



# Full wwPDB X-ray Structure Validation Report i

Mar 31, 2014 – 06:13 PM BST

PDB ID : 2HGR  
Title : 70S T.Th. ribosome functional complex with mRNA and E- and P-site tRNAs at 4.5Å. This entry 2HGr contains 30S ribosomal subunit. The 50S ribosomal subunit can be found in PDB entry 2HGU.  
Authors : Jenner, L.; Yusupova, G.; Rees, B.; Moras, D.; Yusupov, M.  
Deposited on : 2006-06-27  
Resolution : 4.51 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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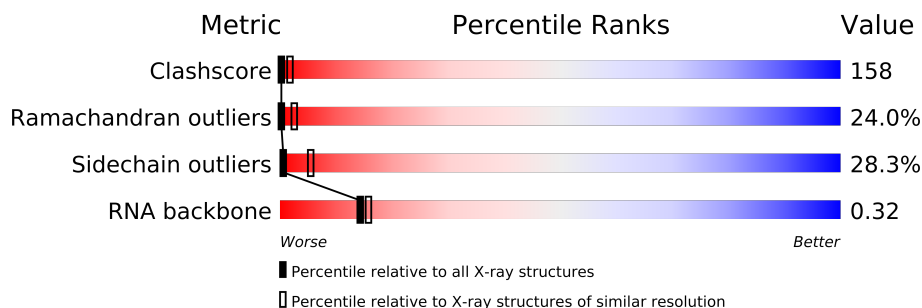
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	<b>NOT EXECUTED</b>
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 4.51 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	1300 (5.50-3.50)
Ramachandran outliers	78287	1222 (5.50-3.50)
Sidechain outliers	78261	1203 (5.50-3.50)
RNA backbone	1838	1031 (6.22-2.80)


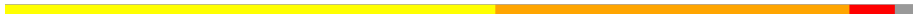
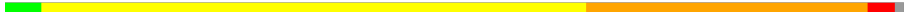

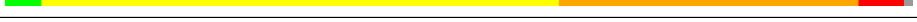



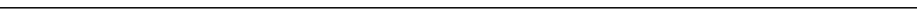
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria.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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1522	
2	C	76	
3	D	76	
4	1	27	
5	E	256	
6	F	239	
7	G	209	
8	H	162	
9	I	101	
10	J	156	
11	K	138	
12	L	128	
13	M	105	
14	N	129	
15	O	132	

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Mol	Chain	Length	Quality of chain
16	P	126	
17	Q	61	
18	R	89	
19	S	88	
20	T	105	
21	U	88	
22	V	93	
23	W	106	
24	X	27	

## 2 Entry composition

There are 24 unique types of molecules in this entry. The entry contains 55628 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	1515	Total	C	N	O	P	0	0	0
			32554	14490	6022	10527	1515			

- Molecule 2 is a RNA chain called tRNA fMET (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	76	Total	C	N	O	P	0	0	0
			1624	723	295	530	76			

- Molecule 3 is a RNA chain called tRNA PHE (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			

- Molecule 4 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	1	27	Total	C	N	O	P	0	0	0
			596	267	127	175	27			

- Molecule 5 is a protein called 30S ribosomal protein S2.

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

- Molecule 6 is a protein called 30S ribosomal protein S3.

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

- Molecule 7 is a protein called 30S ribosomal protein S4.

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

- Molecule 8 is a protein called 30S ribosomal protein S5.

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

- Molecule 9 is a protein called 30S ribosomal protein S6.

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

- Molecule 10 is a protein called 30S ribosomal protein S7.

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

- Molecule 11 is a protein called 30S ribosomal protein S8.

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

- Molecule 12 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	L	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 13 is a protein called 30S ribosomal protein S10.

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

- Molecule 14 is a protein called 30S ribosomal protein S11.

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

- Molecule 15 is a protein called 30S ribosomal protein S12.

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

- Molecule 16 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 17 is a protein called 30S ribosomal protein S14.

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

- Molecule 18 is a protein called 30S ribosomal protein S15.

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

- Molecule 19 is a protein called 30S ribosomal protein S16.

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

- Molecule 20 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

- Molecule 21 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	73	Total	C	N	O	0	0	0
			597	380	118	99			

- Molecule 22 is a protein called 30S ribosomal protein S19.

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

- Molecule 23 is a protein called 30S ribosomal protein S20.

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

- Molecule 24 is a protein called 30S ribosomal protein Thx.

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

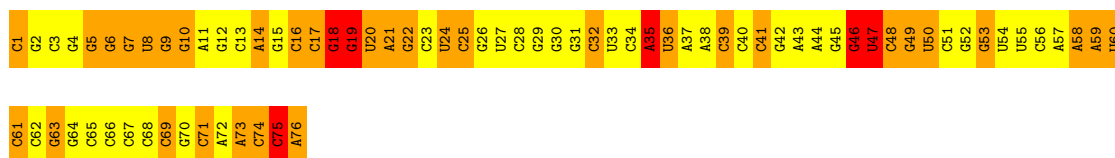


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	C1490	U1425	A1306	G1246	G1186	U1125	U1065	G1009	U950	A889	G823	G763	G703
	G1491	C1426	U1307	U1247	G1187	U1126	C1066	G1010	G951	C890	C824	C764	A704
	A1492	U1427	U1308	A1248	G1188	U1127	A1067	G1011	U952	U891	G825	G765	U705
	A1493	A1428	G1309	C1249	C1189	C1128	G1068	C953	C926	A892	C826	A766	A706
	G1494	C1429	G1310	A1250	G1190	C1129	C1069	G1013	G954	C893	U827	A767	C707
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	C1496	C1431	G1312	A1252	C1192	C1131	C1071	A1015	U956	G895	G829	G769	C709
	G1497	G1432	U1313	G1253	G1193	C1132	G1072	A1016	U957	C896	G830	C770	G710
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	A1500	A1434	U1315	G1255	C1195	G1134	C832	C1018	A959	G898	C832	U772	A712
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	C1502	U1436	C1317	U1257	G1197	U1136	C1076	U1020	U961	A900	C834	G774	G714
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	U1519	U1393	C1334	G1274	C1214	A1093	A1093	G1033	A978	A919	G858	A792	G733
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• Molecule 2: tRNA fMET (unmodified bases)

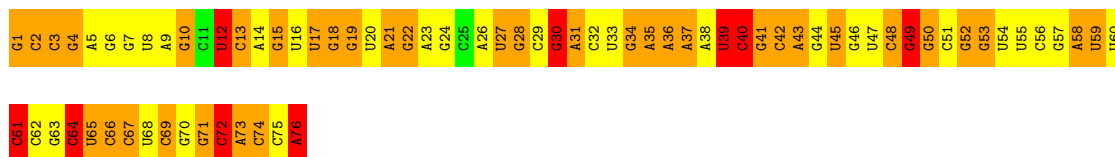
Chain C:





• Molecule 3: tRNA PHE (unmodified bases)

Chain D:



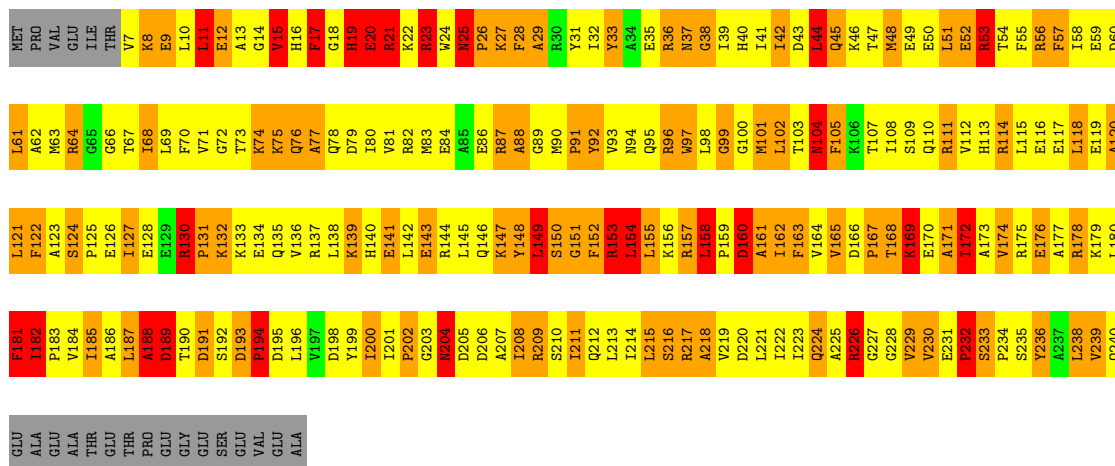
• Molecule 4: mRNA

Chain 1:



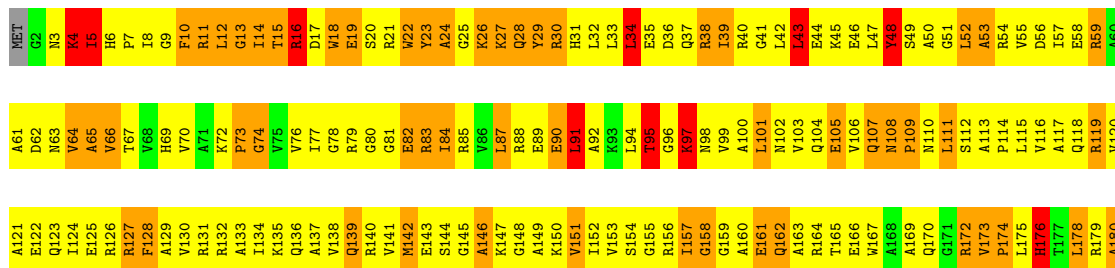
• Molecule 5: 30S ribosomal protein S2

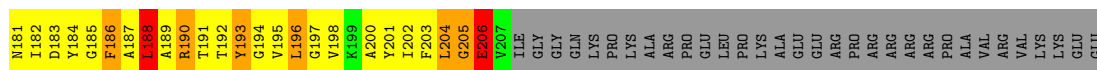
Chain E:



• Molecule 6: 30S ribosomal protein S3

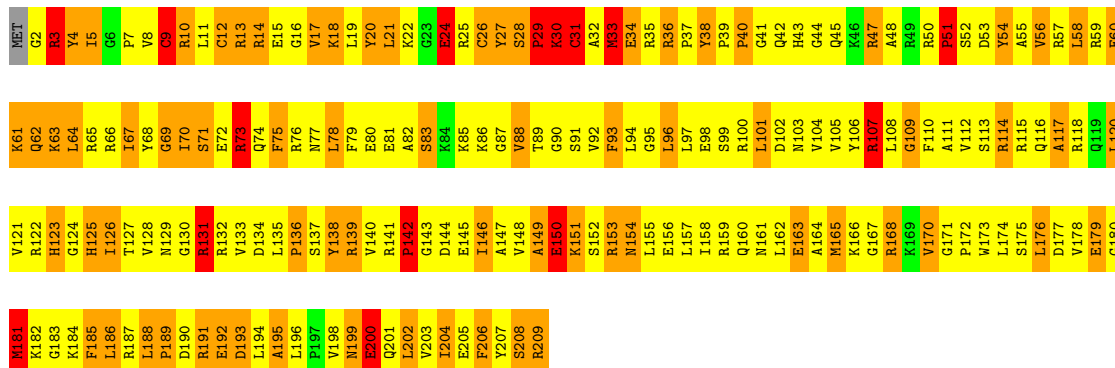
Chain F:





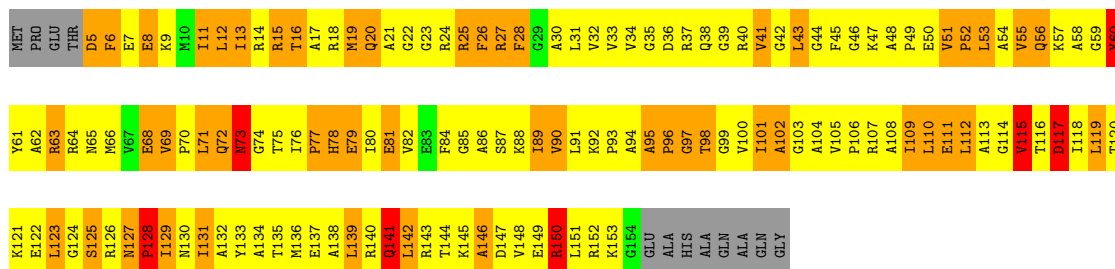
- Molecule 7: 30S ribosomal protein S4

Chain G:



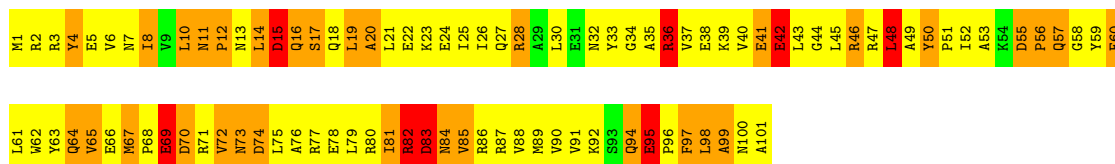
- Molecule 8: 30S ribosomal protein S5

Chain H:



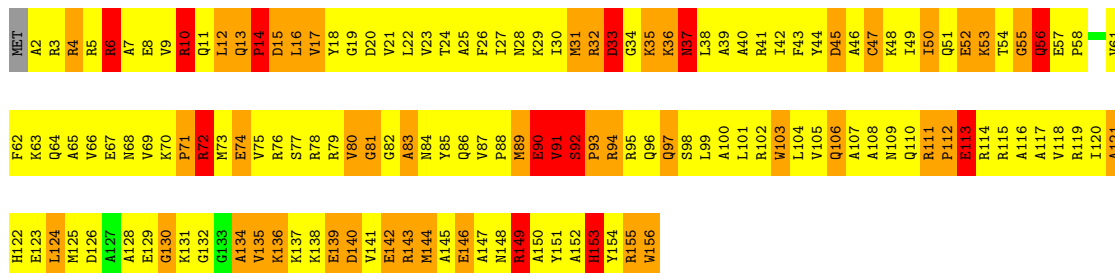
- Molecule 9: 30S ribosomal protein S6

Chain I:



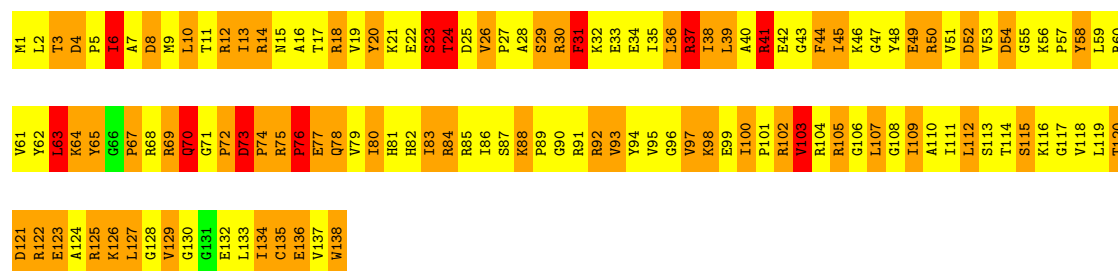
- Molecule 10: 30S ribosomal protein S7

Chain J:



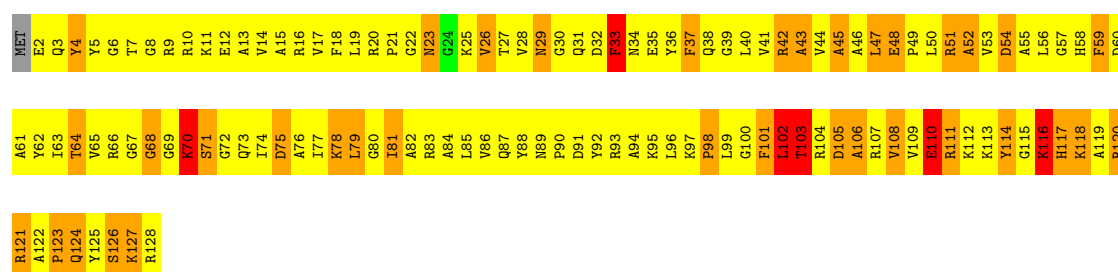
- Molecule 11: 30S ribosomal protein S8

Chain K:



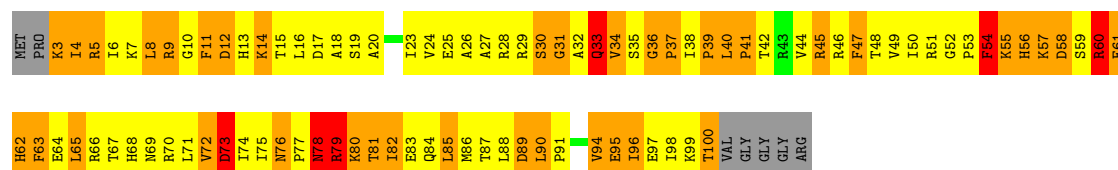
- Molecule 12: 30S ribosomal protein S9

Chain L:



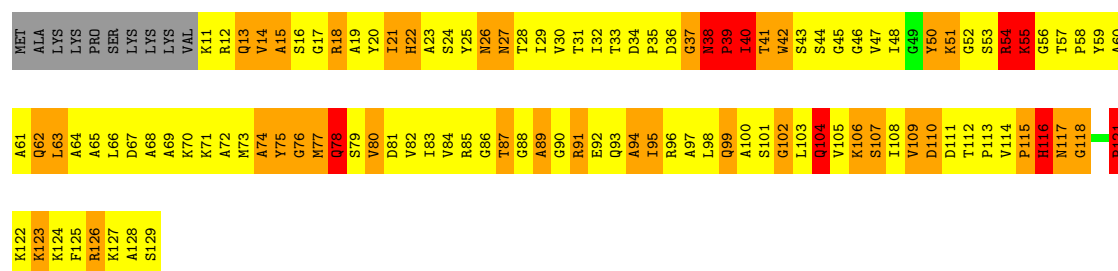
- Molecule 13: 30S ribosomal protein S10

Chain M:



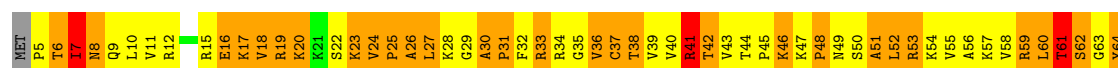
- Molecule 14: 30S ribosomal protein S11

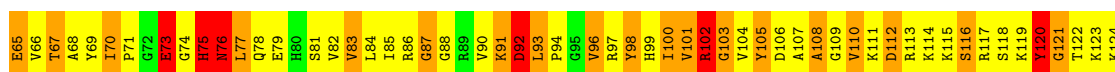
Chain N:



- Molecule 15: 30S ribosomal protein S12

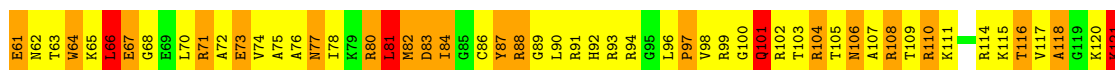
Chain O:





- Molecule 16: 30S ribosomal protein S13

Chain P:



- Molecule 17: 30S ribosomal protein S14

Chain Q:



- Molecule 18: 30S ribosomal protein S15

Chain R:



- Molecule 19: 30S ribosomal protein S16

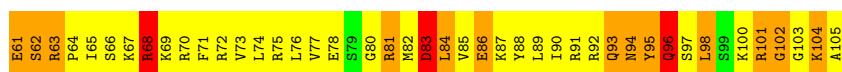
Chain S:



- Molecule 20: 30S ribosomal protein S17

Chain T:





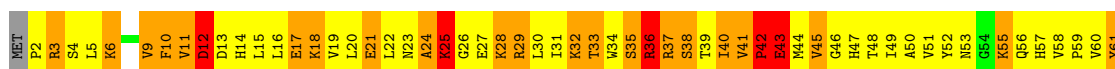
- Molecule 21: 30S ribosomal protein S18

Chain U:



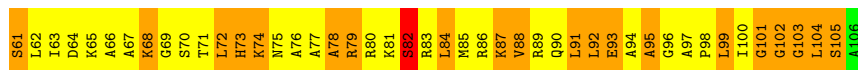
- Molecule 22: 30S ribosomal protein S19

Chain V:



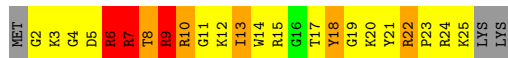
- Molecule 23: 30S ribosomal protein S20

Chain W:



- Molecule 24: 30S ribosomal protein Thx

Chain X:



## 4 Data and refinement statistics

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

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	508.65Å 508.65Å 803.80Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	300.00 – 4.51	Depositor
% Data completeness (in resolution range)	90.3 (300.00-4.51)	Depositor
$R_{merge}$	0.11	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.00 (at 4.02Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.298 , 0.345	Depositor
Wilson B-factor (Å <sup>2</sup> )	198.7	Xtriage
Anisotropy	0.113	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.55$ , $\langle L^2 \rangle = 0.39$	Xtriage
Outliers	0 of 441813 reflections	Xtriage
Total number of atoms	55628	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	257.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.62% of the height of the origin peak. No significant pseudotranslation is detected.*

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

## 5 Model quality

### 5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	A	0.93	38/36438 (0.1%)	1.05	172/56869 (0.3%)
2	C	0.93	2/1814 (0.1%)	1.01	4/2825 (0.1%)
3	D	1.47	34/1813 (1.9%)	1.27	21/2823 (0.7%)
4	I	0.81	1/673 (0.1%)	1.07	3/1048 (0.3%)
5	E	0.63	0/1935	1.01	4/2609 (0.2%)
6	F	0.53	0/1636	0.93	4/2205 (0.2%)
7	G	0.67	1/1733 (0.1%)	1.10	7/2318 (0.3%)
8	H	0.70	0/1162	1.08	4/1564 (0.3%)
9	I	0.69	0/856	1.03	3/1154 (0.3%)
10	J	0.54	0/1276	0.87	0/1709
11	K	0.73	0/1136	1.08	3/1527 (0.2%)
12	L	0.51	0/1029	0.84	1/1379 (0.1%)
13	M	0.50	0/807	0.85	0/1085
14	N	0.67	0/900	1.06	0/1213
15	O	0.67	0/986	1.09	3/1320 (0.2%)
16	P	0.51	0/1008	0.91	2/1347 (0.1%)
17	Q	0.53	0/501	1.02	3/664 (0.5%)
18	R	0.67	0/745	0.98	0/992
19	S	0.72	0/716	1.04	4/963 (0.4%)
20	T	0.67	0/870	1.05	2/1159 (0.2%)
21	U	0.65	0/603	1.12	3/799 (0.4%)
22	V	0.49	0/661	0.91	1/890 (0.1%)
23	W	0.66	0/765	1.05	1/1007 (0.1%)
24	X	0.47	0/212	0.82	0/277
All	All	0.86	76/60275 (0.1%)	1.04	245/89746 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	241

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	C	0	9
3	D	0	12
4	1	0	5
7	G	0	1
8	H	0	1
11	K	0	2
14	N	0	1
15	O	0	1
20	T	0	1
24	X	0	1
All	All	0	275

All (76) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	173	U	O3'-P	19.14	1.84	1.61
1	A	196	A	O3'-P	-18.33	1.39	1.61
1	A	37	U	N3-C4	-14.53	1.25	1.38
3	D	65	U	C2-N3	13.82	1.47	1.37
3	D	65	U	N3-C4	13.08	1.50	1.38
1	A	37	U	C4-O4	-12.91	1.13	1.23
1	A	1494	G	N9-C4	11.29	1.47	1.38
3	D	53	G	C2-N2	-10.61	1.24	1.34
1	A	172	A	O3'-P	10.22	1.73	1.61
1	A	579	G	C3'-O3'	9.69	1.55	1.42
3	D	50	G	C2-N2	-9.38	1.25	1.34
3	D	61	C	C4-C5	-8.85	1.35	1.43
3	D	65	U	C2-O2	8.74	1.30	1.22
3	D	61	C	C4-N4	-8.67	1.26	1.33
1	A	13	U	N3-C4	8.59	1.46	1.38
1	A	579	G	O3'-P	8.57	1.71	1.61
3	D	65	U	C4-O4	8.41	1.30	1.23
1	A	37	U	C2-O2	-8.31	1.14	1.22
3	D	64	C	C2-O2	-8.20	1.17	1.24
1	A	1192	C	N1-C2	8.04	1.48	1.40
3	D	22	G	C5-C6	-7.93	1.34	1.42
3	D	50	G	C6-O6	-7.84	1.17	1.24
3	D	28	G	C5-C6	-7.77	1.34	1.42
3	D	40	C	C4-C5	-7.69	1.36	1.43
1	A	1192	C	C4-N4	-7.57	1.27	1.33
3	D	1	G	OP3-P	-7.55	1.52	1.61
3	D	50	G	N9-C4	-7.54	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1	1	G	OP3-P	-7.45	1.52	1.61
3	D	69	C	C4-C5	-7.34	1.37	1.43
3	D	64	C	C2-N3	-7.21	1.29	1.35
3	D	64	C	C4-N4	-7.18	1.27	1.33
3	D	71	G	N9-C4	6.99	1.43	1.38
3	D	50	G	N1-C2	-6.99	1.32	1.37
1	A	697	U	C2-N3	6.82	1.42	1.37
3	D	22	G	C2-N2	6.71	1.41	1.34
3	D	1	G	C5-C6	-6.68	1.35	1.42
3	D	30	G	C5-C6	6.55	1.49	1.42
2	C	1	C	OP3-P	-6.55	1.53	1.61
1	A	779	C	C2-O2	-6.54	1.18	1.24
3	D	61	C	C5-C6	-6.54	1.29	1.34
1	A	13	U	C2-N3	6.49	1.42	1.37
3	D	12	U	N1-C2	-6.46	1.32	1.38
1	A	1494	G	C6-N1	-6.38	1.35	1.39
1	A	961	U	N1-C6	-6.38	1.32	1.38
1	A	961	U	N1-C2	6.31	1.44	1.38
3	D	40	C	C4-N4	-6.08	1.28	1.33
1	A	697	U	N1-C2	6.02	1.44	1.38
3	D	49	G	N9-C4	-5.99	1.33	1.38
1	A	114	U	C2-N3	-5.98	1.33	1.37
1	A	961	U	C4-O4	-5.95	1.18	1.23
3	D	53	G	N9-C4	5.92	1.42	1.38
1	A	1522	U	N3-C4	-5.92	1.33	1.38
2	C	75	C	N1-C2	5.90	1.46	1.40
1	A	114	U	N3-C4	-5.84	1.33	1.38
1	A	397	A	C5-C6	-5.84	1.35	1.41
3	D	30	G	C2-N2	-5.84	1.28	1.34
3	D	49	G	C6-N1	-5.59	1.35	1.39
1	A	1494	G	C6-O6	-5.58	1.19	1.24
1	A	974	A	C2-N3	5.55	1.38	1.33
3	D	50	G	N3-C4	-5.55	1.31	1.35
3	D	49	G	C6-O6	-5.44	1.19	1.24
1	A	354	G	N9-C4	5.43	1.42	1.38
1	A	1086	U	N1-C2	5.41	1.43	1.38
1	A	677	U	N3-C4	5.39	1.43	1.38
1	A	697	U	N3-C4	5.38	1.43	1.38
1	A	190	G	C5-C6	-5.34	1.37	1.42
1	A	1522	U	C2-N3	-5.33	1.34	1.37
1	A	1417	G	C6-O6	5.33	1.28	1.24
1	A	769	G	C6-O6	-5.26	1.19	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	519	C	N1-C2	5.16	1.45	1.40
3	D	64	C	N3-C4	-5.15	1.30	1.33
1	A	197	A	O3'-P	-5.14	1.54	1.61
3	D	50	G	C6-N1	-5.10	1.35	1.39
1	A	877	C	N1-C2	-5.05	1.35	1.40
7	G	12	CYS	CA-CB	5.04	1.65	1.53
1	A	901	A	C5-C6	-5.00	1.36	1.41

All (245) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	37	U	N3-C4-O4	-25.04	101.87	119.40
1	A	173	U	P-O3'-C3'	17.00	140.10	119.70
1	A	961	U	N1-C1'-C2'	12.14	129.78	114.00
1	A	1494	G	N9-C1'-C2'	11.89	129.45	114.00
1	A	576	G	N9-C1'-C2'	11.62	129.11	114.00
1	A	196	A	P-O3'-C3'	-11.43	105.99	119.70
3	D	65	U	N3-C4-O4	10.20	126.54	119.40
1	A	575	G	N9-C1'-C2'	10.06	127.07	114.00
1	A	457	C	N1-C1'-C2'	-9.97	101.03	112.00
1	A	173	U	O3'-P-O5'	-9.69	85.60	104.00
1	A	961	U	O4'-C1'-N1	9.48	115.79	108.20
3	D	65	U	N3-C2-O2	9.28	128.70	122.20
1	A	727	G	N9-C1'-C2'	-9.05	102.04	112.00
1	A	793	U	N1-C1'-C2'	8.80	125.44	114.00
1	A	1192	C	N1-C2-O2	8.70	124.12	118.90
3	D	65	U	C5-C6-N1	8.67	127.04	122.70
1	A	47	C	N1-C1'-C2'	8.62	125.21	114.00
6	F	188	LEU	CA-CB-CG	8.62	135.12	115.30
1	A	590	C	N1-C1'-C2'	-8.53	102.62	112.00
8	H	97	GLY	N-CA-C	-8.43	92.03	113.10
1	A	961	U	C5-C4-O4	-8.15	121.01	125.90
4	1	15	A	C3'-C2'-C1'	-8.12	95.00	101.50
1	A	397	A	N9-C1'-C2'	-8.09	103.10	112.00
1	A	451	A	N9-C1'-C2'	8.02	124.42	114.00
1	A	13	U	N1-C1'-C2'	8.02	124.42	114.00
1	A	1133	G	N9-C1'-C2'	-7.99	103.21	112.00
1	A	196	A	OP2-P-O3'	-7.81	88.02	105.20
7	G	5	ILE	N-CA-C	-7.77	90.03	111.00
1	A	397	A	N1-C6-N6	7.76	123.26	118.60
1	A	974	A	C5-C6-N6	-7.68	117.55	123.70
1	A	1298	C	N1-C1'-C2'	7.49	123.73	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1528	U	N1-C1'-C2'	7.47	123.72	114.00
1	A	1201	A	N9-C1'-C2'	7.40	123.61	114.00
1	A	1049	U	C2'-C3'-O3'	7.36	125.69	109.50
1	A	1494	G	C8-N9-C4	-7.33	103.47	106.40
1	A	173	U	OP1-P-O3'	7.30	121.26	105.20
1	A	243	A	C2'-C3'-O3'	7.27	125.50	109.50
1	A	1302	U	N1-C1'-C2'	7.22	123.39	114.00
1	A	1271	G	N9-C1'-C2'	-7.17	104.11	112.00
1	A	172	A	O3'-P-O5'	-7.15	90.41	104.00
1	A	13	U	O4'-C1'-N1	-7.15	102.48	108.20
1	A	531	U	N1-C1'-C2'	7.15	123.30	114.00
9	I	48	LEU	CA-CB-CG	-7.13	98.90	115.30
1	A	1498	U	N1-C1'-C2'	7.07	123.19	114.00
1	A	1402	C	N1-C1'-C2'	-7.07	104.22	112.00
16	P	81	LEU	CA-CB-CG	7.04	131.48	115.30
1	A	974	A	C6-N1-C2	-7.02	114.39	118.60
1	A	1398	A	N9-C1'-C2'	-6.98	104.32	112.00
7	G	31	CYS	CA-CB-SG	6.98	126.56	114.00
1	A	1200	C	N1-C1'-C2'	6.98	123.07	114.00
1	A	7	G	N9-C1'-C2'	6.97	123.06	114.00
1	A	490	G	N9-C1'-C2'	-6.91	104.39	112.00
1	A	1341	U	N1-C1'-C2'	-6.90	104.41	112.00
1	A	511	C	N1-C1'-C2'	6.89	122.96	114.00
1	A	579	G	N9-C1'-C2'	6.87	122.93	114.00
1	A	388	G	N9-C1'-C2'	6.86	122.92	114.00
2	C	19	G	N9-C1'-C2'	6.81	122.86	114.00
1	A	1054	C	N1-C1'-C2'	-6.77	104.56	112.00
1	A	13	U	C2-N1-C1'	6.76	125.81	117.70
1	A	352	C	N1-C1'-C2'	6.72	122.74	114.00
1	A	146	G	N9-C1'-C2'	-6.69	104.64	112.00
1	A	974	A	N9-C1'-C2'	6.67	122.67	114.00
1	A	1124	G	N9-C1'-C2'	6.62	122.61	114.00
3	D	65	U	C2-N1-C1'	6.62	125.64	117.70
1	A	282	A	O5'-P-OP1	-6.59	99.76	105.70
1	A	1054	C	O4'-C4'-C3'	-6.59	97.41	104.00
1	A	793	U	O4'-C1'-N1	6.57	113.46	108.20
1	A	1135	U	N1-C1'-C2'	6.57	122.55	114.00
1	A	82	U	N3-C4-O4	-6.57	114.80	119.40
3	D	61	C	C5-C4-N4	-6.54	115.62	120.20
1	A	974	A	C8-N9-C1'	-6.53	115.94	127.70
1	A	60	A	N9-C1'-C2'	6.53	122.49	114.00
1	A	1347	G	N9-C1'-C2'	6.52	122.47	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	397	A	C5-C6-N6	-6.49	118.51	123.70
3	D	65	U	N3-C4-C5	-6.48	110.71	114.60
15	O	59	ARG	N-CA-C	-6.48	93.50	111.00
1	A	1408	A	N9-C1'-C2'	-6.43	104.93	112.00
1	A	1139	G	N9-C1'-C2'	6.43	122.36	114.00
1	A	1408	A	C4'-C3'-C2'	-6.40	96.20	102.60
1	A	974	A	C4-N9-C1'	6.37	137.76	126.30
21	U	75	ILE	CB-CA-C	-6.37	98.87	111.60
1	A	813	U	N1-C1'-C2'	6.36	122.27	114.00
1	A	21	G	O4'-C1'-N9	6.35	113.28	108.20
1	A	961	U	C2-N1-C1'	6.33	125.30	117.70
11	K	10	LEU	CA-CB-CG	6.26	129.71	115.30
8	H	71	LEU	CA-CB-CG	6.26	129.70	115.30
1	A	961	U	C2-N3-C4	-6.26	123.24	127.00
1	A	517	G	N9-C1'-C2'	6.24	122.11	114.00
1	A	347	G	N9-C1'-C2'	-6.22	105.16	112.00
1	A	645	C	N1-C1'-C2'	-6.19	105.19	112.00
6	F	43	LEU	CA-CB-CG	6.16	129.47	115.30
7	G	28	SER	C-N-CD	-6.16	107.06	120.60
19	S	31	LYS	N-CA-C	-6.13	94.44	111.00
3	D	65	U	C6-N1-C1'	-6.13	112.61	121.20
1	A	820	U	N1-C1'-C2'	6.13	121.97	114.00
1	A	752	G	N9-C1'-C2'	6.07	121.89	114.00
1	A	1175	G	N9-C1'-C2'	-6.06	105.34	112.00
1	A	144	G	N9-C1'-C2'	-6.04	105.36	112.00
3	D	61	C	N1-C1'-C2'	6.04	121.85	114.00
1	A	88	C	O4'-C1'-N1	6.00	113.00	108.20
1	A	13	U	C6-N1-C1'	-6.00	112.80	121.20
1	A	817	C	O4'-C1'-N1	5.99	113.00	108.20
9	I	99	ALA	N-CA-C	-5.98	94.85	111.00
6	F	48	TYR	N-CA-C	-5.98	94.86	111.00
3	D	61	C	O4'-C1'-N1	5.96	112.97	108.20
1	A	275	G	N9-C1'-C2'	-5.93	105.47	112.00
1	A	48	C	O4'-C1'-N1	5.91	112.93	108.20
1	A	644	G	N9-C1'-C2'	-5.89	105.52	112.00
1	A	962	C	C5'-C4'-O4'	5.89	116.17	109.10
1	A	843	U	N1-C1'-C2'	5.87	121.63	114.00
1	A	974	A	N1-C6-N6	5.87	122.12	118.60
1	A	429	U	N1-C1'-C2'	5.87	121.62	114.00
1	A	1084	G	N9-C1'-C2'	5.86	121.62	114.00
7	G	30	LYS	N-CA-C	5.86	126.83	111.00
1	A	1192	C	C2-N1-C1'	5.85	125.23	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1166	G	N9-C1'-C2'	-5.85	105.57	112.00
1	A	818	G	N9-C1'-C2'	5.84	121.59	114.00
1	A	7	G	C1'-O4'-C4'	-5.83	105.23	109.90
1	A	1123	A	N9-C1'-C2'	5.83	121.58	114.00
1	A	21	G	O4'-C4'-C3'	-5.81	98.19	104.00
3	D	69	C	O4'-C1'-N1	5.80	112.84	108.20
1	A	456	C	N1-C1'-C2'	-5.80	105.62	112.00
1	A	1346	A	N9-C1'-C2'	5.80	121.54	114.00
15	O	118	SER	N-CA-C	-5.80	95.35	111.00
17	Q	27	CYS	CA-CB-SG	5.79	124.43	114.00
1	A	209	U	N1-C1'-C2'	5.78	121.51	114.00
1	A	37	U	N1-C1'-C2'	-5.78	105.64	112.00
1	A	13	U	C5'-C4'-O4'	5.77	116.02	109.10
1	A	580	U	C5'-C4'-O4'	5.75	116.00	109.10
1	A	250	A	O4'-C1'-N9	-5.74	103.61	108.20
1	A	529	G	N9-C1'-C2'	-5.73	105.70	112.00
3	D	76	A	N9-C1'-C2'	5.72	121.43	114.00
1	A	48	C	N1-C1'-C2'	5.71	121.43	114.00
3	D	61	C	N3-C4-N4	5.70	121.99	118.00
17	Q	40	CYS	N-CA-C	-5.69	95.63	111.00
1	A	1185	G	N9-C1'-C2'	-5.68	105.75	112.00
1	A	1481	U	O4'-C1'-N1	5.68	112.74	108.20
1	A	559	A	N9-C1'-C2'	5.67	121.37	114.00
1	A	13	U	N3-C4-O4	5.67	123.36	119.40
19	S	19	ILE	N-CA-C	-5.66	95.72	111.00
3	D	61	C	N1-C2-O2	5.63	122.28	118.90
4	1	14	A	O4'-C1'-N9	-5.62	103.70	108.20
20	T	61	GLU	N-CA-C	-5.60	95.88	111.00
1	A	372	C	C1'-O4'-C4'	-5.59	105.43	109.90
1	A	319	G	N9-C1'-C2'	-5.58	105.86	112.00
7	G	9	CYS	CA-CB-SG	5.58	124.04	114.00
1	A	158	G	N9-C1'-C2'	-5.57	105.87	112.00
23	W	14	LYS	N-CA-C	-5.57	95.95	111.00
1	A	1192	C	N3-C2-O2	-5.55	118.01	121.90
1	A	199	G	C5'-C4'-C3'	-5.54	107.14	116.00
1	A	960	U	N1-C1'-C2'	5.51	121.17	114.00
7	G	189	PRO	N-CA-C	-5.51	97.77	112.10
1	A	560	U	C2'-C3'-O3'	5.50	122.51	113.70
1	A	1494	G	C4-N9-C1'	5.49	133.63	126.50
1	A	50	A	O4'-C1'-N9	5.48	112.59	108.20
1	A	1481	U	N3-C4-O4	-5.48	115.56	119.40
5	E	149	LEU	N-CA-C	5.47	125.78	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1029	G	N9-C1'-C2'	-5.47	105.98	112.00
1	A	1396	A	N9-C1'-C2'	5.46	121.10	114.00
4	1	15	A	C4'-C3'-O3'	5.45	123.90	113.00
11	K	138	TRP	N-CA-C	-5.43	96.34	111.00
8	H	43	LEU	CA-CB-CG	5.42	127.78	115.30
1	A	47	C	C2'-C3'-O3'	5.42	122.38	113.70
1	A	817	C	O4'-C4'-C3'	-5.42	98.58	104.00
1	A	7	G	O4'-C1'-N9	5.40	112.52	108.20
20	T	56	VAL	N-CA-C	-5.40	96.41	111.00
21	U	80	PRO	N-CA-C	5.40	126.13	112.10
1	A	993	G	N9-C1'-C2'	5.37	120.98	114.00
5	E	51	LEU	CA-CB-CG	-5.37	102.96	115.30
21	U	44	LEU	CA-CB-CG	5.35	127.61	115.30
1	A	1310	G	N9-C1'-C2'	-5.35	106.11	112.00
1	A	1054	C	O4'-C1'-N1	5.35	112.48	108.20
1	A	815	A	N9-C1'-C2'	5.35	120.95	114.00
1	A	1481	U	N1-C1'-C2'	5.34	120.94	114.00
1	A	48	C	C1'-O4'-C4'	-5.33	105.64	109.90
6	F	34	LEU	CA-CB-CG	5.33	127.56	115.30
1	A	1419	G	C1'-O4'-C4'	-5.32	105.64	109.90
1	A	1144	G	N9-C1'-C2'	-5.32	106.15	112.00
3	D	65	U	C5-C4-O4	-5.31	122.72	125.90
1	A	397	A	O4'-C1'-N9	-5.30	103.96	108.20
1	A	961	U	C4-C5-C6	5.30	122.88	119.70
1	A	793	U	C1'-O4'-C4'	-5.30	105.66	109.90
1	A	652	U	N1-C1'-C2'	5.28	120.86	114.00
1	A	226	G	C1'-O4'-C4'	-5.28	105.68	109.90
1	A	216	G	N9-C1'-C2'	5.27	120.86	114.00
1	A	367	U	N1-C1'-C2'	5.27	120.85	114.00
7	G	33	MET	N-CA-C	-5.27	96.78	111.00
1	A	823	G	N9-C1'-C2'	-5.26	106.21	112.00
9	I	36	ARG	N-CA-C	-5.26	96.80	111.00
12	L	102	LEU	CA-CB-CG	5.26	127.39	115.30
5	E	188	ALA	N-CA-C	5.25	125.17	111.00
1	A	860	A	N9-C1'-C2'	-5.25	106.23	112.00
1	A	1077	G	N9-C1'-C2'	-5.22	106.26	112.00
1	A	390	C	N1-C1'-C2'	-5.22	106.26	112.00
17	Q	24	CYS	CA-CB-SG	5.22	123.39	114.00
1	A	633	G	C5'-C4'-C3'	-5.21	107.66	116.00
1	A	721	G	N9-C1'-C2'	5.21	120.77	114.00
1	A	1162	C	N1-C1'-C2'	-5.21	106.27	112.00
3	D	65	U	N1-C2-N3	-5.20	111.78	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	576	G	O4'-C1'-N9	5.20	112.36	108.20
1	A	1280	A	N9-C1'-C2'	5.19	120.75	114.00
3	D	62	C	N1-C1'-C2'	-5.19	106.30	112.00
3	D	30	G	O4'-C1'-N9	5.17	112.34	108.20
3	D	12	U	C2-N1-C1'	-5.16	111.50	117.70
2	C	5	G	N9-C1'-C2'	-5.15	106.34	112.00
1	A	691	G	O4'-C4'-C3'	-5.14	98.86	104.00
1	A	1502	A	N9-C1'-C2'	5.14	120.68	114.00
2	C	14	A	N9-C1'-C2'	-5.14	106.34	112.00
19	S	78	GLY	N-CA-C	-5.13	100.27	113.10
1	A	974	A	C5-C6-N1	5.13	120.26	117.70
11	K	80	ILE	N-CA-C	-5.13	97.15	111.00
1	A	5	U	OP1-P-OP2	-5.12	111.92	119.60
1	A	810	C	O4'-C1'-N1	5.11	112.29	108.20
22	V	68	GLY	N-CA-C	5.11	125.89	113.10
8	H	123	LEU	N-CA-C	-5.11	97.20	111.00
1	A	1494	G	N3-C4-C5	-5.11	126.05	128.60
3	D	13	C	N1-C1'-C2'	-5.11	106.38	112.00
1	A	81	G	N9-C1'-C2'	5.10	120.64	114.00
1	A	1528	U	C2-N1-C1'	5.10	123.82	117.70
1	A	228	A	N9-C1'-C2'	-5.10	106.39	112.00
1	A	555	C	N1-C1'-C2'	5.09	120.62	114.00
1	A	250	A	C2'-C3'-O3'	5.09	121.84	113.70
3	D	39	U	C5-C4-O4	-5.08	122.85	125.90
1	A	818	G	C5'-C4'-O4'	5.08	115.19	109.10
1	A	372	C	N1-C1'-C2'	5.07	120.60	114.00
1	A	728	A	N9-C1'-C2'	-5.07	106.42	112.00
3	D	53	G	N3-C2-N2	-5.07	116.35	119.90
1	A	135	C	N1-C1'-C2'	-5.06	106.43	112.00
15	O	25	PRO	N-CA-C	-5.06	98.94	112.10
1	A	1231	G	N9-C1'-C2'	-5.05	106.45	112.00
1	A	13	U	C5'-C4'-C3'	-5.04	107.93	116.00
2	C	6	G	N9-C1'-C2'	5.04	120.55	114.00
16	P	11	ARG	N-CA-C	5.04	124.60	111.00
1	A	939	G	N9-C1'-C2'	5.03	120.54	114.00
1	A	1164	G	N9-C1'-C2'	-5.03	106.47	112.00
5	E	38	GLY	N-CA-C	5.03	125.68	113.10
1	A	734	G	N9-C1'-C2'	-5.02	106.47	112.00
1	A	1225	A	N9-C1'-C2'	5.02	120.53	114.00
1	A	1533	C	N1-C1'-C2'	5.02	120.53	114.00
1	A	52	G	O5'-P-OP2	-5.01	101.19	105.70
1	A	144	G	O4'-C4'-C3'	-5.01	98.99	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	13	U	C5-C4-O4	-5.01	122.89	125.90
1	A	579	G	C2'-C3'-O3'	5.01	121.72	113.70
1	A	1408	A	O4'-C4'-C3'	-5.01	98.99	104.00
19	S	79	VAL	N-CA-C	-5.00	97.50	111.00

There are no chirality outliers.

All (275) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	1	14	A	Sidechain
4	1	16	A	Sidechain
4	1	18	G	Sidechain
4	1	4	A	Sidechain
4	1	6	G	Sidechain
1	A	1006	C	Sidechain
1	A	1007	C	Sidechain
1	A	1012	U	Sidechain
1	A	1018	C	Sidechain
1	A	1025	U	Sidechain
1	A	1036	G	Sidechain
1	A	1038	C	Sidechain
1	A	1039	C	Sidechain
1	A	1052	U	Sidechain
1	A	1053	G	Sidechain
1	A	1054	C	Sidechain
1	A	1055	A	Sidechain
1	A	1062	U	Sidechain
1	A	1065	U	Sidechain
1	A	1067	A	Sidechain
1	A	1073	U	Sidechain
1	A	1087	G	Sidechain
1	A	1091	U	Sidechain
1	A	1100	C	Sidechain
1	A	112	G	Sidechain
1	A	1122	U	Sidechain
1	A	1124	G	Sidechain
1	A	1128	C	Sidechain
1	A	1133	G	Sidechain
1	A	1135	U	Sidechain
1	A	1138	G	Sidechain
1	A	114	U	Sidechain
1	A	1143	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1150	U	Sidechain
1	A	116	A	Sidechain
1	A	118	U	Sidechain
1	A	119	A	Sidechain
1	A	1195	C	Sidechain
1	A	1196	U	Sidechain
1	A	1199	U	Sidechain
1	A	12	U	Sidechain
1	A	1201	A	Sidechain
1	A	1203	C	Sidechain
1	A	1205	U	Sidechain
1	A	1207	G	Sidechain
1	A	1208	C	Sidechain
1	A	1232	U	Sidechain
1	A	1235	U	Sidechain
1	A	124	G	Sidechain
1	A	1246	C	Sidechain
1	A	1248	A	Sidechain
1	A	125	U	Sidechain
1	A	1263	C	Sidechain
1	A	1264	C	Sidechain
1	A	127	G	Sidechain
1	A	1277	C	Sidechain
1	A	1285	A	Sidechain
1	A	129	U	Sidechain
1	A	1302	U	Sidechain
1	A	1318	A	Sidechain
1	A	1330	U	Sidechain
1	A	1341	U	Sidechain
1	A	1344	C	Sidechain
1	A	1347	G	Sidechain
1	A	1348	U	Sidechain
1	A	1354	C	Sidechain
1	A	1377	A	Sidechain
1	A	1393	U	Sidechain
1	A	1396	A	Sidechain
1	A	1406	U	Sidechain
1	A	1408	A	Sidechain
1	A	1411	C	Sidechain
1	A	1419	G	Sidechain
1	A	146	G	Sidechain
1	A	1461	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1466	C	Sidechain
1	A	1469	G	Sidechain
1	A	147	G	Sidechain
1	A	1472	U	Sidechain
1	A	1481	U	Sidechain
1	A	1485	U	Sidechain
1	A	1486	G	Sidechain
1	A	1488	G	Sidechain
1	A	1494	G	Sidechain
1	A	1496	C	Sidechain
1	A	1497	G	Sidechain
1	A	1498	U	Sidechain
1	A	1504	G	Sidechain
1	A	1514	C	Sidechain
1	A	1516	G	Sidechain
1	A	1524	C	Sidechain
1	A	1535	C	Sidechain
1	A	1538	C	Sidechain
1	A	1539	C	Sidechain
1	A	1540	U	Sidechain
1	A	155	C	Sidechain
1	A	158	G	Sidechain
1	A	159	G	Sidechain
1	A	16	A	Sidechain
1	A	180	U	Sidechain
1	A	186	C	Sidechain
1	A	191(C)	G	Sidechain
1	A	191(D)	U	Sidechain
1	A	196	A	Sidechain
1	A	21	G	Sidechain
1	A	216	G	Sidechain
1	A	219	C	Sidechain
1	A	225	C	Sidechain
1	A	231	G	Sidechain
1	A	24	U	Sidechain
1	A	253	U	Sidechain
1	A	259	G	Sidechain
1	A	266	G	Sidechain
1	A	267	C	Sidechain
1	A	27	G	Sidechain
1	A	294	U	Sidechain
1	A	295	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	296	U	Sidechain
1	A	31	G	Sidechain
1	A	323	U	Sidechain
1	A	337	C	Sidechain
1	A	340	U	Sidechain
1	A	347	G	Sidechain
1	A	352	C	Sidechain
1	A	354	G	Sidechain
1	A	36	C	Sidechain
1	A	361	G	Sidechain
1	A	367	U	Sidechain
1	A	368	U	Sidechain
1	A	37	U	Sidechain
1	A	38	G	Sidechain
1	A	383	A	Sidechain
1	A	385	C	Sidechain
1	A	386	C	Sidechain
1	A	388	G	Sidechain
1	A	390	C	Sidechain
1	A	397	A	Sidechain
1	A	398	C	Sidechain
1	A	403	C	Sidechain
1	A	405	U	Sidechain
1	A	418	C	Sidechain
1	A	430	A	Sidechain
1	A	432	A	Sidechain
1	A	434	U	Sidechain
1	A	440	A	Sidechain
1	A	45	U	Sidechain
1	A	451	A	Sidechain
1	A	452	A	Sidechain
1	A	47	C	Sidechain
1	A	48	C	Sidechain
1	A	482	A	Sidechain
1	A	49	U	Sidechain
1	A	493	G	Sidechain
1	A	510	A	Sidechain
1	A	517	G	Sidechain
1	A	522	C	Sidechain
1	A	529	G	Sidechain
1	A	531	U	Sidechain
1	A	534	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	54	C	Sidechain
1	A	543	C	Sidechain
1	A	549	C	Sidechain
1	A	56	U	Sidechain
1	A	560	U	Sidechain
1	A	561	U	Sidechain
1	A	575	G	Sidechain
1	A	576	G	Sidechain
1	A	579	G	Sidechain
1	A	580	U	Sidechain
1	A	582	U	Sidechain
1	A	586	C	Sidechain
1	A	590	C	Sidechain
1	A	591	U	Sidechain
1	A	603	U	Sidechain
1	A	633	G	Sidechain
1	A	634	C	Sidechain
1	A	644	G	Sidechain
1	A	652	U	Sidechain
1	A	656	C	Sidechain
1	A	666	G	Sidechain
1	A	672	U	Sidechain
1	A	679	C	Sidechain
1	A	681	C	Sidechain
1	A	687	A	Sidechain
1	A	689	C	Sidechain
1	A	690	G	Sidechain
1	A	691	G	Sidechain
1	A	693	G	Sidechain
1	A	7	G	Sidechain
1	A	712	A	Sidechain
1	A	717	C	Sidechain
1	A	721	G	Sidechain
1	A	724	G	Sidechain
1	A	727	G	Sidechain
1	A	734	G	Sidechain
1	A	739	C	Sidechain
1	A	741	G	Sidechain
1	A	75	C	Sidechain
1	A	759	A	Sidechain
1	A	760	G	Sidechain
1	A	771	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	774	G	Sidechain
1	A	779	C	Sidechain
1	A	782	A	Sidechain
1	A	783	C	Sidechain
1	A	784	C	Sidechain
1	A	798	G	Sidechain
1	A	805	C	Sidechain
1	A	81	G	Sidechain
1	A	810	C	Sidechain
1	A	811	C	Sidechain
1	A	812	C	Sidechain
1	A	813	U	Sidechain
1	A	815	A	Sidechain
1	A	817	C	Sidechain
1	A	819	A	Sidechain
1	A	82	U	Sidechain
1	A	820	U	Sidechain
1	A	826	C	Sidechain
1	A	831	U	Sidechain
1	A	841	U	Sidechain
1	A	853	G	Sidechain
1	A	855	G	Sidechain
1	A	862	C	Sidechain
1	A	863	U	Sidechain
1	A	87	A	Sidechain
1	A	874	G	Sidechain
1	A	88	C	Sidechain
1	A	881	G	Sidechain
1	A	884	U	Sidechain
1	A	887	G	Sidechain
1	A	890	G	Sidechain
1	A	896	C	Sidechain
1	A	901	A	Sidechain
1	A	902	G	Sidechain
1	A	908	A	Sidechain
1	A	926	G	Sidechain
1	A	927	G	Sidechain
1	A	930	C	Sidechain
1	A	936	C	Sidechain
1	A	946	A	Sidechain
1	A	961	U	Sidechain
1	A	974	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	975	A	Sidechain
1	A	976	G	Sidechain
1	A	998(A)	C	Sidechain
2	C	18	G	Sidechain
2	C	19	G	Sidechain
2	C	24	U	Sidechain
2	C	25	C	Sidechain
2	C	35	A	Sidechain
2	C	46	G	Sidechain
2	C	47	U	Sidechain
2	C	69	C	Sidechain
2	C	71	C	Sidechain
3	D	12	U	Sidechain
3	D	2	C	Sidechain
3	D	3	C	Sidechain
3	D	31	A	Sidechain
3	D	39	U	Sidechain
3	D	4	G	Sidechain
3	D	49	G	Sidechain
3	D	61	C	Sidechain
3	D	64	C	Sidechain
3	D	66	C	Sidechain
3	D	67	C	Sidechain
3	D	72	C	Sidechain
7	G	54	TYR	Sidechain
8	H	60	TYR	Sidechain
11	K	20	TYR	Sidechain
11	K	31	PHE	Sidechain
14	N	75	TYR	Sidechain
15	O	120	TYR	Sidechain
20	T	32	TYR	Sidechain
24	X	18	TYR	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	32554	0	16429	6669	0
2	C	1624	0	826	297	0
3	D	1623	0	809	257	0
4	1	596	0	296	65	0
5	E	1900	0	1951	928	0
6	F	1612	0	1677	661	0
7	G	1703	0	1763	807	0
8	H	1146	0	1207	482	0
9	I	843	0	857	397	0
10	J	1257	0	1296	519	0
11	K	1116	0	1177	666	0
12	L	1010	0	1037	457	0
13	M	794	0	840	327	0
14	N	885	0	904	410	0
15	O	970	0	1057	413	0
16	P	997	0	1072	432	0
17	Q	492	0	529	264	0
18	R	734	0	771	349	0
19	S	700	0	720	348	0
20	T	857	0	930	385	0
21	U	597	0	668	357	0
22	V	647	0	673	241	0
23	W	763	0	861	330	0
24	X	208	0	221	87	0
All	All	55628	0	38571	14835	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 158.

All (14835) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:582:U:H5'	18:R:64:ARG:NH2	1.46	1.31
1:A:37:U:O4	1:A:397:A:N1	1.59	1.30
5:E:82:ARG:HD2	5:E:92:TYR:OH	1.34	1.27
1:A:123:C:O2'	1:A:290:C:H1'	1.32	1.24
1:A:901:A:C2	1:A:902:G:H1'	1.72	1.24
1:A:559:A:H4'	1:A:560:U:C5'	1.69	1.22
5:E:88:ALA:HB2	5:E:219:VAL:HG13	1.20	1.20
21:U:49:LYS:HD2	21:U:49:LYS:H	1.07	1.20
1:A:263:A:C2'	1:A:264:U:H5''	1.71	1.19
1:A:1375:A:H2'	1:A:1376:U:C6	1.77	1.19
1:A:371:G:O2'	1:A:372:C:H5'	1.40	1.18
10:J:99:LEU:O	10:J:103:TRP:HB2	1.40	1.18

