Full wwPDB EM Validation Report ⓘ

Mar 24, 2026 – 10:27 PM UTC

PDB ID	:	5IMQ / pdb_00005imq
EMDB ID	:	EMD-6584
Title	:	Structure of ribosome bound to cofactor at 3.8 angstrom resolution
Authors	:	Kumar, V.; Ero, R.; Jian, G.K.; Ahmed, T.; Zhan, Y.; Bhushan, S.; Gao, Y.G.
Deposited on	:	2016-03-06
Resolution	:	3.80 Å(reported)
Based on initial models	:	5AA0, 4W2E

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

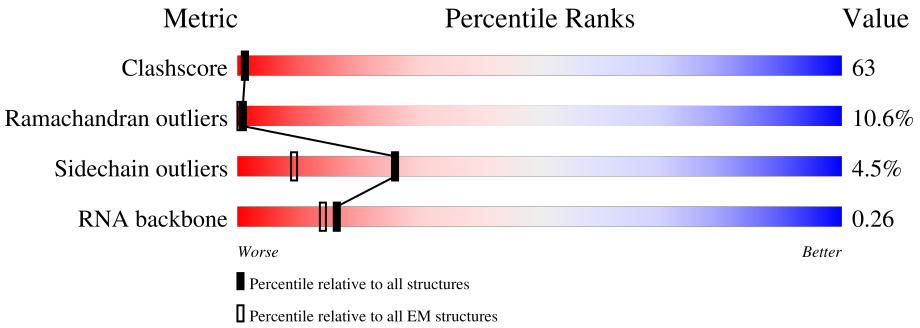
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

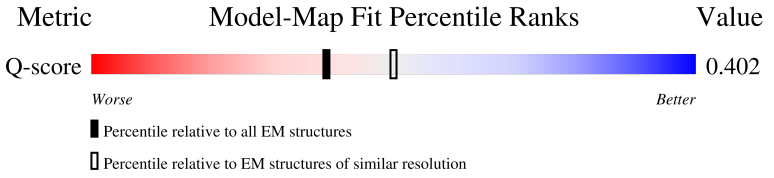
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	10198 (3.30 - 4.30)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	37	11% 30% 46% 24%
2	2	173	66% 57% 17% • 25%
3	3	147	62% 13% 52% 25% • 9%

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Mol	Chain	Length	Quality of chain
4	4	77	12% 18% 53% 29%
5	5	76	71% 11% 51% 38%
6	A	1522	11% 55% 34%
7	D	2893	8% 48% 43%
8	E	123	11% 54% 34%
9	F	256	32% 26% 59% 6% 9%
10	G	239	14% 39% 45% 14%
11	H	209	23% 43% 48% 8%
12	I	162	40% 48% 7%
13	J	101	32% 32% 62% 5%
14	K	156	33% 47% 49%
15	L	138	7% 34% 61% 5%
16	M	128	33% 32% 62% 5%
17	N	105	33% 36% 51% 6% 7%
18	O	129	23% 46% 44% 8%
19	P	132	7% 34% 50% 9% 6%
20	Q	126	46% 18% 53% 16% 10%
21	R	61	11% 43% 46% 8%
22	S	89	15% 31% 62% 6%
23	T	88	14% 32% 57% 6% 6%
24	U	105	18% 32% 61% 6%
25	V	88	33% 20% 57% 6% 17%
26	W	93	47% 38% 40% 5% 14%
27	X	106	10% 42% 50% 7%
28	Y	27	15% 26% 59% 11%

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Mol	Chain	Length	Quality of chain
29	Z	229	90% 36% 56% 6%
30	a	276	9% 30% 51% 16%
31	b	206	7% 27% 60% 13%
32	c	210	12% 37% 50% 11%
33	d	182	25% 29% 59% 12%
34	e	180	12% 33% 51% 13%
35	f	140	9% 29% 51% 17%
36	g	122	11% 15% 67% 17%
37	h	150	21% 17% 62% 16%
38	i	141	9% 29% 52% 15%
39	j	118	5% 42% 53% 5%
40	k	112	16% 21% 60% 17%
41	l	146	14% 16% 51% 12% 20%
42	m	118	36% 58% 6%
43	n	101	19% 25% 57% 18%
44	o	113	35% 58%
45	p	96	8% 44% 45% 8%
46	q	110	16% 29% 50% 21%
47	r	206	31% 24% 51% 12% 13%
48	s	85	7% 45% 45% 7%
49	t	67	34% 57% 9%
50	u	60	30% 58% 10%
51	v	71	11% 24% 45% 28%
52	w	60	7% 27% 47% 15% 7% 5%
53	x	54	7% 17% 39% 28% 7% 9%

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Mol	Chain	Length	Quality of chain
54	y	49	10% 33% 51% 16%
55	z	65	11% 17% 63% 15%
56	B	610	30% 7% 52% 33%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	GCP	B	701	-	-	X	-

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 153046 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	37	307	188	68	47	4	0	0

- Molecule 2 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	2	130	641	381	130	130	0	0

- Molecule 3 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	134	993	632	175	181	5	0	0

- Molecule 4 is a RNA chain called P- site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	4	77	1640	732	297	535	76	0	0

- Molecule 5 is a RNA chain called E site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	5	76	1623	723	290	534	76	0	0

- Molecule 6 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	A	1515	32554	14490	6022	10527	1515	0	0

- Molecule 7 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	D	2889	Total 62218	C 27691	N 11629	O 20009	P 2889	0	0

- Molecule 8 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	E	123	Total 2641	C 1175	N 488	O 855	P 123	0	0

- Molecule 9 is a protein called 30S ribosomal protein S2.

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

- Molecule 10 is a protein called 30S ribosomal protein S3.

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

- Molecule 11 is a protein called 30S ribosomal protein S4.

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

- Molecule 12 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	I	150	Total 1146	C 724	N 217	O 201	S 4	0	0

- Molecule 13 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	101	Total 843	C 531	N 155	O 154	S 3	0	0

- Molecule 14 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	155	Total	C	N	O	S	0	0
			1257	781	252	218	6		

- Molecule 15 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	L	138	Total	C	N	O	S	0	0
			1116	705	215	193	3		

- Molecule 16 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	M	127	Total	C	N	O	0	0
			1010	639	197	174		

- Molecule 17 is a protein called 30S ribosomal protein S10.

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

- Molecule 18 is a protein called 30S ribosomal protein S11.

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

- Molecule 19 is a protein called 30S ribosomal protein S12.

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

- Molecule 20 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	Q	114	Total	C	N	O	S	0	0
			914	565	189	158	2		

- Molecule 21 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 22 is a protein called 30S ribosomal protein S15.

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

- Molecule 23 is a protein called 30S ribosomal protein S16.

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

- Molecule 24 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	U	104	Total	C	N	O	S	0	0
			857	547	161	147	2		

- Molecule 25 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	V	73	Total	C	N	O	0	0
			597	380	118	99		

- Molecule 26 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	W	80	Total	C	N	O	S	0	0
			647	414	119	112	2		

- Molecule 27 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	X	99	Total	C	N	O	S	0	0
			763	470	162	129	2		

- Molecule 28 is a protein called 30S ribosomal protein Thx.

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

- Molecule 29 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Z	228	Total	C	N	O	S	0	0
			1742	1102	318	319	3		

- Molecule 30 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	a	272	Total	C	N	O	S	0	0
			2124	1339	424	358	3		

- Molecule 31 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	b	206	Total	C	N	O	S	0	0
			1578	997	302	273	6		

- Molecule 32 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	c	208	Total	C	N	O	S	0	0
			1625	1034	303	286	2		

- Molecule 33 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	d	182	Total	C	N	O	S	0	0
			1482	947	269	261	5		

- Molecule 34 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	e	174	Total	C	N	O	S	0	0
			1328	844	248	235	1		

- Molecule 35 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	f	139	Total	C	N	O	S	0	0
			1113	717	207	186	3		

- Molecule 36 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	g	122	Total	C	N	O	S	0	0
			932	587	171	170	4		

- Molecule 37 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	h	145	Total	C	N	O	S	0	0
			1106	688	226	190	2		

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	i	136	Total	C	N	O	S	0	0
			1080	688	204	183	5		

- Molecule 39 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	j	117	Total	C	N	O	0	0
			960	599	202	159		

- Molecule 40 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	k	110	Total	C	N	O	0	0
			877	553	175	149		

- Molecule 41 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	l	117	Total	C	N	O	S	0	0
			976	614	197	164	1		

- Molecule 42 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	m	117	Total	C	N	O	S	0	0
			964	610	202	151	1		

- Molecule 43 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	n	101	Total	C	N	O	S	0	0
			779	501	142	135	1		

- Molecule 44 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	o	110	Total	C	N	O	S	0	0
			876	552	171	151	2		

- Molecule 45 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	p	94	Total	C	N	O	0	0
			742	483	133	126		

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	q	110	Total	C	N	O	S	0	0
			844	539	158	141	6		

- Molecule 47 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	r	180	Total	C	N	O	S	0	0
			1435	916	256	260	3		

- Molecule 48 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	s	79	Total	C	N	O	S	0	0
			625	387	131	106	1		

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	t	67	Total	C	N	O	S	0	0
			567	350	116	99	2		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
50	u	59	Total	C	N	O	0	0
			469	298	90	81		

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	v	71	Total	C	N	O	S	0	0
			581	364	108	104	5		

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	w	57	Total	C	N	O	S	0	0
			445	279	87	74	5		

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	x	49	Total	C	N	O	S	0	0
			426	265	87	70	4		

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	y	49	Total	C	N	O	S	0	0
			430	263	108	57	2		

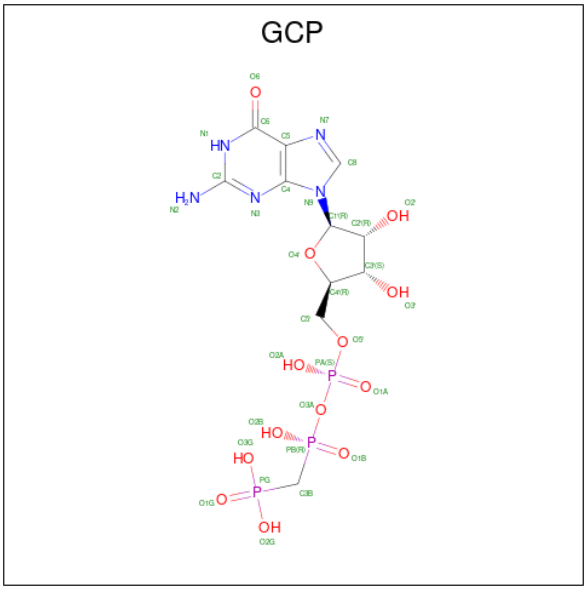
- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	z	64	Total	C	N	O	S	0	0
			515	331	102	79	3		

- Molecule 56 is a protein called Elongation factor 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	B	591	Total	C	N	O	S	0	0
			4628	2968	794	857	9		

- Molecule 57 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (CCD ID: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



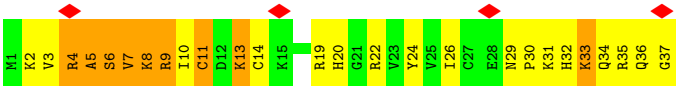
Mol	Chain	Residues	Atoms					AltConf
57	B	1	Total	C	N	O	P	0
			32	11	5	13	3	

3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

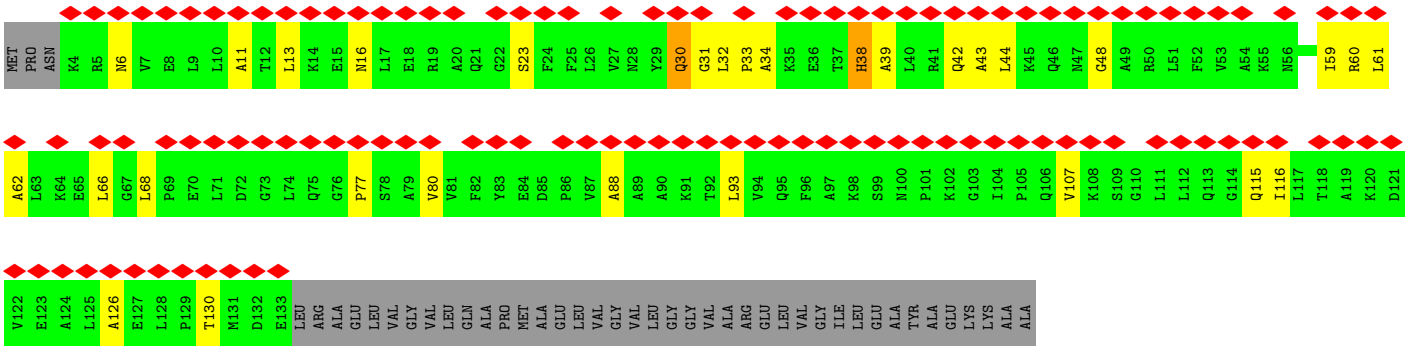
- Molecule 1: 50S ribosomal protein L36

Chain 1:



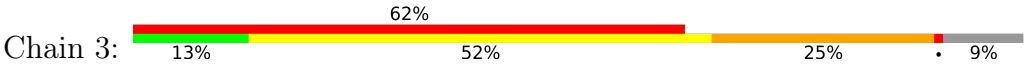
- Molecule 2: 50S ribosomal protein L10

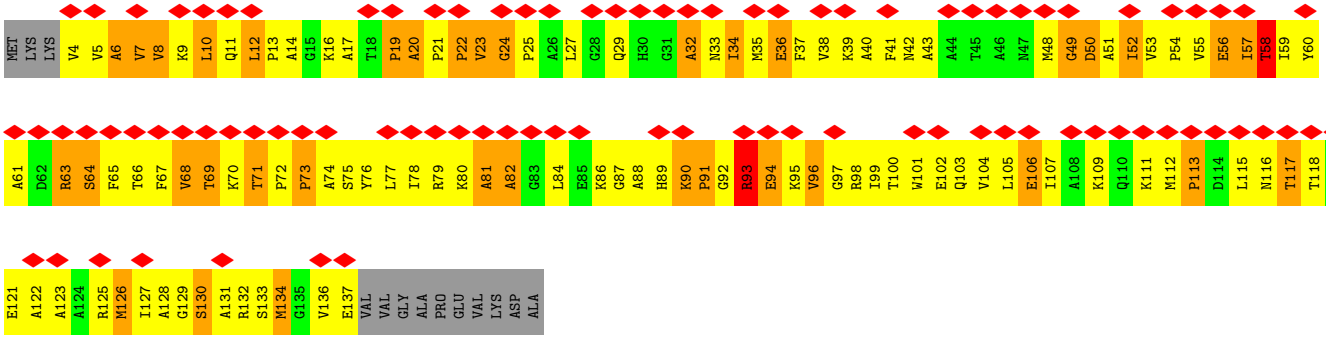
Chain 2:



- Molecule 3: 50S ribosomal protein L11

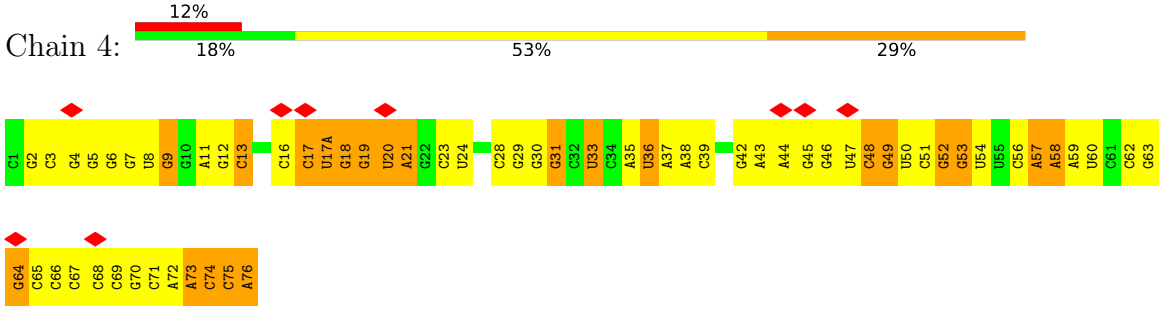
Chain 3:





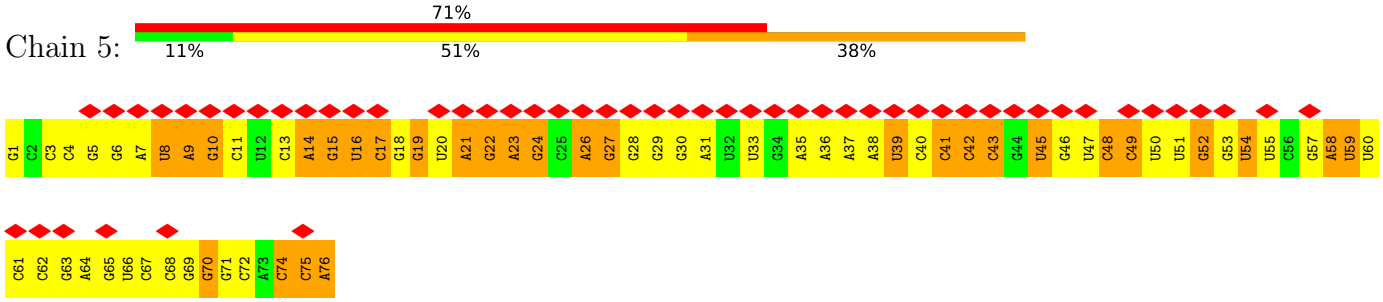
• Molecule 4: P- site tRNA

Chain 4:



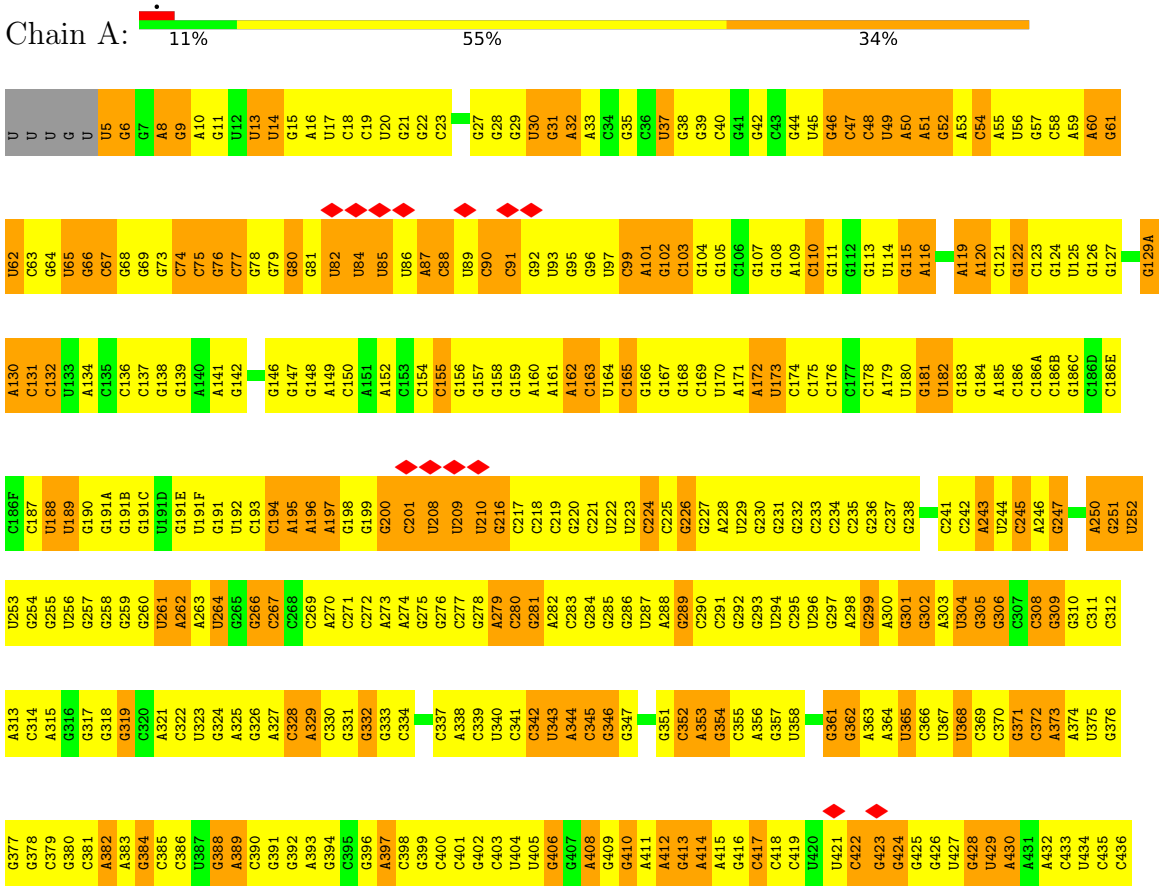
• Molecule 5: E site tRNA

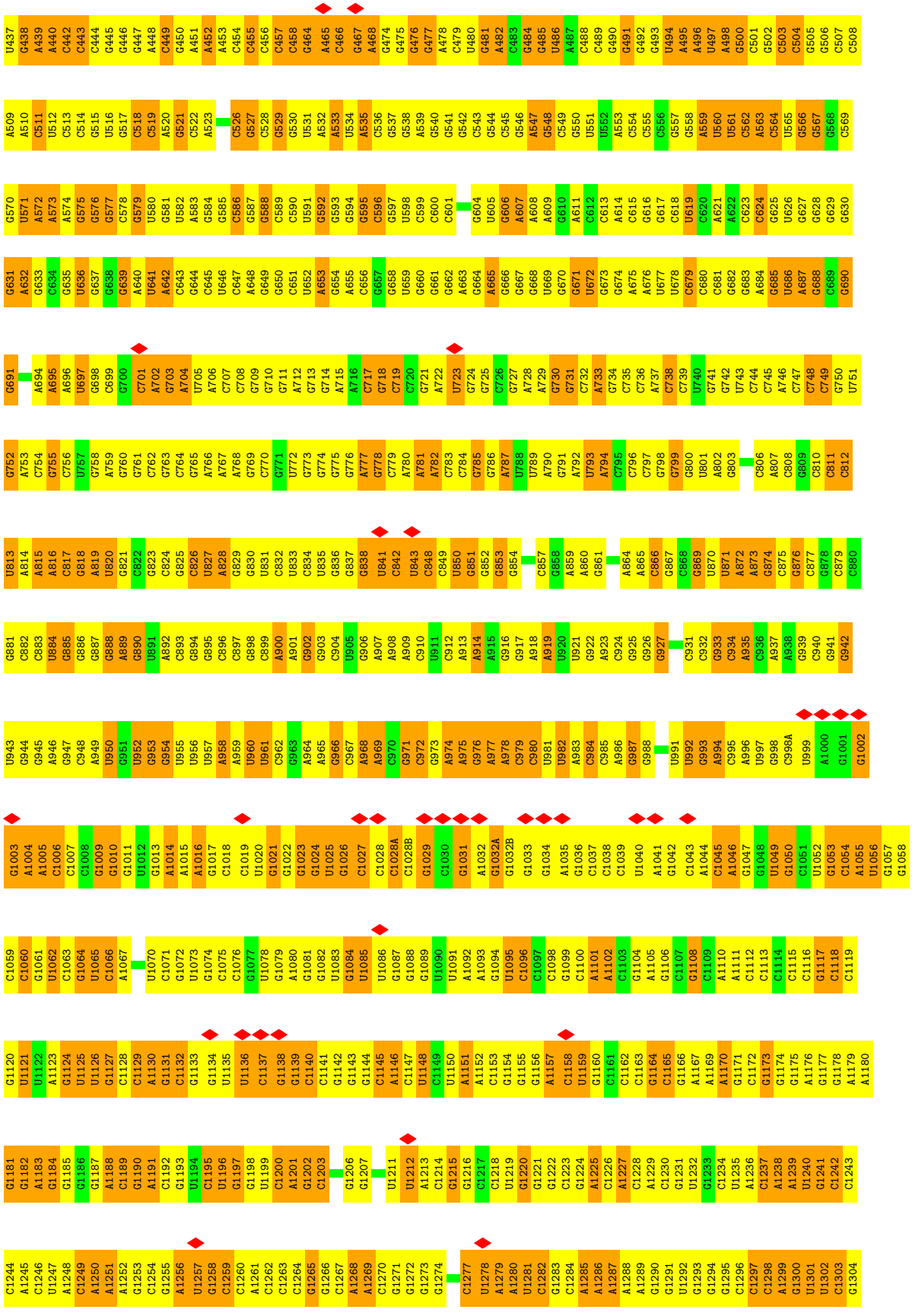
Chain 5:

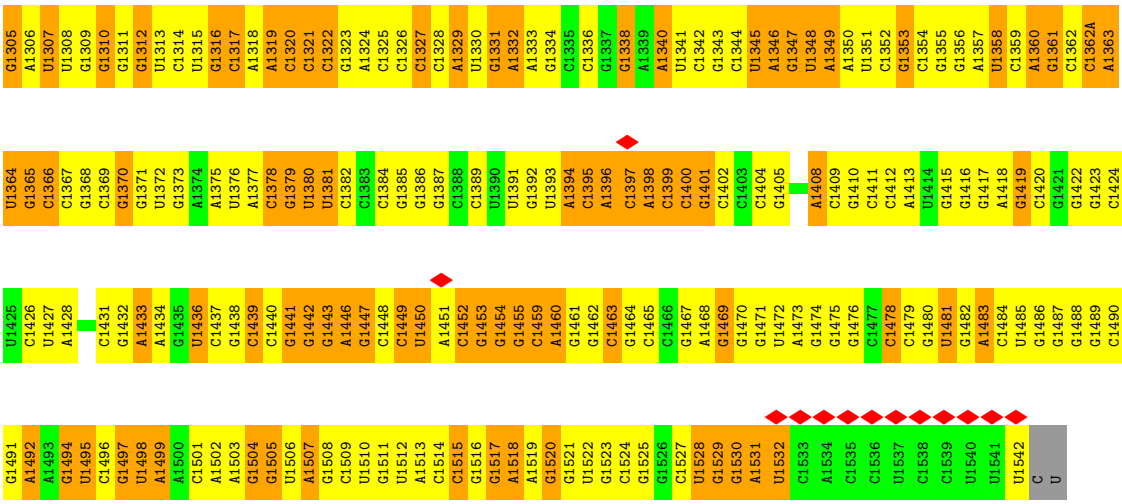


• Molecule 6: 16S ribosomal RNA

Chain A:

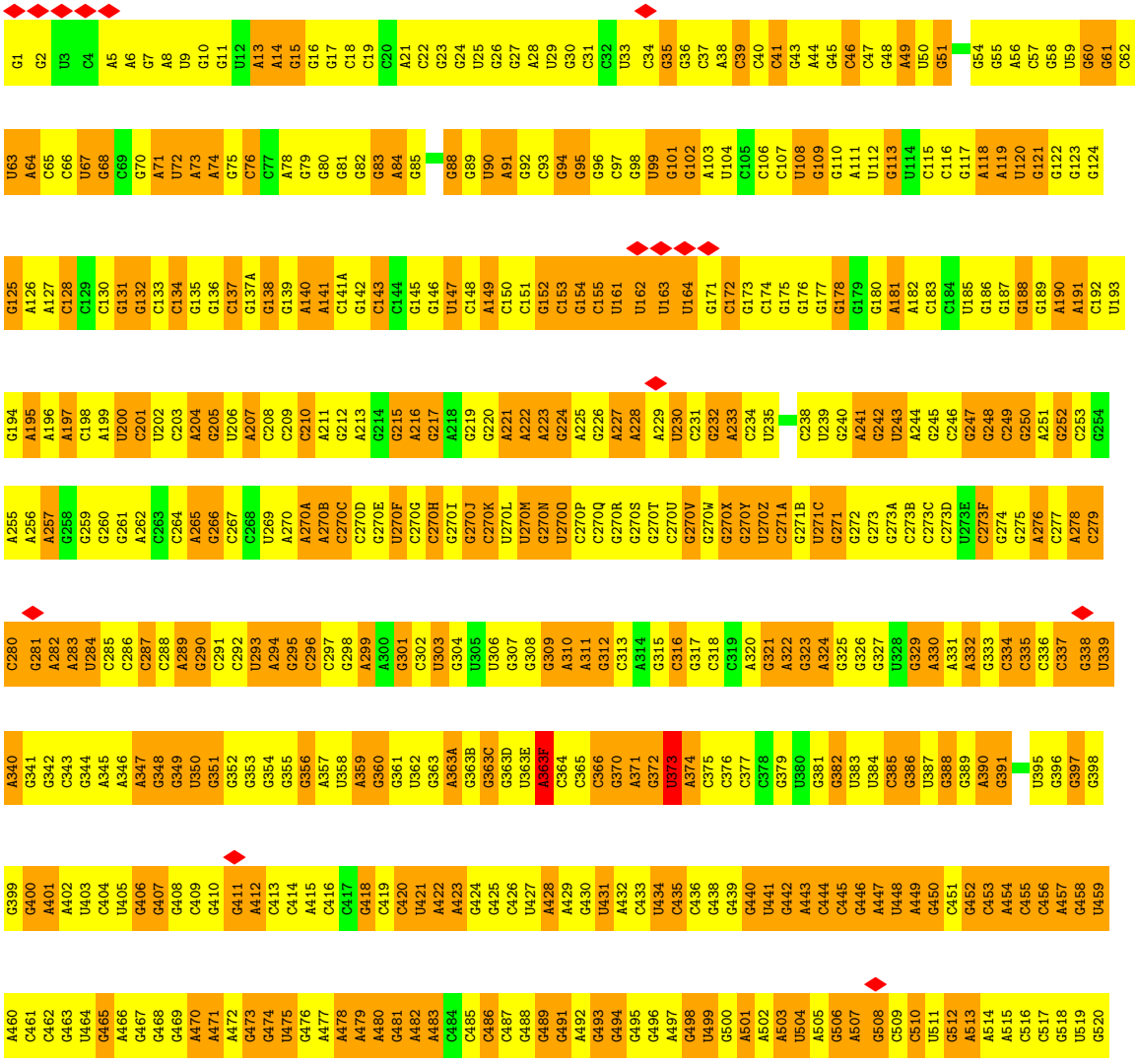


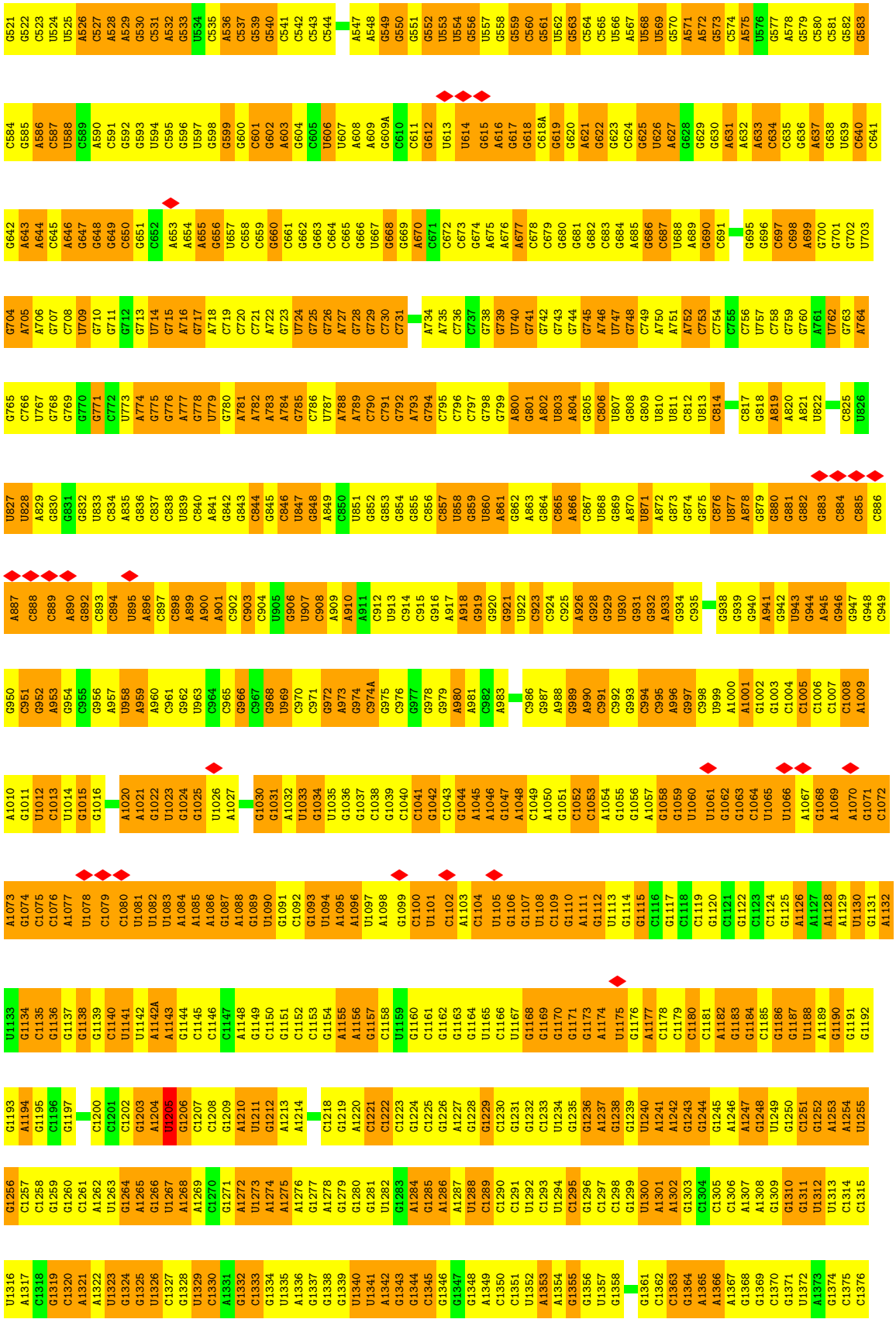


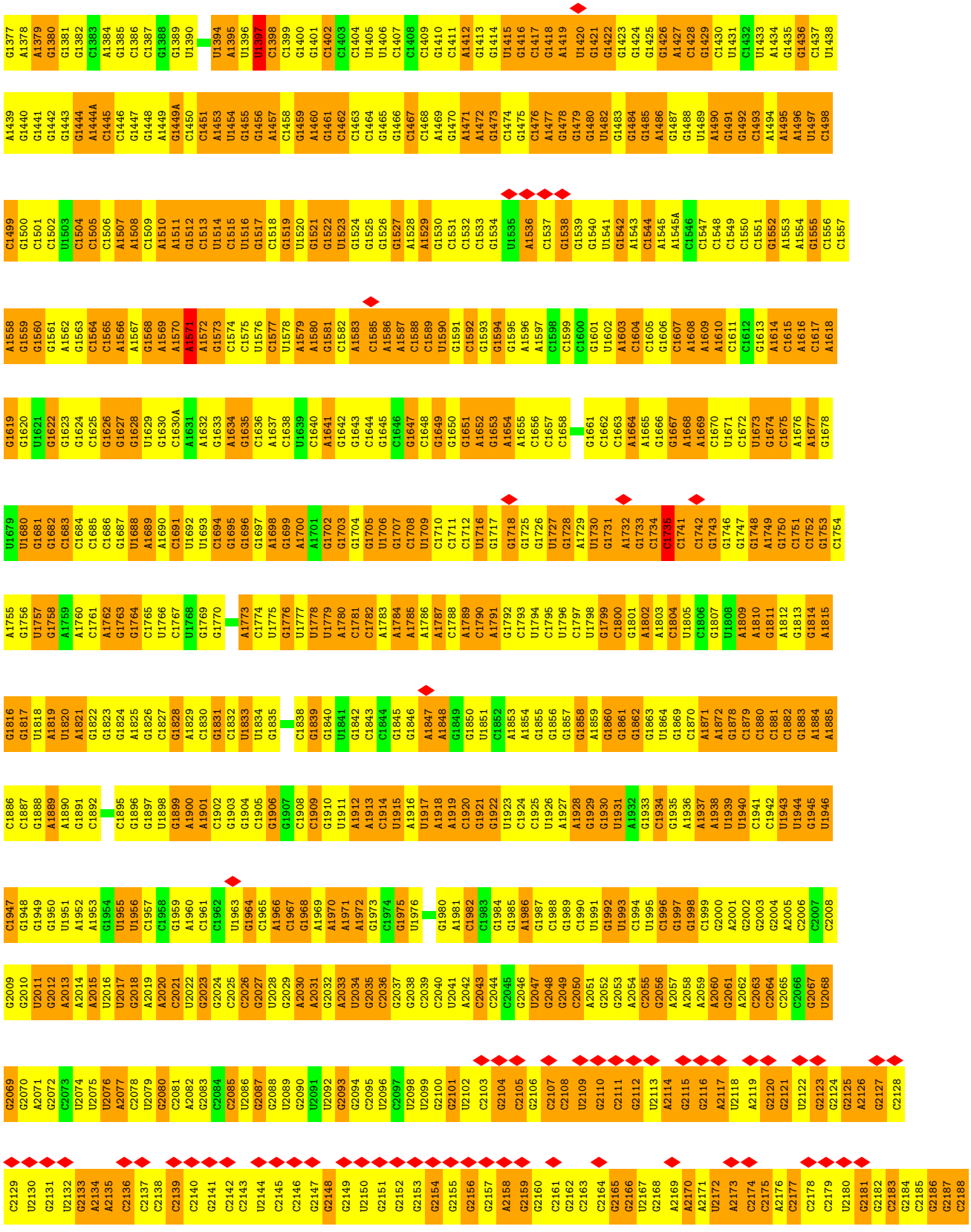


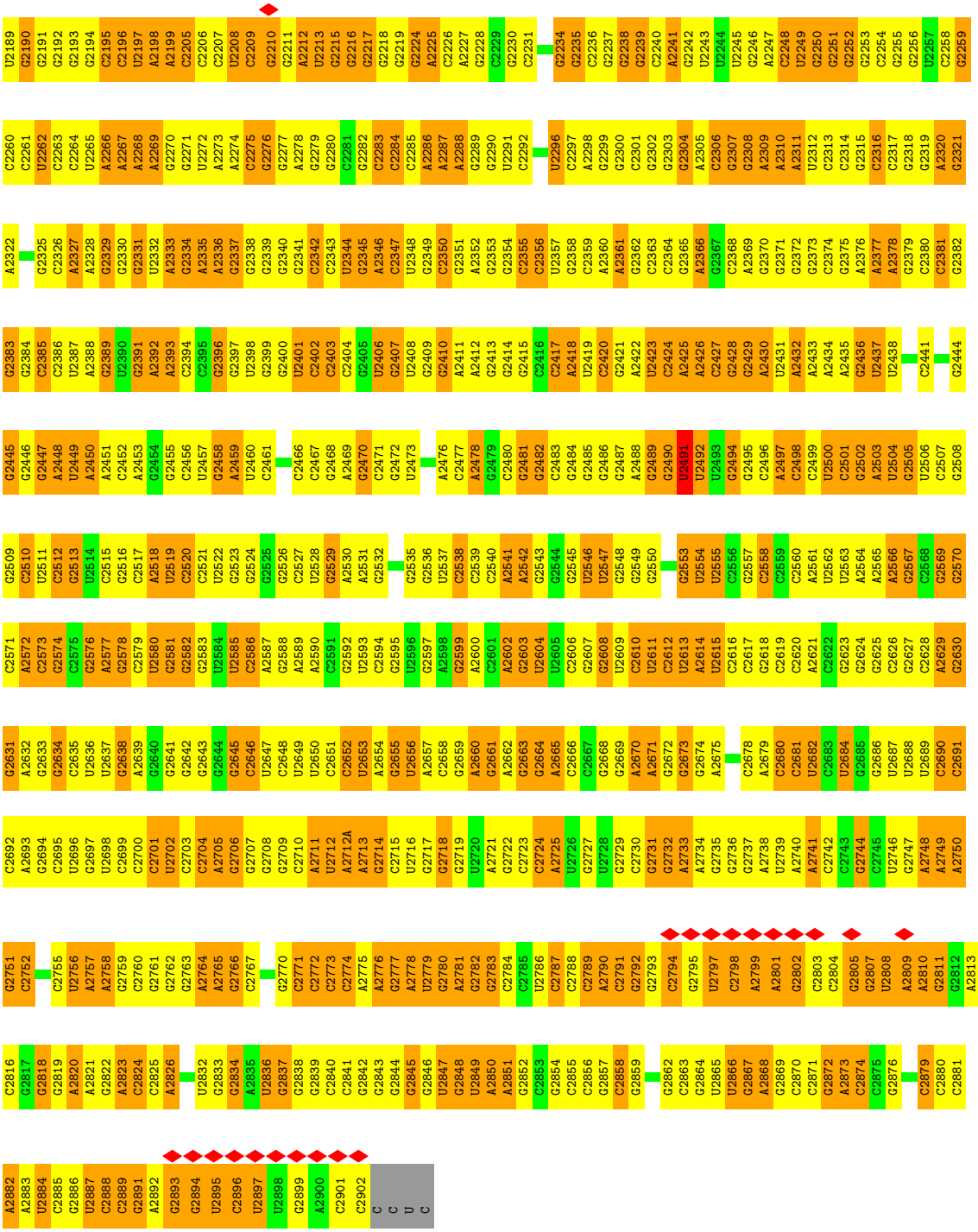
• Molecule 7: 23S ribosomal RNA

Chain D:



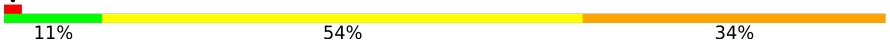


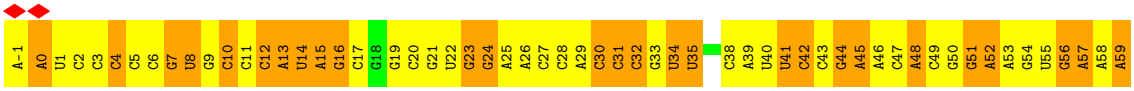


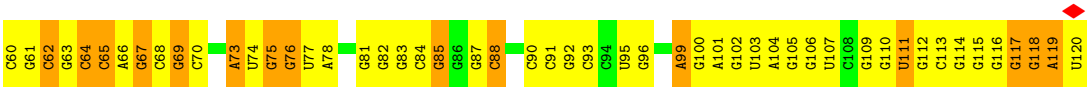


• Molecule 8: 5S ribosomal RNA

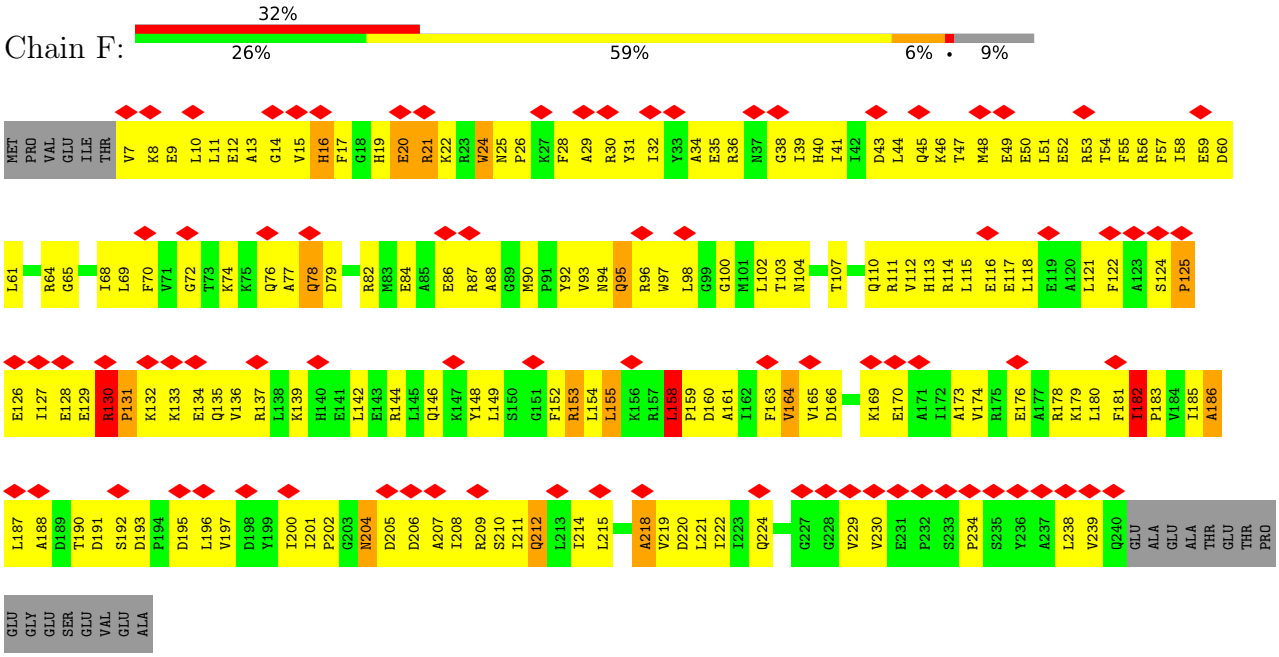
Chain E:



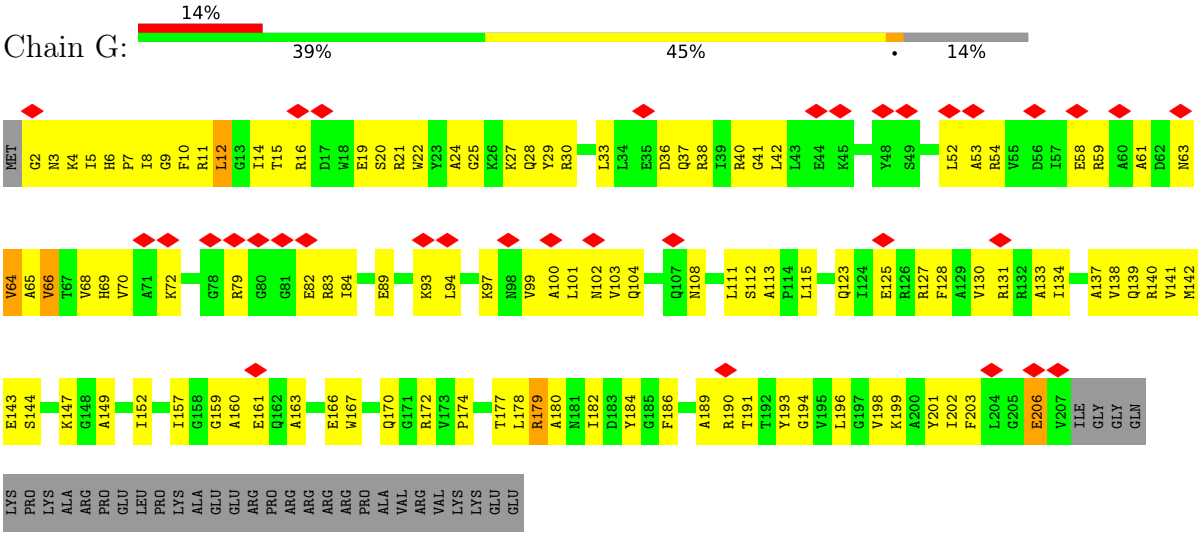




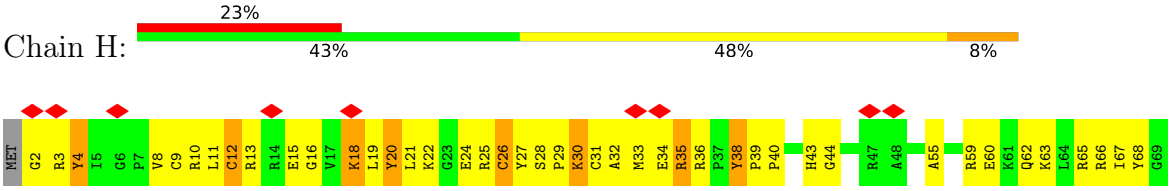
• Molecule 9: 30S ribosomal protein S2

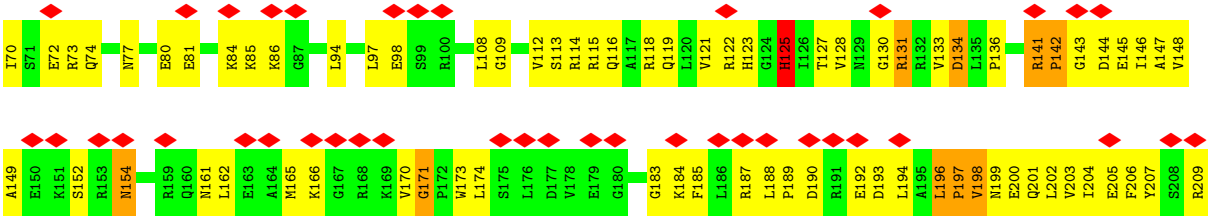


• Molecule 10: 30S ribosomal protein S3

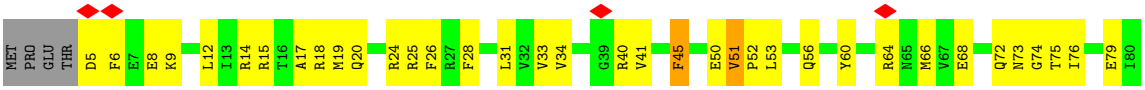


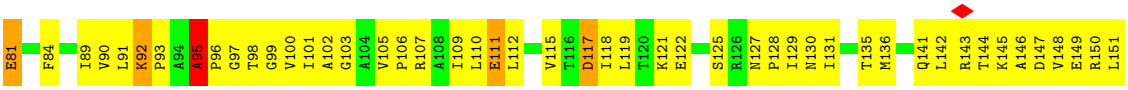
• Molecule 11: 30S ribosomal protein S4

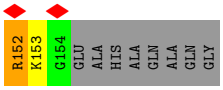




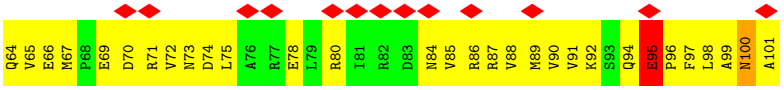
• Molecule 12: 30S ribosomal protein S5



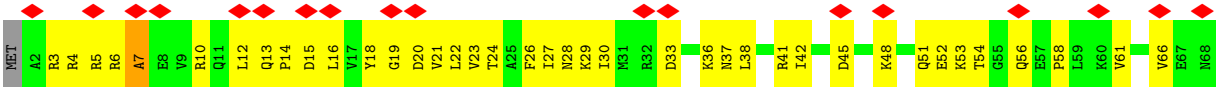


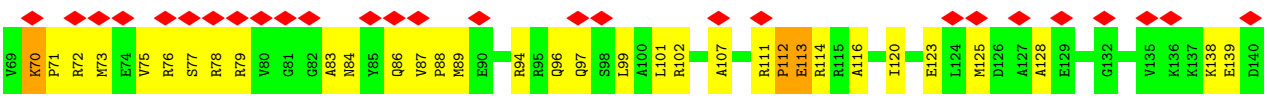


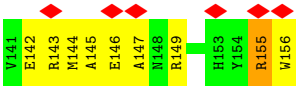
• Molecule 13: 30S ribosomal protein S6



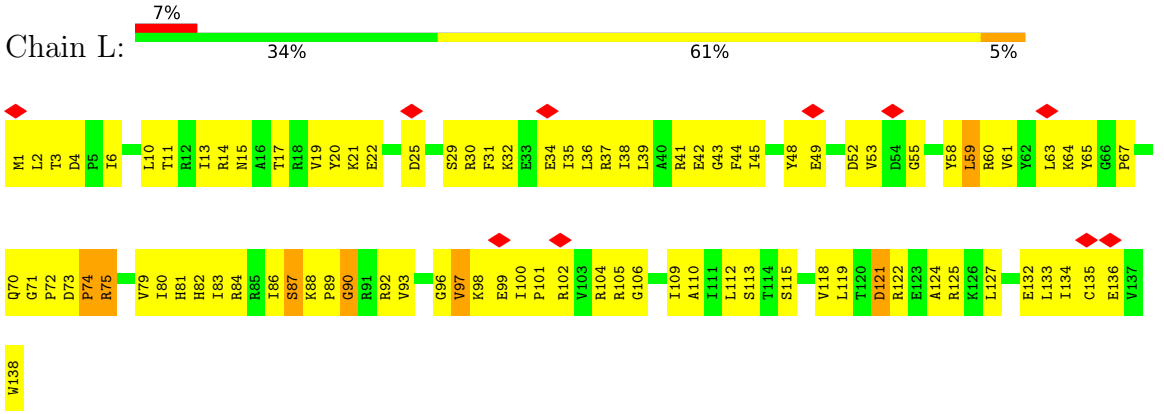
• Molecule 14: 30S ribosomal protein S7



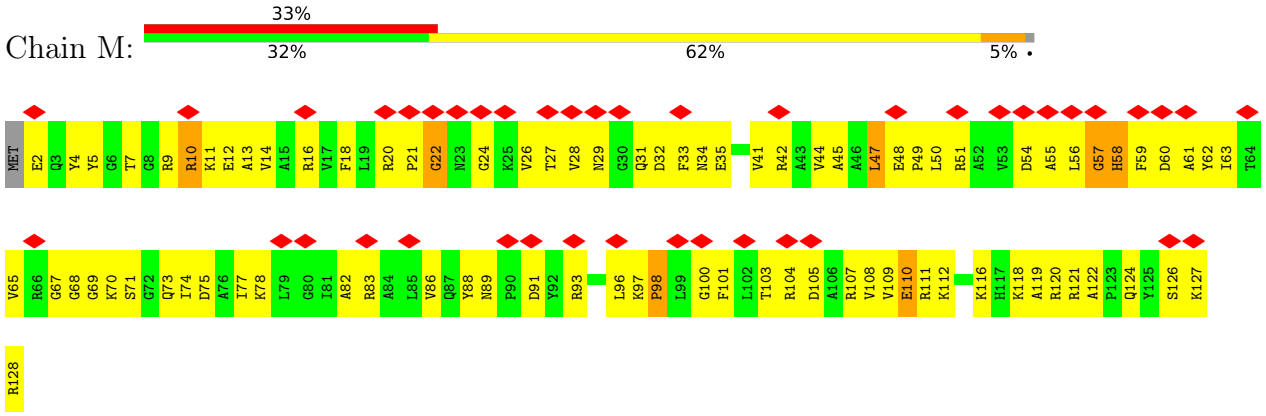




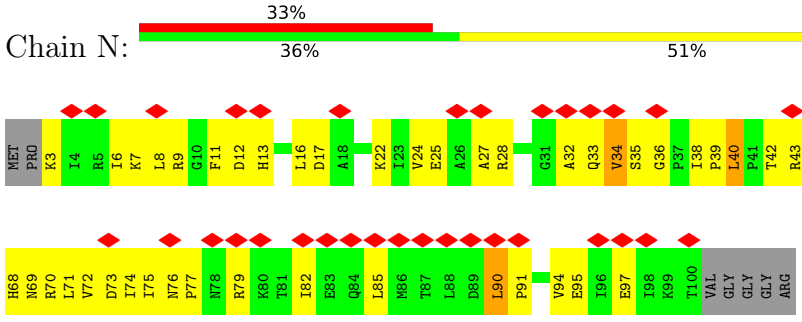
• Molecule 15: 30S ribosomal protein S8



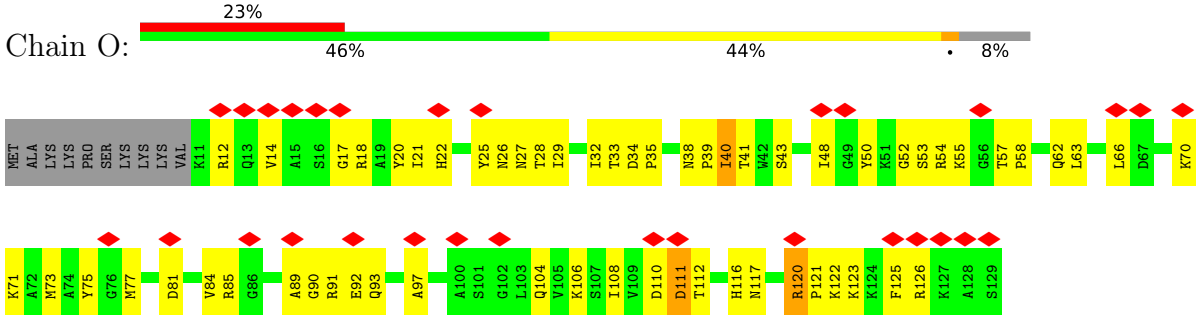
• Molecule 16: 30S ribosomal protein S9



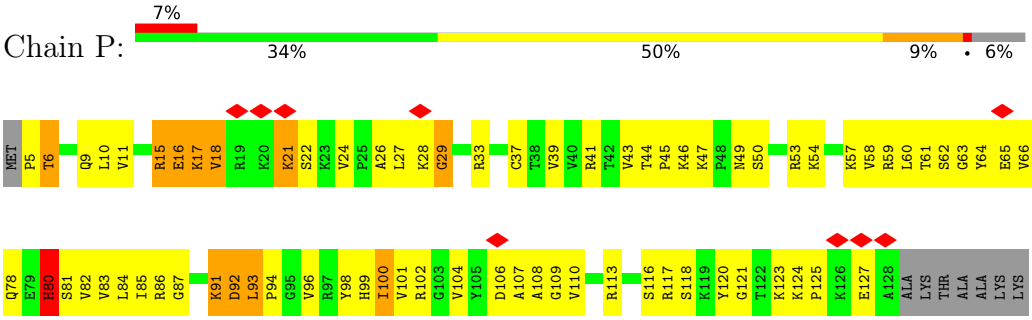
• Molecule 17: 30S ribosomal protein S10



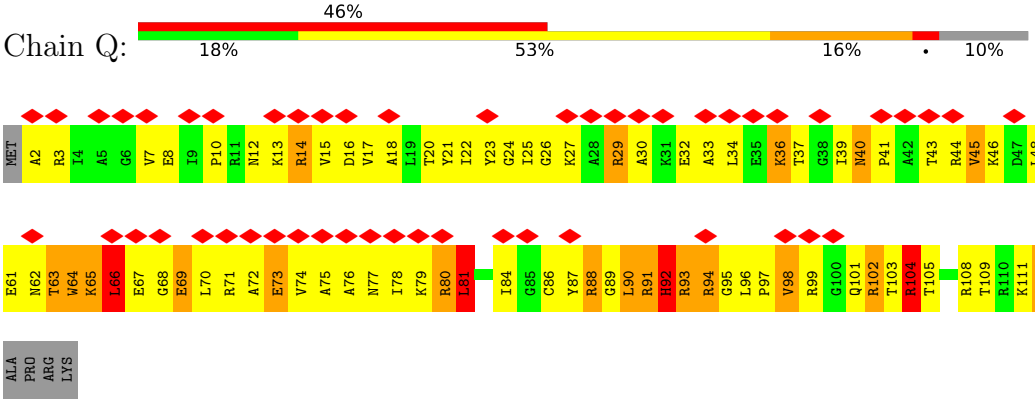
• Molecule 18: 30S ribosomal protein S11



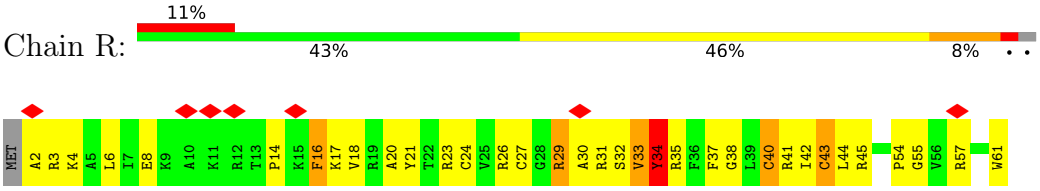
• Molecule 19: 30S ribosomal protein S12



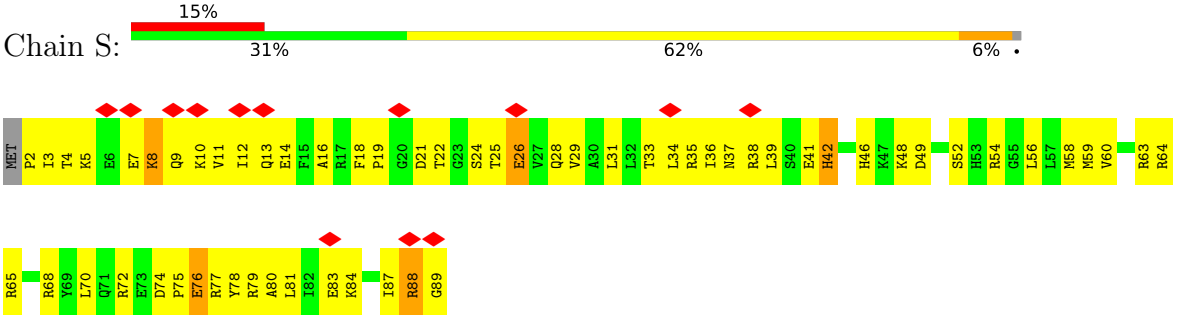
• Molecule 20: 30S ribosomal protein S13



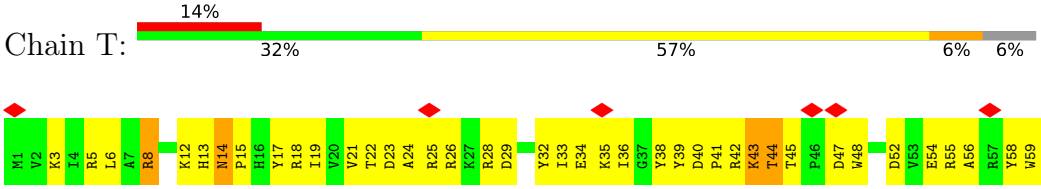
• Molecule 21: 30S ribosomal protein S14 type Z

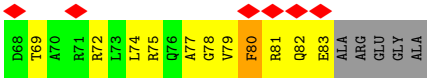


• Molecule 22: 30S ribosomal protein S15

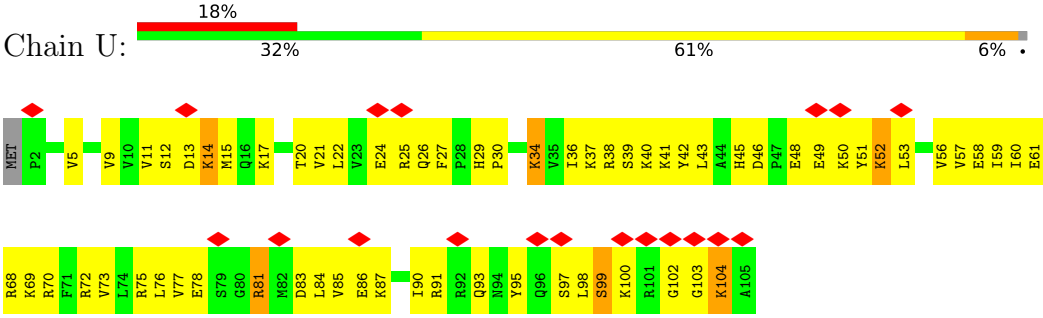


• Molecule 23: 30S ribosomal protein S16

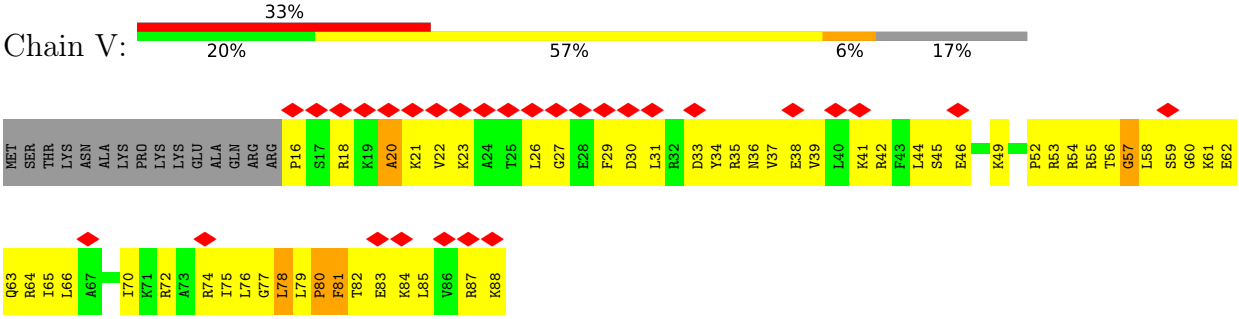




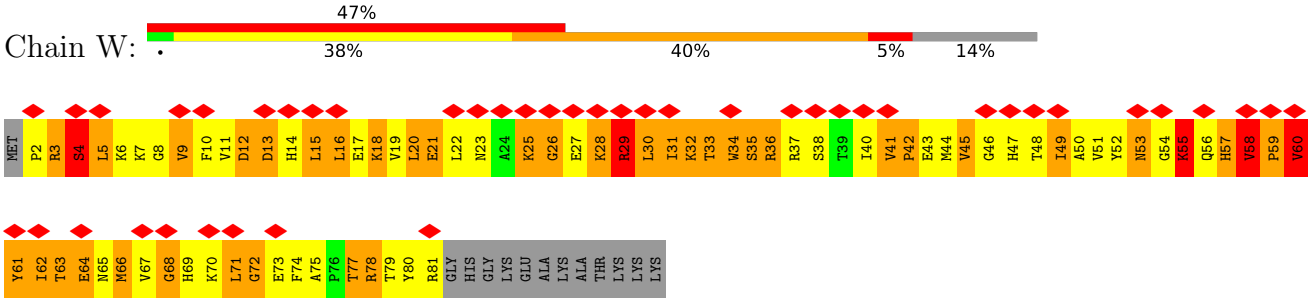
• Molecule 24: 30S ribosomal protein S17



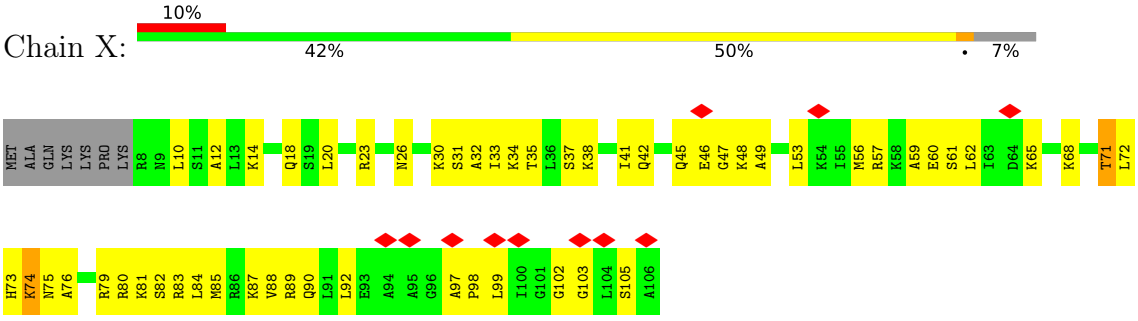
• Molecule 25: 30S ribosomal protein S18



• Molecule 26: 30S ribosomal protein S19

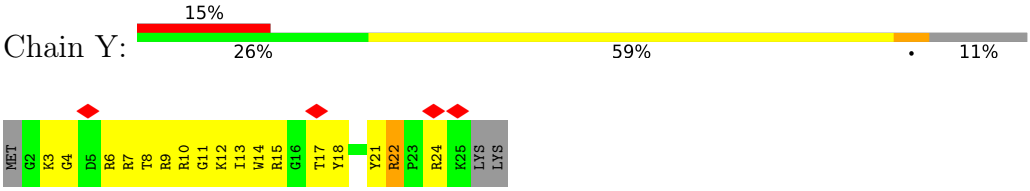


• Molecule 27: 30S ribosomal protein S20



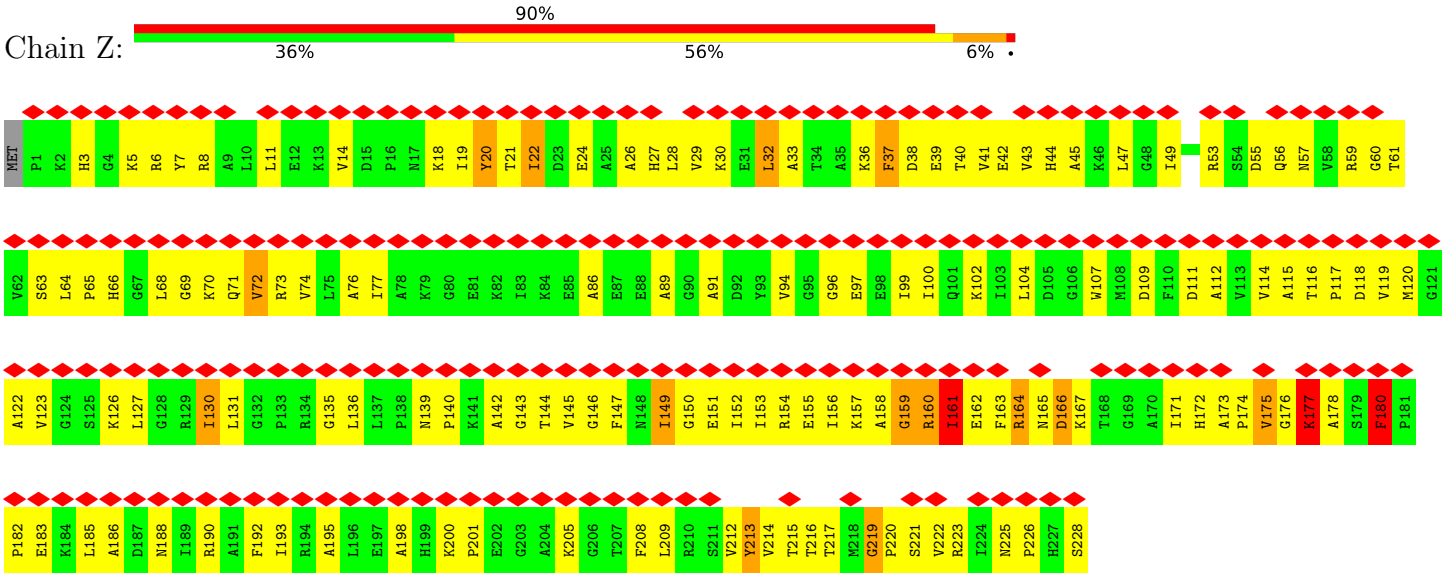
• Molecule 28: 30S ribosomal protein Thx

Chain Y:



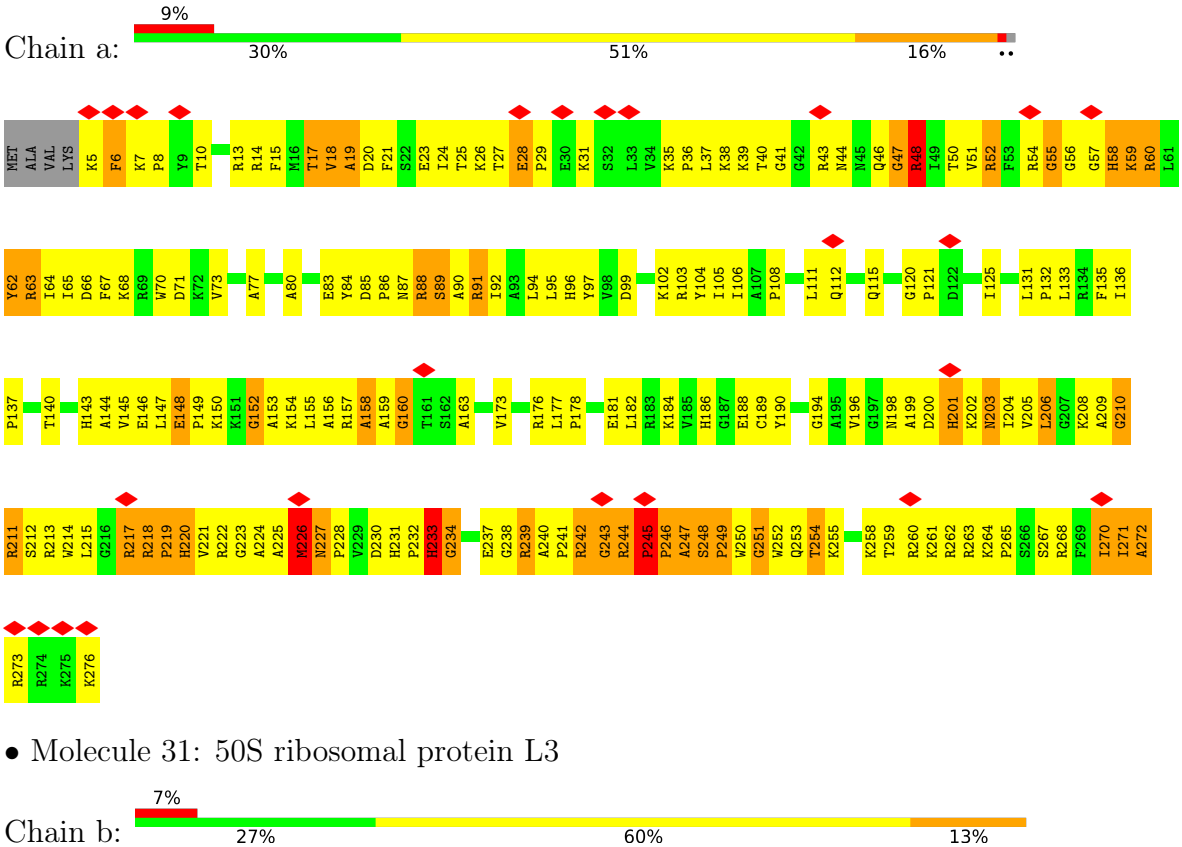
• Molecule 29: 50S ribosomal protein L1

Chain Z:



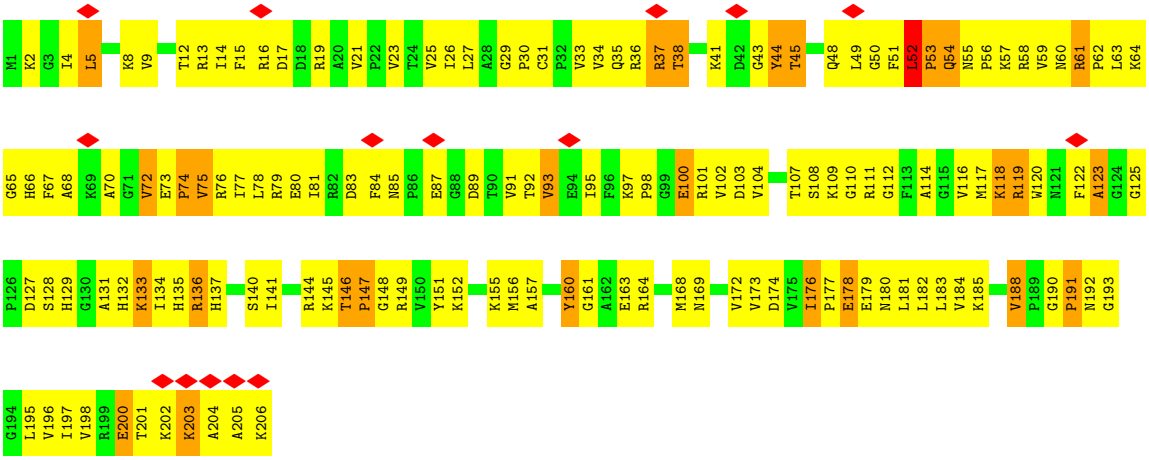
• Molecule 30: 50S ribosomal protein L2

Chain a:



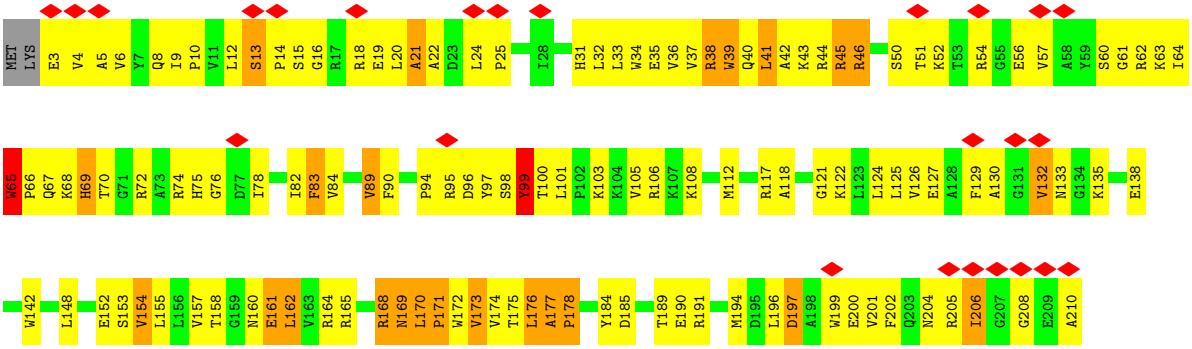
• Molecule 31: 50S ribosomal protein L3

Chain b:



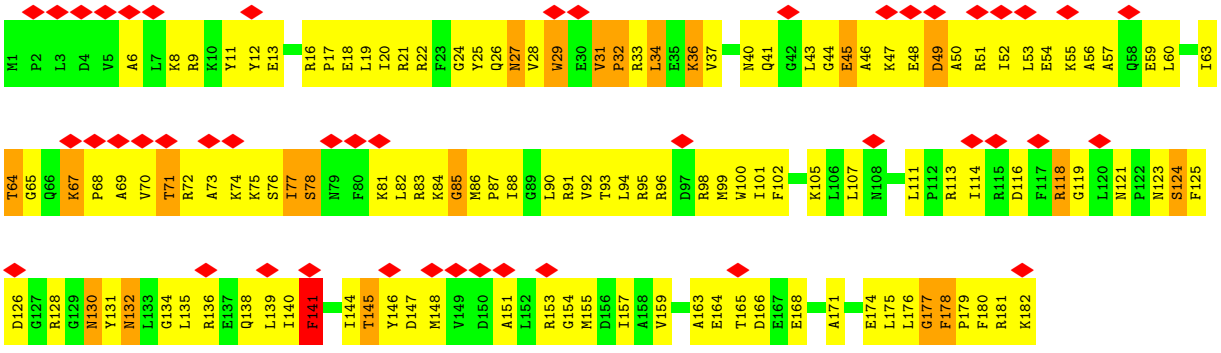
• Molecule 32: 50S ribosomal protein L4

Chain c:



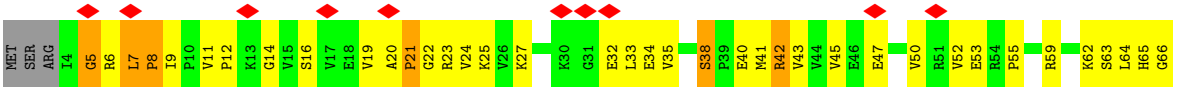
• Molecule 33: 50S ribosomal protein L5

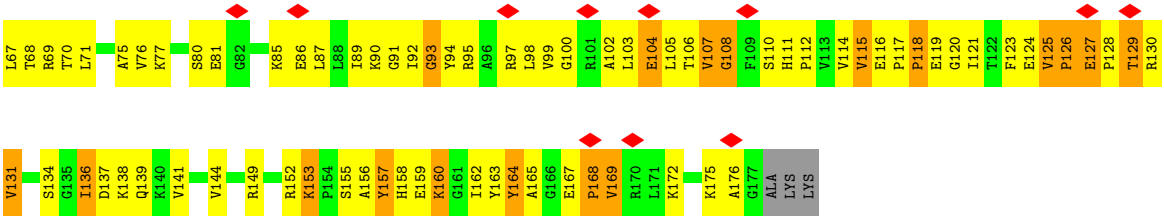
Chain d:



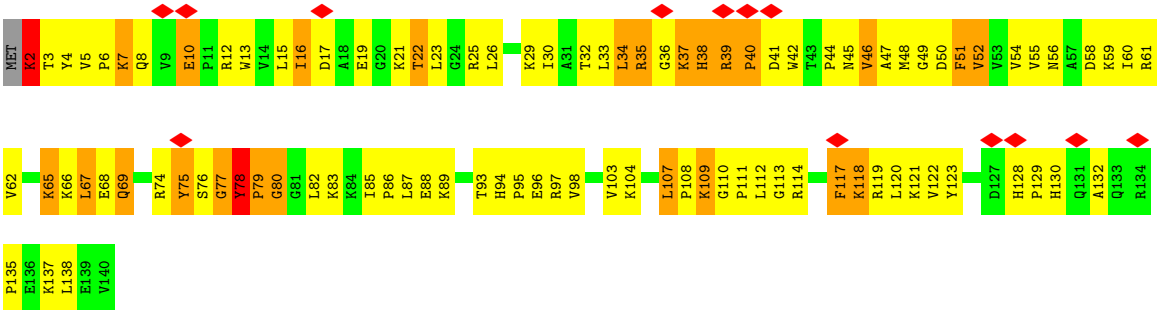
• Molecule 34: 50S ribosomal protein L6

Chain e:

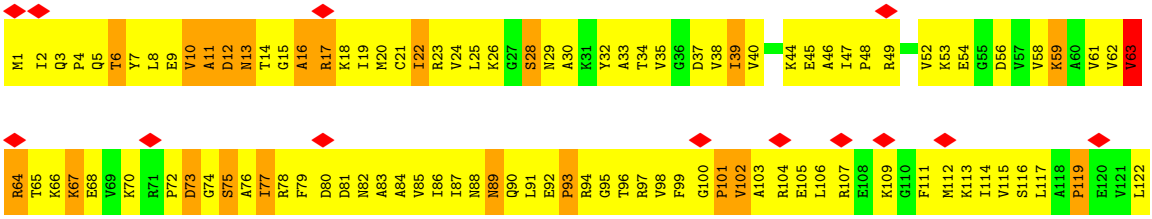




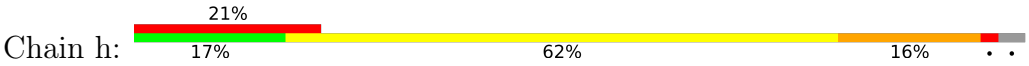
• Molecule 35: 50S ribosomal protein L13

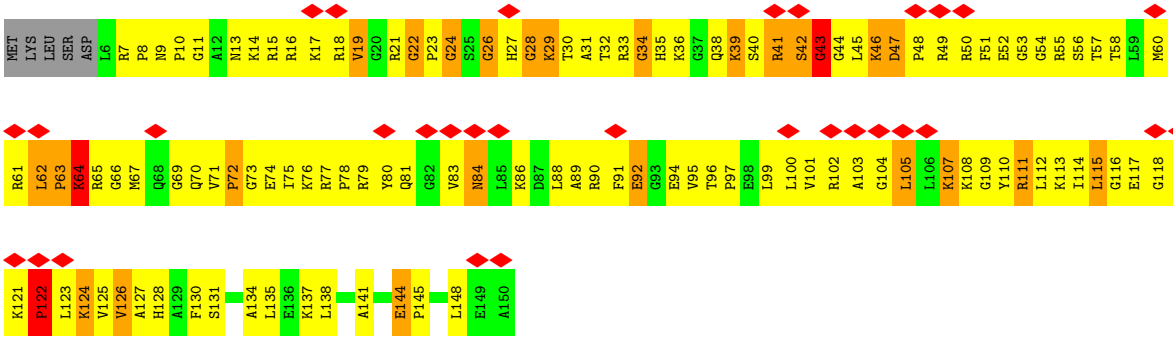


• Molecule 36: 50S ribosomal protein L14

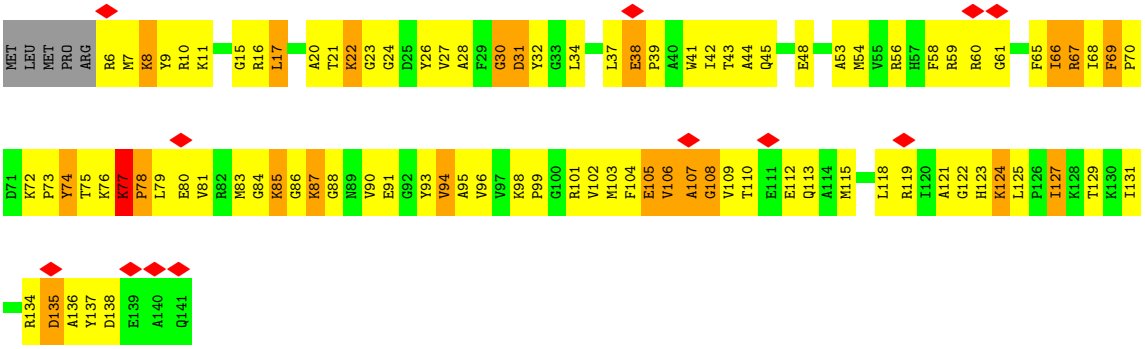


• Molecule 37: 50S ribosomal protein L15



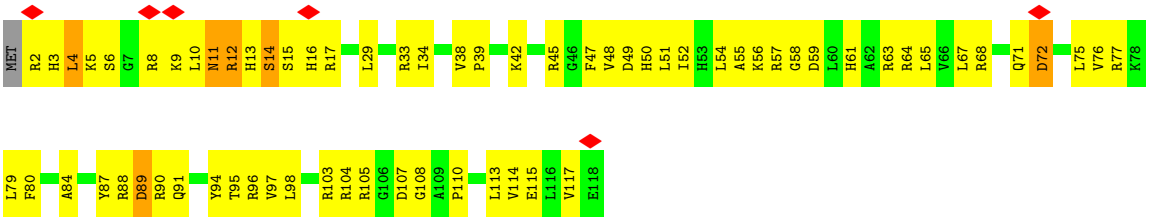


• Molecule 38: 50S ribosomal protein L16



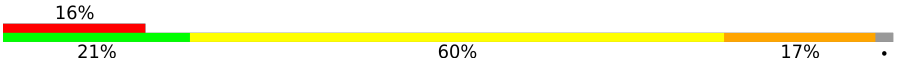
• Molecule 39: 50S ribosomal protein L17

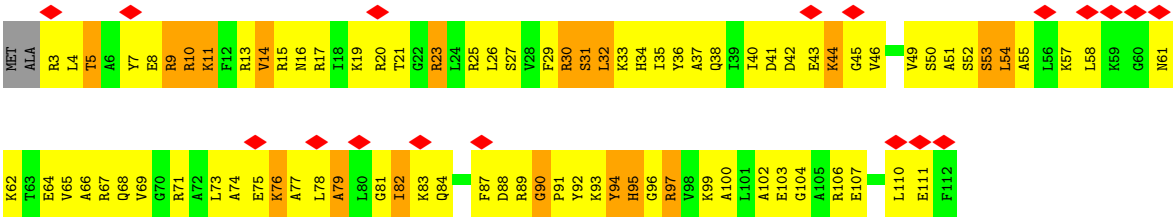
Chain j:



• Molecule 40: 50S ribosomal protein L18

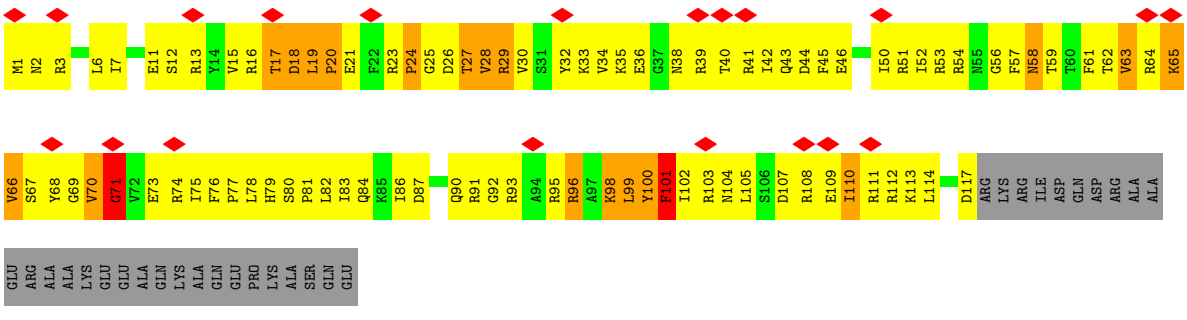
Chain k:





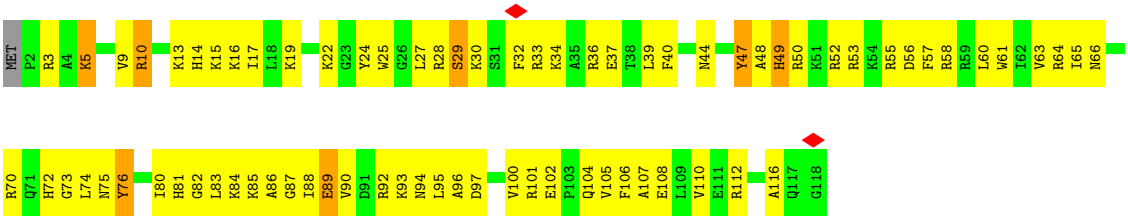
• Molecule 41: 50S ribosomal protein L19

Chain l:

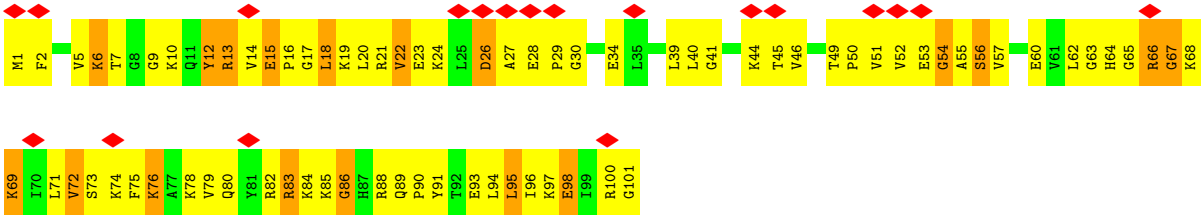


• Molecule 42: 50S ribosomal protein L20

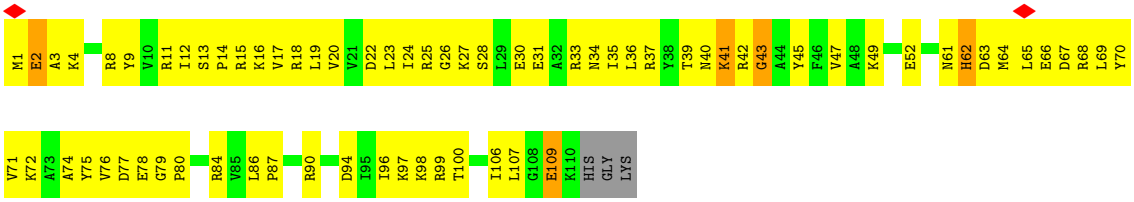
Chain m:



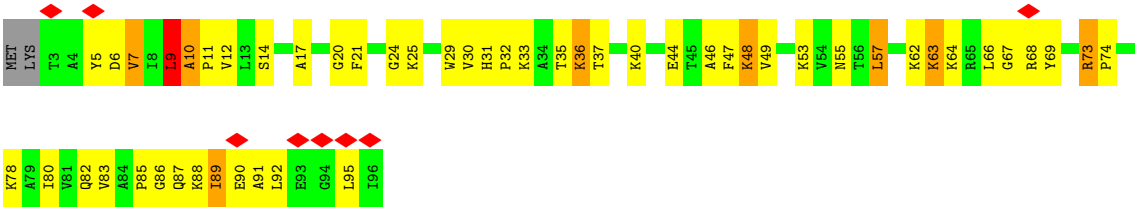
• Molecule 43: 50S ribosomal protein L21



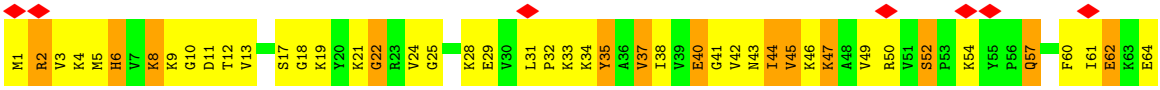
• Molecule 44: 50S ribosomal protein L22

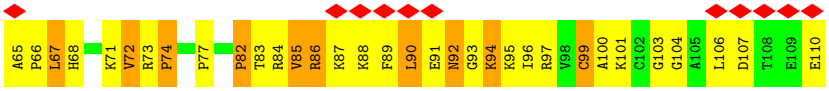


• Molecule 45: 50S ribosomal protein L23

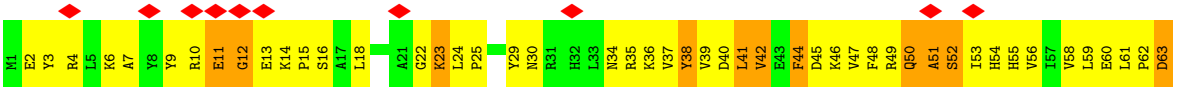


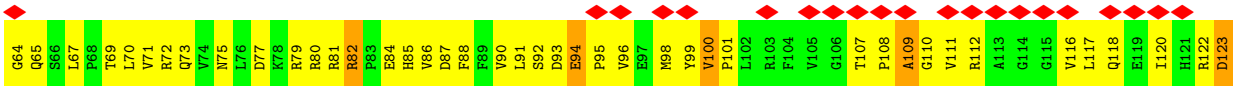
• Molecule 46: 50S ribosomal protein L24

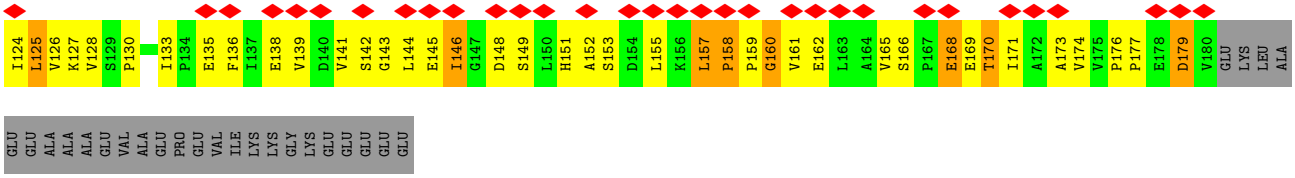




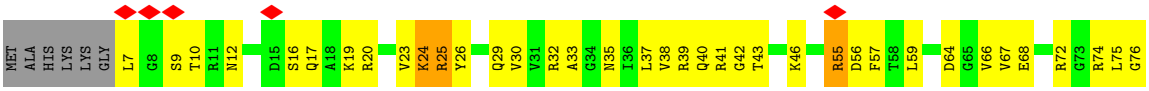
• Molecule 47: 50S ribosomal protein L25

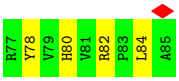






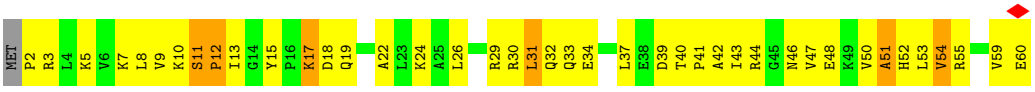
• Molecule 48: 50S ribosomal protein L27



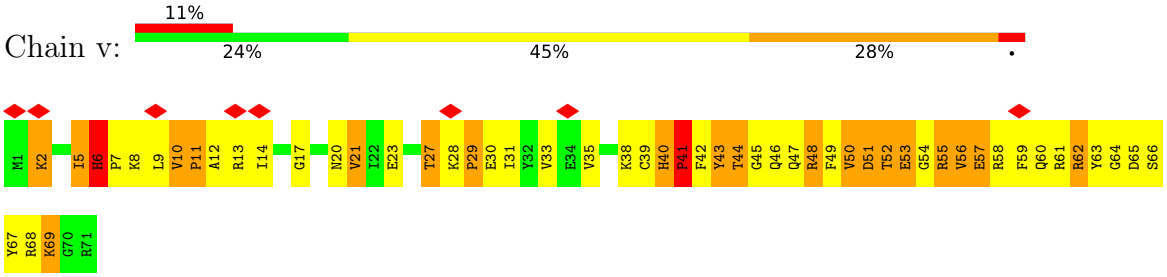


• Molecule 49: 50S ribosomal protein L29

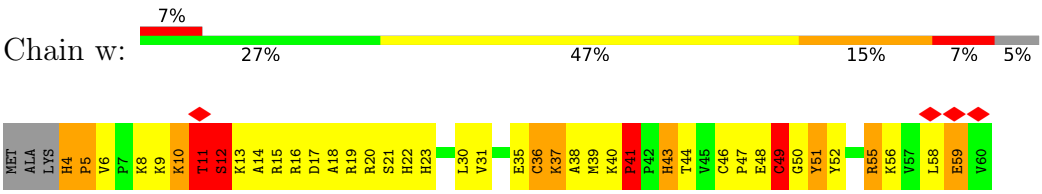
• Molecule 50: 50S ribosomal protein L30



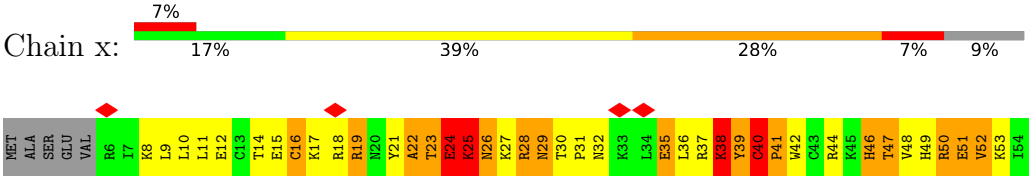
• Molecule 51: 50S ribosomal protein L31



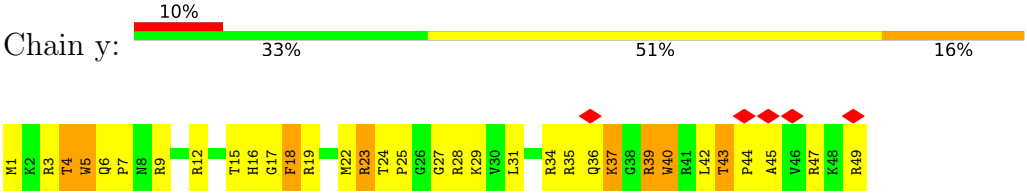
- Molecule 52: 50S ribosomal protein L32



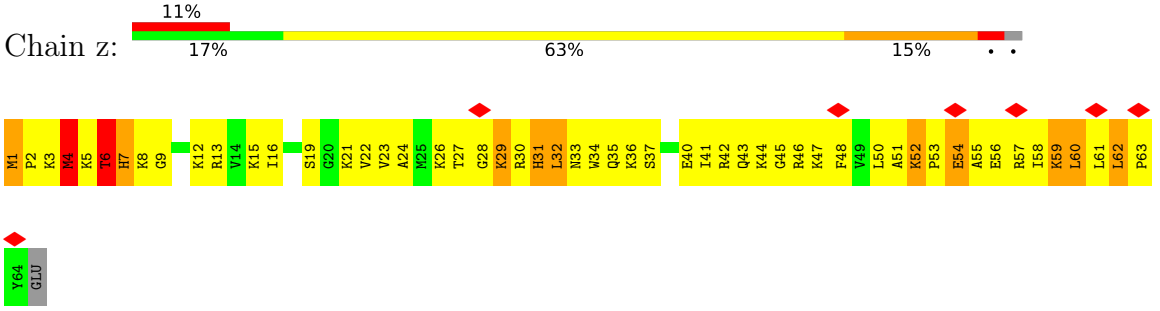
- Molecule 53: 50S ribosomal protein L33



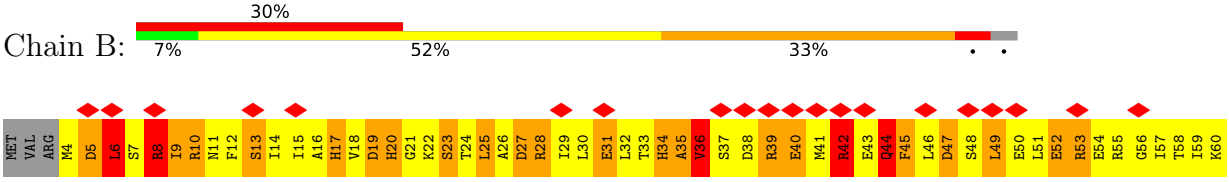
- Molecule 54: 50S ribosomal protein L34

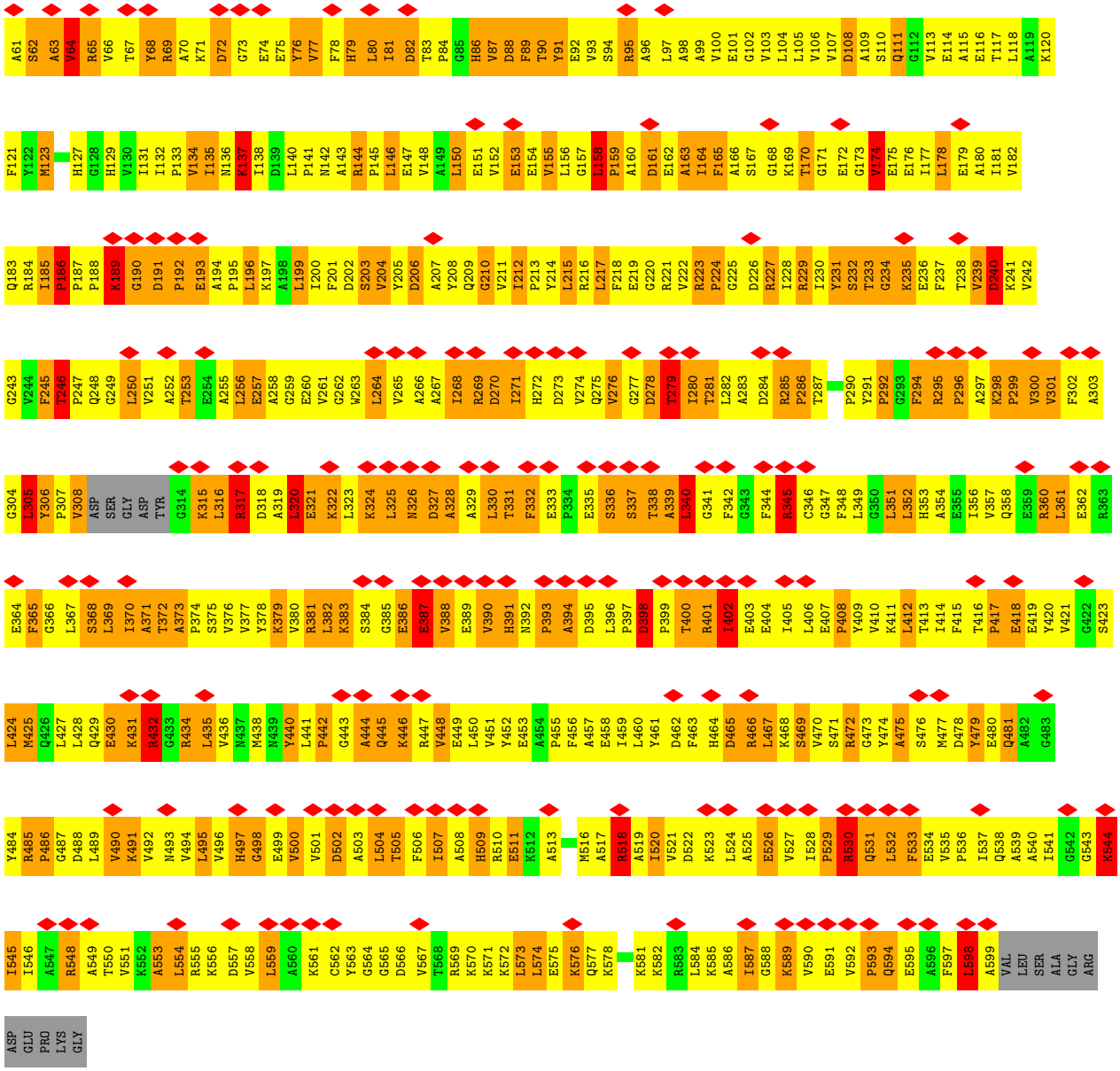


- Molecule 55: 50S ribosomal protein L35



- Molecule 56: Elongation factor 4




A61 S62 A63 V64 R65 V66 T67 Y68 R69 A70 K71 D72 G73 E74 E75 Y76 V77 F78 H79 L80 I81 D82 T83 P84 G85 H86 V87 D88 F89 T90 Y91 E92 V93 S94 R95 A96 L97 A98 A99 V100 E101 G102 V103 L104 L105 V106 V107 D108 A109 S110 Q111 G112 V113 E114 A115 E116 T117 L118 A119 K120
F121 Y122 M123 H127 G128 H129 V130 I131 I132 P133 V134 I135 N136 K137 I138 D139 L140 P141 N142 A143 R144 P145 L146 E147 V148 A149 L150 E151 V152 E153 E154 V155 L156 G157 L158 P159 A160 D161 E162 A163 I164 F165 A166 S167 G168 K169 T170 G171 E172 G173 V174 E175 E176 I177 L178 E179 A180 I181 V182
Q183 R184 I185 P186 P187 P188 K189 G190 D191 P192 E193 A194 P195 L196 K197 A198 L199 I200 F201 D202 S203 V204 Y205 D206 A207 Y208 Q209 G210 V211 I212 P213 Y214 L215 R216 L217 F218 E219 G220 R221 V222 R223 P224 G225 D226 R227 I228 R229 I230 Y231 S232 T233 G234 K235 E236 F237 T238 V239 D240 K241 V242
G243 V244 F245 T246 P247 Q248 G249 L250 V251 A252 T253 E254 A255 L256 E257 A258 G259 E260 V261 G262 W263 L264 V265 A266 A267 I268 R269 D270 I271 H272 D273 V274 Q275 V276 G277 D278 T279 I280 T281 L282 A283 D284 R285 P286 T287 P290 Y291 P292 G293 F294 R295 P296 A297 K298 P299 V300 V301 F302 A303
G304 L305 Y306 P307 V308 ASP SER GLY ASP TYR G314 K315 L316 R317 D318 A319 L320 E321 K322 L323 K324 L325 N326 D327 A328 A329 L330 T331 F332 E333 P334 E335 S336 S337 T338 A339 L340 G341 F342 G343 F344 R345 C346 G347 F348 L349 G350 L351 L352 H353 A354 E355 I356 V357 Q358 E359 R360 L361 E362 R363
E364 F365 G366 L367 S368 L369 I370 A371 T372 A373 P374 S375 V376 V377 Y378 K379 V380 R381 L382 K383 S384 G385 E386 E387 V388 E389 V390 H391 N392 P393 A394 D395 L396 P397 D398 P399 T400 R401 I402 E403 E404 I405 L406 E407 P408 Y409 V410 K411 L412 T413 I414 F415 T416 P417 E418 E419 Y420 V421 G422 S423
L424 M425 Q426 L427 L428 Q429 E430 K431 R432 G433 R434 L435 V436 N437 M438 N439 Y440 L441 P442 G443 A444 Q445 K446 R447 V448 E449 L450 V451 Y452 E453 A454 P455 F456 A457 E458 I459 L460 Y461 D462 F463 H464 D465 R466 L467 K468 S469 V470 S471 R472 G473 Y474 A475 S476 M477 D478 Y479 E480 Q481 A482 G483
Y484 R485 P486 G487 D488 L489 V490 K491 V492 N493 V494 L495 V496 H497 G498 E499 V500 V501 D502 A503 L504 T505 F506 I507 A508 H509 R510 E511 K512 A513 M516 A517 R518 A519 I520 V521 D522 K523 L524 A525 E526 V527 I528 P529 R530 Q531 L532 F533 E534 V535 P536 I537 Q538 A539 A540 I541 G542 G543 K544
I545 L546 A547 R548 A549 T550 V551 K552 A553 L554 R555 K556 D557 V558 L559 A560 K561 C562 Y563 G564 G565 D566 V567 T568 R569 K570 K571 K572 L573 L574 E575 K576 Q577 K578 K581 K582 R583 L584 K585 A586 I587 G588 K589 V590 E591 V592 P593 Q594 E595 A596 F597 L598 A599 VAL LEU SER ALA GLY ARG
ASP GLU PRO LYS GLY

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	110981	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	22	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.616	Depositor
Minimum map value	-0.387	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.025	Depositor
Recommended contour level	0.095	Depositor
Map size (Å)	414.72, 414.72, 414.72	wwPDB
Map dimensions	324, 324, 324	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.28, 1.28, 1.28	Depositor

5 Model quality

5.1 Standard geometry

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

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	1	0.98	0/310	1.32	5/407 (1.2%)
2	2	0.46	0/640	1.01	3/889 (0.3%)
3	3	0.66	1/1012 (0.1%)	1.20	9/1373 (0.7%)
4	4	0.39	0/1832	0.43	0/2855
5	5	0.28	0/1813	0.50	0/2823
6	A	0.47	0/36438	0.52	0/56869
7	D	0.65	1/69685 (0.0%)	0.63	11/108786 (0.0%)
8	E	0.49	0/2954	0.50	0/4606
9	F	0.65	0/1935	1.16	14/2609 (0.5%)
10	G	0.69	0/1636	0.98	1/2205 (0.0%)
11	H	0.69	0/1733	1.14	10/2318 (0.4%)
12	I	0.94	0/1162	1.27	13/1564 (0.8%)
13	J	0.60	0/856	1.08	5/1154 (0.4%)
14	K	0.63	0/1276	1.05	5/1709 (0.3%)
15	L	0.77	0/1136	1.12	1/1527 (0.1%)
16	M	0.61	0/1029	1.02	2/1379 (0.1%)
17	N	0.65	0/807	1.06	3/1085 (0.3%)
18	O	0.68	0/900	1.02	2/1213 (0.2%)
19	P	0.85	0/986	1.24	10/1320 (0.8%)
20	Q	0.49	0/924	1.09	7/1238 (0.6%)
21	R	0.73	0/501	1.12	2/664 (0.3%)
22	S	0.75	0/745	1.21	4/992 (0.4%)
23	T	0.76	0/716	1.11	4/963 (0.4%)
24	U	0.66	0/870	1.05	2/1159 (0.2%)
25	V	0.59	0/603	1.10	3/799 (0.4%)
26	W	0.38	0/661	0.71	0/890
27	X	0.77	0/765	1.09	2/1007 (0.2%)
28	Y	0.62	0/212	1.18	2/277 (0.7%)
29	Z	0.50	1/1775 (0.1%)	1.08	10/2393 (0.4%)
30	a	1.08	2/2174 (0.1%)	1.44	27/2927 (0.9%)
31	b	1.02	0/1611	1.48	26/2171 (1.2%)
32	c	0.99	0/1660	1.34	23/2247 (1.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	d	0.70	0/1507	1.18	9/2027 (0.4%)
34	e	0.75	0/1354	1.20	11/1831 (0.6%)
35	f	1.00	0/1140	1.42	21/1537 (1.4%)
36	g	1.06	1/942 (0.1%)	1.32	7/1268 (0.6%)
37	h	0.84	0/1123	1.60	20/1493 (1.3%)
38	i	1.02	1/1100 (0.1%)	1.51	20/1470 (1.4%)
39	j	1.01	1/974 (0.1%)	1.27	4/1302 (0.3%)
40	k	0.83	0/887	1.46	16/1180 (1.4%)
41	l	0.96	1/990 (0.1%)	1.34	8/1325 (0.6%)
42	m	1.09	1/982 (0.1%)	1.39	9/1306 (0.7%)
43	n	0.80	0/790	1.42	13/1057 (1.2%)
44	o	1.04	0/886	1.25	9/1189 (0.8%)
45	p	0.94	0/756	1.35	7/1015 (0.7%)
46	q	0.71	0/857	1.31	13/1142 (1.1%)
47	r	0.72	0/1467	1.17	11/1992 (0.6%)
48	s	1.02	0/633	1.30	5/843 (0.6%)
49	t	0.79	0/569	1.24	4/751 (0.5%)
50	u	0.95	0/474	1.24	1/635 (0.2%)
51	v	1.07	2/594 (0.3%)	1.79	16/795 (2.0%)
52	w	1.04	0/459	1.49	13/621 (2.1%)
53	x	0.86	0/433	1.35	7/576 (1.2%)
54	y	1.14	1/438 (0.2%)	1.40	5/575 (0.9%)
55	z	1.10	1/523 (0.2%)	1.38	6/690 (0.9%)
56	B	0.45	3/4718 (0.1%)	0.78	8/6392 (0.1%)
All	All	0.66	17/165953 (0.0%)	0.82	449/247430 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
9	F	0	1
17	N	0	1
19	P	0	1
21	R	0	1
30	a	0	4
32	c	0	2
33	d	0	2
35	f	0	3
37	h	0	1
40	k	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
41	l	0	3
47	r	0	1
51	v	0	1
52	w	0	5
53	x	0	3
55	z	0	3
All	All	0	34

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	D	363(F)	A	O3'-P	7.77	1.72	1.61
56	B	398	ASP	C-N	7.14	1.39	1.33
39	j	38	VAL	CA-CB	-6.99	1.50	1.54
56	B	246	THR	C-N	6.88	1.39	1.33
30	a	245	PRO	CA-C	6.38	1.58	1.52
51	v	43	TYR	N-CA	6.12	1.53	1.45
42	m	47	TYR	CA-C	-5.97	1.44	1.52
38	i	94	VAL	CA-CB	-5.88	1.48	1.54
41	l	66	VAL	CA-CB	-5.63	1.47	1.54
55	z	60	LEU	N-CA	-5.51	1.42	1.46
36	g	16	ALA	CA-C	-5.42	1.46	1.53
54	y	4	THR	CA-C	-5.37	1.48	1.53
3	3	20	ALA	C-N	5.21	1.39	1.33
29	Z	180	PHE	C-N	5.15	1.39	1.33
30	a	87	ASN	CA-C	-5.11	1.50	1.53
51	v	11	PRO	CA-C	5.04	1.59	1.52
56	B	185	ILE	C-N	5.04	1.39	1.33

All (449) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	v	40	HIS	CA-C-N	16.06	139.91	119.84
51	v	40	HIS	C-N-CA	16.06	139.91	119.84
37	h	22	GLY	CA-C-N	14.94	138.52	119.84
37	h	22	GLY	C-N-CA	14.94	138.52	119.84
31	b	146	THR	CA-C-N	-12.71	103.95	119.84
31	b	146	THR	C-N-CA	-12.71	103.95	119.84
38	i	77	LYS	CA-C-N	-12.62	104.06	119.84
38	i	77	LYS	C-N-CA	-12.62	104.06	119.84
51	v	40	HIS	N-CA-C	11.72	121.85	108.25
30	a	248	SER	CA-C-N	11.54	134.27	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	a	248	SER	C-N-CA	11.54	134.27	119.84
30	a	227	ASN	CA-C-N	11.08	131.47	119.28
30	a	227	ASN	C-N-CA	11.08	131.47	119.28
29	Z	219	GLY	CA-C-N	11.07	131.19	119.78
29	Z	219	GLY	C-N-CA	11.07	131.19	119.78
38	i	38	GLU	CA-C-N	11.03	131.90	119.99
38	i	38	GLU	C-N-CA	11.03	131.90	119.99
9	F	158	LEU	CA-C-N	10.50	130.45	119.85
9	F	158	LEU	C-N-CA	10.50	130.45	119.85
11	H	12	CYS	N-CA-C	-9.88	100.50	111.28
43	n	15	GLU	CA-C-N	-9.73	107.68	119.84
43	n	15	GLU	C-N-CA	-9.73	107.68	119.84
45	p	10	ALA	CA-C-N	9.72	129.79	119.78
45	p	10	ALA	C-N-CA	9.72	129.79	119.78
19	P	18	VAL	N-CA-C	9.71	120.52	110.62
33	d	67	LYS	CA-C-N	9.69	129.75	119.76
33	d	67	LYS	C-N-CA	9.69	129.75	119.76
47	r	157	LEU	CA-C-N	9.65	126.61	119.66
47	r	157	LEU	C-N-CA	9.65	126.61	119.66
37	h	46	LYS	N-CA-C	9.55	123.41	108.79
41	l	63	VAL	N-CA-C	-9.54	96.49	109.37
33	d	45	GLU	N-CA-C	-9.52	100.76	111.71
30	a	239	ARG	N-CA-C	9.49	123.09	108.96
31	b	29	GLY	CA-C-N	9.43	129.38	119.85
31	b	29	GLY	C-N-CA	9.43	129.38	119.85
55	z	54	GLU	N-CA-C	-9.40	100.76	112.88
11	H	38	TYR	CA-C-N	9.33	126.47	119.66
11	H	38	TYR	C-N-CA	9.33	126.47	119.66
31	b	75	VAL	N-CA-C	9.25	119.89	112.12
29	Z	173	ALA	CA-C-N	9.07	129.01	120.03
29	Z	173	ALA	C-N-CA	9.07	129.01	120.03
34	e	153	LYS	CA-C-N	-8.90	111.58	120.31
34	e	153	LYS	C-N-CA	-8.90	111.58	120.31
30	a	120	GLY	CA-C-N	8.90	129.07	119.28
30	a	120	GLY	C-N-CA	8.90	129.07	119.28
18	O	120	ARG	CA-C-N	8.77	128.81	119.78
18	O	120	ARG	C-N-CA	8.77	128.81	119.78
36	g	74	GLY	N-CA-C	-8.75	97.98	110.75
37	h	62	LEU	CA-C-N	8.73	128.67	119.85
37	h	62	LEU	C-N-CA	8.73	128.67	119.85
32	c	41	LEU	N-CA-C	-8.54	102.12	112.54
31	b	193	GLY	N-CA-C	-8.54	103.39	115.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	v	12	ALA	N-CA-C	8.54	122.07	110.55
35	f	107	LEU	CA-C-N	8.50	128.51	119.76
35	f	107	LEU	C-N-CA	8.50	128.51	119.76
38	i	24	GLY	N-CA-C	8.47	122.58	110.46
23	T	14	ASN	CA-C-N	8.36	128.39	119.78
23	T	14	ASN	C-N-CA	8.36	128.39	119.78
40	k	44	LYS	N-CA-C	-8.32	103.03	113.01
49	t	12	SER	CA-C-N	-8.30	109.46	119.84
49	t	12	SER	C-N-CA	-8.30	109.46	119.84
19	P	29	GLY	N-CA-C	-8.25	103.83	115.30
31	b	176	ILE	CA-C-N	8.24	128.34	119.28
31	b	176	ILE	C-N-CA	8.24	128.34	119.28
30	a	244	ARG	CA-C-N	-8.14	111.99	120.38
30	a	244	ARG	C-N-CA	-8.14	111.99	120.38
41	l	104	ASN	N-CA-C	-8.13	102.42	111.28
30	a	220	HIS	N-CA-C	8.08	124.55	107.67
35	f	113	GLY	N-CA-C	-8.07	104.40	114.16
41	l	65	LYS	CA-C-N	-8.06	112.65	123.12
41	l	65	LYS	C-N-CA	-8.06	112.65	123.12
37	h	41	ARG	N-CA-C	-8.02	103.47	113.18
22	S	74	ASP	CA-C-N	8.01	128.09	119.28
22	S	74	ASP	C-N-CA	8.01	128.09	119.28
31	b	132	HIS	N-CA-C	-7.86	103.80	113.15
3	3	71	THR	CA-C-N	-7.83	112.31	120.38
3	3	71	THR	C-N-CA	-7.83	112.31	120.38
28	Y	22	ARG	CA-C-N	7.83	127.85	119.78
28	Y	22	ARG	C-N-CA	7.83	127.85	119.78
51	v	62	ARG	N-CA-C	-7.78	102.75	111.07
37	h	69	GLY	N-CA-C	-7.78	100.33	112.85
35	f	78	TYR	CA-C-N	7.76	129.54	119.84
35	f	78	TYR	C-N-CA	7.76	129.54	119.84
37	h	9	ASN	CA-C-N	7.68	127.69	119.78
37	h	9	ASN	C-N-CA	7.68	127.69	119.78
43	n	49	THR	CA-C-N	7.68	127.70	119.78
43	n	49	THR	C-N-CA	7.68	127.70	119.78
40	k	33	LYS	N-CA-C	-7.67	103.18	112.54
40	k	10	ARG	N-CA-C	-7.67	102.86	111.07
32	c	39	TRP	CA-C-N	-7.66	110.04	121.99
32	c	39	TRP	C-N-CA	-7.66	110.04	121.99
40	k	62	LYS	N-CA-C	7.64	121.67	108.76
43	n	5	VAL	N-CA-C	7.56	117.64	110.53
39	j	58	GLY	N-CA-C	7.54	125.39	115.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	i	69	PHE	CA-C-N	7.53	127.52	119.76
38	i	69	PHE	C-N-CA	7.53	127.52	119.76
31	b	200	GLU	N-CA-C	7.52	120.89	109.23
30	a	88	ARG	CB-CA-C	-7.52	107.89	116.54
29	Z	22	ILE	N-CA-C	7.50	118.27	110.62
20	Q	112	GLY	CA-C-N	7.50	127.48	119.76
20	Q	112	GLY	C-N-CA	7.50	127.48	119.76
35	f	10	GLU	CA-C-N	7.48	127.40	119.85
35	f	10	GLU	C-N-CA	7.48	127.40	119.85
19	P	26	ALA	N-CA-C	-7.42	104.21	113.18
50	u	54	VAL	N-CA-C	7.41	117.54	108.06
32	c	82	ILE	CA-C-N	-7.41	110.51	122.36
32	c	82	ILE	C-N-CA	-7.41	110.51	122.36
52	w	10	LYS	N-CA-C	7.38	119.11	111.14
43	n	86	GLY	N-CA-C	7.38	121.80	110.88
52	w	12	SER	N-CA-C	7.33	126.42	110.80
11	H	26	CYS	N-CA-C	-7.33	103.31	111.82
46	q	31	LEU	CA-C-N	-7.31	113.14	120.31
46	q	31	LEU	C-N-CA	-7.31	113.14	120.31
46	q	52	SER	CA-C-N	-7.27	112.27	119.76
46	q	52	SER	C-N-CA	-7.27	112.27	119.76
20	Q	29	ARG	N-CA-C	-7.27	104.22	113.23
30	a	245	PRO	N-CA-C	7.23	119.52	110.70
17	N	55	LYS	N-CA-C	7.22	121.54	108.17
35	f	77	GLY	N-CA-C	-7.22	103.28	115.62
45	p	9	LEU	N-CA-C	7.20	119.33	107.73
14	K	70	LYS	CA-C-N	7.19	127.11	119.85
14	K	70	LYS	C-N-CA	7.19	127.11	119.85
31	b	93	VAL	N-CA-C	-7.18	104.39	113.22
34	e	8	PRO	CA-C-N	-7.18	116.44	123.04
34	e	8	PRO	C-N-CA	-7.18	116.44	123.04
44	o	43	GLY	N-CA-C	-7.18	105.59	114.92
13	J	95	GLU	CA-C-N	-7.17	111.47	120.79
13	J	95	GLU	C-N-CA	-7.17	111.47	120.79
32	c	38	ARG	N-CA-C	-7.17	102.51	111.11
41	l	70	VAL	N-CA-C	-7.16	103.31	110.62
40	k	45	GLY	N-CA-C	-7.14	105.92	115.21
37	h	53	GLY	N-CA-C	-7.13	103.43	115.34
35	f	34	LEU	N-CA-C	-7.10	103.47	111.07
45	p	73	ARG	CA-C-N	7.08	127.08	119.78
45	p	73	ARG	C-N-CA	7.08	127.08	119.78
41	l	27	THR	N-CA-C	-7.04	103.79	112.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	v	57	GLU	N-CA-C	7.00	119.11	107.20
36	g	11	ALA	N-CA-C	6.99	121.05	111.54
7	D	363(F)	A	O3'-P-O5'	-6.97	93.54	104.00
7	D	1735	C	O3'-P-O5'	-6.96	93.55	104.00
3	3	37	PHE	N-CA-C	-6.96	105.59	112.97
32	c	173	VAL	N-CA-C	6.92	118.50	109.58
43	n	27	ALA	N-CA-C	-6.91	104.72	113.02
31	b	65	GLY	N-CA-C	-6.91	106.27	115.32
46	q	65	ALA	CA-C-N	-6.87	112.69	119.76
46	q	65	ALA	C-N-CA	-6.87	112.69	119.76
12	I	92	LYS	CA-C-N	6.86	126.85	119.78
12	I	92	LYS	C-N-CA	6.86	126.85	119.78
47	r	100	VAL	N-CA-C	6.85	114.68	107.76
22	S	8	LYS	N-CA-C	-6.84	103.82	111.28
27	X	74	LYS	CB-CA-C	-6.80	107.70	115.79
52	w	40	LYS	CA-C-N	-6.79	114.70	119.66
52	w	40	LYS	C-N-CA	-6.79	114.70	119.66
9	F	182	ILE	CA-C-N	6.77	126.75	119.78
9	F	182	ILE	C-N-CA	6.77	126.75	119.78
40	k	90	GLY	CA-C-N	-6.72	111.88	119.28
40	k	90	GLY	C-N-CA	-6.72	111.88	119.28
31	b	21	VAL	CA-C-N	6.71	126.63	119.85
31	b	21	VAL	C-N-CA	6.71	126.63	119.85
37	h	63	PRO	N-CA-C	6.71	122.05	111.38
53	x	23	THR	N-CA-C	6.66	124.99	110.80
11	H	171	GLY	CA-C-N	6.66	126.61	119.28
11	H	171	GLY	C-N-CA	6.66	126.61	119.28
35	f	69	GLN	N-CA-C	-6.66	99.19	109.52
1	1	11	CYS	N-CA-C	-6.63	105.05	113.01
7	D	1205	U	C4'-C3'-O3'	6.62	122.93	113.00
47	r	52	SER	N-CA-C	-6.62	104.10	111.71
48	s	55	ARG	N-CA-C	-6.60	105.10	113.02
30	a	210	GLY	N-CA-C	-6.58	104.80	112.83
46	q	12	THR	N-CA-C	6.58	119.45	108.13
30	a	203	ASN	N-CA-C	-6.53	104.55	113.30
37	h	28	GLY	N-CA-C	6.51	121.37	110.56
46	q	104	GLY	N-CA-C	-6.49	106.72	115.36
25	V	45	SER	CB-CA-C	-6.46	109.14	116.63
51	v	41	PRO	N-CA-C	6.39	125.64	112.47
33	d	141	PHE	CA-C-N	-6.39	112.25	119.28
33	d	141	PHE	C-N-CA	-6.39	112.25	119.28
12	I	81	GLU	CA-C-N	-6.38	114.57	122.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	I	81	GLU	C-N-CA	-6.38	114.57	122.93
33	d	85	GLY	N-CA-C	6.36	123.65	115.32
40	k	76	LYS	N-CA-C	-6.32	105.39	113.23
12	I	41	VAL	N-CA-C	6.30	117.55	108.48
38	i	108	GLY	N-CA-C	-6.30	105.22	114.61
54	y	40	TRP	CB-CA-C	-6.30	107.57	115.89
52	w	51	TYR	N-CA-C	6.29	117.86	107.73
3	3	50	ASP	N-CA-C	-6.28	105.89	112.93
13	J	11	ASN	CA-C-N	6.27	126.18	119.28
13	J	11	ASN	C-N-CA	6.27	126.18	119.28
36	g	17	ARG	N-CA-C	-6.27	102.15	111.81
32	c	161	GLU	N-CA-C	-6.27	105.12	112.89
47	r	125	LEU	N-CA-C	6.26	118.96	109.95
52	w	41	PRO	O-C-N	6.24	124.18	121.31
9	F	130	ARG	CA-C-N	6.22	127.62	119.84
9	F	130	ARG	C-N-CA	6.22	127.62	119.84
30	a	227	ASN	N-CA-C	6.22	118.44	109.48
31	b	45	THR	N-CA-C	6.22	118.63	108.55
7	D	1397	U	C2'-C3'-O3'	6.21	118.82	109.50
44	o	109	GLU	N-CA-C	6.21	119.62	109.06
31	b	52	LEU	N-CA-C	6.20	119.50	109.15
3	3	130	SER	N-CA-C	-6.20	105.57	113.01
55	z	1	MET	CA-C-N	-6.20	113.40	119.78
55	z	1	MET	C-N-CA	-6.20	113.40	119.78
42	m	29	SER	N-CA-C	-6.18	105.72	113.20
19	P	80	HIS	N-CA-C	-6.17	104.93	112.88
54	y	43	THR	CA-C-N	-6.17	112.50	119.28
54	y	43	THR	C-N-CA	-6.17	112.50	119.28
30	a	60	ARG	N-CA-C	-6.15	99.79	108.96
35	f	75	TYR	N-CA-C	-6.15	105.83	113.15
37	h	105	LEU	N-CA-C	6.14	117.49	107.23
9	F	29	ALA	CB-CA-C	-6.13	109.49	116.54
9	F	186	ALA	N-CA-C	6.12	118.03	107.93
29	Z	149	ILE	N-CA-C	6.11	116.78	110.36
3	3	20	ALA	CA-C-N	-6.11	114.09	120.38
3	3	20	ALA	C-N-CA	-6.11	114.09	120.38
29	Z	180	PHE	CA-C-N	-6.09	114.11	120.38
29	Z	180	PHE	C-N-CA	-6.09	114.11	120.38
46	q	60	PHE	N-CA-C	6.08	118.07	107.49
17	N	44	VAL	N-CA-C	6.07	117.03	108.17
46	q	22	GLY	N-CA-C	6.07	120.00	110.96
9	F	65	GLY	N-CA-C	6.07	123.43	115.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	b	37	ARG	N-CA-C	6.06	117.96	111.36
41	l	29	ARG	N-CA-C	-6.05	101.45	110.23
7	D	1205	U	C3'-C2'-C1'	-6.05	95.25	101.30
38	i	72	LYS	CA-C-N	6.05	125.96	119.85
38	i	72	LYS	C-N-CA	6.05	125.96	119.85
42	m	74	LEU	N-CA-C	6.04	118.14	109.14
40	k	91	PRO	N-CA-C	-6.03	105.52	113.65
33	d	144	ILE	N-CA-C	6.02	117.35	109.58
56	B	186	PRO	CA-C-N	-6.00	114.19	120.38
56	B	186	PRO	C-N-CA	-6.00	114.19	120.38
12	I	103	GLY	N-CA-C	-6.00	103.33	112.51
17	N	65	LEU	N-CA-C	-6.00	99.95	109.07
32	c	83	PHE	N-CA-C	6.00	118.07	109.14
51	v	6	HIS	CA-C-N	-5.96	112.73	119.28
51	v	6	HIS	C-N-CA	-5.96	112.73	119.28
14	K	13	GLN	CA-C-N	5.95	125.91	119.78
14	K	13	GLN	C-N-CA	5.95	125.91	119.78
44	o	79	GLY	CA-C-N	5.95	125.89	119.76
44	o	79	GLY	C-N-CA	5.95	125.89	119.76
41	l	17	THR	N-CA-C	-5.94	101.62	110.23
42	m	5	LYS	N-CA-C	-5.94	101.25	110.10
30	a	159	ALA	N-CA-C	-5.93	106.02	113.20
43	n	12	TYR	N-CA-C	5.92	118.12	108.76
16	M	10	ARG	N-CA-C	5.91	118.10	108.76
47	r	44	PHE	N-CA-C	-5.88	105.36	112.54
40	k	30	ARG	N-CA-C	5.88	123.33	110.80
32	c	154	VAL	N-CA-C	5.88	116.85	110.21
30	a	48	ARG	CB-CG-CD	5.87	124.80	111.30
35	f	3	THR	N-CA-C	5.86	113.59	108.78
23	T	75	ARG	N-CA-C	-5.85	105.40	112.54
56	B	185	ILE	CA-C-N	-5.84	114.36	120.38
56	B	185	ILE	C-N-CA	-5.84	114.36	120.38
21	R	38	GLY	N-CA-C	-5.84	107.59	115.36
30	a	254	THR	N-CA-C	5.84	118.38	109.62
46	q	67	LEU	N-CA-C	-5.83	103.41	111.81
33	d	48	GLU	N-CA-C	-5.83	103.32	110.61
38	i	125	LEU	CA-C-N	5.82	125.68	119.28
38	i	125	LEU	C-N-CA	5.82	125.68	119.28
53	x	39	TYR	N-CA-C	5.82	125.30	113.20
53	x	42	TRP	N-CA-C	-5.82	107.99	114.62
56	B	398	ASP	CA-C-N	-5.81	114.31	120.94
56	B	398	ASP	C-N-CA	-5.81	114.31	120.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	b	203	LYS	N-CA-C	5.81	118.39	111.71
37	h	84	ASN	N-CA-C	5.81	115.95	108.34
1	1	29	ASN	CA-C-N	5.81	125.67	119.28
1	1	29	ASN	C-N-CA	5.81	125.67	119.28
31	b	160	TYR	N-CA-C	5.81	118.31	110.88
2	2	68	LEU	CA-C-N	5.80	125.66	119.28
2	2	68	LEU	C-N-CA	5.80	125.66	119.28
42	m	10	ARG	CA-C-N	-5.79	111.50	120.31
42	m	10	ARG	C-N-CA	-5.79	111.50	120.31
35	f	118	LYS	N-CA-C	5.78	118.53	111.82
35	f	80	GLY	N-CA-C	-5.78	105.38	112.77
39	j	59	ASP	N-CA-C	5.76	117.36	109.18
34	e	117	PRO	CA-C-N	-5.76	112.64	119.84
34	e	117	PRO	C-N-CA	-5.76	112.64	119.84
37	h	39	LYS	N-CA-C	-5.75	106.49	112.93
32	c	65	TRP	CA-C-N	-5.73	112.67	119.84
32	c	65	TRP	C-N-CA	-5.73	112.67	119.84
45	p	86	GLY	N-CA-C	-5.72	107.49	114.92
32	c	13	SER	N-CA-C	-5.71	101.26	109.48
31	b	75	VAL	CB-CA-C	-5.69	105.34	110.91
51	v	45	GLY	N-CA-C	5.69	119.44	111.19
24	U	63	ARG	N-CA-C	-5.67	102.89	109.93
45	p	7	VAL	N-CA-C	5.67	115.42	107.37
9	F	28	PHE	N-CA-C	-5.66	106.33	113.18
30	a	152	GLY	N-CA-C	-5.65	105.30	112.65
29	Z	150	GLY	N-CA-C	5.64	119.99	112.77
27	X	72	LEU	N-CA-C	-5.62	102.58	110.50
34	e	38	SER	CA-C-N	5.60	125.44	119.28
34	e	38	SER	C-N-CA	5.60	125.44	119.28
19	P	11	VAL	N-CA-C	-5.60	107.20	111.62
32	c	21	ALA	N-CA-C	5.60	116.91	108.46
30	a	234	GLY	N-CA-C	5.59	121.19	112.31
43	n	95	LEU	N-CA-C	5.58	118.19	108.76
20	Q	72	ALA	N-CA-C	-5.57	105.99	112.89
37	h	144	GLU	CA-C-N	-5.56	114.03	119.76
37	h	144	GLU	C-N-CA	-5.56	114.03	119.76
30	a	47	GLY	N-CA-C	-5.56	106.33	114.61
56	B	246	THR	CA-C-N	-5.55	114.32	121.04
56	B	246	THR	C-N-CA	-5.55	114.32	121.04
1	1	13	LYS	N-CA-C	-5.55	106.47	113.18
47	r	38	TYR	CA-C-N	5.54	128.06	120.35
47	r	38	TYR	C-N-CA	5.54	128.06	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	I	152	ARG	N-CA-C	-5.52	104.95	110.97
53	x	39	TYR	N-CA-CB	-5.51	105.85	114.45
10	G	102	ASN	N-CA-C	5.51	116.43	107.23
20	Q	40	ASN	CA-C-N	5.51	125.34	119.28
20	Q	40	ASN	C-N-CA	5.51	125.34	119.28
42	m	76	TYR	N-CA-C	5.51	117.28	111.28
36	g	6	THR	N-CA-C	5.50	115.81	108.38
7	D	373	U	C2'-C3'-O3'	5.50	117.74	109.50
43	n	98	GLU	N-CA-C	5.49	118.41	110.28
34	e	168	PRO	N-CA-C	-5.49	106.23	113.65
20	Q	14	ARG	N-CA-C	-5.49	102.76	110.50
54	y	27	GLY	N-CA-C	-5.48	106.15	112.73
51	v	14	ILE	N-CA-C	5.48	115.44	107.88
34	e	108	GLY	N-CA-C	-5.47	107.03	115.73
40	k	33	LYS	CA-C-N	5.47	129.35	120.60
40	k	33	LYS	C-N-CA	5.47	129.35	120.60
32	c	170	LEU	CA-C-N	-5.46	114.15	119.78
32	c	170	LEU	C-N-CA	-5.46	114.15	119.78
37	h	43	GLY	N-CA-C	-5.46	100.23	113.18
46	q	62	GLU	N-CA-C	5.46	117.33	108.26
36	g	75	SER	N-CA-C	5.46	117.00	107.49
35	f	39	ARG	CA-C-N	5.46	126.66	119.84
35	f	39	ARG	C-N-CA	5.46	126.66	119.84
38	i	127	ILE	N-CA-C	5.46	116.44	108.53
21	R	43	CYS	N-CA-C	-5.45	105.44	111.71
24	U	52	LYS	N-CA-C	5.45	116.31	107.32
42	m	49	HIS	CA-C-N	-5.44	112.53	122.38
42	m	49	HIS	C-N-CA	-5.44	112.53	122.38
19	P	16	GLU	N-CA-C	5.44	122.38	110.80
40	k	23	ARG	CB-CA-C	-5.43	109.85	117.23
51	v	29	PRO	N-CA-C	5.42	119.60	111.14
31	b	61	ARG	CA-C-N	-5.42	113.32	119.28
31	b	61	ARG	C-N-CA	-5.42	113.32	119.28
49	t	18	LYS	N-CA-C	-5.42	105.54	111.82
34	e	120	GLY	N-CA-C	-5.42	108.23	115.32
39	j	11	ASN	CA-C-N	5.41	131.88	121.54
39	j	11	ASN	C-N-CA	5.41	131.88	121.54
19	P	21	LYS	N-CA-C	5.39	119.85	113.16
35	f	37	LYS	N-CA-C	5.39	117.84	107.44
32	c	176	LEU	CA-C-N	-5.38	116.41	123.34
32	c	176	LEU	C-N-CA	-5.38	116.41	123.34
7	D	1205	U	C2'-C3'-O3'	5.37	121.76	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F	164	VAL	N-CA-C	5.37	116.01	108.17
53	x	24	GLU	N-CA-C	5.37	122.23	110.80
42	m	10	ARG	N-CA-C	5.36	117.87	111.71
32	c	175	THR	N-CA-C	-5.36	102.95	110.50
44	o	24	ILE	N-CA-C	5.35	117.74	111.05
55	z	52	LYS	CA-C-N	-5.35	114.69	121.91
55	z	52	LYS	C-N-CA	-5.35	114.69	121.91
30	a	14	ARG	N-CA-C	5.35	117.95	107.57
2	2	38	HIS	N-CA-C	-5.35	105.56	111.71
7	D	363(F)	A	OP2-P-O3'	5.35	124.04	108.00
55	z	7	HIS	N-CA-C	-5.35	105.56	111.71
43	n	83	ARG	N-CA-C	5.34	116.64	108.42
31	b	141	ILE	N-CA-C	5.33	117.53	111.88
19	P	18	VAL	CB-CA-C	-5.32	104.96	112.14
11	H	16	GLY	N-CA-C	-5.32	107.91	115.30
13	J	38	GLU	N-CA-C	-5.32	106.85	113.55
44	o	78	GLU	N-CA-C	5.31	118.14	110.28
22	S	26	GLU	N-CA-C	-5.30	105.39	111.07
38	i	22	LYS	N-CA-C	5.30	116.58	108.52
46	q	18	GLY	N-CA-C	-5.30	107.93	115.30
35	f	117	PHE	N-CA-C	-5.30	105.40	111.07
25	V	46	GLU	N-CA-C	-5.29	108.58	114.62
49	t	36	ILE	N-CA-C	5.29	120.35	109.34
40	k	11	LYS	CA-C-N	-5.29	111.54	120.58
40	k	11	LYS	C-N-CA	-5.29	111.54	120.58
51	v	43	TYR	N-CA-C	5.29	117.22	109.24
38	i	105	GLU	N-CA-C	5.28	118.82	107.67
38	i	131	ILE	N-CA-C	5.28	115.91	108.36
30	a	19	ALA	N-CA-C	-5.27	106.80	113.18
19	P	93	LEU	CA-C-N	5.27	125.21	119.78
19	P	93	LEU	C-N-CA	5.27	125.21	119.78
52	w	31	VAL	CA-C-N	-5.27	114.35	119.78
52	w	31	VAL	C-N-CA	-5.27	114.35	119.78
37	h	115	LEU	N-CA-C	5.27	116.52	108.30
52	w	41	PRO	N-CA-C	-5.26	105.42	110.47
47	r	94	GLU	CA-C-N	5.25	127.34	120.25
47	r	94	GLU	C-N-CA	5.25	127.34	120.25
36	g	59	LYS	N-CA-C	5.25	117.06	108.76
43	n	76	LYS	N-CA-C	5.25	118.25	107.69
44	o	86	LEU	CA-C-N	5.25	125.15	119.85
44	o	86	LEU	C-N-CA	5.25	125.15	119.85
44	o	24	ILE	CB-CA-C	-5.24	104.03	112.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F	200	ILE	N-CA-C	5.24	114.33	106.42
43	n	54	GLY	N-CA-C	-5.23	106.07	112.77
52	w	55	ARG	N-CA-C	5.23	116.66	111.07
3	3	134	MET	N-CA-C	5.22	118.95	111.02
11	H	141	ARG	CA-C-N	5.22	126.36	119.84
11	H	141	ARG	C-N-CA	5.22	126.36	119.84
32	c	22	ALA	CB-CA-C	-5.21	109.01	115.89
40	k	14	VAL	N-CA-C	5.20	115.42	110.53
35	f	2	LYS	CA-C-N	-5.20	117.43	123.04
35	f	2	LYS	C-N-CA	-5.20	117.43	123.04
16	M	124	GLN	N-CA-C	5.18	117.81	110.50
9	F	195	ASP	N-CA-C	5.17	117.00	111.36
48	s	25	ARG	CA-C-N	5.17	128.05	120.71
48	s	25	ARG	C-N-CA	5.17	128.05	120.71
52	w	43	HIS	N-CA-C	5.16	115.83	107.32
7	D	1571	A	C4'-C3'-O3'	5.15	120.73	113.00
3	3	36	GLU	N-CA-C	5.15	118.54	111.54
15	L	59	LEU	N-CA-C	-5.15	103.24	110.50
52	w	49	CYS	N-CA-C	-5.15	105.79	111.71
38	i	122	GLY	N-CA-C	-5.14	108.58	115.32
29	Z	213	TYR	N-CA-C	5.14	116.10	108.60
7	D	1205	U	N1-C1'-C2'	-5.14	104.30	112.00
12	I	51	VAL	CB-CA-C	-5.13	107.27	114.00
33	d	118	ARG	N-CA-C	-5.13	105.68	111.28
31	b	43	GLY	N-CA-C	5.13	119.33	112.77
7	D	2491	U	P-O3'-C3'	-5.12	112.52	120.20
31	b	108	SER	N-CA-C	5.12	117.46	110.55
32	c	206	ILE	N-CA-C	-5.11	104.88	112.04
23	T	8	ARG	N-CA-C	5.10	117.56	109.24
38	i	124	LYS	N-CA-C	-5.10	106.91	112.72
37	h	64	LYS	N-CA-C	5.10	121.65	110.80
1	1	8	LYS	N-CA-C	5.09	119.44	112.88
51	v	10	VAL	N-CA-C	5.09	119.87	108.88
53	x	25	LYS	N-CA-C	5.08	121.63	110.80
47	r	158	PRO	O-C-N	5.08	123.54	121.15
48	s	24	LYS	CA-C-N	-5.07	115.80	122.85
48	s	24	LYS	C-N-CA	-5.07	115.80	122.85
30	a	251	GLY	N-CA-C	-5.07	104.84	112.60
11	H	197	PRO	CA-C-O	-5.06	115.69	121.56
51	v	57	GLU	CB-CA-C	-5.06	105.16	111.43
14	K	144	MET	N-CA-C	-5.05	105.96	111.82
52	w	8	LYS	N-CA-C	5.05	119.49	113.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	I	95	ALA	CA-C-N	-5.05	113.53	119.84
12	I	95	ALA	C-N-CA	-5.05	113.53	119.84
12	I	111	GLU	N-CA-C	-5.04	105.97	111.82
32	c	64	ILE	N-CA-C	5.04	119.83	109.34
9	F	212	GLN	N-CA-C	-5.04	104.87	111.02
35	f	22	THR	N-CA-C	5.04	117.19	110.53
31	b	136	ARG	N-CA-C	5.04	117.33	108.56
54	y	40	TRP	N-CA-C	5.04	117.49	109.02
32	c	171	PRO	CA-C-O	-5.03	115.72	121.56
36	g	10	VAL	N-CA-C	5.03	119.80	109.34
51	v	69	LYS	N-CA-C	-5.02	105.99	111.82
53	x	40	CYS	N-CA-C	5.02	120.90	109.81
38	i	96	VAL	CA-C-N	-5.01	118.20	122.96
38	i	96	VAL	C-N-CA	-5.01	118.20	122.96
12	I	117	ASP	CA-C-N	-5.01	116.61	122.93
12	I	117	ASP	C-N-CA	-5.01	116.61	122.93
30	a	218	ARG	CA-C-N	5.01	126.10	119.84
30	a	218	ARG	C-N-CA	5.01	126.10	119.84
25	V	57	GLY	N-CA-C	-5.00	108.70	115.36

There are no chirality outliers.

All (34) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	F	95	GLN	Peptide
17	N	33	GLN	Peptide
19	P	15	ARG	Peptide
21	R	34	TYR	Peptide
30	a	226	MET	Peptide
30	a	233	HIS	Peptide
30	a	238	GLY	Peptide
30	a	246	PRO	Peptide
32	c	177	ALA	Peptide
32	c	98	SER	Peptide
33	d	130	ASN	Peptide
33	d	141	PHE	Peptide
35	f	2	LYS	Peptide
35	f	75	TYR	Peptide
35	f	78	TYR	Peptide
37	h	122	PRO	Peptide
40	k	53	SER	Peptide
40	k	94	TYR	Peptide

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Mol	Chain	Res	Type	Group
41	l	100	TYR	Peptide
41	l	57	PHE	Peptide
41	l	71	GLY	Peptide
47	r	160	GLY	Peptide
51	v	2	LYS	Peptide
52	w	11	THR	Peptide
52	w	4	HIS	Peptide
52	w	41	PRO	Peptide
52	w	49	CYS	Peptide
52	w	5	PRO	Peptide
53	x	22	ALA	Peptide
53	x	26	ASN	Peptide
53	x	38	LYS	Peptide
55	z	29	LYS	Peptide
55	z	4	MET	Peptide
55	z	59	LYS	Peptide

5.2 Too-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 hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	307	0	335	39	0
2	2	641	0	309	21	0
3	3	993	0	1030	318	0
4	4	1640	0	837	69	0
5	5	1623	0	821	104	0
6	A	32554	0	16429	2746	0
7	D	62218	0	31354	5826	0
8	E	2641	0	1337	203	0
9	F	1900	0	1951	168	0
10	G	1612	0	1677	108	0
11	H	1703	0	1763	143	0
12	I	1146	0	1207	74	0
13	J	843	0	857	80	0
14	K	1257	0	1296	92	0
15	L	1116	0	1177	98	0
16	M	1010	0	1035	98	0
17	N	794	0	840	77	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	O	885	0	904	64	0
19	P	970	0	1057	114	0
20	Q	914	0	967	228	0
21	R	492	0	529	46	0
22	S	734	0	771	63	0
23	T	700	0	720	74	0
24	U	857	0	930	88	0
25	V	597	0	668	72	0
26	W	647	0	670	449	0
27	X	763	0	861	69	0
28	Y	208	0	221	24	0
29	Z	1742	0	1796	287	0
30	a	2124	0	2207	315	0
31	b	1578	0	1647	219	0
32	c	1625	0	1666	159	0
33	d	1482	0	1546	222	0
34	e	1328	0	1408	137	0
35	f	1113	0	1183	172	0
36	g	932	0	994	142	0
37	h	1106	0	1183	206	0
38	i	1080	0	1127	134	0
39	j	960	0	1021	98	0
40	k	877	0	938	155	0
41	l	976	0	1033	163	0
42	m	964	0	1022	130	0
43	n	779	0	852	153	0
44	o	876	0	941	66	0
45	p	742	0	800	56	0
46	q	844	0	930	91	0
47	r	1435	0	1463	149	0
48	s	625	0	647	76	0
49	t	567	0	621	50	0
50	u	469	0	518	58	0
51	v	581	0	577	96	0
52	w	445	0	459	72	0
53	x	426	0	452	87	0
54	y	430	0	480	63	0
55	z	515	0	587	120	0
56	B	4628	0	4707	2497	0
57	B	32	0	12	51	0
All	All	153046	0	105370	16077	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including

hydrogen atoms). The all-atom clashscore for this structure is 63.

