



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 02:22 AM UTC

PDB ID : 5KPX / pdb_00005kpx
EMDB ID : EMD-8282
Title : Structure of RelA bound to ribosome in presence of A/R tRNA (Structure IV)
Authors : Loveland, A.B.; Bah, E.; Madireddy, R.; Zhang, Y.; Brilot, A.F.; Grigorieff, N.; Korostelev, A.A.
Deposited on : 2016-07-05
Resolution : 3.90 Å(reported)

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:

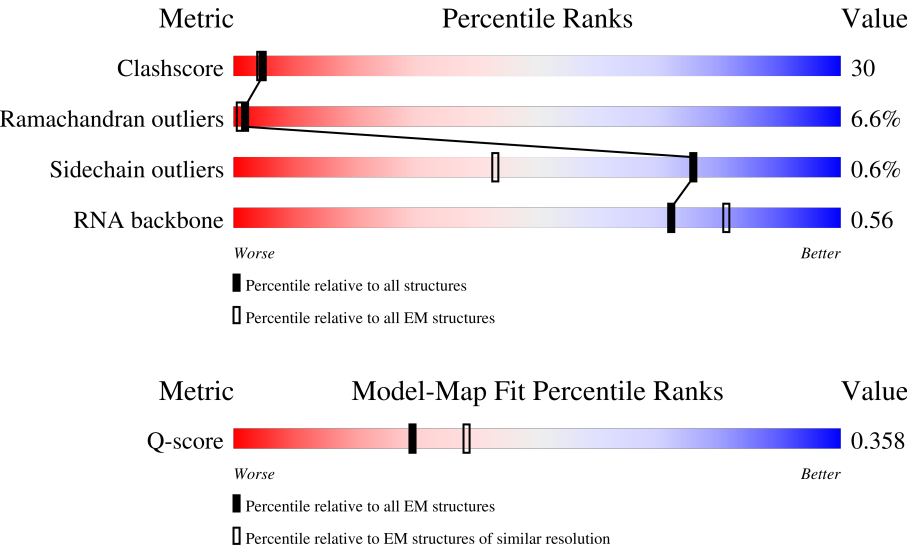
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.90 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.



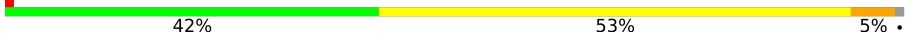
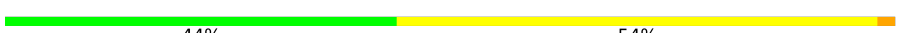
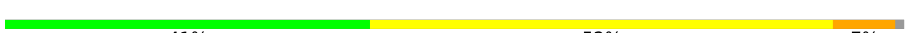
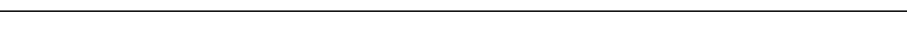
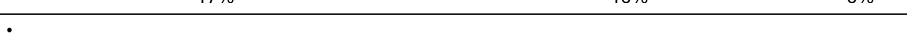
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	8855 (3.40 - 4.40)

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 $\leq 5\%$. 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	A	273	41% 50% 8%
2	B	209	39% 58%
3	C	201	5% 31% 59% 10%

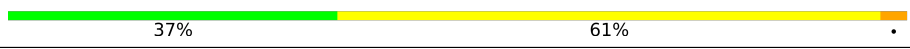
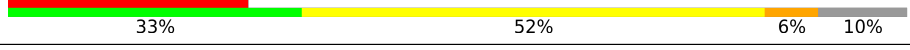
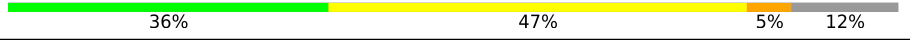
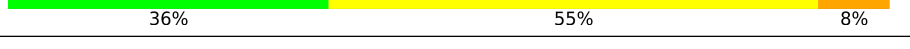
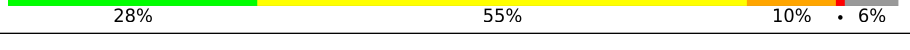
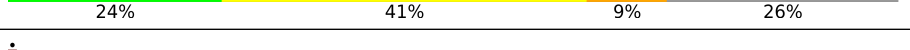
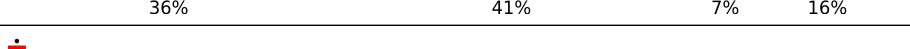
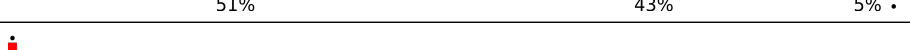
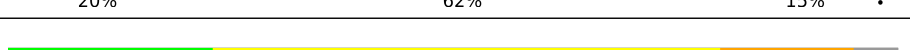
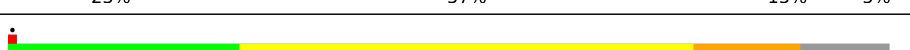
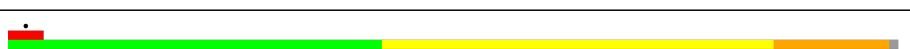
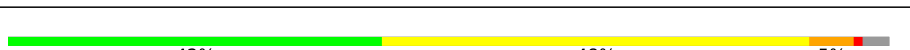
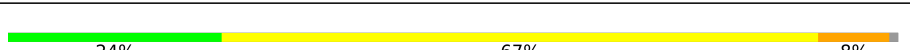
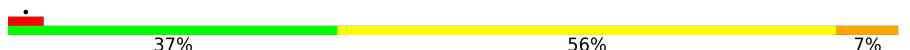
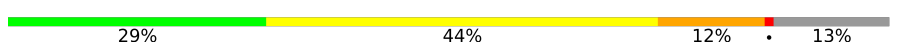
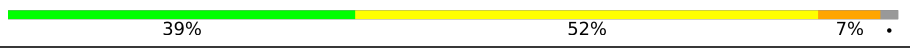
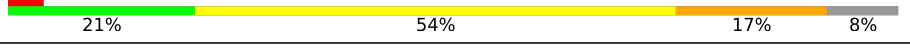
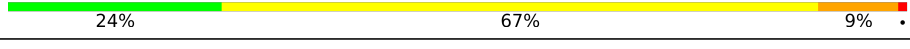
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Mol	Chain	Length	Quality of chain
4	D	179	
5	E	177	
6	F	149	
7	G	165	
8	H	142	
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	

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Mol	Chain	Length	Quality of chain
29	3	46	
30	4	65	
31	5	38	
32	6	241	
33	7	233	
34	8	206	
35	9	167	
36	10	135	
37	11	179	
38	12	130	
39	13	130	
40	14	103	
41	15	129	
42	16	124	
43	17	118	
44	18	101	
45	19	89	
46	20	82	
47	21	84	
48	22	75	
49	23	92	
50	24	87	
51	25	71	
52	26	1539	
53	27	2903	

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Mol	Chain	Length	Quality of chain
54	28	120	26%66%8%
55	29	20	5% 40%50%10%
56	30	76	25% 53%18%
57	31	77	36%58%5%
58	32	77	5% 18%58%23%
59	33	750	51% 34%45%10%10%

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 154603 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 L2.

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

- Molecule 2 is a protein called 50S ribosomal protein L3.

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

- Molecule 3 is a protein called 50S ribosomal protein L4.

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

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	177	Total	C	N	O	S	0	0
			1410	899	249	256	6		

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	131	Total	C	N	O	S	0	0
			988	625	175	183	5		

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	122	Total	C	N	O	S	0	0
			938	587	180	165	6		

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 13 is a protein called 50S ribosomal protein L17.

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

- Molecule 14 is a protein called 50S ribosomal protein L18.

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

- Molecule 15 is a protein called 50S ribosomal protein L19.

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

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	P	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 18 is a protein called 50S ribosomal protein L22.

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

- Molecule 19 is a protein called 50S ribosomal protein L23.

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

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	T	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 21 is a protein called 50S ribosomal protein L25.

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

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	W	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 24 is a protein called 50S ribosomal protein L29.

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

- Molecule 25 is a protein called 50S ribosomal protein L30.

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

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Z	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

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

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

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

Mol	Chain	Residues	Atoms				AltConf	Trace
28	2	50	Total	C	N	O	0	0
			409	263	75	71		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
29	3	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
31	5	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	6	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	7	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	8	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	9	157	Total	C	N	O	S	0	0
			1156	719	218	213	6		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	10	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	11	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	12	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	13	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	14	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	15	116	Total	C	N	O	S	0	0
			869	535	173	158	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	16	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	17	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 44 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	18	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	19	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	20	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	21	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	22	65	Total	C	N	O	S	0	0
			535	339	100	95	1		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	23	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	24	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 51 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	25	65	Total	C	N	O	S	0	0
			544	335	117	91	1		

- Molecule 52 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	26	1539	Total	C	N	O	P	0	0
			33016	14725	6052	10700	1539		

- Molecule 53 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	27	2903	Total	C	N	O	P	0	0
			62322	27801	11468	20150	2903		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
27	747	C	U	conflict	GB 802133627
27	1847	G	A	conflict	GB 802133627

- Molecule 54 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	28	120	Total	C	N	O	P	0	0
			2572	1145	471	836	120		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
28	120	A	-	conflict	GB 1028475309

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	29	20	Total	C	N	O	P	0	0
			432	195	86	132	19		

- Molecule 56 is a RNA chain called A-site tRNAPhe.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	30	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

- Molecule 57 is a RNA chain called P-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	31	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		

- Molecule 58 is a RNA chain called E-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	32	77	Total	C	N	O	P	0	0
			1643	732	297	537	77		

- Molecule 59 is a protein called GTP pyrophosphokinase.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	33	675	Total	C	N	O	S	0	0
			4911	3070	904	915	22		

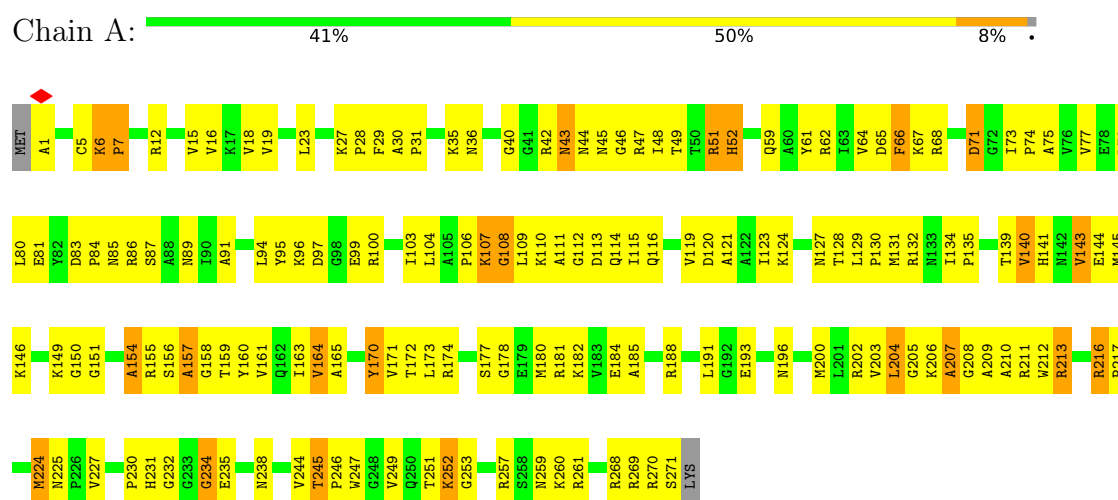
There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag	UNP P0AG20

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 L2

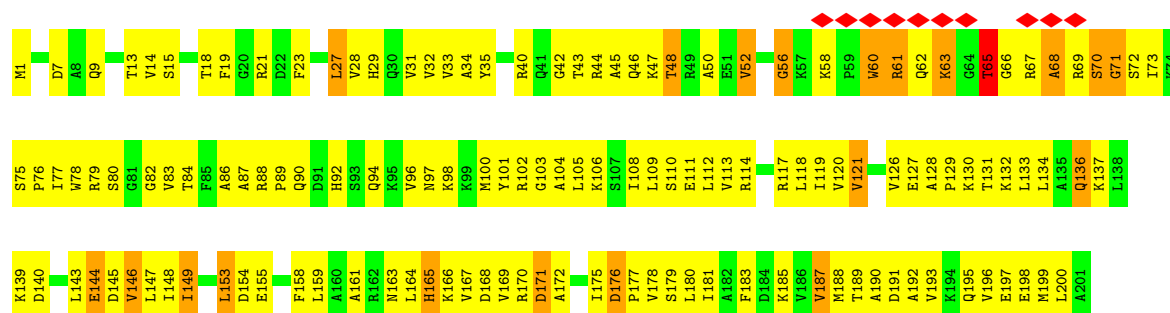


• Molecule 2: 50S ribosomal protein L3



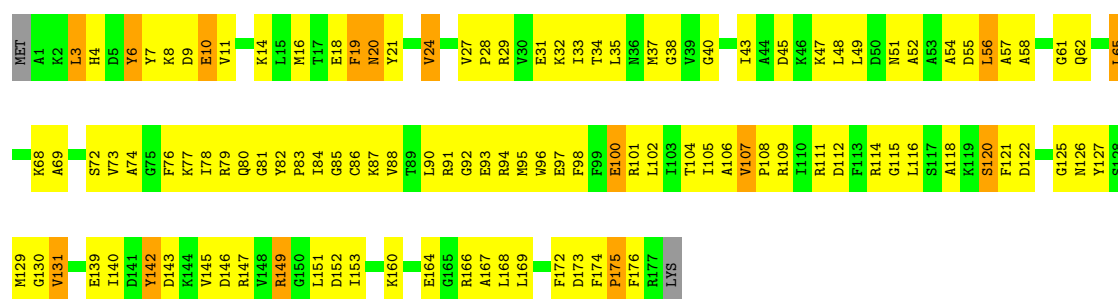
• Molecule 3: 50S ribosomal protein L4





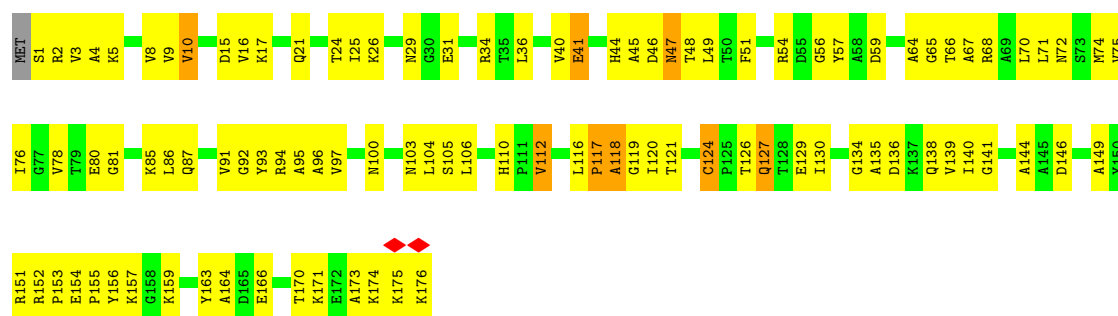
• Molecule 4: 50S ribosomal protein L5

Chain D: 35% 55% 8%



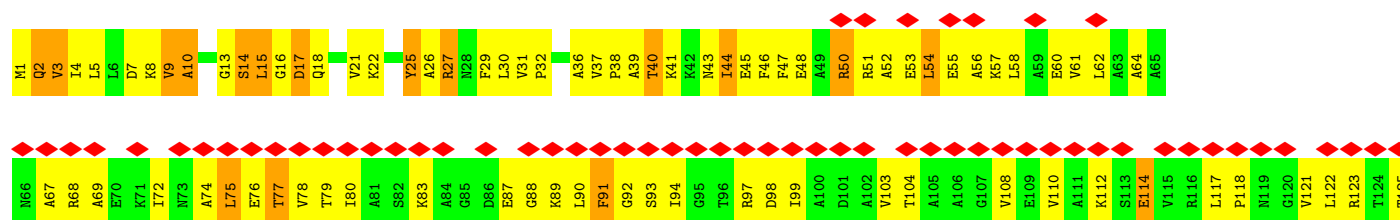
• Molecule 5: 50S ribosomal protein L6

Chain E: 42% 53% 5%



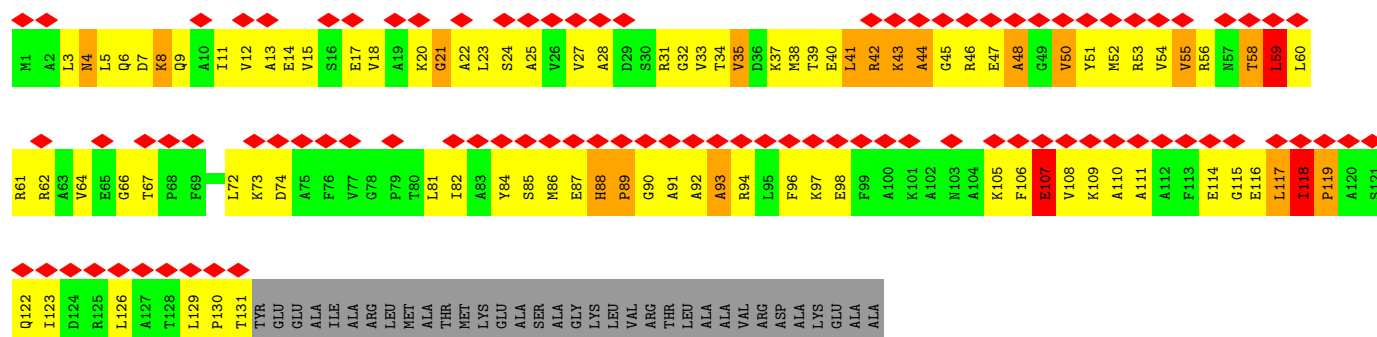
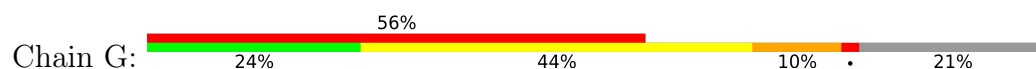
• Molecule 6: 50S ribosomal protein L9

Chain F: 34% 53% 55% 11%

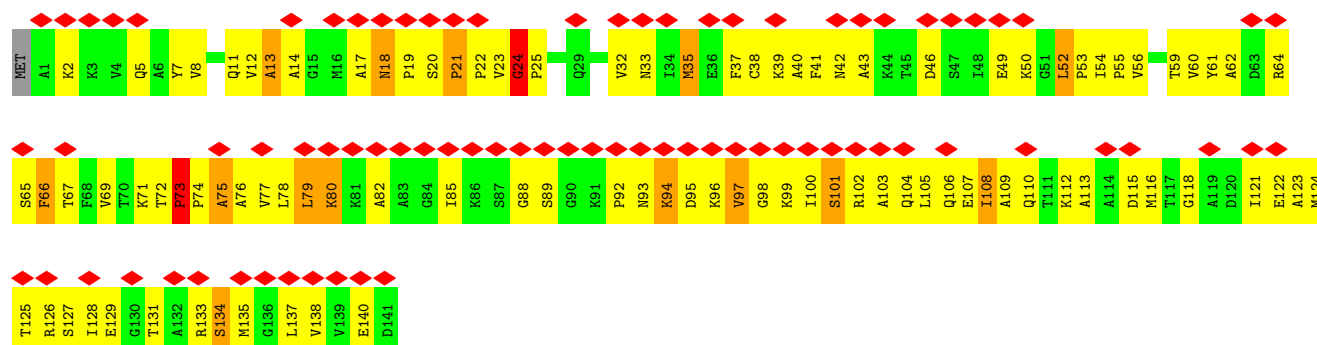




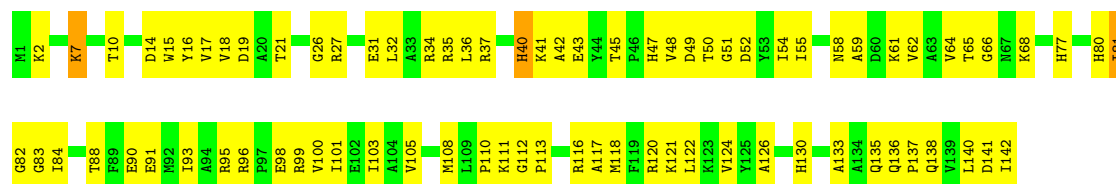
• Molecule 7: 50S ribosomal protein L10



• Molecule 8: 50S ribosomal protein L11



• Molecule 9: 50S ribosomal protein L13



• Molecule 10: 50S ribosomal protein L14

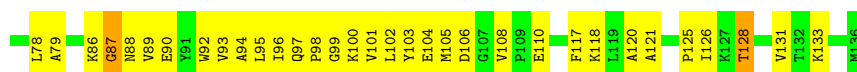
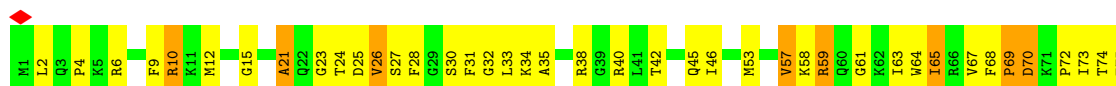




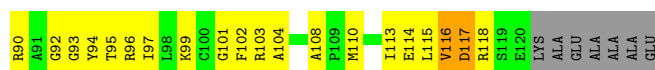
- Molecule 11: 50S ribosomal protein L15



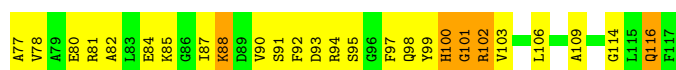
- Molecule 12: 50S ribosomal protein L16