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:61:ALA:HB1	14:N:94:ALA:HB2	1.24	1.18
1:A:173:U:C1'	1:A:197:A:N3	2.05	1.18
9:I:100:ASN:HD22	21:U:23:LYS:HG2	1.09	1.17
1:A:961:U:O2'	1:A:962:C:H5'	1.43	1.17
6:F:14:ILE:HG21	6:F:179:ARG:HA	1.22	1.17
1:A:263:A:H2'	1:A:264:U:H5''	1.22	1.17
1:A:22:G:H4'	1:A:885:G:C8	1.80	1.17
6:F:47:LEU:HD11	6:F:83:ARG:NH2	1.60	1.17
8:H:82:VAL:HB	8:H:138:ALA:HB2	1.24	1.16
5:E:56:ARG:NH1	5:E:56:ARG:HB3	1.59	1.16
13:M:79:ARG:HH12	13:M:82:ILE:HD12	1.02	1.16
20:T:78:GLU:HG2	20:T:81:ARG:HB2	1.21	1.16
14:N:110:ASP:HA	21:U:88:LYS:HD2	1.23	1.16
1:A:946:A:H2'	1:A:947:G:C8	1.80	1.16
14:N:32:ILE:HG22	14:N:40:ILE:HD11	1.27	1.16
11:K:36:LEU:HD11	11:K:59:LEU:HD22	1.27	1.15
1:A:173:U:O4'	1:A:197:A:N3	1.77	1.15
7:G:12:CYS:CA	7:G:19:LEU:HB2	1.77	1.15
7:G:20:TYR:HB2	7:G:27:TYR:HA	1.16	1.14
20:T:91:ARG:HA	20:T:94:ASN:HD22	1.04	1.14
1:A:1443:G:H4'	1:A:1446:A:H5'	1.26	1.14
5:E:15:VAL:CG2	5:E:209:ARG:HD2	1.76	1.14
1:A:1245:A:H2'	1:A:1246:C:C6	1.81	1.14
16:P:16:ASP:HA	16:P:19:LEU:HG	1.14	1.14
20:T:18:THR:HG23	20:T:43:LEU:HD11	1.28	1.13
8:H:102:ALA:HB2	8:H:120:THR:HG22	1.16	1.13
1:A:1277:C:H4'	1:A:1282:C:H1'	1.30	1.13
1:A:453:A:N6	1:A:480:U:H3	1.45	1.13
15:O:43:VAL:HG23	15:O:55:VAL:HG21	1.31	1.13
16:P:60:VAL:HA	16:P:63:THR:HG22	1.29	1.13
9:I:77:ARG:HA	9:I:80:ARG:HD2	1.16	1.13
1:A:380:G:N2	1:A:382:A:H3'	1.64	1.12
1:A:1342:C:H1'	12:L:124:GLN:OE1	1.48	1.12
23:W:40:ALA:HA	23:W:55:ILE:HD13	1.29	1.12
1:A:1418:A:H2'	1:A:1419:G:H5'	1.25	1.12
2:C:34:C:C2'	2:C:35:A:H5''	1.79	1.12
1:A:1107:C:H2'	1:A:1108:G:H5'	1.30	1.12
1:A:862:C:H1'	1:A:874:G:H5''	1.25	1.12
10:J:29:LYS:HD2	10:J:101:LEU:HD22	1.30	1.12
11:K:10:LEU:HD11	11:K:85:ARG:HD3	1.27	1.12
1:A:559:A:H4'	1:A:560:U:H5'	1.13	1.11
1:A:1408:A:H2	1:A:1494:G:O2'	1.31	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:44:ALA:HB3	23:W:91:LEU:HD12	1.21	1.11
19:S:3:LYS:HD2	19:S:24:ALA:HB2	1.16	1.11
11:K:64:LYS:HG2	11:K:79:VAL:HG21	1.20	1.11
5:E:54:THR:HG21	5:E:201:ILE:HD11	1.25	1.11
6:F:11:ARG:HD2	6:F:16:ARG:HH21	1.06	1.11
14:N:95:ILE:HA	14:N:98:LEU:HD12	1.17	1.11
1:A:130:A:H4'	1:A:190:G:C2	1.84	1.11
1:A:1526:G:O2'	1:A:1527:C:H5'	1.48	1.11
23:W:45:GLN:NE2	23:W:91:LEU:HB3	1.64	1.11
1:A:946:A:H2'	1:A:947:G:H8	1.02	1.11
1:A:599:C:H4'	11:K:130:GLY:HA3	1.19	1.11
19:S:43:LYS:HA	19:S:48:TRP:HE3	1.15	1.11
6:F:157:ILE:HG13	6:F:164:ARG:HG2	1.13	1.11
9:I:76:ALA:HB1	9:I:80:ARG:NH2	1.64	1.11
18:R:29:VAL:HG11	18:R:81:LEU:HD21	1.21	1.11
1:A:652:U:H1'	1:A:653:A:H2	1.11	1.10
5:E:14:GLY:HA3	5:E:209:ARG:NH2	1.64	1.10
8:H:78:HIS:HB3	11:K:107:LEU:HD21	1.25	1.10
10:J:115:ARG:HB2	10:J:118:VAL:HG23	1.22	1.10
9:I:48:LEU:HB3	21:U:78:LEU:HD23	1.32	1.10
9:I:98:LEU:HD22	9:I:101:ALA:HB2	1.20	1.10
7:G:159:ARG:O	7:G:163:GLU:HB3	1.49	1.10
14:N:111:ASP:OD2	14:N:113:PRO:HD3	1.49	1.10
14:N:45:GLY:O	14:N:50:TYR:HB3	1.48	1.10
16:P:104:ARG:HG2	16:P:105:THR:HG23	1.32	1.10
1:A:191(C):G:H2'	1:A:191(D):U:C6	1.85	1.10
6:F:91:LEU:HD11	6:F:99:VAL:H	1.09	1.10
11:K:95:VAL:HB	11:K:99:GLU:OE1	1.51	1.10
2:C:74:C:H2'	2:C:75:C:H5''	1.26	1.10
19:S:72:ARG:HD3	19:S:73:LEU:N	1.67	1.10
5:E:101:MET:HA	5:E:108:ILE:HG13	1.14	1.09
2:C:37:A:H2'	2:C:38:A:H8	1.17	1.09
5:E:15:VAL:HG11	5:E:209:ARG:HB3	1.12	1.09
12:L:112:LYS:HE2	12:L:117:HIS:HA	1.32	1.09
11:K:12:ARG:HD2	11:K:26:VAL:HG23	1.33	1.09
19:S:32:TYR:HE2	19:S:35:LYS:HB2	1.14	1.09
7:G:60:GLU:HG2	7:G:203:VAL:HG23	1.29	1.09
15:O:126:LYS:HE3	15:O:126:LYS:H	1.16	1.09
5:E:69:LEU:HB3	5:E:162:ILE:HG22	1.33	1.09
11:K:126:LYS:HZ2	11:K:127:LEU:HD23	1.01	1.09
5:E:16:HIS:HE1	5:E:213:LEU:HD13	1.14	1.09
6:F:83:ARG:HG3	6:F:87:LEU:HD11	1.29	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:23:TYR:HB3	16:P:67:GLU:HA	1.31	1.09
10:J:46:ALA:HA	10:J:49:ILE:HD13	1.29	1.09
13:M:24:VAL:HA	13:M:34:VAL:HG21	1.28	1.09
2:C:34:C:H2'	2:C:35:A:H5''	1.25	1.09
6:F:91:LEU:HD21	6:F:98:ASN:HA	1.19	1.09
15:O:93:LEU:HD12	15:O:96:VAL:HG21	1.16	1.09
21:U:44:LEU:HG	21:U:45:SER:H	1.17	1.09
9:I:76:ALA:HB1	9:I:80:ARG:HH21	1.02	1.08
11:K:29:SER:HB2	11:K:32:LYS:HZ1	1.04	1.08
16:P:48:LEU:HD13	16:P:53:VAL:HG22	1.32	1.08
1:A:1338:G:H21	2:C:41:C:H1'	1.18	1.08
5:E:78:GLN:HG3	5:E:94:ASN:HB3	1.13	1.08
18:R:64:ARG:HA	18:R:67:LEU:HD12	1.29	1.08
19:S:75:ARG:HA	19:S:80:PHE:CB	1.83	1.08
1:A:599:C:H4'	11:K:130:GLY:CA	1.83	1.08
5:E:150:SER:HA	5:E:153:ARG:HB2	1.12	1.08
9:I:23:LYS:HA	9:I:26:ILE:HD12	1.08	1.08
1:A:190:G:H4'	1:A:191(A):G:OP2	1.54	1.07
5:E:55:PHE:HE2	5:E:218:ALA:HA	1.11	1.07
18:R:33:THR:O	18:R:36:ILE:HG22	1.53	1.07
19:S:75:ARG:HA	19:S:80:PHE:HB2	1.09	1.07
6:F:157:ILE:HG13	6:F:164:ARG:CG	1.84	1.07
6:F:91:LEU:HD23	6:F:92:ALA:N	1.69	1.07
11:K:89:PRO:HA	11:K:92:ARG:HE	1.14	1.07
1:A:950:U:H5''	16:P:102:ARG:HH22	1.13	1.07
1:A:819:A:H4'	1:A:820:U:OP2	1.48	1.07
9:I:22:GLU:HA	9:I:25:ILE:HD12	1.33	1.07
12:L:10:ARG:HA	12:L:104:ARG:NE	1.67	1.07
15:O:88:GLY:H	15:O:98:TYR:HA	1.07	1.07
1:A:297:G:H21	1:A:299:G:H3'	1.15	1.07
12:L:55:ALA:HB3	12:L:58:HIS:CE1	1.90	1.07
4:I:15:A:H8	4:I:15:A:H5''	1.12	1.07
5:E:208:ILE:HG21	5:E:239:VAL:HG11	1.34	1.07
20:T:75:ARG:HH22	20:T:77:VAL:HG13	1.15	1.07
5:E:92:TYR:H	5:E:152:PHE:HA	1.18	1.07
19:S:14:ASN:HB2	19:S:42:ARG:HH22	1.15	1.07
1:A:928:G:H4'	1:A:1533:C:H1'	1.16	1.07
5:E:25:ASN:HD21	5:E:27:LYS:HG2	1.13	1.07
14:N:84:VAL:HG11	21:U:88:LYS:HD3	1.36	1.07
2:C:37:A:H2'	2:C:38:A:C8	1.88	1.06
22:V:41:VAL:HB	22:V:42:PRO:HD2	1.36	1.06
1:A:1265:G:H2'	1:A:1266:G:H5'	1.33	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:313:A:H2'	1:A:314:C:C6	1.90	1.06
14:N:58:PRO:HB3	14:N:90:GLY:HA3	1.33	1.06
23:W:63:ILE:HD13	23:W:80:ARG:HB3	1.29	1.06
15:O:5:PRO:HB3	15:O:10:LEU:HD21	1.35	1.06
18:R:62:GLN:HE21	18:R:66:LEU:HD21	1.10	1.06
5:E:185:ILE:CG2	5:E:199:TYR:HB2	1.85	1.06
1:A:1202:G:H1'	17:Q:29:ARG:HD2	1.34	1.06
7:G:20:TYR:HA	7:G:26:CYS:SG	1.95	1.06
6:F:182:ILE:HG23	6:F:203:PHE:HA	1.35	1.06
9:I:100:ASN:ND2	21:U:23:LYS:HG2	1.71	1.06
1:A:558:G:H3'	1:A:559:A:H5''	1.37	1.06
1:A:1129:C:H5'	1:A:1130:A:OP1	1.54	1.06
1:A:1119:C:H2'	1:A:1120:G:C8	1.90	1.06
5:E:111:ARG:HA	5:E:111:ARG:HH11	1.21	1.06
11:K:103:VAL:HB	11:K:108:GLY:HA3	1.38	1.06
1:A:1501:C:H2'	1:A:1504:G:O6	1.56	1.06
9:I:36:ARG:HH11	9:I:36:ARG:HB3	1.13	1.06
7:G:74:GLN:HA	7:G:77:ASN:HD22	1.15	1.05
13:M:23:ILE:HG23	13:M:85:LEU:HD23	1.37	1.05
5:E:67:THR:HG21	5:E:155:LEU:HD11	1.33	1.05
11:K:14:ARG:HB3	11:K:14:ARG:HH11	1.19	1.05
15:O:117:ARG:HH22	15:O:124:LYS:HG2	1.18	1.05
21:U:70:ILE:HG22	21:U:74:ARG:HE	1.18	1.05
21:U:55:ARG:HH11	21:U:55:ARG:HB3	1.19	1.05
7:G:173:TRP:HA	7:G:186:LEU:HD21	1.39	1.05
16:P:91:ARG:HH11	16:P:96:LEU:HG	1.17	1.05
1:A:259:G:H3'	23:W:83:ARG:HH22	1.21	1.05
8:H:80:ILE:HD11	8:H:91:LEU:HB3	1.33	1.05
15:O:117:ARG:HH21	15:O:124:LYS:HA	1.19	1.05
5:E:55:PHE:HA	5:E:58:ILE:HD12	1.35	1.05
11:K:34:GLU:O	11:K:37:ARG:HB3	1.56	1.05
5:E:185:ILE:HG22	5:E:199:TYR:HB2	1.09	1.05
1:A:279:A:H1'	1:A:281:G:N3	1.72	1.05
7:G:18:LYS:HG2	7:G:33:MET:HB3	1.38	1.05
9:I:42:GLU:HG2	9:I:42:GLU:O	1.56	1.05
6:F:47:LEU:HD11	6:F:83:ARG:HH21	1.09	1.05
7:G:94:LEU:HA	7:G:97:LEU:HD12	1.37	1.05
9:I:45:LEU:HG	9:I:59:TYR:CD1	1.92	1.05
1:A:1200:C:H5'	1:A:1202:G:OP1	1.57	1.05
10:J:87:VAL:HB	10:J:156:TRP:CZ3	1.92	1.05
20:T:5:VAL:HG22	20:T:60:ILE:HA	1.37	1.05
14:N:99:GLN:HB3	14:N:105:VAL:HG11	1.39	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:43:C:H5''	19:S:12:LYS:HB3	1.37	1.04
5:E:200:ILE:O	5:E:202:PRO:HD3	1.57	1.04
14:N:69:ALA:HB1	14:N:103:LEU:HD12	1.36	1.04
1:A:571:U:H3'	1:A:572:A:H5''	1.06	1.04
5:E:18:GLY:HA3	5:E:41:ILE:HA	1.37	1.04
5:E:82:ARG:HA	5:E:92:TYR:CE1	1.92	1.04
5:E:136:VAL:HA	5:E:139:LYS:HZ2	1.22	1.04
1:A:279:A:H1'	1:A:281:G:C2	1.91	1.04
1:A:665:A:H2'	1:A:725:G:N2	1.73	1.04
5:E:87:ARG:NH1	5:E:233:SER:HA	1.73	1.04
1:A:1540:U:H2'	1:A:1541:U:C6	1.92	1.04
1:A:1513:A:H2'	1:A:1514:C:C6	1.92	1.04
13:M:60:ARG:HH11	13:M:60:ARG:N	1.55	1.04
6:F:67:THR:HA	6:F:102:ASN:O	1.57	1.04
11:K:18:ARG:HH11	11:K:18:ARG:CA	1.70	1.04
19:S:43:LYS:HA	19:S:48:TRP:CE3	1.92	1.04
7:G:59:ARG:HA	7:G:59:ARG:NH1	1.71	1.04
21:U:58:LEU:HB3	21:U:62:GLU:HB3	1.37	1.04
1:A:872:A:H2'	1:A:873:A:H5''	1.06	1.04
16:P:16:ASP:HB2	16:P:30:ALA:HB1	1.39	1.04
1:A:1394:A:N7	1:A:1501:C:H1'	1.73	1.03
1:A:279:A:H5'	1:A:280:C:H3'	1.40	1.03
7:G:98:GLU:HA	7:G:103:ASN:ND2	1.73	1.03
21:U:26:LEU:HB2	21:U:42:ARG:NH1	1.73	1.03
1:A:932:C:H5''	10:J:3:ARG:HD2	1.39	1.03
6:F:11:ARG:HG3	6:F:16:ARG:HE	1.20	1.03
7:G:31:CYS:SG	7:G:33:MET:SD	2.55	1.03
4:I:13:A:H8	4:I:13:A:OP2	1.38	1.03
1:A:1251:A:H2'	1:A:1252:A:C8	1.92	1.03
1:A:372:C:N4	1:A:389:A:H62	1.55	1.03
5:E:91:PRO:HG3	5:E:154:LEU:HB3	1.03	1.03
7:G:20:TYR:HB2	7:G:27:TYR:CA	1.88	1.03
1:A:173:U:H1'	1:A:197:A:C2	1.93	1.03
1:A:1202:G:H21	1:A:1203:C:H1'	1.22	1.03
1:A:173:U:C2	1:A:197:A:H2	1.77	1.03
1:A:872:A:C2'	1:A:873:A:H5''	1.87	1.03
13:M:45:ARG:HH11	13:M:45:ARG:HB3	1.16	1.03
21:U:52:PRO:HG2	21:U:54:ARG:HB3	1.40	1.03
6:F:116:VAL:O	6:F:119:ARG:HB3	1.57	1.03
6:F:91:LEU:HD11	6:F:99:VAL:N	1.73	1.03
8:H:79:GLU:HB3	8:H:92:LYS:HA	1.40	1.03
11:K:67:PRO:HD2	11:K:77:GLU:H	1.21	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:979:C:N4	17:Q:18:VAL:HB	1.74	1.03
5:E:185:ILE:HG22	5:E:199:TYR:CB	1.89	1.02
10:J:69:VAL:HG11	10:J:104:LEU:HD21	1.39	1.02
11:K:97:VAL:HG22	11:K:98:LYS:H	1.20	1.02
14:N:101:SER:O	14:N:103:LEU:HG	1.59	1.02
19:S:44:THR:HG23	19:S:45:THR:H	1.18	1.02
19:S:49:LEU:HD11	19:S:51:VAL:HG22	1.38	1.02
21:U:66:LEU:HD12	21:U:67:ALA:N	1.74	1.02
1:A:1399:C:N4	1:A:1502:A:N7	2.05	1.02
7:G:12:CYS:HA	7:G:19:LEU:CB	1.90	1.02
1:A:775:G:H2'	1:A:776:G:H8	1.23	1.02
15:O:28:LYS:HE3	15:O:33:ARG:HH12	1.22	1.02
16:P:10:PRO:CG	16:P:18:ALA:HB1	1.89	1.02
20:T:81:ARG:HG3	20:T:84:LEU:HD21	1.38	1.02
1:A:942:G:H21	12:L:124:GLN:NE2	1.56	1.02
1:A:968:A:H4'	1:A:969:A:OP2	1.58	1.02
16:P:88:ARG:HG2	16:P:98:VAL:HG12	1.37	1.02
9:I:98:LEU:HD21	21:U:28:GLU:HA	1.40	1.02
1:A:571:U:C3'	1:A:572:A:H5''	1.89	1.02
7:G:83:SER:HA	7:G:89:THR:OG1	1.57	1.02
11:K:126:LYS:HD2	11:K:127:LEU:N	1.74	1.02
14:N:78:GLN:O	14:N:104:GLN:HB3	1.60	1.02
6:F:157:ILE:CG1	6:F:164:ARG:HG2	1.90	1.02
7:G:47:ARG:HB2	7:G:47:ARG:NH1	1.73	1.02
1:A:713:G:H21	1:A:777:A:H1'	1.25	1.02
1:A:173:U:C2	1:A:197:A:C2	2.48	1.02
5:E:222:ILE:HD13	5:E:226:ARG:HH21	1.23	1.02
1:A:381:C:H2'	1:A:382:A:C8	1.93	1.01
5:E:155:LEU:CB	5:E:159:PRO:HG3	1.90	1.01
21:U:47:THR:HB	21:U:49:LYS:HZ1	1.22	1.01
23:W:84:LEU:O	23:W:88:VAL:HG23	1.59	1.01
1:A:449:C:H2'	1:A:450:G:O4'	1.60	1.01
7:G:22:LYS:HB3	7:G:26:CYS:HB3	1.42	1.01
15:O:56:ALA:HB2	15:O:70:ILE:HG12	1.42	1.01
1:A:1339:A:H2'	1:A:1340:A:H5'	1.40	1.01
1:A:573:A:H2'	1:A:574:A:C8	1.95	1.01
6:F:30:ARG:HB3	17:Q:36:PHE:O	1.59	1.01
15:O:59:ARG:HA	15:O:64:TYR:O	1.59	1.01
16:P:71:ARG:HH11	16:P:71:ARG:HB3	1.26	1.01
1:A:1064:G:H1'	1:A:1066:C:C4	1.95	1.01
1:A:173:U:C1'	1:A:197:A:C2	2.43	1.01
10:J:79:ARG:CZ	10:J:84:ASN:HB3	1.89	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:47:C:H4'	1:A:48:C:C5'	1.89	1.01
1:A:792:A:H4'	1:A:793:U:OP1	1.59	1.01
21:U:46:GLU:HB3	21:U:85:LEU:HD13	1.39	1.01
5:E:222:ILE:HD13	5:E:226:ARG:NH2	1.75	1.01
6:F:138:VAL:HG12	6:F:170:GLN:HE21	1.24	1.01
7:G:55:ALA:O	7:G:59:ARG:HG2	1.61	1.01
1:A:959:A:H3'	1:A:960:U:H5''	1.42	1.01
1:A:1180:A:H2'	1:A:1181:G:H5'	1.40	1.01
11:K:38:ILE:HG13	11:K:118:VAL:HG11	1.39	1.01
18:R:29:VAL:HG21	18:R:81:LEU:HD11	1.38	1.01
21:U:55:ARG:NH1	21:U:55:ARG:HB3	1.76	1.00
1:A:1519:A:H2'	1:A:1520:G:H5'	1.42	1.00
11:K:18:ARG:HA	11:K:18:ARG:HH11	1.22	1.00
16:P:14:ARG:HA	16:P:44:ARG:HA	1.40	1.00
1:A:928:G:H4'	1:A:1533:C:C1'	1.90	1.00
1:A:783:C:H2'	1:A:784:C:H5'	1.42	1.00
23:W:19:SER:O	23:W:23:ARG:HB3	1.61	1.00
6:F:126:ARG:HB3	6:F:128:PHE:CE1	1.95	1.00
7:G:141:ARG:HD2	7:G:142:PRO:HD2	1.42	1.00
7:G:40:PRO:O	7:G:44:GLY:HA3	1.59	1.00
13:M:7:LYS:O	13:M:97:GLU:HB2	1.61	1.00
1:A:607:A:C2	1:A:608:A:H1'	1.97	1.00
1:A:409:G:H5''	7:G:24:GLU:OE1	1.62	1.00
10:J:111:ARG:HD2	10:J:123:GLU:OE2	1.62	1.00
1:A:1249:C:O2	12:L:70:LYS:HE2	1.61	1.00
13:M:24:VAL:HG22	13:M:34:VAL:HG11	1.38	1.00
10:J:126:ASP:HB3	10:J:131:LYS:O	1.62	1.00
1:A:328:C:H4'	1:A:329:A:O5'	1.62	1.00
1:A:817:C:O2	1:A:817:C:H2'	1.59	1.00
9:I:4:TYR:CE1	9:I:72:VAL:HG11	1.96	1.00
11:K:97:VAL:HG22	11:K:98:LYS:N	1.76	1.00
6:F:150:LYS:HB2	6:F:173:VAL:HG21	1.43	1.00
13:M:25:GLU:HA	13:M:28:ARG:HD2	1.43	1.00
18:R:54:ARG:HD3	18:R:55:GLY:N	1.75	1.00
2:C:14:A:N6	2:C:21:A:H2	1.58	1.00
14:N:92:GLU:OE2	14:N:96:ARG:HB2	1.62	1.00
3:D:73:A:H2'	3:D:74:C:H5''	1.42	1.00
1:A:1124:G:N2	1:A:1126:U:H3	1.58	1.00
1:A:47:C:H4'	1:A:48:C:H5'	1.41	1.00
6:F:29:TYR:HE1	13:M:65:LEU:HD11	1.22	1.00
15:O:28:LYS:HD2	15:O:33:ARG:HH22	1.21	1.00
1:A:1157:A:H1'	1:A:1181:G:H21	1.22	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1344:C:H5'	12:L:120:ARG:O	1.62	0.99
18:R:34:LEU:HG	18:R:35:ARG:N	1.67	0.99
1:A:1435:G:H2'	1:A:1436:U:C5	1.95	0.99
5:E:68:ILE:HG13	5:E:90:MET:HG3	1.44	0.99
21:U:44:LEU:CG	21:U:45:SER:H	1.71	0.99
1:A:1192:C:N4	1:A:1193:G:C5	2.29	0.99
1:A:1411:C:H2'	1:A:1412:C:H6	1.27	0.99
1:A:570:G:H2'	1:A:571:U:C5	1.97	0.99
10:J:155:ARG:HD3	10:J:156:TRP:H	1.26	0.99
1:A:1157:A:C1'	1:A:1181:G:H21	1.75	0.99
1:A:291:C:H3'	1:A:305:G:H22	1.26	0.99
5:E:91:PRO:CG	5:E:154:LEU:HB3	1.92	0.99
6:F:116:VAL:HG11	6:F:141:VAL:HG21	1.41	0.99
8:H:51:VAL:O	8:H:55:VAL:HG23	1.62	0.99
16:P:34:LEU:HD23	16:P:39:ILE:HG13	1.43	0.99
1:A:1073:U:H2'	1:A:1074:G:H8	1.27	0.99
14:N:58:PRO:HB2	14:N:93:GLN:HG3	1.42	0.99
21:U:70:ILE:O	21:U:74:ARG:HD2	1.62	0.99
1:A:754:C:H4'	18:R:72:ARG:NH2	1.78	0.99
5:E:101:MET:CA	5:E:108:ILE:HG13	1.90	0.99
7:G:21:LEU:HD13	7:G:67:ILE:HG22	1.43	0.99
22:V:5:LEU:HB2	22:V:9:VAL:HG22	1.44	0.99
23:W:75:ASN:O	23:W:78:ALA:HB3	1.63	0.99
1:A:12:U:H2'	1:A:13:U:H5	1.25	0.99
1:A:262:A:H2'	1:A:263:A:C8	1.95	0.99
1:A:828:A:H5'	1:A:859:A:N1	1.76	0.99
5:E:184:VAL:O	5:E:198:ASP:HB2	1.61	0.99
1:A:878:G:OP1	11:K:88:LYS:HB3	1.63	0.99
18:R:7:GLU:HA	18:R:10:LYS:HG2	1.45	0.99
1:A:68:G:H5'	1:A:171:A:H1'	1.42	0.99
5:E:57:PHE:CD1	5:E:199:TYR:HE1	1.79	0.99
5:E:91:PRO:HG3	5:E:155:LEU:H	1.24	0.99
8:H:71:LEU:HD23	8:H:72:GLN:N	1.78	0.99
10:J:115:ARG:HB2	10:J:118:VAL:CG2	1.93	0.99
19:S:72:ARG:NH1	19:S:73:LEU:HB2	1.78	0.99
23:W:56:MET:O	23:W:59:ALA:HB3	1.63	0.99
1:A:1408:A:C2	1:A:1495:U:H5	1.81	0.99
1:A:42:G:H2'	1:A:43:C:C6	1.96	0.99
5:E:82:ARG:HA	5:E:92:TYR:HE1	1.26	0.99
7:G:59:ARG:HA	7:G:59:ARG:CZ	1.91	0.99
1:A:1465:C:O2	1:A:1465:C:H2'	1.61	0.99
1:A:173:U:C4'	1:A:197:A:H1'	1.93	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:298:A:H3'	1:A:299:G:H8	1.28	0.99
6:F:38:ARG:HB3	6:F:38:ARG:NH1	1.77	0.99
15:O:54:LYS:HB3	15:O:70:ILE:HD12	1.41	0.99
10:J:104:LEU:HD22	10:J:134:ALA:HB1	1.43	0.98
8:H:82:VAL:HG12	8:H:89:ILE:HG22	1.39	0.98
11:K:126:LYS:NZ	11:K:127:LEU:HD23	1.78	0.98
13:M:79:ARG:HH11	13:M:79:ARG:HA	1.25	0.98
1:A:1262:C:H2'	1:A:1263:C:C6	1.98	0.98
1:A:576:G:N7	1:A:881:G:H1'	1.78	0.98
7:G:57:ARG:HB3	7:G:206:PHE:HB2	1.44	0.98
18:R:33:THR:CG2	18:R:87:ILE:HD11	1.93	0.98
1:A:392:G:H5'	19:S:12:LYS:NZ	1.76	0.98
20:T:67:LYS:HA	20:T:70:ARG:NH2	1.78	0.98
1:A:1202:G:N2	1:A:1203:C:H1'	1.77	0.98
9:I:36:ARG:NH1	9:I:36:ARG:HB3	1.79	0.98
15:O:33:ARG:O	15:O:84:LEU:HG	1.62	0.98
15:O:126:LYS:HE3	15:O:126:LYS:N	1.78	0.98
7:G:131:ARG:H	7:G:131:ARG:HH11	1.10	0.98
10:J:10:ARG:HB3	10:J:10:ARG:HH11	1.25	0.98
10:J:69:VAL:HG21	10:J:104:LEU:HD21	1.45	0.98
1:A:1062:U:H2'	1:A:1063:C:C6	1.98	0.98
15:O:68:ALA:HB1	15:O:99:HIS:HA	1.44	0.98
1:A:624:C:H4'	19:S:10:GLY:O	1.62	0.98
6:F:35:GLU:HA	6:F:38:ARG:HG2	1.42	0.98
8:H:74:GLY:C	8:H:115:VAL:HG12	1.83	0.98
1:A:21:G:H2'	1:A:22:G:H8	1.28	0.98
1:A:942:G:H21	12:L:124:GLN:HE22	0.99	0.98
7:G:26:CYS:HA	7:G:31:CYS:HB3	1.44	0.98
3:D:19:G:N2	3:D:57:G:H1'	1.78	0.98
1:A:877:C:OP1	11:K:88:LYS:HD3	1.64	0.97
5:E:204:ASN:HD22	5:E:205:ASP:N	1.61	0.97
5:E:81:VAL:HG12	5:E:92:TYR:HD1	1.29	0.97
1:A:389:A:H2'	1:A:390:C:H5'	1.44	0.97
1:A:687:A:H61	1:A:703:G:H1'	1.26	0.97
11:K:11:THR:HA	11:K:14:ARG:CZ	1.94	0.97
1:A:1238:A:H62	1:A:1301:U:H3	1.06	0.97
1:A:1292:U:H2'	1:A:1293:G:C8	1.99	0.97
1:A:886:G:O2'	1:A:887:G:H5'	1.63	0.97
5:E:233:SER:HB3	5:E:234:PRO:HD2	1.43	0.97
12:L:10:ARG:CA	12:L:104:ARG:HE	1.77	0.97
23:W:50:GLU:OE1	23:W:100:ILE:HG12	1.64	0.97
1:A:113:G:H1'	1:A:354:G:H5''	1.47	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1492:A:N6	1:A:1494:G:H4'	1.79	0.97
1:A:327:A:H4'	1:A:328:C:OP1	1.61	0.97
1:A:197:A:N6	1:A:221:C:O4'	1.96	0.97
1:A:297:G:N2	1:A:299:G:H3'	1.78	0.97
5:E:187:LEU:HD11	5:E:204:ASN:O	1.63	0.97
5:E:57:PHE:HD1	5:E:199:TYR:CE1	1.82	0.97
6:F:36:ASP:O	6:F:39:ILE:HB	1.65	0.97
1:A:392:G:H5'	19:S:12:LYS:HZ3	1.30	0.97
13:M:8:LEU:HD13	13:M:94:VAL:HG11	1.47	0.97
20:T:18:THR:CG2	20:T:43:LEU:HD11	1.94	0.97
22:V:32:LYS:HA	22:V:50:ALA:HB3	1.46	0.97
5:E:130:ARG:HD3	5:E:131:PRO:HD2	1.43	0.97
22:V:62:ILE:HD11	22:V:67:VAL:HA	1.47	0.97
1:A:1205:U:H4'	6:F:195:VAL:HG13	1.47	0.97
7:G:19:LEU:H	7:G:33:MET:HE1	1.30	0.97
8:H:91:LEU:HD21	8:H:118:ILE:CG2	1.94	0.97
9:I:41:GLU:O	9:I:42:GLU:HB3	1.65	0.97
16:P:90:LEU:HD23	16:P:93:ARG:HD3	1.42	0.97
20:T:104:LYS:HD3	20:T:105:ALA:N	1.79	0.97
20:T:84:LEU:HD23	20:T:84:LEU:H	1.28	0.97
1:A:920:U:H2'	1:A:921:U:H6	1.25	0.97
5:E:56:ARG:HH11	5:E:56:ARG:HB3	1.22	0.97
11:K:39:LEU:HB3	11:K:45:ILE:CG2	1.94	0.97
1:A:684:A:H4'	14:N:12:ARG:HH22	1.29	0.97
1:A:1196:U:H5'	1:A:1197:G:C5'	1.94	0.97
1:A:1266:G:H2'	1:A:1268:A:OP2	1.65	0.97
6:F:135:LYS:HZ2	8:H:52:PRO:HG2	1.30	0.97
11:K:88:LYS:NZ	11:K:88:LYS:H	1.62	0.97
9:I:14:LEU:HD12	9:I:19:LEU:HD12	1.46	0.96
11:K:46:LYS:NZ	11:K:64:LYS:HA	1.80	0.96
12:L:47:LEU:HD12	12:L:51:ARG:HH22	1.28	0.96
13:M:79:ARG:HH11	13:M:79:ARG:CA	1.78	0.96
1:A:372:C:H42	1:A:389:A:H62	1.01	0.96
7:G:12:CYS:HA	7:G:19:LEU:HB2	0.99	0.96
11:K:29:SER:HB2	11:K:32:LYS:NZ	1.80	0.96
11:K:70:GLN:NE2	11:K:72:PRO:HD2	1.80	0.96
18:R:39:LEU:HD11	18:R:56:LEU:HB2	1.46	0.96
19:S:53:VAL:HG12	19:S:79:VAL:HG22	1.44	0.96
1:A:1534:A:H2'	1:A:1535:C:H6	1.27	0.96
1:A:64:G:H4'	1:A:65:U:C5'	1.94	0.96
5:E:180:LEU:O	5:E:181:PHE:HB2	1.63	0.96
1:A:1080:A:H5'	8:H:14:ARG:HH21	1.30	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1400:C:H4'	1:A:1401:G:OP2	1.62	0.96
5:E:107:THR:HA	5:E:110:GLN:OE1	1.64	0.96
7:G:170:VAL:HG12	7:G:171:GLY:H	1.28	0.96
1:A:953:G:O2'	16:P:125:ARG:HA	1.65	0.96
1:A:1005:A:H3'	1:A:1006:C:H6	1.25	0.96
5:E:155:LEU:HB2	5:E:159:PRO:HG3	1.45	0.96
5:E:91:PRO:HG3	5:E:154:LEU:CB	1.95	0.96
8:H:91:LEU:HD11	8:H:110:LEU:HD11	1.46	0.96
11:K:109:ILE:HG13	11:K:111:ILE:HD11	1.45	0.96
23:W:13:LEU:HD13	23:W:17:ARG:NH2	1.80	0.96
1:A:169:C:H2'	1:A:170:U:H6	1.30	0.96
1:A:253:U:H2'	1:A:254:G:H8	1.30	0.96
7:G:170:VAL:CG2	7:G:176:LEU:HB2	1.96	0.96
7:G:20:TYR:HA	7:G:26:CYS:O	1.65	0.96
9:I:23:LYS:HA	9:I:26:ILE:CD1	1.96	0.96
15:O:45:PRO:HG3	15:O:50:SER:HA	1.43	0.96
1:A:976:G:OP1	17:Q:32:SER:HA	1.64	0.96
20:T:97:SER:O	20:T:103:GLY:HA2	1.64	0.96
7:G:47:ARG:CZ	7:G:47:ARG:HB2	1.91	0.96
1:A:1196:U:H5'	1:A:1197:G:H5'	1.47	0.96
1:A:1363:A:H1'	1:A:1365:G:N7	1.81	0.96
6:F:84:ILE:HG13	6:F:101:LEU:HD22	1.47	0.96
2:C:74:C:C2'	2:C:75:C:H5''	1.96	0.96
1:A:1126:U:H2'	1:A:1127:G:H8	1.30	0.96
11:K:19:VAL:HG23	11:K:21:LYS:HG2	1.46	0.96
1:A:519:C:H2'	1:A:520:A:H5'	1.45	0.96
1:A:628:G:H2'	1:A:629:G:C8	1.99	0.96
12:L:10:ARG:HA	12:L:104:ARG:HE	0.82	0.96
14:N:54:ARG:HG3	14:N:54:ARG:HH11	1.31	0.96
5:E:57:PHE:HD1	5:E:199:TYR:HE1	1.08	0.95
10:J:64:GLN:HB3	10:J:128:ALA:HB1	1.48	0.95
11:K:112:LEU:HD11	11:K:114:THR:HG22	1.48	0.95
1:A:21:G:H2'	1:A:22:G:C8	2.01	0.95
1:A:484:G:H5'	1:A:486:U:H1'	1.47	0.95
1:A:834:C:O2'	1:A:835:U:H5'	1.66	0.95
5:E:16:HIS:CE1	5:E:213:LEU:HD13	2.00	0.95
1:A:197:A:H61	1:A:221:C:H5'	1.31	0.95
8:H:102:ALA:HB2	8:H:120:THR:CG2	1.95	0.95
1:A:1080:A:H5'	8:H:14:ARG:NH2	1.79	0.95
18:R:75:PRO:O	18:R:78:TYR:HB3	1.66	0.95
19:S:39:TYR:CE1	19:S:41:PRO:HG3	2.00	0.95
1:A:1256:A:H61	1:A:1278:U:H2'	1.26	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:648:A:H2'	1:A:649:G:H5'	1.47	0.95
1:A:677:U:H2'	1:A:678:U:C6	2.01	0.95
5:E:25:ASN:C	5:E:25:ASN:HD22	1.70	0.95
7:G:57:ARG:HH22	8:H:107:ARG:NE	1.64	0.95
12:L:119:ALA:O	12:L:120:ARG:HG3	1.67	0.95
12:L:47:LEU:HD21	12:L:50:LEU:HD13	1.45	0.95
13:M:24:VAL:HG21	13:M:37:PRO:HD3	1.47	0.95
21:U:36:ASN:O	21:U:40:LEU:HG	1.65	0.95
1:A:1053:G:H5'	1:A:1054:C:H5'	1.45	0.95
1:A:1236:A:H4'	1:A:1304:G:H4'	1.45	0.95
1:A:1376:U:H3	1:A:1377:A:H62	1.09	0.95
1:A:764:C:H2'	1:A:765:G:C8	2.02	0.95
5:E:67:THR:HB	5:E:155:LEU:HD21	1.47	0.95
7:G:105:VAL:HG21	7:G:121:VAL:HG22	1.48	0.95
7:G:59:ARG:NH2	7:G:66:ARG:HH12	1.65	0.95
11:K:36:LEU:HD23	11:K:36:LEU:H	1.31	0.95
15:O:41:ARG:HB3	15:O:41:ARG:NH1	1.81	0.95
1:A:994:A:N7	1:A:1216:G:H4'	1.81	0.95
1:A:1271:G:OP1	1:A:1314:C:H5''	1.66	0.95
1:A:265:G:H2'	1:A:267:C:H5	1.32	0.95
1:A:817:C:N4	1:A:1529:G:O6	1.99	0.95
1:A:888:G:N2	1:A:909:A:H62	1.63	0.95
7:G:59:ARG:HH22	7:G:66:ARG:HH12	1.07	0.95
1:A:691:G:H22	14:N:51:LYS:NZ	1.64	0.95
21:U:63:GLN:HA	21:U:66:LEU:CD2	1.97	0.95
23:W:50:GLU:H	23:W:99:LEU:HD12	1.30	0.95
1:A:1391:U:H2'	1:A:1392:G:C8	2.01	0.95
1:A:12:U:H2'	1:A:13:U:C5	2.00	0.95
1:A:384:G:H2'	1:A:385:C:C6	2.02	0.95
1:A:558:G:C3'	1:A:559:A:H5''	1.96	0.95
1:A:64:G:H4'	1:A:65:U:H5''	1.46	0.95
1:A:652:U:H1'	1:A:653:A:C2	2.01	0.95
1:A:705:U:C5	1:A:706:A:N7	2.35	0.95
5:E:88:ALA:HB2	5:E:219:VAL:CG1	1.96	0.95
6:F:110:ASN:HD22	6:F:141:VAL:HA	1.30	0.95
7:G:130:GLY:HA3	7:G:131:ARG:NH1	1.81	0.95
11:K:6:ILE:HG23	11:K:7:ALA:H	1.30	0.95
20:T:62:SER:HB3	20:T:72:ARG:HE	1.31	0.95
1:A:1260:C:H4'	1:A:1284:C:H5'	1.46	0.95
1:A:1428:A:H2'	1:A:1429:C:C6	2.02	0.95
1:A:1514:C:H2'	1:A:1515:C:H6	1.31	0.95
1:A:313:A:H2'	1:A:314:C:C5	2.00	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:511:C:HO2'	1:A:512:U:H6	0.95	0.95
1:A:722:A:H2'	1:A:724:G:H8	1.27	0.95
5:E:102:LEU:HD12	5:E:102:LEU:H	1.32	0.95
7:G:8:VAL:HG21	7:G:115:ARG:HH22	1.28	0.95
5:E:181:PHE:CD1	11:K:71:GLY:HA3	2.02	0.95
11:K:72:PRO:O	11:K:73:ASP:HB3	1.67	0.95
1:A:701:C:H4'	1:A:702:A:O5'	1.63	0.95
7:G:122:ARG:HA	7:G:134:ASP:HB2	1.49	0.95
11:K:46:LYS:HZ2	11:K:64:LYS:HA	1.28	0.95
13:M:6:ILE:HD11	13:M:72:VAL:HB	1.49	0.95
20:T:4:LYS:HD2	20:T:5:VAL:H	1.31	0.95
1:A:1253:G:N1	1:A:1285:A:N6	2.15	0.94
1:A:1375:A:H2'	1:A:1376:U:H6	1.24	0.94
15:O:28:LYS:CE	15:O:33:ARG:HH12	1.78	0.94
23:W:57:ARG:HH12	23:W:102:GLY:HA3	1.31	0.94
4:1:15:A:C8	4:1:15:A:H5''	2.02	0.94
6:F:66:VAL:O	6:F:102:ASN:HB2	1.66	0.94
1:A:482:A:H2	1:A:483:C:O4'	1.50	0.94
8:H:7:GLU:O	8:H:34:VAL:HG13	1.67	0.94
11:K:29:SER:CB	11:K:32:LYS:HZ1	1.80	0.94
12:L:110:GLU:O	12:L:111:ARG:HB2	1.66	0.94
1:A:791:G:O6	4:1:15:A:N1	1.99	0.94
5:E:15:VAL:HG21	5:E:209:ARG:HD2	1.44	0.94
7:G:187:ARG:HG3	7:G:188:LEU:N	1.78	0.94
16:P:13:LYS:HA	16:P:44:ARG:CZ	1.96	0.94
16:P:91:ARG:HB3	16:P:98:VAL:HG22	1.48	0.94
1:A:1028:C:H2'	1:A:1028(A):C:C6	2.02	0.94
1:A:337:C:H2'	1:A:338:A:H8	1.33	0.94
12:L:117:HIS:HD2	12:L:121:ARG:HG2	1.29	0.94
15:O:117:ARG:NH2	15:O:124:LYS:HA	1.83	0.94
19:S:57:ARG:HA	19:S:60:LEU:HD12	1.46	0.94
1:A:828:A:N1	1:A:859:A:O4'	2.01	0.94
20:T:40:LYS:HZ2	20:T:40:LYS:HB2	1.31	0.94
1:A:1184:G:H2'	1:A:1185:G:C8	2.03	0.94
1:A:1494:G:HO2'	1:A:1495:U:H5	0.97	0.94
16:P:67:GLU:HG3	16:P:68:GLY:H	1.33	0.94
23:W:51:GLU:HA	23:W:54:LYS:CD	1.98	0.94
1:A:137:C:H2'	1:A:138:G:H5'	1.47	0.94
18:R:49:ASP:OD1	18:R:52:SER:HB2	1.67	0.94
20:T:10:VAL:O	20:T:53:LEU:HD12	1.66	0.94
5:E:69:LEU:HB2	5:E:159:PRO:HB2	1.47	0.94
5:E:16:HIS:O	5:E:204:ASN:HB2	1.68	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:78:ARG:O	10:J:84:ASN:HA	1.68	0.94
1:A:643:C:H5'	11:K:31:PHE:CE1	2.03	0.94
1:A:1125:U:H5	13:M:5:ARG:HH22	1.05	0.94
1:A:192:U:H1'	23:W:103:GLY:HA2	1.47	0.94
1:A:961:U:H5	1:A:983:A:C5	1.84	0.94
9:I:75:LEU:CD1	9:I:79:LEU:HD21	1.98	0.94
1:A:1425:U:H2'	1:A:1426:C:H6	1.33	0.94
1:A:265:G:O2'	1:A:266:G:H5'	1.67	0.94
5:E:204:ASN:HD22	5:E:205:ASP:H	0.96	0.94
5:E:70:PHE:CD2	5:E:163:PHE:HB3	2.03	0.94
21:U:49:LYS:HD2	21:U:49:LYS:N	1.76	0.94
5:E:230:VAL:HG12	5:E:231:GLU:H	1.33	0.94
1:A:266:G:H8	20:T:67:LYS:HZ3	1.01	0.93
1:A:322:C:H42	1:A:329:A:H62	1.11	0.93
12:L:45:ALA:O	12:L:78:LYS:HB2	1.68	0.93
16:P:55:ARG:HH21	16:P:56:LEU:HD21	1.28	0.93
20:T:83:ASP:O	20:T:86:GLU:HB2	1.67	0.93
1:A:333:G:H4'	23:W:16:HIS:NE2	1.82	0.93
7:G:98:GLU:O	7:G:100:ARG:N	2.01	0.93
14:N:58:PRO:O	14:N:61:ALA:HB3	1.66	0.93
1:A:1278:U:H4'	1:A:1279:A:O4'	1.69	0.93
1:A:52:G:O2'	1:A:53:A:H5'	1.68	0.93
7:G:187:ARG:HG3	7:G:188:LEU:H	1.28	0.93
7:G:3:ARG:NE	7:G:71:SER:H	1.65	0.93
8:H:144:THR:HG22	8:H:146:ALA:H	1.33	0.93
14:N:57:THR:HG23	14:N:60:ALA:H	1.30	0.93
16:P:37:THR:OG1	16:P:56:LEU:HA	1.68	0.93
19:S:3:LYS:CD	19:S:24:ALA:HB2	1.97	0.93
1:A:553:A:H2'	1:A:554:C:C6	2.04	0.93
1:A:570:G:H2'	1:A:571:U:H5	1.30	0.93
1:A:583:A:H2'	1:A:584:G:C8	2.04	0.93
6:F:72:LYS:O	6:F:76:VAL:HG21	1.67	0.93
8:H:27:ARG:NH2	8:H:47:LYS:HB3	1.83	0.93
23:W:11:SER:HA	23:W:13:LEU:HD11	1.49	0.93
2:C:9:G:N2	2:C:45:G:C8	2.37	0.93
1:A:281:G:HO2'	1:A:282:A:H8	0.93	0.93
5:E:55:PHE:CE2	5:E:218:ALA:HA	2.03	0.93
11:K:18:ARG:HA	11:K:18:ARG:NH1	1.82	0.93
23:W:63:ILE:CD1	23:W:80:ARG:HB3	1.97	0.93
1:A:1066:C:H3'	1:A:1067:A:C8	2.04	0.93
1:A:1226:C:H5''	16:P:103:THR:O	1.68	0.93
1:A:1289:A:N6	1:A:1371:G:O2'	2.02	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:164:U:H2'	1:A:165:C:C5	2.04	0.93
1:A:17:U:H2'	1:A:18:C:H6	1.34	0.93
1:A:197:A:N6	1:A:221:C:H5'	1.84	0.93
1:A:19:C:H1'	1:A:864:A:N3	1.83	0.93
5:E:80:ILE:HG22	5:E:215:LEU:HD12	1.47	0.93
7:G:176:LEU:HD11	7:G:178:VAL:HG22	1.50	0.93
1:A:528:C:N4	15:O:49:ASN:ND2	2.16	0.93
24:X:4:GLY:C	24:X:6:ARG:H	1.68	0.93
1:A:673:G:H2'	1:A:674:G:C8	2.04	0.93
7:G:134:ASP:O	7:G:136:PRO:HD3	1.69	0.93
12:L:42:ARG:HB3	12:L:74:ILE:HD13	1.50	0.93
16:P:10:PRO:HG2	16:P:18:ALA:HB1	1.48	0.93
19:S:5:ARG:HH12	19:S:24:ALA:HA	1.31	0.93
1:A:1054:C:H2'	1:A:1055:A:H5''	1.48	0.93
6:F:150:LYS:HG2	6:F:169:ALA:HB2	1.51	0.93
7:G:57:ARG:NH2	8:H:107:ARG:HE	1.65	0.93
9:I:19:LEU:HG	9:I:23:LYS:HD2	1.51	0.93
11:K:46:LYS:CE	11:K:64:LYS:HA	1.98	0.93
18:R:65:ARG:O	18:R:68:ARG:HB3	1.66	0.93
20:T:62:SER:HB3	20:T:72:ARG:NE	1.84	0.93
1:A:517:G:O2'	1:A:530:G:H4'	1.69	0.93
6:F:113:ALA:HB2	6:F:202:ILE:HG13	1.50	0.93
1:A:1198:G:H2'	1:A:1199:U:O4'	1.69	0.93
1:A:1287:A:H2'	1:A:1288:A:C8	2.02	0.93
1:A:174:C:H2'	1:A:175:C:H6	1.32	0.93
1:A:517:G:H5'	1:A:519:C:N4	1.84	0.93
5:E:101:MET:HA	5:E:108:ILE:CG1	1.98	0.93
7:G:154:ASN:HD22	7:G:154:ASN:H	1.16	0.93
21:U:34:TYR:CD1	21:U:35:ARG:HG3	2.04	0.93
23:W:25:ARG:O	23:W:28:ALA:HB3	1.69	0.93
11:K:12:ARG:NH1	11:K:27:PRO:HD3	1.83	0.92
19:S:3:LYS:HD2	19:S:24:ALA:CB	1.98	0.92
1:A:763:G:H2'	1:A:764:C:H6	1.31	0.92
1:A:913:A:O2'	1:A:914:A:O4'	1.88	0.92
10:J:45:ASP:HB2	10:J:117:ALA:CB	1.97	0.92
11:K:86:ILE:HG21	11:K:133:LEU:HB2	1.51	0.92
13:M:79:ARG:HH12	13:M:82:ILE:CD1	1.82	0.92
15:O:84:LEU:HB3	15:O:104:VAL:HG11	1.50	0.92
18:R:76:GLU:HA	18:R:79:ARG:NH2	1.84	0.92
1:A:1064:G:H1'	1:A:1066:C:N3	1.84	0.92
1:A:404:U:H5'	7:G:122:ARG:HH11	1.34	0.92
12:L:111:ARG:O	12:L:119:ALA:HB2	1.68	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:44:THR:HG23	19:S:45:THR:N	1.84	0.92
1:A:1534:A:H2'	1:A:1535:C:C6	2.04	0.92
9:I:12:PRO:HB3	9:I:58:GLY:HA2	1.52	0.92
15:O:25:PRO:C	15:O:27:LEU:H	1.66	0.92
20:T:36:ILE:HG12	20:T:36:ILE:O	1.70	0.92
1:A:781:A:H2'	1:A:782:A:C5'	1.99	0.92
5:E:18:GLY:HA2	5:E:42:ILE:H	1.35	0.92
8:H:147:ASP:HA	8:H:150:ARG:HB2	1.50	0.92
8:H:81:GLU:HB3	8:H:90:VAL:HG23	1.51	0.92
11:K:107:LEU:H	11:K:107:LEU:HD23	1.31	0.92
5:E:54:THR:CG2	5:E:201:ILE:HD11	1.99	0.92
7:G:170:VAL:HG23	7:G:176:LEU:HB2	1.52	0.92
10:J:45:ASP:HA	10:J:48:LYS:NZ	1.85	0.92
19:S:81:ARG:HG2	19:S:83:GLU:HG2	1.51	0.92
5:E:150:SER:CA	5:E:153:ARG:HB2	1.99	0.92
1:A:922:G:H5''	8:H:20:GLN:NE2	1.84	0.92
21:U:26:LEU:HB2	21:U:42:ARG:HH12	1.25	0.92
7:G:159:ARG:O	7:G:163:GLU:CB	2.16	0.92
1:A:332:G:O2'	1:A:333:G:H5'	1.69	0.92
1:A:633:G:H2'	1:A:634:C:H6	1.33	0.92
1:A:763:G:H2'	1:A:764:C:C6	2.05	0.92
19:S:6:LEU:HD13	19:S:6:LEU:H	1.30	0.92
1:A:237:C:H5''	20:T:25:ARG:CZ	1.99	0.92
23:W:50:GLU:HG3	23:W:54:LYS:HE3	1.52	0.92
1:A:197:A:N6	1:A:221:C:C4'	2.33	0.92
5:E:169:LYS:HD3	5:E:170:GLU:N	1.85	0.92
9:I:73:ASN:O	9:I:76:ALA:HB3	1.69	0.92
1:A:1349:A:OP2	12:L:118:LYS:HD2	1.70	0.92
1:A:770:C:H1'	1:A:900:A:C2	2.05	0.92
5:E:136:VAL:HA	5:E:139:LYS:NZ	1.84	0.92
11:K:22:GLU:HA	11:K:63:LEU:CD2	2.00	0.92
21:U:74:ARG:HA	21:U:79:LEU:CD1	1.99	0.92
1:A:1004:A:H5''	1:A:1025:U:C4	2.05	0.92
5:E:58:ILE:O	5:E:61:LEU:HB3	1.69	0.91
5:E:91:PRO:HB3	5:E:152:PHE:HD1	1.31	0.91
1:A:407:G:O2'	7:G:116:GLN:HG2	1.69	0.91
1:A:939:G:H5''	10:J:102:ARG:HH12	1.33	0.91
15:O:93:LEU:CD1	15:O:96:VAL:HG21	2.00	0.91
1:A:872:A:H2'	1:A:873:A:C5'	1.98	0.91
9:I:4:TYR:HB3	9:I:91:VAL:O	1.69	0.91
1:A:1198:G:HO2'	13:M:54:PHE:HE2	1.09	0.91
13:M:79:ARG:NH1	13:M:82:ILE:HD12	1.85	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:21:ILE:HD11	14:N:82:VAL:HG11	1.51	0.91
1:A:1210:C:H4'	1:A:1214:C:H42	1.32	0.91
1:A:345:C:H4'	1:A:346:G:O5'	1.68	0.91
1:A:727:G:C8	1:A:727:G:H3'	2.05	0.91
1:A:818:G:H2'	1:A:819:A:H5''	1.50	0.91
5:E:23:ARG:HH11	5:E:24:TRP:N	1.68	0.91
7:G:58:LEU:HD13	7:G:59:ARG:HH11	1.33	0.91
8:H:80:ILE:CD1	8:H:91:LEU:HB3	1.99	0.91
9:I:45:LEU:HG	9:I:59:TYR:HD1	1.28	0.91
18:R:24:SER:H	18:R:27:VAL:CG2	1.83	0.91
1:A:1239:A:H4'	1:A:1240:U:H5''	1.52	0.91
1:A:928:G:C4'	1:A:1533:C:H1'	2.00	0.91
1:A:530:G:N3	1:A:530:G:H3'	1.86	0.91
21:U:50:ILE:HD13	21:U:70:ILE:HD13	1.50	0.91
1:A:781:A:H2'	1:A:782:A:H5'	1.50	0.91
5:E:61:LEU:HA	5:E:64:ARG:HH11	1.35	0.91
6:F:29:TYR:CE1	13:M:65:LEU:HD11	2.04	0.91
8:H:51:VAL:HB	8:H:52:PRO:HD3	1.53	0.91
1:A:1180:A:OP1	12:L:102:LEU:HB2	1.70	0.91
1:A:109:A:N6	1:A:326:G:C6	2.39	0.91
1:A:371:G:HO2'	1:A:372:C:H5'	1.35	0.91
1:A:1538:C:H2'	1:A:1539:C:C6	2.06	0.91
1:A:609:A:C2	1:A:610:G:H1'	2.05	0.91
1:A:762:C:H2'	1:A:763:G:C8	2.05	0.91
8:H:78:HIS:HB2	11:K:104:ARG:HD2	1.52	0.91
11:K:9:MET:HG2	11:K:13:ILE:CD1	2.01	0.91
1:A:1047:G:H5''	17:Q:4:LYS:HD3	1.51	0.91
1:A:1087:G:H2'	1:A:1088:G:H8	1.35	0.91
1:A:1171:G:HO2'	1:A:1172:C:H6	1.03	0.91
9:I:53:ALA:HB1	9:I:86:ARG:HH11	1.35	0.91
23:W:30:LYS:O	23:W:34:LYS:HG3	1.69	0.91
1:A:1376:U:H3	1:A:1377:A:N6	1.68	0.91
1:A:322:C:N4	1:A:329:A:H62	1.67	0.91
1:A:570:G:H4'	1:A:820:U:C6	2.06	0.91
1:A:902:G:O2'	1:A:903:G:H5'	1.70	0.91
7:G:190:ASP:HB3	7:G:192:GLU:OE1	1.71	0.91
7:G:20:TYR:CA	7:G:26:CYS:SG	2.57	0.91
18:R:16:ALA:HB1	18:R:21:ASP:HB3	1.52	0.91
9:I:62:TRP:CB	21:U:35:ARG:HH12	1.83	0.91
5:E:150:SER:HA	5:E:153:ARG:CB	1.99	0.91
16:P:3:ARG:HG2	16:P:7:VAL:HG12	1.51	0.91
1:A:397:A:N6	1:A:548:G:C6	2.38	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:42:ILE:HD13	10:J:116:ALA:HB3	1.53	0.90
10:J:22:LEU:HD23	10:J:63:LYS:NZ	1.85	0.90
1:A:1226:C:C4	16:P:104:ARG:HG3	2.04	0.90
19:S:56:ALA:HB1	19:S:74:LEU:HD11	1.53	0.90
21:U:55:ARG:HH11	21:U:55:ARG:CB	1.83	0.90
1:A:301:G:H21	1:A:302:G:H1'	1.33	0.90
1:A:337:C:H2'	1:A:338:A:C8	2.06	0.90
1:A:520:A:N6	1:A:529:G:H21	1.70	0.90
1:A:677:U:H2'	1:A:678:U:C5	2.05	0.90
14:N:95:ILE:HA	14:N:98:LEU:CD1	2.01	0.90
15:O:36:VAL:O	15:O:58:VAL:HG13	1.71	0.90
17:Q:10:ALA:HA	17:Q:12:ARG:HE	1.36	0.90
1:A:1066:C:H3'	1:A:1067:A:H8	1.32	0.90
5:E:15:VAL:HG22	5:E:209:ARG:HD2	1.49	0.90
20:T:10:VAL:HG21	20:T:55:ASP:HB2	1.53	0.90
23:W:57:ARG:HE	23:W:100:ILE:HD12	1.36	0.90
1:A:236:G:H2'	1:A:237:C:C6	2.06	0.90
5:E:15:VAL:HG11	5:E:209:ARG:CB	2.00	0.90
6:F:70:VAL:O	6:F:105:GLU:HA	1.71	0.90
10:J:70:LYS:HB3	10:J:96:GLN:HG2	1.53	0.90
7:G:156:GLU:O	7:G:159:ARG:HB3	1.70	0.90
1:A:235:C:H2'	1:A:236:G:H8	1.33	0.90
1:A:416:G:H2'	1:A:417:C:C6	2.05	0.90
1:A:713:G:N2	1:A:777:A:H1'	1.87	0.90
20:T:81:ARG:HG3	20:T:84:LEU:CD2	2.00	0.90
11:K:80:ILE:H	11:K:80:ILE:HD12	1.35	0.90
8:H:101:ILE:HG12	8:H:118:ILE:O	1.70	0.90
13:M:39:PRO:HB3	13:M:70:ARG:NH1	1.86	0.90
14:N:69:ALA:HB1	14:N:103:LEU:CD1	2.02	0.90
20:T:59:ILE:HD12	20:T:72:ARG:C	1.92	0.90
9:I:89:MET:HG2	21:U:76:LEU:HD21	1.52	0.90
23:W:42:GLN:O	23:W:45:GLN:HB2	1.72	0.90
1:A:1157:A:H1'	1:A:1181:G:N2	1.86	0.90
6:F:85:ARG:HH21	6:F:89:GLU:HB2	1.36	0.90
7:G:144:ASP:O	7:G:184:LYS:HA	1.72	0.90
9:I:100:ASN:ND2	21:U:23:LYS:O	2.05	0.90
1:A:679:C:H2'	1:A:680:C:H6	1.36	0.90
1:A:765:G:O2'	1:A:766:A:H5'	1.72	0.90
1:A:8:A:H5'	8:H:120:THR:O	1.72	0.90
6:F:47:LEU:O	6:F:52:LEU:HD22	1.72	0.90
1:A:1344:C:H4'	12:L:120:ARG:HB3	1.52	0.90
19:S:32:TYR:CE2	19:S:35:LYS:HB2	2.05	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1192:C:N4	1:A:1193:G:C4	2.39	0.90
7:G:100:ARG:NH2	7:G:136:PRO:O	2.05	0.90
23:W:21:LYS:HA	23:W:24:LEU:HD12	1.54	0.90
1:A:198:G:O2'	1:A:199:G:H5'	1.72	0.89
1:A:407:G:H5''	7:G:115:ARG:HD2	1.51	0.89
1:A:730:G:C5	1:A:731:G:H1'	2.07	0.89
6:F:35:GLU:HA	6:F:38:ARG:CG	2.01	0.89
8:H:114:GLY:O	8:H:115:VAL:HG13	1.71	0.89
16:P:37:THR:HB	16:P:59:TYR:CD2	2.06	0.89
16:P:97:PRO:HB2	16:P:101:GLN:HB2	1.52	0.89
18:R:77:ARG:HH11	18:R:77:ARG:C	1.75	0.89
1:A:1005:A:H5''	1:A:1006:C:H5	1.37	0.89
5:E:170:GLU:HB3	5:E:174:VAL:HG23	1.52	0.89
6:F:11:ARG:HD2	6:F:16:ARG:NH2	1.86	0.89
10:J:140:ASP:HA	10:J:143:ARG:CZ	2.01	0.89
14:N:25:TYR:OH	14:N:87:THR:HB	1.70	0.89
23:W:53:LEU:HA	23:W:56:MET:HB2	1.54	0.89
1:A:754:C:H5'	1:A:755:G:C8	2.07	0.89
5:E:165:VAL:HG23	5:E:166:ASP:H	1.35	0.89
5:E:174:VAL:O	5:E:178:ARG:HG2	1.70	0.89
7:G:11:LEU:O	7:G:19:LEU:HD12	1.71	0.89
7:G:13:ARG:HH12	7:G:36:ARG:HD3	1.36	0.89
8:H:7:GLU:HB3	8:H:112:LEU:HD11	1.53	0.89
10:J:111:ARG:HB3	10:J:112:PRO:HD2	1.53	0.89
11:K:37:ARG:HD2	11:K:38:ILE:N	1.87	0.89
16:P:14:ARG:HG2	16:P:17:VAL:HG23	1.54	0.89
16:P:88:ARG:HG2	16:P:98:VAL:CG1	2.03	0.89
1:A:1342:C:H4'	12:L:125:TYR:HB2	1.55	0.89
1:A:169:C:H2'	1:A:170:U:C6	2.08	0.89
1:A:583:A:H2'	1:A:584:G:H8	1.33	0.89
1:A:873:A:H8	1:A:873:A:OP1	1.55	0.89
1:A:576:G:N7	1:A:881:G:C1'	2.35	0.89
5:E:164:VAL:HG12	5:E:186:ALA:HB2	1.54	0.89
6:F:38:ARG:HB3	6:F:38:ARG:HH11	1.32	0.89
7:G:125:HIS:O	7:G:126:ILE:HG12	1.72	0.89
10:J:69:VAL:CG1	10:J:104:LEU:HD21	2.01	0.89
11:K:33:GLU:HG2	11:K:59:LEU:HD11	1.52	0.89
21:U:79:LEU:O	21:U:79:LEU:HD13	1.72	0.89
2:C:19:G:H3'	2:C:20:U:C4	2.06	0.89
5:E:36:ARG:NE	5:E:36:ARG:HA	1.87	0.89
5:E:175:ARG:HA	5:E:178:ARG:HB2	1.55	0.89
5:E:238:LEU:HD23	5:E:239:VAL:HG23	1.55	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:68:ILE:HB	5:E:70:PHE:CE1	2.08	0.89
10:J:62:PHE:HD2	10:J:63:LYS:HZ1	1.15	0.89
1:A:1500:A:H5''	1:A:1508:G:H5''	1.55	0.89
1:A:722:A:H2'	1:A:724:G:C8	2.06	0.89
1:A:961:U:C5	1:A:983:A:C5	2.60	0.89
6:F:14:ILE:HG13	6:F:178:LEU:O	1.71	0.89
19:S:19:ILE:HB	19:S:37:GLY:O	1.72	0.89
1:A:84:U:H2'	1:A:85:U:O4'	1.72	0.89
1:A:1346:A:N6	1:A:1374:A:H3'	1.87	0.89
1:A:452:A:H2'	1:A:453:A:C8	2.07	0.89
5:E:204:ASN:ND2	5:E:205:ASP:H	1.70	0.89
8:H:92:LYS:O	8:H:119:LEU:HD12	1.72	0.89
11:K:114:THR:HG23	11:K:119:LEU:HD23	1.51	0.89
18:R:71:GLN:O	18:R:75:PRO:HD3	1.73	0.89
19:S:6:LEU:HD13	19:S:6:LEU:N	1.88	0.89
1:A:192:U:C1'	23:W:103:GLY:HA2	2.02	0.89
1:A:1268:A:H4'	24:X:20:LYS:HB2	1.54	0.89
4:I:13:A:OP2	4:I:13:A:C8	2.26	0.89
1:A:1194:U:H4'	8:H:22:GLY:O	1.72	0.89
1:A:1338:G:N2	2:C:41:C:H1'	1.87	0.89
1:A:1389:C:H2'	1:A:1390:U:O4'	1.72	0.89
1:A:173:U:C5'	1:A:197:A:H1'	2.02	0.89
7:G:59:ARG:HH22	7:G:66:ARG:NH1	1.70	0.89
9:I:52:ILE:HD13	9:I:87:ARG:HH21	1.36	0.89
11:K:95:VAL:HB	11:K:99:GLU:CD	1.93	0.89
18:R:62:GLN:NE2	18:R:66:LEU:HD21	1.87	0.89
3:D:63:G:H2'	3:D:64:C:C6	2.07	0.89
1:A:1230:C:H1'	16:P:126:LYS:HG3	1.54	0.89
1:A:1367:C:OP2	12:L:115:GLY:HA2	1.71	0.89
5:E:75:LYS:NZ	5:E:75:LYS:HA	1.87	0.89
6:F:112:SER:O	6:F:116:VAL:HG23	1.73	0.89
15:O:32:PHE:HB3	15:O:84:LEU:HD21	1.54	0.89
18:R:70:LEU:HD21	18:R:77:ARG:HH12	1.38	0.89
20:T:62:SER:OG	20:T:72:ARG:HG2	1.72	0.89
1:A:545:C:O2'	1:A:546:G:H5'	1.73	0.89
1:A:781:A:C2'	1:A:782:A:H5'	2.03	0.89
1:A:978:A:N6	1:A:1361:G:H22	1.71	0.89
9:I:86:ARG:O	9:I:87:ARG:HG2	1.72	0.89
10:J:138:LYS:HE2	10:J:142:GLU:OE1	1.73	0.89
15:O:38:THR:HG23	15:O:39:VAL:H	1.38	0.89
18:R:54:ARG:HE	18:R:58:MET:HE3	1.38	0.89
14:N:110:ASP:CA	21:U:88:LYS:HD2	2.02	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1305:G:N2	1:A:1331:G:H2'	1.87	0.88
1:A:375:U:O3'	19:S:6:LEU:HD21	1.72	0.88
21:U:74:ARG:HA	21:U:79:LEU:HD13	1.55	0.88
1:A:1407:C:H2'	1:A:1408:A:O4'	1.73	0.88
1:A:961:U:H1'	1:A:1201:A:H61	1.37	0.88
6:F:5:ILE:HG23	13:M:51:ARG:HH12	1.36	0.88
10:J:113:GLU:HG3	10:J:118:VAL:HB	1.54	0.88
1:A:1350:A:OP2	12:L:118:LYS:HE3	1.72	0.88
1:A:453:A:N6	1:A:480:U:N3	2.21	0.88
5:E:222:ILE:CD1	5:E:226:ARG:HH21	1.87	0.88
9:I:47:ARG:HG2	9:I:57:GLN:HB3	1.55	0.88
15:O:88:GLY:N	15:O:98:TYR:HA	1.87	0.88
22:V:16:LEU:O	22:V:19:VAL:HG12	1.72	0.88
1:A:160:A:H1'	1:A:344:A:N7	1.89	0.88
7:G:128:VAL:HG21	7:G:133:VAL:HG23	1.56	0.88
9:I:76:ALA:CB	9:I:80:ARG:HH21	1.85	0.88
15:O:28:LYS:HD2	15:O:33:ARG:NH2	1.88	0.88
20:T:43:LEU:HD13	20:T:44:ALA:N	1.87	0.88
22:V:36:ARG:NH1	22:V:72:GLY:HA2	1.88	0.88
23:W:35:THR:HA	23:W:38:LYS:HD2	1.56	0.88
1:A:571:U:H3'	1:A:572:A:C5'	1.99	0.88
13:M:18:ALA:HB3	13:M:91:PRO:HB3	1.55	0.88
13:M:94:VAL:HG12	13:M:95:GLU:H	1.37	0.88
20:T:59:ILE:HD12	20:T:72:ARG:O	1.73	0.88
23:W:50:GLU:N	23:W:99:LEU:HD12	1.88	0.88
13:M:8:LEU:HD13	13:M:94:VAL:CG1	2.03	0.88
18:R:60:VAL:HA	18:R:63:ARG:HD3	1.55	0.88
19:S:67:THR:HB	19:S:70:ALA:HB2	1.54	0.88
1:A:1005:A:H5''	1:A:1006:C:C5	2.09	0.88
2:C:28:C:H2'	2:C:29:G:H8	1.35	0.88
1:A:1210:C:H4'	1:A:1214:C:N4	1.88	0.88
5:E:187:LEU:HD21	5:E:203:GLY:O	1.74	0.88
10:J:10:ARG:HH11	10:J:10:ARG:CB	1.87	0.88
1:A:598:U:H4'	11:K:94:TYR:HD2	1.39	0.88
8:H:5:ASP:O	8:H:36:ASP:HA	1.73	0.88
1:A:1137:C:H4'	1:A:1138:G:C2	2.09	0.88
1:A:1363:A:H4'	1:A:1364:U:O5'	1.73	0.88
6:F:47:LEU:HD12	6:F:49:SER:HB3	1.54	0.88
7:G:20:TYR:CB	7:G:27:TYR:HA	2.03	0.88
15:O:77:LEU:HD21	15:O:107:ALA:HB2	1.55	0.88
1:A:164:U:H2'	1:A:165:C:H5	1.39	0.88
1:A:8:A:H4'	1:A:9:G:OP1	1.73	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:25:ASN:HD21	5:E:27:LYS:CG	1.85	0.88
7:G:173:TRP:HA	7:G:186:LEU:CD2	2.03	0.88
9:I:17:SER:O	9:I:20:ALA:HB3	1.73	0.88
9:I:21:LEU:O	9:I:25:ILE:HG13	1.73	0.88
10:J:155:ARG:HA	10:J:155:ARG:NE	1.88	0.88
18:R:70:LEU:HG	18:R:78:TYR:CD1	2.09	0.88
20:T:91:ARG:HA	20:T:94:ASN:ND2	1.88	0.88
23:W:48:LYS:HB3	23:W:51:GLU:OE2	1.72	0.88
17:Q:26:ARG:HB2	17:Q:39:LEU:HD22	1.55	0.88
22:V:40:ILE:HB	22:V:67:VAL:O	1.71	0.88
3:D:63:G:H2'	3:D:64:C:H6	1.37	0.88
6:F:40:ARG:HA	6:F:43:LEU:HD13	1.54	0.87
6:F:87:LEU:HB2	6:F:101:LEU:CD1	2.04	0.87
7:G:121:VAL:HB	7:G:136:PRO:HG3	1.54	0.87
9:I:77:ARG:CA	9:I:80:ARG:HD2	2.02	0.87
11:K:39:LEU:HB3	11:K:45:ILE:HG21	1.56	0.87
1:A:1210:C:H4'	1:A:1214:C:N3	1.88	0.87
1:A:1406:U:O2	1:A:1406:U:H2'	1.73	0.87
1:A:777:A:H2'	1:A:778:G:H8	1.38	0.87
1:A:923:A:OP1	8:H:21:ALA:HB2	1.74	0.87
11:K:6:ILE:HG23	11:K:7:ALA:N	1.89	0.87
21:U:67:ALA:HA	21:U:70:ILE:HD12	1.54	0.87
1:A:1197:G:H3'	1:A:1197:G:OP1	1.74	0.87
1:A:559:A:C4'	1:A:560:U:H5'	2.02	0.87
7:G:18:LYS:HA	7:G:33:MET:HE2	1.53	0.87
12:L:113:LYS:H	12:L:113:LYS:HD2	1.39	0.87
21:U:25:THR:HG22	21:U:42:ARG:NH2	1.88	0.87
1:A:1124:G:N7	1:A:1145:C:H2'	1.89	0.87
1:A:51:A:C2	1:A:116:A:H1'	2.09	0.87
5:E:68:ILE:HB	5:E:70:PHE:CZ	2.09	0.87
8:H:109:ILE:HG21	8:H:135:THR:HG21	1.57	0.87
11:K:103:VAL:HB	11:K:108:GLY:CA	2.05	0.87
6:F:122:GLU:O	6:F:125:GLU:HB2	1.73	0.87
1:A:37:U:O2'	1:A:500:G:H4'	1.73	0.87
1:A:716:A:H1'	14:N:118:GLY:HA2	1.57	0.87
1:A:720:C:H3'	1:A:721:G:H8	1.39	0.87
1:A:922:G:HO2'	1:A:1398:A:N6	1.73	0.87
7:G:8:VAL:HG21	7:G:115:ARG:NH2	1.88	0.87
11:K:120:THR:N	11:K:123:GLU:OE1	2.07	0.87
1:A:760:G:N2	20:T:104:LYS:HB3	1.89	0.87
20:T:91:ARG:CA	20:T:94:ASN:HD22	1.87	0.87
9:I:48:LEU:HB3	21:U:78:LEU:CD2	2.04	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:658:G:O2'	1:A:659:U:H5'	1.74	0.87
1:A:585:G:N3	1:A:879:C:H4'	1.89	0.87
5:E:102:LEU:H	5:E:102:LEU:CD1	1.87	0.87
6:F:3:ASN:CG	6:F:4:LYS:H	1.77	0.87
8:H:107:ARG:NH1	8:H:107:ARG:HB2	1.89	0.87
9:I:98:LEU:HD22	9:I:101:ALA:CB	2.02	0.87
1:A:582:U:C5'	18:R:64:ARG:NH2	2.37	0.87
23:W:87:LYS:HE3	23:W:87:LYS:HA	1.55	0.87
1:A:519:C:H2'	1:A:520:A:C5'	2.04	0.87
2:C:34:C:C3'	2:C:35:A:H5''	2.05	0.87
6:F:135:LYS:NZ	8:H:52:PRO:HG2	1.90	0.87
6:F:88:ARG:O	6:F:91:LEU:HB3	1.75	0.87
8:H:94:ALA:HB3	8:H:117:ASP:O	1.72	0.87
11:K:89:PRO:HA	11:K:92:ARG:NE	1.89	0.87
12:L:37:PHE:HE1	12:L:74:ILE:HG23	1.40	0.87
1:A:562:C:O2'	15:O:15:ARG:HD3	1.74	0.87
1:A:1529:G:H5''	1:A:1530:G:OP2	1.75	0.87
1:A:664:G:H5'	21:U:64:ARG:HH21	1.37	0.87
5:E:16:HIS:HA	5:E:204:ASN:CB	2.05	0.87
8:H:35:GLY:HA3	8:H:41:VAL:HG12	1.56	0.87
15:O:68:ALA:HA	15:O:98:TYR:O	1.74	0.87
19:S:21:VAL:HG11	19:S:59:TRP:CD1	2.10	0.87
1:A:1263:C:H2'	1:A:1264:C:C6	2.10	0.87
1:A:325:A:H2'	1:A:326:G:C8	2.09	0.87
1:A:51:A:O2'	1:A:52:G:OP2	1.92	0.87
1:A:676:A:H2'	1:A:677:U:H6	1.40	0.87
1:A:824:C:H2'	1:A:825:G:C8	2.10	0.87
1:A:859:A:O2'	1:A:860:A:H5'	1.74	0.87
5:E:91:PRO:CG	5:E:155:LEU:H	1.87	0.87
5:E:224:GLN:HG2	5:E:229:VAL:HG22	1.57	0.87
1:A:509:A:H5'	7:G:54:TYR:HD2	1.38	0.87
7:G:60:GLU:HA	7:G:63:LYS:CD	2.05	0.87
1:A:964:A:H1'	13:M:55:LYS:HZ2	1.39	0.87
1:A:88:C:O2'	1:A:89:U:C6	2.25	0.87
5:E:19:HIS:NE2	5:E:206:ASP:HB2	1.89	0.86
7:G:21:LEU:CD1	7:G:67:ILE:HG22	2.05	0.86
9:I:60:PHE:O	9:I:61:LEU:HD23	1.74	0.86
11:K:109:ILE:O	11:K:136:GLU:HB2	1.74	0.86
11:K:9:MET:HG2	11:K:13:ILE:HD11	1.57	0.86
15:O:88:GLY:H	15:O:98:TYR:CA	1.86	0.86
19:S:66:PRO:HD2	19:S:71:ARG:HH22	1.41	0.86
21:U:46:GLU:C	21:U:48:GLY:H	1.73	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:58:LEU:HB3	21:U:62:GLU:CB	2.05	0.86
1:A:1423:G:H2'	1:A:1424:C:H6	1.40	0.86
1:A:708:C:O2'	1:A:709:G:H5'	1.75	0.86
6:F:19:GLU:HG3	6:F:54:ARG:HE	1.37	0.86
8:H:82:VAL:CG1	8:H:89:ILE:HG22	2.04	0.86
10:J:69:VAL:HG11	10:J:104:LEU:CD2	2.03	0.86
10:J:104:LEU:CD2	10:J:134:ALA:HB1	2.05	0.86
11:K:10:LEU:HD11	11:K:85:ARG:CD	2.04	0.86
13:M:65:LEU:HD12	17:Q:56:VAL:HG13	1.57	0.86
1:A:1074:G:H2'	1:A:1075:C:O4'	1.74	0.86
1:A:665:A:C8	1:A:733:A:C2	2.63	0.86
1:A:764:C:C3'	1:A:765:G:H8	1.88	0.86
1:A:782:A:N1	1:A:801:U:H1'	1.91	0.86
10:J:69:VAL:HG21	10:J:104:LEU:CD2	2.06	0.86
11:K:64:LYS:HD3	11:K:79:VAL:HG11	1.56	0.86
14:N:67:ASP:N	14:N:70:LYS:HZ2	1.72	0.86
16:P:16:ASP:HA	16:P:19:LEU:CG	2.02	0.86
1:A:761:G:H1'	20:T:104:LYS:O	1.75	0.86
21:U:72:ARG:HA	21:U:75:ILE:CD1	2.04	0.86
1:A:1318:A:H4'	22:V:10:PHE:CD2	2.10	0.86
22:V:18:LYS:HA	22:V:18:LYS:HE3	1.55	0.86
3:D:22:G:H2'	3:D:23:A:C8	2.09	0.86
1:A:1267:C:H2'	1:A:1267:C:O2	1.73	0.86
1:A:1313:U:H5	22:V:4:SER:HB2	1.40	0.86
1:A:68:G:H5'	1:A:171:A:C1'	2.04	0.86
1:A:678:U:H2'	1:A:679:C:C6	2.10	0.86
5:E:152:PHE:O	5:E:154:LEU:N	2.08	0.86
1:A:266:G:H21	1:A:269:C:N4	1.73	0.86
1:A:266:G:H22	1:A:270:A:H62	1.22	0.86
1:A:281:G:O2'	1:A:282:A:H8	1.59	0.86
1:A:160:A:C1'	1:A:344:A:N7	2.38	0.86
1:A:551:U:H2'	1:A:552:U:C6	2.09	0.86
1:A:606:G:H22	1:A:631:G:H2'	1.40	0.86
6:F:151:VAL:HG23	6:F:200:ALA:HA	1.54	0.86
11:K:109:ILE:HG13	11:K:111:ILE:CD1	2.06	0.86
11:K:11:THR:O	11:K:14:ARG:HD2	1.73	0.86
11:K:119:LEU:HB3	11:K:123:GLU:OE2	1.76	0.86
14:N:104:GLN:HE22	14:N:106:LYS:HB2	1.39	0.86
15:O:23:LYS:O	15:O:24:VAL:HG23	1.75	0.86
1:A:1534:A:H8	1:A:1534:A:P	1.98	0.86
1:A:197:A:N6	1:A:221:C:C5'	2.38	0.86
1:A:862:C:C1'	1:A:874:G:H5''	2.04	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:64:LEU:O	7:G:64:LEU:HD22	1.74	0.86
10:J:69:VAL:CG2	10:J:104:LEU:HD21	2.06	0.86
14:N:16:SER:O	14:N:35:PRO:HG3	1.74	0.86
20:T:45:HIS:O	20:T:73:VAL:HG23	1.76	0.86
1:A:491:G:OP1	7:G:151:LYS:HE2	1.76	0.86
1:A:872:A:C6	1:A:874:G:N7	2.42	0.86
1:A:952:U:H5'	1:A:972:C:H41	1.41	0.86
5:E:31:TYR:CE2	5:E:200:ILE:HG21	2.11	0.86
7:G:74:GLN:HA	7:G:77:ASN:ND2	1.90	0.86
7:G:88:VAL:HG22	8:H:97:GLY:H	1.39	0.86
16:P:39:ILE:HD13	16:P:56:LEU:HD13	1.56	0.86
16:P:67:GLU:CG	16:P:68:GLY:H	1.89	0.86
20:T:59:ILE:HG13	20:T:60:ILE:N	1.88	0.86
21:U:41:LYS:O	21:U:44:LEU:HD23	1.76	0.86
1:A:112:G:O2'	1:A:113:G:H5'	1.75	0.86
5:E:127:ILE:HG22	5:E:128:GLU:HG2	1.58	0.86
6:F:11:ARG:CD	6:F:16:ARG:HH21	1.88	0.86
7:G:3:ARG:HE	7:G:71:SER:H	1.19	0.86
8:H:106:PRO:HB3	8:H:120:THR:HG21	1.56	0.86
11:K:46:LYS:HE3	11:K:64:LYS:HG3	1.58	0.86
15:O:87:GLY:HA2	15:O:98:TYR:HB3	1.56	0.86
17:Q:40:CYS:N	17:Q:43:CYS:SG	2.48	0.86
21:U:70:ILE:HG22	21:U:74:ARG:NE	1.90	0.86
1:A:1073:U:H2'	1:A:1074:G:C8	2.11	0.86
1:A:1208:C:H2'	1:A:1209:C:H6	1.38	0.86
1:A:1226:C:C6	16:P:104:ARG:HA	2.10	0.86
1:A:1318:A:H4'	22:V:10:PHE:HD2	1.41	0.86
1:A:1514:C:H2'	1:A:1515:C:C6	2.09	0.86
1:A:235:C:H1'	20:T:61:GLU:OE1	1.75	0.86
1:A:657:G:C1'	18:R:28:GLN:HE22	1.89	0.86
1:A:926:G:H2'	1:A:1505:G:H21	1.41	0.86
6:F:34:LEU:HD23	6:F:35:GLU:N	1.90	0.86
8:H:91:LEU:HD21	8:H:118:ILE:HG21	1.56	0.86
9:I:33:TYR:CD1	9:I:75:LEU:HD23	2.11	0.86
17:Q:39:LEU:HD12	17:Q:44:LEU:HD12	1.57	0.86
1:A:1202:G:C1'	17:Q:29:ARG:HD2	2.06	0.86
1:A:573:A:N3	1:A:883:C:O2'	2.06	0.86
9:I:61:LEU:HB3	9:I:63:TYR:OH	1.75	0.86
10:J:66:VAL:HG12	10:J:70:LYS:HE2	1.56	0.86
13:M:90:LEU:H	13:M:91:PRO:HD2	1.39	0.86
15:O:56:ALA:HB3	15:O:68:ALA:O	1.75	0.86
18:R:79:ARG:HA	18:R:82:ILE:HD12	1.58	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:12:LYS:HZ2	19:S:13:HIS:N	1.73	0.86
3:D:15:G:H1	3:D:48:C:N4	1.73	0.86
1:A:1200:C:H5'	1:A:1202:G:P	2.16	0.85
1:A:409:G:OP1	7:G:24:GLU:HB3	1.76	0.85
1:A:791:G:H2'	1:A:792:A:C8	2.11	0.85
10:J:140:ASP:C	10:J:144:MET:HG3	1.97	0.85
15:O:7:ILE:H	15:O:7:ILE:HD13	1.36	0.85
21:U:63:GLN:HA	21:U:66:LEU:HD21	1.57	0.85
22:V:40:ILE:O	22:V:68:GLY:HA2	1.75	0.85
20:T:100:LYS:C	20:T:101:ARG:HD2	1.96	0.85
1:A:440:A:N6	1:A:494:U:H5	1.74	0.85
1:A:775:G:H2'	1:A:776:G:C8	2.09	0.85
1:A:974:A:P	17:Q:31:ARG:HG2	2.16	0.85
11:K:88:LYS:H	11:K:88:LYS:HZ3	1.16	0.85
14:N:50:TYR:CZ	14:N:54:ARG:HB3	2.11	0.85
18:R:70:LEU:O	18:R:70:LEU:HD12	1.76	0.85
21:U:22:VAL:HG22	21:U:55:ARG:HH12	1.38	0.85
22:V:30:LEU:HD12	22:V:59:PRO:HB3	1.58	0.85
1:A:1321:C:C5	1:A:1322:C:H2'	2.09	0.85
1:A:791:G:H22	1:A:1498:U:P	1.99	0.85
7:G:155:LEU:HB2	7:G:158:ILE:CG1	2.06	0.85
12:L:27:THR:HB	12:L:62:TYR:HD1	1.40	0.85
15:O:25:PRO:O	15:O:27:LEU:N	2.10	0.85
16:P:48:LEU:HD11	16:P:56:LEU:HD12	1.56	0.85
1:A:1145:C:H1'	1:A:1146:A:N7	1.92	0.85
5:E:212:GLN:NE2	5:E:212:GLN:HA	1.90	0.85
9:I:33:TYR:HE2	9:I:74:ASP:HB2	1.40	0.85
1:A:1367:C:P	12:L:115:GLY:HA2	2.17	0.85
15:O:53:ARG:HH11	15:O:53:ARG:HB3	1.41	0.85
16:P:59:TYR:CE2	16:P:60:VAL:HG23	2.11	0.85
19:S:72:ARG:HH11	19:S:73:LEU:HB2	1.39	0.85
20:T:11:VAL:O	20:T:12:SER:HB3	1.77	0.85
1:A:607:A:H2'	1:A:608:A:O4'	1.77	0.85
6:F:47:LEU:CD1	6:F:83:ARG:HH21	1.88	0.85
11:K:36:LEU:HD21	11:K:59:LEU:HD13	1.58	0.85
11:K:6:ILE:HD12	11:K:85:ARG:NH1	1.90	0.85
12:L:117:HIS:O	12:L:119:ALA:N	2.10	0.85
1:A:754:C:H4'	18:R:72:ARG:HH22	1.39	0.85
18:R:80:ALA:O	18:R:83:GLU:HB3	1.76	0.85
2:C:60:U:O2	2:C:60:U:H2'	1.74	0.85
1:A:1028:C:H2'	1:A:1028(A):C:H6	1.42	0.85
1:A:1373:G:H4'	10:J:34:GLY:O	1.77	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:100:ILE:H	11:K:100:ILE:HD12	1.42	0.85
8:H:78:HIS:CB	11:K:107:LEU:HD21	2.06	0.85
15:O:27:LEU:HD21	15:O:61:THR:O	1.76	0.85
15:O:43:VAL:HG23	15:O:55:VAL:CG2	2.05	0.85
1:A:453:A:H4'	19:S:72:ARG:HG3	1.58	0.85
1:A:38:G:H22	1:A:397:A:C5'	1.90	0.85
1:A:684:A:C4'	14:N:12:ARG:HH22	1.90	0.85
6:F:189:ALA:HB3	6:F:196:LEU:H	1.41	0.85
7:G:190:ASP:O	7:G:194:LEU:HD23	1.76	0.85
9:I:14:LEU:HD11	9:I:19:LEU:N	1.91	0.85
9:I:2:ARG:O	9:I:67:MET:HE3	1.75	0.85
9:I:52:ILE:HD13	9:I:87:ARG:NH2	1.92	0.85
11:K:109:ILE:CD1	11:K:137:VAL:HB	2.07	0.85
15:O:117:ARG:NH2	15:O:124:LYS:HG2	1.91	0.85
16:P:4:ILE:HG22	16:P:57:ARG:HG3	1.57	0.85
20:T:9:VAL:HG13	20:T:11:VAL:HG22	1.58	0.85
1:A:1184:G:H2'	1:A:1185:G:H8	1.42	0.85
1:A:173:U:N1	1:A:197:A:C2	2.45	0.85
1:A:173:U:O4'	1:A:197:A:H1'	1.76	0.85
1:A:817:C:N4	1:A:819:A:N3	2.24	0.85
1:A:9:G:OP2	8:H:121:LYS:HD2	1.75	0.85
6:F:120:VAL:HG21	6:F:137:ALA:HB2	1.57	0.85
10:J:132:GLY:O	10:J:136:LYS:HB2	1.75	0.85
10:J:63:LYS:HE2	10:J:63:LYS:N	1.92	0.85
11:K:95:VAL:HG22	11:K:133:LEU:HD21	1.58	0.85
12:L:124:GLN:HG3	12:L:125:TYR:N	1.90	0.85
12:L:19:LEU:HD23	12:L:60:ASP:O	1.77	0.85
15:O:30:ALA:HB1	15:O:31:PRO:HD2	1.59	0.85
19:S:6:LEU:HA	19:S:18:ARG:O	1.76	0.85
20:T:31:LEU:HD12	20:T:31:LEU:O	1.77	0.85
7:G:112:VAL:HG23	7:G:161:ASN:HD21	1.42	0.85
7:G:72:GLU:O	7:G:75:PHE:HB3	1.77	0.85
10:J:32:ARG:O	10:J:33:ASP:HB2	1.77	0.85
1:A:110:C:H2'	1:A:111:G:O5'	1.75	0.85
1:A:1111:A:H2'	1:A:1112:C:C6	2.11	0.85
1:A:1259:C:O2	1:A:1283:G:H1'	1.76	0.85
1:A:1433:A:O2'	1:A:1434:A:H5'	1.77	0.85
1:A:153:C:H2'	1:A:154:C:H6	1.40	0.85
1:A:582:U:H5'	18:R:64:ARG:HH21	1.38	0.85
1:A:792:A:H2'	1:A:794:A:H62	1.41	0.85
5:E:136:VAL:O	5:E:139:LYS:HG2	1.76	0.85
5:E:15:VAL:HG22	5:E:209:ARG:NH1	1.91	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:11:ARG:NH1	6:F:15:THR:HG23	1.91	0.85
8:H:108:ALA:O	8:H:112:LEU:HB2	1.77	0.85
9:I:23:LYS:CA	9:I:26:ILE:HD12	2.02	0.85
9:I:46:ARG:HG2	9:I:47:ARG:N	1.89	0.85
23:W:64:ASP:O	23:W:67:ALA:HB3	1.77	0.85
1:A:218:C:H5'	1:A:466:C:N4	1.92	0.85
1:A:753:A:H5'	1:A:754:C:C6	2.11	0.84
5:E:23:ARG:HD3	5:E:24:TRP:H	1.41	0.84
7:G:61:LYS:HG3	7:G:207:TYR:CE1	2.12	0.84
8:H:12:LEU:HD13	8:H:13:ILE:N	1.92	0.84
9:I:14:LEU:HD13	9:I:18:GLN:HB3	1.58	0.84
11:K:22:GLU:HA	11:K:63:LEU:HD22	1.58	0.84
15:O:66:VAL:HG12	15:O:67:THR:H	1.41	0.84
18:R:39:LEU:CD1	18:R:56:LEU:HB2	2.07	0.84
21:U:56:THR:O	21:U:58:LEU:HG	1.76	0.84
1:A:1396:A:O2'	1:A:1397:C:OP2	1.94	0.84
1:A:1394:A:N7	1:A:1501:C:C1'	2.39	0.84
1:A:579:G:H2'	1:A:580:U:O4'	1.77	0.84
1:A:818:G:O2'	1:A:819:A:OP1	1.95	0.84
5:E:182:ILE:HD13	5:E:182:ILE:H	1.41	0.84
6:F:46:GLU:C	6:F:47:LEU:HD22	1.97	0.84
7:G:90:GLY:HA3	7:G:200:GLU:OE2	1.77	0.84
9:I:8:ILE:HG23	9:I:88:VAL:HG22	1.57	0.84
21:U:47:THR:HB	21:U:49:LYS:NZ	1.92	0.84
22:V:5:LEU:HD12	22:V:9:VAL:HG13	1.58	0.84
2:C:15:G:N2	2:C:59:A:N1	2.25	0.84
1:A:129(A):G:C6	1:A:188:U:H4'	2.12	0.84
1:A:1534:A:OP2	1:A:1534:A:O4'	1.95	0.84
1:A:633:G:H2'	1:A:634:C:C6	2.12	0.84
1:A:923:A:H2'	1:A:924:C:C6	2.12	0.84
7:G:16:GLY:O	7:G:18:LYS:N	2.11	0.84
12:L:37:PHE:CE1	12:L:74:ILE:HG23	2.11	0.84
14:N:23:ALA:HB2	14:N:28:THR:HG23	1.58	0.84
19:S:67:THR:HB	19:S:70:ALA:CB	2.06	0.84
1:A:727:G:H8	1:A:727:G:H3'	1.40	0.84
1:A:950:U:H5''	16:P:102:ARG:NH2	1.92	0.84
6:F:153:VAL:CG2	6:F:166:GLU:HB3	2.07	0.84
7:G:30:LYS:HZ3	7:G:35:ARG:HD2	1.42	0.84
8:H:147:ASP:O	8:H:150:ARG:HB2	1.78	0.84
12:L:5:TYR:OH	12:L:16:ARG:HG3	1.76	0.84
14:N:40:ILE:HD13	14:N:40:ILE:N	1.92	0.84
14:N:15:ALA:HA	14:N:77:MET:HA	1.58	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:43:VAL:HG12	15:O:44:THR:N	1.91	0.84
16:P:58:GLU:HA	16:P:61:GLU:HB2	1.58	0.84
20:T:60:ILE:HG12	20:T:61:GLU:O	1.77	0.84
1:A:900:A:N7	1:A:901:A:N6	2.25	0.84
1:A:888:G:H21	1:A:909:A:H62	1.21	0.84
1:A:920:U:H2'	1:A:921:U:C6	2.12	0.84
12:L:106:ALA:O	12:L:107:ARG:HG3	1.78	0.84
22:V:36:ARG:HB2	22:V:71:LEU:HB3	1.58	0.84
1:A:1405:G:C2	1:A:1406:U:C5	2.65	0.84
1:A:476:G:O2'	1:A:477:G:H5'	1.78	0.84
1:A:778:G:H2'	1:A:779:C:C6	2.12	0.84
1:A:940:C:H2'	1:A:941:G:H8	1.40	0.84
5:E:115:LEU:HD23	5:E:149:LEU:HD22	1.59	0.84
5:E:115:LEU:HB2	5:E:145:LEU:HG	1.59	0.84
5:E:95:GLN:HE21	5:E:148:TYR:CB	1.90	0.84
11:K:78:GLN:HG3	11:K:81:HIS:HA	1.57	0.84
16:P:71:ARG:NH1	16:P:71:ARG:HB3	1.92	0.84
20:T:59:ILE:CG1	20:T:71:PHE:HB3	2.07	0.84
3:D:23:A:H2'	3:D:24:G:C8	2.12	0.84
22:V:32:LYS:CA	22:V:50:ALA:HB3	2.07	0.84
1:A:1154:G:H2'	1:A:1155:G:H8	1.43	0.84
5:E:184:VAL:HB	5:E:198:ASP:OD1	1.77	0.84
7:G:173:TRP:CE2	7:G:189:PRO:HB3	2.12	0.84
7:G:180:GLY:HA3	7:G:182:LYS:NZ	1.93	0.84
7:G:96:LEU:HD23	7:G:139:ARG:HH22	1.41	0.84
10:J:86:GLN:HB2	10:J:148:ASN:CG	1.98	0.84
11:K:104:ARG:O	11:K:107:LEU:HD23	1.78	0.84
16:P:77:ASN:O	16:P:80:ARG:HG3	1.77	0.84
17:Q:9:LYS:HZ3	17:Q:12:ARG:HH21	1.21	0.84
20:T:31:LEU:HG	20:T:32:TYR:CD2	2.13	0.84
1:A:80:G:H2'	1:A:81:G:O4'	1.77	0.84
1:A:1269:A:H2'	1:A:1270:C:O4'	1.78	0.84
1:A:1298:C:H4'	1:A:1299:A:C2	2.13	0.84
1:A:533:A:C5	1:A:536:C:N4	2.46	0.84
1:A:668:G:H1'	18:R:46:HIS:NE2	1.93	0.84
1:A:761:G:H5'	20:T:102:GLY:HA3	1.59	0.84
7:G:200:GLU:HG3	7:G:201:GLN:N	1.93	0.84
1:A:1206:G:H4'	6:F:192:THR:O	1.77	0.84
1:A:1418:A:C2'	1:A:1419:G:H5'	2.08	0.84
1:A:565:U:P	1:A:566:G:H3'	2.18	0.84
1:A:676:A:H2'	1:A:677:U:C6	2.12	0.84
1:A:816:A:H4'	1:A:817:C:H5''	1.59	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:990:C:H2'	1:A:991:U:C1'	2.07	0.84
5:E:140:HIS:O	5:E:143:GLU:HB3	1.78	0.84
10:J:50:ILE:HD12	10:J:58:PRO:HB3	1.59	0.84
1:A:823:G:H21	11:K:1:MET:H2	1.25	0.84
19:S:44:THR:CG2	19:S:45:THR:H	1.90	0.84
15:O:16:GLU:HG3	15:O:16:GLU:O	1.77	0.84
1:A:429:U:H5'	1:A:430:A:OP1	1.76	0.84
5:E:55:PHE:HA	5:E:58:ILE:CD1	2.06	0.84
6:F:138:VAL:HG12	6:F:170:GLN:NE2	1.93	0.84
13:M:34:VAL:HG12	13:M:35:SER:N	1.92	0.84
14:N:21:ILE:CD1	14:N:95:ILE:HG23	2.08	0.84
17:Q:22:THR:HB	17:Q:33:VAL:CG2	2.06	0.84
19:S:8:ARG:NH2	19:S:11:SER:O	2.11	0.84
3:D:17:U:H5'	3:D:18:G:O5'	1.78	0.84
1:A:1262:C:H2'	1:A:1263:C:H6	1.40	0.83
1:A:523:A:H61	15:O:53:ARG:NH2	1.76	0.83
1:A:751:U:H2'	1:A:752:G:O4'	1.77	0.83
1:A:761:G:H5'	20:T:102:GLY:CA	2.08	0.83
1:A:799:G:N2	1:A:800:G:H1'	1.92	0.83
5:E:91:PRO:HB3	5:E:152:PHE:CD1	2.13	0.83
5:E:178:ARG:NH2	5:E:196:LEU:HB2	1.93	0.83
7:G:135:LEU:C	7:G:137:SER:H	1.76	0.83
8:H:102:ALA:CB	8:H:120:THR:HG22	2.03	0.83
8:H:142:LEU:O	8:H:143:ARG:HD3	1.78	0.83
11:K:111:ILE:N	11:K:111:ILE:HD12	1.93	0.83
18:R:39:LEU:HD22	18:R:56:LEU:HD22	1.60	0.83
20:T:3:LYS:HE3	20:T:60:ILE:HD11	1.60	0.83
21:U:81:PHE:O	21:U:82:THR:HG22	1.78	0.83
3:D:75:C:H5''	3:D:76:A:O2'	1.78	0.83
1:A:595:G:N7	1:A:641:U:N3	2.26	0.83
1:A:664:G:C5'	21:U:64:ARG:HH21	1.90	0.83
5:E:145:LEU:O	5:E:149:LEU:HB2	1.78	0.83
5:E:168:THR:CG2	5:E:192:SER:HA	2.07	0.83
11:K:14:ARG:O	11:K:17:THR:HB	1.78	0.83
12:L:3:GLN:HA	12:L:20:ARG:HG2	1.60	0.83
12:L:48:GLU:HB3	12:L:78:LYS:NZ	1.93	0.83
19:S:43:LYS:HG3	19:S:48:TRP:CZ3	2.13	0.83
1:A:1064:G:N3	1:A:1066:C:N3	2.26	0.83
1:A:1472:U:H2'	1:A:1473:A:H8	1.41	0.83
1:A:141:A:H1'	1:A:182:U:O2	1.77	0.83
1:A:262:A:C2	1:A:263:A:C6	2.67	0.83
2:C:34:C:H2'	2:C:35:A:C5'	2.06	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:42:ILE:HD11	5:E:202:PRO:HB2	1.60	0.83
7:G:204:ILE:HD12	7:G:204:ILE:H	1.41	0.83
13:M:30:SER:HB2	13:M:81:THR:N	1.93	0.83
22:V:46:GLY:HA2	22:V:62:ILE:O	1.77	0.83
1:A:1258:G:H2'	1:A:1259:C:C6	2.14	0.83
1:A:1277:C:H4'	1:A:1282:C:C1'	2.09	0.83
1:A:1391:U:H2'	1:A:1392:G:H8	1.44	0.83
1:A:1494:G:O2'	1:A:1495:U:C5	2.32	0.83
1:A:49:U:C2	1:A:364:A:N6	2.46	0.83
1:A:767:A:O2'	1:A:768:A:H5'	1.78	0.83
7:G:148:VAL:HG11	7:G:158:ILE:HD12	1.58	0.83
12:L:102:LEU:O	12:L:103:THR:HB	1.79	0.83
15:O:5:PRO:CB	15:O:10:LEU:HD21	2.07	0.83
1:A:979:C:H42	17:Q:18:VAL:HB	1.44	0.83
1:A:760:G:O2'	20:T:103:GLY:HA3	1.78	0.83
1:A:1354:C:H2'	1:A:1355:G:C8	2.12	0.83
1:A:770:C:C1'	1:A:900:A:H2	1.92	0.83
1:A:914:A:H2'	1:A:915:A:C8	2.13	0.83
5:E:82:ARG:CA	5:E:92:TYR:HE1	1.90	0.83
7:G:20:TYR:N	7:G:33:MET:SD	2.51	0.83
16:P:20:THR:HA	16:P:25:ILE:HG22	1.61	0.83
1:A:1378:C:N3	1:A:1379:G:H1'	1.94	0.83
1:A:173:U:H5'	1:A:197:A:H1'	1.59	0.83
5:E:18:GLY:CA	5:E:41:ILE:HA	2.07	0.83
7:G:63:LYS:HG3	7:G:198:VAL:HG12	1.61	0.83
1:A:1260:C:H4'	1:A:1284:C:C5'	2.08	0.83
11:K:126:LYS:HZ2	11:K:127:LEU:CD2	1.90	0.83
12:L:93:ARG:HH22	12:L:97:LYS:HE2	1.41	0.83
15:O:39:VAL:HG11	15:O:41:ARG:NH2	1.93	0.83
1:A:1329:A:H5''	16:P:29:ARG:CG	2.09	0.83
1:A:1261:A:H61	1:A:1274:G:H1'	1.43	0.83
1:A:21:G:N2	1:A:916:G:C5	2.47	0.83
1:A:28:G:O2'	1:A:296:U:OP1	1.96	0.83
1:A:322:C:H42	1:A:329:A:N6	1.76	0.83
1:A:43:C:OP1	19:S:12:LYS:HG2	1.79	0.83
1:A:600:C:OP1	11:K:97:VAL:N	2.12	0.83
6:F:14:ILE:CG2	6:F:179:ARG:HA	2.08	0.83
6:F:155:GLY:O	6:F:196:LEU:HB2	1.78	0.83
11:K:115:SER:C	11:K:116:LYS:HD2	1.99	0.83
13:M:15:THR:HG23	13:M:16:LEU:HD22	1.61	0.83
13:M:34:VAL:HG12	13:M:35:SER:H	1.42	0.83
15:O:47:LYS:N	15:O:48:PRO:HD2	1.93	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1253:G:H2'	1:A:1254:C:O4'	1.79	0.83
5:E:70:PHE:HD2	5:E:163:PHE:HB3	1.42	0.83
5:E:47:THR:O	5:E:51:LEU:HG	1.79	0.83
16:P:19:LEU:HD11	16:P:30:ALA:HB2	1.59	0.83
1:A:20:U:O2'	1:A:21:G:H5'	1.77	0.83
1:A:792:A:H2'	1:A:794:A:N6	1.94	0.83
5:E:138:LEU:O	5:E:141:GLU:HB3	1.79	0.83
8:H:37:ARG:HG3	8:H:111:GLU:O	1.79	0.83
12:L:112:LYS:CE	12:L:117:HIS:HA	2.09	0.83
1:A:964:A:H1'	13:M:55:LYS:NZ	1.94	0.83
14:N:58:PRO:HB2	14:N:93:GLN:CG	2.09	0.83
14:N:96:ARG:HA	14:N:99:GLN:OE1	1.79	0.83
21:U:74:ARG:HB3	21:U:81:PHE:CD2	2.13	0.83
1:A:1043:C:H2'	1:A:1044:A:O4'	1.76	0.83
1:A:1534:A:OP2	1:A:1534:A:C8	2.32	0.82
1:A:389:A:H2'	1:A:390:C:C5'	2.09	0.82
1:A:753:A:H5'	1:A:754:C:C5	2.13	0.82
1:A:767:A:H8	1:A:767:A:O5'	1.62	0.82
5:E:84:GLU:OE1	5:E:216:SER:HA	1.78	0.82
6:F:123:GLN:HB3	6:F:128:PHE:HE2	1.44	0.82
8:H:71:LEU:HD23	8:H:72:GLN:H	1.37	0.82
11:K:86:ILE:HD13	11:K:135:CYS:HA	1.61	0.82
16:P:55:ARG:NH2	16:P:56:LEU:HD21	1.94	0.82
18:R:79:ARG:NH1	18:R:79:ARG:HB2	1.94	0.82
18:R:5:LYS:O	18:R:8:LYS:HB3	1.79	0.82
24:X:12:LYS:HG3	24:X:17:THR:OG1	1.78	0.82
1:A:1159:U:C5	1:A:1182:G:H1'	2.13	0.82
1:A:1274:G:N2	1:A:1275:A:H62	1.77	0.82
1:A:475:G:H2'	1:A:476:G:H8	1.43	0.82
1:A:610:G:O2'	1:A:611:A:H5'	1.79	0.82
5:E:78:GLN:HG3	5:E:94:ASN:CB	2.06	0.82
13:M:32:ALA:O	13:M:33:GLN:HB2	1.77	0.82
15:O:60:LEU:CD1	15:O:64:TYR:HB3	2.09	0.82
20:T:92:ARG:O	20:T:95:TYR:HB2	1.80	0.82
23:W:92:LEU:O	23:W:93:GLU:HG3	1.79	0.82
1:A:1292:U:H2'	1:A:1293:G:H8	1.38	0.82
1:A:1388:C:H2'	1:A:1389:C:H6	1.44	0.82
1:A:733:A:H3'	1:A:733:A:C8	2.15	0.82
1:A:745:C:H5'	1:A:851:G:N3	1.94	0.82
1:A:961:U:HO2'	1:A:962:C:H5'	1.43	0.82
5:E:158:LEU:HB2	5:E:160:ASP:OD1	1.79	0.82
7:G:135:LEU:O	7:G:137:SER:N	2.11	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:27:ALA:HB2	13:M:85:LEU:HG	1.61	0.82
18:R:62:GLN:O	18:R:66:LEU:HD22	1.79	0.82
20:T:59:ILE:HG12	20:T:71:PHE:HB3	1.59	0.82
1:A:1128:C:O2	1:A:1130:A:N6	2.12	0.82
1:A:522:C:H2'	1:A:523:A:C8	2.15	0.82
1:A:501:C:H1'	1:A:549:C:H1'	1.62	0.82
1:A:716:A:O2'	1:A:717:C:H5'	1.79	0.82
11:K:45:ILE:CD1	11:K:48:TYR:HB3	2.08	0.82
23:W:45:GLN:HE21	23:W:91:LEU:HB3	1.41	0.82
1:A:130:A:H5'	20:T:63:ARG:HH21	1.45	0.82
1:A:42:G:H2'	1:A:43:C:H6	1.44	0.82
1:A:484:G:C8	1:A:486:U:N3	2.48	0.82
5:E:54:THR:O	5:E:58:ILE:HG13	1.79	0.82
7:G:108:LEU:O	7:G:110:PHE:N	2.12	0.82
10:J:28:ASN:O	10:J:31:MET:HB3	1.79	0.82
11:K:100:ILE:HD11	11:K:125:ARG:HG3	1.59	0.82
11:K:25:ASP:OD2	11:K:60:ARG:HB2	1.78	0.82
19:S:4:ILE:HG23	19:S:21:VAL:HG13	1.62	0.82
1:A:1087:G:H2'	1:A:1088:G:C8	2.12	0.82
1:A:1509:C:H2'	1:A:1510:U:C6	2.15	0.82
1:A:173:U:O2	1:A:197:A:H2	1.62	0.82
1:A:405:U:O2	1:A:405:U:H2'	1.79	0.82
1:A:410:G:N3	1:A:432:A:N6	2.27	0.82
1:A:519:C:N4	1:A:520:A:C2	2.47	0.82
7:G:166:LYS:HG2	7:G:178:VAL:CG1	2.10	0.82
7:G:60:GLU:OE2	7:G:199:ASN:HB3	1.80	0.82
8:H:24:ARG:HH11	8:H:24:ARG:HG2	1.44	0.82
8:H:94:ALA:HB1	8:H:98:THR:HG21	1.62	0.82
9:I:12:PRO:HG2	9:I:13:ASN:ND2	1.95	0.82
1:A:1349:A:OP1	12:L:120:ARG:HB2	1.80	0.82
12:L:9:ARG:HD2	12:L:14:VAL:HG22	1.60	0.82
15:O:33:ARG:HB3	15:O:85:ILE:CG2	2.09	0.82
19:S:67:THR:HB	19:S:70:ALA:H	1.44	0.82
19:S:57:ARG:HG2	19:S:79:VAL:CG1	2.09	0.82
20:T:10:VAL:CG2	20:T:55:ASP:HB2	2.08	0.82
5:E:127:ILE:HG22	5:E:128:GLU:H	1.43	0.82
5:E:95:GLN:HE21	5:E:148:TYR:HB3	1.44	0.82
9:I:19:LEU:HD23	9:I:23:LYS:HZ3	1.44	0.82
12:L:115:GLY:O	12:L:117:HIS:N	2.12	0.82
13:M:79:ARG:HD3	13:M:80:LYS:N	1.94	0.82
3:D:19:G:H21	3:D:57:G:H1'	1.40	0.82
1:A:1229:A:H2'	1:A:1230:C:H6	1.45	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1338:G:H2'	1:A:1339:A:C8	2.14	0.82
1:A:309:G:O2'	1:A:310:G:H5'	1.79	0.82
7:G:185:PHE:HE2	7:G:187:ARG:O	1.63	0.82
1:A:520:A:H3'	1:A:521:G:H5''	1.61	0.82
6:F:48:TYR:HA	6:F:52:LEU:CD2	2.10	0.82
20:T:67:LYS:O	20:T:68:ARG:HB2	1.79	0.82
1:A:1144:G:H22	1:A:1146:A:H62	1.25	0.82
1:A:1306:A:N6	1:A:1331:G:H1'	1.95	0.82
1:A:1418:A:N1	1:A:1483:A:C6	2.48	0.82
1:A:370:C:O2'	1:A:371:G:H5'	1.80	0.82
8:H:81:GLU:HB3	8:H:90:VAL:CG2	2.10	0.82
21:U:18:ARG:HH22	21:U:21:LYS:HB2	1.44	0.82
9:I:98:LEU:HD21	21:U:28:GLU:CA	2.10	0.82
22:V:47:HIS:H	22:V:62:ILE:HG22	1.44	0.82
1:A:1101:A:H4'	1:A:1102:A:O5'	1.80	0.81
1:A:1255:G:O2'	1:A:1258:G:H1'	1.80	0.81
1:A:622:A:H2'	1:A:623:C:H5'	1.60	0.81
5:E:48:MET:HA	5:E:51:LEU:HD12	1.61	0.81
1:A:1206:G:H5'	6:F:194:GLY:HA2	1.62	0.81
7:G:24:GLU:O	7:G:27:TYR:HB3	1.79	0.81
8:H:37:ARG:NH1	8:H:112:LEU:HD22	1.92	0.81
10:J:64:GLN:HG3	10:J:128:ALA:O	1.80	0.81
17:Q:22:THR:HG21	17:Q:33:VAL:O	1.80	0.81
19:S:59:TRP:CE3	19:S:59:TRP:HA	2.12	0.81
20:T:52:LYS:HB2	20:T:52:LYS:HZ2	1.43	0.81
20:T:44:ALA:HB2	20:T:59:ILE:HD13	1.61	0.81
1:A:1034:G:H2'	1:A:1035:A:C8	2.15	0.81
1:A:194:C:H2'	1:A:195:A:H5''	1.62	0.81
1:A:279:A:N3	1:A:281:G:N2	2.27	0.81
1:A:363:A:O2'	1:A:364:A:H5'	1.78	0.81
1:A:865:A:HO2'	1:A:918:A:HO2'	1.23	0.81
6:F:84:ILE:CG1	6:F:101:LEU:HD22	2.10	0.81
1:A:644:G:H4'	11:K:92:ARG:HH12	1.45	0.81
15:O:43:VAL:HG12	15:O:44:THR:H	1.45	0.81
16:P:82:MET:SD	16:P:93:ARG:HG3	2.19	0.81
16:P:91:ARG:CB	16:P:98:VAL:HG13	2.10	0.81
21:U:72:ARG:O	21:U:75:ILE:HB	1.79	0.81
24:X:10:ARG:HA	24:X:13:ILE:HB	1.61	0.81
1:A:979:C:H5''	1:A:1222:G:O6	1.81	0.81
1:A:453:A:H62	1:A:480:U:H3	1.27	0.81
5:E:69:LEU:HB2	5:E:159:PRO:CB	2.10	0.81
21:U:18:ARG:NH2	21:U:21:LYS:HD3	1.94	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:72:ARG:HA	21:U:75:ILE:HD12	1.63	0.81
1:A:1157:A:C8	1:A:1181:G:N2	2.48	0.81
1:A:1479:C:O2'	1:A:1480:G:H5'	1.80	0.81
5:E:16:HIS:HA	5:E:204:ASN:HB3	1.61	0.81
10:J:118:VAL:O	10:J:121:ALA:HB3	1.79	0.81
10:J:27:ILE:HG12	10:J:43:PHE:CD1	2.14	0.81
1:A:1192:C:H5	1:A:1193:G:C8	1.98	0.81
6:F:205:GLY:O	6:F:206:GLU:HB2	1.79	0.81
7:G:63:LYS:HG2	7:G:64:LEU:N	1.96	0.81
13:M:26:ALA:HB1	13:M:84:GLN:OE1	1.79	0.81
15:O:55:VAL:O	15:O:70:ILE:HD11	1.80	0.81
16:P:16:ASP:CB	16:P:30:ALA:HB1	2.11	0.81
1:A:113:G:C1'	1:A:354:G:H5''	2.10	0.81
1:A:123:C:O2'	1:A:290:C:C1'	2.25	0.81
1:A:754:C:H2'	1:A:755:G:OP1	1.80	0.81
1:A:797:C:O2'	1:A:798:G:H5'	1.80	0.81
14:N:40:ILE:O	14:N:41:THR:HG23	1.81	0.81
17:Q:24:CYS:HB2	17:Q:40:CYS:N	1.95	0.81
9:I:28:ARG:HH11	9:I:28:ARG:HG2	1.45	0.81
1:A:1239:A:H8	1:A:1241:G:H1'	1.45	0.81
1:A:1263:C:H2'	1:A:1264:C:H6	1.45	0.81
1:A:507:C:OP2	1:A:508:C:H3'	1.81	0.81
1:A:580:U:H3'	1:A:581:G:H8	1.43	0.81
1:A:873:A:C8	1:A:873:A:OP1	2.33	0.81
7:G:65:ARG:HB2	7:G:75:PHE:HE2	1.44	0.81
9:I:79:LEU:HD12	9:I:88:VAL:HG11	1.61	0.81
11:K:36:LEU:CD1	11:K:59:LEU:HD22	2.10	0.81
16:P:77:ASN:O	16:P:81:LEU:HD13	1.79	0.81
20:T:85:VAL:HG12	20:T:89:LEU:HD11	1.62	0.81
23:W:44:ALA:CB	23:W:91:LEU:HD12	2.10	0.81
3:D:47:U:H2'	3:D:48:C:H5''	1.61	0.81
1:A:1108:G:H4'	1:A:1191:A:H1'	1.63	0.81
1:A:974:A:H61	1:A:1201:A:H2	1.28	0.81
1:A:68:G:C5'	1:A:171:A:H1'	2.10	0.81
16:P:60:VAL:HG13	16:P:64:TRP:HB2	1.63	0.81
17:Q:42:ILE:HA	17:Q:45:ARG:HG2	1.61	0.81
18:R:75:PRO:HA	18:R:78:TYR:HB2	1.62	0.81
1:A:186(B):C:H4'	23:W:89:ARG:HH12	1.44	0.81
1:A:1196:U:C5'	1:A:1197:G:H5'	2.11	0.81
1:A:1318:A:O2'	22:V:37:ARG:HB3	1.81	0.81
1:A:1347:G:O2'	1:A:1348:U:OP2	1.99	0.81
1:A:14:U:H2'	1:A:16:A:OP2	1.80	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:497:U:O2	1:A:497:U:H2'	1.79	0.81
1:A:975:A:O2'	1:A:976:G:OP2	1.99	0.81
6:F:156:ARG:HB2	6:F:196:LEU:HD13	1.63	0.81
7:G:100:ARG:HB2	7:G:103:ASN:HB2	1.61	0.81
10:J:31:MET:HB2	10:J:39:ALA:HB2	1.62	0.81
17:Q:23:ARG:NE	17:Q:30:ALA:HB2	1.96	0.81
17:Q:47:LEU:O	17:Q:50:LYS:HB2	1.80	0.81
1:A:1363:A:N3	1:A:1365:G:C6	2.49	0.81
1:A:1435:G:H2'	1:A:1436:U:H5	1.42	0.81
1:A:622:A:H2'	1:A:623:C:C5'	2.10	0.81
2:C:40:C:H2'	2:C:41:C:C5'	2.09	0.81
7:G:153:ARG:HB3	7:G:181:MET:HE3	1.63	0.81
10:J:86:GLN:HB2	10:J:148:ASN:ND2	1.96	0.81
1:A:598:U:H4'	11:K:94:TYR:CD2	2.16	0.81
15:O:24:VAL:HG13	15:O:98:TYR:CE2	2.15	0.81
18:R:34:LEU:CG	18:R:35:ARG:N	2.44	0.81
21:U:86:VAL:O	21:U:87:ARG:HB2	1.80	0.81
3:D:18:G:H4'	3:D:60:U:N3	1.96	0.81
3:D:23:A:H2'	3:D:24:G:H8	1.45	0.81
1:A:1472:U:O2'	1:A:1473:A:H5'	1.79	0.81
1:A:17:U:H2'	1:A:18:C:C6	2.16	0.81
1:A:301:G:N2	1:A:302:G:H1'	1.95	0.81
1:A:43:C:H5''	19:S:12:LYS:CB	2.11	0.81
1:A:486:U:O2	1:A:486:U:H2'	1.79	0.81
1:A:570:G:H5'	1:A:820:U:H1'	1.63	0.81
6:F:123:GLN:HB3	6:F:128:PHE:CE2	2.16	0.81
1:A:755:G:N3	11:K:1:MET:HE1	1.95	0.81
14:N:21:ILE:HA	14:N:30:VAL:HG22	1.63	0.81
20:T:67:LYS:HA	20:T:70:ARG:HH22	1.44	0.81
1:A:1049:U:C5	17:Q:3:ARG:HB2	2.16	0.80
1:A:1094:G:H2'	1:A:1108:G:H22	1.45	0.80
1:A:1178:G:N2	1:A:1180:A:H3'	1.96	0.80
1:A:1321:C:C4	1:A:1322:C:H2'	2.16	0.80
1:A:627:G:O2'	1:A:628:G:H5'	1.81	0.80
1:A:640:A:C2'	1:A:641:U:H5'	2.10	0.80
1:A:986:A:H2'	1:A:987:G:C8	2.15	0.80
5:E:21:ARG:HD2	5:E:23:ARG:HD2	1.62	0.80
1:A:426:G:H5''	7:G:45:GLN:NE2	1.96	0.80
7:G:58:LEU:HD13	7:G:59:ARG:N	1.96	0.80
9:I:62:TRP:CZ2	9:I:64:GLN:HB2	2.14	0.80
13:M:28:ARG:HA	13:M:33:GLN:HA	1.63	0.80
16:P:46:LYS:HG3	16:P:47:ASP:OD1	1.80	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1459:C:P	23:W:27:LYS:HZ3	2.04	0.80
1:A:1329:A:OP1	16:P:29:ARG:HG2	1.81	0.80
1:A:198:G:N2	1:A:199:G:C4	2.50	0.80
1:A:383:A:H2'	1:A:384:G:C5'	2.11	0.80
1:A:673:G:H5''	9:I:87:ARG:NH1	1.96	0.80
7:G:104:VAL:HA	7:G:107:ARG:HB2	1.61	0.80
7:G:155:LEU:HB2	7:G:158:ILE:HG12	1.63	0.80
14:N:15:ALA:C	14:N:77:MET:HG2	2.02	0.80
13:M:50:ILE:HB	17:Q:41:ARG:HE	1.46	0.80
1:A:1181:G:N7	1:A:1182:G:N3	2.30	0.80
1:A:607:A:O2'	1:A:608:A:H5'	1.81	0.80
5:E:61:LEU:CA	5:E:64:ARG:HH11	1.95	0.80
9:I:79:LEU:HD12	9:I:88:VAL:CG1	2.12	0.80
14:N:29:ILE:HG22	14:N:44:SER:OG	1.81	0.80
14:N:95:ILE:O	14:N:98:LEU:HB2	1.80	0.80
15:O:27:LEU:HD23	15:O:33:ARG:CD	2.11	0.80
15:O:39:VAL:HB	15:O:57:LYS:HB2	1.63	0.80
15:O:47:LYS:N	15:O:48:PRO:CD	2.43	0.80
15:O:85:ILE:HD11	15:O:98:TYR:CB	2.11	0.80
13:M:50:ILE:HD12	17:Q:41:ARG:NH2	1.95	0.80
18:R:7:GLU:CG	18:R:10:LYS:HE3	2.11	0.80
2:C:44:A:O2'	2:C:45:G:H5'	1.81	0.80
1:A:1256:A:H61	1:A:1278:U:C2'	1.95	0.80
1:A:250:A:H2	1:A:274:A:N1	1.78	0.80
1:A:628:G:H2'	1:A:629:G:H8	1.45	0.80
5:E:213:LEU:O	5:E:216:SER:HB3	1.81	0.80
7:G:60:GLU:OE2	7:G:202:LEU:HB2	1.81	0.80
7:G:83:SER:N	7:G:89:THR:HG23	1.95	0.80
1:A:1118:C:OP1	12:L:104:ARG:HG3	1.82	0.80
15:O:101:VAL:CG2	15:O:104:VAL:HG21	2.11	0.80
1:A:1005:A:H3'	1:A:1006:C:C6	2.15	0.80
1:A:1034:G:H2'	1:A:1035:A:H8	1.44	0.80
1:A:1200:C:C5'	1:A:1202:G:OP1	2.28	0.80
1:A:1378:C:O2	1:A:1378:C:H2'	1.81	0.80
1:A:1520:G:H2'	1:A:1521:G:H8	1.46	0.80
1:A:611:A:N6	1:A:629:G:H1	1.80	0.80
1:A:800:G:H8	1:A:800:G:O5'	1.64	0.80
5:E:223:ILE:HA	5:E:226:ARG:HE	1.47	0.80
13:M:32:ALA:HB2	13:M:75:ILE:O	1.80	0.80
14:N:61:ALA:HB1	14:N:94:ALA:CB	2.09	0.80
15:O:41:ARG:HH22	15:O:57:LYS:HE3	1.45	0.80
19:S:73:LEU:HD13	19:S:73:LEU:C	2.01	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:468:A:P	19:S:75:ARG:HH22	2.03	0.80
20:T:57:VAL:HA	20:T:77:VAL:HG23	1.63	0.80
1:A:250:A:H4'	1:A:251:G:O5'	1.79	0.80
1:A:520:A:C8	1:A:521:G:O4'	2.35	0.80
1:A:910:C:O2'	1:A:911:U:H5'	1.82	0.80
6:F:87:LEU:HD12	6:F:101:LEU:HD11	1.60	0.80
6:F:112:SER:HB2	6:F:115:LEU:HB2	1.64	0.80
1:A:1189:C:H5''	6:F:5:ILE:HG12	1.63	0.80
6:F:84:ILE:HD11	6:F:88:ARG:HH21	1.47	0.80
7:G:18:LYS:HD3	7:G:20:TYR:CD2	2.16	0.80
1:A:8:A:H1'	8:H:102:ALA:O	1.80	0.80
8:H:78:HIS:ND1	11:K:107:LEU:HD11	1.95	0.80
9:I:46:ARG:HG2	9:I:47:ARG:H	1.45	0.80
11:K:45:ILE:HD11	11:K:48:TYR:HB3	1.64	0.80
11:K:63:LEU:HG	11:K:65:TYR:HE1	1.44	0.80
1:A:942:G:N2	12:L:124:GLN:HE22	1.77	0.80
13:M:49:VAL:HG13	17:Q:41:ARG:HD2	1.62	0.80
17:Q:47:LEU:HA	17:Q:50:LYS:HG3	1.64	0.80
19:S:49:LEU:HD11	19:S:51:VAL:CG2	2.10	0.80
23:W:85:MET:HB3	23:W:104:LEU:HD11	1.61	0.80
2:C:17:C:C4	2:C:19:G:C8	2.70	0.80
22:V:30:LEU:HD11	22:V:50:ALA:HB2	1.64	0.80
1:A:397:A:N6	1:A:548:G:O6	2.15	0.80
1:A:706:A:H4'	14:N:22:HIS:ND1	1.96	0.80
1:A:99:C:H2'	1:A:101:A:C8	2.17	0.80
5:E:117:GLU:O	5:E:120:ALA:HB3	1.80	0.80
8:H:53:LEU:CD2	8:H:53:LEU:H	1.94	0.80
14:N:54:ARG:O	14:N:57:THR:HG22	1.79	0.80
15:O:100:ILE:H	15:O:100:ILE:HD13	1.42	0.80
22:V:36:ARG:NH2	22:V:75:ALA:HB3	1.97	0.80
22:V:5:LEU:CD1	22:V:9:VAL:HG13	2.10	0.80
1:A:1277:C:C4'	1:A:1282:C:H1'	2.11	0.80
1:A:1339:A:C2'	1:A:1340:A:H5'	2.11	0.80
1:A:132:C:C2	1:A:231:G:N2	2.50	0.80
1:A:640:A:O2'	1:A:641:U:H5'	1.82	0.80
1:A:674:G:H2'	1:A:675:A:C8	2.16	0.80
1:A:690:G:C6	1:A:691:G:N3	2.50	0.80
1:A:727:G:N2	1:A:731:G:C5	2.50	0.80
1:A:963:G:H2'	1:A:964:A:H8	1.45	0.80
9:I:14:LEU:CD1	9:I:19:LEU:HD12	2.11	0.80
10:J:14:PRO:HG3	10:J:21:VAL:HG13	1.64	0.80
12:L:49:PRO:HD3	12:L:78:LYS:NZ	1.96	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:48:ILE:HD11	14:N:64:ALA:CA	2.10	0.80
14:N:51:LYS:HD3	14:N:52:GLY:H	1.46	0.80
14:N:79:SER:HA	14:N:104:GLN:CG	2.12	0.80
1:A:1395:C:OP2	1:A:1395:C:H3'	1.82	0.80
1:A:22:G:H2'	1:A:23:C:C6	2.16	0.80
1:A:429:U:H4'	1:A:430:A:O5'	1.80	0.80
1:A:481:G:H4'	1:A:482:A:OP1	1.81	0.80
1:A:302:G:H2'	1:A:556:C:H5''	1.62	0.80
5:E:171:ALA:O	5:E:174:VAL:HB	1.80	0.80
7:G:57:ARG:HH22	8:H:107:ARG:HE	0.85	0.80
19:S:4:ILE:CG2	19:S:21:VAL:HG13	2.12	0.80
1:A:586:C:OP1	20:T:34:LYS:HE3	1.80	0.80
1:A:1049:U:H1'	1:A:1201:A:C8	2.16	0.80
1:A:1063:C:H5''	1:A:1064:G:H5''	1.64	0.80
1:A:1210:C:H4'	1:A:1214:C:C4	2.16	0.80
1:A:129(A):G:H4'	1:A:130:A:O5'	1.81	0.80
1:A:1327:C:H5''	24:X:20:LYS:NZ	1.96	0.80
5:E:132:LYS:H	5:E:132:LYS:CE	1.95	0.80
7:G:150:GLU:O	7:G:152:SER:N	2.15	0.80
9:I:96:PRO:O	9:I:97:PHE:HB2	1.79	0.80
11:K:14:ARG:HD3	11:K:15:ASN:ND2	1.96	0.80
11:K:97:VAL:HG22	11:K:98:LYS:HD3	1.64	0.80
12:L:112:LYS:HE2	12:L:117:HIS:CA	2.11	0.80
1:A:105:G:H2'	1:A:106:C:C6	2.17	0.79
1:A:1192:C:H5	1:A:1193:G:N9	1.80	0.79
1:A:1265:G:O6	1:A:1266:G:N3	2.14	0.79
1:A:1369:C:H2'	1:A:1370:G:C8	2.16	0.79
1:A:1511:G:H2'	1:A:1512:U:O4'	1.82	0.79
1:A:129(A):G:O2'	1:A:189:U:H3'	1.83	0.79
1:A:280:C:H5''	1:A:281:G:OP2	1.82	0.79
1:A:992:U:H5'	1:A:993:G:C8	2.17	0.79
5:E:115:LEU:O	5:E:118:LEU:HB3	1.82	0.79
5:E:182:ILE:CD1	5:E:182:ILE:H	1.94	0.79
7:G:170:VAL:HG23	7:G:176:LEU:CB	2.12	0.79
7:G:60:GLU:HA	7:G:63:LYS:HD2	1.64	0.79
10:J:15:ASP:HB2	10:J:23:VAL:HB	1.64	0.79
11:K:40:ALA:N	11:K:45:ILE:HG23	1.97	0.79
12:L:17:VAL:HA	12:L:63:ILE:HG23	1.64	0.79
15:O:34:ARG:O	15:O:60:LEU:HB2	1.82	0.79
20:T:53:LEU:HD11	20:T:85:VAL:HG22	1.64	0.79
3:D:50:G:H2'	3:D:51:C:C6	2.18	0.79
7:G:69:GLY:O	7:G:70:ILE:HG12	1.81	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:408:A:H5'	7:G:116:GLN:HG2	1.64	0.79
5:E:168:THR:OG1	5:E:192:SER:HA	1.82	0.79
7:G:18:LYS:HA	7:G:33:MET:CE	2.11	0.79
8:H:35:GLY:HA3	8:H:41:VAL:CG1	2.12	0.79
21:U:50:ILE:HD11	21:U:70:ILE:HG21	1.62	0.79
22:V:19:VAL:O	22:V:23:ASN:HB2	1.82	0.79
1:A:1084:G:C4	1:A:1085:U:H5	1.99	0.79
1:A:1425:U:H2'	1:A:1426:C:C6	2.17	0.79
1:A:1492:A:H61	1:A:1494:G:H4'	1.48	0.79
1:A:731:G:O2'	1:A:732:C:H5'	1.82	0.79
1:A:768:A:N7	1:A:769:G:N7	2.31	0.79
1:A:824:C:H2'	1:A:825:G:H8	1.46	0.79
5:E:214:ILE:HA	5:E:217:ARG:HG2	1.63	0.79
5:E:70:PHE:O	5:E:92:TYR:HB2	1.83	0.79
14:N:73:MET:CE	14:N:103:LEU:HD22	2.13	0.79
1:A:1058:G:O2'	1:A:1059:C:H5'	1.82	0.79
1:A:109:A:N7	1:A:326:G:C4	2.51	0.79
1:A:1470:G:O2'	1:A:1471:G:H5'	1.83	0.79
1:A:198:G:H21	1:A:199:G:H1'	1.47	0.79
10:J:94:ARG:HG3	10:J:94:ARG:HH11	1.47	0.79
17:Q:27:CYS:H	17:Q:43:CYS:HB3	1.47	0.79
1:A:1493:A:O2'	1:A:1494:G:C5'	2.31	0.79
1:A:625:G:OP1	19:S:9:PHE:HB3	1.82	0.79
1:A:745:C:H2'	1:A:746:A:H8	1.48	0.79
1:A:781:A:O2'	1:A:782:A:H5'	1.81	0.79
1:A:954:G:N2	1:A:1228:C:C4	2.50	0.79
7:G:114:ARG:O	7:G:117:ALA:HB3	1.83	0.79
7:G:191:ARG:NH2	7:G:194:LEU:O	2.15	0.79
7:G:58:LEU:CD1	7:G:59:ARG:HD2	2.12	0.79
10:J:50:ILE:CG2	10:J:61:VAL:HG21	2.12	0.79
10:J:50:ILE:HG21	10:J:61:VAL:HG21	1.64	0.79
11:K:10:LEU:CD1	11:K:85:ARG:HB2	2.13	0.79
1:A:1538:C:H2'	1:A:1539:C:H6	1.44	0.79
1:A:1269:A:H5'	1:A:1326:C:H4'	1.63	0.79
1:A:390:C:H2'	1:A:391:G:H8	1.48	0.79
1:A:451:A:N6	1:A:480:U:H2'	1.98	0.79
1:A:596:C:H2'	1:A:596:C:O2	1.81	0.79
1:A:817:C:H1'	1:A:820:U:OP2	1.83	0.79
10:J:12:LEU:O	10:J:14:PRO:HD3	1.81	0.79
12:L:45:ALA:HB3	12:L:74:ILE:CG2	2.12	0.79
1:A:582:U:H5''	18:R:68:ARG:HH22	1.48	0.79
22:V:15:LEU:HG	22:V:16:LEU:H	1.46	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1035:A:H2'	1:A:1036:G:H5'	1.64	0.79
1:A:174:C:H2'	1:A:175:C:C6	2.16	0.79
5:E:121:LEU:HD22	5:E:126:GLU:OE2	1.81	0.79
5:E:61:LEU:HA	5:E:64:ARG:CD	2.12	0.79
7:G:170:VAL:HG12	7:G:171:GLY:N	1.95	0.79
11:K:38:ILE:CG1	11:K:118:VAL:HG11	2.11	0.79
18:R:54:ARG:HA	18:R:57:LEU:HD22	1.64	0.79
22:V:47:HIS:H	22:V:62:ILE:CG2	1.94	0.79
1:A:1085:U:H5'	1:A:1094:G:N2	1.97	0.79
1:A:176:C:O2'	1:A:177:C:H5'	1.83	0.79
1:A:506:G:H4'	4:I:27:A:O3'	1.82	0.79
1:A:570:G:C2	1:A:873:A:N1	2.50	0.79
1:A:60:A:H62	1:A:110:C:H42	1.31	0.79
5:E:144:ARG:HD3	5:E:148:TYR:CE2	2.18	0.79
1:A:1343:G:H4'	12:L:122:ALA:O	1.83	0.79
17:Q:23:ARG:CD	17:Q:30:ALA:HB2	2.12	0.79
18:R:69:TYR:OH	18:R:73:GLU:HG3	1.82	0.79
21:U:81:PHE:HD1	21:U:81:PHE:O	1.65	0.79
1:A:1003:G:N7	1:A:1004:A:N3	2.29	0.79
1:A:1403:C:H1'	1:A:1500:A:N1	1.97	0.79
1:A:304:U:H2'	1:A:305:G:H8	1.47	0.79
1:A:547:A:H4'	1:A:548:G:OP1	1.81	0.79
1:A:691:G:N2	14:N:51:LYS:NZ	2.31	0.79
7:G:191:ARG:HH21	7:G:194:LEU:HB2	1.47	0.79
8:H:28:PHE:CZ	8:H:50:GLU:HA	2.18	0.79
10:J:105:VAL:O	10:J:108:ALA:HB3	1.82	0.79
15:O:101:VAL:HG23	15:O:104:VAL:HG21	1.64	0.79
16:P:91:ARG:NH1	16:P:96:LEU:HG	1.97	0.79
18:R:42:HIS:C	18:R:42:HIS:ND1	2.36	0.79
19:S:21:VAL:HG21	19:S:59:TRP:CD1	2.18	0.79
1:A:237:C:OP1	20:T:40:LYS:HE3	1.83	0.79
23:W:51:GLU:HA	23:W:54:LYS:HD2	1.63	0.79
1:A:783:C:H2'	1:A:784:C:C5'	2.13	0.79
1:A:822:C:H2'	1:A:823:G:H8	1.46	0.79
1:A:982:U:H1'	1:A:983:A:H62	1.48	0.79
1:A:738:C:H4'	9:I:70:ASP:HA	1.65	0.79
12:L:45:ALA:HB3	12:L:74:ILE:HG21	1.63	0.79
23:W:77:ALA:O	23:W:80:ARG:HB2	1.83	0.79
1:A:1323:G:H2'	1:A:1324:A:C8	2.17	0.78
1:A:186(A):C:O2'	23:W:89:ARG:NH2	2.17	0.78
3:D:41:G:H2'	3:D:42:C:O4'	1.83	0.78
7:G:147:ALA:HB2	7:G:182:LYS:HB3	1.66	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:75:ILE:HG22	13:M:76:ASN:ND2	1.98	0.78
14:N:67:ASP:O	14:N:71:LYS:HG3	1.82	0.78
20:T:88:TYR:HA	20:T:91:ARG:HH21	1.46	0.78
1:A:80:G:H3'	1:A:81:G:H8	1.47	0.78
1:A:1142:G:H2'	1:A:1143:G:O4'	1.83	0.78
1:A:730:G:N7	1:A:731:G:H1'	1.97	0.78
1:A:942:G:N2	12:L:124:GLN:NE2	2.31	0.78
5:E:14:GLY:O	5:E:15:VAL:HG13	1.83	0.78
7:G:173:TRP:HD1	7:G:185:PHE:CE2	2.02	0.78
1:A:1349:A:P	12:L:118:LYS:HB3	2.23	0.78
12:L:19:LEU:HD22	12:L:59:PHE:HD2	1.47	0.78
15:O:30:ALA:HB1	15:O:31:PRO:CD	2.14	0.78
11:K:90:GLY:O	15:O:7:ILE:HG13	1.83	0.78
16:P:108:ARG:HH11	16:P:108:ARG:HA	1.47	0.78
19:S:75:ARG:CA	19:S:80:PHE:HB2	2.04	0.78
19:S:8:ARG:C	19:S:8:ARG:HD2	2.03	0.78
21:U:74:ARG:NH1	21:U:81:PHE:HB3	1.96	0.78
3:D:19:G:C2	3:D:57:G:H1'	2.18	0.78
1:A:1035:A:C2'	1:A:1036:G:H5'	2.14	0.78
8:H:87:SER:HB3	8:H:131:ILE:HG12	1.65	0.78
1:A:10:A:O2'	1:A:11:G:H5'	1.83	0.78
1:A:198:G:O2'	1:A:199:G:C5'	2.30	0.78
1:A:308:C:H6	1:A:308:C:H5'	1.45	0.78
1:A:533:A:H2'	1:A:535:A:OP2	1.83	0.78
5:E:104:ASN:HD21	5:E:108:ILE:CG1	1.96	0.78
5:E:124:SER:OG	5:E:125:PRO:HD2	1.83	0.78
7:G:19:LEU:H	7:G:33:MET:CE	1.96	0.78
8:H:121:LYS:HZ2	8:H:121:LYS:HB3	1.48	0.78
9:I:72:VAL:HG23	9:I:73:ASN:H	1.46	0.78
11:K:40:ALA:CA	11:K:45:ILE:HG23	2.12	0.78
20:T:75:ARG:NH2	20:T:77:VAL:HG22	1.99	0.78
21:U:50:ILE:HD13	21:U:70:ILE:CD1	2.14	0.78
1:A:1064:G:OP1	1:A:1386:G:H4'	1.82	0.78
1:A:1236:A:H5'	1:A:1305:G:OP1	1.82	0.78
1:A:922:G:HO2'	1:A:1398:A:H61	1.29	0.78
1:A:153:C:H2'	1:A:154:C:C6	2.18	0.78
1:A:267:C:N4	1:A:268:C:N4	2.31	0.78
1:A:591:U:OP1	11:K:30:ARG:NH2	2.16	0.78
1:A:689:C:C4	1:A:690:G:N7	2.52	0.78
1:A:715:A:H2'	1:A:716:A:O4'	1.84	0.78
1:A:718:G:N7	1:A:719:C:N4	2.31	0.78
7:G:12:CYS:SG	7:G:19:LEU:O	2.41	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:79:GLU:HG3	8:H:93:PRO:HD2	1.66	0.78
13:M:6:ILE:HG22	13:M:98:ILE:HG13	1.64	0.78
1:A:363:A:C5	15:O:31:PRO:HD2	2.18	0.78
21:U:53:ARG:O	21:U:55:ARG:N	2.16	0.78
24:X:24:ARG:O	24:X:25:LYS:HB2	1.82	0.78
1:A:192:U:H2'	1:A:193:C:C6	2.19	0.78
1:A:595:G:C8	1:A:641:U:N3	2.51	0.78
1:A:760:G:H2'	20:T:103:GLY:O	1.84	0.78
5:E:169:LYS:NZ	5:E:170:GLU:HA	1.99	0.78
7:G:154:ASN:HD22	7:G:154:ASN:N	1.77	0.78
8:H:76:ILE:HG21	8:H:142:LEU:HD13	1.66	0.78
10:J:76:ARG:HB2	10:J:156:TRP:NE1	1.98	0.78
11:K:109:ILE:HG12	11:K:137:VAL:H	1.49	0.78
11:K:6:ILE:HG23	11:K:85:ARG:HH12	1.47	0.78
11:K:87:SER:OG	11:K:93:VAL:HG23	1.84	0.78
15:O:86:ARG:HB3	15:O:101:VAL:HG13	1.66	0.78
1:A:1104:G:O2'	1:A:1105:A:H5'	1.82	0.78
1:A:1137:C:H4'	1:A:1138:G:N2	1.97	0.78
1:A:1298:C:C5	10:J:114:ARG:HB3	2.18	0.78
1:A:1412:C:H2'	1:A:1413:A:C8	2.18	0.78
1:A:371:G:O2'	1:A:372:C:C5'	2.28	0.78
1:A:817:C:O2'	1:A:818:G:O5'	2.01	0.78
7:G:101:LEU:HD11	7:G:121:VAL:HG13	1.65	0.78
10:J:94:ARG:NH1	10:J:94:ARG:HG3	1.96	0.78
11:K:112:LEU:CD1	11:K:114:THR:HG22	2.13	0.78
19:S:66:PRO:HD2	19:S:71:ARG:NH2	1.98	0.78
20:T:5:VAL:CG1	20:T:6:LEU:N	2.46	0.78
20:T:81:ARG:O	20:T:84:LEU:HD11	1.83	0.78
23:W:63:ILE:HD13	23:W:80:ARG:CB	2.13	0.78
3:D:9:A:N3	3:D:46:G:H1'	1.99	0.78
1:A:1068:G:N7	1:A:1094:G:C8	2.52	0.78
1:A:1210:C:C4'	1:A:1214:C:H42	1.97	0.78
1:A:67:C:O4'	1:A:172:A:H1'	1.84	0.78
1:A:130:A:H5''	1:A:190:G:H2'	1.65	0.78
1:A:540:G:N3	7:G:42:GLN:NE2	2.32	0.78
1:A:776:G:H5''	1:A:777:A:OP1	1.84	0.78
5:E:104:ASN:HD21	5:E:108:ILE:HG12	1.47	0.78
6:F:132:ARG:O	6:F:135:LYS:HB2	1.84	0.78
6:F:46:GLU:O	6:F:47:LEU:HD13	1.83	0.78
7:G:31:CYS:O	7:G:33:MET:HG2	1.84	0.78
7:G:65:ARG:HB2	7:G:75:PHE:CE2	2.19	0.78
10:J:45:ASP:O	10:J:49:ILE:HD12	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:84:VAL:CG2	14:N:111:ASP:H	1.96	0.78
6:F:12:LEU:HD13	17:Q:57:ARG:HG3	1.65	0.78
1:A:474:G:H5'	19:S:81:ARG:HH21	1.46	0.78
21:U:18:ARG:NH2	21:U:21:LYS:HB2	1.98	0.78
23:W:56:MET:SD	23:W:84:LEU:HD12	2.23	0.78
3:D:18:G:N2	3:D:57:G:H2'	1.99	0.78
1:A:1142:G:O2'	1:A:1143:G:H5'	1.83	0.78
1:A:1411:C:H2'	1:A:1412:C:C6	2.15	0.78
1:A:192:U:H2'	1:A:193:C:H6	1.47	0.78
1:A:300:A:H2'	1:A:301:G:O4'	1.83	0.78
1:A:483:C:N4	1:A:484:G:C2	2.51	0.78
1:A:665:A:H2'	1:A:725:G:H21	1.49	0.78
5:E:75:LYS:HZ3	5:E:75:LYS:HA	1.48	0.78
7:G:57:ARG:HD2	7:G:202:LEU:HD23	1.66	0.78
8:H:121:LYS:NZ	8:H:122:GLU:N	2.31	0.78
9:I:36:ARG:O	9:I:65:VAL:HB	1.84	0.78
11:K:109:ILE:HD13	11:K:137:VAL:HB	1.66	0.78
13:M:49:VAL:O	13:M:60:ARG:HA	1.84	0.78
13:M:79:ARG:NH1	13:M:79:ARG:HA	1.98	0.78
14:N:101:SER:O	14:N:103:LEU:N	2.17	0.78
14:N:91:ARG:O	14:N:95:ILE:HG13	1.84	0.78
15:O:32:PHE:CB	15:O:84:LEU:HD21	2.13	0.78
16:P:92:HIS:CE1	16:P:110:ARG:NH2	2.51	0.78
16:P:14:ARG:H	16:P:44:ARG:CZ	1.97	0.78
1:A:761:G:H5'	20:T:103:GLY:N	1.98	0.78
23:W:87:LYS:HG3	23:W:91:LEU:HD21	1.65	0.78
2:C:72:A:H2'	2:C:73:A:C8	2.19	0.78
1:A:1159:U:H5'	1:A:1160:G:OP1	1.84	0.78
1:A:1454:G:H2'	1:A:1455:G:H8	1.48	0.78
1:A:370:C:H2'	1:A:371:G:H8	1.45	0.78
1:A:432:A:C8	1:A:433:C:C6	2.72	0.78
1:A:697:U:O5'	1:A:697:U:H6	1.67	0.78
6:F:73:PRO:HB3	6:F:105:GLU:OE1	1.84	0.78
10:J:70:LYS:HA	10:J:100:ALA:HB2	1.66	0.78
17:Q:22:THR:HB	17:Q:33:VAL:HG23	1.64	0.78
20:T:82:MET:O	20:T:85:VAL:HB	1.84	0.78
1:A:843:U:H3	5:E:37:ASN:HD22	1.29	0.78
1:A:1117:G:H5'	1:A:1118:C:OP2	1.83	0.78
1:A:1405:G:C2	1:A:1406:U:H5	2.01	0.78
1:A:719:C:H3'	1:A:720:C:C5	2.19	0.78
6:F:84:ILE:HD11	6:F:88:ARG:NH2	1.99	0.78
7:G:172:PRO:HG3	7:G:193:ASP:CB	2.13	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:34:GLU:OE2	7:G:35:ARG:HG2	1.83	0.78
7:G:58:LEU:CD1	7:G:59:ARG:HH11	1.95	0.78
8:H:76:ILE:HD12	8:H:142:LEU:HD13	1.65	0.78
8:H:53:LEU:HD23	8:H:53:LEU:H	1.49	0.78
10:J:66:VAL:O	10:J:70:LYS:HG3	1.84	0.78
19:S:6:LEU:HB2	19:S:17:TYR:HB3	1.66	0.78
1:A:1406:U:C2'	1:A:1406:U:O2	2.31	0.77
1:A:565:U:H3'	1:A:566:G:C8	2.19	0.77
1:A:592:G:O2'	1:A:593:G:H5'	1.84	0.77
1:A:649:G:H2'	1:A:650:G:H8	1.48	0.77
14:N:99:GLN:CB	14:N:105:VAL:HG11	2.14	0.77
15:O:100:ILE:N	15:O:100:ILE:HD13	1.98	0.77
13:M:49:VAL:CG1	17:Q:45:ARG:HD2	2.14	0.77
1:A:748:C:H3'	1:A:748:C:C6	2.19	0.77
1:A:1105:A:H2'	1:A:1106:G:H8	1.49	0.77
1:A:125:U:H2'	1:A:126:G:C8	2.20	0.77
1:A:1388:C:H2'	1:A:1389:C:C6	2.19	0.77
1:A:1465:C:N3	1:A:1466:C:C6	2.52	0.77
1:A:883:C:H5'	1:A:884:U:OP2	1.85	0.77
1:A:889:A:H5''	1:A:890:G:OP1	1.84	0.77
1:A:900:A:C5	1:A:901:A:N6	2.52	0.77
1:A:986:A:H2'	1:A:987:G:H8	1.48	0.77
5:E:22:LYS:O	5:E:24:TRP:CD1	2.37	0.77
5:E:80:ILE:HG23	5:E:212:GLN:NE2	1.99	0.77
10:J:26:PHE:HE1	10:J:105:VAL:HG22	1.47	0.77
11:K:4:ASP:OD2	11:K:7:ALA:HB3	1.85	0.77
14:N:48:ILE:HG23	14:N:63:LEU:HD13	1.63	0.77
14:N:27:ASN:HA	14:N:55:LYS:O	1.83	0.77
16:P:78:ILE:O	16:P:82:MET:HB2	1.84	0.77
1:A:255:G:H1'	20:T:16:GLN:HE21	1.48	0.77
20:T:40:LYS:NZ	20:T:42:TYR:CE1	2.52	0.77
22:V:22:LEU:O	22:V:22:LEU:HD23	1.83	0.77
1:A:1442:G:H4'	1:A:1443:G:OP2	1.83	0.77
2:C:4:G:H2'	2:C:5:G:H8	1.49	0.77
3:D:3:C:H2'	3:D:4:G:H8	1.48	0.77
1:A:843:U:H3	5:E:37:ASN:HA	1.49	0.77
1:A:87:A:N7	1:A:88:C:C4	2.52	0.77
1:A:208:U:H4'	1:A:209:U:OP1	1.82	0.77
1:A:1075:C:O2	1:A:1075:C:H2'	1.83	0.77
1:A:161:A:H2'	1:A:162:A:O4'	1.85	0.77
7:G:62:GLN:HA	7:G:62:GLN:HE21	1.49	0.77
14:N:80:VAL:O	14:N:106:LYS:HB3	1.83	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:53:VAL:O	12:L:54:ASP:HB2	1.84	0.77
1:A:1408:A:C2	1:A:1495:U:C5	2.71	0.77
1:A:236:G:H2'	1:A:237:C:H6	1.48	0.77
1:A:37:U:O4	1:A:397:A:C6	2.37	0.77
1:A:720:C:C2	1:A:721:G:N7	2.52	0.77
1:A:820:U:O2	1:A:820:U:H2'	1.84	0.77
1:A:872:A:O2'	1:A:873:A:OP1	2.01	0.77
5:E:87:ARG:CZ	5:E:233:SER:HA	2.14	0.77
14:N:21:ILE:HD11	14:N:82:VAL:CG1	2.13	0.77
18:R:39:LEU:C	18:R:39:LEU:HD23	2.04	0.77
23:W:20:LEU:N	23:W:20:LEU:HD23	2.00	0.77
1:A:1507:A:C2	1:A:1530:G:H1'	2.19	0.77
1:A:691:G:H22	14:N:51:LYS:HZ3	1.32	0.77
1:A:762:C:H2'	1:A:763:G:H8	1.48	0.77
1:A:817:C:O2	1:A:817:C:C2'	2.32	0.77
1:A:915:A:H2'	1:A:916:G:H5'	1.65	0.77
6:F:73:PRO:O	6:F:76:VAL:HB	1.84	0.77
7:G:56:VAL:CG1	7:G:202:LEU:HD21	2.14	0.77
12:L:111:ARG:NH2	13:M:62:HIS:HE1	1.81	0.77
16:P:14:ARG:HG2	16:P:17:VAL:CG2	2.15	0.77
18:R:71:GLN:HA	18:R:75:PRO:HB3	1.66	0.77
20:T:10:VAL:HG23	20:T:55:ASP:O	1.85	0.77
1:A:1368:G:OP2	12:L:112:LYS:O	2.01	0.77
1:A:148:G:O2'	1:A:149:A:H5'	1.84	0.77
1:A:225:C:H2'	1:A:226:G:C5'	2.14	0.77
1:A:494:U:H2'	1:A:494:U:O2	1.84	0.77
1:A:977:A:H4'	1:A:982:U:O4	1.84	0.77
5:E:221:LEU:HD13	5:E:221:LEU:C	2.05	0.77
6:F:131:ARG:HH12	8:H:51:VAL:HG23	1.50	0.77
8:H:18:ARG:NH2	8:H:25:ARG:HG3	2.00	0.77
8:H:94:ALA:HB3	8:H:117:ASP:C	2.05	0.77
10:J:15:ASP:OD1	10:J:18:TYR:HB2	1.83	0.77
1:A:1348:U:OP1	12:L:109:VAL:HA	1.84	0.77
12:L:51:ARG:HA	12:L:51:ARG:HH11	1.49	0.77
12:L:70:LYS:H	12:L:70:LYS:NZ	1.82	0.77
15:O:25:PRO:C	15:O:27:LEU:N	2.38	0.77
15:O:57:LYS:HG2	15:O:67:THR:HG23	1.67	0.77
20:T:60:ILE:CG2	20:T:72:ARG:HG3	2.15	0.77
22:V:11:VAL:O	22:V:15:LEU:HD21	1.85	0.77
1:A:193:C:O4'	23:W:60:GLU:HG2	1.84	0.77
3:D:69:C:H2'	3:D:70:G:H8	1.49	0.77
1:A:1493:A:O2'	1:A:1494:G:H5'	1.84	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:7:G:H1'	1:A:298:A:C8	2.20	0.77
1:A:370:C:C2	1:A:371:G:C8	2.72	0.77
1:A:679:C:H2'	1:A:680:C:C6	2.19	0.77
1:A:939:G:H5''	10:J:102:ARG:NH1	2.00	0.77
3:D:34:G:N2	3:D:35:A:O4'	2.17	0.77
5:E:215:LEU:O	5:E:218:ALA:HB3	1.85	0.77
6:F:182:ILE:HG12	6:F:203:PHE:CD1	2.20	0.77
7:G:11:LEU:C	7:G:19:LEU:HD12	2.04	0.77
9:I:2:ARG:NE	9:I:69:GLU:HG2	1.99	0.77
9:I:6:VAL:HG11	9:I:8:ILE:HD11	1.65	0.77
11:K:70:GLN:HE21	11:K:71:GLY:H	1.28	0.77
14:N:15:ALA:CA	14:N:77:MET:HG2	2.14	0.77
17:Q:26:ARG:HB3	17:Q:43:CYS:CB	2.15	0.77
19:S:14:ASN:CB	19:S:42:ARG:HH22	1.96	0.77
19:S:58:TYR:CD1	19:S:58:TYR:C	2.58	0.77
20:T:22:LEU:HD11	20:T:39:SER:OG	1.84	0.77
1:A:128:G:H4'	20:T:3:LYS:HG3	1.65	0.77
1:A:1021:G:H2'	1:A:1022:G:O4'	1.83	0.77
1:A:1126:U:H2'	1:A:1127:G:C8	2.18	0.77
1:A:440:A:C6	1:A:494:U:C5	2.73	0.77
1:A:594:G:H2'	1:A:595:G:O4'	1.85	0.77
1:A:756:C:O2'	1:A:757:U:H5'	1.85	0.77
5:E:111:ARG:CA	5:E:111:ARG:HH11	1.96	0.77
5:E:170:GLU:O	5:E:172:ILE:N	2.17	0.77
5:E:77:ALA:HB2	5:E:211:ILE:HD13	1.65	0.77
8:H:81:GLU:N	8:H:81:GLU:CD	2.37	0.77
10:J:140:ASP:HA	10:J:143:ARG:NH1	1.98	0.77
11:K:84:ARG:HD3	11:K:85:ARG:O	1.85	0.77
11:K:98:LYS:N	11:K:98:LYS:HZ2	1.83	0.77
18:R:62:GLN:HA	18:R:65:ARG:NH2	1.98	0.77
18:R:62:GLN:HE21	18:R:66:LEU:CD2	1.94	0.77
22:V:40:ILE:HG21	22:V:62:ILE:HD12	1.67	0.77
23:W:40:ALA:HA	23:W:55:ILE:CD1	2.12	0.77
1:A:425:G:O2'	1:A:426:G:H5'	1.85	0.77
1:A:453:A:H61	1:A:480:U:H3	1.27	0.77
1:A:450:G:O6	1:A:481:G:H2'	1.84	0.77
1:A:579:G:C2'	1:A:580:U:H5'	2.14	0.77
8:H:61:TYR:HA	8:H:64:ARG:HG2	1.66	0.77
11:K:36:LEU:HD11	11:K:59:LEU:CD2	2.14	0.77
11:K:39:LEU:O	11:K:43:GLY:O	2.03	0.77
12:L:47:LEU:HD11	12:L:50:LEU:HD22	1.67	0.77
13:M:39:PRO:O	13:M:40:LEU:HB2	1.85	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:97:SER:O	20:T:98:LEU:HD22	1.84	0.77
23:W:57:ARG:HH21	23:W:100:ILE:HB	1.50	0.77
7:G:196:LEU:O	7:G:196:LEU:HD12	1.84	0.77
1:A:1346:A:H4'	1:A:1347:G:O5'	1.85	0.77
1:A:1365:G:H2'	1:A:1366:C:C6	2.19	0.77
5:E:91:PRO:HG2	5:E:155:LEU:HD23	1.67	0.77
5:E:208:ILE:HG21	5:E:239:VAL:CG1	2.12	0.77
5:E:40:HIS:C	5:E:41:ILE:HD12	2.06	0.77
1:A:1100:C:H2'	5:E:98:LEU:HD11	1.65	0.77
8:H:7:GLU:HG2	8:H:37:ARG:NH2	2.00	0.77
12:L:40:LEU:C	12:L:42:ARG:H	1.87	0.77
19:S:14:ASN:HA	19:S:42:ARG:CZ	2.15	0.77
20:T:75:ARG:HH22	20:T:77:VAL:CG1	1.96	0.77
7:G:47:ARG:NH2	7:G:48:ALA:O	2.18	0.77
1:A:1329:A:O2'	1:A:1330:U:H5'	1.85	0.76
1:A:1491:G:O2'	1:A:1492:A:H5'	1.85	0.76
1:A:823:G:H21	11:K:1:MET:N	1.83	0.76
5:E:114:ARG:O	5:E:118:LEU:HB2	1.86	0.76
8:H:103:GLY:O	8:H:106:PRO:HD2	1.85	0.76
9:I:7:ASN:ND2	9:I:62:TRP:HD1	1.84	0.76
10:J:113:GLU:OE2	10:J:119:ARG:HG3	1.85	0.76
10:J:104:LEU:HD22	10:J:134:ALA:CB	2.13	0.76
11:K:109:ILE:CG1	11:K:111:ILE:HD11	2.15	0.76
11:K:33:GLU:HA	11:K:36:LEU:HD21	1.65	0.76
14:N:62:GLN:O	14:N:65:ALA:HB3	1.86	0.76
1:A:538:G:H3'	15:O:115:LYS:HE2	1.66	0.76
15:O:7:ILE:HG21	20:T:34:LYS:HB2	1.67	0.76
23:W:20:LEU:HA	23:W:23:ARG:HH11	1.50	0.76
1:A:1513:A:H2'	1:A:1514:C:H6	1.45	0.76
1:A:764:C:C2'	1:A:765:G:C8	2.67	0.76
7:G:180:GLY:O	7:G:182:LYS:HG2	1.85	0.76
9:I:60:PHE:C	9:I:61:LEU:HD23	2.05	0.76
14:N:14:VAL:O	14:N:16:SER:N	2.18	0.76
14:N:54:ARG:HD3	14:N:54:ARG:H	1.50	0.76
17:Q:44:LEU:HD23	17:Q:45:ARG:N	2.01	0.76
18:R:67:LEU:O	18:R:78:TYR:HE1	1.67	0.76
20:T:15:MET:HB3	20:T:18:THR:HB	1.66	0.76
21:U:70:ILE:CG2	21:U:74:ARG:HE	1.98	0.76
23:W:24:LEU:O	23:W:27:LYS:HB3	1.85	0.76
1:A:1148:U:H2'	1:A:1148:U:O2	1.84	0.76
1:A:318:G:O2'	1:A:319:G:H5'	1.86	0.76
1:A:59:A:C2	1:A:331:G:C2	2.73	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:608:A:C6	1:A:609:A:C8	2.73	0.76
1:A:862:C:H2'	1:A:863:U:C6	2.21	0.76
6:F:83:ARG:O	6:F:87:LEU:HG	1.85	0.76
9:I:75:LEU:HD11	9:I:79:LEU:HD21	1.66	0.76
9:I:89:MET:CE	21:U:75:ILE:HG21	2.16	0.76
10:J:72:ARG:HG2	10:J:142:GLU:OE1	1.86	0.76
1:A:598:U:C4'	11:K:94:TYR:HD2	1.98	0.76
15:O:73:GLU:CD	15:O:73:GLU:H	1.89	0.76
6:F:6:HIS:HB3	17:Q:49:HIS:HD1	1.50	0.76
22:V:53:ASN:HD21	22:V:58:VAL:HG13	1.49	0.76
2:C:50:U:H2'	2:C:51:C:C6	2.20	0.76
3:D:18:G:H4'	3:D:60:U:H3	1.50	0.76
1:A:1084:G:C4	1:A:1085:U:C5	2.74	0.76
1:A:109:A:N7	1:A:326:G:N3	2.32	0.76
1:A:478:A:H2'	1:A:479:C:C6	2.19	0.76
1:A:778:G:H2'	1:A:779:C:H6	1.48	0.76
5:E:155:LEU:HB3	5:E:159:PRO:HG3	1.66	0.76
6:F:83:ARG:O	6:F:85:ARG:N	2.18	0.76
11:K:13:ILE:HG22	11:K:14:ARG:N	2.00	0.76
15:O:33:ARG:HB3	15:O:85:ILE:HG21	1.65	0.76
1:A:1119:C:H2'	1:A:1120:G:N7	2.00	0.76
2:C:29:G:H5'	16:P:118:ALA:O	1.84	0.76
1:A:1129:C:H1'	1:A:1130:A:N7	2.00	0.76
1:A:1305:G:H21	1:A:1331:G:H2'	1.50	0.76
1:A:1341:U:O2'	1:A:1342:C:H5'	1.86	0.76
1:A:193:C:O2'	1:A:194:C:H5'	1.84	0.76
5:E:166:ASP:OD2	5:E:167:PRO:HD2	1.85	0.76
5:E:80:ILE:HD11	5:E:208:ILE:HG23	1.65	0.76
6:F:126:ARG:HB3	6:F:128:PHE:HE1	1.50	0.76
6:F:110:ASN:ND2	6:F:141:VAL:HA	2.01	0.76
1:A:1078:U:C5	1:A:1079:G:N7	2.53	0.76
1:A:1163:C:O2'	1:A:1164:G:H5'	1.84	0.76
1:A:1253:G:H21	1:A:1254:C:H1'	1.50	0.76
1:A:194:C:C2'	1:A:195:A:H5''	2.16	0.76
1:A:229:U:H2'	1:A:230:G:C8	2.21	0.76
1:A:378:G:H2'	1:A:379:C:C6	2.20	0.76
1:A:961:U:C2'	1:A:962:C:H5'	2.15	0.76
1:A:9:G:H3'	8:H:126:ARG:HH11	1.51	0.76
5:E:187:LEU:HD13	5:E:187:LEU:O	1.85	0.76
7:G:179:GLU:HG2	7:G:180:GLY:H	1.51	0.76
8:H:41:VAL:HG11	8:H:113:ALA:HA	1.68	0.76
8:H:147:ASP:CA	8:H:150:ARG:HB2	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:45:ILE:O	11:K:45:ILE:HG12	1.84	0.76
12:L:105:ASP:CG	12:L:107:ARG:HH21	1.88	0.76
12:L:49:PRO:HB3	12:L:82:ALA:HB2	1.68	0.76
16:P:22:ILE:HD12	16:P:25:ILE:HD12	1.67	0.76
22:V:12:ASP:O	22:V:16:LEU:HD13	1.85	0.76
23:W:45:GLN:HE21	23:W:91:LEU:HD13	1.51	0.76
1:A:1144:G:N2	1:A:1146:A:H62	1.82	0.76
1:A:1367:C:OP1	12:L:115:GLY:N	2.19	0.76
1:A:363:A:H5''	15:O:105:TYR:OH	1.86	0.76
1:A:611:A:N1	1:A:629:G:N2	2.33	0.76
1:A:801:U:H2'	1:A:802:A:C8	2.21	0.76
1:A:887:G:H2'	1:A:888:G:H8	1.50	0.76
1:A:886:G:C2'	1:A:887:G:H5'	2.16	0.76
5:E:69:LEU:HB3	5:E:162:ILE:CG2	2.13	0.76
5:E:171:ALA:C	5:E:174:VAL:HB	2.05	0.76
5:E:213:LEU:HD23	5:E:217:ARG:HD3	1.67	0.76
5:E:233:SER:HB3	5:E:234:PRO:CD	2.15	0.76
6:F:182:ILE:HG12	6:F:203:PHE:HD1	1.51	0.76
6:F:193:TYR:N	6:F:193:TYR:CD2	2.52	0.76
7:G:96:LEU:HD23	7:G:139:ARG:NH2	1.99	0.76
12:L:47:LEU:O	12:L:47:LEU:HD13	1.86	0.76
15:O:41:ARG:HG2	15:O:42:THR:N	1.98	0.76
1:A:1004:A:H4'	1:A:1005:A:OP1	1.86	0.76
1:A:283:C:N3	1:A:284:G:C8	2.54	0.76
1:A:384:G:H2'	1:A:385:C:H6	1.47	0.76
5:E:27:LYS:C	5:E:194:PRO:HG2	2.05	0.76
5:E:82:ARG:HD2	5:E:92:TYR:HH	1.49	0.76
6:F:175:LEU:HD21	6:F:201:TYR:CD2	2.21	0.76
6:F:36:ASP:HA	6:F:39:ILE:HD12	1.67	0.76
6:F:40:ARG:O	6:F:43:LEU:HB3	1.86	0.76
6:F:82:GLU:O	6:F:85:ARG:HB3	1.85	0.76
7:G:20:TYR:HD1	7:G:21:LEU:H	1.33	0.76
7:G:26:CYS:O	7:G:31:CYS:SG	2.43	0.76
9:I:60:PHE:CE2	21:U:78:LEU:HD21	2.21	0.76
11:K:9:MET:HA	11:K:26:VAL:HG21	1.67	0.76
14:N:15:ALA:HA	14:N:77:MET:HG2	1.66	0.76
15:O:82:VAL:O	15:O:106:ASP:HB2	1.86	0.76
1:A:582:U:C5'	18:R:68:ARG:HH22	1.98	0.76
19:S:16:HIS:N	19:S:16:HIS:ND1	2.31	0.76
22:V:62:ILE:HD11	22:V:67:VAL:CA	2.15	0.76
1:A:1143:G:H2'	1:A:1144:G:C8	2.21	0.76
1:A:1399:C:H4'	1:A:1400:C:O5'	1.85	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1465:C:N4	1:A:1466:C:C4	2.54	0.76
1:A:1408:A:H2	1:A:1495:U:H5	1.34	0.76
1:A:1534:A:OP2	1:A:1534:A:H8	1.66	0.76
1:A:186:C:H2'	1:A:186(A):C:H6	1.51	0.76
1:A:219:C:C6	1:A:219:C:H3'	2.21	0.76
1:A:313:A:H2'	1:A:314:C:H6	1.46	0.76
1:A:451:A:H1'	1:A:452:A:C4	2.21	0.76
1:A:862:C:H1'	1:A:874:G:C5'	2.12	0.76
5:E:204:ASN:ND2	5:E:205:ASP:N	2.31	0.76
6:F:38:ARG:HH11	6:F:38:ARG:CB	1.98	0.76
7:G:122:ARG:O	7:G:124:GLY:N	2.18	0.76
10:J:45:ASP:O	10:J:48:LYS:HB2	1.85	0.76
13:M:14:LYS:HA	13:M:17:ASP:OD2	1.86	0.76
15:O:54:LYS:O	15:O:70:ILE:HG13	1.85	0.76
15:O:85:ILE:HD11	15:O:98:TYR:HB3	1.66	0.76
16:P:91:ARG:HD3	16:P:96:LEU:HD21	1.67	0.76
1:A:1003:G:C6	1:A:1004:A:H1'	2.20	0.76
1:A:1023:G:H2'	1:A:1024:G:H5'	1.67	0.76
1:A:1107:C:H2'	1:A:1108:G:C5'	2.14	0.76
1:A:1196:U:H3'	1:A:1196:U:H6	1.48	0.76
1:A:1506:U:H3'	1:A:1507:A:H5'	1.66	0.76
1:A:298:A:H3'	1:A:299:G:C8	2.19	0.76
1:A:901:A:C2	1:A:902:G:C1'	2.64	0.76
5:E:118:LEU:HD12	5:E:145:LEU:HD23	1.66	0.76
5:E:71:VAL:HG13	5:E:93:VAL:O	1.86	0.76
1:A:408:A:H5'	7:G:116:GLN:CG	2.15	0.76
7:G:61:LYS:N	7:G:203:VAL:HG22	2.00	0.76
7:G:61:LYS:HG3	7:G:207:TYR:HE1	1.49	0.76
10:J:78:ARG:HG3	10:J:80:VAL:HG23	1.67	0.76
12:L:112:LYS:HB2	12:L:117:HIS:O	1.85	0.76
13:M:72:VAL:O	13:M:73:ASP:HB2	1.83	0.76
14:N:102:GLY:HA2	14:N:105:VAL:CG2	2.17	0.76
14:N:96:ARG:HG3	14:N:99:GLN:OE1	1.86	0.76
16:P:17:VAL:HG21	16:P:44:ARG:HH12	1.50	0.76
17:Q:16:PHE:HB3	17:Q:18:VAL:HG22	1.68	0.76
20:T:85:VAL:O	20:T:89:LEU:HG	1.85	0.76
2:C:60:U:OP2	2:C:60:U:C6	2.39	0.76
3:D:15:G:N1	3:D:48:C:N4	2.34	0.76
1:A:1023:G:O6	1:A:1024:G:N2	2.17	0.76
1:A:1128:C:H1'	1:A:1146:A:H61	1.50	0.75
1:A:1408:A:N7	1:A:1409:C:C5	2.54	0.75
1:A:1440:C:H2'	1:A:1441:G:H8	1.51	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1505:G:H5''	1:A:1506:U:C5'	2.17	0.75
1:A:390:C:C4	1:A:391:G:N7	2.55	0.75
1:A:643:C:H5'	11:K:31:PHE:CD1	2.20	0.75
3:D:35:A:H2'	3:D:36:A:O4'	1.86	0.75
7:G:151:LYS:O	7:G:154:ASN:ND2	2.19	0.75
7:G:20:TYR:O	7:G:22:LYS:N	2.19	0.75
8:H:37:ARG:HH12	8:H:112:LEU:HD22	1.46	0.75
10:J:135:VAL:O	10:J:138:LYS:HB3	1.85	0.75
1:A:599:C:C4'	11:K:130:GLY:HA3	2.10	0.75
13:M:34:VAL:CG1	13:M:35:SER:H	1.99	0.75
14:N:102:GLY:HA2	14:N:105:VAL:HG23	1.68	0.75
18:R:31:LEU:O	18:R:34:LEU:HD23	1.84	0.75
1:A:376:G:OP1	19:S:5:ARG:HB2	1.86	0.75
22:V:29:ARG:HG2	22:V:30:LEU:H	1.52	0.75
1:A:122:G:H2'	1:A:123:C:O4'	1.86	0.75
1:A:1522:U:O2'	1:A:1523:G:H5'	1.85	0.75
1:A:292:G:OP2	1:A:293:G:N7	2.19	0.75
1:A:371:G:C2'	1:A:372:C:H5'	2.17	0.75
1:A:675:A:H2'	1:A:676:A:C8	2.21	0.75
1:A:738:C:C2	1:A:739:C:C5	2.74	0.75
7:G:179:GLU:HG2	7:G:180:GLY:N	2.01	0.75
7:G:19:LEU:O	7:G:26:CYS:SG	2.44	0.75
7:G:60:GLU:HG2	7:G:203:VAL:CG2	2.15	0.75
8:H:109:ILE:HG23	8:H:110:LEU:N	2.00	0.75
11:K:10:LEU:HD13	11:K:85:ARG:HB2	1.67	0.75
15:O:5:PRO:HB3	15:O:10:LEU:CD2	2.13	0.75
18:R:56:LEU:O	18:R:59:MET:HB3	1.87	0.75
1:A:392:G:H5'	19:S:12:LYS:CE	2.16	0.75
23:W:58:LYS:O	23:W:62:LEU:HD12	1.86	0.75
3:D:55:U:H2'	3:D:57:G:N7	2.02	0.75
4:1:15:A:H3'	4:1:15:A:C8	2.20	0.75
1:A:1068:G:OP2	1:A:1094:G:H5'	1.86	0.75
1:A:1163:C:C2'	1:A:1164:G:H5'	2.16	0.75
1:A:1500:A:OP1	1:A:1508:G:OP1	2.04	0.75
1:A:293:G:N3	1:A:293:G:H2'	2.00	0.75
1:A:381:C:H2'	1:A:382:A:H8	1.48	0.75
1:A:811:C:H5'	1:A:812:C:OP2	1.85	0.75
5:E:115:LEU:HD12	5:E:118:LEU:HD13	1.68	0.75
5:E:22:LYS:O	5:E:24:TRP:HD1	1.69	0.75
5:E:47:THR:HG22	5:E:51:LEU:HD11	1.68	0.75
5:E:74:LYS:HZ3	5:E:76:GLN:HB2	1.51	0.75
6:F:43:LEU:HD22	6:F:44:GLU:HG3	1.68	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:52:LEU:O	6:F:115:LEU:HD21	1.85	0.75
7:G:58:LEU:HD13	7:G:59:ARG:HD2	1.67	0.75
8:H:107:ARG:HB2	8:H:107:ARG:CZ	2.14	0.75
11:K:14:ARG:HB3	11:K:14:ARG:NH1	1.99	0.75
11:K:22:GLU:O	11:K:62:TYR:HA	1.85	0.75
14:N:67:ASP:HA	14:N:70:LYS:HD2	1.68	0.75
16:P:64:TRP:CD1	16:P:66:LEU:HD22	2.21	0.75
17:Q:12:ARG:HB3	17:Q:14:PRO:HD3	1.68	0.75
19:S:34:GLU:HB3	19:S:59:TRP:HE1	1.50	0.75
23:W:83:ARG:O	23:W:86:ARG:HG2	1.86	0.75
3:D:18:G:H21	3:D:58:A:C5'	2.00	0.75
1:A:1180:A:OP1	12:L:102:LEU:CB	2.33	0.75
1:A:1507:A:C2	1:A:1530:G:C1'	2.69	0.75
1:A:21:G:C8	1:A:22:G:N7	2.54	0.75
5:E:15:VAL:HG22	5:E:209:ARG:HH11	1.51	0.75
5:E:49:GLU:O	5:E:52:GLU:HB3	1.86	0.75
5:E:97:TRP:HZ2	5:E:102:LEU:HD13	1.52	0.75
7:G:192:GLU:H	7:G:192:GLU:CD	1.89	0.75
8:H:39:GLY:HA2	8:H:69:VAL:HB	1.66	0.75
9:I:11:ASN:HD21	9:I:13:ASN:HB2	1.50	0.75
11:K:102:ARG:HG2	11:K:102:ARG:HH11	1.50	0.75
14:N:97:ALA:O	14:N:100:ALA:HB3	1.85	0.75
19:S:19:ILE:HD11	19:S:39:TYR:HB2	1.69	0.75
1:A:1443:G:C4'	1:A:1446:A:H5'	2.13	0.75
2:C:20:U:H3'	2:C:20:U:O2	1.86	0.75
1:A:1003:G:C5	1:A:1004:A:H1'	2.21	0.75
16:P:3:ARG:HA	16:P:7:VAL:HA	1.66	0.75
1:A:1068:G:N7	1:A:1094:G:N7	2.35	0.75
1:A:1192:C:N4	1:A:1193:G:C6	2.54	0.75
1:A:189:U:O4	20:T:63:ARG:HB2	1.87	0.75
1:A:600:C:H5'	11:K:129:VAL:HA	1.68	0.75
7:G:152:SER:O	7:G:158:ILE:HG13	1.86	0.75
7:G:173:TRP:NE1	7:G:189:PRO:HB3	2.02	0.75
9:I:50:TYR:O	9:I:52:ILE:N	2.18	0.75
10:J:45:ASP:HB2	10:J:117:ALA:HB1	1.66	0.75
11:K:39:LEU:HB3	11:K:45:ILE:HG22	1.66	0.75
13:M:40:LEU:HD12	13:M:71:LEU:HD21	1.69	0.75
14:N:32:ILE:O	14:N:40:ILE:HD13	1.87	0.75
16:P:48:LEU:CD1	16:P:53:VAL:HG22	2.16	0.75
16:P:60:VAL:HG22	16:P:64:TRP:CE3	2.20	0.75
21:U:17:SER:HB3	21:U:54:ARG:NH2	2.01	0.75
1:A:1216:G:H2'	1:A:1217:C:H6	1.50	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1416:G:H2'	1:A:1417:G:H8	1.52	0.75
1:A:173:U:C5'	1:A:197:A:C1'	2.65	0.75
1:A:611:A:N6	1:A:629:G:N1	2.34	0.75
1:A:728:A:H8	18:R:54:ARG:CZ	2.00	0.75
1:A:892:A:H2'	1:A:893:C:H6	1.52	0.75
5:E:87:ARG:O	5:E:89:GLY:N	2.20	0.75
6:F:179:ARG:HG2	6:F:206:GLU:CG	2.15	0.75
9:I:48:LEU:CD2	9:I:60:PHE:HZ	1.99	0.75
9:I:65:VAL:HG23	9:I:66:GLU:N	2.00	0.75
9:I:1:MET:CE	9:I:68:PRO:HG3	2.16	0.75
9:I:98:LEU:CD2	21:U:28:GLU:HA	2.16	0.75
10:J:22:LEU:HD23	10:J:63:LYS:HZ2	1.48	0.75
11:K:6:ILE:HG21	11:K:85:ARG:HH22	1.52	0.75
12:L:55:ALA:CB	12:L:58:HIS:CE1	2.69	0.75
14:N:48:ILE:HD11	14:N:64:ALA:HA	1.69	0.75
1:A:228:A:H1'	19:S:62:VAL:HG11	1.69	0.75
21:U:66:LEU:HD12	21:U:67:ALA:CA	2.16	0.75
1:A:986:A:H4'	22:V:55:LYS:HE3	1.68	0.75
1:A:186:C:O2'	1:A:186(A):C:H5'	1.86	0.75
1:A:863:U:O2	1:A:863:U:H2'	1.84	0.75
1:A:983:A:C2	1:A:984:C:C6	2.74	0.75
6:F:172:ARG:NH1	6:F:172:ARG:HB3	2.02	0.75
7:G:3:ARG:HG3	7:G:3:ARG:HH11	1.51	0.75
14:N:91:ARG:O	14:N:94:ALA:HB3	1.87	0.75
16:P:14:ARG:CA	16:P:44:ARG:HA	2.17	0.75
16:P:51:ALA:O	16:P:54:VAL:HB	1.86	0.75
16:P:29:ARG:CZ	16:P:64:TRP:HE1	1.99	0.75
1:A:994:A:C8	1:A:1216:G:H4'	2.22	0.75
1:A:127:G:HO2'	20:T:2:PRO:N	1.84	0.75
1:A:1412:C:H2'	1:A:1413:A:H8	1.50	0.75
1:A:130:A:H4'	1:A:190:G:N3	2.02	0.75
1:A:570:G:C5'	1:A:820:U:H1'	2.17	0.75
1:A:894:G:H2'	1:A:895:G:H8	1.52	0.75
5:E:24:TRP:CZ3	5:E:26:PRO:HA	2.21	0.75
6:F:188:LEU:HD13	6:F:189:ALA:N	2.01	0.75
7:G:58:LEU:HA	7:G:206:PHE:CE1	2.22	0.75
8:H:15:ARG:NH2	8:H:26:PHE:CD2	2.55	0.75
10:J:62:PHE:HD2	10:J:63:LYS:NZ	1.85	0.75
10:J:6:ARG:HH11	10:J:6:ARG:CA	2.00	0.75
12:L:65:VAL:HG21	12:L:77:ILE:HD11	1.68	0.75
14:N:66:LEU:O	14:N:69:ALA:HB3	1.87	0.75
15:O:24:VAL:HG22	15:O:97:ARG:HG2	1.68	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:43:LEU:HD13	20:T:43:LEU:C	2.07	0.75
21:U:34:TYR:HD1	21:U:35:ARG:HG3	1.47	0.75
23:W:43:LEU:CD2	23:W:48:LYS:HB2	2.17	0.75
2:C:60:U:H4'	2:C:61:C:OP2	1.85	0.75
1:A:750:G:N3	18:R:23:GLY:O	2.20	0.75
1:A:1115:C:H2'	1:A:1116:C:C6	2.21	0.75
1:A:184:G:H4'	1:A:224:C:O3'	1.86	0.75
1:A:428:G:C2	1:A:430:A:N6	2.55	0.75
1:A:799:G:C2	1:A:800:G:H1'	2.22	0.75
5:E:14:GLY:HA3	5:E:209:ARG:CZ	2.17	0.75
5:E:41:ILE:HD12	5:E:41:ILE:N	2.02	0.75
6:F:193:TYR:N	6:F:193:TYR:HD2	1.84	0.75
11:K:64:LYS:CG	11:K:79:VAL:HG21	2.10	0.75
12:L:29:ASN:OD1	12:L:64:THR:HA	1.87	0.75
20:T:94:ASN:HA	20:T:104:LYS:HG3	1.69	0.75
21:U:74:ARG:HG2	21:U:81:PHE:HB3	1.68	0.75
21:U:83:GLU:HA	21:U:83:GLU:OE1	1.85	0.75
2:C:5:G:O2'	2:C:6:G:H5'	1.86	0.75
4:1:12:A:H3'	4:1:12:A:N3	2.01	0.75
1:A:1465:C:O2	1:A:1465:C:C2'	2.35	0.74
1:A:276:G:H2'	1:A:277:C:H5'	1.68	0.74
1:A:372:C:H42	1:A:389:A:N6	1.82	0.74
1:A:403:C:O2'	7:G:122:ARG:NH1	2.19	0.74
6:F:84:ILE:O	6:F:101:LEU:HD13	1.87	0.74
6:F:78:GLY:HA3	6:F:82:GLU:OE1	1.87	0.74
11:K:31:PHE:HZ	11:K:113:SER:HB2	1.51	0.74
12:L:17:VAL:HG22	12:L:63:ILE:HG21	1.67	0.74
15:O:119:LYS:O	15:O:120:TYR:HB2	1.85	0.74
20:T:18:THR:OG1	20:T:69:LYS:HE2	1.87	0.74
21:U:29:PHE:CE1	21:U:39:VAL:HG11	2.22	0.74
22:V:18:LYS:HG2	22:V:31:ILE:HG21	1.67	0.74
1:A:1330:U:OP1	16:P:25:ILE:N	2.19	0.74
1:A:30:U:H4'	1:A:31:G:OP2	1.85	0.74
1:A:416:G:H2'	1:A:417:C:H6	1.48	0.74
5:E:132:LYS:H	5:E:132:LYS:HE2	1.51	0.74
1:A:1100:C:H2'	5:E:98:LEU:CD1	2.17	0.74
7:G:206:PHE:C	7:G:206:PHE:CD2	2.60	0.74
12:L:19:LEU:HD22	12:L:59:PHE:CD2	2.22	0.74
13:M:9:ARG:O	13:M:94:VAL:HG13	1.86	0.74
23:W:49:ALA:HA	23:W:92:LEU:HD22	1.67	0.74
1:A:91:C:O2'	1:A:92:G:H5'	1.87	0.74
1:A:1067:A:O2'	1:A:1068:G:P	2.45	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:319:G:O2'	1:A:320:C:H5'	1.88	0.74
1:A:862:C:H2'	1:A:863:U:H6	1.52	0.74
1:A:970:C:H5''	1:A:971:G:OP1	1.87	0.74
5:E:32:ILE:HD11	5:E:40:HIS:HD2	1.50	0.74
7:G:198:VAL:HG23	7:G:199:ASN:H	1.52	0.74
8:H:43:LEU:HB3	8:H:136:MET:SD	2.27	0.74
13:M:60:ARG:H	13:M:60:ARG:HD3	1.52	0.74
15:O:35:GLY:O	15:O:82:VAL:HG13	1.86	0.74
19:S:1:MET:HB3	19:S:3:LYS:HZ1	1.51	0.74
20:T:27:PHE:O	20:T:36:ILE:HD13	1.87	0.74
20:T:40:LYS:NZ	20:T:40:LYS:HB2	2.01	0.74
4:1:14:A:H3'	4:1:14:A:N3	2.02	0.74
1:A:1143:G:H2'	1:A:1144:G:H8	1.52	0.74
1:A:1273:G:H3'	1:A:1274:G:C8	2.22	0.74
1:A:20:U:H2'	1:A:21:G:O4'	1.86	0.74
1:A:383:A:H2'	1:A:384:G:H5'	1.66	0.74
1:A:482:A:H2'	1:A:482:A:N3	2.00	0.74
1:A:516:U:O2	1:A:533:A:N6	2.20	0.74
1:A:734:G:H8	1:A:734:G:OP1	1.70	0.74
5:E:25:ASN:ND2	5:E:25:ASN:C	2.40	0.74
6:F:112:SER:OG	6:F:115:LEU:HD12	1.88	0.74
10:J:50:ILE:HD13	10:J:58:PRO:HA	1.69	0.74
12:L:89:ASN:C	12:L:91:ASP:H	1.89	0.74
16:P:4:ILE:HG13	16:P:8:GLU:HB2	1.68	0.74
16:P:52:GLU:HA	16:P:55:ARG:CD	2.17	0.74
1:A:1047:G:C5'	17:Q:4:LYS:HD3	2.16	0.74
19:S:6:LEU:HG	19:S:17:TYR:CD2	2.22	0.74
19:S:20:VAL:HG13	19:S:34:GLU:O	1.87	0.74
21:U:43:PHE:O	21:U:51:LEU:HD13	1.88	0.74
22:V:20:LEU:O	22:V:22:LEU:N	2.16	0.74
1:A:986:A:H4'	22:V:55:LYS:CD	2.17	0.74
3:D:58:A:H2'	3:D:61:C:N4	2.01	0.74
1:A:137:C:C2'	1:A:138:G:H5'	2.17	0.74
1:A:517:G:N2	1:A:533:A:OP2	2.19	0.74
1:A:764:C:C3'	1:A:765:G:C8	2.69	0.74
5:E:104:ASN:ND2	5:E:108:ILE:HG12	2.01	0.74
5:E:80:ILE:HG21	5:E:211:ILE:HG22	1.70	0.74
8:H:121:LYS:HZ3	8:H:122:GLU:N	1.85	0.74
9:I:1:MET:HB3	9:I:67:MET:O	1.86	0.74
10:J:65:ALA:HB2	10:J:124:LEU:HD23	1.69	0.74
11:K:18:ARG:NH1	11:K:18:ARG:CA	2.43	0.74
11:K:38:ILE:H	11:K:38:ILE:HD13	1.51	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:73:LEU:O	19:S:73:LEU:HD13	1.87	0.74
1:A:1002:G:OP2	1:A:1002:G:O4'	2.05	0.74
1:A:173:U:H1'	1:A:197:A:H2	1.48	0.74
1:A:922:G:H21	1:A:923:A:H1'	1.53	0.74
5:E:67:THR:CG2	5:E:155:LEU:HD11	2.15	0.74
5:E:25:ASN:ND2	5:E:27:LYS:H	1.86	0.74
6:F:191:THR:OG1	6:F:196:LEU:HD21	1.86	0.74
8:H:72:GLN:NE2	8:H:144:THR:HG23	2.02	0.74
9:I:85:VAL:CG1	9:I:88:VAL:HG23	2.18	0.74
12:L:113:LYS:HD2	12:L:113:LYS:N	2.03	0.74
1:A:973:G:H1'	13:M:55:LYS:H	1.52	0.74
13:M:6:ILE:CG2	13:M:98:ILE:HG13	2.17	0.74
16:P:121:LYS:HA	16:P:121:LYS:HE3	1.69	0.74
18:R:16:ALA:CB	18:R:21:ASP:HB3	2.18	0.74
19:S:26:ARG:HB3	19:S:30:GLY:HA3	1.69	0.74
21:U:73:ALA:O	21:U:79:LEU:HD11	1.87	0.74
21:U:74:ARG:HB3	21:U:81:PHE:HD2	1.49	0.74
23:W:49:ALA:HB3	23:W:99:LEU:HG	1.68	0.74
1:A:209:U:H5''	1:A:210:U:OP1	1.87	0.74
1:A:819:A:C2	1:A:1529:G:O6	2.40	0.74
1:A:501:C:H2'	1:A:502:G:H8	1.53	0.74
1:A:818:G:C2'	1:A:819:A:H5''	2.17	0.74
6:F:156:ARG:HH12	6:F:161:GLU:HA	1.52	0.74
9:I:76:ALA:O	9:I:80:ARG:HG3	1.88	0.74
10:J:71:PRO:HG2	10:J:91:VAL:HG11	1.69	0.74
18:R:33:THR:HG23	18:R:87:ILE:HD11	1.69	0.74
1:A:1244:C:H2'	1:A:1245:A:H8	1.51	0.74
1:A:1302:U:O2'	1:A:1303:C:H5'	1.87	0.74
1:A:815:A:H2	1:A:1527:C:O2	1.71	0.74
1:A:889:A:H4'	1:A:890:G:H4'	1.70	0.74
5:E:162:ILE:HD13	5:E:183:PRO:O	1.88	0.74
5:E:15:VAL:CG1	5:E:209:ARG:HB3	2.06	0.74
5:E:223:ILE:CG2	5:E:229:VAL:HA	2.17	0.74
5:E:61:LEU:HA	5:E:64:ARG:NH1	2.02	0.74
10:J:155:ARG:HD3	10:J:156:TRP:N	2.03	0.74
10:J:52:GLU:OE1	10:J:53:LYS:HG2	1.88	0.74
11:K:114:THR:OG1	11:K:129:VAL:HG11	1.88	0.74
13:M:44:VAL:HG11	13:M:46:ARG:HE	1.51	0.74
19:S:56:ALA:O	19:S:60:LEU:HG	1.86	0.74
22:V:13:ASP:HA	22:V:16:LEU:HB2	1.70	0.74
1:A:1327:C:H5''	24:X:20:LYS:CE	2.18	0.74
3:D:3:C:H2'	3:D:4:G:C8	2.22	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1308:U:OP2	16:P:99:ARG:HG3	1.88	0.74
1:A:174:C:N4	1:A:175:C:H41	1.86	0.74
1:A:517:G:H22	1:A:533:A:P	2.10	0.74
1:A:769:G:O2'	1:A:770:C:H5'	1.87	0.74
6:F:64:VAL:HB	6:F:99:VAL:CG1	2.18	0.74
8:H:74:GLY:O	8:H:115:VAL:HG12	1.88	0.74
9:I:68:PRO:HB2	9:I:71:ARG:HG3	1.67	0.74
16:P:16:ASP:CA	16:P:19:LEU:HG	2.08	0.74
20:T:7:THR:HG23	20:T:8:GLY:N	2.03	0.74
21:U:87:ARG:O	21:U:88:LYS:C	2.26	0.74
22:V:15:LEU:HD13	22:V:71:LEU:HD11	1.69	0.74
23:W:103:GLY:O	23:W:104:LEU:HD12	1.87	0.74
23:W:88:VAL:HG12	23:W:92:LEU:HD12	1.69	0.74
1:A:1226:C:O2'	1:A:1227:A:OP1	2.06	0.74
1:A:1414:U:H2'	1:A:1415:G:H8	1.53	0.74
1:A:351:G:H4'	1:A:352:C:OP1	1.86	0.74
1:A:403:C:H2'	1:A:404:U:C6	2.23	0.74
1:A:731:G:OP1	1:A:766:A:H1'	1.87	0.74
1:A:663:A:H5'	1:A:836:G:OP1	1.88	0.74
1:A:572:A:HO2'	1:A:916:G:HO2'	1.34	0.74
1:A:981:U:H2'	1:A:982:U:C5	2.23	0.74
6:F:59:ARG:NH2	6:F:64:VAL:HA	2.03	0.74
8:H:109:ILE:CG2	8:H:110:LEU:H	2.01	0.74
8:H:11:ILE:HG22	8:H:12:LEU:H	1.53	0.74
10:J:54:THR:OG1	10:J:56:GLN:HG2	1.87	0.74
11:K:25:ASP:CG	11:K:60:ARG:HB2	2.08	0.74
15:O:59:ARG:HD3	15:O:63:GLY:HA2	1.68	0.74
16:P:96:LEU:O	16:P:98:VAL:HG23	1.87	0.74
18:R:24:SER:H	18:R:27:VAL:HG23	1.53	0.74
23:W:53:LEU:O	23:W:57:ARG:HG3	1.87	0.74
1:A:1480:G:H2'	1:A:1481:U:C5'	2.18	0.73
1:A:158:G:N2	1:A:164:U:H1'	2.03	0.73
1:A:177:C:N3	1:A:178:C:C5	2.56	0.73
1:A:267:C:C4	1:A:268:C:N4	2.56	0.73
1:A:404:U:O2	1:A:405:U:H5	1.71	0.73
1:A:47:C:H4'	1:A:48:C:H5''	1.70	0.73
6:F:94:LEU:O	6:F:95:THR:HG23	1.87	0.73
9:I:75:LEU:HD13	9:I:79:LEU:HD21	1.70	0.73
1:A:1308:U:H3'	16:P:99:ARG:NH2	2.03	0.73
18:R:29:VAL:CG1	18:R:81:LEU:HD21	2.12	0.73
19:S:14:ASN:HB2	19:S:42:ARG:NH2	1.99	0.73
19:S:73:LEU:O	19:S:76:GLN:HB3	1.88	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:78:GLU:CG	20:T:81:ARG:HB2	2.10	0.73
20:T:8:GLY:O	20:T:56:VAL:HA	1.88	0.73
21:U:63:GLN:O	21:U:66:LEU:HG	1.87	0.73
1:A:101:A:O2'	1:A:102:G:H5'	1.88	0.73
1:A:1192:C:H3'	1:A:1192:C:C6	2.23	0.73
1:A:1202:G:H21	1:A:1203:C:C1'	2.00	0.73
1:A:163:C:H2'	1:A:164:U:O4'	1.88	0.73
1:A:163:C:C2	1:A:164:U:C6	2.76	0.73
1:A:451:A:H61	1:A:480:U:H2'	1.52	0.73
1:A:770:C:H1'	1:A:900:A:H2	1.51	0.73
1:A:792:A:C2	1:A:794:A:N1	2.56	0.73
1:A:576:G:C8	1:A:881:G:H1'	2.23	0.73
5:E:226:ARG:HG2	5:E:227:GLY:N	2.03	0.73
7:G:148:VAL:CG1	7:G:158:ILE:HD12	2.18	0.73
7:G:15:GLU:HB3	7:G:19:LEU:HD11	1.70	0.73
7:G:60:GLU:CG	7:G:203:VAL:HG23	2.12	0.73
8:H:57:LYS:HG2	8:H:61:TYR:HE2	1.52	0.73
10:J:45:ASP:HA	10:J:48:LYS:HZ3	1.53	0.73
11:K:82:HIS:O	11:K:137:VAL:HA	1.88	0.73
16:P:13:LYS:HA	16:P:44:ARG:NH2	2.01	0.73
21:U:66:LEU:O	21:U:70:ILE:HG13	1.88	0.73
22:V:63:THR:HB	22:V:66:MET:SD	2.28	0.73
23:W:42:GLN:C	23:W:42:GLN:HE21	1.90	0.73
2:C:21:A:C6	2:C:46:G:N1	2.56	0.73
1:A:1229:A:H2'	1:A:1230:C:C6	2.23	0.73
1:A:121:C:H4'	1:A:122:G:OP1	1.86	0.73
1:A:1360:A:N6	17:Q:18:VAL:HG12	2.04	0.73
1:A:1481:U:H2'	1:A:1482:G:C8	2.23	0.73
1:A:230:G:N2	1:A:231:G:H1'	2.03	0.73
1:A:515:G:H2'	1:A:516:U:O4'	1.87	0.73
1:A:522:C:H2'	1:A:523:A:H8	1.52	0.73
1:A:992:U:O2'	1:A:993:G:OP2	2.05	0.73
5:E:132:LYS:HZ2	5:E:132:LYS:HB3	1.53	0.73
14:N:101:SER:O	14:N:103:LEU:CG	2.36	0.73
15:O:29:GLY:O	15:O:30:ALA:O	2.06	0.73
18:R:54:ARG:NE	18:R:58:MET:HE3	2.02	0.73
19:S:75:ARG:HG3	19:S:80:PHE:HB3	1.69	0.73
21:U:22:VAL:HG22	21:U:55:ARG:NH1	2.04	0.73
1:A:226:G:N2	1:A:227:G:H1'	2.02	0.73
1:A:231:G:H2'	1:A:232:G:H8	1.51	0.73
1:A:971:G:C5	1:A:1365:G:H5'	2.24	0.73
6:F:139:GLN:HA	6:F:170:GLN:HE22	1.51	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:189:ALA:HB3	6:F:196:LEU:N	2.03	0.73
7:G:61:LYS:HB2	7:G:203:VAL:HG13	1.69	0.73
8:H:11:ILE:HG22	8:H:12:LEU:N	2.03	0.73
11:K:102:ARG:CZ	11:K:102:ARG:HB3	2.17	0.73
13:M:30:SER:OG	13:M:81:THR:HA	1.88	0.73
16:P:19:LEU:HD11	16:P:30:ALA:CB	2.18	0.73
16:P:72:ALA:O	16:P:75:ALA:HB3	1.88	0.73
20:T:43:LEU:HD12	20:T:69:LYS:HG3	1.70	0.73
23:W:20:LEU:HA	23:W:23:ARG:NH1	2.03	0.73
2:C:47:U:C2	2:C:50:U:OP1	2.41	0.73
3:D:56:C:H3'	3:D:57:G:C8	2.23	0.73
1:A:1005:A:O2'	1:A:1037:C:H1'	1.88	0.73
1:A:87:A:O2'	1:A:88:C:H5'	1.88	0.73
1:A:216:G:H2'	1:A:217:C:C5	2.23	0.73
1:A:216:G:H2'	1:A:217:C:C6	2.22	0.73
1:A:1261:A:N6	1:A:1274:G:H1'	2.02	0.73
1:A:1408:A:H2	1:A:1494:G:HO2'	0.75	0.73
1:A:1505:G:H5''	1:A:1506:U:O5'	1.87	0.73
1:A:130:A:C5	1:A:264:U:H1'	2.21	0.73
1:A:329:A:H4'	1:A:330:C:OP1	1.86	0.73
1:A:458:C:N4	1:A:464:G:C6	2.56	0.73
1:A:733:A:H8	1:A:733:A:H3'	1.50	0.73
6:F:181:ASN:O	6:F:204:LEU:HG	1.89	0.73
6:F:37:GLN:HA	6:F:37:GLN:OE1	1.88	0.73
6:F:87:LEU:HB2	6:F:101:LEU:HD12	1.71	0.73
15:O:33:ARG:HG2	15:O:60:LEU:HG	1.69	0.73
15:O:54:LYS:CB	15:O:70:ILE:HD12	2.15	0.73
20:T:59:ILE:HD11	20:T:72:ARG:N	2.02	0.73
2:C:58:A:N6	2:C:61:C:H1'	2.03	0.73
1:A:12:U:OP1	4:1:27:A:N1	2.21	0.73
1:A:130:A:N7	20:T:64:PRO:HD2	2.03	0.73
1:A:1338:G:H21	2:C:41:C:C1'	1.97	0.73
1:A:1408:A:C2	1:A:1494:G:O2'	2.24	0.73
1:A:1399:C:C4	1:A:1502:A:N7	2.56	0.73
1:A:1528:U:O2'	1:A:1529:G:H3'	1.88	0.73
1:A:494:U:H2'	1:A:495:A:C5'	2.18	0.73
1:A:689:C:C2	1:A:690:G:C8	2.76	0.73
1:A:907:A:H2'	1:A:908:A:C8	2.23	0.73
6:F:120:VAL:HG21	6:F:137:ALA:CB	2.18	0.73
7:G:61:LYS:HE3	7:G:62:GLN:HA	1.71	0.73
9:I:20:ALA:O	9:I:24:GLU:HG3	1.89	0.73
9:I:22:GLU:O	9:I:26:ILE:HG13	1.87	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:12:ARG:HH12	11:K:27:PRO:HD3	1.50	0.73
16:P:10:PRO:HG3	16:P:18:ALA:HB1	1.69	0.73
1:A:1047:G:H5''	17:Q:4:LYS:CD	2.18	0.73
18:R:78:TYR:CE2	18:R:82:ILE:HD11	2.24	0.73
21:U:67:ALA:HA	21:U:70:ILE:CD1	2.18	0.73
1:A:1315:U:OP2	22:V:6:LYS:NZ	2.21	0.73
1:A:407:G:H5''	7:G:115:ARG:CD	2.19	0.73
5:E:144:ARG:HD3	5:E:148:TYR:CZ	2.23	0.73
5:E:88:ALA:CB	5:E:219:VAL:HG13	2.11	0.73
6:F:3:ASN:CG	6:F:4:LYS:N	2.41	0.73
10:J:3:ARG:O	10:J:4:ARG:HG2	1.89	0.73
11:K:83:ILE:HB	11:K:137:VAL:HG22	1.71	0.73
12:L:11:LYS:N	12:L:104:ARG:HH21	1.86	0.73
14:N:23:ALA:HB1	14:N:28:THR:OG1	1.88	0.73
20:T:24:GLU:N	20:T:24:GLU:OE1	2.22	0.73
21:U:47:THR:O	21:U:49:LYS:HE3	1.88	0.73
22:V:69:HIS:HB2	22:V:74:PHE:CZ	2.24	0.73
1:A:748:C:C6	1:A:748:C:O5'	2.42	0.73
1:A:1125:U:H5	13:M:5:ARG:NH2	1.84	0.73
1:A:1160:G:N7	1:A:1181:G:N1	2.37	0.73
1:A:1202:G:H2'	1:A:1203:C:H6	1.54	0.73
1:A:520:A:H62	1:A:529:G:H21	1.36	0.73
1:A:656:C:O2'	1:A:657:G:H5'	1.89	0.73
1:A:690:G:O6	1:A:691:G:N2	2.21	0.73
1:A:900:A:H2'	1:A:901:A:C8	2.23	0.73
5:E:17:PHE:HA	5:E:42:ILE:HG22	1.70	0.73
6:F:11:ARG:HH12	6:F:15:THR:HG23	1.50	0.73
6:F:64:VAL:HB	6:F:99:VAL:HG11	1.70	0.73
7:G:131:ARG:HH11	7:G:131:ARG:N	1.85	0.73
7:G:96:LEU:CD2	7:G:139:ARG:HH22	2.01	0.73
7:G:64:LEU:HD13	7:G:65:ARG:N	2.03	0.73
8:H:122:GLU:N	8:H:122:GLU:OE1	2.20	0.73
9:I:98:LEU:CD2	9:I:101:ALA:HB2	2.11	0.73
9:I:95:GLU:OE2	9:I:96:PRO:HD3	1.88	0.73
1:A:538:G:H5''	15:O:114:LYS:HD3	1.71	0.73
21:U:66:LEU:HD13	21:U:70:ILE:HD11	1.71	0.73
22:V:45:VAL:HG13	22:V:64:GLU:HA	1.70	0.73
3:D:17:U:H3'	3:D:18:G:H8	1.52	0.73
3:D:54:U:OP2	3:D:55:U:C5	2.42	0.73
1:A:1134:G:OP2	1:A:1135:U:H5	1.72	0.73
1:A:963:G:H5'	1:A:1200:C:N4	2.04	0.73
1:A:1316:G:H2'	1:A:1318:A:OP2	1.87	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:136:C:H4'	19:S:65:GLN:HE22	1.53	0.73
1:A:1423:G:H2'	1:A:1424:C:C6	2.21	0.73
1:A:253:U:H2'	1:A:254:G:C8	2.19	0.73
1:A:449:C:C2	1:A:450:G:H1'	2.24	0.73
1:A:751:U:O2'	1:A:752:G:H5'	1.88	0.73
5:E:165:VAL:HG23	5:E:166:ASP:N	2.04	0.73
6:F:35:GLU:O	6:F:39:ILE:HG13	1.88	0.73
6:F:82:GLU:OE1	6:F:83:ARG:N	2.22	0.73
7:G:170:VAL:HG21	7:G:176:LEU:HB2	1.70	0.73
8:H:102:ALA:CB	8:H:120:THR:CG2	2.64	0.73
18:R:77:ARG:C	18:R:77:ARG:NH1	2.42	0.73
19:S:20:VAL:CG1	19:S:21:VAL:N	2.51	0.73
23:W:13:LEU:N	23:W:13:LEU:HD12	2.03	0.73
23:W:62:LEU:HA	23:W:65:LYS:HG2	1.71	0.73
1:A:93:U:H2'	1:A:95:G:C8	2.24	0.73
1:A:1016:A:O5'	1:A:1016:A:H8	1.71	0.73
1:A:12:U:C2'	1:A:13:U:H5	2.00	0.73
1:A:595:G:C8	1:A:641:U:C4	2.77	0.73
1:A:734:G:H2'	1:A:735:C:C6	2.24	0.73
2:C:40:C:H2'	2:C:41:C:H5''	1.69	0.73
3:D:34:G:C2	3:D:35:A:H5''	2.24	0.73
1:A:1104:G:H4'	5:E:111:ARG:HH21	1.54	0.73
5:E:12:GLU:C	5:E:14:GLY:H	1.93	0.73
6:F:21:ARG:O	6:F:58:GLU:HA	1.89	0.73
6:F:84:ILE:HA	6:F:87:LEU:HD12	1.71	0.73
14:N:106:LYS:HG2	14:N:107:SER:H	1.54	0.73
17:Q:12:ARG:O	17:Q:14:PRO:N	2.22	0.73
13:M:50:ILE:HD12	17:Q:41:ARG:CZ	2.19	0.73
17:Q:45:ARG:HG3	17:Q:45:ARG:HH11	1.54	0.73
18:R:62:GLN:HA	18:R:65:ARG:CZ	2.19	0.73
2:C:48:C:H5'	2:C:49:G:O5'	1.89	0.73
1:A:841:U:H5'	1:A:842:C:C5	2.23	0.73
1:A:386:C:C2'	1:A:387:U:H5'	2.19	0.73
1:A:1514:C:O2'	1:A:1515:C:H5'	1.88	0.72
1:A:186:C:H2'	1:A:186(A):C:C6	2.24	0.72
1:A:674:G:H2'	1:A:675:A:H8	1.52	0.72
1:A:729:A:N1	1:A:730:G:C4	2.57	0.72
1:A:801:U:H2'	1:A:802:A:H8	1.54	0.72
5:E:15:VAL:HB	5:E:210:SER:HB2	1.71	0.72
5:E:61:LEU:CA	5:E:64:ARG:NH1	2.52	0.72
6:F:138:VAL:HG13	6:F:149:ALA:HB3	1.71	0.72
10:J:6:ARG:HB2	10:J:6:ARG:NH1	2.04	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:103:VAL:HG21	11:K:110:ALA:N	2.04	0.72
13:M:3:LYS:CE	13:M:77:PRO:HD3	2.19	0.72
18:R:70:LEU:C	18:R:70:LEU:HD12	2.09	0.72
20:T:33:GLY:O	20:T:34:LYS:O	2.07	0.72
1:A:112:G:N2	1:A:113:G:C4	2.57	0.72
1:A:1217:C:O2'	1:A:1218:C:H5'	1.89	0.72
1:A:1234:C:H5'	1:A:1364:U:O2'	1.90	0.72
1:A:1477:C:H2'	1:A:1478:C:H6	1.53	0.72
1:A:397:A:N6	1:A:548:G:C5	2.57	0.72
1:A:51:A:C6	1:A:353:A:C2	2.76	0.72
1:A:600:C:H2'	1:A:601:C:H6	1.53	0.72
1:A:683:G:H2'	1:A:684:A:C8	2.24	0.72
1:A:707:C:O2'	1:A:708:C:H5'	1.88	0.72
1:A:720:C:OP2	1:A:721:G:H3'	1.90	0.72
1:A:7:G:H21	8:H:121:LYS:CB	2.02	0.72
5:E:146:GLN:NE2	5:E:150:SER:HB2	2.04	0.72
8:H:68:GLU:O	8:H:70:PRO:HD3	1.89	0.72
11:K:77:GLU:O	11:K:78:GLN:HB2	1.87	0.72
16:P:20:THR:HA	16:P:25:ILE:CG2	2.19	0.72
16:P:90:LEU:O	16:P:93:ARG:HB3	1.89	0.72
20:T:27:PHE:CD1	20:T:36:ILE:HD11	2.24	0.72
20:T:5:VAL:HG12	20:T:6:LEU:N	2.03	0.72
22:V:36:ARG:O	22:V:71:LEU:HB2	1.89	0.72
15:O:18:VAL:O	15:O:19:ARG:HG3	1.89	0.72
1:A:105:G:H2'	1:A:106:C:C5	2.23	0.72
1:A:1526:G:HO2'	1:A:1527:C:H5'	1.51	0.72
1:A:693:G:H2'	1:A:694:A:O4'	1.88	0.72
1:A:727:G:C8	1:A:727:G:C3'	2.71	0.72
7:G:172:PRO:HG3	7:G:193:ASP:HB2	1.69	0.72
9:I:75:LEU:O	9:I:79:LEU:HG	1.88	0.72
12:L:67:GLY:N	12:L:73:GLN:NE2	2.36	0.72
14:N:23:ALA:CB	14:N:88:GLY:HA3	2.18	0.72
14:N:42:TRP:HE3	14:N:43:SER:HA	1.54	0.72
14:N:23:ALA:HB3	14:N:88:GLY:HA3	1.71	0.72
14:N:88:GLY:O	14:N:91:ARG:N	2.23	0.72
15:O:27:LEU:HD23	15:O:33:ARG:HD3	1.72	0.72
1:A:842:C:H5'	1:A:848:C:O2	1.90	0.72
1:A:1190:G:OP2	6:F:5:ILE:HG13	1.90	0.72
1:A:1394:A:O2'	1:A:1395:C:OP1	2.07	0.72
1:A:1404:C:H2'	1:A:1405:G:H8	1.55	0.72
1:A:1518:A:H8	1:A:1518:A:O5'	1.71	0.72
1:A:819:A:N1	1:A:1529:G:N7	2.37	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:174:C:C6	1:A:175:C:H5	2.06	0.72
1:A:113:G:H1'	1:A:354:G:C5'	2.19	0.72
1:A:406:G:N2	1:A:437:U:O2	2.23	0.72
1:A:49:U:N3	1:A:364:A:N7	2.37	0.72
5:E:132:LYS:O	5:E:135:GLN:HB2	1.90	0.72
7:G:24:GLU:OE1	7:G:25:ARG:HB2	1.89	0.72
7:G:3:ARG:HG3	7:G:3:ARG:NH1	2.04	0.72
9:I:14:LEU:CD1	9:I:18:GLN:HB3	2.19	0.72
16:P:10:PRO:O	16:P:45:VAL:HG21	1.88	0.72
19:S:67:THR:CB	19:S:70:ALA:HB2	2.19	0.72
23:W:57:ARG:HH21	23:W:100:ILE:HD12	1.53	0.72
24:X:12:LYS:HA	24:X:15:ARG:HB2	1.70	0.72
2:C:17:C:C4	2:C:19:G:H8	2.07	0.72
2:C:9:G:C2	2:C:46:G:N7	2.58	0.72
1:A:1202:G:H2'	1:A:1203:C:C6	2.24	0.72
1:A:263:A:H2'	1:A:264:U:C5'	2.13	0.72
1:A:266:G:N2	1:A:269:C:N4	2.36	0.72
5:E:133:LYS:HA	5:E:133:LYS:HE2	1.71	0.72
5:E:91:PRO:HG2	5:E:155:LEU:HB2	1.71	0.72
6:F:91:LEU:CD1	6:F:99:VAL:H	1.96	0.72
7:G:154:ASN:ND2	7:G:154:ASN:N	2.36	0.72
7:G:112:VAL:HG23	7:G:161:ASN:ND2	2.03	0.72
8:H:102:ALA:HB3	8:H:106:PRO:HB2	1.71	0.72
9:I:40:VAL:HA	9:I:63:TYR:HD1	1.53	0.72
10:J:75:VAL:HG22	10:J:88:PRO:CA	2.20	0.72
12:L:37:PHE:N	12:L:37:PHE:HD2	1.87	0.72
13:M:6:ILE:CD1	13:M:72:VAL:HB	2.20	0.72
15:O:5:PRO:HB2	15:O:10:LEU:HD11	1.71	0.72
16:P:80:ARG:HG3	16:P:80:ARG:HH11	1.54	0.72
1:A:663:A:O3'	21:U:64:ARG:NH2	2.23	0.72
1:A:185:A:N3	23:W:81:LYS:NZ	2.37	0.72
22:V:50:ALA:HB1	22:V:57:HIS:HB3	1.70	0.72
3:D:28:G:H2'	3:D:29:C:H6	1.54	0.72
1:A:1049:U:O5'	1:A:1049:U:H6	1.72	0.72
1:A:1240:U:O2	10:J:32:ARG:HG2	1.89	0.72
1:A:1313:U:C5	22:V:4:SER:HB2	2.23	0.72
1:A:258:G:C6	1:A:259:G:O6	2.42	0.72
1:A:344:A:O2'	1:A:345:C:P	2.47	0.72
1:A:50:A:N6	1:A:361:G:C4'	2.52	0.72
1:A:560:U:O2'	1:A:561:U:OP2	2.06	0.72
1:A:978:A:N6	1:A:1361:G:N2	2.37	0.72
6:F:24:ALA:HB1	6:F:28:GLN:CD	2.10	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:153:ARG:HB3	7:G:181:MET:CE	2.19	0.72
7:G:191:ARG:HE	7:G:191:ARG:HA	1.55	0.72
7:G:30:LYS:HA	7:G:34:GLU:HB3	1.69	0.72
8:H:41:VAL:CG1	8:H:113:ALA:HA	2.20	0.72
12:L:27:THR:HG21	12:L:62:TYR:CE1	2.24	0.72
13:M:60:ARG:HH11	13:M:60:ARG:H	1.36	0.72
13:M:61:GLU:HG2	17:Q:58:LYS:HE2	1.72	0.72
16:P:19:LEU:HD12	16:P:20:THR:N	2.05	0.72
16:P:60:VAL:HA	16:P:63:THR:CG2	2.16	0.72
20:T:84:LEU:HD23	20:T:84:LEU:N	2.03	0.72
14:N:84:VAL:HG21	21:U:88:LYS:NZ	2.04	0.72
23:W:79:ARG:O	23:W:82:SER:HB3	1.90	0.72
3:D:55:U:C2'	3:D:57:G:N7	2.52	0.72
22:V:30:LEU:O	22:V:30:LEU:HD23	1.90	0.72
1:A:149:A:H2'	1:A:150:C:C6	2.24	0.72
1:A:225:C:H2'	1:A:226:G:O5'	1.89	0.72
1:A:953:G:H2'	1:A:954:G:C8	2.25	0.72
1:A:982:U:H1'	1:A:983:A:N6	2.03	0.72
1:A:9:G:H5''	8:H:126:ARG:HD3	1.72	0.72
9:I:11:ASN:HB2	9:I:86:ARG:NH2	2.05	0.72
9:I:14:LEU:HD12	9:I:19:LEU:CD1	2.19	0.72
10:J:36:LYS:HZ2	10:J:36:LYS:HB2	1.55	0.72
10:J:76:ARG:HB2	10:J:156:TRP:HE1	1.54	0.72
1:A:642:A:N7	11:K:115:SER:HA	2.05	0.72
16:P:81:LEU:HD22	16:P:82:MET:N	2.05	0.72
17:Q:24:CYS:SG	17:Q:27:CYS:N	2.63	0.72
18:R:68:ARG:O	18:R:71:GLN:HB3	1.90	0.72
19:S:34:GLU:CB	19:S:59:TRP:HE1	2.01	0.72
20:T:5:VAL:HG13	20:T:59:ILE:O	1.88	0.72
22:V:81:ARG:HG2	22:V:81:ARG:O	1.88	0.72
2:C:24:U:O2'	2:C:25:C:H5'	1.90	0.72
1:A:221:C:O2'	1:A:222:U:H5'	1.90	0.72
1:A:366:C:O2'	1:A:394:G:N2	2.23	0.72
1:A:41:G:H2'	1:A:42:G:H8	1.54	0.72
1:A:688:G:C2'	1:A:689:C:H5'	2.20	0.72
6:F:136:GLN:O	6:F:139:GLN:HB2	1.89	0.72
6:F:35:GLU:CA	6:F:38:ARG:HG2	2.20	0.72
6:F:91:LEU:HD23	6:F:92:ALA:CA	2.20	0.72
7:G:43:HIS:C	7:G:45:GLN:H	1.93	0.72
7:G:56:VAL:HG12	7:G:57:ARG:N	2.03	0.72
10:J:66:VAL:HG12	10:J:70:LYS:CE	2.20	0.72
11:K:86:ILE:HD11	11:K:136:GLU:OE1	1.89	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:64:LYS:CD	11:K:79:VAL:HG11	2.19	0.72
12:L:31:GLN:HB3	12:L:35:GLU:CD	2.10	0.72
12:L:74:ILE:HA	12:L:77:ILE:HD12	1.72	0.72
17:Q:34:TYR:OH	17:Q:44:LEU:HD13	1.89	0.72
20:T:8:GLY:O	20:T:56:VAL:HG13	1.90	0.72
1:A:1418:A:H2'	1:A:1419:G:C5'	2.14	0.72
1:A:1519:A:C2'	1:A:1520:G:H5'	2.17	0.72
5:E:168:THR:HG21	5:E:192:SER:HA	1.69	0.72
8:H:9:LYS:HB2	8:H:33:VAL:HG12	1.71	0.72
10:J:79:ARG:NH1	10:J:84:ASN:HB3	2.05	0.72
13:M:45:ARG:NH1	13:M:45:ARG:HB3	1.99	0.72
13:M:65:LEU:HD22	17:Q:36:PHE:CZ	2.24	0.72
15:O:37:CYS:CA	15:O:58:VAL:HG22	2.20	0.72
18:R:70:LEU:HD21	18:R:78:TYR:HA	1.72	0.72
20:T:40:LYS:NZ	20:T:42:TYR:HE1	1.87	0.72
20:T:75:ARG:HG2	20:T:76:LEU:N	2.05	0.72
3:D:17:U:H3'	3:D:18:G:C8	2.25	0.72
1:A:1095:U:OP2	1:A:1108:G:N1	2.22	0.72
1:A:262:A:C2	1:A:263:A:N1	2.57	0.72
1:A:565:U:H3'	1:A:566:G:H8	1.55	0.72
1:A:962:C:O2'	1:A:1200:C:N4	2.20	0.72
5:E:115:LEU:CD2	5:E:149:LEU:HB3	2.20	0.72
5:E:89:GLY:O	5:E:90:MET:HG2	1.89	0.72
8:H:146:ALA:O	8:H:149:GLU:HB2	1.89	0.72
18:R:10:LYS:O	18:R:13:GLN:HB2	1.90	0.72
18:R:53:HIS:O	18:R:57:LEU:HD13	1.90	0.72
20:T:67:LYS:CA	20:T:70:ARG:NH2	2.53	0.72
22:V:18:LYS:HE2	22:V:22:LEU:HD12	1.72	0.72
22:V:22:LEU:HG	22:V:25:LYS:HZ1	1.54	0.72
1:A:191(F):U:O2	23:W:105:SER:HB2	1.90	0.72
1:A:1000:A:H2'	1:A:1001:G:H5'	1.72	0.72
3:D:67:C:O2'	3:D:68:U:H5'	1.89	0.72
1:A:1093:A:H2'	1:A:1095:U:H5	1.54	0.71
1:A:1118:C:H1'	1:A:1179:A:C8	2.25	0.71
1:A:1180:A:H2'	1:A:1181:G:C5'	2.18	0.71
1:A:1371:G:O2'	1:A:1372:U:H5'	1.90	0.71
1:A:129(A):G:N2	1:A:191(A):G:C8	2.58	0.71
5:E:10:LEU:O	5:E:11:LEU:C	2.28	0.71
5:E:28:PHE:CD2	5:E:190:THR:HA	2.24	0.71
6:F:156:ARG:H	6:F:163:ALA:HB1	1.53	0.71
6:F:189:ALA:HB1	6:F:196:LEU:HG	1.70	0.71
8:H:43:LEU:HD22	8:H:133:TYR:HE2	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:52:ILE:CD1	9:I:87:ARG:HH21	2.01	0.71
18:R:24:SER:O	18:R:28:GLN:HG2	1.90	0.71
18:R:71:GLN:O	18:R:75:PRO:CD	2.38	0.71
20:T:76:LEU:HD23	20:T:77:VAL:N	2.04	0.71
2:C:69:C:H2'	2:C:70:G:H8	1.54	0.71
3:D:8:U:H3	3:D:14:A:H62	1.35	0.71
3:D:19:G:O2'	3:D:58:A:H5''	1.90	0.71
1:A:747:C:H2'	1:A:748:C:O4'	1.90	0.71
1:A:1049:U:C4	17:Q:3:ARG:HB2	2.25	0.71
1:A:1487:G:H2'	1:A:1488:G:O5'	1.90	0.71
1:A:1521:G:H2'	1:A:1522:U:C6	2.25	0.71
1:A:532:A:H2'	1:A:533:A:OP1	1.90	0.71
5:E:161:ALA:HA	5:E:183:PRO:HB2	1.70	0.71
5:E:80:ILE:HG23	5:E:212:GLN:HE21	1.55	0.71
6:F:137:ALA:O	6:F:141:VAL:HG23	1.90	0.71
6:F:153:VAL:HG12	6:F:198:VAL:CG1	2.20	0.71
7:G:98:GLU:C	7:G:100:ARG:H	1.93	0.71
8:H:116:THR:HG23	8:H:116:THR:O	1.89	0.71
8:H:82:VAL:CB	8:H:138:ALA:HB2	2.13	0.71
8:H:152:ARG:HD2	11:K:42:GLU:O	1.90	0.71
13:M:56:HIS:O	13:M:58:ASP:N	2.23	0.71
1:A:657:G:H1'	18:R:28:GLN:HE22	1.55	0.71
9:I:60:PHE:HE2	21:U:78:LEU:HD21	1.55	0.71
6:F:157:ILE:HG21	6:F:164:ARG:NH2	2.05	0.71
1:A:1269:A:C8	1:A:1270:C:H1'	2.25	0.71
1:A:12:U:C2	1:A:13:U:O4	2.43	0.71
1:A:1312:G:O2'	1:A:1313:U:H5'	1.90	0.71
1:A:1353:G:C2	1:A:1370:G:C2	2.78	0.71
1:A:1390:U:C2	1:A:1391:U:C5	2.79	0.71
1:A:649:G:H2'	1:A:650:G:C8	2.24	0.71
1:A:736:C:H2'	1:A:737:A:C8	2.26	0.71
6:F:12:LEU:CD1	17:Q:57:ARG:HG3	2.20	0.71
6:F:191:THR:HB	6:F:193:TYR:CE2	2.25	0.71
6:F:191:THR:HG21	6:F:196:LEU:HD11	1.71	0.71
12:L:48:GLU:N	12:L:49:PRO:HD2	2.05	0.71
1:A:717:C:H4'	14:N:117:ASN:HB2	1.72	0.71
16:P:22:ILE:HB	16:P:25:ILE:CD1	2.20	0.71
16:P:48:LEU:CD2	16:P:52:GLU:HB2	2.20	0.71
21:U:63:GLN:HA	21:U:66:LEU:CG	2.19	0.71
1:A:1055:A:N6	1:A:1206:G:N7	2.38	0.71
1:A:1404:C:H1'	1:A:1499:A:C2	2.25	0.71
1:A:173:U:H5'	1:A:197:A:C1'	2.19	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:163:PHE:HA	5:E:185:ILE:HG13	1.72	0.71
7:G:143:GLY:HA2	7:G:185:PHE:HB3	1.73	0.71
9:I:100:ASN:HD22	21:U:23:LYS:CG	1.98	0.71
14:N:110:ASP:HB3	21:U:85:LEU:HB3	1.71	0.71
16:P:66:LEU:HA	16:P:70:LEU:HD12	1.71	0.71
21:U:79:LEU:N	21:U:79:LEU:HD12	2.04	0.71
1:A:1046:A:N3	1:A:1046:A:H2'	2.04	0.71
1:A:1223:C:O5'	1:A:1224:G:H5''	1.90	0.71
1:A:1256:A:O2'	1:A:1257:U:H1'	1.90	0.71
1:A:291:C:H3'	1:A:305:G:N2	2.04	0.71
1:A:298:A:C3'	1:A:299:G:H8	2.03	0.71
1:A:297:G:N2	1:A:300:A:OP2	2.22	0.71
1:A:530:G:H5''	1:A:531:U:O5'	1.90	0.71
1:A:580:U:H3'	1:A:581:G:C8	2.24	0.71
1:A:689:C:H4'	1:A:705:U:H1'	1.71	0.71
1:A:745:C:H2'	1:A:746:A:C8	2.25	0.71
7:G:78:LEU:HD21	7:G:96:LEU:HB3	1.73	0.71
11:K:103:VAL:HG21	11:K:109:ILE:C	2.11	0.71
15:O:85:ILE:HG23	15:O:85:ILE:O	1.89	0.71
16:P:97:PRO:N	16:P:110:ARG:HG2	2.04	0.71
16:P:60:VAL:HG22	16:P:64:TRP:HE3	1.53	0.71
18:R:53:HIS:O	18:R:56:LEU:HB3	1.90	0.71
1:A:1319:A:H5'	22:V:5:LEU:HD21	1.72	0.71
22:V:32:LYS:CB	22:V:50:ALA:HB3	2.20	0.71
1:A:843:U:OP2	1:A:843:U:H4'	1.90	0.71
14:N:86:GLY:HA2	14:N:112:THR:HG23	1.73	0.71
1:A:1304:G:H1'	1:A:1333:A:H61	1.54	0.71
1:A:1350:A:OP2	12:L:118:LYS:HG3	1.91	0.71
1:A:579:G:O2'	1:A:580:U:H5'	1.89	0.71
1:A:671:G:C2	1:A:672:U:C2	2.77	0.71
1:A:983:A:H2	1:A:984:C:C6	2.09	0.71
6:F:19:GLU:HB3	6:F:55:VAL:O	1.91	0.71
10:J:42:ILE:HG22	10:J:120:ILE:CD1	2.20	0.71
1:A:642:A:C5	11:K:115:SER:HA	2.25	0.71
11:K:1:MET:HG2	11:K:2:LEU:H	1.54	0.71
11:K:6:ILE:CG2	11:K:7:ALA:H	2.02	0.71
12:L:96:LEU:O	12:L:100:GLY:HA2	1.90	0.71
16:P:14:ARG:CG	16:P:17:VAL:HG23	2.21	0.71
16:P:2:ALA:HB3	16:P:4:ILE:HG23	1.71	0.71
18:R:36:ILE:HA	18:R:59:MET:HE1	1.71	0.71
18:R:74:ASP:OD2	18:R:77:ARG:HB2	1.91	0.71
19:S:51:VAL:O	19:S:52:ASP:C	2.28	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:72:ARG:HD3	19:S:73:LEU:H	1.51	0.71
20:T:9:VAL:HG13	20:T:11:VAL:CG2	2.20	0.71
14:N:84:VAL:HG21	21:U:88:LYS:HZ2	1.56	0.71
23:W:73:HIS:O	23:W:74:LYS:O	2.08	0.71
1:A:90:C:O2'	1:A:91:C:H5'	1.90	0.71
1:A:1314:C:H2'	1:A:1315:U:C5	2.25	0.71
1:A:1323:G:C6	1:A:1324:A:N6	2.59	0.71
1:A:1515:C:O2	1:A:1516:G:C8	2.43	0.71
1:A:264:U:H2'	1:A:264:U:O2	1.89	0.71
1:A:247:G:N3	1:A:282:A:C2	2.59	0.71
1:A:308:C:H2'	1:A:309:G:O5'	1.89	0.71
1:A:378:G:H2'	1:A:379:C:H6	1.53	0.71
1:A:408:A:H2'	1:A:409:G:H8	1.54	0.71
1:A:754:C:H5'	1:A:755:G:H8	1.55	0.71
5:E:96:ARG:N	5:E:96:ARG:HD2	2.04	0.71
8:H:129:ILE:HG22	8:H:130:ASN:N	2.05	0.71
9:I:33:TYR:CE2	9:I:74:ASP:HB2	2.23	0.71
10:J:75:VAL:HG21	10:J:146:GLU:H	1.55	0.71
10:J:41:ARG:HG2	10:J:41:ARG:HH11	1.56	0.71
11:K:63:LEU:HG	11:K:65:TYR:CE1	2.25	0.71
11:K:84:ARG:HB3	11:K:84:ARG:HH11	1.54	0.71
11:K:90:GLY:HA2	20:T:34:LYS:NZ	2.06	0.71
13:M:75:ILE:HG22	13:M:76:ASN:HD22	1.55	0.71
13:M:9:ARG:HD2	13:M:95:GLU:OE2	1.89	0.71
14:N:91:ARG:HG2	14:N:95:ILE:HD11	1.70	0.71
1:A:1329:A:H5'	16:P:29:ARG:NE	2.04	0.71
16:P:14:ARG:H	16:P:44:ARG:NH1	1.89	0.71
21:U:74:ARG:HA	21:U:79:LEU:HD11	1.73	0.71
1:A:186(B):C:H4'	23:W:89:ARG:NH1	2.04	0.71
22:V:30:LEU:CD1	22:V:59:PRO:HB3	2.19	0.71
1:A:1161:C:H2'	1:A:1162:C:H6	1.56	0.71
1:A:152:A:H8	1:A:152:A:H3'	1.55	0.71
1:A:107:G:H5'	1:A:379:C:OP1	1.91	0.71
1:A:51:A:N1	1:A:116:A:N3	2.39	0.71
1:A:52:G:H2'	1:A:53:A:O4'	1.91	0.71
6:F:29:TYR:OH	17:Q:54:PRO:HG2	1.90	0.71
10:J:143:ARG:HH11	10:J:144:MET:HG2	1.56	0.71
10:J:16:LEU:O	10:J:17:VAL:HG23	1.91	0.71
11:K:126:LYS:HD2	11:K:126:LYS:C	2.10	0.71
12:L:78:LYS:HA	12:L:81:ILE:HD12	1.72	0.71
21:U:25:THR:HG22	21:U:42:ARG:HH21	1.55	0.71
9:I:62:TRP:HB2	21:U:35:ARG:HH12	1.56	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:122:GLU:HA	6:F:125:GLU:HG2	1.73	0.71
1:A:747:C:H2'	1:A:748:C:C1'	2.21	0.71
1:A:1329:A:H5'	16:P:29:ARG:HE	1.54	0.71
1:A:1502:A:C2	1:A:1504:G:C4	2.79	0.71
1:A:222:U:O2'	1:A:223:U:H5'	1.91	0.71
1:A:267:C:N4	1:A:268:C:H41	1.89	0.71
1:A:283:C:O2	1:A:283:C:H2'	1.91	0.71
1:A:611:A:H61	1:A:629:G:H1	1.31	0.71
1:A:668:G:O2'	1:A:669:U:H5'	1.90	0.71
1:A:735:C:O2'	1:A:736:C:H5'	1.91	0.71
1:A:891:U:H2'	1:A:892:A:H8	1.54	0.71
1:A:993:G:N2	1:A:995:C:N4	2.39	0.71
5:E:102:LEU:HB2	5:E:176:GLU:OE1	1.91	0.71
5:E:53:ARG:HA	5:E:56:ARG:HH12	1.56	0.71
6:F:25:GLY:H	6:F:28:GLN:NE2	1.88	0.71
8:H:109:ILE:HD13	8:H:135:THR:HG22	1.73	0.71
9:I:23:LYS:O	9:I:26:ILE:HB	1.91	0.71
9:I:53:ALA:HB1	9:I:86:ARG:NH1	2.05	0.71
12:L:48:GLU:OE1	12:L:48:GLU:HA	1.91	0.71
12:L:6:GLY:HA3	12:L:80:GLY:O	1.90	0.71
13:M:65:LEU:HD22	17:Q:36:PHE:HZ	1.56	0.71
19:S:39:TYR:CE1	19:S:41:PRO:CG	2.74	0.71
21:U:34:TYR:CE1	21:U:35:ARG:HG3	2.25	0.71
21:U:66:LEU:CD1	21:U:70:ILE:HD11	2.21	0.71
22:V:41:VAL:CB	22:V:42:PRO:HD2	2.16	0.71
23:W:72:LEU:HD22	23:W:77:ALA:N	2.06	0.71
22:V:30:LEU:HD21	22:V:50:ALA:HB2	1.72	0.71
1:A:1005:A:H4'	1:A:1037:C:O2	1.90	0.71
1:A:76:G:H2'	1:A:77:C:C6	2.26	0.71
1:A:103:C:O2'	1:A:104:G:H5'	1.91	0.71
1:A:1365:G:H2'	1:A:1366:C:H6	1.55	0.71
1:A:1377:A:H4'	1:A:1378:C:C5	2.25	0.71
1:A:1402:C:C4	1:A:1403:C:C4	2.79	0.71
1:A:265:G:H2'	1:A:267:C:C5	2.23	0.71
1:A:60:A:N1	1:A:107:G:O2'	2.18	0.71
1:A:619:U:N3	7:G:135:LEU:HD21	2.05	0.71
5:E:17:PHE:C	5:E:42:ILE:HG22	2.10	0.71
5:E:56:ARG:HA	5:E:59:GLU:HG3	1.73	0.71
7:G:92:VAL:O	7:G:96:LEU:HD12	1.90	0.71
8:H:76:ILE:CD1	8:H:142:LEU:HD13	2.21	0.71
9:I:14:LEU:HD22	9:I:18:GLN:OE1	1.91	0.71
10:J:6:ARG:N	10:J:6:ARG:HH11	1.88	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:77:SER:HA	10:J:85:TYR:O	1.91	0.71
14:N:111:ASP:OD2	14:N:113:PRO:CD	2.35	0.71
15:O:24:VAL:CG2	15:O:97:ARG:HG2	2.20	0.71
15:O:37:CYS:O	15:O:79:GLU:O	2.09	0.71
17:Q:16:PHE:O	17:Q:18:VAL:N	2.24	0.71
1:A:435:C:C2'	1:A:436:C:H5'	2.20	0.71
2:C:19:G:H3'	2:C:20:U:C5	2.25	0.71
1:A:1004:A:C8	1:A:1036:G:O6	2.44	0.71
3:D:67:C:C2'	3:D:68:U:H5'	2.20	0.71
1:A:1084:G:C5	1:A:1085:U:H5	2.08	0.70
1:A:1196:U:C5'	1:A:1197:G:C5'	2.69	0.70
1:A:494:U:H2'	1:A:495:A:H5'	1.71	0.70
1:A:589:C:H2'	1:A:590:C:C6	2.26	0.70
5:E:12:GLU:O	5:E:14:GLY:N	2.23	0.70
6:F:30:ARG:H	6:F:30:ARG:HD3	1.56	0.70
6:F:42:LEU:HD23	6:F:45:LYS:HD2	1.73	0.70
7:G:98:GLU:CB	7:G:189:PRO:HG3	2.21	0.70
8:H:48:ALA:HB1	8:H:53:LEU:HB2	1.72	0.70
10:J:80:VAL:HG12	10:J:81:GLY:N	2.06	0.70
11:K:46:LYS:HZ2	11:K:64:LYS:CA	2.03	0.70
14:N:96:ARG:O	14:N:100:ALA:HB2	1.91	0.70
1:A:529:G:C6	15:O:49:ASN:ND2	2.59	0.70
16:P:23:TYR:O	16:P:66:LEU:HD12	1.91	0.70
17:Q:26:ARG:HB3	17:Q:43:CYS:HB2	1.72	0.70
20:T:52:LYS:HB2	20:T:52:LYS:NZ	2.06	0.70
21:U:44:LEU:HG	21:U:45:SER:N	2.00	0.70
22:V:12:ASP:O	22:V:16:LEU:HD22	1.91	0.70
23:W:13:LEU:H	23:W:13:LEU:HD12	1.55	0.70
24:X:4:GLY:C	24:X:6:ARG:N	2.43	0.70
1:A:1269:A:H8	1:A:1270:C:H1'	1.56	0.70
1:A:1404:C:H2'	1:A:1405:G:C8	2.26	0.70
1:A:560:U:O4'	1:A:566:G:N2	2.23	0.70
1:A:69:G:H2'	1:A:73:G:H8	1.54	0.70
1:A:652:U:O4	1:A:752:G:H2'	1.90	0.70
1:A:880:C:O2'	1:A:881:G:H5'	1.89	0.70
7:G:145:GLU:HG2	7:G:184:LYS:HE2	1.73	0.70
18:R:11:VAL:HA	18:R:14:GLU:OE2	1.91	0.70
22:V:41:VAL:HB	22:V:42:PRO:CD	2.17	0.70
1:A:1540:U:H2'	1:A:1541:U:C5	2.26	0.70
1:A:1152:A:O2'	1:A:1153:C:H5'	1.91	0.70
1:A:1172:C:H2'	1:A:1173:G:H8	1.56	0.70
1:A:1493:A:O2'	1:A:1494:G:O5'	2.09	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:609:A:C4	1:A:610:G:C8	2.78	0.70
1:A:647:C:C2	1:A:648:A:C8	2.79	0.70
1:A:724:G:O2'	1:A:725:G:H5'	1.91	0.70
1:A:761:G:H5'	20:T:103:GLY:H	1.54	0.70
6:F:134:ILE:HG23	6:F:151:VAL:CG1	2.20	0.70
10:J:107:ALA:O	10:J:110:GLN:HB2	1.90	0.70
15:O:102:ARG:O	15:O:104:VAL:N	2.25	0.70
16:P:22:ILE:HB	16:P:25:ILE:HD12	1.73	0.70
20:T:27:PHE:CE1	20:T:36:ILE:HD11	2.27	0.70
20:T:55:ASP:HA	20:T:78:GLU:O	1.92	0.70
21:U:21:LYS:HD2	21:U:55:ARG:O	1.91	0.70
21:U:46:GLU:CB	21:U:85:LEU:HD13	2.17	0.70
23:W:11:SER:HA	23:W:13:LEU:CD1	2.21	0.70
1:A:186:C:O2'	23:W:85:MET:SD	2.47	0.70
1:A:1434:A:N6	1:A:1467:G:N2	2.40	0.70
1:A:1480:G:H2'	1:A:1481:U:H5'	1.72	0.70
1:A:186(C):G:H2'	1:A:186(D):C:C6	2.26	0.70
1:A:20:U:O4'	1:A:572:A:N1	2.24	0.70
1:A:478:A:H8	1:A:478:A:O5'	1.74	0.70
1:A:501:C:OP2	15:O:124:LYS:NZ	2.24	0.70
1:A:535:A:N3	1:A:535:A:H2'	2.06	0.70
1:A:688:G:O2'	1:A:689:C:H5'	1.90	0.70
1:A:8:A:OP1	1:A:8:A:H3'	1.91	0.70
5:E:113:HIS:O	5:E:117:GLU:HG3	1.91	0.70
5:E:171:ALA:CA	5:E:174:VAL:HB	2.21	0.70
7:G:62:GLN:CA	7:G:62:GLN:HE21	2.04	0.70
10:J:37:ASN:CG	10:J:38:LEU:N	2.45	0.70
13:M:50:ILE:HB	17:Q:41:ARG:NE	2.05	0.70
14:N:44:SER:O	14:N:48:ILE:HG12	1.92	0.70
15:O:60:LEU:H	15:O:60:LEU:HD13	1.55	0.70
16:P:15:VAL:HG11	16:P:39:ILE:HD12	1.74	0.70
20:T:67:LYS:HA	20:T:70:ARG:CZ	2.22	0.70
1:A:435:C:H2'	1:A:436:C:O4'	1.92	0.70
2:C:69:C:C2	2:C:70:G:C8	2.80	0.70
1:A:1138:G:C6	1:A:1140:C:C6	2.80	0.70
1:A:1247:U:O2'	1:A:1248:A:H5'	1.90	0.70
1:A:1250:A:C6	1:A:1251:A:C6	2.79	0.70
1:A:1303:C:O2	1:A:1303:C:H2'	1.91	0.70
1:A:1358:U:H5'	17:Q:34:TYR:HB3	1.73	0.70
1:A:1401:G:O2'	1:A:1402:C:H5'	1.91	0.70
1:A:304:U:H2'	1:A:305:G:C8	2.26	0.70
1:A:520:A:N6	1:A:529:G:N2	2.40	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:572:A:O5'	1:A:573:A:OP2	2.10	0.70
1:A:795:C:H6	1:A:795:C:O5'	1.74	0.70
5:E:60:ASP:O	5:E:63:MET:HB3	1.90	0.70
9:I:89:MET:CG	21:U:76:LEU:HD21	2.22	0.70
10:J:118:VAL:HG12	10:J:122:HIS:NE2	2.07	0.70
10:J:68:ASN:ND2	10:J:128:ALA:O	2.24	0.70
11:K:36:LEU:HD12	11:K:48:TYR:HB2	1.73	0.70
13:M:32:ALA:HB2	13:M:75:ILE:C	2.12	0.70
14:N:99:GLN:O	14:N:102:GLY:HA2	1.92	0.70
20:T:39:SER:O	20:T:40:LYS:HG3	1.91	0.70
1:A:1068:G:O2'	1:A:1069:C:H5'	1.92	0.70
1:A:1129:C:N4	1:A:1139:G:C6	2.59	0.70
1:A:1288:A:N1	1:A:1371:G:H1'	2.06	0.70
1:A:198:G:N7	1:A:220:G:N2	2.39	0.70
1:A:278:G:N2	1:A:279:A:H62	1.90	0.70
1:A:399:G:H2'	1:A:400:C:H6	1.56	0.70
1:A:652:U:C5	1:A:752:G:C4	2.80	0.70
1:A:923:A:P	8:H:21:ALA:HB2	2.32	0.70
1:A:962:C:H2'	1:A:963:G:O4'	1.92	0.70
10:J:87:VAL:HG21	10:J:154:TYR:HB2	1.73	0.70
11:K:33:GLU:HG2	11:K:59:LEU:HD21	1.73	0.70
11:K:46:LYS:HZ1	11:K:65:TYR:H	1.39	0.70
12:L:11:LYS:O	12:L:11:LYS:HG2	1.91	0.70
12:L:70:LYS:N	12:L:70:LYS:NZ	2.40	0.70
16:P:4:ILE:O	16:P:8:GLU:HB2	1.92	0.70
19:S:12:LYS:HZ2	19:S:13:HIS:H	1.38	0.70
19:S:18:ARG:HB3	19:S:20:VAL:HG23	1.73	0.70
20:T:86:GLU:HA	20:T:89:LEU:HD12	1.72	0.70
1:A:1253:G:H1	1:A:1285:A:N6	1.86	0.70
1:A:1343:G:C2	1:A:1344:C:C2	2.80	0.70
1:A:1410:G:H2'	1:A:1411:C:C6	2.27	0.70
1:A:511:C:C2	1:A:512:U:C5	2.79	0.70
1:A:610:G:C2'	1:A:611:A:H5'	2.22	0.70
1:A:673:G:C2'	1:A:674:G:C8	2.75	0.70
1:A:892:A:H2'	1:A:893:C:C6	2.27	0.70
1:A:975:A:H4'	1:A:976:G:H5'	1.73	0.70
6:F:131:ARG:NH1	8:H:51:VAL:HG23	2.06	0.70
6:F:153:VAL:HG12	6:F:198:VAL:HG11	1.73	0.70
6:F:189:ALA:CB	6:F:196:LEU:HG	2.22	0.70
6:F:40:ARG:HG2	6:F:55:VAL:HG11	1.74	0.70
10:J:111:ARG:CZ	10:J:112:PRO:HD2	2.22	0.70
12:L:23:ASN:O	12:L:59:PHE:N	2.24	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:93:ARG:NH2	12:L:97:LYS:HG2	2.06	0.70
14:N:99:GLN:O	14:N:105:VAL:HG21	1.90	0.70
15:O:7:ILE:N	15:O:7:ILE:HD13	2.07	0.70
1:A:1230:C:O2'	16:P:126:LYS:HE2	1.92	0.70
1:A:1329:A:H5''	16:P:29:ARG:HG3	1.73	0.70
18:R:7:GLU:CB	18:R:10:LYS:HE3	2.22	0.70
18:R:29:VAL:HG11	18:R:81:LEU:CD2	2.11	0.70
18:R:54:ARG:HD3	18:R:55:GLY:H	1.55	0.70
1:A:279:A:OP2	20:T:95:TYR:OH	2.09	0.70
21:U:30:ASP:OD1	21:U:32:ARG:HB2	1.91	0.70
23:W:51:GLU:HA	23:W:54:LYS:CG	2.22	0.70
1:A:261:U:O4	23:W:79:ARG:NH2	2.24	0.70
2:C:19:G:H3'	2:C:20:U:O4	1.90	0.70
1:A:1196:U:C6	1:A:1196:U:H3'	2.27	0.70
1:A:1273:G:H2'	1:A:1274:G:O4'	1.90	0.70
1:A:1521:G:H2'	1:A:1522:U:H6	1.56	0.70
1:A:828:A:N6	1:A:858:G:O2'	2.25	0.70
1:A:909:A:H2'	1:A:910:C:C5'	2.22	0.70
1:A:943:U:H2'	1:A:944:G:H5'	1.74	0.70
5:E:127:ILE:HG22	5:E:128:GLU:N	2.06	0.70
5:E:15:VAL:CG2	5:E:209:ARG:HH11	2.04	0.70
6:F:59:ARG:CZ	6:F:64:VAL:HA	2.21	0.70
14:N:44:SER:H	14:N:47:VAL:HB	1.56	0.70
15:O:60:LEU:HD13	15:O:64:TYR:HB3	1.71	0.70
19:S:20:VAL:HG12	19:S:21:VAL:N	2.06	0.70
20:T:75:ARG:NH2	20:T:77:VAL:HG13	1.99	0.70
21:U:39:VAL:HA	21:U:42:ARG:HD2	1.73	0.70
1:A:1308:U:P	16:P:99:ARG:HG3	2.31	0.70
1:A:1324:A:O2'	1:A:1325:C:H5'	1.92	0.70
1:A:296:U:N3	1:A:297:G:N7	2.40	0.70
1:A:498:A:O2'	1:A:500:G:C8	2.44	0.70
1:A:737:A:H2'	1:A:738:C:H6	1.56	0.70
1:A:953:G:H4'	16:P:124:PRO:O	1.90	0.70
6:F:126:ARG:O	6:F:127:ARG:HB2	1.92	0.70
11:K:100:ILE:O	11:K:101:PRO:C	2.30	0.70
13:M:6:ILE:O	13:M:71:LEU:HD13	1.91	0.70
14:N:44:SER:N	14:N:47:VAL:HG21	2.07	0.70
15:O:86:ARG:HH12	15:O:119:LYS:HG3	1.56	0.70
20:T:18:THR:O	20:T:19:VAL:HG13	1.91	0.70
22:V:36:ARG:HE	22:V:51:VAL:HG12	1.57	0.70
23:W:63:ILE:HG23	23:W:72:LEU:HD11	1.73	0.70
2:C:44:A:C2'	2:C:45:G:H5'	2.21	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1202:G:O2'	1:A:1203:C:H5'	1.91	0.70
1:A:1236:A:H4'	1:A:1304:G:C4'	2.19	0.70
1:A:1429:C:H2'	1:A:1430:C:C5	2.27	0.70
1:A:511:C:C4	1:A:541:G:N2	2.60	0.70
1:A:697:U:H5'	1:A:786:G:O2'	1.91	0.70
5:E:56:ARG:CZ	5:E:56:ARG:HB3	2.21	0.70
6:F:51:GLY:O	6:F:52:LEU:O	2.09	0.70
6:F:87:LEU:HB2	6:F:101:LEU:HD11	1.74	0.70
7:G:180:GLY:HA3	7:G:182:LYS:HZ3	1.57	0.70
8:H:46:GLY:C	8:H:47:LYS:HD3	2.12	0.70
18:R:46:HIS:O	18:R:48:LYS:N	2.24	0.70
18:R:62:GLN:HG3	18:R:66:LEU:HD21	1.74	0.70
18:R:7:GLU:CA	18:R:10:LYS:HG2	2.21	0.70
22:V:64:GLU:O	22:V:67:VAL:HG23	1.92	0.70
2:C:19:G:H4'	2:C:20:U:OP2	1.91	0.70
1:A:1160:G:N7	1:A:1181:G:C2	2.60	0.69
1:A:173:U:H5'	1:A:197:A:O2'	1.92	0.69
1:A:186(D):C:O2'	1:A:186(E):C:H5'	1.92	0.69
1:A:535:A:H4'	1:A:536:C:OP2	1.92	0.69
1:A:648:A:C2'	1:A:649:G:H5'	2.20	0.69
5:E:167:PRO:CD	5:E:188:ALA:HA	2.21	0.69
5:E:57:PHE:CD1	5:E:199:TYR:CE1	2.65	0.69
6:F:42:LEU:HA	6:F:45:LYS:HD2	1.72	0.69
10:J:79:ARG:NH2	10:J:84:ASN:HB3	2.07	0.69
11:K:100:ILE:CD1	11:K:125:ARG:HG3	2.21	0.69
15:O:37:CYS:HA	15:O:58:VAL:HG22	1.73	0.69
16:P:8:GLU:OE1	16:P:10:PRO:HG3	1.92	0.69
18:R:36:ILE:HG23	18:R:37:ASN:HD22	1.56	0.69
18:R:6:GLU:HG2	18:R:7:GLU:OE2	1.91	0.69
20:T:7:THR:OG1	20:T:57:VAL:O	2.08	0.69
22:V:52:TYR:OH	22:V:55:LYS:HA	1.90	0.69
23:W:57:ARG:NE	23:W:100:ILE:HD12	2.05	0.69
23:W:100:ILE:HG13	23:W:100:ILE:O	1.91	0.69
2:C:16:C:H5'	2:C:60:U:C2'	2.22	0.69
2:C:16:C:H5'	2:C:60:U:H2'	1.74	0.69
1:A:1054:C:C2'	1:A:1055:A:H5''	2.20	0.69
1:A:1397:C:H2'	1:A:1397:C:O2	1.91	0.69
1:A:16:A:C1'	8:H:17:ALA:HB3	2.21	0.69
1:A:199:G:O2'	1:A:200:G:H5'	1.92	0.69
1:A:112:G:C5'	1:A:389:A:H4'	2.21	0.69
1:A:862:C:C2	1:A:863:U:H5	2.10	0.69
5:E:175:ARG:HG2	5:E:179:LYS:HE2	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:27:LYS:HA	5:E:27:LYS:HE2	1.74	0.69
6:F:28:GLN:CD	6:F:29:TYR:N	2.45	0.69
10:J:34:GLY:O	10:J:36:LYS:N	2.25	0.69
11:K:101:PRO:O	11:K:102:ARG:HB2	1.91	0.69
13:M:45:ARG:HG2	13:M:65:LEU:O	1.91	0.69
14:N:30:VAL:O	14:N:42:TRP:HB2	1.92	0.69
1:A:474:G:C5'	19:S:81:ARG:HE	2.04	0.69
20:T:50:LYS:HG2	20:T:51:TYR:CD1	2.26	0.69
20:T:59:ILE:CD1	20:T:71:PHE:HB3	2.21	0.69
21:U:80:PRO:HB2	21:U:83:GLU:HG2	1.73	0.69
2:C:16:C:O2'	2:C:18:G:OP2	2.04	0.69
1:A:562:C:O2	15:O:15:ARG:HB3	1.92	0.69
3:D:30:G:H2'	3:D:31:A:H8	1.56	0.69
1:A:1153:C:N4	1:A:1154:G:O6	2.26	0.69
1:A:1260:C:O5'	1:A:1284:C:H4'	1.93	0.69
1:A:1295:G:N2	1:A:1302:U:H3	1.89	0.69
1:A:900:A:N6	1:A:901:A:N6	2.40	0.69
1:A:972:C:OP2	13:M:57:LYS:HD2	1.92	0.69
6:F:101:LEU:HD23	6:F:101:LEU:O	1.92	0.69
7:G:29:PRO:C	7:G:34:GLU:HG3	2.12	0.69
7:G:15:GLU:OE2	7:G:63:LYS:HB3	1.92	0.69
12:L:73:GLN:O	12:L:77:ILE:HG13	1.92	0.69
14:N:33:THR:HB	14:N:37:GLY:O	1.93	0.69
20:T:88:TYR:CA	20:T:91:ARG:HH21	2.05	0.69
22:V:11:VAL:O	22:V:38:SER:HB2	1.92	0.69
23:W:49:ALA:O	23:W:53:LEU:HG	1.93	0.69
2:C:74:C:C3'	2:C:75:C:H5''	2.22	0.69
1:A:567:G:N2	1:A:568:G:H1'	2.08	0.69
1:A:608:A:C2	1:A:609:A:O4'	2.45	0.69
1:A:764:C:H3'	1:A:765:G:C8	2.27	0.69
1:A:963:G:H2'	1:A:964:A:C8	2.27	0.69
5:E:95:GLN:O	5:E:97:TRP:N	2.24	0.69
6:F:173:VAL:O	6:F:175:LEU:HD12	1.92	0.69
7:G:18:LYS:HG2	7:G:33:MET:CB	2.19	0.69
11:K:6:ILE:HD12	11:K:85:ARG:CZ	2.22	0.69
15:O:77:LEU:HD21	15:O:107:ALA:CB	2.23	0.69
1:A:668:G:HO2'	18:R:46:HIS:CE1	2.11	0.69
18:R:39:LEU:CD2	18:R:56:LEU:HD22	2.22	0.69
21:U:18:ARG:HH22	21:U:21:LYS:HD3	1.58	0.69
1:A:134:A:H1'	1:A:325:A:C5	2.27	0.69
1:A:777:A:H2'	1:A:778:G:C8	2.26	0.69
1:A:859:A:H2'	1:A:860:A:O5'	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:940:C:H2'	1:A:941:G:C8	2.25	0.69
5:E:15:VAL:HG23	5:E:16:HIS:CE1	2.28	0.69
5:E:184:VAL:C	5:E:198:ASP:HB2	2.13	0.69
7:G:173:TRP:CA	7:G:186:LEU:HD21	2.19	0.69
11:K:132:GLU:C	11:K:133:LEU:HD23	2.12	0.69
11:K:63:LEU:CG	11:K:65:TYR:HE1	2.05	0.69
11:K:97:VAL:HG13	11:K:98:LYS:NZ	2.07	0.69
15:O:46:LYS:C	15:O:48:PRO:HD2	2.13	0.69
16:P:13:LYS:HD3	16:P:17:VAL:HG12	1.75	0.69
18:R:40:SER:O	18:R:43:LEU:HB2	1.93	0.69
18:R:63:ARG:HH12	18:R:87:ILE:CD1	2.04	0.69
23:W:85:MET:CB	23:W:104:LEU:HD11	2.22	0.69
23:W:13:LEU:HD13	23:W:17:ARG:HH21	1.57	0.69
1:A:1234:C:H1'	1:A:1364:U:O2	1.92	0.69
1:A:1339:A:H2'	1:A:1340:A:C5'	2.20	0.69
1:A:1529:G:C5'	1:A:1530:G:OP2	2.40	0.69
1:A:225:C:H2'	1:A:226:G:H5'	1.75	0.69
1:A:37:U:C4	1:A:397:A:N1	2.53	0.69
1:A:551:U:H2'	1:A:552:U:H6	1.57	0.69
1:A:733:A:C3'	1:A:733:A:C8	2.76	0.69
1:A:961:U:H5'	1:A:984:C:H1'	1.75	0.69
5:E:16:HIS:HA	5:E:204:ASN:HB2	1.73	0.69
5:E:69:LEU:HD13	5:E:70:PHE:N	2.08	0.69
1:A:15:G:H4'	8:H:24:ARG:HH22	1.58	0.69
11:K:104:ARG:O	11:K:106:GLY:N	2.26	0.69
12:L:70:LYS:N	12:L:70:LYS:HZ2	1.90	0.69
12:L:6:GLY:HA2	12:L:83:ARG:HB3	1.74	0.69
13:M:50:ILE:HA	13:M:60:ARG:HG3	1.74	0.69
14:N:41:THR:CG2	14:N:71:LYS:HE3	2.23	0.69
14:N:54:ARG:O	14:N:56:GLY:N	2.26	0.69
16:P:58:GLU:CA	16:P:61:GLU:HB2	2.22	0.69
17:Q:27:CYS:SG	17:Q:43:CYS:N	2.65	0.69
20:T:51:TYR:O	20:T:52:LYS:HE3	1.93	0.69
1:A:1192:C:C5	1:A:1193:G:N9	2.61	0.69
1:A:964:A:OP1	1:A:1199:U:OP1	2.10	0.69
1:A:1208:C:H2'	1:A:1209:C:C6	2.25	0.69
1:A:1330:U:H4'	16:P:23:TYR:CZ	2.28	0.69
1:A:1347:G:H22	1:A:1373:G:H2'	1.57	0.69
1:A:1401:G:H2'	1:A:1402:C:C5'	2.22	0.69
1:A:264:U:C2'	1:A:264:U:O2	2.40	0.69
1:A:370:C:N3	1:A:371:G:N7	2.39	0.69
1:A:464:G:H8	1:A:464:G:O5'	1.73	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:373:A:N7	1:A:482:A:N7	2.41	0.69
1:A:594:G:C5	1:A:595:G:N3	2.61	0.69
1:A:783:C:C2'	1:A:784:C:H5'	2.20	0.69
1:A:818:G:H3'	1:A:819:A:H5'	1.74	0.69
1:A:745:C:H4'	1:A:836:G:N2	2.08	0.69
1:A:871:U:H4'	1:A:872:A:OP1	1.90	0.69
1:A:960:U:O2'	1:A:1223:C:H4'	1.92	0.69
5:E:78:GLN:NE2	5:E:96:ARG:HH12	1.91	0.69
6:F:108:ASN:HD22	6:F:111:LEU:CD1	2.05	0.69
7:G:148:VAL:H	7:G:181:MET:HE2	1.56	0.69
10:J:42:ILE:HD13	10:J:116:ALA:CB	2.23	0.69
10:J:6:ARG:HH11	10:J:6:ARG:CB	2.06	0.69
15:O:117:ARG:HH22	15:O:124:LYS:CG	2.02	0.69
15:O:93:LEU:HD12	15:O:96:VAL:CG2	2.10	0.69
16:P:91:ARG:HB3	16:P:98:VAL:HG13	1.72	0.69
17:Q:26:ARG:HD2	17:Q:47:LEU:CD1	2.22	0.69
19:S:59:TRP:HE3	19:S:59:TRP:HA	1.55	0.69
20:T:68:ARG:H	20:T:70:ARG:CZ	2.06	0.69
20:T:59:ILE:HD11	20:T:71:PHE:C	2.13	0.69
1:A:843:U:H3	5:E:37:ASN:ND2	1.89	0.69
1:A:553:A:H2'	1:A:554:C:H6	1.58	0.69
1:A:582:U:H5'	18:R:64:ARG:HH22	1.52	0.69
1:A:64:G:N2	1:A:67:C:C4	2.61	0.69
1:A:960:U:N3	1:A:1225:A:C5	2.59	0.69
5:E:152:PHE:CE1	5:E:159:PRO:HG2	2.28	0.69
5:E:184:VAL:H	5:E:198:ASP:CG	1.96	0.69
5:E:56:ARG:CB	5:E:56:ARG:HH11	2.03	0.69
1:A:597:G:N2	11:K:94:TYR:CE2	2.60	0.69
11:K:96:GLY:O	11:K:99:GLU:HG3	1.91	0.69
12:L:114:TYR:HB2	12:L:116:LYS:NZ	2.08	0.69
12:L:27:THR:CB	12:L:62:TYR:HD1	2.06	0.69
15:O:85:ILE:HG13	15:O:87:GLY:H	1.56	0.69
17:Q:12:ARG:O	17:Q:13:THR:C	2.31	0.69
18:R:42:HIS:CG	18:R:43:LEU:N	2.60	0.69
21:U:74:ARG:N	21:U:79:LEU:HD21	2.07	0.69
23:W:19:SER:O	23:W:23:ARG:CB	2.40	0.69
1:A:110:C:C2'	1:A:111:G:O5'	2.36	0.69
1:A:1364:U:O2'	1:A:1365:G:OP1	2.09	0.69
1:A:1375:A:C2	1:A:1376:U:C2	2.80	0.69
1:A:517:G:H5'	1:A:519:C:C4	2.27	0.69
1:A:701:C:H5''	1:A:702:A:H3'	1.74	0.69
1:A:907:A:H2'	1:A:908:A:H8	1.57	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:10:LEU:HB3	5:E:11:LEU:HD23	1.75	0.69
10:J:26:PHE:CE1	10:J:105:VAL:HG22	2.27	0.69
11:K:23:SER:O	11:K:24:THR:HB	1.92	0.69
14:N:50:TYR:CE2	14:N:54:ARG:HB3	2.27	0.69
22:V:71:LEU:O	22:V:74:PHE:HD1	1.76	0.69
1:A:129(A):G:N2	1:A:191(A):G:C4	2.61	0.69
1:A:1498:U:H5''	4:1:16:A:H4'	1.73	0.69
1:A:1401:G:C6	1:A:1504:G:N2	2.60	0.69
1:A:366:C:O2'	1:A:367:U:P	2.50	0.69
1:A:857:C:H2'	1:A:858:G:O4'	1.93	0.69
1:A:887:G:C5	1:A:888:G:N7	2.61	0.69
1:A:975:A:H4'	1:A:976:G:C5'	2.22	0.69
5:E:100:GLY:O	5:E:104:ASN:ND2	2.25	0.69
6:F:5:ILE:CG2	13:M:51:ARG:HH22	2.06	0.69
7:G:3:ARG:HE	7:G:71:SER:N	1.89	0.69
8:H:109:ILE:CG2	8:H:110:LEU:N	2.56	0.69
1:A:16:A:O4'	8:H:17:ALA:HB3	1.91	0.69
10:J:40:ALA:HB1	10:J:44:TYR:CE1	2.27	0.69
11:K:82:HIS:CE1	11:K:84:ARG:HB2	2.28	0.69
12:L:46:ALA:O	12:L:47:LEU:HB2	1.91	0.69
12:L:48:GLU:HB3	12:L:78:LYS:HZ3	1.58	0.69
14:N:32:ILE:HG22	14:N:40:ILE:CD1	2.16	0.69
6:F:8:ILE:HG21	17:Q:50:LYS:O	1.92	0.69
18:R:21:ASP:OD2	18:R:24:SER:HB2	1.93	0.69
3:D:8:U:OP1	3:D:49:G:H5'	1.93	0.69
6:F:118:GLN:O	6:F:122:GLU:HG3	1.92	0.69
9:I:28:ARG:HG2	9:I:28:ARG:NH1	2.05	0.69
1:A:1269:A:H2'	1:A:1270:C:C4'	2.23	0.69
1:A:928:G:H4'	1:A:1533:C:N1	2.07	0.69
1:A:169:C:O2'	1:A:170:U:H5'	1.93	0.69
1:A:523:A:H61	15:O:53:ARG:HH22	1.40	0.69
1:A:609:A:C2	1:A:610:G:C1'	2.75	0.69
1:A:642:A:H2	11:K:113:SER:O	1.75	0.69
1:A:873:A:O4'	1:A:873:A:OP1	2.11	0.69
7:G:107:ARG:HB3	7:G:174:LEU:CD1	2.24	0.69
1:A:1240:U:OP2	10:J:116:ALA:N	2.25	0.69
10:J:14:PRO:HG3	10:J:21:VAL:CG1	2.23	0.69
11:K:90:GLY:HA2	20:T:34:LYS:HZ1	1.58	0.69
16:P:32:GLU:HB2	16:P:64:TRP:HH2	1.56	0.69
16:P:64:TRP:O	16:P:65:LYS:HD2	1.91	0.69
17:Q:45:ARG:O	17:Q:48:ALA:HB3	1.93	0.69
18:R:7:GLU:HA	18:R:10:LYS:CG	2.22	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:760:G:C2'	20:T:103:GLY:HA3	2.23	0.69
1:A:1409:C:O2'	1:A:1410:G:H5'	1.93	0.68
1:A:193:C:C2	1:A:194:C:C5	2.81	0.68
1:A:219:C:H6	1:A:219:C:H3'	1.57	0.68
1:A:970:C:H4'	1:A:972:C:C5	2.29	0.68
5:E:187:LEU:HA	5:E:201:ILE:O	1.93	0.68
5:E:57:PHE:O	5:E:57:PHE:HD2	1.73	0.68
6:F:29:TYR:CZ	17:Q:54:PRO:HG2	2.28	0.68
6:F:97:LYS:H	6:F:97:LYS:HD3	1.57	0.68
7:G:206:PHE:HD2	7:G:206:PHE:C	1.95	0.68
8:H:109:ILE:HG23	8:H:110:LEU:HD23	1.75	0.68
8:H:41:VAL:HG21	8:H:113:ALA:CB	2.22	0.68
8:H:32:VAL:O	8:H:43:LEU:HA	1.92	0.68
11:K:8:ASP:HA	11:K:11:THR:OG1	1.93	0.68
11:K:48:TYR:HA	11:K:60:ARG:O	1.93	0.68
11:K:44:PHE:HA	11:K:79:VAL:HG12	1.73	0.68
12:L:8:GLY:O	12:L:15:ALA:HB3	1.93	0.68
1:A:1151:A:OP1	13:M:41:PRO:HA	1.93	0.68
14:N:29:ILE:HG22	14:N:44:SER:CB	2.23	0.68
1:A:552:U:H4'	15:O:86:ARG:O	1.93	0.68
16:P:59:TYR:CE1	16:P:63:THR:HG21	2.28	0.68
18:R:36:ILE:HD11	18:R:60:VAL:HG22	1.72	0.68
9:I:97:PHE:O	21:U:30:ASP:HA	1.92	0.68
21:U:43:PHE:HA	21:U:51:LEU:HD22	1.74	0.68
1:A:1537:U:H2'	1:A:1538:C:C1'	2.23	0.68
1:A:1130:A:H5''	1:A:1131:G:OP2	1.92	0.68
1:A:122:G:C2	1:A:123:C:C2	2.82	0.68
1:A:406:G:C2	1:A:407:G:N7	2.61	0.68
1:A:452:A:N6	1:A:480:U:C2	2.61	0.68
1:A:648:A:H2'	1:A:649:G:C5'	2.23	0.68
1:A:735:C:O2'	21:U:75:ILE:HD11	1.93	0.68
1:A:922:G:N2	1:A:923:A:H1'	2.08	0.68
7:G:155:LEU:HB2	7:G:158:ILE:HG13	1.74	0.68
10:J:22:LEU:HD23	10:J:63:LYS:HZ3	1.57	0.68
14:N:85:ARG:HH21	14:N:111:ASP:CG	1.96	0.68
14:N:54:ARG:HG3	14:N:54:ARG:NH1	1.96	0.68
15:O:11:VAL:HG22	20:T:29:HIS:CD2	2.29	0.68
17:Q:4:LYS:O	17:Q:7:ILE:HG13	1.93	0.68
19:S:37:GLY:CA	19:S:50:LYS:O	2.41	0.68
20:T:59:ILE:HD11	20:T:71:PHE:HB3	1.75	0.68
20:T:91:ARG:O	20:T:94:ASN:HB2	1.92	0.68
21:U:44:LEU:O	21:U:45:SER:OG	2.11	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:8:ARG:HB2	23:W:8:ARG:CZ	2.22	0.68
1:A:1336:C:H4'	1:A:1337:G:C2	2.28	0.68
1:A:1387:G:H2'	1:A:1388:C:C6	2.28	0.68
1:A:1495:U:O2	1:A:1495:U:H2'	1.91	0.68
1:A:1406:U:H1'	1:A:1518:A:H4'	1.75	0.68
1:A:559:A:H4'	1:A:560:U:O5'	1.92	0.68
1:A:766:A:C2'	1:A:767:A:O5'	2.41	0.68
1:A:828:A:H2'	1:A:829:G:O4'	1.93	0.68
1:A:836:G:C6	1:A:851:G:C6	2.81	0.68
6:F:156:ARG:HD2	6:F:163:ALA:HB2	1.74	0.68
7:G:98:GLU:CG	7:G:189:PRO:HG3	2.23	0.68
8:H:121:LYS:HZ3	8:H:122:GLU:H	1.40	0.68
8:H:13:ILE:HD12	8:H:13:ILE:N	2.09	0.68
10:J:111:ARG:HB3	10:J:112:PRO:CD	2.23	0.68
11:K:60:ARG:HG3	11:K:61:VAL:N	2.09	0.68
16:P:16:ASP:HB2	16:P:30:ALA:CB	2.21	0.68
16:P:91:ARG:HA	16:P:96:LEU:HD21	1.75	0.68
22:V:11:VAL:HG13	22:V:39:THR:H	1.59	0.68
3:D:20:U:O2	3:D:20:U:H2'	1.92	0.68
1:A:843:U:N3	5:E:37:ASN:HA	2.08	0.68
1:A:1202:G:N2	1:A:1203:C:C1'	2.56	0.68
1:A:1493:A:HO2'	1:A:1494:G:C5'	2.05	0.68
1:A:152:A:H3'	1:A:152:A:C8	2.28	0.68
1:A:720:C:H3'	1:A:721:G:C8	2.26	0.68
1:A:971:G:H2'	1:A:1365:G:H4'	1.75	0.68
5:E:193:ASP:OD2	5:E:196:LEU:HG	1.94	0.68
6:F:192:THR:HG22	6:F:192:THR:O	1.93	0.68
6:F:30:ARG:HG2	6:F:31:HIS:H	1.59	0.68
7:G:102:ASP:HB2	7:G:136:PRO:HB3	1.76	0.68
7:G:83:SER:HA	7:G:89:THR:HG1	1.56	0.68
10:J:150:ALA:HB1	14:N:57:THR:OG1	1.92	0.68
12:L:40:LEU:C	12:L:42:ARG:N	2.45	0.68
1:A:1250:A:H4'	12:L:67:GLY:C	2.14	0.68
13:M:47:PHE:CD1	13:M:47:PHE:N	2.61	0.68
14:N:62:GLN:CD	14:N:63:LEU:N	2.47	0.68
1:A:740:U:OP2	18:R:3:ILE:HD11	1.94	0.68
23:W:91:LEU:HD23	23:W:91:LEU:H	1.58	0.68
15:O:126:LYS:C	15:O:126:LYS:HD2	2.13	0.68
4:1:14:A:O3'	4:1:15:A:O4'	2.11	0.68
1:A:1095:U:C5'	1:A:1109:C:N3	2.57	0.68
1:A:1213:A:H2'	1:A:1215:G:N7	2.09	0.68
1:A:1265:G:C6	1:A:1266:G:N3	2.62	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1333:A:O2'	1:A:1334:G:H5'	1.94	0.68
1:A:1319:A:C2	1:A:1361:G:N2	2.61	0.68
1:A:173:U:C4'	1:A:197:A:C1'	2.70	0.68
1:A:301:G:N2	1:A:302:G:C4	2.62	0.68
1:A:468:A:H1'	19:S:82:GLN:HG2	1.76	0.68
1:A:737:A:H2'	1:A:738:C:C6	2.29	0.68
1:A:741:G:O2'	1:A:742:G:H5'	1.94	0.68
5:E:153:ARG:HH22	5:E:156:LYS:HB2	1.59	0.68
5:E:97:TRP:CE2	5:E:99:GLY:HA3	2.28	0.68
6:F:33:LEU:HD13	17:Q:53:LEU:HD22	1.76	0.68
6:F:76:VAL:O	6:F:83:ARG:HG2	1.92	0.68
7:G:101:LEU:HD11	7:G:121:VAL:CG1	2.23	0.68
7:G:26:CYS:HA	7:G:31:CYS:CB	2.23	0.68
7:G:55:ALA:O	7:G:59:ARG:CG	2.41	0.68
7:G:79:PHE:HB2	7:G:93:PHE:CE1	2.28	0.68
10:J:5:ARG:HB3	10:J:5:ARG:CZ	2.22	0.68
11:K:18:ARG:CG	11:K:18:ARG:HH11	2.07	0.68
11:K:6:ILE:HD13	11:K:6:ILE:C	2.14	0.68
12:L:97:LYS:HB3	12:L:98:PRO:HD3	1.75	0.68
13:M:49:VAL:HG12	17:Q:45:ARG:HD2	1.76	0.68
15:O:113:ARG:HH12	15:O:115:LYS:HB2	1.58	0.68
16:P:16:ASP:OD1	16:P:34:LEU:HD11	1.93	0.68
16:P:54:VAL:HG13	16:P:58:GLU:OE1	1.93	0.68
20:T:4:LYS:HD2	20:T:5:VAL:N	2.06	0.68
21:U:46:GLU:C	21:U:48:GLY:N	2.46	0.68
22:V:36:ARG:HB2	22:V:71:LEU:CB	2.23	0.68
23:W:79:ARG:HG3	23:W:79:ARG:HH11	1.59	0.68
8:H:87:SER:CB	8:H:131:ILE:HG12	2.22	0.68
1:A:1081:G:OP2	8:H:27:ARG:NH1	2.25	0.68
1:A:1148:U:O2	1:A:1149:C:O4'	2.12	0.68
1:A:175:C:O2'	1:A:176:C:H5'	1.92	0.68
1:A:503:C:C2	1:A:504:C:C5	2.82	0.68
1:A:50:A:H5''	1:A:51:A:H5'	1.74	0.68
1:A:623:C:O2'	1:A:624:C:H5'	1.93	0.68
1:A:642:A:C2	11:K:113:SER:O	2.47	0.68
1:A:692:U:H2'	1:A:694:A:OP2	1.92	0.68
5:E:15:VAL:HG23	5:E:16:HIS:ND1	2.09	0.68
5:E:82:ARG:HA	5:E:92:TYR:CZ	2.29	0.68
7:G:63:LYS:HG3	7:G:198:VAL:CG1	2.23	0.68
8:H:17:ALA:HA	8:H:26:PHE:HB3	1.76	0.68
1:A:1349:A:OP1	12:L:118:LYS:HB3	1.93	0.68
14:N:32:ILE:HD12	14:N:41:THR:OG1	1.92	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:67:ASP:HA	14:N:70:LYS:CD	2.24	0.68
21:U:66:LEU:CD1	21:U:67:ALA:N	2.55	0.68
24:X:12:LYS:HE3	24:X:21:TYR:HB2	1.75	0.68
3:D:14:A:C2	3:D:15:G:N7	2.61	0.68
1:A:562:C:H2'	15:O:15:ARG:HB3	1.76	0.68
1:A:1181:G:H2'	1:A:1182:G:O4'	1.94	0.68
1:A:1188:A:H3'	1:A:1189:C:H5	1.58	0.68
1:A:160:A:C2	1:A:343:U:H1'	2.28	0.68
1:A:495:A:H61	7:G:123:HIS:CE1	2.12	0.68
1:A:573:A:C2	1:A:574:A:C6	2.82	0.68
1:A:737:A:O2'	9:I:72:VAL:HG21	1.94	0.68
1:A:878:G:H5''	11:K:89:PRO:O	1.93	0.68
7:G:34:GLU:OE1	7:G:35:ARG:N	2.26	0.68
7:G:62:GLN:O	7:G:66:ARG:HD2	1.94	0.68
9:I:64:GLN:O	9:I:65:VAL:HG12	1.93	0.68
11:K:118:VAL:C	11:K:119:LEU:HD22	2.13	0.68
11:K:9:MET:HG2	11:K:13:ILE:HD12	1.75	0.68
11:K:14:ARG:CB	11:K:14:ARG:HH11	2.03	0.68
16:P:15:VAL:HG11	16:P:39:ILE:CD1	2.24	0.68
19:S:8:ARG:HH12	19:S:11:SER:N	1.92	0.68
2:C:17:C:H5''	2:C:19:G:OP2	1.93	0.68
3:D:21:A:N6	3:D:48:C:OP2	2.27	0.68
1:A:96:G:H2'	1:A:97:U:O4'	1.94	0.68
1:A:1095:U:H5''	1:A:1109:C:N3	2.09	0.68
1:A:1404:C:C1'	1:A:1499:A:C2	2.76	0.68
1:A:141:A:H1'	1:A:182:U:H1'	1.76	0.68
1:A:1419:G:O6	1:A:1482:G:C6	2.46	0.68
1:A:498:A:N1	1:A:546:G:O2'	2.19	0.68
1:A:979:C:H2'	1:A:980:C:H5'	1.76	0.68
5:E:53:ARG:O	5:E:56:ARG:NH1	2.27	0.68
6:F:153:VAL:HG23	6:F:166:GLU:HB3	1.74	0.68
6:F:182:ILE:HG23	6:F:203:PHE:CA	2.18	0.68
6:F:59:ARG:NE	6:F:64:VAL:HA	2.08	0.68
1:A:939:G:H5''	10:J:102:ARG:HH22	1.59	0.68
10:J:108:ALA:HB2	10:J:123:GLU:HG2	1.76	0.68
12:L:9:ARG:O	12:L:104:ARG:HG2	1.93	0.68
12:L:37:PHE:N	12:L:37:PHE:CD2	2.59	0.68
13:M:79:ARG:NH2	13:M:82:ILE:HB	2.08	0.68
14:N:99:GLN:HA	14:N:105:VAL:HG22	1.74	0.68
16:P:24:GLY:O	16:P:29:ARG:HD2	1.93	0.68
16:P:29:ARG:HD3	16:P:64:TRP:CZ2	2.27	0.68
16:P:71:ARG:HH11	16:P:71:ARG:CB	2.02	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:86:VAL:O	21:U:87:ARG:CB	2.40	0.68
1:A:1539:C:H2'	1:A:1540:U:H5''	1.76	0.68
1:A:562:C:O2	1:A:562:C:H2'	1.92	0.68
1:A:1064:G:N3	1:A:1066:C:N4	2.42	0.68
1:A:1078:U:C5	1:A:1079:G:C5	2.81	0.68
1:A:115:G:O2'	1:A:116:A:OP2	2.11	0.68
1:A:1180:A:C2'	1:A:1181:G:H5'	2.22	0.68
1:A:166:G:O2'	1:A:167:G:O5'	2.08	0.68
1:A:59:A:C2	1:A:331:G:N3	2.62	0.68
1:A:494:U:H2'	1:A:495:A:O5'	1.93	0.68
1:A:5:U:C4	7:G:86:LYS:HD3	2.29	0.68
1:A:668:G:HO2'	18:R:46:HIS:CD2	2.12	0.68
5:E:178:ARG:HH21	5:E:196:LEU:HB2	1.55	0.68
6:F:22:TRP:CZ2	6:F:33:LEU:HG	2.29	0.68
8:H:28:PHE:HZ	8:H:50:GLU:HA	1.56	0.68
8:H:43:LEU:H	8:H:65:ASN:ND2	1.90	0.68
9:I:79:LEU:HB2	9:I:88:VAL:HG21	1.76	0.68
11:K:109:ILE:HG23	11:K:137:VAL:O	1.93	0.68
12:L:16:ARG:HB3	12:L:64:THR:OG1	1.93	0.68
12:L:27:THR:HG21	12:L:62:TYR:HE1	1.57	0.68
17:Q:25:VAL:HG12	17:Q:39:LEU:HD23	1.74	0.68
15:O:126:LYS:CE	15:O:126:LYS:H	2.02	0.68
1:A:748:C:C3'	1:A:748:C:C6	2.77	0.68
1:A:1203:C:O2'	1:A:1204:A:H5'	1.94	0.68
1:A:1305:G:H2'	1:A:1331:G:H22	1.57	0.68
1:A:1314:C:OP2	22:V:6:LYS:HG2	1.94	0.68
1:A:1399:C:O2'	1:A:1400:C:OP2	2.10	0.68
1:A:684:A:H4'	14:N:12:ARG:NH2	2.07	0.68
1:A:992:U:H4'	1:A:993:G:O5'	1.94	0.68
8:H:52:PRO:O	8:H:55:VAL:HB	1.93	0.68
10:J:51:GLN:OE1	10:J:58:PRO:HD2	1.94	0.68
14:N:59:TYR:O	14:N:62:GLN:NE2	2.27	0.68
16:P:56:LEU:O	16:P:59:TYR:HB3	1.93	0.68
18:R:35:ARG:NH1	18:R:59:MET:HG3	2.09	0.68
19:S:67:THR:HB	19:S:70:ALA:N	2.09	0.68
1:A:1443:G:O3'	1:A:1446:A:H4'	1.93	0.68
2:C:15:G:N2	2:C:59:A:C6	2.61	0.68
3:D:9:A:H62	3:D:23:A:H62	1.41	0.68
1:A:1044:A:H2'	1:A:1045:C:O4'	1.92	0.68
1:A:1093:A:H2'	1:A:1095:U:C5	2.29	0.67
1:A:1269:A:H8	1:A:1270:C:C1'	2.07	0.67
1:A:949:A:H4'	1:A:1364:U:O4	1.93	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:186(D):C:H2'	1:A:186(E):C:H6	1.60	0.67
1:A:484:G:C8	1:A:486:U:C4	2.81	0.67
1:A:440:A:H61	1:A:494:U:H5	1.40	0.67
1:A:519:C:H5'	15:O:51:ALA:HB2	1.76	0.67
1:A:607:A:C2	1:A:608:A:C1'	2.76	0.67
1:A:775:G:N3	1:A:776:G:C8	2.62	0.67
1:A:828:A:C8	1:A:829:G:C8	2.82	0.67
1:A:836:G:P	21:U:61:LYS:HZ1	2.18	0.67
1:A:988:G:H2'	1:A:989:C:O4'	1.94	0.67
5:E:208:ILE:CD1	5:E:239:VAL:HG11	2.24	0.67
6:F:180:ALA:O	6:F:203:PHE:HE1	1.77	0.67
7:G:206:PHE:HD2	7:G:207:TYR:N	1.91	0.67
7:G:71:SER:O	7:G:75:PHE:HB2	1.94	0.67
11:K:98:LYS:NZ	11:K:98:LYS:C	2.47	0.67
1:A:1347:G:C8	12:L:107:ARG:HD2	2.30	0.67
12:L:117:HIS:CD2	12:L:121:ARG:HG2	2.22	0.67
14:N:123:LYS:O	14:N:126:ARG:HB2	1.94	0.67
14:N:14:VAL:O	14:N:14:VAL:HG12	1.94	0.67
15:O:27:LEU:HD23	15:O:33:ARG:HD2	1.73	0.67
15:O:92:ASP:HB3	15:O:93:LEU:HD23	1.76	0.67
16:P:40:ASN:C	16:P:42:ALA:H	1.98	0.67
16:P:91:ARG:HB3	16:P:98:VAL:CG2	2.22	0.67
18:R:15:PHE:O	18:R:16:ALA:C	2.32	0.67
18:R:56:LEU:O	18:R:60:VAL:HG23	1.94	0.67
19:S:62:VAL:O	19:S:64:ALA:N	2.23	0.67
1:A:436:C:O2'	7:G:157:LEU:HG	1.94	0.67
1:A:1120:G:H2'	1:A:1121:U:O5'	1.94	0.67
1:A:91:C:C2	1:A:92:G:C8	2.82	0.67
1:A:1502:A:C6	1:A:1504:G:C2	2.82	0.67
1:A:258:G:C4	1:A:259:G:N7	2.62	0.67
1:A:552:U:H2'	1:A:553:A:H8	1.58	0.67
1:A:783:C:C2'	1:A:784:C:C5'	2.71	0.67
6:F:187:ALA:HB3	6:F:198:VAL:HG22	1.75	0.67
7:G:19:LEU:HD22	7:G:21:LEU:HD12	1.75	0.67
10:J:139:GLU:O	10:J:142:GLU:HB2	1.93	0.67
14:N:26:ASN:O	14:N:27:ASN:HB2	1.91	0.67
1:A:1014:A:H2'	1:A:1015:A:C8	2.29	0.67
1:A:1272:G:H2'	1:A:1273:G:H8	1.59	0.67
1:A:735:C:H5'	21:U:71:LYS:HD3	1.76	0.67
1:A:819:A:C4'	1:A:820:U:OP2	2.35	0.67
1:A:940:C:OP1	10:J:102:ARG:HD3	1.94	0.67
7:G:107:ARG:CD	7:G:174:LEU:HD11	2.24	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:6:VAL:HG22	9:I:8:ILE:HG12	1.77	0.67
9:I:76:ALA:HB1	9:I:80:ARG:CZ	2.22	0.67
10:J:42:ILE:HG22	10:J:120:ILE:HD11	1.76	0.67
11:K:20:TYR:HA	11:K:65:TYR:OH	1.94	0.67
11:K:45:ILE:HG13	11:K:61:VAL:HG13	1.76	0.67
12:L:96:LEU:O	12:L:100:GLY:CA	2.42	0.67
12:L:112:LYS:HG3	12:L:117:HIS:HA	1.75	0.67
12:L:32:ASP:O	12:L:35:GLU:HB3	1.94	0.67
13:M:6:ILE:HD11	13:M:72:VAL:CB	2.22	0.67
19:S:6:LEU:HD23	19:S:17:TYR:CD2	2.30	0.67
21:U:53:ARG:C	21:U:55:ARG:H	1.96	0.67
2:C:59:A:H2'	2:C:59:A:N3	2.08	0.67
14:N:86:GLY:H	14:N:112:THR:HG23	1.58	0.67
4:1:15:A:H8	4:1:15:A:C5'	1.99	0.67
1:A:1085:U:O3'	1:A:1086:U:H6	1.76	0.67
1:A:1520:G:H2'	1:A:1521:G:C8	2.29	0.67
1:A:181:G:N2	1:A:183:G:C2	2.63	0.67
1:A:259:G:H3'	23:W:83:ARG:NH2	2.03	0.67
1:A:35:G:O2'	1:A:36:C:H5'	1.95	0.67
1:A:440:A:N1	1:A:494:U:C6	2.63	0.67
5:E:220:ASP:O	5:E:223:ILE:HB	1.94	0.67
1:A:1191:A:H5''	6:F:4:LYS:NZ	2.10	0.67
7:G:30:LYS:NZ	7:G:35:ARG:HD2	2.08	0.67
7:G:68:TYR:HE2	7:G:97:LEU:HB3	1.59	0.67
7:G:79:PHE:CE1	7:G:204:ILE:HG23	2.30	0.67
9:I:26:ILE:HG22	9:I:30:LEU:HD11	1.75	0.67
13:M:30:SER:CB	13:M:81:THR:HA	2.24	0.67
14:N:85:ARG:NE	14:N:113:PRO:HD3	2.09	0.67
6:F:33:LEU:HD11	17:Q:53:LEU:HA	1.75	0.67
13:M:64:GLU:O	17:Q:56:VAL:HA	1.93	0.67
18:R:2:PRO:O	18:R:4:THR:N	2.27	0.67
1:A:43:C:P	19:S:12:LYS:HG2	2.35	0.67
1:A:254:G:OP1	20:T:67:LYS:O	2.13	0.67
24:X:18:TYR:CD2	24:X:24:ARG:HA	2.30	0.67
1:A:210:U:H4'	1:A:216:G:O4'	1.94	0.67
1:A:1354:C:H2'	1:A:1355:G:H8	1.56	0.67
1:A:1418:A:C6	1:A:1483:A:C6	2.82	0.67
1:A:1440:C:C2	1:A:1441:G:C8	2.83	0.67
1:A:187:C:H2'	1:A:188:U:O4'	1.94	0.67
1:A:183:G:O2'	1:A:224:C:H1'	1.95	0.67
1:A:262:A:C2'	1:A:263:A:C8	2.74	0.67
1:A:50:A:C2	1:A:360:A:N3	2.63	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:173:VAL:HG12	6:F:175:LEU:CD1	2.24	0.67
12:L:101:PHE:CD1	12:L:101:PHE:N	2.62	0.67
12:L:111:ARG:NH2	13:M:62:HIS:CE1	2.62	0.67
15:O:83:VAL:HG22	15:O:84:LEU:H	1.58	0.67
1:A:1228:C:OP2	16:P:111:LYS:NZ	2.25	0.67
18:R:78:TYR:CD2	18:R:82:ILE:HD11	2.29	0.67
20:T:66:SER:O	20:T:70:ARG:NH1	2.28	0.67
7:G:47:ARG:CB	7:G:47:ARG:NH1	2.54	0.67
3:D:58:A:O2'	3:D:59:U:OP1	2.12	0.67
1:A:1253:G:N2	1:A:1254:C:H1'	2.10	0.67
1:A:1350:A:H2'	1:A:1351:U:H6	1.60	0.67
1:A:1360:A:H62	17:Q:18:VAL:HG12	1.59	0.67
1:A:166:G:HO2'	1:A:167:G:C5'	2.08	0.67
1:A:129(A):G:N2	1:A:191(A):G:C5	2.63	0.67
1:A:894:G:C4	1:A:895:G:C8	2.83	0.67
1:A:898:G:C6	1:A:902:G:C6	2.82	0.67
1:A:21:G:N2	1:A:916:G:C6	2.62	0.67
1:A:967:C:H2'	1:A:968:A:C8	2.29	0.67
5:E:118:LEU:HD13	5:E:142:LEU:HD12	1.76	0.67
5:E:68:ILE:HG13	5:E:90:MET:CG	2.23	0.67
5:E:73:THR:HG21	5:E:95:GLN:O	1.94	0.67
7:G:186:LEU:HG	7:G:187:ARG:H	1.59	0.67
7:G:20:TYR:HD1	7:G:21:LEU:N	1.92	0.67
8:H:57:LYS:HG2	8:H:61:TYR:CE2	2.29	0.67
10:J:105:VAL:O	10:J:109:ASN:ND2	2.28	0.67
10:J:145:ALA:O	10:J:146:GLU:HB3	1.94	0.67
11:K:18:ARG:NH1	11:K:18:ARG:N	2.43	0.67
13:M:24:VAL:HG13	13:M:34:VAL:HB	1.76	0.67
6:F:122:GLU:HA	6:F:125:GLU:CG	2.25	0.67
14:N:114:VAL:HG23	14:N:115:PRO:HD2	1.76	0.67
1:A:1494:G:C2'	1:A:1495:U:C5	2.77	0.67
1:A:225:C:O2'	1:A:226:G:H5'	1.94	0.67
1:A:370:C:C2	1:A:371:G:N7	2.62	0.67
1:A:440:A:N1	1:A:494:U:C5	2.62	0.67
1:A:508:C:H4'	1:A:509:A:O5'	1.94	0.67
1:A:519:C:N4	1:A:520:A:H2	1.92	0.67
1:A:707:C:C2'	1:A:708:C:H5'	2.24	0.67
1:A:874:G:O2'	1:A:875:C:H5'	1.95	0.67
1:A:947:G:H2'	1:A:948:C:H6	1.59	0.67
5:E:132:LYS:N	5:E:132:LYS:HZ3	1.93	0.67
6:F:22:TRP:HZ2	6:F:33:LEU:HG	1.60	0.67
6:F:6:HIS:ND1	6:F:7:PRO:HD2	2.10	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:106:PRO:O	8:H:109:ILE:HG22	1.94	0.67