All (16077) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:79:HIS:CD2	56:B:261:VAL:HG23	1.16	1.68
7:D:884:C:C2	7:D:885:C:C5	1.74	1.66
56:B:382:LEU:HG	56:B:401:ARG:CD	1.24	1.66
3:3:6:ALA:HB3	3:3:59:ILE:CB	1.23	1.64
3:3:10:LEU:HD11	3:3:57:ILE:CG1	1.22	1.64
26:W:14:HIS:CE1	26:W:34:TRP:CZ3	1.83	1.64
56:B:523:LYS:HB3	56:B:598:LEU:CD2	1.20	1.64
26:W:69:HIS:HB2	26:W:74:PHE:CZ	1.16	1.64
56:B:230:ILE:HA	56:B:280:ILE:CG2	1.16	1.63
56:B:243:GLY:HA3	56:B:263:TRP:CD1	1.13	1.62
3:3:10:LEU:HD11	3:3:57:ILE:CD1	1.21	1.62
26:W:14:HIS:HE1	26:W:34:TRP:CH2	1.01	1.62
56:B:378:TYR:CB	56:B:406:LEU:HD13	1.22	1.62
56:B:298:LYS:HA	56:B:348:PHE:CE2	1.12	1.61
26:W:40:ILE:CG2	26:W:67:VAL:HG22	1.26	1.60
56:B:27:ASP:CG	56:B:45:PHE:HB2	1.26	1.60
26:W:11:VAL:CG2	26:W:41:VAL:HG13	1.29	1.60
56:B:218:PHE:HZ	56:B:291:TYR:CZ	1.02	1.60
26:W:69:HIS:CB	26:W:74:PHE:CZ	1.82	1.59
33:d:32:PRO:CG	33:d:168:GLU:CB	1.80	1.59
56:B:195:PRO:HB2	56:B:286:PRO:CA	1.26	1.58
56:B:42:ARG:CD	56:B:53:ARG:HH21	0.95	1.58
56:B:383:LYS:HG2	56:B:402:ILE:CG2	1.20	1.57
56:B:137:LYS:HG3	57:B:701:GCP:C5	1.22	1.57
56:B:431:LYS:CD	56:B:455:PRO:HG3	1.24	1.57
29:Z:38:ASP:CB	29:Z:177:LYS:HD2	1.27	1.57
56:B:79:HIS:CD2	56:B:261:VAL:CG2	1.88	1.56
56:B:382:LEU:HB2	56:B:401:ARG:CG	1.20	1.56
56:B:135:ILE:CG1	56:B:165:PHE:CB	1.76	1.56
3:3:10:LEU:CD1	3:3:57:ILE:CD1	1.83	1.56
56:B:383:LYS:CG	56:B:402:ILE:CG2	1.77	1.56
26:W:14:HIS:CE1	26:W:34:TRP:CH2	1.85	1.55
19:P:80:HIS:CD2	56:B:316:LEU:HG	1.36	1.55
56:B:382:LEU:CB	56:B:401:ARG:HG3	1.29	1.55
56:B:431:LYS:CG	56:B:458:GLU:HG3	1.27	1.55
56:B:490:VAL:HB	56:B:508:ALA:CB	1.27	1.55
56:B:218:PHE:CZ	56:B:291:TYR:CZ	1.89	1.54
56:B:64:VAL:CG1	56:B:80:LEU:HB3	1.35	1.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:497:HIS:HA	56:B:535:VAL:CG1	1.37	1.54
56:B:137:LYS:CG	57:B:701:GCP:C5	1.86	1.54
6:A:1309:G:N2	6:A:1329:A:C8	1.71	1.54
29:Z:38:ASP:HB3	29:Z:177:LYS:CD	1.31	1.54
56:B:431:LYS:HG3	56:B:458:GLU:CG	1.30	1.54
56:B:495:LEU:HD12	56:B:540:ALA:CB	1.08	1.54
7:D:884:C:C2	7:D:885:C:H5	0.86	1.53
56:B:195:PRO:CB	56:B:286:PRO:HA	1.12	1.53
56:B:412:LEU:CD2	56:B:477:MET:HE2	1.12	1.53
56:B:121:PHE:CZ	56:B:157:GLY:HA3	1.40	1.53
56:B:528:ILE:HG22	56:B:592:VAL:CG2	1.39	1.53
3:3:6:ALA:HB3	3:3:59:ILE:CG2	1.10	1.53
56:B:225:GLY:N	56:B:239:VAL:CG1	1.71	1.52
6:A:500:G:C6	6:A:546:G:N2	1.78	1.52
56:B:46:LEU:CB	56:B:61:ALA:HB1	1.37	1.52
3:3:6:ALA:CB	3:3:59:ILE:CG2	1.81	1.51
20:Q:96:LEU:CD1	20:Q:103:THR:HG22	1.38	1.51
56:B:492:VAL:HG22	56:B:541:ILE:CD1	1.07	1.51
56:B:135:ILE:CG1	56:B:165:PHE:HB3	1.08	1.51
56:B:282:LEU:HD13	56:B:283:ALA:N	1.20	1.50
7:D:489:G:N7	7:D:1284:A:C2	1.76	1.50
56:B:383:LYS:CB	56:B:402:ILE:HG21	1.07	1.50
7:D:2790:A:N3	7:D:2893:G:C6	1.76	1.50
56:B:81:ILE:CD1	56:B:100:VAL:CG2	1.84	1.50
56:B:135:ILE:CD1	56:B:165:PHE:CG	1.94	1.50
56:B:383:LYS:N	56:B:402:ILE:HG12	1.25	1.50
6:A:1014:A:H4'	26:W:18:LYS:CE	1.37	1.49
56:B:431:LYS:HD2	56:B:455:PRO:CG	1.42	1.49
3:3:6:ALA:CB	3:3:59:ILE:CB	1.81	1.49
56:B:196:LEU:HD11	56:B:220:GLY:C	1.30	1.49
56:B:242:VAL:HB	56:B:256:LEU:CG	1.38	1.49
56:B:169:LYS:HD2	57:B:701:GCP:C4	1.37	1.49
26:W:36:ARG:HA	26:W:71:LEU:CB	1.41	1.49
56:B:523:LYS:CB	56:B:598:LEU:CD2	1.89	1.49
56:B:196:LEU:CD1	56:B:220:GLY:HA3	1.38	1.48
56:B:528:ILE:CG2	56:B:592:VAL:HG21	1.01	1.48
56:B:298:LYS:CA	56:B:348:PHE:HE2	1.09	1.48
56:B:316:LEU:CD1	56:B:342:PHE:CD1	1.96	1.48
56:B:135:ILE:HD11	56:B:165:PHE:CG	1.44	1.47
56:B:282:LEU:CD1	56:B:283:ALA:H	1.25	1.46
56:B:417:PRO:HA	56:B:448:VAL:CG2	1.43	1.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:191:ASP:HB3	56:B:219:GLU:CB	1.44	1.46
56:B:378:TYR:HB3	56:B:406:LEU:CD1	1.43	1.46
26:W:36:ARG:CA	26:W:71:LEU:HB2	1.45	1.45
56:B:243:GLY:CA	56:B:263:TRP:NE1	1.76	1.45
7:D:884:C:C4	7:D:885:C:N4	1.80	1.45
56:B:46:LEU:HB3	56:B:61:ALA:CB	1.46	1.44
56:B:382:LEU:HD23	56:B:401:ARG:CA	0.97	1.44
56:B:382:LEU:CD2	56:B:401:ARG:HA	0.97	1.44
56:B:412:LEU:CD2	56:B:477:MET:CE	1.93	1.44
6:A:500:G:C5	6:A:546:G:N2	1.85	1.44
6:A:1226:C:N4	20:Q:104:ARG:HD2	1.22	1.44
26:W:14:HIS:C	26:W:35:SER:CB	1.90	1.44
33:d:32:PRO:CG	33:d:168:GLU:HB3	0.98	1.44
56:B:316:LEU:HD12	56:B:342:PHE:CE1	1.50	1.44
56:B:412:LEU:HD23	56:B:477:MET:CE	1.48	1.44
6:A:1320:C:H5"	26:W:70:LYS:NZ	1.27	1.44
56:B:492:VAL:O	56:B:505:THR:CA	1.65	1.43
26:W:14:HIS:CB	26:W:35:SER:HB2	1.46	1.43
56:B:135:ILE:CD1	56:B:145:PRO:HB3	1.48	1.43
20:Q:71:ARG:HG3	20:Q:75:ALA:CB	1.49	1.43
56:B:135:ILE:CD1	56:B:165:PHE:CB	1.94	1.43
56:B:528:ILE:CG2	56:B:592:VAL:CG2	1.94	1.43
29:Z:38:ASP:HB3	29:Z:177:LYS:CE	1.50	1.42
56:B:135:ILE:HG12	56:B:165:PHE:CD1	1.54	1.42
3:3:6:ALA:CB	3:3:59:ILE:HG21	1.41	1.42
56:B:492:VAL:O	56:B:505:THR:CB	1.65	1.42
56:B:559:LEU:HD21	56:B:574:LEU:CD1	1.49	1.42
56:B:137:LYS:HG2	57:B:701:GCP:C6	1.50	1.42
56:B:196:LEU:CD1	56:B:220:GLY:CA	1.98	1.42
56:B:298:LYS:CA	56:B:348:PHE:CE2	1.82	1.42
56:B:411:LYS:CE	56:B:453:GLU:OE2	1.66	1.42
56:B:412:LEU:CD1	56:B:479:TYR:HA	1.46	1.42
56:B:417:PRO:CB	56:B:446:LYS:O	1.65	1.41
56:B:306:TYR:CD1	56:B:370:ILE:HD12	1.56	1.41
56:B:379:LYS:N	56:B:406:LEU:HB2	1.19	1.41
56:B:81:ILE:HD11	56:B:100:VAL:CG2	1.46	1.40
56:B:243:GLY:CA	56:B:263:TRP:HE1	1.30	1.40
26:W:15:LEU:HD21	26:W:19:VAL:CG1	1.52	1.40
7:D:1063:G:C6	7:D:1064:C:N4	1.90	1.40
26:W:14:HIS:NE2	26:W:34:TRP:CZ3	1.76	1.40
56:B:137:LYS:HE3	57:B:701:GCP:N3	1.14	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:169:LYS:HD2	57:B:701:GCP:N3	1.08	1.40
56:B:378:TYR:CA	56:B:406:LEU:HD13	1.48	1.40
56:B:417:PRO:HB3	56:B:447:ARG:CA	1.49	1.40
26:W:70:LYS:HB3	26:W:73:GLU:CG	1.50	1.39
56:B:43:GLU:HB2	56:B:53:ARG:NH2	1.38	1.39
56:B:135:ILE:CD1	56:B:165:PHE:HB3	1.48	1.39
3:3:10:LEU:CD1	3:3:57:ILE:HD11	1.38	1.39
16:M:111:ARG:NH1	21:R:61:TRP:OXT	1.56	1.39
56:B:225:GLY:CA	56:B:239:VAL:CG1	1.99	1.39
20:Q:23:TYR:CG	20:Q:70:LEU:HD21	1.57	1.38
56:B:406:LEU:HD11	56:B:489:LEU:CD1	1.52	1.38
56:B:489:LEU:O	56:B:508:ALA:C	1.65	1.38
56:B:298:LYS:HA	56:B:348:PHE:CZ	1.57	1.38
56:B:46:LEU:CD1	56:B:82:ASP:HB2	1.52	1.38
56:B:533:PHE:CZ	56:B:588:GLY:O	1.75	1.38
26:W:15:LEU:HD23	26:W:33:THR:CG2	1.54	1.37
56:B:211:VAL:O	56:B:265:VAL:CG2	1.71	1.37
8:E:57:A:N3	33:d:29:TRP:HB3	1.33	1.37
56:B:245:PHE:CE2	56:B:262:GLY:HA2	1.58	1.37
56:B:81:ILE:CD1	56:B:100:VAL:HG21	0.91	1.37
7:D:1048:A:OP2	7:D:1109:C:N4	1.58	1.36
56:B:417:PRO:CA	56:B:448:VAL:HG23	1.54	1.36
56:B:523:LYS:CB	56:B:598:LEU:HD22	1.48	1.36
29:Z:38:ASP:CG	29:Z:177:LYS:HD2	1.47	1.36
56:B:191:ASP:CB	56:B:219:GLU:HB3	1.55	1.36
56:B:200:ILE:CD1	56:B:279:THR:HG23	1.53	1.36
56:B:492:VAL:CG2	56:B:541:ILE:HD13	0.92	1.36
7:D:539:G:P	35:f:5:VAL:HG11	1.65	1.36
56:B:46:LEU:CD1	56:B:82:ASP:CB	2.02	1.36
56:B:378:TYR:HE2	56:B:507:ILE:CG2	1.38	1.35
56:B:495:LEU:CD1	56:B:540:ALA:CB	2.02	1.35
7:D:852:G:C6	7:D:926:A:N6	1.95	1.35
26:W:29:ARG:HB3	26:W:48:THR:CG2	1.57	1.35
56:B:42:ARG:HD2	56:B:53:ARG:NH2	1.02	1.35
56:B:243:GLY:HA3	56:B:263:TRP:NE1	1.26	1.35
6:A:1309:G:H5'	20:Q:88:ARG:NH2	1.40	1.34
56:B:133:PRO:O	56:B:163:ALA:HA	1.27	1.34
56:B:135:ILE:HD11	56:B:165:PHE:CB	1.53	1.34
56:B:188:PRO:HB2	56:B:216:ARG:NH2	1.35	1.34
56:B:218:PHE:HZ	56:B:291:TYR:CE2	1.44	1.34
56:B:521:VAL:CG2	56:B:539:ALA:HB2	1.56	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:4:75:C:H5	56:B:569:ARG:NH2	1.19	1.33
33:d:32:PRO:HG3	33:d:168:GLU:CB	1.45	1.33
56:B:169:LYS:CD	57:B:701:GCP:N3	1.91	1.33
7:D:489:G:C5	7:D:1284:A:N1	1.96	1.33
26:W:3:ARG:O	26:W:42:PRO:CG	1.76	1.33
56:B:134:VAL:CB	56:B:163:ALA:O	1.75	1.33
6:A:55:A:C4	56:B:208:TYR:HE2	1.46	1.33
56:B:521:VAL:HG21	56:B:539:ALA:CB	1.58	1.33
26:W:15:LEU:CD2	26:W:33:THR:HG21	1.56	1.33
6:A:1226:C:C4	20:Q:104:ARG:HD2	1.63	1.32
26:W:36:ARG:HB3	26:W:71:LEU:C	1.54	1.32
29:Z:63:SER:HA	29:Z:155:GLU:OE2	1.29	1.32
56:B:306:TYR:HB3	56:B:370:ILE:CB	1.58	1.32
56:B:492:VAL:C	56:B:505:THR:HG22	1.51	1.32
29:Z:38:ASP:OD2	29:Z:177:LYS:CD	1.76	1.31
26:W:44:MET:O	26:W:45:VAL:HG22	1.29	1.31
56:B:490:VAL:CB	56:B:508:ALA:CB	2.07	1.31
56:B:360:ARG:CG	56:B:364:GLU:OE1	1.78	1.31
56:B:396:LEU:HD13	56:B:491:LYS:CG	1.31	1.31
7:D:1084:A:H1'	7:D:1106:G:N7	1.45	1.31
56:B:206:ASP:OD2	56:B:269:ARG:HB3	1.25	1.30
56:B:225:GLY:CA	56:B:239:VAL:HG12	1.58	1.30
20:Q:71:ARG:CG	20:Q:75:ALA:HB3	1.59	1.30
29:Z:38:ASP:CB	29:Z:177:LYS:CD	1.96	1.30
26:W:12:ASP:CB	26:W:38:SER:OG	1.79	1.30
29:Z:38:ASP:OD1	29:Z:178:ALA:HB3	1.29	1.30
56:B:411:LYS:HB2	56:B:480:GLU:OE1	1.31	1.30
56:B:242:VAL:CB	56:B:256:LEU:HG	1.59	1.30
3:3:13:PRO:HG2	3:3:16:LYS:CE	1.62	1.29
56:B:68:TYR:CD2	56:B:75:GLU:HG3	1.67	1.29
56:B:243:GLY:CA	56:B:263:TRP:CD1	2.09	1.29
56:B:383:LYS:CB	56:B:402:ILE:CG2	1.92	1.29
56:B:492:VAL:O	56:B:505:THR:CG2	1.79	1.29
6:A:500:G:C6	6:A:546:G:C2	2.20	1.29
56:B:200:ILE:HD11	56:B:279:THR:CG2	1.62	1.29
56:B:378:TYR:CB	56:B:406:LEU:CD1	2.01	1.29
56:B:379:LYS:N	56:B:406:LEU:CB	1.94	1.29
56:B:379:LYS:NZ	56:B:407:GLU:O	1.65	1.29
56:B:382:LEU:CG	56:B:401:ARG:CD	2.10	1.29
38:i:80:GLU:OE2	56:B:567:VAL:HG13	1.12	1.29
56:B:74:GLU:OE2	56:B:182:VAL:CG1	1.77	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:196:LEU:CD1	56:B:220:GLY:C	2.06	1.29
6:A:439:A:OP2	6:A:493:G:N2	1.65	1.29
56:B:559:LEU:CD2	56:B:574:LEU:HD13	1.61	1.29
56:B:229:ARG:NE	56:B:282:LEU:O	1.63	1.28
6:A:1320:C:C5'	26:W:70:LYS:HZ2	1.43	1.28
6:A:1321:C:P	20:Q:98:VAL:CG2	2.21	1.28
26:W:12:ASP:CB	26:W:38:SER:CB	2.10	1.28
56:B:221:ARG:HG2	56:B:256:LEU:O	1.31	1.28
33:d:32:PRO:CB	33:d:168:GLU:HB3	1.62	1.28
6:A:1309:G:N2	6:A:1329:A:N7	1.82	1.28
56:B:133:PRO:C	56:B:163:ALA:HB1	1.58	1.28
56:B:27:ASP:OD2	56:B:45:PHE:HB2	1.31	1.28
56:B:65:ARG:HG3	56:B:245:PHE:O	1.22	1.28
56:B:230:ILE:CA	56:B:280:ILE:CG2	2.10	1.28
3:3:10:LEU:CD1	3:3:57:ILE:CG1	2.04	1.27
56:B:27:ASP:OD1	56:B:45:PHE:HB2	1.28	1.27
56:B:46:LEU:HD11	56:B:82:ASP:CG	1.58	1.27
56:B:74:GLU:OE2	56:B:182:VAL:HG11	1.21	1.27
56:B:134:VAL:N	56:B:163:ALA:HB1	1.48	1.27
56:B:302:PHE:CD1	56:B:460:LEU:HD22	1.67	1.27
7:D:1227:A:OP2	42:m:16:LYS:NZ	1.67	1.27
56:B:218:PHE:CZ	56:B:291:TYR:CE2	2.20	1.27
7:D:539:G:OP1	35:f:5:VAL:HG12	1.29	1.27
14:K:138:LYS:NZ	14:K:139:GLU:OE2	1.68	1.26
26:W:16:LEU:O	26:W:20:LEU:HB2	1.14	1.26
56:B:135:ILE:HD12	56:B:145:PRO:CG	1.62	1.26
56:B:196:LEU:C	56:B:281:THR:HG22	1.60	1.26
26:W:14:HIS:O	26:W:35:SER:HB3	1.13	1.26
56:B:379:LYS:CE	56:B:484:TYR:HB3	1.64	1.26
56:B:137:LYS:HG3	57:B:701:GCP:N7	1.51	1.26
19:P:80:HIS:HB3	56:B:342:PHE:CZ	1.70	1.26
56:B:8:ARG:CB	56:B:74:GLU:HB3	1.64	1.26
56:B:135:ILE:CD1	56:B:145:PRO:CB	2.13	1.26
56:B:406:LEU:CD1	56:B:489:LEU:HD11	1.64	1.26
56:B:8:ARG:HG3	56:B:74:GLU:CB	1.66	1.25
6:A:1220:G:OP1	26:W:34:TRP:CD1	1.88	1.25
26:W:12:ASP:HB2	26:W:38:SER:CB	1.66	1.25
26:W:15:LEU:HB2	26:W:35:SER:OG	1.29	1.25
56:B:34:HIS:NE2	56:B:67:THR:HG22	1.52	1.25
56:B:431:LYS:CD	56:B:455:PRO:CG	2.02	1.25
7:D:539:G:OP2	35:f:5:VAL:HG11	1.12	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:14:HIS:CD2	26:W:35:SER:HA	1.71	1.25
56:B:242:VAL:CG1	56:B:256:LEU:HG	1.63	1.25
56:B:330:LEU:HG	56:B:346:CYS:N	1.51	1.25
6:A:278:G:OP2	24:U:41:LYS:NZ	1.67	1.24
7:D:539:G:C2	7:D:556:G:N1	2.05	1.24
30:a:71:ASP:OD2	30:a:103:ARG:NH1	1.70	1.24
26:W:70:LYS:CB	26:W:73:GLU:CG	2.14	1.24
56:B:46:LEU:CD1	56:B:82:ASP:CG	2.10	1.24
29:Z:69:GLY:HA2	29:Z:157:LYS:CA	1.64	1.24
56:B:46:LEU:HD13	56:B:61:ALA:O	1.37	1.24
56:B:494:VAL:HG21	56:B:520:ILE:CD1	1.66	1.24
56:B:497:HIS:CB	56:B:535:VAL:HG11	1.67	1.24
6:A:1014:A:C2	26:W:32:LYS:HD3	1.73	1.24
7:D:1451:C:O2	7:D:1461:G:N2	1.68	1.24
26:W:3:ARG:O	26:W:42:PRO:HG3	1.14	1.24
56:B:425:MET:HE2	56:B:452:TYR:OH	1.36	1.24
56:B:430:GLU:OE1	56:B:458:GLU:O	1.55	1.24
26:W:15:LEU:CB	26:W:35:SER:OG	1.84	1.24
56:B:43:GLU:CB	56:B:53:ARG:HH22	1.50	1.24
56:B:211:VAL:O	56:B:265:VAL:HG23	1.07	1.24
26:W:40:ILE:CG2	26:W:67:VAL:CG2	2.15	1.23
56:B:306:TYR:CB	56:B:370:ILE:HB	1.68	1.23
8:E:57:A:C2	33:d:29:TRP:HB3	1.70	1.23
26:W:47:HIS:O	26:W:61:TYR:CD2	1.91	1.23
56:B:135:ILE:HG13	56:B:165:PHE:CB	1.51	1.23
56:B:379:LYS:HE3	56:B:484:TYR:CB	1.69	1.23
26:W:69:HIS:CB	26:W:74:PHE:HZ	1.27	1.23
56:B:206:ASP:OD2	56:B:269:ARG:CB	1.87	1.23
7:D:1749:A:O2'	7:D:1750:G:H5'	1.37	1.23
56:B:133:PRO:O	56:B:163:ALA:CA	1.84	1.23
56:B:378:TYR:CE2	56:B:507:ILE:CG2	2.21	1.23
6:A:1014:A:H2	26:W:32:LYS:CD	1.51	1.23
7:D:2661:G:N2	56:B:465:ASP:OD1	1.72	1.23
56:B:135:ILE:CG1	56:B:165:PHE:CD1	2.20	1.23
56:B:137:LYS:HE3	57:B:701:GCP:C2	1.69	1.23
56:B:316:LEU:HD12	56:B:342:PHE:CD1	1.59	1.23
6:A:835:U:O2	6:A:851:G:N2	1.72	1.22
20:Q:91:ARG:HG3	20:Q:96:LEU:O	1.33	1.22
26:W:29:ARG:CB	26:W:48:THR:CG2	2.18	1.22
6:A:1321:C:OP2	20:Q:98:VAL:CG2	1.87	1.22
7:D:458:G:OP1	54:y:39:ARG:NH1	1.73	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:64:VAL:HB	56:B:80:LEU:CB	1.69	1.22
56:B:497:HIS:CA	56:B:535:VAL:CG1	2.16	1.22
7:D:2793:G:N2	7:D:2803:C:N3	1.87	1.22
56:B:230:ILE:CA	56:B:280:ILE:HG22	1.67	1.22
56:B:299:PRO:C	56:B:479:TYR:OH	1.83	1.22
56:B:420:TYR:CD1	56:B:471:SER:HA	1.74	1.22
56:B:121:PHE:CZ	56:B:157:GLY:CA	2.19	1.22
7:D:539:G:P	35:f:5:VAL:CG1	2.26	1.22
20:Q:71:ARG:CG	20:Q:75:ALA:CB	2.16	1.22
56:B:49:LEU:HD21	56:B:60:LYS:NZ	1.53	1.22
56:B:396:LEU:CD1	56:B:491:LYS:CG	2.12	1.21
56:B:492:VAL:HG13	56:B:541:ILE:CG1	1.69	1.21
6:A:1319:A:OP1	26:W:38:SER:HA	1.41	1.21
37:h:79:ARG:NH1	37:h:118:GLY:O	1.73	1.21
56:B:11:ASN:C	56:B:100:VAL:HG13	1.63	1.21
56:B:134:VAL:CA	56:B:163:ALA:O	1.87	1.21
26:W:70:LYS:CB	26:W:73:GLU:HG2	1.70	1.21
42:m:61:TRP:CD1	42:m:93:LYS:HZ1	1.59	1.21
56:B:137:LYS:CG	57:B:701:GCP:C6	2.13	1.21
56:B:533:PHE:HZ	56:B:588:GLY:O	0.91	1.21
3:3:33:ASN:O	3:3:63:ARG:HD3	1.38	1.21
29:Z:68:LEU:O	29:Z:157:LYS:C	1.82	1.21
56:B:242:VAL:O	56:B:263:TRP:O	1.55	1.21
22:S:26:GLU:OE2	22:S:77:ARG:NH1	1.71	1.20
56:B:137:LYS:CE	57:B:701:GCP:N3	2.04	1.20
56:B:242:VAL:CB	56:B:256:LEU:CG	2.15	1.20
56:B:531:GLN:O	56:B:554:LEU:HB2	1.04	1.20
3:3:24:GLY:O	56:B:440:TYR:CE2	1.91	1.20
6:A:37:U:OP2	19:P:123:LYS:NZ	1.74	1.20
6:A:1014:A:C4'	26:W:18:LYS:HE2	1.70	1.20
56:B:492:VAL:CG2	56:B:541:ILE:CD1	1.80	1.20
56:B:431:LYS:HB3	56:B:455:PRO:CD	1.70	1.20
3:3:6:ALA:HB1	3:3:59:ILE:CG1	1.72	1.20
26:W:70:LYS:HB2	26:W:73:GLU:CD	1.65	1.20
30:a:155:LEU:O	30:a:157:ARG:NH1	1.75	1.20
3:3:6:ALA:CB	3:3:59:ILE:HB	1.50	1.19
6:A:1014:A:H5'	26:W:18:LYS:NZ	1.53	1.19
7:D:1174:A:N6	7:D:1176:G:N7	1.90	1.19
29:Z:38:ASP:OD2	29:Z:178:ALA:N	1.75	1.19
56:B:225:GLY:N	56:B:239:VAL:HG11	1.36	1.19
7:D:1869:G:N2	7:D:1872:A:OP2	1.73	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:11:ASN:OD1	56:B:79:HIS:CD2	1.96	1.19
56:B:383:LYS:HB3	56:B:402:ILE:CG2	1.64	1.19
56:B:410:VAL:CG1	56:B:481:GLN:H	1.55	1.19
6:A:1447:G:N2	6:A:1460:A:C4	2.11	1.19
56:B:135:ILE:CG1	56:B:165:PHE:CG	2.20	1.19
6:A:75:C:C2	6:A:96:G:C2	2.30	1.19
6:A:1319:A:C5'	26:W:37:ARG:O	1.91	1.19
56:B:212:ILE:HG21	56:B:263:TRP:CE3	1.78	1.19
56:B:411:LYS:HE2	56:B:453:GLU:OE2	1.27	1.19
7:D:2790:A:N3	7:D:2893:G:O6	1.72	1.18
56:B:12:PHE:HA	56:B:102:GLY:O	1.42	1.18
7:D:1023:U:OP2	7:D:1025:G:N2	1.76	1.18
56:B:49:LEU:CD2	56:B:60:LYS:HZ2	1.56	1.18
56:B:196:LEU:O	56:B:281:THR:HG22	1.41	1.18
56:B:218:PHE:O	56:B:258:ALA:HB1	1.41	1.18
56:B:490:VAL:CB	56:B:508:ALA:HB1	1.71	1.18
56:B:493:ASN:HB3	56:B:503:ALA:HB1	1.25	1.18
7:D:2790:A:H1'	7:D:2893:G:O6	1.41	1.18
56:B:205:TYR:OH	56:B:271:ILE:HG12	1.43	1.18
56:B:377:VAL:O	56:B:391:HIS:HB3	1.41	1.18
56:B:379:LYS:HG2	56:B:406:LEU:HA	1.26	1.18
56:B:428:LEU:HD13	56:B:452:TYR:CD1	1.78	1.18
7:D:583:G:OP2	42:m:10:ARG:NH1	1.75	1.18
7:D:650:C:OP2	55:z:21:LYS:NZ	1.75	1.17
56:B:378:TYR:CA	56:B:406:LEU:CD1	2.21	1.17
3:3:10:LEU:CD1	3:3:57:ILE:HG12	1.68	1.17
3:3:52:ILE:HD13	7:D:1062:G:OP1	1.45	1.17
6:A:1320:C:C5	26:W:36:ARG:HG3	1.76	1.17
8:E:55:U:O2'	33:d:29:TRP:NE1	1.75	1.17
6:A:1014:A:C5'	26:W:18:LYS:HZ1	1.58	1.17
56:B:227:ARG:HB3	56:B:237:PHE:CD2	1.78	1.17
56:B:316:LEU:CD1	56:B:342:PHE:CE1	2.21	1.17
56:B:205:TYR:CE2	56:B:271:ILE:HG23	1.79	1.17
56:B:380:VAL:O	56:B:387:GLU:O	1.62	1.17
56:B:416:THR:O	56:B:448:VAL:HB	1.41	1.17
7:D:668:G:N7	37:h:41:ARG:NH1	1.93	1.17
53:x:17:LYS:NZ	53:x:49:HIS:O	1.76	1.17
56:B:27:ASP:OD1	56:B:45:PHE:CB	1.93	1.16
56:B:78:PHE:CZ	56:B:182:VAL:HG22	1.80	1.16
56:B:242:VAL:HB	56:B:256:LEU:CD2	1.75	1.16
7:D:2349:G:OP2	55:z:42:ARG:NH1	1.75	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:27:ASP:OD2	56:B:41:MET:SD	2.03	1.16
56:B:335:GLU:HG3	56:B:375:SER:OG	1.43	1.16
6:A:1014:A:C5'	26:W:18:LYS:NZ	2.07	1.16
56:B:523:LYS:HB2	56:B:598:LEU:HD22	1.27	1.16
6:A:1165:C:H2'	6:A:1166:G:H8	1.02	1.16
56:B:64:VAL:HG11	56:B:80:LEU:C	1.69	1.16
56:B:242:VAL:HB	56:B:256:LEU:CD1	1.75	1.16
56:B:322:LYS:HB3	56:B:331:THR:CG2	1.76	1.16
56:B:411:LYS:HD3	56:B:436:VAL:HG21	1.17	1.16
29:Z:69:GLY:HA2	29:Z:157:LYS:C	1.71	1.15
56:B:64:VAL:CB	56:B:80:LEU:HB3	1.75	1.15
8:E:56:G:H5'	33:d:29:TRP:CZ2	1.80	1.15
56:B:64:VAL:HB	56:B:80:LEU:HB2	1.21	1.15
56:B:104:LEU:HD21	56:B:181:ILE:CD1	1.76	1.15
56:B:306:TYR:HD1	56:B:370:ILE:CD1	1.57	1.15
56:B:431:LYS:CG	56:B:455:PRO:HG3	1.75	1.15
26:W:11:VAL:CG2	26:W:41:VAL:CG1	2.24	1.15
29:Z:38:ASP:OD2	29:Z:177:LYS:HD3	1.40	1.15
29:Z:38:ASP:O	29:Z:177:LYS:HE3	1.43	1.15
56:B:13:SER:O	56:B:103:VAL:HB	1.45	1.15
56:B:135:ILE:CD1	56:B:145:PRO:CG	2.24	1.15
56:B:559:LEU:HD21	56:B:574:LEU:HD11	1.15	1.15
7:D:1749:A:H2'	7:D:1750:G:C8	1.82	1.15
56:B:230:ILE:HA	56:B:280:ILE:HG21	1.19	1.15
7:D:435:C:H2'	7:D:436:C:H5'	1.27	1.15
19:P:80:HIS:CD2	56:B:316:LEU:CG	2.30	1.15
20:Q:56:LEU:O	20:Q:60:VAL:CG2	1.94	1.15
38:i:80:GLU:OE2	56:B:567:VAL:CG1	1.95	1.15
56:B:118:LEU:CD1	56:B:446:LYS:NZ	2.09	1.15
56:B:197:LYS:CA	56:B:281:THR:HG22	1.76	1.15
4:4:75:C:C5	56:B:569:ARG:NH2	2.01	1.14
6:A:64:G:N2	6:A:68:G:O6	1.79	1.14
6:A:79:G:N1	6:A:90:C:O2	1.80	1.14
7:D:2794:C:C5	7:D:2799:A:C2	2.35	1.14
26:W:12:ASP:CB	26:W:38:SER:HB2	1.75	1.14
56:B:221:ARG:CG	56:B:256:LEU:O	1.93	1.14
56:B:412:LEU:CG	56:B:479:TYR:HA	1.77	1.14
26:W:11:VAL:HG11	26:W:40:ILE:HA	1.16	1.14
26:W:14:HIS:HB3	26:W:35:SER:HB2	1.20	1.14
56:B:134:VAL:HA	56:B:163:ALA:O	1.43	1.14
56:B:489:LEU:O	56:B:509:HIS:N	1.78	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:55:A:C4	56:B:208:TYR:CE2	2.34	1.14
29:Z:64:LEU:O	29:Z:159:GLY:HA3	1.48	1.14
56:B:42:ARG:HH21	56:B:53:ARG:NH2	1.44	1.14
8:E:57:A:N3	33:d:29:TRP:CB	2.11	1.14
56:B:229:ARG:CZ	56:B:283:ALA:HA	1.76	1.14
56:B:407:GLU:OE2	56:B:431:LYS:NZ	1.81	1.14
3:3:13:PRO:HG2	3:3:16:LYS:HE3	1.15	1.13
4:4:74:C:C5	56:B:569:ARG:NH2	2.16	1.13
26:W:70:LYS:HB3	26:W:73:GLU:CB	1.76	1.13
32:c:117:ARG:NH1	32:c:189:THR:O	1.81	1.13
56:B:8:ARG:CG	56:B:74:GLU:CB	2.26	1.13
56:B:135:ILE:CD1	56:B:165:PHE:CD1	2.31	1.13
56:B:153:GLU:HA	56:B:159:PRO:HA	1.22	1.13
56:B:221:ARG:HG3	56:B:257:GLU:HA	1.16	1.13
56:B:228:ILE:HA	56:B:282:LEU:HD22	1.15	1.13
56:B:378:TYR:HE2	56:B:507:ILE:HG21	1.01	1.13
56:B:495:LEU:HD12	56:B:540:ALA:HB2	1.18	1.13
56:B:417:PRO:CB	56:B:447:ARG:HA	1.77	1.13
56:B:492:VAL:O	56:B:505:THR:HA	1.25	1.13
56:B:493:ASN:CB	56:B:503:ALA:HB1	1.77	1.13
3:3:6:ALA:CA	3:3:59:ILE:HB	1.79	1.13
56:B:196:LEU:O	56:B:281:THR:CG2	1.96	1.13
6:A:526:C:OP2	19:P:91:LYS:NZ	1.79	1.13
6:A:1014:A:C4'	26:W:18:LYS:CE	2.24	1.13
56:B:15:ILE:HD12	56:B:103:VAL:CG2	1.77	1.13
56:B:17:HIS:ND1	56:B:116:GLU:HB2	1.62	1.13
56:B:322:LYS:HG2	56:B:331:THR:HG21	1.19	1.13
56:B:490:VAL:CB	56:B:508:ALA:HB3	1.70	1.13
6:A:1321:C:P	20:Q:98:VAL:HG21	1.84	1.13
7:D:370:G:H22	7:D:422:A:P	1.71	1.12
7:D:539:G:C2	7:D:556:G:C6	2.37	1.12
7:D:1084:A:C1'	7:D:1106:G:C8	2.32	1.12
26:W:16:LEU:O	26:W:20:LEU:CB	1.97	1.12
56:B:24:THR:HG21	56:B:169:LYS:HG3	1.27	1.13
56:B:177:ILE:HG23	56:B:181:ILE:HD12	1.17	1.13
56:B:240:ASP:OD2	56:B:266:ALA:HB1	1.48	1.13
56:B:492:VAL:O	56:B:505:THR:HG22	1.42	1.13
56:B:492:VAL:CG1	56:B:541:ILE:HG12	1.79	1.13
7:D:650:C:OP2	55:z:19:SER:OG	1.65	1.12
7:D:1790:C:H5'	30:a:213:ARG:HH12	1.13	1.12
20:Q:71:ARG:HG3	20:Q:75:ALA:HB1	1.20	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:8:ARG:CB	56:B:74:GLU:CB	2.27	1.12
56:B:64:VAL:CG1	56:B:80:LEU:CB	2.28	1.12
3:3:10:LEU:HD21	3:3:57:ILE:HG13	1.20	1.12
3:3:103:GLN:O	3:3:107:ILE:HG13	1.44	1.12
6:A:403:C:O2'	11:H:122:ARG:NH1	1.82	1.12
6:A:1320:C:C5'	26:W:70:LYS:NZ	2.06	1.12
6:A:1440:C:H2'	6:A:1441:G:H5'	1.29	1.12
7:D:848:G:N2	7:D:931:G:N7	1.98	1.12
7:D:1063:G:O6	7:D:1064:C:N4	1.81	1.12
26:W:29:ARG:HB3	26:W:48:THR:CB	1.78	1.12
56:B:330:LEU:CG	56:B:346:CYS:H	1.61	1.12
56:B:378:TYR:CE2	56:B:507:ILE:HG23	1.81	1.12
26:W:11:VAL:HG23	26:W:41:VAL:HG13	1.28	1.12
56:B:27:ASP:CG	56:B:45:PHE:CB	2.23	1.12
56:B:104:LEU:HD21	56:B:181:ILE:HD11	1.25	1.12
56:B:195:PRO:CB	56:B:286:PRO:CA	1.97	1.12
56:B:425:MET:CE	56:B:452:TYR:OH	1.97	1.12
29:Z:69:GLY:O	29:Z:157:LYS:HG2	1.48	1.11
56:B:196:LEU:O	56:B:281:THR:CB	1.98	1.11
56:B:492:VAL:HG21	56:B:513:ALA:CB	1.78	1.11
20:Q:96:LEU:CD1	20:Q:103:THR:CG2	2.27	1.11
56:B:8:ARG:HB2	56:B:74:GLU:CB	1.80	1.11
56:B:195:PRO:HB3	56:B:286:PRO:HA	1.26	1.11
56:B:225:GLY:HA2	56:B:239:VAL:HG12	1.13	1.11
6:A:464:G:H3'	6:A:465:A:H5"	1.32	1.11
37:h:65:ARG:NH1	37:h:67:MET:O	1.83	1.11
56:B:31:GLU:HG3	56:B:40:GLU:CG	1.52	1.11
56:B:197:LYS:CA	56:B:281:THR:CG2	2.27	1.11
56:B:227:ARG:CB	56:B:237:PHE:HD2	1.62	1.11
56:B:330:LEU:HD12	56:B:345:ARG:HH11	1.08	1.11
56:B:382:LEU:CB	56:B:401:ARG:CG	2.02	1.11
3:3:21:PRO:HB2	7:D:1067:A:C5'	1.78	1.11
6:A:69:G:H2'	6:A:73:G:H8	1.02	1.11
6:A:75:C:N3	6:A:96:G:N1	1.99	1.11
7:D:1735:C:O2'	7:D:1741:C:O4'	1.65	1.11
7:D:2671:A:OP2	31:b:206:LYS:NZ	1.82	1.11
26:W:29:ARG:CB	26:W:48:THR:HG22	1.79	1.11
26:W:40:ILE:HG22	26:W:67:VAL:HG22	1.12	1.11
56:B:135:ILE:HG12	56:B:165:PHE:CG	1.82	1.11
7:D:848:G:N7	7:D:929:G:N2	1.99	1.11
7:D:1084:A:H1'	7:D:1106:G:C8	1.85	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:14:HIS:O	26:W:35:SER:CB	1.90	1.11
37:h:45:LEU:O	37:h:49:ARG:NH1	1.83	1.11
56:B:64:VAL:CB	56:B:80:LEU:CB	2.28	1.11
56:B:79:HIS:NE2	56:B:261:VAL:HG23	1.64	1.11
56:B:378:TYR:HA	56:B:406:LEU:CD1	1.80	1.11
6:A:1226:C:H5'	20:Q:94:ARG:NH1	1.65	1.10
7:D:125:G:O3'	54:y:47:ARG:NH1	1.84	1.10
7:D:2794:C:N4	7:D:2799:A:N3	1.99	1.10
56:B:242:VAL:HG11	56:B:256:LEU:H	1.07	1.10
56:B:382:LEU:CG	56:B:401:ARG:HA	1.79	1.10
56:B:489:LEU:O	56:B:507:ILE:O	1.65	1.10
7:D:884:C:N1	7:D:885:C:H5	1.47	1.10
7:D:2107:C:H1'	7:D:2108:C:H5"	1.28	1.10
26:W:14:HIS:CA	26:W:35:SER:HB2	1.81	1.10
56:B:316:LEU:HD12	56:B:342:PHE:CZ	1.86	1.10
56:B:379:LYS:C	56:B:406:LEU:HB3	1.74	1.10
6:A:1452:C:H4'	6:A:1453:G:H5"	1.33	1.10
29:Z:71:GLN:O	29:Z:156:ILE:HG23	1.50	1.10
56:B:15:ILE:CD1	56:B:103:VAL:HG21	1.80	1.10
56:B:240:ASP:HB2	56:B:266:ALA:HB3	1.22	1.10
56:B:297:ALA:CB	56:B:328:ALA:HB2	1.79	1.10
56:B:330:LEU:HD12	56:B:345:ARG:NH1	1.65	1.10
7:D:892:G:H2'	7:D:893:C:H6	1.14	1.10
56:B:306:TYR:CE1	56:B:339:ALA:O	2.04	1.10
56:B:383:LYS:CG	56:B:402:ILE:HG23	1.53	1.10
56:B:408:PRO:HG2	56:B:456:PHE:HB3	1.31	1.10
56:B:495:LEU:HD12	56:B:540:ALA:HB1	1.21	1.10
56:B:495:LEU:HD12	56:B:540:ALA:HB3	1.16	1.10
56:B:528:ILE:HG21	56:B:592:VAL:HG21	1.19	1.10
3:3:6:ALA:C	3:3:59:ILE:HB	1.75	1.10
7:D:2120:G:C2	7:D:2179:C:O2	2.05	1.10
56:B:305:LEU:HD22	56:B:358:GLN:HE21	1.15	1.10
56:B:428:LEU:HD11	56:B:450:LEU:HD21	1.14	1.10
7:D:1418:G:N2	7:D:1580:A:C2	2.19	1.09
7:D:2684:U:OP1	41:l:64:ARG:NH1	1.83	1.09
26:W:35:SER:O	26:W:71:LEU:HD12	1.51	1.09
26:W:36:ARG:CD	26:W:72:GLY:HA3	1.81	1.09
33:d:32:PRO:CG	33:d:168:GLU:CG	2.28	1.09
56:B:133:PRO:C	56:B:163:ALA:CB	2.25	1.09
56:B:431:LYS:HB3	56:B:455:PRO:HD3	1.22	1.09
3:3:90:LYS:HE3	3:3:91:PRO:HD3	1.18	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1321:C:OP1	20:Q:98:VAL:HG21	1.49	1.09
7:D:273:G:O6	7:D:364:C:N4	1.85	1.09
26:W:32:LYS:HE3	26:W:52:TYR:CD2	1.85	1.09
26:W:59:PRO:O	26:W:60:VAL:HG22	1.51	1.09
56:B:12:PHE:CA	56:B:100:VAL:HG11	1.82	1.09
56:B:222:VAL:HG21	56:B:264:LEU:HD21	1.13	1.09
56:B:228:ILE:HG12	56:B:282:LEU:HD23	1.27	1.09
56:B:412:LEU:HD21	56:B:477:MET:HE2	1.15	1.09
7:D:1063:G:C6	7:D:1064:C:C4	2.40	1.09
7:D:1847:A:N6	7:D:1890:A:OP2	1.85	1.09
56:B:65:ARG:HG3	56:B:245:PHE:C	1.76	1.09
56:B:164:ILE:HG23	56:B:176:GLU:OE1	1.53	1.09
56:B:245:PHE:CE2	56:B:262:GLY:CA	2.34	1.09
56:B:416:THR:HG21	56:B:424:LEU:HD13	1.19	1.09
56:B:459:ILE:HG22	56:B:463:PHE:CE2	1.87	1.09
6:A:89:U:H2'	6:A:90:C:H5'	1.16	1.09
6:A:1321:C:P	20:Q:98:VAL:HG23	1.88	1.09
7:D:243:U:OP1	55:z:5:LYS:NZ	1.85	1.09
29:Z:66:HIS:HB2	29:Z:158:ALA:O	1.50	1.09
56:B:197:LYS:HA	56:B:281:THR:CG2	1.81	1.09
56:B:322:LYS:CG	56:B:331:THR:HG21	1.80	1.09
56:B:428:LEU:CD1	56:B:450:LEU:HD21	1.81	1.09
7:D:1748:G:H2'	7:D:1749:A:C8	1.87	1.09
26:W:40:ILE:HG21	26:W:67:VAL:CG2	1.80	1.09
56:B:420:TYR:CD1	56:B:471:SER:CA	2.36	1.09
3:3:77:LEU:O	3:3:111:LYS:HD2	1.51	1.08
7:D:1726:G:C6	7:D:1727:U:N3	2.20	1.08
29:Z:43:VAL:HG21	29:Z:175:VAL:HG11	1.34	1.08
56:B:227:ARG:HB3	56:B:237:PHE:HD2	1.04	1.08
56:B:316:LEU:HD11	56:B:342:PHE:CD1	1.71	1.08
56:B:322:LYS:HD2	56:B:323:LEU:H	0.99	1.08
3:3:10:LEU:HD11	3:3:57:ILE:HG12	1.08	1.08
7:D:2000:G:OP2	39:j:2:ARG:NH2	1.86	1.08
56:B:97:LEU:HD21	56:B:103:VAL:CG1	1.82	1.08
56:B:299:PRO:O	56:B:479:TYR:OH	1.61	1.08
56:B:382:LEU:HG	56:B:401:ARG:HD3	1.32	1.08
56:B:493:ASN:N	56:B:505:THR:HG22	1.67	1.08
7:D:1456:G:C2	7:D:1457:A:N7	2.20	1.08
8:E:57:A:C2	33:d:29:TRP:CB	2.36	1.08
9:F:144:ARG:NH1	9:F:148:TYR:OH	1.86	1.08
26:W:11:VAL:HG22	26:W:41:VAL:HG13	1.28	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:72:PRO:HB2	37:h:111:ARG:HB3	1.35	1.08
56:B:169:LYS:HB2	57:B:701:GCP:N1	1.68	1.08
56:B:531:GLN:O	56:B:554:LEU:CB	2.00	1.08
6:A:216:G:H2'	6:A:217:C:C6	1.88	1.08
7:D:931:G:H8	7:D:932:G:H1'	1.18	1.08
56:B:81:ILE:HD12	56:B:100:VAL:HG21	1.14	1.08
56:B:225:GLY:N	56:B:239:VAL:HG13	1.58	1.08
56:B:251:VAL:HG12	56:B:252:ALA:H	0.95	1.08
56:B:531:GLN:NE2	56:B:584:LEU:HD11	1.69	1.08
7:D:39:C:H2'	7:D:40:C:C6	1.89	1.08
7:D:1749:A:H2'	7:D:1750:G:H8	0.93	1.08
29:Z:38:ASP:C	29:Z:177:LYS:HE3	1.77	1.08
56:B:81:ILE:HD13	56:B:100:VAL:HG21	1.20	1.08
56:B:137:LYS:HE3	57:B:701:GCP:C4	1.83	1.08
56:B:200:ILE:HD12	56:B:274:VAL:CG1	1.82	1.08
56:B:212:ILE:CG2	56:B:263:TRP:CE3	2.37	1.08
56:B:497:HIS:CA	56:B:535:VAL:HG11	1.80	1.08
6:A:838:G:N1	6:A:849:C:N3	2.02	1.07
7:D:489:G:N7	7:D:1284:A:N1	1.99	1.07
7:D:775:G:N2	7:D:788:A:OP2	1.87	1.07
7:D:884:C:O2	7:D:885:C:C5	2.07	1.07
7:D:884:C:O2'	7:D:885:C:OP2	1.69	1.07
12:I:40:ARG:NH1	12:I:68:GLU:OE1	1.87	1.07
26:W:15:LEU:HD21	26:W:19:VAL:HG13	1.15	1.07
26:W:69:HIS:CD2	26:W:74:PHE:CE1	2.40	1.07
56:B:8:ARG:HG3	56:B:74:GLU:CA	1.84	1.07
56:B:64:VAL:HG11	56:B:80:LEU:HB3	1.24	1.07
56:B:305:LEU:CD1	56:B:369:LEU:HD23	1.83	1.07
56:B:306:TYR:CG	56:B:370:ILE:HD12	1.87	1.07
56:B:360:ARG:HG3	56:B:364:GLU:OE1	0.91	1.07
6:A:216:G:N7	6:A:217:C:N4	2.00	1.07
7:D:270:A:C2	7:D:370:G:H1'	1.87	1.07
26:W:69:HIS:CB	26:W:74:PHE:CE1	2.37	1.07
56:B:10:ARG:HG2	56:B:186:PRO:O	1.53	1.07
56:B:134:VAL:CA	56:B:163:ALA:HB1	1.84	1.07
56:B:152:VAL:HG13	56:B:156:LEU:HB3	1.36	1.07
56:B:431:LYS:HD2	56:B:455:PRO:CB	1.84	1.07
56:B:431:LYS:HB3	56:B:455:PRO:CG	1.83	1.07
56:B:489:LEU:HA	56:B:509:HIS:HA	1.37	1.07
56:B:523:LYS:HB3	56:B:598:LEU:HD23	1.09	1.07
6:A:445:G:H2'	6:A:446:G:C8	1.90	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1226:C:N4	20:Q:104:ARG:CD	2.16	1.07
6:A:1308:U:P	20:Q:97:PRO:HG3	1.93	1.07
7:D:1712:C:H2'	7:D:1716:U:C6	1.90	1.07
56:B:17:HIS:CE1	56:B:114:GLU:HB2	1.89	1.07
56:B:64:VAL:HG21	56:B:80:LEU:N	1.70	1.07
56:B:67:THR:C	56:B:76:TYR:HB2	1.77	1.07
56:B:229:ARG:HG2	56:B:237:PHE:CZ	1.89	1.07
56:B:351:LEU:HG	56:B:465:ASP:OD2	1.54	1.07
56:B:382:LEU:CG	56:B:401:ARG:HD2	1.78	1.07
56:B:412:LEU:CD1	56:B:479:TYR:CA	2.31	1.07
3:3:6:ALA:HB2	3:3:59:ILE:HG21	1.31	1.07
7:D:848:G:C2	7:D:931:G:O6	2.08	1.07
56:B:383:LYS:N	56:B:402:ILE:CG1	2.17	1.07
56:B:406:LEU:HD11	56:B:489:LEU:HD13	1.31	1.07
56:B:411:LYS:HE3	56:B:453:GLU:OE2	1.41	1.07
56:B:493:ASN:CA	56:B:505:THR:HG22	1.82	1.07
3:3:14:ALA:HB2	3:3:53:VAL:H	0.90	1.07
7:D:1590:U:H2'	7:D:1591:G:C8	1.90	1.07
7:D:2790:A:N3	7:D:2893:G:N1	2.02	1.07
19:P:80:HIS:CB	56:B:342:PHE:CE1	2.37	1.07
43:n:68:LYS:NZ	43:n:93:GLU:OE2	1.87	1.07
56:B:118:LEU:HD13	56:B:446:LYS:CE	1.82	1.07
56:B:169:LYS:CD	57:B:701:GCP:C4	2.27	1.07
56:B:431:LYS:CB	56:B:455:PRO:CG	2.32	1.07
56:B:490:VAL:HB	56:B:508:ALA:HB3	1.13	1.07
7:D:884:C:N1	7:D:885:C:C5	2.20	1.06
7:D:890:A:H3'	7:D:892:G:H5"	1.33	1.06
26:W:28:LYS:HG3	26:W:29:ARG:HH21	1.02	1.06
56:B:379:LYS:H	56:B:406:LEU:CB	1.58	1.06
56:B:417:PRO:HB2	56:B:446:LYS:O	0.89	1.06
56:B:492:VAL:HG13	56:B:541:ILE:HG12	1.14	1.06
56:B:559:LEU:CD2	56:B:574:LEU:CD1	2.23	1.06
30:a:51:VAL:O	30:a:52:ARG:NH1	1.88	1.06
33:d:32:PRO:HG3	33:d:168:GLU:CG	1.83	1.06
56:B:8:ARG:HG3	56:B:74:GLU:HB2	1.37	1.06
56:B:31:GLU:HG3	56:B:40:GLU:HG3	1.33	1.06
3:3:6:ALA:HB1	3:3:59:ILE:HG12	1.36	1.06
7:D:2087:G:OP2	30:a:260:ARG:NH2	1.89	1.06
26:W:40:ILE:HG21	26:W:67:VAL:HG22	1.24	1.06
29:Z:63:SER:CA	29:Z:155:GLU:OE2	2.04	1.06
36:g:64:ARG:NH1	36:g:68:GLU:H	1.52	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:240:ASP:HB2	56:B:266:ALA:CB	1.85	1.06
7:D:1225:C:OP1	43:n:88:ARG:NH1	1.88	1.06
7:D:2076:U:OP2	7:D:2238:G:N2	1.87	1.06
7:D:2216:G:H2'	7:D:2217:G:C8	1.89	1.06
34:e:5:GLY:O	34:e:6:ARG:NH1	1.89	1.06
6:A:859:A:OP2	6:A:869:G:N1	1.87	1.06
6:A:1309:G:C5'	20:Q:88:ARG:HH22	1.69	1.06
6:A:1319:A:O5'	26:W:37:ARG:O	1.73	1.06
7:D:2794:C:C5	7:D:2799:A:H2	1.72	1.06
56:B:10:ARG:CG	56:B:186:PRO:O	2.04	1.06
56:B:298:LYS:C	56:B:348:PHE:HE2	1.63	1.06
6:A:1321:C:OP1	20:Q:98:VAL:CG2	2.03	1.05
7:D:1583:A:H4'	7:D:1585:C:C6	1.90	1.05
43:n:76:LYS:NZ	43:n:86:GLY:O	1.89	1.05
56:B:195:PRO:CG	56:B:286:PRO:C	2.29	1.05
56:B:218:PHE:O	56:B:258:ALA:CB	2.04	1.05
56:B:406:LEU:CD1	56:B:489:LEU:CD1	2.25	1.05
6:A:1310:G:H2'	6:A:1311:G:C8	1.91	1.05
7:D:895:U:H4'	7:D:896:A:H5'	1.38	1.05
33:d:32:PRO:HG2	33:d:168:GLU:CB	1.62	1.05
38:i:80:GLU:CD	56:B:567:VAL:CG1	2.28	1.05
26:W:70:LYS:HB3	26:W:73:GLU:HG2	1.09	1.05
34:e:25:LYS:NZ	34:e:34:GLU:OE2	1.86	1.05
56:B:27:ASP:OD2	56:B:45:PHE:CB	2.03	1.05
56:B:46:LEU:HD13	56:B:82:ASP:HB2	1.09	1.05
56:B:306:TYR:CD1	56:B:370:ILE:CD1	2.34	1.05
56:B:431:LYS:HD3	56:B:455:PRO:HG3	1.31	1.05
7:D:2706:G:O2'	39:j:64:ARG:NH1	1.88	1.05
26:W:70:LYS:O	26:W:72:GLY:N	1.86	1.05
45:p:9:LEU:O	49:t:31:ARG:NH1	1.89	1.05
56:B:17:HIS:CE1	56:B:116:GLU:HB2	1.92	1.05
56:B:20:HIS:NE2	56:B:108:ASP:HB2	1.71	1.05
56:B:134:VAL:HB	56:B:163:ALA:O	1.53	1.05
56:B:322:LYS:HB3	56:B:331:THR:HG23	1.09	1.05
56:B:382:LEU:HB2	56:B:401:ARG:CB	1.86	1.05
6:A:443:C:H2'	6:A:444:C:C6	1.92	1.05
7:D:552:G:H2'	7:D:553:U:H6	1.17	1.05
20:Q:24:GLY:O	20:Q:29:ARG:NH1	1.90	1.05
56:B:135:ILE:HD13	56:B:145:PRO:CB	1.83	1.05
56:B:412:LEU:HD11	56:B:479:TYR:CB	1.85	1.05
56:B:417:PRO:HB2	56:B:446:LYS:C	1.81	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:492:VAL:HG21	56:B:541:ILE:HD13	1.38	1.05
6:A:1014:A:H4'	26:W:18:LYS:HE2	1.09	1.04
6:A:1220:G:OP1	26:W:34:TRP:CG	2.09	1.04
26:W:32:LYS:HG3	26:W:52:TYR:CB	1.86	1.04
26:W:33:THR:O	26:W:36:ARG:NH2	1.89	1.04
42:m:58:ARG:HH12	42:m:92:ARG:NH1	1.53	1.04
56:B:118:LEU:CD1	56:B:446:LYS:CE	2.35	1.04
56:B:559:LEU:HD23	56:B:574:LEU:HD13	1.38	1.04
6:A:200:G:N2	6:A:218:C:C2	2.24	1.04
6:A:1014:A:H4'	26:W:18:LYS:HE3	1.38	1.04
7:D:631:A:OP2	55:z:46:ARG:NH2	1.90	1.04
7:D:2219:G:H2'	7:D:2224:G:H5'	1.39	1.04
26:W:14:HIS:HE1	26:W:34:TRP:CZ2	1.75	1.04
26:W:14:HIS:CG	26:W:35:SER:HA	1.93	1.04
29:Z:69:GLY:HA2	29:Z:157:LYS:O	1.54	1.04
56:B:236:GLU:HA	56:B:268:ILE:CG2	1.87	1.04
56:B:383:LYS:HG2	56:B:402:ILE:HG22	1.36	1.04
56:B:410:VAL:CG1	56:B:480:GLU:H	1.69	1.04
56:B:492:VAL:HG21	56:B:513:ALA:HB2	1.35	1.04
56:B:531:GLN:HE22	56:B:584:LEU:CD1	1.70	1.04
6:A:448:A:OP2	6:A:485:G:N2	1.90	1.04
6:A:454:C:H5"	6:A:455:C:C5	1.93	1.04
6:A:838:G:N2	6:A:848:C:O2	1.90	1.04
6:A:1014:A:H2	26:W:32:LYS:HD3	0.94	1.04
20:Q:23:TYR:CD1	20:Q:70:LEU:HD21	1.91	1.04
56:B:46:LEU:HD12	56:B:82:ASP:CB	1.78	1.04
56:B:188:PRO:CB	56:B:216:ARG:NH2	2.21	1.04
56:B:490:VAL:HB	56:B:508:ALA:HB1	1.08	1.04
3:3:103:GLN:HA	3:3:106:GLU:OE2	1.58	1.04
7:D:539:G:OP1	35:f:5:VAL:CG1	2.05	1.04
7:D:2199:A:H2'	7:D:2205:C:H5'	1.40	1.04
11:H:60:GLU:OE2	11:H:199:ASN:N	1.90	1.04
19:P:80:HIS:HB3	56:B:342:PHE:CE1	1.93	1.04
26:W:30:LEU:HD13	26:W:31:ILE:H	1.20	1.04
33:d:32:PRO:HG2	33:d:168:GLU:HB3	1.13	1.04
56:B:412:LEU:HD12	56:B:479:TYR:HA	1.39	1.04
56:B:497:HIS:CG	56:B:535:VAL:HG11	1.92	1.04
6:A:1452:C:O2'	6:A:1453:G:N2	1.88	1.04
7:D:557:U:H2'	7:D:558:G:C8	1.93	1.04
26:W:32:LYS:HG3	26:W:52:TYR:HB2	1.34	1.04
56:B:33:THR:HG21	56:B:69:ARG:HD2	1.33	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:78:PHE:CZ	56:B:182:VAL:CG2	2.41	1.04
56:B:229:ARG:NH2	56:B:286:PRO:HG3	1.73	1.04
56:B:410:VAL:HG13	56:B:481:GLN:H	1.23	1.04
6:A:1309:G:C5'	20:Q:88:ARG:NH2	2.21	1.03
7:D:542:C:H2'	7:D:543:C:C6	1.92	1.03
56:B:282:LEU:CD1	56:B:283:ALA:N	1.98	1.03
56:B:306:TYR:CB	56:B:370:ILE:HD12	1.88	1.03
3:3:10:LEU:HD13	3:3:57:ILE:HD11	1.06	1.03
56:B:230:ILE:CA	56:B:280:ILE:HG21	1.82	1.03
56:B:335:GLU:HG3	56:B:375:SER:CB	1.86	1.03
56:B:513:ALA:O	56:B:517:ALA:N	1.90	1.03
56:B:531:GLN:HE22	56:B:584:LEU:HD11	0.89	1.03
19:P:80:HIS:NE2	56:B:316:LEU:HG	1.73	1.03
29:Z:43:VAL:HG21	29:Z:175:VAL:CG1	1.89	1.03
56:B:197:LYS:CB	56:B:281:THR:CG2	2.36	1.03
56:B:242:VAL:HG11	56:B:256:LEU:HG	1.40	1.03
56:B:381:ARG:O	56:B:402:ILE:HG13	1.56	1.03
6:A:828:A:OP1	15:L:21:LYS:NZ	1.91	1.03
6:A:1461:G:H2'	6:A:1462:G:H8	1.18	1.03
7:D:154:G:H2'	7:D:155:C:H5'	1.39	1.03
7:D:1174:A:C6	7:D:1176:G:N7	2.25	1.03
26:W:59:PRO:O	26:W:60:VAL:CG2	2.06	1.03
39:j:104:ARG:NH1	39:j:107:ASP:OD2	1.92	1.03
56:B:166:ALA:HB1	56:B:172:GLU:HG2	1.40	1.03
56:B:197:LYS:N	56:B:281:THR:HG22	1.74	1.03
56:B:221:ARG:HG2	56:B:256:LEU:C	1.83	1.03
56:B:383:LYS:CG	56:B:402:ILE:HG21	1.61	1.03
6:A:91:C:H2'	6:A:92:G:C8	1.94	1.03
30:a:242:ARG:HH12	30:a:244:ARG:HB2	1.19	1.03
6:A:69:G:H2'	6:A:73:G:C8	1.94	1.02
6:A:1321:C:OP2	20:Q:98:VAL:HG23	1.50	1.02
7:D:535:C:H2'	7:D:536:A:H8	1.19	1.02
7:D:892:G:H2'	7:D:893:C:C6	1.94	1.02
7:D:974:G:H3'	7:D:974(A):C:H5"	1.36	1.02
29:Z:68:LEU:C	29:Z:157:LYS:O	2.02	1.02
55:z:13:ARG:HD2	55:z:24:ALA:HB1	1.42	1.02
56:B:91:TYR:HE2	56:B:296:PRO:C	1.65	1.02
56:B:240:ASP:OD2	56:B:266:ALA:CB	2.07	1.02
56:B:306:TYR:HB3	56:B:370:ILE:CD1	1.89	1.02
3:3:6:ALA:HB1	3:3:59:ILE:CB	1.83	1.02
7:D:849:A:C2	7:D:931:G:N2	2.27	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1869:G:C2	7:D:1878:G:C6	2.47	1.02
26:W:69:HIS:CG	26:W:74:PHE:CZ	2.45	1.02
43:n:19:LYS:O	43:n:21:ARG:NH1	1.91	1.02
56:B:251:VAL:HG12	56:B:252:ALA:N	1.66	1.02
56:B:414:ILE:HB	56:B:450:LEU:HB3	1.41	1.02
29:Z:38:ASP:CB	29:Z:177:LYS:CE	2.31	1.02
29:Z:69:GLY:HA2	29:Z:157:LYS:CB	1.88	1.02
56:B:11:ASN:C	56:B:100:VAL:CG1	2.31	1.02
56:B:66:VAL:HG23	56:B:76:TYR:CE1	1.93	1.02
56:B:135:ILE:HD12	56:B:145:PRO:HG3	1.06	1.02
56:B:431:LYS:CB	56:B:455:PRO:HG3	1.88	1.02
6:A:754:C:P	22:S:72:ARG:HH12	1.80	1.02
7:D:672:C:OP2	37:h:38:GLN:NE2	1.92	1.02
18:O:12:ARG:NH1	18:O:34:ASP:OD2	1.91	1.02
54:y:34:ARG:HH12	54:y:42:LEU:HA	1.22	1.02
56:B:200:ILE:CG1	56:B:279:THR:HG23	1.87	1.02
56:B:361:LEU:HD21	56:B:369:LEU:HD22	1.41	1.02
7:D:151:C:H2'	7:D:152:G:C8	1.95	1.02
7:D:537:C:H2'	7:D:539:G:C8	1.95	1.02
29:Z:38:ASP:CG	29:Z:177:LYS:CD	2.13	1.02
40:k:83:LYS:NZ	40:k:111:GLU:OE2	1.92	1.02
56:B:65:ARG:NH1	56:B:76:TYR:OH	1.91	1.02
56:B:280:ILE:HG23	56:B:281:THR:H	1.23	1.02
56:B:302:PHE:CD1	56:B:460:LEU:CD2	2.43	1.02
6:A:1165:C:H2'	6:A:1166:G:C8	1.94	1.01
6:A:1461:G:N3	6:A:1462:G:C8	2.27	1.01
7:D:1061:U:H1'	7:D:1070:A:O4'	1.60	1.01
20:Q:59:TYR:O	20:Q:61:GLU:N	1.92	1.01
26:W:29:ARG:HB3	26:W:48:THR:HB	1.42	1.01
26:W:36:ARG:HD3	26:W:72:GLY:HA3	1.39	1.01
29:Z:61:THR:HB	29:Z:162:GLU:HG3	1.40	1.01
6:A:103:C:H2'	6:A:104:G:C8	1.95	1.01
7:D:552:G:H2'	7:D:553:U:C6	1.94	1.01
7:D:573:G:N1	7:D:2031:A:OP2	1.92	1.01
7:D:1742:C:H3'	7:D:1743:G:H5"	1.38	1.01
31:b:58:ARG:HH12	31:b:73:GLU:HG2	1.21	1.01
56:B:239:VAL:HG22	56:B:240:ASP:H	1.23	1.01
56:B:251:VAL:CG1	56:B:252:ALA:H	1.70	1.01
56:B:301:VAL:O	56:B:347:GLY:O	1.78	1.01
56:B:316:LEU:CD1	56:B:342:PHE:CG	2.43	1.01
56:B:411:LYS:HD3	56:B:436:VAL:CG2	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:434:ARG:O	56:B:452:TYR:HA	1.60	1.01
56:B:489:LEU:CA	56:B:509:HIS:HA	1.89	1.01
3:3:104:VAL:HA	3:3:107:ILE:HD12	1.40	1.01
7:D:860:U:H3	7:D:917:A:H61	1.08	1.01
7:D:2789:C:O2	7:D:2893:G:N1	1.93	1.01
26:W:12:ASP:HB2	26:W:38:SER:OG	0.85	1.01
56:B:79:HIS:CD2	56:B:261:VAL:HG21	1.95	1.01
56:B:265:VAL:HG22	56:B:266:ALA:H	1.22	1.01
56:B:537:ILE:N	56:B:549:ALA:O	1.91	1.01
6:A:503:C:OP2	19:P:116:SER:OG	1.76	1.01
7:D:458:G:O2'	7:D:459:U:OP2	1.79	1.01
7:D:2602:A:C2	56:B:561:LYS:O	2.13	1.01
15:L:22:GLU:HA	15:L:63:LEU:HD23	1.38	1.01
6:A:707:C:OP1	18:O:85:ARG:NH1	1.94	1.01
6:A:835:U:H3	6:A:851:G:H1	1.03	1.01
7:D:532:A:OP2	7:D:2021:C:N4	1.93	1.01
56:B:27:ASP:OD2	56:B:45:PHE:CD1	2.12	1.01
56:B:196:LEU:HD13	56:B:220:GLY:HA3	1.39	1.01
56:B:200:ILE:HD12	56:B:274:VAL:HG11	1.41	1.01
56:B:306:TYR:HB3	56:B:370:ILE:CG1	1.90	1.01
3:3:6:ALA:HB3	3:3:59:ILE:HG22	1.40	1.00
7:D:884:C:N4	7:D:885:C:H41	1.58	1.00
7:D:2641:G:OP2	35:f:83:LYS:NZ	1.94	1.00
18:O:62:GLN:HB3	18:O:93:GLN:HG3	1.37	1.00
29:Z:43:VAL:CG2	29:Z:175:VAL:HG11	1.90	1.00
37:h:29:LYS:NZ	43:n:82:ARG:HH12	1.58	1.00
56:B:65:ARG:CB	56:B:246:THR:HA	1.91	1.00
56:B:196:LEU:HD11	56:B:220:GLY:O	1.58	1.00
56:B:302:PHE:CE1	56:B:460:LEU:CD2	2.43	1.00
56:B:494:VAL:CG2	56:B:520:ILE:HD12	1.90	1.00
6:A:103:C:H2'	6:A:104:G:H8	1.22	1.00
26:W:11:VAL:HG21	26:W:41:VAL:HG13	1.43	1.00
26:W:12:ASP:HB3	26:W:38:SER:HB2	1.35	1.00
26:W:43:GLU:OE1	26:W:64:GLU:HB2	1.58	1.00
26:W:69:HIS:CD2	26:W:74:PHE:HE1	1.77	1.00
56:B:196:LEU:HD12	56:B:220:GLY:HA3	1.02	1.00
56:B:298:LYS:C	56:B:348:PHE:CE2	2.35	1.00
56:B:376:VAL:HG12	56:B:377:VAL:H	1.25	1.00
6:A:85:U:H2'	6:A:86:U:H5'	1.44	1.00
7:D:559:G:H2'	7:D:560:C:C6	1.96	1.00
7:D:1869:G:O2'	7:D:1871:A:N6	1.93	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2793:G:N1	7:D:2802:G:O6	1.95	1.00
26:W:14:HIS:CB	26:W:35:SER:CB	2.38	1.00
32:c:101:LEU:O	32:c:106:ARG:NH1	1.93	1.00
36:g:64:ARG:NH1	36:g:76:ALA:O	1.93	1.00
56:B:95:ARG:NE	56:B:294:PHE:CE1	2.13	1.00
56:B:196:LEU:HD12	56:B:220:GLY:CA	1.74	1.00
56:B:200:ILE:CD1	56:B:274:VAL:HG11	1.92	1.00
56:B:306:TYR:CB	56:B:370:ILE:CB	2.33	1.00
56:B:383:LYS:CA	56:B:402:ILE:HG12	1.91	1.00
3:3:10:LEU:CD2	3:3:57:ILE:HG13	1.91	1.00
3:3:21:PRO:HB2	7:D:1067:A:H5"	1.44	1.00
7:D:539:G:N2	7:D:556:G:C4	2.28	1.00
7:D:2355:C:O2'	48:s:24:LYS:NZ	1.94	1.00
26:W:69:HIS:HB3	26:W:74:PHE:CZ	1.94	1.00
29:Z:156:ILE:HA	29:Z:160:ARG:HB2	1.44	1.00
56:B:191:ASP:HB3	56:B:219:GLU:HB2	1.39	1.00
56:B:229:ARG:NH2	56:B:283:ALA:HA	1.76	1.00
7:D:2794:C:C4	7:D:2799:A:N3	2.30	1.00
47:r:141:VAL:HG12	47:r:143:GLY:H	1.26	1.00
56:B:197:LYS:CB	56:B:281:THR:HG23	1.92	1.00
42:m:58:ARG:NH1	42:m:92:ARG:NH1	2.10	1.00
56:B:12:PHE:N	56:B:100:VAL:CG1	2.24	1.00
56:B:221:ARG:CG	56:B:257:GLU:HA	1.91	1.00
7:D:848:G:H21	7:D:933:A:H1'	1.25	1.00
9:F:82:ARG:NH1	9:F:92:TYR:OH	1.95	1.00
56:B:34:HIS:HE2	56:B:67:THR:HG22	1.06	1.00
56:B:420:TYR:CD1	56:B:471:SER:CB	2.44	1.00
3:3:25:PRO:HB3	56:B:440:TYR:OH	1.62	0.99
6:A:1225:A:H5'	26:W:78:ARG:CZ	1.91	0.99
7:D:2660:A:H5"	56:B:114:GLU:OE1	1.62	0.99
20:Q:97:PRO:HG2	20:Q:99:ARG:CG	1.92	0.99
56:B:459:ILE:HG22	56:B:463:PHE:HE2	1.22	0.99
6:A:685:G:N1	6:A:704:A:OP2	1.93	0.99
26:W:14:HIS:C	26:W:35:SER:HB2	1.66	0.99
40:k:20:ARG:HH12	40:k:87:PHE:HB3	1.22	0.99
56:B:412:LEU:HD11	56:B:479:TYR:HB3	1.39	0.99
56:B:525:ALA:HB1	56:B:528:ILE:CG1	1.91	0.99
47:r:23:LYS:NZ	47:r:38:TYR:O	1.93	0.99
56:B:137:LYS:CE	57:B:701:GCP:C4	2.39	0.99
56:B:297:ALA:HB3	56:B:328:ALA:CB	1.91	0.99
56:B:299:PRO:CA	56:B:479:TYR:OH	2.10	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:14:ALA:HB2	3:3:53:VAL:N	1.76	0.99
6:A:1226:C:H5'	20:Q:94:ARG:CZ	1.91	0.99
11:H:72:GLU:OE2	11:H:207:TYR:OH	1.81	0.99
56:B:15:ILE:HD12	56:B:103:VAL:HG21	0.99	0.99
56:B:200:ILE:HD11	56:B:279:THR:HG23	1.03	0.99
6:A:837:G:C2	6:A:838:G:N7	2.31	0.99
7:D:1043:C:HO2'	7:D:1044:G:H8	1.05	0.99
6:A:99:C:H2'	6:A:101:A:C8	1.97	0.99
6:A:1222:G:OP2	6:A:1322:C:N4	1.93	0.99
6:A:1308:U:OP1	20:Q:97:PRO:HG3	1.62	0.99
56:B:349:LEU:HD12	56:B:353:HIS:CG	1.98	0.99
7:D:1586:A:H2'	7:D:1587:A:H5"	1.45	0.99
7:D:2790:A:C4	7:D:2893:G:O6	2.15	0.99
6:A:1452:C:H4'	6:A:1453:G:C5'	1.92	0.99
7:D:536:A:C6	7:D:558:G:N1	2.31	0.99
7:D:2194:G:N2	7:D:2195:C:N3	2.10	0.99
9:F:204:ASN:HD22	9:F:210:SER:HB3	1.27	0.99
56:B:134:VAL:HG23	56:B:164:ILE:C	1.86	0.99
56:B:562:CYS:SG	56:B:570:LYS:NZ	2.35	0.99
5:5:41:C:O3'	14:K:143:ARG:NH1	1.95	0.98
7:D:163:U:H2'	7:D:164:U:H5"	1.43	0.98
7:D:539:G:OP2	35:f:5:VAL:CG1	2.06	0.98
20:Q:97:PRO:HG2	20:Q:99:ARG:HG3	1.45	0.98
26:W:29:ARG:HB2	26:W:48:THR:HG22	1.41	0.98
56:B:151:GLU:O	56:B:155:VAL:HB	1.62	0.98
6:A:1248:A:N3	16:M:70:LYS:NZ	2.11	0.98
7:D:884:C:N3	7:D:885:C:C5	2.31	0.98
29:Z:69:GLY:CA	29:Z:157:LYS:O	2.11	0.98
56:B:218:PHE:CZ	56:B:291:TYR:OH	2.14	0.98
6:A:74:C:H2'	6:A:75:C:C6	1.97	0.98
7:D:489:G:C5	7:D:1284:A:C6	2.50	0.98
7:D:852:G:O6	7:D:926:A:N6	1.96	0.98
7:D:1871:A:H2'	7:D:1872:A:H8	1.27	0.98
7:D:2631:G:HO2'	7:D:2810:A:H2	1.08	0.98
56:B:11:ASN:OD1	56:B:79:HIS:HD2	1.38	0.98
56:B:13:SER:CB	56:B:97:LEU:HG	1.94	0.98
6:A:618:C:N4	6:A:621:A:OP2	1.95	0.98
3:3:21:PRO:CB	7:D:1067:A:H5'	1.93	0.98
7:D:715:G:OP2	22:S:88:ARG:NH2	1.97	0.98
7:D:859:G:N2	7:D:917:A:OP2	1.97	0.98
14:K:111:ARG:NH2	14:K:123:GLU:OE2	1.96	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:102:ARG:HH11	20:Q:102:ARG:HB3	1.24	0.98
29:Z:61:THR:OG1	29:Z:161:ILE:O	1.79	0.98
36:g:64:ARG:HH11	36:g:68:GLU:N	1.61	0.98
56:B:229:ARG:HH22	56:B:286:PRO:HD3	1.28	0.98
56:B:494:VAL:HG21	56:B:520:ILE:HD12	1.45	0.98
7:D:2120:G:N2	7:D:2179:C:O2	1.97	0.98
56:B:396:LEU:CD1	56:B:491:LYS:HG2	1.92	0.98
7:D:1084:A:C1'	7:D:1106:G:N7	2.27	0.98
7:D:2107:C:H1'	7:D:2108:C:C5'	1.93	0.98
29:Z:163:PHE:HB3	29:Z:171:ILE:HD11	1.42	0.98
56:B:361:LEU:CD2	56:B:366:GLY:HA3	1.92	0.98
6:A:55:A:H1'	56:B:208:TYR:CZ	1.99	0.98
6:A:848:C:H2'	6:A:849:C:C5	1.97	0.98
14:K:72:ARG:N	14:K:142:GLU:OE2	1.97	0.98
56:B:33:THR:CG2	56:B:69:ARG:HD2	1.52	0.98
56:B:91:TYR:CE2	56:B:296:PRO:C	2.29	0.98
56:B:492:VAL:CA	56:B:541:ILE:HG23	1.86	0.98
7:D:648:G:H2'	7:D:649:G:C8	1.98	0.98
56:B:42:ARG:HD2	56:B:53:ARG:HH22	1.24	0.98
7:D:885:C:O2	7:D:890:A:H4'	1.64	0.97
7:D:2810:A:H61	7:D:2891:G:H1'	1.28	0.97
24:U:46:ASP:OD2	24:U:49:GLU:N	1.97	0.97
7:D:931:G:C8	7:D:932:G:H1'	1.99	0.97
56:B:222:VAL:CG2	56:B:264:LEU:HD21	1.94	0.97
56:B:229:ARG:CZ	56:B:282:LEU:O	2.11	0.97
56:B:396:LEU:HD13	56:B:491:LYS:HG2	1.47	0.97
7:D:1022:G:O6	35:f:65:LYS:NZ	1.97	0.97
7:D:1171:G:C8	7:D:1173:G:H4'	1.97	0.97
26:W:12:ASP:HB3	26:W:38:SER:CB	1.86	0.97
56:B:42:ARG:HD3	56:B:53:ARG:HH21	1.25	0.97
56:B:79:HIS:HD2	56:B:261:VAL:CG2	1.65	0.97
3:3:25:PRO:CA	56:B:440:TYR:OH	2.11	0.97
6:A:468:A:O2'	23:T:82:GLN:HG2	1.64	0.97
6:A:1326:C:OP1	28:Y:12:LYS:NZ	1.95	0.97
7:D:274:G:N2	7:D:274:G:OP2	1.97	0.97
7:D:773:U:OP1	30:a:48:ARG:NH1	1.98	0.97
26:W:14:HIS:HE2	26:W:34:TRP:HZ3	0.99	0.97
56:B:490:VAL:C	56:B:508:ALA:HB3	1.89	0.97
2:2:60:ARG:O	7:D:1046:A:O2'	1.82	0.97
6:A:74:C:O2	6:A:97:U:O2	1.83	0.97
7:D:83:G:N1	7:D:102:G:N3	2.11	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:153:C:H2'	7:D:154:G:C8	1.98	0.97
56:B:42:ARG:CD	56:B:53:ARG:NH2	1.77	0.97
56:B:196:LEU:CB	56:B:282:LEU:HB2	1.95	0.97
56:B:431:LYS:CB	56:B:455:PRO:CD	2.41	0.97
3:3:13:PRO:CG	3:3:16:LYS:HE3	1.94	0.97
7:D:1057:A:OP2	7:D:1089:G:N2	1.98	0.97
7:D:1453:A:OP2	7:D:2702:U:O2	1.83	0.97
7:D:1799:G:N2	7:D:1819:A:OP2	1.96	0.97
26:W:70:LYS:CB	26:W:73:GLU:CD	2.36	0.97
56:B:66:VAL:HG23	56:B:76:TYR:CD1	1.99	0.97
56:B:118:LEU:HD11	56:B:446:LYS:HZ1	1.27	0.97
56:B:202:ASP:O	56:B:276:VAL:O	1.81	0.97
56:B:238:THR:OG1	56:B:267:ALA:HB2	1.65	0.97
56:B:489:LEU:HA	56:B:509:HIS:CA	1.94	0.97
7:D:1726:G:N1	7:D:1727:U:C2	2.32	0.97
56:B:376:VAL:HB	56:B:378:TYR:CE1	1.99	0.97
6:A:1319:A:P	26:W:12:ASP:OD2	2.23	0.97
26:W:15:LEU:CD2	26:W:19:VAL:HG13	1.93	0.97
56:B:67:THR:CA	56:B:76:TYR:HB2	1.93	0.97
56:B:322:LYS:HD2	56:B:323:LEU:N	1.79	0.97
7:D:323:G:H3'	32:c:168:ARG:NH1	1.80	0.97
7:D:539:G:N2	7:D:556:G:C5	2.33	0.97
7:D:1725:G:C2	7:D:1735:C:O2	2.17	0.97
11:H:85:LYS:NZ	11:H:86:LYS:O	1.96	0.97
56:B:65:ARG:CG	56:B:245:PHE:C	2.37	0.97
56:B:382:LEU:HD23	56:B:401:ARG:N	1.79	0.97
19:P:82:VAL:N	19:P:106:ASP:OD2	1.98	0.96
56:B:416:THR:O	56:B:448:VAL:CB	2.13	0.96
56:B:492:VAL:HA	56:B:541:ILE:HG23	1.45	0.96
7:D:1455:G:H2'	7:D:1456:G:H8	1.30	0.96
26:W:47:HIS:O	26:W:61:TYR:HD2	1.42	0.96
56:B:64:VAL:HG12	56:B:80:LEU:HB3	1.45	0.96
56:B:410:VAL:HG13	56:B:481:GLN:N	1.78	0.96
6:A:79:G:C2	6:A:90:C:O2	2.18	0.96
7:D:539:G:C2	7:D:556:G:C2	2.52	0.96
7:D:884:C:O2	7:D:885:C:H5	1.44	0.96
7:D:1480:G:N2	7:D:1482:U:O4'	1.96	0.96
19:P:80:HIS:CB	56:B:342:PHE:HE1	1.74	0.96
56:B:188:PRO:HB2	56:B:216:ARG:HH22	0.98	0.96
56:B:377:VAL:O	56:B:391:HIS:CB	2.13	0.96
6:A:90:C:H2'	6:A:91:C:C6	1.99	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:438:G:H2'	6:A:494:U:H3	1.26	0.96
6:A:1163:C:C2'	6:A:1164:G:H5'	1.95	0.96
7:D:931:G:C8	7:D:932:G:O2'	2.15	0.96
33:d:26:GLN:HG2	33:d:29:TRP:HE3	1.27	0.96
56:B:68:TYR:HA	56:B:75:GLU:HG2	1.47	0.96
56:B:409:TYR:CB	56:B:485:ARG:HD2	1.95	0.96
56:B:495:LEU:CD1	56:B:540:ALA:HB2	1.79	0.96
6:A:89:U:C2'	6:A:90:C:H5'	1.94	0.96
7:D:1746:G:H3'	7:D:1747:G:C8	2.00	0.96
53:x:17:LYS:HZ2	53:x:50:ARG:HB2	1.30	0.96
56:B:195:PRO:HG2	56:B:287:THR:N	1.80	0.96
6:A:719:C:H42	25:V:74:ARG:HH12	1.13	0.96
7:D:2848:G:H22	7:D:2867:G:H1'	1.29	0.96
19:P:80:HIS:HB3	56:B:342:PHE:HZ	1.23	0.96
56:B:228:ILE:CG1	56:B:282:LEU:HD23	1.93	0.96
56:B:229:ARG:HH22	56:B:286:PRO:CD	1.78	0.96
56:B:335:GLU:CG	56:B:375:SER:OG	2.12	0.96
56:B:378:TYR:CE2	56:B:507:ILE:HG21	1.93	0.96
56:B:541:ILE:HD12	56:B:546:ILE:HD12	1.46	0.96
3:3:10:LEU:CG	3:3:57:ILE:CG1	2.44	0.96
4:4:74:C:H5	56:B:569:ARG:HE	0.99	0.96
6:A:67:C:H2'	6:A:68:G:C8	2.01	0.96
37:h:72:PRO:HD2	37:h:111:ARG:HE	1.28	0.96
56:B:282:LEU:HD13	56:B:283:ALA:CA	1.96	0.96
56:B:523:LYS:CB	56:B:598:LEU:HD21	1.96	0.96
3:3:10:LEU:HD11	3:3:57:ILE:HD13	1.48	0.96
6:A:55:A:N9	56:B:208:TYR:HE2	1.64	0.96
6:A:1014:A:H5'	26:W:18:LYS:HZ1	0.81	0.96
7:D:603:A:N6	37:h:103:ALA:O	1.99	0.96
56:B:67:THR:HA	56:B:76:TYR:HB2	1.48	0.96
56:B:195:PRO:CB	56:B:286:PRO:C	2.38	0.96
56:B:420:TYR:CD1	56:B:471:SER:HB2	2.00	0.96
3:3:21:PRO:CB	7:D:1067:A:C5'	2.43	0.96
7:D:559:G:H2'	7:D:560:C:H6	1.31	0.96
7:D:1478:G:H2'	7:D:1479:G:H5'	1.48	0.96
7:D:1586:A:C2'	7:D:1587:A:H5"	1.95	0.96
20:Q:96:LEU:HD11	20:Q:103:THR:HG22	0.99	0.96
52:w:10:LYS:NZ	52:w:11:THR:O	1.98	0.96
6:A:960:U:O2'	6:A:961:U:OP2	1.82	0.96
33:d:32:PRO:HG2	33:d:168:GLU:CG	1.95	0.96
42:m:88:ILE:HB	43:n:52:VAL:HA	1.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:64:VAL:HG11	56:B:80:LEU:CB	1.93	0.96
56:B:202:ASP:O	56:B:203:SER:HB3	1.63	0.96
56:B:226:ASP:H	56:B:239:VAL:CG1	1.79	0.96
56:B:412:LEU:HG	56:B:479:TYR:CA	1.96	0.96
6:A:1316:G:N1	6:A:1319:A:OP2	1.99	0.95
7:D:489:G:C8	7:D:1284:A:C4	2.53	0.95
20:Q:56:LEU:O	20:Q:60:VAL:HG21	1.62	0.95
56:B:378:TYR:C	56:B:406:LEU:HB2	1.90	0.95
56:B:381:ARG:O	56:B:402:ILE:O	1.83	0.95
56:B:243:GLY:HA2	56:B:263:TRP:HE1	0.79	0.95
6:A:75:C:H2'	6:A:76:G:H8	1.31	0.95
6:A:1164:G:C5	6:A:1165:C:C4	2.53	0.95
7:D:535:C:O2'	7:D:536:A:H5'	1.66	0.95
10:G:179:ARG:NE	10:G:206:GLU:OE2	1.99	0.95
56:B:228:ILE:CA	56:B:282:LEU:HD22	1.96	0.95
7:D:2194:G:C2	7:D:2195:C:N3	2.33	0.95
29:Z:69:GLY:CA	29:Z:157:LYS:CA	2.44	0.95
56:B:135:ILE:HD13	56:B:145:PRO:HB3	0.96	0.95
56:B:245:PHE:CE2	56:B:261:VAL:O	2.19	0.95
20:Q:71:ARG:CA	20:Q:75:ALA:HB3	1.95	0.95
30:a:242:ARG:O	30:a:242:ARG:NH1	1.98	0.95
31:b:48:GLN:NE2	31:b:80:GLU:OE2	1.99	0.95
40:k:8:GLU:OE1	40:k:9:ARG:NH1	2.00	0.95
56:B:14:ILE:HD12	56:B:26:ALA:HB2	1.48	0.95
36:g:19:ILE:HD13	36:g:59:LYS:HZ3	1.31	0.95
53:x:19:ARG:HE	53:x:44:ARG:HH12	1.08	0.95
56:B:134:VAL:CG2	56:B:163:ALA:O	2.14	0.95
56:B:536:PRO:CB	56:B:550:THR:HG22	1.96	0.95
7:D:1668:A:N6	7:D:1674:G:N3	2.15	0.95
26:W:36:ARG:HD3	26:W:72:GLY:CA	1.96	0.95
56:B:222:VAL:CG1	56:B:264:LEU:HD11	1.96	0.95
56:B:420:TYR:CE1	56:B:471:SER:HA	2.00	0.95
3:3:25:PRO:HA	56:B:440:TYR:OH	1.67	0.95
7:D:1449(A):G:H2'	7:D:1450:C:H6	1.24	0.95
56:B:137:LYS:CG	57:B:701:GCP:C4	2.45	0.95
56:B:242:VAL:HG11	56:B:256:LEU:N	1.82	0.95
7:D:818:G:N2	7:D:1189:A:N7	2.15	0.95
7:D:1580:A:H2'	7:D:1581:G:C5	2.01	0.95
20:Q:23:TYR:CG	20:Q:70:LEU:CD2	2.49	0.95
56:B:67:THR:HA	56:B:76:TYR:CG	2.02	0.95
56:B:420:TYR:CE1	56:B:471:SER:C	2.45	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:428:LEU:HD11	56:B:450:LEU:CD2	1.95	0.95
6:A:200:G:N2	6:A:218:C:O2	2.00	0.95
7:D:2238:G:O2'	7:D:2239:G:OP2	1.84	0.95
26:W:44:MET:O	26:W:45:VAL:CG2	2.15	0.95
56:B:169:LYS:HB2	57:B:701:GCP:C2	1.96	0.95
56:B:497:HIS:ND1	56:B:535:VAL:CG2	2.30	0.95
6:A:55:A:H1'	56:B:208:TYR:OH	1.66	0.94
6:A:1318:A:C2'	26:W:37:ARG:HB2	1.97	0.94
26:W:28:LYS:CG	26:W:29:ARG:HH21	1.80	0.94
55:z:29:LYS:NZ	55:z:40:GLU:OE1	1.99	0.94
56:B:70:ALA:HA	56:B:178:LEU:HD22	1.48	0.94
56:B:494:VAL:HG21	56:B:520:ILE:HD11	1.49	0.94
6:A:55:A:N3	56:B:208:TYR:CE2	2.34	0.94
6:A:458:C:H5"	6:A:465:A:N1	1.82	0.94
7:D:2216:G:H2'	7:D:2217:G:H8	1.22	0.94
30:a:67:PHE:HB3	30:a:153:ALA:HB3	1.50	0.94
56:B:196:LEU:HB3	56:B:282:LEU:HB2	1.47	0.94
7:D:2790:A:C1'	7:D:2893:G:O6	2.15	0.94
56:B:18:VAL:CG2	56:B:86:HIS:HB3	1.97	0.94
56:B:305:LEU:HD11	56:B:369:LEU:HD23	1.46	0.94
56:B:497:HIS:ND1	56:B:535:VAL:CG1	2.30	0.94
6:A:1182:G:O2'	6:A:1183:A:OP2	1.85	0.94
7:D:370:G:O2'	7:D:371:A:O4'	1.85	0.94
7:D:537:C:O2'	7:D:539:G:O5'	1.85	0.94
7:D:1527:G:N1	7:D:1544:C:N3	2.14	0.94
24:U:29:HIS:HB2	24:U:36:ILE:HD11	1.49	0.94
37:h:46:LYS:HZ1	55:z:59:LYS:HZ1	0.99	0.94
41:l:29:ARG:NH1	41:l:91:ARG:O	1.98	0.94
55:z:56:GLU:HA	55:z:59:LYS:HG2	1.47	0.94
6:A:1086:U:H3	6:A:1099:G:H1	1.13	0.94
6:A:1226:C:C4	20:Q:104:ARG:CD	2.49	0.94
10:G:36:ASP:OD1	10:G:40:ARG:NH1	2.00	0.94
20:Q:71:ARG:CB	20:Q:75:ALA:HB3	1.96	0.94
38:i:80:GLU:CD	56:B:567:VAL:HG13	1.90	0.94
56:B:197:LYS:HG3	56:B:281:THR:HG23	1.45	0.94
3:3:133:SER:HA	7:D:1077:A:H2	1.32	0.94
17:N:57:LYS:HG3	17:N:60:ARG:HH12	1.29	0.94
26:W:14:HIS:CG	26:W:35:SER:CB	2.51	0.94
34:e:77:LYS:NZ	34:e:81:GLU:OE2	2.01	0.94
56:B:306:TYR:HB3	56:B:370:ILE:CG2	1.98	0.94
56:B:383:LYS:H	56:B:402:ILE:HG23	1.30	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:410:VAL:HG11	56:B:481:GLN:H	1.32	0.94
3:3:55:VAL:HB	3:3:69:THR:HG22	1.48	0.94
6:A:1446:A:O2'	6:A:1447:G:O5'	1.85	0.94
7:D:154:G:C2'	7:D:155:C:H5'	1.97	0.94
7:D:536:A:N1	7:D:558:G:N1	2.16	0.94
7:D:1174:A:H2'	7:D:1175:U:C5	2.02	0.94
38:i:8:LYS:HZ2	38:i:93:TYR:HD1	0.96	0.94
56:B:49:LEU:CD2	56:B:60:LYS:NZ	2.21	0.94
56:B:137:LYS:HG2	57:B:701:GCP:N1	1.82	0.94
56:B:378:TYR:HB3	56:B:406:LEU:HD11	1.46	0.94
56:B:450:LEU:HD11	56:B:452:TYR:HE1	1.30	0.94
7:D:1519:G:H5'	7:D:1520:U:OP2	1.67	0.94
7:D:2227:A:N6	7:D:2228:G:C6	2.35	0.94
26:W:70:LYS:C	26:W:72:GLY:H	1.73	0.94
56:B:176:GLU:O	56:B:180:ALA:N	2.00	0.94
56:B:322:LYS:CB	56:B:331:THR:HG23	1.97	0.94
56:B:370:ILE:HG22	56:B:371:ALA:H	1.29	0.94
56:B:420:TYR:CE1	56:B:471:SER:CA	2.50	0.94
56:B:531:GLN:HG2	56:B:532:LEU:HG	1.49	0.94
6:A:1318:A:H1'	26:W:14:HIS:CE1	2.01	0.94
7:D:884:C:N4	7:D:885:C:N4	2.16	0.94
7:D:1869:G:N1	7:D:1878:G:O6	2.01	0.94
7:D:1871:A:H2'	7:D:1872:A:C8	2.03	0.94
20:Q:56:LEU:O	20:Q:60:VAL:HG23	1.65	0.94
26:W:16:LEU:HB3	26:W:20:LEU:HD13	1.49	0.94
26:W:51:VAL:HG21	26:W:75:ALA:HB2	1.46	0.94
35:f:86:PRO:HD2	35:f:89:LYS:HZ1	1.32	0.94
56:B:47:ASP:OD2	56:B:53:ARG:NH1	2.01	0.94
56:B:492:VAL:HG22	56:B:541:ILE:CG1	1.98	0.94
3:3:103:GLN:O	3:3:107:ILE:CG1	2.14	0.94
56:B:221:ARG:HG3	56:B:257:GLU:CA	1.90	0.94
17:N:46:ARG:NH1	17:N:64:GLU:OE1	2.01	0.93
31:b:58:ARG:NH1	31:b:73:GLU:HG2	1.82	0.93
37:h:46:LYS:HZ1	55:z:59:LYS:NZ	1.65	0.93
56:B:411:LYS:CD	56:B:436:VAL:HG21	1.96	0.93
56:B:412:LEU:HG	56:B:479:TYR:HA	1.47	0.93
56:B:489:LEU:HD23	56:B:509:HIS:HB3	1.49	0.93
7:D:1453:A:H61	39:j:63:ARG:HH21	1.02	0.93
56:B:412:LEU:HG	56:B:479:TYR:N	1.83	0.93
7:D:602:G:O2'	7:D:603:A:OP2	1.85	0.93
8:E:56:G:H5'	33:d:29:TRP:HZ2	1.28	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:245:PHE:CZ	56:B:262:GLY:C	2.46	0.93
56:B:409:TYR:HB2	56:B:485:ARG:HD2	1.49	0.93
56:B:428:LEU:CD1	56:B:452:TYR:CD1	2.52	0.93
56:B:497:HIS:CG	56:B:535:VAL:CG1	2.50	0.93
3:3:25:PRO:CB	56:B:440:TYR:OH	2.16	0.93
6:A:192:U:O3'	27:X:57:ARG:NH1	2.02	0.93
6:A:774:G:OP2	30:a:276:LYS:NZ	2.00	0.93
7:D:209:C:O3'	54:y:29:LYS:NZ	2.01	0.93
7:D:2805:G:H2'	7:D:2807:G:C4'	1.98	0.93
26:W:14:HIS:CG	26:W:35:SER:HB2	2.02	0.93
56:B:406:LEU:CG	56:B:489:LEU:HD11	1.98	0.93
56:B:197:LYS:CG	56:B:281:THR:HG23	1.97	0.93
56:B:425:MET:HE2	56:B:452:TYR:HH	1.19	0.93
56:B:497:HIS:HA	56:B:535:VAL:HG11	1.39	0.93
4:4:28:C:H42	4:4:42:G:H1	1.15	0.93
6:A:881:G:OP2	19:P:9:GLN:NE2	2.01	0.93
56:B:134:VAL:HA	56:B:163:ALA:CB	1.98	0.93
56:B:382:LEU:C	56:B:402:ILE:HG12	1.93	0.93
7:D:485:C:N3	7:D:486:C:C4	2.37	0.93
20:Q:96:LEU:HD11	20:Q:103:THR:CG2	1.95	0.93
52:w:11:THR:HG21	52:w:15:ARG:HH11	1.32	0.93
56:B:222:VAL:HG13	56:B:264:LEU:HD11	1.50	0.93
56:B:379:LYS:CG	56:B:406:LEU:HA	1.99	0.93
19:P:80:HIS:CG	56:B:342:PHE:HE1	1.87	0.93
26:W:40:ILE:CB	26:W:67:VAL:O	2.17	0.93
26:W:69:HIS:HB3	26:W:74:PHE:CE1	2.03	0.93
56:B:229:ARG:HH21	56:B:282:LEU:C	1.76	0.93
56:B:316:LEU:HD12	56:B:342:PHE:CG	2.02	0.93
7:D:435:C:C2'	7:D:436:C:H5'	1.98	0.93
7:D:773:U:H5'	30:a:48:ARG:HB3	1.51	0.93
26:W:69:HIS:HD2	26:W:74:PHE:CE1	1.86	0.93
36:g:122:LEU:HG	41:l:71:GLY:HA3	1.51	0.93
38:i:80:GLU:CD	56:B:567:VAL:HG11	1.92	0.93
56:B:361:LEU:HD22	56:B:366:GLY:HA3	1.50	0.93
56:B:378:TYR:HA	56:B:406:LEU:HD12	1.50	0.93
3:3:10:LEU:HD21	3:3:57:ILE:CG1	1.97	0.93
26:W:40:ILE:O	26:W:68:GLY:HA2	1.69	0.93
56:B:197:LYS:HA	56:B:281:THR:HG23	1.51	0.93
56:B:361:LEU:HD13	56:B:362:GLU:N	1.84	0.93
56:B:379:LYS:HZ2	56:B:407:GLU:H	1.11	0.93
56:B:412:LEU:HG	56:B:478:ASP:C	1.92	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:490:VAL:CG1	56:B:508:ALA:HB1	1.97	0.93
6:A:1226:C:H42	20:Q:104:ARG:HD2	1.28	0.92
26:W:11:VAL:CG1	26:W:40:ILE:HA	1.98	0.92
56:B:299:PRO:HA	56:B:479:TYR:CZ	2.04	0.92
56:B:523:LYS:HB3	56:B:598:LEU:HD22	1.11	0.92
3:3:21:PRO:HD2	3:3:22:PRO:HD3	1.50	0.92
4:4:58:A:O2'	4:4:60:U:OP2	1.86	0.92
56:B:12:PHE:CA	56:B:100:VAL:CG1	2.46	0.92
56:B:174:VAL:HG12	56:B:177:ILE:HG13	1.50	0.92
6:A:444:C:H2'	6:A:445:G:C8	2.03	0.92
7:D:1747:G:H2'	7:D:1748:G:H5'	1.49	0.92
26:W:28:LYS:HG3	26:W:29:ARG:NH2	1.83	0.92
6:A:96:G:C2	6:A:97:U:C2	2.57	0.92
6:A:1092:A:H5"	14:K:4:ARG:HH12	1.29	0.92
6:A:1216:G:OP1	21:R:3:ARG:NH1	2.01	0.92
7:D:1583:A:H4'	7:D:1585:C:C5	2.03	0.92
42:m:66:ASN:HB3	42:m:70:ARG:HH21	1.34	0.92
44:o:25:ARG:HD3	44:o:75:TYR:HE2	1.33	0.92
56:B:300:VAL:HG11	56:B:477:MET:SD	2.09	0.92
56:B:558:VAL:HG23	56:B:577:GLN:NE2	1.84	0.92
6:A:1461:G:C2	6:A:1462:G:N7	2.38	0.92
7:D:851:U:O2	7:D:928:G:N2	2.02	0.92
7:D:1184:G:OP2	50:u:30:ARG:NH2	2.02	0.92
29:Z:66:HIS:CB	29:Z:158:ALA:O	2.18	0.92
56:B:222:VAL:HG11	56:B:264:LEU:CD1	2.00	0.92
3:3:89:HIS:O	3:3:90:LYS:HB2	1.65	0.92
6:A:90:C:H2'	6:A:91:C:C5	2.03	0.92
6:A:1396:A:O2'	6:A:1397:C:OP2	1.85	0.92
7:D:820:A:OP2	7:D:973:A:N6	2.01	0.92
7:D:1417:C:N3	7:D:1581:G:N2	2.17	0.92
7:D:1791:A:OP1	30:a:213:ARG:NH1	2.02	0.92
25:V:21:LYS:NZ	25:V:23:LYS:HB3	1.85	0.92
56:B:42:ARG:NH2	56:B:53:ARG:NH2	2.16	0.92
56:B:133:PRO:O	56:B:163:ALA:CB	2.17	0.92
56:B:191:ASP:HB3	56:B:219:GLU:HB3	0.94	0.92
56:B:240:ASP:CB	56:B:266:ALA:CB	2.47	0.92
56:B:322:LYS:CB	56:B:331:THR:CG2	2.48	0.92
56:B:492:VAL:HA	56:B:541:ILE:CB	1.99	0.92
3:3:6:ALA:HB3	3:3:59:ILE:HB	1.17	0.92
6:A:1306:A:N7	6:A:1331:G:N2	2.18	0.92
26:W:14:HIS:NE2	26:W:34:TRP:CE3	2.37	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:69:ARG:CZ	56:B:69:ARG:HA	2.00	0.92
56:B:243:GLY:HA2	56:B:263:TRP:NE1	1.61	0.92
6:A:89:U:H2'	6:A:90:C:C5'	1.98	0.92
7:D:768:G:O2'	7:D:1379:A:N6	2.03	0.92
7:D:1054:A:H2'	7:D:1055:G:H8	1.34	0.92
56:B:135:ILE:HG13	56:B:165:PHE:CA	2.00	0.92
56:B:243:GLY:HA3	56:B:263:TRP:HD1	1.13	0.92
56:B:361:LEU:O	56:B:366:GLY:N	2.03	0.92
6:A:564:C:OP1	19:P:15:ARG:NH1	2.02	0.92
29:Z:180:PHE:HB3	29:Z:185:LEU:HD11	1.52	0.92
56:B:81:ILE:HD11	56:B:100:VAL:HG22	1.47	0.92
56:B:379:LYS:NZ	56:B:407:GLU:H	1.66	0.92
56:B:417:PRO:HB3	56:B:447:ARG:HA	0.95	0.92
56:B:441:LEU:HD13	56:B:447:ARG:HD2	1.50	0.92
56:B:523:LYS:HA	56:B:598:LEU:HD21	1.52	0.92
7:D:154:G:C6	7:D:155:C:C4	2.58	0.92
7:D:2226:C:C2'	7:D:2227:A:H5'	1.99	0.92
26:W:16:LEU:HB3	26:W:20:LEU:CD1	1.99	0.92
32:c:200:GLU:OE2	32:c:204:ASN:ND2	2.03	0.92
36:g:67:LYS:NZ	41:l:65:LYS:HE2	1.84	0.92
56:B:490:VAL:CG1	56:B:508:ALA:CB	2.48	0.92
56:B:497:HIS:HA	56:B:535:VAL:HG12	0.94	0.92
56:B:506:PHE:HZ	56:B:520:ILE:HG21	1.32	0.92
3:3:52:ILE:CD1	7:D:1062:G:OP1	2.18	0.91
6:A:1491:G:OP1	19:P:46:LYS:NZ	2.04	0.91
7:D:2794:C:C4	7:D:2799:A:C2	2.57	0.91
26:W:14:HIS:CG	26:W:35:SER:CA	2.52	0.91
29:Z:43:VAL:CG2	29:Z:175:VAL:CG1	2.46	0.91
56:B:493:ASN:O	56:B:540:ALA:O	1.86	0.91
56:B:531:GLN:NE2	56:B:584:LEU:CD1	2.31	0.91
6:A:1309:G:C8	6:A:1310:G:N7	2.38	0.91
6:A:1319:A:H5'	26:W:37:ARG:O	1.67	0.91
7:D:1725:G:N2	7:D:1735:C:O2	2.02	0.91
6:A:411:A:N6	6:A:430:A:N7	2.17	0.91
6:A:717:C:H4'	18:O:117:ASN:HD22	1.33	0.91
7:D:603:A:OP2	7:D:655:A:N6	2.03	0.91
23:T:52:ASP:OD2	23:T:55:ARG:N	2.02	0.91
31:b:60:ASN:OD1	31:b:61:ARG:NH2	2.03	0.91
3:3:6:ALA:CB	3:3:59:ILE:CG1	2.41	0.91
6:A:474:G:H2'	6:A:475:G:C8	2.04	0.91
7:D:371:A:H5'	7:D:423:A:C6	2.05	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:96:LEU:HD13	20:Q:103:THR:HG22	1.52	0.91
38:i:81:VAL:HG22	56:B:567:VAL:HB	1.53	0.91
6:A:1227:A:OP2	20:Q:94:ARG:NH2	2.03	0.91
6:A:1461:G:H2'	6:A:1462:G:C8	2.05	0.91
7:D:783:A:H2'	7:D:784:A:H4'	1.51	0.91
7:D:1856:G:N7	7:D:1857:G:N2	2.17	0.91
20:Q:65:LYS:HG3	20:Q:73:GLU:HG3	1.53	0.91
26:W:11:VAL:HG11	26:W:40:ILE:CA	2.00	0.91
56:B:221:ARG:CB	56:B:256:LEU:O	2.17	0.91
6:A:518:C:O2'	6:A:519:C:OP2	1.87	0.91
6:A:1028(B):C:O2	6:A:1032(A):G:N1	2.03	0.91
6:A:1318:A:H2'	26:W:37:ARG:HB2	1.51	0.91
7:D:884:C:N3	7:D:885:C:N4	1.99	0.91
29:Z:38:ASP:CA	29:Z:177:LYS:HE3	2.00	0.91
56:B:298:LYS:N	56:B:348:PHE:HE2	1.67	0.91
6:A:1439:C:OP2	27:X:38:LYS:NZ	2.04	0.91
7:D:71:A:O2'	7:D:72:U:OP2	1.89	0.91
29:Z:38:ASP:HB3	29:Z:177:LYS:HE2	1.50	0.91
31:b:2:LYS:NZ	31:b:83:ASP:HB2	1.84	0.91
37:h:46:LYS:NZ	55:z:59:LYS:HZ1	1.68	0.91
50:u:39:ASP:OD2	50:u:44:ARG:NH2	2.03	0.91
56:B:204:VAL:HG12	56:B:205:TYR:H	1.33	0.91
56:B:379:LYS:HE3	56:B:484:TYR:HB3	0.94	0.91
7:D:1858:G:N7	7:D:1883:G:N1	2.19	0.91
56:B:492:VAL:C	56:B:505:THR:CG2	2.31	0.91
7:D:1725:G:C2	7:D:1726:G:N7	2.39	0.91
56:B:34:HIS:HE2	56:B:67:THR:CG2	1.84	0.91
56:B:525:ALA:HB1	56:B:528:ILE:HG12	1.52	0.91
6:A:1013:G:N2	6:A:1016:A:OP2	2.03	0.91
7:D:1943:U:O2'	7:D:1944:U:OP2	1.87	0.91
50:u:5:LYS:NZ	50:u:34:GLU:OE2	2.03	0.91
56:B:297:ALA:HB3	56:B:328:ALA:HB2	0.94	0.91
56:B:303:ALA:CB	56:B:346:CYS:O	2.19	0.91
56:B:489:LEU:C	56:B:507:ILE:O	2.14	0.91
3:3:90:LYS:HE3	3:3:91:PRO:CD	2.01	0.90
6:A:498:A:H4'	6:A:500:G:H5'	1.50	0.90
6:A:972:C:OP1	17:N:57:LYS:NZ	2.04	0.90
6:A:1305:G:N2	6:A:1332:A:OP2	2.03	0.90
7:D:539:G:N3	7:D:556:G:C2	2.39	0.90
7:D:2790:A:C2	7:D:2893:G:C6	2.59	0.90
8:E:12:C:OP2	48:s:74:ARG:NH1	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:56:G:C5'	33:d:29:TRP:CZ2	2.52	0.90
26:W:15:LEU:CA	26:W:35:SER:OG	2.19	0.90
42:m:92:ARG:H	43:n:10:LYS:NZ	1.68	0.90
56:B:12:PHE:CA	56:B:102:GLY:O	2.18	0.90
56:B:118:LEU:HD13	56:B:446:LYS:HE2	1.53	0.90
56:B:147:GLU:HA	56:B:150:LEU:HD23	1.53	0.90
56:B:409:TYR:HD2	56:B:453:GLU:HG2	1.36	0.90
6:A:1461:G:C2	6:A:1462:G:C5	2.58	0.90
26:W:61:TYR:HD1	26:W:62:ILE:HG12	1.35	0.90
26:W:69:HIS:CG	26:W:74:PHE:CE1	2.59	0.90
37:h:46:LYS:NZ	55:z:59:LYS:NZ	2.20	0.90
56:B:81:ILE:HD11	56:B:100:VAL:HG21	0.92	0.90
56:B:118:LEU:CD2	56:B:446:LYS:NZ	2.34	0.90
1:1:8:LYS:NZ	7:D:2467:C:OP1	2.04	0.90
3:3:90:LYS:CE	3:3:91:PRO:HD3	2.02	0.90
20:Q:88:ARG:HG3	20:Q:88:ARG:HH11	1.34	0.90
56:B:242:VAL:CG1	56:B:256:LEU:CG	2.47	0.90
6:A:305:G:H4'	6:A:306:G:OP2	1.69	0.90
7:D:833:U:H1'	37:h:48:PRO:HD2	1.50	0.90
7:D:928:G:N7	7:D:929:G:C5	2.40	0.90
7:D:997:G:OP2	42:m:58:ARG:NH2	2.04	0.90
7:D:1478:G:C2'	7:D:1479:G:H5'	2.01	0.90
7:D:1746:G:C6	7:D:1747:G:C2	2.60	0.90
29:Z:66:HIS:O	29:Z:158:ALA:HA	1.71	0.90
29:Z:69:GLY:CA	29:Z:157:LYS:HB3	2.01	0.90
56:B:17:HIS:CE1	56:B:116:GLU:CB	2.55	0.90
56:B:65:ARG:HB2	56:B:246:THR:HA	1.53	0.90
6:A:1309:G:N2	6:A:1329:A:C5	2.39	0.90
7:D:1902:C:O2'	30:a:244:ARG:NH2	2.04	0.90
7:D:2469:A:O4'	38:i:56:ARG:NH1	2.05	0.90
29:Z:69:GLY:HA2	29:Z:157:LYS:HB3	1.50	0.90
56:B:298:LYS:N	56:B:348:PHE:CE2	2.38	0.90
56:B:302:PHE:CE1	56:B:460:LEU:HD21	2.05	0.90
56:B:382:LEU:CG	56:B:401:ARG:CG	2.42	0.90
56:B:411:LYS:CB	56:B:480:GLU:OE1	2.19	0.90
56:B:468:LYS:O	56:B:473:GLY:N	2.04	0.90
6:A:494:U:O2	6:A:496:A:N6	2.04	0.90
7:D:1566:A:O2'	30:a:59:LYS:NZ	2.04	0.90
7:D:2748:A:N7	7:D:2749:A:N6	2.19	0.90
7:D:2816:C:H4'	52:w:43:HIS:HE1	1.37	0.90
33:d:32:PRO:HG3	33:d:168:GLU:HB3	1.03	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:195:PRO:HB2	56:B:286:PRO:C	1.97	0.90
56:B:226:ASP:N	56:B:239:VAL:CG1	2.35	0.90
56:B:528:ILE:HG21	56:B:592:VAL:CG2	1.81	0.90
6:A:444:C:H2'	6:A:445:G:H8	1.35	0.90
20:Q:48:LEU:HB3	20:Q:53:VAL:HG21	1.50	0.90
56:B:65:ARG:CG	56:B:245:PHE:O	2.15	0.90
56:B:135:ILE:HD11	56:B:165:PHE:CD2	2.07	0.90
56:B:301:VAL:HG11	56:B:349:LEU:O	1.70	0.90
6:A:974:A:OP2	21:R:29:ARG:NH2	2.05	0.90
7:D:1131:G:O4'	35:f:74:ARG:NH1	2.04	0.90
56:B:382:LEU:HD23	56:B:401:ARG:C	1.96	0.90
6:A:80:G:H1	6:A:89:U:H3	0.91	0.90
6:A:1296:C:O3'	20:Q:13:LYS:NZ	2.05	0.90
56:B:229:ARG:HH22	56:B:286:PRO:CG	1.85	0.90
56:B:494:VAL:CG2	56:B:520:ILE:CD1	2.46	0.90
6:A:76:G:C5	6:A:95:G:N1	2.40	0.90
6:A:808:C:O5'	22:S:48:LYS:NZ	2.05	0.90
6:A:998(A):C:O2	6:A:1042:G:N1	2.04	0.90
7:D:2612:C:O2'	52:w:4:HIS:ND1	2.03	0.90
7:D:2793:G:N2	7:D:2803:C:C2	2.40	0.90
26:W:14:HIS:CE1	26:W:34:TRP:CE3	2.60	0.90
56:B:281:THR:CG2	56:B:287:THR:HG23	2.02	0.90
6:A:1006:C:H42	6:A:1024:G:H1'	1.35	0.89
7:D:120:U:O2'	7:D:121:G:OP2	1.90	0.89
7:D:371:A:N6	7:D:424:G:N7	2.20	0.89
56:B:242:VAL:HB	56:B:256:LEU:HD21	1.53	0.89
56:B:303:ALA:HB2	56:B:346:CYS:C	1.97	0.89
6:A:279:A:O2'	6:A:280:C:OP2	1.90	0.89
7:D:30:G:OP2	42:m:5:LYS:NZ	2.05	0.89
8:E:75:G:N2	47:r:87:ASP:OD2	2.05	0.89
56:B:43:GLU:HB2	56:B:53:ARG:HH22	0.73	0.89
7:D:1479:G:O3'	7:D:1559:G:O6	1.90	0.89
7:D:1870:C:H2'	7:D:1871:A:C8	2.06	0.89
7:D:2206:C:O2'	7:D:2207:C:H5'	1.72	0.89
56:B:153:GLU:CA	56:B:159:PRO:HA	2.02	0.89
7:D:627:A:H61	7:D:636:G:H2'	1.37	0.89
7:D:648:G:C5	7:D:649:G:C6	2.61	0.89
7:D:1666:G:H1	7:D:1994:C:H42	1.20	0.89
53:x:19:ARG:NE	53:x:44:ARG:HH12	1.70	0.89
56:B:34:HIS:NE2	56:B:67:THR:CG2	2.35	0.89
56:B:201:PHE:N	56:B:215:LEU:HB3	1.86	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:417:PRO:CB	56:B:446:LYS:C	2.42	0.89
56:B:493:ASN:HB3	56:B:503:ALA:CB	2.02	0.89
6:A:276:G:O3'	24:U:68:ARG:NH1	2.04	0.89
7:D:1102:C:H2'	7:D:1103:A:H5"	1.55	0.89
7:D:1862:G:N2	7:D:1880:C:N3	2.20	0.89
7:D:2304:G:HO2'	33:d:131:TYR:HH	1.16	0.89
7:D:2447:G:N2	7:D:2450:A:OP2	2.05	0.89
7:D:2810:A:N6	7:D:2891:G:H1'	1.86	0.89
11:H:3:ARG:NH2	11:H:74:GLN:OE1	2.05	0.89
40:k:17:ARG:HA	40:k:20:ARG:HD3	1.50	0.89
46:q:33:LYS:HD3	46:q:67:LEU:HB2	1.53	0.89
56:B:211:VAL:C	56:B:212:ILE:HD12	1.98	0.89
6:A:75:C:N3	6:A:96:G:C6	2.40	0.89
6:A:297:G:N2	6:A:300:A:OP2	2.04	0.89
7:D:1748:G:C2	7:D:1749:A:C2	2.61	0.89
36:g:112:MET:HE3	41:l:39:ARG:HE	1.37	0.89
56:B:12:PHE:N	56:B:100:VAL:HG13	1.86	0.89
56:B:303:ALA:CB	56:B:346:CYS:C	2.45	0.89
6:A:468:A:H5"	23:T:80:PHE:CZ	2.07	0.89
7:D:39:C:O2	32:c:46:ARG:NH1	2.06	0.89
7:D:171:G:H1'	7:D:172:C:C5	2.08	0.89
7:D:1491:G:H3'	7:D:1492:G:H4'	1.54	0.89
11:H:98:GLU:OE2	11:H:173:TRP:NE1	2.06	0.89
26:W:14:HIS:C	26:W:35:SER:HB3	1.73	0.89
32:c:168:ARG:HG3	32:c:169:ASN:H	1.34	0.89
56:B:306:TYR:O	56:B:370:ILE:N	1.93	0.89
6:A:402:G:OP2	11:H:74:GLN:NE2	2.04	0.89
6:A:685:G:H1	6:A:703:G:HO2'	1.21	0.89
6:A:1309:G:N7	6:A:1310:G:N7	2.20	0.89
7:D:363(F):A:H2'	7:D:364:C:O4'	1.71	0.89
7:D:1455:G:H2'	7:D:1456:G:C8	2.07	0.89
29:Z:66:HIS:O	29:Z:158:ALA:CA	2.21	0.89
30:a:44:ASN:OD1	30:a:52:ARG:NH2	2.06	0.89
35:f:10:GLU:HB3	35:f:39:ARG:NH1	1.88	0.89
56:B:196:LEU:HB2	56:B:282:LEU:HB3	1.53	0.89
56:B:197:LYS:HB2	56:B:281:THR:CG2	2.03	0.89
56:B:246:THR:OG1	56:B:249:GLY:O	1.90	0.89
5:5:1:G:N1	5:5:72:C:N3	2.21	0.89
6:A:848:C:H2'	6:A:849:C:C6	2.07	0.89
7:D:641:C:H42	7:D:646:A:H61	1.21	0.89
26:W:40:ILE:HG21	26:W:67:VAL:O	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:410:VAL:CG1	56:B:481:GLN:N	2.36	0.89
7:D:485:C:N4	7:D:486:C:N4	2.19	0.89
7:D:2657:A:O2'	34:e:160:LYS:NZ	2.05	0.89
24:U:58:GLU:OE2	24:U:75:ARG:HB3	1.73	0.89
56:B:306:TYR:HB3	56:B:370:ILE:HB	1.32	0.89
56:B:431:LYS:CG	56:B:455:PRO:CG	2.43	0.89
56:B:492:VAL:HA	56:B:541:ILE:CG2	2.00	0.89
6:A:1461:G:N3	6:A:1462:G:N7	2.20	0.88
7:D:163:U:C2'	7:D:164:U:H5"	2.03	0.88
56:B:84:PRO:HB2	57:B:701:GCP:O3G	1.73	0.88
56:B:412:LEU:HD11	56:B:479:TYR:CA	1.99	0.88
6:A:1014:A:H2	26:W:32:LYS:CE	1.86	0.88
7:D:1750:G:O2'	7:D:1751:C:H5'	1.74	0.88
8:E:57:A:N3	33:d:29:TRP:CG	2.41	0.88
26:W:14:HIS:CD2	26:W:35:SER:CA	2.55	0.88
56:B:74:GLU:N	56:B:74:GLU:OE1	2.06	0.88
56:B:196:LEU:CB	56:B:282:LEU:CB	2.51	0.88
56:B:210:GLY:HA2	56:B:269:ARG:HB3	1.55	0.88
56:B:392:ASN:O	56:B:394:ALA:N	2.05	0.88
56:B:420:TYR:HD1	56:B:471:SER:HA	1.30	0.88
6:A:581:G:OP1	22:S:65:ARG:NH1	2.07	0.88
6:A:1014:A:C2	26:W:32:LYS:CD	2.43	0.88
7:D:489:G:C8	7:D:1284:A:C2	2.60	0.88
7:D:1742:C:H3'	7:D:1743:G:C5'	2.01	0.88
56:B:382:LEU:CD2	56:B:401:ARG:C	2.46	0.88
6:A:703:G:O2'	6:A:704:A:OP2	1.90	0.88
6:A:1220:G:OP1	26:W:34:TRP:NE1	2.06	0.88
7:D:46:C:OP2	7:D:215:G:H2'	1.72	0.88
7:D:99:U:H5'	7:D:101:G:C5'	2.04	0.88
7:D:1224:G:C2'	7:D:1225:C:H5'	2.03	0.88
7:D:1449(A):G:H2'	7:D:1450:C:C6	2.07	0.88
7:D:2094:G:O6	7:D:2195:C:N4	2.06	0.88
30:a:252:TRP:O	30:a:255:LYS:NZ	2.06	0.88
6:A:404:U:H5'	11:H:122:ARG:HH11	1.37	0.88
6:A:1170:A:H2'	6:A:1171:G:H5'	1.56	0.88
7:D:370:G:N2	7:D:422:A:OP2	2.07	0.88
7:D:956:G:N2	7:D:960:A:OP2	2.06	0.88
7:D:2660:A:C8	56:B:472:ARG:O	2.27	0.88
20:Q:59:TYR:C	20:Q:61:GLU:H	1.78	0.88
35:f:7:LYS:HZ3	35:f:10:GLU:HB2	1.39	0.88
56:B:84:PRO:CB	57:B:701:GCP:O3G	2.21	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:152:VAL:HA	56:B:156:LEU:CB	2.04	0.88
56:B:212:ILE:HG21	56:B:263:TRP:CZ3	2.08	0.88
56:B:281:THR:HG21	56:B:287:THR:HG23	1.52	0.88
7:D:489:G:C6	7:D:1284:A:N1	2.42	0.88
7:D:1068:G:HO2'	7:D:1096:A:HO2'	0.95	0.88
7:D:1869:G:HO2'	7:D:1871:A:H62	1.15	0.88
30:a:242:ARG:NH1	30:a:244:ARG:HB2	1.88	0.88
31:b:2:LYS:HD3	31:b:83:ASP:OD2	1.74	0.88
56:B:42:ARG:NH2	56:B:53:ARG:CZ	2.36	0.88
56:B:61:ALA:O	56:B:82:ASP:HB2	1.73	0.88
56:B:78:PHE:CE2	56:B:182:VAL:HG22	2.09	0.88
56:B:300:VAL:N	56:B:479:TYR:HE1	1.70	0.88
6:A:1166:G:O2'	6:A:1169:A:N7	2.05	0.88
7:D:535:C:N4	7:D:536:A:H62	1.69	0.88
56:B:46:LEU:CB	56:B:61:ALA:CB	2.24	0.88
6:A:79:G:N1	6:A:90:C:C2	2.37	0.88
6:A:1320:C:H5"	26:W:70:LYS:CE	2.02	0.88
56:B:118:LEU:HD13	56:B:446:LYS:NZ	1.81	0.88
56:B:135:ILE:HG12	56:B:165:PHE:HD1	1.06	0.88
7:D:485:C:C4	7:D:486:C:N4	2.41	0.88
26:W:15:LEU:HB2	26:W:35:SER:HG	1.08	0.88
43:n:19:LYS:N	43:n:21:ARG:HH12	1.71	0.88
47:r:152:ALA:H	47:r:169:GLU:H	1.22	0.88
56:B:228:ILE:CG1	56:B:282:LEU:CD2	2.52	0.88
7:D:2052:G:N2	31:b:148:GLY:O	2.07	0.88
29:Z:69:GLY:C	29:Z:157:LYS:HA	1.98	0.88
56:B:78:PHE:HZ	56:B:182:VAL:CG2	1.81	0.88
6:A:842:C:O3'	6:A:848:C:OP2	1.91	0.87
6:A:1014:A:C3'	26:W:18:LYS:HE2	2.04	0.87
7:D:532:A:H2	7:D:2035:G:H21	1.20	0.87
7:D:609(A):G:N2	7:D:618(A):C:O2	2.07	0.87
56:B:70:ALA:HA	56:B:178:LEU:CD2	2.03	0.87
56:B:230:ILE:HG23	56:B:279:THR:C	1.98	0.87
56:B:303:ALA:O	56:B:344:PHE:O	1.92	0.87
56:B:533:PHE:HB3	56:B:535:VAL:HG23	1.55	0.87
3:3:21:PRO:HB2	7:D:1067:A:OP2	1.74	0.87
7:D:2873:A:O2'	39:j:5:LYS:NZ	2.06	0.87
26:W:4:SER:O	26:W:6:LYS:N	2.07	0.87
26:W:14:HIS:HB3	26:W:35:SER:CB	2.04	0.87
56:B:135:ILE:HD13	56:B:165:PHE:CD1	2.09	0.87
56:B:282:LEU:HD12	56:B:283:ALA:H	1.37	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:102:G:H2'	6:A:103:C:C6	2.08	0.87
6:A:456:C:C2	6:A:477:G:C2	2.62	0.87
7:D:2449:U:O2'	7:D:2450:A:O5'	1.91	0.87
56:B:405:ILE:HA	56:B:486:PRO:HA	1.55	0.87
56:B:463:PHE:O	56:B:467:LEU:HB2	1.74	0.87
7:D:2876:G:OP1	41:l:2:ASN:ND2	2.07	0.87
26:W:69:HIS:CG	26:W:74:PHE:HZ	1.84	0.87
35:f:69:GLN:HE21	35:f:87:LEU:H	1.17	0.87
47:r:96:VAL:HG13	47:r:128:VAL:HG22	1.56	0.87
56:B:42:ARG:HH21	56:B:53:ARG:CZ	1.85	0.87
56:B:338:THR:OG1	56:B:502:ASP:OD2	1.91	0.87
56:B:417:PRO:CB	56:B:447:ARG:CA	2.44	0.87
56:B:523:LYS:CA	56:B:598:LEU:HD21	2.04	0.87
6:A:129(A):G:O2'	6:A:130:A:OP2	1.91	0.87
7:D:40:C:O2'	7:D:41:C:H5'	1.74	0.87
8:E:11:C:OP2	48:s:74:ARG:NH2	2.07	0.87
26:W:36:ARG:HD2	26:W:72:GLY:HA3	1.54	0.87
56:B:299:PRO:C	56:B:479:TYR:CE1	2.53	0.87
56:B:379:LYS:HG2	56:B:406:LEU:CA	2.05	0.87
1:1:9:ARG:NH2	7:D:1033:U:OP1	2.07	0.87
7:D:126:A:P	54:y:47:ARG:HH11	1.98	0.87
7:D:1668:A:H62	7:D:1674:G:H1'	1.39	0.87
26:W:40:ILE:CG2	26:W:67:VAL:O	2.23	0.87
31:b:147:PRO:HB2	31:b:149:ARG:HG2	1.57	0.87
56:B:107:VAL:HG11	56:B:113:VAL:HG22	1.57	0.87
56:B:151:GLU:O	56:B:155:VAL:CB	2.22	0.87
56:B:242:VAL:HB	56:B:256:LEU:HD11	1.53	0.87
56:B:242:VAL:CB	56:B:256:LEU:CD1	2.45	0.87
56:B:299:PRO:C	56:B:479:TYR:CZ	2.51	0.87
6:A:591:U:OP1	15:L:30:ARG:NH1	2.08	0.87
7:D:539:G:N2	7:D:556:G:C2	2.42	0.87
7:D:1619:G:H21	54:y:1:MET:H3	1.18	0.87
26:W:3:ARG:HG2	26:W:42:PRO:HB3	1.56	0.87
26:W:12:ASP:HB2	26:W:38:SER:HG	1.38	0.87
56:B:134:VAL:HA	56:B:163:ALA:HB1	1.53	0.87
56:B:329:ALA:C	56:B:330:LEU:HD13	2.00	0.87
3:3:129:GLY:HA3	7:D:1059:G:H1	1.40	0.87
7:D:270:A:H2	7:D:370:G:H1'	1.35	0.87
7:D:1418:G:N2	7:D:1580:A:H2	1.64	0.87
40:k:50:SER:H	40:k:76:LYS:HZ3	1.22	0.87
56:B:170:THR:HG22	56:B:171:GLY:H	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:211:VAL:O	56:B:265:VAL:HG21	1.74	0.87
6:A:754:C:OP1	22:S:72:ARG:NH1	2.08	0.87
6:A:1178:G:OP2	16:M:93:ARG:NH1	2.07	0.87
6:A:1310:G:H2'	6:A:1311:G:H8	1.36	0.87
7:D:39:C:H1'	32:c:46:ARG:NH1	1.89	0.87
7:D:648:G:C6	7:D:649:G:C6	2.62	0.87
7:D:2562:U:O2'	36:g:23:ARG:NH2	2.06	0.87
24:U:50:LYS:O	24:U:52:LYS:NZ	2.07	0.87
26:W:15:LEU:N	26:W:35:SER:OG	2.07	0.87
30:a:184:LYS:H	30:a:267:SER:HG	1.20	0.87
33:d:18:GLU:OE2	33:d:22:ARG:NE	2.07	0.87
37:h:29:LYS:HZ1	43:n:82:ARG:HH12	0.92	0.87
38:i:80:GLU:OE1	56:B:567:VAL:HG11	1.74	0.87
6:A:75:C:C2	6:A:96:G:N1	2.39	0.86
7:D:371:A:H5'	7:D:423:A:N6	1.89	0.86
28:Y:13:ILE:HG13	28:Y:22:ARG:HH12	1.40	0.86
47:r:10:ARG:HG2	47:r:36:LYS:HD2	1.55	0.86
56:B:152:VAL:CG1	56:B:156:LEU:HB3	2.04	0.86
7:D:611:C:O2	7:D:617:G:N1	2.08	0.86
56:B:490:VAL:O	56:B:507:ILE:O	1.93	0.86
56:B:493:ASN:CG	56:B:503:ALA:HB1	1.99	0.86
5:5:11:C:N4	5:5:24:G:O6	2.08	0.86
7:D:535:C:N4	7:D:536:A:N6	2.23	0.86
7:D:1710:C:O2'	7:D:1711:C:H5'	1.76	0.86
13:J:23:LYS:NZ	13:J:42:GLU:OE2	2.07	0.86
43:n:17:GLY:HA3	43:n:19:LYS:NZ	1.89	0.86
56:B:221:ARG:CG	56:B:257:GLU:CA	2.49	0.86
3:3:13:PRO:HB2	3:3:16:LYS:HZ2	1.39	0.86
6:A:1131:G:O6	6:A:1143:G:N2	2.08	0.86
7:D:539:G:N1	7:D:556:G:C6	2.44	0.86
7:D:1174:A:C5	7:D:1176:G:N7	2.42	0.86
29:Z:38:ASP:CG	29:Z:178:ALA:H	1.84	0.86
39:j:42:LYS:HE3	39:j:45:ARG:HH21	1.41	0.86
51:v:57:GLU:OE2	51:v:58:ARG:NE	2.08	0.86
56:B:67:THR:HA	56:B:76:TYR:CB	2.04	0.86
56:B:245:PHE:HE2	56:B:261:VAL:O	1.57	0.86
56:B:361:LEU:HD21	56:B:369:LEU:CD2	2.05	0.86
6:A:500:G:N1	6:A:546:G:C2	2.44	0.86
6:A:944:G:N1	6:A:1338:G:OP2	2.08	0.86
8:E:75:G:P	47:r:36:LYS:HZ1	1.98	0.86
42:m:16:LYS:HA	42:m:19:LYS:NZ	1.89	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:490:VAL:CA	56:B:508:ALA:HB3	2.05	0.86
6:A:92:G:C5	6:A:93:U:C4	2.63	0.86
6:A:217:C:H2'	6:A:218:C:C6	2.10	0.86
6:A:1176:A:N1	6:A:1181:G:N2	2.23	0.86
35:f:42:TRP:HE1	42:m:64:ARG:HA	1.37	0.86
41:l:21:GLU:OE1	41:l:23:ARG:NH2	2.07	0.86
56:B:229:ARG:NH2	56:B:286:PRO:CG	2.38	0.86
56:B:492:VAL:CB	56:B:541:ILE:CD1	2.52	0.86
7:D:1583:A:H5'	7:D:1585:C:O4'	1.75	0.86
7:D:1919:A:O2'	7:D:1920:C:O5'	1.93	0.86
7:D:2794:C:N3	7:D:2802:G:C6	2.43	0.86
40:k:11:LYS:NZ	40:k:15:ARG:HH12	1.74	0.86
56:B:303:ALA:HB2	56:B:346:CYS:O	1.75	0.86
56:B:497:HIS:CA	56:B:535:VAL:HG12	1.91	0.86
2:2:11:ALA:HB1	7:D:1046:A:N7	1.91	0.86
6:A:927:G:H4'	6:A:1503:A:H62	1.40	0.86
6:A:1165:C:O2'	6:A:1166:G:H5'	1.75	0.86
19:P:91:LYS:O	19:P:93:LEU:N	2.09	0.86
31:b:2:LYS:HZ2	31:b:83:ASP:HB2	1.41	0.86
56:B:492:VAL:CB	56:B:541:ILE:HD13	2.05	0.86
3:3:13:PRO:C	3:3:16:LYS:HZ1	1.83	0.86
43:n:17:GLY:HA3	43:n:19:LYS:HZ3	1.40	0.86
56:B:134:VAL:HG23	56:B:164:ILE:O	1.76	0.86
56:B:490:VAL:HG12	56:B:491:LYS:H	1.39	0.86
6:A:949:A:H1'	6:A:1364:U:H3	1.41	0.86
6:A:1309:G:H5'	20:Q:88:ARG:HH22	1.09	0.86
7:D:154:G:N1	7:D:173:G:C2	2.44	0.86
7:D:359:A:O2'	7:D:360:G:N7	2.06	0.86
7:D:1224:G:O2'	7:D:1225:C:H5'	1.76	0.86
19:P:80:HIS:CG	56:B:342:PHE:CE1	2.63	0.86
26:W:29:ARG:CG	26:W:48:THR:HG21	2.06	0.86
56:B:379:LYS:HE3	56:B:484:TYR:CG	2.10	0.86
56:B:411:LYS:HA	56:B:452:TYR:O	1.76	0.86
6:A:208:U:O2'	6:A:209:U:OP1	1.94	0.85
6:A:1245:A:OP2	28:Y:9:ARG:NH2	2.09	0.85
7:D:1456:G:C2	7:D:1457:A:C8	2.63	0.85
7:D:2756:U:O4	7:D:2758:A:N6	2.09	0.85
41:l:54:ARG:HG3	41:l:100:TYR:HB3	1.57	0.85
56:B:8:ARG:HB2	56:B:74:GLU:HB2	1.57	0.85
56:B:137:LYS:CD	57:B:701:GCP:C4	2.53	0.85
56:B:300:VAL:CG1	56:B:477:MET:HE1	2.05	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:416:THR:CG2	56:B:424:LEU:HD13	2.05	0.85
56:B:541:ILE:HD12	56:B:546:ILE:CD1	2.06	0.85
4:4:19:G:H21	33:d:82:LEU:HD13	1.41	0.85
6:A:75:C:O2'	6:A:76:G:H5'	1.76	0.85
6:A:1318:A:H2'	26:W:37:ARG:CB	2.06	0.85
7:D:476:G:N2	7:D:479:A:OP2	2.08	0.85
7:D:1668:A:H2	7:D:1993:U:C4	1.93	0.85
7:D:1726:G:N1	7:D:1727:U:O2	2.09	0.85
29:Z:8:ARG:HH11	29:Z:11:LEU:HD23	1.40	0.85
56:B:27:ASP:OD2	56:B:45:PHE:HD1	1.59	0.85
56:B:360:ARG:HG3	56:B:364:GLU:CD	1.99	0.85
56:B:492:VAL:CG1	56:B:541:ILE:CD1	2.53	0.85
6:A:1379:G:P	14:K:6:ARG:HH12	1.99	0.85
7:D:188:G:OP2	51:v:13:ARG:NE	2.08	0.85
7:D:535:C:H2'	7:D:536:A:C8	2.08	0.85
7:D:536:A:C4	7:D:558:G:N2	2.44	0.85
7:D:1942:C:OP2	7:D:1943:U:O2'	1.93	0.85
7:D:2690:C:OP2	39:j:8:ARG:NH1	2.08	0.85
26:W:29:ARG:CB	26:W:48:THR:HG21	2.01	0.85
30:a:244:ARG:HD3	30:a:252:TRP:CD1	2.11	0.85
42:m:92:ARG:H	43:n:10:LYS:HZ1	1.16	0.85
53:x:17:LYS:O	53:x:19:ARG:NH1	2.09	0.85
56:B:152:VAL:HA	56:B:156:LEU:HB3	1.58	0.85
56:B:412:LEU:HD21	56:B:477:MET:CE	1.84	0.85
26:W:40:ILE:HB	26:W:68:GLY:HA2	1.57	0.85
39:j:11:ASN:OD1	39:j:12:ARG:N	2.09	0.85
56:B:382:LEU:HG	56:B:401:ARG:HD2	0.87	0.85
3:3:25:PRO:HB3	56:B:440:TYR:HH	1.39	0.85
6:A:55:A:H1'	56:B:208:TYR:CE2	2.10	0.85
7:D:884:C:N3	7:D:885:C:C4	2.44	0.85
7:D:1790:C:H5'	30:a:213:ARG:NH1	1.91	0.85
7:D:1940:U:O2'	7:D:1941:C:OP2	1.94	0.85
14:K:155:ARG:HG3	14:K:156:TRP:H	1.40	0.85
20:Q:69:GLU:O	20:Q:73:GLU:HB3	1.75	0.85
26:W:40:ILE:HG21	26:W:67:VAL:C	2.01	0.85
56:B:75:GLU:HG2	56:B:76:TYR:H	1.41	0.85
56:B:229:ARG:NH2	56:B:283:ALA:CA	2.38	0.85
56:B:378:TYR:HD2	56:B:489:LEU:HD13	1.42	0.85
6:A:1014:A:C2	26:W:32:LYS:HE2	2.10	0.85
6:A:1443:G:O2'	6:A:1446:A:OP1	1.94	0.85
7:D:2141:G:H1	7:D:2150:U:H3	1.24	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:40:ILE:CG2	26:W:67:VAL:C	2.50	0.85
38:i:75:THR:HB	38:i:77:LYS:NZ	1.90	0.85
56:B:13:SER:HB3	56:B:97:LEU:HD11	1.57	0.85
56:B:118:LEU:HD11	56:B:446:LYS:NZ	1.82	0.85
56:B:317:ARG:HE	56:B:342:PHE:HE2	1.21	0.85
3:3:21:PRO:CD	3:3:22:PRO:HD3	2.05	0.85
6:A:444:C:O2'	6:A:445:G:H5'	1.75	0.85
7:D:385:C:O2'	7:D:388:G:N2	2.09	0.85
7:D:569:U:OP2	7:D:945:A:N6	2.09	0.85
7:D:928:G:C8	7:D:929:G:N7	2.44	0.85
7:D:1785:A:H2'	7:D:1786:A:C5	2.11	0.85
6:A:442:C:O2	6:A:493:G:O2'	1.94	0.85
6:A:1501:C:OP2	6:A:1504:G:O2'	1.95	0.85
7:D:1068:G:H4'	7:D:1096:A:H1'	1.57	0.85
7:D:1559:G:C6	7:D:1560:G:H4'	2.12	0.85
7:D:2207:C:H2'	7:D:2208:U:O4'	1.76	0.85
26:W:61:TYR:CD1	26:W:62:ILE:HG12	2.11	0.85
38:i:76:LYS:HZ1	38:i:79:LEU:HA	1.42	0.85
40:k:20:ARG:NH1	40:k:87:PHE:HB3	1.92	0.85
56:B:13:SER:OG	56:B:81:ILE:CG2	2.24	0.85
56:B:22:LYS:N	57:B:701:GCP:O2A	2.09	0.85
56:B:24:THR:HG21	56:B:169:LYS:CG	2.05	0.85
6:A:1372:U:H5"	16:M:71:SER:HB3	1.57	0.85
7:D:800:A:O2'	7:D:801:G:OP2	1.94	0.85
7:D:860:U:O4	7:D:918:A:N6	2.09	0.85
7:D:1726:G:C6	7:D:1727:U:C2	2.64	0.85
7:D:2199:A:H2'	7:D:2205:C:C5'	2.07	0.85
17:N:7:LYS:HB3	17:N:97:GLU:HB2	1.59	0.85
31:b:5:LEU:HD13	31:b:25:VAL:HG11	1.58	0.85
35:f:4:TYR:HE2	42:m:97:ASP:HA	1.41	0.85
56:B:46:LEU:HD12	56:B:82:ASP:CG	1.93	0.85
56:B:118:LEU:CD1	56:B:446:LYS:HZ1	1.81	0.85
56:B:137:LYS:HA	57:B:701:GCP:O6	1.77	0.85
56:B:383:LYS:CG	56:B:402:ILE:HG22	1.99	0.85
6:A:902:G:H2'	6:A:903:G:H8	1.41	0.85
6:A:1440:C:C2'	6:A:1441:G:H5'	2.07	0.85
7:D:99:U:H5'	7:D:101:G:H5'	1.59	0.85
7:D:363(F):A:N3	7:D:364:C:H1'	1.91	0.85
7:D:439:G:H2'	7:D:440:G:C8	2.11	0.85
7:D:1061:U:H1'	7:D:1070:A:C4'	2.06	0.85
7:D:2670:A:H5'	31:b:206:LYS:HZ1	1.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:92:GLU:OE2	37:h:126:VAL:HG13	1.76	0.85
38:i:76:LYS:NZ	38:i:78:PRO:O	2.10	0.85
42:m:87:GLY:N	42:m:89:GLU:OE2	2.09	0.85
56:B:8:ARG:CG	56:B:74:GLU:HB2	1.97	0.85
56:B:8:ARG:HB3	56:B:74:GLU:HB3	1.57	0.85
56:B:13:SER:HB3	56:B:97:LEU:CD1	2.07	0.85
56:B:218:PHE:CZ	56:B:291:TYR:CE1	2.65	0.85
6:A:198:G:H2'	6:A:199:G:H8	1.39	0.84
6:A:1368:G:N7	16:M:112:LYS:NZ	2.25	0.84
7:D:539:G:N2	7:D:556:G:C6	2.45	0.84
7:D:1580:A:H2'	7:D:1581:G:C8	2.11	0.84
26:W:40:ILE:HB	26:W:67:VAL:O	1.75	0.84
36:g:64:ARG:HH11	36:g:68:GLU:H	0.88	0.84
42:m:90:VAL:O	43:n:6:LYS:NZ	2.10	0.84
7:D:1039:G:N7	7:D:1117:G:N1	2.25	0.84
8:E:55:U:H2'	8:E:56:G:H8	1.40	0.84
22:S:3:ILE:HA	22:S:38:ARG:HH22	1.42	0.84
31:b:19:ARG:N	36:g:73:ASP:OD2	2.09	0.84
33:d:138:GLN:HG2	33:d:140:ILE:H	1.39	0.84
46:q:45:VAL:HA	46:q:57:GLN:HA	1.59	0.84
56:B:431:LYS:CB	56:B:455:PRO:HD3	2.02	0.84
5:5:11:C:N3	5:5:24:G:N1	2.25	0.84
6:A:1162:C:N4	6:A:1174:G:O6	2.09	0.84
7:D:151:C:H2'	7:D:152:G:H8	1.40	0.84
26:W:32:LYS:HE3	26:W:52:TYR:CG	2.12	0.84
56:B:536:PRO:HB3	56:B:550:THR:HG22	1.57	0.84
4:4:74:C:C5	56:B:569:ARG:NE	2.45	0.84
6:A:1359:C:OP2	21:R:35:ARG:NE	2.09	0.84
6:A:1379:G:OP2	14:K:6:ARG:NH2	2.10	0.84
7:D:270(J):G:N1	7:D:270(P):C:N3	2.24	0.84
3:3:25:PRO:HA	56:B:440:TYR:CZ	2.13	0.84
6:A:1227:A:P	20:Q:94:ARG:HH22	2.00	0.84
6:A:1366:C:O3'	17:N:60:ARG:NH2	2.10	0.84
7:D:51:G:O2'	7:D:118:A:N6	2.10	0.84
7:D:370:G:N2	7:D:422:A:P	2.50	0.84
7:D:1084:A:O4'	7:D:1106:G:C8	2.31	0.84
56:B:196:LEU:HB2	56:B:282:LEU:CB	2.07	0.84
56:B:197:LYS:CA	56:B:281:THR:HG23	2.01	0.84
56:B:206:ASP:HA	56:B:210:GLY:O	1.77	0.84
56:B:223:ARG:HB3	56:B:224:PRO:CD	2.07	0.84
56:B:299:PRO:HD2	56:B:348:PHE:CD2	2.13	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:407:GLU:CD	56:B:431:LYS:HZ1	1.86	0.84
56:B:493:ASN:HA	56:B:505:THR:HG22	1.59	0.84
56:B:541:ILE:CD1	56:B:546:ILE:HD12	2.06	0.84
56:B:544:LYS:C	56:B:545:ILE:HG13	2.00	0.84
6:A:1129:C:N4	6:A:1142:G:O6	2.10	0.84
6:A:1294:G:H2'	6:A:1295:G:H8	1.41	0.84
56:B:13:SER:OG	56:B:81:ILE:HB	1.75	0.84
56:B:195:PRO:HG2	56:B:286:PRO:C	2.00	0.84
6:A:103:C:O2'	6:A:104:G:H5'	1.78	0.84
7:D:270(I):G:N2	7:D:270(Q):C:O2	2.10	0.84
7:D:1589:C:O2'	7:D:1590:U:H5'	1.76	0.84
7:D:1725:G:C2	7:D:1726:G:C8	2.66	0.84
7:D:2226:C:O2'	7:D:2227:A:H5'	1.75	0.84
7:D:2783:G:H1'	31:b:41:LYS:NZ	1.92	0.84
20:Q:103:THR:O	20:Q:105:THR:N	2.11	0.84
25:V:18:ARG:NH1	25:V:55:ARG:O	2.10	0.84
30:a:243:GLY:C	30:a:245:PRO:HD3	2.02	0.84
37:h:29:LYS:HZ1	43:n:82:ARG:NH1	1.75	0.84
56:B:12:PHE:HA	56:B:100:VAL:CG1	2.08	0.84
56:B:417:PRO:HB3	56:B:447:ARG:C	2.02	0.84
56:B:431:LYS:CB	56:B:458:GLU:HG3	2.08	0.84
56:B:444:ALA:C	56:B:445:GLN:HG3	2.01	0.84
56:B:501:VAL:O	56:B:503:ALA:N	2.11	0.84
56:B:531:GLN:OE1	56:B:584:LEU:CD1	2.24	0.84
6:A:102:G:O2'	6:A:103:C:H5'	1.77	0.84
6:A:194:C:O2'	27:X:68:LYS:NZ	2.11	0.84
6:A:467:G:H21	6:A:468:A:H1'	1.42	0.84
6:A:1308:U:OP1	20:Q:97:PRO:CG	2.25	0.84
7:D:188:G:H5'	51:v:13:ARG:HD3	1.60	0.84
7:D:247:G:C2	55:z:8:LYS:HE3	2.13	0.84
7:D:1063:G:C5	7:D:1064:C:C4	2.65	0.84
7:D:2227:A:C5	7:D:2228:G:C5	2.66	0.84
26:W:69:HIS:HB2	26:W:74:PHE:CE2	2.07	0.84
56:B:97:LEU:HD21	56:B:103:VAL:HG12	1.59	0.84
7:D:2106:G:C5	7:D:2108:C:N3	2.46	0.84
37:h:45:LEU:HD22	55:z:59:LYS:HZ3	1.40	0.84
46:q:95:LYS:HG3	46:q:103:GLY:HA2	1.60	0.84
56:B:38:ASP:O	56:B:40:GLU:N	2.11	0.84
56:B:97:LEU:HD21	56:B:103:VAL:HG11	1.57	0.84
6:A:1163:C:O2'	6:A:1164:G:H5'	1.76	0.84
7:D:189:G:H2'	7:D:205:G:H22	1.43	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1735:C:HO2'	7:D:1741:C:C1'	1.91	0.84
7:D:2674:G:H2'	7:D:2675:A:H8	1.43	0.84
18:O:18:ARG:HG2	18:O:81:ASP:HB2	1.59	0.84
56:B:21:GLY:HA3	56:B:136:ASN:HD22	1.42	0.84
5:5:54:U:H3	5:5:58:A:H62	1.26	0.83
6:A:498:A:C4'	6:A:500:G:H5'	2.07	0.83
7:D:764:A:H62	7:D:1775:U:H3	1.24	0.83
7:D:1455:G:OP2	7:D:1456:G:OP2	1.94	0.83
16:M:7:THR:HB	16:M:83:ARG:NH1	1.93	0.83
30:a:208:LYS:HZ3	30:a:211:ARG:NH2	1.74	0.83
56:B:489:LEU:O	56:B:508:ALA:CA	2.26	0.83
3:3:13:PRO:O	3:3:16:LYS:NZ	2.11	0.83
6:A:1226:C:N3	20:Q:104:ARG:HG3	1.93	0.83
7:D:543:C:O2'	7:D:544:C:H5'	1.77	0.83
56:B:242:VAL:CB	56:B:256:LEU:HD11	2.06	0.83
56:B:373:ALA:HB1	56:B:374:PRO:CD	2.08	0.83
6:A:1060:C:OP1	21:R:45:ARG:NH2	2.10	0.83
6:A:1461:G:C4	6:A:1462:G:N7	2.46	0.83
7:D:1800:C:N4	7:D:1818:U:H1'	1.93	0.83
20:Q:24:GLY:HA3	20:Q:66:LEU:HA	1.59	0.83
40:k:8:GLU:HB2	40:k:9:ARG:NH1	1.93	0.83
56:B:27:ASP:OD2	56:B:45:PHE:CG	2.31	0.83
56:B:218:PHE:CE1	56:B:291:TYR:CE2	2.65	0.83
56:B:411:LYS:HG2	56:B:452:TYR:O	1.78	0.83
6:A:75:C:H2'	6:A:76:G:C8	2.13	0.83
6:A:1014:A:O3'	26:W:18:LYS:HE2	1.79	0.83
6:A:1306:A:H2'	6:A:1307:U:H5'	1.59	0.83
7:D:154:G:C5	7:D:155:C:C4	2.66	0.83
7:D:1342:A:O2'	7:D:1343:G:OP1	1.97	0.83
7:D:2218:G:O2'	7:D:2219:G:H5'	1.78	0.83
21:R:23:ARG:NH1	21:R:30:ALA:HB2	1.93	0.83
29:Z:38:ASP:OD1	29:Z:178:ALA:CB	2.21	0.83
33:d:32:PRO:HG3	33:d:168:GLU:HG2	1.57	0.83
47:r:30:ASN:ND2	47:r:90:VAL:O	2.10	0.83
51:v:21:VAL:HA	51:v:29:PRO:HB3	1.60	0.83
56:B:246:THR:HG21	56:B:251:VAL:HG21	1.60	0.83
56:B:281:THR:HG21	56:B:287:THR:H	1.44	0.83
56:B:410:VAL:CG1	56:B:480:GLU:HG2	2.07	0.83
56:B:492:VAL:HA	56:B:541:ILE:CG1	2.08	0.83
6:A:443:C:H2'	6:A:444:C:C5	2.14	0.83
6:A:1014:A:C2	26:W:32:LYS:CE	2.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:578:A:OP1	7:D:1255:U:O2'	1.95	0.83
7:D:2459:A:C2	7:D:2460:U:H1'	2.13	0.83
29:Z:68:LEU:O	29:Z:157:LYS:O	1.92	0.83
56:B:135:ILE:CG1	56:B:165:PHE:CA	2.54	0.83
56:B:383:LYS:H	56:B:402:ILE:CG2	1.91	0.83
7:D:323:G:H3'	32:c:168:ARG:HH11	1.40	0.83
7:D:2217:G:H2'	7:D:2218:G:H8	1.44	0.83
10:G:70:VAL:HG12	10:G:72:LYS:H	1.41	0.83
16:M:126:SER:HB3	16:M:128:ARG:HH11	1.44	0.83
19:P:53:ARG:NH1	19:P:92:ASP:OD2	2.11	0.83
38:i:41:TRP:HD1	38:i:94:VAL:HG21	1.43	0.83
56:B:12:PHE:C	56:B:100:VAL:HG11	2.03	0.83
56:B:410:VAL:HG11	56:B:480:GLU:H	1.41	0.83
56:B:431:LYS:HD2	56:B:455:PRO:HG2	1.59	0.83
7:D:293:U:H2'	7:D:294:A:C8	2.13	0.83
7:D:1862:G:H1	7:D:1880:C:H42	1.26	0.83
7:D:1920:C:H4'	7:D:1921:G:OP1	1.78	0.83
7:D:2106:G:C6	7:D:2108:C:C4	2.66	0.83
7:D:2777:G:O2'	7:D:2778:A:OP2	1.96	0.83
18:O:33:THR:HG22	18:O:39:PRO:HA	1.61	0.83
41:l:35:LYS:NZ	41:l:86:ILE:HD11	1.94	0.83
56:B:49:LEU:HD21	56:B:60:LYS:HZ2	0.70	0.83
56:B:245:PHE:HE2	56:B:261:VAL:C	1.86	0.83
56:B:492:VAL:CG1	56:B:541:ILE:CG1	2.46	0.83
7:D:2054:A:OP1	31:b:145:LYS:NZ	2.11	0.83
26:W:32:LYS:CG	26:W:52:TYR:HB2	2.09	0.83
36:g:102:VAL:HG12	36:g:103:ALA:H	1.44	0.83
56:B:222:VAL:HG11	56:B:264:LEU:CD2	2.09	0.83
56:B:415:PHE:O	56:B:475:ALA:HB2	1.78	0.83
56:B:492:VAL:O	56:B:505:THR:HB	1.78	0.83
3:3:66:THR:HG22	3:3:67:PHE:H	1.42	0.83
7:D:892:G:O2'	7:D:893:C:O4'	1.97	0.83
20:Q:96:LEU:HD22	20:Q:101:GLN:HG3	1.59	0.83
53:x:17:LYS:NZ	53:x:50:ARG:HB2	1.94	0.83
56:B:121:PHE:HZ	56:B:157:GLY:CA	1.71	0.83
56:B:330:LEU:CD1	56:B:345:ARG:HH11	1.90	0.83
56:B:428:LEU:CD1	56:B:452:TYR:CE1	2.62	0.83
6:A:405:U:C2	6:A:497:U:C5	2.66	0.83
7:D:623:G:OP2	37:h:105:LEU:HD11	1.77	0.83
7:D:1870:C:H2'	7:D:1871:A:H8	1.41	0.83
7:D:2355:C:OP1	48:s:25:ARG:NH2	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:13:ASP:OD2	26:W:17:GLU:HB2	1.78	0.83
39:j:12:ARG:HH12	39:j:16:HIS:CB	1.91	0.83
56:B:196:LEU:O	56:B:281:THR:HB	1.78	0.83
56:B:537:ILE:HD11	56:B:551:VAL:CG2	2.09	0.83
6:A:80:G:H2'	6:A:81:G:H8	1.43	0.82
6:A:382:A:H2'	6:A:383:A:H8	1.42	0.82
6:A:1049:U:O2'	6:A:1050:G:OP2	1.95	0.82
7:D:1340:U:H5'	45:p:57:LEU:HD11	1.60	0.82
26:W:34:TRP:HA	26:W:36:ARG:HE	1.41	0.82
29:Z:69:GLY:CA	29:Z:157:LYS:CB	2.57	0.82
33:d:78:SER:HB2	33:d:82:LEU:HD12	1.61	0.82
44:o:28:SER:OG	44:o:31:GLU:OE2	1.97	0.82
56:B:20:HIS:CE1	56:B:108:ASP:HB2	2.14	0.82
56:B:229:ARG:NE	56:B:283:ALA:HA	1.94	0.82
56:B:378:TYR:HB3	56:B:406:LEU:HD13	0.88	0.82
56:B:413:THR:HA	56:B:450:LEU:O	1.79	0.82
7:D:489:G:C4	7:D:1284:A:C6	2.67	0.82
7:D:928:G:N7	7:D:929:G:C6	2.48	0.82
7:D:1398:C:O3'	45:p:25:LYS:NZ	2.12	0.82
7:D:2194:G:C2	7:D:2195:C:C4	2.67	0.82
7:D:2630:G:O2'	7:D:2893:G:O2'	1.77	0.82
16:M:10:ARG:HH21	16:M:75:ASP:HB2	1.43	0.82
20:Q:61:GLU:HG2	20:Q:62:ASN:H	1.41	0.82
56:B:65:ARG:HB2	56:B:246:THR:CA	2.09	0.82
56:B:414:ILE:O	56:B:450:LEU:N	2.12	0.82
7:D:489:G:C8	7:D:1284:A:C5	2.67	0.82
7:D:655:A:O2'	7:D:656:G:O4'	1.95	0.82
7:D:884:C:C2	7:D:885:C:C4	2.63	0.82
7:D:1173:G:H2'	7:D:1174:A:N1	1.94	0.82
7:D:1314:C:H42	7:D:1338:G:H1	1.28	0.82
7:D:2658:C:H5'	34:e:160:LYS:HZ2	1.43	0.82
8:E:12:C:C2	48:s:74:ARG:HD2	2.14	0.82
36:g:77:ILE:HG23	41:l:75:ILE:HG13	1.59	0.82
51:v:41:PRO:O	51:v:58:ARG:NH2	2.12	0.82
53:x:49:HIS:CD2	53:x:50:ARG:H	1.97	0.82
56:B:118:LEU:HD22	56:B:446:LYS:HZ3	1.44	0.82
56:B:205:TYR:CE2	56:B:271:ILE:CG2	2.62	0.82
56:B:492:VAL:HG21	56:B:513:ALA:HB1	1.60	0.82
56:B:492:VAL:CA	56:B:541:ILE:HG12	2.10	0.82
7:D:539:G:N3	7:D:556:G:N1	2.26	0.82
7:D:1128:A:N7	7:D:2518:A:N6	2.28	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2805:G:H2'	7:D:2807:G:C5'	2.09	0.82
20:Q:71:ARG:HG2	20:Q:75:ALA:HB3	1.57	0.82
30:a:17:THR:HG22	30:a:18:VAL:HG23	1.62	0.82
42:m:58:ARG:NH1	42:m:92:ARG:HH11	1.74	0.82
56:B:17:HIS:CE1	56:B:116:GLU:CG	2.62	0.82
56:B:352:LEU:O	56:B:356:ILE:HG13	1.78	0.82
6:A:216:G:C8	6:A:217:C:C4	2.67	0.82
7:D:1055:G:N2	7:D:1104:C:N3	2.27	0.82
7:D:1321:A:O2'	44:o:11:ARG:NH1	2.13	0.82
7:D:1872:A:H3'	7:D:1878:G:H5"	1.60	0.82
9:F:204:ASN:ND2	9:F:207:ALA:O	2.11	0.82
26:W:29:ARG:HB3	26:W:48:THR:HG21	1.55	0.82
29:Z:163:PHE:HZ	29:Z:195:ALA:HB1	1.43	0.82
34:e:108:GLY:HA2	34:e:152:ARG:HH11	1.42	0.82
35:f:86:PRO:HD2	35:f:89:LYS:NZ	1.95	0.82
56:B:107:VAL:HG21	56:B:156:LEU:CD2	2.09	0.82
56:B:225:GLY:HA2	56:B:239:VAL:CG1	1.84	0.82
56:B:236:GLU:HA	56:B:268:ILE:HG21	1.61	0.82
56:B:306:TYR:CA	56:B:370:ILE:HB	2.05	0.82
56:B:448:VAL:HG12	56:B:449:GLU:H	1.42	0.82
3:3:10:LEU:CD2	3:3:57:ILE:CG1	2.57	0.82
6:A:55:A:C1'	56:B:208:TYR:OH	2.25	0.82
7:D:802:A:H5"	7:D:803:U:OP2	1.80	0.82
7:D:894:C:C5	7:D:895:U:C2	2.67	0.82
13:J:38:GLU:HG3	13:J:66:GLU:OE2	1.80	0.82
41:l:2:ASN:OD1	41:l:3:ARG:N	2.12	0.82
56:B:17:HIS:O	56:B:20:HIS:HB2	1.80	0.82
56:B:33:THR:CG2	56:B:69:ARG:CD	2.48	0.82
56:B:200:ILE:CG1	56:B:279:THR:CG2	2.57	0.82
6:A:443:C:C4	6:A:492:G:C6	2.67	0.82
6:A:457:C:C4	6:A:458:C:N4	2.47	0.82
6:A:674:G:H2'	6:A:675:A:H8	1.45	0.82
6:A:719:C:H42	25:V:74:ARG:NH1	1.78	0.82
6:A:1461:G:O2'	6:A:1462:G:H5'	1.78	0.82
7:D:270(J):G:O6	7:D:270(P):C:N4	2.11	0.82
7:D:1652:A:N6	7:D:1653:G:H21	1.77	0.82
37:h:111:ARG:HG3	37:h:128:HIS:CE1	2.15	0.82
56:B:79:HIS:CG	56:B:261:VAL:CG2	2.63	0.82
56:B:222:VAL:CG1	56:B:264:LEU:CD1	2.56	0.82
56:B:305:LEU:HD21	56:B:358:GLN:HG3	1.61	0.82
6:A:811:C:O2'	6:A:900:A:N6	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1318:A:H1'	26:W:14:HIS:NE2	1.91	0.82
7:D:332:A:O2'	7:D:334:C:OP2	1.96	0.82
7:D:1667:G:N2	7:D:1993:U:O4	2.12	0.82
56:B:8:ARG:CG	56:B:74:GLU:HB3	2.01	0.82
3:3:25:PRO:HA	56:B:440:TYR:CE2	2.15	0.82
6:A:1447:G:N2	6:A:1460:A:N9	2.26	0.82
7:D:566:U:O2'	7:D:809:G:OP2	1.97	0.82
56:B:315:LYS:HD3	56:B:318:ASP:HB3	1.61	0.82
56:B:493:ASN:CA	56:B:505:THR:CG2	2.54	0.82
56:B:493:ASN:H	56:B:541:ILE:HA	1.44	0.82
4:4:74:C:H5	56:B:569:ARG:NE	1.78	0.82
7:D:1171:G:H8	7:D:1173:G:H4'	1.45	0.82
7:D:1726:G:C6	7:D:1734:C:O2	2.33	0.82
20:Q:23:TYR:O	20:Q:66:LEU:HB2	1.80	0.82
29:Z:66:HIS:CA	29:Z:158:ALA:O	2.27	0.82
37:h:123:LEU:HD13	37:h:125:VAL:HB	1.62	0.82
47:r:77:ASP:OD2	47:r:80:ARG:N	2.12	0.82
56:B:226:ASP:N	56:B:239:VAL:HG11	1.93	0.82
56:B:237:PHE:O	56:B:238:THR:OG1	1.98	0.82
56:B:407:GLU:CD	56:B:431:LYS:NZ	2.38	0.82
6:A:89:U:C2'	6:A:90:C:C5'	2.57	0.81
6:A:467:G:N2	6:A:468:A:H1'	1.94	0.81
6:A:1163:C:H2'	6:A:1164:G:H5'	1.57	0.81
6:A:1318:A:O2'	26:W:37:ARG:HB2	1.80	0.81
7:D:884:C:C2'	7:D:885:C:OP2	2.28	0.81
7:D:1105:U:O2'	7:D:1107:G:N7	2.12	0.81
7:D:1364:G:N2	7:D:1367:A:OP2	2.13	0.81
7:D:1580:A:H2'	7:D:1581:G:C4	2.13	0.81
26:W:40:ILE:HG23	26:W:67:VAL:HG22	1.58	0.81
56:B:134:VAL:HG23	56:B:163:ALA:O	1.78	0.81
56:B:226:ASP:H	56:B:239:VAL:HG11	1.45	0.81
56:B:230:ILE:HA	56:B:280:ILE:HG22	0.82	0.81
56:B:306:TYR:HE1	56:B:339:ALA:O	1.58	0.81
56:B:493:ASN:HA	56:B:505:THR:CG2	2.09	0.81
3:3:34:ILE:HG23	3:3:63:ARG:HH11	1.44	0.81
3:3:58:THR:HG23	3:3:64:SER:OG	1.80	0.81
5:5:19:G:O2'	7:D:2112:G:N3	2.13	0.81
7:D:1712:C:O2	7:D:1746:G:O6	1.96	0.81
7:D:1743:G:H2'	7:D:1746:G:O4'	1.79	0.81
7:D:2452:C:H42	7:D:2504:U:H3	1.28	0.81
26:W:40:ILE:CD1	26:W:67:VAL:O	2.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:e:98:LEU:HB2	34:e:125:VAL:HG21	1.62	0.81
56:B:195:PRO:HB3	56:B:285:ARG:O	1.81	0.81
56:B:238:THR:OG1	56:B:267:ALA:CB	2.27	0.81
56:B:492:VAL:HG13	56:B:541:ILE:CD1	2.09	0.81
1:1:6:SER:O	7:D:1031:G:O2'	1.97	0.81
6:A:216:G:N7	6:A:217:C:C4	2.47	0.81
6:A:464:G:H3'	6:A:465:A:C5'	2.09	0.81
6:A:1347:G:H8	16:M:107:ARG:HB3	1.45	0.81
7:D:1398:C:O2'	45:p:25:LYS:NZ	2.12	0.81
7:D:1800:C:N4	7:D:1818:U:O2	2.13	0.81
7:D:2296:U:O2	7:D:2335:A:N6	2.13	0.81
9:F:35:GLU:OE2	9:F:39:ILE:N	2.13	0.81
18:O:62:GLN:HB2	18:O:97:ALA:HB2	1.62	0.81
29:Z:69:GLY:N	29:Z:157:LYS:O	2.13	0.81
31:b:12:THR:HG21	31:b:19:ARG:HH21	1.46	0.81
31:b:58:ARG:HH12	31:b:73:GLU:CG	1.92	0.81
46:q:84:ARG:HB3	46:q:94:LYS:HA	1.60	0.81
47:r:125:LEU:HB3	47:r:127:LYS:HE2	1.63	0.81
56:B:118:LEU:CD2	56:B:446:LYS:HZ3	1.92	0.81
56:B:272:HIS:ND1	56:B:272:HIS:O	2.13	0.81
3:3:11:GLN:O	3:3:12:LEU:HD23	1.80	0.81
6:A:1320:C:H1'	26:W:73:GLU:HB3	1.63	0.81
6:A:1427:U:H2'	6:A:1428:A:H8	1.42	0.81
6:A:1440:C:O2	6:A:1462:G:C2	2.33	0.81
7:D:266:G:H5'	7:D:271(A):C:H42	1.46	0.81
7:D:784:A:O4'	30:a:227:ASN:ND2	2.12	0.81
7:D:1712:C:O2'	7:D:1716:U:H5'	1.81	0.81
7:D:2571:C:HO2'	31:b:146:THR:HG1	1.18	0.81
56:B:7:SER:O	56:B:8:ARG:HG2	1.80	0.81
56:B:137:LYS:N	56:B:167:SER:CB	2.44	0.81
56:B:177:ILE:CG2	56:B:181:ILE:HD12	2.08	0.81
1:1:36:GLN:HE22	7:D:1031:G:H21	1.28	0.81
3:3:86:LYS:O	7:D:1063:G:O2'	1.98	0.81
6:A:1439:C:O2	6:A:1462:G:N2	2.12	0.81
7:D:238:C:O2'	7:D:607:U:O2	1.99	0.81
7:D:634:C:H2'	7:D:635:C:H6	1.46	0.81
29:Z:69:GLY:CA	29:Z:157:LYS:HA	2.09	0.81
30:a:184:LYS:N	30:a:267:SER:OG	2.13	0.81
37:h:56:SER:HB2	55:z:13:ARG:HD3	1.61	0.81
56:B:8:ARG:CB	56:B:74:GLU:HB2	2.09	0.81
56:B:232:SER:O	56:B:234:GLY:N	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:245:PHE:HE2	56:B:262:GLY:HA2	1.45	0.81
56:B:330:LEU:HG	56:B:346:CYS:H	0.70	0.81
6:A:80:G:H2'	6:A:81:G:C8	2.15	0.81
6:A:558:G:OP2	6:A:559:A:O2'	1.99	0.81
6:A:1064:G:O2'	6:A:1190:G:N2	2.14	0.81
7:D:1593:G:H2'	7:D:1594:G:H8	1.44	0.81
26:W:3:ARG:O	26:W:42:PRO:CB	2.28	0.81
37:h:91:PHE:H	37:h:125:VAL:HG13	1.45	0.81
51:v:43:TYR:C	51:v:61:ARG:HH12	1.88	0.81
56:B:65:ARG:HD3	56:B:76:TYR:OH	1.80	0.81
56:B:137:LYS:N	56:B:167:SER:HB2	1.95	0.81
56:B:209:GLN:HE22	56:B:265:VAL:HG13	1.43	0.81
56:B:383:LYS:HG2	56:B:402:ILE:HG23	0.82	0.81
6:A:664:G:O2'	6:A:666:G:OP2	1.98	0.81
6:A:837:G:N3	6:A:838:G:N7	2.28	0.81
6:A:1319:A:OP1	26:W:38:SER:CA	2.27	0.81
7:D:1230:C:H2'	7:D:1231:G:H8	1.43	0.81
7:D:1590:U:H2'	7:D:1591:G:H8	1.44	0.81
7:D:1634:A:O2'	7:D:1635:G:OP1	1.99	0.81
8:E:75:G:OP1	47:r:36:LYS:NZ	2.13	0.81
20:Q:91:ARG:CG	20:Q:96:LEU:O	2.24	0.81
32:c:37:VAL:HG12	32:c:41:LEU:HD23	1.63	0.81
56:B:196:LEU:HD13	56:B:220:GLY:CA	2.01	0.81
56:B:230:ILE:CG2	56:B:279:THR:HA	2.10	0.81
56:B:303:ALA:HB2	56:B:347:GLY:HA3	1.62	0.81
56:B:306:TYR:CE1	56:B:339:ALA:CB	2.63	0.81
56:B:450:LEU:HD11	56:B:452:TYR:CE1	2.16	0.81
7:D:687:C:H41	7:D:774:A:H61	1.28	0.81
7:D:1447:G:O2'	7:D:1448:G:H5'	1.81	0.81
7:D:2033:A:N6	7:D:2036:C:N3	2.29	0.81
26:W:15:LEU:O	26:W:19:VAL:HG22	1.80	0.81
41:l:50:ILE:HD12	41:l:66:VAL:HB	1.63	0.81
56:B:431:LYS:HB2	56:B:458:GLU:CB	2.11	0.81
6:A:73:G:OP2	6:A:74:C:N4	2.14	0.81
6:A:210:U:C6	6:A:216:G:N7	2.48	0.81
6:A:422:C:O2'	6:A:423:G:N2	2.14	0.81
6:A:992:U:O2'	6:A:993:G:OP2	1.96	0.81
7:D:542:C:O2'	7:D:543:C:H5'	1.81	0.81
7:D:1300:U:N3	7:D:1626:G:O2'	2.14	0.81
8:E:14:U:O2'	8:E:106:G:N2	2.14	0.81
29:Z:155:GLU:O	29:Z:160:ARG:N	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:x:25:LYS:HG2	53:x:27:LYS:H	1.45	0.81
56:B:229:ARG:HE	56:B:282:LEU:C	1.88	0.81
56:B:352:LEU:HD22	56:B:356:ILE:CG1	2.10	0.81
56:B:405:ILE:HA	56:B:486:PRO:CA	2.11	0.81
6:A:1440:C:N3	6:A:1462:G:N1	2.29	0.81
7:D:1225:C:O2'	7:D:1226:G:H5'	1.81	0.81
7:D:1453:A:H61	39:j:63:ARG:NH2	1.77	0.81
7:D:1710:C:O2	7:D:1748:G:N2	2.14	0.81
26:W:15:LEU:CD2	26:W:19:VAL:CG1	2.48	0.81
56:B:134:VAL:HA	56:B:163:ALA:C	2.05	0.81
56:B:379:LYS:HZ2	56:B:407:GLU:N	1.79	0.81
56:B:412:LEU:CD2	56:B:477:MET:HE3	2.11	0.81
6:A:74:C:O2'	6:A:75:C:H5'	1.81	0.80
6:A:838:G:C2	6:A:849:C:N3	2.50	0.80
6:A:939:G:H5"	14:K:102:ARG:HH12	1.45	0.80
7:D:295:G:OP2	7:D:338:G:N1	2.14	0.80
7:D:1726:G:C2	7:D:1727:U:C2	2.70	0.80
7:D:2330:G:N2	7:D:2386:C:O2	2.14	0.80
7:D:2715:C:H2'	7:D:2716:U:H6	1.46	0.80
24:U:67:LYS:C	24:U:70:ARG:HH12	1.89	0.80
30:a:143:HIS:ND1	30:a:194:GLY:O	2.14	0.80
37:h:97:PRO:HA	37:h:102:ARG:HE	1.43	0.80
40:k:44:LYS:HB2	40:k:46:VAL:HG22	1.61	0.80
56:B:42:ARG:NE	56:B:53:ARG:HH21	1.78	0.80
56:B:75:GLU:O	56:B:77:VAL:HG12	1.81	0.80
56:B:222:VAL:HG21	56:B:264:LEU:CD2	2.07	0.80
56:B:228:ILE:HA	56:B:282:LEU:CD2	2.06	0.80
56:B:303:ALA:HB2	56:B:347:GLY:CA	2.11	0.80
56:B:410:VAL:HG22	56:B:481:GLN:HA	1.62	0.80
3:3:56:GLU:OE1	3:3:70:LYS:HG3	1.81	0.80
6:A:415:A:N6	6:A:428:G:O6	2.14	0.80
8:E:104:A:H1'	47:r:29:TYR:HE2	1.47	0.80
33:d:57:ALA:HB1	33:d:67:LYS:HB2	1.63	0.80
49:t:60:ASN:OD1	49:t:63:ARG:NH1	2.15	0.80
56:B:306:TYR:HE1	56:B:339:ALA:HB1	1.46	0.80
56:B:380:VAL:O	56:B:387:GLU:C	2.24	0.80
56:B:474:TYR:O	56:B:475:ALA:O	1.99	0.80
7:D:890:A:C3'	7:D:892:G:H5"	2.09	0.80
20:Q:108:ARG:NH1	20:Q:114:ARG:HA	1.96	0.80
22:S:49:ASP:OD2	22:S:52:SER:OG	1.98	0.80
26:W:36:ARG:HB3	26:W:71:LEU:CA	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:40:ILE:HD12	26:W:67:VAL:O	1.80	0.80
29:Z:18:LYS:HG2	29:Z:20:TYR:H	1.43	0.80
37:h:49:ARG:HA	55:z:52:LYS:HZ1	1.46	0.80
56:B:10:ARG:HG3	56:B:186:PRO:O	1.81	0.80
6:A:101:A:O2'	6:A:102:G:H5'	1.81	0.80
7:D:43:G:C5	7:D:44:A:C5	2.69	0.80
7:D:662:G:H2'	7:D:663:G:H8	1.46	0.80
18:O:40:ILE:HG21	18:O:75:TYR:HE2	1.46	0.80
22:S:2:PRO:O	22:S:38:ARG:NH1	2.12	0.80
32:c:158:THR:HG22	32:c:160:ASN:H	1.45	0.80
56:B:8:ARG:HG3	56:B:74:GLU:HA	1.61	0.80
56:B:33:THR:HG21	56:B:69:ARG:CD	2.10	0.80
56:B:151:GLU:O	56:B:155:VAL:N	2.14	0.80
6:A:1164:G:N7	6:A:1165:C:N4	2.30	0.80
6:A:1220:G:OP1	26:W:34:TRP:CE2	2.35	0.80
7:D:270:A:N1	7:D:370:G:H1'	1.95	0.80
7:D:609:A:H2'	7:D:609(A):G:H8	1.47	0.80
7:D:1273:U:O2'	7:D:1275:A:OP2	1.98	0.80
7:D:1913:A:O2'	7:D:1914:C:OP2	1.98	0.80
41:l:21:GLU:HA	41:l:23:ARG:HH12	1.46	0.80
54:y:34:ARG:NH1	54:y:42:LEU:HA	1.95	0.80
56:B:317:ARG:NE	56:B:342:PHE:HE2	1.78	0.80
56:B:413:THR:HG22	56:B:451:VAL:HG22	1.64	0.80
3:3:13:PRO:HG2	3:3:16:LYS:NZ	1.94	0.80
7:D:295:G:P	7:D:338:G:H1	2.04	0.80
7:D:481:G:O2'	7:D:482:A:OP2	1.98	0.80
7:D:630:G:OP1	55:z:46:ARG:NH1	2.14	0.80
7:D:1101:U:O4	7:D:1103:A:N6	2.15	0.80
7:D:2197:U:O2'	7:D:2198:A:H5"	1.81	0.80
7:D:2227:A:C6	7:D:2228:G:C6	2.70	0.80
56:B:69:ARG:C	56:B:178:LEU:HD21	2.05	0.80
56:B:88:ASP:O	56:B:349:LEU:HD13	1.80	0.80
7:D:1275:A:N6	7:D:1295:C:O2'	2.14	0.80
7:D:2842:G:H2'	7:D:2843:G:H8	1.44	0.80
12:I:31:LEU:HA	12:I:45:PHE:HB2	1.64	0.80
17:N:51:ARG:NH2	17:N:61:GLU:OE1	2.15	0.80
26:W:59:PRO:C	26:W:60:VAL:CG2	2.53	0.80
56:B:169:LYS:HB2	57:B:701:GCP:C6	2.11	0.80
56:B:299:PRO:CD	56:B:348:PHE:CD2	2.64	0.80
56:B:480:GLU:O	56:B:481:GLN:HG3	1.80	0.80
56:B:492:VAL:CB	56:B:541:ILE:HG12	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1321:C:OP2	20:Q:98:VAL:HG22	1.82	0.80
6:A:1346:A:H62	6:A:1375:A:H62	1.26	0.80
7:D:295:G:H1	7:D:343:C:H42	1.30	0.80
7:D:624:C:N4	37:h:103:ALA:O	2.14	0.80
7:D:1530:G:N2	7:D:1541:U:O2'	2.15	0.80
10:G:12:LEU:HD11	21:R:57:ARG:HA	1.64	0.80
38:i:8:LYS:NZ	38:i:93:TYR:HD1	1.79	0.80
56:B:330:LEU:CD1	56:B:345:ARG:NH1	2.43	0.80
56:B:431:LYS:HB2	56:B:458:GLU:HB2	1.64	0.80
3:3:21:PRO:CB	7:D:1067:A:OP2	2.29	0.80
4:4:74:C:C5	56:B:569:ARG:CZ	2.65	0.80
6:A:697:U:O2	6:A:785:G:N2	2.13	0.80
7:D:1062:G:C8	7:D:1070:A:OP2	2.35	0.80
7:D:2839:G:O2'	39:j:49:ASP:OD2	1.99	0.80
26:W:16:LEU:HA	26:W:20:LEU:HD12	1.64	0.80
34:e:90:LYS:HE2	34:e:159:GLU:HG3	1.61	0.80
40:k:31:SER:HB3	40:k:34:HIS:CD2	2.17	0.80
56:B:383:LYS:O	56:B:384:SER:OG	2.00	0.80
6:A:75:C:O2	6:A:96:G:C2	2.34	0.80
6:A:193:C:H2'	6:A:194:C:H6	1.44	0.80
7:D:411:G:O2'	7:D:413:C:N4	2.15	0.80
11:H:98:GLU:HG2	11:H:189:PRO:HG3	1.64	0.80
13:J:50:TYR:OH	13:J:87:ARG:NH2	2.15	0.80
20:Q:90:LEU:O	20:Q:93:ARG:HG2	1.81	0.80
56:B:107:VAL:HG21	56:B:156:LEU:HD21	1.62	0.80
56:B:382:LEU:CD2	56:B:401:ARG:CA	1.86	0.80
3:3:19:PRO:HB2	3:3:23:VAL:HG23	1.62	0.79
7:D:869:G:H1	7:D:908:C:H42	1.28	0.79
31:b:5:LEU:HD23	31:b:27:LEU:HD13	1.63	0.79
40:k:49:VAL:HG22	40:k:76:LYS:NZ	1.97	0.79
40:k:49:VAL:HG22	40:k:76:LYS:HZ2	1.46	0.79
56:B:382:LEU:CB	56:B:401:ARG:CB	2.53	0.79
56:B:492:VAL:HA	56:B:541:ILE:HG12	1.62	0.79
4:4:74:C:C4	56:B:569:ARG:NH2	2.46	0.79
7:D:1053:C:N4	7:D:1108:U:O2	2.14	0.79
7:D:2194:G:N2	7:D:2195:C:C2	2.50	0.79
7:D:2237:G:O2'	7:D:2239:G:N7	2.14	0.79
29:Z:69:GLY:HA2	29:Z:157:LYS:HA	1.64	0.79
32:c:125:LEU:O	32:c:127:GLU:N	2.15	0.79
43:n:73:SER:OG	43:n:89:GLN:OE1	1.99	0.79
51:v:56:VAL:HG12	51:v:57:GLU:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:194:ALA:C	56:B:219:GLU:OE1	2.01	0.79
56:B:543:GLY:C	56:B:544:LYS:HG2	2.06	0.79
7:D:601:C:OP1	32:c:108:LYS:NZ	2.15	0.79
7:D:2211:G:H22	7:D:2212:A:H8	1.27	0.79
37:h:73:GLY:N	37:h:107:LYS:HZ1	1.80	0.79
56:B:36:VAL:HG22	56:B:248:GLN:HE21	1.45	0.79
56:B:136:ASN:HA	56:B:167:SER:HA	1.64	0.79
56:B:382:LEU:HD13	56:B:383:LYS:O	1.82	0.79
7:D:465:G:OP1	54:y:12:ARG:NH1	2.14	0.79
7:D:542:C:H2'	7:D:543:C:C5	2.17	0.79
7:D:974(A):C:O2	7:D:1186:G:N1	2.10	0.79
7:D:1449(A):G:O6	7:D:1462:C:N4	2.14	0.79
7:D:1565:C:N4	30:a:84:TYR:OH	2.15	0.79
7:D:2217:G:H2'	7:D:2218:G:C8	2.17	0.79
56:B:91:TYR:CE2	56:B:296:PRO:O	2.33	0.79
56:B:533:PHE:HZ	56:B:588:GLY:C	1.86	0.79
6:A:457:C:O2	6:A:476:G:N2	2.15	0.79
7:D:270(I):G:N1	7:D:270(Q):C:N3	2.30	0.79
7:D:527:C:O2'	7:D:528:A:O4'	1.99	0.79
7:D:1181:C:H2'	7:D:1182:A:H8	1.48	0.79
7:D:1726:G:C5	7:D:1727:U:N3	2.50	0.79
7:D:2115:G:O2'	7:D:2171:A:N6	2.12	0.79
13:J:100:ASN:ND2	25:V:26:LEU:O	2.15	0.79
6:A:711:G:H2'	6:A:712:A:H8	1.46	0.79
7:D:442:G:C5	7:D:444:C:N4	2.51	0.79
7:D:507:A:O2'	7:D:508:G:OP2	1.99	0.79
7:D:861:A:N6	7:D:917:A:N3	2.31	0.79
19:P:49:ASN:ND2	19:P:92:ASP:OD1	2.13	0.79
36:g:10:VAL:O	36:g:97:ARG:NH1	2.13	0.79
40:k:11:LYS:HZ1	40:k:15:ARG:HH12	1.30	0.79
56:B:188:PRO:CB	56:B:216:ARG:HH22	1.87	0.79
56:B:382:LEU:HD21	56:B:400:THR:O	1.81	0.79
4:4:18:G:N2	4:4:58:A:O4'	2.14	0.79
6:A:957:U:O2'	6:A:958:A:N7	2.16	0.79
7:D:928:G:H3'	7:D:929:G:H8	1.47	0.79
7:D:1024:G:O6	7:D:1139:G:N1	2.14	0.79
7:D:1862:G:H2'	7:D:1863:G:C8	2.17	0.79
7:D:1864:U:O2'	7:D:1869:G:H5'	1.83	0.79
56:B:135:ILE:HG13	56:B:165:PHE:HB3	0.79	0.79
56:B:225:GLY:C	56:B:239:VAL:CG1	2.56	0.79
6:A:662:G:H2'	6:A:663:A:H8	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1175:G:H2'	6:A:1176:A:H8	1.47	0.79
7:D:745:G:N2	7:D:753:C:N3	2.29	0.79
7:D:1086:A:H3'	7:D:1087:G:H5'	1.65	0.79
7:D:2386:C:H2'	48:s:41:ARG:HH12	1.46	0.79
7:D:2611:U:H5"	7:D:2612:C:OP2	1.82	0.79
24:U:58:GLU:OE2	24:U:75:ARG:NE	2.16	0.79
38:i:75:THR:HB	38:i:77:LYS:HZ1	1.48	0.79
42:m:92:ARG:N	43:n:10:LYS:HZ1	1.81	0.79
56:B:306:TYR:HB3	56:B:370:ILE:HD12	1.54	0.79
6:A:455:C:O2'	6:A:456:C:H5'	1.82	0.79
7:D:2747:G:N2	7:D:2748:A:N7	2.30	0.79
10:G:84:ILE:HG13	10:G:101:LEU:HD22	1.62	0.79
30:a:244:ARG:HA	30:a:252:TRP:HE1	1.47	0.79
56:B:135:ILE:HG12	56:B:165:PHE:CB	1.82	0.79
56:B:164:ILE:CG2	56:B:176:GLU:OE1	2.30	0.79
56:B:196:LEU:O	56:B:281:THR:CA	2.31	0.79
7:D:2:G:N1	7:D:2901:C:O2	2.16	0.79
7:D:860:U:H3	7:D:917:A:N6	1.81	0.79
7:D:2773:C:O5'	31:b:164:ARG:NH1	2.15	0.79
26:W:36:ARG:CA	26:W:71:LEU:CB	2.25	0.79
33:d:31:VAL:O	33:d:33:ARG:N	2.16	0.79
56:B:81:ILE:HD13	56:B:100:VAL:CG2	1.82	0.79
56:B:97:LEU:O	56:B:97:LEU:HD23	1.83	0.79
56:B:118:LEU:HD11	56:B:446:LYS:CE	2.10	0.79
7:D:1477:A:C5	7:D:1478:G:C6	2.71	0.78
7:D:2346:A:N7	53:x:37:ARG:NH1	2.31	0.78
20:Q:102:ARG:HH11	20:Q:102:ARG:CB	1.95	0.78
31:b:119:ARG:NH1	31:b:155:LYS:HG3	1.97	0.78
34:e:6:ARG:O	34:e:65:HIS:NE2	2.16	0.78
43:n:60:GLU:OE1	43:n:101:GLY:N	2.16	0.78
46:q:22:GLY:HA3	46:q:73:ARG:NH1	1.98	0.78
48:s:25:ARG:HD2	48:s:29:GLN:HE22	1.46	0.78
56:B:381:ARG:HH21	56:B:385:GLY:HA2	1.47	0.78
6:A:324:G:N2	6:A:327:A:OP2	2.16	0.78
6:A:1162:C:N3	6:A:1174:G:N1	2.31	0.78
6:A:1319:A:OP1	26:W:12:ASP:OD2	2.01	0.78
7:D:1119:C:N4	7:D:1120:G:O6	2.16	0.78
7:D:1418:G:O2'	7:D:1579:A:N6	2.16	0.78
7:D:1752:C:H5"	7:D:1753:G:OP2	1.83	0.78
26:W:14:HIS:C	26:W:35:SER:OG	2.26	0.78
56:B:382:LEU:HG	56:B:401:ARG:CG	2.06	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:489:LEU:CD2	56:B:509:HIS:HB3	2.13	0.78
56:B:562:CYS:C	56:B:570:LYS:HZ1	1.91	0.78
6:A:1100:C:H5'	6:A:1101:A:OP2	1.81	0.78
7:D:1074:G:H2'	7:D:1075:C:H5	1.49	0.78
7:D:1143:A:H2'	7:D:1144:G:H8	1.47	0.78
7:D:1266:G:O2'	7:D:1267:U:OP2	2.00	0.78
40:k:106:ARG:NH1	40:k:110:LEU:HB2	1.98	0.78
6:A:382:A:H8	6:A:382:A:OP2	1.66	0.78
6:A:495:A:H4'	6:A:496:A:OP1	1.82	0.78
6:A:837:G:N2	6:A:850:U:O2	2.15	0.78
6:A:1220:G:OP1	26:W:34:TRP:CD2	2.37	0.78
7:D:273(B):C:O2	7:D:363(D):G:N2	2.16	0.78
7:D:648:G:C6	7:D:649:G:N1	2.52	0.78
7:D:1060:U:H5'	7:D:1061:U:OP2	1.83	0.78
7:D:1344:G:N2	7:D:1385:G:O4'	2.17	0.78
7:D:1529:A:H3'	7:D:1530:G:H8	1.47	0.78
7:D:1565:C:C4	7:D:1567:A:H8	2.02	0.78
7:D:1726:G:C5	7:D:1727:U:C4	2.71	0.78
7:D:2219:G:C2'	7:D:2224:G:H5'	2.13	0.78
31:b:64:LYS:HA	31:b:67:PHE:HB3	1.64	0.78
32:c:33:LEU:HD23	32:c:112:MET:HE3	1.64	0.78
56:B:21:GLY:HA3	56:B:136:ASN:ND2	1.98	0.78
56:B:228:ILE:HG23	56:B:282:LEU:HA	1.64	0.78
1:1:36:GLN:HE22	7:D:1031:G:N2	1.81	0.78
3:3:103:GLN:CA	3:3:106:GLU:OE2	2.32	0.78
3:3:112:MET:HE1	3:3:115:LEU:HD13	1.65	0.78
7:D:855:G:N2	7:D:923:C:O2	2.15	0.78
7:D:1059:G:O6	7:D:1081:U:N3	2.15	0.78
7:D:2782:G:H2'	7:D:2783:G:C8	2.18	0.78
26:W:40:ILE:HB	26:W:68:GLY:CA	2.13	0.78
46:q:22:GLY:CA	46:q:73:ARG:HH12	1.97	0.78
56:B:58:THR:OG1	56:B:84:PRO:CG	2.32	0.78
56:B:135:ILE:HD11	56:B:145:PRO:HB3	1.64	0.78
6:A:74:C:H2'	6:A:75:C:C5	2.18	0.78
6:A:974:A:OP2	21:R:32:SER:OG	2.00	0.78
6:A:1353:G:P	28:Y:3:LYS:HZ1	2.07	0.78
7:D:739:G:H4'	7:D:1784:A:H61	1.47	0.78
7:D:1087:G:N1	7:D:1102:C:N3	2.28	0.78
7:D:1529:A:H8	7:D:1530:G:C8	2.02	0.78
7:D:1980:G:O2'	7:D:1982:C:OP2	2.01	0.78
7:D:2787:C:H2'	7:D:2788:C:H6	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:52:GLU:HG2	20:Q:55:ARG:HH21	1.49	0.78
33:d:32:PRO:CG	33:d:168:GLU:HG2	2.08	0.78
56:B:523:LYS:CA	56:B:598:LEU:CD2	2.60	0.78
3:3:91:PRO:HB2	7:D:1076:C:O4'	1.84	0.78
6:A:191:G:N2	27:X:103:GLY:O	2.14	0.78
6:A:1296:C:OP2	20:Q:44:ARG:NH1	2.16	0.78
6:A:1454:G:C5	6:A:1455:G:C8	2.71	0.78
7:D:922:U:O2	7:D:923:C:C2	2.37	0.78
7:D:1174:A:H2'	7:D:1175:U:C6	2.19	0.78
7:D:1485:G:C2	7:D:1486:A:C8	2.71	0.78
7:D:1725:G:N3	7:D:1726:G:C8	2.51	0.78
8:E:48:A:O2'	40:k:95:HIS:NE2	2.15	0.78
26:W:70:LYS:CA	26:W:73:GLU:HG2	2.13	0.78
30:a:155:LEU:HD23	30:a:157:ARG:HH12	1.48	0.78
36:g:8:LEU:HD22	36:g:19:ILE:HD11	1.64	0.78
36:g:67:LYS:HZ1	41:l:65:LYS:HE2	1.43	0.78
56:B:186:PRO:HB2	56:B:187:PRO:CD	2.13	0.78
56:B:202:ASP:O	56:B:203:SER:CB	2.32	0.78
56:B:299:PRO:N	56:B:348:PHE:CE2	2.51	0.78
56:B:300:VAL:CG1	56:B:477:MET:SD	2.71	0.78
56:B:379:LYS:N	56:B:406:LEU:HB3	1.98	0.78
56:B:383:LYS:H	56:B:402:ILE:HG12	1.42	0.78
56:B:416:THR:O	56:B:448:VAL:CG2	2.31	0.78
1:1:22:ARG:NH1	1:1:37:GLY:O	2.17	0.78
6:A:1070:U:O2	6:A:1106:G:N2	2.16	0.78
6:A:1309:G:H5'	20:Q:88:ARG:HH21	1.48	0.78
6:A:1438:G:OP2	27:X:34:LYS:NZ	2.17	0.78
7:D:39:C:H1'	32:c:46:ARG:HH12	1.46	0.78
7:D:989:G:HO2'	7:D:990:A:P	2.06	0.78
7:D:1470:G:N1	7:D:1520:U:O4	2.17	0.78
7:D:1476:C:N4	7:D:1516:U:O2	2.16	0.78
7:D:2060:A:O2'	7:D:2061:G:OP2	2.02	0.78
34:e:137:ASP:OD2	34:e:139:GLN:HG2	1.83	0.78
56:B:13:SER:OG	56:B:81:ILE:CB	2.32	0.78
56:B:20:HIS:CD2	56:B:108:ASP:HB2	2.19	0.78
56:B:25:LEU:HB2	56:B:168:GLY:HA3	1.66	0.78
56:B:121:PHE:CE2	56:B:157:GLY:HA3	2.15	0.78
56:B:196:LEU:HB3	56:B:282:LEU:CB	2.14	0.78
56:B:322:LYS:CG	56:B:331:THR:CG2	2.61	0.78
56:B:497:HIS:ND1	56:B:535:VAL:HG21	1.98	0.78
6:A:74:C:N3	6:A:75:C:N4	2.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1065:U:H2'	7:D:1066:U:H4'	1.66	0.78
10:G:11:ARG:HB3	10:G:15:THR:HG22	1.64	0.78
30:a:224:ALA:H	30:a:233:HIS:CD2	2.01	0.78
37:h:121:LYS:HB2	37:h:137:LYS:HG3	1.65	0.78
56:B:195:PRO:HB2	56:B:286:PRO:CB	2.14	0.78
56:B:345:ARG:HG3	56:B:346:CYS:H	1.49	0.78
56:B:361:LEU:HD23	56:B:366:GLY:HA3	1.66	0.78
6:A:216:G:C5	6:A:217:C:C4	2.72	0.78
7:D:293:U:O4	7:D:346:A:N6	2.17	0.78
7:D:976:C:H5'	7:D:1156:A:H62	1.46	0.78
7:D:1666:G:H1	7:D:1994:C:N4	1.81	0.78
7:D:2794:C:N3	7:D:2802:G:O6	2.17	0.78
17:N:52:GLY:O	21:R:41:ARG:NH2	2.17	0.78
26:W:15:LEU:HD23	26:W:33:THR:CB	2.14	0.78
56:B:412:LEU:HD23	56:B:477:MET:HE2	0.78	0.78
56:B:459:ILE:HD12	56:B:460:LEU:N	1.99	0.78
6:A:129(A):G:N2	6:A:188:U:O2'	2.17	0.77
6:A:438:G:H3'	6:A:494:U:O4	1.84	0.77
7:D:273(C):C:N4	7:D:363(C):G:O6	2.17	0.77
7:D:2746:U:H3	7:D:2758:A:H61	1.32	0.77
7:D:2848:G:N2	7:D:2867:G:N3	2.32	0.77
42:m:61:TRP:CD1	42:m:93:LYS:NZ	2.48	0.77
46:q:84:ARG:NH2	46:q:85:VAL:O	2.17	0.77
56:B:135:ILE:HD13	56:B:165:PHE:CG	2.17	0.77
56:B:229:ARG:NH2	56:B:282:LEU:O	2.16	0.77
56:B:382:LEU:CD2	56:B:400:THR:O	2.32	0.77
56:B:441:LEU:CD1	56:B:447:ARG:HD2	2.14	0.77
3:3:126:MET:HE2	7:D:1059:G:C8	2.18	0.77
6:A:85:U:C2'	6:A:86:U:H5'	2.14	0.77
6:A:1134:G:N2	6:A:1140:C:N3	2.32	0.77
7:D:252:G:C5	55:z:8:LYS:NZ	2.52	0.77
7:D:385:C:HO2'	7:D:388:G:N2	1.82	0.77
7:D:560:C:H2'	7:D:561:G:H5'	1.67	0.77
7:D:1582:C:H5"	7:D:1583:A:OP2	1.84	0.77
7:D:2286:A:N6	53:x:31:PRO:O	2.18	0.77
29:Z:57:ASN:HA	29:Z:165:ASN:HD21	1.49	0.77
30:a:155:LEU:CD2	30:a:157:ARG:HH12	1.96	0.77
35:f:7:LYS:NZ	35:f:10:GLU:HB2	1.98	0.77
37:h:107:LYS:HE3	37:h:110:TYR:HD2	1.47	0.77
41:l:35:LYS:HZ3	41:l:86:ILE:HD11	1.47	0.77
56:B:205:TYR:CZ	56:B:271:ILE:HG12	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:218:PHE:CE2	56:B:291:TYR:OH	2.35	0.77
56:B:305:LEU:CD2	56:B:358:GLN:HE21	1.94	0.77
56:B:320:LEU:O	56:B:322:LYS:HG3	1.85	0.77
7:D:464:U:O2	7:D:788:A:N6	2.18	0.77
16:M:47:LEU:HD11	16:M:51:ARG:NH1	2.00	0.77
22:S:33:THR:O	22:S:37:ASN:ND2	2.17	0.77
33:d:69:ALA:O	33:d:72:ARG:NH2	2.17	0.77
36:g:12:ASP:O	36:g:94:ARG:NH2	2.17	0.77
56:B:13:SER:CB	56:B:97:LEU:CG	2.63	0.77
56:B:531:GLN:CD	56:B:584:LEU:CD1	2.58	0.77
2:2:43:ALA:HA	3:3:117:THR:HG21	1.65	0.77
6:A:208:U:H4'	6:A:209:U:OP2	1.84	0.77
6:A:1025:U:O4	6:A:1035:A:N6	2.17	0.77
7:D:746:A:N6	7:D:2610:C:OP1	2.15	0.77
16:M:67:GLY:O	16:M:73:GLN:NE2	2.14	0.77
37:h:99:LEU:HD23	37:h:101:VAL:H	1.48	0.77
56:B:12:PHE:HA	56:B:100:VAL:HG11	1.65	0.77
56:B:95:ARG:HG3	56:B:96:ALA:N	1.97	0.77
56:B:383:LYS:CA	56:B:402:ILE:CG1	2.62	0.77
56:B:421:VAL:CG1	56:B:425:MET:HG3	2.15	0.77
56:B:431:LYS:HB3	56:B:455:PRO:HG3	1.47	0.77
56:B:506:PHE:CZ	56:B:520:ILE:HG21	2.16	0.77
56:B:531:GLN:HG2	56:B:532:LEU:CG	2.14	0.77
6:A:1328:C:O2'	20:Q:29:ARG:NH2	2.17	0.77
7:D:371:A:C5'	7:D:423:A:N6	2.47	0.77
7:D:539:G:O2'	7:D:540:G:H5'	1.84	0.77
7:D:883:G:H2'	7:D:892:G:O6	1.84	0.77
7:D:1479:G:O3'	7:D:1559:G:C6	2.37	0.77
56:B:48:SER:O	56:B:49:LEU:HD12	1.84	0.77
3:3:34:ILE:HG22	3:3:63:ARG:CB	2.15	0.77
7:D:638:G:N1	7:D:650:C:C2	2.53	0.77
7:D:687:C:H4'	54:y:4:THR:HG22	1.66	0.77
7:D:2107:C:O2	7:D:2108:C:H3'	1.84	0.77
7:D:2226:C:H2'	7:D:2227:A:H5'	1.67	0.77
34:e:24:VAL:HG23	34:e:35:VAL:HG23	1.65	0.77
7:D:537:C:H4'	7:D:539:G:OP1	1.84	0.77
7:D:931:G:H3'	7:D:932:G:H4'	1.65	0.77
11:H:30:LYS:H	11:H:34:GLU:HB3	1.50	0.77
33:d:68:PRO:HB3	33:d:72:ARG:NH1	2.00	0.77
34:e:149:ARG:HD3	34:e:153:LYS:NZ	1.98	0.77
36:g:6:THR:HG22	36:g:21:CYS:HB3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:8:ARG:NE	56:B:74:GLU:HA	1.98	0.77
56:B:95:ARG:CZ	56:B:294:PHE:CE1	2.67	0.77
56:B:306:TYR:HE1	56:B:339:ALA:CB	1.96	0.77
56:B:537:ILE:CD1	56:B:551:VAL:CG2	2.62	0.77
6:A:376:G:H2'	6:A:377:G:H8	1.50	0.77
6:A:380:G:N2	6:A:383:A:OP2	2.18	0.77
6:A:1380:U:O2	6:A:1382:C:N4	2.17	0.77
7:D:2636:U:H4'	31:b:79:ARG:HH21	1.49	0.77
7:D:2810:A:O2'	31:b:61:ARG:CZ	2.33	0.77
26:W:59:PRO:C	26:W:60:VAL:HG23	2.07	0.77
27:X:81:LYS:HB3	27:X:85:MET:HE3	1.67	0.77
33:d:75:LYS:HD2	33:d:85:GLY:H	1.47	0.77
34:e:89:ILE:CG2	34:e:128:PRO:O	2.33	0.77
40:k:50:SER:O	40:k:76:LYS:NZ	2.17	0.77
56:B:200:ILE:HG13	56:B:278:ASP:O	1.84	0.77
6:A:85:U:H5"	6:A:87:A:C2	2.20	0.77
6:A:110:C:O2'	23:T:25:ARG:O	2.03	0.77
6:A:455:C:N3	6:A:478:A:C2	2.53	0.77
7:D:1047:G:C6	7:D:1110:G:C5	2.73	0.77
7:D:1434:A:H2'	7:D:1435:G:H8	1.49	0.77
7:D:2245:U:O2'	7:D:2436:G:OP2	2.02	0.77
7:D:2387:U:O4'	48:s:41:ARG:NH1	2.17	0.77
10:G:152:ILE:HG22	10:G:167:TRP:HB2	1.67	0.77
26:W:36:ARG:CB	26:W:71:LEU:C	2.49	0.77
31:b:127:ASP:OD1	31:b:128:SER:N	2.18	0.77
41:l:13:ARG:O	41:l:16:ARG:NH2	2.16	0.77
47:r:48:PHE:HB3	47:r:54:HIS:HE1	1.49	0.77
56:B:425:MET:HG2	56:B:452:TYR:OH	1.85	0.77
3:3:10:LEU:HD12	3:3:12:LEU:HD21	1.65	0.77
6:A:1400:C:H4'	6:A:1401:G:OP2	1.84	0.77
7:D:247:G:N2	7:D:249:C:O2'	2.17	0.77
7:D:674:G:O6	7:D:806:C:N4	2.17	0.77
7:D:2020:A:H2'	7:D:2021:C:H5"	1.66	0.77
7:D:2320:A:H1'	7:D:2333:A:N1	2.00	0.77
7:D:2704:C:H2'	7:D:2705:A:H8	1.48	0.77
14:K:24:THR:O	14:K:28:ASN:ND2	2.18	0.77
45:p:66:LEU:O	45:p:68:ARG:N	2.18	0.77
56:B:503:ALA:O	56:B:505:THR:N	2.18	0.77
3:3:24:GLY:O	56:B:440:TYR:CD2	2.38	0.76
3:3:34:ILE:HG22	3:3:63:ARG:HB3	1.65	0.76
6:A:1158:C:N4	6:A:1160:G:O2'	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1319:A:O5'	26:W:37:ARG:C	2.28	0.76
7:D:721:C:H2'	7:D:722:A:H8	1.48	0.76
7:D:989:G:O2'	7:D:990:A:O5'	2.02	0.76
7:D:1717:G:O6	7:D:1718:G:N2	2.18	0.76
20:Q:71:ARG:HA	20:Q:75:ALA:CB	2.15	0.76
45:p:66:LEU:HD11	45:p:69:TYR:HB2	1.65	0.76
53:x:12:GLU:OE2	53:x:51:GLU:OE2	2.03	0.76
53:x:19:ARG:HE	53:x:44:ARG:NH1	1.82	0.76
56:B:12:PHE:N	56:B:100:VAL:HG11	1.95	0.76
56:B:92:GLU:HA	56:B:96:ALA:HB3	1.66	0.76
56:B:135:ILE:HD11	56:B:165:PHE:HB2	1.63	0.76
56:B:300:VAL:HG11	56:B:477:MET:CE	2.14	0.76
56:B:450:LEU:CD1	56:B:452:TYR:HE1	1.97	0.76
3:3:76:TYR:OH	3:3:80:LYS:NZ	2.18	0.76
6:A:198:G:H2'	6:A:199:G:C8	2.19	0.76
6:A:1164:G:C6	6:A:1165:C:N3	2.53	0.76
6:A:1182:G:HO2'	6:A:1183:A:P	2.08	0.76
7:D:662:G:H5"	37:h:19:VAL:HG13	1.67	0.76
7:D:2790:A:C2	7:D:2893:G:N1	2.51	0.76
10:G:21:ARG:HB2	10:G:58:GLU:HG2	1.68	0.76
16:M:21:PRO:HA	16:M:59:PHE:HA	1.67	0.76
20:Q:97:PRO:HG2	20:Q:99:ARG:HG2	1.67	0.76
44:o:25:ARG:HD3	44:o:75:TYR:CE2	2.20	0.76
47:r:50:GLN:HB2	47:r:53:ILE:HD12	1.64	0.76
56:B:229:ARG:HG2	56:B:237:PHE:HZ	1.47	0.76
56:B:300:VAL:HG11	56:B:477:MET:HE1	1.66	0.76
56:B:521:VAL:O	56:B:523:LYS:HG2	1.84	0.76
6:A:334:C:HO2'	6:A:1434:A:HO2'	1.30	0.76
6:A:595:G:O2'	6:A:596:C:O5'	2.02	0.76
6:A:1056:U:H5'	10:G:163:ALA:HB2	1.67	0.76
6:A:1378:C:O2	14:K:76:ARG:NH2	2.18	0.76
6:A:1450:U:C2	6:A:1452:C:O2	2.38	0.76
7:D:572:A:H5"	7:D:573:G:OP2	1.84	0.76
7:D:1266:G:N2	7:D:2013:A:OP2	2.17	0.76
7:D:1450:C:O2	7:D:1451:C:H1'	1.86	0.76
7:D:2732:G:H4'	7:D:2733:A:OP2	1.84	0.76
12:I:149:GLU:OE2	12:I:153:LYS:HB2	1.85	0.76
14:K:29:LYS:HG3	14:K:101:LEU:HD22	1.67	0.76
26:W:11:VAL:HG21	26:W:41:VAL:HG22	1.66	0.76
46:q:72:VAL:HG12	46:q:74:PRO:HD3	1.65	0.76
6:A:500:G:O6	6:A:546:G:C2	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:163:U:C3'	7:D:164:U:H5"	2.15	0.76
8:E:55:U:H2'	8:E:56:G:C8	2.19	0.76
17:N:34:VAL:HA	17:N:74:ILE:HG12	1.67	0.76
29:Z:69:GLY:O	29:Z:157:LYS:CG	2.29	0.76
32:c:40:GLN:HG3	32:c:43:LYS:HB3	1.67	0.76
34:e:45:VAL:HG22	34:e:50:VAL:HG13	1.67	0.76
40:k:50:SER:C	40:k:76:LYS:HZ1	1.93	0.76
47:r:39:VAL:HG13	47:r:44:PHE:HD2	1.49	0.76
56:B:199:LEU:O	56:B:215:LEU:HB2	1.85	0.76
56:B:206:ASP:OD2	56:B:269:ARG:HB2	1.80	0.76
56:B:225:GLY:C	56:B:239:VAL:HG12	2.09	0.76
56:B:402:ILE:HG13	56:B:402:ILE:O	1.84	0.76
56:B:406:LEU:HG	56:B:489:LEU:HD11	1.66	0.76
56:B:414:ILE:HD13	56:B:428:LEU:HD11	1.67	0.76
3:3:19:PRO:C	3:3:22:PRO:HD2	2.11	0.76
6:A:197:A:N6	6:A:220:G:O2'	2.19	0.76
6:A:838:G:H1	6:A:849:C:H42	1.31	0.76
6:A:1014:A:H4'	26:W:18:LYS:NZ	1.99	0.76
7:D:154:G:N1	7:D:173:G:N2	2.33	0.76
7:D:363(F):A:C2	7:D:364:C:H1'	2.20	0.76
7:D:558:G:H2'	7:D:559:G:H8	1.49	0.76
7:D:974(A):C:O2	7:D:989:G:N2	2.19	0.76
7:D:1264:G:OP1	52:w:19:ARG:NH1	2.19	0.76
7:D:1869:G:HO2'	7:D:1871:A:N6	1.79	0.76
7:D:2161:C:O2'	7:D:2173:A:O2'	2.03	0.76
32:c:69:HIS:ND1	32:c:69:HIS:O	2.18	0.76
56:B:17:HIS:HE1	56:B:116:GLU:H	1.32	0.76
56:B:230:ILE:HG23	56:B:279:THR:CA	2.15	0.76
56:B:408:PRO:CG	56:B:456:PHE:HB3	2.14	0.76
56:B:459:ILE:HA	56:B:463:PHE:HD2	1.50	0.76
6:A:186(B):C:H4'	27:X:89:ARG:NH1	2.00	0.76
6:A:719:C:N3	25:V:74:ARG:NH2	2.33	0.76
7:D:1453:A:N6	39:j:63:ARG:HH21	1.80	0.76
43:n:2:PHE:HB2	43:n:13:ARG:NH1	1.99	0.76
46:q:13:VAL:HA	46:q:73:ARG:HH11	1.51	0.76
47:r:4:ARG:HE	47:r:39:VAL:HG23	1.50	0.76
56:B:78:PHE:CE2	56:B:182:VAL:CG2	2.68	0.76
56:B:308:VAL:HG23	56:B:370:ILE:HG12	1.67	0.76
56:B:352:LEU:HD22	56:B:356:ILE:HD11	1.68	0.76
56:B:383:LYS:HA	56:B:402:ILE:CD1	2.16	0.76
56:B:493:ASN:HA	56:B:503:ALA:O	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:728:A:H2'	6:A:729:A:H8	1.50	0.76
7:D:485:C:C2'	7:D:486:C:H5'	2.16	0.76
7:D:928:G:H3'	7:D:929:G:C8	2.19	0.76
35:f:69:GLN:NE2	35:f:87:LEU:H	1.83	0.76
56:B:68:TYR:CD2	56:B:75:GLU:CG	2.61	0.76
56:B:420:TYR:CG	56:B:471:SER:HB2	2.21	0.76
56:B:490:VAL:HG12	56:B:491:LYS:N	1.97	0.76
6:A:210:U:H4'	6:A:216:G:OP1	1.85	0.76
7:D:543:C:C2	7:D:551:G:C2	2.74	0.76
7:D:899:A:O2'	7:D:901:A:N7	2.18	0.76
7:D:1820:U:O2'	7:D:1821:A:OP2	2.04	0.76
25:V:21:LYS:HZ2	25:V:23:LYS:HB3	1.51	0.76
49:t:37:GLY:O	49:t:39:LEU:N	2.19	0.76
51:v:38:LYS:NZ	51:v:40:HIS:HB2	2.01	0.76
56:B:299:PRO:CD	56:B:348:PHE:CE2	2.68	0.76
6:A:101:A:H2'	6:A:102:G:H8	1.51	0.76
7:D:516:C:OP1	52:w:13:LYS:NZ	2.16	0.76
7:D:1173:G:N2	7:D:1175:U:OP2	2.17	0.76
7:D:1174:A:H3'	7:D:1174:A:N3	2.00	0.76
7:D:1543:A:H3'	7:D:1544:C:H4'	1.67	0.76
26:W:4:SER:O	26:W:5:LEU:HG	1.85	0.76
33:d:8:LYS:NZ	33:d:176:LEU:HG	2.00	0.76
56:B:78:PHE:HZ	56:B:182:VAL:HG23	1.50	0.76
56:B:536:PRO:HA	56:B:550:THR:HA	1.67	0.76
6:A:969:A:O2'	17:N:55:LYS:NZ	2.17	0.76
7:D:185:U:H2'	7:D:186:G:H8	1.50	0.76
7:D:489:G:N7	7:D:1284:A:N3	2.32	0.76
7:D:1477:A:N1	7:D:1515:C:N4	2.31	0.76
7:D:2217:G:N3	7:D:2218:G:N7	2.34	0.76
7:D:2306:C:O3'	33:d:153:ARG:NH1	2.19	0.76
15:L:11:THR:HG22	15:L:14:ARG:NH1	2.00	0.76
30:a:57:GLY:O	30:a:58:HIS:ND1	2.18	0.76
3:3:132:ARG:O	7:D:1077:A:H2'	1.85	0.75
6:A:445:G:H2'	6:A:446:G:H8	1.45	0.75
6:A:838:G:H1	6:A:849:C:N4	1.84	0.75
7:D:338:G:H8	46:q:4:LYS:HD3	1.51	0.75
7:D:2183:C:H2'	7:D:2184:G:C8	2.21	0.75
7:D:2386:C:H2'	48:s:41:ARG:NH1	2.01	0.75
13:J:53:ALA:HB3	13:J:86:ARG:NH1	2.00	0.75
30:a:27:THR:HG22	30:a:29:PRO:HD2	1.66	0.75
56:B:27:ASP:C	56:B:41:MET:SD	2.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:81:ALA:HB3	3:3:107:ILE:HD13	1.66	0.75
6:A:186:C:O2'	27:X:85:MET:SD	2.42	0.75
6:A:1443:G:H4'	6:A:1446:A:OP2	1.85	0.75
7:D:493:G:H2'	7:D:494:G:H8	1.51	0.75
7:D:2314:C:H2'	7:D:2315:G:H8	1.50	0.75
35:f:35:ARG:HH11	35:f:48:MET:HE1	1.49	0.75
56:B:245:PHE:HE2	56:B:262:GLY:CA	1.94	0.75
6:A:570:G:O6	6:A:865:A:N6	2.13	0.75
7:D:704:G:H2'	7:D:726:G:N2	2.01	0.75
7:D:1058:G:H2'	7:D:1059:G:H5'	1.67	0.75
7:D:1579:A:H5"	7:D:1580:A:C8	2.22	0.75
11:H:74:GLN:HA	11:H:77:ASN:HD22	1.50	0.75
37:h:56:SER:HB2	55:z:13:ARG:HH11	1.51	0.75
46:q:22:GLY:HA3	46:q:73:ARG:HH12	1.48	0.75
56:B:64:VAL:HG11	56:B:80:LEU:CA	2.15	0.75
56:B:206:ASP:HB3	56:B:210:GLY:HA2	1.67	0.75
56:B:225:GLY:CA	56:B:239:VAL:HG11	1.93	0.75
56:B:299:PRO:CA	56:B:479:TYR:CZ	2.69	0.75
3:3:104:VAL:HA	3:3:107:ILE:CD1	2.13	0.75
6:A:391:G:OP1	23:T:8:ARG:NH2	2.19	0.75
6:A:438:G:N2	6:A:495:A:OP2	2.19	0.75
6:A:500:G:N1	6:A:546:G:N3	2.34	0.75
7:D:1492:G:H5'	7:D:1493:C:OP2	1.85	0.75
7:D:1748:G:N2	7:D:1749:A:C2	2.54	0.75
7:D:2355:C:O3'	48:s:24:LYS:NZ	2.18	0.75
8:E:91:C:H5"	47:r:79:ARG:NH1	2.01	0.75
11:H:68:TYR:HD1	11:H:114:ARG:HH12	1.32	0.75
16:M:26:VAL:HB	16:M:33:PHE:HB2	1.68	0.75
32:c:13:SER:O	32:c:15:SER:N	2.19	0.75
32:c:196:LEU:HB3	32:c:199:TRP:HD1	1.50	0.75
41:l:28:VAL:HG12	41:l:30:VAL:HB	1.67	0.75
41:l:53:ARG:HH22	41:l:103:ARG:HG2	1.51	0.75
47:r:53:ILE:HG23	47:r:58:VAL:HG11	1.67	0.75
56:B:166:ALA:CB	56:B:172:GLU:HG2	2.16	0.75
56:B:383:LYS:CA	56:B:402:ILE:HG21	2.10	0.75
3:3:33:ASN:O	3:3:63:ARG:CD	2.28	0.75
3:3:56:GLU:O	3:3:58:THR:N	2.19	0.75
6:A:1320:C:O2	20:Q:87:TYR:HD2	1.70	0.75
6:A:1440:C:C2	6:A:1462:G:C2	2.73	0.75
7:D:2307:G:H5"	7:D:2308:G:H8	1.50	0.75
31:b:50:GLY:HA3	31:b:76:ARG:CZ	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:v:38:LYS:HZ3	51:v:40:HIS:HB2	1.52	0.75
53:x:17:LYS:HE3	53:x:50:ARG:HD2	1.68	0.75
56:B:95:ARG:NE	56:B:294:PHE:CZ	2.45	0.75
56:B:205:TYR:HE2	56:B:271:ILE:HG23	1.48	0.75
56:B:242:VAL:CB	56:B:256:LEU:CD2	2.57	0.75
56:B:373:ALA:HB1	56:B:374:PRO:HD3	1.69	0.75
56:B:396:LEU:HD13	56:B:491:LYS:HG3	1.62	0.75
56:B:409:TYR:OH	56:B:432:ARG:NE	2.18	0.75
1:1:11:CYS:SG	1:1:14:CYS:N	2.60	0.75
6:A:76:G:C4	6:A:95:G:N1	2.55	0.75
7:D:556:G:O2'	7:D:557:U:H5'	1.86	0.75
7:D:1449(A):G:C2'	7:D:1450:C:H6	1.98	0.75
17:N:6:ILE:HD11	17:N:72:VAL:HB	1.68	0.75
26:W:53:ASN:OD1	26:W:54:GLY:N	2.16	0.75
35:f:4:TYR:OH	42:m:101:ARG:NE	2.19	0.75
49:t:23:LYS:HD3	49:t:51:GLN:HE21	1.51	0.75
56:B:15:ILE:CG2	56:B:120:LYS:HD2	2.16	0.75
56:B:558:VAL:CG2	56:B:577:GLN:NE2	2.49	0.75
6:A:69:G:O2'	6:A:73:G:H5'	1.87	0.75
6:A:101:A:C2'	6:A:102:G:H5'	2.15	0.75
6:A:1225:A:H5'	26:W:78:ARG:NE	2.01	0.75
6:A:1496:C:O2	6:A:1517:G:N2	2.20	0.75
7:D:8:A:H61	7:D:2629:A:H8	1.35	0.75
7:D:1181:C:H2'	7:D:1182:A:C8	2.22	0.75
7:D:2500:U:O2'	7:D:2501:C:OP1	2.05	0.75
7:D:2807:G:H22	7:D:2892:A:H62	1.32	0.75
30:a:181:GLU:OE2	30:a:272:ALA:N	2.20	0.75
56:B:64:VAL:CG2	56:B:80:LEU:N	2.48	0.75
56:B:66:VAL:CG2	56:B:76:TYR:CE1	2.67	0.75
56:B:492:VAL:CG1	56:B:541:ILE:HD11	2.17	0.75
6:A:85:U:H5"	6:A:87:A:N1	2.00	0.75
7:D:558:G:O2'	7:D:559:G:H5'	1.86	0.75
7:D:895:U:C4'	7:D:896:A:H5'	2.16	0.75
7:D:1485:G:N3	7:D:1486:A:C8	2.55	0.75
20:Q:81:LEU:O	20:Q:84:ILE:HG12	1.86	0.75
34:e:124:GLU:O	34:e:126:PRO:HD3	1.87	0.75
56:B:379:LYS:O	56:B:405:ILE:O	2.04	0.75
3:3:10:LEU:CG	3:3:57:ILE:HD11	2.17	0.75
5:5:51:U:H3	5:5:63:G:H1	1.33	0.75
6:A:55:A:N9	56:B:208:TYR:CE2	2.49	0.75
7:D:43:G:C4	7:D:44:A:C8	2.75	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:707:G:N2	7:D:725:G:O2'	2.19	0.75
7:D:1061:U:C1'	7:D:1070:A:H4'	2.17	0.75
7:D:2607:G:H5'	7:D:2608:G:OP2	1.87	0.75
7:D:2632:A:H2'	7:D:2633:G:H8	1.51	0.75
30:a:242:ARG:HH12	30:a:244:ARG:CB	1.98	0.75
33:d:32:PRO:HB3	33:d:168:GLU:HB3	1.66	0.75
43:n:12:TYR:OH	43:n:14:VAL:O	2.04	0.75
56:B:69:ARG:NH2	56:B:178:LEU:HD11	2.00	0.75
56:B:204:VAL:O	56:B:211:VAL:HG13	1.87	0.75
6:A:173:U:H4'	6:A:174:C:OP2	1.87	0.74
6:A:477:G:H2'	6:A:478:A:H8	1.51	0.74
6:A:582:U:OP2	6:A:758:G:N1	2.20	0.74
6:A:685:G:N2	6:A:705:U:O4	2.19	0.74
6:A:1364:U:O2'	6:A:1365:G:OP1	2.05	0.74
7:D:528:A:N6	7:D:2042:A:N7	2.35	0.74
7:D:1049:C:N3	7:D:1050:A:N6	2.35	0.74
7:D:1746:G:N1	7:D:1747:G:C2	2.55	0.74
17:N:6:ILE:N	17:N:73:ASP:OD1	2.20	0.74
29:Z:43:VAL:HA	29:Z:214:VAL:HG22	1.69	0.74
29:Z:180:PHE:CB	29:Z:185:LEU:HD11	2.17	0.74
39:j:63:ARG:NH1	39:j:80:PHE:CG	2.55	0.74
41:l:29:ARG:HG3	41:l:91:ARG:HB2	1.69	0.74
43:n:76:LYS:HZ3	43:n:86:GLY:C	1.94	0.74
56:B:18:VAL:CG2	56:B:86:HIS:CB	2.65	0.74
56:B:107:VAL:CG1	56:B:113:VAL:HG22	2.17	0.74
56:B:188:PRO:HB2	56:B:216:ARG:HH21	1.48	0.74
56:B:405:ILE:HA	56:B:486:PRO:CB	2.16	0.74
6:A:449:C:O2	23:T:42:ARG:NH1	2.19	0.74
6:A:713:G:H21	6:A:777:A:H1'	1.50	0.74
6:A:1014:A:N1	26:W:32:LYS:HE2	2.01	0.74
7:D:1801:G:OP2	30:a:154:LYS:NZ	2.20	0.74
13:J:46:ARG:HD3	13:J:60:PHE:HE2	1.52	0.74
26:W:54:GLY:HA2	26:W:77:THR:OG1	1.88	0.74
41:l:29:ARG:NH1	41:l:92:GLY:HA2	2.02	0.74
42:m:88:ILE:HG21	43:n:55:ALA:HB2	1.69	0.74
56:B:382:LEU:CD2	56:B:401:ARG:HD3	2.17	0.74
56:B:382:LEU:CG	56:B:401:ARG:HD3	1.99	0.74
3:3:23:VAL:HG11	3:3:27:LEU:HD12	1.68	0.74
6:A:92:G:O2'	6:A:93:U:H5'	1.87	0.74
6:A:362:G:N2	6:A:365:U:OP2	2.19	0.74
6:A:560:U:O2'	6:A:561:U:OP2	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1075:C:H5”	9:F:179:LYS:NZ	2.00	0.74
6:A:1318:A:N3	26:W:34:TRP:HZ3	1.84	0.74
7:D:448:U:O2’	7:D:449:A:OP2	2.04	0.74
7:D:493:G:H2’	7:D:494:G:C8	2.21	0.74
7:D:1418:G:N1	7:D:1578:U:OP2	2.14	0.74
7:D:2197:U:H4’	7:D:2198:A:C8	2.21	0.74
7:D:2449:U:HO2’	7:D:2450:A:P	2.09	0.74
9:F:70:PHE:HB3	9:F:163:PHE:HB3	1.68	0.74
17:N:24:VAL:HG13	17:N:34:VAL:HG11	1.70	0.74
43:n:21:ARG:NH1	43:n:96:ILE:HD11	2.02	0.74
56:B:22:LYS:HB2	57:B:701:GCP:O1B	1.86	0.74
56:B:497:HIS:ND1	56:B:535:VAL:HG11	1.98	0.74
7:D:1185:C:OP1	50:u:29:ARG:NH1	2.19	0.74
7:D:1483:G:H2’	7:D:1484:G:H5’	1.68	0.74
7:D:2104:G:O2’	7:D:2105:C:H5’	1.86	0.74
20:Q:23:TYR:CD2	20:Q:70:LEU:HD21	2.19	0.74
26:W:28:LYS:HE2	26:W:29:ARG:NH2	2.02	0.74
26:W:70:LYS:CB	26:W:73:GLU:CB	2.54	0.74
33:d:20:ILE:HD11	33:d:26:GLN:H	1.52	0.74
33:d:74:LYS:HG2	33:d:75:LYS:HG3	1.67	0.74
33:d:121:ASN:OD1	33:d:180:PHE:HB2	1.88	0.74
34:e:19:VAL:HA	34:e:24:VAL:HG12	1.68	0.74
37:h:128:HIS:HD2	37:h:148:LEU:HB2	1.52	0.74
56:B:109:ALA:HA	56:B:148:VAL:HG11	1.68	0.74
56:B:169:LYS:CB	57:B:701:GCP:C2	2.65	0.74
4:4:3:C:N4	4:4:4:G:O6	2.19	0.74
6:A:619:U:H4’	11:H:131:ARG:HH21	1.51	0.74
6:A:1353:G:N2	6:A:1370:G:N3	2.36	0.74
6:A:1422:G:H4’	36:g:49:ARG:HH12	1.52	0.74
7:D:638:G:C2	7:D:650:C:O2	2.39	0.74
7:D:641:C:O2’	7:D:2350:C:OP1	2.04	0.74
7:D:739:G:O2’	7:D:1784:A:N6	2.20	0.74
7:D:1035:U:O3’	34:e:59:ARG:NH2	2.20	0.74
7:D:1568:G:O2’	7:D:1569:A:OP2	2.05	0.74
7:D:1579:A:H5”	7:D:1580:A:N7	2.02	0.74
41:l:108:ARG:HD2	41:l:113:LYS:NZ	2.01	0.74
49:t:12:SER:HA	49:t:62:LYS:HE2	1.69	0.74
54:y:17:GLY:HA2	54:y:44:PRO:HB3	1.69	0.74
56:B:69:ARG:NH2	56:B:178:LEU:CD1	2.51	0.74
56:B:240:ASP:CG	56:B:266:ALA:CB	2.60	0.74
56:B:492:VAL:CG2	56:B:513:ALA:CB	2.62	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1188:A:H8	6:A:1188:A:OP2	1.69	0.74
7:D:361:G:N2	7:D:362:U:O2	2.20	0.74
20:Q:87:TYR:HB2	26:W:73:GLU:HB2	1.68	0.74
27:X:10:LEU:HG	27:X:12:ALA:H	1.52	0.74
39:j:96:ARG:HH21	39:j:117:VAL:HG23	1.52	0.74
56:B:152:VAL:HG13	56:B:156:LEU:CB	2.15	0.74
56:B:222:VAL:CG2	56:B:228:ILE:HD11	2.17	0.74
56:B:245:PHE:HZ	56:B:262:GLY:C	1.93	0.74
56:B:528:ILE:CG2	56:B:592:VAL:CB	2.64	0.74
6:A:498:A:H4'	6:A:500:G:C5'	2.17	0.74
7:D:703:U:H5"	7:D:704:G:OP2	1.87	0.74
7:D:1456:G:N3	7:D:1457:A:C8	2.56	0.74
7:D:2489:G:H5"	7:D:2490:G:OP2	1.87	0.74
23:T:74:LEU:O	23:T:78:GLY:N	2.20	0.74
35:f:67:LEU:HD23	35:f:68:GLU:HG3	1.69	0.74
56:B:305:LEU:HD22	56:B:358:GLN:NE2	1.98	0.74
56:B:420:TYR:HB3	56:B:424:LEU:HD12	1.70	0.74
6:A:572:A:OP2	6:A:573:A:OP2	2.05	0.74
7:D:38:A:H2'	7:D:39:C:C6	2.23	0.74
7:D:63:U:O2'	7:D:64:A:N7	2.20	0.74
7:D:336:C:H4'	46:q:71:LYS:HZ3	1.53	0.74
7:D:684:G:N2	7:D:794:G:N3	2.35	0.74
29:Z:38:ASP:O	29:Z:177:LYS:CE	2.30	0.74
37:h:86:LYS:HE2	37:h:99:LEU:HD12	1.70	0.74
41:l:69:GLY:HA2	41:l:73:GLU:HA	1.67	0.74
46:q:2:ARG:HG2	46:q:3:VAL:H	1.51	0.74
46:q:25:GLY:HA2	46:q:37:VAL:HG23	1.69	0.74
54:y:35:ARG:HG3	54:y:42:LEU:HD21	1.69	0.74
56:B:137:LYS:HA	56:B:167:SER:OG	1.87	0.74
56:B:191:ASP:CG	56:B:219:GLU:HB3	2.13	0.74
56:B:531:GLN:CG	56:B:532:LEU:HG	2.16	0.74
3:3:13:PRO:C	3:3:16:LYS:NZ	2.44	0.74
5:5:28:G:H2'	5:5:29:G:H8	1.52	0.74
6:A:1306:A:C2'	6:A:1307:U:H5'	2.17	0.74
6:A:1508:G:H2'	6:A:1509:C:C6	2.23	0.74
7:D:461:C:H2'	7:D:462:C:H6	1.53	0.74
7:D:500:G:N1	7:D:503:A:OP2	2.20	0.74
26:W:14:HIS:CE1	26:W:34:TRP:CZ2	2.62	0.74
29:Z:74:VAL:HG22	29:Z:112:ALA:HB3	1.70	0.74
31:b:119:ARG:HD3	31:b:160:TYR:CZ	2.23	0.74
33:d:52:ILE:HG12	33:d:148:MET:HE3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:r:101:PRO:HA	47:r:124:ILE:HG12	1.69	0.74
56:B:242:VAL:CA	56:B:256:LEU:HD11	2.17	0.74
56:B:492:VAL:CG2	56:B:513:ALA:HB2	2.13	0.74
56:B:492:VAL:HG21	56:B:541:ILE:CD1	2.01	0.74
6:A:501:C:O2'	6:A:502:G:H5'	1.88	0.74
6:A:836:G:C8	6:A:851:G:N2	2.55	0.74
7:D:242:G:H8	55:z:4:MET:HG3	1.52	0.74
7:D:1287:A:N7	7:D:1288:U:N3	2.35	0.74
7:D:2415:G:OP1	37:h:61:ARG:NH2	2.19	0.74
38:i:26:TYR:CE2	38:i:27:VAL:HB	2.22	0.74
38:i:41:TRP:CD1	38:i:94:VAL:HG21	2.23	0.74
47:r:62:PRO:HG2	47:r:65:GLN:HB2	1.69	0.74
48:s:46:LYS:NZ	48:s:76:GLY:HA3	2.03	0.74
56:B:152:VAL:CA	56:B:156:LEU:HB3	2.16	0.74
56:B:245:PHE:CZ	56:B:262:GLY:HA2	2.21	0.74
56:B:382:LEU:HB3	56:B:386:GLU:CG	2.18	0.74
56:B:383:LYS:CA	56:B:402:ILE:CG2	2.64	0.74
56:B:411:LYS:NZ	56:B:436:VAL:HG22	2.02	0.74
56:B:431:LYS:O	56:B:432:ARG:HG3	1.87	0.74
56:B:497:HIS:HB2	56:B:535:VAL:HG11	1.65	0.74
7:D:1006:C:N3	7:D:1137:G:N2	2.36	0.73
7:D:1057:A:O2'	7:D:1058:G:H5'	1.88	0.73
7:D:1142(A):A:N6	7:D:1143:A:N7	2.36	0.73
7:D:1265:A:O2'	7:D:1266:G:O5'	2.05	0.73
7:D:1296:G:H4'	39:j:16:HIS:HE1	1.53	0.73
7:D:2107:C:H4'	7:D:2108:C:OP1	1.87	0.73
7:D:2783:G:H1'	31:b:41:LYS:HZ3	1.51	0.73
40:k:17:ARG:HH12	40:k:27:SER:HG	1.35	0.73
47:r:3:TYR:HA	47:r:61:LEU:H	1.52	0.73
56:B:330:LEU:N	56:B:330:LEU:HD22	2.02	0.73
7:D:270(Z):U:H5	7:D:370:G:O6	1.71	0.73
7:D:696:G:N2	7:D:697:C:O2	2.20	0.73
7:D:893:C:H2'	7:D:894:C:O4'	1.88	0.73
7:D:1456:G:N3	7:D:1457:A:N7	2.36	0.73
26:W:16:LEU:CB	26:W:20:LEU:CD1	2.65	0.73
26:W:36:ARG:HB3	26:W:72:GLY:N	2.00	0.73
31:b:179:GLU:O	31:b:181:LEU:N	2.22	0.73
56:B:316:LEU:HD12	56:B:342:PHE:CE2	2.22	0.73
56:B:336:SER:HA	56:B:340:LEU:HA	1.70	0.73
56:B:411:LYS:HE2	56:B:453:GLU:HB2	1.71	0.73
56:B:415:PHE:HA	56:B:448:VAL:O	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:277:C:OP1	24:U:68:ARG:NH2	2.20	0.73
6:A:849:C:H2'	6:A:850:U:C6	2.22	0.73
6:A:1260:C:HO2'	6:A:1261:A:H8	1.35	0.73
7:D:351:G:H1'	7:D:352:G:C8	2.22	0.73
7:D:371:A:H4'	7:D:372:G:OP2	1.87	0.73
7:D:775:G:H21	7:D:788:A:P	2.10	0.73
7:D:1057:A:H62	7:D:1086:A:H2'	1.51	0.73
7:D:1213:A:OP2	7:D:1235:G:N1	2.19	0.73
8:E:56:G:C5'	33:d:29:TRP:HZ2	1.94	0.73
8:E:57:A:C2	33:d:29:TRP:CG	2.75	0.73
26:W:16:LEU:O	26:W:20:LEU:CD1	2.35	0.73
29:Z:66:HIS:C	29:Z:158:ALA:O	2.31	0.73
56:B:27:ASP:OD1	56:B:45:PHE:HB3	1.88	0.73
56:B:302:PHE:HD1	56:B:460:LEU:HD22	1.51	0.73
7:D:177:G:H5"	7:D:178:G:OP2	1.88	0.73
7:D:280:C:N4	7:D:359:A:O2'	2.22	0.73
7:D:776:G:N3	7:D:793:A:N6	2.36	0.73
7:D:1860:G:H2'	7:D:1861:G:H8	1.52	0.73
7:D:2217:G:C2	7:D:2218:G:C5	2.76	0.73
7:D:2612:C:O2	52:w:4:HIS:NE2	2.22	0.73
7:D:2789:C:O2	7:D:2893:G:N2	2.21	0.73
20:Q:71:ARG:CB	20:Q:75:ALA:CB	2.62	0.73
30:a:200:ASP:O	30:a:203:ASN:N	2.21	0.73
47:r:116:VAL:HA	47:r:177:PRO:HD3	1.70	0.73
50:u:10:LYS:O	50:u:11:SER:OG	2.05	0.73
56:B:17:HIS:HD1	56:B:116:GLU:HB2	1.53	0.73
56:B:228:ILE:HG12	56:B:282:LEU:CD2	2.12	0.73
56:B:236:GLU:HA	56:B:268:ILE:HG22	1.70	0.73
56:B:382:LEU:HB3	56:B:401:ARG:HG3	1.65	0.73
3:3:21:PRO:O	7:D:1068:G:OP1	2.06	0.73
6:A:55:A:C1'	56:B:208:TYR:CE2	2.71	0.73
6:A:85:U:H2'	6:A:86:U:C5'	2.18	0.73
6:A:1182:G:H4'	6:A:1183:A:H5"	1.70	0.73
7:D:2217:G:C2	7:D:2218:G:N7	2.57	0.73
7:D:2260:C:HO2'	7:D:2388:A:HO2'	1.31	0.73
7:D:2346:A:N6	53:x:26:ASN:OD1	2.20	0.73
7:D:2816:C:H4'	52:w:43:HIS:CE1	2.23	0.73
10:G:189:ALA:HB3	10:G:196:LEU:H	1.51	0.73
20:Q:71:ARG:CA	20:Q:75:ALA:CB	2.66	0.73
26:W:16:LEU:CA	26:W:20:LEU:HD12	2.18	0.73
37:h:74:GLU:OE2	37:h:101:VAL:HB	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:u:7:LYS:HB3	50:u:55:ARG:HB3	1.70	0.73
51:v:55:ARG:O	51:v:61:ARG:NH2	2.21	0.73
53:x:17:LYS:HZ3	53:x:49:HIS:C	1.97	0.73
56:B:99:ALA:O	56:B:216:ARG:HD2	1.89	0.73
56:B:144:ARG:HD3	56:B:144:ARG:O	1.89	0.73
56:B:218:PHE:CE2	56:B:291:TYR:CZ	2.75	0.73
56:B:246:THR:CG2	56:B:251:VAL:HG21	2.19	0.73
56:B:306:TYR:HB3	56:B:370:ILE:HG21	1.69	0.73
56:B:306:TYR:CE1	56:B:339:ALA:HB1	2.23	0.73
1:1:35:ARG:HB3	1:1:37:GLY:OXT	1.88	0.73
3:3:13:PRO:CG	3:3:16:LYS:CE	2.54	0.73
6:A:101:A:C5	6:A:102:G:N7	2.56	0.73
6:A:126:G:OP1	6:A:605:U:O2'	2.06	0.73
6:A:1014:A:C5'	26:W:18:LYS:HZ3	2.01	0.73
6:A:1512:U:H2'	6:A:1513:A:H8	1.54	0.73
7:D:485:C:O2'	7:D:486:C:H5'	1.88	0.73
7:D:1087:G:H8	7:D:1089:G:H1'	1.54	0.73
7:D:1174:A:H2'	7:D:1175:U:H5	1.50	0.73
7:D:1224:G:H2'	7:D:1225:C:H5'	1.69	0.73
7:D:1781:C:O2'	7:D:1782:C:OP2	2.06	0.73
7:D:2211:G:N2	7:D:2212:A:H8	1.87	0.73
9:F:103:THR:HB	9:F:176:GLU:OE2	1.89	0.73
33:d:26:GLN:HG2	33:d:29:TRP:CE3	2.18	0.73
35:f:10:GLU:HB3	35:f:39:ARG:HH12	1.53	0.73
56:B:31:GLU:CG	56:B:40:GLU:CG	2.46	0.73
56:B:324:LYS:O	56:B:325:LEU:HG	1.88	0.73
56:B:379:LYS:HZ2	56:B:407:GLU:C	1.97	0.73
56:B:459:ILE:CG2	56:B:463:PHE:CE2	2.71	0.73
3:3:21:PRO:CA	7:D:1067:A:H5'	2.18	0.73
3:3:107:ILE:HG22	3:3:111:LYS:HG3	1.69	0.73
6:A:615:C:H2'	6:A:616:G:H8	1.54	0.73
6:A:1256:A:H8	10:G:27:LYS:NZ	1.86	0.73
6:A:1446:A:H4'	6:A:1447:G:OP1	1.87	0.73
6:A:1454:G:C4	6:A:1455:G:C8	2.77	0.73
7:D:1747:G:C2'	7:D:1748:G:H5'	2.16	0.73
7:D:1819:A:H1'	7:D:1821:A:C6	2.24	0.73
7:D:2210:G:O6	30:a:150:LYS:HG2	1.88	0.73
7:D:2334:G:N3	40:k:15:ARG:NH2	2.37	0.73
7:D:2378:A:H8	7:D:2378:A:OP2	1.72	0.73
7:D:2620:C:O2'	31:b:157:ALA:O	2.07	0.73
30:a:224:ALA:H	30:a:233:HIS:HD2	1.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:104:VAL:HG22	31:b:198:VAL:HG22	1.70	0.73
56:B:14:ILE:HD12	56:B:26:ALA:CB	2.19	0.73
56:B:51:LEU:HD23	56:B:51:LEU:C	2.14	0.73
6:A:719:C:N4	25:V:74:ARG:HH12	1.84	0.73
6:A:1309:G:N2	6:A:1329:A:N9	2.33	0.73
7:D:270(A):A:H4'	7:D:270(B):A:OP2	1.87	0.73
7:D:614:U:H5"	7:D:615:G:OP2	1.89	0.73
7:D:2030:A:O2'	7:D:2031:A:O5'	2.07	0.73
7:D:2660:A:H8	56:B:472:ARG:O	1.68	0.73
22:S:88:ARG:HG2	22:S:89:GLY:H	1.54	0.73
30:a:233:HIS:CE1	30:a:247:ALA:HB2	2.24	0.73
33:d:174:GLU:HA	33:d:179:PRO:HD3	1.70	0.73
37:h:55:ARG:C	55:z:13:ARG:NH1	2.47	0.73
56:B:46:LEU:HD12	56:B:82:ASP:HB3	1.71	0.73
56:B:383:LYS:N	56:B:402:ILE:CG2	2.52	0.73
56:B:383:LYS:N	56:B:402:ILE:HG23	2.03	0.73
56:B:408:PRO:HG2	56:B:456:PHE:CB	2.16	0.73
56:B:459:ILE:HA	56:B:463:PHE:CD2	2.24	0.73
3:3:120:LEU:HD21	3:3:125:ARG:HH11	1.53	0.73
6:A:1206:G:OP1	10:G:190:ARG:NH2	2.21	0.73
6:A:1498:U:O2'	6:A:1499:A:O5'	2.04	0.73
7:D:2133:G:H8	7:D:2133:G:OP2	1.72	0.73
7:D:2572:A:O2'	7:D:2573:C:OP2	2.06	0.73
26:W:16:LEU:O	26:W:20:LEU:HD13	1.88	0.73
37:h:45:LEU:HD22	37:h:46:LYS:HZ2	1.54	0.73
43:n:24:LYS:HB2	43:n:28:GLU:OE2	1.88	0.73
56:B:42:ARG:HD2	56:B:43:GLU:HB2	1.71	0.73
56:B:74:GLU:OE2	56:B:182:VAL:HG12	1.88	0.73
56:B:379:LYS:NZ	56:B:485:ARG:H	1.86	0.73
56:B:492:VAL:CG2	56:B:541:ILE:HD11	2.12	0.73
3:3:10:LEU:CG	3:3:57:ILE:HG12	2.16	0.73
3:3:133:SER:HA	7:D:1077:A:C2	2.20	0.73
6:A:465:A:H1'	6:A:466:C:OP1	1.89	0.73
6:A:737:A:H5"	13:J:92:LYS:HG3	1.69	0.73
7:D:175:G:N2	7:D:176:G:N3	2.37	0.73
7:D:1656:C:OP2	31:b:136:ARG:NH1	2.19	0.73
20:Q:10:PRO:HG3	20:Q:48:LEU:HD11	1.69	0.73
20:Q:16:ASP:OD2	20:Q:30:ALA:HB1	1.87	0.73
20:Q:101:GLN:O	20:Q:103:THR:HG23	1.87	0.73
29:Z:161:ILE:HG22	29:Z:174:PRO:HG2	1.70	0.73
31:b:12:THR:HG21	31:b:19:ARG:NH2	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:e:149:ARG:HG2	34:e:153:LYS:HD2	1.69	0.73
56:B:227:ARG:O	56:B:283:ALA:HB2	1.88	0.73
56:B:410:VAL:HG13	56:B:480:GLU:HG2	1.71	0.73
3:3:8:VAL:HG12	3:3:9:LYS:H	1.54	0.72
6:A:343:U:O2'	6:A:346:G:O6	2.07	0.72
6:A:964:A:O2'	17:N:55:LYS:NZ	2.18	0.72
7:D:796:C:OP2	32:c:63:LYS:NZ	2.13	0.72
7:D:1047:G:H3'	7:D:1110:G:H21	1.53	0.72
7:D:1464:C:O2'	7:D:1527:G:O2'	2.05	0.72
7:D:2378:A:N3	40:k:20:ARG:NH2	2.37	0.72
23:T:8:ARG:HB3	23:T:28:ARG:HH12	1.53	0.72
29:Z:151:GLU:O	29:Z:154:ARG:HG2	1.88	0.72
53:x:40:CYS:HB2	53:x:46:HIS:CD2	2.24	0.72
56:B:228:ILE:C	56:B:229:ARG:HG3	2.13	0.72
56:B:492:VAL:HA	56:B:541:ILE:HA	1.71	0.72
56:B:555:ARG:HG3	56:B:577:GLN:CD	2.14	0.72
6:A:474:G:O5'	23:T:81:ARG:HG3	1.89	0.72
6:A:551:U:O2'	19:P:86:ARG:NH1	2.22	0.72
7:D:85:G:P	46:q:28:LYS:HZ1	2.11	0.72
7:D:152:G:C2'	7:D:153:C:H5'	2.19	0.72
7:D:330:A:O2'	7:D:1210:A:N6	2.22	0.72
7:D:457:A:H1'	7:D:459:U:C2	2.24	0.72
7:D:747:U:O4	52:w:4:HIS:N	2.21	0.72
7:D:1858:G:N3	7:D:1885:A:N6	2.37	0.72
7:D:2104:G:C2'	7:D:2105:C:H5'	2.19	0.72
10:G:54:ARG:HD3	10:G:69:HIS:HD2	1.53	0.72
26:W:11:VAL:HG23	26:W:41:VAL:CG1	2.09	0.72
26:W:70:LYS:HB3	26:W:73:GLU:HB3	1.71	0.72
29:Z:38:ASP:OD2	29:Z:177:LYS:HB3	1.88	0.72
30:a:131:LEU:HD12	30:a:132:PRO:HD2	1.70	0.72
44:o:84:ARG:NH1	44:o:98:LYS:HD2	2.02	0.72
56:B:20:HIS:CD2	56:B:108:ASP:H	2.06	0.72
6:A:438:G:H2'	6:A:494:U:N3	2.02	0.72
7:D:2491:U:H5'	7:D:2492:U:OP2	1.89	0.72
8:E:44:G:O2'	8:E:47:C:N4	2.22	0.72
11:H:3:ARG:NH1	11:H:70:ILE:HA	2.03	0.72
29:Z:38:ASP:OD2	29:Z:177:LYS:CB	2.37	0.72
37:h:29:LYS:NZ	43:n:82:ARG:NH1	2.36	0.72
51:v:65:ASP:HA	51:v:68:ARG:HG2	1.70	0.72
56:B:13:SER:OG	56:B:81:ILE:HG21	1.89	0.72
56:B:16:ALA:H	56:B:22:LYS:CE	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:410:VAL:HG12	56:B:480:GLU:HG2	1.70	0.72
56:B:412:LEU:O	56:B:451:VAL:HA	1.89	0.72
56:B:420:TYR:CE1	56:B:471:SER:O	2.41	0.72
56:B:492:VAL:CB	56:B:541:ILE:CG1	2.67	0.72
6:A:232:G:O2'	6:A:262:A:N6	2.18	0.72
6:A:467:G:H2'	6:A:468:A:O4'	1.90	0.72
6:A:1170:A:C2'	6:A:1171:G:H5'	2.19	0.72
7:D:676:A:H8	7:D:2069:G:H21	1.34	0.72
7:D:881:G:H2'	7:D:882:G:H5'	1.71	0.72
7:D:1634:A:HO2'	7:D:1635:G:P	2.12	0.72
20:Q:88:ARG:HG3	20:Q:88:ARG:NH1	2.00	0.72
26:W:11:VAL:HG21	26:W:41:VAL:H	1.53	0.72
46:q:19:LYS:HE3	46:q:40:GLU:HB2	1.71	0.72
47:r:47:VAL:HG13	47:r:53:ILE:HD13	1.71	0.72
47:r:125:LEU:HD21	47:r:171:ILE:HD11	1.70	0.72
56:B:8:ARG:HB2	56:B:74:GLU:HB3	1.45	0.72
56:B:245:PHE:CD2	56:B:261:VAL:O	2.43	0.72
6:A:490:G:H2'	6:A:491:G:C8	2.25	0.72
7:D:155:C:O2'	7:D:161:U:OP1	2.07	0.72
7:D:279:C:H41	7:D:359:A:H2	1.38	0.72
7:D:2472:G:N2	7:D:2529:G:O6	2.22	0.72
7:D:2473:U:OP1	7:D:2529:G:N2	2.21	0.72
10:G:14:ILE:HG13	10:G:178:LEU:HD21	1.71	0.72
46:q:6:HIS:CG	46:q:71:LYS:HE2	2.24	0.72
52:w:30:LEU:HB3	52:w:39:MET:HE3	1.71	0.72
56:B:229:ARG:HH21	56:B:283:ALA:N	1.87	0.72
56:B:330:LEU:HD21	56:B:346:CYS:SG	2.29	0.72
56:B:337:SER:OG	56:B:393:PRO:HB3	1.90	0.72
6:A:173:U:OP1	6:A:197:A:O2'	2.06	0.72
6:A:345:C:H5"	6:A:346:G:C5	2.24	0.72
6:A:405:U:OP1	6:A:406:G:O2'	2.08	0.72
6:A:522:C:H42	6:A:528:C:H42	1.37	0.72
6:A:1119:C:N4	6:A:1154:G:O6	2.20	0.72
7:D:154:G:C5	7:D:155:C:C5	2.77	0.72
7:D:346:A:O2'	7:D:347:A:N7	2.22	0.72
7:D:489:G:C8	7:D:1284:A:N3	2.58	0.72
7:D:489:G:C8	7:D:1284:A:C6	2.77	0.72
7:D:728:G:H21	7:D:730:C:H41	1.38	0.72
7:D:1379:A:O2'	7:D:1380:G:OP1	2.07	0.72
7:D:1490:A:H3'	7:D:1490:A:OP2	1.89	0.72
7:D:1818:U:C5	30:a:156:ALA:HB3	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2773:C:OP1	31:b:164:ARG:NH2	2.23	0.72
8:E:2:C:H42	8:E:118:G:H1	1.37	0.72
9:F:54:THR:HG21	9:F:201:ILE:HD11	1.70	0.72
15:L:122:ARG:HA	15:L:125:ARG:NH1	2.05	0.72
37:h:49:ARG:HG2	55:z:52:LYS:NZ	2.04	0.72
45:p:55:ASN:HB2	45:p:80:ILE:HB	1.72	0.72
56:B:20:HIS:CE1	56:B:108:ASP:CB	2.71	0.72
56:B:23:SER:HB2	57:B:701:GCP:O1A	1.88	0.72
56:B:212:ILE:HD12	56:B:212:ILE:N	2.04	0.72
56:B:533:PHE:CZ	56:B:588:GLY:C	2.65	0.72
56:B:556:LYS:O	56:B:558:VAL:N	2.17	0.72
3:3:13:PRO:HB2	3:3:16:LYS:NZ	2.04	0.72
6:A:446:G:N2	6:A:489:C:C2	2.56	0.72
6:A:642:A:N3	15:L:113:SER:OG	2.21	0.72
6:A:838:G:O2'	6:A:841:U:OP1	2.08	0.72
7:D:171:G:H4'	7:D:172:C:OP1	1.88	0.72
7:D:210:C:P	54:y:29:LYS:HZ3	2.12	0.72
7:D:455:C:O2'	7:D:456:C:OP1	2.08	0.72
7:D:771:G:HO2'	7:D:1355:G:HO2'	1.34	0.72
7:D:1222:C:H42	7:D:1227:A:H61	1.37	0.72
7:D:1477:A:C5	7:D:1478:G:N1	2.57	0.72
7:D:1559:G:C5	7:D:1560:G:H4'	2.25	0.72
7:D:2391:G:OP2	55:z:33:ASN:ND2	2.23	0.72
16:M:110:GLU:OE1	16:M:111:ARG:N	2.23	0.72
29:Z:180:PHE:HB3	29:Z:185:LEU:CD1	2.19	0.72
30:a:177:LEU:HD11	30:a:181:GLU:HB2	1.71	0.72
37:h:46:LYS:HE2	37:h:50:ARG:CZ	2.19	0.72
56:B:231:TYR:N	56:B:280:ILE:HG21	2.04	0.72
56:B:382:LEU:H	56:B:386:GLU:HB3	1.53	0.72
56:B:488:ASP:HB3	56:B:510:ARG:H	1.51	0.72
5:5:75:C:O2'	5:5:76:A:O5'	2.04	0.72
6:A:475:G:C4	6:A:476:G:C8	2.78	0.72
6:A:1225:A:OP1	20:Q:103:THR:OG1	2.07	0.72
7:D:96:G:C6	7:D:97:C:N4	2.57	0.72
7:D:560:C:C2'	7:D:561:G:H5'	2.20	0.72
7:D:2225:A:H4'	7:D:2226:C:C6	2.25	0.72
7:D:2887:U:C2'	7:D:2888:C:H5'	2.20	0.72
12:I:152:ARG:HD3	15:L:43:GLY:HA3	1.70	0.72
14:K:16:LEU:HD22	16:M:45:ALA:HB2	1.72	0.72
20:Q:37:THR:OG1	20:Q:55:ARG:NH2	2.22	0.72
42:m:58:ARG:HH12	42:m:92:ARG:HH12	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:u:9:VAL:HG23	50:u:10:LYS:H	1.54	0.72
56:B:13:SER:HB2	56:B:97:LEU:HG	1.71	0.72
56:B:27:ASP:OD2	56:B:41:MET:HB3	1.90	0.72
56:B:68:TYR:CG	56:B:75:GLU:HG3	2.22	0.72
56:B:245:PHE:CZ	56:B:262:GLY:CA	2.73	0.72
3:3:24:GLY:O	56:B:440:TYR:CZ	2.43	0.72
6:A:80:G:C4	6:A:81:G:N7	2.58	0.72
6:A:1067:A:O2'	6:A:1093:A:O2'	2.07	0.72
7:D:68:G:N2	7:D:74:A:O4'	2.21	0.72
7:D:583:G:H5"	42:m:10:ARG:HH12	1.54	0.72
7:D:1550:C:OP1	7:D:1727:U:O2'	2.08	0.72
7:D:1862:G:C2	7:D:1863:G:C6	2.77	0.72
7:D:2184:G:C5	7:D:2185:C:C4	2.77	0.72
7:D:2286:A:N6	53:x:32:ASN:O	2.20	0.72
35:f:36:GLY:HA2	35:f:48:MET:HB2	1.71	0.72
56:B:15:ILE:HG23	56:B:120:LYS:HD2	1.70	0.72
56:B:306:TYR:CB	56:B:370:ILE:CD1	2.56	0.72
56:B:531:GLN:HG2	56:B:532:LEU:CD2	2.19	0.72
3:3:103:GLN:HA	3:3:106:GLU:CD	2.13	0.72
6:A:218:C:H2'	6:A:219:C:C6	2.24	0.72
6:A:422:C:H4'	6:A:423:G:C2	2.25	0.72
6:A:613:C:H2'	6:A:614:A:C8	2.23	0.72
7:D:396:G:H5"	51:v:10:VAL:HG13	1.72	0.72
7:D:1227:A:OP1	42:m:13:LYS:HE3	1.89	0.72
7:D:1908:C:N4	7:D:1922:G:O6	2.18	0.72
17:N:7:LYS:HD3	17:N:9:ARG:HH21	1.54	0.72
42:m:57:PHE:O	42:m:61:TRP:HD1	1.73	0.72
56:B:495:LEU:CD1	56:B:540:ALA:HB1	1.96	0.72
3:3:19:PRO:HG3	3:3:41:PHE:HE2	1.54	0.71
6:A:866:C:O2'	6:A:919:A:OP1	2.07	0.71
7:D:40:C:O2	7:D:440:G:N2	2.23	0.71
7:D:321:G:H5"	7:D:322:A:OP2	1.90	0.71
7:D:371:A:N6	7:D:424:G:C8	2.58	0.71
7:D:1566:A:C2	30:a:215:LEU:HD13	2.25	0.71
7:D:1712:C:H2'	7:D:1716:U:C5	2.24	0.71
7:D:2616:C:H5'	52:w:15:ARG:NH1	2.05	0.71
27:X:26:ASN:HB2	27:X:71:THR:HG23	1.72	0.71
56:B:492:VAL:HA	56:B:541:ILE:CA	2.20	0.71
6:A:711:G:OP1	13:J:54:LYS:NZ	2.23	0.71
6:A:1318:A:N3	26:W:34:TRP:CZ3	2.58	0.71
6:A:1357:A:N6	6:A:1358:U:O4	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:83:G:O2'	7:D:84:A:O5'	2.06	0.71
7:D:441:U:H5"	7:D:442:G:OP2	1.91	0.71
7:D:771:G:O2'	7:D:1355:G:O2'	2.05	0.71
7:D:2401:U:H5"	7:D:2402:C:OP2	1.88	0.71
11:H:34:GLU:HG3	11:H:35:ARG:HG2	1.71	0.71
30:a:208:LYS:NZ	30:a:211:ARG:NH2	2.38	0.71
30:a:267:SER:OG	30:a:268:ARG:N	2.23	0.71
38:i:81:VAL:HA	56:B:567:VAL:CG2	2.20	0.71
56:B:63:ALA:O	56:B:64:VAL:HG22	1.90	0.71
56:B:200:ILE:CG1	56:B:278:ASP:O	2.38	0.71
7:D:344:G:N2	7:D:345:A:C4	2.59	0.71
7:D:775:G:N2	7:D:787:U:O2'	2.23	0.71
7:D:776:G:O2'	7:D:777:A:OP2	2.07	0.71
7:D:1173:G:N3	7:D:1173:G:H5'	2.03	0.71
7:D:1529:A:N7	7:D:1542:G:N2	2.37	0.71
7:D:2255:G:H21	48:s:9:SER:HB3	1.55	0.71
15:L:84:ARG:HD3	15:L:136:GLU:OE2	1.90	0.71
30:a:198:ASN:OD1	30:a:199:ALA:N	2.22	0.71
31:b:15:PHE:O	31:b:17:ASP:N	2.23	0.71
37:h:96:THR:HB	37:h:99:LEU:HB3	1.71	0.71
56:B:12:PHE:O	56:B:81:ILE:HG13	1.88	0.71
56:B:153:GLU:HG3	56:B:159:PRO:CB	2.19	0.71
6:A:99:C:O2'	6:A:101:A:OP1	2.08	0.71
7:D:1071:G:H21	7:D:1089:G:H2'	1.55	0.71
7:D:1944:U:O2'	7:D:1945:G:OP1	2.07	0.71
45:p:5:TYR:HB3	49:t:24:LYS:HZ2	1.56	0.71
56:B:379:LYS:CA	56:B:406:LEU:HB3	2.20	0.71
56:B:396:LEU:HD11	56:B:491:LYS:HG2	1.73	0.71
6:A:409:G:OP1	11:H:25:ARG:N	2.21	0.71
6:A:836:G:H2'	6:A:837:G:C8	2.25	0.71
7:D:43:G:C5	7:D:44:A:N7	2.58	0.71
7:D:1742:C:C3'	7:D:1743:G:H5"	2.19	0.71
7:D:2177:C:OP1	29:Z:223:ARG:NH1	2.23	0.71
7:D:2285:C:H5	53:x:27:LYS:HZ3	1.38	0.71
22:S:16:ALA:HB1	22:S:21:ASP:HB3	1.72	0.71
26:W:15:LEU:N	26:W:35:SER:CB	2.53	0.71
29:Z:38:ASP:CG	29:Z:178:ALA:HB3	2.13	0.71
56:B:528:ILE:HG21	56:B:592:VAL:CB	2.19	0.71
3:3:34:ILE:HG12	3:3:35:MET:H	1.55	0.71
6:A:519:C:H2'	6:A:520:A:H8	1.54	0.71
6:A:851:G:H2'	6:A:852:G:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:791:C:H4'	7:D:791:C:OP1	1.90	0.71
7:D:2121:G:O6	7:D:2176:A:N6	2.24	0.71
7:D:2889:C:C5	7:D:2891:G:N7	2.59	0.71
36:g:26:LYS:HE2	36:g:37:ASP:OD2	1.90	0.71
50:u:41:PRO:HG3	50:u:44:ARG:HH12	1.55	0.71
3:3:59:ILE:H	3:3:59:ILE:HD12	1.56	0.71
4:4:62:C:H2'	4:4:63:G:H8	1.55	0.71
6:A:55:A:N3	56:B:208:TYR:CD2	2.59	0.71
6:A:96:G:N1	6:A:97:U:C2	2.59	0.71
6:A:101:A:C4	6:A:102:G:C8	2.79	0.71
6:A:209:U:H5"	6:A:210:U:OP1	1.91	0.71
6:A:1047:G:H5"	21:R:4:LYS:HD3	1.73	0.71
6:A:1427:U:H2'	6:A:1428:A:C8	2.24	0.71
7:D:784:A:OP2	30:a:226:MET:HG3	1.91	0.71
7:D:1058:G:H22	7:D:1081:U:H2'	1.54	0.71
7:D:1419:A:N6	7:D:1577:C:N3	2.39	0.71
7:D:1913:A:OP2	7:D:1914:C:H5'	1.91	0.71
7:D:2346:A:H62	53:x:37:ARG:HH22	1.37	0.71
41:l:17:THR:HG21	41:l:20:PRO:HG3	1.71	0.71
56:B:58:THR:CB	56:B:84:PRO:HG3	2.21	0.71
56:B:118:LEU:CD1	56:B:446:LYS:HZ3	2.01	0.71
56:B:330:LEU:HB3	56:B:345:ARG:NH1	2.06	0.71
7:D:943:U:OP2	37:h:32:THR:HB	1.89	0.71
7:D:993:G:OP1	42:m:50:ARG:NH2	2.23	0.71
7:D:1364:G:OP2	7:D:1364:G:C8	2.43	0.71
7:D:2198:A:H2'	7:D:2198:A:N3	2.05	0.71
23:T:43:LYS:O	23:T:45:THR:N	2.24	0.71
30:a:244:ARG:HA	30:a:252:TRP:NE1	2.05	0.71
33:d:126:ASP:HA	33:d:166:ASP:OD2	1.91	0.71
56:B:222:VAL:HG21	56:B:228:ILE:HD11	1.72	0.71
56:B:382:LEU:N	56:B:386:GLU:HB3	2.05	0.71
6:A:570:G:H5'	6:A:820:U:H1'	1.73	0.71
6:A:572:A:H5'	6:A:573:A:OP2	1.91	0.71
6:A:1455:G:OP1	27:X:32:ALA:HA	1.90	0.71
6:A:1460:A:C2'	6:A:1461:G:H5'	2.20	0.71
7:D:385:C:HO2'	7:D:388:G:H22	1.36	0.71
7:D:524:U:H2'	7:D:525:U:C6	2.26	0.71
7:D:1497:U:O4	7:D:1576:U:O2'	2.06	0.71
7:D:1563:G:C2	7:D:1564:C:H1'	2.26	0.71
7:D:2227:A:C6	7:D:2228:G:C5	2.78	0.71
10:G:142:MET:SD	10:G:170:GLN:NE2	2.63	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:18:VAL:HG23	56:B:86:HIS:HB3	1.73	0.71
56:B:153:GLU:O	56:B:153:GLU:HG2	1.89	0.71
56:B:315:LYS:CD	56:B:318:ASP:HB3	2.21	0.71
6:A:195:A:O5'	27:X:68:LYS:NZ	2.23	0.71
6:A:686:U:O2'	6:A:687:A:O5'	2.09	0.71
7:D:227:A:H61	7:D:410:G:H21	1.39	0.71
7:D:249:C:OP2	7:D:2394:C:O2'	2.08	0.71
7:D:2063:C:OP2	7:D:2064:C:OP2	2.08	0.71
7:D:2104:G:C2	7:D:2105:C:C2	2.79	0.71
7:D:2901:C:N3	7:D:2902:C:N4	2.39	0.71
11:H:30:LYS:HG2	11:H:35:ARG:HG3	1.72	0.71
11:H:62:GLN:HE22	11:H:65:ARG:HH11	1.38	0.71
22:S:70:LEU:HG	22:S:78:TYR:HB2	1.71	0.71
26:W:53:ASN:HD21	26:W:75:ALA:HB1	1.55	0.71
32:c:95:ARG:NH2	32:c:96:ASP:O	2.23	0.71
33:d:57:ALA:HA	33:d:68:PRO:HD2	1.72	0.71
38:i:134:ARG:NH1	38:i:137:TYR:HA	2.05	0.71
43:n:72:VAL:HA	43:n:88:ARG:HD3	1.72	0.71
56:B:144:ARG:O	56:B:148:VAL:HG23	1.91	0.71
56:B:240:ASP:CG	56:B:266:ALA:HB1	2.16	0.71
56:B:513:ALA:HB1	56:B:541:ILE:HD11	1.72	0.71
1:1:11:CYS:N	1:1:14:CYS:SG	2.55	0.70
3:3:6:ALA:HB1	3:3:59:ILE:HG21	1.68	0.70
3:3:103:GLN:O	3:3:107:ILE:CD1	2.38	0.70
5:5:49:C:H5"	5:5:50:U:OP2	1.91	0.70
6:A:789:U:N3	6:A:791:G:OP2	2.24	0.70
6:A:1226:C:C2	20:Q:104:ARG:HG3	2.25	0.70
7:D:553:U:H5"	7:D:554:U:OP2	1.91	0.70
7:D:1569:A:H2'	7:D:1570:A:C8	2.26	0.70
7:D:1589:C:H2'	7:D:1590:U:C6	2.26	0.70
7:D:1936:A:N6	7:D:1963:U:O2	2.24	0.70
7:D:2019:A:O4'	42:m:34:LYS:NZ	2.23	0.70
7:D:2219:G:N3	30:a:262:ARG:NH2	2.39	0.70
16:M:29:ASN:N	16:M:63:ILE:O	2.19	0.70
25:V:16:PRO:HA	25:V:54:ARG:HH12	1.55	0.70
29:Z:182:PRO:HD2	29:Z:183:GLU:OE1	1.91	0.70
33:d:75:LYS:HD2	33:d:84:LYS:HB2	1.73	0.70
35:f:12:ARG:HH11	35:f:12:ARG:HG2	1.55	0.70
35:f:109:LYS:HG3	35:f:110:GLY:H	1.54	0.70
46:q:97:ARG:HH21	46:q:101:LYS:HD3	1.55	0.70
56:B:200:ILE:HB	56:B:278:ASP:N	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:337:SER:OG	56:B:393:PRO:CB	2.38	0.70
56:B:414:ILE:N	56:B:450:LEU:O	2.24	0.70
3:3:13:PRO:CB	3:3:16:LYS:NZ	2.54	0.70
7:D:1152:C:H2'	7:D:1153:C:H6	1.55	0.70
7:D:1390:U:H3	7:D:1395:A:H62	1.40	0.70
7:D:1791:A:N6	7:D:1828:G:O2'	2.24	0.70
7:D:2215:G:H22	51:v:47:GLN:NE2	1.89	0.70
7:D:2418:A:H5"	7:D:2419:U:OP2	1.91	0.70
7:D:2895:U:O2'	7:D:2896:C:O4'	2.08	0.70
8:E:57:A:H2	33:d:29:TRP:CB	2.03	0.70
32:c:31:HIS:HA	32:c:34:TRP:HB3	1.72	0.70
43:n:74:LYS:HE3	43:n:88:ARG:HH21	1.55	0.70
56:B:241:LYS:HG2	56:B:243:GLY:H	1.56	0.70
56:B:330:LEU:O	56:B:331:THR:HG23	1.91	0.70
56:B:499:GLU:O	56:B:500:VAL:HG12	1.90	0.70
3:3:68:VAL:O	3:3:69:THR:O	2.07	0.70
6:A:1353:G:OP1	28:Y:3:LYS:NZ	2.24	0.70
7:D:1084:A:O2'	7:D:1106:G:N7	2.21	0.70
7:D:1209:G:H21	7:D:1237:A:H2	1.39	0.70
7:D:2305:A:OP2	33:d:136:ARG:NE	2.24	0.70
11:H:20:TYR:HA	11:H:26:CYS:SG	2.32	0.70
25:V:53:ARG:HD2	25:V:63:GLN:HG3	1.73	0.70
34:e:9:ILE:HB	34:e:50:VAL:HB	1.73	0.70
34:e:25:LYS:NZ	34:e:32:GLU:O	2.14	0.70
36:g:15:GLY:O	36:g:47:ILE:N	2.24	0.70
41:l:93:ARG:HB2	41:l:95:ARG:HE	1.54	0.70
56:B:58:THR:HB	56:B:84:PRO:HG3	1.73	0.70
56:B:306:TYR:CB	56:B:370:ILE:CG1	2.68	0.70
56:B:324:LYS:C	56:B:325:LEU:HG	2.16	0.70
6:A:1447:G:C2	6:A:1460:A:C4	2.79	0.70
7:D:388:G:OP2	51:v:29:PRO:HG3	1.91	0.70
7:D:894:C:H42	7:D:897:C:N4	1.90	0.70
7:D:2125:G:N1	7:D:2172:U:OP1	2.20	0.70
7:D:2305:A:H4'	33:d:136:ARG:HG2	1.74	0.70
7:D:2789:C:O2	7:D:2893:G:C2	2.44	0.70
7:D:2805:G:H2'	7:D:2807:G:H4'	1.73	0.70
20:Q:15:VAL:HG11	20:Q:39:ILE:HD11	1.74	0.70
21:R:24:CYS:SG	21:R:40:CYS:N	2.64	0.70
30:a:200:ASP:O	30:a:202:LYS:N	2.25	0.70
44:o:35:ILE:O	44:o:39:THR:OG1	2.09	0.70
56:B:134:VAL:CG2	56:B:164:ILE:O	2.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:136:ASN:OD1	56:B:167:SER:HA	1.91	0.70
56:B:137:LYS:NZ	57:B:701:GCP:H1'	2.06	0.70
6:A:69:G:N3	6:A:73:G:C8	2.60	0.70
7:D:226:G:O2'	7:D:227:A:O4'	2.09	0.70
7:D:536:A:O2'	7:D:537:C:H5'	1.91	0.70
7:D:1869:G:N2	7:D:1878:G:C6	2.59	0.70
7:D:2106:G:C4	7:D:2108:C:N3	2.60	0.70
19:P:110:VAL:HG23	19:P:113:ARG:HB2	1.73	0.70
29:Z:64:LEU:O	29:Z:159:GLY:CA	2.33	0.70
33:d:75:LYS:HZ1	33:d:87:PRO:HB3	1.55	0.70
44:o:68:ARG:HG3	44:o:109:GLU:OE2	1.91	0.70
51:v:53:GLU:HG2	51:v:54:GLY:H	1.55	0.70
56:B:227:ARG:CB	56:B:237:PHE:CD2	2.53	0.70
56:B:379:LYS:NZ	56:B:407:GLU:C	2.49	0.70
56:B:420:TYR:O	56:B:424:LEU:HB2	1.91	0.70
56:B:528:ILE:HG22	56:B:592:VAL:HG22	1.66	0.70
3:3:10:LEU:HD13	3:3:57:ILE:CD1	1.84	0.70
3:3:126:MET:HE2	7:D:1059:G:N7	2.06	0.70
6:A:194:C:O3'	27:X:68:LYS:NZ	2.20	0.70
6:A:344:A:O2'	6:A:346:G:N7	2.24	0.70
6:A:792:A:O2'	6:A:793:U:OP2	2.07	0.70
6:A:874:G:N2	15:L:15:ASN:OD1	2.24	0.70
7:D:813:U:OP2	37:h:26:GLY:HA2	1.91	0.70
7:D:1049:C:N4	7:D:2751:G:O6	2.24	0.70
7:D:1668:A:C2	7:D:1993:U:C4	2.79	0.70
7:D:2135:A:N7	7:D:2160:G:O2'	2.24	0.70
7:D:2157:G:H4'	7:D:2158:A:OP2	1.92	0.70
7:D:2189:U:H2'	7:D:2190:G:C8	2.26	0.70
7:D:2778:A:H4'	7:D:2779:U:OP2	1.91	0.70
7:D:2858:C:H5"	7:D:2859:G:OP2	1.91	0.70
26:W:5:LEU:HD12	26:W:6:LYS:N	2.06	0.70
26:W:70:LYS:CB	26:W:73:GLU:HB3	2.19	0.70
35:f:45:ASN:O	35:f:47:ALA:N	2.23	0.70
56:B:495:LEU:HG	56:B:500:VAL:HG23	1.72	0.70
7:D:309:G:N3	7:D:329:G:O2'	2.25	0.70
7:D:321:G:C4	32:c:165:ARG:NH1	2.60	0.70
7:D:341:G:H2'	7:D:342:G:O4'	1.90	0.70
7:D:648:G:O2'	7:D:649:G:H5'	1.92	0.70
7:D:1128:A:N6	7:D:2518:A:N1	2.39	0.70
7:D:1295:C:H2'	7:D:1296:G:H8	1.56	0.70
7:D:1580:A:H2'	7:D:1581:G:N7	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1599:C:H5'	45:p:35:THR:HG23	1.73	0.70
7:D:1826:G:OP2	30:a:223:GLY:HA3	1.92	0.70
7:D:2197:U:C2'	7:D:2198:A:H5"	2.20	0.70
7:D:2757:A:H2'	7:D:2758:A:H5'	1.73	0.70
35:f:50:ASP:O	35:f:52:VAL:N	2.25	0.70
38:i:22:LYS:NZ	38:i:23:GLY:O	2.23	0.70
40:k:8:GLU:HB2	40:k:9:ARG:HH11	1.55	0.70
41:l:70:VAL:HB	41:l:74:ARG:NH1	2.06	0.70
52:w:18:ALA:O	52:w:21:SER:OG	2.07	0.70
56:B:196:LEU:CD1	56:B:220:GLY:O	2.26	0.70
56:B:379:LYS:NZ	56:B:407:GLU:N	2.36	0.70
56:B:421:VAL:O	56:B:425:MET:N	2.18	0.70
56:B:424:LEU:HD11	56:B:471:SER:HB3	1.73	0.70
3:3:126:MET:HG3	7:D:1059:G:C5	2.26	0.70
6:A:92:G:C6	6:A:93:U:C4	2.79	0.70
6:A:101:A:C4	6:A:102:G:N7	2.60	0.70
6:A:522:C:H41	19:P:53:ARG:HH22	1.38	0.70
6:A:1322:C:O2	26:W:37:ARG:NH2	2.23	0.70
6:A:1461:G:C2	6:A:1462:G:C8	2.78	0.70
7:D:136:G:N2	7:D:137:C:N3	2.39	0.70
7:D:370:G:N2	7:D:422:A:OP1	2.24	0.70
7:D:899:A:H1'	7:D:900:A:H2	1.56	0.70
7:D:930:U:O2'	7:D:931:G:OP2	2.09	0.70
7:D:1864:U:H4'	7:D:2409:G:H22	1.56	0.70
18:O:17:GLY:HA2	18:O:35:PRO:HD3	1.72	0.70
32:c:197:ASP:OD1	32:c:197:ASP:N	2.24	0.70
42:m:112:ARG:CZ	43:n:50:PRO:HG3	2.20	0.70
56:B:226:ASP:O	56:B:228:ILE:HG13	1.92	0.70
56:B:455:PRO:HG2	56:B:458:GLU:HB2	1.74	0.70
56:B:525:ALA:HB1	56:B:528:ILE:HG13	1.74	0.70
3:3:19:PRO:HG3	3:3:41:PHE:CE2	2.27	0.70
6:A:371:G:H8	6:A:371:G:OP2	1.74	0.70
6:A:376:G:H5"	23:T:5:ARG:HD2	1.74	0.70
6:A:414:A:OP2	6:A:428:G:N2	2.16	0.70
7:D:530:G:N2	7:D:2023:G:OP1	2.23	0.70
7:D:559:G:O2'	7:D:560:C:OP1	2.08	0.70
7:D:1726:G:C6	7:D:1734:C:C2	2.79	0.70
7:D:2287:A:N6	7:D:2344:U:H3	1.89	0.70
7:D:2782:G:C2	7:D:2783:G:C4	2.80	0.70
9:F:126:GLU:O	9:F:128:GLU:N	2.25	0.70
9:F:204:ASN:ND2	9:F:210:SER:HB3	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:40:ILE:O	26:W:68:GLY:CA	2.39	0.70
40:k:103:GLU:HA	40:k:106:ARG:HB3	1.73	0.70
43:n:14:VAL:HG11	43:n:19:LYS:HZ3	1.56	0.70
56:B:8:ARG:CG	56:B:74:GLU:HA	2.22	0.70
56:B:65:ARG:HG2	56:B:245:PHE:C	2.17	0.70
56:B:137:LYS:HG2	57:B:701:GCP:C5	1.83	0.70
56:B:229:ARG:NH2	56:B:282:LEU:C	2.50	0.70
56:B:299:PRO:HA	56:B:479:TYR:OH	1.85	0.70
56:B:330:LEU:HD21	56:B:346:CYS:HA	1.73	0.70
56:B:383:LYS:HB3	56:B:402:ILE:HG21	0.70	0.70
6:A:1163:C:N4	6:A:1173:G:O6	2.18	0.70
6:A:1453:G:H3'	6:A:1453:G:N3	2.05	0.70
7:D:931:G:H3'	7:D:932:G:C4'	2.22	0.70
7:D:1047:G:C6	7:D:1110:G:C6	2.80	0.70
7:D:1061:U:C1'	7:D:1070:A:C4'	2.69	0.70
7:D:1787:A:H5"	7:D:1788:C:OP2	1.90	0.70
7:D:2578:G:N7	31:b:140:SER:HB2	2.07	0.70
20:Q:3:ARG:HG3	20:Q:7:VAL:HG12	1.74	0.70
26:W:15:LEU:C	26:W:15:LEU:HD13	2.17	0.70
31:b:54:GLN:HB3	31:b:57:LYS:NZ	2.07	0.70
40:k:106:ARG:HH12	40:k:110:LEU:HB2	1.57	0.70
48:s:30:VAL:HG12	48:s:66:VAL:HG22	1.72	0.70
52:w:11:THR:HG21	52:w:15:ARG:NH1	2.04	0.70
56:B:46:LEU:HD12	56:B:82:ASP:OD2	1.92	0.70
56:B:137:LYS:CE	57:B:701:GCP:C2	2.60	0.70
56:B:194:ALA:HB1	56:B:195:PRO:CD	2.22	0.70
56:B:194:ALA:N	56:B:219:GLU:OE1	2.11	0.70
56:B:206:ASP:HB3	56:B:210:GLY:CA	2.21	0.70
6:A:1459:C:H2'	6:A:1460:A:H5'	1.73	0.69
7:D:111:A:O2'	49:t:60:ASN:ND2	2.24	0.69
7:D:247:G:H22	55:z:8:LYS:HG2	1.56	0.69
7:D:276:A:O2'	7:D:278:A:N6	2.25	0.69
7:D:2444:G:H5'	7:D:2445:G:OP2	1.91	0.69
9:F:84:GLU:HG2	9:F:215:LEU:HG	1.74	0.69
14:K:79:ARG:HG2	14:K:84:ASN:HB3	1.74	0.69
33:d:68:PRO:HG3	33:d:90:LEU:HD13	1.74	0.69
40:k:7:TYR:O	40:k:11:LYS:HB2	1.92	0.69
40:k:53:SER:O	40:k:55:ALA:N	2.25	0.69
41:l:108:ARG:HD2	41:l:113:LYS:HZ2	1.56	0.69
56:B:74:GLU:CD	56:B:74:GLU:H	1.99	0.69
56:B:152:VAL:HG22	56:B:156:LEU:HD23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:227:ARG:CA	56:B:237:PHE:HD2	2.04	0.69
56:B:537:ILE:CD1	56:B:551:VAL:HG23	2.22	0.69
3:3:77:LEU:CD1	3:3:111:LYS:HD3	2.22	0.69
3:3:137:GLU:HB3	7:D:1078:U:OP1	1.92	0.69
6:A:216:G:C5	6:A:217:C:N3	2.60	0.69
6:A:1308:U:O2	6:A:1329:A:N6	2.24	0.69
6:A:1438:G:O2'	6:A:1439:C:H5'	1.92	0.69
7:D:270(W):G:C5	7:D:270(X):G:C5	2.79	0.69
7:D:848:G:N2	7:D:933:A:H1'	2.04	0.69
7:D:1755:A:H5'	7:D:1756:G:OP2	1.93	0.69
7:D:2218:G:H2'	7:D:2219:G:H8	1.55	0.69
14:K:111:ARG:HD3	14:K:112:PRO:HD2	1.74	0.69
15:L:97:VAL:HG13	15:L:98:LYS:H	1.57	0.69
20:Q:23:TYR:CD2	20:Q:70:LEU:HD11	2.26	0.69
25:V:37:VAL:HG21	25:V:78:LEU:HD22	1.74	0.69
56:B:97:LEU:CD2	56:B:103:VAL:HG11	2.21	0.69
56:B:520:ILE:C	56:B:520:ILE:HD13	2.17	0.69
3:3:12:LEU:H	3:3:54:PRO:CB	2.06	0.69
6:A:382:A:H2'	6:A:383:A:C8	2.27	0.69
6:A:457:C:N4	6:A:458:C:H42	1.90	0.69
6:A:545:C:H5"	11:H:72:GLU:HG2	1.73	0.69
7:D:775:G:H5"	7:D:777:A:C4	2.27	0.69
7:D:1999:C:H2'	7:D:2000:G:H8	1.57	0.69
8:E:57:A:H2	33:d:29:TRP:CA	2.05	0.69
10:G:11:ARG:O	10:G:14:ILE:N	2.25	0.69
33:d:31:VAL:HB	33:d:32:PRO:CD	2.20	0.69
56:B:135:ILE:CG1	56:B:165:PHE:HD1	1.78	0.69
56:B:282:LEU:HD13	56:B:283:ALA:CB	2.21	0.69
56:B:361:LEU:O	56:B:366:GLY:CA	2.40	0.69
6:A:1507:A:H2	6:A:1530:G:H1'	1.56	0.69
7:D:848:G:N2	7:D:931:G:C5	2.60	0.69
12:I:79:GLU:O	15:L:104:ARG:NH1	2.25	0.69
41:l:25:GLY:O	41:l:100:TYR:OH	2.08	0.69
44:o:84:ARG:HH12	44:o:98:LYS:HD2	1.55	0.69
47:r:151:HIS:HB3	47:r:169:GLU:N	2.06	0.69
56:B:306:TYR:OH	56:B:339:ALA:C	2.35	0.69
56:B:531:GLN:OE1	56:B:584:LEU:HD12	1.91	0.69
3:3:84:LEU:HD22	3:3:86:LYS:HE3	1.75	0.69
5:5:42:C:P	14:K:143:ARG:HH12	2.16	0.69
6:A:18:C:P	12:I:127:ASN:HD21	2.14	0.69
6:A:457:C:C5	6:A:458:C:N4	2.60	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:884:C:H1'	7:D:885:C:OP2	1.92	0.69
7:D:1946:U:H5"	7:D:1947:C:OP2	1.93	0.69
7:D:2126:A:N6	7:D:2172:U:OP2	2.25	0.69
30:a:66:ASP:OD2	30:a:103:ARG:HD3	1.93	0.69
35:f:103:VAL:HG21	35:f:120:LEU:HD23	1.75	0.69
40:k:50:SER:N	40:k:76:LYS:HZ3	1.88	0.69
56:B:229:ARG:O	56:B:280:ILE:HG23	1.93	0.69
56:B:303:ALA:HB3	56:B:345:ARG:O	1.92	0.69
56:B:380:VAL:O	56:B:387:GLU:CA	2.40	0.69
56:B:410:VAL:HG12	56:B:480:GLU:H	1.58	0.69
5:5:17:C:H41	7:D:2181:G:C5'	2.05	0.69
6:A:381:C:H2'	6:A:382:A:C8	2.28	0.69
7:D:82:G:N7	7:D:102:G:N2	2.40	0.69
7:D:306:U:H3	7:D:310:A:H62	1.39	0.69
7:D:485:C:C4	7:D:486:C:C4	2.81	0.69
7:D:558:G:C4	7:D:559:G:N7	2.60	0.69
7:D:1225:C:OP1	43:n:88:ARG:CZ	2.41	0.69
7:D:1588:C:H2'	7:D:1589:C:C5	2.28	0.69
7:D:2497:A:O2'	7:D:2498:C:OP2	2.10	0.69
10:G:12:LEU:HD21	21:R:57:ARG:HB2	1.74	0.69
13:J:53:ALA:HB3	13:J:86:ARG:HH12	1.57	0.69
19:P:102:ARG:NH2	19:P:108:ALA:O	2.25	0.69
25:V:80:PRO:O	25:V:82:THR:N	2.26	0.69
26:W:53:ASN:ND2	26:W:75:ALA:CB	2.56	0.69
26:W:69:HIS:CD2	26:W:74:PHE:CZ	2.76	0.69
29:Z:131:LEU:HD22	29:Z:136:LEU:HB3	1.74	0.69
30:a:222:ARG:CZ	30:a:222:ARG:HB2	2.22	0.69
33:d:22:ARG:NH1	33:d:175:LEU:HD21	2.08	0.69
33:d:138:GLN:HB3	33:d:151:ALA:HB1	1.73	0.69
35:f:34:LEU:O	35:f:36:GLY:N	2.25	0.69
39:j:63:ARG:NH1	39:j:80:PHE:CD2	2.61	0.69
47:r:29:TYR:HD2	47:r:72:ARG:HH12	1.40	0.69
56:B:45:PHE:HE2	56:B:247:PRO:O	1.74	0.69
56:B:105:LEU:HD22	56:B:131:ILE:CG2	2.23	0.69
56:B:217:LEU:O	56:B:259:GLY:N	2.20	0.69
56:B:315:LYS:HE2	56:B:318:ASP:HB3	1.74	0.69
56:B:382:LEU:HD22	56:B:383:LYS:N	2.07	0.69
56:B:428:LEU:HD13	56:B:452:TYR:CE1	2.25	0.69
6:A:791:G:N2	6:A:1497:G:O3'	2.25	0.69
7:D:172:C:C2'	7:D:173:G:H5'	2.22	0.69
7:D:1332:G:N7	7:D:1609:A:N6	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2651:C:N3	7:D:2652:C:N4	2.40	0.69
9:F:97:TRP:HZ2	9:F:102:LEU:HD13	1.57	0.69
29:Z:71:GLN:O	29:Z:156:ILE:CG2	2.35	0.69
37:h:23:PRO:HB3	37:h:28:GLY:HA3	1.74	0.69
37:h:33:ARG:HG3	37:h:34:GLY:N	2.08	0.69
39:j:87:TYR:OH	39:j:117:VAL:O	2.06	0.69
56:B:144:ARG:HD3	56:B:148:VAL:HG23	1.74	0.69
56:B:188:PRO:C	56:B:189:LYS:HG3	2.17	0.69
56:B:200:ILE:CD1	56:B:278:ASP:O	2.41	0.69
56:B:492:VAL:C	56:B:505:THR:CB	2.63	0.69
3:3:6:ALA:C	3:3:59:ILE:CB	2.60	0.69
3:3:10:LEU:CD2	3:3:57:ILE:CD1	2.70	0.69
3:3:14:ALA:CB	3:3:53:VAL:H	1.86	0.69
3:3:89:HIS:O	3:3:90:LYS:CB	2.41	0.69
5:5:63:G:H2'	5:5:64:A:C8	2.27	0.69
6:A:444:C:N4	6:A:445:G:O6	2.26	0.69
6:A:451:A:O2'	6:A:452:A:OP2	2.09	0.69
6:A:690:G:OP2	18:O:27:ASN:ND2	2.25	0.69
6:A:1137:C:O2'	6:A:1138:G:N2	2.26	0.69
6:A:1169:A:H2'	6:A:1170:A:C8	2.28	0.69
7:D:230:U:H2'	7:D:231:C:H6	1.57	0.69
7:D:270(O):U:OP1	7:D:270(P):C:N4	2.25	0.69
7:D:320:A:OP1	32:c:135:LYS:NZ	2.26	0.69
7:D:609:A:H2'	7:D:609(A):G:C8	2.27	0.69
7:D:890:A:H3'	7:D:892:G:C5'	2.17	0.69
7:D:1266:G:C4	44:o:15:ARG:NH1	2.61	0.69
7:D:1350:C:N3	7:D:1382:G:N2	2.41	0.69
7:D:1792:G:O2'	7:D:1830:C:OP1	2.11	0.69
7:D:2020:A:O2'	7:D:2021:C:OP1	2.11	0.69
7:D:2124:G:H2'	29:Z:217:THR:HG23	1.73	0.69
7:D:2227:A:N6	7:D:2228:G:N1	2.40	0.69
9:F:34:ALA:HB3	9:F:36:ARG:HH12	1.58	0.69
9:F:174:VAL:HG11	9:F:196:LEU:HD13	1.75	0.69
20:Q:87:TYR:N	26:W:73:GLU:O	2.19	0.69
25:V:21:LYS:HZ3	25:V:23:LYS:HB3	1.56	0.69
26:W:43:GLU:HA	26:W:67:VAL:HG11	1.75	0.69
29:Z:161:ILE:O	29:Z:161:ILE:HG13	1.91	0.69
34:e:38:SER:OG	34:e:40:GLU:OE2	2.09	0.69
34:e:155:SER:O	34:e:157:TYR:N	2.26	0.69
40:k:82:ILE:HG13	40:k:83:LYS:H	1.58	0.69
51:v:44:THR:HB	51:v:61:ARG:NH1	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:18:VAL:HA	57:B:701:GCP:O2G	1.92	0.69
56:B:113:VAL:HG13	56:B:117:THR:OG1	1.91	0.69
56:B:190:GLY:O	56:B:258:ALA:HB3	1.93	0.69
56:B:200:ILE:HG13	56:B:279:THR:HG23	1.70	0.69
56:B:383:LYS:HA	56:B:402:ILE:HD13	1.73	0.69
56:B:406:LEU:CG	56:B:489:LEU:CD1	2.65	0.69
6:A:562:C:O2'	19:P:15:ARG:O	2.11	0.69
6:A:964:A:H1'	17:N:55:LYS:HZ2	1.58	0.69
6:A:993:G:O2'	6:A:994:A:OP1	2.11	0.69
7:D:442:G:C4	7:D:444:C:C5	2.80	0.69
7:D:1937:A:O2'	7:D:1938:A:OP1	2.09	0.69
7:D:2612:C:HO2'	52:w:4:HIS:CG	2.09	0.69
26:W:40:ILE:CB	26:W:68:GLY:HA2	2.23	0.69
31:b:103:ASP:OD2	31:b:201:THR:N	2.25	0.69
34:e:16:SER:HB3	34:e:27:LYS:HB2	1.75	0.69
40:k:89:ARG:HG2	40:k:90:GLY:H	1.58	0.69
42:m:61:TRP:CE3	42:m:96:ALA:HB3	2.28	0.69
47:r:4:ARG:HD3	47:r:37:VAL:HB	1.74	0.69
49:t:39:LEU:O	49:t:42:ASN:ND2	2.25	0.69
56:B:115:ALA:HB2	56:B:474:TYR:CD1	2.27	0.69
56:B:137:LYS:H	56:B:167:SER:CB	2.05	0.69
56:B:169:LYS:CD	57:B:701:GCP:C2	2.70	0.69
1:1:4:ARG:HA	1:1:36:GLN:HA	1.74	0.69
6:A:74:C:H2'	6:A:75:C:H6	1.56	0.69
6:A:681:C:H42	6:A:709:G:H1	1.40	0.69
6:A:1014:A:H5"	6:A:1015:A:OP2	1.92	0.69
7:D:99:U:H5'	7:D:101:G:H5"	1.73	0.69
7:D:479:A:HO2'	7:D:480:A:H8	1.39	0.69
7:D:557:U:H2'	7:D:558:G:H8	1.57	0.69
7:D:804:A:OP2	37:h:39:LYS:HD2	1.93	0.69
7:D:1168:G:C2	7:D:1182:A:C2	2.81	0.69
7:D:1710:C:H2'	7:D:1711:C:C6	2.28	0.69
7:D:1821:A:N6	7:D:1822:G:O6	2.25	0.69
7:D:2208:U:H2'	7:D:2209:C:H5'	1.74	0.69
17:N:34:VAL:H	17:N:74:ILE:HG23	1.57	0.69
34:e:136:ILE:HG23	34:e:137:ASP:H	1.58	0.69
40:k:17:ARG:O	40:k:20:ARG:HB2	1.93	0.69
49:t:8:ALA:HB1	49:t:58:VAL:HG11	1.73	0.69
56:B:8:ARG:CD	56:B:74:GLU:HA	2.23	0.69
56:B:17:HIS:CE1	56:B:116:GLU:HG3	2.28	0.69
56:B:25:LEU:HD23	56:B:168:GLY:HA2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:239:VAL:HG22	56:B:240:ASP:N	2.03	0.69
56:B:352:LEU:HD22	56:B:356:ILE:CD1	2.23	0.69
56:B:489:LEU:O	56:B:507:ILE:C	2.34	0.69
6:A:1164:G:N7	6:A:1165:C:C4	2.61	0.68
7:D:64:A:N3	45:p:66:LEU:HD22	2.07	0.68
7:D:388:G:OP2	51:v:23:GLU:OE2	2.11	0.68
7:D:988:A:OP1	50:u:10:LYS:HG2	1.92	0.68
7:D:1480:G:H3'	7:D:1480:G:N3	2.08	0.68
7:D:1789:A:H5"	7:D:1790:C:OP2	1.93	0.68
7:D:2086:U:OP2	30:a:260:ARG:NH1	2.26	0.68
12:I:5:ASP:OD2	12:I:6:PHE:HB3	1.93	0.68
30:a:242:ARG:O	30:a:244:ARG:N	2.26	0.68
31:b:54:GLN:HG3	31:b:56:PRO:HD2	1.76	0.68
33:d:20:ILE:HG23	33:d:21:ARG:HG2	1.74	0.68
37:h:111:ARG:HG3	37:h:128:HIS:ND1	2.08	0.68
48:s:40:GLN:HE22	48:s:43:THR:HA	1.56	0.68
56:B:423:SER:OG	56:B:470:VAL:HG12	1.93	0.68
56:B:497:HIS:ND1	56:B:535:VAL:HG22	2.06	0.68
56:B:497:HIS:CE1	56:B:535:VAL:HG22	2.27	0.68
6:A:1152:A:H4'	17:N:13:HIS:CE1	2.27	0.68
6:A:1372:U:OP2	16:M:11:LYS:NZ	2.25	0.68
7:D:636:G:N7	37:h:113:LYS:NZ	2.41	0.68
7:D:803:U:C2'	7:D:804:A:H5'	2.23	0.68
7:D:998:C:OP1	42:m:84:LYS:NZ	2.19	0.68
7:D:1519:G:H3'	7:D:1520:U:C6	2.28	0.68
9:F:34:ALA:CB	9:F:36:ARG:HH12	2.07	0.68
11:H:11:LEU:HD13	11:H:66:ARG:HD3	1.74	0.68
20:Q:64:TRP:HA	20:Q:64:TRP:CE3	2.28	0.68
26:W:16:LEU:HG	26:W:44:MET:HE1	1.73	0.68
30:a:251:GLY:C	30:a:255:LYS:HZ1	2.01	0.68
34:e:111:HIS:ND1	34:e:111:HIS:O	2.26	0.68
36:g:113:LYS:O	36:g:116:SER:OG	2.07	0.68
56:B:29:ILE:HD13	56:B:177:ILE:CD1	2.23	0.68
56:B:152:VAL:HG22	56:B:156:LEU:CD2	2.23	0.68
56:B:378:TYR:C	56:B:406:LEU:HD13	2.17	0.68
56:B:497:HIS:ND1	56:B:535:VAL:HG13	2.07	0.68
7:D:154:G:C6	7:D:155:C:N3	2.61	0.68
7:D:390:A:O2'	7:D:391:G:O5'	2.12	0.68
7:D:531:C:N3	42:m:28:ARG:NH2	2.40	0.68
7:D:1326:U:OP2	7:D:1326:U:H6	1.75	0.68
7:D:1417:C:N4	7:D:1581:G:H22	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1652:A:H62	7:D:1653:G:H21	1.40	0.68
8:E:49:C:OP1	40:k:97:ARG:N	2.25	0.68
26:W:70:LYS:C	26:W:72:GLY:N	2.42	0.68
51:v:56:VAL:O	51:v:61:ARG:NH2	2.20	0.68
56:B:230:ILE:HG23	56:B:279:THR:HA	1.75	0.68
56:B:488:ASP:C	56:B:509:HIS:HA	2.18	0.68
56:B:490:VAL:HB	56:B:508:ALA:CA	2.20	0.68
3:3:121:GLU:HG3	3:3:123:ALA:H	1.57	0.68
6:A:493:G:N2	6:A:494:U:O4	2.26	0.68
6:A:1044:A:N6	6:A:1045:C:O2	2.27	0.68
7:D:559:G:C2'	7:D:560:C:H6	2.06	0.68
7:D:1236:G:O2'	7:D:1237:A:O5'	2.11	0.68
7:D:2215:G:O2'	7:D:2216:G:OP2	2.09	0.68
7:D:2792:G:H8	7:D:2792:G:OP2	1.77	0.68
14:K:24:THR:HG22	14:K:28:ASN:HD21	1.59	0.68
29:Z:123:VAL:HG13	29:Z:127:LEU:HD12	1.75	0.68
31:b:119:ARG:HG3	31:b:120:TRP:H	1.58	0.68
42:m:92:ARG:N	43:n:10:LYS:NZ	2.39	0.68
52:w:10:LYS:NZ	52:w:11:THR:C	2.51	0.68
56:B:459:ILE:HD12	56:B:459:ILE:C	2.18	0.68
5:5:17:C:H41	7:D:2181:G:H5"	1.58	0.68
5:5:17:C:N4	7:D:2181:G:H5"	2.08	0.68
6:A:1075:C:H5"	9:F:179:LYS:HZ3	1.57	0.68
7:D:150:C:H42	7:D:176:G:H1	1.40	0.68
7:D:1043:C:H2'	7:D:1045:A:OP1	1.93	0.68
7:D:1743:G:N3	7:D:1746:G:H1'	2.08	0.68
7:D:1858:G:O2'	7:D:1859:A:O4'	2.12	0.68
7:D:2218:G:H2'	7:D:2219:G:C8	2.29	0.68
7:D:2807:G:N1	7:D:2892:A:C5	2.61	0.68
20:Q:96:LEU:HD13	20:Q:103:THR:CG2	2.17	0.68
32:c:35:GLU:CG	37:h:14:LYS:HZ3	2.07	0.68
40:k:107:GLU:OE2	40:k:110:LEU:HD23	1.92	0.68
47:r:50:GLN:O	47:r:52:SER:N	2.27	0.68
53:x:16:CYS:SG	53:x:17:LYS:N	2.64	0.68
56:B:46:LEU:CD1	56:B:82:ASP:OD2	2.41	0.68
56:B:584:LEU:O	56:B:586:ALA:N	2.22	0.68
3:3:13:PRO:CG	3:3:16:LYS:NZ	2.57	0.68
6:A:33:A:N6	6:A:550:G:O6	2.26	0.68
6:A:90:C:O2'	6:A:91:C:H5'	1.94	0.68
6:A:254:G:O3'	24:U:69:LYS:NZ	2.25	0.68
6:A:275:G:H4'	24:U:15:MET:HE3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:475:G:H2'	6:A:476:G:C1'	2.24	0.68
6:A:883:C:H5'	6:A:884:U:OP2	1.93	0.68
6:A:1034:G:H2'	6:A:1035:A:H8	1.58	0.68
7:D:489:G:O2'	7:D:491:G:OP1	2.08	0.68
7:D:558:G:H2'	7:D:559:G:C8	2.28	0.68
7:D:1105:U:H1'	7:D:1106:G:OP1	1.94	0.68
7:D:1460:A:H5'	7:D:1461:G:OP2	1.94	0.68
7:D:1861:G:C2	7:D:1882:C:O2	2.46	0.68
7:D:1955:U:O2'	7:D:1956:U:OP1	2.09	0.68
7:D:2593:U:H2'	7:D:2594:C:H6	1.58	0.68
8:E:57:A:C2	33:d:29:TRP:CD1	2.82	0.68
25:V:33:ASP:OD2	25:V:36:ASN:HB2	1.92	0.68
29:Z:63:SER:CB	29:Z:155:GLU:OE2	2.42	0.68
29:Z:68:LEU:O	29:Z:158:ALA:N	2.27	0.68
41:l:82:LEU:HD23	41:l:84:GLN:H	1.58	0.68
44:o:11:ARG:HB2	44:o:98:LYS:NZ	2.07	0.68
55:z:37:SER:N	55:z:40:GLU:OE2	2.26	0.68
56:B:200:ILE:HG13	56:B:278:ASP:C	2.18	0.68
56:B:412:LEU:CG	56:B:479:TYR:CA	2.52	0.68
3:3:102:GLU:HA	3:3:105:LEU:HD12	1.74	0.68
6:A:209:U:H4'	6:A:210:U:O2	1.93	0.68
6:A:850:U:C2'	6:A:851:G:H5'	2.24	0.68
6:A:1212:U:O2'	6:A:1213:A:O4'	2.11	0.68
7:D:99:U:C5'	7:D:101:G:H5'	2.22	0.68
7:D:884:C:C5	7:D:885:C:N4	2.60	0.68
7:D:1321:A:O3'	44:o:11:ARG:NH2	2.27	0.68
7:D:1716:U:O2	7:D:1743:G:O6	2.12	0.68
7:D:1743:G:H4'	7:D:1743:G:OP1	1.93	0.68
7:D:1904:G:N2	7:D:1905:C:O2	2.27	0.68
7:D:2553:G:H5"	7:D:2554:U:OP2	1.93	0.68
7:D:2580:U:H5"	7:D:2581:G:OP2	1.93	0.68
26:W:11:VAL:O	26:W:38:SER:OG	2.11	0.68
26:W:15:LEU:HD23	26:W:33:THR:HG21	0.73	0.68
29:Z:20:TYR:HE2	29:Z:28:LEU:HD22	1.59	0.68
31:b:102:VAL:HA	31:b:200:GLU:OE2	1.93	0.68
34:e:41:MET:SD	34:e:68:THR:OG1	2.52	0.68
36:g:67:LYS:HZ3	41:l:65:LYS:HE2	1.59	0.68
43:n:6:LYS:HE2	43:n:10:LYS:HG2	1.76	0.68
46:q:13:VAL:HA	46:q:73:ARG:NH1	2.09	0.68
56:B:360:ARG:CA	56:B:364:GLU:OE1	2.42	0.68
3:3:6:ALA:HB1	3:3:59:ILE:CG2	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:760:G:N1	24:U:104:LYS:O	2.27	0.68
6:A:925:G:O2'	6:A:927:G:OP1	2.12	0.68
6:A:1165:C:C2'	6:A:1166:G:H8	1.95	0.68
6:A:1256:A:H5"	10:G:27:LYS:HZ2	1.59	0.68
7:D:1189:A:H5"	7:D:1190:G:OP2	1.93	0.68
7:D:1239:G:N3	7:D:1240:U:H1'	2.09	0.68
7:D:1275:A:N3	39:j:12:ARG:NH2	2.40	0.68
7:D:2041:U:O4	7:D:2042:A:N6	2.26	0.68
7:D:2314:C:H2'	7:D:2315:G:C8	2.28	0.68
7:D:2470:G:O6	7:D:2481:G:N2	2.27	0.68
11:H:30:LYS:NZ	11:H:36:ARG:HH12	1.90	0.68
50:u:10:LYS:HA	50:u:31:LEU:HD11	1.76	0.68
53:x:41:PRO:HD3	53:x:49:HIS:HB2	1.75	0.68
56:B:42:ARG:HD3	56:B:53:ARG:NH2	1.94	0.68
56:B:435:LEU:HD13	56:B:452:TYR:CZ	2.29	0.68
6:A:851:G:C5	6:A:852:G:N7	2.61	0.68
6:A:1132:C:H42	6:A:1142:G:H1	1.41	0.68
6:A:1299:A:N7	6:A:1301:U:N3	2.42	0.68
6:A:1345:U:H5'	16:M:120:ARG:HH12	1.58	0.68
7:D:479:A:N6	7:D:506:G:H21	1.92	0.68
7:D:532:A:H5'	7:D:533:G:OP2	1.92	0.68
7:D:1095:A:OP2	7:D:1096:A:OP2	2.12	0.68
7:D:1399:C:H5'	45:p:25:LYS:HZ1	1.58	0.68
7:D:1446:C:H2'	7:D:1447:G:H8	1.59	0.68
7:D:1447:G:C2'	7:D:1448:G:H5'	2.23	0.68
7:D:1485:G:N1	7:D:1486:A:C5	2.61	0.68
7:D:2332:U:H4'	7:D:2336:A:H62	1.59	0.68
7:D:2848:G:N2	7:D:2867:G:H1'	2.06	0.68
11:H:127:THR:OG1	11:H:148:VAL:O	2.12	0.68
26:W:29:ARG:HG2	26:W:48:THR:HG21	1.74	0.68
33:d:56:ALA:HA	33:d:59:GLU:HG2	1.76	0.68
56:B:197:LYS:HG3	56:B:280:ILE:O	1.94	0.68
56:B:316:LEU:HD12	56:B:342:PHE:CD2	2.29	0.68
56:B:405:ILE:HA	56:B:486:PRO:HB3	1.76	0.68
56:B:414:ILE:CD1	56:B:428:LEU:HD11	2.24	0.68
6:A:164:U:H2'	6:A:165:C:C6	2.29	0.68
6:A:323:U:OP1	27:X:26:ASN:ND2	2.26	0.68
6:A:1416:G:N1	6:A:1485:U:O2	2.27	0.68
7:D:288:C:N3	7:D:289:A:O2'	2.27	0.68
7:D:442:G:C6	7:D:444:C:N4	2.62	0.68
7:D:2822:G:OP1	31:b:111:ARG:N	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:7:G:O2'	8:E:8:U:OP1	2.11	0.68
13:J:4:TYR:HB3	13:J:90:VAL:HG23	1.76	0.68
20:Q:71:ARG:HA	20:Q:75:ALA:HB3	1.76	0.68
29:Z:66:HIS:O	29:Z:158:ALA:CB	2.42	0.68
51:v:27:THR:OG1	51:v:28:LYS:N	2.27	0.68
56:B:9:ILE:O	56:B:10:ARG:HG3	1.94	0.68
5:5:4:C:H42	5:5:69:G:H1	1.41	0.67
6:A:92:G:C6	6:A:93:U:N3	2.62	0.67
7:D:95:G:H2'	49:t:43:HIS:NE2	2.09	0.67
7:D:680:G:C4	7:D:798:G:N2	2.62	0.67
7:D:747:U:O2'	7:D:748:G:OP1	2.10	0.67
7:D:1031:G:N2	7:D:1124:C:O2	2.27	0.67
7:D:1087:G:H5"	7:D:1088:A:OP2	1.94	0.67
7:D:1591:G:O2'	7:D:1592:C:H5'	1.93	0.67
7:D:2512:C:H5'	31:b:120:TRP:CH2	2.29	0.67
7:D:2820:A:C8	31:b:191:PRO:HB3	2.29	0.67
17:N:51:ARG:HH21	17:N:61:GLU:HB2	1.59	0.67
26:W:36:ARG:CB	26:W:71:LEU:CB	2.72	0.67
31:b:36:ARG:HG3	31:b:79:ARG:HE	1.57	0.67
32:c:35:GLU:HG3	37:h:14:LYS:HZ3	1.57	0.67
32:c:153:SER:H	32:c:190:GLU:HB3	1.59	0.67
41:l:53:ARG:NH1	41:l:101:PHE:HD1	1.92	0.67
48:s:33:ALA:N	48:s:64:ASP:OD1	2.23	0.67
56:B:104:LEU:CD2	56:B:181:ILE:HD11	2.15	0.67
56:B:191:ASP:CB	56:B:219:GLU:CB	2.33	0.67
56:B:300:VAL:CG1	56:B:477:MET:CE	2.71	0.67
56:B:376:VAL:HG12	56:B:377:VAL:N	2.05	0.67
56:B:428:LEU:HD12	56:B:452:TYR:CE1	2.28	0.67
56:B:489:LEU:HA	56:B:509:HIS:CB	2.24	0.67
56:B:497:HIS:CG	56:B:535:VAL:HG13	2.28	0.67
7:D:267:C:OP2	7:D:271(A):C:N4	2.27	0.67
7:D:926:A:O2'	7:D:928:G:OP1	2.11	0.67
7:D:995:C:P	42:m:53:ARG:HH12	2.17	0.67
7:D:1143:A:H2'	7:D:1144:G:C8	2.29	0.67
7:D:2115:G:H2'	7:D:2117:A:N7	2.08	0.67
7:D:2211:G:H3'	7:D:2211:G:N3	2.08	0.67
7:D:2305:A:H2'	7:D:2306:C:H5'	1.75	0.67
7:D:2490:G:H21	7:D:2491:U:H3	1.41	0.67
34:e:89:ILE:HG23	34:e:128:PRO:O	1.93	0.67
49:t:5:LEU:O	49:t:9:ARG:HG2	1.94	0.67
52:w:12:SER:OG	52:w:14:ALA:N	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:x:11:LEU:HB3	55:z:35:GLN:HE22	1.58	0.67
56:B:25:LEU:HD13	56:B:25:LEU:C	2.19	0.67
56:B:58:THR:OG1	56:B:84:PRO:HG2	1.93	0.67
56:B:66:VAL:CG2	56:B:76:TYR:HE1	2.05	0.67
56:B:174:VAL:HG11	56:B:177:ILE:HD11	1.75	0.67
56:B:214:TYR:HB2	56:B:245:PHE:CZ	2.29	0.67
56:B:219:GLU:HA	56:B:258:ALA:HB2	1.75	0.67
56:B:428:LEU:HD13	56:B:452:TYR:CG	2.29	0.67
56:B:532:LEU:HD22	56:B:555:ARG:H	1.59	0.67
5:5:5:G:H1	5:5:68:C:H42	1.42	0.67
6:A:479:C:H6	6:A:479:C:O5'	1.78	0.67
6:A:501:C:OP1	19:P:117:ARG:NH2	2.27	0.67
6:A:754:C:O5'	22:S:72:ARG:NH1	2.25	0.67
6:A:1376:U:O4	14:K:10:ARG:NH1	2.26	0.67
6:A:1452:C:H5"	6:A:1453:G:OP1	1.95	0.67
7:D:295:G:H1'	7:D:344:G:H21	1.58	0.67
7:D:1817:G:H5'	30:a:88:ARG:NH1	2.10	0.67
7:D:2787:C:O2	31:b:61:ARG:NE	2.28	0.67
9:F:118:LEU:HD22	9:F:142:LEU:HB2	1.77	0.67
11:H:128:VAL:HG21	11:H:133:VAL:HB	1.76	0.67
15:L:11:THR:HG22	15:L:14:ARG:HH12	1.58	0.67
18:O:21:ILE:HD11	18:O:84:VAL:HG12	1.77	0.67
26:W:30:LEU:HD13	26:W:31:ILE:N	2.04	0.67
29:Z:155:GLU:O	29:Z:159:GLY:N	2.27	0.67
29:Z:156:ILE:CA	29:Z:160:ARG:HB2	2.24	0.67
30:a:57:GLY:HA2	30:a:217:ARG:HG3	1.74	0.67
41:l:51:ARG:NH1	41:l:114:LEU:HD13	2.09	0.67
51:v:43:TYR:CA	51:v:61:ARG:HH22	2.07	0.67
56:B:142:ASN:HD21	56:B:144:ARG:CZ	2.06	0.67
56:B:339:ALA:O	56:B:340:LEU:C	2.38	0.67
56:B:379:LYS:CA	56:B:406:LEU:CB	2.71	0.67
56:B:421:VAL:HG12	56:B:425:MET:HG3	1.76	0.67
3:3:77:LEU:O	3:3:111:LYS:CD	2.37	0.67
5:5:14:A:H62	5:5:15:G:H21	1.42	0.67
6:A:932:C:H5"	14:K:3:ARG:HG2	1.77	0.67
6:A:1015:A:N3	6:A:1218:C:O2'	2.27	0.67
6:A:1047:G:OP1	21:R:4:LYS:NZ	2.18	0.67
7:D:270(U):C:H2'	7:D:270(V):G:C8	2.29	0.67
7:D:279:C:O2'	7:D:280:C:O5'	2.12	0.67
7:D:1705:G:H5'	7:D:1706:U:OP2	1.95	0.67
9:F:15:VAL:HG23	9:F:16:HIS:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:145:LYS:HA	12:I:148:VAL:HB	1.77	0.67
15:L:41:ARG:HG2	15:L:42:GLU:OE2	1.94	0.67
16:M:22:GLY:N	16:M:58:HIS:O	2.26	0.67
22:S:35:ARG:NH1	22:S:59:MET:SD	2.67	0.67
29:Z:43:VAL:CG2	29:Z:175:VAL:HG13	2.24	0.67
36:g:106:LEU:HD22	41:l:39:ARG:HH12	1.60	0.67
37:h:76:LYS:NZ	37:h:96:THR:HG21	2.09	0.67
37:h:115:LEU:O	37:h:131:SER:OG	2.11	0.67
38:i:43:THR:OG1	38:i:45:GLN:OE1	2.11	0.67
56:B:137:LYS:HG3	57:B:701:GCP:C4	2.12	0.67
56:B:305:LEU:CD2	56:B:358:GLN:HG3	2.25	0.67
6:A:372:C:H42	6:A:389:A:H62	1.40	0.67
6:A:452:A:O2'	23:T:72:ARG:NH1	2.27	0.67
6:A:458:C:H5"	6:A:465:A:C6	2.29	0.67
6:A:808:C:P	22:S:48:LYS:NZ	2.67	0.67
6:A:850:U:H2'	6:A:851:G:H5'	1.75	0.67
6:A:1227:A:P	20:Q:94:ARG:NH2	2.68	0.67
6:A:1236:A:H4'	6:A:1304:G:H4'	1.75	0.67
6:A:1448:C:O5'	6:A:1448:C:H6	1.78	0.67
7:D:2307:G:H5"	7:D:2308:G:C8	2.29	0.67
7:D:2808:U:H3	7:D:2891:G:H2'	1.59	0.67
19:P:80:HIS:HD2	56:B:316:LEU:HG	1.46	0.67
37:h:72:PRO:HB3	37:h:110:TYR:CG	2.30	0.67
40:k:5:THR:HG23	40:k:9:ARG:NH2	2.09	0.67
42:m:40:PHE:HB3	43:n:78:LYS:HD3	1.76	0.67
56:B:17:HIS:HB2	56:B:20:HIS:CD2	2.29	0.67
56:B:166:ALA:HB2	56:B:172:GLU:CD	2.19	0.67
56:B:378:TYR:CD2	56:B:489:LEU:HD13	2.27	0.67
56:B:382:LEU:HD22	56:B:401:ARG:C	2.19	0.67
5:5:28:G:N2	5:5:43:C:N3	2.42	0.67
6:A:218:C:H2'	6:A:219:C:C5	2.29	0.67
6:A:477:G:N3	6:A:478:A:C8	2.61	0.67
6:A:606:G:H22	6:A:631:G:H2'	1.59	0.67
6:A:1112:C:O2	10:G:178:LEU:N	2.25	0.67
7:D:615:G:OP1	32:c:44:ARG:NH2	2.27	0.67
7:D:852:G:C6	7:D:926:A:C6	2.82	0.67
7:D:917:A:H2'	7:D:918:A:C8	2.30	0.67
7:D:1651:G:H2'	7:D:1652:A:C8	2.29	0.67
7:D:1749:A:C2'	7:D:1750:G:H8	1.88	0.67
7:D:2626:C:H2'	7:D:2627:G:C8	2.30	0.67
7:D:2642:G:H1	7:D:2772:C:H42	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2847:U:OP1	41:l:54:ARG:NH2	2.28	0.67
11:H:141:ARG:HD2	11:H:142:PRO:HD2	1.76	0.67