- Molecule 13: 50S ribosomal protein L17

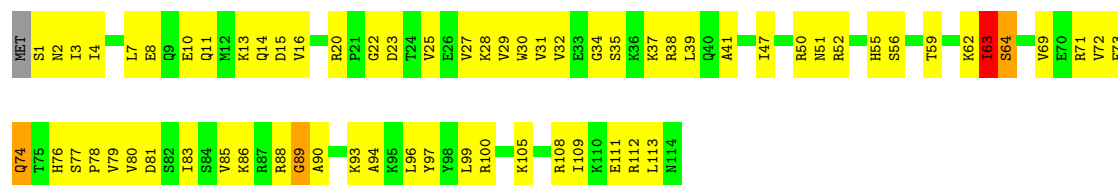


- Molecule 14: 50S ribosomal protein L18



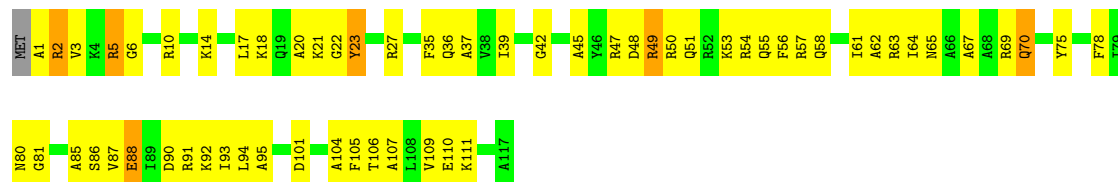
- Molecule 15: 50S ribosomal protein L19





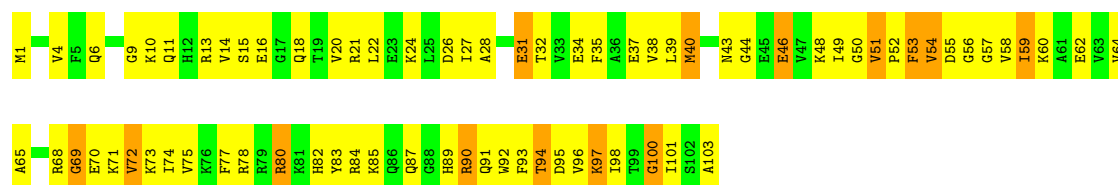
- Molecule 16: 50S ribosomal protein L20

Chain P: 47% 47% 5%



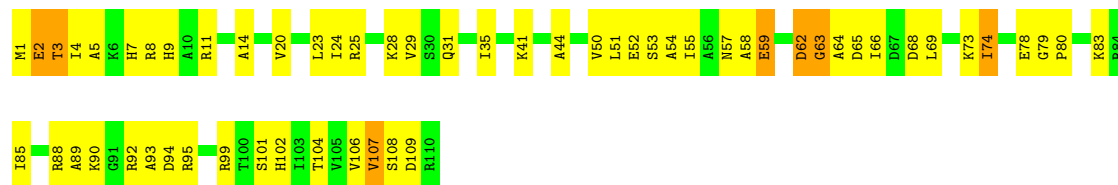
- Molecule 17: 50S ribosomal protein L21

Chain Q: 28% 58% 14%



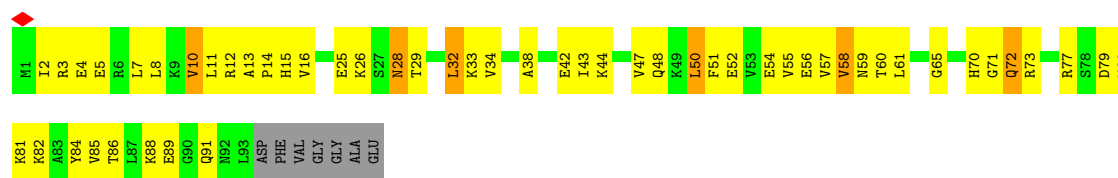
- Molecule 18: 50S ribosomal protein L22

Chain R: 47% 46% 6%



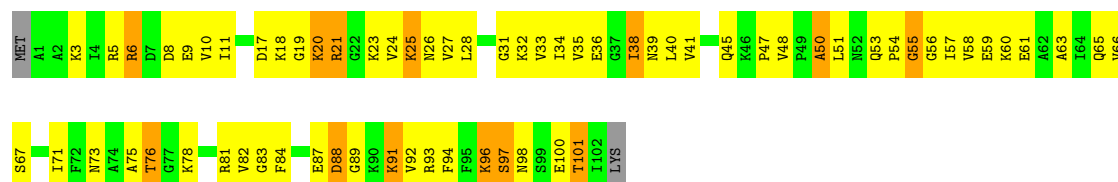
- Molecule 19: 50S ribosomal protein L23

Chain S: 40% 47% 6% 7%

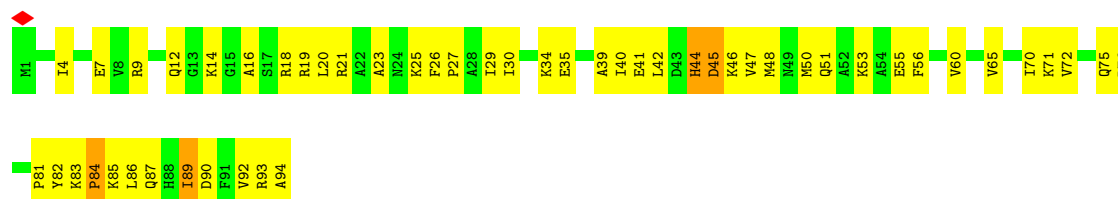


- Molecule 20: 50S ribosomal protein L24

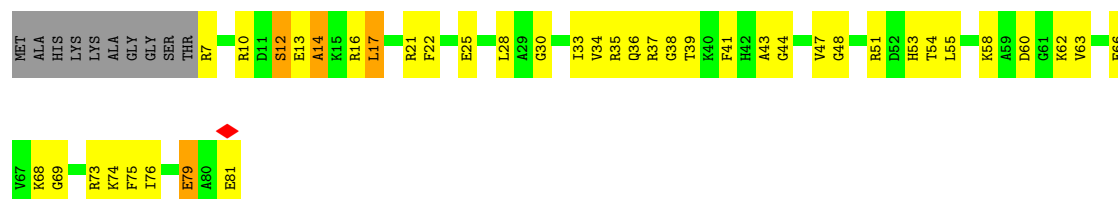
Chain T: 34% 52% 12%



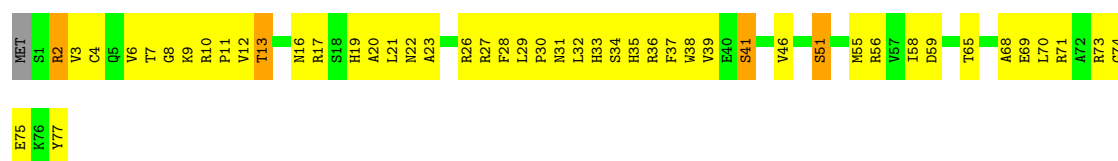
- Molecule 21: 50S ribosomal protein L25



- Molecule 22: 50S ribosomal protein L27



- Molecule 23: 50S ribosomal protein L28



- Molecule 24: 50S ribosomal protein L29

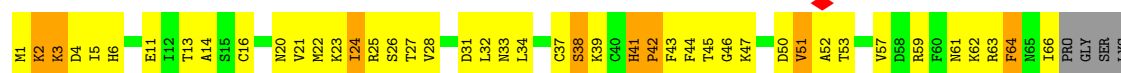
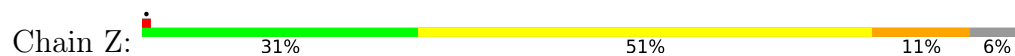


- Molecule 25: 50S ribosomal protein L30

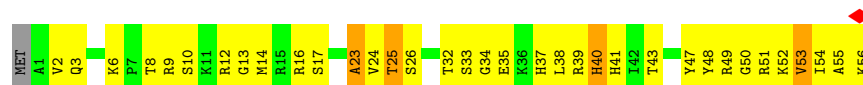




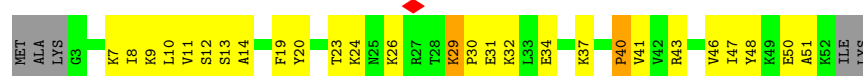
- Molecule 26: 50S ribosomal protein L31



- Molecule 27: 50S ribosomal protein L32



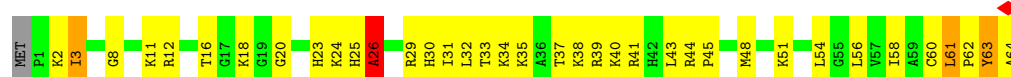
- Molecule 28: 50S ribosomal protein L33



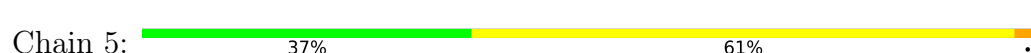
- Molecule 29: 50S ribosomal protein L34



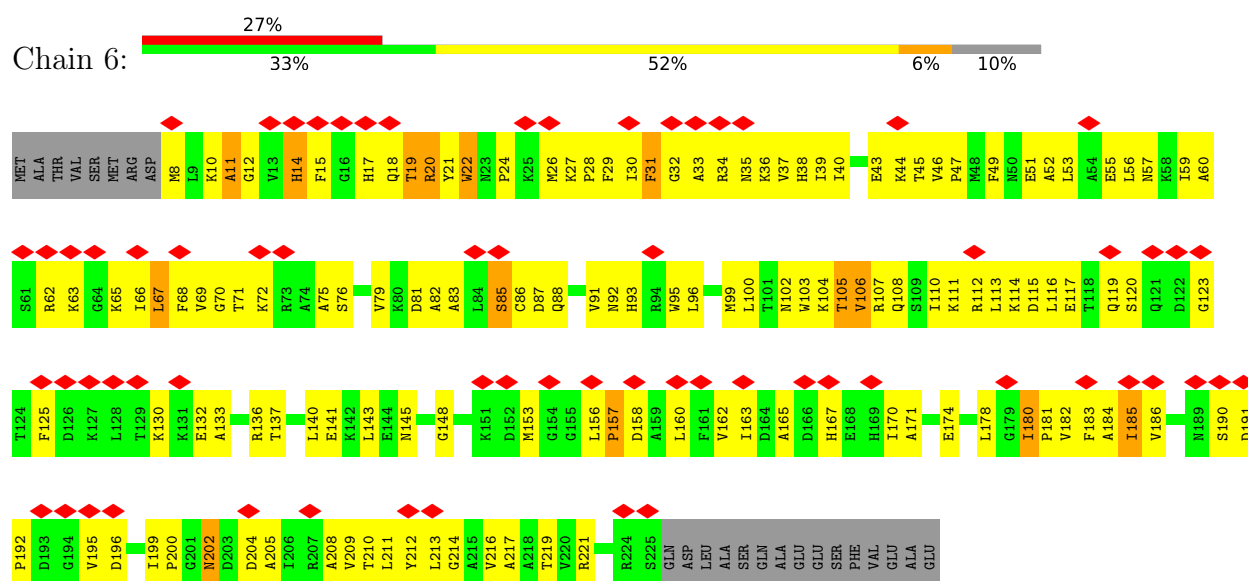
- Molecule 30: 50S ribosomal protein L35



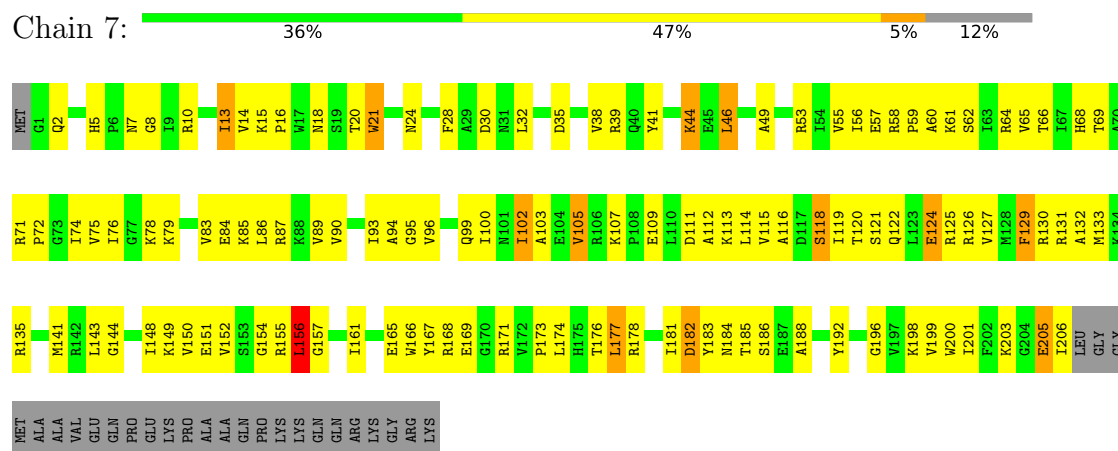
- Molecule 31: 50S ribosomal protein L36



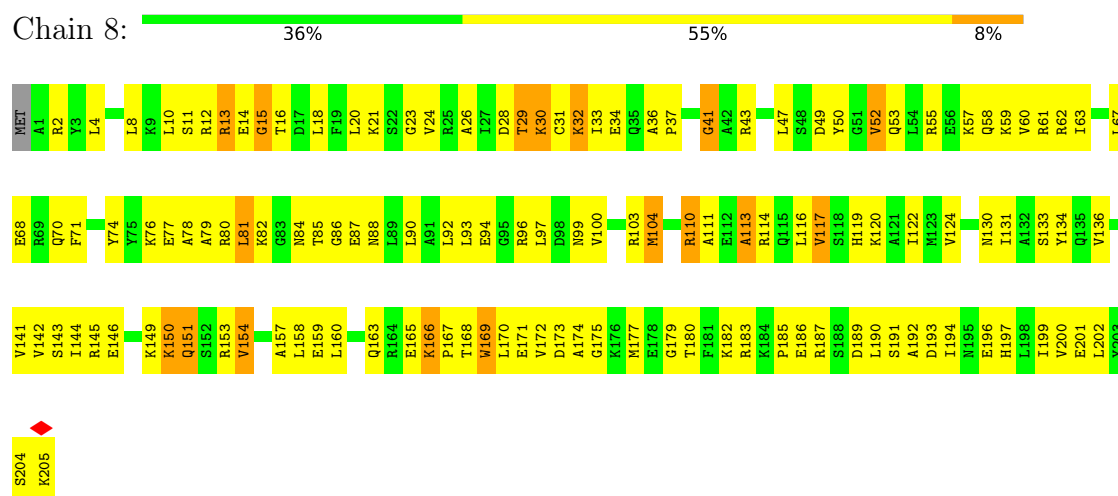
- Molecule 32: 30S ribosomal protein S2



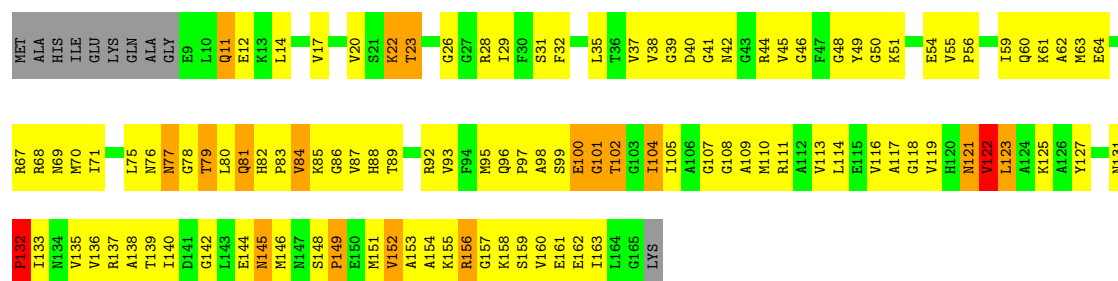
• Molecule 33: 30S ribosomal protein S3



• Molecule 34: 30S ribosomal protein S4



• Molecule 35: 30S ribosomal protein S5

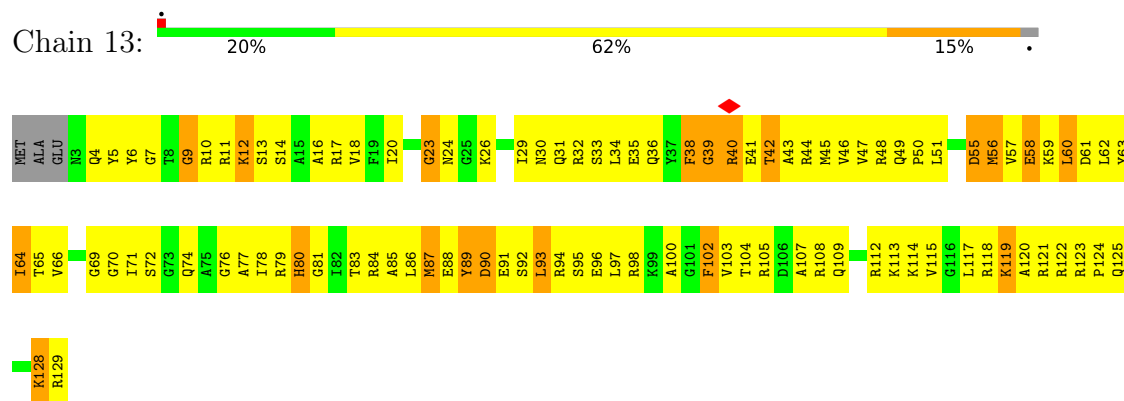


GLU GLU	E69	E69	H1
	V70	R2	H3
	I71		
	D72	I6	
	E73	V7	
	L74	F8	
	E75	M9	
	T76	V10	
	T77	H11	
	F78	P12	
	R79	D13	
		Q14	
	I85	S15	
	R86	E16	
	S87	Q17	
	M88	V18	
	V89	F19	
	M90	G20	
	R91	M21	
	T92	I22	
	K93	E23	
		R24	
	V96	Y25	
	T97	T26	
	E98	A27	
	A99	Z28	
	S100	A29	
		I29	
	PRO		
	MET		
	VAL	G34	
	LYS	K35	
	ALA	I36	
	LYS	H37	
	ASP	R38	
	GLU	L39	
	ARG	E40	
	ARG	D41	
	GLU	W42	
	ARG	C43	
	ARG	R44	
	ASP	R45	
	ASP		
	PHE	I51	
	ALA	N52	
	ASN	K53	
	GLU	L54	
	THR	H55	
	ALA	K56	
	ASP	A57	
	ASP	H58	
	ALA	Y59	
	GLU	V60	
	ALA	L61	
	GLY	M62	
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	SER	V64	
	GLU	E65	
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	GLU	P67	
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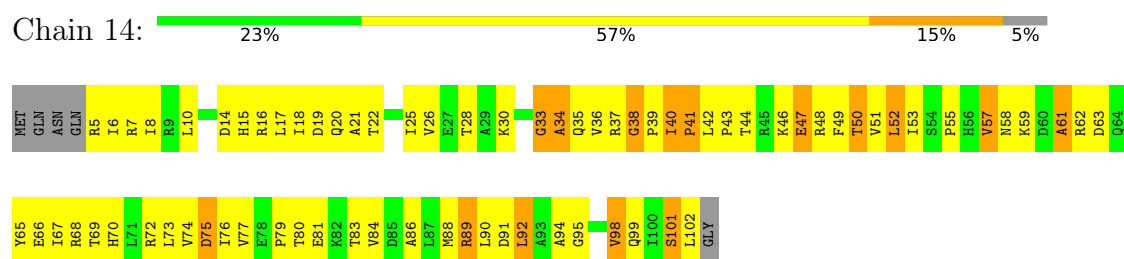
A146	A147	K148	A149	F150	A151	HIS	TYR	ARG	TRP	LEU	SER	LEU	SER	ARG	SER	ARG	PHE	SER	HIS	GLN	ALA	ALA	SER	SER	LYS	GLN	PRO	ALA	LEU	GLY	TYR	ASN																							
V68	R69	T70	T71	E73	V74	K75	S76	R77	R78	T83	E89	V90	R91	P92	R95	N96	A99	R100	R101	W102	I103	V104	E105	R110	G111	D112	K113	S114	H115	A116	L117	R118	L119	N120	N121	E122	L123	S124	D125	A126	A127	E128	N129	K130	G131	V134	V140	R142	F146						
Met	P1	R2	R3	R4	V5	I6	G7	I11	L12	P13	D14	P15	K16	F17	G18	S19	E20	L21	L22	A23	K24	F25	V26	N27	L28	O29	M30	V31	D32	G33	K34	K35	S36	V42	L46	E47	T48	L49	A50	Q51	R52	S53	G54	K55	S56	E57	L58	E59	A60	F61	E62	V63	A64	L65	E66

V77	MET	S1	M2	Q3	D4	P5	I6	A7	D8	M9	L10	T11	R12	I13	R14	Q17	A18	A19	N20	K21	M26	P27	S28	S29	K32	V38	L39	K40	F44	I45	E46	D47	F48	K49	V50	E51	P56	E57	L58	T61	Y64	F65	Q66	A69	V70	V71	E72	S73	I74	Q75
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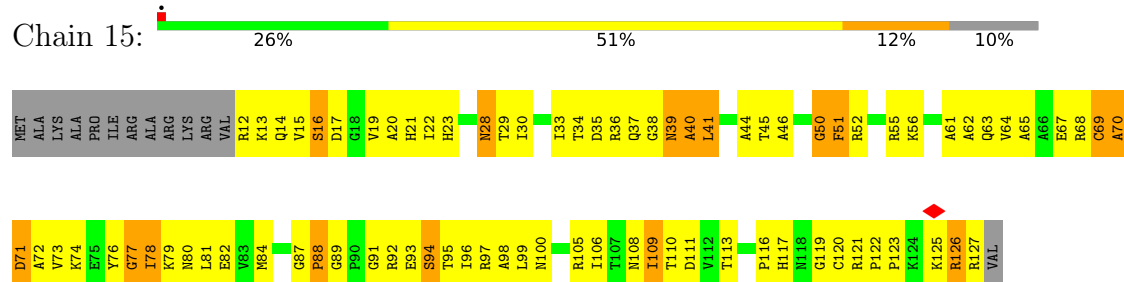
WORLDWIDE
PDB
PROTEIN DATA BANK