9:I:19:LEU:CG	9:I:23:LYS:HD2	2.23	0.67
9:I:94:GLN:HB2	21:U:32:ARG:NH2	2.09	0.67
18:R:54:ARG:O	18:R:57:LEU:HB2	1.94	0.67
18:R:71:GLN:CA	18:R:75:PRO:HB3	2.25	0.67
19:S:49:LEU:HD21	19:S:51:VAL:HG23	1.76	0.67
19:S:69:THR:HA	19:S:72:ARG:HD2	1.77	0.67
20:T:9:VAL:HG21	20:T:84:LEU:HD12	1.76	0.67
23:W:57:ARG:NH2	23:W:100:ILE:HB	2.09	0.67
2:C:10:G:C2	2:C:11:A:C8	2.82	0.67
1:A:1099:G:H2'	1:A:1099:G:N3	2.10	0.67
1:A:10:A:H1'	1:A:507:C:O2'	1.94	0.67
1:A:1191:A:N3	1:A:1191:A:H2'	2.10	0.67
1:A:1245:A:H2'	1:A:1246:C:H6	1.53	0.67
1:A:321:A:H5'	1:A:1435:G:O2'	1.94	0.67
1:A:294:U:C2	1:A:295:C:C5	2.82	0.67
1:A:571:U:H5'	1:A:572:A:OP2	1.94	0.67
3:D:36:A:H2'	3:D:37:A:C8	2.30	0.67
5:E:69:LEU:HD22	5:E:91:PRO:C	2.15	0.67
6:F:150:LYS:HZ3	6:F:152:ILE:CG2	2.08	0.67
8:H:101:ILE:N	8:H:101:ILE:HD13	2.10	0.67
8:H:79:GLU:CD	8:H:79:GLU:H	1.98	0.67
11:K:40:ALA:N	11:K:45:ILE:CG2	2.57	0.67
12:L:56:LEU:HD23	12:L:56:LEU:O	1.95	0.67
13:M:60:ARG:HB2	13:M:60:ARG:CZ	2.25	0.67
14:N:41:THR:HG22	14:N:71:LYS:HE3	1.75	0.67
15:O:55:VAL:C	15:O:70:ILE:HD11	2.14	0.67
16:P:13:LYS:O	16:P:45:VAL:HG23	1.95	0.67
16:P:76:ALA:O	16:P:80:ARG:HG2	1.94	0.67
17:Q:22:THR:HB	17:Q:33:VAL:HG21	1.76	0.67
19:S:58:TYR:HD1	19:S:58:TYR:C	1.97	0.67
20:T:51:TYR:CZ	20:T:73:VAL:HG11	2.29	0.67
1:A:325:A:OP2	23:W:70:SER:HB3	1.94	0.67
3:D:8:U:O4'	3:D:48:C:H4'	1.94	0.67
1:A:1138:G:H3'	1:A:1138:G:N3	2.09	0.67
1:A:1269:A:H5'	1:A:1326:C:C4'	2.25	0.67
1:A:1393:U:H4'	1:A:1501:C:O2'	1.95	0.67
1:A:235:C:H2'	1:A:236:G:C8	2.23	0.67
1:A:267:C:H2'	1:A:268:C:C6	2.29	0.67
1:A:971:G:N2	1:A:1363:A:OP2	2.27	0.67
1:A:993:G:H21	1:A:995:C:N4	1.93	0.67
8:H:9:LYS:HE2	8:H:112:LEU:HD23	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:129:VAL:HG22	11:K:130:GLY:H	1.60	0.67
11:K:6:ILE:HG23	11:K:85:ARG:NH1	2.10	0.67
13:M:23:ILE:HG13	13:M:85:LEU:HB3	1.75	0.67
1:A:501:C:OP1	15:O:124:LYS:HD2	1.94	0.67
16:P:14:ARG:N	16:P:44:ARG:HD2	2.09	0.67
19:S:6:LEU:O	19:S:6:LEU:HD22	1.94	0.67
1:A:277:C:OP1	20:T:41:LYS:HD2	1.95	0.67
3:D:18:G:C2	3:D:19:G:H1'	2.29	0.67
1:A:1192:C:C3'	1:A:1192:C:C6	2.77	0.67
1:A:1465:C:N3	1:A:1466:C:C5	2.63	0.67
1:A:1469:G:O2'	1:A:1470:G:H5'	1.95	0.67
7:G:106:TYR:HE1	7:G:112:VAL:C	1.98	0.67
11:K:35:ILE:O	11:K:39:LEU:HD23	1.95	0.67
15:O:77:LEU:CD2	15:O:107:ALA:HB2	2.24	0.67
15:O:43:VAL:CG1	15:O:44:THR:H	2.07	0.67
15:O:45:PRO:CG	15:O:50:SER:HA	2.23	0.67
16:P:19:LEU:HD13	16:P:25:ILE:CG2	2.24	0.67
17:Q:9:LYS:NZ	17:Q:12:ARG:HH21	1.92	0.67
18:R:49:ASP:O	18:R:49:ASP:CG	2.34	0.67
18:R:54:ARG:HE	18:R:58:MET:CE	2.08	0.67
22:V:11:VAL:O	22:V:11:VAL:HG12	1.95	0.67
22:V:24:ALA:C	22:V:26:GLY:H	1.98	0.67
1:A:1320:C:O4'	22:V:70:LYS:HD2	1.95	0.67
1:A:191(F):U:C2	23:W:105:SER:HB2	2.29	0.67
1:A:191:G:O2'	23:W:102:GLY:HA2	1.95	0.66
1:A:306:G:O2'	1:A:307:C:H5'	1.95	0.66
1:A:684:A:H2'	1:A:685:G:C8	2.28	0.66
1:A:828:A:H8	1:A:829:G:C8	2.13	0.66
1:A:894:G:C5	1:A:895:G:N7	2.64	0.66
1:A:922:G:C2	1:A:923:A:C4	2.82	0.66
6:F:150:LYS:HG2	6:F:169:ALA:CB	2.23	0.66
6:F:40:ARG:NH1	6:F:57:ILE:HD12	2.10	0.66
6:F:72:LYS:O	6:F:76:VAL:CG2	2.43	0.66
7:G:22:LYS:HB3	7:G:26:CYS:CB	2.22	0.66
9:I:84:ASN:O	9:I:86:ARG:N	2.28	0.66
13:M:24:VAL:HG22	13:M:72:VAL:HG13	1.77	0.66
13:M:3:LYS:HE3	13:M:3:LYS:HA	1.76	0.66
14:N:44:SER:N	14:N:47:VAL:CG2	2.58	0.66
14:N:54:ARG:C	14:N:56:GLY:H	1.96	0.66
15:O:37:CYS:HB3	15:O:58:VAL:HG22	1.75	0.66
19:S:39:TYR:HD1	19:S:40:ASP:N	1.92	0.66
19:S:49:LEU:HD21	19:S:51:VAL:CG2	2.25	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:21:LYS:HZ3	21:U:23:LYS:H	1.43	0.66
1:A:1327:C:OP1	24:X:20:LYS:HE2	1.95	0.66
1:A:1408:A:H62	1:A:1409:C:N4	1.92	0.66
1:A:401:C:H2'	1:A:402:G:O4'	1.95	0.66
1:A:440:A:H8	1:A:440:A:O5'	1.77	0.66
1:A:659:U:O2'	1:A:660:G:H5'	1.95	0.66
1:A:812:C:O2	1:A:813:U:H5	1.78	0.66
1:A:878:G:H5''	11:K:89:PRO:HG2	1.76	0.66
5:E:83:MET:HB2	5:E:234:PRO:HG3	1.75	0.66
6:F:42:LEU:O	6:F:45:LYS:HB3	1.96	0.66
6:F:47:LEU:CD1	6:F:49:SER:HB3	2.23	0.66
11:K:103:VAL:CB	11:K:108:GLY:HA3	2.23	0.66
11:K:73:ASP:C	11:K:73:ASP:OD2	2.33	0.66
1:A:1232:U:OP1	12:L:125:TYR:O	2.13	0.66
14:N:28:THR:HG22	14:N:29:ILE:N	2.11	0.66
15:O:25:PRO:HD2	15:O:98:TYR:OH	1.95	0.66
15:O:28:LYS:HE3	15:O:33:ARG:NH1	2.02	0.66
15:O:85:ILE:HD11	15:O:99:HIS:N	2.10	0.66
16:P:66:LEU:N	16:P:66:LEU:HD23	2.10	0.66
17:Q:26:ARG:HD2	17:Q:47:LEU:HD11	1.77	0.66
17:Q:24:CYS:HA	17:Q:39:LEU:HA	1.76	0.66
21:U:52:PRO:CG	21:U:54:ARG:HB3	2.23	0.66
22:V:20:LEU:HD23	22:V:21:GLU:N	2.09	0.66
5:E:35:GLU:O	5:E:36:ARG:CZ	2.43	0.66
1:A:1045:C:H6	1:A:1045:C:O5'	1.79	0.66
3:D:28:G:H2'	3:D:29:C:C6	2.31	0.66
1:A:1129:C:C1'	1:A:1130:A:N7	2.58	0.66
1:A:1193:G:H2'	1:A:1194:U:O5'	1.96	0.66
1:A:1323:G:H2'	1:A:1324:A:H8	1.57	0.66
1:A:16:A:C2	1:A:17:U:C6	2.83	0.66
1:A:519:C:H41	1:A:520:A:H2	1.42	0.66
1:A:65:U:H4'	1:A:66:G:H5''	1.78	0.66
1:A:819:A:C6	1:A:1529:G:N7	2.63	0.66
1:A:965:A:O2'	1:A:966:G:P	2.52	0.66
5:E:238:LEU:HD23	5:E:239:VAL:CG2	2.24	0.66
8:H:91:LEU:C	8:H:91:LEU:HD23	2.15	0.66
8:H:91:LEU:HD23	8:H:92:LYS:N	2.10	0.66
10:J:23:VAL:HG13	10:J:43:PHE:CZ	2.30	0.66
12:L:49:PRO:HD3	12:L:78:LYS:HZ3	1.59	0.66
13:M:9:ARG:C	13:M:94:VAL:HG13	2.16	0.66
14:N:24:SER:O	14:N:88:GLY:HA2	1.95	0.66
16:P:52:GLU:O	16:P:56:LEU:HG	1.96	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:11:LYS:HD2	17:Q:11:LYS:O	1.95	0.66
17:Q:27:CYS:H	17:Q:43:CYS:CB	2.08	0.66
23:W:33:ILE:HD13	23:W:63:ILE:HA	1.77	0.66
1:A:1025:U:H4'	1:A:1025:U:OP1	1.95	0.66
1:A:1004:A:H5''	1:A:1025:U:N3	2.09	0.66
1:A:89:U:H2'	1:A:90:C:O4'	1.95	0.66
1:A:91:C:H2'	1:A:92:G:H8	1.60	0.66
1:A:1010:G:N2	1:A:1020:U:H1'	2.10	0.66
14:N:86:GLY:CA	14:N:112:THR:HG23	2.25	0.66
1:A:1085:U:H5''	1:A:1086:U:H5	1.60	0.66
1:A:1158:C:C4	1:A:1160:G:H1'	2.30	0.66
1:A:1236:A:H4'	1:A:1304:G:H5''	1.77	0.66
1:A:1347:G:N2	1:A:1373:G:C4	2.64	0.66
1:A:1433:A:H62	1:A:1467:G:H21	1.44	0.66
1:A:402:G:O2'	1:A:620:C:N4	2.28	0.66
1:A:408:A:H2'	1:A:409:G:C8	2.29	0.66
1:A:495:A:H61	7:G:123:HIS:HE1	1.42	0.66
1:A:518:C:H2'	1:A:530:G:H8	1.60	0.66
1:A:594:G:N2	1:A:596:C:H41	1.93	0.66
1:A:799:G:C2	1:A:800:G:C1'	2.78	0.66
1:A:965:A:H1'	1:A:969:A:C8	2.30	0.66
5:E:16:HIS:HE1	5:E:213:LEU:CD1	2.02	0.66
10:J:75:VAL:CG2	10:J:146:GLU:H	2.07	0.66
11:K:92:ARG:HH11	11:K:92:ARG:HG2	1.60	0.66
15:O:50:SER:O	15:O:51:ALA:HB2	1.95	0.66
1:A:953:G:H1'	16:P:125:ARG:O	1.95	0.66
19:S:71:ARG:HG3	19:S:80:PHE:CE1	2.30	0.66
20:T:59:ILE:CD1	20:T:72:ARG:C	2.64	0.66
1:A:986:A:H4'	22:V:55:LYS:CE	2.26	0.66
1:A:208:U:O3'	1:A:209:U:H6	1.77	0.66
11:K:53:VAL:HG12	11:K:54:ASP:OD1	1.95	0.66
1:A:174:C:C4	1:A:175:C:N4	2.61	0.66
1:A:17:U:H1'	1:A:1079:G:H21	1.60	0.66
1:A:296:U:C4	1:A:297:G:N7	2.64	0.66
1:A:362:G:N3	1:A:364:A:C8	2.63	0.66
1:A:394:G:H2'	1:A:395:C:H6	1.60	0.66
1:A:483:C:H3'	1:A:483:C:H6	1.60	0.66
1:A:530:G:N3	1:A:530:G:C3'	2.57	0.66
1:A:594:G:N7	1:A:595:G:N3	2.43	0.66
1:A:755:G:H21	11:K:1:MET:HE3	1.59	0.66
1:A:778:G:H2'	1:A:779:C:O4'	1.96	0.66
1:A:968:A:H5''	1:A:969:A:O5'	1.96	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:91:PRO:HD3	5:E:154:LEU:HD13	1.75	0.66
6:F:46:GLU:HB3	6:F:47:LEU:HD22	1.77	0.66
7:G:64:LEU:C	7:G:64:LEU:HD22	2.16	0.66
1:A:402:G:OP1	7:G:74:GLN:HG2	1.95	0.66
9:I:78:GLU:O	9:I:81:ILE:HG13	1.95	0.66
10:J:137:LYS:O	10:J:140:ASP:HB2	1.95	0.66
11:K:107:LEU:H	11:K:107:LEU:CD2	2.06	0.66
13:M:60:ARG:HB2	13:M:60:ARG:NH1	2.11	0.66
17:Q:9:LYS:HZ3	17:Q:12:ARG:NH2	1.94	0.66
18:R:36:ILE:CG2	18:R:37:ASN:HD22	2.09	0.66
1:A:290:C:O5'	1:A:290:C:H6	1.77	0.66
1:A:482:A:C2	1:A:483:C:O4'	2.42	0.66
1:A:522:C:H5''	15:O:120:TYR:OH	1.96	0.66
1:A:685:G:N2	1:A:686:U:O4	2.28	0.66
1:A:719:C:H3'	1:A:720:C:C6	2.31	0.66
1:A:792:A:O2'	1:A:794:A:N7	2.25	0.66
1:A:854:G:P	1:A:871:U:O2	2.54	0.66
6:F:18:TRP:CZ2	17:Q:55:GLY:O	2.49	0.66
6:F:194:GLY:O	6:F:196:LEU:CD2	2.43	0.66
7:G:8:VAL:O	7:G:11:LEU:N	2.29	0.66
7:G:145:GLU:HA	7:G:183:GLY:O	1.96	0.66
8:H:105:VAL:HG21	8:H:132:ALA:HB2	1.77	0.66
12:L:113:LYS:NZ	12:L:119:ALA:HB1	2.11	0.66
12:L:117:HIS:C	12:L:119:ALA:H	1.99	0.66
15:O:84:LEU:CB	15:O:104:VAL:HG11	2.23	0.66
1:A:761:G:C5'	20:T:102:GLY:HA3	2.24	0.66
20:T:7:THR:O	20:T:23:VAL:HG23	1.94	0.66
20:T:53:LEU:HD21	20:T:85:VAL:CG1	2.26	0.66
22:V:38:SER:O	22:V:70:LYS:HA	1.94	0.66
2:C:9:G:H4'	2:C:10:G:OP1	1.93	0.66
1:A:1295:G:H21	1:A:1302:U:H3	1.43	0.66
1:A:1431:C:O2'	1:A:1432:G:H5'	1.96	0.66
1:A:1461:G:H2'	1:A:1462:G:C8	2.31	0.66
1:A:317:G:H2'	1:A:318:G:O5'	1.96	0.66
1:A:542:G:H5'	7:G:41:GLY:HA2	1.77	0.66
1:A:56:U:H2'	1:A:57:G:C8	2.30	0.66
5:E:144:ARG:O	5:E:147:LYS:HB3	1.94	0.66
5:E:16:HIS:C	5:E:204:ASN:HB2	2.16	0.66
7:G:31:CYS:O	7:G:31:CYS:SG	2.54	0.66
8:H:79:GLU:O	8:H:80:ILE:HG23	1.96	0.66
9:I:85:VAL:HG12	9:I:88:VAL:HG23	1.78	0.66
10:J:155:ARG:HA	10:J:155:ARG:CZ	2.26	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:42:ARG:HB3	12:L:74:ILE:CD1	2.25	0.66
12:L:49:PRO:CD	12:L:78:LYS:HG2	2.25	0.66
14:N:32:ILE:HD11	14:N:68:ALA:O	1.95	0.66
16:P:4:ILE:HG13	16:P:8:GLU:CB	2.24	0.66
24:X:20:LYS:HE3	24:X:21:TYR:CE2	2.30	0.66
10:J:129:GLU:OE2	10:J:131:LYS:HD3	1.96	0.66
1:A:1159:U:H5	1:A:1182:G:H1'	1.58	0.66
1:A:503:C:N3	1:A:504:C:C5	2.64	0.66
1:A:608:A:N1	1:A:609:A:C8	2.64	0.66
1:A:663:A:H4'	21:U:61:LYS:NZ	2.11	0.66
1:A:687:A:O2'	1:A:688:G:OP2	2.12	0.66
5:E:28:PHE:HE2	5:E:189:ASP:O	1.78	0.66
6:F:50:ALA:O	6:F:72:LYS:HD2	1.96	0.66
7:G:11:LEU:HA	7:G:14:ARG:HB3	1.78	0.66
7:G:153:ARG:HA	7:G:158:ILE:HG21	1.76	0.66
7:G:20:TYR:CD1	7:G:21:LEU:N	2.64	0.66
7:G:78:LEU:HD13	7:G:93:PHE:CE2	2.30	0.66
7:G:78:LEU:HD21	7:G:96:LEU:HD22	1.77	0.66
9:I:50:TYR:O	9:I:50:TYR:HD2	1.79	0.66
11:K:40:ALA:HA	11:K:43:GLY:O	1.96	0.66
12:L:16:ARG:O	12:L:63:ILE:HG23	1.95	0.66
1:A:1307:U:O4'	16:P:109:THR:HG21	1.96	0.66
18:R:32:LEU:N	18:R:32:LEU:HD23	2.10	0.66
19:S:39:TYR:CD1	19:S:39:TYR:C	2.69	0.66
21:U:74:ARG:HG3	21:U:79:LEU:HD22	1.76	0.66
1:A:1222:G:OP1	22:V:77:THR:HG21	1.95	0.66
23:W:90:GLN:HA	23:W:93:GLU:OE1	1.95	0.66
2:C:16:C:P	2:C:60:U:O2'	2.54	0.66
1:A:1088:G:C2	1:A:1089:G:C8	2.84	0.66
1:A:1244:C:H2'	1:A:1245:A:C8	2.31	0.66
1:A:1401:G:C2'	1:A:1402:C:H5'	2.26	0.66
1:A:335:C:O2'	1:A:1433:A:H1'	1.96	0.66
1:A:451:A:H1'	1:A:452:A:C5	2.31	0.66
1:A:946:A:C4	1:A:947:G:N7	2.63	0.66
3:D:36:A:C6	4:1:14:A:N6	2.59	0.66
5:E:21:ARG:CD	5:E:23:ARG:HD2	2.26	0.66
5:E:56:ARG:HG2	5:E:59:GLU:OE2	1.96	0.66
7:G:106:TYR:CE1	7:G:112:VAL:C	2.70	0.66
7:G:199:ASN:CG	7:G:200:GLU:H	1.98	0.66
8:H:107:ARG:NH1	8:H:107:ARG:CB	2.59	0.66
8:H:84:PHE:CE1	8:H:133:TYR:HB3	2.30	0.66
11:K:101:PRO:O	11:K:102:ARG:CB	2.44	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:109:ILE:HG12	11:K:137:VAL:N	2.10	0.66
14:N:67:ASP:N	14:N:70:LYS:NZ	2.44	0.66
15:O:36:VAL:C	15:O:58:VAL:HG13	2.16	0.66
15:O:85:ILE:HD12	15:O:99:HIS:O	1.95	0.66
16:P:108:ARG:CA	16:P:108:ARG:HH11	2.09	0.66
18:R:6:GLU:O	18:R:9:GLN:HB2	1.95	0.66
23:W:44:ALA:HB1	23:W:92:LEU:HG	1.77	0.66
1:A:1215:G:C2	1:A:1216:G:C8	2.84	0.66
1:A:1394:A:O2'	1:A:1395:C:P	2.54	0.66
1:A:1401:G:N1	1:A:1504:G:N2	2.41	0.66
1:A:196:A:N3	1:A:222:U:H1'	2.11	0.66
1:A:373:A:H2'	1:A:374:A:H8	1.58	0.66
1:A:523:A:N6	15:O:53:ARG:HH22	1.94	0.66
1:A:727:G:N2	1:A:731:G:C6	2.64	0.66
1:A:967:C:O5'	1:A:967:C:H6	1.79	0.66
5:E:16:HIS:CA	5:E:204:ASN:HB2	2.25	0.66
6:F:150:LYS:NZ	6:F:152:ILE:CG2	2.59	0.66
6:F:156:ARG:HH12	6:F:161:GLU:CA	2.08	0.66
6:F:149:ALA:O	6:F:169:ALA:HA	1.96	0.66
6:F:179:ARG:HG2	6:F:206:GLU:HG2	1.78	0.66
7:G:198:VAL:HG23	7:G:199:ASN:N	2.11	0.66
9:I:10:LEU:N	9:I:10:LEU:HD23	2.11	0.66
11:K:26:VAL:HG22	11:K:27:PRO:HD2	1.76	0.66
12:L:110:GLU:O	12:L:111:ARG:CB	2.38	0.66
12:L:22:GLY:HA3	12:L:60:ASP:OD2	1.96	0.66
14:N:128:ALA:O	14:N:129:SER:HB2	1.96	0.66
14:N:99:GLN:HA	14:N:105:VAL:CG2	2.25	0.66
16:P:91:ARG:CD	16:P:96:LEU:HD21	2.26	0.66
19:S:39:TYR:C	19:S:39:TYR:HD1	1.99	0.66
19:S:42:ARG:C	19:S:43:LYS:HD2	2.16	0.66
20:T:86:GLU:OE1	20:T:86:GLU:HA	1.94	0.66
3:D:30:G:H2'	3:D:31:A:C8	2.31	0.66
1:A:1326:C:H2'	1:A:1327:C:H6	1.60	0.65
1:A:133:U:O3'	1:A:134:A:H8	1.79	0.65
1:A:1503:A:N3	1:A:1503:A:H2'	2.09	0.65
1:A:155:C:C2'	1:A:156:G:H5'	2.26	0.65
1:A:184:G:O4'	1:A:224:C:H4'	1.96	0.65
1:A:394:G:H2'	1:A:395:C:C6	2.31	0.65
1:A:564:C:N4	1:A:565:U:C4	2.65	0.65
1:A:714:G:H4'	1:A:776:G:H5'	1.77	0.65
5:E:101:MET:CB	5:E:108:ILE:HG21	2.26	0.65
5:E:74:LYS:HD2	5:E:76:GLN:HB2	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:97:TRP:C	5:E:99:GLY:H	2.00	0.65
6:F:116:VAL:CG1	6:F:141:VAL:HG21	2.22	0.65
7:G:125:HIS:HB3	7:G:152:SER:CB	2.27	0.65
7:G:24:GLU:C	7:G:27:TYR:HB3	2.17	0.65
8:H:147:ASP:HA	8:H:150:ARG:CB	2.24	0.65
11:K:117:GLY:O	11:K:119:LEU:HD22	1.96	0.65
12:L:105:ASP:O	12:L:106:ALA:HB3	1.96	0.65
12:L:47:LEU:HD11	12:L:56:LEU:HD12	1.78	0.65
14:N:65:ALA:HB1	14:N:98:LEU:HD23	1.78	0.65
16:P:50:GLU:O	16:P:54:VAL:HG23	1.96	0.65
16:P:81:LEU:HD22	16:P:82:MET:H	1.60	0.65
1:A:377:G:OP1	19:S:5:ARG:NH1	2.28	0.65
21:U:36:ASN:OD1	21:U:39:VAL:HB	1.96	0.65
5:E:35:GLU:O	5:E:36:ARG:HD2	1.95	0.65
1:A:210:U:H4'	1:A:216:G:OP1	1.96	0.65
4:1:2:G:H2'	4:1:3:C:O4'	1.96	0.65
1:A:1113:C:O2'	1:A:1114:C:H5'	1.96	0.65
1:A:1228:C:H4'	16:P:115:LYS:O	1.96	0.65
1:A:1504:G:O2'	1:A:1505:G:OP2	2.09	0.65
1:A:764:C:N4	1:A:765:G:O6	2.30	0.65
1:A:831:U:H2'	1:A:832:C:H6	1.61	0.65
1:A:865:A:H5'	1:A:1078:U:O4	1.96	0.65
6:F:112:SER:CB	6:F:115:LEU:HB2	2.26	0.65
6:F:52:LEU:HA	6:F:70:VAL:HG13	1.77	0.65
7:G:129:ASN:OD1	7:G:145:GLU:HG3	1.95	0.65
10:J:80:VAL:O	10:J:82:GLY:N	2.27	0.65
11:K:25:ASP:OD1	11:K:60:ARG:HD3	1.96	0.65
12:L:51:ARG:CZ	12:L:51:ARG:HB2	2.26	0.65
16:P:99:ARG:HH11	16:P:99:ARG:HG3	1.61	0.65
13:M:49:VAL:HG13	17:Q:41:ARG:CD	2.27	0.65
18:R:16:ALA:HA	18:R:21:ASP:OD1	1.96	0.65
19:S:6:LEU:CG	19:S:17:TYR:CD2	2.79	0.65
1:A:1200:C:H5''	1:A:1201:A:H3'	1.77	0.65
1:A:978:A:C6	1:A:1318:A:N6	2.64	0.65
1:A:173:U:H1'	1:A:197:A:N3	1.91	0.65
1:A:440:A:N6	1:A:494:U:C5	2.59	0.65
1:A:51:A:N1	1:A:116:A:C4	2.64	0.65
1:A:958:A:O2'	1:A:959:A:H5'	1.96	0.65
5:E:95:GLN:NE2	5:E:148:TYR:HA	2.12	0.65
5:E:173:ALA:HA	5:E:176:GLU:HB2	1.79	0.65
5:E:61:LEU:HA	5:E:64:ARG:HD3	1.78	0.65
6:F:132:ARG:HG2	6:F:136:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:188:LEU:HD11	6:F:190:ARG:HD2	1.78	0.65
6:F:19:GLU:HG3	6:F:54:ARG:NE	2.11	0.65
7:G:188:LEU:C	7:G:189:PRO:O	2.32	0.65
7:G:75:PHE:CE1	7:G:93:PHE:HZ	2.14	0.65
8:H:78:HIS:CE1	8:H:142:LEU:HA	2.31	0.65
9:I:23:LYS:HZ2	9:I:59:TYR:HE2	1.45	0.65
13:M:49:VAL:HG11	17:Q:45:ARG:HD2	1.79	0.65
13:M:79:ARG:HD3	13:M:79:ARG:C	2.16	0.65
18:R:36:ILE:HD12	18:R:63:ARG:HD3	1.79	0.65
21:U:58:LEU:HB3	21:U:62:GLU:CG	2.26	0.65
22:V:11:VAL:HG22	22:V:39:THR:HB	1.77	0.65
2:C:62:C:C2'	2:C:63:G:O5'	2.44	0.65
3:D:17:U:O4	3:D:19:G:N7	2.29	0.65
2:C:26:G:H2'	2:C:26:G:N3	2.11	0.65
1:A:124:G:H2'	1:A:125:U:O4'	1.96	0.65
1:A:135:C:O5'	1:A:135:C:H6	1.80	0.65
1:A:284:G:H2'	1:A:285:G:O4'	1.96	0.65
1:A:44:G:C6	1:A:399:G:C6	2.85	0.65
1:A:7:G:H21	8:H:121:LYS:HB2	1.61	0.65
1:A:952:U:O2'	1:A:965:A:N6	2.29	0.65
5:E:102:LEU:HD12	5:E:102:LEU:N	2.06	0.65
5:E:139:LYS:HG3	5:E:140:HIS:N	2.10	0.65
6:F:48:TYR:HD2	6:F:48:TYR:C	1.99	0.65
7:G:75:PHE:HE1	7:G:93:PHE:CZ	2.15	0.65
8:H:144:THR:C	8:H:146:ALA:N	2.48	0.65
8:H:43:LEU:H	8:H:65:ASN:HD22	1.45	0.65
8:H:72:GLN:HE22	8:H:145:LYS:H	1.42	0.65
9:I:45:LEU:O	9:I:46:ARG:HB2	1.96	0.65
10:J:85:TYR:HD1	10:J:154:TYR:CE1	2.15	0.65
11:K:102:ARG:HE	11:K:105:ARG:HH11	1.42	0.65
1:A:642:A:O2'	11:K:31:PHE:HE1	1.78	0.65
1:A:1280:A:C5'	13:M:40:LEU:HD22	2.26	0.65
16:P:15:VAL:CG1	16:P:39:ILE:HD12	2.27	0.65
19:S:39:TYR:HE1	19:S:41:PRO:CA	2.09	0.65
1:A:277:C:H5''	20:T:68:ARG:HH22	1.62	0.65
20:T:84:LEU:CD2	20:T:84:LEU:H	1.92	0.65
2:C:5:G:H2'	2:C:6:G:O5'	1.96	0.65
3:D:18:G:N3	3:D:58:A:O4'	2.29	0.65
3:D:8:U:H3	3:D:14:A:N6	1.94	0.65
1:A:80:G:H3'	1:A:81:G:C8	2.30	0.65
1:A:92:G:H2'	1:A:93:U:O4'	1.97	0.65
1:A:92:G:C2	1:A:93:U:C2	2.84	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:50:ARG:N	11:K:50:ARG:HD3	2.11	0.65
1:A:1272:G:H2'	1:A:1273:G:C8	2.30	0.65
1:A:277:C:H5''	20:T:68:ARG:NH2	2.12	0.65
1:A:322:C:O2'	1:A:323:U:H5'	1.97	0.65
1:A:401:C:P	7:G:73:ARG:NH1	2.70	0.65
1:A:412:A:H4'	1:A:412:A:OP2	1.95	0.65
1:A:453:A:C4'	19:S:72:ARG:HG3	2.27	0.65
1:A:518:C:H2'	1:A:530:G:C8	2.32	0.65
1:A:532:A:C2'	1:A:533:A:OP1	2.44	0.65
1:A:946:A:N3	1:A:947:G:N7	2.44	0.65
1:A:968:A:H8	1:A:968:A:OP1	1.79	0.65
5:E:169:LYS:HZ2	5:E:170:GLU:HA	1.60	0.65
5:E:217:ARG:O	5:E:220:ASP:HB2	1.96	0.65
5:E:59:GLU:HB3	5:E:221:LEU:HD11	1.78	0.65
10:J:56:GLN:CD	10:J:56:GLN:H	2.00	0.65
11:K:4:ASP:HB2	11:K:6:ILE:CG2	2.26	0.65
12:L:49:PRO:CG	12:L:81:ILE:HB	2.27	0.65
1:A:953:G:N7	16:P:104:ARG:NH2	2.44	0.65
16:P:23:TYR:CD2	16:P:70:LEU:HD13	2.32	0.65
1:A:1308:U:H3'	16:P:99:ARG:CZ	2.26	0.65
19:S:14:ASN:O	19:S:14:ASN:OD1	2.14	0.65
1:A:468:A:O3'	19:S:81:ARG:HA	1.95	0.65
24:X:5:ASP:O	24:X:7:ARG:N	2.30	0.65
1:A:562:C:O2'	15:O:15:ARG:CD	2.44	0.65
1:A:1320:C:C5	22:V:37:ARG:CZ	2.80	0.65
1:A:1337:G:H5''	1:A:1338:G:OP1	1.96	0.65
1:A:1379:G:N7	10:J:2:ALA:N	2.45	0.65
1:A:1416:G:H2'	1:A:1417:G:C8	2.31	0.65
1:A:1451:A:H5''	1:A:1452:C:H41	1.61	0.65
1:A:1475:G:O2'	1:A:1476:G:H5'	1.97	0.65
1:A:219:C:C3'	1:A:219:C:C6	2.79	0.65
1:A:340:U:O2'	1:A:341:C:O4'	2.11	0.65
1:A:377:G:H2'	1:A:378:G:H8	1.61	0.65
1:A:401:C:O2'	1:A:402:G:H5'	1.96	0.65
1:A:412:A:N3	7:G:35:ARG:CZ	2.60	0.65
1:A:528:C:O4'	1:A:535:A:C6	2.50	0.65
1:A:627:G:H2'	1:A:628:G:H8	1.61	0.65
1:A:595:G:N7	1:A:641:U:C4	2.64	0.65
1:A:983:A:N3	1:A:983:A:H3'	2.12	0.65
5:E:67:THR:CB	5:E:155:LEU:HD21	2.22	0.65
5:E:76:GLN:O	5:E:211:ILE:HD12	1.97	0.65
5:E:91:PRO:HG3	5:E:155:LEU:N	2.05	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:179:ARG:NE	6:F:206:GLU:OE1	2.29	0.65
11:K:11:THR:HA	11:K:14:ARG:NE	2.10	0.65
12:L:19:LEU:HD13	12:L:59:PHE:CD2	2.32	0.65
12:L:5:TYR:O	12:L:84:ALA:HA	1.97	0.65
13:M:39:PRO:HB3	13:M:70:ARG:HH12	1.58	0.65
15:O:38:THR:HG23	15:O:39:VAL:N	2.12	0.65
1:A:529:G:C6	15:O:49:ASN:CG	2.70	0.65
20:T:55:ASP:HB3	20:T:57:VAL:HG12	1.78	0.65
21:U:78:LEU:C	21:U:79:LEU:HD12	2.17	0.65
1:A:1058:G:H2'	1:A:1059:C:H6	1.62	0.65
1:A:109:A:O2'	1:A:110:C:P	2.55	0.65
1:A:112:G:H5'	1:A:389:A:H4'	1.77	0.65
1:A:1147:C:O2	12:L:16:ARG:NH2	2.29	0.65
1:A:1209:C:C2'	1:A:1210:C:H5'	2.26	0.65
1:A:1216:G:H2'	1:A:1217:C:C6	2.31	0.65
1:A:1396:A:C2'	1:A:1397:C:OP2	2.44	0.65
1:A:1403:C:HO2'	1:A:1404:C:H6	1.43	0.65
1:A:1408:A:N3	1:A:1495:U:C5	2.65	0.65
1:A:1424:C:O2'	1:A:1425:U:H5'	1.97	0.65
1:A:198:G:OP2	1:A:198:G:H8	1.79	0.65
1:A:533:A:C6	1:A:536:C:N4	2.65	0.65
1:A:601:C:H2'	1:A:602:A:H8	1.62	0.65
1:A:890:G:H2'	1:A:891:U:OP2	1.95	0.65
1:A:933:G:OP2	10:J:3:ARG:HG3	1.96	0.65
1:A:991:U:O2'	1:A:993:G:H1'	1.97	0.65
5:E:188:ALA:O	5:E:189:ASP:HB2	1.95	0.65
8:H:115:VAL:HG11	8:H:118:ILE:HD11	1.77	0.65
8:H:127:ASN:O	8:H:127:ASN:OD1	2.14	0.65
8:H:71:LEU:HD21	8:H:74:GLY:N	2.12	0.65
11:K:116:LYS:HB2	11:K:119:LEU:HD11	1.78	0.65
11:K:86:ILE:HB	11:K:133:LEU:O	1.97	0.65
12:L:4:TYR:HE1	12:L:59:PHE:HZ	1.43	0.65
13:M:5:ARG:HD3	13:M:6:ILE:N	2.11	0.65
1:A:755:G:OP2	18:R:65:ARG:HG2	1.96	0.65
20:T:82:MET:O	20:T:85:VAL:N	2.30	0.65
21:U:17:SER:HB3	21:U:54:ARG:CZ	2.26	0.65
2:C:74:C:H2'	2:C:75:C:C5'	2.16	0.65
1:A:1431:C:H2'	1:A:1432:G:C5'	2.26	0.65
1:A:14:U:C6	1:A:16:A:OP2	2.50	0.65
5:E:115:LEU:HD21	5:E:146:GLN:HA	1.79	0.65
6:F:13:GLY:O	6:F:14:ILE:HD13	1.97	0.65
7:G:146:ILE:N	7:G:146:ILE:HD12	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:200:GLU:O	7:G:204:ILE:HD12	1.95	0.65
7:G:20:TYR:CA	7:G:26:CYS:O	2.42	0.65
8:H:78:HIS:HB3	11:K:107:LEU:CD2	2.15	0.65
9:I:5:GLU:HA	9:I:64:GLN:HA	1.79	0.65
9:I:2:ARG:O	9:I:66:GLU:HA	1.97	0.65
10:J:100:ALA:O	10:J:104:LEU:HG	1.96	0.65
11:K:138:TRP:OXT	11:K:138:TRP:CE3	2.49	0.65
1:A:1228:C:H4'	16:P:116:THR:HA	1.78	0.65
19:S:57:ARG:HG2	19:S:79:VAL:HG12	1.79	0.65
21:U:61:LYS:O	21:U:65:ILE:HG12	1.95	0.65
22:V:40:ILE:HD11	22:V:71:LEU:HD23	1.78	0.65
1:A:1319:A:H4'	22:V:70:LYS:HE3	1.77	0.65
23:W:43:LEU:HD11	23:W:51:GLU:HG3	1.78	0.65
1:A:1446:A:O2'	1:A:1447:G:P	2.55	0.65
1:A:1161:C:C2	1:A:1162:C:C5	2.84	0.65
1:A:1200:C:O4'	1:A:1200:C:P	2.55	0.65
1:A:1347:G:N2	1:A:1373:G:H2'	2.12	0.65
1:A:438:G:H5'	7:G:123:HIS:ND1	2.12	0.65
1:A:640:A:H2'	1:A:641:U:H5'	1.77	0.65
1:A:570:G:C4'	1:A:820:U:C6	2.78	0.65
1:A:900:A:C6	1:A:901:A:N6	2.65	0.65
1:A:961:U:C5	1:A:983:A:C4	2.85	0.65
5:E:115:LEU:CD2	5:E:149:LEU:HD13	2.27	0.65
9:I:76:ALA:C	9:I:80:ARG:HE	2.00	0.65
11:K:112:LEU:HD21	11:K:114:THR:CG2	2.26	0.65
11:K:21:LYS:HE2	11:K:21:LYS:HA	1.78	0.65
12:L:111:ARG:HH22	13:M:62:HIS:HE1	1.44	0.65
1:A:692:U:O4	14:N:53:SER:HA	1.96	0.65
16:P:38:GLY:O	16:P:39:ILE:HG23	1.97	0.65
18:R:44:LYS:HE3	18:R:44:LYS:N	2.12	0.65
19:S:51:VAL:HG11	19:S:74:LEU:HD23	1.79	0.65
20:T:31:LEU:O	20:T:31:LEU:CD1	2.45	0.65
1:A:736:C:OP1	21:U:72:ARG:CZ	2.45	0.65
22:V:62:ILE:CD1	22:V:67:VAL:HA	2.24	0.65
23:W:13:LEU:HB2	23:W:17:ARG:HH21	1.61	0.65
23:W:66:ALA:HB1	23:W:72:LEU:HB2	1.79	0.65
1:A:1537:U:H2'	1:A:1538:C:H1'	1.79	0.65
3:D:69:C:H2'	3:D:70:G:C8	2.32	0.65
1:A:398:C:H6	1:A:398:C:O5'	1.79	0.65
1:A:1066:C:C3'	1:A:1067:A:C8	2.80	0.65
1:A:1067:A:O2'	1:A:1068:G:OP2	2.13	0.65
1:A:1346:A:H2'	10:J:10:ARG:HH21	1.62	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:159:G:N1	1:A:163:C:N4	2.44	0.65
1:A:262:A:H5'	23:W:74:LYS:HG3	1.79	0.65
1:A:38:G:N2	1:A:397:A:O5'	2.24	0.65
1:A:698:G:O2'	1:A:699:C:H5'	1.97	0.65
1:A:781:A:C2'	1:A:782:A:C5'	2.69	0.65
1:A:821:G:H2'	1:A:822:C:H6	1.62	0.65
5:E:169:LYS:CD	5:E:170:GLU:N	2.60	0.65
5:E:54:THR:HG23	5:E:199:TYR:HB3	1.79	0.65
5:E:69:LEU:C	5:E:69:LEU:HD13	2.18	0.65
7:G:107:ARG:HD2	7:G:173:TRP:CZ2	2.32	0.65
1:A:1346:A:C2	10:J:10:ARG:NE	2.65	0.65
10:J:27:ILE:HG23	10:J:43:PHE:HB2	1.79	0.65
1:A:1121:U:H6	1:A:1121:U:O5'	1.80	0.65
1:A:218:C:H5'	1:A:466:C:H42	1.62	0.65
1:A:1144:G:N3	1:A:1144:G:H2'	2.11	0.64
1:A:1203:C:H2'	1:A:1204:A:O4'	1.97	0.64
1:A:1435:G:H2'	1:A:1436:U:C6	2.32	0.64
1:A:171:A:O2'	1:A:172:A:H5'	1.96	0.64
1:A:308:C:C2	1:A:309:G:C8	2.84	0.64
1:A:370:C:C4	1:A:371:G:N7	2.65	0.64
1:A:498:A:H4'	1:A:500:G:OP1	1.96	0.64
1:A:510:A:O5'	1:A:510:A:H8	1.81	0.64
1:A:568:G:C6	1:A:569:C:N4	2.65	0.64
1:A:632:A:C4	1:A:633:G:C8	2.85	0.64
1:A:737:A:H3'	9:I:92:LYS:HZ2	1.63	0.64
1:A:967:C:C5	1:A:968:A:H2'	2.32	0.64
1:A:693:G:N2	3:D:37:A:C2	2.66	0.64
6:F:48:TYR:C	6:F:48:TYR:CD2	2.71	0.64
7:G:158:ILE:O	7:G:162:LEU:HG	1.97	0.64
7:G:24:GLU:CD	7:G:25:ARG:N	2.51	0.64
7:G:78:LEU:O	7:G:81:GLU:HB3	1.97	0.64
8:H:9:LYS:CE	8:H:112:LEU:HD23	2.27	0.64
8:H:57:LYS:HE3	8:H:61:TYR:CE2	2.32	0.64
1:A:737:A:H3'	9:I:92:LYS:NZ	2.11	0.64
8:H:78:HIS:CG	11:K:107:LEU:HD11	2.32	0.64
11:K:18:ARG:HD2	11:K:18:ARG:H	1.61	0.64
11:K:22:GLU:HA	11:K:63:LEU:CD1	2.28	0.64
16:P:40:ASN:OD1	16:P:42:ALA:HB3	1.97	0.64
23:W:76:ALA:O	23:W:79:ARG:HG2	1.97	0.64
1:A:87:A:H2'	1:A:88:C:O4'	1.97	0.64
1:A:101:A:C4	1:A:102:G:C8	2.86	0.64
1:A:112:G:C2'	1:A:113:G:H5'	2.27	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1239:A:H4'	1:A:1240:U:C5'	2.25	0.64
1:A:1284:C:H2'	1:A:1285:A:C8	2.32	0.64
1:A:1479:C:H2'	1:A:1480:G:H8	1.61	0.64
1:A:155:C:O2'	1:A:156:G:H5'	1.97	0.64
1:A:194:C:O3'	23:W:68:LYS:NZ	2.30	0.64
1:A:21:G:C2'	1:A:22:G:H8	2.06	0.64
1:A:336:C:O2'	1:A:337:C:H5'	1.96	0.64
1:A:373:A:C2	1:A:482:A:N6	2.65	0.64
1:A:373:A:O2'	1:A:374:A:H5'	1.97	0.64
1:A:39:G:H2'	1:A:40:C:O5'	1.98	0.64
1:A:520:A:H8	1:A:521:G:H5''	1.61	0.64
1:A:721:G:N2	1:A:733:A:N6	2.44	0.64
1:A:728:A:C8	18:R:54:ARG:CZ	2.81	0.64
1:A:766:A:H2'	1:A:767:A:O5'	1.96	0.64
1:A:782:A:C8	1:A:783:C:C5	2.85	0.64
1:A:915:A:C2'	1:A:916:G:H5'	2.27	0.64
6:F:173:VAL:HG12	6:F:175:LEU:HD12	1.78	0.64
7:G:128:VAL:HG12	7:G:129:ASN:N	2.12	0.64
8:H:79:GLU:HG3	8:H:93:PRO:CD	2.26	0.64
12:L:109:VAL:O	12:L:109:VAL:HG12	1.97	0.64
14:N:124:LYS:HD3	14:N:125:PHE:CE1	2.32	0.64
14:N:19:ALA:HB3	14:N:82:VAL:CG2	2.26	0.64
15:O:54:LYS:HD2	15:O:54:LYS:H	1.62	0.64
16:P:20:THR:OG1	16:P:26:GLY:HA2	1.96	0.64
16:P:37:THR:HG23	16:P:56:LEU:HD22	1.79	0.64
18:R:24:SER:H	18:R:27:VAL:HG21	1.59	0.64
18:R:59:MET:O	18:R:63:ARG:CG	2.45	0.64
19:S:57:ARG:CA	19:S:60:LEU:HD12	2.22	0.64
1:A:262:A:H4'	23:W:75:ASN:OD1	1.97	0.64
2:C:1:C:O2'	2:C:2:G:H5'	1.97	0.64
1:A:1016:A:H2'	1:A:1017:G:O4'	1.96	0.64
1:A:1350:A:H2'	1:A:1351:U:O4'	1.97	0.64
1:A:1363:A:H5''	1:A:1364:U:OP1	1.97	0.64
1:A:67:C:H4'	1:A:172:A:O4'	1.97	0.64
1:A:20:U:H5	1:A:916:G:C2	2.14	0.64
1:A:236:G:C4	1:A:237:C:C5	2.85	0.64
1:A:247:G:H21	1:A:282:A:H2	1.42	0.64
1:A:38:G:N3	1:A:397:A:H2	1.96	0.64
1:A:443:C:H2'	1:A:444:C:C6	2.32	0.64
1:A:47:C:O2'	1:A:48:C:OP2	2.15	0.64
1:A:579:G:O5'	1:A:579:G:H8	1.81	0.64
1:A:591:U:P	11:K:30:ARG:NH2	2.71	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:65:U:H4'	1:A:66:G:C5'	2.27	0.64
1:A:887:G:O2'	1:A:888:G:H5'	1.97	0.64
1:A:917:G:O2'	1:A:918:A:H5'	1.98	0.64
7:G:98:GLU:HB3	7:G:189:PRO:HG3	1.77	0.64
8:H:11:ILE:CG2	8:H:12:LEU:N	2.61	0.64
8:H:71:LEU:CD2	8:H:73:ASN:H	2.09	0.64
10:J:76:ARG:HB2	10:J:156:TRP:CE2	2.32	0.64
10:J:84:ASN:C	10:J:85:TYR:HD2	2.01	0.64
11:K:69:ARG:CZ	11:K:74:PRO:O	2.45	0.64
13:M:30:SER:HB2	13:M:81:THR:CA	2.27	0.64
13:M:4:ILE:HD13	13:M:98:ILE:HG21	1.78	0.64
15:O:28:LYS:CD	15:O:33:ARG:HH12	2.10	0.64
19:S:26:ARG:HD2	19:S:31:LYS:H	1.62	0.64
19:S:42:ARG:O	19:S:43:LYS:HB2	1.97	0.64
19:S:51:VAL:HG21	19:S:73:LEU:HD11	1.79	0.64
20:T:9:VAL:CG2	20:T:84:LEU:HD12	2.26	0.64
22:V:30:LEU:HD12	22:V:59:PRO:CB	2.28	0.64
10:J:67:GLU:OE2	10:J:67:GLU:HA	1.98	0.64
1:A:934:C:N4	1:A:1344:C:N3	2.45	0.64
1:A:1499:A:C2'	1:A:1500:A:H5'	2.27	0.64
1:A:432:A:N7	1:A:433:C:C6	2.66	0.64
1:A:474:G:H5'	19:S:81:ARG:HE	1.61	0.64
1:A:529:G:C8	1:A:529:G:H3'	2.32	0.64
1:A:558:G:H3'	1:A:559:A:C5'	2.20	0.64
1:A:859:A:H2'	1:A:860:A:C5'	2.28	0.64
1:A:891:U:H5	1:A:906:G:C2	2.15	0.64
1:A:961:U:H5	1:A:983:A:N7	1.94	0.64
5:E:208:ILE:HD13	5:E:239:VAL:HG11	1.80	0.64
5:E:67:THR:HB	5:E:155:LEU:CD2	2.25	0.64
6:F:37:GLN:O	6:F:38:ARG:C	2.36	0.64
7:G:133:VAL:HG11	7:G:138:TYR:HD1	1.62	0.64
7:G:135:LEU:C	7:G:137:SER:N	2.48	0.64
7:G:153:ARG:HD3	7:G:181:MET:HE1	1.78	0.64
7:G:58:LEU:O	7:G:58:LEU:HD22	1.97	0.64
9:I:48:LEU:HD23	9:I:60:PHE:HZ	1.61	0.64
11:K:4:ASP:HB2	11:K:6:ILE:HG22	1.80	0.64
15:O:40:VAL:HG11	15:O:77:LEU:O	1.98	0.64
16:P:4:ILE:HG22	16:P:57:ARG:CG	2.26	0.64
20:T:61:GLU:HA	20:T:71:PHE:CD1	2.31	0.64
21:U:69:THR:O	21:U:70:ILE:C	2.36	0.64
1:A:1241:G:O2'	1:A:1242:C:H5'	1.98	0.64
1:A:1419:G:O2'	1:A:1420:C:C5'	2.46	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1419:G:H2'	1:A:1420:C:C6	2.33	0.64
1:A:1413:A:N6	1:A:1488:G:C6	2.66	0.64
1:A:328:C:HO2'	1:A:329:A:P	2.21	0.64
1:A:382:A:C2'	1:A:383:A:O5'	2.45	0.64
1:A:519:C:C4	1:A:520:A:N3	2.65	0.64
1:A:582:U:C4	1:A:583:A:N7	2.65	0.64
1:A:587:G:OP1	11:K:92:ARG:NH2	2.30	0.64
1:A:890:G:C2'	1:A:891:U:OP2	2.45	0.64
1:A:921:U:C2	1:A:922:G:C8	2.86	0.64
5:E:101:MET:HB3	5:E:108:ILE:HG21	1.80	0.64
5:E:72:GLY:HA2	5:E:165:VAL:CG2	2.27	0.64
5:E:194:PRO:O	5:E:196:LEU:N	2.30	0.64
5:E:53:ARG:HH21	5:E:199:TYR:HE2	1.43	0.64
5:E:87:ARG:C	5:E:89:GLY:H	2.01	0.64
5:E:88:ALA:HB1	5:E:222:ILE:CD1	2.27	0.64
6:F:132:ARG:HG2	6:F:136:GLN:HE21	1.61	0.64
7:G:101:LEU:C	7:G:101:LEU:HD12	2.17	0.64
1:A:15:G:H1'	8:H:19:MET:HG2	1.80	0.64
10:J:12:LEU:HD22	10:J:24:THR:HB	1.79	0.64
10:J:37:ASN:CG	10:J:38:LEU:H	2.01	0.64
11:K:20:TYR:CE2	11:K:75:ARG:HD2	2.33	0.64
12:L:98:PRO:C	12:L:100:GLY:H	1.99	0.64
1:A:1117:G:H5'	12:L:104:ARG:HD3	1.79	0.64
1:A:1232:U:OP1	12:L:125:TYR:C	2.35	0.64
13:M:13:HIS:HB2	13:M:68:HIS:HE1	1.61	0.64
19:S:20:VAL:HG11	19:S:32:TYR:CD2	2.33	0.64
23:W:21:LYS:O	23:W:24:LEU:HB2	1.98	0.64
1:A:434:U:H2'	1:A:435:C:H6	1.61	0.64
1:A:1148:U:O2'	1:A:1149:C:H5'	1.98	0.64
1:A:1428:A:H2'	1:A:1429:C:H6	1.58	0.64
1:A:1405:G:H1'	1:A:1519:A:C4'	2.27	0.64
1:A:1533:C:C2'	1:A:1534:A:OP2	2.46	0.64
1:A:186(B):C:H2'	1:A:186(C):G:O5'	1.98	0.64
1:A:225:C:C2'	1:A:226:G:H5'	2.27	0.64
1:A:226:G:H21	1:A:227:G:H1'	1.62	0.64
1:A:426:G:P	7:G:45:GLN:HE22	2.19	0.64
1:A:507:C:N3	1:A:508:C:N4	2.45	0.64
1:A:607:A:C4	1:A:608:A:C8	2.85	0.64
1:A:892:A:C6	1:A:907:A:C8	2.85	0.64
5:E:154:LEU:O	5:E:156:LYS:N	2.30	0.64
5:E:164:VAL:HG12	5:E:186:ALA:CB	2.27	0.64
5:E:239:VAL:O	5:E:240:GLN:HG3	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:12:CYS:HB3	7:G:33:MET:SD	2.38	0.64
7:G:75:PHE:CE1	7:G:93:PHE:CZ	2.85	0.64
8:H:144:THR:HB	8:H:146:ALA:HB3	1.80	0.64
9:I:2:ARG:CD	9:I:69:GLU:HG2	2.26	0.64
10:J:76:ARG:C	10:J:156:TRP:CZ2	2.71	0.64
10:J:15:ASP:HB3	10:J:20:ASP:H	1.62	0.64
11:K:10:LEU:HD22	11:K:135:CYS:SG	2.38	0.64
12:L:4:TYR:HE1	12:L:59:PHE:CZ	2.16	0.64
13:M:30:SER:HB3	13:M:80:LYS:CG	2.26	0.64
1:A:1198:G:O2'	13:M:54:PHE:HE2	1.77	0.64
15:O:93:LEU:N	15:O:93:LEU:HD23	2.12	0.64
16:P:36:LYS:HB3	16:P:59:TYR:OH	1.97	0.64
17:Q:45:ARG:HH12	17:Q:49:HIS:HD2	1.46	0.64
20:T:53:LEU:HD21	20:T:85:VAL:HG13	1.80	0.64
3:D:18:G:H21	3:D:58:A:H5''	1.63	0.64
1:A:1038:C:H2'	1:A:1039:C:C5	2.32	0.64
1:A:93:U:H2'	1:A:95:G:H8	1.62	0.64
11:K:53:VAL:O	11:K:56:LYS:HB2	1.97	0.64
1:A:1144:G:N2	1:A:1146:A:N6	2.46	0.64
1:A:1357:A:C5	1:A:1358:U:C4	2.86	0.64
1:A:1394:A:HO2'	1:A:1395:C:P	2.20	0.64
1:A:1468:A:H2'	1:A:1469:G:O5'	1.96	0.64
1:A:1483:A:H3'	1:A:1484:C:H6	1.61	0.64
1:A:445:G:O2'	1:A:446:G:H5'	1.98	0.64
1:A:533:A:C6	1:A:536:C:C4	2.85	0.64
1:A:933:G:P	10:J:3:ARG:HG3	2.37	0.64
1:A:961:U:O2'	1:A:962:C:C5'	2.34	0.64
5:E:15:VAL:HG22	5:E:209:ARG:CD	2.26	0.64
5:E:53:ARG:NH2	5:E:199:TYR:HE2	1.96	0.64
7:G:20:TYR:HA	7:G:26:CYS:C	2.17	0.64
8:H:71:LEU:HD23	8:H:73:ASN:N	2.12	0.64
10:J:11:GLN:CD	10:J:12:LEU:H	2.01	0.64
11:K:33:GLU:CG	11:K:59:LEU:HD11	2.26	0.64
12:L:105:ASP:OD1	12:L:107:ARG:NH2	2.30	0.64
12:L:112:LYS:CG	12:L:117:HIS:HA	2.26	0.64
12:L:55:ALA:CB	12:L:58:HIS:ND1	2.61	0.64
13:M:27:ALA:HB2	13:M:85:LEU:CG	2.27	0.64
1:A:521:G:OP2	15:O:54:LYS:HE2	1.98	0.64
1:A:1119:C:H2'	1:A:1120:G:H8	1.59	0.64
1:A:1105:A:N3	1:A:1106:G:C8	2.65	0.64
1:A:1206:G:H2'	1:A:1207:G:O4'	1.98	0.64
1:A:1361:G:N7	1:A:1362:C:C5	2.65	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:279:A:C1'	1:A:281:G:N3	2.57	0.64
1:A:383:A:C2'	1:A:384:G:H5'	2.27	0.64
1:A:41:G:H2'	1:A:42:G:C8	2.33	0.64
1:A:475:G:H2'	1:A:476:G:C8	2.31	0.64
1:A:545:C:H5''	7:G:72:GLU:HG2	1.80	0.64
1:A:589:C:H2'	1:A:590:C:C5	2.33	0.64
3:D:34:G:N2	3:D:35:A:H5''	2.13	0.64
3:D:38:A:C2'	3:D:39:U:H5'	2.28	0.64
5:E:71:VAL:HG22	5:E:93:VAL:HB	1.79	0.64
1:A:619:U:H3	7:G:135:LEU:HD21	1.61	0.64
7:G:98:GLU:HG2	7:G:189:PRO:HG3	1.79	0.64
7:G:22:LYS:CB	7:G:26:CYS:HB3	2.23	0.64
7:G:88:VAL:HG22	8:H:97:GLY:N	2.11	0.64
9:I:7:ASN:HD21	9:I:62:TRP:HD1	1.43	0.64
1:A:644:G:H4'	11:K:92:ARG:NH1	2.11	0.64
12:L:28:VAL:O	12:L:30:GLY:N	2.31	0.64
19:S:40:ASP:OD1	19:S:44:THR:HG22	1.97	0.64
19:S:73:LEU:CD1	19:S:73:LEU:C	2.67	0.64
21:U:60:GLY:O	21:U:64:ARG:HG3	1.97	0.64
2:C:48:C:H5'	2:C:49:G:C5'	2.27	0.64
1:A:89:U:O2'	1:A:90:C:H5'	1.98	0.64
1:A:123:C:OP1	1:A:312:C:H5'	1.98	0.64
1:A:1265:G:C2'	1:A:1266:G:H5'	2.20	0.64
1:A:1377:A:O5'	1:A:1377:A:H8	1.80	0.64
1:A:1515:C:H2'	1:A:1516:G:H8	1.63	0.64
1:A:1530:G:N1	1:A:1531:A:C2	2.66	0.64
1:A:246:A:O2'	1:A:247:G:O4'	2.04	0.64
1:A:50:A:H62	1:A:361:G:H4'	1.63	0.64
1:A:572:A:O2'	1:A:916:G:O2'	2.12	0.64
1:A:675:A:H2'	1:A:676:A:O4'	1.98	0.64
1:A:818:G:C3'	1:A:819:A:C5'	2.75	0.64
1:A:958:A:H2'	1:A:959:A:O4'	1.98	0.64
1:A:959:A:C3'	1:A:960:U:H5''	2.24	0.64
5:E:23:ARG:O	5:E:24:TRP:CD1	2.51	0.64
6:F:26:LYS:N	6:F:26:LYS:HD3	2.13	0.64
6:F:39:ILE:HG21	6:F:57:ILE:HD13	1.80	0.64
8:H:72:GLN:O	8:H:73:ASN:HB2	1.97	0.64
8:H:78:HIS:HB3	11:K:104:ARG:HB3	1.79	0.64
9:I:52:ILE:CG2	9:I:53:ALA:N	2.61	0.64
9:I:1:MET:HE2	9:I:68:PRO:HG3	1.79	0.64
1:A:1377:A:HO2'	10:J:2:ALA:N	1.96	0.64
10:J:75:VAL:HA	10:J:89:MET:HE3	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:30:SER:HB3	13:M:80:LYS:HG3	1.78	0.64
1:A:675:A:H1'	14:N:116:HIS:ND1	2.13	0.64
17:Q:9:LYS:HD3	17:Q:10:ALA:N	2.13	0.64
21:U:21:LYS:NZ	21:U:23:LYS:HB2	2.13	0.64
23:W:91:LEU:O	23:W:93:GLU:N	2.27	0.64
1:A:1345:U:H5'	1:A:1346:A:OP1	1.99	0.64
1:A:1413:A:C2	1:A:1414:U:N1	2.66	0.64
1:A:1502:A:H5''	1:A:1503:A:OP2	1.98	0.64
1:A:1502:A:N1	1:A:1504:G:C2	2.66	0.64
1:A:1509:C:H2'	1:A:1510:U:H6	1.58	0.64
1:A:1405:G:N2	1:A:1517:G:H22	1.96	0.64
1:A:340:U:H2'	1:A:341:C:H6	1.63	0.64
1:A:37:U:H2'	1:A:37:U:O2	1.98	0.64
1:A:391:G:P	19:S:28:ARG:HH21	2.20	0.64
1:A:763:G:O2'	1:A:764:C:O5'	2.16	0.64
1:A:770:C:C1'	1:A:900:A:C2	2.71	0.64
5:E:61:LEU:N	5:E:64:ARG:NH1	2.46	0.64
7:G:122:ARG:HG2	7:G:134:ASP:O	1.97	0.64
8:H:84:PHE:CD1	8:H:134:ALA:HA	2.33	0.64
1:A:598:U:O2'	11:K:94:TYR:HB3	1.98	0.64
12:L:47:LEU:CD2	12:L:50:LEU:HD13	2.25	0.64
15:O:58:VAL:O	15:O:65:GLU:HA	1.97	0.64
15:O:59:ARG:CA	15:O:64:TYR:O	2.40	0.64
16:P:108:ARG:NH1	16:P:111:LYS:HB3	2.13	0.64
16:P:114:ARG:HG2	16:P:114:ARG:HH11	1.63	0.64
16:P:58:GLU:O	16:P:61:GLU:HB2	1.98	0.64
21:U:21:LYS:O	21:U:22:VAL:HG13	1.97	0.64
21:U:40:LEU:N	21:U:40:LEU:HD23	2.12	0.64
22:V:63:THR:O	22:V:66:MET:HG2	1.98	0.64
24:X:3:LYS:HB3	24:X:14:TRP:HB3	1.78	0.64
5:E:230:VAL:HG12	5:E:231:GLU:N	2.11	0.64
1:A:1053:G:H4'	1:A:1054:C:O3'	1.97	0.63
1:A:1185:G:O2'	1:A:1186:G:H5'	1.98	0.63
1:A:1227:A:O2'	16:P:115:LYS:NZ	2.21	0.63
1:A:1437:C:H2'	1:A:1438:G:H8	1.63	0.63
1:A:197:A:H2'	1:A:198:G:OP2	1.98	0.63
1:A:308:C:C6	1:A:308:C:H5'	2.31	0.63
1:A:380:G:H21	1:A:382:A:H3'	1.60	0.63
1:A:585:G:O2'	1:A:586:C:H5'	1.97	0.63
1:A:827:U:H3	1:A:872:A:H61	1.45	0.63
5:E:42:ILE:HG12	5:E:43:ASP:H	1.63	0.63
6:F:179:ARG:O	6:F:206:GLU:HG3	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:18:LYS:HD3	7:G:20:TYR:CE2	2.32	0.63
7:G:19:LEU:C	7:G:21:LEU:N	2.49	0.63
8:H:124:GLY:O	8:H:126:ARG:N	2.31	0.63
8:H:26:PHE:N	8:H:26:PHE:CD1	2.63	0.63
8:H:65:ASN:O	8:H:66:MET:HG2	1.98	0.63
9:I:5:GLU:HB2	9:I:62:TRP:HE1	1.63	0.63
11:K:103:VAL:HB	11:K:108:GLY:C	2.17	0.63
11:K:18:ARG:HH12	11:K:78:GLN:NE2	1.95	0.63
15:O:27:LEU:HD22	15:O:60:LEU:HD21	1.80	0.63
15:O:41:ARG:HB3	15:O:41:ARG:HH11	1.61	0.63
16:P:13:LYS:HA	16:P:44:ARG:NE	2.12	0.63
19:S:14:ASN:HB2	19:S:16:HIS:HE1	1.64	0.63
20:T:21:VAL:HG23	20:T:42:TYR:O	1.97	0.63
23:W:78:ALA:O	23:W:79:ARG:C	2.37	0.63
1:A:1400:C:H6	1:A:1400:C:OP1	1.81	0.63
1:A:259:G:N2	1:A:260:G:N3	2.46	0.63
1:A:130:A:C4	1:A:264:U:H1'	2.33	0.63
1:A:301:G:N2	1:A:302:G:C1'	2.61	0.63
1:A:823:G:N2	11:K:1:MET:H2	1.95	0.63
5:E:139:LYS:O	5:E:143:GLU:HB2	1.99	0.63
5:E:17:PHE:CA	5:E:42:ILE:HG22	2.28	0.63
6:F:12:LEU:HD21	6:F:18:TRP:HH2	1.64	0.63
7:G:58:LEU:HA	7:G:206:PHE:CD1	2.33	0.63
13:M:82:ILE:O	13:M:86:MET:HB3	1.98	0.63
14:N:79:SER:HA	14:N:104:GLN:HB3	1.80	0.63
15:O:86:ARG:HE	15:O:99:HIS:CE1	2.16	0.63
17:Q:41:ARG:O	17:Q:45:ARG:HG2	1.97	0.63
19:S:7:ALA:HB3	19:S:18:ARG:HB2	1.80	0.63
20:T:88:TYR:HA	20:T:91:ARG:NH2	2.13	0.63
21:U:36:ASN:HB3	21:U:40:LEU:HG	1.80	0.63
23:W:14:LYS:O	23:W:15:ARG:C	2.36	0.63
3:D:73:A:C2	3:D:74:C:O4'	2.52	0.63
1:A:1231:G:H2'	1:A:1232:U:C6	2.34	0.63
1:A:1248:A:C2	1:A:1249:C:N3	2.66	0.63
1:A:272:C:H2'	1:A:273:A:H8	1.61	0.63
1:A:389:A:C6	1:A:390:C:H1'	2.34	0.63
1:A:676:A:C4	1:A:677:U:C5	2.86	0.63
1:A:777:A:C4	1:A:778:G:C8	2.87	0.63
1:A:934:C:N4	1:A:939:G:N1	2.46	0.63
5:E:167:PRO:HG2	5:E:168:THR:H	1.62	0.63
5:E:31:TYR:CE2	5:E:200:ILE:CG2	2.80	0.63
5:E:87:ARG:NH2	5:E:233:SER:OG	2.32	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:94:LEU:O	7:G:97:LEU:HB2	1.99	0.63
10:J:46:ALA:HA	10:J:49:ILE:CD1	2.18	0.63
11:K:34:GLU:HG2	11:K:118:VAL:CG2	2.29	0.63
11:K:46:LYS:HD2	11:K:63:LEU:O	1.98	0.63
11:K:82:HIS:O	11:K:137:VAL:HG13	1.97	0.63
12:L:103:THR:HG23	12:L:104:ARG:N	2.13	0.63
13:M:16:LEU:HD13	13:M:94:VAL:HG21	1.79	0.63
16:P:59:TYR:CZ	16:P:63:THR:HG21	2.33	0.63
12:L:111:ARG:HD2	17:Q:61:TRP:HE1	1.63	0.63
18:R:36:ILE:O	18:R:40:SER:OG	2.16	0.63
18:R:71:GLN:N	18:R:78:TYR:HD1	1.96	0.63
21:U:44:LEU:CG	21:U:45:SER:N	2.52	0.63
23:W:14:LYS:O	23:W:18:GLN:HG2	1.98	0.63
23:W:88:VAL:O	23:W:92:LEU:HD12	1.98	0.63
2:C:14:A:N6	2:C:15:G:O6	2.31	0.63
1:A:1351:U:O4	12:L:118:LYS:NZ	2.21	0.63
1:A:198:G:H21	1:A:199:G:C1'	2.11	0.63
1:A:276:G:C2'	1:A:277:C:H5'	2.27	0.63
1:A:363:A:C2'	1:A:364:A:H5'	2.28	0.63
1:A:372:C:O2'	1:A:373:A:OP2	2.14	0.63
1:A:49:U:C5	1:A:361:G:N2	2.66	0.63
1:A:765:G:O2'	1:A:766:A:C5'	2.46	0.63
1:A:920:U:O2'	1:A:921:U:H5'	1.97	0.63
1:A:965:A:O2'	1:A:966:G:OP1	2.15	0.63
5:E:208:ILE:HA	5:E:211:ILE:HB	1.79	0.63
6:F:132:ARG:C	6:F:136:GLN:NE2	2.52	0.63
7:G:14:ARG:HD3	7:G:15:GLU:N	2.14	0.63
7:G:26:CYS:CA	7:G:31:CYS:HB3	2.24	0.63
8:H:102:ALA:CB	8:H:106:PRO:HB2	2.28	0.63
9:I:94:GLN:CB	21:U:32:ARG:NH2	2.62	0.63
10:J:75:VAL:HG23	10:J:145:ALA:HB1	1.79	0.63
11:K:34:GLU:HG2	11:K:118:VAL:HG23	1.81	0.63
12:L:7:THR:H	12:L:83:ARG:HD2	1.63	0.63
13:M:50:ILE:N	13:M:60:ARG:HG3	2.12	0.63
14:N:53:SER:O	14:N:55:LYS:HG2	1.98	0.63
19:S:14:ASN:HA	19:S:42:ARG:NH1	2.13	0.63
19:S:6:LEU:HD23	19:S:17:TYR:HD2	1.64	0.63
20:T:20:THR:HA	20:T:43:LEU:CD2	2.28	0.63
1:A:266:G:H3'	20:T:67:LYS:HD3	1.79	0.63
21:U:47:THR:CB	21:U:49:LYS:HZ1	2.04	0.63
21:U:72:ARG:HH11	21:U:72:ARG:HB3	1.63	0.63
22:V:5:LEU:HD12	22:V:9:VAL:CG1	2.28	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:45:GLN:HE22	23:W:91:LEU:HB3	1.61	0.63
23:W:90:GLN:O	23:W:93:GLU:HB2	1.98	0.63
2:C:58:A:O2'	2:C:59:A:OP1	2.16	0.63
1:A:1196:U:H4'	1:A:1197:G:O5'	1.97	0.63
1:A:1227:A:HO2'	16:P:115:LYS:HG2	1.63	0.63
1:A:1239:A:H2'	1:A:1239:A:N3	2.14	0.63
1:A:1320:C:C6	22:V:72:GLY:HA3	2.34	0.63
1:A:1358:U:OP2	1:A:1359:C:H5	1.80	0.63
1:A:1399:C:O2	1:A:1401:G:C4	2.51	0.63
1:A:1483:A:H2'	1:A:1484:C:O4'	1.99	0.63
1:A:192:U:C2	1:A:193:C:C5	2.86	0.63
1:A:297:G:O2'	1:A:300:A:N6	2.31	0.63
1:A:299:G:C6	1:A:300:A:C6	2.87	0.63
1:A:474:G:O2'	1:A:475:G:H5'	1.98	0.63
1:A:600:C:H2'	1:A:601:C:C6	2.33	0.63
1:A:671:G:H2'	1:A:672:U:O4'	1.99	0.63
1:A:721:G:N2	1:A:733:A:C6	2.66	0.63
1:A:828:A:C2'	1:A:829:G:O4'	2.46	0.63
6:F:112:SER:CB	6:F:115:LEU:HD12	2.27	0.63
7:G:42:GLN:HG2	7:G:43:HIS:CE1	2.34	0.63
9:I:37:VAL:HA	9:I:65:VAL:CG1	2.29	0.63
11:K:97:VAL:CG2	11:K:98:LYS:N	2.50	0.63
18:R:77:ARG:HB3	18:R:77:ARG:NH1	2.14	0.63
20:T:68:ARG:H	20:T:70:ARG:NH2	1.96	0.63
22:V:40:ILE:HG13	22:V:69:HIS:O	1.99	0.63
22:V:47:HIS:O	22:V:61:TYR:HA	1.97	0.63
1:A:1320:C:C5	22:V:72:GLY:HA3	2.34	0.63
1:A:1181:G:C2'	1:A:1182:G:H5'	2.28	0.63
1:A:1499:A:H2'	1:A:1500:A:H5'	1.80	0.63
1:A:186(D):C:O5'	1:A:186(D):C:H6	1.82	0.63
1:A:678:U:H2'	1:A:679:C:C5	2.32	0.63
1:A:692:U:O2	1:A:694:A:H3'	1.98	0.63
1:A:69:G:H2'	1:A:73:G:C8	2.34	0.63
1:A:859:A:H2'	1:A:860:A:O4'	1.98	0.63
1:A:862:C:C2	1:A:863:U:C5	2.86	0.63
1:A:900:A:H62	1:A:901:A:N6	1.96	0.63
6:F:139:GLN:CA	6:F:170:GLN:HE22	2.11	0.63
6:F:84:ILE:HG13	6:F:101:LEU:CD2	2.27	0.63
1:A:8:A:C4'	8:H:102:ALA:HA	2.28	0.63
8:H:122:GLU:HB2	8:H:126:ARG:HG3	1.80	0.63
8:H:69:VAL:HG12	8:H:71:LEU:HB2	1.79	0.63
10:J:100:ALA:HA	10:J:103:TRP:HE3	1.64	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:12:ARG:HH11	11:K:26:VAL:HA	1.62	0.63
12:L:47:LEU:HD12	12:L:51:ARG:NH2	2.09	0.63
12:L:82:ALA:HB1	12:L:96:LEU:HD21	1.80	0.63
14:N:106:LYS:CG	14:N:107:SER:H	2.10	0.63
15:O:90:VAL:HG12	15:O:90:VAL:O	1.98	0.63
16:P:52:GLU:HA	16:P:55:ARG:NE	2.14	0.63
18:R:7:GLU:O	18:R:11:VAL:HG22	1.97	0.63
4:1:22:A:O2'	4:1:23:A:H5'	1.98	0.63
1:A:1239:A:H1'	1:A:1241:G:C8	2.33	0.63
1:A:1278:U:H4'	1:A:1279:A:C1'	2.28	0.63
1:A:1329:A:C5'	16:P:29:ARG:NE	2.61	0.63
1:A:1413:A:O2'	1:A:1414:U:H5'	1.99	0.63
1:A:1499:A:H8	1:A:1499:A:O5'	1.81	0.63
1:A:129(A):G:H2'	1:A:189:U:C6	2.33	0.63
1:A:263:A:C3'	1:A:264:U:H5''	2.29	0.63
1:A:302:G:C2'	1:A:556:C:H5''	2.28	0.63
1:A:332:G:H2'	1:A:333:G:H8	1.63	0.63
1:A:332:G:O2'	1:A:333:G:C5'	2.44	0.63
1:A:38:G:N3	1:A:397:A:C2	2.66	0.63
1:A:439:A:H5''	1:A:493:G:H22	1.62	0.63
1:A:622:A:C2'	1:A:623:C:H5'	2.29	0.63
1:A:647:C:N3	1:A:648:A:N7	2.47	0.63
1:A:947:G:O2'	1:A:948:C:H5'	1.97	0.63
1:A:953:G:H2'	1:A:954:G:H8	1.59	0.63
5:E:28:PHE:HE2	5:E:189:ASP:C	2.01	0.63
5:E:78:GLN:CG	5:E:94:ASN:HB3	2.09	0.63
7:G:128:VAL:HG21	7:G:133:VAL:CG2	2.29	0.63
7:G:131:ARG:HD2	7:G:131:ARG:N	2.12	0.63
7:G:208:SER:O	7:G:209:ARG:HD3	1.98	0.63
8:H:109:ILE:HG23	8:H:110:LEU:H	1.62	0.63
8:H:78:HIS:CE1	8:H:142:LEU:HD23	2.34	0.63
11:K:63:LEU:N	11:K:63:LEU:CD2	2.61	0.63
11:K:18:ARG:HH12	11:K:78:GLN:HE21	1.47	0.63
12:L:96:LEU:HG	12:L:101:PHE:HE1	1.62	0.63
13:M:38:ILE:O	13:M:71:LEU:HB2	1.98	0.63
14:N:92:GLU:O	14:N:93:GLN:C	2.36	0.63
1:A:363:A:OP2	15:O:34:ARG:HB3	1.98	0.63
16:P:91:ARG:HH22	16:P:103:THR:HG21	1.64	0.63
1:A:1227:A:O2'	16:P:115:LYS:HG2	1.97	0.63
22:V:18:LYS:HE2	22:V:22:LEU:CD1	2.28	0.63
24:X:14:TRP:CZ3	24:X:15:ARG:CZ	2.81	0.63
1:A:1113:C:H2'	1:A:1114:C:H6	1.63	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1145:C:O2'	1:A:1146:A:C8	2.51	0.63
1:A:1314:C:H2'	1:A:1315:U:C6	2.34	0.63
1:A:1433:A:N1	1:A:1434:A:C2	2.66	0.63
1:A:158:G:H22	1:A:164:U:H1'	1.63	0.63
1:A:179:A:H2'	1:A:180:U:H6	1.64	0.63
1:A:190:G:C8	1:A:190:G:OP1	2.51	0.63
1:A:328:C:O2'	1:A:329:A:OP2	2.16	0.63
1:A:683:G:H2'	1:A:684:A:H8	1.62	0.63
1:A:701:C:C2	1:A:703:G:N2	2.66	0.63
1:A:754:C:C2'	1:A:755:G:OP1	2.46	0.63
1:A:760:G:C2	20:T:104:LYS:O	2.51	0.63
1:A:814:A:N7	1:A:816:A:C5	2.66	0.63
1:A:922:G:H4'	8:H:20:GLN:HA	1.80	0.63
1:A:944:G:H3'	1:A:945:G:H5'	1.81	0.63
5:E:184:VAL:O	5:E:184:VAL:HG12	1.98	0.63
1:A:1055:A:H2	6:F:156:ARG:HD3	1.63	0.63
6:F:196:LEU:HD23	6:F:196:LEU:N	2.14	0.63
7:G:205:GLU:CD	8:H:100:VAL:H	2.01	0.63
9:I:16:GLN:HG3	9:I:17:SER:N	2.13	0.63
12:L:3:GLN:CA	12:L:20:ARG:HG2	2.28	0.63
12:L:47:LEU:CD1	12:L:51:ARG:HH12	2.12	0.63
15:O:73:GLU:CD	15:O:73:GLU:N	2.50	0.63
18:R:62:GLN:HA	18:R:65:ARG:NH1	2.13	0.63
18:R:32:LEU:HD12	18:R:63:ARG:HB3	1.81	0.63
18:R:7:GLU:O	18:R:8:LYS:C	2.34	0.63
19:S:51:VAL:HG21	19:S:77:ALA:HB2	1.80	0.63
1:A:259:G:C3'	23:W:83:ARG:HH22	2.05	0.63
1:A:85:U:C2'	1:A:86:U:H5'	2.29	0.63
20:T:100:LYS:O	20:T:101:ARG:HD2	1.99	0.63
1:A:1238:A:N6	1:A:1301:U:H3	1.88	0.63
1:A:137:C:H2'	1:A:138:G:C5'	2.27	0.63
1:A:1396:A:O4'	1:A:1398:A:H1'	1.99	0.63
1:A:321:A:N6	1:A:328:C:O2'	2.31	0.63
1:A:404:U:C2	1:A:405:U:H5	2.17	0.63
1:A:640:A:H2'	1:A:641:U:C5'	2.29	0.63
1:A:690:G:N3	1:A:690:G:H2'	2.13	0.63
1:A:707:C:H2'	1:A:708:C:C5'	2.29	0.63
1:A:780:A:H2	1:A:803:G:C6	2.17	0.63
1:A:572:A:C2	1:A:864:A:C2	2.87	0.63
1:A:874:G:N2	1:A:875:C:C2	2.67	0.63
1:A:909:A:H2'	1:A:910:C:O5'	1.98	0.63
1:A:959:A:H1'	1:A:985:C:H1'	1.80	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:978:A:C6	1:A:1361:G:N2	2.61	0.63
6:F:12:LEU:HD21	6:F:18:TRP:CH2	2.34	0.63
11:K:133:LEU:N	11:K:133:LEU:HD23	2.11	0.63
11:K:40:ALA:HB2	11:K:45:ILE:CG1	2.29	0.63
11:K:61:VAL:HG12	11:K:62:TYR:N	2.13	0.63
12:L:111:ARG:NE	12:L:113:LYS:HG3	2.13	0.63
13:M:79:ARG:HH11	13:M:79:ARG:C	2.01	0.63
14:N:23:ALA:HB2	14:N:28:THR:CG2	2.28	0.63
16:P:14:ARG:HB3	16:P:44:ARG:HH11	1.63	0.63
21:U:53:ARG:HH11	21:U:63:GLN:HB2	1.64	0.63
1:A:1074:G:C5	1:A:1075:C:C5	2.87	0.62
1:A:1343:G:H2'	1:A:1344:C:C6	2.33	0.62
1:A:1315:U:O2'	1:A:1360:A:H1'	1.98	0.62
1:A:1465:C:H2'	1:A:1466:C:O5'	1.99	0.62
1:A:1492:A:N6	1:A:1494:G:C4'	2.58	0.62
1:A:1505:G:H5''	1:A:1506:U:H5''	1.81	0.62
1:A:1405:G:O2'	1:A:1519:A:H5'	1.99	0.62
1:A:263:A:P	23:W:75:ASN:HD21	2.21	0.62
1:A:797:C:C2'	1:A:798:G:H5'	2.28	0.62
6:F:142:MET:HG2	6:F:170:GLN:CG	2.28	0.62
7:G:78:LEU:HD13	7:G:93:PHE:HE2	1.64	0.62
9:I:12:PRO:HG2	9:I:13:ASN:HD22	1.62	0.62
9:I:8:ILE:CG2	9:I:88:VAL:HG22	2.29	0.62
10:J:40:ALA:CB	12:L:41:VAL:HG21	2.29	0.62
10:J:73:MET:HA	10:J:90:GLU:O	1.98	0.62
10:J:75:VAL:N	10:J:145:ALA:HB1	2.14	0.62
11:K:98:LYS:O	11:K:98:LYS:HG2	1.99	0.62
16:P:91:ARG:HB2	16:P:98:VAL:HG13	1.80	0.62
17:Q:26:ARG:HH11	17:Q:47:LEU:HD11	1.63	0.62
1:A:376:G:O3'	19:S:5:ARG:HD2	1.98	0.62
20:T:80:GLY:O	20:T:81:ARG:C	2.37	0.62
21:U:34:TYR:HE1	21:U:35:ARG:NE	1.96	0.62
23:W:47:GLY:C	23:W:48:LYS:HD2	2.17	0.62
3:D:55:U:H1'	3:D:58:A:N7	2.14	0.62
3:D:60:U:H3'	3:D:60:U:C6	2.34	0.62
1:A:924:C:O2'	1:A:1399:C:C6	2.52	0.62
1:A:68:G:C4'	1:A:171:A:H1'	2.29	0.62
1:A:490:G:H2'	1:A:491:G:C8	2.34	0.62
1:A:558:G:O5'	1:A:559:A:H3'	1.99	0.62
1:A:660:G:H2'	1:A:661:G:C8	2.34	0.62
1:A:745:C:H4'	1:A:836:G:H21	1.64	0.62
5:E:104:ASN:O	5:E:104:ASN:CG	2.38	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:82:ARG:O	5:E:86:GLU:HB2	1.99	0.62
6:F:173:VAL:O	6:F:175:LEU:N	2.32	0.62
7:G:177:ASP:OD1	7:G:179:GLU:HB3	1.98	0.62
7:G:187:ARG:CG	7:G:188:LEU:H	2.08	0.62
8:H:78:HIS:CD2	8:H:78:HIS:N	2.67	0.62
9:I:3:ARG:C	9:I:4:TYR:HD2	2.02	0.62
11:K:45:ILE:HD12	11:K:48:TYR:HB3	1.81	0.62
13:M:90:LEU:H	13:M:91:PRO:CD	2.09	0.62
14:N:54:ARG:C	14:N:56:GLY:N	2.52	0.62
19:S:19:ILE:HG13	19:S:38:TYR:HA	1.80	0.62
21:U:21:LYS:HE2	21:U:57:GLY:HA3	1.81	0.62
5:E:36:ARG:HA	5:E:36:ARG:HE	1.60	0.62
1:A:1054:C:H2'	1:A:1055:A:C5'	2.26	0.62
1:A:1148:U:H5'	12:L:16:ARG:HD2	1.80	0.62
1:A:1153:C:H2'	1:A:1154:G:C8	2.35	0.62
1:A:238:G:C2	1:A:239:U:C2	2.87	0.62
1:A:343:U:C2'	1:A:344:A:O5'	2.47	0.62
1:A:593:G:C2'	1:A:594:G:H5'	2.30	0.62
1:A:970:C:C5'	1:A:972:C:C6	2.82	0.62
6:F:10:PHE:CD1	6:F:178:LEU:HD22	2.33	0.62
7:G:125:HIS:HB3	7:G:152:SER:HB2	1.81	0.62
7:G:20:TYR:CE1	7:G:21:LEU:HD23	2.34	0.62
1:A:7:G:N2	8:H:121:LYS:HB2	2.14	0.62
8:H:47:LYS:N	8:H:47:LYS:HD3	2.13	0.62
8:H:82:VAL:O	8:H:88:LYS:HA	2.00	0.62
9:I:52:ILE:HD13	9:I:87:ARG:CZ	2.29	0.62
1:A:939:G:C5'	10:J:102:ARG:HH12	2.07	0.62
11:K:134:ILE:HG22	11:K:135:CYS:N	2.14	0.62
11:K:32:LYS:O	11:K:36:LEU:HD23	1.98	0.62
12:L:17:VAL:HG13	12:L:63:ILE:HG12	1.80	0.62
14:N:121:PRO:HG3	14:N:125:PHE:HB2	1.81	0.62
15:O:86:ARG:HH12	15:O:119:LYS:CG	2.12	0.62
1:A:362:G:H4'	15:O:28:LYS:NZ	2.14	0.62
8:H:87:SER:HB3	8:H:131:ILE:CG1	2.28	0.62
1:A:1058:G:H2'	1:A:1059:C:O4'	1.99	0.62
1:A:1074:G:O2'	1:A:1101:A:N6	2.32	0.62
1:A:1081:G:O2'	1:A:1082:G:H5'	1.98	0.62
1:A:1055:A:N6	1:A:1206:G:C5	2.67	0.62
1:A:1408:A:N3	1:A:1495:U:H5	1.97	0.62
1:A:109:A:N7	1:A:326:G:C2	2.67	0.62
1:A:362:G:N3	1:A:364:A:H8	1.97	0.62
1:A:571:U:OP1	1:A:819:A:H2'	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:609:A:C2	1:A:610:G:N9	2.67	0.62
1:A:632:A:H2'	1:A:633:G:O4'	1.99	0.62
1:A:953:G:O2'	16:P:125:ARG:CA	2.46	0.62
5:E:175:ARG:HG2	5:E:179:LYS:CE	2.29	0.62
6:F:110:ASN:HD22	6:F:141:VAL:CA	2.09	0.62
6:F:142:MET:HB3	6:F:149:ALA:CB	2.29	0.62
6:F:156:ARG:HB3	6:F:193:TYR:HD1	1.63	0.62
6:F:23:TYR:O	6:F:24:ALA:HB2	1.99	0.62
7:G:200:GLU:O	7:G:201:GLN:C	2.37	0.62
8:H:109:ILE:CG2	8:H:110:LEU:HD23	2.28	0.62
8:H:71:LEU:HD23	8:H:73:ASN:H	1.64	0.62
10:J:122:HIS:H	10:J:122:HIS:CD2	2.16	0.62
10:J:38:LEU:HD12	10:J:41:ARG:HB2	1.81	0.62
10:J:71:PRO:HA	10:J:138:LYS:HE3	1.80	0.62
11:K:37:ARG:HD2	11:K:38:ILE:HD13	1.82	0.62
12:L:28:VAL:N	12:L:31:GLN:O	2.27	0.62
12:L:6:GLY:O	12:L:17:VAL:HB	1.99	0.62
14:N:66:LEU:HB3	14:N:70:LYS:HE3	1.80	0.62
1:A:1186:G:H21	17:Q:61:TRP:C	2.01	0.62
19:S:67:THR:N	19:S:70:ALA:HB3	2.14	0.62
21:U:64:ARG:HH11	21:U:64:ARG:HG3	1.64	0.62
21:U:87:ARG:HH11	21:U:87:ARG:HG2	1.64	0.62
1:A:80:G:C2'	1:A:81:G:O4'	2.45	0.62
1:A:248:C:H4'	1:A:283:C:H1'	1.81	0.62
1:A:297:G:N2	1:A:299:G:O5'	2.32	0.62
1:A:30:U:O2'	1:A:31:G:P	2.57	0.62
1:A:313:A:C2'	1:A:314:C:C6	2.75	0.62
1:A:62:U:H4'	1:A:385:C:O2	1.99	0.62
1:A:718:G:H22	21:U:82:THR:HB	1.64	0.62
1:A:577:G:H4'	1:A:816:A:H2'	1.81	0.62
1:A:943:U:C2'	1:A:944:G:H5'	2.30	0.62
5:E:178:ARG:NE	5:E:196:LEU:HD13	2.14	0.62
5:E:80:ILE:CG2	5:E:215:LEU:HD12	2.26	0.62
6:F:52:LEU:O	6:F:53:ALA:HB2	1.99	0.62
6:F:66:VAL:O	6:F:66:VAL:HG12	1.97	0.62
7:G:26:CYS:O	7:G:33:MET:HG3	2.00	0.62
7:G:34:GLU:O	7:G:35:ARG:HB2	2.00	0.62
8:H:15:ARG:HA	8:H:28:PHE:HB3	1.82	0.62
9:I:42:GLU:O	9:I:42:GLU:CG	2.39	0.62
9:I:52:ILE:CD1	9:I:87:ARG:HE	2.12	0.62
10:J:75:VAL:HG13	10:J:87:VAL:O	1.99	0.62
10:J:71:PRO:HG2	10:J:91:VAL:CG1	2.29	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:48:GLU:OE1	12:L:51:ARG:HB2	2.00	0.62
12:L:84:ALA:O	12:L:87:GLN:HB2	1.99	0.62
13:M:89:ASP:O	13:M:90:LEU:HG	1.99	0.62
16:P:19:LEU:HD13	16:P:25:ILE:HG21	1.82	0.62
21:U:49:LYS:CD	21:U:49:LYS:N	2.58	0.62
22:V:11:VAL:O	22:V:12:ASP:O	2.18	0.62
23:W:87:LYS:CE	23:W:87:LYS:HA	2.29	0.62
2:C:12:G:H2'	2:C:13:C:O5'	1.99	0.62
1:A:1322:C:H5''	1:A:1323:G:OP1	1.99	0.62
1:A:1358:U:OP2	1:A:1359:C:C5	2.53	0.62
1:A:293:G:C2	1:A:294:U:C6	2.87	0.62
1:A:657:G:N2	18:R:22:THR:OG1	2.33	0.62
1:A:691:G:N2	14:N:51:LYS:HZ3	1.93	0.62
1:A:744:C:H4'	1:A:852:G:O2'	1.99	0.62
1:A:754:C:H3'	1:A:754:C:O2	1.99	0.62
5:E:21:ARG:NE	5:E:21:ARG:H	1.98	0.62
5:E:220:ASP:HA	5:E:223:ILE:HD12	1.82	0.62
5:E:222:ILE:O	5:E:226:ARG:HB3	2.00	0.62
5:E:61:LEU:CD1	5:E:68:ILE:HG23	2.29	0.62
5:E:81:VAL:HG12	5:E:92:TYR:CD1	2.21	0.62
7:G:208:SER:O	7:G:209:ARG:CD	2.48	0.62
7:G:64:LEU:CD1	7:G:75:PHE:CZ	2.83	0.62
8:H:28:PHE:HE1	8:H:50:GLU:N	1.98	0.62
11:K:118:VAL:O	11:K:119:LEU:HD13	1.98	0.62
11:K:43:GLY:O	11:K:44:PHE:HB2	2.00	0.62
1:A:878:G:C5'	11:K:89:PRO:HG2	2.30	0.62
12:L:71:SER:HA	12:L:74:ILE:HD12	1.81	0.62
12:L:93:ARG:NH2	12:L:97:LYS:HE2	2.13	0.62
13:M:83:GLU:HA	13:M:83:GLU:OE1	2.00	0.62
17:Q:23:ARG:HD3	17:Q:30:ALA:HB2	1.81	0.62
18:R:71:GLN:HA	18:R:75:PRO:CB	2.30	0.62
23:W:57:ARG:HE	23:W:100:ILE:CD1	2.12	0.62
1:A:79:G:H2'	1:A:80:G:O4'	2.00	0.62
1:A:386:C:H2'	1:A:387:U:H5'	1.80	0.62
1:A:1217:C:H2'	1:A:1218:C:H6	1.62	0.62
1:A:1384:C:O2'	1:A:1385:G:H5'	1.99	0.62
1:A:283:C:O2	1:A:284:G:O4'	2.16	0.62
1:A:32:A:H2'	1:A:33:A:C8	2.35	0.62
1:A:464:G:H2'	1:A:465:A:H5''	1.82	0.62
1:A:418:C:H4'	1:A:540:G:O4'	2.00	0.62
1:A:659:U:H2'	1:A:660:G:H8	1.64	0.62
5:E:103:THR:O	5:E:104:ASN:HB3	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:143:GLU:O	6:F:145:GLY:N	2.31	0.62
7:G:101:LEU:O	7:G:101:LEU:HD12	2.00	0.62
7:G:161:ASN:O	7:G:165:MET:HB3	1.99	0.62
8:H:8:GLU:HA	8:H:34:VAL:HG22	1.82	0.62
12:L:22:GLY:O	12:L:58:HIS:O	2.16	0.62
1:A:1125:U:C5	13:M:5:ARG:NH2	2.63	0.62
14:N:79:SER:CB	14:N:104:GLN:HE21	2.12	0.62
14:N:18:ARG:HD3	14:N:34:ASP:O	2.00	0.62
16:P:29:ARG:HD3	16:P:64:TRP:CE2	2.33	0.62
6:F:29:TYR:CE2	17:Q:54:PRO:HG2	2.34	0.62
18:R:63:ARG:HH22	18:R:87:ILE:HD13	1.64	0.62
20:T:4:LYS:O	20:T:5:VAL:HG23	1.99	0.62
20:T:80:GLY:O	20:T:82:MET:HG2	2.00	0.62
21:U:33:ASP:CG	21:U:34:TYR:H	2.00	0.62
21:U:74:ARG:NH1	21:U:81:PHE:CB	2.63	0.62
23:W:51:GLU:O	23:W:55:ILE:HG13	1.99	0.62
3:D:9:A:C2	3:D:46:G:H1'	2.34	0.62
6:F:160:ALA:O	6:F:162:GLN:N	2.32	0.62
1:A:1182:G:H4'	1:A:1183:A:O5'	1.97	0.62
1:A:1252:A:C6	1:A:1253:G:N7	2.67	0.62
1:A:1350:A:O5'	1:A:1350:A:H8	1.82	0.62
1:A:1461:G:H2'	1:A:1462:G:H8	1.63	0.62
1:A:1486:G:C2	1:A:1487:G:C4	2.88	0.62
1:A:1534:A:C4	1:A:1535:C:C5	2.88	0.62
1:A:186(B):C:C2'	1:A:186(C):G:O5'	2.47	0.62
1:A:236:G:C2'	1:A:237:C:H6	2.11	0.62
1:A:327:A:C4'	1:A:328:C:OP1	2.44	0.62
1:A:34:C:H1'	15:O:32:PHE:CE2	2.35	0.62
1:A:564:C:C4	1:A:565:U:C5	2.88	0.62
1:A:821:G:H2'	1:A:822:C:C6	2.34	0.62
1:A:908:A:C2	1:A:909:A:C5	2.87	0.62
1:A:991:U:O2'	1:A:993:G:H8	1.83	0.62
5:E:114:ARG:HG3	5:E:115:LEU:N	2.12	0.62
5:E:18:GLY:O	5:E:19:HIS:HB2	1.97	0.62
5:E:87:ARG:C	5:E:89:GLY:N	2.52	0.62
7:G:75:PHE:CD1	7:G:93:PHE:HZ	2.17	0.62
8:H:147:ASP:C	8:H:150:ARG:HB2	2.20	0.62
9:I:4:TYR:CZ	9:I:72:VAL:HG11	2.34	0.62
9:I:79:LEU:O	9:I:85:VAL:HG21	1.99	0.62
10:J:140:ASP:O	10:J:144:MET:CG	2.47	0.62
10:J:91:VAL:O	10:J:92:SER:O	2.18	0.62
11:K:112:LEU:HD11	11:K:114:THR:CG2	2.24	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:60:ARG:N	13:M:60:ARG:NH1	2.40	0.62
1:A:1308:U:H5'	16:P:110:ARG:HH12	1.64	0.62
16:P:48:LEU:HD22	16:P:53:VAL:CG2	2.30	0.62
18:R:63:ARG:HH12	18:R:87:ILE:HD11	1.63	0.62
21:U:54:ARG:O	21:U:54:ARG:HG3	2.00	0.62
21:U:81:PHE:CD1	21:U:81:PHE:O	2.51	0.62
2:C:60:U:H6	2:C:60:U:OP2	1.81	0.62
1:A:1006:C:O2	1:A:1006:C:H2'	2.00	0.62
1:A:842:C:H5'	1:A:848:C:C2	2.34	0.62
15:O:111:LYS:O	15:O:112:ASP:HB2	2.00	0.62
1:A:1315:U:O2	1:A:1360:A:H2	1.83	0.62
1:A:1513:A:H2'	1:A:1514:C:C5	2.35	0.62
1:A:308:C:C2'	1:A:309:G:O5'	2.48	0.62
1:A:901:A:H2	1:A:902:G:H1'	1.54	0.62
1:A:915:A:O5'	1:A:915:A:H8	1.82	0.62
5:E:54:THR:HG23	5:E:185:ILE:HG22	1.82	0.62
8:H:51:VAL:HB	8:H:52:PRO:CD	2.29	0.62
8:H:9:LYS:HB2	8:H:33:VAL:CG1	2.29	0.62
11:K:37:ARG:HD3	11:K:41:ARG:HG3	1.82	0.62
12:L:93:ARG:CZ	12:L:97:LYS:HG2	2.30	0.62
15:O:117:ARG:NH2	15:O:124:LYS:CG	2.62	0.62
17:Q:45:ARG:HH12	17:Q:49:HIS:CD2	2.18	0.62
23:W:53:LEU:HD13	23:W:101:GLY:HA2	1.81	0.62
2:C:16:C:P	2:C:60:U:HO2'	2.22	0.62
3:D:9:A:H5''	3:D:10:G:OP2	1.99	0.62
1:A:1265:G:O6	1:A:1266:G:C2	2.52	0.62
1:A:1316:G:O5'	1:A:1316:G:H8	1.82	0.62
1:A:1320:C:O2'	22:V:73:GLU:HB3	2.00	0.62
1:A:1400:C:C4'	1:A:1401:G:OP2	2.44	0.62
1:A:1405:G:O4'	1:A:1519:A:H4'	2.00	0.62
1:A:1465:C:O2	1:A:1466:C:O4'	2.16	0.62
1:A:1487:G:C2'	1:A:1488:G:O5'	2.48	0.62
1:A:1534:A:P	1:A:1534:A:C8	2.89	0.62
1:A:163:C:O2'	1:A:164:U:H5'	2.00	0.62
1:A:247:G:N2	1:A:282:A:C2	2.66	0.62
1:A:484:G:O4'	1:A:486:U:C6	2.53	0.62
1:A:656:C:C2'	1:A:657:G:H5'	2.30	0.62
1:A:796:C:O2'	1:A:797:C:H5'	2.00	0.62
5:E:139:LYS:CG	5:E:140:HIS:N	2.63	0.62
5:E:163:PHE:CE2	5:E:186:ALA:HA	2.35	0.62
5:E:193:ASP:OD2	5:E:196:LEU:CG	2.48	0.62
7:G:127:THR:HB	7:G:147:ALA:H	1.65	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:191:ARG:HH22	7:G:194:LEU:C	2.02	0.62
10:J:64:GLN:CB	10:J:128:ALA:HB1	2.25	0.62
10:J:78:ARG:HD2	10:J:79:ARG:H	1.65	0.62
10:J:87:VAL:HG13	10:J:152:ALA:HA	1.82	0.62
11:K:63:LEU:HD12	11:K:65:TYR:OH	1.99	0.62
17:Q:14:PRO:O	17:Q:15:LYS:C	2.38	0.62
17:Q:24:CYS:HB2	17:Q:39:LEU:C	2.20	0.62
18:R:71:GLN:HG3	18:R:75:PRO:HB3	1.81	0.62
19:S:51:VAL:CG2	19:S:73:LEU:HD11	2.30	0.62
1:A:237:C:H5''	20:T:25:ARG:NH2	2.15	0.62
20:T:9:VAL:O	20:T:11:VAL:HG23	2.00	0.62
21:U:21:LYS:HZ1	21:U:23:LYS:HB2	1.65	0.62
1:A:1219:U:O2'	22:V:34:TRP:HB3	2.00	0.62
2:C:9:G:N2	2:C:46:G:N7	2.47	0.62
3:D:18:G:H2'	3:D:19:G:C4'	2.29	0.62
1:A:1004:A:H8	1:A:1036:G:O6	1.83	0.62
1:A:1132:C:C4	1:A:1133:G:N7	2.68	0.61
1:A:1154:G:H2'	1:A:1155:G:C8	2.29	0.61
1:A:1316:G:C5'	17:Q:17:LYS:HD2	2.30	0.61
1:A:1382:C:O2'	1:A:1383:C:H5'	1.99	0.61
1:A:1418:A:C6	1:A:1483:A:N6	2.68	0.61
1:A:15:G:H2'	1:A:16:A:C8	2.34	0.61
1:A:178:C:C2	1:A:179:A:C8	2.88	0.61
1:A:274:A:O2'	1:A:275:G:C8	2.47	0.61
1:A:32:A:H2'	1:A:33:A:H8	1.65	0.61
1:A:399:G:H2'	1:A:400:C:C6	2.34	0.61
1:A:580:U:C3'	1:A:581:G:H8	2.10	0.61
1:A:923:A:H8	1:A:923:A:O5'	1.83	0.61
5:E:55:PHE:HE2	5:E:218:ALA:CA	2.01	0.61
6:F:195:VAL:C	6:F:196:LEU:HD23	2.21	0.61
6:F:39:ILE:N	6:F:94:LEU:HD11	2.15	0.61
7:G:20:TYR:CA	7:G:33:MET:SD	2.88	0.61
7:G:87:GLY:O	7:G:89:THR:N	2.33	0.61
1:A:15:G:H4'	8:H:24:ARG:NH2	2.14	0.61
9:I:57:GLN:HE21	9:I:57:GLN:C	2.02	0.61
9:I:94:GLN:CB	21:U:32:ARG:HH21	2.13	0.61
11:K:18:ARG:HG3	11:K:18:ARG:NH1	2.13	0.61
11:K:65:TYR:O	11:K:67:PRO:HD3	2.00	0.61
13:M:39:PRO:HA	13:M:69:ASN:O	1.99	0.61
14:N:19:ALA:HB3	14:N:82:VAL:HG22	1.82	0.61
15:O:43:VAL:CG1	15:O:44:THR:N	2.59	0.61
15:O:61:THR:O	15:O:62:SER:CB	2.48	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:45:ARG:CZ	17:Q:45:ARG:HB2	2.30	0.61
18:R:13:GLN:O	18:R:14:GLU:C	2.37	0.61
19:S:37:GLY:HA3	19:S:50:LYS:O	2.00	0.61
19:S:51:VAL:CG1	19:S:74:LEU:HD23	2.30	0.61
20:T:60:ILE:HG12	20:T:61:GLU:N	2.12	0.61
22:V:77:THR:HG23	22:V:78:ARG:HG2	1.82	0.61
3:D:2:C:H2'	3:D:3:C:C6	2.35	0.61
1:A:1039:C:N4	1:A:1040:U:O4	2.33	0.61
1:A:1125:U:H4'	1:A:1126:U:H5	1.64	0.61
1:A:1270:C:H6	1:A:1270:C:O5'	1.83	0.61
1:A:1413:A:H61	1:A:1487:G:H1	1.48	0.61
1:A:401:C:OP2	7:G:73:ARG:NH1	2.33	0.61
1:A:777:A:C2'	1:A:778:G:H8	2.12	0.61
1:A:933:G:C2	1:A:935:A:O4'	2.53	0.61
1:A:975:A:N6	1:A:1366:C:O2'	2.32	0.61
6:F:108:ASN:ND2	6:F:110:ASN:HB2	2.14	0.61
6:F:126:ARG:O	6:F:127:ARG:CB	2.48	0.61
1:A:1191:A:H5''	6:F:4:LYS:HZ2	1.65	0.61
7:G:20:TYR:HA	7:G:31:CYS:SG	2.40	0.61
9:I:2:ARG:HH22	18:R:2:PRO:HG2	1.64	0.61
10:J:132:GLY:O	10:J:136:LYS:CB	2.48	0.61
11:K:40:ALA:HB2	11:K:45:ILE:HG12	1.81	0.61
11:K:6:ILE:CD1	11:K:6:ILE:C	2.68	0.61
12:L:34:ASN:OD1	12:L:43:ALA:HB2	2.00	0.61
13:M:15:THR:OG1	13:M:94:VAL:HG23	2.00	0.61
15:O:24:VAL:HG13	15:O:98:TYR:HE2	1.62	0.61
19:S:21:VAL:HG21	19:S:59:TRP:HD1	1.60	0.61
21:U:73:ALA:CB	21:U:79:LEU:HD21	2.31	0.61
22:V:15:LEU:HG	22:V:16:LEU:N	2.15	0.61
1:A:333:G:H4'	23:W:16:HIS:CD2	2.35	0.61
23:W:73:HIS:O	23:W:76:ALA:HB3	2.00	0.61
2:C:3:C:O2'	2:C:4:G:H5'	1.99	0.61
1:A:1048:G:H5''	17:Q:3:ARG:NH1	2.16	0.61
1:A:1107:C:C2'	1:A:1108:G:H5'	2.20	0.61
1:A:1256:A:O3'	1:A:1257:U:H4'	2.01	0.61
1:A:1261:A:H61	1:A:1274:G:C1'	2.11	0.61
1:A:1149:C:O2'	1:A:1280:A:N1	2.28	0.61
1:A:1315:U:O2'	1:A:1360:A:N3	2.26	0.61
1:A:1401:G:H2'	1:A:1402:C:H5'	1.82	0.61
1:A:1488:G:C6	1:A:1489:G:N7	2.68	0.61
1:A:20:U:C2'	1:A:20:U:O2	2.48	0.61
1:A:406:G:N2	1:A:407:G:C5	2.68	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:50:A:N6	1:A:361:G:H5'	2.15	0.61
1:A:523:A:O5'	1:A:523:A:H8	1.83	0.61
1:A:60:A:H62	1:A:110:C:N4	1.97	0.61
1:A:696:A:N3	1:A:697:U:O4'	2.34	0.61
1:A:900:A:C4	1:A:901:A:N7	2.68	0.61
1:A:976:G:OP2	1:A:1358:U:H1'	2.01	0.61
1:A:961:U:C6	1:A:983:A:C4	2.88	0.61
5:E:162:ILE:O	5:E:185:ILE:HG13	1.99	0.61
7:G:205:GLU:OE1	8:H:100:VAL:N	2.28	0.61
10:J:78:ARG:HE	10:J:80:VAL:CG2	2.12	0.61
1:A:1349:A:OP2	12:L:118:LYS:HB3	2.00	0.61
12:L:17:VAL:HG13	12:L:63:ILE:CG1	2.30	0.61
13:M:5:ARG:HB2	13:M:5:ARG:CZ	2.30	0.61
14:N:100:ALA:C	14:N:102:GLY:H	2.04	0.61
15:O:113:ARG:NH2	15:O:115:LYS:O	2.34	0.61
16:P:14:ARG:HB3	16:P:44:ARG:HD2	1.81	0.61
16:P:48:LEU:HD13	16:P:53:VAL:CG2	2.21	0.61
21:U:58:LEU:CB	21:U:62:GLU:HB3	2.20	0.61
22:V:51:VAL:HB	22:V:58:VAL:CG2	2.29	0.61
6:F:157:ILE:HG22	6:F:157:ILE:O	1.99	0.61
3:D:58:A:H2'	3:D:61:C:C4	2.36	0.61
1:A:86:U:OP2	1:A:87:A:N1	2.33	0.61
8:H:87:SER:HB3	8:H:131:ILE:CD1	2.30	0.61
1:A:110:C:H2'	1:A:111:G:C5'	2.29	0.61
1:A:1117:G:O2'	12:L:106:ALA:HB2	2.00	0.61
1:A:1156:G:H1'	1:A:1179:A:H61	1.64	0.61
1:A:1273:G:H3'	1:A:1274:G:H8	1.63	0.61
1:A:1516:G:H22	1:A:1518:A:H3'	1.65	0.61
1:A:865:A:H2'	1:A:866:C:O2	2.01	0.61
1:A:22:G:C4'	1:A:885:G:C8	2.72	0.61
1:A:939:G:OP1	10:J:99:LEU:HD11	2.00	0.61
5:E:130:ARG:NE	5:E:130:ARG:HA	2.15	0.61
5:E:175:ARG:O	5:E:176:GLU:C	2.39	0.61
5:E:187:LEU:HD22	5:E:187:LEU:C	2.21	0.61
6:F:22:TRP:CZ2	17:Q:54:PRO:HG3	2.34	0.61
6:F:64:VAL:HG12	6:F:66:VAL:HG23	1.82	0.61
7:G:187:ARG:HG3	7:G:188:LEU:HG	1.82	0.61
1:A:429:U:C3'	7:G:22:LYS:HZ2	2.13	0.61
10:J:36:LYS:HZ2	10:J:36:LYS:CB	2.12	0.61
12:L:28:VAL:HG11	12:L:36:TYR:HB3	1.83	0.61
12:L:15:ALA:HB1	12:L:77:ILE:HA	1.80	0.61
12:L:49:PRO:HG3	12:L:78:LYS:O	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:31:GLY:CA	13:M:81:THR:OG1	2.48	0.61
15:O:6:THR:O	15:O:10:LEU:HG	2.00	0.61
15:O:41:ARG:HB3	15:O:41:ARG:CZ	2.30	0.61
16:P:97:PRO:CB	16:P:101:GLN:HB2	2.29	0.61
16:P:37:THR:CG2	16:P:56:LEU:HD22	2.30	0.61
18:R:42:HIS:ND1	18:R:43:LEU:N	2.49	0.61
19:S:5:ARG:NH1	19:S:24:ALA:HA	2.10	0.61
19:S:54:GLU:O	19:S:55:ARG:C	2.39	0.61
21:U:22:VAL:CG2	21:U:55:ARG:HH12	2.10	0.61
22:V:53:ASN:HD21	22:V:58:VAL:CG1	2.12	0.61
23:W:43:LEU:CD1	23:W:55:ILE:HD11	2.30	0.61
7:G:159:ARG:HD3	7:G:163:GLU:HB2	1.81	0.61
2:C:74:C:H5	2:C:75:C:O2	1.83	0.61
2:C:7:G:H4'	2:C:8:U:OP2	1.99	0.61
1:A:1018:C:O2'	1:A:1019:C:H5'	2.01	0.61
1:A:1197:G:OP1	1:A:1198:G:OP2	2.18	0.61
1:A:1213:A:C2	1:A:1215:G:C4	2.88	0.61
1:A:60:A:H4'	1:A:61:G:O5'	1.99	0.61
1:A:735:C:O2'	1:A:736:C:C5'	2.49	0.61
1:A:979:C:H2'	1:A:980:C:C5'	2.31	0.61
5:E:167:PRO:O	5:E:169:LYS:N	2.33	0.61
5:E:168:THR:OG1	5:E:191:ASP:O	2.18	0.61
5:E:71:VAL:O	5:E:164:VAL:HG23	2.00	0.61
6:F:14:ILE:HG21	6:F:179:ARG:CA	2.15	0.61
6:F:36:ASP:OD2	6:F:40:ARG:NH1	2.34	0.61
6:F:94:LEU:HD23	6:F:94:LEU:O	1.99	0.61
7:G:57:ARG:HG3	7:G:202:LEU:O	2.00	0.61
8:H:82:VAL:HG21	8:H:134:ALA:O	2.00	0.61
8:H:72:GLN:HE21	8:H:144:THR:HG23	1.64	0.61
8:H:56:GLN:O	8:H:59:GLY:N	2.32	0.61
1:A:755:G:H21	11:K:1:MET:CE	2.13	0.61
15:O:82:VAL:N	15:O:106:ASP:OD1	2.27	0.61
16:P:11:ARG:NH1	16:P:46:LYS:HB3	2.16	0.61
16:P:59:TYR:CD2	16:P:60:VAL:HG23	2.36	0.61
20:T:44:ALA:CB	20:T:59:ILE:HD13	2.29	0.61
20:T:80:GLY:O	20:T:82:MET:N	2.32	0.61
21:U:34:TYR:HD1	21:U:35:ARG:N	1.97	0.61
21:U:58:LEU:HB2	21:U:63:GLN:OE1	2.01	0.61
23:W:73:HIS:O	23:W:74:LYS:C	2.38	0.61
1:A:1120:G:O5'	1:A:1120:G:C8	2.53	0.61
2:C:17:C:H5'	2:C:18:G:H5''	1.82	0.61
3:D:75:C:C5'	3:D:76:A:O2'	2.49	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1109:C:O2'	1:A:1110:A:H5'	2.00	0.61
1:A:1435:G:C2	1:A:1436:U:O4	2.53	0.61
1:A:1451:A:H2'	1:A:1452:C:OP1	2.01	0.61
1:A:251:G:C2	1:A:266:G:O6	2.54	0.61
1:A:406:G:H5''	7:G:5:ILE:HG23	1.81	0.61
1:A:836:G:P	21:U:61:LYS:NZ	2.73	0.61
1:A:1104:G:H4'	5:E:111:ARG:NH2	2.16	0.61
7:G:109:GLY:O	7:G:110:PHE:C	2.38	0.61
7:G:191:ARG:HH21	7:G:194:LEU:CB	2.14	0.61
8:H:129:ILE:O	8:H:132:ALA:HB3	1.99	0.61
9:I:14:LEU:CD1	9:I:15:ASP:H	2.14	0.61
10:J:37:ASN:O	10:J:41:ARG:HG3	2.01	0.61
10:J:75:VAL:CG2	10:J:88:PRO:HB3	2.29	0.61
11:K:6:ILE:HD13	11:K:6:ILE:O	2.00	0.61
11:K:9:MET:O	11:K:10:LEU:C	2.38	0.61
13:M:45:ARG:HH11	13:M:45:ARG:CB	2.01	0.61
1:A:1316:G:C4'	17:Q:17:LYS:HD2	2.31	0.61
13:M:49:VAL:HG22	17:Q:41:ARG:HB2	1.81	0.61
19:S:3:LYS:HZ2	19:S:3:LYS:HB3	1.66	0.61
20:T:13:ASP:O	20:T:15:MET:N	2.33	0.61
20:T:66:SER:CB	20:T:69:LYS:NZ	2.64	0.61
1:A:720:C:H4'	21:U:50:ILE:HG22	1.83	0.61
3:D:72:C:H2'	3:D:73:A:C8	2.36	0.61
3:D:19:G:H21	3:D:57:G:C1'	2.14	0.61
1:A:1090:U:O2'	1:A:1091:U:O4'	2.15	0.61
1:A:1157:A:H4'	1:A:1158:C:C2	2.36	0.61
1:A:1158:C:C5	1:A:1160:G:H1'	2.35	0.61
1:A:16:A:H1'	8:H:17:ALA:HB3	1.83	0.61
1:A:720:C:H6	1:A:720:C:O5'	1.83	0.61
1:A:764:C:C2'	1:A:765:G:H8	2.08	0.61
5:E:165:VAL:CG2	5:E:166:ASP:H	2.07	0.61
5:E:234:PRO:HB2	5:E:238:LEU:CD2	2.30	0.61
1:A:421:U:C2	6:F:127:ARG:NH1	2.69	0.61
6:F:5:ILE:HG22	13:M:51:ARG:HH22	1.66	0.61
10:J:70:LYS:HA	10:J:100:ALA:CB	2.30	0.61
12:L:10:ARG:CZ	12:L:105:ASP:OD2	2.48	0.61
19:S:81:ARG:HG2	19:S:83:GLU:CG	2.28	0.61
20:T:97:SER:CB	20:T:104:LYS:H	2.14	0.61
2:C:25:C:H2'	2:C:26:G:C8	2.35	0.61
1:A:524:G:H2'	1:A:525:C:O4'	2.00	0.61
1:A:108:G:H5'	1:A:109:A:H5''	1.82	0.61
1:A:1206:G:H2'	1:A:1207:G:C8	2.34	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:263:A:OP1	23:W:75:ASN:ND2	2.33	0.61
1:A:290:C:H2'	1:A:291:C:O4'	2.00	0.61
1:A:46:G:C2	1:A:396:G:C6	2.89	0.61
1:A:513:C:H2'	1:A:514:C:C6	2.36	0.61
1:A:20:U:C6	1:A:572:A:C2	2.88	0.61
1:A:56:U:O2'	1:A:57:G:H5'	2.01	0.61
1:A:705:U:C6	1:A:706:A:N7	2.69	0.61
1:A:800:G:C8	1:A:800:G:O5'	2.50	0.61
1:A:950:U:C2'	1:A:951:G:H5'	2.31	0.61
1:A:955:U:C2	1:A:956:U:C5	2.88	0.61
5:E:95:GLN:HA	5:E:95:GLN:OE1	2.00	0.61
7:G:19:LEU:HA	7:G:21:LEU:HD12	1.83	0.61
7:G:206:PHE:CD2	7:G:207:TYR:CD1	2.89	0.61
7:G:74:GLN:CA	7:G:77:ASN:HD22	2.01	0.61
8:H:149:GLU:O	8:H:152:ARG:N	2.34	0.61
10:J:94:ARG:C	10:J:94:ARG:HH11	2.04	0.61
1:A:1347:G:N7	12:L:107:ARG:CZ	2.64	0.61
12:L:22:GLY:HA3	12:L:60:ASP:CG	2.19	0.61
13:M:51:ARG:HB2	13:M:59:SER:O	2.00	0.61
14:N:42:TRP:CE3	14:N:43:SER:HA	2.34	0.61
1:A:974:A:OP1	17:Q:31:ARG:HG2	2.01	0.61
18:R:18:PHE:O	18:R:20:GLY:N	2.34	0.61
21:U:47:THR:O	21:U:47:THR:HG22	2.01	0.61
1:A:1003:G:C2	1:A:1004:A:O2'	2.48	0.61
1:A:103:C:O4'	1:A:151:A:C2	2.54	0.61
1:A:1376:U:H2'	1:A:1377:A:C8	2.36	0.61
1:A:1435:G:C2	1:A:1436:U:C4	2.89	0.61
1:A:184:G:O2'	1:A:185:A:H5'	1.99	0.61
1:A:828:A:H5'	1:A:859:A:C2	2.35	0.61
5:E:73:THR:HG22	5:E:94:ASN:CA	2.30	0.61
6:F:83:ARG:HD2	6:F:87:LEU:HD21	1.82	0.61
7:G:14:ARG:C	7:G:14:ARG:CD	2.70	0.61
8:H:31:LEU:HD21	8:H:43:LEU:HD11	1.83	0.61
9:I:14:LEU:CD1	9:I:19:LEU:N	2.62	0.61
9:I:47:ARG:HG2	9:I:57:GLN:CB	2.29	0.61
9:I:98:LEU:HD13	9:I:101:ALA:HB1	1.81	0.61
10:J:101:LEU:C	10:J:101:LEU:HD23	2.21	0.61
11:K:6:ILE:HG21	11:K:85:ARG:NH2	2.14	0.61
13:M:40:LEU:HD12	13:M:71:LEU:CD2	2.31	0.61
13:M:75:ILE:HG22	13:M:76:ASN:N	2.15	0.61
14:N:58:PRO:HB2	14:N:93:GLN:HB2	1.82	0.61
15:O:41:ARG:CZ	15:O:41:ARG:CB	2.79	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:29:PHE:CZ	21:U:39:VAL:HG11	2.35	0.61
24:X:11:GLY:O	24:X:15:ARG:HG2	2.01	0.61
1:A:105:G:C5	1:A:106:C:N4	2.69	0.61
1:A:1157:A:H2'	1:A:1157:A:N3	2.14	0.61
1:A:10:A:C2'	1:A:11:G:H5'	2.31	0.61
1:A:1055:A:N6	1:A:1206:G:C8	2.68	0.61
1:A:1451:A:H5''	1:A:1452:C:C5	2.36	0.61
1:A:1475:G:N2	1:A:1476:G:C4	2.69	0.61
1:A:186(B):C:O2'	1:A:186(C):G:H5'	2.00	0.61
1:A:259:G:H2'	1:A:260:G:C8	2.35	0.61
1:A:268:C:O2'	1:A:269:C:H5'	2.01	0.61
1:A:454:C:H5''	1:A:455:C:OP2	2.01	0.61
1:A:737:A:C3'	9:I:92:LYS:HZ2	2.14	0.61
1:A:795:C:H4'	1:A:1506:U:O2	2.00	0.61
1:A:19:C:O4'	1:A:864:A:H1'	2.00	0.61
1:A:960:U:H2'	1:A:960:U:O2	2.00	0.61
1:A:961:U:C2'	1:A:962:C:C5'	2.79	0.61
5:E:234:PRO:O	5:E:238:LEU:HD22	2.00	0.61
6:F:23:TYR:CD2	6:F:24:ALA:N	2.68	0.61
11:K:118:VAL:O	11:K:119:LEU:HD22	2.01	0.61
11:K:85:ARG:HA	11:K:135:CYS:HB2	1.83	0.61
11:K:88:LYS:N	11:K:88:LYS:HZ3	1.95	0.61
11:K:97:VAL:HG13	11:K:98:LYS:HZ2	1.65	0.61
12:L:16:ARG:HD3	12:L:64:THR:OG1	2.00	0.61
12:L:25:LYS:N	12:L:25:LYS:HD2	2.15	0.61
13:M:76:ASN:HD22	13:M:76:ASN:N	1.99	0.61
14:N:28:THR:CG2	14:N:29:ILE:N	2.64	0.61
14:N:42:TRP:HE3	14:N:43:SER:CA	2.14	0.61
15:O:70:ILE:HG23	15:O:100:ILE:HG13	1.82	0.61
17:Q:12:ARG:C	17:Q:14:PRO:N	2.52	0.61
19:S:1:MET:HB3	19:S:3:LYS:NZ	2.15	0.61
21:U:50:ILE:CD1	21:U:70:ILE:HG21	2.29	0.61
23:W:30:LYS:HD3	23:W:34:LYS:HD2	1.83	0.61
23:W:57:ARG:NH2	23:W:100:ILE:HD12	2.15	0.61
1:A:1233:G:O2'	1:A:1365:G:OP1	2.18	0.60
1:A:1254:C:OP1	13:M:45:ARG:HD2	2.00	0.60
1:A:1256:A:O3'	1:A:1257:U:C4'	2.49	0.60
1:A:1261:A:C2	1:A:1262:C:N3	2.69	0.60
1:A:103:C:O2	1:A:172:A:H2	1.84	0.60
1:A:278:G:H21	1:A:279:A:H62	1.48	0.60
1:A:279:A:H1'	1:A:281:G:C4	2.35	0.60
1:A:304:U:C2	1:A:305:G:N7	2.69	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:40:C:H2'	1:A:41:G:H8	1.66	0.60
1:A:423:G:H2'	1:A:424:G:O4'	2.01	0.60
1:A:52:G:H2'	1:A:53:A:C5'	2.31	0.60
1:A:652:U:H2'	1:A:752:G:H22	1.64	0.60
1:A:790:A:C2'	1:A:791:G:O5'	2.49	0.60
1:A:812:C:O2'	1:A:813:U:OP2	2.17	0.60
1:A:872:A:C5	1:A:874:G:N7	2.68	0.60
5:E:205:ASP:O	5:E:211:ILE:HD11	2.01	0.60
5:E:28:PHE:CE1	5:E:31:TYR:HB2	2.35	0.60
7:G:205:GLU:O	7:G:206:PHE:C	2.40	0.60
7:G:20:TYR:C	7:G:26:CYS:SG	2.80	0.60
7:G:62:GLN:NE2	7:G:62:GLN:HA	2.15	0.60
9:I:77:ARG:HA	9:I:80:ARG:CD	2.10	0.60
11:K:20:TYR:HE2	11:K:75:ARG:HD2	1.66	0.60
12:L:122:ALA:O	12:L:123:PRO:C	2.38	0.60
1:A:362:G:H4'	15:O:28:LYS:HZ3	1.66	0.60
15:O:6:THR:OG1	15:O:9:GLN:CG	2.49	0.60
1:A:1226:C:C5	16:P:104:ARG:HA	2.35	0.60
1:A:1316:G:H5''	17:Q:17:LYS:HD2	1.83	0.60
1:A:237:C:H5''	20:T:25:ARG:NH1	2.15	0.60
21:U:53:ARG:HD3	21:U:58:LEU:O	2.01	0.60
23:W:37:SER:O	23:W:41:ILE:HG13	2.01	0.60
1:A:748:C:H3'	1:A:748:C:H6	1.66	0.60
1:A:1075:C:O2	1:A:1075:C:C2'	2.48	0.60
1:A:1190:G:H5''	6:F:176:HIS:NE2	2.16	0.60
1:A:1048:G:O4'	1:A:1215:G:H4'	2.01	0.60
1:A:1231:G:H2'	1:A:1232:U:H6	1.67	0.60
1:A:945:G:C6	1:A:1337:G:C5	2.89	0.60
1:A:136:C:O4'	19:S:1:MET:SD	2.59	0.60
1:A:1386:G:O2'	1:A:1387:G:O5'	2.18	0.60
1:A:184:G:C4'	1:A:224:C:H4'	2.31	0.60
1:A:22:G:H2'	1:A:23:C:C1'	2.31	0.60
1:A:246:A:O4'	1:A:282:A:N6	2.34	0.60
1:A:301:G:C2	1:A:302:G:C4	2.89	0.60
1:A:366:C:O2'	1:A:367:U:O5'	2.18	0.60
1:A:303:A:O2'	1:A:555:C:O2'	2.16	0.60
1:A:981:U:H2'	1:A:982:U:H5	1.65	0.60
5:E:15:VAL:HG21	5:E:210:SER:N	2.15	0.60
5:E:162:ILE:O	5:E:185:ILE:CG1	2.49	0.60
5:E:160:ASP:HB3	5:E:182:ILE:HG21	1.82	0.60
5:E:27:LYS:CB	5:E:194:PRO:HD2	2.31	0.60
6:F:83:ARG:C	6:F:85:ARG:H	2.03	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:8:VAL:CG2	7:G:115:ARG:HH22	2.08	0.60
1:A:404:U:C5'	7:G:122:ARG:HH11	2.10	0.60
7:G:165:MET:SD	7:G:165:MET:C	2.80	0.60
9:I:78:GLU:O	9:I:81:ILE:CG1	2.49	0.60
9:I:7:ASN:ND2	9:I:62:TRP:CD1	2.66	0.60
9:I:53:ALA:CB	9:I:86:ARG:HH11	2.11	0.60
10:J:110:GLN:O	10:J:111:ARG:O	2.19	0.60
11:K:10:LEU:HB3	11:K:83:ILE:HD11	1.83	0.60
11:K:40:ALA:O	11:K:43:GLY:N	2.34	0.60
12:L:93:ARG:C	12:L:95:LYS:H	2.01	0.60
15:O:113:ARG:C	15:O:114:LYS:HG3	2.21	0.60
17:Q:9:LYS:NZ	17:Q:12:ARG:NH2	2.49	0.60
18:R:44:LYS:H	18:R:44:LYS:HE3	1.64	0.60
20:T:98:LEU:CD1	20:T:102:GLY:O	2.49	0.60
2:C:19:G:C3'	2:C:20:U:C5	2.83	0.60
1:A:1040:U:H2'	1:A:1041:A:C8	2.35	0.60
1:A:748:C:O2'	1:A:749:C:H5'	2.01	0.60
1:A:1055:A:H2'	1:A:1055:A:N3	2.15	0.60
1:A:1173:G:H2'	1:A:1174:G:H5''	1.80	0.60
1:A:1216:G:C4	1:A:1217:C:C5	2.89	0.60
1:A:122:G:N2	1:A:123:C:H1'	2.17	0.60
1:A:1400:C:C6	1:A:1400:C:OP1	2.53	0.60
1:A:1414:U:H2'	1:A:1415:G:C8	2.36	0.60
1:A:1465:C:C4	1:A:1466:C:C5	2.88	0.60
1:A:356:A:H1'	1:A:368:U:O2'	2.01	0.60
1:A:517:G:H5''	1:A:518:C:OP1	2.01	0.60
1:A:609:A:N3	1:A:610:G:C1'	2.64	0.60
1:A:687:A:O2'	1:A:688:G:P	2.59	0.60
1:A:738:C:N3	1:A:739:C:C5	2.69	0.60
2:C:35:A:C8	2:C:35:A:H5'	2.36	0.60
5:E:97:TRP:CZ2	5:E:102:LEU:HD13	2.36	0.60
5:E:97:TRP:HH2	5:E:176:GLU:HG3	1.66	0.60
8:H:121:LYS:HZ2	8:H:121:LYS:CB	2.14	0.60
9:I:41:GLU:O	9:I:42:GLU:CB	2.42	0.60
9:I:6:VAL:CG1	9:I:8:ILE:HD11	2.32	0.60
10:J:155:ARG:O	10:J:156:TRP:HE3	1.83	0.60
11:K:92:ARG:HB3	11:K:94:TYR:CE1	2.36	0.60
12:L:117:HIS:HD2	12:L:121:ARG:CG	2.09	0.60
13:M:8:LEU:HD13	13:M:94:VAL:CB	2.30	0.60
14:N:44:SER:H	14:N:47:VAL:CB	2.14	0.60
15:O:33:ARG:HA	15:O:33:ARG:HE	1.66	0.60
18:R:15:PHE:CE2	18:R:84:LYS:HD3	2.35	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:66:LEU:O	18:R:69:TYR:HB3	2.00	0.60
20:T:43:LEU:CD1	20:T:69:LYS:HG3	2.30	0.60
24:X:21:TYR:O	24:X:22:ARG:HB2	2.01	0.60
3:D:50:G:H2'	3:D:51:C:H6	1.65	0.60
1:A:1004:A:H2'	1:A:1036:G:C6	2.36	0.60
11:K:80:ILE:HD12	11:K:80:ILE:N	2.12	0.60
1:A:841:U:O2	1:A:841:U:H2'	2.02	0.60
1:A:841:U:OP2	1:A:842:C:N4	2.34	0.60
4:1:15:A:C3'	4:1:15:A:C8	2.84	0.60
1:A:1063:C:C4	1:A:1064:G:N7	2.69	0.60
1:A:1109:C:H2'	1:A:1110:A:O4'	2.02	0.60
1:A:1134:G:C6	1:A:1135:U:H1'	2.37	0.60
1:A:1174:G:H8	1:A:1174:G:H5'	1.67	0.60
1:A:1209:C:H2'	1:A:1210:C:H5'	1.83	0.60
1:A:1239:A:N6	1:A:1299:A:H61	1.99	0.60
1:A:1266:G:H8	1:A:1268:A:OP2	1.84	0.60
1:A:1347:G:H8	12:L:107:ARG:CD	2.15	0.60
1:A:781:A:H5''	1:A:1523:G:O4'	2.00	0.60
1:A:50:A:H61	1:A:361:G:H5'	1.66	0.60
1:A:392:G:H5'	19:S:12:LYS:HE2	1.83	0.60
1:A:426:G:C5'	7:G:45:GLN:NE2	2.63	0.60
1:A:563:A:C2	1:A:567:G:C5	2.90	0.60
1:A:593:G:H2'	1:A:594:G:H5'	1.83	0.60
1:A:628:G:H2'	1:A:629:G:O4'	2.01	0.60
1:A:729:A:C2	1:A:730:G:C1'	2.84	0.60
1:A:729:A:N1	1:A:730:G:N3	2.48	0.60
1:A:778:G:C2'	1:A:779:C:H6	2.14	0.60
1:A:922:G:N3	1:A:1398:A:C2	2.70	0.60
7:G:191:ARG:NH2	7:G:194:LEU:C	2.55	0.60
9:I:30:LEU:HB3	9:I:35:ALA:CB	2.31	0.60
10:J:15:ASP:OD2	10:J:16:LEU:N	2.34	0.60
10:J:27:ILE:HG12	10:J:43:PHE:CG	2.36	0.60
10:J:89:MET:O	10:J:90:GLU:O	2.18	0.60
14:N:58:PRO:HB2	14:N:93:GLN:CB	2.31	0.60
16:P:80:ARG:HH12	16:P:81:LEU:HB3	1.67	0.60
13:M:65:LEU:HD13	17:Q:36:PHE:CZ	2.36	0.60
17:Q:45:ARG:CG	17:Q:45:ARG:HH11	2.15	0.60
19:S:22:THR:HG22	19:S:32:TYR:HB2	1.83	0.60
20:T:7:THR:HG1	20:T:57:VAL:C	2.04	0.60
1:A:736:C:OP1	21:U:72:ARG:NH2	2.35	0.60
22:V:30:LEU:CD1	22:V:50:ALA:HB2	2.30	0.60
14:N:86:GLY:N	14:N:112:THR:HG23	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1101:A:O2'	1:A:1102:A:P	2.59	0.60
1:A:1128:C:C5	1:A:1139:G:O6	2.55	0.60
1:A:1451:A:C5'	1:A:1452:C:H5	2.14	0.60
1:A:151:A:N7	1:A:152:A:C2	2.70	0.60
1:A:262:A:C2	1:A:263:A:C2	2.90	0.60
1:A:447:G:N2	1:A:488:C:N4	2.49	0.60
1:A:57:G:C6	1:A:58:C:C4	2.90	0.60
1:A:675:A:H1'	14:N:116:HIS:CG	2.37	0.60
1:A:739:C:OP1	18:R:2:PRO:HG2	2.01	0.60
5:E:174:VAL:O	5:E:178:ARG:CG	2.48	0.60
5:E:224:GLN:HG2	5:E:229:VAL:CG2	2.29	0.60
5:E:50:GLU:CD	5:E:200:ILE:HB	2.21	0.60
7:G:152:SER:HA	7:G:155:LEU:HD23	1.84	0.60
8:H:72:GLN:O	8:H:73:ASN:CB	2.49	0.60
10:J:84:ASN:O	10:J:85:TYR:HD2	1.84	0.60
11:K:18:ARG:HG3	11:K:18:ARG:HH11	1.67	0.60
1:A:599:C:O3'	11:K:96:GLY:HA3	2.00	0.60
1:A:34:C:H1'	15:O:32:PHE:HE2	1.66	0.60
18:R:12:ILE:HG12	18:R:31:LEU:HD11	1.82	0.60
19:S:39:TYR:HE1	19:S:41:PRO:HA	1.67	0.60
23:W:57:ARG:HH21	23:W:100:ILE:CD1	2.13	0.60
1:A:1442:G:C6	1:A:1446:A:N6	2.70	0.60
1:A:1159:U:C4	1:A:1182:G:H1'	2.36	0.60
1:A:1392:G:H2'	1:A:1393:U:C6	2.37	0.60
1:A:1522:U:H2'	1:A:1523:G:H8	1.66	0.60
1:A:186(E):C:O2'	1:A:186(F):C:H5'	2.01	0.60
1:A:263:A:O2'	1:A:264:U:H5''	2.01	0.60
1:A:320:C:O2'	1:A:321:A:H5'	2.01	0.60
1:A:58:C:O2	1:A:388:G:N7	2.35	0.60
1:A:597:G:C4	1:A:644:G:C2	2.89	0.60
1:A:67:C:C4'	1:A:172:A:H1'	2.32	0.60
1:A:64:G:N2	1:A:68:G:O6	2.31	0.60
1:A:701:C:C4'	1:A:702:A:O5'	2.44	0.60
1:A:735:C:C2'	1:A:736:C:O5'	2.48	0.60
1:A:832:C:C2	1:A:833:U:C5	2.90	0.60
1:A:858:G:O5'	1:A:858:G:H8	1.84	0.60
5:E:134:GLU:O	5:E:138:LEU:HG	2.01	0.60
5:E:118:LEU:HD11	5:E:141:GLU:OE2	2.01	0.60
6:F:59:ARG:CZ	6:F:59:ARG:HB2	2.32	0.60
7:G:67:ILE:HD12	7:G:67:ILE:C	2.22	0.60
7:G:94:LEU:HA	7:G:97:LEU:CD1	2.21	0.60
8:H:84:PHE:HE2	8:H:130:ASN:ND2	1.99	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:28:ASN:ND2	10:J:31:MET:HE1	2.17	0.60
10:J:50:ILE:HG22	10:J:56:GLN:O	2.02	0.60
13:M:57:LYS:O	13:M:58:ASP:CG	2.39	0.60
14:N:69:ALA:O	14:N:70:LYS:C	2.40	0.60
1:A:1316:G:H5''	17:Q:17:LYS:NZ	2.15	0.60
6:F:12:LEU:HD11	17:Q:57:ARG:HA	1.84	0.60
19:S:15:PRO:HB2	19:S:17:TYR:CE1	2.36	0.60
22:V:36:ARG:NE	22:V:51:VAL:HG12	2.15	0.60
23:W:57:ARG:HH21	23:W:100:ILE:CG1	2.14	0.60
3:D:49:G:N3	3:D:49:G:H2'	2.17	0.60
1:A:1043:C:O2'	1:A:1044:A:H5'	2.01	0.60
1:A:1152:A:H4'	13:M:13:HIS:CE1	2.37	0.60
1:A:1174:G:H2'	1:A:1175:G:H5'	1.83	0.60
1:A:1319:A:OP2	22:V:5:LEU:HD22	2.02	0.60
1:A:1350:A:H2'	1:A:1351:U:C6	2.35	0.60
1:A:1441:G:H1'	1:A:1461:G:N2	2.17	0.60
1:A:1475:G:C2	1:A:1476:G:C4	2.88	0.60
1:A:1480:G:C2'	1:A:1481:U:H5'	2.31	0.60
1:A:151:A:H62	1:A:152:A:H2	1.49	0.60
1:A:231:G:H2'	1:A:232:G:C8	2.35	0.60
1:A:258:G:O6	1:A:259:G:O6	2.20	0.60
1:A:607:A:N1	19:S:31:LYS:HG3	2.16	0.60
1:A:609:A:H2'	1:A:610:G:O4'	2.02	0.60
1:A:666:G:H5'	1:A:726:C:H1'	1.84	0.60
1:A:782:A:C2	1:A:801:U:H1'	2.37	0.60
1:A:816:A:H2'	1:A:817:C:OP2	2.01	0.60
1:A:858:G:H22	1:A:869:G:C3'	2.14	0.60
1:A:886:G:HO2'	1:A:887:G:H5'	1.64	0.60
5:E:169:LYS:HE2	5:E:169:LYS:C	2.22	0.60
5:E:25:ASN:ND2	5:E:27:LYS:HG2	1.99	0.60
5:E:75:LYS:HD3	5:E:75:LYS:C	2.22	0.60
5:E:80:ILE:HD12	5:E:211:ILE:CG2	2.31	0.60
1:A:1189:C:O2'	6:F:176:HIS:CD2	2.55	0.60
6:F:30:ARG:HH11	6:F:31:HIS:H	1.46	0.60
7:G:166:LYS:HG2	7:G:178:VAL:HG11	1.84	0.60
7:G:187:ARG:HE	7:G:188:LEU:HG	1.65	0.60
7:G:43:HIS:C	7:G:45:GLN:N	2.54	0.60
8:H:84:PHE:CD2	8:H:84:PHE:O	2.54	0.60
11:K:110:ALA:C	11:K:111:ILE:HD12	2.21	0.60
11:K:82:HIS:HE1	11:K:84:ARG:HB2	1.66	0.60
1:A:877:C:H5''	11:K:88:LYS:HG2	1.82	0.60
12:L:51:ARG:HH11	12:L:51:ARG:CA	2.13	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:93:ARG:O	12:L:95:LYS:N	2.33	0.60
13:M:3:LYS:HD2	13:M:3:LYS:N	2.16	0.60
14:N:81:ASP:HB2	14:N:106:LYS:HE3	1.84	0.60
14:N:45:GLY:O	14:N:50:TYR:CB	2.38	0.60
15:O:53:ARG:HH11	15:O:53:ARG:CB	2.11	0.60
16:P:67:GLU:CG	16:P:68:GLY:N	2.59	0.60
17:Q:23:ARG:HA	17:Q:33:VAL:HG11	1.81	0.60
1:A:963:G:H5'	1:A:1200:C:H41	1.67	0.60
1:A:974:A:N6	1:A:1201:A:H2	1.99	0.60
1:A:124:G:H2'	1:A:125:U:C6	2.37	0.60
1:A:1299:A:N7	1:A:1301:U:N1	2.49	0.60
1:A:1396:A:O2'	1:A:1397:C:P	2.59	0.60
1:A:198:G:N2	1:A:199:G:N9	2.50	0.60
1:A:296:U:C2	1:A:297:G:C8	2.90	0.60
1:A:309:G:O2'	1:A:310:G:C5'	2.49	0.60
1:A:358:U:O2'	1:A:359:U:H5'	2.01	0.60
1:A:401:C:OP1	7:G:73:ARG:CZ	2.49	0.60
1:A:579:G:C8	1:A:579:G:O5'	2.54	0.60
1:A:706:A:C2	1:A:707:C:C6	2.90	0.60
1:A:718:G:C5	14:N:116:HIS:NE2	2.69	0.60
1:A:909:A:H8	1:A:909:A:O5'	1.83	0.60
1:A:922:G:H2'	1:A:923:A:C8	2.37	0.60
3:D:36:A:C3'	3:D:37:A:H8	2.15	0.60
7:G:110:PHE:CZ	7:G:147:ALA:HA	2.37	0.60
7:G:176:LEU:HD11	7:G:178:VAL:CG2	2.28	0.60
7:G:4:TYR:CE2	7:G:5:ILE:O	2.55	0.60
7:G:7:PRO:O	7:G:10:ARG:HB3	2.02	0.60
8:H:8:GLU:O	8:H:8:GLU:HG3	2.01	0.60
9:I:40:VAL:HG22	9:I:40:VAL:O	2.02	0.60
11:K:14:ARG:O	11:K:17:THR:CB	2.49	0.60
11:K:10:LEU:HB3	11:K:83:ILE:CD1	2.32	0.60
11:K:89:PRO:CA	11:K:92:ARG:HE	2.02	0.60
1:A:690:G:OP2	14:N:27:ASN:ND2	2.35	0.60
16:P:11:ARG:HH11	16:P:11:ARG:HG3	1.66	0.60
16:P:2:ALA:C	16:P:4:ILE:H	2.05	0.60
16:P:14:ARG:H	16:P:44:ARG:HD2	1.64	0.60
18:R:66:LEU:HD22	18:R:66:LEU:H	1.66	0.60
18:R:71:GLN:CG	18:R:75:PRO:HB3	2.31	0.60
20:T:82:MET:SD	20:T:85:VAL:HG21	2.42	0.60
20:T:87:LYS:O	20:T:91:ARG:HB3	2.02	0.60
22:V:38:SER:OG	22:V:71:LEU:HD12	2.02	0.60
22:V:70:LYS:O	22:V:72:GLY:N	2.35	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:49:ALA:HA	23:W:92:LEU:CD2	2.32	0.60
1:A:1540:U:H5'	1:A:1540:U:H6	1.66	0.60
1:A:81:G:H5''	1:A:82:U:OP2	2.01	0.60
1:A:76:G:H2'	1:A:77:C:H6	1.64	0.60
1:A:1101:A:O2'	1:A:1102:A:OP2	2.19	0.60
1:A:121:C:H1'	1:A:123:C:H41	1.67	0.60
1:A:181:G:O2'	1:A:182:U:H5'	2.01	0.60
1:A:296:U:H2'	1:A:297:G:H8	1.66	0.60
1:A:303:A:HO2'	1:A:555:C:HO2'	1.47	0.60
1:A:390:C:N3	1:A:391:G:N7	2.50	0.60
1:A:47:C:C5	1:A:365:U:H2'	2.37	0.60
1:A:487:A:H2'	1:A:488:C:H5'	1.82	0.60
1:A:509:A:H5'	7:G:54:TYR:CD2	2.28	0.60
1:A:756:C:O4'	11:K:1:MET:CE	2.49	0.60
1:A:854:G:N1	1:A:855:G:N7	2.50	0.60
1:A:962:C:O2'	1:A:963:G:H5'	2.01	0.60
1:A:967:C:O5'	1:A:967:C:C6	2.55	0.60
6:F:107:GLN:O	6:F:108:ASN:HB2	2.01	0.60
7:G:150:GLU:OE2	7:G:151:LYS:N	2.34	0.60
10:J:26:PHE:HB3	10:J:62:PHE:HZ	1.67	0.60
11:K:10:LEU:O	11:K:13:ILE:HB	2.01	0.60
13:M:23:ILE:HG23	13:M:85:LEU:CD2	2.24	0.60
13:M:24:VAL:CA	13:M:34:VAL:HG21	2.18	0.60
13:M:82:ILE:O	13:M:86:MET:CB	2.50	0.60
14:N:90:GLY:C	14:N:92:GLU:N	2.50	0.60
16:P:36:LYS:HB3	16:P:59:TYR:CZ	2.37	0.60
1:A:974:A:C8	17:Q:31:ARG:CZ	2.85	0.60
1:A:468:A:OP1	19:S:75:ARG:NH2	2.35	0.60
9:I:49:ALA:CB	21:U:80:PRO:HD3	2.32	0.60
22:V:18:LYS:HA	22:V:18:LYS:CE	2.31	0.60
23:W:64:ASP:O	23:W:67:ALA:CB	2.49	0.60
24:X:6:ARG:NH1	24:X:6:ARG:HB2	2.17	0.60
3:D:18:G:H21	3:D:58:A:H5'	1.66	0.60
3:D:58:A:H2'	3:D:61:C:C5	2.37	0.60
18:R:45:VAL:O	18:R:45:VAL:HG12	2.01	0.60
1:A:1453:G:H2'	1:A:1454:G:O4'	2.02	0.60
1:A:519:C:O3'	15:O:51:ALA:HB1	2.02	0.60
1:A:67:C:H4'	1:A:172:A:C1'	2.32	0.60
1:A:812:C:O2'	1:A:813:U:P	2.59	0.60
1:A:858:G:H22	1:A:869:G:H3'	1.67	0.60
1:A:966:G:C2	2:C:34:C:H5'	2.36	0.60
5:E:92:TYR:N	5:E:152:PHE:HA	2.03	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:209:ARG:NH1	5:E:213:LEU:HD12	2.17	0.60
5:E:18:GLY:CA	5:E:42:ILE:H	2.11	0.60
5:E:48:MET:HA	5:E:51:LEU:CD1	2.29	0.60
6:F:6:HIS:O	6:F:10:PHE:HB2	2.02	0.60
6:F:84:ILE:HA	6:F:87:LEU:CD1	2.31	0.60
7:G:7:PRO:HB2	7:G:10:ARG:HB2	1.84	0.60
7:G:36:ARG:HG2	7:G:38:TYR:OH	2.02	0.60
8:H:41:VAL:HG11	8:H:113:ALA:CA	2.32	0.60
11:K:122:ARG:HA	11:K:125:ARG:NH1	2.17	0.60
11:K:69:ARG:HH11	11:K:69:ARG:HG3	1.67	0.60
12:L:106:ALA:C	12:L:107:ARG:HG3	2.22	0.60
12:L:50:LEU:HD11	12:L:56:LEU:HA	1.84	0.60
14:N:32:ILE:O	14:N:39:PRO:HA	2.02	0.60
15:O:104:VAL:O	15:O:106:ASP:N	2.34	0.60
16:P:110:ARG:HB2	16:P:110:ARG:NH1	2.16	0.60
16:P:92:HIS:N	16:P:98:VAL:HG21	2.16	0.60
17:Q:38:GLY:O	17:Q:39:LEU:HD23	2.01	0.60
18:R:76:GLU:HG3	18:R:77:ARG:N	2.16	0.60
19:S:43:LYS:HD2	19:S:43:LYS:N	2.17	0.60
19:S:4:ILE:CD1	19:S:65:GLN:O	2.49	0.60
20:T:67:LYS:O	20:T:68:ARG:CB	2.50	0.60
21:U:67:ALA:O	21:U:68:LYS:C	2.40	0.60
23:W:42:GLN:CA	23:W:42:GLN:NE2	2.64	0.60
2:C:18:G:O5'	2:C:18:G:H8	1.85	0.60
1:A:1138:G:N7	1:A:1140:C:O4'	2.34	0.59
1:A:56:U:H2'	1:A:57:G:H8	1.67	0.59
1:A:688:G:N2	1:A:689:C:H1'	2.17	0.59
5:E:142:LEU:O	5:E:142:LEU:HD23	2.02	0.59
5:E:72:GLY:HA3	5:E:165:VAL:HG11	1.84	0.59
5:E:21:ARG:N	5:E:21:ARG:CD	2.65	0.59
5:E:226:ARG:HG3	5:E:226:ARG:HH11	1.67	0.59
5:E:75:LYS:HZ2	5:E:75:LYS:HA	1.62	0.59
8:H:118:ILE:HG22	8:H:119:LEU:N	2.18	0.59
9:I:50:TYR:CD2	9:I:52:ILE:HG13	2.37	0.59
10:J:10:ARG:HB3	10:J:10:ARG:NH1	2.07	0.59
10:J:9:VAL:O	10:J:10:ARG:O	2.19	0.59
11:K:116:LYS:N	11:K:116:LYS:HD2	2.17	0.59
11:K:47:GLY:O	11:K:61:VAL:HA	2.01	0.59
12:L:11:LYS:N	12:L:104:ARG:NH2	2.50	0.59
13:M:3:LYS:HE3	13:M:77:PRO:HD3	1.81	0.59
14:N:14:VAL:HG11	14:N:35:PRO:HG2	1.84	0.59
14:N:40:ILE:N	14:N:40:ILE:CD1	2.61	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:13:LYS:HB3	16:P:17:VAL:CG1	2.32	0.59
17:Q:42:ILE:HG13	17:Q:43:CYS:N	2.16	0.59
18:R:39:LEU:CD2	18:R:39:LEU:C	2.69	0.59
1:A:468:A:H1'	19:S:82:GLN:NE2	2.17	0.59
19:S:8:ARG:NH1	19:S:11:SER:H	1.99	0.59
21:U:21:LYS:HG3	21:U:22:VAL:N	2.17	0.59
11:K:50:ARG:HH11	11:K:50:ARG:HG2	1.66	0.59
1:A:129(A):G:O2'	1:A:130:A:OP2	2.17	0.59
1:A:229:U:H2'	1:A:230:G:H8	1.65	0.59
1:A:254:G:C6	1:A:273:A:C6	2.90	0.59
1:A:51:A:O2'	1:A:52:G:P	2.59	0.59
1:A:58:C:C2'	1:A:59:A:H5'	2.32	0.59
1:A:754:C:O2'	18:R:69:TYR:HB2	2.02	0.59
1:A:769:G:C2	1:A:770:C:C6	2.90	0.59
1:A:986:A:O2'	22:V:55:LYS:HG3	2.02	0.59
5:E:32:ILE:O	5:E:32:ILE:CG2	2.50	0.59
5:E:72:GLY:HA3	5:E:165:VAL:CG1	2.32	0.59
6:F:180:ALA:O	6:F:203:PHE:CE1	2.54	0.59
1:A:412:A:C2	7:G:35:ARG:CZ	2.85	0.59
8:H:37:ARG:NH1	8:H:112:LEU:HA	2.17	0.59
9:I:26:ILE:O	9:I:30:LEU:HD12	2.01	0.59
10:J:61:VAL:HG12	10:J:124:LEU:HD22	1.84	0.59
11:K:122:ARG:O	11:K:125:ARG:N	2.35	0.59
11:K:126:LYS:NZ	11:K:127:LEU:CD2	2.57	0.59
11:K:63:LEU:HB2	11:K:65:TYR:CZ	2.37	0.59
11:K:44:PHE:HA	11:K:79:VAL:CG1	2.31	0.59
12:L:78:LYS:HZ2	12:L:101:PHE:HE2	1.49	0.59
15:O:57:LYS:HG2	15:O:67:THR:CG2	2.32	0.59
20:T:45:HIS:ND1	20:T:46:ASP:N	2.50	0.59
1:A:1160:G:N3	1:A:1160:G:H2'	2.17	0.59
1:A:1180:A:C2'	1:A:1181:G:C5'	2.80	0.59
1:A:1222:G:C2	1:A:1223:C:N3	2.69	0.59
1:A:1263:C:C2	1:A:1264:C:C5	2.91	0.59
1:A:1323:G:N3	1:A:1324:A:N7	2.50	0.59
1:A:1390:U:N3	1:A:1391:U:C4	2.70	0.59
1:A:494:U:C2'	1:A:494:U:O2	2.49	0.59
1:A:600:C:O2'	1:A:601:C:O4'	2.17	0.59
1:A:881:G:H2'	1:A:882:C:H6	1.67	0.59
5:E:91:PRO:CG	5:E:155:LEU:HD23	2.33	0.59
5:E:16:HIS:NE2	5:E:214:ILE:HG12	2.17	0.59
6:F:153:VAL:HG21	6:F:166:GLU:HB3	1.84	0.59
6:F:91:LEU:CD2	6:F:92:ALA:N	2.55	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:50:ILE:HA	10:J:54:THR:CG2	2.33	0.59
1:A:1061:G:O4'	13:M:56:HIS:CE1	2.56	0.59
13:M:75:ILE:HG22	13:M:76:ASN:H	1.68	0.59
15:O:59:ARG:HG3	15:O:64:TYR:O	2.01	0.59
16:P:32:GLU:HB2	16:P:64:TRP:CH2	2.36	0.59
18:R:48:LYS:HA	18:R:50:HIS:CE1	2.37	0.59
19:S:11:SER:OG	19:S:14:ASN:ND2	2.34	0.59
20:T:22:LEU:HD12	20:T:40:LYS:O	2.02	0.59
22:V:36:ARG:HH22	22:V:75:ALA:HB3	1.66	0.59
1:A:1032(A):G:O2'	1:A:1032(B):G:H5'	2.02	0.59
1:A:1039:C:H2'	1:A:1040:U:H6	1.67	0.59
1:A:848:C:H2'	1:A:849:C:H6	1.67	0.59
1:A:111:G:OP2	1:A:112:G:OP2	2.21	0.59
1:A:121:C:C4'	1:A:122:G:OP1	2.50	0.59
1:A:47:C:C6	1:A:365:U:H2'	2.38	0.59
1:A:382:A:H2'	1:A:383:A:O5'	2.03	0.59
1:A:445:G:H2'	1:A:446:G:H8	1.67	0.59
1:A:454:C:H3'	1:A:455:C:H6	1.67	0.59
1:A:55:A:C2'	1:A:56:U:H5'	2.31	0.59
1:A:626:U:H2'	1:A:627:G:C8	2.37	0.59
1:A:715:A:H4'	1:A:777:A:N6	2.17	0.59
1:A:769:G:N3	1:A:770:C:C6	2.71	0.59
1:A:784:C:H5'	1:A:784:C:H6	1.65	0.59
1:A:834:C:HO2'	1:A:835:U:H5'	1.66	0.59
1:A:854:G:C2	1:A:855:G:C8	2.89	0.59
1:A:859:A:C2'	1:A:860:A:C5'	2.81	0.59
1:A:572:A:C2	1:A:864:A:N1	2.70	0.59
5:E:178:ARG:O	11:K:71:GLY:O	2.20	0.59
7:G:121:VAL:O	7:G:134:ASP:HA	2.02	0.59
7:G:58:LEU:HA	7:G:206:PHE:HE1	1.67	0.59
8:H:37:ARG:HH22	8:H:112:LEU:CD2	2.16	0.59
10:J:54:THR:O	10:J:56:GLN:N	2.34	0.59
1:A:756:C:O4'	11:K:1:MET:HE3	2.02	0.59
13:M:49:VAL:C	13:M:60:ARG:HG3	2.23	0.59
14:N:78:GLN:O	14:N:103:LEU:O	2.19	0.59
14:N:79:SER:HA	14:N:104:GLN:NE2	2.17	0.59
15:O:46:LYS:HB3	15:O:48:PRO:CD	2.32	0.59
20:T:6:LEU:O	20:T:58:GLU:HB2	2.02	0.59
22:V:5:LEU:HB2	22:V:9:VAL:CG2	2.28	0.59
1:A:1284:C:C4	1:A:1285:A:C5	2.90	0.59
1:A:1346:A:C8	1:A:1348:U:C2	2.90	0.59
1:A:1472:U:H2'	1:A:1473:A:C8	2.31	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1477:C:H2'	1:A:1478:C:C6	2.37	0.59
1:A:262:A:H5'	23:W:74:LYS:CG	2.33	0.59
1:A:302:G:N3	1:A:556:C:H4'	2.18	0.59
1:A:357:G:O2'	1:A:358:U:H5'	2.01	0.59
1:A:439:A:OP2	1:A:493:G:N1	2.31	0.59
1:A:495:A:H4'	1:A:496:A:O5'	2.02	0.59
1:A:540:G:H8	1:A:540:G:O5'	1.84	0.59
1:A:595:G:N7	1:A:641:U:C2	2.71	0.59
1:A:689:C:C5	1:A:690:G:N7	2.70	0.59
1:A:741:G:H2'	1:A:742:G:H8	1.68	0.59
1:A:876:G:O2'	11:K:11:THR:HG21	2.03	0.59
5:E:120:ALA:O	5:E:121:LEU:C	2.40	0.59
5:E:160:ASP:O	5:E:161:ALA:HB2	2.02	0.59
5:E:77:ALA:O	5:E:80:ILE:N	2.36	0.59
5:E:69:LEU:HD23	5:E:91:PRO:HB2	1.85	0.59
6:F:64:VAL:O	6:F:99:VAL:HB	2.03	0.59
7:G:154:ASN:ND2	7:G:154:ASN:H	1.90	0.59
9:I:76:ALA:C	9:I:80:ARG:NE	2.55	0.59
10:J:105:VAL:HG12	10:J:109:ASN:HD21	1.66	0.59
10:J:111:ARG:NH1	10:J:111:ARG:HB3	2.17	0.59
10:J:49:ILE:HG22	10:J:125:MET:CE	2.32	0.59
10:J:20:ASP:OD1	10:J:23:VAL:HG23	2.01	0.59
10:J:40:ALA:HB1	10:J:44:TYR:HE1	1.66	0.59
12:L:89:ASN:O	12:L:91:ASP:N	2.33	0.59
14:N:79:SER:CA	14:N:104:GLN:HE21	2.16	0.59
14:N:79:SER:HA	14:N:104:GLN:HG3	1.83	0.59
16:P:14:ARG:HD2	16:P:16:ASP:OD2	2.01	0.59
19:S:58:TYR:O	19:S:61:SER:CB	2.51	0.59
2:C:9:G:N2	2:C:45:G:N7	2.50	0.59
1:A:1001:G:C4	1:A:1002:G:H1'	2.38	0.59
1:A:750:G:H1'	18:R:23:GLY:H	1.67	0.59
1:A:1048:G:H5''	17:Q:3:ARG:HH11	1.67	0.59
1:A:1102:A:C2	1:A:1103:C:C4	2.91	0.59
1:A:1194:U:H2'	1:A:1195:C:O4'	2.02	0.59
1:A:1464:G:N3	1:A:1465:C:H5	2.00	0.59
1:A:152:A:C8	1:A:152:A:C3'	2.85	0.59
1:A:247:G:O2'	1:A:248:C:H5'	2.03	0.59
1:A:318:G:C2	1:A:319:G:C8	2.90	0.59
1:A:707:C:H2'	1:A:708:C:H5'	1.82	0.59
1:A:889:A:N3	1:A:891:U:N3	2.51	0.59
1:A:934:C:N4	1:A:939:G:H1	2.01	0.59
1:A:954:G:O3'	16:P:120:LYS:HD2	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:960:U:O2'	1:A:961:U:OP1	2.19	0.59
5:E:50:GLU:HG3	5:E:200:ILE:O	2.03	0.59
7:G:148:VAL:HG11	7:G:158:ILE:CG2	2.33	0.59
7:G:191:ARG:NH2	7:G:194:LEU:HB2	2.15	0.59
7:G:79:PHE:O	7:G:82:ALA:HB3	2.02	0.59
10:J:103:TRP:CH2	10:J:138:LYS:HA	2.37	0.59
10:J:44:TYR:O	10:J:45:ASP:C	2.40	0.59
11:K:112:LEU:CG	11:K:114:THR:HG22	2.33	0.59
11:K:49:GLU:OE1	11:K:60:ARG:HB3	2.02	0.59
13:M:15:THR:CG2	13:M:16:LEU:HD22	2.31	0.59
14:N:96:ARG:O	14:N:100:ALA:CB	2.49	0.59
15:O:37:CYS:CB	15:O:58:VAL:HG22	2.31	0.59
16:P:110:ARG:HB2	16:P:110:ARG:HH11	1.66	0.59
16:P:80:ARG:O	16:P:84:ILE:HG12	2.03	0.59
22:V:24:ALA:O	22:V:26:GLY:N	2.33	0.59
22:V:39:THR:O	22:V:40:ILE:O	2.20	0.59
2:C:62:C:H2'	2:C:63:G:O5'	2.03	0.59
1:A:1007:C:O2'	1:A:1008:C:H5'	2.03	0.59
1:A:386:C:O2'	1:A:387:U:H5'	2.02	0.59
4:1:21:A:N6	4:1:22:A:C6	2.71	0.59
1:A:1090:U:O2'	1:A:1091:U:H5'	2.03	0.59
1:A:1087:G:N2	1:A:1099:G:C4	2.71	0.59
1:A:1138:G:H5''	1:A:1138:G:N3	2.17	0.59
1:A:1315:U:O2'	1:A:1360:A:C1'	2.51	0.59
1:A:1344:C:O2'	1:A:1349:A:H5'	2.02	0.59
1:A:390:C:H4'	19:S:28:ARG:HE	1.68	0.59
1:A:394:G:C4	1:A:395:C:C5	2.90	0.59
1:A:465:A:C8	1:A:467:G:C6	2.91	0.59
1:A:483:C:H3'	1:A:483:C:C6	2.37	0.59
1:A:486:U:C2'	1:A:486:U:O2	2.49	0.59
1:A:570:G:H2'	1:A:571:U:C6	2.37	0.59
1:A:663:A:H5''	21:U:61:LYS:HE3	1.85	0.59
1:A:731:G:C2'	1:A:732:C:H5'	2.32	0.59
6:F:30:ARG:NH1	6:F:31:HIS:HB2	2.17	0.59
7:G:101:LEU:HD12	7:G:105:VAL:HG23	1.85	0.59
7:G:20:TYR:C	7:G:22:LYS:H	2.04	0.59
7:G:93:PHE:O	7:G:94:LEU:C	2.40	0.59
8:H:91:LEU:HD21	8:H:118:ILE:HG23	1.84	0.59
9:I:2:ARG:HD2	9:I:69:GLU:HB3	1.83	0.59
10:J:42:ILE:HA	10:J:45:ASP:OD2	2.03	0.59
11:K:98:LYS:HZ2	11:K:98:LYS:CA	2.16	0.59
13:M:20:ALA:HB1	13:M:37:PRO:HB3	1.85	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:67:ASP:O	14:N:68:ALA:C	2.41	0.59
14:N:95:ILE:CA	14:N:98:LEU:HD12	2.11	0.59
14:N:99:GLN:O	14:N:102:GLY:N	2.36	0.59
1:A:995:C:C2'	17:Q:4:LYS:HE2	2.32	0.59
18:R:36:ILE:HG13	18:R:59:MET:HE1	1.85	0.59
18:R:36:ILE:HA	18:R:59:MET:CE	2.32	0.59
1:A:474:G:H5'	19:S:81:ARG:NH2	2.16	0.59
20:T:58:GLU:OE1	20:T:75:ARG:N	2.35	0.59
21:U:53:ARG:NH2	21:U:60:GLY:N	2.50	0.59
1:A:1268:A:C4'	24:X:20:LYS:HB2	2.31	0.59
22:V:30:LEU:CG	22:V:50:ALA:HB2	2.33	0.59
1:A:1067:A:O2'	1:A:1068:G:O5'	2.20	0.59
1:A:1169:A:C6	1:A:1170:A:C2	2.91	0.59
1:A:1188:A:H4'	17:Q:58:LYS:NZ	2.17	0.59
1:A:1196:U:C6	1:A:1196:U:C3'	2.85	0.59
1:A:1236:A:H4'	1:A:1304:G:C5'	2.33	0.59
1:A:1317:C:C2'	1:A:1318:A:H5'	2.33	0.59
1:A:1394:A:H62	1:A:1501:C:C4'	2.15	0.59
1:A:1507:A:C2	1:A:1530:G:O4'	2.56	0.59
1:A:230:G:N2	1:A:231:G:N3	2.50	0.59
1:A:394:G:C5	1:A:395:C:C5	2.90	0.59
1:A:44:G:O2'	1:A:45:U:H5'	2.02	0.59
1:A:563:A:O2'	1:A:564:C:OP2	2.15	0.59
1:A:724:G:C2	1:A:725:G:C8	2.91	0.59
1:A:812:C:H1'	1:A:813:U:C5	2.38	0.59
1:A:920:U:O2'	1:A:921:U:C5'	2.49	0.59
1:A:947:G:N3	1:A:948:C:C6	2.71	0.59
1:A:974:A:H5''	1:A:975:A:OP1	2.01	0.59
2:C:33:U:H2'	2:C:35:A:OP2	2.02	0.59
6:F:58:GLU:H	6:F:65:ALA:HB3	1.68	0.59
8:H:109:ILE:HG21	8:H:135:THR:CG2	2.31	0.59
9:I:14:LEU:CG	9:I:19:LEU:HD12	2.33	0.59
10:J:28:ASN:HA	10:J:31:MET:HE2	1.85	0.59
12:L:112:LYS:HG3	12:L:117:HIS:CA	2.32	0.59
12:L:16:ARG:C	12:L:63:ILE:HG23	2.22	0.59
14:N:33:THR:HA	14:N:39:PRO:HA	1.84	0.59
18:R:79:ARG:HH11	18:R:79:ARG:HB2	1.64	0.59
22:V:18:LYS:HD3	22:V:31:ILE:HD12	1.84	0.59
22:V:39:THR:HA	22:V:70:LYS:HA	1.84	0.59
1:A:1305:G:H5'	24:X:4:GLY:HA3	1.85	0.59
7:G:196:LEU:O	7:G:196:LEU:CD1	2.50	0.59
1:A:865:A:H5'	1:A:1078:U:C4	2.38	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1237:C:H4'	1:A:1334:G:N2	2.18	0.59
1:A:1452:C:O4'	1:A:1453:G:N2	2.36	0.59
1:A:1528:U:H1'	1:A:1529:G:H21	1.68	0.59
1:A:187:C:H3'	1:A:188:U:C6	2.37	0.59
1:A:192:U:H1'	23:W:103:GLY:CA	2.27	0.59
1:A:317:G:C2'	1:A:318:G:O5'	2.50	0.59
1:A:322:C:O2'	23:W:23:ARG:HB2	2.03	0.59
1:A:414:A:C4	1:A:415:A:C8	2.90	0.59
1:A:511:C:O2'	1:A:512:U:H6	1.76	0.59
1:A:691:G:O6	14:N:55:LYS:HG3	2.01	0.59
1:A:909:A:H2'	1:A:910:C:H5'	1.84	0.59
1:A:922:G:N2	1:A:923:A:C4	2.71	0.59
1:A:953:G:H1'	16:P:125:ARG:C	2.23	0.59
3:D:33:U:H1'	3:D:38:A:H61	1.68	0.59
5:E:28:PHE:CE2	5:E:190:THR:HA	2.38	0.59
6:F:29:TYR:HD2	6:F:29:TYR:O	1.85	0.59
6:F:89:GLU:O	6:F:91:LEU:N	2.36	0.59
7:G:19:LEU:HA	7:G:21:LEU:CD1	2.33	0.59
1:A:8:A:H4'	8:H:102:ALA:HA	1.83	0.59
8:H:75:THR:HA	8:H:118:ILE:HD11	1.84	0.59
1:A:1081:G:OP2	8:H:27:ARG:HD3	2.03	0.59
9:I:52:ILE:HD13	9:I:87:ARG:NE	2.18	0.59
12:L:23:ASN:C	12:L:23:ASN:HD22	2.05	0.59
12:L:89:ASN:ND2	12:L:92:TYR:CE1	2.71	0.59
13:M:99:LYS:HE2	13:M:99:LYS:HA	1.84	0.59
16:P:98:VAL:HG12	16:P:98:VAL:O	2.03	0.59
19:S:12:LYS:NZ	19:S:13:HIS:H	2.01	0.59
20:T:51:TYR:N	20:T:51:TYR:CD1	2.70	0.59
9:I:98:LEU:HG	21:U:28:GLU:HG2	1.83	0.59
21:U:80:PRO:CB	21:U:83:GLU:HG2	2.32	0.59
2:C:20:U:C3'	2:C:20:U:O2	2.50	0.59
11:K:50:ARG:NH1	11:K:50:ARG:HG2	2.16	0.59
1:A:1117:G:O5'	12:L:104:ARG:NH1	2.36	0.59
1:A:1126:U:H5'	1:A:1281:U:O4'	2.02	0.59
1:A:1129:C:C4	1:A:1139:G:C6	2.91	0.59
1:A:1129:C:C5'	1:A:1130:A:OP1	2.42	0.59
1:A:1187:G:H2'	1:A:1188:A:C8	2.37	0.59
1:A:1241:G:H2'	1:A:1242:C:H6	1.66	0.59
1:A:1490:C:C6	1:A:1490:C:OP2	2.56	0.59
1:A:1528:U:HO2'	1:A:1529:G:H3'	1.68	0.59
1:A:519:C:C4	1:A:520:A:C2	2.91	0.59
1:A:57:G:C6	1:A:58:C:N4	2.70	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:607:A:N3	1:A:608:A:H1'	2.18	0.59
1:A:671:G:H2'	1:A:672:U:C6	2.38	0.59
1:A:706:A:H4'	14:N:22:HIS:CE1	2.38	0.59
1:A:926:G:C4	1:A:1505:G:N2	2.71	0.59
5:E:213:LEU:HD22	5:E:214:ILE:HD13	1.85	0.59
8:H:18:ARG:HH21	8:H:25:ARG:HB2	1.67	0.59
9:I:38:GLU:HG2	9:I:39:LYS:HG2	1.84	0.59
11:K:38:ILE:HD11	11:K:118:VAL:HG21	1.85	0.59
12:L:8:GLY:HA3	12:L:76:ALA:O	2.03	0.59
14:N:48:ILE:HD11	14:N:64:ALA:CB	2.32	0.59
17:Q:15:LYS:O	17:Q:16:PHE:HB2	2.02	0.59
18:R:36:ILE:HD12	18:R:59:MET:SD	2.43	0.59
18:R:36:ILE:HG23	18:R:37:ASN:ND2	2.18	0.59
18:R:39:LEU:HD23	18:R:39:LEU:O	2.02	0.59
18:R:74:ASP:OD1	18:R:76:GLU:HB3	2.03	0.59
22:V:78:ARG:O	22:V:79:THR:OG1	2.18	0.59
23:W:50:GLU:HG3	23:W:54:LYS:CE	2.30	0.59
23:W:51:GLU:HA	23:W:54:LYS:HG3	1.85	0.59
15:O:126:LYS:CE	15:O:126:LYS:N	2.60	0.59
2:C:9:G:H5'	2:C:46:G:O2'	2.02	0.59
15:O:111:LYS:O	15:O:112:ASP:CB	2.51	0.59
1:A:953:G:C6	1:A:1229:A:C6	2.91	0.58
1:A:1261:A:C2	1:A:1262:C:C2	2.90	0.58
1:A:1296:C:H1'	1:A:1302:U:C4	2.37	0.58
1:A:1324:A:C2'	1:A:1325:C:H5'	2.32	0.58
1:A:1425:U:O2	1:A:1476:G:C2	2.55	0.58
1:A:198:G:H2'	1:A:199:G:H8	1.68	0.58
1:A:370:C:O2'	1:A:371:G:C5'	2.50	0.58
1:A:38:G:O2'	1:A:39:G:H5''	2.03	0.58
1:A:689:C:H2'	1:A:690:G:O4'	2.03	0.58
1:A:715:A:C4'	1:A:777:A:N6	2.65	0.58
1:A:667:G:N2	1:A:740:U:H1'	2.18	0.58
5:E:153:ARG:HH12	5:E:156:LYS:HB2	1.66	0.58
5:E:28:PHE:CD1	5:E:31:TYR:HB2	2.38	0.58
5:E:97:TRP:NE1	5:E:99:GLY:HA3	2.18	0.58
6:F:130:VAL:O	6:F:134:ILE:HD13	2.02	0.58
7:G:190:ASP:O	7:G:191:ARG:C	2.41	0.58
7:G:22:LYS:HD3	7:G:26:CYS:HB2	1.85	0.58
7:G:88:VAL:HG12	7:G:91:SER:H	1.66	0.58
8:H:100:VAL:O	8:H:107:ARG:NH2	2.35	0.58
8:H:20:GLN:HB3	8:H:25:ARG:HE	1.68	0.58
8:H:57:LYS:HE3	8:H:61:TYR:HE2	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:76:ILE:HD11	8:H:139:LEU:CD2	2.32	0.58
8:H:84:PHE:HD2	8:H:84:PHE:O	1.86	0.58
10:J:5:ARG:HH11	10:J:5:ARG:HG2	1.68	0.58
10:J:6:ARG:H	10:J:6:ARG:NH1	2.00	0.58
11:K:86:ILE:CG2	11:K:133:LEU:HB2	2.30	0.58
11:K:137:VAL:HG12	11:K:138:TRP:N	2.18	0.58
11:K:63:LEU:CG	11:K:65:TYR:CE1	2.84	0.58
13:M:57:LYS:HG2	13:M:57:LYS:O	2.02	0.58
13:M:34:VAL:HA	13:M:74:ILE:HG12	1.85	0.58
14:N:78:GLN:OE1	14:N:79:SER:N	2.36	0.58
14:N:91:ARG:CG	14:N:95:ILE:HD11	2.33	0.58
18:R:59:MET:O	18:R:63:ARG:HG2	2.02	0.58
1:A:255:G:H1'	20:T:16:GLN:NE2	2.16	0.58
9:I:62:TRP:HB2	21:U:35:ARG:NH1	2.17	0.58
2:C:65:C:H2'	2:C:66:C:H6	1.67	0.58
2:C:72:A:O2'	2:C:73:A:O4'	2.20	0.58
1:A:1152:A:H5'	13:M:13:HIS:NE2	2.19	0.58
1:A:1259:C:H6	1:A:1259:C:O5'	1.87	0.58
1:A:1263:C:H2'	1:A:1264:C:C5	2.37	0.58
1:A:1369:C:P	12:L:111:ARG:HG3	2.43	0.58
1:A:1507:A:H2'	1:A:1508:G:O4'	2.03	0.58
1:A:1497:G:O2'	1:A:1518:A:H2	1.87	0.58
1:A:56:U:O4	1:A:352:C:N3	2.36	0.58
1:A:38:G:N2	1:A:397:A:C5'	2.64	0.58
1:A:495:A:H5''	1:A:496:A:OP1	2.03	0.58
1:A:20:U:O4'	1:A:572:A:C6	2.57	0.58
1:A:650:G:C2	1:A:651:C:C6	2.90	0.58
1:A:696:A:C2	1:A:697:U:H1'	2.39	0.58
1:A:739:C:H2'	1:A:740:U:C5'	2.33	0.58
1:A:782:A:C2	1:A:801:U:O2	2.56	0.58
1:A:854:G:C2	1:A:855:G:N7	2.71	0.58
5:E:132:LYS:H	5:E:132:LYS:NZ	2.00	0.58
5:E:17:PHE:CG	5:E:18:GLY:N	2.71	0.58
6:F:121:ALA:O	6:F:124:ILE:HB	2.03	0.58
6:F:91:LEU:HD23	6:F:92:ALA:H	1.64	0.58
10:J:69:VAL:CB	10:J:104:LEU:HD21	2.33	0.58
10:J:121:ALA:O	10:J:122:HIS:C	2.42	0.58
10:J:22:LEU:O	10:J:25:ALA:HB3	2.02	0.58
1:A:1240:U:C2	10:J:32:ARG:NE	2.71	0.58
10:J:83:ALA:HB3	10:J:85:TYR:CE2	2.38	0.58
11:K:102:ARG:HH11	11:K:102:ARG:CG	2.16	0.58
1:A:1372:U:OP2	12:L:11:LYS:HE2	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:47:LEU:CD1	12:L:51:ARG:HH22	2.10	0.58
13:M:50:ILE:CA	13:M:60:ARG:HG3	2.32	0.58
14:N:110:ASP:HB2	21:U:88:LYS:HB2	1.85	0.58
14:N:58:PRO:CB	14:N:93:GLN:HG3	2.26	0.58
16:P:58:GLU:C	16:P:61:GLU:HB2	2.23	0.58
18:R:59:MET:O	18:R:63:ARG:HG3	2.04	0.58
20:T:51:TYR:HD1	20:T:51:TYR:H	1.50	0.58
1:A:721:G:OP2	21:U:63:GLN:HG2	2.03	0.58
1:A:1285:A:H4'	1:A:1286:A:C8	2.38	0.58
1:A:1454:G:O2'	1:A:1455:G:H5'	2.03	0.58
1:A:1512:U:H2'	1:A:1513:A:C8	2.38	0.58
1:A:297:G:H21	1:A:299:G:C3'	2.05	0.58
1:A:519:C:C2'	1:A:520:A:H5'	2.25	0.58
1:A:654:G:H1'	1:A:753:A:C2	2.39	0.58
1:A:891:U:H5	1:A:906:G:N2	2.01	0.58
5:E:115:LEU:HD13	5:E:145:LEU:HB3	1.84	0.58
5:E:90:MET:SD	5:E:91:PRO:HD2	2.44	0.58
1:A:1057:G:H5''	6:F:154:SER:O	2.02	0.58
6:F:88:ARG:HB2	6:F:101:LEU:HB2	1.86	0.58
7:G:117:ALA:O	7:G:121:VAL:HG23	2.03	0.58
7:G:148:VAL:HG21	7:G:162:LEU:HD11	1.85	0.58
7:G:19:LEU:HD22	7:G:21:LEU:CD1	2.33	0.58
8:H:37:ARG:CZ	8:H:112:LEU:HD22	2.32	0.58
8:H:79:GLU:HB3	8:H:91:LEU:O	2.02	0.58
9:I:11:ASN:HD21	9:I:13:ASN:CB	2.16	0.58
9:I:39:LYS:HB2	9:I:62:TRP:CH2	2.39	0.58
10:J:6:ARG:HB2	10:J:6:ARG:HH11	1.65	0.58
11:K:14:ARG:HA	11:K:17:THR:OG1	2.03	0.58
11:K:38:ILE:CD1	11:K:118:VAL:HG11	2.33	0.58
12:L:89:ASN:C	12:L:91:ASP:N	2.56	0.58
14:N:21:ILE:HD13	14:N:95:ILE:HG23	1.83	0.58
10:J:150:ALA:HB1	14:N:57:THR:HG1	1.67	0.58
14:N:79:SER:HA	14:N:104:GLN:CB	2.32	0.58
16:P:120:LYS:HG2	16:P:121:LYS:H	1.68	0.58
16:P:96:LEU:O	16:P:98:VAL:N	2.35	0.58
19:S:10:GLY:O	19:S:11:SER:CB	2.50	0.58
1:A:760:G:H21	20:T:104:LYS:HB3	1.67	0.58
24:X:3:LYS:HD2	24:X:14:TRP:HB2	1.85	0.58
2:C:5:G:C2'	2:C:6:G:O5'	2.50	0.58
1:A:1095:U:H5'	1:A:1109:C:O2	2.03	0.58
1:A:1148:U:O2	1:A:1149:C:C1'	2.51	0.58
1:A:1169:A:O5'	1:A:1169:A:H8	1.86	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1221:G:OP1	1:A:1320:C:N4	2.36	0.58
1:A:1333:A:H2'	1:A:1334:G:O4'	2.03	0.58
1:A:1342:C:H2'	1:A:1343:G:H8	1.67	0.58
1:A:1387:G:H2'	1:A:1388:C:H6	1.67	0.58
1:A:1423:G:O2'	1:A:1424:C:H5'	2.02	0.58
1:A:1503:A:N1	4:1:13:A:O2'	2.36	0.58
1:A:250:A:O4'	1:A:252:U:C5	2.56	0.58
1:A:383:A:H2'	1:A:384:G:C4'	2.32	0.58
1:A:405:U:H3'	1:A:406:G:H5'	1.84	0.58
1:A:61:G:N2	1:A:379:C:H4'	2.18	0.58
1:A:618:C:H3'	1:A:620:C:OP2	2.02	0.58
1:A:660:G:H2'	1:A:661:G:H8	1.66	0.58
1:A:664:G:H5'	21:U:64:ARG:NH2	2.14	0.58
5:E:163:PHE:CA	5:E:185:ILE:HG13	2.33	0.58
5:E:212:GLN:O	5:E:213:LEU:C	2.42	0.58
6:F:192:THR:CG2	6:F:192:THR:O	2.51	0.58
6:F:85:ARG:NH2	6:F:89:GLU:HB2	2.15	0.58
7:G:107:ARG:HB3	7:G:174:LEU:HD11	1.85	0.58
7:G:38:TYR:HB2	7:G:39:PRO:HD2	1.84	0.58
7:G:64:LEU:CD1	7:G:75:PHE:HZ	2.16	0.58
8:H:122:GLU:CB	8:H:126:ARG:HG3	2.34	0.58
9:I:33:TYR:CG	9:I:75:LEU:HB2	2.37	0.58
9:I:3:ARG:HG3	9:I:65:VAL:C	2.23	0.58
1:A:939:G:H5''	10:J:102:ARG:NH2	2.18	0.58
10:J:74:GLU:HG2	10:J:75:VAL:H	1.67	0.58
1:A:755:G:O2'	11:K:1:MET:CE	2.51	0.58
11:K:4:ASP:O	11:K:5:PRO:C	2.42	0.58
1:A:1226:C:N4	16:P:104:ARG:HG3	2.19	0.58
16:P:70:LEU:HD23	16:P:70:LEU:C	2.23	0.58
21:U:34:TYR:CD1	21:U:35:ARG:N	2.71	0.58
1:A:82:U:H2'	1:A:85:U:H5	1.67	0.58
1:A:1085:U:H5'	1:A:1094:G:H21	1.69	0.58
1:A:1321:C:O4'	16:P:87:TYR:HE1	1.86	0.58
1:A:1495:U:C2'	1:A:1496:C:O5'	2.51	0.58
1:A:1510:U:H2'	1:A:1511:G:C8	2.39	0.58
1:A:828:A:O2'	1:A:829:G:O5'	2.09	0.58
1:A:867:G:O2'	1:A:873:A:N6	2.37	0.58
5:E:136:VAL:CA	5:E:139:LYS:NZ	2.63	0.58
5:E:68:ILE:HA	5:E:161:ALA:O	2.03	0.58
5:E:222:ILE:HD12	5:E:223:ILE:N	2.17	0.58
6:F:142:MET:HG3	6:F:143:GLU:N	2.18	0.58
6:F:63:ASN:O	6:F:64:VAL:HB	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:106:TYR:HE1	7:G:112:VAL:HA	1.69	0.58
7:G:199:ASN:OD1	7:G:200:GLU:N	2.29	0.58
8:H:69:VAL:HG12	8:H:69:VAL:O	2.03	0.58
9:I:2:ARG:NH1	9:I:69:GLU:HB3	2.18	0.58
9:I:3:ARG:HG3	9:I:65:VAL:O	2.04	0.58
11:K:95:VAL:CG2	11:K:133:LEU:HD21	2.31	0.58
12:L:38:GLN:O	12:L:40:LEU:N	2.37	0.58
12:L:51:ARG:NH1	12:L:51:ARG:CA	2.66	0.58
14:N:48:ILE:HB	14:N:50:TYR:HB2	1.86	0.58
16:P:90:LEU:HA	16:P:93:ARG:CB	2.33	0.58
1:A:43:C:C5'	19:S:12:LYS:HB3	2.25	0.58
1:A:760:G:H2'	20:T:103:GLY:HA3	1.84	0.58
1:A:81:G:C6	1:A:82:U:O4	2.57	0.58
1:A:1068:G:N2	1:A:1191:A:C2	2.70	0.58
1:A:1159:U:O4	1:A:1182:G:N3	2.36	0.58
1:A:1157:A:N1	1:A:1180:A:C4	2.72	0.58
1:A:1216:G:OP1	17:Q:3:ARG:NH2	2.37	0.58
1:A:1490:C:C2'	1:A:1491:G:O5'	2.52	0.58
1:A:310:G:H2'	1:A:311:C:C6	2.39	0.58
1:A:363:A:N1	1:A:364:A:N3	2.52	0.58
1:A:515:G:N2	1:A:537:G:C4	2.70	0.58
1:A:573:A:H2'	1:A:574:A:H8	1.64	0.58
1:A:607:A:C2	19:S:31:LYS:HG3	2.37	0.58
1:A:608:A:C2	1:A:609:A:C8	2.92	0.58
1:A:622:A:H2'	1:A:623:C:O5'	2.02	0.58
1:A:61:G:N7	1:A:62:U:C4	2.72	0.58
1:A:739:C:O2'	1:A:740:U:H5'	2.04	0.58
3:D:32:C:H2'	3:D:33:U:H5'	1.85	0.58
6:F:77:ILE:C	6:F:83:ARG:HB3	2.24	0.58
6:F:89:GLU:O	6:F:90:GLU:C	2.42	0.58
6:F:91:LEU:HD11	6:F:99:VAL:HG13	1.85	0.58
7:G:133:VAL:HG21	7:G:138:TYR:CD1	2.39	0.58
8:H:43:LEU:HD22	8:H:133:TYR:CE2	2.37	0.58
11:K:46:LYS:NZ	11:K:65:TYR:H	2.01	0.58
11:K:49:GLU:CD	11:K:60:ARG:HB3	2.23	0.58
11:K:6:ILE:HD13	11:K:10:LEU:HG	1.85	0.58
15:O:54:LYS:N	15:O:54:LYS:HD2	2.19	0.58
16:P:120:LYS:O	16:P:121:LYS:HB2	2.04	0.58
16:P:86:CYS:SG	16:P:89:GLY:HA3	2.43	0.58
6:F:22:TRP:CE2	17:Q:54:PRO:HG3	2.38	0.58
18:R:26:GLU:CD	18:R:26:GLU:N	2.56	0.58
1:A:391:G:OP1	19:S:28:ARG:NH2	2.37	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:66:PRO:HG2	19:S:71:ARG:HB2	1.85	0.58
1:A:130:A:H8	20:T:63:ARG:HG3	1.68	0.58
20:T:57:VAL:HG21	20:T:73:VAL:HG13	1.85	0.58
20:T:97:SER:O	20:T:98:LEU:HD13	2.03	0.58
21:U:33:ASP:O	21:U:34:TYR:CD2	2.56	0.58
2:C:19:G:C4'	2:C:20:U:OP2	2.51	0.58
2:C:46:G:OP2	2:C:46:G:H8	1.87	0.58
3:D:63:G:C6	3:D:64:C:C4	2.91	0.58
1:A:108:G:C6	23:W:15:ARG:NE	2.71	0.58
1:A:1113:C:H2'	1:A:1114:C:O4'	2.03	0.58
1:A:1147:C:N3	1:A:1148:U:C5	2.72	0.58
1:A:1187:G:C4	1:A:1188:A:N7	2.71	0.58
1:A:1210:C:C5'	1:A:1214:C:H42	2.16	0.58
1:A:1251:A:O4'	1:A:1370:G:H4'	2.04	0.58
1:A:1325:C:H2'	1:A:1326:C:H6	1.68	0.58
1:A:191(D):U:H6	1:A:191(D):U:O5'	1.86	0.58
1:A:31:G:N2	1:A:47:C:H5''	2.18	0.58
1:A:692:U:O2	1:A:694:A:C8	2.57	0.58
1:A:888:G:H21	1:A:909:A:N6	1.96	0.58
1:A:959:A:H3'	1:A:960:U:C5'	2.27	0.58
3:D:36:A:H3'	3:D:37:A:H8	1.67	0.58
5:E:162:ILE:HD11	5:E:184:VAL:CG2	2.33	0.58
5:E:19:HIS:CE1	5:E:204:ASN:HD21	2.22	0.58
6:F:20:SER:HB2	6:F:40:ARG:NH2	2.18	0.58
6:F:58:GLU:O	6:F:59:ARG:NE	2.36	0.58
6:F:65:ALA:O	6:F:66:VAL:HB	2.02	0.58
11:K:63:LEU:O	11:K:64:LYS:HB2	2.02	0.58
11:K:97:VAL:CG2	11:K:98:LYS:HD3	2.32	0.58
12:L:49:PRO:HD3	12:L:78:LYS:HZ2	1.67	0.58
17:Q:26:ARG:HB2	17:Q:39:LEU:CD2	2.31	0.58
17:Q:27:CYS:SG	17:Q:42:ILE:HG13	2.44	0.58
18:R:56:LEU:HG	18:R:57:LEU:HD12	1.84	0.58
19:S:36:ILE:HG21	19:S:55:ARG:HB3	1.85	0.58
19:S:7:ALA:HB1	19:S:9:PHE:HE2	1.69	0.58
20:T:15:MET:CB	20:T:18:THR:HB	2.33	0.58
23:W:13:LEU:HD13	23:W:17:ARG:HH22	1.67	0.58
24:X:23:PRO:C	24:X:25:LYS:H	2.06	0.58
10:J:129:GLU:CD	10:J:131:LYS:HD3	2.24	0.58
1:A:772:U:O2'	1:A:773:G:H5'	2.02	0.58
1:A:1124:G:H2'	1:A:1126:U:O4	2.03	0.58
1:A:1133:G:N1	1:A:1142:G:C6	2.72	0.58
1:A:1302:U:O2'	1:A:1303:C:OP1	2.19	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1451:A:H5''	1:A:1452:C:H5	1.69	0.58
1:A:1416:G:N2	1:A:1485:U:H1'	2.19	0.58
1:A:815:A:C2	1:A:1527:C:O2	2.55	0.58
1:A:179:A:H3'	1:A:180:U:C6	2.39	0.58
1:A:195:A:P	23:W:68:LYS:NZ	2.76	0.58
1:A:197:A:H61	1:A:221:C:C5'	2.07	0.58
1:A:22:G:H3'	1:A:23:C:H6	1.69	0.58
1:A:280:C:C5'	1:A:281:G:OP2	2.51	0.58
1:A:375:U:C2	1:A:376:G:C8	2.92	0.58
1:A:450:G:H4'	19:S:42:ARG:HG3	1.86	0.58
1:A:452:A:H2'	1:A:453:A:H8	1.64	0.58
1:A:792:A:N6	4:I:15:A:H2	2.00	0.58
1:A:830:G:N2	1:A:857:C:H1'	2.18	0.58
1:A:991:U:O2'	1:A:993:G:C8	2.57	0.58
6:F:111:LEU:N	6:F:111:LEU:CD1	2.67	0.58
6:F:110:ASN:CG	6:F:144:SER:OG	2.42	0.58
7:G:92:VAL:HG12	7:G:96:LEU:HD11	1.84	0.58
9:I:5:GLU:HB2	9:I:62:TRP:NE1	2.18	0.58
9:I:72:VAL:HG23	9:I:73:ASN:N	2.17	0.58
10:J:94:ARG:O	10:J:97:GLN:HB3	2.02	0.58
11:K:97:VAL:CG2	11:K:98:LYS:H	1.95	0.58
12:L:10:ARG:NH1	12:L:105:ASP:OD2	2.36	0.58
12:L:37:PHE:HD1	12:L:43:ALA:HA	1.69	0.58
14:N:69:ALA:CB	14:N:103:LEU:HD12	2.22	0.58
14:N:25:TYR:CZ	14:N:87:THR:HB	2.38	0.58
14:N:48:ILE:HD11	14:N:64:ALA:HB2	1.85	0.58
15:O:7:ILE:CG2	20:T:34:LYS:HB2	2.32	0.58
1:A:948:C:P	16:P:109:THR:H	2.27	0.58
18:R:70:LEU:HD23	18:R:81:LEU:HD13	1.86	0.58
3:D:15:G:H1	3:D:48:C:H41	1.47	0.58
3:D:48:C:HO2'	3:D:49:G:P	2.27	0.58
12:L:53:VAL:O	12:L:54:ASP:CB	2.52	0.58
1:A:1077:G:N3	1:A:1081:G:C2	2.71	0.58
1:A:118:U:C6	1:A:288:A:C2	2.92	0.58
1:A:1341:U:O5'	1:A:1341:U:H6	1.87	0.58
1:A:1347:G:H4'	1:A:1348:U:O5'	2.03	0.58
1:A:1416:G:O2'	1:A:1417:G:H5'	2.03	0.58
1:A:174:C:N4	1:A:175:C:N4	2.52	0.58
1:A:625:G:OP1	19:S:9:PHE:CB	2.51	0.58
1:A:782:A:N1	1:A:801:U:C1'	2.66	0.58
1:A:859:A:C2'	1:A:860:A:O5'	2.51	0.58
5:E:168:THR:CB	5:E:192:SER:HA	2.34	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:60:ASP:CG	5:E:64:ARG:NH2	2.57	0.58
6:F:88:ARG:N	6:F:101:LEU:HD12	2.19	0.58
8:H:78:HIS:NE2	8:H:142:LEU:HD23	2.18	0.58
8:H:144:THR:O	8:H:145:LYS:C	2.42	0.58
11:K:32:LYS:O	11:K:35:ILE:HB	2.04	0.58
1:A:877:C:O2'	11:K:3:THR:HB	2.03	0.58
1:A:1179:A:H4'	12:L:103:THR:OG1	2.04	0.58
12:L:47:LEU:O	12:L:50:LEU:HB3	2.04	0.58
12:L:5:TYR:HD2	12:L:17:VAL:O	1.87	0.58
12:L:63:ILE:HD12	12:L:63:ILE:N	2.19	0.58
13:M:7:LYS:O	13:M:97:GLU:CB	2.46	0.58
13:M:4:ILE:HD13	13:M:98:ILE:CG2	2.34	0.58
14:N:18:ARG:NH2	14:N:37:GLY:HA2	2.19	0.58
15:O:51:ALA:C	15:O:52:LEU:HD23	2.24	0.58
16:P:98:VAL:HG23	16:P:110:ARG:HH21	1.69	0.58
1:A:189:U:H3	20:T:63:ARG:CB	2.16	0.58
2:C:15:G:H22	2:C:48:C:H42	1.51	0.58
2:C:16:C:H4'	2:C:18:G:C5'	2.34	0.58
1:A:99:C:O2'	1:A:101:A:OP1	2.22	0.58
1:A:1189:C:O5'	1:A:1189:C:H6	1.85	0.58
1:A:1194:U:C5	1:A:1195:C:C5	2.91	0.58
1:A:1242:C:P	24:X:10:ARG:HH12	2.27	0.58
1:A:1407:C:O5'	1:A:1407:C:H6	1.86	0.58
1:A:266:G:H21	1:A:269:C:H41	1.51	0.58
1:A:281:G:O2'	1:A:282:A:C8	2.48	0.58
1:A:284:G:H2'	1:A:285:G:C8	2.39	0.58
1:A:299:G:H2'	1:A:300:A:C8	2.38	0.58
1:A:425:G:C2	1:A:426:G:C8	2.92	0.58
1:A:484:G:O2'	1:A:485:G:OP2	2.21	0.58
1:A:52:G:C2'	1:A:53:A:C5'	2.81	0.58
1:A:566:G:H4'	1:A:567:G:OP1	2.01	0.58
1:A:589:C:N3	1:A:590:C:N4	2.52	0.58
1:A:664:G:H3'	1:A:664:G:C8	2.39	0.58
1:A:799:G:N2	1:A:800:G:C1'	2.66	0.58
1:A:828:A:C8	1:A:829:G:N9	2.71	0.58
1:A:939:G:H2'	1:A:940:C:C6	2.38	0.58
3:D:34:G:H3'	3:D:35:A:C5'	2.34	0.58
5:E:95:GLN:HE21	5:E:148:TYR:CA	2.16	0.58
5:E:61:LEU:HD11	5:E:68:ILE:HG23	1.85	0.58
5:E:87:ARG:HH21	5:E:219:VAL:HG11	1.69	0.58
7:G:15:GLU:CB	7:G:19:LEU:HD11	2.33	0.58
7:G:61:LYS:NZ	7:G:65:ARG:HD2	2.19	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:87:GLY:O	7:G:88:VAL:C	2.42	0.58
9:I:11:ASN:ND2	9:I:13:ASN:H	2.02	0.58
9:I:2:ARG:CZ	9:I:69:GLU:HB3	2.34	0.58
10:J:150:ALA:HB2	14:N:59:TYR:HD2	1.69	0.58
10:J:36:LYS:CE	10:J:36:LYS:HA	2.34	0.58
10:J:40:ALA:HB1	12:L:41:VAL:HG21	1.84	0.58
10:J:88:PRO:HG2	10:J:152:ALA:HB2	1.85	0.58
11:K:69:ARG:HG3	11:K:69:ARG:NH1	2.18	0.58
16:P:100:GLY:O	16:P:101:GLN:O	2.21	0.58
1:A:1308:U:H6	16:P:99:ARG:HH12	1.43	0.58
18:R:81:LEU:HD23	18:R:85:LEU:HD13	1.86	0.58
21:U:46:GLU:CD	21:U:46:GLU:N	2.57	0.58
21:U:61:LYS:HA	21:U:64:ARG:NH1	2.18	0.58
1:A:838:G:N2	1:A:849:C:C2	2.72	0.58
1:A:1095:U:H5'	1:A:1109:C:N3	2.19	0.57
1:A:1145:C:H1'	1:A:1146:A:C8	2.38	0.57
1:A:1240:U:H2'	10:J:32:ARG:HE	1.67	0.57
1:A:1300:G:O2'	1:A:1301:U:P	2.62	0.57
1:A:270:A:C6	1:A:271:C:C4	2.92	0.57
1:A:360:A:N1	1:A:361:G:C2	2.72	0.57
1:A:538:G:OP2	15:O:115:LYS:HD2	2.03	0.57
1:A:587:G:C2	1:A:755:G:C5	2.92	0.57
1:A:626:U:H2'	1:A:627:G:H8	1.69	0.57
1:A:671:G:H2'	1:A:672:U:H6	1.69	0.57
1:A:688:G:H2'	1:A:689:C:H5'	1.84	0.57
1:A:907:A:C2'	1:A:908:A:H8	2.17	0.57
1:A:991:U:C4	1:A:1212:U:O2	2.57	0.57
5:E:111:ARG:NH1	5:E:111:ARG:HA	2.06	0.57
5:E:153:ARG:HH12	5:E:156:LYS:HG3	1.68	0.57
5:E:163:PHE:HZ	5:E:201:ILE:HG12	1.69	0.57
5:E:74:LYS:HD3	5:E:75:LYS:N	2.19	0.57
6:F:147:LYS:HA	6:F:147:LYS:HE3	1.86	0.57
6:F:142:MET:HG2	6:F:170:GLN:HG3	1.86	0.57
6:F:186:PHE:CD1	6:F:187:ALA:N	2.72	0.57
7:G:110:PHE:O	7:G:161:ASN:ND2	2.35	0.57
7:G:132:ARG:O	7:G:133:VAL:HG23	2.04	0.57
7:G:64:LEU:HD11	7:G:75:PHE:CZ	2.39	0.57
9:I:38:GLU:OE2	9:I:64:GLN:NE2	2.36	0.57
10:J:72:ARG:HH11	10:J:72:ARG:HB3	1.69	0.57
10:J:87:VAL:HG22	10:J:151:TYR:O	2.04	0.57
13:M:24:VAL:CG2	13:M:34:VAL:HG11	2.24	0.57
1:A:375:U:C3'	19:S:6:LEU:HD21	2.34	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:60:ILE:HG23	20:T:72:ARG:HG3	1.87	0.57
23:W:26:ASN:CB	23:W:71:THR:HG22	2.34	0.57
1:A:562:C:O2'	15:O:15:ARG:NH1	2.36	0.57
1:A:750:G:N2	18:R:23:GLY:O	2.37	0.57
14:N:114:VAL:CG2	14:N:115:PRO:HD2	2.32	0.57
1:A:1058:G:H2'	1:A:1059:C:C6	2.39	0.57
1:A:1192:C:H6	1:A:1192:C:H3'	1.69	0.57
1:A:1193:G:C8	1:A:1193:G:H3'	2.40	0.57
1:A:1261:A:N6	1:A:1274:G:C1'	2.67	0.57
1:A:1265:G:O6	1:A:1266:G:N2	2.37	0.57
1:A:1271:G:OP1	1:A:1314:C:C5'	2.47	0.57
1:A:1276:G:H2'	1:A:1277:C:O4'	2.04	0.57
1:A:1305:G:OP1	24:X:2:GLY:HA3	2.04	0.57
1:A:1319:A:N7	1:A:1323:G:C5	2.71	0.57
1:A:1347:G:H22	1:A:1373:G:C2'	2.17	0.57
1:A:1440:C:OP2	1:A:1440:C:C6	2.58	0.57
1:A:1460:A:C2	1:A:1461:G:H1'	2.39	0.57
1:A:243:A:O2'	1:A:244:U:OP2	2.16	0.57
1:A:40:C:C2	1:A:41:G:C8	2.91	0.57
1:A:448:A:OP2	1:A:485:G:N2	2.37	0.57
1:A:44:G:N2	1:A:45:U:H1'	2.20	0.57
1:A:566:G:H8	1:A:566:G:O5'	1.87	0.57
1:A:717:C:H4'	14:N:117:ASN:CB	2.34	0.57
1:A:781:A:N6	1:A:802:A:C4	2.72	0.57
1:A:792:A:C2	1:A:794:A:C2	2.92	0.57
1:A:818:G:H3'	1:A:819:A:C5'	2.34	0.57
1:A:862:C:N4	1:A:863:U:O4	2.37	0.57
1:A:922:G:H5''	8:H:20:GLN:HE21	1.66	0.57
1:A:975:A:H4'	1:A:976:G:O5'	2.04	0.57
5:E:70:PHE:CE2	5:E:163:PHE:HB3	2.38	0.57
5:E:23:ARG:NH1	5:E:24:TRP:N	2.46	0.57
7:G:8:VAL:C	7:G:10:ARG:H	2.05	0.57
7:G:145:GLU:HB3	7:G:184:LYS:HG2	1.84	0.57
1:A:939:G:C5'	10:J:102:ARG:HH22	2.16	0.57
1:A:1240:U:H2'	10:J:32:ARG:NE	2.18	0.57
11:K:102:ARG:NE	11:K:105:ARG:HH11	2.02	0.57
11:K:18:ARG:HH11	11:K:18:ARG:CB	2.18	0.57
11:K:20:TYR:HD1	11:K:65:TYR:CE2	2.22	0.57
12:L:28:VAL:HG11	12:L:36:TYR:CB	2.34	0.57
12:L:17:VAL:CA	12:L:63:ILE:HG23	2.32	0.57
12:L:4:TYR:CD2	12:L:88:TYR:HB2	2.39	0.57
13:M:3:LYS:N	13:M:3:LYS:CD	2.67	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:99:GLN:O	14:N:102:GLY:CA	2.51	0.57
15:O:33:ARG:O	15:O:85:ILE:HG22	2.04	0.57
6:F:33:LEU:HD11	17:Q:54:PRO:HD2	1.85	0.57
1:A:659:U:OP1	18:R:9:GLN:NE2	2.37	0.57
19:S:53:VAL:HG12	19:S:78:GLY:O	2.04	0.57
20:T:11:VAL:O	20:T:12:SER:CB	2.51	0.57
1:A:435:C:O2'	1:A:436:C:H5'	2.03	0.57
10:J:126:ASP:HA	10:J:131:LYS:CE	2.34	0.57
3:D:59:U:H2'	3:D:59:U:O2	2.04	0.57
3:D:13:C:O2	3:D:13:C:H2'	2.05	0.57
1:A:1115:C:H2'	1:A:1116:C:H6	1.67	0.57
1:A:1158:C:C2'	1:A:1158:C:O2	2.52	0.57
1:A:1239:A:H62	1:A:1299:A:H61	1.51	0.57
1:A:1330:U:H4'	16:P:23:TYR:OH	2.03	0.57
1:A:1388:C:C2	1:A:1389:C:C5	2.92	0.57
1:A:266:G:C3'	20:T:67:LYS:HD3	2.35	0.57
1:A:458:C:C2	1:A:475:G:C2	2.92	0.57
1:A:51:A:C2	1:A:116:A:C1'	2.87	0.57
1:A:610:G:N2	1:A:611:A:C1'	2.67	0.57
1:A:646:U:H2'	1:A:647:C:C6	2.38	0.57
1:A:828:A:O4'	1:A:859:A:C2	2.57	0.57
1:A:933:G:N2	1:A:935:A:O4'	2.37	0.57
5:E:166:ASP:O	5:E:169:LYS:HB3	2.04	0.57
5:E:69:LEU:O	5:E:162:ILE:HB	2.04	0.57
6:F:153:VAL:HA	6:F:198:VAL:HG12	1.85	0.57
6:F:142:MET:HG2	6:F:170:GLN:CD	2.25	0.57
6:F:20:SER:HB2	6:F:40:ARG:HH22	1.69	0.57
7:G:104:VAL:O	7:G:105:VAL:C	2.40	0.57
7:G:146:ILE:HD12	7:G:146:ILE:H	1.68	0.57
7:G:98:GLU:HA	7:G:103:ASN:HD22	1.62	0.57
10:J:143:ARG:NH1	10:J:144:MET:HG2	2.18	0.57
12:L:111:ARG:O	12:L:113:LYS:NZ	2.33	0.57
13:M:94:VAL:HG12	13:M:95:GLU:N	2.14	0.57
14:N:83:ILE:N	14:N:83:ILE:HD12	2.19	0.57
16:P:23:TYR:CE2	16:P:70:LEU:HD13	2.39	0.57
19:S:20:VAL:CG1	19:S:21:VAL:H	2.15	0.57
19:S:54:GLU:CD	19:S:54:GLU:C	2.59	0.57
21:U:53:ARG:HH22	21:U:60:GLY:CA	2.16	0.57
24:X:7:ARG:O	24:X:12:LYS:HD3	2.04	0.57
1:A:1447:G:H8	1:A:1447:G:O5'	1.88	0.57
1:A:1040:U:H2'	1:A:1041:A:H8	1.69	0.57
1:A:90:C:O2'	1:A:91:C:C5'	2.53	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:18:VAL:O	15:O:19:ARG:CG	2.52	0.57
1:A:748:C:O5'	1:A:748:C:H6	1.85	0.57
15:O:103:GLY:HA2	15:O:108:ALA:HA	1.84	0.57
1:A:1101:A:O2'	1:A:1102:A:H8	1.86	0.57
1:A:1307:U:H6	1:A:1307:U:O5'	1.87	0.57
1:A:1237:C:C4'	1:A:1334:G:N2	2.67	0.57
1:A:1433:A:N1	1:A:1434:A:N3	2.52	0.57
1:A:266:G:H8	20:T:67:LYS:NZ	1.88	0.57
1:A:306:G:H2'	1:A:307:C:H6	1.69	0.57
1:A:458:C:C4	1:A:475:G:C6	2.92	0.57
1:A:558:G:C5	1:A:559:A:C2	2.93	0.57
1:A:654:G:H1	1:A:754:C:N4	2.03	0.57
1:A:831:U:H2'	1:A:832:C:C6	2.38	0.57
1:A:922:G:O2'	1:A:923:A:H5'	2.04	0.57
1:A:955:U:H2'	1:A:956:U:C6	2.39	0.57
1:A:990:C:H2'	1:A:991:U:O4'	2.05	0.57
5:E:115:LEU:HD22	5:E:149:LEU:HD13	1.86	0.57
6:F:25:GLY:N	6:F:28:GLN:NE2	2.52	0.57
6:F:63:ASN:O	6:F:99:VAL:HG12	2.05	0.57
7:G:129:ASN:OD1	7:G:144:ASP:HB3	2.04	0.57
4:I:25:A:C2	8:H:15:ARG:HB2	2.39	0.57
1:A:923:A:OP1	8:H:21:ALA:CB	2.50	0.57
8:H:39:GLY:O	8:H:69:VAL:HG23	2.04	0.57
9:I:78:GLU:O	9:I:81:ILE:CD1	2.53	0.57
10:J:12:LEU:HB2	10:J:24:THR:HG21	1.86	0.57
10:J:140:ASP:O	10:J:144:MET:HG3	2.03	0.57
10:J:149:ARG:HG2	14:N:59:TYR:OH	2.04	0.57
10:J:27:ILE:HG23	10:J:43:PHE:CB	2.35	0.57
8:H:151:LEU:HD13	11:K:65:TYR:O	2.04	0.57
11:K:97:VAL:HG13	11:K:98:LYS:N	2.19	0.57
12:L:67:GLY:C	12:L:73:GLN:NE2	2.58	0.57
13:M:4:ILE:HG12	13:M:99:LYS:O	2.05	0.57
14:N:54:ARG:O	14:N:57:THR:N	2.37	0.57
18:R:76:GLU:HG3	18:R:77:ARG:H	1.69	0.57
19:S:19:ILE:O	19:S:36:ILE:O	2.23	0.57
19:S:21:VAL:HG23	19:S:34:GLU:O	2.04	0.57
19:S:4:ILE:CG1	19:S:66:PRO:HB3	2.33	0.57
20:T:55:ASP:HB3	20:T:57:VAL:CG1	2.34	0.57
23:W:44:ALA:HB1	23:W:92:LEU:CG	2.35	0.57
24:X:6:ARG:HG3	24:X:7:ARG:H	1.69	0.57
2:C:68:C:H2'	2:C:69:C:C6	2.39	0.57
2:C:27:U:H2'	2:C:28:C:C6	2.40	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:75:C:H5''	3:D:76:A:HO2'	1.70	0.57
1:A:1010:G:H2'	1:A:1011:G:H8	1.69	0.57
1:A:1542:U:H2'	1:A:1542:U:O2	2.02	0.57
1:A:1064:G:N3	1:A:1066:C:C4	2.72	0.57
1:A:1169:A:C2	1:A:1170:A:C2	2.91	0.57
1:A:1198:G:C2'	1:A:1199:U:H5'	2.34	0.57
1:A:1200:C:C5'	1:A:1202:G:P	2.91	0.57
1:A:1230:C:O2'	1:A:1231:G:H5'	2.04	0.57
1:A:1239:A:C8	1:A:1241:G:H1'	2.33	0.57
1:A:1250:A:OP1	12:L:66:ARG:HD2	2.04	0.57
1:A:1324:A:C2	1:A:1325:C:C6	2.92	0.57
1:A:135:C:H3'	1:A:135:C:C6	2.39	0.57
1:A:1507:A:H2'	1:A:1508:G:H8	1.69	0.57
1:A:411:A:C6	1:A:429:U:C4	2.92	0.57
1:A:468:A:N7	1:A:474:G:N7	2.52	0.57
1:A:486:U:H2'	1:A:487:A:O5'	2.04	0.57
1:A:688:G:C4	1:A:700:G:N2	2.73	0.57
1:A:791:G:N2	1:A:1498:U:OP1	2.38	0.57
1:A:922:G:H21	1:A:923:A:C1'	2.17	0.57
1:A:970:C:H5'	1:A:972:C:C6	2.39	0.57
3:D:34:G:N3	3:D:35:A:H5''	2.19	0.57
5:E:69:LEU:O	5:E:162:ILE:HA	2.04	0.57
5:E:22:LYS:O	5:E:23:ARG:C	2.43	0.57
5:E:92:TYR:HE2	5:E:151:GLY:HA2	1.69	0.57
6:F:205:GLY:O	6:F:206:GLU:CB	2.48	0.57
6:F:24:ALA:HB1	6:F:28:GLN:OE1	2.04	0.57
6:F:99:VAL:HG23	6:F:100:ALA:N	2.18	0.57
8:H:98:THR:HB	8:H:117:ASP:HA	1.84	0.57
8:H:135:THR:O	8:H:136:MET:C	2.41	0.57
8:H:76:ILE:CG2	8:H:142:LEU:HD22	2.34	0.57
8:H:11:ILE:CG2	8:H:31:LEU:HD13	2.34	0.57
9:I:41:GLU:HB2	9:I:62:TRP:CE3	2.40	0.57
9:I:37:VAL:HA	9:I:65:VAL:HB	1.86	0.57
15:O:7:ILE:H	15:O:7:ILE:CD1	1.98	0.57
21:U:63:GLN:HA	21:U:66:LEU:HG	1.85	0.57
23:W:51:GLU:HA	23:W:54:LYS:CE	2.34	0.57
7:G:47:ARG:HB2	7:G:47:ARG:HH11	1.68	0.57
2:C:18:G:C4	2:C:58:A:N3	2.73	0.57
2:C:44:A:N1	2:C:45:G:N3	2.53	0.57
2:C:8:U:O4'	2:C:48:C:O2'	2.22	0.57
3:D:1:G:N1	3:D:73:A:C6	2.73	0.57
1:A:1097:C:H5'	1:A:1170:A:H4'	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:114:U:O2'	1:A:115:G:H5'	2.04	0.57
1:A:1188:A:H3'	1:A:1189:C:C5	2.39	0.57
1:A:118:U:C5	1:A:288:A:C2	2.93	0.57
1:A:1202:G:H4'	17:Q:29:ARG:HE	1.69	0.57
1:A:1208:C:O2'	1:A:1209:C:H5'	2.05	0.57
1:A:1406:U:H1'	1:A:1518:A:C4'	2.35	0.57
1:A:522:C:N4	1:A:523:A:C6	2.72	0.57
1:A:564:C:C5	1:A:565:U:C5	2.93	0.57
1:A:594:G:H2'	1:A:595:G:C1'	2.35	0.57
1:A:607:A:N3	1:A:608:A:C1'	2.68	0.57
1:A:754:C:C2'	1:A:754:C:O2	2.53	0.57
1:A:730:G:O2'	1:A:766:A:O4'	2.22	0.57
1:A:20:U:C5	1:A:916:G:C2	2.92	0.57
1:A:950:U:O2	1:A:951:G:C8	2.58	0.57
1:A:981:U:C2	1:A:982:U:C4	2.92	0.57
5:E:102:LEU:HD21	5:E:173:ALA:HB1	1.86	0.57
5:E:53:ARG:NH2	5:E:199:TYR:CE2	2.72	0.57
5:E:239:VAL:O	5:E:240:GLN:CG	2.53	0.57
6:F:7:PRO:O	6:F:10:PHE:HB3	2.05	0.57
7:G:152:SER:C	7:G:154:ASN:H	2.07	0.57
7:G:185:PHE:CE2	7:G:187:ARG:O	2.53	0.57
7:G:61:LYS:CA	7:G:203:VAL:HG22	2.34	0.57
7:G:31:CYS:O	7:G:33:MET:CG	2.52	0.57
9:I:52:ILE:HG22	9:I:53:ALA:N	2.19	0.57
9:I:78:GLU:O	9:I:81:ILE:HD12	2.04	0.57
9:I:94:GLN:HB3	21:U:32:ARG:HH21	1.69	0.57
10:J:49:ILE:HG22	10:J:125:MET:HE3	1.85	0.57
11:K:8:ASP:O	11:K:12:ARG:HG2	2.05	0.57
11:K:38:ILE:HD13	11:K:38:ILE:N	2.15	0.57
11:K:88:LYS:N	11:K:88:LYS:NZ	2.43	0.57
12:L:98:PRO:C	12:L:100:GLY:N	2.57	0.57
14:N:42:TRP:HZ3	14:N:47:VAL:HG22	1.68	0.57
14:N:15:ALA:O	14:N:79:SER:HB3	2.04	0.57
15:O:83:VAL:HG23	15:O:104:VAL:O	2.04	0.57
15:O:75:HIS:CG	15:O:76:ASN:H	2.22	0.57
1:A:1225:A:H5''	16:P:103:THR:OG1	2.04	0.57
16:P:14:ARG:H	16:P:44:ARG:CD	2.18	0.57
20:T:57:VAL:HG21	20:T:73:VAL:CG1	2.35	0.57
23:W:42:GLN:CA	23:W:42:GLN:HE21	2.16	0.57
1:A:1286:A:C5'	24:X:25:LYS:HE2	2.35	0.57
1:A:1446:A:O2'	1:A:1447:G:OP1	2.22	0.57
1:A:85:U:H2'	1:A:86:U:O4'	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:87:A:N7	1:A:88:C:N3	2.52	0.57
1:A:1077:G:H1'	1:A:1081:G:N2	2.20	0.57
1:A:1113:C:H6	1:A:1113:C:O5'	1.87	0.57
1:A:1129:C:H4'	1:A:1130:A:H8	1.69	0.57
1:A:1206:G:C2	1:A:1207:G:C4	2.92	0.57
1:A:1299:A:N7	1:A:1301:U:C1'	2.68	0.57
1:A:130:A:O2'	1:A:131:C:OP2	2.20	0.57
1:A:1371:G:OP2	12:L:11:LYS:NZ	2.22	0.57
1:A:1510:U:C2	1:A:1526:G:N2	2.72	0.57
1:A:20:U:H2'	1:A:20:U:O2	2.04	0.57
1:A:20:U:O4'	1:A:572:A:C2	2.58	0.57
1:A:327:A:O3'	1:A:328:C:O4'	2.23	0.57
1:A:411:A:C6	1:A:429:U:C5	2.93	0.57
1:A:640:A:H2'	1:A:641:U:O4'	2.04	0.57
1:A:64:G:N2	1:A:67:C:N4	2.52	0.57
1:A:806:C:H2'	1:A:807:A:H8	1.70	0.57
1:A:873:A:H5'	1:A:874:G:OP2	2.05	0.57
1:A:985:C:H2'	1:A:986:A:H8	1.70	0.57
5:E:25:ASN:HD22	5:E:26:PRO:N	2.03	0.57
6:F:40:ARG:HG3	6:F:40:ARG:HH11	1.70	0.57
6:F:59:ARG:HH21	6:F:64:VAL:HA	1.68	0.57
7:G:68:TYR:HE1	7:G:114:ARG:HH12	1.52	0.57
7:G:61:LYS:HZ1	7:G:65:ARG:CD	2.17	0.57
9:I:10:LEU:H	9:I:10:LEU:HD23	1.70	0.57
9:I:79:LEU:CB	9:I:88:VAL:HG21	2.33	0.57
11:K:118:VAL:HG12	11:K:119:LEU:N	2.19	0.57
11:K:4:ASP:OD2	11:K:7:ALA:CB	2.53	0.57
13:M:3:LYS:HE3	13:M:3:LYS:CA	2.34	0.57
14:N:65:ALA:HB1	14:N:98:LEU:CD2	2.35	0.57
15:O:77:LEU:HA	15:O:81:SER:OG	2.04	0.57
16:P:114:ARG:HG2	16:P:114:ARG:NH1	2.20	0.57
17:Q:10:ALA:HA	17:Q:12:ARG:NE	2.12	0.57
18:R:71:GLN:HA	18:R:75:PRO:CA	2.35	0.57
23:W:34:LYS:HB3	23:W:38:LYS:HE3	1.86	0.57
2:C:10:G:C2	2:C:11:A:N7	2.73	0.57
1:A:25:C:O2'	1:A:524:G:N2	2.38	0.57
1:A:1215:G:N3	1:A:1215:G:H2'	2.20	0.57
1:A:224:C:H2'	1:A:225:C:C6	2.39	0.57
1:A:246:A:O2'	1:A:247:G:P	2.62	0.57
1:A:30:U:O2'	1:A:31:G:OP1	2.21	0.57
1:A:32:A:N6	1:A:553:A:N6	2.52	0.57
1:A:390:C:H2'	1:A:391:G:C8	2.35	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:42:G:C4	1:A:43:C:C5	2.93	0.57
1:A:919:A:C6	1:A:920:U:O4	2.57	0.57
5:E:118:LEU:HD22	5:E:142:LEU:HD12	1.87	0.57
6:F:10:PHE:CZ	6:F:175:LEU:O	2.58	0.57
6:F:142:MET:O	6:F:145:GLY:O	2.22	0.57
7:G:8:VAL:C	7:G:10:ARG:N	2.57	0.57
8:H:14:ARG:HG3	8:H:14:ARG:O	2.03	0.57
8:H:52:PRO:HD2	8:H:53:LEU:HD23	1.87	0.57
9:I:11:ASN:ND2	9:I:12:PRO:HD2	2.20	0.57
9:I:14:LEU:O	9:I:15:ASP:HB3	2.05	0.57
9:I:52:ILE:HD13	9:I:87:ARG:HE	1.69	0.57
9:I:45:LEU:HB3	9:I:58:GLY:O	2.05	0.57
8:H:79:GLU:O	11:K:104:ARG:NH1	2.37	0.57
14:N:23:ALA:CB	14:N:28:THR:HG23	2.33	0.57
14:N:85:ARG:HG3	14:N:85:ARG:HH11	1.68	0.57
15:O:41:ARG:HG2	15:O:42:THR:H	1.70	0.57
17:Q:13:THR:O	17:Q:15:LYS:N	2.38	0.57
18:R:9:GLN:O	18:R:12:ILE:N	2.38	0.57
1:A:667:G:H5'	18:R:51:HIS:CD2	2.39	0.57
21:U:18:ARG:HH11	21:U:18:ARG:HG2	1.69	0.57
21:U:61:LYS:HA	21:U:64:ARG:HH12	1.68	0.57
23:W:46:GLU:OE2	23:W:48:LYS:HD3	2.05	0.57
1:A:1041:A:C6	1:A:1042:G:N7	2.73	0.57
1:A:109:A:C2	1:A:327:A:N1	2.73	0.57
1:A:1287:A:C6	1:A:1288:A:N6	2.72	0.57
1:A:1468:A:H2'	1:A:1469:G:C5'	2.34	0.57
1:A:1526:G:H2'	1:A:1527:C:H6	1.70	0.57
1:A:152:A:N6	1:A:169:C:N3	2.53	0.57
1:A:187:C:H3'	1:A:188:U:H6	1.70	0.57
1:A:225:C:C2'	1:A:226:G:C5'	2.83	0.57
1:A:564:C:N4	1:A:565:U:O4	2.38	0.57
1:A:690:G:C2	1:A:691:G:H1'	2.40	0.57
1:A:744:C:H2'	1:A:745:C:C6	2.40	0.57
5:E:163:PHE:HD2	5:E:164:VAL:N	2.03	0.57
5:E:88:ALA:HB1	5:E:222:ILE:HD11	1.87	0.57
7:G:191:ARG:HE	7:G:191:ARG:CA	2.17	0.57
7:G:30:LYS:CA	7:G:34:GLU:HB3	2.35	0.57
7:G:79:PHE:HE1	7:G:204:ILE:HG23	1.68	0.57
8:H:114:GLY:C	8:H:115:VAL:HG22	2.24	0.57
9:I:11:ASN:HD22	9:I:86:ARG:HH22	1.53	0.57
9:I:95:GLU:CD	9:I:95:GLU:N	2.57	0.57
1:A:590:C:O3'	11:K:30:ARG:NH2	2.37	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:642:A:HO2'	11:K:31:PHE:HE1	1.49	0.57
14:N:44:SER:H	14:N:47:VAL:CG2	2.17	0.57
14:N:48:ILE:HG23	14:N:63:LEU:CD1	2.33	0.57
16:P:13:LYS:O	16:P:18:ALA:HB2	2.04	0.57
1:A:1188:A:H4'	17:Q:58:LYS:HZ3	1.70	0.57
19:S:27:LYS:H	19:S:27:LYS:NZ	2.03	0.57
20:T:93:GLN:O	20:T:95:TYR:N	2.38	0.57
22:V:18:LYS:O	22:V:22:LEU:HB3	2.05	0.57
22:V:77:THR:HG23	22:V:78:ARG:N	2.20	0.57
22:V:79:THR:O	22:V:80:TYR:O	2.23	0.57
1:A:325:A:OP2	23:W:70:SER:CB	2.53	0.57
1:A:1198:G:O2'	1:A:1199:U:H5'	2.05	0.57
1:A:1238:A:N7	1:A:1303:C:H1'	2.20	0.57
1:A:130:A:OP2	1:A:189:U:C4	2.58	0.57
1:A:320:C:O2'	1:A:321:A:C5'	2.53	0.57
1:A:518:C:O2'	1:A:519:C:P	2.63	0.57
1:A:739:C:C2'	1:A:740:U:H5'	2.35	0.57
1:A:790:A:H2'	1:A:791:G:O5'	2.05	0.57
1:A:894:G:H2'	1:A:895:G:C8	2.37	0.57
5:E:131:PRO:HB2	5:E:134:GLU:HG2	1.87	0.57
5:E:161:ALA:HA	5:E:183:PRO:CB	2.33	0.57
6:F:139:GLN:O	6:F:143:GLU:HB2	2.05	0.57
7:G:120:LEU:HG	7:G:121:VAL:N	2.20	0.57
1:A:404:U:O4	7:G:2:GLY:N	2.38	0.57
7:G:61:LYS:HG3	7:G:207:TYR:CZ	2.40	0.57
8:H:78:HIS:CD2	8:H:78:HIS:H	2.23	0.57
9:I:94:GLN:NE2	9:I:94:GLN:N	2.53	0.57
11:K:36:LEU:HD23	11:K:36:LEU:N	2.11	0.57
11:K:67:PRO:C	11:K:68:ARG:O	2.40	0.57
11:K:77:GLU:OE2	11:K:78:GLN:N	2.37	0.57
12:L:113:LYS:H	12:L:113:LYS:CD	2.15	0.57
12:L:49:PRO:HG3	12:L:81:ILE:HB	1.87	0.57
16:P:9:ILE:O	16:P:9:ILE:HD12	2.05	0.57
17:Q:39:LEU:HB2	17:Q:44:LEU:HB2	1.86	0.57
18:R:6:GLU:OE2	18:R:6:GLU:N	2.22	0.57
19:S:6:LEU:CD2	19:S:17:TYR:CD2	2.88	0.57
19:S:44:THR:CG2	19:S:45:THR:N	2.55	0.57
21:U:18:ARG:HH22	21:U:21:LYS:CB	2.16	0.57
21:U:50:ILE:HG22	21:U:50:ILE:O	2.05	0.57
24:X:14:TRP:CH2	24:X:15:ARG:CZ	2.88	0.57
2:C:19:G:H5'	2:C:20:U:OP2	2.05	0.57
3:D:73:A:C2'	3:D:74:C:H5''	2.25	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:85:U:H2'	1:A:86:U:H5'	1.86	0.57
6:F:160:ALA:C	6:F:162:GLN:N	2.56	0.57
1:A:1257:U:O2'	1:A:1258:G:OP2	2.22	0.56
1:A:975:A:N7	1:A:1365:G:N2	2.53	0.56
1:A:171:A:H8	1:A:171:A:O5'	1.88	0.56
1:A:242:C:H2'	1:A:243:A:H5'	1.87	0.56
1:A:283:C:O2	1:A:283:C:C2'	2.53	0.56
1:A:428:G:H5'	1:A:430:A:C1'	2.35	0.56
1:A:448:A:H2'	1:A:449:C:C6	2.40	0.56
1:A:43:C:H2'	1:A:44:G:H8	1.69	0.56
5:E:182:ILE:N	5:E:182:ILE:HD13	2.16	0.56
5:E:178:ARG:NH1	5:E:196:LEU:O	2.37	0.56
5:E:75:LYS:CA	5:E:75:LYS:NZ	2.66	0.56
6:F:156:ARG:HH12	6:F:161:GLU:C	2.09	0.56
1:A:409:G:C5'	7:G:24:GLU:OE1	2.47	0.56
1:A:1081:G:OP2	8:H:27:ARG:CD	2.52	0.56
9:I:2:ARG:HG3	9:I:69:GLU:HG2	1.87	0.56
10:J:45:ASP:HA	10:J:48:LYS:CE	2.35	0.56
11:K:60:ARG:HG2	11:K:62:TYR:CZ	2.39	0.56
12:L:5:TYR:CD1	12:L:18:PHE:CZ	2.92	0.56
12:L:55:ALA:HB1	12:L:58:HIS:ND1	2.20	0.56
16:P:36:LYS:HD3	16:P:59:TYR:HE1	1.70	0.56
18:R:79:ARG:HH11	18:R:79:ARG:CB	2.18	0.56
20:T:46:ASP:OD1	20:T:51:TYR:HD1	1.87	0.56
21:U:41:LYS:C	21:U:44:LEU:HD23	2.25	0.56
22:V:42:PRO:O	22:V:44:MET:N	2.38	0.56
23:W:44:ALA:HB3	23:W:91:LEU:CD1	2.15	0.56
1:A:1032:A:H2'	1:A:1032(A):G:O4'	2.05	0.56
4:1:14:A:H3'	4:1:14:A:C4	2.39	0.56
4:1:15:A:C5'	4:1:15:A:C8	2.81	0.56
1:A:1065:U:OP2	1:A:1190:G:N2	2.38	0.56
1:A:1242:C:H5''	24:X:10:ARG:NH1	2.19	0.56
1:A:1492:A:C8	1:A:1493:A:N3	2.73	0.56
1:A:262:A:H2'	1:A:263:A:N7	2.18	0.56
1:A:39:G:C2'	1:A:40:C:O5'	2.53	0.56
1:A:482:A:C2'	1:A:482:A:N3	2.68	0.56
1:A:719:C:H1'	21:U:49:LYS:HB3	1.85	0.56
1:A:887:G:H2'	1:A:888:G:C8	2.37	0.56
1:A:933:G:OP2	10:J:3:ARG:CG	2.53	0.56
2:C:31:G:O3'	12:L:127:LYS:O	2.22	0.56
3:D:40:C:C2'	3:D:41:G:H5''	2.35	0.56
6:F:91:LEU:CD1	6:F:99:VAL:HG13	2.35	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:133:VAL:HG11	7:G:138:TYR:CD1	2.41	0.56
7:G:18:LYS:CG	7:G:33:MET:HB3	2.23	0.56
7:G:30:LYS:HZ3	7:G:35:ARG:NH1	2.02	0.56
7:G:61:LYS:HG3	7:G:207:TYR:OH	2.04	0.56
8:H:106:PRO:CB	8:H:120:THR:HG21	2.31	0.56
9:I:4:TYR:HB3	9:I:91:VAL:C	2.25	0.56
10:J:17:VAL:CG1	10:J:17:VAL:O	2.52	0.56
11:K:22:GLU:O	11:K:63:LEU:HD22	2.05	0.56
14:N:121:PRO:CG	14:N:125:PHE:HB2	2.35	0.56
15:O:83:VAL:HG13	15:O:84:LEU:N	2.19	0.56
1:A:1309:G:OP1	16:P:88:ARG:NH1	2.38	0.56
16:P:90:LEU:O	16:P:93:ARG:N	2.38	0.56
22:V:35:SER:C	22:V:37:ARG:H	2.09	0.56
7:G:163:GLU:HG3	7:G:164:ALA:N	2.18	0.56
5:E:35:GLU:O	5:E:36:ARG:NH1	2.38	0.56
1:A:562:C:O2	15:O:15:ARG:O	2.22	0.56
1:A:1069:C:C5	1:A:1094:G:O6	2.58	0.56
1:A:113:G:N2	1:A:315:A:C2	2.73	0.56
1:A:1181:G:O3'	1:A:1184:G:H5'	2.05	0.56
1:A:1184:G:C2	1:A:1185:G:C5	2.93	0.56
1:A:1185:G:N2	1:A:1186:G:H1'	2.21	0.56
1:A:1284:C:H2'	1:A:1285:A:N7	2.20	0.56
1:A:323:U:H5'	23:W:23:ARG:HB2	1.87	0.56
1:A:512:U:H2'	1:A:513:C:C6	2.41	0.56
1:A:557:G:H2'	1:A:558:G:C8	2.40	0.56
1:A:560:U:OP1	1:A:566:G:N2	2.38	0.56
1:A:571:U:C3'	1:A:572:A:C5'	2.71	0.56
1:A:752:G:O4'	1:A:752:G:OP2	2.23	0.56
1:A:755:G:O2'	11:K:1:MET:HE1	2.05	0.56
1:A:918:A:H2'	1:A:919:A:O4'	2.05	0.56
6:F:183:ASP:N	6:F:204:LEU:HD21	2.20	0.56
7:G:107:ARG:HD2	7:G:173:TRP:HZ2	1.69	0.56
8:H:18:ARG:HH21	8:H:25:ARG:CB	2.17	0.56
10:J:83:ALA:CB	10:J:85:TYR:HE2	2.17	0.56
11:K:64:LYS:HG2	11:K:79:VAL:CG2	2.14	0.56
13:M:81:THR:O	13:M:85:LEU:HD12	2.05	0.56
14:N:78:GLN:C	14:N:104:GLN:HB3	2.26	0.56
15:O:37:CYS:HB3	15:O:58:VAL:CG2	2.35	0.56
21:U:80:PRO:HB2	21:U:83:GLU:CG	2.35	0.56
22:V:19:VAL:HG22	22:V:43:GLU:OE1	2.06	0.56
24:X:5:ASP:O	24:X:7:ARG:HG3	2.05	0.56
1:A:1148:U:O2	1:A:1149:C:C6	2.59	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1192:C:C5	1:A:1193:G:C8	2.86	0.56
1:A:1197:G:C2'	1:A:1198:G:H5'	2.36	0.56
1:A:1205:U:H4'	6:F:195:VAL:CG1	2.29	0.56
1:A:1242:C:N4	1:A:1243:C:N4	2.53	0.56
1:A:1494:G:H2'	1:A:1495:U:C5	2.40	0.56
1:A:151:A:C6	1:A:152:A:N3	2.73	0.56
1:A:928:G:H4'	1:A:1533:C:C2	2.41	0.56
1:A:277:C:C4	1:A:278:G:N7	2.74	0.56
1:A:307:C:C6	1:A:307:C:O5'	2.58	0.56
1:A:410:G:H1'	1:A:432:A:H61	1.69	0.56
1:A:455:C:N3	1:A:477:G:O6	2.38	0.56
1:A:476:G:H21	1:A:477:G:H1'	1.70	0.56
1:A:451:A:C8	1:A:481:G:N1	2.73	0.56
1:A:438:G:O2'	1:A:494:U:O4	2.19	0.56
1:A:550:G:C6	1:A:551:U:O4	2.58	0.56
1:A:665:A:H2'	1:A:725:G:H22	1.67	0.56
1:A:667:G:H4'	18:R:51:HIS:CG	2.40	0.56
1:A:775:G:O2'	1:A:776:G:O5'	2.19	0.56
1:A:993:G:N2	1:A:995:C:H42	2.03	0.56
2:C:34:C:H6	2:C:34:C:O5'	1.88	0.56
5:E:150:SER:O	5:E:151:GLY:O	2.23	0.56
5:E:204:ASN:HB3	5:E:210:SER:OG	2.05	0.56
5:E:55:PHE:O	5:E:58:ILE:HB	2.05	0.56
5:E:82:ARG:HA	5:E:92:TYR:OH	2.06	0.56
6:F:108:ASN:HD22	6:F:111:LEU:HD13	1.69	0.56
7:G:22:LYS:CB	7:G:26:CYS:CB	2.82	0.56
1:A:9:G:OP2	8:H:122:GLU:OE1	2.23	0.56
12:L:23:ASN:ND2	12:L:57:GLY:O	2.39	0.56
1:A:718:G:C2	14:N:116:HIS:CE1	2.93	0.56
16:P:81:LEU:HA	16:P:84:ILE:HD11	1.86	0.56
21:U:46:GLU:O	21:U:48:GLY:N	2.36	0.56
21:U:68:LYS:O	21:U:71:LYS:HB2	2.05	0.56
22:V:17:GLU:OE1	22:V:18:LYS:N	2.38	0.56
1:A:1320:C:H6	22:V:70:LYS:CD	2.18	0.56
23:W:92:LEU:O	23:W:93:GLU:CG	2.52	0.56
2:C:75:C:H2'	2:C:76:A:O3'	2.05	0.56
2:C:19:G:O3'	2:C:20:U:C5	2.59	0.56
2:C:62:C:O2'	2:C:63:G:H5'	2.05	0.56
2:C:50:U:H2'	2:C:51:C:H6	1.70	0.56
2:C:70:G:N2	2:C:71:C:C2	2.74	0.56
3:D:48:C:N4	3:D:59:U:C2	2.74	0.56
1:A:1027:C:C4	1:A:1028:C:C5	2.92	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1299:A:N7	1:A:1301:U:H1'	2.20	0.56
1:A:1320:C:H3'	1:A:1321:C:C6	2.40	0.56
1:A:1346:A:C2	10:J:10:ARG:CZ	2.88	0.56
1:A:143:A:H2	1:A:220:G:H1	1.52	0.56
1:A:1451:A:OP1	1:A:1451:A:H8	1.88	0.56
1:A:158:G:O6	1:A:159:G:C5	2.58	0.56
1:A:294:U:H2'	1:A:294:U:O2	2.06	0.56
1:A:411:A:C5	1:A:429:U:C5	2.93	0.56
1:A:410:G:N1	1:A:429:U:O2	2.38	0.56
1:A:432:A:N7	1:A:433:C:C2	2.73	0.56
1:A:503:C:H2'	1:A:504:C:H6	1.70	0.56
1:A:514:C:O2'	1:A:515:G:H5'	2.05	0.56
1:A:418:C:O2'	1:A:540:G:H1'	2.05	0.56
1:A:574:A:H5''	1:A:575:G:OP2	2.06	0.56
1:A:696:A:C2	1:A:697:U:C1'	2.88	0.56
1:A:707:C:H2'	1:A:708:C:O5'	2.06	0.56
1:A:666:G:H5'	1:A:726:C:O2	2.05	0.56
1:A:948:C:O2'	1:A:949:A:C5'	2.53	0.56
5:E:142:LEU:C	5:E:142:LEU:HD23	2.25	0.56
5:E:178:ARG:HE	5:E:196:LEU:HD13	1.70	0.56
5:E:61:LEU:HA	5:E:64:ARG:HD2	1.86	0.56
6:F:184:TYR:HA	6:F:200:ALA:O	2.05	0.56
7:G:180:GLY:CA	7:G:182:LYS:NZ	2.68	0.56
7:G:144:ASP:HA	7:G:184:LYS:HD3	1.87	0.56
8:H:24:ARG:NH1	8:H:24:ARG:HG2	2.17	0.56
8:H:28:PHE:CD1	8:H:28:PHE:N	2.71	0.56
9:I:82:ARG:C	9:I:83:ASP:CG	2.64	0.56
10:J:26:PHE:O	10:J:30:ILE:HG13	2.05	0.56
11:K:46:LYS:HG3	11:K:64:LYS:CG	2.35	0.56
16:P:20:THR:HG23	16:P:25:ILE:O	2.05	0.56
6:F:6:HIS:CD2	17:Q:49:HIS:HB3	2.39	0.56
18:R:62:GLN:HA	18:R:65:ARG:HH22	1.67	0.56
18:R:69:TYR:O	18:R:70:LEU:C	2.41	0.56
18:R:7:GLU:HB3	18:R:10:LYS:HE3	1.88	0.56
18:R:9:GLN:O	18:R:12:ILE:HB	2.05	0.56
19:S:6:LEU:CG	19:S:17:TYR:HD2	2.17	0.56
19:S:71:ARG:HG3	19:S:80:PHE:HE1	1.69	0.56
20:T:3:LYS:NZ	20:T:62:SER:HA	2.21	0.56
22:V:40:ILE:HG21	22:V:62:ILE:CD1	2.34	0.56
22:V:43:GLU:OE2	22:V:47:HIS:NE2	2.37	0.56
23:W:13:LEU:H	23:W:13:LEU:CD1	2.09	0.56
23:W:57:ARG:HH21	23:W:100:ILE:CB	2.16	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:195:A:O5'	23:W:68:LYS:NZ	2.39	0.56
24:X:18:TYR:HD2	24:X:23:PRO:O	1.88	0.56
3:D:18:G:H2'	3:D:19:G:O4'	2.05	0.56
3:D:59:U:O2	3:D:59:U:C2'	2.52	0.56
3:D:63:G:C4	3:D:64:C:C5	2.93	0.56
1:A:1085:U:C5'	1:A:1094:G:N2	2.68	0.56
1:A:1326:C:H2'	1:A:1327:C:C6	2.40	0.56
1:A:1369:C:H2'	1:A:1370:G:O4'	2.05	0.56
1:A:1487:G:O2'	1:A:1488:G:H5'	2.05	0.56
1:A:255:G:P	20:T:66:SER:HB2	2.44	0.56
1:A:305:G:O2'	1:A:306:G:P	2.64	0.56
1:A:363:A:OP2	15:O:34:ARG:NE	2.38	0.56
1:A:601:C:O2'	1:A:602:A:H5'	2.05	0.56
1:A:658:G:H2'	1:A:659:U:O4'	2.05	0.56
1:A:21:G:N2	1:A:915:A:N6	2.53	0.56
1:A:935:A:H2'	1:A:936:C:C6	2.41	0.56
5:E:91:PRO:O	5:E:92:TYR:HB3	2.06	0.56
6:F:6:HIS:CD2	6:F:8:ILE:HG22	2.40	0.56
1:A:619:U:O2	7:G:133:VAL:HG22	2.06	0.56
7:G:186:LEU:CG	7:G:187:ARG:H	2.17	0.56
9:I:4:TYR:HD1	9:I:90:VAL:HG22	1.70	0.56
10:J:139:GLU:H	10:J:139:GLU:CD	2.09	0.56
10:J:88:PRO:HD2	10:J:152:ALA:HA	1.87	0.56
11:K:83:ILE:HA	11:K:136:GLU:O	2.05	0.56
11:K:48:TYR:C	11:K:49:GLU:HG3	2.24	0.56
11:K:70:GLN:HE21	11:K:72:PRO:HD2	1.66	0.56
12:L:37:PHE:HA	12:L:40:LEU:HD12	1.86	0.56
12:L:62:TYR:C	12:L:63:ILE:HD12	2.26	0.56
13:M:31:GLY:H	13:M:81:THR:HG23	1.70	0.56
13:M:26:ALA:O	13:M:84:GLN:NE2	2.39	0.56
14:N:42:TRP:HE3	14:N:43:SER:N	2.04	0.56
15:O:113:ARG:O	15:O:114:LYS:HG3	2.06	0.56
1:A:551:U:H4'	15:O:119:LYS:HE2	1.87	0.56
16:P:62:ASN:C	16:P:64:TRP:H	2.09	0.56
17:Q:22:THR:CB	17:Q:33:VAL:HG23	2.33	0.56
18:R:27:VAL:O	18:R:31:LEU:HD13	2.05	0.56
19:S:8:ARG:NH1	19:S:11:SER:N	2.53	0.56
14:N:84:VAL:CG1	21:U:88:LYS:HD3	2.23	0.56
22:V:44:MET:HA	22:V:47:HIS:CD2	2.40	0.56
23:W:16:HIS:O	23:W:19:SER:N	2.39	0.56
1:A:1085:U:O3'	1:A:1086:U:C6	2.58	0.56
1:A:1178:G:OP2	12:L:93:ARG:NH1	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1178:G:C4	1:A:1180:A:OP2	2.59	0.56
1:A:124:G:O2'	1:A:125:U:H5'	2.06	0.56
1:A:1278:U:C4'	1:A:1279:A:O4'	2.49	0.56
1:A:224:C:H2'	1:A:225:C:H6	1.69	0.56
1:A:22:G:C2'	1:A:23:C:O4'	2.53	0.56
1:A:295:C:O2'	1:A:296:U:H5'	2.04	0.56
1:A:373:A:C5	1:A:482:A:N7	2.74	0.56
1:A:390:C:N4	1:A:391:G:O6	2.38	0.56
1:A:565:U:N3	1:A:566:G:O6	2.39	0.56
1:A:58:C:H2'	1:A:59:A:H5'	1.88	0.56
1:A:622:A:C8	1:A:623:C:C5	2.93	0.56
1:A:675:A:C8	1:A:675:A:O5'	2.58	0.56
1:A:990:C:H2'	1:A:991:U:H1'	1.87	0.56
1:A:991:U:HO2'	1:A:993:G:H8	1.50	0.56
3:D:38:A:C6	3:D:39:U:C5	2.94	0.56
5:E:67:THR:HG21	5:E:155:LEU:CD1	2.22	0.56
7:G:148:VAL:HG12	7:G:152:SER:OG	2.05	0.56
7:G:19:LEU:HA	7:G:21:LEU:HG	1.86	0.56
8:H:121:LYS:NZ	8:H:121:LYS:CB	2.69	0.56
8:H:149:GLU:OE2	8:H:149:GLU:HA	2.04	0.56
8:H:84:PHE:HB2	8:H:134:ALA:HA	1.88	0.56
9:I:98:LEU:HD21	21:U:28:GLU:CB	2.36	0.56
1:A:1298:C:C4	10:J:114:ARG:HB3	2.40	0.56
10:J:89:MET:HB3	10:J:156:TRP:HB2	1.86	0.56
10:J:50:ILE:HG23	10:J:61:VAL:HG21	1.86	0.56
10:J:82:GLY:O	10:J:83:ALA:HB2	2.05	0.56
11:K:98:LYS:C	11:K:98:LYS:HZ3	2.07	0.56
14:N:20:TYR:O	14:N:30:VAL:HA	2.05	0.56
16:P:77:ASN:HA	16:P:80:ARG:CG	2.36	0.56
18:R:70:LEU:CD2	18:R:78:TYR:HA	2.35	0.56
22:V:18:LYS:CE	22:V:22:LEU:HD12	2.34	0.56
22:V:38:SER:O	22:V:70:LYS:HG3	2.05	0.56
22:V:40:ILE:CB	22:V:67:VAL:O	2.50	0.56
23:W:41:ILE:O	23:W:45:GLN:HG2	2.04	0.56
23:W:50:GLU:OE1	23:W:100:ILE:CG1	2.48	0.56
5:E:36:ARG:O	5:E:37:ASN:C	2.43	0.56
1:A:1059:C:O2'	13:M:53:PRO:HD3	2.06	0.56
1:A:1117:G:C5'	1:A:1118:C:OP2	2.54	0.56
1:A:1376:U:O4	10:J:10:ARG:HD2	2.05	0.56
1:A:1378:C:O2	1:A:1378:C:C2'	2.54	0.56
1:A:1452:C:H4'	1:A:1453:G:H5''	1.86	0.56
1:A:1490:C:OP2	1:A:1490:C:H6	1.89	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:59:A:H4'	1:A:388:G:C5'	2.35	0.56
1:A:389:A:N1	1:A:390:C:H1'	2.21	0.56
1:A:539:A:OP2	15:O:115:LYS:NZ	2.37	0.56
1:A:738:C:N4	1:A:739:C:H41	2.04	0.56
1:A:739:C:H2'	1:A:740:U:H5'	1.87	0.56
1:A:8:A:H5''	8:H:121:LYS:HD2	1.87	0.56
5:E:43:ASP:OD2	5:E:46:LYS:N	2.38	0.56
5:E:68:ILE:HD12	5:E:70:PHE:CZ	2.41	0.56
8:H:40:ARG:O	8:H:41:VAL:HG13	2.06	0.56
8:H:59:GLY:C	8:H:63:ARG:HH21	2.08	0.56
9:I:19:LEU:HD23	9:I:23:LYS:NZ	2.19	0.56
9:I:50:TYR:O	9:I:50:TYR:CD2	2.58	0.56
10:J:29:LYS:CD	10:J:101:LEU:HD22	2.20	0.56
10:J:54:THR:O	10:J:54:THR:HG23	2.06	0.56
11:K:25:ASP:HB3	11:K:58:TYR:CD1	2.40	0.56
12:L:34:ASN:OD1	12:L:43:ALA:CB	2.54	0.56
12:L:88:TYR:CD2	12:L:89:ASN:ND2	2.73	0.56
13:M:82:ILE:O	13:M:82:ILE:HG22	2.05	0.56
15:O:45:PRO:HB2	15:O:49:ASN:O	2.06	0.56
16:P:29:ARG:NE	16:P:64:TRP:HE1	2.03	0.56
17:Q:26:ARG:CB	17:Q:39:LEU:HD22	2.33	0.56
1:A:264:U:H2'	20:T:64:PRO:HB2	1.88	0.56
23:W:63:ILE:HG23	23:W:72:LEU:CD1	2.34	0.56
2:C:14:A:H2'	2:C:15:G:H8	1.71	0.56
2:C:49:G:C8	2:C:49:G:OP2	2.59	0.56
2:C:9:G:C2	2:C:46:G:C8	2.94	0.56
3:D:9:A:N3	3:D:46:G:C1'	2.68	0.56
1:A:1015:A:H2'	1:A:1016:A:C8	2.41	0.56
1:A:1084:G:C2	1:A:1085:U:O4	2.59	0.56
1:A:1157:A:O4'	1:A:1158:C:N3	2.39	0.56
1:A:1228:C:H2'	1:A:1228:C:O2	2.05	0.56
1:A:124:G:H2'	1:A:125:U:H6	1.70	0.56
1:A:1372:U:C5	1:A:1373:G:N7	2.74	0.56
1:A:924:C:O2'	1:A:1399:C:C5	2.58	0.56
1:A:172:A:N7	1:A:174:C:N3	2.54	0.56
1:A:186:C:H1'	23:W:85:MET:SD	2.45	0.56
1:A:183:G:O6	1:A:194:C:N3	2.39	0.56
1:A:410:G:N2	1:A:429:U:H3	2.02	0.56
1:A:503:C:OP2	15:O:116:SER:OG	2.11	0.56
1:A:518:C:C5	1:A:530:G:C5	2.94	0.56
1:A:601:C:H2'	1:A:602:A:C8	2.41	0.56
1:A:606:G:N2	1:A:631:G:H2'	2.16	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:728:A:N3	1:A:728:A:H2'	2.19	0.56
1:A:582:U:C4	1:A:760:G:O6	2.59	0.56
1:A:7:G:H21	8:H:121:LYS:CG	2.18	0.56
2:C:35:A:C8	2:C:35:A:C5'	2.88	0.56
3:D:35:A:H2'	3:D:36:A:C8	2.40	0.56
5:E:187:LEU:HD22	5:E:188:ALA:N	2.21	0.56
5:E:232:PRO:O	5:E:233:SER:OG	2.12	0.56
5:E:23:ARG:HH11	5:E:23:ARG:C	2.09	0.56
6:F:84:ILE:HG13	6:F:101:LEU:HD13	1.88	0.56
7:G:127:THR:O	7:G:146:ILE:CG2	2.54	0.56
7:G:3:ARG:NH2	7:G:74:GLN:OE1	2.38	0.56
8:H:48:ALA:CB	8:H:53:LEU:HB2	2.36	0.56
8:H:50:GLU:HB2	8:H:53:LEU:HG	1.87	0.56
9:I:65:VAL:HG23	9:I:66:GLU:O	2.06	0.56
10:J:49:ILE:HG21	10:J:121:ALA:HB1	1.86	0.56
11:K:33:GLU:HG2	11:K:59:LEU:CD1	2.29	0.56
11:K:26:VAL:C	11:K:58:TYR:CE1	2.79	0.56
14:N:126:ARG:HB3	14:N:126:ARG:NH1	2.20	0.56
18:R:53:HIS:CD2	18:R:57:LEU:HD11	2.41	0.56
2:C:18:G:C4	2:C:58:A:C2	2.94	0.56
3:D:72:C:OP2	3:D:72:C:H6	1.89	0.56
1:A:1066:C:C6	1:A:1067:A:N7	2.74	0.56
1:A:105:G:C6	1:A:106:C:N4	2.74	0.56
1:A:1259:C:H2'	1:A:1283:G:O2'	2.05	0.56
1:A:1327:C:O2'	1:A:1328:C:H5'	2.06	0.56
1:A:142:G:H2'	1:A:143:A:C8	2.41	0.56
1:A:328:C:O2'	1:A:329:A:P	2.63	0.56
1:A:354:G:C6	1:A:355:C:N4	2.74	0.56
1:A:389:A:C2	1:A:390:C:O4'	2.58	0.56
1:A:426:G:H2'	1:A:427:U:C6	2.41	0.56
1:A:449:C:H2'	1:A:450:G:C4'	2.36	0.56
1:A:575:G:O2'	1:A:576:G:O5'	2.24	0.56
1:A:628:G:C2'	1:A:629:G:H8	2.17	0.56
1:A:720:C:C6	1:A:720:C:O5'	2.59	0.56
1:A:872:A:C6	1:A:874:G:C5	2.94	0.56
1:A:877:C:H2'	1:A:878:G:C8	2.41	0.56
5:E:120:ALA:O	5:E:122:PHE:HB2	2.06	0.56
5:E:146:GLN:O	5:E:147:LYS:C	2.44	0.56
5:E:78:GLN:NE2	5:E:96:ARG:HH22	2.04	0.56
5:E:80:ILE:O	5:E:84:GLU:HB2	2.05	0.56
6:F:119:ARG:NH2	6:F:140:ARG:HH22	2.04	0.56
7:G:205:GLU:OE1	8:H:100:VAL:HG23	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:64:GLN:C	9:I:65:VAL:CG1	2.75	0.56
9:I:67:MET:HE3	9:I:67:MET:N	2.21	0.56
11:K:102:ARG:O	11:K:103:VAL:O	2.22	0.56
15:O:6:THR:O	15:O:10:LEU:CG	2.53	0.56
15:O:92:ASP:CB	15:O:93:LEU:HD23	2.36	0.56
16:P:24:GLY:HA3	16:P:66:LEU:HB2	1.86	0.56
18:R:36:ILE:CG1	18:R:59:MET:SD	2.94	0.56
18:R:5:LYS:HZ2	18:R:5:LYS:HB2	1.71	0.56
18:R:71:GLN:HA	18:R:75:PRO:HA	1.88	0.56
21:U:82:THR:O	21:U:82:THR:HG23	2.05	0.56
22:V:53:ASN:OD1	22:V:56:GLN:HB2	2.06	0.56
2:C:69:C:O2'	2:C:70:G:H5'	2.05	0.56
3:D:52:G:H2'	3:D:53:G:O4'	2.06	0.56
3:D:55:U:O2'	3:D:57:G:N7	2.39	0.56
1:A:1075:C:H4'	1:A:1101:A:H62	1.71	0.56
1:A:1090:U:O2'	1:A:1091:U:C5'	2.54	0.56
1:A:1101:A:O2'	1:A:1102:A:C8	2.59	0.56
1:A:1206:G:O2'	1:A:1207:G:H5'	2.06	0.56
1:A:1225:A:OP2	16:P:102:ARG:O	2.24	0.56
1:A:1431:C:C2'	1:A:1432:G:H5'	2.36	0.56
1:A:1437:C:C6	1:A:1437:C:OP2	2.59	0.56
1:A:179:A:C2'	1:A:180:U:H6	2.19	0.56
1:A:230:G:O2'	1:A:231:G:H5'	2.06	0.56
1:A:322:C:OP1	1:A:1436:U:H4'	2.06	0.56
1:A:342:C:H2'	1:A:343:U:H6	1.71	0.56
1:A:160:A:O4'	1:A:344:A:N7	2.38	0.56
1:A:392:G:O2'	1:A:393:A:H5'	2.05	0.56
1:A:543:C:N3	1:A:544:G:N7	2.54	0.56
1:A:675:A:O5'	1:A:675:A:H8	1.87	0.56
1:A:740:U:O2'	1:A:741:G:C5'	2.54	0.56
1:A:767:A:H3'	1:A:767:A:C8	2.41	0.56
1:A:800:G:H2'	1:A:801:U:OP2	2.06	0.56
1:A:812:C:H4'	1:A:813:U:H6	1.69	0.56
1:A:874:G:C2'	1:A:875:C:H5'	2.36	0.56
1:A:908:A:C2	1:A:909:A:N7	2.74	0.56
5:E:102:LEU:HD22	5:E:176:GLU:CB	2.35	0.56
5:E:92:TYR:O	5:E:152:PHE:CA	2.54	0.56
7:G:20:TYR:CB	7:G:26:CYS:O	2.54	0.56
7:G:59:ARG:HH11	7:G:59:ARG:HA	1.68	0.56
8:H:76:ILE:HD12	8:H:142:LEU:CD1	2.34	0.56
9:I:68:PRO:HB2	9:I:71:ARG:CG	2.36	0.56
9:I:89:MET:CB	21:U:76:LEU:HD21	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:3:ARG:O	10:J:4:ARG:CG	2.52	0.56
10:J:71:PRO:HD3	10:J:103:TRP:HZ3	1.71	0.56
10:J:89:MET:HB3	10:J:155:ARG:HH12	1.71	0.56
11:K:102:ARG:NH2	11:K:105:ARG:C	2.59	0.56
12:L:37:PHE:CD1	12:L:43:ALA:HA	2.40	0.56
12:L:46:ALA:HA	12:L:78:LYS:HB2	1.88	0.56
16:P:67:GLU:HG3	16:P:68:GLY:N	2.14	0.56
18:R:67:LEU:O	18:R:78:TYR:CE1	2.54	0.56
19:S:37:GLY:HA2	19:S:50:LYS:O	2.05	0.56
23:W:100:ILE:O	23:W:102:GLY:N	2.37	0.56
1:A:1074:G:C4	1:A:1075:C:C6	2.95	0.55
1:A:1229:A:OP1	16:P:116:THR:HG22	2.06	0.55
1:A:1259:C:C2	1:A:1283:G:H1'	2.41	0.55
1:A:1429:C:H2'	1:A:1430:C:C6	2.41	0.55
1:A:197:A:N6	1:A:220:G:O2'	2.36	0.55
1:A:230:G:H21	1:A:231:G:H1'	1.71	0.55
1:A:357:G:OP1	1:A:367:U:H3'	2.06	0.55
1:A:376:G:OP1	19:S:6:LEU:HD13	2.06	0.55
1:A:479:C:H6	1:A:479:C:O5'	1.89	0.55
1:A:608:A:H2'	1:A:608:A:N3	2.21	0.55
1:A:623:C:H2'	1:A:624:C:H6	1.71	0.55
1:A:675:A:N1	1:A:716:A:C2	2.74	0.55
1:A:791:G:OP2	1:A:792:A:OP2	2.23	0.55
1:A:795:C:H4'	1:A:1506:U:C2	2.41	0.55
1:A:855:G:H5''	1:A:871:U:O4	2.05	0.55
1:A:991:U:C2'	1:A:993:G:H8	2.19	0.55
5:E:23:ARG:NH1	5:E:23:ARG:HB2	2.21	0.55
5:E:21:ARG:HA	5:E:39:ILE:HA	1.87	0.55
5:E:7:VAL:HG23	5:E:8:LYS:N	2.21	0.55
6:F:11:ARG:NH1	6:F:15:THR:CG2	2.68	0.55
6:F:110:ASN:ND2	6:F:140:ARG:O	2.39	0.55
6:F:172:ARG:NH2	6:F:203:PHE:HE2	2.04	0.55
6:F:25:GLY:O	6:F:28:GLN:NE2	2.38	0.55
7:G:162:LEU:O	7:G:166:LYS:HG3	2.06	0.55
8:H:120:THR:O	8:H:120:THR:HG23	2.04	0.55
1:A:1194:U:C4'	8:H:22:GLY:O	2.52	0.55
9:I:62:TRP:CB	21:U:35:ARG:NH1	2.64	0.55
10:J:49:ILE:O	10:J:53:LYS:HB2	2.05	0.55
10:J:76:ARG:HD3	10:J:89:MET:HE1	1.88	0.55
11:K:37:ARG:CD	11:K:38:ILE:HD13	2.36	0.55
12:L:19:LEU:HD23	12:L:60:ASP:C	2.27	0.55
12:L:67:GLY:O	12:L:73:GLN:NE2	2.39	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:49:VAL:O	13:M:60:ARG:CA	2.54	0.55
18:R:18:PHE:CZ	18:R:21:ASP:HB2	2.41	0.55
19:S:23:ASP:O	19:S:25:ARG:N	2.33	0.55
22:V:15:LEU:CD2	22:V:38:SER:HB3	2.37	0.55
23:W:23:ARG:O	23:W:26:ASN:ND2	2.39	0.55
23:W:34:LYS:CB	23:W:38:LYS:HE3	2.36	0.55
23:W:88:VAL:HG12	23:W:92:LEU:CD1	2.35	0.55
3:D:51:C:H2'	3:D:52:G:C8	2.41	0.55
3:D:58:A:O2'	3:D:59:U:P	2.64	0.55
1:A:1174:G:C8	1:A:1174:G:H5'	2.41	0.55
1:A:122:G:O2'	1:A:123:C:H5'	2.07	0.55
1:A:1308:U:C6	16:P:99:ARG:NH1	2.67	0.55
1:A:1320:C:C4	22:V:72:GLY:HA3	2.41	0.55
1:A:1361:G:H2'	1:A:1362:C:H5'	1.89	0.55
1:A:1365:G:C2	1:A:1366:C:C2	2.95	0.55
1:A:1404:C:O4'	1:A:1499:A:C2	2.59	0.55
1:A:1408:A:N7	1:A:1409:C:H5	2.02	0.55
1:A:1440:C:C2'	1:A:1441:G:O5'	2.54	0.55
1:A:256:U:H2'	1:A:257:G:O4'	2.06	0.55
1:A:306:G:N2	1:A:307:C:H1'	2.22	0.55
1:A:306:G:H2'	1:A:307:C:C6	2.41	0.55
1:A:61:G:N2	1:A:379:C:C4'	2.69	0.55
1:A:652:U:C1'	1:A:653:A:H2	2.03	0.55
1:A:571:U:O4'	1:A:819:A:N7	2.39	0.55
1:A:872:A:N1	1:A:874:G:N7	2.54	0.55
1:A:576:G:N7	1:A:881:G:O4'	2.38	0.55
1:A:889:A:C5'	1:A:890:G:OP1	2.53	0.55
5:E:179:LYS:O	5:E:180:LEU:C	2.44	0.55
5:E:219:VAL:O	5:E:223:ILE:HG13	2.07	0.55
5:E:236:TYR:HA	5:E:240:GLN:NE2	2.21	0.55
6:F:100:ALA:O	6:F:102:ASN:ND2	2.39	0.55
7:G:185:PHE:HD2	7:G:186:LEU:N	2.04	0.55
1:A:9:G:P	8:H:122:GLU:OE1	2.65	0.55
8:H:20:GLN:O	8:H:23:GLY:O	2.25	0.55
9:I:55:ASP:O	9:I:57:GLN:N	2.39	0.55
9:I:6:VAL:O	9:I:6:VAL:HG13	2.05	0.55
11:K:109:ILE:CD1	11:K:111:ILE:HD11	2.36	0.55
11:K:49:GLU:OE2	11:K:60:ARG:HB3	2.06	0.55
11:K:5:PRO:O	11:K:8:ASP:OD1	2.24	0.55
12:L:17:VAL:HG22	12:L:63:ILE:CG2	2.35	0.55
12:L:30:GLY:C	12:L:31:GLN:OE1	2.44	0.55
13:M:67:THR:HG22	13:M:69:ASN:OD1	2.05	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:105:VAL:O	14:N:106:LYS:O	2.23	0.55
14:N:110:ASP:HA	21:U:88:LYS:CD	2.16	0.55
14:N:85:ARG:NH2	14:N:111:ASP:OD2	2.38	0.55
14:N:51:LYS:HD3	14:N:52:GLY:N	2.18	0.55
15:O:28:LYS:CE	15:O:33:ARG:NH1	2.61	0.55
15:O:86:ARG:O	15:O:86:ARG:HG3	2.05	0.55
16:P:81:LEU:CD2	16:P:82:MET:N	2.69	0.55
18:R:71:GLN:HB2	18:R:78:TYR:CE1	2.41	0.55
21:U:53:ARG:HH22	21:U:60:GLY:HA2	1.70	0.55
1:A:1124:G:H21	1:A:1126:U:H3	0.73	0.55
1:A:1148:U:O2	1:A:1149:C:N1	2.40	0.55
1:A:1251:A:H2	1:A:1354:C:O2	1.90	0.55
1:A:130:A:H4'	1:A:190:G:N2	2.21	0.55
1:A:1314:C:C6	22:V:6:LYS:HD3	2.42	0.55
1:A:1317:C:H2'	1:A:1318:A:H5'	1.88	0.55
1:A:235:C:OP1	20:T:70:ARG:HG3	2.07	0.55
1:A:367:U:O4'	1:A:394:G:N2	2.40	0.55
1:A:373:A:C6	1:A:482:A:N6	2.74	0.55
1:A:591:U:H2'	1:A:592:G:H8	1.70	0.55
1:A:664:G:P	21:U:64:ARG:NH2	2.79	0.55
1:A:816:A:C2'	1:A:817:C:OP2	2.54	0.55
1:A:826:C:H2'	1:A:827:U:O5'	2.05	0.55
3:D:34:G:C2	3:D:35:A:C5'	2.89	0.55
3:D:41:G:H8	3:D:41:G:H5'	1.72	0.55
5:E:153:ARG:HH12	5:E:156:LYS:CB	2.19	0.55
5:E:173:ALA:O	5:E:176:GLU:N	2.39	0.55
5:E:25:ASN:ND2	5:E:27:LYS:CG	2.64	0.55
5:E:92:TYR:O	5:E:152:PHE:N	2.39	0.55
6:F:113:ALA:N	6:F:202:ILE:HD11	2.20	0.55
7:G:57:ARG:CB	7:G:206:PHE:HB2	2.29	0.55
8:H:15:ARG:HH11	8:H:15:ARG:HG3	1.70	0.55
9:I:59:TYR:CD2	9:I:61:LEU:HD21	2.41	0.55
10:J:6:ARG:NH1	10:J:6:ARG:CB	2.69	0.55
10:J:90:GLU:OE1	10:J:90:GLU:HA	2.04	0.55
11:K:29:SER:N	11:K:32:LYS:NZ	2.55	0.55
11:K:24:THR:HG22	11:K:61:VAL:O	2.06	0.55
14:N:33:THR:HA	14:N:38:ASN:O	2.06	0.55
15:O:41:ARG:CG	15:O:42:THR:H	2.18	0.55
15:O:93:LEU:O	15:O:96:VAL:HG23	2.07	0.55
1:A:1219:U:P	17:Q:19:ARG:HH22	2.29	0.55
18:R:63:ARG:HA	18:R:66:LEU:HD23	1.88	0.55
20:T:57:VAL:HG23	20:T:58:GLU:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:80:PRO:O	21:U:81:PHE:O	2.24	0.55
23:W:45:GLN:HE21	23:W:91:LEU:CD1	2.19	0.55
22:V:32:LYS:HA	22:V:50:ALA:CB	2.28	0.55
22:V:30:LEU:CD2	22:V:50:ALA:HB2	2.35	0.55
1:A:1064:G:O2'	1:A:1065:U:H1'	2.06	0.55
1:A:1095:U:H5'	1:A:1109:C:C2	2.41	0.55
1:A:1163:C:H2'	1:A:1164:G:H5'	1.87	0.55
1:A:1172:C:O2'	1:A:1173:G:H5'	2.07	0.55
1:A:1177:G:H8	1:A:1177:G:O5'	1.89	0.55
1:A:1241:G:H2'	1:A:1242:C:C6	2.41	0.55
1:A:1298:C:C4'	1:A:1299:A:C2	2.89	0.55
1:A:1346:A:H2'	10:J:10:ARG:NH2	2.20	0.55
1:A:153:C:C2	1:A:154:C:C5	2.94	0.55
1:A:160:A:N7	1:A:161:A:C5	2.74	0.55
1:A:164:U:H2'	1:A:165:C:C6	2.41	0.55
1:A:181:G:N2	1:A:183:G:N2	2.54	0.55
1:A:251:G:H5'	1:A:252:U:OP1	2.07	0.55
1:A:440:A:H2'	1:A:442:C:O4'	2.06	0.55
1:A:501:C:H2'	1:A:502:G:C8	2.38	0.55
1:A:50:A:O2'	1:A:52:G:C8	2.58	0.55
1:A:682:G:C6	1:A:683:G:N7	2.75	0.55
1:A:949:A:N3	1:A:971:G:O6	2.39	0.55
6:F:10:PHE:O	6:F:178:LEU:CD1	2.55	0.55
6:F:110:ASN:CB	6:F:144:SER:OG	2.55	0.55
6:F:78:GLY:O	6:F:80:GLY:N	2.39	0.55
7:G:127:THR:O	7:G:146:ILE:HA	2.06	0.55
7:G:176:LEU:O	7:G:176:LEU:HG	2.04	0.55
7:G:180:GLY:CA	7:G:182:LYS:HZ3	2.20	0.55
9:I:36:ARG:CB	9:I:36:ARG:HH11	2.04	0.55
9:I:67:MET:SD	9:I:67:MET:C	2.83	0.55
10:J:32:ARG:HG3	10:J:32:ARG:O	2.07	0.55
10:J:50:ILE:CD1	10:J:58:PRO:HA	2.36	0.55
10:J:77:SER:OG	10:J:86:GLN:OE1	2.22	0.55
10:J:94:ARG:NH1	10:J:98:SER:OG	2.39	0.55
11:K:117:GLY:O	11:K:119:LEU:CD2	2.54	0.55
13:M:49:VAL:HG13	17:Q:41:ARG:CG	2.36	0.55
15:O:60:LEU:N	15:O:60:LEU:HD13	2.20	0.55
16:P:16:ASP:CG	16:P:34:LEU:HD11	2.27	0.55
20:T:12:SER:OG	20:T:14:LYS:HD2	2.06	0.55
21:U:63:GLN:C	21:U:66:LEU:HG	2.27	0.55
23:W:45:GLN:NE2	23:W:91:LEU:CB	2.56	0.55
23:W:43:LEU:HD11	23:W:51:GLU:CG	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:55:ILE:O	23:W:56:MET:C	2.45	0.55
1:A:1026:G:N7	1:A:1027:C:C5	2.74	0.55
1:A:1158:C:N3	1:A:1160:G:C8	2.74	0.55
1:A:1166:G:H2'	1:A:1169:A:OP2	2.07	0.55
1:A:1286:A:H8	1:A:1286:A:H3'	1.71	0.55
1:A:1285:A:O4'	1:A:1286:A:N7	2.39	0.55
1:A:1298:C:N4	10:J:114:ARG:HB3	2.21	0.55
1:A:1325:C:H2'	1:A:1326:C:C6	2.41	0.55
1:A:22:G:C3'	1:A:23:C:H6	2.20	0.55
1:A:254:G:O6	1:A:273:A:N6	2.39	0.55
1:A:327:A:C2	1:A:329:A:C4	2.95	0.55
1:A:370:C:H2'	1:A:371:G:C8	2.35	0.55
1:A:407:G:H2'	1:A:408:A:O5'	2.07	0.55
1:A:667:G:N2	1:A:740:U:C1'	2.70	0.55
1:A:990:C:H2'	1:A:991:U:C6	2.42	0.55
3:D:37:A:H2'	3:D:38:A:H8	1.71	0.55
5:E:82:ARG:HG2	5:E:83:MET:HE1	1.89	0.55
6:F:30:ARG:HG2	6:F:31:HIS:N	2.20	0.55
6:F:8:ILE:HG13	6:F:16:ARG:CD	2.35	0.55
7:G:165:MET:HE2	7:G:166:LYS:HA	1.89	0.55
7:G:13:ARG:NH1	7:G:36:ARG:CB	2.69	0.55
7:G:35:ARG:O	7:G:36:ARG:C	2.44	0.55
8:H:34:VAL:HG12	8:H:35:GLY:N	2.22	0.55
8:H:48:ALA:HB3	8:H:54:ALA:HB2	1.88	0.55
8:H:79:GLU:CG	8:H:93:PRO:HD2	2.36	0.55
9:I:65:VAL:CG2	9:I:66:GLU:N	2.70	0.55
12:L:96:LEU:CG	12:L:101:PHE:HE1	2.19	0.55
12:L:12:GLU:H	12:L:104:ARG:NH2	2.03	0.55
1:A:1373:G:OP1	12:L:42:ARG:NH2	2.39	0.55
13:M:30:SER:HB2	13:M:81:THR:HA	1.84	0.55
15:O:68:ALA:CA	15:O:98:TYR:O	2.51	0.55
16:P:14:ARG:HA	16:P:44:ARG:CA	2.27	0.55
16:P:13:LYS:HB3	16:P:17:VAL:HG12	1.89	0.55
16:P:58:GLU:HA	16:P:61:GLU:CB	2.33	0.55
17:Q:42:ILE:HG13	17:Q:43:CYS:H	1.71	0.55
18:R:57:LEU:O	18:R:58:MET:C	2.45	0.55
20:T:45:HIS:CE1	20:T:47:PRO:HG3	2.42	0.55
21:U:74:ARG:CA	21:U:79:LEU:HD11	2.36	0.55
16:P:87:TYR:HB2	22:V:73:GLU:O	2.06	0.55
2:C:6:G:H2'	2:C:7:G:H8	1.72	0.55
1:A:1000:A:N6	1:A:1001:G:O6	2.39	0.55
7:G:69:GLY:O	7:G:70:ILE:CG1	2.54	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1007:C:C2	1:A:1023:G:N2	2.74	0.55
1:A:1067:A:HO2'	1:A:1068:G:P	2.26	0.55
1:A:1097:C:H2'	1:A:1098:C:H6	1.70	0.55
1:A:1101:A:H2	5:E:100:GLY:HA3	1.70	0.55
1:A:960:U:O2'	1:A:1223:C:C4'	2.55	0.55
1:A:1492:A:H3'	1:A:1493:A:O4'	2.07	0.55
1:A:1526:G:O2'	1:A:1527:C:C5'	2.39	0.55
1:A:160:A:H2	1:A:343:U:C1'	2.20	0.55
1:A:186:C:O2'	1:A:186(A):C:C5'	2.53	0.55
1:A:197:A:C2'	1:A:198:G:OP2	2.54	0.55
1:A:198:G:N3	1:A:199:G:C8	2.74	0.55
1:A:421:U:O5'	1:A:421:U:H6	1.88	0.55
1:A:421:U:H5''	1:A:422:C:OP2	2.06	0.55
1:A:454:C:H3'	1:A:455:C:C6	2.41	0.55
1:A:52:G:C2'	1:A:53:A:H5'	2.35	0.55
1:A:610:G:N2	1:A:611:A:H1'	2.22	0.55
1:A:687:A:C2	1:A:704:A:C5	2.95	0.55
1:A:691:G:H22	14:N:51:LYS:CE	2.19	0.55
1:A:757:U:H2'	1:A:758:G:O4'	2.05	0.55
1:A:859:A:O2'	1:A:860:A:C5'	2.53	0.55
5:E:219:VAL:HA	5:E:222:ILE:HD11	1.88	0.55
5:E:33:TYR:CE2	5:E:44:LEU:HG	2.42	0.55
5:E:79:ASP:O	5:E:82:ARG:HB3	2.07	0.55
5:E:84:GLU:HG2	5:E:234:PRO:HD2	1.89	0.55
5:E:69:LEU:CD2	5:E:91:PRO:HB2	2.37	0.55
6:F:134:ILE:HG23	6:F:151:VAL:HG11	1.88	0.55
6:F:16:ARG:HH12	6:F:184:TYR:H	1.54	0.55
6:F:57:ILE:HG23	6:F:66:VAL:HG23	1.89	0.55
7:G:68:TYR:CE1	7:G:114:ARG:NH1	2.74	0.55
8:H:141:GLN:O	8:H:142:LEU:HB2	2.07	0.55
10:J:153:HIS:HE1	14:N:58:PRO:HD2	1.72	0.55
10:J:36:LYS:HE3	10:J:36:LYS:HA	1.88	0.55
10:J:6:ARG:H	10:J:6:ARG:HH11	1.54	0.55
11:K:10:LEU:HD11	11:K:85:ARG:CG	2.37	0.55
11:K:29:SER:CB	11:K:32:LYS:NZ	2.56	0.55
11:K:49:GLU:O	11:K:49:GLU:OE1	2.25	0.55
11:K:10:LEU:CD2	11:K:83:ILE:HD11	2.37	0.55
12:L:91:ASP:CG	12:L:91:ASP:O	2.44	0.55
14:N:25:TYR:O	14:N:26:ASN:HB2	2.06	0.55
18:R:70:LEU:HG	18:R:78:TYR:CG	2.41	0.55
18:R:70:LEU:HD11	18:R:78:TYR:N	2.21	0.55
20:T:75:ARG:CG	20:T:76:LEU:N	2.69	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1270:C:OP1	24:X:24:ARG:NH2	2.40	0.55
2:C:7:G:O2'	2:C:8:U:OP1	2.23	0.55
3:D:18:G:N3	3:D:19:G:H1'	2.21	0.55
1:A:91:C:C2	1:A:92:G:N7	2.74	0.55
1:A:1170:A:N7	1:A:1171:G:C4	2.74	0.55
1:A:1192:C:H6	1:A:1192:C:C3'	2.20	0.55
1:A:1276:G:O2'	1:A:1277:C:H5'	2.07	0.55
1:A:1346:A:H8	1:A:1348:U:C2	2.24	0.55
1:A:1363:A:H1'	1:A:1365:G:C5	2.42	0.55
1:A:1411:C:C2	1:A:1412:C:C5	2.94	0.55
1:A:926:G:C2	1:A:1505:G:C2	2.95	0.55
1:A:401:C:P	7:G:73:ARG:HH12	2.30	0.55
1:A:476:G:N2	1:A:477:G:H1'	2.22	0.55
1:A:652:U:H2'	1:A:752:G:N2	2.21	0.55
1:A:859:A:N6	1:A:860:A:C2	2.75	0.55
1:A:894:G:C4	1:A:895:G:N7	2.75	0.55
1:A:937:A:C5	1:A:938:A:N7	2.75	0.55
1:A:955:U:H2'	1:A:956:U:H6	1.72	0.55
6:F:142:MET:HB3	6:F:149:ALA:HB2	1.88	0.55
7:G:112:VAL:HG12	7:G:112:VAL:O	2.06	0.55
7:G:59:ARG:NH1	7:G:59:ARG:CA	2.59	0.55
7:G:93:PHE:O	7:G:96:LEU:N	2.40	0.55
8:H:107:ARG:HH11	8:H:107:ARG:CB	2.19	0.55
8:H:147:ASP:OD1	8:H:150:ARG:HG3	2.06	0.55
9:I:5:GLU:HB3	9:I:64:GLN:HG3	1.88	0.55
10:J:76:ARG:HB2	10:J:156:TRP:CZ2	2.42	0.55
11:K:123:GLU:OE2	11:K:124:ALA:CA	2.54	0.55
12:L:42:ARG:O	12:L:43:ALA:C	2.42	0.55
13:M:14:LYS:O	13:M:17:ASP:HB2	2.07	0.55
14:N:116:HIS:O	14:N:117:ASN:ND2	2.39	0.55
14:N:16:SER:HA	14:N:79:SER:HB3	1.88	0.55
15:O:59:ARG:HE	15:O:65:GLU:CG	2.20	0.55
16:P:11:ARG:HG3	16:P:11:ARG:NH1	2.22	0.55
16:P:14:ARG:CA	16:P:44:ARG:HD2	2.37	0.55
1:A:1204:A:OP2	17:Q:2:ALA:HB2	2.07	0.55
21:U:41:LYS:CA	21:U:44:LEU:HD23	2.36	0.55
1:A:1014:A:O3'	22:V:14:HIS:CE1	2.60	0.55
1:A:1539:C:C2'	1:A:1540:U:H5''	2.36	0.55
2:C:60:U:C4'	2:C:61:C:OP2	2.55	0.55
1:A:1004:A:H8	1:A:1036:G:C6	2.25	0.55
1:A:1163:C:N4	1:A:1174:G:C6	2.74	0.55
1:A:128:G:H4'	20:T:3:LYS:CG	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:367:U:O2'	1:A:368:U:H4'	2.06	0.55
1:A:518:C:H5'	1:A:530:G:O4'	2.06	0.55
1:A:682:G:C6	1:A:709:G:C6	2.94	0.55
1:A:709:G:O2'	1:A:710:G:H5'	2.07	0.55
1:A:780:A:H1'	1:A:802:A:N6	2.21	0.55
1:A:907:A:H3'	1:A:908:A:H8	1.72	0.55
1:A:9:G:C2	1:A:26:A:N1	2.75	0.55
5:E:118:LEU:HD21	5:E:142:LEU:HB2	1.88	0.55
5:E:162:ILE:HD11	5:E:184:VAL:HG22	1.89	0.55
5:E:171:ALA:HA	5:E:174:VAL:HB	1.89	0.55
5:E:59:GLU:HB3	5:E:221:LEU:HD21	1.88	0.55
5:E:81:VAL:HA	5:E:215:LEU:HD11	1.87	0.55
6:F:110:ASN:HD21	6:F:140:ARG:HG2	1.72	0.55
6:F:113:ALA:N	6:F:114:PRO:CD	2.69	0.55
6:F:33:LEU:O	6:F:36:ASP:HB3	2.06	0.55
6:F:59:ARG:HE	6:F:64:VAL:HA	1.71	0.55
6:F:38:ARG:C	6:F:94:LEU:HD11	2.27	0.55
9:I:47:ARG:HD3	9:I:57:GLN:HG3	1.87	0.55
11:K:83:ILE:HG13	11:K:135:CYS:SG	2.47	0.55
11:K:85:ARG:HG2	11:K:85:ARG:HH11	1.72	0.55
13:M:24:VAL:HG13	13:M:34:VAL:CB	2.37	0.55
15:O:5:PRO:O	15:O:6:THR:HG23	2.06	0.55
16:P:52:GLU:HB3	16:P:55:ARG:CZ	2.37	0.55
16:P:29:ARG:HH12	16:P:66:LEU:HB3	1.72	0.55
1:A:740:U:H4'	18:R:42:HIS:HD2	1.72	0.55
1:A:453:A:H4'	19:S:72:ARG:CG	2.34	0.55
20:T:67:LYS:CA	20:T:70:ARG:HH22	2.16	0.55
20:T:95:TYR:O	20:T:97:SER:N	2.39	0.55
21:U:47:THR:HB	21:U:49:LYS:CE	2.37	0.55
23:W:43:LEU:HD21	23:W:48:LYS:HB2	1.88	0.55
1:A:386:C:O5'	1:A:386:C:H6	1.89	0.55
1:A:1057:G:H2'	1:A:1058:G:H8	1.71	0.55
1:A:1169:A:C6	1:A:1170:A:N1	2.75	0.55
1:A:1187:G:H2'	1:A:1188:A:H8	1.72	0.55
1:A:1210:C:H5''	1:A:1214:C:H42	1.71	0.55
1:A:1267:C:C2'	1:A:1267:C:O2	2.47	0.55
1:A:1323:G:C4	1:A:1324:A:N7	2.75	0.55
1:A:1399:C:H42	1:A:1401:G:N2	2.04	0.55
1:A:1491:G:OP2	1:A:1491:G:H3'	2.07	0.55
1:A:1500:A:OP2	1:A:1505:G:OP2	2.24	0.55
1:A:269:C:H2'	1:A:270:A:C8	2.41	0.55
1:A:658:G:C6	1:A:659:U:C4	2.95	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:658:G:H5''	18:R:8:LYS:HZ3	1.70	0.55
1:A:914:A:O2'	1:A:915:A:O5'	2.25	0.55
5:E:97:TRP:CE3	5:E:172:ILE:HB	2.42	0.55
5:E:61:LEU:HG	5:E:66:GLY:O	2.07	0.55
6:F:8:ILE:HG13	6:F:16:ARG:HD2	1.87	0.55
7:G:101:LEU:CD1	7:G:105:VAL:HG23	2.37	0.55
7:G:187:ARG:HH21	7:G:188:LEU:HD21	1.72	0.55
8:H:37:ARG:HH12	8:H:112:LEU:CD2	2.18	0.55
10:J:75:VAL:HG22	10:J:88:PRO:CB	2.37	0.55
10:J:90:GLU:O	10:J:91:VAL:HG23	2.07	0.55
8:H:80:ILE:HG22	11:K:104:ARG:NH2	2.22	0.55
11:K:10:LEU:HD22	11:K:83:ILE:HD11	1.89	0.55
12:L:19:LEU:HD22	12:L:59:PHE:HB3	1.89	0.55
1:A:684:A:H1'	14:N:38:ASN:HB3	1.87	0.55
19:S:18:ARG:HB3	19:S:20:VAL:CG2	2.36	0.55
19:S:31:LYS:HG2	19:S:32:TYR:H	1.72	0.55
19:S:4:ILE:HG12	19:S:66:PRO:HA	1.89	0.55
20:T:59:ILE:CD1	20:T:72:ARG:O	2.49	0.55
9:I:7:ASN:HB3	21:U:76:LEU:HD11	1.88	0.55
21:U:81:PHE:O	21:U:82:THR:CG2	2.54	0.55
7:G:47:ARG:CB	7:G:47:ARG:HH11	2.20	0.55
1:A:841:U:H2'	1:A:842:C:OP1	2.07	0.55
14:N:11:LYS:HA	14:N:75:TYR:HA	1.87	0.55
1:A:1134:G:H2'	1:A:1135:U:H5'	1.88	0.55
1:A:1212:U:O2'	1:A:1213:A:O4'	2.24	0.55
1:A:122:G:N2	1:A:123:C:O2	2.40	0.55
1:A:1249:C:O4'	1:A:1249:C:OP2	2.24	0.55
1:A:1285:A:O2'	1:A:1286:A:OP2	2.21	0.55
1:A:1289:A:O2'	1:A:1290:G:H5'	2.07	0.55
1:A:131:C:N4	1:A:232:G:N1	2.55	0.55
1:A:1402:C:N4	1:A:1403:C:C4	2.75	0.55
1:A:1507:A:H2'	1:A:1508:G:C8	2.42	0.55
1:A:193:C:H2'	1:A:194:C:H6	1.71	0.55
1:A:235:C:C2	1:A:236:G:N7	2.75	0.55
1:A:247:G:C2	1:A:248:C:C6	2.95	0.55
1:A:282:A:C8	1:A:283:C:H5	2.25	0.55
1:A:513:C:H2'	1:A:514:C:H6	1.69	0.55
1:A:619:U:O4	7:G:134:ASP:OD1	2.25	0.55
1:A:713:G:H21	1:A:777:A:C1'	2.09	0.55
1:A:781:A:H8	1:A:781:A:H5'	1.72	0.55
1:A:818:G:C3'	1:A:819:A:H5'	2.35	0.55
1:A:975:A:C4'	1:A:976:G:H5'	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:994:A:H3'	1:A:995:C:H6	1.72	0.55
1:A:993:G:C2	1:A:995:C:N4	2.75	0.55
5:E:132:LYS:NZ	5:E:132:LYS:HB3	2.20	0.55
5:E:150:SER:O	5:E:151:GLY:C	2.43	0.55
5:E:153:ARG:HH12	5:E:156:LYS:CG	2.20	0.55
5:E:91:PRO:CD	5:E:154:LEU:HD13	2.37	0.55
6:F:56:ASP:O	6:F:66:VAL:HA	2.07	0.55
7:G:148:VAL:HG11	7:G:158:ILE:HG23	1.89	0.55
7:G:14:ARG:HD3	7:G:15:GLU:CA	2.37	0.55
7:G:200:GLU:CG	7:G:201:GLN:N	2.69	0.55
7:G:30:LYS:N	7:G:34:GLU:HB3	2.22	0.55
8:H:48:ALA:HB3	8:H:54:ALA:N	2.22	0.55
9:I:41:GLU:HB2	9:I:62:TRP:HE3	1.72	0.55
9:I:61:LEU:CB	9:I:63:TYR:OH	2.50	0.55
9:I:86:ARG:O	9:I:87:ARG:CG	2.51	0.55
10:J:78:ARG:NE	10:J:79:ARG:O	2.40	0.55
11:K:8:ASP:O	11:K:11:THR:OG1	2.25	0.55
11:K:123:GLU:O	11:K:126:LYS:HE3	2.07	0.55
11:K:16:ALA:HB1	11:K:21:LYS:HG3	1.89	0.55
14:N:105:VAL:HG12	14:N:105:VAL:O	2.07	0.55
14:N:29:ILE:HG22	14:N:44:SER:HB3	1.88	0.55
15:O:86:ARG:HB3	15:O:101:VAL:CG1	2.36	0.55
15:O:32:PHE:HB3	15:O:85:ILE:O	2.07	0.55
15:O:57:LYS:HE2	15:O:67:THR:HG23	1.88	0.55
21:U:67:ALA:O	21:U:70:ILE:N	2.40	0.55
1:A:87:A:C8	1:A:88:C:C2	2.95	0.55
3:D:75:C:H6	3:D:76:A:O3'	1.89	0.55
1:A:1256:A:H5''	6:F:27:LYS:NZ	2.22	0.54
1:A:126:G:C6	1:A:236:G:O6	2.60	0.54
1:A:1351:U:O4'	10:J:33:ASP:OD1	2.25	0.54
1:A:1486:G:C2	1:A:1487:G:N3	2.75	0.54
1:A:1495:U:H2'	1:A:1496:C:O5'	2.06	0.54
1:A:781:A:H4'	1:A:1522:U:O2'	2.07	0.54
1:A:1507:A:N1	1:A:1530:G:C1'	2.69	0.54
1:A:67:C:H5'	1:A:172:A:O2'	2.07	0.54
1:A:124:G:OP1	1:A:310:G:N2	2.37	0.54
1:A:402:G:C6	1:A:403:C:C5	2.95	0.54
1:A:46:G:C6	1:A:396:G:O6	2.60	0.54
1:A:496:A:H4'	1:A:497:U:OP1	2.08	0.54
1:A:521:G:O2'	1:A:522:C:H5'	2.07	0.54
1:A:547:A:C4'	1:A:548:G:OP1	2.54	0.54
1:A:603:U:O2'	1:A:604:G:H5'	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:624:C:H2'	1:A:625:G:H8	1.71	0.54
1:A:652:U:O2	1:A:753:A:N7	2.39	0.54
1:A:570:G:O6	1:A:865:A:N6	2.39	0.54
1:A:950:U:C2	1:A:951:G:C8	2.95	0.54
2:C:35:A:H8	2:C:35:A:C5'	2.18	0.54
5:E:53:ARG:CA	5:E:56:ARG:HH12	2.20	0.54
5:E:82:ARG:O	5:E:86:GLU:HG3	2.07	0.54
7:G:129:ASN:CG	7:G:145:GLU:HG3	2.26	0.54
7:G:148:VAL:HB	7:G:181:MET:CE	2.37	0.54
7:G:152:SER:O	7:G:154:ASN:N	2.38	0.54
10:J:11:GLN:NE2	10:J:12:LEU:O	2.40	0.54
11:K:36:LEU:O	11:K:39:LEU:HB2	2.07	0.54
11:K:64:LYS:HB3	11:K:79:VAL:HB	1.89	0.54
1:A:1118:C:H5'	12:L:103:THR:OG1	2.06	0.54
12:L:9:ARG:HD2	12:L:14:VAL:HA	1.88	0.54
13:M:16:LEU:H	13:M:16:LEU:HD22	1.71	0.54
13:M:3:LYS:HE2	13:M:77:PRO:HD3	1.88	0.54
13:M:60:ARG:CA	13:M:60:ARG:HH11	2.18	0.54
14:N:85:ARG:HE	14:N:113:PRO:HD3	1.72	0.54
15:O:27:LEU:CD2	15:O:61:THR:O	2.52	0.54
16:P:39:ILE:HG21	16:P:56:LEU:CD1	2.37	0.54
18:R:5:LYS:CB	18:R:5:LYS:NZ	2.69	0.54
19:S:42:ARG:C	19:S:43:LYS:CD	2.75	0.54
20:T:19:VAL:O	20:T:43:LEU:HD22	2.07	0.54
23:W:49:ALA:O	23:W:52:ALA:HB3	2.07	0.54
2:C:65:C:H2'	2:C:66:C:C6	2.40	0.54
3:D:60:U:C3'	3:D:60:U:C6	2.90	0.54
4:1:14:A:C2'	4:1:14:A:N3	2.71	0.54
1:A:1079:G:H2'	1:A:1080:A:C8	2.42	0.54
1:A:1094:G:C2'	1:A:1108:G:H22	2.15	0.54
1:A:1218:C:H2'	1:A:1219:U:C6	2.43	0.54
1:A:1219:U:P	17:Q:19:ARG:HH12	2.30	0.54
1:A:1343:G:O3'	12:L:122:ALA:HB3	2.06	0.54
1:A:1346:A:H61	1:A:1374:A:H3'	1.70	0.54
1:A:1390:U:C4	1:A:1391:U:O4	2.60	0.54
1:A:1392:G:O2'	1:A:1393:U:O4'	2.24	0.54
1:A:1431:C:N4	1:A:1470:G:C6	2.75	0.54
1:A:20:U:H2'	1:A:21:G:C5'	2.37	0.54
1:A:594:G:N7	1:A:595:G:C2	2.76	0.54
1:A:687:A:HO2'	1:A:688:G:P	2.30	0.54
1:A:730:G:C8	1:A:731:G:C1'	2.91	0.54
5:E:157:ARG:C	5:E:158:LEU:HD23	2.27	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:16:HIS:H	5:E:210:SER:HB2	1.73	0.54
5:E:178:ARG:CZ	5:E:196:LEU:O	2.55	0.54
5:E:221:LEU:HD13	5:E:221:LEU:O	2.07	0.54
5:E:74:LYS:CD	5:E:76:GLN:H	2.21	0.54
6:F:153:VAL:HG22	6:F:166:GLU:O	2.08	0.54
7:G:170:VAL:CG1	7:G:171:GLY:N	2.65	0.54
7:G:144:ASP:H	7:G:185:PHE:HB3	1.73	0.54
7:G:20:TYR:HE1	7:G:21:LEU:CD2	2.20	0.54
8:H:80:ILE:HG22	11:K:104:ARG:HH22	1.71	0.54
9:I:81:ILE:O	9:I:83:ASP:N	2.40	0.54
10:J:6:ARG:N	10:J:6:ARG:NH1	2.55	0.54