20:Q:23:TYR:CD1	20:Q:70:LEU:CD2	2.74	0.67
29:Z:114:VAL:HG12	29:Z:144:THR:HG22	1.77	0.67
46:q:86:ARG:HH21	46:q:90:LEU:H	1.43	0.67
56:B:79:HIS:CG	56:B:261:VAL:HG21	2.29	0.67
56:B:118:LEU:HD13	56:B:446:LYS:HZ3	1.56	0.67
56:B:118:LEU:HD21	56:B:446:LYS:NZ	2.10	0.67
56:B:202:ASP:OD2	56:B:214:TYR:OH	2.10	0.67
3:3:95:LYS:O	3:3:96:VAL:C	2.38	0.67
4:4:74:C:C6	56:B:569:ARG:NH2	2.59	0.67
6:A:1449:C:C4	6:A:1455:G:N1	2.62	0.67
7:D:301:G:O2'	7:D:302:C:O4'	2.10	0.67
7:D:1864:U:O5'	7:D:1864:U:H6	1.78	0.67
7:D:1869:G:N1	7:D:1878:G:C6	2.61	0.67
9:F:22:LYS:HA	9:F:40:HIS:HE1	1.58	0.67
26:W:41:VAL:HB	26:W:42:PRO:CD	2.24	0.67
26:W:70:LYS:N	26:W:73:GLU:OE2	2.28	0.67
30:a:155:LEU:CG	30:a:157:ARG:HH12	2.08	0.67
31:b:53:PRO:HG3	31:b:75:VAL:HG13	1.77	0.67
47:r:158:PRO:O	47:r:160:GLY:N	2.28	0.67
56:B:221:ARG:HB3	56:B:256:LEU:O	1.92	0.67
56:B:233:THR:OG1	56:B:235:LYS:HD3	1.94	0.67
56:B:558:VAL:HG23	56:B:577:GLN:HE22	1.58	0.67
6:A:575:G:O2'	6:A:576:G:O5'	2.12	0.67
6:A:668:G:H1'	22:S:46:HIS:NE2	2.08	0.67
6:A:1359:C:O5'	21:R:35:ARG:NH2	2.26	0.67
7:D:84:A:C6	7:D:99:U:H1'	2.30	0.67
7:D:475:U:H5"	7:D:476:G:OP2	1.95	0.67
7:D:1742:C:C4	7:D:1743:G:N7	2.63	0.67
7:D:1870:C:O5'	7:D:1870:C:H6	1.78	0.67
7:D:2185:C:H2'	7:D:2186:G:H8	1.60	0.67
7:D:2602:A:C5	56:B:562:CYS:HA	2.30	0.67
30:a:7:LYS:HZ2	30:a:91:ARG:HB3	1.60	0.67
38:i:106:VAL:HG22	38:i:107:ALA:H	1.60	0.67
46:q:33:LYS:O	46:q:35:TYR:N	2.26	0.67
47:r:60:GLU:N	47:r:60:GLU:OE1	2.27	0.67
56:B:69:ARG:HH21	56:B:178:LEU:CD1	2.08	0.67
56:B:281:THR:HB	56:B:286:PRO:HB2	1.75	0.67
56:B:537:ILE:CA	56:B:549:ALA:O	2.43	0.67
6:A:782:A:H62	6:A:800:G:H21	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:818:G:O2'	6:A:819:A:OP1	2.12	0.67
6:A:1309:G:C2	6:A:1329:A:C8	2.76	0.67
7:D:38:A:O2'	7:D:39:C:H5'	1.95	0.67
7:D:44:A:O2'	7:D:45:G:H5'	1.95	0.67
7:D:489:G:C5	7:D:1284:A:C2	2.54	0.67
7:D:1059:G:O6	7:D:1081:U:C2	2.47	0.67
7:D:1417:C:H42	7:D:1581:G:H22	1.42	0.67
7:D:1718:G:HO2'	7:D:1725:G:H8	1.43	0.67
7:D:1749:A:C2'	7:D:1750:G:H5'	2.23	0.67
7:D:2105:C:O2'	7:D:2106:G:H5'	1.95	0.67
7:D:2418:A:OP2	55:z:30:ARG:NH1	2.27	0.67
9:F:208:ILE:HA	9:F:211:ILE:HD12	1.77	0.67
29:Z:61:THR:HB	29:Z:162:GLU:CG	2.20	0.67
29:Z:63:SER:HA	29:Z:155:GLU:CD	2.17	0.67
35:f:46:VAL:H	35:f:112:LEU:HD11	1.59	0.67
40:k:106:ARG:HH12	40:k:110:LEU:HD13	1.59	0.67
43:n:15:GLU:HG3	43:n:16:PRO:HD2	1.76	0.67
43:n:20:LEU:HA	43:n:95:LEU:HD22	1.74	0.67
43:n:64:HIS:HA	43:n:96:ILE:HA	1.76	0.67
56:B:231:TYR:CE2	56:B:290:PRO:HB3	2.30	0.67
56:B:306:TYR:CZ	56:B:339:ALA:O	2.48	0.67
56:B:378:TYR:CG	56:B:406:LEU:CD1	2.77	0.67
56:B:420:TYR:O	56:B:424:LEU:HD12	1.95	0.67
3:3:10:LEU:CD1	3:3:57:ILE:HD13	2.11	0.67
6:A:1015:A:OP1	26:W:18:LYS:HD3	1.94	0.67
6:A:1268:A:N7	6:A:1269:A:N6	2.43	0.67
6:A:1308:U:OP2	20:Q:97:PRO:HG3	1.95	0.67
6:A:1447:G:C5	6:A:1448:C:C4	2.82	0.67
7:D:90:U:O2'	7:D:91:A:H8	1.78	0.67
7:D:99:U:C4'	7:D:101:G:H5'	2.24	0.67
7:D:725:G:O6	7:D:726:G:N2	2.28	0.67
7:D:1726:G:O6	7:D:1734:C:N3	2.28	0.67
29:Z:38:ASP:C	29:Z:177:LYS:CE	2.64	0.67
34:e:126:PRO:O	34:e:130:ARG:HB2	1.94	0.67
35:f:6:PRO:HA	35:f:41:ASP:OD2	1.94	0.67
54:y:15:THR:OG1	54:y:16:HIS:N	2.25	0.67
56:B:78:PHE:CZ	56:B:182:VAL:HG23	2.24	0.67
56:B:81:ILE:O	56:B:83:THR:N	2.27	0.67
56:B:200:ILE:HD12	56:B:278:ASP:O	1.95	0.67
56:B:327:ASP:O	56:B:329:ALA:N	2.28	0.67
56:B:388:VAL:HG12	56:B:390:VAL:H	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:415:PHE:O	56:B:475:ALA:CB	2.43	0.67
3:3:10:LEU:CD2	3:3:57:ILE:HD11	2.25	0.66
6:A:456:C:N3	6:A:477:G:N1	2.44	0.66
6:A:478:A:H2'	6:A:479:C:C5	2.30	0.66
6:A:836:G:C5	6:A:851:G:C2	2.83	0.66
6:A:959:A:HO2'	6:A:984:C:HO2'	1.43	0.66
6:A:1171:G:O2'	6:A:1172:C:H5'	1.95	0.66
6:A:1327:C:H5'	28:Y:21:TYR:HE1	1.58	0.66
7:D:730:C:P	30:a:211:ARG:HH22	2.18	0.66
7:D:864:G:N2	7:D:865:C:O2	2.28	0.66
7:D:1364:G:OP2	7:D:1364:G:H8	1.75	0.66
7:D:1859:A:N1	7:D:1884:A:O2'	2.27	0.66
7:D:1956:U:O4	7:D:1957:C:N4	2.29	0.66
9:F:35:GLU:OE2	9:F:38:GLY:N	2.28	0.66
10:G:20:SER:OG	10:G:22:TRP:NE1	2.28	0.66
20:Q:74:VAL:O	20:Q:78:ILE:HG13	1.94	0.66
38:i:80:GLU:HG2	56:B:567:VAL:CG2	2.24	0.66
42:m:16:LYS:HA	42:m:19:LYS:HZ1	1.59	0.66
43:n:14:VAL:HG12	43:n:15:GLU:O	1.95	0.66
45:p:88:LYS:HA	45:p:90:GLU:OE2	1.95	0.66
52:w:51:TYR:CE1	52:w:55:ARG:HG2	2.29	0.66
54:y:34:ARG:NH1	54:y:42:LEU:HD23	2.09	0.66
56:B:280:ILE:HG23	56:B:281:THR:N	2.03	0.66
56:B:382:LEU:HB3	56:B:386:GLU:CD	2.20	0.66
56:B:584:LEU:C	56:B:586:ALA:H	2.02	0.66
5:5:51:U:O2	5:5:63:G:N2	2.23	0.66
6:A:47:C:O4'	6:A:365:U:N3	2.29	0.66
6:A:279:A:OP2	24:U:95:TYR:OH	2.12	0.66
6:A:401:C:OP2	11:H:73:ARG:NH2	2.29	0.66
6:A:553:A:O2'	19:P:29:GLY:O	2.12	0.66
6:A:659:U:OP1	22:S:9:GLN:NE2	2.29	0.66
7:D:878:A:O2'	7:D:899:A:N1	2.27	0.66
7:D:1168:G:H1	7:D:1181:C:H42	1.43	0.66
7:D:2194:G:N1	7:D:2195:C:C4	2.63	0.66
15:L:122:ARG:HA	15:L:125:ARG:HH11	1.56	0.66
19:P:80:HIS:CB	56:B:342:PHE:CZ	2.58	0.66
26:W:34:TRP:HA	26:W:36:ARG:NE	2.09	0.66
32:c:121:GLY:HA3	32:c:191:ARG:HE	1.60	0.66
35:f:32:THR:O	35:f:35:ARG:NE	2.28	0.66
35:f:49:GLY:HA3	35:f:119:ARG:HH11	1.60	0.66
35:f:62:VAL:HG13	35:f:65:LYS:HB2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:123:LEU:HD12	37:h:130:PHE:HE2	1.60	0.66
44:o:36:LEU:HD21	44:o:47:VAL:HG23	1.77	0.66
46:q:86:ARG:HG3	46:q:91:GLU:HB2	1.77	0.66
56:B:23:SER:N	57:B:701:GCP:O2A	2.26	0.66
56:B:417:PRO:HB3	56:B:447:ARG:N	2.09	0.66
56:B:493:ASN:O	56:B:540:ALA:C	2.38	0.66
56:B:558:VAL:HG12	56:B:573:LEU:HB3	1.78	0.66
3:3:35:MET:C	3:3:63:ARG:HH12	2.03	0.66
6:A:80:G:N2	6:A:89:U:O2	2.29	0.66
6:A:216:G:C2'	6:A:217:C:C6	2.74	0.66
6:A:217:C:O2'	6:A:218:C:H5'	1.95	0.66
6:A:456:C:C4	6:A:477:G:N1	2.63	0.66
6:A:939:G:H5"	14:K:102:ARG:NH1	2.09	0.66
6:A:1240:U:OP2	14:K:116:ALA:N	2.28	0.66
7:D:152:G:H2'	7:D:153:C:H5'	1.75	0.66
7:D:607:U:H5'	7:D:608:A:OP2	1.95	0.66
7:D:687:C:N4	7:D:774:A:H61	1.93	0.66
20:Q:64:TRP:HA	20:Q:64:TRP:HE3	1.60	0.66
26:W:16:LEU:C	26:W:20:LEU:HB2	2.12	0.66
47:r:51:ALA:O	47:r:55:HIS:ND1	2.28	0.66
52:w:4:HIS:CE1	52:w:5:PRO:HB3	2.31	0.66
56:B:9:ILE:HG23	56:B:77:VAL:CA	2.24	0.66
56:B:104:LEU:HD21	56:B:181:ILE:HD13	1.74	0.66
56:B:242:VAL:CB	56:B:256:LEU:HD21	2.21	0.66
6:A:478:A:H2'	6:A:479:C:C6	2.30	0.66
7:D:602:G:HO2'	7:D:603:A:P	2.14	0.66
7:D:1080:C:H2'	7:D:1081:U:C6	2.30	0.66
7:D:2139:C:H2'	7:D:2140:C:O4'	1.94	0.66
7:D:2810:A:O2'	31:b:61:ARG:NH1	2.28	0.66
9:F:47:THR:O	9:F:51:LEU:HG	1.95	0.66
11:H:3:ARG:HG3	11:H:118:ARG:NH1	2.11	0.66
29:Z:155:GLU:HB2	29:Z:160:ARG:HA	1.78	0.66
34:e:25:LYS:HZ3	34:e:34:GLU:CD	1.96	0.66
40:k:31:SER:OG	40:k:32:LEU:N	2.24	0.66
56:B:191:ASP:HB2	56:B:218:PHE:O	1.96	0.66
56:B:379:LYS:CD	56:B:406:LEU:HA	2.25	0.66
56:B:502:ASP:OD2	56:B:504:LEU:HD12	1.96	0.66
3:3:11:GLN:O	7:D:1070:A:N6	2.28	0.66
3:3:88:ALA:O	7:D:1064:C:O2'	2.12	0.66
6:A:198:G:H21	6:A:199:G:H1'	1.58	0.66
6:A:454:C:H5"	6:A:455:C:H5	1.56	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:485:G:OP2	6:A:485:G:H4'	1.89	0.66
6:A:505:G:H5'	6:A:534:U:H2'	1.76	0.66
6:A:615:C:H2'	6:A:616:G:C8	2.31	0.66
7:D:35:G:O6	7:D:446:G:N2	2.29	0.66
7:D:89:G:C4	7:D:90:U:H5	2.13	0.66
7:D:246:C:N4	7:D:247:G:O6	2.29	0.66
7:D:539:G:N2	7:D:556:G:N3	2.43	0.66
7:D:1492:G:N3	7:D:1493:C:N4	2.43	0.66
7:D:2168:G:O2'	7:D:2169:A:N7	2.24	0.66
7:D:2810:A:H4'	31:b:61:ARG:HH12	1.60	0.66
34:e:168:PRO:O	34:e:169:VAL:HG22	1.95	0.66
35:f:51:PHE:HE1	35:f:119:ARG:NH1	1.92	0.66
40:k:17:ARG:NE	40:k:25:ARG:HD2	2.10	0.66
41:l:53:ARG:NH2	41:l:103:ARG:HG2	2.10	0.66
44:o:80:PRO:O	44:o:100:THR:OG1	2.12	0.66
56:B:227:ARG:HD3	56:B:227:ARG:H	1.60	0.66
56:B:300:VAL:N	56:B:479:TYR:CE1	2.56	0.66
56:B:308:VAL:CG2	56:B:370:ILE:HG12	2.25	0.66
56:B:435:LEU:CD1	56:B:452:TYR:CE1	2.79	0.66
2:2:60:ARG:C	7:D:1046:A:O2'	2.38	0.66
3:3:56:GLU:OE1	3:3:70:LYS:CG	2.44	0.66
6:A:590:C:H2'	6:A:591:U:H6	1.61	0.66
7:D:107:C:H4'	7:D:293:U:H1'	1.78	0.66
7:D:571:A:N6	7:D:575:A:C5	2.64	0.66
7:D:668:G:H2'	7:D:670:A:H62	1.60	0.66
7:D:1520:U:O2'	7:D:1521:G:O4'	2.07	0.66
7:D:1593:G:H2'	7:D:1594:G:C8	2.27	0.66
7:D:2418:A:P	55:z:30:ARG:HH12	2.18	0.66
31:b:58:ARG:NH1	31:b:73:GLU:HA	2.11	0.66
33:d:94:LEU:HB2	33:d:99:MET:HE3	1.77	0.66
35:f:15:LEU:HD11	35:f:137:LYS:HB3	1.75	0.66
47:r:52:SER:O	47:r:56:VAL:N	2.27	0.66
56:B:64:VAL:HG21	56:B:80:LEU:CA	2.26	0.66
56:B:80:LEU:HD22	56:B:82:ASP:OD1	1.96	0.66
6:A:195:A:H4'	27:X:68:LYS:NZ	2.10	0.66
6:A:261:U:C5	27:X:79:ARG:NH1	2.64	0.66
6:A:372:C:H1'	6:A:373:A:OP2	1.95	0.66
6:A:714:G:H2'	6:A:715:A:H8	1.60	0.66
6:A:1447:G:N1	6:A:1460:A:C6	2.63	0.66
6:A:1512:U:H2'	6:A:1513:A:C8	2.30	0.66
7:D:298:G:N2	7:D:340:A:OP2	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1063:G:N1	7:D:1064:C:N4	2.41	0.66
7:D:1869:G:N2	7:D:1878:G:C5	2.63	0.66
7:D:2154:G:H2'	7:D:2155:G:H8	1.61	0.66
7:D:2197:U:O5'	7:D:2197:U:H6	1.79	0.66
7:D:2301:C:H42	7:D:2315:G:H1	1.42	0.66
7:D:2305:A:O2'	33:d:136:ARG:HA	1.96	0.66
7:D:2793:G:N2	7:D:2803:C:C4	2.64	0.66
30:a:44:ASN:O	30:a:52:ARG:NH2	2.18	0.66
33:d:9:ARG:HA	33:d:12:TYR:CE2	2.31	0.66
34:e:43:VAL:HG22	34:e:52:VAL:HG23	1.78	0.66
40:k:11:LYS:HD3	40:k:15:ARG:HH22	1.60	0.66
43:n:2:PHE:HB2	43:n:13:ARG:CZ	2.25	0.66
56:B:151:GLU:O	56:B:155:VAL:CA	2.44	0.66
56:B:281:THR:CG2	56:B:287:THR:CG2	2.73	0.66
56:B:306:TYR:CE1	56:B:339:ALA:HB3	2.31	0.66
56:B:327:ASP:HB3	56:B:353:HIS:NE2	2.10	0.66
56:B:409:TYR:OH	56:B:432:ARG:CD	2.43	0.66
6:A:8:A:OP2	6:A:8:A:H2'	1.96	0.66
6:A:69:G:O6	6:A:101:A:N1	2.29	0.66
6:A:219:C:O5'	6:A:219:C:H6	1.78	0.66
6:A:1227:A:OP2	20:Q:111:LYS:NZ	2.29	0.66
7:D:617:G:OP2	32:c:40:GLN:NE2	2.29	0.66
7:D:1180:C:H2'	7:D:1181:C:C6	2.31	0.66
7:D:1579:A:N7	7:D:1580:A:N3	2.44	0.66
7:D:2194:G:N1	7:D:2195:C:N4	2.44	0.66
7:D:2893:G:O2'	7:D:2895:U:OP2	2.14	0.66
10:G:130:VAL:HG11	10:G:157:ILE:HD12	1.78	0.66
29:Z:38:ASP:CA	29:Z:177:LYS:CE	2.66	0.66
34:e:127:GLU:HB3	34:e:130:ARG:HD3	1.77	0.66
41:l:15:VAL:HG13	41:l:81:PRO:HB3	1.77	0.66
43:n:44:LYS:NZ	43:n:60:GLU:OE2	2.29	0.66
53:x:50:ARG:NH1	53:x:52:VAL:HG22	2.10	0.66
56:B:12:PHE:CB	56:B:102:GLY:O	2.44	0.66
56:B:506:PHE:HZ	56:B:520:ILE:CG2	2.07	0.66
6:A:152:A:N6	6:A:169:C:N3	2.43	0.66
6:A:457:C:N3	6:A:476:G:N1	2.43	0.66
6:A:1235:U:H2'	6:A:1236:A:H8	1.61	0.66
6:A:1320:C:O2	20:Q:87:TYR:CD2	2.49	0.66
6:A:1449:C:C2	6:A:1455:G:C2	2.84	0.66
7:D:40:C:H2'	7:D:41:C:C6	2.31	0.66
7:D:650:C:H4'	7:D:650:C:OP1	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1047:G:O6	7:D:1110:G:C6	2.48	0.66
7:D:1131:G:P	35:f:74:ARG:HH22	2.19	0.66
7:D:1448:G:O3'	7:D:1543:A:N6	2.28	0.66
7:D:1571:A:H2'	7:D:1571:A:N3	2.11	0.66
7:D:1706:U:H5	7:D:1757:U:OP2	1.79	0.66
7:D:2887:U:H2'	7:D:2888:C:H5'	1.76	0.66
19:P:27:LEU:C	19:P:29:GLY:H	2.03	0.66
19:P:28:LYS:HD2	19:P:33:ARG:HH22	1.60	0.66
26:W:5:LEU:HG	26:W:6:LYS:H	1.61	0.66
29:Z:65:PRO:HG2	29:Z:154:ARG:NH1	2.11	0.66
30:a:133:LEU:HD23	30:a:136:ILE:HD12	1.77	0.66
30:a:155:LEU:HD21	30:a:157:ARG:HH22	1.60	0.66
30:a:198:ASN:HD21	30:a:201:HIS:HB3	1.61	0.66
32:c:202:PHE:HA	32:c:205:ARG:HG2	1.78	0.66
33:d:8:LYS:HZ3	33:d:176:LEU:HG	1.59	0.66
34:e:98:LEU:CB	34:e:125:VAL:HG21	2.26	0.66
46:q:6:HIS:CD2	46:q:71:LYS:HE2	2.31	0.66
3:3:25:PRO:HG2	7:D:1095:A:C2	2.30	0.66
4:4:7:G:OP1	4:4:16:C:N4	2.28	0.66
6:A:196:A:O2'	6:A:197:A:OP1	2.11	0.66
6:A:793:U:H4'	6:A:794:A:OP2	1.95	0.66
6:A:851:G:C4	6:A:852:G:C8	2.84	0.66
6:A:872:A:O2'	6:A:873:A:O5'	2.14	0.66
6:A:1447:G:H2'	6:A:1448:C:C6	2.31	0.66
7:D:40:C:H6	7:D:40:C:O5'	1.79	0.66
7:D:49:A:N6	7:D:176:G:N7	2.44	0.66
7:D:926:A:H2'	7:D:928:G:C8	2.31	0.66
7:D:1480:G:P	7:D:1559:G:C6	2.89	0.66
7:D:1489:U:O2'	7:D:1490:A:OP1	2.14	0.66
7:D:2175:C:O2	29:Z:215:THR:OG1	2.13	0.66
7:D:2391:G:O2'	7:D:2392:A:O5'	2.14	0.66
7:D:2519:U:O2'	7:D:2520:C:O5'	2.14	0.66
9:F:87:ARG:NH2	9:F:220:ASP:OD1	2.26	0.66
17:N:13:HIS:ND1	17:N:17:ASP:OD2	2.28	0.66
29:Z:43:VAL:HG23	29:Z:175:VAL:CG1	2.26	0.66
31:b:112:GLY:O	31:b:114:ALA:N	2.28	0.66
38:i:79:LEU:HD12	56:B:571:LYS:NZ	2.11	0.66
40:k:26:LEU:HB3	40:k:88:ASP:HA	1.78	0.66
40:k:26:LEU:HD22	40:k:88:ASP:HB3	1.76	0.66
56:B:99:ALA:O	56:B:216:ARG:CD	2.43	0.66
56:B:118:LEU:CD1	56:B:446:LYS:HE3	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:60:ARG:C	7:D:1046:A:HO2'	1.98	0.65
6:A:619:U:H4'	11:H:131:ARG:NH2	2.11	0.65
6:A:1320:C:C4	26:W:36:ARG:HD2	2.31	0.65
6:A:1442:G:N3	6:A:1442:G:H5"	2.11	0.65
7:D:43:G:C8	7:D:44:A:N7	2.64	0.65
7:D:558:G:H8	7:D:558:G:O5'	1.79	0.65
7:D:1266:G:O6	44:o:13:SER:OG	2.14	0.65
7:D:1424:G:N1	7:D:1574:C:O2	2.29	0.65
7:D:1475:G:H21	7:D:1476:C:H5"	1.60	0.65
26:W:15:LEU:O	26:W:15:LEU:HD22	1.94	0.65
38:i:75:THR:HG21	38:i:88:GLY:O	1.96	0.65
52:w:4:HIS:CG	52:w:5:PRO:N	2.61	0.65
56:B:11:ASN:OD1	56:B:79:HIS:CG	2.48	0.65
56:B:137:LYS:CA	57:B:701:GCP:O6	2.44	0.65
56:B:231:TYR:H	56:B:280:ILE:HG21	1.60	0.65
56:B:242:VAL:HA	56:B:264:LEU:HD12	1.78	0.65
3:3:19:PRO:O	3:3:22:PRO:HD2	1.95	0.65
5:5:68:C:H2'	5:5:69:G:C8	2.30	0.65
6:A:266:G:O2'	6:A:267:C:O5'	2.14	0.65
6:A:445:G:O2'	6:A:446:G:H5'	1.96	0.65
7:D:536:A:C2	7:D:558:G:C2	2.84	0.65
7:D:940:G:H2'	7:D:941:A:O4'	1.96	0.65
7:D:1801:G:P	30:a:154:LYS:HZ3	2.18	0.65
7:D:2011:U:OP2	44:o:16:LYS:HE3	1.96	0.65
7:D:2670:A:H5'	31:b:206:LYS:NZ	2.11	0.65
22:S:10:LYS:O	22:S:14:GLU:HG3	1.96	0.65
26:W:32:LYS:H	26:W:32:LYS:HD2	1.61	0.65
30:a:5:LYS:HA	30:a:28:GLU:HB2	1.76	0.65
30:a:27:THR:HG22	30:a:28:GLU:H	1.60	0.65
34:e:149:ARG:HD3	34:e:153:LYS:HZ2	1.57	0.65
51:v:63:TYR:HB3	51:v:67:TYR:CZ	2.31	0.65
56:B:7:SER:C	56:B:8:ARG:HG2	2.21	0.65
56:B:221:ARG:HG2	56:B:257:GLU:CA	2.26	0.65
56:B:322:LYS:HG2	56:B:331:THR:CG2	2.11	0.65
56:B:455:PRO:HG2	56:B:458:GLU:CG	2.26	0.65
56:B:489:LEU:HD22	56:B:507:ILE:CG2	2.25	0.65
3:3:10:LEU:CG	3:3:57:ILE:HG13	2.18	0.65
4:4:71:C:H2'	4:4:72:A:H8	1.61	0.65
7:D:535:C:N3	7:D:559:G:N1	2.45	0.65
7:D:774:A:H1'	7:D:775:G:C8	2.31	0.65
7:D:923:C:O4'	48:s:26:TYR:CE2	2.48	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:932:G:H4'	7:D:932:G:OP1	1.93	0.65
7:D:2791:C:C5	7:D:2892:A:N7	2.65	0.65
9:F:21:ARG:O	9:F:40:HIS:ND1	2.29	0.65
29:Z:152:ILE:HG22	29:Z:160:ARG:NH1	2.12	0.65
30:a:242:ARG:HH11	30:a:244:ARG:HH21	1.45	0.65
36:g:106:LEU:HD22	41:l:39:ARG:HH22	1.61	0.65
50:u:37:LEU:HD21	50:u:43:ILE:HG21	1.77	0.65
55:z:55:ALA:O	55:z:58:ILE:HG13	1.95	0.65
56:B:88:ASP:OD2	56:B:352:LEU:HB2	1.96	0.65
56:B:121:PHE:HZ	56:B:157:GLY:HA3	0.89	0.65
56:B:327:ASP:HB3	56:B:353:HIS:CE1	2.32	0.65
56:B:382:LEU:HB3	56:B:386:GLU:HB2	1.78	0.65
56:B:521:VAL:O	56:B:523:LYS:N	2.29	0.65
3:3:126:MET:HG3	7:D:1059:G:C4	2.30	0.65
6:A:1101:A:N6	9:F:176:GLU:OE1	2.28	0.65
7:D:467:G:OP2	54:y:34:ARG:HD3	1.97	0.65
7:D:704:G:H2'	7:D:726:G:H22	1.60	0.65
7:D:904:C:O2	47:r:122:ARG:NH2	2.29	0.65
7:D:1860:G:H2'	7:D:1861:G:C8	2.32	0.65
7:D:1862:G:C2	7:D:1863:G:C5	2.84	0.65
7:D:2396:G:O6	55:z:31:HIS:NE2	2.29	0.65
12:I:151:LEU:HD21	15:L:67:PRO:HD3	1.79	0.65
15:L:11:THR:O	15:L:15:ASN:ND2	2.29	0.65
24:U:60:ILE:HD11	24:U:72:ARG:HB2	1.77	0.65
25:V:53:ARG:HH12	25:V:59:SER:C	2.03	0.65
30:a:121:PRO:HB3	30:a:135:PHE:HE2	1.62	0.65
35:f:42:TRP:NE1	42:m:64:ARG:HA	2.11	0.65
42:m:80:ILE:HD13	42:m:92:ARG:HH21	1.62	0.65
56:B:68:TYR:HD2	56:B:75:GLU:HG3	1.53	0.65
56:B:200:ILE:CG2	56:B:213:PRO:HB2	2.27	0.65
56:B:322:LYS:CD	56:B:323:LEU:H	1.93	0.65
56:B:332:PHE:CD1	56:B:333:GLU:HB2	2.31	0.65
3:3:66:THR:O	3:3:67:PHE:HB2	1.96	0.65
7:D:1342:A:H8	7:D:1342:A:OP2	1.78	0.65
7:D:1457:A:N6	7:D:2703:C:N4	2.43	0.65
7:D:1641:A:H5'	7:D:1642:G:OP2	1.95	0.65
7:D:1651:G:H2'	7:D:1652:A:H8	1.62	0.65
7:D:2658:C:P	34:e:160:LYS:HZ1	2.20	0.65
14:K:37:ASN:OD1	14:K:38:LEU:N	2.28	0.65
20:Q:96:LEU:HD22	20:Q:101:GLN:CG	2.26	0.65
29:Z:40:THR:O	29:Z:216:THR:HA	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:a:242:ARG:NH1	30:a:244:ARG:HE	1.94	0.65
32:c:10:PRO:HA	32:c:16:GLY:HA2	1.77	0.65
33:d:124:SER:HA	33:d:132:ASN:HB2	1.79	0.65
39:j:84:ALA:HB1	39:j:88:ARG:HH22	1.62	0.65
56:B:531:GLN:OE1	56:B:584:LEU:HD13	1.97	0.65
3:3:134:MET:HE3	3:3:136:VAL:HB	1.77	0.65
6:A:75:C:C4	6:A:96:G:N1	2.65	0.65
6:A:538:G:OP2	19:P:113:ARG:NH1	2.30	0.65
7:D:10:G:H2'	7:D:11:G:C8	2.32	0.65
7:D:225:A:N1	7:D:228:A:N6	2.45	0.65
7:D:288:C:N4	7:D:352:G:O6	2.29	0.65
7:D:1061:U:O4'	7:D:1070:A:H4'	1.96	0.65
7:D:2711:A:H5"	7:D:2712:U:H5'	1.79	0.65
7:D:2715:C:H2'	7:D:2716:U:C6	2.31	0.65
7:D:2808:U:C4	7:D:2891:G:C4	2.85	0.65
8:E:28:C:OP1	40:k:34:HIS:ND1	2.29	0.65
9:F:238:LEU:HD23	9:F:239:VAL:HG23	1.78	0.65
10:G:21:ARG:HD2	10:G:58:GLU:OE2	1.96	0.65
26:W:11:VAL:CG1	26:W:40:ILE:CA	2.68	0.65
26:W:12:ASP:CG	26:W:38:SER:HB2	2.20	0.65
27:X:59:ALA:HB1	27:X:84:LEU:HD21	1.79	0.65
35:f:13:TRP:CD1	35:f:51:PHE:HB2	2.31	0.65
37:h:90:ARG:NE	37:h:144:GLU:OE1	2.29	0.65
38:i:77:LYS:HG3	38:i:88:GLY:H	1.60	0.65
42:m:32:PHE:C	42:m:36:ARG:NH1	2.54	0.65
43:n:19:LYS:HB2	43:n:21:ARG:NH2	2.11	0.65
47:r:45:ASP:HA	47:r:48:PHE:CD2	2.31	0.65
51:v:57:GLU:N	51:v:61:ARG:HE	1.94	0.65
52:w:46:CYS:SG	52:w:50:GLY:N	2.67	0.65
53:x:38:LYS:O	53:x:49:HIS:HB3	1.97	0.65
56:B:43:GLU:CA	56:B:53:ARG:HH22	2.10	0.65
56:B:177:ILE:HG23	56:B:181:ILE:CD1	2.11	0.65
7:D:556:G:H2'	7:D:557:U:C6	2.30	0.65
7:D:855:G:H2'	7:D:856:C:H6	1.62	0.65
7:D:858:U:O2	7:D:920:G:N2	2.29	0.65
7:D:1062:G:H1'	7:D:1063:G:O5'	1.97	0.65
7:D:2184:G:C6	7:D:2185:C:C4	2.84	0.65
16:M:51:ARG:HH12	16:M:56:LEU:HD12	1.60	0.65
30:a:68:LYS:O	30:a:71:ASP:HB3	1.97	0.65
30:a:70:TRP:HH2	30:a:152:GLY:H	1.43	0.65
51:v:2:LYS:HA	51:v:55:ARG:HH22	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:200:ILE:C	56:B:215:LEU:HB3	2.21	0.65
56:B:488:ASP:O	56:B:509:HIS:HA	1.97	0.65
56:B:530:ARG:O	56:B:532:LEU:N	2.30	0.65
6:A:62:U:O2'	6:A:379:C:O2	2.14	0.65
6:A:547:A:O2'	6:A:548:G:O5'	2.15	0.65
6:A:1095:U:OP1	6:A:1108:G:N1	2.27	0.65
7:D:407:G:N2	7:D:421:U:O2	2.29	0.65
7:D:741:G:N1	7:D:757:U:O2	2.30	0.65
7:D:780:G:N1	30:a:230:ASP:OD2	2.27	0.65
7:D:922:U:H2'	7:D:923:C:C6	2.32	0.65
7:D:1250:G:H4'	7:D:1251:C:OP2	1.95	0.65
7:D:1952:A:N6	7:D:1953:A:N1	2.45	0.65
9:F:17:PHE:HB3	9:F:44:LEU:HD21	1.78	0.65
15:L:45:ILE:HD13	15:L:61:VAL:HG13	1.77	0.65
19:P:80:HIS:HB2	56:B:342:PHE:CE1	2.31	0.65
37:h:92:GLU:CD	37:h:126:VAL:HG13	2.22	0.65
56:B:225:GLY:HA2	56:B:238:THR:O	1.96	0.65
56:B:237:PHE:O	56:B:267:ALA:CB	2.45	0.65
56:B:492:VAL:CA	56:B:541:ILE:CG1	2.74	0.65
6:A:29:G:H1	6:A:554:C:H42	1.45	0.65
6:A:37:U:H3	6:A:397:A:H61	1.44	0.65
6:A:101:A:H2'	6:A:102:G:H5'	1.77	0.65
6:A:373:A:H61	6:A:391:G:H1'	1.60	0.65
6:A:443:C:C4	6:A:492:G:N1	2.65	0.65
6:A:817:C:H1'	6:A:819:A:H5'	1.77	0.65
6:A:1454:G:C6	6:A:1455:G:N7	2.64	0.65
6:A:1463:C:H2'	6:A:1464:G:H8	1.61	0.65
7:D:278:A:N1	7:D:363:G:N2	2.44	0.65
7:D:283:A:H3'	7:D:284:U:C6	2.31	0.65
7:D:366:C:H2'	7:D:370:G:H5"	1.79	0.65
7:D:519:U:H2'	7:D:520:G:H8	1.61	0.65
7:D:680:G:C2	7:D:681:G:C4	2.85	0.65
7:D:1152:C:H2'	7:D:1153:C:C6	2.32	0.65
7:D:1157:G:OP2	7:D:1158:C:OP2	2.15	0.65
7:D:1968:G:O2'	7:D:1969:A:O4'	2.14	0.65
12:I:15:ARG:HD2	12:I:26:PHE:CE1	2.32	0.65
15:L:119:LEU:HD21	15:L:127:LEU:HD13	1.79	0.65
20:Q:59:TYR:C	20:Q:61:GLU:N	2.43	0.65
34:e:22:GLY:H	34:e:42:ARG:HH22	1.43	0.65
34:e:175:LYS:NZ	56:B:469:SER:HB3	2.11	0.65
35:f:94:HIS:HA	35:f:96:GLU:OE2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:r:108:PRO:HB3	47:r:112:ARG:NH1	2.10	0.65
51:v:42:PHE:CE2	51:v:61:ARG:NH1	2.65	0.65
56:B:240:ASP:OD2	56:B:266:ALA:HB2	1.95	0.65
56:B:386:GLU:OE1	56:B:401:ARG:CG	2.45	0.65
56:B:531:GLN:OE1	56:B:532:LEU:HG	1.97	0.65
3:3:36:GLU:HA	3:3:38:VAL:HG23	1.79	0.65
3:3:128:ALA:O	7:D:1079:C:O2'	2.11	0.65
6:A:713:G:H2'	6:A:714:G:C8	2.32	0.65
6:A:1130:A:N6	6:A:1131:G:O6	2.29	0.65
7:D:609(A):G:N1	7:D:618(A):C:N3	2.41	0.65
7:D:880:G:H2'	7:D:881:G:H4'	1.78	0.65
7:D:1045:A:O3'	7:D:1046:A:H4'	1.97	0.65
7:D:1084:A:O2'	7:D:1106:G:C8	2.47	0.65
7:D:1314:C:N4	7:D:1315:C:N3	2.44	0.65
7:D:1448:G:H1	7:D:1463:C:H42	1.45	0.65
7:D:1664:A:C8	7:D:1664:A:P	2.90	0.65
7:D:1869:G:H2'	7:D:1871:A:N7	2.12	0.65
7:D:2099:U:H2'	7:D:2100:G:C8	2.32	0.65
8:E:56:G:O2'	8:E:57:A:OP2	2.14	0.65
10:G:191:THR:OG1	10:G:194:GLY:O	2.15	0.65
11:H:185:PHE:HZ	11:H:188:LEU:HA	1.60	0.65
23:T:8:ARG:HD3	23:T:17:TYR:HE1	1.60	0.65
25:V:22:VAL:N	25:V:55:ARG:HH12	1.94	0.65
29:Z:177:LYS:N	29:Z:180:PHE:HD2	1.95	0.65
31:b:4:ILE:HG22	31:b:197:ILE:HG22	1.78	0.65
36:g:64:ARG:NH1	36:g:68:GLU:HG2	2.12	0.65
41:l:54:ARG:HH11	41:l:100:TYR:C	2.05	0.65
46:q:34:LYS:O	46:q:64:GLU:N	2.29	0.65
46:q:93:GLY:O	46:q:95:LYS:N	2.30	0.65
51:v:6:HIS:CE1	51:v:55:ARG:HD3	2.32	0.65
56:B:410:VAL:CG1	56:B:480:GLU:N	2.53	0.65
6:A:96:G:C6	6:A:97:U:N3	2.65	0.64
6:A:209:U:H4'	6:A:210:U:O5'	1.97	0.64
6:A:1178:G:H22	6:A:1181:G:H5"	1.62	0.64
7:D:49:A:C6	7:D:177:G:C5	2.85	0.64
7:D:85:G:O5'	46:q:28:LYS:NZ	2.30	0.64
7:D:270(D):C:H2'	7:D:270(E):G:H8	1.62	0.64
7:D:279:C:N4	7:D:361:G:O6	2.30	0.64
7:D:601:C:P	32:c:108:LYS:NZ	2.70	0.64
7:D:1241:A:C4	7:D:1241:A:OP2	2.50	0.64
7:D:1450:C:H2'	7:D:1451:C:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1742:C:N4	7:D:1743:G:N7	2.44	0.64
7:D:2629:A:H5'	7:D:2895:U:O2	1.96	0.64
7:D:2847:U:H5"	41:l:99:LEU:HD12	1.79	0.64
24:U:5:VAL:HG22	24:U:60:ILE:HG22	1.79	0.64
35:f:22:THR:HG23	35:f:61:ARG:NH1	2.12	0.64
47:r:4:ARG:NE	47:r:39:VAL:HG23	2.12	0.64
47:r:122:ARG:O	47:r:124:ILE:N	2.29	0.64
56:B:34:HIS:CE1	56:B:67:THR:HG22	2.32	0.64
6:A:1320:C:C5	26:W:36:ARG:CG	2.69	0.64
7:D:370:G:N3	7:D:370:G:H2'	2.10	0.64
7:D:943:U:OP2	37:h:33:ARG:N	2.27	0.64
7:D:1676:A:N6	7:D:1677:A:N1	2.44	0.64
7:D:2302:G:H2'	7:D:2303:G:H8	1.62	0.64
7:D:2329:G:N2	48:s:41:ARG:HE	1.95	0.64
7:D:2500:U:O2'	7:D:2504:U:OP1	2.13	0.64
11:H:39:PRO:O	11:H:44:GLY:HA3	1.98	0.64
20:Q:29:ARG:HA	20:Q:32:GLU:CD	2.22	0.64
20:Q:102:ARG:O	20:Q:103:THR:OG1	2.15	0.64
22:S:76:GLU:HA	22:S:79:ARG:NH2	2.11	0.64
26:W:5:LEU:HD12	26:W:6:LYS:CB	2.28	0.64
26:W:40:ILE:HG22	26:W:67:VAL:CG2	2.07	0.64
29:Z:38:ASP:HB3	29:Z:177:LYS:HD2	0.95	0.64
29:Z:149:ILE:O	29:Z:153:ILE:HG13	1.96	0.64
32:c:196:LEU:HB3	32:c:199:TRP:CD1	2.33	0.64
35:f:7:LYS:HG3	35:f:8:GLN:O	1.97	0.64
37:h:97:PRO:CA	37:h:102:ARG:HE	2.10	0.64
41:l:54:ARG:NH1	41:l:100:TYR:C	2.56	0.64
56:B:242:VAL:CG1	56:B:256:LEU:CD1	2.75	0.64
56:B:360:ARG:CB	56:B:364:GLU:OE1	2.44	0.64
5:5:68:C:H2'	5:5:69:G:H8	1.61	0.64
6:A:75:C:C2	6:A:96:G:N2	2.64	0.64
6:A:776:G:N2	6:A:802:A:OP2	2.30	0.64
6:A:1507:A:H2'	6:A:1508:G:H8	1.63	0.64
7:D:39:C:O2'	7:D:40:C:H5'	1.96	0.64
7:D:322:A:P	32:c:168:ARG:HD2	2.38	0.64
7:D:371:A:H5'	7:D:423:A:C5	2.32	0.64
7:D:543:C:C2	7:D:551:G:N2	2.65	0.64
7:D:894:C:C5	7:D:895:U:O2	2.50	0.64
7:D:1288:U:O2'	7:D:1647:G:N2	2.30	0.64
7:D:1449:A:H8	7:D:1449:A:O5'	1.81	0.64
7:D:1800:C:H42	7:D:1818:U:H1'	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2183:C:H2'	7:D:2184:G:H8	1.62	0.64
7:D:2781:A:H2'	7:D:2782:G:O2'	1.97	0.64
14:K:54:THR:OG1	14:K:56:GLN:OE1	2.13	0.64
19:P:33:ARG:HB3	19:P:85:ILE:HG22	1.80	0.64
29:Z:38:ASP:OD2	29:Z:177:LYS:HD2	1.57	0.64
36:g:7:TYR:CE1	36:g:44:LYS:HD2	2.31	0.64
42:m:58:ARG:NH1	42:m:92:ARG:HH12	1.92	0.64
48:s:25:ARG:HD2	48:s:29:GLN:NE2	2.12	0.64
56:B:200:ILE:HB	56:B:277:GLY:C	2.22	0.64
56:B:209:GLN:HE22	56:B:265:VAL:CG1	2.10	0.64
56:B:299:PRO:C	56:B:479:TYR:HE1	2.01	0.64
56:B:379:LYS:H	56:B:406:LEU:HB2	0.82	0.64
6:A:819:A:H4'	6:A:820:U:OP2	1.95	0.64
7:D:65:C:H2'	7:D:66:C:H6	1.61	0.64
7:D:573:G:O2'	7:D:574:C:H3'	1.98	0.64
7:D:721:C:H2'	7:D:722:A:C8	2.32	0.64
7:D:851:U:O2	7:D:928:G:C2	2.51	0.64
7:D:1791:A:H2'	7:D:1792:G:O4'	1.96	0.64
7:D:1861:G:C2'	7:D:1862:G:H5'	2.28	0.64
7:D:2310:A:N3	33:d:83:ARG:NH2	2.45	0.64
8:E:104:A:H1'	47:r:29:TYR:CE2	2.32	0.64
16:M:10:ARG:HA	16:M:104:ARG:HH21	1.62	0.64
16:M:33:PHE:HZ	16:M:44:VAL:HA	1.62	0.64
30:a:186:HIS:HB3	30:a:188:GLU:CD	2.22	0.64
35:f:37:LYS:HA	35:f:42:TRP:HB2	1.79	0.64
56:B:65:ARG:HG2	56:B:245:PHE:HB2	1.79	0.64
56:B:420:TYR:HE1	56:B:471:SER:C	2.05	0.64
6:A:1326:C:OP2	28:Y:6:ARG:NH2	2.30	0.64
6:A:1494:G:H3'	6:A:1494:G:OP2	1.98	0.64
7:D:915:C:H2'	7:D:916:G:H8	1.61	0.64
7:D:1555:G:N2	7:D:1556:C:O2	2.30	0.64
7:D:2095:C:H2'	7:D:2096:U:C6	2.32	0.64
7:D:2516:G:N3	7:D:2569:G:N2	2.46	0.64
7:D:2616:C:H5'	52:w:15:ARG:HH12	1.62	0.64
7:D:2658:C:H5'	34:e:160:LYS:NZ	2.12	0.64
7:D:2820:A:N6	31:b:192:ASN:OD1	2.22	0.64
33:d:171:ALA:HA	33:d:174:GLU:OE2	1.98	0.64
52:w:10:LYS:HZ1	52:w:11:THR:C	2.04	0.64
56:B:166:ALA:O	56:B:167:SER:HB3	1.97	0.64
56:B:370:ILE:HG22	56:B:371:ALA:N	2.08	0.64
56:B:417:PRO:HA	56:B:448:VAL:HG21	1.70	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:492:VAL:HG22	56:B:541:ILE:CG2	2.26	0.64
3:3:34:ILE:HG23	3:3:63:ARG:NH1	2.11	0.64
6:A:192:U:C4'	27:X:57:ARG:HH12	2.11	0.64
6:A:1075:C:H2'	6:A:1076:C:H6	1.62	0.64
7:D:848:G:C2	7:D:931:G:C6	2.85	0.64
7:D:1131:G:N2	7:D:1132:A:N3	2.45	0.64
7:D:1727:U:O5'	7:D:1727:U:H6	1.81	0.64
7:D:2336:A:O2'	7:D:2337:G:OP1	2.15	0.64
7:D:2471:C:H2'	7:D:2472:G:H8	1.62	0.64
11:H:73:ARG:O	11:H:77:ASN:ND2	2.30	0.64
23:T:18:ARG:NH1	23:T:35:LYS:HE2	2.13	0.64
26:W:53:ASN:ND2	26:W:75:ALA:HB1	2.12	0.64
28:Y:18:TYR:HE1	28:Y:22:ARG:HH21	1.46	0.64
29:Z:66:HIS:O	29:Z:158:ALA:HB1	1.97	0.64
30:a:206:LEU:HB2	30:a:212:SER:OG	1.97	0.64
48:s:74:ARG:HG3	48:s:75:LEU:HD13	1.80	0.64
56:B:84:PRO:HB3	57:B:701:GCP:O3G	1.97	0.64
56:B:150:LEU:O	56:B:154:GLU:HG2	1.97	0.64
56:B:298:LYS:CA	56:B:348:PHE:CZ	2.44	0.64
56:B:525:ALA:HB2	56:B:551:VAL:HG22	1.79	0.64
3:3:94:GLU:O	3:3:95:LYS:HB2	1.97	0.64
6:A:82:U:O2	6:A:85:U:H5	1.81	0.64
6:A:269:C:H2'	6:A:270:A:C8	2.32	0.64
6:A:1256:A:OP2	10:G:27:LYS:NZ	2.27	0.64
7:D:495:G:N3	44:o:61:ASN:ND2	2.46	0.64
7:D:990:A:H62	7:D:1186:G:H21	1.42	0.64
7:D:1313:U:O5'	7:D:1313:U:H6	1.80	0.64
7:D:2418:A:P	55:z:30:ARG:NH1	2.71	0.64
7:D:2419:U:O4	55:z:31:HIS:ND1	2.31	0.64
33:d:68:PRO:HB3	33:d:72:ARG:HH12	1.63	0.64
34:e:7:LEU:H	34:e:8:PRO:HD3	1.62	0.64
40:k:17:ARG:NH1	40:k:27:SER:OG	2.26	0.64
43:n:96:ILE:HD13	43:n:98:GLU:HG3	1.80	0.64
54:y:1:MET:HG2	54:y:3:ARG:NH1	2.13	0.64
54:y:23:ARG:O	54:y:28:ARG:NH2	2.29	0.64
56:B:118:LEU:HD11	56:B:446:LYS:HE3	1.78	0.64
56:B:196:LEU:O	56:B:282:LEU:N	2.31	0.64
56:B:230:ILE:C	56:B:280:ILE:HG21	2.21	0.64
6:A:92:G:C2'	6:A:93:U:H5'	2.27	0.64
6:A:136:C:H42	6:A:227:G:H1	1.46	0.64
6:A:1450:U:N3	6:A:1452:C:O2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:739:G:C4’	7:D:1784:A:H61	2.10	0.64
7:D:1861:G:O2’	7:D:1862:G:H5’	1.98	0.64
7:D:1942:C:OP1	56:B:556:LYS:NZ	2.22	0.64
7:D:2357:U:P	48:s:20:ARG:HE	2.21	0.64
7:D:2790:A:N9	7:D:2893:G:O6	2.31	0.64
7:D:2811:G:H5’	31:b:59:VAL:HG13	1.79	0.64
8:E:102:G:O2’	47:r:73:GLN:NE2	2.31	0.64
16:M:10:ARG:NH2	16:M:75:ASP:HB2	2.13	0.64
18:O:120:ARG:CZ	18:O:126:ARG:HH12	2.10	0.64
26:W:6:LYS:HZ2	26:W:11:VAL:HA	1.62	0.64
26:W:57:HIS:O	26:W:58:VAL:HG13	1.97	0.64
34:e:97:ARG:NH1	34:e:104:GLU:CD	2.56	0.64
35:f:35:ARG:CD	35:f:38:HIS:HB2	2.28	0.64
35:f:35:ARG:HG3	35:f:36:GLY:H	1.63	0.64
56:B:409:TYR:CG	56:B:485:ARG:HD2	2.33	0.64
6:A:77:C:H2’	6:A:78:G:C8	2.33	0.64
6:A:445:G:N1	6:A:490:G:C6	2.66	0.64
6:A:1320:C:O2	26:W:73:GLU:HA	1.98	0.64
7:D:152:G:O2’	7:D:153:C:H5’	1.97	0.64
7:D:296:C:H2’	7:D:297:C:C6	2.33	0.64
7:D:532:A:P	7:D:2021:C:H41	2.19	0.64
7:D:537:C:O5’	7:D:537:C:H6	1.80	0.64
7:D:992:C:H5”	42:m:47:TYR:OH	1.98	0.64
7:D:1131:G:C5	35:f:74:ARG:HD2	2.33	0.64
7:D:1613:G:H3’	7:D:1614:A:H5’	1.79	0.64
25:V:76:LEU:O	25:V:78:LEU:HG	1.98	0.64
29:Z:120:MET:HE2	29:Z:145:VAL:HG22	1.78	0.64
29:Z:163:PHE:CB	29:Z:171:ILE:HD11	2.22	0.64
48:s:66:VAL:HB	48:s:82:ARG:HG2	1.79	0.64
51:v:46:GLN:NE2	51:v:65:ASP:OD2	2.31	0.64
51:v:59:PHE:CD1	51:v:60:GLN:HG3	2.32	0.64
56:B:205:TYR:HE2	56:B:271:ILE:CG2	2.07	0.64
56:B:227:ARG:CA	56:B:237:PHE:CD2	2.80	0.64
56:B:537:ILE:O	56:B:549:ALA:HB3	1.98	0.64
56:B:541:ILE:CG1	56:B:546:ILE:HD12	2.28	0.64
6:A:1507:A:C2	6:A:1530:G:H1’	2.33	0.64
7:D:227:A:H61	7:D:410:G:N2	1.95	0.64
7:D:602:G:H4’	7:D:603:A:H4’	1.79	0.64
7:D:910:A:N6	38:i:15:GLY:O	2.31	0.64
7:D:1805:U:H1’	30:a:51:VAL:HG13	1.80	0.64
7:D:2217:G:N3	7:D:2218:G:C8	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:170:GLU:HG3	9:F:173:ALA:HB3	1.80	0.64
15:L:10:LEU:O	15:L:13:ILE:HB	1.98	0.64
26:W:32:LYS:CD	26:W:32:LYS:H	2.11	0.64
33:d:119:GLY:C	33:d:180:PHE:HB3	2.23	0.64
39:j:50:HIS:HD2	39:j:51:LEU:HD12	1.63	0.64
50:u:41:PRO:HG3	50:u:44:ARG:NH1	2.13	0.64
51:v:43:TYR:CD1	51:v:55:ARG:HG3	2.33	0.64
56:B:303:ALA:HB2	56:B:347:GLY:N	2.12	0.64
56:B:382:LEU:HD23	56:B:400:THR:C	2.23	0.64
56:B:490:VAL:CG1	56:B:491:LYS:H	2.11	0.64
1:1:32:HIS:O	1:1:34:GLN:N	2.31	0.63
6:A:185:A:H61	6:A:192:U:H3	1.46	0.63
6:A:277:C:P	24:U:68:ARG:HH12	2.21	0.63
7:D:252:G:C6	55:z:8:LYS:NZ	2.66	0.63
7:D:365:C:H6	7:D:365:C:O5'	1.79	0.63
7:D:625:G:N7	37:h:104:GLY:HA2	2.13	0.63
7:D:727:A:H5"	7:D:728:G:N1	2.13	0.63
7:D:1107:G:H8	7:D:1107:G:O5'	1.81	0.63
7:D:1313:U:C4	7:D:1314:C:C4	2.87	0.63
7:D:1537:C:C4	7:D:1538:G:H1'	2.33	0.63
7:D:1799:G:O5'	30:a:268:ARG:NH2	2.30	0.63
7:D:2070:G:N2	7:D:2071:A:N3	2.45	0.63
7:D:2781:A:C6	7:D:2782:G:N3	2.65	0.63
9:F:84:GLU:OE2	9:F:219:VAL:HB	1.98	0.63
16:M:9:ARG:O	16:M:104:ARG:NE	2.32	0.63
19:P:24:VAL:HG13	19:P:98:TYR:CE1	2.33	0.63
25:V:16:PRO:HA	25:V:54:ARG:NH1	2.13	0.63
29:Z:161:ILE:HA	29:Z:174:PRO:HD2	1.80	0.63
37:h:56:SER:CB	55:z:13:ARG:HH11	2.11	0.63
56:B:197:LYS:HA	56:B:281:THR:HA	1.79	0.63
56:B:229:ARG:NH2	56:B:286:PRO:HD3	2.09	0.63
56:B:322:LYS:HE3	56:B:323:LEU:HD12	1.80	0.63
56:B:382:LEU:HB3	56:B:386:GLU:CB	2.28	0.63
56:B:410:VAL:HG11	56:B:479:TYR:HB2	1.79	0.63
1:1:36:GLN:NE2	7:D:1031:G:H21	1.96	0.63
3:3:50:ASP:HB3	3:3:80:LYS:HE2	1.81	0.63
6:A:278:G:P	24:U:41:LYS:HZ3	2.12	0.63
6:A:656:C:H42	6:A:750:G:H1	1.46	0.63
6:A:1226:C:N3	20:Q:104:ARG:CG	2.61	0.63
7:D:400:G:H1	51:v:63:TYR:HE2	1.44	0.63
7:D:491:G:C5	7:D:492:A:C8	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:543:C:O2	7:D:551:G:C2	2.51	0.63
7:D:800:A:HO2'	7:D:801:G:P	2.21	0.63
7:D:1063:G:C5	7:D:1064:C:C5	2.87	0.63
7:D:1327:C:H5	7:D:1328:G:C6	2.16	0.63
7:D:1397:U:O2'	7:D:1398:C:OP1	2.17	0.63
7:D:2522:U:O2'	7:D:2647:U:OP1	2.16	0.63
7:D:2787:C:H1'	31:b:61:ARG:CZ	2.27	0.63
8:E:75:G:H2'	47:r:85:HIS:HE1	1.63	0.63
8:E:113:C:H2'	8:E:114:G:H8	1.62	0.63
26:W:11:VAL:HG21	26:W:41:VAL:CG2	2.29	0.63
40:k:92:TYR:CG	40:k:93:LYS:N	2.65	0.63
47:r:98:MET:HE2	47:r:133:ILE:HG21	1.79	0.63
56:B:20:HIS:CD2	56:B:108:ASP:CB	2.80	0.63
56:B:109:ALA:HB2	56:B:135:ILE:CG2	2.28	0.63
56:B:229:ARG:CZ	56:B:286:PRO:HG3	2.28	0.63
56:B:240:ASP:CB	56:B:266:ALA:HB3	2.09	0.63
1:1:3:VAL:O	1:1:5:ALA:N	2.30	0.63
3:3:17:ALA:C	3:3:38:VAL:HG13	2.23	0.63
6:A:68:G:O5'	6:A:68:G:H8	1.80	0.63
6:A:447:G:N2	6:A:488:C:N3	2.46	0.63
6:A:833:U:H2'	6:A:834:C:C6	2.32	0.63
7:D:38:A:C6	7:D:39:C:N4	2.66	0.63
7:D:434:U:O2'	7:D:435:C:O5'	2.16	0.63
7:D:640:C:O2	7:D:648:G:N2	2.31	0.63
7:D:1329:U:O2'	7:D:1330:C:OP1	2.17	0.63
7:D:2030:A:HO2'	7:D:2031:A:P	2.20	0.63
7:D:2645:G:H3'	7:D:2646:C:H5'	1.79	0.63
11:H:8:VAL:HG21	11:H:115:ARG:HH22	1.63	0.63
31:b:13:ARG:HE	31:b:173:VAL:HG21	1.63	0.63
35:f:39:ARG:HH21	35:f:48:MET:HA	1.63	0.63
42:m:88:ILE:O	42:m:90:VAL:N	2.30	0.63
56:B:23:SER:OG	56:B:44:GLN:HB3	1.98	0.63
56:B:228:ILE:CA	56:B:282:LEU:CD2	2.70	0.63
56:B:230:ILE:CB	56:B:280:ILE:HG22	2.28	0.63
6:A:454:C:OP2	6:A:455:C:N4	2.31	0.63
6:A:467:G:C2	6:A:468:A:H1'	2.34	0.63
6:A:1330:U:C2	6:A:1331:G:H1'	2.33	0.63
7:D:270(M):U:O2	7:D:270(N):G:O2'	2.16	0.63
7:D:485:C:N4	7:D:486:C:H42	1.96	0.63
7:D:789:A:H3'	7:D:790:C:H5"	1.81	0.63
7:D:861:A:C6	7:D:917:A:N3	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:974:G:OP2	7:D:974(A):C:OP2	2.16	0.63
7:D:1426:G:H8	7:D:1426:G:OP2	1.80	0.63
7:D:2151:G:OP1	29:Z:5:LYS:NZ	2.31	0.63
7:D:2194:G:C2	7:D:2195:C:C2	2.87	0.63
7:D:2637:U:H3	7:D:2781:A:N6	1.95	0.63
7:D:2701:C:H3'	7:D:2702:U:H5"	1.79	0.63
8:E:76:G:OP1	47:r:38:TYR:OH	2.17	0.63
17:N:91:PRO:HG2	17:N:94:VAL:HG21	1.79	0.63
32:c:161:GLU:O	32:c:165:ARG:HG2	1.98	0.63
37:h:72:PRO:HG3	37:h:110:TYR:CE1	2.34	0.63
38:i:76:LYS:NZ	38:i:79:LEU:HA	2.12	0.63
41:l:26:ASP:HB2	41:l:100:TYR:CE1	2.33	0.63
56:B:17:HIS:HA	56:B:116:GLU:OE1	1.98	0.63
56:B:18:VAL:HG22	56:B:86:HIS:HB3	1.79	0.63
56:B:75:GLU:CG	56:B:76:TYR:H	2.10	0.63
56:B:223:ARG:HB3	56:B:224:PRO:HD3	1.80	0.63
56:B:380:VAL:HA	56:B:406:LEU:HD23	1.79	0.63
56:B:513:ALA:HB1	56:B:541:ILE:CD1	2.27	0.63
6:A:218:C:O5'	6:A:218:C:H6	1.81	0.63
6:A:448:A:P	6:A:485:G:H22	2.21	0.63
6:A:738:C:H2'	6:A:739:C:C6	2.34	0.63
6:A:828:A:P	15:L:21:LYS:HZ1	2.19	0.63
6:A:1443:G:N3	6:A:1443:G:H2'	2.13	0.63
7:D:488:G:H8	7:D:488:G:O5'	1.81	0.63
7:D:507:A:HO2'	7:D:508:G:P	2.20	0.63
7:D:634:C:H2'	7:D:635:C:C6	2.31	0.63
7:D:884:C:C4	7:D:885:C:C4	2.75	0.63
7:D:1062:G:H8	7:D:1070:A:OP2	1.81	0.63
7:D:1285:G:H8	7:D:1285:G:OP2	1.81	0.63
25:V:39:VAL:HG13	25:V:42:ARG:NH1	2.13	0.63
37:h:79:ARG:NH1	37:h:120:ALA:O	2.31	0.63
38:i:78:PRO:HB3	38:i:81:VAL:HB	1.79	0.63
40:k:11:LYS:NZ	40:k:15:ARG:NH1	2.46	0.63
56:B:13:SER:HG	56:B:81:ILE:HB	1.64	0.63
56:B:29:ILE:HD13	56:B:177:ILE:HD12	1.80	0.63
56:B:281:THR:HG21	56:B:287:THR:CG2	2.26	0.63
56:B:382:LEU:CB	56:B:401:ARG:CA	2.75	0.63
56:B:528:ILE:HD11	56:B:537:ILE:HD11	1.80	0.63
5:5:58:A:H1'	5:5:60:U:OP2	1.98	0.63
6:A:837:G:C4	6:A:838:G:N7	2.66	0.63
6:A:1225:A:H5'	26:W:78:ARG:NH1	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1377:A:O2'	14:K:6:ARG:O	2.16	0.63
7:D:1173:G:N3	7:D:1173:G:H3'	2.13	0.63
7:D:1579:A:H5"	7:D:1580:A:C5	2.33	0.63
7:D:1803:A:N6	7:D:1814:G:O2'	2.31	0.63
7:D:2013:A:O2'	44:o:94:ASP:OD2	2.16	0.63
9:F:97:TRP:CH2	9:F:173:ALA:HA	2.34	0.63
19:P:69:TYR:HB3	19:P:99:HIS:HB3	1.79	0.63
20:Q:15:VAL:HG22	20:Q:45:VAL:HG21	1.79	0.63
20:Q:96:LEU:HD12	20:Q:103:THR:HG22	1.67	0.63
31:b:101:ARG:HD2	31:b:169:ASN:OD1	1.99	0.63
34:e:149:ARG:HA	34:e:162:ILE:HD13	1.79	0.63
37:h:117:GLU:N	37:h:117:GLU:OE1	2.31	0.63
56:B:152:VAL:CB	56:B:156:LEU:HB3	2.28	0.63
56:B:496:VAL:O	56:B:498:GLY:N	2.31	0.63
6:A:198:G:C2	6:A:199:G:C4	2.86	0.63
6:A:339:C:H2'	6:A:340:U:H6	1.63	0.63
6:A:529:G:O6	19:P:50:SER:N	2.31	0.63
6:A:1300:G:O2'	6:A:1301:U:O5'	2.16	0.63
7:D:90:U:O2'	7:D:91:A:O5'	2.12	0.63
7:D:321:G:N3	32:c:165:ARG:NE	2.47	0.63
7:D:539:G:N3	7:D:556:G:N2	2.47	0.63
7:D:1485:G:C4	7:D:1486:A:N7	2.66	0.63
8:E:67:G:OP2	8:E:68:C:OP2	2.17	0.63
19:P:87:GLY:HA2	19:P:98:TYR:HA	1.80	0.63
19:P:91:LYS:HG2	19:P:92:ASP:H	1.62	0.63
26:W:40:ILE:HD11	26:W:71:LEU:HD23	1.81	0.63
30:a:244:ARG:NH1	30:a:252:TRP:NE1	2.46	0.63
30:a:246:PRO:O	30:a:250:TRP:HB2	1.97	0.63
37:h:73:GLY:N	37:h:107:LYS:NZ	2.46	0.63
47:r:34:ASN:OD1	47:r:35:ARG:N	2.31	0.63
56:B:54:GLU:O	56:B:55:ARG:HB2	1.99	0.63
56:B:444:ALA:O	56:B:445:GLN:HG3	1.98	0.63
56:B:488:ASP:O	56:B:509:HIS:CA	2.47	0.63
56:B:489:LEU:N	56:B:509:HIS:HA	2.14	0.63
56:B:492:VAL:HG22	56:B:541:ILE:HG21	1.80	0.63
56:B:518:ARG:O	56:B:518:ARG:HD3	1.99	0.63
3:3:23:VAL:CG1	3:3:27:LEU:HD12	2.28	0.63
6:A:256:U:H3	6:A:270:A:H61	1.47	0.63
6:A:522:C:N4	6:A:528:C:H42	1.96	0.63
6:A:576:G:H3'	6:A:577:G:H5"	1.79	0.63
6:A:1450:U:O2'	6:A:1451:A:N7	2.25	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:270(K):C:H3'	7:D:270(L):U:H6	1.63	0.63
7:D:548:A:H62	7:D:549:G:H21	1.46	0.63
7:D:568:U:N3	7:D:571:A:OP2	2.32	0.63
7:D:1298:C:H42	7:D:1642:G:H1	1.45	0.63
7:D:1819:A:H4'	7:D:1820:U:H5'	1.80	0.63
7:D:2044:C:N3	7:D:2625:G:N2	2.46	0.63
7:D:2489:G:O6	7:D:2490:G:N1	2.31	0.63
13:J:98:LEU:HD21	13:J:101:ALA:HB2	1.81	0.63
22:S:63:ARG:NH1	22:S:87:ILE:HG21	2.14	0.63
30:a:28:GLU:N	30:a:28:GLU:OE1	2.32	0.63
30:a:259:THR:H	30:a:261:LYS:HD2	1.63	0.63
31:b:133:LYS:HE3	31:b:137:HIS:CB	2.29	0.63
40:k:14:VAL:O	40:k:17:ARG:N	2.31	0.63
55:z:36:LYS:HB2	55:z:40:GLU:OE2	1.97	0.63
56:B:65:ARG:HB3	56:B:246:THR:HA	1.79	0.63
56:B:297:ALA:O	56:B:298:LYS:HB2	1.98	0.63
56:B:319:ALA:O	56:B:321:GLU:N	2.31	0.63
56:B:396:LEU:CD1	56:B:491:LYS:HG3	2.20	0.63
6:A:477:G:C4	6:A:478:A:C8	2.87	0.63
6:A:529:G:H4'	6:A:533:A:C2	2.34	0.63
6:A:1256:A:H5"	10:G:27:LYS:NZ	2.14	0.63
6:A:1288:A:H2'	6:A:1289:A:C8	2.33	0.63
6:A:1321:C:H5"	6:A:1322:C:OP2	1.99	0.63
6:A:1454:G:C2	6:A:1455:G:H1'	2.34	0.63
7:D:45:G:H8	7:D:45:G:O5'	1.81	0.63
7:D:774:A:C5	7:D:775:G:C6	2.87	0.63
7:D:1042:G:OP2	7:D:1042:G:C8	2.52	0.63
7:D:1177:A:N1	7:D:1178:C:C4	2.67	0.63
7:D:2027:G:H1	7:D:2036:C:H42	1.44	0.63
9:F:76:GLN:NE2	9:F:206:ASP:O	2.27	0.63
11:H:19:LEU:O	11:H:21:LEU:N	2.30	0.63
12:I:122:GLU:OE1	12:I:122:GLU:N	2.31	0.63
16:M:32:ASP:OD1	16:M:35:GLU:N	2.31	0.63
22:S:29:VAL:O	22:S:33:THR:OG1	2.06	0.63
22:S:36:ILE:HD12	22:S:60:VAL:HG22	1.80	0.63
26:W:16:LEU:CB	26:W:20:LEU:HD13	2.27	0.63
29:Z:44:HIS:N	29:Z:213:TYR:O	2.28	0.63
31:b:51:PHE:H	31:b:76:ARG:HE	1.47	0.63
33:d:6:ALA:HA	33:d:9:ARG:NH1	2.14	0.63
34:e:106:THR:HG23	34:e:111:HIS:CD2	2.33	0.63
43:n:89:GLN:HG3	43:n:91:TYR:CD2	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:r:151:HIS:CD2	47:r:170:THR:H	2.17	0.63
56:B:210:GLY:CA	56:B:269:ARG:HB3	2.26	0.63
1:1:5:ALA:O	1:1:7:VAL:HG23	1.99	0.62
5:5:21:A:N6	5:5:48:C:O4'	2.31	0.62
6:A:90:C:C2	6:A:91:C:C4	2.87	0.62
6:A:533:A:N6	6:A:536:C:C2	2.67	0.62
6:A:1256:A:C8	10:G:27:LYS:NZ	2.66	0.62
7:D:915:C:H2'	7:D:916:G:C8	2.34	0.62
7:D:1171:G:H2'	7:D:1174:A:OP2	1.99	0.62
7:D:1174:A:N7	7:D:1176:G:N7	2.47	0.62
7:D:1799:G:H8	30:a:268:ARG:HH22	1.46	0.62
7:D:2180:U:O5'	7:D:2180:U:H6	1.82	0.62
7:D:2208:U:O2	7:D:2217:G:C2	2.52	0.62
7:D:2458:G:H21	7:D:2459:A:N6	1.97	0.62
7:D:2641:G:P	35:f:83:LYS:HZ3	2.21	0.62
7:D:2749:A:H8	7:D:2749:A:OP2	1.82	0.62
8:E:-1:A:H5'	8:E:0:A:OP2	1.99	0.62
9:F:10:LEU:HD23	9:F:11:LEU:HG	1.81	0.62
11:H:18:LYS:HG3	11:H:33:MET:HE3	1.81	0.62
13:J:10:LEU:HD13	13:J:84:ASN:HB3	1.81	0.62
16:M:126:SER:O	16:M:128:ARG:NH1	2.32	0.62
35:f:10:GLU:O	35:f:12:ARG:NH2	2.29	0.62
41:l:53:ARG:NH1	41:l:101:PHE:HA	2.14	0.62
43:n:19:LYS:HB2	43:n:21:ARG:CZ	2.28	0.62
56:B:455:PRO:HG2	56:B:458:GLU:CB	2.29	0.62
56:B:544:LYS:O	56:B:545:ILE:HG13	1.98	0.62
3:3:103:GLN:HA	3:3:106:GLU:CG	2.29	0.62
6:A:55:A:C2	56:B:208:TYR:HD2	2.17	0.62
6:A:727:G:C2	6:A:731:G:N3	2.67	0.62
6:A:1238:A:N7	6:A:1299:A:N6	2.48	0.62
6:A:1309:G:P	20:Q:88:ARG:HH22	2.21	0.62
6:A:1347:G:C8	16:M:107:ARG:HB3	2.31	0.62
7:D:78:A:H2'	7:D:79:G:H8	1.64	0.62
7:D:146:G:H2'	7:D:147:U:C6	2.34	0.62
7:D:270(L):U:O2'	7:D:270(M):U:H5"	2.00	0.62
7:D:969:U:H5"	7:D:970:C:OP2	1.99	0.62
7:D:1067:A:H2'	7:D:1068:G:C5	2.33	0.62
7:D:1981:A:H5"	7:D:1982:C:OP2	1.98	0.62
7:D:2219:G:H2'	7:D:2224:G:C5'	2.24	0.62
7:D:2334:G:O2'	7:D:2335:A:OP1	2.17	0.62
7:D:2630:G:OP2	7:D:2895:U:C6	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2793:G:H2'	7:D:2793:G:N3	2.15	0.62
7:D:2836:U:H2'	7:D:2837:G:H8	1.64	0.62
10:G:58:GLU:O	10:G:65:ALA:N	2.21	0.62
30:a:46:GLN:C	30:a:48:ARG:H	2.07	0.62
30:a:208:LYS:NZ	30:a:211:ARG:HH21	1.96	0.62
34:e:90:LYS:NZ	34:e:163:TYR:CD2	2.67	0.62
55:z:2:PRO:HB2	55:z:4:MET:HE3	1.81	0.62
56:B:11:ASN:CB	56:B:100:VAL:HG13	2.27	0.62
56:B:315:LYS:CE	56:B:318:ASP:HB3	2.28	0.62
56:B:381:ARG:HH21	56:B:385:GLY:CA	2.11	0.62
6:A:259:G:H2'	6:A:260:G:C8	2.34	0.62
6:A:434:U:H2'	6:A:435:C:C6	2.34	0.62
6:A:445:G:N1	6:A:490:G:N1	2.47	0.62
6:A:585:G:H1	6:A:756:C:H42	1.47	0.62
6:A:1507:A:H2'	6:A:1508:G:C8	2.34	0.62
7:D:46:C:N3	7:D:180:G:N2	2.48	0.62
7:D:96:G:O2'	7:D:97:C:H5'	1.99	0.62
7:D:242:G:C8	55:z:4:MET:HG3	2.34	0.62
7:D:895:U:H6	7:D:895:U:O5'	1.82	0.62
7:D:1043:C:H4'	7:D:1044:G:N7	2.14	0.62
7:D:1105:U:H4'	7:D:1106:G:OP2	1.99	0.62
7:D:1708:C:N4	7:D:1709:U:O4	2.32	0.62
7:D:2512:C:H5"	7:D:2513:G:OP2	1.98	0.62
7:D:2810:A:H2'	7:D:2811:G:O4'	2.00	0.62
13:J:69:GLU:HG2	13:J:70:ASP:H	1.64	0.62
26:W:16:LEU:CA	26:W:20:LEU:CD1	2.77	0.62
30:a:188:GLU:N	30:a:188:GLU:OE1	2.32	0.62
34:e:98:LEU:HB2	34:e:125:VAL:CG2	2.28	0.62
39:j:90:ARG:HH11	39:j:117:VAL:HG11	1.64	0.62
43:n:44:LYS:NZ	43:n:101:GLY:OXT	2.32	0.62
56:B:62:SER:O	56:B:64:VAL:HG13	1.98	0.62
56:B:135:ILE:HD11	56:B:145:PRO:CB	2.19	0.62
56:B:136:ASN:OD1	56:B:168:GLY:N	2.32	0.62
56:B:489:LEU:HA	56:B:509:HIS:HB3	1.81	0.62
56:B:513:ALA:CB	56:B:541:ILE:CD1	2.78	0.62
3:3:131:ALA:HA	3:3:136:VAL:O	1.99	0.62
4:4:51:C:N4	4:4:52:G:O6	2.33	0.62
6:A:438:G:C2'	6:A:494:U:H3	2.08	0.62
6:A:595:G:HO2'	6:A:596:C:P	2.21	0.62
6:A:680:C:H2'	6:A:681:C:H6	1.64	0.62
6:A:869:G:O2'	6:A:872:A:N7	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:898:G:N2	6:A:901:A:OP2	2.31	0.62
6:A:1156:G:O2'	6:A:1179:A:N6	2.33	0.62
6:A:1273:G:H3'	6:A:1274:G:H8	1.63	0.62
6:A:1452:C:H4'	6:A:1453:G:O5'	1.98	0.62
7:D:60:G:H21	7:D:74:A:C1'	2.12	0.62
7:D:270(Z):U:C5	7:D:370:G:O6	2.52	0.62
7:D:430:G:H5"	7:D:431:U:OP2	1.99	0.62
7:D:679:C:H2'	7:D:680:G:H8	1.63	0.62
7:D:728:G:O2'	7:D:729:G:O5'	2.18	0.62
7:D:744:G:H2'	7:D:745:G:O4'	1.98	0.62
7:D:1139:G:N2	7:D:1143:A:O2'	2.29	0.62
7:D:1477:A:N6	7:D:1478:G:O6	2.32	0.62
7:D:1520:U:H2'	7:D:1521:G:H5"	1.80	0.62
7:D:2217:G:C4	7:D:2218:G:N7	2.68	0.62
7:D:2302:G:H21	33:d:125:PHE:HE1	1.44	0.62
56:B:226:ASP:H	56:B:239:VAL:CB	2.12	0.62
56:B:528:ILE:HG23	56:B:592:VAL:HG11	1.81	0.62
3:3:107:ILE:O	3:3:111:LYS:HB2	1.98	0.62
6:A:183:G:H2'	6:A:184:G:H8	1.64	0.62
7:D:293:U:H2'	7:D:294:A:H8	1.61	0.62
7:D:458:G:P	54:y:39:ARG:NH1	2.72	0.62
7:D:479:A:N7	7:D:481:G:C8	2.67	0.62
7:D:543:C:N3	7:D:551:G:N1	2.46	0.62
7:D:1045:A:OP2	7:D:1111:A:N1	2.32	0.62
7:D:1776:G:N2	7:D:1777:U:O2	2.32	0.62
7:D:2061:G:OP2	7:D:2502:G:OP2	2.18	0.62
7:D:2306:C:OP1	33:d:153:ARG:NH2	2.33	0.62
7:D:2770:G:H5"	7:D:2771:C:OP2	1.99	0.62
10:G:6:HIS:O	10:G:9:GLY:N	2.31	0.62
15:L:96:GLY:N	15:L:99:GLU:OE1	2.26	0.62
32:c:34:TRP:HE1	32:c:38:ARG:NH1	1.97	0.62
35:f:103:VAL:HG21	35:f:120:LEU:CD2	2.30	0.62
38:i:80:GLU:C	56:B:567:VAL:HG21	2.24	0.62
43:n:44:LYS:NZ	43:n:100:ARG:HH11	1.98	0.62
43:n:72:VAL:O	43:n:73:SER:OG	2.17	0.62
47:r:71:VAL:HG22	47:r:88:PHE:HE1	1.64	0.62
47:r:75:ASN:O	47:r:84:GLU:N	2.25	0.62
53:x:25:LYS:HG2	53:x:27:LYS:N	2.13	0.62
56:B:330:LEU:CG	56:B:346:CYS:N	2.35	0.62
56:B:398:ASP:CG	56:B:399:PRO:HD3	2.24	0.62
56:B:537:ILE:HD12	56:B:551:VAL:HG23	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:38:A:H3'	5:5:39:U:H5"	1.80	0.62
6:A:1328:C:OP2	28:Y:7:ARG:NH2	2.32	0.62
6:A:1384:C:N4	6:A:1385:G:O6	2.32	0.62
7:D:371:A:O5'	7:D:423:A:N6	2.33	0.62
7:D:931:G:C8	7:D:932:G:C1'	2.79	0.62
7:D:931:G:H5"	7:D:932:G:H1'	1.81	0.62
7:D:1058:G:N2	7:D:1081:U:H2'	2.14	0.62
7:D:1077:A:N6	7:D:1088:A:O3'	2.33	0.62
7:D:1444:G:H2'	7:D:1445:C:C4	2.34	0.62
7:D:1801:G:P	30:a:154:LYS:NZ	2.72	0.62
27:X:56:MET:HE3	27:X:60:GLU:OE2	2.00	0.62
34:e:20:ALA:O	34:e:22:GLY:N	2.32	0.62
56:B:41:MET:CB	56:B:45:PHE:HD1	2.13	0.62
56:B:75:GLU:HG2	56:B:76:TYR:N	2.14	0.62
56:B:109:ALA:HB2	56:B:135:ILE:HG22	1.80	0.62
56:B:206:ASP:OD2	56:B:210:GLY:HA2	1.98	0.62
56:B:212:ILE:HG22	56:B:263:TRP:CE3	2.35	0.62
56:B:495:LEU:HD13	56:B:540:ALA:HB2	1.78	0.62
6:A:216:G:C8	6:A:217:C:N4	2.64	0.62
6:A:1131:G:OP2	6:A:1132:C:OP2	2.17	0.62
7:D:322:A:H4'	7:D:323:G:OP2	1.99	0.62
7:D:477:A:N7	7:D:478:A:N6	2.47	0.62
7:D:1471:A:N6	7:D:1473:G:N7	2.48	0.62
7:D:1668:A:H1'	7:D:1669:A:C2	2.34	0.62
10:G:42:LEU:HD12	10:G:94:LEU:HD12	1.82	0.62
11:H:68:TYR:HA	11:H:114:ARG:HH12	1.64	0.62
11:H:113:SER:HB3	11:H:116:GLN:HG3	1.82	0.62
12:I:14:ARG:NH1	12:I:129:ILE:HD11	2.14	0.62
13:J:41:GLU:HB3	13:J:62:TRP:CE3	2.35	0.62
24:U:59:ILE:HD12	24:U:73:VAL:HA	1.80	0.62
26:W:70:LYS:N	26:W:73:GLU:HG2	2.13	0.62
26:W:70:LYS:H	26:W:73:GLU:HG2	1.64	0.62
30:a:90:ALA:O	30:a:91:ARG:HG2	1.99	0.62
35:f:16:ILE:HG21	35:f:26:LEU:HD11	1.82	0.62
36:g:122:LEU:N	41:l:70:VAL:HG12	2.15	0.62
41:l:27:THR:HB	41:l:93:ARG:O	2.00	0.62
48:s:40:GLN:NE2	48:s:43:THR:HA	2.15	0.62
55:z:30:ARG:HA	55:z:34:TRP:HZ2	1.64	0.62
56:B:281:THR:CB	56:B:286:PRO:HB2	2.28	0.62
6:A:974:A:H4'	6:A:975:A:H3'	1.80	0.62
6:A:1164:G:C6	6:A:1173:G:C6	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1367:C:P	17:N:60:ARG:HH21	2.23	0.62
6:A:1377:A:OP2	14:K:94:ARG:NH2	2.32	0.62
7:D:503:A:O2'	7:D:504:U:H5"	2.00	0.62
7:D:612:G:H1'	7:D:617:G:H22	1.64	0.62
7:D:922:U:C2	7:D:923:C:N3	2.67	0.62
7:D:1285:G:H5"	7:D:1286:A:OP2	1.99	0.62
7:D:2019:A:H3'	7:D:2020:A:H5"	1.82	0.62
7:D:2740:A:C2	7:D:2741:A:C5	2.88	0.62
8:E:48:A:H4'	40:k:95:HIS:CE1	2.35	0.62
16:M:63:ILE:HG21	16:M:77:ILE:HG12	1.82	0.62
26:W:35:SER:O	26:W:71:LEU:CD1	2.40	0.62
26:W:40:ILE:C	26:W:68:GLY:HA2	2.25	0.62
39:j:12:ARG:HH12	39:j:16:HIS:HB2	1.65	0.62
39:j:12:ARG:HH12	39:j:16:HIS:HB3	1.65	0.62
47:r:122:ARG:HG3	47:r:171:ILE:HD12	1.80	0.62
50:u:39:ASP:CG	50:u:44:ARG:HH21	2.05	0.62
56:B:20:HIS:CE1	56:B:111:GLN:HG3	2.35	0.62
56:B:51:LEU:HD23	56:B:51:LEU:O	1.98	0.62
56:B:118:LEU:HD21	56:B:446:LYS:HZ1	1.65	0.62
56:B:380:VAL:HG22	56:B:381:ARG:N	2.14	0.62
6:A:74:C:C2	6:A:75:C:C5	2.88	0.62
6:A:164:U:H2'	6:A:165:C:H6	1.63	0.62
6:A:308:C:H2'	6:A:309:G:C8	2.35	0.62
6:A:430:A:P	11:H:8:VAL:H	2.22	0.62
6:A:465:A:H1'	6:A:466:C:P	2.40	0.62
6:A:521:G:N7	6:A:529:G:N2	2.47	0.62
6:A:626:U:H2'	6:A:627:G:C8	2.35	0.62
6:A:628:G:H2'	6:A:629:G:H8	1.65	0.62
6:A:717:C:H4'	18:O:117:ASN:ND2	2.12	0.62
7:D:536:A:C2	7:D:558:G:N1	2.67	0.62
7:D:943:U:H5'	37:h:33:ARG:HG2	1.81	0.62
7:D:1067:A:H2'	7:D:1068:G:C6	2.35	0.62
7:D:1156:A:P	42:m:55:ARG:HH21	2.22	0.62
7:D:1174:A:H3'	7:D:1175:U:H5"	1.80	0.62
7:D:1784:A:OP2	7:D:1785:A:C2	2.53	0.62
13:J:62:TRP:CZ2	13:J:64:GLN:HB2	2.34	0.62
16:M:7:THR:HB	16:M:83:ARG:HH11	1.65	0.62
20:Q:71:ARG:C	20:Q:75:ALA:HB3	2.24	0.62
32:c:196:LEU:HD13	32:c:199:TRP:HE1	1.65	0.62
47:r:53:ILE:HG12	47:r:58:VAL:HG12	1.82	0.62
56:B:164:ILE:HG21	56:B:176:GLU:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:190:GLY:O	56:B:258:ALA:CB	2.48	0.62
56:B:218:PHE:O	56:B:258:ALA:HB2	1.96	0.62
56:B:338:THR:O	56:B:339:ALA:HB2	1.98	0.62
56:B:378:TYR:CD2	56:B:406:LEU:CD1	2.82	0.62
56:B:528:ILE:O	56:B:551:VAL:HG11	1.99	0.62
6:A:92:G:C2	6:A:93:U:C2	2.88	0.62
6:A:324:G:H8	6:A:324:G:O5'	1.83	0.62
6:A:888:G:H5"	6:A:889:A:H5"	1.82	0.62
6:A:1071:C:H2'	6:A:1072:G:H8	1.65	0.62
6:A:1101:A:H1'	6:A:1102:A:OP2	2.00	0.62
6:A:1225:A:OP2	6:A:1226:C:H5	1.83	0.62
6:A:1308:U:OP1	20:Q:97:PRO:CD	2.47	0.62
6:A:1350:A:O2'	14:K:33:ASP:OD1	2.15	0.62
7:D:270(U):C:N4	7:D:270(V):G:O6	2.33	0.62
7:D:684:G:N2	7:D:794:G:C2	2.68	0.62
7:D:1287:A:H5'	39:j:104:ARG:HD2	1.81	0.62
7:D:1515:C:O2'	7:D:1516:U:OP1	2.16	0.62
7:D:2641:G:H2'	7:D:2642:G:H8	1.65	0.62
9:F:74:LYS:NZ	9:F:76:GLN:HB2	2.15	0.62
11:H:24:GLU:O	11:H:28:SER:N	2.32	0.62
13:J:10:LEU:HB2	13:J:84:ASN:O	1.99	0.62
26:W:67:VAL:C	26:W:69:HIS:H	2.08	0.62
31:b:8:LYS:HG3	41:l:3:ARG:HB3	1.82	0.62
33:d:57:ALA:HB2	33:d:68:PRO:O	1.99	0.62
35:f:114:ARG:HA	35:f:117:PHE:CD2	2.34	0.62
37:h:107:LYS:HE3	37:h:110:TYR:CD2	2.33	0.62
53:x:21:TYR:CE1	53:x:53:LYS:NZ	2.67	0.62
56:B:162:GLU:C	56:B:164:ILE:H	2.07	0.62
56:B:316:LEU:HD13	56:B:342:PHE:CG	2.35	0.62
56:B:411:LYS:HZ3	56:B:436:VAL:HG22	1.64	0.62
56:B:435:LEU:CD1	56:B:452:TYR:CZ	2.82	0.62
6:A:1306:A:C5	6:A:1307:U:C2	2.87	0.61
7:D:247:G:H1'	7:D:386:G:C6	2.35	0.61
7:D:297:C:O3'	46:q:83:THR:OG1	2.18	0.61
7:D:541:C:C5	7:D:542:C:C4	2.87	0.61
7:D:857:C:O2	7:D:921:G:N2	2.34	0.61
7:D:974:G:N7	7:D:974(A):C:C2	2.68	0.61
7:D:1071:G:H8	7:D:1071:G:OP2	1.82	0.61
7:D:1416:G:O2'	7:D:1417:C:O5'	2.17	0.61
7:D:1589:C:C2'	7:D:1590:U:H5'	2.29	0.61
7:D:1614:A:H61	44:o:87:PRO:HA	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1863:G:H2'	7:D:1864:U:C6	2.35	0.61
7:D:2135:A:OP2	7:D:2159:G:H1'	2.00	0.61
7:D:2168:G:O2'	7:D:2170:A:N6	2.19	0.61
7:D:2675:A:H4'	36:g:29:ASN:ND2	2.14	0.61
9:F:19:HIS:O	9:F:190:THR:OG1	2.13	0.61
10:G:113:ALA:HA	10:G:202:ILE:HD12	1.82	0.61
26:W:15:LEU:O	26:W:15:LEU:HD13	2.00	0.61
26:W:36:ARG:HB3	26:W:71:LEU:CB	2.29	0.61
27:X:65:LYS:HA	27:X:68:LYS:HG2	1.83	0.61
29:Z:74:VAL:HG11	29:Z:114:VAL:HG13	1.82	0.61
30:a:112:GLN:HB2	30:a:115:GLN:HB3	1.80	0.61
33:d:8:LYS:HD2	33:d:11:TYR:HB2	1.81	0.61
34:e:121:ILE:HD12	34:e:144:VAL:HG21	1.82	0.61
35:f:37:LYS:HD3	42:m:63:VAL:HG11	1.82	0.61
36:g:80:ASP:OD1	36:g:81:ASP:N	2.33	0.61
44:o:11:ARG:CG	44:o:98:LYS:HZ1	2.13	0.61
48:s:46:LYS:HZ1	48:s:76:GLY:HA3	1.64	0.61
56:B:195:PRO:HB2	56:B:286:PRO:HA	0.62	0.61
56:B:218:PHE:C	56:B:258:ALA:HB1	2.22	0.61
56:B:361:LEU:HD13	56:B:361:LEU:C	2.24	0.61
6:A:225:C:H2'	6:A:226:G:H8	1.64	0.61
6:A:371:G:OP2	6:A:371:G:C8	2.52	0.61
6:A:1027:C:H42	6:A:1034:G:H1	1.46	0.61
6:A:1443:G:OP1	6:A:1443:G:O3'	2.17	0.61
7:D:585:G:N2	7:D:1256:G:C6	2.68	0.61
7:D:603:A:H62	37:h:103:ALA:HB1	1.64	0.61
7:D:1007:C:O3'	35:f:108:PRO:HB3	1.99	0.61
7:D:1047:G:N7	7:D:1110:G:N1	2.47	0.61
7:D:1085:A:O2'	7:D:1086:A:OP2	2.13	0.61
7:D:1785:A:H2'	7:D:1786:A:N7	2.15	0.61
7:D:2577:A:H5"	7:D:2578:G:H5'	1.81	0.61
7:D:2641:G:P	35:f:83:LYS:NZ	2.73	0.61
9:F:113:HIS:ND1	9:F:116:GLU:OE2	2.33	0.61
11:H:62:GLN:NE2	11:H:65:ARG:HH11	1.98	0.61
19:P:80:HIS:NE2	56:B:316:LEU:CG	2.56	0.61
20:Q:22:ILE:HB	20:Q:25:ILE:HD12	1.82	0.61
26:W:41:VAL:O	26:W:67:VAL:HG13	2.00	0.61
26:W:51:VAL:HG12	26:W:52:TYR:N	2.15	0.61
39:j:115:GLU:OE2	52:w:56:LYS:NZ	2.18	0.61
51:v:56:VAL:C	51:v:61:ARG:HH21	2.08	0.61
54:y:6:GLN:N	54:y:6:GLN:OE1	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:137:LYS:HA	57:B:701:GCP:C6	2.30	0.61
56:B:417:PRO:CG	56:B:447:ARG:HA	2.29	0.61
6:A:97:U:O5'	6:A:97:U:H6	1.83	0.61
6:A:179:A:H5'	6:A:180:U:OP2	2.01	0.61
6:A:711:G:H2'	6:A:712:A:C8	2.34	0.61
6:A:1267:C:H5"	6:A:1268:A:OP2	2.00	0.61
6:A:1321:C:H5	26:W:37:ARG:NH2	1.97	0.61
6:A:1516:G:N2	6:A:1520:G:N3	2.47	0.61
7:D:190:A:O2'	7:D:191:A:O5'	2.11	0.61
7:D:277:C:H4'	7:D:278:A:N7	2.15	0.61
7:D:295:G:H3'	7:D:338:G:N2	2.15	0.61
7:D:339:U:O2'	7:D:340:A:O4'	2.19	0.61
7:D:491:G:C5	7:D:492:A:N7	2.68	0.61
7:D:501:A:N6	7:D:502:A:N1	2.48	0.61
7:D:1310:G:N7	7:D:1311:G:N2	2.48	0.61
7:D:1509:C:OP2	7:D:1510:A:C5	2.53	0.61
7:D:1651:G:H5"	39:j:39:PRO:HG2	1.81	0.61
7:D:1859:A:H8	7:D:1860:G:C8	2.18	0.61
7:D:2067:G:H5"	7:D:2068:U:OP2	2.01	0.61
9:F:43:ASP:OD2	9:F:46:LYS:N	2.33	0.61
13:J:52:ILE:O	13:J:55:ASP:N	2.31	0.61
29:Z:76:ALA:HB3	29:Z:94:VAL:HG22	1.82	0.61
30:a:7:LYS:NZ	30:a:91:ARG:HB3	2.15	0.61
33:d:77:ILE:HG22	33:d:83:ARG:HG2	1.82	0.61
36:g:19:ILE:HG21	36:g:59:LYS:HZ1	1.66	0.61
36:g:112:MET:HE3	41:l:39:ARG:NE	2.13	0.61
38:i:77:LYS:HE2	38:i:87:LYS:HG3	1.82	0.61
40:k:100:ALA:HA	40:k:103:GLU:OE2	2.00	0.61
44:o:84:ARG:NH1	44:o:98:LYS:HB2	2.14	0.61
56:B:137:LYS:HZ1	57:B:701:GCP:H1'	1.63	0.61
56:B:229:ARG:HH21	56:B:283:ALA:CA	2.09	0.61
56:B:386:GLU:OE1	56:B:401:ARG:HG3	1.99	0.61
6:A:75:C:O2	6:A:96:G:N3	2.33	0.61
6:A:812:C:O2'	6:A:813:U:O5'	2.17	0.61
6:A:894:G:H2'	6:A:895:G:H8	1.65	0.61
6:A:1002:G:H1	6:A:1038:C:H42	1.47	0.61
7:D:273(A):G:N2	7:D:363(E):U:O2	2.28	0.61
7:D:295:G:O2'	7:D:296:C:H5'	2.00	0.61
7:D:536:A:N1	7:D:558:G:C6	2.68	0.61
7:D:881:G:H1'	7:D:896:A:C2	2.34	0.61
7:D:1603:A:C5	7:D:1604:C:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2110:G:H2'	7:D:2120:G:OP1	2.01	0.61
7:D:2345:G:H4'	7:D:2346:A:H5'	1.83	0.61
7:D:2648:C:H2'	7:D:2649:U:H6	1.65	0.61
8:E:55:U:C2'	33:d:29:TRP:HE1	2.11	0.61
11:H:81:GLU:HA	11:H:84:LYS:HD3	1.81	0.61
14:K:71:PRO:HG3	14:K:99:LEU:HD22	1.83	0.61
30:a:231:HIS:HA	30:a:233:HIS:CE1	2.34	0.61
37:h:88:LEU:HG	37:h:124:LYS:HE3	1.83	0.61
44:o:11:ARG:O	44:o:98:LYS:NZ	2.33	0.61
51:v:47:GLN:HE21	51:v:50:VAL:HA	1.64	0.61
56:B:8:ARG:CZ	56:B:73:GLY:O	2.49	0.61
56:B:137:LYS:CA	56:B:167:SER:OG	2.48	0.61
56:B:265:VAL:HG22	56:B:266:ALA:N	2.03	0.61
3:3:93:ARG:HB3	3:3:94:GLU:OE1	1.99	0.61
4:4:19:G:H5'	4:4:20:U:C5	2.35	0.61
4:4:52:G:O2'	4:4:53:G:O5'	2.17	0.61
6:A:337:C:H2'	6:A:338:A:C8	2.34	0.61
6:A:538:G:H2'	6:A:539:A:H8	1.64	0.61
6:A:829:G:H1	6:A:857:C:H42	1.48	0.61
6:A:1296:C:H4'	6:A:1302:U:C5	2.35	0.61
7:D:297:C:N4	7:D:298:G:C2	2.68	0.61
7:D:728:G:OP2	7:D:728:G:C8	2.54	0.61
7:D:869:G:H2'	7:D:870:A:H8	1.64	0.61
7:D:1050:A:H2'	7:D:1051:G:C8	2.35	0.61
7:D:1109:C:H41	7:D:1110:G:H21	1.49	0.61
7:D:1203:G:H5'	7:D:1204:A:C8	2.35	0.61
9:F:130:ARG:HD3	9:F:131:PRO:HD2	1.81	0.61
11:H:8:VAL:HG21	11:H:115:ARG:NH2	2.15	0.61
26:W:26:GLY:HA3	26:W:47:HIS:ND1	2.15	0.61
33:d:20:ILE:HD11	33:d:26:GLN:N	2.14	0.61
34:e:33:LEU:HD12	34:e:136:ILE:HG12	1.83	0.61
35:f:123:TYR:CG	35:f:129:PRO:HB3	2.35	0.61
42:m:16:LYS:HA	42:m:19:LYS:HZ3	1.64	0.61
42:m:61:TRP:HE3	42:m:96:ALA:HB3	1.65	0.61
51:v:43:TYR:HA	51:v:61:ARG:HH22	1.64	0.61
56:B:301:VAL:O	56:B:301:VAL:HG13	2.00	0.61
56:B:381:ARG:O	56:B:402:ILE:CG1	2.41	0.61
56:B:455:PRO:HD2	56:B:458:GLU:HB2	1.83	0.61
6:A:1367:C:H5'	17:N:60:ARG:HE	1.65	0.61
6:A:1446:A:HO2'	6:A:1447:G:P	2.23	0.61
7:D:25:U:H3	7:D:515:A:H61	1.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:151:C:N3	7:D:176:G:N2	2.48	0.61
7:D:414:C:H5"	7:D:1879:C:O2'	2.01	0.61
7:D:1020:A:N1	7:D:1141:U:OP2	2.34	0.61
7:D:1532:C:O2	7:D:1539:G:N1	2.32	0.61
7:D:1625:C:C4	7:D:1626:G:C8	2.88	0.61
7:D:1747:G:P	7:D:1747:G:H8	2.24	0.61
7:D:2783:G:C6	7:D:2784:C:C4	2.88	0.61
7:D:2807:G:C6	7:D:2808:U:C2	2.89	0.61
20:Q:61:GLU:O	20:Q:62:ASN:HB2	1.99	0.61
20:Q:68:GLY:C	20:Q:70:LEU:H	2.07	0.61
26:W:12:ASP:O	26:W:14:HIS:N	2.28	0.61
29:Z:122:ALA:HB1	29:Z:126:LYS:HE2	1.82	0.61
31:b:54:GLN:HB3	31:b:57:LYS:HZ3	1.65	0.61
41:l:12:SER:O	41:l:16:ARG:NE	2.30	0.61
49:t:38:GLN:N	49:t:41:GLN:OE1	2.33	0.61
56:B:241:LYS:HD2	56:B:252:ALA:O	2.01	0.61
6:A:27:G:H2'	6:A:28:G:H8	1.66	0.61
6:A:197:A:N1	6:A:221:C:H4'	2.15	0.61
6:A:216:G:C5	6:A:217:C:N4	2.69	0.61
6:A:217:C:H2'	6:A:218:C:C5	2.35	0.61
6:A:426:G:OP1	11:H:38:TYR:OH	2.14	0.61
6:A:1043:C:H2'	6:A:1044:A:H8	1.65	0.61
7:D:411:G:N2	7:D:2407:G:O6	2.33	0.61
7:D:687:C:H41	7:D:774:A:N6	1.95	0.61
7:D:1300:U:O2'	7:D:1626:G:N2	2.34	0.61
7:D:1455:G:OP2	7:D:1455:G:H3'	2.01	0.61
7:D:1706:U:C5	7:D:1757:U:OP2	2.54	0.61
7:D:1899:G:O2'	7:D:1900:A:H5"	2.00	0.61
7:D:1993:U:H5	7:D:1994:C:C2	2.18	0.61
7:D:2128:C:OP2	29:Z:36:LYS:HB3	2.00	0.61
7:D:2460:U:C4	7:D:2461:C:N4	2.69	0.61
7:D:2848:G:C2	7:D:2867:G:N3	2.68	0.61
23:T:6:LEU:HD13	23:T:17:TYR:CG	2.35	0.61
29:Z:38:ASP:CG	29:Z:177:LYS:HD3	2.03	0.61
32:c:132:VAL:N	32:c:138:GLU:OE1	2.34	0.61
53:x:51:GLU:OE1	53:x:52:VAL:N	2.34	0.61
56:B:67:THR:C	56:B:76:TYR:CB	2.65	0.61
56:B:86:HIS:O	56:B:87:VAL:HB	2.00	0.61
56:B:174:VAL:CG1	56:B:177:ILE:HG13	2.26	0.61
56:B:222:VAL:HG11	56:B:264:LEU:HD13	1.81	0.61
56:B:274:VAL:O	56:B:277:GLY:O	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:489:LEU:HD23	56:B:509:HIS:CB	2.26	0.61
3:3:19:PRO:HG2	3:3:23:VAL:HG21	1.81	0.61
6:A:15:G:O2'	12:I:24:ARG:NH2	2.33	0.61
6:A:31:G:OP1	6:A:31:G:H3'	2.01	0.61
6:A:308:C:H2'	6:A:309:G:H8	1.64	0.61
6:A:447:G:H3'	6:A:485:G:H1	1.64	0.61
6:A:569:C:H42	6:A:881:G:H1	1.47	0.61
6:A:714:G:H2'	6:A:715:A:C8	2.36	0.61
6:A:834:C:H2'	6:A:835:U:H6	1.65	0.61
7:D:279:C:N3	7:D:361:G:N1	2.47	0.61
7:D:321:G:C1'	32:c:165:ARG:HH11	2.12	0.61
7:D:776:G:C4	7:D:793:A:N7	2.68	0.61
7:D:1418:G:C2	7:D:1580:A:H2	2.18	0.61
7:D:1749:A:C4	7:D:1750:G:N7	2.68	0.61
7:D:1756:G:H4'	7:D:1758:G:H1'	1.81	0.61
7:D:2387:U:C2	48:s:41:ARG:NH2	2.69	0.61
7:D:2529:G:H5"	7:D:2530:A:H5"	1.82	0.61
7:D:2845:G:H2'	7:D:2846:G:H8	1.66	0.61
17:N:90:LEU:HB2	17:N:91:PRO:HD3	1.83	0.61
20:Q:71:ARG:O	20:Q:75:ALA:HB3	2.01	0.61
25:V:21:LYS:C	25:V:55:ARG:HH12	2.09	0.61
26:W:5:LEU:HD12	26:W:6:LYS:HB3	1.82	0.61
26:W:11:VAL:HG21	26:W:41:VAL:N	2.16	0.61
26:W:32:LYS:HG3	26:W:52:TYR:HB3	1.78	0.61
29:Z:7:TYR:O	29:Z:11:LEU:N	2.33	0.61
32:c:117:ARG:NH1	32:c:190:GLU:C	2.59	0.61
35:f:93:THR:HG22	35:f:94:HIS:CD2	2.36	0.61
43:n:50:PRO:HB2	43:n:53:GLU:OE1	1.99	0.61
56:B:41:MET:HA	56:B:45:PHE:CD1	2.36	0.61
3:3:6:ALA:C	3:3:8:VAL:H	2.09	0.61
3:3:137:GLU:HB2	7:D:1078:U:H5"	1.83	0.61
4:4:75:C:H41	56:B:569:ARG:NH2	1.98	0.61
6:A:101:A:C6	6:A:102:G:C5	2.88	0.61
6:A:160:A:H1'	6:A:344:A:C6	2.35	0.61
6:A:376:G:H2'	6:A:377:G:C8	2.33	0.61
6:A:575:G:HO2'	6:A:576:G:P	2.23	0.61
6:A:738:C:H2'	6:A:739:C:H6	1.66	0.61
6:A:801:U:H2'	6:A:802:A:H8	1.66	0.61
6:A:836:G:OP1	25:V:61:LYS:NZ	2.30	0.61
6:A:934:C:N4	6:A:1344:C:C2	2.69	0.61
6:A:978:A:O2'	26:W:37:ARG:NH2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1089:G:H1	6:A:1096:C:H42	1.46	0.61
6:A:1309:G:N2	6:A:1329:A:C4	2.69	0.61
7:D:7:G:N2	7:D:8:A:H1'	2.16	0.61
7:D:154:G:C2	7:D:173:G:N2	2.67	0.61
7:D:261:G:N2	7:D:262:A:N3	2.48	0.61
7:D:270(Z):U:H2'	7:D:271(A):C:H5'	1.81	0.61
7:D:289:A:H2'	7:D:351:G:N1	2.16	0.61
7:D:476:G:N1	7:D:479:A:OP2	2.33	0.61
7:D:989:G:P	50:u:12:PRO:HG2	2.41	0.61
7:D:2120:G:N3	7:D:2179:C:O2	2.34	0.61
7:D:2142:C:N4	7:D:2148:G:O6	2.33	0.61
7:D:2808:U:O4	7:D:2891:G:C4	2.54	0.61
9:F:219:VAL:O	9:F:222:ILE:HG13	2.00	0.61
26:W:44:MET:C	26:W:45:VAL:HG22	2.22	0.61
31:b:117:MET:HG3	31:b:136:ARG:HB2	1.83	0.61
33:d:36:LYS:HD3	33:d:95:ARG:NH1	2.16	0.61
41:l:67:SER:OG	41:l:73:GLU:OE2	2.12	0.61
46:q:86:ARG:O	46:q:88:LYS:N	2.33	0.61
56:B:66:VAL:O	56:B:76:TYR:CZ	2.53	0.61
6:A:475:G:C2	6:A:476:G:C5	2.89	0.61
6:A:626:U:H2'	6:A:627:G:H8	1.66	0.61
6:A:966:G:N2	6:A:967:C:O2	2.34	0.61
6:A:1353:G:P	28:Y:3:LYS:NZ	2.72	0.61
7:D:172:C:H2'	7:D:173:G:H5'	1.82	0.61
7:D:668:G:H5'	7:D:669:G:OP2	2.01	0.61
7:D:1204:A:N3	7:D:1204:A:OP2	2.34	0.61
7:D:2027:G:N2	7:D:2037:G:C4	2.69	0.61
7:D:2074:U:O2'	7:D:2597:G:O2'	2.19	0.61
7:D:2158:A:O2'	7:D:2159:G:OP2	2.16	0.61
7:D:2195:C:H2'	7:D:2196:C:C6	2.36	0.61
8:E:50:G:O3'	40:k:61:ASN:HA	2.01	0.61
20:Q:24:GLY:HA3	20:Q:66:LEU:CA	2.31	0.61
26:W:36:ARG:O	26:W:70:LYS:HD3	1.99	0.61
35:f:39:ARG:CG	35:f:40:PRO:HD2	2.30	0.61
38:i:11:LYS:HD3	38:i:16:ARG:HH12	1.65	0.61
40:k:32:LEU:C	40:k:34:HIS:H	2.06	0.61
42:m:94:ASN:ND2	43:n:10:LYS:HB3	2.15	0.61
49:t:16:LEU:HD23	49:t:59:LEU:HD13	1.83	0.61
56:B:43:GLU:HB2	56:B:53:ARG:CZ	2.23	0.61
56:B:137:LYS:N	56:B:167:SER:OG	2.34	0.61
56:B:212:ILE:CG2	56:B:263:TRP:HE3	2.08	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:225:GLY:C	56:B:239:VAL:HG11	2.21	0.61
56:B:227:ARG:HB3	56:B:237:PHE:CE2	2.33	0.61
3:3:127:ILE:O	3:3:130:SER:OG	2.13	0.60
6:A:1454:G:C2	6:A:1455:G:N9	2.68	0.60
7:D:529:A:N6	7:D:2023:G:C6	2.69	0.60
7:D:706:A:H2'	7:D:707:G:O4'	2.01	0.60
7:D:1314:C:O2	7:D:1339:G:N2	2.34	0.60
7:D:1618:A:H4'	7:D:1619:G:OP1	2.01	0.60
7:D:1857:G:H2'	7:D:1858:G:O4'	2.00	0.60
7:D:2399:G:H1	7:D:2417:C:H42	1.49	0.60
8:E:12:C:H5"	48:s:74:ARG:HD3	1.83	0.60
14:K:70:LYS:HB3	14:K:96:GLN:HE21	1.66	0.60
26:W:3:ARG:HH21	26:W:3:ARG:CG	2.14	0.60
31:b:151:TYR:CE1	35:f:79:PRO:HD2	2.36	0.60
31:b:176:ILE:HG23	31:b:181:LEU:HB2	1.81	0.60
37:h:45:LEU:HD23	37:h:49:ARG:NH1	2.16	0.60
37:h:117:GLU:HG2	37:h:118:GLY:N	2.15	0.60
45:p:5:TYR:HB3	49:t:24:LYS:NZ	2.15	0.60
56:B:345:ARG:HH11	56:B:345:ARG:CG	2.14	0.60
56:B:378:TYR:CA	56:B:406:LEU:HB2	2.31	0.60
56:B:409:TYR:CD2	56:B:453:GLU:HG2	2.28	0.60
56:B:456:PHE:HA	56:B:459:ILE:CG1	2.31	0.60
2:2:38:HIS:O	3:3:116:ASN:HB2	2.01	0.60
3:3:93:ARG:HG2	3:3:93:ARG:HH11	1.65	0.60
6:A:161:A:H2'	6:A:162:A:O4'	2.01	0.60
6:A:198:G:N3	6:A:199:G:C8	2.70	0.60
6:A:443:C:C2	6:A:444:C:C4	2.88	0.60
6:A:959:A:O2'	6:A:984:C:O2'	2.15	0.60
7:D:295:G:H1	7:D:343:C:N4	1.99	0.60
7:D:366:C:H2'	7:D:370:G:C5'	2.31	0.60
7:D:440:G:N2	7:D:441:U:O2	2.33	0.60
7:D:879:G:C6	7:D:880:G:N7	2.69	0.60
7:D:1058:G:H2'	7:D:1059:G:C5'	2.31	0.60
7:D:1063:G:H2'	7:D:1064:C:O4'	2.02	0.60
7:D:2170:A:H8	7:D:2170:A:OP2	1.83	0.60
7:D:2378:A:C2	40:k:20:ARG:HD2	2.37	0.60
7:D:2748:A:C6	7:D:2757:A:N6	2.69	0.60
8:E:50:G:H4'	40:k:61:ASN:HB3	1.82	0.60
19:P:61:THR:O	19:P:62:SER:OG	2.17	0.60
29:Z:42:GLU:H	29:Z:214:VAL:HG13	1.65	0.60
29:Z:154:ARG:O	29:Z:158:ALA:HB3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:a:91:ARG:HH12	30:a:198:ASN:HA	1.66	0.60
32:c:44:ARG:O	32:c:46:ARG:N	2.34	0.60
33:d:47:LYS:HA	33:d:53:LEU:HD21	1.83	0.60
36:g:12:ASP:OD1	36:g:97:ARG:HD3	2.01	0.60
40:k:51:ALA:O	40:k:73:LEU:HD11	2.01	0.60
41:l:56:GLY:HA3	41:l:64:ARG:NH2	2.16	0.60
56:B:178:LEU:O	56:B:182:VAL:HG21	2.01	0.60
56:B:218:PHE:C	56:B:258:ALA:CB	2.73	0.60
56:B:238:THR:HG1	56:B:267:ALA:CB	2.12	0.60
56:B:528:ILE:HG22	56:B:592:VAL:HG21	0.60	0.60
56:B:555:ARG:HG3	56:B:577:GLN:OE1	2.01	0.60
2:2:39:ALA:O	3:3:117:THR:OG1	2.11	0.60
6:A:92:G:H8	6:A:92:G:O5'	1.83	0.60
6:A:261:U:H2'	6:A:263:A:OP2	2.01	0.60
6:A:475:G:N1	6:A:476:G:C5	2.69	0.60
6:A:1345:U:C5'	16:M:120:ARG:HH12	2.14	0.60
7:D:58:G:H1'	7:D:70:G:N2	2.15	0.60
7:D:126:A:C6	7:D:127:A:N1	2.69	0.60
7:D:270(A):A:N6	7:D:270(X):G:O2'	2.35	0.60
7:D:317:G:H2'	7:D:318:C:C6	2.36	0.60
7:D:459:U:OP1	54:y:40:TRP:HA	2.01	0.60
7:D:491:G:C6	7:D:492:A:C5	2.89	0.60
7:D:882:G:H8	7:D:883:G:H4'	1.64	0.60
7:D:1005:C:H5"	7:D:1006:C:OP2	2.00	0.60
7:D:1364:G:OP1	7:D:1809:A:C6	2.54	0.60
7:D:1485:G:C5	7:D:1486:A:N7	2.70	0.60
7:D:1707:G:N3	7:D:1756:G:N2	2.49	0.60
7:D:2304:G:H1	7:D:2312:U:H3	1.48	0.60
7:D:2582:G:H21	7:D:2583:G:H1'	1.66	0.60
9:F:115:LEU:HD23	9:F:153:ARG:HD3	1.83	0.60
13:J:7:ASN:OD1	25:V:34:TYR:OH	2.06	0.60
15:L:102:ARG:HH12	15:L:106:GLY:N	2.00	0.60
17:N:11:PHE:CE1	21:R:55:GLY:HA2	2.36	0.60
26:W:45:VAL:O	26:W:45:VAL:HG23	2.01	0.60
29:Z:22:ILE:N	29:Z:228:SER:OXT	2.27	0.60
29:Z:200:LYS:NZ	29:Z:208:PHE:HB2	2.15	0.60
31:b:110:GLY:O	31:b:111:ARG:HG3	2.01	0.60
37:h:24:GLY:H	37:h:28:GLY:HA3	1.65	0.60
40:k:58:LEU:HB3	40:k:65:VAL:HG12	1.82	0.60
41:l:43:GLN:CD	41:l:43:GLN:H	2.09	0.60
56:B:13:SER:HA	56:B:81:ILE:HB	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:228:ILE:HG22	56:B:229:ARG:N	2.16	0.60
56:B:230:ILE:O	56:B:232:SER:N	2.35	0.60
56:B:304:GLY:HA3	56:B:372:THR:O	2.02	0.60
6:A:15:G:H4'	12:I:24:ARG:HH22	1.66	0.60
6:A:671:G:H5'	6:A:672:U:OP2	2.01	0.60
7:D:67:U:O2'	7:D:68:G:OP1	2.20	0.60
7:D:124:G:C5	54:y:19:ARG:NH1	2.69	0.60
7:D:372:G:H5"	7:D:373:U:OP2	2.01	0.60
7:D:535:C:C2	7:D:536:A:N7	2.69	0.60
7:D:1001:A:N6	7:D:1154:G:O2'	2.34	0.60
7:D:1109:C:H5	7:D:1110:G:N3	1.99	0.60
7:D:1522:G:H5"	7:D:1523:U:OP2	2.01	0.60
7:D:1569:A:H2'	7:D:1570:A:H8	1.64	0.60
7:D:1665:A:H2	7:D:1666:G:C4	2.19	0.60
7:D:2256:G:H8	7:D:2256:G:OP2	1.84	0.60
7:D:2334:G:O6	48:s:75:LEU:HG	2.01	0.60
7:D:2864:G:H2'	7:D:2865:U:C6	2.37	0.60
9:F:129:GLU:O	9:F:135:GLN:NE2	2.34	0.60
22:S:26:GLU:CD	22:S:77:ARG:HH11	2.09	0.60
24:U:13:ASP:O	24:U:15:MET:N	2.35	0.60
26:W:25:LYS:C	26:W:27:GLU:H	2.09	0.60
29:Z:139:ASN:N	29:Z:144:THR:OG1	2.35	0.60
30:a:18:VAL:HG13	30:a:208:LYS:HB2	1.83	0.60
56:B:17:HIS:CE1	56:B:114:GLU:CB	2.76	0.60
56:B:383:LYS:HA	56:B:402:ILE:CG1	2.31	0.60
6:A:189:U:C4	24:U:72:ARG:NH1	2.70	0.60
6:A:559:A:O2'	6:A:560:U:OP2	2.15	0.60
6:A:595:G:O2'	6:A:596:C:H6	1.83	0.60
6:A:642:A:C5	15:L:115:SER:HA	2.36	0.60
6:A:1118:C:H6	6:A:1118:C:OP2	1.85	0.60
7:D:140:A:H61	7:D:1596:A:H4'	1.65	0.60
7:D:212:G:H2'	7:D:213:A:C8	2.37	0.60
7:D:307:G:H21	7:D:330:A:N6	1.98	0.60
7:D:474:G:O2'	7:D:475:U:OP1	2.18	0.60
7:D:660:G:H5"	7:D:661:C:OP2	2.01	0.60
7:D:884:C:C1'	7:D:885:C:OP2	2.49	0.60
7:D:899:A:H1'	7:D:900:A:C2	2.36	0.60
7:D:1526:G:H5"	7:D:1527:G:OP1	2.01	0.60
7:D:1812:A:O2'	30:a:46:GLN:HB2	2.02	0.60
7:D:2106:G:C5	7:D:2108:C:C4	2.86	0.60
7:D:2378:A:H1'	40:k:20:ARG:HH22	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:40:U:H3	8:E:43:C:H5"	1.66	0.60
23:T:18:ARG:NH2	23:T:35:LYS:HD2	2.17	0.60
43:n:60:GLU:OE2	43:n:101:GLY:OXT	2.20	0.60
56:B:200:ILE:CD1	56:B:279:THR:CG2	2.37	0.60
56:B:338:THR:HG23	56:B:502:ASP:OD1	2.02	0.60
56:B:378:TYR:CD2	56:B:406:LEU:HD11	2.36	0.60
6:A:509:A:H5"	11:H:55:ALA:HB2	1.83	0.60
6:A:1189:C:H5"	6:A:1190:G:OP2	2.02	0.60
6:A:1304:G:O6	6:A:1331:G:H3'	2.01	0.60
7:D:240:G:O2'	7:D:257:A:N6	2.35	0.60
7:D:1399:C:C5'	45:p:25:LYS:HZ1	2.15	0.60
7:D:1529:A:H3'	7:D:1530:G:C8	2.35	0.60
7:D:1545:A:N7	7:D:1545(A):A:C6	2.69	0.60
7:D:2782:G:C6	7:D:2783:G:C6	2.89	0.60
7:D:2814:C:H42	7:D:2886:G:H1	1.47	0.60
9:F:22:LYS:HA	9:F:40:HIS:CE1	2.36	0.60
10:G:19:GLU:O	10:G:40:ARG:NH2	2.34	0.60
26:W:66:MET:HB2	26:W:69:HIS:CD2	2.37	0.60
40:k:17:ARG:HA	40:k:20:ARG:CD	2.29	0.60
53:x:27:LYS:HE3	53:x:29:ASN:HD21	1.67	0.60
3:3:130:SER:HA	3:3:133:SER:HB3	1.84	0.60
6:A:443:C:O2'	6:A:444:C:H5'	2.00	0.60
6:A:584:G:H2'	6:A:585:G:H8	1.66	0.60
6:A:1014:A:H5"	26:W:18:LYS:HZ3	1.66	0.60
7:D:295:G:H2'	7:D:296:C:C6	2.37	0.60
7:D:434:U:H6	7:D:434:U:O5'	1.84	0.60
7:D:489:G:N7	7:D:1284:A:C6	2.62	0.60
7:D:1319:G:H5"	7:D:1320:C:OP2	2.01	0.60
7:D:1456:G:C4	7:D:1457:A:N7	2.70	0.60
7:D:1799:G:H8	30:a:268:ARG:NH2	1.99	0.60
7:D:2008:C:H2'	7:D:2009:G:H8	1.66	0.60
7:D:2378:A:H2	40:k:20:ARG:HD2	1.65	0.60
7:D:2841:C:H2'	7:D:2842:G:C8	2.37	0.60
22:S:46:HIS:O	22:S:48:LYS:N	2.34	0.60
26:W:50:ALA:HB1	26:W:57:HIS:CB	2.31	0.60
40:k:71:ARG:HG2	40:k:104:GLY:HA2	1.81	0.60
44:o:11:ARG:HG3	44:o:98:LYS:HZ1	1.67	0.60
47:r:2:GLU:O	47:r:60:GLU:HA	2.02	0.60
56:B:6:LEU:HD12	56:B:6:LEU:N	2.16	0.60
56:B:13:SER:HB3	56:B:97:LEU:CG	2.31	0.60
56:B:158:LEU:HB3	56:B:159:PRO:CD	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:298:LYS:HG2	56:B:298:LYS:O	2.00	0.60
3:3:130:SER:N	7:D:1059:G:H22	2.00	0.60
6:A:73:G:C5	6:A:74:C:C4	2.90	0.60
6:A:1452:C:C4'	6:A:1453:G:H5"	2.21	0.60
7:D:352:G:C6	7:D:353:G:C6	2.90	0.60
7:D:766:C:N3	7:D:767:U:N3	2.49	0.60
20:Q:94:ARG:CZ	20:Q:94:ARG:HB3	2.30	0.60
36:g:97:ARG:HH21	36:g:98:VAL:H	1.50	0.60
36:g:112:MET:CE	41:l:39:ARG:HE	2.11	0.60
53:x:36:LEU:O	53:x:51:GLU:HB2	2.01	0.60
56:B:14:ILE:CD1	56:B:26:ALA:HB2	2.28	0.60
56:B:97:LEU:CD2	56:B:103:VAL:CG1	2.70	0.60
56:B:330:LEU:HB3	56:B:345:ARG:CZ	2.32	0.60
56:B:410:VAL:CG2	56:B:481:GLN:HA	2.30	0.60
56:B:417:PRO:HD2	56:B:420:TYR:HD2	1.66	0.60
56:B:521:VAL:CG2	56:B:539:ALA:CB	2.44	0.60
6:A:55:A:C2	56:B:208:TYR:CD2	2.90	0.60
6:A:210:U:C6	6:A:216:G:C8	2.89	0.60
6:A:361:G:O6	6:A:362:G:N2	2.34	0.60
6:A:484:G:H4'	6:A:485:G:OP2	2.02	0.60
7:D:1169:G:C6	7:D:1170:G:C5	2.89	0.60
7:D:1228:G:H2'	7:D:1228:G:N3	2.16	0.60
7:D:1453:A:H3'	7:D:1454:U:H5"	1.83	0.60
7:D:1492:G:H21	7:D:1493:C:H42	1.49	0.60
7:D:2699:C:O2	7:D:2709:G:N2	2.35	0.60
10:G:186:PHE:HB2	10:G:198:VAL:O	2.01	0.60
31:b:119:ARG:HG3	31:b:120:TRP:N	2.16	0.60
32:c:6:VAL:HB	32:c:18:ARG:HD2	1.82	0.60
34:e:66:GLY:HA2	34:e:69:ARG:HD3	1.84	0.60
37:h:117:GLU:HG2	37:h:118:GLY:H	1.67	0.60
38:i:54:MET:HE1	38:i:118:LEU:HD23	1.83	0.60
47:r:7:ALA:HB3	47:r:38:TYR:CD1	2.37	0.60
47:r:9:TYR:CD2	47:r:14:LYS:HG2	2.37	0.60
51:v:20:ASN:ND2	51:v:30:GLU:OE1	2.35	0.60
4:4:31:G:HO2'	6:A:1340:A:HO2'	1.46	0.60
6:A:76:G:C4	6:A:95:G:C6	2.83	0.60
6:A:404:U:H5'	11:H:122:ARG:NH1	2.13	0.60
6:A:443:C:C5	6:A:492:G:N1	2.70	0.60
6:A:477:G:C4	6:A:478:A:N7	2.69	0.60
6:A:1132:C:H2'	6:A:1133:G:C8	2.37	0.60
6:A:1460:A:O2'	6:A:1461:G:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:295:G:H2'	7:D:296:C:H6	1.66	0.60
7:D:355:G:H2'	7:D:356:G:C8	2.36	0.60
7:D:572:A:OP1	43:n:80:GLN:NE2	2.35	0.60
7:D:1077:A:H5"	7:D:1078:U:OP2	2.02	0.60
7:D:1999:C:H2'	7:D:2000:G:C8	2.36	0.60
7:D:2110:G:N2	7:D:2180:U:C2	2.70	0.60
7:D:2478:A:C2	7:D:2529:G:H2'	2.37	0.60
8:E:29:A:OP2	40:k:34:HIS:CE1	2.55	0.60
13:J:71:ARG:O	13:J:75:LEU:HG	2.01	0.60
16:M:65:VAL:HG21	16:M:73:GLN:HB3	1.82	0.60
26:W:11:VAL:HG21	26:W:41:VAL:CG1	2.13	0.60
31:b:2:LYS:HE3	31:b:85:ASN:ND2	2.17	0.60
38:i:76:LYS:O	38:i:77:LYS:HB2	2.02	0.60
40:k:13:ARG:HH21	40:k:90:GLY:HA3	1.66	0.60
46:q:10:GLY:H	46:q:110:GLU:CD	2.10	0.60
53:x:49:HIS:CG	53:x:50:ARG:H	2.19	0.60
56:B:529:PRO:HD2	56:B:530:ARG:H	1.67	0.60
56:B:537:ILE:O	56:B:549:ALA:N	2.35	0.60
3:3:58:THR:HG23	3:3:64:SER:CB	2.32	0.59
6:A:443:C:C6	6:A:492:G:C2	2.89	0.59
6:A:1130:A:C5	6:A:1146:A:N6	2.69	0.59
6:A:1132:C:H2'	6:A:1133:G:H8	1.66	0.59
6:A:1391:U:H2'	6:A:1392:G:C8	2.37	0.59
7:D:283:A:H3'	7:D:284:U:C5	2.37	0.59
7:D:972:G:H8	7:D:972:G:OP2	1.84	0.59
7:D:972:G:H3'	7:D:973:A:H3'	1.84	0.59
7:D:1074:G:H2'	7:D:1075:C:C5	2.35	0.59
7:D:1487:G:H2'	7:D:1488:G:H8	1.67	0.59
7:D:1565:C:C4	7:D:1567:A:C8	2.88	0.59
7:D:2285:C:H5	53:x:27:LYS:NZ	1.99	0.59
7:D:2422:A:N7	7:D:2424:C:N4	2.50	0.59
7:D:2740:A:OP2	7:D:2763:G:N1	2.28	0.59
8:E:81:G:C5	8:E:96:G:C2	2.90	0.59
10:G:6:HIS:HD2	10:G:8:ILE:HG22	1.66	0.59
10:G:29:TYR:OH	21:R:54:PRO:O	2.19	0.59
11:H:128:VAL:HA	11:H:146:ILE:HG22	1.83	0.59
14:K:27:ILE:HG22	14:K:36:LYS:NZ	2.17	0.59
16:M:31:GLN:HB3	16:M:35:GLU:HB3	1.83	0.59
17:N:46:ARG:HD2	21:R:61:TRP:CZ3	2.37	0.59
18:O:18:ARG:NH2	18:O:35:PRO:O	2.35	0.59
26:W:3:ARG:O	26:W:42:PRO:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:38:ASP:OD2	29:Z:177:LYS:CG	2.49	0.59
30:a:184:LYS:HB2	30:a:267:SER:HB2	1.84	0.59
34:e:131:VAL:O	34:e:131:VAL:HG13	2.00	0.59
42:m:14:HIS:CD2	42:m:36:ARG:HH21	2.20	0.59
42:m:86:ALA:HB1	42:m:89:GLU:CD	2.27	0.59
52:w:21:SER:OG	52:w:22:HIS:N	2.33	0.59
56:B:23:SER:CB	57:B:701:GCP:O1A	2.49	0.59
56:B:64:VAL:CG1	56:B:80:LEU:C	2.62	0.59
56:B:228:ILE:HG22	56:B:229:ARG:H	1.65	0.59
56:B:230:ILE:HG21	56:B:279:THR:HA	1.82	0.59
6:A:51:A:H4'	6:A:52:G:OP2	2.01	0.59
6:A:375:U:H4'	23:T:6:LEU:HD11	1.84	0.59
6:A:376:G:OP1	23:T:5:ARG:HB2	2.02	0.59
6:A:498:A:C6	6:A:547:A:C8	2.90	0.59
7:D:219:G:N2	7:D:430:G:O6	2.35	0.59
7:D:1088:A:P	7:D:1088:A:H8	2.25	0.59
7:D:1149:G:H2'	7:D:1150:C:C6	2.36	0.59
7:D:1484:G:H2'	7:D:1485:G:O4'	2.01	0.59
7:D:1749:A:HO2'	7:D:1750:G:H5'	1.62	0.59
8:E:33:G:H1	8:E:49:C:H42	1.50	0.59
10:G:20:SER:HB2	10:G:40:ARG:HH22	1.67	0.59
15:L:70:GLN:HG3	15:L:72:PRO:HD2	1.84	0.59
23:T:8:ARG:H	23:T:28:ARG:NH1	1.99	0.59
26:W:14:HIS:NE2	26:W:34:TRP:HZ3	1.57	0.59
29:Z:41:VAL:HG13	29:Z:214:VAL:HG11	1.83	0.59
36:g:10:VAL:HG22	36:g:14:THR:HG21	1.84	0.59
37:h:108:LYS:HG3	37:h:109:GLY:N	2.17	0.59
38:i:81:VAL:CG2	56:B:567:VAL:HB	2.29	0.59
56:B:280:ILE:HG13	56:B:281:THR:OG1	2.02	0.59
56:B:330:LEU:HD22	56:B:330:LEU:H	1.65	0.59
56:B:420:TYR:HB3	56:B:424:LEU:CD1	2.32	0.59
6:A:362:G:C2	6:A:365:U:OP2	2.55	0.59
6:A:1321:C:H41	26:W:37:ARG:NH2	2.00	0.59
6:A:1426:C:H2'	6:A:1427:U:C6	2.38	0.59
7:D:154:G:C6	7:D:173:G:N2	2.70	0.59
7:D:273:G:C2	7:D:365:C:N3	2.70	0.59
7:D:542:C:H2'	7:D:543:C:H6	1.59	0.59
7:D:1417:C:H42	7:D:1581:G:H1	1.50	0.59
7:D:1786:A:C8	7:D:1787:A:C8	2.90	0.59
7:D:2043:C:H42	7:D:2625:G:H1	1.50	0.59
7:D:2339:G:H2'	7:D:2340:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2458:G:H1'	7:D:2459:A:N7	2.17	0.59
7:D:2631:G:OP2	7:D:2894:G:H5'	2.01	0.59
7:D:2659:G:N2	7:D:2662:A:OP2	2.32	0.59
7:D:2783:G:H1'	31:b:41:LYS:HZ1	1.67	0.59
7:D:2858:C:H3'	7:D:2859:G:C8	2.37	0.59
7:D:2887:U:O2'	7:D:2888:C:H5'	2.02	0.59
12:I:72:GLN:O	12:I:74:GLY:N	2.34	0.59
14:K:79:ARG:HA	14:K:84:ASN:HA	1.83	0.59
15:L:4:ASP:HB3	15:L:89:PRO:HG3	1.84	0.59
19:P:80:HIS:HB2	56:B:342:PHE:HE1	1.63	0.59
24:U:48:GLU:N	24:U:48:GLU:OE1	2.35	0.59
26:W:11:VAL:O	26:W:11:VAL:HG12	2.01	0.59
26:W:70:LYS:H	26:W:73:GLU:CG	2.15	0.59
40:k:14:VAL:O	40:k:17:ARG:HG2	2.02	0.59
43:n:7:THR:O	43:n:24:LYS:NZ	2.33	0.59
45:p:64:LYS:HZ1	45:p:73:ARG:HD2	1.66	0.59
56:B:137:LYS:HG2	57:B:701:GCP:C2	2.32	0.59
56:B:152:VAL:CG2	56:B:156:LEU:HD23	2.32	0.59
56:B:246:THR:HB	56:B:247:PRO:CD	2.32	0.59
56:B:493:ASN:N	56:B:541:ILE:HA	2.15	0.59
5:5:3:C:N4	5:5:70:G:O6	2.26	0.59
6:A:418:C:H2'	6:A:419:C:C6	2.37	0.59
6:A:684:A:H1'	18:O:39:PRO:HD2	1.85	0.59
7:D:439:G:C2	7:D:440:G:C5	2.90	0.59
7:D:531:C:O2	42:m:28:ARG:NH2	2.35	0.59
7:D:559:G:OP2	35:f:109:LYS:CE	2.51	0.59
7:D:792:G:OP2	7:D:792:G:H4'	2.03	0.59
7:D:878:A:H8	7:D:897:C:N3	2.00	0.59
7:D:1300:U:H4'	7:D:1301:A:O5'	2.02	0.59
7:D:1652:A:H8	7:D:1652:A:OP2	1.85	0.59
7:D:1730:U:O2'	7:D:1731:G:N7	2.35	0.59
7:D:2808:U:O2	7:D:2892:A:C2	2.55	0.59
8:E:14:U:H4'	8:E:15:A:OP2	2.02	0.59
11:H:94:LEU:HB3	11:H:194:LEU:HD21	1.83	0.59
23:T:5:ARG:NH1	23:T:22:THR:HG23	2.17	0.59
25:V:21:LYS:N	25:V:55:ARG:NH1	2.50	0.59
25:V:53:ARG:HH12	25:V:60:GLY:N	2.01	0.59
26:W:40:ILE:HG21	26:W:67:VAL:HG23	1.80	0.59
26:W:51:VAL:HG12	26:W:52:TYR:H	1.68	0.59
34:e:97:ARG:NH1	34:e:104:GLU:OE1	2.36	0.59
35:f:35:ARG:HG3	35:f:36:GLY:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:26:TYR:CG	38:i:27:VAL:N	2.70	0.59
41:l:17:THR:C	41:l:19:LEU:H	2.09	0.59
47:r:3:TYR:HB3	47:r:61:LEU:HB2	1.82	0.59
51:v:8:LYS:HG2	51:v:9:LEU:H	1.68	0.59
56:B:66:VAL:C	56:B:76:TYR:CD1	2.80	0.59
56:B:153:GLU:HG3	56:B:159:PRO:HB3	1.85	0.59
56:B:201:PHE:H	56:B:215:LEU:HB3	1.65	0.59
56:B:345:ARG:O	56:B:346:CYS:HB2	2.02	0.59
3:3:55:VAL:HB	3:3:69:THR:CG2	2.26	0.59
5:5:30:G:H2'	5:5:31:A:C8	2.37	0.59
6:A:19:C:H2'	6:A:20:U:H6	1.68	0.59
6:A:92:G:H2'	6:A:93:U:C6	2.37	0.59
6:A:159:G:N3	6:A:161:A:OP2	2.35	0.59
6:A:401:C:OP2	11:H:73:ARG:NE	2.35	0.59
6:A:444:C:H6	6:A:444:C:O5'	1.86	0.59
6:A:950:U:O2'	6:A:971:G:N3	2.35	0.59
6:A:1018:C:H2'	6:A:1019:C:H6	1.67	0.59
6:A:1058:G:OP1	10:G:199:LYS:HE3	2.03	0.59
6:A:1091:U:O2	6:A:1095:U:N3	2.35	0.59
7:D:409:C:H2'	7:D:410:G:H8	1.68	0.59
7:D:489:G:H4'	7:D:491:G:OP1	2.02	0.59
7:D:552:G:C2'	7:D:553:U:H6	2.05	0.59
7:D:617:G:OP2	32:c:40:GLN:CD	2.45	0.59
7:D:1174:A:N7	7:D:1176:G:C5	2.70	0.59
7:D:1540:G:H2'	7:D:1540:G:N3	2.17	0.59
7:D:1698:A:HO2'	7:D:1699:G:P	2.26	0.59
7:D:1975:G:C6	7:D:1976:U:N3	2.70	0.59
10:G:20:SER:HG	10:G:22:TRP:NE1	1.99	0.59
11:H:62:GLN:HE22	11:H:65:ARG:NH1	2.00	0.59
12:I:14:ARG:HH12	12:I:129:ILE:CD1	2.16	0.59
35:f:4:TYR:CE2	42:m:100:VAL:HB	2.38	0.59
56:B:58:THR:OG1	56:B:84:PRO:HG3	2.03	0.59
56:B:64:VAL:HG21	56:B:80:LEU:O	2.03	0.59
56:B:65:ARG:CB	56:B:246:THR:CA	2.71	0.59
56:B:88:ASP:O	56:B:349:LEU:HB3	2.01	0.59
56:B:147:GLU:HA	56:B:150:LEU:CD2	2.30	0.59
56:B:303:ALA:HB3	56:B:345:ARG:C	2.28	0.59
56:B:383:LYS:HA	56:B:402:ILE:HG12	1.83	0.59
1:1:10:ILE:HG13	1:1:32:HIS:CD2	2.38	0.59
5:5:11:C:O2	5:5:24:G:N2	2.33	0.59
6:A:718:G:H1'	18:O:116:HIS:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1005:A:H2'	6:A:1006:C:H5'	1.84	0.59
6:A:1226:C:C4	20:Q:104:ARG:HG3	2.37	0.59
6:A:1302:U:H5	20:Q:13:LYS:HD3	1.66	0.59
7:D:276:A:C4	7:D:276:A:OP2	2.55	0.59
7:D:374:A:N1	7:D:401:A:H1'	2.18	0.59
7:D:575:A:OP2	7:D:2055:C:H5	1.85	0.59
7:D:846:C:O2'	7:D:847:U:OP2	2.14	0.59
7:D:1735:C:H4'	7:D:1741:C:OP1	1.97	0.59
7:D:2429:G:OP2	7:D:2430:A:OP2	2.20	0.59
8:E:42:C:O2	33:d:93:THR:N	2.36	0.59
12:I:15:ARG:NH1	12:I:26:PHE:CG	2.71	0.59
23:T:18:ARG:HH22	23:T:35:LYS:HD2	1.68	0.59
25:V:74:ARG:HG2	25:V:81:PHE:HB3	1.83	0.59
34:e:124:GLU:OE2	34:e:134:SER:HB3	2.03	0.59
37:h:72:PRO:HB3	37:h:110:TYR:CD2	2.38	0.59
37:h:79:ARG:HB2	37:h:117:GLU:OE2	2.03	0.59
39:j:96:ARG:NH2	39:j:117:VAL:HG23	2.16	0.59
41:l:50:ILE:HG22	41:l:68:TYR:CB	2.32	0.59
41:l:54:ARG:HH11	41:l:101:PHE:N	2.01	0.59
43:n:19:LYS:C	43:n:21:ARG:NH1	2.61	0.59
43:n:53:GLU:OE1	43:n:53:GLU:N	2.35	0.59
55:z:30:ARG:HE	55:z:44:LYS:HG3	1.68	0.59
56:B:49:LEU:C	56:B:51:LEU:H	2.10	0.59
56:B:222:VAL:HG11	56:B:264:LEU:HD21	1.84	0.59
56:B:299:PRO:HA	56:B:479:TYR:CE1	2.36	0.59
6:A:500:G:O6	6:A:546:G:N2	2.28	0.59
6:A:673:G:H1'	25:V:75:ILE:HG12	1.85	0.59
7:D:60:G:H21	7:D:74:A:H1'	1.66	0.59
7:D:295:G:P	7:D:338:G:H22	2.26	0.59
7:D:321:G:H1'	32:c:165:ARG:HE	1.68	0.59
7:D:585:G:C5	7:D:1251:C:N3	2.71	0.59
7:D:727:A:H5"	7:D:728:G:C6	2.38	0.59
7:D:974:G:H3'	7:D:974(A):C:C5'	2.22	0.59
7:D:1209:G:N1	7:D:1238:G:O6	2.36	0.59
7:D:1457:A:N6	7:D:2703:C:H42	1.99	0.59
7:D:2721:A:C2	7:D:2873:A:C6	2.91	0.59
7:D:2807:G:H5'	7:D:2808:U:H5	1.68	0.59
17:N:57:LYS:O	17:N:60:ARG:NH1	2.35	0.59
29:Z:163:PHE:CZ	29:Z:195:ALA:HB1	2.33	0.59
30:a:137:PRO:HG2	30:a:140:THR:HG21	1.84	0.59
32:c:152:GLU:HB3	32:c:154:VAL:HG13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:f:15:LEU:N	35:f:138:LEU:O	2.30	0.59
36:g:63:VAL:HB	36:g:78:ARG:HH11	1.67	0.59
47:r:107:THR:OG1	47:r:142:SER:OG	2.13	0.59
47:r:157:LEU:HD21	47:r:161:VAL:HA	1.84	0.59
56:B:51:LEU:HD13	56:B:360:ARG:NH1	2.18	0.59
56:B:70:ALA:CA	56:B:178:LEU:CD2	2.79	0.59
3:3:8:VAL:HG12	3:3:9:LYS:N	2.18	0.59
3:3:25:PRO:HG2	7:D:1095:A:N3	2.16	0.59
3:3:29:GLN:HB2	56:B:440:TYR:CE2	2.37	0.59
6:A:63:C:H5'	6:A:64:G:OP2	2.03	0.59
6:A:193:C:H2'	6:A:194:C:C6	2.31	0.59
6:A:246:A:O2'	6:A:247:G:O4'	2.21	0.59
6:A:456:C:N3	6:A:477:G:C2	2.70	0.59
6:A:828:A:N6	6:A:829:G:N3	2.50	0.59
6:A:1443:G:H3'	6:A:1443:G:P	2.42	0.59
6:A:1460:A:H2'	6:A:1461:G:H5'	1.84	0.59
7:D:486:C:O2'	7:D:487:C:H5'	2.03	0.59
7:D:535:C:C2'	7:D:536:A:H5'	2.32	0.59
7:D:950:G:C6	7:D:951:C:C4	2.91	0.59
7:D:1061:U:H1'	7:D:1070:A:C1'	2.33	0.59
7:D:1324:G:H1'	7:D:1616:A:H62	1.67	0.59
7:D:1455:G:C2	7:D:1456:G:C5	2.91	0.59
7:D:1466:G:H2'	7:D:1547:C:H41	1.67	0.59
7:D:1483:G:C2'	7:D:1484:G:H5'	2.32	0.59
7:D:2756:U:N3	7:D:2758:A:N7	2.50	0.59
8:E:33:G:N2	8:E:49:C:N3	2.51	0.59
8:E:56:G:H4'	8:E:57:A:O5'	2.02	0.59
10:G:138:VAL:HG13	10:G:149:ALA:HB3	1.85	0.59
12:I:14:ARG:HH12	12:I:129:ILE:HD11	1.68	0.59
15:L:34:GLU:O	15:L:37:ARG:HB3	2.02	0.59
15:L:86:ILE:O	15:L:88:LYS:N	2.36	0.59
23:T:5:ARG:HH12	23:T:22:THR:HG23	1.68	0.59
30:a:157:ARG:HB3	30:a:160:GLY:HA3	1.85	0.59
35:f:107:LEU:HD22	35:f:117:PHE:CD1	2.37	0.59
41:l:21:GLU:HA	41:l:23:ARG:NH1	2.15	0.59
46:q:32:PRO:HB2	46:q:34:LYS:HD2	1.84	0.59
47:r:41:LEU:HB3	47:r:45:ASP:OD2	2.03	0.59
51:v:48:ARG:N	51:v:52:THR:OG1	2.36	0.59
55:z:34:TRP:HZ3	55:z:41:ILE:HG13	1.67	0.59
56:B:77:VAL:O	56:B:77:VAL:HG13	2.03	0.59
56:B:135:ILE:HG13	56:B:165:PHE:HA	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:233:THR:HB	56:B:235:LYS:HE2	1.85	0.59
56:B:349:LEU:HD12	56:B:353:HIS:CB	2.32	0.59
6:A:374:A:C6	6:A:375:U:C4	2.90	0.59
6:A:495:A:H61	11:H:119:GLN:NE2	2.01	0.59
6:A:1440:C:N3	6:A:1462:G:C2	2.71	0.59
7:D:280:C:H4'	7:D:281:G:OP2	2.03	0.59
7:D:554:U:O2'	7:D:556:G:N7	2.36	0.59
7:D:855:G:C2	7:D:923:C:O2	2.55	0.59
7:D:902:C:N4	7:D:903:C:H41	2.00	0.59
7:D:1043:C:O3'	7:D:1044:G:H3'	2.03	0.59
7:D:1106:G:H2'	7:D:1106:G:N3	2.18	0.59
7:D:1128:A:H62	7:D:2518:A:N6	2.01	0.59
7:D:1455:G:N2	7:D:1456:G:C4	2.71	0.59
7:D:1479:G:H2'	7:D:1480:G:C8	2.37	0.59
7:D:1524:G:H2'	7:D:1525:G:H8	1.67	0.59
7:D:1735:C:H2'	7:D:1741:C:C6	2.38	0.59
7:D:1742:C:H4'	7:D:1742:C:OP1	2.03	0.59
7:D:2103:C:N4	7:D:2187:G:O6	2.35	0.59
7:D:2110:G:C2	7:D:2120:G:H1'	2.37	0.59
7:D:2447:G:O2'	7:D:2448:A:OP2	2.21	0.59
7:D:2886:G:C2	7:D:2887:U:N3	2.71	0.59
10:G:125:GLU:OE2	10:G:190:ARG:N	2.29	0.59
16:M:27:THR:O	16:M:62:TYR:HA	2.02	0.59
24:U:48:GLU:OE2	24:U:50:LYS:HE3	2.03	0.59
34:e:92:ILE:O	34:e:94:TYR:N	2.36	0.59
35:f:44:PRO:HD3	42:m:60:LEU:HD21	1.85	0.59
40:k:57:LYS:HZ2	40:k:58:LEU:HB2	1.68	0.59
52:w:4:HIS:O	52:w:6:VAL:N	2.36	0.59
56:B:197:LYS:O	56:B:218:PHE:HD1	1.86	0.59
3:3:5:VAL:C	3:3:7:VAL:H	2.11	0.59
6:A:38:G:H4'	6:A:547:A:N6	2.18	0.59
6:A:413:G:H22	6:A:428:G:H1'	1.68	0.59
6:A:498:A:N1	6:A:547:A:C8	2.71	0.59
6:A:562:C:O2'	19:P:15:ARG:HG2	2.03	0.59
6:A:975:A:H4'	6:A:976:G:O5'	2.01	0.59
6:A:985:C:O2	6:A:1221:G:N2	2.36	0.59
6:A:1129:C:N3	6:A:1143:G:N2	2.51	0.59
6:A:1167:A:O5'	6:A:1167:A:H8	1.86	0.59
7:D:60:G:C8	7:D:63:U:C5	2.91	0.59
7:D:85:G:P	46:q:28:LYS:NZ	2.75	0.59
7:D:185:U:H2'	7:D:186:G:C8	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:371:A:C6	7:D:424:G:C8	2.91	0.59
7:D:485:C:H2'	7:D:486:C:H5'	1.83	0.59
7:D:786:C:H2'	7:D:787:U:H6	1.67	0.59
7:D:878:A:H2'	7:D:879:G:H5"	1.85	0.59
7:D:1063:G:C2	7:D:1064:C:N3	2.71	0.59
7:D:1485:G:C6	7:D:1486:A:C5	2.91	0.59
7:D:1637:A:O2'	7:D:2697:G:N2	2.36	0.59
7:D:2320:A:OP1	7:D:2320:A:H3'	2.02	0.59
7:D:2773:C:P	31:b:164:ARG:HH12	2.25	0.59
11:H:141:ARG:O	11:H:143:GLY:N	2.36	0.59
26:W:15:LEU:HD21	26:W:19:VAL:HG11	1.70	0.59
31:b:152:LYS:NZ	35:f:77:GLY:HA2	2.18	0.59
46:q:43:ASN:C	46:q:45:VAL:H	2.11	0.59
56:B:31:GLU:CG	56:B:40:GLU:HG3	2.21	0.59
56:B:229:ARG:O	56:B:281:THR:O	2.21	0.59
56:B:245:PHE:HE2	56:B:262:GLY:N	2.01	0.59
56:B:246:THR:HG21	56:B:251:VAL:CG2	2.32	0.59
3:3:12:LEU:HA	7:D:1070:A:H61	1.68	0.58
5:5:33:U:H4'	14:K:84:ASN:HD21	1.68	0.58
5:5:52:G:H8	5:5:52:G:OP2	1.85	0.58
6:A:535:A:H4'	6:A:536:C:OP2	2.03	0.58
6:A:1038:C:H2'	6:A:1039:C:C6	2.38	0.58
7:D:116:C:O2'	7:D:126:A:N3	2.36	0.58
7:D:270(I):G:N2	7:D:270(J):G:H1'	2.18	0.58
7:D:1609:A:O2'	7:D:1617:C:OP1	2.19	0.58
7:D:1784:A:O2'	7:D:1785:A:P	2.61	0.58
7:D:2177:C:H2'	7:D:2178:C:C6	2.38	0.58
7:D:2227:A:H8	7:D:2227:A:O5'	1.84	0.58
9:F:95:GLN:HG3	9:F:148:TYR:HB3	1.84	0.58
13:J:8:ILE:HG12	13:J:88:VAL:HG12	1.85	0.58
24:U:17:LYS:HG3	24:U:45:HIS:CE1	2.37	0.58
37:h:27:HIS:CD2	43:n:82:ARG:HG2	2.37	0.58
38:i:81:VAL:HA	56:B:567:VAL:HG23	1.84	0.58
38:i:134:ARG:HG3	38:i:137:TYR:HE1	1.68	0.58
40:k:42:ASP:C	40:k:44:LYS:H	2.11	0.58
52:w:43:HIS:ND1	52:w:43:HIS:O	2.36	0.58
56:B:330:LEU:HD21	56:B:346:CYS:CA	2.32	0.58
6:A:96:G:C5	6:A:97:U:C4	2.91	0.58
6:A:109:A:C6	6:A:326:G:C6	2.92	0.58
6:A:773:G:H1	6:A:806:C:H42	1.50	0.58
6:A:1296:C:P	20:Q:44:ARG:NH1	2.76	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1454:G:H2'	6:A:1455:G:O4'	2.03	0.58
6:A:1462:G:H2'	6:A:1463:C:C6	2.38	0.58
7:D:38:A:C6	7:D:39:C:C4	2.90	0.58
7:D:96:G:H2'	7:D:97:C:C6	2.38	0.58
7:D:329:G:H4'	7:D:330:A:OP2	2.01	0.58
7:D:559:G:OP2	35:f:109:LYS:HE2	2.03	0.58
7:D:1385:G:H1	7:D:1402:C:N4	2.01	0.58
7:D:1603:A:O2'	7:D:1604:C:O4'	2.21	0.58
7:D:1754:C:C5	41:l:98:LYS:NZ	2.66	0.58
7:D:1799:G:C8	30:a:268:ARG:NH1	2.70	0.58
7:D:1904:G:H21	7:D:1928:A:H2	1.50	0.58
7:D:2128:C:P	29:Z:36:LYS:HB3	2.42	0.58
7:D:2134:A:H4'	7:D:2158:A:OP2	2.03	0.58
7:D:2602:A:N3	56:B:561:LYS:O	2.36	0.58
7:D:2674:G:H5"	36:g:26:LYS:NZ	2.18	0.58
20:Q:77:ASN:O	20:Q:80:ARG:HD3	2.03	0.58
23:T:18:ARG:HH12	23:T:35:LYS:HE2	1.68	0.58
29:Z:44:HIS:CD2	29:Z:215:THR:HG22	2.38	0.58
29:Z:71:GLN:HG2	29:Z:174:PRO:HB3	1.84	0.58
31:b:53:PRO:HD2	31:b:74:PRO:HA	1.85	0.58
36:g:106:LEU:HB3	36:g:115:VAL:HG21	1.84	0.58
37:h:55:ARG:O	55:z:13:ARG:NH1	2.36	0.58
44:o:34:ASN:HA	44:o:37:ARG:HG2	1.85	0.58
47:r:141:VAL:HG12	47:r:143:GLY:N	2.09	0.58
56:B:13:SER:O	56:B:103:VAL:CB	2.36	0.58
56:B:204:VAL:HG12	56:B:205:TYR:N	2.12	0.58
56:B:406:LEU:HD12	56:B:489:LEU:HD11	1.77	0.58
6:A:736:C:H2'	6:A:737:A:H8	1.68	0.58
6:A:1284:C:H3'	6:A:1285:A:H8	1.67	0.58
7:D:215:G:H1'	7:D:216:A:OP2	2.03	0.58
7:D:270(F):U:H2'	7:D:270(G):C:C6	2.37	0.58
7:D:916:G:O2'	7:D:917:A:O4'	2.22	0.58
7:D:1053:C:H6	7:D:1053:C:OP2	1.85	0.58
7:D:1063:G:N1	7:D:1064:C:C4	2.70	0.58
7:D:1477:A:N7	7:D:1478:G:C6	2.70	0.58
7:D:1950:G:H5"	7:D:1951:U:OP2	2.03	0.58
7:D:2099:U:H2'	7:D:2100:G:H8	1.68	0.58
7:D:2143:C:O2	7:D:2148:G:N1	2.29	0.58
10:G:22:TRP:CD2	10:G:59:ARG:NH1	2.72	0.58
10:G:64:VAL:HB	10:G:99:VAL:HG12	1.84	0.58
11:H:127:THR:HB	11:H:147:ALA:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:93:ARG:NH1	16:M:97:LYS:HD3	2.18	0.58
20:Q:108:ARG:CZ	20:Q:114:ARG:HG2	2.32	0.58
22:S:63:ARG:HH12	22:S:87:ILE:HG21	1.67	0.58
25:V:39:VAL:HG13	25:V:42:ARG:HH12	1.68	0.58
33:d:9:ARG:HA	33:d:12:TYR:CZ	2.38	0.58
47:r:56:VAL:HG13	47:r:133:ILE:HD11	1.85	0.58
47:r:100:VAL:C	47:r:124:ILE:HG23	2.28	0.58
55:z:19:SER:HG	55:z:21:LYS:NZ	2.00	0.58
56:B:230:ILE:HG23	56:B:280:ILE:N	2.18	0.58
56:B:322:LYS:CB	56:B:331:THR:HG21	2.20	0.58
56:B:381:ARG:HA	56:B:387:GLU:H	1.68	0.58
3:3:25:PRO:HA	3:3:29:GLN:HB2	1.84	0.58
6:A:259:G:H2'	6:A:260:G:H8	1.67	0.58
6:A:468:A:H5"	23:T:80:PHE:CE2	2.37	0.58
6:A:526:C:O2'	6:A:527:G:OP1	2.21	0.58
6:A:754:C:P	22:S:72:ARG:NH1	2.64	0.58
7:D:43:G:C6	7:D:44:A:C5	2.91	0.58
7:D:701:G:H1	7:D:731:C:H42	1.52	0.58
7:D:974:G:P	7:D:974(A):C:OP2	2.61	0.58
7:D:1131:G:C5'	35:f:74:ARG:HH12	2.15	0.58
7:D:1173:G:C4	7:D:1174:A:H2	2.21	0.58
7:D:1492:G:N2	7:D:1493:C:H42	2.01	0.58
7:D:1591:G:H8	7:D:1591:G:O5'	1.85	0.58
7:D:1606:G:H5"	7:D:1607:C:OP1	2.02	0.58
7:D:1718:G:O2'	7:D:1725:G:H8	1.86	0.58
7:D:1741:C:H2'	7:D:1742:C:O4'	2.03	0.58
7:D:2113:U:O4	7:D:2114:A:N6	2.37	0.58
8:E:50:G:H2'	8:E:51:G:H8	1.68	0.58
9:F:12:GLU:O	9:F:14:GLY:N	2.35	0.58
9:F:114:ARG:HA	9:F:117:GLU:HG2	1.85	0.58
13:J:69:GLU:HG2	13:J:70:ASP:N	2.19	0.58
14:K:45:ASP:HA	14:K:48:LYS:NZ	2.19	0.58
26:W:11:VAL:HG21	26:W:41:VAL:CB	2.32	0.58
26:W:30:LEU:HD21	26:W:57:HIS:NE2	2.18	0.58
34:e:77:LYS:O	34:e:80:SER:OG	2.19	0.58
42:m:105:VAL:HA	42:m:108:GLU:OE2	2.03	0.58
47:r:95:PRO:HD2	47:r:130:PRO:HA	1.84	0.58
56:B:228:ILE:HG13	56:B:282:LEU:CD2	2.32	0.58
56:B:417:PRO:CA	56:B:448:VAL:CG2	2.40	0.58
3:3:76:TYR:CZ	3:3:80:LYS:NZ	2.71	0.58
5:5:59:U:H2'	5:5:60:U:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:468:A:C5'	23:T:80:PHE:CZ	2.84	0.58
6:A:468:A:HO2'	23:T:82:GLN:HG2	1.68	0.58
6:A:648:A:H2'	6:A:649:G:C8	2.38	0.58
6:A:652:U:H2'	6:A:752:G:O6	2.03	0.58
6:A:808:C:P	22:S:48:LYS:HZ2	2.26	0.58
6:A:836:G:P	25:V:61:LYS:HZ1	2.26	0.58
6:A:1229:A:OP2	20:Q:108:ARG:NH2	2.36	0.58
6:A:1330:U:H2'	6:A:1331:G:H4'	1.84	0.58
7:D:629:G:N3	7:D:639:U:O2'	2.35	0.58
7:D:685:A:C8	7:D:774:A:N6	2.72	0.58
7:D:738:G:H5'	7:D:739:G:OP2	2.02	0.58
7:D:1022:G:N2	7:D:1024:G:H22	2.00	0.58
7:D:1109:C:H41	7:D:1110:G:N2	2.01	0.58
7:D:1205:U:H3	7:D:1207:C:N4	2.02	0.58
7:D:1307:A:H1'	7:D:1622:G:H22	1.68	0.58
7:D:1814:G:OP2	7:D:1815:A:H3'	2.02	0.58
7:D:1872:A:C3'	7:D:1878:G:H5"	2.33	0.58
7:D:1936:A:OP2	7:D:1961:C:N4	2.36	0.58
7:D:2329:G:H22	48:s:41:ARG:HE	1.50	0.58
7:D:2371:G:N2	7:D:2372:G:C4	2.70	0.58
8:E:51:G:OP2	8:E:51:G:C8	2.56	0.58
25:V:77:GLY:O	25:V:79:LEU:N	2.36	0.58
33:d:57:ALA:HA	33:d:68:PRO:CD	2.34	0.58
35:f:78:TYR:HB3	35:f:79:PRO:HD2	1.84	0.58
36:g:67:LYS:NZ	36:g:77:ILE:HD13	2.18	0.58
37:h:58:THR:HG23	55:z:12:LYS:HA	1.83	0.58
56:B:41:MET:O	56:B:42:ARG:HB3	2.02	0.58
56:B:49:LEU:CD2	56:B:60:LYS:HZ1	2.16	0.58
56:B:305:LEU:CD1	56:B:369:LEU:CD2	2.72	0.58
56:B:389:GLU:HG2	56:B:389:GLU:O	2.03	0.58
56:B:411:LYS:CG	56:B:452:TYR:O	2.52	0.58
56:B:493:ASN:HA	56:B:505:THR:HG23	1.86	0.58
4:4:50:U:C4	4:4:51:C:C4	2.92	0.58
6:A:571:U:O4	6:A:864:A:N6	2.36	0.58
6:A:736:C:H2'	6:A:737:A:C8	2.38	0.58
6:A:1423:G:N2	6:A:1478:C:O2	2.36	0.58
7:D:126:A:N6	7:D:127:A:N1	2.50	0.58
7:D:191:A:H2'	7:D:192:C:H6	1.69	0.58
7:D:270(E):G:H2'	7:D:270(F):U:O4'	2.03	0.58
7:D:370:G:OP1	7:D:370:G:H4'	2.03	0.58
7:D:539:G:C2'	7:D:540:G:H5'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:563:G:N2	42:m:37:GLU:OE2	2.37	0.58
7:D:719:C:H2'	7:D:720:C:C6	2.38	0.58
7:D:788:A:H1'	7:D:789:A:OP2	2.04	0.58
7:D:1173:G:H2'	7:D:1174:A:C6	2.38	0.58
7:D:1542:G:H3'	7:D:1542:G:OP2	2.03	0.58
7:D:1730:U:O2	7:D:1733:G:N2	2.37	0.58
7:D:1861:G:C2	7:D:1862:G:C8	2.91	0.58
7:D:1964:G:C2	7:D:1967:C:C4	2.92	0.58
7:D:2111:C:N4	7:D:2146:C:OP2	2.37	0.58
7:D:2376:A:OP1	7:D:2376:A:H8	1.85	0.58
7:D:2636:U:H4'	31:b:79:ARG:HD3	1.86	0.58
7:D:2810:A:C4'	31:b:61:ARG:HH12	2.16	0.58
7:D:2848:G:C5	41:l:99:LEU:HD21	2.39	0.58
9:F:12:GLU:OE1	9:F:209:ARG:NH2	2.33	0.58
16:M:33:PHE:CZ	16:M:44:VAL:HA	2.38	0.58
17:N:42:THR:HG23	17:N:67:THR:C	2.28	0.58
18:O:27:ASN:OD1	18:O:28:THR:N	2.37	0.58
18:O:43:SER:HB2	18:O:71:LYS:NZ	2.19	0.58
19:P:5:PRO:O	19:P:6:THR:OG1	2.20	0.58
29:Z:11:LEU:HA	29:Z:14:VAL:HB	1.85	0.58
32:c:197:ASP:O	32:c:201:VAL:HG23	2.04	0.58
33:d:94:LEU:HD23	33:d:98:ARG:HD2	1.85	0.58
33:d:180:PHE:C	33:d:182:LYS:H	2.12	0.58
36:g:29:ASN:OD1	36:g:30:ALA:N	2.36	0.58
38:i:103:MET:HB3	38:i:105:GLU:OE2	2.04	0.58
41:l:76:PHE:CD1	41:l:78:LEU:HD12	2.38	0.58
43:n:68:LYS:HG3	43:n:93:GLU:HG3	1.85	0.58
46:q:50:ARG:HB2	46:q:54:LYS:HZ3	1.68	0.58
50:u:12:PRO:HA	50:u:15:TYR:OH	2.03	0.58
56:B:10:ARG:HG2	56:B:185:ILE:HG22	1.85	0.58
56:B:11:ASN:O	56:B:100:VAL:CG1	2.52	0.58
56:B:279:THR:O	56:B:281:THR:N	2.36	0.58
56:B:330:LEU:CD2	56:B:346:CYS:SG	2.91	0.58
56:B:379:LYS:HG2	56:B:405:ILE:O	2.02	0.58
56:B:456:PHE:HA	56:B:459:ILE:HG13	1.86	0.58
56:B:497:HIS:CB	56:B:535:VAL:CG1	2.50	0.58
3:3:10:LEU:HD21	3:3:57:ILE:CD1	2.31	0.58
3:3:21:PRO:CG	7:D:1067:A:OP2	2.51	0.58
3:3:38:VAL:O	3:3:42:ASN:ND2	2.37	0.58
6:A:502:G:N1	6:A:544:G:C6	2.71	0.58
6:A:705:U:H2'	6:A:706:A:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1055:A:O2'	10:G:161:GLU:O	2.22	0.58
6:A:1202:G:C2	6:A:1203:C:H1'	2.38	0.58
6:A:1294:G:H2'	6:A:1295:G:C8	2.31	0.58
7:D:71:A:N3	7:D:73:A:N6	2.52	0.58
7:D:188:G:C5'	51:v:13:ARG:HD3	2.31	0.58
7:D:565:C:H2'	7:D:566:U:C6	2.39	0.58
7:D:603:A:C6	7:D:604:G:N1	2.72	0.58
7:D:690:G:O2'	7:D:780:G:OP1	2.20	0.58
7:D:852:G:C5	7:D:926:A:N6	2.55	0.58
7:D:957:A:C2	7:D:2459:A:H5'	2.39	0.58
7:D:1364:G:OP1	7:D:1809:A:N6	2.36	0.58
7:D:1476:C:H5	7:D:1477:A:C2	2.21	0.58
7:D:1735:C:O2'	7:D:1741:C:OP1	2.21	0.58
7:D:2589:A:H2'	7:D:2590:A:H8	1.67	0.58
13:J:62:TRP:CG	25:V:35:ARG:NH1	2.71	0.58
22:S:81:LEU:HA	22:S:84:LYS:HB2	1.85	0.58
28:Y:13:ILE:HG13	28:Y:22:ARG:NH1	2.16	0.58
30:a:55:GLY:CA	30:a:218:ARG:HH11	2.17	0.58
50:u:10:LYS:HG3	50:u:31:LEU:HD21	1.86	0.58
56:B:95:ARG:HG3	56:B:96:ALA:H	1.65	0.58
56:B:378:TYR:HD2	56:B:406:LEU:HD11	1.68	0.58
1:1:31:LYS:NZ	7:D:2478:A:O4'	2.37	0.58
2:2:61:LEU:HA	7:D:1046:A:H2'	1.86	0.58
6:A:546:G:P	11:H:72:GLU:HB3	2.44	0.58
6:A:1163:C:C2'	6:A:1164:G:C5'	2.79	0.58
6:A:1200:C:H3'	6:A:1201:A:H5'	1.86	0.58
6:A:1347:G:H1'	6:A:1348:U:OP2	2.03	0.58
7:D:1:G:H2'	7:D:2:G:H8	1.66	0.58
7:D:76:C:OP1	49:t:50:ARG:NH2	2.37	0.58
7:D:623:G:H8	37:h:105:LEU:HD13	1.69	0.58
7:D:1012:U:O2'	7:D:1013:C:OP2	2.16	0.58
7:D:1035:U:H2'	7:D:1036:G:H8	1.69	0.58
7:D:1651:G:C2	7:D:1652:A:C5	2.92	0.58
7:D:1816:G:O6	30:a:38:LYS:HE3	2.04	0.58
7:D:1889:A:N3	7:D:2086:U:O2'	2.36	0.58
7:D:2215:G:H4'	7:D:2216:G:OP2	2.04	0.58
7:D:2264:C:H2'	7:D:2265:U:H6	1.69	0.58
7:D:2305:A:P	33:d:136:ARG:HE	2.27	0.58
7:D:2570:G:H5'	7:D:2571:C:OP2	2.04	0.58
8:E:44:G:H1'	8:E:47:C:H42	1.67	0.58
8:E:118:G:H2'	8:E:119:A:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:97:LYS:HB3	16:M:98:PRO:HD3	1.84	0.58
17:N:42:THR:HG21	17:N:66:ARG:HD2	1.86	0.58
24:U:22:LEU:HG	24:U:24:GLU:OE2	2.03	0.58
30:a:7:LYS:HG3	30:a:26:LYS:O	2.04	0.58
30:a:242:ARG:NH1	30:a:244:ARG:HH21	2.01	0.58
30:a:271:ILE:O	30:a:273:ARG:N	2.34	0.58
34:e:38:SER:HB3	34:e:41:MET:HE2	1.86	0.58
35:f:25:ARG:HH11	35:f:29:LYS:HD2	1.67	0.58
49:t:6:GLU:OE1	49:t:10:LYS:NZ	2.35	0.58
56:B:13:SER:HB2	56:B:97:LEU:CG	2.30	0.58
56:B:421:VAL:O	56:B:425:MET:HB2	2.03	0.58
3:3:101:TRP:O	3:3:105:LEU:HG	2.04	0.58
5:5:15:G:H4’	5:5:16:U:OP1	2.04	0.58
5:5:75:C:O2	51:v:30:GLU:HG2	2.04	0.58
6:A:55:A:C1’	56:B:208:TYR:HE2	2.16	0.58
6:A:456:C:H2’	6:A:457:C:O4’	2.03	0.58
6:A:500:G:N7	6:A:546:G:N2	2.50	0.58
6:A:702:A:H5”	6:A:703:G:N7	2.18	0.58
6:A:718:G:N7	6:A:719:C:C4	2.72	0.58
6:A:1346:A:C6	14:K:10:ARG:NH1	2.72	0.58
7:D:215:G:H4’	7:D:216:A:O5’	2.04	0.58
7:D:329:G:C2	7:D:477:A:C2	2.91	0.58
7:D:373:U:O2’	7:D:374:A:P	2.62	0.58
7:D:1564:C:H5’	7:D:1565:C:OP2	2.03	0.58
7:D:1819:A:OP1	30:a:157:ARG:HD3	2.04	0.58
7:D:2507:C:C2	7:D:2583:G:C2	2.92	0.58
7:D:2782:G:H2’	7:D:2783:G:H8	1.69	0.58
7:D:2791:C:OP2	7:D:2792:G:OP2	2.21	0.58
9:F:30:ARG:NH2	9:F:31:TYR:OH	2.37	0.58
17:N:11:PHE:O	17:N:68:HIS:ND1	2.36	0.58
17:N:22:LYS:O	17:N:25:GLU:N	2.37	0.58
20:Q:69:GLU:HB3	20:Q:73:GLU:HB2	1.84	0.58
20:Q:71:ARG:HA	20:Q:75:ALA:H	1.67	0.58
22:S:76:GLU:HA	22:S:79:ARG:HH21	1.67	0.58
26:W:14:HIS:HB3	26:W:35:SER:O	2.04	0.58
26:W:28:LYS:HE2	26:W:29:ARG:CZ	2.34	0.58
26:W:29:ARG:HD2	26:W:29:ARG:C	2.29	0.58
29:Z:37:PHE:HE1	29:Z:40:THR:HG1	1.50	0.58
33:d:54:GLU:N	33:d:54:GLU:OE1	2.37	0.58
36:g:16:ALA:HB2	36:g:45:GLU:HB2	1.85	0.58
37:h:49:ARG:HA	55:z:52:LYS:NZ	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:8:LYS:NZ	38:i:93:TYR:CD1	2.62	0.58
38:i:39:PRO:HB3	38:i:98:LYS:HA	1.84	0.58
51:v:59:PHE:O	51:v:62:ARG:HG2	2.04	0.58
56:B:299:PRO:N	56:B:348:PHE:HE2	1.95	0.58
56:B:301:VAL:CG1	56:B:349:LEU:O	2.50	0.58
56:B:380:VAL:O	56:B:387:GLU:HA	2.03	0.58
56:B:527:VAL:O	56:B:527:VAL:HG23	2.02	0.58
6:A:69:G:C2'	6:A:73:G:H8	1.95	0.58
6:A:216:G:C8	6:A:217:C:C5	2.91	0.58
6:A:373:A:N1	6:A:391:G:O2'	2.33	0.58
6:A:409:G:OP1	11:H:24:GLU:N	2.37	0.58
6:A:646:U:H2'	6:A:647:C:C6	2.38	0.58
6:A:837:G:H2'	6:A:838:G:H8	1.69	0.58
6:A:1241:G:OP2	6:A:1241:G:C8	2.56	0.58
6:A:1452:C:C1'	6:A:1453:G:C2	2.87	0.58
6:A:1459:C:C2'	6:A:1460:A:H5'	2.34	0.58
7:D:28:A:C4	7:D:513:A:N7	2.72	0.58
7:D:280:C:N4	7:D:360:G:N7	2.52	0.58
7:D:539:G:P	35:f:5:VAL:HG12	2.11	0.58
7:D:542:C:C4	7:D:543:C:N4	2.72	0.58
7:D:548:A:C5	7:D:549:G:H1'	2.39	0.58
7:D:1143:A:OP2	7:D:1144:G:OP2	2.22	0.58
7:D:1171:G:H2'	7:D:1173:G:O3'	2.04	0.58
7:D:1203:G:H5'	7:D:1204:A:H8	1.68	0.58
7:D:1251:C:H5'	42:m:10:ARG:HE	1.69	0.58
7:D:1358:G:N1	7:D:1372:U:OP2	2.28	0.58
7:D:1485:G:O6	7:D:1486:A:N6	2.37	0.58
7:D:1524:G:H2'	7:D:1525:G:C8	2.39	0.58
7:D:1580:A:H2'	7:D:1581:G:N9	2.18	0.58
7:D:1718:G:O2'	7:D:1725:G:H5'	2.04	0.58
7:D:1748:G:C2'	7:D:1749:A:C8	2.76	0.58
7:D:2287:A:O2'	7:D:2288:A:O5'	2.21	0.58
7:D:2320:A:H1'	7:D:2333:A:C2	2.38	0.58
7:D:2585:U:O2'	7:D:2586:C:O5'	2.21	0.58
7:D:2686:G:N1	7:D:2722:G:O6	2.36	0.58
7:D:2734:A:C2	31:b:203:LYS:HD3	2.38	0.58
7:D:2792:G:C4	7:D:2793:G:C8	2.91	0.58
9:F:22:LYS:HE2	9:F:38:GLY:HA2	1.86	0.58
26:W:49:ILE:O	26:W:59:PRO:HG2	2.04	0.58
40:k:57:LYS:NZ	40:k:58:LEU:HB2	2.19	0.58
56:B:299:PRO:CA	56:B:479:TYR:CE1	2.87	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:19:ARG:HD3	1:1:24:TYR:CD2	2.39	0.57
3:3:49:GLY:O	3:3:53:VAL:HG23	2.04	0.57
5:5:16:U:OP2	5:5:17:C:OP2	2.22	0.57
6:A:393:A:OP2	23:T:12:LYS:NZ	2.33	0.57
6:A:734:G:H21	25:V:75:ILE:HD11	1.69	0.57
6:A:1092:A:H5"	14:K:4:ARG:NH1	2.11	0.57
6:A:1164:G:C6	6:A:1165:C:C4	2.92	0.57
6:A:1167:A:H8	6:A:1167:A:P	2.25	0.57
6:A:1243:C:H2'	6:A:1244:C:H6	1.68	0.57
6:A:1254:C:H2'	6:A:1255:G:H8	1.69	0.57
6:A:1293:G:H2'	6:A:1294:G:H8	1.67	0.57
7:D:151:C:C2	7:D:176:G:N2	2.72	0.57
7:D:154:G:C4	7:D:155:C:C5	2.92	0.57
7:D:531:C:C2	42:m:28:ARG:NH2	2.71	0.57
7:D:646:A:H5"	7:D:647:G:OP2	2.04	0.57
7:D:778:G:C6	7:D:779:U:N3	2.72	0.57
7:D:827:U:H4'	7:D:828:U:O2	2.04	0.57
7:D:930:U:H4'	7:D:931:G:OP2	2.04	0.57
7:D:1025:G:C8	7:D:1134:G:H1'	2.39	0.57
7:D:1084:A:C4'	7:D:1106:G:H8	2.17	0.57
7:D:1205:U:H2'	7:D:1206:G:N7	2.19	0.57
7:D:1309:G:H4'	54:y:7:PRO:HG2	1.85	0.57
7:D:1491:G:H5"	7:D:1492:G:OP2	2.04	0.57
7:D:1528:A:C5	7:D:1529:A:C6	2.91	0.57
7:D:1707:G:C4	7:D:1756:G:C2	2.91	0.57
7:D:1709:U:HO2'	7:D:2859:G:HO2'	1.52	0.57
7:D:2125:G:O4'	29:Z:217:THR:HG21	2.04	0.57
7:D:2206:C:H6	7:D:2206:C:O5'	1.87	0.57
7:D:2599:G:N7	30:a:237:GLU:HG3	2.18	0.57
7:D:2681:C:O2'	7:D:2682:U:O5'	2.21	0.57
10:G:137:ALA:O	10:G:141:VAL:HG23	2.04	0.57
13:J:62:TRP:CD2	25:V:35:ARG:NH1	2.71	0.57
14:K:146:GLU:HA	14:K:149:ARG:HG3	1.86	0.57
20:Q:87:TYR:HD2	26:W:73:GLU:HA	1.69	0.57
27:X:56:MET:HE2	27:X:85:MET:HB3	1.85	0.57
27:X:73:HIS:HD2	27:X:74:LYS:HD2	1.69	0.57
31:b:13:ARG:NE	31:b:173:VAL:HG21	2.19	0.57
38:i:80:GLU:HG2	56:B:567:VAL:HG21	1.85	0.57
39:j:97:VAL:HG22	39:j:114:VAL:HG22	1.85	0.57
45:p:68:ARG:HD2	45:p:69:TYR:CZ	2.39	0.57
49:t:27:LEU:HD12	49:t:48:LEU:HD23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:194:ALA:HB1	56:B:195:PRO:HD2	1.85	0.57
56:B:308:VAL:HG22	56:B:370:ILE:HD11	1.86	0.57
6:A:217:C:H6	6:A:217:C:O5'	1.87	0.57
6:A:442:C:O2'	6:A:443:C:H5'	2.04	0.57
6:A:511:C:O2'	11:H:43:HIS:NE2	2.34	0.57
6:A:733:A:H5'	6:A:734:G:OP2	2.03	0.57
6:A:850:U:O5'	6:A:850:U:H6	1.87	0.57
7:D:38:A:C5	7:D:39:C:C4	2.91	0.57
7:D:82:G:C5	7:D:102:G:N2	2.71	0.57
7:D:201:C:O2'	7:D:386:G:N1	2.36	0.57
7:D:242:G:H8	55:z:4:MET:CG	2.17	0.57
7:D:440:G:C2	7:D:441:U:C2	2.91	0.57
7:D:1185:C:P	50:u:29:ARG:HH11	2.26	0.57
7:D:1225:C:HO2'	7:D:1226:G:H5'	1.68	0.57
7:D:1485:G:C4	7:D:1486:A:C8	2.92	0.57
7:D:1511:A:H8	7:D:1511:A:OP2	1.87	0.57
7:D:1747:G:H2'	7:D:1748:G:C5'	2.30	0.57
7:D:1856:G:O6	7:D:1858:G:N2	2.37	0.57
7:D:2227:A:N7	7:D:2228:G:N7	2.52	0.57
7:D:2656:U:H5"	7:D:2657:A:OP2	2.05	0.57
7:D:2842:G:H2'	7:D:2843:G:C8	2.34	0.57
7:D:2856:C:N4	7:D:2857:G:O6	2.36	0.57
8:E:113:C:H2'	8:E:114:G:C8	2.39	0.57
11:H:77:ASN:O	11:H:81:GLU:HG2	2.03	0.57
14:K:18:TYR:CD2	14:K:23:VAL:HG21	2.39	0.57
19:P:86:ARG:HH21	19:P:99:HIS:HE1	1.50	0.57
29:Z:127:LEU:HD23	29:Z:130:ILE:HD13	1.86	0.57
32:c:61:GLY:O	32:c:63:LYS:N	2.37	0.57
40:k:14:VAL:HG13	40:k:17:ARG:CD	2.33	0.57
42:m:70:ARG:HD3	42:m:75:ASN:OD1	2.04	0.57
43:n:14:VAL:HG11	43:n:19:LYS:NZ	2.19	0.57
43:n:93:GLU:HG3	43:n:93:GLU:O	2.04	0.57
51:v:42:PHE:HB3	51:v:57:GLU:OE2	2.04	0.57
56:B:12:PHE:HA	56:B:100:VAL:HG12	1.86	0.57
56:B:25:LEU:CD2	56:B:29:ILE:HD11	2.34	0.57
56:B:192:PRO:HD2	56:B:193:GLU:H	1.69	0.57
6:A:19:C:H2'	6:A:20:U:C6	2.39	0.57
6:A:84:U:O5'	6:A:84:U:H6	1.87	0.57
6:A:199:G:C2	6:A:219:C:N3	2.72	0.57
6:A:614:A:H2'	6:A:615:C:C6	2.39	0.57
6:A:1159:U:H5	6:A:1182:G:N3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1326:C:N3	6:A:1327:C:N4	2.51	0.57
7:D:141:A:N3	7:D:1596:A:O2'	2.37	0.57
7:D:638:G:H22	7:D:650:C:H1'	1.69	0.57
7:D:894:C:H5	7:D:895:U:C2	2.19	0.57
7:D:1456:G:N1	7:D:1457:A:N7	2.52	0.57
7:D:1870:C:C2'	7:D:1871:A:C8	2.86	0.57
7:D:2154:G:H2'	7:D:2155:G:C8	2.39	0.57
7:D:2423:U:H1'	7:D:2425:A:C5	2.39	0.57
7:D:2460:U:H3	7:D:2490:G:H1	1.53	0.57
7:D:2563:U:H4'	36:g:28:SER:HA	1.85	0.57
7:D:2792:G:OP2	7:D:2792:G:C8	2.57	0.57
7:D:2807:G:H22	7:D:2892:A:N6	2.01	0.57
11:H:68:TYR:HD1	11:H:114:ARG:NH1	2.02	0.57
14:K:77:SER:OG	14:K:86:GLN:OE1	2.18	0.57
20:Q:108:ARG:HH21	20:Q:114:ARG:HH11	1.51	0.57
29:Z:65:PRO:HG2	29:Z:154:ARG:HH11	1.69	0.57
30:a:85:ASP:OD2	30:a:88:ARG:HG3	2.04	0.57
30:a:212:SER:HA	30:a:215:LEU:HD12	1.87	0.57
30:a:222:ARG:HB2	30:a:222:ARG:NH1	2.18	0.57
34:e:108:GLY:HA2	34:e:152:ARG:NH1	2.17	0.57
34:e:126:PRO:O	34:e:127:GLU:HB3	2.04	0.57
38:i:58:PHE:CD1	38:i:109:VAL:HG21	2.39	0.57
42:m:86:ALA:HB2	42:m:116:ALA:HB2	1.86	0.57
56:B:118:LEU:HD22	56:B:446:LYS:NZ	2.10	0.57
56:B:195:PRO:HG3	56:B:286:PRO:C	2.24	0.57
56:B:239:VAL:CG2	56:B:240:ASP:H	2.05	0.57
56:B:379:LYS:HZ3	56:B:485:ARG:H	1.52	0.57
56:B:490:VAL:HG12	56:B:508:ALA:CB	2.31	0.57
6:A:62:U:H5"	6:A:385:C:O2'	2.04	0.57
6:A:850:U:O2'	6:A:851:G:H5'	2.04	0.57
6:A:1171:G:H2'	6:A:1172:C:H6	1.68	0.57
6:A:1293:G:H2'	6:A:1294:G:C8	2.38	0.57
6:A:1321:C:C5	26:W:37:ARG:NH2	2.73	0.57
7:D:338:G:C8	46:q:4:LYS:HD3	2.37	0.57
7:D:350:U:H2'	7:D:350:U:O2	2.03	0.57
7:D:432:A:C5	7:D:433:C:C5	2.92	0.57
7:D:528:A:N7	7:D:2042:A:C6	2.72	0.57
7:D:729:G:O3'	7:D:730:C:H4'	2.03	0.57
7:D:879:G:N1	7:D:880:G:N7	2.53	0.57
7:D:917:A:N6	7:D:2268:A:C4	2.72	0.57
7:D:1128:A:C4	7:D:1128:A:OP2	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1448:G:N2	7:D:1463:C:N3	2.51	0.57
7:D:1460:A:OP2	7:D:1461:G:OP2	2.22	0.57
7:D:2047:U:H2'	7:D:2048:G:H8	1.69	0.57
7:D:2270:G:C6	7:D:2271:G:C2	2.92	0.57
9:F:124:SER:O	9:F:126:GLU:N	2.37	0.57
9:F:163:PHE:HA	9:F:185:ILE:O	2.04	0.57
26:W:30:LEU:CD1	26:W:31:ILE:H	2.05	0.57
26:W:70:LYS:HB3	26:W:73:GLU:H	1.69	0.57
29:Z:69:GLY:C	29:Z:157:LYS:CA	2.71	0.57
31:b:51:PHE:H	31:b:76:ARG:NE	2.01	0.57
40:k:31:SER:C	40:k:34:HIS:HB3	2.29	0.57
40:k:35:ILE:HG12	40:k:66:ALA:HB2	1.86	0.57
42:m:27:LEU:HD11	52:w:13:LYS:NZ	2.19	0.57
47:r:48:PHE:CB	47:r:54:HIS:HE1	2.16	0.57
50:u:39:ASP:O	50:u:44:ARG:NH2	2.37	0.57
56:B:9:ILE:HG23	56:B:77:VAL:HA	1.85	0.57
56:B:107:VAL:HG11	56:B:113:VAL:CG2	2.33	0.57
56:B:222:VAL:HG13	56:B:222:VAL:O	2.03	0.57
6:A:66:G:C6	6:A:67:C:C4	2.93	0.57
6:A:101:A:C6	6:A:102:G:C6	2.92	0.57
6:A:166:G:H2'	6:A:167:G:C8	2.39	0.57
6:A:447:G:H3'	6:A:485:G:N1	2.20	0.57
6:A:495:A:O4'	6:A:496:A:C8	2.58	0.57
6:A:696:A:C6	6:A:697:U:C4	2.93	0.57
6:A:1059:C:H2'	6:A:1060:C:C6	2.39	0.57
6:A:1131:G:N1	6:A:1144:G:O2'	2.35	0.57
7:D:299:A:N1	7:D:322:A:H2'	2.19	0.57
7:D:519:U:H2'	7:D:520:G:C8	2.39	0.57
7:D:526:A:H4'	7:D:527:C:OP1	2.04	0.57
7:D:738:G:H1'	7:D:759:G:N2	2.19	0.57
7:D:848:G:N3	7:D:931:G:O6	2.36	0.57
7:D:1275:A:H62	7:D:1296:G:C4'	2.17	0.57
7:D:1512:G:N7	7:D:1513:C:N4	2.52	0.57
7:D:1709:U:O2'	7:D:2859:G:O2'	2.22	0.57
7:D:1746:G:N1	7:D:1747:G:N3	2.52	0.57
7:D:1776:G:C2	7:D:1777:U:C2	2.92	0.57
7:D:2029:G:N2	7:D:2033:A:C4	2.72	0.57
7:D:2089:U:H2'	7:D:2090:G:H8	1.70	0.57
7:D:2104:G:O5'	7:D:2104:G:H8	1.86	0.57
7:D:2427:C:O2'	7:D:2428:G:OP2	2.15	0.57
7:D:2545:G:N1	7:D:2546:U:O2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2660:A:C2	34:e:175:LYS:HD3	2.39	0.57
16:M:49:PRO:HD3	16:M:101:PHE:HE2	1.69	0.57
18:O:43:SER:HB2	18:O:71:LYS:HZ1	1.70	0.57
26:W:49:ILE:N	26:W:49:ILE:HD13	2.20	0.57
29:Z:91:ALA:HB2	29:Z:153:ILE:CG2	2.35	0.57
29:Z:216:THR:OG1	29:Z:220:PRO:O	2.16	0.57
32:c:205:ARG:C	32:c:208:GLY:H	2.12	0.57
42:m:66:ASN:HB3	42:m:70:ARG:NH2	2.12	0.57
45:p:31:HIS:HD2	45:p:32:PRO:HD2	1.69	0.57
52:w:30:LEU:HB2	52:w:39:MET:HB2	1.86	0.57
56:B:303:ALA:HB3	56:B:346:CYS:C	2.28	0.57
56:B:492:VAL:CG2	56:B:541:ILE:CG2	2.83	0.57
56:B:528:ILE:HG13	56:B:528:ILE:O	2.03	0.57
56:B:597:PHE:C	56:B:599:ALA:H	2.12	0.57
4:4:63:G:H5"	4:4:64:G:OP2	2.05	0.57
6:A:277:C:H5'	24:U:68:ARG:NH1	2.20	0.57
6:A:443:C:C6	6:A:492:G:N2	2.72	0.57
6:A:1169:A:C6	6:A:1170:A:N6	2.73	0.57
6:A:1265:G:C6	6:A:1266:G:H1'	2.40	0.57
7:D:37:C:H2'	7:D:38:A:H8	1.69	0.57
7:D:139:G:C2	7:D:140:A:H1'	2.39	0.57
7:D:153:C:O2	7:D:174:C:O2	2.22	0.57
7:D:270(Z):U:N3	7:D:271(B):G:OP1	2.36	0.57
7:D:585:G:C2	7:D:1251:C:N4	2.73	0.57
7:D:685:A:C8	7:D:774:A:C6	2.93	0.57
7:D:1569:A:O2'	30:a:39:LYS:HD2	2.03	0.57
7:D:1899:G:H22	7:D:1902:C:H41	1.50	0.57
7:D:2787:C:H5'	31:b:64:LYS:HD2	1.86	0.57
8:E:23:G:H5"	8:E:24:G:OP2	2.04	0.57
9:F:24:TRP:CG	9:F:25:ASN:H	2.22	0.57
11:H:60:GLU:OE2	11:H:198:VAL:HB	2.04	0.57
25:V:80:PRO:HB2	25:V:83:GLU:OE2	2.05	0.57
29:Z:66:HIS:N	29:Z:158:ALA:O	2.37	0.57
29:Z:131:LEU:HB3	29:Z:136:LEU:HB2	1.85	0.57
53:x:22:ALA:HB3	53:x:39:TYR:HE2	1.70	0.57
56:B:23:SER:N	57:B:701:GCP:O2B	2.38	0.57
56:B:70:ALA:CA	56:B:178:LEU:HD21	2.34	0.57
56:B:153:GLU:HG3	56:B:159:PRO:HB2	1.87	0.57
56:B:200:ILE:CD1	56:B:274:VAL:CG1	2.60	0.57
56:B:205:TYR:OH	56:B:271:ILE:CG1	2.35	0.57
56:B:242:VAL:CG2	56:B:256:LEU:CD2	2.83	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:411:LYS:CA	56:B:452:TYR:O	2.49	0.57
56:B:531:GLN:CD	56:B:532:LEU:HG	2.30	0.57
56:B:556:LYS:O	56:B:558:VAL:HG23	2.04	0.57
3:3:10:LEU:CG	3:3:57:ILE:CD1	2.72	0.57
4:4:23:C:H2'	4:4:24:U:H6	1.70	0.57
6:A:90:C:C2	6:A:91:C:N4	2.73	0.57
6:A:160:A:H2'	6:A:161:A:H8	1.69	0.57
6:A:287:U:H2'	6:A:288:A:C8	2.40	0.57
6:A:362:G:N1	6:A:365:U:OP2	2.37	0.57
6:A:449:C:C2	23:T:42:ARG:NH1	2.73	0.57
6:A:474:G:N2	6:A:475:G:C2	2.73	0.57
6:A:584:G:O6	6:A:758:G:N2	2.37	0.57
6:A:1238:A:H5"	6:A:1239:A:OP2	2.03	0.57
6:A:1288:A:C6	6:A:1289:A:C6	2.92	0.57
6:A:1320:C:C5'	26:W:70:LYS:CE	2.31	0.57
6:A:1323:G:H2'	6:A:1324:A:C8	2.40	0.57
6:A:1479:C:H2'	6:A:1480:G:H8	1.68	0.57
7:D:273(C):C:H2'	7:D:273(D):C:C6	2.38	0.57
7:D:295:G:C4	7:D:344:G:N2	2.72	0.57
7:D:375:C:H42	7:D:399:G:H1	1.53	0.57
7:D:541:C:C5	7:D:542:C:N4	2.73	0.57
7:D:775:G:H5"	7:D:777:A:N9	2.19	0.57
7:D:884:C:C1'	7:D:885:C:C5	2.87	0.57
7:D:1054:A:H2'	7:D:1055:G:C8	2.26	0.57
7:D:1448:G:H1	7:D:1463:C:N4	2.02	0.57
7:D:1748:G:H2'	7:D:1749:A:N9	2.19	0.57
7:D:1797:C:H2'	7:D:1798:U:H6	1.69	0.57
7:D:1913:A:HO2'	7:D:1914:C:P	2.27	0.57
7:D:1943:U:OP1	56:B:532:LEU:HD11	2.04	0.57
7:D:2301:C:N4	7:D:2302:G:O6	2.37	0.57
7:D:2461:C:H1'	7:D:2492:U:C4	2.39	0.57
7:D:2592:G:C2	7:D:2603:G:C2	2.93	0.57
7:D:2630:G:N3	7:D:2893:G:C2	2.66	0.57
7:D:2659:G:H4'	7:D:2660:A:N1	2.19	0.57
15:L:118:VAL:O	15:L:119:LEU:HD12	2.05	0.57
19:P:24:VAL:HG13	19:P:98:TYR:HE1	1.70	0.57
19:P:86:ARG:HH21	19:P:99:HIS:CE1	2.22	0.57
23:T:19:ILE:HG22	23:T:36:ILE:HG13	1.85	0.57
29:Z:66:HIS:H	29:Z:158:ALA:C	2.12	0.57
30:a:10:THR:HG23	30:a:23:GLU:OE2	2.05	0.57
30:a:177:LEU:HB2	30:a:178:PRO:HD2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:30:PRO:HB2	31:b:48:GLN:HB2	1.87	0.57
33:d:32:PRO:HG2	33:d:168:GLU:CA	2.33	0.57
34:e:164:TYR:HE1	34:e:167:GLU:HG2	1.69	0.57
37:h:123:LEU:O	37:h:124:LYS:HG3	2.05	0.57
41:l:45:PHE:HE1	41:l:86:ILE:HD12	1.69	0.57
43:n:21:ARG:H	43:n:95:LEU:HD22	1.69	0.57
53:x:8:LYS:O	53:x:28:ARG:HB3	2.05	0.57
55:z:56:GLU:HA	55:z:59:LYS:CG	2.28	0.57
56:B:15:ILE:HA	56:B:22:LYS:HE3	1.86	0.57
56:B:48:SER:C	56:B:50:GLU:H	2.13	0.57
56:B:69:ARG:HA	56:B:69:ARG:NH2	2.18	0.57
56:B:229:ARG:O	56:B:280:ILE:CG2	2.52	0.57
56:B:306:TYR:HB2	56:B:370:ILE:HB	1.76	0.57
56:B:382:LEU:H	56:B:386:GLU:CB	2.16	0.57
56:B:526:GLU:OE1	56:B:595:GLU:HB3	2.05	0.57
6:A:44:G:C2	6:A:399:G:C2	2.92	0.57
6:A:66:G:C2	6:A:104:G:H1'	2.40	0.57
6:A:97:U:C4	6:A:99:C:N4	2.73	0.57
6:A:477:G:H2'	6:A:478:A:C8	2.35	0.57
6:A:695:A:H61	6:A:797:C:H1'	1.70	0.57
6:A:1039:C:H2'	6:A:1040:U:H6	1.68	0.57
6:A:1408:A:N7	6:A:1409:C:C4	2.73	0.57
6:A:1447:G:C5	6:A:1448:C:N4	2.73	0.57
7:D:65:C:H2'	7:D:66:C:C6	2.39	0.57
7:D:155:C:H4'	7:D:161:U:OP1	2.03	0.57
7:D:465:G:P	54:y:12:ARG:HH12	2.27	0.57
7:D:727:A:N6	7:D:729:G:O6	2.36	0.57
7:D:958:U:O2'	7:D:959:A:OP2	2.18	0.57
7:D:1477:A:C6	7:D:1478:G:C6	2.92	0.57
7:D:1480:G:OP1	7:D:1559:G:N1	2.38	0.57
7:D:1748:G:O2'	7:D:1749:A:O4'	2.17	0.57
7:D:1971:A:N3	30:a:239:ARG:HB2	2.19	0.57
9:F:32:ILE:HD11	9:F:40:HIS:HB3	1.85	0.57
11:H:121:VAL:O	11:H:134:ASP:HB2	2.04	0.57
17:N:54:PHE:CD2	17:N:55:LYS:HG2	2.40	0.57
23:T:3:LYS:NZ	23:T:24:ALA:HB2	2.19	0.57
29:Z:22:ILE:HG13	29:Z:228:SER:OXT	2.05	0.57
31:b:131:ALA:C	31:b:133:LYS:H	2.13	0.57
32:c:42:ALA:O	32:c:45:ARG:HG2	2.04	0.57
34:e:91:GLY:O	34:e:94:TYR:HD2	1.88	0.57
35:f:110:GLY:O	35:f:114:ARG:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:10:VAL:HG13	36:g:11:ALA:H	1.69	0.57
37:h:49:ARG:HG2	55:z:52:LYS:HZ2	1.67	0.57
43:n:28:GLU:HA	43:n:64:HIS:CE1	2.39	0.57
56:B:25:LEU:HB2	56:B:168:GLY:CA	2.34	0.57
56:B:64:VAL:CG2	56:B:80:LEU:H	2.17	0.57
56:B:246:THR:OG1	56:B:251:VAL:HG23	2.04	0.57
56:B:306:TYR:CE1	56:B:339:ALA:C	2.83	0.57
56:B:337:SER:O	56:B:338:THR:OG1	2.22	0.57
56:B:383:LYS:CD	56:B:402:ILE:CG2	2.78	0.57
56:B:397:PRO:HB2	56:B:401:ARG:NH2	2.20	0.57
56:B:417:PRO:HA	56:B:448:VAL:HG23	0.65	0.57
56:B:527:VAL:O	56:B:529:PRO:HD3	2.04	0.57
6:A:125:U:H2'	6:A:126:G:C8	2.40	0.57
6:A:210:U:H1'	6:A:216:G:O5'	2.04	0.57
6:A:285:G:H2'	6:A:286:G:H8	1.70	0.57
6:A:308:C:H3'	6:A:308:C:OP2	2.05	0.57
6:A:370:C:O2'	6:A:371:G:H5'	2.05	0.57
6:A:475:G:C2	6:A:476:G:C4	2.93	0.57
6:A:538:G:H2'	6:A:539:A:C8	2.39	0.57
6:A:979:C:OP1	6:A:1223:C:N4	2.38	0.57
7:D:132:G:N2	7:D:148:C:O2	2.38	0.57
7:D:222:A:N6	7:D:224:G:C2	2.73	0.57
7:D:230:U:H2'	7:D:231:C:C6	2.39	0.57
7:D:448:U:O2'	7:D:449:A:P	2.63	0.57
7:D:667:U:OP2	37:h:41:ARG:HD3	2.05	0.57
7:D:1131:G:C4'	35:f:74:ARG:HH12	2.18	0.57
7:D:1386:C:H2'	7:D:1387:C:C6	2.40	0.57
7:D:1466:G:N3	7:D:1547:C:N4	2.53	0.57
7:D:1582:C:C4	7:D:1583:A:N6	2.73	0.57
7:D:1619:G:H21	54:y:1:MET:N	1.98	0.57
7:D:1652:A:H62	7:D:1653:G:N2	2.02	0.57
7:D:1661:G:N2	7:D:2000:G:C4	2.73	0.57
7:D:1743:G:C2	7:D:1746:G:H1'	2.40	0.57
7:D:1777:U:H3	7:D:1787:A:H61	1.51	0.57
7:D:2205:C:H2'	7:D:2206:C:C6	2.40	0.57
7:D:2711:A:OP2	7:D:2712(A):A:OP2	2.22	0.57
7:D:2776:A:C6	7:D:2778:A:C6	2.93	0.57
9:F:114:ARG:HG3	9:F:117:GLU:OE2	2.04	0.57
26:W:15:LEU:HD21	26:W:19:VAL:CB	1.96	0.57
31:b:50:GLY:H	31:b:76:ARG:HG3	1.70	0.57
33:d:77:ILE:HD13	33:d:83:ARG:NH1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:13:ASN:HA	36:g:94:ARG:CZ	2.35	0.57
37:h:122:PRO:HB3	37:h:137:LYS:C	2.30	0.57
39:j:65:LEU:O	39:j:68:ARG:HB3	2.04	0.57
56:B:265:VAL:O	56:B:266:ALA:HB3	2.05	0.57
56:B:332:PHE:CD1	56:B:333:GLU:N	2.73	0.57
6:A:424:G:H2'	6:A:425:G:H8	1.69	0.57
6:A:642:A:N7	15:L:115:SER:HA	2.20	0.57
6:A:713:G:N2	6:A:777:A:H1'	2.20	0.57
6:A:1146:A:H3'	6:A:1147:C:C6	2.39	0.57
7:D:243:U:OP2	55:z:7:HIS:NE2	2.38	0.57
7:D:336:C:C2'	7:D:337:C:H5'	2.35	0.57
7:D:627:A:H2	7:D:637:A:C4	2.23	0.57
7:D:829:A:N7	7:D:2248:C:H5'	2.19	0.57
7:D:1062:G:H1'	7:D:1063:G:P	2.45	0.57
7:D:1223:C:N4	43:n:88:ARG:HH12	2.03	0.57
7:D:1255:U:C6	32:c:74:ARG:HB2	2.39	0.57
7:D:1882:C:C5	7:D:1883:G:C5	2.92	0.57
7:D:2227:A:C5	7:D:2228:G:N7	2.72	0.57
7:D:2576:G:O2'	7:D:2579:C:OP2	2.22	0.57
7:D:2631:G:P	7:D:2894:G:H5'	2.45	0.57
7:D:2660:A:N1	34:e:175:LYS:HD3	2.19	0.57
7:D:2704:C:H2'	7:D:2705:A:C8	2.37	0.57
8:E:33:G:H2'	8:E:34:U:C6	2.40	0.57
9:F:161:ALA:HA	9:F:182:ILE:HG23	1.86	0.57
43:n:6:LYS:HG2	43:n:10:LYS:CG	2.35	0.57
46:q:46:LYS:HE3	46:q:52:SER:HB2	1.87	0.57
56:B:106:VAL:CG1	56:B:136:ASN:HB2	2.35	0.57
56:B:372:THR:HG22	56:B:373:ALA:H	1.69	0.57
56:B:378:TYR:HD2	56:B:489:LEU:CD1	2.15	0.57
6:A:86:U:O5'	6:A:86:U:H6	1.87	0.56
6:A:90:C:N3	6:A:91:C:N4	2.52	0.56
6:A:99:C:H4'	6:A:101:A:OP1	2.04	0.56
6:A:146:G:H1	6:A:176:C:H42	1.53	0.56
6:A:191(F):U:H2'	6:A:191:G:C8	2.40	0.56
6:A:322:C:H2'	6:A:323:U:C6	2.40	0.56
6:A:443:C:N1	6:A:492:G:C2	2.73	0.56
6:A:502:G:C6	6:A:544:G:C6	2.92	0.56
6:A:570:G:O3'	6:A:819:A:O2'	2.23	0.56
6:A:613:C:H2'	6:A:614:A:H8	1.66	0.56
6:A:848:C:C4	6:A:849:C:N4	2.73	0.56
7:D:295:G:H1'	7:D:344:G:N2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:533:G:H5'	42:m:24:TYR:CD1	2.40	0.56
7:D:616:A:O2'	7:D:617:G:O4'	2.22	0.56
7:D:681:G:N2	7:D:797:C:O2	2.38	0.56
7:D:869:G:C2	7:D:909:A:C2	2.93	0.56
7:D:1204:A:H4'	7:D:1205:U:O5'	2.04	0.56
7:D:1307:A:H1'	7:D:1622:G:N2	2.20	0.56
7:D:1862:G:N2	7:D:1863:G:C6	2.73	0.56
7:D:2757:A:H2'	7:D:2758:A:C5'	2.34	0.56
15:L:89:PRO:HA	15:L:92:ARG:HE	1.69	0.56
20:Q:25:ILE:HD11	20:Q:66:LEU:HD13	1.86	0.56
29:Z:144:THR:OG1	29:Z:145:VAL:N	2.37	0.56
29:Z:152:ILE:HG23	29:Z:155:GLU:OE1	2.04	0.56
30:a:7:LYS:CE	30:a:91:ARG:HE	2.18	0.56
30:a:7:LYS:HA	30:a:27:THR:HA	1.87	0.56
31:b:146:THR:HB	31:b:147:PRO:HD3	1.87	0.56
32:c:118:ALA:HA	32:c:122:LYS:HG3	1.87	0.56
36:g:64:ARG:NH1	36:g:68:GLU:N	2.34	0.56
56:B:115:ALA:HB2	56:B:474:TYR:CE1	2.40	0.56
56:B:195:PRO:HG2	56:B:287:THR:CA	2.34	0.56
6:A:195:A:H4'	27:X:68:LYS:HZ2	1.70	0.56
6:A:451:A:C5	6:A:481:G:C6	2.93	0.56
6:A:861:G:O2'	6:A:874:G:O2'	2.21	0.56
6:A:1163:C:H2'	6:A:1164:G:C5'	2.31	0.56
6:A:1449:C:N3	6:A:1455:G:C2	2.73	0.56
7:D:93:C:N4	7:D:94:G:N3	2.53	0.56
7:D:149:A:H2'	7:D:150:C:O4'	2.05	0.56
7:D:164:U:H5'	7:D:164:U:O2	2.05	0.56
7:D:294:A:N6	7:D:346:A:C6	2.73	0.56
7:D:445:C:H5'	42:m:3:ARG:HG2	1.86	0.56
7:D:517:C:OP1	52:w:16:ARG:NH1	2.39	0.56
7:D:707:G:C6	7:D:708:C:C2	2.93	0.56
7:D:740:U:H2'	7:D:741:G:H8	1.70	0.56
7:D:777:A:H2	7:D:778:G:C4	2.22	0.56
7:D:1580:A:C2'	7:D:1581:G:C4	2.86	0.56
7:D:1748:G:C2	7:D:1749:A:N3	2.73	0.56
7:D:1871:A:N3	7:D:1872:A:C8	2.73	0.56
7:D:2141:G:H2'	7:D:2142:C:H6	1.69	0.56
7:D:2175:C:OP2	29:Z:5:LYS:HG2	2.04	0.56
7:D:2748:A:N7	7:D:2749:A:C6	2.73	0.56
7:D:2748:A:O2'	34:e:66:GLY:HA3	2.06	0.56
9:F:181:PHE:HE1	15:L:72:PRO:HD3	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:165:MET:HG3	11:H:166:LYS:H	1.70	0.56
11:H:173:TRP:CD1	11:H:174:LEU:HG	2.40	0.56
12:I:97:GLY:O	12:I:99:GLY:N	2.37	0.56
19:P:102:ARG:HA	19:P:107:ALA:HB1	1.87	0.56
20:Q:70:LEU:O	20:Q:74:VAL:HB	2.05	0.56
28:Y:3:LYS:O	28:Y:11:GLY:HA2	2.05	0.56
32:c:50:SER:O	32:c:52:LYS:HG3	2.05	0.56
34:e:95:ARG:HB2	34:e:106:THR:HB	1.87	0.56
48:s:23:VAL:HG22	48:s:38:VAL:HG13	1.87	0.56
56:B:64:VAL:HG11	56:B:80:LEU:O	2.05	0.56
56:B:135:ILE:CG1	56:B:165:PHE:HA	2.33	0.56
56:B:337:SER:OG	56:B:393:PRO:HB2	2.04	0.56
56:B:351:LEU:CG	56:B:465:ASP:OD2	2.43	0.56
56:B:528:ILE:CG2	56:B:592:VAL:HG11	2.36	0.56
3:3:22:PRO:HD2	3:3:23:VAL:H	1.70	0.56
6:A:187:C:N4	6:A:188:U:O2	2.37	0.56
6:A:410:G:H1'	6:A:432:A:H61	1.70	0.56
6:A:500:G:H2'	6:A:501:C:C6	2.41	0.56
6:A:560:U:H4'	6:A:561:U:H5"	1.86	0.56
6:A:976:G:N7	6:A:1362:C:N4	2.54	0.56
6:A:1075:C:H2'	6:A:1076:C:C6	2.41	0.56
6:A:1152:A:O5'	17:N:13:HIS:NE2	2.39	0.56
6:A:1169:A:C3'	6:A:1170:A:C8	2.88	0.56
6:A:1295:G:H1'	20:Q:14:ARG:HH21	1.69	0.56
6:A:1329:A:O2'	20:Q:24:GLY:HA2	2.05	0.56
6:A:1401:G:H5"	6:A:1402:C:OP2	2.06	0.56
6:A:1422:G:H1	6:A:1478:C:H42	1.53	0.56
6:A:1454:G:C6	6:A:1455:G:C8	2.92	0.56
6:A:1454:G:H8	6:A:1454:G:O5'	1.87	0.56
6:A:1495:U:OP1	7:D:1912:A:O2'	2.23	0.56
7:D:22:C:H2'	7:D:23:G:H8	1.70	0.56
7:D:150:C:N4	7:D:176:G:H1	2.03	0.56
7:D:339:U:H6	7:D:339:U:OP1	1.89	0.56
7:D:452:G:H5"	7:D:453:C:OP2	2.04	0.56
7:D:455:C:H5'	7:D:472:A:C2	2.41	0.56
7:D:532:A:OP2	7:D:2021:C:C4	2.58	0.56
7:D:542:C:N3	7:D:543:C:N4	2.53	0.56
7:D:596:G:H21	37:h:17:LYS:HE2	1.70	0.56
7:D:603:A:N1	7:D:625:G:C4	2.73	0.56
7:D:684:G:C4	7:D:775:G:C6	2.92	0.56
7:D:687:C:O2	7:D:788:A:C8	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1056:G:H5'	7:D:1057:A:H5'	1.86	0.56
7:D:1181:C:H2'	7:D:1182:A:O4'	2.06	0.56
7:D:1566:A:C5	30:a:215:LEU:HD22	2.40	0.56
7:D:1717:G:C6	7:D:1718:G:N2	2.73	0.56
7:D:1734:C:C4	7:D:1735:C:N4	2.73	0.56
7:D:1735:C:H2'	7:D:1741:C:N1	2.19	0.56
7:D:2134:A:C4	7:D:2134:A:OP2	2.59	0.56
7:D:2148:G:H3'	7:D:2149:G:C8	2.40	0.56
7:D:2503:A:O2'	7:D:2505:G:OP2	2.23	0.56
7:D:2577:A:H4'	7:D:2612:C:C5	2.41	0.56
7:D:2593:U:H2'	7:D:2594:C:C6	2.40	0.56
7:D:2725:A:N6	7:D:2727:G:C4	2.73	0.56
9:F:112:VAL:HG22	9:F:149:LEU:HD21	1.87	0.56
10:G:82:GLU:OE2	10:G:83:ARG:HG2	2.06	0.56
12:I:75:THR:HB	12:I:117:ASP:OD2	2.05	0.56
19:P:86:ARG:NH2	19:P:99:HIS:HE1	2.04	0.56
20:Q:89:GLY:O	20:Q:92:HIS:HB2	2.04	0.56
22:S:7:GLU:HB2	22:S:10:LYS:HE3	1.87	0.56
26:W:6:LYS:NZ	26:W:11:VAL:HA	2.19	0.56
26:W:29:ARG:N	26:W:29:ARG:HE	2.03	0.56
29:Z:43:VAL:HG21	29:Z:175:VAL:HG13	1.79	0.56
29:Z:45:ALA:O	29:Z:171:ILE:HG22	2.05	0.56
29:Z:177:LYS:H	29:Z:180:PHE:HD2	1.54	0.56
31:b:53:PRO:CD	31:b:74:PRO:HA	2.35	0.56
33:d:31:VAL:HB	33:d:32:PRO:HD2	1.87	0.56
33:d:63:ILE:HD12	33:d:105:LYS:NZ	2.21	0.56
33:d:70:VAL:O	33:d:71:THR:OG1	2.22	0.56
35:f:109:LYS:HG3	35:f:110:GLY:N	2.20	0.56
37:h:75:ILE:HG23	37:h:115:LEU:HD11	1.88	0.56
45:p:35:THR:O	45:p:37:THR:N	2.38	0.56
47:r:77:ASP:OD2	47:r:80:ARG:HG2	2.06	0.56
56:B:6:LEU:HD12	56:B:6:LEU:H	1.70	0.56
56:B:66:VAL:O	56:B:76:TYR:CE2	2.57	0.56
56:B:169:LYS:HD3	57:B:701:GCP:N3	2.08	0.56
56:B:238:THR:O	56:B:239:VAL:HG12	2.05	0.56
56:B:298:LYS:O	56:B:479:TYR:OH	2.23	0.56
56:B:382:LEU:HD22	56:B:383:LYS:H	1.69	0.56
56:B:398:ASP:HB3	56:B:399:PRO:CD	2.36	0.56
56:B:419:GLU:HG2	56:B:419:GLU:O	2.05	0.56
56:B:492:VAL:CA	56:B:541:ILE:CG2	2.66	0.56
56:B:587:ILE:H	56:B:587:ILE:HD12	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:129:GLY:C	7:D:1059:G:H22	2.13	0.56
6:A:584:G:H2'	6:A:585:G:C8	2.41	0.56
6:A:588:G:C2	6:A:589:C:C2	2.93	0.56
6:A:789:U:C4	6:A:791:G:OP2	2.59	0.56
6:A:815:A:H62	6:A:1509:C:H1'	1.70	0.56
6:A:1454:G:C6	6:A:1455:G:C5	2.93	0.56
7:D:59:U:O2'	7:D:74:A:OP2	2.17	0.56
7:D:140:A:C2	7:D:141:A:H1'	2.40	0.56
7:D:270(W):G:H2'	7:D:270(X):G:C8	2.40	0.56
7:D:363(F):A:C2'	7:D:364:C:O4'	2.50	0.56
7:D:556:G:H2'	7:D:557:U:H6	1.68	0.56
7:D:611:C:N3	7:D:612:G:N1	2.53	0.56
7:D:960:A:HO2'	7:D:2456:C:HO2'	1.50	0.56
7:D:1085:A:O2'	7:D:1086:A:O4'	2.24	0.56
7:D:1421:G:H21	7:D:1495:A:N6	2.03	0.56
7:D:1589:C:H2'	7:D:1590:U:H6	1.70	0.56
7:D:1725:G:N2	7:D:1735:C:C2	2.72	0.56
7:D:2420:C:OP2	55:z:34:TRP:HB2	2.05	0.56
7:D:2515:C:OP1	35:f:79:PRO:HB3	2.05	0.56
7:D:2630:G:OP1	7:D:2895:U:C4	2.57	0.56
29:Z:21:THR:OG1	29:Z:24:GLU:OE1	2.22	0.56
29:Z:192:PHE:O	29:Z:195:ALA:HB3	2.05	0.56
30:a:157:ARG:HB2	30:a:196:VAL:HG21	1.87	0.56
31:b:38:THR:HA	31:b:41:LYS:O	2.06	0.56
33:d:107:LEU:HD21	33:d:177:GLY:HA3	1.87	0.56
35:f:22:THR:HG23	35:f:61:ARG:CZ	2.36	0.56
38:i:11:LYS:NZ	38:i:73:PRO:HD3	2.21	0.56
40:k:94:TYR:HB3	40:k:99:LYS:HB2	1.88	0.56
46:q:13:VAL:CA	46:q:73:ARG:HH11	2.17	0.56
56:B:17:HIS:CB	56:B:20:HIS:CD2	2.88	0.56
56:B:67:THR:CA	56:B:76:TYR:CB	2.71	0.56
56:B:242:VAL:O	56:B:263:TRP:HD1	1.88	0.56
56:B:338:THR:CG2	56:B:502:ASP:OD1	2.53	0.56
56:B:517:ALA:C	56:B:519:ALA:H	2.12	0.56
5:5:49:C:N4	5:5:63:G:O6	2.39	0.56
5:5:76:A:H62	7:D:2422:A:C5'	2.17	0.56
6:A:173:U:O2	6:A:197:A:N6	2.38	0.56
6:A:1085:U:H3'	6:A:1086:U:C6	2.41	0.56
6:A:1229:A:H2'	6:A:1230:C:H6	1.70	0.56
6:A:1306:A:N6	6:A:1307:U:O2	2.39	0.56
6:A:1454:G:N2	6:A:1455:G:H1'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:83:G:H22	7:D:102:G:H2'	1.70	0.56
7:D:173:G:N1	7:D:174:C:C4	2.73	0.56
7:D:182:A:O5'	7:D:182:A:H8	1.88	0.56
7:D:307:G:H21	7:D:330:A:H62	1.53	0.56
7:D:351:G:O2'	7:D:352:G:OP2	2.24	0.56
7:D:458:G:H5"	54:y:39:ARG:HD2	1.86	0.56
7:D:729:G:H2'	7:D:730:C:C1'	2.36	0.56
7:D:777:A:C2	7:D:778:G:C4	2.94	0.56
7:D:807:U:H2'	7:D:808:G:H8	1.71	0.56
7:D:974:G:C2	7:D:1186:G:N7	2.74	0.56
7:D:1020:A:N6	7:D:1141:U:OP2	2.37	0.56
7:D:1784:A:C8	7:D:1981:A:C5	2.94	0.56
7:D:2094:G:C6	7:D:2195:C:N4	2.71	0.56
7:D:2205:C:C5	7:D:2206:C:N4	2.73	0.56
7:D:2547:U:C2	7:D:2566:A:N6	2.73	0.56
7:D:2612:C:O2	52:w:4:HIS:CE1	2.59	0.56
7:D:2809:A:O4'	7:D:2811:G:N7	2.38	0.56
8:E:100:G:H2'	8:E:101:A:O4'	2.06	0.56
15:L:90:GLY:O	24:U:34:LYS:HD3	2.06	0.56
22:S:88:ARG:HG2	22:S:89:GLY:N	2.20	0.56
24:U:68:ARG:N	24:U:70:ARG:HH12	2.03	0.56
43:n:65:GLY:N	43:n:97:LYS:HZ3	2.03	0.56
44:o:26:GLY:H	44:o:71:VAL:HG13	1.70	0.56
49:t:17:GLU:HA	49:t:20:VAL:HG12	1.87	0.56
56:B:67:THR:O	56:B:69:ARG:N	2.39	0.56
56:B:174:VAL:HG11	56:B:177:ILE:CD1	2.34	0.56
56:B:206:ASP:HA	56:B:210:GLY:C	2.29	0.56
56:B:345:ARG:CZ	56:B:348:PHE:CE1	2.88	0.56
56:B:411:LYS:NZ	56:B:436:VAL:CG2	2.68	0.56
5:5:17:C:N4	7:D:2181:G:C5'	2.67	0.56
6:A:123:C:OP1	6:A:311:C:O2'	2.22	0.56
6:A:280:C:C4	24:U:91:ARG:NH1	2.74	0.56
6:A:453:A:N1	6:A:454:C:N4	2.53	0.56
6:A:1021:G:H2'	6:A:1022:G:C8	2.40	0.56
6:A:1226:C:N3	20:Q:104:ARG:CD	2.68	0.56
6:A:1309:G:C2	6:A:1329:A:N7	2.67	0.56
6:A:1440:C:C5	6:A:1441:G:C5	2.94	0.56
6:A:1517:G:N9	7:D:1920:C:OP2	2.39	0.56
6:A:1529:G:O2'	6:A:1530:G:OP1	2.24	0.56
7:D:355:G:N1	7:D:356:G:C6	2.74	0.56
7:D:415:A:H2'	7:D:416:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:482:A:C6	7:D:506:G:C5	2.94	0.56
7:D:1007:C:H42	7:D:1135:C:H42	1.53	0.56
7:D:1193:G:N2	7:D:1194:A:C4	2.74	0.56
7:D:1286:A:N1	7:D:1329:U:H2'	2.19	0.56
7:D:1312:U:O2	7:D:1603:A:N6	2.30	0.56
7:D:1485:G:H2'	7:D:1486:A:H5'	1.88	0.56
7:D:1565:C:P	30:a:26:LYS:HZ2	2.29	0.56
7:D:2126:A:H61	7:D:2172:U:H5'	1.71	0.56
7:D:2306:C:H4'	33:d:153:ARG:CZ	2.36	0.56
7:D:2461:C:H1'	7:D:2492:U:C5	2.41	0.56
7:D:2632:A:HO2'	7:D:2811:G:HO2'	1.51	0.56
7:D:2805:G:H3'	7:D:2807:G:H5"	1.88	0.56
9:F:74:LYS:HA	9:F:169:LYS:HE2	1.87	0.56
9:F:126:GLU:O	9:F:129:GLU:N	2.30	0.56
9:F:134:GLU:HA	9:F:137:ARG:HH11	1.70	0.56
10:G:5:ILE:HD11	10:G:10:PHE:CD2	2.40	0.56
30:a:5:LYS:HB3	30:a:29:PRO:HD3	1.88	0.56
33:d:64:THR:HG23	33:d:65:GLY:H	1.70	0.56
36:g:63:VAL:HA	36:g:78:ARG:NH1	2.21	0.56
50:u:10:LYS:NZ	50:u:31:LEU:HD21	2.21	0.56
56:B:226:ASP:N	56:B:239:VAL:HG12	2.15	0.56
6:A:256:U:H3	6:A:270:A:N6	2.03	0.56
6:A:342:C:C4	6:A:343:U:C4	2.94	0.56
6:A:675:A:H1'	18:O:116:HIS:ND1	2.20	0.56
6:A:848:C:C2	6:A:849:C:N4	2.73	0.56
6:A:1305:G:O2'	6:A:1306:A:O4'	2.24	0.56
6:A:1452:C:H1'	6:A:1453:G:C2	2.40	0.56
6:A:1455:G:N2	6:A:1459:C:O2	2.39	0.56
7:D:46:C:C4	7:D:47:C:N4	2.73	0.56
7:D:172:C:O2'	7:D:173:G:H5'	2.06	0.56
7:D:173:G:C6	7:D:174:C:C4	2.94	0.56
7:D:439:G:N1	7:D:440:G:C6	2.73	0.56
7:D:615:G:OP2	7:D:615:G:H4'	2.04	0.56
7:D:976:C:H5'	7:D:1156:A:N6	2.18	0.56
7:D:1400:G:H2'	7:D:1401:G:H8	1.69	0.56
7:D:1491:G:C3'	7:D:1492:G:H4'	2.33	0.56
7:D:1783:A:H2	7:D:2587:A:C5	2.23	0.56
10:G:54:ARG:HD3	10:G:69:HIS:CD2	2.36	0.56
10:G:64:VAL:HG12	10:G:66:VAL:HG23	1.87	0.56
11:H:68:TYR:CE2	11:H:97:LEU:HD13	2.41	0.56
23:T:60:LEU:HD21	23:T:66:PRO:HD3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:15:LEU:O	26:W:19:VAL:CG2	2.51	0.56
31:b:8:LYS:HG2	41:l:6:LEU:HD21	1.88	0.56
31:b:83:ASP:OD1	31:b:83:ASP:N	2.37	0.56
32:c:133:ASN:HD21	32:c:162:LEU:HD22	1.71	0.56
34:e:45:VAL:HG13	34:e:50:VAL:HG22	1.87	0.56
34:e:126:PRO:HD2	34:e:131:VAL:HA	1.87	0.56
37:h:52:GLU:O	55:z:13:ARG:NH2	2.39	0.56
37:h:114:ILE:HG21	37:h:123:LEU:HG	1.87	0.56
47:r:71:VAL:HG22	47:r:88:PHE:CE1	2.39	0.56
55:z:30:ARG:HA	55:z:34:TRP:CZ2	2.39	0.56
56:B:12:PHE:HE2	56:B:78:PHE:HB3	1.69	0.56
56:B:47:ASP:OD1	56:B:53:ARG:N	2.38	0.56
56:B:66:VAL:C	56:B:76:TYR:CE1	2.84	0.56
56:B:265:VAL:CG2	56:B:266:ALA:H	2.05	0.56
56:B:307:PRO:HD2	56:B:341:GLY:CA	2.35	0.56
56:B:379:LYS:NZ	56:B:484:TYR:HB3	2.21	0.56
56:B:379:LYS:HD3	56:B:407:GLU:H	1.71	0.56
56:B:407:GLU:OE1	56:B:409:TYR:HE1	1.88	0.56
56:B:455:PRO:CG	56:B:458:GLU:HB2	2.36	0.56
56:B:524:LEU:O	56:B:525:ALA:HB3	2.05	0.56
56:B:532:LEU:CB	56:B:553:ALA:HB1	2.35	0.56
3:3:84:LEU:HD11	3:3:134:MET:HG3	1.87	0.56
5:5:64:A:H2'	5:5:65:G:O4'	2.06	0.56
6:A:443:C:N3	6:A:492:G:C6	2.73	0.56
6:A:942:G:C6	6:A:943:U:C4	2.94	0.56
6:A:1065:U:O2'	6:A:1066:C:O5'	2.24	0.56
6:A:1504:G:H4'	6:A:1505:G:OP2	2.05	0.56
7:D:43:G:C4	7:D:44:A:N7	2.73	0.56
7:D:173:G:N2	7:D:174:C:C2	2.73	0.56
7:D:273(B):C:N3	7:D:363(D):G:N1	2.52	0.56
7:D:558:G:OP1	35:f:111:PRO:HG2	2.06	0.56
7:D:636:G:H1	37:h:75:ILE:HD11	1.70	0.56
7:D:729:G:H2'	7:D:730:C:H1'	1.88	0.56
7:D:974:G:C5	7:D:1186:G:C6	2.94	0.56
7:D:1099:G:N2	7:D:1100:C:H1'	2.21	0.56
7:D:1204:A:OP2	7:D:1204:A:C4	2.59	0.56
7:D:1518:C:C4	7:D:1519:G:C8	2.94	0.56
7:D:1665:A:C2	7:D:1666:G:C4	2.94	0.56
7:D:1839:G:C6	7:D:1927:A:C5	2.94	0.56
7:D:2110:G:C2	7:D:2180:U:C2	2.93	0.56
7:D:2184:G:C5	7:D:2185:C:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2268:A:H5'	7:D:2269:A:OP2	2.05	0.56
7:D:2368:C:H2'	7:D:2369:A:H8	1.70	0.56
25:V:53:ARG:NH1	25:V:58:LEU:O	2.39	0.56
26:W:3:ARG:HG2	26:W:42:PRO:CB	2.32	0.56
26:W:51:VAL:O	26:W:57:HIS:HB3	2.06	0.56
29:Z:42:GLU:HB2	29:Z:215:THR:O	2.06	0.56
29:Z:91:ALA:HB2	29:Z:153:ILE:HG23	1.88	0.56
39:j:94:TYR:O	39:j:117:VAL:HG12	2.06	0.56
56:B:42:ARG:CZ	56:B:53:ARG:NH2	2.68	0.56
56:B:308:VAL:HG22	56:B:370:ILE:CD1	2.35	0.56
56:B:381:ARG:NH2	56:B:385:GLY:HA2	2.18	0.56
3:3:65:PHE:H	3:3:65:PHE:HD1	1.54	0.56
6:A:96:G:N1	6:A:97:U:N3	2.54	0.56
6:A:443:C:N3	6:A:444:C:N4	2.54	0.56
6:A:1074:G:O2'	6:A:1101:A:N1	2.37	0.56
6:A:1088:G:H2'	6:A:1089:G:H8	1.70	0.56
6:A:1281:U:H5"	6:A:1282:C:H5	1.71	0.56
6:A:1347:G:OP1	16:M:107:ARG:HG2	2.05	0.56
6:A:1422:G:H2'	6:A:1423:G:C8	2.41	0.56
6:A:1442:G:N3	6:A:1442:G:H3'	2.20	0.56
7:D:5:A:H2'	7:D:6:A:H8	1.70	0.56
7:D:189:G:H2'	7:D:205:G:N2	2.16	0.56
7:D:309:G:C6	7:D:330:A:C5	2.94	0.56
7:D:356:G:H3'	7:D:357:A:C8	2.41	0.56
7:D:363(E):U:H2'	7:D:363(F):A:C8	2.41	0.56
7:D:661:C:O3'	37:h:15:ARG:NH2	2.38	0.56
7:D:1102:C:C4	7:D:1104:C:N4	2.74	0.56
7:D:1153:C:C2	7:D:1154:G:C8	2.94	0.56
7:D:1425:G:H1'	7:D:1573:G:H22	1.71	0.56
7:D:2212:A:H4'	7:D:2212:A:OP1	2.06	0.56
7:D:2254:C:H2'	7:D:2255:G:H5'	1.88	0.56
7:D:2636:U:O2'	31:b:79:ARG:NH2	2.38	0.56
14:K:18:TYR:HD2	14:K:23:VAL:HG21	1.70	0.56
20:Q:23:TYR:CB	20:Q:70:LEU:HD21	2.31	0.56
23:T:40:ASP:OD1	23:T:40:ASP:N	2.37	0.56
26:W:14:HIS:NE2	26:W:35:SER:HA	2.19	0.56
26:W:32:LYS:CE	26:W:52:TYR:CD2	2.76	0.56
29:Z:180:PHE:HB3	29:Z:185:LEU:CG	2.35	0.56
30:a:244:ARG:HD3	30:a:252:TRP:HD1	1.70	0.56
35:f:39:ARG:HG2	35:f:40:PRO:HD2	1.88	0.56
44:o:69:LEU:HD23	44:o:107:LEU:HD21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:16:ILE:HG21	55:z:57:ARG:HH12	1.71	0.56
56:B:23:SER:HB2	57:B:701:GCP:PA	2.45	0.56
56:B:206:ASP:CB	56:B:210:GLY:HA2	2.36	0.56
56:B:339:ALA:O	56:B:341:GLY:N	2.39	0.56
56:B:361:LEU:HD13	56:B:362:GLU:H	1.69	0.56
56:B:497:HIS:HE1	56:B:533:PHE:CE1	2.23	0.56
6:A:186(B):C:H4'	27:X:89:ARG:HH12	1.67	0.56
6:A:409:G:H5"	11:H:25:ARG:HB2	1.87	0.56
6:A:1169:A:C2	6:A:1170:A:C6	2.94	0.56
6:A:1227:A:P	20:Q:111:LYS:NZ	2.79	0.56
6:A:1271:G:H2'	6:A:1272:G:H8	1.70	0.56
6:A:1438:G:C6	6:A:1439:C:N4	2.75	0.56
6:A:1508:G:H2'	6:A:1509:C:H6	1.71	0.56
7:D:7:G:H21	7:D:8:A:H1'	1.71	0.56
7:D:38:A:C4	7:D:442:G:N2	2.74	0.56
7:D:125:G:N2	54:y:49:ARG:HD3	2.21	0.56
7:D:271(B):G:H5"	7:D:271(C):U:O2'	2.06	0.56
7:D:523:C:H1'	7:D:553:U:O2'	2.06	0.56
7:D:730:C:OP2	30:a:211:ARG:NH1	2.35	0.56
7:D:792:G:N2	7:D:2072:G:O2'	2.37	0.56
7:D:801:G:OP2	32:c:57:VAL:HG13	2.06	0.56
7:D:860:U:H2'	7:D:861:A:H5'	1.88	0.56
7:D:873:G:C2	7:D:874:G:C4	2.94	0.56
7:D:918:A:C2	7:D:919:G:H1'	2.41	0.56
7:D:963:U:O2'	7:D:2250:G:N3	2.39	0.56
7:D:1042:G:H1'	7:D:1113:U:O2	2.05	0.56
7:D:1375:C:H2'	7:D:1376:C:H6	1.71	0.56
7:D:1507:A:H2'	7:D:1507:A:N3	2.21	0.56
7:D:1520:U:C2'	7:D:1521:G:H5"	2.36	0.56
7:D:1613:G:C2	7:D:1619:G:C5	2.94	0.56
7:D:1783:A:C2	7:D:2587:A:C5	2.94	0.56
7:D:2114:A:H3'	7:D:2115:G:C8	2.41	0.56
7:D:2206:C:O2	7:D:2219:G:C2	2.58	0.56
11:H:127:THR:N	11:H:147:ALA:O	2.34	0.56
11:H:197:PRO:O	11:H:198:VAL:HG13	2.06	0.56
14:K:107:ALA:O	14:K:123:GLU:HG3	2.06	0.56
17:N:79:ARG:NH1	17:N:82:ILE:HG21	2.21	0.56
26:W:26:GLY:CA	26:W:47:HIS:ND1	2.68	0.56
30:a:186:HIS:HB3	30:a:188:GLU:OE2	2.06	0.56
38:i:9:TYR:HE2	38:i:10:ARG:HH21	1.53	0.56
49:t:17:GLU:O	49:t:21:ARG:HG2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:x:22:ALA:O	53:x:39:TYR:OH	2.13	0.56
54:y:34:ARG:HH12	54:y:42:LEU:CA	2.07	0.56
55:z:36:LYS:C	55:z:40:GLU:OE2	2.49	0.56
56:B:16:ALA:N	56:B:22:LYS:HE3	2.21	0.56
56:B:490:VAL:HG11	56:B:508:ALA:HB1	1.88	0.56
6:A:86:U:H5	6:A:87:A:N3	2.03	0.55
6:A:137:C:H2'	6:A:138:G:H8	1.70	0.55
6:A:191(F):U:H2'	6:A:191:G:H8	1.71	0.55
6:A:465:A:C1'	6:A:466:C:P	2.94	0.55
6:A:492:G:C2	6:A:493:G:H1'	2.41	0.55
6:A:962:C:H1'	6:A:1201:A:N6	2.21	0.55
6:A:1150:U:H5"	6:A:1151:A:OP2	2.06	0.55
6:A:1226:C:C4	20:Q:104:ARG:CG	2.87	0.55
7:D:10:G:N2	7:D:2629:A:N3	2.55	0.55
7:D:492:A:C8	7:D:493:G:N7	2.75	0.55
7:D:862:G:H2'	7:D:863:A:O4'	2.06	0.55
7:D:926:A:H4'	7:D:928:G:OP1	2.06	0.55
7:D:1102:C:H2'	7:D:1103:A:C5'	2.34	0.55
7:D:1128:A:N7	7:D:2518:A:C6	2.74	0.55
7:D:1345:C:H2'	7:D:1346:G:H8	1.71	0.55
7:D:1657:C:C2	7:D:2004:G:N2	2.74	0.55
7:D:1778:U:H3	7:D:1786:A:H61	1.52	0.55
7:D:1835:G:H1	7:D:1905:C:H42	1.53	0.55
7:D:2160:G:H22	29:Z:6:ARG:HH22	1.54	0.55
7:D:2834:G:C6	7:D:2879:C:C2	2.94	0.55
9:F:82:ARG:NE	9:F:86:GLU:OE2	2.39	0.55
11:H:30:LYS:NZ	11:H:35:ARG:HG3	2.21	0.55
12:I:102:ALA:H	12:I:107:ARG:HH22	1.53	0.55
15:L:20:TYR:HE2	15:L:75:ARG:HG3	1.69	0.55
23:T:8:ARG:HB3	23:T:28:ARG:NH1	2.20	0.55
23:T:81:ARG:HG2	23:T:83:GLU:HG2	1.89	0.55
26:W:19:VAL:O	26:W:21:GLU:HG2	2.06	0.55
30:a:83:GLU:OE2	30:a:104:TYR:HE1	1.88	0.55
31:b:87:GLU:HG3	31:b:89:ASP:H	1.71	0.55
33:d:49:ASP:C	33:d:70:VAL:HG22	2.31	0.55
35:f:12:ARG:HG2	35:f:12:ARG:NH1	2.20	0.55
35:f:35:ARG:HD3	35:f:37:LYS:O	2.06	0.55
37:h:125:VAL:HG12	37:h:126:VAL:O	2.05	0.55
40:k:76:LYS:HA	40:k:79:ALA:HB3	1.88	0.55
51:v:5:ILE:HG22	51:v:6:HIS:H	1.71	0.55
55:z:56:GLU:CD	55:z:56:GLU:H	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:17:HIS:CD2	56:B:116:GLU:CD	2.84	0.55
56:B:206:ASP:O	56:B:207:ALA:HB3	2.05	0.55
56:B:351:LEU:HD13	56:B:351:LEU:O	2.05	0.55
56:B:412:LEU:HG	56:B:478:ASP:O	2.05	0.55
56:B:425:MET:HE2	56:B:452:TYR:CZ	2.35	0.55
56:B:425:MET:HE3	56:B:452:TYR:OH	1.98	0.55
56:B:524:LEU:O	56:B:524:LEU:HG	2.05	0.55
3:3:4:VAL:O	3:3:5:VAL:HG12	2.06	0.55
3:3:11:GLN:C	7:D:1070:A:N6	2.64	0.55
3:3:93:ARG:HH11	3:3:93:ARG:CG	2.20	0.55
5:5:52:G:H3'	5:5:53:G:H8	1.70	0.55
6:A:74:C:C2	6:A:75:C:C4	2.94	0.55
6:A:113:G:O6	6:A:313:A:N6	2.40	0.55
6:A:295:C:H2'	6:A:296:U:C6	2.41	0.55
6:A:687:A:H1'	6:A:688:G:OP2	2.07	0.55
6:A:838:G:H4'	6:A:841:U:OP1	2.04	0.55
6:A:1116:C:H2'	6:A:1117:G:O4'	2.07	0.55
6:A:1171:G:H2'	6:A:1172:C:C6	2.42	0.55
6:A:1422:G:H4'	36:g:49:ARG:NH1	2.19	0.55
6:A:1449:C:C2	6:A:1455:G:N2	2.75	0.55
7:D:343:C:H2'	7:D:344:G:O4'	2.06	0.55
7:D:559:G:H4'	7:D:560:C:OP1	2.04	0.55
7:D:650:C:P	55:z:21:LYS:HZ1	2.27	0.55
7:D:729:G:C2	7:D:730:C:C2	2.93	0.55
7:D:1450:C:H2'	7:D:1451:C:C1'	2.37	0.55
7:D:1456:G:C6	7:D:1457:A:N6	2.73	0.55
7:D:1467:C:C2	7:D:1525:G:N2	2.75	0.55
7:D:1924:C:C4	7:D:1925:C:H5	2.24	0.55
7:D:2003:G:N2	7:D:2004:G:N3	2.53	0.55
7:D:2184:G:C6	7:D:2185:C:N3	2.74	0.55
7:D:2206:C:O2	7:D:2219:G:N2	2.39	0.55
7:D:2492:U:O2	7:D:2492:U:H2'	2.05	0.55
7:D:2694:G:N2	7:D:2695:C:O2	2.38	0.55
11:H:29:PRO:HB3	11:H:34:GLU:HG2	1.89	0.55
14:K:20:ASP:OD1	14:K:21:VAL:N	2.39	0.55
14:K:26:PHE:HA	14:K:101:LEU:HD21	1.88	0.55
26:W:23:ASN:O	26:W:23:ASN:ND2	2.39	0.55
26:W:51:VAL:HG21	26:W:75:ALA:CB	2.29	0.55
30:a:149:PRO:HG3	30:a:188:GLU:HG2	1.87	0.55
32:c:12:LEU:HD23	32:c:127:GLU:HB2	1.88	0.55
33:d:13:GLU:HG2	33:d:16:ARG:HH12	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:10:VAL:O	36:g:97:ARG:CZ	2.53	0.55
37:h:76:LYS:HE3	37:h:99:LEU:HD13	1.86	0.55
46:q:17:SER:OG	46:q:19:LYS:N	2.39	0.55
56:B:49:LEU:O	56:B:51:LEU:N	2.35	0.55
56:B:64:VAL:HG21	56:B:80:LEU:H	1.68	0.55
56:B:118:LEU:CG	56:B:446:LYS:NZ	2.69	0.55
3:3:35:MET:HG3	3:3:36:GLU:H	1.72	0.55
6:A:119:A:H4'	6:A:120:A:O5'	2.06	0.55
6:A:194:C:C3'	27:X:68:LYS:HZ1	2.17	0.55
6:A:409:G:OP2	11:H:22:LYS:HE3	2.07	0.55
6:A:440:A:H62	6:A:493:G:C2'	2.19	0.55
6:A:498:A:H4'	6:A:500:G:OP1	2.04	0.55
6:A:728:A:H2'	6:A:729:A:C8	2.36	0.55
7:D:446:G:OP2	42:m:3:ARG:HD3	2.06	0.55
7:D:500:G:N2	7:D:503:A:OP2	2.39	0.55
7:D:877:U:N3	7:D:899:A:N7	2.55	0.55
7:D:1143:A:C4	7:D:1144:G:C8	2.94	0.55
7:D:1527:G:H1'	7:D:1528:A:C2	2.41	0.55
7:D:1765:C:H42	7:D:1987:G:H1	1.55	0.55
7:D:2415:G:H5"	37:h:61:ARG:HD2	1.88	0.55
7:D:2701:C:H5'	7:D:2702:U:H5"	1.89	0.55
7:D:2751:G:OP1	34:e:6:ARG:NH2	2.37	0.55
7:D:2848:G:N1	7:D:2867:G:O2'	2.40	0.55
11:H:125:HIS:HA	11:H:149:ALA:HB2	1.87	0.55
13:J:67:MET:SD	13:J:72:VAL:HG12	2.45	0.55
19:P:60:LEU:O	19:P:63:GLY:N	2.40	0.55
29:Z:163:PHE:HZ	29:Z:195:ALA:CB	2.17	0.55
32:c:117:ARG:HH11	32:c:190:GLU:C	2.15	0.55
34:e:98:LEU:HD12	34:e:125:VAL:HG23	1.87	0.55
42:m:112:ARG:NH1	43:n:50:PRO:HG3	2.22	0.55
46:q:72:VAL:HG11	46:q:96:ILE:HG12	1.87	0.55
56:B:35:ALA:C	56:B:36:VAL:HG23	2.31	0.55
56:B:204:VAL:C	56:B:211:VAL:HG13	2.30	0.55
56:B:497:HIS:CE1	56:B:533:PHE:CE1	2.94	0.55
56:B:523:LYS:O	56:B:524:LEU:HB3	2.07	0.55
1:1:35:ARG:NH2	7:D:2742:C:H5"	2.21	0.55
4:4:73:A:H5'	4:4:74:C:H5'	1.88	0.55
6:A:608:A:H4'	23:T:32:TYR:OH	2.07	0.55
6:A:678:U:H2'	6:A:679:C:C6	2.41	0.55
6:A:870:U:H4'	6:A:871:U:H5"	1.88	0.55
6:A:1006:C:N4	6:A:1024:G:H1'	2.15	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1326:C:H2'	6:A:1327:C:C6	2.41	0.55
6:A:1394:A:H4'	6:A:1395:C:OP2	2.06	0.55
7:D:25:U:H3	7:D:515:A:N6	2.04	0.55
7:D:227:A:N6	7:D:410:G:H21	2.04	0.55
7:D:261:G:N2	7:D:262:A:C4	2.74	0.55
7:D:360:G:C2	7:D:361:G:H1'	2.42	0.55
7:D:684:G:C2	7:D:794:G:C2	2.95	0.55
7:D:687:C:N4	7:D:774:A:N6	2.51	0.55
7:D:728:G:H2'	7:D:763:G:OP2	2.07	0.55
7:D:859:G:H21	7:D:2268:A:H2	1.54	0.55
7:D:1025:G:N3	7:D:1025:G:H2'	2.21	0.55
7:D:1048:A:N1	7:D:1111:A:N3	2.55	0.55
7:D:1084:A:C2'	7:D:1106:G:C8	2.90	0.55
7:D:1473:G:N2	7:D:1474:C:C2	2.74	0.55
7:D:1567:A:C8	30:a:84:TYR:CZ	2.94	0.55
7:D:1831:G:C4	7:D:1975:G:N2	2.75	0.55
7:D:2046:G:N2	7:D:2623:G:C4	2.74	0.55
7:D:2077:A:C8	7:D:2435:A:C4	2.94	0.55
7:D:2147:G:H3'	7:D:2148:G:H8	1.71	0.55
7:D:2344:U:O2'	7:D:2345:G:H3'	2.06	0.55
8:E:28:C:H2'	8:E:29:A:O4'	2.07	0.55
18:O:110:ASP:OD1	18:O:111:ASP:N	2.39	0.55
26:W:3:ARG:HG2	26:W:3:ARG:HH21	1.72	0.55
26:W:15:LEU:HB3	26:W:71:LEU:HD13	1.88	0.55
26:W:34:TRP:C	26:W:36:ARG:H	2.14	0.55
26:W:59:PRO:O	26:W:60:VAL:HG23	1.95	0.55
30:a:38:LYS:C	30:a:39:LYS:HG3	2.31	0.55
31:b:55:ASN:HA	31:b:73:GLU:HG3	1.88	0.55
31:b:163:GLU:CD	31:b:163:GLU:H	2.14	0.55
33:d:37:VAL:HB	33:d:99:MET:SD	2.46	0.55
36:g:106:LEU:HD22	41:l:39:ARG:NH1	2.20	0.55
37:h:70:GLN:C	37:h:72:PRO:HD3	2.32	0.55
38:i:81:VAL:N	56:B:567:VAL:HG21	2.21	0.55
44:o:96:ILE:O	44:o:96:ILE:HG13	2.07	0.55
47:r:109:ALA:N	47:r:144:LEU:HD12	2.22	0.55
47:r:126:VAL:O	47:r:127:LYS:HD3	2.06	0.55
49:t:42:ASN:O	49:t:45:ILE:HG13	2.07	0.55
56:B:69:ARG:HH21	56:B:178:LEU:HD11	1.66	0.55
56:B:164:ILE:HG23	56:B:176:GLU:CD	2.29	0.55
56:B:188:PRO:O	56:B:189:LYS:HD2	2.07	0.55
56:B:242:VAL:HG12	56:B:256:LEU:CD1	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:594:GLN:O	56:B:595:GLU:HB3	2.06	0.55
4:4:19:G:C8	4:4:57:A:H2	2.25	0.55
4:4:43:A:H2'	4:4:44:A:C8	2.42	0.55
5:5:28:G:H2'	5:5:29:G:C8	2.38	0.55
6:A:80:G:N3	6:A:81:G:C8	2.74	0.55
6:A:237:C:OP1	24:U:25:ARG:NH2	2.39	0.55
6:A:529:G:H4'	6:A:533:A:H2	1.70	0.55
6:A:1128:C:O2'	6:A:1130:A:N7	2.40	0.55
6:A:1160:G:O6	6:A:1181:G:N1	2.31	0.55
6:A:1249:C:O2'	16:M:69:GLY:O	2.23	0.55
6:A:1404:C:H2'	6:A:1405:G:C8	2.42	0.55
6:A:1454:G:H2'	6:A:1455:G:C5'	2.37	0.55
7:D:265:A:C4	7:D:428:A:N1	2.74	0.55
7:D:1131:G:OP1	35:f:74:ARG:NH2	2.39	0.55
7:D:1385:G:C2	7:D:1386:C:N3	2.75	0.55
7:D:1608:A:O2'	7:D:1610:A:OP1	2.19	0.55
7:D:2106:G:C6	7:D:2108:C:N4	2.73	0.55
7:D:2287:A:HO2'	7:D:2288:A:P	2.29	0.55
7:D:2344:U:O2'	7:D:2345:G:O5'	2.23	0.55
7:D:2631:G:OP2	7:D:2893:G:H1'	2.07	0.55
7:D:2839:G:H2'	7:D:2840:C:C6	2.41	0.55
10:G:139:GLN:O	10:G:143:GLU:HG3	2.06	0.55
15:L:119:LEU:HD23	15:L:124:ALA:HA	1.87	0.55
30:a:92:ILE:HD12	30:a:104:TYR:CD1	2.42	0.55
35:f:35:ARG:HD3	35:f:37:LYS:C	2.31	0.55
36:g:64:ARG:NE	36:g:66:LYS:O	2.33	0.55
38:i:80:GLU:HG2	56:B:567:VAL:HG22	1.87	0.55
43:n:19:LYS:H	43:n:21:ARG:HH12	1.54	0.55
55:z:6:THR:OG1	55:z:9:GLY:N	2.40	0.55
56:B:197:LYS:HG3	56:B:287:THR:OG1	2.06	0.55
56:B:406:LEU:HD21	56:B:489:LEU:HD12	1.88	0.55
56:B:417:PRO:HB3	56:B:446:LYS:C	2.21	0.55
56:B:488:ASP:O	56:B:509:HIS:CB	2.54	0.55
56:B:556:LYS:H	56:B:577:GLN:NE2	2.04	0.55
6:A:116:A:OP2	6:A:116:A:C8	2.58	0.55
6:A:196:A:HO2'	6:A:197:A:P	2.29	0.55
6:A:210:U:O2	6:A:210:U:H2'	2.07	0.55
6:A:440:A:N6	6:A:493:G:O2'	2.40	0.55
6:A:475:G:C6	6:A:476:G:N7	2.75	0.55
6:A:1255:G:H22	6:A:1277:C:H1'	1.71	0.55
6:A:1263:C:H2'	6:A:1264:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1308:U:OP1	20:Q:97:PRO:HD3	2.07	0.55
6:A:1358:U:H5'	21:R:34:TYR:HA	1.88	0.55
6:A:1399:C:C2	6:A:1502:A:N6	2.75	0.55
6:A:1461:G:C4	6:A:1462:G:C8	2.92	0.55
7:D:173:G:C2	7:D:174:C:C2	2.95	0.55
7:D:288:C:C4	7:D:289:A:H1'	2.41	0.55
7:D:527:C:OP1	7:D:527:C:H4'	2.05	0.55
7:D:623:G:C8	37:h:105:LEU:HD13	2.41	0.55
7:D:943:U:H2'	7:D:944:G:H5'	1.88	0.55
7:D:1062:G:O2'	7:D:1063:G:H8	1.90	0.55
7:D:1168:G:H2'	7:D:1169:G:O4'	2.07	0.55
7:D:1267:U:O2'	7:D:1268:A:OP1	2.19	0.55
7:D:1515:C:N3	7:D:1516:U:N3	2.54	0.55
7:D:2365:G:OP1	48:s:55:ARG:N	2.39	0.55
7:D:2717:G:H2'	7:D:2718:G:H5"	1.88	0.55
10:G:6:HIS:CD2	10:G:8:ILE:HG22	2.42	0.55
26:W:30:LEU:O	26:W:31:ILE:HB	2.06	0.55
26:W:50:ALA:HB1	26:W:57:HIS:CG	2.42	0.55
26:W:54:GLY:O	26:W:55:LYS:HB3	2.06	0.55
29:Z:69:GLY:C	29:Z:157:LYS:HG2	2.25	0.55
29:Z:135:GLY:HA3	29:Z:164:ARG:HH12	1.72	0.55
30:a:242:ARG:HH12	30:a:244:ARG:N	2.04	0.55
30:a:253:GLN:CD	30:a:254:THR:HG23	2.32	0.55
34:e:126:PRO:O	34:e:130:ARG:HD3	2.07	0.55
35:f:15:LEU:HD13	35:f:130:HIS:CE1	2.42	0.55
37:h:46:LYS:HE2	37:h:50:ARG:NH1	2.22	0.55
47:r:4:ARG:HE	47:r:39:VAL:CG2	2.18	0.55
47:r:92:SER:OG	47:r:93:ASP:N	2.39	0.55
50:u:8:LEU:HB3	50:u:31:LEU:O	2.06	0.55
56:B:349:LEU:HD12	56:B:353:HIS:CD2	2.39	0.55
56:B:380:VAL:HG22	56:B:381:ARG:H	1.72	0.55
56:B:423:SER:OG	56:B:470:VAL:CG1	2.54	0.55
56:B:431:LYS:CG	56:B:455:PRO:HG2	2.33	0.55
56:B:432:ARG:NH2	56:B:487:GLY:HA2	2.22	0.55
56:B:466:ARG:O	56:B:470:VAL:HG23	2.07	0.55
56:B:506:PHE:C	56:B:507:ILE:HG12	2.31	0.55
6:A:113:G:O2'	6:A:353:A:O2'	2.19	0.55
6:A:114:U:H2'	6:A:115:G:C8	2.41	0.55
6:A:192:U:C3'	27:X:57:ARG:HH12	2.20	0.55
6:A:280:C:H4'	6:A:281:G:OP2	2.07	0.55
6:A:405:U:C2	6:A:497:U:H5	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:960:U:H4'	6:A:961:U:H5"	1.89	0.55
6:A:1105:A:H2'	6:A:1106:G:C8	2.42	0.55
6:A:1531:A:O2'	6:A:1532:U:OP1	2.22	0.55
7:D:330:A:HO2'	7:D:1210:A:N6	2.05	0.55
7:D:685:A:C6	7:D:774:A:C2	2.95	0.55
7:D:920:G:H2'	7:D:921:G:O4'	2.07	0.55
7:D:1545:A:N6	7:D:1545(A):A:N1	2.54	0.55
7:D:1709:U:C5	7:D:1710:C:N4	2.75	0.55
7:D:1710:C:H6	7:D:1710:C:O5'	1.89	0.55
7:D:1869:G:C2	7:D:1878:G:N1	2.74	0.55
7:D:2563:U:H2'	7:D:2565:A:OP2	2.06	0.55
8:E:87:G:H5'	8:E:88:C:OP2	2.07	0.55
15:L:112:LEU:HB3	15:L:133:LEU:HD23	1.89	0.55
17:N:24:VAL:O	17:N:28:ARG:N	2.40	0.55
24:U:9:VAL:HG21	24:U:84:LEU:HD21	1.89	0.55
26:W:51:VAL:HG12	26:W:53:ASN:H	1.71	0.55
29:Z:152:ILE:HG22	29:Z:160:ARG:HH11	1.71	0.55
32:c:127:GLU:O	32:c:129:PHE:N	2.39	0.55
33:d:37:VAL:HG13	33:d:159:VAL:HG12	1.88	0.55
36:g:106:LEU:HD22	41:l:39:ARG:NH2	2.21	0.55
42:m:88:ILE:N	43:n:52:VAL:HG22	2.22	0.55
45:p:31:HIS:O	45:p:33:LYS:N	2.32	0.55
47:r:72:ARG:HE	47:r:87:ASP:HB3	1.71	0.55
52:w:47:PRO:HG2	52:w:48:GLU:OE1	2.07	0.55
56:B:15:ILE:HG23	56:B:120:LYS:CD	2.36	0.55
56:B:65:ARG:HB2	56:B:246:THR:C	2.30	0.55
56:B:92:GLU:HA	56:B:96:ALA:CB	2.36	0.55
56:B:242:VAL:HA	56:B:264:LEU:CD1	2.36	0.55
56:B:298:LYS:H	56:B:299:PRO:HD3	1.71	0.55
5:5:69:G:H5"	5:5:70:G:OP2	2.05	0.55
6:A:909:A:OP2	19:P:21:LYS:NZ	2.40	0.55
6:A:1282:C:OP2	6:A:1283:G:OP2	2.25	0.55
6:A:1380:U:C4	14:K:3:ARG:HD3	2.42	0.55
7:D:78:A:H2'	7:D:79:G:C8	2.40	0.55
7:D:80:G:N2	7:D:81:G:C4	2.74	0.55
7:D:99:U:H4'	7:D:101:G:H5'	1.88	0.55
7:D:126:A:P	54:y:47:ARG:NH1	2.67	0.55
7:D:342:G:C2	7:D:343:C:C2	2.94	0.55
7:D:537:C:O2'	7:D:539:G:O4'	2.17	0.55
7:D:898:C:H2'	7:D:900:A:OP1	2.06	0.55
7:D:1035:U:H2'	7:D:1036:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1249:U:O4	37:h:21:ARG:HD3	2.06	0.55
7:D:1314:C:N4	7:D:1315:C:C4	2.75	0.55
7:D:1324:G:H1'	7:D:1616:A:N6	2.22	0.55
7:D:1397:U:O2'	7:D:1398:C:P	2.65	0.55
7:D:1484:G:C5	7:D:1485:G:C8	2.94	0.55
7:D:1528:A:C8	7:D:1529:A:C5	2.94	0.55
7:D:1537:C:C5	7:D:1538:G:H1'	2.41	0.55
7:D:2129:C:H1'	29:Z:6:ARG:HH11	1.70	0.55
7:D:2807:G:OP2	7:D:2891:G:O6	2.25	0.55
9:F:49:GLU:HA	9:F:52:GLU:CD	2.31	0.55
14:K:14:PRO:HB3	14:K:19:GLY:O	2.07	0.55
30:a:224:ALA:N	30:a:233:HIS:HD2	2.04	0.55
31:b:13:ARG:NH2	31:b:14:ILE:O	2.39	0.55
31:b:61:ARG:HB2	31:b:62:PRO:HD3	1.88	0.55
34:e:11:VAL:HG22	34:e:76:VAL:HG21	1.88	0.55
36:g:63:VAL:CG1	36:g:78:ARG:HD2	2.37	0.55
38:i:115:MET:O	38:i:119:ARG:HG2	2.07	0.55
39:j:89:ASP:OD1	39:j:89:ASP:N	2.39	0.55
41:l:113:LYS:O	41:l:117:ASP:N	2.40	0.55
46:q:71:LYS:HB3	46:q:72:VAL:HG23	1.89	0.55
47:r:40:ASP:OD1	47:r:41:LEU:N	2.40	0.55
47:r:148:ASP:O	47:r:174:VAL:HG22	2.07	0.55
56:B:16:ALA:HB3	56:B:22:LYS:HG3	1.88	0.55
56:B:67:THR:CA	56:B:76:TYR:CG	2.85	0.55
56:B:266:ALA:O	56:B:267:ALA:HB3	2.05	0.55
56:B:338:THR:OG1	56:B:502:ASP:CG	2.50	0.55
3:3:34:ILE:HG22	3:3:63:ARG:CG	2.36	0.55
6:A:191(F):U:O2	27:X:105:SER:HB2	2.07	0.55
6:A:201:C:H6	6:A:201:C:H3'	1.72	0.55
6:A:562:C:C5	19:P:18:VAL:HG12	2.42	0.55
6:A:934:C:H5	6:A:1345:U:OP2	1.90	0.55
6:A:1377:A:O2'	6:A:1378:C:OP1	2.22	0.55
7:D:162:U:O2	7:D:162:U:H2'	2.07	0.55
7:D:618:G:OP2	32:c:106:ARG:NH2	2.31	0.55
7:D:684:G:C6	7:D:775:G:N7	2.75	0.55
7:D:1064:C:N4	7:D:1074:G:C6	2.75	0.55
7:D:1181:C:C2	7:D:1182:A:C8	2.95	0.55
7:D:1434:A:H2'	7:D:1435:G:C8	2.36	0.55
7:D:1528:A:N7	7:D:1529:A:C5	2.75	0.55
7:D:1779:U:O4	7:D:1785:A:N1	2.40	0.55
7:D:1786:A:O2'	7:D:1938:A:N1	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1926:U:H3	7:D:1929:G:N2	2.05	0.55
7:D:2276:G:C2	7:D:2277:G:C8	2.95	0.55
7:D:2291:U:H2'	7:D:2292:C:C6	2.41	0.55
7:D:2358:G:C6	7:D:2359:C:C4	2.94	0.55
7:D:2663:G:C5	7:D:2664:G:C5	2.95	0.55
7:D:2692:C:H2'	7:D:2693:A:H8	1.71	0.55
7:D:2787:C:H2'	7:D:2788:C:C6	2.37	0.55
7:D:2807:G:C3'	7:D:2808:U:H5'	2.37	0.55
8:E:2:C:N4	8:E:118:G:H1	2.03	0.55
8:E:58:A:N7	8:E:59:A:N6	2.54	0.55
10:G:125:GLU:OE2	10:G:191:THR:N	2.40	0.55
11:H:24:GLU:HA	11:H:27:TYR:HB3	1.89	0.55
12:I:15:ARG:NH1	12:I:26:PHE:CD2	2.75	0.55
20:Q:16:ASP:OD1	20:Q:17:VAL:N	2.37	0.55
20:Q:96:LEU:CD2	20:Q:101:GLN:HG3	2.36	0.55
21:R:18:VAL:O	21:R:20:ALA:N	2.34	0.55
22:S:31:LEU:O	22:S:35:ARG:HG3	2.06	0.55
26:W:36:ARG:HD3	26:W:71:LEU:O	2.07	0.55
31:b:120:TRP:CD1	31:b:155:LYS:HB3	2.42	0.55
33:d:72:ARG:HA	33:d:88:ILE:HD11	1.88	0.55
37:h:117:GLU:O	37:h:121:LYS:HE2	2.07	0.55
41:l:53:ARG:HH22	41:l:103:ARG:CG	2.18	0.55
46:q:19:LYS:O	46:q:21:LYS:N	2.40	0.55
48:s:26:TYR:CE2	48:s:29:GLN:HB3	2.42	0.55
52:w:51:TYR:CD1	52:w:55:ARG:HA	2.41	0.55
56:B:133:PRO:O	56:B:163:ALA:C	2.47	0.55
56:B:427:LEU:HD11	56:B:466:ARG:HD2	1.88	0.55
5:5:7:A:C8	5:5:49:C:H1'	2.42	0.55
6:A:13:U:O2	6:A:21:G:N2	2.39	0.55
6:A:189:U:N3	24:U:72:ARG:NH1	2.55	0.55
6:A:671:G:O3'	13:J:80:ARG:NH2	2.40	0.55
6:A:677:U:H2'	6:A:678:U:C6	2.41	0.55
6:A:1195:C:H5"	6:A:1196:U:OP2	2.06	0.55
6:A:1381:U:C2	14:K:78:ARG:NH1	2.75	0.55
7:D:335:C:H2'	7:D:336:C:H6	1.71	0.55
7:D:341:G:C6	7:D:342:G:C4	2.95	0.55
7:D:411:G:N2	7:D:416:C:N3	2.54	0.55
7:D:483:A:O2'	46:q:47:LYS:O	2.25	0.55
7:D:539:G:N1	7:D:556:G:O6	2.39	0.55
7:D:819:A:C4	7:D:1189:A:C2	2.95	0.55
7:D:1039:G:OP2	7:D:1039:G:N2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1210:A:O2'	7:D:1211:U:OP2	2.21	0.55
7:D:1400:G:H2'	7:D:1401:G:C8	2.41	0.55
7:D:2081:C:H2'	7:D:2082:A:H8	1.72	0.55
7:D:2335:A:OP2	7:D:2335:A:C8	2.60	0.55
7:D:2516:G:C4	7:D:2569:G:N2	2.75	0.55
34:e:112:PRO:O	34:e:114:VAL:N	2.38	0.55
34:e:118:PRO:HD2	34:e:121:ILE:HD13	1.89	0.55
35:f:104:LYS:NZ	35:f:117:PHE:O	2.38	0.55
41:l:68:TYR:CE2	41:l:70:VAL:HG22	2.41	0.55
43:n:18:LEU:H	43:n:19:LYS:HD2	1.72	0.55
51:v:8:LYS:HB2	51:v:60:GLN:HE22	1.69	0.55
56:B:17:HIS:HB3	56:B:20:HIS:CG	2.42	0.55
56:B:238:THR:HG1	56:B:267:ALA:HB2	1.66	0.55
56:B:435:LEU:HA	56:B:451:VAL:O	2.06	0.55
6:A:115:G:H4'	6:A:116:A:O5'	2.06	0.54
6:A:476:G:H2'	6:A:476:G:N3	2.21	0.54
6:A:673:G:H4'	13:J:87:ARG:HH22	1.72	0.54
6:A:894:G:H2'	6:A:895:G:C8	2.42	0.54
6:A:952:U:H5'	6:A:972:C:H41	1.72	0.54
6:A:1273:G:H3'	6:A:1274:G:C8	2.42	0.54
7:D:145:G:H2'	7:D:146:G:H8	1.71	0.54
7:D:284:U:C6	7:D:284:U:OP2	2.60	0.54
7:D:310:A:C6	7:D:312:G:C4	2.95	0.54
7:D:456:C:N3	45:p:69:TYR:HD2	2.05	0.54
7:D:571:A:C6	7:D:2030:A:N1	2.75	0.54
7:D:1006:C:C2	7:D:1137:G:N2	2.75	0.54
7:D:1069:A:H4'	7:D:1070:A:H5"	1.89	0.54
7:D:1341:U:H4'	7:D:1342:A:OP1	2.08	0.54
7:D:1799:G:O6	30:a:177:LEU:HD13	2.08	0.54
7:D:1857:G:C6	7:D:1858:G:C6	2.95	0.54
7:D:1993:U:H5	7:D:1994:C:N3	2.05	0.54
7:D:2070:G:C2	7:D:2071:A:C4	2.95	0.54
7:D:2081:C:C4	7:D:2237:G:N2	2.75	0.54
7:D:2114:A:N3	7:D:2167:U:O2'	2.34	0.54
7:D:2124:G:O6	7:D:2125:G:N2	2.39	0.54
7:D:2368:C:H2'	7:D:2369:A:C8	2.42	0.54
7:D:2631:G:OP2	7:D:2893:G:O3'	2.25	0.54
7:D:2779:U:O3'	35:f:118:LYS:NZ	2.33	0.54
11:H:26:CYS:O	11:H:31:CYS:HB3	2.07	0.54
12:I:20:GLN:HG2	12:I:25:ARG:NH2	2.22	0.54
15:L:1:MET:HG2	15:L:2:LEU:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:69:GLY:CA	29:Z:157:LYS:C	2.57	0.54
30:a:54:ARG:NE	30:a:221:VAL:HG23	2.22	0.54
34:e:35:VAL:HG12	34:e:71:LEU:HD23	1.88	0.54
34:e:90:LYS:HG3	34:e:159:GLU:OE2	2.07	0.54
38:i:76:LYS:O	38:i:78:PRO:HD3	2.07	0.54
43:n:6:LYS:HG2	43:n:10:LYS:HG2	1.88	0.54
43:n:62:LEU:HD13	43:n:96:ILE:HG21	1.88	0.54
44:o:27:LYS:O	44:o:71:VAL:HG12	2.06	0.54
46:q:11:ASP:OD1	46:q:24:VAL:HG12	2.06	0.54
56:B:11:ASN:CA	56:B:100:VAL:HG13	2.34	0.54
56:B:46:LEU:HB2	56:B:61:ALA:CB	2.27	0.54
56:B:166:ALA:CB	56:B:172:GLU:CG	2.86	0.54
56:B:234:GLY:O	56:B:237:PHE:HE1	1.88	0.54
56:B:526:GLU:O	56:B:527:VAL:HG22	2.06	0.54
3:3:102:GLU:C	3:3:106:GLU:OE2	2.51	0.54
3:3:126:MET:CG	7:D:1059:G:C4	2.89	0.54
6:A:1156:G:H1'	6:A:1179:A:H61	1.73	0.54
6:A:1288:A:N3	6:A:1352:C:O2'	2.37	0.54
7:D:40:C:C2'	7:D:41:C:H5'	2.38	0.54
7:D:202:U:H2'	7:D:203:C:C6	2.42	0.54
7:D:273(A):G:N2	7:D:363(F):A:H62	2.05	0.54
7:D:471:A:C8	7:D:472:A:C8	2.96	0.54
7:D:531:C:H5'	7:D:532:A:C2	2.42	0.54
7:D:1657:C:H42	7:D:2003:G:H1	1.55	0.54
7:D:1747:G:C2'	7:D:1748:G:C5'	2.86	0.54
7:D:1784:A:O3'	7:D:1785:A:O4'	2.25	0.54
7:D:2196:C:H3'	7:D:2197:U:H5	1.73	0.54
9:F:87:ARG:HD2	9:F:234:PRO:HD3	1.88	0.54
19:P:27:LEU:O	19:P:29:GLY:N	2.38	0.54
23:T:23:ASP:HB3	23:T:25:ARG:HG2	1.89	0.54
26:W:20:LEU:C	26:W:22:LEU:H	2.14	0.54
26:W:43:GLU:OE1	26:W:64:GLU:CB	2.46	0.54
30:a:57:GLY:HA3	30:a:60:ARG:HH21	1.71	0.54
30:a:63:ARG:CZ	30:a:86:PRO:HD3	2.38	0.54
30:a:198:ASN:ND2	30:a:201:HIS:HB3	2.22	0.54
31:b:72:VAL:HG23	31:b:73:GLU:H	1.71	0.54
32:c:33:LEU:HA	32:c:36:VAL:HG12	1.88	0.54
36:g:59:LYS:HB2	36:g:84:ALA:O	2.08	0.54
36:g:78:ARG:HB2	41:l:73:GLU:O	2.07	0.54
38:i:81:VAL:HA	56:B:567:VAL:HG21	1.89	0.54
39:j:67:LEU:HD12	39:j:71:GLN:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:l:52:ILE:HA	41:l:66:VAL:HG13	1.89	0.54
45:p:5:TYR:CD2	49:t:24:LYS:NZ	2.72	0.54
50:u:39:ASP:OD2	50:u:44:ARG:HD3	2.07	0.54
53:x:9:LEU:HD22	53:x:27:LYS:HB3	1.88	0.54
53:x:41:PRO:HD2	53:x:46:HIS:O	2.07	0.54
56:B:25:LEU:HD21	56:B:29:ILE:HD11	1.89	0.54
56:B:68:TYR:HA	56:B:75:GLU:CG	2.29	0.54
56:B:69:ARG:HA	56:B:69:ARG:NE	2.20	0.54
56:B:200:ILE:HG13	56:B:279:THR:OG1	2.07	0.54
56:B:338:THR:O	56:B:338:THR:HG22	2.07	0.54
56:B:360:ARG:O	56:B:364:GLU:HB2	2.07	0.54
56:B:380:VAL:HG23	56:B:404:GLU:HA	1.87	0.54
56:B:431:LYS:HB2	56:B:455:PRO:CD	2.33	0.54
4:4:18:G:N7	4:4:57:A:N6	2.55	0.54
4:4:75:C:C4	56:B:569:ARG:NH2	2.66	0.54
6:A:69:G:N1	6:A:101:A:C2	2.75	0.54
6:A:452:A:O2’	23:T:72:ARG:HD2	2.07	0.54
6:A:1007:C:N3	6:A:1023:G:C6	2.75	0.54
6:A:1023:G:H2’	6:A:1023:G:N3	2.22	0.54
6:A:1261:A:C5	6:A:1262:C:C4	2.95	0.54
6:A:1266:G:C8	6:A:1268:A:OP2	2.60	0.54
6:A:1454:G:C2	6:A:1455:G:C1’	2.91	0.54
7:D:99:U:O2	7:D:99:U:H2’	2.07	0.54
7:D:532:A:H2	7:D:2035:G:N2	1.98	0.54
7:D:1177:A:C2	7:D:1178:C:C6	2.94	0.54
7:D:1312:U:O2’	7:D:1313:U:O4’	2.24	0.54
7:D:1633:G:N7	7:D:1635:G:C6	2.76	0.54
7:D:1779:U:H6	7:D:1779:U:H3’	1.72	0.54
7:D:1799:G:O2’	7:D:1800:C:O4’	2.24	0.54
7:D:2227:A:C8	7:D:2228:G:N7	2.76	0.54
7:D:2693:A:H2’	7:D:2694:G:H8	1.72	0.54
7:D:2807:G:N1	7:D:2892:A:N7	2.54	0.54
7:D:2895:U:H6	7:D:2895:U:H3’	1.72	0.54
8:E:13:A:N7	8:E:70:C:H4’	2.22	0.54
10:G:22:TRP:CE2	21:R:54:PRO:HG2	2.41	0.54
17:N:51:ARG:HB2	17:N:59:SER:O	2.08	0.54
22:S:8:LYS:O	22:S:12:ILE:HG13	2.07	0.54
24:U:86:GLU:O	24:U:90:ILE:HG13	2.07	0.54
29:Z:41:VAL:HB	29:Z:176:GLY:O	2.07	0.54
33:d:54:GLU:OE2	33:d:70:VAL:HG23	2.08	0.54
36:g:62:VAL:O	36:g:63:VAL:HG22	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:122:PRO:HB3	37:h:138:LEU:N	2.23	0.54
42:m:40:PHE:HB3	43:n:78:LYS:CD	2.37	0.54
42:m:112:ARG:NH2	43:n:50:PRO:HG3	2.23	0.54
56:B:48:SER:C	56:B:49:LEU:HD12	2.32	0.54
56:B:55:ARG:HB3	56:B:57:ILE:HG13	1.89	0.54
56:B:89:PHE:N	56:B:89:PHE:CD1	2.75	0.54
56:B:135:ILE:HG12	56:B:165:PHE:CA	2.28	0.54
56:B:435:LEU:CD2	56:B:438:MET:HE3	2.37	0.54
56:B:532:LEU:CD2	56:B:555:ARG:H	2.19	0.54
3:3:75:SER:OG	7:D:1059:G:N2	2.40	0.54
6:A:157:G:C6	6:A:165:C:C4	2.95	0.54
6:A:195:A:OP1	27:X:65:LYS:NZ	2.40	0.54
6:A:218:C:N3	6:A:219:C:N4	2.55	0.54
6:A:361:G:H5'	6:A:362:G:OP2	2.08	0.54
6:A:694:A:C2	6:A:695:A:H1'	2.42	0.54
6:A:1426:C:H42	6:A:1474:G:H1	1.56	0.54
6:A:1447:G:N1	6:A:1460:A:C5	2.75	0.54
7:D:30:G:C5	7:D:31:C:C4	2.96	0.54
7:D:366:C:O5'	7:D:366:C:H6	1.90	0.54
7:D:729:G:C6	7:D:730:C:C4	2.96	0.54
7:D:869:G:H1	7:D:908:C:N4	2.00	0.54
7:D:893:C:H2'	7:D:894:C:C4'	2.37	0.54
7:D:1693:U:H4'	7:D:1694:C:OP2	2.07	0.54
7:D:2017:U:O2'	7:D:2018:G:OP1	2.24	0.54
7:D:2120:G:C2	7:D:2179:C:C2	2.92	0.54
7:D:2208:U:O2	7:D:2217:G:N2	2.40	0.54
7:D:2637:U:O2'	7:D:2638:G:O4'	2.22	0.54
11:H:207:TYR:O	11:H:209:ARG:NH1	2.40	0.54
24:U:12:SER:N	24:U:20:THR:OG1	2.40	0.54
30:a:80:ALA:HB2	30:a:96:HIS:ND1	2.22	0.54
56:B:409:TYR:HB3	56:B:453:GLU:HG3	1.89	0.54
1:1:36:GLN:NE2	7:D:1124:C:O2	2.40	0.54
6:A:299:G:C6	6:A:300:A:C6	2.95	0.54
6:A:695:A:H2'	6:A:696:A:C8	2.42	0.54
6:A:1002:G:H2'	6:A:1003:G:C8	2.42	0.54
7:D:120:U:O2'	7:D:121:G:P	2.65	0.54
7:D:188:G:OP2	51:v:13:ARG:CZ	2.56	0.54
7:D:411:G:N2	7:D:2407:G:C6	2.76	0.54
7:D:668:G:C2	7:D:670:A:C6	2.96	0.54
7:D:1084:A:C2'	7:D:1106:G:N7	2.70	0.54
7:D:1142(A):A:H8	7:D:1142(A):A:OP2	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1327:C:C5	7:D:1328:G:C6	2.95	0.54
7:D:1588:C:O5'	7:D:1588:C:H6	1.91	0.54
7:D:1778:U:H2'	7:D:1779:U:C6	2.43	0.54
7:D:2003:G:C2	7:D:2004:G:C4	2.95	0.54
7:D:2058:A:H8	7:D:2058:A:O5'	1.89	0.54
7:D:2226:C:H2'	7:D:2227:A:C5'	2.37	0.54
7:D:2889:C:O5'	7:D:2889:C:H6	1.90	0.54
16:M:50:LEU:HD22	16:M:51:ARG:NH1	2.21	0.54
18:O:91:ARG:HG3	18:O:92:GLU:N	2.22	0.54
20:Q:12:ASN:HD21	20:Q:44:ARG:HB3	1.72	0.54
20:Q:23:TYR:HB3	20:Q:70:LEU:CD2	2.37	0.54
24:U:9:VAL:HG21	24:U:84:LEU:HD11	1.89	0.54
31:b:23:VAL:HG22	31:b:184:VAL:HG23	1.89	0.54
31:b:110:GLY:HA2	31:b:161:GLY:HA3	1.90	0.54
35:f:35:ARG:HD2	35:f:38:HIS:HB2	1.90	0.54
36:g:99:PHE:HA	41:l:74:ARG:NH2	2.23	0.54
47:r:63:ASP:OD1	47:r:65:GLN:HG2	2.07	0.54
53:x:12:GLU:H	53:x:25:LYS:HA	1.72	0.54
54:y:4:THR:O	54:y:4:THR:OG1	2.21	0.54
55:z:19:SER:HG	55:z:21:LYS:HZ3	1.55	0.54
56:B:8:ARG:NH1	56:B:73:GLY:O	2.41	0.54
56:B:65:ARG:CD	56:B:76:TYR:OH	2.55	0.54
56:B:300:VAL:HG12	56:B:477:MET:HE1	1.87	0.54
3:3:7:VAL:HG12	3:3:58:THR:OG1	2.06	0.54
6:A:125:U:H2'	6:A:126:G:H8	1.72	0.54
6:A:344:A:H3'	6:A:345:C:H5'	1.90	0.54
6:A:443:C:C2	6:A:492:G:C2	2.96	0.54
6:A:477:G:C2	6:A:478:A:C4	2.95	0.54
6:A:992:U:O2	6:A:1044:A:N6	2.19	0.54
6:A:1072:G:C5	6:A:1073:U:C4	2.95	0.54
6:A:1202:G:H21	21:R:27:CYS:HB3	1.72	0.54
6:A:1248:A:C2'	16:M:70:LYS:HZ2	2.21	0.54
6:A:1319:A:C4'	26:W:37:ARG:O	2.53	0.54
6:A:1320:C:H6	26:W:70:LYS:HD2	1.72	0.54
7:D:342:G:H2'	7:D:343:C:O4'	2.07	0.54
7:D:435:C:H3'	7:D:435:C:H6	1.73	0.54
7:D:839:U:O2'	7:D:1191:G:N3	2.39	0.54
7:D:877:U:H2'	7:D:899:A:N6	2.22	0.54
7:D:1007:C:OP2	7:D:1009:A:OP2	2.25	0.54
7:D:1061:U:O2'	7:D:1062:G:OP1	2.21	0.54
7:D:1138:G:H2'	7:D:1139:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1240:U:H3'	7:D:1241:A:C8	2.43	0.54
7:D:1287:A:C5	7:D:1288:U:N3	2.74	0.54
7:D:1527:G:C8	7:D:1528:A:C5	2.95	0.54
7:D:1528:A:H5"	7:D:1529:A:OP2	2.07	0.54
7:D:1533:C:H2'	7:D:1534:G:C8	2.43	0.54
7:D:2019:A:C1'	42:m:34:LYS:NZ	2.71	0.54
7:D:2123:G:P	29:Z:164:ARG:HE	2.30	0.54
7:D:2207:C:H6	7:D:2207:C:H3'	1.73	0.54
7:D:2312:U:H2'	7:D:2313:C:O4'	2.07	0.54
7:D:2651:C:N3	7:D:2652:C:C4	2.76	0.54
7:D:2797:U:O2	7:D:2797:U:H2'	2.06	0.54
11:H:108:LEU:HD23	11:H:170:VAL:HG11	1.89	0.54
20:Q:87:TYR:OH	26:W:77:THR:HG22	2.07	0.54
34:e:20:ALA:HB1	34:e:21:PRO:HD2	1.89	0.54
35:f:33:LEU:C	35:f:35:ARG:HG2	2.33	0.54
36:g:9:GLU:HA	36:g:17:ARG:O	2.07	0.54
36:g:63:VAL:CB	36:g:78:ARG:HH11	2.20	0.54
38:i:134:ARG:HG3	38:i:137:TYR:CE1	2.43	0.54
43:n:12:TYR:CE1	43:n:14:VAL:HB	2.42	0.54
45:p:91:ALA:O	45:p:95:LEU:HG	2.07	0.54
47:r:30:ASN:HD22	47:r:90:VAL:HG23	1.72	0.54
56:B:16:ALA:H	56:B:22:LYS:HE3	1.72	0.54
56:B:70:ALA:HA	56:B:178:LEU:HD21	1.88	0.54
56:B:330:LEU:CD2	56:B:346:CYS:N	2.70	0.54
56:B:374:PRO:CG	56:B:461:TYR:HD1	2.21	0.54
3:3:19:PRO:O	3:3:23:VAL:HB	2.08	0.54
5:5:67:C:H2'	5:5:68:C:C6	2.43	0.54
6:A:44:G:N1	6:A:45:U:O2	2.40	0.54
6:A:96:G:C6	6:A:97:U:C4	2.96	0.54
6:A:198:G:N2	6:A:199:G:C4	2.76	0.54
6:A:986:A:N1	6:A:1220:G:C6	2.75	0.54
6:A:1099:G:O2'	6:A:1542:U:H4'	2.08	0.54
6:A:1269:A:OP2	6:A:1270:C:C4	2.61	0.54
6:A:1320:C:P	26:W:70:LYS:HZ1	2.30	0.54
7:D:270(M):U:H4'	7:D:270(N):G:H4'	1.89	0.54
7:D:489:G:C4	7:D:1284:A:N6	2.75	0.54
7:D:695:G:C2	7:D:768:G:C5	2.95	0.54
7:D:818:G:N2	7:D:1190:G:C5	2.76	0.54
7:D:942:G:H5"	37:h:32:THR:HG22	1.90	0.54
7:D:1024:G:H3'	7:D:1025:G:H5"	1.89	0.54
7:D:1050:A:C5	7:D:2751:G:N1	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1227:A:H2'	7:D:1228:G:O4'	2.07	0.54
7:D:1238:G:H2'	7:D:1239:G:O4'	2.07	0.54
7:D:1380:G:C2	7:D:1381:G:C8	2.96	0.54
7:D:1478:G:O2'	7:D:1479:G:H5'	2.08	0.54
7:D:1786:A:N6	7:D:1787:A:C2	2.76	0.54
7:D:1816:G:OP2	30:a:43:ARG:NH2	2.41	0.54
7:D:1952:A:H5"	7:D:1953:A:OP2	2.08	0.54
7:D:2215:G:N2	51:v:47:GLN:NE2	2.55	0.54
7:D:2305:A:O2'	33:d:153:ARG:O	2.15	0.54
7:D:2458:G:O2'	7:D:2459:A:O5'	2.25	0.54
7:D:2870:C:H2'	7:D:2871:C:O4'	2.06	0.54
13:J:95:GLU:H	13:J:96:PRO:HD2	1.73	0.54
15:L:63:LEU:HD13	15:L:65:TYR:H	1.71	0.54
26:W:12:ASP:OD2	26:W:38:SER:HB2	2.08	0.54
26:W:79:THR:HG22	26:W:80:TYR:N	2.23	0.54
29:Z:77:ILE:HD13	29:Z:100:ILE:HD11	1.90	0.54
29:Z:160:ARG:O	29:Z:161:ILE:HG13	2.07	0.54
31:b:2:LYS:HZ2	31:b:83:ASP:CB	2.18	0.54
32:c:34:TRP:CD1	37:h:10:PRO:HB3	2.43	0.54
39:j:42:LYS:O	39:j:45:ARG:HG2	2.08	0.54
44:o:34:ASN:HB3	52:w:39:MET:SD	2.48	0.54
53:x:50:ARG:HH11	53:x:52:VAL:HG22	1.72	0.54
53:x:52:VAL:HG12	53:x:53:LYS:N	2.23	0.54
56:B:5:ASP:C	56:B:7:SER:H	2.16	0.54
56:B:230:ILE:CG2	56:B:280:ILE:HG22	2.37	0.54
56:B:555:ARG:HG2	56:B:556:LYS:H	1.72	0.54
5:5:19:G:O4'	5:5:57:G:N2	2.35	0.54
5:5:42:C:P	14:K:143:ARG:NH1	2.79	0.54
5:5:76:A:H62	7:D:2422:A:H5'	1.71	0.54
6:A:57:G:H2'	6:A:58:C:C6	2.43	0.54
6:A:995:C:H1'	21:R:4:LYS:HE2	1.90	0.54
6:A:1104:G:H4'	9:F:111:ARG:HH21	1.73	0.54
7:D:38:A:C2'	7:D:39:C:H5'	2.38	0.54
7:D:58:G:H1'	7:D:70:G:H22	1.72	0.54
7:D:239:U:H2'	7:D:240:G:O4'	2.07	0.54
7:D:338:G:P	7:D:339:U:OP2	2.65	0.54
7:D:533:G:H5'	42:m:24:TYR:HD1	1.73	0.54
7:D:540:G:C2	7:D:541:C:C2	2.96	0.54
7:D:748:G:H5'	7:D:749:C:OP2	2.07	0.54
7:D:944:G:H4'	7:D:945:A:H5"	1.89	0.54
7:D:1008:C:O2'	7:D:1009:A:N7	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1030:G:C5	7:D:1125:G:N2	2.76	0.54
7:D:1107:G:H8	7:D:1107:G:P	2.31	0.54
7:D:1208:C:N4	7:D:1209:G:O6	2.41	0.54
7:D:1302:A:H5'	7:D:1608:A:OP2	2.08	0.54
7:D:1386:C:H2'	7:D:1387:C:H6	1.72	0.54
7:D:1789:A:H4'	30:a:222:ARG:HH21	1.71	0.54
7:D:2347:C:H2'	7:D:2348:U:H6	1.73	0.54
7:D:2360:A:H2'	7:D:2361:A:O4'	2.06	0.54
8:E:118:G:OP2	8:E:118:G:C8	2.61	0.54
12:I:149:GLU:HA	12:I:152:ARG:HB3	1.90	0.54
29:Z:11:LEU:HD12	29:Z:14:VAL:HB	1.90	0.54
29:Z:18:LYS:HG2	29:Z:20:TYR:N	2.19	0.54
32:c:68:LYS:HG2	32:c:69:HIS:CD2	2.43	0.54
32:c:78:ILE:HA	32:c:83:PHE:HZ	1.73	0.54
37:h:46:LYS:NZ	55:z:59:LYS:HZ3	2.05	0.54
43:n:67:GLY:HA2	43:n:94:LEU:CD2	2.37	0.54
45:p:20:GLY:O	45:p:24:GLY:N	2.41	0.54
47:r:96:VAL:HG22	47:r:128:VAL:HG13	1.88	0.54
50:u:11:SER:HB3	50:u:53:LEU:HD22	1.89	0.54
53:x:21:TYR:CZ	53:x:53:LYS:NZ	2.75	0.54
55:z:30:ARG:HB3	55:z:44:LYS:NZ	2.23	0.54
56:B:36:VAL:HG11	56:B:39:ARG:O	2.08	0.54
56:B:41:MET:HA	56:B:45:PHE:CE1	2.43	0.54
56:B:46:LEU:CD1	56:B:61:ALA:O	2.31	0.54
56:B:135:ILE:H	56:B:165:PHE:HD1	1.55	0.54
56:B:169:LYS:CG	57:B:701:GCP:C4	2.85	0.54
56:B:495:LEU:CD1	56:B:540:ALA:HB3	2.03	0.54
3:3:27:LEU:C	3:3:32:ALA:HB3	2.33	0.54
3:3:99:ILE:O	3:3:100:THR:OG1	2.25	0.54
6:A:110:C:H2'	6:A:111:G:H8	1.73	0.54
6:A:477:G:C6	6:A:478:A:C5	2.96	0.54
6:A:723:U:OP2	6:A:724:G:OP2	2.26	0.54
6:A:736:C:H5"	25:V:72:ARG:HH12	1.72	0.54
6:A:968:A:H4'	6:A:969:A:OP2	2.06	0.54
6:A:1320:C:C6	26:W:70:LYS:HD2	2.43	0.54
7:D:146:G:H2'	7:D:147:U:H6	1.71	0.54
7:D:154:G:C3'	7:D:155:C:H5'	2.38	0.54
7:D:155:C:C2'	7:D:161:U:H3'	2.36	0.54
7:D:491:G:C4	7:D:492:A:C8	2.96	0.54
7:D:583:G:N2	7:D:1258:C:O2	2.40	0.54
7:D:1002:G:C6	7:D:1003:G:N7	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1044:G:O2'	7:D:1047:G:H4'	2.08	0.54
7:D:1047:G:H3'	7:D:1110:G:N2	2.20	0.54
7:D:1084:A:H1'	7:D:1106:G:C5	2.35	0.54
7:D:1425:G:H1'	7:D:1573:G:N2	2.23	0.54
7:D:1492:G:H8	7:D:1495:A:OP2	1.90	0.54
7:D:1572:A:H3'	7:D:1573:G:C8	2.42	0.54
7:D:1995:U:H3'	7:D:1996:C:H5"	1.89	0.54
7:D:2107:C:H1'	7:D:2108:C:O5'	2.07	0.54
7:D:2133:G:OP2	7:D:2133:G:C8	2.59	0.54
7:D:2242:G:C6	7:D:2243:U:N3	2.76	0.54
7:D:2355:C:O2	48:s:39:ARG:NH2	2.41	0.54
7:D:2524:G:N2	7:D:2540:C:C2	2.76	0.54
7:D:2589:A:C6	7:D:2606:C:N4	2.76	0.54
7:D:2653:U:H3'	7:D:2654:A:H8	1.73	0.54
7:D:2781:A:O3'	7:D:2782:G:H4'	2.07	0.54
7:D:2788:C:H5"	7:D:2789:C:OP2	2.07	0.54
7:D:2809:A:O3'	7:D:2811:G:OP2	2.26	0.54
8:E:12:C:O2	48:s:74:ARG:HD2	2.06	0.54
14:K:61:VAL:HG12	14:K:128:ALA:HB1	1.89	0.54
26:W:36:ARG:CB	26:W:72:GLY:N	2.68	0.54
26:W:51:VAL:HG11	26:W:75:ALA:HB3	1.90	0.54
29:Z:166:ASP:OD1	29:Z:166:ASP:N	2.41	0.54
31:b:58:ARG:HH12	31:b:73:GLU:CB	2.19	0.54
37:h:76:LYS:HE2	37:h:81:GLN:NE2	2.23	0.54
40:k:75:GLU:HA	40:k:78:LEU:HB2	1.90	0.54
43:n:1:MET:HA	43:n:44:LYS:HA	1.89	0.54
53:x:17:LYS:CB	53:x:19:ARG:HH12	2.21	0.54
55:z:50:LEU:O	55:z:52:LYS:N	2.35	0.54
56:B:25:LEU:CB	56:B:168:GLY:HA3	2.38	0.54
56:B:137:LYS:HG3	57:B:701:GCP:C8	2.33	0.54
56:B:417:PRO:HD2	56:B:420:TYR:CD2	2.42	0.54
3:3:104:VAL:CA	3:3:107:ILE:HD12	2.28	0.54
6:A:162:A:C8	6:A:162:A:OP2	2.60	0.54
6:A:1092:A:C5'	14:K:4:ARG:HH12	2.11	0.54
6:A:1252:A:H2'	6:A:1253:G:O4'	2.08	0.54
6:A:1285:A:H1'	6:A:1286:A:OP2	2.08	0.54
6:A:1455:G:C2	6:A:1459:C:N3	2.76	0.54
7:D:161:U:H2'	7:D:161:U:O2	2.07	0.54
7:D:308:G:O2'	7:D:329:G:N2	2.41	0.54
7:D:884:C:H1'	7:D:885:C:C6	2.43	0.54
7:D:1131:G:H4'	7:D:1132:A:OP1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1444:G:H1	7:D:1547:C:H42	1.56	0.54
7:D:1582:C:H6	7:D:1582:C:H3'	1.72	0.54
7:D:1626:G:H2'	7:D:1626:G:N3	2.23	0.54
7:D:1861:G:H2'	7:D:1862:G:H5'	1.89	0.54
7:D:2056:G:C4	7:D:2577:A:C2	2.96	0.54
7:D:2093:G:C5	7:D:2225:A:N7	2.75	0.54
8:E:38:C:H2'	8:E:39:A:H8	1.71	0.54
9:F:79:ASP:O	9:F:82:ARG:HB3	2.07	0.54
10:G:152:ILE:HG13	10:G:199:LYS:HB2	1.89	0.54
11:H:26:CYS:HA	11:H:31:CYS:HB2	1.89	0.54
15:L:20:TYR:CE2	15:L:75:ARG:HG3	2.43	0.54
15:L:44:PHE:O	15:L:64:LYS:HD3	2.08	0.54
26:W:12:ASP:C	26:W:14:HIS:H	2.13	0.54
26:W:36:ARG:CB	26:W:71:LEU:CA	2.84	0.54
27:X:20:LEU:O	27:X:23:ARG:HG2	2.08	0.54
35:f:74:ARG:C	35:f:76:SER:H	2.16	0.54
40:k:14:VAL:HG13	40:k:17:ARG:HD2	1.90	0.54
43:n:23:GLU:HG3	43:n:94:LEU:HG	1.90	0.54
51:v:17:GLY:HA2	51:v:33:VAL:HB	1.89	0.54
56:B:46:LEU:C	56:B:48:SER:H	2.16	0.54
56:B:490:VAL:CG1	56:B:491:LYS:N	2.67	0.54
56:B:497:HIS:HE1	56:B:533:PHE:CD1	2.26	0.54
6:A:113:G:HO2'	6:A:353:A:HO2'	1.54	0.53
6:A:160:A:H2'	6:A:161:A:C8	2.43	0.53
6:A:225:C:H2'	6:A:226:G:C8	2.43	0.53
6:A:262:A:C6	6:A:263:A:C6	2.96	0.53
6:A:738:C:OP2	13:J:92:LYS:NZ	2.38	0.53
6:A:751:U:C4	6:A:752:G:C2	2.96	0.53
6:A:778:G:H2'	6:A:779:C:O4'	2.08	0.53
6:A:798:G:OP1	18:O:122:LYS:NZ	2.33	0.53
6:A:1018:C:H2'	6:A:1019:C:C6	2.43	0.53
6:A:1292:U:H2'	6:A:1293:G:C8	2.44	0.53
7:D:49:A:C5	7:D:177:G:C6	2.96	0.53
7:D:315:G:H2'	7:D:316:C:O4'	2.09	0.53
7:D:631:A:H4'	37:h:60:MET:HB3	1.91	0.53
7:D:662:G:H2'	7:D:663:G:C8	2.36	0.53
7:D:947:G:N2	7:D:948:G:C4	2.76	0.53
7:D:1171:G:H2'	7:D:1174:A:P	2.48	0.53
7:D:1171:G:O6	7:D:1177:A:N1	2.42	0.53
7:D:1580:A:C2'	7:D:1581:G:C8	2.89	0.53
7:D:1785:A:H5'	7:D:1982:C:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1950:G:H1	7:D:1956:U:H3	1.56	0.53
7:D:2491:U:H6	7:D:2491:U:H3'	1.73	0.53
7:D:2671:A:P	31:b:206:LYS:NZ	2.80	0.53
8:E:75:G:P	47:r:36:LYS:NZ	2.73	0.53
8:E:76:G:C6	8:E:77:U:N3	2.77	0.53
9:F:57:PHE:O	9:F:60:ASP:HB3	2.09	0.53
9:F:96:ARG:HB2	9:F:98:LEU:HD12	1.90	0.53
10:G:152:ILE:HG22	10:G:167:TRP:CB	2.37	0.53
15:L:10:LEU:HD22	15:L:83:ILE:HD11	1.89	0.53
25:V:20:ALA:HB1	25:V:55:ARG:CZ	2.38	0.53
29:Z:155:GLU:HB3	29:Z:159:GLY:C	2.33	0.53
29:Z:212:VAL:O	29:Z:223:ARG:HG3	2.08	0.53
32:c:38:ARG:HH12	37:h:14:LYS:HD3	1.72	0.53
34:e:41:MET:HA	34:e:55:PRO:HD3	1.90	0.53
35:f:69:GLN:HG3	35:f:87:LEU:HD23	1.90	0.53
44:o:11:ARG:HB2	44:o:98:LYS:HZ2	1.72	0.53
44:o:31:GLU:OE1	44:o:31:GLU:N	2.29	0.53
56:B:80:LEU:HD23	56:B:81:ILE:H	1.73	0.53
56:B:92:GLU:O	56:B:96:ALA:HB3	2.08	0.53
56:B:531:GLN:CD	56:B:584:LEU:HD13	2.31	0.53
3:3:49:GLY:O	3:3:53:VAL:CG2	2.55	0.53
3:3:78:ILE:CD1	7:D:1059:G:H1'	2.37	0.53
6:A:195:A:P	27:X:68:LYS:NZ	2.82	0.53
6:A:263:A:OP2	27:X:79:ARG:NH1	2.41	0.53
6:A:509:A:N7	6:A:510:A:C6	2.76	0.53
6:A:762:C:H2'	6:A:763:G:C8	2.44	0.53
6:A:1146:A:H3'	6:A:1147:C:H6	1.72	0.53
6:A:1433:A:H5'	41:l:111:ARG:NH1	2.22	0.53
7:D:1:G:H2'	7:D:2:G:C8	2.43	0.53
7:D:49:A:N6	7:D:176:G:C5	2.76	0.53
7:D:124:G:N2	7:D:128:C:N3	2.56	0.53
7:D:248:G:C2	7:D:2431:U:H4'	2.44	0.53
7:D:251:A:OP1	37:h:50:ARG:NH2	2.41	0.53
7:D:310:A:C5	7:D:312:G:C5	2.96	0.53
7:D:403:U:O2'	7:D:404:C:OP2	2.24	0.53
7:D:553:U:H2'	7:D:553:U:O2	2.07	0.53
7:D:698:C:O2'	7:D:735:A:N1	2.41	0.53
7:D:883:G:O2'	7:D:892:G:N1	2.41	0.53
7:D:1062:G:N3	7:D:1063:G:H5'	2.23	0.53
7:D:1577:C:C6	7:D:1577:C:OP2	2.61	0.53
7:D:2067:G:C6	7:D:2069:G:N7	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2218:G:N2	7:D:2219:G:C4	2.76	0.53
7:D:2305:A:H2'	33:d:154:GLY:HA2	1.89	0.53
7:D:2406:U:OP2	7:D:2411:A:N6	2.40	0.53
9:F:22:LYS:HZ1	9:F:35:GLU:CD	2.16	0.53
9:F:135:GLN:OE1	9:F:135:GLN:N	2.39	0.53
10:G:20:SER:HG	10:G:22:TRP:HE1	1.56	0.53
10:G:108:ASN:HD22	10:G:111:LEU:HD13	1.74	0.53
14:K:20:ASP:OD2	14:K:22:LEU:HB2	2.08	0.53
16:M:82:ALA:HB2	16:M:101:PHE:HD2	1.72	0.53
26:W:36:ARG:HB3	26:W:71:LEU:O	2.04	0.53
26:W:63:THR:O	26:W:66:MET:HG3	2.08	0.53
32:c:89:VAL:HG12	32:c:90:PHE:CD1	2.43	0.53
34:e:24:VAL:HG23	34:e:35:VAL:CG2	2.37	0.53
37:h:49:ARG:HG2	55:z:52:LYS:HZ1	1.71	0.53
37:h:86:LYS:HD2	37:h:86:LYS:N	2.23	0.53
39:j:12:ARG:NH1	39:j:16:HIS:O	2.41	0.53
40:k:71:ARG:HA	40:k:74:ALA:HB3	1.90	0.53
42:m:52:ARG:HG3	42:m:55:ARG:NH1	2.23	0.53
51:v:6:HIS:HE1	51:v:55:ARG:HD3	1.72	0.53
56:B:31:GLU:HG3	56:B:40:GLU:HG2	1.76	0.53
56:B:46:LEU:HD11	56:B:82:ASP:OD1	2.01	0.53
56:B:47:ASP:OD1	56:B:52:GLU:HB3	2.08	0.53
56:B:196:LEU:C	56:B:281:THR:CG2	2.52	0.53
56:B:221:ARG:HG2	56:B:257:GLU:N	2.22	0.53
56:B:317:ARG:HH11	56:B:317:ARG:CG	2.21	0.53
56:B:377:VAL:C	56:B:378:TYR:CD1	2.86	0.53
56:B:432:ARG:HH21	56:B:487:GLY:CA	2.21	0.53
56:B:455:PRO:CD	56:B:458:GLU:HB2	2.38	0.53
3:3:120:LEU:HD21	3:3:125:ARG:NH1	2.20	0.53
4:4:75:C:N4	56:B:569:ARG:NH2	2.56	0.53
6:A:79:G:H2'	6:A:80:G:O4'	2.09	0.53
6:A:136:C:N4	6:A:227:G:H1	2.06	0.53
6:A:148:G:H2'	6:A:149:A:C8	2.43	0.53
6:A:557:G:C6	6:A:558:G:C6	2.96	0.53
6:A:594:G:H3'	6:A:595:G:H8	1.73	0.53
6:A:827:U:H4'	15:L:19:VAL:HG21	1.91	0.53
6:A:876:G:P	15:L:14:ARG:HH21	2.32	0.53
6:A:1074:G:H4'	9:F:103:THR:O	2.08	0.53
6:A:1306:A:C6	6:A:1307:U:C2	2.96	0.53
6:A:1320:C:C6	26:W:36:ARG:HG3	2.36	0.53
6:A:1488:G:N2	6:A:1489:G:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:270(U):C:H2'	7:D:270(V):G:H8	1.73	0.53
7:D:289:A:H2'	7:D:351:G:C2	2.43	0.53
7:D:822:U:OP2	7:D:946:G:OP2	2.26	0.53
7:D:899:A:N3	7:D:900:A:N1	2.57	0.53
7:D:934:G:H2'	7:D:935:C:C6	2.44	0.53
7:D:1357:U:H2'	7:D:1358:G:C8	2.44	0.53
7:D:1456:G:C2	7:D:1457:A:C5	2.95	0.53
7:D:1477:A:C4	7:D:1478:G:C2	2.97	0.53
7:D:1668:A:H62	7:D:1674:G:C1'	2.17	0.53
7:D:2106:G:C6	7:D:2108:C:N3	2.76	0.53
7:D:2197:U:H4'	7:D:2198:A:N7	2.23	0.53
7:D:2320:A:N6	40:k:4:LEU:HD21	2.22	0.53
7:D:2751:G:H1'	34:e:6:ARG:HH12	1.72	0.53
18:O:121:PRO:HB2	18:O:125:PHE:HB2	1.91	0.53
20:Q:16:ASP:O	20:Q:20:THR:OG1	2.17	0.53
24:U:66:SER:HB3	24:U:69:LYS:HE2	1.89	0.53
29:Z:40:THR:HB	29:Z:216:THR:HB	1.91	0.53
31:b:49:LEU:HD13	31:b:77:ILE:HB	1.91	0.53
31:b:92:THR:HA	31:b:95:ILE:H	1.73	0.53
33:d:63:ILE:HG23	33:d:64:THR:HG22	1.90	0.53
35:f:69:GLN:NE2	35:f:87:LEU:HG	2.24	0.53
43:n:68:LYS:HG3	43:n:95:LEU:HD11	1.90	0.53
47:r:39:VAL:HG13	47:r:44:PHE:CD2	2.39	0.53
47:r:176:PRO:HB2	47:r:179:ASP:H	1.72	0.53
56:B:241:LYS:NZ	56:B:243:GLY:HA2	2.24	0.53
3:3:13:PRO:CG	3:3:16:LYS:HZ1	2.20	0.53
6:A:66:G:C6	6:A:67:C:N4	2.76	0.53
6:A:89:U:C2'	6:A:90:C:H5"	2.37	0.53
6:A:260:G:H2'	6:A:261:U:C6	2.43	0.53
6:A:370:C:H2'	6:A:371:G:C8	2.43	0.53
6:A:762:C:H2'	6:A:763:G:H8	1.73	0.53
6:A:972:C:P	17:N:57:LYS:HD3	2.49	0.53
6:A:1221:G:H5'	6:A:1321:C:O2	2.09	0.53
6:A:1447:G:N2	6:A:1460:A:N3	2.53	0.53
7:D:242:G:H5"	55:z:4:MET:SD	2.49	0.53
7:D:270(Z):U:H3	7:D:271(B):G:P	2.31	0.53
7:D:295:G:N2	7:D:343:C:N3	2.44	0.53
7:D:458:G:O2'	7:D:459:U:P	2.65	0.53
7:D:568:U:C6	7:D:570:G:OP2	2.61	0.53
7:D:577:G:O2'	7:D:1254:A:OP1	2.25	0.53
7:D:746:A:OP1	7:D:748:G:O2'	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:878:A:C8	7:D:897:C:N3	2.76	0.53
7:D:889:C:C4	7:D:890:A:C2	2.97	0.53
7:D:928:G:H5'	7:D:929:G:OP2	2.09	0.53
7:D:972:G:OP2	7:D:972:G:C8	2.61	0.53
7:D:1267:U:HO2'	7:D:1268:A:P	2.30	0.53
7:D:1324:G:O2'	7:D:1325:G:OP1	2.26	0.53
7:D:1467:C:N4	7:D:1468:C:H41	2.06	0.53
7:D:1581:G:H8	7:D:1581:G:O5'	1.91	0.53
7:D:1730:U:C2	7:D:1733:G:N2	2.77	0.53
7:D:1864:U:H4'	7:D:2409:G:N2	2.23	0.53
7:D:2141:G:H2'	7:D:2142:C:C6	2.43	0.53
7:D:2168:G:N2	7:D:2170:A:H2'	2.24	0.53
7:D:2631:G:C2	7:D:2632:A:C4	2.96	0.53
7:D:2810:A:C4'	31:b:61:ARG:NH1	2.71	0.53
8:E:12:C:O4'	48:s:74:ARG:HD3	2.09	0.53
9:F:121:LEU:HD22	9:F:126:GLU:OE1	2.08	0.53
26:W:41:VAL:HB	26:W:42:PRO:HD2	1.89	0.53
26:W:67:VAL:O	26:W:69:HIS:N	2.38	0.53
29:Z:200:LYS:NZ	29:Z:208:PHE:CD1	2.72	0.53
30:a:222:ARG:NH1	30:a:222:ARG:CB	2.71	0.53
31:b:66:HIS:HE1	31:b:72:VAL:N	2.06	0.53
32:c:125:LEU:HD13	32:c:142:TRP:HZ2	1.73	0.53
33:d:27:ASN:C	33:d:29:TRP:H	2.17	0.53
38:i:59:ARG:O	38:i:60:ARG:HG2	2.08	0.53
51:v:50:VAL:HG12	51:v:51:ASP:OD1	2.08	0.53
56:B:41:MET:HB3	56:B:45:PHE:HD1	1.73	0.53
56:B:206:ASP:OD1	56:B:206:ASP:N	2.40	0.53
56:B:214:TYR:C	56:B:215:LEU:HG	2.33	0.53
56:B:242:VAL:CG2	56:B:256:LEU:HD21	2.38	0.53
56:B:378:TYR:HA	56:B:406:LEU:HB2	1.90	0.53
56:B:505:THR:O	56:B:506:PHE:CD1	2.61	0.53
2:2:39:ALA:HA	3:3:116:ASN:HB2	1.90	0.53
5:5:4:C:N3	5:5:69:G:N2	2.46	0.53
5:5:55:U:H4'	29:Z:167:LYS:HD3	1.91	0.53
5:5:69:G:C2	5:5:70:G:C5	2.97	0.53
6:A:363:A:C6	6:A:364:A:C6	2.97	0.53
6:A:538:G:P	19:P:113:ARG:NH1	2.82	0.53
6:A:767:A:H2'	6:A:768:A:H8	1.72	0.53
6:A:837:G:C2'	6:A:838:G:H5'	2.39	0.53
6:A:964:A:H1'	17:N:55:LYS:NZ	2.24	0.53
6:A:1034:G:H2'	6:A:1035:A:C8	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1221:G:H8	6:A:1221:G:OP2	1.91	0.53
6:A:1443:G:HO2'	6:A:1446:A:P	2.30	0.53
7:D:190:A:C5	7:D:207:A:C2	2.97	0.53
7:D:707:G:H2'	7:D:708:C:O4'	2.09	0.53
7:D:893:C:H2'	7:D:893:C:O2	2.08	0.53
7:D:1022:G:OP2	35:f:68:GLU:OE2	2.26	0.53
7:D:1140:C:O2'	7:D:1142(A):A:N6	2.41	0.53
7:D:1177:A:C2	7:D:1178:C:C5	2.96	0.53
7:D:1257:C:N3	7:D:1258:C:C4	2.77	0.53
7:D:2310:A:O2'	7:D:2311:A:O5'	2.27	0.53
7:D:2657:A:C6	7:D:2665:A:C8	2.96	0.53
7:D:2686:G:C2	7:D:2687:U:C2	2.96	0.53
7:D:2714:G:C2	7:D:2715:C:C2	2.96	0.53
8:E:40:U:O2'	8:E:43:C:N4	2.41	0.53
11:H:30:LYS:N	11:H:34:GLU:HB3	2.23	0.53
18:O:81:ASP:OD1	18:O:106:LYS:HD2	2.08	0.53
20:Q:80:ARG:CG	20:Q:80:ARG:HH11	2.21	0.53
31:b:119:ARG:HH12	31:b:155:LYS:HG3	1.73	0.53
33:d:32:PRO:HG3	33:d:168:GLU:HB2	1.73	0.53
34:e:20:ALA:HB3	34:e:23:ARG:O	2.09	0.53
37:h:39:LYS:O	37:h:41:ARG:N	2.37	0.53
37:h:72:PRO:HB2	37:h:111:ARG:CB	2.23	0.53
41:l:19:LEU:O	41:l:21:GLU:HG2	2.08	0.53
49:t:30:LEU:HD13	49:t:44:LYS:HB3	1.89	0.53
55:z:48:PHE:CE2	55:z:50:LEU:HD12	2.44	0.53
56:B:88:ASP:O	56:B:349:LEU:HD22	2.09	0.53
56:B:409:TYR:CD2	56:B:453:GLU:O	2.61	0.53
56:B:450:LEU:HD21	56:B:452:TYR:CD1	2.44	0.53
56:B:493:ASN:HB2	56:B:540:ALA:O	2.08	0.53
6:A:200:G:H8	6:A:200:G:O5'	1.92	0.53
6:A:339:C:H2'	6:A:340:U:C6	2.44	0.53
6:A:440:A:N6	6:A:493:G:O3'	2.41	0.53
6:A:592:G:O6	6:A:648:A:N6	2.41	0.53
6:A:707:C:H4'	18:O:20:TYR:CE2	2.44	0.53
6:A:1044:A:C6	6:A:1045:C:H1'	2.43	0.53
6:A:1380:U:C2	14:K:3:ARG:NH1	2.76	0.53
6:A:1502:A:H5'	6:A:1504:G:C8	2.44	0.53
7:D:243:U:P	55:z:5:LYS:NZ	2.81	0.53
7:D:247:G:H1	55:z:8:LYS:HG2	1.74	0.53
7:D:249:C:O2'	7:D:250:G:OP2	2.16	0.53
7:D:336:C:H2'	7:D:337:C:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:442:G:C5	7:D:444:C:C4	2.97	0.53
7:D:573:G:H1	7:D:2031:A:P	2.31	0.53
7:D:884:C:O2'	7:D:885:C:P	2.65	0.53
7:D:962:G:H2'	7:D:963:U:O4'	2.09	0.53
7:D:1138:G:H2'	7:D:1139:G:H8	1.74	0.53
7:D:1153:C:C2	7:D:1154:G:H8	2.26	0.53
7:D:1174:A:C2'	7:D:1175:U:H5	2.19	0.53
7:D:1182:A:N6	7:D:1183:G:O6	2.42	0.53
7:D:2269:A:H8	7:D:2269:A:O5'	1.92	0.53
7:D:2336:A:O2'	7:D:2337:G:P	2.67	0.53
10:G:61:ALA:O	10:G:63:ASN:N	2.36	0.53
15:L:70:GLN:HE21	15:L:72:PRO:HD2	1.74	0.53
21:R:33:VAL:HG23	21:R:34:TYR:H	1.74	0.53
34:e:107:VAL:HG22	34:e:152:ARG:HD2	1.89	0.53
35:f:32:THR:C	35:f:35:ARG:HB3	2.34	0.53
36:g:72:PRO:HG3	36:g:107:ARG:HH12	1.73	0.53
39:j:12:ARG:HH12	39:j:16:HIS:C	2.16	0.53
39:j:88:ARG:HB2	39:j:88:ARG:NH1	2.23	0.53
45:p:44:GLU:HG2	45:p:49:VAL:O	2.09	0.53
54:y:35:ARG:HD2	54:y:42:LEU:HD11	1.89	0.53
56:B:80:LEU:O	56:B:81:ILE:HG12	2.08	0.53
56:B:135:ILE:HD11	56:B:145:PRO:CG	2.30	0.53
56:B:196:LEU:CB	56:B:282:LEU:HB3	2.23	0.53
56:B:242:VAL:CG2	56:B:256:LEU:HG	2.37	0.53
56:B:421:VAL:HG13	56:B:425:MET:HG3	1.90	0.53
5:5:27:G:H2'	5:5:28:G:O4'	2.08	0.53
6:A:322:C:H2'	6:A:323:U:H6	1.73	0.53
6:A:444:C:C2'	6:A:445:G:H5'	2.38	0.53
6:A:495:A:C2	6:A:496:A:C6	2.97	0.53
6:A:575:G:C2	6:A:881:G:C2	2.96	0.53
6:A:837:G:O5'	6:A:837:G:H8	1.90	0.53
6:A:870:U:O5'	6:A:870:U:H6	1.91	0.53
6:A:1164:G:C5	6:A:1165:C:N4	2.76	0.53
6:A:1170:A:H3'	6:A:1171:G:H8	1.73	0.53
7:D:126:A:C5	54:y:18:PHE:CE1	2.96	0.53
7:D:528:A:H62	7:D:2042:A:N6	2.06	0.53
7:D:775:G:N2	7:D:787:U:HO2'	2.03	0.53
7:D:784:A:O2'	7:D:785:G:O5'	2.27	0.53
7:D:948:G:N2	7:D:970:C:O2	2.42	0.53
7:D:1023:U:O4	7:D:1024:G:N2	2.28	0.53
7:D:1485:G:C2	7:D:1486:A:N7	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1664:A:H2'	7:D:1665:A:C8	2.44	0.53
7:D:1903:G:H2'	7:D:1904:G:H8	1.72	0.53
7:D:2347:C:H2'	7:D:2348:U:C6	2.43	0.53
7:D:2642:G:H1	7:D:2772:C:N4	2.06	0.53
7:D:2748:A:C8	7:D:2749:A:N7	2.77	0.53
7:D:2779:U:O2'	7:D:2780:G:O5'	2.21	0.53
7:D:2783:G:N3	31:b:41:LYS:NZ	2.48	0.53
8:E:52:A:OP1	8:E:52:A:H4'	2.08	0.53
9:F:152:PHE:O	9:F:154:LEU:N	2.41	0.53
23:T:39:TYR:OH	23:T:41:PRO:HA	2.08	0.53
26:W:36:ARG:CA	26:W:71:LEU:HB3	2.32	0.53
31:b:119:ARG:CZ	31:b:155:LYS:HG3	2.38	0.53
31:b:119:ARG:HB2	31:b:160:TYR:CE2	2.44	0.53
32:c:34:TRP:HE1	32:c:38:ARG:CZ	2.21	0.53
37:h:123:LEU:HD12	37:h:130:PHE:CE2	2.43	0.53
39:j:90:ARG:NH1	39:j:117:VAL:HG11	2.22	0.53
43:n:20:LEU:HB2	43:n:93:GLU:OE1	2.08	0.53
50:u:7:LYS:HE3	50:u:32:GLN:O	2.09	0.53
56:B:396:LEU:HD11	56:B:491:LYS:CG	2.24	0.53
56:B:416:THR:HB	56:B:420:TYR:HB2	1.91	0.53
6:A:78:G:H2'	6:A:79:G:H8	1.74	0.53
6:A:665:A:H1'	6:A:733:A:H1'	1.91	0.53
6:A:1231:G:OP1	16:M:127:LYS:HE2	2.09	0.53
6:A:1472:U:H2'	6:A:1473:A:O4'	2.09	0.53
7:D:46:C:C2	7:D:180:G:N2	2.77	0.53
7:D:60:G:O6	7:D:66:C:N4	2.41	0.53
7:D:364:C:H2'	7:D:364:C:O2	2.08	0.53
7:D:500:G:C2	7:D:503:A:OP2	2.62	0.53
7:D:646:A:H3'	7:D:647:G:H8	1.74	0.53
7:D:717:G:H2'	7:D:718:A:O4'	2.09	0.53
7:D:972:G:OP1	7:D:974(A):C:H5'	2.07	0.53
7:D:1168:G:C4	7:D:1182:A:C2	2.97	0.53
7:D:1296:G:H4'	39:j:16:HIS:CE1	2.38	0.53
7:D:1748:G:N1	7:D:1749:A:C2	2.77	0.53
7:D:1870:C:C2'	7:D:1871:A:H8	2.17	0.53
7:D:1948:G:H2'	7:D:1949:G:H8	1.73	0.53
7:D:2086:U:H2'	7:D:2087:G:H8	1.73	0.53
7:D:2123:G:OP1	29:Z:164:ARG:NH2	2.40	0.53
7:D:2162:G:H2'	7:D:2163:C:O4'	2.09	0.53
7:D:2210:G:C5	30:a:70:TRP:CD1	2.97	0.53
7:D:2698:U:H2'	7:D:2699:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2781:A:N1	7:D:2782:G:N2	2.57	0.53
10:G:89:GLU:OE2	10:G:93:LYS:HE2	2.08	0.53
16:M:47:LEU:HD12	16:M:50:LEU:HB3	1.90	0.53
30:a:146:GLU:HB2	30:a:153:ALA:HA	1.90	0.53
32:c:45:ARG:NE	32:c:97:TYR:CD2	2.76	0.53
33:d:47:LYS:HD2	33:d:73:ALA:HB2	1.90	0.53
35:f:21:LYS:HD3	35:f:25:ARG:NH2	2.23	0.53
39:j:54:LEU:O	39:j:57:ARG:HB3	2.09	0.53
40:k:17:ARG:CZ	40:k:89:ARG:HD2	2.39	0.53
46:q:9:LYS:HB2	46:q:110:GLU:OE2	2.08	0.53
46:q:88:LYS:HB3	46:q:91:GLU:HG3	1.90	0.53
47:r:10:ARG:HD3	47:r:36:LYS:HZ2	1.74	0.53
47:r:145:GLU:HG2	47:r:146:ILE:HG13	1.91	0.53
49:t:27:LEU:HD11	49:t:48:LEU:HB3	1.90	0.53
56:B:222:VAL:HG21	56:B:228:ILE:CD1	2.39	0.53
56:B:241:LYS:HG2	56:B:243:GLY:N	2.23	0.53
56:B:410:VAL:HG11	56:B:480:GLU:N	2.16	0.53
56:B:510:ARG:O	56:B:511:GLU:HB2	2.08	0.53
6:A:66:G:N2	6:A:104:G:H1'	2.24	0.53
6:A:235:C:H5"	24:U:70:ARG:HG3	1.91	0.53
6:A:361:G:N7	6:A:362:G:C4	2.77	0.53
6:A:516:U:H3'	6:A:517:G:C8	2.44	0.53
6:A:579:G:C5	6:A:580:U:C4	2.97	0.53
6:A:579:G:N2	6:A:763:G:C4	2.77	0.53
6:A:681:C:N4	6:A:709:G:H1	2.05	0.53
6:A:934:C:O2'	6:A:935:A:O5'	2.25	0.53
6:A:1239:A:H1'	6:A:1241:G:C4	2.44	0.53
6:A:1416:G:H2'	6:A:1417:G:O4'	2.09	0.53
7:D:7:G:C2	7:D:2897:U:O2	2.62	0.53
7:D:119:A:O2'	7:D:120:U:H3'	2.09	0.53
7:D:247:G:N2	55:z:8:LYS:HE3	2.23	0.53
7:D:273:G:C2	7:D:365:C:C2	2.97	0.53
7:D:344:G:C2	7:D:345:A:C8	2.97	0.53
7:D:506:G:O2'	7:D:507:A:O5'	2.27	0.53
7:D:513:A:H2'	7:D:513:A:N3	2.24	0.53
7:D:681:G:C6	7:D:682:G:C5	2.96	0.53
7:D:924:C:H6	7:D:924:C:O5'	1.92	0.53
7:D:1102:C:H2'	7:D:1102:C:O2	2.08	0.53
7:D:1265:A:H4'	7:D:1266:G:OP1	2.09	0.53
7:D:1548:C:H2'	7:D:1549:C:C6	2.44	0.53
7:D:1668:A:N1	7:D:1993:U:C2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1796:U:H4'	30:a:254:THR:HG22	1.90	0.53
7:D:2362:G:C2	7:D:2363:C:C2	2.97	0.53
7:D:2399:G:N2	7:D:2400:G:C4	2.77	0.53
7:D:2562:U:H1'	36:g:23:ARG:HH21	1.73	0.53
8:E:26:A:H2'	8:E:27:C:O4'	2.09	0.53
9:F:24:TRP:CG	9:F:25:ASN:N	2.77	0.53
13:J:4:TYR:CE2	13:J:72:VAL:HG11	2.44	0.53
20:Q:26:GLY:O	20:Q:29:ARG:HB3	2.08	0.53
20:Q:77:ASN:OD1	20:Q:78:ILE:N	2.42	0.53
26:W:16:LEU:O	26:W:20:LEU:CG	2.57	0.53
30:a:242:ARG:CZ	30:a:244:ARG:HB2	2.39	0.53
36:g:95:GLY:HA2	36:g:117:LEU:HD11	1.89	0.53
37:h:86:LYS:HG3	37:h:91:PHE:CZ	2.43	0.53
38:i:11:LYS:HD3	38:i:16:ARG:NH1	2.23	0.53
38:i:75:THR:OG1	38:i:90:VAL:HA	2.09	0.53
39:j:79:LEU:HD23	39:j:80:PHE:HA	1.91	0.53
40:k:50:SER:C	40:k:76:LYS:NZ	2.64	0.53