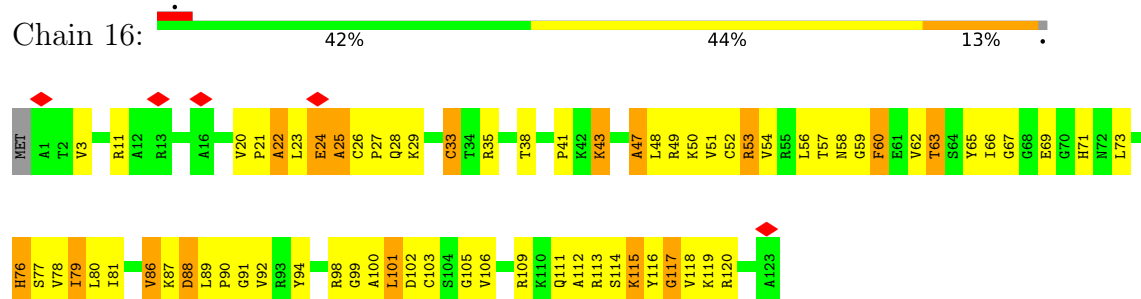
• Molecule 40: 30S ribosomal protein S10



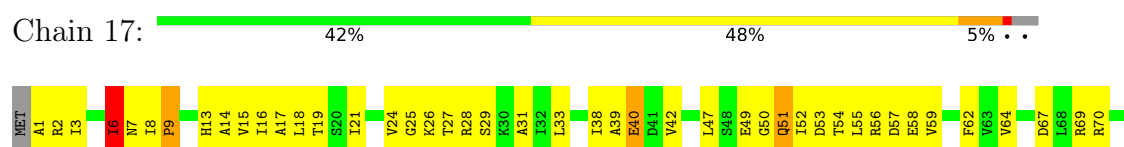
• Molecule 41: 30S ribosomal protein S11



• Molecule 42: 30S ribosomal protein S12



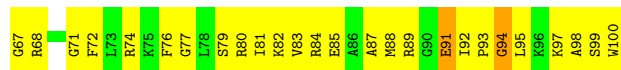
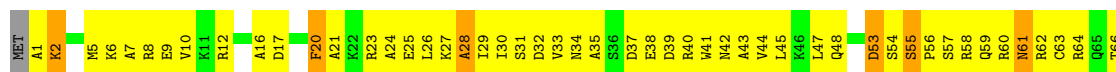
• Molecule 43: 30S ribosomal protein S13





- Molecule 44: 30S ribosomal protein S14

Chain 18: 24% 67% 8%



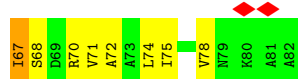
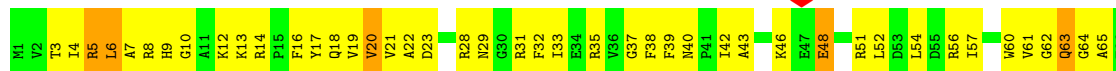
- Molecule 45: 30S ribosomal protein S15

Chain 19: 56% 38%



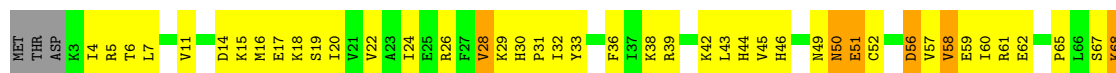
- Molecule 46: 30S ribosomal protein S16

Chain 20: 37% 56% 7%



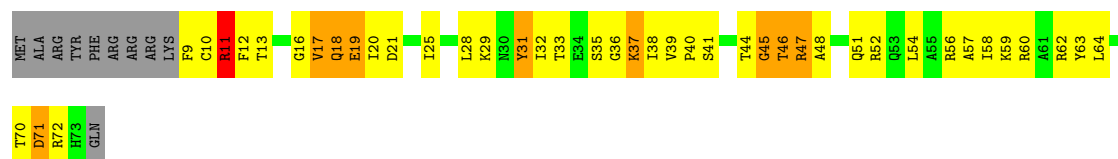
- Molecule 47: 30S ribosomal protein S17

Chain 21: 35% 51% 10% 5%

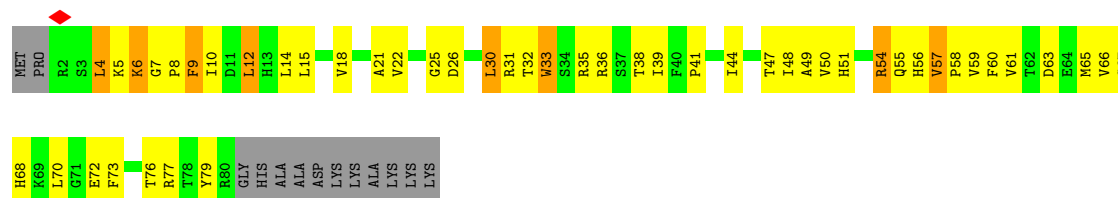


- Molecule 48: 30S ribosomal protein S18

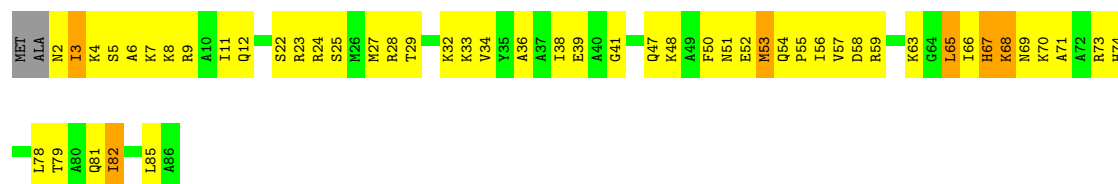
Chain 22: 29% 44% 12% 13%



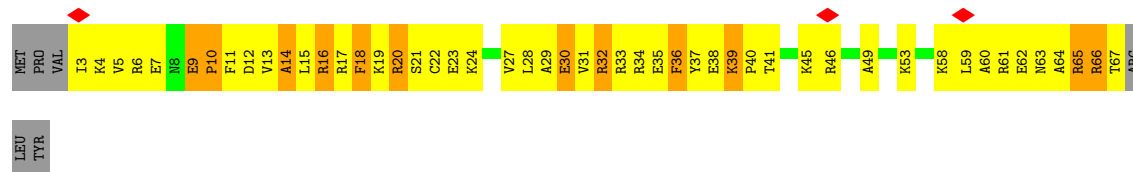
- Molecule 49: 30S ribosomal protein S19



- Molecule 50: 30S ribosomal protein S20



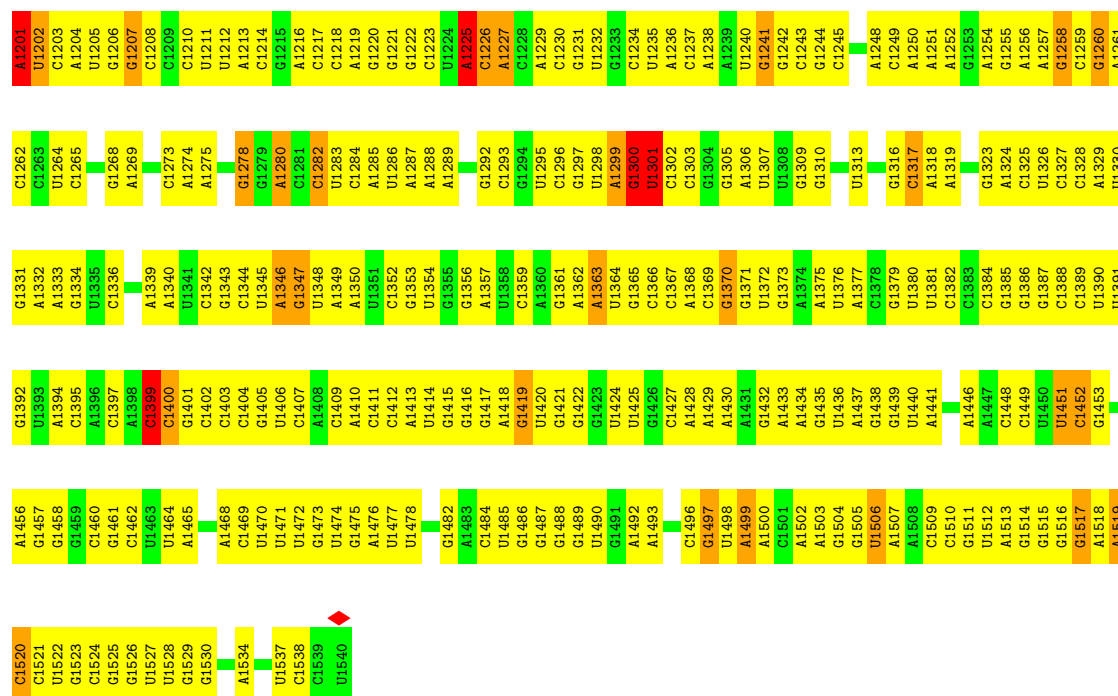
- Molecule 51: 30S ribosomal protein S21



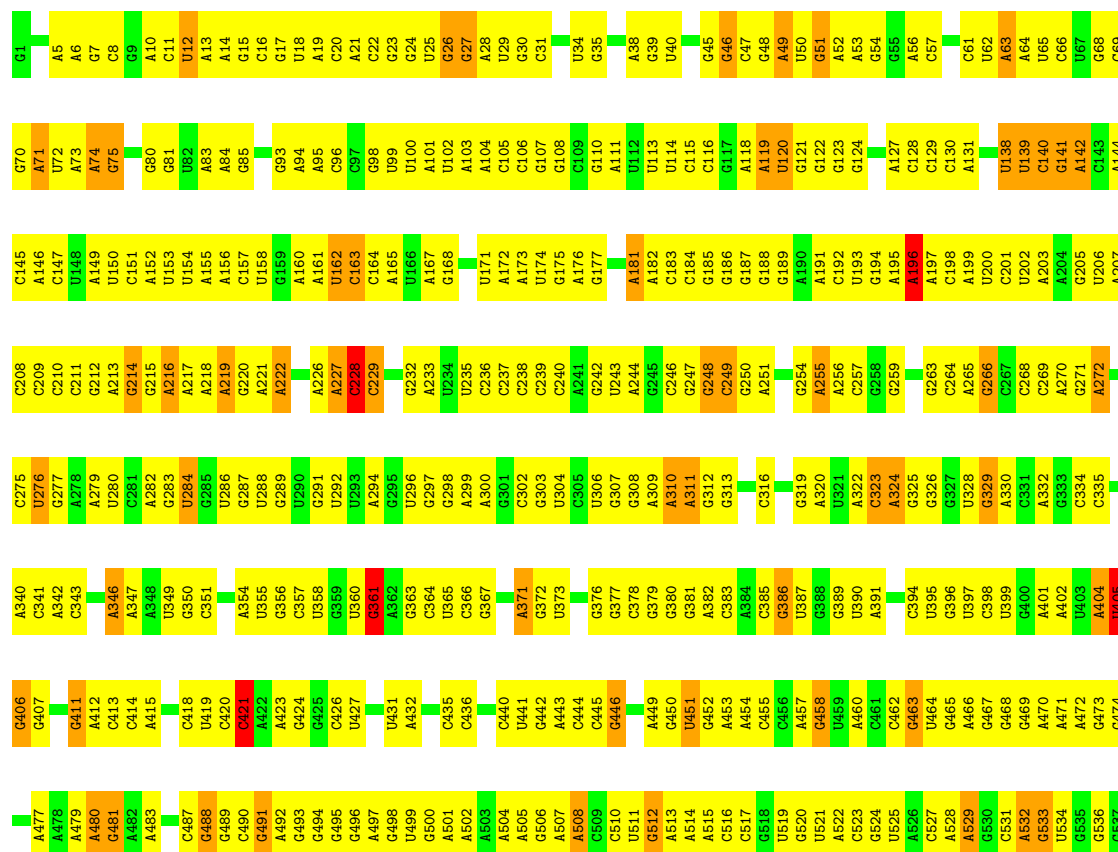
- Molecule 52: 16S ribosomal RNA



C1137	C1138	C1139	C1140	C1141	C1142	C1143	C1144	C1145	C1146	C1147	C1148	C1149	C1150	C1151	C1152	A1155	A1156	A1157	C1158	C1159	C1160	C1161	C1162	A1163	G1166	A1167	C1168	A1169	A1170	A1171	C1172	G1175	G1176	G1177	G1178	A1179	A1180	C1181	C1182	C1183	G1184	G1187	A1188	C1189	G1190	A1191	C1192	C1193	C1194	C1195	C1196	A1197	C1198	C1199	C1200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
G1072	U1073	G1074	C1075	C1076	C1077	U1078	U1079	U1080	A1081	G1084	U1085	G1088	G1089	U1090	G1091	A1092	A1093	G1094	U1095	C1096	C1097	C1098	C1099	C1100	A1101	A1102	C1103	G1106	C1107	G1108	C1109	A1110	A1111	C1112	C1113	U1114	U1115	U1116	A1117	U1118	C1119	U1120	U1121	U1122	U1123	G1124	U1125	U1126	G1127	C1128	C1129	A1130	G1131	C1132	G1133	C1201																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
G1003	A1004	A1005	C1006	C1007	U1008	U1009	U1010	C1011	A1014	G1015	G1018	A1019	G1024	G1025	U1026	C1027	C1028	U1029	U1030	C1031	C1032	G1033	G1034	C1037	C1038	G1039	U1040	U1041	C1045	A1046	G1047	C1048	U1049	G1050	C1051	U1052	G1053	C1054	A1055	U1056	U1057	C1058	C1059	G1060	G1061	U1062	C1063	C1064	U1065	C1066	C1069	U1070	C1071																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
A935	C936	A937	G942	U943	G944	G945	A946	C947	C948	A949	U950	C951	U952	G953	G954	U955	U956	U957	A958	U959	U960	U961	C962	C963	A964	U965	C966	C967	A968	A969	C970	C971	G972	C973	A974	A975	A976	A977	A978	C979	C980	U981	U982	A983	C984	G988	U992	C993	A994	C995	A996	U997	C998	C1001	G1002																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
A873	C874	U875	C876	C877	A878	C879	C880	G881	C882	U883	U884	C885	G886	A889	C890	U891	A892	C893	G894	C895	C896	C897	C898	C899	A900	A901	C902	C903	U904	U905	A906	C907	C908	A909	A910	C911	C912	A913	A914	A915	U916	C917	A918	U919	U920	U921	C922	A923	C924	G925	A926	C927	C928	C930	G933	C934																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
G809	C810	C811	C812	A815	A816	C817	C818	A819	U820	C821	G824	A825	C826	U827	U828	C829	C830	A831	C832	C833	C834	U835	C836	U837	C838	C839	C840	C841	U842	U843	C844	C845	C846	C847	C848	C849	U850	C851	C852	C853	U854	U855	C856	C857	U858	C859	C860	A864	A865	C866	C867	C868	C869	U871	C872	A873																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
G742	A743	C744	C745	A746	A747	G748	A749	C750	U751	C752	A753	C754	G755	C756	C757	U758	A759	U762	C763	C764	C765	A766	C767	A768	C769	C770	C771	C772	C773	C774	C775	C776	A777	C778	C779	A780	A781	C782	C783	A784	C785	C786	A787	U789	C792	U793	A794	C795	C796	C797	U798	C799	A802	C806	A807	C808																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
A673	C674	A675	U676	C677	A678	C679	C680	A681	C682	C683	U684	C685	U686	C689	C690	C691	U692	C693	A694	A695	C696	U697	C703	A704	C705	A706	U707	C708	U709	C710	C711	A712	C713	C714	A715	A716	C720	C721	U722	C723	U724	C725	C726	C727	U728	C731	C734	C735	C736	A665	C666	C667	C668	U739	C740	C741																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
A532	A533	U534	C535	C536	G537	C538	A539	C540	G541	C542	U543	G544	C545	A546	A547	C548	C549	C550	C551	U552	A553	A554	U555	C556	C557	C558	A559	C560	U561	C562	A563	C564	C565	C566	C567	C568	C569	A572	A573	A574	C575	C576	C577	C578	A579	C580	C581	C584	C585	C586	C587	C588	C589	C590	C591	C592	C593	C594	C595	C596	C597	C598	C599	C600	C601	C602	C603	C604	C605	C606	C607	C608	C609	C610	C611	C612	C613	C614	C615	C616	C617	C618	A621	C622	C623	C624	U625	C626	C627	C628	C629	A630	C631	C632	C633	C634	A635	U636	A642	C643	U644	C645	U652	C656	U657	C658	U659	C660	C661	C664	C665	C666	C667	C668	C669	C670	C671	C672	C673	C674	C675	C676	C677	C678	C679	C680	C681	C682	C683	C684	C685	C686	C687	C688	C689	C690	C691	C692	C693	C694	C695	C696	C697	C698	C699	C700	C701	C702	C703	C704	C705	C706	C707	C708	C709	C710	C711	C712	C713	C714	C715	C716	C717	C718	C719	C720	C721	C722	C723	C724	C725	C726	C727	C728	C729	C730	C731	C732	C733	C734	C735	C736	C737	C738	C739	C740	C741	C742	C743	C744	C745	C746	C747	C748	C749	C750	C751	C752	C753	C754	C755	C756	C757	C758	C759	C760	C761	C762	C763	C764	C765	C766	C767	C768	C769	C770	C771	C772	C773	C774	C775	C776	C777	C778	C779	C780	C781	C782	C783	C784	C785	C786	C787	C788	C789	C790	C791	C792	C793	C794	C795	C796	C797	C798	C799	C800	C801	C802	C803	C804	C805	C806	C807	C808	C809	C810	C811	C812	C813	C814	C815	C816	C817	C818	C819	C820	C821	C822	C823	C824	C825	C826	C827	C828	C829	C830	C831	C832	C833	C834	C835	C836	C837	C838	C839	C840	C841	C842	C843	C844	C845	C846	C847	C848	C849	C850	C851	C852	C853	C854	C855	C856	C857	C858	C859	C860	C861	C862	C863	C864	C865	C866	C867	C868	C869	C870	C871	C872	C873	C874	C875	C876	C877	C878	C879	C880	C881	C882	C883	C884	C885	C886	C887	C888	C889	C890	C891	C892	C893	C894	C895	C896	C897	C898	C899	C900	C901	C902	C903	C904	C905	C906	C907	C908	C909	C910	C911	C912	C913	C914	C915	C916	C917	C918	C919	C920	C921	C922	C923	C924	C925	C926	C927	C928	C929	C930	C931	C932	C933	C934	C935	C936	C937	C938	C939	C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	C1000	C1001	C1002	C1003	C1004	C1005	C1006	C1007	C1008	C1009	C1010	C1011	C1012	C1013	C1014	C1015	C1016	C1017	C1018	C1019	C1020	C1021	C1022	C1023	C1024	C1025	C1026	C1027	C1028	C1029	C1030	C1031	C1032	C1033	C1034	C1035	C1036	C1037	C1038	C1039	C1040	C1041	C1042	C1043	C1044	C1045	C1046	C1047	C1048	C1049	C1050	C1051	C1052	C1053	C1054	C1055	C1056	C1057	C1058	C1059	C1060	C1061	C1062	C1063	C1064	C1065	C1066	C1067	C1068	C1069	C1070	C1071	C1072	C1073	C1074	C1075	C1076	C1077	C1078	C1079	C1080	C1081	C1082	C1083	C1084	C1085	C1086	C1087	C1088	C1089	C1090	C1091	C1092	C1093	C1094	C1095	C1096	C1097	C1098	C1099	C1100	C1101	C1102	C1103	C1104	C1105	C1106	C1107	C1108	C1109	C1110	C1111	C1112	C1113	C1114	C1115	C1116	C1117	C1118	C1119	C1120	C1121	C1122	C1123	C1124	C1125	C1126	C1127	C1128	C1129	C1130	C1131	C1132	C1133	C1134	C1135	C1136	C1137	C1138	C1139	C1140	C1141	C1142	C1143	C1144	C1145	C1146	C1147	C1148	C1149	C1150	C1151	C1152	C1153	C1154	C1155	C1156	C1157	C1158	C1159	C1160	C1161	C1162	C1163	C1164	C1165	C1166	C1167	C1168	C1169	C1170	C1171	C1172	C1173	C1174	C1175	C1176	C1177	C1178	C1179	C1180	C1181	C1182	C1183	C1184	C1185	C1186	C1187	C1188	C1189	C1190	C1191	C1192	C1193	C1194	C1195	C1196	C1197	C1198	C1199	C1200
C207	U208	U209	C210	C211	G212	G213	C214	C215	C216	C217	U218	U219	C220	C221	C222	A223	U224	C225	C226	C227	C228	C229	C230	U231	C232	C233	C234	C235	C236	C237	C238	U239	C240	A246	G247	C248	A250	C251	U252	A253	C254	C255	U256	C257	C258	C259	G260	U261	A262	A263	C264	C265	C266	C267	U268	C269	A270																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
C271	C277	G278	C279	C280	C281	C284	C285	C286	U287	U288	C289	C290	C291	C292	C295	C296	C297	A298	C299	A300	G301	G305	A306	C307	C308	A309	C310	C311	C312	C313	C314	C315	C316	U317	C318	C319	A320	A321	C322	U323	C324	A325	C326	C327	C328	A329	C330	G331	C332	C333	C334	C335	A336	G337	A338																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
C339	U340	C341	C342	U343	A344	C345	C346	A349	C350	C351	C352	A353	C354	C355	A356	C357	U358	C359	C360	C361	C362	A363	A364	U367	U368	C369	C370	A371	C372	A373	U374	U375	C376	C377	C378	C379	C380	C381	A382	A383	C384	C385	A389	U390	C391	C392	A393	C394	C395	C396	C397	U398	C399	C400	C401	C402																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
C403	C404	U405	C406	U407	A408	U409	C410	A411	A412	U413	A414	C418	C419	U420	U421	C422	C423	C424	C425	C426	U427	C428	U429	A430	A431	U432	A433	A434	C435	C436	U437	U438	U439	C440	A441	C442	C443	C444	G447	A448	G449	C450	A451	C452	C453	U458	A459	A460	A461	C462	U463	C464	C465	U464	A465	A466	U467	A468																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
C469	C470	U471	U472	U473	C474	C475	U476	C477	A478	U479	U480	C481	A482	C483	C484	U485	U486	C487	C488	C489	C490	U491	C492	A493	C494	A495	A496	C497	U498	A499	C500	C501	A502	C503	U504	C505	A510	C511	U512	C513	C514	U515	C517	C518	C519	A520	C521	C522	A523	C524	C525	C526	C527	C528	C529	U531																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
A532	A533	U534	C535	C536	G537	C538	A539	C540	G541	C542	U543	G544	C545	A546	A547	C548	C549	C550	C551	U552	A553	A554	U555	C556	C557	C558	A559	C560	U561	C562	A563	C564	C565	C566	C567	C568	C569	A572	A573	A574	C575	C576	C577	C578	A579	C580	C581	C584	C585	C586	C587	C588	C589	C590	C591	C592	C593	C594	C595	C596	C597	C598	C599	C600	C601	C602	C603	C604	C605	C606	C607	C608	C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