14:N:84:VAL:HG13	14:N:109:VAL:O	2.07	0.54
16:P:12:ASN:O	16:P:44:ARG:NE	2.31	0.54
22:V:13:ASP:O	22:V:17:GLU:HG3	2.07	0.54
2:C:10:G:N2	2:C:11:A:C4	2.76	0.54
3:D:75:C:C6	3:D:76:A:O3'	2.60	0.54
1:A:723:U:H2'	1:A:723:U:O2	2.06	0.54
1:A:1251:A:C6	1:A:1252:A:N6	2.76	0.54
1:A:1397:C:C2'	1:A:1397:C:O2	2.56	0.54
1:A:1506:U:H3'	1:A:1507:A:C5'	2.35	0.54
1:A:1405:G:C1'	1:A:1519:A:H4'	2.37	0.54
1:A:151:A:N6	1:A:152:A:C2	2.75	0.54
1:A:607:A:C2'	1:A:608:A:H5'	2.37	0.54
1:A:719:C:H3'	1:A:720:C:H5	1.72	0.54
1:A:784:C:C2'	1:A:785:G:O5'	2.56	0.54
5:E:125:PRO:O	5:E:126:GLU:C	2.46	0.54
7:G:10:ARG:HD3	7:G:10:ARG:C	2.27	0.54
7:G:122:ARG:C	7:G:124:GLY:H	2.10	0.54
7:G:56:VAL:HG12	7:G:202:LEU:HD21	1.88	0.54
10:J:29:LYS:NZ	10:J:102:ARG:HB2	2.22	0.54
10:J:54:THR:OG1	10:J:56:GLN:CG	2.55	0.54
10:J:63:LYS:HE2	10:J:63:LYS:CA	2.38	0.54
10:J:22:LEU:CD2	10:J:63:LYS:HZ3	2.21	0.54
10:J:75:VAL:CG1	10:J:76:ARG:N	2.70	0.54
13:M:20:ALA:O	13:M:24:VAL:HG23	2.07	0.54
13:M:63:PHE:CZ	17:Q:45:ARG:HA	2.42	0.54
13:M:76:ASN:ND2	13:M:76:ASN:N	2.54	0.54
15:O:76:ASN:C	15:O:77:LEU:HG	2.28	0.54
16:P:104:ARG:HG2	16:P:105:THR:N	2.21	0.54
16:P:90:LEU:O	16:P:93:ARG:CB	2.55	0.54
18:R:7:GLU:HG3	18:R:10:LYS:HE3	1.89	0.54
1:A:468:A:C1'	19:S:82:GLN:HG2	2.35	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:17:ARG:O	23:W:20:LEU:HB2	2.06	0.54
1:A:1122:U:O2'	1:A:1123:A:H5'	2.08	0.54
2:C:28:C:C2	2:C:29:G:C8	2.95	0.54
6:F:160:ALA:C	6:F:162:GLN:H	2.10	0.54
1:A:25:C:H4'	1:A:524:G:N3	2.22	0.54
4:1:14:A:C3'	4:1:14:A:N3	2.69	0.54
1:A:1172:C:H2'	1:A:1173:G:C8	2.42	0.54
1:A:1280:A:H5'	13:M:40:LEU:HD22	1.89	0.54
1:A:1312:G:C2'	1:A:1313:U:H5'	2.37	0.54
1:A:1413:A:C2	1:A:1414:U:C2	2.95	0.54
1:A:1437:C:H2'	1:A:1438:G:C8	2.43	0.54
1:A:1454:G:H2'	1:A:1455:G:C8	2.34	0.54
1:A:154:C:O2'	1:A:155:C:H5'	2.07	0.54
1:A:177:C:C2	1:A:178:C:C5	2.96	0.54
1:A:483:C:C6	1:A:483:C:C3'	2.91	0.54
1:A:440:A:C6	1:A:494:U:H5	2.17	0.54
1:A:49:U:O4	1:A:362:G:N2	2.39	0.54
1:A:665:A:N7	1:A:733:A:C2	2.75	0.54
1:A:751:U:C2'	1:A:752:G:O4'	2.54	0.54
2:C:40:C:H2'	2:C:41:C:H5'	1.86	0.54
3:D:35:A:C6	4:1:14:A:N1	2.76	0.54
5:E:115:LEU:HD12	5:E:115:LEU:O	2.08	0.54
5:E:234:PRO:HB2	5:E:238:LEU:HD21	1.89	0.54
5:E:27:LYS:HB3	5:E:194:PRO:HD2	1.89	0.54
5:E:46:LYS:O	5:E:49:GLU:HB2	2.07	0.54
6:F:126:ARG:HB3	6:F:128:PHE:CZ	2.40	0.54
6:F:130:VAL:O	6:F:133:ALA:HB3	2.08	0.54
7:G:38:TYR:OH	7:G:45:GLN:NE2	2.40	0.54
7:G:58:LEU:HD13	7:G:58:LEU:C	2.28	0.54
8:H:45:PHE:CD1	8:H:45:PHE:O	2.60	0.54
9:I:6:VAL:CG2	9:I:8:ILE:HG12	2.36	0.54
14:N:121:PRO:HD2	14:N:126:ARG:HE	1.72	0.54
15:O:110:VAL:CG2	15:O:113:ARG:HG3	2.38	0.54
15:O:41:ARG:HH22	15:O:57:LYS:CE	2.18	0.54
15:O:85:ILE:HD12	15:O:99:HIS:C	2.27	0.54
16:P:48:LEU:HD22	16:P:53:VAL:HG23	1.88	0.54
16:P:92:HIS:CA	16:P:98:VAL:HG21	2.37	0.54
17:Q:16:PHE:O	17:Q:17:LYS:C	2.45	0.54
19:S:58:TYR:O	19:S:61:SER:OG	2.24	0.54
6:F:157:ILE:O	6:F:159:GLY:N	2.40	0.54
1:A:1003:G:N2	1:A:1038:C:H1'	2.23	0.54
1:A:615:C:H2'	1:A:616:G:O4'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1151:A:OP1	13:M:41:PRO:CA	2.56	0.54
1:A:1163:C:H2'	1:A:1164:G:C5'	2.38	0.54
1:A:1357:A:H8	1:A:1357:A:O5'	1.91	0.54
1:A:1452:C:H5'	1:A:1453:G:N3	2.22	0.54
1:A:246:A:N1	1:A:279:A:C5	2.76	0.54
1:A:262:A:N1	1:A:263:A:C6	2.75	0.54
1:A:301:G:N2	1:A:302:G:N9	2.56	0.54
1:A:424:G:O2'	1:A:425:G:H5'	2.07	0.54
1:A:427:U:C2	1:A:428:G:N7	2.76	0.54
1:A:569:C:O4'	1:A:574:A:C2	2.60	0.54
1:A:578:C:H2'	1:A:578:C:O2	2.08	0.54
1:A:652:U:C1'	1:A:653:A:C2	2.85	0.54
1:A:659:U:O2'	1:A:660:G:C5'	2.55	0.54
1:A:682:G:C2	1:A:683:G:C8	2.95	0.54
3:D:35:A:H3'	3:D:36:A:H8	1.73	0.54
5:E:212:GLN:O	5:E:216:SER:HB3	2.07	0.54
6:F:107:GLN:CD	6:F:107:GLN:H	2.10	0.54
6:F:14:ILE:HG22	6:F:15:THR:HG22	1.89	0.54
7:G:107:ARG:HB3	7:G:174:LEU:HD13	1.89	0.54
7:G:25:ARG:HG2	7:G:28:SER:O	2.07	0.54
7:G:53:ASP:O	7:G:56:VAL:HB	2.08	0.54
7:G:56:VAL:HG13	7:G:202:LEU:HD21	1.86	0.54
7:G:83:SER:OG	7:G:89:THR:HG21	2.06	0.54
8:H:127:ASN:O	8:H:128:PRO:O	2.26	0.54
8:H:43:LEU:HD23	8:H:44:GLY:N	2.22	0.54
9:I:19:LEU:O	9:I:23:LYS:HB2	2.07	0.54
9:I:50:TYR:CE2	9:I:52:ILE:CD1	2.90	0.54
10:J:42:ILE:HG22	10:J:120:ILE:HD12	1.89	0.54
10:J:78:ARG:HE	10:J:80:VAL:HG22	1.72	0.54
11:K:114:THR:HG1	11:K:129:VAL:HG11	1.70	0.54
14:N:15:ALA:HA	14:N:77:MET:CA	2.35	0.54
15:O:33:ARG:HG2	15:O:60:LEU:CG	2.36	0.54
16:P:83:ASP:O	16:P:84:ILE:O	2.26	0.54
21:U:21:LYS:NZ	21:U:23:LYS:CB	2.71	0.54
21:U:21:LYS:NZ	21:U:23:LYS:H	2.05	0.54
22:V:22:LEU:C	22:V:24:ALA:N	2.61	0.54
23:W:61:SER:O	23:W:65:LYS:HG2	2.08	0.54
3:D:21:A:H2'	3:D:22:G:O4'	2.08	0.54
1:A:106:C:O2	1:A:379:C:H5''	2.07	0.54
1:A:1329:A:H5''	16:P:29:ARG:HG2	1.89	0.54
1:A:282:A:C5	1:A:283:C:C5	2.96	0.54
1:A:48:C:OP1	1:A:115:G:OP1	2.26	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:575:G:H4'	1:A:575:G:OP1	2.06	0.54
1:A:589:C:C2	1:A:590:C:C5	2.96	0.54
1:A:607:A:C5	1:A:608:A:C8	2.96	0.54
1:A:754:C:O5'	18:R:72:ARG:NH1	2.40	0.54
1:A:760:G:H2'	20:T:103:GLY:CA	2.36	0.54
1:A:780:A:C2	1:A:803:G:N1	2.75	0.54
1:A:862:C:N1	1:A:863:U:H5	2.05	0.54
5:E:105:PHE:HD1	5:E:108:ILE:HB	1.71	0.54
5:E:72:GLY:HA2	5:E:165:VAL:HG21	1.88	0.54
5:E:16:HIS:CE1	5:E:210:SER:HA	2.42	0.54
5:E:176:GLU:O	5:E:180:LEU:HG	2.07	0.54
5:E:50:GLU:CG	5:E:200:ILE:O	2.56	0.54
6:F:179:ARG:HG2	6:F:206:GLU:CD	2.27	0.54
7:G:60:GLU:OE1	7:G:202:LEU:HD13	2.07	0.54
8:H:80:ILE:O	8:H:90:VAL:HG22	2.08	0.54
10:J:30:ILE:HD12	10:J:43:PHE:HB2	1.88	0.54
11:K:112:LEU:HG	11:K:113:SER:N	2.20	0.54
11:K:26:VAL:C	11:K:58:TYR:HE1	2.11	0.54
19:S:9:PHE:CZ	19:S:18:ARG:HG3	2.41	0.54
20:T:6:LEU:HD22	20:T:23:VAL:HG21	1.90	0.54
20:T:90:ILE:O	20:T:94:ASN:ND2	2.40	0.54
21:U:53:ARG:C	21:U:55:ARG:N	2.60	0.54
21:U:68:LYS:HG3	21:U:72:ARG:HD2	1.90	0.54
1:A:718:G:H22	21:U:82:THR:CB	2.20	0.54
23:W:57:ARG:NH1	23:W:102:GLY:HA3	2.12	0.54
24:X:6:ARG:CB	24:X:6:ARG:NH1	2.71	0.54
2:C:14:A:N6	2:C:15:G:C6	2.75	0.54
1:A:1017:G:C2'	1:A:1018:C:O5'	2.56	0.54
1:A:1104:G:H2'	1:A:1105:A:O4'	2.08	0.54
1:A:1248:A:N1	1:A:1249:C:N3	2.55	0.54
1:A:1250:A:N3	1:A:1370:G:O2'	2.41	0.54
1:A:1289:A:C2'	1:A:1290:G:O5'	2.56	0.54
1:A:1347:G:H8	12:L:107:ARG:HD2	1.70	0.54
1:A:1502:A:C2	1:A:1504:G:N3	2.75	0.54
1:A:321:A:C2	1:A:322:C:C4	2.95	0.54
1:A:329:A:H2'	1:A:332:G:O6	2.07	0.54
1:A:509:A:C6	1:A:510:A:N1	2.75	0.54
1:A:553:A:H2'	1:A:554:C:O4'	2.08	0.54
1:A:755:G:OP1	18:R:66:LEU:CD1	2.56	0.54
1:A:756:C:H2'	1:A:757:U:H6	1.71	0.54
1:A:789:U:C2	1:A:791:G:OP2	2.60	0.54
1:A:809:G:N2	1:A:810:C:C2	2.76	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:817:C:C2'	1:A:818:G:O5'	2.55	0.54
1:A:949:A:N3	1:A:971:G:C6	2.76	0.54
6:F:138:VAL:HG13	6:F:149:ALA:CB	2.38	0.54
8:H:14:ARG:HG3	8:H:16:THR:HG22	1.89	0.54
10:J:136:LYS:HD2	10:J:140:ASP:OD1	2.06	0.54
10:J:139:GLU:N	10:J:139:GLU:OE1	2.41	0.54
10:J:71:PRO:C	10:J:96:GLN:HE21	2.11	0.54
11:K:34:GLU:O	11:K:38:ILE:CD1	2.56	0.54
11:K:44:PHE:H	11:K:64:LYS:NZ	2.06	0.54
11:K:21:LYS:C	11:K:63:LEU:HD13	2.28	0.54
12:L:20:ARG:O	12:L:21:PRO:C	2.46	0.54
6:F:5:ILE:CG2	13:M:51:ARG:HH12	2.17	0.54
14:N:73:MET:HE2	14:N:103:LEU:HD22	1.90	0.54
14:N:13:GLN:HA	14:N:76:GLY:HA3	1.89	0.54
14:N:15:ALA:O	14:N:78:GLN:NE2	2.41	0.54
15:O:85:ILE:HG13	15:O:87:GLY:N	2.21	0.54
15:O:91:LYS:O	15:O:92:ASP:CB	2.54	0.54
6:F:157:ILE:HG21	6:F:164:ARG:CZ	2.38	0.54
2:C:48:C:H2'	2:C:48:C:O2	2.08	0.54
3:D:60:U:H6	3:D:60:U:H3'	1.73	0.54
1:A:78:G:N1	1:A:79:G:C5	2.76	0.54
3:D:67:C:C4	3:D:68:U:C5	2.95	0.54
1:A:1065:U:C2'	1:A:1065:U:O2	2.56	0.54
1:A:1109:C:C2'	1:A:1110:A:H5'	2.38	0.54
1:A:1200:C:OP2	1:A:1200:C:H4'	2.07	0.54
1:A:1230:C:C1'	16:P:125:ARG:HH22	2.21	0.54
1:A:1419:G:H2'	1:A:1420:C:H6	1.71	0.54
1:A:185:A:C6	1:A:186:C:C4	2.96	0.54
1:A:411:A:C2	1:A:429:U:O4	2.60	0.54
1:A:489:C:C2	1:A:490:G:C8	2.95	0.54
1:A:580:U:C2	1:A:581:G:C8	2.96	0.54
1:A:609:A:H2	1:A:610:G:H1'	1.65	0.54
1:A:610:G:H2'	1:A:611:A:C5'	2.37	0.54
1:A:696:A:H3'	1:A:697:U:C5	2.42	0.54
1:A:730:G:H2'	1:A:731:G:C4'	2.38	0.54
1:A:789:U:H2'	1:A:790:A:O5'	2.08	0.54
1:A:992:U:H4'	1:A:993:G:C5'	2.37	0.54
5:E:143:GLU:O	5:E:147:LYS:HB2	2.08	0.54
5:E:169:LYS:O	5:E:169:LYS:HE2	2.08	0.54
5:E:166:ASP:OD1	5:E:205:ASP:OD2	2.26	0.54
5:E:14:GLY:CA	5:E:209:ARG:NH2	2.56	0.54
6:F:15:THR:HG21	6:F:181:ASN:CG	2.29	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:100:ARG:O	7:G:104:VAL:HG22	2.08	0.54
7:G:129:ASN:HD21	7:G:145:GLU:HG2	1.72	0.54
8:H:72:GLN:HB2	8:H:77:PRO:HD3	1.89	0.54
11:K:10:LEU:O	11:K:14:ARG:NH1	2.41	0.54
11:K:19:VAL:CG2	11:K:21:LYS:HG2	2.28	0.54
11:K:37:ARG:NH1	11:K:37:ARG:HG3	2.23	0.54
12:L:27:THR:HB	12:L:62:TYR:CD1	2.31	0.54
12:L:45:ALA:HB3	12:L:74:ILE:HG22	1.87	0.54
13:M:42:THR:HG23	13:M:67:THR:O	2.08	0.54
13:M:5:ARG:NH2	13:M:73:ASP:OD2	2.41	0.54
14:N:85:ARG:NE	14:N:113:PRO:CD	2.71	0.54
15:O:28:LYS:CD	15:O:33:ARG:HH22	2.09	0.54
15:O:41:ARG:CB	15:O:41:ARG:NH1	2.65	0.54
15:O:86:ARG:HE	15:O:99:HIS:HE1	1.54	0.54
18:R:83:GLU:O	18:R:84:LYS:C	2.46	0.54
19:S:51:VAL:HG21	19:S:73:LEU:CD1	2.37	0.54
1:A:761:G:H5'	20:T:102:GLY:C	2.27	0.54
21:U:45:SER:HB2	21:U:46:GLU:OE2	2.08	0.54
22:V:4:SER:O	22:V:5:LEU:HD23	2.08	0.54
24:X:5:ASP:OD1	24:X:7:ARG:HG3	2.08	0.54
1:A:1538:C:H2'	1:A:1539:C:C5	2.43	0.54
2:C:14:A:H2'	2:C:15:G:C8	2.43	0.54
2:C:18:G:N1	2:C:57:A:C6	2.76	0.54
2:C:8:U:O2'	2:C:46:G:N2	2.40	0.54
3:D:54:U:OP2	3:D:55:U:C4	2.61	0.54
1:A:85:U:H2'	1:A:86:U:C5'	2.37	0.54
1:A:1057:G:H5'	6:F:196:LEU:HA	1.90	0.54
1:A:1230:C:C4'	16:P:125:ARG:HH22	2.21	0.54
1:A:1352:C:H2'	1:A:1353:G:C8	2.42	0.54
1:A:1361:G:C2'	1:A:1362:C:H5'	2.38	0.54
1:A:193:C:O4'	23:W:60:GLU:CG	2.54	0.54
1:A:247:G:N2	1:A:282:A:H2	2.05	0.54
1:A:431:A:O2'	1:A:432:A:H5'	2.08	0.54
1:A:487:A:C2'	1:A:488:C:H5'	2.38	0.54
1:A:585:G:H8	1:A:585:G:O5'	1.89	0.54
1:A:715:A:O4'	1:A:777:A:C6	2.61	0.54
1:A:754:C:O2	1:A:754:C:C3'	2.56	0.54
1:A:810:C:HO2'	1:A:811:C:C4'	2.21	0.54
1:A:828:A:H2'	1:A:829:G:C8	2.42	0.54
1:A:864:A:C2	1:A:917:G:N3	2.76	0.54
1:A:912:C:N4	1:A:913:A:N6	2.56	0.54
5:E:173:ALA:O	5:E:174:VAL:C	2.45	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:109:PRO:HA	6:F:112:SER:OG	2.08	0.54
6:F:180:ALA:HB1	6:F:182:ILE:HG13	1.90	0.54
6:F:5:ILE:N	6:F:5:ILE:HD12	2.22	0.54
7:G:11:LEU:O	7:G:12:CYS:C	2.46	0.54
7:G:13:ARG:HH12	7:G:36:ARG:CD	2.14	0.54
9:I:13:ASN:HD22	9:I:13:ASN:H	1.54	0.54
10:J:26:PHE:CE1	10:J:30:ILE:HG12	2.42	0.54
11:K:23:SER:O	11:K:24:THR:CB	2.56	0.54
11:K:5:PRO:HA	11:K:8:ASP:OD1	2.08	0.54
11:K:95:VAL:HG21	11:K:133:LEU:HD11	1.90	0.54
14:N:126:ARG:HB3	14:N:126:ARG:HH11	1.72	0.54
14:N:43:SER:HA	14:N:47:VAL:HG21	1.90	0.54
15:O:76:ASN:HD21	15:O:107:ALA:HA	1.73	0.54
15:O:59:ARG:HE	15:O:65:GLU:HG2	1.72	0.54
17:Q:26:ARG:C	17:Q:28:GLY:H	2.12	0.54
19:S:14:ASN:HA	19:S:42:ARG:NH2	2.22	0.54
20:T:3:LYS:O	20:T:4:LYS:O	2.25	0.54
20:T:43:LEU:CD1	20:T:43:LEU:C	2.77	0.54
21:U:59:SER:O	21:U:62:GLU:HB2	2.08	0.54
23:W:45:GLN:HE21	23:W:91:LEU:CB	2.17	0.54
3:D:16:U:H4'	3:D:18:G:OP2	2.08	0.54
1:A:1018:C:H2'	1:A:1019:C:O4'	2.08	0.54
1:A:101:A:H2'	1:A:102:G:H8	1.72	0.54
1:A:1189:C:HO2'	1:A:1190:G:H5'	1.72	0.54
1:A:1316:G:H4'	17:Q:17:LYS:HD2	1.90	0.54
1:A:1410:G:H2'	1:A:1411:C:H6	1.70	0.54
1:A:1433:A:C8	1:A:1468:A:N6	2.76	0.54
1:A:1480:G:N1	1:A:1481:U:O2	2.41	0.54
1:A:175:C:H2'	1:A:176:C:H6	1.72	0.54
1:A:21:G:N7	1:A:22:G:N7	2.56	0.54
1:A:401:C:C2'	1:A:402:G:H5'	2.38	0.54
1:A:424:G:C2	1:A:425:G:N7	2.76	0.54
1:A:498:A:C2	1:A:546:G:N3	2.75	0.54
1:A:589:C:H5'	11:K:29:SER:OG	2.06	0.54
1:A:631:G:O2'	1:A:632:A:C8	2.58	0.54
1:A:968:A:O4'	1:A:968:A:OP1	2.26	0.54
2:C:34:C:H2'	2:C:35:A:H8	1.72	0.54
5:E:158:LEU:HD23	5:E:158:LEU:N	2.23	0.54
5:E:20:GLU:CG	5:E:189:ASP:OD2	2.56	0.54
5:E:212:GLN:O	5:E:216:SER:CB	2.55	0.54
6:F:126:ARG:CB	6:F:128:PHE:HE1	2.21	0.54
6:F:12:LEU:HD23	6:F:13:GLY:N	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:120:LEU:O	7:G:121:VAL:C	2.47	0.54
7:G:35:ARG:O	7:G:37:PRO:N	2.41	0.54
7:G:54:TYR:O	7:G:55:ALA:C	2.45	0.54
9:I:48:LEU:HD23	9:I:60:PHE:CZ	2.43	0.54
10:J:143:ARG:HA	10:J:146:GLU:OE1	2.07	0.54
12:L:10:ARG:C	12:L:104:ARG:HH21	2.11	0.54
20:T:56:VAL:HB	20:T:78:GLU:HB3	1.90	0.54
20:T:88:TYR:N	20:T:91:ARG:HH21	2.06	0.54
21:U:55:ARG:HH11	21:U:55:ARG:CA	2.20	0.54
23:W:57:ARG:O	23:W:58:LYS:C	2.45	0.54
24:X:6:ARG:CZ	24:X:6:ARG:HB2	2.38	0.54
2:C:18:G:N3	2:C:58:A:N3	2.55	0.54
1:A:750:G:C2	18:R:23:GLY:O	2.61	0.54
4:1:5:A:C4	4:1:6:G:C8	2.96	0.54
1:A:1068:G:C6	1:A:1108:G:N3	2.75	0.53
1:A:1100:C:O2	1:A:1102:A:H5'	2.08	0.53
1:A:1252:A:C5	1:A:1253:G:N7	2.76	0.53
1:A:1386:G:C2	1:A:1387:G:N7	2.76	0.53
1:A:1468:A:C2'	1:A:1469:G:O5'	2.55	0.53
1:A:225:C:C2'	1:A:226:G:O5'	2.54	0.53
1:A:247:G:N3	1:A:282:A:H2	2.02	0.53
1:A:371:G:N2	1:A:372:C:C5	2.76	0.53
1:A:50:A:O2'	1:A:52:G:N7	2.41	0.53
1:A:576:G:C8	1:A:881:G:O2'	2.56	0.53
1:A:702:A:C2'	1:A:703:G:OP1	2.56	0.53
1:A:721:G:H1'	1:A:722:A:C5	2.43	0.53
1:A:666:G:C2	1:A:741:G:C4	2.96	0.53
1:A:818:G:C2'	1:A:819:A:C5'	2.86	0.53
1:A:933:G:O5'	1:A:933:G:H8	1.90	0.53
1:A:995:C:O2'	17:Q:4:LYS:HE2	2.08	0.53
5:E:161:ALA:HA	5:E:183:PRO:CG	2.37	0.53
5:E:177:ALA:O	5:E:180:LEU:N	2.41	0.53
6:F:11:ARG:HG3	6:F:16:ARG:NE	2.05	0.53
7:G:108:LEU:HD11	7:G:183:GLY:HA3	1.90	0.53
7:G:14:ARG:CG	7:G:15:GLU:N	2.71	0.53
7:G:31:CYS:O	7:G:33:MET:SD	2.65	0.53
7:G:80:GLU:O	7:G:83:SER:N	2.41	0.53
9:I:33:TYR:CD2	9:I:75:LEU:HB2	2.43	0.53
10:J:152:ALA:O	10:J:154:TYR:N	2.41	0.53
10:J:64:GLN:HB3	10:J:128:ALA:CB	2.28	0.53
5:E:181:PHE:CE1	11:K:71:GLY:HA3	2.43	0.53
1:A:538:G:OP2	15:O:115:LYS:HB2	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:4:ILE:O	16:P:5:ALA:HB3	2.07	0.53
18:R:36:ILE:HG13	18:R:59:MET:SD	2.48	0.53
19:S:72:ARG:CD	19:S:73:LEU:N	2.58	0.53
1:A:236:G:H5'	20:T:42:TYR:OH	2.08	0.53
20:T:7:THR:OG1	20:T:57:VAL:C	2.46	0.53
21:U:69:THR:O	21:U:71:LYS:N	2.41	0.53
21:U:74:ARG:CB	21:U:81:PHE:HD2	2.20	0.53
22:V:25:LYS:HE2	22:V:27:GLU:O	2.08	0.53
22:V:11:VAL:HG11	22:V:41:VAL:HG22	1.90	0.53
22:V:44:MET:HA	22:V:47:HIS:NE2	2.22	0.53
23:W:16:HIS:O	23:W:19:SER:HB3	2.08	0.53
23:W:58:LYS:C	23:W:62:LEU:HD12	2.28	0.53
23:W:91:LEU:HD23	23:W:91:LEU:N	2.22	0.53
2:C:58:A:N6	2:C:61:C:C1'	2.70	0.53
22:V:32:LYS:HB3	22:V:50:ALA:HB3	1.89	0.53
1:A:842:C:H4'	1:A:848:C:C2	2.43	0.53
1:A:82:U:C2	1:A:85:U:OP2	2.61	0.53
3:D:44:G:C6	3:D:45:U:O2	2.61	0.53
3:D:44:G:H2'	3:D:45:U:H5'	1.90	0.53
1:A:1097:C:H2'	1:A:1098:C:C6	2.43	0.53
1:A:1182:G:H4'	1:A:1183:A:C5'	2.38	0.53
1:A:1236:A:H2'	1:A:1237:C:C6	2.43	0.53
1:A:1320:C:C5	22:V:37:ARG:NH1	2.76	0.53
1:A:1502:A:N6	1:A:1504:G:N2	2.56	0.53
1:A:152:A:C8	1:A:153:C:C6	2.96	0.53
1:A:50:A:N6	1:A:361:G:C5'	2.72	0.53
1:A:422:C:H4'	1:A:423:G:N3	2.24	0.53
1:A:465:A:N7	1:A:467:G:N1	2.56	0.53
1:A:610:G:H2'	1:A:611:A:H5'	1.90	0.53
1:A:688:G:H2'	1:A:689:C:C5'	2.38	0.53
1:A:691:G:N2	14:N:51:LYS:HZ1	2.04	0.53
1:A:769:G:O2'	1:A:770:C:C5'	2.55	0.53
1:A:792:A:C2'	1:A:794:A:N6	2.69	0.53
5:E:10:LEU:HG	5:E:11:LEU:H	1.73	0.53
5:E:12:GLU:OE1	5:E:209:ARG:NH1	2.41	0.53
5:E:221:LEU:CD1	5:E:221:LEU:C	2.76	0.53
5:E:23:ARG:HD3	5:E:24:TRP:N	2.17	0.53
5:E:9:GLU:OE1	5:E:10:LEU:O	2.26	0.53
6:F:18:TRP:HZ2	17:Q:55:GLY:O	1.88	0.53
6:F:43:LEU:CD1	6:F:55:VAL:HG11	2.38	0.53
7:G:155:LEU:HD22	7:G:155:LEU:N	2.23	0.53
8:H:147:ASP:O	8:H:150:ARG:CB	2.53	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:60:PHE:CD1	9:I:60:PHE:N	2.77	0.53
9:I:89:MET:HE3	21:U:75:ILE:HG21	1.89	0.53
10:J:148:ASN:HD22	10:J:151:TYR:HD1	1.55	0.53
10:J:54:THR:O	10:J:55:GLY:C	2.45	0.53
11:K:37:ARG:HG3	11:K:37:ARG:HH11	1.73	0.53
12:L:72:GLY:HA2	12:L:75:ASP:OD1	2.08	0.53
13:M:34:VAL:HG22	13:M:74:ILE:HG12	1.90	0.53
13:M:74:ILE:HG22	13:M:75:ILE:O	2.08	0.53
14:N:32:ILE:O	14:N:40:ILE:CD1	2.56	0.53
15:O:120:TYR:O	15:O:121:GLY:C	2.46	0.53
16:P:14:ARG:H	16:P:44:ARG:NE	2.05	0.53
16:P:52:GLU:HA	16:P:55:ARG:HD3	1.90	0.53
18:R:40:SER:O	18:R:41:GLU:C	2.46	0.53
19:S:16:HIS:CE1	19:S:42:ARG:NH2	2.77	0.53
20:T:46:ASP:OD2	20:T:48:GLU:OE1	2.25	0.53
20:T:54:GLY:O	20:T:55:ASP:C	2.46	0.53
10:J:129:GLU:OE1	10:J:130:GLY:N	2.41	0.53
5:E:35:GLU:O	5:E:36:ARG:CD	2.56	0.53
1:A:78:G:O2'	1:A:79:G:H5'	2.07	0.53
1:A:1257:U:C2'	1:A:1258:G:OP2	2.57	0.53
1:A:1286:A:C8	1:A:1286:A:H3'	2.44	0.53
1:A:1321:C:C5'	1:A:1321:C:H6	2.21	0.53
1:A:1357:A:C8	1:A:1358:U:C5	2.97	0.53
1:A:1374:A:C5	1:A:1375:A:N7	2.77	0.53
1:A:1375:A:C2	1:A:1376:U:N3	2.76	0.53
1:A:1415:G:O2'	1:A:1416:G:H5'	2.08	0.53
1:A:1496:C:H2'	1:A:1497:G:O4'	2.08	0.53
1:A:179:A:H3'	1:A:180:U:H6	1.73	0.53
1:A:20:U:H5'	1:A:572:A:H61	1.72	0.53
1:A:226:G:O2'	1:A:227:G:C5'	2.55	0.53
1:A:366:C:HO2'	1:A:367:U:P	2.30	0.53
1:A:451:A:C4	1:A:452:A:C6	2.97	0.53
1:A:498:A:H4'	1:A:500:G:H5'	1.91	0.53
1:A:520:A:N6	1:A:529:G:C2	2.76	0.53
1:A:20:U:H6	1:A:572:A:C2	2.26	0.53
1:A:664:G:P	21:U:64:ARG:HH21	2.31	0.53
1:A:673:G:H2'	1:A:674:G:N7	2.22	0.53
1:A:697:U:H3'	1:A:698:G:H8	1.72	0.53
1:A:735:C:H2'	1:A:736:C:O5'	2.09	0.53
1:A:777:A:C8	1:A:778:G:N7	2.76	0.53
1:A:812:C:O2	1:A:813:U:C5	2.60	0.53
1:A:970:C:N3	16:P:126:LYS:NZ	2.52	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:977:A:N6	1:A:1224:G:O5'	2.41	0.53
3:D:32:C:O5'	3:D:32:C:H6	1.91	0.53
1:A:1101:A:C2	5:E:100:GLY:HA3	2.43	0.53
5:E:82:ARG:N	5:E:92:TYR:HE1	2.05	0.53
6:F:172:ARG:HH12	6:F:174:PRO:HG3	1.72	0.53
6:F:49:SER:C	6:F:51:GLY:H	2.11	0.53
7:G:97:LEU:O	7:G:100:ARG:HG3	2.09	0.53
7:G:143:GLY:HA2	7:G:185:PHE:CB	2.38	0.53
7:G:141:ARG:O	7:G:143:GLY:N	2.41	0.53
8:H:127:ASN:C	8:H:127:ASN:OD1	2.47	0.53
8:H:18:ARG:HB2	8:H:26:PHE:HA	1.90	0.53
8:H:71:LEU:CD2	8:H:73:ASN:N	2.71	0.53
12:L:96:LEU:CD1	12:L:101:PHE:HE1	2.21	0.53
13:M:59:SER:O	13:M:60:ARG:O	2.26	0.53
13:M:7:LYS:HG2	13:M:71:LEU:CD1	2.39	0.53
16:P:20:THR:CG2	16:P:26:GLY:HA2	2.38	0.53
16:P:60:VAL:HG13	16:P:64:TRP:CB	2.36	0.53
18:R:67:LEU:O	18:R:68:ARG:C	2.46	0.53
18:R:75:PRO:O	18:R:78:TYR:CB	2.51	0.53
18:R:81:LEU:O	18:R:82:ILE:C	2.47	0.53
19:S:6:LEU:CA	19:S:18:ARG:O	2.52	0.53
19:S:6:LEU:CD1	19:S:6:LEU:N	2.63	0.53
19:S:9:PHE:N	19:S:9:PHE:CD2	2.75	0.53
20:T:27:PHE:O	20:T:36:ILE:CD1	2.55	0.53
21:U:73:ALA:C	21:U:79:LEU:HD11	2.28	0.53
1:A:986:A:H4'	22:V:55:LYS:HG3	1.89	0.53
22:V:70:LYS:O	22:V:71:LEU:C	2.45	0.53
23:W:33:ILE:HD11	23:W:66:ALA:HB2	1.90	0.53
23:W:87:LYS:O	23:W:88:VAL:C	2.47	0.53
1:A:1026:G:O6	1:A:1036:G:C2	2.61	0.53
15:O:18:VAL:O	15:O:19:ARG:CB	2.56	0.53
1:A:1104:G:C4'	5:E:111:ARG:HH21	2.19	0.53
1:A:1169:A:N1	1:A:1170:A:C2	2.76	0.53
1:A:1298:C:N4	10:J:114:ARG:O	2.42	0.53
1:A:1495:U:O2	1:A:1496:C:C6	2.62	0.53
1:A:1502:A:C5'	1:A:1503:A:OP2	2.57	0.53
1:A:274:A:O2'	1:A:275:G:N9	2.41	0.53
1:A:115:G:C6	1:A:313:A:C6	2.96	0.53
1:A:313:A:C2'	1:A:314:C:H6	2.15	0.53
1:A:337:C:N4	1:A:338:A:H62	2.06	0.53
1:A:360:A:N6	1:A:361:G:C6	2.77	0.53
1:A:417:C:O2'	1:A:418:C:H5'	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:446:G:O2'	1:A:447:G:H5'	2.09	0.53
1:A:529:G:C8	1:A:529:G:C3'	2.92	0.53
1:A:627:G:N3	1:A:628:G:C8	2.77	0.53
1:A:729:A:C2	1:A:730:G:C4	2.96	0.53
1:A:809:G:N3	1:A:809:G:H2'	2.22	0.53
1:A:907:A:OP1	1:A:907:A:H4'	2.09	0.53
1:A:909:A:C2'	1:A:910:C:O5'	2.55	0.53
5:E:103:THR:O	5:E:104:ASN:CB	2.55	0.53
5:E:217:ARG:HA	5:E:220:ASP:OD2	2.07	0.53
7:G:101:LEU:O	7:G:104:VAL:CG2	2.56	0.53
7:G:187:ARG:HE	7:G:188:LEU:CD2	2.21	0.53
7:G:21:LEU:HD13	7:G:67:ILE:CG2	2.28	0.53
7:G:31:CYS:O	7:G:33:MET:N	2.34	0.53
7:G:94:LEU:CA	7:G:97:LEU:HD12	2.26	0.53
8:H:128:PRO:O	8:H:129:ILE:C	2.46	0.53
9:I:14:LEU:CD1	9:I:19:LEU:H	2.21	0.53
11:K:46:LYS:HE3	11:K:64:LYS:HA	1.88	0.53
13:M:8:LEU:CD1	13:M:94:VAL:HG11	2.31	0.53
14:N:31:THR:HG22	14:N:33:THR:HG23	1.91	0.53
1:A:1227:A:O2'	16:P:115:LYS:CG	2.56	0.53
18:R:40:SER:O	18:R:43:LEU:N	2.41	0.53
20:T:62:SER:CB	20:T:72:ARG:HE	2.14	0.53
21:U:80:PRO:O	21:U:81:PHE:CD1	2.62	0.53
23:W:12:ALA:N	23:W:13:LEU:HD12	2.24	0.53
2:C:48:C:H5'	2:C:49:G:H5''	1.90	0.53
2:C:49:G:OP2	2:C:49:G:H8	1.90	0.53
3:D:52:G:C4	3:D:53:G:C8	2.97	0.53
1:A:77:C:H6	1:A:77:C:O5'	1.91	0.53
13:M:87:THR:HG22	13:M:87:THR:O	2.08	0.53
1:A:1065:U:O2'	1:A:1066:C:P	2.67	0.53
1:A:1157:A:H1'	1:A:1181:G:C2	2.43	0.53
1:A:1157:A:N9	1:A:1181:G:N2	2.49	0.53
1:A:126:G:N2	1:A:127:G:H1'	2.24	0.53
1:A:1298:C:H4'	1:A:1299:A:N3	2.24	0.53
1:A:1331:G:HO2'	1:A:1332:A:P	2.32	0.53
1:A:1347:G:N7	12:L:107:ARG:NH1	2.56	0.53
1:A:1399:C:N3	1:A:1401:G:C2	2.76	0.53
1:A:1497:G:HO2'	1:A:1519:A:H2	1.55	0.53
1:A:1507:A:N1	1:A:1530:G:N9	2.56	0.53
1:A:50:A:C6	1:A:361:G:O4'	2.61	0.53
1:A:373:A:N1	1:A:482:A:N6	2.57	0.53
1:A:428:G:H4'	1:A:429:U:O5'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:491:G:C2'	1:A:492:G:H5'	2.39	0.53
1:A:61:G:C5	1:A:62:U:C4	2.97	0.53
1:A:632:A:C2'	1:A:633:G:H5'	2.38	0.53
1:A:646:U:C2	1:A:647:C:C5	2.96	0.53
1:A:684:A:H1'	14:N:39:PRO:HD2	1.91	0.53
1:A:665:A:C5	1:A:733:A:N1	2.77	0.53
1:A:901:A:N3	1:A:902:G:H1'	2.17	0.53
5:E:21:ARG:H	5:E:21:ARG:CD	2.22	0.53
5:E:95:GLN:CA	5:E:95:GLN:OE1	2.57	0.53
6:F:151:VAL:CG2	6:F:200:ALA:HA	2.34	0.53
6:F:29:TYR:CD2	6:F:29:TYR:C	2.82	0.53
6:F:40:ARG:HA	6:F:43:LEU:CD1	2.34	0.53
7:G:206:PHE:CD2	7:G:207:TYR:N	2.75	0.53
9:I:15:ASP:OD2	9:I:18:GLN:NE2	2.40	0.53
9:I:66:GLU:HA	9:I:67:MET:HE3	1.90	0.53
10:J:115:ARG:CB	10:J:118:VAL:HG23	2.16	0.53
11:K:40:ALA:HB2	11:K:45:ILE:HG23	1.90	0.53
12:L:2:GLU:HA	12:L:21:PRO:HD2	1.91	0.53
12:L:15:ALA:HB1	12:L:77:ILE:CA	2.39	0.53
13:M:5:ARG:HH11	13:M:5:ARG:HG2	1.74	0.53
15:O:70:ILE:HG21	15:O:77:LEU:CD1	2.39	0.53
18:R:11:VAL:O	18:R:14:GLU:HB2	2.09	0.53
18:R:54:ARG:HH21	18:R:58:MET:HE3	1.71	0.53
18:R:71:GLN:N	18:R:78:TYR:CD1	2.76	0.53
19:S:20:VAL:HG13	19:S:21:VAL:H	1.72	0.53
19:S:44:THR:HG23	19:S:45:THR:HG23	1.90	0.53
20:T:29:HIS:HA	20:T:36:ILE:HD12	1.89	0.53
23:W:62:LEU:CA	23:W:65:LYS:HG2	2.38	0.53
1:A:1442:G:C6	1:A:1446:A:C6	2.96	0.53
1:A:434:U:H2'	1:A:435:C:C6	2.41	0.53
3:D:57:G:H8	3:D:57:G:O5'	1.91	0.53
1:A:210:U:C4'	1:A:216:G:OP1	2.56	0.53
1:A:1061:G:O4'	13:M:56:HIS:HE1	1.92	0.53
1:A:1173:G:C6	1:A:1174:G:N7	2.77	0.53
1:A:1293:G:H2'	1:A:1294:G:H8	1.74	0.53
1:A:1342:C:H2'	1:A:1343:G:C8	2.44	0.53
1:A:1397:C:N3	4:1:22:A:C6	2.77	0.53
1:A:1413:A:N6	1:A:1488:G:N1	2.56	0.53
1:A:1427:U:H2'	1:A:1428:A:H8	1.73	0.53
1:A:1436:U:H2'	1:A:1437:C:O4'	2.09	0.53
1:A:167:G:O2'	1:A:168:G:H5'	2.08	0.53
1:A:226:G:C2	1:A:227:G:N9	2.77	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:238:G:N2	1:A:239:U:O2	2.41	0.53
1:A:377:G:H2'	1:A:378:G:C8	2.41	0.53
1:A:489:C:C4	1:A:490:G:N7	2.77	0.53
1:A:55:A:H2'	1:A:56:U:H5'	1.90	0.53
1:A:577:G:H4'	1:A:817:C:OP2	2.09	0.53
1:A:593:G:C6	1:A:594:G:C5	2.96	0.53
1:A:721:G:H22	1:A:733:A:N6	2.05	0.53
1:A:7:G:H21	8:H:121:LYS:HG3	1.74	0.53
1:A:826:C:O4'	11:K:12:ARG:HB3	2.09	0.53
1:A:834:C:N4	1:A:853:G:C6	2.77	0.53
1:A:921:U:C4	1:A:922:G:N7	2.77	0.53
1:A:943:U:H2'	1:A:944:G:C5'	2.38	0.53
1:A:949:A:C4	1:A:1233:G:N2	2.77	0.53
1:A:981:U:H6	1:A:981:U:O5'	1.90	0.53
5:E:124:SER:HB3	5:E:126:GLU:CD	2.29	0.53
5:E:73:THR:HA	5:E:94:ASN:HA	1.90	0.53
5:E:88:ALA:HB1	5:E:222:ILE:HD13	1.91	0.53
6:F:10:PHE:O	6:F:178:LEU:HD13	2.08	0.53
6:F:30:ARG:HD3	6:F:30:ARG:N	2.21	0.53
6:F:43:LEU:CD2	6:F:44:GLU:HG3	2.37	0.53
6:F:8:ILE:O	6:F:11:ARG:N	2.41	0.53
9:I:72:VAL:O	9:I:73:ASN:C	2.46	0.53
10:J:21:VAL:O	10:J:24:THR:HB	2.08	0.53
10:J:96:GLN:O	10:J:100:ALA:HB2	2.08	0.53
11:K:98:LYS:HZ2	11:K:98:LYS:C	2.11	0.53
13:M:35:SER:O	13:M:36:GLY:O	2.26	0.53
13:M:23:ILE:HG22	13:M:72:VAL:HG11	1.91	0.53
14:N:104:GLN:OE1	14:N:106:LYS:N	2.42	0.53
1:A:529:G:C6	15:O:49:ASN:HB3	2.44	0.53
15:O:52:LEU:N	15:O:52:LEU:HD23	2.23	0.53
15:O:60:LEU:HD11	15:O:64:TYR:HD2	1.73	0.53
16:P:14:ARG:N	16:P:44:ARG:CD	2.72	0.53
16:P:22:ILE:HB	16:P:25:ILE:CG1	2.39	0.53
17:Q:37:PHE:HB2	17:Q:44:LEU:HD12	1.91	0.53
19:S:72:ARG:HD3	19:S:72:ARG:C	2.29	0.53
1:A:1320:C:H5	22:V:37:ARG:CZ	2.22	0.53
1:A:1243:C:OP2	24:X:10:ARG:HD2	2.08	0.53
6:F:164:ARG:HG3	6:F:164:ARG:HH11	1.74	0.53
3:D:58:A:C2'	3:D:61:C:C5	2.92	0.53
1:A:1030:C:H2'	1:A:1031:G:C8	2.42	0.53
11:K:80:ILE:H	11:K:80:ILE:CD1	2.10	0.53
1:A:78:G:C6	1:A:79:G:N7	2.76	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:101:ARG:N	20:T:101:ARG:HD2	2.23	0.53
3:D:12:U:H2'	3:D:13:C:C6	2.44	0.53
1:A:1053:G:C5'	1:A:1054:C:H5'	2.28	0.53
1:A:122:G:H21	1:A:123:C:H1'	1.74	0.53
1:A:23:C:O2	1:A:23:C:H2'	2.08	0.53
1:A:266:G:C2'	1:A:267:C:OP2	2.57	0.53
1:A:340:U:H2'	1:A:341:C:C6	2.42	0.53
1:A:38:G:C2	1:A:397:A:C2	2.96	0.53
1:A:443:C:H2'	1:A:444:C:H6	1.72	0.53
1:A:579:G:H2'	1:A:580:U:H6	1.74	0.53
5:E:177:ALA:O	5:E:178:ARG:C	2.47	0.53
5:E:15:VAL:HG22	5:E:209:ARG:CZ	2.37	0.53
5:E:78:GLN:HE22	5:E:96:ARG:HH12	1.54	0.53
1:A:1055:A:C2	6:F:156:ARG:HD3	2.43	0.53
6:F:156:ARG:CB	6:F:196:LEU:HD13	2.35	0.53
7:G:154:ASN:ND2	7:G:155:LEU:CD2	2.72	0.53
7:G:24:GLU:CD	7:G:24:GLU:C	2.67	0.53
9:I:27:GLN:HA	9:I:30:LEU:HD12	1.90	0.53
10:J:11:GLN:CD	10:J:12:LEU:N	2.62	0.53
10:J:85:TYR:HD1	10:J:154:TYR:HE1	1.55	0.53
10:J:15:ASP:OD1	10:J:18:TYR:N	2.41	0.53
10:J:37:ASN:O	10:J:40:ALA:HB3	2.09	0.53
11:K:104:ARG:O	11:K:107:LEU:CD2	2.55	0.53
11:K:68:ARG:O	11:K:69:ARG:HB3	2.08	0.53
12:L:102:LEU:O	12:L:103:THR:CB	2.54	0.53
12:L:78:LYS:HA	12:L:81:ILE:CD1	2.39	0.53
13:M:34:VAL:CG1	13:M:35:SER:N	2.57	0.53
16:P:44:ARG:HB3	16:P:47:ASP:OD2	2.08	0.53
17:Q:13:THR:HG22	17:Q:13:THR:O	2.09	0.53
18:R:54:ARG:NH2	18:R:58:MET:HE3	2.23	0.53
21:U:50:ILE:O	21:U:51:LEU:C	2.47	0.53
21:U:78:LEU:N	21:U:78:LEU:HD23	2.24	0.53
2:C:67:C:H2'	2:C:68:C:H6	1.74	0.53
1:A:1035:A:H2'	1:A:1036:G:C5'	2.36	0.53
1:A:693:G:H5'	4:I:13:A:N6	2.24	0.53
1:A:1074:G:C5	1:A:1075:C:C6	2.96	0.53
1:A:1083:U:O4	1:A:1084:G:O6	2.26	0.53
1:A:1327:C:H5''	24:X:20:LYS:HD3	1.91	0.53
1:A:1361:G:H3'	1:A:1361:G:H8	1.74	0.53
1:A:1510:U:O2'	1:A:1511:G:O5'	2.25	0.53
1:A:1513:A:C2'	1:A:1514:C:C6	2.81	0.53
1:A:198:G:C2	1:A:199:G:C8	2.96	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:236:G:C5	1:A:237:C:C5	2.97	0.53
1:A:263:A:C2'	1:A:264:U:C5'	2.65	0.53
1:A:51:A:N6	1:A:353:A:C2	2.76	0.53
1:A:360:A:N6	1:A:361:G:N1	2.56	0.53
1:A:375:U:H4'	19:S:17:TYR:CE2	2.44	0.53
1:A:42:G:C6	1:A:43:C:N4	2.77	0.53
1:A:445:G:C2	1:A:446:G:C4	2.96	0.53
1:A:565:U:P	1:A:566:G:C3'	2.95	0.53
1:A:575:G:O2'	1:A:576:G:C5'	2.57	0.53
1:A:590:C:O2'	1:A:591:U:O5'	2.27	0.53
1:A:664:G:H5''	21:U:64:ARG:HE	1.73	0.53
1:A:686:U:HO2'	1:A:687:A:P	2.32	0.53
1:A:690:G:C6	1:A:691:G:C2	2.97	0.53
1:A:697:U:H2'	1:A:698:G:C8	2.43	0.53
1:A:770:C:O4'	1:A:900:A:H2	1.92	0.53
1:A:783:C:C2'	1:A:784:C:H5''	2.38	0.53
1:A:818:G:N2	1:A:820:U:N3	2.57	0.53
3:D:35:A:H3'	3:D:36:A:C8	2.44	0.53
5:E:201:ILE:N	5:E:201:ILE:HD12	2.24	0.53
5:E:70:PHE:O	5:E:92:TYR:CB	2.57	0.53
7:G:60:GLU:CA	7:G:63:LYS:HD2	2.38	0.53
10:J:86:GLN:O	10:J:148:ASN:HB3	2.09	0.53
11:K:132:GLU:O	11:K:133:LEU:HD23	2.08	0.53
11:K:25:ASP:OD1	11:K:60:ARG:HB2	2.09	0.53
11:K:35:ILE:HA	11:K:38:ILE:HG12	1.89	0.53
12:L:112:LYS:CD	12:L:117:HIS:HA	2.38	0.53
14:N:68:ALA:O	14:N:71:LYS:HB2	2.09	0.53
15:O:61:THR:O	15:O:62:SER:OG	2.26	0.53
16:P:23:TYR:CE2	16:P:70:LEU:HD22	2.44	0.53
17:Q:22:THR:O	17:Q:23:ARG:HG2	2.08	0.53
18:R:21:ASP:OD2	18:R:24:SER:CB	2.57	0.53
19:S:40:ASP:C	19:S:40:ASP:OD2	2.48	0.53
1:A:663:A:C5'	21:U:61:LYS:HE3	2.38	0.53
22:V:47:HIS:N	22:V:62:ILE:CG2	2.70	0.53
2:C:44:A:H2'	2:C:45:G:H5'	1.90	0.53
3:D:22:G:N7	3:D:46:G:N2	2.57	0.53
1:A:747:C:H2'	1:A:748:C:H1'	1.90	0.53
1:A:1101:A:H1'	1:A:1102:A:O4'	2.09	0.53
1:A:1104:G:C2'	1:A:1105:A:H5'	2.39	0.53
1:A:1105:A:C2	1:A:1106:G:C8	2.96	0.53
1:A:131:C:N4	1:A:232:G:H1	2.07	0.53
1:A:922:G:O2'	1:A:1398:A:N6	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:356:A:H5''	1:A:367:U:C5	2.44	0.53
1:A:380:G:H22	1:A:382:A:H3'	1.64	0.53
1:A:413:G:C2'	1:A:414:A:OP2	2.57	0.53
1:A:445:G:H2'	1:A:446:G:C8	2.43	0.53
1:A:452:A:N6	1:A:480:U:N3	2.57	0.53
1:A:458:C:N3	1:A:475:G:C6	2.77	0.53
1:A:601:C:C2	1:A:602:A:C8	2.97	0.53
1:A:610:G:C2'	1:A:611:A:C5'	2.86	0.53
1:A:673:G:O2'	1:A:674:G:C8	2.60	0.53
1:A:790:A:C6	1:A:791:G:C6	2.97	0.53
1:A:770:C:H1'	1:A:900:A:N1	2.24	0.53
5:E:213:LEU:HD22	5:E:214:ILE:CD1	2.39	0.53
5:E:80:ILE:HG21	5:E:211:ILE:CG2	2.38	0.53
5:E:93:VAL:HG11	5:E:97:TRP:HD1	1.72	0.53
6:F:150:LYS:HE2	6:F:167:TRP:HE3	1.74	0.53
6:F:12:LEU:HA	6:F:17:ASP:OD2	2.09	0.53
6:F:38:ARG:HB2	6:F:94:LEU:HD11	1.89	0.53
7:G:13:ARG:HD2	7:G:32:ALA:HB2	1.89	0.53
7:G:20:TYR:C	7:G:22:LYS:N	2.61	0.53
8:H:28:PHE:CE1	8:H:50:GLU:CA	2.92	0.53
8:H:31:LEU:HD23	8:H:31:LEU:C	2.30	0.53
9:I:94:GLN:H	9:I:94:GLN:NE2	2.07	0.53
10:J:111:ARG:CD	10:J:123:GLU:OE2	2.46	0.53
10:J:44:TYR:HA	10:J:47:CYS:SG	2.49	0.53
10:J:50:ILE:HD12	10:J:58:PRO:CB	2.34	0.53
12:L:114:TYR:HB2	12:L:116:LYS:HZ3	1.74	0.53
14:N:99:GLN:O	14:N:105:VAL:CG2	2.57	0.53
14:N:23:ALA:HB1	14:N:88:GLY:HA3	1.90	0.53
14:N:92:GLU:HA	14:N:92:GLU:OE1	2.08	0.53
16:P:59:TYR:O	16:P:63:THR:HB	2.08	0.53
16:P:80:ARG:HG3	16:P:80:ARG:NH1	2.21	0.53
1:A:1202:G:C4'	17:Q:29:ARG:HE	2.21	0.53
18:R:41:GLU:CD	18:R:41:GLU:C	2.65	0.53
19:S:26:ARG:HD2	19:S:31:LYS:N	2.23	0.53
19:S:66:PRO:CD	19:S:71:ARG:NH2	2.69	0.53
20:T:51:TYR:CD2	20:T:57:VAL:HG11	2.43	0.53
1:A:1325:C:OP1	24:X:15:ARG:NH1	2.42	0.53
24:X:6:ARG:NH1	24:X:15:ARG:CZ	2.72	0.53
6:F:157:ILE:CD1	6:F:164:ARG:NH1	2.71	0.53
2:C:72:A:C2'	2:C:73:A:C8	2.91	0.53
1:A:1039:C:H2'	1:A:1040:U:C6	2.43	0.53
1:A:95:G:C2'	1:A:96:G:H5'	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:8:ARG:HB2	23:W:8:ARG:NH1	2.24	0.53
1:A:103:C:C4	1:A:104:G:N7	2.77	0.53
1:A:121:C:N4	1:A:235:C:H2'	2.24	0.53
1:A:1291:G:N2	1:A:1292:U:C2	2.77	0.53
1:A:1338:G:C6	1:A:1339:A:N6	2.77	0.53
1:A:195:A:P	23:W:68:LYS:HZ3	2.32	0.53
1:A:251:G:H4'	1:A:252:U:O5'	2.08	0.53
1:A:420:U:H1'	1:A:424:G:N2	2.24	0.53
1:A:530:G:H5''	1:A:531:U:C5'	2.39	0.53
1:A:578:C:O2'	1:A:728:A:O2'	2.24	0.53
1:A:588:G:N3	1:A:588:G:H2'	2.24	0.53
1:A:602:A:C6	1:A:603:U:C4	2.97	0.53
1:A:652:U:C6	1:A:752:G:C2	2.97	0.53
1:A:828:A:HO2'	1:A:829:G:P	2.30	0.53
1:A:828:A:C2	1:A:859:A:C1'	2.92	0.53
1:A:918:A:H2'	1:A:919:A:O5'	2.09	0.53
1:A:922:G:N2	1:A:923:A:C1'	2.70	0.53
1:A:979:C:C2	1:A:980:C:O4'	2.62	0.53
5:E:132:LYS:H	5:E:132:LYS:HZ3	1.54	0.53
5:E:14:GLY:HA3	5:E:209:ARG:HH22	1.63	0.53
5:E:103:THR:OG1	5:E:180:LEU:HD21	2.09	0.53
5:E:28:PHE:CE1	5:E:31:TYR:CB	2.91	0.53
5:E:42:ILE:HG23	5:E:43:ASP:N	2.24	0.53
6:F:182:ILE:HG22	6:F:202:ILE:O	2.07	0.53
6:F:77:ILE:CD1	6:F:84:ILE:HB	2.39	0.53
7:G:90:GLY:CA	7:G:200:GLU:OE2	2.53	0.53
7:G:19:LEU:N	7:G:33:MET:HE1	2.12	0.53
7:G:61:LYS:HZ1	7:G:65:ARG:HD2	1.74	0.53
8:H:41:VAL:HG21	8:H:113:ALA:HB2	1.90	0.53
1:A:823:G:N2	11:K:1:MET:N	2.54	0.53
11:K:48:TYR:CD1	11:K:49:GLU:N	2.77	0.53
11:K:7:ALA:HA	11:K:10:LEU:HD12	1.90	0.53
13:M:54:PHE:O	13:M:55:LYS:O	2.27	0.53
15:O:24:VAL:O	15:O:24:VAL:HG12	2.09	0.53
16:P:20:THR:HG23	16:P:26:GLY:HA2	1.90	0.53
19:S:9:PHE:N	19:S:9:PHE:HD2	2.07	0.53
20:T:44:ALA:HA	20:T:71:PHE:O	2.09	0.53
1:A:265:G:OP1	20:T:64:PRO:O	2.26	0.53
20:T:88:TYR:O	20:T:92:ARG:HB2	2.08	0.53
22:V:46:GLY:H	22:V:62:ILE:HG23	1.73	0.53
23:W:102:GLY:O	23:W:104:LEU:N	2.41	0.53
1:A:80:G:C3'	1:A:81:G:O4'	2.57	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:86:U:OP2	1:A:87:A:C2	2.61	0.53
1:A:1064:G:H1'	1:A:1066:C:C2	2.43	0.52
1:A:1108:G:N7	1:A:1109:C:C5	2.77	0.52
1:A:1202:G:C8	17:Q:42:ILE:HD13	2.44	0.52
1:A:129(A):G:H2'	1:A:189:U:C5	2.44	0.52
1:A:1305:G:H2'	1:A:1331:G:N2	2.23	0.52
1:A:1362(A):C:H5'	1:A:1363:A:O5'	2.09	0.52
1:A:20:U:C2'	1:A:21:G:H5'	2.39	0.52
1:A:341:C:O2'	1:A:342:C:H5'	2.09	0.52
1:A:406:G:H5''	7:G:5:ILE:CG2	2.39	0.52
1:A:582:U:H2'	1:A:583:A:O5'	2.08	0.52
1:A:590:C:C2'	1:A:591:U:O5'	2.56	0.52
1:A:724:G:H21	1:A:725:G:H1'	1.74	0.52
1:A:767:A:O5'	1:A:767:A:C8	2.54	0.52
1:A:781:A:H61	1:A:802:A:H1'	1.73	0.52
1:A:784:C:H2'	1:A:785:G:O4'	2.10	0.52
1:A:872:A:C5	1:A:874:G:C8	2.97	0.52
1:A:944:G:H3'	1:A:945:G:C5'	2.38	0.52
5:E:10:LEU:CG	5:E:11:LEU:H	2.21	0.52
5:E:17:PHE:HA	5:E:42:ILE:CG2	2.39	0.52
7:G:100:ARG:HB2	7:G:103:ASN:CB	2.35	0.52
7:G:110:PHE:O	7:G:161:ASN:HB3	2.08	0.52
9:I:87:ARG:NH1	9:I:87:ARG:HG2	2.23	0.52
10:J:17:VAL:HG21	10:J:44:TYR:CZ	2.44	0.52
11:K:19:VAL:HG23	11:K:21:LYS:HE3	1.91	0.52
12:L:105:ASP:CG	12:L:107:ARG:NH2	2.59	0.52
13:M:78:ASN:O	13:M:79:ARG:C	2.48	0.52
13:M:6:ILE:HG22	13:M:98:ILE:HA	1.91	0.52
14:N:104:GLN:OE1	14:N:104:GLN:C	2.47	0.52
1:A:684:A:O2'	14:N:39:PRO:O	2.26	0.52
15:O:125:PRO:C	15:O:127:GLU:H	2.11	0.52
16:P:91:ARG:HB3	16:P:98:VAL:CG1	2.39	0.52
18:R:4:THR:HG22	18:R:6:GLU:OE1	2.09	0.52
18:R:64:ARG:O	18:R:67:LEU:HB2	2.09	0.52
1:A:130:A:N7	20:T:64:PRO:CD	2.71	0.52
21:U:39:VAL:O	21:U:42:ARG:HB2	2.09	0.52
23:W:23:ARG:HA	23:W:26:ASN:OD1	2.09	0.52
23:W:58:LYS:O	23:W:62:LEU:CD1	2.57	0.52
2:C:55:U:O2'	2:C:57:A:N6	2.37	0.52
22:V:33:THR:N	22:V:50:ALA:O	2.43	0.52
3:D:44:G:C2'	3:D:45:U:H5'	2.39	0.52
1:A:1157:A:N1	1:A:1180:A:C5	2.76	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1181:G:O2'	1:A:1182:G:H5'	2.09	0.52
1:A:1197:G:H2'	1:A:1198:G:H5'	1.91	0.52
1:A:1226:C:O2'	1:A:1227:A:P	2.66	0.52
1:A:1381:U:H2'	1:A:1382:C:H5'	1.91	0.52
1:A:176:C:O2'	1:A:177:C:C5'	2.54	0.52
1:A:36:C:C5'	15:O:122:THR:O	2.57	0.52
1:A:375:U:C4	1:A:376:G:N7	2.77	0.52
1:A:577:G:C2	1:A:578:C:C6	2.97	0.52
1:A:675:A:H2'	1:A:676:A:H8	1.70	0.52
1:A:679:C:O2'	1:A:680:C:H5'	2.08	0.52
1:A:695:A:H2'	1:A:696:A:O4'	2.09	0.52
1:A:730:G:H2'	1:A:731:G:O4'	2.09	0.52
1:A:745:C:H6	1:A:745:C:O5'	1.92	0.52
1:A:774:G:C4	1:A:775:G:C8	2.97	0.52
1:A:790:A:N6	1:A:791:G:N1	2.56	0.52
1:A:795:C:C4'	1:A:1506:U:C2	2.92	0.52
1:A:830:G:O2'	1:A:831:U:H5'	2.08	0.52
1:A:889:A:C4'	1:A:890:G:OP1	2.56	0.52
1:A:977:A:C4	1:A:1223:C:H5	2.27	0.52
3:D:41:G:C2	3:D:42:C:C2	2.97	0.52
5:E:192:SER:O	5:E:194:PRO:HD3	2.09	0.52
5:E:58:ILE:HG22	5:E:222:ILE:HG23	1.90	0.52
1:A:1057:G:H4'	6:F:197:GLY:H	1.73	0.52
7:G:3:ARG:CG	7:G:3:ARG:HH11	2.22	0.52
8:H:50:GLU:HB2	8:H:53:LEU:CD2	2.39	0.52
9:I:14:LEU:HD12	9:I:15:ASP:O	2.09	0.52
9:I:67:MET:SD	9:I:67:MET:O	2.67	0.52
10:J:140:ASP:O	10:J:141:VAL:C	2.46	0.52
10:J:27:ILE:HG21	10:J:40:ALA:HA	1.90	0.52
10:J:50:ILE:HG21	10:J:61:VAL:CG2	2.35	0.52
11:K:103:VAL:HG22	11:K:110:ALA:HB2	1.90	0.52
11:K:28:ALA:O	11:K:29:SER:OG	2.17	0.52
12:L:114:TYR:HB2	12:L:116:LYS:HZ2	1.73	0.52
13:M:62:HIS:O	17:Q:59:ALA:HB3	2.09	0.52
13:M:65:LEU:HB2	17:Q:56:VAL:CG1	2.39	0.52
15:O:127:GLU:OE2	15:O:127:GLU:O	2.27	0.52
16:P:78:ILE:O	16:P:81:LEU:HD22	2.09	0.52
17:Q:14:PRO:C	17:Q:16:PHE:N	2.59	0.52
18:R:33:THR:HG22	18:R:87:ILE:HD11	1.85	0.52
19:S:36:ILE:CD1	19:S:56:ALA:HA	2.39	0.52
20:T:29:HIS:N	20:T:33:GLY:O	2.40	0.52
20:T:38:ARG:HG2	20:T:39:SER:H	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:18:GLN:O	23:W:19:SER:C	2.46	0.52
23:W:52:ALA:HA	23:W:55:ILE:HD12	1.91	0.52
24:X:9:ARG:O	24:X:10:ARG:C	2.45	0.52
1:A:1118:C:C2	1:A:1156:G:N2	2.77	0.52
1:A:1182:G:C4'	1:A:1183:A:O5'	2.57	0.52
1:A:1222:G:N3	1:A:1223:C:O2	2.42	0.52
1:A:1323:G:H4'	1:A:1362(A):C:N3	2.24	0.52
1:A:1412:C:C2'	1:A:1413:A:H8	2.20	0.52
1:A:1429:C:C2	1:A:1430:C:C5	2.97	0.52
1:A:103:C:O2'	1:A:172:A:N1	2.40	0.52
1:A:270:A:C5	1:A:271:C:C5	2.98	0.52
1:A:339:C:C2	1:A:340:U:C5	2.97	0.52
1:A:409:G:C4	1:A:410:G:C8	2.97	0.52
1:A:438:G:H2'	1:A:494:U:O4	2.09	0.52
1:A:448:A:HO2'	1:A:449:C:H6	1.57	0.52
1:A:513:C:C2	1:A:514:C:C5	2.96	0.52
1:A:701:C:O2'	1:A:702:A:OP2	2.27	0.52
1:A:654:G:N2	1:A:753:A:H1'	2.24	0.52
1:A:766:A:H2'	1:A:767:A:C8	2.45	0.52
1:A:799:G:N1	1:A:800:G:N3	2.58	0.52
1:A:925:G:H1'	1:A:1502:A:H1'	1.91	0.52
1:A:986:A:H4'	22:V:55:LYS:HD2	1.91	0.52
5:E:198:ASP:O	5:E:199:TYR:CD2	2.63	0.52
5:E:74:LYS:NZ	5:E:76:GLN:HG3	2.24	0.52
7:G:88:VAL:O	7:G:92:VAL:HG23	2.09	0.52
8:H:105:VAL:HG12	8:H:106:PRO:N	2.22	0.52
8:H:31:LEU:HD12	8:H:129:ILE:HA	1.91	0.52
9:I:82:ARG:O	9:I:85:VAL:HG23	2.09	0.52
10:J:118:VAL:CG1	10:J:122:HIS:NE2	2.73	0.52
10:J:13:GLN:O	10:J:14:PRO:O	2.27	0.52
11:K:35:ILE:HG22	11:K:39:LEU:HD23	1.91	0.52
11:K:22:GLU:CA	11:K:63:LEU:HD22	2.34	0.52
11:K:83:ILE:CB	11:K:137:VAL:HG22	2.39	0.52
11:K:96:GLY:HA2	11:K:130:GLY:HA3	1.91	0.52
12:L:105:ASP:O	12:L:106:ALA:CB	2.56	0.52
12:L:40:LEU:CB	12:L:42:ARG:HB2	2.39	0.52
12:L:6:GLY:CA	12:L:80:GLY:O	2.57	0.52
12:L:67:GLY:N	12:L:73:GLN:HE21	2.05	0.52
13:M:44:VAL:HG22	13:M:66:ARG:HB3	1.90	0.52
13:M:65:LEU:CD2	17:Q:36:PHE:HZ	2.20	0.52
10:J:153:HIS:CE1	14:N:58:PRO:HD2	2.45	0.52
15:O:117:ARG:HA	15:O:119:LYS:O	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:85:ILE:HD11	15:O:98:TYR:HB2	1.88	0.52
16:P:40:ASN:O	16:P:42:ALA:N	2.42	0.52
18:R:6:GLU:H	18:R:6:GLU:CD	2.11	0.52
19:S:21:VAL:HG11	19:S:59:TRP:CG	2.43	0.52
22:V:25:LYS:C	22:V:25:LYS:HD2	2.30	0.52
23:W:75:ASN:O	23:W:79:ARG:HG2	2.07	0.52
1:A:1009:G:O2'	1:A:1010:G:H5'	2.09	0.52
1:A:1017:G:H2'	1:A:1018:C:O5'	2.09	0.52
1:A:1127:G:O2'	1:A:1148:U:N3	2.37	0.52
1:A:1224:G:C2'	1:A:1225:A:OP1	2.58	0.52
1:A:1247:U:H2'	1:A:1248:A:H8	1.73	0.52
1:A:129(A):G:N2	1:A:191(A):G:N9	2.56	0.52
1:A:27:G:H2'	1:A:28:G:H8	1.74	0.52
1:A:123:C:HO2'	1:A:290:C:H1'	1.63	0.52
1:A:573:A:H3'	1:A:573:A:OP2	2.09	0.52
1:A:618:C:H6	1:A:620:C:OP2	1.93	0.52
1:A:702:A:O2'	1:A:703:G:P	2.68	0.52
1:A:728:A:N6	1:A:764:C:O2'	2.34	0.52
1:A:898:G:N1	1:A:902:G:C6	2.77	0.52
1:A:946:A:C2	1:A:947:G:C5	2.98	0.52
1:A:965:A:HO2'	1:A:966:G:P	2.32	0.52
1:A:994:A:H3'	1:A:995:C:C6	2.44	0.52
5:E:101:MET:N	5:E:108:ILE:HG13	2.24	0.52
5:E:42:ILE:CD1	5:E:202:PRO:C	2.77	0.52
5:E:9:GLU:OE2	5:E:12:GLU:HG2	2.09	0.52
6:F:123:GLN:HA	6:F:123:GLN:OE1	2.10	0.52
6:F:12:LEU:O	6:F:14:ILE:N	2.43	0.52
6:F:204:LEU:O	6:F:205:GLY:O	2.28	0.52
7:G:127:THR:C	7:G:128:VAL:O	2.42	0.52
7:G:170:VAL:CG2	7:G:176:LEU:CB	2.74	0.52
7:G:85:LYS:CB	7:G:85:LYS:NZ	2.72	0.52
8:H:144:THR:O	8:H:146:ALA:N	2.43	0.52
8:H:147:ASP:O	8:H:148:VAL:C	2.46	0.52
8:H:78:HIS:CE1	11:K:107:LEU:HD11	2.44	0.52
11:K:121:ASP:O	11:K:124:ALA:HB3	2.09	0.52
11:K:35:ILE:O	11:K:39:LEU:CD2	2.58	0.52
15:O:11:VAL:HG13	20:T:29:HIS:CD2	2.45	0.52
15:O:117:ARG:HB3	15:O:122:THR:HB	1.90	0.52
16:P:62:ASN:C	16:P:64:TRP:N	2.62	0.52
17:Q:25:VAL:HG12	17:Q:38:GLY:O	2.10	0.52
19:S:67:THR:CB	19:S:70:ALA:H	2.19	0.52
2:C:13:C:H2'	2:C:14:A:H5'	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:70:G:H21	2:C:71:C:H1'	1.74	0.52
3:D:19:G:C2	3:D:57:G:N3	2.77	0.52
1:A:20:U:H5	1:A:916:G:N1	2.07	0.52
1:A:124:G:N2	1:A:238:G:H1'	2.25	0.52
1:A:274:A:H5'	1:A:275:G:OP1	2.10	0.52
1:A:343:U:O2'	1:A:344:A:O5'	2.20	0.52
1:A:492:G:C5	1:A:493:G:C8	2.97	0.52
1:A:519:C:N4	1:A:520:A:N3	2.56	0.52
1:A:518:C:O2'	1:A:519:C:OP2	2.24	0.52
1:A:617:G:N2	1:A:618:C:O2	2.43	0.52
1:A:644:G:C5	1:A:645:C:C5	2.98	0.52
1:A:671:G:N3	1:A:672:U:H1'	2.25	0.52
5:E:187:LEU:HD23	5:E:201:ILE:HG22	1.91	0.52
5:E:213:LEU:O	5:E:217:ARG:HG2	2.10	0.52
6:F:41:GLY:O	6:F:45:LYS:HB2	2.09	0.52
8:H:49:PRO:O	8:H:50:GLU:HG2	2.09	0.52
10:J:26:PHE:CZ	10:J:30:ILE:HG12	2.44	0.52
11:K:109:ILE:CG1	11:K:109:ILE:O	2.57	0.52
11:K:22:GLU:N	11:K:63:LEU:HD13	2.24	0.52
11:K:9:MET:SD	11:K:32:LYS:HB2	2.49	0.52
12:L:106:ALA:O	12:L:107:ARG:CG	2.55	0.52
12:L:113:LYS:HZ3	12:L:119:ALA:HB1	1.74	0.52
12:L:65:VAL:O	12:L:65:VAL:HG13	2.08	0.52
12:L:9:ARG:O	12:L:10:ARG:HB3	2.09	0.52
13:M:10:GLY:N	13:M:16:LEU:HD11	2.25	0.52
13:M:79:ARG:CZ	13:M:82:ILE:HB	2.39	0.52
14:N:92:GLU:O	14:N:94:ALA:N	2.42	0.52
15:O:60:LEU:HD11	15:O:64:TYR:HB3	1.88	0.52
15:O:57:LYS:HE2	15:O:67:THR:CG2	2.39	0.52
15:O:75:HIS:CG	15:O:76:ASN:N	2.74	0.52
16:P:14:ARG:NH1	16:P:41:PRO:O	2.37	0.52
19:S:53:VAL:HG23	19:S:54:GLU:H	1.74	0.52
20:T:52:LYS:O	20:T:53:LEU:O	2.27	0.52
21:U:31:LEU:N	21:U:31:LEU:HD12	2.24	0.52
21:U:61:LYS:HD2	21:U:64:ARG:HH12	1.74	0.52
21:U:63:GLN:CA	21:U:66:LEU:HG	2.40	0.52
24:X:12:LYS:HB3	24:X:22:ARG:HD3	1.90	0.52
2:C:19:G:N2	2:C:56:C:N3	2.58	0.52
1:A:1038:C:H2'	1:A:1039:C:H5	1.72	0.52
1:A:81:G:O6	1:A:87:A:N6	2.43	0.52
1:A:1018:C:C4	1:A:1019:C:C5	2.97	0.52
1:A:1117:G:P	12:L:104:ARG:NH1	2.83	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1413:A:C6	1:A:1488:G:C2	2.98	0.52
1:A:259:G:C2	1:A:260:G:C4	2.98	0.52
1:A:277:C:OP2	20:T:41:LYS:HD3	2.08	0.52
1:A:407:G:OP1	7:G:115:ARG:HD2	2.09	0.52
1:A:423:G:N2	1:A:424:G:C4	2.78	0.52
1:A:497:U:O2	1:A:497:U:C2'	2.54	0.52
1:A:511:C:O2'	1:A:512:U:P	2.67	0.52
1:A:584:G:N1	1:A:585:G:C5	2.77	0.52
1:A:790:A:C5	1:A:791:G:C5	2.97	0.52
1:A:977:A:C4'	1:A:982:U:O4	2.54	0.52
5:E:180:LEU:HB3	5:E:182:ILE:HD11	1.92	0.52
5:E:42:ILE:HD13	5:E:202:PRO:C	2.30	0.52
5:E:48:MET:SD	5:E:48:MET:N	2.83	0.52
5:E:82:ARG:HG2	5:E:83:MET:CE	2.40	0.52
6:F:29:TYR:HD2	6:F:29:TYR:C	2.13	0.52
6:F:63:ASN:O	6:F:64:VAL:CB	2.58	0.52
1:A:543:C:P	7:G:10:ARG:HH22	2.33	0.52
7:G:162:LEU:O	7:G:166:LYS:HE3	2.09	0.52
7:G:192:GLU:N	7:G:192:GLU:OE1	2.41	0.52
7:G:20:TYR:HE1	7:G:21:LEU:HD23	1.72	0.52
10:J:75:VAL:HG22	10:J:88:PRO:HB3	1.92	0.52
11:K:98:LYS:O	11:K:98:LYS:NZ	2.43	0.52
12:L:65:VAL:HG21	12:L:77:ILE:CD1	2.38	0.52
12:L:4:TYR:HB3	12:L:87:GLN:HB2	1.92	0.52
14:N:22:HIS:HB2	14:N:85:ARG:HB2	1.92	0.52
15:O:6:THR:O	15:O:10:LEU:HD12	2.10	0.52
15:O:85:ILE:CG2	15:O:85:ILE:O	2.56	0.52
16:P:11:ARG:O	16:P:45:VAL:HB	2.09	0.52
16:P:71:ARG:O	16:P:72:ALA:C	2.45	0.52
16:P:84:ILE:HD11	16:P:86:CYS:SG	2.50	0.52
18:R:44:LYS:O	18:R:46:HIS:N	2.38	0.52
18:R:62:GLN:HG3	18:R:66:LEU:CD2	2.39	0.52
19:S:26:ARG:HE	19:S:31:LYS:C	2.13	0.52
1:A:227:G:H21	19:S:62:VAL:HG12	1.73	0.52
1:A:127:G:O2'	20:T:2:PRO:O	2.28	0.52
1:A:1540:U:C2	1:A:1541:U:C4	2.97	0.52
2:C:3:C:H2'	2:C:4:G:O5'	2.10	0.52
1:A:88:C:H2'	1:A:89:U:OP2	2.09	0.52
9:I:28:ARG:HD3	9:I:28:ARG:N	2.25	0.52
1:A:1015:A:C6	1:A:1016:A:C6	2.97	0.52
1:A:1228:C:OP1	16:P:115:LYS:HB3	2.09	0.52
1:A:1297:C:H4'	1:A:1298:C:O5'	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1464:G:H2'	1:A:1465:C:C5	2.44	0.52
1:A:1471:G:H2'	1:A:1472:U:C6	2.45	0.52
1:A:283:C:C2	1:A:284:G:C8	2.98	0.52
1:A:293:G:H21	1:A:294:U:H1'	1.73	0.52
1:A:319:G:H4'	1:A:1468:A:H5'	1.92	0.52
1:A:356:A:O2'	1:A:357:G:H5'	2.10	0.52
1:A:46:G:N1	1:A:366:C:C2	2.77	0.52
1:A:373:A:H2'	1:A:374:A:C8	2.43	0.52
1:A:369:C:N3	1:A:393:A:C2	2.78	0.52
1:A:509:A:N3	1:A:543:C:O2'	2.34	0.52
1:A:508:C:H5''	1:A:509:A:OP1	2.10	0.52
1:A:564:C:H6	1:A:564:C:O5'	1.93	0.52
1:A:789:U:C6	1:A:790:A:H5''	2.45	0.52
1:A:794:A:C6	1:A:795:C:N4	2.77	0.52
1:A:814:A:C8	1:A:816:A:N7	2.77	0.52
1:A:895:G:C2	1:A:896:C:C4	2.98	0.52
5:E:70:PHE:HA	5:E:163:PHE:O	2.10	0.52
6:F:18:TRP:O	6:F:21:ARG:HG2	2.09	0.52
7:G:30:LYS:HZ3	7:G:35:ARG:HH11	1.56	0.52
8:H:76:ILE:CD1	8:H:139:LEU:HD23	2.39	0.52
10:J:89:MET:CB	10:J:155:ARG:HH12	2.23	0.52
10:J:15:ASP:HB2	10:J:23:VAL:CB	2.37	0.52
10:J:17:VAL:HG12	10:J:18:TYR:HD1	1.74	0.52
10:J:43:PHE:HD2	10:J:44:TYR:CD2	2.28	0.52
10:J:5:ARG:O	10:J:7:ALA:N	2.43	0.52
11:K:86:ILE:HG21	11:K:133:LEU:CB	2.34	0.52
14:N:39:PRO:C	14:N:40:ILE:HD13	2.29	0.52
16:P:10:PRO:HB2	16:P:18:ALA:HA	1.92	0.52
16:P:22:ILE:HB	16:P:25:ILE:HG13	1.92	0.52
17:Q:48:ALA:HA	17:Q:53:LEU:HD12	1.91	0.52
18:R:57:LEU:N	18:R:57:LEU:CD1	2.73	0.52
23:W:43:LEU:HD12	23:W:55:ILE:HD11	1.91	0.52
24:X:6:ARG:HB3	24:X:15:ARG:HH21	1.75	0.52
3:D:21:A:C5	3:D:46:G:N1	2.71	0.52
2:C:28:C:H6	2:C:28:C:O5'	1.93	0.52
1:A:208:U:O3'	1:A:209:U:C6	2.62	0.52
1:A:748:C:O2'	1:A:749:C:C5'	2.58	0.52
1:A:1183:A:H8	1:A:1183:A:OP1	1.93	0.52
1:A:1261:A:C6	1:A:1274:G:H1'	2.45	0.52
1:A:1274:G:N3	1:A:1274:G:H2'	2.25	0.52
1:A:1288:A:C2	1:A:1289:A:N7	2.78	0.52
1:A:925:G:O6	1:A:1392:G:C6	2.63	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:923:A:O2'	1:A:1399:C:OP2	2.28	0.52
1:A:1465:C:C2	1:A:1466:C:C6	2.97	0.52
1:A:1399:C:C5	1:A:1502:A:N7	2.77	0.52
1:A:378:G:C4	1:A:379:C:C5	2.96	0.52
1:A:388:G:O2'	1:A:389:A:OP2	2.23	0.52
1:A:414:A:H2'	1:A:415:A:H8	1.75	0.52
1:A:512:U:H2'	1:A:513:C:H6	1.74	0.52
1:A:577:G:N2	1:A:578:C:C2	2.78	0.52
1:A:687:A:H2'	1:A:701:C:H41	1.75	0.52
1:A:727:G:N7	1:A:729:A:OP2	2.42	0.52
2:C:37:A:C2'	2:C:38:A:H8	2.06	0.52
5:E:153:ARG:NH2	5:E:156:LYS:HB2	2.24	0.52
5:E:96:ARG:O	5:E:98:LEU:HD22	2.09	0.52
6:F:21:ARG:NH1	6:F:56:ASP:OD2	2.41	0.52
6:F:95:THR:HB	6:F:97:LYS:HE2	1.90	0.52
7:G:191:ARG:NH2	7:G:194:LEU:CB	2.72	0.52
7:G:19:LEU:HA	7:G:21:LEU:CG	2.39	0.52
1:A:427:U:OP1	7:G:41:GLY:N	2.43	0.52
8:H:56:GLN:O	8:H:59:GLY:CA	2.58	0.52
10:J:107:ALA:HB3	10:J:123:GLU:OE1	2.10	0.52
10:J:76:ARG:O	10:J:156:TRP:CZ2	2.63	0.52
10:J:62:PHE:HB3	10:J:63:LYS:HE2	1.91	0.52
12:L:4:TYR:CE1	12:L:59:PHE:CZ	2.98	0.52
13:M:16:LEU:HB3	13:M:70:ARG:CG	2.40	0.52
13:M:32:ALA:CB	13:M:75:ILE:O	2.55	0.52
13:M:9:ARG:HG3	13:M:95:GLU:OE2	2.10	0.52
15:O:115:LYS:O	15:O:116:SER:C	2.48	0.52
17:Q:45:ARG:HG3	17:Q:46:GLU:N	2.25	0.52
21:U:26:LEU:HD23	21:U:29:PHE:CD1	2.45	0.52
2:C:17:C:H5'	2:C:18:G:C5'	2.40	0.52
1:A:1002:G:N2	1:A:1039:C:N4	2.58	0.52
1:A:1003:G:C4	1:A:1004:A:H1'	2.44	0.52
1:A:562:C:O2	1:A:562:C:C2'	2.55	0.52
1:A:749:C:H2'	1:A:749:C:O2	2.09	0.52
1:A:1010:G:C2	1:A:1011:G:C8	2.98	0.52
3:D:66:C:N3	3:D:67:C:C4	2.78	0.52
11:K:55:GLY:O	11:K:57:PRO:HD3	2.09	0.52
1:A:457:C:C6	1:A:457:C:H3'	2.45	0.52
1:A:1015:A:H1'	1:A:1218:C:O2'	2.09	0.52
1:A:1211:U:O2'	1:A:1213:A:N3	2.42	0.52
1:A:1268:A:O2'	1:A:1269:A:O5'	2.23	0.52
1:A:1285:A:O2'	1:A:1286:A:P	2.68	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1299:A:N7	1:A:1301:U:C6	2.77	0.52
1:A:129(A):G:C8	1:A:189:U:OP1	2.63	0.52
1:A:129(A):G:N1	1:A:188:U:H4'	2.25	0.52
1:A:976:G:N3	1:A:1363:A:N6	2.55	0.52
1:A:1480:G:O2'	1:A:1481:U:H5'	2.10	0.52
1:A:1401:G:H1	1:A:1504:G:H22	1.49	0.52
1:A:22:G:C2'	1:A:23:C:C6	2.91	0.52
1:A:363:A:N3	1:A:363:A:H2'	2.25	0.52
1:A:440:A:OP2	1:A:442:C:H5	1.93	0.52
1:A:50:A:H5''	1:A:51:A:O3'	2.10	0.52
1:A:609:A:N3	1:A:610:G:H1'	2.22	0.52
1:A:913:A:O2'	1:A:914:A:O5'	2.27	0.52
5:E:152:PHE:CE1	5:E:159:PRO:CG	2.93	0.52
5:E:76:GLN:O	5:E:211:ILE:CD1	2.58	0.52
6:F:26:LYS:N	6:F:26:LYS:CD	2.73	0.52
7:G:129:ASN:OD1	7:G:145:GLU:N	2.31	0.52
8:H:20:GLN:OE1	8:H:21:ALA:N	2.42	0.52
9:I:47:ARG:HD2	9:I:56:PRO:HB2	1.92	0.52
10:J:111:ARG:CZ	10:J:122:HIS:HB2	2.40	0.52
10:J:140:ASP:O	10:J:142:GLU:N	2.42	0.52
10:J:31:MET:SD	10:J:36:LYS:NZ	2.77	0.52
11:K:102:ARG:HH21	11:K:105:ARG:C	2.12	0.52
13:M:12:ASP:OD1	13:M:14:LYS:N	2.42	0.52
14:N:52:GLY:O	14:N:55:LYS:HD3	2.10	0.52
15:O:113:ARG:CZ	15:O:115:LYS:O	2.58	0.52
15:O:33:ARG:HB3	15:O:85:ILE:HG22	1.90	0.52
16:P:90:LEU:HA	16:P:93:ARG:HB2	1.92	0.52
18:R:37:ASN:N	18:R:37:ASN:HD22	2.08	0.52
21:U:18:ARG:C	21:U:19:LYS:HG3	2.30	0.52
22:V:36:ARG:NH1	22:V:36:ARG:HG3	2.24	0.52
23:W:34:LYS:C	23:W:38:LYS:HE3	2.30	0.52
2:C:58:A:O2'	2:C:60:U:C5	2.55	0.52
1:A:1369:C:C2'	1:A:1370:G:O4'	2.58	0.52
1:A:1419:G:C6	1:A:1482:G:C2	2.98	0.52
1:A:1487:G:C2	1:A:1488:G:C8	2.98	0.52
1:A:769:G:H5'	1:A:1513:A:H4'	1.92	0.52
1:A:22:G:H2'	1:A:23:C:O4'	2.09	0.52
1:A:265:G:O2'	1:A:266:G:C5'	2.50	0.52
1:A:478:A:C5	1:A:479:C:N4	2.78	0.52
1:A:494:U:C2'	1:A:495:A:O5'	2.57	0.52
1:A:527:G:O2'	1:A:535:A:N6	2.42	0.52
1:A:67:C:C4'	1:A:172:A:C1'	2.88	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:718:G:H1'	14:N:116:HIS:HA	1.91	0.52
1:A:722:A:C4	1:A:724:G:C8	2.98	0.52
1:A:767:A:C2'	1:A:768:A:H5'	2.39	0.52
1:A:869:G:H4'	1:A:872:A:C8	2.45	0.52
1:A:895:G:C2	1:A:896:C:C5	2.98	0.52
1:A:961:U:H5	1:A:983:A:C8	2.28	0.52
1:A:9:G:N2	1:A:10:A:C4	2.78	0.52
5:E:138:LEU:C	5:E:141:GLU:HB3	2.30	0.52
5:E:164:VAL:CG1	5:E:186:ALA:CB	2.87	0.52
5:E:170:GLU:CB	5:E:174:VAL:HG23	2.33	0.52
7:G:60:GLU:CD	7:G:202:LEU:HB2	2.29	0.52
7:G:83:SER:N	7:G:89:THR:CG2	2.69	0.52
8:H:68:GLU:OE2	8:H:68:GLU:HA	2.09	0.52
9:I:14:LEU:HD13	9:I:18:GLN:CB	2.34	0.52
9:I:14:LEU:CD2	9:I:18:GLN:HG2	2.40	0.52
10:J:41:ARG:HH11	10:J:41:ARG:CG	2.23	0.52
11:K:101:PRO:O	11:K:102:ARG:HG3	2.10	0.52
13:M:48:THR:OG1	13:M:62:HIS:CD2	2.62	0.52
1:A:1228:C:P	16:P:115:LYS:HB3	2.50	0.52
18:R:74:ASP:CG	18:R:74:ASP:O	2.47	0.52
19:S:19:ILE:HG13	19:S:38:TYR:CA	2.40	0.52
20:T:27:PHE:HB2	20:T:28:PRO:HD2	1.92	0.52
21:U:74:ARG:HH11	21:U:81:PHE:HB3	1.75	0.52
22:V:22:LEU:C	22:V:24:ALA:H	2.11	0.52
3:D:72:C:H2'	3:D:73:A:H8	1.75	0.52
3:D:50:G:O2'	3:D:51:C:H5'	2.10	0.52
1:A:843:U:O2'	1:A:848:C:OP1	2.24	0.52
1:A:88:C:O2'	1:A:89:U:O5'	2.28	0.52
8:H:87:SER:OG	8:H:131:ILE:HG12	2.10	0.52
1:A:747:C:C2'	1:A:748:C:O4'	2.58	0.52
1:A:1091:U:O2	1:A:1095:U:C4	2.63	0.51
1:A:1261:A:H3'	1:A:1262:C:C5	2.45	0.51
1:A:127:G:OP1	1:A:635:G:H1'	2.10	0.51
1:A:1286:A:H4'	24:X:25:LYS:HE2	1.90	0.51
1:A:945:G:C2	1:A:1337:G:C2	2.98	0.51
1:A:1358:U:H5''	1:A:1359:C:OP2	2.10	0.51
1:A:1430:C:C2'	1:A:1431:C:O5'	2.58	0.51
1:A:152:A:OP2	1:A:153:C:H5	1.92	0.51
1:A:179:A:C4	1:A:180:U:C6	2.98	0.51
1:A:302:G:C8	1:A:302:G:H5''	2.45	0.51
1:A:308:C:H2'	1:A:309:G:C5'	2.41	0.51
1:A:30:U:HO2'	1:A:31:G:P	2.34	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:372:C:N4	1:A:389:A:N6	2.40	0.51
1:A:424:G:C2	1:A:425:G:C8	2.98	0.51
1:A:449:C:N3	1:A:450:G:H1'	2.25	0.51
1:A:560:U:C2	1:A:566:G:H1'	2.45	0.51
1:A:643:C:H2'	1:A:643:C:O2	2.10	0.51
1:A:670:G:O2'	9:I:77:ARG:NH2	2.43	0.51
1:A:686:U:C2'	1:A:687:A:O5'	2.58	0.51
5:E:167:PRO:O	5:E:174:VAL:HG21	2.09	0.51
5:E:20:GLU:O	5:E:21:ARG:O	2.28	0.51
7:G:107:ARG:HD2	7:G:174:LEU:HD11	1.92	0.51
1:A:405:U:O4	7:G:2:GLY:HA2	2.10	0.51
8:H:28:PHE:CE1	8:H:50:GLU:N	2.76	0.51
12:L:112:LYS:CB	12:L:117:HIS:O	2.55	0.51
12:L:32:ASP:CG	12:L:33:PHE:N	2.63	0.51
1:A:1177:G:OP1	12:L:93:ARG:CZ	2.58	0.51
14:N:34:ASP:HB2	14:N:35:PRO:CD	2.40	0.51
14:N:42:TRP:CE3	14:N:42:TRP:C	2.83	0.51
1:A:501:C:OP2	15:O:124:LYS:CE	2.59	0.51
15:O:50:SER:O	15:O:51:ALA:CB	2.58	0.51
16:P:29:ARG:NH1	16:P:66:LEU:HB3	2.26	0.51
19:S:32:TYR:N	19:S:32:TYR:CD1	2.78	0.51
20:T:46:ASP:OD2	20:T:46:ASP:C	2.47	0.51
20:T:4:LYS:CD	20:T:5:VAL:H	2.15	0.51
20:T:68:ARG:N	20:T:70:ARG:NH2	2.57	0.51
20:T:61:GLU:HA	20:T:71:PHE:CE1	2.45	0.51
21:U:75:ILE:O	21:U:76:LEU:C	2.48	0.51
24:X:21:TYR:O	24:X:22:ARG:CB	2.58	0.51
2:C:7:G:O2'	2:C:8:U:P	2.68	0.51
2:C:9:G:N3	2:C:45:G:H2'	2.24	0.51
1:A:1003:G:N2	1:A:1004:A:HO2'	2.04	0.51
1:A:1037:C:O2'	1:A:1038:C:H5'	2.10	0.51
15:O:17:LYS:O	15:O:18:VAL:O	2.28	0.51
1:A:1135:U:H2'	1:A:1137:C:C6	2.45	0.51
1:A:1165:C:H2'	1:A:1166:G:O4'	2.11	0.51
1:A:1068:G:N2	1:A:1191:A:N3	2.47	0.51
1:A:953:G:C6	1:A:1229:A:N6	2.79	0.51
1:A:1304:G:H2'	1:A:1305:G:H1'	1.91	0.51
1:A:1392:G:H2'	1:A:1393:U:H6	1.73	0.51
1:A:1419:G:O2'	1:A:1420:C:O5'	2.27	0.51
1:A:1441:G:C2'	1:A:1460:A:H61	2.23	0.51
1:A:1518:A:O5'	1:A:1518:A:C8	2.59	0.51
1:A:151:A:N6	1:A:171:A:C6	2.78	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:176:C:H2'	1:A:177:C:H6	1.76	0.51
1:A:191(D):U:O2'	1:A:191(E):G:H5'	2.10	0.51
1:A:19:C:C2'	1:A:20:U:O5'	2.58	0.51
1:A:261:U:H2'	1:A:263:A:OP2	2.09	0.51
1:A:271:C:O2'	1:A:272:C:H5'	2.09	0.51
1:A:316:G:C2	1:A:317:G:C8	2.97	0.51
1:A:37:U:H2'	1:A:38:G:H5'	1.91	0.51
1:A:432:A:H8	1:A:432:A:H3'	1.75	0.51
1:A:552:U:H2'	1:A:553:A:C8	2.43	0.51
1:A:655:A:C6	1:A:656:C:C4	2.98	0.51
1:A:707:C:C2'	1:A:708:C:C5'	2.88	0.51
1:A:826:C:C2'	1:A:827:U:O5'	2.58	0.51
1:A:936:C:O2'	1:A:937:A:H5'	2.10	0.51
1:A:972:C:O2	1:A:972:C:H2'	2.09	0.51
1:A:975:A:H62	1:A:1366:C:C2'	2.22	0.51
5:E:103:THR:OG1	5:E:180:LEU:HD11	2.10	0.51
5:E:71:VAL:HG22	5:E:93:VAL:CB	2.41	0.51
6:F:47:LEU:HD11	6:F:83:ARG:HH22	1.69	0.51
6:F:8:ILE:CG2	17:Q:49:HIS:O	2.58	0.51
10:J:120:ILE:O	10:J:124:LEU:HB2	2.10	0.51
10:J:21:VAL:HG23	10:J:22:LEU:H	1.75	0.51
11:K:31:PHE:CZ	11:K:113:SER:HB2	2.40	0.51
11:K:123:GLU:CD	11:K:124:ALA:N	2.64	0.51
11:K:98:LYS:HZ2	11:K:98:LYS:H	1.57	0.51
11:K:95:VAL:CB	11:K:99:GLU:OE1	2.43	0.51
12:L:69:GLY:C	12:L:73:GLN:OE1	2.48	0.51
13:M:77:PRO:O	13:M:78:ASN:C	2.48	0.51
14:N:15:ALA:HB1	14:N:78:GLN:NE2	2.25	0.51
14:N:92:GLU:C	14:N:94:ALA:N	2.61	0.51
14:N:99:GLN:HB3	14:N:105:VAL:CG1	2.26	0.51
16:P:104:ARG:CG	16:P:105:THR:HG23	2.21	0.51
16:P:15:VAL:HB	16:P:34:LEU:HD21	1.93	0.51
20:T:13:ASP:CG	20:T:14:LYS:H	2.13	0.51
20:T:5:VAL:HG13	20:T:6:LEU:H	1.75	0.51
20:T:83:ASP:OD2	20:T:84:LEU:HD23	2.10	0.51
22:V:79:THR:HG22	22:V:79:THR:O	2.10	0.51
1:A:193:C:O3'	23:W:61:SER:HB3	2.10	0.51
2:C:14:A:N6	2:C:21:A:C2	2.48	0.51
3:D:18:G:H1'	3:D:58:A:H1'	1.92	0.51
22:V:30:LEU:HA	22:V:48:THR:O	2.09	0.51
1:A:90:C:C4	1:A:91:C:C5	2.98	0.51
3:D:66:C:C2	3:D:67:C:C5	2.98	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:54:ASP:O	11:K:56:LYS:HD2	2.09	0.51
1:A:1106:G:C6	1:A:1107:C:C4	2.97	0.51
1:A:1251:A:H2'	1:A:1252:A:N9	2.24	0.51
1:A:1236:A:C4'	1:A:1304:G:H5''	2.40	0.51
1:A:1433:A:N6	1:A:1467:G:H21	2.08	0.51
1:A:29:G:H5'	1:A:296:U:OP1	2.10	0.51
1:A:321:A:C2	1:A:332:G:N2	2.78	0.51
1:A:47:C:N4	1:A:362:G:H22	2.08	0.51
1:A:366:C:H4'	1:A:367:U:OP1	2.10	0.51
1:A:593:G:H2'	1:A:594:G:C5'	2.40	0.51
1:A:61:G:C6	1:A:62:U:N3	2.78	0.51
1:A:761:G:C5'	20:T:103:GLY:H	2.19	0.51
1:A:7:G:H1'	1:A:298:A:N7	2.25	0.51
1:A:575:G:C6	1:A:821:G:C8	2.98	0.51
1:A:868:C:O2'	1:A:872:A:H1'	2.11	0.51
1:A:918:A:C2'	1:A:919:A:O5'	2.58	0.51
5:E:115:LEU:HD23	5:E:149:LEU:HB3	1.91	0.51
5:E:19:HIS:O	5:E:20:GLU:C	2.49	0.51
5:E:71:VAL:CG2	5:E:93:VAL:HB	2.40	0.51
5:E:74:LYS:HD2	5:E:76:GLN:H	1.75	0.51
6:F:73:PRO:HD3	6:F:105:GLU:OE2	2.10	0.51
7:G:199:ASN:CG	7:G:200:GLU:N	2.64	0.51
10:J:41:ARG:CZ	10:J:41:ARG:HB3	2.40	0.51
11:K:100:ILE:HD12	11:K:100:ILE:N	2.18	0.51
11:K:40:ALA:CB	11:K:45:ILE:HG23	2.39	0.51
11:K:46:LYS:HG3	11:K:64:LYS:HG3	1.92	0.51
11:K:71:GLY:H	11:K:72:PRO:HD2	1.75	0.51
14:N:79:SER:CA	14:N:104:GLN:NE2	2.72	0.51
15:O:97:ARG:O	15:O:97:ARG:HG2	2.10	0.51
16:P:40:ASN:C	16:P:42:ALA:N	2.64	0.51
19:S:28:ARG:HH11	19:S:28:ARG:HG3	1.76	0.51
23:W:14:LYS:HA	23:W:17:ARG:HD2	1.91	0.51
23:W:76:ALA:O	23:W:77:ALA:C	2.47	0.51
23:W:49:ALA:CB	23:W:99:LEU:HG	2.38	0.51
2:C:75:C:C5	2:C:76:A:O2'	2.61	0.51
2:C:7:G:C5	2:C:49:G:N7	2.78	0.51
3:D:48:C:N4	3:D:59:U:O2	2.43	0.51
1:A:82:U:O2	1:A:86:U:H5	1.94	0.51
3:D:30:G:C2	3:D:31:A:C5	2.99	0.51
20:T:74:LEU:O	20:T:74:LEU:HD13	2.10	0.51
1:A:1143:G:N2	1:A:1144:G:C4	2.78	0.51
1:A:1214:C:O2'	1:A:1215:G:OP1	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1234:C:N4	1:A:1235:U:C4	2.79	0.51
1:A:135:C:C6	1:A:135:C:C3'	2.94	0.51
1:A:1429:C:H2'	1:A:1430:C:H5	1.74	0.51
1:A:1440:C:H2'	1:A:1441:G:C8	2.39	0.51
1:A:1440:C:H2'	1:A:1441:G:O5'	2.11	0.51
1:A:1488:G:O2'	1:A:1489:G:H5'	2.10	0.51
1:A:1493:A:O4'	1:A:1493:A:P	2.68	0.51
1:A:224:C:C2	1:A:225:C:C5	2.98	0.51
1:A:257:G:H2'	1:A:258:G:C5'	2.40	0.51
1:A:257:G:O2'	1:A:258:G:H5'	2.10	0.51
1:A:305:G:H4'	1:A:306:G:OP2	2.10	0.51
1:A:115:G:O6	1:A:313:A:N6	2.43	0.51
1:A:316:G:C2	1:A:317:G:N7	2.78	0.51
1:A:134:A:H1'	1:A:325:A:C6	2.44	0.51
1:A:350:G:N2	1:A:351:G:C2	2.78	0.51
1:A:465:A:N6	1:A:467:G:N3	2.58	0.51
1:A:475:G:C4	1:A:476:G:N7	2.78	0.51
1:A:585:G:H4'	15:O:8:ASN:OD1	2.11	0.51
3:D:40:C:C3'	3:D:41:G:C5'	2.88	0.51
5:E:27:LYS:O	5:E:194:PRO:HG2	2.10	0.51
6:F:181:ASN:HD22	6:F:206:GLU:CG	2.23	0.51
7:G:107:ARG:HD3	7:G:174:LEU:HD11	1.91	0.51
7:G:134:ASP:C	7:G:136:PRO:HD3	2.30	0.51
8:H:142:LEU:C	8:H:143:ARG:HD3	2.31	0.51
8:H:40:ARG:NH1	8:H:68:GLU:OE1	2.43	0.51
9:I:79:LEU:HD12	9:I:88:VAL:HG13	1.90	0.51
10:J:108:ALA:O	10:J:109:ASN:C	2.49	0.51
10:J:22:LEU:CD2	10:J:63:LYS:NZ	2.67	0.51
10:J:78:ARG:CG	10:J:80:VAL:HG23	2.37	0.51
13:M:52:GLY:H	13:M:59:SER:HB3	1.74	0.51
13:M:79:ARG:NH1	13:M:79:ARG:O	2.43	0.51
1:A:529:G:C5	15:O:49:ASN:ND2	2.78	0.51
15:O:69:TYR:O	15:O:71:PRO:HD3	2.10	0.51
15:O:86:ARG:O	15:O:87:GLY:O	2.28	0.51
16:P:48:LEU:HD11	16:P:56:LEU:CD1	2.35	0.51
16:P:67:GLU:O	16:P:70:LEU:HB3	2.09	0.51
16:P:81:LEU:HB2	16:P:86:CYS:SG	2.50	0.51
19:S:5:ARG:NH2	19:S:22:THR:OG1	2.42	0.51
19:S:36:ILE:CG2	19:S:55:ARG:HB3	2.40	0.51
1:A:255:G:OP1	20:T:66:SER:HB2	2.10	0.51
20:T:75:ARG:NH1	20:T:76:LEU:O	2.43	0.51
21:U:46:GLU:N	21:U:46:GLU:OE2	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:68:LYS:O	21:U:72:ARG:HG3	2.11	0.51
22:V:39:THR:O	22:V:40:ILE:C	2.49	0.51
23:W:66:ALA:CB	23:W:72:LEU:HB2	2.41	0.51
2:C:58:A:C5	2:C:61:C:C6	2.98	0.51
3:D:22:G:C8	3:D:46:G:N2	2.78	0.51
1:A:1085:U:O2	1:A:1094:G:C6	2.63	0.51
1:A:1105:A:C4	1:A:1106:G:C8	2.99	0.51
1:A:130:A:C2'	1:A:131:C:OP2	2.58	0.51
1:A:1237:C:O2	1:A:1335:C:H5'	2.09	0.51
1:A:928:G:N2	1:A:1390:U:H1'	2.26	0.51
1:A:1502:A:N1	1:A:1504:G:N3	2.58	0.51
1:A:21:G:N2	1:A:915:A:H61	2.08	0.51
1:A:272:C:O2'	1:A:273:A:H5'	2.10	0.51
1:A:425:G:N2	1:A:426:G:N9	2.59	0.51
1:A:591:U:H2'	1:A:592:G:C8	2.45	0.51
1:A:690:G:C2	1:A:691:G:C1'	2.93	0.51
1:A:6:G:H22	8:H:98:THR:CG2	2.23	0.51
1:A:719:C:O2	21:U:50:ILE:HG13	2.10	0.51
1:A:775:G:C4	1:A:776:G:C8	2.99	0.51
1:A:921:U:N3	1:A:922:G:N7	2.59	0.51
1:A:953:G:H5'	1:A:965:A:H61	1.75	0.51
1:A:967:C:OP1	1:A:969:A:N7	2.44	0.51
5:E:19:HIS:O	5:E:20:GLU:O	2.28	0.51
5:E:219:VAL:O	5:E:223:ILE:CG1	2.59	0.51
5:E:24:TRP:CH2	5:E:26:PRO:HA	2.46	0.51
5:E:57:PHE:CD2	5:E:57:PHE:C	2.84	0.51
6:F:94:LEU:O	6:F:95:THR:CG2	2.58	0.51
7:G:140:VAL:HG11	7:G:185:PHE:HD1	1.75	0.51
7:G:83:SER:CB	7:G:89:THR:HG21	2.41	0.51
8:H:45:PHE:CD1	8:H:47:LYS:HD2	2.46	0.51
8:H:78:HIS:CD2	8:H:142:LEU:HD23	2.46	0.51
8:H:95:ALA:HB3	8:H:96:PRO:HD3	1.91	0.51
9:I:100:ASN:OD1	21:U:27:GLY:HA2	2.10	0.51
11:K:29:SER:CA	11:K:32:LYS:NZ	2.74	0.51
11:K:32:LYS:HG2	11:K:33:GLU:N	2.25	0.51
12:L:49:PRO:O	12:L:85:LEU:HD22	2.10	0.51
13:M:13:HIS:O	13:M:14:LYS:HD3	2.10	0.51
14:N:122:LYS:O	14:N:123:LYS:C	2.49	0.51
14:N:67:ASP:O	14:N:69:ALA:N	2.44	0.51
15:O:25:PRO:HG2	15:O:25:PRO:O	2.10	0.51
18:R:29:VAL:HG21	18:R:81:LEU:CD1	2.27	0.51
18:R:63:ARG:HH22	18:R:87:ILE:CD1	2.24	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:36:ILE:HG13	19:S:36:ILE:O	2.11	0.51
20:T:29:HIS:ND1	20:T:32:TYR:N	2.55	0.51
20:T:3:LYS:CE	20:T:60:ILE:HD11	2.35	0.51
1:A:1459:C:O5'	23:W:27:LYS:NZ	2.44	0.51
3:D:72:C:C6	3:D:72:C:OP2	2.63	0.51
3:D:18:G:H21	3:D:57:G:H2'	1.74	0.51
2:C:27:U:C2	2:C:28:C:C5	2.98	0.51
3:D:67:C:H2'	3:D:68:U:H5'	1.92	0.51
3:D:35:A:C6	4:1:14:A:C2	2.99	0.51
1:A:994:A:N1	1:A:1047:G:H4'	2.25	0.51
1:A:1227:A:OP1	22:V:80:TYR:CZ	2.64	0.51
1:A:1323:G:N1	1:A:1324:A:N6	2.58	0.51
1:A:1353:G:C2	1:A:1354:C:C4	2.98	0.51
1:A:976:G:N2	1:A:1363:A:N7	2.59	0.51
1:A:1468:A:C8	1:A:1469:G:C8	2.99	0.51
1:A:150:C:H2'	1:A:151:A:O5'	2.11	0.51
1:A:1528:U:N3	1:A:1530:G:C8	2.78	0.51
1:A:1528:U:O2	1:A:1530:G:C5'	2.59	0.51
1:A:50:A:N6	1:A:361:G:H4'	2.19	0.51
1:A:405:U:H5''	1:A:406:G:O4'	2.10	0.51
1:A:474:G:C2	1:A:475:G:C8	2.98	0.51
1:A:451:A:C6	1:A:480:U:H2'	2.45	0.51
1:A:644:G:C6	1:A:645:C:C2	2.98	0.51
1:A:927:G:C6	1:A:1391:U:N3	2.79	0.51
1:A:971:G:P	1:A:1231:G:H21	2.34	0.51
2:C:38:A:C2'	2:C:39:C:O5'	2.58	0.51
5:E:141:GLU:CD	5:E:142:LEU:N	2.63	0.51
5:E:175:ARG:HD2	5:E:179:LYS:NZ	2.25	0.51
6:F:12:LEU:O	6:F:17:ASP:OD1	2.28	0.51
6:F:25:GLY:C	6:F:28:GLN:HE21	2.13	0.51
6:F:77:ILE:HD13	6:F:84:ILE:HB	1.93	0.51
7:G:173:TRP:CD1	7:G:189:PRO:HB3	2.45	0.51
1:A:412:A:N3	7:G:35:ARG:NH1	2.59	0.51
8:H:88:LYS:HB3	8:H:123:LEU:O	2.10	0.51
11:K:92:ARG:NH1	11:K:92:ARG:HG2	2.25	0.51
12:L:38:GLN:OE1	12:L:38:GLN:HA	2.11	0.51
12:L:5:TYR:O	12:L:87:GLN:HG3	2.11	0.51
13:M:4:ILE:HA	13:M:100:THR:HA	1.91	0.51
13:M:98:ILE:HD12	13:M:98:ILE:N	2.25	0.51
15:O:35:GLY:O	15:O:82:VAL:HA	2.11	0.51
16:P:10:PRO:HG2	16:P:18:ALA:CB	2.31	0.51
17:Q:59:ALA:HB1	17:Q:61:TRP:HZ3	1.76	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:8:LYS:O	18:R:11:VAL:HG23	2.11	0.51
20:T:52:LYS:O	20:T:53:LEU:C	2.48	0.51
21:U:33:ASP:CG	21:U:34:TYR:N	2.64	0.51
21:U:44:LEU:O	21:U:45:SER:CB	2.59	0.51
1:A:91:C:N3	1:A:92:G:N7	2.59	0.51
1:A:1048:G:H1'	1:A:1215:G:H5'	1.92	0.51
1:A:1150:U:H5'	1:A:1280:A:C2	2.46	0.51
1:A:1189:C:HO2'	6:F:176:HIS:CD2	2.29	0.51
1:A:1193:G:O2'	1:A:1194:U:H5'	2.11	0.51
1:A:1301:U:C4	1:A:1303:C:N1	2.79	0.51
1:A:1341:U:H3'	1:A:1341:U:C6	2.46	0.51
1:A:1488:G:C2	1:A:1489:G:C8	2.99	0.51
1:A:188:U:O2'	1:A:189:U:H5'	2.11	0.51
1:A:219:C:N4	1:A:220:G:C5	2.79	0.51
1:A:251:G:C2	1:A:266:G:C6	2.98	0.51
1:A:301:G:C2	1:A:302:G:N9	2.78	0.51
1:A:394:G:C6	1:A:395:C:N4	2.79	0.51
1:A:443:C:C2	1:A:492:G:C2	2.99	0.51
1:A:580:U:C2'	1:A:581:G:H8	2.23	0.51
1:A:594:G:N7	1:A:595:G:N2	2.59	0.51
1:A:791:G:C4	1:A:792:A:N7	2.79	0.51
1:A:900:A:C5	1:A:901:A:N7	2.79	0.51
1:A:954:G:H2'	1:A:955:U:O4'	2.11	0.51
1:A:974:A:C1'	17:Q:31:ARG:HH21	2.23	0.51
1:A:979:C:OP2	1:A:980:C:C5	2.63	0.51
6:F:11:ARG:HB2	6:F:15:THR:O	2.10	0.51
6:F:150:LYS:NZ	6:F:152:ILE:HG23	2.25	0.51
6:F:89:GLU:C	6:F:91:LEU:N	2.63	0.51
7:G:130:GLY:HA3	7:G:131:ARG:HH12	1.71	0.51
10:J:3:ARG:O	10:J:4:ARG:CB	2.59	0.51
10:J:57:GLU:O	10:J:61:VAL:HG23	2.10	0.51
10:J:71:PRO:O	10:J:96:GLN:NE2	2.43	0.51
11:K:103:VAL:CG2	11:K:110:ALA:HB2	2.41	0.51
11:K:36:LEU:CD2	11:K:59:LEU:HD13	2.37	0.51
11:K:62:TYR:O	11:K:63:LEU:O	2.29	0.51
11:K:84:ARG:HH11	11:K:84:ARG:CB	2.22	0.51
1:A:1344:C:C4'	12:L:120:ARG:HB3	2.33	0.51
12:L:48:GLU:N	12:L:49:PRO:CD	2.74	0.51
13:M:36:GLY:O	13:M:38:ILE:N	2.43	0.51
16:P:21:TYR:N	16:P:21:TYR:CD2	2.76	0.51
17:Q:21:TYR:HD1	17:Q:21:TYR:H	1.59	0.51
17:Q:42:ILE:HA	17:Q:45:ARG:CG	2.35	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1186:G:N2	17:Q:61:TRP:O	2.29	0.51
21:U:30:ASP:CG	21:U:32:ARG:HB2	2.31	0.51
22:V:24:ALA:C	22:V:26:GLY:N	2.64	0.51
23:W:66:ALA:O	23:W:67:ALA:C	2.49	0.51
1:A:1001:G:C5	1:A:1002:G:H1'	2.45	0.51
2:C:1:C:C2'	2:C:2:G:H5'	2.41	0.51
1:A:996:A:N3	1:A:996:A:H2'	2.26	0.51
1:A:1118:C:OP1	12:L:104:ARG:CG	2.57	0.51
1:A:1166:G:C2	1:A:1171:G:O6	2.64	0.51
1:A:1305:G:OP1	24:X:2:GLY:N	2.44	0.51
1:A:1329:A:C2'	1:A:1330:U:H5'	2.40	0.51
1:A:142:G:H2'	1:A:143:A:H8	1.74	0.51
1:A:1431:C:H2'	1:A:1432:G:H5'	1.92	0.51
1:A:1433:A:H2'	1:A:1434:A:O4'	2.10	0.51
1:A:1438:G:C5	1:A:1439:C:C5	2.99	0.51
1:A:1394:A:C8	1:A:1501:C:H1'	2.43	0.51
1:A:1515:C:H2'	1:A:1516:G:C8	2.44	0.51
1:A:174:C:N1	1:A:175:C:H5	2.08	0.51
1:A:338:A:C6	1:A:339:C:C4	2.99	0.51
1:A:342:C:C2	1:A:343:U:C5	2.99	0.51
1:A:445:G:N2	1:A:446:G:C4	2.78	0.51
1:A:467:G:C2	1:A:468:A:C5	2.99	0.51
1:A:518:C:C6	1:A:530:G:C8	2.98	0.51
1:A:573:A:OP2	1:A:574:A:OP2	2.29	0.51
1:A:58:C:O2	1:A:388:G:C8	2.64	0.51
1:A:68:G:H2'	1:A:69:G:O4'	2.11	0.51
1:A:883:C:C5'	1:A:884:U:OP2	2.58	0.51
1:A:907:A:C3'	1:A:908:A:H8	2.23	0.51
1:A:959:A:H2'	1:A:960:U:H4'	1.92	0.51
1:A:961:U:H1'	1:A:1201:A:N6	2.17	0.51
2:C:36:U:C4	2:C:37:A:N7	2.79	0.51
5:E:102:LEU:HD22	5:E:176:GLU:HB3	1.92	0.51
5:E:169:LYS:CE	5:E:169:LYS:C	2.79	0.51
5:E:52:GLU:O	5:E:53:ARG:C	2.49	0.51
5:E:74:LYS:HD2	5:E:76:GLN:N	2.26	0.51
5:E:97:TRP:HE3	5:E:172:ILE:HB	1.75	0.51
6:F:15:THR:HG21	6:F:181:ASN:CA	2.40	0.51
6:F:46:GLU:O	6:F:47:LEU:HD22	2.10	0.51
7:G:18:LYS:HB3	7:G:20:TYR:CD1	2.46	0.51
7:G:38:TYR:CZ	7:G:45:GLN:NE2	2.79	0.51
7:G:74:GLN:CA	7:G:77:ASN:ND2	2.68	0.51
7:G:83:SER:C	7:G:85:LYS:H	2.12	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:101:ILE:O	8:H:102:ALA:HB2	2.10	0.51
8:H:109:ILE:HD13	8:H:135:THR:CG2	2.41	0.51
1:A:1079:G:OP1	8:H:45:PHE:CE2	2.63	0.51
10:J:75:VAL:HG11	10:J:86:GLN:HB3	1.91	0.51
5:E:181:PHE:CE1	11:K:71:GLY:N	2.79	0.51
11:K:98:LYS:HA	11:K:100:ILE:CD1	2.41	0.51
12:L:48:GLU:HB3	12:L:78:LYS:HZ1	1.70	0.51
12:L:4:TYR:HB3	12:L:87:GLN:CB	2.41	0.51
14:N:50:TYR:O	14:N:55:LYS:HD2	2.11	0.51
15:O:90:VAL:O	15:O:91:LYS:C	2.49	0.51
18:R:56:LEU:HD12	18:R:56:LEU:O	2.11	0.51
19:S:23:ASP:OD1	19:S:25:ARG:HG3	2.10	0.51
20:T:23:VAL:C	20:T:24:GLU:OE1	2.49	0.51
20:T:5:VAL:CG1	20:T:6:LEU:H	2.22	0.51
21:U:21:LYS:HZ3	21:U:23:LYS:N	2.08	0.51
22:V:13:ASP:O	22:V:17:GLU:CG	2.58	0.51
22:V:37:ARG:O	22:V:70:LYS:HG3	2.10	0.51
22:V:41:VAL:CB	22:V:42:PRO:CD	2.86	0.51
1:A:192:U:O4'	23:W:103:GLY:HA2	2.11	0.51
23:W:98:PRO:O	23:W:99:LEU:O	2.29	0.51
1:A:1120:G:C2'	1:A:1121:U:O5'	2.57	0.51
2:C:21:A:N1	2:C:48:C:C4	2.79	0.51
3:D:1:G:O6	3:D:73:A:N6	2.44	0.51
1:A:1032(B):G:C2	1:A:1033:G:C4	2.99	0.51
1:A:210:U:H5'	1:A:216:G:OP1	2.11	0.51
10:J:67:GLU:CA	10:J:67:GLU:OE2	2.58	0.51
1:A:1213:A:C2	1:A:1215:G:N9	2.78	0.51
1:A:1291:G:N2	1:A:1292:U:O2	2.44	0.51
1:A:1486:G:N2	1:A:1487:G:N3	2.59	0.51
1:A:155:C:C2	1:A:167:G:C2	2.99	0.51
1:A:197:A:H61	1:A:220:G:C2'	2.24	0.51
1:A:173:U:N1	1:A:197:A:N3	2.53	0.51
1:A:251:G:C5'	1:A:252:U:OP1	2.59	0.51
1:A:323:U:O4	1:A:324:G:C2	2.64	0.51
1:A:109:A:N6	1:A:326:G:O6	2.44	0.51
1:A:59:A:C5	1:A:354:G:C6	2.99	0.51
1:A:401:C:H6	1:A:401:C:O5'	1.93	0.51
1:A:445:G:C6	1:A:490:G:C6	2.98	0.51
1:A:553:A:H2'	1:A:554:C:C1'	2.41	0.51
1:A:55:A:O2'	1:A:56:U:H5'	2.11	0.51
1:A:622:A:C2'	1:A:623:C:C5'	2.86	0.51
1:A:741:G:O2'	1:A:742:G:C5'	2.59	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:797:C:C2	1:A:798:G:C8	2.99	0.51
2:C:38:A:H2'	2:C:39:C:O5'	2.10	0.51
5:E:24:TRP:HA	5:E:190:THR:O	2.11	0.51
6:F:32:LEU:O	6:F:35:GLU:HG2	2.11	0.51
6:F:58:GLU:O	6:F:59:ARG:NH2	2.43	0.51
7:G:106:TYR:HE1	7:G:112:VAL:CA	2.24	0.51
8:H:27:ARG:HH22	8:H:47:LYS:HB3	1.73	0.51
9:I:6:VAL:O	9:I:6:VAL:CG1	2.59	0.51
1:A:939:G:H5''	10:J:102:ARG:CZ	2.40	0.51
10:J:10:ARG:CG	10:J:10:ARG:HH11	2.24	0.51
10:J:5:ARG:HH11	10:J:5:ARG:CG	2.23	0.51
11:K:82:HIS:HD2	11:K:138:TRP:CD1	2.29	0.51
12:L:19:LEU:HD13	12:L:59:PHE:HD2	1.74	0.51
13:M:3:LYS:HG3	13:M:75:ILE:HG23	1.93	0.51
14:N:84:VAL:HG22	14:N:109:VAL:O	2.11	0.51
15:O:53:ARG:NE	15:O:93:LEU:HD22	2.26	0.51
15:O:9:GLN:O	15:O:12:ARG:N	2.41	0.51
1:A:755:G:OP2	18:R:65:ARG:CG	2.58	0.51
20:T:31:LEU:O	20:T:32:TYR:CD2	2.64	0.51
20:T:10:VAL:HG23	20:T:55:ASP:HB2	1.90	0.51
23:W:49:ALA:HB3	23:W:99:LEU:CG	2.38	0.51
23:W:64:ASP:O	23:W:67:ALA:N	2.44	0.51
23:W:26:ASN:HB3	23:W:71:THR:HG22	1.93	0.51
24:X:14:TRP:CZ3	24:X:15:ARG:NE	2.79	0.51
1:A:1539:C:H2'	1:A:1540:U:C5'	2.40	0.51
2:C:16:C:H4'	2:C:18:G:H5'	1.93	0.51
3:D:58:A:N1	3:D:61:C:H1'	2.26	0.51
22:V:30:LEU:HD21	22:V:50:ALA:CB	2.39	0.51
1:A:1470:G:O2'	1:A:1471:G:C5'	2.57	0.51
1:A:1474:G:C2	1:A:1475:G:N7	2.79	0.51
1:A:155:C:H2'	1:A:156:G:O4'	2.11	0.51
1:A:302:G:H2'	1:A:556:C:C5'	2.35	0.51
1:A:411:A:C5	1:A:413:G:H1'	2.46	0.51
1:A:451:A:C8	1:A:481:G:C6	2.98	0.51
1:A:507:C:P	1:A:508:C:H3'	2.50	0.51
1:A:521:G:P	15:O:54:LYS:HE2	2.51	0.51
1:A:529:G:O6	15:O:49:ASN:CB	2.59	0.51
1:A:545:C:OP2	7:G:62:GLN:OE1	2.29	0.51
1:A:622:A:C2'	1:A:623:C:O5'	2.59	0.51
1:A:628:G:C2'	1:A:629:G:C8	2.85	0.51
1:A:640:A:N7	1:A:641:U:C5	2.79	0.51
1:A:690:G:H2'	1:A:691:G:O5'	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:697:U:O5'	1:A:697:U:C6	2.57	0.51
1:A:718:G:C8	1:A:719:C:C5	2.99	0.51
1:A:914:A:HO2'	1:A:915:A:C5'	2.24	0.51
1:A:991:U:H6	1:A:991:U:OP2	1.93	0.51
2:C:34:C:C2	2:C:35:A:C8	2.99	0.51
5:E:126:GLU:O	5:E:127:ILE:C	2.50	0.51
5:E:213:LEU:CD2	5:E:214:ILE:HD13	2.41	0.51
5:E:223:ILE:O	5:E:226:ARG:HB3	2.10	0.51
5:E:28:PHE:CE2	5:E:189:ASP:O	2.60	0.51
6:F:91:LEU:HD12	6:F:99:VAL:HG22	1.92	0.51
9:I:33:TYR:CE1	9:I:75:LEU:HA	2.46	0.51
9:I:87:ARG:HH11	9:I:87:ARG:HG2	1.74	0.51
11:K:102:ARG:NH1	11:K:102:ARG:CG	2.71	0.51
11:K:19:VAL:HG23	11:K:21:LYS:CG	2.31	0.51
11:K:98:LYS:HD3	11:K:98:LYS:H	1.76	0.51
13:M:84:GLN:O	13:M:88:LEU:HB2	2.11	0.51
1:A:691:G:N7	14:N:26:ASN:HB3	2.26	0.51
14:N:44:SER:O	14:N:47:VAL:HB	2.11	0.51
14:N:53:SER:O	14:N:55:LYS:N	2.44	0.51
14:N:77:MET:SD	14:N:79:SER:O	2.68	0.51
18:R:42:HIS:O	18:R:43:LEU:C	2.49	0.51
19:S:51:VAL:HB	19:S:77:ALA:HB1	1.93	0.51
23:W:16:HIS:O	23:W:17:ARG:C	2.49	0.51
23:W:48:LYS:HB3	23:W:51:GLU:CD	2.30	0.51
23:W:53:LEU:CA	23:W:56:MET:HB2	2.33	0.51
1:A:1442:G:O5'	1:A:1442:G:N3	2.44	0.51
2:C:12:G:C2'	2:C:13:C:O5'	2.58	0.51
3:D:14:A:C2	3:D:15:G:C5	2.98	0.51
1:A:750:G:H1'	18:R:23:GLY:N	2.25	0.51
1:A:116:A:N6	1:A:117:G:C6	2.79	0.50
1:A:117:G:O5'	1:A:117:G:H8	1.95	0.50
1:A:1224:G:H2'	1:A:1225:A:OP1	2.11	0.50
1:A:1225:A:P	16:P:103:THR:OG1	2.69	0.50
1:A:1424:C:C2	1:A:1425:U:C6	2.99	0.50
1:A:1534:A:C5	1:A:1535:C:C5	2.99	0.50
1:A:174:C:C2	1:A:175:C:C5	2.99	0.50
1:A:174:C:C5	1:A:175:C:H5	2.28	0.50
1:A:189:U:C4	20:T:72:ARG:NH2	2.70	0.50
1:A:243:A:H62	1:A:281:G:H2'	1.76	0.50
1:A:293:G:C8	1:A:293:G:OP2	2.64	0.50
1:A:412:A:O2'	1:A:413:G:C8	2.62	0.50
1:A:410:G:H1'	1:A:432:A:N6	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:476:G:O2'	1:A:477:G:C5'	2.54	0.50
1:A:50:A:C5'	1:A:51:A:H5'	2.39	0.50
1:A:529:G:O6	15:O:49:ASN:CG	2.49	0.50
1:A:543:C:OP2	7:G:10:ARG:NH2	2.42	0.50
1:A:573:A:C2	1:A:574:A:C5	2.98	0.50
1:A:648:A:C2	1:A:649:G:C8	2.99	0.50
1:A:658:G:C2'	1:A:659:U:H5'	2.41	0.50
1:A:722:A:C2	1:A:724:G:N7	2.80	0.50
1:A:789:U:H6	1:A:790:A:H5''	1.76	0.50
1:A:986:A:H4'	22:V:55:LYS:CG	2.41	0.50
5:E:21:ARG:H	5:E:21:ARG:HE	1.58	0.50
6:F:150:LYS:HA	6:F:169:ALA:HB2	1.91	0.50
6:F:39:ILE:HG22	6:F:40:ARG:N	2.26	0.50
6:F:59:ARG:CD	6:F:61:ALA:O	2.60	0.50
8:H:81:GLU:H	8:H:81:GLU:CD	2.12	0.50
9:I:75:LEU:C	9:I:75:LEU:HD13	2.31	0.50
10:J:80:VAL:HG12	10:J:81:GLY:H	1.76	0.50
13:M:55:LYS:O	13:M:56:HIS:CG	2.64	0.50
14:N:28:THR:O	14:N:44:SER:HA	2.11	0.50
14:N:41:THR:HB	14:N:71:LYS:HD3	1.93	0.50
14:N:43:SER:CB	14:N:47:VAL:HG11	2.41	0.50
15:O:124:LYS:HG2	15:O:125:PRO:HD2	1.92	0.50
15:O:46:LYS:HB3	15:O:48:PRO:HD3	1.93	0.50
1:A:1226:C:C5'	16:P:103:THR:O	2.51	0.50
1:A:1308:U:H5''	16:P:110:ARG:HH22	1.76	0.50
17:Q:13:THR:C	17:Q:15:LYS:N	2.64	0.50
19:S:30:GLY:C	19:S:31:LYS:O	2.39	0.50
19:S:52:ASP:OD2	19:S:52:ASP:C	2.49	0.50
19:S:71:ARG:HG2	19:S:72:ARG:N	2.26	0.50
9:I:100:ASN:OD1	21:U:26:LEU:O	2.29	0.50
22:V:80:TYR:CD1	22:V:81:ARG:N	2.80	0.50
23:W:29:LYS:O	23:W:33:ILE:HG13	2.11	0.50
2:C:3:C:C2'	2:C:4:G:O5'	2.58	0.50
1:A:848:C:H2'	1:A:849:C:C6	2.45	0.50
1:A:929:G:C6	1:A:930:C:C4	2.99	0.50
1:A:1185:G:C2'	1:A:1186:G:H5'	2.40	0.50
1:A:1209:C:O2'	1:A:1210:C:H5'	2.11	0.50
1:A:1213:A:C4	1:A:1215:G:C5	2.99	0.50
1:A:1303:C:C2'	1:A:1303:C:O2	2.56	0.50
1:A:1306:A:C6	1:A:1307:U:C2	2.98	0.50
1:A:1316:G:H2'	1:A:1317:C:O5'	2.11	0.50
1:A:1316:G:H5'	1:A:1360:A:C5	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1486:G:N1	1:A:1487:G:C2	2.79	0.50
1:A:440:A:C8	1:A:442:C:C5	2.99	0.50
1:A:448:A:C5	1:A:487:A:C2	2.99	0.50
1:A:468:A:P	19:S:75:ARG:HH12	2.33	0.50
1:A:537:G:O2'	1:A:538:G:H5'	2.12	0.50
1:A:557:G:C6	1:A:558:G:N1	2.79	0.50
1:A:724:G:N2	1:A:725:G:N9	2.59	0.50
1:A:820:U:C2'	1:A:820:U:O2	2.54	0.50
1:A:872:A:O2'	1:A:873:A:C8	2.65	0.50
1:A:926:G:C2	1:A:1505:G:N3	2.79	0.50
1:A:978:A:N1	1:A:1318:A:C6	2.79	0.50
2:C:33:U:C6	2:C:35:A:OP2	2.64	0.50
3:D:38:A:H2'	3:D:39:U:H5'	1.92	0.50
5:E:97:TRP:NE1	5:E:101:MET:SD	2.73	0.50
5:E:137:ARG:O	5:E:141:GLU:HB2	2.11	0.50
5:E:222:ILE:O	5:E:226:ARG:CB	2.60	0.50
5:E:59:GLU:CA	5:E:221:LEU:HD11	2.42	0.50
6:F:76:VAL:O	6:F:83:ARG:CG	2.58	0.50
1:A:407:G:HO2'	7:G:116:GLN:HG2	1.75	0.50
7:G:165:MET:CE	7:G:166:LYS:HA	2.41	0.50
7:G:173:TRP:CA	7:G:186:LEU:CD2	2.84	0.50
7:G:25:ARG:O	7:G:25:ARG:HD3	2.11	0.50
8:H:102:ALA:HB1	8:H:106:PRO:HG2	1.94	0.50
10:J:89:MET:HG3	10:J:156:TRP:CD1	2.46	0.50
10:J:94:ARG:CG	10:J:94:ARG:HH11	2.16	0.50
12:L:96:LEU:HG	12:L:101:PHE:CE1	2.44	0.50
15:O:33:ARG:H	15:O:85:ILE:CG2	2.24	0.50
1:A:1230:C:O2	16:P:126:LYS:HD3	2.11	0.50
16:P:92:HIS:CE1	16:P:110:ARG:HH22	2.28	0.50
17:Q:48:ALA:O	17:Q:51:GLY:N	2.45	0.50
1:A:189:U:H3	20:T:63:ARG:HD2	1.76	0.50
20:T:95:TYR:O	20:T:98:LEU:HD23	2.10	0.50
23:W:29:LYS:O	23:W:32:ALA:HB3	2.11	0.50
2:C:5:G:O2'	2:C:6:G:C5'	2.58	0.50
3:D:58:A:N3	3:D:61:C:C6	2.79	0.50
1:A:1025:U:O2'	1:A:1026:G:C8	2.55	0.50
15:O:15:ARG:HH11	15:O:15:ARG:HG2	1.76	0.50
15:O:19:ARG:O	15:O:20:LYS:C	2.49	0.50
1:A:108:G:C5'	1:A:109:A:H5''	2.40	0.50
1:A:1068:G:O6	1:A:1108:G:C2	2.64	0.50
1:A:1319:A:N1	1:A:1361:G:C2	2.79	0.50
1:A:1339:A:H2	2:C:31:G:H1'	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1395:C:H6	1:A:1395:C:H5'	1.76	0.50
1:A:148:G:N1	1:A:175:C:N4	2.59	0.50
1:A:1493:A:OP2	1:A:1493:A:O4'	2.28	0.50
1:A:1515:C:C2	1:A:1516:G:C8	2.99	0.50
1:A:251:G:C4'	1:A:252:U:OP1	2.59	0.50
1:A:276:G:H2'	1:A:277:C:C5'	2.40	0.50
1:A:329:A:C6	1:A:332:G:C2	2.99	0.50
1:A:483:C:OP2	1:A:484:G:H2'	2.10	0.50
1:A:551:U:C2	1:A:552:U:C5	3.00	0.50
1:A:582:U:H5''	18:R:68:ARG:NH2	2.23	0.50
1:A:596:C:C2'	1:A:596:C:O2	2.55	0.50
1:A:684:A:C6	1:A:685:G:C6	3.00	0.50
1:A:697:U:H3'	1:A:698:G:C8	2.47	0.50
1:A:969:A:C6	1:A:970:C:C4	2.99	0.50
1:A:971:G:N7	1:A:1365:G:H5'	2.25	0.50
5:E:91:PRO:HG2	5:E:155:LEU:CB	2.41	0.50
6:F:172:ARG:NH2	6:F:203:PHE:CE2	2.79	0.50
6:F:22:TRP:HZ3	6:F:32:LEU:HD12	1.77	0.50
6:F:97:LYS:O	6:F:99:VAL:HG12	2.11	0.50
7:G:61:LYS:HA	7:G:203:VAL:CG2	2.41	0.50
9:I:98:LEU:HD13	9:I:101:ALA:CB	2.41	0.50
1:A:737:A:OP1	9:I:91:VAL:HG13	2.10	0.50
10:J:118:VAL:CG1	10:J:122:HIS:HE2	2.24	0.50
10:J:36:LYS:NZ	10:J:36:LYS:HA	2.26	0.50
10:J:45:ASP:CA	10:J:48:LYS:HZ3	2.21	0.50
10:J:88:PRO:CG	10:J:152:ALA:HB2	2.40	0.50
11:K:17:THR:HB	11:K:18:ARG:CZ	2.42	0.50
11:K:25:ASP:HA	11:K:59:LEU:O	2.11	0.50
12:L:28:VAL:HG21	12:L:32:ASP:O	2.11	0.50
13:M:31:GLY:HA2	13:M:81:THR:OG1	2.11	0.50
15:O:33:ARG:H	15:O:85:ILE:HG23	1.75	0.50
15:O:60:LEU:HD21	15:O:64:TYR:CD2	2.46	0.50
17:Q:53:LEU:O	17:Q:56:VAL:CG2	2.60	0.50
13:M:65:LEU:HB2	17:Q:56:VAL:HG12	1.92	0.50
1:A:760:G:H2'	20:T:103:GLY:C	2.32	0.50
21:U:30:ASP:CG	21:U:32:ARG:H	2.14	0.50
22:V:45:VAL:HA	22:V:67:VAL:HG21	1.92	0.50
23:W:40:ALA:O	23:W:41:ILE:C	2.49	0.50
23:W:56:MET:SD	23:W:84:LEU:CD1	2.97	0.50
2:C:21:A:N1	2:C:46:G:N2	2.53	0.50
2:C:63:G:H2'	2:C:64:G:H8	1.77	0.50
3:D:19:G:N3	3:D:57:G:H1'	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:1:19:A:O2'	4:1:20:A:H5'	2.12	0.50
1:A:1101:A:HO2'	1:A:1102:A:H8	1.56	0.50
1:A:1206:G:H5'	6:F:194:GLY:CA	2.38	0.50
1:A:1212:U:O2'	1:A:1213:A:H8	1.95	0.50
1:A:144:G:N1	1:A:145:G:C5	2.79	0.50
1:A:163:C:O2	1:A:164:U:C1'	2.59	0.50
1:A:277:C:C2	1:A:278:G:C8	3.00	0.50
1:A:291:C:H2'	1:A:291:C:O2	2.11	0.50
1:A:296:U:C2	1:A:297:G:N7	2.80	0.50
1:A:298:A:C4	1:A:299:G:C8	2.99	0.50
1:A:438:G:C2'	1:A:494:U:O4	2.59	0.50
1:A:594:G:N2	1:A:596:C:N4	2.58	0.50
1:A:631:G:H8	1:A:631:G:O5'	1.94	0.50
1:A:640:A:C5	1:A:641:U:C5	3.00	0.50
1:A:643:C:C5'	11:K:31:PHE:CD1	2.93	0.50
1:A:668:G:H2'	1:A:669:U:H6	1.75	0.50
1:A:724:G:N2	1:A:725:G:H1'	2.27	0.50
1:A:924:C:O2'	1:A:925:G:H5'	2.10	0.50
1:A:978:A:N1	1:A:1318:A:N6	2.59	0.50
1:A:994:A:H2'	1:A:994:A:N3	2.26	0.50
2:C:36:U:C2	2:C:37:A:C8	2.98	0.50
5:E:84:GLU:HG3	5:E:212:GLN:HE22	1.77	0.50
5:E:83:MET:HB2	5:E:234:PRO:CG	2.41	0.50
9:I:80:ARG:O	9:I:81:ILE:C	2.49	0.50
10:J:65:ALA:CB	10:J:124:LEU:HD23	2.41	0.50
10:J:134:ALA:O	10:J:135:VAL:C	2.50	0.50
10:J:38:LEU:HD13	10:J:41:ARG:HD3	1.92	0.50
11:K:112:LEU:HB2	11:K:132:GLU:O	2.12	0.50
11:K:88:LYS:O	11:K:91:ARG:O	2.30	0.50
12:L:51:ARG:O	12:L:52:ALA:C	2.50	0.50
14:N:48:ILE:HG22	14:N:48:ILE:O	2.11	0.50
14:N:82:VAL:C	14:N:83:ILE:HD12	2.32	0.50
15:O:110:VAL:HG21	15:O:113:ARG:HG3	1.93	0.50
1:A:1202:G:C4	17:Q:42:ILE:HD12	2.46	0.50
20:T:81:ARG:O	20:T:84:LEU:CD1	2.55	0.50
21:U:56:THR:O	21:U:57:GLY:C	2.50	0.50
23:W:89:ARG:HH21	23:W:104:LEU:HD23	1.75	0.50
3:D:54:U:H2'	3:D:55:U:H5'	1.93	0.50
8:H:5:ASP:O	8:H:36:ASP:CA	2.55	0.50
1:A:1065:U:C2'	1:A:1066:C:OP2	2.59	0.50
1:A:1134:G:O6	1:A:1141:C:N4	2.45	0.50
1:A:1118:C:N3	1:A:1156:G:N2	2.59	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1241:G:H8	1:A:1241:G:OP2	1.94	0.50
1:A:1321:C:N3	22:V:37:ARG:NH2	2.57	0.50
1:A:1329:A:C5	1:A:1330:U:C5	3.00	0.50
1:A:1234:C:H4'	1:A:1364:U:H1'	1.93	0.50
1:A:1438:G:C4	1:A:1439:C:C6	2.98	0.50
1:A:1401:G:H1	1:A:1504:G:N2	2.06	0.50
1:A:150:C:H6	1:A:150:C:O5'	1.95	0.50
1:A:1534:A:OP1	1:A:1534:A:H8	1.94	0.50
1:A:230:G:N2	1:A:231:G:C4	2.78	0.50
1:A:390:C:O3'	19:S:28:ARG:NH2	2.38	0.50
1:A:501:C:P	15:O:124:LYS:HD2	2.51	0.50
1:A:608:A:C2	1:A:609:A:H8	2.30	0.50
1:A:67:C:H2'	1:A:68:G:C8	2.46	0.50
1:A:687:A:H4'	1:A:688:G:O5'	2.12	0.50
1:A:794:A:C8	1:A:794:A:H3'	2.47	0.50
1:A:886:G:C2'	1:A:887:G:C5'	2.90	0.50
1:A:942:G:N2	12:L:124:GLN:CD	2.65	0.50
2:C:39:C:O2	2:C:40:C:C5	2.64	0.50
5:E:115:LEU:HB2	5:E:145:LEU:CG	2.36	0.50
5:E:130:ARG:CD	5:E:131:PRO:HD2	2.27	0.50
5:E:42:ILE:HD13	5:E:202:PRO:O	2.10	0.50
5:E:52:GLU:OE1	5:E:56:ARG:NH2	2.41	0.50
5:E:74:LYS:NZ	5:E:76:GLN:HB2	2.21	0.50
6:F:132:ARG:O	6:F:136:GLN:NE2	2.44	0.50
6:F:172:ARG:HB3	6:F:172:ARG:CZ	2.41	0.50
7:G:167:GLY:O	7:G:168:ARG:O	2.30	0.50
7:G:58:LEU:HD22	7:G:58:LEU:C	2.32	0.50
8:H:121:LYS:NZ	8:H:121:LYS:CA	2.75	0.50
8:H:76:ILE:HG21	8:H:142:LEU:HD22	1.93	0.50
9:I:98:LEU:CG	21:U:28:GLU:HG2	2.41	0.50
1:A:1240:U:C4	10:J:30:ILE:HG22	2.46	0.50
10:J:83:ALA:HB3	10:J:85:TYR:HE2	1.74	0.50
12:L:79:LEU:HD13	12:L:101:PHE:CB	2.42	0.50
12:L:48:GLU:CB	12:L:78:LYS:HZ3	2.25	0.50
12:L:87:GLN:O	12:L:90:PRO:HD3	2.11	0.50
13:M:34:VAL:HG22	13:M:74:ILE:HD11	1.92	0.50
15:O:86:ARG:NH1	15:O:119:LYS:HG3	2.24	0.50
1:A:880:C:P	15:O:9:GLN:HE21	2.35	0.50
16:P:37:THR:OG1	16:P:56:LEU:HD23	2.12	0.50
16:P:74:VAL:HA	16:P:77:ASN:OD1	2.12	0.50
16:P:77:ASN:HA	16:P:80:ARG:HD3	1.94	0.50
16:P:91:ARG:O	16:P:96:LEU:HD23	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:37:PHE:N	17:Q:37:PHE:CD2	2.79	0.50
18:R:3:ILE:H	18:R:3:ILE:HD12	1.75	0.50
18:R:5:LYS:NZ	18:R:5:LYS:HB2	2.27	0.50
18:R:76:GLU:CG	18:R:77:ARG:N	2.74	0.50
19:S:74:LEU:O	19:S:77:ALA:HB3	2.11	0.50
21:U:21:LYS:HG3	21:U:22:VAL:H	1.77	0.50
22:V:37:ARG:O	22:V:70:LYS:NZ	2.38	0.50
22:V:62:ILE:HD11	22:V:67:VAL:HG13	1.93	0.50
23:W:40:ALA:HB2	23:W:55:ILE:CG2	2.42	0.50
23:W:50:GLU:HA	23:W:50:GLU:OE1	2.11	0.50
23:W:81:LYS:O	23:W:82:SER:C	2.49	0.50
2:C:19:G:C4	2:C:57:A:C2	3.00	0.50
1:A:1031:G:H2'	1:A:1032:A:O4'	2.12	0.50
1:A:96:G:C2	1:A:97:U:H1'	2.46	0.50
7:G:70:ILE:HD11	7:G:118:ARG:NH2	2.26	0.50
12:L:108:VAL:O	12:L:108:VAL:HG23	2.11	0.50
1:A:1016:A:O5'	1:A:1016:A:C8	2.59	0.50
1:A:104:G:C2	1:A:105:G:C8	3.00	0.50
1:A:1161:C:H2'	1:A:1162:C:C6	2.42	0.50
1:A:1324:A:C6	1:A:1325:C:C5	2.99	0.50
1:A:1326:C:H5''	24:X:12:LYS:NZ	2.25	0.50
1:A:1350:A:O5'	1:A:1350:A:C8	2.65	0.50
1:A:1396:A:C4'	1:A:1398:A:H1'	2.42	0.50
1:A:1462:G:O2'	1:A:1463:C:H5'	2.11	0.50
1:A:1476:G:H8	1:A:1476:G:O5'	1.95	0.50
1:A:1406:U:C1'	1:A:1518:A:H4'	2.42	0.50
1:A:170:U:O2'	1:A:171:A:H5'	2.11	0.50
1:A:193:C:H4'	23:W:61:SER:N	2.27	0.50
1:A:389:A:C4	1:A:390:C:O4'	2.64	0.50
1:A:429:U:C5'	1:A:430:A:OP1	2.55	0.50
1:A:44:G:H2'	1:A:45:U:O5'	2.11	0.50
1:A:533:A:HO2'	1:A:534:U:P	2.35	0.50
1:A:575:G:HO2'	1:A:576:G:P	2.34	0.50
1:A:812:C:C1'	1:A:813:U:C5	2.94	0.50
1:A:855:G:O2'	1:A:856:C:H5'	2.11	0.50
1:A:858:G:N2	1:A:869:G:H2'	2.25	0.50
1:A:953:G:O4'	16:P:126:LYS:OXT	2.30	0.50
1:A:988:G:C2	1:A:989:C:C2	3.00	0.50
5:E:70:PHE:CE2	5:E:163:PHE:CB	2.94	0.50
5:E:23:ARG:NH1	5:E:24:TRP:O	2.44	0.50
5:E:84:GLU:OE2	5:E:219:VAL:HG21	2.12	0.50
6:F:134:ILE:N	6:F:134:ILE:HD12	2.25	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:14:ILE:HG22	6:F:15:THR:CG2	2.42	0.50
6:F:191:THR:CG2	6:F:196:LEU:HD21	2.40	0.50
7:G:120:LEU:HG	7:G:121:VAL:H	1.75	0.50
7:G:16:GLY:O	7:G:17:VAL:C	2.48	0.50
8:H:84:PHE:HE1	8:H:133:TYR:HB3	1.74	0.50
9:I:42:GLU:O	9:I:44:GLY:N	2.37	0.50
9:I:4:TYR:N	9:I:4:TYR:CD2	2.79	0.50
9:I:64:GLN:C	9:I:65:VAL:HG12	2.31	0.50
9:I:83:ASP:O	9:I:85:VAL:N	2.45	0.50
10:J:104:LEU:N	10:J:104:LEU:HD23	2.25	0.50
11:K:14:ARG:HD2	11:K:15:ASN:H	1.76	0.50
11:K:10:LEU:CD1	11:K:85:ARG:CB	2.88	0.50
12:L:97:LYS:O	12:L:100:GLY:HA3	2.10	0.50
12:L:47:LEU:CD1	12:L:50:LEU:HD22	2.38	0.50
12:L:5:TYR:CZ	12:L:7:THR:OG1	2.63	0.50
13:M:13:HIS:HB2	13:M:68:HIS:CE1	2.46	0.50
16:P:120:LYS:HG2	16:P:121:LYS:N	2.26	0.50
16:P:91:ARG:HH12	16:P:103:THR:HG22	1.76	0.50
17:Q:21:TYR:CE2	17:Q:23:ARG:HG2	2.47	0.50
18:R:64:ARG:O	18:R:67:LEU:N	2.44	0.50
18:R:77:ARG:HB3	18:R:77:ARG:CZ	2.42	0.50
18:R:77:ARG:O	18:R:80:ALA:HB3	2.12	0.50
18:R:78:TYR:HE2	18:R:82:ILE:HD11	1.75	0.50
20:T:10:VAL:HG11	20:T:52:LYS:C	2.32	0.50
20:T:16:GLN:C	20:T:18:THR:H	2.14	0.50
1:A:237:C:C5'	20:T:25:ARG:NH2	2.75	0.50
23:W:43:LEU:O	23:W:46:GLU:HG3	2.12	0.50
23:W:49:ALA:HB3	23:W:99:LEU:CD1	2.42	0.50
24:X:10:ARG:CA	24:X:13:ILE:HB	2.37	0.50
2:C:70:G:C2	2:C:71:C:C6	2.99	0.50
12:L:54:ASP:O	12:L:54:ASP:OD1	2.30	0.50
1:A:1051:C:H2'	1:A:1052:U:O4'	2.11	0.50
23:W:94:ALA:O	23:W:95:ALA:CB	2.59	0.50
4:1:16:A:OP2	4:1:16:A:H8	1.95	0.50
1:A:1138:G:N3	1:A:1138:G:C3'	2.74	0.50
1:A:1196:U:C4'	1:A:1197:G:O5'	2.59	0.50
1:A:1254:C:OP1	13:M:45:ARG:CZ	2.60	0.50
1:A:1330:U:C5	1:A:1331:G:N7	2.80	0.50
1:A:1371:G:C6	1:A:1372:U:C4	2.99	0.50
1:A:1428:A:C2	1:A:1429:C:C2	3.00	0.50
1:A:1433:A:C2'	1:A:1434:A:H5'	2.41	0.50
1:A:193:C:O2'	1:A:194:C:C5'	2.55	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:123:C:O2'	1:A:290:C:O2	2.24	0.50
1:A:375:U:O3'	19:S:6:LEU:CD2	2.52	0.50
1:A:438:G:N3	1:A:495:A:C8	2.80	0.50
1:A:43:C:OP1	19:S:12:LYS:CG	2.56	0.50
1:A:543:C:C2	1:A:544:G:N7	2.80	0.50
1:A:550:G:C6	1:A:551:U:C4	3.00	0.50
1:A:706:A:H4'	14:N:29:ILE:HD11	1.93	0.50
1:A:717:C:O2'	1:A:718:G:P	2.69	0.50
1:A:664:G:N3	1:A:726:C:H4'	2.27	0.50
1:A:896:C:C2	1:A:897:C:C6	2.99	0.50
1:A:961:U:H6	1:A:983:A:C4	2.29	0.50
5:E:112:VAL:O	5:E:116:GLU:OE2	2.30	0.50
5:E:133:LYS:CA	5:E:133:LYS:HE2	2.39	0.50
5:E:20:GLU:CD	5:E:189:ASP:OD2	2.50	0.50
5:E:212:GLN:OE1	5:E:216:SER:HB2	2.12	0.50
5:E:25:ASN:ND2	5:E:27:LYS:N	2.58	0.50
5:E:78:GLN:O	5:E:94:ASN:ND2	2.44	0.50
6:F:105:GLU:HG2	6:F:105:GLU:O	2.10	0.50
6:F:16:ARG:O	6:F:17:ASP:OD1	2.29	0.50
7:G:61:LYS:HE3	7:G:62:GLN:CA	2.42	0.50
8:H:59:GLY:O	8:H:62:ALA:N	2.45	0.50
9:I:69:GLU:O	9:I:72:VAL:HG13	2.12	0.50
10:J:149:ARG:HB3	14:N:59:TYR:CE2	2.46	0.50
10:J:45:ASP:HA	10:J:48:LYS:HZ1	1.74	0.50
10:J:75:VAL:HG22	10:J:88:PRO:HA	1.92	0.50
11:K:122:ARG:CD	11:K:123:GLU:H	2.24	0.50
11:K:29:SER:CA	11:K:32:LYS:HZ1	2.22	0.50
12:L:43:ALA:O	12:L:45:ALA:N	2.44	0.50
13:M:84:GLN:OE1	13:M:88:LEU:CD1	2.60	0.50
16:P:29:ARG:HA	16:P:64:TRP:CZ2	2.46	0.50
17:Q:3:ARG:NH1	17:Q:5:ALA:HB3	2.26	0.50
20:T:45:HIS:HE1	20:T:47:PRO:HA	1.76	0.50
21:U:40:LEU:C	21:U:42:ARG:H	2.15	0.50
14:N:110:ASP:CB	21:U:88:LYS:HD2	2.42	0.50
23:W:59:ALA:O	23:W:60:GLU:C	2.50	0.50
2:C:62:C:O2'	2:C:63:G:C5'	2.60	0.50
2:C:6:G:H2'	2:C:7:G:C8	2.46	0.50
1:A:89:U:N3	1:A:90:C:C5	2.80	0.50
1:A:76:G:O2'	1:A:77:C:H5'	2.11	0.50
16:P:122:LYS:O	16:P:123:ALA:CB	2.59	0.50
1:A:1109:C:OP1	6:F:176:HIS:CE1	2.64	0.50
1:A:1125:U:H4'	1:A:1126:U:C5	2.44	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1158:C:O2	1:A:1158:C:H3'	2.12	0.50
1:A:1159:U:C5	1:A:1181:G:N7	2.79	0.50
1:A:1239:A:C8	1:A:1241:G:N3	2.80	0.50
1:A:1274:G:H21	1:A:1275:A:H62	1.57	0.50
1:A:1399:C:N3	1:A:1502:A:N6	2.53	0.50
1:A:1424:C:H2'	1:A:1425:U:O4'	2.11	0.50
1:A:142:G:C2	1:A:143:A:C5	3.00	0.50
1:A:1460:A:C2	1:A:1461:G:C1'	2.95	0.50
1:A:1476:G:C4	1:A:1477:C:C5	3.00	0.50
1:A:151:A:C5	1:A:152:A:N3	2.80	0.50
1:A:1522:U:O2'	1:A:1523:G:C5'	2.59	0.50
1:A:521:G:OP1	15:O:73:GLU:O	2.30	0.50
1:A:564:C:C4	1:A:565:U:C4	3.00	0.50
1:A:563:A:H1'	1:A:566:G:O2'	2.11	0.50
1:A:646:U:H2'	1:A:647:C:H6	1.77	0.50
1:A:821:G:C2	1:A:822:C:C2	3.00	0.50
1:A:895:G:H2'	1:A:896:C:C6	2.46	0.50
5:E:170:GLU:HA	5:E:170:GLU:OE1	2.11	0.50
6:F:10:PHE:O	6:F:10:PHE:HD1	1.95	0.50
6:F:145:GLY:O	6:F:146:ALA:HB2	2.11	0.50
6:F:40:ARG:HG3	6:F:40:ARG:NH1	2.27	0.50
9:I:42:GLU:C	9:I:44:GLY:H	2.15	0.50
9:I:4:TYR:HD1	9:I:90:VAL:CG2	2.25	0.50
10:J:88:PRO:HD2	10:J:152:ALA:CA	2.41	0.50
10:J:37:ASN:OD1	10:J:38:LEU:N	2.44	0.50
11:K:37:ARG:NE	11:K:38:ILE:HD13	2.26	0.50
1:A:1368:G:P	12:L:113:LYS:HA	2.52	0.50
14:N:84:VAL:HG11	21:U:88:LYS:CD	2.24	0.50
15:O:96:VAL:O	15:O:96:VAL:HG12	2.11	0.50
16:P:78:ILE:HA	16:P:81:LEU:CD1	2.42	0.50
16:P:81:LEU:O	16:P:86:CYS:SG	2.70	0.50
17:Q:14:PRO:HB2	17:Q:17:LYS:HA	1.93	0.50
18:R:6:GLU:HG2	18:R:7:GLU:H	1.76	0.50
1:A:626:U:O3'	19:S:38:TYR:CE2	2.65	0.50
1:A:468:A:H1'	19:S:82:GLN:CG	2.41	0.50
20:T:29:HIS:HB2	20:T:36:ILE:CG2	2.42	0.50
22:V:77:THR:HG23	22:V:78:ARG:H	1.76	0.50
1:A:435:C:H2'	1:A:436:C:H5'	1.92	0.50
2:C:4:G:H2'	2:C:5:G:C8	2.38	0.50
3:D:74:C:H5'	3:D:74:C:H6	1.76	0.50
1:A:1134:G:C6	1:A:1141:C:C4	3.00	0.50
1:A:1239:A:C2	1:A:1298:C:C5	3.00	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1347:G:C8	12:L:107:ARG:CZ	2.95	0.50
1:A:1515:C:O2'	1:A:1516:G:C5'	2.60	0.50
1:A:160:A:H2	1:A:343:U:H1'	1.73	0.50
1:A:193:C:C2	1:A:194:C:H5	2.30	0.50
1:A:267:C:H2'	1:A:268:C:C5	2.47	0.50
1:A:272:C:C2	1:A:273:A:C8	3.00	0.50
1:A:345:C:C4'	1:A:346:G:O5'	2.52	0.50
1:A:352:C:H4'	1:A:354:G:OP1	2.12	0.50
1:A:412:A:H4'	1:A:413:G:H8	1.77	0.50
1:A:533:A:O2'	1:A:534:U:P	2.70	0.50
1:A:558:G:C8	1:A:559:A:N3	2.80	0.50
1:A:5:U:H4'	1:A:6:G:OP2	2.11	0.50
1:A:620:C:C2	7:G:135:LEU:HD13	2.46	0.50
1:A:402:G:C2'	1:A:620:C:H42	2.24	0.50
1:A:667:G:C2	1:A:740:U:C2	3.00	0.50
1:A:755:G:OP1	18:R:66:LEU:HD12	2.11	0.50
1:A:813:U:HO2'	1:A:1511:G:HO2'	1.57	0.50
1:A:923:A:H5'	1:A:1398:A:N6	2.27	0.50
1:A:970:C:H4'	1:A:972:C:C6	2.46	0.50
1:A:979:C:N3	17:Q:18:VAL:O	2.44	0.50
1:A:9:G:OP2	8:H:121:LYS:CD	2.55	0.50
2:C:32:C:H6	2:C:32:C:O5'	1.94	0.50
5:E:131:PRO:C	5:E:133:LYS:N	2.65	0.50
5:E:169:LYS:C	5:E:169:LYS:CD	2.80	0.50
5:E:181:PHE:CE1	11:K:70:GLN:NE2	2.80	0.50
5:E:77:ALA:HB2	5:E:211:ILE:CD1	2.39	0.50
6:F:87:LEU:CD1	6:F:101:LEU:HD11	2.38	0.50
6:F:105:GLU:CG	6:F:105:GLU:O	2.60	0.50
6:F:194:GLY:O	6:F:196:LEU:HD23	2.10	0.50
6:F:42:LEU:HD23	6:F:45:LYS:CD	2.40	0.50
7:G:10:ARG:HD3	7:G:10:ARG:O	2.11	0.50
7:G:148:VAL:O	7:G:149:ALA:O	2.29	0.50
7:G:178:VAL:O	7:G:179:GLU:O	2.29	0.50
7:G:56:VAL:O	7:G:59:ARG:HB2	2.12	0.50
8:H:127:ASN:O	8:H:128:PRO:C	2.50	0.50
8:H:13:ILE:H	8:H:13:ILE:HD12	1.74	0.50
10:J:148:ASN:HB3	10:J:151:TYR:HD1	1.76	0.50
10:J:76:ARG:HD3	10:J:156:TRP:NE1	2.26	0.50
11:K:129:VAL:HG13	11:K:130:GLY:N	2.25	0.50
1:A:1347:G:C8	12:L:107:ARG:CD	2.92	0.50
1:A:1369:C:OP2	12:L:111:ARG:HG3	2.12	0.50
12:L:66:ARG:HG2	12:L:67:GLY:N	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:3:LYS:CE	13:M:3:LYS:N	2.75	0.50
15:O:102:ARG:NH1	15:O:110:VAL:HG13	2.27	0.50
15:O:43:VAL:CG2	15:O:55:VAL:HG21	2.21	0.50
19:S:4:ILE:HG13	19:S:66:PRO:HB3	1.93	0.50
22:V:38:SER:OG	22:V:71:LEU:CD1	2.59	0.50
22:V:36:ARG:NE	22:V:51:VAL:CG1	2.75	0.50
3:D:3:C:C2	3:D:4:G:N7	2.80	0.50
3:D:9:A:N6	3:D:22:G:N7	2.60	0.50
16:P:122:LYS:O	16:P:123:ALA:HB2	2.12	0.50
1:A:122:G:OP1	1:A:122:G:C8	2.64	0.49
1:A:1242:C:O2'	1:A:1302:U:O2'	2.29	0.49
1:A:1305:G:OP1	24:X:2:GLY:CA	2.60	0.49
1:A:1433:A:C6	1:A:1434:A:C2	2.99	0.49
1:A:1528:U:O2	1:A:1530:G:H5''	2.12	0.49
1:A:17:U:C2	1:A:18:C:C5	3.00	0.49
1:A:181:G:H22	1:A:183:G:N2	2.09	0.49
1:A:189:U:H3	20:T:63:ARG:HB3	1.75	0.49
1:A:20:U:C2'	1:A:21:G:C5'	2.90	0.49
1:A:392:G:O3'	19:S:12:LYS:HE2	2.12	0.49
1:A:402:G:C6	1:A:403:C:C4	3.00	0.49
1:A:407:G:H5''	7:G:115:ARG:CG	2.42	0.49
1:A:44:G:C2	1:A:45:U:C1'	2.95	0.49
1:A:44:G:C2'	1:A:45:U:O5'	2.60	0.49
1:A:520:A:N7	1:A:521:G:C8	2.80	0.49
1:A:509:A:C2	1:A:543:C:H2'	2.47	0.49
1:A:556:C:C2'	1:A:557:G:H5'	2.42	0.49
1:A:580:U:C6	1:A:581:G:N7	2.80	0.49
1:A:685:G:H2'	1:A:686:U:H6	1.77	0.49
1:A:687:A:H2'	1:A:701:C:N4	2.27	0.49
1:A:729:A:C2	1:A:730:G:N9	2.80	0.49
1:A:673:G:C6	1:A:734:G:C6	3.00	0.49
1:A:908:A:N3	1:A:909:A:N7	2.60	0.49
1:A:970:C:C5'	1:A:972:C:H6	2.25	0.49
5:E:95:GLN:HE21	5:E:148:TYR:HA	1.77	0.49
5:E:192:SER:O	5:E:194:PRO:CD	2.60	0.49
6:F:188:LEU:CD1	6:F:190:ARG:HG2	2.42	0.49
6:F:28:GLN:NE2	6:F:29:TYR:N	2.60	0.49
7:G:152:SER:C	7:G:154:ASN:ND2	2.65	0.49
7:G:179:GLU:CG	7:G:180:GLY:N	2.69	0.49
8:H:105:VAL:HG12	8:H:106:PRO:CD	2.42	0.49
8:H:84:PHE:HB3	8:H:134:ALA:HB2	1.94	0.49
9:I:70:ASP:OD1	9:I:71:ARG:N	2.45	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:74:PRO:O	11:K:75:ARG:O	2.30	0.49
1:A:1231:G:OP1	12:L:127:LYS:HD3	2.12	0.49
1:A:1199:U:H4'	13:M:54:PHE:CE2	2.47	0.49
14:N:57:THR:HG23	14:N:60:ALA:N	2.12	0.49
15:O:38:THR:CG2	15:O:39:VAL:H	2.16	0.49
15:O:46:LYS:HB3	15:O:48:PRO:HD2	1.92	0.49
15:O:53:ARG:NE	15:O:92:ASP:OD2	2.43	0.49
15:O:88:GLY:HA3	15:O:99:HIS:CE1	2.46	0.49
18:R:33:THR:C	18:R:36:ILE:HG22	2.30	0.49
18:R:49:ASP:O	18:R:49:ASP:OD1	2.30	0.49
20:T:9:VAL:HG12	20:T:22:LEU:HB3	1.93	0.49
20:T:94:ASN:HA	20:T:104:LYS:CG	2.40	0.49
21:U:77:GLY:C	21:U:78:LEU:HG	2.32	0.49
21:U:77:GLY:C	21:U:79:LEU:HD12	2.33	0.49
22:V:63:THR:O	22:V:64:GLU:C	2.50	0.49
23:W:53:LEU:HA	23:W:56:MET:CB	2.33	0.49
2:C:7:G:C6	2:C:49:G:C5	3.00	0.49
3:D:19:G:N1	3:D:56:C:N3	2.60	0.49
1:A:1001:G:C8	1:A:1001:G:H3'	2.47	0.49
1:A:1003:G:N1	1:A:1038:C:C2	2.80	0.49
1:A:1026:G:H2'	1:A:1027:C:H5'	1.92	0.49
3:D:63:G:C2	3:D:64:C:N3	2.80	0.49
1:A:1008:C:C2	1:A:1009:G:C8	3.00	0.49
1:A:1291:G:C2	1:A:1292:U:C2	3.00	0.49
1:A:1424:C:H2'	1:A:1425:U:H6	1.77	0.49
1:A:1438:G:H2'	1:A:1439:C:H6	1.77	0.49
1:A:1474:G:N1	1:A:1475:G:N7	2.60	0.49
1:A:1418:A:C2	1:A:1483:A:N1	2.80	0.49
1:A:184:G:H5'	1:A:224:C:O2'	2.13	0.49
1:A:246:A:H1'	1:A:247:G:H1'	1.94	0.49
1:A:277:C:P	20:T:68:ARG:HH12	2.34	0.49
1:A:404:U:H5'	7:G:122:ARG:NH1	2.15	0.49
1:A:465:A:N7	1:A:467:G:C6	2.80	0.49
1:A:52:G:H2'	1:A:53:A:O5'	2.12	0.49
1:A:582:U:N3	1:A:583:A:N7	2.59	0.49
1:A:571:U:O5'	1:A:819:A:C8	2.65	0.49
1:A:829:G:C1'	5:E:26:PRO:HG2	2.42	0.49
1:A:944:G:C2	1:A:1340:A:C6	3.01	0.49
5:E:101:MET:HA	5:E:108:ILE:CB	2.42	0.49
5:E:113:HIS:HA	5:E:116:GLU:OE1	2.11	0.49
5:E:177:ALA:O	5:E:179:LYS:N	2.45	0.49
5:E:48:MET:O	5:E:49:GLU:C	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:57:PHE:HD2	5:E:57:PHE:C	2.15	0.49
6:F:88:ARG:NE	6:F:101:LEU:H	2.10	0.49
7:G:130:GLY:CA	7:G:131:ARG:NH1	2.67	0.49
9:I:15:ASP:OD1	9:I:16:GLN:N	2.44	0.49
10:J:49:ILE:H	10:J:49:ILE:HD12	1.76	0.49
10:J:74:GLU:HG2	10:J:75:VAL:N	2.27	0.49
11:K:9:MET:C	11:K:13:ILE:HD12	2.33	0.49
11:K:46:LYS:HE3	11:K:64:LYS:CG	2.36	0.49
11:K:46:LYS:CD	11:K:64:LYS:HA	2.42	0.49
13:M:13:HIS:O	13:M:13:HIS:ND1	2.44	0.49
14:N:18:ARG:HB2	14:N:33:THR:OG1	2.12	0.49
15:O:27:LEU:HD22	15:O:60:LEU:CD2	2.42	0.49
15:O:66:VAL:HG12	15:O:67:THR:N	2.19	0.49
1:A:950:U:OP2	16:P:102:ARG:NH2	2.46	0.49
1:A:1227:A:P	16:P:111:LYS:HZ1	2.35	0.49
19:S:55:ARG:O	19:S:58:TYR:N	2.45	0.49
19:S:6:LEU:C	19:S:6:LEU:CD2	2.80	0.49
20:T:81:ARG:HG3	20:T:84:LEU:HD22	1.92	0.49
21:U:30:ASP:C	21:U:32:ARG:H	2.13	0.49
21:U:44:LEU:CD1	21:U:45:SER:O	2.60	0.49
21:U:54:ARG:O	21:U:54:ARG:CG	2.60	0.49
23:W:100:ILE:C	23:W:102:GLY:H	2.14	0.49
7:G:159:ARG:O	7:G:160:GLN:C	2.48	0.49
1:A:1120:G:H8	1:A:1120:G:O5'	1.92	0.49
3:D:4:G:O2'	3:D:5:A:H5'	2.12	0.49
3:D:1:G:C6	3:D:73:A:C6	3.00	0.49
1:A:10:A:H2'	1:A:11:G:C5'	2.41	0.49
1:A:1072:G:C6	1:A:1104:G:N1	2.80	0.49
1:A:1193:G:H2'	1:A:1194:U:C5'	2.41	0.49
1:A:1201:A:O2'	1:A:1202:G:OP2	2.30	0.49
1:A:120:A:H2'	1:A:122:G:N7	2.27	0.49
1:A:1231:G:C4'	16:P:126:LYS:HZ3	2.25	0.49
1:A:1404:C:C1'	1:A:1499:A:H2	2.23	0.49
1:A:1425:U:C2	1:A:1426:C:C5	3.00	0.49
1:A:484:G:C8	1:A:486:U:C2	2.99	0.49
1:A:547:A:O2'	1:A:548:G:O5'	2.28	0.49
1:A:670:G:H2'	1:A:671:G:H5'	1.94	0.49
1:A:679:C:O2'	1:A:680:C:C5'	2.61	0.49
1:A:686:U:H2'	1:A:687:A:O5'	2.13	0.49
1:A:730:G:C8	1:A:731:G:H1'	2.46	0.49
1:A:742:G:N2	1:A:743:U:H1'	2.26	0.49
1:A:858:G:H1	1:A:869:G:H3'	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:948:C:OP2	16:P:108:ARG:N	2.45	0.49
1:A:950:U:H2'	1:A:951:G:H5'	1.94	0.49
3:D:38:A:O2'	3:D:39:U:H5'	2.11	0.49
5:E:118:LEU:CD1	5:E:141:GLU:OE2	2.60	0.49
5:E:156:LYS:HG2	5:E:156:LYS:O	2.11	0.49
5:E:179:LYS:C	5:E:181:PHE:N	2.64	0.49
5:E:187:LEU:HD21	5:E:203:GLY:C	2.32	0.49
5:E:178:ARG:NE	5:E:196:LEU:CD1	2.75	0.49
5:E:14:GLY:CA	5:E:209:ARG:CZ	2.90	0.49
6:F:150:LYS:HB2	6:F:173:VAL:CG2	2.30	0.49
6:F:166:GLU:OE1	6:F:166:GLU:HA	2.12	0.49
7:G:29:PRO:O	7:G:30:LYS:CG	2.60	0.49
7:G:60:GLU:HA	7:G:63:LYS:HD3	1.92	0.49
7:G:73:ARG:O	7:G:74:GLN:C	2.49	0.49
9:I:67:MET:HE3	9:I:67:MET:H	1.76	0.49
9:I:78:GLU:HA	9:I:81:ILE:HD11	1.94	0.49
9:I:75:LEU:HD22	9:I:78:GLU:HB3	1.95	0.49
3:D:41:G:O2'	10:J:144:MET:SD	2.59	0.49
10:J:97:GLN:O	10:J:98:SER:C	2.50	0.49
14:N:30:VAL:O	14:N:42:TRP:CB	2.58	0.49
14:N:42:TRP:C	14:N:42:TRP:HE3	2.15	0.49
14:N:79:SER:HA	14:N:104:GLN:CD	2.32	0.49
15:O:6:THR:OG1	15:O:9:GLN:HG3	2.12	0.49
15:O:73:GLU:OE1	15:O:73:GLU:N	2.27	0.49
17:Q:13:THR:O	17:Q:14:PRO:C	2.49	0.49
18:R:54:ARG:CZ	18:R:58:MET:HE3	2.42	0.49
18:R:70:LEU:HD22	18:R:77:ARG:HH22	1.77	0.49
19:S:6:LEU:HD22	19:S:6:LEU:C	2.32	0.49
1:A:468:A:C1'	19:S:82:GLN:NE2	2.76	0.49
20:T:31:LEU:O	20:T:32:TYR:HD2	1.95	0.49
21:U:21:LYS:HZ1	21:U:23:LYS:CB	2.25	0.49
9:I:49:ALA:HB1	21:U:80:PRO:HB3	1.95	0.49
23:W:57:ARG:CZ	23:W:100:ILE:HD12	2.42	0.49
23:W:65:LYS:O	23:W:68:LYS:HG3	2.12	0.49
24:X:13:ILE:HG22	24:X:14:TRP:N	2.28	0.49
7:G:157:LEU:HA	7:G:160:GLN:HG2	1.94	0.49
3:D:19:G:N2	3:D:57:G:C1'	2.66	0.49
1:A:1001:G:H8	1:A:1001:G:H5'	1.76	0.49
1:A:843:U:N3	5:E:37:ASN:ND2	2.48	0.49
23:W:8:ARG:NH1	23:W:8:ARG:CB	2.75	0.49
1:A:1115:C:C4	1:A:1116:C:N4	2.80	0.49
1:A:1261:A:N6	1:A:1274:G:C4	2.80	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1314:C:N4	22:V:4:SER:OG	2.46	0.49
1:A:1359:C:O2'	1:A:1361:G:OP2	2.31	0.49
1:A:1390:U:N3	1:A:1391:U:O4	2.45	0.49
1:A:1490:C:H2'	1:A:1491:G:O5'	2.12	0.49
1:A:794:A:O2'	1:A:1506:U:O4	2.23	0.49
1:A:161:A:C6	1:A:162:A:C5	3.00	0.49
1:A:166:G:C2	1:A:167:G:C8	3.00	0.49
1:A:197:A:O2'	1:A:198:G:O4'	2.24	0.49
1:A:250:A:H5'	1:A:252:U:O4'	2.12	0.49
1:A:9:G:C2	1:A:26:A:C2	3.00	0.49
1:A:451:A:C2	1:A:452:A:N6	2.80	0.49
1:A:489:C:H2'	1:A:490:G:H8	1.78	0.49
1:A:557:G:N1	1:A:558:G:C2	2.80	0.49
1:A:586:C:H1'	1:A:878:G:O2'	2.11	0.49
1:A:590:C:O2'	1:A:591:U:C5'	2.59	0.49
1:A:601:C:C2	1:A:638:G:N2	2.81	0.49
1:A:652:U:O4	1:A:752:G:C2'	2.60	0.49
1:A:656:C:HO2'	1:A:657:G:H5'	1.76	0.49
1:A:702:A:H2'	1:A:703:G:OP1	2.12	0.49
1:A:791:G:H2'	1:A:792:A:H8	1.69	0.49
1:A:873:A:H4'	1:A:874:G:OP2	2.10	0.49
1:A:898:G:O6	1:A:902:G:O6	2.30	0.49
1:A:919:A:C2	1:A:920:U:C4	3.00	0.49
5:E:68:ILE:CB	5:E:70:PHE:CZ	2.90	0.49
5:E:79:ASP:HA	5:E:82:ARG:CB	2.42	0.49
6:F:11:ARG:HB3	6:F:11:ARG:NH1	2.27	0.49
8:H:42:GLY:HA3	8:H:66:MET:SD	2.52	0.49
9:I:22:GLU:HA	9:I:25:ILE:CD1	2.23	0.49
9:I:41:GLU:CB	9:I:62:TRP:HE3	2.24	0.49
11:K:12:ARG:NH1	11:K:26:VAL:HA	2.25	0.49
13:M:26:ALA:HB1	13:M:84:GLN:CD	2.33	0.49
13:M:79:ARG:NH1	13:M:79:ARG:C	2.64	0.49
1:A:691:G:O6	14:N:55:LYS:CG	2.60	0.49
16:P:97:PRO:CD	16:P:110:ARG:HG2	2.41	0.49
17:Q:42:ILE:O	17:Q:43:CYS:C	2.51	0.49
18:R:3:ILE:HA	18:R:38:ARG:NH2	2.27	0.49
19:S:19:ILE:HD11	19:S:38:TYR:C	2.31	0.49
1:A:1028(B):C:C4	1:A:1029:G:N7	2.81	0.49
1:A:848:C:C2	1:A:849:C:C6	3.00	0.49
1:A:86:U:C3'	1:A:87:A:H5'	2.43	0.49
1:A:1072:G:C2	1:A:1104:G:C2	3.01	0.49
1:A:1229:A:O2'	1:A:1230:C:O4'	2.31	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1250:A:H4'	12:L:67:GLY:HA2	1.94	0.49
1:A:1293:G:H2'	1:A:1294:G:C8	2.48	0.49
1:A:1308:U:H2'	1:A:1309:G:H8	1.78	0.49
1:A:1304:G:H1	1:A:1332:A:P	2.35	0.49
1:A:1361:G:C8	1:A:1361:G:H3'	2.47	0.49
1:A:1521:G:O2'	1:A:1522:U:C5'	2.60	0.49
1:A:232:G:C5	1:A:233:C:C5	3.00	0.49
1:A:246:A:C4	1:A:282:A:N6	2.80	0.49
1:A:342:C:H2'	1:A:343:U:C6	2.47	0.49
1:A:344:A:HO2'	1:A:345:C:P	2.34	0.49
1:A:356:A:H2'	1:A:357:G:O4'	2.13	0.49
1:A:432:A:N7	1:A:433:C:N1	2.59	0.49
1:A:559:A:O2'	1:A:560:U:P	2.70	0.49
1:A:599:C:H4'	11:K:130:GLY:C	2.33	0.49
1:A:740:U:O2	1:A:741:G:C8	2.66	0.49
1:A:740:U:O2'	1:A:741:G:H5'	2.12	0.49
1:A:745:C:C5'	1:A:851:G:N3	2.72	0.49
5:E:119:GLU:O	5:E:120:ALA:O	2.30	0.49
5:E:91:PRO:CD	5:E:155:LEU:HD23	2.43	0.49
5:E:31:TYR:HE2	5:E:200:ILE:HG21	1.72	0.49
7:G:14:ARG:CD	7:G:15:GLU:N	2.75	0.49
7:G:34:GLU:CD	7:G:35:ARG:N	2.66	0.49
7:G:57:ARG:NH2	8:H:107:ARG:NE	2.41	0.49
7:G:83:SER:CA	7:G:89:THR:CG2	2.90	0.49
8:H:120:THR:CG2	8:H:120:THR:O	2.60	0.49
8:H:89:ILE:HG21	8:H:135:THR:HA	1.93	0.49
8:H:76:ILE:HG21	8:H:142:LEU:CD1	2.38	0.49
8:H:77:PRO:O	8:H:93:PRO:HG3	2.13	0.49
9:I:37:VAL:HG12	9:I:38:GLU:N	2.28	0.49
9:I:72:VAL:HG23	9:I:73:ASN:OD1	2.12	0.49
9:I:33:TYR:CZ	9:I:75:LEU:HA	2.48	0.49
9:I:98:LEU:CD2	21:U:28:GLU:HG2	2.42	0.49
10:J:52:GLU:O	10:J:54:THR:N	2.45	0.49
10:J:74:GLU:OE2	10:J:76:ARG:HG3	2.13	0.49
10:J:88:PRO:HG2	10:J:152:ALA:CB	2.41	0.49
10:J:95:ARG:O	10:J:96:GLN:C	2.50	0.49
11:K:111:ILE:CD1	11:K:111:ILE:N	2.65	0.49
12:L:103:THR:CG2	12:L:104:ARG:N	2.75	0.49
12:L:5:TYR:CZ	12:L:16:ARG:HG3	2.46	0.49
15:O:117:ARG:HH21	15:O:124:LYS:CA	2.06	0.49
17:Q:55:GLY:O	17:Q:56:VAL:C	2.48	0.49
18:R:57:LEU:O	18:R:60:VAL:N	2.45	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:60:VAL:O	18:R:63:ARG:HG3	2.11	0.49
18:R:70:LEU:C	18:R:70:LEU:CD1	2.78	0.49
19:S:43:LYS:CG	19:S:48:TRP:CZ3	2.90	0.49
1:A:760:G:H22	20:T:104:LYS:HB3	1.73	0.49
20:T:12:SER:OG	20:T:12:SER:O	2.27	0.49
20:T:65:ILE:CG2	20:T:69:LYS:O	2.61	0.49
20:T:8:GLY:O	20:T:56:VAL:CA	2.60	0.49
24:X:9:ARG:N	24:X:9:ARG:HD2	2.26	0.49
2:C:65:C:C2	2:C:66:C:C5	3.00	0.49
1:A:1001:G:H2'	1:A:1002:G:C4'	2.42	0.49
1:A:1002:G:N2	1:A:1039:C:C4	2.81	0.49
1:A:1005:A:N3	1:A:1005:A:H2'	2.27	0.49
1:A:849:C:H2'	1:A:850:U:C6	2.47	0.49
1:A:1133:G:C6	1:A:1134:G:N7	2.81	0.49
1:A:1147:C:N3	1:A:1148:U:C4	2.80	0.49
1:A:1244:C:OP2	24:X:9:ARG:HB2	2.13	0.49
1:A:138:G:C6	1:A:226:G:C5	3.01	0.49
1:A:922:G:N3	1:A:1398:A:H2	2.09	0.49
1:A:145:G:N1	1:A:178:C:C4	2.81	0.49
1:A:1476:G:C6	1:A:1477:C:N4	2.80	0.49
1:A:1517:G:C6	1:A:1518:A:C2	3.00	0.49
1:A:928:G:C3'	1:A:1533:C:H1'	2.42	0.49
1:A:160:A:N6	1:A:161:A:N1	2.61	0.49
1:A:329:A:C4	1:A:332:G:C6	3.00	0.49
1:A:34:C:C1'	15:O:32:PHE:HE2	2.26	0.49
1:A:407:G:OP1	7:G:115:ARG:CD	2.60	0.49
1:A:571:U:H4'	1:A:819:A:H62	1.77	0.49
1:A:791:G:H3'	1:A:791:G:OP2	2.13	0.49
1:A:818:G:O2'	1:A:819:A:P	2.70	0.49
1:A:907:A:C4	1:A:908:A:C8	3.00	0.49
1:A:918:A:O2'	1:A:919:A:OP1	2.31	0.49
1:A:947:G:H2'	1:A:948:C:C6	2.44	0.49
1:A:961:U:H5	1:A:983:A:C4	2.23	0.49
1:A:951:G:H1'	1:A:970:C:O2'	2.12	0.49
5:E:109:SER:O	5:E:112:VAL:N	2.45	0.49
5:E:19:HIS:CD2	5:E:204:ASN:ND2	2.81	0.49
5:E:50:GLU:O	5:E:51:LEU:C	2.50	0.49
5:E:91:PRO:HG2	5:E:155:LEU:CD2	2.39	0.49
6:F:12:LEU:HD22	17:Q:57:ARG:HG3	1.95	0.49
6:F:145:GLY:O	6:F:146:ALA:CB	2.59	0.49
6:F:182:ILE:CG2	6:F:202:ILE:O	2.59	0.49
6:F:182:ILE:CG1	6:F:203:PHE:HD1	2.22	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:115:ARG:O	7:G:116:GLN:C	2.51	0.49
7:G:191:ARG:NE	7:G:191:ARG:CA	2.75	0.49
7:G:200:GLU:O	7:G:203:VAL:N	2.45	0.49
7:G:43:HIS:O	7:G:45:GLN:N	2.46	0.49
11:K:109:ILE:HG12	11:K:137:VAL:O	2.11	0.49
11:K:35:ILE:HD11	11:K:134:ILE:HD13	1.95	0.49
12:L:21:PRO:HA	12:L:59:PHE:CE1	2.48	0.49
13:M:10:GLY:HA3	13:M:94:VAL:HG22	1.94	0.49
13:M:28:ARG:HG2	13:M:28:ARG:HH11	1.78	0.49
13:M:28:ARG:HG2	13:M:28:ARG:NH1	2.28	0.49
17:Q:4:LYS:O	17:Q:6:LEU:N	2.45	0.49
18:R:18:PHE:CE1	18:R:21:ASP:N	2.81	0.49
1:A:579:G:O2'	18:R:58:MET:CE	2.60	0.49
9:I:91:VAL:HG13	21:U:72:ARG:NH2	2.28	0.49
23:W:73:HIS:H	23:W:76:ALA:HB3	1.78	0.49
2:C:16:C:O3'	2:C:18:G:H5''	2.13	0.49
2:C:48:C:C2'	2:C:48:C:O2	2.61	0.49
1:A:1031:G:O2'	1:A:1032:A:H5'	2.13	0.49
1:A:1051:C:O2'	1:A:1052:U:H5'	2.12	0.49
1:A:1054:C:OP2	1:A:1196:U:O3'	2.31	0.49
1:A:946:A:N6	1:A:1236:A:C6	2.81	0.49
1:A:126:G:H4'	1:A:634:C:O2	2.13	0.49
1:A:1378:C:N3	1:A:1379:G:C1'	2.73	0.49
1:A:1518:A:C2	1:A:1519:A:C2	3.01	0.49
1:A:186(D):C:H2'	1:A:186(E):C:C6	2.44	0.49
1:A:339:C:C2'	1:A:340:U:O5'	2.60	0.49
1:A:46:G:C2	1:A:366:C:C2	3.01	0.49
1:A:510:A:H1'	1:A:543:C:H1'	1.94	0.49
1:A:512:U:C2	1:A:513:C:C5	3.01	0.49
1:A:528:C:C4	15:O:49:ASN:ND2	2.81	0.49
1:A:659:U:C2	1:A:660:G:C8	3.01	0.49
1:A:674:G:OP1	9:I:87:ARG:NH2	2.45	0.49
1:A:821:G:O2'	1:A:822:C:H5'	2.12	0.49
1:A:978:A:O2'	1:A:979:C:H5'	2.12	0.49
1:A:1340:A:H4'	2:C:31:G:O2'	2.13	0.49
5:E:179:LYS:O	5:E:181:PHE:N	2.46	0.49
5:E:50:GLU:OE2	5:E:200:ILE:HB	2.12	0.49
1:A:1057:G:H4'	6:F:197:GLY:N	2.27	0.49
7:G:162:LEU:HD13	7:G:181:MET:CB	2.42	0.49
7:G:185:PHE:HD2	7:G:186:LEU:H	1.61	0.49
8:H:61:TYR:HA	8:H:64:ARG:CG	2.40	0.49
9:I:80:ARG:O	9:I:81:ILE:O	2.30	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:138:LYS:O	10:J:139:GLU:C	2.51	0.49
11:K:61:VAL:CG1	11:K:62:TYR:N	2.75	0.49
12:L:38:GLN:C	12:L:40:LEU:H	2.16	0.49
12:L:19:LEU:CD2	12:L:59:PHE:HB3	2.42	0.49
13:M:25:GLU:O	13:M:28:ARG:HB2	2.13	0.49
13:M:34:VAL:HG22	13:M:74:ILE:CD1	2.43	0.49
14:N:20:TYR:CE2	14:N:83:ILE:HG21	2.48	0.49
1:A:1358:U:C5'	17:Q:34:TYR:HB3	2.41	0.49
17:Q:39:LEU:HD12	17:Q:44:LEU:HB2	1.93	0.49
18:R:59:MET:O	18:R:62:GLN:HB3	2.13	0.49
19:S:51:VAL:HG12	19:S:74:LEU:CD2	2.42	0.49
20:T:9:VAL:HG22	20:T:10:VAL:O	2.12	0.49
20:T:32:TYR:O	20:T:34:LYS:N	2.45	0.49
23:W:72:LEU:CD2	23:W:77:ALA:N	2.76	0.49
2:C:75:C:H5	2:C:76:A:HO2'	1.50	0.49
2:C:16:C:H4'	2:C:18:G:H5''	1.95	0.49
2:C:44:A:H2'	2:C:45:G:C5'	2.43	0.49
2:C:58:A:C6	2:C:61:C:C6	3.01	0.49
1:A:1039:C:O2'	1:A:1040:U:H5'	2.13	0.49
1:A:562:C:HO2'	15:O:15:ARG:HD3	1.75	0.49
1:A:1011:G:C2	1:A:1012:U:H1'	2.47	0.49
1:A:101:A:C2'	1:A:102:G:H5'	2.43	0.49
1:A:1275:A:H2	1:A:1283:G:H5'	1.78	0.49
1:A:1363:A:N3	1:A:1365:G:O6	2.44	0.49
1:A:1399:C:C4	1:A:1502:A:N6	2.70	0.49
1:A:1423:G:C6	1:A:1424:C:C4	3.00	0.49
1:A:1431:C:C2'	1:A:1432:G:C5'	2.90	0.49
1:A:1515:C:O2'	1:A:1516:G:H5'	2.13	0.49
1:A:132:C:C2	1:A:231:G:C2	3.00	0.49
1:A:241:C:C2	1:A:242:C:C5	3.01	0.49
1:A:253:U:C2'	1:A:254:G:H8	2.15	0.49
1:A:297:G:N2	1:A:299:G:C5'	2.76	0.49
1:A:658:G:C5	1:A:659:U:C5	3.01	0.49
1:A:722:A:N3	1:A:724:G:N7	2.60	0.49
1:A:834:C:H2'	1:A:835:U:O4'	2.13	0.49
1:A:887:G:N2	1:A:911:U:H1'	2.27	0.49
1:A:939:G:N2	1:A:940:C:C2	2.81	0.49
1:A:950:U:O2'	1:A:951:G:H5'	2.13	0.49
3:D:34:G:N3	3:D:34:G:H2'	2.26	0.49
5:E:216:SER:O	5:E:217:ARG:C	2.51	0.49
5:E:222:ILE:CD1	5:E:226:ARG:NH2	2.55	0.49
5:E:61:LEU:HD23	5:E:62:ALA:N	2.28	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:14:ARG:HG3	7:G:15:GLU:N	2.28	0.49
7:G:173:TRP:HA	7:G:186:LEU:CG	2.43	0.49
8:H:12:LEU:C	8:H:12:LEU:HD13	2.31	0.49
8:H:79:GLU:CB	8:H:92:LYS:HA	2.28	0.49
8:H:79:GLU:HG2	8:H:92:LYS:HG3	1.95	0.49
10:J:113:GLU:OE2	10:J:119:ARG:CG	2.60	0.49
10:J:116:ALA:O	10:J:120:ILE:HG13	2.13	0.49
10:J:45:ASP:CA	10:J:48:LYS:NZ	2.67	0.49
10:J:51:GLN:O	10:J:55:GLY:HA2	2.12	0.49
11:K:21:LYS:HE2	11:K:21:LYS:CA	2.43	0.49
11:K:96:GLY:HA2	11:K:130:GLY:CA	2.43	0.49
12:L:5:TYR:CD2	12:L:17:VAL:O	2.65	0.49
12:L:17:VAL:HG22	12:L:63:ILE:HG12	1.94	0.49
12:L:74:ILE:O	12:L:77:ILE:HB	2.13	0.49
16:P:29:ARG:CZ	16:P:64:TRP:NE1	2.74	0.49
18:R:26:GLU:CD	18:R:77:ARG:HH21	2.16	0.49
19:S:67:THR:HG22	19:S:68:ASP:N	2.28	0.49
19:S:7:ALA:CB	19:S:9:PHE:HE2	2.25	0.49
19:S:8:ARG:C	19:S:8:ARG:CD	2.80	0.49
20:T:57:VAL:HB	20:T:75:ARG:O	2.12	0.49
22:V:9:VAL:O	22:V:10:PHE:O	2.30	0.49
3:D:60:U:C2'	3:D:61:C:OP1	2.61	0.49
1:A:1010:G:C2	1:A:1011:G:N7	2.81	0.49
1:A:1104:G:H2'	1:A:1105:A:H8	1.78	0.49
1:A:1107:C:OP1	6:F:172:ARG:HA	2.13	0.49
1:A:1135:U:O2	1:A:1137:C:C2	2.66	0.49
1:A:1200:C:OP2	1:A:1200:C:C4'	2.60	0.49
1:A:1316:G:N3	1:A:1318:A:OP2	2.46	0.49
1:A:1331:G:O2'	1:A:1332:A:P	2.71	0.49
1:A:1357:A:N7	1:A:1358:U:C4	2.81	0.49
1:A:971:G:C8	1:A:1365:G:H4'	2.48	0.49
1:A:1375:A:H2'	1:A:1376:U:C5	2.41	0.49
1:A:924:C:O2'	1:A:1399:C:H6	1.96	0.49
1:A:1423:G:C5	1:A:1424:C:C5	3.00	0.49
1:A:143:A:N1	1:A:220:G:O6	2.45	0.49
1:A:195:A:H4'	23:W:68:LYS:NZ	2.28	0.49
1:A:226:G:O2'	1:A:227:G:O5'	2.31	0.49
1:A:438:G:N2	1:A:495:A:H8	2.11	0.49
1:A:657:G:O4'	18:R:28:GLN:NE2	2.44	0.49
1:A:686:U:O2'	1:A:687:A:P	2.71	0.49
1:A:738:C:H2'	1:A:739:C:H6	1.77	0.49
1:A:768:A:H8	1:A:768:A:O5'	1.96	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:777:A:C5	1:A:778:G:N7	2.81	0.49
1:A:789:U:N3	1:A:791:G:OP2	2.46	0.49
1:A:889:A:H5'	1:A:891:U:O4'	2.13	0.49
1:A:913:A:O2'	1:A:914:A:P	2.70	0.49
6:F:101:LEU:HD23	6:F:103:VAL:HG23	1.95	0.49
6:F:116:VAL:HG11	6:F:141:VAL:CG2	2.26	0.49
6:F:77:ILE:HD11	6:F:103:VAL:HG21	1.93	0.49
9:I:79:LEU:HD23	9:I:79:LEU:N	2.27	0.49
10:J:76:ARG:C	10:J:156:TRP:HZ2	2.16	0.49
1:A:1377:A:C2	10:J:7:ALA:HB1	2.48	0.49
11:K:123:GLU:O	11:K:124:ALA:C	2.50	0.49
13:M:62:HIS:O	17:Q:59:ALA:CB	2.61	0.49
13:M:84:GLN:OE1	13:M:88:LEU:HD12	2.12	0.49
15:O:23:LYS:O	15:O:24:VAL:CG2	2.55	0.49
18:R:32:LEU:O	18:R:36:ILE:HB	2.12	0.49
18:R:69:TYR:O	18:R:72:ARG:N	2.45	0.49
18:R:79:ARG:HB2	18:R:79:ARG:CZ	2.42	0.49
19:S:20:VAL:CG1	19:S:32:TYR:CD2	2.96	0.49
22:V:36:ARG:HH12	22:V:72:GLY:HA2	1.72	0.49
2:C:18:G:N3	2:C:58:A:C4	2.81	0.49
3:D:1:G:C6	3:D:73:A:N6	2.81	0.49
3:D:19:G:H5''	3:D:20:U:C4	2.47	0.49
3:D:21:A:C6	3:D:46:G:N2	2.80	0.49
1:A:1128:C:C1'	1:A:1146:A:H61	2.24	0.49
1:A:1190:G:H3'	6:F:3:ASN:HD21	1.78	0.49
1:A:130:A:O2'	1:A:131:C:P	2.71	0.49
1:A:1340:A:O3'	2:C:32:C:H5'	2.13	0.49
1:A:1516:G:C4	1:A:1520:G:N2	2.81	0.49
1:A:191(E):G:H8	1:A:191(E):G:O5'	1.95	0.49
1:A:266:G:N2	1:A:270:A:H62	1.99	0.49
1:A:297:G:N2	1:A:299:G:C3'	2.64	0.49
1:A:299:G:N1	1:A:300:A:N1	2.61	0.49
1:A:487:A:OP2	1:A:488:C:H5	1.95	0.49
1:A:61:G:H2'	1:A:62:U:O4'	2.12	0.49
1:A:647:C:O2'	1:A:648:A:H5'	2.12	0.49
1:A:696:A:H2'	1:A:697:U:C5'	2.43	0.49
1:A:703:G:O5'	1:A:703:G:H8	1.95	0.49
1:A:814:A:H2'	1:A:816:A:OP1	2.13	0.49
1:A:853:G:H2'	1:A:854:G:H8	1.77	0.49
1:A:828:A:C2	1:A:859:A:O4'	2.65	0.49
1:A:965:A:H2'	1:A:965:A:N3	2.27	0.49
5:E:112:VAL:O	5:E:113:HIS:C	2.51	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:177:ALA:HA	5:E:180:LEU:HD12	1.95	0.49
6:F:111:LEU:N	6:F:111:LEU:HD12	2.28	0.49
6:F:181:ASN:HD22	6:F:206:GLU:HG2	1.77	0.49
8:H:91:LEU:CD2	8:H:118:ILE:CG2	2.82	0.49
8:H:35:GLY:HA3	8:H:41:VAL:HG13	1.95	0.49
8:H:7:GLU:HB3	8:H:112:LEU:CD1	2.36	0.49
8:H:9:LYS:HE2	8:H:112:LEU:CD2	2.43	0.49
9:I:73:ASN:O	9:I:76:ALA:CB	2.53	0.49
11:K:26:VAL:HG22	11:K:27:PRO:CD	2.42	0.49
11:K:6:ILE:CD1	11:K:85:ARG:CZ	2.90	0.49
1:A:1368:G:OP1	12:L:113:LYS:HA	2.13	0.49
12:L:116:LYS:HB2	12:L:121:ARG:C	2.33	0.49
12:L:28:VAL:O	12:L:29:ASN:C	2.51	0.49
12:L:38:GLN:O	12:L:40:LEU:HG	2.13	0.49
14:N:73:MET:HE1	14:N:103:LEU:HD22	1.94	0.49
16:P:16:ASP:OD1	16:P:34:LEU:CD1	2.61	0.49
16:P:53:VAL:O	16:P:54:VAL:C	2.51	0.49
16:P:96:LEU:O	16:P:98:VAL:CG2	2.59	0.49
16:P:92:HIS:CG	16:P:98:VAL:HG21	2.48	0.49
18:R:69:TYR:HB2	18:R:72:ARG:HH21	1.78	0.49
1:A:626:U:H5''	19:S:38:TYR:CD2	2.48	0.49
19:S:52:ASP:OD2	19:S:55:ARG:N	2.46	0.49
19:S:9:PHE:CZ	19:S:18:ARG:CG	2.95	0.49
20:T:18:THR:HG22	20:T:19:VAL:N	2.27	0.49
23:W:87:LYS:O	23:W:90:GLN:N	2.46	0.49
1:A:1243:C:OP2	24:X:10:ARG:NE	2.46	0.49
1:A:1035:A:O2'	1:A:1036:G:H5'	2.12	0.49
1:A:838:G:N2	1:A:849:C:O2	2.46	0.49
1:A:848:C:O2'	1:A:849:C:C5'	2.61	0.49
3:D:75:C:C3'	3:D:76:A:H4'	2.43	0.49
1:A:1173:G:C2'	1:A:1174:G:H5''	2.42	0.48
1:A:1192:C:C5	1:A:1193:G:C1'	2.96	0.48
1:A:955:U:H1'	1:A:1227:A:H61	1.78	0.48
1:A:1265:G:C6	1:A:1271:G:C6	3.00	0.48
1:A:1253:G:C2	1:A:1285:A:N6	2.80	0.48
1:A:1320:C:C2	22:V:72:GLY:HA3	2.47	0.48
1:A:1402:C:O2'	1:A:1403:C:H5'	2.13	0.48
1:A:156:G:C2	1:A:157:G:H1'	2.48	0.48
1:A:197:A:O2'	1:A:198:G:O5'	2.30	0.48
1:A:247:G:C2	1:A:282:A:C2	3.00	0.48
1:A:253:U:OP2	20:T:67:LYS:HE3	2.13	0.48
1:A:298:A:H2'	1:A:299:G:O4'	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:397:A:C6	1:A:548:G:N7	2.81	0.48
1:A:432:A:H8	1:A:433:C:C6	2.30	0.48
1:A:479:C:H2'	1:A:480:U:C6	2.47	0.48
1:A:692:U:N3	1:A:695:A:OP2	2.46	0.48
1:A:692:U:O4	14:N:53:SER:CA	2.61	0.48
1:A:724:G:N2	1:A:725:G:C1'	2.75	0.48
1:A:782:A:N7	1:A:783:C:C4	2.81	0.48
1:A:825:G:N2	1:A:826:C:C2	2.80	0.48
1:A:956:U:O2	1:A:960:U:O4	2.31	0.48
5:E:27:LYS:HB2	5:E:194:PRO:HD2	1.94	0.48
7:G:155:LEU:N	7:G:155:LEU:CD2	2.76	0.48
7:G:177:ASP:CG	7:G:179:GLU:HB3	2.32	0.48
7:G:173:TRP:CH2	7:G:194:LEU:HD11	2.48	0.48
7:G:25:ARG:HH21	7:G:30:LYS:HD3	1.77	0.48
7:G:71:SER:OG	7:G:73:ARG:N	2.46	0.48
7:G:94:LEU:HD23	7:G:97:LEU:CD1	2.43	0.48
10:J:11:GLN:NE2	10:J:12:LEU:H	2.11	0.48
11:K:122:ARG:HA	11:K:125:ARG:HH11	1.78	0.48
11:K:122:ARG:HD3	11:K:123:GLU:H	1.78	0.48
11:K:37:ARG:HE	11:K:38:ILE:CD1	2.25	0.48
12:L:69:GLY:O	12:L:70:LYS:C	2.51	0.48
13:M:60:ARG:NH1	13:M:60:ARG:CB	2.75	0.48
14:N:34:ASP:HB2	14:N:35:PRO:HD2	1.95	0.48
14:N:83:ILE:CG2	14:N:84:VAL:N	2.76	0.48
15:O:117:ARG:HG3	15:O:117:ARG:HH11	1.78	0.48
1:A:952:U:C4	16:P:104:ARG:NH2	2.81	0.48
16:P:29:ARG:HH11	16:P:66:LEU:HD13	1.78	0.48
16:P:58:GLU:O	16:P:61:GLU:CB	2.60	0.48
18:R:62:GLN:NE2	18:R:66:LEU:HD11	2.27	0.48
19:S:19:ILE:CD1	19:S:38:TYR:C	2.81	0.48
20:T:31:LEU:O	20:T:31:LEU:CG	2.60	0.48
20:T:51:TYR:CZ	20:T:73:VAL:CG1	2.95	0.48
1:A:663:A:H4'	21:U:61:LYS:HZ1	1.75	0.48
21:U:72:ARG:HH11	21:U:72:ARG:CB	2.26	0.48
23:W:14:LYS:O	23:W:18:GLN:CG	2.60	0.48
23:W:57:ARG:HG2	23:W:57:ARG:HH11	1.78	0.48
1:A:1327:C:H5''	24:X:20:LYS:CD	2.42	0.48
2:C:18:G:C2	2:C:58:A:C4	3.00	0.48
1:A:849:C:H2'	1:A:850:U:H6	1.78	0.48
1:A:1072:G:C4	1:A:1104:G:N2	2.81	0.48
1:A:1113:C:C2	1:A:1114:C:C6	3.01	0.48
1:A:1296:C:C5	1:A:1297:C:N4	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1365:G:C6	1:A:1366:C:C4	3.01	0.48
1:A:925:G:C6	1:A:1392:G:N1	2.81	0.48
1:A:1407:C:O2'	1:A:1408:A:H5'	2.13	0.48
1:A:1430:C:O2'	1:A:1431:C:O5'	2.31	0.48
1:A:1475:G:H2'	1:A:1476:G:H8	1.78	0.48
1:A:21:G:C2'	1:A:22:G:C8	2.86	0.48
1:A:236:G:H3'	1:A:237:C:H6	1.78	0.48
1:A:644:G:C5	1:A:645:C:C6	3.00	0.48
1:A:676:A:C2'	1:A:677:U:O5'	2.60	0.48
1:A:755:G:N3	1:A:755:G:H2'	2.28	0.48
1:A:902:G:N2	1:A:903:G:C4	2.81	0.48
1:A:966:G:N3	2:C:34:C:H5'	2.28	0.48
5:E:11:LEU:N	5:E:11:LEU:HD23	2.28	0.48
5:E:126:GLU:O	5:E:127:ILE:O	2.31	0.48
5:E:21:ARG:N	5:E:21:ARG:HD2	2.27	0.48
5:E:75:LYS:HZ2	5:E:75:LYS:CA	2.26	0.48
5:E:77:ALA:O	5:E:80:ILE:HB	2.13	0.48
6:F:155:GLY:O	6:F:156:ARG:HB2	2.13	0.48
7:G:15:GLU:OE2	7:G:66:ARG:NH1	2.46	0.48
8:H:74:GLY:O	8:H:117:ASP:OD2	2.32	0.48
9:I:33:TYR:CE2	9:I:75:LEU:N	2.81	0.48
10:J:75:VAL:HG12	10:J:76:ARG:N	2.27	0.48
8:H:79:GLU:O	11:K:104:ARG:CZ	2.62	0.48
11:K:49:GLU:OE1	11:K:51:VAL:HG23	2.13	0.48
12:L:101:PHE:O	12:L:102:LEU:HD23	2.13	0.48
15:O:85:ILE:CD1	15:O:99:HIS:N	2.75	0.48
16:P:33:ALA:HA	16:P:59:TYR:OH	2.14	0.48
16:P:49:THR:O	16:P:53:VAL:HG23	2.13	0.48
16:P:54:VAL:CG1	16:P:58:GLU:OE1	2.61	0.48
17:Q:16:PHE:C	17:Q:18:VAL:N	2.64	0.48
19:S:75:ARG:CG	19:S:80:PHE:HB3	2.41	0.48
20:T:31:LEU:HG	20:T:32:TYR:CE2	2.48	0.48
22:V:15:LEU:HD21	22:V:38:SER:HB3	1.94	0.48
23:W:34:LYS:O	23:W:37:SER:N	2.46	0.48
23:W:87:LYS:HG3	23:W:91:LEU:CD2	2.38	0.48
24:X:3:LYS:HB3	24:X:14:TRP:CB	2.44	0.48
24:X:6:ARG:HG3	24:X:7:ARG:N	2.28	0.48
2:C:17:C:N3	2:C:19:G:C8	2.81	0.48
3:D:56:C:H2'	3:D:57:G:O4'	2.13	0.48
1:A:89:U:C4	1:A:90:C:C5	3.01	0.48
4:1:11:U:O2'	4:1:12:A:OP1	2.19	0.48
1:A:1083:U:C4	1:A:1084:G:O6	2.66	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:109:A:N3	1:A:109:A:O4'	2.46	0.48
1:A:1117:G:OP1	12:L:104:ARG:NH1	2.46	0.48
1:A:1184:G:C4	1:A:1185:G:N7	2.81	0.48
1:A:1296:C:O4'	1:A:1302:U:O4	2.31	0.48
1:A:1332:A:N3	1:A:1332:A:H2'	2.29	0.48
1:A:136:C:H4'	19:S:65:GLN:NE2	2.25	0.48
1:A:1371:G:C5	1:A:1372:U:C5	3.01	0.48
1:A:937:A:C2	1:A:1379:G:C6	3.01	0.48
1:A:143:A:H4'	1:A:144:G:H8	1.78	0.48
1:A:1452:C:H5'	1:A:1453:G:C2	2.48	0.48
1:A:1474:G:C2	1:A:1475:G:C8	3.02	0.48
1:A:1404:C:O4'	1:A:1499:A:H2	1.96	0.48
1:A:152:A:N7	1:A:153:C:C6	2.81	0.48
1:A:284:G:H2'	1:A:285:G:H8	1.77	0.48
1:A:307:C:O5'	1:A:307:C:H6	1.96	0.48
1:A:321:A:H62	1:A:328:C:C2'	2.26	0.48
1:A:34:C:O2'	1:A:35:G:H5'	2.12	0.48
1:A:367:U:O2'	1:A:368:U:OP1	2.27	0.48
1:A:375:U:N3	1:A:376:G:N7	2.61	0.48
1:A:422:C:H2'	1:A:422:C:O2	2.12	0.48
1:A:455:C:N3	1:A:478:A:C2	2.81	0.48
1:A:497:U:O2'	1:A:498:A:H5'	2.13	0.48
1:A:657:G:C2'	1:A:658:G:H5'	2.43	0.48
1:A:780:A:N7	1:A:800:G:C6	2.81	0.48
1:A:896:C:C2	1:A:897:C:C5	3.01	0.48
3:D:40:C:C3'	3:D:41:G:H5''	2.42	0.48
5:E:115:LEU:HA	5:E:118:LEU:HD12	1.94	0.48
5:E:80:ILE:HD12	5:E:208:ILE:HG12	1.96	0.48
5:E:50:GLU:CG	5:E:200:ILE:HB	2.44	0.48
5:E:69:LEU:C	5:E:69:LEU:CD1	2.80	0.48
5:E:79:ASP:HA	5:E:82:ARG:HB3	1.94	0.48
7:G:108:LEU:HD12	7:G:110:PHE:HE2	1.78	0.48
8:H:116:THR:C	8:H:117:ASP:OD1	2.52	0.48
8:H:150:ARG:HA	8:H:150:ARG:HE	1.78	0.48
1:A:15:G:C4'	8:H:24:ARG:HH22	2.25	0.48
8:H:81:GLU:CB	8:H:90:VAL:HG23	2.35	0.48
11:K:126:LYS:HZ1	11:K:127:LEU:HB2	1.78	0.48
11:K:22:GLU:HA	11:K:63:LEU:HD21	1.89	0.48
11:K:9:MET:CA	11:K:26:VAL:HG21	2.40	0.48
11:K:27:PRO:O	11:K:32:LYS:HD2	2.14	0.48
11:K:60:ARG:HG3	11:K:61:VAL:H	1.78	0.48
1:A:1250:A:H4'	12:L:67:GLY:CA	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:44:VAL:HG22	13:M:66:ARG:CB	2.43	0.48
14:N:90:GLY:C	14:N:92:GLU:H	2.15	0.48
19:S:6:LEU:CD2	19:S:17:TYR:HD2	2.22	0.48
19:S:51:VAL:CG1	19:S:74:LEU:CD2	2.91	0.48
19:S:58:TYR:HD1	19:S:59:TRP:N	2.10	0.48
19:S:61:SER:OG	19:S:62:VAL:N	2.47	0.48
21:U:34:TYR:O	21:U:40:LEU:HD12	2.14	0.48
21:U:44:LEU:HD11	21:U:45:SER:O	2.13	0.48
1:A:1312:G:N7	22:V:3:ARG:O	2.46	0.48
23:W:62:LEU:HA	23:W:65:LYS:CG	2.42	0.48
23:W:87:LYS:O	23:W:90:GLN:HB2	2.13	0.48
1:A:1305:G:H5''	24:X:5:ASP:N	2.28	0.48
3:D:49:G:C6	3:D:50:G:N7	2.81	0.48
1:A:88:C:C2'	1:A:89:U:OP2	2.62	0.48
7:G:50:ARG:HD3	7:G:51:PRO:N	2.28	0.48
3:D:36:A:N6	4:I:14:A:H61	2.10	0.48
1:A:1096:C:H2'	1:A:1097:C:O5'	2.14	0.48
1:A:1181:G:N7	1:A:1182:G:C2	2.81	0.48
1:A:1321:C:C5	1:A:1322:C:C2'	2.92	0.48
1:A:1468:A:O2'	1:A:1469:G:OP1	2.31	0.48
1:A:179:A:H2'	1:A:180:U:C6	2.46	0.48
1:A:250:A:O4'	1:A:252:U:C6	2.66	0.48
1:A:246:A:C6	1:A:279:A:C5	3.02	0.48
1:A:246:A:N1	1:A:279:A:N7	2.60	0.48
1:A:306:G:C2'	1:A:307:C:H5'	2.44	0.48
1:A:323:U:O4	1:A:324:G:N3	2.46	0.48
1:A:334:C:H2'	1:A:335:C:C6	2.49	0.48
1:A:432:A:C8	1:A:433:C:C5	3.02	0.48
1:A:444:C:H2'	1:A:445:G:H8	1.77	0.48
1:A:468:A:C8	1:A:474:G:N7	2.81	0.48
1:A:533:A:O2'	1:A:534:U:OP1	2.30	0.48
1:A:597:G:O2'	1:A:598:U:H5'	2.14	0.48
1:A:640:A:C5	1:A:641:U:C6	3.01	0.48
1:A:674:G:H1	1:A:716:A:H61	1.60	0.48
1:A:728:A:C2'	1:A:728:A:N3	2.76	0.48
1:A:787:A:H2'	1:A:788:U:O5'	2.13	0.48
1:A:802:A:H2'	1:A:803:G:O4'	2.13	0.48
1:A:810:C:O2'	1:A:811:C:O5'	2.31	0.48
1:A:832:C:N3	1:A:833:U:C4	2.81	0.48
3:D:37:A:C4	3:D:38:A:C8	3.02	0.48
5:E:125:PRO:O	5:E:127:ILE:N	2.46	0.48
6:F:7:PRO:HG3	6:F:184:TYR:CG	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:73:PRO:HG2	6:F:74:GLY:H	1.78	0.48
8:H:11:ILE:O	8:H:13:ILE:HD11	2.13	0.48
8:H:136:MET:O	8:H:139:LEU:HB3	2.13	0.48
8:H:28:PHE:CE1	8:H:50:GLU:HA	2.47	0.48
9:I:2:ARG:CG	9:I:69:GLU:HG2	2.43	0.48
10:J:155:ARG:O	10:J:156:TRP:CE3	2.66	0.48
11:K:126:LYS:HZ1	11:K:127:LEU:CG	2.26	0.48
11:K:11:THR:HG22	11:K:14:ARG:HH21	1.77	0.48
11:K:24:THR:O	11:K:60:ARG:HA	2.13	0.48
1:A:519:C:OP2	15:O:50:SER:O	2.32	0.48
18:R:22:THR:O	18:R:27:VAL:HG11	2.13	0.48
18:R:54:ARG:CD	18:R:55:GLY:N	2.64	0.48
20:T:3:LYS:HZ1	20:T:62:SER:HA	1.79	0.48
20:T:8:GLY:HA3	20:T:22:LEU:O	2.13	0.48
22:V:20:LEU:HD23	22:V:21:GLU:H	1.78	0.48
22:V:56:GLN:HA	22:V:56:GLN:OE1	2.13	0.48
23:W:44:ALA:HA	23:W:92:LEU:HD21	1.96	0.48
23:W:76:ALA:C	23:W:78:ALA:N	2.65	0.48
24:X:14:TRP:O	24:X:15:ARG:C	2.51	0.48
1:A:1004:A:H3'	1:A:1025:U:H3	1.78	0.48
3:D:63:G:C2	3:D:64:C:C2	3.01	0.48
1:A:106:C:O2	1:A:379:C:C5'	2.62	0.48
1:A:1242:C:O2'	1:A:1303:C:C5'	2.61	0.48
1:A:1407:C:C2'	1:A:1408:A:O4'	2.55	0.48
1:A:148:G:C2	1:A:175:C:N3	2.81	0.48
1:A:227:G:H2'	1:A:228:A:C8	2.48	0.48
1:A:251:G:H4'	1:A:252:U:OP1	2.08	0.48
1:A:314:C:H2'	1:A:315:A:C1'	2.43	0.48
1:A:458:C:C4	1:A:464:G:C6	3.01	0.48
1:A:475:G:C2	1:A:476:G:C5	3.02	0.48
1:A:578:C:O2'	1:A:728:A:H2'	2.13	0.48
1:A:627:G:O2'	1:A:628:G:C5'	2.58	0.48
1:A:674:G:P	9:I:87:ARG:NH2	2.86	0.48
1:A:674:G:H1	1:A:716:A:N6	2.12	0.48
1:A:782:A:C8	1:A:783:C:C6	3.01	0.48
1:A:832:C:N3	1:A:855:G:C6	2.82	0.48
1:A:947:G:O2'	1:A:948:C:C5'	2.62	0.48
5:E:16:HIS:HA	5:E:210:SER:OG	2.12	0.48
5:E:234:PRO:HB2	5:E:238:LEU:HD22	1.95	0.48
5:E:208:ILE:HD12	5:E:239:VAL:HG11	1.96	0.48
5:E:27:LYS:HE2	5:E:27:LYS:CA	2.43	0.48
5:E:74:LYS:HZ1	5:E:76:GLN:HG3	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:81:VAL:CG1	5:E:92:TYR:HD1	2.13	0.48
6:F:12:LEU:C	6:F:14:ILE:H	2.16	0.48
6:F:24:ALA:CB	6:F:28:GLN:OE1	2.61	0.48
6:F:5:ILE:HG22	13:M:51:ARG:NH2	2.28	0.48
7:G:106:TYR:HB3	7:G:114:ARG:HE	1.77	0.48
7:G:148:VAL:O	7:G:149:ALA:C	2.52	0.48
7:G:150:GLU:C	7:G:152:SER:N	2.65	0.48
7:G:24:GLU:CD	7:G:25:ARG:HB2	2.33	0.48
8:H:106:PRO:O	8:H:110:LEU:HB2	2.14	0.48
1:A:1298:C:H5	10:J:114:ARG:HB3	1.76	0.48
11:K:126:LYS:HD2	11:K:127:LEU:CA	2.43	0.48
11:K:20:TYR:CD1	11:K:65:TYR:CE2	3.02	0.48
12:L:31:GLN:OE1	12:L:31:GLN:N	2.46	0.48
12:L:4:TYR:CE1	12:L:59:PHE:HZ	2.28	0.48
13:M:48:THR:OG1	13:M:62:HIS:HD2	1.96	0.48
15:O:70:ILE:HA	15:O:100:ILE:HG12	1.94	0.48
16:P:37:THR:OG1	16:P:56:LEU:CA	2.53	0.48
16:P:23:TYR:HD2	16:P:70:LEU:HD13	1.78	0.48
18:R:53:HIS:NE2	18:R:57:LEU:HD11	2.29	0.48
18:R:75:PRO:HA	18:R:78:TYR:CB	2.38	0.48
19:S:19:ILE:HD11	19:S:39:TYR:CB	2.40	0.48
1:A:238:G:P	20:T:25:ARG:HH12	2.36	0.48
1:A:719:C:O2	21:U:49:LYS:C	2.50	0.48
23:W:14:LYS:O	23:W:16:HIS:N	2.47	0.48
3:D:8:U:O4	3:D:14:A:N7	2.46	0.48
1:A:1031:G:H2'	1:A:1032:A:C8	2.49	0.48
4:1:15:A:C4'	4:1:15:A:C8	2.96	0.48
1:A:1138:G:C6	1:A:1140:C:N1	2.82	0.48
1:A:1143:G:N3	1:A:1144:G:C8	2.81	0.48
1:A:116:A:N7	1:A:117:G:N7	2.61	0.48
1:A:1229:A:O2'	1:A:1230:C:H5'	2.13	0.48
1:A:130:A:C2	1:A:264:U:H6	2.31	0.48
1:A:1316:G:C2'	1:A:1317:C:O5'	2.61	0.48
1:A:1348:U:H2'	1:A:1348:U:O2	2.12	0.48
1:A:1373:G:O2'	10:J:34:GLY:HA2	2.13	0.48
1:A:1386:G:H2'	1:A:1387:G:H8	1.77	0.48
1:A:1404:C:H6	1:A:1404:C:O5'	1.96	0.48
1:A:36:C:C2	1:A:37:U:C6	3.01	0.48
1:A:390:C:C3'	1:A:390:C:C6	2.96	0.48
1:A:44:G:C2	1:A:45:U:H1'	2.48	0.48
1:A:452:A:C6	1:A:453:A:C6	3.02	0.48
1:A:579:G:C3'	1:A:580:U:H5'	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:598:U:C4'	11:K:94:TYR:CD2	2.86	0.48
1:A:657:G:C6	1:A:658:G:N7	2.82	0.48
1:A:671:G:C2'	1:A:672:U:O4'	2.61	0.48
1:A:761:G:H1'	20:T:104:LYS:C	2.34	0.48
1:A:766:A:C5	1:A:814:A:C2	3.02	0.48
1:A:816:A:HO2'	1:A:817:C:P	2.36	0.48
1:A:756:C:H4'	1:A:823:G:O2'	2.13	0.48
1:A:826:C:N4	1:A:827:U:O4	2.46	0.48
1:A:852:G:C6	1:A:853:G:N7	2.82	0.48
1:A:867:G:O2'	1:A:868:C:H5'	2.14	0.48
1:A:935:A:H2'	1:A:936:C:H6	1.77	0.48
1:A:945:G:N2	1:A:1337:G:C2	2.81	0.48
1:A:952:U:C5'	1:A:972:C:H41	2.20	0.48
1:A:991:U:H2'	1:A:993:G:H8	1.79	0.48
5:E:104:ASN:ND2	5:E:108:ILE:CG1	2.69	0.48
5:E:132:LYS:NZ	5:E:132:LYS:CB	2.77	0.48
5:E:169:LYS:O	5:E:170:GLU:C	2.49	0.48
6:F:43:LEU:HD11	6:F:55:VAL:CG1	2.43	0.48
7:G:10:ARG:HD2	7:G:11:LEU:HD23	1.94	0.48
7:G:133:VAL:HG13	7:G:135:LEU:HG	1.95	0.48
8:H:125:SER:O	8:H:127:ASN:N	2.45	0.48
8:H:12:LEU:HD11	8:H:14:ARG:HB3	1.96	0.48
8:H:18:ARG:NH2	8:H:25:ARG:CG	2.76	0.48
1:A:738:C:OP2	9:I:92:LYS:HE3	2.13	0.48
10:J:2:ALA:HB2	10:J:7:ALA:CB	2.44	0.48
1:A:1351:U:O2'	10:J:33:ASP:OD2	2.25	0.48
10:J:91:VAL:CG1	10:J:91:VAL:O	2.61	0.48
11:K:112:LEU:HD21	11:K:119:LEU:HB2	1.95	0.48
11:K:67:PRO:O	11:K:68:ARG:C	2.49	0.48
12:L:118:LYS:C	12:L:120:ARG:N	2.64	0.48
12:L:38:GLN:C	12:L:40:LEU:N	2.66	0.48
12:L:45:ALA:CB	12:L:74:ILE:HG22	2.44	0.48
1:A:1280:A:H5''	13:M:40:LEU:HD22	1.96	0.48
15:O:58:VAL:HG12	15:O:59:ARG:N	2.27	0.48
16:P:14:ARG:CB	16:P:44:ARG:HD2	2.44	0.48
16:P:48:LEU:HD21	16:P:52:GLU:HB2	1.94	0.48
18:R:41:GLU:O	18:R:44:LYS:HB2	2.13	0.48
18:R:57:LEU:HA	18:R:60:VAL:HG23	1.94	0.48
20:T:97:SER:HB2	20:T:104:LYS:H	1.78	0.48
20:T:40:LYS:CB	20:T:42:TYR:HE1	2.26	0.48
20:T:4:LYS:C	20:T:5:VAL:HG23	2.34	0.48
20:T:60:ILE:CG1	20:T:61:GLU:O	2.55	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:55:ARG:HH11	21:U:55:ARG:C	2.17	0.48
21:U:53:ARG:NH1	21:U:63:GLN:HB2	2.28	0.48
23:W:89:ARG:O	23:W:93:GLU:HG3	2.14	0.48
1:A:1447:G:C4	1:A:1448:C:C5	3.01	0.48
2:C:53:G:O2'	2:C:54:U:H5'	2.13	0.48
4:1:11:U:OP1	14:N:127:LYS:HB3	2.14	0.48
3:D:6:G:H2'	3:D:7:G:O4'	2.13	0.48
1:A:1289:A:H2'	1:A:1290:G:O5'	2.14	0.48
1:A:1450:U:O2	1:A:1453:G:N2	2.33	0.48
1:A:159:G:C2	1:A:163:C:N4	2.82	0.48
1:A:294:U:O2	1:A:294:U:C2'	2.60	0.48
1:A:313:A:H2'	1:A:314:C:H5	1.70	0.48
1:A:34:C:H2'	1:A:35:G:H8	1.79	0.48
1:A:427:U:H2'	1:A:428:G:C8	2.49	0.48
1:A:515:G:O6	1:A:533:A:N7	2.47	0.48
1:A:542:G:C2	1:A:543:C:C6	3.01	0.48
1:A:554:C:C2	1:A:555:C:C5	3.01	0.48
1:A:558:G:C3'	1:A:559:A:C5'	2.83	0.48
1:A:609:A:N3	1:A:610:G:C8	2.82	0.48
1:A:701:C:C2	1:A:703:G:C2	3.01	0.48
1:A:754:C:H4'	18:R:72:ARG:CZ	2.42	0.48
1:A:758:G:H2'	1:A:759:A:OP2	2.13	0.48
1:A:809:G:N2	1:A:810:C:C1'	2.77	0.48
1:A:889:A:H4'	1:A:890:G:OP1	2.13	0.48
1:A:990:C:H2'	1:A:991:U:N1	2.28	0.48
5:E:16:HIS:CD2	5:E:214:ILE:HG12	2.49	0.48
5:E:176:GLU:O	5:E:180:LEU:HD12	2.13	0.48
5:E:19:HIS:CE1	5:E:204:ASN:ND2	2.81	0.48
5:E:29:ALA:O	5:E:32:ILE:HB	2.13	0.48
5:E:45:GLN:O	5:E:49:GLU:OE2	2.31	0.48
5:E:64:ARG:HG2	5:E:66:GLY:H	1.78	0.48
6:F:11:ARG:HB3	6:F:11:ARG:HH11	1.78	0.48
6:F:19:GLU:HB2	17:Q:52:GLN:HG2	1.96	0.48
7:G:204:ILE:HD12	7:G:204:ILE:N	2.21	0.48
7:G:58:LEU:CD1	7:G:59:ARG:NH1	2.72	0.48
8:H:121:LYS:NZ	8:H:121:LYS:C	2.65	0.48
10:J:11:GLN:HA	10:J:11:GLN:OE1	2.14	0.48
10:J:64:GLN:C	10:J:128:ALA:HA	2.34	0.48
11:K:100:ILE:CG2	11:K:121:ASP:OD1	2.62	0.48
11:K:125:ARG:HH11	11:K:125:ARG:HB2	1.79	0.48
11:K:35:ILE:CG2	11:K:39:LEU:HD23	2.42	0.48
5:E:179:LYS:HG2	11:K:72:PRO:HB3	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:33:PHE:C	12:L:35:GLU:H	2.16	0.48
12:L:8:GLY:O	12:L:76:ALA:HB1	2.14	0.48
12:L:6:GLY:CA	12:L:83:ARG:HB3	2.44	0.48
13:M:24:VAL:O	13:M:28:ARG:HG3	2.14	0.48
13:M:18:ALA:CB	13:M:91:PRO:HB3	2.35	0.48
17:Q:30:ALA:HA	17:Q:33:VAL:HG11	1.94	0.48
17:Q:26:ARG:HB3	17:Q:43:CYS:HB3	1.91	0.48
6:F:12:LEU:CD2	17:Q:57:ARG:HG3	2.44	0.48
19:S:31:LYS:HG2	19:S:32:TYR:N	2.29	0.48
21:U:53:ARG:CD	21:U:58:LEU:O	2.62	0.48
22:V:45:VAL:HA	22:V:67:VAL:CG2	2.44	0.48
22:V:51:VAL:HG21	22:V:60:VAL:HG21	1.95	0.48
22:V:46:GLY:N	22:V:62:ILE:HG23	2.29	0.48
23:W:33:ILE:HD13	23:W:63:ILE:CA	2.41	0.48
2:C:18:G:C2'	2:C:19:G:O5'	2.61	0.48
1:A:96:G:O2'	1:A:97:U:H5'	2.14	0.48
4:1:14:A:C3'	4:1:14:A:C4	2.95	0.48
1:A:1100:C:O5'	1:A:1100:C:H6	1.96	0.48
1:A:1126:U:C2'	1:A:1127:G:O5'	2.62	0.48
1:A:1133:G:C6	1:A:1142:G:C6	3.02	0.48
1:A:1148:U:C2'	1:A:1148:U:O2	2.54	0.48
1:A:1213:A:C6	1:A:1215:G:C2	3.02	0.48
1:A:1266:G:C2'	1:A:1268:A:OP2	2.52	0.48
1:A:1316:G:H5''	17:Q:17:LYS:HZ2	1.77	0.48
1:A:1504:G:OP1	1:A:1507:A:H4'	2.13	0.48
1:A:1521:G:O2'	1:A:1522:U:O5'	2.32	0.48
1:A:1533:C:H2'	1:A:1534:A:OP2	2.13	0.48
1:A:191(F):U:C6	1:A:191(F):U:H3'	2.49	0.48
1:A:13:U:O4	1:A:22:G:N1	2.46	0.48
1:A:130:A:C6	1:A:264:U:H1'	2.49	0.48
1:A:280:C:C4'	1:A:281:G:OP2	2.61	0.48
1:A:414:A:O2'	1:A:415:A:H5'	2.13	0.48
1:A:453:A:H1'	19:S:69:THR:HG23	1.95	0.48
1:A:560:U:P	1:A:566:G:H22	2.36	0.48
1:A:592:G:C2'	1:A:593:G:H5'	2.43	0.48
1:A:597:G:H21	11:K:94:TYR:HE2	1.52	0.48
1:A:611:A:N6	1:A:629:G:C6	2.72	0.48
1:A:685:G:N2	1:A:686:U:C4	2.80	0.48
1:A:688:G:C4	1:A:700:G:C2	3.02	0.48
1:A:745:C:H1'	1:A:836:G:O2'	2.13	0.48
1:A:784:C:H2'	1:A:785:G:O5'	2.14	0.48
1:A:787:A:H2'	1:A:788:U:C5'	2.44	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:854:G:OP2	1:A:871:U:O2	2.31	0.48
1:A:855:G:C5'	1:A:871:U:O4	2.62	0.48
1:A:872:A:C2'	1:A:873:A:C5'	2.74	0.48
1:A:872:A:O2'	1:A:873:A:H8	1.97	0.48
1:A:887:G:O6	1:A:888:G:C6	2.67	0.48
1:A:902:G:O2'	1:A:903:G:C5'	2.51	0.48
1:A:1104:G:C4'	5:E:111:ARG:HE	2.26	0.48
5:E:239:VAL:O	5:E:240:GLN:CB	2.62	0.48
7:G:24:GLU:OE1	7:G:25:ARG:CB	2.62	0.48
9:I:82:ARG:O	9:I:83:ASP:C	2.51	0.48
10:J:104:LEU:O	10:J:105:VAL:C	2.51	0.48
10:J:111:ARG:HB3	10:J:111:ARG:CZ	2.44	0.48
11:K:21:LYS:O	11:K:22:GLU:C	2.49	0.48
11:K:40:ALA:HB2	11:K:45:ILE:CD1	2.44	0.48
14:N:26:ASN:O	14:N:27:ASN:CB	2.61	0.48
1:A:538:G:C8	15:O:115:LYS:HE3	2.49	0.48
18:R:78:TYR:CD2	18:R:82:ILE:CD1	2.96	0.48
19:S:55:ARG:HA	19:S:55:ARG:HE	1.77	0.48
20:T:35:VAL:O	20:T:35:VAL:CG1	2.61	0.48
20:T:67:LYS:HG3	20:T:67:LYS:O	2.12	0.48
20:T:93:GLN:C	20:T:95:TYR:N	2.64	0.48
21:U:79:LEU:N	21:U:79:LEU:CD1	2.73	0.48
22:V:15:LEU:HD23	22:V:15:LEU:H	1.79	0.48
22:V:17:GLU:HG3	22:V:18:LYS:H	1.78	0.48
23:W:88:VAL:CG1	23:W:92:LEU:HD12	2.41	0.48
10:J:129:GLU:HB3	10:J:131:LYS:HE2	1.96	0.48
3:D:59:U:O4'	3:D:59:U:OP2	2.31	0.48
1:A:24:U:O2'	1:A:25:C:H5'	2.13	0.48
1:A:1063:C:C5	1:A:1064:G:N7	2.81	0.48
1:A:106:C:H2'	1:A:107:G:H8	1.79	0.48
1:A:1268:A:HO2'	1:A:1269:A:C5'	2.25	0.48
1:A:1358:U:OP1	17:Q:34:TYR:CB	2.61	0.48
1:A:1405:G:H21	1:A:1517:G:H22	1.61	0.48
1:A:1449:C:C4	1:A:1450:U:C5	3.01	0.48
1:A:145:G:C2'	1:A:146:G:H5'	2.43	0.48
1:A:1489:G:H2'	1:A:1490:C:C6	2.48	0.48
1:A:197:A:N6	1:A:220:G:H2'	2.28	0.48
1:A:254:G:H2'	1:A:255:G:H8	1.79	0.48
1:A:278:G:N2	1:A:279:A:N6	2.58	0.48
1:A:285:G:C2	1:A:286:G:C8	3.02	0.48
1:A:293:G:O6	1:A:305:G:C6	2.67	0.48
1:A:34:C:C2'	1:A:35:G:O5'	2.62	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:52:G:C4	1:A:53:A:C8	3.01	0.48
1:A:596:C:H2'	1:A:597:G:O5'	2.13	0.48
1:A:782:A:N7	1:A:783:C:C5	2.82	0.48
1:A:792:A:N3	1:A:794:A:C6	2.82	0.48
1:A:803:G:O2'	1:A:804:U:H5'	2.14	0.48
1:A:814:A:N7	1:A:816:A:C4	2.82	0.48
1:A:817:C:C5	1:A:819:A:H1'	2.49	0.48
1:A:830:G:C2'	1:A:831:U:H5'	2.44	0.48
1:A:918:A:O2'	1:A:919:A:P	2.72	0.48
5:E:115:LEU:HD13	5:E:145:LEU:HG	1.96	0.48
5:E:132:LYS:NZ	5:E:132:LYS:N	2.60	0.48
5:E:175:ARG:HG2	5:E:179:LYS:CD	2.44	0.48
5:E:182:ILE:HG22	5:E:183:PRO:HD3	1.95	0.48
5:E:16:HIS:CD2	5:E:214:ILE:CG1	2.97	0.48
5:E:39:ILE:O	5:E:41:ILE:CD1	2.62	0.48
5:E:73:THR:HG22	5:E:94:ASN:C	2.34	0.48
6:F:142:MET:HB3	6:F:149:ALA:HB3	1.96	0.48
7:G:117:ALA:O	7:G:120:LEU:HG	2.13	0.48
1:A:404:U:C4'	7:G:122:ARG:NH1	2.77	0.48
7:G:57:ARG:HB3	7:G:206:PHE:CB	2.31	0.48
7:G:63:LYS:HG2	7:G:64:LEU:H	1.75	0.48
7:G:80:GLU:O	7:G:81:GLU:C	2.52	0.48
9:I:64:GLN:HB3	9:I:64:GLN:HE21	1.48	0.48
10:J:118:VAL:HG12	10:J:122:HIS:CE1	2.48	0.48
10:J:56:GLN:NE2	10:J:56:GLN:H	2.11	0.48
12:L:70:LYS:HZ3	12:L:70:LYS:H	1.57	0.48
12:L:93:ARG:NH1	12:L:97:LYS:HD3	2.29	0.48
14:N:13:GLN:O	14:N:14:VAL:HG23	2.14	0.48
14:N:14:VAL:C	14:N:16:SER:H	2.17	0.48
15:O:6:THR:OG1	15:O:9:GLN:CD	2.52	0.48
1:A:974:A:C8	17:Q:31:ARG:NE	2.82	0.48
18:R:74:ASP:OD1	18:R:76:GLU:CB	2.61	0.48
19:S:19:ILE:CB	19:S:37:GLY:O	2.53	0.48
19:S:43:LYS:CD	19:S:48:TRP:HZ3	2.26	0.48
20:T:6:LEU:HD12	20:T:59:ILE:HG22	1.96	0.48
21:U:44:LEU:CD1	21:U:45:SER:H	2.25	0.48
23:W:21:LYS:CA	23:W:24:LEU:HD12	2.34	0.48
6:F:157:ILE:HD12	6:F:164:ARG:NH1	2.29	0.48
2:C:19:G:N1	2:C:56:C:N4	2.61	0.48
2:C:69:C:H2'	2:C:70:G:C8	2.43	0.48
3:D:73:A:H2	3:D:74:C:O4'	1.95	0.48
1:A:1020:U:H2'	1:A:1021:G:H8	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:1:5:A:H2'	4:1:6:G:O4'	2.13	0.48
16:P:94:ARG:HD3	16:P:94:ARG:HA	1.74	0.48
1:A:1048:G:OP1	17:Q:3:ARG:HA	2.13	0.48
1:A:1099:G:C2	1:A:1100:C:O4'	2.66	0.48
1:A:1129:C:C4	1:A:1139:G:O6	2.67	0.48
1:A:1134:G:C3'	1:A:1135:U:H5'	2.44	0.48
1:A:1214:C:H4'	1:A:1215:G:OP2	2.10	0.48
1:A:130:A:H2	1:A:263:A:C2	2.32	0.48
1:A:1378:C:C2	1:A:1379:G:H1'	2.48	0.48
1:A:1450:U:O2'	1:A:1453:G:O6	2.32	0.48
1:A:161:A:N6	1:A:162:A:C6	2.82	0.48
1:A:673:G:H5''	9:I:87:ARG:CZ	2.43	0.48
1:A:5:U:HO2'	1:A:6:G:P	2.37	0.48
1:A:654:G:N1	1:A:754:C:N4	2.62	0.48
1:A:789:U:H2'	1:A:790:A:H3'	1.96	0.48
1:A:962:C:C2'	1:A:963:G:O4'	2.61	0.48
1:A:99:C:HO2'	1:A:101:A:P	2.36	0.48
1:A:9:G:C2	1:A:10:A:C5	3.02	0.48
3:D:34:G:C2'	3:D:34:G:N3	2.76	0.48
3:D:39:U:H2'	3:D:40:C:O4'	2.14	0.48
5:E:139:LYS:CG	5:E:140:HIS:H	2.26	0.48
5:E:153:ARG:O	5:E:154:LEU:O	2.32	0.48
5:E:82:ARG:O	5:E:86:GLU:CB	2.61	0.48
1:A:1100:C:C2'	5:E:98:LEU:HD11	2.38	0.48
6:F:43:LEU:HD11	6:F:55:VAL:HG11	1.95	0.48
6:F:8:ILE:CG2	6:F:9:GLY:N	2.76	0.48
7:G:101:LEU:CD2	7:G:133:VAL:HG12	2.43	0.48
7:G:147:ALA:HB1	7:G:181:MET:O	2.13	0.48
7:G:165:MET:HG3	7:G:166:LYS:N	2.29	0.48
7:G:187:ARG:O	7:G:188:LEU:C	2.51	0.48
7:G:73:ARG:O	7:G:75:PHE:N	2.47	0.48
8:H:119:LEU:HD12	8:H:119:LEU:H	1.79	0.48
8:H:137:GLU:OE2	8:H:140:ARG:NH1	2.46	0.48
8:H:47:LYS:H	8:H:57:LYS:HD3	1.79	0.48
9:I:34:GLY:O	9:I:67:MET:HA	2.13	0.48
10:J:2:ALA:HB2	10:J:7:ALA:HB2	1.96	0.48
10:J:55:GLY:O	10:J:56:GLN:O	2.31	0.48
10:J:71:PRO:HB2	10:J:91:VAL:HG21	1.96	0.48
11:K:109:ILE:O	11:K:109:ILE:HG13	2.12	0.48
11:K:40:ALA:HB2	11:K:45:ILE:HD13	1.96	0.48
12:L:96:LEU:O	12:L:100:GLY:HA3	2.12	0.48
12:L:23:ASN:OD1	12:L:25:LYS:NZ	2.47	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:26:VAL:HA	12:L:61:ALA:O	2.14	0.48
12:L:67:GLY:O	12:L:68:GLY:C	2.52	0.48
13:M:15:THR:HG23	13:M:16:LEU:N	2.29	0.48
13:M:6:ILE:HG21	13:M:98:ILE:HG13	1.94	0.48
14:N:99:GLN:CA	14:N:105:VAL:CG2	2.92	0.48
14:N:116:HIS:O	14:N:117:ASN:CB	2.62	0.48
15:O:27:LEU:C	15:O:29:GLY:N	2.63	0.48
15:O:76:ASN:O	15:O:77:LEU:CB	2.61	0.48
1:A:1230:C:HO2'	16:P:126:LYS:HE2	1.79	0.48
16:P:13:LYS:O	16:P:14:ARG:O	2.32	0.48
17:Q:40:CYS:HB2	17:Q:42:ILE:HG12	1.96	0.48
17:Q:9:LYS:HG2	17:Q:21:TYR:O	2.13	0.48
18:R:21:ASP:CG	18:R:24:SER:HB2	2.34	0.48
18:R:66:LEU:O	18:R:69:TYR:N	2.47	0.48
19:S:14:ASN:CA	19:S:42:ARG:NH2	2.77	0.48
19:S:59:TRP:O	19:S:60:LEU:C	2.53	0.48
20:T:59:ILE:HG13	20:T:60:ILE:H	1.71	0.48
20:T:65:ILE:HG23	20:T:69:LYS:O	2.14	0.48
21:U:59:SER:O	21:U:62:GLU:N	2.47	0.48
2:C:60:U:H5'	2:C:61:C:OP2	2.14	0.48
22:V:30:LEU:HG	22:V:50:ALA:N	2.29	0.48
1:A:1004:A:O2'	1:A:1005:A:O5'	2.32	0.48
1:A:842:C:H5''	1:A:843:U:O5'	2.14	0.48
1:A:89:U:C2	1:A:90:C:C6	3.02	0.48
1:A:748:C:O2'	1:A:749:C:C6	2.67	0.48
1:A:996:A:C2	1:A:997:U:C5	3.02	0.48
1:A:119:A:N3	1:A:240:C:C5	2.82	0.48
1:A:1092:A:N6	1:A:1093:A:N1	2.62	0.47
1:A:1184:G:N3	1:A:1185:G:N7	2.62	0.47
1:A:1454:G:C4	1:A:1455:G:C8	3.02	0.47
1:A:1520:G:O2'	1:A:1521:G:H5'	2.14	0.47
1:A:269:C:O2'	1:A:270:A:H5'	2.13	0.47
1:A:284:G:C4	1:A:285:G:C8	3.02	0.47
1:A:115:G:N1	1:A:313:A:C6	2.82	0.47
1:A:54:C:N4	1:A:352:C:H2'	2.29	0.47
1:A:367:U:H4'	1:A:368:U:OP1	2.14	0.47
1:A:403:C:H2'	1:A:404:U:H6	1.76	0.47
1:A:519:C:H2'	1:A:520:A:O5'	2.13	0.47
1:A:664:G:H3'	1:A:664:G:H8	1.78	0.47
1:A:778:G:C4	1:A:779:C:C6	3.02	0.47
1:A:571:U:C4'	1:A:819:A:N7	2.77	0.47
1:A:874:G:C2	1:A:875:C:C6	3.02	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:964:A:C2	1:A:965:A:N7	2.81	0.47
5:E:118:LEU:O	5:E:119:GLU:C	2.52	0.47
5:E:160:ASP:O	5:E:161:ALA:CB	2.61	0.47
6:F:28:GLN:HE22	6:F:29:TYR:HB2	1.78	0.47
7:G:31:CYS:C	7:G:33:MET:H	2.15	0.47
8:H:140:ARG:O	8:H:141:GLN:O	2.32	0.47
9:I:76:ALA:HB1	9:I:80:ARG:NE	2.28	0.47
10:J:65:ALA:N	10:J:128:ALA:HA	2.29	0.47
10:J:136:LYS:O	10:J:140:ASP:OD1	2.32	0.47
10:J:72:ARG:HG3	10:J:73:MET:H	1.79	0.47
10:J:84:ASN:C	10:J:85:TYR:CD2	2.84	0.47
11:K:104:ARG:HB3	11:K:107:LEU:HG	1.95	0.47
11:K:13:ILE:O	11:K:14:ARG:C	2.52	0.47
11:K:93:VAL:HG12	11:K:95:VAL:CG1	2.44	0.47
1:A:942:G:N2	12:L:124:GLN:OE1	2.47	0.47
12:L:15:ALA:CB	12:L:77:ILE:N	2.77	0.47
14:N:84:VAL:HG21	14:N:111:ASP:H	1.76	0.47
14:N:99:GLN:CB	14:N:105:VAL:CG1	2.90	0.47
15:O:84:LEU:O	15:O:100:ILE:HG22	2.13	0.47
17:Q:12:ARG:CB	17:Q:14:PRO:HD3	2.39	0.47
19:S:20:VAL:HG11	19:S:32:TYR:HB2	1.96	0.47
20:T:44:ALA:HB2	20:T:59:ILE:CD1	2.40	0.47
20:T:65:ILE:O	20:T:69:LYS:O	2.32	0.47
20:T:85:VAL:HG12	20:T:89:LEU:CD1	2.40	0.47
21:U:31:LEU:HD22	21:U:65:ILE:HG13	1.96	0.47
22:V:36:ARG:HH11	22:V:36:ARG:CG	2.26	0.47
1:A:986:A:C4'	22:V:55:LYS:HG3	2.43	0.47
10:J:126:ASP:HA	10:J:131:LYS:HE2	1.96	0.47
2:C:52:G:N3	2:C:63:G:C2	2.81	0.47
2:C:56:C:H2'	2:C:56:C:O2	2.13	0.47
2:C:57:A:H3'	2:C:58:A:H5''	1.96	0.47
2:C:64:G:O2'	2:C:65:C:H5'	2.14	0.47
2:C:7:G:C6	2:C:49:G:C6	3.02	0.47
9:I:32:ASN:N	9:I:32:ASN:ND2	2.60	0.47
7:G:118:ARG:NH2	7:G:118:ARG:HG3	2.29	0.47
7:G:70:ILE:HD11	7:G:118:ARG:HH22	1.79	0.47
1:A:1102:A:N1	1:A:1103:C:C4	2.82	0.47
1:A:1134:G:C2'	1:A:1135:U:H5'	2.44	0.47
1:A:1138:G:H2'	1:A:1139:G:O3'	2.14	0.47
1:A:1242:C:N3	1:A:1243:C:C5	2.82	0.47
1:A:1243:C:OP2	24:X:10:ARG:CD	2.62	0.47
1:A:124:G:N7	1:A:125:U:C5	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1317:C:C6	1:A:1317:C:OP1	2.67	0.47
1:A:1346:A:O2'	1:A:1347:G:OP2	2.21	0.47
1:A:1401:G:C2'	1:A:1402:C:C5'	2.89	0.47
1:A:1440:C:OP2	1:A:1440:C:H6	1.96	0.47
1:A:1534:A:C5	1:A:1535:C:C4	3.02	0.47
1:A:308:C:N3	1:A:309:G:N7	2.62	0.47
1:A:583:A:H2'	1:A:584:G:O4'	2.14	0.47
1:A:593:G:O2'	1:A:594:G:H5'	2.14	0.47
1:A:624:C:O2	1:A:625:G:C8	2.67	0.47
1:A:717:C:HO2'	1:A:718:G:P	2.37	0.47
1:A:770:C:H2'	1:A:771:G:H8	1.79	0.47
1:A:771:G:O6	1:A:809:G:C6	2.67	0.47
1:A:864:A:N6	1:A:865:A:C6	2.83	0.47
1:A:864:A:O5'	1:A:864:A:H8	1.96	0.47
5:E:163:PHE:HA	5:E:185:ILE:O	2.13	0.47
5:E:8:LYS:O	5:E:217:ARG:NH2	2.47	0.47
7:G:127:THR:C	7:G:146:ILE:HG22	2.34	0.47
7:G:19:LEU:N	7:G:33:MET:CE	2.74	0.47
8:H:147:ASP:HA	8:H:150:ARG:CG	2.43	0.47
8:H:18:ARG:O	8:H:25:ARG:O	2.32	0.47
9:I:78:GLU:C	9:I:81:ILE:HG13	2.34	0.47
9:I:95:GLU:CD	9:I:95:GLU:H	2.17	0.47
10:J:103:TRP:CZ2	10:J:138:LYS:HA	2.49	0.47
10:J:69:VAL:HB	10:J:104:LEU:HD11	1.95	0.47
1:A:589:C:H4'	11:K:29:SER:OG	2.14	0.47
12:L:97:LYS:HD2	12:L:102:LEU:HD21	1.95	0.47
12:L:78:LYS:NZ	12:L:101:PHE:HE2	2.10	0.47
14:N:87:THR:HG22	14:N:91:ARG:NH2	2.29	0.47
15:O:36:VAL:HG23	15:O:82:VAL:HG22	1.96	0.47
15:O:58:VAL:CG1	15:O:59:ARG:N	2.76	0.47
18:R:17:ARG:NH1	18:R:17:ARG:HG3	2.30	0.47
18:R:57:LEU:HD12	18:R:57:LEU:N	2.29	0.47
19:S:53:VAL:HA	19:S:79:VAL:CG2	2.44	0.47
20:T:104:LYS:HD3	20:T:105:ALA:CA	2.43	0.47
21:U:31:LEU:H	21:U:31:LEU:HD12	1.80	0.47
21:U:64:ARG:CG	21:U:64:ARG:HH11	2.27	0.47
23:W:89:ARG:O	23:W:92:LEU:C	2.52	0.47
2:C:18:G:C6	2:C:57:A:C6	3.01	0.47
5:E:35:GLU:O	5:E:36:ARG:NE	2.46	0.47
3:D:26:A:H61	3:D:44:G:H1	1.62	0.47
14:N:114:VAL:CG2	14:N:115:PRO:CD	2.91	0.47
1:A:1285:A:C8	1:A:1285:A:OP1	2.67	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1363:A:C2	1:A:1365:G:C6	3.02	0.47
1:A:1376:U:O2	1:A:1377:A:N7	2.47	0.47
1:A:138:G:O2'	1:A:139:G:H5'	2.14	0.47
1:A:1451:A:C2'	1:A:1452:C:OP1	2.62	0.47
1:A:1455:G:OP1	23:W:35:THR:HG21	2.13	0.47
1:A:1521:G:C6	1:A:1522:U:C4	3.02	0.47
1:A:1521:G:O2'	1:A:1522:U:H5'	2.13	0.47
1:A:342:C:O2'	1:A:343:U:H5'	2.14	0.47
1:A:62:U:H5''	1:A:385:C:O2	2.13	0.47
1:A:391:G:P	19:S:28:ARG:NH2	2.86	0.47
1:A:394:G:C6	1:A:395:C:C4	3.02	0.47
1:A:405:U:C2'	1:A:405:U:O2	2.53	0.47
1:A:483:C:O5'	1:A:483:C:C6	2.68	0.47
1:A:520:A:H3'	1:A:520:A:H8	1.80	0.47
1:A:533:A:C2'	1:A:534:U:O5'	2.63	0.47
1:A:644:G:O6	1:A:645:C:N3	2.47	0.47
1:A:664:G:C3'	1:A:664:G:C8	2.97	0.47
1:A:670:G:C2'	1:A:671:G:H5'	2.43	0.47
1:A:716:A:N3	14:N:117:ASN:O	2.48	0.47
1:A:735:C:O2'	1:A:736:C:O5'	2.32	0.47
1:A:660:G:C6	1:A:746:A:C6	3.02	0.47
1:A:781:A:H2'	1:A:782:A:O4'	2.14	0.47
1:A:808:C:P	18:R:48:LYS:NZ	2.87	0.47
1:A:829:G:H1'	5:E:26:PRO:HG2	1.95	0.47
1:A:880:C:C2	1:A:881:G:C8	3.02	0.47
1:A:937:A:N3	1:A:1379:G:C6	2.82	0.47
1:A:940:C:C2	1:A:941:G:N7	2.82	0.47
2:C:33:U:H6	2:C:33:U:O5'	1.96	0.47
3:D:35:A:N1	4:I:14:A:C2	2.82	0.47
5:E:33:TYR:CD2	5:E:43:ASP:HA	2.49	0.47
5:E:33:TYR:HB2	5:E:43:ASP:CA	2.44	0.47
5:E:62:ALA:CB	5:E:225:ALA:HB3	2.45	0.47
6:F:136:GLN:O	6:F:139:GLN:N	2.47	0.47
6:F:7:PRO:HG3	6:F:184:TYR:CD1	2.50	0.47
6:F:58:GLU:HB2	6:F:65:ALA:CB	2.44	0.47
7:G:14:ARG:C	7:G:14:ARG:HD3	2.35	0.47
8:H:11:ILE:HG22	8:H:31:LEU:HD13	1.96	0.47
9:I:3:ARG:HA	9:I:65:VAL:O	2.14	0.47
9:I:96:PRO:O	21:U:32:ARG:HG3	2.15	0.47
10:J:76:ARG:CD	10:J:156:TRP:HE1	2.27	0.47
10:J:17:VAL:HG12	10:J:17:VAL:O	2.14	0.47
11:K:51:VAL:HG12	11:K:52:ASP:N	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:87:SER:HB3	11:K:92:ARG:HA	1.96	0.47
11:K:96:GLY:O	11:K:97:VAL:HG12	2.14	0.47
12:L:66:ARG:C	12:L:73:GLN:HE21	2.18	0.47
13:M:23:ILE:O	13:M:27:ALA:HB3	2.13	0.47
14:N:106:LYS:HG2	14:N:107:SER:N	2.26	0.47
14:N:23:ALA:HB1	14:N:28:THR:HG1	1.80	0.47
15:O:47:LYS:H	15:O:48:PRO:CD	2.26	0.47
19:S:27:LYS:H	19:S:27:LYS:HZ2	1.61	0.47
19:S:43:LYS:CA	19:S:48:TRP:CE3	2.82	0.47
1:A:474:G:H5'	19:S:81:ARG:NE	2.28	0.47
1:A:130:A:C8	20:T:63:ARG:HG3	2.46	0.47
20:T:75:ARG:NH1	20:T:77:VAL:HA	2.30	0.47
23:W:83:ARG:O	23:W:84:LEU:C	2.52	0.47
1:A:1446:A:O2'	1:A:1447:G:O5'	2.31	0.47
1:A:1002:G:O4'	1:A:1002:G:P	2.73	0.47
1:A:1158:C:H2'	1:A:1158:C:O2	2.14	0.47
1:A:1214:C:H2'	1:A:1214:C:O2	2.14	0.47
1:A:1226:C:H4'	1:A:1227:A:OP1	2.13	0.47
1:A:954:G:N2	1:A:1228:C:N4	2.62	0.47
1:A:1269:A:C2	1:A:1312:G:N3	2.83	0.47
1:A:1285:A:H8	1:A:1285:A:OP1	1.96	0.47
1:A:1301:U:O4	1:A:1303:C:C2	2.68	0.47
1:A:1396:A:H4'	1:A:1397:C:H5''	1.96	0.47
1:A:17:U:C2	1:A:18:C:C6	3.03	0.47
1:A:226:G:C2	1:A:227:G:C4	3.02	0.47
1:A:309:G:H2'	1:A:310:G:H8	1.80	0.47
1:A:354:G:C6	1:A:355:C:C4	3.02	0.47
1:A:364:A:C2	1:A:365:U:O4	2.68	0.47
1:A:369:C:OP2	1:A:388:G:N1	2.36	0.47
1:A:445:G:O2'	1:A:446:G:C5'	2.61	0.47
1:A:475:G:N3	1:A:476:G:C8	2.83	0.47
1:A:497:U:O2	1:A:498:A:H8	1.97	0.47
1:A:126:G:O2'	1:A:635:G:H5'	2.13	0.47
1:A:717:C:C2'	1:A:718:G:OP2	2.62	0.47
1:A:792:A:O2'	1:A:794:A:C5	2.56	0.47
1:A:795:C:O4'	1:A:1506:U:C2	2.67	0.47
1:A:826:C:C4'	11:K:12:ARG:HB3	2.45	0.47
1:A:869:G:C4'	1:A:872:A:C8	2.98	0.47
1:A:977:A:N6	1:A:1224:G:OP1	2.47	0.47
1:A:961:U:H6	1:A:983:A:N3	2.13	0.47
1:A:992:U:OP2	1:A:993:G:C8	2.67	0.47
3:D:36:A:C2'	3:D:37:A:H8	2.26	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:125:PRO:C	5:E:127:ILE:N	2.67	0.47
5:E:59:GLU:CB	5:E:221:LEU:HD11	2.44	0.47
5:E:64:ARG:HG2	5:E:66:GLY:N	2.29	0.47
5:E:57:PHE:HE2	5:E:64:ARG:NH1	2.12	0.47
6:F:7:PRO:O	6:F:11:ARG:HG2	2.14	0.47
6:F:17:ASP:O	6:F:18:TRP:C	2.52	0.47
7:G:122:ARG:HA	7:G:134:ASP:CB	2.32	0.47
7:G:26:CYS:O	7:G:33:MET:CG	2.62	0.47
8:H:82:VAL:CG1	8:H:89:ILE:CG2	2.87	0.47
9:I:91:VAL:CG1	21:U:72:ARG:NH2	2.77	0.47
9:I:91:VAL:HG22	21:U:72:ARG:HH22	1.78	0.47
10:J:20:ASP:HB3	10:J:23:VAL:HG23	1.95	0.47
11:K:100:ILE:HG12	11:K:125:ARG:CZ	2.44	0.47
11:K:99:GLU:O	11:K:101:PRO:CD	2.63	0.47
1:A:1177:G:OP2	12:L:93:ARG:NH2	2.47	0.47
13:M:42:THR:HG23	13:M:68:HIS:HA	1.96	0.47
14:N:14:VAL:HG11	14:N:35:PRO:CG	2.44	0.47
1:A:689:C:OP2	14:N:46:GLY:HA3	2.14	0.47
14:N:54:ARG:CG	14:N:54:ARG:NH1	2.69	0.47
14:N:85:ARG:CG	14:N:85:ARG:HH11	2.26	0.47
14:N:95:ILE:HG13	14:N:95:ILE:H	1.53	0.47
15:O:44:THR:HB	15:O:45:PRO:HD2	1.96	0.47
1:A:362:G:OP1	15:O:61:THR:HG22	2.14	0.47
16:P:116:THR:O	16:P:116:THR:OG1	2.32	0.47
11:K:91:ARG:NH1	20:T:33:GLY:HA3	2.30	0.47
20:T:98:LEU:HD13	20:T:102:GLY:O	2.14	0.47
23:W:53:LEU:O	23:W:56:MET:CB	2.63	0.47
2:C:57:A:H8	2:C:57:A:O5'	1.97	0.47
1:A:1034:G:C2	1:A:1035:A:C5	3.02	0.47
1:A:1009:G:C6	1:A:1021:G:C6	3.02	0.47
1:A:1063:C:H5''	1:A:1064:G:OP2	2.15	0.47
1:A:1069:C:O2'	1:A:1192:C:O2'	2.28	0.47
1:A:1096:C:C2'	1:A:1097:C:O5'	2.62	0.47
1:A:1201:A:C2'	1:A:1202:G:OP2	2.62	0.47
1:A:979:C:OP1	1:A:1223:C:N4	2.47	0.47
1:A:960:U:C2	1:A:1225:A:N7	2.83	0.47
1:A:1269:A:N6	1:A:1312:G:HO2'	2.12	0.47
1:A:1430:C:H2'	1:A:1431:C:H6	1.79	0.47
1:A:1468:A:OP2	1:A:1468:A:H8	1.96	0.47
1:A:148:G:C2	1:A:175:C:C4	3.03	0.47
1:A:191(C):G:C2'	1:A:191(D):U:C6	2.78	0.47
1:A:223:U:H2'	1:A:224:C:H6	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:262:A:C6	1:A:263:A:N6	2.83	0.47
1:A:264:U:H3'	1:A:264:U:O2	2.15	0.47
1:A:341:C:O2'	1:A:342:C:C5'	2.62	0.47
1:A:345:C:H5'	1:A:346:G:C4	2.50	0.47
1:A:42:G:C6	1:A:43:C:C4	3.02	0.47
1:A:625:G:C6	1:A:626:U:C4	3.03	0.47
1:A:695:A:C4	1:A:696:A:C8	3.02	0.47
1:A:782:A:N1	1:A:801:U:C2	2.83	0.47
1:A:828:A:O2'	1:A:829:G:O4'	2.32	0.47
1:A:853:G:H2'	1:A:854:G:C8	2.50	0.47
1:A:862:C:C4	1:A:863:U:O4	2.67	0.47
1:A:874:G:N2	1:A:875:C:N1	2.63	0.47
1:A:969:A:H2'	1:A:969:A:N3	2.29	0.47
1:A:969:A:N6	1:A:970:C:N4	2.63	0.47
5:E:20:GLU:HG2	5:E:189:ASP:OD2	2.14	0.47
5:E:31:TYR:HE2	5:E:200:ILE:CG2	2.26	0.47
5:E:83:MET:O	5:E:87:ARG:HG3	2.15	0.47
6:F:110:ASN:HD21	6:F:140:ARG:CD	2.27	0.47
7:G:198:VAL:O	7:G:199:ASN:CB	2.62	0.47
7:G:67:ILE:CD1	7:G:68:TYR:CD1	2.97	0.47
6:F:131:ARG:HD3	8:H:50:GLU:OE1	2.14	0.47
9:I:14:LEU:HD12	9:I:15:ASP:H	1.79	0.47
9:I:77:ARG:N	9:I:80:ARG:HE	2.11	0.47
9:I:98:LEU:HD21	21:U:28:GLU:CG	2.44	0.47
10:J:70:LYS:O	10:J:138:LYS:HE3	2.14	0.47
11:K:104:ARG:C	11:K:106:GLY:N	2.67	0.47
11:K:114:THR:C	11:K:116:LYS:H	2.17	0.47
11:K:22:GLU:HA	11:K:63:LEU:HD13	1.96	0.47
12:L:50:LEU:HD21	12:L:55:ALA:O	2.15	0.47
13:M:7:LYS:HG2	13:M:71:LEU:HD11	1.95	0.47
13:M:96:ILE:HB	13:M:98:ILE:CD1	2.44	0.47
14:N:19:ALA:HA	14:N:31:THR:O	2.15	0.47
14:N:67:ASP:CA	14:N:70:LYS:HD2	2.41	0.47
18:R:3:ILE:HA	18:R:38:ARG:NH1	2.28	0.47
1:A:668:G:C1'	18:R:46:HIS:NE2	2.73	0.47
19:S:18:ARG:NH1	19:S:32:TYR:OH	2.47	0.47
20:T:75:ARG:NH2	20:T:77:VAL:CG2	2.76	0.47
9:I:96:PRO:C	21:U:32:ARG:HG3	2.34	0.47
21:U:37:VAL:CG1	21:U:41:LYS:NZ	2.77	0.47
1:A:735:C:HO2'	21:U:75:ILE:HD11	1.77	0.47
22:V:44:MET:HA	22:V:47:HIS:HE2	1.80	0.47
23:W:42:GLN:O	23:W:45:GLN:CB	2.54	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1122:U:H2'	1:A:1123:A:O4'	2.15	0.47
2:C:16:C:OP2	2:C:60:U:O2'	2.25	0.47
2:C:9:G:H5''	2:C:10:G:OP2	2.14	0.47
12:L:99:LEU:HD22	12:L:99:LEU:N	2.30	0.47
1:A:1058:G:O5'	1:A:1058:G:H8	1.98	0.47
1:A:1078:U:C6	1:A:1079:G:N7	2.82	0.47
1:A:1102:A:C6	1:A:1103:C:N4	2.82	0.47
1:A:1217:C:H2'	1:A:1218:C:C6	2.46	0.47
1:A:1227:A:H8	1:A:1228:C:O4'	1.97	0.47
1:A:1274:G:N2	1:A:1275:A:N6	2.55	0.47
1:A:1320:C:H2'	1:A:1320:C:O2	2.14	0.47
1:A:1440:C:C2'	1:A:1441:G:H8	2.24	0.47
1:A:1499:A:N7	1:A:1500:A:N7	2.63	0.47
1:A:152:A:N7	1:A:153:C:C5	2.83	0.47
1:A:198:G:C2	1:A:199:G:N9	2.82	0.47
1:A:198:G:N2	1:A:199:G:C1'	2.78	0.47
1:A:20:U:HO2'	1:A:21:G:H5'	1.77	0.47
1:A:230:G:OP1	19:S:33:ILE:HG12	2.14	0.47
1:A:265:G:H4'	20:T:66:SER:O	2.14	0.47
1:A:340:U:O2'	1:A:341:C:C5'	2.63	0.47
1:A:40:C:O2	1:A:41:G:C8	2.67	0.47
1:A:458:C:C4	1:A:475:G:N1	2.82	0.47
1:A:535:A:C2'	1:A:535:A:N3	2.77	0.47
1:A:534:U:H5''	1:A:535:A:OP2	2.14	0.47
1:A:646:U:C2'	1:A:647:C:O5'	2.62	0.47
1:A:768:A:C5	1:A:769:G:N7	2.81	0.47
1:A:791:G:C5	1:A:792:A:N7	2.82	0.47
1:A:899:C:H2'	1:A:900:A:O4'	2.14	0.47
1:A:994:A:C2	1:A:995:C:C2	3.02	0.47
3:D:34:G:C5	3:D:34:G:OP1	2.68	0.47
5:E:168:THR:HG21	5:E:192:SER:CA	2.40	0.47
5:E:171:ALA:N	5:E:174:VAL:CG2	2.78	0.47
6:F:8:ILE:HG22	17:Q:49:HIS:O	2.14	0.47
6:F:95:THR:O	6:F:97:LYS:HE2	2.14	0.47
7:G:131:ARG:H	7:G:131:ARG:CD	2.27	0.47
7:G:153:ARG:HD3	7:G:181:MET:CE	2.43	0.47
7:G:57:ARG:CD	7:G:202:LEU:HD23	2.42	0.47
8:H:76:ILE:HD11	8:H:139:LEU:HD23	1.94	0.47
1:A:1193:G:O2'	8:H:25:ARG:NH1	2.48	0.47
11:K:10:LEU:CD2	11:K:135:CYS:SG	3.03	0.47
11:K:8:ASP:CA	11:K:11:THR:OG1	2.62	0.47
11:K:30:ARG:O	11:K:33:GLU:CB	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:44:PHE:CD1	11:K:79:VAL:HG12	2.50	0.47
11:K:79:VAL:C	11:K:81:HIS:N	2.68	0.47
13:M:32:ALA:H	13:M:74:ILE:CG2	2.27	0.47
14:N:84:VAL:HG23	14:N:111:ASP:H	1.79	0.47
14:N:18:ARG:CZ	14:N:36:ASP:O	2.62	0.47
14:N:32:ILE:HD13	14:N:72:ALA:HB2	1.96	0.47
15:O:33:ARG:CB	15:O:85:ILE:CG2	2.90	0.47
16:P:34:LEU:HD22	16:P:41:PRO:HA	1.96	0.47
16:P:39:ILE:HG21	16:P:56:LEU:HD11	1.96	0.47
16:P:99:ARG:HG3	16:P:99:ARG:NH1	2.29	0.47
17:Q:48:ALA:O	17:Q:49:HIS:C	2.52	0.47
18:R:15:PHE:CD2	18:R:84:LYS:HD3	2.49	0.47
1:A:668:G:O2'	18:R:46:HIS:NE2	2.34	0.47
1:A:457:C:O5'	1:A:457:C:H6	1.97	0.47
1:A:101:A:N3	1:A:102:G:C8	2.82	0.47
1:A:1057:G:H5'	6:F:155:GLY:HA3	1.96	0.47
1:A:1109:C:P	6:F:176:HIS:CE1	3.08	0.47
1:A:1118:C:O4'	1:A:1179:A:C1'	2.63	0.47
1:A:1148:U:H6	12:L:16:ARG:NH1	2.13	0.47
1:A:1234:C:C5'	1:A:1364:U:O2'	2.60	0.47
1:A:978:A:N6	1:A:1318:A:N6	2.62	0.47
1:A:1406:U:H2'	1:A:1407:C:H5'	1.97	0.47
1:A:1418:A:N1	1:A:1483:A:C5	2.82	0.47
1:A:1419:G:O2'	1:A:1420:C:H5'	2.15	0.47
1:A:1497:G:HO2'	1:A:1518:A:H2	1.62	0.47
1:A:156:G:C6	1:A:157:G:C8	3.03	0.47
1:A:198:G:C2	1:A:199:G:C4	3.02	0.47
1:A:236:G:C2'	1:A:237:C:C6	2.85	0.47
1:A:449:C:C2	1:A:450:G:C1'	2.96	0.47
1:A:46:G:C4	1:A:396:G:N1	2.83	0.47
1:A:510:A:C8	1:A:510:A:O5'	2.64	0.47
1:A:515:G:C8	1:A:516:U:C5	3.03	0.47
1:A:590:C:H5''	11:K:30:ARG:HG3	1.96	0.47
1:A:771:G:C6	1:A:809:G:C6	3.03	0.47
1:A:790:A:C5	1:A:791:G:C6	3.03	0.47
1:A:952:U:C5	16:P:104:ARG:NH1	2.83	0.47
1:A:961:U:H5'	1:A:984:C:C1'	2.42	0.47
1:A:968:A:C8	1:A:968:A:OP1	2.65	0.47
3:D:35:A:C3'	3:D:36:A:H8	2.26	0.47
5:E:192:SER:C	5:E:194:PRO:HD3	2.34	0.47
6:F:84:ILE:HA	6:F:101:LEU:CD1	2.44	0.47
6:F:10:PHE:HZ	6:F:176:HIS:C	2.18	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:22:TRP:CZ3	6:F:32:LEU:HD12	2.50	0.47
7:G:32:ALA:C	7:G:34:GLU:N	2.66	0.47
9:I:12:PRO:HB3	9:I:58:GLY:CA	2.34	0.47
9:I:33:TYR:CE1	9:I:75:LEU:HD23	2.49	0.47
10:J:122:HIS:O	10:J:125:MET:HB2	2.15	0.47
11:K:86:ILE:CD1	11:K:136:GLU:OE1	2.59	0.47
11:K:89:PRO:HB3	11:K:92:ARG:HH21	1.78	0.47
12:L:26:VAL:O	12:L:32:ASP:HA	2.14	0.47
12:L:67:GLY:N	12:L:73:GLN:HE22	2.10	0.47
12:L:70:LYS:O	12:L:71:SER:C	2.53	0.47
15:O:45:PRO:HG3	15:O:50:SER:CA	2.30	0.47
15:O:46:LYS:CA	15:O:48:PRO:HD2	2.45	0.47
16:P:90:LEU:HA	16:P:93:ARG:HB3	1.96	0.47
17:Q:14:PRO:HB2	17:Q:17:LYS:N	2.29	0.47
17:Q:14:PRO:O	17:Q:16:PHE:N	2.47	0.47
17:Q:26:ARG:O	17:Q:28:GLY:N	2.47	0.47
1:A:751:U:OP1	18:R:18:PHE:CZ	2.68	0.47
1:A:280:C:H1'	20:T:38:ARG:HG3	1.97	0.47
20:T:62:SER:CB	20:T:72:ARG:NE	2.70	0.47
1:A:1319:A:C5'	22:V:5:LEU:HD21	2.41	0.47
23:W:23:ARG:O	23:W:24:LEU:C	2.52	0.47
23:W:57:ARG:O	23:W:59:ALA:N	2.48	0.47
23:W:63:ILE:O	23:W:66:ALA:HB3	2.14	0.47
1:A:1187:G:C6	1:A:1188:A:C6	3.02	0.47
1:A:1324:A:O4'	1:A:1362:C:H4'	2.14	0.47
1:A:318:G:HO2'	1:A:1468:A:HO2'	1.54	0.47
1:A:1517:G:N2	1:A:1518:A:H1'	2.30	0.47
1:A:1507:A:N1	1:A:1530:G:C8	2.82	0.47
1:A:171:A:C2'	1:A:172:A:H5'	2.45	0.47
1:A:196:A:O2'	1:A:222:U:H5'	2.14	0.47
1:A:266:G:N2	1:A:269:C:C4	2.78	0.47
1:A:421:U:C2	6:F:127:ARG:CZ	2.98	0.47
1:A:430:A:N7	1:A:431:A:N7	2.62	0.47
1:A:410:G:N3	1:A:432:A:C6	2.82	0.47
1:A:448:A:N7	1:A:487:A:C6	2.83	0.47
1:A:445:G:C6	1:A:490:G:N1	2.83	0.47
1:A:492:G:N7	1:A:493:G:N7	2.63	0.47
1:A:529:G:N1	15:O:49:ASN:HB3	2.30	0.47
1:A:582:U:O4	1:A:583:A:N6	2.47	0.47
1:A:596:C:O2	1:A:597:G:C8	2.67	0.47
1:A:647:C:H2'	1:A:648:A:H8	1.79	0.47
1:A:654:G:C6	1:A:655:A:C4	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:687:A:C2	1:A:704:A:C6	3.02	0.47
1:A:661:G:N2	1:A:745:C:C2	2.83	0.47
1:A:767:A:C8	1:A:767:A:C3'	2.98	0.47
1:A:715:A:O4'	1:A:777:A:N6	2.48	0.47
1:A:944:G:C3'	1:A:945:G:C5'	2.93	0.47
1:A:953:G:C6	1:A:954:G:C6	3.02	0.47
1:A:956:U:O2	1:A:960:U:C4	2.68	0.47
1:A:992:U:HO2'	1:A:993:G:P	2.33	0.47
2:C:38:A:O2'	2:C:39:C:H5'	2.15	0.47
5:E:118:LEU:CD2	5:E:142:LEU:HB2	2.45	0.47
5:E:223:ILE:HG21	5:E:229:VAL:HA	1.96	0.47
5:E:43:ASP:O	5:E:47:THR:HB	2.15	0.47
5:E:54:THR:HG23	5:E:199:TYR:CB	2.45	0.47
5:E:84:GLU:HG2	5:E:234:PRO:CG	2.45	0.47
6:F:12:LEU:HD11	17:Q:57:ARG:CB	2.45	0.47
6:F:131:ARG:O	6:F:132:ARG:C	2.53	0.47
6:F:39:ILE:CG2	6:F:57:ILE:HD13	2.45	0.47
8:H:76:ILE:HG21	8:H:142:LEU:CB	2.45	0.47
8:H:146:ALA:O	8:H:149:GLU:N	2.48	0.47
9:I:11:ASN:CG	9:I:12:PRO:N	2.68	0.47
9:I:62:TRP:O	9:I:62:TRP:CE3	2.68	0.47
10:J:75:VAL:N	10:J:145:ALA:CB	2.78	0.47
11:K:135:CYS:SG	11:K:136:GLU:N	2.88	0.47
11:K:38:ILE:H	11:K:38:ILE:CD1	2.09	0.47
11:K:65:TYR:CD1	11:K:65:TYR:N	2.82	0.47
12:L:50:LEU:O	12:L:51:ARG:C	2.53	0.47
13:M:34:VAL:HG22	13:M:74:ILE:CG1	2.43	0.47
13:M:88:LEU:O	13:M:89:ASP:O	2.33	0.47
14:N:101:SER:OG	14:N:103:LEU:HG	2.14	0.47
14:N:123:LYS:CA	14:N:126:ARG:HG3	2.45	0.47
17:Q:14:PRO:HB2	17:Q:17:LYS:CA	2.45	0.47
17:Q:24:CYS:C	17:Q:26:ARG:N	2.67	0.47
19:S:71:ARG:HB2	19:S:71:ARG:CZ	2.45	0.47
22:V:11:VAL:HG12	22:V:15:LEU:HD11	1.97	0.47
22:V:18:LYS:HD3	22:V:31:ILE:CD1	2.44	0.47
22:V:34:TRP:O	22:V:36:ARG:N	2.44	0.47
23:W:23:ARG:CA	23:W:26:ASN:OD1	2.62	0.47
23:W:55:ILE:O	23:W:57:ARG:N	2.48	0.47
23:W:82:SER:O	23:W:86:ARG:HG2	2.14	0.47
2:C:18:G:O5'	2:C:18:G:C8	2.66	0.47
3:D:52:G:N2	3:D:53:G:H1'	2.29	0.47
1:A:1003:G:C8	1:A:1003:G:OP2	2.67	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1006:C:O2	1:A:1006:C:C2'	2.62	0.47
1:A:1033:G:C2	1:A:1034:G:C5	3.03	0.47
1:A:842:C:H4'	1:A:848:C:N3	2.30	0.47
1:A:748:C:HO2'	1:A:749:C:H6	1.56	0.47
4:1:11:U:OP1	14:N:127:LYS:O	2.33	0.47
4:1:6:G:H2'	4:1:6:G:N3	2.29	0.47
1:A:615:C:O2'	1:A:616:G:H5'	2.15	0.47
1:A:931:C:H2'	1:A:931:C:O2	2.14	0.47
1:A:1082:G:C5	1:A:1083:U:C5	3.03	0.47
1:A:1178:G:N9	1:A:1180:A:OP2	2.48	0.47
1:A:1050:G:OP1	1:A:1215:G:OP1	2.33	0.47
1:A:1242:C:O2'	1:A:1303:C:H5''	2.15	0.47
1:A:130:A:H5''	1:A:190:G:C4	2.49	0.47
1:A:1314:C:H2'	1:A:1315:U:H5	1.79	0.47
1:A:1316:G:H5''	17:Q:17:LYS:CD	2.44	0.47
1:A:1326:C:C2	1:A:1327:C:C5	3.02	0.47
1:A:142:G:N1	1:A:143:A:C5	2.83	0.47
1:A:1464:G:N3	1:A:1465:C:C5	2.82	0.47
1:A:1480:G:C2'	1:A:1481:U:C5'	2.90	0.47
1:A:1520:G:O2'	1:A:1521:G:C5'	2.63	0.47
1:A:363:A:OP2	15:O:34:ARG:CZ	2.63	0.47
1:A:390:C:C6	1:A:390:C:H3'	2.49	0.47
1:A:394:G:C5	1:A:395:C:C4	3.02	0.47
1:A:695:A:H2'	1:A:696:A:C8	2.50	0.47
1:A:1104:G:H4'	5:E:111:ARG:HE	1.80	0.47
5:E:52:GLU:CD	5:E:53:ARG:N	2.69	0.47
6:F:142:MET:CG	6:F:143:GLU:N	2.78	0.47
6:F:175:LEU:HA	6:F:182:ILE:HD12	1.97	0.47
6:F:46:GLU:HB3	6:F:47:LEU:CD2	2.43	0.47
7:G:128:VAL:CG1	7:G:129:ASN:N	2.78	0.47
7:G:191:ARG:NE	7:G:191:ARG:O	2.48	0.47
7:G:25:ARG:NH2	7:G:30:LYS:HD3	2.30	0.47
1:A:9:G:C8	8:H:126:ARG:NH1	2.83	0.47
8:H:141:GLN:O	8:H:142:LEU:CB	2.63	0.47
8:H:145:LYS:O	8:H:148:VAL:HG23	2.15	0.47
8:H:69:VAL:O	8:H:71:LEU:N	2.39	0.47
10:J:43:PHE:O	10:J:46:ALA:HB3	2.14	0.47
11:K:39:LEU:CB	11:K:45:ILE:HG21	2.38	0.47
13:M:5:ARG:NE	13:M:73:ASP:OD1	2.44	0.47
14:N:123:LYS:HA	14:N:126:ARG:HG3	1.97	0.47
1:A:796:C:OP1	14:N:123:LYS:HD3	2.14	0.47
14:N:43:SER:OG	14:N:47:VAL:HG11	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:45:GLY:O	14:N:55:LYS:HB3	2.15	0.47
15:O:9:GLN:O	15:O:10:LEU:C	2.52	0.47
17:Q:40:CYS:HB2	17:Q:42:ILE:CG1	2.44	0.47
17:Q:59:ALA:HB1	17:Q:61:TRP:CZ3	2.49	0.47
18:R:32:LEU:HB3	18:R:63:ARG:HB3	1.97	0.47
18:R:5:LYS:HG3	18:R:6:GLU:OE2	2.14	0.47
18:R:78:TYR:O	18:R:79:ARG:C	2.52	0.47
20:T:91:ARG:HB3	20:T:91:ARG:HE	1.46	0.47
21:U:52:PRO:O	21:U:53:ARG:C	2.52	0.47
21:U:53:ARG:HH12	21:U:60:GLY:HA2	1.80	0.47
21:U:53:ARG:HH22	21:U:60:GLY:N	2.11	0.47
23:W:22:ARG:O	23:W:23:ARG:C	2.53	0.47
1:A:194:C:H5'	23:W:65:LYS:NZ	2.29	0.47
1:A:195:A:H4'	23:W:68:LYS:HZ2	1.79	0.47
10:J:129:GLU:OE1	10:J:131:LYS:CG	2.63	0.47
1:A:89:U:H6	1:A:89:U:O5'	1.95	0.47
1:A:996:A:N1	1:A:997:U:C4	2.83	0.47
1:A:1082:G:C6	1:A:1083:U:C4	3.02	0.47
1:A:1174:G:C2'	1:A:1175:G:H5'	2.45	0.47
1:A:1343:G:N2	1:A:1344:C:O2	2.48	0.47
1:A:976:G:C4	1:A:1363:A:N6	2.83	0.47
1:A:137:C:O5'	1:A:137:C:H6	1.97	0.47
1:A:1502:A:H2'	1:A:1502:A:N3	2.30	0.47
1:A:1516:G:C2	1:A:1518:A:OP2	2.67	0.47
1:A:197:A:O2'	1:A:198:G:P	2.72	0.47
1:A:246:A:N3	1:A:282:A:C6	2.82	0.47
1:A:424:G:N3	1:A:425:G:C8	2.83	0.47
1:A:547:A:H1'	1:A:548:G:O4'	2.14	0.47
1:A:686:U:O2	14:N:42:TRP:HZ2	1.98	0.47
1:A:682:G:C6	1:A:709:G:O6	2.67	0.47
1:A:769:G:C2	1:A:770:C:C5	3.02	0.47
1:A:778:G:C4	1:A:779:C:C5	3.03	0.47
1:A:814:A:C8	1:A:816:A:C5	3.03	0.47
1:A:836:G:C5	1:A:851:G:N1	2.83	0.47
1:A:853:G:H2'	1:A:854:G:O4'	2.14	0.47
1:A:864:A:N6	1:A:865:A:N1	2.63	0.47
1:A:979:C:C2'	1:A:980:C:H5'	2.44	0.47
3:D:32:C:H1'	10:J:86:GLN:HE22	1.79	0.47
5:E:209:ARG:NH1	5:E:213:LEU:CD1	2.78	0.47
5:E:46:LYS:HA	5:E:49:GLU:CD	2.35	0.47
5:E:97:TRP:HH2	5:E:176:GLU:CG	2.27	0.47
6:F:134:ILE:HG23	6:F:151:VAL:HG12	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:15:GLU:OE2	7:G:63:LYS:CB	2.62	0.47
7:G:187:ARG:HE	7:G:188:LEU:CG	2.28	0.47
7:G:22:LYS:CD	7:G:26:CYS:HB2	2.45	0.47
7:G:73:ARG:C	7:G:75:PHE:N	2.64	0.47
8:H:84:PHE:CB	8:H:134:ALA:HB2	2.45	0.47
9:I:11:ASN:OD1	9:I:14:LEU:N	2.48	0.47
9:I:47:ARG:HG2	9:I:57:GLN:CG	2.44	0.47
10:J:78:ARG:N	10:J:156:TRP:HH2	2.13	0.47
11:K:46:LYS:HG3	11:K:64:LYS:HB2	1.96	0.47
11:K:44:PHE:HD1	11:K:79:VAL:HG12	1.80	0.47
11:K:88:LYS:NZ	11:K:88:LYS:CB	2.78	0.47
14:N:34:ASP:CB	14:N:35:PRO:CD	2.93	0.47
15:O:122:THR:HG22	15:O:123:LYS:O	2.15	0.47
1:A:1328:C:OP1	16:P:28:ALA:HB2	2.15	0.47
16:P:64:TRP:HB3	16:P:66:LEU:CD2	2.44	0.47
16:P:64:TRP:HD1	16:P:66:LEU:HD22	1.77	0.47
17:Q:10:ALA:C	17:Q:12:ARG:H	2.15	0.47
17:Q:45:ARG:CG	17:Q:45:ARG:NH1	2.73	0.47
1:A:1187:G:H1'	17:Q:61:TRP:C	2.35	0.47
19:S:39:TYR:CZ	19:S:41:PRO:HG3	2.49	0.47
20:T:70:ARG:O	20:T:71:PHE:HD1	1.97	0.47
20:T:86:GLU:CD	20:T:89:LEU:HD12	2.35	0.47
21:U:18:ARG:NH2	21:U:21:LYS:CD	2.71	0.47
23:W:88:VAL:C	23:W:92:LEU:HD12	2.35	0.47
1:A:1004:A:H3'	1:A:1025:U:N3	2.30	0.47
4:1:22:A:C2'	4:1:23:A:H5'	2.45	0.47
1:A:1242:C:OP1	24:X:10:ARG:NH1	2.48	0.47
1:A:1307:U:C4	1:A:1308:U:C5	3.03	0.47
1:A:160:A:N6	1:A:161:A:C2	2.83	0.47
1:A:197:A:N6	1:A:220:G:C2'	2.78	0.47
1:A:270:A:H2'	1:A:271:C:H6	1.80	0.47
1:A:344:A:O2'	1:A:345:C:OP1	2.27	0.47
1:A:449:C:C2'	1:A:450:G:O4'	2.49	0.47
1:A:491:G:O2'	1:A:492:G:H5'	2.15	0.47
1:A:519:C:H5'	15:O:51:ALA:CB	2.45	0.47
1:A:6:G:O2'	1:A:298:A:H1'	2.14	0.47
1:A:752:G:OP2	1:A:752:G:H8	1.98	0.47
1:A:754:C:H1'	18:R:69:TYR:CG	2.50	0.47
1:A:758:G:C2'	1:A:759:A:OP2	2.62	0.47
1:A:887:G:C6	1:A:888:G:C5	3.02	0.47
1:A:891:U:C5	1:A:892:A:N7	2.83	0.47
1:A:895:G:H2'	1:A:896:C:H6	1.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:951:G:N2	1:A:952:U:C2	2.82	0.47
1:A:981:U:H3'	1:A:981:U:C6	2.50	0.47
1:A:981:U:N3	1:A:982:U:C4	2.83	0.47
3:D:32:C:O2'	10:J:84:ASN:ND2	2.47	0.47
5:E:102:LEU:CD2	5:E:176:GLU:HB3	2.45	0.47
5:E:176:GLU:O	5:E:180:LEU:CG	2.63	0.47
6:F:172:ARG:CZ	6:F:172:ARG:CB	2.93	0.47
6:F:66:VAL:O	6:F:102:ASN:CB	2.52	0.47
7:G:15:GLU:OE1	7:G:59:ARG:NH2	2.46	0.47
8:H:37:ARG:NH2	8:H:112:LEU:HD22	2.30	0.47
8:H:48:ALA:HB1	8:H:53:LEU:CB	2.42	0.47
8:H:76:ILE:HG22	8:H:142:LEU:HD22	1.97	0.47
9:I:12:PRO:CG	9:I:13:ASN:HD22	2.28	0.47
9:I:45:LEU:O	9:I:46:ARG:CB	2.63	0.47
9:I:4:TYR:N	9:I:4:TYR:HD2	2.13	0.47
9:I:6:VAL:HG22	9:I:8:ILE:CG1	2.44	0.47
11:K:112:LEU:HD21	11:K:114:THR:HG23	1.96	0.47
11:K:49:GLU:C	11:K:49:GLU:OE1	2.53	0.47
12:L:69:GLY:CA	12:L:73:GLN:OE1	2.63	0.47
14:N:128:ALA:O	14:N:129:SER:CB	2.61	0.47
16:P:29:ARG:NH1	16:P:64:TRP:CD1	2.83	0.47
17:Q:24:CYS:HA	17:Q:39:LEU:CA	2.45	0.47
1:A:1202:G:C8	17:Q:42:ILE:CD1	2.98	0.47
18:R:43:LEU:HD11	18:R:53:HIS:HD2	1.80	0.47
18:R:76:GLU:O	18:R:77:ARG:C	2.52	0.47
19:S:14:ASN:CB	19:S:16:HIS:HE1	2.27	0.47
21:U:43:PHE:C	21:U:51:LEU:HD13	2.34	0.47
1:A:193:C:H4'	23:W:61:SER:CA	2.45	0.47
7:G:159:ARG:O	7:G:163:GLU:HB2	2.08	0.47
2:C:10:G:N3	2:C:11:A:C8	2.83	0.47
2:C:70:G:N2	2:C:71:C:N1	2.63	0.47
1:A:1029:G:N3	1:A:1031:G:OP2	2.48	0.47
1:A:1033:G:N1	1:A:1034:G:C5	2.83	0.47
1:A:1032(B):G:N2	1:A:1033:G:N3	2.62	0.47
1:A:1036:G:C8	1:A:1037:C:C5	3.03	0.47
1:A:1010:G:N3	1:A:1011:G:C8	2.83	0.47
3:D:67:C:H2'	3:D:68:U:C5'	2.44	0.47
1:A:1046:A:C2	1:A:1047:G:C8	3.03	0.46
1:A:1057:G:C5	1:A:1204:A:C2	3.02	0.46
1:A:1073:U:O2'	1:A:1074:G:H5'	2.16	0.46
1:A:1071:C:N4	1:A:1084:G:N2	2.63	0.46
1:A:1171:G:N3	1:A:1172:C:C5	2.83	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1246:C:C2'	1:A:1247:U:O5'	2.63	0.46
1:A:1411:C:N3	1:A:1412:C:C5	2.82	0.46
1:A:141:A:C6	1:A:142:G:N7	2.83	0.46
1:A:145:G:H2'	1:A:146:G:H5'	1.96	0.46
1:A:1474:G:C6	1:A:1475:G:N7	2.83	0.46
1:A:1521:G:C4	1:A:1522:U:C5	3.03	0.46
1:A:17:U:O2'	1:A:18:C:O4'	2.28	0.46
1:A:173:U:H4'	1:A:197:A:C1'	2.45	0.46
1:A:415:A:H2'	1:A:416:G:O4'	2.14	0.46
1:A:40:C:O2'	1:A:41:G:C5'	2.63	0.46
1:A:556:C:O2'	1:A:557:G:H5'	2.15	0.46
1:A:57:G:O6	1:A:58:C:N4	2.48	0.46
1:A:666:G:OP2	1:A:726:C:H1'	2.15	0.46
1:A:668:G:H1'	18:R:46:HIS:CD2	2.48	0.46
1:A:704:A:O2'	1:A:705:U:H5'	2.16	0.46
1:A:730:G:N7	1:A:731:G:C1'	2.72	0.46
1:A:778:G:C2'	1:A:779:C:O4'	2.63	0.46
1:A:781:A:H2'	1:A:782:A:C4'	2.44	0.46
1:A:834:C:C4	1:A:853:G:N1	2.83	0.46
1:A:950:U:H1'	1:A:971:G:C4	2.50	0.46
5:E:115:LEU:HD23	5:E:149:LEU:CD2	2.36	0.46
5:E:55:PHE:CD2	5:E:58:ILE:HD12	2.50	0.46
6:F:15:THR:HG21	6:F:181:ASN:HA	1.96	0.46
6:F:23:TYR:CZ	13:M:11:PHE:CD2	3.02	0.46
6:F:27:LYS:O	6:F:28:GLN:HB3	2.14	0.46
7:G:145:GLU:O	7:G:146:ILE:HG23	2.14	0.46
8:H:79:GLU:CB	8:H:91:LEU:O	2.61	0.46
8:H:96:PRO:O	8:H:98:THR:N	2.48	0.46
10:J:150:ALA:HB2	14:N:59:TYR:CD2	2.49	0.46
10:J:88:PRO:HA	10:J:89:MET:HE3	1.97	0.46
10:J:93:PRO:O	10:J:94:ARG:C	2.53	0.46
11:K:112:LEU:CD2	11:K:119:LEU:HB2	2.44	0.46
11:K:33:GLU:HA	11:K:59:LEU:CD1	2.45	0.46
13:M:8:LEU:HD12	13:M:19:SER:CB	2.45	0.46
14:N:18:ARG:NE	14:N:33:THR:OG1	2.43	0.46
14:N:80:VAL:O	14:N:106:LYS:CB	2.57	0.46
15:O:35:GLY:HA3	15:O:60:LEU:HA	1.96	0.46
16:P:15:VAL:CG2	16:P:39:ILE:HD12	2.46	0.46
16:P:73:GLU:O	16:P:76:ALA:N	2.48	0.46
16:P:90:LEU:CD2	16:P:93:ARG:HD3	2.30	0.46
18:R:44:LYS:C	18:R:46:HIS:H	2.18	0.46
19:S:32:TYR:O	19:S:34:GLU:N	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:10:G:N2	2:C:11:A:C8	2.83	0.46
2:C:63:G:H2'	2:C:64:G:C8	2.50	0.46
3:D:58:A:C4	3:D:61:C:C6	3.03	0.46
1:A:1085:U:O2	1:A:1094:G:O6	2.34	0.46
1:A:1091:U:C6	1:A:1091:U:H3'	2.50	0.46
1:A:1210:C:C4	1:A:1211:U:C4	3.04	0.46
1:A:1301:U:O4	1:A:1303:C:H1'	2.16	0.46
1:A:1305:G:N3	1:A:1331:G:N2	2.63	0.46
1:A:1403:C:C1'	1:A:1500:A:N1	2.75	0.46
1:A:1504:G:H3'	1:A:1504:G:C8	2.50	0.46
1:A:179:A:C3'	1:A:180:U:H6	2.29	0.46
1:A:197:A:C6	1:A:221:C:C4'	2.97	0.46
1:A:301:G:N2	1:A:302:G:N3	2.62	0.46
1:A:40:C:O2'	1:A:41:G:O5'	2.33	0.46