43:n:93:GLU:HB2	43:n:95:LEU:HD21	1.90	0.53
45:p:37:THR:O	45:p:40:LYS:HB2	2.09	0.53
52:w:10:LYS:HG3	52:w:12:SER:N	2.23	0.53
56:B:13:SER:HB2	56:B:97:LEU:CD2	2.39	0.53
56:B:406:LEU:HG	56:B:489:LEU:CD1	2.35	0.53
56:B:431:LYS:CG	56:B:458:GLU:CG	2.22	0.53
56:B:492:VAL:HG13	56:B:541:ILE:HD11	1.86	0.53
56:B:537:ILE:HD12	56:B:551:VAL:CG2	2.36	0.53
56:B:584:LEU:HD23	56:B:587:ILE:HD13	1.91	0.53
6:A:101:A:N3	6:A:102:G:C8	2.77	0.53
6:A:102:G:C2	6:A:103:C:C2	2.97	0.53
6:A:369:C:H2'	6:A:370:C:C6	2.44	0.53
6:A:465:A:O5'	6:A:467:G:O6	2.27	0.53
6:A:652:U:H2'	6:A:752:G:C6	2.44	0.53
6:A:727:G:C2	6:A:731:G:C2	2.97	0.53
6:A:836:G:C6	6:A:837:G:C6	2.97	0.53
6:A:1145:C:O2'	6:A:1146:A:O5'	2.27	0.53
7:D:186:G:N2	7:D:187:G:C4	2.77	0.53
7:D:323:G:H3'	32:c:168:ARG:HH12	1.73	0.53
7:D:467:G:C2	7:D:468:G:C4	2.97	0.53
7:D:485:C:C2	7:D:486:C:C5	2.97	0.53
7:D:650:C:O2	7:D:650:C:H2'	2.08	0.53
7:D:833:U:H2'	7:D:834:C:H6	1.73	0.53
7:D:1020:A:H5"	7:D:1021:A:OP1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1230:C:O2'	7:D:1231:G:H5'	2.08	0.53
7:D:1242:A:N3	7:D:1242:A:H2'	2.24	0.53
7:D:1339:G:H22	7:D:1603:A:H8	1.56	0.53
7:D:1795:C:H42	7:D:1824:G:H1	1.57	0.53
7:D:2067:G:H1'	7:D:2444:G:N2	2.24	0.53
7:D:2487:G:N2	7:D:2488:A:C4	2.77	0.53
7:D:2490:G:N2	7:D:2491:U:H3	2.06	0.53
7:D:2497:A:O2'	7:D:2498:C:P	2.67	0.53
7:D:2517:C:C5	7:D:2542:A:C5	2.97	0.53
8:E:73:A:C6	8:E:104:A:C2	2.97	0.53
20:Q:60:VAL:HG12	20:Q:60:VAL:O	2.09	0.53
22:S:75:PRO:O	22:S:78:TYR:HB3	2.09	0.53
29:Z:38:ASP:N	29:Z:177:LYS:HE3	2.23	0.53
30:a:244:ARG:HD3	30:a:252:TRP:NE1	2.24	0.53
31:b:104:VAL:HG11	31:b:188:VAL:HG13	1.89	0.53
34:e:116:GLU:H	34:e:116:GLU:CD	2.16	0.53
37:h:81:GLN:HA	37:h:86:LYS:HB2	1.91	0.53
41:l:50:ILE:HG22	41:l:68:TYR:HB3	1.91	0.53
41:l:110:ILE:HG22	41:l:112:ARG:H	1.74	0.53
44:o:17:VAL:HA	44:o:20:VAL:HG12	1.91	0.53
53:x:25:LYS:HG2	53:x:26:ASN:N	2.24	0.53
56:B:135:ILE:HG13	56:B:138:ILE:HD11	1.90	0.53
56:B:160:ALA:C	56:B:162:GLU:H	2.17	0.53
56:B:523:LYS:HB2	56:B:598:LEU:CD2	2.00	0.53
3:3:77:LEU:HD12	3:3:111:LYS:HD3	1.89	0.52
3:3:98:ARG:HG2	3:3:100:THR:H	1.73	0.52
6:A:563:A:O2'	19:P:15:ARG:NH1	2.42	0.52
6:A:658:G:C6	6:A:749:C:N4	2.77	0.52
6:A:695:A:N1	6:A:786:G:N2	2.52	0.52
6:A:903:G:H2'	6:A:904:C:C6	2.44	0.52
6:A:1081:G:C2	6:A:1082:G:C4	2.97	0.52
6:A:1316:G:C2	6:A:1319:A:OP2	2.62	0.52
7:D:49:A:C6	7:D:177:G:C4	2.97	0.52
7:D:363(F):A:H3'	7:D:364:C:H6	1.73	0.52
7:D:603:A:N1	7:D:604:G:N2	2.57	0.52
7:D:814:C:H42	7:D:1193:G:H1	1.57	0.52
7:D:999:U:H3'	7:D:1154:G:H1	1.74	0.52
7:D:1001:A:H5"	7:D:1002:G:OP2	2.09	0.52
7:D:1041:C:H1'	7:D:1115:G:C2	2.44	0.52
7:D:1252:G:OP2	7:D:1252:G:H4'	2.09	0.52
7:D:1480:G:OP1	7:D:1559:G:C6	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1637:A:H5'	7:D:1760:A:O2'	2.08	0.52
7:D:1956:U:C4	7:D:1957:C:C4	2.97	0.52
7:D:2184:G:H2'	7:D:2185:C:O4'	2.09	0.52
7:D:2255:G:N2	48:s:9:SER:HB3	2.23	0.52
7:D:2612:C:O2	52:w:4:HIS:CD2	2.61	0.52
7:D:2653:U:H3	7:D:2654:A:H62	1.57	0.52
7:D:2774:C:H2'	7:D:2775:A:C8	2.44	0.52
7:D:2805:G:C2'	7:D:2807:G:C5'	2.86	0.52
8:E:34:U:O2'	8:E:35:U:O5'	2.26	0.52
9:F:96:ARG:HB2	9:F:98:LEU:CD1	2.39	0.52
9:F:136:VAL:O	9:F:139:LYS:HG2	2.09	0.52
10:G:54:ARG:HB3	10:G:69:HIS:HB2	1.92	0.52
12:I:91:LEU:HD21	12:I:118:ILE:HG21	1.91	0.52
17:N:27:ALA:HB2	17:N:85:LEU:HD11	1.91	0.52
29:Z:155:GLU:CB	29:Z:160:ARG:HA	2.37	0.52
32:c:40:GLN:HB3	32:c:184:TYR:CZ	2.44	0.52
43:n:82:ARG:HG2	43:n:82:ARG:O	2.08	0.52
47:r:151:HIS:HB3	47:r:169:GLU:H	1.73	0.52
51:v:5:ILE:HG22	51:v:7:PRO:HD2	1.91	0.52
54:y:44:PRO:O	54:y:47:ARG:HG2	2.08	0.52
56:B:92:GLU:CA	56:B:96:ALA:HB3	2.36	0.52
56:B:227:ARG:C	56:B:237:PHE:CD2	2.87	0.52
56:B:536:PRO:HB3	56:B:550:THR:CG2	2.34	0.52
6:A:59:A:C5	6:A:354:G:C6	2.97	0.52
6:A:73:G:C5	6:A:74:C:C5	2.97	0.52
6:A:73:G:C6	6:A:74:C:C2	2.96	0.52
6:A:391:G:H5"	23:T:8:ARG:HH21	1.73	0.52
6:A:691:G:N7	18:O:26:ASN:ND2	2.56	0.52
6:A:808:C:C5'	22:S:48:LYS:HZ1	2.17	0.52
6:A:966:G:C2	6:A:967:C:C2	2.97	0.52
6:A:1356:G:N2	6:A:1366:C:N3	2.53	0.52
6:A:1419:G:N2	6:A:1482:G:H1'	2.24	0.52
6:A:1447:G:O5'	6:A:1447:G:H8	1.92	0.52
7:D:83:G:H22	7:D:102:G:C2'	2.23	0.52
7:D:259:G:H2'	7:D:260:G:H8	1.73	0.52
7:D:371:A:N6	7:D:424:G:C5	2.77	0.52
7:D:448:U:O2'	32:c:84:VAL:HG13	2.09	0.52
7:D:616:A:H3'	7:D:616:A:OP2	2.10	0.52
7:D:774:A:C4	7:D:775:G:C5	2.97	0.52
7:D:866:A:H2'	7:D:866:A:N3	2.24	0.52
7:D:1065:U:OP2	7:D:1066:U:OP2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1098:A:C6	7:D:1099:G:C6	2.97	0.52
7:D:1419:A:H3'	7:D:1420:U:C2	2.45	0.52
7:D:1469:A:C6	7:D:1470:G:N2	2.77	0.52
7:D:1775:U:H1'	30:a:208:LYS:NZ	2.24	0.52
7:D:1854:A:C8	7:D:1855:G:C8	2.97	0.52
7:D:2043:C:OP1	7:D:2777:G:O2'	2.28	0.52
7:D:2185:C:O2'	7:D:2186:G:H5'	2.09	0.52
7:D:2731:G:N2	7:D:2732:G:C2	2.78	0.52
15:L:113:SER:HB2	15:L:134:ILE:HD11	1.90	0.52
24:U:99:SER:OG	24:U:100:LYS:N	2.42	0.52
27:X:49:ALA:O	27:X:53:LEU:HG	2.08	0.52
30:a:27:THR:HG22	30:a:28:GLU:N	2.23	0.52
34:e:149:ARG:CZ	34:e:164:TYR:HB3	2.40	0.52
37:h:29:LYS:C	37:h:30:THR:HG1	2.17	0.52
40:k:11:LYS:HZ2	40:k:15:ARG:NH1	2.07	0.52
40:k:67:ARG:O	40:k:71:ARG:HG3	2.09	0.52
42:m:88:ILE:H	43:n:52:VAL:HG22	1.73	0.52
42:m:89:GLU:HA	43:n:51:VAL:HB	1.90	0.52
43:n:65:GLY:CA	43:n:97:LYS:NZ	2.72	0.52
47:r:2:GLU:HB2	47:r:44:PHE:CE1	2.44	0.52
51:v:54:GLY:O	51:v:55:ARG:HB3	2.09	0.52
51:v:65:ASP:N	51:v:68:ARG:NH1	2.57	0.52
56:B:60:LYS:O	56:B:60:LYS:HG3	2.10	0.52
56:B:195:PRO:HG3	56:B:286:PRO:O	2.09	0.52
5:5:35:A:H2'	5:5:36:A:C8	2.44	0.52
6:A:384:G:OP2	6:A:384:G:C8	2.62	0.52
6:A:405:U:C4	6:A:498:A:N7	2.77	0.52
6:A:509:A:OP2	6:A:510:A:OP2	2.27	0.52
6:A:1118:C:OP2	6:A:1118:C:C6	2.62	0.52
6:A:1225:A:OP2	6:A:1225:A:C8	2.62	0.52
6:A:1226:C:C5'	20:Q:94:ARG:CZ	2.78	0.52
6:A:1361:G:H5"	6:A:1362:C:OP2	2.10	0.52
7:D:219:G:O6	7:D:220:G:N1	2.42	0.52
7:D:563:G:C2	7:D:2018:G:N3	2.77	0.52
7:D:698:C:N4	7:D:762:U:H3	2.06	0.52
7:D:1004:C:H42	7:D:1151:G:H1	1.57	0.52
7:D:1047:G:C5	7:D:1110:G:C2	2.97	0.52
7:D:1131:G:N9	35:f:74:ARG:NH1	2.57	0.52
7:D:1248:G:C2	32:c:52:LYS:NZ	2.78	0.52
7:D:1278:A:H2'	7:D:1279:G:H8	1.74	0.52
7:D:1397:U:OP2	7:D:1397:U:O4'	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1575:C:N4	7:D:1576:U:O4	2.43	0.52
7:D:1586:A:C3'	7:D:1587:A:H5"	2.39	0.52
7:D:1749:A:C2'	7:D:1750:G:C8	2.74	0.52
7:D:2185:C:H2'	7:D:2186:G:C8	2.43	0.52
7:D:2306:C:OP2	7:D:2307:G:C8	2.61	0.52
7:D:2318:G:P	40:k:3:ARG:HH22	2.32	0.52
7:D:2585:U:H4'	7:D:2586:C:H5'	1.90	0.52
7:D:2616:C:C5'	52:w:15:ARG:NH1	2.71	0.52
7:D:2686:G:N2	7:D:2687:U:O2	2.42	0.52
8:E:57:A:H2	33:d:29:TRP:HA	1.74	0.52
9:F:164:VAL:HG22	9:F:166:ASP:H	1.74	0.52
11:H:10:ARG:HA	11:H:13:ARG:HD3	1.91	0.52
13:J:95:GLU:H	13:J:96:PRO:CD	2.22	0.52
16:M:5:TYR:HH	16:M:7:THR:HG1	1.58	0.52
22:S:3:ILE:HG13	22:S:38:ARG:NH2	2.24	0.52
26:W:5:LEU:CG	26:W:6:LYS:H	2.21	0.52
26:W:29:ARG:CG	26:W:48:THR:CG2	2.76	0.52
30:a:200:ASP:C	30:a:202:LYS:H	2.16	0.52
32:c:60:SER:OG	32:c:78:ILE:O	2.22	0.52
34:e:87:LEU:HD22	34:e:131:VAL:HG13	1.90	0.52
38:i:37:LEU:O	38:i:99:PRO:HB3	2.10	0.52
41:l:50:ILE:HG22	41:l:68:TYR:HB2	1.91	0.52
56:B:227:ARG:HD3	56:B:227:ARG:N	2.24	0.52
56:B:241:LYS:HE3	56:B:243:GLY:HA2	1.90	0.52
56:B:398:ASP:CB	56:B:399:PRO:CD	2.87	0.52
56:B:405:ILE:CA	56:B:486:PRO:HA	2.36	0.52
56:B:409:TYR:HD2	56:B:453:GLU:CG	2.17	0.52
56:B:414:ILE:HG22	56:B:416:THR:HG23	1.90	0.52
56:B:584:LEU:C	56:B:586:ALA:N	2.66	0.52
1:1:2:LYS:HD2	7:D:2539:C:H4'	1.91	0.52
6:A:162:A:C8	6:A:163:C:H1'	2.44	0.52
6:A:594:G:H3'	6:A:595:G:C8	2.43	0.52
6:A:842:C:H4'	6:A:848:C:OP2	2.08	0.52
6:A:927:G:OP2	6:A:1503:A:N6	2.43	0.52
6:A:1241:G:H2'	6:A:1242:C:O4'	2.10	0.52
6:A:1280:A:OP2	17:N:43:ARG:NH2	2.39	0.52
6:A:1321:C:H1'	20:Q:87:TYR:CE2	2.44	0.52
6:A:1443:G:P	6:A:1443:G:C3'	2.97	0.52
7:D:66:C:C4	7:D:67:U:C4	2.97	0.52
7:D:68:G:H21	7:D:74:A:C4'	2.23	0.52
7:D:295:G:N3	7:D:344:G:N2	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:450:G:N1	7:D:454:A:OP2	2.42	0.52
7:D:536:A:N3	7:D:558:G:N2	2.57	0.52
7:D:615:G:OP1	32:c:44:ARG:HD2	2.08	0.52
7:D:879:G:N1	7:D:898:C:OP1	2.43	0.52
7:D:997:G:H1	7:D:1158:C:H42	1.56	0.52
7:D:1332:G:H2'	7:D:1609:A:N1	2.24	0.52
7:D:1369:G:C6	7:D:1370:C:C4	2.97	0.52
7:D:1615:C:C2	44:o:87:PRO:HG3	2.45	0.52
7:D:1668:A:N6	7:D:1674:G:C4	2.78	0.52
7:D:1681:G:O2'	7:D:1682:G:OP1	2.27	0.52
7:D:2211:G:N3	7:D:2211:G:C2'	2.73	0.52
8:E:9:G:C2	8:E:10:C:C2	2.98	0.52
8:E:57:A:C2	33:d:29:TRP:CA	2.83	0.52
16:M:12:GLU:O	16:M:68:GLY:N	2.43	0.52
20:Q:97:PRO:C	20:Q:99:ARG:H	2.18	0.52
29:Z:139:ASN:OD1	29:Z:140:PRO:HD2	2.10	0.52
33:d:26:GLN:O	33:d:27:ASN:HB2	2.08	0.52
34:e:85:LYS:HG2	34:e:86:GLU:O	2.10	0.52
34:e:98:LEU:CA	34:e:125:VAL:HG21	2.39	0.52
38:i:68:ILE:HG13	38:i:69:PHE:H	1.75	0.52
43:n:6:LYS:HA	43:n:10:LYS:HA	1.90	0.52
55:z:15:LYS:O	55:z:23:VAL:HB	2.10	0.52
56:B:195:PRO:HB3	56:B:286:PRO:CA	2.03	0.52
56:B:210:GLY:HA2	56:B:269:ARG:CB	2.34	0.52
56:B:509:HIS:O	56:B:510:ARG:HB3	2.10	0.52
5:5:15:G:N2	5:5:48:C:O2	2.41	0.52
6:A:189:U:C2	24:U:72:ARG:NH1	2.78	0.52
6:A:455:C:O2	6:A:455:C:H2'	2.08	0.52
6:A:475:G:C5	6:A:476:G:N7	2.78	0.52
6:A:723:U:H5"	6:A:724:G:OP2	2.09	0.52
6:A:893:C:H2'	6:A:894:G:H8	1.75	0.52
6:A:1305:G:H5'	28:Y:4:GLY:HA3	1.91	0.52
7:D:189:G:C4	7:D:205:G:N2	2.77	0.52
7:D:356:G:C6	7:D:357:A:C6	2.97	0.52
7:D:592:G:C2	7:D:593:G:C8	2.97	0.52
7:D:633:A:H5"	7:D:634:C:OP2	2.09	0.52
7:D:778:G:O6	7:D:779:U:N3	2.43	0.52
7:D:974:G:N2	7:D:1187:G:C6	2.78	0.52
7:D:1245:G:C2	7:D:1246:A:C5	2.97	0.52
7:D:1485:G:C2'	7:D:1486:A:H5'	2.39	0.52
7:D:1818:U:HO2'	7:D:1819:A:P	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2044:C:H42	7:D:2624:G:H1	1.57	0.52
7:D:2078:C:C4	7:D:2079:U:C4	2.97	0.52
8:E:33:G:H2'	8:E:34:U:H6	1.74	0.52
9:F:234:PRO:HB2	9:F:238:LEU:HD13	1.91	0.52
15:L:38:ILE:O	15:L:41:ARG:HB3	2.09	0.52
26:W:36:ARG:HD3	26:W:71:LEU:C	2.35	0.52
26:W:53:ASN:HD21	26:W:75:ALA:CB	2.17	0.52
30:a:70:TRP:O	30:a:73:VAL:HG13	2.10	0.52
31:b:36:ARG:O	31:b:44:TYR:HA	2.09	0.52
31:b:133:LYS:O	31:b:137:HIS:CE1	2.63	0.52
31:b:147:PRO:HD2	31:b:148:GLY:H	1.75	0.52
37:h:79:ARG:O	37:h:83:VAL:HG22	2.09	0.52
56:B:24:THR:O	56:B:28:ARG:HB2	2.10	0.52
56:B:237:PHE:O	56:B:267:ALA:HB1	2.09	0.52
56:B:411:LYS:HZ2	56:B:436:VAL:HG22	1.75	0.52
56:B:432:ARG:NH2	56:B:487:GLY:CA	2.73	0.52
56:B:474:TYR:O	56:B:475:ALA:C	2.53	0.52
56:B:572:LYS:C	56:B:574:LEU:H	2.17	0.52
3:3:21:PRO:HB2	7:D:1067:A:P	2.49	0.52
5:5:18:G:O2'	5:5:57:G:O6	2.21	0.52
6:A:198:G:N2	6:A:199:G:H1'	2.24	0.52
6:A:380:G:C2	6:A:384:G:C6	2.97	0.52
6:A:924:C:N4	6:A:925:G:O6	2.43	0.52
6:A:1165:C:C2'	6:A:1166:G:H5'	2.39	0.52
7:D:38:A:C5	7:D:39:C:N4	2.78	0.52
7:D:149:A:N7	7:D:150:C:N3	2.58	0.52
7:D:200:U:O2'	51:v:31:ILE:HG13	2.09	0.52
7:D:321:G:H2'	7:D:341:G:O2'	2.08	0.52
7:D:326:G:H2'	7:D:327:G:H8	1.75	0.52
7:D:354:G:H2'	7:D:355:G:C8	2.44	0.52
7:D:705:A:C8	7:D:727:A:C2	2.98	0.52
7:D:878:A:H8	7:D:897:C:C4	2.27	0.52
7:D:1324:G:C2	7:D:1328:G:C6	2.97	0.52
7:D:1381:G:N1	7:D:1382:G:N3	2.58	0.52
7:D:1423:G:C2	7:D:1424:G:C5	2.97	0.52
7:D:1429:G:C5	7:D:1568:G:C6	2.97	0.52
7:D:1484:G:C6	7:D:1485:G:C5	2.97	0.52
7:D:1746:G:C2	7:D:1747:G:N3	2.77	0.52
7:D:1750:G:C2'	7:D:1751:C:H5'	2.40	0.52
7:D:1944:U:O2'	7:D:1945:G:P	2.67	0.52
7:D:2022:U:H3'	7:D:2022:U:OP2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2196:C:O2	7:D:2196:C:H2'	2.08	0.52
7:D:2210:G:C5	30:a:70:TRP:NE1	2.78	0.52
7:D:2285:C:C5	53:x:27:LYS:NZ	2.75	0.52
7:D:2313:C:O4'	33:d:40:ASN:ND2	2.42	0.52
7:D:2484:G:C2	7:D:2485:G:C8	2.98	0.52
7:D:2562:U:H1'	36:g:23:ARG:NH2	2.24	0.52
7:D:2631:G:O5'	7:D:2894:G:C8	2.63	0.52
7:D:2762:G:C6	7:D:2763:G:C4	2.97	0.52
8:E:32:C:N4	8:E:50:G:H1	2.08	0.52
10:G:79:ARG:N	10:G:82:GLU:OE1	2.43	0.52
18:O:54:ARG:O	18:O:57:THR:HG22	2.10	0.52
23:T:18:ARG:HH12	23:T:35:LYS:CE	2.23	0.52
30:a:46:GLN:C	30:a:48:ARG:N	2.66	0.52
33:d:94:LEU:CB	33:d:99:MET:HE3	2.40	0.52
33:d:111:LEU:HA	33:d:139:LEU:HD11	1.91	0.52
33:d:145:THR:OG1	33:d:146:TYR:N	2.42	0.52
37:h:48:PRO:O	37:h:51:PHE:HB2	2.10	0.52
38:i:34:LEU:HG	38:i:118:LEU:HD22	1.91	0.52
41:l:3:ARG:O	41:l:7:ILE:HG12	2.09	0.52
43:n:20:LEU:HB3	43:n:95:LEU:HD13	1.91	0.52
43:n:56:SER:OG	43:n:57:VAL:N	2.41	0.52
45:p:87:GLN:HB3	45:p:88:LYS:HG2	1.91	0.52
46:q:33:LYS:C	46:q:35:TYR:H	2.17	0.52
52:w:51:TYR:CG	52:w:55:ARG:HA	2.45	0.52
56:B:13:SER:OG	56:B:97:LEU:HG	2.08	0.52
56:B:13:SER:H	56:B:103:VAL:HG12	1.75	0.52
56:B:219:GLU:O	56:B:219:GLU:HG3	2.09	0.52
56:B:228:ILE:HD13	56:B:264:LEU:HD23	1.91	0.52
56:B:409:TYR:OH	56:B:432:ARG:HD2	2.08	0.52
3:3:137:GLU:OE1	7:D:1078:U:C6	2.63	0.52
6:A:436:C:H2'	6:A:437:U:C2	2.45	0.52
6:A:852:G:H5"	6:A:853:G:OP2	2.10	0.52
6:A:976:G:N2	6:A:1363:A:C5	2.78	0.52
6:A:1095:U:H5"	6:A:1096:C:OP2	2.10	0.52
6:A:1106:G:H5"	10:G:172:ARG:HG2	1.91	0.52
6:A:1243:C:H2'	6:A:1244:C:C6	2.44	0.52
6:A:1323:G:H2'	6:A:1324:A:H8	1.74	0.52
7:D:43:G:N7	7:D:44:A:N7	2.56	0.52
7:D:141:A:C6	7:D:141(A):C:C2	2.98	0.52
7:D:512:G:O2'	7:D:513:A:OP2	2.19	0.52
7:D:560:C:H2'	7:D:560:C:O2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:830:G:C4	7:D:2448:A:C2	2.97	0.52
7:D:859:G:H2'	7:D:860:U:OP2	2.10	0.52
7:D:1140:C:H4'	7:D:1142(A):A:N1	2.25	0.52
7:D:1183:G:H21	7:D:1184:G:H1'	1.75	0.52
7:D:1229:G:C6	7:D:1230:C:C4	2.98	0.52
7:D:1424:G:H22	7:D:1574:C:H1'	1.74	0.52
7:D:1488:G:N1	7:D:1502:C:N3	2.57	0.52
7:D:1746:G:C3'	7:D:1747:G:C8	2.86	0.52
7:D:2224:G:O2'	7:D:2225:A:O4'	2.27	0.52
7:D:2787:C:O2'	31:b:61:ARG:NH2	2.43	0.52
8:E:100:G:C6	8:E:101:A:C5	2.98	0.52
27:X:34:LYS:O	27:X:37:SER:OG	2.24	0.52
29:Z:107:TRP:CZ2	29:Z:109:ASP:HB2	2.45	0.52
30:a:198:ASN:OD1	30:a:201:HIS:HB3	2.10	0.52
36:g:2:ILE:HB	36:g:32:TYR:CE1	2.45	0.52
36:g:87:ILE:HG22	36:g:88:ASN:HD22	1.75	0.52
39:j:72:ASP:O	39:j:76:VAL:HG23	2.10	0.52
51:v:52:THR:HG22	51:v:53:GLU:H	1.74	0.52
56:B:27:ASP:O	56:B:41:MET:SD	2.67	0.52
56:B:145:PRO:HB3	56:B:165:PHE:CG	2.43	0.52
56:B:152:VAL:HA	56:B:156:LEU:HB2	1.89	0.52
56:B:376:VAL:CG1	56:B:377:VAL:H	2.06	0.52
56:B:381:ARG:O	56:B:401:ARG:O	2.27	0.52
56:B:382:LEU:CB	56:B:386:GLU:CG	2.87	0.52
56:B:415:PHE:CA	56:B:448:VAL:O	2.55	0.52
56:B:443:GLY:O	56:B:444:ALA:HB2	2.10	0.52
56:B:520:ILE:HD13	56:B:520:ILE:O	2.10	0.52
6:A:388:G:H8	6:A:388:G:O5'	1.93	0.52
6:A:507:C:H3'	6:A:508:C:H2'	1.91	0.52
6:A:664:G:OP1	25:V:64:ARG:NH2	2.42	0.52
6:A:801:U:C2	6:A:802:A:C8	2.98	0.52
6:A:836:G:N7	6:A:851:G:C2	2.78	0.52
6:A:1016:A:OP2	6:A:1016:A:H8	1.93	0.52
6:A:1213:A:C5	6:A:1215:G:C4	2.98	0.52
6:A:1306:A:N7	6:A:1307:U:N3	2.57	0.52
6:A:1370:G:C2	6:A:1371:G:C8	2.98	0.52
6:A:1453:G:H5"	6:A:1453:G:N3	2.25	0.52
7:D:126:A:C6	54:y:18:PHE:CE1	2.97	0.52
7:D:272:G:C2	7:D:366:C:N3	2.78	0.52
7:D:276:A:HO2'	7:D:278:A:N6	2.06	0.52
7:D:568:U:H5'	7:D:945:A:N6	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:666:G:H2'	7:D:667:U:H6	1.74	0.52
7:D:1015:G:H2'	7:D:1016:G:H8	1.74	0.52
7:D:1296:G:OP1	7:D:2709:G:O2'	2.19	0.52
7:D:1381:G:O2'	7:D:1571:A:N6	2.42	0.52
7:D:1446:C:O2'	7:D:1545(A):A:O2'	2.21	0.52
7:D:1468:C:N4	7:D:1524:G:H1	2.08	0.52
7:D:1657:C:N3	7:D:2004:G:N2	2.58	0.52
7:D:1707:G:N3	7:D:1756:G:C2	2.78	0.52
7:D:1709:U:N3	7:D:1750:G:N2	2.58	0.52
7:D:1819:A:O2'	7:D:1820:U:P	2.68	0.52
7:D:2024:G:H2'	7:D:2025:C:H6	1.74	0.52
7:D:2352:A:C6	7:D:2366:A:C4	2.97	0.52
7:D:2519:U:C4	7:D:2541:A:C6	2.98	0.52
7:D:2588:G:C5	7:D:2607:G:N2	2.78	0.52
7:D:2694:G:C2	7:D:2695:C:C2	2.97	0.52
7:D:2884:U:H5	52:w:43:HIS:HB3	1.74	0.52
9:F:117:GLU:O	9:F:121:LEU:HG	2.10	0.52
14:K:66:VAL:O	14:K:70:LYS:HG3	2.10	0.52
26:W:6:LYS:HD2	26:W:41:VAL:HG12	1.91	0.52
35:f:21:LYS:HA	35:f:61:ARG:HH21	1.73	0.52
37:h:78:PRO:HB3	37:h:122:PRO:O	2.09	0.52
37:h:116:GLY:HA2	37:h:121:LYS:HB3	1.91	0.52
37:h:121:LYS:N	37:h:122:PRO:HD3	2.25	0.52
40:k:31:SER:HB3	40:k:34:HIS:CG	2.45	0.52
42:m:87:GLY:C	42:m:89:GLU:HG2	2.35	0.52
44:o:1:MET:O	44:o:3:ALA:N	2.43	0.52
44:o:34:ASN:O	44:o:37:ARG:N	2.43	0.52
44:o:66:GLU:HA	44:o:69:LEU:HD13	1.91	0.52
51:v:33:VAL:HG12	51:v:35:VAL:H	1.75	0.52
55:z:22:VAL:HG21	55:z:53:PRO:HB2	1.92	0.52
56:B:81:ILE:HG22	56:B:83:THR:HG23	1.92	0.52
4:4:50:U:H3	4:4:64:G:H1	1.57	0.52
6:A:57:G:O6	6:A:356:A:N6	2.43	0.52
6:A:404:U:H2'	6:A:405:U:H6	1.74	0.52
6:A:474:G:C2'	6:A:475:G:C8	2.86	0.52
6:A:495:A:H61	11:H:119:GLN:HE22	1.58	0.52
6:A:1014:A:H3'	6:A:1015:A:C8	2.45	0.52
7:D:49:A:OP2	7:D:49:A:C8	2.63	0.52
7:D:270(D):C:C2	7:D:270(E):G:C8	2.98	0.52
7:D:317:G:H2'	7:D:318:C:H6	1.74	0.52
7:D:337:C:C5'	7:D:338:G:OP2	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:356:G:H3'	7:D:357:A:H8	1.74	0.52
7:D:573:G:C2	7:D:2031:A:OP2	2.61	0.52
7:D:612:G:OP2	7:D:612:G:C8	2.63	0.52
7:D:697:C:H5"	7:D:698:C:OP2	2.10	0.52
7:D:1151:G:C2	7:D:1152:C:C2	2.98	0.52
7:D:1361:G:C2	7:D:1362:C:C2	2.97	0.52
7:D:1748:G:N2	7:D:1749:A:N3	2.58	0.52
7:D:1753:G:N2	7:D:1756:G:N3	2.57	0.52
7:D:1769:G:H2'	7:D:1770:G:H8	1.74	0.52
7:D:2000:G:H2'	7:D:2001:A:H8	1.75	0.52
7:D:2046:G:N2	7:D:2623:G:N3	2.58	0.52
7:D:2124:G:H22	7:D:2174:C:N4	2.08	0.52
7:D:2175:C:H1'	29:Z:219:GLY:O	2.09	0.52
7:D:2299:G:C2	7:D:2300:G:C4	2.97	0.52
20:Q:91:ARG:C	20:Q:93:ARG:H	2.18	0.52
24:U:68:ARG:N	24:U:70:ARG:NH1	2.58	0.52
26:W:28:LYS:HA	26:W:28:LYS:HE3	1.92	0.52
33:d:131:TYR:CG	33:d:132:ASN:N	2.77	0.52
36:g:87:ILE:HD11	36:g:93:PRO:HB3	1.91	0.52
41:l:34:VAL:HB	41:l:84:GLN:HE21	1.75	0.52
45:p:85:PRO:HG2	45:p:87:GLN:H	1.75	0.52
51:v:56:VAL:HG12	51:v:57:GLU:N	2.22	0.52
54:y:34:ARG:HH22	54:y:42:LEU:HA	1.75	0.52
56:B:416:THR:HG21	56:B:424:LEU:CD1	2.13	0.52
56:B:565:GLY:O	56:B:566:ASP:HB2	2.09	0.52
3:3:49:GLY:C	3:3:51:ALA:H	2.18	0.52
3:3:80:LYS:O	3:3:82:ALA:N	2.42	0.52
5:5:45:U:H5"	5:5:46:G:OP2	2.09	0.52
6:A:262:A:H2'	6:A:263:A:C8	2.45	0.52
6:A:712:A:H2'	6:A:713:G:O4'	2.10	0.52
6:A:939:G:O3'	14:K:102:ARG:NH2	2.43	0.52
7:D:96:G:H1'	49:t:43:HIS:CE1	2.45	0.52
7:D:120:U:H2'	7:D:120:U:O2	2.09	0.52
7:D:476:G:C2	7:D:479:A:OP2	2.62	0.52
7:D:573:G:C6	7:D:2031:A:OP2	2.60	0.52
7:D:581:C:OP2	42:m:33:ARG:NH1	2.41	0.52
7:D:619:G:C8	7:D:620:G:N2	2.78	0.52
7:D:729:G:H5'	30:a:18:VAL:HB	1.92	0.52
7:D:1160:G:H2'	7:D:1161:C:C6	2.45	0.52
7:D:1368:G:C2	7:D:1369:G:C8	2.98	0.52
7:D:1477:A:C6	7:D:1478:G:N1	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1664:A:C8	7:D:1664:A:OP2	2.63	0.52
7:D:1682:G:C2	7:D:1683:C:C2	2.98	0.52
7:D:1747:G:H8	7:D:1747:G:O5'	1.93	0.52
7:D:1985:G:C2	7:D:1986:A:C8	2.98	0.52
7:D:2034:U:H5"	7:D:2035:G:OP2	2.10	0.52
7:D:2104:G:H2'	7:D:2105:C:H5'	1.91	0.52
7:D:2332:U:C4'	7:D:2336:A:H62	2.21	0.52
7:D:2392:A:N6	7:D:2393:A:C6	2.78	0.52
7:D:2805:G:H2'	7:D:2807:G:H5"	1.92	0.52
7:D:2805:G:C3'	7:D:2807:G:H5"	2.40	0.52
7:D:2811:G:OP1	31:b:59:VAL:HG13	2.10	0.52
8:E:48:A:H5'	40:k:92:TYR:CD2	2.44	0.52
9:F:44:LEU:O	9:F:47:THR:HB	2.09	0.52
11:H:171:GLY:HA3	11:H:173:TRP:CZ3	2.45	0.52
17:N:13:HIS:CE1	17:N:70:ARG:HH21	2.28	0.52
20:Q:69:GLU:HB3	20:Q:73:GLU:CB	2.39	0.52
32:c:45:ARG:HE	32:c:97:TYR:HD2	1.58	0.52
37:h:54:GLY:O	37:h:55:ARG:HD3	2.10	0.52
38:i:67:ARG:NE	38:i:103:MET:HB3	2.25	0.52
41:l:17:THR:C	41:l:19:LEU:N	2.67	0.52
41:l:53:ARG:HD3	41:l:105:LEU:HD23	1.92	0.52
43:n:16:PRO:HD3	43:n:100:ARG:HE	1.74	0.52
47:r:127:LYS:HZ3	47:r:165:VAL:HG23	1.75	0.52
56:B:23:SER:HB3	56:B:44:GLN:HG2	1.90	0.52
56:B:203:SER:HA	56:B:213:PRO:HA	1.91	0.52
56:B:537:ILE:HD11	56:B:551:VAL:HG23	1.89	0.52
56:B:555:ARG:HG2	56:B:556:LYS:N	2.24	0.52
3:3:81:ALA:HB3	3:3:107:ILE:CD1	2.39	0.51
3:3:90:LYS:HB3	3:3:91:PRO:CD	2.40	0.51
6:A:210:U:C5	6:A:216:G:N7	2.78	0.51
6:A:428:G:O2'	6:A:429:U:OP2	2.19	0.51
6:A:484:G:H1'	6:A:485:G:OP1	2.10	0.51
6:A:582:U:H5"	22:S:64:ARG:HH22	1.76	0.51
6:A:607:A:C2	6:A:608:A:H1'	2.45	0.51
6:A:837:G:N3	6:A:838:G:C8	2.78	0.51
6:A:1075:C:H5"	9:F:179:LYS:HZ1	1.75	0.51
6:A:1310:G:C2	6:A:1311:G:C5	2.98	0.51
7:D:38:A:C4	7:D:39:C:C5	2.98	0.51
7:D:154:G:O5'	7:D:154:G:H8	1.93	0.51
7:D:191:A:H8	7:D:191:A:OP2	1.92	0.51
7:D:216:A:OP2	7:D:216:A:O4'	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:548:A:H62	7:D:549:G:N2	2.08	0.51
7:D:923:C:O5'	7:D:923:C:H6	1.93	0.51
7:D:958:U:H4'	7:D:959:A:O5'	2.11	0.51
7:D:1654:A:C6	7:D:1655:A:N7	2.78	0.51
7:D:1668:A:O4'	7:D:1668:A:OP2	2.28	0.51
7:D:1687:G:H1'	7:D:1702:G:N2	2.25	0.51
7:D:1824:G:N2	7:D:1825:A:N3	2.59	0.51
7:D:1861:G:N3	7:D:1862:G:C8	2.79	0.51
7:D:2020:A:C2'	7:D:2021:C:H5"	2.37	0.51
7:D:2021:C:O2'	7:D:2022:U:OP1	2.21	0.51
7:D:2211:G:N3	7:D:2211:G:C3'	2.73	0.51
7:D:2391:G:O2'	7:D:2392:A:P	2.66	0.51
12:I:95:ALA:HB3	12:I:96:PRO:HD3	1.91	0.51
13:J:7:ASN:ND2	13:J:62:TRP:HD1	2.07	0.51
13:J:91:VAL:HG12	13:J:92:LYS:O	2.09	0.51
15:L:84:ARG:HB3	15:L:136:GLU:OE2	2.10	0.51
15:L:88:LYS:O	15:L:90:GLY:N	2.42	0.51
15:L:110:ALA:HA	15:L:136:GLU:HA	1.91	0.51
16:M:105:ASP:O	16:M:107:ARG:HG3	2.10	0.51
18:O:18:ARG:HE	18:O:35:PRO:HA	1.75	0.51
23:T:22:THR:OG1	23:T:26:ARG:NH2	2.44	0.51
25:V:56:THR:HB	25:V:58:LEU:HG	1.91	0.51
29:Z:59:ARG:HD3	29:Z:164:ARG:HG3	1.91	0.51
29:Z:96:GLY:O	29:Z:99:ILE:HG22	2.09	0.51
29:Z:162:GLU:HG2	29:Z:163:PHE:N	2.25	0.51
32:c:3:GLU:OE2	32:c:20:LEU:C	2.53	0.51
32:c:39:TRP:NE1	32:c:99:TYR:O	2.43	0.51
33:d:116:ASP:HB3	33:d:118:ARG:NH1	2.25	0.51
41:l:53:ARG:HH12	41:l:101:PHE:HD1	1.56	0.51
50:u:11:SER:CB	50:u:53:LEU:HD22	2.40	0.51
52:w:14:ALA:O	52:w:17:ASP:N	2.44	0.51
52:w:46:CYS:O	52:w:50:GLY:HA2	2.11	0.51
55:z:48:PHE:HE2	55:z:50:LEU:HD12	1.75	0.51
56:B:242:VAL:C	56:B:256:LEU:HD11	2.34	0.51
56:B:413:THR:HG22	56:B:451:VAL:CG2	2.38	0.51
56:B:448:VAL:HG12	56:B:449:GLU:N	2.18	0.51
4:4:19:G:N2	33:d:82:LEU:HD13	2.19	0.51
6:A:232:G:H2'	6:A:233:C:C6	2.45	0.51
6:A:328:C:H4'	6:A:329:A:H5'	1.92	0.51
6:A:656:C:N4	6:A:750:G:H1	2.08	0.51
6:A:665:A:C1'	6:A:733:A:H1'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1032(A):G:H2'	6:A:1032(B):G:C8	2.45	0.51
6:A:1064:G:HO2'	6:A:1190:G:N2	2.08	0.51
6:A:1123:A:H5"	6:A:1124:G:OP2	2.10	0.51
6:A:1134:G:C6	6:A:1135:U:C2	2.98	0.51
6:A:1261:A:H61	6:A:1274:G:H1'	1.75	0.51
6:A:1308:U:H2'	6:A:1309:G:O4'	2.10	0.51
6:A:1330:U:N3	6:A:1331:G:H1'	2.25	0.51
7:D:27:G:H1'	7:D:513:A:N6	2.25	0.51
7:D:43:G:H2'	7:D:44:A:H8	1.74	0.51
7:D:96:G:C5	7:D:97:C:N4	2.78	0.51
7:D:136:G:H1	7:D:143:C:H42	1.57	0.51
7:D:270(D):C:H2'	7:D:270(E):G:C8	2.43	0.51
7:D:270(X):G:H2'	7:D:270(Y):G:O4'	2.11	0.51
7:D:461:C:H2'	7:D:462:C:C6	2.39	0.51
7:D:616:A:O2'	7:D:617:G:OP1	2.28	0.51
7:D:630:G:P	55:z:46:ARG:HH12	2.33	0.51
7:D:788:A:H4'	7:D:789:A:H5'	1.91	0.51
7:D:794:G:C5	7:D:795:C:C5	2.98	0.51
7:D:1035:U:H4'	34:e:59:ARG:CZ	2.39	0.51
7:D:1048:A:H8	7:D:1048:A:O5'	1.93	0.51
7:D:1142(A):A:C5	7:D:1143:A:C8	2.97	0.51
7:D:1459:G:H2'	7:D:1461:G:OP2	2.10	0.51
7:D:1510:A:N6	7:D:1511:A:N1	2.58	0.51
7:D:1521:G:H4'	7:D:1522:G:OP2	2.11	0.51
7:D:1656:C:P	31:b:136:ARG:NH1	2.83	0.51
7:D:1944:U:HO2'	7:D:1945:G:P	2.32	0.51
7:D:2126:A:H4'	7:D:2127:G:OP1	2.09	0.51
7:D:2301:C:N4	7:D:2315:G:H1	2.09	0.51
7:D:2354:G:H4'	48:s:35:ASN:ND2	2.26	0.51
7:D:2486:G:C6	7:D:2487:G:N7	2.78	0.51
7:D:2516:G:C2	7:D:2569:G:C2	2.98	0.51
7:D:2764:A:N7	7:D:2766:G:C5	2.79	0.51
11:H:30:LYS:HZ3	11:H:35:ARG:HG3	1.75	0.51
17:N:12:ASP:OD1	17:N:13:HIS:N	2.44	0.51
24:U:81:ARG:NH1	24:U:83:ASP:OD1	2.41	0.51
29:Z:59:ARG:HD2	29:Z:164:ARG:HH11	1.75	0.51
30:a:147:LEU:HD23	30:a:155:LEU:HD13	1.91	0.51
30:a:208:LYS:HZ3	30:a:211:ARG:CZ	2.23	0.51
31:b:5:LEU:HB2	31:b:26:ILE:O	2.11	0.51
32:c:45:ARG:HG3	32:c:97:TYR:HB2	1.92	0.51
33:d:12:TYR:CD1	33:d:13:GLU:HG3	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:24:GLY:H	37:h:28:GLY:CA	2.23	0.51
40:k:51:ALA:HA	40:k:73:LEU:HD21	1.91	0.51
41:l:45:PHE:CE1	41:l:86:ILE:HD12	2.45	0.51
42:m:83:LEU:HA	42:m:86:ALA:HB3	1.93	0.51
42:m:85:LYS:HD3	42:m:116:ALA:O	2.10	0.51
51:v:60:GLN:HA	51:v:63:TYR:HB2	1.92	0.51
55:z:5:LYS:HE2	55:z:7:HIS:HD2	1.75	0.51
56:B:15:ILE:CA	56:B:22:LYS:HE3	2.41	0.51
56:B:17:HIS:CE1	56:B:116:GLU:H	2.20	0.51
56:B:306:TYR:CB	56:B:370:ILE:CG2	2.77	0.51
56:B:488:ASP:CB	56:B:510:ARG:H	2.22	0.51
3:3:12:LEU:H	3:3:54:PRO:HB2	1.72	0.51
3:3:36:GLU:C	3:3:38:VAL:H	2.17	0.51
4:4:69:C:H2'	4:4:70:G:H8	1.74	0.51
6:A:79:G:O6	6:A:90:C:N3	2.44	0.51
6:A:166:G:H2'	6:A:167:G:H8	1.74	0.51
6:A:324:G:H22	6:A:327:A:P	2.33	0.51
6:A:467:G:N3	6:A:468:A:H1'	2.26	0.51
6:A:477:G:C6	6:A:478:A:C6	2.99	0.51
6:A:698:G:C6	6:A:699:C:C4	2.98	0.51
6:A:815:A:O4'	6:A:817:C:N4	2.43	0.51
6:A:947:G:O3'	20:Q:109:THR:OG1	2.27	0.51
6:A:1039:C:H2'	6:A:1040:U:C6	2.44	0.51
6:A:1484:C:O2'	7:D:1960:A:O2'	2.07	0.51
7:D:49:A:N6	7:D:177:G:C8	2.79	0.51
7:D:228:A:C5	7:D:230:U:C2	2.98	0.51
7:D:532:A:H3'	7:D:533:G:O4'	2.09	0.51
7:D:617:G:C5	7:D:618:G:C2	2.99	0.51
7:D:960:A:O2'	7:D:2456:C:O2'	2.22	0.51
7:D:1480:G:N3	7:D:1480:G:C2'	2.73	0.51
7:D:1485:G:C2	7:D:1486:A:C5	2.98	0.51
7:D:1632:A:H8	7:D:1632:A:O5'	1.93	0.51
7:D:1742:C:C4	7:D:1743:G:C8	2.98	0.51
7:D:2102:U:N3	7:D:2187:G:O6	2.43	0.51
7:D:2331:G:N2	7:D:2385:C:C4	2.78	0.51
22:S:81:LEU:HA	22:S:84:LYS:CB	2.39	0.51
32:c:153:SER:OG	32:c:190:GLU:N	2.39	0.51
33:d:136:ARG:O	33:d:153:ARG:HB2	2.11	0.51
35:f:13:TRP:CE2	35:f:51:PHE:HD2	2.28	0.51
35:f:67:LEU:H	35:f:69:GLN:CD	2.18	0.51
35:f:104:LYS:HE3	35:f:117:PHE:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:10:VAL:C	36:g:97:ARG:NH1	2.68	0.51
37:h:36:LYS:NZ	37:h:43:GLY:HA3	2.25	0.51
41:l:109:GLU:HG3	41:l:110:ILE:HG13	1.92	0.51
42:m:14:HIS:HB3	42:m:32:PHE:CD2	2.45	0.51
50:u:26:LEU:HD21	50:u:47:VAL:HG22	1.92	0.51
56:B:105:LEU:HD22	56:B:131:ILE:HG21	1.92	0.51
56:B:123:MET:O	56:B:127:HIS:HB2	2.09	0.51
56:B:200:ILE:HD12	56:B:274:VAL:HG12	1.84	0.51
56:B:242:VAL:HG12	56:B:256:LEU:HD12	1.92	0.51
56:B:474:TYR:C	56:B:475:ALA:O	2.52	0.51
3:3:126:MET:CE	7:D:1059:G:C8	2.91	0.51
4:4:49:G:H1	4:4:65:C:H42	1.58	0.51
5:5:16:U:H5’	5:5:17:C:H5’	1.91	0.51
6:A:303:A:H5”	6:A:304:U:OP2	2.10	0.51
6:A:409:G:C5	6:A:410:G:C5	2.99	0.51
6:A:450:G:H2’	6:A:481:G:H22	1.75	0.51
6:A:464:G:H8	6:A:464:G:O5’	1.93	0.51
6:A:475:G:H2’	6:A:476:G:O4’	2.11	0.51
6:A:577:G:C2	6:A:578:C:C2	2.98	0.51
6:A:876:G:H4’	15:L:14:ARG:HH22	1.76	0.51
6:A:987:G:N2	6:A:1219:U:O2	2.43	0.51
6:A:1219:U:H2’	6:A:1220:G:H8	1.76	0.51
6:A:1320:C:P	26:W:70:LYS:NZ	2.84	0.51
6:A:1348:U:OP2	6:A:1373:G:N1	2.39	0.51
6:A:1360:A:C6	6:A:1361:G:C4	2.98	0.51
6:A:1442:G:N3	6:A:1442:G:C5’	2.73	0.51
7:D:499:U:H3	7:D:503:A:H62	1.56	0.51
7:D:564:C:O2’	7:D:1252:G:O6	2.29	0.51
7:D:803:U:H2’	7:D:804:A:H5’	1.92	0.51
7:D:818:G:O6	7:D:1188:U:OP2	2.28	0.51
7:D:858:U:H2’	7:D:2268:A:H2’	1.93	0.51
7:D:944:G:OP2	37:h:33:ARG:NH1	2.42	0.51
7:D:1082:U:C6	7:D:1082:U:OP2	2.63	0.51
7:D:1477:A:C6	7:D:1515:C:N4	2.77	0.51
7:D:1485:G:C6	7:D:1486:A:N7	2.78	0.51
7:D:2120:G:C6	7:D:2121:G:C5	2.99	0.51
7:D:2225:A:H4’	7:D:2226:C:C5	2.45	0.51
7:D:2357:U:OP1	48:s:20:ARG:NE	2.44	0.51
7:D:2459:A:C8	7:D:2494:G:N2	2.79	0.51
7:D:2489:G:C6	7:D:2490:G:C2	2.98	0.51
7:D:2791:C:H3’	7:D:2792:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:81:G:C5	8:E:82:G:C8	2.98	0.51
9:F:193:ASP:OD1	9:F:193:ASP:N	2.41	0.51
10:G:38:ARG:HB3	10:G:94:LEU:HD21	1.92	0.51
12:I:152:ARG:NH1	15:L:44:PHE:CE1	2.79	0.51
13:J:23:LYS:O	13:J:27:GLN:HG2	2.10	0.51
17:N:54:PHE:CE2	17:N:55:LYS:HG2	2.46	0.51
20:Q:23:TYR:CB	20:Q:70:LEU:CD2	2.87	0.51
21:R:40:CYS:N	21:R:43:CYS:SG	2.58	0.51
26:W:5:LEU:CG	26:W:6:LYS:N	2.73	0.51
26:W:16:LEU:N	26:W:16:LEU:CD1	2.73	0.51
26:W:69:HIS:HB2	26:W:74:PHE:HZ	0.59	0.51
29:Z:156:ILE:CG1	29:Z:160:ARG:HD3	2.40	0.51
31:b:93:VAL:HG12	31:b:177:PRO:HB3	1.92	0.51
32:c:171:PRO:O	32:c:172:TRP:HB2	2.10	0.51
33:d:52:ILE:C	33:d:55:LYS:HB3	2.36	0.51
53:x:15:GLU:N	53:x:51:GLU:O	2.28	0.51
56:B:16:ALA:H	56:B:22:LYS:HZ2	1.56	0.51
56:B:22:LYS:C	57:B:701:GCP:O2B	2.53	0.51
56:B:68:TYR:CA	56:B:75:GLU:HG2	2.30	0.51
56:B:199:LEU:O	56:B:215:LEU:CB	2.58	0.51
56:B:577:GLN:O	56:B:581:LYS:HG2	2.11	0.51
3:3:117:THR:O	3:3:118:THR:OG1	2.17	0.51
6:A:81:G:H3'	6:A:82:U:C5	2.46	0.51
6:A:412:A:H1'	11:H:36:ARG:HH22	1.75	0.51
6:A:851:G:C6	6:A:852:G:C5	2.98	0.51
6:A:1014:A:C5'	26:W:18:LYS:CE	2.70	0.51
6:A:1189:C:H4'	10:G:10:PHE:CZ	2.44	0.51
7:D:76:C:H42	7:D:110:G:H1	1.59	0.51
7:D:88:G:C2	7:D:89:G:C8	2.98	0.51
7:D:271(C):U:C2	7:D:421:U:C5	2.98	0.51
7:D:298:G:O2'	7:D:322:A:N1	2.43	0.51
7:D:558:G:P	35:f:111:PRO:HG2	2.51	0.51
7:D:627:A:N3	7:D:637:A:C6	2.79	0.51
7:D:648:G:C5	7:D:649:G:C5	2.97	0.51
7:D:931:G:C8	7:D:932:G:C2'	2.93	0.51
7:D:1061:U:O2'	7:D:1061:U:O2	2.27	0.51
7:D:1480:G:N3	7:D:1480:G:C3'	2.73	0.51
7:D:1670:C:O5'	7:D:1670:C:H6	1.93	0.51
7:D:1919:A:HO2'	7:D:1920:C:P	2.30	0.51
7:D:1971:A:C2	30:a:239:ARG:HB2	2.45	0.51
7:D:2307:G:C2	7:D:2308:G:H1'	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2327:A:H2'	7:D:2328:A:C8	2.46	0.51
11:H:80:GLU:O	11:H:84:LYS:HG3	2.11	0.51
12:I:81:GLU:HG3	12:I:90:VAL:HG13	1.92	0.51
13:J:18:GLN:HG3	13:J:21:LEU:HD23	1.92	0.51
17:N:35:SER:HB3	17:N:72:VAL:O	2.11	0.51
20:Q:93:ARG:C	20:Q:95:GLY:H	2.18	0.51
26:W:15:LEU:CD2	26:W:33:THR:CG2	2.43	0.51
26:W:32:LYS:HD2	26:W:32:LYS:N	2.25	0.51
34:e:90:LYS:NZ	34:e:163:TYR:CG	2.78	0.51
35:f:6:PRO:HA	35:f:41:ASP:CB	2.39	0.51
37:h:56:SER:OG	37:h:57:THR:N	2.44	0.51
38:i:85:LYS:HE2	48:s:10:THR:HG23	1.92	0.51
38:i:135:ASP:CG	38:i:136:ALA:H	2.19	0.51
42:m:14:HIS:CD2	42:m:36:ARG:NH2	2.79	0.51
52:w:48:GLU:HG2	52:w:49:CYS:H	1.76	0.51
56:B:49:LEU:HD23	56:B:60:LYS:NZ	2.22	0.51
56:B:105:LEU:HD22	56:B:131:ILE:HG23	1.93	0.51
56:B:118:LEU:HD21	56:B:155:VAL:O	2.10	0.51
56:B:212:ILE:HG22	56:B:263:TRP:HE3	1.72	0.51
56:B:230:ILE:HG23	56:B:280:ILE:HG22	1.91	0.51
5:5:9:A:OP2	5:5:13:C:N4	2.44	0.51
6:A:147:G:C2	6:A:148:G:C8	2.98	0.51
6:A:156:G:C2	6:A:166:G:C4	2.98	0.51
6:A:181:G:N1	6:A:194:C:O2	2.43	0.51
6:A:272:C:H2'	6:A:273:A:C8	2.46	0.51
6:A:526:C:P	19:P:91:LYS:NZ	2.81	0.51
6:A:575:G:N2	6:A:881:G:N3	2.57	0.51
6:A:685:G:C6	6:A:686:U:C4	2.99	0.51
6:A:836:G:P	25:V:61:LYS:NZ	2.84	0.51
6:A:1005:A:OP2	6:A:1006:C:N4	2.43	0.51
6:A:1015:A:OP1	26:W:18:LYS:CD	2.58	0.51
7:D:171:G:C4	7:D:172:C:N4	2.79	0.51
7:D:273(C):C:N3	7:D:363(C):G:N1	2.38	0.51
7:D:284:U:H2'	7:D:285:C:C6	2.45	0.51
7:D:438:G:C2	7:D:439:G:C4	2.99	0.51
7:D:531:C:O2	7:D:531:C:H2'	2.10	0.51
7:D:603:A:C6	7:D:604:G:C2	2.99	0.51
7:D:795:C:N3	7:D:796:C:C4	2.78	0.51
7:D:819:A:C5	7:D:1189:A:C2	2.99	0.51
7:D:928:G:C5	7:D:929:G:C5	2.99	0.51
7:D:1051:G:C6	7:D:1052:C:N3	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1090:U:N3	7:D:1091:G:N7	2.59	0.51
7:D:1173:G:C4	7:D:1174:A:C2	2.98	0.51
7:D:1313:U:N3	7:D:1314:C:C4	2.79	0.51
7:D:1314:C:N4	7:D:1338:G:H1	2.05	0.51
7:D:1797:C:H2'	7:D:1798:U:C6	2.45	0.51
7:D:1858:G:N7	7:D:1883:G:C6	2.78	0.51
7:D:2104:G:C6	7:D:2105:C:C4	2.99	0.51
7:D:2255:G:N2	7:D:2275:C:N3	2.57	0.51
7:D:2404:C:N4	7:D:2413:G:H1	2.08	0.51
7:D:2690:C:OP2	39:j:8:ARG:CZ	2.58	0.51
7:D:2763:G:H5"	7:D:2764:A:OP2	2.11	0.51
8:E:75:G:O6	8:E:76:G:N1	2.43	0.51
9:F:55:PHE:HD1	9:F:58:ILE:HD12	1.76	0.51
9:F:82:ARG:O	9:F:86:GLU:HG3	2.10	0.51
12:I:152:ARG:NH1	15:L:44:PHE:CZ	2.70	0.51
16:M:28:VAL:HG22	16:M:63:ILE:HB	1.91	0.51
17:N:6:ILE:O	17:N:71:LEU:HD22	2.11	0.51
17:N:55:LYS:HG3	17:N:55:LYS:O	2.11	0.51
19:P:83:VAL:HG21	19:P:100:ILE:HG12	1.92	0.51
19:P:84:LEU:HD13	19:P:104:VAL:HG11	1.93	0.51
22:S:80:ALA:O	22:S:83:GLU:HB3	2.10	0.51
26:W:3:ARG:CG	26:W:42:PRO:HB3	2.36	0.51
26:W:16:LEU:CB	26:W:20:LEU:HD12	2.39	0.51
29:Z:32:LEU:HD11	29:Z:222:VAL:HG23	1.93	0.51
31:b:59:VAL:HG12	31:b:61:ARG:H	1.74	0.51
31:b:118:LYS:O	31:b:119:ARG:C	2.53	0.51
32:c:3:GLU:OE2	32:c:21:ALA:N	2.44	0.51
33:d:17:PRO:O	33:d:20:ILE:HG22	2.10	0.51
34:e:42:ARG:O	34:e:53:GLU:HG2	2.11	0.51
34:e:149:ARG:NH1	34:e:164:TYR:CB	2.74	0.51
36:g:67:LYS:HD3	36:g:77:ILE:HG21	1.91	0.51
40:k:21:THR:C	40:k:23:ARG:H	2.17	0.51
43:n:15:GLU:CG	43:n:16:PRO:HD2	2.40	0.51
47:r:118:GLN:HA	47:r:174:VAL:HG12	1.91	0.51
51:v:48:ARG:N	51:v:52:THR:HG1	2.08	0.51
56:B:227:ARG:N	56:B:227:ARG:CD	2.73	0.51
56:B:420:TYR:CZ	56:B:471:SER:O	2.63	0.51
3:3:22:PRO:CD	3:3:23:VAL:H	2.24	0.51
4:4:31:G:OP1	16:M:127:LYS:HE3	2.11	0.51
6:A:247:G:OP2	24:U:99:SER:HA	2.11	0.51
6:A:400:C:H5"	11:H:73:ARG:NH2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:448:A:O2'	6:A:449:C:O4'	2.16	0.51
6:A:477:G:C2	6:A:478:A:C8	2.99	0.51
6:A:696:A:H2	6:A:786:G:H1'	1.74	0.51
6:A:737:A:H5"	13:J:92:LYS:HZ2	1.76	0.51
6:A:836:G:N7	6:A:851:G:N2	2.59	0.51
6:A:934:C:N4	6:A:1344:C:N3	2.59	0.51
6:A:1104:G:OP1	9:F:144:ARG:NH2	2.44	0.51
6:A:1258:G:O6	6:A:1259:C:N4	2.43	0.51
7:D:153:C:C2'	7:D:154:G:C8	2.86	0.51
7:D:541:C:H42	7:D:552:G:H1	1.57	0.51
7:D:775:G:H2'	7:D:794:G:C8	2.46	0.51
7:D:931:G:H5"	7:D:932:G:C1'	2.40	0.51
7:D:974(A):C:O2	7:D:989:G:C2	2.63	0.51
7:D:1178:C:O2'	7:D:1179:C:H5'	2.10	0.51
7:D:1264:G:N7	7:D:1265:A:C5	2.79	0.51
7:D:1288:U:N3	7:D:1327:C:O2	2.42	0.51
7:D:1477:A:H2	7:D:1516:U:H3	1.59	0.51
7:D:1514:U:OP2	7:D:1514:U:C6	2.64	0.51
7:D:1613:G:C5	7:D:1617:C:C4	2.99	0.51
7:D:1784:A:OP2	7:D:1784:A:N3	2.44	0.51
7:D:1857:G:C5	7:D:1858:G:C5	2.98	0.51
7:D:2163:C:C5	7:D:2164:C:C4	2.99	0.51
7:D:2163:C:H3'	7:D:2164:C:C6	2.46	0.51
7:D:2198:A:N3	7:D:2198:A:C2'	2.74	0.51
7:D:2453:A:O2'	7:D:2572:A:H1'	2.10	0.51
7:D:2791:C:OP2	7:D:2792:G:N7	2.43	0.51
7:D:2794:C:C2	7:D:2802:G:N1	2.78	0.51
7:D:2873:A:HO2'	7:D:2874:C:P	2.34	0.51
8:E:24:G:C5	8:E:56:G:C2	2.99	0.51
8:E:63:G:C6	8:E:64:C:C4	2.99	0.51
19:P:80:HIS:CD2	56:B:316:LEU:CB	2.92	0.51
20:Q:87:TYR:HB2	26:W:73:GLU:CB	2.40	0.51
24:U:51:TYR:CE2	24:U:73:VAL:HG11	2.46	0.51
26:W:5:LEU:CD1	26:W:6:LYS:N	2.73	0.51
27:X:61:SER:O	27:X:65:LYS:HG2	2.11	0.51
28:Y:3:LYS:HB3	28:Y:14:TRP:CD2	2.46	0.51
29:Z:164:ARG:H	29:Z:171:ILE:HG13	1.75	0.51
30:a:54:ARG:HA	30:a:219:PRO:HG2	1.93	0.51
31:b:2:LYS:HZ1	31:b:83:ASP:HB2	1.69	0.51
31:b:178:GLU:OE1	31:b:178:GLU:N	2.36	0.51
33:d:119:GLY:HA3	33:d:180:PHE:CD1	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:14:THR:HA	36:g:52:VAL:HG21	1.92	0.51
37:h:99:LEU:HD23	37:h:101:VAL:N	2.22	0.51
39:j:3:HIS:NE2	39:j:4:LEU:O	2.44	0.51
43:n:14:VAL:CG1	43:n:19:LYS:NZ	2.74	0.51
49:t:36:ILE:O	49:t:38:GLN:HG2	2.11	0.51
51:v:44:THR:HB	51:v:61:ARG:HH11	1.73	0.51
56:B:81:ILE:HD13	56:B:100:VAL:HG23	1.85	0.51
56:B:226:ASP:H	56:B:239:VAL:HB	1.75	0.51
56:B:326:ASN:O	56:B:327:ASP:HB2	2.11	0.51
56:B:494:VAL:HG22	56:B:520:ILE:HD12	1.89	0.51
3:3:13:PRO:HG2	3:3:16:LYS:HZ1	1.75	0.51
4:4:2:G:H1'	48:s:7:LEU:HD22	1.93	0.51
5:5:75:C:H5"	51:v:27:THR:OG1	2.11	0.51
6:A:79:G:H22	6:A:90:C:H1'	1.75	0.51
6:A:187:C:C2	6:A:188:U:H1'	2.45	0.51
6:A:737:A:O2'	13:J:73:ASN:ND2	2.43	0.51
6:A:941:G:N3	6:A:1343:G:N2	2.58	0.51
6:A:1098:C:H2'	6:A:1099:G:O4'	2.09	0.51
6:A:1317:C:H2'	6:A:1318:A:O4'	2.11	0.51
6:A:1320:C:C1'	26:W:73:GLU:HB3	2.39	0.51
7:D:149:A:C8	7:D:150:C:C2	2.98	0.51
7:D:163:U:C3'	7:D:164:U:C5'	2.89	0.51
7:D:241:A:O4'	7:D:243:U:C2	2.64	0.51
7:D:339:U:HO2'	7:D:340:A:C4'	2.24	0.51
7:D:579:G:C2	7:D:1262:A:C5	2.98	0.51
7:D:739:G:O3'	7:D:1784:A:N6	2.44	0.51
7:D:848:G:C8	7:D:929:G:N2	2.75	0.51
7:D:973:A:H4'	7:D:974:G:OP1	2.11	0.51
7:D:1068:G:N2	7:D:1095:A:O3'	2.28	0.51
7:D:1107:G:N7	7:D:1108:U:C4	2.79	0.51
7:D:1197:G:N2	7:D:1250:G:C5	2.79	0.51
7:D:1450:C:O2	7:D:1450:C:H2'	2.09	0.51
7:D:1467:C:O2	7:D:1525:G:N2	2.44	0.51
7:D:1625:C:C2	7:D:1626:G:H8	2.29	0.51
7:D:1652:A:N6	7:D:1653:G:N2	2.54	0.51
7:D:1652:A:C8	7:D:1652:A:OP2	2.64	0.51
7:D:1861:G:C2	7:D:1882:C:C2	2.99	0.51
7:D:2000:G:C2	7:D:2001:A:C5	2.99	0.51
7:D:2246:G:C2	7:D:2426:A:H1'	2.45	0.51
7:D:2610:C:H6	7:D:2610:C:H5"	1.76	0.51
7:D:2886:G:N2	7:D:2887:U:H3	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:57:A:H2'	8:E:58:A:O4'	2.10	0.51
8:E:78:A:C2	8:E:99:A:C4	2.99	0.51
14:K:79:ARG:NH1	14:K:83:ALA:HA	2.25	0.51
15:L:53:VAL:HB	15:L:58:TYR:CE1	2.45	0.51
15:L:87:SER:HB3	15:L:93:VAL:H	1.75	0.51
22:S:13:GLN:NE2	22:S:19:PRO:HA	2.26	0.51
26:W:36:ARG:CB	26:W:71:LEU:HB2	2.28	0.51
26:W:66:MET:SD	26:W:66:MET:C	2.94	0.51
29:Z:37:PHE:HD1	29:Z:38:ASP:O	1.94	0.51
29:Z:97:GLU:HA	29:Z:100:ILE:HD12	1.93	0.51
31:b:49:LEU:HD21	31:b:74:PRO:HD2	1.92	0.51
31:b:181:LEU:HD21	41:l:6:LEU:HD22	1.92	0.51
37:h:55:ARG:C	55:z:13:ARG:HH12	2.18	0.51
39:j:50:HIS:CD2	39:j:51:LEU:HD12	2.46	0.51
56:B:27:ASP:O	56:B:30:LEU:HB2	2.10	0.51
56:B:66:VAL:HG23	56:B:76:TYR:HE1	1.54	0.51
56:B:95:ARG:HH12	56:B:199:LEU:HD21	1.76	0.51
56:B:506:PHE:CE1	56:B:516:MET:HE2	2.46	0.51
3:3:21:PRO:HA	7:D:1067:A:H5'	1.92	0.51
6:A:55:A:C1'	56:B:208:TYR:CZ	2.81	0.51
6:A:234:C:O2'	6:A:235:C:H5'	2.11	0.51
6:A:237:C:H2'	6:A:238:G:C8	2.45	0.51
6:A:542:G:H2'	6:A:543:C:C6	2.46	0.51
6:A:851:G:H2'	6:A:852:G:H8	1.76	0.51
6:A:1014:A:C4'	26:W:18:LYS:NZ	2.51	0.51
6:A:1032:A:H5"	6:A:1032(A):G:OP2	2.10	0.51
6:A:1464:G:N2	6:A:1465:C:C2	2.79	0.51
7:D:282:A:N6	7:D:283:A:O2'	2.44	0.51
7:D:878:A:H2'	7:D:879:G:C5'	2.41	0.51
7:D:879:G:O6	7:D:897:C:H1'	2.11	0.51
7:D:987:G:OP2	50:u:13:ILE:HD13	2.10	0.51
7:D:1173:G:H2'	7:D:1174:A:C2	2.45	0.51
7:D:1222:C:N4	7:D:1227:A:H61	2.08	0.51
7:D:1512:G:C8	7:D:1512:G:OP2	2.63	0.51
7:D:1566:A:N3	30:a:215:LEU:HD13	2.25	0.51
7:D:1630:G:N2	7:D:1630(A):C:C2	2.79	0.51
7:D:2306:C:H5	7:D:2307:G:HO2'	1.58	0.51
7:D:2839:G:N2	7:D:2880:C:C4	2.79	0.51
7:D:2845:G:H5"	41:l:58:ASN:HB3	1.91	0.51
9:F:19:HIS:HB3	9:F:20:GLU:OE1	2.11	0.51
17:N:79:ARG:HH11	17:N:82:ILE:CD1	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:109:GLY:HA3	19:P:121:GLY:O	2.10	0.51
29:Z:116:THR:OG1	29:Z:118:ASP:OD1	2.27	0.51
29:Z:175:VAL:HA	29:Z:188:ASN:HD22	1.76	0.51
32:c:9:ILE:HD13	32:c:19:GLU:HB2	1.91	0.51
37:h:76:LYS:HE2	37:h:81:GLN:HE21	1.75	0.51
37:h:102:ARG:HA	37:h:108:LYS:HB2	1.93	0.51
38:i:134:ARG:CZ	38:i:137:TYR:HA	2.41	0.51
40:k:38:GLN:HE21	40:k:40:ILE:HD11	1.76	0.51
40:k:75:GLU:HA	40:k:78:LEU:CB	2.41	0.51
41:l:3:ARG:HA	41:l:6:LEU:HG	1.93	0.51
43:n:12:TYR:CZ	43:n:14:VAL:O	2.63	0.51
44:o:90:ARG:HG3	44:o:90:ARG:O	2.11	0.51
49:t:12:SER:HB3	49:t:13:PRO:HD3	1.93	0.51
53:x:48:VAL:HG22	53:x:49:HIS:O	2.11	0.51
56:B:17:HIS:HE1	56:B:116:GLU:N	2.06	0.51
56:B:529:PRO:CD	56:B:530:ARG:H	2.23	0.51
56:B:562:CYS:O	56:B:564:GLY:N	2.44	0.51
4:4:11:A:C6	4:4:12:G:C5	2.99	0.51
5:5:9:A:H61	5:5:22:G:H3'	1.75	0.51
5:5:55:U:N3	5:5:57:G:OP2	2.44	0.51
5:5:75:C:HO2'	5:5:76:A:P	2.28	0.51
6:A:681:C:N4	6:A:710:G:O6	2.43	0.51
6:A:976:G:OP2	6:A:1358:U:H1'	2.10	0.51
6:A:1131:G:H1	6:A:1144:G:HO2'	1.47	0.51
6:A:1135:U:H2'	6:A:1137:C:H1'	1.93	0.51
6:A:1297:C:H1'	14:K:114:ARG:NH1	2.26	0.51
6:A:1523:G:H2'	6:A:1524:C:H6	1.76	0.51
7:D:197:A:C6	7:D:2430:A:C5	2.99	0.51
7:D:255:A:C6	7:D:256:A:C5	2.99	0.51
7:D:270(D):C:C4	7:D:270(E):G:N7	2.78	0.51
7:D:338:G:O5'	46:q:4:LYS:HG2	2.11	0.51
7:D:359:A:H5"	7:D:360:G:H5'	1.92	0.51
7:D:492:A:H2'	7:D:493:G:H5'	1.92	0.51
7:D:668:G:C2	7:D:670:A:C5	2.99	0.51
7:D:817:C:H2'	7:D:818:G:O4'	2.10	0.51
7:D:848:G:N7	7:D:929:G:C2	2.74	0.51
7:D:1034:G:C4	7:D:1122:G:N2	2.79	0.51
7:D:1316:U:O4	7:D:1317:A:N6	2.44	0.51
7:D:1335:U:H2'	7:D:1336:A:H8	1.75	0.51
7:D:1428:C:O2'	7:D:1569:A:OP1	2.21	0.51
7:D:1480:G:N2	7:D:1482:U:C1'	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1567:A:H2'	30:a:84:TYR:CE1	2.45	0.51
7:D:1641:A:N7	7:D:1642:G:C4	2.79	0.51
7:D:1854:A:H62	7:D:1888:G:H8	1.59	0.51
7:D:1855:G:H1	7:D:1887:C:H42	1.58	0.51
7:D:1859:A:C8	7:D:1860:G:C8	2.98	0.51
7:D:2067:G:C6	7:D:2069:G:C5	2.98	0.51
7:D:2121:G:H2'	7:D:2122:U:O4'	2.11	0.51
7:D:2137:C:H42	7:D:2154:G:H1	1.59	0.51
7:D:2138:C:C2	7:D:2154:G:N2	2.79	0.51
7:D:2168:G:N1	7:D:2171:A:OP2	2.44	0.51
7:D:2230:G:H2'	7:D:2231:C:C6	2.45	0.51
7:D:2690:C:OP2	39:j:8:ARG:NH2	2.44	0.51
8:E:11:C:OP2	48:s:74:ARG:CZ	2.59	0.51
8:E:42:C:N3	33:d:93:THR:HB	2.25	0.51
24:U:84:LEU:HD12	24:U:85:VAL:N	2.26	0.51
26:W:53:ASN:CG	26:W:54:GLY:H	2.09	0.51
26:W:54:GLY:N	26:W:77:THR:HB	2.25	0.51
29:Z:60:GLY:O	29:Z:162:GLU:HG2	2.11	0.51
29:Z:64:LEU:HD13	29:Z:188:ASN:OD1	2.11	0.51
29:Z:69:GLY:C	29:Z:157:LYS:CB	2.83	0.51
30:a:242:ARG:HG3	30:a:243:GLY:N	2.16	0.51
32:c:37:VAL:HA	32:c:184:TYR:HE1	1.76	0.51
33:d:77:ILE:HG13	33:d:78:SER:N	2.26	0.51
36:g:22:ILE:HG22	36:g:23:ARG:N	2.26	0.51
39:j:14:SER:OG	39:j:15:SER:N	2.43	0.51
41:l:53:ARG:NH1	41:l:102:ILE:C	2.69	0.51
46:q:44:ILE:O	46:q:45:VAL:HG22	2.11	0.51
50:u:18:ASP:OD1	50:u:19:GLN:N	2.44	0.51
51:v:33:VAL:CG1	51:v:35:VAL:H	2.23	0.51
55:z:31:HIS:H	55:z:34:TRP:HE1	1.59	0.51
56:B:133:PRO:O	56:B:163:ALA:HB1	1.91	0.51
56:B:192:PRO:CD	56:B:193:GLU:H	2.23	0.51
56:B:281:THR:HB	56:B:286:PRO:CB	2.40	0.51
56:B:373:ALA:CB	56:B:374:PRO:CD	2.86	0.51
3:3:112:MET:HG2	3:3:122:ALA:HB2	1.93	0.50
4:4:71:C:C2	4:4:72:A:C8	2.99	0.50
6:A:500:G:C2	6:A:546:G:N3	2.78	0.50
6:A:623:C:H2'	6:A:624:C:O4'	2.11	0.50
6:A:690:G:H2'	6:A:691:G:C8	2.46	0.50
6:A:828:A:OP1	6:A:828:A:H4'	2.10	0.50
6:A:835:U:C2	6:A:851:G:N2	2.56	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:876:G:C6	6:A:877:C:C4	2.99	0.50
6:A:1036:G:OP2	6:A:1037:C:H5	1.94	0.50
6:A:1364:U:HO2'	6:A:1365:G:P	2.32	0.50
6:A:1452:C:H1'	6:A:1453:G:N2	2.26	0.50
7:D:49:A:OP2	7:D:49:A:H8	1.93	0.50
7:D:84:A:N7	7:D:99:U:C2	2.79	0.50
7:D:269:U:C4	7:D:270(Z):U:OP2	2.63	0.50
7:D:302:C:H2'	7:D:303:U:C6	2.47	0.50
7:D:323:G:H4'	7:D:324:A:O5'	2.11	0.50
7:D:556:G:C5	7:D:557:U:C4	2.99	0.50
7:D:562:U:O2	7:D:572:A:C4	2.64	0.50
7:D:618:G:OP1	32:c:106:ARG:HD2	2.11	0.50
7:D:1694:C:O2	7:D:1695:G:N2	2.44	0.50
7:D:1791:A:OP1	30:a:213:ARG:HD3	2.11	0.50
7:D:1812:A:C2	7:D:1813:G:C5	2.99	0.50
7:D:2051:A:C2	7:D:2614:A:C6	2.99	0.50
7:D:2079:U:H2'	7:D:2080:G:O4'	2.11	0.50
7:D:2115:G:H4'	7:D:2116:G:OP2	2.11	0.50
7:D:2453:A:H4'	7:D:2572:A:O2'	2.11	0.50
7:D:2481:G:O2'	7:D:2482:G:P	2.69	0.50
7:D:2746:U:H3	7:D:2758:A:N6	2.07	0.50
16:M:26:VAL:HA	16:M:61:ALA:HB3	1.93	0.50
18:O:120:ARG:NH1	18:O:126:ARG:HH22	2.10	0.50
19:P:110:VAL:HG22	19:P:120:TYR:HB3	1.92	0.50
24:U:25:ARG:HG2	24:U:38:ARG:O	2.11	0.50
27:X:47:GLY:O	27:X:49:ALA:N	2.42	0.50
40:k:41:ASP:OD1	40:k:46:VAL:HG23	2.11	0.50
41:l:32:TYR:CE2	41:l:63:VAL:HG11	2.46	0.50
41:l:62:THR:OG1	41:l:64:ARG:NH1	2.44	0.50
54:y:24:THR:OG1	54:y:25:PRO:HD2	2.10	0.50
55:z:26:LYS:O	55:z:28:GLY:N	2.44	0.50
56:B:305:LEU:CD2	56:B:358:GLN:NE2	2.66	0.50
56:B:352:LEU:HD22	56:B:356:ILE:HG13	1.93	0.50
56:B:360:ARG:C	56:B:364:GLU:OE1	2.54	0.50
56:B:392:ASN:C	56:B:394:ALA:H	2.12	0.50
1:1:31:LYS:HD3	7:D:2528:U:H5"	1.92	0.50
3:3:52:ILE:O	3:3:54:PRO:HD3	2.11	0.50
6:A:422:C:HO2'	6:A:423:G:H21	1.56	0.50
6:A:432:A:H2'	6:A:433:C:O4'	2.10	0.50
6:A:663:A:H2'	6:A:664:G:C8	2.46	0.50
6:A:748:C:H1'	6:A:749:C:H5	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:979:C:O2'	6:A:980:C:OP1	2.23	0.50
6:A:1317:C:OP2	21:R:17:LYS:HG2	2.12	0.50
6:A:1459:C:H2'	6:A:1460:A:C5'	2.42	0.50
7:D:81:G:H1'	7:D:294:A:O2'	2.11	0.50
7:D:270(A):A:H61	7:D:273:G:C4'	2.24	0.50
7:D:270(K):C:C4	7:D:270(L):U:H1'	2.47	0.50
7:D:421:U:HO2'	7:D:422:A:P	2.34	0.50
7:D:528:A:N6	7:D:2042:A:C5	2.79	0.50
7:D:532:A:P	7:D:2021:C:H5	2.34	0.50
7:D:782:A:O2'	30:a:225:ALA:HB1	2.12	0.50
7:D:926:A:O2'	7:D:928:G:O4'	2.28	0.50
7:D:971:C:OP2	7:D:974(A):C:C4	2.64	0.50
7:D:1108:U:H6	7:D:1108:U:H3'	1.75	0.50
7:D:1221:C:O2'	7:D:1222:C:OP1	2.29	0.50
7:D:1232:G:C6	7:D:1233:C:C4	3.00	0.50
7:D:1351:C:O2'	7:D:1571:A:H1'	2.11	0.50
7:D:1425:G:H8	7:D:1425:G:O5'	1.94	0.50
7:D:1809:A:H4'	7:D:1809:A:OP1	2.11	0.50
7:D:1895:C:H2'	7:D:1896:G:H8	1.75	0.50
7:D:1945:G:C2	7:D:1946:U:C2	3.00	0.50
7:D:2117:A:C4	7:D:2117:A:OP2	2.64	0.50
7:D:2259:G:H1'	7:D:2427:C:C2	2.46	0.50
7:D:2487:G:C2	7:D:2488:A:C5	3.00	0.50
7:D:2586:C:OP1	7:D:2608:G:N1	2.32	0.50
7:D:2867:G:H5'	7:D:2868:A:OP1	2.11	0.50
9:F:181:PHE:CD1	15:L:71:GLY:HA3	2.46	0.50
14:K:15:ASP:HB2	14:K:23:VAL:HB	1.93	0.50
14:K:77:SER:HB3	14:K:84:ASN:HD22	1.76	0.50
20:Q:29:ARG:HD3	20:Q:32:GLU:OE1	2.11	0.50
20:Q:98:VAL:HG22	20:Q:98:VAL:O	2.11	0.50
20:Q:108:ARG:CZ	20:Q:114:ARG:HA	2.40	0.50
29:Z:118:ASP:OD1	29:Z:119:VAL:N	2.44	0.50
30:a:66:ASP:OD1	30:a:68:LYS:N	2.44	0.50
30:a:198:ASN:HD21	30:a:201:HIS:CD2	2.29	0.50
35:f:2:LYS:HB3	42:m:61:TRP:HH2	1.77	0.50
42:m:27:LEU:H	42:m:30:LYS:NZ	2.09	0.50
42:m:86:ALA:HB1	42:m:89:GLU:OE2	2.10	0.50
42:m:94:ASN:HD21	43:n:10:LYS:HB3	1.75	0.50
42:m:106:PHE:O	42:m:110:VAL:HG23	2.11	0.50
47:r:80:ARG:NH1	47:r:82:ARG:HH22	2.09	0.50
47:r:99:TYR:HA	47:r:125:LEU:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:4:21:A:N6	4:4:46:G:N3	2.60	0.50
6:A:87:A:H2'	6:A:88:C:C6	2.47	0.50
6:A:186(A):C:N3	27:X:105:SER:HB3	2.27	0.50
6:A:186(C):G:C6	6:A:191(E):G:C5	2.99	0.50
6:A:639:G:C2	6:A:640:A:C8	2.99	0.50
6:A:848:C:H6	6:A:848:C:H3'	1.75	0.50
6:A:979:C:HO2'	6:A:980:C:P	2.35	0.50
6:A:1302:U:C5	20:Q:13:LYS:HD3	2.44	0.50
6:A:1350:A:C2	6:A:1351:U:C2	3.00	0.50
6:A:1370:G:N7	16:M:109:VAL:HG11	2.26	0.50
7:D:163:U:H3'	7:D:164:U:H5"	1.92	0.50
7:D:465:G:N1	7:D:466:A:N1	2.59	0.50
7:D:586:A:N6	7:D:1251:C:C4	2.79	0.50
7:D:627:A:H1'	7:D:637:A:N6	2.26	0.50
7:D:715:G:O6	7:D:716:A:N6	2.44	0.50
7:D:812:C:C2	7:D:1250:G:N1	2.80	0.50
7:D:848:G:H8	7:D:848:G:O5'	1.94	0.50
7:D:872:A:C6	7:D:873:G:N7	2.80	0.50
7:D:898:C:N4	7:D:899:A:C2	2.79	0.50
7:D:974:G:C4	7:D:1186:G:C5	2.99	0.50
7:D:1068:G:C4	7:D:1069:A:N6	2.80	0.50
7:D:1128:A:H8	7:D:2516:G:HO2'	1.60	0.50
7:D:1174:A:N3	7:D:1174:A:C3'	2.73	0.50
7:D:1397:U:HO2'	7:D:1398:C:P	2.33	0.50
7:D:1635:G:C6	7:D:1636:C:C4	3.00	0.50
7:D:1815:A:C2	7:D:1817:G:C6	2.99	0.50
7:D:1859:A:H2	7:D:1885:A:C8	2.30	0.50
7:D:2056:G:N2	7:D:2057:A:C4	2.79	0.50
7:D:2345:G:N3	7:D:2381:C:H2'	2.25	0.50
19:P:33:ARG:HG2	19:P:60:LEU:HD13	1.93	0.50
20:Q:96:LEU:HD22	20:Q:101:GLN:CB	2.41	0.50
29:Z:29:VAL:HG22	29:Z:41:VAL:HG22	1.94	0.50
32:c:33:LEU:O	32:c:37:VAL:HG23	2.10	0.50
33:d:75:LYS:HZ1	33:d:87:PRO:CB	2.22	0.50
40:k:9:ARG:HG3	40:k:10:ARG:NH1	2.27	0.50
41:l:6:LEU:HD12	41:l:7:ILE:N	2.27	0.50
43:n:19:LYS:HD3	43:n:21:ARG:HH22	1.76	0.50
45:p:57:LEU:HD22	45:p:78:LYS:HD2	1.93	0.50
47:r:4:ARG:HG2	47:r:37:VAL:HG12	1.93	0.50
47:r:25:PRO:HA	47:r:38:TYR:CD2	2.45	0.50
53:x:17:LYS:HB2	53:x:19:ARG:NH2	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:16:ALA:H	56:B:22:LYS:NZ	2.09	0.50
56:B:237:PHE:C	56:B:239:VAL:H	2.19	0.50
56:B:528:ILE:CG2	56:B:592:VAL:CG1	2.89	0.50
2:2:34:ALA:N	7:D:1056:G:OP1	2.27	0.50
6:A:50:A:OP1	6:A:50:A:H8	1.95	0.50
6:A:223:U:H5"	6:A:224:C:OP2	2.10	0.50
6:A:272:C:H2'	6:A:273:A:H8	1.76	0.50
6:A:274:A:H4'	6:A:275:G:OP1	2.12	0.50
6:A:614:A:H2'	6:A:615:C:H6	1.76	0.50
6:A:774:G:N1	6:A:806:C:N3	2.59	0.50
6:A:859:A:OP2	6:A:869:G:C6	2.62	0.50
6:A:1029:G:O2'	6:A:1031:G:N7	2.45	0.50
6:A:1071:C:H2'	6:A:1072:G:C8	2.44	0.50
6:A:1113:C:H1'	10:G:178:LEU:HD23	1.93	0.50
6:A:1164:G:C8	6:A:1165:C:C5	3.00	0.50
6:A:1527:C:N4	6:A:1528:U:O4	2.44	0.50
7:D:23:G:N2	7:D:24:G:C4	2.80	0.50
7:D:44:A:C2	7:D:45:G:C4	2.99	0.50
7:D:48:G:C2	7:D:178:G:C5	2.99	0.50
7:D:270(Y):G:H5'	7:D:270(Z):U:H4'	1.93	0.50
7:D:273:G:N1	7:D:365:C:N3	2.60	0.50
7:D:350:U:OP2	7:D:350:U:C6	2.64	0.50
7:D:595:C:H2'	7:D:596:G:H8	1.76	0.50
7:D:928:G:C8	7:D:929:G:C5	2.92	0.50
7:D:1142(A):A:C6	7:D:1143:A:N7	2.80	0.50
7:D:1266:G:OP2	52:w:20:ARG:NE	2.41	0.50
7:D:1345:C:H2'	7:D:1346:G:C8	2.46	0.50
7:D:1492:G:N3	7:D:1493:C:N3	2.59	0.50
7:D:1570:A:O5'	30:a:39:LYS:HE3	2.10	0.50
7:D:1625:C:N3	7:D:1626:G:H8	2.10	0.50
7:D:2123:G:OP1	29:Z:164:ARG:NE	2.43	0.50
7:D:2365:G:OP1	48:s:55:ARG:HG2	2.12	0.50
7:D:2570:G:C6	7:D:2571:C:C2	2.99	0.50
7:D:2834:G:O4'	7:D:2879:C:N4	2.44	0.50
7:D:2863:C:H2'	7:D:2864:G:C8	2.46	0.50
9:F:43:ASP:OD2	9:F:46:LYS:HB2	2.10	0.50
11:H:31:CYS:O	11:H:33:MET:N	2.44	0.50
12:I:105:VAL:HB	12:I:106:PRO:HD3	1.93	0.50
21:R:42:ILE:HG13	21:R:43:CYS:N	2.26	0.50
24:U:65:ILE:HG12	24:U:69:LYS:HE3	1.93	0.50
24:U:97:SER:OG	24:U:103:GLY:HA2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:50:ALA:HB1	26:W:57:HIS:HB2	1.94	0.50
26:W:61:TYR:O	26:W:62:ILE:HB	2.10	0.50
29:Z:143:GLY:O	29:Z:152:ILE:HD13	2.11	0.50
30:a:144:ALA:HA	30:a:156:ALA:HA	1.93	0.50
30:a:251:GLY:C	30:a:255:LYS:NZ	2.68	0.50
31:b:13:ARG:NH1	31:b:15:PHE:CD1	2.69	0.50
34:e:103:LEU:HD11	34:e:123:PHE:CG	2.46	0.50
36:g:59:LYS:HD3	36:g:85:VAL:HG22	1.94	0.50
41:l:99:LEU:HB3	41:l:100:TYR:CD2	2.46	0.50
43:n:23:GLU:HA	43:n:94:LEU:H	1.75	0.50
46:q:46:LYS:CE	46:q:52:SER:HB2	2.41	0.50
46:q:96:ILE:O	46:q:97:ARG:HD2	2.12	0.50
47:r:109:ALA:H	47:r:144:LEU:HD12	1.74	0.50
52:w:12:SER:OG	52:w:13:LYS:N	2.45	0.50
56:B:15:ILE:HD11	56:B:97:LEU:CD1	2.42	0.50
56:B:212:ILE:N	56:B:212:ILE:CD1	2.74	0.50
56:B:338:THR:HG21	56:B:502:ASP:CG	2.37	0.50
5:5:10:G:C6	5:5:26:A:C5	2.98	0.50
6:A:60:A:H1'	6:A:61:G:OP2	2.10	0.50
6:A:75:C:N1	6:A:96:G:N2	2.60	0.50
6:A:148:G:H2'	6:A:149:A:H8	1.77	0.50
6:A:632:A:H2'	6:A:633:G:O4'	2.11	0.50
6:A:778:G:C6	6:A:779:C:N3	2.79	0.50
6:A:1134:G:N2	6:A:1136:U:O4	2.39	0.50
6:A:1148:U:H4'	16:M:14:VAL:HG11	1.93	0.50
6:A:1308:U:O5'	6:A:1308:U:H6	1.95	0.50
7:D:61:G:C4	7:D:62:C:C5	2.99	0.50
7:D:282:A:N6	7:D:283:A:HO2'	2.09	0.50
7:D:535:C:N3	7:D:559:G:C6	2.80	0.50
7:D:571:A:N6	7:D:575:A:N7	2.59	0.50
7:D:590:A:N7	7:D:591:C:N4	2.59	0.50
7:D:609:A:C5	7:D:609(A):G:N7	2.79	0.50
7:D:685:A:C5	7:D:774:A:N1	2.80	0.50
7:D:848:G:N2	7:D:931:G:C6	2.79	0.50
7:D:870:A:C6	7:D:871:U:N3	2.80	0.50
7:D:1050:A:O2'	7:D:2752:C:O2	2.30	0.50
7:D:1134:G:O2'	7:D:1135:C:OP1	2.27	0.50
7:D:1374:G:C2	7:D:1375:C:C2	2.99	0.50
7:D:1475:G:C2	7:D:1476:C:H6	2.30	0.50
7:D:1476:C:C5	7:D:1477:A:C2	3.00	0.50
7:D:1483:G:N2	7:D:1507:A:O2'	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1691:C:C4	7:D:1692:U:N3	2.79	0.50
7:D:1847:A:H4'	7:D:1848:A:N7	2.27	0.50
7:D:1890:A:C8	7:D:1891:G:C8	2.99	0.50
7:D:2019:A:C1'	42:m:34:LYS:HZ1	2.24	0.50
7:D:2146:C:H2'	7:D:2147:G:H8	1.75	0.50
7:D:2339:G:H2'	7:D:2340:G:C8	2.46	0.50
12:I:110:LEU:HD22	12:I:115:VAL:HG21	1.93	0.50
13:J:7:ASN:HD21	13:J:62:TRP:HD1	1.58	0.50
14:K:138:LYS:NZ	14:K:139:GLU:CD	2.63	0.50
18:O:40:ILE:HG21	18:O:75:TYR:CE2	2.35	0.50
20:Q:65:LYS:CG	20:Q:73:GLU:HG3	2.35	0.50
29:Z:42:GLU:CD	29:Z:71:GLN:HE22	2.18	0.50
30:a:51:VAL:C	30:a:52:ARG:NH1	2.67	0.50
31:b:8:LYS:HE2	41:l:3:ARG:HB3	1.94	0.50
31:b:58:ARG:HH12	31:b:73:GLU:HA	1.77	0.50
33:d:47:LYS:HD2	33:d:72:ARG:O	2.12	0.50
33:d:72:ARG:HG2	33:d:88:ILE:HD13	1.93	0.50
39:j:56:LYS:NZ	39:j:91:GLN:OE1	2.37	0.50
39:j:107:ASP:OD1	39:j:108:GLY:N	2.45	0.50
40:k:66:ALA:HA	40:k:69:VAL:HB	1.94	0.50
41:l:99:LEU:HB3	41:l:100:TYR:HD2	1.76	0.50
47:r:62:PRO:O	47:r:65:GLN:N	2.43	0.50
52:w:58:LEU:HD23	52:w:59:GLU:HG3	1.92	0.50
54:y:43:THR:N	54:y:44:PRO:HD2	2.27	0.50
56:B:153:GLU:CB	56:B:159:PRO:HA	2.41	0.50
56:B:242:VAL:O	56:B:256:LEU:HD11	2.12	0.50
56:B:411:LYS:H	56:B:480:GLU:CD	2.20	0.50
56:B:412:LEU:HD23	56:B:477:MET:SD	2.49	0.50
3:3:75:SER:HB3	3:3:130:SER:HB3	1.93	0.50
5:5:30:G:H1	5:5:40:C:H42	1.60	0.50
6:A:191(F):U:H3	27:X:105:SER:HB2	1.75	0.50
6:A:192:U:H4'	27:X:57:ARG:NH1	2.27	0.50
6:A:391:G:H5"	23:T:8:ARG:NH2	2.27	0.50
6:A:477:G:O2'	6:A:478:A:H5'	2.11	0.50
6:A:495:A:C2	6:A:496:A:C5	3.00	0.50
7:D:55:G:N2	7:D:56:A:C4	2.79	0.50
7:D:295:G:N3	7:D:344:G:C2	2.80	0.50
7:D:618(A):C:C5	7:D:619:G:C5	3.00	0.50
7:D:630:G:P	55:z:46:ARG:NH1	2.85	0.50
7:D:848:G:C8	7:D:848:G:OP2	2.65	0.50
7:D:900:A:C6	7:D:901:A:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:901:A:C6	7:D:902:C:C2	2.99	0.50
7:D:919:G:N2	7:D:920:G:H1'	2.27	0.50
7:D:919:G:H5'	7:D:920:G:OP2	2.12	0.50
7:D:1265:A:C8	7:D:1267:U:C4	3.00	0.50
7:D:1478:G:OP1	7:D:1478:G:H4'	2.12	0.50
7:D:1629:U:O2	7:D:2698:U:H5"	2.12	0.50
7:D:1725:G:N2	7:D:1726:G:C5	2.79	0.50
7:D:2020:A:OP1	7:D:2020:A:H4'	2.12	0.50
7:D:2238:G:HO2'	7:D:2239:G:P	2.26	0.50
7:D:2255:G:H1	7:D:2275:C:H42	1.60	0.50
7:D:2679:A:C2	7:D:2680:C:C2	2.99	0.50
7:D:2695:C:H2'	7:D:2696:U:H6	1.76	0.50
7:D:2824:C:H5"	7:D:2825:C:OP2	2.11	0.50
8:E:91:C:H5"	47:r:79:ARG:HH12	1.74	0.50
9:F:21:ARG:HA	9:F:39:ILE:HA	1.93	0.50
18:O:110:ASP:CB	25:V:85:LEU:HB3	2.42	0.50
19:P:27:LEU:C	19:P:29:GLY:N	2.69	0.50
19:P:41:ARG:HH12	19:P:57:LYS:HE2	1.76	0.50
19:P:45:PRO:HB3	19:P:93:LEU:HB3	1.93	0.50
19:P:80:HIS:HD2	56:B:316:LEU:CG	2.14	0.50
24:U:26:GLN:HG2	24:U:37:LYS:HA	1.92	0.50
26:W:53:ASN:ND2	26:W:75:ALA:HB3	2.27	0.50
34:e:164:TYR:CD2	34:e:165:ALA:N	2.80	0.50
35:f:66:LYS:O	35:f:88:GLU:OE2	2.30	0.50
42:m:104:GLN:O	42:m:107:ALA:N	2.43	0.50
43:n:39:LEU:O	43:n:40:LEU:HD12	2.12	0.50
44:o:67:ASP:OD1	44:o:68:ARG:N	2.44	0.50
47:r:63:ASP:CG	47:r:64:GLY:H	2.19	0.50
53:x:52:VAL:HG12	53:x:53:LYS:H	1.77	0.50
55:z:4:MET:HE1	55:z:62:LEU:HD22	1.93	0.50
56:B:317:ARG:CD	56:B:342:PHE:HE2	2.25	0.50
56:B:374:PRO:CD	56:B:461:TYR:CD1	2.95	0.50
56:B:379:LYS:HE3	56:B:484:TYR:CD2	2.47	0.50
56:B:555:ARG:CG	56:B:577:GLN:OE1	2.60	0.50
3:3:103:GLN:O	3:3:107:ILE:HD11	2.11	0.50
3:3:128:ALA:HB1	7:D:1079:C:O2'	2.11	0.50
6:A:179:A:H3'	6:A:180:U:C6	2.46	0.50
6:A:302:G:H4'	19:P:17:LYS:NZ	2.27	0.50
6:A:495:A:N3	6:A:496:A:C5	2.80	0.50
6:A:495:A:C4	6:A:496:A:N7	2.80	0.50
6:A:585:G:O2'	6:A:879:C:H5"	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:597:G:N7	6:A:598:U:C4	2.80	0.50
6:A:663:A:C2	6:A:664:G:C4	3.00	0.50
6:A:664:G:N2	6:A:666:G:C8	2.79	0.50
6:A:1146:A:C6	6:A:1147:C:C2	2.99	0.50
6:A:1309:G:C8	6:A:1310:G:C8	3.00	0.50
6:A:1505:G:OP2	6:A:1505:G:C8	2.65	0.50
6:A:1517:G:C4	7:D:1920:C:OP2	2.64	0.50
7:D:5:A:H2'	7:D:6:A:C8	2.47	0.50
7:D:27:G:N2	7:D:512:G:O2'	2.44	0.50
7:D:37:C:H2'	7:D:38:A:C8	2.46	0.50
7:D:298:G:O5'	7:D:298:G:H8	1.95	0.50
7:D:409:C:H2'	7:D:410:G:C8	2.47	0.50
7:D:438:G:N2	7:D:439:G:C4	2.79	0.50
7:D:479:A:O2'	7:D:480:A:H8	1.94	0.50
7:D:481:G:O2'	7:D:507:A:N6	2.44	0.50
7:D:548:A:N6	7:D:549:G:H21	2.08	0.50
7:D:903:C:H2'	7:D:904:C:C6	2.46	0.50
7:D:904:C:O2'	47:r:122:ARG:NH1	2.44	0.50
7:D:974:G:H5"	7:D:974(A):C:OP2	2.11	0.50
7:D:1001:A:N7	7:D:1002:G:C4	2.80	0.50
7:D:1014:U:OP2	7:D:1142:U:H1'	2.11	0.50
7:D:1047:G:O6	7:D:1110:G:C5	2.64	0.50
7:D:1062:G:OP2	7:D:1070:A:C2	2.64	0.50
7:D:1103:A:N3	7:D:1103:A:H2'	2.26	0.50
7:D:1218:C:OP2	42:m:15:LYS:HD3	2.12	0.50
7:D:1230:C:H2'	7:D:1231:G:C8	2.35	0.50
7:D:1322:A:OP1	44:o:11:ARG:HD2	2.12	0.50
7:D:1363:C:O3'	7:D:1809:A:C5	2.64	0.50
7:D:1449:A:H2'	7:D:1449(A):G:C5'	2.41	0.50
7:D:1725:G:C2	7:D:1735:C:C2	2.98	0.50
7:D:2106:G:C2	7:D:2108:C:C2	2.99	0.50
7:D:2308:G:H2'	7:D:2309:A:OP2	2.12	0.50
7:D:2630:G:OP1	7:D:2895:U:N3	2.45	0.50
7:D:2776:A:C2	7:D:2778:A:C4	2.99	0.50
8:E:12:C:C6	48:s:74:ARG:HB2	2.46	0.50
8:E:57:A:OP2	8:E:58:A:OP2	2.30	0.50
9:F:61:LEU:HD22	9:F:68:ILE:HG13	1.93	0.50
9:F:84:GLU:HG3	9:F:219:VAL:HG21	1.94	0.50
13:J:46:ARG:HH22	25:V:37:VAL:HB	1.76	0.50
20:Q:16:ASP:HB2	20:Q:30:ALA:HA	1.93	0.50
29:Z:156:ILE:HG12	29:Z:160:ARG:HD3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:55:ASN:HB3	31:b:56:PRO:HD3	1.93	0.50
32:c:40:GLN:HA	32:c:43:LYS:H	1.75	0.50
37:h:77:ARG:HB2	37:h:115:LEU:HD22	1.93	0.50
39:j:47:PHE:O	39:j:50:HIS:HB3	2.12	0.50
47:r:55:HIS:CD2	47:r:124:ILE:HD13	2.47	0.50
47:r:80:ARG:HD2	47:r:82:ARG:NH1	2.27	0.50
51:v:20:ASN:HD22	51:v:30:GLU:HB2	1.76	0.50
56:B:11:ASN:HB2	56:B:100:VAL:HA	1.93	0.50
56:B:66:VAL:O	56:B:76:TYR:CE1	2.65	0.50
56:B:131:ILE:C	56:B:132:ILE:HG13	2.37	0.50
56:B:205:TYR:CZ	56:B:271:ILE:HG23	2.41	0.50
56:B:382:LEU:HB2	56:B:401:ARG:HG3	0.52	0.50
56:B:409:TYR:CG	56:B:485:ARG:CD	2.94	0.50
56:B:456:PHE:CZ	56:B:460:LEU:HD21	2.46	0.50
56:B:489:LEU:HD22	56:B:507:ILE:HG21	1.94	0.50
56:B:493:ASN:C	56:B:540:ALA:O	2.54	0.50
3:3:24:GLY:C	56:B:440:TYR:CZ	2.90	0.50
3:3:79:ARG:CZ	3:3:134:MET:HB2	2.41	0.50
6:A:13:U:N3	6:A:21:G:N1	2.59	0.50
6:A:101:A:N6	6:A:102:G:O6	2.44	0.50
6:A:179:A:C5	6:A:180:U:C4	2.99	0.50
6:A:262:A:C6	6:A:263:A:C5	3.00	0.50
6:A:270:A:H2'	6:A:271:C:O4'	2.12	0.50
6:A:653:A:H5'	6:A:654:G:OP2	2.12	0.50
6:A:848:C:C2'	6:A:849:C:C5	2.86	0.50
6:A:1014:A:H5"	26:W:18:LYS:NZ	2.12	0.50
7:D:273(A):G:C2	7:D:273(B):C:C2	3.00	0.50
7:D:283:A:H3'	7:D:284:U:H6	1.75	0.50
7:D:512:G:HO2'	7:D:513:A:P	2.31	0.50
7:D:1128:A:H62	7:D:2518:A:H61	1.59	0.50
7:D:1173:G:N3	7:D:1173:G:C5'	2.73	0.50
7:D:1174:A:C6	7:D:1176:G:C8	2.95	0.50
7:D:1485:G:C6	7:D:1486:A:C6	3.00	0.50
7:D:1567:A:H2'	30:a:84:TYR:HE1	1.77	0.50
7:D:1748:G:N1	7:D:1749:A:N1	2.59	0.50
7:D:1784:A:N3	7:D:1785:A:C6	2.80	0.50
7:D:1789:A:C5	7:D:1790:C:C2	2.99	0.50
7:D:1945:G:N2	7:D:1946:U:O2	2.45	0.50
7:D:2141:G:N2	7:D:2150:U:O2	2.42	0.50
7:D:2277:G:C6	7:D:2278:A:N7	2.80	0.50
7:D:2793:G:C2	7:D:2803:C:N3	2.72	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2887:U:O5'	7:D:2887:U:H6	1.95	0.50
8:E:44:G:C2	8:E:48:A:C2	3.00	0.50
8:E:83:G:H5'	8:E:84:C:OP2	2.12	0.50
9:F:61:LEU:HD11	9:F:160:ASP:HB3	1.93	0.50
22:S:36:ILE:HG13	22:S:56:LEU:HD11	1.93	0.50
25:V:85:LEU:HD11	25:V:87:ARG:HB3	1.94	0.50
28:Y:10:ARG:HA	28:Y:13:ILE:HG22	1.94	0.50
29:Z:42:GLU:OE1	29:Z:71:GLN:NE2	2.45	0.50
30:a:155:LEU:HG	30:a:157:ARG:NH1	2.27	0.50
30:a:209:ALA:O	30:a:210:GLY:C	2.55	0.50
36:g:40:VAL:HA	36:g:58:VAL:HA	1.93	0.50
37:h:73:GLY:C	37:h:107:LYS:HZ1	2.19	0.50
39:j:52:ILE:HG23	39:j:94:TYR:HD2	1.77	0.50
49:t:60:ASN:HA	49:t:63:ARG:NH1	2.27	0.50
53:x:27:LYS:HE3	53:x:29:ASN:ND2	2.27	0.50
56:B:127:HIS:O	56:B:127:HIS:HD2	1.95	0.50
56:B:170:THR:HG22	56:B:171:GLY:N	2.18	0.50
3:3:66:THR:HG22	3:3:67:PHE:N	2.19	0.50
6:A:505:G:C5	6:A:535:A:C2	2.99	0.50
6:A:590:C:H2'	6:A:591:U:C6	2.43	0.50
6:A:686:U:N3	6:A:703:G:N3	2.59	0.50
6:A:1368:G:H2'	6:A:1369:C:H6	1.77	0.50
6:A:1504:G:H4'	6:A:1505:G:O4'	2.11	0.50
7:D:38:A:C2	7:D:39:C:C2	3.00	0.50
7:D:270(B):A:H1'	7:D:270(C):C:H5	1.77	0.50
7:D:493:G:N2	7:D:494:G:C4	2.79	0.50
7:D:640:C:OP2	7:D:640:C:H6	1.95	0.50
7:D:674:G:C5	7:D:804:A:N6	2.80	0.50
7:D:1168:G:N3	7:D:1182:A:C2	2.80	0.50
7:D:1263:U:H4'	52:w:10:LYS:HD3	1.93	0.50
7:D:1268:A:C4	7:D:2013:A:N6	2.80	0.50
7:D:1436:G:C2	7:D:1437:C:C2	3.00	0.50
7:D:1475:G:C2	7:D:1476:C:C6	2.99	0.50
7:D:1561:G:N2	7:D:1562:A:C4	2.80	0.50
7:D:1572:A:C8	7:D:1573:G:C8	3.00	0.50
7:D:1915:U:C4	7:D:1916:A:N7	2.80	0.50
7:D:2104:G:C5	7:D:2105:C:C4	3.00	0.50
7:D:2126:A:HO2'	7:D:2163:C:HO2'	1.44	0.50
7:D:2346:A:C2	7:D:2383:G:N1	2.80	0.50
7:D:2446:G:C2	7:D:2501:C:C5	2.99	0.50
7:D:2455:G:C2	7:D:2498:C:N4	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2548:G:C6	7:D:2561:A:N1	2.80	0.50
7:D:2594:C:C2	7:D:2600:A:H2	2.30	0.50
8:E:7:G:H21	40:k:38:GLN:HE22	1.59	0.50
10:G:63:ASN:O	10:G:99:VAL:HA	2.12	0.50
15:L:87:SER:HB2	15:L:92:ARG:HA	1.94	0.50
18:O:14:VAL:O	18:O:77:MET:HG2	2.12	0.50
20:Q:71:ARG:HG2	20:Q:71:ARG:O	2.11	0.50
20:Q:81:LEU:HD12	20:Q:84:ILE:HG23	1.92	0.50
23:T:21:VAL:HG22	23:T:34:GLU:O	2.12	0.50
24:U:67:LYS:O	24:U:69:LYS:N	2.38	0.50
26:W:16:LEU:C	26:W:20:LEU:HD13	2.36	0.50
30:a:222:ARG:HH11	30:a:222:ARG:HB3	1.77	0.50
31:b:4:ILE:HD12	31:b:76:ARG:NH2	2.27	0.50
32:c:54:ARG:C	32:c:56:GLU:H	2.19	0.50
33:d:68:PRO:HG3	33:d:90:LEU:CD1	2.41	0.50
39:j:48:VAL:O	39:j:52:ILE:HG22	2.12	0.50
41:l:58:ASN:H	41:l:61:PHE:HD1	1.59	0.50
43:n:19:LYS:N	43:n:19:LYS:HD2	2.27	0.50
46:q:24:VAL:HG23	46:q:38:ILE:HD12	1.93	0.50
55:z:4:MET:SD	55:z:62:LEU:HD13	2.51	0.50
56:B:200:ILE:HG23	56:B:213:PRO:HB2	1.94	0.50
56:B:558:VAL:CG1	56:B:573:LEU:HB3	2.42	0.50
3:3:58:THR:O	3:3:64:SER:HB2	2.12	0.49
3:3:77:LEU:HD11	3:3:111:LYS:HD3	1.93	0.49
6:A:31:G:OP1	6:A:31:G:H8	1.94	0.49
6:A:78:G:H2'	6:A:79:G:C8	2.47	0.49
6:A:253:U:OP1	24:U:67:LYS:NZ	2.41	0.49
6:A:388:G:O2'	6:A:389:A:OP2	2.30	0.49
6:A:401:C:OP2	11:H:73:ARG:CZ	2.60	0.49
6:A:978:A:C5	6:A:1318:A:N6	2.80	0.49
6:A:1014:A:H8	6:A:1015:A:N7	2.10	0.49
6:A:1056:U:OP1	10:G:163:ALA:N	2.44	0.49
6:A:1058:G:N2	17:N:53:PRO:HG3	2.26	0.49
6:A:1169:A:C2'	6:A:1170:A:C8	2.93	0.49
6:A:1498:U:O2'	6:A:1499:A:P	2.69	0.49
7:D:13:A:C2	7:D:526:A:N7	2.80	0.49
7:D:358:U:H2'	7:D:359:A:H5'	1.94	0.49
7:D:411:G:N2	7:D:2408:U:O4	2.40	0.49
7:D:423:A:H8	7:D:423:A:OP2	1.94	0.49
7:D:439:G:H2'	7:D:440:G:H8	1.71	0.49
7:D:507:A:HO2'	7:D:508:G:H21	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:752:A:O2'	7:D:753:C:P	2.70	0.49
7:D:969:U:OP1	50:u:17:LYS:N	2.31	0.49
7:D:987:G:O2'	7:D:1000:A:N3	2.45	0.49
7:D:1059:G:O6	7:D:1081:U:O2	2.30	0.49
7:D:1062:G:C1'	7:D:1063:G:P	3.00	0.49
7:D:1313:U:C2	7:D:1314:C:C6	3.00	0.49
7:D:1341:U:O2'	45:p:55:ASN:OD1	2.29	0.49
7:D:1356:G:C6	7:D:1357:U:C4	3.00	0.49
7:D:1416:G:HO2'	7:D:1417:C:P	2.35	0.49
7:D:1417:C:N4	7:D:1581:G:H1	2.10	0.49
7:D:1668:A:H2	7:D:1993:U:C5	2.29	0.49
7:D:1668:A:N1	7:D:1993:U:N3	2.60	0.49
7:D:1861:G:OP1	29:Z:205:LYS:HG3	2.12	0.49
7:D:2116:G:N7	7:D:2165:G:N1	2.58	0.49
7:D:2262:U:O2'	7:D:2263:C:H5'	2.12	0.49
7:D:2537:U:N3	7:D:2538:C:C4	2.80	0.49
7:D:2807:G:H2'	7:D:2807:G:N3	2.27	0.49
7:D:2821:A:H2'	7:D:2822:G:O4'	2.12	0.49
7:D:2889:C:N4	7:D:2891:G:C6	2.80	0.49
10:G:52:LEU:HA	10:G:70:VAL:HG22	1.94	0.49
10:G:147:LYS:HB2	10:G:203:PHE:CD1	2.46	0.49
23:T:56:ALA:HB3	23:T:79:VAL:HG21	1.95	0.49
27:X:81:LYS:O	27:X:85:MET:HG2	2.12	0.49
29:Z:37:PHE:HE1	29:Z:40:THR:OG1	1.94	0.49
30:a:40:THR:HB	30:a:62:TYR:CE2	2.47	0.49
39:j:12:ARG:NH1	39:j:16:HIS:C	2.70	0.49
40:k:37:ALA:H	40:k:51:ALA:CB	2.24	0.49
42:m:9:VAL:HG13	42:m:13:LYS:HZ2	1.77	0.49
53:x:8:LYS:HE3	53:x:29:ASN:HA	1.93	0.49
53:x:15:GLU:HA	53:x:21:TYR:CB	2.42	0.49
56:B:32:LEU:HD22	56:B:173:GLY:O	2.12	0.49
56:B:47:ASP:CG	56:B:53:ARG:HD2	2.37	0.49
56:B:65:ARG:CG	56:B:246:THR:HA	2.42	0.49
56:B:222:VAL:CB	56:B:264:LEU:HD21	2.42	0.49
56:B:278:ASP:O	56:B:279:THR:HG23	2.11	0.49
56:B:332:PHE:HD1	56:B:333:GLU:N	2.10	0.49
3:3:21:PRO:CD	3:3:22:PRO:CD	2.86	0.49
4:4:7:G:N2	4:4:67:C:O2	2.45	0.49
6:A:180:U:N3	6:A:195:A:N7	2.61	0.49
6:A:587:G:H4'	15:L:3:THR:O	2.11	0.49
6:A:1201:A:O2'	6:A:1202:G:O5'	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1321:C:HO2'	20:Q:87:TYR:HH	1.59	0.49
6:A:1412:C:H2'	6:A:1413:A:C8	2.47	0.49
7:D:124:G:N2	7:D:128:C:C4	2.81	0.49
7:D:529:A:N6	7:D:2023:G:C5	2.80	0.49
7:D:719:C:C2	7:D:720:C:C5	3.00	0.49
7:D:890:A:H4'	7:D:892:G:OP2	2.12	0.49
7:D:1106:G:O3'	7:D:1107:G:O4'	2.30	0.49
7:D:1350:C:C4	7:D:1382:G:N2	2.80	0.49
7:D:1440:G:C5	7:D:1552:G:N2	2.81	0.49
7:D:1587:A:H2'	7:D:1588:C:O4'	2.12	0.49
7:D:1662:C:H2'	7:D:1663:C:C6	2.46	0.49
7:D:2133:G:OP1	7:D:2156:G:O2'	2.26	0.49
7:D:2315:G:H2'	7:D:2316:C:C6	2.47	0.49
7:D:2353:G:H4'	48:s:32:ARG:HH12	1.77	0.49
7:D:2376:A:H8	7:D:2376:A:P	2.36	0.49
7:D:2655:G:H2'	7:D:2664:G:N1	2.26	0.49
7:D:2793:G:C6	7:D:2802:G:O6	2.65	0.49
7:D:2848:G:C4	41:l:99:LEU:HD21	2.47	0.49
7:D:2896:C:H3'	7:D:2897:U:C5	2.47	0.49
8:E:29:A:H2	8:E:56:G:C4	2.30	0.49
8:E:43:C:C4	8:E:45:A:N6	2.80	0.49
22:S:7:GLU:HA	22:S:10:LYS:HG2	1.94	0.49
26:W:40:ILE:HG23	26:W:67:VAL:CG2	2.29	0.49
29:Z:215:THR:HA	29:Z:221:SER:HB2	1.93	0.49
30:a:133:LEU:HA	30:a:136:ILE:HD12	1.94	0.49
30:a:242:ARG:NH1	30:a:244:ARG:NE	2.59	0.49
31:b:172:VAL:HG12	31:b:184:VAL:HG12	1.92	0.49
35:f:58:ASP:OD1	35:f:58:ASP:N	2.41	0.49
36:g:24:VAL:HG23	36:g:30:ALA:HB1	1.94	0.49
40:k:96:GLY:O	40:k:99:LYS:N	2.43	0.49
45:p:20:GLY:O	45:p:25:LYS:N	2.44	0.49
52:w:36:CYS:O	52:w:37:LYS:HG3	2.12	0.49
56:B:47:ASP:OD2	56:B:53:ARG:HA	2.12	0.49
56:B:210:GLY:CA	56:B:269:ARG:HG2	2.42	0.49
56:B:374:PRO:HG3	56:B:461:TYR:HB3	1.95	0.49
56:B:413:THR:CA	56:B:450:LEU:O	2.57	0.49
2:2:11:ALA:CB	7:D:1046:A:N7	2.69	0.49
5:5:63:G:H2'	5:5:64:A:H8	1.78	0.49
6:A:157:G:H2'	6:A:158:G:H8	1.77	0.49
6:A:309:G:C2	6:A:310:G:C8	3.00	0.49
6:A:909:A:P	19:P:21:LYS:HZ3	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1129:C:H1'	6:A:1130:A:C8	2.46	0.49
6:A:1129:C:H1'	6:A:1130:A:N7	2.27	0.49
6:A:1134:G:H1	6:A:1140:C:N4	2.11	0.49
6:A:1306:A:C6	6:A:1307:U:O2	2.65	0.49
6:A:1397:C:O2'	6:A:1398:A:OP2	2.22	0.49
6:A:1422:G:H2'	6:A:1423:G:H8	1.76	0.49
7:D:35:G:C4	7:D:36:G:C8	3.00	0.49
7:D:388:G:OP2	51:v:23:GLU:HG2	2.13	0.49
7:D:480:A:H4'	46:q:44:ILE:H	1.78	0.49
7:D:532:A:C2	7:D:2035:G:N2	2.76	0.49
7:D:685:A:C5	7:D:774:A:C6	2.99	0.49
7:D:752:A:O2'	7:D:753:C:O5'	2.28	0.49
7:D:839:U:H2'	7:D:840:C:C6	2.47	0.49
7:D:875:G:C6	7:D:876:C:N3	2.80	0.49
7:D:876:C:H5"	7:D:877:U:OP2	2.12	0.49
7:D:896:A:OP2	7:D:897:C:OP2	2.31	0.49
7:D:952:G:H5"	7:D:953:A:OP2	2.13	0.49
7:D:1287:A:H2	7:D:1649:G:H4'	1.77	0.49
7:D:1305:C:C2	7:D:1624:G:C2	3.00	0.49
7:D:1492:G:O6	7:D:1496:A:C6	2.65	0.49
7:D:1816:G:O2'	7:D:1817:G:OP2	2.21	0.49
7:D:2053:G:C2	7:D:2617:C:C2	3.00	0.49
7:D:2210:G:C6	30:a:70:TRP:CD1	3.00	0.49
7:D:2490:G:N2	7:D:2491:U:O2	2.45	0.49
7:D:2864:G:C5	7:D:2865:U:C4	3.00	0.49
10:G:11:ARG:HH21	10:G:182:ILE:HD12	1.76	0.49
11:H:127:THR:HB	11:H:147:ALA:N	2.26	0.49
11:H:152:SER:O	11:H:154:ASN:N	2.42	0.49
13:J:33:TYR:CE2	13:J:75:LEU:HD22	2.47	0.49
26:W:40:ILE:HB	26:W:67:VAL:C	2.37	0.49
29:Z:155:GLU:HB3	29:Z:159:GLY:O	2.12	0.49
30:a:38:LYS:NZ	30:a:64:ILE:HD12	2.27	0.49
33:d:60:LEU:HA	33:d:63:ILE:HG22	1.95	0.49
35:f:128:HIS:N	35:f:129:PRO:HD2	2.27	0.49
36:g:122:LEU:HA	41:l:70:VAL:C	2.37	0.49
37:h:77:ARG:HA	37:h:115:LEU:HB2	1.93	0.49
37:h:100:LEU:HA	37:h:103:ALA:HB3	1.94	0.49
37:h:123:LEU:HB3	37:h:125:VAL:H	1.77	0.49
39:j:84:ALA:C	39:j:88:ARG:HH12	2.20	0.49
40:k:17:ARG:HD3	40:k:25:ARG:NH2	2.28	0.49
46:q:97:ARG:NH2	46:q:101:LYS:HD3	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:r:69:THR:HG21	47:r:88:PHE:CD2	2.47	0.49
53:x:17:LYS:NZ	53:x:48:VAL:HG13	2.28	0.49
53:x:46:HIS:ND1	53:x:47:THR:O	2.45	0.49
56:B:8:ARG:O	56:B:9:ILE:HB	2.12	0.49
56:B:66:VAL:HG23	56:B:76:TYR:HD1	1.66	0.49
56:B:239:VAL:HG13	56:B:240:ASP:N	2.28	0.49
56:B:349:LEU:HD12	56:B:353:HIS:HB2	1.94	0.49
56:B:379:LYS:CE	56:B:485:ARG:H	2.25	0.49
6:A:186(B):C:C4'	27:X:89:ARG:NH1	2.74	0.49
6:A:439:A:C6	6:A:440:A:H1'	2.47	0.49
6:A:798:G:H5"	6:A:799:G:OP2	2.11	0.49
6:A:819:A:C6	6:A:1529:G:C6	3.00	0.49
6:A:1049:U:H4'	6:A:1050:G:C5'	2.43	0.49
6:A:1143:G:H2'	6:A:1144:G:H8	1.76	0.49
6:A:1256:A:N6	6:A:1278:U:O2	2.40	0.49
7:D:308:G:C2	7:D:501:A:C5	3.00	0.49
7:D:563:G:C6	7:D:564:C:C4	3.00	0.49
7:D:661:C:H2'	7:D:662:G:C8	2.47	0.49
7:D:749:C:HO2'	7:D:1617:C:HO2'	1.57	0.49
7:D:848:G:O6	7:D:929:G:N3	2.45	0.49
7:D:1091:G:H2'	7:D:1092:C:C6	2.47	0.49
7:D:1096:A:H2'	7:D:1097:U:O4'	2.11	0.49
7:D:1263:U:C5	7:D:1264:G:C6	3.00	0.49
7:D:1272:A:C5	7:D:1618:A:H1'	2.48	0.49
7:D:1480:G:P	7:D:1559:G:O6	2.70	0.49
7:D:1565:C:N3	7:D:1567:A:H8	2.09	0.49
7:D:1681:G:O2'	7:D:1682:G:P	2.70	0.49
7:D:1993:U:C5	7:D:1994:C:C2	3.01	0.49
7:D:2072:G:N1	7:D:2438:U:O2	2.46	0.49
7:D:2134:A:O2'	7:D:2157:G:OP1	2.29	0.49
7:D:2639:A:C4	7:D:2778:A:C6	3.01	0.49
7:D:2772:C:H5'	7:D:2773:C:OP2	2.12	0.49
7:D:2781:A:C3'	7:D:2782:G:H4'	2.42	0.49
8:E:91:C:OP1	47:r:79:ARG:NH1	2.32	0.49
11:H:162:LEU:O	11:H:165:MET:N	2.45	0.49
13:J:33:TYR:CZ	13:J:75:LEU:HD22	2.46	0.49
29:Z:36:LYS:HG3	29:Z:37:PHE:CD2	2.48	0.49
29:Z:44:HIS:HA	29:Z:172:HIS:HA	1.95	0.49
29:Z:86:ALA:HA	29:Z:153:ILE:HD12	1.94	0.49
29:Z:127:LEU:HA	29:Z:130:ILE:HD13	1.93	0.49
30:a:242:ARG:NH1	30:a:244:ARG:N	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:a:253:GLN:N	30:a:253:GLN:OE1	2.46	0.49
37:h:79:ARG:HE	37:h:117:GLU:CG	2.25	0.49
40:k:5:THR:O	40:k:9:ARG:HG2	2.12	0.49
40:k:52:SER:O	40:k:54:LEU:N	2.45	0.49
43:n:72:VAL:O	43:n:89:GLN:HB3	2.12	0.49
46:q:95:LYS:HG2	46:q:96:ILE:O	2.12	0.49
54:y:18:PHE:HD2	54:y:22:MET:HE1	1.77	0.49
56:B:17:HIS:HB3	56:B:20:HIS:CE1	2.47	0.49
56:B:193:GLU:HA	56:B:193:GLU:OE1	2.12	0.49
56:B:196:LEU:HD23	56:B:282:LEU:HB2	1.94	0.49
56:B:290:PRO:O	56:B:292:PRO:HD3	2.12	0.49
56:B:300:VAL:HG23	56:B:301:VAL:N	2.27	0.49
56:B:383:LYS:H	56:B:402:ILE:CB	2.25	0.49
56:B:456:PHE:CD1	56:B:459:ILE:HD11	2.47	0.49
1:1:30:PRO:HB2	7:D:2527:C:H5"	1.93	0.49
6:A:5:U:H1'	6:A:6:G:OP2	2.12	0.49
6:A:48:C:OP2	6:A:49:U:OP2	2.30	0.49
6:A:429:U:H1'	6:A:430:A:H5"	1.94	0.49
6:A:837:G:C2	6:A:838:G:C5	3.00	0.49
6:A:978:A:H61	6:A:1316:G:H1'	1.78	0.49
6:A:996:A:N6	6:A:1046:A:H1'	2.27	0.49
6:A:1297:C:P	20:Q:13:LYS:HZ3	2.35	0.49
6:A:1453:G:N3	6:A:1453:G:C3'	2.73	0.49
7:D:83:G:C2	7:D:84:A:C2	3.00	0.49
7:D:284:U:OP2	7:D:284:U:H3'	2.13	0.49
7:D:508:G:OP2	7:D:508:G:N2	2.46	0.49
7:D:529:A:C6	7:D:2042:A:N1	2.80	0.49
7:D:696:G:N2	7:D:697:C:C2	2.80	0.49
7:D:738:G:N2	7:D:759:G:C5	2.80	0.49
7:D:932:G:C5	7:D:933:A:N7	2.80	0.49
7:D:976:C:C5'	7:D:1156:A:H62	2.23	0.49
7:D:1313:U:H2'	7:D:1314:C:O4'	2.12	0.49
7:D:1511:A:OP2	7:D:1511:A:C8	2.66	0.49
7:D:1603:A:C4	7:D:1604:C:C5	3.01	0.49
7:D:1869:G:C2	7:D:1872:A:OP2	2.59	0.49
7:D:2026:C:C2	7:D:2038:G:N2	2.81	0.49
7:D:2458:G:H8	7:D:2458:G:O5'	1.96	0.49
8:E:48:A:H5'	40:k:92:TYR:CE2	2.47	0.49
8:E:48:A:OP1	40:k:30:ARG:NH2	2.46	0.49
8:E:57:A:H2	33:d:29:TRP:HB3	1.56	0.49
9:F:45:GLN:N	9:F:45:GLN:OE1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:131:ARG:HG3	10:G:166:GLU:OE2	2.13	0.49
11:H:20:TYR:O	11:H:26:CYS:HB3	2.13	0.49
20:Q:25:ILE:HA	20:Q:29:ARG:HG2	1.94	0.49
23:T:69:THR:O	23:T:72:ARG:HG2	2.13	0.49
23:T:78:GLY:O	23:T:80:PHE:N	2.45	0.49
26:W:28:LYS:O	26:W:48:THR:HB	2.13	0.49
27:X:73:HIS:CD2	27:X:74:LYS:HD2	2.48	0.49
29:Z:117:PRO:HG2	29:Z:147:PHE:CE2	2.47	0.49
31:b:107:THR:O	31:b:190:GLY:HA2	2.13	0.49
32:c:9:ILE:HG21	32:c:124:LEU:HD22	1.93	0.49
38:i:106:VAL:HG22	38:i:107:ALA:N	2.27	0.49
41:l:96:ARG:NE	41:l:117:ASP:OD2	2.43	0.49
43:n:19:LYS:CA	43:n:21:ARG:HH12	2.26	0.49
46:q:89:PHE:CE2	46:q:90:LEU:HD13	2.46	0.49
47:r:18:LEU:HD22	47:r:23:LYS:HD3	1.94	0.49
47:r:128:VAL:HB	47:r:162:GLU:HB3	1.94	0.49
51:v:5:ILE:O	51:v:6:HIS:ND1	2.45	0.49
55:z:34:TRP:CZ3	55:z:41:ILE:HG13	2.48	0.49
56:B:222:VAL:HG22	56:B:239:VAL:HG21	1.94	0.49
56:B:490:VAL:HB	56:B:508:ALA:C	2.36	0.49
1:1:22:ARG:HD2	1:1:37:GLY:HA3	1.93	0.49
3:3:34:ILE:CG2	3:3:63:ARG:HG2	2.43	0.49
3:3:103:GLN:N	3:3:106:GLU:OE2	2.46	0.49
4:4:33:U:N3	4:4:36:U:OP2	2.42	0.49
6:A:185:A:N6	6:A:192:U:H3	2.09	0.49
6:A:321:A:C2	6:A:333:G:C2	3.00	0.49
6:A:372:C:N4	6:A:389:A:H62	2.10	0.49
6:A:384:G:H2'	6:A:385:C:C6	2.47	0.49
6:A:401:C:H2'	6:A:402:G:H8	1.76	0.49
6:A:477:G:C5	6:A:478:A:N7	2.81	0.49
6:A:506:G:C5	6:A:507:C:C4	3.00	0.49
6:A:583:A:H5'	24:U:90:ILE:HG21	1.95	0.49
6:A:735:C:H2'	6:A:736:C:C6	2.47	0.49
6:A:1229:A:H2'	6:A:1230:C:C6	2.46	0.49
6:A:1250:A:C2	6:A:1287:A:C6	3.01	0.49
6:A:1398:A:C6	12:I:19:MET:HE3	2.48	0.49
7:D:202:U:H2'	7:D:203:C:H6	1.78	0.49
7:D:266:G:H5'	7:D:271(A):C:N4	2.21	0.49
7:D:292:C:H3'	7:D:293:U:C6	2.46	0.49
7:D:296:C:O2'	7:D:297:C:O4'	2.16	0.49
7:D:669:G:H5"	7:D:670:A:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:684:G:C2	7:D:775:G:C5	3.01	0.49
7:D:817:C:O2'	7:D:839:U:H5"	2.13	0.49
7:D:863:A:H61	7:D:912:C:H42	1.61	0.49
7:D:1000:A:N6	7:D:1001:A:N1	2.61	0.49
7:D:1128:A:H8	7:D:2516:G:O2'	1.95	0.49
7:D:1414:G:C2	7:D:1589:C:N3	2.80	0.49
7:D:1483:G:C2	7:D:1507:A:O2'	2.66	0.49
7:D:1497:U:OP2	7:D:1498:C:C5	2.66	0.49
7:D:1583:A:H4'	7:D:1585:C:C4	2.46	0.49
7:D:1684:C:H2'	7:D:1685:C:O4'	2.13	0.49
7:D:1707:G:N2	7:D:1708:C:O2	2.45	0.49
7:D:1726:G:H2'	7:D:1726:G:N3	2.26	0.49
7:D:1732:A:H3'	7:D:1733:G:H5"	1.93	0.49
7:D:2086:U:H2'	7:D:2087:G:C8	2.48	0.49
7:D:2340:G:N2	7:D:2341:G:C4	2.80	0.49
7:D:2491:U:C4	7:D:2492:U:C4	3.01	0.49
7:D:2819:G:C5	7:D:2821:A:C6	3.00	0.49
7:D:2847:U:C4	7:D:2848:G:N7	2.81	0.49
8:E:85:G:C6	8:E:92:G:C6	3.01	0.49
9:F:12:GLU:HB3	9:F:16:HIS:CE1	2.47	0.49
10:G:159:GLY:HA2	10:G:193:TYR:CE1	2.48	0.49
12:I:15:ARG:HG3	12:I:28:PHE:CE1	2.47	0.49
15:L:100:ILE:HB	15:L:125:ARG:NH2	2.28	0.49
16:M:18:PHE:HB2	16:M:62:TYR:HD2	1.78	0.49
29:Z:38:ASP:CG	29:Z:178:ALA:CB	2.81	0.49
30:a:154:LYS:O	30:a:155:LEU:HB3	2.13	0.49
31:b:117:MET:SD	31:b:123:ALA:HB3	2.53	0.49
32:c:34:TRP:NE1	37:h:10:PRO:HB3	2.27	0.49
35:f:96:GLU:CD	35:f:96:GLU:H	2.20	0.49
35:f:109:LYS:CG	35:f:110:GLY:H	2.23	0.49
36:g:122:LEU:H	41:l:70:VAL:HG12	1.76	0.49
38:i:30:GLY:O	38:i:31:ASP:HB2	2.13	0.49
39:j:33:ARG:HH21	39:j:113:LEU:HD11	1.77	0.49
44:o:20:VAL:O	44:o:23:LEU:HB2	2.11	0.49
45:p:14:SER:OG	45:p:17:ALA:N	2.43	0.49
49:t:21:ARG:NH2	49:t:24:LYS:HZ2	2.10	0.49
56:B:65:ARG:NH1	56:B:76:TYR:HH	2.07	0.49
56:B:67:THR:OG1	56:B:68:TYR:N	2.45	0.49
56:B:233:THR:OG1	56:B:234:GLY:N	2.46	0.49
56:B:338:THR:CG2	56:B:502:ASP:CG	2.86	0.49
3:3:27:LEU:C	3:3:32:ALA:CB	2.86	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:77:LEU:HD12	3:3:111:LYS:CD	2.42	0.49
6:A:137:C:H42	6:A:226:G:H1	1.60	0.49
6:A:424:G:H2'	6:A:425:G:C8	2.48	0.49
6:A:464:G:C3'	6:A:465:A:C5'	2.88	0.49
6:A:475:G:H2'	6:A:476:G:H1'	1.92	0.49
6:A:909:A:P	19:P:21:LYS:NZ	2.86	0.49
6:A:1028(B):C:H2'	6:A:1029:G:H5'	1.95	0.49
6:A:1089:G:H1	6:A:1096:C:N4	2.10	0.49
7:D:191:A:H2'	7:D:192:C:C6	2.47	0.49
7:D:294:A:H3'	7:D:295:G:C5'	2.42	0.49
7:D:448:U:HO2'	7:D:449:A:P	2.32	0.49
7:D:974:G:N2	7:D:1187:G:C5	2.80	0.49
7:D:1042:G:C4	7:D:1114:G:O6	2.66	0.49
7:D:1071:G:H21	7:D:1089:G:C2'	2.23	0.49
7:D:1162:G:C2	7:D:1163:G:C8	3.01	0.49
7:D:1286:A:N7	7:D:1289:C:N4	2.61	0.49
7:D:1341:U:H3'	7:D:1397:U:O2	2.12	0.49
7:D:1862:G:C2	7:D:1881:C:O2	2.66	0.49
7:D:1871:A:H8	7:D:1871:A:O5'	1.95	0.49
7:D:2026:C:O2	7:D:2038:G:N2	2.45	0.49
7:D:2033:A:C6	7:D:2036:C:C4	3.01	0.49
7:D:2184:G:H2'	7:D:2185:C:C6	2.47	0.49
7:D:2218:G:O3'	30:a:186:HIS:NE2	2.45	0.49
7:D:2327:A:H8	7:D:2327:A:OP2	1.95	0.49
7:D:2339:G:C2	7:D:2340:G:C5	3.00	0.49
7:D:2513:G:N1	7:D:2570:G:O6	2.46	0.49
7:D:2589:A:N1	7:D:2606:C:N4	2.61	0.49
7:D:2632:A:H2'	7:D:2633:G:C8	2.39	0.49
7:D:2648:C:O2	7:D:2673:G:C2	2.66	0.49
7:D:2723:C:OP1	31:b:109:LYS:HD3	2.13	0.49
7:D:2749:A:OP2	7:D:2751:G:OP2	2.31	0.49
8:E:16:G:C6	8:E:69:G:C2	3.01	0.49
9:F:74:LYS:HZ2	9:F:76:GLN:HB2	1.75	0.49
11:H:18:LYS:HE2	11:H:20:TYR:HE2	1.78	0.49
20:Q:37:THR:HG23	20:Q:39:ILE:H	1.78	0.49
20:Q:80:ARG:O	20:Q:81:LEU:HD22	2.13	0.49
26:W:29:ARG:HD2	26:W:30:LEU:N	2.28	0.49
34:e:103:LEU:HB2	34:e:115:VAL:HG13	1.95	0.49
37:h:124:LYS:C	37:h:144:GLU:H	2.20	0.49
43:n:67:GLY:HA2	43:n:94:LEU:HD22	1.94	0.49
47:r:151:HIS:HD2	47:r:170:THR:H	1.57	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:88:ASP:HA	56:B:349:LEU:HB3	1.94	0.49
56:B:134:VAL:HA	56:B:163:ALA:CA	2.43	0.49
56:B:200:ILE:HG21	56:B:213:PRO:HB2	1.95	0.49
56:B:229:ARG:C	56:B:230:ILE:HG13	2.37	0.49
56:B:468:LYS:HA	56:B:473:GLY:HA2	1.95	0.49
1:1:10:ILE:HG13	1:1:32:HIS:HD2	1.76	0.49
3:3:112:MET:O	3:3:112:MET:HG3	2.12	0.49
6:A:95:G:H2'	6:A:96:G:H8	1.78	0.49
6:A:222:U:H2'	6:A:223:U:C6	2.48	0.49
6:A:443:C:N4	6:A:492:G:O6	2.45	0.49
6:A:837:G:H2'	6:A:838:G:C8	2.48	0.49
6:A:838:G:C6	6:A:849:C:N3	2.80	0.49
6:A:841:U:H3'	6:A:841:U:H6	1.77	0.49
6:A:927:G:OP2	6:A:1503:A:C6	2.66	0.49
6:A:1016:A:OP2	6:A:1016:A:C8	2.66	0.49
6:A:1228:C:C5'	20:Q:108:ARG:HH12	2.26	0.49
6:A:1255:G:C5	6:A:1279:A:C6	3.01	0.49
6:A:1306:A:N7	6:A:1307:U:C4	2.80	0.49
7:D:7:G:H5"	35:f:121:LYS:NZ	2.28	0.49
7:D:64:A:C2	7:D:65:C:C2	3.01	0.49
7:D:71:A:N3	7:D:73:A:C6	2.81	0.49
7:D:559:G:O2'	7:D:560:C:O4'	2.30	0.49
7:D:620:G:H4'	7:D:621:A:H5"	1.94	0.49
7:D:626:U:O2	37:h:100:LEU:HB3	2.12	0.49
7:D:641:C:H42	7:D:646:A:N6	2.01	0.49
7:D:1128:A:OP2	7:D:1128:A:O4'	2.30	0.49
7:D:1251:C:P	42:m:10:ARG:HG3	2.52	0.49
7:D:1299:G:N1	7:D:1640:C:OP2	2.45	0.49
7:D:1405:U:H2'	7:D:1406:U:C6	2.48	0.49
7:D:1541:U:O2	7:D:1542:G:C6	2.65	0.49
7:D:1625:C:H5"	7:D:1626:G:OP2	2.12	0.49
7:D:1746:G:C6	7:D:1747:G:N1	2.79	0.49
7:D:1778:U:H2'	7:D:1779:U:C5	2.48	0.49
7:D:1872:A:H2'	7:D:1872:A:N3	2.27	0.49
7:D:1881:C:N4	7:D:1882:C:N4	2.60	0.49
7:D:1911:U:H5"	7:D:1912:A:OP1	2.13	0.49
7:D:2023:G:C2	7:D:2024:G:C8	3.01	0.49
7:D:2304:G:O2'	33:d:134:GLY:HA2	2.13	0.49
7:D:2305:A:C4'	33:d:136:ARG:HG2	2.42	0.49
7:D:2333:A:H1'	7:D:2335:A:C2	2.46	0.49
7:D:2346:A:H62	53:x:37:ARG:NH2	2.08	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2624:G:C2	7:D:2625:G:C4	3.01	0.49
8:E:48:A:H4'	40:k:95:HIS:HE1	1.76	0.49
8:E:61:G:C6	8:E:62:C:C4	3.00	0.49
8:E:78:A:C2	8:E:99:A:C5	3.01	0.49
9:F:25:ASN:ND2	9:F:192:SER:O	2.46	0.49
12:I:118:ILE:HG22	12:I:119:LEU:O	2.13	0.49
20:Q:66:LEU:HG	20:Q:67:GLU:N	2.28	0.49
24:U:57:VAL:HG12	24:U:76:LEU:HA	1.93	0.49
25:V:61:LYS:O	25:V:65:ILE:HG12	2.13	0.49
39:j:9:LYS:C	39:j:10:LEU:HG	2.37	0.49
43:n:14:VAL:CG1	43:n:19:LYS:HZ3	2.25	0.49
48:s:38:VAL:HB	48:s:59:LEU:HB2	1.95	0.49
56:B:18:VAL:C	56:B:20:HIS:H	2.21	0.49
56:B:214:TYR:HA	56:B:263:TRP:HA	1.95	0.49
56:B:332:PHE:CE1	56:B:333:GLU:HB2	2.48	0.49
56:B:353:HIS:O	56:B:357:VAL:HG23	2.12	0.49
5:5:20:U:H2'	5:5:21:A:H4'	1.95	0.49
6:A:327:A:C4	6:A:329:A:C8	3.00	0.49
6:A:1228:C:H5'	20:Q:115:LYS:H	1.78	0.49
7:D:49:A:N6	7:D:176:G:C6	2.81	0.49
7:D:103:A:C5	7:D:104:U:C5	3.01	0.49
7:D:154:G:C2	7:D:173:G:C2	3.00	0.49
7:D:209:C:H2'	7:D:210:C:H6	1.78	0.49
7:D:321:G:N3	32:c:165:ARG:NH1	2.61	0.49
7:D:379:G:C6	7:D:396:G:O6	2.66	0.49
7:D:528:A:H62	7:D:2042:A:H62	1.59	0.49
7:D:778:G:N2	7:D:787:U:C2	2.81	0.49
7:D:931:G:H1'	50:u:24:LYS:O	2.13	0.49
7:D:950:G:C2	7:D:951:C:C2	3.00	0.49
7:D:1048:A:C2	7:D:1111:A:C2	3.00	0.49
7:D:1050:A:N6	7:D:2751:G:C5	2.81	0.49
7:D:1168:G:C6	7:D:1182:A:N1	2.81	0.49
7:D:1583:A:H4'	7:D:1585:C:N1	2.24	0.49
7:D:1810:A:H5"	7:D:1811:G:OP2	2.13	0.49
7:D:2088:G:C6	7:D:2089:U:N3	2.80	0.49
7:D:2196:C:H3'	7:D:2197:U:C5	2.47	0.49
7:D:2197:U:O2	7:D:2225:A:N7	2.46	0.49
7:D:2305:A:OP2	33:d:136:ARG:NH2	2.44	0.49
7:D:2314:C:OP1	33:d:91:ARG:NH1	2.46	0.49
7:D:2557:G:C2	7:D:2558:C:C2	3.01	0.49
7:D:2663:G:C5	7:D:2664:G:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:3:ASN:N	10:G:3:ASN:OD1	2.43	0.49
12:I:8:GLU:HB3	12:I:34:VAL:HG22	1.93	0.49
16:M:24:GLY:N	16:M:57:GLY:HA2	2.28	0.49
20:Q:66:LEU:O	20:Q:69:GLU:HB2	2.13	0.49
22:S:38:ARG:HA	22:S:41:GLU:HB3	1.94	0.49
29:Z:182:PRO:HD2	29:Z:183:GLU:H	1.77	0.49
30:a:125:ILE:HD12	30:a:131:LEU:HD21	1.94	0.49
34:e:157:TYR:CG	34:e:158:HIS:N	2.81	0.49
36:g:22:ILE:HG22	36:g:23:ARG:H	1.78	0.49
40:k:21:THR:O	40:k:23:ARG:N	2.40	0.49
42:m:9:VAL:HG13	42:m:13:LYS:NZ	2.27	0.49
56:B:204:VAL:O	56:B:211:VAL:CG1	2.58	0.49
56:B:222:VAL:CG1	56:B:264:LEU:HD21	2.43	0.49
56:B:229:ARG:NE	56:B:283:ALA:CA	2.72	0.49
56:B:246:THR:CG2	56:B:251:VAL:CG2	2.90	0.49
56:B:300:VAL:HG13	56:B:477:MET:SD	2.51	0.49
4:4:62:C:H2'	4:4:63:G:C8	2.41	0.49
6:A:46:G:H5"	6:A:47:C:OP1	2.13	0.49
6:A:306:G:OP2	6:A:306:G:C8	2.66	0.49
6:A:658:G:C6	6:A:659:U:C4	3.00	0.49
6:A:976:G:C2	6:A:1363:A:C6	3.01	0.49
6:A:1134:G:H1	6:A:1140:C:H42	1.61	0.49
6:A:1178:G:O2'	6:A:1179:A:N7	2.40	0.49
6:A:1206:G:H2'	6:A:1207:G:O4'	2.13	0.49
6:A:1218:C:H2'	6:A:1219:U:C6	2.48	0.49
6:A:1488:G:C2	6:A:1489:G:C5	3.01	0.49
7:D:151:C:N4	7:D:152:G:O6	2.46	0.49
7:D:366:C:HO2'	7:D:370:G:P	2.36	0.49
7:D:701:G:H1	7:D:731:C:N4	2.11	0.49
7:D:715:G:H3'	7:D:715:G:C8	2.47	0.49
7:D:728:G:OP2	7:D:728:G:N7	2.46	0.49
7:D:780:G:C2	7:D:782:A:C2	3.01	0.49
7:D:859:G:C2'	7:D:860:U:OP2	2.60	0.49
7:D:863:A:N6	7:D:912:C:H42	2.11	0.49
7:D:906:G:H5"	7:D:907:U:OP2	2.13	0.49
7:D:1022:G:N2	7:D:1140:C:C2	2.81	0.49
7:D:1022:G:H22	7:D:1140:C:H1'	1.77	0.49
7:D:1073:A:OP2	7:D:1073:A:H4'	2.11	0.49
7:D:1107:G:H2'	7:D:1108:U:H5'	1.94	0.49
7:D:1109:C:H5	7:D:1110:G:C4	2.30	0.49
7:D:1137:G:O5'	7:D:1137:G:H8	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1385:G:O2'	7:D:1386:C:O4'	2.31	0.49
7:D:1527:G:H21	7:D:1545:A:N6	2.11	0.49
7:D:1528:A:C8	7:D:1529:A:C4	3.01	0.49
7:D:1668:A:C2	7:D:1993:U:N3	2.81	0.49
7:D:1682:G:H2'	7:D:1682:G:N3	2.28	0.49
7:D:1780:A:OP2	7:D:1782:C:OP1	2.30	0.49
7:D:1935:G:N2	7:D:1964:G:O4'	2.46	0.49
7:D:2123:G:H5'	7:D:2124:G:OP2	2.13	0.49
7:D:2290:G:C5	7:D:2291:U:C4	3.01	0.49
7:D:2748:A:H2'	7:D:2749:A:C8	2.48	0.49
13:J:41:GLU:HB3	13:J:62:TRP:CZ3	2.47	0.49
15:L:31:PHE:O	15:L:35:ILE:HG12	2.13	0.49
18:O:25:TYR:HA	18:O:89:ALA:HB2	1.95	0.49
31:b:56:PRO:O	31:b:58:ARG:N	2.43	0.49
32:c:37:VAL:HA	32:c:184:TYR:CE1	2.48	0.49
32:c:65:TRP:O	32:c:67:GLN:N	2.46	0.49
37:h:72:PRO:HG3	37:h:110:TYR:CZ	2.48	0.49
37:h:111:ARG:HG3	37:h:128:HIS:HD1	1.78	0.49
38:i:11:LYS:HZ2	38:i:73:PRO:CG	2.26	0.49
41:l:82:LEU:CD2	41:l:84:GLN:H	2.26	0.49
42:m:92:ARG:HA	42:m:95:LEU:HG	1.94	0.49
43:n:34:GLU:HA	43:n:62:LEU:O	2.12	0.49
47:r:120:ILE:HD12	47:r:123:ASP:OD1	2.12	0.49
48:s:72:ARG:O	48:s:74:ARG:N	2.40	0.49
56:B:9:ILE:C	56:B:10:ARG:HD2	2.38	0.49
56:B:46:LEU:O	56:B:48:SER:N	2.37	0.49
56:B:58:THR:CB	56:B:84:PRO:CG	2.86	0.49
56:B:275:GLN:C	56:B:277:GLY:N	2.70	0.49
56:B:303:ALA:HB1	56:B:346:CYS:O	2.11	0.49
56:B:345:ARG:NH1	56:B:345:ARG:CG	2.73	0.49
2:2:30:GLN:O	2:2:32:LEU:N	2.36	0.48
3:3:67:PHE:C	3:3:68:VAL:CG2	2.86	0.48
5:5:13:C:H2'	5:5:14:A:H5"	1.94	0.48
6:A:18:C:OP1	12:I:127:ASN:ND2	2.44	0.48
6:A:137:C:H2'	6:A:138:G:C8	2.47	0.48
6:A:606:G:N2	6:A:631:G:C4	2.81	0.48
6:A:616:G:C2	6:A:625:G:C5	3.01	0.48
6:A:665:A:C8	6:A:725:G:C2	3.01	0.48
6:A:707:C:O2'	6:A:708:C:H5'	2.13	0.48
6:A:902:G:H2'	6:A:903:G:C8	2.33	0.48
6:A:1086:U:N3	6:A:1100:C:O2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1125:U:H4'	6:A:1126:U:C5	2.47	0.48
6:A:1130:A:OP2	6:A:1131:G:OP2	2.31	0.48
6:A:1288:A:C2	6:A:1289:A:C4	3.01	0.48
6:A:1411:C:H2'	6:A:1412:C:H6	1.78	0.48
7:D:220:G:H5"	7:D:221:A:OP1	2.13	0.48
7:D:240:G:C8	7:D:241:A:C8	3.01	0.48
7:D:270(Q):C:H2'	7:D:270(R):G:H8	1.78	0.48
7:D:280:C:O3'	7:D:281:G:H3'	2.13	0.48
7:D:326:G:H21	46:q:1:MET:HE1	1.78	0.48
7:D:452:G:N2	7:D:458:G:C4	2.81	0.48
7:D:838:C:H2'	7:D:839:U:C6	2.48	0.48
7:D:884:C:C6	7:D:885:C:C5	3.00	0.48
7:D:926:A:C3'	7:D:928:G:H8	2.25	0.48
7:D:1094:U:O2'	7:D:1095:A:N7	2.43	0.48
7:D:1224:G:H2'	7:D:1225:C:C5'	2.41	0.48
7:D:1263:U:O4	7:D:1264:G:N1	2.46	0.48
7:D:1275:A:C6	39:j:16:HIS:ND1	2.81	0.48
7:D:1417:C:H42	7:D:1581:G:N2	2.10	0.48
7:D:1608:A:N6	7:D:1611:C:C2	2.81	0.48
7:D:1746:G:H2'	7:D:1746:G:N3	2.27	0.48
7:D:1814:G:C4	7:D:1815:A:N7	2.80	0.48
7:D:1833:U:O2	7:D:1973:G:C2	2.66	0.48
7:D:1933:G:C6	7:D:1968:G:N2	2.81	0.48
7:D:1948:G:N1	7:D:1959:G:C6	2.81	0.48
7:D:2287:A:C5	7:D:2289:G:C5	3.01	0.48
7:D:2311:A:O4'	33:d:83:ARG:HD3	2.12	0.48
7:D:2334:G:N2	40:k:15:ARG:NH1	2.61	0.48
7:D:2392:A:OP2	55:z:32:LEU:HD12	2.13	0.48
7:D:2843:G:H2'	7:D:2844:G:O4'	2.12	0.48
8:E:52:A:N6	8:E:53:A:N3	2.61	0.48
8:E:100:G:C4	8:E:101:A:C8	3.01	0.48
10:G:24:ALA:HB3	10:G:29:TYR:HD1	1.76	0.48
11:H:3:ARG:HH11	11:H:70:ILE:HA	1.75	0.48
30:a:145:VAL:O	30:a:155:LEU:HD22	2.12	0.48
31:b:49:LEU:HD11	31:b:74:PRO:HB2	1.94	0.48
31:b:64:LYS:HA	31:b:67:PHE:CB	2.37	0.48
32:c:51:THR:C	32:c:52:LYS:HG3	2.38	0.48
33:d:8:LYS:HA	33:d:11:TYR:CD1	2.47	0.48
33:d:8:LYS:HA	33:d:11:TYR:HD1	1.78	0.48
33:d:116:ASP:O	33:d:118:ARG:N	2.35	0.48
37:h:79:ARG:NE	37:h:117:GLU:OE2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:k:50:SER:N	40:k:76:LYS:NZ	2.59	0.48
45:p:12:VAL:HG22	45:p:29:TRP:CE2	2.48	0.48
47:r:6:LYS:HA	47:r:37:VAL:HG13	1.94	0.48
47:r:77:ASP:HA	47:r:84:GLU:OE2	2.13	0.48
47:r:139:VAL:HG21	47:r:155:LEU:HA	1.94	0.48
51:v:62:ARG:O	51:v:66:SER:OG	2.19	0.48
56:B:131:ILE:O	56:B:132:ILE:HG13	2.13	0.48
2:2:59:ILE:O	2:2:61:LEU:N	2.39	0.48
6:A:50:A:H4'	6:A:51:A:O5'	2.12	0.48
6:A:361:G:N7	6:A:362:G:C5	2.81	0.48
6:A:477:G:N1	6:A:478:A:C5	2.81	0.48
6:A:848:C:C2'	6:A:849:C:C6	2.90	0.48
6:A:922:G:H2'	6:A:923:A:C8	2.47	0.48
7:D:571:A:N6	7:D:575:A:C8	2.80	0.48
7:D:574:C:N4	7:D:2034:U:OP1	2.45	0.48
7:D:650:C:OP2	55:z:19:SER:CB	2.56	0.48
7:D:672:C:C2	7:D:809:G:N2	2.81	0.48
7:D:690:G:H5'	7:D:691:C:OP2	2.13	0.48
7:D:715:G:H5"	22:S:60:VAL:HG11	1.96	0.48
7:D:715:G:N7	7:D:716:A:C8	2.82	0.48
7:D:923:C:C1'	48:s:26:TYR:CE2	2.96	0.48
7:D:1131:G:C4	35:f:74:ARG:HD2	2.48	0.48
7:D:1223:C:OP2	43:n:69:LYS:NZ	2.46	0.48
7:D:1613:G:C8	7:D:1617:C:N4	2.80	0.48
7:D:1698:A:O2'	7:D:1699:G:P	2.69	0.48
7:D:1971:A:H1'	30:a:241:PRO:HD3	1.94	0.48
7:D:2017:U:O2'	7:D:2019:A:OP2	2.30	0.48
7:D:2022:U:O2'	7:D:2617:C:H5'	2.12	0.48
7:D:2422:A:C5	7:D:2424:C:N4	2.81	0.48
7:D:2469:A:C4'	38:i:56:ARG:HH11	2.26	0.48
7:D:2872:G:O2'	7:D:2873:A:O4'	2.31	0.48
8:E:49:C:OP2	40:k:30:ARG:NH1	2.47	0.48
8:E:76:G:OP2	47:r:11:GLU:HA	2.12	0.48
9:F:220:ASP:O	9:F:224:GLN:HG3	2.13	0.48
10:G:11:ARG:NH2	10:G:182:ILE:HD12	2.28	0.48
16:M:9:ARG:HG3	16:M:104:ARG:CZ	2.43	0.48
16:M:26:VAL:HG12	16:M:28:VAL:HG23	1.95	0.48
20:Q:77:ASN:O	20:Q:80:ARG:HB3	2.13	0.48
20:Q:96:LEU:HD22	20:Q:101:GLN:HB2	1.96	0.48
23:T:21:VAL:HG23	23:T:33:ILE:HB	1.94	0.48
26:W:7:LYS:O	26:W:7:LYS:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:44:HIS:HB2	29:Z:213:TYR:CE2	2.48	0.48
30:a:57:GLY:CA	30:a:60:ARG:HH21	2.26	0.48
30:a:57:GLY:C	30:a:58:HIS:ND1	2.70	0.48
34:e:62:LYS:O	34:e:65:HIS:HB3	2.13	0.48
37:h:42:SER:O	37:h:44:GLY:N	2.46	0.48
37:h:46:LYS:HE2	37:h:50:ARG:NE	2.27	0.48
41:l:54:ARG:HB3	41:l:64:ARG:HB3	1.94	0.48
43:n:21:ARG:HD2	43:n:96:ILE:HG12	1.94	0.48
46:q:97:ARG:HE	46:q:101:LYS:HD3	1.77	0.48
47:r:80:ARG:HD2	47:r:82:ARG:NH2	2.28	0.48
49:t:30:LEU:HD12	49:t:48:LEU:HD22	1.95	0.48
54:y:5:TRP:O	54:y:5:TRP:CG	2.66	0.48
56:B:70:ALA:N	56:B:178:LEU:HD21	2.28	0.48
56:B:502:ASP:C	56:B:504:LEU:H	2.20	0.48
3:3:19:PRO:C	3:3:22:PRO:CD	2.86	0.48
4:4:48:C:C2	4:4:59:A:H1'	2.48	0.48
6:A:438:G:N2	6:A:495:A:C8	2.81	0.48
6:A:730:G:O2'	6:A:766:A:O4'	2.29	0.48
6:A:853:G:C6	6:A:854:G:N7	2.81	0.48
6:A:874:G:C6	6:A:875:C:C4	3.01	0.48
6:A:1159:U:C5	6:A:1182:G:H1'	2.48	0.48
6:A:1226:C:N3	20:Q:104:ARG:HD2	2.13	0.48
6:A:1325:C:H2'	6:A:1326:C:H6	1.78	0.48
7:D:72:U:H4'	7:D:73:A:OP1	2.12	0.48
7:D:133:C:N4	7:D:134:C:H41	2.11	0.48
7:D:270(L):U:OP2	7:D:270(L):U:C6	2.67	0.48
7:D:447:A:N6	7:D:473:G:C4	2.82	0.48
7:D:513:A:C2	7:D:514:A:C5	3.01	0.48
7:D:739:G:C3'	7:D:1784:A:H61	2.25	0.48
7:D:783:A:OP2	30:a:226:MET:HG2	2.13	0.48
7:D:808:G:N2	7:D:809:G:C4	2.82	0.48
7:D:1173:G:N3	7:D:1173:G:C3'	2.76	0.48
7:D:1184:G:H5'	50:u:29:ARG:HE	1.77	0.48
7:D:1206:G:OP2	7:D:1206:G:C8	2.66	0.48
7:D:1266:G:HO2'	7:D:1267:U:P	2.32	0.48
7:D:1342:A:OP2	7:D:1342:A:C8	2.63	0.48
7:D:1426:G:C8	7:D:1427:A:N7	2.81	0.48
7:D:1516:U:H2'	7:D:1517:G:H8	1.78	0.48
7:D:1674:G:N2	7:D:1677:A:N1	2.61	0.48
7:D:1783:A:H5"	7:D:1784:A:OP1	2.13	0.48
7:D:1912:A:C2	7:D:1919:A:N6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2103:C:H2'	7:D:2104:G:C8	2.48	0.48
7:D:2246:G:H1	7:D:2258:C:H42	1.61	0.48
7:D:2705:A:O2'	7:D:2706:G:OP1	2.31	0.48
15:L:29:SER:HB2	15:L:32:LYS:NZ	2.28	0.48
16:M:96:LEU:HA	16:M:100:GLY:HA3	1.93	0.48
17:N:7:LYS:HD3	17:N:9:ARG:NH2	2.27	0.48
18:O:52:GLY:O	18:O:55:LYS:HD3	2.13	0.48
19:P:65:GLU:N	19:P:65:GLU:OE1	2.45	0.48
26:W:11:VAL:HG22	26:W:41:VAL:CG1	2.15	0.48
31:b:49:LEU:HG	31:b:74:PRO:HG2	1.96	0.48
33:d:53:LEU:HD23	33:d:72:ARG:HH21	1.78	0.48
34:e:111:HIS:O	34:e:111:HIS:CG	2.65	0.48
35:f:15:LEU:HD13	35:f:130:HIS:ND1	2.28	0.48
35:f:35:ARG:HD2	35:f:48:MET:HE1	1.95	0.48
36:g:77:ILE:HG23	41:l:75:ILE:CG1	2.36	0.48
39:j:50:HIS:CE1	39:j:54:LEU:HD13	2.48	0.48
43:n:17:GLY:HA3	43:n:19:LYS:HZ2	1.73	0.48
43:n:41:GLY:CA	43:n:51:VAL:HG22	2.43	0.48
45:p:82:GLN:HG2	45:p:83:VAL:H	1.77	0.48
56:B:93:VAL:O	56:B:123:MET:HE1	2.13	0.48
56:B:200:ILE:HG13	56:B:279:THR:CG2	2.33	0.48
56:B:412:LEU:CD1	56:B:412:LEU:N	2.76	0.48
56:B:431:LYS:CD	56:B:455:PRO:CB	2.66	0.48
6:A:27:G:H2'	6:A:28:G:C8	2.45	0.48
6:A:101:A:H2'	6:A:102:G:C8	2.41	0.48
6:A:155:C:H2'	6:A:156:G:O4'	2.13	0.48
6:A:279:A:C2	24:U:98:LEU:HD23	2.48	0.48
6:A:666:G:C2	6:A:741:G:C4	3.01	0.48
6:A:703:G:H4'	6:A:704:A:O5'	2.13	0.48
6:A:947:G:C5	6:A:948:C:C4	3.01	0.48
6:A:979:C:H42	21:R:18:VAL:HG21	1.78	0.48
6:A:1017:G:H2'	6:A:1018:C:O4'	2.14	0.48
6:A:1060:C:C5	10:G:2:GLY:HA2	2.48	0.48
6:A:1128:C:H5'	6:A:1129:C:OP1	2.13	0.48
6:A:1433:A:N3	6:A:1433:A:H2'	2.28	0.48
6:A:1438:G:C2'	6:A:1439:C:H5'	2.42	0.48
7:D:38:A:H2'	7:D:39:C:H6	1.75	0.48
7:D:39:C:H2'	7:D:40:C:C5	2.42	0.48
7:D:325:G:H2'	7:D:326:G:H8	1.77	0.48
7:D:540:G:N2	7:D:541:C:O2	2.46	0.48
7:D:629:G:H1'	7:D:639:U:O2'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:813:U:O2'	7:D:1225:C:H1'	2.14	0.48
7:D:1039:G:N7	7:D:1117:G:C2	2.81	0.48
7:D:1095:A:N7	7:D:1096:A:C8	2.82	0.48
7:D:1275:A:C5	39:j:16:HIS:CE1	3.02	0.48
7:D:1281:G:H1	7:D:1289:C:H42	1.59	0.48
7:D:1335:U:H2'	7:D:1336:A:C8	2.48	0.48
7:D:1379:A:HO2'	7:D:1380:G:P	2.32	0.48
7:D:1707:G:C2	7:D:1708:C:C2	3.01	0.48
7:D:1842:G:H2'	7:D:1843:C:O4'	2.13	0.48
7:D:2107:C:O2	7:D:2108:C:H5"	2.14	0.48
7:D:2159:G:H2'	7:D:2160:G:H8	1.79	0.48
7:D:2188:C:C4	7:D:2189:U:C4	3.02	0.48
7:D:2301:C:N3	7:D:2315:G:N2	2.60	0.48
7:D:2342:C:N4	7:D:2343:C:N3	2.61	0.48
7:D:2377:A:O2'	7:D:2378:A:O5'	2.29	0.48
7:D:2467:C:N3	7:D:2468:G:N2	2.60	0.48
7:D:2486:G:N1	7:D:2487:G:C5	2.81	0.48
7:D:2526:G:C2	7:D:2527:C:C2	3.02	0.48
7:D:2528:U:O2'	7:D:2529:G:O5'	2.30	0.48
7:D:2713:A:H5"	7:D:2714:G:OP2	2.13	0.48
7:D:2807:G:H3'	7:D:2808:U:C6	2.48	0.48
8:E:61:G:C2	8:E:62:C:C2	3.02	0.48
10:G:30:ARG:HB2	21:R:37:PHE:O	2.12	0.48
10:G:38:ARG:CB	10:G:94:LEU:HD21	2.44	0.48
10:G:125:GLU:OE2	10:G:190:ARG:C	2.56	0.48
13:J:70:ASP:N	13:J:70:ASP:OD1	2.45	0.48
14:K:26:PHE:O	14:K:30:ILE:HG13	2.13	0.48
15:L:52:ASP:HB3	15:L:55:GLY:HA2	1.95	0.48
23:T:42:ARG:O	23:T:44:THR:N	2.47	0.48
23:T:58:TYR:O	23:T:61:SER:OG	2.26	0.48
24:U:25:ARG:HH21	24:U:40:LYS:HD2	1.79	0.48
24:U:66:SER:OG	24:U:67:LYS:N	2.44	0.48
29:Z:156:ILE:HA	29:Z:160:ARG:CB	2.32	0.48
30:a:18:VAL:CG1	30:a:208:LYS:HB2	2.43	0.48
31:b:53:PRO:HD2	31:b:73:GLU:O	2.14	0.48
31:b:53:PRO:C	31:b:73:GLU:OE2	2.56	0.48
32:c:194:MET:HE2	32:c:197:ASP:HA	1.94	0.48
33:d:87:PRO:C	33:d:88:ILE:HG13	2.38	0.48
33:d:139:LEU:O	33:d:141:PHE:N	2.38	0.48
35:f:2:LYS:HB3	42:m:61:TRP:CH2	2.48	0.48
39:j:61:HIS:O	39:j:64:ARG:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:n:6:LYS:HD2	43:n:40:LEU:HD22	1.95	0.48
43:n:10:LYS:O	43:n:12:TYR:N	2.45	0.48
53:x:17:LYS:HB2	53:x:19:ARG:HH22	1.78	0.48
56:B:27:ASP:OD2	56:B:41:MET:CB	2.61	0.48
56:B:67:THR:O	56:B:76:TYR:HA	2.13	0.48
56:B:134:VAL:CA	56:B:163:ALA:CB	2.62	0.48
56:B:194:ALA:O	56:B:219:GLU:OE1	2.28	0.48
56:B:379:LYS:HZ2	56:B:407:GLU:CA	2.25	0.48
3:3:67:PHE:O	3:3:68:VAL:HG23	2.13	0.48
6:A:229:U:O2'	23:T:23:ASP:OD1	2.31	0.48
6:A:241:C:N3	6:A:286:G:N1	2.61	0.48
6:A:277:C:OP1	24:U:41:LYS:HE3	2.12	0.48
6:A:302:G:H4'	19:P:17:LYS:HZ3	1.78	0.48
6:A:302:G:C2	6:A:303:A:C4	3.01	0.48
6:A:451:A:N7	6:A:481:G:N1	2.62	0.48
6:A:588:G:N2	6:A:589:C:O2	2.46	0.48
6:A:595:G:C5	6:A:641:U:C4	3.02	0.48
6:A:736:C:H5"	25:V:72:ARG:NH1	2.29	0.48
6:A:864:A:H8	6:A:864:A:P	2.35	0.48
6:A:1144:G:N2	6:A:1145:C:H1'	2.29	0.48
6:A:1319:A:P	26:W:38:SER:HA	2.47	0.48
7:D:40:C:C2	7:D:440:G:N2	2.81	0.48
7:D:83:G:C6	7:D:102:G:N3	2.81	0.48
7:D:118:A:C2	7:D:177:G:C6	3.01	0.48
7:D:270:A:H1'	7:D:371:A:C2	2.49	0.48
7:D:384:U:H5"	7:D:385:C:OP2	2.13	0.48
7:D:465:G:C6	7:D:466:A:N6	2.81	0.48
7:D:470:A:H2'	7:D:471:A:O4'	2.12	0.48
7:D:535:C:C4	7:D:536:A:N7	2.82	0.48
7:D:638:G:C5	7:D:639:U:N3	2.81	0.48
7:D:685:A:C8	7:D:773:U:C4	3.01	0.48
7:D:919:G:N1	7:D:920:G:C4	2.82	0.48
7:D:1182:A:H3'	7:D:1183:G:H2'	1.94	0.48
7:D:1377:G:H8	7:D:1377:G:O5'	1.97	0.48
7:D:1413:G:C2	7:D:1414:G:C4	3.01	0.48
7:D:1580:A:H8	7:D:1580:A:O5'	1.97	0.48
7:D:2630:G:N3	7:D:2630:G:H2'	2.28	0.48
7:D:2869:G:H2'	7:D:2870:C:O4'	2.13	0.48
10:G:130:VAL:HG21	10:G:157:ILE:HG23	1.94	0.48
12:I:76:ILE:HD12	12:I:91:LEU:HD21	1.95	0.48
21:R:23:ARG:HD3	21:R:30:ALA:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:11:VAL:HA	22:S:14:GLU:CD	2.38	0.48
23:T:8:ARG:H	23:T:28:ARG:HH11	1.60	0.48
23:T:59:TRP:HA	23:T:62:VAL:HG22	1.94	0.48
30:a:158:ALA:O	30:a:196:VAL:HG11	2.13	0.48
31:b:37:ARG:O	31:b:44:TYR:HD1	1.97	0.48
36:g:76:ALA:HB1	36:g:78:ARG:NH2	2.28	0.48
40:k:4:LEU:O	40:k:7:TYR:HB2	2.13	0.48
40:k:58:LEU:HD21	40:k:64:GLU:HB3	1.94	0.48
41:l:16:ARG:HG3	41:l:17:THR:H	1.79	0.48
52:w:35:GLU:OE2	52:w:51:TYR:OH	2.20	0.48
53:x:49:HIS:CD2	53:x:50:ARG:N	2.77	0.48
56:B:105:LEU:N	56:B:132:ILE:O	2.46	0.48
56:B:222:VAL:HG23	56:B:228:ILE:HD11	1.93	0.48
56:B:378:TYR:CD2	56:B:507:ILE:HG23	2.43	0.48
56:B:382:LEU:CD2	56:B:400:THR:C	2.85	0.48
56:B:382:LEU:N	56:B:386:GLU:CB	2.73	0.48
56:B:493:ASN:O	56:B:540:ALA:N	2.47	0.48
56:B:493:ASN:CG	56:B:503:ALA:CB	2.82	0.48
6:A:108:G:H5’	6:A:109:A:H5”	1.96	0.48
6:A:110:C:H2’	6:A:111:G:C8	2.48	0.48
6:A:345:C:H5”	6:A:346:G:C4	2.48	0.48
6:A:415:A:H2’	6:A:416:G:O4’	2.14	0.48
6:A:427:U:C4	6:A:428:G:C6	3.01	0.48
6:A:500:G:O6	6:A:546:G:N1	2.46	0.48
6:A:588:G:N1	6:A:589:C:N3	2.61	0.48
6:A:721:G:C2	6:A:733:A:C6	3.01	0.48
6:A:851:G:C2’	6:A:852:G:O4’	2.61	0.48
6:A:1014:A:C4’	26:W:18:LYS:HZ1	2.17	0.48
6:A:1134:G:C2	6:A:1141:C:C4	3.01	0.48
6:A:1411:C:H2’	6:A:1412:C:C6	2.48	0.48
7:D:700:G:C2	7:D:701:G:C4	3.02	0.48
7:D:726:G:H4’	7:D:727:A:OP1	2.14	0.48
7:D:862:G:C6	7:D:863:A:C4	3.01	0.48
7:D:921:G:C5	7:D:922:U:C5	3.02	0.48
7:D:1353:A:C4	7:D:1378:A:N6	2.81	0.48
7:D:1414:G:N2	7:D:1589:C:C4	2.82	0.48
7:D:1426:G:C6	7:D:1427:A:N6	2.82	0.48
7:D:1472:A:C5	7:D:1473:G:C6	3.01	0.48
7:D:1581:G:O2’	7:D:1582:C:H5’	2.13	0.48
7:D:1676:A:N6	7:D:1677:A:C6	2.81	0.48
7:D:1776:G:N2	7:D:1777:U:C2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1906:G:C8	7:D:1929:G:C5	3.02	0.48
7:D:1906:G:C4	7:D:1929:G:C6	3.01	0.48
7:D:1909:C:O2	7:D:1922:G:N2	2.46	0.48
7:D:1933:G:C2	7:D:1934:C:C2	3.01	0.48
7:D:2080:G:N2	7:D:2241:A:C4	2.81	0.48
7:D:2199:A:C2'	7:D:2205:C:H5'	2.28	0.48
7:D:2307:G:O3'	7:D:2311:A:N6	2.46	0.48
7:D:2345:G:C4	7:D:2381:C:C2	3.01	0.48
7:D:2374:C:N4	7:D:2375:G:O6	2.47	0.48
7:D:2589:A:C2	7:D:2590:A:C5	3.02	0.48
7:D:2822:G:OP1	31:b:112:GLY:N	2.45	0.48
16:M:21:PRO:HB3	16:M:59:PHE:CD1	2.49	0.48
20:Q:91:ARG:CA	20:Q:91:ARG:HE	2.26	0.48
20:Q:108:ARG:HH21	20:Q:114:ARG:NH1	2.10	0.48
25:V:52:PRO:HG2	25:V:54:ARG:HB3	1.95	0.48
30:a:8:PRO:O	30:a:25:THR:HG23	2.13	0.48
30:a:214:TRP:HZ2	30:a:220:HIS:HE2	1.62	0.48
33:d:37:VAL:HG22	33:d:159:VAL:HG12	1.96	0.48
38:i:68:ILE:HD13	38:i:101:ARG:HH11	1.79	0.48
42:m:29:SER:OG	42:m:30:LYS:HG3	2.12	0.48
43:n:16:PRO:HD3	43:n:100:ARG:NE	2.29	0.48
47:r:59:LEU:HG	47:r:67:LEU:O	2.14	0.48
53:x:44:ARG:HD3	53:x:47:THR:HG21	1.95	0.48
56:B:90:THR:O	56:B:94:SER:OG	2.22	0.48
56:B:93:VAL:O	56:B:93:VAL:HG22	2.13	0.48
56:B:228:ILE:CB	56:B:282:LEU:CD2	2.91	0.48
56:B:230:ILE:C	56:B:280:ILE:CG2	2.81	0.48
2:2:23:SER:C	2:2:88:ALA:HB2	2.38	0.48
6:A:38:G:N2	6:A:397:A:C4	2.81	0.48
6:A:96:G:N2	6:A:97:U:H1'	2.29	0.48
6:A:115:G:C2	6:A:289:G:N7	2.82	0.48
6:A:162:A:H3'	6:A:163:C:C4'	2.43	0.48
6:A:195:A:C5'	27:X:68:LYS:HZ2	2.26	0.48
6:A:578:C:O2'	6:A:728:A:N3	2.44	0.48
6:A:1157:A:N6	6:A:1180:A:C6	2.82	0.48
6:A:1319:A:H4'	26:W:37:ARG:O	2.14	0.48
6:A:1320:C:H5	26:W:36:ARG:HG3	1.64	0.48
6:A:1396:A:H4'	6:A:1397:C:H5"	1.95	0.48
7:D:153:C:H2'	7:D:154:G:N7	2.26	0.48
7:D:272:G:N2	7:D:366:C:C2	2.82	0.48
7:D:539:G:H2'	7:D:540:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:730:C:OP1	30:a:211:ARG:NH2	2.39	0.48
7:D:818:G:C8	7:D:1187:G:C6	3.02	0.48
7:D:993:G:C6	7:D:1162:G:C6	3.02	0.48
7:D:1024:G:H3'	7:D:1025:G:C5'	2.43	0.48
7:D:1047:G:C5	7:D:1110:G:N1	2.82	0.48
7:D:1171:G:C8	7:D:1173:G:C4'	2.86	0.48
7:D:1203:G:N1	7:D:1241:A:C8	2.81	0.48
7:D:1239:G:N2	7:D:1240:U:O2'	2.47	0.48
7:D:1251:C:H2'	7:D:1252:G:H5'	1.96	0.48
7:D:1313:U:OP1	45:p:63:LYS:HE2	2.14	0.48
7:D:1504:C:OP2	7:D:1504:C:H6	1.96	0.48
7:D:1939:U:O2'	7:D:1940:U:P	2.71	0.48
7:D:2173:A:C5	7:D:2174:C:H1'	2.49	0.48
7:D:2391:G:HO2'	7:D:2392:A:P	2.37	0.48
7:D:2526:G:C6	7:D:2527:C:C4	3.02	0.48
7:D:2674:G:C5	7:D:2675:A:N7	2.81	0.48
8:E:56:G:H5"	33:d:29:TRP:CZ2	2.43	0.48
9:F:50:GLU:O	9:F:53:ARG:HG2	2.13	0.48
9:F:74:LYS:HE3	9:F:205:ASP:CG	2.39	0.48
10:G:180:ALA:HB1	10:G:182:ILE:HG13	1.95	0.48
12:I:60:TYR:OH	12:I:64:ARG:NH2	2.47	0.48
15:L:97:VAL:HG13	15:L:98:LYS:N	2.27	0.48
19:P:28:LYS:HD2	19:P:33:ARG:HH12	1.78	0.48
27:X:84:LEU:O	27:X:88:VAL:HG23	2.14	0.48
29:Z:47:LEU:HD22	29:Z:208:PHE:CZ	2.48	0.48
29:Z:66:HIS:NE2	29:Z:188:ASN:OD1	2.47	0.48
30:a:258:LYS:HB2	30:a:264:LYS:HE2	1.96	0.48
32:c:32:LEU:HD11	32:c:105:VAL:HG13	1.95	0.48
33:d:180:PHE:O	33:d:182:LYS:N	2.37	0.48
35:f:19:GLU:HG3	35:f:59:LYS:HD2	1.95	0.48
36:g:19:ILE:HD13	36:g:59:LYS:NZ	2.16	0.48
36:g:19:ILE:CD1	36:g:59:LYS:HZ3	2.14	0.48
38:i:69:PHE:CD1	38:i:70:PRO:HD2	2.48	0.48
38:i:91:GLU:N	38:i:91:GLU:OE1	2.47	0.48
42:m:60:LEU:O	42:m:64:ARG:HG2	2.13	0.48
48:s:19:LYS:HG2	48:s:20:ARG:H	1.78	0.48
56:B:14:ILE:CD1	56:B:26:ALA:CB	2.90	0.48
56:B:20:HIS:HE1	56:B:111:GLN:HG3	1.77	0.48
56:B:27:ASP:CG	56:B:45:PHE:H	2.21	0.48
56:B:80:LEU:CD2	56:B:81:ILE:H	2.26	0.48
56:B:382:LEU:CA	56:B:401:ARG:CB	2.92	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:386:GLU:OE1	56:B:401:ARG:CD	2.62	0.48
56:B:488:ASP:O	56:B:509:HIS:HB2	2.14	0.48
56:B:555:ARG:HA	56:B:581:LYS:HZ1	1.79	0.48
56:B:562:CYS:CB	56:B:570:LYS:HZ3	2.26	0.48
2:2:13:LEU:HA	2:2:16:ASN:CB	2.43	0.48
6:A:102:G:C2	6:A:103:C:N3	2.82	0.48
6:A:250:A:O2'	6:A:251:G:OP2	2.26	0.48
6:A:696:A:N3	6:A:786:G:O2'	2.44	0.48
6:A:1087:G:C6	6:A:1088:G:N7	2.82	0.48
6:A:1092:A:N6	6:A:1093:A:N1	2.62	0.48
6:A:1163:C:H2'	6:A:1164:G:H8	1.79	0.48
6:A:1164:G:H2'	6:A:1165:C:C6	2.49	0.48
7:D:26:G:C6	7:D:27:G:N2	2.82	0.48
7:D:187:G:N2	7:D:210:C:C2	2.81	0.48
7:D:244:A:C6	7:D:255:A:C8	3.02	0.48
7:D:322:A:OP2	32:c:168:ARG:HD2	2.13	0.48
7:D:390:A:O2'	7:D:391:G:O4'	2.32	0.48
7:D:751:A:H62	7:D:789:A:N6	2.11	0.48
7:D:852:G:C5	7:D:926:A:N1	2.82	0.48
7:D:1003:G:N2	7:D:1004:C:C2	2.82	0.48
7:D:1057:A:C2	7:D:1058:G:C2	3.02	0.48
7:D:1245:G:N2	7:D:1246:A:C4	2.82	0.48
7:D:1312:U:H5"	45:p:63:LYS:HG2	1.95	0.48
7:D:1785:A:P	7:D:1785:A:C8	3.07	0.48
7:D:1811:G:O6	7:D:1812:A:N6	2.47	0.48
7:D:2071:A:H8	7:D:2071:A:O5'	1.96	0.48
7:D:2134:A:H1'	7:D:2155:G:O6	2.14	0.48
7:D:2275:C:H4'	7:D:2276:G:O5'	2.14	0.48
7:D:2548:G:C2	7:D:2561:A:C2	3.02	0.48
7:D:2895:U:O2'	7:D:2896:C:O5'	2.32	0.48
8:E:19:G:C2	8:E:20:C:C2	3.02	0.48
8:E:66:A:C2	8:E:107:U:C2	3.02	0.48
8:E:81:G:C6	8:E:96:G:C2	3.01	0.48
15:L:102:ARG:NH1	15:L:106:GLY:N	2.61	0.48
26:W:67:VAL:HG13	26:W:68:GLY:N	2.29	0.48
30:a:23:GLU:HB3	30:a:205:VAL:H	1.79	0.48
30:a:44:ASN:ND2	30:a:55:GLY:O	2.47	0.48
33:d:99:MET:HA	33:d:99:MET:HE2	1.95	0.48
36:g:8:LEU:HD21	36:g:83:ALA:HB2	1.94	0.48
36:g:111:PHE:O	36:g:111:PHE:CD2	2.67	0.48
37:h:138:LEU:CD2	37:h:145:PRO:HD3	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:75:THR:HA	38:i:91:GLU:OE1	2.13	0.48
40:k:16:ASN:OD1	40:k:16:ASN:C	2.57	0.48
41:l:33:LYS:HD3	41:l:45:PHE:HE2	1.78	0.48
43:n:15:GLU:HG3	43:n:16:PRO:CD	2.41	0.48
43:n:28:GLU:HA	43:n:64:HIS:NE2	2.28	0.48
56:B:86:HIS:O	56:B:87:VAL:CB	2.60	0.48
56:B:414:ILE:O	56:B:449:GLU:C	2.57	0.48
56:B:447:ARG:C	56:B:448:VAL:CG2	2.86	0.48
56:B:502:ASP:O	56:B:503:ALA:HB3	2.13	0.48
56:B:532:LEU:HB3	56:B:554:LEU:H	1.78	0.48
56:B:558:VAL:CG1	56:B:573:LEU:HD22	2.44	0.48
56:B:595:GLU:HG3	56:B:595:GLU:O	2.14	0.48
3:3:12:LEU:C	3:3:54:PRO:HB3	2.39	0.48
6:A:79:G:N1	6:A:80:G:N3	2.62	0.48
6:A:115:G:N3	6:A:289:G:C8	2.82	0.48
6:A:217:C:C4	6:A:218:C:N4	2.82	0.48
6:A:352:C:H42	6:A:357:G:H22	1.61	0.48
6:A:619:U:O2	11:H:133:VAL:HG13	2.13	0.48
6:A:631:G:O3’	6:A:632:A:H8	1.95	0.48
6:A:727:G:N2	6:A:731:G:N3	2.61	0.48
6:A:744:C:H2’	6:A:745:C:C6	2.49	0.48
6:A:781:A:H2’	6:A:782:A:O4’	2.14	0.48
6:A:952:U:H5’	6:A:972:C:N4	2.29	0.48
6:A:1002:G:C2	6:A:1003:G:C5	3.02	0.48
6:A:1228:C:H5’	20:Q:108:ARG:HH12	1.79	0.48
6:A:1440:C:C5	6:A:1441:G:N7	2.82	0.48
7:D:125:G:C3’	54:y:47:ARG:HH12	2.27	0.48
7:D:210:C:OP1	54:y:29:LYS:HE2	2.14	0.48
7:D:411:G:N1	7:D:2407:G:O6	2.45	0.48
7:D:480:A:O3’	46:q:44:ILE:HA	2.14	0.48
7:D:539:G:N2	7:D:556:G:N1	2.41	0.48
7:D:542:C:O5’	7:D:542:C:H6	1.96	0.48
7:D:719:C:N3	7:D:720:C:N4	2.61	0.48
7:D:972:G:C6	7:D:973:A:C6	3.02	0.48
7:D:1007:C:O2	7:D:1136:G:N2	2.47	0.48
7:D:1021:A:N6	7:D:1140:C:O2	2.47	0.48
7:D:1155:A:H2’	7:D:1156:A:H5”	1.94	0.48
7:D:1263:U:H4’	52:w:10:LYS:CD	2.44	0.48
7:D:1267:U:C5	7:D:2012:G:N2	2.82	0.48
7:D:1361:G:C6	7:D:1371:G:N2	2.82	0.48
7:D:1491:G:N2	7:D:1493:C:H41	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1521:G:H3'	7:D:1522:G:O4'	2.13	0.48
7:D:1611:C:H42	7:D:1620:G:H1	1.60	0.48
7:D:1670:C:N4	7:D:1674:G:OP2	2.46	0.48
7:D:1689:A:C8	7:D:1700:A:C6	3.02	0.48
7:D:1879:C:O5'	7:D:1879:C:H6	1.96	0.48
7:D:2170:A:OP2	7:D:2170:A:C8	2.64	0.48
7:D:2249:U:H4'	7:D:2250:G:OP2	2.14	0.48
7:D:2259:G:C2	7:D:2282:G:C6	3.02	0.48
7:D:2396:G:C2	7:D:2421:G:C2	3.02	0.48
7:D:2428:G:H5"	7:D:2429:G:OP1	2.13	0.48
7:D:2681:C:N3	7:D:2724:C:H5	2.12	0.48
7:D:2687:U:C4	7:D:2688:U:N3	2.82	0.48
8:E:13:A:N6	8:E:69:G:O2'	2.47	0.48
10:G:139:GLN:HG3	10:G:143:GLU:OE2	2.14	0.48
15:L:100:ILE:HG23	15:L:101:PRO:HD2	1.96	0.48
17:N:3:LYS:N	17:N:77:PRO:HD3	2.29	0.48
21:R:14:PRO:HB2	21:R:16:PHE:O	2.14	0.48
23:T:23:ASP:H	23:T:26:ARG:NH2	2.12	0.48
29:Z:41:VAL:HG12	29:Z:175:VAL:CG2	2.44	0.48
29:Z:115:ALA:HB3	29:Z:120:MET:SD	2.54	0.48
30:a:200:ASP:C	30:a:202:LYS:N	2.70	0.48
31:b:31:CYS:O	31:b:33:VAL:N	2.47	0.48
32:c:164:ARG:HD2	32:c:177:ALA:O	2.14	0.48
33:d:124:SER:HA	33:d:132:ASN:CB	2.43	0.48
34:e:116:GLU:OE1	34:e:116:GLU:N	2.25	0.48
43:n:15:GLU:HA	43:n:100:ARG:HH21	1.79	0.48
48:s:23:VAL:HG13	48:s:38:VAL:HG22	1.96	0.48
53:x:17:LYS:CE	53:x:50:ARG:HB2	2.43	0.48
55:z:6:THR:O	55:z:9:GLY:N	2.44	0.48
56:B:28:ARG:HD2	56:B:28:ARG:HA	1.69	0.48
56:B:186:PRO:HB2	56:B:187:PRO:HD2	1.96	0.48
56:B:191:ASP:OD2	56:B:219:GLU:HB3	2.13	0.48
56:B:295:ARG:HD2	56:B:295:ARG:H	1.78	0.48
56:B:388:VAL:O	56:B:389:GLU:HB3	2.14	0.48
56:B:516:MET:O	56:B:520:ILE:HG22	2.14	0.48
6:A:96:G:N2	6:A:97:U:C2	2.82	0.48
6:A:178:C:C2	6:A:179:A:C8	3.02	0.48
6:A:262:A:C5	6:A:263:A:C5	3.02	0.48
6:A:645:C:N3	6:A:646:U:N3	2.62	0.48
6:A:786:G:H2'	6:A:787:A:O4'	2.13	0.48
6:A:789:U:C2	6:A:791:G:OP2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:978:A:O2'	6:A:1322:C:O2	2.29	0.48
6:A:1005:A:OP2	6:A:1006:C:C4	2.67	0.48
6:A:1065:U:O2'	6:A:1066:C:H6	1.96	0.48
6:A:1120:G:C6	6:A:1121:U:C4	3.01	0.48
6:A:1169:A:H3'	6:A:1170:A:C8	2.48	0.48
7:D:276:A:H3'	7:D:276:A:N3	2.29	0.48
7:D:442:G:C6	7:D:444:C:C4	3.02	0.48
7:D:476:G:N2	7:D:479:A:O4'	2.46	0.48
7:D:503:A:O2'	7:D:506:G:OP2	2.27	0.48
7:D:585:G:C2	7:D:1251:C:C4	3.02	0.48
7:D:763:G:C6	7:D:765:G:C5	3.02	0.48
7:D:817:C:O2'	7:D:839:U:OP1	2.26	0.48
7:D:839:U:H2'	7:D:840:C:H6	1.79	0.48
7:D:898:C:H5"	7:D:899:A:OP2	2.14	0.48
7:D:988:A:N7	50:u:13:ILE:HG13	2.29	0.48
7:D:1256:G:C6	7:D:1257:C:C4	3.02	0.48
7:D:1259:G:C4	7:D:1260:G:C8	3.01	0.48
7:D:1266:G:O2'	7:D:1267:U:P	2.70	0.48
7:D:1471:A:N7	7:D:1519:G:C2	2.82	0.48
7:D:1578:U:C5	7:D:1579:A:C5	3.01	0.48
7:D:1819:A:H1'	7:D:1821:A:C5	2.49	0.48
7:D:1965:C:O2	56:B:576:LYS:NZ	2.46	0.48
7:D:2261:C:OP2	48:s:17:GLN:HG2	2.14	0.48
7:D:2712(A):A:H4'	39:j:13:HIS:CE1	2.49	0.48
10:G:53:ALA:N	10:G:69:HIS:O	2.47	0.48
15:L:82:HIS:CD2	15:L:138:TRP:NE1	2.81	0.48
22:S:42:HIS:O	22:S:46:HIS:HB2	2.13	0.48
29:Z:68:LEU:HD23	29:Z:70:LYS:H	1.79	0.48
29:Z:164:ARG:N	29:Z:171:ILE:HG13	2.28	0.48
31:b:44:TYR:OH	31:b:84:PHE:HD1	1.97	0.48
31:b:133:LYS:HE3	31:b:137:HIS:CG	2.49	0.48
34:e:164:TYR:CE1	34:e:167:GLU:HG2	2.48	0.48
38:i:80:GLU:OE1	38:i:80:GLU:N	2.47	0.48
40:k:13:ARG:NH2	40:k:90:GLY:HA3	2.28	0.48
40:k:69:VAL:O	40:k:73:LEU:HD13	2.14	0.48
43:n:15:GLU:HA	43:n:100:ARG:NH2	2.29	0.48
46:q:13:VAL:HB	46:q:73:ARG:HE	1.78	0.48
47:r:108:PRO:HB3	47:r:112:ARG:HH12	1.79	0.48
47:r:153:SER:HB3	47:r:168:GLU:HB2	1.96	0.48
47:r:157:LEU:HD11	47:r:160:GLY:O	2.14	0.48
50:u:41:PRO:HA	50:u:44:ARG:CZ	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:32:LEU:O	55:z:34:TRP:HD1	1.97	0.48
56:B:89:PHE:C	56:B:91:TYR:H	2.22	0.48
56:B:203:SER:C	56:B:204:VAL:CG2	2.87	0.48
56:B:450:LEU:CG	56:B:452:TYR:HE1	2.26	0.48
2:2:34:ALA:H	7:D:1056:G:P	2.33	0.47
6:A:69:G:C4	6:A:73:G:C8	3.02	0.47
6:A:455:C:C2'	6:A:456:C:H5'	2.44	0.47
6:A:522:C:OP2	19:P:69:TYR:OH	2.31	0.47
6:A:626:U:C2	6:A:627:G:C8	3.02	0.47
6:A:999:U:H3	6:A:1041:A:N6	2.11	0.47
6:A:1022:G:H2'	6:A:1023:G:H8	1.79	0.47
6:A:1163:C:C2	6:A:1164:G:C8	3.02	0.47
6:A:1202:G:C4	21:R:42:ILE:HD11	2.49	0.47
6:A:1215:G:N1	6:A:1216:G:C5	2.82	0.47
6:A:1517:G:C8	7:D:1920:C:OP2	2.67	0.47
7:D:148:C:H5"	7:D:149:A:OP2	2.14	0.47
7:D:247:G:N2	7:D:249:C:H1'	2.29	0.47
7:D:270(R):G:C2	7:D:270(S):G:C8	3.02	0.47
7:D:513:A:H2	7:D:514:A:C4	2.32	0.47
7:D:646:A:H3'	7:D:647:G:C8	2.48	0.47
7:D:702:G:C2	7:D:731:C:C2	3.02	0.47
7:D:776:G:H1'	7:D:777:A:OP2	2.13	0.47
7:D:820:A:C2	7:D:821:A:C4	3.02	0.47
7:D:1474:C:O2	7:D:1475:G:C8	2.67	0.47
7:D:1478:G:N2	7:D:1515:C:C2	2.82	0.47
7:D:1515:C:HO2'	7:D:1516:U:P	2.35	0.47
7:D:1583:A:C4'	7:D:1585:C:C5	2.89	0.47
7:D:1588:C:H2'	7:D:1589:C:C6	2.48	0.47
7:D:1680:U:H2'	7:D:1681:G:O4'	2.13	0.47
7:D:2196:C:C2	7:D:2197:U:C5	3.02	0.47
7:D:2637:U:N3	7:D:2781:A:N6	2.62	0.47
7:D:2659:G:H21	7:D:2661:G:H8	1.61	0.47
7:D:2691:C:C4	7:D:2719:G:N2	2.82	0.47
7:D:2781:A:N1	7:D:2782:G:C2	2.83	0.47
9:F:53:ARG:HA	9:F:56:ARG:NE	2.29	0.47
9:F:133:LYS:HB3	9:F:137:ARG:NH2	2.29	0.47
11:H:118:ARG:CZ	11:H:136:PRO:HB3	2.43	0.47
18:O:18:ARG:NE	18:O:35:PRO:HA	2.29	0.47
19:P:39:VAL:HG11	19:P:41:ARG:CZ	2.44	0.47
22:S:9:GLN:HA	22:S:12:ILE:HD12	1.95	0.47
27:X:82:SER:OG	27:X:83:ARG:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:122:LEU:HA	41:l:71:GLY:HA3	1.96	0.47
37:h:120:ALA:C	37:h:122:PRO:HD3	2.39	0.47
38:i:68:ILE:HG13	38:i:69:PHE:N	2.28	0.47
41:l:54:ARG:HA	41:l:100:TYR:CD1	2.49	0.47
43:n:51:VAL:C	43:n:54:GLY:H	2.22	0.47
44:o:97:LYS:HD2	44:o:99:ARG:NH2	2.29	0.47
46:q:38:ILE:HG22	46:q:38:ILE:O	2.14	0.47
51:v:8:LYS:HD2	51:v:60:GLN:HE22	1.79	0.47
51:v:64:GLY:HA2	51:v:67:TYR:CD2	2.49	0.47
56:B:118:LEU:CD2	56:B:446:LYS:HZ1	2.10	0.47
56:B:236:GLU:CA	56:B:268:ILE:HG21	2.36	0.47
56:B:328:ALA:O	56:B:330:LEU:HD13	2.13	0.47
56:B:468:LYS:CA	56:B:473:GLY:HA2	2.44	0.47
6:A:19:C:C6	6:A:20:U:H5	2.32	0.47
6:A:179:A:H3’	6:A:180:U:H6	1.77	0.47
6:A:655:A:H2’	6:A:656:C:O4’	2.14	0.47
6:A:696:A:C2	6:A:786:G:H1’	2.48	0.47
6:A:894:G:C2	6:A:895:G:C4	3.03	0.47
6:A:895:G:C2	6:A:896:C:C2	3.02	0.47
6:A:982:U:H5”	21:R:6:LEU:HD11	1.96	0.47
6:A:1015:A:H2’	6:A:1016:A:C8	2.49	0.47
6:A:1131:G:O6	6:A:1144:G:H1’	2.13	0.47
6:A:1145:C:O2	6:A:1147:C:N4	2.46	0.47
6:A:1433:A:H5’	41:l:111:ARG:HH12	1.78	0.47
6:A:1440:C:C2	6:A:1462:G:N2	2.81	0.47
6:A:1454:G:N1	6:A:1455:G:C4	2.82	0.47
7:D:311:A:O2’	7:D:312:G:OP2	2.32	0.47
7:D:363(B):G:C6	7:D:363(C):G:N7	2.82	0.47
7:D:400:G:C6	51:v:62:ARG:NH1	2.82	0.47
7:D:455:C:HO2’	7:D:456:C:P	2.33	0.47
7:D:464:U:C5	7:D:465:G:C5	3.02	0.47
7:D:571:A:C6	7:D:2030:A:C6	3.02	0.47
7:D:621:A:N7	7:D:622:G:H1’	2.29	0.47
7:D:723:G:C2	7:D:724:U:C2	3.02	0.47
7:D:728:G:H3’	7:D:728:G:H8	1.79	0.47
7:D:861:A:H61	7:D:917:A:H1’	1.77	0.47
7:D:1300:U:O2’	7:D:1626:G:C2	2.68	0.47
7:D:1332:G:C8	7:D:1609:A:N6	2.82	0.47
7:D:1492:G:C8	7:D:1495:A:OP2	2.67	0.47
7:D:1747:G:C5	7:D:1748:G:N7	2.83	0.47
7:D:2067:G:C2	7:D:2069:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2126:A:O2'	7:D:2163:C:O2'	2.21	0.47
7:D:2190:G:H2'	7:D:2191:G:H8	1.79	0.47
7:D:2467:C:O2	38:i:124:LYS:HE3	2.14	0.47
7:D:2481:G:O2'	7:D:2482:G:OP2	2.31	0.47
7:D:2486:G:C2	7:D:2487:G:C8	3.02	0.47
7:D:2554:U:H2'	7:D:2555:U:C6	2.49	0.47
7:D:2565:A:H5"	7:D:2566:A:OP2	2.13	0.47
7:D:2793:G:C2	7:D:2794:C:N3	2.82	0.47
7:D:2824:C:N4	7:D:2825:C:N3	2.62	0.47
7:D:2871:C:H5'	7:D:2872:G:OP1	2.14	0.47
9:F:188:ALA:N	9:F:201:ILE:O	2.47	0.47
18:O:120:ARG:CZ	18:O:126:ARG:NH1	2.76	0.47
24:U:13:ASP:CG	24:U:14:LYS:H	2.20	0.47
26:W:8:GLY:O	26:W:10:PHE:N	2.47	0.47
30:a:70:TRP:CH2	30:a:150:LYS:HA	2.49	0.47
31:b:13:ARG:NH2	31:b:15:PHE:HB2	2.29	0.47
32:c:3:GLU:O	32:c:5:ALA:N	2.37	0.47
33:d:32:PRO:HB3	33:d:168:GLU:CB	2.37	0.47
33:d:53:LEU:HD23	33:d:72:ARG:NH2	2.29	0.47
33:d:53:LEU:CD2	33:d:72:ARG:HD2	2.44	0.47
36:g:68:GLU:O	36:g:75:SER:HB2	2.13	0.47
40:k:9:ARG:HB2	40:k:10:ARG:HH11	1.78	0.47
41:l:68:TYR:CZ	41:l:70:VAL:HA	2.49	0.47
41:l:108:ARG:HD2	41:l:113:LYS:HZ3	1.79	0.47
44:o:19:LEU:O	44:o:22:ASP:HB2	2.14	0.47
47:r:6:LYS:HZ1	47:r:35:ARG:NE	2.12	0.47
47:r:165:VAL:HG12	47:r:166:SER:O	2.14	0.47
56:B:42:ARG:HD2	56:B:43:GLU:H	1.79	0.47
56:B:380:VAL:CA	56:B:406:LEU:HD23	2.43	0.47
56:B:411:LYS:CB	56:B:452:TYR:O	2.62	0.47
3:3:23:VAL:HG12	3:3:24:GLY:N	2.29	0.47
3:3:40:ALA:HA	3:3:43:ALA:HB3	1.95	0.47
3:3:137:GLU:OE1	7:D:1078:U:H3'	2.14	0.47
6:A:35:G:N3	19:P:118:SER:OG	2.46	0.47
6:A:61:G:N7	6:A:107:G:N2	2.62	0.47
6:A:64:G:H5"	6:A:65:U:OP1	2.14	0.47
6:A:96:G:C2	6:A:97:U:N1	2.82	0.47
6:A:192:U:H4'	27:X:57:ARG:HH12	1.77	0.47
6:A:219:C:H4'	6:A:381:C:H5'	1.96	0.47
6:A:261:U:C4	27:X:79:ARG:NH1	2.82	0.47
6:A:382:A:OP2	6:A:382:A:C8	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:515:G:C6	6:A:516:U:C2	3.02	0.47
6:A:1227:A:P	20:Q:111:LYS:HZ1	2.37	0.47
6:A:1455:G:C2	6:A:1459:C:C2	3.01	0.47
7:D:18:C:H2'	7:D:19:C:C6	2.48	0.47
7:D:141:A:N6	7:D:141(A):C:N3	2.61	0.47
7:D:142:G:H2'	7:D:143:C:O4'	2.15	0.47
7:D:194:G:O6	7:D:195:A:C6	2.66	0.47
7:D:270(V):G:H3'	7:D:270(W):G:H8	1.78	0.47
7:D:648:G:C2'	7:D:649:G:C8	2.86	0.47
7:D:684:G:N1	7:D:775:G:C5	2.83	0.47
7:D:1039:G:C8	7:D:1117:G:C2	3.02	0.47
7:D:1141:U:H5'	7:D:1142(A):A:N6	2.29	0.47
7:D:1239:G:C2	7:D:1240:U:H1'	2.49	0.47
7:D:1288:U:C4	7:D:1327:C:H1'	2.49	0.47
7:D:1375:C:H2'	7:D:1376:C:C6	2.50	0.47
7:D:1517:G:N2	7:D:1518:C:C2	2.82	0.47
7:D:1731:G:N3	7:D:1731:G:H2'	2.29	0.47
7:D:1796:U:H2'	7:D:1797:C:C6	2.49	0.47
7:D:2497:A:H4'	7:D:2498:C:O5'	2.14	0.47
7:D:2603:G:C2	7:D:2604:U:O2	2.68	0.47
7:D:2707:G:N2	7:D:2708:G:C4	2.83	0.47
7:D:2723:C:N4	7:D:2724:C:C4	2.82	0.47
7:D:2749:A:C8	7:D:2750:A:N7	2.83	0.47
8:E:118:G:OP2	8:E:118:G:H8	1.97	0.47
9:F:144:ARG:NH1	9:F:148:TYR:CZ	2.80	0.47
13:J:10:LEU:HD22	13:J:85:VAL:HG22	1.96	0.47
16:M:55:ALA:O	16:M:58:HIS:ND1	2.46	0.47
20:Q:98:VAL:O	20:Q:98:VAL:HG13	2.12	0.47
22:S:54:ARG:HG2	22:S:58:MET:HE2	1.95	0.47
28:Y:6:ARG:H	28:Y:11:GLY:HA3	1.79	0.47
29:Z:69:GLY:HA3	29:Z:157:LYS:HB3	1.94	0.47
30:a:31:LYS:HZ3	30:a:83:GLU:HB3	1.79	0.47
30:a:77:ALA:HB2	30:a:97:TYR:CD1	2.49	0.47
31:b:9:VAL:HG21	41:l:7:ILE:CG2	2.44	0.47
33:d:45:GLU:C	33:d:47:LYS:H	2.22	0.47
33:d:53:LEU:O	33:d:68:PRO:HB2	2.13	0.47
36:g:16:ALA:HB3	36:g:18:LYS:H	1.80	0.47
36:g:24:VAL:CG2	36:g:30:ALA:HB1	2.44	0.47
36:g:63:VAL:HG22	36:g:82:ASN:H	1.79	0.47
37:h:45:LEU:HD23	37:h:49:ARG:HH11	1.77	0.47
37:h:92:GLU:OE2	37:h:126:VAL:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:114:ILE:HG22	37:h:115:LEU:H	1.80	0.47
38:i:11:LYS:NZ	38:i:73:PRO:HB3	2.30	0.47
41:l:70:VAL:HB	41:l:74:ARG:HH12	1.78	0.47
47:r:6:LYS:NZ	47:r:35:ARG:CZ	2.78	0.47
47:r:24:LEU:HD13	47:r:86:VAL:HG23	1.96	0.47
51:v:42:PHE:N	51:v:57:GLU:OE1	2.47	0.47
4:4:74:C:C2'	4:4:75:C:H5'	2.44	0.47
6:A:886:G:C2	6:A:887:G:H1'	2.50	0.47
6:A:1009:G:C6	6:A:1021:G:C5	3.03	0.47
6:A:1055:A:C5	6:A:1206:G:C2	3.02	0.47
6:A:1129:C:O2'	6:A:1130:A:O5'	2.27	0.47
6:A:1170:A:H3'	6:A:1171:G:C8	2.49	0.47
6:A:1311:G:H8	6:A:1311:G:O5'	1.97	0.47
6:A:1447:G:N2	6:A:1460:A:C5	2.72	0.47
6:A:1528:U:O2'	6:A:1530:G:O4'	2.30	0.47
7:D:8:A:C6	7:D:9:U:C4	3.02	0.47
7:D:27:G:O2'	7:D:513:A:N6	2.47	0.47
7:D:270(J):G:N1	7:D:270(K):C:C2	2.83	0.47
7:D:273(A):G:C6	7:D:273(B):C:C4	3.03	0.47
7:D:290:G:H22	7:D:350:U:C1'	2.28	0.47
7:D:329:G:H5"	7:D:329:G:C8	2.49	0.47
7:D:492:A:H3'	7:D:493:G:H8	1.79	0.47
7:D:836:G:N7	7:D:837:C:N4	2.63	0.47
7:D:869:G:N2	7:D:870:A:C4	2.82	0.47
7:D:973:A:HO2'	7:D:974:G:P	2.37	0.47
7:D:1143:A:C5	7:D:1144:G:N7	2.82	0.47
7:D:1228:G:N1	7:D:1229:G:C5	2.82	0.47
7:D:1287:A:N6	7:D:1288:U:H3	2.12	0.47
7:D:1308:A:N6	7:D:1309:G:C2	2.82	0.47
7:D:1385:G:H1	7:D:1402:C:H42	1.60	0.47
7:D:1592:C:H2'	7:D:1593:G:C8	2.50	0.47
7:D:1690:A:N7	7:D:1691:C:C2	2.82	0.47
7:D:1692:U:O2'	7:D:1693:U:H2'	2.15	0.47
7:D:1725:G:C2	7:D:1726:G:C5	3.00	0.47
7:D:1728:G:N3	7:D:1728:G:H2'	2.29	0.47
7:D:1784:A:OP2	7:D:1784:A:O4'	2.32	0.47
7:D:2033:A:C6	7:D:2036:C:N3	2.82	0.47
7:D:2264:C:H2'	7:D:2265:U:C6	2.48	0.47
7:D:2391:G:HO2'	7:D:2392:A:C5'	2.26	0.47
7:D:2456:C:C5	7:D:2457:U:C4	3.02	0.47
7:D:2839:G:C5	7:D:2840:C:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:18:ARG:HB3	12:I:25:ARG:O	2.15	0.47
14:K:22:LEU:HD21	14:K:97:GLN:HE21	1.78	0.47
21:R:40:CYS:HB2	21:R:43:CYS:H	1.79	0.47
31:b:117:MET:CG	31:b:136:ARG:HB2	2.44	0.47
38:i:54:MET:CE	38:i:118:LEU:HD23	2.43	0.47
40:k:17:ARG:NH1	40:k:26:LEU:O	2.48	0.47
41:l:11:GLU:N	41:l:11:GLU:OE1	2.47	0.47
45:p:11:PRO:HD3	49:t:32:PHE:CE1	2.49	0.47
47:r:6:LYS:HZ2	47:r:35:ARG:CZ	2.27	0.47
47:r:80:ARG:HH11	47:r:82:ARG:NH2	2.12	0.47
56:B:80:LEU:C	56:B:81:ILE:CG1	2.87	0.47
56:B:86:HIS:NE2	56:B:352:LEU:HD12	2.29	0.47
56:B:307:PRO:O	56:B:370:ILE:HD11	2.14	0.47
56:B:360:ARG:HA	56:B:364:GLU:OE1	2.13	0.47
56:B:379:LYS:CE	56:B:407:GLU:H	2.27	0.47
56:B:382:LEU:CB	56:B:386:GLU:HG2	2.44	0.47
5:5:5:G:H1	5:5:68:C:N4	2.09	0.47
5:5:5:G:N2	5:5:68:C:N3	2.51	0.47
6:A:99:C:C2'	6:A:101:A:C8	2.86	0.47
6:A:231:G:N1	6:A:232:G:C5	2.82	0.47
6:A:363:A:H2'	6:A:364:A:C8	2.49	0.47
6:A:446:G:H2'	6:A:447:G:O4'	2.14	0.47
6:A:654:G:N3	6:A:654:G:H2'	2.30	0.47
6:A:728:A:N6	22:S:54:ARG:HD2	2.29	0.47
6:A:1169:A:N1	6:A:1170:A:N6	2.61	0.47
6:A:1244:C:H2'	6:A:1245:A:C8	2.50	0.47
6:A:1440:C:N3	6:A:1462:G:C6	2.82	0.47
7:D:49:A:C5	7:D:177:G:C5	3.02	0.47
7:D:126:A:H5'	54:y:47:ARG:NH1	2.29	0.47
7:D:270(W):G:C5	7:D:270(X):G:C6	3.03	0.47
7:D:270(W):G:H2'	7:D:270(X):G:O4'	2.15	0.47
7:D:548:A:H5"	7:D:549:G:OP2	2.14	0.47
7:D:587:C:H4'	7:D:588:U:O5'	2.14	0.47
7:D:638:G:C2	7:D:650:C:C2	3.01	0.47
7:D:685:A:H5'	7:D:687:C:N4	2.30	0.47
7:D:975:G:C2	7:D:990:A:C8	3.03	0.47
7:D:1168:G:C4	7:D:1182:A:H2	2.33	0.47
7:D:1206:G:H1	7:D:1242:A:H62	1.61	0.47
7:D:1257:C:H2'	7:D:1258:C:C6	2.50	0.47
7:D:1307:A:N1	7:D:1308:A:C4	2.82	0.47
7:D:1332:G:C5'	7:D:1333:C:OP2	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1410:G:C6	7:D:1411:C:C4	3.02	0.47
7:D:1615:C:O2	44:o:87:PRO:HG3	2.14	0.47
7:D:1798:U:N3	7:D:1822:G:N1	2.62	0.47
7:D:2099:U:H1'	7:D:2191:G:H22	1.78	0.47
7:D:2125:G:O2'	7:D:2126:A:O4'	2.26	0.47
7:D:2548:G:C2	7:D:2549:G:C8	3.02	0.47
7:D:2820:A:H4'	39:j:4:LEU:HD22	1.96	0.47
9:F:163:PHE:HA	9:F:185:ILE:HG13	1.95	0.47
9:F:181:PHE:CE1	15:L:72:PRO:HD3	2.50	0.47
12:I:40:ARG:HG2	12:I:66:MET:HE3	1.97	0.47
14:K:48:LYS:HA	14:K:51:GLN:OE1	2.13	0.47
19:P:27:LEU:HG	19:P:28:LYS:N	2.30	0.47
22:S:33:THR:HG22	22:S:37:ASN:HD21	1.79	0.47
24:U:50:LYS:HD2	24:U:51:TYR:CE1	2.50	0.47
27:X:41:ILE:O	27:X:45:GLN:HG2	2.14	0.47
30:a:6:PHE:O	30:a:27:THR:HG23	2.14	0.47
30:a:240:ALA:N	30:a:241:PRO:HD3	2.29	0.47
33:d:8:LYS:HZ1	33:d:176:LEU:HG	1.76	0.47
35:f:54:VAL:CG1	35:f:122:VAL:HG12	2.45	0.47
37:h:80:TYR:HE2	37:h:86:LYS:NZ	2.12	0.47
40:k:64:GLU:OE1	40:k:67:ARG:HD3	2.14	0.47
41:l:21:GLU:O	41:l:23:ARG:HG2	2.15	0.47
41:l:40:THR:O	41:l:42:ILE:HG13	2.15	0.47
47:r:2:GLU:HB2	47:r:44:PHE:CD1	2.49	0.47
56:B:28:ARG:HG2	56:B:168:GLY:O	2.14	0.47
56:B:42:ARG:HD2	56:B:43:GLU:N	2.29	0.47
56:B:222:VAL:HG11	56:B:264:LEU:HD22	1.92	0.47
56:B:528:ILE:HG21	56:B:592:VAL:HB	1.96	0.47
4:4:56:C:O2'	33:d:83:ARG:N	2.47	0.47
6:A:124:G:C6	6:A:125:U:N3	2.83	0.47
6:A:191(A):G:C2	6:A:191(B):G:C4	3.03	0.47
6:A:198:G:C2	6:A:199:G:N9	2.83	0.47
6:A:208:U:H6	6:A:208:U:H3'	1.80	0.47
6:A:464:G:H1'	6:A:468:A:N6	2.29	0.47
6:A:588:G:C4	6:A:753:A:C6	3.03	0.47
6:A:651:C:C4	6:A:652:U:C4	3.02	0.47
6:A:708:C:H2'	6:A:709:G:C8	2.49	0.47
6:A:1015:A:P	26:W:18:LYS:HE2	2.54	0.47
6:A:1363:A:O2'	6:A:1364:U:O5'	2.28	0.47
7:D:149:A:C5	7:D:150:C:C4	3.02	0.47
7:D:273(F):C:C5	7:D:274:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:279:C:N4	7:D:359:A:H2	2.10	0.47
7:D:596:G:C2	7:D:597:U:C2	3.02	0.47
7:D:869:G:H2'	7:D:870:A:C8	2.47	0.47
7:D:890:A:H5'	7:D:892:G:OP2	2.14	0.47
7:D:909:A:O2'	7:D:910:A:H5'	2.15	0.47
7:D:952:G:C2	7:D:966:G:C2	3.03	0.47
7:D:1202:C:C5	7:D:1203:G:C8	3.01	0.47
7:D:1455:G:N3	7:D:1456:G:C8	2.82	0.47
7:D:1543:A:H8	7:D:1544:C:H4'	1.80	0.47
7:D:1579:A:C8	7:D:1580:A:N3	2.82	0.47
7:D:1613:G:C5	7:D:1617:C:N4	2.83	0.47
7:D:1708:C:H42	7:D:1750:G:H1	1.62	0.47
7:D:1839:G:C4	7:D:1927:A:C8	3.03	0.47
7:D:1937:A:HO2'	7:D:1938:A:P	2.32	0.47
7:D:2307:G:H3'	7:D:2308:G:O4'	2.15	0.47
7:D:2445:G:N2	7:D:2446:G:C4	2.82	0.47
7:D:2869:G:C6	7:D:2870:C:N3	2.83	0.47
8:E:14:U:HO2'	8:E:106:G:N2	2.10	0.47
8:E:91:C:H2'	8:E:92:G:C8	2.49	0.47
9:F:88:ALA:HB1	9:F:90:MET:HG2	1.95	0.47
14:K:155:ARG:CG	14:K:156:TRP:H	2.15	0.47
17:N:57:LYS:CG	17:N:60:ARG:HH12	2.14	0.47
19:P:85:ILE:HD12	19:P:100:ILE:HA	1.96	0.47
26:W:13:ASP:OD2	26:W:17:GLU:CB	2.56	0.47
28:Y:3:LYS:HB3	28:Y:14:TRP:CG	2.49	0.47
29:Z:33:ALA:HB2	29:Z:220:PRO:HG2	1.95	0.47
29:Z:60:GLY:O	29:Z:163:PHE:HD1	1.98	0.47
33:d:18:GLU:CD	33:d:22:ARG:HE	2.11	0.47
36:g:11:ALA:HB3	36:g:97:ARG:NH2	2.29	0.47
37:h:63:PRO:HB2	37:h:64:LYS:HG2	1.95	0.47
40:k:75:GLU:O	40:k:78:LEU:HB3	2.15	0.47
43:n:15:GLU:O	43:n:17:GLY:N	2.48	0.47
43:n:89:GLN:HA	43:n:91:TYR:CZ	2.50	0.47
44:o:17:VAL:HG23	44:o:76:VAL:HG11	1.96	0.47
44:o:45:TYR:O	44:o:49:LYS:HG2	2.15	0.47
47:r:13:GLU:O	47:r:16:SER:OG	2.22	0.47
49:t:26:GLU:O	49:t:29:GLU:HB2	2.14	0.47
50:u:12:PRO:HA	50:u:15:TYR:CZ	2.49	0.47
51:v:65:ASP:HB2	51:v:69:LYS:HE3	1.95	0.47
56:B:268:ILE:O	56:B:268:ILE:HG23	2.15	0.47
56:B:296:PRO:HG2	56:B:297:ALA:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:349:LEU:CD1	56:B:353:HIS:CD2	2.97	0.47
56:B:537:ILE:HB	56:B:549:ALA:O	2.14	0.47
3:3:93:ARG:CG	3:3:93:ARG:NH1	2.77	0.47
4:4:31:G:H5'	16:M:127:LYS:HD2	1.96	0.47
6:A:9:G:OP2	12:I:121:LYS:HD2	2.14	0.47
6:A:19:C:C2	6:A:20:U:C5	3.03	0.47
6:A:44:G:C6	6:A:45:U:C2	3.03	0.47
6:A:59:A:C6	6:A:354:G:C6	3.03	0.47
6:A:89:U:O2'	6:A:90:C:H5"	2.14	0.47
6:A:131:C:O2'	6:A:132:C:H5'	2.15	0.47
6:A:236:G:H3'	6:A:237:C:H6	1.80	0.47
6:A:250:A:N3	6:A:252:U:C4	2.83	0.47
6:A:345:C:H6	6:A:346:G:C2	2.33	0.47
6:A:494:U:O2	6:A:496:A:C6	2.66	0.47
6:A:670:G:H1	6:A:736:C:H42	1.61	0.47
6:A:748:C:HO2'	6:A:749:C:P	2.38	0.47
6:A:917:G:C2	6:A:918:A:C4	3.02	0.47
6:A:1046:A:H3'	6:A:1047:G:H8	1.79	0.47
6:A:1089:G:H1'	6:A:1169:A:C2	2.49	0.47
6:A:1170:A:H8	6:A:1170:A:O5'	1.97	0.47
6:A:1196:U:H5'	6:A:1197:G:H5'	1.97	0.47
6:A:1226:C:H42	20:Q:104:ARG:CD	2.01	0.47
6:A:1256:A:OP2	6:A:1256:A:C8	2.68	0.47
6:A:1288:A:H2'	6:A:1289:A:H8	1.77	0.47
6:A:1437:C:H2'	6:A:1438:G:C8	2.50	0.47
7:D:23:G:N2	7:D:24:G:N3	2.63	0.47
7:D:28:A:C2	7:D:513:A:C8	3.03	0.47
7:D:96:G:O4'	49:t:43:HIS:NE2	2.48	0.47
7:D:293:U:C2	7:D:294:A:C8	3.03	0.47
7:D:295:G:P	7:D:338:G:N1	2.80	0.47
7:D:299:A:C2	7:D:322:A:C8	3.03	0.47
7:D:327:G:H1	7:D:335:C:H42	1.61	0.47
7:D:339:U:O2'	7:D:340:A:O5'	2.31	0.47
7:D:341:G:N1	7:D:342:G:N3	2.63	0.47
7:D:363(F):A:H2'	7:D:364:C:C1'	2.45	0.47
7:D:381:G:N2	7:D:382:G:C4	2.83	0.47
7:D:410:G:O2'	7:D:2407:G:OP2	2.31	0.47
7:D:457:A:N6	7:D:470:A:H5"	2.30	0.47
7:D:464:U:H2'	7:D:465:G:O4'	2.15	0.47
7:D:470:A:H4'	7:D:471:A:OP1	2.15	0.47
7:D:489:G:N9	7:D:1284:A:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:556:G:C8	7:D:557:U:C5	3.02	0.47
7:D:571:A:N7	7:D:575:A:N6	2.62	0.47
7:D:598:G:H2'	7:D:599:G:O4'	2.15	0.47
7:D:607:U:C2	7:D:621:A:N6	2.82	0.47
7:D:609:A:H8	7:D:609:A:O5'	1.98	0.47
7:D:627:A:C2	7:D:637:A:C4	3.02	0.47
7:D:680:G:N2	7:D:681:G:N3	2.63	0.47
7:D:741:G:C6	7:D:742:G:N7	2.82	0.47
7:D:779:U:OP1	30:a:50:THR:N	2.30	0.47
7:D:807:U:C5	7:D:808:G:N7	2.83	0.47
7:D:812:C:O2'	7:D:813:U:H5'	2.14	0.47
7:D:878:A:O2'	7:D:898:C:N4	2.48	0.47
7:D:894:C:N4	7:D:897:C:N4	2.59	0.47
7:D:894:C:O5'	7:D:894:C:H6	1.97	0.47
7:D:999:U:C2	7:D:1154:G:N2	2.82	0.47
7:D:1041:C:H1'	7:D:1115:G:N2	2.30	0.47
7:D:1084:A:C4'	7:D:1106:G:C8	2.97	0.47
7:D:1177:A:C2	7:D:1178:C:C4	3.03	0.47
7:D:1273:U:O2'	7:D:1274:A:H5"	2.14	0.47
7:D:1275:A:HO2'	7:D:1276:A:P	2.37	0.47
7:D:1340:U:C5'	45:p:57:LEU:HD11	2.40	0.47
7:D:1346:G:C2	7:D:1601:G:C2	3.02	0.47
7:D:1412:A:H2'	7:D:1413:G:C8	2.50	0.47
7:D:1416:G:O2'	7:D:1417:C:O4'	2.32	0.47
7:D:1422:G:C2	7:D:1423:G:C8	3.02	0.47
7:D:1655:A:OP1	39:j:2:ARG:HD3	2.15	0.47
7:D:1689:A:C2	7:D:1690:A:C4	3.02	0.47
7:D:1784:A:H1'	7:D:1785:A:OP2	2.15	0.47
7:D:1812:A:H2'	7:D:1813:G:C8	2.50	0.47
7:D:1831:G:C6	7:D:1832:C:C4	3.02	0.47
7:D:1840:G:H1	7:D:1902:C:H42	1.63	0.47
7:D:1856:G:N7	7:D:1857:G:C2	2.82	0.47
7:D:1863:G:H8	7:D:1863:G:O5'	1.97	0.47
7:D:1925:C:O2	7:D:1925:C:H2'	2.15	0.47
7:D:2006:C:O2'	7:D:2823:A:H1'	2.15	0.47
7:D:2040:C:N3	7:D:2041:U:C4	2.82	0.47
7:D:2053:G:C6	7:D:2617:C:C4	3.03	0.47
7:D:2109:U:H1'	7:D:2181:G:H22	1.79	0.47
7:D:2124:G:H22	7:D:2174:C:H42	1.63	0.47
7:D:2148:G:C2	7:D:2149:G:C2	3.02	0.47
7:D:2205:C:C4	7:D:2206:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2250:G:C8	38:i:83:MET:HG3	2.49	0.47
7:D:2255:G:H1	7:D:2275:C:N4	2.13	0.47
7:D:2270:G:O6	7:D:2271:G:N1	2.48	0.47
7:D:2320:A:H3'	7:D:2320:A:P	2.55	0.47
7:D:2376:A:C6	7:D:2377:A:C5	3.03	0.47
7:D:2448:A:OP2	7:D:2499:C:OP2	2.33	0.47
7:D:2638:G:N2	7:D:2776:A:C8	2.81	0.47
7:D:2672:G:H5"	7:D:2673:G:OP2	2.15	0.47
7:D:2692:C:N4	7:D:2718:G:O6	2.48	0.47
7:D:2751:G:O4'	34:e:6:ARG:NH2	2.48	0.47
7:D:2764:A:N7	7:D:2766:G:C6	2.82	0.47
7:D:2773:C:H2'	7:D:2774:C:C6	2.50	0.47
7:D:2802:G:C8	7:D:2803:C:C5	3.03	0.47
9:F:100:GLY:O	9:F:103:THR:N	2.42	0.47
9:F:187:LEU:HD21	9:F:204:ASN:O	2.14	0.47
10:G:65:ALA:O	10:G:100:ALA:HB3	2.14	0.47
12:I:79:GLU:HB3	12:I:93:PRO:HD2	1.96	0.47
13:J:41:GLU:HB3	13:J:62:TRP:HE3	1.79	0.47
15:L:37:ARG:O	15:L:41:ARG:HB2	2.14	0.47
20:Q:12:ASN:ND2	20:Q:44:ARG:HB3	2.29	0.47
20:Q:97:PRO:O	20:Q:99:ARG:N	2.41	0.47
25:V:29:PHE:CG	25:V:30:ASP:N	2.83	0.47
25:V:29:PHE:HD2	25:V:31:LEU:HD12	1.78	0.47
29:Z:74:VAL:HA	29:Z:112:ALA:O	2.15	0.47
29:Z:112:ALA:HA	29:Z:136:LEU:HD23	1.95	0.47
30:a:7:LYS:HD2	30:a:91:ARG:HH21	1.80	0.47
30:a:55:GLY:HA2	30:a:218:ARG:HH11	1.79	0.47
30:a:208:LYS:NZ	30:a:211:ARG:CZ	2.78	0.47
33:d:168:GLU:OE1	33:d:168:GLU:N	2.39	0.47
34:e:22:GLY:N	34:e:42:ARG:HH22	2.12	0.47
34:e:127:GLU:C	34:e:129:THR:N	2.73	0.47
35:f:6:PRO:HA	35:f:41:ASP:CG	2.39	0.47
35:f:15:LEU:HD22	35:f:130:HIS:CD2	2.49	0.47
35:f:41:ASP:HA	42:m:64:ARG:HH22	1.78	0.47
37:h:32:THR:HG21	37:h:35:HIS:CE1	2.49	0.47
38:i:22:LYS:HE2	38:i:99:PRO:HG2	1.95	0.47
41:l:65:LYS:HB3	41:l:75:ILE:HB	1.96	0.47
42:m:32:PHE:C	42:m:36:ARG:HH12	2.21	0.47
44:o:33:ARG:CZ	44:o:52:GLU:OE2	2.63	0.47
47:r:151:HIS:CD2	47:r:168:GLU:OE2	2.68	0.47
54:y:31:LEU:HD23	54:y:31:LEU:HA	1.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:16:ALA:HB1	56:B:106:VAL:O	2.15	0.47
56:B:17:HIS:NE2	56:B:116:GLU:CD	2.73	0.47
56:B:48:SER:C	56:B:50:GLU:N	2.73	0.47
56:B:74:GLU:CG	56:B:77:VAL:HG11	2.44	0.47
56:B:174:VAL:HG12	56:B:177:ILE:CG1	2.34	0.47
56:B:188:PRO:O	56:B:189:LYS:HG3	2.14	0.47
56:B:236:GLU:CA	56:B:268:ILE:CG2	2.76	0.47
56:B:241:LYS:CE	56:B:243:GLY:HA2	2.45	0.47
56:B:275:GLN:O	56:B:277:GLY:N	2.48	0.47
56:B:374:PRO:CG	56:B:461:TYR:CD1	2.98	0.47
56:B:424:LEU:CD1	56:B:471:SER:HB3	2.44	0.47
56:B:489:LEU:O	56:B:508:ALA:CB	2.62	0.47
56:B:525:ALA:O	56:B:527:VAL:N	2.48	0.47
3:3:13:PRO:CB	3:3:16:LYS:HZ1	2.28	0.47
3:3:132:ARG:NH2	7:D:1060:U:H2'	2.30	0.47
4:4:4:G:N1	4:4:70:G:C6	2.82	0.47
5:5:68:C:H2'	5:5:69:G:O4'	2.15	0.47
6:A:92:G:H2'	6:A:93:U:H5'	1.95	0.47
6:A:738:C:OP1	13:J:92:LYS:HE3	2.15	0.47
6:A:741:G:H2'	6:A:742:G:C8	2.50	0.47
6:A:962:C:H1'	6:A:1201:A:C6	2.49	0.47
6:A:1027:C:N4	6:A:1034:G:H1	2.13	0.47
6:A:1244:C:H2'	6:A:1245:A:H8	1.79	0.47
6:A:1365:G:C6	6:A:1366:C:N3	2.83	0.47
7:D:35:G:C6	7:D:446:G:N2	2.83	0.47
7:D:155:C:O3'	7:D:161:U:H3'	2.15	0.47
7:D:199:A:O2'	7:D:200:U:O5'	2.23	0.47
7:D:295:G:C2	7:D:344:G:C2	3.03	0.47
7:D:301:G:H1	7:D:316:C:H42	1.62	0.47
7:D:418:G:C6	7:D:419:C:C4	3.03	0.47
7:D:485:C:H42	7:D:486:C:H42	1.63	0.47
7:D:495:G:H5"	44:o:4:LYS:HE2	1.97	0.47
7:D:827:U:H4'	7:D:828:U:C2	2.49	0.47
7:D:953:A:C6	7:D:965:C:N3	2.83	0.47
7:D:968:G:H5"	7:D:969:U:OP2	2.14	0.47
7:D:1074:G:C2	7:D:1075:C:N4	2.83	0.47
7:D:1449:A:C5	7:D:1449(A):G:C8	3.02	0.47
7:D:1488:G:C2	7:D:1502:C:C2	3.03	0.47
7:D:1510:A:N7	7:D:1511:A:C6	2.83	0.47
7:D:1871:A:C2'	7:D:1872:A:H8	2.11	0.47
7:D:1917:U:C5	7:D:1918:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1943:U:H5	56:B:531:GLN:NE2	2.12	0.47
7:D:2033:A:HO2'	7:D:2034:U:P	2.37	0.47
7:D:2044:C:N3	7:D:2625:G:C2	2.83	0.47
7:D:2115:G:O3'	7:D:2117:A:N6	2.48	0.47
7:D:2450:A:N7	7:D:2501:C:N4	2.63	0.47
7:D:2851:A:HO2'	39:j:64:ARG:HE	1.59	0.47
12:I:33:VAL:HG11	12:I:109:ILE:HG13	1.96	0.47
14:K:51:GLN:HG3	14:K:58:PRO:HD3	1.96	0.47
15:L:41:ARG:NH1	15:L:42:GLU:OE2	2.48	0.47
19:P:66:VAL:HG21	19:P:98:TYR:HE2	1.80	0.47
21:R:6:LEU:HB3	21:R:23:ARG:NH2	2.29	0.47
26:W:3:ARG:CG	26:W:3:ARG:NH2	2.73	0.47
26:W:21:GLU:O	26:W:22:LEU:HB2	2.15	0.47
29:Z:66:HIS:H	29:Z:158:ALA:HB1	1.78	0.47
29:Z:162:GLU:HG2	29:Z:163:PHE:H	1.78	0.47
30:a:52:ARG:NH1	30:a:52:ARG:HG2	2.29	0.47
30:a:173:VAL:O	30:a:184:LYS:HA	2.14	0.47
35:f:17:ASP:O	35:f:19:GLU:N	2.47	0.47
36:g:64:ARG:CZ	36:g:68:GLU:H	2.21	0.47
42:m:32:PHE:HB3	42:m:36:ARG:NH2	2.29	0.47
44:o:8:ARG:HG3	44:o:9:TYR:CD1	2.50	0.47
45:p:9:LEU:HD11	49:t:28:MET:HE3	1.95	0.47
49:t:9:ARG:HH21	49:t:58:VAL:HG23	1.79	0.47
51:v:52:THR:CG2	51:v:53:GLU:H	2.27	0.47
55:z:42:ARG:HB2	55:z:43:GLN:OE1	2.15	0.47
56:B:20:HIS:CD2	56:B:108:ASP:N	2.80	0.47
56:B:134:VAL:O	56:B:134:VAL:HG13	2.15	0.47
56:B:174:VAL:CG1	56:B:177:ILE:CD1	2.93	0.47
56:B:242:VAL:C	56:B:263:TRP:O	2.46	0.47
56:B:347:GLY:HA2	56:B:354:ALA:HB2	1.96	0.47
56:B:459:ILE:CA	56:B:463:PHE:CD2	2.97	0.47
3:3:48:MET:O	3:3:53:VAL:HG21	2.15	0.47
5:5:28:G:N2	5:5:43:C:C4	2.83	0.47
5:5:52:G:C2	5:5:63:G:C2	3.03	0.47
6:A:103:C:C2'	6:A:104:G:H5'	2.45	0.47
6:A:236:G:H2'	6:A:236:G:N3	2.30	0.47
6:A:401:C:O2'	6:A:621:A:N3	2.47	0.47
6:A:535:A:H5'	6:A:536:C:H5	1.80	0.47
6:A:608:A:C4	6:A:609:A:C8	3.03	0.47
6:A:741:G:H2'	6:A:742:G:O4'	2.15	0.47
6:A:851:G:H2'	6:A:852:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1076:C:C2	6:A:1082:G:N2	2.83	0.47
6:A:1104:G:O3'	9:F:111:ARG:NH2	2.45	0.47
6:A:1135:U:H4'	6:A:1136:U:C5	2.50	0.47
6:A:1294:G:C4	6:A:1295:G:N7	2.83	0.47
6:A:1440:C:O2	6:A:1462:G:N3	2.47	0.47
6:A:1454:G:C2	6:A:1455:G:C4	3.03	0.47
7:D:322:A:OP1	32:c:168:ARG:HD2	2.15	0.47
7:D:460:A:C2	7:D:470:A:C6	3.03	0.47
7:D:495:G:N2	7:D:496:G:N3	2.62	0.47
7:D:529:A:HO2'	7:D:530:G:P	2.38	0.47
7:D:557:U:H6	7:D:557:U:O5'	1.98	0.47
7:D:686:G:H4'	7:D:687:C:OP2	2.14	0.47
7:D:768:G:C2	7:D:769:G:C4	3.02	0.47
7:D:778:G:C6	7:D:779:U:C2	3.03	0.47
7:D:809:G:C2	7:D:810:U:O2	2.68	0.47
7:D:848:G:N2	7:D:931:G:O6	2.47	0.47
7:D:921:G:H5"	7:D:922:U:OP2	2.15	0.47
7:D:947:G:N2	7:D:948:G:N3	2.63	0.47
7:D:1003:G:C6	7:D:1153:C:N4	2.83	0.47
7:D:1131:G:C1'	35:f:74:ARG:NH1	2.78	0.47
7:D:1353:A:C6	7:D:1378:A:C5	3.03	0.47
7:D:1456:G:N2	7:D:1457:A:C8	2.82	0.47
7:D:1705:G:C2	7:D:1706:U:O2	2.67	0.47
7:D:1857:G:H8	7:D:1858:G:H5"	1.79	0.47
7:D:1862:G:N2	7:D:1880:C:C2	2.79	0.47
7:D:1910:G:C2	7:D:1921:G:N3	2.83	0.47
7:D:2298:A:C6	7:D:2299:G:C4	3.03	0.47
7:D:2358:G:H8	7:D:2358:G:O5'	1.98	0.47
7:D:2563:U:O2'	36:g:28:SER:OG	2.09	0.47
7:D:2781:A:C6	7:D:2782:G:C2	3.03	0.47
8:E:30:C:C4	8:E:31:C:H1'	2.49	0.47
8:E:57:A:C8	8:E:58:A:C8	3.03	0.47
11:H:68:TYR:CD2	11:H:97:LEU:HD13	2.50	0.47
14:K:73:MET:HG3	14:K:89:MET:C	2.40	0.47
19:P:41:ARG:NH1	19:P:57:LYS:HE2	2.30	0.47
19:P:84:LEU:O	19:P:101:VAL:HG22	2.15	0.47
26:W:32:LYS:HB3	26:W:50:ALA:O	2.14	0.47
28:Y:10:ARG:O	28:Y:13:ILE:HG22	2.15	0.47
29:Z:59:ARG:CD	29:Z:164:ARG:HH11	2.28	0.47
30:a:7:LYS:HD2	30:a:91:ARG:HE	1.79	0.47
30:a:8:PRO:HD2	30:a:27:THR:C	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:19:ARG:HD3	41:l:82:LEU:HD12	1.96	0.47
33:d:13:GLU:HA	33:d:16:ARG:NH2	2.29	0.47
33:d:32:PRO:HB3	33:d:168:GLU:C	2.40	0.47
34:e:41:MET:O	34:e:53:GLU:HG3	2.15	0.47
35:f:104:LYS:CE	35:f:117:PHE:HB3	2.45	0.47
36:g:1:MET:HG2	36:g:66:LYS:HG2	1.95	0.47
36:g:65:THR:OG1	36:g:80:ASP:O	2.30	0.47
36:g:112:MET:HE3	41:l:39:ARG:HH21	1.80	0.47
46:q:86:ARG:NH2	46:q:90:LEU:H	2.11	0.47
50:u:7:LYS:HD3	50:u:34:GLU:HB2	1.95	0.47
55:z:30:ARG:HB3	55:z:44:LYS:HZ1	1.80	0.47
56:B:49:LEU:C	56:B:51:LEU:N	2.73	0.47
56:B:142:ASN:HD21	56:B:144:ARG:NH2	2.12	0.47
56:B:409:TYR:CD2	56:B:485:ARG:HD3	2.49	0.47
56:B:441:LEU:HD22	56:B:442:PRO:CD	2.45	0.47
56:B:486:PRO:HG2	56:B:487:GLY:H	1.79	0.47
56:B:504:LEU:N	56:B:504:LEU:CD1	2.78	0.47
3:3:5:VAL:O	3:3:5:VAL:HG13	2.15	0.47
3:3:25:PRO:CA	56:B:440:TYR:CZ	2.84	0.47
3:3:74:ALA:HA	7:D:1061:U:OP1	2.15	0.47
6:A:191(F):U:C2	27:X:105:SER:HB2	2.50	0.47
6:A:264:U:OP2	6:A:264:U:H6	1.97	0.47
6:A:275:G:C4	6:A:276:G:C8	3.03	0.47
6:A:563:A:C2	6:A:567:G:C4	3.03	0.47
6:A:773:G:H1	6:A:806:C:N4	2.13	0.47
6:A:937:A:C2	6:A:1379:G:C6	3.03	0.47
6:A:1311:G:H2'	6:A:1312:G:O5'	2.15	0.47
6:A:1415:G:C5	6:A:1486:G:C2	3.03	0.47
6:A:1461:G:N2	6:A:1462:G:C4	2.82	0.47
6:A:1511:G:H2'	6:A:1512:U:O4'	2.15	0.47
7:D:46:C:OP2	7:D:215:G:C2'	2.54	0.47
7:D:203:C:C4	7:D:204:A:N7	2.83	0.47
7:D:283:A:N1	7:D:358:U:N3	2.63	0.47
7:D:919:G:C2	7:D:2268:A:C8	3.02	0.47
7:D:1183:G:N2	7:D:1184:G:H1'	2.30	0.47
7:D:1223:C:N4	43:n:88:ARG:HH22	2.13	0.47
7:D:1240:U:H3'	7:D:1241:A:N7	2.30	0.47
7:D:1260:G:N2	7:D:1261:C:O2	2.48	0.47
7:D:1332:G:C5	7:D:1609:A:C6	3.03	0.47
7:D:1369:G:C2	7:D:1370:C:C2	3.03	0.47
7:D:1457:A:C6	7:D:2703:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1530:G:C5	7:D:1531:C:N4	2.83	0.47
7:D:1555:G:C2	7:D:1556:C:C2	3.03	0.47
7:D:1637:A:H4'	7:D:2711:A:O2'	2.15	0.47
7:D:1996:C:H2'	7:D:1997:G:O4'	2.15	0.47
7:D:2063:C:N4	7:D:2064:C:N4	2.62	0.47
7:D:2070:G:C2	7:D:2071:A:N3	2.83	0.47
7:D:2106:G:H8	7:D:2106:G:O5'	1.98	0.47
7:D:2210:G:O2'	7:D:2211:G:N7	2.48	0.47
7:D:2315:G:H2'	7:D:2316:C:H6	1.80	0.47
7:D:2334:G:C2	40:k:15:ARG:CZ	2.98	0.47
7:D:2410:G:C6	7:D:2411:A:C4	3.03	0.47
7:D:2820:A:O2'	39:j:4:LEU:HD22	2.14	0.47
8:E:92:G:N2	8:E:93:C:O2	2.48	0.47
10:G:22:TRP:CG	10:G:59:ARG:NH1	2.83	0.47
10:G:184:TYR:HE1	10:G:201:TYR:HE1	1.62	0.47
11:H:63:LYS:O	11:H:67:ILE:HG23	2.14	0.47
18:O:33:THR:HG22	18:O:39:PRO:CA	2.39	0.47
19:P:27:LEU:HG	19:P:28:LYS:H	1.80	0.47
20:Q:55:ARG:HA	20:Q:58:GLU:CG	2.45	0.47
20:Q:88:ARG:NH1	20:Q:88:ARG:CG	2.73	0.47
30:a:242:ARG:HH12	30:a:244:ARG:HE	1.62	0.47
31:b:49:LEU:HD22	31:b:77:ILE:HB	1.97	0.47
36:g:99:PHE:CD1	36:g:100:GLY:N	2.83	0.47
37:h:128:HIS:CD2	37:h:148:LEU:HB2	2.42	0.47
38:i:65:PHE:HB2	38:i:104:PHE:O	2.15	0.47
42:m:27:LEU:HD11	52:w:13:LYS:HZ2	1.80	0.47
42:m:88:ILE:HG22	43:n:51:VAL:HG12	1.97	0.47
44:o:40:ASN:OD1	44:o:41:LYS:N	2.43	0.47
45:p:31:HIS:C	45:p:33:LYS:H	2.21	0.47
52:w:46:CYS:SG	52:w:49:CYS:SG	3.11	0.47
55:z:30:ARG:HD2	55:z:44:LYS:HE2	1.97	0.47
56:B:17:HIS:CE1	56:B:116:GLU:CD	2.93	0.47
56:B:34:HIS:ND1	56:B:35:ALA:N	2.62	0.47
56:B:380:VAL:N	56:B:406:LEU:HB3	2.28	0.47
56:B:392:ASN:C	56:B:394:ALA:N	2.68	0.47
3:3:25:PRO:O	3:3:29:GLN:HB3	2.15	0.46
3:3:55:VAL:HG23	3:3:69:THR:HA	1.97	0.46
3:3:132:ARG:O	7:D:1077:A:N3	2.48	0.46
3:3:132:ARG:CZ	7:D:1080:C:H42	2.28	0.46
5:5:74:C:O5'	5:5:75:C:OP2	2.32	0.46
6:A:113:G:C2	6:A:315:A:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:165:C:H2'	6:A:166:G:H8	1.80	0.46
6:A:481:G:H4'	6:A:482:A:OP1	2.13	0.46
6:A:648:A:H2'	6:A:649:G:H8	1.78	0.46
6:A:695:A:N6	6:A:797:C:H1'	2.31	0.46
6:A:703:G:HO2'	6:A:704:A:P	2.29	0.46
6:A:812:C:H2'	6:A:813:U:OP2	2.15	0.46
6:A:958:A:OP2	6:A:959:A:OP2	2.33	0.46
6:A:1023:G:OP2	6:A:1024:G:N7	2.49	0.46
6:A:1088:G:C2	6:A:1098:C:C2	3.04	0.46
6:A:1147:C:O2	6:A:1148:U:H5	1.98	0.46
6:A:1494:G:H1'	6:A:1495:U:C5	2.50	0.46
7:D:17:G:C4	7:D:18:C:C5	3.03	0.46
7:D:29:U:H6	7:D:29:U:O5'	1.99	0.46
7:D:121:G:H5"	7:D:149:A:H5'	1.97	0.46
7:D:122:G:C6	7:D:123:G:N7	2.83	0.46
7:D:145:G:H2'	7:D:146:G:C8	2.49	0.46
7:D:295:G:OP2	7:D:338:G:C2	2.68	0.46
7:D:752:A:HO2'	7:D:753:C:P	2.38	0.46
7:D:900:A:H2'	7:D:901:A:O4'	2.15	0.46
7:D:1113:U:H2'	7:D:1114:G:C8	2.49	0.46
7:D:1205:U:H2'	7:D:1205:U:O2	2.15	0.46
7:D:1301:A:N6	7:D:1303:G:C4	2.82	0.46
7:D:1511:A:H2'	7:D:1512:G:C8	2.49	0.46
7:D:1784:A:N3	7:D:1785:A:N6	2.64	0.46
7:D:1819:A:OP1	30:a:157:ARG:HA	2.15	0.46
7:D:1942:C:O2'	56:B:577:GLN:HA	2.16	0.46
7:D:2051:A:C4	7:D:2614:A:N6	2.83	0.46
7:D:2056:G:N2	52:w:4:HIS:NE2	2.62	0.46
7:D:2311:A:H4'	33:d:86:MET:HE2	1.96	0.46
7:D:2334:G:N3	40:k:15:ARG:CZ	2.77	0.46
7:D:2386:C:C2	48:s:41:ARG:NH2	2.83	0.46
7:D:2413:G:N2	7:D:2414:G:C4	2.83	0.46
7:D:2740:A:C2	7:D:2741:A:C6	3.03	0.46
7:D:2819:G:C2	7:D:2821:A:C5	3.03	0.46
7:D:2884:U:C2	52:w:52:TYR:HD1	2.32	0.46
9:F:22:LYS:O	9:F:24:TRP:HD1	1.98	0.46
9:F:181:PHE:HD1	15:L:71:GLY:HA3	1.79	0.46
10:G:33:LEU:O	10:G:36:ASP:HB3	2.15	0.46
12:I:51:VAL:HB	12:I:52:PRO:HD3	1.97	0.46
16:M:20:ARG:O	16:M:60:ASP:HB2	2.15	0.46
20:Q:103:THR:C	20:Q:105:THR:N	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:70:LYS:HB3	26:W:73:GLU:N	2.29	0.46
30:a:270:ILE:O	30:a:271:ILE:HB	2.15	0.46
31:b:38:THR:OG1	31:b:44:TYR:HB2	2.16	0.46
33:d:21:ARG:HD3	33:d:21:ARG:HA	1.67	0.46
33:d:111:LEU:O	33:d:113:ARG:N	2.48	0.46
35:f:114:ARG:O	35:f:117:PHE:HB2	2.15	0.46
40:k:42:ASP:HB3	40:k:44:LYS:HG2	1.96	0.46
42:m:82:GLY:O	42:m:83:LEU:HD12	2.15	0.46
43:n:60:GLU:OE1	43:n:100:ARG:HD3	2.15	0.46
46:q:19:LYS:C	46:q:21:LYS:H	2.23	0.46
52:w:51:TYR:CD1	52:w:55:ARG:HG2	2.50	0.46
52:w:51:TYR:HB3	52:w:55:ARG:HA	1.97	0.46
56:B:16:ALA:O	56:B:22:LYS:HD2	2.15	0.46
56:B:65:ARG:CG	56:B:246:THR:N	2.78	0.46
56:B:92:GLU:O	56:B:97:LEU:N	2.48	0.46
56:B:196:LEU:CD2	56:B:282:LEU:HG	2.45	0.46
56:B:218:PHE:CE1	56:B:291:TYR:CD2	3.03	0.46
56:B:306:TYR:CB	56:B:370:ILE:HG21	2.41	0.46
56:B:330:LEU:CD2	56:B:346:CYS:CA	2.92	0.46
56:B:411:LYS:CA	56:B:480:GLU:CD	2.88	0.46
56:B:431:LYS:CB	56:B:458:GLU:CG	2.83	0.46
56:B:543:GLY:O	56:B:544:LYS:HG2	2.16	0.46
1:1:10:ILE:HG21	7:D:2477:C:H42	1.81	0.46
5:5:54:U:H3	5:5:58:A:N6	2.04	0.46
6:A:80:G:C4	6:A:81:G:C8	3.02	0.46
6:A:129(A):G:HO2'	6:A:130:A:P	2.30	0.46
6:A:285:G:C4	6:A:286:G:C8	3.04	0.46
6:A:498:A:N1	6:A:547:A:N9	2.64	0.46
6:A:498:A:O4'	6:A:500:G:H5'	2.16	0.46
6:A:519:C:C2	6:A:520:A:C8	3.03	0.46
6:A:544:G:C6	6:A:545:C:C4	3.03	0.46
6:A:550:G:H2'	6:A:551:U:C6	2.50	0.46
6:A:585:G:H1	6:A:756:C:N4	2.13	0.46
6:A:690:G:C6	6:A:691:G:C6	3.03	0.46
6:A:769:G:N2	6:A:770:C:C2	2.83	0.46
6:A:1084:G:H2'	6:A:1085:U:H2'	1.96	0.46
6:A:1089:G:O2'	6:A:1169:A:N1	2.34	0.46
6:A:1287:A:H2'	6:A:1288:A:C8	2.50	0.46
7:D:130:C:H2'	7:D:131:G:O4'	2.16	0.46
7:D:152:G:C6	7:D:153:C:C4	3.03	0.46
7:D:255:A:N6	7:D:256:A:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:585:G:N3	7:D:1251:C:N4	2.63	0.46
7:D:612:G:H1'	7:D:617:G:N2	2.29	0.46
7:D:743:G:N1	7:D:744:G:C4	2.84	0.46
7:D:744:G:N2	7:D:754:C:C2	2.83	0.46
7:D:860:U:N3	7:D:917:A:N6	2.55	0.46
7:D:1067:A:H2'	7:D:1068:G:C4	2.50	0.46
7:D:1095:A:H2'	7:D:1096:A:O4'	2.14	0.46
7:D:1340:U:HO2'	7:D:1394:U:HO2'	1.61	0.46
7:D:1468:C:H42	7:D:1524:G:H1	1.62	0.46
7:D:1566:A:C4	30:a:215:LEU:HD22	2.49	0.46
7:D:1658:C:OP1	31:b:134:ILE:HD12	2.14	0.46
7:D:1670:C:C4	7:D:1671:U:C2	3.03	0.46
7:D:1823:G:C2	7:D:1824:G:C8	3.03	0.46
7:D:1928:A:H8	7:D:1928:A:OP2	1.98	0.46
7:D:2335:A:N6	7:D:2337:G:C4	2.82	0.46
7:D:2629:A:N6	7:D:2896:C:O4'	2.48	0.46
7:D:2648:C:O2	7:D:2673:G:N2	2.48	0.46
7:D:2781:A:N1	7:D:2782:G:N3	2.62	0.46
7:D:2837:G:C2	7:D:2882:A:C2	3.03	0.46
7:D:2873:A:O2'	7:D:2874:C:OP1	2.31	0.46
8:E:43:C:H1'	33:d:93:THR:O	2.15	0.46
8:E:53:A:C5	8:E:54:G:N7	2.83	0.46
10:G:141:VAL:O	10:G:144:SER:OG	2.24	0.46
11:H:125:HIS:HA	11:H:149:ALA:CB	2.45	0.46
11:H:185:PHE:CZ	11:H:188:LEU:HD23	2.50	0.46
12:I:40:ARG:HG2	12:I:66:MET:CE	2.46	0.46
16:M:4:TYR:CE2	16:M:88:TYR:HD1	2.34	0.46
20:Q:55:ARG:HA	20:Q:58:GLU:CD	2.41	0.46
20:Q:80:ARG:CG	20:Q:80:ARG:NH1	2.79	0.46
23:T:12:LYS:C	23:T:14:ASN:H	2.23	0.46
26:W:40:ILE:CG1	26:W:67:VAL:O	2.62	0.46
26:W:62:ILE:C	26:W:63:THR:OG1	2.57	0.46
29:Z:20:TYR:O	29:Z:225:ASN:ND2	2.49	0.46
29:Z:66:HIS:N	29:Z:158:ALA:C	2.72	0.46
29:Z:174:PRO:O	29:Z:175:VAL:HG13	2.15	0.46
29:Z:200:LYS:HZ2	29:Z:208:PHE:CB	2.28	0.46
30:a:31:LYS:NZ	30:a:83:GLU:HB3	2.31	0.46
31:b:5:LEU:HD13	31:b:25:VAL:CG1	2.39	0.46
33:d:32:PRO:HG2	33:d:168:GLU:HG3	1.91	0.46
36:g:68:GLU:HG3	36:g:104:ARG:NH2	2.29	0.46
38:i:26:TYR:CZ	38:i:27:VAL:HB	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:31:ASP:CG	38:i:134:ARG:HB2	2.40	0.46
39:j:8:ARG:C	39:j:10:LEU:HG	2.40	0.46
39:j:90:ARG:NH1	39:j:117:VAL:CG1	2.78	0.46
41:l:64:ARG:O	41:l:65:LYS:C	2.58	0.46
43:n:41:GLY:HA2	43:n:51:VAL:HG22	1.97	0.46
44:o:39:THR:HG22	44:o:40:ASN:O	2.15	0.46
48:s:37:LEU:HG	48:s:59:LEU:O	2.14	0.46
50:u:40:THR:O	50:u:43:ILE:N	2.48	0.46
51:v:65:ASP:CA	51:v:68:ARG:NH1	2.78	0.46
56:B:88:ASP:O	56:B:349:LEU:CD1	2.58	0.46
56:B:230:ILE:HG12	56:B:279:THR:HA	1.97	0.46
56:B:386:GLU:HG2	56:B:401:ARG:HG3	1.97	0.46
56:B:434:ARG:O	56:B:452:TYR:CA	2.47	0.46
56:B:489:LEU:C	56:B:509:HIS:N	2.66	0.46
56:B:559:LEU:H	56:B:559:LEU:HG	1.47	0.46
4:4:12:G:N1	4:4:13:C:C2	2.83	0.46
6:A:156:G:C5	6:A:166:G:C6	3.03	0.46
6:A:230:G:C6	6:A:231:G:N7	2.84	0.46
6:A:237:C:H2'	6:A:238:G:H8	1.81	0.46
6:A:767:A:H2'	6:A:768:A:O4'	2.15	0.46
6:A:767:A:H8	6:A:767:A:O5'	1.97	0.46
6:A:1156:G:H21	6:A:1179:A:H2	1.62	0.46
6:A:1203:C:OP1	21:R:2:ALA:N	2.48	0.46
6:A:1319:A:C5	6:A:1323:G:C4	3.04	0.46
6:A:1452:C:C1'	6:A:1453:G:N2	2.78	0.46
7:D:270(J):G:C2	7:D:270(K):C:C2	3.03	0.46
7:D:279:C:N4	7:D:359:A:C2	2.81	0.46
7:D:456:C:C4	45:p:69:TYR:HD2	2.34	0.46
7:D:685:A:N9	7:D:774:A:N6	2.63	0.46
7:D:725:G:C6	7:D:726:G:N2	2.83	0.46
7:D:766:C:C4	7:D:767:U:C4	3.03	0.46
7:D:821:A:N7	7:D:946:G:C5	2.84	0.46
7:D:930:U:O4'	7:D:932:G:C5	2.68	0.46
7:D:1177:A:N3	7:D:1178:C:C6	2.83	0.46
7:D:1203:G:OP1	7:D:1204:A:H8	1.98	0.46
7:D:1277:G:C2	7:D:1278:A:C4	3.03	0.46
7:D:1312:U:H2'	7:D:1313:U:C6	2.50	0.46
7:D:1340:U:HO2'	7:D:1341:U:P	2.38	0.46
7:D:1427:A:O2'	7:D:1428:C:P	2.73	0.46
7:D:1650:G:C2	7:D:1651:G:C8	3.04	0.46
7:D:1764:G:C5	7:D:1989:G:N2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1784:A:N7	7:D:1981:A:C6	2.83	0.46
7:D:2246:G:N2	7:D:2426:A:H1'	2.30	0.46
7:D:2287:A:N6	7:D:2344:U:N3	2.62	0.46
7:D:2370:G:C5	7:D:2371:G:C5	3.03	0.46
7:D:2397:G:C2	7:D:2398:U:C2	3.03	0.46
7:D:2595:G:N2	7:D:2599:G:C4	2.83	0.46
7:D:2653:U:C2	7:D:2654:A:N7	2.83	0.46
12:I:147:ASP:HA	12:I:150:ARG:HB2	1.96	0.46
20:Q:68:GLY:C	20:Q:70:LEU:N	2.73	0.46
23:T:22:THR:OG1	23:T:23:ASP:N	2.47	0.46
29:Z:3:HIS:O	29:Z:5:LYS:N	2.44	0.46
33:d:27:ASN:C	33:d:29:TRP:N	2.73	0.46
33:d:55:LYS:HD3	33:d:147:ASP:HB3	1.96	0.46
34:e:149:ARG:HD3	34:e:153:LYS:HZ1	1.76	0.46
36:g:67:LYS:H	36:g:77:ILE:HB	1.80	0.46
37:h:124:LYS:HD3	37:h:141:ALA:O	2.16	0.46
40:k:42:ASP:O	40:k:44:LYS:N	2.47	0.46
43:n:21:ARG:H	43:n:95:LEU:CD2	2.28	0.46
43:n:75:PHE:CE2	43:n:89:GLN:HB2	2.49	0.46
47:r:42:VAL:O	47:r:45:ASP:HB2	2.15	0.46
50:u:22:ALA:HB1	50:u:46:ASN:OD1	2.15	0.46
54:y:17:GLY:CA	54:y:44:PRO:HB3	2.43	0.46
54:y:35:ARG:HB3	54:y:36:GLN:OE1	2.15	0.46
56:B:97:LEU:HD23	56:B:97:LEU:C	2.39	0.46
56:B:335:GLU:HG2	56:B:375:SER:OG	2.07	0.46
56:B:372:THR:HG22	56:B:373:ALA:N	2.29	0.46
56:B:432:ARG:HH21	56:B:487:GLY:HA3	1.79	0.46
3:3:21:PRO:CG	3:3:22:PRO:HD3	2.45	0.46
3:3:23:VAL:HG13	3:3:27:LEU:HG	1.97	0.46
4:4:12:G:H2'	4:4:13:C:O4'	2.15	0.46
5:5:8:U:O2	5:5:21:A:H2	1.98	0.46
6:A:5:U:H5'	6:A:6:G:C8	2.50	0.46
6:A:159:G:H2'	6:A:161:A:OP2	2.15	0.46
6:A:200:G:N3	6:A:201:C:N4	2.63	0.46
6:A:266:G:HO2'	6:A:267:C:P	2.39	0.46
6:A:270:A:C5	6:A:271:C:C4	3.03	0.46
6:A:345:C:H3'	6:A:345:C:OP2	2.16	0.46
6:A:357:G:H2'	6:A:358:U:H6	1.79	0.46
6:A:381:C:C4	6:A:382:A:C6	3.04	0.46
6:A:408:A:C6	6:A:409:G:C5	3.03	0.46
6:A:1044:A:C5	6:A:1045:C:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1084:G:H3'	6:A:1086:U:C5	2.50	0.46
6:A:1196:U:O2'	6:A:1197:G:OP2	2.25	0.46
6:A:1215:G:C2	6:A:1216:G:C8	3.03	0.46
6:A:1318:A:H1'	26:W:34:TRP:CZ3	2.50	0.46
6:A:1326:C:H2'	6:A:1327:C:C5	2.50	0.46
7:D:119:A:O2'	7:D:120:U:O5'	2.27	0.46
7:D:152:G:H8	7:D:152:G:O5'	1.98	0.46
7:D:154:G:N1	7:D:155:C:C2	2.83	0.46
7:D:215:G:H4'	7:D:216:A:H4'	1.97	0.46
7:D:266:G:C2	7:D:267:C:H1'	2.51	0.46
7:D:323:G:O2'	32:c:170:LEU:HD13	2.15	0.46
7:D:503:A:C2	7:D:506:G:C4	3.04	0.46
7:D:530:G:N3	7:D:530:G:O2'	2.46	0.46
7:D:747:U:N3	7:D:2613:U:H5	2.14	0.46
7:D:800:A:H8	7:D:800:A:O5'	1.98	0.46
7:D:881:G:H2'	7:D:882:G:C5'	2.44	0.46
7:D:884:C:O2	7:D:885:C:C6	2.62	0.46
7:D:1084:A:C8	7:D:1085:A:N7	2.83	0.46
7:D:1228:G:H5'	7:D:1229:G:OP2	2.16	0.46
7:D:1286:A:C2	7:D:1329:U:C2	3.03	0.46
7:D:1410:G:C5	7:D:1411:C:C5	3.03	0.46
7:D:1425:G:C6	7:D:1426:G:C6	3.03	0.46
7:D:1449(A):G:H2'	7:D:1450:C:O4'	2.16	0.46
7:D:1504:C:H2'	7:D:1505:C:C6	2.51	0.46
7:D:1638:C:H5"	7:D:2710:C:O2'	2.15	0.46
7:D:1708:C:H5"	7:D:1709:U:OP2	2.15	0.46
7:D:1732:A:H3'	7:D:1733:G:C5'	2.46	0.46
7:D:1735:C:HO2'	7:D:1741:C:C4'	2.09	0.46
7:D:2194:G:C6	7:D:2195:C:N4	2.84	0.46
7:D:2209:C:H2'	7:D:2211:G:P	2.55	0.46
7:D:2311:A:O2'	33:d:86:MET:HG2	2.15	0.46
7:D:2565:A:H2'	7:D:2566:A:H1'	1.96	0.46
8:E:57:A:H1'	33:d:26:GLN:HE21	1.79	0.46
8:E:92:G:C2	8:E:93:C:C2	3.04	0.46
10:G:140:ARG:HA	10:G:143:GLU:HB2	1.98	0.46
12:I:91:LEU:CD2	12:I:118:ILE:HG21	2.46	0.46
16:M:89:ASN:C	16:M:91:ASP:H	2.23	0.46
22:S:2:PRO:C	22:S:38:ARG:HH12	2.13	0.46
24:U:97:SER:O	24:U:103:GLY:N	2.49	0.46
30:a:222:ARG:CB	30:a:222:ARG:HH11	2.28	0.46
31:b:77:ILE:C	31:b:78:LEU:HD12	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:c:35:GLU:HA	32:c:38:ARG:HH21	1.80	0.46
33:d:64:THR:HG21	33:d:92:VAL:HG11	1.97	0.46
34:e:90:LYS:HE2	34:e:159:GLU:CG	2.40	0.46
34:e:176:ALA:HB3	56:B:469:SER:C	2.41	0.46
35:f:17:ASP:C	35:f:19:GLU:H	2.22	0.46
37:h:72:PRO:C	37:h:107:LYS:HZ1	2.23	0.46
38:i:31:ASP:OD1	38:i:134:ARG:HB2	2.16	0.46
38:i:102:VAL:HG13	38:i:104:PHE:HE1	1.81	0.46
41:l:40:THR:O	41:l:42:ILE:N	2.49	0.46
53:x:23:THR:OG1	53:x:24:GLU:HG3	2.16	0.46
53:x:38:LYS:O	53:x:49:HIS:CD2	2.69	0.46
55:z:50:LEU:C	55:z:53:PRO:HD2	2.40	0.46
55:z:61:LEU:C	55:z:62:LEU:HG	2.40	0.46
56:B:11:ASN:O	56:B:100:VAL:HG12	2.14	0.46
56:B:201:PHE:CD2	56:B:215:LEU:HA	2.51	0.46
56:B:229:ARG:NH2	56:B:286:PRO:CD	2.61	0.46
56:B:245:PHE:CZ	56:B:263:TRP:N	2.84	0.46
56:B:352:LEU:HD13	56:B:356:ILE:HD11	1.97	0.46
4:4:17:C:OP2	4:4:17(A):U:H5	1.98	0.46
6:A:51:A:H4'	6:A:52:G:H5'	1.97	0.46
6:A:234:C:H2'	6:A:235:C:C6	2.51	0.46
6:A:254:G:C6	6:A:273:A:C6	3.03	0.46
6:A:280:C:C5	24:U:91:ARG:NH1	2.83	0.46
6:A:451:A:H8	6:A:451:A:O5'	1.98	0.46
6:A:802:A:C4	6:A:803:G:C8	3.03	0.46
6:A:831:U:H2'	6:A:832:C:H6	1.80	0.46
6:A:838:G:N1	6:A:849:C:C4	2.71	0.46
6:A:925:G:N3	6:A:927:G:C8	2.84	0.46
6:A:1063:C:N4	6:A:1193:G:H1	2.14	0.46
6:A:1320:C:O2'	26:W:73:GLU:HB3	2.15	0.46
6:A:1459:C:OP1	27:X:31:SER:OG	2.30	0.46
6:A:1492:A:OP1	19:P:47:LYS:HB3	2.16	0.46
7:D:238:C:O2	7:D:260:G:C2	2.69	0.46
7:D:446:G:OP2	42:m:3:ARG:CD	2.64	0.46
7:D:489:G:C2	7:D:491:G:C2	3.04	0.46
7:D:558:G:N3	7:D:559:G:N7	2.64	0.46
7:D:707:G:O6	7:D:725:G:N2	2.49	0.46
7:D:785:G:C2	7:D:786:C:C2	3.03	0.46
7:D:828:U:O2'	7:D:829:A:O4'	2.32	0.46
7:D:852:G:C4	7:D:926:A:N1	2.84	0.46
7:D:1024:G:N1	7:D:1139:G:N2	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1229:G:C5	7:D:1230:C:C4	3.03	0.46
7:D:1256:G:C5	7:D:1257:C:C5	3.04	0.46
7:D:1482:U:H3'	7:D:1482:U:O2	2.15	0.46
7:D:1629:U:H2'	7:D:1630:G:H8	1.80	0.46
7:D:1707:G:H2'	7:D:1708:C:O4'	2.14	0.46
7:D:1798:U:C2	7:D:1822:G:N2	2.83	0.46
7:D:1839:G:C5	7:D:1840:G:C8	3.04	0.46
7:D:1869:G:C2'	7:D:1871:A:N7	2.76	0.46
7:D:1869:G:C6	7:D:1878:G:O6	2.68	0.46
7:D:1871:A:C2	7:D:1872:A:C5	3.03	0.46
7:D:2013:A:H2'	7:D:2014:A:H8	1.80	0.46
7:D:2054:A:H62	7:D:2577:A:H61	1.63	0.46
7:D:2192:G:C2	7:D:2193:G:C8	3.04	0.46
7:D:2301:C:H2'	7:D:2302:G:C8	2.51	0.46
7:D:2511:U:H2'	7:D:2512:C:O4'	2.16	0.46
7:D:2884:U:C5	52:w:43:HIS:HB3	2.51	0.46
8:E:7:G:H4'	40:k:29:PHE:CE1	2.50	0.46
10:G:19:GLU:N	10:G:19:GLU:OE1	2.48	0.46
14:K:52:GLU:HG2	14:K:53:LYS:HD3	1.97	0.46
20:Q:36:LYS:HG3	20:Q:37:THR:N	2.31	0.46
29:Z:200:LYS:HZ3	29:Z:208:PHE:HB2	1.81	0.46
30:a:242:ARG:HH22	30:a:244:ARG:HB2	1.81	0.46
32:c:40:GLN:HB3	32:c:184:TYR:CE2	2.51	0.46
34:e:124:GLU:C	34:e:126:PRO:HD3	2.41	0.46
35:f:25:ARG:NH1	35:f:29:LYS:HD2	2.30	0.46
37:h:46:LYS:CE	55:z:59:LYS:HZ1	2.27	0.46
39:j:77:ARG:O	39:j:80:PHE:N	2.48	0.46
40:k:49:VAL:HG22	40:k:76:LYS:HZ3	1.80	0.46
41:l:43:GLN:OE1	41:l:43:GLN:N	2.45	0.46
41:l:50:ILE:HB	41:l:66:VAL:HG12	1.96	0.46
45:p:31:HIS:HA	45:p:32:PRO:HD3	1.76	0.46
45:p:47:PHE:O	45:p:48:LYS:HB2	2.16	0.46
46:q:45:VAL:HB	46:q:57:GLN:HG2	1.97	0.46
46:q:99:CYS:SG	46:q:100:ALA:N	2.86	0.46
56:B:69:ARG:HH21	56:B:178:LEU:HD12	1.78	0.46
56:B:147:GLU:O	56:B:150:LEU:HB2	2.16	0.46
56:B:380:VAL:N	56:B:406:LEU:HD22	2.31	0.46
56:B:492:VAL:CG2	56:B:541:ILE:HG21	2.43	0.46
5:5:4:C:N4	5:5:69:G:H1	2.09	0.46
6:A:16:A:O2'	6:A:17:U:H5'	2.16	0.46
6:A:422:C:H4'	6:A:423:G:N3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:513:C:H2'	6:A:514:C:C6	2.51	0.46
6:A:607:A:H2'	6:A:608:A:O4'	2.16	0.46
6:A:688:G:H1	6:A:699:C:H42	1.63	0.46
6:A:767:A:H2'	6:A:768:A:C8	2.50	0.46
6:A:814:A:OP2	6:A:816:A:N6	2.48	0.46
6:A:1015:A:H2'	6:A:1016:A:H8	1.81	0.46
6:A:1023:G:C6	6:A:1024:G:C4	3.04	0.46
6:A:1182:G:C5	6:A:1182:G:OP2	2.68	0.46
6:A:1316:G:O2'	6:A:1318:A:N7	2.42	0.46
6:A:1380:U:N3	14:K:3:ARG:NH1	2.64	0.46
6:A:1520:G:C2	6:A:1521:G:C4	3.04	0.46
7:D:48:G:C2	7:D:178:G:C6	3.03	0.46
7:D:226:G:N2	7:D:227:A:C2	2.83	0.46
7:D:429:A:N7	7:D:430:G:C6	2.84	0.46
7:D:500:G:H22	7:D:503:A:P	2.39	0.46
7:D:590:A:H5"	32:c:95:ARG:HE	1.80	0.46
7:D:649:G:H2'	7:D:650:C:O4'	2.15	0.46
7:D:699:A:H1'	7:D:1634:A:N7	2.31	0.46
7:D:702:G:C2	7:D:703:U:C2	3.04	0.46
7:D:888:C:H4'	7:D:889:C:OP1	2.15	0.46
7:D:1049:C:C4	7:D:1050:A:N7	2.84	0.46
7:D:1056:G:H3'	7:D:1056:G:H8	1.81	0.46
7:D:1416:G:N2	7:D:1417:C:N4	2.64	0.46
7:D:1613:G:C4	7:D:1617:C:N4	2.84	0.46
7:D:1633:G:C5	7:D:1635:G:C5	3.04	0.46
7:D:1897:G:C2	7:D:1898:U:C2	3.04	0.46
7:D:2012:G:O2'	7:D:2013:A:O5'	2.31	0.46
7:D:2069:G:C2	7:D:2070:G:C8	3.04	0.46
7:D:2116:G:N7	7:D:2165:G:N2	2.62	0.46
7:D:2116:G:H3'	7:D:2117:A:C2	2.50	0.46
7:D:2376:A:N1	40:k:87:PHE:CE1	2.84	0.46
7:D:2734:A:H2	31:b:203:LYS:HD3	1.79	0.46
7:D:2848:G:N1	7:D:2867:G:N3	2.64	0.46
8:E:110:G:H2'	8:E:111:U:O4'	2.16	0.46
11:H:146:ILE:O	11:H:183:GLY:N	2.38	0.46
13:J:14:LEU:HD21	13:J:18:GLN:HB3	1.98	0.46
13:J:40:VAL:O	13:J:41:GLU:HB2	2.15	0.46
15:L:49:GLU:OE2	15:L:60:ARG:HD2	2.15	0.46
32:c:32:LEU:HA	32:c:32:LEU:HD12	1.68	0.46
32:c:37:VAL:CG1	32:c:41:LEU:HD23	2.42	0.46
32:c:69:HIS:O	32:c:69:HIS:CG	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:c:196:LEU:HD13	32:c:199:TRP:NE1	2.29	0.46
33:d:81:LYS:HG2	33:d:83:ARG:H	1.81	0.46
36:g:99:PHE:HA	41:l:74:ARG:HH21	1.80	0.46
37:h:97:PRO:CD	37:h:102:ARG:HH11	2.29	0.46
38:i:11:LYS:HZ3	38:i:73:PRO:HD3	1.80	0.46
38:i:66:ILE:HG22	38:i:67:ARG:N	2.30	0.46
39:j:15:SER:OG	39:j:16:HIS:N	2.46	0.46
39:j:95:THR:HG22	39:j:96:ARG:N	2.31	0.46
39:j:103:ARG:HG2	39:j:110:PRO:HA	1.98	0.46
40:k:41:ASP:CG	40:k:46:VAL:HG23	2.40	0.46
41:l:53:ARG:HH11	41:l:102:ILE:N	2.14	0.46
50:u:2:PRO:O	50:u:39:ASP:HB2	2.16	0.46
50:u:8:LEU:HD23	50:u:31:LEU:HA	1.97	0.46
51:v:42:PHE:HB3	51:v:57:GLU:CD	2.41	0.46
56:B:12:PHE:HB2	56:B:102:GLY:O	2.16	0.46
56:B:196:LEU:HD11	56:B:221:ARG:N	2.13	0.46
56:B:211:VAL:HG12	56:B:212:ILE:N	2.31	0.46
56:B:317:ARG:HD2	56:B:317:ARG:N	2.31	0.46
56:B:338:THR:O	56:B:339:ALA:CB	2.64	0.46
56:B:520:ILE:CD1	56:B:520:ILE:C	2.86	0.46
3:3:137:GLU:CB	7:D:1078:U:H5”	2.44	0.46
6:A:45:U:H2’	6:A:46:G:C8	2.50	0.46
6:A:75:C:O2	6:A:96:G:C4	2.69	0.46
6:A:77:C:N4	6:A:78:G:O6	2.48	0.46
6:A:95:G:H2’	6:A:96:G:C8	2.51	0.46
6:A:102:G:N2	6:A:103:C:C2	2.84	0.46
6:A:158:G:C6	6:A:159:G:C5	3.04	0.46
6:A:475:G:H8	6:A:475:G:O5’	1.98	0.46
6:A:738:C:P	13:J:92:LYS:NZ	2.89	0.46
6:A:1225:A:OP2	6:A:1225:A:H3’	2.15	0.46
6:A:1316:G:H22	6:A:1319:A:C5’	2.29	0.46
7:D:7:G:C5’	35:f:121:LYS:HZ3	2.29	0.46
7:D:216:A:H2’	7:D:217:G:C8	2.50	0.46
7:D:223:A:O2’	7:D:224:G:OP2	2.30	0.46
7:D:248:G:O2’	7:D:2432:A:OP1	2.15	0.46
7:D:270(M):U:C4’	7:D:270(N):G:H4’	2.45	0.46
7:D:279:C:HO2’	7:D:280:C:P	2.39	0.46
7:D:326:G:C4	7:D:327:G:C8	3.04	0.46
7:D:389:G:N1	37:h:64:LYS:HD2	2.30	0.46
7:D:487:C:H2’	7:D:488:G:C8	2.50	0.46
7:D:655:A:O2’	7:D:656:G:O5’	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:657:U:H2'	7:D:658:C:C6	2.50	0.46
7:D:715:G:C6	7:D:716:A:C6	3.04	0.46
7:D:988:A:H62	50:u:13:ILE:HG13	1.80	0.46
7:D:996:A:H5'	42:m:93:LYS:HG3	1.98	0.46
7:D:1138:G:C6	7:D:1139:G:C6	3.04	0.46
7:D:1310:G:O2'	7:D:1311:G:OP1	2.27	0.46
7:D:1499:C:H2'	7:D:1500:G:H8	1.81	0.46
7:D:1565:C:O2'	7:D:1566:A:O5'	2.32	0.46
7:D:1792:G:C6	7:D:1793:C:C4	3.03	0.46
7:D:1799:G:O4'	30:a:268:ARG:NH2	2.48	0.46
7:D:2106:G:C5	7:D:2108:C:N4	2.84	0.46
7:D:2249:U:O2'	7:D:2250:G:OP1	2.33	0.46
7:D:2578:G:C5	31:b:140:SER:HB2	2.50	0.46
7:D:2588:G:C5	7:D:2589:A:C8	3.04	0.46
7:D:2700:C:H42	7:D:2707:G:H1	1.62	0.46
7:D:2889:C:H2'	7:D:2891:G:O5'	2.16	0.46
8:E:91:C:O2'	8:E:92:G:H5'	2.16	0.46
9:F:196:LEU:HD12	9:F:197:VAL:HG23	1.98	0.46
10:G:5:ILE:HD12	10:G:6:HIS:O	2.16	0.46
10:G:14:ILE:HG21	10:G:178:LEU:HG	1.97	0.46
12:I:75:THR:OG1	12:I:76:ILE:N	2.48	0.46
14:K:75:VAL:HG23	14:K:145:ALA:HB2	1.97	0.46
17:N:95:GLU:N	17:N:95:GLU:OE1	2.49	0.46
19:P:81:SER:HB3	19:P:106:ASP:OD2	2.15	0.46
20:Q:36:LYS:HE3	20:Q:59:TYR:HB3	1.98	0.46
23:T:8:ARG:HD3	23:T:17:TYR:CE1	2.46	0.46
30:a:40:THR:HB	30:a:62:TYR:CD2	2.50	0.46
31:b:14:ILE:HA	31:b:19:ARG:HG3	1.98	0.46
32:c:18:ARG:CZ	32:c:18:ARG:HB2	2.45	0.46
32:c:40:GLN:CD	32:c:43:LYS:HD2	2.41	0.46
34:e:175:LYS:HZ1	56:B:469:SER:HB3	1.78	0.46
36:g:79:PHE:CZ	41:l:75:ILE:HD13	2.50	0.46
38:i:32:TYR:O	38:i:118:LEU:HD11	2.15	0.46
38:i:67:ARG:HD3	38:i:103:MET:SD	2.56	0.46
44:o:14:PRO:O	44:o:18:ARG:HG2	2.15	0.46
47:r:94:GLU:HG3	47:r:130:PRO:HG3	1.98	0.46
53:x:50:ARG:HH11	53:x:52:VAL:CG2	2.29	0.46
56:B:23:SER:HB2	57:B:701:GCP:O2B	2.15	0.46
56:B:144:ARG:N	56:B:144:ARG:HD2	2.31	0.46
56:B:223:ARG:HD2	56:B:255:ALA:HB2	1.97	0.46
56:B:279:THR:C	56:B:280:ILE:HG22	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:409:TYR:HB3	56:B:453:GLU:CG	2.45	0.46
56:B:562:CYS:CB	56:B:570:LYS:NZ	2.78	0.46
3:3:23:VAL:HG13	3:3:27:LEU:CG	2.45	0.46
4:4:17:C:OP2	4:4:17(A):U:C5	2.69	0.46
6:A:85:U:H6	6:A:85:U:O5'	1.98	0.46
6:A:216:G:C4	6:A:217:C:N3	2.84	0.46
6:A:310:G:C6	6:A:311:C:C4	3.04	0.46
6:A:458:C:C5'	6:A:465:A:N1	2.66	0.46
6:A:705:U:C4	6:A:706:A:C5	3.03	0.46
6:A:945:G:H2'	6:A:945:G:N3	2.31	0.46
6:A:1053:G:C2'	6:A:1054:C:OP2	2.64	0.46
6:A:1055:A:H5'	6:A:1055:A:H8	1.81	0.46
6:A:1241:G:OP2	6:A:1241:G:H8	1.97	0.46
6:A:1261:A:H61	6:A:1274:G:C1'	2.28	0.46
6:A:1321:C:OP2	6:A:1322:C:H3'	2.15	0.46
6:A:1330:U:C4	6:A:1331:G:H1'	2.51	0.46
6:A:1461:G:N1	6:A:1462:G:C5	2.83	0.46
6:A:1501:C:N4	6:A:1504:G:C2	2.84	0.46
7:D:67:U:HO2'	7:D:68:G:P	2.38	0.46
7:D:85:G:C6	7:D:98:G:C6	3.03	0.46
7:D:326:G:N3	7:D:327:G:C8	2.84	0.46
7:D:366:C:H2'	7:D:370:G:O5'	2.16	0.46
7:D:470:A:C2	7:D:471:A:N3	2.84	0.46
7:D:532:A:OP2	7:D:2021:C:C5	2.69	0.46
7:D:585:G:C6	7:D:1251:C:C4	3.04	0.46
7:D:594:U:N3	7:D:595:C:C4	2.84	0.46
7:D:650:C:P	55:z:21:LYS:NZ	2.87	0.46
7:D:716:A:N6	7:D:717:G:N3	2.60	0.46
7:D:1040:C:H3'	7:D:1041:C:C5	2.51	0.46
7:D:1316:U:H2'	7:D:1317:A:H8	1.80	0.46
7:D:1472:A:C5	7:D:1473:G:C5	3.03	0.46
7:D:1472:A:C8	7:D:1473:G:C8	3.04	0.46
7:D:1484:G:C4	7:D:1485:G:C8	3.03	0.46
7:D:1563:G:N3	7:D:1564:C:H1'	2.31	0.46
7:D:1578:U:H5'	7:D:1579:A:OP2	2.16	0.46
7:D:1655:A:N6	7:D:2005:A:O2'	2.49	0.46
7:D:1860:G:N3	7:D:1861:G:C8	2.84	0.46
7:D:2230:G:N2	7:D:2231:C:C2	2.83	0.46
7:D:2450:A:N1	7:D:2451:A:C5	2.83	0.46
7:D:2589:A:H2'	7:D:2590:A:C8	2.51	0.46
7:D:2717:G:C5	7:D:2718:G:N7	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2797:U:H4'	7:D:2798:C:OP1	2.15	0.46
7:D:2810:A:O4'	31:b:61:ARG:NH1	2.49	0.46
15:L:17:THR:HG23	15:L:65:TYR:HE1	1.80	0.46
17:N:6:ILE:HA	17:N:97:GLU:O	2.15	0.46
18:O:14:VAL:O	18:O:77:MET:HE3	2.16	0.46
22:S:39:LEU:HD22	22:S:56:LEU:HB2	1.98	0.46
23:T:43:LYS:HA	23:T:48:TRP:CD1	2.50	0.46
24:U:15:MET:HE2	24:U:15:MET:HA	1.97	0.46
26:W:2:PRO:C	26:W:4:SER:H	2.24	0.46
31:b:156:MET:HG3	31:b:157:ALA:H	1.80	0.46
33:d:180:PHE:C	33:d:182:LYS:N	2.73	0.46
35:f:22:THR:HG23	35:f:61:ARG:NH2	2.31	0.46
35:f:38:HIS:N	35:f:48:MET:SD	2.89	0.46
35:f:78:TYR:C	35:f:80:GLY:H	2.24	0.46
35:f:112:LEU:HD23	35:f:112:LEU:HA	1.72	0.46
36:g:102:VAL:HG12	36:g:103:ALA:N	2.22	0.46
40:k:96:GLY:O	40:k:97:ARG:C	2.59	0.46
40:k:99:LYS:O	40:k:102:ALA:HB3	2.16	0.46
40:k:100:ALA:HA	40:k:103:GLU:CD	2.40	0.46
41:l:2:ASN:CG	41:l:3:ARG:H	2.12	0.46
43:n:20:LEU:CA	43:n:95:LEU:HD22	2.44	0.46
43:n:65:GLY:N	43:n:97:LYS:NZ	2.63	0.46
46:q:84:ARG:HD2	46:q:92:ASN:O	2.15	0.46
52:w:10:LYS:HZ2	52:w:11:THR:C	2.22	0.46
53:x:51:GLU:CD	53:x:52:VAL:N	2.74	0.46
56:B:214:TYR:HB2	56:B:245:PHE:HZ	1.76	0.46
5:5:7:A:H61	5:5:66:U:C2'	2.29	0.46
6:A:11:G:H1	6:A:23:C:H42	1.64	0.46
6:A:195:A:H4'	27:X:68:LYS:HZ3	1.80	0.46
6:A:404:U:H2'	6:A:405:U:C6	2.50	0.46
6:A:763:G:C6	6:A:764:C:C4	3.03	0.46
6:A:1016:A:H3'	6:A:1017:G:C8	2.50	0.46
6:A:1045:C:H2'	6:A:1046:A:H8	1.80	0.46
6:A:1288:A:C6	6:A:1289:A:C5	3.04	0.46
6:A:1455:G:N1	6:A:1459:C:N3	2.63	0.46
6:A:1479:C:H2'	6:A:1480:G:C8	2.47	0.46
7:D:30:G:C6	7:D:31:C:N3	2.84	0.46
7:D:191:A:C2	7:D:192:C:C4	3.04	0.46
7:D:452:G:H5"	7:D:453:C:P	2.56	0.46
7:D:453:C:H5'	7:D:454:A:OP2	2.16	0.46
7:D:489:G:O2'	7:D:491:G:O4'	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:498:G:N2	7:D:499:U:C2	2.83	0.46
7:D:563:G:H21	42:m:37:GLU:CD	2.22	0.46
7:D:607:U:OP2	7:D:619:G:N1	2.38	0.46
7:D:618(A):C:H5	7:D:619:G:C6	2.33	0.46
7:D:868:U:N3	7:D:869:G:N7	2.64	0.46
7:D:895:U:H5"	7:D:896:A:OP1	2.16	0.46
7:D:1174:A:H3'	7:D:1175:U:C5'	2.46	0.46
7:D:1213:A:C8	7:D:1237:A:C5	3.03	0.46
7:D:1229:G:C6	7:D:1230:C:N3	2.84	0.46
7:D:1298:C:C2	7:D:1643:G:N2	2.84	0.46
7:D:1342:A:C6	7:D:1345:C:C4	3.04	0.46
7:D:1419:A:H3'	7:D:1420:U:O2	2.16	0.46
7:D:1509:C:H5'	7:D:1510:A:C8	2.50	0.46
7:D:1910:G:C6	7:D:1921:G:C6	3.04	0.46
7:D:2379:G:N2	7:D:2380:C:O2	2.49	0.46
7:D:2572:A:OP2	31:b:144:ARG:O	2.33	0.46
7:D:2614:A:HO2'	7:D:2615:U:P	2.39	0.46
7:D:2749:A:C6	7:D:2750:A:N6	2.83	0.46
9:F:133:LYS:O	9:F:137:ARG:HG2	2.16	0.46
10:G:7:PRO:HG2	10:G:184:TYR:CD1	2.51	0.46
10:G:152:ILE:CG1	10:G:199:LYS:HB2	2.46	0.46
11:H:162:LEU:C	11:H:165:MET:H	2.24	0.46
12:I:79:GLU:HB3	12:I:92:LYS:HG3	1.97	0.46
13:J:97:PHE:HD2	25:V:30:ASP:HA	1.81	0.46
19:P:16:GLU:OE1	19:P:17:LYS:N	2.49	0.46
19:P:86:ARG:HG2	19:P:99:HIS:O	2.15	0.46
20:Q:86:CYS:HB2	26:W:74:PHE:HD1	1.81	0.46
22:S:65:ARG:O	22:S:68:ARG:HB3	2.16	0.46
29:Z:175:VAL:O	29:Z:185:LEU:HD23	2.16	0.46
30:a:17:THR:C	30:a:19:ALA:H	2.23	0.46
31:b:8:LYS:HE2	41:l:2:ASN:OD1	2.15	0.46
31:b:45:THR:OG1	31:b:80:GLU:O	2.23	0.46
35:f:33:LEU:O	35:f:35:ARG:HG2	2.16	0.46
37:h:47:ASP:HB3	37:h:48:PRO:HD3	1.97	0.46
41:l:82:LEU:HD23	41:l:83:ILE:N	2.31	0.46
47:r:161:VAL:O	47:r:162:GLU:HB2	2.16	0.46
56:B:162:GLU:C	56:B:164:ILE:N	2.73	0.46
56:B:282:LEU:CD1	56:B:283:ALA:HB3	2.45	0.46
56:B:386:GLU:OE1	56:B:401:ARG:HD2	2.16	0.46
56:B:411:LYS:HZ2	56:B:436:VAL:CG2	2.26	0.46
56:B:556:LYS:C	56:B:558:VAL:N	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:79:ARG:HE	3:3:130:SER:HB2	1.81	0.46
5:5:5:G:C2	5:5:69:G:C2	3.04	0.46
6:A:38:G:H4'	6:A:547:A:H61	1.81	0.46
6:A:216:G:H2'	6:A:217:C:N1	2.28	0.46
6:A:519:C:C4	6:A:520:A:N7	2.84	0.46
6:A:542:G:H2'	6:A:543:C:H6	1.79	0.46
6:A:900:A:N6	6:A:901:A:C6	2.84	0.46
6:A:953:G:N2	6:A:1229:A:C4	2.84	0.46
6:A:1049:U:O5'	6:A:1049:U:H6	1.99	0.46
6:A:1187:G:N2	6:A:1188:A:N3	2.64	0.46
7:D:28:A:HO2'	7:D:582:G:HO2'	1.60	0.46
7:D:110:G:N2	7:D:111:A:C4	2.83	0.46
7:D:173:G:N1	7:D:174:C:N3	2.64	0.46
7:D:216:A:C2	7:D:217:G:C4	3.04	0.46
7:D:247:G:C2	7:D:249:C:H1'	2.51	0.46
7:D:332:A:C5	7:D:335:C:C4	3.04	0.46
7:D:521:G:H2'	7:D:522:G:H8	1.80	0.46
7:D:537:C:H2'	7:D:539:G:H8	1.70	0.46
7:D:677:A:C5	7:D:678:C:C5	3.04	0.46
7:D:893:C:C2	7:D:894:C:H1'	2.51	0.46
7:D:962:G:C2	7:D:963:U:O2	2.69	0.46
7:D:1239:G:H5"	7:D:1240:U:OP2	2.15	0.46
7:D:1306:C:N3	7:D:1623:G:C6	2.84	0.46
7:D:1374:G:C6	7:D:1375:C:C4	3.04	0.46
7:D:1479:G:C2'	7:D:1480:G:C8	2.99	0.46
7:D:1504:C:OP2	7:D:1504:C:C6	2.69	0.46
7:D:1562:A:C2	7:D:1563:G:C4	3.04	0.46
7:D:1609:A:H2'	7:D:1609:A:N3	2.31	0.46
7:D:1625:C:C4	7:D:1626:G:H8	2.32	0.46
7:D:1633:G:N7	7:D:1635:G:C5	2.84	0.46
7:D:1642:G:C6	7:D:1643:G:C5	3.04	0.46
7:D:1779:U:H3'	7:D:1779:U:C6	2.51	0.46
7:D:1785:A:H2'	7:D:1786:A:C8	2.51	0.46
7:D:2049:G:HO2'	7:D:2050:C:P	2.38	0.46
7:D:2287:A:H61	7:D:2344:U:H3	1.63	0.46
7:D:2542:A:OP2	7:D:2542:A:C8	2.69	0.46
7:D:2693:A:C2	7:D:2694:G:C5	3.04	0.46
7:D:2845:G:H2'	7:D:2846:G:C8	2.49	0.46
8:E:69:G:N2	8:E:70:C:H1'	2.31	0.46
11:H:145:GLU:OE1	11:H:184:LYS:HD3	2.16	0.46
14:K:16:LEU:HD11	16:M:42:ARG:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:63:LEU:HD22	15:L:65:TYR:CE2	2.51	0.46
20:Q:2:ALA:N	20:Q:10:PRO:HD2	2.31	0.46
20:Q:25:ILE:CD1	20:Q:66:LEU:HD13	2.45	0.46
23:T:12:LYS:O	23:T:14:ASN:N	2.49	0.46
26:W:64:GLU:C	26:W:66:MET:N	2.73	0.46
29:Z:66:HIS:O	29:Z:158:ALA:C	2.59	0.46
30:a:242:ARG:NH1	30:a:244:ARG:NH2	2.64	0.46
32:c:75:HIS:CG	32:c:76:GLY:H	2.33	0.46
33:d:50:ALA:HA	33:d:54:GLU:OE1	2.15	0.46
33:d:130:ASN:O	33:d:159:VAL:HG23	2.16	0.46
34:e:7:LEU:H	34:e:8:PRO:CD	2.29	0.46
35:f:23:LEU:HD23	35:f:60:ILE:HG21	1.98	0.46
36:g:39:ILE:HD13	36:g:61:VAL:HG23	1.97	0.46
38:i:26:TYR:CE2	38:i:138:ASP:OD2	2.69	0.46
38:i:41:TRP:HB3	38:i:94:VAL:HG11	1.97	0.46
38:i:70:PRO:HB3	38:i:93:TYR:O	2.16	0.46
41:l:53:ARG:HH12	41:l:101:PHE:HA	1.81	0.46
55:z:13:ARG:HB2	55:z:24:ALA:HA	1.98	0.46
56:B:199:LEU:HB2	56:B:218:PHE:HE1	1.81	0.46
56:B:205:TYR:HD1	56:B:206:ASP:H	1.61	0.46
56:B:397:PRO:CB	56:B:401:ARG:HH21	2.28	0.46
56:B:414:ILE:CG2	56:B:416:THR:HG23	2.46	0.46
5:5:75:C:C5	51:v:28:LYS:HB3	2.51	0.45
6:A:73:G:C6	6:A:74:C:N3	2.84	0.45
6:A:503:C:O5’	6:A:503:C:H6	1.99	0.45
6:A:743:U:H2’	6:A:744:C:H6	1.80	0.45
6:A:886:G:C2	6:A:912:C:O2	2.69	0.45
6:A:973:G:H3’	6:A:974:A:H5”	1.98	0.45
6:A:1182:G:H3’	6:A:1182:G:C8	2.51	0.45
6:A:1325:C:H4’	28:Y:17:THR:HG21	1.98	0.45
6:A:1333:A:H2’	6:A:1334:G:O4’	2.16	0.45
7:D:117:G:H3’	7:D:119:A:C8	2.50	0.45
7:D:186:G:C2	7:D:187:G:C4	3.04	0.45
7:D:270(W):G:C6	7:D:270(X):G:C2	3.04	0.45
7:D:296:C:C2	7:D:297:C:C5	3.05	0.45
7:D:357:A:C4	7:D:358:U:N3	2.84	0.45
7:D:387:U:H4’	7:D:388:G:C5	2.51	0.45
7:D:489:G:C2	7:D:491:G:N3	2.84	0.45
7:D:756:C:N4	7:D:757:U:H3	2.14	0.45
7:D:814:C:OP1	43:n:85:LYS:HB2	2.16	0.45
7:D:952:G:H3’	7:D:953:A:H5”	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1035:U:C2	7:D:1036:G:N7	2.85	0.45
7:D:1209:G:C2	7:D:1238:G:C6	3.04	0.45
7:D:1457:A:O2'	7:D:1459:G:H1'	2.15	0.45
7:D:1534:G:O5'	7:D:1534:G:H8	1.99	0.45
7:D:1789:A:N7	7:D:1790:C:C4	2.84	0.45
7:D:1818:U:O2'	7:D:1819:A:OP2	2.33	0.45
7:D:1862:G:H2'	7:D:1863:G:H8	1.75	0.45
7:D:1952:A:C6	7:D:1953:A:N1	2.85	0.45
7:D:2069:G:N1	7:D:2070:G:C5	2.84	0.45
7:D:2123:G:N2	7:D:2176:A:N1	2.64	0.45
7:D:2425:A:H1'	7:D:2427:C:C4	2.51	0.45
7:D:2495:G:H2'	7:D:2496:C:C6	2.51	0.45
7:D:2653:U:N3	7:D:2654:A:N7	2.63	0.45
7:D:2715:C:C6	7:D:2716:U:H5	2.33	0.45
7:D:2737:G:C2	7:D:2738:A:C4	3.04	0.45
7:D:2780:G:O2'	7:D:2781:A:H4'	2.16	0.45
7:D:2783:G:C2	7:D:2784:C:C2	3.05	0.45
7:D:2789:C:H2'	7:D:2790:A:O4'	2.17	0.45
7:D:2807:G:N2	7:D:2892:A:N6	2.64	0.45
8:E:75:G:H2'	47:r:85:HIS:CE1	2.46	0.45
9:F:43:ASP:O	9:F:47:THR:OG1	2.25	0.45
9:F:45:GLN:O	9:F:48:MET:N	2.48	0.45
9:F:180:LEU:HD23	9:F:180:LEU:HA	1.80	0.45
11:H:193:ASP:OD1	11:H:194:LEU:HD12	2.15	0.45
13:J:10:LEU:HD12	13:J:11:ASN:N	2.31	0.45
14:K:27:ILE:HG22	14:K:36:LYS:HZ2	1.81	0.45
16:M:13:ALA:HB2	16:M:68:GLY:HA3	1.98	0.45
16:M:54:ASP:CG	16:M:55:ALA:H	2.24	0.45
18:O:120:ARG:HA	18:O:121:PRO:HD2	1.72	0.45
20:Q:40:ASN:HB3	20:Q:43:THR:HG23	1.97	0.45
26:W:46:GLY:HA3	26:W:64:GLU:OE1	2.16	0.45
30:a:20:ASP:OD1	30:a:21:PHE:N	2.49	0.45
30:a:99:ASP:OD1	30:a:99:ASP:N	2.46	0.45
30:a:155:LEU:HG	30:a:157:ARG:HH12	1.79	0.45
30:a:232:PRO:C	30:a:234:GLY:H	2.23	0.45
31:b:119:ARG:CG	31:b:120:TRP:N	2.77	0.45
32:c:24:LEU:N	32:c:25:PRO:HD2	2.31	0.45
33:d:138:GLN:HG2	33:d:140:ILE:N	2.19	0.45
35:f:40:PRO:HA	35:f:42:TRP:CZ3	2.51	0.45
37:h:84:ASN:O	37:h:86:LYS:N	2.48	0.45
38:i:22:LYS:NZ	38:i:23:GLY:N	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:75:THR:HB	38:i:77:LYS:HZ2	1.76	0.45
38:i:81:VAL:CA	56:B:567:VAL:HG21	2.46	0.45
41:l:33:LYS:HD3	41:l:45:PHE:CE2	2.51	0.45
43:n:68:LYS:HZ1	43:n:95:LEU:CD1	2.28	0.45
43:n:79:VAL:HG22	43:n:83:ARG:HG2	1.97	0.45
47:r:42:VAL:N	47:r:45:ASP:OD2	2.49	0.45
47:r:111:VAL:HA	47:r:116:VAL:O	2.16	0.45
51:v:52:THR:HG22	51:v:53:GLU:N	2.31	0.45
56:B:27:ASP:OD2	56:B:41:MET:CG	2.64	0.45
56:B:111:GLN:H	56:B:111:GLN:HG2	1.49	0.45
56:B:267:ALA:C	56:B:268:ILE:HG22	2.41	0.45
56:B:517:ALA:C	56:B:519:ALA:N	2.74	0.45
56:B:575:GLU:HA	56:B:575:GLU:OE1	2.16	0.45
3:3:12:LEU:O	3:3:54:PRO:HB3	2.16	0.45
3:3:131:ALA:O	3:3:137:GLU:HA	2.16	0.45
6:A:30:U:O4	6:A:32:A:N6	2.49	0.45
6:A:162:A:H3'	6:A:163:C:O4'	2.16	0.45
6:A:376:G:C2	6:A:377:G:C5	3.05	0.45
6:A:515:G:H2'	6:A:516:U:O4'	2.17	0.45
6:A:682:G:C2	6:A:709:G:C2	3.04	0.45
6:A:1184:G:OP1	6:A:1185:G:OP2	2.34	0.45
6:A:1309:G:H2'	6:A:1310:G:H5'	1.98	0.45
6:A:1316:G:C8	6:A:1318:A:OP2	2.69	0.45
6:A:1340:A:C6	6:A:1341:U:C4	3.04	0.45
7:D:126:A:C5'	54:y:47:ARG:NH1	2.80	0.45
7:D:186:G:N2	7:D:187:G:N3	2.65	0.45
7:D:221:A:O2'	7:D:222:A:OP2	2.26	0.45
7:D:272:G:C2	7:D:273:G:C8	3.04	0.45
7:D:422:A:H2'	7:D:423:A:C8	2.51	0.45
7:D:481:G:O2'	7:D:482:A:P	2.74	0.45
7:D:700:G:H2'	7:D:701:G:C8	2.51	0.45
7:D:821:A:C8	7:D:946:G:C8	3.04	0.45
7:D:851:U:O2'	50:u:42:ALA:O	2.33	0.45
7:D:852:G:N1	7:D:853:G:C5	2.84	0.45
7:D:855:G:H2'	7:D:856:C:C6	2.48	0.45
7:D:919:G:N1	7:D:920:G:N3	2.64	0.45
7:D:995:C:C2	35:f:2:LYS:N	2.84	0.45
7:D:1181:C:C4	7:D:1182:A:C5	3.04	0.45
7:D:1321:A:OP1	7:D:1321:A:H8	1.99	0.45
7:D:1363:C:O3'	7:D:1809:A:N7	2.49	0.45
7:D:1509:C:OP2	7:D:1510:A:C6	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1530:G:C2	7:D:1542:G:C2	3.04	0.45
7:D:1663:C:O3'	7:D:1664:A:C8	2.70	0.45
7:D:1839:G:C4	7:D:1840:G:C8	3.04	0.45
7:D:1842:G:N2	7:D:1901:A:C4	2.84	0.45
7:D:2273:A:N7	7:D:2274:A:C5	2.84	0.45
7:D:2334:G:H1'	40:k:15:ARG:HD2	1.98	0.45
7:D:2377:A:C2	7:D:2378:A:C4	3.03	0.45
7:D:2531:A:C6	7:D:2532:G:C5	3.04	0.45
7:D:2641:G:H2'	7:D:2642:G:C8	2.49	0.45
7:D:2779:U:HO2'	7:D:2780:G:C5'	2.29	0.45
8:E:75:G:O6	8:E:76:G:C2	2.69	0.45
12:I:109:ILE:HG21	12:I:135:THR:HG21	1.98	0.45
13:J:6:VAL:HA	13:J:90:VAL:HA	1.97	0.45
14:K:24:THR:HG22	14:K:28:ASN:ND2	2.30	0.45
20:Q:54:VAL:O	20:Q:58:GLU:HG3	2.16	0.45
22:S:4:THR:OG1	22:S:7:GLU:HG2	2.16	0.45
23:T:38:TYR:OH	23:T:47:ASP:O	2.20	0.45
29:Z:186:ALA:HB1	29:Z:190:ARG:NH1	2.32	0.45
31:b:30:PRO:HB2	31:b:49:LEU:H	1.81	0.45
31:b:58:ARG:HG2	31:b:59:VAL:O	2.16	0.45
31:b:97:LYS:HG3	31:b:98:PRO:HD2	1.98	0.45
33:d:16:ARG:N	33:d:17:PRO:HD2	2.30	0.45
33:d:98:ARG:HA	33:d:101:ILE:HG22	1.98	0.45
35:f:4:TYR:CE2	42:m:97:ASP:HA	2.33	0.45
35:f:67:LEU:HB2	35:f:88:GLU:OE2	2.15	0.45
38:i:38:GLU:HA	38:i:39:PRO:HD3	1.48	0.45
38:i:106:VAL:HG22	38:i:108:GLY:H	1.80	0.45
39:j:84:ALA:HB1	39:j:88:ARG:NH2	2.30	0.45
40:k:92:TYR:CZ	40:k:93:LYS:HB3	2.51	0.45
41:l:21:GLU:HB3	41:l:23:ARG:NH2	2.30	0.45
41:l:54:ARG:HA	41:l:100:TYR:HD1	1.82	0.45
42:m:39:LEU:HA	42:m:39:LEU:HD23	1.67	0.45
43:n:50:PRO:O	43:n:54:GLY:N	2.49	0.45
43:n:68:LYS:NZ	43:n:95:LEU:HD11	2.31	0.45
47:r:118:GLN:NE2	47:r:173:ALA:O	2.49	0.45
47:r:157:LEU:HA	47:r:158:PRO:HD2	1.82	0.45
56:B:21:GLY:HA2	57:B:701:GCP:O2A	2.16	0.45
56:B:133:PRO:HB2	56:B:163:ALA:HB2	1.97	0.45
56:B:317:ARG:CG	56:B:317:ARG:NH1	2.78	0.45
6:A:234:C:H2'	6:A:235:C:H6	1.82	0.45
6:A:687:A:H61	6:A:701:C:H5'	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:825:G:C2	6:A:826:C:C2	3.04	0.45
6:A:876:G:O6	6:A:877:C:N4	2.50	0.45
6:A:946:A:H2'	6:A:947:G:H8	1.81	0.45
6:A:1120:G:O6	6:A:1152:A:N6	2.49	0.45
6:A:1273:G:C2	6:A:1274:G:H1'	2.51	0.45
6:A:1290:G:C6	6:A:1291:G:C5	3.05	0.45
6:A:1307:U:OP1	20:Q:101:GLN:OE1	2.33	0.45
6:A:1353:G:C2	6:A:1370:G:C2	3.04	0.45
6:A:1363:A:C5	6:A:1365:G:C2	3.04	0.45
7:D:28:A:N6	7:D:29:U:O2	2.49	0.45
7:D:51:G:H22	7:D:120:U:H3	1.63	0.45
7:D:54:G:H1'	54:y:35:ARG:HH21	1.81	0.45
7:D:321:G:N3	32:c:165:ARG:CZ	2.80	0.45
7:D:337:C:H5"	7:D:338:G:OP2	2.17	0.45
7:D:338:G:P	46:q:4:LYS:HG2	2.56	0.45
7:D:477:A:H2'	7:D:478:A:C8	2.50	0.45
7:D:485:C:C2	7:D:486:C:C4	3.02	0.45
7:D:668:G:C4	7:D:670:A:N7	2.84	0.45
7:D:685:A:O4'	7:D:774:A:N6	2.50	0.45
7:D:743:G:C6	7:D:744:G:C5	3.04	0.45
7:D:748:G:C4	7:D:750:A:N7	2.84	0.45
7:D:944:G:H3'	7:D:944:G:N3	2.32	0.45
7:D:1068:G:H1'	7:D:1096:A:H4'	1.99	0.45
7:D:1090:U:C4	7:D:1091:G:N7	2.84	0.45
7:D:1163:G:N2	7:D:1164:G:C4	2.84	0.45
7:D:1164:G:C2	7:D:1165:U:C2	3.04	0.45
7:D:1167:U:O4	7:D:1168:G:O6	2.34	0.45
7:D:1213:A:N7	7:D:1237:A:N7	2.64	0.45
7:D:1295:C:H2'	7:D:1296:G:C8	2.43	0.45
7:D:1302:A:H5'	7:D:1608:A:P	2.56	0.45
7:D:1324:G:C4	7:D:1328:G:O6	2.69	0.45
7:D:1519:G:H2'	7:D:1519:G:N3	2.32	0.45
7:D:1777:U:H3	7:D:1787:A:N6	2.14	0.45
7:D:2101:G:C2	7:D:2102:U:C2	3.05	0.45
7:D:2114:A:H2'	7:D:2115:G:O4'	2.17	0.45
7:D:2166:G:H1	7:D:2171:A:H2'	1.82	0.45
7:D:2250:G:N7	38:i:84:GLY:HA2	2.32	0.45
7:D:2491:U:N3	7:D:2492:U:C4	2.84	0.45
7:D:2629:A:H2'	7:D:2895:U:O5'	2.15	0.45
7:D:2701:C:H5'	7:D:2702:U:C5'	2.46	0.45
7:D:2759:G:N2	7:D:2760:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2834:G:C4	7:D:2879:C:C4	3.04	0.45
9:F:152:PHE:CE1	9:F:155:LEU:HD12	2.51	0.45
12:I:9:LYS:HG2	12:I:112:LEU:HD11	1.98	0.45
12:I:151:LEU:HB3	15:L:79:VAL:HG22	1.98	0.45
15:L:25:ASP:HB3	15:L:58:TYR:CD2	2.51	0.45
19:P:39:VAL:HG12	19:P:41:ARG:H	1.81	0.45
19:P:125:PRO:O	19:P:127:GLU:N	2.43	0.45
20:Q:67:GLU:HG3	20:Q:68:GLY:H	1.82	0.45
20:Q:68:GLY:O	20:Q:70:LEU:N	2.48	0.45
20:Q:102:ARG:CB	20:Q:102:ARG:NH1	2.74	0.45
30:a:232:PRO:C	30:a:234:GLY:N	2.75	0.45
32:c:133:ASN:OD1	32:c:162:LEU:HB3	2.16	0.45
34:e:102:ALA:HA	34:e:116:GLU:HA	1.97	0.45
36:g:89:ASN:OD1	36:g:89:ASN:N	2.48	0.45
37:h:76:LYS:HZ1	37:h:96:THR:HG21	1.81	0.45
38:i:6:ARG:O	38:i:7:MET:HG2	2.16	0.45
40:k:74:ALA:O	40:k:77:ALA:HB3	2.16	0.45
48:s:37:LEU:HD12	48:s:38:VAL:HG23	1.99	0.45
53:x:22:ALA:HB3	53:x:39:TYR:CE2	2.50	0.45
53:x:22:ALA:HA	53:x:23:THR:HG23	1.98	0.45
53:x:39:TYR:O	53:x:39:TYR:CG	2.68	0.45
56:B:17:HIS:HB3	56:B:20:HIS:ND1	2.32	0.45
56:B:77:VAL:O	56:B:78:PHE:CG	2.69	0.45
56:B:282:LEU:HD13	56:B:283:ALA:HB3	1.98	0.45
56:B:315:LYS:HE2	56:B:318:ASP:CB	2.44	0.45
56:B:447:ARG:O	56:B:448:VAL:HG22	2.16	0.45
56:B:497:HIS:ND1	56:B:535:VAL:CB	2.80	0.45
56:B:532:LEU:HB3	56:B:553:ALA:HB1	1.99	0.45
1:1:26:ILE:HG12	1:1:33:LYS:NZ	2.31	0.45
1:1:31:LYS:HZ1	7:D:2478:A:P	2.39	0.45
3:3:33:ASN:O	3:3:63:ARG:HB2	2.17	0.45
4:4:53:G:C6	4:4:54:U:C4	3.05	0.45
6:A:267:C:OP2	24:U:67:LYS:HE2	2.16	0.45
6:A:714:G:C4	6:A:715:A:C8	3.03	0.45
6:A:837:G:H2'	6:A:838:G:H5'	1.96	0.45
6:A:1084:G:OP1	6:A:1086:U:H1'	2.16	0.45
6:A:1145:C:O2'	6:A:1147:C:N4	2.50	0.45
6:A:1175:G:H2'	6:A:1176:A:C8	2.39	0.45
6:A:1201:A:O2'	6:A:1202:G:P	2.74	0.45
6:A:1247:U:H2'	6:A:1248:A:H8	1.81	0.45
6:A:1265:G:H1'	6:A:1271:G:H22	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1300:G:O2'	6:A:1303:C:N4	2.50	0.45
6:A:1321:C:O2'	20:Q:87:TYR:OH	2.33	0.45
6:A:1454:G:N3	6:A:1455:G:C1'	2.80	0.45
6:A:1463:C:H2'	6:A:1464:G:C8	2.48	0.45
6:A:1475:G:C2	6:A:1476:G:C8	3.03	0.45
7:D:109:G:C6	7:D:110:G:N7	2.85	0.45
7:D:198:C:N4	7:D:248:G:O6	2.50	0.45
7:D:270(F):U:C6	7:D:270(F):U:OP2	2.70	0.45
7:D:374:A:C8	7:D:375:C:C5	3.05	0.45
7:D:464:U:C2	7:D:788:A:C6	3.04	0.45
7:D:485:C:C2	7:D:496:G:N2	2.84	0.45
7:D:623:G:C2	7:D:624:C:O2	2.70	0.45
7:D:875:G:H2'	7:D:876:C:C6	2.52	0.45
7:D:900:A:C8	7:D:901:A:H1'	2.51	0.45
7:D:950:G:C4	7:D:968:G:N2	2.84	0.45
7:D:954:G:H5"	38:i:17:LEU:HD23	1.98	0.45
7:D:1023:U:C4	7:D:1024:G:N3	2.84	0.45
7:D:1063:G:N1	7:D:1064:C:N3	2.64	0.45
7:D:1171:G:H3'	7:D:1173:G:C5'	2.47	0.45
7:D:1453:A:H3'	7:D:1454:U:C5'	2.45	0.45
7:D:1688:U:HO2'	7:D:1689:A:P	2.39	0.45
7:D:1766:U:C2	7:D:1987:G:N2	2.84	0.45
7:D:1778:U:N3	7:D:1787:A:C2	2.83	0.45
7:D:1785:A:H2'	7:D:1786:A:C4	2.51	0.45
7:D:1818:U:H5	30:a:156:ALA:HB3	1.78	0.45
7:D:1921:G:H2'	7:D:1922:G:O4'	2.15	0.45
7:D:2080:G:C5	7:D:2081:C:C5	3.04	0.45
7:D:2134:A:H5'	7:D:2158:A:OP2	2.16	0.45
7:D:2259:G:C6	7:D:2260:C:C4	3.05	0.45
7:D:2333:A:C8	7:D:2335:A:N1	2.84	0.45
7:D:2447:G:H3'	7:D:2500:U:OP2	2.17	0.45
8:E:30:C:N4	8:E:31:C:O2	2.49	0.45
11:H:68:TYR:HA	11:H:114:ARG:NH1	2.31	0.45
11:H:141:ARG:HB3	11:H:144:ASP:HB2	1.99	0.45
17:N:16:LEU:HD23	17:N:94:VAL:HG22	1.97	0.45
24:U:29:HIS:CG	24:U:30:PRO:HD2	2.52	0.45
27:X:30:LYS:NZ	27:X:80:ARG:HH22	2.13	0.45
29:Z:49:ILE:HB	29:Z:56:GLN:OE1	2.16	0.45
29:Z:195:ALA:HA	29:Z:198:ALA:HB3	1.98	0.45
30:a:111:LEU:HG	30:a:115:GLN:HE21	1.80	0.45
36:g:38:VAL:C	36:g:39:ILE:HD12	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:75:THR:HG22	38:i:77:LYS:HD2	1.98	0.45
41:l:35:LYS:HZ2	41:l:86:ILE:HD11	1.78	0.45
42:m:40:PHE:CZ	43:n:84:LYS:HD2	2.51	0.45
51:v:42:PHE:CG	51:v:43:TYR:N	2.85	0.45
53:x:17:LYS:HB2	53:x:19:ARG:NH1	2.32	0.45
56:B:137:LYS:HZ2	57:B:701:GCP:H1'	1.81	0.45
56:B:152:VAL:HG13	56:B:156:LEU:CG	2.46	0.45
56:B:435:LEU:HD12	56:B:452:TYR:CE1	2.49	0.45
56:B:502:ASP:HB3	56:B:504:LEU:CD1	2.46	0.45
56:B:541:ILE:HG13	56:B:546:ILE:HD12	1.96	0.45
3:3:20:ALA:N	3:3:21:PRO:CD	2.80	0.45
4:4:21:A:N7	4:4:46:G:C6	2.84	0.45
4:4:63:G:C2	4:4:64:G:C4	3.04	0.45
6:A:53:A:H2'	6:A:54:C:O4'	2.16	0.45
6:A:69:G:C6	6:A:101:A:N1	2.85	0.45
6:A:80:G:N2	6:A:89:U:C2	2.80	0.45
6:A:324:G:N2	6:A:327:A:C8	2.85	0.45
6:A:411:A:C6	6:A:429:U:C4	3.04	0.45
6:A:438:G:N1	6:A:495:A:OP2	2.50	0.45
6:A:439:A:N7	6:A:496:A:C2	2.85	0.45
6:A:495:A:O4'	6:A:496:A:H8	2.00	0.45
6:A:750:G:C2	6:A:751:U:C2	3.05	0.45
6:A:842:C:O5'	6:A:842:C:H6	1.99	0.45
6:A:851:G:C6	6:A:852:G:C6	3.04	0.45
6:A:1076:C:C2	6:A:1082:G:C2	3.04	0.45
6:A:1381:U:N1	14:K:78:ARG:NH1	2.65	0.45
7:D:67:U:H1'	7:D:88:G:N2	2.31	0.45
7:D:108:U:O2'	7:D:348:G:N2	2.40	0.45
7:D:270(I):G:C2	7:D:270(J):G:H1'	2.51	0.45
7:D:784:A:HO2'	7:D:785:G:P	2.40	0.45
7:D:841:A:C6	7:D:842:G:C5	3.05	0.45
7:D:971:C:C5	7:D:972:G:C5	3.05	0.45
7:D:1072:C:H42	7:D:1100:C:H41	1.63	0.45
7:D:1255:U:C5	32:c:74:ARG:HB2	2.52	0.45
7:D:1348:G:C6	7:D:1349:A:N7	2.85	0.45
7:D:1363:C:O3'	7:D:1809:A:N6	2.49	0.45
7:D:1363:C:H4'	7:D:1809:A:N7	2.32	0.45
7:D:1419:A:N6	7:D:1421:G:C2	2.85	0.45
7:D:1592:C:H2'	7:D:1593:G:H8	1.81	0.45
7:D:1620:G:O4'	54:y:1:MET:N	2.49	0.45
7:D:1622:G:H2'	7:D:1623:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1814:G:C8	7:D:1815:A:C8	3.05	0.45
7:D:1943:U:OP1	56:B:532:LEU:HD21	2.16	0.45
7:D:2123:G:N2	29:Z:215:THR:HG21	2.32	0.45
7:D:2124:G:C6	7:D:2125:G:N2	2.84	0.45
7:D:2179:C:H6	7:D:2179:C:H5"	1.82	0.45
7:D:2234:G:C6	7:D:2235:G:C5	3.05	0.45
7:D:2302:G:N3	7:D:2303:G:C8	2.84	0.45
7:D:2320:A:H1'	7:D:2333:A:C6	2.52	0.45
7:D:2456:C:H5	7:D:2457:U:C4	2.35	0.45
7:D:2458:G:H2'	7:D:2490:G:O6	2.16	0.45
7:D:2485:G:H2'	7:D:2486:G:H8	1.82	0.45
7:D:2537:U:H2'	7:D:2538:C:C6	2.51	0.45
7:D:2579:C:N4	7:D:2580:U:C4	2.84	0.45
7:D:2773:C:P	31:b:164:ARG:NH1	2.86	0.45
7:D:2791:C:C4	7:D:2792:G:C6	3.05	0.45
8:E:40:U:N3	8:E:43:C:OP2	2.50	0.45
8:E:53:A:C5	8:E:54:G:C8	3.04	0.45
9:F:69:LEU:HD12	9:F:92:TYR:HA	1.99	0.45
11:H:3:ARG:HH12	11:H:70:ILE:CD1	2.29	0.45
12:I:24:ARG:O	12:I:26:PHE:HD2	2.00	0.45
14:K:145:ALA:O	14:K:147:ALA:N	2.45	0.45
15:L:36:LEU:HD12	15:L:37:ARG:N	2.31	0.45
16:M:33:PHE:HD2	16:M:34:ASN:ND2	2.14	0.45
18:O:120:ARG:NH2	18:O:126:ARG:NH1	2.64	0.45
19:P:60:LEU:HD11	19:P:64:TYR:HB2	1.97	0.45
30:a:209:ALA:O	30:a:211:ARG:N	2.50	0.45
31:b:45:THR:HB	31:b:81:ILE:HA	1.98	0.45
42:m:16:LYS:CA	42:m:19:LYS:HZ1	2.29	0.45
45:p:47:PHE:CZ	45:p:89:ILE:HA	2.52	0.45
50:u:18:ASP:OD1	50:u:18:ASP:C	2.60	0.45
55:z:30:ARG:HE	55:z:44:LYS:CG	2.30	0.45
56:B:230:ILE:CD1	56:B:279:THR:HG22	2.47	0.45
2:2:126:ALA:O	2:2:130:THR:N	2.50	0.45