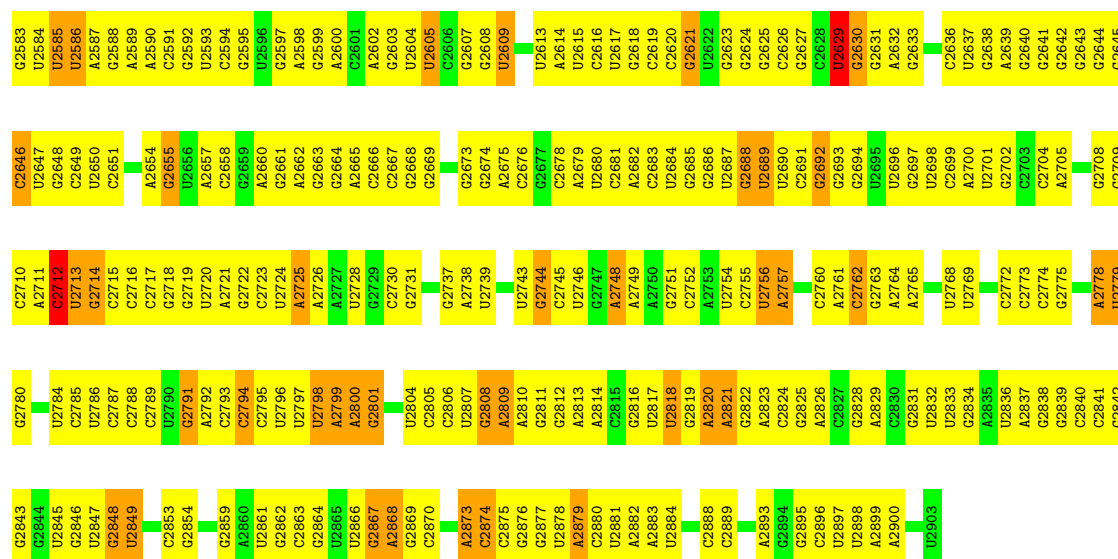


Chain 27: 26% 62% 11%



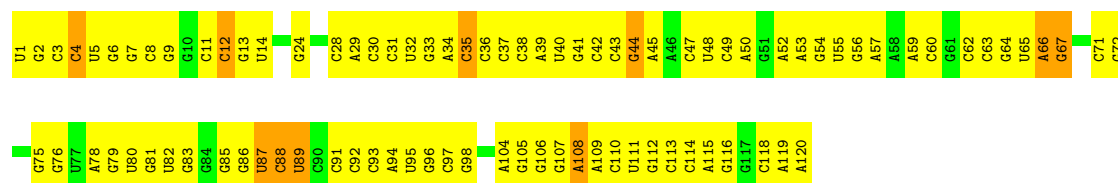
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C1480	U1406	G1337	G1266	G1195	U1130	A1069	G1002	G939	U860	C795	A794	G669	G604	G539
G1481	G1407	G1338	U1267	G1196	G1131	A1070	C1005	G940	A863	C796	A794	A670	U607	C540
G1482	G1408	G1339	G1268	G1197	U1132	A1071	C1006	G941	G864	C797	G737	C671	G607	A541
U1409	U1409	G1340	A1269	U1198	G1133	C1072	C1007	G942	C865	G798	G738	C672	A608	C544
U1484	G1416	G1341	C1270	U1199	C1135	C1073	A1008	G943	C866	G799	A739	C673	A609	U545
U1485	G1417	A1342	G1271	C1200	G1138	G1074	A1009	C944	U868	A800	C740	C674	C610	U546
U1486	C1417	G1343	A1272	U1201	G1139	C1075	A1010	A945	G869	G801	U741		C611	U547
U1487	G1418	U1344	U1273		G1139	C1076	A1011	C946	U870	A802	A742		G612	U548
A1490	A1419	U1345	A1274	A1205	U1140	A1077	G1011	A947	U871	A803	A743		A613	G548
G1491	G1421	C1346	G1275	G1206	U1141	U1078	U1012	C948	U872	A804	A744		A614	G549
	G1422	U1352	A1276	C1207	A1142	C1079	C1013	G949	U873	G805	G745		U615	C550
C1498	G1425	A1353	C1278	U1209	A1143	U1079	A1080	G950	C876	C806	U746		G681	G551
G1499	G1426	G1354	G1279	U1210	A1144	U1081	U1015	C951	A877	U807	C747		G617	U552
G1500	A1427	G1355	G1280	C1211	C1145	U1082	G1016	G952	A878	G808	G748		G618	G553
A1501	G1428	G1356	G1281	G1212	G1149	U1083	U1019	G953	A879	U810	A750		G619	U554
A1502	A1429	C1357	A1213	A1213	G1150	A1084	U1020	U954	G879	U811	A751		G622	G555
A1503	G1430	G1358	A1284	G1216	A1151	A1085	A1021	U955	G882	U812	A752		G623	A556
A1504	A1431	U1359	A1285	G1217	G1152	A1086	G1022	C957	U883	U813	A753		G624	C557
U1506	G1432	G1360	A1286	U1217	C1153	G1087	U1023	U958	U884	C814	U754		G625	U558
C1507	A1433	G1361	A1287	G1218	G1154	A1088	G1024	A959	U887	C815	U755		A626	C560
A1508	A1434	C1362	G1288	U1219	A1155	A1089	G1025	A960	U888	C816	A756		A627	G561
A1509	G1435	G1363	G1293	G1220	A1156	A1090	G1026	C961	C889	C817	G757		G628	U562
G1510	G1436	A1364	U1294	G1221	G1157	C1091	A1027	G962	C890	G818	C758		G629	A563
	C1437	A1365		U1222		C1092	A1028	U963	C891	A819	G759		C564	C564
A1515	U1438	C1370	C1297	G1223	G1160	U1094	A1029	C964	G892	A820	G760		A632	C565
G1516	A1439	G1371	G1298	G1227	G1162	A1095	C1030	C965	G893	A892	A761		A633	U566
U1520	U1440	U1372	C1299	G1228	G1163	A1096	G1031	G966	C893	A893	G762		G634	U567
G1521	G1441	A1373	G1300	G1229	C1164	U1097	A1032	U967	C897	C823	G763		G635	U568
U1522	U1442	G1374	A1301	A1230	U1165	A1098	U1033	C968	C897	U824	A764		G636	U569
G1523	U1443	U1375	G1302	U1234	G1166	C1099	G1036	C969	C902	A825	C765		A637	G570
G1524	G1444	C1376	G1303	G1235	C1167	U1101	G1037	U970	C903	U826	U767		G638	U571
A1525	G1445	G1377	A1304	G1236	G1168	A1102	G1041	A973	G904	U828	G768		G639	U572
C1526	C1446	U1378	C1305	A1237	C1170	A1103	G1042	G974	A905	A829	U769		C640	A573
G1527	G1447	G1379	A1306	G1238	G1171	C1104	U1045	A975	U906	G830	G770		A644	A574
U1528	G1448	G1380	A1307	G1239	C1172	U1105	C1046	G976	G907	U832	G771		C645	U580
G1529	G1449	G1381	A1308	A1241	U1173	G1106	A1047	G977	A910	A833	G772		U646	C581
C1530	C1451	A1383	G1310	U1242	U1174	G1107	G1048	G978	A911	A834	G773		G647	A582
U1533	A1453	A1385	G1311	C1243	A1175	U1108	A1049	A979	C915	G841	G774		G648	A583
U1534	C1454	C1386	U1312	G1248	U1176	C1109	C1049	A980	G914	C837	G775		G649	C584
A1535	G1455	A1387	C1313	U1249	G1177	G1110	C1052	A981	C915	C838	G776		G650	C585
C1536	C1461	G1388	C1314	U1250	C1178	A1111	C1053	C982	C915	U839	G777		G651	A586
G1537	G1462	U1389	U1315	G1251	U1179	G1112	A1054	A983	U919	A718	G778		U652	A587
U1538	C1463	G1390	G1316	C1252	U1180	U1113	A1055	A984	U920	A719	G779		A653	U588
G1540	G1464	U1391	G1317	G1253	U1181	C1114	G1056	C985	A920	A720	A781		A654	U589
C1541	U1465	U1392	U1318	A1254	G1182	G1115	G1057	C986	C921	A721	A782		A655	A590
U1542	U1466	U1393	C1319	U1255	U1183	C1116	A1057	C987	C922	A722	A783		G656	U593
G1543	A1467	U1394	G1320	U1256	U1184	C1117	U1058	A990	C923	U846	C784		U657	U594
A1544	A1470	U1395	A1321	C1257	U1185	C1118	G1059	C993	G926	C848	U724		G658	C595
U1545	U1471	U1396	G1322	G1258	G1186	U1119	U1060	C994	A927	A849	U725		A661	U596
C1546	G1474	U1400	U1326	G1259	G1187	C1122	U1061	C995	C851	G726	G726		G662	A597
G1547	U1475	G1401	A1327	G1260	U1188	G1123	G1062	C996	A928	A788	A727		G663	U598
A1548	U1476	U1402	G1331	C1261	G1190	C1124	C1063	A996	U929	U852	A789		G664	A599
A1549		A1403	G1332	U1262	G1191	G1125	C1064	C997	U932	C853	U790		U665	G600
C1550		C1404		A1263	A1126	U1126	U1065	C998	U937	C854	C791		A666	C601
				G1332	A1127	G1127	U1066	U999	C937	G858	A793		U667	A602

A2518	A2450	G2316	G2242	C2175	G2110	U2041	G1972	G1903	C1830	G1770	C1694	G1623	A1551
U2519	A2451	A2317	U2243	A2176	U2111	A2042	G1973	G1904	G1831	C1771	C1695	G1623	A1552
C2520	A2452	G2318	U2244	C2177	G2112	C2043	C1974	G1905	C1836	A1772	G1696	U1629	G1585
A2453	A2453	G2319	U2245	C2178	U2113	G2048	A1977	G1906	C1837	A1773	G1697	A1632	G1585
U2522	G2454	U2320	G2246	C2179	G2114	C2049	U1978	G1907	C1838	C1774	A1698	A1633	G1560
G2523	A2455	U2321	A2247	U2182	G2115	C2050	U1979	C1908	G1839	U1775	G1699	G1633	C1561
G2524	C2456	U2322	C2248	U2183	G2116	A2051	G1980	G1909	C1840	G1776	G1699	U1636	G1562
G2525	U2460	U2323	G2249	U2184	A2117	A2052	U1981	G1910	G1842	U1777	A1705	U1637	G1561
G2526	A2461	G2325	G2250	U2185	G2117	C2053	U1982	G1911	G1843	U1778	C1706	U1638	U1562
C2527	C2462	A2326	G2251	U2186	G2118	G2054	U1983	G1912	C1844	U1779	G1707	C1639	C1564
U2528	G2463	G2327	G2252	U2187	G2119	A2054	U1984	A1913	C1845	C1780	C1708	C1638	C1565
G2529	C2463	U2328	G2253	U2188	G2120	G2055	G1984	C1914	G1845	U1781	U1709	A1640	C1566
A2530	C2466	U2329	G2254	U2189	G2121	G2056	G1985	U1915	G1846	U1782	G1710	G1641	G1567
A2531	C2467	G2330	U2257	U2190	G2122	G2057	C1986	A1916	G1847	A1783	G1711	G1568	G1569
U2532	A2468	G2331	G2258	A2191	G2123	A2058	U1991	U1917	G1848	U1784	A1713	U1647	A1569
A2534	G2469	C2332	G2259	U2192	G2124	A2059	U1992	U1918	G1849	U1785	U1714	U1648	A1570
U2537	A2470	U2333	G2260	U2193	G2125	G2060	U1993	U1919	G1850	A1786	G1715	A1571	A1572
C2538	A2471	A2334	U2261	U2194	G2126	A2061	U1994	U1920	A1853	A1787	U1720	G1651	C1576
G2543	C2472	G2335	U2262	U2195	G2127	G2062	C1994	U1921	A1854	C1788	G1721	G1652	U1576
G2544	C2475	A2336	C2263	C2196	G2128	C2063	U1995	C1924	G1857	A1789	U1725	G1653	C1577
G2545	U2477	U2337	G2264	U2197	G2129	C2064	U1996	C1925	A1858	C1790	C1726	A1655	U1578
U2546	C2480	G2338	A2267	A2198	U2130	C2065	C1997	G1929	G1857	U1791	U1727	C1656	C1584
A2547	G2481	C2339	A2268	C2200	U2131	C2066	A1998	U1930	G1857	G1792	C1728	U1657	C1585
U2548	C2484	A2340	G2269	G2201	G2132	G2067	C1999	U1931	G1863	C1793	C1728	C1658	C1586
G2549	A2411	G2341	U2270	U2202	G2133	U2068	C2000	G1932	G1864	U1794	U1729	G1659	U1584
U2550	A2412	C2342	G2271	U2203	A2134	G2069	C2001	C1934	U1864	C1795	U1730	G1660	C1587
G2553	G2415	U2343	U2272	G2204	G2135	A2070	U2007	U1935	U1865	U1796	G1731	G1661	A1591
U2554	C2416	U2344	A2273	A2205	G2136	A2071	C2008	A1936	G1866	U1797	C1732	G1662	C1592
C2487	C2417	G2345	G2279	C2206	U2137	C2072	A2009	U1937	G1867	U1798	G1733	G1663	A1591
U2555	A2418	A2346	A2280	C2207	U2138	U2074	G2010	A1938	G1868	U1799	G1734	G1664	C1592
C2488	U2419	U2347	A2281	C2208	G2139	U2075	U2011	C1941	G1869	C1800	G1735	A1665	A1593
U2489	G2420	G2348	G2282	U2210	A2142	C2078	U2012	G1942	A1870	A1802	A1736	G1666	A1594
G2490	C2421	U2349	C2283	A2211	C2143	U2079	A2013	U1943	A1871	A1803	U1737	G1667	C1595
U2491	G2422	G2350	A2284	A2212	C2144	A2080	U2016	U1946	G1872	C1804	G1738	A1668	A1596
C2492	A2352	G2351	G2285	U2213	C2145	U2081	U2017	C1947	C1874	A1805	U1744	A1669	A1597
G2493	G2353	G2352	G2286	C2214	G2146	A2082	G2018	U1948	G1875	C1806	A1745	C1670	A1598
C2494	U2356	U2355	A2287	C2215	A2147	G2083	G2019	G1949	A1876	G1807	U1746	U1671	U1599
A2495	G2357	G2288	A2288	G2216	U2148	C2084	A2020	U1950	A1877	A1808	U1747	G1672	C1600
C2496	C2357	U2289	C2289	G2217	C2150	U2085	C2021	U1951	G1878	A1809	U1748	A1673	A1603
U2498	G2426	G2290	U2290	U2220	U2155	U2086	U2022	A1952	C1881	A1810	A1749	C1675	C1604
A2564	C2427	U2291	U2291	G2221	G2156	G2087	C2023	A1953	G1881	U1812	G1750	A1676	C1605
U2500	G2428	G2292	U2292	C2222	G2157	C2088	G2024	G1954	U1882	G1813	U1751	A1677	C1606
A2565	C2429	G2293	G2293	C2223	A2158	C2089	C2025	U1955	U1883	G1814	C1607	C1607	C1606
C2503	A2430	U2294	G2294	A2225	G2159	A2090	U2026	U1956	A1754	A1754	A1608	A1679	A1608
G2504	U2431	C2295	G2295	C2226	C2160	C2091	G2027	C1957	G1755	G1815	A1755	U1680	C1604
U2505	A2432	A2296	U2296	A2227	C2161	U2092	U2028	C1958	G1756	G1817	G1756	G1681	A1610
G2506	G2433	G2297	G2297	A2227	C2161	G2093	G2029	G1959	U1889	U1818	A1757	G1682	C1611
U2507	A2434	A2298	U2298	G2230	G2162	A2094	A2030	A1960	A1890	U1758	U1758	G1683	C1612
C2507	G2435	U2299	C2300	U2231	C2165	C2097	A2031	A1961	G1891	U1759	A1759	G1684	G1613
G2508	U2441	U2300	G2300	U2232	U2166	A2097	G2032	C1962	G1892	A1821	C1760	C1685	A1614
U2509	C2442	U2301	U2301	U2233	U2167	U2098	A2033	U1963	C1893	C1822	C1761	C1686	C1615
C2510	G2443	G2302	U2302	G2234	U2168	C2104	U2034	G1964	C1894	G1823	A1762	G1687	C1616
G2511	U2444	C2303	C2303	G2234	A2169	C2035	G2035	C1967	G1895	G1824	G1763	U1688	C1617
U2512	C2374	G2304	G2304	G2237	A2170	U2105	G2036	C1968	G1896	U1825	C1764	A1689	A1618
C2513	G2375	U2305	U2305	G2238	A2171	U2106	A2037	G1969	A1900	G1826	U1765	G1619	G1619
U2514	G2445	A2311	A2311	G2239	U2172	G2107	G2038	A1970	G1901	U1827	G1766	C1620	U1621
C2515	G2446	U2312	U2312	U2240	A2173	A2108	U2039	U1971	C1902	G1828	U1692	G1622	G1622
G2516	A2447	G2313	G2313	U2241	C2174	U2109	G2040			A1829			