1:A:467:G:H21	19:S:82:GLN:NE2	2.13	0.46
1:A:558:G:C5'	1:A:559:A:H5''	2.45	0.46
1:A:607:A:C2'	1:A:608:A:C5'	2.93	0.46
1:A:689:C:N3	1:A:690:G:N7	2.63	0.46
1:A:696:A:C2	1:A:697:U:O4'	2.69	0.46
1:A:706:A:O4'	14:N:29:ILE:CD1	2.64	0.46
1:A:822:C:H2'	1:A:823:G:C8	2.37	0.46
1:A:990:C:C2'	1:A:991:U:O4'	2.63	0.46
3:D:34:G:N2	3:D:35:A:C5'	2.78	0.46
5:E:184:VAL:O	5:E:198:ASP:CB	2.49	0.46
5:E:47:THR:OG1	5:E:202:PRO:HG2	2.15	0.46
5:E:44:LEU:O	5:E:47:THR:HB	2.16	0.46
6:F:123:GLN:O	6:F:124:ILE:C	2.54	0.46
6:F:172:ARG:HH12	6:F:174:PRO:CG	2.28	0.46
7:G:101:LEU:O	7:G:104:VAL:HG23	2.15	0.46
8:H:105:VAL:HG12	8:H:106:PRO:HD3	1.97	0.46
8:H:84:PHE:CB	8:H:134:ALA:CB	2.93	0.46
8:H:30:ALA:O	8:H:45:PHE:HA	2.15	0.46
8:H:80:ILE:CD1	8:H:91:LEU:CB	2.85	0.46
9:I:60:PHE:N	9:I:60:PHE:HD1	2.13	0.46
9:I:67:MET:N	9:I:67:MET:CE	2.79	0.46
10:J:113:GLU:OE1	10:J:119:ARG:HA	2.15	0.46
10:J:15:ASP:CG	10:J:23:VAL:HG11	2.35	0.46
10:J:3:ARG:C	10:J:4:ARG:HG2	2.34	0.46
11:K:100:ILE:HG22	11:K:121:ASP:OD1	2.15	0.46
11:K:40:ALA:HA	11:K:45:ILE:HG23	1.97	0.46
13:M:52:GLY:HA3	13:M:56:HIS:CD2	2.51	0.46
15:O:60:LEU:HD11	15:O:64:TYR:CD2	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:81:LEU:HD23	16:P:89:GLY:HA2	1.96	0.46
1:A:1048:G:C5'	17:Q:3:ARG:NH1	2.78	0.46
17:Q:27:CYS:N	17:Q:43:CYS:HB3	2.24	0.46
18:R:70:LEU:HD23	18:R:81:LEU:CD1	2.44	0.46
22:V:47:HIS:H	22:V:62:ILE:HG23	1.76	0.46
23:W:104:LEU:O	23:W:105:SER:O	2.32	0.46
6:F:157:ILE:HG13	6:F:164:ARG:CZ	2.44	0.46
1:A:435:C:H2'	1:A:436:C:C5'	2.44	0.46
2:C:59:A:C2'	2:C:59:A:N3	2.78	0.46
3:D:2:C:H2'	3:D:3:C:H6	1.77	0.46
1:A:1063:C:H5''	1:A:1064:G:C5'	2.42	0.46
1:A:1142:G:HO2'	1:A:1143:G:H5'	1.77	0.46
1:A:1127:G:O2'	1:A:1148:U:C4	2.62	0.46
1:A:1193:G:C8	1:A:1193:G:C3'	2.98	0.46
1:A:1196:U:H5'	1:A:1197:G:H5''	1.89	0.46
1:A:1242:C:C4	1:A:1243:C:C5	3.03	0.46
1:A:1253:G:C2'	1:A:1254:C:O4'	2.58	0.46
1:A:1261:A:N1	1:A:1274:G:H1'	2.30	0.46
1:A:1282:C:O2	1:A:1282:C:C2'	2.64	0.46
1:A:1324:A:H2'	1:A:1325:C:H5'	1.97	0.46
1:A:1378:C:O5'	10:J:6:ARG:HD2	2.15	0.46
1:A:1480:G:C2	1:A:1481:U:H1'	2.50	0.46
1:A:1494:G:O2'	1:A:1495:U:C6	2.66	0.46
1:A:166:G:C2'	1:A:167:G:O5'	2.62	0.46
1:A:177:C:N4	1:A:178:C:H41	2.13	0.46
1:A:57:G:N2	1:A:388:G:C6	2.83	0.46
1:A:451:A:O2'	1:A:452:A:C8	2.67	0.46
1:A:793:U:H5'	1:A:794:A:H5''	1.97	0.46
1:A:890:G:O2'	1:A:891:U:P	2.73	0.46
1:A:891:U:C5	1:A:906:G:N2	2.82	0.46
1:A:909:A:C2'	1:A:910:C:H5'	2.46	0.46
1:A:932:C:H5''	10:J:3:ARG:CD	2.26	0.46
1:A:980:C:C4	1:A:981:U:C2	3.03	0.46
1:A:988:G:N1	1:A:989:C:C2	2.83	0.46
5:E:72:GLY:HA2	5:E:165:VAL:HG22	1.98	0.46
5:E:16:HIS:NE2	5:E:213:LEU:HB3	2.30	0.46
6:F:150:LYS:NZ	6:F:152:ILE:HG21	2.30	0.46
6:F:10:PHE:HD1	6:F:178:LEU:HD22	1.81	0.46
6:F:190:ARG:HA	6:F:190:ARG:NE	2.30	0.46
6:F:52:LEU:O	6:F:53:ALA:CB	2.64	0.46
7:G:151:LYS:C	7:G:154:ASN:HD21	2.12	0.46
7:G:180:GLY:O	7:G:181:MET:C	2.54	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:205:GLU:O	7:G:208:SER:N	2.49	0.46
7:G:20:TYR:CE1	7:G:21:LEU:CD2	2.97	0.46
7:G:20:TYR:HB2	7:G:27:TYR:N	2.29	0.46
7:G:78:LEU:O	7:G:81:GLU:CB	2.63	0.46
9:I:2:ARG:O	9:I:66:GLU:CA	2.63	0.46
9:I:75:LEU:O	9:I:78:GLU:HB3	2.15	0.46
9:I:98:LEU:HD11	21:U:28:GLU:HG3	1.96	0.46
11:K:95:VAL:O	11:K:130:GLY:CA	2.63	0.46
11:K:63:LEU:N	11:K:63:LEU:HD23	2.28	0.46
11:K:97:VAL:HG13	11:K:98:LYS:H	1.80	0.46
12:L:5:TYR:HD2	12:L:6:GLY:H	1.61	0.46
15:O:101:VAL:O	15:O:104:VAL:HB	2.15	0.46
15:O:34:ARG:HG2	15:O:35:GLY:N	2.29	0.46
15:O:92:ASP:C	15:O:93:LEU:HD23	2.36	0.46
16:P:20:THR:O	16:P:20:THR:CG2	2.64	0.46
17:Q:13:THR:HG22	17:Q:15:LYS:HB2	1.97	0.46
17:Q:53:LEU:O	17:Q:56:VAL:HG22	2.14	0.46
20:T:17:LYS:NZ	20:T:47:PRO:HA	2.30	0.46
20:T:82:MET:O	20:T:85:VAL:CB	2.60	0.46
21:U:72:ARG:HH11	21:U:72:ARG:CG	2.28	0.46
22:V:27:GLU:O	22:V:28:LYS:HB2	2.15	0.46
23:W:13:LEU:O	23:W:14:LYS:C	2.54	0.46
23:W:26:ASN:O	23:W:27:LYS:C	2.53	0.46
23:W:79:ARG:CG	23:W:79:ARG:HH11	2.27	0.46
1:A:96:G:N2	1:A:97:U:H1'	2.31	0.46
4:1:11:U:O2	4:1:11:U:H2'	2.13	0.46
2:C:25:C:H2'	2:C:26:G:H8	1.77	0.46
1:A:930:C:C4	1:A:931:C:C5	3.02	0.46
2:C:23:C:H2'	2:C:23:C:O2	2.14	0.46
1:A:1169:A:P	1:A:1169:A:H8	2.38	0.46
1:A:1284:C:C2	1:A:1285:A:N7	2.84	0.46
1:A:236:G:C3'	1:A:237:C:H6	2.28	0.46
1:A:265:G:C8	1:A:267:C:C5	3.03	0.46
1:A:277:C:N3	1:A:278:G:N7	2.64	0.46
1:A:290:C:C6	1:A:290:C:H3'	2.51	0.46
1:A:406:G:C2	1:A:407:G:C5	3.03	0.46
1:A:440:A:N7	1:A:442:C:C5	2.84	0.46
1:A:451:A:C2	1:A:480:U:C5	3.03	0.46
1:A:484:G:H8	1:A:486:U:C2	2.33	0.46
1:A:569:C:O4'	1:A:574:A:N1	2.48	0.46
1:A:731:G:HO2'	1:A:732:C:H5'	1.77	0.46
1:A:582:U:C4	1:A:760:G:C6	3.04	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:785:G:C2	1:A:786:G:C8	3.03	0.46
1:A:794:A:C8	1:A:794:A:C3'	2.98	0.46
1:A:881:G:H2'	1:A:882:C:C6	2.48	0.46
1:A:907:A:H3'	1:A:908:A:C8	2.49	0.46
1:A:993:G:N3	1:A:995:C:N4	2.64	0.46
5:E:123:ALA:O	5:E:124:SER:O	2.34	0.46
5:E:153:ARG:NH1	5:E:156:LYS:HB2	2.29	0.46
5:E:223:ILE:HA	5:E:226:ARG:NE	2.24	0.46
5:E:32:ILE:O	5:E:32:ILE:HG22	2.14	0.46
6:F:180:ALA:HB1	6:F:182:ILE:CD1	2.45	0.46
6:F:73:PRO:HA	6:F:76:VAL:HB	1.98	0.46
7:G:101:LEU:O	7:G:104:VAL:HG22	2.16	0.46
7:G:193:ASP:C	7:G:194:LEU:HD22	2.36	0.46
8:H:78:HIS:CD2	8:H:142:LEU:CD2	2.99	0.46
8:H:37:ARG:HH11	8:H:37:ARG:HG3	1.80	0.46
8:H:69:VAL:CG1	8:H:71:LEU:HB2	2.45	0.46
9:I:95:GLU:H	9:I:96:PRO:HD3	1.79	0.46
11:K:18:ARG:H	11:K:18:ARG:CD	2.25	0.46
11:K:37:ARG:HD2	11:K:38:ILE:CA	2.45	0.46
5:E:179:LYS:HG2	11:K:72:PRO:CB	2.46	0.46
12:L:126:SER:HB3	12:L:127:LYS:H	1.63	0.46
13:M:65:LEU:HD13	17:Q:36:PHE:HZ	1.80	0.46
15:O:76:ASN:HD22	15:O:77:LEU:HD23	1.81	0.46
16:P:19:LEU:HD11	16:P:30:ALA:CA	2.45	0.46
18:R:36:ILE:CG2	18:R:37:ASN:ND2	2.75	0.46
19:S:74:LEU:CD2	19:S:79:VAL:HG21	2.45	0.46
1:A:468:A:H1'	19:S:82:GLN:HE21	1.80	0.46
15:O:11:VAL:CG2	20:T:29:HIS:CD2	2.97	0.46
20:T:33:GLY:O	20:T:34:LYS:C	2.53	0.46
20:T:75:ARG:HH12	20:T:77:VAL:HA	1.79	0.46
21:U:78:LEU:O	21:U:79:LEU:HG	2.14	0.46
23:W:42:GLN:C	23:W:42:GLN:NE2	2.66	0.46
23:W:55:ILE:H	23:W:55:ILE:HG13	1.42	0.46
22:V:30:LEU:C	22:V:30:LEU:HD23	2.36	0.46
2:C:28:C:HO2'	2:C:29:G:H5'	1.80	0.46
3:D:30:G:N1	3:D:31:A:C6	2.83	0.46
1:A:1126:U:C2	1:A:1127:G:C8	3.03	0.46
1:A:1171:G:C4	1:A:1172:C:C5	3.03	0.46
1:A:1298:C:H41	10:J:114:ARG:HB3	1.79	0.46
1:A:1426:C:C2	1:A:1427:U:C5	3.03	0.46
1:A:1430:C:C2	1:A:1471:G:N2	2.84	0.46
1:A:324:G:H5''	23:W:70:SER:OG	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:334:C:H2'	1:A:335:C:H6	1.79	0.46
1:A:344:A:H5''	1:A:345:C:C5	2.50	0.46
1:A:343:U:H2'	1:A:344:A:O5'	2.15	0.46
1:A:377:G:HO2'	1:A:378:G:C5'	2.28	0.46
1:A:478:A:C6	1:A:479:C:N4	2.84	0.46
1:A:64:G:C2	1:A:67:C:N4	2.84	0.46
1:A:730:G:O2'	1:A:766:A:C4'	2.64	0.46
1:A:767:A:H2'	1:A:768:A:C5'	2.45	0.46
1:A:775:G:C4	1:A:776:G:N7	2.84	0.46
1:A:859:A:C8	1:A:860:A:C8	3.04	0.46
1:A:952:U:H5	16:P:104:ARG:HH12	1.64	0.46
1:A:953:G:O2'	1:A:954:G:H5'	2.14	0.46
3:D:37:A:C2	3:D:38:A:H1'	2.50	0.46
5:E:115:LEU:CB	5:E:145:LEU:HG	2.38	0.46
5:E:18:GLY:HA2	5:E:42:ILE:N	2.18	0.46
5:E:200:ILE:HG22	5:E:200:ILE:O	2.16	0.46
6:F:140:ARG:HA	6:F:143:GLU:HB2	1.98	0.46
7:G:34:GLU:O	7:G:35:ARG:CB	2.62	0.46
7:G:95:GLY:O	7:G:98:GLU:HB3	2.16	0.46
8:H:37:ARG:NH2	8:H:112:LEU:CD2	2.78	0.46
8:H:18:ARG:CB	8:H:26:PHE:HA	2.45	0.46
10:J:30:ILE:CD1	10:J:43:PHE:HB2	2.45	0.46
10:J:62:PHE:O	10:J:66:VAL:HG23	2.15	0.46
11:K:69:ARG:HH12	11:K:70:GLN:HG3	1.81	0.46
11:K:69:ARG:NH1	11:K:70:GLN:HG3	2.31	0.46
12:L:47:LEU:HD22	12:L:50:LEU:CB	2.45	0.46
12:L:69:GLY:O	12:L:70:LYS:O	2.34	0.46
13:M:8:LEU:HD12	13:M:19:SER:HB3	1.97	0.46
14:N:78:GLN:CD	14:N:79:SER:N	2.69	0.46
15:O:34:ARG:HB2	15:O:105:TYR:CE1	2.51	0.46
17:Q:39:LEU:HD13	17:Q:44:LEU:HA	1.96	0.46
19:S:48:TRP:CD1	19:S:48:TRP:C	2.87	0.46
22:V:21:GLU:O	22:V:24:ALA:HB2	2.15	0.46
23:W:76:ALA:O	23:W:78:ALA:N	2.48	0.46
2:C:13:C:H2'	2:C:14:A:C5'	2.45	0.46
3:D:14:A:N1	3:D:15:G:O6	2.48	0.46
1:A:1053:G:O6	1:A:1200:C:OP2	2.33	0.46
1:A:1095:U:C2	1:A:1096:C:C6	3.04	0.46
1:A:1129:C:H4'	1:A:1130:A:C8	2.49	0.46
1:A:1182:G:OP1	1:A:1184:G:H4'	2.16	0.46
1:A:1324:A:C2	1:A:1325:C:N1	2.84	0.46
1:A:1437:C:O2	1:A:1438:G:C8	2.68	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1475:G:C2	1:A:1476:G:C5	3.04	0.46
1:A:178:C:C2	1:A:179:A:H8	2.34	0.46
1:A:276:G:O2'	20:T:68:ARG:NH1	2.48	0.46
1:A:293:G:N3	1:A:294:U:C6	2.83	0.46
1:A:302:G:O6	1:A:303:A:C6	2.68	0.46
1:A:429:U:O3'	7:G:22:LYS:NZ	2.44	0.46
1:A:474:G:C2'	1:A:475:G:H5'	2.46	0.46
1:A:373:A:H1'	1:A:481:G:H1'	1.96	0.46
1:A:51:A:C2'	1:A:52:G:OP2	2.63	0.46
1:A:577:G:N3	1:A:578:C:C6	2.84	0.46
1:A:581:G:H4'	18:R:64:ARG:HH12	1.81	0.46
1:A:610:G:C2	1:A:611:A:C8	3.04	0.46
1:A:61:G:H22	1:A:379:C:H4'	1.78	0.46
1:A:657:G:H2'	1:A:658:G:H5'	1.98	0.46
1:A:702:A:HO2'	1:A:703:G:P	2.38	0.46
1:A:737:A:O2'	9:I:72:VAL:CG2	2.63	0.46
1:A:739:C:H2'	1:A:740:U:O5'	2.16	0.46
1:A:789:U:C2'	1:A:790:A:O5'	2.64	0.46
1:A:874:G:C2	1:A:875:C:N1	2.84	0.46
1:A:864:A:H2	1:A:917:G:N3	2.14	0.46
1:A:946:A:OP2	16:P:114:ARG:NH2	2.41	0.46
5:E:132:LYS:HA	5:E:135:GLN:OE1	2.15	0.46
5:E:219:VAL:O	5:E:222:ILE:HD12	2.15	0.46
5:E:28:PHE:O	5:E:29:ALA:C	2.53	0.46
5:E:69:LEU:HD23	5:E:91:PRO:CB	2.45	0.46
6:F:138:VAL:CG1	6:F:149:ALA:HB3	2.43	0.46
7:G:13:ARG:NH1	7:G:36:ARG:HD3	2.18	0.46
7:G:4:TYR:CD2	7:G:5:ILE:O	2.69	0.46
7:G:57:ARG:HA	7:G:202:LEU:CD2	2.46	0.46
9:I:44:GLY:HA2	9:I:59:TYR:CE1	2.50	0.46
9:I:69:GLU:O	9:I:72:VAL:HG22	2.15	0.46
10:J:29:LYS:HZ3	10:J:102:ARG:HB2	1.79	0.46
10:J:135:VAL:O	10:J:139:GLU:OE2	2.33	0.46
11:K:102:ARG:HG2	11:K:102:ARG:NH1	2.24	0.46
11:K:37:ARG:O	11:K:38:ILE:C	2.54	0.46
12:L:13:ALA:HB1	12:L:73:GLN:HG2	1.97	0.46
13:M:16:LEU:HD22	13:M:16:LEU:N	2.31	0.46
13:M:85:LEU:HD12	13:M:85:LEU:H	1.81	0.46
15:O:44:THR:CB	15:O:45:PRO:HD2	2.45	0.46
15:O:76:ASN:ND2	15:O:77:LEU:HD23	2.31	0.46
15:O:82:VAL:O	15:O:106:ASP:CB	2.61	0.46
16:P:102:ARG:HG2	16:P:105:THR:O	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:42:ALA:O	16:P:43:THR:C	2.54	0.46
22:V:69:HIS:HB2	22:V:74:PHE:CE1	2.49	0.46
1:A:1001:G:C8	1:A:1001:G:C3'	2.99	0.46
2:C:28:C:H2'	2:C:29:G:C8	2.28	0.46
1:A:1113:C:OP2	1:A:1113:C:C6	2.69	0.46
1:A:1126:U:O2'	1:A:1127:G:C5'	2.63	0.46
1:A:1192:C:C5	1:A:1193:G:C4	3.04	0.46
1:A:1234:C:C4'	1:A:1364:U:O2'	2.64	0.46
1:A:1260:C:H4'	1:A:1284:C:H5''	1.94	0.46
1:A:1352:C:C4	1:A:1371:G:O6	2.69	0.46
1:A:1372:U:C4	1:A:1373:G:N7	2.84	0.46
1:A:1426:C:H2'	1:A:1427:U:C6	2.51	0.46
1:A:1433:A:N6	1:A:1434:A:N1	2.63	0.46
1:A:928:G:C5'	1:A:1533:C:C2	2.99	0.46
1:A:173:U:H5''	1:A:197:A:C4'	2.45	0.46
1:A:250:A:C2	1:A:274:A:N1	2.71	0.46
1:A:515:G:C2	1:A:537:G:C4	3.04	0.46
1:A:598:U:C2	1:A:599:C:C5	3.04	0.46
1:A:5:U:O2'	1:A:6:G:P	2.74	0.46
1:A:678:U:H2'	1:A:679:C:H6	1.72	0.46
1:A:775:G:C2	1:A:776:G:C8	3.03	0.46
1:A:792:A:H2	1:A:794:A:C2	2.33	0.46
1:A:824:C:O4'	11:K:1:MET:N	2.47	0.46
1:A:925:G:C2	1:A:927:G:C8	3.03	0.46
1:A:939:G:H2'	1:A:940:C:H6	1.78	0.46
1:A:954:G:C5	1:A:955:U:C5	3.04	0.46
1:A:959:A:C2	1:A:1222:G:O4'	2.69	0.46
5:E:226:ARG:CG	5:E:227:GLY:N	2.71	0.46
5:E:58:ILE:O	5:E:61:LEU:CB	2.53	0.46
6:F:123:GLN:CB	6:F:128:PHE:CE2	2.94	0.46
6:F:11:ARG:CB	6:F:15:THR:O	2.64	0.46
6:F:50:ALA:CB	6:F:70:VAL:HG11	2.46	0.46
7:G:13:ARG:HG2	7:G:32:ALA:HB2	1.97	0.46
7:G:112:VAL:CG2	7:G:161:ASN:ND2	2.76	0.46
7:G:12:CYS:N	7:G:19:LEU:HB2	2.29	0.46
7:G:209:ARG:HG2	7:G:209:ARG:HH11	1.81	0.46
7:G:3:ARG:CD	7:G:71:SER:H	2.28	0.46
7:G:71:SER:O	7:G:75:PHE:CB	2.61	0.46
9:I:99:ALA:O	9:I:100:ASN:C	2.53	0.46
9:I:19:LEU:CD2	9:I:23:LYS:NZ	2.78	0.46
9:I:37:VAL:HA	9:I:65:VAL:CB	2.45	0.46
9:I:80:ARG:HG2	9:I:80:ARG:HH11	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:106:GLN:O	10:J:110:GLN:HG2	2.15	0.46
10:J:113:GLU:HB2	10:J:118:VAL:HG11	1.98	0.46
10:J:75:VAL:CG2	10:J:145:ALA:HB1	2.45	0.46
11:K:82:HIS:HD2	11:K:138:TRP:NE1	2.13	0.46
11:K:19:VAL:CG2	11:K:21:LYS:HE3	2.46	0.46
12:L:47:LEU:HD22	12:L:50:LEU:HB3	1.97	0.46
14:N:62:GLN:OE1	14:N:63:LEU:HA	2.15	0.46
16:P:60:VAL:O	16:P:61:GLU:C	2.53	0.46
17:Q:47:LEU:CB	17:Q:53:LEU:HD11	2.45	0.46
18:R:55:GLY:O	18:R:58:MET:N	2.48	0.46
18:R:77:ARG:O	18:R:77:ARG:NH1	2.46	0.46
19:S:71:ARG:NH1	19:S:71:ARG:CB	2.79	0.46
9:I:97:PHE:CD2	21:U:31:LEU:HD13	2.50	0.46
2:C:14:A:C5	2:C:15:G:N7	2.84	0.46
2:C:47:U:C5	2:C:49:G:H4'	2.51	0.46
2:C:59:A:C2	2:C:60:U:H1'	2.51	0.46
3:D:48:C:O2'	3:D:49:G:OP2	2.31	0.46
1:A:838:G:H2'	1:A:841:U:H5''	1.97	0.46
1:A:843:U:C2'	1:A:848:C:OP1	2.64	0.46
1:A:216:G:N2	1:A:217:C:C2	2.84	0.46
3:D:75:C:H5''	3:D:76:A:H4'	1.96	0.46
9:I:32:ASN:N	9:I:32:ASN:HD22	2.14	0.46
1:A:723:U:C6	1:A:723:U:O5'	2.68	0.46
1:A:1309:G:C6	1:A:1329:A:N1	2.83	0.46
1:A:1346:A:N3	10:J:10:ARG:NH2	2.64	0.46
1:A:1381:U:C2	1:A:1382:C:C6	3.03	0.46
1:A:1386:G:C2'	1:A:1387:G:O5'	2.64	0.46
1:A:1423:G:C4	1:A:1424:C:C6	3.03	0.46
1:A:1428:A:C2	1:A:1429:C:N3	2.84	0.46
1:A:1449:C:C2	1:A:1455:G:C2	3.04	0.46
1:A:174:C:C2	1:A:175:C:H5	2.34	0.46
1:A:183:G:O2'	1:A:224:C:C1'	2.63	0.46
1:A:131:C:C4	1:A:232:G:N1	2.84	0.46
1:A:338:A:C4	1:A:339:C:C5	3.03	0.46
1:A:338:A:C5	1:A:339:C:C5	3.04	0.46
1:A:407:G:C2'	1:A:408:A:O5'	2.63	0.46
1:A:20:U:H5'	1:A:572:A:N6	2.30	0.46
1:A:644:G:N7	1:A:645:C:C5	2.84	0.46
1:A:887:G:N7	1:A:888:G:N7	2.63	0.46
1:A:900:A:H2'	1:A:901:A:O5'	2.15	0.46
1:A:980:C:C5	1:A:981:U:N3	2.83	0.46
5:E:19:HIS:NE2	5:E:204:ASN:ND2	2.62	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:207:ALA:O	5:E:210:SER:N	2.48	0.46
5:E:78:GLN:CD	5:E:96:ARG:HH12	2.19	0.46
6:F:172:ARG:HH12	6:F:174:PRO:CD	2.29	0.46
6:F:23:TYR:O	6:F:24:ALA:CB	2.64	0.46
6:F:69:HIS:ND1	6:F:104:GLN:HB2	2.30	0.46
7:G:78:LEU:CD2	7:G:96:LEU:HD22	2.44	0.46
8:H:96:PRO:O	8:H:117:ASP:HB3	2.15	0.46
8:H:88:LYS:CB	8:H:123:LEU:O	2.64	0.46
9:I:2:ARG:HD2	9:I:69:GLU:CB	2.44	0.46
11:K:26:VAL:CA	11:K:58:TYR:HE1	2.29	0.46
12:L:20:ARG:O	12:L:60:ASP:HB2	2.16	0.46
12:L:78:LYS:CE	12:L:101:PHE:HE2	2.28	0.46
1:A:1060:C:H5'	13:M:51:ARG:O	2.15	0.46
13:M:54:PHE:CZ	13:M:55:LYS:HG2	2.51	0.46
14:N:54:ARG:HH11	14:N:54:ARG:CG	2.11	0.46
15:O:53:ARG:HH11	15:O:53:ARG:CG	2.28	0.46
18:R:70:LEU:HD11	18:R:78:TYR:H	1.79	0.46
18:R:77:ARG:O	18:R:78:TYR:C	2.54	0.46
19:S:19:ILE:HB	19:S:37:GLY:C	2.35	0.46
1:A:127:G:O2'	20:T:2:PRO:N	2.44	0.46
9:I:49:ALA:HB3	21:U:80:PRO:HD3	1.98	0.46
23:W:64:ASP:O	23:W:65:LYS:C	2.54	0.46
24:X:3:LYS:O	24:X:14:TRP:HE3	1.99	0.46
1:A:1004:A:C4'	1:A:1005:A:OP1	2.61	0.46
1:A:848:C:O2'	1:A:849:C:H5'	2.16	0.46
1:A:82:U:H2'	1:A:85:U:C5	2.50	0.46
1:A:86:U:C2'	1:A:87:A:H5'	2.45	0.46
1:A:90:C:N3	1:A:91:C:C5	2.84	0.46
1:A:1007:C:N1	1:A:1023:G:N2	2.64	0.46
4:1:14:A:H2'	4:1:14:A:N3	2.31	0.46
1:A:1084:G:O2'	1:A:1085:U:OP1	2.29	0.46
1:A:107:G:OP1	1:A:108:G:OP2	2.34	0.46
1:A:1091:U:C4	1:A:1093:A:OP2	2.68	0.46
1:A:1229:A:N6	16:P:105:THR:HG21	2.31	0.46
1:A:1344:C:O2'	1:A:1349:A:C5'	2.64	0.46
1:A:1381:U:H2'	1:A:1382:C:C5'	2.46	0.46
1:A:148:G:C2'	1:A:149:A:H5'	2.46	0.46
1:A:1506:U:C3'	1:A:1507:A:C5'	2.93	0.46
1:A:195:A:C2'	1:A:222:U:O2'	2.64	0.46
1:A:234:C:N3	1:A:235:C:C5	2.84	0.46
1:A:278:G:H4'	1:A:282:A:H1'	1.98	0.46
1:A:355:C:O4'	1:A:388:G:H2'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:389:A:N3	1:A:390:C:O4'	2.49	0.46
1:A:414:A:C5	1:A:415:A:N7	2.84	0.46
1:A:60:A:N6	1:A:110:C:N4	2.62	0.46
1:A:597:G:N9	1:A:644:G:N2	2.64	0.46
1:A:675:A:C2	1:A:676:A:C4	3.03	0.46
1:A:676:A:H5''	14:N:113:PRO:HB2	1.97	0.46
1:A:693:G:O2'	1:A:694:A:H5'	2.16	0.46
1:A:69:G:N3	1:A:73:G:C8	2.84	0.46
1:A:578:C:HO2'	1:A:728:A:H2'	1.81	0.46
1:A:780:A:H1'	1:A:802:A:H61	1.80	0.46
1:A:928:G:O3'	1:A:1533:C:H1'	2.15	0.46
1:A:969:A:N1	1:A:970:C:C4	2.84	0.46
1:A:977:A:N6	1:A:1224:G:P	2.89	0.46
5:E:145:LEU:O	5:E:149:LEU:CB	2.57	0.46
5:E:31:TYR:N	5:E:31:TYR:CD1	2.83	0.46
6:F:15:THR:O	6:F:16:ARG:O	2.34	0.46
6:F:204:LEU:O	6:F:205:GLY:C	2.52	0.46
6:F:21:ARG:NH2	6:F:54:ARG:NH2	2.64	0.46
7:G:208:SER:O	7:G:209:ARG:HD2	2.14	0.46
7:G:60:GLU:O	7:G:61:LYS:C	2.53	0.46
7:G:92:VAL:C	7:G:96:LEU:HD12	2.35	0.46
7:G:96:LEU:O	7:G:97:LEU:C	2.53	0.46
7:G:68:TYR:CE2	7:G:97:LEU:HB3	2.44	0.46
9:I:50:TYR:CE2	9:I:52:ILE:HG13	2.51	0.46
11:K:126:LYS:CD	11:K:126:LYS:C	2.82	0.46
11:K:44:PHE:H	11:K:64:LYS:HZ3	1.64	0.46
11:K:96:GLY:N	11:K:99:GLU:OE2	2.49	0.46
12:L:2:GLU:O	12:L:20:ARG:HG2	2.16	0.46
12:L:9:ARG:HD2	12:L:14:VAL:CG2	2.40	0.46
13:M:5:ARG:HH11	13:M:5:ARG:CG	2.28	0.46
13:M:60:ARG:HB3	13:M:61:GLU:H	1.54	0.46
14:N:22:HIS:ND1	14:N:29:ILE:HD11	2.30	0.46
15:O:76:ASN:O	15:O:77:LEU:HB2	2.16	0.46
16:P:66:LEU:HA	16:P:70:LEU:HB2	1.98	0.46
16:P:73:GLU:C	16:P:73:GLU:CD	2.74	0.46
18:R:35:ARG:CZ	18:R:59:MET:HG3	2.45	0.46
18:R:60:VAL:HA	18:R:63:ARG:CD	2.39	0.46
19:S:57:ARG:O	19:S:58:TYR:C	2.50	0.46
21:U:16:PRO:HB3	21:U:54:ARG:NH1	2.30	0.46
22:V:13:ASP:OD1	22:V:17:GLU:N	2.48	0.46
22:V:19:VAL:CG1	22:V:20:LEU:N	2.78	0.46
23:W:52:ALA:HA	23:W:55:ILE:CD1	2.46	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:21:A:H8	2:C:21:A:O5'	1.99	0.46
2:C:60:U:O4'	2:C:60:U:OP2	2.34	0.46
1:A:1058:G:C2'	1:A:1059:C:H5'	2.45	0.46
1:A:106:C:H2'	1:A:107:G:O5'	2.16	0.46
1:A:1105:A:O2'	1:A:1106:G:H5'	2.16	0.46
1:A:1151:A:N3	13:M:39:PRO:HG3	2.31	0.46
1:A:1255:G:C6	1:A:1279:A:C2	3.04	0.46
1:A:1286:A:C3'	1:A:1286:A:C8	2.99	0.46
1:A:1299:A:C2'	1:A:1300:G:O5'	2.64	0.46
1:A:130:A:OP2	1:A:189:U:C5	2.68	0.46
1:A:1341:U:C3'	1:A:1341:U:C6	2.98	0.46
1:A:1387:G:C4	1:A:1388:C:C5	3.04	0.46
1:A:1464:G:C2	1:A:1465:C:N4	2.82	0.46
1:A:1475:G:H2'	1:A:1476:G:C8	2.50	0.46
1:A:236:G:C4	1:A:237:C:C6	3.04	0.46
1:A:345:C:O4'	1:A:346:G:C2	2.69	0.46
1:A:65:U:H2'	1:A:381:C:H5	1.81	0.46
1:A:468:A:O3'	19:S:80:PHE:O	2.34	0.46
1:A:595:G:C8	1:A:641:U:O4	2.69	0.46
1:A:766:A:N6	1:A:767:A:C2	2.84	0.46
1:A:798:G:N1	1:A:799:G:C8	2.84	0.46
1:A:892:A:N6	1:A:907:A:C8	2.84	0.46
1:A:907:A:C4	1:A:908:A:N7	2.84	0.46
1:A:969:A:OP1	1:A:969:A:O4'	2.34	0.46
5:E:193:ASP:O	5:E:194:PRO:C	2.54	0.46
5:E:21:ARG:HB2	5:E:22:LYS:H	1.39	0.46
6:F:31:HIS:ND1	6:F:34:LEU:HD13	2.30	0.46
7:G:114:ARG:HH11	7:G:114:ARG:CG	2.29	0.46
7:G:155:LEU:O	7:G:158:ILE:N	2.49	0.46
7:G:19:LEU:N	7:G:33:MET:SD	2.89	0.46
1:A:430:A:P	7:G:9:CYS:H	2.39	0.46
9:I:50:TYR:CE1	21:U:81:PHE:CZ	3.03	0.46
10:J:79:ARG:NH2	10:J:84:ASN:CB	2.78	0.46
12:L:5:TYR:CG	12:L:18:PHE:CE2	3.04	0.46
12:L:5:TYR:CD2	12:L:6:GLY:N	2.83	0.46
13:M:32:ALA:HA	13:M:76:ASN:OD1	2.16	0.46
15:O:71:PRO:HD2	15:O:100:ILE:HG12	1.96	0.46
17:Q:39:LEU:HD12	17:Q:44:LEU:CD1	2.36	0.46
17:Q:48:ALA:CA	17:Q:53:LEU:HD12	2.46	0.46
18:R:71:GLN:HB2	18:R:78:TYR:CD1	2.51	0.46
19:S:10:GLY:O	19:S:11:SER:OG	2.31	0.46
20:T:95:TYR:O	20:T:98:LEU:CD2	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:73:ALA:C	21:U:79:LEU:HD21	2.36	0.46
23:W:10:LEU:HD12	23:W:11:SER:N	2.30	0.46
23:W:79:ARG:NH1	23:W:79:ARG:HG3	2.29	0.46
24:X:6:ARG:CB	24:X:6:ARG:HH11	2.29	0.46
2:C:61:C:H2'	2:C:62:C:H6	1.81	0.46
3:D:1:G:H2'	3:D:2:C:H6	1.81	0.46
3:D:4:G:C6	3:D:70:G:C6	3.03	0.46
1:A:1002:G:N3	1:A:1002:G:H2'	2.31	0.46
1:A:748:C:O2'	1:A:749:C:H6	1.99	0.46
1:A:1011:G:H2'	1:A:1012:U:H5'	1.96	0.46
3:D:26:A:H2'	3:D:26:A:N3	2.31	0.46
1:A:1108:G:C8	1:A:1109:C:C5	3.04	0.45
1:A:109:A:OP2	1:A:111:G:O6	2.35	0.45
1:A:1138:G:C5	1:A:1140:C:C6	3.04	0.45
1:A:1184:G:C6	1:A:1185:G:O6	2.69	0.45
1:A:1049:U:O4'	1:A:1201:A:H5''	2.15	0.45
1:A:979:C:OP1	1:A:1222:G:O6	2.34	0.45
1:A:1238:A:N3	1:A:1241:G:H1'	2.31	0.45
1:A:1275:A:C2	1:A:1283:G:H5'	2.51	0.45
1:A:1256:A:N6	1:A:1278:U:H2'	2.11	0.45
1:A:1476:G:H2'	1:A:1477:C:C6	2.50	0.45
1:A:1507:A:H2	1:A:1530:G:O4'	1.99	0.45
1:A:168:G:C6	1:A:169:C:N4	2.84	0.45
1:A:190:G:H5''	1:A:191(A):G:H8	1.80	0.45
1:A:269:C:H2'	1:A:270:A:H8	1.80	0.45
1:A:280:C:H1'	20:T:38:ARG:CG	2.46	0.45
1:A:448:A:O2'	1:A:449:C:H5'	2.16	0.45
1:A:467:G:H3'	1:A:467:G:OP2	2.17	0.45
1:A:528:C:O5'	1:A:535:A:N6	2.49	0.45
1:A:555:C:H5''	1:A:556:C:OP2	2.16	0.45
1:A:560:U:C2'	1:A:561:U:OP2	2.63	0.45
1:A:611:A:N1	1:A:629:G:C2	2.84	0.45
1:A:728:A:H8	18:R:54:ARG:NH2	2.13	0.45
1:A:900:A:C2'	1:A:901:A:O5'	2.64	0.45
1:A:965:A:O2'	1:A:966:G:O5'	2.33	0.45
1:A:977:A:N3	1:A:977:A:H2'	2.31	0.45
3:D:32:C:C2'	3:D:33:U:H5'	2.46	0.45
6:F:101:LEU:CD2	6:F:101:LEU:O	2.64	0.45
6:F:130:VAL:HA	6:F:133:ALA:HB3	1.98	0.45
6:F:139:GLN:O	6:F:143:GLU:CB	2.63	0.45
6:F:110:ASN:HD21	6:F:140:ARG:CG	2.28	0.45
1:A:1107:C:OP1	6:F:174:PRO:HD3	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:113:ALA:CA	6:F:202:ILE:HD11	2.46	0.45
6:F:37:GLN:C	6:F:39:ILE:N	2.68	0.45
6:F:58:GLU:O	6:F:59:ARG:CZ	2.65	0.45
6:F:6:HIS:HB3	17:Q:49:HIS:ND1	2.25	0.45
7:G:101:LEU:HB3	7:G:138:TYR:O	2.16	0.45
7:G:11:LEU:N	7:G:11:LEU:HD23	2.31	0.45
10:J:64:GLN:HG3	10:J:128:ALA:C	2.34	0.45
10:J:68:ASN:HD22	10:J:128:ALA:HA	1.81	0.45
11:K:100:ILE:H	11:K:100:ILE:CD1	2.16	0.45
11:K:109:ILE:HG12	11:K:137:VAL:CA	2.46	0.45
12:L:69:GLY:O	12:L:73:GLN:HG3	2.16	0.45
14:N:20:TYR:HB2	14:N:31:THR:HB	1.98	0.45
14:N:21:ILE:HD12	14:N:95:ILE:HG12	1.98	0.45
14:N:27:ASN:ND2	14:N:55:LYS:HZ2	2.15	0.45
14:N:66:LEU:O	14:N:70:LYS:HD2	2.16	0.45
16:P:48:LEU:HD22	16:P:53:VAL:HG22	1.97	0.45
19:S:16:HIS:HE1	19:S:42:ARG:HH22	1.63	0.45
1:A:376:G:OP1	19:S:6:LEU:CD1	2.63	0.45
20:T:20:THR:O	20:T:21:VAL:HG13	2.15	0.45
21:U:30:ASP:OD2	21:U:32:ARG:HB2	2.16	0.45
21:U:58:LEU:C	21:U:62:GLU:HB2	2.37	0.45
21:U:69:THR:C	21:U:71:LYS:N	2.66	0.45
23:W:38:LYS:O	23:W:39:LYS:C	2.54	0.45
2:C:9:G:O4'	2:C:46:G:H1'	2.16	0.45
2:C:60:U:H5''	2:C:61:C:C6	2.51	0.45
1:A:1001:G:H2'	1:A:1002:G:O4'	2.16	0.45
1:A:1026:G:N7	1:A:1027:C:C6	2.84	0.45
1:A:1032:A:N7	1:A:1032(A):G:C4	2.84	0.45
1:A:80:G:H2'	1:A:81:G:C4'	2.46	0.45
1:A:84:U:C4	1:A:85:U:C4	3.04	0.45
2:C:28:C:O2	2:C:29:G:C8	2.70	0.45
1:A:1007:C:O2'	1:A:1008:C:C5'	2.63	0.45
1:A:25:C:H5''	1:A:524:G:H1'	1.97	0.45
1:A:104:G:C4	1:A:105:G:C8	3.04	0.45
1:A:1151:A:O2'	13:M:70:ARG:NH2	2.49	0.45
1:A:1290:G:C6	1:A:1291:G:N7	2.84	0.45
1:A:1300:G:HO2'	1:A:1301:U:P	2.39	0.45
1:A:1316:G:C2'	1:A:1318:A:OP2	2.61	0.45
1:A:1347:G:C8	12:L:107:ARG:NE	2.84	0.45
1:A:1405:G:N1	1:A:1406:U:H5	2.13	0.45
1:A:1528:U:O2'	1:A:1529:G:O5'	2.34	0.45
1:A:293:G:C2'	1:A:293:G:N3	2.76	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:340:U:C2'	1:A:341:C:H6	2.28	0.45
1:A:487:A:H2'	1:A:488:C:C5'	2.46	0.45
1:A:519:C:C5	1:A:520:A:C2	3.05	0.45
1:A:560:U:C6	1:A:566:G:N3	2.84	0.45
1:A:768:A:N7	1:A:769:G:C8	2.84	0.45
1:A:828:A:N1	1:A:859:A:C1'	2.79	0.45
1:A:896:C:O2	1:A:897:C:C6	2.69	0.45
3:D:42:C:O2	3:D:42:C:H2'	2.16	0.45
5:E:169:LYS:HZ3	5:E:170:GLU:HA	1.80	0.45
5:E:41:ILE:CD1	5:E:41:ILE:N	2.72	0.45
6:F:31:HIS:O	6:F:34:LEU:HD22	2.16	0.45
7:G:122:ARG:CA	7:G:134:ASP:HB2	2.34	0.45
7:G:14:ARG:NH1	7:G:59:ARG:HH21	2.15	0.45
7:G:61:LYS:HZ1	7:G:65:ARG:HD3	1.81	0.45
7:G:65:ARG:HE	7:G:72:GLU:N	2.14	0.45
8:H:9:LYS:HE3	8:H:112:LEU:HD23	1.99	0.45
9:I:76:ALA:O	9:I:80:ARG:CG	2.62	0.45
10:J:50:ILE:O	10:J:54:THR:O	2.35	0.45
11:K:102:ARG:HH21	11:K:105:ARG:HD2	1.81	0.45
1:A:642:A:C2	11:K:113:SER:C	2.89	0.45
11:K:1:MET:HG2	11:K:2:LEU:N	2.27	0.45
1:A:1347:G:H8	12:L:107:ARG:NE	2.14	0.45
12:L:28:VAL:HG23	12:L:32:ASP:C	2.36	0.45
14:N:100:ALA:C	14:N:102:GLY:N	2.70	0.45
14:N:101:SER:O	14:N:102:GLY:C	2.53	0.45
14:N:102:GLY:O	14:N:103:LEU:C	2.55	0.45
14:N:67:ASP:OD1	14:N:71:LYS:HD2	2.16	0.45
15:O:33:ARG:HA	15:O:33:ARG:NE	2.29	0.45
18:R:62:GLN:CG	18:R:66:LEU:HD21	2.43	0.45
19:S:20:VAL:CG1	19:S:32:TYR:HD2	2.28	0.45
19:S:67:THR:HB	19:S:70:ALA:CA	2.47	0.45
20:T:20:THR:HA	20:T:43:LEU:HD23	1.94	0.45
20:T:50:LYS:HG2	20:T:51:TYR:N	2.30	0.45
20:T:84:LEU:HG	20:T:85:VAL:H	1.81	0.45
22:V:63:THR:O	22:V:64:GLU:O	2.34	0.45
23:W:65:LYS:O	23:W:68:LYS:CG	2.64	0.45
23:W:85:MET:HG2	23:W:85:MET:H	1.60	0.45
24:X:18:TYR:CG	24:X:24:ARG:HD3	2.51	0.45
6:F:157:ILE:CG2	6:F:164:ARG:NH2	2.77	0.45
2:C:76:A:H3'	2:C:76:A:C8	2.52	0.45
3:D:20:U:O2	3:D:20:U:C2'	2.61	0.45
3:D:28:G:C6	3:D:43:A:C6	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1069:C:H5	1:A:1094:G:O6	1.99	0.45
1:A:1102:A:C2	1:A:1103:C:N3	2.85	0.45
1:A:1284:C:N3	1:A:1285:A:C6	2.84	0.45
1:A:129(A):G:O2'	1:A:130:A:P	2.74	0.45
1:A:1486:G:C6	1:A:1487:G:C6	3.04	0.45
1:A:1502:A:C6	1:A:1504:G:N2	2.84	0.45
1:A:197:A:HO2'	1:A:198:G:C4'	2.28	0.45
1:A:20:U:H5	1:A:916:G:N2	2.14	0.45
1:A:231:G:O6	1:A:232:G:O6	2.35	0.45
1:A:273:A:C6	1:A:274:A:C5	3.04	0.45
1:A:318:G:O2'	1:A:1468:A:O2'	2.30	0.45
1:A:389:A:H2'	1:A:390:C:O5'	2.16	0.45
1:A:422:C:O4'	1:A:423:G:C2	2.69	0.45
1:A:545:C:C2'	1:A:546:G:H5'	2.46	0.45
1:A:583:A:O2'	1:A:584:G:O4'	2.34	0.45
1:A:578:C:H1'	1:A:729:A:H1'	1.98	0.45
1:A:775:G:HO2'	1:A:776:G:C5'	2.29	0.45
1:A:790:A:OP1	2:C:38:A:O2'	2.30	0.45
1:A:909:A:O5'	1:A:909:A:C8	2.67	0.45
1:A:975:A:C5'	1:A:976:G:H5'	2.47	0.45
5:E:68:ILE:CG1	5:E:90:MET:HG3	2.30	0.45
6:F:175:LEU:HD21	6:F:201:TYR:HD2	1.77	0.45
7:G:155:LEU:CB	7:G:158:ILE:HG12	2.42	0.45
7:G:201:GLN:NE2	7:G:201:GLN:HA	2.31	0.45
7:G:56:VAL:HG12	7:G:202:LEU:CD2	2.45	0.45
7:G:58:LEU:CD2	7:G:62:GLN:CG	2.94	0.45
1:A:430:A:H4'	7:G:7:PRO:HB3	1.98	0.45
8:H:11:ILE:HD11	8:H:104:ALA:HB1	1.98	0.45
10:J:101:LEU:C	10:J:101:LEU:CD2	2.85	0.45
10:J:29:LYS:HZ3	10:J:102:ARG:HE	1.63	0.45
10:J:122:HIS:N	10:J:122:HIS:CD2	2.82	0.45
10:J:46:ALA:O	10:J:49:ILE:N	2.49	0.45
11:K:11:THR:O	11:K:14:ARG:CD	2.57	0.45
11:K:123:GLU:OE2	11:K:124:ALA:N	2.49	0.45
11:K:46:LYS:HG3	11:K:64:LYS:CB	2.46	0.45
13:M:39:PRO:O	13:M:69:ASN:O	2.34	0.45
13:M:48:THR:HA	13:M:61:GLU:O	2.16	0.45
14:N:81:ASP:HB2	14:N:106:LYS:CE	2.47	0.45
14:N:71:LYS:O	14:N:74:ALA:N	2.49	0.45
14:N:78:GLN:O	14:N:104:GLN:CB	2.48	0.45
17:Q:11:LYS:HE3	17:Q:11:LYS:HB3	1.73	0.45
17:Q:12:ARG:HA	17:Q:20:ALA:HB2	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:81:LEU:HD23	18:R:85:LEU:CD1	2.45	0.45
18:R:81:LEU:CD2	18:R:85:LEU:HD13	2.46	0.45
19:S:7:ALA:HB3	19:S:18:ARG:HG3	1.98	0.45
19:S:20:VAL:HG22	19:S:35:LYS:HA	1.97	0.45
19:S:71:ARG:NH1	19:S:71:ARG:HB2	2.32	0.45
21:U:53:ARG:HG2	21:U:63:GLN:NE2	2.32	0.45
23:W:42:GLN:HA	23:W:42:GLN:NE2	2.31	0.45
1:A:194:C:H4'	23:W:68:LYS:HE2	1.98	0.45
24:X:4:GLY:O	24:X:6:ARG:HG2	2.16	0.45
1:A:1442:G:H3'	1:A:1446:A:H2	1.82	0.45
2:C:75:C:H5	2:C:76:A:O2'	1.97	0.45
10:J:126:ASP:HA	10:J:131:LYS:HG2	1.98	0.45
1:A:1023:G:C2'	1:A:1024:G:H5'	2.41	0.45
1:A:456:C:H3'	1:A:456:C:C6	2.51	0.45
1:A:1049:U:C1'	1:A:1201:A:O4'	2.65	0.45
1:A:1062:U:C4	1:A:1063:C:N4	2.85	0.45
1:A:1102:A:C2'	1:A:1103:C:O5'	2.64	0.45
1:A:114:U:H2'	1:A:115:G:C8	2.52	0.45
1:A:1215:G:N2	1:A:1216:G:C8	2.83	0.45
1:A:1243:C:OP2	24:X:10:ARG:CZ	2.64	0.45
1:A:1462:G:H2'	1:A:1463:C:H6	1.81	0.45
1:A:134:A:H1'	1:A:325:A:C4	2.51	0.45
1:A:33:A:H1'	15:O:31:PRO:HB3	1.98	0.45
1:A:414:A:H2'	1:A:415:A:O4'	2.16	0.45
1:A:47:C:O2	1:A:49:U:H5	1.99	0.45
1:A:594:G:O6	1:A:595:G:N2	2.49	0.45
1:A:733:A:H5''	1:A:733:A:C8	2.52	0.45
1:A:665:A:N7	1:A:733:A:N1	2.64	0.45
1:A:588:G:H1'	1:A:753:A:C2	2.52	0.45
1:A:819:A:C2	1:A:1529:G:N7	2.85	0.45
1:A:888:G:H3'	1:A:889:A:H8	1.82	0.45
1:A:953:G:N1	1:A:1229:A:C6	2.84	0.45
5:E:50:GLU:O	5:E:53:ARG:N	2.49	0.45
5:E:97:TRP:O	5:E:97:TRP:CG	2.66	0.45
6:F:107:GLN:H	6:F:107:GLN:NE2	2.15	0.45
6:F:108:ASN:HD22	6:F:111:LEU:HD11	1.81	0.45
6:F:43:LEU:HD23	6:F:44:GLU:N	2.32	0.45
7:G:128:VAL:HG23	7:G:132:ARG:C	2.37	0.45
7:G:165:MET:HE3	7:G:167:GLY:H	1.81	0.45
7:G:177:ASP:HB3	7:G:182:LYS:O	2.16	0.45
7:G:60:GLU:CG	7:G:203:VAL:CG2	2.86	0.45
8:H:71:LEU:O	8:H:72:GLN:HG3	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:91:LEU:C	8:H:91:LEU:CD2	2.82	0.45
9:I:55:ASP:C	9:I:57:GLN:H	2.20	0.45
9:I:1:MET:SD	9:I:68:PRO:HD3	2.56	0.45
9:I:81:ILE:HB	9:I:82:ARG:H	1.31	0.45
10:J:6:ARG:O	10:J:7:ALA:C	2.54	0.45
11:K:137:VAL:HG12	11:K:138:TRP:H	1.81	0.45
11:K:12:ARG:HA	11:K:15:ASN:HB2	1.98	0.45
11:K:96:GLY:C	11:K:97:VAL:HG12	2.36	0.45
12:L:14:VAL:HG12	12:L:14:VAL:O	2.16	0.45
14:N:59:TYR:O	14:N:60:ALA:C	2.55	0.45
14:N:79:SER:OG	14:N:104:GLN:NE2	2.38	0.45
15:O:26:ALA:HB3	15:O:29:GLY:HA2	1.98	0.45
15:O:74:GLY:O	15:O:75:HIS:HB3	2.16	0.45
18:R:26:GLU:OE1	18:R:26:GLU:HA	2.17	0.45
19:S:58:TYR:O	19:S:61:SER:HB3	2.16	0.45
20:T:9:VAL:O	20:T:9:VAL:HG13	2.16	0.45
9:I:100:ASN:O	21:U:28:GLU:HA	2.16	0.45
16:P:87:TYR:N	22:V:73:GLU:O	2.49	0.45
2:C:75:C:OP1	2:C:76:A:OP2	2.35	0.45
3:D:4:G:C6	3:D:70:G:N1	2.85	0.45
1:A:1311:G:OP2	22:V:2:PRO:N	2.49	0.45
1:A:1060:C:O2'	1:A:1061:G:H5'	2.17	0.45
1:A:1115:C:N4	1:A:1116:C:N4	2.65	0.45
1:A:1178:G:H2'	1:A:1180:A:OP2	2.16	0.45
1:A:1159:U:O4	1:A:1182:G:H1'	2.16	0.45
1:A:1227:A:HO2'	16:P:115:LYS:CG	2.28	0.45
1:A:1246:C:N4	1:A:1247:U:O4	2.49	0.45
1:A:1258:G:O2'	1:A:1259:C:H5'	2.17	0.45
1:A:1308:U:O5'	16:P:99:ARG:NH1	2.49	0.45
1:A:1419:G:C5	1:A:1482:G:C2	3.05	0.45
1:A:1466:C:H2'	1:A:1467:G:N9	2.31	0.45
1:A:171:A:C2	1:A:172:A:C2	3.05	0.45
1:A:219:C:C4	1:A:220:G:C8	3.05	0.45
1:A:223:U:H2'	1:A:224:C:C6	2.51	0.45
1:A:23:C:O2	1:A:23:C:C2'	2.63	0.45
1:A:278:G:H21	1:A:279:A:N6	2.12	0.45
1:A:405:U:O4	7:G:2:GLY:CA	2.65	0.45
1:A:467:G:N2	1:A:468:A:C4	2.84	0.45
1:A:766:A:C8	1:A:814:A:N1	2.85	0.45
1:A:780:A:C2	1:A:803:G:C6	3.03	0.45
1:A:869:G:H5'	1:A:872:A:O4'	2.17	0.45
1:A:889:A:H4'	1:A:890:G:C4'	2.44	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:901:A:N3	1:A:902:G:C1'	2.79	0.45
1:A:919:A:C4	1:A:920:U:C5	3.05	0.45
1:A:942:G:C2	1:A:943:U:C6	3.05	0.45
5:E:133:LYS:HB3	5:E:137:ARG:HH12	1.82	0.45
7:G:13:ARG:CD	7:G:32:ALA:HB2	2.46	0.45
7:G:58:LEU:O	7:G:62:GLN:HB2	2.16	0.45
9:I:62:TRP:CH2	9:I:64:GLN:HB2	2.48	0.45
10:J:21:VAL:HG23	10:J:22:LEU:N	2.31	0.45
5:E:181:PHE:HE1	11:K:70:GLN:NE2	2.13	0.45
14:N:110:ASP:CB	21:U:88:LYS:HB2	2.45	0.45
15:O:34:ARG:O	15:O:60:LEU:CB	2.61	0.45
15:O:6:THR:HG1	15:O:9:GLN:CD	2.19	0.45
16:P:104:ARG:HG2	16:P:105:THR:CG2	2.23	0.45
17:Q:17:LYS:HG3	17:Q:18:VAL:H	1.82	0.45
1:A:375:U:O3'	19:S:6:LEU:HD11	2.17	0.45
21:U:47:THR:HA	21:U:83:GLU:H	1.81	0.45
22:V:39:THR:O	22:V:41:VAL:HG13	2.16	0.45
23:W:43:LEU:CD1	23:W:51:GLU:CG	2.95	0.45
2:C:74:C:H6	2:C:75:C:H5''	1.81	0.45
2:C:50:U:C6	2:C:50:U:OP2	2.69	0.45
1:A:1032(B):G:H2'	1:A:1033:G:C8	2.52	0.45
1:A:93:U:O2	1:A:95:G:N7	2.50	0.45
1:A:96:G:H2'	1:A:97:U:C6	2.51	0.45
1:A:1081:G:H2'	1:A:1082:G:C8	2.52	0.45
1:A:10:A:C2'	1:A:11:G:C5'	2.95	0.45
1:A:118:U:O4	1:A:288:A:H2'	2.17	0.45
1:A:1277:C:H2'	1:A:1278:U:O4'	2.17	0.45
1:A:1284:C:C4	1:A:1285:A:C6	3.04	0.45
1:A:1304:G:C1'	1:A:1333:A:H61	2.27	0.45
1:A:135:C:C5	1:A:136:C:H5	2.34	0.45
1:A:1386:G:C2	1:A:1387:G:C5	3.05	0.45
1:A:928:G:H22	1:A:1390:U:H1'	1.81	0.45
1:A:12:U:O2	1:A:13:U:O4	2.35	0.45
1:A:1424:C:H2'	1:A:1425:U:C6	2.51	0.45
1:A:1475:G:C2'	1:A:1476:G:O5'	2.65	0.45
1:A:150:C:C2'	1:A:151:A:O5'	2.64	0.45
1:A:196:A:H1'	1:A:222:U:O4'	2.16	0.45
1:A:33:A:H5''	1:A:34:C:OP2	2.16	0.45
1:A:37:U:C2'	1:A:37:U:O2	2.59	0.45
1:A:397:A:N6	1:A:548:G:N7	2.65	0.45
1:A:450:G:N7	1:A:481:G:C6	2.84	0.45
1:A:568:G:N3	1:A:574:A:H2	2.14	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:574:A:H8	1:A:574:A:O5'	1.99	0.45
1:A:591:U:C4	1:A:649:G:C6	3.05	0.45
1:A:64:G:H4'	1:A:65:U:O5'	2.16	0.45
1:A:6:G:H22	8:H:98:THR:HG23	1.80	0.45
1:A:713:G:H2'	1:A:714:G:C8	2.52	0.45
1:A:588:G:H1'	1:A:753:A:N1	2.31	0.45
1:A:760:G:O2'	20:T:102:GLY:O	2.35	0.45
1:A:812:C:C1'	1:A:813:U:H5	2.29	0.45
1:A:862:C:O4'	1:A:874:G:H4'	2.16	0.45
1:A:881:G:C6	1:A:882:C:C4	3.05	0.45
1:A:886:G:H2'	1:A:887:G:H5'	1.97	0.45
1:A:932:C:O3'	10:J:3:ARG:HG3	2.16	0.45
1:A:959:A:H4'	1:A:985:C:H4'	1.99	0.45
1:A:979:C:H2'	1:A:979:C:O2	2.16	0.45
5:E:97:TRP:CH2	5:E:176:GLU:HG3	2.49	0.45
5:E:213:LEU:C	5:E:213:LEU:HD23	2.37	0.45
5:E:213:LEU:CD2	5:E:217:ARG:HD3	2.42	0.45
6:F:10:PHE:HZ	6:F:176:HIS:CA	2.29	0.45
6:F:121:ALA:CB	6:F:187:ALA:HB1	2.46	0.45
1:A:1206:G:C5'	6:F:194:GLY:HA2	2.39	0.45
6:F:29:TYR:CE1	13:M:65:LEU:CD1	2.90	0.45
7:G:113:SER:O	7:G:114:ARG:C	2.51	0.45
1:A:8:A:O4'	8:H:102:ALA:HA	2.17	0.45
8:H:39:GLY:CA	8:H:69:VAL:HB	2.41	0.45
9:I:99:ALA:HB3	21:U:31:LEU:HD11	1.98	0.45
10:J:99:LEU:HD21	10:J:102:ARG:NH1	2.31	0.45
11:K:120:THR:H	11:K:123:GLU:CD	2.09	0.45
11:K:127:LEU:HD22	11:K:127:LEU:HA	1.63	0.45
11:K:6:ILE:CG2	11:K:85:ARG:HH12	2.25	0.45
11:K:87:SER:OG	11:K:93:VAL:N	2.49	0.45
14:N:67:ASP:C	14:N:69:ALA:N	2.69	0.45
15:O:102:ARG:HE	15:O:102:ARG:HB3	1.53	0.45
15:O:6:THR:O	15:O:10:LEU:CD1	2.64	0.45
15:O:88:GLY:HA3	15:O:99:HIS:NE2	2.32	0.45
16:P:108:ARG:CB	16:P:108:ARG:HH11	2.29	0.45
16:P:90:LEU:O	16:P:91:ARG:C	2.55	0.45
16:P:91:ARG:HA	16:P:96:LEU:CD2	2.43	0.45
19:S:25:ARG:O	19:S:26:ARG:O	2.35	0.45
21:U:58:LEU:HD22	21:U:62:GLU:CG	2.46	0.45
2:C:9:G:O6	2:C:22:G:N7	2.49	0.45
2:C:52:G:C6	2:C:53:G:C5	3.05	0.45
3:D:52:G:C5	3:D:53:G:C8	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:58:A:O2'	3:D:60:U:C5	2.69	0.45
1:A:1039:C:H6	1:A:1039:C:O5'	1.99	0.45
7:G:69:GLY:C	7:G:70:ILE:HG12	2.35	0.45
1:A:525:C:H3'	1:A:525:C:H6	1.80	0.45
1:A:102:G:C6	1:A:103:C:C5	3.05	0.45
1:A:1171:G:H2'	1:A:1172:C:C5	2.52	0.45
1:A:1261:A:H3'	1:A:1262:C:C6	2.51	0.45
1:A:1305:G:OP2	1:A:1305:G:O4'	2.35	0.45
1:A:1331:G:O2'	1:A:1332:A:O5'	2.34	0.45
1:A:134:A:C2	1:A:135:C:C2	3.05	0.45
1:A:1352:C:C2	1:A:1371:G:C6	3.05	0.45
1:A:1504:G:H3'	1:A:1504:G:H8	1.82	0.45
1:A:226:G:N2	1:A:227:G:C1'	2.77	0.45
1:A:241:C:H2'	1:A:242:C:O5'	2.16	0.45
1:A:428:G:H5'	1:A:430:A:O4'	2.17	0.45
1:A:465:A:N7	1:A:467:G:C2	2.85	0.45
1:A:523:A:C8	1:A:523:A:O5'	2.68	0.45
1:A:529:G:C6	15:O:49:ASN:CB	2.99	0.45
1:A:540:G:H2'	1:A:541:G:O4'	2.17	0.45
1:A:558:G:C4	1:A:559:A:C2	3.04	0.45
1:A:659:U:H2'	1:A:660:G:C8	2.50	0.45
1:A:690:G:C2	1:A:691:G:O4'	2.69	0.45
1:A:69:G:C2	1:A:73:G:C8	3.05	0.45
1:A:836:G:C4	1:A:851:G:C2	3.05	0.45
1:A:880:C:HO2'	1:A:881:G:H5'	1.81	0.45
1:A:959:A:O5'	1:A:960:U:OP2	2.35	0.45
1:A:973:G:H3'	1:A:974:A:H5''	1.98	0.45
1:A:994:A:N7	1:A:1216:G:C4'	2.67	0.45
2:C:31:G:N2	2:C:40:C:C2	2.85	0.45
2:C:38:A:H2'	2:C:39:C:C5'	2.47	0.45
5:E:9:GLU:HB2	5:E:217:ARG:HH21	1.82	0.45
6:F:22:TRP:CZ3	6:F:32:LEU:CD1	3.00	0.45
7:G:141:ARG:HD2	7:G:142:PRO:CD	2.29	0.45
7:G:127:THR:O	7:G:146:ILE:HG22	2.16	0.45
7:G:17:VAL:O	7:G:18:LYS:O	2.34	0.45
7:G:19:LEU:C	7:G:21:LEU:H	2.15	0.45
8:H:19:MET:CE	8:H:20:GLN:N	2.80	0.45
8:H:39:GLY:HA2	8:H:69:VAL:CB	2.41	0.45
9:I:11:ASN:HD21	9:I:13:ASN:H	1.64	0.45
10:J:42:ILE:CD1	10:J:116:ALA:HB3	2.36	0.45
10:J:78:ARG:HE	10:J:80:VAL:HG23	1.81	0.45
10:J:96:GLN:O	10:J:100:ALA:CB	2.65	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:39:LEU:HD13	11:K:39:LEU:HA	1.47	0.45
12:L:10:ARG:O	12:L:11:LYS:C	2.54	0.45
14:N:43:SER:C	14:N:47:VAL:HG21	2.36	0.45
15:O:38:THR:CG2	15:O:39:VAL:N	2.78	0.45
17:Q:15:LYS:O	17:Q:16:PHE:CB	2.64	0.45
17:Q:26:ARG:CB	17:Q:43:CYS:HB2	2.43	0.45
19:S:61:SER:OG	19:S:62:VAL:HG22	2.17	0.45
20:T:51:TYR:HD2	20:T:57:VAL:HG11	1.81	0.45
2:C:20:U:O2	2:C:20:U:C2'	2.65	0.45
1:A:95:G:O2'	1:A:96:G:H5'	2.16	0.45
6:F:62:ASP:C	6:F:62:ASP:OD1	2.55	0.45
1:A:1153:C:N4	1:A:1154:G:C6	2.84	0.45
1:A:1195:C:C2	1:A:1197:G:C8	3.04	0.45
1:A:1244:C:C2	1:A:1245:A:N7	2.85	0.45
1:A:1256:A:H3'	6:F:27:LYS:NZ	2.32	0.45
1:A:1368:G:C6	1:A:1369:C:C4	3.05	0.45
1:A:1401:G:H2'	1:A:1402:C:O4'	2.17	0.45
1:A:1430:C:C2	1:A:1431:C:C5	3.05	0.45
1:A:148:G:N1	1:A:175:C:C4	2.84	0.45
1:A:1520:G:C2'	1:A:1521:G:O5'	2.65	0.45
1:A:1534:A:C6	1:A:1535:C:C4	3.04	0.45
1:A:68:G:C5'	1:A:171:A:C1'	2.82	0.45
1:A:9:G:C6	1:A:26:A:N6	2.84	0.45
1:A:293:G:N2	1:A:294:U:N1	2.64	0.45
1:A:377:G:O2'	1:A:378:G:O5'	2.34	0.45
1:A:423:G:N2	1:A:424:G:C5	2.85	0.45
1:A:427:U:O2'	1:A:428:G:OP1	2.30	0.45
1:A:496:A:O2'	1:A:497:U:OP1	2.33	0.45
1:A:549:C:C2'	1:A:550:G:O5'	2.65	0.45
1:A:559:A:C8	1:A:561:U:C5	3.05	0.45
1:A:581:G:HO2'	1:A:582:U:H6	1.63	0.45
1:A:607:A:H2'	1:A:608:A:C5'	2.46	0.45
1:A:402:G:C4'	1:A:620:C:H42	2.30	0.45
1:A:62:U:C5'	1:A:385:C:O2	2.65	0.45
1:A:867:G:N2	1:A:868:C:C2	2.85	0.45
1:A:928:G:O2'	1:A:1533:C:C4'	2.64	0.45
3:D:36:A:H2'	3:D:37:A:H8	1.79	0.45
5:E:169:LYS:HD3	5:E:170:GLU:CA	2.46	0.45
5:E:219:VAL:HG12	5:E:223:ILE:CD1	2.47	0.45
5:E:69:LEU:O	5:E:162:ILE:CA	2.65	0.45
5:E:97:TRP:C	5:E:99:GLY:N	2.67	0.45
6:F:28:GLN:HA	6:F:30:ARG:NH1	2.30	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:13:ARG:NH1	7:G:36:ARG:HB2	2.32	0.45
7:G:207:TYR:O	7:G:208:SER:C	2.55	0.45
7:G:21:LEU:CD1	7:G:67:ILE:CG2	2.88	0.45
7:G:77:ASN:O	7:G:78:LEU:C	2.55	0.45
8:H:48:ALA:CB	8:H:54:ALA:N	2.79	0.45
8:H:71:LEU:CD2	8:H:72:GLN:N	2.65	0.45
9:I:2:ARG:O	9:I:66:GLU:HB2	2.17	0.45
10:J:111:ARG:NH1	10:J:112:PRO:HD2	2.30	0.45
11:K:99:GLU:O	11:K:101:PRO:HD3	2.17	0.45
13:M:8:LEU:HD13	13:M:94:VAL:HB	1.97	0.45
13:M:9:ARG:CD	13:M:95:GLU:OE2	2.61	0.45
14:N:19:ALA:CB	14:N:80:VAL:HG21	2.46	0.45
16:P:91:ARG:O	16:P:96:LEU:CD2	2.64	0.45
16:P:97:PRO:HG2	16:P:103:THR:HG22	1.99	0.45
1:A:43:C:C5'	19:S:12:LYS:CB	2.89	0.45
19:S:15:PRO:C	19:S:16:HIS:ND1	2.70	0.45
19:S:75:ARG:CA	19:S:80:PHE:CB	2.76	0.45
20:T:95:TYR:O	20:T:96:GLN:C	2.55	0.45
21:U:21:LYS:CG	21:U:22:VAL:N	2.79	0.45
21:U:79:LEU:CD1	21:U:79:LEU:O	2.53	0.45
22:V:51:VAL:HB	22:V:58:VAL:HG22	1.98	0.45
22:V:5:LEU:CB	22:V:9:VAL:HG22	2.31	0.45
23:W:57:ARG:C	23:W:59:ALA:N	2.68	0.45
2:C:74:C:C3'	2:C:75:C:C5'	2.94	0.45
2:C:44:A:C2	2:C:45:G:N3	2.85	0.45
2:C:59:A:C5	2:C:60:U:C5	3.05	0.45
3:D:75:C:H3'	3:D:76:A:H4'	1.97	0.45
1:A:1092:A:H5''	10:J:4:ARG:HH22	1.82	0.45
1:A:1179:A:H2'	1:A:1180:A:C8	2.51	0.45
1:A:1242:C:C5'	24:X:10:ARG:NH1	2.79	0.45
1:A:1243:C:P	24:X:10:ARG:HD2	2.56	0.45
1:A:1260:C:O2	1:A:1260:C:H2'	2.16	0.45
1:A:1273:G:C2'	1:A:1274:G:H5'	2.47	0.45
1:A:1277:C:H2'	1:A:1279:A:H8	1.80	0.45
1:A:1300:G:O2'	1:A:1301:U:OP2	2.34	0.45
1:A:1323:G:C2	1:A:1324:A:C5	3.04	0.45
1:A:1331:G:C2'	1:A:1332:A:OP2	2.65	0.45
1:A:1237:C:C4'	1:A:1334:G:H21	2.29	0.45
1:A:220:G:C5	1:A:221:C:C5	3.05	0.45
1:A:263:A:OP1	23:W:79:ARG:HD3	2.16	0.45
1:A:354:G:C2'	1:A:355:C:O5'	2.64	0.45
1:A:391:G:C6	1:A:392:G:C5	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:544:G:H2'	1:A:545:C:O4'	2.17	0.45
1:A:67:C:H1'	1:A:172:A:N3	2.32	0.45
1:A:684:A:C1'	14:N:38:ASN:HB3	2.47	0.45
1:A:695:A:C6	1:A:696:A:C5	3.05	0.45
1:A:874:G:H2'	1:A:875:C:H5'	1.99	0.45
1:A:877:C:H2'	1:A:878:G:H8	1.82	0.45
5:E:167:PRO:HG2	5:E:192:SER:OG	2.17	0.45
5:E:33:TYR:HB2	5:E:42:ILE:C	2.37	0.45
6:F:124:ILE:HD11	6:F:130:VAL:CG1	2.47	0.45
6:F:173:VAL:O	6:F:175:LEU:CD1	2.65	0.45
7:G:150:GLU:C	7:G:152:SER:H	2.19	0.45
7:G:20:TYR:O	7:G:26:CYS:SG	2.75	0.45
1:A:425:G:O3'	7:G:45:GLN:OE1	2.34	0.45
8:H:145:LYS:C	8:H:148:VAL:HG23	2.37	0.45
8:H:18:ARG:NH2	8:H:25:ARG:HB2	2.31	0.45
8:H:47:LYS:N	8:H:47:LYS:CD	2.80	0.45
9:I:45:LEU:CG	9:I:59:TYR:CD1	2.83	0.45
10:J:135:VAL:HG12	10:J:139:GLU:OE2	2.17	0.45
11:K:100:ILE:O	11:K:102:ARG:N	2.50	0.45
11:K:45:ILE:HB	11:K:61:VAL:HG11	1.98	0.45
11:K:6:ILE:CG2	11:K:85:ARG:NH1	2.80	0.45
13:M:11:PHE:HE1	17:Q:54:PRO:HB2	1.81	0.45
15:O:42:THR:O	15:O:42:THR:HG23	2.15	0.45
15:O:39:VAL:HG21	15:O:57:LYS:HD2	1.98	0.45
15:O:97:ARG:HB3	15:O:98:TYR:CE1	2.52	0.45
17:Q:21:TYR:N	17:Q:21:TYR:CD1	2.84	0.45
17:Q:22:THR:CG2	17:Q:33:VAL:HG23	2.47	0.45
17:Q:26:ARG:HD2	17:Q:47:LEU:HD12	1.95	0.45
6:F:29:TYR:OH	17:Q:54:PRO:O	2.35	0.45
9:I:2:ARG:NH2	18:R:2:PRO:HG2	2.30	0.45
1:A:666:G:N2	18:R:52:SER:OG	2.46	0.45
18:R:57:LEU:CD1	18:R:57:LEU:H	2.29	0.45
18:R:62:GLN:O	18:R:63:ARG:C	2.55	0.45
1:A:755:G:OP2	18:R:65:ARG:CD	2.65	0.45
21:U:36:ASN:OD1	21:U:39:VAL:CB	2.64	0.45
21:U:47:THR:C	21:U:49:LYS:HZ2	2.20	0.45
22:V:15:LEU:HG	22:V:16:LEU:HD13	1.98	0.45
2:C:16:C:H5'	2:C:60:U:O2'	2.17	0.45
2:C:44:A:N6	2:C:45:G:N2	2.65	0.45
2:C:61:C:H2'	2:C:62:C:C6	2.52	0.45
8:H:36:ASP:C	8:H:38:GLN:N	2.70	0.45
14:N:112:THR:O	14:N:112:THR:HG22	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:94:ALA:O	23:W:95:ALA:HB3	2.16	0.45
4:1:18:G:H5'	4:1:19:A:OP1	2.17	0.45
1:A:1085:U:OP2	1:A:1086:U:O4	2.34	0.45
1:A:1230:C:O2'	16:P:126:LYS:CE	2.62	0.45
1:A:124:G:N2	1:A:238:G:C4	2.85	0.45
1:A:1265:G:H2'	1:A:1266:G:C5'	2.24	0.45
1:A:1273:G:C3'	1:A:1274:G:H8	2.28	0.45
1:A:1410:G:C6	1:A:1411:C:C4	3.05	0.45
1:A:1468:A:P	1:A:1468:A:H3'	2.57	0.45
1:A:129(A):G:O6	1:A:188:U:H4'	2.14	0.45
1:A:190:G:H5''	1:A:191(A):G:C8	2.52	0.45
1:A:223:U:O2'	1:A:224:C:H5'	2.17	0.45
1:A:118:U:O4	1:A:289:G:H4'	2.16	0.45
1:A:322:C:H42	1:A:332:G:N2	2.15	0.45
1:A:359:U:H2'	1:A:360:A:C8	2.52	0.45
1:A:362:G:H2'	1:A:364:A:OP2	2.16	0.45
1:A:65:U:C6	1:A:381:C:N4	2.85	0.45
1:A:429:U:H4'	1:A:430:A:C5'	2.46	0.45
1:A:678:U:O2'	1:A:679:C:O5'	2.26	0.45
1:A:729:A:C2	1:A:730:G:H1'	2.52	0.45
1:A:69:G:C2	1:A:73:G:N7	2.85	0.45
1:A:818:G:HO2'	1:A:819:A:P	2.33	0.45
1:A:993:G:O2'	1:A:994:A:P	2.75	0.45
2:C:36:U:H6	2:C:36:U:C5'	2.30	0.45
3:D:36:A:C2'	3:D:37:A:C8	2.99	0.45
3:D:39:U:H2'	3:D:39:U:O2	2.17	0.45
5:E:140:HIS:HA	5:E:143:GLU:OE1	2.17	0.45
5:E:234:PRO:C	5:E:238:LEU:HD22	2.36	0.45
6:F:11:ARG:O	6:F:12:LEU:C	2.55	0.45
6:F:78:GLY:CA	6:F:82:GLU:OE1	2.62	0.45
7:G:13:ARG:NH1	7:G:36:ARG:HB3	2.31	0.45
7:G:150:GLU:O	7:G:151:LYS:C	2.54	0.45
7:G:143:GLY:HA2	7:G:185:PHE:CG	2.52	0.45
8:H:86:ALA:O	8:H:125:SER:CB	2.65	0.45
8:H:33:VAL:O	8:H:34:VAL:HG23	2.17	0.45
10:J:42:ILE:O	10:J:43:PHE:C	2.55	0.45
10:J:64:GLN:O	10:J:68:ASN:ND2	2.50	0.45
11:K:101:PRO:O	11:K:102:ARG:CG	2.65	0.45
11:K:29:SER:O	11:K:33:GLU:HB2	2.17	0.45
11:K:63:LEU:HB2	11:K:65:TYR:CE1	2.51	0.45
11:K:63:LEU:HD12	11:K:65:TYR:CE1	2.52	0.45
12:L:40:LEU:HB3	12:L:42:ARG:HB2	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:964:A:C2'	13:M:55:LYS:HZ3	2.28	0.45
13:M:61:GLU:OE1	17:Q:58:LYS:NZ	2.40	0.45
14:N:69:ALA:O	14:N:71:LYS:N	2.50	0.45
19:S:8:ARG:O	19:S:8:ARG:HD2	2.16	0.45
20:T:29:HIS:HB2	20:T:36:ILE:HG23	1.98	0.45
21:U:72:ARG:HA	21:U:75:ILE:CG1	2.45	0.45
2:C:70:G:H2'	2:C:70:G:N3	2.32	0.45
3:D:1:G:O2'	3:D:2:C:H5'	2.16	0.45
6:F:122:GLU:O	6:F:125:GLU:CB	2.55	0.45
1:A:1046:A:C2'	1:A:1046:A:N3	2.79	0.44
1:A:1095:U:N3	1:A:1096:C:C5	2.86	0.44
1:A:1154:G:O2'	1:A:1155:G:C5'	2.65	0.44
1:A:1173:G:C2	1:A:1174:G:C8	3.06	0.44
1:A:986:A:N6	1:A:1220:G:C6	2.85	0.44
1:A:1305:G:N2	1:A:1331:G:N3	2.65	0.44
1:A:1468:A:H2'	1:A:1469:G:O4'	2.17	0.44
1:A:102:G:H2'	1:A:151:A:H2	1.82	0.44
1:A:254:G:H2'	1:A:255:G:C8	2.51	0.44
1:A:447:G:H21	1:A:487:A:H62	1.65	0.44
1:A:520:A:H3'	1:A:520:A:C8	2.52	0.44
1:A:520:A:N7	1:A:521:G:O4'	2.49	0.44
1:A:620:C:C5	1:A:621:A:C5	3.05	0.44
1:A:61:G:C5	1:A:62:U:N3	2.86	0.44
1:A:708:C:N3	1:A:709:G:N7	2.64	0.44
1:A:710:G:O2'	1:A:711:G:H5'	2.16	0.44
1:A:716:A:C2'	1:A:717:C:H5'	2.47	0.44
1:A:862:C:C4	1:A:863:U:C5	3.04	0.44
1:A:862:C:C6	1:A:863:U:H5	2.34	0.44
1:A:886:G:H2'	1:A:887:G:C5'	2.47	0.44
1:A:244:U:C6	1:A:894:G:C2	3.04	0.44
1:A:8:A:P	1:A:8:A:H3'	2.56	0.44
1:A:20:U:C5	1:A:916:G:N2	2.85	0.44
1:A:980:C:C4	1:A:981:U:O2	2.70	0.44
1:A:987:G:O2'	1:A:988:G:H5'	2.17	0.44
2:C:34:C:C2'	2:C:35:A:C5'	2.72	0.44
5:E:208:ILE:O	5:E:209:ARG:C	2.54	0.44
5:E:84:GLU:O	5:E:219:VAL:HG21	2.17	0.44
6:F:179:ARG:O	6:F:181:ASN:ND2	2.50	0.44
6:F:92:ALA:HA	6:F:96:GLY:O	2.17	0.44
7:G:120:LEU:CG	7:G:121:VAL:N	2.80	0.44
1:A:403:C:HO2'	7:G:122:ARG:NH1	2.12	0.44
7:G:152:SER:O	7:G:155:LEU:HD23	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:201:GLN:O	7:G:202:LEU:C	2.55	0.44
7:G:13:ARG:HH21	7:G:40:PRO:HA	1.81	0.44
1:A:737:A:H5'	9:I:92:LYS:HG3	1.99	0.44
10:J:86:GLN:O	10:J:148:ASN:CB	2.65	0.44
10:J:64:GLN:CG	10:J:128:ALA:HB1	2.47	0.44
12:L:104:ARG:O	12:L:105:ASP:CB	2.65	0.44
12:L:28:VAL:C	12:L:30:GLY:N	2.70	0.44
12:L:40:LEU:HB2	12:L:42:ARG:HB2	1.99	0.44
12:L:66:ARG:HG2	12:L:67:GLY:H	1.82	0.44
16:P:39:ILE:CD1	16:P:56:LEU:HD13	2.38	0.44
18:R:3:ILE:HA	18:R:38:ARG:CZ	2.47	0.44
19:S:51:VAL:HB	19:S:77:ALA:CB	2.47	0.44
20:T:13:ASP:CG	20:T:14:LYS:N	2.71	0.44
20:T:18:THR:HG23	20:T:69:LYS:HE3	1.99	0.44
20:T:97:SER:C	20:T:98:LEU:HD22	2.37	0.44
3:D:19:G:C5'	3:D:20:U:C4	3.00	0.44
3:D:48:C:C6	3:D:48:C:OP1	2.70	0.44
1:A:1025:U:H2'	1:A:1026:G:N7	2.32	0.44
1:A:849:C:C2	1:A:850:U:C5	3.05	0.44
6:F:162:GLN:C	6:F:162:GLN:CD	2.75	0.44
1:A:1109:C:OP2	6:F:176:HIS:ND1	2.50	0.44
1:A:1132:C:C2	1:A:1133:G:C8	3.05	0.44
1:A:1238:A:N7	1:A:1301:U:O4	2.51	0.44
1:A:1309:G:OP2	16:P:99:ARG:NH2	2.50	0.44
1:A:1394:A:N7	1:A:1501:C:O4'	2.50	0.44
1:A:1506:U:P	1:A:1506:U:O4'	2.76	0.44
1:A:186(B):C:N3	1:A:186(C):G:C8	2.86	0.44
1:A:257:G:C2'	1:A:258:G:H5'	2.47	0.44
1:A:258:G:C2	1:A:259:G:N7	2.85	0.44
1:A:425:G:H21	1:A:426:G:H1'	1.82	0.44
1:A:432:A:N7	1:A:433:C:C5	2.85	0.44
1:A:451:A:H61	1:A:480:U:C2'	2.25	0.44
1:A:703:G:H4'	1:A:704:A:O5'	2.16	0.44
1:A:794:A:C5	1:A:795:C:N4	2.86	0.44
1:A:803:G:C6	1:A:804:U:N3	2.85	0.44
1:A:914:A:H2'	1:A:915:A:H8	1.74	0.44
5:E:166:ASP:OD2	5:E:188:ALA:O	2.35	0.44
5:E:223:ILE:HG22	5:E:224:GLN:N	2.31	0.44
5:E:87:ARG:HE	5:E:87:ARG:HB2	1.44	0.44
6:F:11:ARG:CZ	6:F:11:ARG:HA	2.47	0.44
6:F:183:ASP:O	6:F:201:TYR:HA	2.17	0.44
7:G:106:TYR:CD1	7:G:111:ALA:O	2.71	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:125:HIS:O	7:G:126:ILE:CG1	2.54	0.44
8:H:110:LEU:O	8:H:113:ALA:HB3	2.17	0.44
9:I:62:TRP:CG	21:U:35:ARG:NH1	2.76	0.44
11:K:36:LEU:C	11:K:39:LEU:HB2	2.37	0.44
11:K:34:GLU:O	11:K:38:ILE:HD11	2.17	0.44
12:L:56:LEU:CD2	12:L:56:LEU:O	2.63	0.44
12:L:69:GLY:H	12:L:73:GLN:HG3	1.81	0.44
13:M:16:LEU:HB3	13:M:70:ARG:HG2	1.98	0.44
13:M:8:LEU:HD22	13:M:94:VAL:HG12	1.98	0.44
14:N:26:ASN:HA	14:N:56:GLY:HA3	1.99	0.44
14:N:62:GLN:OE1	14:N:63:LEU:CA	2.65	0.44
15:O:37:CYS:SG	15:O:81:SER:HB2	2.57	0.44
17:Q:36:PHE:HB3	17:Q:37:PHE:HD2	1.82	0.44
17:Q:9:LYS:HA	17:Q:21:TYR:CE1	2.52	0.44
19:S:3:LYS:CG	19:S:24:ALA:HB2	2.47	0.44
20:T:40:LYS:HB2	20:T:42:TYR:HE1	1.81	0.44
20:T:59:ILE:HG23	20:T:59:ILE:O	2.16	0.44
22:V:17:GLU:CG	22:V:18:LYS:H	2.30	0.44
23:W:34:LYS:O	23:W:35:THR:C	2.56	0.44
23:W:43:LEU:HD22	23:W:48:LYS:HB2	1.98	0.44
1:A:1326:C:OP1	24:X:17:THR:HG21	2.18	0.44
1:A:1447:G:C6	1:A:1448:C:N4	2.85	0.44
6:F:157:ILE:CG1	6:F:164:ARG:CG	2.71	0.44
10:J:126:ASP:O	10:J:131:LYS:HG2	2.18	0.44
1:A:398:C:H3'	1:A:398:C:C6	2.52	0.44
1:A:1075:C:O2'	1:A:1101:A:N7	2.45	0.44
1:A:1108:G:C6	1:A:1109:C:N4	2.85	0.44
1:A:1129:C:O2'	1:A:1131:G:N7	2.50	0.44
1:A:982:U:H3	1:A:1223:C:N4	2.15	0.44
1:A:1260:C:O2'	1:A:1283:G:H4'	2.17	0.44
1:A:1328:C:H2'	1:A:1329:A:H8	1.82	0.44
1:A:1480:G:H2'	1:A:1481:U:O5'	2.17	0.44
1:A:791:G:N2	1:A:1498:U:P	2.79	0.44
1:A:1499:A:H3'	1:A:1499:A:C8	2.53	0.44
1:A:1405:G:H1'	1:A:1519:A:O4'	2.17	0.44
1:A:172:A:N6	1:A:174:C:O2	2.50	0.44
1:A:22:G:OP1	1:A:561:U:O2	2.35	0.44
1:A:236:G:H5''	1:A:237:C:OP2	2.17	0.44
1:A:238:G:N1	1:A:239:U:C2	2.85	0.44
1:A:263:A:O2'	1:A:264:U:C5'	2.64	0.44
1:A:28:G:O2'	1:A:296:U:H5''	2.18	0.44
1:A:321:A:N1	1:A:332:G:N2	2.59	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:429:U:C3'	7:G:22:LYS:NZ	2.79	0.44
1:A:511:C:N3	1:A:541:G:N2	2.66	0.44
1:A:541:G:O2'	1:A:542:G:H5'	2.17	0.44
1:A:622:A:N7	1:A:623:C:C5	2.85	0.44
1:A:768:A:O2'	1:A:1523:G:N2	2.49	0.44
1:A:697:U:C5'	1:A:786:G:H4'	2.47	0.44
1:A:790:A:O5'	1:A:790:A:H8	2.00	0.44
1:A:816:A:C4'	1:A:817:C:H5''	2.38	0.44
1:A:759:A:H4'	1:A:881:G:OP1	2.16	0.44
1:A:924:C:H2'	1:A:925:G:C8	2.52	0.44
1:A:924:C:H2'	1:A:925:G:H8	1.82	0.44
1:A:982:U:H5''	1:A:983:A:OP1	2.18	0.44
5:E:131:PRO:CB	5:E:134:GLU:HG2	2.47	0.44
5:E:72:GLY:CA	5:E:165:VAL:CG1	2.94	0.44
6:F:83:ARG:C	6:F:85:ARG:N	2.65	0.44
6:F:91:LEU:HD11	6:F:99:VAL:CA	2.46	0.44
7:G:67:ILE:CD1	7:G:67:ILE:C	2.84	0.44
9:I:14:LEU:HD22	9:I:18:GLN:CD	2.37	0.44
10:J:55:GLY:O	10:J:56:GLN:C	2.55	0.44
10:J:62:PHE:HA	10:J:124:LEU:HD21	1.98	0.44
11:K:37:ARG:HE	11:K:38:ILE:HD13	1.81	0.44
12:L:113:LYS:NZ	12:L:119:ALA:CB	2.79	0.44
12:L:32:ASP:CG	12:L:33:PHE:H	2.21	0.44
12:L:49:PRO:HG2	12:L:81:ILE:CG2	2.47	0.44
13:M:11:PHE:HD2	13:M:11:PHE:HA	1.67	0.44
13:M:47:PHE:O	13:M:62:HIS:HA	2.18	0.44
13:M:95:GLU:O	13:M:95:GLU:OE1	2.35	0.44
14:N:69:ALA:C	14:N:71:LYS:N	2.70	0.44
14:N:69:ALA:O	14:N:72:ALA:N	2.50	0.44
15:O:70:ILE:HG21	15:O:77:LEU:HD12	1.98	0.44
1:A:952:U:H5	16:P:104:ARG:NH1	2.14	0.44
16:P:15:VAL:HG21	16:P:39:ILE:HD12	1.99	0.44
16:P:96:LEU:O	16:P:97:PRO:C	2.56	0.44
17:Q:26:ARG:HB3	17:Q:27:CYS:H	1.61	0.44
1:A:1202:G:C5	17:Q:42:ILE:HD12	2.53	0.44
18:R:65:ARG:HH11	18:R:65:ARG:HB2	1.83	0.44
19:S:14:ASN:CB	19:S:42:ARG:NH2	2.70	0.44
19:S:60:LEU:O	19:S:61:SER:C	2.56	0.44
21:U:66:LEU:CG	21:U:67:ALA:N	2.80	0.44
14:N:110:ASP:CB	21:U:85:LEU:HB3	2.44	0.44
22:V:20:LEU:C	22:V:21:GLU:HG2	2.38	0.44
3:D:9:A:N6	3:D:22:G:C8	2.85	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1025:U:O2'	1:A:1026:G:C5	2.67	0.44
3:D:63:G:C5	3:D:64:C:C5	3.05	0.44
1:A:1403:C:N4	4:1:18:G:OP2	2.48	0.44
1:A:1068:G:C8	1:A:1094:G:N7	2.85	0.44
1:A:1124:G:OP1	13:M:35:SER:O	2.35	0.44
1:A:1282:C:O2	1:A:1282:C:H2'	2.17	0.44
1:A:1531:A:H2'	1:A:1532:U:C2	2.53	0.44
1:A:246:A:C2'	1:A:247:G:OP2	2.66	0.44
1:A:300:A:H1'	1:A:565:U:O2	2.18	0.44
1:A:307:C:O5'	1:A:308:C:OP2	2.36	0.44
1:A:46:G:N2	1:A:366:C:N1	2.65	0.44
1:A:542:G:N2	1:A:543:C:H1'	2.33	0.44
1:A:609:A:H2'	1:A:610:G:H8	1.81	0.44
1:A:675:A:C2	1:A:716:A:C2	3.06	0.44
1:A:676:A:N3	1:A:677:U:C6	2.85	0.44
1:A:762:C:N4	1:A:763:G:O6	2.50	0.44
1:A:808:C:C2	1:A:809:G:C8	3.05	0.44
1:A:821:G:C6	1:A:822:C:C4	3.06	0.44
1:A:826:C:C6	1:A:826:C:OP2	2.71	0.44
1:A:863:U:O2	1:A:865:A:OP2	2.34	0.44
1:A:895:G:C4	1:A:896:C:C5	3.05	0.44
1:A:993:G:O6	1:A:1046:A:C5	2.70	0.44
1:A:993:G:C2'	1:A:994:A:OP1	2.65	0.44
5:E:167:PRO:CG	5:E:188:ALA:HA	2.46	0.44
5:E:80:ILE:HD12	5:E:211:ILE:HG21	1.98	0.44
5:E:80:ILE:HD13	5:E:212:GLN:HB2	1.98	0.44
6:F:121:ALA:HB2	6:F:187:ALA:HB1	1.99	0.44
6:F:119:ARG:HH21	6:F:140:ARG:HH22	1.65	0.44
6:F:182:ILE:HG12	6:F:203:PHE:CE1	2.53	0.44
6:F:38:ARG:NH1	6:F:38:ARG:CB	2.60	0.44
7:G:61:LYS:NZ	7:G:65:ARG:CD	2.79	0.44
8:H:109:ILE:HG22	8:H:110:LEU:H	1.81	0.44
8:H:16:THR:HG23	8:H:28:PHE:HA	1.99	0.44
8:H:94:ALA:HB1	8:H:98:THR:CG2	2.41	0.44
9:I:90:VAL:HG13	9:I:90:VAL:O	2.17	0.44
1:A:939:G:O3'	10:J:102:ARG:NH1	2.50	0.44
10:J:115:ARG:O	10:J:118:VAL:HB	2.18	0.44
10:J:78:ARG:HD2	10:J:79:ARG:N	2.31	0.44
12:L:116:LYS:HB2	12:L:121:ARG:O	2.17	0.44
1:A:1148:U:C5'	12:L:16:ARG:HD2	2.47	0.44
12:L:41:VAL:O	12:L:41:VAL:HG12	2.17	0.44
12:L:66:ARG:C	12:L:73:GLN:NE2	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:3:LYS:NZ	13:M:77:PRO:HG3	2.33	0.44
14:N:42:TRP:HZ3	14:N:47:VAL:CG2	2.30	0.44
14:N:67:ASP:CA	14:N:70:LYS:NZ	2.80	0.44
16:P:67:GLU:OE2	16:P:68:GLY:N	2.51	0.44
18:R:34:LEU:HD23	18:R:35:ARG:H	1.83	0.44
19:S:5:ARG:HH12	19:S:24:ALA:CA	2.17	0.44
23:W:18:GLN:H	23:W:18:GLN:HG2	1.37	0.44
23:W:20:LEU:O	23:W:23:ARG:NH1	2.51	0.44
2:C:6:G:O2'	2:C:7:G:O4'	2.24	0.44
1:A:1010:G:N2	1:A:1020:U:C1'	2.77	0.44
1:A:723:U:O2	1:A:723:U:C2'	2.65	0.44
1:A:12:U:OP1	4:1:27:A:C2	2.70	0.44
1:A:1060:C:H2'	1:A:1061:G:H8	1.81	0.44
1:A:1124:G:N2	1:A:1126:U:N3	2.37	0.44
1:A:1283:G:O2'	1:A:1284:C:H5'	2.18	0.44
1:A:1326:C:OP2	24:X:6:ARG:NH2	2.48	0.44
1:A:1338:G:C6	1:A:1339:A:C6	3.06	0.44
1:A:1345:U:C4	1:A:1377:A:C2	3.04	0.44
1:A:1410:G:C6	1:A:1411:C:N4	2.85	0.44
1:A:175:C:O2	1:A:176:C:C6	2.69	0.44
1:A:144:G:C6	1:A:179:A:N6	2.86	0.44
1:A:191(F):U:C3'	1:A:191(F):U:C6	3.01	0.44
1:A:192:U:C2'	1:A:193:C:O5'	2.65	0.44
1:A:193:C:N3	1:A:194:C:C5	2.85	0.44
1:A:432:A:C8	1:A:432:A:H3'	2.53	0.44
1:A:606:G:C2	1:A:631:G:C2	3.06	0.44
1:A:688:G:N9	1:A:700:G:N2	2.66	0.44
1:A:708:C:C2	1:A:709:G:C8	3.06	0.44
1:A:976:G:H2'	1:A:977:A:OP2	2.18	0.44
3:D:40:C:H2'	3:D:41:G:H5''	1.99	0.44
5:E:146:GLN:HE21	5:E:150:SER:HB2	1.82	0.44
5:E:61:LEU:O	5:E:64:ARG:HD2	2.17	0.44
5:E:84:GLU:HG2	5:E:234:PRO:CD	2.47	0.44
6:F:116:VAL:HG21	6:F:141:VAL:CG1	2.47	0.44
6:F:15:THR:CG2	6:F:181:ASN:OD1	2.66	0.44
1:A:532:A:O4'	6:F:161:GLU:OE1	2.35	0.44
6:F:23:TYR:CE2	6:F:24:ALA:O	2.71	0.44
6:F:48:TYR:HA	6:F:52:LEU:HD23	1.96	0.44
1:A:1190:G:OP1	6:F:5:ILE:HD11	2.17	0.44
7:G:144:ASP:CA	7:G:184:LYS:HD3	2.48	0.44
9:I:16:GLN:HG3	9:I:17:SER:H	1.79	0.44
9:I:27:GLN:CA	9:I:30:LEU:HD12	2.48	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:3:ARG:HD2	9:I:38:GLU:OE1	2.17	0.44
9:I:77:ARG:O	9:I:78:GLU:C	2.56	0.44
10:J:45:ASP:O	10:J:49:ILE:CD1	2.59	0.44
10:J:72:ARG:H	10:J:91:VAL:HG21	1.81	0.44
12:L:4:TYR:CE2	12:L:88:TYR:HB2	2.53	0.44
13:M:24:VAL:CG2	13:M:72:VAL:HG13	2.46	0.44
13:M:8:LEU:HD22	13:M:8:LEU:HA	1.77	0.44
13:M:9:ARG:CG	13:M:95:GLU:OE2	2.65	0.44
14:N:116:HIS:O	14:N:117:ASN:HB2	2.17	0.44
14:N:39:PRO:O	14:N:40:ILE:HG23	2.17	0.44
15:O:45:PRO:CG	15:O:49:ASN:O	2.66	0.44
17:Q:17:LYS:O	17:Q:19:ARG:N	2.47	0.44
1:A:1318:A:N6	17:Q:18:VAL:HG11	2.33	0.44
17:Q:40:CYS:C	17:Q:42:ILE:N	2.70	0.44
17:Q:39:LEU:HD12	17:Q:44:LEU:CB	2.48	0.44
18:R:70:LEU:HG	18:R:78:TYR:CB	2.48	0.44
20:T:53:LEU:HD21	20:T:85:VAL:HG11	1.98	0.44
20:T:66:SER:HB2	20:T:69:LYS:HZ3	1.82	0.44
20:T:81:ARG:HA	20:T:81:ARG:HD2	1.86	0.44
1:A:107:G:C6	23:W:15:ARG:NH2	2.85	0.44
23:W:34:LYS:HB3	23:W:34:LYS:HE2	1.67	0.44
23:W:43:LEU:HD11	23:W:51:GLU:HB2	1.99	0.44
24:X:17:THR:O	24:X:22:ARG:CZ	2.66	0.44
24:X:23:PRO:C	24:X:25:LYS:N	2.71	0.44
24:X:6:ARG:O	24:X:7:ARG:O	2.36	0.44
2:C:14:A:C2	2:C:22:G:C4	3.06	0.44
2:C:58:A:C5	2:C:61:C:C5	3.05	0.44
1:A:91:C:O2	1:A:92:G:C8	2.71	0.44
1:A:1049:U:H1'	1:A:1201:A:H8	1.79	0.44
1:A:1111:A:H2'	1:A:1112:C:H6	1.74	0.44
1:A:1143:G:C2'	1:A:1144:G:H8	2.28	0.44
1:A:1165:C:H2'	1:A:1166:G:C5'	2.47	0.44
1:A:122:G:O5'	1:A:122:G:C8	2.71	0.44
1:A:1347:G:C3'	12:L:107:ARG:HB3	2.47	0.44
1:A:819:A:N3	1:A:1529:G:O6	2.50	0.44
1:A:191:G:H21	23:W:103:GLY:C	2.20	0.44
1:A:225:C:O2	1:A:225:C:H2'	2.16	0.44
1:A:275:G:C6	1:A:276:G:N7	2.86	0.44
1:A:293:G:N2	1:A:294:U:H1'	2.31	0.44
1:A:421:U:O5'	1:A:422:C:H5	2.01	0.44
1:A:458:C:N4	1:A:464:G:N1	2.65	0.44
1:A:559:A:HO2'	1:A:560:U:P	2.40	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:563:A:H1'	1:A:566:G:C2'	2.48	0.44
1:A:62:U:H2'	1:A:63:C:C6	2.53	0.44
1:A:677:U:C2	1:A:678:U:C5	3.05	0.44
1:A:675:A:C2	1:A:716:A:H2	2.35	0.44
1:A:721:G:H1'	1:A:722:A:C6	2.53	0.44
1:A:577:G:C8	1:A:816:A:N1	2.85	0.44
1:A:981:U:C6	1:A:981:U:C3'	3.01	0.44
3:D:33:U:H3'	3:D:34:G:C5'	2.48	0.44
5:E:88:ALA:CB	5:E:219:VAL:HG22	2.48	0.44
1:A:421:U:N3	6:F:127:ARG:NH1	2.66	0.44
6:F:147:LYS:CE	6:F:147:LYS:HA	2.44	0.44
6:F:150:LYS:HA	6:F:169:ALA:CB	2.48	0.44
6:F:184:TYR:CG	6:F:185:GLY:N	2.86	0.44
7:G:198:VAL:CG2	7:G:199:ASN:H	2.28	0.44
9:I:18:GLN:O	9:I:19:LEU:C	2.56	0.44
9:I:85:VAL:CG1	9:I:88:VAL:CG2	2.91	0.44
10:J:10:ARG:NH1	10:J:10:ARG:CG	2.81	0.44
10:J:76:ARG:O	10:J:156:TRP:CH2	2.71	0.44
11:K:32:LYS:HB3	11:K:32:LYS:HE3	1.91	0.44
1:A:1179:A:O3'	12:L:102:LEU:O	2.36	0.44
1:A:1341:U:O2'	12:L:126:SER:O	2.16	0.44
12:L:33:PHE:C	12:L:35:GLU:N	2.70	0.44
13:M:16:LEU:HD13	13:M:94:VAL:CG2	2.45	0.44
13:M:6:ILE:CG1	13:M:72:VAL:HB	2.47	0.44
14:N:17:GLY:N	14:N:77:MET:SD	2.91	0.44
14:N:39:PRO:HA	14:N:40:ILE:HD13	2.00	0.44
15:O:73:GLU:HB2	15:O:110:VAL:HG12	2.00	0.44
19:S:21:VAL:O	19:S:22:THR:HG22	2.17	0.44
19:S:42:ARG:O	19:S:43:LYS:CB	2.64	0.44
19:S:49:LEU:CD2	19:S:51:VAL:HG23	2.47	0.44
20:T:65:ILE:O	20:T:66:SER:HB3	2.17	0.44
22:V:55:LYS:HG2	22:V:56:GLN:NE2	2.33	0.44
22:V:40:ILE:C	22:V:68:GLY:HA2	2.37	0.44
2:C:19:G:C3'	2:C:20:U:C4	2.90	0.44
2:C:57:A:C3'	2:C:58:A:H5''	2.47	0.44
2:C:25:C:H2'	2:C:26:G:O4'	2.17	0.44
4:1:8:A:C5'	4:1:8:A:H8	2.31	0.44
1:A:1069:C:H1'	1:A:1191:A:H2	1.81	0.44
1:A:1077:G:C4	1:A:1081:G:N1	2.86	0.44
1:A:1091:U:C5	1:A:1093:A:OP2	2.71	0.44
1:A:1198:G:H2'	1:A:1199:U:C4'	2.48	0.44
1:A:1352:C:N3	1:A:1371:G:C6	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1383:C:O2'	1:A:1384:C:H5'	2.18	0.44
1:A:1415:G:C6	1:A:1486:G:C6	3.05	0.44
1:A:179:A:C2	1:A:180:U:H1'	2.52	0.44
1:A:226:G:O2'	1:A:227:G:O4'	2.27	0.44
1:A:243:A:H61	1:A:281:G:HO2'	1.64	0.44
1:A:270:A:O2'	1:A:271:C:H5'	2.18	0.44
1:A:277:C:N3	1:A:278:G:C8	2.86	0.44
1:A:451:A:C4	1:A:452:A:N6	2.86	0.44
1:A:533:A:H2'	1:A:534:U:O5'	2.18	0.44
1:A:558:G:OP2	1:A:559:A:O3'	2.35	0.44
1:A:566:G:O5'	1:A:566:G:C8	2.67	0.44
1:A:676:A:H2'	1:A:677:U:O5'	2.18	0.44
1:A:73:G:N2	1:A:74:C:C2	2.86	0.44
1:A:760:G:C2'	20:T:103:GLY:CA	2.92	0.44
1:A:763:G:C2'	1:A:764:C:O5'	2.66	0.44
1:A:808:C:C4	1:A:809:G:N7	2.86	0.44
1:A:898:G:N1	1:A:902:G:C5	2.86	0.44
1:A:910:C:H2'	1:A:911:U:O4'	2.18	0.44
1:A:947:G:N2	1:A:948:C:C2	2.86	0.44
1:A:950:U:C6	16:P:102:ARG:NH2	2.86	0.44
2:C:31:G:H3'	2:C:32:C:H5	1.83	0.44
5:E:164:VAL:HG21	5:E:170:GLU:HB2	2.00	0.44
6:F:59:ARG:NE	6:F:64:VAL:CA	2.80	0.44
6:F:5:ILE:HG23	13:M:51:ARG:NH1	2.18	0.44
7:G:108:LEU:CD1	7:G:183:GLY:HA3	2.47	0.44
7:G:3:ARG:HE	7:G:71:SER:CB	2.31	0.44
7:G:85:LYS:HB2	7:G:85:LYS:NZ	2.33	0.44
8:H:149:GLU:O	8:H:150:ARG:C	2.56	0.44
8:H:34:VAL:CG1	8:H:35:GLY:N	2.81	0.44
8:H:84:PHE:CD1	8:H:134:ALA:CA	2.99	0.44
8:H:99:GLY:C	8:H:101:ILE:HD13	2.38	0.44
9:I:10:LEU:N	9:I:10:LEU:CD2	2.80	0.44
10:J:66:VAL:HG12	10:J:70:LYS:CD	2.48	0.44
11:K:14:ARG:HD2	11:K:15:ASN:N	2.32	0.44
11:K:32:LYS:O	11:K:35:ILE:N	2.51	0.44
11:K:85:ARG:HG2	11:K:85:ARG:NH1	2.33	0.44
12:L:97:LYS:HZ2	12:L:102:LEU:CD2	2.31	0.44
13:M:9:ARG:HH11	13:M:9:ARG:HB3	1.83	0.44
14:N:24:SER:OG	14:N:25:TYR:N	2.50	0.44
15:O:36:VAL:HG23	15:O:82:VAL:CG2	2.48	0.44
15:O:84:LEU:HB3	15:O:104:VAL:CG1	2.35	0.44
16:P:102:ARG:HD3	16:P:102:ARG:HA	1.87	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:11:LYS:O	17:Q:13:THR:N	2.51	0.44
17:Q:24:CYS:HB3	17:Q:29:ARG:O	2.18	0.44
17:Q:9:LYS:HZ3	17:Q:10:ALA:HB2	1.83	0.44
18:R:36:ILE:CD1	18:R:59:MET:SD	3.06	0.44
19:S:16:HIS:HE1	19:S:42:ARG:NH2	2.15	0.44
20:T:70:ARG:C	20:T:71:PHE:HD1	2.21	0.44
20:T:8:GLY:O	20:T:56:VAL:CG1	2.63	0.44
21:U:50:ILE:O	21:U:51:LEU:O	2.36	0.44
21:U:58:LEU:O	21:U:59:SER:O	2.36	0.44
22:V:14:HIS:HD2	22:V:35:SER:HB3	1.83	0.44
22:V:36:ARG:HH11	22:V:36:ARG:HG3	1.83	0.44
23:W:25:ARG:O	23:W:28:ALA:CB	2.55	0.44
3:D:18:G:H1'	3:D:58:A:C1'	2.48	0.44
1:A:1153:C:C4	1:A:1154:G:C6	3.05	0.44
1:A:114:U:O2'	1:A:115:G:C5'	2.65	0.44
1:A:1160:G:C2	1:A:1161:C:C6	3.06	0.44
1:A:10:A:H2'	1:A:11:G:H5'	1.98	0.44
1:A:1200:C:H5'	1:A:1201:A:O3'	2.16	0.44
1:A:1226:C:OP2	16:P:103:THR:HB	2.18	0.44
1:A:126:G:C2	1:A:127:G:N9	2.86	0.44
1:A:1330:U:C4	1:A:1331:G:N7	2.86	0.44
1:A:1344:C:H6	1:A:1344:C:O5'	2.00	0.44
1:A:1353:G:C2	1:A:1370:G:N2	2.86	0.44
1:A:1345:U:C5	1:A:1377:A:C2	3.05	0.44
1:A:1412:C:O2	1:A:1412:C:H2'	2.17	0.44
1:A:1425:U:C2	1:A:1476:G:N1	2.86	0.44
1:A:1513:A:C2	1:A:1523:G:C6	3.06	0.44
1:A:1528:U:N3	1:A:1530:G:H8	2.15	0.44
1:A:259:G:H21	1:A:260:G:H1'	1.81	0.44
1:A:324:G:N2	1:A:327:A:OP2	2.50	0.44
1:A:363:A:N1	1:A:364:A:C4	2.86	0.44
1:A:565:U:OP1	1:A:566:G:O3'	2.36	0.44
1:A:665:A:C8	1:A:725:G:C2	3.05	0.44
1:A:798:G:C2	1:A:799:G:C8	3.05	0.44
1:A:799:G:C6	1:A:800:G:N3	2.86	0.44
1:A:874:G:C2	1:A:875:C:C2	3.06	0.44
1:A:572:A:H1'	1:A:917:G:O4'	2.17	0.44
1:A:962:C:C4	1:A:963:G:C5	3.05	0.44
1:A:983:A:C3'	1:A:983:A:N3	2.80	0.44
2:C:33:U:H2'	2:C:34:C:H3'	2.00	0.44
5:E:165:VAL:O	5:E:187:LEU:O	2.35	0.44
6:F:8:ILE:C	6:F:10:PHE:N	2.69	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:94:LEU:O	6:F:95:THR:CB	2.66	0.44
7:G:19:LEU:CD2	7:G:21:LEU:HD12	2.47	0.44
7:G:67:ILE:HD12	7:G:68:TYR:CD1	2.53	0.44
8:H:57:LYS:CG	8:H:61:TYR:HE2	2.25	0.44
8:H:57:LYS:HE3	8:H:61:TYR:OH	2.17	0.44
1:A:932:C:H5'	10:J:3:ARG:HB3	1.99	0.44
1:A:643:C:O2'	11:K:132:GLU:OE1	2.25	0.44
11:K:72:PRO:O	11:K:72:PRO:HG2	2.17	0.44
1:A:1117:G:P	12:L:104:ARG:HH11	2.39	0.44
1:A:1177:G:P	12:L:93:ARG:NH2	2.90	0.44
14:N:22:HIS:HA	14:N:85:ARG:HB2	1.98	0.44
14:N:99:GLN:CA	14:N:105:VAL:HG21	2.47	0.44
1:A:362:G:O5'	15:O:34:ARG:NH2	2.50	0.44
18:R:18:PHE:CD2	18:R:18:PHE:N	2.85	0.44
18:R:69:TYR:HD1	18:R:72:ARG:NE	2.16	0.44
18:R:69:TYR:CZ	18:R:73:GLU:HG3	2.53	0.44
19:S:20:VAL:HG11	19:S:32:TYR:CB	2.48	0.44
19:S:67:THR:CB	19:S:70:ALA:CB	2.83	0.44
19:S:74:LEU:HD22	19:S:79:VAL:CG2	2.48	0.44
20:T:83:ASP:O	20:T:86:GLU:CB	2.52	0.44
9:I:89:MET:HE1	21:U:75:ILE:HD13	2.00	0.44
22:V:71:LEU:O	22:V:72:GLY:C	2.55	0.44
1:A:88:C:O2'	1:A:89:U:P	2.76	0.44
11:K:54:ASP:C	11:K:56:LYS:H	2.21	0.44
1:A:996:A:C2	1:A:997:U:C6	3.06	0.44
1:A:1072:G:N1	1:A:1104:G:C2	2.86	0.44
1:A:109:A:H4'	1:A:110:C:OP2	2.18	0.44
1:A:1142:G:C4	1:A:1143:G:C8	3.05	0.44
1:A:1256:A:N1	1:A:1278:U:H1'	2.33	0.44
1:A:1374:A:C4	1:A:1375:A:C8	3.06	0.44
1:A:173:U:O2	1:A:197:A:C2	2.52	0.44
1:A:188:U:H6	1:A:188:U:OP2	2.01	0.44
1:A:225:C:O2	1:A:226:G:O4'	2.36	0.44
1:A:359:U:H2'	1:A:360:A:H8	1.82	0.44
1:A:428:G:H5'	1:A:430:A:H1'	2.00	0.44
1:A:445:G:O6	1:A:490:G:C6	2.71	0.44
1:A:44:G:O6	1:A:399:G:O6	2.35	0.44
1:A:632:A:O2'	1:A:633:G:H5'	2.18	0.44
1:A:65:U:C5	1:A:381:C:C4	3.06	0.44
1:A:686:U:O2'	1:A:687:A:OP1	2.34	0.44
1:A:729:A:H2	1:A:730:G:H1'	1.83	0.44
1:A:582:U:N3	1:A:760:G:N1	2.65	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:767:A:C2'	1:A:768:A:C5'	2.95	0.44
1:A:774:G:C2	1:A:775:G:C4	3.06	0.44
1:A:782:A:C2	1:A:801:U:C2	3.05	0.44
1:A:801:U:C2	1:A:802:A:C8	3.05	0.44
1:A:807:A:C2	1:A:808:C:C2	3.06	0.44
1:A:832:C:C4	1:A:855:G:O6	2.71	0.44
1:A:993:G:O6	1:A:1046:A:C6	2.71	0.44
2:C:34:C:H2'	2:C:35:A:O4'	2.18	0.44
5:E:103:THR:C	5:E:104:ASN:HD22	2.21	0.44
5:E:115:LEU:HD13	5:E:145:LEU:CG	2.47	0.44
5:E:17:PHE:CD1	5:E:18:GLY:N	2.86	0.44
5:E:43:ASP:O	5:E:44:LEU:O	2.36	0.44
5:E:83:MET:HB2	5:E:234:PRO:CB	2.48	0.44
6:F:24:ALA:HB1	6:F:28:GLN:NE2	2.32	0.44
6:F:39:ILE:HA	6:F:94:LEU:CD1	2.48	0.44
7:G:18:LYS:O	7:G:19:LEU:HD23	2.18	0.44
1:A:412:A:C2	7:G:35:ARG:NH2	2.85	0.44
7:G:38:TYR:CZ	7:G:45:GLN:HG3	2.53	0.44
7:G:76:ARG:O	7:G:79:PHE:HB3	2.18	0.44
11:K:26:VAL:O	11:K:58:TYR:CD1	2.70	0.44
12:L:27:THR:HG22	12:L:30:GLY:H	1.83	0.44
14:N:19:ALA:HB3	14:N:82:VAL:HG23	1.98	0.44
14:N:18:ARG:HB2	14:N:33:THR:HG1	1.83	0.44
15:O:87:GLY:HA2	15:O:98:TYR:CB	2.39	0.44
16:P:22:ILE:CD1	16:P:25:ILE:HD12	2.43	0.44
16:P:59:TYR:CE2	16:P:60:VAL:CG2	2.94	0.44
16:P:66:LEU:C	16:P:70:LEU:HB2	2.38	0.44
1:A:754:C:C4'	18:R:72:ARG:NH2	2.65	0.44
18:R:79:ARG:O	18:R:80:ALA:C	2.56	0.44
19:S:55:ARG:O	19:S:56:ALA:C	2.56	0.44
19:S:5:ARG:HA	19:S:67:THR:OG1	2.18	0.44
19:S:51:VAL:CG2	19:S:77:ALA:HB2	2.46	0.44
1:A:189:U:C4	20:T:63:ARG:HB2	2.52	0.44
21:U:36:ASN:HB3	21:U:40:LEU:CG	2.47	0.44
21:U:39:VAL:HA	21:U:42:ARG:CD	2.47	0.44
22:V:12:ASP:O	22:V:16:LEU:CD1	2.62	0.44
22:V:22:LEU:CD2	22:V:25:LYS:HE2	2.47	0.44
22:V:15:LEU:HD21	22:V:38:SER:CB	2.48	0.44
23:W:79:ARG:HG2	23:W:79:ARG:H	1.42	0.44
1:A:1026:G:C8	1:A:1027:C:C6	3.06	0.44
1:A:1064:G:C1'	1:A:1066:C:N3	2.67	0.43
1:A:1082:G:O5'	1:A:1082:G:H8	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1115:C:C4	1:A:1116:C:C4	3.05	0.43
1:A:112:G:N2	1:A:113:G:N9	2.66	0.43
1:A:1188:A:N3	1:A:1188:A:H2'	2.33	0.43
1:A:122:G:N2	1:A:123:C:C2	2.86	0.43
1:A:1268:A:C5'	24:X:20:LYS:HB2	2.48	0.43
1:A:1287:A:H61	1:A:1371:G:C4'	2.31	0.43
1:A:1306:A:H2'	1:A:1307:U:C6	2.53	0.43
1:A:1325:C:C2	1:A:1326:C:C5	3.06	0.43
1:A:1251:A:C2	1:A:1354:C:H1'	2.53	0.43
1:A:1437:C:O2'	1:A:1438:G:H5'	2.18	0.43
1:A:1522:U:H2'	1:A:1523:G:C8	2.50	0.43
1:A:193:C:H2'	1:A:194:C:C6	2.52	0.43
1:A:231:G:C6	1:A:232:G:C6	3.06	0.43
1:A:247:G:O6	1:A:278:G:C6	2.71	0.43
1:A:287:U:H2'	1:A:288:A:C8	2.53	0.43
1:A:370:C:C2'	1:A:371:G:H8	2.21	0.43
1:A:403:C:HO2'	7:G:122:ARG:HH12	1.66	0.43
1:A:509:A:H2'	1:A:510:A:C8	2.52	0.43
1:A:579:G:N3	1:A:580:U:C6	2.85	0.43
1:A:582:U:C2'	1:A:583:A:O5'	2.66	0.43
1:A:617:G:C2	1:A:618:C:C2	3.06	0.43
1:A:627:G:C2	1:A:628:G:C8	3.06	0.43
1:A:788:U:O2	1:A:789:U:O2	2.36	0.43
1:A:812:C:C2'	1:A:813:U:OP2	2.66	0.43
1:A:873:A:C4'	1:A:874:G:OP2	2.66	0.43
1:A:894:G:C2'	1:A:895:G:H8	2.28	0.43
5:E:108:ILE:O	5:E:112:VAL:HG23	2.18	0.43
5:E:69:LEU:CD2	5:E:91:PRO:CB	2.96	0.43
6:F:139:GLN:O	6:F:143:GLU:CG	2.66	0.43
6:F:188:LEU:HD13	6:F:189:ALA:H	1.80	0.43
6:F:87:LEU:N	6:F:87:LEU:HD23	2.32	0.43
7:G:138:TYR:HD2	7:G:139:ARG:N	2.16	0.43
7:G:57:ARG:C	7:G:206:PHE:HD1	2.20	0.43
7:G:4:TYR:CE2	7:G:8:VAL:HG22	2.53	0.43
8:H:44:GLY:O	8:H:58:ALA:HB1	2.18	0.43
9:I:13:ASN:HD22	9:I:13:ASN:N	2.16	0.43
10:J:85:TYR:CD2	10:J:85:TYR:N	2.84	0.43
11:K:95:VAL:O	11:K:130:GLY:HA2	2.17	0.43
11:K:33:GLU:HA	11:K:59:LEU:HD11	1.99	0.43
11:K:9:MET:O	11:K:11:THR:N	2.51	0.43
1:A:1368:G:OP2	12:L:113:LYS:O	2.36	0.43
12:L:28:VAL:CG2	12:L:32:ASP:C	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:65:VAL:HG21	12:L:77:ILE:CG1	2.48	0.43
13:M:30:SER:HG	13:M:81:THR:HA	1.80	0.43
14:N:18:ARG:CD	14:N:34:ASP:O	2.65	0.43
14:N:42:TRP:CZ3	14:N:47:VAL:HG22	2.49	0.43
15:O:56:ALA:CB	15:O:100:ILE:HD11	2.48	0.43
15:O:41:ARG:NH2	15:O:57:LYS:HE3	2.25	0.43
16:P:10:PRO:CG	16:P:18:ALA:CB	2.79	0.43
17:Q:22:THR:CB	17:Q:33:VAL:CG2	2.88	0.43
19:S:39:TYR:CE1	19:S:41:PRO:N	2.86	0.43
20:T:44:ALA:CB	20:T:59:ILE:CD1	2.95	0.43
21:U:65:ILE:HG12	21:U:65:ILE:H	1.54	0.43
21:U:63:GLN:OE1	21:U:66:LEU:HD21	2.18	0.43
24:X:3:LYS:O	24:X:14:TRP:CE3	2.70	0.43
2:C:58:A:C8	2:C:61:C:C4	3.06	0.43
3:D:18:G:OP1	3:D:58:A:C2	2.71	0.43
3:D:59:U:C2	3:D:59:U:OP1	2.71	0.43
1:A:1029:G:C4	1:A:1032(A):G:N1	2.86	0.43
1:A:1054:C:H6	1:A:1054:C:H3'	1.84	0.43
1:A:921:U:OP1	1:A:1082:G:H5''	2.18	0.43
1:A:1158:C:C3'	1:A:1158:C:O2	2.66	0.43
1:A:1252:A:C4	1:A:1253:G:C8	3.06	0.43
1:A:1324:A:H2'	1:A:1325:C:C5'	2.48	0.43
1:A:131:C:O2'	1:A:132:C:H5'	2.18	0.43
1:A:1341:U:H5'	2:C:32:C:OP1	2.18	0.43
1:A:1394:A:H62	1:A:1501:C:C5'	2.31	0.43
1:A:1413:A:C2	1:A:1414:U:C6	3.06	0.43
1:A:1517:G:N3	1:A:1517:G:H2'	2.33	0.43
1:A:185:A:H1'	23:W:81:LYS:HZ2	1.83	0.43
1:A:577:G:N2	1:A:578:C:N1	2.65	0.43
1:A:672:U:O2	1:A:673:G:C8	2.71	0.43
1:A:673:G:O3'	9:I:87:ARG:NH2	2.52	0.43
1:A:718:G:C8	1:A:719:C:H5	2.36	0.43
1:A:799:G:O6	1:A:800:G:C2	2.72	0.43
1:A:800:G:C2'	1:A:801:U:OP2	2.66	0.43
1:A:877:C:H5''	11:K:88:LYS:CG	2.46	0.43
1:A:916:G:N2	1:A:917:G:C4	2.86	0.43
1:A:916:G:N2	1:A:917:G:C5	2.86	0.43
1:A:922:G:C4'	8:H:19:MET:O	2.66	0.43
1:A:979:C:O5'	1:A:980:C:H5	2.01	0.43
5:E:161:ALA:HA	5:E:183:PRO:HD2	2.00	0.43
5:E:25:ASN:HD22	5:E:27:LYS:H	1.62	0.43
6:F:26:LYS:O	6:F:28:GLN:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:78:LEU:HD21	7:G:96:LEU:CD2	2.47	0.43
8:H:26:PHE:C	8:H:27:ARG:HG3	2.36	0.43
8:H:9:LYS:HB2	8:H:33:VAL:CB	2.49	0.43
8:H:78:HIS:HB2	11:K:104:ARG:CD	2.35	0.43
11:K:17:THR:HG1	11:K:17:THR:H	1.60	0.43
11:K:14:ARG:O	11:K:18:ARG:NE	2.51	0.43
11:K:20:TYR:HD1	11:K:65:TYR:CZ	2.36	0.43
11:K:63:LEU:HB2	11:K:65:TYR:OH	2.18	0.43
11:K:6:ILE:O	11:K:10:LEU:HG	2.19	0.43
11:K:70:GLN:HE21	11:K:71:GLY:N	2.07	0.43
12:L:93:ARG:C	12:L:95:LYS:N	2.69	0.43
13:M:13:HIS:C	13:M:14:LYS:HD3	2.39	0.43
14:N:43:SER:CA	14:N:47:VAL:HG21	2.48	0.43
1:A:521:G:H4'	15:O:73:GLU:OE2	2.18	0.43
18:R:39:LEU:HD13	18:R:56:LEU:HD13	1.99	0.43
19:S:56:ALA:O	19:S:57:ARG:C	2.54	0.43
20:T:17:LYS:CE	20:T:47:PRO:C	2.86	0.43
20:T:34:LYS:HD2	20:T:35:VAL:N	2.33	0.43
20:T:66:SER:HB3	20:T:69:LYS:NZ	2.32	0.43
1:A:720:C:C4'	21:U:50:ILE:HG22	2.48	0.43
22:V:69:HIS:HB2	22:V:74:PHE:HZ	1.76	0.43
22:V:69:HIS:HB3	22:V:73:GLU:OE1	2.18	0.43
7:G:159:ARG:HG2	7:G:159:ARG:HH11	1.84	0.43
2:C:66:C:H2'	2:C:67:C:C6	2.53	0.43
2:C:7:G:HO2'	2:C:8:U:P	2.40	0.43
1:A:1012:U:C4	1:A:1013:G:C6	3.06	0.43
3:D:26:A:H2'	3:D:27:U:O5'	2.18	0.43
15:O:103:GLY:H	15:O:108:ALA:C	2.21	0.43
4:1:16:A:C2'	4:1:17:U:O5'	2.66	0.43
1:A:1105:A:H2'	1:A:1106:G:C8	2.41	0.43
1:A:1164:G:O6	1:A:1165:C:C4	2.70	0.43
1:A:1246:C:H2'	1:A:1247:U:O5'	2.18	0.43
1:A:1279:A:O2'	1:A:1282:C:C4	2.56	0.43
1:A:1286:A:C2	24:X:18:TYR:CZ	3.06	0.43
1:A:1369:C:H2'	1:A:1370:G:C1'	2.49	0.43
1:A:1399:C:O2	1:A:1401:G:N9	2.51	0.43
1:A:1413:A:H2'	1:A:1413:A:N3	2.31	0.43
1:A:1475:G:H2'	1:A:1476:G:O5'	2.18	0.43
1:A:1515:C:O2	1:A:1516:G:H8	1.99	0.43
1:A:1533:C:O2'	1:A:1534:A:OP2	2.36	0.43
1:A:175:C:C2	1:A:176:C:C5	3.06	0.43
1:A:247:G:C6	1:A:278:G:C6	3.07	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:337:C:N4	1:A:338:A:N6	2.65	0.43
1:A:468:A:P	19:S:75:ARG:NH2	2.82	0.43
1:A:602:A:C5	1:A:603:U:C4	3.06	0.43
1:A:605:U:H2'	1:A:606:G:O4'	2.18	0.43
1:A:658:G:C4	1:A:659:U:C6	3.06	0.43
1:A:677:U:H6	1:A:677:U:O5'	2.01	0.43
1:A:709:G:O2'	1:A:710:G:C5'	2.67	0.43
1:A:715:A:C2'	1:A:716:A:O4'	2.60	0.43
1:A:792:A:C4'	1:A:793:U:OP1	2.47	0.43
1:A:861:G:H2'	1:A:862:C:C6	2.54	0.43
1:A:866:C:C5	1:A:867:G:H1'	2.54	0.43
1:A:914:A:C2	1:A:915:A:C4	3.07	0.43
2:C:40:C:C2'	2:C:41:C:C5'	2.91	0.43
2:C:41:C:H2'	2:C:42:G:O4'	2.18	0.43
5:E:136:VAL:N	5:E:139:LYS:HZ1	2.14	0.43
5:E:91:PRO:HG2	5:E:155:LEU:H	1.79	0.43
5:E:193:ASP:OD2	5:E:196:LEU:HD11	2.18	0.43
5:E:233:SER:CB	5:E:234:PRO:CD	2.93	0.43
5:E:55:PHE:CE2	5:E:218:ALA:CA	2.88	0.43
5:E:74:LYS:CD	5:E:76:GLN:HB2	2.47	0.43
6:F:139:GLN:C	6:F:143:GLU:OE1	2.57	0.43
1:A:620:C:N1	7:G:135:LEU:HD13	2.32	0.43
7:G:148:VAL:HG11	7:G:158:ILE:HG21	1.99	0.43
8:H:112:LEU:HA	8:H:112:LEU:HD22	1.76	0.43
8:H:139:LEU:O	8:H:141:GLN:O	2.37	0.43
8:H:57:LYS:O	8:H:58:ALA:C	2.57	0.43
8:H:73:ASN:C	8:H:73:ASN:HD22	2.22	0.43
9:I:10:LEU:O	9:I:11:ASN:O	2.37	0.43
9:I:74:ASP:N	9:I:74:ASP:OD1	2.43	0.43
9:I:76:ALA:CB	9:I:80:ARG:HE	2.30	0.43
10:J:5:ARG:CG	10:J:5:ARG:NH1	2.80	0.43
11:K:29:SER:N	11:K:32:LYS:HZ3	2.16	0.43
11:K:63:LEU:CD1	11:K:65:TYR:HE1	2.31	0.43
11:K:6:ILE:HD11	11:K:10:LEU:HD21	2.00	0.43
13:M:20:ALA:HB1	13:M:37:PRO:CB	2.47	0.43
13:M:75:ILE:CG2	13:M:76:ASN:N	2.81	0.43
14:N:106:LYS:CG	14:N:107:SER:N	2.81	0.43
14:N:20:TYR:O	14:N:30:VAL:HG13	2.19	0.43
14:N:43:SER:OG	14:N:47:VAL:CG1	2.67	0.43
1:A:551:U:C4'	15:O:119:LYS:HE2	2.47	0.43
15:O:60:LEU:CD2	15:O:64:TYR:HB3	2.48	0.43
15:O:70:ILE:HA	15:O:100:ILE:CG1	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1230:C:C4'	16:P:125:ARG:NH2	2.81	0.43
16:P:22:ILE:HD12	16:P:25:ILE:CD1	2.40	0.43
16:P:37:THR:HG1	16:P:56:LEU:HA	1.78	0.43
16:P:78:ILE:HA	16:P:81:LEU:HD11	2.00	0.43
18:R:70:LEU:HD21	18:R:77:ARG:NH1	2.19	0.43
19:S:53:VAL:CG1	19:S:79:VAL:HG22	2.30	0.43
20:T:38:ARG:CG	20:T:39:SER:H	2.30	0.43
20:T:84:LEU:O	20:T:85:VAL:C	2.55	0.43
21:U:27:GLY:O	21:U:28:GLU:C	2.56	0.43
21:U:55:ARG:HA	21:U:55:ARG:HD2	1.74	0.43
2:C:62:C:O2'	2:C:63:G:O5'	2.36	0.43
2:C:69:C:N3	2:C:70:G:N7	2.66	0.43
1:A:841:U:C2'	1:A:842:C:OP1	2.66	0.43
1:A:85:U:O2'	1:A:86:U:H5'	2.18	0.43
1:A:217:C:H2'	1:A:218:C:C6	2.54	0.43
1:A:1022:G:C6	1:A:1023:G:C6	3.06	0.43
1:A:1065:U:O2'	1:A:1066:C:OP2	2.35	0.43
1:A:1171:G:O2'	1:A:1172:C:H6	1.83	0.43
1:A:124:G:C5	1:A:125:U:C5	3.07	0.43
1:A:1273:G:C8	1:A:1274:G:C8	3.06	0.43
1:A:1317:C:C5	1:A:1317:C:OP1	2.71	0.43
1:A:1346:A:N6	1:A:1375:A:OP2	2.38	0.43
1:A:1376:U:C2	1:A:1377:A:N7	2.86	0.43
1:A:1387:G:C2	1:A:1388:C:C4	3.07	0.43
1:A:1436:U:C2	1:A:1437:C:C6	3.06	0.43
1:A:1439:C:H2'	1:A:1439:C:O2	2.18	0.43
1:A:1510:U:H2'	1:A:1511:G:H8	1.81	0.43
1:A:173:U:C1'	1:A:197:A:H2	2.10	0.43
1:A:246:A:C1'	1:A:282:A:N6	2.82	0.43
1:A:293:G:C2	1:A:294:U:C5	3.06	0.43
1:A:109:A:N3	1:A:327:A:C2	2.85	0.43
1:A:358:U:H2'	1:A:359:U:C6	2.53	0.43
1:A:376:G:H5''	19:S:5:ARG:CG	2.49	0.43
1:A:397:A:C6	1:A:548:G:C5	3.07	0.43
1:A:506:G:C6	1:A:507:C:N4	2.87	0.43
1:A:500:G:C5	1:A:546:G:N2	2.87	0.43
1:A:557:G:H2'	1:A:558:G:N9	2.34	0.43
1:A:687:A:C8	1:A:701:C:N4	2.86	0.43
1:A:68:G:C4'	1:A:171:A:C1'	2.97	0.43
1:A:703:G:O2'	1:A:704:A:OP2	2.29	0.43
1:A:766:A:C8	1:A:814:A:C6	3.07	0.43
1:A:769:G:C6	1:A:811:C:O2	2.72	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:893:C:OP2	1:A:893:C:C6	2.71	0.43
1:A:896:C:N3	1:A:897:C:C5	2.87	0.43
1:A:942:G:N3	1:A:943:U:C6	2.87	0.43
1:A:948:C:O2'	1:A:949:A:H5'	2.17	0.43
1:A:993:G:C6	1:A:1046:A:C6	3.06	0.43
3:D:35:A:C8	3:D:35:A:H3'	2.53	0.43
5:E:125:PRO:C	5:E:127:ILE:HG13	2.39	0.43
5:E:69:LEU:O	5:E:162:ILE:CB	2.66	0.43
5:E:50:GLU:HG3	5:E:200:ILE:HB	1.99	0.43
5:E:74:LYS:C	5:E:74:LYS:HD3	2.39	0.43
5:E:84:GLU:OE1	5:E:233:SER:CB	2.67	0.43
6:F:23:TYR:CE2	13:M:11:PHE:CE2	3.07	0.43
6:F:8:ILE:O	6:F:9:GLY:C	2.55	0.43
7:G:42:GLN:O	7:G:43:HIS:ND1	2.52	0.43
9:I:16:GLN:CG	9:I:17:SER:N	2.78	0.43
10:J:17:VAL:O	10:J:18:TYR:CD1	2.70	0.43
10:J:74:GLU:CG	10:J:75:VAL:N	2.80	0.43
10:J:94:ARG:CZ	10:J:98:SER:OG	2.67	0.43
11:K:103:VAL:HG11	11:K:109:ILE:O	2.19	0.43
11:K:33:GLU:O	11:K:34:GLU:C	2.57	0.43
11:K:48:TYR:CD1	11:K:48:TYR:C	2.91	0.43
14:N:32:ILE:CD1	14:N:72:ALA:HB2	2.49	0.43
15:O:119:LYS:O	15:O:120:TYR:CB	2.59	0.43
1:A:1216:G:P	17:Q:3:ARG:HH22	2.41	0.43
17:Q:24:CYS:CB	17:Q:40:CYS:N	2.74	0.43
1:A:581:G:H5''	18:R:61:GLY:HA3	1.99	0.43
20:T:104:LYS:HD3	20:T:105:ALA:H	1.75	0.43
20:T:104:LYS:CD	20:T:105:ALA:N	2.67	0.43
21:U:18:ARG:HH11	21:U:18:ARG:CG	2.32	0.43
21:U:58:LEU:HD22	21:U:62:GLU:HG3	2.00	0.43
22:V:5:LEU:CB	22:V:9:VAL:HG13	2.48	0.43
23:W:79:ARG:O	23:W:80:ARG:C	2.56	0.43
6:F:157:ILE:O	6:F:158:GLY:C	2.57	0.43
1:A:1046:A:N3	1:A:1047:G:C8	2.86	0.43
1:A:1057:G:H2'	1:A:1058:G:C8	2.51	0.43
1:A:1065:U:O2	1:A:1065:U:H2'	2.17	0.43
1:A:1102:A:H2'	1:A:1103:C:O5'	2.18	0.43
1:A:111:G:O5'	1:A:111:G:H8	2.02	0.43
1:A:1134:G:OP2	1:A:1135:U:C5	2.62	0.43
1:A:1176:A:C6	1:A:1177:G:C6	3.06	0.43
1:A:1308:U:H5''	16:P:92:HIS:CE1	2.53	0.43
1:A:1433:A:C2	1:A:1434:A:N3	2.86	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1465:C:C2'	1:A:1466:C:O5'	2.66	0.43
1:A:1499:A:H2'	1:A:1500:A:C5'	2.47	0.43
1:A:13:U:H4'	1:A:14:U:OP2	2.14	0.43
1:A:926:G:C2	1:A:1505:G:C4	3.07	0.43
1:A:1534:A:OP1	1:A:1534:A:C8	2.71	0.43
1:A:164:U:C2'	1:A:165:C:C6	3.02	0.43
1:A:237:C:OP1	20:T:40:LYS:CE	2.60	0.43
1:A:298:A:C3'	1:A:299:G:C8	2.93	0.43
1:A:363:A:N1	1:A:364:A:C2	2.87	0.43
1:A:44:G:C6	1:A:399:G:N1	2.86	0.43
1:A:520:A:N7	1:A:521:G:N9	2.67	0.43
1:A:52:G:C2'	1:A:53:A:O5'	2.67	0.43
1:A:595:G:H8	1:A:641:U:O4	2.02	0.43
1:A:690:G:N3	1:A:691:G:O4'	2.52	0.43
1:A:874:G:N2	1:A:875:C:C1'	2.81	0.43
1:A:893:C:N3	1:A:894:G:N7	2.66	0.43
1:A:770:C:O2'	1:A:899:C:N3	2.51	0.43
1:A:971:G:H2'	1:A:1365:G:C4'	2.44	0.43
2:C:36:U:H6	2:C:36:U:H5"	1.83	0.43
5:E:115:LEU:HD12	5:E:118:LEU:CD1	2.44	0.43
6:F:150:LYS:HZ2	6:F:152:ILE:HG23	1.84	0.43
1:A:1057:G:C5'	6:F:155:GLY:HA3	2.49	0.43
6:F:17:ASP:HB3	6:F:18:TRP:HE3	1.82	0.43
6:F:201:TYR:N	6:F:201:TYR:CD1	2.86	0.43
6:F:88:ARG:HE	6:F:101:LEU:HB3	1.83	0.43
7:G:4:TYR:HE2	7:G:8:VAL:HG22	1.82	0.43
7:G:88:VAL:HG12	7:G:88:VAL:O	2.19	0.43
8:H:111:GLU:H	8:H:111:GLU:HG3	1.66	0.43
8:H:55:VAL:O	8:H:56:GLN:C	2.55	0.43
9:I:75:LEU:CD2	9:I:79:LEU:HD21	2.48	0.43
1:A:878:G:O4'	11:K:3:THR:CG2	2.66	0.43
11:K:22:GLU:CA	11:K:63:LEU:HD13	2.48	0.43
12:L:27:THR:HG21	12:L:62:TYR:CD1	2.53	0.43
12:L:80:GLY:O	12:L:81:ILE:C	2.57	0.43
14:N:63:LEU:HD23	14:N:66:LEU:HD12	2.01	0.43
18:R:33:THR:CG2	18:R:87:ILE:CD1	2.81	0.43
18:R:36:ILE:HG13	18:R:59:MET:CE	2.47	0.43
18:R:55:GLY:O	18:R:56:LEU:C	2.55	0.43
18:R:53:HIS:O	18:R:56:LEU:N	2.52	0.43
19:S:6:LEU:HD23	19:S:17:TYR:CE2	2.53	0.43
20:T:5:VAL:CG2	20:T:60:ILE:HA	2.28	0.43
21:U:47:THR:N	21:U:49:LYS:HZ2	2.16	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:58:VAL:HG23	22:V:58:VAL:O	2.19	0.43
23:W:65:LYS:O	23:W:66:ALA:C	2.56	0.43
7:G:159:ARG:HG3	7:G:160:GLN:N	2.33	0.43
2:C:50:U:O5'	2:C:50:U:H6	2.01	0.43
1:A:1113:C:OP2	1:A:1113:C:C5	2.71	0.43
1:A:1150:U:H5'	1:A:1280:A:N1	2.33	0.43
1:A:1229:A:OP1	16:P:116:THR:CG2	2.66	0.43
1:A:1267:C:N4	1:A:1268:A:C2	2.83	0.43
1:A:1346:A:C8	1:A:1348:U:N3	2.87	0.43
1:A:1349:A:OP2	12:L:118:LYS:CD	2.56	0.43
1:A:1386:G:HO2'	1:A:1387:G:C5'	2.32	0.43
1:A:1479:C:C2	1:A:1480:G:C8	3.06	0.43
1:A:925:G:N3	1:A:1502:A:H1'	2.34	0.43
1:A:156:G:C5	1:A:166:G:C6	3.06	0.43
1:A:129(A):G:C2	1:A:191(A):G:C8	3.07	0.43
1:A:225:C:N3	1:A:226:G:C8	2.87	0.43
1:A:131:C:O2'	1:A:262:A:H1'	2.18	0.43
1:A:264:U:O2	1:A:264:U:C3'	2.66	0.43
1:A:286:G:O2'	1:A:287:U:H5'	2.18	0.43
1:A:316:G:N3	1:A:317:G:C8	2.87	0.43
1:A:425:G:N2	1:A:426:G:C1'	2.82	0.43
1:A:586:C:O2'	1:A:587:G:H5'	2.18	0.43
1:A:5:U:C5	7:G:86:LYS:CE	3.01	0.43
1:A:609:A:C2	1:A:610:G:C4	3.07	0.43
1:A:685:G:H2'	1:A:686:U:C6	2.53	0.43
1:A:861:G:HO2'	1:A:874:G:HO2'	1.64	0.43
1:A:893:C:C2	1:A:894:G:C8	3.06	0.43
1:A:916:G:C2	1:A:917:G:N7	2.86	0.43
1:A:949:A:O2'	1:A:971:G:N2	2.49	0.43
1:A:958:A:C2'	1:A:959:A:H5'	2.47	0.43
5:E:7:VAL:HG23	5:E:8:LYS:HG3	2.00	0.43
5:E:80:ILE:HG13	5:E:208:ILE:CD1	2.48	0.43
5:E:78:GLN:HE22	5:E:96:ARG:HH22	1.65	0.43
6:F:84:ILE:CD1	6:F:101:LEU:HD22	2.49	0.43
6:F:116:VAL:C	6:F:119:ARG:HB3	2.33	0.43
6:F:150:LYS:HE2	6:F:167:TRP:CE3	2.54	0.43
6:F:28:GLN:NE2	6:F:29:TYR:HB2	2.32	0.43
7:G:127:THR:O	7:G:146:ILE:HG23	2.18	0.43
8:H:102:ALA:CB	8:H:106:PRO:CB	2.96	0.43
8:H:144:THR:HG22	8:H:145:LYS:N	2.33	0.43
9:I:24:GLU:C	9:I:24:GLU:OE2	2.56	0.43
10:J:75:VAL:CB	10:J:145:ALA:HB1	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:146:GLU:C	10:J:148:ASN:N	2.68	0.43
10:J:27:ILE:HG12	10:J:43:PHE:CE1	2.54	0.43
10:J:30:ILE:O	10:J:31:MET:O	2.37	0.43
10:J:5:ARG:HB3	10:J:5:ARG:NH1	2.33	0.43
10:J:95:ARG:C	10:J:97:GLN:N	2.71	0.43
11:K:64:LYS:CE	11:K:79:VAL:HG11	2.49	0.43
12:L:97:LYS:HZ2	12:L:102:LEU:CD1	2.31	0.43
12:L:111:ARG:HD2	17:Q:61:TRP:NE1	2.33	0.43
1:A:1231:G:OP1	12:L:126:SER:HB3	2.18	0.43
14:N:104:GLN:NE2	14:N:106:LYS:HB2	2.19	0.43
14:N:124:LYS:HD3	14:N:125:PHE:HE1	1.81	0.43
15:O:28:LYS:CD	15:O:33:ARG:NH1	2.78	0.43
15:O:28:LYS:C	15:O:30:ALA:H	2.22	0.43
16:P:33:ALA:HA	16:P:59:TYR:CE2	2.53	0.43
16:P:37:THR:HG23	16:P:38:GLY:N	2.33	0.43
17:Q:22:THR:HG22	17:Q:33:VAL:HB	2.01	0.43
6:F:18:TRP:HH2	17:Q:57:ARG:HB2	1.82	0.43
19:S:52:ASP:CG	19:S:55:ARG:HB2	2.39	0.43
19:S:4:ILE:HG12	19:S:66:PRO:CA	2.48	0.43
21:U:39:VAL:O	21:U:40:LEU:C	2.54	0.43
21:U:41:LYS:HA	21:U:44:LEU:HD23	1.99	0.43
1:A:1537:U:H2'	1:A:1538:C:O4'	2.18	0.43
1:A:1538:C:C2	1:A:1539:C:C5	3.06	0.43
1:A:843:U:H3	5:E:37:ASN:CA	2.25	0.43
4:1:10:G:C6	4:1:11:U:O4	2.71	0.43
4:1:11:U:C2'	4:1:12:A:OP1	2.67	0.43
2:C:24:U:H2'	2:C:25:C:O4'	2.18	0.43
1:A:1073:U:O2'	1:A:1074:G:C5'	2.66	0.43
1:A:1126:U:O2'	1:A:1127:G:H5'	2.19	0.43
1:A:1226:C:O2	1:A:1226:C:H2'	2.19	0.43
1:A:1403:C:O2'	1:A:1404:C:O5'	2.32	0.43
1:A:1418:A:C2	1:A:1483:A:C6	3.06	0.43
1:A:1488:G:N1	1:A:1489:G:C5	2.87	0.43
1:A:1505:G:C5'	1:A:1506:U:O5'	2.62	0.43
1:A:1510:U:C2'	1:A:1511:G:O5'	2.66	0.43
1:A:16:A:N3	1:A:16:A:H2'	2.34	0.43
1:A:178:C:N3	1:A:179:A:N7	2.66	0.43
1:A:182:U:H3'	1:A:182:U:H6	1.83	0.43
1:A:195:A:P	23:W:68:LYS:HZ1	2.41	0.43
1:A:302:G:C6	1:A:303:A:C5	3.07	0.43
1:A:316:G:O6	1:A:338:A:N6	2.52	0.43
1:A:443:C:C2	1:A:444:C:C5	3.07	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:518:C:HO2'	1:A:519:C:P	2.38	0.43
1:A:531:U:H3'	1:A:531:U:OP2	2.18	0.43
1:A:20:U:H5'	1:A:572:A:N1	2.33	0.43
1:A:684:A:O3'	14:N:12:ARG:NH2	2.52	0.43
1:A:6:G:N2	8:H:98:THR:CG2	2.81	0.43
1:A:792:A:N3	1:A:794:A:N1	2.67	0.43
1:A:830:G:C2	1:A:857:C:C2	3.07	0.43
1:A:947:G:C4	1:A:948:C:C5	3.07	0.43
1:A:976:G:OP2	1:A:1358:U:C1'	2.66	0.43
2:C:35:A:C4	4:1:18:G:N2	2.87	0.43
5:E:131:PRO:O	5:E:135:GLN:OE1	2.36	0.43
5:E:115:LEU:CB	5:E:149:LEU:HD13	2.49	0.43
5:E:154:LEU:O	5:E:155:LEU:C	2.57	0.43
5:E:163:PHE:CD2	5:E:164:VAL:N	2.85	0.43
5:E:208:ILE:HD12	5:E:239:VAL:CG1	2.49	0.43
5:E:71:VAL:HG22	5:E:93:VAL:N	2.32	0.43
6:F:47:LEU:HD22	6:F:47:LEU:N	2.34	0.43
6:F:73:PRO:O	6:F:74:GLY:C	2.57	0.43
1:A:407:G:O2'	7:G:116:GLN:HA	2.17	0.43
7:G:3:ARG:HH21	7:G:74:GLN:CD	2.21	0.43
8:H:11:ILE:HG21	8:H:31:LEU:HD13	2.00	0.43
10:J:153:HIS:C	10:J:153:HIS:CD2	2.92	0.43
10:J:75:VAL:HG22	10:J:88:PRO:N	2.33	0.43
10:J:99:LEU:CD2	10:J:102:ARG:HD2	2.49	0.43
11:K:34:GLU:CG	11:K:118:VAL:HG23	2.47	0.43
11:K:65:TYR:HE2	11:K:78:GLN:HE22	1.67	0.43
1:A:1117:G:C5'	12:L:104:ARG:HD3	2.46	0.43
12:L:40:LEU:O	12:L:42:ARG:N	2.51	0.43
12:L:7:THR:HG22	12:L:83:ARG:NH1	2.33	0.43
13:M:3:LYS:CE	13:M:77:PRO:CD	2.94	0.43
14:N:40:ILE:HD13	14:N:40:ILE:H	1.79	0.43
15:O:100:ILE:CD1	15:O:100:ILE:H	2.03	0.43
15:O:102:ARG:NE	15:O:109:GLY:HA2	2.34	0.43
15:O:113:ARG:NH1	15:O:115:LYS:HB2	2.30	0.43
15:O:39:VAL:HB	15:O:57:LYS:CB	2.41	0.43
16:P:20:THR:HA	16:P:25:ILE:CB	2.48	0.43
16:P:46:LYS:HG3	16:P:47:ASP:CG	2.39	0.43
1:A:1049:U:OP1	17:Q:2:ALA:O	2.36	0.43
1:A:1114:C:H4'	17:Q:57:ARG:HH22	1.83	0.43
19:S:54:GLU:O	19:S:54:GLU:OE2	2.36	0.43
20:T:17:LYS:HE3	20:T:48:GLU:HA	2.01	0.43
20:T:60:ILE:HG21	20:T:72:ARG:HG3	1.95	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:47:THR:O	21:U:48:GLY:C	2.56	0.43
23:W:74:LYS:C	23:W:76:ALA:H	2.20	0.43
1:A:261:U:C4	23:W:79:ARG:NH2	2.87	0.43
1:A:1442:G:C4	1:A:1446:A:N1	2.87	0.43
2:C:15:G:C2	2:C:59:A:N1	2.86	0.43
3:D:1:G:N1	3:D:73:A:C5	2.87	0.43
15:O:16:GLU:O	15:O:17:LYS:O	2.36	0.43
20:T:26:GLN:HG2	20:T:37:LYS:HB3	1.99	0.43
19:S:46:PRO:HG2	19:S:47:ASP:H	1.84	0.43
1:A:1192:C:C4	1:A:1193:G:C4	3.04	0.43
1:A:1222:G:OP2	1:A:1322:C:H5	2.01	0.43
1:A:1287:A:C8	1:A:1288:A:N7	2.87	0.43
1:A:1290:G:C2	1:A:1291:G:C8	3.06	0.43
1:A:1433:A:C2'	1:A:1434:A:C5'	2.96	0.43
1:A:152:A:N6	1:A:169:C:C4	2.87	0.43
1:A:173:U:H4'	1:A:197:A:O4'	2.19	0.43
1:A:247:G:C2	1:A:282:A:H2	2.36	0.43
1:A:322:C:N4	1:A:332:G:H22	2.17	0.43
1:A:395:C:C2	1:A:396:G:N7	2.87	0.43
1:A:542:G:H21	1:A:543:C:H1'	1.84	0.43
1:A:598:U:H4'	11:K:94:TYR:CB	2.48	0.43
1:A:682:G:H2'	1:A:683:G:O5'	2.17	0.43
1:A:754:C:C5'	1:A:755:G:H8	2.28	0.43
1:A:832:C:C4	1:A:833:U:O4	2.72	0.43
1:A:948:C:O2'	1:A:949:A:O5'	2.37	0.43
1:A:957:U:H6	1:A:957:U:O5'	2.02	0.43
1:A:975:A:C8	1:A:1365:G:N2	2.87	0.43
5:E:10:LEU:HG	5:E:11:LEU:N	2.33	0.43
5:E:168:THR:OG1	5:E:192:SER:CA	2.61	0.43
6:F:76:VAL:HG11	6:F:103:VAL:HG11	2.01	0.43
7:G:148:VAL:HB	7:G:181:MET:HE3	1.99	0.43
7:G:32:ALA:N	7:G:34:GLU:O	2.52	0.43
8:H:132:ALA:O	8:H:135:THR:HB	2.18	0.43
8:H:19:MET:HE3	8:H:20:GLN:N	2.33	0.43
9:I:42:GLU:HG2	9:I:44:GLY:H	1.83	0.43
9:I:50:TYR:CD1	21:U:81:PHE:CZ	3.06	0.43
12:L:50:LEU:C	12:L:50:LEU:HD23	2.39	0.43
13:M:3:LYS:CE	13:M:3:LYS:CA	2.96	0.43
13:M:41:PRO:O	13:M:42:THR:C	2.57	0.43
14:N:85:ARG:HD3	14:N:85:ARG:HA	1.29	0.43
15:O:41:ARG:HH12	15:O:55:VAL:HG11	1.83	0.43
16:P:110:ARG:HG3	16:P:111:LYS:N	2.33	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:71:ARG:O	16:P:73:GLU:N	2.52	0.43
17:Q:3:ARG:HD2	17:Q:3:ARG:C	2.39	0.43
18:R:17:ARG:HG3	18:R:17:ARG:HH11	1.83	0.43
20:T:59:ILE:HG12	20:T:71:PHE:CB	2.41	0.43
21:U:59:SER:O	21:U:60:GLY:C	2.57	0.43
21:U:62:GLU:O	21:U:63:GLN:C	2.56	0.43
21:U:80:PRO:HB2	21:U:83:GLU:OE2	2.19	0.43
23:W:39:LYS:O	23:W:42:GLN:HB2	2.19	0.43
24:X:6:ARG:HB3	24:X:15:ARG:NH2	2.34	0.43
2:C:71:C:C2	2:C:72:A:C8	3.07	0.43
1:A:82:U:O2	1:A:87:A:H2	2.01	0.43
7:G:195:ALA:O	7:G:196:LEU:C	2.57	0.43
3:D:27:U:H2'	3:D:28:G:H8	1.83	0.43
3:D:29:C:H2'	3:D:30:G:O5'	2.17	0.43
11:K:54:ASP:N	11:K:54:ASP:OD1	2.52	0.43
1:A:103:C:O4'	1:A:151:A:H2	2.00	0.43
1:A:1067:A:C2	1:A:1068:G:H1'	2.54	0.43
1:A:1083:U:C4	1:A:1084:G:C6	3.07	0.43
1:A:108:G:H5''	1:A:109:A:C2	2.54	0.43
1:A:1131:G:OP2	12:L:20:ARG:NH2	2.52	0.43
1:A:1140:C:N3	1:A:1141:C:C5	2.87	0.43
1:A:1169:A:N1	1:A:1170:A:H2	2.16	0.43
1:A:1232:U:O5'	1:A:1232:U:H6	2.02	0.43
1:A:1241:G:C6	1:A:1242:C:C4	3.06	0.43
1:A:1247:U:O2'	1:A:1248:A:C5'	2.64	0.43
1:A:1287:A:N6	1:A:1288:A:N6	2.66	0.43
1:A:1299:A:C5	1:A:1301:U:H1'	2.53	0.43
1:A:1360:A:O2'	1:A:1361:G:H5'	2.19	0.43
1:A:1399:C:N3	1:A:1401:G:N3	2.67	0.43
1:A:1476:G:H2'	1:A:1477:C:H6	1.84	0.43
1:A:156:G:N2	1:A:157:G:H1'	2.34	0.43
1:A:67:C:O2'	1:A:171:A:H1'	2.19	0.43
1:A:242:C:H2'	1:A:243:A:C5'	2.48	0.43
1:A:267:C:H2'	1:A:268:C:H6	1.79	0.43
1:A:266:G:N2	1:A:269:C:H41	2.11	0.43
1:A:509:A:C6	1:A:510:A:C2	3.06	0.43
1:A:698:G:H2'	1:A:699:C:H6	1.84	0.43
1:A:712:A:H2'	1:A:713:G:C8	2.54	0.43
1:A:974:A:N9	17:Q:31:ARG:NH2	2.67	0.43
5:E:142:LEU:O	5:E:143:GLU:C	2.57	0.43
5:E:31:TYR:CZ	5:E:200:ILE:HG21	2.53	0.43
5:E:43:ASP:O	5:E:47:THR:CB	2.66	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:75:LYS:O	5:E:77:ALA:N	2.50	0.43
5:E:79:ASP:OD1	5:E:82:ARG:HG2	2.18	0.43
6:F:120:VAL:O	6:F:123:GLN:HB2	2.19	0.43
6:F:138:VAL:C	6:F:170:GLN:NE2	2.72	0.43
6:F:153:VAL:HG23	6:F:153:VAL:O	2.17	0.43
6:F:40:ARG:HG3	6:F:57:ILE:HD12	2.01	0.43
7:G:52:SER:OG	7:G:54:TYR:HB3	2.18	0.43
8:H:118:ILE:CG2	8:H:119:LEU:N	2.82	0.43
8:H:109:ILE:HD11	8:H:136:MET:HA	2.00	0.43
8:H:144:THR:O	8:H:147:ASP:N	2.52	0.43
8:H:33:VAL:O	8:H:34:VAL:CG2	2.67	0.43
8:H:78:HIS:HD2	8:H:78:HIS:N	2.13	0.43
9:I:46:ARG:CG	9:I:47:ARG:N	2.71	0.43
11:K:103:VAL:HB	11:K:109:ILE:N	2.33	0.43
11:K:136:GLU:N	11:K:136:GLU:OE1	2.51	0.43
12:L:79:LEU:CD1	12:L:101:PHE:HB3	2.48	0.43
12:L:113:LYS:HZ2	12:L:119:ALA:CB	2.32	0.43
12:L:113:LYS:O	12:L:115:GLY:N	2.50	0.43
12:L:91:ASP:O	12:L:92:TYR:HD2	2.01	0.43
13:M:50:ILE:HB	17:Q:41:ARG:CZ	2.49	0.43
14:N:82:VAL:O	14:N:108:ILE:HA	2.19	0.43
16:P:81:LEU:HG	16:P:88:ARG:NH2	2.34	0.43
17:Q:26:ARG:HG3	17:Q:39:LEU:HD22	2.00	0.43
19:S:78:GLY:O	19:S:79:VAL:CG2	2.66	0.43
21:U:47:THR:CB	21:U:49:LYS:NZ	2.71	0.43
22:V:22:LEU:C	22:V:22:LEU:HD23	2.39	0.43
23:W:25:ARG:HG2	23:W:29:LYS:HE2	2.01	0.43
2:C:76:A:H5'	2:C:76:A:H8	1.84	0.43
2:C:60:U:O2	2:C:60:U:C2'	2.50	0.43
2:C:70:G:N2	2:C:71:C:H1'	2.33	0.43
23:W:8:ARG:CZ	23:W:8:ARG:CB	2.95	0.43
1:A:1310:G:H3'	22:V:2:PRO:HD2	2.01	0.43
1:A:1063:C:C5'	1:A:1064:G:OP2	2.67	0.43
1:A:1068:G:C8	1:A:1094:G:C8	3.07	0.43
1:A:1301:U:C4	1:A:1303:C:C6	3.06	0.43
1:A:1415:G:H2'	1:A:1416:G:O5'	2.18	0.43
1:A:1430:C:N3	1:A:1471:G:C2	2.86	0.43
1:A:319:G:H5'	1:A:1468:A:H4'	2.01	0.43
1:A:150:C:N4	1:A:170:U:N3	2.67	0.43
1:A:1514:C:N4	1:A:1515:C:N4	2.67	0.43
1:A:151:A:H2'	1:A:152:A:H5'	2.00	0.43
1:A:153:C:O5'	1:A:153:C:H6	2.02	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:156:G:C6	1:A:166:G:C6	3.07	0.43
1:A:177:C:C4	1:A:178:C:C5	3.06	0.43
1:A:234:C:O2	1:A:235:C:C6	2.72	0.43
1:A:262:A:C2	1:A:263:A:C5	3.07	0.43
1:A:293:G:N2	1:A:294:U:C2	2.87	0.43
1:A:311:C:H2'	1:A:312:C:H6	1.84	0.43
1:A:338:A:C4	1:A:339:C:C6	3.06	0.43
1:A:440:A:H2'	1:A:442:C:H6	1.84	0.43
1:A:528:C:N4	15:O:49:ASN:HD22	2.10	0.43
1:A:541:G:H2'	1:A:542:G:O4'	2.19	0.43
1:A:683:G:C2'	1:A:684:A:O5'	2.67	0.43
1:A:6:G:H1	8:H:98:THR:CG2	2.31	0.43
1:A:761:G:C2'	1:A:762:C:H5'	2.49	0.43
1:A:777:A:N7	1:A:778:G:N7	2.67	0.43
1:A:788:U:C2	1:A:789:U:O2	2.72	0.43
1:A:585:G:H21	1:A:879:C:C4'	2.32	0.43
1:A:945:G:C2	1:A:946:A:C8	3.07	0.43
2:C:30:G:C2'	2:C:31:G:O5'	2.67	0.43
5:E:73:THR:CG2	5:E:95:GLN:O	2.66	0.43
7:G:10:ARG:CD	7:G:10:ARG:C	2.87	0.43
7:G:3:ARG:NH2	7:G:74:GLN:CD	2.72	0.43
1:A:5:U:C6	7:G:86:LYS:HE2	2.54	0.43
1:A:8:A:N3	8:H:102:ALA:O	2.52	0.43
1:A:7:G:N2	8:H:121:LYS:CB	2.75	0.43
1:A:10:A:OP2	8:H:126:ARG:HD2	2.19	0.43
8:H:20:GLN:O	8:H:21:ALA:C	2.55	0.43
8:H:28:PHE:HE1	8:H:50:GLU:CA	2.30	0.43
10:J:42:ILE:CG2	10:J:120:ILE:HD11	2.45	0.43
10:J:12:LEU:H	10:J:12:LEU:HD12	1.82	0.43
11:K:123:GLU:OE2	11:K:124:ALA:HA	2.18	0.43
1:A:826:C:H5'	11:K:12:ARG:NE	2.34	0.43
11:K:14:ARG:CD	11:K:15:ASN:N	2.82	0.43
11:K:8:ASP:C	11:K:11:THR:OG1	2.56	0.43
12:L:2:GLU:O	12:L:20:ARG:CG	2.67	0.43
12:L:86:VAL:O	12:L:90:PRO:N	2.51	0.43
13:M:13:HIS:O	13:M:14:LYS:CD	2.67	0.43
13:M:80:LYS:O	13:M:81:THR:C	2.58	0.43
14:N:33:THR:HB	14:N:38:ASN:O	2.19	0.43
15:O:33:ARG:CA	15:O:33:ARG:HE	2.25	0.43
15:O:58:VAL:HG12	15:O:59:ARG:O	2.19	0.43
22:V:12:ASP:O	22:V:16:LEU:CD2	2.66	0.43
22:V:37:ARG:HA	22:V:37:ARG:HD3	1.65	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:21:A:H2'	2:C:22:G:C8	2.54	0.43
3:D:52:G:C2	3:D:53:G:H1'	2.53	0.43
2:C:26:G:N3	2:C:26:G:C2'	2.80	0.43
1:A:1076:C:C2	1:A:1082:G:N2	2.87	0.42
1:A:1148:U:O4'	12:L:16:ARG:HD2	2.18	0.42
1:A:1244:C:N4	1:A:1245:A:H62	2.17	0.42
1:A:136:C:H2'	1:A:137:C:C6	2.54	0.42
1:A:1419:G:C2	1:A:1420:C:C2	3.07	0.42
1:A:1464:G:N1	1:A:1465:C:N4	2.67	0.42
1:A:1498:U:O2'	1:A:1499:A:O5'	2.36	0.42
1:A:1514:C:C2	1:A:1515:C:C5	3.07	0.42
1:A:186(C):G:H2'	1:A:186(D):C:C5	2.53	0.42
1:A:219:C:C3'	1:A:219:C:H6	2.24	0.42
1:A:230:G:N2	1:A:231:G:C1'	2.76	0.42
1:A:231:G:C5	1:A:232:G:N7	2.87	0.42
1:A:264:U:O4	1:A:265:G:C2	2.72	0.42
1:A:282:A:C4	1:A:283:C:C5	3.07	0.42
1:A:290:C:C6	1:A:290:C:C3'	3.02	0.42
1:A:299:G:N1	1:A:300:A:C2	2.87	0.42
1:A:310:G:H2'	1:A:311:C:H6	1.83	0.42
1:A:362:G:H3'	15:O:34:ARG:NH2	2.34	0.42
1:A:390:C:O2'	1:A:391:G:H5'	2.19	0.42
1:A:419:C:C4	1:A:420:U:C5	3.07	0.42
1:A:495:A:H1'	1:A:496:A:C8	2.54	0.42
1:A:519:C:C2'	1:A:520:A:C5'	2.88	0.42
1:A:570:G:C2	1:A:873:A:C2	3.07	0.42
1:A:628:G:C2'	1:A:629:G:O4'	2.66	0.42
1:A:606:G:H2'	1:A:631:G:H22	1.83	0.42
1:A:64:G:H5'	1:A:66:G:OP1	2.19	0.42
1:A:662:G:N2	1:A:663:A:C2	2.87	0.42
1:A:689:C:P	14:N:27:ASN:HD21	2.41	0.42
1:A:712:A:H2'	1:A:713:G:H8	1.84	0.42
1:A:739:C:C2	1:A:740:U:C6	3.07	0.42
1:A:741:G:C4	1:A:742:G:C8	3.07	0.42
1:A:798:G:C6	1:A:799:G:C8	3.07	0.42
1:A:834:C:N4	1:A:853:G:O6	2.52	0.42
1:A:854:G:C6	1:A:855:G:N7	2.86	0.42
1:A:872:A:C2	1:A:874:G:N7	2.87	0.42
1:A:922:G:H2'	1:A:923:A:H8	1.82	0.42
5:E:207:ALA:O	5:E:208:ILE:C	2.56	0.42
5:E:84:GLU:HB2	5:E:215:LEU:HD13	2.01	0.42
6:F:124:ILE:CG1	6:F:130:VAL:HG13	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:184:TYR:CD2	6:F:184:TYR:C	2.91	0.42
7:G:64:LEU:C	7:G:64:LEU:HD13	2.39	0.42
9:I:95:GLU:H	9:I:96:PRO:CD	2.31	0.42
11:K:29:SER:O	11:K:32:LYS:NZ	2.52	0.42
11:K:32:LYS:O	11:K:33:GLU:C	2.57	0.42
11:K:60:ARG:CG	11:K:61:VAL:N	2.80	0.42
11:K:88:LYS:HZ3	11:K:88:LYS:CB	2.32	0.42
11:K:8:ASP:HA	11:K:11:THR:HG1	1.84	0.42
11:K:96:GLY:O	11:K:97:VAL:CG1	2.67	0.42
12:L:104:ARG:O	12:L:105:ASP:HB2	2.18	0.42
12:L:19:LEU:CD2	12:L:59:PHE:HD2	2.25	0.42
13:M:11:PHE:O	13:M:12:ASP:C	2.57	0.42
13:M:3:LYS:HG3	13:M:75:ILE:HA	1.99	0.42
14:N:102:GLY:CA	14:N:105:VAL:HG23	2.43	0.42
14:N:126:ARG:C	14:N:128:ALA:H	2.22	0.42
14:N:44:SER:HB2	14:N:47:VAL:HG23	2.01	0.42
16:P:19:LEU:HD21	16:P:30:ALA:HA	2.00	0.42
16:P:14:ARG:HB2	16:P:42:ALA:O	2.19	0.42
16:P:24:GLY:O	16:P:66:LEU:HD13	2.19	0.42
16:P:82:MET:SD	16:P:93:ARG:CG	3.00	0.42
16:P:84:ILE:HG13	16:P:86:CYS:SG	2.59	0.42
17:Q:45:ARG:HH22	17:Q:49:HIS:CD2	2.32	0.42
21:U:73:ALA:HB3	21:U:79:LEU:HD21	2.00	0.42
23:W:89:ARG:O	23:W:92:LEU:N	2.52	0.42
10:J:129:GLU:CD	10:J:131:LYS:CD	2.87	0.42
2:C:44:A:C2	2:C:45:G:H1'	2.54	0.42
22:V:29:ARG:CG	22:V:30:LEU:H	2.20	0.42
1:A:1091:U:O2	1:A:1093:A:C8	2.72	0.42
1:A:1176:A:N6	1:A:1177:G:N1	2.66	0.42
1:A:1239:A:H1'	1:A:1241:G:N9	2.33	0.42
1:A:1278:U:OP1	1:A:1281:U:O4	2.38	0.42
1:A:1309:G:C5	1:A:1329:A:C2	3.07	0.42
1:A:1439:C:N3	1:A:1440:C:N4	2.68	0.42
1:A:265:G:C2'	1:A:266:G:H5'	2.48	0.42
1:A:323:U:O5'	1:A:323:U:H6	2.02	0.42
1:A:376:G:O2'	1:A:377:G:H5'	2.19	0.42
1:A:426:G:C2'	1:A:427:U:O5'	2.67	0.42
1:A:553:A:C2'	1:A:554:C:O4'	2.67	0.42
1:A:579:G:C2'	1:A:580:U:C5'	2.94	0.42
1:A:708:C:H4'	14:N:37:GLY:HA3	2.01	0.42
1:A:735:C:O2'	21:U:75:ILE:CD1	2.64	0.42
1:A:949:A:C2	1:A:1233:G:N3	2.87	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:959:A:H2	1:A:1221:G:N3	2.17	0.42
5:E:118:LEU:CD1	5:E:145:LEU:HD23	2.41	0.42
5:E:51:LEU:HG	5:E:51:LEU:H	1.41	0.42
6:F:126:ARG:HB2	6:F:126:ARG:HE	1.62	0.42
6:F:16:ARG:HH12	6:F:184:TYR:N	2.16	0.42
6:F:25:GLY:O	6:F:29:TYR:HB2	2.19	0.42
6:F:48:TYR:O	6:F:51:GLY:N	2.51	0.42
7:G:131:ARG:HB2	7:G:132:ARG:H	1.55	0.42
7:G:194:LEU:HD22	7:G:194:LEU:N	2.33	0.42
8:H:108:ALA:O	8:H:109:ILE:O	2.37	0.42
8:H:76:ILE:HG21	8:H:142:LEU:CG	2.49	0.42
9:I:39:LYS:HB2	9:I:62:TRP:CZ3	2.54	0.42
9:I:39:LYS:O	9:I:63:TYR:HA	2.19	0.42
10:J:90:GLU:N	10:J:90:GLU:CD	2.72	0.42
11:K:98:LYS:HA	11:K:100:ILE:HD11	2.02	0.42
11:K:102:ARG:NH2	11:K:106:GLY:N	2.67	0.42
11:K:104:ARG:O	11:K:105:ARG:C	2.57	0.42
11:K:40:ALA:C	11:K:42:GLU:N	2.72	0.42
12:L:47:LEU:HD13	12:L:50:LEU:HB3	2.01	0.42
12:L:51:ARG:CZ	12:L:51:ARG:CB	2.96	0.42
13:M:29:ARG:O	13:M:30:SER:CB	2.68	0.42
14:N:84:VAL:HG21	14:N:110:ASP:HA	2.02	0.42
15:O:27:LEU:HD21	15:O:62:SER:OG	2.18	0.42
15:O:97:ARG:C	15:O:98:TYR:CD1	2.93	0.42
16:P:15:VAL:HG11	16:P:34:LEU:CD2	2.50	0.42
16:P:23:TYR:N	16:P:67:GLU:OE1	2.45	0.42
16:P:70:LEU:CD2	16:P:70:LEU:C	2.88	0.42
18:R:54:ARG:HH21	18:R:58:MET:CE	2.32	0.42
18:R:62:GLN:CD	18:R:65:ARG:NH2	2.72	0.42
19:S:10:GLY:CA	19:S:14:ASN:OD1	2.67	0.42
20:T:103:GLY:O	20:T:104:LYS:O	2.37	0.42
20:T:43:LEU:HD12	20:T:69:LYS:CG	2.44	0.42
21:U:28:GLU:O	21:U:28:GLU:OE1	2.36	0.42
23:W:25:ARG:HB2	23:W:25:ARG:CZ	2.49	0.42
23:W:85:MET:HB3	23:W:85:MET:HE2	1.90	0.42
1:A:999:U:C4	1:A:1042:G:N1	2.88	0.42
1:A:1542:U:C2'	1:A:1542:U:O2	2.68	0.42
1:A:1498:U:C4	4:1:17:U:H5''	2.55	0.42
1:A:1108:G:C5	1:A:1109:C:C4	3.07	0.42
1:A:1128:C:C6	1:A:1139:G:O6	2.72	0.42
1:A:1155:G:H2'	1:A:1156:G:C8	2.54	0.42
1:A:1174:G:H2'	1:A:1175:G:C5'	2.46	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1224:G:H1	1:A:1362(A):C:N4	2.17	0.42
1:A:1224:G:O2'	1:A:1225:A:P	2.76	0.42
1:A:1254:C:OP1	13:M:45:ARG:CD	2.67	0.42
1:A:1150:U:C4'	1:A:1280:A:N1	2.82	0.42
1:A:1286:A:N3	24:X:18:TYR:CZ	2.87	0.42
1:A:1285:A:C1'	1:A:1286:A:N7	2.82	0.42
1:A:1308:U:H2'	1:A:1309:G:C8	2.53	0.42
1:A:1317:C:N4	1:A:1318:A:C2	2.87	0.42
1:A:1315:U:C2'	1:A:1360:A:N3	2.81	0.42
1:A:1401:G:N7	1:A:1402:C:C6	2.87	0.42
1:A:1433:A:H62	1:A:1467:G:N2	2.13	0.42
1:A:1488:G:C5	1:A:1489:G:N7	2.87	0.42
1:A:141:A:N3	1:A:182:U:O2	2.52	0.42
1:A:20:U:N3	1:A:21:G:C4	2.87	0.42
1:A:238:G:OP1	20:T:25:ARG:NH1	2.52	0.42
1:A:251:G:N2	1:A:266:G:O6	2.51	0.42
1:A:294:U:H2'	1:A:295:C:C6	2.53	0.42
1:A:482:A:H2	1:A:483:C:C1'	2.30	0.42
1:A:503:C:C2	1:A:504:C:C6	3.08	0.42
1:A:503:C:O2'	1:A:510:A:N1	2.47	0.42
1:A:53:A:C6	1:A:54:C:C5	3.07	0.42
1:A:549:C:H2'	1:A:550:G:O5'	2.18	0.42
1:A:554:C:H2'	1:A:554:C:O2	2.18	0.42
1:A:57:G:C5	1:A:58:C:C5	3.06	0.42
1:A:593:G:C5	1:A:594:G:C8	3.07	0.42
1:A:619:U:H3	7:G:135:LEU:CD2	2.30	0.42
1:A:658:G:C2	1:A:659:U:C2	3.08	0.42
1:A:739:C:H2'	1:A:739:C:O2	2.20	0.42
1:A:825:G:C2'	1:A:826:C:O5'	2.67	0.42
1:A:888:G:C2	1:A:909:A:N6	2.86	0.42
3:D:41:G:N3	3:D:42:C:H1'	2.35	0.42
5:E:181:PHE:CE1	11:K:71:GLY:CA	3.02	0.42
5:E:222:ILE:HD12	5:E:223:ILE:H	1.82	0.42
5:E:59:GLU:N	5:E:221:LEU:HD11	2.34	0.42
5:E:68:ILE:HD12	5:E:70:PHE:CE1	2.54	0.42
6:F:27:LYS:HE3	6:F:27:LYS:HB2	1.89	0.42
6:F:49:SER:C	6:F:51:GLY:N	2.72	0.42
7:G:148:VAL:HG21	7:G:162:LEU:HD21	2.02	0.42
7:G:185:PHE:CD2	7:G:186:LEU:N	2.84	0.42
8:H:6:PHE:CE2	8:H:35:GLY:HA2	2.54	0.42
8:H:50:GLU:O	8:H:51:VAL:C	2.58	0.42
9:I:19:LEU:CD2	9:I:23:LYS:HZ3	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:102:ARG:O	10:J:103:TRP:C	2.57	0.42
10:J:72:ARG:N	10:J:91:VAL:HG21	2.35	0.42
11:K:26:VAL:O	11:K:58:TYR:HD1	2.03	0.42
11:K:6:ILE:CG2	11:K:7:ALA:N	2.59	0.42
11:K:79:VAL:O	11:K:81:HIS:N	2.46	0.42
13:M:75:ILE:CG2	13:M:76:ASN:H	2.31	0.42
13:M:79:ARG:HH22	13:M:82:ILE:HG21	1.84	0.42
13:M:9:ARG:HH11	13:M:9:ARG:CB	2.32	0.42
15:O:8:ASN:O	15:O:9:GLN:C	2.56	0.42
16:P:16:ASP:HB3	16:P:34:LEU:HD11	2.00	0.42
16:P:14:ARG:CB	16:P:44:ARG:HH11	2.29	0.42
1:A:1358:U:H5''	17:Q:34:TYR:HA	2.01	0.42
3:D:14:A:H2'	3:D:14:A:N3	2.34	0.42
3:D:57:G:C8	3:D:57:G:OP2	2.73	0.42
1:A:1026:G:C8	1:A:1027:C:C5	3.06	0.42
1:A:1028(B):C:H2'	1:A:1029:G:O5'	2.19	0.42
1:A:998:G:C6	1:A:998(A):C:C5	3.07	0.42
1:A:988:G:H4'	1:A:1014:A:H61	1.84	0.42
1:A:1066:C:H2'	1:A:1067:A:C8	2.54	0.42
1:A:1152:A:C6	1:A:1153:C:C5	3.07	0.42
1:A:1188:A:C4	1:A:1189:C:C5	3.07	0.42
1:A:1260:C:P	1:A:1284:C:H4'	2.60	0.42
1:A:1236:A:C5'	1:A:1305:G:OP1	2.59	0.42
1:A:1346:A:H62	1:A:1374:A:H3'	1.77	0.42
1:A:1459:C:P	23:W:27:LYS:NZ	2.84	0.42
1:A:174:C:C5	1:A:175:C:C5	3.07	0.42
1:A:295:C:H2'	1:A:296:U:C6	2.53	0.42
1:A:338:A:N3	1:A:339:C:C6	2.87	0.42
1:A:374:A:C6	1:A:375:U:C4	3.08	0.42
1:A:374:A:O5'	1:A:374:A:C8	2.73	0.42
1:A:411:A:C5	1:A:429:U:H5	2.36	0.42
1:A:420:U:O3'	1:A:421:U:C5	2.73	0.42
1:A:432:A:C8	1:A:432:A:C3'	3.02	0.42
1:A:448:A:H2'	1:A:449:C:C5	2.54	0.42
1:A:552:U:H1'	15:O:32:PHE:HE1	1.84	0.42
1:A:590:C:O2'	1:A:591:U:H5'	2.19	0.42
1:A:622:A:C8	1:A:623:C:C6	3.06	0.42
1:A:642:A:C6	11:K:115:SER:N	2.88	0.42
1:A:652:U:H5'	1:A:653:A:OP1	2.19	0.42
1:A:686:U:OP1	1:A:686:U:H4'	2.18	0.42
1:A:6:G:H1	8:H:98:THR:HG23	1.83	0.42
1:A:724:G:H21	1:A:725:G:C1'	2.33	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:828:A:N7	1:A:829:G:C4	2.87	0.42
1:A:873:A:P	1:A:873:A:O4'	2.77	0.42
1:A:969:A:C2	1:A:970:C:C2	3.08	0.42
5:E:76:GLN:NE2	5:E:206:ASP:O	2.52	0.42
6:F:57:ILE:HG12	6:F:66:VAL:HG22	1.99	0.42
7:G:145:GLU:C	7:G:146:ILE:HG13	2.39	0.42
7:G:14:ARG:HH11	7:G:59:ARG:HH21	1.66	0.42
7:G:29:PRO:O	7:G:30:LYS:CB	2.67	0.42
7:G:31:CYS:C	7:G:33:MET:N	2.73	0.42
8:H:107:ARG:O	8:H:111:GLU:HG3	2.19	0.42
8:H:15:ARG:HB3	8:H:15:ARG:CZ	2.48	0.42
9:I:14:LEU:CD1	9:I:18:GLN:CB	2.96	0.42
9:I:14:LEU:HG	9:I:19:LEU:HD12	2.00	0.42
10:J:50:ILE:HA	10:J:54:THR:HG22	1.99	0.42
10:J:62:PHE:HB3	10:J:63:LYS:CE	2.49	0.42
10:J:70:LYS:O	10:J:71:PRO:O	2.37	0.42
11:K:15:ASN:O	11:K:16:ALA:C	2.57	0.42
1:A:756:C:O4'	11:K:1:MET:HE2	2.17	0.42
12:L:33:PHE:CZ	12:L:46:ALA:O	2.73	0.42
12:L:78:LYS:O	12:L:81:ILE:HB	2.19	0.42
15:O:42:THR:CG2	15:O:42:THR:O	2.66	0.42
15:O:61:THR:C	15:O:62:SER:HG	2.21	0.42
16:P:20:THR:O	16:P:20:THR:HG22	2.19	0.42
16:P:9:ILE:N	16:P:10:PRO:CD	2.82	0.42
17:Q:14:PRO:O	17:Q:16:PHE:O	2.37	0.42
18:R:17:ARG:NH2	18:R:77:ARG:HG3	2.33	0.42
18:R:87:ILE:O	18:R:88:ARG:O	2.38	0.42
19:S:4:ILE:HA	19:S:20:VAL:O	2.19	0.42
19:S:54:GLU:O	19:S:57:ARG:N	2.52	0.42
19:S:8:ARG:C	19:S:9:PHE:HD2	2.23	0.42
21:U:34:TYR:HA	21:U:69:THR:CG2	2.49	0.42
21:U:34:TYR:HB3	21:U:69:THR:HG23	2.01	0.42
21:U:25:THR:CG2	21:U:42:ARG:NH2	2.73	0.42
22:V:11:VAL:CG1	22:V:16:LEU:HD11	2.49	0.42
23:W:16:HIS:O	23:W:20:LEU:HG	2.19	0.42
23:W:27:LYS:O	23:W:28:ALA:C	2.58	0.42
23:W:53:LEU:O	23:W:56:MET:HB3	2.20	0.42
2:C:20:U:H3'	2:C:20:U:C2	2.54	0.42
2:C:19:G:C5'	2:C:20:U:OP2	2.65	0.42
2:C:61:C:C2	2:C:62:C:C5	3.07	0.42
3:D:18:G:H2'	3:D:19:G:O5'	2.18	0.42
1:A:1003:G:N7	1:A:1004:A:C2	2.86	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:82:U:C6	1:A:85:U:OP2	2.72	0.42
1:A:89:U:C2	1:A:90:C:C5	3.07	0.42
9:I:28:ARG:O	9:I:32:ASN:CG	2.58	0.42
3:D:26:A:C2	3:D:27:U:C6	3.07	0.42
4:1:4:A:H2'	4:1:5:A:O4'	2.19	0.42
1:A:457:C:C6	1:A:457:C:C3'	3.02	0.42
2:C:23:C:C2'	2:C:23:C:O2	2.66	0.42
1:A:1085:U:H5'	1:A:1094:G:C2	2.53	0.42
1:A:1104:G:H2'	1:A:1105:A:C8	2.54	0.42
1:A:1161:C:C2	1:A:1162:C:C6	3.07	0.42
1:A:1191:A:H5''	6:F:4:LYS:HZ3	1.84	0.42
1:A:1228:C:H4'	16:P:115:LYS:C	2.38	0.42
1:A:1270:C:H2'	1:A:1271:G:O5'	2.20	0.42
1:A:1126:U:C5'	1:A:1281:U:O4'	2.68	0.42
1:A:1316:G:N3	1:A:1318:A:P	2.92	0.42
1:A:133:U:C5'	1:A:133:U:H6	2.32	0.42
1:A:1410:G:C4	1:A:1411:C:C5	3.07	0.42
1:A:1423:G:O2'	1:A:1424:C:O4'	2.33	0.42
1:A:1512:U:H2'	1:A:1513:A:H8	1.82	0.42
1:A:151:A:N6	1:A:152:A:N3	2.67	0.42
1:A:153:C:C2'	1:A:154:C:O5'	2.67	0.42
1:A:173:U:H5'	1:A:197:A:C2'	2.50	0.42
1:A:188:U:C6	1:A:188:U:OP2	2.73	0.42
1:A:254:G:O4'	20:T:15:MET:HG2	2.19	0.42
1:A:310:G:OP2	19:S:27:LYS:HE2	2.20	0.42
1:A:371:G:N2	1:A:372:C:C6	2.87	0.42
1:A:425:G:H21	1:A:426:G:C1'	2.32	0.42
1:A:458:C:O5'	1:A:458:C:H6	2.01	0.42
1:A:532:A:H5''	6:F:161:GLU:OE2	2.18	0.42
1:A:587:G:N2	1:A:755:G:C8	2.88	0.42
1:A:627:G:H2'	1:A:628:G:C8	2.49	0.42
1:A:693:G:O5'	1:A:693:G:H8	2.02	0.42
1:A:787:A:H2'	1:A:788:U:H5'	2.02	0.42
1:A:815:A:C4	1:A:1529:G:N1	2.88	0.42
1:A:834:C:C4	1:A:853:G:C6	3.07	0.42
1:A:872:A:O2'	1:A:873:A:P	2.76	0.42
1:A:1230:C:OP1	2:C:30:G:H4'	2.20	0.42
5:E:88:ALA:CB	5:E:222:ILE:HD11	2.48	0.42
6:F:131:ARG:HH12	8:H:51:VAL:H	1.65	0.42
6:F:40:ARG:HG3	6:F:57:ILE:CD1	2.50	0.42
7:G:129:ASN:ND2	7:G:145:GLU:CG	2.82	0.42
7:G:172:PRO:HG3	7:G:193:ASP:HB3	1.97	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:107:ALA:CB	10:J:123:GLU:OE1	2.67	0.42
10:J:14:PRO:HB3	10:J:20:ASP:N	2.35	0.42
10:J:52:GLU:O	10:J:53:LYS:C	2.57	0.42
11:K:44:PHE:O	11:K:64:LYS:HD3	2.19	0.42
12:L:5:TYR:CE1	12:L:18:PHE:CZ	3.07	0.42
12:L:52:ALA:CB	12:L:85:LEU:HD21	2.50	0.42
12:L:49:PRO:HD2	12:L:78:LYS:HG2	2.01	0.42
12:L:79:LEU:HD13	12:L:101:PHE:HB2	2.01	0.42
6:F:23:TYR:CD1	13:M:11:PHE:N	2.88	0.42
13:M:81:THR:HG22	13:M:85:LEU:HD11	2.00	0.42
1:A:691:G:O6	14:N:52:GLY:O	2.37	0.42
14:N:63:LEU:O	14:N:64:ALA:C	2.57	0.42
15:O:102:ARG:NH2	15:O:109:GLY:C	2.73	0.42
15:O:5:PRO:O	15:O:9:GLN:OE1	2.38	0.42
13:M:50:ILE:H	17:Q:41:ARG:HD2	1.85	0.42
17:Q:51:GLY:C	17:Q:53:LEU:H	2.23	0.42
21:U:29:PHE:CZ	21:U:39:VAL:CG1	3.03	0.42
21:U:43:PHE:N	21:U:43:PHE:CD1	2.88	0.42
24:X:13:ILE:CG2	24:X:14:TRP:N	2.82	0.42
2:C:44:A:C2'	2:C:45:G:C5'	2.93	0.42
1:A:216:G:C2	1:A:217:C:C4	3.08	0.42
15:O:16:GLU:O	15:O:17:LYS:HB3	2.18	0.42
3:D:29:C:C2'	3:D:30:G:O5'	2.67	0.42
4:1:8:A:C8	4:1:8:A:H5''	2.55	0.42
1:A:102:G:H1'	1:A:152:A:H4'	2.01	0.42
1:A:105:G:C2'	1:A:106:C:C5	3.00	0.42
1:A:1064:G:N2	1:A:1191:A:N7	2.67	0.42
1:A:1349:A:C2'	1:A:1350:A:H5'	2.50	0.42
1:A:1350:A:OP2	12:L:118:LYS:CE	2.56	0.42
1:A:1361:G:C8	1:A:1361:G:C3'	3.02	0.42
1:A:1488:G:H2'	1:A:1489:G:H8	1.84	0.42
1:A:1515:C:HO2'	1:A:1516:G:C5'	2.33	0.42
1:A:186(B):C:C2	1:A:186(C):G:C8	3.07	0.42
1:A:192:U:C1'	23:W:103:GLY:CA	2.88	0.42
1:A:257:G:H2'	1:A:258:G:H5'	2.02	0.42
1:A:280:C:H1'	20:T:38:ARG:CD	2.50	0.42
1:A:299:G:C6	1:A:300:A:N6	2.87	0.42
1:A:327:A:C2	1:A:329:A:N3	2.87	0.42
1:A:363:A:H2'	1:A:364:A:H5'	2.00	0.42
1:A:446:G:C2'	1:A:447:G:H5'	2.49	0.42
1:A:453:A:C6	1:A:454:C:N4	2.88	0.42
1:A:468:A:C5	1:A:474:G:N7	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:448:A:C8	1:A:487:A:N1	2.87	0.42
1:A:629:G:C2	1:A:630:G:C8	3.08	0.42
1:A:687:A:N6	1:A:703:G:H1'	2.10	0.42
1:A:774:G:H3'	1:A:775:G:H8	1.85	0.42
1:A:832:C:C4	1:A:833:U:C4	3.08	0.42
1:A:833:U:H6	1:A:833:U:O5'	2.03	0.42
1:A:854:G:N1	1:A:855:G:C5	2.88	0.42
1:A:897:C:H2'	1:A:898:G:H8	1.85	0.42
1:A:937:A:N7	1:A:938:A:N7	2.68	0.42
1:A:946:A:C2	1:A:947:G:C6	3.08	0.42
1:A:979:C:O2	1:A:980:C:O4'	2.37	0.42
5:E:72:GLY:CA	5:E:165:VAL:HG11	2.49	0.42
5:E:187:LEU:HA	5:E:201:ILE:HB	2.01	0.42
6:F:107:GLN:OE1	6:F:111:LEU:CD2	2.68	0.42
6:F:40:ARG:C	6:F:43:LEU:HB3	2.38	0.42
7:G:128:VAL:HG22	7:G:133:VAL:HB	2.00	0.42
8:H:122:GLU:N	8:H:122:GLU:CD	2.72	0.42
8:H:89:ILE:CD1	8:H:120:THR:OG1	2.68	0.42
8:H:89:ILE:CG2	8:H:89:ILE:O	2.68	0.42
9:I:14:LEU:HD11	9:I:19:LEU:CA	2.48	0.42
9:I:14:LEU:HD13	9:I:18:GLN:CG	2.49	0.42
9:I:36:ARG:NH1	9:I:66:GLU:HG2	2.35	0.42
10:J:22:LEU:CD1	10:J:97:GLN:NE2	2.83	0.42
11:K:14:ARG:CA	11:K:17:THR:OG1	2.68	0.42
11:K:30:ARG:O	11:K:31:PHE:C	2.57	0.42
11:K:51:VAL:HG21	11:K:60:ARG:HB2	2.01	0.42
12:L:79:LEU:HD22	12:L:101:PHE:CD2	2.55	0.42
12:L:17:VAL:HA	12:L:63:ILE:CG2	2.42	0.42
12:L:3:GLN:HG3	12:L:20:ARG:CG	2.49	0.42
1:A:1280:A:C4	13:M:41:PRO:HG3	2.55	0.42
1:A:1231:G:C4'	16:P:126:LYS:NZ	2.82	0.42
18:R:41:GLU:HA	18:R:44:LYS:HD2	2.00	0.42
1:A:668:G:O2'	18:R:46:HIS:CE1	2.72	0.42
19:S:6:LEU:CB	19:S:17:TYR:HB3	2.44	0.42
20:T:18:THR:CG2	20:T:19:VAL:N	2.83	0.42
20:T:29:HIS:CA	20:T:36:ILE:HD12	2.48	0.42
21:U:40:LEU:O	21:U:42:ARG:N	2.52	0.42
24:X:3:LYS:HD2	24:X:14:TRP:CB	2.48	0.42
2:C:75:C:C2'	2:C:76:A:O3'	2.68	0.42
2:C:53:G:H2'	2:C:54:U:H6	1.83	0.42
3:D:50:G:C6	3:D:65:U:N3	2.87	0.42
1:A:87:A:N7	1:A:88:C:C5	2.86	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:1:22:A:H2'	4:1:23:A:O5'	2.19	0.42
1:A:1130:A:C6	1:A:1146:A:N1	2.87	0.42
1:A:1141:C:C2	1:A:1142:G:C8	3.07	0.42
1:A:1166:G:C2	1:A:1169:A:P	3.13	0.42
1:A:1195:C:N3	1:A:1197:G:C8	2.88	0.42
1:A:1327:C:N3	1:A:1328:C:C5	2.87	0.42
1:A:1234:C:H5'	1:A:1365:G:OP1	2.20	0.42
1:A:1345:U:N3	1:A:1377:A:C6	2.88	0.42
1:A:1384:C:H2'	1:A:1385:G:C5'	2.49	0.42
1:A:1410:G:C5	1:A:1411:C:C4	3.08	0.42
1:A:1419:G:O2'	1:A:1420:C:O4'	2.30	0.42
1:A:1498:U:C2	4:1:17:U:OP1	2.73	0.42
1:A:1503:A:N3	1:A:1503:A:C2'	2.81	0.42
1:A:1530:G:C6	1:A:1531:A:N1	2.88	0.42
1:A:179:A:N3	1:A:180:U:C6	2.88	0.42
1:A:234:C:C2	1:A:235:C:C5	3.07	0.42
1:A:263:A:O2'	1:A:264:U:C4'	2.68	0.42
1:A:327:A:H2'	1:A:329:A:C8	2.54	0.42
1:A:383:A:C2'	1:A:384:G:C5'	2.88	0.42
1:A:397:A:H2'	1:A:399:G:OP2	2.19	0.42
1:A:415:A:C2	1:A:416:G:H1'	2.55	0.42
1:A:422:C:C2'	1:A:422:C:O2	2.67	0.42
1:A:448:A:H2'	1:A:449:C:H6	1.85	0.42
1:A:518:C:C2'	1:A:530:G:H8	2.28	0.42
1:A:505:G:H5'	1:A:534:U:H2'	2.01	0.42
1:A:570:G:H5'	1:A:820:U:C1'	2.40	0.42
1:A:617:G:H4'	19:S:44:THR:OG1	2.20	0.42
1:A:627:G:C2'	1:A:628:G:O5'	2.68	0.42
1:A:754:C:O2	1:A:754:C:H2'	2.18	0.42
1:A:867:G:H2'	1:A:868:C:H6	1.84	0.42
1:A:936:C:C2'	1:A:937:A:H5'	2.50	0.42
1:A:977:A:N1	1:A:1224:G:O4'	2.52	0.42
1:A:1339:A:C2	2:C:31:G:H1'	2.55	0.42
5:E:162:ILE:O	5:E:185:ILE:HG12	2.18	0.42
5:E:175:ARG:HD2	5:E:179:LYS:HZ3	1.83	0.42
5:E:176:GLU:C	5:E:180:LEU:HD12	2.39	0.42
5:E:43:ASP:OD2	5:E:46:LYS:HB2	2.20	0.42
5:E:84:GLU:CB	5:E:215:LEU:HD13	2.50	0.42
7:G:199:ASN:O	7:G:200:GLU:HB3	2.20	0.42
7:G:30:LYS:NZ	7:G:35:ARG:HH11	2.15	0.42
8:H:108:ALA:O	8:H:109:ILE:C	2.57	0.42
8:H:56:GLN:O	8:H:59:GLY:HA3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:86:GLN:CB	10:J:148:ASN:ND2	2.73	0.42
10:J:45:ASP:HA	10:J:48:LYS:HE2	2.01	0.42
10:J:69:VAL:HA	10:J:138:LYS:HD2	2.01	0.42
11:K:120:THR:O	11:K:121:ASP:C	2.58	0.42
11:K:11:THR:C	11:K:13:ILE:N	2.71	0.42
11:K:11:THR:HG22	11:K:14:ARG:NH2	2.34	0.42
11:K:42:GLU:OE1	11:K:122:ARG:NH2	2.49	0.42
12:L:70:LYS:CD	12:L:70:LYS:H	2.33	0.42
15:O:46:LYS:HZ2	15:O:94:PRO:HG2	1.84	0.42
15:O:46:LYS:NZ	15:O:94:PRO:HG2	2.35	0.42
1:A:1230:C:O2	16:P:126:LYS:CG	2.68	0.42
16:P:84:ILE:CD1	16:P:86:CYS:SG	3.08	0.42
1:A:1203:C:OP1	17:Q:2:ALA:N	2.52	0.42
13:M:47:PHE:HE2	17:Q:36:PHE:CE2	2.36	0.42
17:Q:3:ARG:CG	17:Q:3:ARG:O	2.66	0.42
19:S:67:THR:HG22	19:S:69:THR:H	1.84	0.42
20:T:66:SER:CB	20:T:69:LYS:HZ3	2.32	0.42
21:U:75:ILE:HB	21:U:76:LEU:H	1.62	0.42
22:V:22:LEU:CG	22:V:25:LYS:HZ1	2.28	0.42
23:W:43:LEU:HD21	23:W:51:GLU:HG3	2.01	0.42
1:A:1537:U:C2	1:A:1538:C:H1'	2.55	0.42
3:D:69:C:C2	3:D:70:G:C8	3.07	0.42
1:A:1003:G:N2	1:A:1004:A:O2'	2.53	0.42
1:A:1027:C:N4	1:A:1028:C:N4	2.68	0.42
1:A:1041:A:C5	1:A:1042:G:N7	2.88	0.42
6:F:118:GLN:C	6:F:122:GLU:OE2	2.58	0.42
1:A:748:C:HO2'	1:A:749:C:C5'	2.33	0.42
2:C:1:C:H2'	2:C:2:G:O4'	2.19	0.42
1:A:1128:C:C5	1:A:1139:G:C6	3.08	0.42
1:A:1198:G:C2'	1:A:1199:U:C5'	2.98	0.42
1:A:121:C:H41	1:A:235:C:H3'	1.85	0.42
1:A:1244:C:N4	1:A:1245:A:N6	2.66	0.42
1:A:1306:A:H1'	1:A:1332:A:C6	2.55	0.42
1:A:1319:A:H4'	22:V:70:LYS:CE	2.49	0.42
1:A:131:C:O2'	1:A:132:C:C5'	2.68	0.42
1:A:1330:U:C4	1:A:1331:G:C5	3.07	0.42
1:A:1341:U:C5'	2:C:32:C:OP1	2.68	0.42
1:A:1367:C:OP1	12:L:115:GLY:CA	2.67	0.42
1:A:336:C:H1'	1:A:1468:A:C2	2.54	0.42
1:A:1422:G:C2	1:A:1479:C:C2	3.07	0.42
1:A:151:A:H2'	1:A:152:A:C5'	2.50	0.42
1:A:152:A:N1	1:A:170:U:C2	2.87	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:163:C:C4	1:A:164:U:C5	3.08	0.42
1:A:266:G:O2'	1:A:267:C:P	2.77	0.42
1:A:276:G:N2	1:A:277:C:H1'	2.35	0.42
1:A:321:A:H5'	1:A:1435:G:HO2'	1.84	0.42
1:A:37:U:O2'	1:A:500:G:C4'	2.58	0.42
1:A:37:U:OP2	15:O:123:LYS:NZ	2.41	0.42
1:A:416:G:C5	1:A:417:C:C4	3.08	0.42
1:A:516:U:C5	1:A:517:G:C6	3.07	0.42
1:A:521:G:C6	1:A:529:G:N2	2.88	0.42
1:A:559:A:C5'	1:A:560:U:H5'	2.50	0.42
1:A:598:U:O2	1:A:599:C:C6	2.73	0.42
1:A:647:C:C4	1:A:648:A:N7	2.88	0.42
1:A:654:G:O6	1:A:655:A:C2	2.73	0.42
1:A:65:U:H2'	1:A:381:C:C5	2.55	0.42
1:A:668:G:H2'	1:A:669:U:C6	2.54	0.42
1:A:684:A:C5	1:A:685:G:C6	3.08	0.42
1:A:728:A:C6	1:A:729:A:N7	2.88	0.42
1:A:756:C:H2'	1:A:757:U:C6	2.52	0.42
1:A:881:G:C5	1:A:882:C:C5	3.07	0.42
1:A:895:G:N3	1:A:896:C:C5	2.87	0.42
1:A:951:G:C2'	1:A:970:C:O2'	2.66	0.42
1:A:956:U:H2'	1:A:957:U:C6	2.54	0.42
1:A:985:C:H2'	1:A:986:A:C8	2.53	0.42
1:A:993:G:N1	1:A:1046:A:C5	2.87	0.42
3:D:37:A:H2'	3:D:38:A:C8	2.53	0.42
5:E:112:VAL:C	5:E:116:GLU:OE2	2.58	0.42
5:E:181:PHE:O	5:E:182:ILE:O	2.38	0.42
5:E:55:PHE:CZ	5:E:217:ARG:HB2	2.54	0.42
7:G:67:ILE:HD12	7:G:68:TYR:N	2.35	0.42
9:I:12:PRO:C	9:I:14:LEU:H	2.22	0.42
9:I:24:GLU:O	9:I:27:GLN:HB2	2.19	0.42
9:I:45:LEU:CG	9:I:59:TYR:HD1	2.14	0.42
9:I:76:ALA:HB1	9:I:80:ARG:HE	1.85	0.42
1:A:670:G:O3'	9:I:77:ARG:NH2	2.53	0.42
10:J:145:ALA:O	10:J:146:GLU:CB	2.62	0.42
10:J:14:PRO:HB3	10:J:19:GLY:C	2.40	0.42
11:K:33:GLU:HG2	11:K:59:LEU:CD2	2.45	0.42
11:K:43:GLY:O	11:K:44:PHE:CB	2.64	0.42
11:K:68:ARG:O	11:K:69:ARG:CB	2.66	0.42
11:K:65:TYR:HB2	11:K:76:PRO:CB	2.50	0.42
1:A:1347:G:C2'	12:L:107:ARG:HB3	2.49	0.42
12:L:37:PHE:CE1	12:L:74:ILE:CG2	2.94	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:52:ALA:HB1	12:L:85:LEU:HD21	2.01	0.42
12:L:9:ARG:HH11	12:L:9:ARG:HG3	1.84	0.42
14:N:60:ALA:O	14:N:61:ALA:C	2.58	0.42
11:K:91:ARG:HG2	15:O:7:ILE:HD12	2.01	0.42
16:P:13:LYS:HD3	16:P:21:TYR:OH	2.20	0.42
16:P:19:LEU:HD12	16:P:20:THR:H	1.81	0.42
18:R:17:ARG:HD2	18:R:17:ARG:HA	1.96	0.42
18:R:16:ALA:CA	18:R:21:ASP:HB3	2.49	0.42
1:A:808:C:P	18:R:48:LYS:HZ1	2.43	0.42
18:R:43:LEU:HD11	18:R:56:LEU:HD23	2.02	0.42
18:R:78:TYR:HD2	18:R:82:ILE:CD1	2.32	0.42
19:S:63:GLY:O	19:S:65:GLN:N	2.53	0.42
23:W:12:ALA:C	23:W:14:LYS:N	2.72	0.42
23:W:50:GLU:HB2	23:W:99:LEU:CD1	2.50	0.42
7:G:163:GLU:CG	7:G:164:ALA:N	2.82	0.42
1:A:1537:U:H3'	1:A:1538:C:O4'	2.19	0.42
3:D:60:U:H2'	3:D:61:C:OP1	2.20	0.42
1:A:1033:G:OP2	1:A:1033:G:H8	2.02	0.42
1:A:1043:C:C2'	1:A:1044:A:H5'	2.49	0.42
3:D:43:A:N3	3:D:43:A:H2'	2.34	0.42
1:A:1099:G:C2'	1:A:1099:G:N3	2.82	0.42
1:A:1161:C:O2	1:A:1162:C:C6	2.72	0.42
1:A:1177:G:O2'	1:A:1178:G:H5'	2.19	0.42
1:A:1321:C:N4	1:A:1322:C:H2'	2.33	0.42
1:A:1329:A:O3'	16:P:24:GLY:HA2	2.20	0.42
1:A:1392:G:C2'	1:A:1393:U:O4'	2.68	0.42
1:A:145:G:C2	1:A:178:C:C2	3.07	0.42
1:A:1468:A:O2'	1:A:1469:G:P	2.77	0.42
1:A:1504:G:C3'	1:A:1504:G:C8	3.03	0.42
1:A:245:C:C2	1:A:284:G:C2	3.08	0.42
1:A:22:G:P	1:A:561:U:O2	2.78	0.42
1:A:580:U:H2'	1:A:581:G:O4'	2.19	0.42
1:A:669:U:O4'	18:R:46:HIS:HE1	2.02	0.42
1:A:695:A:C2	1:A:696:A:C4	3.07	0.42
1:A:964:A:H1'	13:M:55:LYS:HZ3	1.83	0.42
1:A:972:C:C2'	1:A:972:C:O2	2.68	0.42
1:A:1074:G:H4'	5:E:104:ASN:HB3	2.01	0.42
5:E:95:GLN:HG3	5:E:148:TYR:HB3	2.02	0.42
5:E:164:VAL:O	5:E:186:ALA:HA	2.20	0.42
5:E:15:VAL:CG2	5:E:210:SER:HA	2.49	0.42
5:E:55:PHE:HZ	5:E:217:ARG:HB2	1.84	0.42
5:E:74:LYS:O	5:E:75:LYS:C	2.58	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:73:PRO:CB	6:F:105:GLU:OE1	2.63	0.42
6:F:123:GLN:CB	6:F:128:PHE:HE2	2.22	0.42
6:F:156:ARG:HE	6:F:156:ARG:HB3	1.69	0.42
6:F:43:LEU:CD2	6:F:55:VAL:HG21	2.50	0.42
6:F:43:LEU:HD21	6:F:55:VAL:HG21	2.01	0.42
6:F:21:ARG:HH22	6:F:54:ARG:NH2	2.17	0.42
6:F:50:ALA:HB1	6:F:70:VAL:HG11	2.01	0.42
6:F:85:ARG:C	6:F:87:LEU:N	2.72	0.42
7:G:120:LEU:HD11	7:G:126:ILE:HD11	2.00	0.42
7:G:152:SER:C	7:G:154:ASN:N	2.73	0.42
7:G:61:LYS:CG	7:G:207:TYR:HE1	2.27	0.42
8:H:121:LYS:HZ2	8:H:121:LYS:C	2.22	0.42
8:H:76:ILE:HG21	8:H:142:LEU:HB3	2.02	0.42
8:H:41:VAL:C	8:H:66:MET:SD	2.99	0.42
8:H:82:VAL:HG13	8:H:89:ILE:H	1.85	0.42
11:K:104:ARG:CB	11:K:107:LEU:HG	2.50	0.42
11:K:112:LEU:HG	11:K:114:THR:HG22	2.01	0.42
11:K:29:SER:N	11:K:32:LYS:HZ1	2.17	0.42
12:L:75:ASP:O	12:L:78:LYS:HB3	2.20	0.42
1:A:1280:A:N3	13:M:41:PRO:HG3	2.35	0.42
14:N:85:ARG:CD	14:N:113:PRO:HD2	2.50	0.42
15:O:28:LYS:HG3	15:O:33:ARG:NH1	2.34	0.42
15:O:84:LEU:O	15:O:100:ILE:HA	2.20	0.42
17:Q:31:ARG:O	17:Q:33:VAL:HG22	2.20	0.42
18:R:33:THR:HG23	18:R:87:ILE:CD1	2.47	0.42
19:S:3:LYS:HZ2	19:S:3:LYS:CB	2.32	0.42
19:S:39:TYR:CE1	19:S:41:PRO:CA	2.97	0.42
20:T:24:GLU:HG3	20:T:39:SER:HB2	2.02	0.42
20:T:59:ILE:HG12	20:T:71:PHE:CD2	2.55	0.42
20:T:51:TYR:CE2	20:T:73:VAL:HG11	2.54	0.42
20:T:75:ARG:CZ	20:T:77:VAL:HG22	2.48	0.42
22:V:69:HIS:HB3	22:V:73:GLU:CD	2.40	0.42
23:W:51:GLU:N	23:W:54:LYS:HE3	2.34	0.42
1:A:1442:G:N3	1:A:1442:G:C5'	2.83	0.42
2:C:10:G:N2	2:C:11:A:N9	2.67	0.42
1:A:748:C:C5'	1:A:748:C:H6	2.32	0.42
3:D:26:A:C2'	3:D:27:U:O5'	2.68	0.42
4:1:3:C:N4	4:1:4:A:N6	2.68	0.42
1:A:1078:U:H5	1:A:1079:G:N7	2.13	0.42
1:A:1180:A:OP1	12:L:102:LEU:CD1	2.68	0.42
1:A:1189:C:C2'	1:A:1190:G:H5'	2.50	0.42
1:A:1240:U:O2'	1:A:1241:G:OP1	2.38	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1240:U:H4'	1:A:1241:G:OP2	2.20	0.42
1:A:1279:A:O2'	1:A:1282:C:C5	2.69	0.42
1:A:1313:U:OP2	22:V:6:LYS:HA	2.20	0.42
1:A:1336:C:H1'	1:A:1337:G:C6	2.55	0.42
1:A:1394:A:N6	1:A:1501:C:O4'	2.35	0.42
1:A:1516:G:N2	1:A:1518:A:P	2.93	0.42
1:A:1531:A:O3'	1:A:1532:U:O4'	2.38	0.42
1:A:262:A:N1	1:A:263:A:N1	2.67	0.42
1:A:522:C:O4'	1:A:536:C:H4'	2.19	0.42
1:A:590:C:H2'	1:A:591:U:O5'	2.20	0.42
1:A:614:A:N1	1:A:627:G:C6	2.87	0.42
1:A:673:G:C2	1:A:674:G:C6	3.07	0.42
1:A:738:C:H5'	9:I:72:VAL:CG2	2.50	0.42
1:A:788:U:C2	1:A:789:U:C2	3.08	0.42
1:A:812:C:C4'	1:A:813:U:H6	2.32	0.42
1:A:939:G:C2	1:A:940:C:C2	3.08	0.42
1:A:988:G:C4'	1:A:1014:A:H61	2.33	0.42
3:D:42:C:C2'	3:D:42:C:O2	2.68	0.42
5:E:103:THR:O	5:E:104:ASN:ND2	2.52	0.42
5:E:157:ARG:O	5:E:158:LEU:HG	2.19	0.42
5:E:175:ARG:CA	5:E:178:ARG:HB2	2.36	0.42
5:E:15:VAL:CG2	5:E:209:ARG:NH1	2.66	0.42
5:E:74:LYS:HZ3	5:E:76:GLN:CB	2.27	0.42
6:F:124:ILE:HD11	6:F:130:VAL:HG13	2.02	0.42
6:F:150:LYS:HZ2	6:F:152:ILE:CG2	2.33	0.42
6:F:173:VAL:N	6:F:174:PRO:CD	2.83	0.42
1:A:1190:G:C5'	6:F:176:HIS:NE2	2.82	0.42
6:F:28:GLN:CD	6:F:28:GLN:C	2.78	0.42
6:F:39:ILE:HG21	6:F:57:ILE:CD1	2.49	0.42
7:G:165:MET:HE1	7:G:178:VAL:HG22	2.02	0.42
7:G:173:TRP:CE2	7:G:174:LEU:HG	2.55	0.42
7:G:60:GLU:CB	7:G:202:LEU:HB3	2.50	0.42
7:G:94:LEU:HD23	7:G:97:LEU:HD12	2.02	0.42
8:H:140:ARG:C	8:H:141:GLN:O	2.57	0.42
9:I:94:GLN:HB3	21:U:32:ARG:NH2	2.32	0.42
10:J:46:ALA:N	10:J:117:ALA:HB1	2.34	0.42
11:K:17:THR:CG2	11:K:18:ARG:NH2	2.83	0.42
12:L:118:LYS:O	12:L:120:ARG:N	2.53	0.42
12:L:17:VAL:HA	12:L:63:ILE:HG13	2.01	0.42
12:L:49:PRO:CD	12:L:78:LYS:HZ3	2.29	0.42
13:M:44:VAL:HG11	13:M:64:GLU:OE2	2.20	0.42
13:M:81:THR:O	13:M:83:GLU:N	2.53	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:706:A:H1'	14:N:29:ILE:HD12	2.01	0.42
14:N:85:ARG:NH1	14:N:85:ARG:CG	2.83	0.42
15:O:45:PRO:O	15:O:46:LYS:O	2.38	0.42
15:O:98:TYR:CD1	15:O:98:TYR:N	2.88	0.42
1:A:952:U:O4	16:P:104:ARG:CZ	2.68	0.42
16:P:80:ARG:CG	16:P:80:ARG:NH1	2.83	0.42
1:A:761:G:P	20:T:102:GLY:HA3	2.60	0.42
20:T:62:SER:HB3	20:T:72:ARG:CZ	2.44	0.42
21:U:80:PRO:O	21:U:81:PHE:C	2.58	0.42
22:V:9:VAL:O	22:V:9:VAL:HG12	2.19	0.42
23:W:72:LEU:HD23	23:W:76:ALA:HB1	2.00	0.42
24:X:15:ARG:HD3	24:X:15:ARG:HA	1.84	0.42
2:C:75:C:H6	2:C:76:A:HO2'	1.60	0.42
3:D:49:G:C2'	3:D:49:G:N3	2.81	0.42
1:A:96:G:H2'	1:A:97:U:H6	1.85	0.42
4:1:10:G:C4	4:1:11:U:C5	3.07	0.42
3:D:7:G:N2	3:D:67:C:C2	2.88	0.42
1:A:1062:U:N3	1:A:1063:C:N4	2.67	0.41
1:A:1124:G:C8	1:A:1145:C:H2'	2.53	0.41
1:A:1154:G:O2'	1:A:1155:G:H5'	2.20	0.41
1:A:116:A:H8	1:A:116:A:O5'	2.03	0.41
1:A:1193:G:C2'	1:A:1194:U:O5'	2.67	0.41
1:A:1270:C:P	24:X:24:ARG:NH2	2.93	0.41
1:A:1316:G:H8	1:A:1316:G:P	2.43	0.41
1:A:1305:G:N2	1:A:1332:A:OP2	2.53	0.41
1:A:1357:A:N7	1:A:1358:U:C5	2.88	0.41
1:A:1315:U:HO2'	1:A:1360:A:C1'	2.32	0.41
1:A:1430:C:H6	1:A:1430:C:O5'	2.03	0.41
1:A:1452:C:H5'	1:A:1453:G:C4	2.55	0.41
1:A:1475:G:N3	1:A:1476:G:C8	2.88	0.41
1:A:1521:G:C2'	1:A:1522:U:O5'	2.68	0.41
1:A:15:G:H2'	1:A:16:A:H8	1.80	0.41
1:A:67:C:C1'	1:A:172:A:H1'	2.50	0.41
1:A:330:C:O2'	1:A:331:G:H5'	2.19	0.41
1:A:374:A:C2'	1:A:375:U:H5'	2.50	0.41
1:A:61:G:N2	1:A:379:C:H5'	2.34	0.41
1:A:439:A:N3	1:A:496:A:C2	2.88	0.41
1:A:50:A:N6	1:A:361:G:O4'	2.53	0.41
1:A:529:G:O6	15:O:49:ASN:HB3	2.20	0.41
1:A:613:C:O2'	1:A:614:A:H5'	2.19	0.41
1:A:693:G:H5'	4:1:13:A:H62	1.85	0.41
1:A:774:G:N2	1:A:775:G:H1'	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:874:G:H2'	1:A:875:C:C5'	2.50	0.41
1:A:919:A:N1	1:A:920:U:C4	2.88	0.41
1:A:957:U:O2	1:A:960:U:C6	2.73	0.41
5:E:115:LEU:HD13	5:E:145:LEU:CB	2.49	0.41
5:E:92:TYR:O	5:E:152:PHE:HB2	2.20	0.41
5:E:193:ASP:OD2	5:E:196:LEU:CD1	2.68	0.41
5:E:33:TYR:CG	5:E:43:ASP:HB2	2.55	0.41
5:E:47:THR:HG22	5:E:48:MET:SD	2.60	0.41
5:E:7:VAL:CG2	5:E:8:LYS:N	2.82	0.41
6:F:152:ILE:O	6:F:198:VAL:HB	2.20	0.41
1:A:540:G:H21	7:G:42:GLN:CD	2.22	0.41
1:A:5:U:O4	7:G:86:LYS:HD3	2.20	0.41
9:I:22:GLU:O	9:I:25:ILE:HB	2.20	0.41
11:K:5:PRO:O	11:K:6:ILE:C	2.57	0.41
12:L:72:GLY:CA	12:L:75:ASP:OD1	2.68	0.41
14:N:15:ALA:HA	14:N:76:GLY:O	2.20	0.41
14:N:83:ILE:N	14:N:83:ILE:CD1	2.82	0.41
15:O:88:GLY:O	15:O:90:VAL:HG23	2.20	0.41
16:P:15:VAL:HG12	16:P:16:ASP:N	2.34	0.41
16:P:24:GLY:O	16:P:25:ILE:HG12	2.20	0.41
16:P:70:LEU:O	16:P:73:GLU:HB3	2.20	0.41
1:A:1317:C:C4	17:Q:16:PHE:CD1	3.08	0.41
17:Q:24:CYS:CA	17:Q:39:LEU:HA	2.48	0.41
17:Q:53:LEU:HA	17:Q:54:PRO:HD2	1.79	0.41
18:R:17:ARG:CG	18:R:17:ARG:HH11	2.33	0.41
18:R:15:PHE:HB3	18:R:26:GLU:HB3	2.01	0.41
18:R:54:ARG:O	18:R:55:GLY:C	2.57	0.41
1:A:135:C:C2	19:S:1:MET:HG2	2.54	0.41
21:U:33:ASP:C	21:U:34:TYR:CG	2.94	0.41
1:A:1242:C:C5'	24:X:10:ARG:HH12	2.33	0.41
2:C:18:G:H4'	2:C:60:U:O2	2.20	0.41
3:D:18:G:N1	3:D:57:G:C2	2.88	0.41
1:A:1032(B):G:N2	1:A:1033:G:C2	2.88	0.41
3:D:63:G:C6	3:D:64:C:N4	2.88	0.41
3:D:30:G:C6	3:D:31:A:N6	2.88	0.41
14:N:86:GLY:HA2	14:N:112:THR:CG2	2.47	0.41
14:N:114:VAL:HG23	14:N:115:PRO:CD	2.48	0.41
1:A:930:C:H2'	1:A:931:C:H6	1.85	0.41
1:A:456:C:C3'	1:A:456:C:C6	3.03	0.41
2:C:35:A:C6	4:1:18:G:N1	2.87	0.41
1:A:103:C:C2	1:A:104:G:C8	3.08	0.41
1:A:1092:A:N7	1:A:1093:A:N6	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1154:G:C2	1:A:1155:G:C5	3.08	0.41
1:A:1187:G:C6	1:A:1188:A:N6	2.88	0.41
1:A:124:G:N2	1:A:238:G:N9	2.68	0.41
1:A:1306:A:H2'	1:A:1307:U:O4'	2.19	0.41
1:A:1399:C:HO2'	1:A:1400:C:P	2.39	0.41
1:A:1412:C:C2	1:A:1413:A:N7	2.88	0.41
1:A:1498:U:HO2'	1:A:1499:A:C5'	2.33	0.41
1:A:1516:G:N2	1:A:1518:A:H3'	2.32	0.41
1:A:151:A:C5	1:A:152:A:C2	3.08	0.41
1:A:382:A:O2'	1:A:383:A:C5'	2.68	0.41
1:A:413:G:H2'	1:A:414:A:OP2	2.20	0.41
1:A:497:U:O2	1:A:498:A:C8	2.73	0.41
1:A:598:U:C2	1:A:599:C:C6	3.08	0.41
1:A:66:G:OP2	1:A:66:G:H8	2.01	0.41
1:A:974:A:C5'	1:A:975:A:OP1	2.68	0.41
2:C:36:U:H5''	2:C:36:U:C6	2.55	0.41
5:E:172:ILE:O	5:E:173:ALA:C	2.56	0.41
5:E:168:THR:HG21	5:E:192:SER:C	2.40	0.41
5:E:80:ILE:CD1	5:E:208:ILE:HG12	2.51	0.41
5:E:224:GLN:O	5:E:225:ALA:C	2.58	0.41
5:E:25:ASN:ND2	5:E:27:LYS:CB	2.83	0.41
6:F:114:PRO:O	6:F:117:ALA:HB3	2.21	0.41
6:F:136:GLN:O	6:F:137:ALA:C	2.57	0.41
6:F:39:ILE:O	6:F:40:ARG:C	2.56	0.41
6:F:58:GLU:HB2	6:F:65:ALA:HB2	2.01	0.41
7:G:158:ILE:HG22	7:G:162:LEU:HG	2.00	0.41
7:G:61:LYS:HA	7:G:203:VAL:HG22	1.97	0.41
7:G:61:LYS:HE3	7:G:61:LYS:C	2.41	0.41
7:G:58:LEU:CD2	7:G:62:GLN:HG3	2.50	0.41
7:G:76:ARG:HG3	7:G:207:TYR:CE2	2.55	0.41
8:H:61:TYR:O	8:H:64:ARG:N	2.53	0.41
10:J:24:THR:O	10:J:28:ASN:HB2	2.20	0.41
11:K:17:THR:HG22	11:K:78:GLN:NE2	2.35	0.41
12:L:10:ARG:HD3	12:L:104:ARG:O	2.19	0.41
12:L:4:TYR:CD2	12:L:88:TYR:HA	2.55	0.41
12:L:6:GLY:CA	12:L:84:ALA:N	2.83	0.41
13:M:23:ILE:CG2	13:M:72:VAL:HG11	2.50	0.41
15:O:45:PRO:CB	15:O:49:ASN:O	2.68	0.41
16:P:97:PRO:HD3	16:P:110:ARG:HG2	2.02	0.41
16:P:37:THR:CG2	16:P:38:GLY:N	2.82	0.41
16:P:48:LEU:HD23	16:P:52:GLU:HB2	1.96	0.41
16:P:88:ARG:NE	16:P:92:HIS:HD2	2.17	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:13:THR:N	17:Q:14:PRO:CD	2.82	0.41
1:A:754:C:H1'	18:R:69:TYR:CD2	2.55	0.41
19:S:66:PRO:CG	19:S:71:ARG:HB2	2.50	0.41
20:T:53:LEU:CD1	20:T:85:VAL:HG22	2.40	0.41
21:U:21:LYS:CG	21:U:22:VAL:H	2.33	0.41
1:A:61:G:OP2	23:W:10:LEU:HD13	2.20	0.41
23:W:13:LEU:HB2	23:W:17:ARG:NH2	2.31	0.41
23:W:19:SER:OG	23:W:20:LEU:HD23	2.19	0.41
24:X:18:TYR:HA	24:X:22:ARG:HB2	2.02	0.41
2:C:11:A:C2'	2:C:12:G:O5'	2.67	0.41
2:C:9:G:N2	2:C:46:G:C8	2.89	0.41
3:D:21:A:N6	3:D:48:C:C6	2.88	0.41
1:A:1028:C:N3	1:A:1028(A):C:C4	2.88	0.41
1:A:81:G:N3	1:A:81:G:H2'	2.34	0.41
1:A:82:U:O2	1:A:87:A:C2	2.73	0.41
4:1:2:G:H2'	4:1:3:C:C6	2.55	0.41
1:A:525:C:C5	1:A:526:C:C5	3.08	0.41
1:A:110:C:H2'	1:A:111:G:H5'	2.03	0.41
1:A:1113:C:H2'	1:A:1114:C:C6	2.47	0.41
1:A:1159:U:C5'	1:A:1160:G:OP1	2.63	0.41
1:A:1222:G:C2	1:A:1223:C:C2	3.08	0.41
1:A:1261:A:H2'	1:A:1262:C:C6	2.55	0.41
1:A:1315:U:O2'	1:A:1360:A:C2'	2.69	0.41
1:A:1360:A:H2'	1:A:1360:A:N3	2.35	0.41
1:A:1234:C:C4'	1:A:1364:U:H1'	2.50	0.41
1:A:1381:U:O2	10:J:79:ARG:HG3	2.20	0.41
1:A:1417:G:HO2'	1:A:1418:A:P	2.44	0.41
1:A:59:A:C8	1:A:354:G:N1	2.88	0.41
1:A:46:G:N3	1:A:396:G:N1	2.68	0.41
1:A:475:G:C2	1:A:476:G:N7	2.88	0.41
1:A:483:C:O5'	1:A:483:C:H6	2.03	0.41
1:A:511:C:O2'	1:A:512:U:C6	2.61	0.41
1:A:518:C:C2'	1:A:530:G:C8	3.00	0.41
1:A:602:A:H2'	1:A:603:U:C6	2.55	0.41
1:A:60:A:O2'	1:A:61:G:P	2.79	0.41
1:A:620:C:H2'	1:A:621:A:O4'	2.21	0.41
1:A:627:G:HO2'	1:A:628:G:H5'	1.78	0.41
1:A:654:G:H1	1:A:754:C:H42	1.63	0.41
1:A:872:A:N1	1:A:874:G:O6	2.53	0.41
1:A:907:A:C6	1:A:908:A:C6	3.08	0.41
1:A:925:G:C6	1:A:1392:G:C6	3.09	0.41
1:A:970:C:H4'	1:A:972:C:H5	1.79	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:117:GLU:C	5:E:117:GLU:CD	2.78	0.41
5:E:138:LEU:HA	5:E:141:GLU:HB3	2.01	0.41
5:E:16:HIS:NE2	5:E:214:ILE:CG1	2.82	0.41
5:E:170:GLU:HB3	5:E:174:VAL:CG2	2.37	0.41
5:E:188:ALA:O	5:E:189:ASP:CB	2.65	0.41
6:F:39:ILE:O	6:F:41:GLY:N	2.54	0.41
7:G:105:VAL:HG21	7:G:121:VAL:CG2	2.34	0.41
7:G:108:LEU:C	7:G:110:PHE:N	2.73	0.41
7:G:73:ARG:O	7:G:76:ARG:N	2.52	0.41
7:G:78:LEU:HD21	7:G:96:LEU:CB	2.46	0.41
7:G:91:SER:O	7:G:94:LEU:HB2	2.20	0.41
8:H:92:LYS:CG	8:H:93:PRO:HD2	2.50	0.41
10:J:119:ARG:HE	10:J:119:ARG:HB2	1.65	0.41
10:J:20:ASP:HB3	10:J:23:VAL:CG2	2.50	0.41
10:J:33:ASP:C	10:J:35:LYS:H	2.23	0.41
10:J:41:ARG:HG2	10:J:41:ARG:NH1	2.27	0.41
10:J:87:VAL:HB	10:J:156:TRP:CE3	2.50	0.41
11:K:137:VAL:CG1	11:K:138:TRP:N	2.84	0.41
11:K:32:LYS:CG	11:K:33:GLU:N	2.83	0.41
11:K:65:TYR:C	11:K:67:PRO:HD3	2.40	0.41
10:J:150:ALA:CB	14:N:57:THR:HG21	2.50	0.41
15:O:41:ARG:O	15:O:42:THR:HB	2.20	0.41
15:O:78:GLN:O	15:O:79:GLU:C	2.58	0.41
1:A:1229:A:H62	16:P:105:THR:HG21	1.85	0.41
18:R:11:VAL:O	18:R:12:ILE:C	2.58	0.41
18:R:87:ILE:HG22	18:R:88:ARG:N	2.35	0.41
19:S:6:LEU:HB2	19:S:17:TYR:HD2	1.85	0.41
19:S:27:LYS:O	19:S:28:ARG:C	2.59	0.41
21:U:30:ASP:C	21:U:32:ARG:N	2.73	0.41
9:I:7:ASN:CB	21:U:76:LEU:HD11	2.51	0.41
21:U:78:LEU:O	21:U:79:LEU:CB	2.68	0.41
21:U:82:THR:O	21:U:82:THR:CG2	2.69	0.41
22:V:36:ARG:CG	22:V:36:ARG:NH1	2.82	0.41
22:V:37:ARG:O	22:V:38:SER:O	2.38	0.41
23:W:59:ALA:O	23:W:62:LEU:N	2.54	0.41
3:D:55:U:H3'	3:D:55:U:C6	2.55	0.41
1:A:1002:G:C6	1:A:1003:G:O6	2.73	0.41
1:A:1054:C:C3'	1:A:1054:C:C6	3.04	0.41
1:A:10:A:O2'	1:A:507:C:H4'	2.20	0.41
1:A:1116:C:H2'	1:A:1117:G:H8	1.84	0.41
1:A:1129:C:H4'	1:A:1130:A:O5'	2.21	0.41
1:A:1185:G:H2'	1:A:1186:G:C5'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1239:A:C8	1:A:1241:G:C4	3.08	0.41
1:A:1269:A:OP1	24:X:19:GLY:HA3	2.20	0.41
1:A:186(B):C:H5'	23:W:89:ARG:NH2	2.35	0.41
1:A:160:A:N1	1:A:346:G:O6	2.53	0.41
1:A:659:U:N3	1:A:660:G:N7	2.69	0.41
1:A:791:G:C6	1:A:792:A:N6	2.82	0.41
1:A:868:C:H2'	1:A:869:G:O4'	2.20	0.41
1:A:869:G:O4'	1:A:872:A:C8	2.73	0.41
1:A:942:G:N2	1:A:943:U:N1	2.69	0.41
1:A:966:G:N2	2:C:34:C:H5'	2.34	0.41
5:E:105:PHE:HA	5:E:105:PHE:HD1	1.68	0.41
5:E:148:TYR:CD1	5:E:148:TYR:N	2.88	0.41
5:E:16:HIS:CE1	5:E:213:LEU:HB3	2.55	0.41
6:F:15:THR:CG2	6:F:181:ASN:CG	2.88	0.41
1:A:1056:U:H5'	6:F:163:ALA:HB3	2.01	0.41
7:G:106:TYR:CE1	7:G:112:VAL:HA	2.51	0.41
7:G:57:ARG:HH12	8:H:107:ARG:HD3	1.84	0.41
7:G:58:LEU:CD2	7:G:62:GLN:HG2	2.50	0.41
7:G:58:LEU:HD22	7:G:62:GLN:CG	2.51	0.41
7:G:62:GLN:HB3	7:G:66:ARG:CZ	2.50	0.41
7:G:78:LEU:HD23	7:G:78:LEU:HA	1.70	0.41
8:H:65:ASN:O	8:H:66:MET:CG	2.67	0.41
9:I:15:ASP:O	9:I:19:LEU:HB2	2.19	0.41
9:I:37:VAL:HG11	9:I:40:VAL:HB	2.02	0.41
10:J:121:ALA:O	10:J:125:MET:HG2	2.20	0.41
10:J:86:GLN:CG	10:J:148:ASN:ND2	2.83	0.41
1:A:642:A:C4	11:K:114:THR:O	2.73	0.41
11:K:122:ARG:O	11:K:123:GLU:C	2.59	0.41
11:K:24:THR:C	11:K:25:ASP:OD1	2.58	0.41
12:L:70:LYS:HD2	12:L:70:LYS:H	1.85	0.41
14:N:25:TYR:CE1	14:N:89:ALA:N	2.88	0.41
14:N:32:ILE:CG2	14:N:40:ILE:HD11	2.20	0.41
14:N:57:THR:C	14:N:59:TYR:N	2.73	0.41
15:O:120:TYR:O	15:O:121:GLY:O	2.38	0.41
16:P:29:ARG:NH1	16:P:64:TRP:NE1	2.69	0.41
16:P:77:ASN:HA	16:P:80:ARG:CD	2.51	0.41
18:R:26:GLU:OE1	18:R:26:GLU:CA	2.68	0.41
18:R:36:ILE:CD1	18:R:63:ARG:HD3	2.47	0.41
19:S:39:TYR:HE1	19:S:41:PRO:N	2.18	0.41
21:U:77:GLY:O	21:U:78:LEU:HG	2.20	0.41
22:V:46:GLY:CA	22:V:62:ILE:HG23	2.51	0.41
23:W:40:ALA:HB2	23:W:55:ILE:HG21	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:57:ARG:NH1	23:W:57:ARG:HG2	2.34	0.41
23:W:79:ARG:CG	23:W:79:ARG:NH1	2.81	0.41
1:A:1043:C:H2'	1:A:1044:A:C5'	2.50	0.41
4:1:22:A:H2'	4:1:23:A:C5'	2.50	0.41
1:A:105:G:C4	1:A:106:C:C4	3.08	0.41
1:A:1108:G:H5''	1:A:1191:A:H1'	2.03	0.41
1:A:1125:U:H4'	1:A:1125:U:OP2	2.20	0.41
1:A:1251:A:C2'	1:A:1252:A:C8	2.84	0.41
1:A:1281:U:H3'	1:A:1281:U:H6	1.85	0.41
1:A:1350:A:O2'	1:A:1351:U:H5'	2.21	0.41
1:A:1372:U:C4	1:A:1373:G:C5	3.09	0.41
1:A:1465:C:C4	1:A:1466:C:C4	3.07	0.41
1:A:1528:U:C2	1:A:1530:G:H8	2.39	0.41
1:A:1531:A:O5'	1:A:1531:A:H8	2.03	0.41
1:A:186(E):C:C2	1:A:191(C):G:N2	2.88	0.41
1:A:382:A:O2'	1:A:383:A:O5'	2.38	0.41
1:A:388:G:C2'	1:A:389:A:OP2	2.69	0.41
1:A:527:G:N2	1:A:528:C:C2	2.88	0.41
1:A:552:U:O2'	1:A:553:A:H5'	2.20	0.41
1:A:599:C:O2'	1:A:600:C:H5'	2.20	0.41
1:A:632:A:H2'	1:A:633:G:H5'	2.02	0.41
1:A:641:U:O3'	1:A:642:A:H8	2.03	0.41
1:A:643:C:HO2'	11:K:132:GLU:CD	2.20	0.41
1:A:685:G:H8	1:A:685:G:O5'	2.03	0.41
1:A:692:U:H1'	1:A:694:A:N7	2.35	0.41
1:A:698:G:N2	1:A:699:C:C2	2.89	0.41
1:A:755:G:C2'	1:A:755:G:N3	2.84	0.41
1:A:761:G:C4'	20:T:103:GLY:H	2.33	0.41
1:A:768:A:C8	1:A:768:A:H3'	2.56	0.41
1:A:793:U:C3'	1:A:794:A:H5''	2.49	0.41
1:A:821:G:N2	1:A:822:C:C2	2.89	0.41
1:A:891:U:C6	1:A:892:A:N7	2.88	0.41
1:A:8:A:H1'	8:H:102:ALA:C	2.37	0.41
1:A:960:U:C2'	1:A:960:U:O2	2.67	0.41
1:A:966:G:C2'	1:A:967:C:O5'	2.68	0.41
5:E:155:LEU:C	5:E:157:ARG:H	2.23	0.41
5:E:60:ASP:C	5:E:64:ARG:CZ	2.89	0.41
5:E:83:MET:CB	5:E:234:PRO:HB3	2.50	0.41
6:F:136:GLN:HA	6:F:139:GLN:HG3	2.02	0.41
6:F:138:VAL:O	6:F:170:GLN:NE2	2.53	0.41
6:F:6:HIS:ND1	6:F:7:PRO:CD	2.80	0.41
6:F:83:ARG:O	6:F:87:LEU:CG	2.62	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:83:ARG:C	6:F:87:LEU:HG	2.40	0.41
7:G:133:VAL:HG21	7:G:138:TYR:CE1	2.55	0.41
1:A:5:U:C5	7:G:86:LYS:HD3	2.55	0.41
8:H:98:THR:OG1	8:H:117:ASP:CB	2.68	0.41
9:I:95:GLU:N	9:I:96:PRO:CD	2.83	0.41
11:K:28:ALA:O	11:K:29:SER:CB	2.68	0.41
12:L:9:ARG:HG2	12:L:15:ALA:H	1.85	0.41
12:L:27:THR:CB	12:L:62:TYR:CD1	2.95	0.41
13:M:61:GLU:HG3	13:M:62:HIS:H	1.85	0.41
13:M:90:LEU:N	13:M:91:PRO:CD	2.81	0.41
1:A:36:C:H5''	15:O:123:LYS:HA	2.01	0.41
15:O:91:LYS:O	15:O:92:ASP:HB3	2.19	0.41
16:P:87:TYR:CD2	16:P:87:TYR:C	2.91	0.41
13:M:51:ARG:HG2	17:Q:45:ARG:HH21	1.85	0.41
1:A:994:A:N3	17:Q:5:ALA:HA	2.36	0.41
18:R:36:ILE:HB	18:R:59:MET:SD	2.60	0.41
18:R:39:LEU:O	18:R:42:HIS:HB3	2.20	0.41
18:R:43:LEU:CD1	18:R:53:HIS:HD2	2.33	0.41
1:A:625:G:H4'	19:S:16:HIS:CB	2.51	0.41
19:S:26:ARG:CD	19:S:31:LYS:H	2.29	0.41
21:U:47:THR:N	21:U:49:LYS:NZ	2.68	0.41
23:W:92:LEU:C	23:W:93:GLU:HG3	2.38	0.41
2:C:6:G:C2	2:C:7:G:C5	3.09	0.41
3:D:1:G:O2'	3:D:2:C:C5'	2.69	0.41
3:D:9:A:H62	3:D:23:A:N6	2.14	0.41
1:A:1026:G:O6	1:A:1036:G:N1	2.53	0.41
1:A:87:A:N7	1:A:88:C:C2	2.89	0.41
8:H:87:SER:HB3	8:H:131:ILE:HD13	2.01	0.41
4:1:5:A:C2'	4:1:6:G:O4'	2.69	0.41
1:A:1111:A:H2'	1:A:1112:C:C5	2.52	0.41
1:A:128:G:C6	1:A:129:U:C4	3.08	0.41
1:A:1315:U:C5	1:A:1316:G:O6	2.74	0.41
1:A:1234:C:C1'	1:A:1364:U:O2	2.65	0.41
1:A:1498:U:O2'	1:A:1499:A:C5'	2.69	0.41
1:A:1516:G:N2	1:A:1518:A:OP2	2.53	0.41
1:A:186(C):G:N2	1:A:186(D):C:C2	2.89	0.41
1:A:221:C:H2'	1:A:222:U:H6	1.86	0.41
1:A:243:A:N6	1:A:281:G:H2'	2.34	0.41
1:A:258:G:N3	1:A:259:G:N7	2.68	0.41
1:A:266:G:H2'	1:A:267:C:OP2	2.21	0.41
1:A:282:A:N3	1:A:282:A:H2'	2.34	0.41
1:A:302:G:H8	1:A:302:G:H5''	1.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:483:C:N4	1:A:484:G:N1	2.67	0.41
1:A:539:A:H2'	1:A:540:G:C8	2.56	0.41
1:A:565:U:O5'	1:A:566:G:H3'	2.20	0.41
1:A:606:G:N2	1:A:631:G:N3	2.69	0.41
1:A:629:G:N3	1:A:630:G:C8	2.88	0.41
1:A:683:G:N2	14:N:38:ASN:HA	2.35	0.41
1:A:799:G:C6	1:A:800:G:C2	3.08	0.41
1:A:800:G:C8	1:A:800:G:H3'	2.56	0.41
1:A:853:G:O2'	1:A:854:G:O4'	2.36	0.41
1:A:867:G:H2'	1:A:868:C:C6	2.55	0.41
1:A:893:C:OP2	1:A:893:C:H6	2.03	0.41
5:E:176:GLU:O	5:E:180:LEU:CD1	2.68	0.41
5:E:22:LYS:HD3	5:E:22:LYS:HA	1.76	0.41
6:F:131:ARG:NH1	8:H:51:VAL:CG2	2.81	0.41
6:F:134:ILE:CD1	6:F:134:ILE:N	2.83	0.41
6:F:179:ARG:HB3	6:F:206:GLU:OE1	2.21	0.41
6:F:114:PRO:HD3	6:F:183:ASP:OD2	2.19	0.41
6:F:190:ARG:CA	6:F:190:ARG:NE	2.84	0.41
7:G:128:VAL:O	7:G:130:GLY:N	2.53	0.41
7:G:59:ARG:HA	7:G:59:ARG:NE	2.22	0.41
7:G:60:GLU:O	7:G:63:LYS:HD2	2.20	0.41
8:H:80:ILE:O	8:H:90:VAL:HA	2.21	0.41
9:I:70:ASP:O	9:I:72:VAL:N	2.54	0.41
10:J:40:ALA:O	10:J:44:TYR:CD1	2.74	0.41
10:J:80:VAL:CG1	10:J:81:GLY:N	2.73	0.41
1:A:1249:C:O2'	12:L:67:GLY:O	2.35	0.41
13:M:60:ARG:O	13:M:61:GLU:HB2	2.21	0.41
14:N:15:ALA:HB1	14:N:78:GLN:HE22	1.84	0.41
15:O:60:LEU:CD2	15:O:64:TYR:CB	2.98	0.41
16:P:110:ARG:CB	16:P:110:ARG:HH11	2.32	0.41
16:P:14:ARG:N	16:P:44:ARG:CZ	2.75	0.41
18:R:69:TYR:HH	18:R:73:GLU:HG3	1.83	0.41
20:T:97:SER:HB2	20:T:104:LYS:N	2.36	0.41
21:U:36:ASN:O	21:U:40:LEU:CG	2.53	0.41
21:U:40:LEU:C	21:U:42:ARG:N	2.73	0.41
21:U:71:LYS:O	21:U:72:ARG:C	2.58	0.41
21:U:78:LEU:O	21:U:79:LEU:CG	2.68	0.41
14:N:84:VAL:CG2	21:U:88:LYS:NZ	2.81	0.41
22:V:62:ILE:HD11	22:V:67:VAL:CB	2.50	0.41
23:W:12:ALA:C	23:W:14:LYS:H	2.23	0.41
24:X:6:ARG:HH11	24:X:15:ARG:NH2	2.18	0.41
2:C:21:A:N6	2:C:48:C:C5	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:19:G:C4	2:C:57:A:H2	2.39	0.41
3:D:47:U:C2'	3:D:48:C:H5''	2.41	0.41
1:A:79:G:C2	1:A:91:C:C2	3.08	0.41
1:A:524:G:C5	1:A:525:C:N3	2.89	0.41
20:T:26:GLN:HA	20:T:37:LYS:HA	2.03	0.41
1:A:1191:A:N3	1:A:1191:A:C2'	2.79	0.41
1:A:136:C:H2'	1:A:137:C:H6	1.85	0.41
1:A:1486:G:H8	1:A:1486:G:O5'	2.04	0.41
1:A:1500:A:OP1	1:A:1505:G:P	2.78	0.41
1:A:1515:C:O2'	1:A:1516:G:O5'	2.38	0.41
1:A:781:A:H5''	1:A:1523:G:C4'	2.50	0.41
1:A:245:C:N3	1:A:284:G:C6	2.89	0.41
1:A:339:C:H2'	1:A:340:U:O5'	2.20	0.41
1:A:59:A:N7	1:A:354:G:C6	2.89	0.41
1:A:406:G:C2	1:A:407:G:C8	3.08	0.41
1:A:430:A:OP2	7:G:8:VAL:N	2.52	0.41
1:A:410:G:C1'	1:A:432:A:H61	2.33	0.41
1:A:511:C:C2	1:A:512:U:C6	3.09	0.41
1:A:522:C:N4	1:A:523:A:N6	2.69	0.41
1:A:540:G:C6	1:A:541:G:C5	3.08	0.41
1:A:592:G:O6	1:A:648:A:N6	2.53	0.41
1:A:650:G:N3	1:A:651:C:C6	2.89	0.41
1:A:709:G:H2'	1:A:710:G:H8	1.85	0.41
1:A:734:G:C2	1:A:735:C:C2	3.08	0.41
1:A:826:C:N3	1:A:827:U:C5	2.89	0.41
1:A:886:G:C2	1:A:912:C:O2	2.73	0.41
1:A:961:U:H6	1:A:983:A:C2	2.39	0.41
5:E:102:LEU:HD22	5:E:176:GLU:OE1	2.21	0.41
5:E:120:ALA:O	5:E:122:PHE:N	2.52	0.41
5:E:162:ILE:HD11	5:E:184:VAL:HG23	2.01	0.41
5:E:207:ALA:C	5:E:209:ARG:N	2.72	0.41
5:E:84:GLU:OE2	5:E:219:VAL:CG2	2.69	0.41
5:E:25:ASN:O	5:E:26:PRO:C	2.58	0.41
5:E:87:ARG:O	5:E:88:ALA:C	2.59	0.41
6:F:14:ILE:CG1	6:F:178:LEU:O	2.55	0.41
6:F:179:ARG:NE	6:F:206:GLU:CD	2.74	0.41
7:G:111:ALA:HA	7:G:161:ASN:ND2	2.35	0.41
7:G:162:LEU:CD1	7:G:181:MET:HG2	2.51	0.41
7:G:13:ARG:CG	7:G:32:ALA:HB2	2.50	0.41
7:G:66:ARG:O	7:G:68:TYR:N	2.53	0.41
8:H:9:LYS:HG2	8:H:112:LEU:HG	2.02	0.41
8:H:143:ARG:HB3	8:H:147:ASP:CB	2.51	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:1:MET:SD	9:I:68:PRO:CD	3.08	0.41
9:I:82:ARG:HA	9:I:82:ARG:HD2	1.73	0.41
11:K:77:GLU:HB3	11:K:78:GLN:H	1.52	0.41
12:L:32:ASP:OD1	12:L:33:PHE:N	2.53	0.41
15:O:84:LEU:O	15:O:101:VAL:HG22	2.21	0.41
15:O:25:PRO:HG2	15:O:64:TYR:OH	2.21	0.41
15:O:84:LEU:HG	15:O:85:ILE:H	1.86	0.41
1:A:952:U:O2'	16:P:126:LYS:OXT	2.39	0.41
16:P:12:ASN:OD1	16:P:12:ASN:O	2.39	0.41
16:P:29:ARG:HD3	16:P:64:TRP:NE1	2.35	0.41
1:A:1308:U:C3'	16:P:99:ARG:NH2	2.81	0.41
17:Q:6:LEU:O	17:Q:8:GLU:HG2	2.20	0.41
18:R:34:LEU:CD2	18:R:35:ARG:N	2.84	0.41
18:R:65:ARG:NH1	18:R:65:ARG:HB3	2.36	0.41
19:S:22:THR:HG22	19:S:32:TYR:CB	2.49	0.41
19:S:57:ARG:CG	19:S:79:VAL:HG12	2.49	0.41
20:T:41:LYS:O	20:T:42:TYR:CD1	2.73	0.41
1:A:434:U:C2	1:A:435:C:C5	3.09	0.41
3:D:19:G:C5'	3:D:20:U:O4	2.69	0.41
1:A:1029:G:C2	1:A:1032(A):G:O6	2.73	0.41
1:A:1004:A:C8	1:A:1037:C:N4	2.88	0.41
1:A:1088:G:C6	1:A:1089:G:N7	2.89	0.41
1:A:108:G:C6	23:W:15:ARG:CD	3.03	0.41
1:A:1091:U:O2	1:A:1095:U:C5	2.73	0.41
1:A:1110:A:N7	1:A:1111:A:N7	2.69	0.41
1:A:1178:G:C8	1:A:1180:A:OP2	2.74	0.41
1:A:1232:U:O5'	1:A:1232:U:C6	2.74	0.41
1:A:1290:G:C6	1:A:1291:G:C8	3.09	0.41
1:A:1328:C:H2'	1:A:1329:A:C8	2.56	0.41
1:A:1366:C:O2'	1:A:1367:C:H5'	2.20	0.41
1:A:1287:A:N6	1:A:1371:G:O4'	2.54	0.41
1:A:1376:U:H2'	1:A:1377:A:N7	2.36	0.41
1:A:1418:A:N6	1:A:1483:A:C5	2.89	0.41
1:A:1434:A:O5'	1:A:1434:A:H8	2.03	0.41
1:A:1475:G:O2'	1:A:1476:G:C5'	2.67	0.41
1:A:1530:G:C2	1:A:1531:A:C2	3.08	0.41
1:A:155:C:H2'	1:A:156:G:H5'	2.00	0.41
1:A:296:U:O2	1:A:302:G:C2	2.73	0.41
1:A:340:U:O2'	1:A:341:C:O5'	2.38	0.41
1:A:38:G:N2	1:A:397:A:O4'	2.54	0.41
1:A:518:C:C2	1:A:529:G:O6	2.73	0.41
1:A:577:G:H21	1:A:578:C:H1'	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:585:G:H2'	1:A:586:C:O5'	2.21	0.41
1:A:592:G:C2	1:A:593:G:C8	3.08	0.41
1:A:596:C:C2'	1:A:597:G:O5'	2.69	0.41
1:A:610:G:H2'	1:A:611:A:O5'	2.21	0.41
1:A:618:C:C6	1:A:620:C:OP2	2.72	0.41
1:A:677:U:C2'	1:A:678:U:C5	2.91	0.41
1:A:687:A:O2'	1:A:688:G:O4'	2.39	0.41
1:A:706:A:C1'	14:N:29:ILE:HD12	2.50	0.41
1:A:720:C:N3	1:A:721:G:C5	2.88	0.41
1:A:734:G:OP1	1:A:734:G:C8	2.60	0.41
1:A:756:C:O2'	1:A:823:G:H1'	2.21	0.41
1:A:827:U:O5'	1:A:827:U:H6	2.04	0.41
1:A:831:U:C2	1:A:832:C:C5	3.08	0.41
1:A:868:C:H5'	1:A:873:A:N6	2.36	0.41
1:A:909:A:C2'	1:A:910:C:C5'	2.94	0.41
1:A:864:A:C2	1:A:917:G:C2	3.08	0.41
1:A:961:U:C5	1:A:983:A:C6	3.07	0.41
2:C:34:C:C6	2:C:34:C:O5'	2.72	0.41
5:E:115:LEU:CD2	5:E:149:LEU:CB	2.93	0.41
5:E:187:LEU:HD13	5:E:187:LEU:C	2.41	0.41
5:E:33:TYR:HA	5:E:33:TYR:HD1	1.73	0.41
5:E:57:PHE:CE2	5:E:64:ARG:NH1	2.87	0.41
6:F:31:HIS:HA	6:F:34:LEU:HD13	2.02	0.41
7:G:123:HIS:N	7:G:123:HIS:CD2	2.85	0.41
7:G:123:HIS:HB2	7:G:125:HIS:CE1	2.56	0.41
7:G:128:VAL:CG2	7:G:133:VAL:CG2	2.96	0.41
7:G:188:LEU:O	7:G:189:PRO:O	2.37	0.41
7:G:65:ARG:NE	7:G:72:GLU:CA	2.83	0.41
8:H:108:ALA:O	8:H:112:LEU:CB	2.59	0.41
9:I:38:GLU:O	9:I:39:LYS:HD2	2.21	0.41
9:I:45:LEU:HA	9:I:59:TYR:HA	2.01	0.41
9:I:98:LEU:HD21	21:U:28:GLU:HG2	2.02	0.41
11:K:126:LYS:NZ	11:K:127:LEU:CG	2.82	0.41
12:L:49:PRO:HG2	12:L:81:ILE:HB	1.99	0.41
14:N:25:TYR:CD1	14:N:89:ALA:N	2.88	0.41
15:O:68:ALA:HB1	15:O:99:HIS:CA	2.33	0.41
15:O:85:ILE:CD1	15:O:98:TYR:CB	2.93	0.41
17:Q:14:PRO:CB	17:Q:17:LYS:HA	2.50	0.41
17:Q:34:TYR:HB2	17:Q:35:ARG:H	1.63	0.41
18:R:79:ARG:NH1	18:R:79:ARG:CB	2.72	0.41
19:S:7:ALA:CB	19:S:18:ARG:HB2	2.47	0.41
20:T:23:VAL:O	20:T:23:VAL:HG13	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:60:ILE:HG22	20:T:72:ARG:O	2.21	0.41
22:V:37:ARG:HH11	22:V:70:LYS:HD3	1.86	0.41
22:V:41:VAL:O	22:V:44:MET:HB2	2.20	0.41
23:W:45:GLN:HG2	23:W:91:LEU:HD13	2.02	0.41
23:W:54:LYS:O	23:W:57:ARG:HB2	2.21	0.41
23:W:88:VAL:O	23:W:92:LEU:CD1	2.68	0.41
2:C:4:G:C4	2:C:5:G:C8	3.09	0.41
2:C:71:C:H2'	2:C:72:A:O5'	2.21	0.41
3:D:56:C:N4	3:D:57:G:N2	2.69	0.41
3:D:57:G:H2'	3:D:58:A:H5''	2.02	0.41
1:A:1037:C:H2'	1:A:1038:C:O4'	2.19	0.41
1:A:1039:C:C2'	1:A:1040:U:O5'	2.69	0.41
1:A:1077:G:H1'	1:A:1081:G:H22	1.84	0.41
1:A:1401:G:C8	1:A:1402:C:C6	3.09	0.41
1:A:1435:G:H8	1:A:1435:G:OP2	2.04	0.41
1:A:155:C:H2'	1:A:156:G:C5'	2.50	0.41
1:A:172:A:N7	1:A:174:C:C4	2.88	0.41
1:A:179:A:H2'	1:A:180:U:O4'	2.21	0.41
1:A:230:G:C2	1:A:231:G:C4	3.08	0.41
1:A:278:G:C4'	1:A:282:A:H1'	2.51	0.41
1:A:351:G:O5'	1:A:351:G:C8	2.74	0.41
1:A:354:G:N1	1:A:355:C:C4	2.88	0.41
1:A:62:U:H1'	1:A:379:C:H1'	2.02	0.41
1:A:407:G:C4	1:A:408:A:C8	3.09	0.41
1:A:571:U:H4'	1:A:819:A:N6	2.35	0.41
1:A:609:A:N3	1:A:610:G:N9	2.69	0.41
1:A:671:G:C2	1:A:672:U:H1'	2.55	0.41
1:A:675:A:C2'	1:A:676:A:C8	3.00	0.41
1:A:686:U:C4'	1:A:686:U:OP1	2.68	0.41
1:A:715:A:H4'	1:A:777:A:H61	1.85	0.41
1:A:778:G:C3'	1:A:779:C:H6	2.34	0.41
1:A:910:C:C2'	1:A:911:U:H5'	2.50	0.41
1:A:981:U:C4	1:A:982:U:N3	2.89	0.41
5:E:127:ILE:CG2	5:E:128:GLU:HG2	2.38	0.41
5:E:179:LYS:HE3	5:E:179:LYS:HB2	1.90	0.41
5:E:189:ASP:OD1	5:E:205:ASP:HB3	2.21	0.41
6:F:110:ASN:O	6:F:141:VAL:HG13	2.21	0.41
6:F:142:MET:HB2	6:F:148:GLY:C	2.41	0.41
6:F:191:THR:OG1	6:F:196:LEU:CD2	2.64	0.41
1:A:401:C:OP1	7:G:73:ARG:NH2	2.54	0.41
7:G:83:SER:HA	7:G:89:THR:CB	2.47	0.41
7:G:82:ALA:CB	7:G:93:PHE:HB2	2.51	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:109:ILE:HD11	8:H:136:MET:HG2	2.02	0.41
8:H:114:GLY:O	8:H:115:VAL:CG1	2.56	0.41
8:H:19:MET:HE1	8:H:20:GLN:O	2.21	0.41
8:H:52:PRO:O	8:H:55:VAL:N	2.54	0.41
9:I:12:PRO:HG3	9:I:55:ASP:OD2	2.21	0.41
9:I:4:TYR:CB	9:I:91:VAL:O	2.55	0.41
10:J:151:TYR:O	10:J:152:ALA:C	2.57	0.41
10:J:12:LEU:HD13	10:J:21:VAL:HG12	2.03	0.41
11:K:25:ASP:OD2	11:K:51:VAL:HG21	2.20	0.41
11:K:85:ARG:C	11:K:86:ILE:HD12	2.41	0.41
11:K:88:LYS:HB2	11:K:88:LYS:HZ3	1.86	0.41
12:L:109:VAL:CG1	12:L:109:VAL:O	2.68	0.41
12:L:2:GLU:CA	12:L:21:PRO:HD2	2.49	0.41
12:L:5:TYR:HD2	12:L:6:GLY:N	2.17	0.41
13:M:79:ARG:HH12	13:M:82:ILE:CG1	2.32	0.41
14:N:73:MET:O	14:N:74:ALA:C	2.59	0.41
1:A:970:C:O2	16:P:126:LYS:HD2	2.21	0.41
16:P:8:GLU:OE1	16:P:10:PRO:CG	2.64	0.41
6:F:12:LEU:CD1	17:Q:57:ARG:HA	2.50	0.41
18:R:29:VAL:O	18:R:33:THR:OG1	2.38	0.41
18:R:53:HIS:C	18:R:57:LEU:HD13	2.40	0.41
18:R:65:ARG:HH11	18:R:65:ARG:CB	2.34	0.41
19:S:43:LYS:CG	19:S:48:TRP:HZ3	2.34	0.41
19:S:49:LEU:HG	19:S:50:LYS:N	2.28	0.41
20:T:29:HIS:CG	20:T:32:TYR:HB2	2.55	0.41
1:A:1157:A:C6	1:A:1180:A:C5	3.09	0.41
1:A:1206:G:H2'	1:A:1207:G:H8	1.82	0.41
1:A:1222:G:C2	1:A:1223:C:O2	2.74	0.41
1:A:1264:C:N4	1:A:1266:G:H22	2.19	0.41
1:A:1295:G:O2'	16:P:14:ARG:NH2	2.54	0.41
1:A:132:C:N3	1:A:133:U:C4	2.89	0.41
1:A:1378:C:N4	1:A:1379:G:C4	2.89	0.41
1:A:1466:C:H2'	1:A:1467:G:C8	2.55	0.41
1:A:1526:G:H2'	1:A:1527:C:C6	2.53	0.41
1:A:159:G:C2	1:A:161:A:OP2	2.74	0.41
1:A:20:U:H3'	1:A:20:U:O2	2.21	0.41
1:A:219:C:N4	1:A:220:G:C8	2.89	0.41
1:A:285:G:N3	1:A:286:G:C8	2.89	0.41
1:A:39:G:O2'	1:A:40:C:H5'	2.21	0.41
1:A:47:C:O2'	1:A:48:C:P	2.79	0.41
1:A:690:G:H22	1:A:696:A:N6	2.19	0.41
1:A:761:G:N3	1:A:761:G:H2'	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:798:G:C6	1:A:799:G:N7	2.89	0.41
1:A:969:A:C4'	1:A:969:A:OP1	2.69	0.41
1:A:969:A:H5'	1:A:970:C:OP2	2.20	0.41
5:E:164:VAL:HG22	5:E:165:VAL:N	2.35	0.41
5:E:16:HIS:O	5:E:17:PHE:C	2.59	0.41
5:E:55:PHE:O	5:E:58:ILE:CB	2.69	0.41
5:E:62:ALA:HB3	5:E:225:ALA:CB	2.49	0.41
5:E:74:LYS:CE	5:E:76:GLN:HB2	2.51	0.41
6:F:84:ILE:HA	6:F:101:LEU:HD11	2.02	0.41
6:F:108:ASN:HD21	6:F:110:ASN:HB2	1.83	0.41
6:F:34:LEU:CD2	6:F:35:GLU:N	2.75	0.41
6:F:53:ALA:HB3	6:F:69:HIS:O	2.21	0.41
1:A:407:G:H5''	7:G:115:ARG:HG2	2.03	0.41
7:G:179:GLU:C	7:G:181:MET:H	2.25	0.41
7:G:63:LYS:CG	7:G:198:VAL:CG1	2.94	0.41
7:G:60:GLU:CD	7:G:202:LEU:CB	2.90	0.41
1:A:401:C:OP1	7:G:73:ARG:NH1	2.54	0.41
7:G:94:LEU:HA	7:G:94:LEU:HD23	1.86	0.41
9:I:24:GLU:OE2	9:I:25:ILE:N	2.54	0.41
9:I:2:ARG:CD	9:I:69:GLU:HB3	2.48	0.41
10:J:146:GLU:CG	10:J:149:ARG:NH1	2.84	0.41
10:J:35:LYS:HB3	10:J:35:LYS:HE2	1.84	0.41
10:J:38:LEU:HD12	10:J:38:LEU:HA	1.78	0.41
1:A:932:C:C3'	10:J:3:ARG:HG3	2.50	0.41
10:J:41:ARG:NH1	10:J:41:ARG:CG	2.78	0.41
10:J:46:ALA:O	10:J:47:CYS:C	2.59	0.41
11:K:30:ARG:O	11:K:33:GLU:HB2	2.21	0.41
11:K:67:PRO:O	11:K:68:ARG:O	2.39	0.41
11:K:85:ARG:HD2	11:K:85:ARG:HA	1.68	0.41
13:M:19:SER:CA	13:M:91:PRO:HG3	2.50	0.41
13:M:60:ARG:H	13:M:60:ARG:CD	2.27	0.41
13:M:82:ILE:HG22	13:M:86:MET:SD	2.61	0.41
13:M:95:GLU:HG2	13:M:95:GLU:O	2.21	0.41
1:A:706:A:H5''	14:N:22:HIS:HE1	1.85	0.41
15:O:27:LEU:O	15:O:28:LYS:C	2.59	0.41
15:O:34:ARG:CG	15:O:35:GLY:N	2.84	0.41
16:P:105:THR:O	16:P:106:ASN:HB2	2.21	0.41
16:P:66:LEU:CD2	16:P:66:LEU:N	2.79	0.41
18:R:18:PHE:O	18:R:18:PHE:CD1	2.74	0.41
22:V:68:GLY:O	22:V:69:HIS:ND1	2.50	0.41
1:A:1459:C:C5'	23:W:27:LYS:HZ3	2.33	0.41
23:W:43:LEU:HB3	23:W:52:ALA:HA	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:X:20:LYS:HB3	24:X:20:LYS:HE2	1.90	0.41
2:C:59:A:H3'	2:C:60:U:H6	1.86	0.41
3:D:48:C:O2'	3:D:49:G:P	2.78	0.41
1:A:1031:G:N1	1:A:1032:A:C2	2.89	0.41
1:A:1025:U:O2	1:A:1026:G:O6	2.39	0.41
1:A:91:C:H2'	1:A:92:G:C8	2.48	0.41
1:A:748:C:C3'	1:A:748:C:H6	2.27	0.41
14:N:114:VAL:HG22	14:N:115:PRO:N	2.35	0.41
1:A:398:C:C6	1:A:398:C:C3'	3.04	0.41
1:A:101:A:H8	1:A:101:A:O5'	2.04	0.41
1:A:104:G:N1	1:A:105:G:C5	2.89	0.41
1:A:1066:C:C5	1:A:1067:A:N6	2.89	0.41
1:A:109:A:C2	1:A:327:A:C2	3.09	0.41
1:A:1130:A:OP2	1:A:1131:G:OP2	2.39	0.41
1:A:1242:C:O2'	1:A:1303:C:H5'	2.21	0.41
1:A:1304:G:N1	1:A:1332:A:OP2	2.54	0.41
1:A:1361:G:C8	1:A:1362:C:C6	3.09	0.41
1:A:1381:U:H2'	1:A:1381:U:O2	2.20	0.41
1:A:1459:C:OP1	23:W:27:LYS:HD3	2.21	0.41
1:A:1514:C:O2'	1:A:1515:C:C5'	2.64	0.41
1:A:229:U:O3'	19:S:33:ILE:HD13	2.21	0.41
1:A:274:A:O2'	1:A:275:G:C1'	2.69	0.41
1:A:292:G:H3'	1:A:293:G:H8	1.86	0.41
1:A:327:A:H2'	1:A:329:A:H8	1.86	0.41
1:A:112:G:O2'	1:A:354:G:O2'	2.30	0.41
1:A:359:U:O2'	1:A:360:A:H5'	2.21	0.41
1:A:426:G:OP1	7:G:45:GLN:NE2	2.41	0.41
1:A:5:U:C5	7:G:86:LYS:HE2	2.56	0.41
1:A:610:G:C2'	1:A:611:A:O5'	2.69	0.41
1:A:628:G:C2	1:A:629:G:C4	3.09	0.41
1:A:684:A:H2	1:A:706:A:N1	2.19	0.41
1:A:687:A:C4	1:A:704:A:N6	2.89	0.41
1:A:790:A:O5'	1:A:790:A:C8	2.74	0.41
1:A:585:G:C2	1:A:879:C:H4'	2.52	0.41
1:A:888:G:N2	1:A:908:A:C6	2.89	0.41
1:A:961:U:H2'	1:A:962:C:C5'	2.49	0.41
1:A:962:C:H2'	1:A:963:G:C8	2.56	0.41
5:E:93:VAL:CG2	5:E:101:MET:HE3	2.51	0.41
5:E:118:LEU:HD22	5:E:142:LEU:CD1	2.49	0.41
5:E:12:GLU:C	5:E:14:GLY:N	2.62	0.41
5:E:131:PRO:HB2	5:E:134:GLU:OE2	2.21	0.41
5:E:15:VAL:HG21	5:E:210:SER:CA	2.51	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:134:ILE:HG12	6:F:153:VAL:HG11	2.03	0.41
6:F:147:LYS:HB2	6:F:203:PHE:CD2	2.56	0.41
7:G:101:LEU:HD23	7:G:138:TYR:HB3	2.03	0.41
7:G:187:ARG:NE	7:G:188:LEU:HG	2.35	0.41
7:G:200:GLU:HG3	7:G:201:GLN:HE21	1.86	0.41
7:G:79:PHE:HA	7:G:93:PHE:CD1	2.56	0.41
8:H:121:LYS:CA	8:H:121:LYS:HZ3	2.34	0.41
9:I:42:GLU:HG3	9:I:61:LEU:HD22	2.03	0.41
10:J:146:GLU:O	10:J:147:ALA:C	2.59	0.41
10:J:69:VAL:O	10:J:138:LYS:HD2	2.21	0.41
1:A:1341:U:H4'	12:L:127:LYS:HA	2.03	0.41
12:L:27:THR:CG2	12:L:30:GLY:H	2.34	0.41
12:L:71:SER:O	12:L:75:ASP:OD1	2.39	0.41
12:L:49:PRO:HD3	12:L:78:LYS:HG2	2.01	0.41
13:M:30:SER:HB3	13:M:80:LYS:HG2	1.99	0.41
13:M:47:PHE:HZ	13:M:65:LEU:HB2	1.85	0.41
20:T:18:THR:O	20:T:19:VAL:CG1	2.63	0.41
20:T:45:HIS:CD2	20:T:65:ILE:CD1	3.04	0.41
22:V:10:PHE:HE2	22:V:12:ASP:OD1	2.03	0.41
3:D:19:G:C5	3:D:57:G:N2	2.76	0.41
3:D:48:C:C4	3:D:59:U:C2	3.08	0.41
6:F:122:GLU:CA	6:F:125:GLU:HG2	2.46	0.41
22:V:49:ILE:O	22:V:49:ILE:HG13	2.21	0.41
1:A:1066:C:O2'	1:A:1387:G:H5'	2.22	0.40
1:A:1124:G:C2'	1:A:1125:U:OP2	2.70	0.40
1:A:1181:G:O3'	1:A:1184:G:C5'	2.68	0.40
1:A:1196:U:H6	1:A:1196:U:C3'	2.22	0.40
1:A:1245:A:N1	1:A:1293:G:C6	2.89	0.40
1:A:1257:U:O2'	1:A:1258:G:P	2.79	0.40
1:A:1296:C:C1'	1:A:1302:U:O4	2.69	0.40
1:A:1368:G:C2	1:A:1369:C:C2	3.09	0.40
1:A:1399:C:O2	1:A:1401:G:C8	2.74	0.40
1:A:1412:C:C2	1:A:1413:A:C8	3.09	0.40
1:A:1433:A:H2'	1:A:1434:A:C5'	2.51	0.40
1:A:1438:G:C6	1:A:1464:G:C2	3.09	0.40
1:A:926:G:C2'	1:A:1505:G:H21	2.22	0.40
1:A:1520:G:O2'	1:A:1521:G:O5'	2.39	0.40
1:A:160:A:N7	1:A:161:A:N7	2.69	0.40
1:A:167:G:H2'	1:A:168:G:H8	1.84	0.40
1:A:191(F):U:H6	1:A:191(F):U:O5'	2.03	0.40
1:A:20:U:C4	1:A:21:G:C2	3.09	0.40
1:A:254:G:O2'	1:A:255:G:H5'	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:258:G:C6	1:A:259:G:C6	3.08	0.40
1:A:267:C:P	20:T:67:LYS:HD3	2.61	0.40
1:A:272:C:N3	1:A:273:A:N7	2.69	0.40
1:A:277:C:OP2	20:T:41:LYS:CD	2.70	0.40
1:A:296:U:O2'	1:A:297:G:H5'	2.21	0.40
1:A:331:G:O5'	1:A:331:G:H8	2.04	0.40
1:A:382:A:O2'	1:A:383:A:H5'	2.21	0.40
1:A:452:A:OP1	19:S:43:LYS:NZ	2.48	0.40
1:A:476:G:C2	1:A:477:G:C8	3.10	0.40
1:A:534:U:C5'	1:A:535:A:OP2	2.69	0.40
1:A:568:G:N1	1:A:569:C:C4	2.90	0.40
1:A:581:G:H2'	1:A:582:U:OP2	2.21	0.40
1:A:622:A:HO2'	1:A:623:C:P	2.44	0.40
1:A:623:C:H2'	1:A:624:C:C6	2.53	0.40
1:A:715:A:O5'	1:A:715:A:H8	2.04	0.40
1:A:745:C:H4'	1:A:836:G:C2	2.55	0.40
1:A:766:A:C4	1:A:814:A:C2	3.09	0.40
1:A:907:A:N6	1:A:908:A:N6	2.69	0.40
1:A:966:G:H2'	1:A:967:C:C6	2.56	0.40
5:E:139:LYS:O	5:E:143:GLU:CB	2.67	0.40
5:E:217:ARG:HB3	5:E:217:ARG:NH1	2.36	0.40
6:F:22:TRP:HE3	6:F:23:TYR:O	2.04	0.40
7:G:165:MET:CG	7:G:166:LYS:N	2.83	0.40
7:G:24:GLU:OE2	7:G:25:ARG:HB2	2.21	0.40
8:H:103:GLY:C	8:H:106:PRO:HD2	2.41	0.40
1:A:9:G:OP2	8:H:121:LYS:HA	2.21	0.40
8:H:140:ARG:O	8:H:141:GLN:C	2.59	0.40
8:H:81:GLU:CB	8:H:90:VAL:CG2	2.91	0.40
9:I:3:ARG:CD	9:I:38:GLU:OE1	2.69	0.40
9:I:44:GLY:HA2	9:I:59:TYR:HE1	1.86	0.40
9:I:68:PRO:O	9:I:71:ARG:HG2	2.21	0.40
10:J:71:PRO:CA	10:J:138:LYS:HE3	2.49	0.40
10:J:35:LYS:HE3	10:J:37:ASN:HD21	1.86	0.40
10:J:54:THR:O	10:J:56:GLN:HG2	2.21	0.40
10:J:77:SER:C	10:J:156:TRP:CH2	2.95	0.40
10:J:83:ALA:CB	10:J:85:TYR:CE2	2.99	0.40
11:K:68:ARG:HG2	11:K:74:PRO:HB2	2.02	0.40
11:K:14:ARG:NH1	11:K:83:ILE:HG23	2.36	0.40
12:L:14:VAL:O	12:L:65:VAL:HA	2.21	0.40
13:M:5:ARG:NH1	13:M:5:ARG:CG	2.84	0.40
13:M:61:GLU:HG3	13:M:62:HIS:N	2.35	0.40
16:P:29:ARG:CD	16:P:64:TRP:NE1	2.84	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:59:TYR:CG	16:P:60:VAL:N	2.87	0.40
16:P:77:ASN:HA	16:P:80:ARG:HG2	2.02	0.40
17:Q:34:TYR:CZ	17:Q:44:LEU:HD13	2.55	0.40
18:R:18:PHE:CE1	18:R:21:ASP:CA	3.04	0.40
19:S:8:ARG:HG2	19:S:17:TYR:CZ	2.56	0.40
19:S:58:TYR:CD1	19:S:59:TRP:N	2.89	0.40
20:T:60:ILE:HG23	20:T:60:ILE:O	2.21	0.40
1:A:191:G:O2'	23:W:102:GLY:O	2.37	0.40
23:W:42:GLN:O	23:W:45:GLN:N	2.53	0.40
23:W:48:LYS:O	23:W:49:ALA:C	2.60	0.40
1:A:1121:U:C2	1:A:1122:U:C5	3.10	0.40
3:D:23:A:O5'	3:D:23:A:H8	2.04	0.40
1:A:1002:G:N1	1:A:1003:G:C6	2.89	0.40
1:A:848:C:C2	1:A:849:C:C5	3.09	0.40
1:A:93:U:C2	1:A:95:G:N7	2.89	0.40
1:A:209:U:C5'	1:A:210:U:OP1	2.62	0.40
1:A:1014:A:H4'	22:V:14:HIS:CE1	2.56	0.40
1:A:1046:A:H3'	1:A:1047:G:C8	2.55	0.40
1:A:1140:C:C4	1:A:1141:C:C5	3.09	0.40
1:A:1161:C:N3	1:A:1162:C:C5	2.89	0.40
1:A:118:U:C6	1:A:288:A:N1	2.88	0.40
1:A:1197:G:H3'	1:A:1197:G:P	2.61	0.40
1:A:1222:G:N3	1:A:1223:C:C2	2.89	0.40
1:A:1222:G:OP2	1:A:1322:C:C5	2.74	0.40
1:A:1239:A:H1'	1:A:1241:G:C4	2.57	0.40
1:A:1245:A:C6	1:A:1293:G:N1	2.90	0.40
1:A:1301:U:C4	1:A:1303:C:H1'	2.56	0.40
1:A:1306:A:O2'	1:A:1307:U:H5'	2.20	0.40
1:A:1335:C:H5''	1:A:1336:C:H5'	2.03	0.40
1:A:1475:G:C2	1:A:1476:G:N9	2.89	0.40
1:A:928:G:O2'	1:A:1533:C:O4'	2.37	0.40
1:A:153:C:N4	1:A:154:C:N4	2.69	0.40
1:A:158:G:C2	1:A:164:U:O2	2.74	0.40
1:A:335:C:C4'	1:A:1434:A:H4'	2.51	0.40
1:A:342:C:N3	1:A:348:G:C2	2.89	0.40
1:A:38:G:C4	1:A:397:A:H2	2.39	0.40
1:A:497:U:C2'	1:A:498:A:O5'	2.69	0.40
1:A:601:C:C2	1:A:638:G:C2	3.09	0.40
1:A:719:C:OP2	1:A:720:C:N4	2.45	0.40
1:A:728:A:OP1	1:A:742:G:O2'	2.40	0.40
1:A:753:A:H4'	1:A:754:C:H5''	2.03	0.40
1:A:888:G:N2	1:A:909:A:N6	2.48	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:909:A:C5	1:A:910:C:C6	3.09	0.40
1:A:928:G:O2'	1:A:1533:C:H4'	2.22	0.40
5:E:109:SER:O	5:E:110:GLN:C	2.59	0.40
5:E:169:LYS:C	5:E:171:ALA:N	2.74	0.40
5:E:84:GLU:OE2	5:E:219:VAL:HB	2.21	0.40
5:E:220:ASP:HA	5:E:223:ILE:HB	2.02	0.40
6:F:190:ARG:CZ	6:F:190:ARG:HB3	2.51	0.40
6:F:59:ARG:HG3	6:F:61:ALA:O	2.21	0.40
7:G:88:VAL:O	7:G:89:THR:C	2.60	0.40
8:H:41:VAL:CG2	8:H:113:ALA:HA	2.51	0.40
8:H:71:LEU:HD23	8:H:72:GLN:CA	2.49	0.40
10:J:155:ARG:NH1	10:J:156:TRP:HB2	2.36	0.40
11:K:107:LEU:N	11:K:107:LEU:HD23	2.15	0.40
11:K:121:ASP:OD2	11:K:122:ARG:N	2.51	0.40
11:K:67:PRO:HD2	11:K:77:GLU:N	2.07	0.40
14:N:25:TYR:HD1	14:N:89:ALA:HB2	1.86	0.40
14:N:27:ASN:ND2	14:N:55:LYS:NZ	2.70	0.40
14:N:95:ILE:HA	14:N:98:LEU:CG	2.52	0.40
14:N:96:ARG:O	14:N:97:ALA:C	2.58	0.40
16:P:13:LYS:HB3	16:P:17:VAL:HB	2.02	0.40
6:F:18:TRP:CH2	17:Q:57:ARG:HB2	2.57	0.40
13:M:46:ARG:NH1	17:Q:61:TRP:CE3	2.90	0.40
18:R:43:LEU:HD23	18:R:43:LEU:HA	1.74	0.40
1:A:764:C:H4'	18:R:50:HIS:HB3	2.03	0.40
18:R:77:ARG:HH22	18:R:81:LEU:HD12	1.85	0.40
1:A:761:G:H4'	20:T:103:GLY:H	1.86	0.40
20:T:46:ASP:O	20:T:46:ASP:OD2	2.39	0.40
22:V:15:LEU:HD22	22:V:38:SER:HB3	2.02	0.40
1:A:986:A:C4'	22:V:55:LYS:HD2	2.50	0.40
22:V:69:HIS:CD2	22:V:74:PHE:CZ	3.09	0.40
10:J:129:GLU:OE1	10:J:131:LYS:N	2.54	0.40
2:C:58:A:N7	2:C:61:C:C4	2.89	0.40
2:C:69:C:C2	2:C:70:G:H8	2.35	0.40
1:A:91:C:HO2'	1:A:92:G:H5'	1.85	0.40
3:D:75:C:C5'	3:D:76:A:H4'	2.51	0.40
6:F:106:VAL:HG22	6:F:106:VAL:H	1.62	0.40
1:A:983:A:O2'	1:A:1049:U:O2'	2.31	0.40
1:A:106:C:C2'	1:A:107:G:O5'	2.69	0.40
1:A:1125:U:C5	13:M:5:ARG:NH1	2.88	0.40
1:A:1194:U:C6	1:A:1195:C:C5	3.09	0.40
1:A:1269:A:N6	1:A:1312:G:O2'	2.54	0.40
1:A:1272:G:C2	1:A:1273:G:C5	3.10	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1372:U:H2'	1:A:1373:G:O4'	2.21	0.40
1:A:1494:G:C2'	1:A:1495:U:C6	3.03	0.40
1:A:174:C:C4	1:A:175:C:C5	3.09	0.40
1:A:219:C:C5	1:A:220:G:C8	3.10	0.40
1:A:237:C:O2	1:A:237:C:H2'	2.21	0.40
1:A:270:A:H2'	1:A:271:C:C6	2.55	0.40
1:A:448:A:O2'	1:A:449:C:C5'	2.69	0.40
1:A:498:A:C4'	1:A:500:G:OP1	2.66	0.40
1:A:550:G:C4	1:A:551:U:C5	3.10	0.40
1:A:596:C:O2	1:A:597:G:H8	2.05	0.40
1:A:402:G:H4'	1:A:620:C:H42	1.87	0.40
1:A:682:G:N1	1:A:683:G:N7	2.69	0.40
1:A:685:G:N3	1:A:686:U:C5	2.89	0.40
1:A:835:U:O3'	21:U:61:LYS:NZ	2.55	0.40
1:A:866:C:C5	1:A:867:G:N9	2.90	0.40
1:A:885:G:C2	1:A:913:A:C2	3.09	0.40
1:A:928:G:O3'	1:A:1533:C:O2'	2.35	0.40
5:E:178:ARG:NH2	5:E:196:LEU:O	2.54	0.40
5:E:80:ILE:CD1	5:E:211:ILE:HG22	2.51	0.40
5:E:53:ARG:O	5:E:54:THR:C	2.60	0.40
5:E:72:GLY:HA3	5:E:165:VAL:HG13	2.02	0.40
5:E:81:VAL:HA	5:E:215:LEU:CD1	2.50	0.40
6:F:12:LEU:CD2	6:F:13:GLY:N	2.85	0.40
6:F:36:ASP:OD2	6:F:36:ASP:C	2.59	0.40
7:G:108:LEU:C	7:G:110:PHE:H	2.25	0.40
7:G:120:LEU:CD1	7:G:125:HIS:HD2	2.35	0.40
7:G:147:ALA:CB	7:G:181:MET:O	2.69	0.40
7:G:29:PRO:O	7:G:30:LYS:HG3	2.21	0.40
7:G:61:LYS:HE3	7:G:62:GLN:N	2.35	0.40
1:A:428:G:OP2	7:G:7:PRO:HG3	2.21	0.40
8:H:109:ILE:HG23	8:H:110:LEU:CD2	2.49	0.40
8:H:35:GLY:N	8:H:112:LEU:HD12	2.35	0.40
8:H:45:PHE:CD1	8:H:45:PHE:C	2.95	0.40
8:H:60:TYR:CE1	8:H:64:ARG:CZ	3.04	0.40
9:I:18:GLN:HB2	9:I:18:GLN:HE21	1.53	0.40
9:I:92:LYS:HB2	9:I:94:GLN:OE1	2.21	0.40
10:J:23:VAL:HG12	10:J:27:ILE:HD11	2.03	0.40
12:L:3:GLN:CB	12:L:20:ARG:HG2	2.51	0.40
14:N:33:THR:CA	14:N:38:ASN:O	2.67	0.40
14:N:43:SER:HA	14:N:47:VAL:HG11	2.03	0.40
14:N:17:GLY:HA3	14:N:77:MET:CE	2.52	0.40
15:O:84:LEU:N	15:O:104:VAL:HG11	2.36	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:52:LEU:N	15:O:52:LEU:CD2	2.84	0.40
15:O:7:ILE:O	15:O:10:LEU:HB2	2.22	0.40
13:M:63:PHE:HZ	17:Q:45:ARG:HA	1.85	0.40
19:S:74:LEU:HD22	19:S:79:VAL:HB	2.03	0.40
20:T:90:ILE:HG22	20:T:94:ASN:HD21	1.86	0.40
1:A:719:C:O2	21:U:49:LYS:O	2.39	0.40
22:V:68:GLY:C	22:V:69:HIS:ND1	2.75	0.40
23:W:31:SER:OG	23:W:32:ALA:N	2.53	0.40
2:C:21:A:O4'	2:C:21:A:OP1	2.40	0.40
3:D:18:G:C1'	3:D:60:U:O4	2.70	0.40
1:A:87:A:HO2'	1:A:88:C:H5'	1.84	0.40
15:O:15:ARG:NH1	15:O:15:ARG:HG2	2.36	0.40
4:1:5:A:H2'	4:1:6:G:H8	1.86	0.40
1:A:1070:U:C2	1:A:1071:C:C5	3.09	0.40
1:A:1091:U:C6	1:A:1093:A:OP2	2.73	0.40
1:A:1151:A:N7	1:A:1152:A:N7	2.69	0.40
1:A:1159:U:C4	1:A:1182:G:N3	2.89	0.40
1:A:1185:G:H2'	1:A:1186:G:H5'	2.02	0.40
1:A:1198:G:H2'	1:A:1199:U:C5'	2.52	0.40
1:A:1212:U:O2'	1:A:1213:A:C8	2.75	0.40
1:A:1226:C:C2'	1:A:1226:C:O2	2.68	0.40
1:A:1226:C:O3'	16:P:111:LYS:NZ	2.49	0.40
1:A:1229:A:O2'	1:A:1230:C:C5'	2.70	0.40
1:A:1238:A:C5	1:A:1303:C:H1'	2.57	0.40
1:A:1434:A:N6	1:A:1467:G:H21	2.13	0.40
1:A:244:U:O2'	1:A:245:C:OP2	2.38	0.40
1:A:308:C:C5'	1:A:308:C:H6	2.24	0.40
1:A:35:G:C5	1:A:550:G:C2	3.10	0.40
1:A:46:G:N2	1:A:366:C:C6	2.90	0.40
1:A:407:G:N1	1:A:408:A:C5	2.90	0.40
1:A:492:G:C5	1:A:493:G:N7	2.89	0.40
1:A:495:A:C1'	1:A:496:A:C8	3.04	0.40
1:A:563:A:H1'	1:A:566:G:H2'	2.03	0.40
1:A:662:G:N1	1:A:744:C:C4	2.90	0.40
1:A:682:G:N1	1:A:683:G:C5	2.89	0.40
1:A:914:A:H2'	1:A:915:A:N7	2.33	0.40
1:A:934:C:C5	1:A:1344:C:C4	3.09	0.40
1:A:985:C:C2	1:A:986:A:N7	2.89	0.40
5:E:43:ASP:OD2	5:E:46:LYS:CB	2.70	0.40
5:E:76:GLN:O	5:E:77:ALA:HB2	2.21	0.40
5:E:73:THR:O	5:E:96:ARG:NH2	2.54	0.40
6:F:142:MET:CB	6:F:149:ALA:HB2	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:16:ARG:NH2	6:F:182:ILE:O	2.55	0.40
6:F:67:THR:CG2	6:F:69:HIS:CE1	3.05	0.40
7:G:110:PHE:HZ	7:G:182:LYS:HA	1.87	0.40
7:G:122:ARG:C	7:G:124:GLY:N	2.73	0.40
7:G:201:GLN:HA	7:G:204:ILE:HD13	2.04	0.40
7:G:30:LYS:NZ	7:G:35:ARG:NH1	2.67	0.40
7:G:61:LYS:NZ	7:G:72:GLU:OE2	2.51	0.40
1:A:402:G:OP1	7:G:74:GLN:NE2	2.55	0.40
8:H:19:MET:HE3	8:H:19:MET:C	2.41	0.40
9:I:100:ASN:HD21	21:U:23:LYS:C	2.22	0.40
9:I:75:LEU:O	9:I:75:LEU:HD13	2.21	0.40
10:J:36:LYS:NZ	10:J:36:LYS:CA	2.84	0.40
12:L:11:LYS:C	12:L:12:GLU:CD	2.79	0.40
14:N:30:VAL:CG1	14:N:31:THR:N	2.84	0.40
1:A:1230:C:H4'	16:P:125:ARG:NH2	2.37	0.40
18:R:18:PHE:C	18:R:20:GLY:H	2.24	0.40
18:R:65:ARG:CB	18:R:65:ARG:NH1	2.84	0.40
19:S:7:ALA:HB3	19:S:18:ARG:CG	2.51	0.40
20:T:66:SER:HB3	20:T:69:LYS:HZ2	1.85	0.40
21:U:66:LEU:HD12	21:U:70:ILE:HD11	2.01	0.40
21:U:70:ILE:O	21:U:73:ALA:HB3	2.22	0.40
22:V:13:ASP:O	22:V:13:ASP:CG	2.60	0.40
23:W:13:LEU:O	23:W:16:HIS:CB	2.69	0.40
23:W:48:LYS:N	23:W:48:LYS:HD2	2.36	0.40
23:W:67:ALA:O	23:W:68:LYS:C	2.59	0.40
1:A:1032(B):G:H2'	1:A:1033:G:O4'	2.21	0.40
1:A:1040:U:C2	1:A:1041:A:C8	3.09	0.40
1:A:90:C:H2'	1:A:91:C:H6	1.86	0.40
7:G:118:ARG:HG3	7:G:118:ARG:HH21	1.85	0.40
1:A:108:G:C2	1:A:109:A:N1	2.89	0.40
1:A:1128:C:H1'	1:A:1146:A:N6	2.28	0.40
1:A:1152:A:C2	1:A:1153:C:C6	3.10	0.40
1:A:1158:C:C4	1:A:1160:G:C1'	3.01	0.40
1:A:1269:A:H8	1:A:1270:C:O4'	2.03	0.40
1:A:1277:C:O2'	1:A:1279:A:C8	2.71	0.40
1:A:130:A:N6	20:T:64:PRO:HG2	2.37	0.40
1:A:144:G:N3	1:A:144:G:H2'	2.36	0.40
1:A:1454:G:O2'	1:A:1455:G:C5'	2.70	0.40
1:A:1531:A:C5'	1:A:1531:A:H8	2.35	0.40
1:A:184:G:H5'	1:A:224:C:H4'	2.04	0.40
1:A:124:G:H21	1:A:238:G:H1'	1.84	0.40
1:A:258:G:H2'	1:A:259:G:H8	1.86	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:289:G:C2	1:A:290:C:C4	3.09	0.40
1:A:33:A:C6	1:A:34:C:C4	3.09	0.40
1:A:377:G:N3	1:A:378:G:C8	2.90	0.40
1:A:404:U:C2	1:A:405:U:C5	3.04	0.40
1:A:501:C:N3	1:A:502:G:N7	2.69	0.40
1:A:580:U:C2'	1:A:581:G:C8	3.02	0.40
1:A:61:G:C8	1:A:62:U:C5	3.10	0.40
1:A:703:G:O2'	1:A:704:A:P	2.80	0.40
1:A:809:G:N2	1:A:810:C:N1	2.70	0.40
1:A:577:G:C8	1:A:816:A:C6	3.09	0.40
1:A:828:A:C8	1:A:829:G:C4	3.10	0.40
1:A:834:C:O2'	1:A:835:U:C5'	2.52	0.40
1:A:865:A:C4	1:A:866:C:O2	2.74	0.40
3:D:35:A:C8	3:D:36:A:C8	3.09	0.40
5:E:92:TYR:CE2	5:E:151:GLY:HA2	2.52	0.40
5:E:156:LYS:O	5:E:157:ARG:HG3	2.21	0.40
5:E:15:VAL:HB	5:E:16:HIS:H	1.57	0.40
5:E:47:THR:HA	5:E:202:PRO:HG2	2.03	0.40
5:E:54:THR:HG23	5:E:185:ILE:CG2	2.51	0.40
6:F:76:VAL:CG1	6:F:103:VAL:HG11	2.52	0.40
6:F:85:ARG:O	6:F:89:GLU:HB3	2.22	0.40
7:G:123:HIS:CD2	7:G:123:HIS:H	2.40	0.40
7:G:124:GLY:O	7:G:125:HIS:C	2.59	0.40
7:G:165:MET:HE3	7:G:167:GLY:N	2.36	0.40
9:I:98:LEU:HG	21:U:28:GLU:CG	2.51	0.40
11:K:113:SER:HB2	11:K:134:ILE:HD11	2.02	0.40
12:L:122:ALA:O	12:L:123:PRO:O	2.40	0.40
2:C:33:U:OP2	12:L:128:ARG:O	2.39	0.40
12:L:4:TYR:CG	12:L:88:TYR:HB2	2.56	0.40
13:M:3:LYS:HE2	13:M:77:PRO:CD	2.51	0.40
15:O:101:VAL:O	15:O:102:ARG:O	2.39	0.40
16:P:52:GLU:HA	16:P:55:ARG:CG	2.51	0.40
18:R:64:ARG:CA	18:R:67:LEU:HD12	2.22	0.40
22:V:21:GLU:O	22:V:24:ALA:CB	2.70	0.40
23:W:51:GLU:HA	23:W:54:LYS:HE3	2.01	0.40
1:A:1446:A:O4'	1:A:1446:A:N3	2.54	0.40
2:C:13:C:H2'	2:C:14:A:O5'	2.22	0.40
2:C:15:G:N2	2:C:59:A:N6	2.69	0.40
2:C:72:A:O2'	2:C:73:A:C8	2.73	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	
5	E	232/256 (91%)	112 (48%)	47 (20%)	73 (32%)	0	0
6	F	204/239 (85%)	115 (56%)	43 (21%)	46 (22%)	0	3
7	G	206/209 (99%)	103 (50%)	61 (30%)	42 (20%)	0	4
8	H	148/162 (91%)	92 (62%)	34 (23%)	22 (15%)	0	9
9	I	99/101 (98%)	58 (59%)	19 (19%)	22 (22%)	0	3
10	J	153/156 (98%)	74 (48%)	40 (26%)	39 (26%)	0	2
11	K	136/138 (99%)	71 (52%)	32 (24%)	33 (24%)	0	2
12	L	125/128 (98%)	64 (51%)	33 (26%)	28 (22%)	0	3
13	M	96/105 (91%)	55 (57%)	14 (15%)	27 (28%)	0	1
14	N	117/129 (91%)	62 (53%)	30 (26%)	25 (21%)	0	4
15	O	122/132 (92%)	62 (51%)	22 (18%)	38 (31%)	0	0
16	P	123/126 (98%)	63 (51%)	36 (29%)	24 (20%)	0	5
17	Q	58/61 (95%)	28 (48%)	14 (24%)	16 (28%)	0	1
18	R	86/89 (97%)	40 (46%)	33 (38%)	13 (15%)	0	9
19	S	81/88 (92%)	45 (56%)	21 (26%)	15 (18%)	0	5
20	T	102/105 (97%)	63 (62%)	22 (22%)	17 (17%)	0	7
21	U	71/88 (81%)	30 (42%)	18 (25%)	23 (32%)	0	0
22	V	78/93 (84%)	32 (41%)	18 (23%)	28 (36%)	0	0
23	W	97/106 (92%)	32 (33%)	36 (37%)	29 (30%)	0	1
24	X	22/27 (82%)	9 (41%)	8 (36%)	5 (23%)	0	3
All	All	2356/2538 (93%)	1210 (51%)	581 (25%)	565 (24%)	0	2