3:3:39:LYS:O	3:3:43:ALA:N	2.37	0.45
3:3:84:LEU:HD23	3:3:96:VAL:HG12	1.97	0.45
3:3:87:GLY:HA2	3:3:92:GLY:H	1.81	0.45
5:5:5:G:H2'	5:5:6:G:H8	1.82	0.45
6:A:129(A):G:N2	6:A:191(A):G:C8	2.84	0.45
6:A:174:C:H2'	6:A:175:C:O4'	2.17	0.45
6:A:185:A:C6	6:A:186:C:C4	3.04	0.45
6:A:199:G:N2	6:A:200:G:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:575:G:N2	6:A:881:G:C4	2.85	0.45
6:A:600:C:N3	6:A:639:G:C6	2.84	0.45
6:A:675:A:C4	6:A:676:A:C8	3.04	0.45
6:A:687:A:H4'	6:A:688:G:O5'	2.17	0.45
6:A:1054:C:OP1	6:A:1198:G:OP2	2.34	0.45
6:A:1325:C:H2'	6:A:1326:C:C6	2.51	0.45
6:A:1350:A:C5	6:A:1351:U:C4	3.04	0.45
6:A:1423:G:C6	6:A:1424:C:C4	3.05	0.45
7:D:270(F):U:OP2	7:D:270(F):U:H6	1.99	0.45
7:D:376:C:N3	7:D:377:C:C4	2.84	0.45
7:D:411:G:N2	7:D:2408:U:C4	2.78	0.45
7:D:452:G:N2	7:D:458:G:N3	2.64	0.45
7:D:579:G:N2	7:D:580:C:O2	2.49	0.45
7:D:599:G:N2	7:D:659:C:C2	2.85	0.45
7:D:667:U:C4	7:D:668:G:N7	2.84	0.45
7:D:730:C:H5"	7:D:763:G:OP1	2.17	0.45
7:D:1030:G:C6	7:D:1031:G:C5	3.05	0.45
7:D:1078:U:OP2	7:D:1078:U:C6	2.70	0.45
7:D:1171:G:H3'	7:D:1173:G:H4'	1.97	0.45
7:D:1182:A:C5	7:D:1183:G:N7	2.84	0.45
7:D:1236:G:HO2'	7:D:1237:A:P	2.40	0.45
7:D:1342:A:C5	7:D:1345:C:C4	3.05	0.45
7:D:1353:A:C8	7:D:1377:G:N2	2.85	0.45
7:D:1443:G:C4	7:D:1444:G:C8	3.04	0.45
7:D:1455:G:OP2	7:D:1456:G:P	2.73	0.45
7:D:1472:A:H61	7:D:1518:C:N4	2.14	0.45
7:D:1496:A:H2'	7:D:1496:A:N3	2.32	0.45
7:D:1497:U:OP2	7:D:1498:C:H5	1.99	0.45
7:D:1510:A:N7	7:D:1511:A:N6	2.65	0.45
7:D:1565:C:OP2	30:a:26:LYS:HE3	2.17	0.45
7:D:1567:A:C6	30:a:84:TYR:CG	3.04	0.45
7:D:1627:G:C4	7:D:1640:C:N3	2.85	0.45
7:D:1650:G:N1	7:D:1651:G:C5	2.85	0.45
7:D:1897:G:N2	7:D:1898:U:O2	2.50	0.45
7:D:1956:U:C4	7:D:1957:C:N4	2.84	0.45
7:D:2095:C:C4	7:D:2096:U:C4	3.04	0.45
7:D:2115:G:H5"	7:D:2116:G:OP2	2.16	0.45
7:D:2335:A:C6	7:D:2337:G:C4	3.05	0.45
7:D:2536:G:C5	7:D:2537:U:C5	3.04	0.45
7:D:2693:A:H2'	7:D:2694:G:C8	2.50	0.45
7:D:2882:A:N6	7:D:2883:A:N7	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:7:VAL:HG23	9:F:8:LYS:H	1.82	0.45
9:F:32:ILE:CD1	9:F:40:HIS:HB3	2.47	0.45
11:H:2:GLY:O	11:H:4:TYR:N	2.45	0.45
12:I:17:ALA:HA	12:I:26:PHE:HB3	1.99	0.45
16:M:2:GLU:O	16:M:21:PRO:HD2	2.17	0.45
17:N:42:THR:HG23	17:N:67:THR:O	2.17	0.45
17:N:44:VAL:HG11	17:N:46:ARG:CZ	2.47	0.45
19:P:80:HIS:HD2	56:B:316:LEU:CB	2.27	0.45
24:U:56:VAL:HB	24:U:78:GLU:HB3	1.97	0.45
25:V:88:LYS:HG2	25:V:88:LYS:OXT	2.16	0.45
26:W:16:LEU:C	26:W:20:LEU:CD1	2.89	0.45
29:Z:43:VAL:HG23	29:Z:175:VAL:CG2	2.47	0.45
29:Z:102:LYS:HZ2	29:Z:107:TRP:CD1	2.35	0.45
30:a:38:LYS:HZ2	30:a:64:ILE:HD12	1.81	0.45
30:a:121:PRO:HB3	30:a:135:PHE:CE2	2.48	0.45
31:b:17:ASP:N	31:b:17:ASP:OD1	2.49	0.45
43:n:19:LYS:CA	43:n:21:ARG:NH1	2.80	0.45
44:o:28:SER:HA	44:o:70:TYR:HA	1.99	0.45
45:p:6:ASP:OD1	45:p:7:VAL:N	2.50	0.45
45:p:9:LEU:HB3	45:p:30:VAL:HG12	1.99	0.45
45:p:10:ALA:HA	45:p:11:PRO:HD3	1.74	0.45
45:p:21:PHE:CE1	45:p:92:LEU:HB3	2.51	0.45
45:p:82:GLN:HG2	45:p:83:VAL:N	2.32	0.45
47:r:49:ARG:C	47:r:51:ALA:H	2.24	0.45
55:z:30:ARG:NE	55:z:44:LYS:HG3	2.32	0.45
56:B:34:HIS:O	56:B:35:ALA:HB3	2.17	0.45
56:B:95:ARG:HE	56:B:294:PHE:HZ	1.62	0.45
56:B:101:GLU:O	56:B:101:GLU:HG3	2.16	0.45
56:B:138:ILE:HD11	56:B:165:PHE:C	2.41	0.45
56:B:171:GLY:C	56:B:173:GLY:H	2.25	0.45
56:B:205:TYR:CD1	56:B:206:ASP:N	2.82	0.45
56:B:305:LEU:HD12	56:B:369:LEU:HD23	1.90	0.45
56:B:401:ARG:HA	56:B:401:ARG:HD3	1.76	0.45
56:B:412:LEU:HD22	56:B:477:MET:CE	2.26	0.45
4:4:75:C:O5'	4:4:76:A:OP2	2.35	0.45
5:5:1:G:C2	5:5:72:C:N3	2.84	0.45
6:A:29:G:H1	6:A:554:C:N4	2.14	0.45
6:A:80:G:O2'	6:A:81:G:H5'	2.17	0.45
6:A:130:A:O2'	6:A:131:C:O5'	2.28	0.45
6:A:456:C:C2	6:A:477:G:N2	2.84	0.45
6:A:511:C:N3	6:A:512:U:C4	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:593:G:C2	6:A:594:G:C4	3.04	0.45
6:A:709:G:C2	6:A:710:G:N7	2.84	0.45
6:A:907:A:N6	6:A:908:A:N1	2.63	0.45
6:A:1046:A:H2'	6:A:1046:A:N3	2.32	0.45
6:A:1116:C:C4	6:A:1117:G:C8	3.05	0.45
6:A:1248:A:H1'	16:M:70:LYS:HZ1	1.81	0.45
6:A:1345:U:C2	6:A:1377:A:N1	2.85	0.45
6:A:1384:C:H2'	6:A:1385:G:C8	2.51	0.45
6:A:1419:G:N1	6:A:1420:C:O2	2.50	0.45
6:A:1452:C:H1'	6:A:1453:G:N1	2.31	0.45
7:D:16:G:C2	7:D:17:G:C8	3.05	0.45
7:D:270(V):G:C4	7:D:270(W):G:N7	2.85	0.45
7:D:285:C:H2'	7:D:286:C:H6	1.81	0.45
7:D:329:G:O4'	7:D:329:G:OP2	2.35	0.45
7:D:363(F):A:C4	7:D:364:C:H1'	2.52	0.45
7:D:513:A:C2	7:D:514:A:C4	3.05	0.45
7:D:565:C:H4'	7:D:1253:A:C6	2.52	0.45
7:D:609:A:H61	7:D:618(A):C:N4	2.14	0.45
7:D:690:G:N2	7:D:773:U:C2	2.85	0.45
7:D:819:A:C2	7:D:820:A:C4	3.05	0.45
7:D:829:A:C8	7:D:2248:C:H5'	2.51	0.45
7:D:974:G:C6	7:D:1186:G:O6	2.70	0.45
7:D:993:G:C5	7:D:994:C:C5	3.05	0.45
7:D:1034:G:C2	7:D:1035:U:C2	3.05	0.45
7:D:1042:G:N3	7:D:1113:U:N3	2.64	0.45
7:D:1092:C:C6	7:D:1092:C:OP2	2.69	0.45
7:D:1278:A:H61	7:D:1292:U:H3	1.63	0.45
7:D:1613:G:N1	7:D:1619:G:C5	2.84	0.45
7:D:1627:G:C2	7:D:1628:G:C8	3.04	0.45
7:D:1860:G:C4	7:D:1861:G:N7	2.85	0.45
7:D:2094:G:H1	7:D:2195:C:N4	2.15	0.45
7:D:2104:G:C6	7:D:2105:C:N3	2.85	0.45
7:D:2332:U:H5"	7:D:2333:A:OP2	2.17	0.45
7:D:2444:G:H5"	7:D:2444:G:H8	1.81	0.45
7:D:2489:G:C6	7:D:2490:G:N1	2.85	0.45
7:D:2627:G:N2	7:D:2777:G:C4	2.85	0.45
7:D:2740:A:N6	7:D:2764:A:C4	2.84	0.45
8:E:9:G:C2	8:E:112:G:C4	3.04	0.45
8:E:40:U:C2	8:E:43:C:OP2	2.69	0.45
8:E:66:A:O2'	8:E:67:G:OP2	2.29	0.45
8:E:100:G:C2	8:E:101:A:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:58:GLU:HB2	10:G:65:ALA:HB3	1.99	0.45
11:H:143:GLY:HA2	11:H:185:PHE:HB3	1.98	0.45
12:I:15:ARG:HG3	12:I:28:PHE:HE1	1.82	0.45
14:K:5:ARG:NH1	14:K:7:ALA:HA	2.31	0.45
16:M:110:GLU:OE1	16:M:119:ALA:HB1	2.16	0.45
18:O:12:ARG:NH1	18:O:34:ASP:CG	2.69	0.45
18:O:32:ILE:O	18:O:40:ILE:HD12	2.17	0.45
24:U:21:VAL:CG2	24:U:42:TYR:HB2	2.47	0.45
29:Z:44:HIS:HB2	29:Z:213:TYR:CD2	2.52	0.45
30:a:70:TRP:CZ2	30:a:150:LYS:HA	2.51	0.45
30:a:242:ARG:HH22	30:a:244:ARG:CB	2.29	0.45
31:b:8:LYS:O	31:b:192:ASN:HB2	2.16	0.45
31:b:101:ARG:HD3	31:b:101:ARG:HA	1.70	0.45
31:b:133:LYS:HG3	31:b:137:HIS:ND1	2.32	0.45
33:d:126:ASP:HA	33:d:166:ASP:CG	2.42	0.45
36:g:11:ALA:HB3	36:g:97:ARG:CZ	2.47	0.45
36:g:64:ARG:HG3	36:g:66:LYS:H	1.82	0.45
36:g:114:ILE:O	36:g:117:LEU:N	2.47	0.45
41:l:103:ARG:HH11	41:l:107:ASP:CG	2.25	0.45
42:m:82:GLY:HA2	42:m:116:ALA:HB3	1.98	0.45
44:o:11:ARG:CB	44:o:98:LYS:NZ	2.79	0.45
49:t:4:GLN:NE2	49:t:55:LEU:HD11	2.32	0.45
53:x:17:LYS:HB3	53:x:19:ARG:HH12	1.81	0.45
56:B:166:ALA:HB1	56:B:172:GLU:CG	2.27	0.45
56:B:493:ASN:CA	56:B:540:ALA:O	2.65	0.45
56:B:501:VAL:C	56:B:503:ALA:N	2.74	0.45
56:B:567:VAL:HG12	56:B:567:VAL:O	2.17	0.45
1:1:35:ARG:NH1	7:D:2742:C:OP1	2.50	0.45
3:3:102:GLU:O	3:3:106:GLU:OE2	2.35	0.45
6:A:181:G:N1	6:A:194:C:C2	2.85	0.45
6:A:374:A:C2	6:A:375:U:C2	3.05	0.45
6:A:495:A:N6	11:H:119:GLN:HE22	2.13	0.45
6:A:516:U:H3'	6:A:517:G:H8	1.80	0.45
6:A:592:G:C6	6:A:648:A:C6	3.05	0.45
6:A:718:G:O5'	18:O:117:ASN:ND2	2.49	0.45
6:A:719:C:O2'	25:V:49:LYS:HD2	2.17	0.45
6:A:874:G:C2	6:A:875:C:C2	3.05	0.45
6:A:918:A:H2'	6:A:919:A:C8	2.51	0.45
6:A:1179:A:H8	6:A:1179:A:P	2.39	0.45
7:D:270(I):G:O6	7:D:270(Q):C:N4	2.35	0.45
7:D:421:U:O2'	7:D:422:A:P	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:498:G:H5”	7:D:499:U:OP2	2.16	0.45
7:D:529:A:O2’	7:D:530:G:O5’	2.27	0.45
7:D:612:G:N3	7:D:615:G:N2	2.65	0.45
7:D:684:G:O3’	7:D:686:G:N2	2.50	0.45
7:D:957:A:H8	7:D:957:A:O5’	1.99	0.45
7:D:1024:G:O6	7:D:1025:G:C6	2.69	0.45
7:D:1061:U:P	7:D:1061:U:H2’	2.57	0.45
7:D:1168:G:H2’	7:D:1169:G:O5’	2.17	0.45
7:D:1274:A:C6	7:D:1302:A:C2	3.05	0.45
7:D:1281:G:N2	7:D:1290:C:C2	2.85	0.45
7:D:1336:A:H2’	7:D:1337:G:H8	1.82	0.45
7:D:1664:A:OP2	7:D:1664:A:N7	2.50	0.45
7:D:1819:A:H4’	7:D:1820:U:C5’	2.45	0.45
7:D:2021:C:OP2	52:w:12:SER:CB	2.65	0.45
7:D:2049:G:O2’	7:D:2050:C:OP1	2.32	0.45
7:D:2106:G:C4	7:D:2108:C:C2	3.04	0.45
7:D:2166:G:H2’	7:D:2167:U:C6	2.52	0.45
7:D:2168:G:H22	7:D:2170:A:H2’	1.81	0.45
7:D:2712:U:OP1	7:D:2714:G:H4’	2.16	0.45
7:D:2744:G:N7	7:D:2755:C:H1’	2.32	0.45
7:D:2814:C:N4	7:D:2886:G:H1	2.13	0.45
8:E:24:G:O2’	8:E:27:C:N4	2.50	0.45
8:E:46:A:H2’	8:E:47:C:O4’	2.17	0.45
10:G:6:HIS:HD2	10:G:8:ILE:CG2	2.29	0.45
11:H:185:PHE:CZ	11:H:188:LEU:HA	2.46	0.45
11:H:190:ASP:O	11:H:192:GLU:N	2.47	0.45
13:J:14:LEU:HD11	13:J:18:GLN:HB3	1.98	0.45
16:M:73:GLN:O	16:M:77:ILE:HG13	2.17	0.45
25:V:29:PHE:CD2	25:V:31:LEU:HD12	2.51	0.45
25:V:38:GLU:OE1	25:V:38:GLU:N	2.43	0.45
26:W:29:ARG:HE	26:W:29:ARG:H	1.63	0.45
30:a:94:LEU:HD12	30:a:95:LEU:H	1.82	0.45
31:b:125:GLY:O	31:b:135:HIS:HD2	2.00	0.45
32:c:40:GLN:C	32:c:42:ALA:N	2.70	0.45
34:e:25:LYS:HZ1	34:e:32:GLU:CG	2.30	0.45
34:e:106:THR:HG23	34:e:111:HIS:CG	2.51	0.45
35:f:12:ARG:NH1	35:f:12:ARG:CG	2.80	0.45
37:h:72:PRO:HD2	37:h:111:ARG:NE	2.12	0.45
38:i:43:THR:OG1	38:i:44:ALA:N	2.50	0.45
41:l:40:THR:C	41:l:42:ILE:N	2.75	0.45
42:m:32:PHE:O	42:m:36:ARG:NH1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:m:92:ARG:CA	43:n:10:LYS:HZ1	2.30	0.45
43:n:22:VAL:HG12	43:n:23:GLU:O	2.17	0.45
45:p:35:THR:O	45:p:36:LYS:C	2.59	0.45
56:B:121:PHE:CZ	56:B:157:GLY:HA2	2.37	0.45
56:B:196:LEU:HA	56:B:219:GLU:O	2.16	0.45
56:B:265:VAL:HG13	56:B:266:ALA:N	2.32	0.45
56:B:377:VAL:C	56:B:378:TYR:HD1	2.23	0.45
56:B:536:PRO:HB2	56:B:550:THR:HG22	1.88	0.45
1:1:6:SER:OG	7:D:2466:C:H5"	2.17	0.45
2:2:62:ALA:O	2:2:66:LEU:N	2.49	0.45
6:A:154:C:C2	6:A:168:G:C2	3.05	0.45
6:A:456:C:N1	6:A:477:G:N2	2.65	0.45
6:A:566:G:H4'	6:A:567:G:OP1	2.16	0.45
6:A:701:C:C4	6:A:703:G:N2	2.85	0.45
6:A:898:G:C2	6:A:902:G:C6	3.05	0.45
6:A:941:G:C2	6:A:1343:G:C2	3.05	0.45
6:A:1057:G:C6	6:A:1058:G:C4	3.04	0.45
6:A:1058:G:C6	6:A:1059:C:C4	3.05	0.45
6:A:1248:A:C6	6:A:1290:G:C6	3.05	0.45
6:A:1447:G:P	6:A:1447:G:H8	2.39	0.45
6:A:1489:G:C2	6:A:1490:C:O2	2.70	0.45
6:A:1520:G:N1	6:A:1521:G:C5	2.85	0.45
7:D:26:G:C6	7:D:27:G:C2	3.05	0.45
7:D:151:C:H42	7:D:175:G:H1	1.64	0.45
7:D:216:A:C5	7:D:432:A:C6	3.04	0.45
7:D:244:A:C2	7:D:255:A:C4	3.05	0.45
7:D:270(J):G:N2	7:D:270(P):C:O2	2.28	0.45
7:D:375:C:N3	7:D:399:G:N2	2.52	0.45
7:D:390:A:N3	7:D:390:A:H2'	2.32	0.45
7:D:491:G:N7	7:D:492:A:N7	2.65	0.45
7:D:549:G:H2'	7:D:550:G:O4'	2.17	0.45
7:D:704:G:C6	7:D:726:G:C6	3.05	0.45
7:D:748:G:C2	7:D:750:A:N6	2.84	0.45
7:D:844:C:H3'	7:D:845:G:C8	2.52	0.45
7:D:1000:A:OP2	7:D:1154:G:C6	2.69	0.45
7:D:1174:A:C2'	7:D:1175:U:C5	2.88	0.45
7:D:1251:C:OP1	42:m:10:ARG:HG3	2.17	0.45
7:D:1281:G:C5	7:D:1282:U:C4	3.04	0.45
7:D:1395:A:N1	7:D:1398:C:C2	2.85	0.45
7:D:1450:C:O3'	7:D:1451:C:H4'	2.16	0.45
7:D:1513:C:H6	7:D:1513:C:OP2	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1579:A:C5'	7:D:1580:A:N7	2.77	0.45
7:D:1641:A:C8	7:D:1642:G:C8	3.04	0.45
7:D:1675:C:N4	7:D:1676:A:C2	2.85	0.45
7:D:1716:U:O2	7:D:1743:G:C6	2.70	0.45
7:D:1798:U:C4	7:D:1819:A:C2	3.05	0.45
7:D:2033:A:O2'	7:D:2034:U:P	2.75	0.45
7:D:2067:G:C4	7:D:2444:G:N2	2.85	0.45
7:D:2135:A:O5'	7:D:2159:G:O2'	2.35	0.45
7:D:2218:G:C2	7:D:2219:G:C5	3.05	0.45
7:D:2296:U:H5	40:k:8:GLU:CD	2.24	0.45
7:D:2353:G:C4'	48:s:32:ARG:HH12	2.30	0.45
7:D:2377:A:H2'	7:D:2378:A:C8	2.52	0.45
7:D:2406:U:C5	37:h:65:ARG:HB3	2.52	0.45
7:D:2411:A:H2'	7:D:2412:A:H8	1.82	0.45
7:D:2499:C:H5'	7:D:2500:U:OP2	2.16	0.45
7:D:2792:G:H2'	7:D:2793:G:H8	1.81	0.45
8:E:23:G:H1	8:E:60:C:H42	1.64	0.45
8:E:64:C:H2'	8:E:65:C:C6	2.51	0.45
9:F:95:GLN:HA	9:F:96:ARG:NH1	2.32	0.45
20:Q:25:ILE:HG23	20:Q:29:ARG:CG	2.46	0.45
28:Y:10:ARG:HA	28:Y:13:ILE:CG2	2.47	0.45
29:Z:42:GLU:H	29:Z:214:VAL:CG1	2.29	0.45
33:d:131:TYR:HH	33:d:134:GLY:HA2	1.81	0.45
33:d:179:PRO:O	33:d:181:ARG:N	2.49	0.45
34:e:149:ARG:NH1	34:e:164:TYR:HB3	2.32	0.45
36:g:46:ALA:HB2	36:g:54:GLU:OE2	2.16	0.45
38:i:30:GLY:HA3	38:i:106:VAL:HB	1.98	0.45
39:j:84:ALA:C	39:j:88:ARG:NH1	2.75	0.45
40:k:32:LEU:C	40:k:34:HIS:N	2.70	0.45
41:l:50:ILE:HD12	41:l:66:VAL:CB	2.41	0.45
43:n:16:PRO:HA	43:n:98:GLU:OE1	2.17	0.45
43:n:100:ARG:HD3	43:n:101:GLY:H	1.82	0.45
53:x:15:GLU:OE2	53:x:18:ARG:C	2.59	0.45
55:z:62:LEU:HA	55:z:62:LEU:HD23	1.75	0.45
56:B:7:SER:C	56:B:8:ARG:CG	2.87	0.45
56:B:64:VAL:HG23	56:B:64:VAL:O	2.17	0.45
56:B:555:ARG:CG	56:B:556:LYS:H	2.30	0.45
1:1:36:GLN:NE2	7:D:1124:C:H1'	2.32	0.45
5:5:18:G:N2	5:5:55:U:H6	2.15	0.45
5:5:74:C:O2'	5:5:75:C:OP1	2.24	0.45
6:A:21:G:H21	6:A:914:A:H62	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:44:G:N3	6:A:399:G:N2	2.65	0.45
6:A:57:G:H2'	6:A:58:C:H6	1.81	0.45
6:A:80:G:N2	6:A:90:C:C2	2.85	0.45
6:A:92:G:C4	6:A:93:U:C5	3.05	0.45
6:A:163:C:C4	6:A:164:U:C4	3.05	0.45
6:A:479:C:C5	6:A:479:C:OP2	2.70	0.45
6:A:737:A:H2'	6:A:738:C:C6	2.52	0.45
6:A:761:G:P	24:U:102:GLY:HA3	2.57	0.45
6:A:773:G:C2	6:A:774:G:C5	3.05	0.45
6:A:849:C:C5	6:A:850:U:O4	2.70	0.45
6:A:1104:G:C3'	9:F:111:ARG:HH21	2.30	0.45
6:A:1320:C:H5"	26:W:70:LYS:HZ2	0.49	0.45
6:A:1386:G:H2'	6:A:1387:G:H8	1.81	0.45
6:A:1447:G:C2	6:A:1460:A:N3	2.85	0.45
6:A:1452:C:O4'	6:A:1453:G:C2	2.71	0.45
7:D:154:G:C6	7:D:155:C:N4	2.84	0.45
7:D:270(I):G:C2	7:D:270(R):G:C5	3.05	0.45
7:D:373:U:HO2'	7:D:374:A:P	2.38	0.45
7:D:443:A:H62	32:c:42:ALA:HA	1.82	0.45
7:D:509:C:O2'	7:D:510:C:H5'	2.16	0.45
7:D:696:G:C2	7:D:767:U:O2	2.69	0.45
7:D:764:A:N6	7:D:1775:U:H3	2.02	0.45
7:D:922:U:O2	7:D:923:C:N3	2.48	0.45
7:D:926:A:C2'	7:D:928:G:C8	3.00	0.45
7:D:948:G:H2'	7:D:949:C:O4'	2.16	0.45
7:D:974:G:OP2	7:D:974(A):C:C5'	2.65	0.45
7:D:1037:G:C2	7:D:1038:C:C2	3.05	0.45
7:D:1056:G:O6	7:D:1101:U:H5"	2.16	0.45
7:D:1072:C:OP2	7:D:1073:A:OP1	2.35	0.45
7:D:1106:G:H5"	7:D:1107:G:OP2	2.17	0.45
7:D:1344:G:C2	7:D:1385:G:C8	3.05	0.45
7:D:1354:A:N7	7:D:1355:G:C4	2.85	0.45
7:D:1594:G:C4	7:D:1595:G:C8	3.04	0.45
7:D:1682:G:H5"	7:D:1683:C:OP2	2.17	0.45
7:D:2335:A:H2'	7:D:2336:A:H3'	1.99	0.45
7:D:2362:G:N2	7:D:2363:C:O2	2.50	0.45
7:D:2510:C:C4	7:D:2511:U:N3	2.84	0.45
7:D:2572:A:C2'	7:D:2573:C:OP2	2.65	0.45
7:D:2837:G:C2	7:D:2838:G:C8	3.05	0.45
8:E:48:A:H5"	40:k:30:ARG:HH12	1.82	0.45
17:N:7:LYS:HA	17:N:71:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:80:ARG:HH11	20:Q:80:ARG:HG3	1.81	0.45
26:W:51:VAL:HG11	26:W:75:ALA:CB	2.47	0.45
27:X:53:LEU:O	27:X:57:ARG:HG3	2.17	0.45
31:b:58:ARG:HH12	31:b:73:GLU:CA	2.30	0.45
35:f:2:LYS:N	42:m:61:TRP:HZ2	2.15	0.45
35:f:67:LEU:N	35:f:69:GLN:OE1	2.41	0.45
36:g:70:LYS:HB3	36:g:72:PRO:HD2	1.98	0.45
41:l:70:VAL:CG2	41:l:74:ARG:HH11	2.30	0.45
42:m:25:TRP:HB3	42:m:28:ARG:NH1	2.32	0.45
51:v:63:TYR:HB3	51:v:67:TYR:OH	2.16	0.45
53:x:11:LEU:CB	55:z:35:GLN:HE22	2.29	0.45
55:z:52:LYS:O	55:z:54:GLU:N	2.50	0.45
56:B:36:VAL:CG2	56:B:248:GLN:HE21	2.24	0.45
56:B:118:LEU:HD23	56:B:118:LEU:HA	1.83	0.45
3:3:6:ALA:C	3:3:8:VAL:N	2.73	0.44
3:3:87:GLY:C	7:D:1063:G:O2'	2.59	0.44
6:A:122:G:N1	6:A:123:C:C2	2.85	0.44
6:A:127:G:N2	24:U:61:GLU:OE2	2.49	0.44
6:A:172:A:H5"	6:A:173:U:OP2	2.17	0.44
6:A:286:G:C2	6:A:287:U:C2	3.05	0.44
6:A:443:C:O2	6:A:491:G:N1	2.47	0.44
6:A:464:G:OP2	6:A:465:A:C4	2.70	0.44
6:A:503:C:O5'	6:A:503:C:C6	2.71	0.44
6:A:577:G:H2'	6:A:578:C:H6	1.83	0.44
6:A:583:A:H2	6:A:759:A:C4	2.35	0.44
6:A:597:G:H5"	6:A:598:U:OP2	2.18	0.44
6:A:666:G:C5	6:A:667:G:N7	2.85	0.44
6:A:977:A:O2'	6:A:979:C:OP2	2.29	0.44
6:A:1378:C:O3'	14:K:6:ARG:NH1	2.48	0.44
6:A:1399:C:N3	6:A:1401:G:C2	2.85	0.44
6:A:1433:A:H5"	6:A:1434:A:OP2	2.16	0.44
7:D:270(X):G:C6	7:D:270(Y):G:C4	3.05	0.44
7:D:301:G:H1	7:D:316:C:N4	2.14	0.44
7:D:309:G:C6	7:D:330:A:C6	3.05	0.44
7:D:354:G:C6	7:D:355:G:C6	3.04	0.44
7:D:492:A:C5	7:D:493:G:C8	3.05	0.44
7:D:541:C:H6	7:D:541:C:H5"	1.83	0.44
7:D:558:G:C6	7:D:559:G:O6	2.70	0.44
7:D:740:U:O5'	7:D:1784:A:C6	2.70	0.44
7:D:763:G:C2	7:D:765:G:C4	3.04	0.44
7:D:838:C:H2'	7:D:839:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:974:G:OP2	7:D:974(A):C:P	2.74	0.44
7:D:1034:G:C6	7:D:1035:U:C4	3.05	0.44
7:D:1137:G:H5"	7:D:1138:G:OP2	2.17	0.44
7:D:1296:G:N2	7:D:1297:C:C2	2.85	0.44
7:D:1447:G:C2	7:D:1448:G:C4	3.05	0.44
7:D:1492:G:N3	7:D:1493:C:C4	2.85	0.44
7:D:1538:G:C6	7:D:1539:G:C6	3.06	0.44
7:D:1565:C:N4	30:a:84:TYR:HH	2.14	0.44
7:D:1565:C:C5'	30:a:26:LYS:HZ2	2.30	0.44
7:D:1589:C:C4	7:D:1590:U:O4	2.70	0.44
7:D:1821:A:C6	7:D:1822:G:C6	3.06	0.44
7:D:1847:A:C6	7:D:1890:A:OP2	2.65	0.44
7:D:2027:G:C2	7:D:2037:G:C2	3.05	0.44
7:D:2230:G:C2	7:D:2231:C:C2	3.04	0.44
7:D:2671:A:H2'	7:D:2672:G:H8	1.82	0.44
7:D:2744:G:C2	7:D:2761:G:C4	3.05	0.44
7:D:2787:C:H1'	31:b:61:ARG:NH2	2.32	0.44
11:H:20:TYR:HA	11:H:31:CYS:SG	2.56	0.44
11:H:22:LYS:HB3	11:H:26:CYS:HB2	1.98	0.44
13:J:69:GLU:O	13:J:72:VAL:HG13	2.16	0.44
17:N:47:PHE:CE1	21:R:44:LEU:HD21	2.51	0.44
21:R:21:TYR:OH	21:R:23:ARG:NH2	2.49	0.44
23:T:45:THR:OG1	23:T:48:TRP:HB3	2.17	0.44
31:b:116:VAL:HG13	31:b:120:TRP:NE1	2.32	0.44
33:d:6:ALA:O	33:d:9:ARG:HB3	2.16	0.44
33:d:67:LYS:HA	33:d:68:PRO:HD2	1.77	0.44
35:f:39:ARG:C	35:f:42:TRP:HE3	2.25	0.44
35:f:39:ARG:HB2	35:f:48:MET:HE3	1.99	0.44
38:i:54:MET:HE2	38:i:121:ALA:HB3	1.98	0.44
46:q:25:GLY:CA	46:q:37:VAL:HG23	2.44	0.44
48:s:25:ARG:HB2	48:s:37:LEU:HB2	1.98	0.44
49:t:51:GLN:HA	49:t:54:ARG:HH21	1.82	0.44
52:w:36:CYS:HB3	52:w:49:CYS:HB3	1.96	0.44
56:B:40:GLU:HG2	56:B:41:MET:H	1.82	0.44
56:B:131:ILE:HG22	56:B:132:ILE:N	2.32	0.44
56:B:154:GLU:C	56:B:155:VAL:HG23	2.41	0.44
56:B:241:LYS:CG	56:B:242:VAL:N	2.80	0.44
56:B:280:ILE:CG2	56:B:281:THR:H	2.07	0.44
56:B:328:ALA:O	56:B:330:LEU:CD1	2.66	0.44
56:B:432:ARG:HG3	56:B:432:ARG:O	2.16	0.44
4:4:9:G:N2	4:4:45:G:C5	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:14:U:N3	6:A:17:U:OP2	2.40	0.44
6:A:85:U:C2'	6:A:86:U:C5'	2.87	0.44
6:A:85:U:O5'	6:A:85:U:C6	2.71	0.44
6:A:90:C:C2'	6:A:91:C:C6	2.86	0.44
6:A:123:C:H2'	6:A:124:G:C8	2.51	0.44
6:A:328:C:H4'	6:A:329:A:C5'	2.48	0.44
6:A:437:U:O2'	6:A:438:G:OP1	2.32	0.44
6:A:512:U:H2'	6:A:513:C:H6	1.82	0.44
6:A:635:G:C6	6:A:636:U:C4	3.04	0.44
6:A:663:A:H2'	6:A:664:G:H8	1.82	0.44
6:A:708:C:H2'	6:A:709:G:H8	1.83	0.44
6:A:764:C:H2'	6:A:765:G:C8	2.53	0.44
6:A:1480:G:C6	6:A:1481:U:N3	2.85	0.44
7:D:54:G:C6	7:D:55:G:N7	2.86	0.44
7:D:81:G:C5	7:D:82:G:C5	3.06	0.44
7:D:227:A:H1'	7:D:228:A:C5	2.51	0.44
7:D:242:G:O2'	7:D:243:U:OP2	2.36	0.44
7:D:250:G:N1	7:D:251:A:C2	2.85	0.44
7:D:295:G:OP2	7:D:338:G:N2	2.50	0.44
7:D:335:C:H2'	7:D:336:C:C6	2.50	0.44
7:D:460:A:C2	7:D:470:A:C5	3.05	0.44
7:D:625:G:H1	37:h:100:LEU:CD2	2.31	0.44
7:D:699:A:N7	7:D:734:A:C6	2.85	0.44
7:D:776:G:C2	7:D:793:A:N6	2.85	0.44
7:D:854:G:N1	7:D:855:G:C5	2.85	0.44
7:D:926:A:C3'	7:D:928:G:C8	3.01	0.44
7:D:974:G:C5'	7:D:974(A):C:OP2	2.66	0.44
7:D:1015:G:O6	7:D:1148:A:N6	2.50	0.44
7:D:1024:G:C6	7:D:1139:G:N1	2.76	0.44
7:D:1041:C:O2	7:D:1115:G:C6	2.70	0.44
7:D:1047:G:C5	7:D:1110:G:C6	3.05	0.44
7:D:1171:G:C5	7:D:1173:G:O2'	2.70	0.44
7:D:1255:U:H5'	7:D:1256:G:H5"	2.00	0.44
7:D:1278:A:H2'	7:D:1279:G:C8	2.53	0.44
7:D:1363:C:C5'	7:D:1809:A:H62	2.29	0.44
7:D:1410:G:C6	7:D:1593:G:C6	3.04	0.44
7:D:1485:G:C6	7:D:1486:A:N6	2.85	0.44
7:D:1588:C:O5'	7:D:1588:C:C6	2.70	0.44
7:D:1717:G:H8	7:D:1717:G:O5'	2.00	0.44
7:D:1764:G:N2	7:D:1765:C:C2	2.85	0.44
7:D:1790:C:O3'	30:a:209:ALA:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1799:G:H8	30:a:268:ARG:NH1	2.14	0.44
7:D:1802:A:OP2	7:D:1815:A:N6	2.38	0.44
7:D:1881:C:H41	7:D:1882:C:N4	2.15	0.44
7:D:1916:A:C6	7:D:1917:U:O4	2.70	0.44
7:D:2087:G:C6	7:D:2088:G:C5	3.06	0.44
7:D:2227:A:C5	7:D:2228:G:C6	3.01	0.44
7:D:2517:C:C4	7:D:2542:A:C6	3.05	0.44
7:D:2530:A:H62	34:e:172:LYS:NZ	2.15	0.44
7:D:2657:A:C4	7:D:2665:A:C6	3.05	0.44
7:D:2787:C:H1'	31:b:61:ARG:NE	2.32	0.44
7:D:2839:G:N2	7:D:2880:C:N3	2.66	0.44
7:D:2884:U:C5	52:w:52:TYR:HE1	2.36	0.44
8:E:116:G:C2	8:E:117:G:C4	3.06	0.44
9:F:130:ARG:O	9:F:135:GLN:NE2	2.38	0.44
9:F:182:ILE:HA	9:F:183:PRO:HD3	1.78	0.44
10:G:68:VAL:HG12	10:G:70:VAL:HG23	1.98	0.44
11:H:18:LYS:HG2	11:H:33:MET:HG3	1.99	0.44
11:H:68:TYR:CD2	11:H:97:LEU:HD22	2.52	0.44
13:J:91:VAL:HG11	13:J:94:GLN:HE22	1.81	0.44
15:L:73:ASP:OD1	15:L:74:PRO:HD2	2.16	0.44
15:L:81:HIS:HD2	15:L:138:TRP:CZ3	2.34	0.44
16:M:105:ASP:HB3	16:M:107:ARG:HB2	1.99	0.44
17:N:6:ILE:HG12	17:N:73:ASP:OD1	2.15	0.44
30:a:70:TRP:CD1	30:a:71:ASP:N	2.85	0.44
30:a:242:ARG:NH2	30:a:244:ARG:HB2	2.32	0.44
32:c:162:LEU:O	32:c:165:ARG:N	2.50	0.44
34:e:124:GLU:N	34:e:124:GLU:OE1	2.51	0.44
37:h:122:PRO:HA	37:h:134:ALA:HA	1.99	0.44
49:t:13:PRO:O	49:t:16:LEU:HB3	2.18	0.44
54:y:17:GLY:HA2	54:y:44:PRO:CB	2.43	0.44
54:y:34:ARG:HH12	54:y:42:LEU:HD23	1.80	0.44
56:B:13:SER:HB2	56:B:97:LEU:HD21	2.00	0.44
56:B:16:ALA:N	56:B:22:LYS:CE	2.74	0.44
56:B:33:THR:HG21	56:B:69:ARG:CG	2.47	0.44
56:B:106:VAL:HG11	56:B:136:ASN:ND2	2.32	0.44
56:B:197:LYS:HA	56:B:281:THR:HG22	1.54	0.44
56:B:300:VAL:C	56:B:301:VAL:HG12	2.43	0.44
56:B:383:LYS:N	56:B:402:ILE:CB	2.78	0.44
56:B:530:ARG:HB3	56:B:533:PHE:HD2	1.83	0.44
1:1:10:ILE:HG21	7:D:2477:C:N4	2.32	0.44
6:A:88:C:H2'	6:A:89:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:243:A:C2	6:A:246:A:C8	3.05	0.44
6:A:251:G:H4'	6:A:252:U:O5'	2.16	0.44
6:A:258:G:C2	6:A:259:G:C4	3.05	0.44
6:A:321:A:N7	6:A:328:C:C6	2.85	0.44
6:A:325:A:H2'	6:A:326:G:C8	2.53	0.44
6:A:451:A:C6	6:A:481:G:C5	3.06	0.44
6:A:714:G:C2	6:A:715:A:C4	3.05	0.44
6:A:755:G:N2	6:A:756:C:C2	2.85	0.44
6:A:875:C:O3'	15:L:14:ARG:NH2	2.32	0.44
6:A:916:G:H2'	6:A:917:G:C8	2.52	0.44
6:A:947:G:C6	6:A:948:C:C4	3.06	0.44
6:A:1263:C:H2'	6:A:1264:C:C6	2.51	0.44
6:A:1356:G:H1	6:A:1366:C:H42	1.65	0.44
6:A:1384:C:C4	6:A:1385:G:N7	2.85	0.44
6:A:1448:C:H2'	6:A:1449:C:H6	1.82	0.44
7:D:14:A:N3	7:D:2625:G:O2'	2.35	0.44
7:D:119:A:HO2'	7:D:120:U:P	2.39	0.44
7:D:290:G:O4'	7:D:290:G:OP2	2.34	0.44
7:D:371:A:C5'	7:D:423:A:H62	2.28	0.44
7:D:401:A:C4	7:D:402:A:C8	3.05	0.44
7:D:479:A:C2	7:D:480:A:C6	3.06	0.44
7:D:531:C:H5'	7:D:532:A:N3	2.33	0.44
7:D:592:G:H1	7:D:665:C:H42	1.66	0.44
7:D:696:G:C2	7:D:697:C:C2	3.06	0.44
7:D:715:G:C8	7:D:715:G:C3'	2.99	0.44
7:D:909:A:N6	7:D:912:C:O2	2.50	0.44
7:D:972:G:C6	7:D:973:A:C5	3.06	0.44
7:D:980:A:N7	7:D:981:A:C6	2.85	0.44
7:D:997:G:OP1	42:m:92:ARG:HB3	2.16	0.44
7:D:1054:A:N3	7:D:1107:G:N2	2.66	0.44
7:D:1128:A:N6	7:D:2518:A:H61	2.15	0.44
7:D:1144:G:C6	7:D:1145:C:C4	3.06	0.44
7:D:1167:U:C2'	7:D:1168:G:H5'	2.47	0.44
7:D:1197:G:N2	7:D:1250:G:C4	2.85	0.44
7:D:1240:U:H2'	7:D:1241:A:C8	2.53	0.44
7:D:1321:A:H4'	44:o:11:ARG:HH22	1.82	0.44
7:D:1401:G:H5"	7:D:1402:C:OP2	2.18	0.44
7:D:1444(A):A:N6	7:D:1462:C:OP2	2.50	0.44
7:D:1456:G:O6	7:D:1457:A:N6	2.51	0.44
7:D:1692:U:O2	7:D:1696:G:C2	2.71	0.44
7:D:1732:A:OP1	7:D:1733:G:C5	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1734:C:C6	7:D:1734:C:OP2	2.71	0.44
7:D:1881:C:N4	7:D:1882:C:C4	2.85	0.44
7:D:2160:G:H22	29:Z:6:ARG:NH2	2.14	0.44
7:D:2267:A:O2'	7:D:2268:A:OP2	2.24	0.44
7:D:2645:G:H4'	7:D:2732:G:O2'	2.17	0.44
7:D:2714:G:N2	7:D:2715:C:O2	2.51	0.44
7:D:2896:C:H3'	7:D:2896:C:H6	1.81	0.44
8:E:34:U:O4	8:E:44:G:H2'	2.18	0.44
10:G:37:GLN:HE21	21:R:26:ARG:HD2	1.81	0.44
10:G:103:VAL:O	10:G:104:GLN:NE2	2.50	0.44
12:I:128:PRO:O	12:I:131:ILE:HG22	2.17	0.44
13:J:28:ARG:O	13:J:31:GLU:HB3	2.18	0.44
13:J:97:PHE:HZ	25:V:62:GLU:OE1	2.00	0.44
23:T:60:LEU:HD23	23:T:60:LEU:HA	1.76	0.44
24:U:12:SER:OG	24:U:13:ASP:N	2.50	0.44
24:U:90:ILE:O	24:U:93:GLN:HB2	2.17	0.44
30:a:252:TRP:N	30:a:255:LYS:NZ	2.66	0.44
31:b:195:LEU:HD12	31:b:196:VAL:H	1.83	0.44
32:c:67:GLN:H	32:c:67:GLN:HG2	1.51	0.44
35:f:30:ILE:HG23	35:f:34:LEU:HD13	1.98	0.44
35:f:48:MET:HB3	35:f:49:GLY:H	1.64	0.44
36:g:34:THR:HG22	36:g:35:VAL:N	2.33	0.44
36:g:64:ARG:HG3	36:g:66:LYS:N	2.33	0.44
39:j:8:ARG:O	39:j:8:ARG:HG2	2.17	0.44
41:l:53:ARG:NH1	41:l:102:ILE:N	2.65	0.44
43:n:76:LYS:HZ2	43:n:86:GLY:H	1.65	0.44
45:p:73:ARG:CG	45:p:74:PRO:HD2	2.47	0.44
48:s:82:ARG:O	48:s:82:ARG:HG3	2.13	0.44
49:t:60:ASN:CG	49:t:63:ARG:NH1	2.74	0.44
53:x:9:LEU:HD21	53:x:27:LYS:HZ1	1.82	0.44
53:x:35:GLU:HB2	53:x:51:GLU:CD	2.42	0.44
56:B:58:THR:HB	56:B:84:PRO:CG	2.45	0.44
56:B:379:LYS:NZ	56:B:485:ARG:N	2.60	0.44
56:B:380:VAL:CG2	56:B:381:ARG:N	2.80	0.44
56:B:431:LYS:HB2	56:B:458:GLU:CG	2.46	0.44
56:B:537:ILE:CD1	56:B:551:VAL:HG22	2.45	0.44
6:A:74:C:C4	6:A:75:C:N4	2.81	0.44
6:A:109:A:C8	6:A:327:A:N3	2.85	0.44
6:A:329:A:C6	6:A:332:G:C2	3.06	0.44
6:A:501:C:O5'	6:A:501:C:H6	2.00	0.44
6:A:503:C:O2'	6:A:504:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:575:G:C2	6:A:881:G:N3	2.85	0.44
6:A:582:U:O2	6:A:583:A:C4	2.71	0.44
6:A:596:C:N4	6:A:645:C:N3	2.66	0.44
6:A:778:G:H21	18:O:120:ARG:HG2	1.82	0.44
6:A:818:G:HO2'	6:A:819:A:P	2.39	0.44
6:A:890:G:H2'	6:A:906:G:O6	2.17	0.44
6:A:945:G:H21	6:A:1334:G:H4'	1.82	0.44
6:A:1256:A:O3'	6:A:1257:U:H4'	2.16	0.44
6:A:1312:G:N2	6:A:1313:U:C2	2.85	0.44
6:A:1446:A:O2'	6:A:1447:G:C8	2.71	0.44
6:A:1461:G:N2	6:A:1462:G:C5	2.85	0.44
7:D:16:G:C4	7:D:17:G:C8	3.06	0.44
7:D:35:G:C4	7:D:454:A:C2	3.06	0.44
7:D:38:A:N3	7:D:442:G:N2	2.64	0.44
7:D:121:G:N2	7:D:131:G:C4	2.86	0.44
7:D:138:G:N3	7:D:139:G:H5"	2.32	0.44
7:D:242:G:H3'	55:z:4:MET:SD	2.57	0.44
7:D:436:C:C4	7:D:438:G:N7	2.86	0.44
7:D:608:A:H2'	7:D:609:A:O4'	2.18	0.44
7:D:890:A:C3'	7:D:892:G:C5'	2.86	0.44
7:D:1138:G:C2	7:D:1139:G:C5	3.05	0.44
7:D:1167:U:H2'	7:D:1168:G:H5'	1.99	0.44
7:D:1252:G:O2'	42:m:33:ARG:NH2	2.51	0.44
7:D:1262:A:C2	7:D:1263:U:C2	3.06	0.44
7:D:1268:A:N3	7:D:2013:A:C6	2.85	0.44
7:D:1300:U:C4	7:D:1627:G:OP2	2.70	0.44
7:D:1365:A:C6	7:D:1366:A:C5	3.06	0.44
7:D:1475:G:N7	7:D:1517:G:C2	2.85	0.44
7:D:1513:C:OP2	7:D:1513:C:C6	2.70	0.44
7:D:1524:G:N2	7:D:1525:G:C4	2.86	0.44
7:D:1527:G:N1	7:D:1544:C:C2	2.77	0.44
7:D:1735:C:O5'	7:D:1735:C:C6	2.70	0.44
7:D:1762:A:H5"	7:D:1763:G:OP2	2.18	0.44
7:D:1764:G:C2	7:D:1765:C:C2	3.06	0.44
7:D:1776:G:C2	7:D:1789:A:C2	3.05	0.44
7:D:1878:G:C2	7:D:1879:C:O2	2.70	0.44
7:D:1910:G:C2	7:D:1921:G:C4	3.05	0.44
7:D:1947:C:H5"	7:D:1948:G:OP2	2.17	0.44
7:D:2013:A:N3	7:D:2014:A:C8	2.86	0.44
7:D:2122:U:C4	7:D:2123:G:C4	3.06	0.44
7:D:2508:G:C6	7:D:2582:G:O6	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2851:A:N7	7:D:2852:G:N7	2.65	0.44
7:D:2889:C:O5'	7:D:2889:C:C6	2.70	0.44
9:F:158:LEU:HA	9:F:159:PRO:HD3	1.58	0.44
10:G:29:TYR:CE2	10:G:33:LEU:HD11	2.52	0.44
11:H:39:PRO:HG2	11:H:44:GLY:CA	2.47	0.44
12:I:102:ALA:H	12:I:107:ARG:NH2	2.16	0.44
14:K:146:GLU:HG2	14:K:149:ARG:NE	2.32	0.44
18:O:48:ILE:HG21	18:O:63:LEU:HD22	1.99	0.44
18:O:50:TYR:CD1	18:O:54:ARG:NH1	2.85	0.44
20:Q:96:LEU:HD12	20:Q:103:THR:CG2	2.34	0.44
24:U:81:ARG:NH1	24:U:83:ASP:CG	2.76	0.44
26:W:70:LYS:O	26:W:73:GLU:N	2.49	0.44
29:Z:32:LEU:HB3	29:Z:220:PRO:HB2	2.00	0.44
29:Z:71:GLN:HG3	29:Z:72:VAL:HG23	1.99	0.44
29:Z:153:ILE:HA	29:Z:156:ILE:HD12	1.99	0.44
29:Z:155:GLU:C	29:Z:160:ARG:N	2.74	0.44
30:a:23:GLU:OE1	30:a:204:ILE:HA	2.17	0.44
30:a:57:GLY:O	30:a:217:ARG:HA	2.18	0.44
34:e:119:GLU:H	34:e:121:ILE:HG22	1.82	0.44
35:f:76:SER:HB3	35:f:78:TYR:H	1.82	0.44
38:i:11:LYS:NZ	38:i:73:PRO:CD	2.81	0.44
38:i:45:GLN:HA	38:i:48:GLU:OE1	2.17	0.44
41:l:64:ARG:HG3	41:l:65:LYS:H	1.83	0.44
42:m:44:ASN:ND2	43:n:78:LYS:HB3	2.32	0.44
43:n:62:LEU:HD23	43:n:98:GLU:HG2	1.99	0.44
47:r:80:ARG:HD2	47:r:82:ARG:HH12	1.83	0.44
50:u:50:VAL:O	50:u:52:HIS:N	2.50	0.44
52:w:41:PRO:HG2	52:w:44:THR:OG1	2.18	0.44
56:B:17:HIS:CB	56:B:20:HIS:CG	3.00	0.44
56:B:43:GLU:HB3	56:B:53:ARG:HH12	1.82	0.44
56:B:203:SER:O	56:B:204:VAL:HG22	2.17	0.44
56:B:306:TYR:CZ	56:B:339:ALA:HB3	2.52	0.44
56:B:331:THR:O	56:B:332:PHE:CD2	2.71	0.44
56:B:556:LYS:C	56:B:558:VAL:H	2.19	0.44
3:3:79:ARG:NH2	3:3:134:MET:HB2	2.33	0.44
6:A:156:G:C6	6:A:157:G:N7	2.86	0.44
6:A:403:C:HO2'	11:H:122:ARG:HH12	1.54	0.44
6:A:438:G:OP1	11:H:123:HIS:HB3	2.17	0.44
6:A:464:G:OP2	6:A:464:G:C8	2.70	0.44
6:A:686:U:H4'	6:A:687:A:OP1	2.18	0.44
6:A:830:G:H2'	6:A:831:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1134:G:C2	6:A:1135:U:H1'	2.53	0.44
6:A:1268:A:C5	6:A:1269:A:N6	2.85	0.44
6:A:1449:C:N4	6:A:1455:G:C6	2.86	0.44
7:D:261:G:O2'	7:D:262:A:H5'	2.17	0.44
7:D:273(A):G:H1	7:D:363(E):U:H3	1.66	0.44
7:D:381:G:N2	7:D:382:G:N3	2.66	0.44
7:D:441:U:O5'	7:D:441:U:C6	2.71	0.44
7:D:447:A:N1	7:D:454:A:C8	2.85	0.44
7:D:602:G:N2	7:D:656:G:N7	2.65	0.44
7:D:729:G:H2'	7:D:730:C:O4'	2.17	0.44
7:D:1071:G:N2	7:D:1089:G:H2'	2.29	0.44
7:D:1223:C:N4	43:n:88:ARG:NH1	2.66	0.44
7:D:1258:C:H2'	7:D:1259:G:H8	1.82	0.44
7:D:1279:G:C4	7:D:1280:G:C8	3.06	0.44
7:D:1361:G:N2	7:D:1362:C:O2	2.51	0.44
7:D:1472:A:H62	7:D:1474:C:N4	2.16	0.44
7:D:1477:A:N7	7:D:1478:G:C5	2.86	0.44
7:D:1483:G:N1	7:D:1484:G:C5	2.86	0.44
7:D:1486:A:H2'	7:D:1487:G:C8	2.53	0.44
7:D:1487:G:N3	7:D:1488:G:C8	2.85	0.44
7:D:1559:G:N2	7:D:1561:G:OP1	2.49	0.44
7:D:1582:C:C6	7:D:1582:C:C3'	3.00	0.44
7:D:1853:A:N1	7:D:1889:A:C6	2.86	0.44
7:D:1869:G:C5	7:D:1871:A:OP2	2.71	0.44
7:D:2028:U:H2'	7:D:2029:G:C8	2.53	0.44
7:D:2211:G:N3	7:D:2211:G:H2'	2.33	0.44
7:D:2400:G:C2	7:D:2401:U:C2	3.05	0.44
7:D:2577:A:O2'	52:w:4:HIS:HE1	2.01	0.44
7:D:2613:U:O2'	7:D:2614:A:OP1	2.30	0.44
7:D:2786:U:O4	7:D:2787:C:N4	2.50	0.44
8:E:51:G:H2'	8:E:51:G:N3	2.33	0.44
8:E:87:G:N2	8:E:90:C:C2	2.86	0.44
9:F:12:GLU:O	9:F:16:HIS:ND1	2.50	0.44
9:F:208:ILE:O	9:F:212:GLN:HG2	2.18	0.44
10:G:11:ARG:HD3	10:G:178:LEU:HD12	1.98	0.44
10:G:25:GLY:O	10:G:29:TYR:HB2	2.18	0.44
11:H:15:GLU:CD	11:H:63:LYS:HB3	2.43	0.44
15:L:109:ILE:HA	15:L:121:ASP:OD2	2.17	0.44
19:P:39:VAL:HG11	19:P:41:ARG:NH2	2.33	0.44
22:S:18:PHE:HA	22:S:19:PRO:HD3	1.85	0.44
23:T:52:ASP:OD2	23:T:54:GLU:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:U:45:HIS:CG	24:U:65:ILE:HD13	2.53	0.44
26:W:14:HIS:CD2	26:W:35:SER:C	2.96	0.44
26:W:28:LYS:HA	26:W:28:LYS:CE	2.46	0.44
30:a:46:GLN:CD	30:a:46:GLN:O	2.59	0.44
30:a:132:PRO:HA	30:a:189:CYS:O	2.17	0.44
30:a:248:SER:HA	30:a:249:PRO:HD2	1.68	0.44
31:b:49:LEU:HD11	31:b:74:PRO:C	2.43	0.44
35:f:22:THR:HG23	35:f:61:ARG:HH12	1.82	0.44
35:f:51:PHE:CE1	35:f:119:ARG:NH1	2.81	0.44
36:g:8:LEU:O	36:g:19:ILE:HG13	2.18	0.44
36:g:86:ILE:HG22	36:g:87:ILE:N	2.32	0.44
38:i:76:LYS:NZ	38:i:78:PRO:C	2.75	0.44
41:l:108:ARG:HE	41:l:113:LYS:HD3	1.83	0.44
43:n:6:LYS:HG2	43:n:10:LYS:HA	1.99	0.44
43:n:19:LYS:N	43:n:21:ARG:NH1	2.53	0.44
43:n:96:ILE:CD1	43:n:98:GLU:HG3	2.47	0.44
44:o:3:ALA:O	44:o:106:ILE:HD12	2.18	0.44
46:q:84:ARG:HD3	46:q:94:LYS:HG3	1.97	0.44
48:s:40:GLN:NE2	48:s:42:GLY:O	2.50	0.44
49:t:36:ILE:HG23	49:t:37:GLY:N	2.32	0.44
54:y:34:ARG:NH2	54:y:42:LEU:HA	2.32	0.44
54:y:36:GLN:O	54:y:37:LYS:HB2	2.17	0.44
55:z:16:ILE:CG2	55:z:57:ARG:NH1	2.80	0.44
56:B:89:PHE:C	56:B:91:TYR:N	2.73	0.44
56:B:459:ILE:C	56:B:459:ILE:CD1	2.87	0.44
56:B:593:PRO:O	56:B:597:PHE:CE1	2.70	0.44
3:3:75:SER:O	3:3:79:ARG:HG2	2.18	0.44
5:5:21:A:C6	5:5:46:G:C2	3.06	0.44
6:A:38:G:H1	6:A:397:A:H5”	1.83	0.44
6:A:80:G:O6	6:A:88:C:N4	2.44	0.44
6:A:81:G:OP2	6:A:82:U:C5	2.71	0.44
6:A:131:C:H2’	6:A:132:C:H6	1.82	0.44
6:A:254:G:C6	6:A:273:A:N1	2.86	0.44
6:A:414:A:H2’	6:A:415:A:C8	2.53	0.44
6:A:417:C:C6	6:A:417:C:OP2	2.70	0.44
6:A:443:C:C2	6:A:492:G:C4	3.06	0.44
6:A:501:C:C6	6:A:501:C:O5’	2.71	0.44
6:A:533:A:H5’	6:A:534:U:OP2	2.18	0.44
6:A:650:G:C2	6:A:651:C:C6	3.06	0.44
6:A:727:G:N2	6:A:731:G:H1’	2.33	0.44
6:A:834:C:H2’	6:A:835:U:C6	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:939:G:N2	6:A:940:C:C2	2.85	0.44
6:A:999:U:C2	6:A:1041:A:N1	2.86	0.44
6:A:1252:A:H61	6:A:1285:A:H61	1.65	0.44
6:A:1400:C:HO2'	6:A:1401:G:P	2.41	0.44
6:A:1521:G:C2	6:A:1522:U:C2	3.06	0.44
7:D:195:A:C6	7:D:198:C:C5	3.05	0.44
7:D:255:A:C6	7:D:256:A:C4	3.06	0.44
7:D:323:G:C6	7:D:333:G:C5	3.05	0.44
7:D:342:G:N2	7:D:343:C:C2	2.86	0.44
7:D:436:C:H2'	7:D:438:G:O5'	2.18	0.44
7:D:571:A:C5	7:D:2030:A:N6	2.86	0.44
7:D:572:A:N6	7:D:573:G:C6	2.85	0.44
7:D:829:A:N7	7:D:2247:A:O2'	2.51	0.44
7:D:879:G:C6	7:D:897:C:H1'	2.52	0.44
7:D:1047:G:C8	7:D:1110:G:N2	2.86	0.44
7:D:1082:U:H2'	7:D:1083:U:O4'	2.18	0.44
7:D:1091:G:O2'	7:D:1092:C:O4'	2.29	0.44
7:D:1164:G:H2'	7:D:1165:U:O4'	2.18	0.44
7:D:1171:G:N7	7:D:1173:G:O2'	2.45	0.44
7:D:1174:A:C4	7:D:1174:A:OP1	2.71	0.44
7:D:1222:C:H42	7:D:1227:A:N6	2.11	0.44
7:D:1251:C:C5'	42:m:10:ARG:HE	2.29	0.44
7:D:1471:A:C4	7:D:1521:G:N2	2.86	0.44
7:D:1591:G:C2'	7:D:1592:C:H5'	2.46	0.44
7:D:1749:A:H8	7:D:1749:A:P	2.41	0.44
7:D:1750:G:H2'	7:D:1751:C:C6	2.51	0.44
7:D:1781:C:C2'	7:D:1782:C:OP2	2.65	0.44
7:D:1864:U:H2'	7:D:1869:G:C8	2.52	0.44
7:D:2115:G:H8	7:D:2115:G:O5'	2.01	0.44
7:D:2125:G:O2'	7:D:2126:A:O5'	2.35	0.44
7:D:2217:G:H8	7:D:2217:G:O5'	2.01	0.44
7:D:2330:G:N2	7:D:2386:C:C2	2.83	0.44
7:D:2795:G:OP2	7:D:2795:G:C8	2.70	0.44
8:E:43:C:N3	8:E:45:A:C6	2.86	0.44
8:E:75:G:N7	8:E:76:G:C5	2.86	0.44
9:F:9:GLU:OE1	9:F:12:GLU:HG2	2.18	0.44
9:F:60:ASP:OD1	9:F:64:ARG:NH1	2.51	0.44
9:F:113:HIS:HA	9:F:116:GLU:CD	2.42	0.44
9:F:215:LEU:O	9:F:218:ALA:HB3	2.18	0.44
10:G:22:TRP:CZ2	21:R:54:PRO:HG2	2.53	0.44
16:M:28:VAL:O	16:M:31:GLN:N	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:O:12:ARG:HH12	18:O:38:ASN:HB2	1.83	0.44
18:O:57:THR:OG1	18:O:58:PRO:HD2	2.18	0.44
18:O:123:LYS:HA	18:O:126:ARG:HB3	1.99	0.44
23:T:43:LYS:HA	23:T:48:TRP:CG	2.52	0.44
25:V:29:PHE:CE2	25:V:39:VAL:HG11	2.53	0.44
28:Y:6:ARG:HH11	28:Y:15:ARG:NE	2.16	0.44
29:Z:18:LYS:HE3	29:Z:20:TYR:HA	1.99	0.44
31:b:54:GLN:HB3	31:b:57:LYS:HZ1	1.81	0.44
31:b:119:ARG:HD3	31:b:160:TYR:CE2	2.53	0.44
32:c:34:TRP:NE1	32:c:38:ARG:CZ	2.80	0.44
35:f:130:HIS:O	35:f:137:LYS:HE2	2.17	0.44
38:i:107:ALA:O	47:r:117:LEU:HD21	2.18	0.44
40:k:106:ARG:HH12	40:k:110:LEU:CB	2.27	0.44
43:n:79:VAL:HG22	43:n:83:ARG:CG	2.48	0.44
46:q:82:PRO:HG3	46:q:97:ARG:HB2	2.00	0.44
47:r:151:HIS:HB2	47:r:168:GLU:HG2	1.99	0.44
53:x:16:CYS:C	53:x:17:LYS:HD2	2.42	0.44
55:z:24:ALA:O	55:z:47:LYS:HG2	2.17	0.44
56:B:144:ARG:CD	56:B:148:VAL:HG23	2.44	0.44
56:B:196:LEU:CD2	56:B:282:LEU:HB2	2.48	0.44
56:B:226:ASP:O	56:B:228:ILE:N	2.51	0.44
56:B:378:TYR:O	56:B:391:HIS:HB2	2.17	0.44
56:B:406:LEU:O	56:B:407:GLU:HG3	2.18	0.44
3:3:34:ILE:CG1	3:3:35:MET:H	2.29	0.44
3:3:71:THR:O	3:3:73:PRO:HD3	2.18	0.44
3:3:89:HIS:ND1	3:3:90:LYS:HG2	2.33	0.44
3:3:126:MET:O	7:D:1059:G:N2	2.51	0.44
6:A:173:U:C2	6:A:197:A:N6	2.85	0.44
6:A:406:G:C5	6:A:495:A:C5	3.05	0.44
6:A:428:G:H1'	6:A:429:U:OP2	2.18	0.44
6:A:543:C:H2'	6:A:544:G:H8	1.82	0.44
6:A:587:G:N2	6:A:755:G:C8	2.85	0.44
6:A:630:G:H2'	6:A:631:G:O4'	2.17	0.44
6:A:823:G:H2'	6:A:824:C:C6	2.53	0.44
6:A:885:G:C2	6:A:886:G:C8	3.05	0.44
6:A:1019:C:N4	6:A:1020:U:C4	2.86	0.44
6:A:1156:G:P	6:A:1157:A:OP2	2.76	0.44
6:A:1452:C:C6	6:A:1452:C:O5'	2.71	0.44
7:D:43:G:N2	7:D:438:G:C4	2.86	0.44
7:D:109:G:C5	7:D:110:G:N7	2.86	0.44
7:D:297:C:H2'	7:D:298:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:350:U:H2'	7:D:351:G:OP1	2.17	0.44
7:D:894:C:H5"	7:D:895:U:OP2	2.18	0.44
7:D:989:G:OP2	50:u:12:PRO:HG2	2.18	0.44
7:D:1058:G:OP2	7:D:1060:U:C5	2.71	0.44
7:D:1106:G:C8	7:D:1106:G:OP1	2.71	0.44
7:D:1128:A:C8	7:D:2516:G:O2'	2.70	0.44
7:D:1206:G:H22	7:D:1242:A:N6	2.15	0.44
7:D:1264:G:O6	7:D:1265:A:N6	2.51	0.44
7:D:1364:G:N7	51:v:2:LYS:HB2	2.33	0.44
7:D:1485:G:H2'	7:D:1486:A:H8	1.83	0.44
7:D:1485:G:O2'	7:D:1486:A:H5'	2.17	0.44
7:D:1567:A:C4	30:a:84:TYR:CE1	3.05	0.44
7:D:1580:A:C8	7:D:1580:A:O5'	2.70	0.44
7:D:1697:G:C6	7:D:1698:A:C6	3.06	0.44
7:D:1779:U:C6	7:D:1779:U:C3'	3.00	0.44
7:D:1795:C:N4	7:D:1796:U:C4	2.86	0.44
7:D:1840:G:H1	7:D:1902:C:N4	2.16	0.44
7:D:2060:A:C2	7:D:2502:G:C6	3.06	0.44
7:D:2353:G:H5"	48:s:32:ARG:HH12	1.82	0.44
7:D:2384:G:P	48:s:55:ARG:HH21	2.41	0.44
7:D:2759:G:H2'	7:D:2760:C:H6	1.83	0.44
7:D:2895:U:HO2'	7:D:2896:C:C1'	2.30	0.44
9:F:124:SER:C	9:F:126:GLU:H	2.25	0.44
10:G:130:VAL:O	10:G:133:ALA:N	2.51	0.44
11:H:20:TYR:C	11:H:26:CYS:HB3	2.42	0.44
12:I:151:LEU:HD23	12:I:151:LEU:HA	1.78	0.44
13:J:29:ALA:HA	13:J:32:ASN:OD1	2.18	0.44
17:N:34:VAL:HG12	17:N:36:GLY:N	2.33	0.44
19:P:67:THR:OG1	19:P:96:VAL:HA	2.17	0.44
22:S:25:THR:O	22:S:28:GLN:HB2	2.18	0.44
26:W:43:GLU:CA	26:W:67:VAL:HG11	2.41	0.44
30:a:188:GLU:CD	30:a:188:GLU:H	2.24	0.44
32:c:125:LEU:HD13	32:c:142:TRP:CZ2	2.51	0.44
33:d:34:LEU:HD21	33:d:100:TRP:HE1	1.83	0.44
33:d:41:GLN:HA	33:d:155:MET:HA	2.00	0.44
34:e:94:TYR:O	34:e:95:ARG:HG2	2.18	0.44
34:e:130:ARG:C	34:e:131:VAL:HG12	2.43	0.44
37:h:49:ARG:CA	55:z:52:LYS:HZ1	2.21	0.44
37:h:74:GLU:OE2	37:h:101:VAL:O	2.36	0.44
38:i:11:LYS:HZ2	38:i:73:PRO:HG3	1.83	0.44
38:i:67:ARG:NE	38:i:105:GLU:OE2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:i:127:ILE:O	38:i:129:THR:HG23	2.17	0.44
40:k:37:ALA:H	40:k:51:ALA:HB2	1.82	0.44
40:k:41:ASP:OD1	40:k:41:ASP:N	2.41	0.44
41:l:16:ARG:HG3	41:l:17:THR:N	2.33	0.44
42:m:93:LYS:N	43:n:10:LYS:HZ1	2.16	0.44
46:q:29:GLU:HB3	46:q:32:PRO:HG2	2.00	0.44
50:u:7:LYS:CD	50:u:34:GLU:HB2	2.48	0.44
53:x:15:GLU:HA	53:x:21:TYR:HB3	2.00	0.44
54:y:42:LEU:H	54:y:42:LEU:HG	1.59	0.44
56:B:65:ARG:HG2	56:B:245:PHE:CB	2.45	0.44
56:B:98:ALA:CB	56:B:127:HIS:HE1	2.30	0.44
56:B:101:GLU:HA	56:B:129:HIS:ND1	2.32	0.44
56:B:195:PRO:CG	56:B:287:THR:N	2.56	0.44
3:3:5:VAL:O	3:3:5:VAL:HG22	2.17	0.44
3:3:60:TYR:CD2	3:3:61:ALA:N	2.86	0.44
3:3:95:LYS:HA	3:3:95:LYS:HD2	1.63	0.44
3:3:103:GLN:HA	3:3:106:GLU:HG2	1.99	0.44
3:3:106:GLU:O	3:3:109:LYS:HG2	2.17	0.44
5:5:28:G:C5	5:5:29:G:N7	2.85	0.44
6:A:201:C:H2'	6:A:208:U:OP1	2.17	0.44
6:A:437:U:O5'	6:A:437:U:C6	2.71	0.44
6:A:444:C:C4	6:A:445:G:O6	2.71	0.44
6:A:540:G:H2'	6:A:541:G:H8	1.82	0.44
6:A:731:G:C6	6:A:732:C:C4	3.06	0.44
6:A:790:A:OP1	6:A:790:A:H8	2.00	0.44
6:A:791:G:N1	6:A:1498:U:OP1	2.40	0.44
6:A:810:C:H2'	6:A:811:C:O4'	2.17	0.44
6:A:941:G:H2'	6:A:942:G:O4'	2.18	0.44
6:A:954:G:H21	6:A:1227:A:H62	1.66	0.44
6:A:1049:U:H4'	6:A:1050:G:H5'	1.99	0.44
6:A:1169:A:H5'	6:A:1170:A:OP2	2.17	0.44
6:A:1188:A:OP2	6:A:1188:A:C8	2.59	0.44
6:A:1261:A:N7	6:A:1262:C:N4	2.65	0.44
7:D:14:A:N7	7:D:15:G:C4	2.86	0.44
7:D:30:G:C6	7:D:31:C:C4	3.06	0.44
7:D:81:G:C2	7:D:106:C:O2	2.71	0.44
7:D:93:C:N3	7:D:94:G:H1'	2.33	0.44
7:D:110:G:N2	7:D:111:A:N3	2.66	0.44
7:D:119:A:O2'	7:D:120:U:P	2.76	0.44
7:D:155:C:O2'	7:D:161:U:C2	2.63	0.44
7:D:190:A:C6	7:D:207:A:N3	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:243:U:P	55:z:5:LYS:HZ3	2.39	0.44
7:D:247:G:O2'	7:D:248:G:OP1	2.27	0.44
7:D:267:C:OP2	7:D:271(A):C:C4	2.70	0.44
7:D:344:G:N1	7:D:345:A:N7	2.66	0.44
7:D:381:G:C2	7:D:382:G:C4	3.06	0.44
7:D:389:G:H5"	7:D:390:A:OP2	2.17	0.44
7:D:454:A:H3'	7:D:454:A:H8	1.83	0.44
7:D:458:G:O2'	7:D:469:G:O6	2.36	0.44
7:D:464:U:C5	7:D:465:G:C4	3.06	0.44
7:D:467:G:N2	7:D:468:G:N3	2.65	0.44
7:D:591:C:O2	55:z:1:MET:HB3	2.18	0.44
7:D:745:G:N2	7:D:753:C:C4	2.86	0.44
7:D:1077:A:H62	7:D:1089:G:P	2.41	0.44
7:D:1128:A:H3'	7:D:1128:A:N3	2.33	0.44
7:D:1130:U:OP2	7:D:2570:G:N2	2.51	0.44
7:D:1251:C:H2'	7:D:1251:C:H6	1.53	0.44
7:D:1313:U:C4	7:D:1314:C:N4	2.86	0.44
7:D:1493:C:O2	7:D:1493:C:H2'	2.17	0.44
7:D:1523:U:H2'	7:D:1524:G:H8	1.82	0.44
7:D:1712:C:H6	7:D:1712:C:H3'	1.82	0.44
7:D:1784:A:O3'	7:D:1785:A:C8	2.71	0.44
7:D:1902:C:N4	7:D:1903:G:N3	2.66	0.44
7:D:2360:A:C2	7:D:2361:A:H1'	2.52	0.44
7:D:2447:G:C6	7:D:2501:C:N3	2.86	0.44
7:D:2588:G:H2'	7:D:2589:A:H5'	2.00	0.44
7:D:2693:A:N3	7:D:2694:G:C8	2.86	0.44
7:D:2712:U:H2'	7:D:2712(A):A:H5"	2.00	0.44
7:D:2714:G:C2	7:D:2715:C:O2	2.71	0.44
14:K:77:SER:CB	14:K:84:ASN:HD22	2.31	0.44
20:Q:108:ARG:HE	20:Q:114:ARG:NH1	2.15	0.44
25:V:21:LYS:CA	25:V:55:ARG:HH12	2.30	0.44
27:X:42:GLN:O	27:X:45:GLN:HB2	2.18	0.44
30:a:10:THR:HG22	30:a:10:THR:O	2.18	0.44
31:b:9:VAL:O	31:b:23:VAL:HB	2.17	0.44
32:c:100:THR:O	32:c:100:THR:OG1	2.23	0.44
34:e:176:ALA:HB3	56:B:469:SER:O	2.18	0.44
35:f:76:SER:O	35:f:78:TYR:HD1	2.00	0.44
36:g:9:GLU:HB3	36:g:17:ARG:HG2	1.99	0.44
36:g:76:ALA:HB1	36:g:78:ARG:HH21	1.82	0.44
38:i:109:VAL:HG22	38:i:113:GLN:OE1	2.17	0.44
39:j:29:LEU:HA	39:j:29:LEU:HD23	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:m:102:GLU:N	42:m:102:GLU:OE1	2.50	0.44
47:r:41:LEU:HB3	47:r:42:VAL:H	1.43	0.44
50:u:50:VAL:CG1	50:u:53:LEU:HB2	2.48	0.44
56:B:109:ALA:HB2	56:B:135:ILE:HB	1.99	0.44
56:B:241:LYS:HZ1	56:B:243:GLY:HA2	1.82	0.44
56:B:307:PRO:HD2	56:B:341:GLY:HA3	2.00	0.44
56:B:361:LEU:HD22	56:B:361:LEU:C	2.42	0.44
56:B:382:LEU:CG	56:B:401:ARG:CA	2.61	0.44
56:B:383:LYS:CD	56:B:402:ILE:HG22	2.47	0.44
56:B:526:GLU:OE1	56:B:594:GLN:O	2.36	0.44
3:3:72:PRO:HG2	3:3:77:LEU:HD22	1.99	0.44
5:5:29:G:H1	5:5:41:C:H42	1.66	0.44
6:A:61:G:H2'	6:A:62:U:C6	2.52	0.44
6:A:101:A:N6	6:A:102:G:C6	2.86	0.44
6:A:142:G:O2'	6:A:196:A:N1	2.51	0.44
6:A:232:G:H2'	6:A:233:C:O4'	2.17	0.44
6:A:406:G:C5	6:A:495:A:C4	3.06	0.44
6:A:457:C:C2	6:A:476:G:N1	2.86	0.44
6:A:540:G:H2'	6:A:541:G:C8	2.53	0.44
6:A:562:C:C2	6:A:884:U:C5	3.05	0.44
6:A:718:G:C5	18:O:116:HIS:CD2	3.05	0.44
6:A:785:G:C2	6:A:798:G:N3	2.86	0.44
6:A:837:G:C6	6:A:838:G:O6	2.71	0.44
6:A:849:C:C4	6:A:850:U:O4	2.71	0.44
6:A:849:C:H3'	6:A:849:C:H6	1.82	0.44
6:A:1025:U:H2'	6:A:1026:G:C8	2.53	0.44
6:A:1119:C:N3	6:A:1155:G:N1	2.66	0.44
6:A:1167:A:N7	6:A:1169:A:N7	2.65	0.44
6:A:1244:C:C2	6:A:1294:G:N2	2.86	0.44
6:A:1426:C:N4	6:A:1474:G:H1	2.16	0.44
6:A:1442:G:N3	6:A:1442:G:C3'	2.81	0.44
6:A:1509:C:H2'	6:A:1510:U:O4'	2.18	0.44
7:D:1:G:H2'	7:D:2:G:O4'	2.18	0.44
7:D:24:G:C1'	44:o:77:ASP:OD2	2.65	0.44
7:D:83:G:C2	7:D:84:A:H2	2.35	0.44
7:D:121:G:C2	7:D:131:G:C4	3.05	0.44
7:D:190:A:H2'	7:D:191:A:C8	2.53	0.44
7:D:226:G:O2'	7:D:227:A:O5'	2.34	0.44
7:D:290:G:OP2	7:D:290:G:C8	2.71	0.44
7:D:301:G:C6	7:D:302:C:N4	2.86	0.44
7:D:311:A:H1'	7:D:332:A:C4	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:382:G:H2'	7:D:383:U:H5'	2.00	0.44
7:D:453:C:O2	7:D:453:C:H2'	2.18	0.44
7:D:512:G:C2'	7:D:513:A:OP2	2.65	0.44
7:D:722:A:C2	7:D:723:G:C4	3.06	0.44
7:D:1000:A:H5"	7:D:1001:A:OP2	2.17	0.44
7:D:1080:C:H5	7:D:1086:A:N6	2.15	0.44
7:D:1190:G:N1	7:D:1191:G:C6	2.86	0.44
7:D:1746:G:H3'	7:D:1747:G:N7	2.30	0.44
7:D:1786:A:N7	7:D:1787:A:C8	2.86	0.44
7:D:2253:G:C5	7:D:2254:C:C4	3.05	0.44
7:D:2305:A:N1	7:D:2312:U:C2	2.86	0.44
7:D:2642:G:N2	7:D:2643:G:C4	2.86	0.44
7:D:2663:G:C8	7:D:2664:G:N7	2.86	0.44
7:D:2820:A:H2	39:j:5:LYS:HE3	1.83	0.44
9:F:165:VAL:O	9:F:187:LEU:HD22	2.18	0.44
9:F:210:SER:O	9:F:214:ILE:HG12	2.18	0.44
11:H:30:LYS:HZ3	11:H:35:ARG:HH11	1.64	0.44
11:H:145:GLU:HB3	11:H:184:LYS:HD3	1.98	0.44
15:L:96:GLY:O	15:L:97:VAL:C	2.60	0.44
20:Q:29:ARG:O	20:Q:32:GLU:HB2	2.18	0.44
20:Q:66:LEU:CG	20:Q:67:GLU:N	2.80	0.44
20:Q:86:CYS:O	20:Q:89:GLY:N	2.34	0.44
26:W:66:MET:O	26:W:69:HIS:CG	2.71	0.44
29:Z:89:ALA:O	29:Z:154:ARG:HA	2.18	0.44
32:c:206:ILE:HA	32:c:210:ALA:O	2.17	0.44
33:d:32:PRO:CB	33:d:168:GLU:CB	2.55	0.44
38:i:22:LYS:HZ2	38:i:23:GLY:N	2.16	0.44
41:l:114:LEU:HD23	41:l:114:LEU:HA	1.82	0.44
46:q:95:LYS:O	46:q:97:ARG:HG2	2.18	0.44
47:r:100:VAL:O	47:r:124:ILE:HG23	2.18	0.44
51:v:56:VAL:CG1	51:v:61:ARG:HG2	2.48	0.44
53:x:12:GLU:OE2	53:x:53:LYS:O	2.35	0.44
53:x:17:LYS:NZ	53:x:49:HIS:C	2.59	0.44
56:B:206:ASP:CB	56:B:210:GLY:CA	2.95	0.44
56:B:296:PRO:CG	56:B:297:ALA:H	2.31	0.44
56:B:486:PRO:CG	56:B:487:GLY:H	2.31	0.44
3:3:80:LYS:HB3	3:3:111:LYS:HE3	1.99	0.43
6:A:15:G:H3'	6:A:16:A:H8	1.82	0.43
6:A:22:G:H4'	6:A:885:G:C8	2.53	0.43
6:A:60:A:N1	6:A:107:G:O2'	2.41	0.43
6:A:101:A:H2'	6:A:102:G:C5'	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:184:G:C2	6:A:185:A:C8	3.06	0.43
6:A:246:A:N6	6:A:279:A:C4	2.86	0.43
6:A:259:G:C5	6:A:260:G:C5	3.06	0.43
6:A:298:A:N6	6:A:299:G:N1	2.66	0.43
6:A:309:G:N3	6:A:310:G:C8	2.87	0.43
6:A:309:G:O2'	6:A:607:A:N6	2.51	0.43
6:A:318:G:C2	6:A:319:G:C8	3.06	0.43
6:A:440:A:OP2	6:A:442:C:C5	2.71	0.43
6:A:593:G:C6	6:A:594:G:C5	3.06	0.43
6:A:829:G:C2	6:A:830:G:C4	3.06	0.43
6:A:925:G:C2	6:A:927:G:C8	3.06	0.43
6:A:953:G:C6	6:A:954:G:C4	3.06	0.43
6:A:1013:G:H22	6:A:1016:A:P	2.40	0.43
6:A:1167:A:O5'	6:A:1167:A:C8	2.70	0.43
6:A:1167:A:C8	6:A:1167:A:OP1	2.70	0.43
6:A:1342:C:O2'	6:A:1343:G:H5'	2.18	0.43
6:A:1452:C:O5'	6:A:1452:C:H6	2.01	0.43
6:A:1508:G:C2	6:A:1509:C:C2	3.06	0.43
7:D:7:G:H5"	35:f:121:LYS:HZ1	1.82	0.43
7:D:188:G:C6	7:D:189:G:C4	3.06	0.43
7:D:207:A:H2'	7:D:208:C:O4'	2.18	0.43
7:D:296:C:N3	7:D:297:C:C4	2.87	0.43
7:D:322:A:O2'	7:D:323:G:P	2.76	0.43
7:D:336:C:H5"	46:q:6:HIS:CE1	2.52	0.43
7:D:673:C:C4	7:D:674:G:N7	2.86	0.43
7:D:699:A:N6	7:D:734:A:C8	2.86	0.43
7:D:738:G:H1'	7:D:759:G:H22	1.83	0.43
7:D:1137:G:O6	7:D:1138:G:C2	2.71	0.43
7:D:1210:A:H4'	7:D:1211:U:OP2	2.15	0.43
7:D:1241:A:OP2	7:D:1241:A:N9	2.51	0.43
7:D:1285:G:C6	7:D:1329:U:C5	3.06	0.43
7:D:1316:U:H2'	7:D:1317:A:C8	2.53	0.43
7:D:1420:U:C6	7:D:1420:U:OP2	2.71	0.43
7:D:1456:G:N1	7:D:1457:A:C5	2.86	0.43
7:D:1630:G:C2	7:D:1630(A):C:C4	3.06	0.43
7:D:1668:A:HO2'	7:D:1669:A:P	2.41	0.43
7:D:1682:G:C6	7:D:1683:C:C4	3.06	0.43
7:D:1726:G:H3'	7:D:1727:U:C5	2.53	0.43
7:D:1791:A:H5'	30:a:209:ALA:CB	2.48	0.43
7:D:1799:G:C8	30:a:268:ARG:NH2	2.78	0.43
7:D:1815:A:OP2	30:a:218:ARG:NH2	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1879:C:O5'	7:D:1879:C:C6	2.70	0.43
7:D:2001:A:H2'	7:D:2002:G:H8	1.81	0.43
7:D:2164:C:OP2	7:D:2165:G:C8	2.71	0.43
7:D:2175:C:OP2	29:Z:7:TYR:HB3	2.18	0.43
7:D:2250:G:N7	38:i:83:MET:HG3	2.33	0.43
7:D:2376:A:C5	40:k:94:TYR:CE2	3.06	0.43
7:D:2403:C:C4	7:D:2415:G:N1	2.86	0.43
7:D:2436:G:C2	7:D:2437:U:C2	3.06	0.43
7:D:2511:U:C5	7:D:2512:C:C4	3.06	0.43
7:D:2530:A:H62	34:e:172:LYS:HZ2	1.64	0.43
7:D:2659:G:O3'	7:D:2660:A:C5	2.71	0.43
7:D:2783:G:H2'	7:D:2784:C:O4'	2.18	0.43
7:D:2838:G:C1'	39:j:45:ARG:HH12	2.31	0.43
8:E:24:G:C6	8:E:56:G:C2	3.06	0.43
8:E:59:A:H2'	8:E:60:C:O4'	2.18	0.43
8:E:83:G:N2	8:E:84:C:O2	2.50	0.43
13:J:5:GLU:HB2	13:J:62:TRP:HE1	1.83	0.43
16:M:75:ASP:N	16:M:75:ASP:OD1	2.49	0.43
17:N:7:LYS:HA	17:N:71:LEU:HD22	2.00	0.43
18:O:50:TYR:HB3	18:O:54:ARG:HB2	1.99	0.43
19:P:80:HIS:CD2	56:B:342:PHE:CE1	3.06	0.43
23:T:28:ARG:HG3	23:T:29:ASP:OD1	2.18	0.43
26:W:69:HIS:HB3	26:W:70:LYS:H	1.69	0.43
30:a:155:LEU:CD2	30:a:157:ARG:HH22	2.31	0.43
32:c:202:PHE:O	32:c:206:ILE:HG13	2.18	0.43
36:g:64:ARG:CZ	36:g:68:GLU:HG2	2.48	0.43
37:h:71:VAL:N	37:h:72:PRO:HD3	2.33	0.43
42:m:52:ARG:NH1	42:m:56:ASP:OD2	2.51	0.43
50:u:2:PRO:HA	50:u:60:GLU:HB2	2.00	0.43
51:v:43:TYR:C	51:v:61:ARG:NH1	2.65	0.43
53:x:15:GLU:HB3	53:x:52:VAL:HB	1.99	0.43
55:z:30:ARG:HE	55:z:44:LYS:HE2	1.83	0.43
56:B:64:VAL:HG21	56:B:80:LEU:C	2.42	0.43
56:B:105:LEU:HB3	56:B:133:PRO:HA	1.99	0.43
56:B:207:ALA:O	56:B:208:TYR:CD1	2.71	0.43
56:B:274:VAL:O	56:B:274:VAL:HG12	2.17	0.43
56:B:299:PRO:HD3	56:B:348:PHE:CD2	2.49	0.43
56:B:327:ASP:OD2	56:B:353:HIS:CE1	2.71	0.43
56:B:331:THR:O	56:B:332:PHE:CG	2.70	0.43
6:A:44:G:H2'	6:A:45:U:O4'	2.17	0.43
6:A:99:C:OP2	6:A:99:C:C6	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:186(E):C:C2	6:A:191(C):G:N2	2.87	0.43
6:A:220:G:H2'	6:A:221:C:O4'	2.18	0.43
6:A:227:G:C6	6:A:228:A:C6	3.06	0.43
6:A:289:G:C6	6:A:290:C:C4	3.06	0.43
6:A:455:C:N3	6:A:478:A:H2	2.14	0.43
6:A:528:C:H2'	6:A:529:G:O4'	2.18	0.43
6:A:566:G:O2'	6:A:567:G:O5'	2.29	0.43
6:A:674:G:H2'	6:A:675:A:C8	2.37	0.43
6:A:1170:A:C3'	6:A:1171:G:H5'	2.48	0.43
6:A:1213:A:N7	6:A:1215:G:C5	2.86	0.43
6:A:1308:U:O5'	6:A:1308:U:C6	2.70	0.43
6:A:1318:A:O3'	26:W:12:ASP:OD2	2.36	0.43
6:A:1423:G:C5	6:A:1424:C:C4	3.06	0.43
6:A:1440:C:H6	6:A:1440:C:H5"	1.83	0.43
7:D:36:G:N2	7:D:37:C:C2	2.86	0.43
7:D:55:G:H1	7:D:115:C:H42	1.66	0.43
7:D:58:G:N2	7:D:59:U:C2	2.86	0.43
7:D:197:A:C6	7:D:198:C:N3	2.86	0.43
7:D:221:A:C5	7:D:266:G:N7	2.86	0.43
7:D:267:C:OP2	7:D:271(A):C:C5	2.70	0.43
7:D:295:G:C2	7:D:296:C:C4	3.06	0.43
7:D:532:A:P	7:D:2021:C:C5	3.11	0.43
7:D:571:A:N1	7:D:2030:A:C2	2.86	0.43
7:D:753:C:H5'	54:y:1:MET:HE1	1.99	0.43
7:D:786:C:O2'	7:D:787:U:H5'	2.18	0.43
7:D:1051:G:H4'	7:D:2752:C:O2'	2.19	0.43
7:D:1053:C:H3'	7:D:1054:A:C8	2.53	0.43
7:D:1062:G:O2'	7:D:1063:G:C8	2.70	0.43
7:D:1062:G:OP2	7:D:1070:A:N3	2.51	0.43
7:D:1071:G:OP2	7:D:1071:G:C8	2.68	0.43
7:D:1092:C:H3'	7:D:1093:G:O4'	2.18	0.43
7:D:1149:G:H2'	7:D:1150:C:H6	1.83	0.43
7:D:1151:G:H4'	42:m:81:HIS:HB2	2.00	0.43
7:D:1579:A:C8	7:D:1580:A:C4	3.05	0.43
7:D:1769:G:N3	7:D:1984:G:C2	2.86	0.43
7:D:1904:G:C2	7:D:1905:C:C2	3.07	0.43
7:D:1910:G:C2	7:D:1911:U:C2	3.06	0.43
7:D:2004:G:C6	7:D:2005:A:C4	3.06	0.43
7:D:2093:G:C5	7:D:2225:A:C5	3.06	0.43
7:D:2199:A:H2'	7:D:2205:C:O5'	2.18	0.43
7:D:2217:G:C2	7:D:2218:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2284:C:OP2	53:x:9:LEU:HD12	2.18	0.43
7:D:2362:G:N1	7:D:2363:C:N3	2.66	0.43
7:D:2581:G:O2'	7:D:2582:G:N7	2.49	0.43
7:D:2657:A:C8	7:D:2658:C:C5	3.06	0.43
7:D:2777:G:C8	7:D:2777:G:H3'	2.53	0.43
7:D:2845:G:N2	7:D:2846:G:C4	2.85	0.43
8:E:28:C:H5"	40:k:34:HIS:CE1	2.52	0.43
14:K:12:LEU:HD13	14:K:24:THR:HB	2.00	0.43
16:M:7:THR:N	16:M:83:ARG:HD2	2.33	0.43
29:Z:117:PRO:HG3	29:Z:146:GLY:HA2	2.01	0.43
31:b:60:ASN:HB2	31:b:63:LEU:HD12	2.00	0.43
31:b:117:MET:HE2	31:b:136:ARG:HB3	2.00	0.43
33:d:16:ARG:HA	33:d:19:LEU:HD13	2.00	0.43
33:d:27:ASN:HB3	33:d:29:TRP:CE3	2.53	0.43
34:e:93:GLY:O	34:e:107:VAL:HG23	2.18	0.43
35:f:7:LYS:NZ	35:f:8:GLN:O	2.51	0.43
35:f:96:GLU:HG2	35:f:97:ARG:N	2.33	0.43
36:g:75:SER:O	41:l:77:PRO:HD2	2.18	0.43
37:h:86:LYS:HG3	37:h:91:PHE:CE2	2.53	0.43
40:k:30:ARG:O	40:k:34:HIS:CD2	2.71	0.43
41:l:21:GLU:CA	41:l:23:ARG:NH1	2.81	0.43
41:l:26:ASP:HB2	41:l:100:TYR:CZ	2.53	0.43
42:m:76:TYR:CZ	42:m:80:ILE:HD12	2.53	0.43
56:B:25:LEU:C	56:B:25:LEU:CD1	2.90	0.43
56:B:49:LEU:HD23	56:B:60:LYS:HZ1	1.81	0.43
56:B:335:GLU:O	56:B:340:LEU:O	2.35	0.43
56:B:387:GLU:HB3	56:B:388:VAL:H	1.70	0.43
56:B:414:ILE:O	56:B:449:GLU:HA	2.18	0.43
56:B:500:VAL:O	56:B:500:VAL:HG13	2.17	0.43
3:3:21:PRO:N	3:3:22:PRO:CD	2.81	0.43
4:4:31:G:O2'	6:A:1340:A:O2'	2.19	0.43
6:A:89:U:C3'	6:A:90:C:C5'	2.97	0.43
6:A:201:C:C3'	6:A:201:C:C6	3.01	0.43
6:A:300:A:H5"	6:A:301:G:OP2	2.19	0.43
6:A:438:G:C2	6:A:495:A:OP2	2.71	0.43
6:A:533:A:N6	6:A:536:C:N3	2.66	0.43
6:A:748:C:O2'	6:A:749:C:P	2.76	0.43
6:A:750:G:N2	6:A:751:U:O2	2.51	0.43
6:A:760:G:N2	24:U:104:LYS:HB3	2.33	0.43
6:A:899:C:H5"	6:A:900:A:OP2	2.18	0.43
6:A:986:A:N6	6:A:987:G:C6	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1078:U:O4	6:A:1079:G:N1	2.52	0.43
6:A:1079:G:C6	6:A:1080:A:N6	2.86	0.43
6:A:1236:A:C2	6:A:1237:C:N3	2.86	0.43
6:A:1347:G:H3'	16:M:108:VAL:O	2.18	0.43
6:A:1448:C:H2'	6:A:1449:C:C6	2.53	0.43
6:A:1462:G:N2	6:A:1463:C:C2	2.86	0.43
7:D:113:G:OP1	7:D:113:G:H4'	2.18	0.43
7:D:190:A:C6	7:D:207:A:C2	3.06	0.43
7:D:460:A:C6	7:D:470:A:N7	2.87	0.43
7:D:492:A:C8	7:D:493:G:C8	3.06	0.43
7:D:728:G:O2'	7:D:729:G:P	2.76	0.43
7:D:948:G:C6	7:D:949:C:N3	2.86	0.43
7:D:1020:A:C2	7:D:1140:C:C2	3.06	0.43
7:D:1310:G:OP2	54:y:9:ARG:NH2	2.51	0.43
7:D:1325:G:OP2	7:D:1325:G:H4'	2.17	0.43
7:D:1400:G:C6	7:D:1401:G:C6	3.06	0.43
7:D:1421:G:C2	7:D:1422:G:N7	2.86	0.43
7:D:1444:G:H2'	7:D:1445:C:N4	2.33	0.43
7:D:1487:G:C4	7:D:1488:G:C8	3.06	0.43
7:D:1508:A:N3	7:D:1508:A:OP2	2.50	0.43
7:D:1711:C:O5'	7:D:1711:C:H6	2.00	0.43
7:D:1814:G:H3'	7:D:1815:A:H8	1.83	0.43
7:D:1860:G:C2	7:D:1861:G:C5	3.06	0.43
7:D:1909:C:C2	7:D:1922:G:C2	3.06	0.43
7:D:1933:G:H8	7:D:1933:G:O5'	2.01	0.43
7:D:2031:A:H62	7:D:2498:C:H1'	1.83	0.43
7:D:2082:A:C6	7:D:2083:G:C4	3.07	0.43
7:D:2137:C:H2'	7:D:2138:C:C6	2.53	0.43
7:D:2167:U:H2'	7:D:2168:G:O4'	2.18	0.43
7:D:2226:C:C2'	7:D:2227:A:C5'	2.86	0.43
7:D:2325:G:C5	7:D:2326:C:C5	3.06	0.43
7:D:2540:C:C4	7:D:2541:A:C8	3.06	0.43
7:D:2545:G:C6	7:D:2546:U:O2	2.71	0.43
7:D:2820:A:OP1	39:j:5:LYS:HA	2.19	0.43
8:E:9:G:H1'	8:E:112:G:N2	2.33	0.43
8:E:50:G:O2'	40:k:61:ASN:OD1	2.17	0.43
11:H:10:ARG:O	11:H:13:ARG:HB2	2.18	0.43
25:V:63:GLN:O	25:V:66:LEU:HG	2.18	0.43
26:W:34:TRP:CE3	26:W:34:TRP:O	2.71	0.43
26:W:36:ARG:O	26:W:70:LYS:CD	2.66	0.43
30:a:5:LYS:CB	30:a:29:PRO:HD3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:a:37:LEU:HD12	30:a:38:LYS:H	1.83	0.43
30:a:209:ALA:C	30:a:211:ARG:N	2.71	0.43
31:b:13:ARG:CZ	31:b:15:PHE:HB2	2.48	0.43
31:b:119:ARG:HB2	31:b:160:TYR:HE2	1.82	0.43
41:l:80:SER:HB3	41:l:81:PRO:HD3	2.01	0.43
42:m:47:TYR:O	42:m:48:ALA:C	2.58	0.43
48:s:19:LYS:HB2	48:s:19:LYS:HE2	1.77	0.43
50:u:3:ARG:O	50:u:59:VAL:HB	2.18	0.43
55:z:23:VAL:CG1	55:z:46:ARG:HD3	2.48	0.43
56:B:45:PHE:CE2	56:B:247:PRO:O	2.64	0.43
56:B:88:ASP:OD2	56:B:352:LEU:CB	2.64	0.43
56:B:206:ASP:CG	56:B:210:GLY:HA2	2.44	0.43
56:B:222:VAL:HG11	56:B:264:LEU:CG	2.48	0.43
56:B:230:ILE:CG2	56:B:279:THR:CA	2.80	0.43
56:B:241:LYS:HG2	56:B:242:VAL:N	2.33	0.43
56:B:506:PHE:O	56:B:507:ILE:HD13	2.18	0.43
56:B:523:LYS:C	56:B:525:ALA:H	2.27	0.43
56:B:537:ILE:CB	56:B:549:ALA:O	2.67	0.43
3:3:12:LEU:HB3	3:3:13:PRO:CD	2.48	0.43
4:4:75:C:C2	7:D:2252:G:N2	2.86	0.43
6:A:370:C:H2'	6:A:371:G:H8	1.80	0.43
6:A:393:A:C4	6:A:394:G:C8	3.07	0.43
6:A:413:G:H2'	6:A:428:G:N2	2.34	0.43
6:A:717:C:O2'	6:A:718:G:O5'	2.36	0.43
6:A:837:G:N1	6:A:838:G:O6	2.51	0.43
6:A:892:A:C2	6:A:893:C:C2	3.06	0.43
6:A:996:A:H2'	6:A:997:U:H6	1.83	0.43
6:A:1164:G:C2'	6:A:1165:C:H5'	2.48	0.43
6:A:1171:G:C2	6:A:1172:C:C4	3.07	0.43
6:A:1238:A:C2	6:A:1303:C:H4'	2.52	0.43
6:A:1298:C:O2'	6:A:1299:A:O5'	2.36	0.43
6:A:1343:G:O2'	16:M:121:ARG:HD2	2.19	0.43
6:A:1426:C:C2	6:A:1475:G:C2	3.06	0.43
7:D:56:A:C5	7:D:57:C:C4	3.06	0.43
7:D:93:C:N4	7:D:94:G:C4	2.87	0.43
7:D:118:A:C4	7:D:177:G:N2	2.86	0.43
7:D:208:C:H2'	7:D:209:C:C6	2.53	0.43
7:D:210:C:P	54:y:29:LYS:NZ	2.88	0.43
7:D:270(X):G:C4	7:D:270(Y):G:H1'	2.54	0.43
7:D:312:G:H5"	7:D:313:C:OP2	2.18	0.43
7:D:438:G:N3	7:D:438:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:528:A:C6	7:D:2042:A:C5	3.06	0.43
7:D:667:U:OP2	37:h:41:ARG:NH2	2.51	0.43
7:D:742:G:N2	7:D:743:G:C4	2.86	0.43
7:D:784:A:OP2	30:a:226:MET:HE2	2.19	0.43
7:D:880:G:C2'	7:D:881:G:H4'	2.46	0.43
7:D:958:U:O2'	7:D:959:A:P	2.76	0.43
7:D:1047:G:N2	7:D:1110:G:H2'	2.34	0.43
7:D:1060:U:OP1	7:D:1061:U:C2	2.70	0.43
7:D:1062:G:O2'	7:D:1063:G:O5'	2.19	0.43
7:D:1165:U:H4'	7:D:1224:G:H22	1.83	0.43
7:D:1203:G:O6	7:D:1205:U:H1'	2.18	0.43
7:D:1314:C:N3	7:D:1338:G:N2	2.55	0.43
7:D:1487:G:H2'	7:D:1488:G:C8	2.50	0.43
7:D:1581:G:C6	7:D:1582:C:O2	2.71	0.43
7:D:1632:A:C6	7:D:1633:G:C6	3.06	0.43
7:D:1675:C:N4	31:b:129:HIS:CE1	2.87	0.43
7:D:1799:G:H8	30:a:268:ARG:CZ	2.32	0.43
7:D:1800:C:H4'	7:D:1800:C:OP1	2.17	0.43
7:D:2033:A:N6	7:D:2036:C:C2	2.83	0.43
7:D:2037:G:C6	7:D:2038:G:C6	3.07	0.43
7:D:2125:G:H1	7:D:2172:U:P	2.38	0.43
7:D:2141:G:O2'	7:D:2142:C:H5'	2.19	0.43
7:D:2193:G:N1	7:D:2194:G:C5	2.87	0.43
7:D:2212:A:O2'	7:D:2213:U:C5	2.70	0.43
7:D:2379:G:C2	7:D:2380:C:C2	3.06	0.43
7:D:2399:G:C2	7:D:2400:G:C4	3.06	0.43
7:D:2548:G:N1	7:D:2549:G:C5	2.86	0.43
7:D:2652:C:H2'	7:D:2653:U:C5	2.54	0.43
7:D:2691:C:N3	7:D:2719:G:N2	2.66	0.43
7:D:2781:A:C4	7:D:2782:G:H1'	2.53	0.43
7:D:2844:G:C4	7:D:2845:G:C8	3.07	0.43
7:D:2887:U:O5'	7:D:2887:U:C6	2.71	0.43
9:F:49:GLU:HA	9:F:52:GLU:OE1	2.17	0.43
9:F:209:ARG:O	9:F:212:GLN:HB2	2.18	0.43
10:G:112:SER:HB3	10:G:115:LEU:HD12	1.99	0.43
11:H:18:LYS:O	11:H:19:LEU:HD23	2.18	0.43
11:H:19:LEU:C	11:H:21:LEU:N	2.76	0.43
14:K:112:PRO:HB2	14:K:113:GLU:H	1.56	0.43
17:N:55:LYS:HE3	17:N:55:LYS:HB2	1.82	0.43
18:O:110:ASP:HB3	25:V:85:LEU:HB3	1.99	0.43
24:U:93:GLN:HB3	24:U:104:LYS:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:4:SER:C	26:W:5:LEU:HG	2.43	0.43
29:Z:26:ALA:HA	29:Z:29:VAL:HG12	2.00	0.43
29:Z:56:GLN:O	29:Z:201:PRO:HB3	2.17	0.43
29:Z:60:GLY:HA2	29:Z:142:ALA:HA	1.99	0.43
29:Z:130:ILE:HG22	29:Z:131:LEU:HD23	2.00	0.43
37:h:86:LYS:HE2	37:h:99:LEU:CD1	2.46	0.43
39:j:75:LEU:HA	39:j:75:LEU:HD23	1.79	0.43
46:q:86:ARG:HH21	46:q:90:LEU:N	2.14	0.43
51:v:5:ILE:HB	51:v:8:LYS:O	2.17	0.43
56:B:64:VAL:CB	56:B:80:LEU:CA	2.96	0.43
56:B:91:TYR:O	56:B:94:SER:HB2	2.19	0.43
56:B:179:GLU:O	56:B:183:GLN:HG2	2.18	0.43
56:B:489:LEU:C	56:B:509:HIS:HA	2.42	0.43
3:3:67:PHE:C	3:3:68:VAL:HG22	2.43	0.43
3:3:115:LEU:HD23	3:3:116:ASN:H	1.83	0.43
3:3:115:LEU:HD23	3:3:116:ASN:N	2.34	0.43
5:5:19:G:OP1	5:5:60:U:N3	2.52	0.43
6:A:11:G:H1	6:A:23:C:N4	2.16	0.43
6:A:86:U:OP2	6:A:87:A:C4	2.71	0.43
6:A:99:C:H2'	6:A:101:A:H8	1.72	0.43
6:A:218:C:C4	6:A:219:C:N4	2.86	0.43
6:A:448:A:H2'	6:A:449:C:C6	2.53	0.43
6:A:476:G:C6	6:A:477:G:O6	2.72	0.43
6:A:502:G:N1	6:A:544:G:C5	2.86	0.43
6:A:565:U:C4	6:A:566:G:C6	3.07	0.43
6:A:566:G:HO2'	6:A:567:G:C5'	2.30	0.43
6:A:579:G:C6	6:A:580:U:C4	3.06	0.43
6:A:594:G:H2'	6:A:595:G:O4'	2.18	0.43
6:A:597:G:N3	6:A:644:G:C2	2.86	0.43
6:A:645:C:C4	6:A:646:U:C4	3.06	0.43
6:A:681:C:C2	6:A:682:G:C8	3.06	0.43
6:A:722:A:H3'	6:A:722:A:N3	2.32	0.43
6:A:843:U:H5'	6:A:843:U:H6	1.83	0.43
6:A:881:G:C6	6:A:882:C:C4	3.06	0.43
6:A:900:A:C6	6:A:901:A:C5	3.06	0.43
6:A:1028(A):C:H3'	6:A:1028(B):C:C6	2.53	0.43
6:A:1099:G:N1	6:A:1100:C:O2	2.52	0.43
6:A:1177:G:N2	6:A:1181:G:H21	2.16	0.43
6:A:1343:G:H1'	16:M:121:ARG:NH1	2.33	0.43
6:A:1447:G:C2	6:A:1460:A:C2	3.07	0.43
6:A:1510:U:H2'	6:A:1511:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:21:A:N1	7:D:520:G:C6	2.86	0.43
7:D:118:A:C4	7:D:177:G:C2	3.06	0.43
7:D:154:G:C4	7:D:155:C:C6	3.06	0.43
7:D:210:C:C6	7:D:210:C:OP2	2.72	0.43
7:D:257:A:H8	7:D:257:A:OP2	2.01	0.43
7:D:270(A):A:H5'	7:D:270(B):A:O5'	2.18	0.43
7:D:344:G:N2	7:D:345:A:C5	2.86	0.43
7:D:435:C:C2'	7:D:436:C:C5'	2.86	0.43
7:D:606:U:OP1	32:c:103:LYS:N	2.43	0.43
7:D:627:A:N3	7:D:637:A:C5	2.87	0.43
7:D:707:G:N1	7:D:708:C:O2	2.51	0.43
7:D:774:A:C1'	7:D:775:G:C8	3.01	0.43
7:D:835:A:C6	7:D:836:G:C5	3.06	0.43
7:D:1109:C:C5	7:D:1110:G:N3	2.82	0.43
7:D:1139:G:O2'	7:D:1143:A:O4'	2.23	0.43
7:D:1142(A):A:C6	7:D:1143:A:C8	3.07	0.43
7:D:1203:G:N3	7:D:1203:G:H2'	2.33	0.43
7:D:1205:U:N3	7:D:1207:C:N4	2.66	0.43
7:D:1379:A:O2'	7:D:1380:G:P	2.75	0.43
7:D:1480:G:N3	7:D:1480:G:H2'	2.33	0.43
7:D:1512:G:OP2	7:D:1512:G:H8	2.00	0.43
7:D:1629:U:H2'	7:D:1630:G:C8	2.53	0.43
7:D:1668:A:C6	7:D:1674:G:N3	2.82	0.43
7:D:1787:A:H8	7:D:1787:A:O5'	2.02	0.43
7:D:1789:A:N7	7:D:1790:C:N3	2.66	0.43
7:D:1817:G:H5"	7:D:1818:U:OP2	2.18	0.43
7:D:1885:A:H5"	7:D:1886:C:OP2	2.18	0.43
7:D:1912:A:C6	7:D:1919:A:N6	2.87	0.43
7:D:1938:A:H4'	7:D:1939:U:OP2	2.16	0.43
7:D:2114:A:H3'	7:D:2115:G:H8	1.84	0.43
7:D:2199:A:C2'	7:D:2205:C:C5'	2.89	0.43
7:D:2458:G:H21	7:D:2459:A:H61	1.66	0.43
7:D:2519:U:C2	7:D:2542:A:N6	2.87	0.43
7:D:2703:C:N3	7:D:2704:C:N4	2.66	0.43
8:E:11:C:OP2	48:s:74:ARG:NH1	2.51	0.43
13:J:2:ARG:HD2	13:J:69:GLU:HB2	2.00	0.43
24:U:45:HIS:O	24:U:73:VAL:HG23	2.19	0.43
25:V:84:LYS:N	25:V:84:LYS:HD2	2.34	0.43
26:W:60:VAL:HB	26:W:61:TYR:H	1.70	0.43
26:W:63:THR:C	26:W:65:ASN:N	2.75	0.43
29:Z:201:PRO:HD2	29:Z:208:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:12:THR:HG22	31:b:13:ARG:N	2.33	0.43
31:b:173:VAL:O	31:b:174:ASP:HB2	2.17	0.43
31:b:182:LEU:C	31:b:183:LEU:HD12	2.44	0.43
32:c:176:LEU:HD12	32:c:176:LEU:HA	1.83	0.43
36:g:3:GLN:NE2	36:g:33:ALA:HB3	2.33	0.43
38:i:85:LYS:HE2	48:s:10:THR:CG2	2.49	0.43
40:k:106:ARG:HH12	40:k:110:LEU:CD1	2.30	0.43
43:n:15:GLU:CD	43:n:16:PRO:HD2	2.44	0.43
50:u:9:VAL:HG22	50:u:54:VAL:HA	2.00	0.43
51:v:41:PRO:HB3	51:v:57:GLU:CD	2.43	0.43
52:w:35:GLU:OE2	52:w:51:TYR:CZ	2.71	0.43
55:z:16:ILE:CG2	55:z:57:ARG:HH12	2.31	0.43
56:B:240:ASP:CB	56:B:266:ALA:HB2	2.41	0.43
56:B:275:GLN:C	56:B:277:GLY:H	2.26	0.43
56:B:306:TYR:CZ	56:B:339:ALA:C	2.94	0.43
56:B:425:MET:CE	56:B:452:TYR:HH	1.98	0.43
56:B:431:LYS:CB	56:B:458:GLU:HB2	2.43	0.43
3:3:60:TYR:CG	3:3:61:ALA:N	2.86	0.43
6:A:141:A:C6	6:A:142:G:C5	3.07	0.43
6:A:247:G:C5	6:A:278:G:C2	3.07	0.43
6:A:256:U:H2'	6:A:257:G:C8	2.54	0.43
6:A:381:C:N4	6:A:382:A:N1	2.66	0.43
6:A:391:G:C6	6:A:392:G:C5	3.06	0.43
6:A:408:A:OP1	11:H:113:SER:OG	2.34	0.43
6:A:414:A:C4	6:A:415:A:C8	3.07	0.43
6:A:498:A:C2	6:A:547:A:C4	3.06	0.43
6:A:763:G:H2'	6:A:764:C:C6	2.54	0.43
6:A:775:G:N7	30:a:276:LYS:OXT	2.51	0.43
6:A:1177:G:O5'	6:A:1177:G:H8	2.01	0.43
6:A:1187:G:C2	6:A:1188:A:C4	3.06	0.43
6:A:1321:C:H41	26:W:37:ARG:HH21	1.67	0.43
6:A:1432:G:O2'	6:A:1433:A:H8	2.02	0.43
7:D:17:G:H21	7:D:554:U:P	2.41	0.43
7:D:41:C:H2'	7:D:43:G:O4'	2.18	0.43
7:D:89:G:H3'	7:D:90:U:H5"	2.01	0.43
7:D:270(G):C:H2'	7:D:270(H):C:C1'	2.49	0.43
7:D:326:G:C2	7:D:327:G:C8	3.07	0.43
7:D:400:G:N1	51:v:63:TYR:OH	2.47	0.43
7:D:520:G:C2	7:D:521:G:C4	3.06	0.43
7:D:535:C:C2	7:D:536:A:C8	3.06	0.43
7:D:590:A:C2	7:D:668:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:675:A:C5	7:D:676:A:N1	2.86	0.43
7:D:685:A:N1	7:D:689:A:C2	2.87	0.43
7:D:744:G:C6	7:D:745:G:C4	3.07	0.43
7:D:787:U:C2	7:D:791:C:N4	2.86	0.43
7:D:918:A:H3'	7:D:919:G:O4'	2.19	0.43
7:D:1301:A:HO2'	7:D:1302:A:P	2.39	0.43
7:D:1364:G:C2	7:D:1368:G:C5	3.07	0.43
7:D:1369:G:N1	7:D:1370:C:N3	2.67	0.43
7:D:1419:A:N1	7:D:1421:G:C4	2.87	0.43
7:D:1427:A:H1'	7:D:1428:C:C5	2.54	0.43
7:D:1454:U:C5	7:D:1455:G:N7	2.86	0.43
7:D:1591:G:C8	7:D:1591:G:O5'	2.70	0.43
7:D:1664:A:C8	7:D:1664:A:H3'	2.53	0.43
7:D:1687:G:C2	7:D:1688:U:C5	3.06	0.43
7:D:1726:G:O6	7:D:1734:C:C2	2.71	0.43
7:D:1803:A:C8	7:D:1804:C:C6	3.07	0.43
7:D:2207:C:C6	7:D:2207:C:C3'	3.01	0.43
7:D:2801:A:H2'	7:D:2802:G:OP1	2.18	0.43
7:D:2847:U:C5	7:D:2848:G:N7	2.87	0.43
9:F:69:LEU:HD11	9:F:93:VAL:HG23	2.01	0.43
13:J:11:ASN:HA	13:J:12:PRO:HD2	1.73	0.43
13:J:74:ASP:O	13:J:78:GLU:N	2.49	0.43
13:J:99:ALA:HB2	25:V:31:LEU:HD13	2.01	0.43
17:N:32:ALA:HB2	17:N:76:ASN:HB2	2.00	0.43
18:O:66:LEU:C	18:O:70:LYS:HZ3	2.25	0.43
26:W:52:TYR:CD1	26:W:52:TYR:O	2.72	0.43
28:Y:18:TYR:CE2	28:Y:24:ARG:NH1	2.86	0.43
29:Z:45:ALA:C	29:Z:171:ILE:HG22	2.44	0.43
30:a:24:ILE:HG22	30:a:25:THR:N	2.33	0.43
33:d:75:LYS:HE2	33:d:87:PRO:HD3	1.99	0.43
37:h:72:PRO:CD	37:h:111:ARG:HE	2.16	0.43
37:h:97:PRO:HD3	37:h:102:ARG:HH11	1.83	0.43
38:i:77:LYS:HB2	38:i:78:PRO:HD3	2.01	0.43
43:n:63:GLY:O	43:n:97:LYS:HB2	2.18	0.43
44:o:42:ARG:HG2	44:o:43:GLY:N	2.33	0.43
46:q:17:SER:CB	46:q:19:LYS:H	2.31	0.43
49:t:41:GLN:HA	49:t:44:LYS:HG2	2.00	0.43
56:B:43:GLU:C	56:B:44:GLN:HG3	2.44	0.43
56:B:142:ASN:ND2	56:B:144:ARG:NH2	2.67	0.43
56:B:206:ASP:C	56:B:208:TYR:H	2.26	0.43
3:3:132:ARG:HH22	7:D:1060:U:C2'	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:166:G:C2	6:A:167:G:C4	3.07	0.43
6:A:286:G:C6	6:A:287:U:N3	2.87	0.43
6:A:308:C:O2'	6:A:309:G:OP1	2.33	0.43
6:A:411:A:C5	6:A:429:U:C4	3.06	0.43
6:A:457:C:O2	6:A:476:G:C2	2.70	0.43
6:A:698:G:C2	6:A:699:C:C2	3.06	0.43
6:A:755:G:H2'	6:A:756:C:C6	2.54	0.43
6:A:806:C:H2'	6:A:807:A:C8	2.53	0.43
6:A:806:C:H2'	6:A:807:A:H8	1.83	0.43
6:A:1046:A:OP2	6:A:1046:A:C8	2.72	0.43
6:A:1088:G:H2'	6:A:1089:G:C8	2.53	0.43
6:A:1195:C:H2'	6:A:1197:G:O4'	2.19	0.43
6:A:1235:U:H2'	6:A:1236:A:C8	2.48	0.43
6:A:1413:A:N1	6:A:1488:G:C2	2.86	0.43
7:D:30:G:C2	7:D:511:U:O2	2.71	0.43
7:D:337:C:O3'	7:D:339:U:OP2	2.36	0.43
7:D:364:C:C4	7:D:365:C:N4	2.86	0.43
7:D:411:G:O5'	7:D:412:A:OP2	2.37	0.43
7:D:564:C:N4	7:D:573:G:OP1	2.49	0.43
7:D:579:G:C2	7:D:580:C:C2	3.07	0.43
7:D:860:U:O4	7:D:917:A:N6	2.52	0.43
7:D:973:A:O2'	7:D:974:G:O5'	2.22	0.43
7:D:1003:G:O6	7:D:1153:C:N4	2.51	0.43
7:D:1050:A:C5	7:D:2751:G:C2	3.07	0.43
7:D:1246:A:H2'	7:D:1247:A:O4'	2.19	0.43
7:D:1332:G:C5	7:D:1609:A:N6	2.86	0.43
7:D:1656:C:OP2	31:b:136:ARG:NH2	2.52	0.43
7:D:1663:C:H5"	7:D:1664:A:OP1	2.18	0.43
7:D:1728:G:N2	7:D:1729:A:C5	2.87	0.43
7:D:1773:A:H2'	7:D:1774:C:H5'	2.01	0.43
7:D:1776:G:C4	7:D:1789:A:C2	3.07	0.43
7:D:1916:A:C5	7:D:1917:U:O4	2.72	0.43
7:D:1993:U:C5	7:D:1994:C:C4	3.06	0.43
7:D:2085:C:C4	7:D:2086:U:C4	3.07	0.43
7:D:2246:G:C6	7:D:2247:A:C6	3.06	0.43
7:D:2271:G:C6	7:D:2272:U:N3	2.85	0.43
7:D:2290:G:C6	7:D:2291:U:N3	2.87	0.43
7:D:2334:G:N2	40:k:15:ARG:HH12	2.17	0.43
7:D:2519:U:H4'	7:D:2520:C:OP1	2.19	0.43
7:D:2655:G:H2'	7:D:2664:G:C6	2.54	0.43
7:D:2758:A:H1'	34:e:67:LEU:HD13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2881:C:H5"	7:D:2882:A:OP2	2.18	0.43
9:F:19:HIS:HA	9:F:39:ILE:HD11	2.00	0.43
12:I:112:LEU:HD23	12:I:112:LEU:HA	1.86	0.43
13:J:51:PRO:HA	13:J:55:ASP:O	2.19	0.43
15:L:39:LEU:HA	15:L:39:LEU:HD12	1.79	0.43
29:Z:24:GLU:O	29:Z:27:HIS:HB2	2.18	0.43
29:Z:176:GLY:CA	29:Z:180:PHE:CD2	3.02	0.43
30:a:41:GLY:C	30:a:43:ARG:H	2.26	0.43
33:d:139:LEU:C	33:d:141:PHE:H	2.25	0.43
36:g:6:THR:O	36:g:20:MET:HA	2.18	0.43
36:g:72:PRO:O	36:g:73:ASP:HB2	2.18	0.43
37:h:52:GLU:HB2	55:z:52:LYS:HE2	2.01	0.43
41:l:44:ASP:OD1	41:l:45:PHE:N	2.52	0.43
44:o:15:ARG:HH21	52:w:20:ARG:NH2	2.17	0.43
46:q:22:GLY:N	46:q:73:ARG:HH12	2.17	0.43
49:t:60:ASN:HA	49:t:63:ARG:CZ	2.49	0.43
50:u:31:LEU:C	50:u:33:GLN:H	2.27	0.43
56:B:33:THR:HG23	56:B:34:HIS:H	1.83	0.43
56:B:251:VAL:CG1	56:B:252:ALA:N	2.39	0.43
56:B:379:LYS:H	56:B:406:LEU:CA	2.25	0.43
56:B:382:LEU:HD22	56:B:402:ILE:HG23	2.01	0.43
56:B:589:LYS:C	56:B:590:VAL:HG23	2.43	0.43
3:3:98:ARG:CZ	3:3:100:THR:HA	2.49	0.43
5:5:5:G:H2'	5:5:6:G:C8	2.53	0.43
6:A:193:C:O2'	6:A:194:C:H5'	2.18	0.43
6:A:533:A:OP2	6:A:533:A:O4'	2.36	0.43
6:A:606:G:N2	6:A:631:G:H2'	2.30	0.43
6:A:695:A:C6	6:A:696:A:C6	3.07	0.43
6:A:718:G:C5	18:O:116:HIS:NE2	2.86	0.43
6:A:802:A:C2	6:A:803:G:H1'	2.54	0.43
6:A:860:A:H2'	6:A:861:G:O4'	2.19	0.43
6:A:1360:A:OP2	21:R:35:ARG:NH2	2.51	0.43
7:D:83:G:N2	7:D:102:G:O2'	2.51	0.43
7:D:126:A:C5	7:D:127:A:C6	3.07	0.43
7:D:227:A:HO2'	7:D:228:A:P	2.42	0.43
7:D:233:A:N6	7:D:429:A:H61	2.17	0.43
7:D:270(C):C:H2'	7:D:270(D):C:O4'	2.19	0.43
7:D:454:A:H4'	7:D:455:C:O2	2.19	0.43
7:D:464:U:H4'	54:y:5:TRP:CZ3	2.54	0.43
7:D:541:C:N4	7:D:552:G:H1	2.16	0.43
7:D:616:A:H2'	7:D:617:G:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:728:G:C8	7:D:728:G:H3'	2.54	0.43
7:D:889:C:N4	7:D:890:A:C2	2.87	0.43
7:D:931:G:N3	50:u:24:LYS:HG2	2.33	0.43
7:D:978:G:C2	7:D:986:C:C2	3.06	0.43
7:D:1047:G:N7	7:D:1110:G:C2	2.86	0.43
7:D:1306:C:H2'	7:D:1307:A:O4'	2.19	0.43
7:D:1433:U:H2'	7:D:1434:A:H8	1.83	0.43
7:D:1728:G:N2	7:D:1730:U:H1'	2.33	0.43
7:D:1741:C:H3'	7:D:1741:C:H6	1.82	0.43
7:D:1749:A:C8	7:D:1749:A:OP2	2.71	0.43
7:D:2019:A:H3'	7:D:2020:A:C5'	2.48	0.43
7:D:2120:G:H5"	7:D:2121:G:OP2	2.18	0.43
7:D:2169:A:P	7:D:2169:A:H8	2.42	0.43
7:D:2432:A:C2	7:D:2433:A:C5	3.07	0.43
7:D:2603:G:H2'	7:D:2604:U:O4'	2.19	0.43
7:D:2696:U:O2	7:D:2697:G:C8	2.71	0.43
7:D:2807:G:H5'	7:D:2808:U:C5	2.50	0.43
7:D:2845:G:N1	7:D:2871:C:O2	2.48	0.43
7:D:2893:G:H4'	7:D:2894:G:OP1	2.17	0.43
9:F:133:LYS:C	9:F:137:ARG:NH1	2.77	0.43
11:H:63:LYS:HZ1	11:H:198:VAL:HG12	1.83	0.43
11:H:201:GLN:O	11:H:205:GLU:HB2	2.19	0.43
13:J:89:MET:HB2	25:V:76:LEU:HD11	2.01	0.43
14:K:139:GLU:O	14:K:143:ARG:HG2	2.19	0.43
16:M:50:LEU:O	16:M:54:ASP:N	2.51	0.43
17:N:24:VAL:HG11	17:N:28:ARG:HH21	1.83	0.43
19:P:43:VAL:HG12	19:P:44:THR:O	2.18	0.43
24:U:40:LYS:HE3	24:U:42:TYR:CE1	2.54	0.43
26:W:20:LEU:C	26:W:22:LEU:N	2.77	0.43
26:W:79:THR:CG2	26:W:80:TYR:N	2.82	0.43
27:X:14:LYS:O	27:X:18:GLN:HG3	2.19	0.43
29:Z:152:ILE:CG2	29:Z:160:ARG:NH1	2.80	0.43
30:a:38:LYS:HZ2	30:a:64:ILE:CD1	2.32	0.43
30:a:106:ILE:O	30:a:108:PRO:HD3	2.19	0.43
30:a:206:LEU:O	30:a:206:LEU:HD12	2.18	0.43
32:c:155:LEU:HD12	32:c:189:THR:HG21	2.01	0.43
33:d:47:LYS:CD	33:d:73:ALA:HB2	2.49	0.43
33:d:63:ILE:HD12	33:d:105:LYS:HZ3	1.83	0.43
35:f:32:THR:O	35:f:35:ARG:HB3	2.18	0.43
36:g:97:ARG:HD2	36:g:97:ARG:HA	1.64	0.43
37:h:61:ARG:C	37:h:62:LEU:HD12	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:112:LEU:HD23	37:h:112:LEU:HA	1.72	0.43
38:i:53:ALA:HA	38:i:56:ARG:NE	2.34	0.43
38:i:78:PRO:HB2	38:i:79:LEU:H	1.53	0.43
40:k:76:LYS:HA	40:k:79:ALA:CB	2.48	0.43
46:q:49:VAL:O	46:q:52:SER:HB3	2.19	0.43
50:u:50:VAL:HG13	50:u:53:LEU:HB2	2.00	0.43
51:v:56:VAL:C	51:v:61:ARG:HE	2.26	0.43
54:y:34:ARG:CZ	54:y:42:LEU:HA	2.47	0.43
56:B:195:PRO:HG2	56:B:287:THR:HA	1.98	0.43
56:B:330:LEU:HB3	56:B:345:ARG:HH11	1.84	0.43
56:B:396:LEU:CD2	56:B:491:LYS:HG3	2.49	0.43
5:5:17:C:H41	7:D:2181:G:H5'	1.81	0.43
5:5:24:G:H8	5:5:24:G:O5'	2.00	0.43
5:5:36:A:C5	5:5:37:A:C8	3.07	0.43
6:A:46:G:C2	6:A:396:G:C2	3.06	0.43
6:A:76:G:C8	6:A:95:G:N1	2.82	0.43
6:A:216:G:H3'	6:A:217:C:C5	2.53	0.43
6:A:262:A:C2	6:A:263:A:C4	3.07	0.43
6:A:345:C:H4'	6:A:346:G:O5'	2.18	0.43
6:A:425:G:C4	6:A:426:G:C8	3.07	0.43
6:A:464:G:H8	6:A:464:G:P	2.42	0.43
6:A:527:G:N1	6:A:528:C:N3	2.67	0.43
6:A:580:U:O4	6:A:581:G:N1	2.51	0.43
6:A:617:G:C6	6:A:624:C:N3	2.87	0.43
6:A:774:G:C2	6:A:806:C:C2	3.06	0.43
6:A:818:G:O2'	6:A:819:A:H5"	2.18	0.43
6:A:994:A:N3	6:A:994:A:H2'	2.33	0.43
6:A:1010:G:C4	6:A:1011:G:C8	3.07	0.43
6:A:1035:A:C6	6:A:1036:G:N7	2.87	0.43
6:A:1041:A:H8	6:A:1041:A:O5'	2.02	0.43
6:A:1059:C:N3	6:A:1060:C:C4	2.86	0.43
6:A:1167:A:H8	6:A:1167:A:OP1	2.02	0.43
7:D:173:G:C6	7:D:174:C:N4	2.87	0.43
7:D:261:G:C2	7:D:262:A:C4	3.06	0.43
7:D:353:G:C6	7:D:354:G:C5	3.06	0.43
7:D:375:C:N4	7:D:399:G:H1	2.17	0.43
7:D:479:A:N6	7:D:481:G:N3	2.66	0.43
7:D:560:C:N4	7:D:561:G:C6	2.87	0.43
7:D:563:G:N1	7:D:2018:G:N3	2.65	0.43
7:D:718:A:H8	7:D:718:A:O5'	2.01	0.43
7:D:997:G:OP1	42:m:92:ARG:HD2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1174:A:C3'	7:D:1175:U:H5"	2.46	0.43
7:D:1297:C:OP1	7:D:2710:C:H4'	2.19	0.43
7:D:1369:G:N1	7:D:1370:C:C2	2.86	0.43
7:D:1439:A:N1	7:D:1553:A:C4	2.87	0.43
7:D:1449(A):G:N2	7:D:1450:C:H1'	2.34	0.43
7:D:1451:C:H2'	7:D:1453:A:OP1	2.19	0.43
7:D:1477:A:C6	7:D:1478:G:O6	2.72	0.43
7:D:1519:G:H3'	7:D:1520:U:N1	2.33	0.43
7:D:1537:C:H2'	7:D:1538:G:H4'	2.00	0.43
7:D:1557:C:H2'	7:D:1558:A:N7	2.34	0.43
7:D:1580:A:C2'	7:D:1581:G:N9	2.82	0.43
7:D:1666:G:H1'	36:g:2:ILE:HD11	2.00	0.43
7:D:1707:G:C2	7:D:1756:G:N2	2.87	0.43
7:D:1725:G:N1	7:D:1726:G:N7	2.67	0.43
7:D:1792:G:C6	7:D:1828:G:N2	2.86	0.43
7:D:1850:G:C5	7:D:1851:U:C5	3.07	0.43
7:D:1853:A:C6	7:D:1889:A:C6	3.06	0.43
7:D:1993:U:O2	7:D:1993:U:O4'	2.37	0.43
7:D:2059:A:OP1	32:c:72:ARG:HG2	2.19	0.43
7:D:2099:U:C2	7:D:2100:G:N7	2.87	0.43
7:D:2196:C:C4	7:D:2197:U:O4	2.71	0.43
7:D:2266:A:N3	7:D:2272:U:H5	2.16	0.43
7:D:2333:A:H1'	7:D:2335:A:C4	2.54	0.43
7:D:2383:G:C5	7:D:2384:G:N7	2.87	0.43
7:D:2396:G:C2	7:D:2397:G:C8	3.07	0.43
7:D:2695:C:H2'	7:D:2696:U:C6	2.53	0.43
7:D:2813:A:H2'	7:D:2814:C:C6	2.53	0.43
7:D:2849:U:C2'	7:D:2850:A:OP2	2.67	0.43
9:F:124:SER:OG	9:F:125:PRO:HD2	2.18	0.43
11:H:203:VAL:O	11:H:206:PHE:N	2.51	0.43
12:I:79:GLU:OE1	12:I:79:GLU:N	2.36	0.43
12:I:144:THR:HG22	12:I:145:LYS:N	2.33	0.43
24:U:25:ARG:HD2	24:U:27:PHE:HE2	1.84	0.43
26:W:67:VAL:C	26:W:69:HIS:N	2.73	0.43
29:Z:39:GLU:OE2	29:Z:216:THR:HG21	2.18	0.43
29:Z:91:ALA:HB3	29:Z:94:VAL:HG23	2.00	0.43
30:a:242:ARG:HH11	30:a:244:ARG:NH2	2.13	0.43
30:a:247:ALA:HB1	30:a:248:SER:H	1.57	0.43
32:c:65:TRP:CD1	32:c:66:PRO:HD2	2.54	0.43
33:d:76:SER:O	33:d:82:LEU:HB2	2.19	0.43
34:e:98:LEU:O	34:e:100:GLY:N	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:f:49:GLY:HA3	35:f:119:ARG:NH1	2.31	0.43
36:g:59:LYS:CB	36:g:85:VAL:HA	2.48	0.43
36:g:92:GLU:OE2	36:g:114:ILE:HG13	2.19	0.43
38:i:85:LYS:HD2	38:i:86:GLY:H	1.83	0.43
40:k:25:ARG:HG2	40:k:40:ILE:O	2.19	0.43
42:m:93:LYS:H	43:n:10:LYS:NZ	2.16	0.43
46:q:97:ARG:HA	46:q:101:LYS:HG2	2.01	0.43
49:t:23:LYS:HD3	49:t:51:GLN:NE2	2.26	0.43
56:B:19:ASP:HA	57:B:701:GCP:H5'2	2.00	0.43
56:B:70:ALA:HB3	56:B:75:GLU:H	1.83	0.43
56:B:127:HIS:O	56:B:127:HIS:CD2	2.71	0.43
56:B:250:LEU:N	56:B:250:LEU:CD1	2.81	0.43
56:B:270:ASP:C	56:B:271:ILE:HG13	2.44	0.43
56:B:417:PRO:CB	56:B:447:ARG:N	2.74	0.43
3:3:23:VAL:O	3:3:25:PRO:HD2	2.19	0.43
5:5:55:U:C4	5:5:57:G:OP2	2.72	0.43
6:A:5:U:C1'	6:A:6:G:OP2	2.66	0.43
6:A:44:G:OP2	23:T:12:LYS:HB2	2.19	0.43
6:A:285:G:H2'	6:A:286:G:C8	2.54	0.43
6:A:538:G:C2	6:A:539:A:C4	3.06	0.43
6:A:710:G:H2'	6:A:711:G:H8	1.84	0.43
6:A:830:G:C6	6:A:831:U:C4	3.07	0.43
6:A:848:C:C6	6:A:848:C:OP1	2.72	0.43
6:A:981:U:C2	6:A:982:U:H5	2.37	0.43
6:A:1175:G:N3	6:A:1176:A:C8	2.87	0.43
6:A:1201:A:HO2'	6:A:1202:G:P	2.41	0.43
6:A:1235:U:C2	6:A:1236:A:C8	3.07	0.43
6:A:1304:G:H1	6:A:1332:A:P	2.42	0.43
6:A:1343:G:H4'	16:M:122:ALA:O	2.19	0.43
6:A:1440:C:O2	6:A:1462:G:N2	2.50	0.43
7:D:271:G:C5	7:D:404:C:N3	2.87	0.43
7:D:465:G:C6	7:D:466:A:C6	3.06	0.43
7:D:602:G:N2	7:D:656:G:C5	2.87	0.43
7:D:660:G:C6	7:D:661:C:N3	2.86	0.43
7:D:775:G:H5"	7:D:777:A:C8	2.54	0.43
7:D:875:G:C5	7:D:876:C:C4	3.07	0.43
7:D:909:A:N7	7:D:912:C:N3	2.66	0.43
7:D:921:G:C5	7:D:922:U:C4	3.07	0.43
7:D:1022:G:H21	7:D:1024:G:H22	1.63	0.43
7:D:1062:G:O6	7:D:1077:A:C4	2.72	0.43
7:D:1293:C:N3	7:D:1294:U:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1434:A:C4	7:D:1435:G:C8	3.06	0.43
7:D:1449:A:OP1	7:D:1543:A:N1	2.52	0.43
7:D:1859:A:C2	7:D:1885:A:C8	3.07	0.43
7:D:2320:A:C6	40:k:4:LEU:HD21	2.54	0.43
7:D:2396:G:C2	7:D:2421:G:N1	2.87	0.43
7:D:2399:G:H1	7:D:2417:C:N4	2.14	0.43
7:D:2631:G:C5'	7:D:2894:G:H5"	2.49	0.43
7:D:2638:G:C5	7:D:2775:A:C6	3.07	0.43
7:D:2711:A:C5'	7:D:2712:U:H5'	2.47	0.43
8:E:7:G:H3'	8:E:8:U:C5	2.54	0.43
8:E:21:G:C2	8:E:22:U:C2	3.07	0.43
15:L:19:VAL:O	15:L:20:TYR:HB2	2.19	0.43
15:L:49:GLU:N	15:L:49:GLU:OE1	2.52	0.43
18:O:40:ILE:HB	18:O:41:THR:H	1.56	0.43
19:P:85:ILE:HD12	19:P:85:ILE:HA	1.82	0.43
20:Q:30:ALA:O	20:Q:33:ALA:N	2.52	0.43
22:S:80:ALA:O	22:S:84:LYS:HB2	2.18	0.43
23:T:74:LEU:HA	23:T:77:ALA:HB3	1.99	0.43
26:W:11:VAL:C	26:W:38:SER:OG	2.62	0.43
27:X:76:ALA:O	27:X:80:ARG:HG2	2.19	0.43
29:Z:163:PHE:O	29:Z:164:ARG:HB2	2.19	0.43
30:a:38:LYS:NZ	30:a:64:ILE:CG1	2.82	0.43
31:b:60:ASN:CB	31:b:63:LEU:HD12	2.49	0.43
32:c:78:ILE:HA	32:c:83:PHE:CZ	2.53	0.43
32:c:155:LEU:HD11	32:c:185:ASP:HB3	2.01	0.43
34:e:33:LEU:HD22	34:e:75:ALA:HA	2.01	0.43
35:f:21:LYS:O	35:f:60:ILE:HG23	2.19	0.43
35:f:55:VAL:HG22	35:f:56:ASN:OD1	2.19	0.43
37:h:122:PRO:HB3	37:h:137:LYS:HB2	2.00	0.43
38:i:70:PRO:HA	38:i:95:ALA:HB2	2.01	0.43
45:p:62:LYS:O	45:p:63:LYS:C	2.62	0.43
55:z:30:ARG:HE	55:z:44:LYS:CD	2.32	0.43
55:z:37:SER:O	55:z:40:GLU:HG2	2.19	0.43
56:B:143:ALA:O	56:B:145:PRO:HD3	2.19	0.43
56:B:361:LEU:HA	56:B:365:PHE:HD1	1.84	0.43
56:B:385:GLY:O	56:B:386:GLU:HB2	2.19	0.43
3:3:35:MET:HG3	3:3:36:GLU:N	2.32	0.42
3:3:55:VAL:O	3:3:55:VAL:HG13	2.19	0.42
4:4:28:C:H2'	4:4:29:G:H8	1.83	0.42
4:4:30:G:C2	4:4:31:G:C8	3.07	0.42
4:4:49:G:H1	4:4:65:C:N4	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:172:A:N7	6:A:174:C:C2	2.87	0.42
6:A:294:U:H2'	6:A:295:C:H6	1.84	0.42
6:A:403:C:H2'	6:A:404:U:C6	2.53	0.42
6:A:448:A:C2	6:A:449:C:C4	3.07	0.42
6:A:474:G:N2	6:A:475:G:N3	2.67	0.42
6:A:575:G:C4	6:A:881:G:N2	2.87	0.42
6:A:586:C:H42	6:A:755:G:H1	1.67	0.42
6:A:741:G:H2'	6:A:742:G:H8	1.84	0.42
6:A:814:A:C8	6:A:816:A:N7	2.87	0.42
6:A:848:C:N3	6:A:849:C:N4	2.66	0.42
6:A:1043:C:H2'	6:A:1044:A:C8	2.50	0.42
6:A:1120:G:C2	6:A:1121:U:C2	3.07	0.42
6:A:1206:G:C6	6:A:1207:G:C5	3.07	0.42
6:A:1300:G:OP2	6:A:1300:G:O4'	2.37	0.42
6:A:1419:G:C5	6:A:1482:G:C2	3.07	0.42
6:A:1452:C:C2'	6:A:1453:G:N2	2.80	0.42
7:D:250:G:H5'	55:z:8:LYS:HD3	2.01	0.42
7:D:456:C:C4	45:p:69:TYR:CD2	3.07	0.42
7:D:799:G:N1	7:D:800:A:N6	2.67	0.42
7:D:818:G:N2	7:D:1190:G:C4	2.87	0.42
7:D:869:G:C2	7:D:870:A:C5	3.07	0.42
7:D:883:G:C2'	7:D:892:G:O6	2.62	0.42
7:D:923:C:O4'	48:s:26:TYR:CZ	2.72	0.42
7:D:1056:G:H3'	7:D:1056:G:C8	2.54	0.42
7:D:1131:G:N2	7:D:1132:A:C2	2.87	0.42
7:D:1138:G:C2	7:D:1139:G:C4	3.07	0.42
7:D:1163:G:C2	7:D:1164:G:C4	3.06	0.42
7:D:1192:G:C2	7:D:1193:G:C8	3.07	0.42
7:D:1251:C:H5'	42:m:10:ARG:NE	2.34	0.42
7:D:1258:C:N4	7:D:1259:G:O6	2.51	0.42
7:D:1268:A:C5	7:D:1269:A:C5	3.07	0.42
7:D:1288:U:O4	7:D:1327:C:H1'	2.18	0.42
7:D:1429:G:C2	7:D:1430:C:C2	3.07	0.42
7:D:1623:G:C2	7:D:1624:G:C8	3.07	0.42
7:D:1627:G:C5	7:D:1640:C:N3	2.87	0.42
7:D:1725:G:N1	7:D:1735:C:N3	2.66	0.42
7:D:1872:A:H2'	7:D:1878:G:OP1	2.19	0.42
7:D:1899:G:N2	7:D:1902:C:H41	2.16	0.42
7:D:1992:G:O6	7:D:1997:G:C2	2.71	0.42
7:D:1995:U:C4	7:D:1996:C:C5	3.07	0.42
7:D:2016:U:O4'	52:w:6:VAL:HG21	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2104:G:H2'	7:D:2105:C:C6	2.54	0.42
7:D:2105:C:H2'	7:D:2106:G:C8	2.54	0.42
7:D:2448:A:O2'	7:D:2449:U:OP1	2.37	0.42
7:D:2528:U:O2'	7:D:2529:G:H3'	2.18	0.42
7:D:2572:A:O2'	7:D:2573:C:P	2.77	0.42
7:D:2684:U:O2'	36:g:67:LYS:HB3	2.19	0.42
7:D:2782:G:C2	7:D:2783:G:C5	3.06	0.42
7:D:2818:G:C2	7:D:2819:G:C4	3.07	0.42
8:E:4:C:C2	8:E:117:G:N2	2.87	0.42
9:F:52:GLU:O	9:F:56:ARG:HG2	2.18	0.42
11:H:196:LEU:HD12	11:H:196:LEU:O	2.19	0.42
13:J:46:ARG:HB3	13:J:60:PHE:CE2	2.54	0.42
18:O:108:ILE:HB	25:V:88:LYS:OXT	2.19	0.42
19:P:93:LEU:HA	19:P:94:PRO:HD3	1.76	0.42
20:Q:61:GLU:C	20:Q:63:THR:H	2.27	0.42
25:V:58:LEU:HB2	25:V:63:GLN:OE1	2.19	0.42
29:Z:44:HIS:ND1	29:Z:172:HIS:HB3	2.34	0.42
31:b:151:TYR:CE1	35:f:79:PRO:HG2	2.54	0.42
33:d:33:ARG:HG2	33:d:34:LEU:N	2.34	0.42
33:d:121:ASN:ND2	33:d:180:PHE:HD2	2.17	0.42
33:d:140:ILE:HG22	33:d:141:PHE:CD1	2.54	0.42
35:f:74:ARG:C	35:f:76:SER:N	2.77	0.42
37:h:38:GLN:C	37:h:40:SER:H	2.26	0.42
38:i:58:PHE:CE1	38:i:109:VAL:HG11	2.54	0.42
38:i:112:GLU:HG2	38:i:113:GLN:N	2.33	0.42
40:k:9:ARG:HB2	40:k:10:ARG:H	1.71	0.42
40:k:26:LEU:HD23	40:k:27:SER:N	2.34	0.42
47:r:23:LYS:HE3	47:r:38:TYR:HB3	2.00	0.42
47:r:47:VAL:CG1	47:r:53:ILE:HD13	2.44	0.42
56:B:121:PHE:CZ	56:B:157:GLY:N	2.80	0.42
56:B:166:ALA:CB	56:B:172:GLU:CD	2.90	0.42
56:B:238:THR:OG1	56:B:267:ALA:HB1	2.15	0.42
56:B:252:ALA:O	56:B:253:THR:OG1	2.32	0.42
56:B:281:THR:CG2	56:B:287:THR:OG1	2.66	0.42
56:B:378:TYR:C	56:B:406:LEU:CB	2.69	0.42
56:B:396:LEU:HD22	56:B:491:LYS:HG3	2.01	0.42
56:B:489:LEU:CA	56:B:509:HIS:CA	2.67	0.42
56:B:490:VAL:C	56:B:507:ILE:O	2.59	0.42
56:B:543:GLY:O	56:B:545:ILE:N	2.52	0.42
1:1:2:LYS:HE2	1:1:37:GLY:OXT	2.19	0.42
1:1:35:ARG:CZ	7:D:2742:C:H5"	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:10:LEU:HG	3:3:57:ILE:CG1	2.43	0.42
3:3:79:ARG:NH1	3:3:134:MET:SD	2.93	0.42
4:4:17:C:H5"	4:4:17(A):U:C6	2.54	0.42
6:A:52:G:C2	6:A:53:A:C4	3.07	0.42
6:A:237:C:H5"	24:U:25:ARG:NH1	2.35	0.42
6:A:284:G:N1	6:A:285:G:C5	2.87	0.42
6:A:373:A:C2	6:A:374:A:C8	3.07	0.42
6:A:410:G:H3'	6:A:410:G:OP2	2.18	0.42
6:A:447:G:N2	6:A:488:C:C4	2.87	0.42
6:A:560:U:C5	6:A:566:G:C4	3.07	0.42
6:A:597:G:N1	6:A:644:G:C6	2.87	0.42
6:A:671:G:C6	6:A:672:U:C2	3.07	0.42
6:A:722:A:C2	6:A:724:G:C5	3.08	0.42
6:A:754:C:H3'	6:A:755:G:C5'	2.49	0.42
6:A:837:G:C8	6:A:837:G:O5'	2.71	0.42
6:A:954:G:O6	6:A:1225:A:N6	2.52	0.42
6:A:1044:A:H5"	6:A:1045:C:OP2	2.19	0.42
6:A:1235:U:C2	6:A:1236:A:N7	2.87	0.42
6:A:1284:C:H3'	6:A:1285:A:C8	2.52	0.42
6:A:1354:C:N4	6:A:1368:G:H1	2.17	0.42
6:A:1426:C:H2'	6:A:1427:U:H6	1.83	0.42
7:D:1:G:C2'	7:D:2:G:H8	2.32	0.42
7:D:5:A:C6	7:D:6:A:C5	3.07	0.42
7:D:37:C:C2	7:D:38:A:C8	3.06	0.42
7:D:270(G):C:H5"	7:D:270(H):C:OP2	2.19	0.42
7:D:425:G:N2	7:D:426:C:C2	2.87	0.42
7:D:662:G:P	37:h:15:ARG:NH2	2.92	0.42
7:D:685:A:C8	7:D:773:U:C5	3.07	0.42
7:D:833:U:H2'	7:D:834:C:C6	2.54	0.42
7:D:834:C:C2	7:D:835:A:C8	3.07	0.42
7:D:880:G:P	7:D:881:G:OP2	2.77	0.42
7:D:923:C:C6	7:D:923:C:O5'	2.70	0.42
7:D:932:G:H2'	7:D:933:A:C1'	2.49	0.42
7:D:971:C:OP2	7:D:974(A):C:C5	2.72	0.42
7:D:1423:G:H2'	7:D:1424:G:C8	2.53	0.42
7:D:1457:A:O2'	7:D:1459:G:C1'	2.67	0.42
7:D:1459:G:O6	7:D:1461:G:C2	2.72	0.42
7:D:1568:G:OP1	30:a:86:PRO:HG3	2.19	0.42
7:D:1605:C:C5	7:D:1606:G:C8	3.07	0.42
7:D:1697:G:C4	7:D:1698:A:C2	3.07	0.42
7:D:1707:G:H3'	7:D:1707:G:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1735:C:H3'	7:D:1735:C:H6	1.85	0.42
7:D:1799:G:O2'	7:D:1800:C:O2	2.38	0.42
7:D:1812:A:C2	7:D:1813:G:C4	3.07	0.42
7:D:1860:G:C4	7:D:1861:G:C8	3.07	0.42
7:D:2067:G:N1	7:D:2069:G:C5	2.87	0.42
7:D:2266:A:C4	7:D:2272:U:C5	3.07	0.42
7:D:2353:G:C5'	48:s:32:ARG:HH12	2.32	0.42
7:D:2356:C:H4'	48:s:20:ARG:HG3	2.00	0.42
7:D:2487:G:N3	7:D:2488:A:C8	2.88	0.42
7:D:2588:G:C5	7:D:2589:A:N7	2.87	0.42
7:D:2623:G:H21	52:w:22:HIS:HE1	1.66	0.42
7:D:2654:A:C4	7:D:2656:U:C4	3.07	0.42
7:D:2740:A:N6	7:D:2764:A:C5	2.87	0.42
7:D:2836:U:H6	7:D:2836:U:H3'	1.84	0.42
8:E:11:C:P	48:s:74:ARG:HH12	2.42	0.42
8:E:34:U:O2'	8:E:35:U:P	2.77	0.42
8:E:57:A:H1'	33:d:26:GLN:NE2	2.35	0.42
8:E:75:G:C5'	47:r:36:LYS:HZ1	2.31	0.42
9:F:208:ILE:HG22	9:F:212:GLN:HE21	1.84	0.42
12:I:15:ARG:NH1	12:I:26:PHE:CE2	2.88	0.42
14:K:22:LEU:CD2	14:K:97:GLN:HE21	2.32	0.42
14:K:45:ASP:HA	14:K:48:LYS:HZ3	1.83	0.42
20:Q:24:GLY:HA3	20:Q:66:LEU:CB	2.49	0.42
20:Q:67:GLU:OE1	20:Q:67:GLU:HA	2.19	0.42
22:S:5:LYS:O	22:S:9:GLN:HG2	2.19	0.42
26:W:36:ARG:H	26:W:36:ARG:HG2	1.50	0.42
29:Z:131:LEU:HA	29:Z:136:LEU:HD12	2.01	0.42
30:a:56:GLY:O	30:a:58:HIS:CE1	2.71	0.42
30:a:213:ARG:HG3	30:a:214:TRP:N	2.35	0.42
31:b:45:THR:HG1	31:b:80:GLU:C	2.24	0.42
31:b:49:LEU:HD11	31:b:75:VAL:N	2.34	0.42
33:d:13:GLU:HG2	33:d:16:ARG:HH22	1.85	0.42
33:d:27:ASN:HB3	33:d:29:TRP:CD2	2.54	0.42
33:d:54:GLU:CD	33:d:69:ALA:HA	2.44	0.42
33:d:63:ILE:HD12	33:d:63:ILE:HA	1.85	0.42
35:f:39:ARG:HB3	35:f:48:MET:HG2	2.01	0.42
37:h:138:LEU:HD13	37:h:145:PRO:HB3	2.01	0.42
38:i:103:MET:N	38:i:103:MET:HE2	2.35	0.42
40:k:71:ARG:HA	40:k:74:ALA:CB	2.49	0.42
41:l:17:THR:O	41:l:19:LEU:N	2.48	0.42
52:w:9:LYS:HE2	52:w:9:LYS:HB3	1.79	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:35:GLN:HB2	55:z:36:LYS:HE2	2.01	0.42
56:B:74:GLU:HG3	56:B:77:VAL:HG11	2.00	0.42
56:B:302:PHE:C	56:B:347:GLY:HA3	2.44	0.42
56:B:306:TYR:HE1	56:B:339:ALA:C	2.25	0.42
56:B:397:PRO:HB2	56:B:401:ARG:HH21	1.83	0.42
56:B:398:ASP:OD2	56:B:399:PRO:HD3	2.19	0.42
56:B:537:ILE:HD11	56:B:551:VAL:HG21	1.96	0.42
4:4:7:G:O2'	4:4:49:G:O4'	2.30	0.42
6:A:52:G:N1	6:A:53:A:C4	2.87	0.42
6:A:114:U:O2'	6:A:115:G:H5'	2.19	0.42
6:A:150:C:O2	6:A:171:A:N6	2.51	0.42
6:A:440:A:N6	6:A:494:U:O5'	2.52	0.42
6:A:537:G:C6	6:A:538:G:C5	3.07	0.42
6:A:539:A:C6	6:A:540:G:C5	3.08	0.42
6:A:576:G:H3'	6:A:577:G:C5'	2.49	0.42
6:A:635:G:C2	6:A:636:U:C2	3.08	0.42
6:A:767:A:N6	6:A:813:U:H3	2.17	0.42
6:A:943:U:H2'	6:A:944:G:H8	1.82	0.42
6:A:1147:C:O2	16:M:16:ARG:NH2	2.41	0.42
6:A:1319:A:O5'	26:W:37:ARG:HB3	2.18	0.42
6:A:1319:A:HO2'	6:A:1320:C:P	2.42	0.42
7:D:117:G:C5	7:D:119:A:N6	2.87	0.42
7:D:118:A:C2	7:D:177:G:N1	2.87	0.42
7:D:155:C:O2'	7:D:161:U:P	2.77	0.42
7:D:259:G:N3	7:D:260:G:C8	2.86	0.42
7:D:270(O):U:H5"	7:D:270(P):C:H5	1.84	0.42
7:D:273(F):C:O2'	7:D:363(A):A:N3	2.52	0.42
7:D:309:G:O2'	7:D:329:G:C4	2.72	0.42
7:D:435:C:C6	7:D:435:C:C3'	3.01	0.42
7:D:441:U:O5'	7:D:441:U:H6	2.01	0.42
7:D:455:C:O2'	7:D:456:C:P	2.77	0.42
7:D:478:A:C6	7:D:480:A:N6	2.87	0.42
7:D:491:G:H2'	7:D:492:A:O5'	2.19	0.42
7:D:571:A:C6	7:D:575:A:N7	2.87	0.42
7:D:775:G:C5'	7:D:777:A:C4	3.01	0.42
7:D:857:C:C2	7:D:921:G:N2	2.88	0.42
7:D:884:C:H1'	7:D:885:C:C5	2.55	0.42
7:D:960:A:N7	7:D:962:G:C4	2.88	0.42
7:D:1025:G:N3	7:D:1025:G:C2'	2.83	0.42
7:D:1206:G:OP2	7:D:1206:G:H8	2.01	0.42
7:D:1206:G:N2	7:D:1242:A:N6	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1319:G:C2	7:D:1334:G:C5	3.07	0.42
7:D:1394:U:N3	7:D:1395:A:C6	2.87	0.42
7:D:1412:A:C4	7:D:1591:G:N2	2.87	0.42
7:D:1415:U:O3'	7:D:1416:G:H4'	2.19	0.42
7:D:1443:G:C2	7:D:1444:G:C4	3.07	0.42
7:D:1515:C:N3	7:D:1516:U:C4	2.87	0.42
7:D:1534:G:C5	7:D:1536:A:OP2	2.72	0.42
7:D:1583:A:H5'	7:D:1585:C:O5'	2.19	0.42
7:D:1735:C:H2'	7:D:1741:C:C2	2.54	0.42
7:D:2077:A:C2	7:D:2078:C:C4	3.07	0.42
7:D:2104:G:N1	7:D:2105:C:N3	2.66	0.42
7:D:2166:G:N2	7:D:2171:A:C8	2.87	0.42
7:D:2356:C:H5'	7:D:2357:U:OP2	2.20	0.42
7:D:2418:A:C5	7:D:2419:U:C2	3.07	0.42
7:D:2422:A:C8	7:D:2424:C:N4	2.87	0.42
7:D:2509:G:C2	7:D:2510:C:C2	3.07	0.42
7:D:2709:G:C6	7:D:2710:C:N3	2.87	0.42
7:D:2774:C:H2'	7:D:2775:A:H8	1.85	0.42
7:D:2805:G:C5	7:D:2807:G:C8	3.08	0.42
7:D:2837:G:N3	7:D:2838:G:C8	2.86	0.42
7:D:2848:G:N7	41:l:99:LEU:HD11	2.34	0.42
8:E:9:G:C5	8:E:112:G:C6	3.07	0.42
8:E:118:G:OP2	8:E:118:G:H3'	2.18	0.42
12:I:76:ILE:HD12	12:I:91:LEU:CD2	2.49	0.42
13:J:35:ALA:HA	13:J:66:GLU:O	2.20	0.42
13:J:52:ILE:O	13:J:53:ALA:C	2.62	0.42
25:V:18:ARG:HD2	25:V:21:LYS:HB2	2.02	0.42
28:Y:8:THR:HB	28:Y:9:ARG:H	1.57	0.42
29:Z:116:THR:O	29:Z:120:MET:HG2	2.19	0.42
30:a:13:ARG:HH21	30:a:19:ALA:HB2	1.84	0.42
30:a:89:SER:OG	30:a:158:ALA:HB1	2.19	0.42
30:a:132:PRO:HA	30:a:190:TYR:HA	2.00	0.42
30:a:153:ALA:O	30:a:156:ALA:HB2	2.18	0.42
31:b:8:LYS:HD2	31:b:8:LYS:HA	1.81	0.42
31:b:13:ARG:HH22	31:b:15:PHE:HD1	1.67	0.42
31:b:102:VAL:HG22	31:b:103:ASP:N	2.34	0.42
32:c:122:LYS:HE3	32:c:122:LYS:HB3	1.86	0.42
35:f:10:GLU:OE1	35:f:39:ARG:NH1	2.52	0.42
36:g:47:ILE:HG13	36:g:48:PRO:HD2	2.02	0.42
38:i:69:PHE:HA	38:i:70:PRO:HD3	1.77	0.42
40:k:30:ARG:C	40:k:34:HIS:HD2	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:n:88:ARG:HG2	43:n:89:GLN:O	2.20	0.42
45:p:89:ILE:HG23	45:p:92:LEU:HD13	2.02	0.42
49:t:15:GLU:O	49:t:18:LYS:HG2	2.20	0.42
50:u:10:LYS:HZ3	50:u:31:LEU:HD21	1.84	0.42
51:v:55:ARG:O	51:v:61:ARG:CZ	2.66	0.42
53:x:23:THR:HB	53:x:24:GLU:H	1.61	0.42
56:B:42:ARG:CG	56:B:43:GLU:N	2.80	0.42
56:B:46:LEU:C	56:B:48:SER:N	2.77	0.42
56:B:66:VAL:O	56:B:76:TYR:CD2	2.72	0.42
56:B:504:LEU:HD12	56:B:504:LEU:N	2.35	0.42
1:1:11:CYS:C	1:1:13:LYS:H	2.28	0.42
1:1:31:LYS:NZ	7:D:2478:A:O5'	2.51	0.42
3:3:51:ALA:HB1	3:3:77:LEU:HA	2.01	0.42
6:A:49:U:C2	6:A:364:A:N6	2.88	0.42
6:A:81:G:OP2	6:A:82:U:H5	2.02	0.42
6:A:363:A:OP1	19:P:33:ARG:HD3	2.20	0.42
6:A:410:G:C2	6:A:429:U:N3	2.87	0.42
6:A:424:G:C2	6:A:425:G:C4	3.07	0.42
6:A:684:A:O2'	18:O:39:PRO:O	2.35	0.42
6:A:691:G:C8	18:O:26:ASN:ND2	2.87	0.42
6:A:703:G:O2'	6:A:704:A:P	2.74	0.42
6:A:799:G:H3'	6:A:800:G:C8	2.54	0.42
6:A:848:C:C6	6:A:848:C:C3'	3.02	0.42
6:A:853:G:C2	6:A:854:G:C8	3.07	0.42
6:A:922:G:N2	6:A:1396:A:C4	2.88	0.42
6:A:934:C:HO2'	6:A:935:A:P	2.41	0.42
6:A:1040:U:C4	6:A:1041:A:N6	2.87	0.42
6:A:1128:C:H3'	6:A:1139:G:N7	2.34	0.42
6:A:1129:C:N3	6:A:1143:G:C2	2.88	0.42
6:A:1152:A:N6	6:A:1153:C:C4	2.87	0.42
6:A:1321:C:H5	26:W:37:ARG:CZ	2.31	0.42
6:A:1431:C:H2'	6:A:1432:G:O4'	2.19	0.42
7:D:38:A:C2	7:D:39:C:N3	2.88	0.42
7:D:55:G:H2'	7:D:56:A:C8	2.54	0.42
7:D:78:A:C6	7:D:109:G:C6	3.06	0.42
7:D:708:C:N4	7:D:709:U:O4	2.53	0.42
7:D:710:G:C4	7:D:711:G:C8	3.07	0.42
7:D:918:A:N3	7:D:919:G:H1'	2.34	0.42
7:D:938:G:H2'	7:D:939:G:H8	1.84	0.42
7:D:1037:G:N2	7:D:1038:C:O2	2.52	0.42
7:D:1239:G:C4	7:D:1240:U:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1284:A:H2'	7:D:1285:G:C8	2.54	0.42
7:D:1368:G:N3	7:D:1369:G:C8	2.88	0.42
7:D:1486:A:N6	7:D:1504:C:H42	2.17	0.42
7:D:1492:G:OP1	7:D:1493:C:OP2	2.36	0.42
7:D:1643:G:H2'	7:D:1644:C:O4'	2.20	0.42
7:D:1795:C:H2'	7:D:1796:U:O4'	2.19	0.42
7:D:1817:G:H8	7:D:1817:G:O5'	2.02	0.42
7:D:1919:A:OP2	7:D:1920:C:C5	2.72	0.42
7:D:1924:C:N3	7:D:1925:C:H5	2.17	0.42
7:D:1935:G:C2	7:D:1964:G:C4	3.07	0.42
7:D:1965:C:C2	7:D:1966:A:N7	2.88	0.42
7:D:1967:C:N4	7:D:1968:G:C6	2.88	0.42
7:D:2206:C:C2'	7:D:2207:C:H5'	2.48	0.42
7:D:2497:A:HO2'	7:D:2498:C:P	2.37	0.42
7:D:2692:C:H2'	7:D:2693:A:C8	2.52	0.42
7:D:2895:U:C6	7:D:2895:U:C3'	3.02	0.42
8:E:-1:A:N7	8:E:0:A:H8	2.18	0.42
9:F:54:THR:HG21	9:F:201:ILE:CD1	2.46	0.42
9:F:118:LEU:HA	9:F:121:LEU:HB2	2.01	0.42
13:J:6:VAL:O	13:J:7:ASN:ND2	2.52	0.42
15:L:34:GLU:CG	15:L:118:VAL:HB	2.49	0.42
17:N:8:LEU:HD21	17:N:16:LEU:HD22	2.01	0.42
19:P:68:ALA:HB1	19:P:85:ILE:HD11	2.01	0.42
19:P:124:LYS:HD3	19:P:127:GLU:OE1	2.19	0.42
23:T:82:GLN:HG3	23:T:83:GLU:N	2.34	0.42
26:W:15:LEU:CB	26:W:71:LEU:HD13	2.50	0.42
30:a:35:LYS:O	30:a:37:LEU:N	2.52	0.42
33:d:43:LEU:HD11	33:d:88:ILE:HD13	2.01	0.42
33:d:131:TYR:HE1	33:d:157:ILE:O	2.01	0.42
33:d:178:PHE:HA	33:d:179:PRO:HD2	1.92	0.42
34:e:99:VAL:HB	34:e:102:ALA:O	2.19	0.42
37:h:138:LEU:HD21	37:h:145:PRO:HD3	2.00	0.42
38:i:103:MET:CB	38:i:105:GLU:OE2	2.65	0.42
39:j:87:TYR:HE1	39:j:117:VAL:HG13	1.84	0.42
42:m:17:ILE:HG23	42:m:39:LEU:HD12	2.01	0.42
43:n:6:LYS:HD2	43:n:40:LEU:HB2	2.00	0.42
43:n:65:GLY:CA	43:n:97:LYS:HZ1	2.32	0.42
47:r:45:ASP:O	47:r:48:PHE:HB2	2.19	0.42
50:u:11:SER:C	50:u:15:TYR:HE2	2.28	0.42
54:y:1:MET:HG2	54:y:3:ARG:HH12	1.83	0.42
55:z:52:LYS:HE3	55:z:52:LYS:HB3	1.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:138:ILE:HG22	56:B:138:ILE:O	2.20	0.42
56:B:204:VAL:CG1	56:B:205:TYR:H	2.12	0.42
56:B:360:ARG:O	56:B:364:GLU:CB	2.68	0.42
56:B:427:LEU:CD1	56:B:466:ARG:HD2	2.48	0.42
56:B:597:PHE:C	56:B:599:ALA:N	2.78	0.42
6:A:59:A:C4	6:A:331:G:N2	2.86	0.42
6:A:73:G:N3	6:A:73:G:H2'	2.34	0.42
6:A:192:U:H5"	27:X:57:ARG:HH22	1.84	0.42
6:A:277:C:C2	6:A:278:G:C8	3.08	0.42
6:A:392:G:C2	6:A:393:A:C5	3.08	0.42
6:A:440:A:C6	6:A:494:U:H6	2.37	0.42
6:A:545:C:H2'	6:A:546:G:O4'	2.20	0.42
6:A:680:C:H2'	6:A:681:C:C6	2.51	0.42
6:A:773:G:N1	6:A:807:A:C6	2.87	0.42
6:A:781:A:O2'	6:A:782:A:OP1	2.35	0.42
6:A:894:G:C4	6:A:895:G:C8	3.08	0.42
6:A:1003:G:C6	6:A:1004:A:C5	3.07	0.42
6:A:1015:A:C2	6:A:1016:A:C4	3.08	0.42
6:A:1074:G:C6	6:A:1075:C:C4	3.07	0.42
6:A:1124:G:H4'	17:N:38:ILE:HD11	2.00	0.42
6:A:1129:C:O2'	6:A:1130:A:H3'	2.20	0.42
6:A:1144:G:N1	6:A:1145:C:C2	2.87	0.42
6:A:1245:A:N6	6:A:1291:G:O6	2.52	0.42
6:A:1250:A:C6	6:A:1251:A:C2	3.08	0.42
6:A:1260:C:O5'	6:A:1284:C:H4'	2.19	0.42
7:D:6:A:C5	7:D:7:G:N7	2.87	0.42
7:D:6:A:H4'	35:f:132:ALA:O	2.19	0.42
7:D:116:C:H2'	7:D:117:G:C8	2.54	0.42
7:D:137(A):G:C2	7:D:142:G:C2	3.08	0.42
7:D:150:C:N4	7:D:176:G:N1	2.64	0.42
7:D:164:U:O2	7:D:164:U:H3'	2.19	0.42
7:D:246:C:H2'	7:D:247:G:C8	2.54	0.42
7:D:259:G:C4	7:D:260:G:C8	3.08	0.42
7:D:289:A:O2'	7:D:352:G:O6	2.34	0.42
7:D:290:G:N1	7:D:349:G:N2	2.67	0.42
7:D:388:G:P	51:v:23:GLU:OE2	2.77	0.42
7:D:464:U:O2'	7:D:686:G:O6	2.37	0.42
7:D:471:A:N7	7:D:472:A:C5	2.88	0.42
7:D:547:A:C4	7:D:548:A:C8	3.08	0.42
7:D:713:G:H5'	7:D:714:U:OP1	2.19	0.42
7:D:775:G:H21	7:D:787:U:C2'	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1048:A:O5'	7:D:1048:A:C8	2.73	0.42
7:D:1057:A:C2	7:D:1058:G:N1	2.87	0.42
7:D:1059:G:C2	7:D:1060:U:O2'	2.71	0.42
7:D:1090:U:C2	7:D:1103:A:N6	2.87	0.42
7:D:1148:A:C2	7:D:1149:G:C4	3.08	0.42
7:D:1194:A:N1	7:D:1195:G:C5	2.87	0.42
7:D:1319:G:H1	7:D:1333:C:H42	1.66	0.42
7:D:1323:U:C4	7:D:1324:G:N7	2.88	0.42
7:D:1529:A:H8	7:D:1530:G:N7	2.15	0.42
7:D:1586:A:H2'	7:D:1587:A:C5'	2.32	0.42
7:D:1630:G:N1	7:D:1637:A:N1	2.68	0.42
7:D:1664:A:H61	7:D:1992:G:P	2.43	0.42
7:D:1670:C:OP2	7:D:2550:G:OP1	2.37	0.42
7:D:1778:U:H3'	7:D:1778:U:H6	1.85	0.42
7:D:1784:A:OP2	7:D:1785:A:N1	2.53	0.42
7:D:1799:G:N2	7:D:1818:U:O2'	2.53	0.42
7:D:1930:G:H2'	7:D:1931:U:OP2	2.19	0.42
7:D:2009:G:C2	7:D:2010:G:C8	3.08	0.42
7:D:2013:A:H2'	7:D:2014:A:C8	2.55	0.42
7:D:2158:A:H1'	7:D:2159:G:OP2	2.19	0.42
7:D:2195:C:H3'	7:D:2196:C:C6	2.55	0.42
7:D:2205:C:H6	7:D:2205:C:H3'	1.85	0.42
7:D:2333:A:C8	7:D:2335:A:C2	3.08	0.42
7:D:2345:G:N3	7:D:2381:C:C2	2.86	0.42
7:D:2414:G:O2'	37:h:63:PRO:HG3	2.19	0.42
7:D:2491:U:H3'	7:D:2491:U:C6	2.52	0.42
7:D:2512:C:H5'	31:b:120:TRP:CZ3	2.54	0.42
7:D:2571:C:N4	7:D:2574:G:C8	2.87	0.42
7:D:2577:A:O2'	7:D:2612:C:H2'	2.20	0.42
7:D:2699:C:O2	7:D:2709:G:C2	2.72	0.42
7:D:2773:C:H2'	7:D:2774:C:H6	1.85	0.42
7:D:2865:U:C4	7:D:2866:U:C5	3.08	0.42
8:E:99:A:C6	8:E:100:G:C5	3.07	0.42
10:G:159:GLY:HA2	10:G:193:TYR:CZ	2.54	0.42
15:L:36:LEU:HD13	15:L:48:TYR:CG	2.55	0.42
16:M:48:GLU:N	16:M:49:PRO:HD2	2.35	0.42
16:M:127:LYS:O	16:M:127:LYS:HG3	2.20	0.42
17:N:40:LEU:O	17:N:69:ASN:HB2	2.19	0.42
20:Q:8:GLU:HG3	20:Q:21:TYR:HB2	2.01	0.42
20:Q:60:VAL:O	20:Q:66:LEU:HD21	2.20	0.42
20:Q:71:ARG:HA	20:Q:75:ALA:HB2	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:T:55:ARG:HD2	23:T:59:TRP:HE1	1.84	0.42
26:W:36:ARG:HD3	26:W:72:GLY:N	2.30	0.42
29:Z:176:GLY:HA3	29:Z:180:PHE:CD2	2.54	0.42
33:d:113:ARG:NH1	33:d:141:PHE:HD2	2.18	0.42
35:f:82:LEU:HD23	35:f:82:LEU:HA	1.64	0.42
36:g:9:GLU:N	36:g:81:ASP:O	2.48	0.42
38:i:75:THR:HG22	38:i:76:LYS:N	2.33	0.42
39:j:98:LEU:HD12	52:w:56:LYS:NZ	2.33	0.42
40:k:17:ARG:HD3	40:k:25:ARG:HH21	1.85	0.42
40:k:19:LYS:HE3	40:k:19:LYS:HB3	1.89	0.42
40:k:77:ALA:HA	40:k:81:GLY:HA3	2.00	0.42
46:q:37:VAL:HG22	46:q:37:VAL:O	2.20	0.42
47:r:49:ARG:O	47:r:51:ALA:N	2.52	0.42
53:x:22:ALA:C	53:x:23:THR:HG1	2.27	0.42
56:B:65:ARG:HD3	56:B:65:ARG:HA	1.58	0.42
56:B:150:LEU:HD13	56:B:150:LEU:HA	1.85	0.42
56:B:282:LEU:CD1	56:B:283:ALA:CA	2.79	0.42
56:B:294:PHE:CD1	56:B:294:PHE:N	2.82	0.42
56:B:358:GLN:O	56:B:362:GLU:HG3	2.20	0.42
56:B:412:LEU:HD12	56:B:479:TYR:CA	2.26	0.42
56:B:415:PHE:HD1	56:B:448:VAL:O	2.02	0.42
5:5:13:C:C2	5:5:23:A:C6	3.08	0.42
6:A:20:U:OP2	12:I:125:SER:HB2	2.19	0.42
6:A:21:G:N2	6:A:914:A:H62	2.17	0.42
6:A:430:A:OP1	11:H:9:CYS:N	2.45	0.42
6:A:468:A:N6	6:A:474:G:C2	2.87	0.42
6:A:475:G:C8	6:A:475:G:O5'	2.72	0.42
6:A:601:C:H42	6:A:637:G:H1	1.68	0.42
6:A:668:G:H2'	6:A:669:U:C6	2.55	0.42
6:A:683:G:C6	6:A:684:A:C6	3.08	0.42
6:A:684:A:O2'	18:O:38:ASN:HB3	2.19	0.42
6:A:686:U:N3	6:A:703:G:O2'	2.46	0.42
6:A:786:G:O6	6:A:797:C:N4	2.53	0.42
6:A:796:C:H2'	6:A:797:C:H6	1.83	0.42
6:A:877:C:OP1	15:L:88:LYS:HD3	2.20	0.42
6:A:1024:G:H2'	6:A:1025:U:OP2	2.19	0.42
6:A:1032(A):G:H2'	6:A:1032(B):G:H8	1.82	0.42
6:A:1141:C:C4	6:A:1142:G:N7	2.88	0.42
6:A:1307:U:C4	6:A:1308:U:O4	2.72	0.42
6:A:1340:A:C5	6:A:1341:U:C5	3.07	0.42
7:D:89:G:C4	7:D:90:U:C5	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:94:G:C6	7:D:95:G:C5	3.07	0.42
7:D:135:G:N1	7:D:145:G:C6	2.88	0.42
7:D:200:U:H2'	7:D:200:U:O2	2.19	0.42
7:D:210:C:H2'	7:D:211:A:C8	2.54	0.42
7:D:280:C:C4	7:D:360:G:N7	2.88	0.42
7:D:346:A:H8	7:D:346:A:O5'	2.03	0.42
7:D:463:G:C2	7:D:467:G:C5	3.07	0.42
7:D:607:U:C2	7:D:621:A:C6	3.07	0.42
7:D:669:G:N3	7:D:801:G:N1	2.68	0.42
7:D:836:G:C5	7:D:837:C:C4	3.07	0.42
7:D:1024:G:H5"	7:D:1025:G:H5"	2.00	0.42
7:D:1081:U:H3'	7:D:1082:U:C5	2.54	0.42
7:D:1280:G:C2	7:D:1281:G:C4	3.08	0.42
7:D:1345:C:OP1	7:D:1385:G:H5"	2.20	0.42
7:D:1350:C:C2	7:D:1382:G:N2	2.88	0.42
7:D:1422:G:N3	7:D:1423:G:C8	2.87	0.42
7:D:1434:A:N3	7:D:1435:G:C8	2.88	0.42
7:D:1496:A:H2	7:D:1498:C:N3	2.18	0.42
7:D:1581:G:H2'	7:D:1582:C:O4'	2.20	0.42
7:D:1653:G:O2'	7:D:1654:A:O5'	2.34	0.42
7:D:1708:C:C4	7:D:1709:U:C4	3.08	0.42
7:D:1746:G:O6	7:D:1747:G:C2	2.70	0.42
7:D:1762:A:OP2	7:D:1762:A:C8	2.73	0.42
7:D:1860:G:H1	7:D:1882:C:H42	1.66	0.42
7:D:1964:G:N2	7:D:1967:C:N3	2.68	0.42
7:D:2054:A:H62	7:D:2577:A:N6	2.16	0.42
7:D:2078:C:N4	7:D:2079:U:O4	2.53	0.42
7:D:2094:G:H1	7:D:2195:C:H42	1.67	0.42
7:D:2138:C:H2'	7:D:2153:G:H22	1.85	0.42
7:D:2312:U:N3	7:D:2313:C:C4	2.88	0.42
7:D:2673:G:C6	7:D:2674:G:C6	3.08	0.42
7:D:2692:C:H1'	7:D:2847:U:O2'	2.20	0.42
7:D:2732:G:C4'	7:D:2733:A:OP2	2.61	0.42
7:D:2805:G:C2'	7:D:2807:G:H5"	2.49	0.42
7:D:2862:G:C5	7:D:2863:C:C5	3.06	0.42
7:D:2901:C:C2	7:D:2902:C:N4	2.87	0.42
8:E:12:C:H3'	48:s:74:ARG:HB3	2.01	0.42
8:E:49:C:C4	8:E:50:G:N7	2.88	0.42
8:E:73:A:N1	8:E:74:U:C2	2.87	0.42
19:P:65:GLU:HG2	19:P:65:GLU:O	2.19	0.42
20:Q:94:ARG:CZ	20:Q:94:ARG:CB	2.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:21:GLU:HG2	26:W:21:GLU:H	1.52	0.42
26:W:70:LYS:HB3	26:W:73:GLU:CA	2.45	0.42
29:Z:22:ILE:HB	29:Z:190:ARG:NH1	2.33	0.42
30:a:91:ARG:NH1	30:a:198:ASN:HA	2.33	0.42
30:a:222:ARG:CZ	30:a:222:ARG:CB	2.94	0.42
31:b:4:ILE:C	31:b:5:LEU:HG	2.45	0.42
32:c:65:TRP:HD1	32:c:66:PRO:HD2	1.85	0.42
33:d:44:GLY:C	33:d:46:ALA:N	2.75	0.42
33:d:53:LEU:HD23	33:d:72:ARG:HD2	2.02	0.42
33:d:60:LEU:HA	33:d:60:LEU:HD23	1.86	0.42
33:d:75:LYS:NZ	33:d:87:PRO:HG3	2.34	0.42
37:h:22:GLY:HA3	37:h:23:PRO:HD3	1.41	0.42
37:h:114:ILE:HG13	37:h:123:LEU:HD11	2.02	0.42
39:j:12:ARG:NH1	39:j:16:HIS:HB3	2.31	0.42
39:j:55:ALA:HB2	39:j:79:LEU:HD21	2.02	0.42
46:q:97:ARG:O	46:q:101:LYS:HG2	2.19	0.42
49:t:41:GLN:O	49:t:44:LYS:N	2.51	0.42
51:v:48:ARG:HB3	51:v:49:PHE:H	1.58	0.42
55:z:26:LYS:HE3	55:z:46:ARG:N	2.34	0.42
56:B:196:LEU:O	56:B:281:THR:HA	2.15	0.42
56:B:200:ILE:HB	56:B:277:GLY:CA	2.49	0.42
56:B:285:ARG:HA	56:B:285:ARG:HD3	1.85	0.42
56:B:411:LYS:CD	56:B:436:VAL:CG2	2.75	0.42
56:B:455:PRO:C	56:B:457:ALA:N	2.74	0.42
56:B:493:ASN:O	56:B:540:ALA:CA	2.67	0.42
56:B:536:PRO:CA	56:B:550:THR:HG22	2.49	0.42
3:3:55:VAL:CG2	3:3:69:THR:HA	2.50	0.42
4:4:6:G:N2	4:4:68:C:O2	2.52	0.42
5:5:18:G:C8	5:5:58:A:N1	2.88	0.42
6:A:73:G:N7	6:A:74:C:C4	2.88	0.42
6:A:138:G:C4	6:A:139:G:C8	3.08	0.42
6:A:146:G:H2'	6:A:147:G:C8	2.55	0.42
6:A:181:G:O2'	6:A:182:U:P	2.77	0.42
6:A:255:G:P	24:U:69:LYS:NZ	2.93	0.42
6:A:280:C:N3	24:U:39:SER:HB3	2.34	0.42
6:A:377:G:O2'	6:A:378:G:H5'	2.20	0.42
6:A:479:C:OP2	6:A:479:C:H5	2.01	0.42
6:A:593:G:C2	6:A:647:C:O2	2.73	0.42
6:A:643:C:H2'	6:A:644:G:C8	2.54	0.42
6:A:949:A:C6	6:A:950:U:C2	3.08	0.42
6:A:1061:G:C2	6:A:1062:U:O2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1088:G:C4	6:A:1089:G:N7	2.88	0.42
6:A:1125:U:H5'	6:A:1126:U:C5	2.54	0.42
6:A:1250:A:C6	6:A:1287:A:C4	3.07	0.42
6:A:1302:U:C4	20:Q:17:VAL:HG21	2.54	0.42
6:A:1303:C:N4	6:A:1304:G:C2	2.88	0.42
7:D:13:A:N6	7:D:525:U:C4	2.84	0.42
7:D:24:G:H1'	44:o:77:ASP:OD2	2.20	0.42
7:D:29:U:H2'	7:D:30:G:C8	2.55	0.42
7:D:80:G:C2	7:D:81:G:C8	3.07	0.42
7:D:93:C:N4	7:D:94:G:C2	2.88	0.42
7:D:222:A:H5"	7:D:421:U:OP1	2.20	0.42
7:D:276:A:OP2	7:D:276:A:N3	2.52	0.42
7:D:295:G:C2	7:D:344:G:N3	2.88	0.42
7:D:311:A:O2'	7:D:312:G:P	2.76	0.42
7:D:480:A:H5"	46:q:44:ILE:HG13	2.01	0.42
7:D:549:G:C6	7:D:550:G:C5	3.08	0.42
7:D:626:U:O2'	7:D:627:A:OP1	2.34	0.42
7:D:627:A:N6	7:D:636:G:H2'	2.19	0.42
7:D:683:C:N4	7:D:684:G:O6	2.52	0.42
7:D:801:G:OP1	32:c:57:VAL:HG22	2.20	0.42
7:D:909:A:N7	7:D:912:C:C2	2.87	0.42
7:D:1003:G:C2	7:D:1153:C:C2	3.07	0.42
7:D:1007:C:H42	7:D:1135:C:N4	2.16	0.42
7:D:1230:C:O5'	7:D:1230:C:H6	2.02	0.42
7:D:1245:G:N1	7:D:1246:A:C5	2.88	0.42
7:D:1324:G:C5	7:D:1328:G:O6	2.73	0.42
7:D:1442:G:C2	7:D:1443:G:C8	3.08	0.42
7:D:1454:U:H5	7:D:1455:G:O6	2.03	0.42
7:D:1454:U:H5	7:D:1455:G:C6	2.37	0.42
7:D:1517:G:C2	7:D:1518:C:C2	3.07	0.42
7:D:1627:G:N2	7:D:1628:G:C4	2.88	0.42
7:D:1902:C:H4'	30:a:244:ARG:HH22	1.83	0.42
7:D:1942:C:O3'	56:B:577:GLN:HG3	2.20	0.42
7:D:2159:G:C5	7:D:2160:G:N7	2.88	0.42
7:D:2372:G:H1	7:D:2381:C:H42	1.68	0.42
7:D:2429:G:H5"	7:D:2430:A:OP2	2.20	0.42
7:D:2631:G:N2	7:D:2632:A:N3	2.68	0.42
7:D:2668:G:N2	7:D:2669:G:C2	2.87	0.42
7:D:2736:G:H2'	7:D:2737:G:H8	1.83	0.42
7:D:2808:U:O4	7:D:2891:G:C5	2.72	0.42
7:D:2824:C:C4	7:D:2825:C:N3	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:83:G:C2	8:E:84:C:C2	3.08	0.42
11:H:165:MET:HG3	11:H:166:LYS:N	2.33	0.42
13:J:8:ILE:O	13:J:61:LEU:HB2	2.19	0.42
15:L:86:ILE:HD12	15:L:135:CYS:HA	2.01	0.42
17:N:70:ARG:O	17:N:71:LEU:HD23	2.20	0.42
17:N:79:ARG:HH11	17:N:82:ILE:HD12	1.84	0.42
24:U:65:ILE:HG23	24:U:69:LYS:HG2	2.00	0.42
29:Z:3:HIS:C	29:Z:5:LYS:H	2.26	0.42
30:a:219:PRO:HB2	30:a:220:HIS:CD2	2.55	0.42
30:a:242:ARG:HH12	30:a:244:ARG:CA	2.31	0.42
31:b:97:LYS:O	31:b:100:GLU:HG3	2.20	0.42
36:g:2:ILE:HB	36:g:32:TYR:CD1	2.54	0.42
36:g:59:LYS:HB3	36:g:85:VAL:HA	2.01	0.42
37:h:45:LEU:CD2	37:h:49:ARG:NH1	2.82	0.42
37:h:55:ARG:H	55:z:13:ARG:HH12	1.67	0.42
37:h:130:PHE:HB2	37:h:135:LEU:CD1	2.49	0.42
41:l:1:MET:HG3	41:l:2:ASN:HB2	2.02	0.42
41:l:63:VAL:HG12	41:l:78:LEU:O	2.20	0.42
45:p:21:PHE:HE1	45:p:92:LEU:HB3	1.84	0.42
47:r:10:ARG:HG2	47:r:36:LYS:CD	2.38	0.42
56:B:43:GLU:CB	56:B:53:ARG:NH2	2.29	0.42
56:B:93:VAL:HA	56:B:97:LEU:HB2	2.01	0.42
56:B:152:VAL:HA	56:B:156:LEU:H	1.85	0.42
56:B:197:LYS:HB2	56:B:281:THR:HG21	1.89	0.42
56:B:299:PRO:HB2	56:B:300:VAL:H	1.72	0.42
56:B:488:ASP:HB2	56:B:510:ARG:HA	2.01	0.42
56:B:509:HIS:O	56:B:509:HIS:CD2	2.73	0.42
56:B:537:ILE:O	56:B:549:ALA:CB	2.67	0.42
3:3:35:MET:CA	3:3:63:ARG:HH12	2.32	0.42
3:3:75:SER:HB3	3:3:130:SER:CB	2.50	0.42
3:3:84:LEU:HA	3:3:96:VAL:HG11	2.01	0.42
6:A:115:G:C2	6:A:313:A:C2	3.08	0.42
6:A:280:C:O4'	24:U:38:ARG:NH1	2.52	0.42
6:A:608:A:C6	6:A:609:A:C5	3.08	0.42
6:A:763:G:C2	6:A:764:C:C2	3.07	0.42
6:A:829:G:H1	6:A:857:C:N4	2.14	0.42
6:A:897:C:H2'	6:A:898:G:H8	1.84	0.42
6:A:1006:C:O5'	6:A:1006:C:H6	2.03	0.42
6:A:1131:G:C6	6:A:1144:G:H1'	2.54	0.42
6:A:1355:G:C6	6:A:1356:G:C5	3.07	0.42
6:A:1461:G:N1	6:A:1462:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1514:C:H2'	6:A:1515:C:O4'	2.20	0.42
7:D:270:A:C4	7:D:371:A:C2	3.08	0.42
7:D:270(W):G:C6	7:D:270(X):G:C6	3.06	0.42
7:D:273(A):G:H2'	7:D:273(B):C:C6	2.55	0.42
7:D:381:G:H21	7:D:382:G:H1'	1.85	0.42
7:D:503:A:H4'	7:D:504:U:O5'	2.20	0.42
7:D:611:C:N3	7:D:612:G:C2	2.88	0.42
7:D:690:G:C6	7:D:691:C:C4	3.07	0.42
7:D:740:U:H2'	7:D:741:G:C8	2.53	0.42
7:D:791:C:O2	7:D:791:C:H2'	2.20	0.42
7:D:889:C:N4	7:D:890:A:H2	2.18	0.42
7:D:1112:G:C5	7:D:1113:U:C4	3.08	0.42
7:D:1141:U:H5'	7:D:1142(A):A:C6	2.53	0.42
7:D:1212:G:H2'	7:D:1236:G:H22	1.84	0.42
7:D:1324:G:N1	7:D:1328:G:C6	2.88	0.42
7:D:1346:G:C4	7:D:1601:G:N2	2.88	0.42
7:D:1445:C:H2'	7:D:1446:C:C6	2.55	0.42
7:D:1499:C:C4	7:D:1500:G:N7	2.88	0.42
7:D:1552:G:H5'	7:D:1553:A:OP2	2.20	0.42
7:D:1583:A:OP1	7:D:1586:A:H1'	2.19	0.42
7:D:1748:G:C6	7:D:1749:A:C6	3.08	0.42
7:D:1824:G:C2	7:D:1825:A:C4	3.07	0.42
7:D:1996:C:HO2'	7:D:1997:G:P	2.43	0.42
7:D:2003:G:N2	7:D:2004:G:C4	2.88	0.42
7:D:2013:A:C4	7:D:2014:A:C8	3.08	0.42
7:D:2231:C:OP1	51:v:39:CYS:HA	2.20	0.42
7:D:2262:U:OP2	48:s:16:SER:HB2	2.20	0.42
7:D:2312:U:OP1	7:D:2313:C:OP2	2.37	0.42
7:D:2353:G:H4'	48:s:32:ARG:NH1	2.34	0.42
7:D:2643:G:N2	7:D:2772:C:O2	2.53	0.42
7:D:2687:U:H2'	7:D:2688:U:O4'	2.19	0.42
7:D:2776:A:C4	7:D:2781:A:C8	3.07	0.42
7:D:2777:G:C2'	7:D:2778:A:OP2	2.66	0.42
7:D:2822:G:H2'	7:D:2823:A:H5"	2.02	0.42
7:D:2836:U:N3	7:D:2883:A:C6	2.88	0.42
8:E:56:G:H5'	33:d:29:TRP:CE2	2.48	0.42
9:F:74:LYS:HZ3	9:F:76:GLN:HB2	1.83	0.42
11:H:202:LEU:HA	11:H:202:LEU:HD23	1.73	0.42
25:V:29:PHE:CZ	25:V:39:VAL:HG11	2.55	0.42
26:W:12:ASP:C	26:W:14:HIS:N	2.73	0.42
26:W:34:TRP:O	26:W:34:TRP:HE3	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:40:ILE:CA	26:W:68:GLY:HA2	2.49	0.42
29:Z:178:ALA:C	29:Z:180:PHE:H	2.27	0.42
29:Z:200:LYS:HZ2	29:Z:208:PHE:HB2	1.84	0.42
30:a:96:HIS:CD2	30:a:102:LYS:HG2	2.55	0.42
31:b:125:GLY:N	31:b:135:HIS:O	2.44	0.42
32:c:8:GLN:HG2	32:c:10:PRO:HD3	2.02	0.42
32:c:40:GLN:HB3	32:c:184:TYR:OH	2.20	0.42
35:f:120:LEU:C	35:f:121:LYS:HG3	2.44	0.42
36:g:104:ARG:HA	36:g:107:ARG:HD2	2.01	0.42
37:h:47:ASP:HB3	37:h:48:PRO:CD	2.50	0.42
37:h:92:GLU:HB2	37:h:95:VAL:CG2	2.50	0.42
38:i:134:ARG:HH22	38:i:138:ASP:H	1.66	0.42
39:j:3:HIS:CE1	39:j:4:LEU:O	2.73	0.42
41:l:33:LYS:HD2	41:l:87:ASP:HB3	2.01	0.42
43:n:20:LEU:HD22	43:n:68:LYS:HZ3	1.84	0.42
44:o:1:MET:HB3	44:o:106:ILE:HD11	2.01	0.42
44:o:72:LYS:O	44:o:106:ILE:HG23	2.19	0.42
50:u:41:PRO:CG	50:u:44:ARG:NH1	2.80	0.42
56:B:17:HIS:ND1	56:B:114:GLU:HB2	2.28	0.42
56:B:64:VAL:HG21	56:B:79:HIS:C	2.39	0.42
56:B:162:GLU:O	56:B:164:ILE:N	2.52	0.42
56:B:199:LEU:HB2	56:B:218:PHE:CE1	2.54	0.42
56:B:317:ARG:CD	56:B:342:PHE:CE2	3.03	0.42
56:B:380:VAL:HA	56:B:404:GLU:O	2.20	0.42
56:B:450:LEU:HD21	56:B:452:TYR:CE1	2.55	0.42
56:B:506:PHE:HB2	56:B:507:ILE:H	1.70	0.42
3:3:6:ALA:HB1	3:3:59:ILE:CD1	2.44	0.42
3:3:78:ILE:HD11	7:D:1059:G:H1'	2.01	0.42
6:A:156:G:N1	6:A:165:C:O2	2.47	0.42
6:A:298:A:H2'	6:A:299:G:O4'	2.20	0.42
6:A:311:C:H2'	6:A:312:C:O4'	2.18	0.42
6:A:361:G:O6	6:A:362:G:C2	2.73	0.42
6:A:376:G:N3	6:A:377:G:C8	2.88	0.42
6:A:397:A:H3'	6:A:397:A:N3	2.35	0.42
6:A:424:G:C2	6:A:425:G:C5	3.08	0.42
6:A:437:U:H6	6:A:437:U:H3'	1.85	0.42
6:A:454:C:H6	6:A:455:C:C5	2.38	0.42
6:A:464:G:H8	6:A:464:G:OP2	2.02	0.42
6:A:597:G:C5	6:A:598:U:C2	3.08	0.42
6:A:774:G:C5	6:A:775:G:C8	3.08	0.42
6:A:779:C:N4	6:A:780:A:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:823:G:C6	6:A:824:C:C4	3.08	0.42
6:A:960:U:O4	6:A:1225:A:H1'	2.20	0.42
6:A:1162:C:H2'	6:A:1163:C:C6	2.54	0.42
6:A:1220:G:H5"	26:W:34:TRP:HB3	2.02	0.42
6:A:1302:U:H2'	6:A:1302:U:OP1	2.19	0.42
6:A:1320:C:H4'	26:W:70:LYS:HE3	0.60	0.42
6:A:1359:C:P	21:R:35:ARG:HH21	2.42	0.42
6:A:1396:A:HO2'	6:A:1397:C:P	2.29	0.42
6:A:1454:G:C5	6:A:1455:G:N7	2.86	0.42
7:D:43:G:N7	7:D:44:A:C5	2.88	0.42
7:D:49:A:OP2	7:D:49:A:O4'	2.38	0.42
7:D:132:G:C2	7:D:148:C:O2	2.72	0.42
7:D:134:C:H2'	7:D:135:G:O4'	2.20	0.42
7:D:163:U:H3'	7:D:164:U:C5'	2.48	0.42
7:D:183:C:O2'	7:D:432:A:N3	2.52	0.42
7:D:270(S):G:N1	7:D:270(T):G:C5	2.87	0.42
7:D:270(W):G:C8	7:D:270(X):G:N7	2.88	0.42
7:D:298:G:O6	7:D:338:G:H4'	2.20	0.42
7:D:363(A):A:C6	7:D:363(B):G:C5	3.07	0.42
7:D:663:G:C2	7:D:664:C:C2	3.08	0.42
7:D:725:G:C6	7:D:726:G:C2	3.08	0.42
7:D:775:G:C2'	7:D:794:G:C8	3.03	0.42
7:D:808:G:C2	7:D:809:G:C4	3.08	0.42
7:D:919:G:N1	7:D:2268:A:N7	2.68	0.42
7:D:946:G:C4	7:D:947:G:C8	3.08	0.42
7:D:1020:A:C2	7:D:1140:C:H2'	2.55	0.42
7:D:1043:C:H4'	7:D:1044:G:C8	2.55	0.42
7:D:1104:C:H6	7:D:1104:C:H5"	1.84	0.42
7:D:1174:A:N7	7:D:1176:G:C6	2.87	0.42
7:D:1174:A:H5"	7:D:1175:U:OP2	2.20	0.42
7:D:1227:A:C4	7:D:1228:G:C8	3.08	0.42
7:D:1275:A:O2'	7:D:1276:A:O5'	2.33	0.42
7:D:1300:U:H1'	7:D:1301:A:OP2	2.19	0.42
7:D:1381:G:C6	7:D:1382:G:C4	3.07	0.42
7:D:1434:A:C6	7:D:1560:G:C2	3.08	0.42
7:D:1486:A:H61	7:D:1504:C:H42	1.66	0.42
7:D:1528:A:C6	7:D:1529:A:N6	2.88	0.42
7:D:1571:A:OP2	7:D:1571:A:C8	2.73	0.42
7:D:1685:C:H2'	7:D:1686:C:H6	1.84	0.42
7:D:1735:C:C4'	7:D:1741:C:OP1	2.67	0.42
7:D:1786:A:N7	7:D:1787:A:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2046:G:C6	7:D:2047:U:O4	2.73	0.42
7:D:2060:A:HO2'	7:D:2061:G:P	2.32	0.42
7:D:2074:U:O2	7:D:2436:G:N2	2.53	0.42
7:D:2124:G:N7	7:D:2125:G:N1	2.67	0.42
7:D:2141:G:C6	7:D:2151:G:C6	3.07	0.42
7:D:2168:G:C6	7:D:2171:A:OP2	2.72	0.42
7:D:2264:C:C6	7:D:2265:U:H5	2.37	0.42
7:D:2508:G:C2	7:D:2582:G:O6	2.72	0.42
7:D:2634:G:C4	7:D:2635:C:C5	3.08	0.42
7:D:2687:U:C4	7:D:2688:U:C2	3.07	0.42
7:D:2735:G:C2	7:D:2736:G:C4	3.08	0.42
7:D:2758:A:C6	7:D:2759:G:C5	3.08	0.42
7:D:2799:A:OP1	7:D:2801:A:C4	2.72	0.42
7:D:2805:G:H2'	7:D:2807:G:O4'	2.19	0.42
7:D:2809:A:H4'	7:D:2811:G:C8	2.54	0.42
7:D:2825:C:N4	7:D:2826:A:C4	2.88	0.42
9:F:56:ARG:HA	9:F:59:GLU:OE2	2.20	0.42
11:H:19:LEU:HD23	11:H:19:LEU:HA	1.75	0.42
11:H:187:ARG:HG3	11:H:188:LEU:O	2.20	0.42
14:K:37:ASN:O	14:K:41:ARG:HG2	2.20	0.42
16:M:89:ASN:HB3	16:M:91:ASP:OD1	2.20	0.42
20:Q:87:TYR:CD2	26:W:73:GLU:HA	2.52	0.42
23:T:6:LEU:HA	23:T:18:ARG:O	2.20	0.42
23:T:14:ASN:HA	23:T:15:PRO:HD2	1.75	0.42
29:Z:42:GLU:C	29:Z:214:VAL:HG13	2.44	0.42
29:Z:209:LEU:HD21	29:Z:226:PRO:CG	2.49	0.42
30:a:39:LYS:HE2	30:a:39:LYS:HB2	1.77	0.42
30:a:51:VAL:O	30:a:51:VAL:HG12	2.18	0.42
30:a:65:ILE:HD11	30:a:92:ILE:HG21	2.02	0.42
31:b:53:PRO:HD3	31:b:74:PRO:HA	2.02	0.42
32:c:19:GLU:O	32:c:20:LEU:HD23	2.18	0.42
35:f:69:GLN:OE1	35:f:69:GLN:N	2.53	0.42
36:g:106:LEU:O	36:g:109:LYS:N	2.48	0.42
37:h:75:ILE:HG23	37:h:115:LEU:HD21	2.01	0.42
37:h:91:PHE:CE2	37:h:95:VAL:HG12	2.54	0.42
37:h:92:GLU:HB2	37:h:95:VAL:HG23	2.02	0.42
37:h:111:ARG:HA	37:h:128:HIS:HE1	1.85	0.42
39:j:84:ALA:CB	39:j:88:ARG:HH12	2.32	0.42
41:l:18:ASP:CG	41:l:81:PRO:HA	2.45	0.42
42:m:33:ARG:HA	42:m:36:ARG:HH11	1.84	0.42
48:s:46:LYS:HE2	48:s:78:TYR:CZ	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:t:50:ARG:O	49:t:53:ALA:N	2.53	0.42
56:B:18:VAL:HG21	56:B:86:HIS:CB	2.48	0.42
56:B:69:ARG:NH2	56:B:69:ARG:CA	2.83	0.42
56:B:188:PRO:C	56:B:189:LYS:CG	2.91	0.42
56:B:228:ILE:C	56:B:229:ARG:CG	2.89	0.42
56:B:298:LYS:C	56:B:348:PHE:CZ	2.86	0.42
56:B:490:VAL:CG2	56:B:508:ALA:O	2.68	0.42
56:B:574:LEU:HD12	56:B:574:LEU:HA	1.82	0.42
3:3:78:ILE:HD12	7:D:1059:G:H1'	2.01	0.42
3:3:126:MET:O	7:D:1059:G:C2	2.73	0.42
6:A:92:G:N1	6:A:93:U:N3	2.68	0.42
6:A:324:G:C2	6:A:327:A:OP2	2.73	0.42
6:A:355:C:N4	6:A:356:A:N6	2.68	0.42
6:A:355:C:C4	6:A:356:A:N7	2.88	0.42
6:A:474:G:C2	6:A:475:G:C4	3.08	0.42
6:A:688:G:OP2	6:A:688:G:O4'	2.38	0.42
6:A:696:A:N1	6:A:697:U:C4	2.88	0.42
6:A:838:G:O2'	6:A:841:U:C6	2.70	0.42
6:A:986:A:C6	6:A:987:G:C6	3.08	0.42
6:A:1083:U:H5"	6:A:1084:G:OP2	2.20	0.42
6:A:1357:A:N6	6:A:1358:U:C4	2.87	0.42
6:A:1377:A:H3'	6:A:1378:C:H5'	2.02	0.42
6:A:1448:C:O2'	6:A:1449:C:H5'	2.19	0.42
6:A:1515:C:O2	6:A:1521:G:N2	2.53	0.42
7:D:89:G:N1	7:D:90:U:O4	2.53	0.42
7:D:120:U:C2	7:D:149:A:C2	3.08	0.42
7:D:335:C:H1'	46:q:68:HIS:CD2	2.54	0.42
7:D:339:U:N3	7:D:340:A:C2	2.82	0.42
7:D:436:C:O5'	7:D:436:C:H6	2.02	0.42
7:D:447:A:C5	7:D:473:G:C5	3.08	0.42
7:D:493:G:N2	7:D:494:G:N3	2.68	0.42
7:D:562:U:C2'	7:D:563:G:OP2	2.68	0.42
7:D:662:G:C4	7:D:663:G:N7	2.88	0.42
7:D:685:A:N7	7:D:774:A:C6	2.88	0.42
7:D:738:G:C6	7:D:739:G:N7	2.88	0.42
7:D:887:A:H2'	7:D:888:C:O4'	2.20	0.42
7:D:901:A:C5	7:D:902:C:C2	3.07	0.42
7:D:920:G:C6	7:D:921:G:C5	3.08	0.42
7:D:1022:G:C6	7:D:1139:G:C5	3.08	0.42
7:D:1112:G:C6	7:D:1113:U:N3	2.87	0.42
7:D:1125:G:N7	7:D:1126:A:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1190:G:C2	7:D:1191:G:C5	3.08	0.42
7:D:1285:G:C5	7:D:1329:U:C4	3.07	0.42
7:D:1406:U:C4	7:D:1407:C:C5	3.08	0.42
7:D:1409:C:N3	7:D:1594:G:N1	2.67	0.42
7:D:1472:A:C6	7:D:1473:G:C6	3.07	0.42
7:D:1491:G:C2	7:D:1493:C:N4	2.78	0.42
7:D:1630:G:C2	7:D:1637:A:N1	2.88	0.42
7:D:1801:G:OP1	30:a:154:LYS:NZ	2.52	0.42
7:D:1951:U:H3'	7:D:1951:U:O2	2.20	0.42
7:D:1959:G:C2	7:D:1960:A:C4	3.08	0.42
7:D:1992:G:C6	7:D:1997:G:C2	3.08	0.42
7:D:1997:G:C5	7:D:1998:G:N7	2.88	0.42
7:D:2099:U:O2	7:D:2191:G:N1	2.53	0.42
7:D:2196:C:C5	7:D:2197:U:O4	2.73	0.42
7:D:2354:G:C6	7:D:2355:C:N4	2.88	0.42
7:D:2428:G:C2	37:h:55:ARG:NH1	2.88	0.42
7:D:2485:G:N3	7:D:2486:G:C8	2.88	0.42
7:D:2563:U:O2	7:D:2566:A:C5	2.72	0.42
7:D:2582:G:OP2	7:D:2583:G:OP2	2.38	0.42
7:D:2589:A:N3	7:D:2590:A:C8	2.88	0.42
7:D:2639:A:C4	7:D:2778:A:C5	3.07	0.42
8:E:0:A:H3'	8:E:0:A:N3	2.35	0.42
8:E:7:G:HO2'	8:E:8:U:P	2.40	0.42
8:E:13:A:O2'	8:E:15:A:H5"	2.20	0.42
8:E:46:A:C6	8:E:47:C:C2	3.08	0.42
8:E:52:A:C6	8:E:53:A:H1'	2.55	0.42
9:F:133:LYS:HB3	9:F:137:ARG:HH22	1.85	0.42
11:H:9:CYS:O	11:H:12:CYS:HB2	2.19	0.42
11:H:59:ARG:HD3	11:H:59:ARG:HA	1.81	0.42
15:L:119:LEU:HB3	15:L:124:ALA:HB2	2.01	0.42
16:M:50:LEU:HD22	16:M:51:ARG:HH11	1.85	0.42
17:N:9:ARG:NH1	17:N:69:ASN:OD1	2.52	0.42
27:X:60:GLU:OE2	27:X:85:MET:HE2	2.20	0.42
29:Z:32:LEU:HD13	29:Z:220:PRO:HB2	2.02	0.42
30:a:264:LYS:N	30:a:265:PRO:HD2	2.35	0.42
31:b:122:PHE:O	31:b:123:ALA:HB2	2.19	0.42
33:d:43:LEU:HD21	33:d:88:ILE:HD12	2.01	0.42
37:h:99:LEU:HD23	37:h:100:LEU:N	2.35	0.42
40:k:79:ALA:O	40:k:82:ILE:HG23	2.20	0.42
43:n:22:VAL:HG12	43:n:23:GLU:N	2.35	0.42
43:n:66:ARG:NE	43:n:95:LEU:HB2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:o:30:GLU:O	44:o:33:ARG:HB3	2.20	0.42
51:v:42:PHE:HB2	51:v:58:ARG:NH2	2.35	0.42
56:B:229:ARG:CZ	56:B:283:ALA:CA	2.69	0.42
56:B:306:TYR:N	56:B:370:ILE:HB	2.35	0.42
56:B:361:LEU:HD22	56:B:366:GLY:CA	2.34	0.42
56:B:448:VAL:CG1	56:B:449:GLU:H	2.24	0.42
56:B:499:GLU:CB	56:B:589:LYS:HD3	2.50	0.42
56:B:528:ILE:CD1	56:B:551:VAL:HG21	2.50	0.42
5:5:75:C:HO2'	5:5:76:A:C5'	2.24	0.41
6:A:9:G:C2	6:A:10:A:C8	3.08	0.41
6:A:191(B):G:H2'	6:A:191(C):G:H8	1.84	0.41
6:A:191(F):U:N3	27:X:105:SER:HB2	2.35	0.41
6:A:352:C:H4'	6:A:354:G:OP1	2.20	0.41
6:A:371:G:C2'	6:A:372:C:H5"	2.50	0.41
6:A:439:A:OP2	6:A:493:G:C2	2.58	0.41
6:A:542:G:N2	6:A:543:C:C2	2.88	0.41
6:A:828:A:N6	6:A:829:G:C2	2.88	0.41
6:A:829:G:N1	6:A:830:G:C5	2.88	0.41
6:A:978:A:C2	6:A:1319:A:C4	3.08	0.41
6:A:1033:G:H2'	6:A:1034:G:O4'	2.20	0.41
6:A:1110:A:N6	6:A:1111:A:C6	2.88	0.41
6:A:1319:A:N7	6:A:1323:G:C6	2.88	0.41
6:A:1366:C:C4	6:A:1367:C:C4	3.07	0.41
6:A:1469:G:C6	6:A:1470:G:C5	3.08	0.41
6:A:1470:G:N1	6:A:1471:G:C5	2.88	0.41
7:D:188:G:C2	7:D:209:C:N3	2.88	0.41
7:D:190:A:N7	7:D:207:A:C6	2.88	0.41
7:D:199:A:C6	7:D:2433:A:N1	2.88	0.41
7:D:234:C:H2'	7:D:235:U:O4'	2.20	0.41
7:D:273(B):C:N3	7:D:273(C):C:N4	2.68	0.41
7:D:479:A:O2'	7:D:480:A:C8	2.69	0.41
7:D:626:U:H3'	7:D:627:A:H5'	2.02	0.41
7:D:1174:A:N6	7:D:1177:A:C5	2.88	0.41
7:D:1186:G:O2'	7:D:1187:G:H5'	2.20	0.41
7:D:1203:G:H22	7:D:1241:A:H1'	1.83	0.41
7:D:1317:A:C6	7:D:1336:A:N1	2.88	0.41
7:D:1319:G:C2	7:D:1334:G:C6	3.07	0.41
7:D:1337:G:N1	7:D:1338:G:C5	2.88	0.41
7:D:1444:G:H5"	7:D:1444(A):A:OP2	2.20	0.41
7:D:1500:G:C2	7:D:1501:C:C2	3.08	0.41
7:D:1506:C:H3'	7:D:1507:A:H4'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1540:G:N3	7:D:1541:U:H5'	2.35	0.41
7:D:1656:C:P	31:b:136:ARG:HH12	2.38	0.41
7:D:1670:C:O2	7:D:1993:U:H1'	2.19	0.41
7:D:2188:C:H6	7:D:2188:C:OP2	2.02	0.41
7:D:2265:U:N3	7:D:2266:A:C5	2.88	0.41
7:D:2614:A:O2'	7:D:2615:U:P	2.78	0.41
7:D:2851:A:O2'	39:j:64:ARG:NE	2.48	0.41
7:D:2876:G:H4'	41:l:1:MET:N	2.35	0.41
8:E:87:G:C2	8:E:90:C:C2	3.08	0.41
12:I:9:LYS:HG2	12:I:112:LEU:CD1	2.50	0.41
12:I:147:ASP:HA	12:I:150:ARG:CB	2.50	0.41
14:K:16:LEU:HD12	16:M:41:VAL:HG12	2.02	0.41
14:K:125:MET:O	14:K:128:ALA:HB3	2.19	0.41
17:N:11:PHE:CZ	21:R:55:GLY:HA2	2.55	0.41
19:P:80:HIS:NE2	56:B:316:LEU:CD2	2.83	0.41
20:Q:15:VAL:O	20:Q:18:ALA:HB3	2.20	0.41
27:X:14:LYS:HB3	27:X:14:LYS:HE2	1.71	0.41
29:Z:19:ILE:HG22	29:Z:225:ASN:HA	2.01	0.41
29:Z:26:ALA:O	29:Z:30:LYS:HG3	2.20	0.41
29:Z:153:ILE:HA	29:Z:156:ILE:CD1	2.49	0.41
30:a:7:LYS:CD	30:a:91:ARG:HE	2.32	0.41
30:a:198:ASN:CG	30:a:201:HIS:HB3	2.45	0.41
30:a:255:LYS:HE2	30:a:255:LYS:HB2	1.86	0.41
31:b:73:GLU:N	31:b:74:PRO:HD3	2.35	0.41
32:c:160:ASN:HB3	32:c:162:LEU:H	1.84	0.41
33:d:41:GLN:HB3	33:d:90:LEU:HD21	2.01	0.41
33:d:75:LYS:HZ1	33:d:87:PRO:CG	2.32	0.41
33:d:124:SER:CA	33:d:132:ASN:HB2	2.48	0.41
34:e:77:LYS:HZ3	34:e:81:GLU:CD	2.08	0.41
36:g:16:ALA:CB	36:g:45:GLU:HB2	2.47	0.41
37:h:78:PRO:O	37:h:81:GLN:HB2	2.20	0.41
38:i:107:ALA:C	38:i:109:VAL:N	2.76	0.41
39:j:115:GLU:N	39:j:115:GLU:OE1	2.53	0.41
40:k:5:THR:O	40:k:9:ARG:NH1	2.52	0.41
41:l:24:PRO:O	41:l:28:VAL:HG21	2.20	0.41
41:l:76:PHE:HD1	41:l:78:LEU:HD12	1.82	0.41
47:r:12:GLY:O	47:r:15:PRO:HD2	2.20	0.41
47:r:136:PHE:O	47:r:138:GLU:HG3	2.20	0.41
51:v:5:ILE:CG2	51:v:6:HIS:H	2.30	0.41
56:B:15:ILE:HD11	56:B:97:LEU:HD13	2.00	0.41
56:B:54:GLU:C	56:B:56:GLY:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:75:GLU:CG	56:B:76:TYR:N	2.79	0.41
56:B:121:PHE:CE1	56:B:157:GLY:CA	2.94	0.41
3:3:34:ILE:HG22	3:3:63:ARG:HG2	2.02	0.41
3:3:34:ILE:CG2	3:3:63:ARG:HB3	2.44	0.41
4:4:23:C:H2'	4:4:24:U:C6	2.51	0.41
6:A:21:G:H21	6:A:914:A:N6	2.16	0.41
6:A:154:C:H2'	6:A:155:C:C6	2.55	0.41
6:A:157:G:O6	6:A:165:C:N4	2.53	0.41
6:A:299:G:C5	6:A:300:A:C6	3.08	0.41
6:A:414:A:C6	6:A:415:A:C5	3.08	0.41
6:A:512:U:O2	6:A:540:G:N2	2.52	0.41
6:A:673:G:H4'	13:J:87:ARG:HH12	1.85	0.41
6:A:814:A:N7	6:A:816:A:C5	2.88	0.41
6:A:925:G:C2	6:A:927:G:N7	2.89	0.41
6:A:1005:A:C4	6:A:1036:G:N2	2.88	0.41
6:A:1038:C:N3	6:A:1039:C:C4	2.88	0.41
6:A:1183:A:H8	6:A:1183:A:O5'	2.03	0.41
6:A:1278:U:H4'	6:A:1279:A:H8	1.85	0.41
6:A:1320:C:OP1	26:W:70:LYS:NZ	2.45	0.41
6:A:1517:G:C6	6:A:1518:A:C6	3.08	0.41
7:D:171:G:H1'	7:D:172:C:C6	2.54	0.41
7:D:191:A:C4	7:D:192:C:C5	3.08	0.41
7:D:207:A:C5	7:D:208:C:C2	3.08	0.41
7:D:271:G:N2	7:D:272:G:C4	2.88	0.41
7:D:287:C:C2	7:D:288:C:H5	2.38	0.41
7:D:308:G:C6	7:D:309:G:C2	3.08	0.41
7:D:356:G:N1	7:D:357:A:C2	2.88	0.41
7:D:434:U:O5'	7:D:434:U:C6	2.71	0.41
7:D:507:A:C2'	7:D:508:G:OP2	2.68	0.41
7:D:603:A:N1	7:D:604:G:C2	2.88	0.41
7:D:616:A:C5	32:c:178:PRO:HG3	2.55	0.41
7:D:685:A:H1'	7:D:688:U:O4	2.20	0.41
7:D:724:U:H2'	7:D:725:G:O4'	2.20	0.41
7:D:809:G:N2	7:D:810:U:O2	2.54	0.41
7:D:1071:G:N3	7:D:1089:G:C8	2.88	0.41
7:D:1078:U:P	7:D:1078:U:H6	2.42	0.41
7:D:1153:C:C5	7:D:1154:G:N7	2.88	0.41
7:D:1169:G:N2	7:D:1180:C:N3	2.68	0.41
7:D:1194:A:C6	7:D:1195:G:N7	2.88	0.41
7:D:1204:A:H5'	7:D:1205:U:O3'	2.20	0.41
7:D:1273:U:H4'	7:D:1275:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1341:U:O2'	7:D:1342:A:P	2.78	0.41
7:D:1529:A:C8	7:D:1530:G:C8	2.94	0.41
7:D:1565:C:C5	7:D:1567:A:H8	2.36	0.41
7:D:1586:A:H2'	7:D:1587:A:C8	2.55	0.41
7:D:1696:G:C6	7:D:1697:G:C4	3.08	0.41
7:D:1784:A:H4'	7:D:1785:A:C4	2.55	0.41
7:D:1941:C:C5	7:D:1942:C:C4	3.08	0.41
7:D:2128:C:O2'	29:Z:6:ARG:NH2	2.52	0.41
7:D:2196:C:C4	7:D:2197:U:C4	3.08	0.41
7:D:2211:G:N2	7:D:2212:A:C8	2.73	0.41
7:D:2298:A:C6	7:D:2321:G:O6	2.73	0.41
7:D:2354:G:H4'	48:s:35:ASN:HD22	1.85	0.41
7:D:2373:G:H2'	7:D:2374:C:O4'	2.19	0.41
7:D:2431:U:P	7:D:2432:A:OP2	2.78	0.41
7:D:2467:C:H4'	38:i:123:HIS:CD2	2.55	0.41
7:D:2508:G:N1	7:D:2582:G:O6	2.53	0.41
7:D:2570:G:C5	7:D:2571:C:C2	3.08	0.41
7:D:2594:C:C2	7:D:2600:A:C2	3.08	0.41
7:D:2670:A:N3	7:D:2670:A:H2'	2.35	0.41
7:D:2706:G:HO2'	39:j:64:ARG:NH1	2.10	0.41
7:D:2808:U:C5	7:D:2891:G:C2	3.08	0.41
8:E:3:C:C2	8:E:118:G:N2	2.88	0.41
8:E:16:G:N2	8:E:17:C:C2	2.88	0.41
8:E:48:A:C5'	40:k:30:ARG:HH22	2.34	0.41
11:H:196:LEU:HA	11:H:197:PRO:HD2	1.86	0.41
12:I:109:ILE:HD11	12:I:136:MET:SD	2.60	0.41
18:O:53:SER:C	18:O:55:LYS:H	2.28	0.41
19:P:5:PRO:HA	19:P:10:LEU:HD11	2.02	0.41
19:P:5:PRO:HB2	19:P:6:THR:H	1.56	0.41
19:P:76:ASN:CG	19:P:77:LEU:H	2.28	0.41
24:U:87:LYS:HA	24:U:90:ILE:HD12	2.02	0.41
26:W:60:VAL:O	26:W:61:TYR:HB3	2.20	0.41
29:Z:40:THR:C	29:Z:216:THR:HG22	2.45	0.41
29:Z:215:THR:HA	29:Z:221:SER:CB	2.50	0.41
32:c:31:HIS:O	32:c:35:GLU:HG3	2.20	0.41
32:c:36:VAL:O	32:c:39:TRP:N	2.54	0.41
33:d:52:ILE:O	33:d:55:LYS:HB3	2.19	0.41
33:d:86:MET:O	33:d:88:ILE:N	2.49	0.41
33:d:141:PHE:CE1	33:d:145:THR:HA	2.55	0.41
34:e:108:GLY:O	34:e:110:SER:N	2.53	0.41
36:g:25:LEU:HB3	36:g:38:VAL:HG23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:g:94:ARG:HD3	36:g:96:THR:HB	2.02	0.41
47:r:149:SER:OG	47:r:173:ALA:HA	2.20	0.41
51:v:63:TYR:O	51:v:66:SER:HB2	2.20	0.41
53:x:25:LYS:CG	53:x:27:LYS:H	2.22	0.41
56:B:23:SER:CB	56:B:44:GLN:HB3	2.50	0.41
56:B:44:GLN:O	56:B:47:ASP:HB2	2.20	0.41
56:B:337:SER:CB	56:B:393:PRO:HB2	2.50	0.41
56:B:460:LEU:HD23	56:B:460:LEU:HA	1.78	0.41
1:1:35:ARG:HH12	7:D:2742:C:H5'	1.86	0.41
2:2:42:GLN:CB	3:3:117:THR:HB	2.51	0.41
2:2:44:LEU:O	2:2:48:GLY:N	2.52	0.41
3:3:94:GLU:OE1	3:3:94:GLU:N	2.54	0.41
3:3:126:MET:HA	7:D:1080:C:O2	2.20	0.41
5:5:51:U:H2'	5:5:52:G:C8	2.56	0.41
6:A:79:G:C6	6:A:90:C:N3	2.88	0.41
6:A:163:C:N3	6:A:164:U:N3	2.68	0.41
6:A:259:G:C6	6:A:260:G:C6	3.09	0.41
6:A:291:C:O2'	6:A:292:G:H5'	2.20	0.41
6:A:475:G:H5"	6:A:476:G:OP2	2.20	0.41
6:A:549:C:N3	6:A:550:G:C8	2.87	0.41
6:A:710:G:H2'	6:A:711:G:C8	2.55	0.41
6:A:735:C:H2'	6:A:736:C:H6	1.84	0.41
6:A:778:G:C6	6:A:779:C:C2	3.08	0.41
6:A:811:C:H5	6:A:812:C:C4	2.38	0.41
6:A:866:C:C4	6:A:867:G:H1'	2.55	0.41
6:A:942:G:C5	6:A:943:U:C5	3.08	0.41
6:A:1002:G:H1	6:A:1038:C:N4	2.17	0.41
6:A:1007:C:H6	6:A:1007:C:O5'	2.03	0.41
6:A:1028:C:N4	6:A:1028(A):C:C4	2.88	0.41
6:A:1063:C:H42	6:A:1193:G:H1	1.68	0.41
6:A:1401:G:C5	6:A:1402:C:C2	3.09	0.41
7:D:13:A:H2'	7:D:15:G:N7	2.34	0.41
7:D:224:G:C2	7:D:225:A:C8	3.08	0.41
7:D:269:U:C5	7:D:270(Z):U:OP2	2.73	0.41
7:D:273(B):C:H2'	7:D:273(C):C:C6	2.56	0.41
7:D:290:G:H22	7:D:350:U:H1'	1.84	0.41
7:D:432:A:C8	7:D:433:C:H5	2.38	0.41
7:D:579:G:C2	7:D:580:C:N3	2.88	0.41
7:D:584:C:H2'	7:D:585:G:O4'	2.20	0.41
7:D:679:C:H2'	7:D:680:G:C8	2.49	0.41
7:D:728:G:C8	7:D:728:G:C3'	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:852:G:C5	7:D:926:A:C6	3.06	0.41
7:D:858:U:O2'	7:D:859:G:OP1	2.34	0.41
7:D:1062:G:H1'	7:D:1063:G:OP1	2.20	0.41
7:D:1069:A:C6	7:D:1073:A:C8	3.08	0.41
7:D:1142(A):A:C5	7:D:1143:A:N7	2.88	0.41
7:D:1162:G:N2	7:D:1163:G:C4	2.88	0.41
7:D:1165:U:H2'	7:D:1166:C:H6	1.84	0.41
7:D:1223:C:N3	7:D:1227:A:N1	2.68	0.41
7:D:1252:G:N7	7:D:1253:A:C2	2.88	0.41
7:D:1272:A:OP2	7:D:1647:G:OP1	2.38	0.41
7:D:1284:A:C6	7:D:1285:G:C2	3.08	0.41
7:D:1288:U:C4	7:D:1327:C:O2	2.73	0.41
7:D:1341:U:O2'	7:D:1342:A:O5'	2.38	0.41
7:D:1455:G:H3'	7:D:1455:G:P	2.60	0.41
7:D:1457:A:H61	7:D:2703:C:N4	2.17	0.41
7:D:1497:U:H6	7:D:1497:U:H3'	1.85	0.41
7:D:1511:A:C5	7:D:1512:G:C6	3.08	0.41
7:D:1520:U:N3	7:D:1522:G:N1	2.67	0.41
7:D:1520:U:C4	7:D:1522:G:O6	2.73	0.41
7:D:1716:U:O2'	7:D:1717:G:H5'	2.20	0.41
7:D:2043:C:N4	7:D:2625:G:H1	2.17	0.41
7:D:2112:G:C6	7:D:2113:U:C2	3.07	0.41
7:D:2147:G:H2'	7:D:2148:G:H5'	2.02	0.41
7:D:2184:G:H2'	7:D:2185:C:H6	1.85	0.41
7:D:2209:C:H5'	7:D:2209:C:H6	1.85	0.41
7:D:2285:C:OP2	53:x:29:ASN:ND2	2.50	0.41
7:D:2376:A:C2	40:k:87:PHE:HE1	2.39	0.41
7:D:2573:C:H5"	7:D:2574:G:H5'	2.02	0.41
7:D:2612:C:HO2'	52:w:4:HIS:CE1	2.24	0.41
7:D:2625:G:N7	7:D:2626:C:C5	2.88	0.41
7:D:2791:C:C2	7:D:2807:G:C2	3.08	0.41
7:D:2810:A:H4'	31:b:61:ARG:NH1	2.29	0.41
7:D:2819:G:C2	7:D:2821:A:C4	3.08	0.41
16:M:75:ASP:O	16:M:78:LYS:HB3	2.21	0.41
17:N:13:HIS:CE1	17:N:17:ASP:OD2	2.73	0.41
17:N:44:VAL:HG11	17:N:46:ARG:NE	2.35	0.41
17:N:74:ILE:HG22	17:N:75:ILE:O	2.20	0.41
20:Q:112:GLY:HA3	20:Q:113:PRO:HD2	1.85	0.41
25:V:66:LEU:O	25:V:70:ILE:HG13	2.20	0.41
26:W:25:LYS:O	26:W:27:GLU:N	2.53	0.41
29:Z:72:VAL:HG12	29:Z:74:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:182:PRO:CD	29:Z:183:GLU:H	2.33	0.41
30:a:15:PHE:C	30:a:17:THR:H	2.28	0.41
30:a:55:GLY:CA	30:a:218:ARG:NH1	2.83	0.41
30:a:132:PRO:HB3	30:a:190:TYR:CE1	2.55	0.41
30:a:244:ARG:N	30:a:245:PRO:HD3	2.33	0.41
32:c:39:TRP:CD1	32:c:99:TYR:O	2.73	0.41
32:c:199:TRP:O	32:c:202:PHE:HB2	2.21	0.41
33:d:60:LEU:O	33:d:63:ILE:HG22	2.20	0.41
34:e:126:PRO:HD2	34:e:131:VAL:CA	2.49	0.41
34:e:157:TYR:CD2	34:e:158:HIS:N	2.89	0.41
35:f:85:ILE:HG23	35:f:89:LYS:HE2	2.02	0.41
36:g:86:ILE:HG23	36:g:91:LEU:H	1.85	0.41
41:l:45:PHE:HE1	41:l:86:ILE:CD1	2.32	0.41
41:l:102:ILE:HG21	41:l:102:ILE:HD13	1.83	0.41
42:m:27:LEU:H	42:m:30:LYS:HZ1	1.66	0.41
48:s:42:GLY:H	48:s:57:PHE:HD2	1.67	0.41
53:x:14:THR:O	53:x:21:TYR:HB2	2.20	0.41
53:x:15:GLU:OE2	53:x:18:ARG:N	2.53	0.41
56:B:51:LEU:C	56:B:51:LEU:CD2	2.86	0.41
56:B:57:ILE:O	56:B:59:ILE:HG13	2.20	0.41
56:B:90:THR:HA	56:B:93:VAL:HG12	2.02	0.41
56:B:99:ALA:O	56:B:216:ARG:HD3	2.19	0.41
56:B:217:LEU:HD23	56:B:220:GLY:O	2.19	0.41
56:B:382:LEU:CB	56:B:386:GLU:OE1	2.68	0.41
56:B:442:PRO:HB2	56:B:443:GLY:H	1.72	0.41
4:4:35:A:C2	4:4:36:U:C2	3.08	0.41
6:A:104:G:C2	6:A:105:G:C8	3.08	0.41
6:A:104:G:N2	6:A:105:G:C4	2.88	0.41
6:A:158:G:H2'	6:A:159:G:O4'	2.20	0.41
6:A:168:G:C2	6:A:169:C:N3	2.88	0.41
6:A:355:C:N4	6:A:356:A:H62	2.18	0.41
6:A:477:G:C2	6:A:478:A:C5	3.08	0.41
6:A:523:A:H61	19:P:53:ARG:HH12	1.69	0.41
6:A:605:U:H5"	6:A:606:G:OP2	2.21	0.41
6:A:737:A:H3'	13:J:92:LYS:NZ	2.36	0.41
6:A:829:G:C6	6:A:830:G:C5	3.08	0.41
6:A:1028(B):C:C4	6:A:1029:G:N7	2.89	0.41
6:A:1074:G:C5	6:A:1075:C:C4	3.08	0.41
6:A:1310:G:N1	6:A:1311:G:C6	2.89	0.41
6:A:1329:A:C6	6:A:1330:U:C4	3.08	0.41
6:A:1359:C:H3'	21:R:35:ARG:HH22	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1362:C:C2'	6:A:1362(A):C:H5"	2.50	0.41
6:A:1379:G:P	14:K:6:ARG:NH1	2.81	0.41
6:A:1398:A:N6	12:I:19:MET:HE3	2.35	0.41
7:D:71:A:C2	7:D:73:A:N1	2.89	0.41
7:D:81:G:N3	7:D:294:A:O2'	2.54	0.41
7:D:151:C:C4	7:D:176:G:N2	2.88	0.41
7:D:240:G:N7	7:D:241:A:C5	2.88	0.41
7:D:240:G:C6	7:D:241:A:N6	2.88	0.41
7:D:290:G:C5	7:D:291:C:C4	3.09	0.41
7:D:297:C:C4	7:D:298:G:C4	3.07	0.41
7:D:306:U:O4	7:D:307:G:C2	2.73	0.41
7:D:406:G:H2'	7:D:407:G:O4'	2.21	0.41
7:D:408:G:C2	7:D:420:C:O2	2.73	0.41
7:D:616:A:O2'	7:D:617:G:P	2.79	0.41
7:D:643:A:H4'	7:D:644:A:OP1	2.18	0.41
7:D:724:U:O5'	7:D:724:U:H6	2.04	0.41
7:D:827:U:H4'	7:D:828:U:H3	1.84	0.41
7:D:919:G:C6	7:D:2268:A:N7	2.88	0.41
7:D:1069:A:C8	7:D:1074:G:C6	3.09	0.41
7:D:1180:C:C4	7:D:1181:C:N4	2.88	0.41
7:D:1203:G:N2	7:D:1206:G:O6	2.53	0.41
7:D:1238:G:C2	7:D:1239:G:C4	3.08	0.41
7:D:1339:G:H5"	7:D:1340:U:OP1	2.20	0.41
7:D:1453:A:C6	7:D:1454:U:H1'	2.56	0.41
7:D:1582:C:H3'	7:D:1582:C:C6	2.54	0.41
7:D:1599:C:OP1	45:p:36:LYS:HG2	2.20	0.41
7:D:1975:G:C5	7:D:1976:U:N3	2.89	0.41
7:D:1995:U:C4	7:D:1996:C:N4	2.89	0.41
7:D:2025:C:H2'	7:D:2026:C:C6	2.56	0.41
7:D:2195:C:C3'	7:D:2196:C:H6	2.33	0.41
7:D:2251:G:O6	7:D:2252:G:C6	2.74	0.41
7:D:2364:C:H5'	48:s:56:ASP:OD2	2.21	0.41
7:D:2494:G:C5	7:D:2495:G:N7	2.88	0.41
7:D:2566:A:HO2'	7:D:2567:G:P	2.44	0.41
7:D:2588:G:C6	7:D:2607:G:C2	3.09	0.41
7:D:2594:C:N3	7:D:2600:A:C2	2.89	0.41
7:D:2629:A:H3'	7:D:2895:U:C2	2.55	0.41
7:D:2648:C:H2'	7:D:2649:U:C6	2.52	0.41
7:D:2736:G:C4	7:D:2737:G:C8	3.09	0.41
7:D:2749:A:O4'	34:e:63:SER:HA	2.21	0.41
7:D:2791:C:C5	7:D:2892:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2810:A:C1'	31:b:61:ARG:NH1	2.84	0.41
8:E:48:A:H5"	40:k:30:ARG:HH22	1.86	0.41
9:F:7:VAL:HG12	9:F:221:LEU:HD13	2.01	0.41
9:F:186:ALA:HB3	9:F:197:VAL:HG11	2.01	0.41
13:J:25:ILE:HG12	13:J:28:ARG:HH21	1.85	0.41
14:K:29:LYS:HG3	14:K:101:LEU:CD2	2.45	0.41
14:K:52:GLU:OE2	14:K:53:LYS:NZ	2.31	0.41
17:N:13:HIS:HB2	17:N:68:HIS:CE1	2.56	0.41
18:O:70:LYS:O	18:O:73:MET:HB2	2.20	0.41
19:P:37:CYS:SG	19:P:81:SER:HB2	2.61	0.41
19:P:69:TYR:O	19:P:99:HIS:HB2	2.20	0.41
25:V:41:LYS:HA	25:V:44:LEU:HD21	2.02	0.41
26:W:70:LYS:HB2	26:W:73:GLU:OE1	2.13	0.41
30:a:105:ILE:HG13	30:a:106:ILE:N	2.35	0.41
30:a:154:LYS:HB3	30:a:154:LYS:HE2	1.73	0.41
30:a:227:ASN:HA	30:a:228:PRO:HD2	1.71	0.41
31:b:2:LYS:HE3	31:b:85:ASN:HD22	1.85	0.41
31:b:13:ARG:NH1	31:b:15:PHE:HB2	2.35	0.41
32:c:170:LEU:N	32:c:171:PRO:HD2	2.36	0.41
33:d:47:LYS:NZ	33:d:73:ALA:HB2	2.35	0.41
34:e:40:GLU:H	34:e:40:GLU:CD	2.28	0.41
37:h:46:LYS:CE	37:h:50:ARG:NH1	2.83	0.41
37:h:49:ARG:HH21	55:z:55:ALA:HB2	1.86	0.41
37:h:63:PRO:C	37:h:64:LYS:HG2	2.46	0.41
38:i:22:LYS:HD2	38:i:23:GLY:H	1.85	0.41
44:o:2:GLU:O	44:o:62:HIS:CD2	2.74	0.41
44:o:34:ASN:O	44:o:37:ARG:HG2	2.20	0.41
46:q:22:GLY:C	46:q:73:ARG:HH22	2.28	0.41
46:q:44:ILE:HD12	46:q:61:ILE:HG12	2.02	0.41
46:q:86:ARG:HG2	46:q:88:LYS:O	2.20	0.41
46:q:95:LYS:HE3	46:q:103:GLY:HA2	2.03	0.41
47:r:62:PRO:O	47:r:63:ASP:C	2.62	0.41
50:u:48:GLU:O	50:u:51:ALA:HB2	2.20	0.41
55:z:50:LEU:HD23	55:z:51:ALA:HB2	2.02	0.41
56:B:25:LEU:HA	56:B:168:GLY:CA	2.50	0.41
56:B:200:ILE:HD11	56:B:279:THR:HG21	1.82	0.41
56:B:427:LEU:HD11	56:B:466:ARG:CD	2.49	0.41
56:B:492:VAL:H	56:B:505:THR:HB	1.86	0.41
56:B:497:HIS:CE1	56:B:533:PHE:CD1	3.08	0.41
3:3:29:GLN:HB2	56:B:440:TYR:CZ	2.56	0.41
3:3:78:ILE:HG22	3:3:127:ILE:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:98:ARG:CG	3:3:100:THR:H	2.34	0.41
5:5:27:G:O6	5:5:43:C:N4	2.20	0.41
5:5:52:G:H3'	5:5:53:G:C8	2.53	0.41
6:A:87:A:H2'	6:A:88:C:N1	2.35	0.41
6:A:354:G:C2	6:A:355:C:C5	3.09	0.41
6:A:357:G:C5	6:A:358:U:C5	3.09	0.41
6:A:373:A:C2	6:A:482:A:C6	3.08	0.41
6:A:475:G:N1	6:A:476:G:C6	2.89	0.41
6:A:597:G:C4	6:A:644:G:C2	3.09	0.41
6:A:629:G:H2'	6:A:630:G:C8	2.55	0.41
6:A:642:A:C6	6:A:643:C:C4	3.08	0.41
6:A:737:A:C5'	13:J:92:LYS:HZ2	2.34	0.41
6:A:750:G:H1'	22:S:22:THR:O	2.20	0.41
6:A:979:C:H42	21:R:18:VAL:CG2	2.33	0.41
6:A:1072:G:C2	6:A:1073:U:C2	3.08	0.41
6:A:1164:G:C5	6:A:1165:C:N3	2.77	0.41
6:A:1213:A:C8	6:A:1215:G:C5	3.09	0.41
6:A:1245:A:C5	6:A:1246:C:C4	3.07	0.41
6:A:1423:G:C5	6:A:1424:C:C5	3.09	0.41
7:D:44:A:H2'	7:D:45:G:C8	2.56	0.41
7:D:174:C:H6	7:D:174:C:H5"	1.84	0.41
7:D:197:A:C2	7:D:2430:A:C6	3.07	0.41
7:D:202:U:C4	7:D:203:C:N4	2.89	0.41
7:D:329:G:H5"	7:D:329:G:H8	1.85	0.41
7:D:489:G:HO2'	7:D:491:G:P	2.35	0.41
7:D:497:A:C5	7:D:498:G:C8	3.08	0.41
7:D:585:G:C5	7:D:1251:C:C2	3.08	0.41
7:D:684:G:C6	7:D:775:G:C5	3.09	0.41
7:D:739:G:O3'	7:D:1784:A:C6	2.74	0.41
7:D:766:C:N3	7:D:767:U:C4	2.88	0.41
7:D:843:G:C2	7:D:844:C:C2	3.09	0.41
7:D:931:G:C3'	7:D:932:G:H4'	2.44	0.41
7:D:946:G:C6	7:D:947:G:N7	2.89	0.41
7:D:1248:G:N1	32:c:52:LYS:NZ	2.68	0.41
7:D:1448:G:H2'	7:D:1449:A:N7	2.35	0.41
7:D:1465:G:C5	7:D:1466:G:N7	2.89	0.41
7:D:1497:U:C4	7:D:1576:U:O3'	2.73	0.41
7:D:1523:U:C4	7:D:1524:G:N7	2.89	0.41
7:D:1534:G:N2	7:D:1538:G:C5	2.89	0.41
7:D:1728:G:H22	7:D:1730:U:H1'	1.85	0.41
7:D:1793:C:C2	7:D:1794:U:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1800:C:OP1	30:a:263:ARG:HG3	2.20	0.41
7:D:1880:C:H5"	7:D:1880:C:H6	1.85	0.41
7:D:1972:A:C2	7:D:1973:G:C8	3.08	0.41
7:D:1995:U:C5	7:D:1996:C:C5	3.08	0.41
7:D:2123:G:N1	7:D:2124:G:C2	2.88	0.41
7:D:2155:G:C5	7:D:2156:G:H4'	2.56	0.41
7:D:2262:U:O4	7:D:2279:G:N1	2.53	0.41
7:D:2431:U:OP1	7:D:2432:A:OP2	2.37	0.41
7:D:2527:C:H2'	7:D:2528:U:H6	1.85	0.41
7:D:2531:A:C4	7:D:2532:G:C8	3.09	0.41
7:D:2659:G:N2	7:D:2661:G:H3'	2.35	0.41
7:D:2783:G:C1'	31:b:41:LYS:HZ1	2.33	0.41
8:E:9:G:O2'	40:k:43:GLU:OE1	2.26	0.41
9:F:72:GLY:O	9:F:78:GLN:HA	2.20	0.41
11:H:63:LYS:NZ	11:H:198:VAL:HG12	2.35	0.41
15:L:71:GLY:H	15:L:72:PRO:HD2	1.86	0.41
15:L:81:HIS:HD2	15:L:138:TRP:HZ3	1.67	0.41
16:M:71:SER:HA	16:M:74:ILE:HD12	2.03	0.41
22:S:13:GLN:HE22	22:S:19:PRO:HA	1.85	0.41
26:W:16:LEU:N	26:W:16:LEU:HD12	2.34	0.41
27:X:57:ARG:NH2	27:X:102:GLY:HA2	2.36	0.41
30:a:267:SER:HG	30:a:268:ARG:H	1.64	0.41
31:b:34:VAL:HG12	31:b:35:GLN:O	2.21	0.41
37:h:73:GLY:C	37:h:107:LYS:NZ	2.78	0.41
38:i:8:LYS:HZ3	38:i:11:LYS:HZ1	1.69	0.41
38:i:53:ALA:HA	38:i:56:ARG:HE	1.86	0.41
39:j:55:ALA:CB	39:j:79:LEU:HD21	2.50	0.41
39:j:79:LEU:HD23	39:j:80:PHE:CA	2.50	0.41
40:k:17:ARG:NH2	40:k:89:ARG:HE	2.19	0.41
40:k:35:ILE:HD12	40:k:36:TYR:H	1.85	0.41
40:k:42:ASP:C	40:k:44:LYS:N	2.76	0.41
47:r:80:ARG:HD2	47:r:82:ARG:HH22	1.85	0.41
47:r:91:LEU:HD22	47:r:95:PRO:CG	2.51	0.41
49:t:59:LEU:O	49:t:63:ARG:HG3	2.21	0.41
51:v:65:ASP:O	51:v:66:SER:C	2.63	0.41
56:B:200:ILE:HG13	56:B:279:THR:CB	2.50	0.41
56:B:230:ILE:HG12	56:B:279:THR:CA	2.50	0.41
56:B:532:LEU:CA	56:B:553:ALA:HB1	2.50	0.41
56:B:555:ARG:HA	56:B:581:LYS:NZ	2.34	0.41
3:3:10:LEU:HG	3:3:57:ILE:HG12	1.96	0.41
3:3:131:ALA:HB1	3:3:137:GLU:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:8:U:C4	5:5:13:C:C2	3.08	0.41
5:5:60:U:O5'	5:5:60:U:H6	2.04	0.41
6:A:55:A:O4'	56:B:208:TYR:OH	2.38	0.41
6:A:186:C:H2'	6:A:186(A):C:C6	2.55	0.41
6:A:518:C:C2'	6:A:519:C:OP2	2.67	0.41
6:A:686:U:H3	6:A:703:G:C2'	2.32	0.41
6:A:694:A:N3	6:A:695:A:H1'	2.35	0.41
6:A:701:C:C2	6:A:703:G:N1	2.88	0.41
6:A:836:G:C2'	6:A:837:G:C8	3.01	0.41
6:A:850:U:C6	6:A:850:U:O5'	2.71	0.41
6:A:954:G:C6	6:A:955:U:C4	3.09	0.41
6:A:961:U:H2'	6:A:962:C:O4'	2.20	0.41
6:A:972:C:O5'	17:N:57:LYS:HD3	2.20	0.41
6:A:1065:U:O2'	6:A:1066:C:P	2.78	0.41
6:A:1125:U:H4'	6:A:1126:U:H5	1.84	0.41
6:A:1155:G:C6	6:A:1156:G:C5	3.08	0.41
6:A:1160:G:N7	6:A:1181:G:C6	2.89	0.41
6:A:1216:G:P	21:R:3:ARG:HH12	2.42	0.41
6:A:1319:A:C8	6:A:1323:G:C6	3.08	0.41
6:A:1433:A:C5'	41:l:111:ARG:HH12	2.33	0.41
7:D:56:A:C6	7:D:57:C:C4	3.09	0.41
7:D:60:G:N2	7:D:68:G:C2	2.89	0.41
7:D:135:G:C2	7:D:145:G:C5	3.08	0.41
7:D:212:G:C2	7:D:213:A:C5	3.09	0.41
7:D:247:G:H1'	7:D:386:G:O6	2.19	0.41
7:D:323:G:H4'	7:D:324:A:C5'	2.50	0.41
7:D:494:G:H8	7:D:494:G:O5'	2.04	0.41
7:D:579:G:O2'	7:D:2019:A:OP1	2.38	0.41
7:D:601:C:O5'	32:c:108:LYS:NZ	2.53	0.41
7:D:604:G:H1	7:D:624:C:N4	2.18	0.41
7:D:763:G:C4	7:D:765:G:C8	3.08	0.41
7:D:800:A:O2'	7:D:801:G:P	2.76	0.41
7:D:1182:A:C6	7:D:1183:G:N7	2.89	0.41
7:D:1253:A:H8	7:D:1253:A:H2'	1.72	0.41
7:D:1447:G:H2'	7:D:1448:G:H5'	2.00	0.41
7:D:1471:A:N3	7:D:1521:G:N2	2.69	0.41
7:D:1666:G:N2	7:D:1995:U:C4	2.88	0.41
7:D:1741:C:C6	7:D:1741:C:C3'	3.04	0.41
7:D:1779:U:H6	7:D:1779:U:C3'	2.34	0.41
7:D:1793:C:H2'	7:D:1794:U:H6	1.84	0.41
7:D:1842:G:N2	7:D:1901:A:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1845:G:C6	7:D:1846:G:N7	2.89	0.41
7:D:1862:G:N1	7:D:1863:G:C6	2.88	0.41
7:D:1900:A:C2	7:D:1970:A:C5	3.08	0.41
7:D:2060:A:O2'	7:D:2061:G:P	2.78	0.41
7:D:2118:U:H2'	7:D:2147:G:O6	2.20	0.41
7:D:2195:C:H2'	7:D:2196:C:H6	1.83	0.41
7:D:2353:G:C6	7:D:2365:G:N2	2.89	0.41
7:D:2632:A:C4	7:D:2633:G:N7	2.88	0.41
7:D:2766:G:C6	7:D:2767:C:C4	3.09	0.41
7:D:2838:G:C2	7:D:2839:G:C4	3.09	0.41
7:D:2848:G:C8	41:l:99:LEU:HD11	2.56	0.41
8:E:95:U:C2	8:E:96:G:C8	3.09	0.41
9:F:25:ASN:HA	9:F:26:PRO:HD3	1.89	0.41
9:F:48:MET:HA	9:F:51:LEU:HD12	2.02	0.41
9:F:115:LEU:HD11	9:F:146:GLN:OE1	2.20	0.41
14:K:87:VAL:HA	14:K:88:PRO:HD2	1.88	0.41
15:L:4:ASP:OD1	15:L:4:ASP:N	2.53	0.41
16:M:33:PHE:HD2	16:M:34:ASN:HD21	1.69	0.41
20:Q:71:ARG:HA	20:Q:75:ALA:N	2.34	0.41
21:R:6:LEU:C	21:R:8:GLU:H	2.28	0.41
26:W:15:LEU:C	26:W:15:LEU:CD1	2.88	0.41
27:X:62:LEU:HA	27:X:62:LEU:HD23	1.87	0.41
28:Y:6:ARG:NH1	28:Y:15:ARG:CD	2.84	0.41
29:Z:8:ARG:HH11	29:Z:11:LEU:CD2	2.22	0.41
31:b:4:ILE:HG22	31:b:197:ILE:CG2	2.50	0.41
33:d:12:TYR:CE2	33:d:100:TRP:CE2	3.08	0.41
35:f:40:PRO:HA	35:f:42:TRP:CE3	2.55	0.41
35:f:95:PRO:O	35:f:98:VAL:HB	2.20	0.41
38:i:42:ILE:O	38:i:42:ILE:HG23	2.21	0.41
39:j:33:ARG:O	39:j:34:ILE:HD13	2.19	0.41
41:l:26:ASP:C	41:l:28:VAL:N	2.75	0.41
41:l:34:VAL:HG23	41:l:46:GLU:HB3	2.02	0.41
56:B:81:ILE:C	56:B:83:THR:N	2.79	0.41
56:B:164:ILE:O	56:B:166:ALA:N	2.53	0.41
56:B:272:HIS:O	56:B:272:HIS:CG	2.74	0.41
56:B:338:THR:CB	56:B:502:ASP:OD2	2.66	0.41
56:B:555:ARG:CA	56:B:581:LYS:HZ1	2.33	0.41
1:1:20:HIS:CE1	7:D:2757:A:OP2	2.73	0.41
6:A:299:G:H2'	6:A:300:A:C8	2.56	0.41
6:A:604:G:C6	6:A:605:U:C2	3.08	0.41
6:A:1016:A:H3'	6:A:1017:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1017:G:C6	6:A:1018:C:N3	2.89	0.41
6:A:1045:C:H2'	6:A:1046:A:C8	2.55	0.41
6:A:1219:U:C2'	6:A:1220:G:H5'	2.51	0.41
7:D:14:A:C2	7:D:526:A:C6	3.09	0.41
7:D:89:G:C5	7:D:90:U:C5	3.08	0.41
7:D:270(J):G:H5"	7:D:270(K):C:OP2	2.21	0.41
7:D:288:C:H3'	7:D:289:A:C5'	2.51	0.41
7:D:342:G:N2	7:D:343:C:O2	2.53	0.41
7:D:464:U:O4	7:D:465:G:C2	2.73	0.41
7:D:475:U:O5'	7:D:475:U:H6	2.03	0.41
7:D:689:A:N3	7:D:779:U:O2'	2.49	0.41
7:D:783:A:C8	7:D:785:G:C8	3.09	0.41
7:D:852:G:C6	7:D:853:G:C5	3.08	0.41
7:D:974:G:O4'	7:D:1187:G:H1'	2.20	0.41
7:D:990:A:P	7:D:991:C:OP2	2.78	0.41
7:D:1083:U:O2'	7:D:1084:A:H8	2.03	0.41
7:D:1165:U:H2'	7:D:1166:C:C6	2.56	0.41
7:D:1223:C:H42	7:D:1227:A:N6	2.18	0.41
7:D:1268:A:C6	7:D:1269:A:C4	3.09	0.41
7:D:1483:G:C5	7:D:1507:A:C4	3.09	0.41
7:D:1551:C:H5"	7:D:1552:G:OP2	2.20	0.41
7:D:1799:G:C6	30:a:177:LEU:HD13	2.56	0.41
7:D:1840:G:N2	7:D:1902:C:N3	2.55	0.41
7:D:1884:A:O4'	7:D:1884:A:P	2.78	0.41
7:D:1993:U:H2'	7:D:1994:C:O4'	2.21	0.41
7:D:2152:G:H2'	7:D:2153:G:H5'	2.03	0.41
7:D:2348:U:C4	7:D:2370:G:C2	3.09	0.41
7:D:2444:G:C5	7:D:2445:G:C8	3.08	0.41
7:D:2521:C:C2	7:D:2545:G:N2	2.89	0.41
7:D:2585:U:O2'	7:D:2586:C:P	2.78	0.41
7:D:2624:G:N1	7:D:2625:G:C4	2.88	0.41
7:D:2627:G:C5	7:D:2628:C:C4	3.08	0.41
7:D:2733:A:C2	31:b:204:ALA:HB2	2.56	0.41
7:D:2765:A:H5'	7:D:2766:G:OP2	2.21	0.41
7:D:2794:C:N4	7:D:2799:A:C2	2.74	0.41
7:D:2807:G:O6	7:D:2892:A:C4	2.74	0.41
8:E:55:U:O2'	33:d:29:TRP:CE2	2.66	0.41
9:F:114:ARG:HA	9:F:117:GLU:OE2	2.20	0.41
11:H:187:ARG:HD2	11:H:187:ARG:HA	1.74	0.41
12:I:50:GLU:HB2	12:I:53:LEU:HD12	2.03	0.41
13:J:30:LEU:HB3	13:J:35:ALA:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:78:ARG:HD3	14:K:156:TRP:CH2	2.56	0.41
15:L:79:VAL:O	15:L:81:HIS:N	2.53	0.41
22:S:31:LEU:O	22:S:34:LEU:HG	2.21	0.41
24:U:75:ARG:NH1	24:U:77:VAL:HG22	2.35	0.41
24:U:83:ASP:HA	24:U:86:GLU:HG2	2.03	0.41
25:V:26:LEU:HD12	25:V:27:GLY:H	1.85	0.41
25:V:56:THR:OG1	25:V:57:GLY:N	2.53	0.41
26:W:61:TYR:HD1	26:W:62:ILE:CG1	2.20	0.41
29:Z:64:LEU:HB3	29:Z:66:HIS:NE2	2.35	0.41
29:Z:73:ARG:HB2	29:Z:111:ASP:H	1.85	0.41
31:b:52:LEU:O	31:b:52:LEU:HD12	2.20	0.41
31:b:93:VAL:HG12	31:b:177:PRO:CB	2.50	0.41
32:c:44:ARG:O	32:c:45:ARG:C	2.64	0.41
32:c:168:ARG:HG3	32:c:169:ASN:N	2.12	0.41
33:d:49:ASP:O	33:d:70:VAL:HG22	2.20	0.41
33:d:63:ILE:HG13	33:d:102:PHE:HE1	1.85	0.41
34:e:64:LEU:HD23	34:e:67:LEU:HD12	2.02	0.41
35:f:41:ASP:HA	42:m:64:ARG:NH2	2.35	0.41
39:j:3:HIS:CE1	39:j:9:LYS:HE2	2.55	0.41
39:j:10:LEU:O	39:j:17:ARG:NH1	2.52	0.41
41:l:26:ASP:C	41:l:28:VAL:H	2.25	0.41
43:n:26:ASP:O	43:n:29:PRO:HD2	2.20	0.41
43:n:45:THR:O	43:n:46:VAL:HB	2.21	0.41
46:q:66:PRO:C	46:q:68:HIS:H	2.29	0.41
56:B:109:ALA:HB2	56:B:135:ILE:CB	2.50	0.41
56:B:152:VAL:HA	56:B:156:LEU:N	2.35	0.41
56:B:223:ARG:O	56:B:239:VAL:HG21	2.20	0.41
56:B:555:ARG:CG	56:B:556:LYS:N	2.83	0.41
3:3:29:GLN:HB2	56:B:440:TYR:OH	2.21	0.41
3:3:112:MET:N	3:3:113:PRO:CD	2.84	0.41
6:A:55:A:H61	6:A:368:U:H3	1.67	0.41
6:A:161:A:C4	6:A:162:A:C8	3.09	0.41
6:A:194:C:C2'	27:X:68:LYS:HZ1	2.33	0.41
6:A:198:G:H8	6:A:198:G:OP2	2.04	0.41
6:A:325:A:C6	6:A:326:G:C6	3.09	0.41
6:A:445:G:C6	6:A:490:G:N1	2.89	0.41
6:A:448:A:N6	6:A:486:U:O4	2.45	0.41
6:A:456:C:N3	6:A:477:G:C6	2.88	0.41
6:A:503:C:C2'	6:A:504:C:H5'	2.51	0.41
6:A:588:G:C6	6:A:753:A:C5	3.08	0.41
6:A:838:G:O2'	6:A:841:U:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:848:C:P	6:A:848:C:O4'	2.79	0.41
6:A:872:A:H4'	6:A:873:A:OP1	2.21	0.41
6:A:1297:C:H1'	14:K:114:ARG:CZ	2.51	0.41
6:A:1319:A:P	26:W:37:ARG:O	2.77	0.41
6:A:1459:C:O2'	6:A:1460:A:H5'	2.21	0.41
7:D:79:G:C2	7:D:80:G:C8	3.09	0.41
7:D:79:G:C4	7:D:80:G:C8	3.09	0.41
7:D:145:G:C6	7:D:146:G:C5	3.09	0.41
7:D:197:A:C6	7:D:2430:A:C4	3.09	0.41
7:D:289:A:C6	7:D:351:G:N7	2.88	0.41
7:D:447:A:C6	7:D:473:G:C4	3.08	0.41
7:D:467:G:H2'	7:D:468:G:O4'	2.21	0.41
7:D:677:A:C6	7:D:678:C:C4	3.09	0.41
7:D:718:A:OP2	7:D:719:C:C4	2.74	0.41
7:D:757:U:C5	7:D:758:C:C5	3.08	0.41
7:D:781:A:H1'	7:D:1789:A:O2'	2.21	0.41
7:D:827:U:C4	7:D:2430:A:C6	3.09	0.41
7:D:922:U:C2	7:D:923:C:C4	3.08	0.41
7:D:1040:C:H3'	7:D:1041:C:H5	1.86	0.41
7:D:1061:U:OP2	7:D:1061:U:C6	2.74	0.41
7:D:1087:G:H2'	7:D:1089:G:H1'	2.02	0.41
7:D:1092:C:H5"	7:D:1093:G:OP2	2.20	0.41
7:D:1202:C:C4	7:D:1203:G:H1'	2.56	0.41
7:D:1243:G:C6	7:D:1244:G:C5	3.09	0.41
7:D:1346:G:C6	7:D:1601:G:N1	2.89	0.41
7:D:1492:G:N2	7:D:1498:C:N3	2.68	0.41
7:D:1615:C:C5	7:D:1617:C:C5	3.09	0.41
7:D:1619:G:OP2	7:D:1619:G:C8	2.74	0.41
7:D:1642:G:N1	7:D:1643:G:C5	2.89	0.41
7:D:1779:U:C2	7:D:1783:A:C8	3.09	0.41
7:D:2050:C:H2'	7:D:2051:A:C8	2.55	0.41
7:D:2056:G:H22	52:w:4:HIS:CD2	2.39	0.41
7:D:2057:A:C6	7:D:2058:A:C6	3.09	0.41
7:D:2164:C:H3'	7:D:2165:G:O4'	2.21	0.41
7:D:2195:C:H2'	7:D:2196:C:O4'	2.21	0.41
7:D:2219:G:C2'	30:a:262:ARG:HH21	2.33	0.41
7:D:2259:G:C6	7:D:2260:C:N3	2.89	0.41
7:D:2459:A:N1	7:D:2460:U:H1'	2.34	0.41
7:D:2519:U:N3	7:D:2542:A:C6	2.89	0.41
7:D:2592:G:C6	7:D:2593:U:N3	2.88	0.41
7:D:2618:G:C5	7:D:2619:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2646:C:C4	7:D:2647:U:N3	2.89	0.41
7:D:2678:C:C2	7:D:2679:A:C8	3.09	0.41
7:D:2819:G:C4	7:D:2821:A:C6	3.09	0.41
9:F:92:TYR:HE2	9:F:94:ASN:ND2	2.19	0.41
9:F:132:LYS:O	9:F:136:VAL:HG23	2.20	0.41
10:G:186:PHE:CD1	10:G:186:PHE:C	2.98	0.41
12:I:89:ILE:HD13	12:I:122:GLU:HG3	2.03	0.41
14:K:155:ARG:HG3	14:K:156:TRP:N	2.22	0.41
20:Q:43:THR:O	20:Q:45:VAL:HG23	2.20	0.41
23:T:22:THR:HA	23:T:33:ILE:HG13	2.03	0.41
23:T:55:ARG:HD2	23:T:59:TRP:NE1	2.35	0.41
24:U:43:LEU:CD1	24:U:69:LYS:HB2	2.51	0.41
25:V:21:LYS:N	25:V:55:ARG:HH12	2.18	0.41
27:X:92:LEU:HD23	27:X:92:LEU:HA	1.80	0.41
30:a:47:GLY:O	30:a:48:ARG:HB2	2.21	0.41
31:b:36:ARG:HB2	31:b:45:THR:HG23	2.03	0.41
31:b:54:GLN:N	31:b:73:GLU:OE1	2.53	0.41
32:c:35:GLU:HA	32:c:38:ARG:NH2	2.35	0.41
32:c:148:LEU:HD23	32:c:148:LEU:HA	1.84	0.41
33:d:43:LEU:HD11	33:d:88:ILE:CD1	2.50	0.41
34:e:118:PRO:CD	34:e:121:ILE:HG21	2.51	0.41
36:g:103:ALA:C	36:g:105:GLU:H	2.29	0.41
44:o:43:GLY:O	44:o:47:VAL:HG22	2.20	0.41
46:q:83:THR:HG22	46:q:84:ARG:N	2.35	0.41
48:s:67:VAL:HG12	48:s:68:GLU:N	2.35	0.41
51:v:8:LYS:C	51:v:9:LEU:HG	2.45	0.41
51:v:61:ARG:C	51:v:64:GLY:H	2.28	0.41
54:y:4:THR:O	54:y:5:TRP:HB2	2.20	0.41
56:B:174:VAL:CG1	56:B:177:ILE:CG1	2.97	0.41
56:B:243:GLY:C	56:B:263:TRP:CD1	2.91	0.41
56:B:317:ARG:HA	56:B:320:LEU:HD13	2.03	0.41
3:3:35:MET:CA	3:3:63:ARG:NH1	2.84	0.41
3:3:80:LYS:HB3	3:3:111:LYS:CE	2.51	0.41
4:4:50:U:O4	4:4:51:C:N4	2.53	0.41
5:5:17:C:H5"	5:5:18:G:OP1	2.21	0.41
5:5:48:C:OP1	5:5:48:C:H6	2.04	0.41
6:A:13:U:H3'	6:A:13:U:H6	1.86	0.41
6:A:109:A:C8	6:A:327:A:C4	3.09	0.41
6:A:216:G:C4	6:A:217:C:C4	3.09	0.41
6:A:254:G:H2'	6:A:255:G:H8	1.85	0.41
6:A:326:G:H8	6:A:326:G:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:371:G:H2'	6:A:372:C:H5"	2.03	0.41
6:A:388:G:O2'	6:A:389:A:P	2.79	0.41
6:A:451:A:C2	6:A:480:U:N3	2.89	0.41
6:A:523:A:N6	19:P:53:ARG:HH12	2.19	0.41
6:A:550:G:C2	6:A:551:U:C2	3.09	0.41
6:A:564:C:P	19:P:15:ARG:HH12	2.43	0.41
6:A:574:A:O5'	6:A:574:A:H8	2.04	0.41
6:A:670:G:H2'	6:A:671:G:O4'	2.20	0.41
6:A:671:G:O6	6:A:672:U:N3	2.54	0.41
6:A:746:A:C6	6:A:747:C:C4	3.08	0.41
6:A:764:C:H2'	6:A:765:G:H8	1.86	0.41
6:A:841:U:C6	6:A:841:U:C3'	3.04	0.41
6:A:842:C:H4'	6:A:848:C:O2	2.21	0.41
6:A:903:G:N2	6:A:904:C:C2	2.89	0.41
6:A:925:G:H5"	6:A:926:G:OP1	2.21	0.41
6:A:933:G:H5"	6:A:934:C:OP1	2.21	0.41
6:A:1028(A):C:H2'	6:A:1028(B):C:O4'	2.20	0.41
6:A:1104:G:H4'	9:F:111:ARG:NH2	2.35	0.41
6:A:1119:C:C2	6:A:1155:G:C2	3.09	0.41
6:A:1148:U:C6	16:M:16:ARG:NH1	2.89	0.41
6:A:1163:C:N3	6:A:1174:G:N1	2.69	0.41
6:A:1179:A:C6	6:A:1180:A:N1	2.89	0.41
6:A:1183:A:HO2'	6:A:1184:G:P	2.44	0.41
6:A:1190:G:C2'	6:A:1191:A:OP2	2.69	0.41
6:A:1225:A:OP2	6:A:1226:C:C5	2.69	0.41
6:A:1256:A:P	10:G:27:LYS:HZ3	2.39	0.41
6:A:1265:G:H1	6:A:1270:C:H42	1.69	0.41
6:A:1299:A:C5	6:A:1301:U:C2	3.09	0.41
6:A:1302:U:C2	20:Q:27:LYS:NZ	2.89	0.41
6:A:1323:G:C2	6:A:1324:A:C5	3.09	0.41
6:A:1410:G:N3	6:A:1491:G:C2	2.89	0.41
6:A:1419:G:C6	6:A:1482:G:C2	3.09	0.41
6:A:1438:G:P	27:X:34:LYS:NZ	2.94	0.41
6:A:1447:G:C6	6:A:1448:C:C4	3.08	0.41
6:A:1455:G:OP1	27:X:35:THR:OG1	2.35	0.41
7:D:5:A:C4	7:D:6:A:C8	3.08	0.41
7:D:43:G:H2'	7:D:44:A:C8	2.55	0.41
7:D:47:C:H3'	7:D:47:C:H6	1.86	0.41
7:D:110:G:C2	7:D:111:A:C4	3.08	0.41
7:D:181:A:N6	7:D:182:A:N1	2.69	0.41
7:D:227:A:O2'	7:D:228:A:O5'	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:265:A:C8	7:D:428:A:N6	2.89	0.41
7:D:270(M):U:O3'	7:D:270(N):G:H4'	2.21	0.41
7:D:361:G:N2	7:D:362:U:C2	2.89	0.41
7:D:464:U:O2'	7:D:686:G:C6	2.74	0.41
7:D:508:G:OP2	7:D:508:G:C2	2.74	0.41
7:D:537:C:O2'	7:D:539:G:P	2.79	0.41
7:D:551:G:C4	7:D:552:G:N7	2.89	0.41
7:D:607:U:C5	7:D:608:A:C5	3.09	0.41
7:D:818:G:OP2	7:D:1187:G:O6	2.38	0.41
7:D:870:A:C2	7:D:908:C:N3	2.88	0.41
7:D:875:G:H2'	7:D:876:C:O4'	2.21	0.41
7:D:923:C:H4'	48:s:26:TYR:OH	2.20	0.41
7:D:988:A:OP1	50:u:12:PRO:HD3	2.21	0.41
7:D:995:C:P	42:m:53:ARG:HH22	2.43	0.41
7:D:1023:U:C4	7:D:1024:G:N2	2.88	0.41
7:D:1050:A:C6	7:D:2751:G:C6	3.09	0.41
7:D:1065:U:O4'	7:D:1074:G:N2	2.53	0.41
7:D:1108:U:C3'	7:D:1108:U:C6	3.03	0.41
7:D:1177:A:C6	7:D:1178:C:C4	3.09	0.41
7:D:1218:C:O2'	7:D:1219:G:H5'	2.21	0.41
7:D:1231:G:H2'	7:D:1232:G:C8	2.56	0.41
7:D:1361:G:N1	7:D:1362:C:N3	2.69	0.41
7:D:1363:C:O3'	7:D:1809:A:C6	2.74	0.41
7:D:1386:C:OP2	7:D:1396:U:O2	2.39	0.41
7:D:1471:A:C6	7:D:1473:G:N7	2.89	0.41
7:D:1480:G:H22	7:D:1482:U:C1'	2.33	0.41
7:D:1486:A:H2'	7:D:1487:G:O4'	2.20	0.41
7:D:1668:A:H2'	7:D:1669:A:OP2	2.21	0.41
7:D:1710:C:C2'	7:D:1711:C:H5'	2.51	0.41
7:D:1728:G:N2	7:D:1730:U:O2	2.53	0.41
7:D:1754:C:O2'	41:l:108:ARG:NH1	2.51	0.41
7:D:1785:A:C2'	7:D:1786:A:C8	3.03	0.41
7:D:1809:A:H5"	7:D:1810:A:C2	2.56	0.41
7:D:1912:A:H5'	7:D:1913:A:OP1	2.21	0.41
7:D:1919:A:H1'	7:D:1920:C:OP1	2.21	0.41
7:D:1941:C:C5	7:D:1942:C:C5	3.09	0.41
7:D:1980:G:C2	7:D:1982:C:N3	2.89	0.41
7:D:2015:A:C6	52:w:6:VAL:HG23	2.55	0.41
7:D:2021:C:OP2	52:w:12:SER:HB3	2.21	0.41
7:D:2024:G:N2	7:D:2025:C:C2	2.89	0.41
7:D:2043:C:C2	7:D:2777:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2120:G:H2'	7:D:2121:G:O4'	2.21	0.41
7:D:2199:A:C2	7:D:2205:C:O4'	2.74	0.41
7:D:2230:G:H4'	51:v:40:HIS:O	2.21	0.41
7:D:2270:G:O6	7:D:2271:G:C2	2.74	0.41
7:D:2290:G:C6	7:D:2291:U:C4	3.09	0.41
7:D:2645:G:O4'	7:D:2645:G:OP2	2.38	0.41
7:D:2650:U:H2'	7:D:2651:C:O4'	2.20	0.41
7:D:2665:A:C2	7:D:2666:C:C2	3.09	0.41
7:D:2670:A:C5'	31:b:206:LYS:HZ1	2.22	0.41
7:D:2674:G:H2'	7:D:2675:A:C8	2.35	0.41
7:D:2686:G:N2	7:D:2687:U:C2	2.89	0.41
7:D:2693:A:C4	7:D:2717:G:N2	2.89	0.41
7:D:2741:A:H5"	7:D:2742:C:OP2	2.21	0.41
7:D:2896:C:C3'	7:D:2896:C:C6	3.04	0.41
8:E:46:A:N7	8:E:47:C:C4	2.88	0.41
8:E:52:A:N1	8:E:53:A:H1'	2.36	0.41
8:E:53:A:C4	8:E:54:G:C8	3.08	0.41
8:E:58:A:C8	8:E:59:A:N7	2.88	0.41
8:E:84:C:H2'	8:E:85:G:O4'	2.21	0.41
8:E:110:G:N3	8:E:111:U:H1'	2.35	0.41
9:F:111:ARG:HD3	9:F:111:ARG:HA	1.88	0.41
9:F:218:ALA:O	9:F:221:LEU:HB3	2.21	0.41
11:H:19:LEU:C	11:H:21:LEU:H	2.25	0.41
11:H:109:GLY:O	11:H:161:ASN:HB3	2.21	0.41
11:H:114:ARG:HA	11:H:114:ARG:HD3	1.89	0.41
12:I:100:VAL:HG22	12:I:118:ILE:H	1.86	0.41
12:I:100:VAL:HG13	12:I:118:ILE:O	2.21	0.41
13:J:2:ARG:HH11	13:J:69:GLU:CB	2.34	0.41
13:J:4:TYR:O	13:J:65:VAL:HG22	2.21	0.41
13:J:97:PHE:CE2	25:V:31:LEU:HB2	2.56	0.41
14:K:42:ILE:HG22	14:K:120:ILE:HD12	2.02	0.41
15:L:36:LEU:HD21	15:L:59:LEU:HD13	2.03	0.41
15:L:82:HIS:CE1	15:L:84:ARG:HB2	2.56	0.41
16:M:65:VAL:HG21	16:M:73:GLN:CB	2.48	0.41
19:P:54:LYS:N	19:P:54:LYS:HD2	2.35	0.41
19:P:59:ARG:HG3	19:P:59:ARG:HH11	1.85	0.41
23:T:40:ASP:HA	23:T:41:PRO:HD3	1.96	0.41
24:U:11:VAL:HG23	24:U:22:LEU:HB2	2.01	0.41
24:U:25:ARG:HD2	24:U:27:PHE:CE2	2.56	0.41
25:V:44:LEU:HD23	25:V:79:LEU:HD22	2.01	0.41
26:W:19:VAL:C	26:W:21:GLU:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:25:LYS:C	26:W:27:GLU:N	2.74	0.41
26:W:59:PRO:HB2	26:W:60:VAL:H	1.66	0.41
27:X:74:LYS:HB3	27:X:75:ASN:H	1.37	0.41
29:Z:100:ILE:O	29:Z:104:LEU:HG	2.21	0.41
30:a:20:ASP:O	30:a:21:PHE:HB2	2.19	0.41
30:a:38:LYS:NZ	30:a:64:ILE:HG13	2.36	0.41
30:a:40:THR:O	30:a:62:TYR:HE2	2.03	0.41
30:a:176:ARG:HA	30:a:182:LEU:HD23	2.03	0.41
30:a:242:ARG:HH12	30:a:244:ARG:NE	2.16	0.41
32:c:9:ILE:CG2	32:c:124:LEU:HB2	2.51	0.41
32:c:39:TRP:CZ2	32:c:43:LYS:NZ	2.84	0.41
32:c:45:ARG:NE	32:c:97:TYR:HD2	2.18	0.41
32:c:157:VAL:HG12	32:c:176:LEU:O	2.21	0.41
33:d:163:ALA:O	33:d:165:THR:N	2.54	0.41
34:e:76:VAL:HG23	34:e:77:LYS:N	2.35	0.41
35:f:15:LEU:HD13	35:f:130:HIS:CG	2.56	0.41
35:f:66:LYS:C	35:f:88:GLU:OE2	2.63	0.41
36:g:12:ASP:C	36:g:94:ARG:HD2	2.46	0.41
36:g:32:TYR:HB3	36:g:33:ALA:H	1.64	0.41
37:h:95:VAL:HG12	37:h:95:VAL:O	2.20	0.41
38:i:28:ALA:HB1	38:i:31:ASP:HA	2.02	0.41
41:l:28:VAL:HG13	41:l:90:GLN:HB2	2.02	0.41
41:l:95:ARG:HH22	41:l:96:ARG:HH22	1.68	0.41
43:n:62:LEU:HD22	43:n:96:ILE:HB	2.03	0.41
46:q:41:GLY:HA2	46:q:62:GLU:OE2	2.21	0.41
47:r:70:LEU:HD23	47:r:91:LEU:HD11	2.02	0.41
47:r:80:ARG:HD2	47:r:82:ARG:CZ	2.50	0.41
48:s:25:ARG:CD	48:s:29:GLN:HE22	2.26	0.41
48:s:68:GLU:HB2	48:s:80:HIS:HB2	2.03	0.41
49:t:44:LYS:HD2	49:t:44:LYS:HA	1.80	0.41
52:w:4:HIS:O	52:w:6:VAL:HB	2.21	0.41
53:x:25:LYS:HB2	55:z:35:GLN:OE1	2.21	0.41
54:y:42:LEU:O	54:y:45:ALA:N	2.52	0.41
55:z:16:ILE:HG21	55:z:57:ARG:NH1	2.33	0.41
55:z:55:ALA:O	55:z:58:ILE:N	2.45	0.41
56:B:53:ARG:HA	56:B:53:ARG:HH11	1.86	0.41
56:B:87:VAL:O	56:B:87:VAL:HG12	2.20	0.41
56:B:194:ALA:CB	56:B:195:PRO:CD	2.95	0.41
56:B:222:VAL:CG1	56:B:264:LEU:HD13	2.42	0.41
56:B:297:ALA:CB	56:B:328:ALA:CB	2.73	0.41
56:B:322:LYS:CE	56:B:323:LEU:HD12	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:379:LYS:O	56:B:406:LEU:HB3	2.15	0.41
56:B:379:LYS:CD	56:B:407:GLU:H	2.32	0.41
56:B:492:VAL:CG2	56:B:541:ILE:CG1	2.67	0.41
56:B:598:LEU:HD12	56:B:598:LEU:HA	1.78	0.41
1:1:19:ARG:HH12	1:1:26:ILE:HD11	1.86	0.41
3:3:12:LEU:CB	3:3:13:PRO:CD	2.99	0.41
3:3:74:ALA:N	7:D:1059:G:O2'	2.54	0.41
6:A:55:A:C5	6:A:56:U:C5	3.09	0.41
6:A:85:U:O2'	6:A:86:U:H5'	2.20	0.41
6:A:115:G:C2	6:A:289:G:C8	3.09	0.41
6:A:217:C:HO2'	6:A:218:C:H5'	1.84	0.41
6:A:327:A:C4	6:A:329:A:N7	2.89	0.41
6:A:594:G:N7	6:A:595:G:C5	2.89	0.41
6:A:767:A:C5	6:A:768:A:N7	2.89	0.41
6:A:926:G:C6	6:A:1505:G:C6	3.08	0.41
6:A:1038:C:C4	6:A:1039:C:N4	2.89	0.41
6:A:1127:G:N2	6:A:1148:U:O4	2.54	0.41
6:A:1162:C:H2'	6:A:1163:C:H6	1.86	0.41
6:A:1198:G:H2'	6:A:1199:U:O4'	2.20	0.41
6:A:1231:G:N2	6:A:1232:U:C2	2.89	0.41
6:A:1234:C:H2'	6:A:1235:U:H6	1.86	0.41
6:A:1320:C:H5'	26:W:37:ARG:HH11	1.86	0.41
6:A:1393:U:H4'	6:A:1501:C:O2'	2.21	0.41
6:A:1408:A:N1	6:A:1494:G:O4'	2.54	0.41
6:A:1419:G:C5	6:A:1482:G:N2	2.89	0.41
7:D:49:A:C4	7:D:177:G:C6	3.09	0.41
7:D:79:G:H2'	7:D:80:G:H8	1.85	0.41
7:D:117:G:C6	7:D:119:A:N6	2.88	0.41
7:D:181:A:C5	7:D:435:C:C2	3.09	0.41
7:D:270(B):A:H1'	7:D:270(C):C:C5	2.56	0.41
7:D:293:U:OP2	7:D:293:U:H6	2.04	0.41
7:D:535:C:C4	7:D:536:A:N6	2.81	0.41
7:D:543:C:C2	7:D:551:G:N1	2.89	0.41
7:D:548:A:N6	7:D:549:G:N3	2.69	0.41
7:D:559:G:O2'	7:D:560:C:P	2.79	0.41
7:D:625:G:C5	7:D:626:U:C6	3.09	0.41
7:D:776:G:O2'	7:D:777:A:P	2.79	0.41
7:D:780:G:C6	7:D:782:A:N1	2.89	0.41
7:D:945:A:N1	7:D:2448:A:N7	2.69	0.41
7:D:1044:G:C5	7:D:1044:G:OP1	2.74	0.41
7:D:1056:G:C2	7:D:1102:C:H5	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1178:C:N3	7:D:1179:C:N4	2.69	0.41
7:D:1268:A:O2'	7:D:2613:U:O2	2.23	0.41
7:D:1344:G:H2'	7:D:1344:G:N3	2.36	0.41
7:D:1447:G:N2	7:D:1448:G:C4	2.89	0.41
7:D:1455:G:N2	7:D:1456:G:C5	2.88	0.41
7:D:1488:G:C5	7:D:1489:U:C5	3.09	0.41
7:D:1491:G:H8	7:D:1491:G:O5'	2.03	0.41
7:D:1506:C:H2'	7:D:1507:A:O3'	2.21	0.41
7:D:1606:G:H4'	7:D:1608:A:C2	2.56	0.41
7:D:1766:U:H2'	7:D:1767:C:H6	1.86	0.41
7:D:1782:C:N3	7:D:2587:A:N1	2.69	0.41
7:D:1862:G:N2	7:D:1863:G:C5	2.88	0.41
7:D:1998:G:C6	7:D:1999:C:C4	3.08	0.41
7:D:2047:U:HO2'	7:D:2048:G:P	2.44	0.41
7:D:2056:G:O5'	7:D:2057:A:OP2	2.39	0.41
7:D:2101:G:N2	7:D:2189:U:H1'	2.36	0.41
7:D:2115:G:C4'	7:D:2116:G:OP2	2.69	0.41
7:D:2126:A:N1	7:D:2162:G:O2'	2.50	0.41
7:D:2136:C:H3'	7:D:2137:C:C6	2.55	0.41
7:D:2195:C:H3'	7:D:2196:C:H6	1.86	0.41
7:D:2338:G:N1	7:D:2339:G:C5	2.89	0.41
7:D:2376:A:C4	40:k:94:TYR:HE2	2.38	0.41
7:D:2519:U:O2'	7:D:2520:C:P	2.79	0.41
7:D:2542:A:OP2	7:D:2542:A:O4'	2.39	0.41
7:D:2545:G:C2	7:D:2546:U:O2	2.74	0.41
7:D:2681:C:OP2	7:D:2681:C:O2	2.39	0.41
7:D:2836:U:N3	7:D:2883:A:N6	2.69	0.41
7:D:2854:G:C2	7:D:2855:C:C2	3.09	0.41
7:D:2895:U:C6	7:D:2895:U:H3'	2.55	0.41
8:E:30:C:H1'	8:E:58:A:C2	2.56	0.41
8:E:57:A:C2	33:d:29:TRP:HA	2.53	0.41
9:F:49:GLU:HA	9:F:52:GLU:OE2	2.20	0.41
9:F:50:GLU:OE2	9:F:201:ILE:HA	2.21	0.41
9:F:61:LEU:HD22	9:F:68:ILE:CG1	2.50	0.41
10:G:177:THR:HG23	10:G:180:ALA:HB2	2.02	0.41
11:H:60:GLU:HG3	11:H:198:VAL:HG12	2.03	0.41
16:M:83:ARG:HA	16:M:86:VAL:HG23	2.03	0.41
19:P:28:LYS:HD2	19:P:33:ARG:NH2	2.32	0.41
19:P:66:VAL:HG21	19:P:98:TYR:CE2	2.56	0.41
19:P:123:LYS:HE3	19:P:123:LYS:HB3	1.91	0.41
20:Q:71:ARG:O	20:Q:76:ALA:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:81:LEU:HA	20:Q:81:LEU:HD13	1.83	0.41
20:Q:93:ARG:C	20:Q:95:GLY:N	2.78	0.41
20:Q:96:LEU:HD23	20:Q:96:LEU:HA	1.84	0.41
27:X:46:GLU:CD	27:X:48:LYS:HD3	2.45	0.41
29:Z:20:TYR:CE2	29:Z:28:LEU:HD22	2.48	0.41
29:Z:53:ARG:NH2	29:Z:55:ASP:OD2	2.54	0.41
29:Z:70:LYS:N	29:Z:157:LYS:HA	2.35	0.41
30:a:205:VAL:O	30:a:205:VAL:HG13	2.20	0.41
32:c:12:LEU:CD2	32:c:127:GLU:HB2	2.51	0.41
32:c:18:ARG:HB2	32:c:18:ARG:NH1	2.36	0.41
34:e:9:ILE:HG22	34:e:11:VAL:HG23	2.03	0.41
34:e:92:ILE:HA	34:e:94:TYR:CE2	2.56	0.41
34:e:138:LYS:O	34:e:141:VAL:HB	2.22	0.41
35:f:58:ASP:HA	35:f:95:PRO:CB	2.51	0.41
36:g:5:GLN:HA	36:g:21:CYS:O	2.21	0.41
36:g:86:ILE:HD13	36:g:90:GLN:HG3	2.02	0.41
36:g:101:PRO:HG3	36:g:119:PRO:O	2.21	0.41
38:i:22:LYS:HZ3	38:i:23:GLY:C	2.23	0.41
38:i:79:LEU:HD12	56:B:571:LYS:HZ3	1.84	0.41
39:j:77:ARG:C	39:j:80:PHE:H	2.28	0.41
40:k:82:ILE:HD11	40:k:84:GLN:HE22	1.86	0.41
46:q:106:LEU:HD23	46:q:110:GLU:OXT	2.21	0.41
48:s:46:LYS:HZ3	48:s:76:GLY:HA3	1.81	0.41
51:v:5:ILE:HG22	51:v:6:HIS:N	2.33	0.41
56:B:81:ILE:HG22	56:B:83:THR:CG2	2.51	0.41
56:B:196:LEU:HD23	56:B:282:LEU:HG	2.03	0.41
56:B:410:VAL:HG11	56:B:481:GLN:N	2.16	0.41
56:B:441:LEU:HD23	56:B:441:LEU:HA	1.84	0.41
2:2:33:PRO:HA	7:D:1055:G:O3'	2.21	0.40
3:3:39:LYS:HA	3:3:42:ASN:HD22	1.86	0.40
5:5:76:A:C6	7:D:2422:A:C4	3.09	0.40
6:A:61:G:C5	6:A:107:G:C2	3.09	0.40
6:A:137:C:N4	6:A:226:G:H1	2.19	0.40
6:A:277:C:H5'	24:U:68:ARG:HH12	1.84	0.40
6:A:405:U:O4	6:A:498:A:N7	2.54	0.40
6:A:518:C:C4	6:A:529:G:N7	2.89	0.40
6:A:546:G:OP1	11:H:73:ARG:N	2.46	0.40
6:A:782:A:C8	6:A:783:C:C5	3.09	0.40
6:A:791:G:H22	6:A:1498:U:P	2.44	0.40
6:A:1118:C:H1'	6:A:1179:A:H1'	2.03	0.40
6:A:1155:G:C5	6:A:1156:G:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:1179:A:C6	6:A:1180:A:C6	3.09	0.40
6:A:1188:A:H4'	17:N:61:GLU:OE2	2.21	0.40
6:A:1198:G:C6	6:A:1199:U:C4	3.08	0.40
6:A:1202:G:N2	6:A:1203:C:H1'	2.36	0.40
6:A:1330:U:O5'	6:A:1330:U:H6	2.04	0.40
6:A:1371:G:C6	6:A:1372:U:N3	2.89	0.40
7:D:49:A:N6	7:D:177:G:C4	2.89	0.40
7:D:271:G:C2	7:D:272:G:C8	3.09	0.40
7:D:398:G:N2	7:D:399:G:H1'	2.36	0.40
7:D:563:G:N3	7:D:2018:G:N2	2.69	0.40
7:D:579:G:C2	7:D:1262:A:C4	3.09	0.40
7:D:798:G:C5	7:D:799:G:N7	2.90	0.40
7:D:852:G:C2	7:D:853:G:C4	3.09	0.40
7:D:915:C:C4	7:D:916:G:C5	3.09	0.40
7:D:957:A:N6	7:D:959:A:C2	2.89	0.40
7:D:978:G:C6	7:D:979:G:C4	3.08	0.40
7:D:1050:A:C6	7:D:2751:G:C5	3.09	0.40
7:D:1074:G:N3	7:D:1075:C:N4	2.69	0.40
7:D:1153:C:C4	7:D:1154:G:N7	2.89	0.40
7:D:1212:G:H2'	7:D:1236:G:N2	2.37	0.40
7:D:1296:G:C4	7:D:1645:G:N2	2.89	0.40
7:D:1300:U:H3	7:D:1626:G:HO2'	1.54	0.40
7:D:1356:G:C5	7:D:1357:U:C5	3.09	0.40
7:D:1370:C:N4	7:D:1371:G:C6	2.89	0.40
7:D:1442:G:C2	7:D:1443:G:C4	3.09	0.40
7:D:1665:A:H2	7:D:1666:G:N3	2.19	0.40
7:D:1703:G:N2	7:D:1704:G:C4	2.89	0.40
7:D:1807:G:O2'	7:D:1810:A:N6	2.54	0.40
7:D:2012:G:OP1	44:o:98:LYS:HG3	2.21	0.40
7:D:2046:G:C2	7:D:2623:G:N3	2.89	0.40
7:D:2047:U:C2	7:D:2048:G:C8	3.09	0.40
7:D:2117:A:C6	7:D:2172:U:O4	2.74	0.40
7:D:2137:C:C4	7:D:2138:C:C4	3.09	0.40
7:D:2182:G:C6	7:D:2183:C:N4	2.89	0.40
7:D:2215:G:O2'	7:D:2216:G:P	2.79	0.40
7:D:2291:U:H2'	7:D:2292:C:H6	1.83	0.40
7:D:2356:C:C5	7:D:2357:U:N3	2.90	0.40
7:D:2417:C:H5"	7:D:2418:A:OP2	2.20	0.40
7:D:2643:G:C2	7:D:2772:C:O2	2.73	0.40
7:D:2805:G:C4	7:D:2807:G:O4'	2.75	0.40
7:D:2843:G:H2'	7:D:2844:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:2851:A:HO2'	39:j:64:ARG:NE	2.19	0.40
7:D:2889:C:H2'	7:D:2891:G:C5'	2.51	0.40
8:E:6:C:H2'	8:E:7:G:O4'	2.21	0.40
8:E:75:G:H4'	47:r:36:LYS:CE	2.51	0.40
9:F:186:ALA:O	9:F:201:ILE:N	2.54	0.40
13:J:70:ASP:O	13:J:71:ARG:C	2.63	0.40
20:Q:12:ASN:OD1	20:Q:44:ARG:HB3	2.21	0.40
20:Q:34:LEU:HD22	20:Q:41:PRO:HG3	2.03	0.40
22:S:24:SER:O	22:S:28:GLN:HG2	2.22	0.40
26:W:5:LEU:CD1	26:W:6:LYS:HB3	2.50	0.40
29:Z:127:LEU:O	29:Z:131:LEU:HG	2.21	0.40
30:a:106:ILE:HD11	30:a:144:ALA:HB2	2.03	0.40
30:a:148:GLU:HA	30:a:149:PRO:HD3	1.86	0.40
31:b:8:LYS:HZ2	41:l:6:LEU:HD21	1.85	0.40
32:c:173:VAL:HG22	32:c:174:VAL:C	2.46	0.40
33:d:139:LEU:O	33:d:139:LEU:HD23	2.21	0.40
35:f:93:THR:HG22	35:f:94:HIS:CG	2.56	0.40
40:k:64:GLU:HG3	40:k:68:GLN:HG3	2.02	0.40
43:n:44:LYS:NZ	43:n:100:ARG:NH1	2.68	0.40
51:v:8:LYS:CD	51:v:60:GLN:HE22	2.34	0.40
53:x:30:THR:HB	53:x:31:PRO:HD3	2.01	0.40
54:y:1:MET:HB2	54:y:1:MET:HE2	1.71	0.40
54:y:18:PHE:HD2	54:y:22:MET:CE	2.34	0.40
54:y:37:LYS:HB2	54:y:37:LYS:HE3	1.87	0.40
56:B:25:LEU:CA	56:B:168:GLY:HA3	2.51	0.40
56:B:45:PHE:O	56:B:46:LEU:HB2	2.22	0.40
56:B:197:LYS:HA	56:B:281:THR:CA	2.50	0.40
56:B:337:SER:CA	56:B:393:PRO:HB2	2.51	0.40
56:B:489:LEU:O	56:B:508:ALA:HB3	2.21	0.40
56:B:543:GLY:C	56:B:544:LYS:CG	2.86	0.40
3:3:130:SER:HA	3:3:133:SER:CB	2.51	0.40
5:5:52:G:OP2	5:5:52:G:C8	2.70	0.40
6:A:10:A:C2	6:A:11:G:C5	3.10	0.40
6:A:81:G:H2'	6:A:81:G:N3	2.36	0.40
6:A:99:C:O2'	6:A:101:A:P	2.79	0.40
6:A:147:G:N3	6:A:148:G:C8	2.89	0.40
6:A:208:U:C3'	6:A:208:U:C6	3.04	0.40
6:A:247:G:N7	6:A:278:G:N2	2.68	0.40
6:A:564:C:H2'	6:A:565:U:C6	2.56	0.40
6:A:643:C:H5'	15:L:31:PHE:CE1	2.57	0.40
6:A:778:G:C5	6:A:779:C:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:952:U:H4'	6:A:964:A:H61	1.86	0.40
6:A:987:G:C6	6:A:988:G:N7	2.90	0.40
6:A:1081:G:N2	6:A:1082:G:C4	2.89	0.40
6:A:1129:C:N4	6:A:1139:G:N1	2.69	0.40
6:A:1183:A:O2'	6:A:1184:G:OP2	2.39	0.40
6:A:1285:A:C1'	6:A:1286:A:OP2	2.69	0.40
6:A:1299:A:C5	6:A:1301:U:N3	2.90	0.40
6:A:1413:A:C2	6:A:1488:G:C2	3.08	0.40
6:A:1436:U:H5"	6:A:1437:C:OP2	2.21	0.40
6:A:1451:A:O5'	6:A:1451:A:C8	2.74	0.40
6:A:1483:A:H2'	6:A:1484:C:O4'	2.22	0.40
7:D:85:G:H1'	7:D:103:A:C2	2.56	0.40
7:D:145:G:C6	7:D:146:G:C6	3.09	0.40
7:D:247:G:N1	55:z:8:LYS:HE3	2.35	0.40
7:D:270(O):U:H5"	7:D:270(P):C:H41	1.86	0.40
7:D:277:C:H4'	7:D:278:A:C5	2.56	0.40
7:D:310:A:N6	7:D:312:G:C2	2.90	0.40
7:D:315:G:C6	7:D:316:C:N3	2.89	0.40
7:D:335:C:H2'	7:D:336:C:O4'	2.21	0.40
7:D:337:C:O3'	7:D:339:U:P	2.79	0.40
7:D:899:A:H4'	7:D:900:A:OP2	2.12	0.40
7:D:968:G:C5'	7:D:969:U:OP2	2.69	0.40
7:D:993:G:N1	7:D:1162:G:C5	2.89	0.40
7:D:1000:A:C2	7:D:1155:A:C6	3.09	0.40
7:D:1024:G:N7	7:D:1025:G:C4	2.89	0.40
7:D:1039:G:N7	7:D:1117:G:C6	2.90	0.40
7:D:1059:G:P	7:D:1060:U:OP2	2.79	0.40
7:D:1063:G:OP2	7:D:1064:C:P	2.79	0.40
7:D:1092:C:H6	7:D:1092:C:P	2.44	0.40
7:D:1145:C:C4	7:D:1146:C:C5	3.09	0.40
7:D:1179:C:H6	7:D:1179:C:H2'	1.64	0.40
7:D:1182:A:N7	7:D:1183:G:C8	2.90	0.40
7:D:1184:G:OP1	50:u:29:ARG:HD3	2.21	0.40
7:D:1221:C:HO2'	7:D:1222:C:P	2.43	0.40
7:D:1247:A:N1	7:D:1249:U:C2	2.89	0.40
7:D:1307:A:C4	7:D:1622:G:N1	2.90	0.40
7:D:1320:C:H4'	7:D:1321:A:OP1	2.20	0.40
7:D:1447:G:C4	7:D:1465:G:N2	2.89	0.40
7:D:1543:A:C8	7:D:1544:C:O2'	2.70	0.40
7:D:1656:C:OP2	31:b:136:ARG:CZ	2.70	0.40
7:D:1707:G:O2'	7:D:1758:G:N2	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1829:A:C4	7:D:1830:C:C6	3.09	0.40
7:D:1864:U:H5"	7:D:2410:G:O2'	2.21	0.40
7:D:1891:G:C6	7:D:1892:C:N3	2.89	0.40
7:D:1919:A:O2'	7:D:1920:C:P	2.78	0.40
7:D:1942:C:C4	7:D:1943:U:N3	2.89	0.40
7:D:2283:C:C5	7:D:2389:G:C4	3.09	0.40
7:D:2345:G:O2'	7:D:2381:C:O2	2.25	0.40
7:D:2491:U:N3	7:D:2492:U:C5	2.90	0.40
7:D:2546:U:HO2'	7:D:2566:A:HO2'	1.64	0.40
7:D:2671:A:H2'	7:D:2672:G:C8	2.56	0.40
7:D:2732:G:H8	7:D:2732:G:OP2	2.04	0.40
7:D:2744:G:C6	7:D:2761:G:C6	3.10	0.40
7:D:2758:A:N6	7:D:2759:G:C6	2.89	0.40
7:D:2807:G:H2'	7:D:2808:U:H5'	2.04	0.40
9:F:44:LEU:O	9:F:48:MET:HG2	2.20	0.40
9:F:178:ARG:NH1	15:L:71:GLY:HA2	2.36	0.40
10:G:123:GLN:NE2	10:G:128:PHE:HZ	2.18	0.40
13:J:45:LEU:HA	13:J:45:LEU:HD23	1.86	0.40
14:K:61:VAL:HG12	14:K:128:ALA:CB	2.52	0.40
15:L:132:GLU:HG2	15:L:133:LEU:O	2.21	0.40
16:M:24:GLY:CA	16:M:57:GLY:HA2	2.51	0.40
26:W:64:GLU:C	26:W:66:MET:H	2.29	0.40
27:X:30:LYS:HA	27:X:33:ILE:HD12	2.02	0.40
27:X:87:LYS:HA	27:X:90:GLN:OE1	2.22	0.40
29:Z:209:LEU:HD11	29:Z:226:PRO:HB2	2.02	0.40
30:a:6:PHE:C	30:a:28:GLU:OE1	2.64	0.40
32:c:51:THR:HG23	32:c:94:PRO:HD2	2.02	0.40
32:c:152:GLU:OE1	32:c:191:ARG:HB3	2.21	0.40
34:e:175:LYS:HZ3	56:B:469:SER:HB3	1.85	0.40
35:f:13:TRP:HD1	35:f:51:PHE:O	2.03	0.40
36:g:73:ASP:O	41:l:79:HIS:ND1	2.54	0.40
44:o:84:ARG:NH1	44:o:98:LYS:CD	2.80	0.40
46:q:71:LYS:HD2	46:q:71:LYS:N	2.36	0.40
47:r:23:LYS:HA	47:r:40:ASP:HA	2.02	0.40
50:u:9:VAL:O	50:u:32:GLN:NE2	2.53	0.40
56:B:15:ILE:HA	56:B:22:LYS:CE	2.49	0.40
56:B:33:THR:HG23	56:B:34:HIS:N	2.36	0.40
56:B:69:ARG:NH2	56:B:178:LEU:HD12	2.32	0.40
56:B:203:SER:C	56:B:204:VAL:HG23	2.45	0.40
56:B:228:ILE:HG13	56:B:282:LEU:HD21	2.03	0.40
56:B:361:LEU:O	56:B:366:GLY:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:379:LYS:HD3	56:B:407:GLU:N	2.35	0.40
56:B:471:SER:C	56:B:473:GLY:H	2.29	0.40
56:B:479:TYR:N	56:B:479:TYR:CD1	2.86	0.40
1:1:2:LYS:HG2	1:1:35:ARG:HB2	2.02	0.40
3:3:53:VAL:O	3:3:53:VAL:HG12	2.21	0.40
4:4:2:G:N2	4:4:3:C:C2	2.90	0.40
6:A:90:C:O2	6:A:91:C:C4	2.74	0.40
6:A:113:G:C2	6:A:315:A:H2	2.39	0.40
6:A:257:G:C2	6:A:258:G:C8	3.09	0.40
6:A:293:G:C6	6:A:294:U:N3	2.90	0.40
6:A:493:G:H2'	6:A:493:G:N3	2.35	0.40
6:A:660:G:C2	6:A:746:A:C4	3.09	0.40
6:A:662:G:H2'	6:A:663:A:C8	2.40	0.40
6:A:674:G:H5'	13:J:50:TYR:CE1	2.56	0.40
6:A:687:A:C8	6:A:704:A:N6	2.90	0.40
6:A:758:G:O2'	6:A:759:A:H5'	2.22	0.40
6:A:774:G:P	30:a:276:LYS:HD2	2.61	0.40
6:A:960:U:H4'	6:A:961:U:C5'	2.50	0.40
6:A:1221:G:C2	6:A:1222:G:C4	3.10	0.40
6:A:1323:G:C2	6:A:1324:A:C4	3.09	0.40
6:A:1433:A:C5	6:A:1468:A:C2	3.09	0.40
7:D:60:G:O2'	7:D:63:U:H5	2.04	0.40
7:D:97:C:O5'	7:D:97:C:H6	2.04	0.40
7:D:252:G:N2	7:D:253:C:C2	2.89	0.40
7:D:269:U:N3	7:D:424:G:C6	2.89	0.40
7:D:270(E):G:H1	7:D:270(T):G:N2	2.20	0.40
7:D:270(E):G:C6	7:D:270(F):U:N3	2.89	0.40
7:D:400:G:N1	51:v:63:TYR:CE2	2.86	0.40
7:D:557:U:O2'	7:D:558:G:H5'	2.22	0.40
7:D:565:C:O2	7:D:577:G:C2	2.74	0.40
7:D:609(A):G:N2	7:D:618(A):C:C2	2.79	0.40
7:D:612:G:N2	7:D:617:G:C6	2.89	0.40
7:D:626:U:H1'	37:h:100:LEU:HD22	2.02	0.40
7:D:743:G:N1	7:D:744:G:C5	2.90	0.40
7:D:744:G:C4	7:D:745:G:H1'	2.57	0.40
7:D:913:U:O2'	7:D:914:C:O5'	2.35	0.40
7:D:919:G:C6	7:D:920:G:C4	3.09	0.40
7:D:991:C:OP2	7:D:1186:G:OP2	2.40	0.40
7:D:1191:G:H2'	7:D:1192:G:O4'	2.22	0.40
7:D:1208:C:C2	7:D:1239:G:C2	3.10	0.40
7:D:1275:A:C6	39:j:16:HIS:CE1	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1319:G:C2	7:D:1320:C:N3	2.90	0.40
7:D:1378:A:N3	7:D:1380:G:C8	2.89	0.40
7:D:1484:G:C6	7:D:1485:G:N7	2.89	0.40
7:D:1557:C:O5'	7:D:1558:A:OP2	2.39	0.40
7:D:1651:G:N2	7:D:1652:A:C4	2.89	0.40
7:D:1671:U:C2	7:D:1673:U:H5'	2.57	0.40
7:D:1789:A:C5	7:D:1790:C:N3	2.89	0.40
7:D:1797:C:N3	7:D:1823:G:C6	2.90	0.40
7:D:1800:C:H5	7:D:1817:G:O6	2.04	0.40
7:D:2001:A:H2'	7:D:2002:G:C8	2.56	0.40
7:D:2093:G:C4	7:D:2225:A:C5	3.09	0.40
7:D:2134:A:H5"	7:D:2135:A:OP2	2.22	0.40
7:D:2137:C:N3	7:D:2154:G:N2	2.67	0.40
7:D:2175:C:O2'	29:Z:221:SER:N	2.54	0.40
7:D:2209:C:H2'	7:D:2211:G:OP1	2.21	0.40
7:D:2274:A:O3'	7:D:2275:C:H3'	2.21	0.40
7:D:2481:G:H4'	7:D:2482:G:H5'	2.04	0.40
7:D:2491:U:C2	7:D:2492:U:C5	3.10	0.40
7:D:2499:C:N4	7:D:2500:U:C4	2.90	0.40
7:D:2634:G:H1	7:D:2784:C:H42	1.69	0.40
8:E:61:G:H2'	8:E:62:C:C6	2.57	0.40
8:E:75:G:C2	8:E:102:G:N2	2.90	0.40
9:F:10:LEU:O	9:F:11:LEU:HB2	2.21	0.40
9:F:224:GLN:HG2	9:F:229:VAL:HG21	2.03	0.40
11:H:165:MET:O	11:H:166:LYS:HB2	2.20	0.40
12:I:53:LEU:CD2	12:I:56:GLN:HE22	2.34	0.40
15:L:6:ILE:O	15:L:10:LEU:HG	2.21	0.40
16:M:58:HIS:NE2	16:M:59:PHE:CD2	2.90	0.40
18:O:22:HIS:HB3	18:O:29:ILE:HG13	2.03	0.40
23:T:39:TYR:CZ	23:T:41:PRO:HA	2.57	0.40
25:V:84:LYS:HD2	25:V:84:LYS:H	1.86	0.40
26:W:51:VAL:CG1	26:W:52:TYR:N	2.83	0.40
34:e:35:VAL:CG1	34:e:75:ALA:HB2	2.51	0.40
34:e:67:LEU:O	34:e:70:THR:OG1	2.26	0.40
34:e:106:THR:HA	34:e:111:HIS:HB2	2.03	0.40
35:f:58:ASP:HA	35:f:95:PRO:HB2	2.03	0.40
37:h:110:TYR:O	37:h:111:ARG:HB2	2.21	0.40
39:j:105:ARG:HE	39:j:105:ARG:HB2	1.75	0.40
40:k:17:ARG:C	40:k:20:ARG:HB2	2.45	0.40
47:r:116:VAL:HG12	47:r:176:PRO:HA	2.03	0.40
49:t:37:GLY:HA3	49:t:41:GLN:NE2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B:65:ARG:HE	56:B:245:PHE:HB2	1.86	0.40
56:B:106:VAL:HG12	56:B:136:ASN:HB2	2.04	0.40
56:B:137:LYS:CA	57:B:701:GCP:C6	2.97	0.40
56:B:280:ILE:O	56:B:281:THR:HG23	2.22	0.40
56:B:298:LYS:C	56:B:479:TYR:OH	2.64	0.40
56:B:327:ASP:O	56:B:328:ALA:C	2.64	0.40
56:B:383:LYS:H	56:B:402:ILE:CG1	2.10	0.40
5:5:15:G:H8	5:5:15:G:OP2	2.03	0.40
6:A:92:G:C5	6:A:93:U:C5	3.08	0.40
6:A:124:G:C6	6:A:125:U:C4	3.09	0.40
6:A:243:A:C5	6:A:245:C:C4	3.09	0.40
6:A:598:U:H2'	6:A:599:C:H6	1.86	0.40
6:A:632:A:C8	6:A:633:G:C8	3.10	0.40
6:A:721:G:H5'	6:A:722:A:C8	2.57	0.40
6:A:722:A:N1	6:A:724:G:C6	2.89	0.40
6:A:812:C:HO2'	6:A:813:U:P	2.43	0.40
6:A:819:A:N6	6:A:1529:G:C5	2.89	0.40
6:A:829:G:H4'	9:F:26:PRO:HG3	2.03	0.40
6:A:1002:G:C2	6:A:1003:G:C6	3.10	0.40
6:A:1133:G:C4	6:A:1134:G:C8	3.10	0.40
6:A:1164:G:C2	6:A:1173:G:C4	3.10	0.40
6:A:1228:C:H41	20:Q:104:ARG:HG2	1.87	0.40
6:A:1235:U:N3	6:A:1236:A:N7	2.69	0.40
6:A:1314:C:H2'	6:A:1315:U:C6	2.56	0.40
6:A:1355:G:C4	6:A:1368:G:C2	3.10	0.40
6:A:1449:C:HO2'	6:A:1450:U:P	2.45	0.40
6:A:1459:C:C5	6:A:1460:A:N7	2.89	0.40
7:D:80:G:C2	7:D:81:G:C5	3.10	0.40
7:D:84:A:C8	46:q:8:LYS:NZ	2.89	0.40
7:D:231:C:C4	7:D:232:G:N2	2.89	0.40
7:D:295:G:N2	7:D:296:C:C2	2.89	0.40
7:D:439:G:O5'	7:D:439:G:C8	2.75	0.40
7:D:765:G:N3	7:D:766:C:C6	2.90	0.40
7:D:774:A:C8	7:D:775:G:N7	2.89	0.40
7:D:882:G:OP2	7:D:883:G:O5'	2.40	0.40
7:D:958:U:OP1	38:i:74:TYR:CE2	2.75	0.40
7:D:1048:A:C2	7:D:1111:A:N3	2.89	0.40
7:D:1083:U:H2'	7:D:1085:A:OP2	2.21	0.40
7:D:1338:G:C2	7:D:1339:G:C8	3.09	0.40
7:D:1353:A:OP2	7:D:1377:G:N2	2.50	0.40
7:D:1389:G:C6	7:D:1390:U:C4	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1448:G:N2	7:D:1463:C:C2	2.87	0.40
7:D:1488:G:C6	7:D:1489:U:C4	3.09	0.40
7:D:1536:A:H2'	7:D:1537:C:C6	2.56	0.40
7:D:1543:A:H8	7:D:1544:C:HO2'	1.66	0.40
7:D:1562:A:C6	7:D:1563:G:C5	3.10	0.40
7:D:1966:A:H1'	7:D:2593:U:H4'	2.02	0.40
7:D:2000:G:C2	7:D:2001:A:N7	2.90	0.40
7:D:2165:G:H3'	7:D:2166:G:O4'	2.21	0.40
7:D:2585:U:HO2'	7:D:2586:C:C5'	2.34	0.40
7:D:2588:G:C5	7:D:2607:G:C2	3.10	0.40
7:D:2663:G:C6	7:D:2664:G:C5	3.10	0.40
8:E:12:C:H2'	8:E:13:A:H5"	2.03	0.40
8:E:34:U:C4	8:E:44:G:C8	3.09	0.40
9:F:107:THR:O	9:F:110:GLN:N	2.55	0.40
11:H:68:TYR:HE2	11:H:97:LEU:HD13	1.86	0.40
12:I:84:PHE:HD1	12:I:130:ASN:OD1	2.04	0.40
16:M:118:LYS:O	16:M:119:ALA:HB3	2.22	0.40
17:N:45:ARG:HB2	17:N:65:LEU:HB3	2.03	0.40
29:Z:65:PRO:CG	29:Z:154:ARG:NH1	2.80	0.40
29:Z:65:PRO:CG	29:Z:154:ARG:HH11	2.34	0.40
29:Z:193:ILE:HD11	29:Z:212:VAL:HG11	2.03	0.40
30:a:108:PRO:HG3	30:a:143:HIS:CE1	2.56	0.40
33:d:33:ARG:HE	33:d:33:ARG:HB3	1.75	0.40
35:f:26:LEU:HD12	35:f:26:LEU:HA	1.83	0.40
35:f:35:ARG:HD2	35:f:48:MET:CE	2.50	0.40
36:g:106:LEU:CD2	41:l:39:ARG:HH12	2.30	0.40
37:h:7:ARG:CG	37:h:8:PRO:HD3	2.51	0.40
37:h:94:GLU:O	37:h:102:ARG:NH1	2.55	0.40
47:r:46:LYS:O	47:r:50:GLN:HG2	2.22	0.40
53:x:10:LEU:HD12	53:x:28:ARG:CZ	2.52	0.40
55:z:19:SER:OG	55:z:21:LYS:NZ	2.52	0.40
55:z:30:ARG:NE	55:z:44:LYS:HE2	2.37	0.40
56:B:6:LEU:H	56:B:6:LEU:CD1	2.30	0.40
56:B:64:VAL:CG2	56:B:80:LEU:O	2.68	0.40
56:B:173:GLY:O	56:B:174:VAL:C	2.65	0.40
56:B:412:LEU:CD1	56:B:479:TYR:HB3	2.30	0.40
56:B:455:PRO:O	56:B:458:GLU:N	2.42	0.40
5:5:40:C:H2'	5:5:41:C:O4'	2.22	0.40
6:A:20:U:O2	6:A:21:G:C4	2.74	0.40
6:A:185:A:C5	6:A:186:C:C5	3.09	0.40
6:A:186(E):C:C2	6:A:191(C):G:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:241:C:H2'	6:A:242:C:H6	1.86	0.40
6:A:442:C:O2	6:A:493:G:C2'	2.70	0.40
6:A:477:G:C2	6:A:478:A:N9	2.89	0.40
6:A:498:A:N6	6:A:547:A:C8	2.90	0.40
6:A:521:G:N2	6:A:522:C:C2	2.89	0.40
6:A:623:C:N3	6:A:624:C:C4	2.89	0.40
6:A:849:C:C6	6:A:849:C:C3'	3.04	0.40
6:A:872:A:N1	6:A:874:G:C5	2.89	0.40
6:A:922:G:H1	6:A:1395:C:H42	1.68	0.40
6:A:960:U:H2'	6:A:1223:C:H5'	2.03	0.40
6:A:1177:G:P	16:M:93:ARG:HH21	2.45	0.40
6:A:1198:G:C5	6:A:1199:U:C4	3.10	0.40
6:A:1245:A:H2'	6:A:1246:C:C6	2.56	0.40
6:A:1248:A:H1'	16:M:70:LYS:NZ	2.35	0.40
6:A:1349:A:H3'	6:A:1350:A:H8	1.85	0.40
6:A:1365:G:H2'	6:A:1366:C:O4'	2.21	0.40
6:A:1381:U:O2	14:K:79:ARG:HB2	2.22	0.40
6:A:1447:G:N7	6:A:1448:C:N4	2.70	0.40
7:D:118:A:C6	7:D:177:G:N1	2.89	0.40
7:D:270(W):G:O6	7:D:270(X):G:N1	2.54	0.40
7:D:291:C:N4	7:D:292:C:H41	2.19	0.40
7:D:350:U:N3	7:D:351:G:O6	2.33	0.40
7:D:354:G:N1	7:D:355:G:C6	2.89	0.40
7:D:397:G:C2	7:D:398:G:C8	3.10	0.40
7:D:400:G:O6	51:v:62:ARG:HD2	2.21	0.40
7:D:434:U:O2	7:D:435:C:N4	2.51	0.40
7:D:464:U:O2	7:D:788:A:C6	2.73	0.40
7:D:535:C:N3	7:D:536:A:N7	2.70	0.40
7:D:559:G:H21	42:m:49:HIS:CD2	2.40	0.40
7:D:582:G:C2	7:D:1259:G:C2	3.09	0.40
7:D:640:C:N4	7:D:641:C:H41	2.19	0.40
7:D:686:G:O2'	7:D:687:C:OP1	2.33	0.40
7:D:827:U:C4	7:D:2430:A:N6	2.90	0.40
7:D:866:A:C6	7:D:914:C:C5	3.08	0.40
7:D:879:G:C8	7:D:898:C:N4	2.90	0.40
7:D:930:U:O4'	7:D:932:G:C4	2.74	0.40
7:D:948:G:C2	7:D:970:C:O2	2.75	0.40
7:D:1053:C:H2'	7:D:1054:A:C8	2.56	0.40
7:D:1086:A:OP2	7:D:1086:A:O4'	2.39	0.40
7:D:1203:G:C6	7:D:1241:A:C8	3.10	0.40
7:D:1264:G:C6	7:D:1265:A:N6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:1275:A:N7	39:j:16:HIS:NE2	2.70	0.40
7:D:1319:G:H1	7:D:1333:C:N4	2.20	0.40
7:D:1424:G:N2	7:D:1574:C:H1'	2.35	0.40
7:D:1520:U:O5'	7:D:1520:U:H6	2.04	0.40
7:D:1603:A:O2'	7:D:1604:C:O5'	2.39	0.40
7:D:1703:G:C2	7:D:1704:G:C4	3.10	0.40
7:D:1712:C:C3'	7:D:1712:C:C6	3.04	0.40
7:D:1791:A:H5'	30:a:209:ALA:HA	2.03	0.40
7:D:1819:A:HO2'	7:D:1820:U:P	2.42	0.40
7:D:1904:G:N2	7:D:1905:C:H1'	2.37	0.40
7:D:1933:G:O6	7:D:1968:G:N2	2.54	0.40
7:D:2008:C:H2'	7:D:2009:G:C8	2.52	0.40
7:D:2024:G:N3	7:D:2025:C:C6	2.90	0.40
7:D:2134:A:H2'	7:D:2136:C:C5	2.55	0.40
7:D:2148:G:C6	7:D:2149:G:C6	3.10	0.40
7:D:2154:G:N3	7:D:2155:G:C8	2.89	0.40
7:D:2182:G:H2'	7:D:2183:C:O4'	2.22	0.40
7:D:2184:G:C2	7:D:2185:C:C2	3.09	0.40
7:D:2312:U:O2'	33:d:40:ASN:ND2	2.40	0.40
7:D:2344:U:HO2'	7:D:2345:G:P	2.44	0.40
7:D:2679:A:N3	7:D:2729:G:N2	2.70	0.40
7:D:2690:C:H5"	39:j:8:ARG:NH2	2.37	0.40
7:D:2789:C:OP1	7:D:2789:C:H4'	2.21	0.40
7:D:2834:G:C4	7:D:2879:C:N3	2.90	0.40
8:E:40:U:HO2'	8:E:41:U:P	2.44	0.40
9:F:174:VAL:CG1	9:F:196:LEU:HD13	2.48	0.40
15:L:80:ILE:HD12	15:L:80:ILE:H	1.87	0.40
16:M:55:ALA:HB1	16:M:58:HIS:CG	2.56	0.40
18:O:50:TYR:HD1	18:O:54:ARG:NH1	2.20	0.40
19:P:37:CYS:HA	19:P:58:VAL:HG22	2.04	0.40
24:U:67:LYS:HA	24:U:70:ARG:HH22	1.87	0.40
26:W:29:ARG:C	26:W:29:ARG:CD	2.94	0.40
30:a:253:GLN:NE2	30:a:254:THR:HG23	2.36	0.40
31:b:205:ALA:O	31:b:206:LYS:HB3	2.21	0.40
36:g:10:VAL:HG13	36:g:11:ALA:N	2.34	0.40
36:g:56:ASP:N	36:g:56:ASP:OD1	2.55	0.40
37:h:13:ASN:CG	37:h:14:LYS:H	2.30	0.40
37:h:99:LEU:HG	37:h:100:LEU:H	1.87	0.40
38:i:77:LYS:CG	38:i:88:GLY:H	2.30	0.40
43:n:69:LYS:O	43:n:71:LEU:HG	2.21	0.40
45:p:46:ALA:HB1	49:t:28:MET:HE1	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:6:HIS:CE1	46:q:71:LYS:HE2	2.56	0.40
47:r:98:MET:HB2	47:r:127:LYS:O	2.22	0.40
49:t:6:GLU:O	49:t:9:ARG:N	2.54	0.40
53:x:12:GLU:OE2	53:x:52:VAL:O	2.39	0.40
53:x:17:LYS:HZ2	53:x:50:ARG:CB	2.16	0.40
56:B:231:TYR:HD1	56:B:280:ILE:HG12	1.44	0.40
56:B:282:LEU:CG	56:B:283:ALA:N	2.70	0.40
56:B:335:GLU:O	56:B:340:LEU:HA	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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
1	1	35/37 (95%)	23 (66%)	6 (17%)	6 (17%)	0 2
2	2	128/173 (74%)	96 (75%)	23 (18%)	9 (7%)	1 12
3	3	132/147 (90%)	68 (52%)	37 (28%)	27 (20%)	0 1
9	F	232/256 (91%)	179 (77%)	32 (14%)	21 (9%)	0 8
10	G	204/239 (85%)	170 (83%)	21 (10%)	13 (6%)	1 14
11	H	206/209 (99%)	172 (84%)	17 (8%)	17 (8%)	0 9
12	I	148/162 (91%)	125 (84%)	15 (10%)	8 (5%)	1 16
13	J	99/101 (98%)	85 (86%)	8 (8%)	6 (6%)	1 14
14	K	153/156 (98%)	138 (90%)	11 (7%)	4 (3%)	4 27
15	L	136/138 (99%)	112 (82%)	17 (12%)	7 (5%)	1 17
16	M	125/128 (98%)	90 (72%)	27 (22%)	8 (6%)	1 14
17	N	96/105 (91%)	80 (83%)	12 (12%)	4 (4%)	2 19
18	O	117/129 (91%)	104 (89%)	8 (7%)	5 (4%)	2 19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
19	P	122/132 (92%)	91 (75%)	24 (20%)	7 (6%)	1 15
20	Q	112/126 (89%)	77 (69%)	23 (20%)	12 (11%)	0 6
21	R	58/61 (95%)	43 (74%)	9 (16%)	6 (10%)	0 6
22	S	86/89 (97%)	74 (86%)	10 (12%)	2 (2%)	5 30
23	T	81/88 (92%)	69 (85%)	8 (10%)	4 (5%)	1 17
24	U	102/105 (97%)	80 (78%)	16 (16%)	6 (6%)	1 15
25	V	71/88 (81%)	57 (80%)	10 (14%)	4 (6%)	1 15
26	W	78/93 (84%)	30 (38%)	25 (32%)	23 (30%)	0 0
27	X	97/106 (92%)	85 (88%)	8 (8%)	4 (4%)	2 20
28	Y	22/27 (82%)	19 (86%)	3 (14%)	0	100 100
29	Z	226/229 (99%)	187 (83%)	28 (12%)	11 (5%)	1 17
30	a	270/276 (98%)	201 (74%)	38 (14%)	31 (12%)	0 4
31	b	204/206 (99%)	150 (74%)	31 (15%)	23 (11%)	0 5
32	c	206/210 (98%)	165 (80%)	25 (12%)	16 (8%)	1 11
33	d	180/182 (99%)	115 (64%)	42 (23%)	23 (13%)	0 3
34	e	172/180 (96%)	125 (73%)	24 (14%)	23 (13%)	0 3
35	f	137/140 (98%)	107 (78%)	19 (14%)	11 (8%)	1 10
36	g	120/122 (98%)	81 (68%)	24 (20%)	15 (12%)	0 4
37	h	143/150 (95%)	93 (65%)	28 (20%)	22 (15%)	0 2
38	i	134/141 (95%)	92 (69%)	25 (19%)	17 (13%)	0 4
39	j	115/118 (98%)	104 (90%)	6 (5%)	5 (4%)	2 19
40	k	108/112 (96%)	77 (71%)	22 (20%)	9 (8%)	0 9
41	l	115/146 (79%)	80 (70%)	19 (16%)	16 (14%)	0 3
42	m	115/118 (98%)	100 (87%)	11 (10%)	4 (4%)	3 23
43	n	99/101 (98%)	66 (67%)	20 (20%)	13 (13%)	0 3
44	o	108/113 (96%)	86 (80%)	14 (13%)	8 (7%)	1 11
45	p	92/96 (96%)	71 (77%)	14 (15%)	7 (8%)	1 11
46	q	108/110 (98%)	63 (58%)	21 (19%)	24 (22%)	0 1
47	r	178/206 (86%)	130 (73%)	28 (16%)	20 (11%)	0 5
48	s	77/85 (91%)	65 (84%)	10 (13%)	2 (3%)	4 27
49	t	65/67 (97%)	54 (83%)	7 (11%)	4 (6%)	1 14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
50	u	57/60 (95%)	44 (77%)	8 (14%)	5 (9%)	0 9
51	v	69/71 (97%)	35 (51%)	21 (30%)	13 (19%)	0 1
52	w	55/60 (92%)	37 (67%)	11 (20%)	7 (13%)	0 4
53	x	47/54 (87%)	16 (34%)	16 (34%)	15 (32%)	0 0
54	y	47/49 (96%)	33 (70%)	9 (19%)	5 (11%)	0 6
55	z	62/65 (95%)	45 (73%)	8 (13%)	9 (14%)	0 2
56	B	587/610 (96%)	267 (46%)	188 (32%)	132 (22%)	0 0
All	All	6536/6972 (94%)	4756 (73%)	1087 (17%)	693 (11%)	1 6