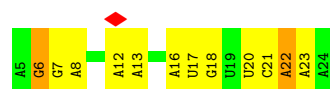
• Molecule 54: 5S ribosomal RNA

Chain 28: 26% 66% 8%



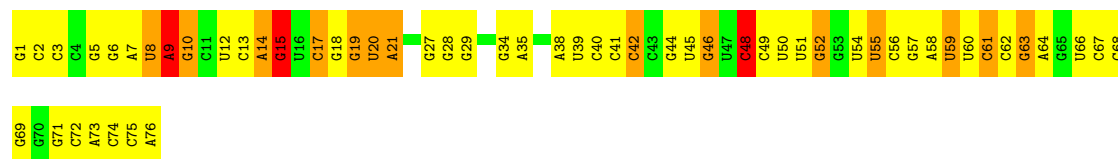
• Molecule 55: mRNA

Chain 29: 5% 40% 50% 10%



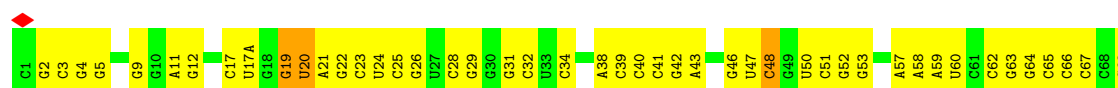
• Molecule 56: A-site tRNA^{Phe}

Chain 30: 25% 53% 18%



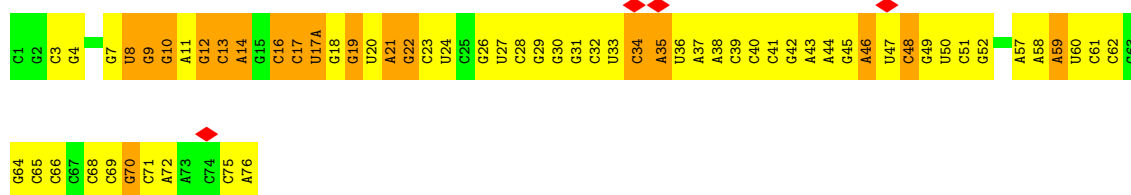
• Molecule 57: P-site tRNA^{fMet}

Chain 31: 36% 58% 5%

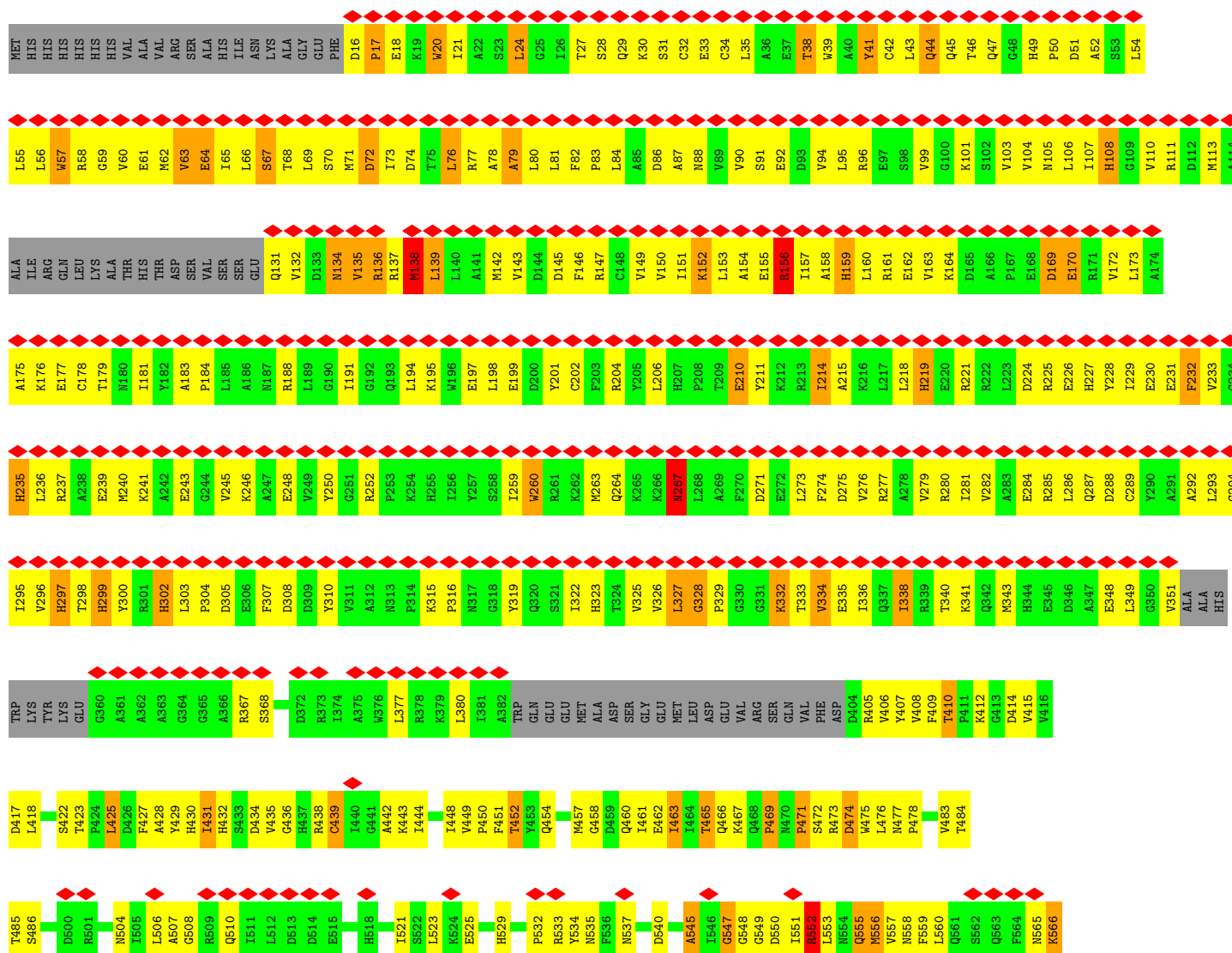


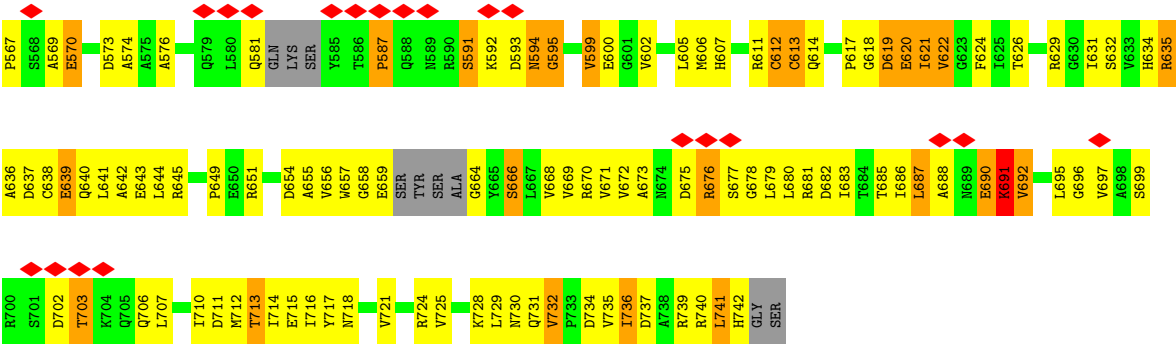


• Molecule 58: E-site tRNA^fMet



• Molecule 59: GTP pyrophosphokinase





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	57430	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)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.6	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	30488	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.490	Depositor
Minimum map value	-0.157	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.043	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	393.6, 393.6, 393.6	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.37	0/2121	1.13	24/2852 (0.8%)
2	B	0.41	0/1586	1.04	8/2134 (0.4%)
3	C	0.43	0/1571	1.13	19/2113 (0.9%)
4	D	0.37	0/1434	1.08	14/1926 (0.7%)
5	E	0.42	0/1343	1.15	12/1816 (0.7%)
6	F	0.52	0/1122	1.11	11/1515 (0.7%)
7	G	0.59	0/1001	1.32	16/1350 (1.2%)
8	H	0.65	0/1046	1.26	16/1410 (1.1%)
9	I	0.39	0/1152	0.99	7/1551 (0.5%)
10	J	0.40	0/947	1.11	11/1268 (0.9%)
11	K	0.40	0/1054	1.12	12/1403 (0.9%)
12	L	0.37	0/1093	0.95	3/1460 (0.2%)
13	M	0.37	0/973	1.03	4/1301 (0.3%)
14	N	0.36	0/902	0.98	6/1209 (0.5%)
15	O	0.38	0/929	1.10	8/1242 (0.6%)
16	P	0.39	0/960	0.97	4/1278 (0.3%)
17	Q	0.40	0/829	1.20	10/1107 (0.9%)
18	R	0.40	0/864	1.09	7/1156 (0.6%)
19	S	0.37	0/744	1.12	8/994 (0.8%)
20	T	0.35	0/787	1.18	12/1051 (1.1%)
21	U	0.37	0/766	0.97	2/1025 (0.2%)
22	V	0.38	0/582	1.00	4/769 (0.5%)
23	W	0.40	0/635	1.10	6/848 (0.7%)
24	X	0.40	0/510	1.02	3/677 (0.4%)
25	Y	0.39	0/453	1.00	1/605 (0.2%)
26	Z	0.45	0/531	1.18	8/709 (1.1%)
27	1	0.40	0/450	1.02	1/599 (0.2%)
28	2	0.39	0/416	0.96	3/554 (0.5%)
29	3	0.46	0/380	0.97	0/498
30	4	0.39	0/513	1.02	5/676 (0.7%)
31	5	0.38	0/303	1.06	3/397 (0.8%)
32	6	0.45	0/1735	1.13	16/2338 (0.7%)
33	7	0.41	0/1651	1.05	12/2225 (0.5%)
34	8	0.40	0/1665	1.09	14/2227 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	9	0.41	0/1169	1.09	12/1573 (0.8%)
36	10	0.42	0/835	1.13	7/1128 (0.6%)
37	11	0.38	0/1195	1.15	15/1602 (0.9%)
38	12	0.38	0/989	1.04	4/1326 (0.3%)
39	13	0.40	0/1034	1.15	10/1375 (0.7%)
40	14	0.46	0/796	1.13	10/1077 (0.9%)
41	15	0.40	0/885	1.25	13/1195 (1.1%)
42	16	0.42	0/969	1.27	14/1300 (1.1%)
43	17	0.38	0/892	1.03	4/1193 (0.3%)
44	18	0.36	0/817	1.00	3/1088 (0.3%)
45	19	0.36	0/722	1.02	4/964 (0.4%)
46	20	0.40	0/659	1.10	8/884 (0.9%)
47	21	0.39	0/657	1.08	4/881 (0.5%)
48	22	0.46	0/544	1.10	5/731 (0.7%)
49	23	0.40	0/652	1.16	7/877 (0.8%)
50	24	0.36	0/671	1.09	6/888 (0.7%)
51	25	0.46	0/550	1.23	4/728 (0.5%)
52	26	0.47	0/36967	0.59	16/57666 (0.0%)
53	27	0.49	0/69801	0.61	35/108894 (0.0%)
54	28	0.45	0/2876	0.57	3/4483 (0.1%)
55	29	0.55	0/486	0.62	0/757
56	30	0.56	0/1813	0.66	2/2823 (0.1%)
57	31	0.47	0/1836	0.51	0/2859
58	32	0.67	0/1835	0.66	0/2857
59	33	0.85	15/4985 (0.3%)	1.42	82/6770 (1.2%)
All	All	0.48	15/167683 (0.0%)	0.79	558/250202 (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
52	26	0	16
53	27	0	37
56	30	0	2
58	32	0	1
59	33	0	2
All	All	0	58

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.87	1.19	1.33
59	33	17	PRO	CA-CB	-9.92	1.39	1.53
59	33	20	TRP	NE1-CE2	-7.66	1.29	1.37
59	33	152	LYS	CD-CE	-6.88	1.31	1.52
59	33	159	HIS	CG-ND1	-6.53	1.31	1.38
59	33	159	HIS	CD2-NE2	-6.31	1.30	1.37
59	33	299	HIS	CD2-NE2	-6.13	1.31	1.37
59	33	260	TRP	NE1-CE2	-5.56	1.31	1.37
59	33	299	HIS	CG-ND1	-5.55	1.32	1.38
59	33	297	HIS	CD2-NE2	-5.38	1.31	1.37
59	33	219	HIS	CG-ND1	-5.31	1.32	1.38
59	33	323	HIS	CD2-NE2	-5.30	1.32	1.37
59	33	108	HIS	CG-ND1	-5.27	1.32	1.38
59	33	302	HIS	CG-ND1	-5.19	1.32	1.38
59	33	235	HIS	CD2-NE2	-5.01	1.32	1.37