All (565) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	E	13	ALA
5	E	15	VAL

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Mol	Chain	Res	Type
5	E	17	PHE
5	E	19	HIS
5	E	20	GLU
5	E	21	ARG
5	E	44	LEU
5	E	45	GLN
5	E	76	GLN
5	E	91	PRO
5	E	97	TRP
5	E	104	ASN
5	E	120	ALA
5	E	121	LEU
5	E	124	SER
5	E	127	ILE
5	E	130	ARG
5	E	131	PRO
5	E	141	GLU
5	E	153	ARG
5	E	154	LEU
5	E	155	LEU
5	E	157	ARG
5	E	161	ALA
5	E	165	VAL
5	E	171	ALA
5	E	172	ILE
5	E	182	ILE
5	E	189	ASP
5	E	194	PRO
5	E	195	ASP
5	E	204	ASN
5	E	229	VAL
5	E	232	PRO
5	E	233	SER
6	F	12	LEU
6	F	16	ARG
6	F	18	TRP
6	F	22	TRP
6	F	24	ALA
6	F	26	LYS
6	F	27	LYS
6	F	28	GLN
6	F	39	ILE

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Mol	Chain	Res	Type
6	F	52	LEU
6	F	53	ALA
6	F	65	ALA
6	F	79	ARG
6	F	83	ARG
6	F	84	ILE
6	F	95	THR
6	F	97	LYS
6	F	119	ARG
6	F	127	ARG
6	F	129	ALA
6	F	146	ALA
6	F	157	ILE
7	G	3	ARG
7	G	17	VAL
7	G	18	LYS
7	G	21	LEU
7	G	29	PRO
7	G	30	LYS
7	G	71	SER
7	G	88	VAL
7	G	99	SER
7	G	109	GLY
7	G	123	HIS
7	G	126	ILE
7	G	131	ARG
7	G	142	PRO
7	G	149	ALA
7	G	150	GLU
7	G	151	LYS
7	G	168	ARG
7	G	170	VAL
7	G	179	GLU
7	G	199	ASN
8	H	77	PRO
8	H	102	ALA
8	H	115	VAL
8	H	117	ASP
8	H	125	SER
8	H	128	PRO
8	H	129	ILE
8	H	141	GLN