All (693) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	1	4	ARG
1	1	33	LYS
2	2	77	PRO
2	2	93	LEU
2	2	107	VAL
3	3	23	VAL
3	3	57	ILE
3	3	69	THR
3	3	73	PRO
3	3	90	LYS
3	3	96	VAL
3	3	117	THR
9	F	16	HIS
9	F	20	GLU
9	F	104	ASN
9	F	127	ILE
9	F	158	LEU
10	G	16	ARG
11	H	20	TYR
11	H	30	LYS
11	H	142	PRO
11	H	198	VAL
12	I	73	ASN
12	I	98	THR
13	J	49	ALA
14	K	113	GLU
15	L	97	VAL
16	M	98	PRO

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Mol	Chain	Res	Type
17	N	90	LEU
19	P	77	LEU
19	P	91	LYS
20	Q	36	LYS
20	Q	60	VAL
20	Q	65	LYS
20	Q	81	LEU
21	R	34	TYR
23	T	44	THR
24	U	99	SER
25	V	78	LEU
25	V	81	PHE
26	W	5	LEU
26	W	53	ASN
26	W	55	LYS
26	W	60	VAL
26	W	61	TYR
26	W	62	ILE
26	W	71	LEU
27	X	71	THR
29	Z	37	PHE
30	a	52	ARG
30	a	58	HIS
30	a	59	LYS
30	a	89	SER
30	a	91	ARG
30	a	211	ARG
30	a	226	MET
30	a	243	GLY
30	a	245	PRO
30	a	249	PRO
31	b	16	ARG
31	b	38	THR
31	b	74	PRO
31	b	100	GLU
31	b	119	ARG
31	b	123	ALA
31	b	147	PRO
31	b	178	GLU
31	b	185	LYS
31	b	191	PRO
32	c	45	ARG