All (558) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	16	22	ALA	N-CA-C	-14.76	95.32	113.18
51	25	20	ARG	N-CA-C	-14.64	94.73	112.89
59	33	555	GLN	N-CA-C	-12.79	97.37	113.23
59	33	17	PRO	N-CA-CB	-12.18	89.93	103.33
59	33	156	ARG	NH1-CZ-NH2	-11.67	104.13	119.30
59	33	690	GLU	N-CA-C	-11.31	99.50	113.18
51	25	16	ARG	N-CA-C	-11.26	99.54	113.38
39	13	87	MET	N-CA-C	-11.08	99.22	113.17
8	H	66	PHE	N-CA-C	11.06	125.44	108.96
59	33	17	PRO	CB-CA-C	-10.81	94.78	112.62
44	18	24	ALA	N-CA-C	-10.50	100.08	113.72
39	13	95	SER	N-CA-C	-10.44	98.85	111.69
59	33	17	PRO	CA-CB-CG	10.44	124.33	104.50
41	15	70	ALA	N-CA-C	-10.42	100.58	113.18
17	Q	72	VAL	N-CA-C	-10.29	98.83	110.05
36	10	15	SER	N-CA-C	-10.22	100.07	112.54
6	F	91	PHE	N-CA-C	-10.16	100.88	113.28
17	Q	46	GLU	N-CA-C	10.15	125.53	109.39
32	6	180	ILE	N-CA-C	10.15	118.01	107.76
59	33	327	LEU	CD1-CG-CD2	-10.08	88.62	110.80
39	13	89	TYR	N-CA-C	-10.04	101.16	113.41
50	24	5	SER	N-CA-C	-9.97	101.33	113.19
7	G	42	ARG	N-CA-C	-9.93	101.19	113.20
59	33	410	THR	N-CA-C	-9.93	98.72	110.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	87	SER	N-CA-C	-9.79	100.69	111.36
32	6	44	LYS	N-CA-C	-9.78	101.47	113.50
32	6	32	GLY	N-CA-C	-9.62	99.55	112.82
59	33	593	ASP	N-CA-C	-9.59	100.69	111.82
48	22	16	GLY	N-CA-C	-9.56	102.59	114.16
7	G	58	THR	N-CA-C	9.49	122.81	111.33
59	33	328	GLY	CA-C-N	9.47	129.56	119.05
59	33	328	GLY	C-N-CA	9.47	129.56	119.05
20	T	96	LYS	N-CA-C	-9.28	96.55	110.28
42	16	63	THR	N-CA-C	-9.22	98.10	110.55
1	A	245	THR	N-CA-C	-9.10	98.17	110.36
47	21	68	LYS	N-CA-C	-9.01	97.80	110.50
26	Z	41	HIS	N-CA-C	-8.95	96.96	110.39
42	16	114	SER	N-CA-C	-8.94	101.51	111.07
42	16	105	GLY	N-CA-C	-8.86	99.97	112.37
33	7	118	SER	N-CA-C	-8.84	101.73	111.36
59	33	523	LEU	N-CA-C	-8.83	102.08	113.12
59	33	332	LYS	CA-CB-CG	8.81	131.72	114.10
42	16	86	VAL	N-CA-C	8.77	119.33	110.82
59	33	156	ARG	NE-CZ-NH1	8.76	130.26	121.50
34	8	32	LYS	N-CA-C	-8.75	99.05	111.56
59	33	591	SER	N-CA-C	-8.65	102.71	113.18
19	S	10	VAL	N-CA-C	8.65	119.44	110.36
7	G	72	LEU	N-CA-C	8.61	120.67	111.28
41	15	117	HIS	N-CA-C	-8.59	99.82	110.65
39	13	40	ARG	N-CA-C	-8.58	102.83	113.38
7	G	35	VAL	N-CA-C	-8.50	100.46	111.09
7	G	44	ALA	N-CA-C	-8.45	102.98	113.28
59	33	431	ILE	N-CA-C	-8.44	102.64	110.82
5	E	81	GLY	N-CA-C	-8.39	102.89	112.29
17	Q	101	ILE	N-CA-C	-8.29	101.01	110.05
37	11	115	MET	N-CA-C	-8.26	102.22	111.14
7	G	13	ALA	N-CA-C	-8.21	102.29	111.82
7	G	43	LYS	N-CA-C	-8.14	102.38	111.82
42	16	115	LYS	N-CA-C	-8.09	97.42	110.20
59	33	152	LYS	CB-CG-CD	-8.08	92.71	111.30
23	W	13	THR	N-CA-C	8.08	122.59	109.59
18	R	24	ILE	N-CA-C	8.04	119.81	112.17
33	7	105	VAL	N-CA-C	-8.00	96.97	108.17
59	33	736	ILE	N-CA-C	-7.97	105.72	113.53
59	33	76	LEU	N-CA-CB	-7.89	98.53	110.12
59	33	547	GLY	N-CA-C	-7.84	102.24	115.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	Z	51	VAL	N-CA-C	7.84	118.59	110.36
7	G	41	LEU	N-CA-C	-7.83	103.76	113.38
34	8	166	LYS	CA-C-N	7.82	127.87	119.89
34	8	166	LYS	C-N-CA	7.82	127.87	119.89
17	Q	51	VAL	N-CA-C	-7.78	102.81	109.19
56	30	15	G	N9-C1'-C2'	7.78	125.67	114.00
1	A	71	ASP	N-CA-C	7.76	120.70	109.14
1	A	66	PHE	N-CA-C	-7.75	103.79	113.55
4	D	61	GLY	N-CA-C	-7.74	104.35	115.27
23	W	51	SER	N-CA-C	-7.74	99.03	110.48
32	6	30	ILE	N-CA-C	7.71	120.10	109.46
45	19	43	ALA	N-CA-C	-7.71	102.82	111.07
6	F	138	VAL	N-CA-C	7.64	120.63	109.63
53	27	2502	G	N9-C1'-C2'	7.63	123.44	112.00
13	M	2	ARG	N-CA-C	7.60	121.93	111.90
40	14	95	GLY	N-CA-C	-7.57	106.07	115.08
52	26	89	U	N1-C1'-C2'	7.57	123.35	112.00
3	C	48	THR	N-CA-C	-7.51	100.84	110.53
36	10	52	ASN	N-CA-C	-7.46	101.66	111.74
17	Q	44	GLY	N-CA-C	-7.46	102.63	115.61
5	E	112	VAL	N-CA-C	7.45	118.21	106.88
59	33	169	ASP	CA-C-O	-7.45	112.81	121.16
49	23	9	PHE	N-CA-C	7.44	120.73	110.24
41	15	78	ILE	N-CA-C	7.42	119.03	109.30
8	H	79	LEU	N-CA-C	-7.41	104.24	113.28
40	14	40	ILE	CA-C-N	7.41	129.10	119.84
40	14	40	ILE	C-N-CA	7.41	129.10	119.84
40	14	38	GLY	N-CA-C	7.40	127.44	112.34
20	T	8	ASP	N-CA-C	7.38	120.67	110.35
54	28	66	A	C2'-C3'-O3'	-7.37	102.65	113.70
3	C	153	LEU	N-CA-C	7.36	120.66	108.96
1	A	164	VAL	N-CA-C	7.33	117.45	110.42
20	T	76	THR	N-CA-C	-7.30	104.10	113.16
15	O	10	GLU	N-CA-C	-7.26	104.22	113.23
59	33	557	VAL	N-CA-C	-7.25	102.02	111.09
13	M	104	ALA	N-CA-C	7.23	119.16	111.28
2	B	92	VAL	N-CA-C	-7.23	102.04	110.21
39	13	56	MET	N-CA-C	-7.21	105.10	114.04
37	11	60	ALA	N-CA-C	-7.19	103.77	112.54
31	5	31	PRO	N-CA-C	-7.17	104.18	113.57
6	F	67	ALA	N-CA-C	-7.16	103.51	111.82
42	16	79	ILE	N-CA-C	7.14	118.10	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	9	84	VAL	N-CA-C	7.11	118.97	108.45
34	8	13	ARG	N-CA-C	-7.07	103.62	111.82
32	6	62	ARG	N-CA-C	-7.06	103.93	112.54
3	C	154	ASP	N-CA-C	-7.04	99.13	110.32
9	I	133	ALA	N-CA-C	-7.04	103.95	112.54
40	14	50	THR	N-CA-C	-7.01	99.12	110.20
59	33	469	PRO	N-CA-CB	7.00	110.60	103.25
23	W	34	SER	N-CA-C	-6.98	100.14	110.48
59	33	730	ASN	N-CA-C	-6.96	104.59	113.23
32	6	85	SER	N-CA-C	-6.96	103.71	111.71
46	20	78	VAL	N-CA-C	-6.95	103.55	113.07
15	O	14	GLN	N-CA-C	6.94	122.03	113.50
41	15	28	ASN	N-CA-C	6.93	118.63	108.86
1	A	146	LYS	N-CA-C	-6.92	101.08	110.36
36	10	89	VAL	N-CA-C	-6.92	100.03	109.37
23	W	8	GLY	N-CA-C	-6.87	105.75	115.43
51	25	21	SER	N-CA-C	-6.81	104.23	112.54
2	B	55	LYS	N-CA-C	-6.80	100.38	110.23
11	K	19	LEU	N-CA-C	6.79	119.49	110.53
7	G	117	LEU	N-CA-C	6.77	120.05	110.23
3	C	60	TRP	N-CA-C	-6.77	104.90	113.43
53	27	1111	A	C2'-C3'-O3'	6.76	119.64	109.50
8	H	24	GLY	CA-C-N	6.75	126.70	119.28
8	H	24	GLY	C-N-CA	6.75	126.70	119.28
59	33	587	PRO	N-CA-CB	6.75	110.33	103.25
41	15	74	LYS	N-CA-C	-6.72	103.95	111.28
59	33	138	MET	N-CA-C	-6.70	104.33	113.30
8	H	118	GLY	N-CA-C	-6.69	102.80	112.17
31	5	5	ALA	N-CA-C	-6.67	105.14	113.28
59	33	63	VAL	CG1-CB-CG2	-6.67	96.12	110.80
59	33	566	LYS	N-CA-C	6.63	124.47	109.81
11	K	69	ARG	N-CA-C	-6.62	103.88	112.23
34	8	14	GLU	N-CA-C	-6.61	105.21	113.28
35	9	100	GLU	N-CA-C	-6.60	102.56	111.54
41	15	81	LEU	N-CA-C	6.60	118.79	108.96
24	X	2	LYS	N-CA-C	6.59	118.12	111.07
3	C	197	GLU	N-CA-C	-6.59	104.34	112.38
59	33	595	GLY	N-CA-C	-6.59	106.59	115.36
59	33	570	GLU	N-CA-C	-6.59	104.18	111.82
16	P	88	GLU	N-CA-C	6.58	119.46	111.82
59	33	732	VAL	CA-C-N	6.55	126.79	119.32
59	33	732	VAL	C-N-CA	6.55	126.79	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	11	20	GLU	N-CA-C	-6.54	103.99	112.23
19	S	58	VAL	N-CA-C	6.52	117.65	107.28
20	T	91	LYS	N-CA-C	-6.52	99.39	109.76
50	24	69	ASN	N-CA-C	-6.52	104.21	111.71
5	E	15	ASP	N-CA-C	6.52	119.82	109.65
4	D	131	VAL	N-CA-C	-6.51	98.09	108.90
46	20	67	ILE	N-CA-C	6.51	118.82	109.51
39	13	80	HIS	N-CA-C	-6.50	104.23	111.71
32	6	106	VAL	N-CA-C	-6.49	102.98	111.09
38	12	90	GLU	N-CA-C	-6.49	102.74	112.54
49	23	6	LYS	N-CA-C	6.49	118.98	108.41
53	27	421	C	N1-C1'-C2'	6.47	121.70	112.00
17	Q	59	ILE	N-CA-C	6.46	116.02	106.85
5	E	40	VAL	N-CA-C	6.45	117.53	107.28
59	33	67	SER	O-C-N	-6.45	114.34	122.27
18	R	52	GLU	N-CA-C	-6.44	103.38	111.11
59	33	486	SER	N-CA-C	-6.44	105.05	113.17
53	27	2287	A	N9-C1'-C2'	6.44	121.66	112.00
7	G	122	GLN	N-CA-C	6.43	117.11	108.23
12	L	65	ILE	N-CA-C	-6.43	100.68	109.55
2	B	177	VAL	N-CA-C	-6.41	99.00	109.12
11	K	109	LYS	N-CA-C	-6.40	100.73	110.14
37	11	128	GLU	N-CA-C	-6.39	105.44	112.72
19	S	38	ALA	N-CA-C	6.38	119.28	110.35
59	33	741	LEU	N-CA-C	-6.37	101.51	110.50
3	C	73	ILE	N-CA-C	6.36	117.04	110.36
53	27	1378	A	C2'-C3'-O3'	6.36	119.03	109.50
47	21	28	VAL	N-CA-C	6.35	118.64	108.85
11	K	138	ALA	N-CA-C	-6.35	105.53	113.28
40	14	98	VAL	N-CA-C	6.34	119.08	108.81
1	A	35	LYS	N-CA-C	6.34	118.48	110.24
3	C	176	ASP	CA-C-N	6.34	127.76	119.84
3	C	176	ASP	C-N-CA	6.34	127.76	119.84
42	16	25	ALA	N-CA-C	-6.34	103.53	111.90
59	33	351	VAL	CB-CA-C	6.33	123.43	111.40
41	15	71	ASP	N-CA-C	-6.32	100.63	110.42
5	E	56	GLY	N-CA-C	-6.31	105.98	115.32
20	T	55	GLY	N-CA-C	-6.31	101.42	112.53
11	K	93	ASN	N-CA-C	-6.31	97.36	110.80
14	N	116	GLN	N-CA-C	6.30	119.41	109.39
53	27	1320	C	N1-C1'-C2'	6.30	121.46	112.00
35	9	55	VAL	N-CA-C	6.30	122.48	108.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	28	LYS	N-CA-C	-6.29	100.52	109.96
18	R	107	VAL	N-CA-C	6.29	115.78	106.85
4	D	107	VAL	CB-CA-C	-6.28	107.73	113.70
20	T	9	GLU	N-CA-C	-6.28	100.33	110.32
41	15	40	ALA	N-CA-C	6.28	118.89	110.35
2	B	39	ASP	N-CA-C	6.27	119.24	109.52
38	12	20	ASN	N-CA-C	-6.27	105.21	112.86
53	27	1130	U	C2'-C3'-O3'	6.27	118.91	109.50
59	33	507	ALA	N-CA-C	-6.27	104.73	112.38
7	G	107	GLU	N-CA-C	-6.25	97.48	110.80
7	G	4	ASN	N-CA-C	6.25	118.90	111.71
49	23	12	LEU	N-CA-C	6.25	118.61	111.11
44	18	55	SER	CA-C-N	6.24	126.43	119.32
44	18	55	SER	C-N-CA	6.24	126.43	119.32
35	9	101	GLY	N-CA-C	-6.23	106.02	113.99
15	O	15	ASP	N-CA-C	6.23	119.61	112.57
10	J	39	ILE	N-CA-C	6.22	116.57	108.35
42	16	101	LEU	CB-CA-C	-6.22	107.67	115.89
33	7	85	LYS	N-CA-C	-6.22	104.50	111.28
59	33	79	ALA	CA-C-O	6.20	126.99	120.42
1	A	170	TYR	N-CA-C	6.19	119.00	108.90
1	A	27	LYS	CA-C-N	6.19	126.16	119.78
1	A	27	LYS	C-N-CA	6.19	126.16	119.78
52	26	305	G	C2'-C3'-O3'	-6.19	104.42	113.70
37	11	26	VAL	N-CA-C	-6.18	104.72	110.53
47	21	17	GLU	N-CA-C	6.17	119.55	110.30
3	C	79	ARG	N-CA-C	-6.16	101.81	110.50
36	10	66	ALA	CA-C-N	6.16	126.64	119.99
36	10	66	ALA	C-N-CA	6.16	126.64	119.99
26	Z	59	ARG	N-CA-C	-6.15	104.58	111.28
9	I	50	THR	N-CA-C	-6.15	104.95	112.88
59	33	210	GLU	CA-CB-CG	-6.15	101.81	114.10
59	33	559	PHE	N-CA-C	-6.15	104.69	111.82
49	23	57	VAL	CA-C-N	6.14	126.33	120.31
49	23	57	VAL	C-N-CA	6.14	126.33	120.31
59	33	439	CYS	N-CA-C	6.14	119.27	110.24
11	K	137	ALA	N-CA-C	-6.14	104.70	111.82
26	Z	63	ARG	N-CA-C	-6.13	103.96	112.30
1	A	225	ASN	CA-C-N	6.13	127.50	119.84
1	A	225	ASN	C-N-CA	6.13	127.50	119.84
43	17	40	GLU	N-CA-C	6.12	119.85	112.38
34	8	159	GLU	N-CA-C	-6.11	104.73	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	33	592	LYS	N-CA-C	-6.11	105.32	112.89
8	H	65	SER	N-CA-C	-6.11	97.79	110.80
42	16	43	LYS	N-CA-C	6.11	123.30	109.81
31	5	12	ARG	N-CA-C	-6.10	106.38	113.88
1	A	178	GLY	N-CA-C	-6.10	106.36	114.95
59	33	152	LYS	CD-CE-NZ	6.09	131.38	111.90
2	B	22	ILE	N-CA-C	6.08	113.57	107.55
53	27	1320	C	C4'-C3'-O3'	-6.07	103.89	113.00
10	J	121	GLU	N-CA-C	6.06	118.06	108.79
5	E	47	ASN	N-CA-C	-6.05	107.13	114.75
8	H	73	PRO	CA-C-N	6.05	126.06	119.89
8	H	73	PRO	C-N-CA	6.05	126.06	119.89
4	D	10	GLU	N-CA-C	6.03	118.63	111.33
59	33	594	ASN	CB-CA-C	-6.03	108.62	115.79
38	12	28	SER	N-CA-C	6.03	118.30	110.53
15	O	74	GLN	N-CA-C	-6.01	100.76	109.59
20	T	101	THR	N-CA-C	-6.01	99.17	108.42
42	16	59	GLY	N-CA-C	6.01	122.23	115.08
59	33	57	TRP	O-C-N	-6.00	115.89	122.07
59	33	137	ARG	N-CA-C	-6.00	104.81	113.21
4	D	56	LEU	N-CA-C	-5.99	104.75	111.28
32	6	120	SER	N-CA-C	-5.98	105.47	112.89
59	33	139	LEU	N-CA-C	-5.98	104.57	112.34
1	A	51	ARG	N-CA-C	5.96	117.99	110.24
10	J	38	ILE	N-CA-C	5.96	117.93	108.87
4	D	65	LEU	N-CA-C	-5.96	101.66	110.48
23	W	74	GLY	N-CA-C	-5.96	107.03	115.43
46	20	62	GLY	N-CA-C	-5.96	106.95	114.16
9	I	7	LYS	CA-C-N	5.96	127.28	119.84
9	I	7	LYS	C-N-CA	5.96	127.28	119.84
13	M	95	THR	N-CA-C	5.96	118.01	109.14
1	A	213	ARG	N-CA-C	-5.95	105.21	112.88
36	10	68	GLN	N-CA-C	5.95	118.28	111.02
5	E	100	ASN	N-CA-C	-5.92	105.55	112.89
45	19	61	GLN	N-CA-C	-5.92	104.74	111.07
32	6	71	THR	N-CA-C	5.91	117.69	107.93
23	W	19	HIS	N-CA-C	-5.91	104.92	111.36
1	A	207	ALA	N-CA-C	-5.90	104.98	111.82
59	33	639	GLU	N-CA-C	5.90	118.21	111.02
39	13	39	GLY	N-CA-C	-5.89	106.36	115.73
59	33	471	PRO	N-CA-CB	5.89	109.44	103.25
45	19	23	SER	N-CA-C	-5.88	101.57	110.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	27	746	U	N1-C1'-C2'	5.88	120.83	112.00
53	27	2605	U	C4'-C3'-O3'	-5.88	104.18	113.00
4	D	109	ARG	N-CA-C	5.87	120.17	113.19
43	17	19	THR	N-CA-C	-5.87	105.39	112.54
8	H	101	SER	N-CA-C	-5.86	101.61	110.28
6	F	17	ASP	N-CA-C	5.85	118.78	109.65
10	J	49	ARG	N-CA-C	5.85	117.33	111.07
34	8	117	VAL	N-CA-C	5.85	117.29	110.62
35	9	79	THR	N-CA-C	5.85	116.00	108.34
20	T	25	LYS	N-CA-C	-5.84	106.19	113.55
37	11	69	ARG	CA-C-N	5.82	125.73	119.85
37	11	69	ARG	C-N-CA	5.82	125.73	119.85
50	24	7	LYS	N-CA-C	-5.82	105.06	111.82
59	33	540	ASP	N-CA-C	-5.82	104.84	111.07
34	8	15	GLY	N-CA-C	-5.82	105.31	114.10
1	A	6	LYS	CA-C-N	5.80	127.09	119.84
1	A	6	LYS	C-N-CA	5.80	127.09	119.84
11	K	26	GLY	N-CA-C	-5.80	106.15	115.08
53	27	1020	A	C2'-C3'-O3'	5.80	118.20	109.50
30	4	3	ILE	N-CA-C	-5.80	102.09	109.80
9	I	10	THR	N-CA-C	5.79	121.01	113.88
50	24	3	ILE	N-CA-C	5.79	116.02	107.15
59	33	552	ARG	N-CA-C	-5.79	98.48	110.80
18	R	85	ILE	N-CA-C	5.78	115.14	106.42
19	S	59	ASN	N-CA-C	-5.78	101.14	110.32
53	27	2333	A	C2'-C3'-O3'	-5.78	105.04	113.70
52	26	572	A	N9-C1'-C2'	5.77	120.66	112.00
59	33	38	THR	CA-CB-CG2	-5.77	100.69	110.50
8	H	134	SER	N-CA-C	-5.77	106.14	112.72
35	9	153	ALA	N-CA-C	-5.77	105.95	112.87
59	33	79	ALA	O-C-N	-5.77	115.58	122.15
30	4	61	LEU	CA-C-N	5.76	127.05	119.84
30	4	61	LEU	C-N-CA	5.76	127.05	119.84
3	C	56	GLY	N-CA-C	5.75	126.82	113.18
38	12	125	ILE	N-CA-C	5.74	121.29	109.34
3	C	136	GLN	N-CA-C	-5.74	104.93	111.07
41	15	41	LEU	N-CA-C	-5.74	102.79	111.34
46	20	35	ARG	N-CA-C	-5.74	102.95	110.53
40	14	101	SER	N-CA-C	5.73	118.58	110.50
7	G	59	LEU	N-CA-C	5.73	118.37	110.35
19	S	50	LEU	N-CA-C	5.72	118.25	111.33
52	26	1399	C	C2'-C3'-O3'	5.72	118.08	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	E	41	GLU	N-CA-C	-5.72	100.67	109.76
11	K	98	ALA	N-CA-C	-5.71	106.27	113.18
53	27	1395	A	N9-C1'-C2'	5.71	120.57	112.00
26	Z	38	SER	N-CA-C	-5.70	104.67	111.69
59	33	452	THR	N-CA-C	-5.70	107.57	114.75
53	27	2712	C	C2'-C3'-O3'	5.70	118.04	109.50
6	F	40	THR	N-CA-C	-5.69	101.42	109.96
8	H	80	LYS	N-CA-C	-5.69	106.47	113.41
53	27	2529	G	N9-C1'-C2'	5.69	120.53	112.00
30	4	26	ALA	N-CA-C	5.69	122.92	110.80
4	D	19	PHE	N-CA-C	-5.69	106.56	112.93
41	15	109	ILE	N-CA-C	-5.68	103.86	110.05
59	33	64	GLU	O-C-N	5.67	128.14	122.12
54	28	87	U	N1-C1'-C2'	5.67	120.51	112.00
41	15	38	GLY	N-CA-C	-5.67	107.94	114.69
34	8	151	GLN	N-CA-C	5.67	118.06	110.35
2	B	30	GLU	N-CA-C	-5.67	102.51	110.50
10	J	54	LYS	N-CA-C	-5.66	101.90	110.28
59	33	545	ALA	N-CA-C	5.66	118.18	111.33
20	T	6	ARG	N-CA-C	5.66	122.84	110.80
48	22	21	ASP	N-CA-C	-5.66	101.47	109.96
42	16	53	ARG	N-CA-C	-5.65	102.53	110.50
59	33	214	ILE	CB-CG1-CD1	-5.65	101.93	113.80
21	U	89	ILE	N-CA-C	5.65	116.81	108.45
6	F	75	LEU	N-CA-C	-5.64	104.82	110.97
21	U	4	ILE	N-CA-C	5.64	116.11	107.77
10	J	67	LYS	N-CA-C	-5.63	104.62	112.45
48	22	47	ARG	N-CA-C	-5.63	101.71	110.10
26	Z	4	ASP	N-CA-C	5.63	119.40	111.52
22	V	69	GLY	CA-C-N	5.62	125.46	119.28
22	V	69	GLY	C-N-CA	5.62	125.46	119.28
47	21	58	VAL	N-CA-C	5.62	115.25	108.06
52	26	1201	A	C2'-C3'-O3'	5.62	117.93	109.50
59	33	687	LEU	N-CA-C	5.62	118.13	111.33
59	33	713	THR	N-CA-C	-5.61	101.40	110.32
59	33	525	GLU	N-CA-C	-5.61	104.56	111.40
59	33	478	PRO	N-CA-C	-5.60	106.09	113.65
52	26	77	A	N9-C1'-C2'	5.60	120.39	112.00
26	Z	21	VAL	N-CA-C	-5.59	101.82	109.37
33	7	157	GLY	N-CA-C	-5.59	107.60	115.32
15	O	89	GLY	N-CA-C	5.59	118.36	111.93
37	11	124	SER	N-CA-C	-5.59	105.10	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	19	ASP	N-CA-C	-5.58	102.02	110.28
24	X	7	ARG	N-CA-C	5.58	117.44	111.36
10	J	31	ARG	N-CA-C	5.57	120.23	113.38
3	C	139	LYS	N-CA-C	-5.57	105.74	112.54
14	N	102	ARG	N-CA-C	-5.57	105.21	111.28
35	9	145	ASN	N-CA-C	-5.56	105.22	112.23
15	O	32	VAL	N-CA-C	5.55	115.99	107.77
59	33	691	LYS	N-CA-C	5.55	122.63	110.80
30	4	63	TYR	N-CA-C	5.55	118.05	111.33
32	6	43	GLU	N-CA-C	-5.55	106.48	113.20
14	N	19	GLN	N-CA-C	-5.55	105.24	112.23
43	17	51	GLN	N-CA-C	-5.55	106.56	113.55
14	N	46	GLU	N-CA-C	5.55	117.54	108.55
11	K	16	GLY	N-CA-C	5.54	121.00	112.81
28	2	13	SER	N-CA-C	-5.54	106.41	112.72
24	X	8	GLU	N-CA-C	5.53	117.88	110.35
37	11	14	ASP	N-CA-C	5.53	117.45	109.48
59	33	556	MET	N-CA-C	-5.53	105.66	112.90
17	Q	56	GLY	N-CA-C	-5.53	106.17	115.62
3	C	171	ASP	N-CA-C	-5.52	101.86	110.42
52	26	280	C	C2'-C3'-O3'	5.52	117.78	109.50
53	27	2324	U	N1-C1'-C2'	5.52	120.28	112.00
39	13	128	LYS	N-CA-C	-5.51	105.43	111.82
16	P	49	ARG	N-CA-C	-5.51	105.66	112.38
6	F	22	LYS	N-CA-C	-5.50	102.14	110.28
59	33	457	MET	N-CA-C	5.50	119.16	111.90
51	25	39	LYS	N-CA-C	5.49	121.01	113.77
46	20	6	LEU	N-CA-C	5.48	117.09	109.31
52	26	1151	A	N9-C1'-C2'	5.47	120.21	112.00
59	33	550	ASP	N-CA-C	5.47	117.68	111.11
15	O	34	GLY	N-CA-C	-5.47	100.22	113.18
39	13	63	TYR	N-CA-C	-5.47	100.39	109.46
53	27	361	G	N9-C1'-C2'	5.47	120.20	112.00
7	G	118	ILE	N-CA-C	-5.46	97.09	108.88
8	H	52	LEU	CA-C-N	5.46	125.47	119.90
8	H	52	LEU	C-N-CA	5.46	125.47	119.90
33	7	124	GLU	N-CA-C	-5.46	105.49	111.82
33	7	144	GLY	N-CA-C	5.46	122.60	115.40
32	6	125	PHE	N-CA-C	-5.45	105.89	112.54
35	9	156	ARG	N-CA-C	5.45	117.58	107.99
41	15	50	GLY	N-CA-C	-5.45	102.75	112.22
59	33	139	LEU	CA-C-O	-5.44	113.19	119.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	7	182	ASP	N-CA-C	-5.43	102.84	110.50
40	14	21	ALA	N-CA-C	-5.43	105.92	112.54
6	F	27	ARG	N-CA-C	5.42	117.89	111.33
32	6	31	PHE	N-CA-C	-5.42	101.12	109.52
49	23	33	TRP	N-CA-C	-5.41	105.31	112.94
43	17	83	GLY	N-CA-C	-5.41	107.86	115.32
53	27	784	G	C2'-C3'-O3'	-5.40	105.61	113.70
59	33	672	VAL	N-CA-C	-5.39	102.09	109.37
10	J	24	VAL	N-CA-C	-5.39	104.12	110.21
59	33	558	ASN	N-CA-C	-5.38	105.07	111.69
33	7	107	LYS	CA-C-N	5.38	125.71	119.47
33	7	107	LYS	C-N-CA	5.38	125.71	119.47
4	D	6	TYR	N-CA-C	-5.37	105.53	111.71
4	D	143	ASP	N-CA-C	5.37	117.83	111.33
46	20	5	ARG	N-CA-C	5.37	115.12	108.19
50	24	53	MET	N-CA-C	-5.35	108.52	114.62
5	E	127	GLN	N-CA-C	5.35	122.19	110.80
35	9	157	GLY	N-CA-C	-5.34	107.13	114.67
17	Q	97	LYS	N-CA-C	-5.34	100.20	108.90
20	T	20	LYS	N-CA-C	-5.34	102.97	110.50
10	J	47	ILE	CA-C-N	5.33	126.50	119.84
10	J	47	ILE	C-N-CA	5.33	126.50	119.84
12	L	118	LYS	N-CA-C	-5.33	105.37	111.07
52	26	422	C	N1-C1'-C2'	5.33	119.99	112.00
59	33	599	VAL	N-CA-C	5.33	116.42	108.54
10	J	95	ILE	N-CA-C	-5.33	107.65	112.12
53	27	2119	A	N9-C1'-C2'	5.33	119.99	112.00
13	M	69	ARG	N-CA-C	-5.32	103.37	110.55
5	E	124	CYS	CA-C-N	5.31	125.63	119.47
5	E	124	CYS	C-N-CA	5.31	125.63	119.47
59	33	24	LEU	CD1-CG-CD2	5.31	122.49	110.80
37	11	2	ARG	N-CA-C	-5.31	105.54	112.23
35	9	149	PRO	N-CA-C	-5.29	106.64	113.57
2	B	71	ALA	N-CA-C	-5.28	107.00	113.50
4	D	24	VAL	N-CA-C	5.28	116.01	110.62
16	P	5	ARG	N-CA-C	-5.28	102.04	109.96
59	33	232	PHE	CD1-CE1-CZ	5.28	129.49	120.00
34	8	41	GLY	N-CA-C	-5.27	106.33	113.24
14	N	25	ARG	N-CA-C	5.27	117.99	109.40
1	A	111	ALA	N-CA-C	-5.27	103.36	110.68
53	27	361	G	C4'-C3'-O3'	-5.27	105.10	113.00
22	V	30	GLY	N-CA-C	-5.26	108.08	114.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	14	52	LEU	N-CA-C	-5.26	103.74	110.53
56	30	9	A	C2'-C3'-O3'	-5.26	105.81	113.70
37	11	150	PHE	N-CA-C	5.26	118.57	110.42
28	2	29	LYS	CA-C-N	5.25	125.06	119.28
28	2	29	LYS	C-N-CA	5.25	125.06	119.28
4	D	100	GLU	N-CA-C	-5.25	105.64	111.36
33	7	177	LEU	N-CA-C	5.25	117.41	111.11
53	27	2725	A	N9-C1'-C2'	5.24	119.86	112.00
6	F	50	ARG	N-CA-C	-5.24	105.75	111.82
40	14	55	PRO	N-CA-C	-5.24	106.90	114.18
53	27	405	U	N1-C1'-C2'	5.24	119.85	112.00
11	K	55	MET	CA-C-N	5.23	125.23	119.89
11	K	55	MET	C-N-CA	5.23	125.23	119.89
39	13	64	ILE	N-CA-C	5.23	116.19	108.45
1	A	132	ARG	N-CA-C	-5.22	105.76	111.82
15	O	109	ILE	N-CA-C	5.22	116.00	108.48
59	33	566	LYS	CA-C-N	-5.22	113.32	119.84
59	33	566	LYS	C-N-CA	-5.22	113.32	119.84
3	C	96	VAL	N-CA-C	-5.21	100.61	108.12
37	11	32	ASP	CB-CA-C	-5.21	109.01	115.89
42	16	117	GLY	N-CA-C	5.21	125.53	113.18
9	I	112	GLY	N-CA-C	-5.21	101.71	112.34
5	E	10	VAL	N-CA-C	5.21	113.02	107.76
59	33	565	ASN	N-CA-C	-5.21	105.28	111.69
22	V	79	GLU	N-CA-C	-5.21	101.94	109.59
34	8	169	TRP	N-CA-C	5.20	117.63	111.33
50	24	82	ILE	N-CA-C	5.20	115.97	110.72
11	K	43	GLY	N-CA-C	-5.20	105.85	114.48
19	S	51	PHE	N-CA-C	-5.20	106.98	113.38
52	26	1225	A	N9-C1'-C2'	5.20	119.80	112.00
4	D	160	LYS	N-CA-C	-5.20	106.97	113.72
18	R	99	ARG	N-CA-C	5.19	117.56	110.55
33	7	13	ILE	CB-CA-C	-5.19	107.30	111.71
18	R	41	LYS	N-CA-C	-5.18	101.20	109.23
7	G	8	LYS	N-CA-C	-5.18	106.22	112.54
53	27	2576	G	N9-C1'-C2'	5.18	119.77	112.00
37	11	31	VAL	N-CA-C	-5.18	102.17	109.21
52	26	1301	U	N1-C1'-C2'	5.18	119.77	112.00
8	H	108	ILE	N-CA-C	-5.16	104.81	112.04
35	9	32	PHE	N-CA-C	5.16	117.82	108.69
37	11	53	SER	N-CA-C	-5.16	105.74	111.36
6	F	44	ILE	N-CA-C	-5.15	105.52	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	6	186	VAL	N-CA-C	5.15	120.05	109.34
52	26	1537	U	N1-C1'-C2'	5.14	119.72	112.00
53	27	669	G	N9-C1'-C2'	5.14	119.71	112.00
42	16	81	ILE	N-CA-C	5.14	115.25	107.75
45	19	21	THR	N-CA-C	-5.14	103.62	110.55
3	C	52	VAL	N-CA-C	5.13	116.30	109.37
49	23	30	LEU	N-CA-C	5.13	117.48	110.55
1	A	224	MET	N-CA-C	5.13	117.67	110.23
53	27	1343	G	N9-C1'-C2'	5.13	119.69	112.00
53	27	2529	G	C4'-C3'-O3'	-5.13	105.31	113.00
1	A	216	ARG	N-CA-C	-5.13	103.32	109.83
53	27	1884	G	N9-C1'-C2'	5.13	119.69	112.00
59	33	465	THR	N-CA-C	5.13	115.06	108.34
14	N	24	THR	N-CA-C	-5.12	102.28	109.96
17	Q	94	THR	N-CA-C	-5.12	100.56	108.90
6	F	74	ALA	N-CA-C	-5.11	106.82	113.16
3	C	72	SER	N-CA-C	5.10	117.76	109.24
16	P	70	GLN	N-CA-C	-5.10	106.31	112.54
46	20	63	GLN	N-CA-C	-5.10	106.56	112.89
3	C	50	ALA	N-CA-C	5.10	116.53	110.97
59	33	299	HIS	ND1-CG-CD2	5.09	111.19	106.10
53	27	1818	U	N1-C1'-C2'	5.08	119.62	112.00
17	Q	90	ARG	N-CA-C	-5.08	101.43	109.96
27	1	34	GLY	N-CA-C	-5.08	108.27	115.43
52	26	1300	G	N9-C1'-C2'	5.08	119.62	112.00
1	A	40	GLY	N-CA-C	-5.07	107.81	115.32
59	33	622	VAL	N-CA-C	-5.07	100.76	108.17
52	26	563	A	N9-C1'-C2'	5.07	119.61	112.00
53	27	750	A	N9-C1'-C2'	5.07	119.61	112.00
41	15	69	CYS	N-CA-C	-5.07	106.78	113.17
19	S	28	ASN	N-CA-C	-5.06	104.40	111.39
32	6	86	CYS	N-CA-C	-5.06	100.02	110.80
1	A	140	VAL	N-CA-C	5.06	116.19	108.80
32	6	83	ALA	N-CA-C	-5.06	105.68	111.14
53	27	310	A	N9-C1'-C2'	5.06	119.58	112.00
53	27	566	U	C4'-C3'-O3'	-5.05	105.42	113.00
52	26	652	U	N1-C1'-C2'	5.05	119.58	112.00
53	27	2115	G	N9-C1'-C2'	5.05	119.58	112.00
8	H	24	GLY	N-CA-C	5.05	122.64	112.34
48	22	31	TYR	N-CA-C	5.05	119.31	112.04
59	33	17	PRO	CB-CG-CD	-5.04	89.96	106.10
53	27	2629	U	N1-C1'-C2'	5.04	119.56	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	187	VAL	N-CA-C	-5.04	102.36	109.21
8	H	35	MET	N-CA-C	5.04	117.16	111.02
20	T	21	ARG	N-CA-C	5.04	116.64	109.14
34	8	110	ARG	N-CA-C	-5.04	105.68	111.07
59	33	594	ASN	N-CA-C	5.04	118.58	109.32
34	8	104	MET	N-CA-C	-5.03	106.92	113.16
26	Z	3	LYS	N-CA-C	5.03	117.19	110.35
32	6	88	GLN	N-CA-C	5.03	117.17	110.53
3	C	146	VAL	N-CA-C	5.03	116.99	109.20
36	10	65	GLU	N-CA-C	-5.03	101.50	109.59
53	27	729	G	N9-C1'-C2'	5.03	119.54	112.00
4	D	31	GLU	N-CA-C	-5.02	106.00	112.68
12	L	128	THR	N-CA-C	5.02	115.94	108.86
48	22	11	ARG	N-CA-C	5.02	121.50	110.80
52	26	1138	G	N9-C1'-C2'	5.02	119.53	112.00
59	33	67	SER	CA-C-O	5.02	125.75	119.97
19	S	32	LEU	N-CA-C	5.02	116.87	108.99
20	T	50	ALA	N-CA-C	-5.02	102.44	109.96
2	B	174	SER	N-CA-C	5.01	121.48	110.80
25	Y	32	GLY	N-CA-C	-5.01	108.78	115.40
54	28	12	C	N1-C1'-C2'	5.01	119.52	112.00
59	33	136	ARG	CA-C-N	5.01	127.77	119.35
59	33	136	ARG	C-N-CA	5.01	127.77	119.35
34	8	113	ALA	N-CA-C	-5.01	105.95	111.71
35	9	123	LEU	N-CA-C	-5.01	101.58	109.50
46	20	20	VAL	N-CA-C	5.01	114.80	107.88
7	G	89	PRO	N-CA-C	-5.01	104.89	113.70
33	7	129	PHE	N-CA-C	5.00	117.12	111.02
37	11	19	SER	N-CA-C	5.00	117.56	110.10
53	27	228	C	C4'-C3'-O3'	-5.00	105.50	113.00