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Mol	Chain	Res	Type
8	H	153	LYS
9	I	11	ASN
9	I	15	ASP
9	I	16	GLN
9	I	42	GLU
9	I	51	PRO
9	I	81	ILE
9	I	82	ARG
9	I	84	ASN
9	I	97	PHE
10	J	6	ARG
10	J	10	ARG
10	J	14	PRO
10	J	17	VAL
10	J	31	MET
10	J	33	ASP
10	J	35	LYS
10	J	56	GLN
10	J	71	PRO
10	J	90	GLU
10	J	91	VAL
10	J	92	SER
10	J	111	ARG
10	J	121	ALA
10	J	134	ALA
10	J	140	ASP
10	J	142	GLU
10	J	149	ARG
10	J	153	HIS
11	K	24	THR
11	K	29	SER
11	K	30	ARG
11	K	63	LEU
11	K	70	GLN
11	K	74	PRO
11	K	75	ARG
11	K	77	GLU
11	K	78	GLN
11	K	103	VAL
11	K	105	ARG
11	K	121	ASP
11	K	134	ILE

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Mol	Chain	Res	Type
12	L	29	ASN
12	L	33	PHE
12	L	43	ALA
12	L	47	LEU
12	L	52	ALA
12	L	54	ASP
12	L	70	LYS
12	L	71	SER
12	L	94	ALA
12	L	103	THR
12	L	105	ASP
12	L	116	LYS
12	L	118	LYS
13	M	30	SER
13	M	34	VAL
13	M	41	PRO
13	M	55	LYS
13	M	56	HIS
13	M	57	LYS
13	M	58	ASP
13	M	60	ARG
13	M	79	ARG
13	M	80	LYS
13	M	89	ASP
13	M	90	LEU
13	M	94	VAL
13	M	96	ILE
14	N	14	VAL
14	N	15	ALA
14	N	26	ASN
14	N	27	ASN
14	N	54	ARG
14	N	74	ALA
14	N	78	GLN
14	N	102	GLY
14	N	106	LYS
14	N	115	PRO
14	N	116	HIS
14	N	117	ASN
15	O	6	THR
15	O	18	VAL
15	O	19	ARG