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Mol	Chain	Res	Type
32	c	126	VAL
32	c	169	ASN
33	d	27	ASN
33	d	51	ARG
33	d	114	ILE
33	d	123	ASN
33	d	145	THR
35	f	35	ARG
35	f	51	PHE
35	f	65	LYS
35	f	67	LEU
35	f	79	PRO
36	g	22	ILE
36	g	63	VAL
36	g	89	ASN
36	g	101	PRO
36	g	102	VAL
37	h	18	ARG
37	h	42	SER
37	h	47	ASP
37	h	92	GLU
37	h	111	ARG
37	h	122	PRO
38	i	8	LYS
38	i	31	ASP
38	i	66	ILE
38	i	67	ARG
38	i	77	LYS
38	i	78	PRO
38	i	87	LYS
39	j	6	SER
39	j	12	ARG
40	k	31	SER
40	k	32	LEU
40	k	95	HIS
41	l	24	PRO
41	l	28	VAL
41	l	58	ASN
42	m	22	LYS
42	m	89	GLU
43	n	18	LEU
43	n	22	VAL

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Mol	Chain	Res	Type
43	n	69	LYS
43	n	90	PRO
44	o	12	ILE
44	o	65	LEU
44	o	74	ALA
45	p	36	LYS
45	p	89	ILE
46	q	47	LYS
46	q	72	VAL
46	q	77	PRO
46	q	82	PRO
46	q	94	LYS
46	q	107	ASP
47	r	41	LEU
47	r	63	ASP
47	r	146	ILE
48	s	12	ASN
49	t	13	PRO
49	t	38	GLN
49	t	39	LEU
50	u	12	PRO
50	u	17	LYS
50	u	51	ALA
51	v	11	PRO
51	v	27	THR
51	v	41	PRO
51	v	44	THR
51	v	51	ASP
51	v	56	VAL
52	w	23	HIS
52	w	36	CYS
53	x	19	ARG
53	x	25	LYS
53	x	29	ASN
53	x	52	VAL
54	y	5	TRP
54	y	18	PHE
54	y	23	ARG
55	z	32	LEU
56	B	39	ARG
56	B	68	TYR
56	B	146	LEU