There are no chirality outliers.

All (58) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1055	A	Sidechain
52	26	1151	A	Sidechain
52	26	1167	A	Sidechain
52	26	117	G	Sidechain
52	26	1194	U	Sidechain
52	26	1299	A	Sidechain

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Mol	Chain	Res	Type	Group
52	26	1345	U	Sidechain
52	26	1504	G	Sidechain
52	26	159	G	Sidechain
52	26	239	U	Sidechain
52	26	266	G	Sidechain
52	26	438	U	Sidechain
52	26	529	G	Sidechain
52	26	820	U	Sidechain
52	26	898	G	Sidechain
53	27	1126	A	Sidechain
53	27	1186	G	Sidechain
53	27	1241	A	Sidechain
53	27	1251	C	Sidechain
53	27	1663	G	Sidechain
53	27	1769	U	Sidechain
53	27	1784	A	Sidechain
53	27	1802	A	Sidechain
53	27	1937	A	Sidechain
53	27	196	A	Sidechain
53	27	1961	C	Sidechain
53	27	1981	A	Sidechain
53	27	1982	U	Sidechain
53	27	1993	U	Sidechain
53	27	2139	U	Sidechain
53	27	214	G	Sidechain
53	27	2155	U	Sidechain
53	27	2187	U	Sidechain
53	27	2273	A	Sidechain
53	27	2489	U	Sidechain
53	27	2516	A	Sidechain
53	27	2518	A	Sidechain
53	27	2529	G	Sidechain
53	27	2532	G	Sidechain
53	27	26	G	Sidechain
53	27	2688	G	Sidechain
53	27	2692	G	Sidechain
53	27	27	G	Sidechain
53	27	446	G	Sidechain
53	27	463	G	Sidechain
53	27	488	G	Sidechain
53	27	512	G	Sidechain
53	27	562	U	Sidechain

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Mol	Chain	Res	Type	Group
53	27	683	U	Sidechain
53	27	734	A	Sidechain
53	27	800	A	Sidechain
53	27	975	A	Sidechain
56	30	15	G	Sidechain
56	30	48	C	Sidechain
58	32	46	A	Sidechain
59	33	156	ARG	Sidechain
59	33	41	TYR	Sidechain

5.2 Too-close contacts [i](#)

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	A	2082	0	2157	173	0
2	B	1565	0	1616	132	0
3	C	1552	0	1619	129	0
4	D	1410	0	1447	116	0
5	E	1323	0	1374	81	0
6	F	1111	0	1148	89	0
7	G	988	0	1025	117	0
8	H	1032	0	1088	105	0
9	I	1129	0	1162	78	0
10	J	938	0	1012	65	0
11	K	1045	0	1117	88	0
12	L	1074	0	1157	69	0
13	M	960	0	1000	67	0
14	N	892	0	923	70	0
15	O	917	0	965	76	0
16	P	947	0	1022	83	0
17	Q	816	0	839	87	0
18	R	857	0	922	48	0
19	S	738	0	807	48	0
20	T	779	0	834	51	0
21	U	753	0	780	49	0
22	V	575	0	592	36	0
23	W	625	0	655	41	0
24	X	509	0	543	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	Y	449	0	491	18	0
26	Z	522	0	521	50	0
27	1	444	0	461	40	0
28	2	409	0	440	26	0
29	3	377	0	418	36	0
30	4	504	0	574	43	0
31	5	302	0	343	33	0
32	6	1704	0	1732	111	0
33	7	1624	0	1699	115	0
34	8	1643	0	1710	152	0
35	9	1156	0	1199	124	0
36	10	817	0	808	79	0
37	11	1181	0	1240	77	0
38	12	979	0	1034	72	0
39	13	1022	0	1070	114	0
40	14	786	0	828	84	0
41	15	869	0	878	91	0
42	16	955	0	1019	98	0
43	17	883	0	944	79	0
44	18	805	0	847	109	0
45	19	714	0	737	30	0
46	20	649	0	666	74	0
47	21	648	0	691	68	0
48	22	535	0	552	55	0
49	23	637	0	665	58	0
50	24	665	0	714	62	0
51	25	544	0	579	76	0
52	26	33016	0	16617	1357	0
53	27	62322	0	31345	2399	0
54	28	2572	0	1302	112	0
55	29	432	0	218	15	0
56	30	1623	0	821	58	0
57	31	1644	0	836	33	0
58	32	1643	0	836	78	0
59	33	4911	0	4550	643	0
All	All	154603	0	105189	7748	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 30.