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Mol	Chain	Res	Type
15	O	26	ALA
15	O	30	ALA
15	O	46	LYS
15	O	51	ALA
15	O	62	SER
15	O	73	GLU
15	O	83	VAL
15	O	87	GLY
15	O	102	ARG
15	O	103	GLY
15	O	121	GLY
15	O	127	GLU
16	P	11	ARG
16	P	14	ARG
16	P	84	ILE
16	P	101	GLN
16	P	107	ALA
16	P	123	ALA
16	P	124	PRO
17	Q	5	ALA
17	Q	12	ARG
17	Q	16	PHE
17	Q	17	LYS
17	Q	18	VAL
17	Q	29	ARG
17	Q	54	PRO
18	R	3	ILE
18	R	45	VAL
18	R	47	LYS
18	R	49	ASP
18	R	88	ARG
19	S	11	SER
19	S	26	ARG
19	S	44	THR
19	S	63	GLY
19	S	64	ALA
19	S	66	PRO
20	T	4	LYS
20	T	12	SER
20	T	14	LYS
20	T	33	GLY
20	T	34	LYS

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Mol	Chain	Res	Type
20	T	53	LEU
20	T	81	ARG
20	T	104	LYS
21	U	34	TYR
21	U	44	LEU
21	U	45	SER
21	U	48	GLY
21	U	50	ILE
21	U	54	ARG
21	U	59	SER
21	U	79	LEU
21	U	81	PHE
21	U	87	ARG
22	V	3	ARG
22	V	9	VAL
22	V	10	PHE
22	V	12	ASP
22	V	21	GLU
22	V	24	ALA
22	V	28	LYS
22	V	32	LYS
22	V	38	SER
22	V	40	ILE
22	V	42	PRO
22	V	43	GLU
22	V	45	VAL
22	V	64	GLU
22	V	65	ASN
22	V	71	LEU
22	V	78	ARG
22	V	79	THR
22	V	80	TYR
23	W	68	LYS
23	W	74	LYS
23	W	95	ALA
23	W	99	LEU
23	W	105	SER
24	X	6	ARG
24	X	7	ARG
24	X	8	THR
24	X	9	ARG
24	X	22	ARG

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Mol	Chain	Res	Type
5	E	11	LEU
5	E	25	ASN
5	E	29	ALA
5	E	37	ASN
5	E	77	ALA
5	E	88	ALA
5	E	99	GLY
5	E	160	ASP
5	E	167	PRO
5	E	169	LYS
5	E	178	ARG
5	E	181	PHE
5	E	188	ALA
5	E	191	ASP
5	E	228	GLY
5	E	236	TYR
6	F	4	LYS
6	F	43	LEU
6	F	64	VAL
6	F	74	GLY
6	F	158	GLY
6	F	161	GLU
6	F	176	HIS
6	F	205	GLY
6	F	206	GLU
7	G	4	TYR
7	G	73	ARG
7	G	181	MET
7	G	192	GLU
7	G	200	GLU
8	H	55	VAL
8	H	73	ASN
8	H	85	GLY
8	H	146	ALA
9	I	12	PRO
9	I	56	PRO
9	I	69	GLU
9	I	85	VAL
10	J	4	ARG
10	J	8	GLU
10	J	15	ASP
10	J	52	GLU

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Mol	Chain	Res	Type
10	J	53	LYS
10	J	55	GLY
10	J	80	VAL
10	J	81	GLY
10	J	93	PRO
10	J	112	PRO
11	K	13	ILE
11	K	23	SER
11	K	31	PHE
11	K	67	PRO
11	K	100	ILE
11	K	102	ARG
11	K	128	GLY
12	L	39	GLY
12	L	44	VAL
12	L	68	GLY
12	L	106	ALA
12	L	110	GLU
12	L	111	ARG
13	M	33	GLN
13	M	36	GLY
13	M	37	PRO
13	M	54	PHE
13	M	72	VAL
13	M	82	ILE
14	N	55	LYS
14	N	89	ALA
14	N	94	ALA
15	O	7	ILE
15	O	8	ASN
15	O	20	LYS
15	O	41	ARG
15	O	48	PRO
15	O	75	HIS
15	O	76	ASN
15	O	91	LYS
15	O	92	ASP
15	O	108	ALA
15	O	112	ASP
15	O	116	SER
16	P	8	GLU
16	P	46	LYS

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Mol	Chain	Res	Type
16	P	104	ARG
16	P	118	ALA
16	P	122	LYS
17	Q	27	CYS
17	Q	44	LEU
17	Q	55	GLY
18	R	62	GLN
19	S	24	ALA
19	S	33	ILE
19	S	43	LYS
19	S	52	ASP
19	S	79	VAL
20	T	47	PRO
20	T	94	ASN
20	T	96	GLN
21	U	21	LYS
21	U	22	VAL
21	U	49	LYS
21	U	57	GLY
21	U	75	ILE
22	V	6	LYS
22	V	35	SER
22	V	55	LYS
22	V	70	LYS
22	V	73	GLU
23	W	13	LEU
23	W	50	GLU
23	W	69	GLY
23	W	92	LEU
23	W	97	ALA
23	W	102	GLY
23	W	103	GLY
5	E	96	ARG
5	E	168	THR
5	E	200	ILE
5	E	230	VAL
6	F	5	ILE
6	F	73	PRO
6	F	81	GLY
6	F	91	LEU
6	F	180	ALA
6	F	190	ARG

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Mol	Chain	Res	Type
7	G	51	PRO
7	G	67	ILE
7	G	69	GLY
7	G	117	ALA
7	G	163	GLU
7	G	195	ALA
7	G	208	SER
8	H	72	GLN
8	H	95	ALA
9	I	46	ARG
10	J	13	GLN
10	J	83	ALA
10	J	94	ARG
10	J	113	GLU
11	K	6	ILE
11	K	37	ARG
11	K	44	PHE
11	K	64	LYS
11	K	69	ARG
11	K	73	ASP
11	K	76	PRO
12	L	98	PRO
12	L	114	TYR
12	L	117	HIS
12	L	120	ARG
14	N	13	GLN
14	N	76	GLY
14	N	104	GLN
15	O	22	SER
15	O	24	VAL
15	O	31	PRO
15	O	42	THR
15	O	96	VAL
15	O	105	TYR
16	P	43	THR
16	P	66	LEU
16	P	97	PRO
16	P	121	LYS
17	Q	9	LYS
17	Q	15	LYS
17	Q	60	SER
18	R	6	GLU

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Mol	Chain	Res	Type
18	R	19	PRO
18	R	44	LYS
18	R	78	TYR
19	S	15	PRO
19	S	54	GLU
20	T	68	ARG
20	T	102	GLY
21	U	28	GLU
21	U	82	THR
22	V	25	LYS
23	W	28	ALA
23	W	34	LYS
23	W	56	MET
23	W	59	ALA
23	W	88	VAL
23	W	93	GLU
5	E	27	LYS
5	E	42	ILE
5	E	53	ARG
5	E	87	ARG
5	E	143	GLU
5	E	151	GLY
5	E	174	VAL
5	E	216	SER
5	E	218	ALA
5	E	226	ARG
6	F	90	GLU
6	F	174	PRO
7	G	24	GLU
7	G	36	ARG
7	G	56	VAL
7	G	70	ILE
7	G	136	PRO
7	G	153	ARG
9	I	36	ARG
9	I	43	LEU
9	I	72	VAL
9	I	83	ASP
9	I	95	GLU
11	K	41	ARG
11	K	97	VAL
11	K	115	SER

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Mol	Chain	Res	Type
12	L	42	ARG
12	L	123	PRO
13	M	61	GLU
13	M	73	ASP
13	M	78	ASN
15	O	27	LEU
15	O	61	THR
15	O	77	LEU
16	P	15	VAL
16	P	27	LYS
16	P	41	PRO
16	P	67	GLU
16	P	106	ASN
18	R	14	GLU
20	T	48	GLU
20	T	83	ASP
20	T	95	TYR
21	U	27	GLY
21	U	41	LYS
22	V	36	ARG
23	W	15	ARG
23	W	16	HIS
23	W	45	GLN
23	W	78	ALA
5	E	8	LYS
5	E	23	ARG
5	E	158	LEU
6	F	14	ILE
6	F	66	VAL
6	F	101	LEU
6	F	173	VAL
7	G	107	ARG
7	G	125	HIS
8	H	69	VAL
8	H	96	PRO
8	H	109	ILE
8	H	142	LEU
8	H	150	ARG
9	I	17	SER
10	J	37	ASN
12	L	45	ALA
13	M	12	ASP

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Mol	Chain	Res	Type
14	N	37	GLY
14	N	121	PRO
15	O	17	LYS
15	O	120	TYR
16	P	4	ILE
17	Q	56	VAL
18	R	51	HIS
19	S	71	ARG
21	U	51	LEU
22	V	29	ARG
23	W	11	SER
23	W	35	THR
23	W	49	ALA
23	W	82	SER
23	W	101	GLY
5	E	38	GLY
5	E	193	ASP
5	E	211	ILE
6	F	109	PRO
9	I	20	ALA
10	J	72	ARG
10	J	97	GLN
11	K	72	PRO
13	M	40	LEU
14	N	39	PRO
14	N	118	GLY
14	N	123	LYS
16	P	45	VAL
17	Q	13	THR
20	T	98	LEU
21	U	47	THR
13	M	31	GLY
13	M	39	PRO
14	N	38	ASN
19	S	51	VAL
21	U	70	ILE
6	F	13	GLY
7	G	40	PRO
8	H	51	VAL
10	J	50	ILE
10	J	130	GLY
14	N	40	ILE

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Mol	Chain	Res	Type
16	P	54	VAL
22	V	11	VAL
5	E	26	PRO
8	H	52	PRO
10	J	135	VAL
11	K	93	VAL
12	L	81	ILE
12	L	108	VAL
18	R	82	ILE
5	E	239	VAL
6	F	108	ASN
9	I	65	VAL
17	Q	38	GLY
21	U	37	VAL
23	W	47	GLY
11	K	129	VAL
23	W	96	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	
5	E	202/220 (92%)	135 (67%)	67 (33%)	0	3
6	F	160/188 (85%)	123 (77%)	37 (23%)	1	10
7	G	180/181 (99%)	127 (71%)	53 (29%)	0	5
8	H	115/123 (94%)	75 (65%)	40 (35%)	0	3
9	I	90/90 (100%)	64 (71%)	26 (29%)	0	5
10	J	126/127 (99%)	95 (75%)	31 (25%)	1	9
11	K	119/119 (100%)	76 (64%)	43 (36%)	0	2
12	L	98/99 (99%)	76 (78%)	22 (22%)	1	11
13	M	88/92 (96%)	65 (74%)	23 (26%)	1	7
14	N	90/99 (91%)	62 (69%)	28 (31%)	0	4
15	O	104/109 (95%)	77 (74%)	27 (26%)	1	7
16	P	100/101 (99%)	79 (79%)	21 (21%)	1	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	Q	49/50 (98%)	37 (76%)	12 (24%)	1	9
18	R	79/80 (99%)	56 (71%)	23 (29%)	0	5
19	S	72/74 (97%)	48 (67%)	24 (33%)	0	3
20	T	96/97 (99%)	71 (74%)	25 (26%)	1	7
21	U	64/77 (83%)	41 (64%)	23 (36%)	0	2
22	V	71/80 (89%)	57 (80%)	14 (20%)	2	15
23	W	76/82 (93%)	56 (74%)	20 (26%)	1	7
24	X	19/22 (86%)	13 (68%)	6 (32%)	0	4
All	All	1998/2110 (95%)	1433 (72%)	565 (28%)	0	5

All (565) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	9	GLU
5	E	11	LEU
5	E	12	GLU
5	E	15	VAL
5	E	17	PHE
5	E	19	HIS
5	E	20	GLU
5	E	21	ARG
5	E	23	ARG
5	E	25	ASN
5	E	28	PHE
5	E	33	TYR
5	E	36	ARG
5	E	44	LEU
5	E	48	MET
5	E	52	GLU
5	E	53	ARG
5	E	56	ARG
5	E	57	PHE
5	E	61	LEU
5	E	64	ARG
5	E	68	ILE
5	E	74	LYS
5	E	75	LYS
5	E	92	TYR
5	E	101	MET

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Mol	Chain	Res	Type
5	E	102	LEU
5	E	104	ASN
5	E	105	PHE
5	E	111	ARG
5	E	114	ARG
5	E	118	LEU
5	E	122	PHE
5	E	130	ARG
5	E	132	LYS
5	E	139	LYS
5	E	147	LYS
5	E	148	TYR
5	E	149	LEU
5	E	150	SER
5	E	152	PHE
5	E	153	ARG
5	E	154	LEU
5	E	158	LEU
5	E	160	ASP
5	E	162	ILE
5	E	163	PHE
5	E	169	LYS
5	E	172	ILE
5	E	176	GLU
5	E	181	PHE
5	E	182	ILE
5	E	185	ILE
5	E	187	LEU
5	E	189	ASP
5	E	194	PRO
5	E	202	PRO
5	E	204	ASN
5	E	208	ILE
5	E	209	ARG
5	E	215	LEU
5	E	217	ARG
5	E	224	GLN
5	E	226	ARG
5	E	232	PRO
5	E	235	SER
5	E	238	LEU
6	F	4	LYS

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Mol	Chain	Res	Type
6	F	5	ILE
6	F	10	PHE
6	F	11	ARG
6	F	15	THR
6	F	16	ARG
6	F	19	GLU
6	F	23	TYR
6	F	29	TYR
6	F	30	ARG
6	F	34	LEU
6	F	38	ARG
6	F	48	TYR
6	F	59	ARG
6	F	82	GLU
6	F	87	LEU
6	F	91	LEU
6	F	95	THR
6	F	97	LYS
6	F	105	GLU
6	F	107	GLN
6	F	111	LEU
6	F	128	PHE
6	F	139	GLN
6	F	142	MET
6	F	151	VAL
6	F	162	GLN
6	F	165	THR
6	F	172	ARG
6	F	176	HIS
6	F	178	LEU
6	F	186	PHE
6	F	188	LEU
6	F	193	TYR
6	F	196	LEU
6	F	204	LEU
6	F	206	GLU
7	G	3	ARG
7	G	9	CYS
7	G	10	ARG
7	G	13	ARG
7	G	14	ARG
7	G	20	TYR

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Mol	Chain	Res	Type
7	G	24	GLU
7	G	26	CYS
7	G	27	TYR
7	G	29	PRO
7	G	31	CYS
7	G	33	MET
7	G	34	GLU
7	G	38	TYR
7	G	47	ARG
7	G	51	PRO
7	G	58	LEU
7	G	60	GLU
7	G	61	LYS
7	G	62	GLN
7	G	63	LYS
7	G	64	LEU
7	G	73	ARG
7	G	75	PHE
7	G	78	LEU
7	G	83	SER
7	G	93	PHE
7	G	96	LEU
7	G	101	LEU
7	G	107	ARG
7	G	114	ARG
7	G	120	LEU
7	G	131	ARG
7	G	138	TYR
7	G	139	ARG
7	G	142	PRO
7	G	146	ILE
7	G	150	GLU
7	G	154	ASN
7	G	165	MET
7	G	175	SER
7	G	176	LEU
7	G	181	MET
7	G	185	PHE
7	G	186	LEU
7	G	188	LEU
7	G	191	ARG
7	G	193	ASP

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Mol	Chain	Res	Type
7	G	200	GLU
7	G	202	LEU
7	G	204	ILE
7	G	206	PHE
7	G	209	ARG
8	H	5	ASP
8	H	6	PHE
8	H	8	GLU
8	H	11	ILE
8	H	12	LEU
8	H	13	ILE
8	H	15	ARG
8	H	16	THR
8	H	19	MET
8	H	20	GLN
8	H	25	ARG
8	H	26	PHE
8	H	27	ARG
8	H	28	PHE
8	H	41	VAL
8	H	53	LEU
8	H	56	GLN
8	H	60	TYR
8	H	63	ARG
8	H	68	GLU
8	H	73	ASN
8	H	78	HIS
8	H	79	GLU
8	H	81	GLU
8	H	89	ILE
8	H	90	VAL
8	H	98	THR
8	H	101	ILE
8	H	110	LEU
8	H	111	GLU
8	H	112	LEU
8	H	115	VAL
8	H	117	ASP
8	H	119	LEU
8	H	127	ASN
8	H	128	PRO
8	H	131	ILE

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Mol	Chain	Res	Type
8	H	139	LEU
8	H	141	GLN
8	H	150	ARG
9	I	4	TYR
9	I	8	ILE
9	I	10	LEU
9	I	14	LEU
9	I	15	ASP
9	I	19	LEU
9	I	28	ARG
9	I	36	ARG
9	I	41	GLU
9	I	42	GLU
9	I	48	LEU
9	I	50	TYR
9	I	55	ASP
9	I	57	GLN
9	I	60	PHE
9	I	64	GLN
9	I	67	MET
9	I	69	GLU
9	I	70	ASP
9	I	73	ASN
9	I	74	ASP
9	I	82	ARG
9	I	83	ASP
9	I	94	GLN
9	I	95	GLU
9	I	98	LEU
10	J	6	ARG
10	J	10	ARG
10	J	12	LEU
10	J	14	PRO
10	J	16	LEU
10	J	32	ARG
10	J	33	ASP
10	J	36	LYS
10	J	37	ASN
10	J	45	ASP
10	J	47	CYS
10	J	56	GLN
10	J	72	ARG

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Mol	Chain	Res	Type
10	J	74	GLU
10	J	89	MET
10	J	90	GLU
10	J	91	VAL
10	J	92	SER
10	J	103	TRP
10	J	106	GLN
10	J	113	GLU
10	J	124	LEU
10	J	136	LYS
10	J	139	GLU
10	J	143	ARG
10	J	144	MET
10	J	146	GLU
10	J	149	ARG
10	J	153	HIS
10	J	155	ARG
10	J	156	TRP
11	K	3	THR
11	K	4	ASP
11	K	6	ILE
11	K	8	ASP
11	K	12	ARG
11	K	14	ARG
11	K	18	ARG
11	K	23	SER
11	K	24	THR
11	K	26	VAL
11	K	36	LEU
11	K	37	ARG
11	K	38	ILE
11	K	39	LEU
11	K	41	ARG
11	K	45	ILE
11	K	49	GLU
11	K	50	ARG
11	K	52	ASP
11	K	54	ASP
11	K	58	TYR
11	K	63	LEU
11	K	65	TYR
11	K	70	GLN

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Mol	Chain	Res	Type
11	K	73	ASP
11	K	76	PRO
11	K	83	ILE
11	K	84	ARG
11	K	88	LYS
11	K	92	ARG
11	K	98	LYS
11	K	103	VAL
11	K	107	LEU
11	K	109	ILE
11	K	112	LEU
11	K	120	THR
11	K	122	ARG
11	K	123	GLU
11	K	125	ARG
11	K	126	LYS
11	K	127	LEU
11	K	135	CYS
11	K	136	GLU
12	L	4	TYR
12	L	23	ASN
12	L	26	VAL
12	L	33	PHE
12	L	37	PHE
12	L	48	GLU
12	L	51	ARG
12	L	59	PHE
12	L	64	THR
12	L	70	LYS
12	L	75	ASP
12	L	78	LYS
12	L	79	LEU
12	L	101	PHE
12	L	102	LEU
12	L	103	THR
12	L	110	GLU
12	L	116	LYS
12	L	121	ARG
12	L	124	GLN
12	L	126	SER
12	L	127	LYS
13	M	3	LYS

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Mol	Chain	Res	Type
13	M	4	ILE
13	M	5	ARG
13	M	8	LEU
13	M	9	ARG
13	M	11	PHE
13	M	14	LYS
13	M	33	GLN
13	M	45	ARG
13	M	47	PHE
13	M	54	PHE
13	M	60	ARG
13	M	62	HIS
13	M	63	PHE
13	M	65	LEU
13	M	73	ASP
13	M	76	ASN
13	M	78	ASN
13	M	79	ARG
13	M	81	THR
13	M	85	LEU
13	M	95	GLU
13	M	100	THR
14	N	18	ARG
14	N	21	ILE
14	N	22	HIS
14	N	38	ASN
14	N	39	PRO
14	N	40	ILE
14	N	41	THR
14	N	42	TRP
14	N	50	TYR
14	N	51	LYS
14	N	54	ARG
14	N	55	LYS
14	N	62	GLN
14	N	63	LEU
14	N	77	MET
14	N	78	GLN
14	N	80	VAL
14	N	87	THR
14	N	91	ARG
14	N	95	ILE

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Mol	Chain	Res	Type
14	N	99	GLN
14	N	104	GLN
14	N	107	SER
14	N	109	VAL
14	N	110	ASP
14	N	116	HIS
14	N	121	PRO
14	N	126	ARG
15	O	7	ILE
15	O	16	GLU
15	O	23	LYS
15	O	33	ARG
15	O	36	VAL
15	O	37	CYS
15	O	38	THR
15	O	41	ARG
15	O	52	LEU
15	O	53	ARG
15	O	60	LEU
15	O	61	THR
15	O	64	TYR
15	O	65	GLU
15	O	67	THR
15	O	70	ILE
15	O	73	GLU
15	O	75	HIS
15	O	76	ASN
15	O	92	ASP
15	O	93	LEU
15	O	98	TYR
15	O	100	ILE
15	O	101	VAL
15	O	102	ARG
15	O	110	VAL
15	O	126	LYS
16	P	47	ASP
16	P	48	LEU
16	P	61	GLU
16	P	64	TRP
16	P	66	LEU
16	P	71	ARG
16	P	73	GLU

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Mol	Chain	Res	Type
16	P	77	ASN
16	P	80	ARG
16	P	81	LEU
16	P	82	MET
16	P	83	ASP
16	P	87	TYR
16	P	88	ARG
16	P	101	GLN
16	P	108	ARG
16	P	110	ARG
16	P	116	THR
16	P	117	VAL
16	P	121	LYS
16	P	124	PRO
17	Q	7	ILE
17	Q	21	TYR
17	Q	22	THR
17	Q	24	CYS
17	Q	26	ARG
17	Q	34	TYR
17	Q	36	PHE
17	Q	37	PHE
17	Q	40	CYS
17	Q	43	CYS
17	Q	45	ARG
17	Q	60	SER
18	R	4	THR
18	R	5	LYS
18	R	11	VAL
18	R	14	GLU
18	R	17	ARG
18	R	26	GLU
18	R	32	LEU
18	R	33	THR
18	R	34	LEU
18	R	35	ARG
18	R	38	ARG
18	R	40	SER
18	R	41	GLU
18	R	42	HIS
18	R	44	LYS
18	R	49	ASP

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Mol	Chain	Res	Type
18	R	54	ARG
18	R	56	LEU
18	R	63	ARG
18	R	64	ARG
18	R	70	LEU
18	R	76	GLU
18	R	77	ARG
19	S	3	LYS
19	S	4	ILE
19	S	6	LEU
19	S	8	ARG
19	S	9	PHE
19	S	16	HIS
19	S	21	VAL
19	S	22	THR
19	S	27	LYS
19	S	32	TYR
19	S	34	GLU
19	S	39	TYR
19	S	48	TRP
19	S	53	VAL
19	S	58	TYR
19	S	59	TRP
19	S	62	VAL
19	S	65	GLN
19	S	66	PRO
19	S	68	ASP
19	S	69	THR
19	S	72	ARG
19	S	74	LEU
19	S	80	PHE
20	T	6	LEU
20	T	7	THR
20	T	12	SER
20	T	21	VAL
20	T	31	LEU
20	T	36	ILE
20	T	39	SER
20	T	40	LYS
20	T	45	HIS
20	T	46	ASP
20	T	48	GLU

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Mol	Chain	Res	Type
20	T	51	TYR
20	T	52	LYS
20	T	57	VAL
20	T	58	GLU
20	T	60	ILE
20	T	62	SER
20	T	63	ARG
20	T	68	ARG
20	T	83	ASP
20	T	84	LEU
20	T	86	GLU
20	T	93	GLN
20	T	96	GLN
20	T	101	ARG
21	U	17	SER
21	U	18	ARG
21	U	22	VAL
21	U	25	THR
21	U	28	GLU
21	U	34	TYR
21	U	38	GLU
21	U	43	PHE
21	U	44	LEU
21	U	49	LYS
21	U	50	ILE
21	U	53	ARG
21	U	55	ARG
21	U	62	GLU
21	U	63	GLN
21	U	72	ARG
21	U	74	ARG
21	U	76	LEU
21	U	78	LEU
21	U	79	LEU
21	U	81	PHE
21	U	83	GLU
21	U	86	VAL
22	V	12	ASP
22	V	17	GLU
22	V	18	LYS
22	V	25	LYS
22	V	33	THR

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Mol	Chain	Res	Type
22	V	36	ARG
22	V	37	ARG
22	V	41	VAL
22	V	42	PRO
22	V	43	GLU
22	V	61	TYR
22	V	64	GLU
22	V	66	MET
22	V	81	ARG
23	W	9	ASN
23	W	13	LEU
23	W	18	GLN
23	W	19	SER
23	W	26	ASN
23	W	36	LEU
23	W	42	GLN
23	W	43	LEU
23	W	48	LYS
23	W	55	ILE
23	W	56	MET
23	W	61	SER
23	W	72	LEU
23	W	73	HIS
23	W	79	ARG
23	W	82	SER
23	W	84	LEU
23	W	87	LYS
23	W	91	LEU
23	W	104	LEU
24	X	6	ARG
24	X	7	ARG
24	X	8	THR
24	X	9	ARG
24	X	10	ARG
24	X	13	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (86) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	25	ASN
5	E	37	ASN
5	E	40	HIS

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Mol	Chain	Res	Type
5	E	76	GLN
5	E	78	GLN
5	E	95	GLN
5	E	104	ASN
5	E	204	ASN
5	E	212	GLN
5	E	224	GLN
5	E	240	GLN
6	F	3	ASN
6	F	28	GLN
6	F	102	ASN
6	F	108	ASN
6	F	110	ASN
6	F	136	GLN
6	F	139	GLN
6	F	170	GLN
6	F	181	ASN
7	G	42	GLN
7	G	62	GLN
7	G	77	ASN
7	G	154	ASN
7	G	161	ASN
7	G	201	GLN
8	H	56	GLN
8	H	65	ASN
8	H	72	GLN
8	H	78	HIS
8	H	127	ASN
9	I	7	ASN
9	I	11	ASN
9	I	13	ASN
9	I	18	GLN
9	I	32	ASN
9	I	57	GLN
9	I	94	GLN
10	J	11	GLN
10	J	56	GLN
10	J	68	ASN
10	J	96	GLN
10	J	97	GLN
10	J	106	GLN
10	J	109	ASN

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Mol	Chain	Res	Type
10	J	110	GLN
10	J	153	HIS
11	K	15	ASN
11	K	70	GLN
11	K	78	GLN
11	K	82	HIS
12	L	73	GLN
12	L	87	GLN
12	L	89	ASN
12	L	117	HIS
12	L	124	GLN
13	M	56	HIS
13	M	62	HIS
13	M	68	HIS
13	M	76	ASN
13	M	78	ASN
14	N	27	ASN
14	N	93	GLN
14	N	104	GLN
14	N	117	ASN
15	O	49	ASN
15	O	76	ASN
15	O	99	HIS
16	P	12	ASN
16	P	92	HIS
17	Q	52	GLN
18	R	13	GLN
18	R	37	ASN
18	R	50	HIS
18	R	53	HIS
18	R	62	GLN
19	S	16	HIS
19	S	82	GLN
20	T	16	GLN
20	T	93	GLN
20	T	94	ASN
22	V	14	HIS
22	V	23	ASN
23	W	42	GLN
23	W	45	GLN
23	W	73	HIS

## 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1515/1522 (99%)	479 (31%)	151 (9%)
2	C	75/76 (98%)	30 (40%)	7 (9%)
3	D	75/76 (98%)	27 (36%)	3 (4%)
4	1	26/27 (96%)	11 (42%)	1 (3%)
All	All	1691/1701 (99%)	547 (32%)	162 (9%)

All (547) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	13	U
1	A	14	U
1	A	20	U
1	A	31	G
1	A	32	A
1	A	35	G
1	A	39	G
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	52	G
1	A	61	G
1	A	65	U
1	A	66	G
1	A	78	G
1	A	81	G
1	A	82	U
1	A	87	A
1	A	89	U
1	A	101	A
1	A	106	C
1	A	110	C
1	A	111	G
1	A	116	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	130	A

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Mol	Chain	Res	Type
1	A	131	C
1	A	134	A
1	A	151	A
1	A	152	A
1	A	167	G
1	A	182	U
1	A	186(C)	G
1	A	189	U
1	A	190	G
1	A	191(A)	G
1	A	191(C)	G
1	A	195	A
1	A	196	A
1	A	197	A
1	A	198	G
1	A	209	U
1	A	210	U
1	A	216	G
1	A	225	C
1	A	236	G
1	A	244	U
1	A	245	C
1	A	247	G
1	A	251	G
1	A	252	U
1	A	253	U
1	A	259	G
1	A	260	G
1	A	261	U
1	A	262	A
1	A	264	U
1	A	265	G
1	A	266	G
1	A	267	C
1	A	275	G
1	A	279	A
1	A	280	C
1	A	281	G
1	A	282	A
1	A	288	A
1	A	289	G
1	A	293	G

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Mol	Chain	Res	Type
1	A	306	G
1	A	308	C
1	A	309	G
1	A	314	C
1	A	315	A
1	A	316	G
1	A	318	G
1	A	328	C
1	A	329	A
1	A	330	C
1	A	332	G
1	A	340	U
1	A	345	C
1	A	346	G
1	A	350	G
1	A	352	C
1	A	353	A
1	A	355	C
1	A	365	U
1	A	366	C
1	A	367	U
1	A	368	U
1	A	373	A
1	A	382	A
1	A	383	A
1	A	384	G
1	A	388	G
1	A	389	A
1	A	390	C
1	A	397	A
1	A	398	C
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	423	G
1	A	424	G
1	A	427	U
1	A	428	G
1	A	429	U
1	A	430	A
1	A	439	A

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Mol	Chain	Res	Type
1	A	440	A
1	A	451	A
1	A	452	A
1	A	465	A
1	A	466	C
1	A	467	G
1	A	481	G
1	A	482	A
1	A	484	G
1	A	485	G
1	A	486	U
1	A	487	A
1	A	495	A
1	A	496	A
1	A	497	U
1	A	500	G
1	A	507	C
1	A	508	C
1	A	509	A
1	A	511	C
1	A	517	G
1	A	518	C
1	A	519	C
1	A	520	A
1	A	521	G
1	A	527	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C
1	A	548	G
1	A	549	C
1	A	553	A
1	A	554	C
1	A	555	C
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	563	A

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Mol	Chain	Res	Type
1	A	566	G
1	A	567	G
1	A	570	G
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	G
1	A	577	G
1	A	579	G
1	A	581	G
1	A	589	C
1	A	595	G
1	A	607	A
1	A	609	A
1	A	610	G
1	A	618	C
1	A	623	C
1	A	642	A
1	A	652	U
1	A	653	A
1	A	665	A
1	A	672	U
1	A	673	G
1	A	674	G
1	A	677	U
1	A	679	C
1	A	686	U
1	A	687	A
1	A	688	G
1	A	691	G
1	A	693	G
1	A	697	U
1	A	701	C
1	A	702	A
1	A	703	G
1	A	704	A
1	A	718	G
1	A	719	C
1	A	721	G
1	A	722	A
1	A	723	U
1	A	724	G

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Mol	Chain	Res	Type
1	A	729	A
1	A	731	G
1	A	733	A
1	A	747	C
1	A	749	C
1	A	752	G
1	A	754	C
1	A	760	G
1	A	763	G
1	A	764	C
1	A	766	A
1	A	767	A
1	A	776	G
1	A	777	A
1	A	778	G
1	A	781	A
1	A	782	A
1	A	784	C
1	A	785	G
1	A	790	A
1	A	791	G
1	A	793	U
1	A	794	A
1	A	801	U
1	A	805	C
1	A	807	A
1	A	813	U
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	821	G
1	A	825	G
1	A	826	C
1	A	828	A
1	A	834	C
1	A	841	U
1	A	842	C
1	A	843	U
1	A	848	C

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Mol	Chain	Res	Type
1	A	859	A
1	A	865	A
1	A	866	C
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	874	G
1	A	884	U
1	A	885	G
1	A	889	A
1	A	890	G
1	A	891	U
1	A	893	C
1	A	902	G
1	A	913	A
1	A	914	A
1	A	915	A
1	A	919	A
1	A	920	U
1	A	927	G
1	A	931	C
1	A	932	C
1	A	934	C
1	A	945	G
1	A	958	A
1	A	960	U
1	A	961	U
1	A	965	A
1	A	966	G
1	A	967	C
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	980	C
1	A	982	U
1	A	983	A
1	A	991	U

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Mol	Chain	Res	Type
1	A	993	G
1	A	994	A
1	A	995	C
1	A	996	A
1	A	997	U
1	A	1000	A
1	A	1001	G
1	A	1002	G
1	A	1003	G
1	A	1004	A
1	A	1005	A
1	A	1006	C
1	A	1007	C
1	A	1013	G
1	A	1018	C
1	A	1023	G
1	A	1026	G
1	A	1027	C
1	A	1029	G
1	A	1033	G
1	A	1050	G
1	A	1054	C
1	A	1056	U
1	A	1063	C
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1068	G
1	A	1084	G
1	A	1085	U
1	A	1086	U
1	A	1094	G
1	A	1095	U
1	A	1096	C
1	A	1099	G
1	A	1100	C
1	A	1101	A
1	A	1102	A
1	A	1107	C
1	A	1108	G
1	A	1118	C
1	A	1123	A

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Mol	Chain	Res	Type
1	A	1125	U
1	A	1126	U
1	A	1127	G
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1135	U
1	A	1136	U
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1145	C
1	A	1146	A
1	A	1147	C
1	A	1148	U
1	A	1151	A
1	A	1152	A
1	A	1157	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1161	C
1	A	1174	G
1	A	1177	G
1	A	1182	G
1	A	1183	A
1	A	1184	G
1	A	1185	G
1	A	1188	A
1	A	1189	C
1	A	1190	G
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1211	U
1	A	1212	U
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A

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Mol	Chain	Res	Type
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1254	C
1	A	1256	A
1	A	1257	U
1	A	1258	G
1	A	1260	C
1	A	1269	A
1	A	1270	C
1	A	1271	G
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1283	G
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1289	A
1	A	1290	G
1	A	1292	U
1	A	1297	C
1	A	1298	C
1	A	1299	A
1	A	1301	U
1	A	1302	U
1	A	1303	C
1	A	1305	G
1	A	1312	G
1	A	1316	G
1	A	1317	C
1	A	1318	A
1	A	1320	C
1	A	1321	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1332	A
1	A	1333	A
1	A	1338	G
1	A	1345	U
1	A	1346	A

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Mol	Chain	Res	Type
1	A	1347	G
1	A	1348	U
1	A	1353	G
1	A	1354	C
1	A	1362(A)	C
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1378	C
1	A	1379	G
1	A	1381	U
1	A	1387	G
1	A	1394	A
1	A	1395	C
1	A	1396	A
1	A	1397	C
1	A	1398	A
1	A	1400	C
1	A	1401	G
1	A	1406	U
1	A	1413	A
1	A	1419	G
1	A	1431	C
1	A	1437	C
1	A	1440	C
1	A	1441	G
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1447	G
1	A	1449	C
1	A	1450	U
1	A	1451	A
1	A	1452	C
1	A	1453	G
1	A	1466	C
1	A	1467	G
1	A	1468	A
1	A	1469	G
1	A	1479	C
1	A	1481	U
1	A	1482	G

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Mol	Chain	Res	Type
1	A	1483	A
1	A	1491	G
1	A	1493	A
1	A	1495	U
1	A	1496	C
1	A	1497	G
1	A	1498	U
1	A	1501	C
1	A	1502	A
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1511	G
1	A	1517	G
1	A	1520	G
1	A	1528	U
1	A	1529	G
1	A	1530	G
1	A	1531	A
1	A	1532	U
1	A	1533	C
1	A	1534	A
1	A	1538	C
1	A	1540	U
1	A	1542	U
2	C	8	U
2	C	9	G
2	C	10	G
2	C	16	C
2	C	17	C
2	C	18	G
2	C	19	G
2	C	20	U
2	C	21	A
2	C	22	G
2	C	32	C
2	C	35	A
2	C	36	U
2	C	39	C
2	C	41	C

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Mol	Chain	Res	Type
2	C	43	A
2	C	46	G
2	C	47	U
2	C	48	C
2	C	49	G
2	C	50	U
2	C	53	G
2	C	58	A
2	C	59	A
2	C	60	U
2	C	61	C
2	C	63	G
2	C	74	C
2	C	75	C
2	C	76	A
3	D	10	G
3	D	15	G
3	D	17	U
3	D	18	G
3	D	19	G
3	D	21	A
3	D	27	U
3	D	30	G
3	D	34	G
3	D	35	A
3	D	36	A
3	D	37	A
3	D	40	C
3	D	41	G
3	D	42	C
3	D	43	A
3	D	45	U
3	D	48	C
3	D	49	G
3	D	52	G
3	D	58	A
3	D	59	U
3	D	61	C
3	D	71	G
3	D	72	C
3	D	74	C
3	D	76	A

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Mol	Chain	Res	Type
4	1	5	A
4	1	6	G
4	1	7	G
4	1	9	G
4	1	11	U
4	1	12	A
4	1	15	A
4	1	16	A
4	1	18	G
4	1	19	A
4	1	23	A

All (162) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	5	U
1	A	7	G
1	A	8	A
1	A	13	U
1	A	30	U
1	A	47	C
1	A	48	C
1	A	51	A
1	A	60	A
1	A	88	C
1	A	99	C
1	A	109	A
1	A	115	G
1	A	119	A
1	A	121	C
1	A	129(A)	G
1	A	190	G
1	A	197	A
1	A	208	U
1	A	209	U
1	A	210	U
1	A	243	A
1	A	244	U
1	A	246	A
1	A	250	A
1	A	251	G
1	A	266	G

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Mol	Chain	Res	Type
1	A	274	A
1	A	279	A
1	A	280	C
1	A	281	G
1	A	305	G
1	A	308	C
1	A	327	A
1	A	328	C
1	A	329	A
1	A	344	A
1	A	345	C
1	A	351	G
1	A	366	C
1	A	367	U
1	A	372	C
1	A	413	G
1	A	428	G
1	A	429	U
1	A	451	A
1	A	481	G
1	A	484	G
1	A	495	A
1	A	496	A
1	A	498	A
1	A	508	C
1	A	511	C
1	A	517	G
1	A	518	C
1	A	531	U
1	A	533	A
1	A	535	A
1	A	547	A
1	A	559	A
1	A	560	U
1	A	566	G
1	A	575	G
1	A	576	G
1	A	652	U
1	A	653	A
1	A	686	U
1	A	687	A
1	A	701	C

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Mol	Chain	Res	Type
1	A	702	A
1	A	703	G
1	A	717	C
1	A	721	G
1	A	723	U
1	A	727	G
1	A	748	C
1	A	752	G
1	A	753	A
1	A	781	A
1	A	792	A
1	A	793	U
1	A	812	C
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	889	A
1	A	890	G
1	A	913	A
1	A	918	A
1	A	960	U
1	A	965	A
1	A	968	A
1	A	974	A
1	A	975	A
1	A	982	U
1	A	992	U
1	A	993	G
1	A	1004	A
1	A	1049	U
1	A	1065	U
1	A	1067	A
1	A	1085	U
1	A	1100	C
1	A	1101	A
1	A	1123	A

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Mol	Chain	Res	Type
1	A	1129	C
1	A	1145	C
1	A	1159	U
1	A	1182	G
1	A	1196	U
1	A	1214	C
1	A	1224	G
1	A	1226	C
1	A	1240	U
1	A	1257	U
1	A	1280	A
1	A	1285	A
1	A	1297	C
1	A	1300	G
1	A	1302	U
1	A	1316	G
1	A	1322	C
1	A	1331	G
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1363	A
1	A	1377	A
1	A	1380	U
1	A	1394	A
1	A	1396	A
1	A	1399	C
1	A	1400	C
1	A	1408	A
1	A	1442	G
1	A	1446	A
1	A	1452	C
1	A	1468	A
1	A	1502	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1528	U
1	A	1529	G
1	A	1531	A
2	C	7	G
2	C	9	G

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Mol	Chain	Res	Type
2	C	19	G
2	C	35	A
2	C	58	A
2	C	60	U
2	C	73	A
3	D	35	A
3	D	58	A
3	D	73	A
4	1	18	G

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

There are no ligands in this entry.

## 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.