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Mol	Chain	Res	Type
56	B	203	SER
56	B	223	ARG
56	B	233	THR
56	B	280	ILE
56	B	296	PRO
56	B	298	LYS
56	B	320	LEU
56	B	328	ALA
56	B	339	ALA
56	B	340	LEU
56	B	386	GLU
56	B	394	ALA
56	B	444	ALA
56	B	475	ALA
56	B	486	PRO
56	B	490	VAL
56	B	497	HIS
56	B	504	LEU
56	B	531	GLN
56	B	557	ASP
56	B	563	TYR
56	B	585	LYS
56	B	587	ILE
1	1	5	ALA
1	1	9	ARG
2	2	30	GLN
2	2	80	VAL
2	2	116	ILE
3	3	24	GLY
3	3	32	ALA
3	3	34	ILE
3	3	49	GLY
3	3	56	GLU
3	3	58	THR
3	3	82	ALA
3	3	93	ARG
9	F	24	TRP
9	F	155	LEU
9	F	191	ASP
10	G	66	VAL
10	G	179	ARG
11	H	4	TYR

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Mol	Chain	Res	Type
11	H	154	ASN
11	H	196	LEU
11	H	200	GLU
12	I	12	LEU
12	I	95	ALA
13	J	53	ALA
14	K	112	PRO
15	L	74	PRO
15	L	121	ASP
16	M	47	LEU
16	M	110	GLU
16	M	116	LYS
17	N	39	PRO
19	P	6	THR
20	Q	45	VAL
20	Q	46	LYS
20	Q	69	GLU
20	Q	98	VAL
20	Q	104	ARG
21	R	16	PHE
21	R	29	ARG
21	R	31	ARG
23	T	43	LYS
23	T	80	PHE
24	U	104	LYS
25	V	20	ALA
26	W	4	SER
26	W	9	VAL
26	W	13	ASP
26	W	59	PRO
29	Z	20	TYR
29	Z	32	LEU
29	Z	166	ASP
30	a	6	PHE
30	a	18	VAL
30	a	55	GLY
30	a	158	ALA
30	a	160	GLY
30	a	163	ALA
30	a	201	HIS
30	a	217	ARG
30	a	219	PRO

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Mol	Chain	Res	Type
30	a	233	HIS
31	b	44	TYR
31	b	53	PRO
31	b	54	GLN
31	b	202	LYS
32	c	14	PRO
32	c	89	VAL
32	c	168	ARG
33	d	24	GLY
33	d	28	VAL
33	d	36	LYS
33	d	64	THR
33	d	71	THR
33	d	124	SER
34	e	12	PRO
34	e	21	PRO
34	e	93	GLY
34	e	107	VAL
34	e	118	PRO
34	e	131	VAL
34	e	164	TYR
35	f	7	LYS
35	f	38	HIS
36	g	13	ASN
36	g	64	ARG
36	g	67	LYS
36	g	119	PRO
37	h	11	GLY
37	h	16	ARG
37	h	24	GLY
37	h	29	LYS
37	h	31	ALA
37	h	107	LYS
37	h	124	LYS
37	h	127	ALA
38	i	20	ALA
38	i	85	LYS
38	i	107	ALA
39	j	14	SER
39	j	89	ASP
40	k	54	LEU
40	k	79	ALA

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Mol	Chain	Res	Type
40	k	82	ILE
40	k	97	ARG
41	l	38	ASN
41	l	98	LYS
41	l	99	LEU
41	l	101	PHE
42	m	72	HIS
43	n	56	SER
43	n	66	ARG
44	o	2	GLU
44	o	63	ASP
45	p	53	LYS
45	p	67	GLY
46	q	8	LYS
46	q	87	LYS
46	q	90	LEU
47	r	12	GLY
47	r	42	VAL
47	r	109	ALA
47	r	123	ASP
47	r	159	PRO
47	r	179	ASP
49	t	66	ASN
51	v	5	ILE
51	v	6	HIS
52	w	11	THR
52	w	12	SER
53	x	16	CYS
53	x	28	ARG
53	x	38	LYS
53	x	41	PRO
53	x	50	ARG
55	z	27	THR
55	z	31	HIS
56	B	9	ILE
56	B	40	GLU
56	B	47	ASP
56	B	71	LYS
56	B	77	VAL
56	B	79	HIS
56	B	82	ASP
56	B	87	VAL

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Mol	Chain	Res	Type
56	B	88	ASP
56	B	158	LEU
56	B	163	ALA
56	B	165	PHE
56	B	190	GLY
56	B	204	VAL
56	B	227	ARG
56	B	231	TYR
56	B	234	GLY
56	B	239	VAL
56	B	240	ASP
56	B	268	ILE
56	B	273	ASP
56	B	300	VAL
56	B	301	VAL
56	B	338	THR
56	B	371	ALA
56	B	398	ASP
56	B	502	ASP
56	B	522	ASP
56	B	526	GLU
56	B	548	ARG
56	B	593	PRO
56	B	594	GLN
2	2	115	GLN
3	3	22	PRO
9	F	131	PRO
9	F	204	ASN
10	G	12	LEU
10	G	64	VAL
10	G	160	ALA
10	G	206	GLU
11	H	35	ARG
11	H	130	GLY
11	H	131	ARG
12	I	143	ARG
12	I	146	ALA
13	J	41	GLU
13	J	56	PRO
14	K	7	ALA
14	K	155	ARG
15	L	87	SER

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Mol	Chain	Res	Type
16	M	58	HIS
16	M	103	THR
17	N	34	VAL
18	O	104	GLN
18	O	111	ASP
19	P	22	SER
22	S	76	GLU
24	U	14	LYS
27	X	99	LEU
29	Z	161	ILE
29	Z	177	LYS
30	a	17	THR
30	a	247	ALA
30	a	271	ILE
31	b	68	ALA
31	b	72	VAL
31	b	118	LYS
31	b	168	MET
31	b	188	VAL
32	c	46	ARG
32	c	130	ALA
32	c	178	PRO
33	d	29	TRP
33	d	32	PRO
33	d	132	ASN
33	d	135	LEU
33	d	164	GLU
33	d	177	GLY
34	e	47	GLU
34	e	156	ALA
34	e	157	TYR
34	e	160	LYS
34	e	169	VAL
35	f	40	PRO
35	f	135	PRO
36	g	4	PRO
36	g	53	LYS
36	g	73	ASP
36	g	93	PRO
37	h	64	LYS
38	i	21	THR
38	i	135	ASP

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Mol	Chain	Res	Type
40	k	5	THR
41	l	19	LEU
41	l	36	GLU
41	l	41	ARG
41	l	110	ILE
43	n	6	LYS
43	n	26	ASP
45	p	48	LYS
45	p	63	LYS
46	q	2	ARG
46	q	35	TYR
46	q	45	VAL
46	q	86	ARG
47	r	51	ALA
47	r	81	ARG
47	r	135	GLU
51	v	21	VAL
51	v	48	ARG
51	v	50	VAL
51	v	55	ARG
52	w	37	LYS
53	x	47	THR
53	x	51	GLU
56	B	8	ARG
56	B	34	HIS
56	B	36	VAL
56	B	42	ARG
56	B	64	VAL
56	B	81	ILE
56	B	86	HIS
56	B	141	PRO
56	B	159	PRO
56	B	170	THR
56	B	189	LYS
56	B	192	PRO
56	B	253	THR
56	B	299	PRO
56	B	305	LEU
56	B	321	GLU
56	B	332	PHE
56	B	368	SER
56	B	373	ALA

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Mol	Chain	Res	Type
56	B	388	VAL
56	B	393	PRO
56	B	402	ILE
56	B	418	GLU
56	B	442	PRO
56	B	500	VAL
56	B	529	PRO
56	B	530	ARG
56	B	544	LYS
3	3	6	ALA
3	3	7	VAL
3	3	63	ARG
3	3	81	ALA
3	3	126	MET
9	F	13	ALA
9	F	21	ARG
9	F	77	ALA
9	F	202	PRO
10	G	4	LYS
10	G	28	GLN
11	H	32	ALA
11	H	125	HIS
11	H	134	ASP
13	J	95	GLU
13	J	100	ASN
17	N	40	LEU
18	O	90	GLY
18	O	112	THR
19	P	17	LYS
19	P	78	GLN
19	P	92	ASP
20	Q	92	HIS
21	R	33	VAL
24	U	53	LEU
24	U	81	ARG
26	W	29	ARG
26	W	34	TRP
26	W	35	SER
26	W	41	VAL
26	W	72	GLY
29	Z	160	ARG
29	Z	164	ARG

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Mol	Chain	Res	Type
30	a	148	GLU
30	a	272	ALA
31	b	70	ALA
33	d	49	ASP
33	d	78	SER
33	d	96	ARG
33	d	178	PHE
34	e	7	LEU
34	e	14	GLY
34	e	104	GLU
34	e	127	GLU
34	e	136	ILE
36	g	28	SER
37	h	66	GLY
37	h	89	ALA
37	h	119	GLU
38	i	17	LEU
38	i	30	GLY
38	i	61	GLY
40	k	9	ARG
41	l	59	THR
42	m	73	GLY
43	n	13	ARG
43	n	72	VAL
44	o	41	LYS
44	o	62	HIS
45	p	57	LEU
46	q	6	HIS
46	q	42	VAL
46	q	57	GLN
46	q	92	ASN
46	q	99	CYS
47	r	11	GLU
47	r	23	LYS
47	r	82	ARG
47	r	168	GLU
47	r	170	THR
48	s	84	LEU
50	u	11	SER
50	u	31	LEU
51	v	53	GLU
53	x	24	GLU

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Mol	Chain	Res	Type
53	x	46	HIS
54	y	37	LYS
54	y	39	ARG
55	z	4	MET
56	B	6	LEU
56	B	37	SER
56	B	44	GLN
56	B	63	ALA
56	B	134	VAL
56	B	186	PRO
56	B	232	SER
56	B	245	PHE
56	B	279	THR
56	B	317	ARG
56	B	326	ASN
56	B	360	ARG
56	B	372	THR
56	B	387	GLU
56	B	390	VAL
56	B	432	ARG
56	B	498	GLY
56	B	598	LEU
1	1	6	SER
1	1	7	VAL
2	2	6	ASN
3	3	8	VAL
3	3	113	PRO
9	F	78	GLN
9	F	122	PHE
9	F	125	PRO
9	F	218	ALA
10	G	127	ARG
11	H	18	LYS
11	H	112	VAL
12	I	141	GLN
12	I	142	LEU
15	L	75	ARG
15	L	105	ARG
20	Q	63	THR
22	S	88	ARG
24	U	34	LYS
26	W	12	ASP

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Mol	Chain	Res	Type
26	W	31	ILE
29	Z	72	VAL
29	Z	175	VAL
30	a	48	ARG
30	a	63	ARG
31	b	133	LYS
31	b	180	ASN
32	c	62	ARG
32	c	69	HIS
32	c	70	THR
32	c	99	TYR
32	c	162	LEU
33	d	25	TYR
33	d	128	ARG
34	e	42	ARG
34	e	105	LEU
36	g	12	ASP
37	h	26	GLY
37	h	72	PRO
39	j	72	ASP
41	l	18	ASP
41	l	96	ARG
44	o	64	MET
46	q	5	MET
46	q	44	ILE
46	q	74	PRO
46	q	85	VAL
47	r	50	GLN
52	w	59	GLU
53	x	35	GLU
53	x	40	CYS
55	z	6	THR
55	z	62	LEU
55	z	63	PRO
56	B	5	ASP
56	B	35	ALA
56	B	72	ASP
56	B	76	TYR
56	B	137	LYS
56	B	155	VAL
56	B	161	ASP
56	B	286	PRO

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Mol	Chain	Res	Type
56	B	324	LYS
56	B	327	ASP
56	B	345	ARG
56	B	403	GLU
56	B	417	PRO
56	B	446	LYS
56	B	505	THR
56	B	553	ALA
56	B	573	LEU
9	F	153	ARG
9	F	230	VAL
10	G	97	LYS
20	Q	66	LEU
21	R	40	CYS
23	T	13	HIS
27	X	97	ALA
30	a	36	PRO
30	a	62	TYR
32	c	4	VAL
34	e	125	VAL
35	f	109	LYS
38	i	110	THR
43	n	9	GLY
46	q	40	GLU
52	w	38	ALA
55	z	3	LYS
56	B	224	PRO
56	B	408	PRO
56	B	518	ARG
3	3	19	PRO
3	3	91	PRO
10	G	41	GLY
11	H	40	PRO
18	O	40	ILE
25	V	80	PRO
26	W	42	PRO
26	W	68	GLY
27	X	98	PRO
30	a	28	GLU
34	e	126	PRO
35	f	46	VAL
47	r	22	GLY

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Mol	Chain	Res	Type
47	r	110	GLY
55	z	45	GLY
56	B	174	VAL
56	B	507	ILE
2	2	31	GLY
3	3	97	GLY
16	M	57	GLY
26	W	58	VAL
31	b	91	VAL
34	e	5	GLY
37	h	34	GLY
37	h	43	GLY
43	n	30	GLY
56	B	276	VAL
56	B	370	ILE
9	F	130	ARG
10	G	174	PRO
15	L	90	GLY
26	W	26	GLY
26	W	45	VAL
30	a	270	ILE
34	e	115	VAL
38	i	106	VAL
41	l	71	GLY
46	q	37	VAL
56	B	191	ASP
56	B	448	VAL
3	3	52	ILE
16	M	22	GLY
29	Z	159	GLY
32	c	132	VAL
41	l	20	PRO
43	n	67	GLY
56	B	210	GLY
56	B	292	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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
1	1	34/34 (100%)	34 (100%)	0	100 100
3	3	101/111 (91%)	92 (91%)	9 (9%)	9 32
9	F	202/220 (92%)	200 (99%)	2 (1%)	68 74
10	G	160/188 (85%)	159 (99%)	1 (1%)	78 79
11	H	180/181 (99%)	178 (99%)	2 (1%)	65 73
12	I	115/123 (94%)	112 (97%)	3 (3%)	40 60
13	J	90/90 (100%)	90 (100%)	0	100 100
14	K	126/127 (99%)	126 (100%)	0	100 100
15	L	119/119 (100%)	119 (100%)	0	100 100
16	M	98/99 (99%)	98 (100%)	0	100 100
17	N	88/92 (96%)	88 (100%)	0	100 100
18	O	90/99 (91%)	90 (100%)	0	100 100
19	P	104/109 (95%)	102 (98%)	2 (2%)	50 66
20	Q	92/101 (91%)	78 (85%)	14 (15%)	3 16
21	R	49/50 (98%)	49 (100%)	0	100 100
22	S	79/80 (99%)	78 (99%)	1 (1%)	61 71
23	T	72/74 (97%)	72 (100%)	0	100 100
24	U	96/97 (99%)	96 (100%)	0	100 100
25	V	64/77 (83%)	64 (100%)	0	100 100
26	W	71/80 (89%)	44 (62%)	27 (38%)	0 0
27	X	76/82 (93%)	76 (100%)	0	100 100
28	Y	19/22 (86%)	19 (100%)	0	100 100
29	Z	180/181 (99%)	176 (98%)	4 (2%)	45 63
30	a	215/218 (99%)	213 (99%)	2 (1%)	70 74
31	b	166/166 (100%)	164 (99%)	2 (1%)	63 72
32	c	164/166 (99%)	161 (98%)	3 (2%)	51 67
33	d	156/156 (100%)	153 (98%)	3 (2%)	50 66
34	e	143/148 (97%)	142 (99%)	1 (1%)	76 77
35	f	118/119 (99%)	116 (98%)	2 (2%)	53 67
36	g	100/100 (100%)	97 (97%)	3 (3%)	36 57
37	h	111/116 (96%)	109 (98%)	2 (2%)	51 67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
38	i	106/111 (96%)	105 (99%)	1 (1%)	70 74
39	j	100/101 (99%)	99 (99%)	1 (1%)	68 74
40	k	87/88 (99%)	87 (100%)	0	100 100
41	l	105/127 (83%)	104 (99%)	1 (1%)	68 74
42	m	93/94 (99%)	92 (99%)	1 (1%)	65 73
43	n	82/82 (100%)	82 (100%)	0	100 100
44	o	90/92 (98%)	90 (100%)	0	100 100
45	p	76/78 (97%)	75 (99%)	1 (1%)	61 71
46	q	91/91 (100%)	91 (100%)	0	100 100
47	r	159/179 (89%)	159 (100%)	0	100 100
48	s	63/67 (94%)	63 (100%)	0	100 100
49	t	62/62 (100%)	62 (100%)	0	100 100
50	u	51/52 (98%)	51 (100%)	0	100 100
51	v	63/63 (100%)	62 (98%)	1 (2%)	55 68
52	w	50/52 (96%)	50 (100%)	0	100 100
53	x	48/52 (92%)	48 (100%)	0	100 100
54	y	42/42 (100%)	42 (100%)	0	100 100
55	z	54/55 (98%)	52 (96%)	2 (4%)	30 54
56	B	490/505 (97%)	336 (69%)	154 (31%)	0 1
All	All	5390/5618 (96%)	5145 (96%)	245 (4%)	26 48

All (245) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	3	10	LEU
3	3	12	LEU
3	3	58	THR
3	3	64	SER
3	3	68	VAL
3	3	93	ARG
3	3	94	GLU
3	3	106	GLU
3	3	120	LEU
9	F	41	ILE
9	F	182	ILE

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Mol	Chain	Res	Type
10	G	134	ILE
11	H	125	HIS
11	H	204	ILE
12	I	45	PHE
12	I	101	ILE
12	I	111	GLU
19	P	80	HIS
19	P	100	ILE
20	Q	64	TRP
20	Q	66	LEU
20	Q	73	GLU
20	Q	79	LYS
20	Q	80	ARG
20	Q	81	LEU
20	Q	88	ARG
20	Q	90	LEU
20	Q	91	ARG
20	Q	92	HIS
20	Q	93	ARG
20	Q	94	ARG
20	Q	102	ARG
20	Q	104	ARG
22	S	42	HIS
26	W	3	ARG
26	W	4	SER
26	W	9	VAL
26	W	15	LEU
26	W	16	LEU
26	W	18	LYS
26	W	20	LEU
26	W	21	GLU
26	W	25	LYS
26	W	28	LYS
26	W	29	ARG
26	W	30	LEU
26	W	32	LYS
26	W	33	THR
26	W	36	ARG
26	W	49	ILE
26	W	55	LYS
26	W	56	GLN
26	W	57	HIS

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Mol	Chain	Res	Type
26	W	58	VAL
26	W	60	VAL
26	W	63	THR
26	W	64	GLU
26	W	66	MET
26	W	77	THR
26	W	78	ARG
26	W	81	ARG
29	Z	130	ILE
29	Z	161	ILE
29	Z	177	LYS
29	Z	180	PHE
30	a	206	LEU
30	a	242	ARG
31	b	5	LEU
31	b	52	LEU
32	c	65	TRP
32	c	99	TYR
32	c	197	ASP
33	d	31	VAL
33	d	34	LEU
33	d	77	ILE
34	e	129	THR
35	f	16	ILE
35	f	52	VAL
36	g	39	ILE
36	g	63	VAL
36	g	77	ILE
37	h	19	VAL
37	h	126	VAL
38	i	74	TYR
39	j	4	LEU
41	l	101	PHE
42	m	65	ILE
45	p	9	LEU
51	v	52	THR
55	z	6	THR
55	z	60	LEU
56	B	4	MET
56	B	6	LEU
56	B	8	ARG
56	B	10	ARG

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Mol	Chain	Res	Type
56	B	13	SER
56	B	17	HIS
56	B	19	ASP
56	B	20	HIS
56	B	23	SER
56	B	25	LEU
56	B	27	ASP
56	B	28	ARG
56	B	31	GLU
56	B	36	VAL
56	B	42	ARG
56	B	44	GLN
56	B	45	PHE
56	B	49	LEU
56	B	52	GLU
56	B	53	ARG
56	B	62	SER
56	B	64	VAL
56	B	65	ARG
56	B	69	ARG
56	B	72	ASP
56	B	80	LEU
56	B	89	PHE
56	B	90	THR
56	B	91	TYR
56	B	95	ARG
56	B	108	ASP
56	B	110	SER
56	B	111	GLN
56	B	123	MET
56	B	135	ILE
56	B	137	LYS
56	B	140	LEU
56	B	144	ARG
56	B	146	LEU
56	B	150	LEU
56	B	153	GLU
56	B	158	LEU
56	B	161	ASP
56	B	164	ILE
56	B	174	VAL
56	B	175	GLU

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Mol	Chain	Res	Type
56	B	178	LEU
56	B	184	ARG
56	B	189	LYS
56	B	193	GLU
56	B	196	LEU
56	B	199	LEU
56	B	206	ASP
56	B	212	ILE
56	B	215	LEU
56	B	217	LEU
56	B	229	ARG
56	B	235	LYS
56	B	240	ASP
56	B	246	THR
56	B	250	LEU
56	B	256	LEU
56	B	257	GLU
56	B	260	GLU
56	B	264	LEU
56	B	269	ARG
56	B	270	ASP
56	B	271	ILE
56	B	278	ASP
56	B	279	THR
56	B	281	THR
56	B	284	ASP
56	B	285	ARG
56	B	294	PHE
56	B	295	ARG
56	B	305	LEU
56	B	306	TYR
56	B	308	VAL
56	B	315	LYS
56	B	316	LEU
56	B	317	ARG
56	B	320	LEU
56	B	322	LYS
56	B	325	LEU
56	B	330	LEU
56	B	331	THR
56	B	336	SER
56	B	337	SER

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Mol	Chain	Res	Type
56	B	340	LEU
56	B	345	ARG
56	B	351	LEU
56	B	352	LEU
56	B	361	LEU
56	B	365	PHE
56	B	367	LEU
56	B	368	SER
56	B	369	LEU
56	B	379	LYS
56	B	381	ARG
56	B	382	LEU
56	B	383	LYS
56	B	387	GLU
56	B	391	HIS
56	B	395	ASP
56	B	398	ASP
56	B	400	THR
56	B	401	ARG
56	B	402	ILE
56	B	412	LEU
56	B	418	GLU
56	B	424	LEU
56	B	425	MET
56	B	429	GLN
56	B	430	GLU
56	B	431	LYS
56	B	432	ARG
56	B	434	ARG
56	B	435	LEU
56	B	440	TYR
56	B	445	GLN
56	B	462	ASP
56	B	464	HIS
56	B	465	ASP
56	B	466	ARG
56	B	467	LEU
56	B	469	SER
56	B	472	ARG
56	B	476	SER
56	B	479	TYR
56	B	481	GLN

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Mol	Chain	Res	Type
56	B	485	ARG
56	B	491	LYS
56	B	495	LEU
56	B	509	HIS
56	B	511	GLU
56	B	518	ARG
56	B	520	ILE
56	B	530	ARG
56	B	532	LEU
56	B	533	PHE
56	B	534	GLU
56	B	538	GLN
56	B	544	LYS
56	B	545	ILE
56	B	548	ARG
56	B	554	LEU
56	B	559	LEU
56	B	574	LEU
56	B	576	LYS
56	B	578	LYS
56	B	582	LYS
56	B	589	LYS
56	B	591	GLU
56	B	598	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (101) such sidechains are listed below:

Mol	Chain	Res	Type
1	1	32	HIS
1	1	36	GLN
3	3	29	GLN
3	3	30	HIS
9	F	95	GLN
9	F	212	GLN
9	F	224	GLN
10	G	6	HIS
10	G	37	GLN
10	G	63	ASN
10	G	69	HIS
10	G	102	ASN
10	G	104	GLN
10	G	162	GLN

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Mol	Chain	Res	Type
11	H	62	GLN
11	H	77	ASN
11	H	129	ASN
12	I	141	GLN
13	J	27	GLN
14	K	84	ASN
14	K	96	GLN
14	K	97	GLN
15	L	81	HIS
16	M	34	ASN
16	M	38	GLN
16	M	89	ASN
17	N	33	GLN
18	O	93	GLN
18	O	117	ASN
19	P	80	HIS
19	P	99	HIS
20	Q	101	GLN
22	S	13	GLN
22	S	37	ASN
22	S	46	HIS
23	T	65	GLN
24	U	26	GLN
24	U	45	HIS
26	W	14	HIS
26	W	69	HIS
27	X	45	GLN
27	X	73	HIS
29	Z	71	GLN
29	Z	165	ASN
30	a	115	GLN
30	a	116	GLN
30	a	201	HIS
30	a	233	HIS
31	b	85	ASN
31	b	129	HIS
31	b	135	HIS
31	b	180	ASN
33	d	130	ASN
34	e	147	ASN
34	e	158	HIS
35	f	94	HIS

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Mol	Chain	Res	Type
36	g	88	ASN
37	h	27	HIS
37	h	84	ASN
37	h	128	HIS
38	i	89	ASN
39	j	13	HIS
39	j	24	GLN
39	j	31	HIS
39	j	50	HIS
40	k	38	GLN
41	l	84	GLN
42	m	14	HIS
42	m	44	ASN
42	m	117	GLN
43	n	11	GLN
43	n	80	GLN
43	n	87	HIS
44	o	34	ASN
44	o	57	ASN
45	p	31	HIS
47	r	54	HIS
47	r	73	GLN
47	r	118	GLN
47	r	151	HIS
49	t	51	GLN
50	u	33	GLN
51	v	20	ASN
51	v	47	GLN
52	w	23	HIS
53	x	29	ASN
53	x	49	HIS
54	y	16	HIS
56	B	17	HIS
56	B	20	HIS
56	B	79	HIS
56	B	127	HIS
56	B	142	ASN
56	B	209	GLN
56	B	248	GLN
56	B	275	GLN
56	B	353	HIS
56	B	358	GLN

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Mol	Chain	Res	Type
56	B	481	GLN
56	B	509	HIS
56	B	577	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
4	4	76/77 (98%)	29 (38%)	0
5	5	75/76 (98%)	32 (42%)	3 (4%)
6	A	1515/1522 (99%)	529 (34%)	102 (6%)
7	D	2888/2893 (99%)	1317 (45%)	205 (7%)
8	E	122/123 (99%)	48 (39%)	4 (3%)
All	All	4676/4691 (99%)	1955 (41%)	314 (6%)

All (1955) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
4	4	5	G
4	4	8	U
4	4	9	G
4	4	13	C
4	4	17	C
4	4	17(A)	U
4	4	18	G
4	4	19	G
4	4	20	U
4	4	21	A
4	4	31	G
4	4	33	U
4	4	36	U
4	4	37	A
4	4	38	A
4	4	39	C
4	4	47	U
4	4	48	C
4	4	49	G
4	4	52	G
4	4	53	G
4	4	57	A
4	4	58	A
4	4	64	G

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Mol	Chain	Res	Type
4	4	66	C
4	4	73	A
4	4	74	C
4	4	75	C
4	4	76	A
5	5	8	U
5	5	9	A
5	5	10	G
5	5	14	A
5	5	15	G
5	5	16	U
5	5	17	C
5	5	19	G
5	5	21	A
5	5	22	G
5	5	23	A
5	5	24	G
5	5	26	A
5	5	27	G
5	5	39	U
5	5	41	C
5	5	42	C
5	5	43	C
5	5	45	U
5	5	47	U
5	5	48	C
5	5	49	C
5	5	52	G
5	5	54	U
5	5	59	U
5	5	61	C
5	5	62	C
5	5	70	G
5	5	71	G
5	5	74	C
5	5	75	C
5	5	76	A
6	A	6	G
6	A	8	A
6	A	9	G
6	A	13	U
6	A	14	U

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Mol	Chain	Res	Type
6	A	30	U
6	A	31	G
6	A	32	A
6	A	37	U
6	A	39	G
6	A	40	C
6	A	42	G
6	A	46	G
6	A	47	C
6	A	48	C
6	A	49	U
6	A	50	A
6	A	51	A
6	A	52	G
6	A	54	C
6	A	61	G
6	A	62	U
6	A	65	U
6	A	66	G
6	A	67	C
6	A	74	C
6	A	75	C
6	A	76	G
6	A	77	C
6	A	80	G
6	A	82	U
6	A	84	U
6	A	85	U
6	A	87	A
6	A	88	C
6	A	90	C
6	A	91	C
6	A	99	C
6	A	101	A
6	A	102	G
6	A	103	C
6	A	110	C
6	A	116	A
6	A	120	A
6	A	121	C
6	A	122	G
6	A	130	A

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Mol	Chain	Res	Type
6	A	131	C
6	A	132	C
6	A	134	A
6	A	155	C
6	A	162	A
6	A	163	C
6	A	165	C
6	A	170	U
6	A	172	A
6	A	173	U
6	A	182	U
6	A	188	U
6	A	189	U
6	A	190	G
6	A	194	C
6	A	195	A
6	A	196	A
6	A	197	A
6	A	200	G
6	A	201	C
6	A	208	U
6	A	209	U
6	A	210	U
6	A	216	G
6	A	224	C
6	A	226	G
6	A	244	U
6	A	245	C
6	A	247	G
6	A	250	A
6	A	251	G
6	A	252	U
6	A	261	U
6	A	262	A
6	A	264	U
6	A	266	G
6	A	267	C
6	A	279	A
6	A	280	C
6	A	282	A
6	A	283	C
6	A	289	G

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Mol	Chain	Res	Type
6	A	299	G
6	A	301	G
6	A	302	G
6	A	304	U
6	A	306	G
6	A	308	C
6	A	309	G
6	A	314	C
6	A	317	G
6	A	319	G
6	A	328	C
6	A	329	A
6	A	330	C
6	A	332	G
6	A	341	C
6	A	342	C
6	A	343	U
6	A	344	A
6	A	345	C
6	A	346	G
6	A	347	G
6	A	351	G
6	A	352	C
6	A	353	A
6	A	354	G
6	A	361	G
6	A	362	G
6	A	365	U
6	A	367	U
6	A	368	U
6	A	371	G
6	A	373	A
6	A	382	A
6	A	384	G
6	A	386	C
6	A	388	G
6	A	389	A
6	A	390	C
6	A	397	A
6	A	398	C
6	A	406	G
6	A	408	A

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Mol	Chain	Res	Type
6	A	410	G
6	A	412	A
6	A	413	G
6	A	414	A
6	A	417	C
6	A	421	U
6	A	422	C
6	A	423	G
6	A	424	G
6	A	429	U
6	A	430	A
6	A	438	G
6	A	439	A
6	A	440	A
6	A	442	C
6	A	443	C
6	A	449	C
6	A	452	A
6	A	455	C
6	A	457	C
6	A	458	C
6	A	464	G
6	A	465	A
6	A	466	C
6	A	467	G
6	A	468	A
6	A	476	G
6	A	477	G
6	A	481	G
6	A	482	A
6	A	485	G
6	A	486	U
6	A	491	G
6	A	494	U
6	A	496	A
6	A	497	U
6	A	500	G
6	A	503	C
6	A	504	C
6	A	511	C
6	A	518	C
6	A	519	C

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Mol	Chain	Res	Type
6	A	521	G
6	A	527	G
6	A	529	G
6	A	530	G
6	A	531	U
6	A	532	A
6	A	533	A
6	A	535	A
6	A	548	G
6	A	555	C
6	A	559	A
6	A	560	U
6	A	561	U
6	A	562	C
6	A	563	A
6	A	564	C
6	A	566	G
6	A	567	G
6	A	571	U
6	A	572	A
6	A	573	A
6	A	575	G
6	A	576	G
6	A	577	G
6	A	579	G
6	A	586	C
6	A	588	G
6	A	592	G
6	A	596	C
6	A	606	G
6	A	607	A
6	A	611	A
6	A	619	U
6	A	624	C
6	A	631	G
6	A	632	A
6	A	636	U
6	A	639	G
6	A	641	U
6	A	642	A
6	A	653	A
6	A	661	G

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Mol	Chain	Res	Type
6	A	665	A
6	A	671	G
6	A	672	U
6	A	679	C
6	A	685	G
6	A	687	A
6	A	688	G
6	A	690	G
6	A	691	G
6	A	695	A
6	A	697	U
6	A	701	C
6	A	702	A
6	A	703	G
6	A	704	A
6	A	718	G
6	A	719	C
6	A	723	U
6	A	730	G
6	A	731	G
6	A	733	A
6	A	738	C
6	A	749	C
6	A	752	G
6	A	755	G
6	A	772	U
6	A	777	A
6	A	778	G
6	A	781	A
6	A	782	A
6	A	784	C
6	A	785	G
6	A	787	A
6	A	793	U
6	A	794	A
6	A	799	G
6	A	811	C
6	A	812	C
6	A	813	U
6	A	815	A
6	A	816	A
6	A	817	C

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Mol	Chain	Res	Type
6	A	818	G
6	A	819	A
6	A	820	U
6	A	821	G
6	A	826	C
6	A	827	U
6	A	828	A
6	A	838	G
6	A	841	U
6	A	842	C
6	A	843	U
6	A	848	C
6	A	850	U
6	A	851	G
6	A	853	G
6	A	866	C
6	A	869	G
6	A	871	U
6	A	873	A
6	A	874	G
6	A	876	G
6	A	884	U
6	A	885	G
6	A	888	G
6	A	889	A
6	A	890	G
6	A	900	A
6	A	902	G
6	A	910	C
6	A	913	A
6	A	914	A
6	A	919	A
6	A	921	U
6	A	927	G
6	A	931	C
6	A	933	G
6	A	934	C
6	A	935	A
6	A	942	G
6	A	950	U
6	A	952	U
6	A	953	G

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Mol	Chain	Res	Type
6	A	954	G
6	A	956	U
6	A	958	A
6	A	960	U
6	A	961	U
6	A	965	A
6	A	966	G
6	A	968	A
6	A	969	A
6	A	971	G
6	A	972	C
6	A	974	A
6	A	975	A
6	A	976	G
6	A	977	A
6	A	978	A
6	A	980	C
6	A	982	U
6	A	983	A
6	A	984	C
6	A	987	G
6	A	991	U
6	A	993	G
6	A	994	A
6	A	998	G
6	A	1002	G
6	A	1003	G
6	A	1004	A
6	A	1005	A
6	A	1006	C
6	A	1009	G
6	A	1010	G
6	A	1014	A
6	A	1016	A
6	A	1021	G
6	A	1023	G
6	A	1024	G
6	A	1025	U
6	A	1026	G
6	A	1027	C
6	A	1028(A)	C
6	A	1029	G

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Mol	Chain	Res	Type
6	A	1031	G
6	A	1032(A)	G
6	A	1045	C
6	A	1046	A
6	A	1050	G
6	A	1052	U
6	A	1053	G
6	A	1054	C
6	A	1055	A
6	A	1056	U
6	A	1060	C
6	A	1062	U
6	A	1064	G
6	A	1065	U
6	A	1066	C
6	A	1084	G
6	A	1085	U
6	A	1094	G
6	A	1095	U
6	A	1096	C
6	A	1101	A
6	A	1102	A
6	A	1108	G
6	A	1115	C
6	A	1117	G
6	A	1118	C
6	A	1121	U
6	A	1124	G
6	A	1125	U
6	A	1126	U
6	A	1127	G
6	A	1129	C
6	A	1130	A
6	A	1131	G
6	A	1132	C
6	A	1136	U
6	A	1137	C
6	A	1138	G
6	A	1139	G
6	A	1140	C
6	A	1146	A
6	A	1148	U

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Mol	Chain	Res	Type
6	A	1151	A
6	A	1157	A
6	A	1158	C
6	A	1159	U
6	A	1164	G
6	A	1165	C
6	A	1170	A
6	A	1173	G
6	A	1181	G
6	A	1183	A
6	A	1184	G
6	A	1188	A
6	A	1189	C
6	A	1191	A
6	A	1192	C
6	A	1195	C
6	A	1196	U
6	A	1197	G
6	A	1200	C
6	A	1201	A
6	A	1202	G
6	A	1203	C
6	A	1211	U
6	A	1212	U
6	A	1215	G
6	A	1220	G
6	A	1224	G
6	A	1225	A
6	A	1227	A
6	A	1237	C
6	A	1238	A
6	A	1239	A
6	A	1240	U
6	A	1241	G
6	A	1242	C
6	A	1249	C
6	A	1250	A
6	A	1251	A
6	A	1256	A
6	A	1257	U
6	A	1258	G
6	A	1259	C

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Mol	Chain	Res	Type
6	A	1265	G
6	A	1268	A
6	A	1269	A
6	A	1277	C
6	A	1278	U
6	A	1279	A
6	A	1280	A
6	A	1281	U
6	A	1282	C
6	A	1286	A
6	A	1287	A
6	A	1297	C
6	A	1298	C
6	A	1299	A
6	A	1300	G
6	A	1301	U
6	A	1302	U
6	A	1303	C
6	A	1305	G
6	A	1307	U
6	A	1310	G
6	A	1312	G
6	A	1316	G
6	A	1317	C
6	A	1320	C
6	A	1321	C
6	A	1322	C
6	A	1327	C
6	A	1329	A
6	A	1331	G
6	A	1332	A
6	A	1336	C
6	A	1338	G
6	A	1340	A
6	A	1345	U
6	A	1346	A
6	A	1347	G
6	A	1348	U
6	A	1349	A
6	A	1353	G
6	A	1358	U
6	A	1360	A

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Mol	Chain	Res	Type
6	A	1361	G
6	A	1362(A)	C
6	A	1363	A
6	A	1364	U
6	A	1365	G
6	A	1366	C
6	A	1370	G
6	A	1378	C
6	A	1379	G
6	A	1380	U
6	A	1381	U
6	A	1389	C
6	A	1395	C
6	A	1397	C
6	A	1398	A
6	A	1400	C
6	A	1401	G
6	A	1408	A
6	A	1418	A
6	A	1419	G
6	A	1433	A
6	A	1436	U
6	A	1439	C
6	A	1441	G
6	A	1442	G
6	A	1443	G
6	A	1446	A
6	A	1447	G
6	A	1450	U
6	A	1452	C
6	A	1453	G
6	A	1454	G
6	A	1455	G
6	A	1459	C
6	A	1460	A
6	A	1463	C
6	A	1467	G
6	A	1469	G
6	A	1478	C
6	A	1481	U
6	A	1483	A
6	A	1487	G

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Mol	Chain	Res	Type
6	A	1492	A
6	A	1494	G
6	A	1495	U
6	A	1497	G
6	A	1499	A
6	A	1504	G
6	A	1505	G
6	A	1506	U
6	A	1507	A
6	A	1515	C
6	A	1517	G
6	A	1518	A
6	A	1519	A
6	A	1520	G
6	A	1525	G
6	A	1528	U
6	A	1529	G
6	A	1530	G
6	A	1531	A
6	A	1532	U
7	D	13	A
7	D	14	A
7	D	15	G
7	D	33	U
7	D	34	C
7	D	35	G
7	D	39	C
7	D	41	C
7	D	46	C
7	D	49	A
7	D	50	U
7	D	51	G
7	D	60	G
7	D	61	G
7	D	63	U
7	D	64	A
7	D	68	G
7	D	71	A
7	D	72	U
7	D	73	A
7	D	74	A
7	D	75	G

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Mol	Chain	Res	Type
7	D	76	C
7	D	84	A
7	D	88	G
7	D	90	U
7	D	91	A
7	D	92	G
7	D	94	G
7	D	95	G
7	D	99	U
7	D	101	G
7	D	102	G
7	D	108	U
7	D	109	G
7	D	112	U
7	D	113	G
7	D	118	A
7	D	119	A
7	D	120	U
7	D	121	G
7	D	125	G
7	D	128	C
7	D	131	G
7	D	132	G
7	D	134	C
7	D	137	C
7	D	138	G
7	D	140	A
7	D	141	A
7	D	143	C
7	D	147	U
7	D	149	A
7	D	152	G
7	D	153	C
7	D	154	G
7	D	155	C
7	D	161	U
7	D	162	U
7	D	163	U
7	D	164	U
7	D	172	C
7	D	178	G
7	D	181	A

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Mol	Chain	Res	Type
7	D	188	G
7	D	190	A
7	D	191	A
7	D	193	U
7	D	195	A
7	D	196	A
7	D	197	A
7	D	200	U
7	D	201	C
7	D	204	A
7	D	205	G
7	D	206	U
7	D	207	A
7	D	210	C
7	D	215	G
7	D	216	A
7	D	217	G
7	D	221	A
7	D	222	A
7	D	223	A
7	D	224	G
7	D	227	A
7	D	228	A
7	D	229	A
7	D	230	U
7	D	232	G
7	D	233	A
7	D	241	A
7	D	242	G
7	D	243	U
7	D	245	G
7	D	248	G
7	D	249	C
7	D	250	G
7	D	252	G
7	D	257	A
7	D	264	C
7	D	265	A
7	D	266	G
7	D	270(A)	A
7	D	270(B)	A
7	D	270(C)	C

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Mol	Chain	Res	Type
7	D	270(F)	U
7	D	270(H)	C
7	D	270(J)	G
7	D	270(K)	C
7	D	270(M)	U
7	D	270(N)	G
7	D	270(O)	U
7	D	270(V)	G
7	D	270(X)	G
7	D	270(Y)	G
7	D	270(Z)	U
7	D	271(A)	C
7	D	271(C)	U
7	D	271	G
7	D	273(F)	C
7	D	275	G
7	D	276	A
7	D	278	A
7	D	279	C
7	D	280	C
7	D	281	G
7	D	282	A
7	D	283	A
7	D	284	U
7	D	287	C
7	D	289	A
7	D	290	G
7	D	293	U
7	D	294	A
7	D	295	G
7	D	296	C
7	D	299	A
7	D	301	G
7	D	303	U
7	D	304	G
7	D	309	G
7	D	310	A
7	D	311	A
7	D	312	G
7	D	316	C
7	D	321	G
7	D	322	A

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Mol	Chain	Res	Type
7	D	323	G
7	D	324	A
7	D	329	G
7	D	330	A
7	D	331	A
7	D	332	A
7	D	335	C
7	D	338	G
7	D	339	U
7	D	340	A
7	D	347	A
7	D	348	G
7	D	349	G
7	D	350	U
7	D	351	G
7	D	356	G
7	D	359	A
7	D	360	G
7	D	363(A)	A
7	D	363(C)	G
7	D	363(F)	A
7	D	370	G
7	D	371	A
7	D	372	G
7	D	373	U
7	D	374	A
7	D	382	G
7	D	385	C
7	D	386	G
7	D	388	G
7	D	390	A
7	D	391	G
7	D	395	U
7	D	397	G
7	D	400	G
7	D	401	A
7	D	405	U
7	D	406	G
7	D	407	G
7	D	411	G
7	D	412	A
7	D	418	G

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Mol	Chain	Res	Type
7	D	420	C
7	D	421	U
7	D	422	A
7	D	423	A
7	D	427	U
7	D	428	A
7	D	431	U
7	D	434	U
7	D	435	C
7	D	440	G
7	D	441	U
7	D	442	G
7	D	443	A
7	D	444	C
7	D	445	C
7	D	446	G
7	D	447	A
7	D	448	U
7	D	449	A
7	D	450	G
7	D	451	C
7	D	452	G
7	D	453	C
7	D	454	A
7	D	455	C
7	D	456	C
7	D	457	A
7	D	458	G
7	D	459	U
7	D	465	G
7	D	471	A
7	D	473	G
7	D	475	U
7	D	478	A
7	D	479	A
7	D	480	A
7	D	481	G
7	D	482	A
7	D	483	A
7	D	486	C
7	D	491	G
7	D	493	G

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Mol	Chain	Res	Type
7	D	494	G
7	D	498	G
7	D	499	U
7	D	501	A
7	D	503	A
7	D	504	U
7	D	505	A
7	D	507	A
7	D	508	G
7	D	510	C
7	D	513	A
7	D	518	G
7	D	526	A
7	D	527	C
7	D	528	A
7	D	529	A
7	D	530	G
7	D	531	C
7	D	532	A
7	D	533	G
7	D	536	A
7	D	539	G
7	D	540	G
7	D	549	G
7	D	550	G
7	D	552	G
7	D	553	U
7	D	554	U
7	D	556	G
7	D	559	G
7	D	560	C
7	D	561	G
7	D	563	G
7	D	568	U
7	D	569	U
7	D	571	A
7	D	572	A
7	D	573	G
7	D	575	A
7	D	583	G
7	D	586	A
7	D	588	U

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Mol	Chain	Res	Type
7	D	599	G
7	D	600	G
7	D	601	C
7	D	603	A
7	D	606	U
7	D	612	G
7	D	613	U
7	D	614	U
7	D	615	G
7	D	616	A
7	D	617	G
7	D	618	G
7	D	619	G
7	D	621	A
7	D	622	G
7	D	625	G
7	D	626	U
7	D	627	A
7	D	631	A
7	D	632	A
7	D	633	A
7	D	634	C
7	D	637	A
7	D	640	C
7	D	642	G
7	D	643	A
7	D	644	A
7	D	645	C
7	D	646	A
7	D	647	G
7	D	648	G
7	D	649	G
7	D	650	C
7	D	651	G
7	D	653	A
7	D	654	A
7	D	655	A
7	D	656	G
7	D	660	G
7	D	668	G
7	D	670	A
7	D	677	A

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Mol	Chain	Res	Type
7	D	687	C
7	D	690	G
7	D	697	C
7	D	698	C
7	D	699	A
7	D	704	G
7	D	705	A
7	D	709	U
7	D	714	U
7	D	715	G
7	D	716	A
7	D	717	G
7	D	724	U
7	D	725	G
7	D	726	G
7	D	727	A
7	D	728	G
7	D	729	G
7	D	730	C
7	D	731	C
7	D	736	C
7	D	739	G
7	D	740	U
7	D	741	G
7	D	745	G
7	D	746	A
7	D	747	U
7	D	748	G
7	D	752	A
7	D	753	C
7	D	760	G
7	D	762	U
7	D	764	A
7	D	771	G
7	D	774	A
7	D	775	G
7	D	776	G
7	D	777	A
7	D	778	G
7	D	779	U
7	D	781	A
7	D	782	A

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Mol	Chain	Res	Type
7	D	783	A
7	D	784	A
7	D	785	G
7	D	789	A
7	D	790	C
7	D	791	C
7	D	792	G
7	D	793	A
7	D	794	G
7	D	800	A
7	D	801	G
7	D	802	A
7	D	803	U
7	D	804	A
7	D	805	G
7	D	806	C
7	D	811	U
7	D	814	C
7	D	819	A
7	D	825	C
7	D	827	U
7	D	828	U
7	D	832	G
7	D	844	C
7	D	846	C
7	D	847	U
7	D	848	G
7	D	857	C
7	D	858	U
7	D	859	G
7	D	860	U
7	D	861	A
7	D	865	C
7	D	866	A
7	D	867	C
7	D	871	U
7	D	876	C
7	D	877	U
7	D	878	A
7	D	880	G
7	D	881	G
7	D	882	G

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Mol	Chain	Res	Type
7	D	883	G
7	D	884	C
7	D	885	C
7	D	886	C
7	D	887	A
7	D	888	C
7	D	889	C
7	D	890	A
7	D	892	G
7	D	894	C
7	D	895	U
7	D	896	A
7	D	898	C
7	D	899	A
7	D	900	A
7	D	901	A
7	D	903	C
7	D	906	G
7	D	907	U
7	D	908	C
7	D	910	A
7	D	918	A
7	D	919	G
7	D	921	G
7	D	923	C
7	D	925	C
7	D	926	A
7	D	928	G
7	D	929	G
7	D	930	U
7	D	931	G
7	D	932	G
7	D	933	A
7	D	941	A
7	D	943	U
7	D	944	G
7	D	945	A
7	D	946	G
7	D	951	C
7	D	952	G
7	D	953	A
7	D	958	U

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Mol	Chain	Res	Type
7	D	959	A
7	D	961	C
7	D	966	G
7	D	968	G
7	D	969	U
7	D	972	G
7	D	973	A
7	D	974	G
7	D	974(A)	C
7	D	980	A
7	D	983	A
7	D	990	A
7	D	991	C
7	D	994	C
7	D	995	C
7	D	996	A
7	D	997	G
7	D	1001	A
7	D	1005	C
7	D	1008	C
7	D	1009	A
7	D	1010	A
7	D	1011	G
7	D	1012	U
7	D	1013	C
7	D	1015	G
7	D	1020	A
7	D	1021	A
7	D	1022	G
7	D	1023	U
7	D	1024	G
7	D	1025	G
7	D	1026	U
7	D	1027	A
7	D	1030	G
7	D	1031	G
7	D	1032	A
7	D	1033	U
7	D	1034	G
7	D	1041	C
7	D	1042	G
7	D	1044	G

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Mol	Chain	Res	Type
7	D	1045	A
7	D	1046	A
7	D	1047	G
7	D	1048	A
7	D	1052	C
7	D	1053	C
7	D	1058	G
7	D	1059	G
7	D	1060	U
7	D	1061	U
7	D	1062	G
7	D	1063	G
7	D	1064	C
7	D	1065	U
7	D	1066	U
7	D	1068	G
7	D	1069	A
7	D	1070	A
7	D	1071	G
7	D	1072	C
7	D	1073	A
7	D	1074	G
7	D	1075	C
7	D	1076	C
7	D	1077	A
7	D	1078	U
7	D	1079	C
7	D	1080	C
7	D	1081	U
7	D	1082	U
7	D	1083	U
7	D	1084	A
7	D	1085	A
7	D	1086	A
7	D	1087	G
7	D	1088	A
7	D	1089	G
7	D	1090	U
7	D	1093	G
7	D	1094	U
7	D	1095	A
7	D	1096	A

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Mol	Chain	Res	Type
7	D	1100	C
7	D	1101	U
7	D	1102	C
7	D	1104	C
7	D	1105	U
7	D	1106	G
7	D	1107	G
7	D	1108	U
7	D	1109	C
7	D	1110	G
7	D	1111	A
7	D	1112	G
7	D	1115	G
7	D	1126	A
7	D	1128	A
7	D	1129	A
7	D	1130	U
7	D	1132	A
7	D	1134	G
7	D	1135	C
7	D	1136	G
7	D	1138	G
7	D	1140	C
7	D	1141	U
7	D	1142(A)	A
7	D	1143	A
7	D	1155	A
7	D	1156	A
7	D	1157	G
7	D	1168	G
7	D	1169	G
7	D	1170	G
7	D	1171	G
7	D	1173	G
7	D	1174	A
7	D	1175	U
7	D	1177	A
7	D	1180	C
7	D	1182	A
7	D	1184	G
7	D	1186	G
7	D	1187	G

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Mol	Chain	Res	Type
7	D	1188	U
7	D	1190	G
7	D	1194	A
7	D	1200	C
7	D	1203	G
7	D	1204	A
7	D	1205	U
7	D	1206	G
7	D	1211	U
7	D	1212	G
7	D	1214	A
7	D	1220	A
7	D	1221	C
7	D	1222	C
7	D	1229	G
7	D	1234	U
7	D	1237	A
7	D	1238	G
7	D	1240	U
7	D	1241	A
7	D	1242	A
7	D	1243	G
7	D	1244	G
7	D	1247	A
7	D	1248	G
7	D	1251	C
7	D	1252	G
7	D	1253	A
7	D	1254	A
7	D	1255	U
7	D	1256	G
7	D	1264	G
7	D	1265	A
7	D	1266	G
7	D	1267	U
7	D	1268	A
7	D	1271	G
7	D	1272	A
7	D	1273	U
7	D	1274	A
7	D	1275	A
7	D	1284	A

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Mol	Chain	Res	Type
7	D	1285	G
7	D	1286	A
7	D	1288	U
7	D	1289	C
7	D	1291	C
7	D	1295	C
7	D	1300	U
7	D	1301	A
7	D	1302	A
7	D	1311	G
7	D	1312	U
7	D	1319	G
7	D	1320	C
7	D	1321	A
7	D	1324	G
7	D	1325	G
7	D	1326	U
7	D	1329	U
7	D	1330	C
7	D	1332	G
7	D	1333	C
7	D	1340	U
7	D	1341	U
7	D	1342	A
7	D	1343	G
7	D	1344	G
7	D	1345	C
7	D	1352	U
7	D	1353	A
7	D	1355	G
7	D	1363	C
7	D	1364	G
7	D	1365	A
7	D	1366	A
7	D	1380	G
7	D	1384	A
7	D	1394	U
7	D	1395	A
7	D	1397	U
7	D	1398	C
7	D	1402	C
7	D	1404	C

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Mol	Chain	Res	Type
7	D	1412	A
7	D	1415	U
7	D	1416	G
7	D	1417	C
7	D	1418	G
7	D	1419	A
7	D	1420	U
7	D	1421	G
7	D	1422	G
7	D	1426	G
7	D	1427	A
7	D	1428	C
7	D	1429	G
7	D	1431	U
7	D	1436	G
7	D	1438	U
7	D	1441	G
7	D	1444(A)	A
7	D	1445	C
7	D	1449(A)	G
7	D	1451	C
7	D	1453	A
7	D	1454	U
7	D	1455	G
7	D	1456	G
7	D	1457	A
7	D	1458	C
7	D	1459	G
7	D	1460	A
7	D	1461	G
7	D	1462	C
7	D	1467	C
7	D	1471	A
7	D	1472	A
7	D	1473	G
7	D	1476	C
7	D	1477	A
7	D	1478	G
7	D	1479	G
7	D	1480	G
7	D	1482	U
7	D	1484	G

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Mol	Chain	Res	Type
7	D	1485	G
7	D	1486	A
7	D	1490	A
7	D	1491	G
7	D	1492	G
7	D	1493	C
7	D	1494	A
7	D	1495	A
7	D	1496	A
7	D	1497	U
7	D	1498	C
7	D	1499	C
7	D	1504	C
7	D	1505	C
7	D	1507	A
7	D	1508	A
7	D	1510	A
7	D	1511	A
7	D	1512	G
7	D	1513	C
7	D	1514	U
7	D	1515	C
7	D	1516	U
7	D	1517	G
7	D	1519	G
7	D	1521	G
7	D	1522	G
7	D	1523	U
7	D	1527	G
7	D	1529	A
7	D	1536	A
7	D	1538	G
7	D	1542	G
7	D	1544	C
7	D	1552	G
7	D	1554	A
7	D	1555	G
7	D	1558	A
7	D	1559	G
7	D	1560	G
7	D	1564	C
7	D	1565	C

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Mol	Chain	Res	Type
7	D	1566	A
7	D	1568	G
7	D	1569	A
7	D	1570	A
7	D	1571	A
7	D	1572	A
7	D	1573	G
7	D	1577	C
7	D	1579	A
7	D	1580	A
7	D	1581	G
7	D	1583	A
7	D	1585	C
7	D	1586	A
7	D	1587	A
7	D	1588	C
7	D	1589	C
7	D	1590	U
7	D	1592	C
7	D	1594	G
7	D	1597	A
7	D	1602	U
7	D	1603	A
7	D	1604	C
7	D	1607	C
7	D	1608	A
7	D	1609	A
7	D	1610	A
7	D	1614	A
7	D	1615	C
7	D	1616	A
7	D	1617	C
7	D	1618	A
7	D	1619	G
7	D	1622	G
7	D	1626	G
7	D	1627	G
7	D	1628	G
7	D	1635	G
7	D	1641	A
7	D	1647	G
7	D	1648	C

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Mol	Chain	Res	Type
7	D	1649	G
7	D	1652	A
7	D	1653	G
7	D	1654	A
7	D	1664	A
7	D	1667	G
7	D	1668	A
7	D	1669	A
7	D	1672	C
7	D	1673	U
7	D	1674	G
7	D	1675	C
7	D	1677	A
7	D	1678	G
7	D	1680	U
7	D	1682	G
7	D	1683	C
7	D	1689	A
7	D	1691	C
7	D	1694	C
7	D	1695	G
7	D	1696	G
7	D	1698	A
7	D	1699	G
7	D	1700	A
7	D	1702	G
7	D	1703	G
7	D	1705	G
7	D	1706	U
7	D	1707	G
7	D	1708	C
7	D	1709	U
7	D	1716	U
7	D	1718	G
7	D	1727	U
7	D	1728	G
7	D	1730	U
7	D	1731	G
7	D	1732	A
7	D	1733	G
7	D	1734	C
7	D	1741	C

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Mol	Chain	Res	Type
7	D	1742	C
7	D	1743	G
7	D	1748	G
7	D	1749	A
7	D	1750	G
7	D	1751	C
7	D	1752	C
7	D	1753	G
7	D	1758	G
7	D	1761	C
7	D	1762	A
7	D	1763	G
7	D	1764	G
7	D	1773	A
7	D	1776	G
7	D	1779	U
7	D	1780	A
7	D	1781	C
7	D	1782	C
7	D	1784	A
7	D	1785	A
7	D	1787	A
7	D	1789	A
7	D	1790	C
7	D	1791	A
7	D	1799	G
7	D	1800	C
7	D	1802	A
7	D	1804	C
7	D	1809	A
7	D	1810	A
7	D	1811	G
7	D	1814	G
7	D	1815	A
7	D	1816	G
7	D	1817	G
7	D	1820	U
7	D	1821	A
7	D	1827	C
7	D	1828	G
7	D	1831	G
7	D	1833	U

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Mol	Chain	Res	Type
7	D	1834	U
7	D	1838	C
7	D	1839	G
7	D	1847	A
7	D	1848	A
7	D	1858	G
7	D	1860	G
7	D	1861	G
7	D	1862	G
7	D	1871	A
7	D	1872	A
7	D	1878	G
7	D	1879	C
7	D	1880	C
7	D	1881	C
7	D	1882	C
7	D	1883	G
7	D	1884	A
7	D	1885	A
7	D	1889	A
7	D	1899	G
7	D	1900	A
7	D	1901	A
7	D	1906	G
7	D	1909	C
7	D	1912	A
7	D	1913	A
7	D	1914	C
7	D	1915	U
7	D	1917	U
7	D	1918	A
7	D	1919	A
7	D	1920	C
7	D	1921	G
7	D	1922	G
7	D	1923	U
7	D	1928	A
7	D	1929	G
7	D	1930	G
7	D	1931	U
7	D	1934	C
7	D	1937	A

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Mol	Chain	Res	Type
7	D	1938	A
7	D	1939	U
7	D	1940	U
7	D	1944	U
7	D	1945	G
7	D	1946	U
7	D	1947	C
7	D	1955	U
7	D	1956	U
7	D	1964	G
7	D	1966	A
7	D	1967	C
7	D	1968	G
7	D	1970	A
7	D	1971	A
7	D	1972	A
7	D	1975	G
7	D	1982	C
7	D	1986	A
7	D	1988	C
7	D	1990	C
7	D	1991	U
7	D	1992	G
7	D	1993	U
7	D	1996	C
7	D	1997	G
7	D	1998	G
7	D	2011	U
7	D	2012	G
7	D	2013	A
7	D	2015	A
7	D	2018	G
7	D	2020	A
7	D	2021	C
7	D	2023	G
7	D	2026	C
7	D	2027	G
7	D	2030	A
7	D	2031	A
7	D	2032	G
7	D	2033	A
7	D	2034	U

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Mol	Chain	Res	Type
7	D	2035	G
7	D	2036	C
7	D	2039	C
7	D	2043	C
7	D	2048	G
7	D	2049	G
7	D	2050	C
7	D	2055	C
7	D	2056	G
7	D	2060	A
7	D	2061	G
7	D	2062	A
7	D	2063	C
7	D	2064	C
7	D	2065	C
7	D	2067	G
7	D	2068	U
7	D	2069	G
7	D	2075	U
7	D	2076	U
7	D	2077	A
7	D	2080	G
7	D	2085	C
7	D	2087	G
7	D	2092	U
7	D	2093	G
7	D	2098	U
7	D	2101	G
7	D	2104	G
7	D	2105	C
7	D	2107	C
7	D	2108	C
7	D	2109	U
7	D	2110	G
7	D	2111	C
7	D	2112	G
7	D	2114	A
7	D	2116	G
7	D	2117	A
7	D	2119	A
7	D	2120	G
7	D	2121	G

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Mol	Chain	Res	Type
7	D	2123	G
7	D	2125	G
7	D	2126	A
7	D	2127	G
7	D	2130	U
7	D	2131	G
7	D	2132	U
7	D	2133	G
7	D	2134	A
7	D	2135	A
7	D	2136	C
7	D	2139	C
7	D	2144	U
7	D	2145	C
7	D	2148	G
7	D	2154	G
7	D	2156	G
7	D	2159	G
7	D	2165	G
7	D	2166	G
7	D	2170	A
7	D	2172	U
7	D	2173	A
7	D	2174	C
7	D	2175	C
7	D	2177	C
7	D	2181	G
7	D	2183	C
7	D	2186	G
7	D	2187	G
7	D	2188	C
7	D	2190	G
7	D	2195	C
7	D	2196	C
7	D	2197	U
7	D	2198	A
7	D	2205	C
7	D	2208	U
7	D	2209	C
7	D	2210	G
7	D	2212	A
7	D	2213	U

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Mol	Chain	Res	Type
7	D	2215	G
7	D	2216	G
7	D	2217	G
7	D	2224	G
7	D	2225	A
7	D	2234	G
7	D	2235	G
7	D	2236	C
7	D	2238	G
7	D	2239	G
7	D	2240	C
7	D	2241	A
7	D	2248	C
7	D	2249	U
7	D	2250	G
7	D	2251	G
7	D	2252	G
7	D	2259	G
7	D	2262	U
7	D	2266	A
7	D	2267	A
7	D	2268	A
7	D	2269	A
7	D	2276	G
7	D	2280	G
7	D	2283	C
7	D	2284	C
7	D	2286	A
7	D	2287	A
7	D	2288	A
7	D	2296	U
7	D	2297	C
7	D	2304	G
7	D	2306	C
7	D	2307	G
7	D	2308	G
7	D	2309	A
7	D	2310	A
7	D	2311	A
7	D	2316	C
7	D	2317	C
7	D	2319	G

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Mol	Chain	Res	Type
7	D	2320	A
7	D	2321	G
7	D	2322	A
7	D	2327	A
7	D	2329	G
7	D	2331	G
7	D	2333	A
7	D	2334	G
7	D	2335	A
7	D	2336	A
7	D	2337	G
7	D	2342	C
7	D	2345	G
7	D	2346	A
7	D	2347	C
7	D	2350	C
7	D	2351	G
7	D	2355	C
7	D	2356	C
7	D	2361	A
7	D	2366	A
7	D	2378	A
7	D	2381	C
7	D	2382	G
7	D	2383	G
7	D	2385	C
7	D	2389	G
7	D	2392	A
7	D	2393	A
7	D	2396	G
7	D	2401	U
7	D	2403	C
7	D	2406	U
7	D	2407	G
7	D	2410	G
7	D	2417	C
7	D	2418	A
7	D	2420	C
7	D	2423	U
7	D	2424	C
7	D	2425	A
7	D	2426	A

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Mol	Chain	Res	Type
7	D	2427	C
7	D	2428	G
7	D	2429	G
7	D	2430	A
7	D	2432	A
7	D	2434	A
7	D	2436	G
7	D	2437	U
7	D	2441	C
7	D	2445	G
7	D	2447	G
7	D	2448	A
7	D	2449	U
7	D	2450	A
7	D	2459	A
7	D	2470	G
7	D	2476	A
7	D	2478	A
7	D	2480	C
7	D	2481	G
7	D	2482	G
7	D	2483	C
7	D	2489	G
7	D	2490	G
7	D	2491	U
7	D	2492	U
7	D	2494	G
7	D	2498	C
7	D	2501	C
7	D	2502	G
7	D	2503	A
7	D	2504	U
7	D	2505	G
7	D	2506	U
7	D	2510	C
7	D	2512	C
7	D	2513	G
7	D	2518	A
7	D	2519	U
7	D	2520	C
7	D	2523	G
7	D	2529	G

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Mol	Chain	Res	Type
7	D	2535	G
7	D	2538	C
7	D	2541	A
7	D	2542	A
7	D	2543	G
7	D	2546	U
7	D	2547	U
7	D	2553	G
7	D	2554	U
7	D	2555	U
7	D	2558	C
7	D	2560	C
7	D	2564	A
7	D	2566	A
7	D	2567	G
7	D	2569	G
7	D	2570	G
7	D	2572	A
7	D	2573	C
7	D	2574	G
7	D	2576	G
7	D	2577	A
7	D	2578	G
7	D	2580	U
7	D	2581	G
7	D	2582	G
7	D	2586	C
7	D	2599	G
7	D	2602	A
7	D	2603	G
7	D	2604	U
7	D	2608	G
7	D	2609	U
7	D	2610	C
7	D	2611	U
7	D	2612	C
7	D	2613	U
7	D	2614	A
7	D	2615	U
7	D	2621	A
7	D	2629	A
7	D	2630	G

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Mol	Chain	Res	Type
7	D	2631	G
7	D	2634	G
7	D	2638	G
7	D	2645	G
7	D	2646	C
7	D	2652	C
7	D	2653	U
7	D	2655	G
7	D	2656	U
7	D	2660	A
7	D	2661	G
7	D	2663	G
7	D	2664	G
7	D	2665	A
7	D	2670	A
7	D	2671	A
7	D	2673	G
7	D	2680	C
7	D	2681	C
7	D	2682	U
7	D	2684	U
7	D	2689	U
7	D	2690	C
7	D	2691	C
7	D	2701	C
7	D	2702	U
7	D	2704	C
7	D	2706	G
7	D	2711	A
7	D	2712	U
7	D	2712(A)	A
7	D	2713	A
7	D	2714	G
7	D	2718	G
7	D	2724	C
7	D	2725	A
7	D	2730	C
7	D	2731	G
7	D	2732	G
7	D	2733	A
7	D	2739	U
7	D	2741	A

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Mol	Chain	Res	Type
7	D	2744	G
7	D	2748	A
7	D	2749	A
7	D	2750	A
7	D	2751	G
7	D	2752	C
7	D	2756	U
7	D	2757	A
7	D	2758	A
7	D	2764	A
7	D	2765	A
7	D	2766	G
7	D	2771	C
7	D	2772	C
7	D	2773	C
7	D	2774	C
7	D	2776	A
7	D	2777	G
7	D	2778	A
7	D	2779	U
7	D	2780	G
7	D	2781	A
7	D	2782	G
7	D	2783	G
7	D	2787	C
7	D	2789	C
7	D	2790	A
7	D	2791	C
7	D	2792	G
7	D	2794	C
7	D	2797	U
7	D	2798	C
7	D	2799	A
7	D	2801	A
7	D	2802	G
7	D	2804	C
7	D	2805	G
7	D	2807	G
7	D	2808	U
7	D	2809	A
7	D	2810	A
7	D	2811	G

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Mol	Chain	Res	Type
7	D	2818	G
7	D	2820	A
7	D	2823	A
7	D	2824	C
7	D	2826	A
7	D	2832	U
7	D	2833	G
7	D	2834	G
7	D	2836	U
7	D	2837	G
7	D	2845	G
7	D	2847	U
7	D	2849	U
7	D	2850	A
7	D	2851	A
7	D	2858	C
7	D	2866	U
7	D	2867	G
7	D	2868	A
7	D	2872	G
7	D	2874	C
7	D	2879	C
7	D	2882	A
7	D	2884	U
7	D	2885	C
7	D	2887	U
7	D	2888	C
7	D	2889	C
7	D	2891	G
7	D	2893	G
7	D	2894	G
7	D	2895	U
7	D	2896	C
7	D	2897	U
7	D	2899	G
8	E	0	A
8	E	1	U
8	E	4	C
8	E	5	C
8	E	7	G
8	E	8	U
8	E	10	C

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Mol	Chain	Res	Type
8	E	12	C
8	E	13	A
8	E	14	U
8	E	15	A
8	E	16	G
8	E	23	G
8	E	24	G
8	E	25	A
8	E	30	C
8	E	31	C
8	E	32	C
8	E	35	U
8	E	41	U
8	E	42	C
8	E	44	G
8	E	45	A
8	E	48	A
8	E	51	G
8	E	52	A
8	E	57	A
8	E	59	A
8	E	62	C
8	E	64	C
8	E	65	C
8	E	67	G
8	E	69	G
8	E	73	A
8	E	75	G
8	E	76	G
8	E	85	G
8	E	88	C
8	E	99	A
8	E	103	U
8	E	105	G
8	E	109	G
8	E	111	U
8	E	115	G
8	E	117	G
8	E	118	G
8	E	119	A
8	E	120	U

All (314) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
5	5	15	G
5	5	58	A
5	5	74	C
6	A	5	U
6	A	13	U
6	A	30	U
6	A	48	C
6	A	50	A
6	A	51	A
6	A	60	A
6	A	99	C
6	A	115	G
6	A	119	A
6	A	129(A)	G
6	A	130	A
6	A	181	G
6	A	196	A
6	A	208	U
6	A	209	U
6	A	210	U
6	A	243	A
6	A	244	U
6	A	250	A
6	A	251	G
6	A	266	G
6	A	279	A
6	A	281	G
6	A	305	G
6	A	308	C
6	A	328	C
6	A	345	C
6	A	366	C
6	A	367	U
6	A	372	C
6	A	388	G
6	A	413	G
6	A	421	U
6	A	428	G
6	A	429	U
6	A	465	A
6	A	481	G
6	A	484	G
6	A	495	A

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Mol	Chain	Res	Type
6	A	498	A
6	A	518	C
6	A	526	C
6	A	547	A
6	A	559	A
6	A	560	U
6	A	566	G
6	A	575	G
6	A	595	G
6	A	653	A
6	A	686	U
6	A	687	A
6	A	701	C
6	A	703	G
6	A	717	C
6	A	748	C
6	A	781	A
6	A	812	C
6	A	838	G
6	A	872	A
6	A	934	C
6	A	960	U
6	A	975	A
6	A	979	C
6	A	982	U
6	A	992	U
6	A	993	G
6	A	1004	A
6	A	1049	U
6	A	1053	G
6	A	1054	C
6	A	1064	G
6	A	1065	U
6	A	1101	A
6	A	1125	U
6	A	1129	C
6	A	1145	C
6	A	1182	G
6	A	1183	A
6	A	1190	G
6	A	1196	U
6	A	1201	A

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Mol	Chain	Res	Type
6	A	1214	C
6	A	1239	A
6	A	1285	A
6	A	1300	G
6	A	1319	A
6	A	1320	C
6	A	1346	A
6	A	1347	G
6	A	1363	A
6	A	1394	A
6	A	1396	A
6	A	1399	C
6	A	1400	C
6	A	1443	G
6	A	1446	A
6	A	1449	C
6	A	1452	C
6	A	1498	U
6	A	1504	G
6	A	1531	A
7	D	13	A
7	D	67	U
7	D	71	A
7	D	72	U
7	D	83	G
7	D	90	U
7	D	119	A
7	D	120	U
7	D	155	C
7	D	190	A
7	D	205	G
7	D	215	G
7	D	221	A
7	D	227	A
7	D	241	A
7	D	247	G
7	D	270(A)	A
7	D	279	C
7	D	280	C
7	D	311	A
7	D	322	A
7	D	323	G

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Mol	Chain	Res	Type
7	D	334	C
7	D	337	C
7	D	339	U
7	D	350	U
7	D	366	C
7	D	373	U
7	D	390	A
7	D	421	U
7	D	446	G
7	D	447	A
7	D	448	U
7	D	455	C
7	D	458	G
7	D	470	A
7	D	474	G
7	D	481	G
7	D	489	G
7	D	503	A
7	D	506	G
7	D	507	A
7	D	512	G
7	D	526	A
7	D	529	A
7	D	537	C
7	D	559	G
7	D	567	A
7	D	587	C
7	D	602	G
7	D	616	A
7	D	626	U
7	D	643	A
7	D	686	G
7	D	726	G
7	D	728	G
7	D	730	C
7	D	740	U
7	D	747	U
7	D	752	A
7	D	776	G
7	D	784	A
7	D	788	A
7	D	800	A

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Mol	Chain	Res	Type
7	D	805	G
7	D	846	C
7	D	858	U
7	D	860	U
7	D	865	C
7	D	884	C
7	D	899	A
7	D	926	A
7	D	930	U
7	D	944	G
7	D	958	U
7	D	973	A
7	D	989	G
7	D	1060	U
7	D	1062	G
7	D	1105	U
7	D	1134	G
7	D	1183	G
7	D	1204	A
7	D	1205	U
7	D	1210	A
7	D	1221	C
7	D	1236	G
7	D	1265	A
7	D	1266	G
7	D	1267	U
7	D	1300	U
7	D	1310	G
7	D	1320	C
7	D	1323	U
7	D	1324	G
7	D	1329	U
7	D	1340	U
7	D	1341	U
7	D	1342	A
7	D	1379	A
7	D	1397	U
7	D	1416	G
7	D	1427	A
7	D	1428	C
7	D	1444	G
7	D	1459	G

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Mol	Chain	Res	Type
7	D	1515	C
7	D	1521	G
7	D	1554	A
7	D	1568	G
7	D	1571	A
7	D	1616	A
7	D	1618	A
7	D	1626	G
7	D	1634	A
7	D	1651	G
7	D	1653	G
7	D	1668	A
7	D	1672	C
7	D	1681	G
7	D	1688	U
7	D	1698	A
7	D	1735	C
7	D	1757	U
7	D	1778	U
7	D	1780	A
7	D	1784	A
7	D	1790	C
7	D	1815	A
7	D	1819	A
7	D	1820	U
7	D	1838	C
7	D	1900	A
7	D	1913	A
7	D	1919	A
7	D	1920	C
7	D	1930	G
7	D	1938	A
7	D	1939	U
7	D	1943	U
7	D	1944	U
7	D	1955	U
7	D	1967	C
7	D	1996	C
7	D	2012	G
7	D	2017	U
7	D	2020	A
7	D	2030	A

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Mol	Chain	Res	Type
7	D	2033	A
7	D	2047	U
7	D	2049	G
7	D	2067	G
7	D	2076	U
7	D	2092	U
7	D	2107	C
7	D	2115	G
7	D	2125	G
7	D	2126	A
7	D	2158	A
7	D	2199	A
7	D	2215	G
7	D	2238	G
7	D	2249	U
7	D	2266	A
7	D	2267	A
7	D	2275	C
7	D	2287	A
7	D	2288	A
7	D	2308	G
7	D	2319	G
7	D	2334	G
7	D	2336	A
7	D	2344	U
7	D	2377	A
7	D	2391	G
7	D	2402	C
7	D	2425	A
7	D	2426	A
7	D	2427	C
7	D	2436	G
7	D	2447	G
7	D	2449	U
7	D	2458	G
7	D	2481	G
7	D	2497	A
7	D	2500	U
7	D	2519	U
7	D	2572	A
7	D	2585	U
7	D	2610	C

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Mol	Chain	Res	Type
7	D	2614	A
7	D	2664	G
7	D	2689	U
7	D	2690	C
7	D	2705	A
7	D	2732	G
7	D	2749	A
7	D	2756	U
7	D	2777	G
7	D	2779	U
7	D	2848	G
7	D	2849	U
7	D	2867	G
7	D	2873	A
7	D	2893	G
8	E	7	G
8	E	14	U
8	E	34	U
8	E	56	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 oligosaccharides in this entry.

5.6 Ligand geometry

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
57	GCP	B	701	-	32,34,34	1.47	7 (21%)	49,54,54	1.82	8 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	GCP	B	701	-	-	5/19/38/38	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	B	701	GCP	C5-C4	3.16	1.47	1.38
57	B	701	GCP	PG-O3G	2.91	1.61	1.55
57	B	701	GCP	PG-O2G	2.89	1.61	1.55
57	B	701	GCP	PB-O3A	2.82	1.61	1.58
57	B	701	GCP	C6-N1	-2.40	1.34	1.38
57	B	701	GCP	PB-O2B	2.03	1.61	1.56
57	B	701	GCP	C5-N7	-2.01	1.35	1.39

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	B	701	GCP	C5-C4-N3	-6.15	118.61	128.39
57	B	701	GCP	C2-N3-C4	5.05	121.00	112.30
57	B	701	GCP	N9-C4-N3	4.54	135.03	125.95
57	B	701	GCP	PB-O3A-PA	-3.65	120.45	132.37
57	B	701	GCP	C6-C5-N7	3.23	136.18	130.29
57	B	701	GCP	C4-C5-N7	-2.59	106.57	110.67
57	B	701	GCP	C3'-C2'-C1'	2.54	106.27	101.46
57	B	701	GCP	O6-C6-C5	-2.10	121.00	126.53

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
57	B	701	GCP	C5'-O5'-PA-O3A
57	B	701	GCP	C5'-O5'-PA-O1A
57	B	701	GCP	PG-C3B-PB-O2B
57	B	701	GCP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
57	B	701	GCP	PB-C3B-PG-O1G

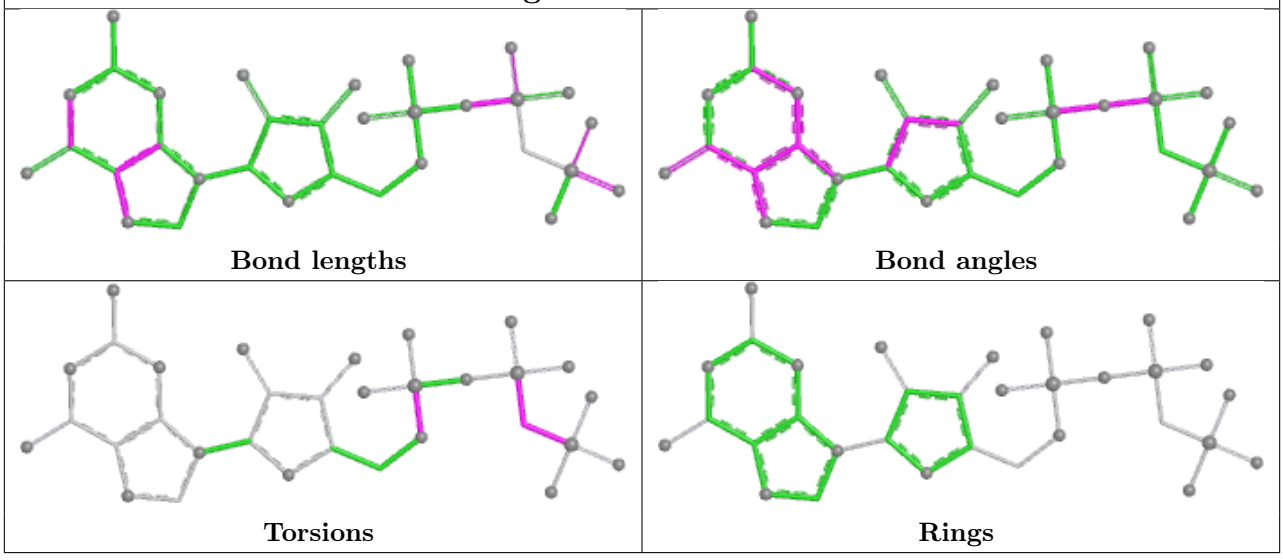
There are no ring outliers.

1 monomer is involved in 51 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	B	701	GCP	51	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GCP B 701



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

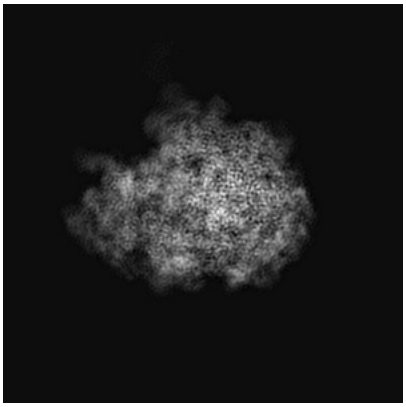
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6584. These allow visual inspection of the internal detail of the map and identification of artifacts.

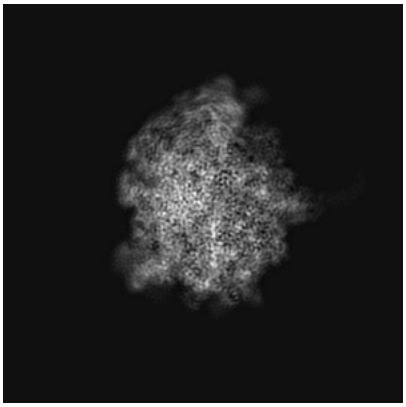
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

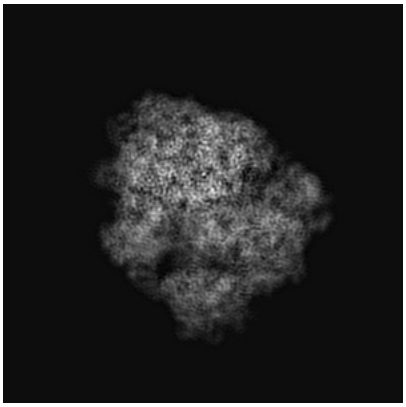
6.1.1 Primary map



X



Y

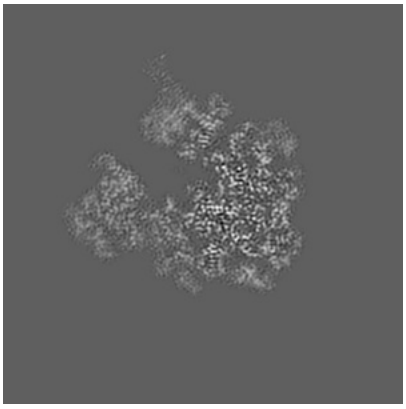


Z

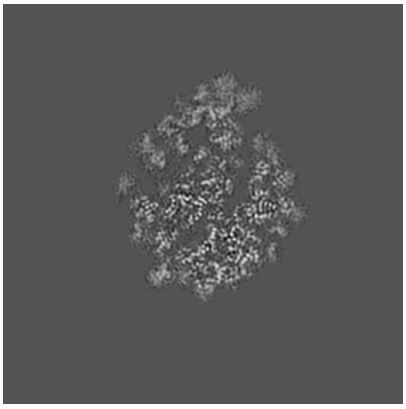
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map



X Index: 162



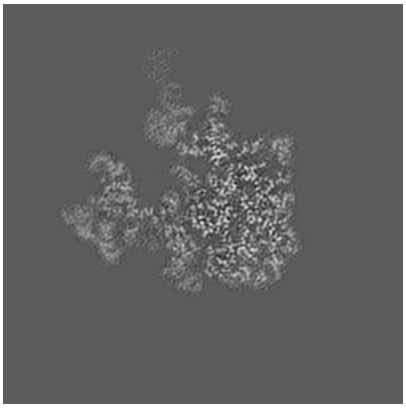
Y Index: 162

Z Index: 162

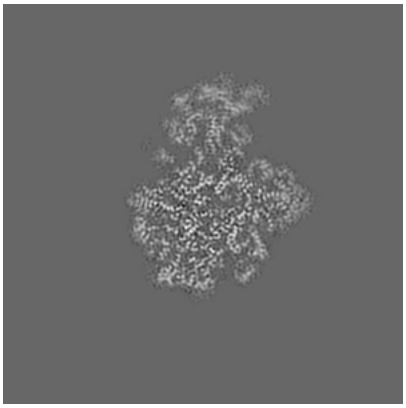
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 168



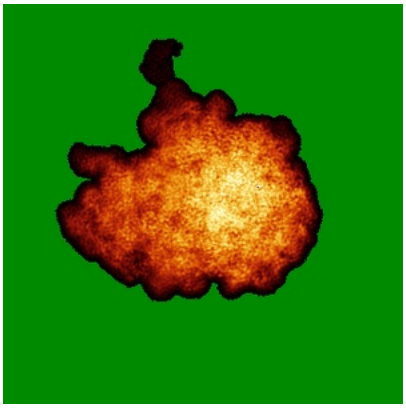
Y Index: 169

Z Index: 170

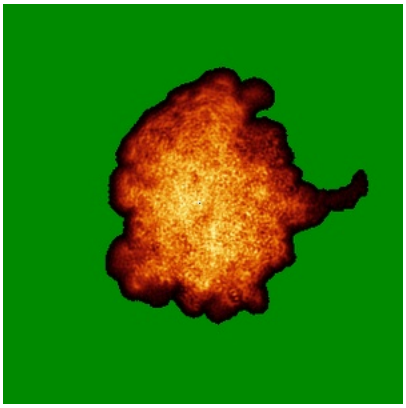
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

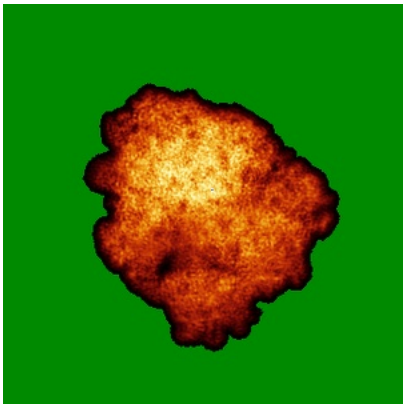
6.4.1 Primary map



X



Y

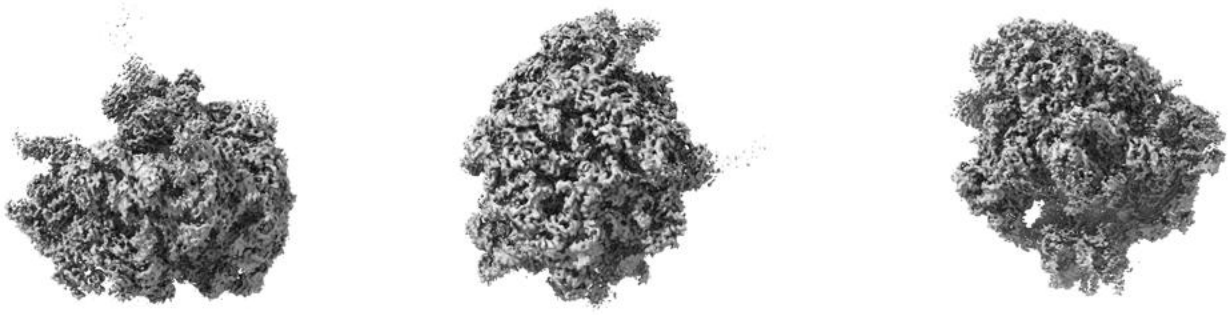


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.095. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

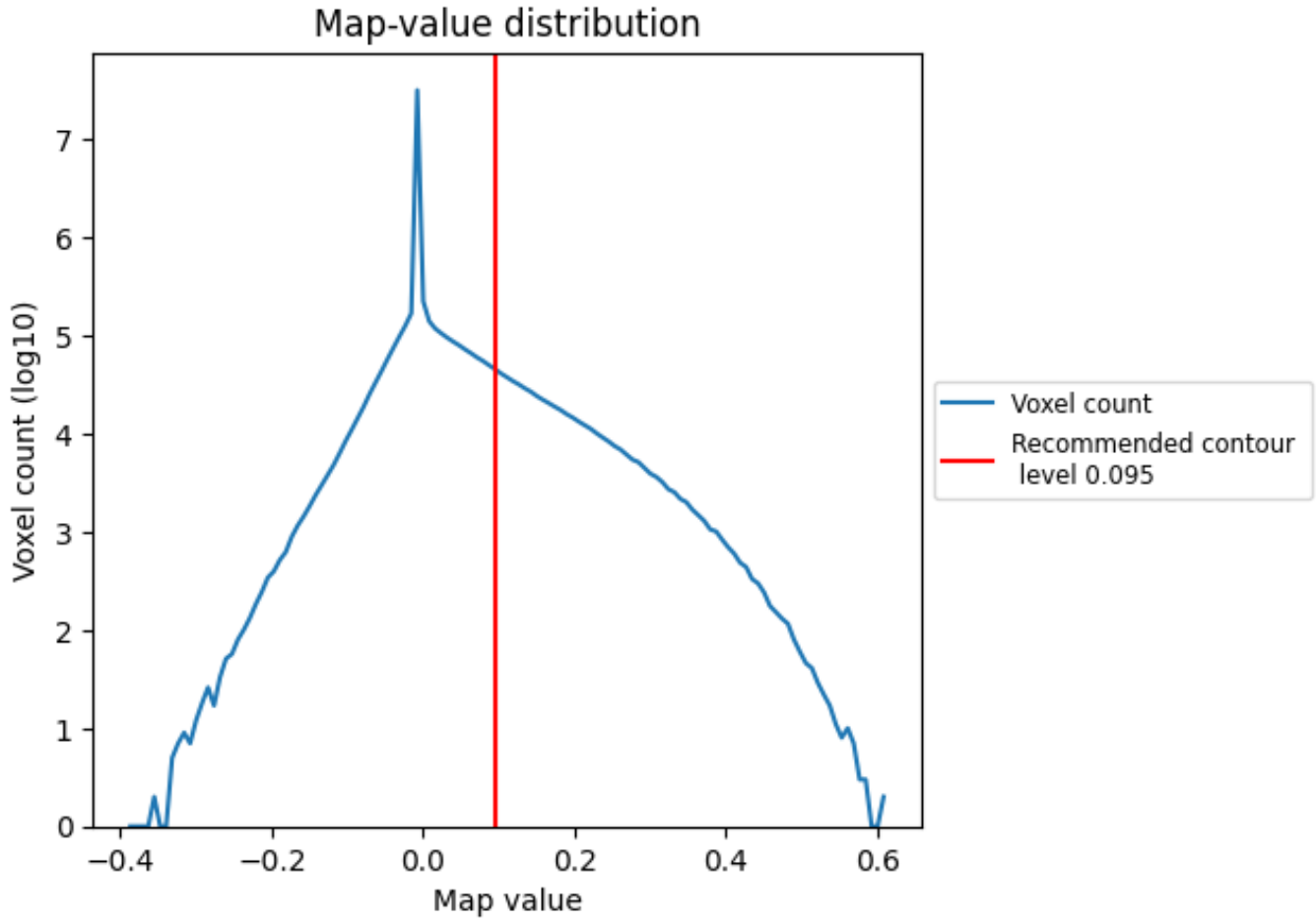
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

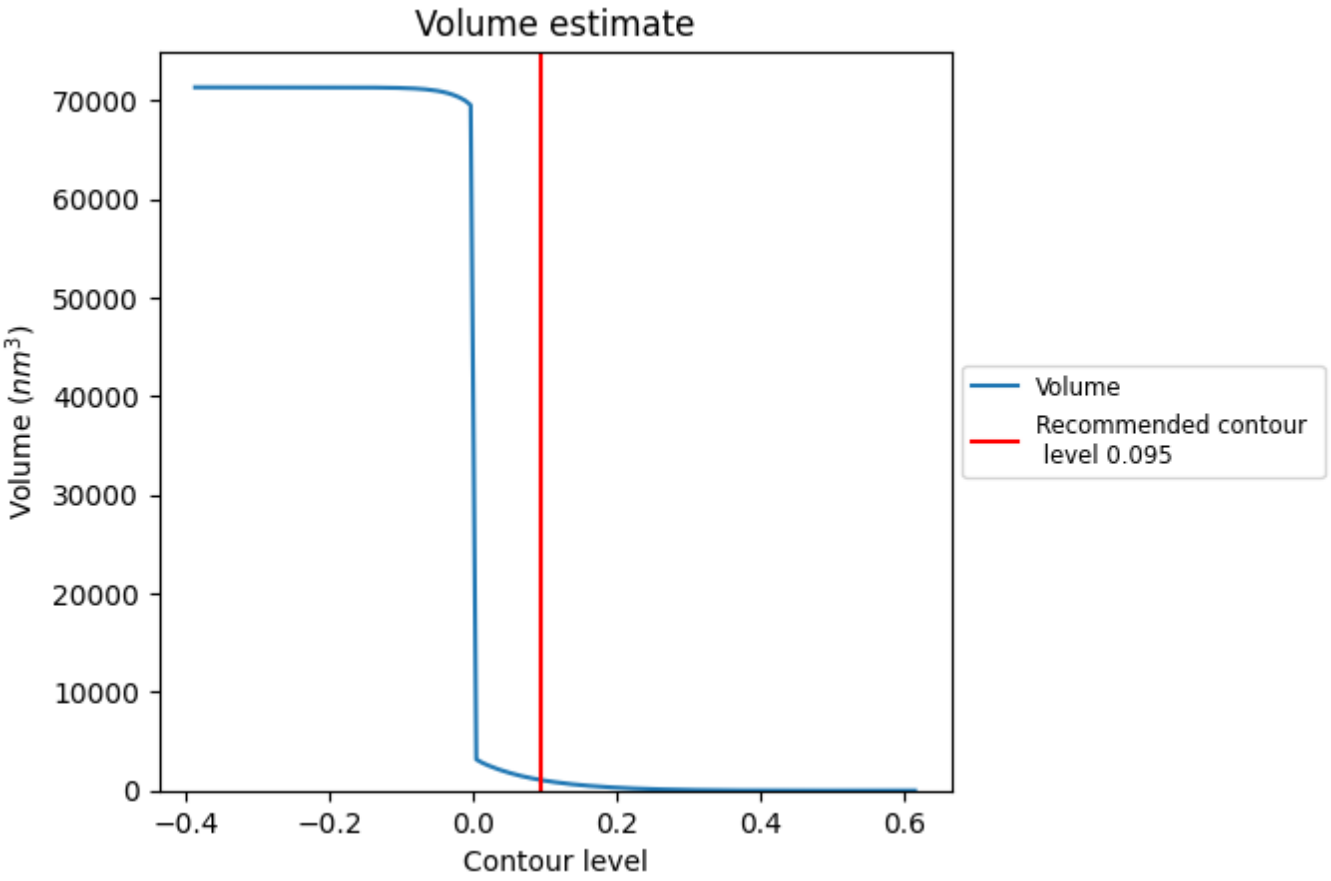
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

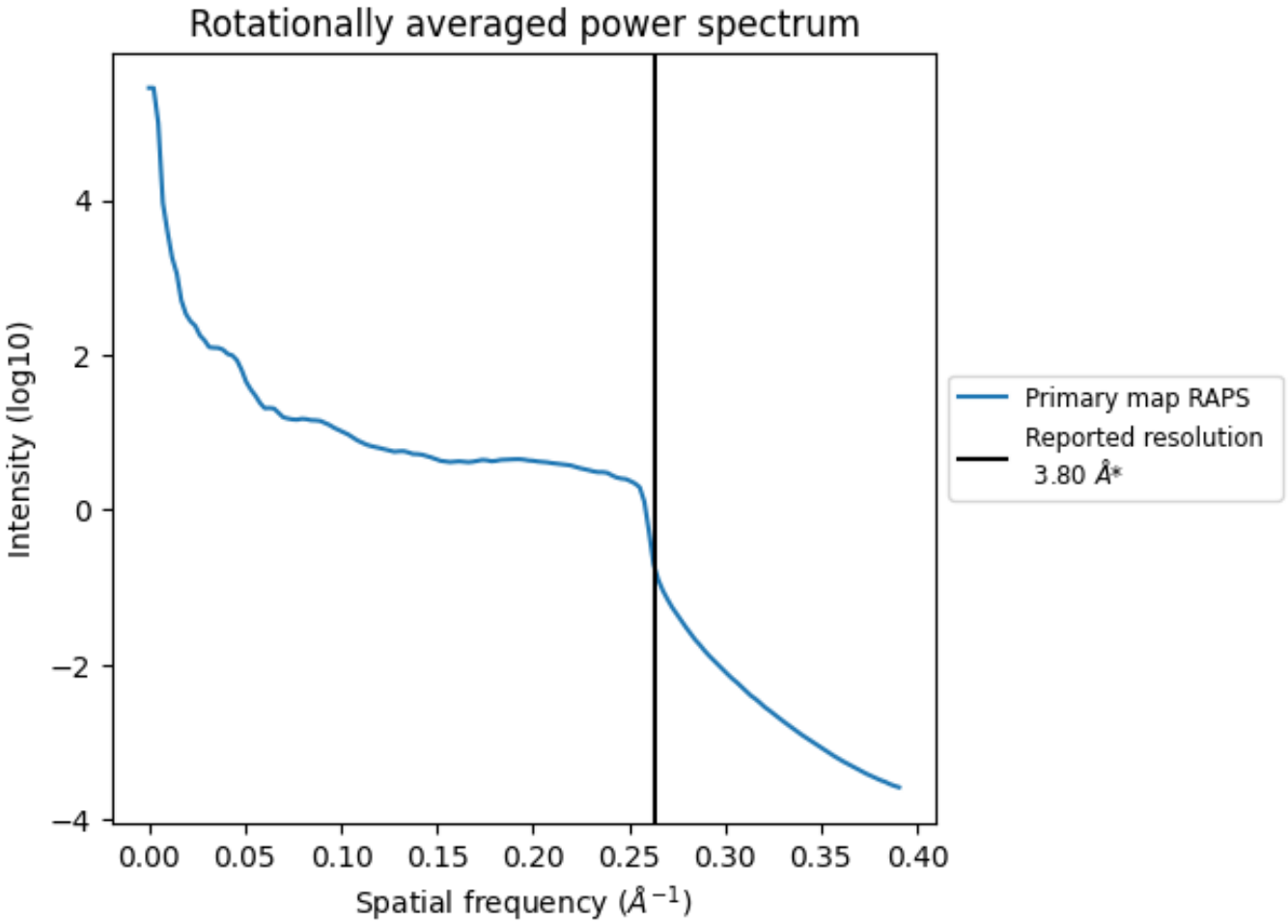
7.2 Volume estimate (i)



The volume at the recommended contour level is 1072 nm^3; this corresponds to an approximate mass of 968 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

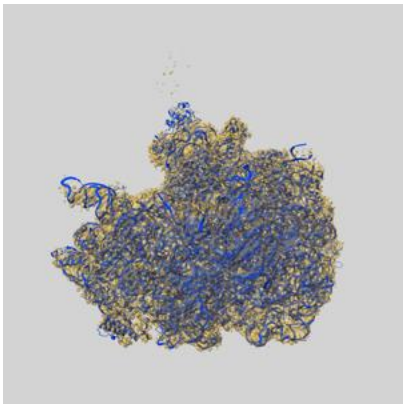
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

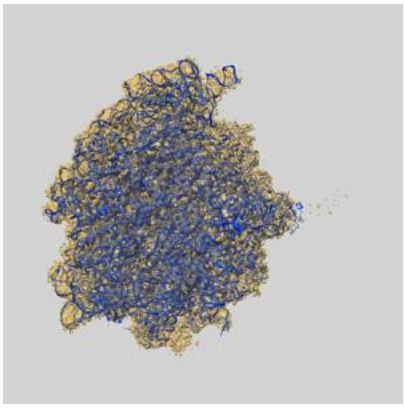
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6584 and PDB model 5IMQ. Per-residue inclusion information can be found in section 3 on page 15.

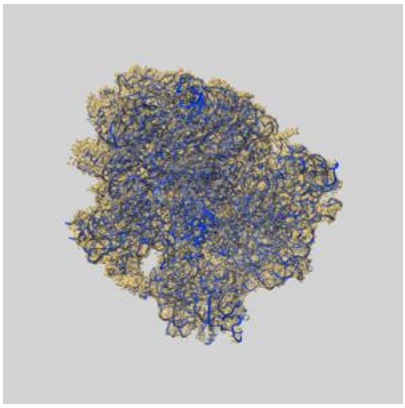
9.1 Map-model overlay



X



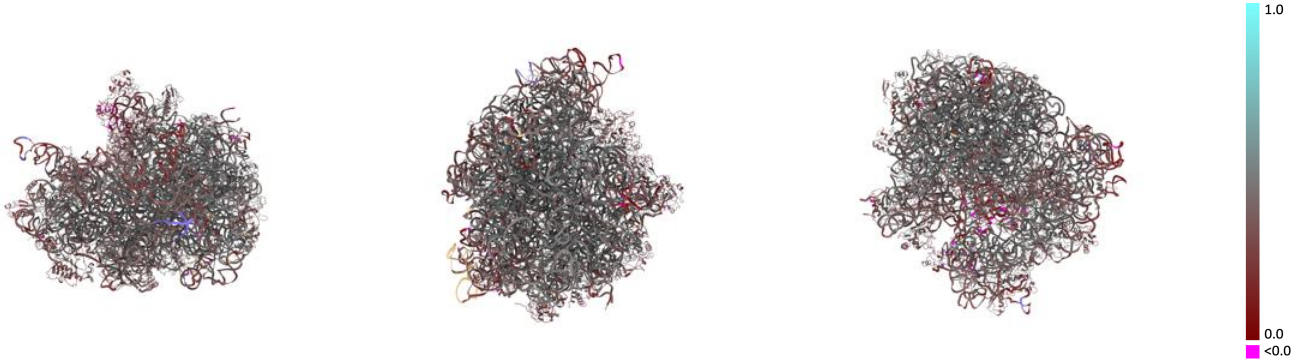
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.095 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

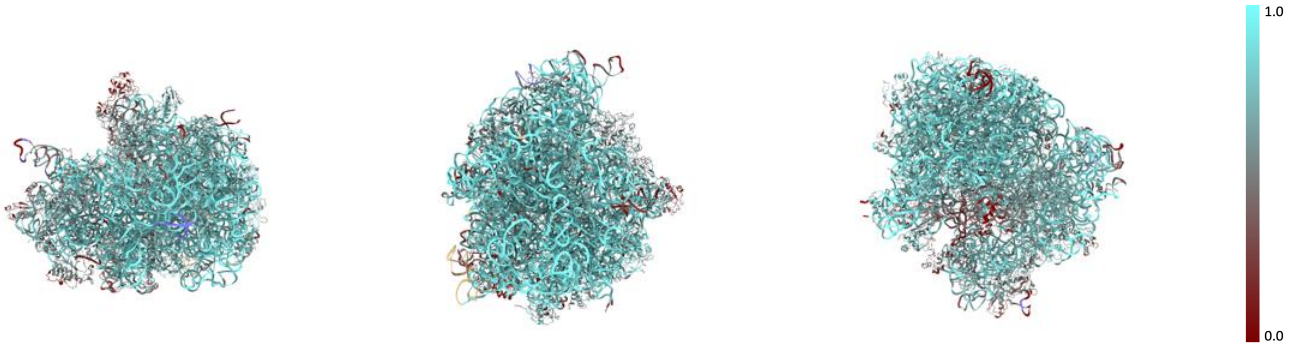
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

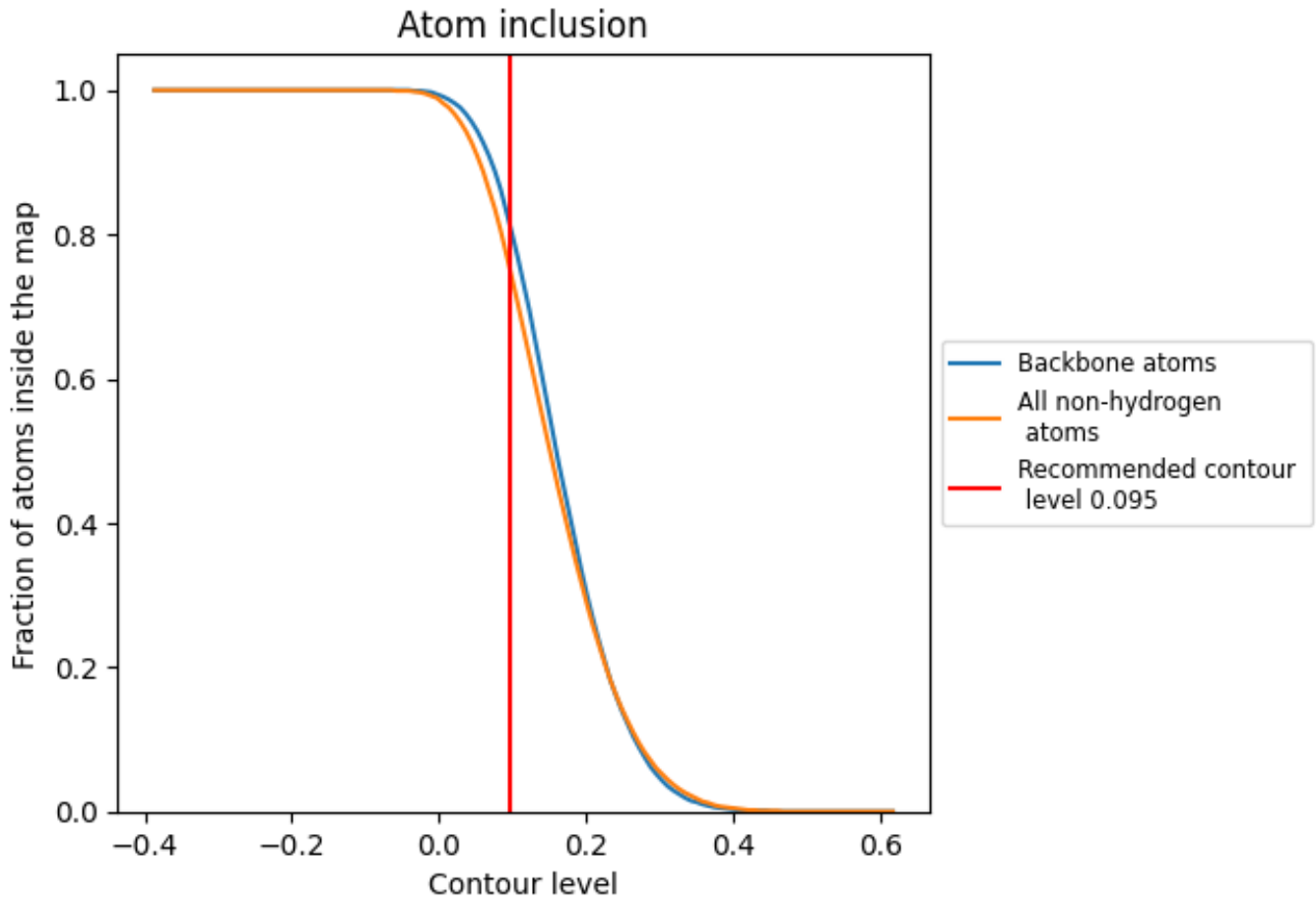
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.095).

9.4 Atom inclusion (i)



At the recommended contour level, 82% of all backbone atoms, 76% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.095) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7560	0.4020
1	0.7650	0.4810
2	0.1920	0.3240
3	0.3170	0.1780
4	0.6350	0.4010
5	0.2730	0.2430
A	0.8310	0.4030
B	0.5040	0.3030
D	0.8640	0.4290
E	0.8960	0.4250
F	0.5090	0.3650
G	0.5850	0.4070
H	0.6020	0.3710
I	0.6800	0.4430
J	0.5040	0.3330
K	0.4890	0.3660
L	0.6710	0.4270
M	0.5060	0.3610
N	0.4770	0.3540
O	0.5790	0.3990
P	0.6790	0.4600
Q	0.4300	0.2670
R	0.6250	0.4330
S	0.6170	0.3790
T	0.6630	0.3900
U	0.5980	0.3900
V	0.5020	0.3570
W	0.3710	0.1910
X	0.6200	0.3910
Y	0.6810	0.4310
Z	0.1310	0.2160
a	0.6970	0.4310
b	0.7160	0.4330
c	0.6850	0.4010
d	0.5710	0.3180

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Chain	Atom inclusion	Q-score
e	0.6480	0.3860
f	0.6850	0.4130
g	0.6710	0.4210
h	0.6020	0.3350
i	0.6850	0.4220
j	0.7430	0.4460
k	0.6350	0.3260
l	0.6290	0.3950
m	0.7700	0.4360
n	0.6500	0.3650
o	0.7490	0.4560
p	0.6840	0.4190
q	0.6080	0.3660
r	0.5290	0.3770
s	0.7300	0.4570
t	0.7000	0.4210
u	0.7110	0.4390
v	0.6480	0.3690
w	0.7760	0.4230
x	0.6800	0.3610
y	0.7210	0.4510
z	0.6640	0.4210