All (7748) 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)
59:33:188:ARG:NH1	59:33:377:LEU:HA	1.23	1.40
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.16
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.58	1.15
34:8:84:ASN:HD22	34:8:87:GLU:HG3	0.98	1.15
59:33:188:ARG:NH1	59:33:377:LEU:CA	2.09	1.14
36:10:6:ILE:HD11	36:10:71:ILE:HD11	1.28	1.12
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.11
56:30:41:C:H2'	56:30:42:C:H5''	1.29	1.10
31:5:1:MET:HE2	31:5:36:ARG:HB2	1.33	1.09
40:14:7:ARG:HH12	52:26:1125:U:H4'	1.17	1.09
53:27:45:G:H5''	53:27:46:G:H5'	1.14	1.08
26:Z:61:ASN:HA	26:Z:64:PHE:HB2	1.24	1.08
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.08
7:G:62:ARG:HH12	53:27:1106:G:H5''	0.94	1.07
53:27:2092:U:H4'	53:27:2093:G:H5''	1.35	1.07
29:3:7:PRO:HB2	53:27:1309:G:H4'	1.37	1.06
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.06
9:I:81:ILE:HG23	9:I:82:GLY:H	1.14	1.05
54:28:3:C:H2'	54:28:4:C:H5''	1.31	1.04
56:30:7:A:H3'	56:30:8:U:H5''	1.38	1.03
51:25:9:GLU:HG2	51:25:10:PRO:HD3	1.40	1.03
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.92	1.03
11:K:95:LEU:HD22	11:K:100:ILE:HD11	1.35	1.02
59:33:188:ARG:HH12	59:33:377:LEU:CA	1.71	1.02
11:K:18:ARG:HH22	53:27:1249:U:H2'	1.24	1.01
34:8:190:LEU:HD12	34:8:192:ALA:H	1.24	1.01
53:27:275:C:H2'	53:27:276:U:H4'	1.38	1.01
57:31:75:C:H3'	57:31:76:A:H5''	1.42	1.01
3:C:97:ASN:HB2	3:C:100:MET:HG2	1.43	1.01
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	1.00
53:27:1868:C:H3'	53:27:1869:G:H5''	1.40	1.00
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.24	0.99
29:3:34:ARG:HE	29:3:39:ARG:HD2	1.22	0.99
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	0.99
17:Q:65:ALA:HB3	17:Q:95:ASP:HB2	1.43	0.99
3:C:127:GLU:HB2	3:C:133:LEU:HD13	1.43	0.99
48:22:11:ARG:HD3	52:26:845:A:H1'	1.44	0.99
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.98
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.98
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.47	0.97
59:33:696:GLY:HA3	59:33:713:THR:H	1.29	0.97
7:G:62:ARG:NH1	53:27:1106:G:H5''	1.78	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:30:LYS:HD3	52:26:429:U:H6	1.29	0.97
13:M:2:ARG:HA	13:M:5:LYS:HD3	1.47	0.96
37:11:111:GLY:HA2	37:11:118:ARG:HD3	1.47	0.96
43:17:38:ILE:HD11	43:17:51:GLN:HB3	1.47	0.96
34:8:84:ASN:ND2	34:8:87:GLU:HG3	1.80	0.96
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.47	0.95
53:27:2629:U:O2'	53:27:2630:G:H5''	1.65	0.95
58:32:69:C:H2'	58:32:70:G:H5''	1.48	0.95
53:27:1801:A:H5''	53:27:2203:U:H2'	1.49	0.95
59:33:574:ALA:HB2	59:33:680:LEU:HD21	1.46	0.95
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.95
42:16:73:LEU:HD21	42:16:79:ILE:HG21	1.47	0.94
53:27:1304:A:H2'	53:27:1305:C:H5''	1.48	0.94
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.94
59:33:95:LEU:O	59:33:99:VAL:HG12	1.66	0.94
16:P:3:VAL:HG22	53:27:1199:U:H1'	1.49	0.94
52:26:1130:A:H61	52:26:1144:G:H1'	1.29	0.94
37:11:69:ARG:HG2	37:11:95:ARG:HG2	1.46	0.94
53:27:1936:A:H2	53:27:1943:U:H3	1.06	0.94
16:P:54:ARG:HE	53:27:1155:A:H5''	1.33	0.93
52:26:1206:G:H2'	52:26:1207:G:H5''	1.50	0.93
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.93
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.50	0.93
6:F:76:GLU:HA	6:F:142:VAL:HG13	1.51	0.93
32:6:33:ALA:HB2	32:6:39:ILE:HG13	1.49	0.93
50:24:23:ARG:HH21	52:26:176:C:H5''	1.32	0.93
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.93
21:U:86:LEU:HD23	21:U:89:ILE:HD11	1.50	0.93
48:22:33:THR:HG23	48:22:35:SER:H	1.34	0.93
56:30:51:U:H2'	56:30:52:G:C8	2.04	0.92
56:30:54:U:H3'	56:30:55:U:H5''	1.51	0.92
2:B:5:VAL:H	2:B:32:ASN:HD21	1.03	0.92
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.52	0.92
53:27:2443:C:H2'	53:27:2444:G:H8	1.33	0.92
9:I:80:HIS:HD1	9:I:81:ILE:HG22	1.33	0.92
54:28:65:U:H3'	54:28:108:A:H61	1.32	0.92
1:A:180:MET:HB2	1:A:268:ARG:HB3	1.52	0.91
18:R:73:LYS:HB2	18:R:106:VAL:HB	1.51	0.91
52:26:411:A:H61	52:26:430:A:H62	1.17	0.91
7:G:62:ARG:HH12	53:27:1106:G:C5'	1.83	0.90
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1412:C:H2'	52:26:1413:A:H8	1.35	0.90
53:27:807:U:H2'	53:27:808:G:H8	1.36	0.90
26:Z:42:PRO:HB2	26:Z:46:GLY:HA3	1.51	0.90
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.90
59:33:670:ARG:HB2	59:33:741:LEU:HD12	1.50	0.90
48:22:11:ARG:HG3	48:22:12:PHE:H	1.37	0.90
35:9:137:ARG:HH12	52:26:1078:U:H4'	1.34	0.90
6:F:97:ARG:HH11	6:F:112:LYS:HD2	1.37	0.90
53:27:581:C:H2'	53:27:582:A:C8	2.07	0.90
53:27:821:A:H5''	53:27:822:G:H5''	1.52	0.90
53:27:612:G:H1'	53:27:616:A:H61	1.35	0.89
53:27:2111:U:H3	53:27:2147:A:H1'	1.38	0.89
53:27:1664:A:H61	53:27:1996:C:H42	1.18	0.89
10:J:65:THR:HG22	10:J:67:LYS:H	1.36	0.89
27:1:37:HIS:HB3	27:1:43:THR:HG22	1.54	0.89
53:27:2208:C:H2'	53:27:2209:G:C8	2.08	0.89
31:5:19:ARG:HH12	31:5:26:ILE:HD11	1.38	0.89
58:32:36:U:H2'	58:32:37:A:H5'	1.54	0.89
53:27:581:C:H2'	53:27:582:A:H8	1.38	0.88
10:J:121:GLU:HG2	10:J:122:VAL:HG23	1.55	0.88
42:16:98:ARG:HH21	42:16:106:VAL:HA	1.35	0.88
52:26:1512:U:H2'	52:26:1513:A:C8	2.08	0.88
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.35	0.88
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.55	0.88
46:20:14:ARG:HH12	52:26:618:C:H1'	1.38	0.88
39:13:23:GLY:H	39:13:60:LEU:HA	1.39	0.88
54:28:3:C:C2'	54:28:4:C:H5''	2.03	0.88
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
3:C:143:LEU:HB3	3:C:146:VAL:HG11	1.53	0.88
14:N:49:VAL:HG21	14:N:82:ALA:HA	1.56	0.88
53:27:582:A:H2'	53:27:583:G:C8	2.09	0.88
42:16:109:ARG:NH1	52:26:537:G:H5''	1.89	0.88
59:33:676:ARG:HG3	59:33:677:SER:H	1.35	0.88
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.87
53:27:690:G:H2'	53:27:691:C:H6	1.38	0.87
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.87
59:33:62:MET:HE3	59:33:79:ALA:HA	1.56	0.87
35:9:83:PRO:HB3	35:9:96:GLN:HG3	1.55	0.87
53:27:2604:U:H2'	53:27:2605:U:H6	1.40	0.87
56:30:41:C:C2'	56:30:42:C:H5''	2.04	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.87
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.87
12:L:53:MET:HE3	12:L:63:ILE:HD13	1.55	0.87
18:R:29:VAL:HG11	18:R:55:ILE:HD11	1.55	0.87
52:26:767:A:H2'	52:26:768:A:H8	1.39	0.87
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.87
53:27:2537:U:H2'	53:27:2538:C:C6	2.10	0.87
54:28:44:G:H1'	54:28:47:C:H42	1.39	0.87
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.87
10:J:103:VAL:HG12	10:J:104:THR:H	1.39	0.86
29:3:34:ARG:NE	29:3:39:ARG:HD2	1.88	0.86
53:27:878:A:H3'	53:27:879:G:H8	1.40	0.86
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.86
52:26:695:A:H2'	52:26:696:A:C8	2.10	0.86
8:H:108:ILE:O	8:H:112:LYS:HB3	1.75	0.86
38:12:11:THR:HG21	52:26:876:C:H1'	1.56	0.86
53:27:1326:U:H2'	53:27:1327:A:H8	1.39	0.86
58:32:46:A:H2'	58:32:47:U:H5''	1.58	0.86
53:27:1779:U:H5''	53:27:1780:A:H5''	1.58	0.86
45:19:71:ARG:NH2	52:26:754:C:H5'	1.91	0.86
54:28:88:C:H5''	54:28:89:U:OP1	1.76	0.86
53:27:1434:A:H2'	53:27:1435:G:C8	2.08	0.86
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.86
53:27:1857:G:H1'	53:27:1885:A:H61	1.39	0.86
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.86
43:17:25:GLY:H	52:26:1329:A:H5''	1.37	0.85
11:K:61:LEU:HA	30:4:26:ALA:HB2	1.58	0.85
47:21:5:ARG:NH2	52:26:128:G:H5'	1.90	0.85
8:H:73:PRO:HB2	8:H:78:LEU:HD11	1.58	0.85
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.12	0.85
39:13:51:LEU:HD11	39:13:62:LEU:HD11	1.58	0.85
53:27:2508:G:H2'	53:27:2509:G:H8	1.40	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.85
6:F:78:VAL:HG21	6:F:103:VAL:HG22	1.58	0.85
41:15:88:PRO:HD3	51:25:28:LEU:HD13	1.57	0.85
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.85
4:D:114:ARG:HE	43:17:70:ARG:HH21	1.25	0.85
4:D:130:GLY:HA3	53:27:2305:U:H5''	1.58	0.85
36:10:88:MET:HG2	48:22:64:LEU:HD21	1.58	0.85
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.85
27:1:54:ILE:HG23	27:1:56:LYS:H	1.41	0.85
26:Z:66:ILE:HD11	44:18:38:GLU:HA	1.58	0.85
53:27:582:A:H2'	53:27:583:G:H8	1.40	0.85
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.84
52:26:1130:A:N6	52:26:1144:G:H1'	1.93	0.84
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.58	0.84
52:26:1259:C:H3'	52:26:1260:G:H5''	1.58	0.84
53:27:2136:G:O6	53:27:2156:G:H1'	1.78	0.84
53:27:528:A:C2	53:27:2042:A:H2'	2.13	0.84
53:27:955:U:H5	53:27:962:G:H1	1.24	0.84
41:15:121:ARG:HH21	51:25:35:GLU:HG2	1.43	0.84
52:26:1062:U:H2'	52:26:1063:C:C6	2.12	0.84
44:18:60:ARG:HG2	52:26:981:U:H4'	1.58	0.84
52:26:628:G:H2'	52:26:629:A:H8	1.43	0.84
34:8:8:LEU:HD21	34:8:31:CYS:HB3	1.60	0.83
52:26:405:U:H3'	52:26:406:G:H5'	1.58	0.83
52:26:1144:G:H21	52:26:1146:A:H62	1.22	0.83
40:14:57:VAL:HG22	40:14:58:ASN:H	1.42	0.83
52:26:714:G:H2'	52:26:715:A:C8	2.13	0.83
52:26:628:G:H2'	52:26:629:A:C8	2.14	0.83
5:E:176:LYS:HD3	53:27:2660:A:N6	1.92	0.83
41:15:34:THR:HG22	41:15:40:ALA:HA	1.60	0.83
43:17:100:ARG:HH22	52:26:950:U:H3'	1.44	0.83
11:K:62:PRO:HD3	30:4:26:ALA:HB2	1.61	0.83
59:33:463:ILE:H	59:33:463:ILE:HD12	1.44	0.83
23:W:17:ARG:NE	23:W:23:ALA:HB2	1.94	0.83
44:18:12:ARG:HD3	44:18:58:ARG:O	1.77	0.83
53:27:1101:U:H2'	53:27:1102:C:H5'	1.59	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
8:H:109:ALA:O	8:H:113:ALA:HB3	1.78	0.82
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.79	0.82
9:I:81:ILE:HG23	9:I:82:GLY:N	1.92	0.82
34:8:97:LEU:HB2	34:8:134:TYR:HB3	1.61	0.82
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
40:14:5:ARG:HG2	40:14:79:PRO:HB3	1.61	0.82
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.42	0.82
52:26:960:U:H4'	52:26:961:U:O5'	1.80	0.82
59:33:188:ARG:HH11	59:33:377:LEU:HA	1.41	0.82
53:27:1111:A:O2'	53:27:1112:G:H4'	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:62:LYS:HB3	22:V:79:GLU:HB3	1.62	0.82
49:23:31:ARG:HD3	59:33:602:VAL:HG21	1.61	0.82
2:B:49:GLN:NE2	2:B:79:LEU:HD13	1.95	0.82
4:D:94:ARG:HE	26:Z:1:MET:HE1	1.45	0.82
8:H:85:ILE:HD13	8:H:137:LEU:HD21	1.62	0.82
52:26:1219:A:H2'	52:26:1220:G:H8	1.45	0.82
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.62	0.81
38:12:80:PRO:HG2	52:26:878:A:H5''	1.62	0.81
53:27:184:C:H2'	53:27:185:G:H8	1.44	0.81
53:27:2604:U:H2'	53:27:2605:U:C6	2.14	0.81
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.81
53:27:1821:A:H2'	53:27:1822:C:C6	2.15	0.81
6:F:27:ARG:HE	23:W:55:MET:HE2	1.45	0.81
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.61	0.81
35:9:107:GLY:HA3	52:26:9:G:H5'	1.63	0.81
52:26:392:C:H2'	52:26:393:A:H8	1.45	0.81
52:26:1171:A:H2'	52:26:1172:C:C6	2.15	0.81
52:26:1219:A:H2'	52:26:1220:G:C8	2.15	0.81
53:27:2443:C:H2'	53:27:2444:G:C8	2.13	0.81
19:S:2:ILE:HD11	53:27:144:A:H5''	1.62	0.81
40:14:62:ARG:HH12	52:26:1367:C:H5'	1.45	0.81
52:26:352:C:H4'	52:26:354:G:OP1	1.79	0.81
53:27:1300:G:H4'	53:27:1301:A:H5'	1.62	0.81
1:A:149:LYS:HD3	53:27:2204:G:H4'	1.60	0.81
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.81	0.81
59:33:599:VAL:HA	59:33:655:ALA:HB2	1.61	0.81
53:27:2174:C:H2'	53:27:2175:C:H5'	1.61	0.81
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.81
52:26:1352:C:H2'	52:26:1353:G:C8	2.15	0.81
7:G:52:MET:HE2	7:G:54:VAL:HB	1.60	0.80
8:H:88:GLY:HA3	53:27:1063:G:O2'	1.81	0.80
40:14:8:ILE:HB	40:14:74:VAL:HB	1.60	0.80
53:27:807:U:H2'	53:27:808:G:C8	2.15	0.80
59:33:696:GLY:HA3	59:33:713:THR:N	1.95	0.80
8:H:55:PRO:HD3	8:H:74:PRO:HD3	1.62	0.80
53:27:2817:U:H3'	53:27:2818:U:H5''	1.61	0.80
4:D:43:ILE:HG21	4:D:78:ILE:HG22	1.64	0.80
6:F:32:PRO:HB3	23:W:38:TRP:HB2	1.61	0.80
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.44	0.80
52:26:85:U:H5''	52:26:86:G:H5'	1.63	0.80
52:26:1412:C:H2'	52:26:1413:A:C8	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:884:U:H4'	59:33:612:CYS:SG	2.22	0.80
54:28:93:C:H2'	54:28:94:A:H8	1.46	0.80
42:16:73:LEU:HD11	42:16:103:CYS:HA	1.63	0.80
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.80
15:O:29:VAL:HG13	15:O:79:VAL:HG22	1.61	0.80
36:10:51:ILE:HD13	36:10:86:ARG:HH12	1.47	0.80
37:11:113:LYS:NZ	52:26:1297:G:H1'	1.96	0.80
57:31:75:C:H3'	57:31:76:A:C5'	2.11	0.80
59:33:188:ARG:HH11	59:33:377:LEU:CA	1.94	0.80
9:I:35:ARG:HA	9:I:40:HIS:HD2	1.46	0.80
53:27:2788:C:H2'	53:27:2789:C:C6	2.16	0.80
3:C:146:VAL:HG12	3:C:185:LYS:HB2	1.64	0.80
31:5:36:ARG:HG2	31:5:37:GLN:N	1.98	0.79
52:26:35:G:H2'	52:26:36:C:C6	2.17	0.79
52:26:56:U:H2'	52:26:57:G:H8	1.46	0.79
37:11:50:ALA:HB2	37:11:57:GLU:HG2	1.64	0.79
53:27:878:A:H3'	53:27:879:G:C8	2.16	0.79
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.65	0.79
59:33:721:VAL:HG13	59:33:724:ARG:HE	1.47	0.79
41:15:87:GLY:N	41:15:113:THR:HG22	1.98	0.79
52:26:1206:G:C2'	52:26:1207:G:H5''	2.11	0.79
53:27:1503:A:H3'	53:27:1504:A:H5''	1.63	0.79
11:K:57:LEU:HB2	11:K:60:ARG:HH11	1.45	0.79
17:Q:6:GLN:HE21	17:Q:9:GLY:HA2	1.47	0.79
53:27:851:C:H2'	53:27:852:U:C6	2.17	0.79
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.79
51:25:36:PHE:HB2	51:25:39:LYS:HB3	1.64	0.79
53:27:1293:C:H2'	53:27:1294:U:H5''	1.64	0.79
53:27:2060:A:H3'	53:27:2060:A:N3	1.97	0.79
53:27:2188:U:H2'	53:27:2189:U:O4'	1.82	0.79
50:24:55:PRO:HG2	50:24:56:ILE:HD12	1.65	0.79
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.79
52:26:835:U:H2'	52:26:836:G:H5''	1.62	0.79
53:27:1061:U:H5'	53:27:1070:A:H1'	1.62	0.79
53:27:848:C:H2'	53:27:849:A:H8	1.48	0.78
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
40:14:36:VAL:HG22	40:14:38:GLY:H	1.48	0.78
52:26:673:A:H2'	52:26:674:G:C8	2.18	0.78
52:26:1170:A:H2'	52:26:1171:A:O4'	1.83	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.83	0.78
13:M:30:ARG:HH11	13:M:75:ILE:HD11	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2292:U:H2'	53:27:2293:G:H8	1.48	0.78
16:P:27:ARG:HH12	53:27:532:A:H5''	1.46	0.78
46:20:67:ILE:HD12	46:20:67:ILE:H	1.48	0.78
53:27:2296:U:H5''	53:27:2297:A:OP1	1.83	0.78
54:28:95:U:H2'	54:28:96:G:C8	2.18	0.78
48:22:17:VAL:HG12	48:22:18:GLN:HG3	1.64	0.78
1:A:77:VAL:HG21	1:A:109:LEU:HD11	1.65	0.78
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.19	0.78
12:L:45:GLN:NE2	53:27:2485:G:H5''	1.98	0.78
46:20:6:LEU:HD22	46:20:17:TYR:HB3	1.64	0.78
47:21:5:ARG:HH22	52:26:128:G:H5'	1.48	0.78
12:L:33:LEU:HD11	12:L:121:ALA:HB2	1.66	0.78
13:M:96:ARG:HH22	13:M:116:VAL:HG13	1.49	0.78
19:S:8:LEU:HD22	24:X:22:LEU:HA	1.65	0.78
41:15:33:ILE:HG22	41:15:41:LEU:HD12	1.65	0.78
41:15:126:ARG:NH2	52:26:692:U:H5''	1.98	0.78
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.78
20:T:27:VAL:HA	20:T:33:VAL:HG12	1.64	0.78
28:2:46:VAL:HG12	28:2:47:ILE:H	1.48	0.78
50:24:28:ARG:O	50:24:32:LYS:HG2	1.83	0.78
53:27:546:U:H2'	53:27:547:A:C8	2.19	0.78
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.78
7:G:3:LEU:HD12	7:G:5:LEU:H	1.49	0.78
9:I:81:ILE:CG2	9:I:82:GLY:H	1.96	0.78
35:9:63:MET:HB3	35:9:67:ARG:HH12	1.48	0.78
38:12:28:SER:HB2	38:12:58:LEU:HB2	1.66	0.78
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.64	0.78
53:27:193:U:H2'	53:27:194:G:H8	1.47	0.78
20:T:45:GLN:O	53:27:483:A:H4'	1.83	0.78
41:15:84:MET:HG2	41:15:110:THR:HB	1.65	0.78
44:18:66:THR:HB	52:26:1202:U:O2'	1.84	0.78
52:26:112:G:H21	52:26:354:G:H5'	1.49	0.78
52:26:1088:G:H21	52:26:1167:A:H61	1.30	0.78
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.78
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.78
9:I:65:THR:HG22	9:I:66:GLY:H	1.48	0.77
31:5:33:HIS:O	31:5:35:GLN:HG3	1.84	0.77
52:26:549:C:H2'	52:26:550:G:H5''	1.65	0.77
53:27:1434:A:H2'	53:27:1435:G:H8	1.49	0.77
56:30:7:A:H3'	56:30:8:U:C5'	2.12	0.77
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:10:GLY:HA2	52:26:624:C:H4'	1.66	0.77
43:17:100:ARG:NH2	52:26:950:U:H3'	1.99	0.77
51:25:17:ARG:C	51:25:19:LYS:H	1.92	0.77
53:27:1341:G:H2'	53:27:1397:U:O2	1.84	0.77
58:32:38:A:H2'	58:32:39:C:O4'	1.84	0.77
2:B:123:LYS:HE2	13:M:1:MET:HE1	1.65	0.77
52:26:151:A:H2'	52:26:152:A:O4'	1.85	0.77
53:27:215:G:H4'	53:27:216:A:H4'	1.66	0.77
53:27:1096:A:H3'	53:27:1097:U:H5''	1.63	0.77
53:27:1584:U:H2'	53:27:1585:C:H5'	1.66	0.77
3:C:105:LEU:HD23	3:C:108:ILE:HD12	1.67	0.77
10:J:98:ARG:C	10:J:99:ILE:HD12	2.09	0.77
35:9:22:LYS:HB3	35:9:29:ILE:HG22	1.65	0.77
52:26:830:G:H2'	52:26:831:A:H8	1.49	0.77
53:27:580:U:H2'	53:27:581:C:C6	2.20	0.77
58:32:69:C:C2'	58:32:70:G:H5''	2.13	0.77
6:F:9:VAL:HB	6:F:13:GLY:HA2	1.67	0.77
52:26:1397:C:N4	55:29:22:A:H2'	1.99	0.77
53:27:2114:A:H3'	53:27:2115:G:H5''	1.66	0.77
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.77
2:B:5:VAL:H	2:B:32:ASN:ND2	1.81	0.77
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.67	0.77
9:I:140:LEU:HD23	9:I:141:ASP:N	2.00	0.77
18:R:83:LYS:HD3	18:R:95:ARG:HH12	1.49	0.77
32:6:156:LEU:HD11	32:6:178:LEU:HD13	1.66	0.77
50:24:73:ARG:HH22	52:26:263:A:P	2.08	0.77
54:28:44:G:H1'	54:28:47:C:N4	1.99	0.77
58:32:65:C:H2'	58:32:66:C:C6	2.19	0.77
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.67	0.77
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.64	0.77
41:15:23:HIS:HB3	41:15:30:ILE:HB	1.65	0.77
52:26:1305:G:HO2'	52:26:1306:A:H8	1.31	0.77
53:27:1304:A:C2'	53:27:1305:C:H5''	2.14	0.77
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
7:G:11:ILE:HD12	7:G:66:GLY:HA3	1.65	0.77
34:8:205:LYS:HA	52:26:8:A:N7	2.00	0.77
39:13:33:SER:HB3	39:13:36:GLN:HG2	1.66	0.77
53:27:779:U:H2'	53:27:780:G:C8	2.20	0.77
39:13:123:ARG:HD3	39:13:124:PRO:HD2	1.67	0.76
52:26:70:U:H5''	52:26:71:A:OP1	1.83	0.76
52:26:212:G:H2'	52:26:213:G:H8	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.76
39:13:123:ARG:HB3	52:26:1343:G:H4'	1.67	0.76
41:15:126:ARG:HH21	52:26:692:U:H5''	1.48	0.76
44:18:100:TRP:HZ2	52:26:1368:A:H5''	1.50	0.76
45:19:69:LEU:HD11	45:19:76:ARG:HD2	1.67	0.76
50:24:9:ARG:HG2	52:26:108:G:N1	2.00	0.76
53:27:2065:C:H2'	53:27:2066:C:C6	2.20	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.66	0.76
34:8:131:ILE:HD12	34:8:134:TYR:HB2	1.64	0.76
35:9:137:ARG:NH1	52:26:1078:U:H4'	2.00	0.76
44:18:92:ILE:H	44:18:92:ILE:HD12	1.50	0.76
53:27:184:C:H2'	53:27:185:G:C8	2.19	0.76
53:27:283:G:H3'	53:27:284:U:H5''	1.68	0.76
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.76
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.67	0.76
7:G:114:GLU:HG3	7:G:115:GLY:H	1.50	0.76
41:15:17:ASP:HB2	41:15:36:ARG:HH22	1.51	0.76
52:26:884:U:H4'	52:26:885:G:H5''	1.68	0.76
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.76
8:H:72:THR:HG21	8:H:112:LYS:HA	1.68	0.76
12:L:42:THR:HA	12:L:93:VAL:HG12	1.66	0.76
37:11:142:ARG:HD2	58:32:41:C:O2'	1.85	0.76
52:26:516:U:H5	52:26:533:A:H62	1.34	0.76
52:26:1305:G:H22	52:26:1331:G:H2'	1.50	0.76
11:K:93:ASN:O	11:K:95:LEU:N	2.18	0.76
36:10:42:TRP:HB2	36:10:59:TYR:HB2	1.67	0.76
40:14:7:ARG:NH1	52:26:1125:U:H4'	1.96	0.76
53:27:612:G:H1'	53:27:616:A:N6	2.00	0.76
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.66	0.76
2:B:118:PHE:HB2	53:27:2823:A:OP1	1.86	0.76
12:L:33:LEU:HD12	12:L:117:PHE:HB3	1.68	0.76
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
53:27:598:U:H2'	53:27:599:A:C8	2.20	0.76
53:27:1141:U:H4'	53:27:1142:A:O4'	1.86	0.76
53:27:1857:G:H1'	53:27:1885:A:N6	2.01	0.76
12:L:12:MET:HA	53:27:910:A:H62	1.50	0.76
34:8:30:LYS:HD3	52:26:429:U:C6	2.19	0.76
52:26:473:U:H2'	52:26:474:G:C8	2.21	0.76
52:26:767:A:H2'	52:26:768:A:C8	2.20	0.76
39:13:4:GLN:HE22	52:26:1131:G:H5'	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.76
52:26:664:G:H22	52:26:741:G:H1	1.33	0.75
38:12:85:TYR:CE1	38:12:123:GLU:HB2	2.21	0.75
53:27:2329:U:H2'	53:27:2330:G:C8	2.20	0.75
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.75
59:33:368:SER:HA	59:33:409:PHE:CE2	2.21	0.75
6:F:44:ILE:O	6:F:48:GLU:HG3	1.86	0.75
17:Q:40:MET:HG3	17:Q:48:LYS:HA	1.67	0.75
21:U:30:ILE:HG13	21:U:40:ILE:HG13	1.69	0.75
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.01	0.75
52:26:20:U:H2'	52:26:21:G:O4'	1.85	0.75
52:26:32:A:H2'	52:26:33:A:C8	2.21	0.75
52:26:114:U:H2'	52:26:115:G:C8	2.21	0.75
58:32:59:A:H5''	58:32:60:U:C5	2.22	0.75
7:G:67:THR:HG21	7:G:74:ASP:HB2	1.68	0.75
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.50	0.75
53:27:1181:U:H2'	53:27:1182:G:C8	2.22	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.87	0.75
35:9:149:PRO:O	35:9:152:VAL:HG22	1.87	0.75
48:22:70:THR:HG23	48:22:71:ASP:H	1.52	0.75
53:27:1550:C:H2'	53:27:1551:A:C8	2.21	0.75
53:27:2816:G:H2'	53:27:2817:U:C6	2.22	0.75
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.75
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.75
33:7:64:ARG:HG2	33:7:99:GLN:HB2	1.68	0.75
35:9:105:ILE:HD11	35:9:123:LEU:HA	1.66	0.75
46:20:46:LYS:HG3	46:20:48:GLU:H	1.52	0.75
52:26:1432:G:H1'	52:26:1468:A:N6	2.02	0.75
53:27:310:A:C2'	53:27:311:A:H5''	2.17	0.75
53:27:2486:C:H2'	53:27:2487:G:H5''	1.69	0.75
59:33:634:HIS:HB3	59:33:641:LEU:HD22	1.69	0.75
9:I:35:ARG:HA	9:I:40:HIS:CD2	2.22	0.75
22:V:39:THR:H	53:27:2331:G:H4'	1.51	0.75
2:B:48:ILE:HG12	2:B:84:LEU:HD11	1.68	0.75
9:I:80:HIS:ND1	9:I:81:ILE:HG22	2.02	0.75
52:26:1513:A:H2'	52:26:1514:G:H8	1.51	0.75
34:8:120:LYS:HE3	52:26:439:U:H4'	1.69	0.74
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.68	0.74
53:27:2230:G:H2'	53:27:2231:U:C6	2.22	0.74
53:27:2498:C:O2'	53:27:2499:C:H5'	1.87	0.74
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.46	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:84:GLU:HA	33:7:87:ARG:HG2	1.68	0.74
53:27:690:G:H2'	53:27:691:C:C6	2.22	0.74
53:27:2591:C:H2'	53:27:2592:G:H8	1.52	0.74
1:A:145:MET:HE1	1:A:181:ARG:NE	2.01	0.74
29:3:24:THR:HG23	29:3:27:GLY:H	1.52	0.74
38:12:9:MET:HB2	38:12:26:MET:SD	2.27	0.74
40:14:89:ARG:HH12	40:14:90:LEU:HD12	1.52	0.74
52:26:50:A:H4'	52:26:51:A:H5'	1.67	0.74
52:26:337:G:H2'	52:26:338:A:C8	2.23	0.74
53:27:2287:A:O2'	53:27:2288:A:H2'	1.86	0.74
53:27:2328:A:H2'	53:27:2329:U:C6	2.21	0.74
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.74
59:33:188:ARG:HH12	59:33:377:LEU:HA	0.81	0.74
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.69	0.74
41:15:87:GLY:H	41:15:113:THR:HG22	1.48	0.74
52:26:473:U:H2'	52:26:474:G:H8	1.51	0.74
53:27:2340:A:H5'	54:28:41:G:H21	1.53	0.74
53:27:2646:C:H2'	53:27:2647:U:O4'	1.88	0.74
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.74
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.74
16:P:35:PHE:CZ	16:P:39:ILE:HD11	2.23	0.74
46:20:61:VAL:HG22	46:20:67:ILE:HD11	1.67	0.74
54:28:104:A:H2'	54:28:105:G:O4'	1.88	0.74
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.22	0.74
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.70	0.74
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.67	0.74
37:11:113:LYS:HZ1	52:26:1297:G:H1'	1.50	0.74
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.68	0.74
39:13:113:LYS:HG3	39:13:119:LYS:HA	1.70	0.74
40:14:28:THR:HG22	40:14:86:ALA:HB1	1.69	0.74
53:27:1331:G:O2'	53:27:1332:G:H5''	1.88	0.74
4:D:92:GLY:O	4:D:95:MET:HG2	1.87	0.74
6:F:40:THR:HB	6:F:43:ASN:HD22	1.52	0.74
56:30:58:A:H1'	56:30:60:U:OP2	1.86	0.74
5:E:9:VAL:HA	5:E:48:THR:HA	1.68	0.74
40:14:30:LYS:HG3	40:14:34:ALA:HA	1.70	0.74
44:18:2:LYS:HG2	52:26:1048:G:H5''	1.70	0.74
52:26:1010:U:H2'	52:26:1011:C:H6	1.51	0.74
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.52	0.74
42:16:20:VAL:HG21	52:26:553:A:H5''	1.69	0.74
52:26:1513:A:H2'	52:26:1514:G:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:12:U:H2'	53:27:13:A:H5'	1.69	0.74
53:27:2591:C:H2'	53:27:2592:G:C8	2.22	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
1:A:145:MET:HE1	1:A:181:ARG:HE	1.53	0.73
29:3:13:ASN:O	29:3:17:GLY:N	2.20	0.73
53:27:45:G:C5'	53:27:46:G:H5'	2.08	0.73
53:27:1363:C:H2'	53:27:1364:G:H8	1.51	0.73
7:G:126:LEU:HD13	7:G:129:LEU:HD21	1.70	0.73
44:18:20:PHE:HE1	44:18:47:LEU:HD11	1.52	0.73
53:27:1102:C:H2'	53:27:1103:A:C8	2.23	0.73
53:27:1441:G:H2'	53:27:1442:U:C6	2.23	0.73
53:27:1957:C:H2'	53:27:1958:C:C6	2.23	0.73
53:27:2043:C:H1'	53:27:2779:U:O4	1.88	0.73
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.22	0.73
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.73
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.70	0.73
16:P:20:ALA:HA	16:P:23:TYR:CE2	2.24	0.73
40:14:66:GLU:HB3	44:18:98:ALA:HB2	1.70	0.73
51:25:13:VAL:HG13	51:25:15:LEU:HG	1.71	0.73
53:27:1565:C:O2'	53:27:1566:A:H2'	1.87	0.73
34:8:28:ASP:HB2	34:8:31:CYS:SG	2.28	0.73
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
6:F:57:LYS:N	6:F:57:LYS:HD2	2.04	0.73
41:15:100:ASN:HB2	41:15:106:ILE:HD11	1.70	0.73
52:26:909:A:H2'	52:26:910:C:O4'	1.87	0.73
53:27:742:A:H2'	53:27:743:A:C8	2.23	0.73
12:L:45:GLN:HE21	53:27:2485:G:H5''	1.54	0.73
34:8:94:GLU:HA	34:8:99:ASN:ND2	2.04	0.73
45:19:87:ARG:HG3	45:19:88:ARG:H	1.54	0.73
52:26:477:C:H2'	52:26:478:A:C8	2.24	0.73
52:26:1409:C:H2'	52:26:1410:A:H8	1.54	0.73
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.73
53:27:488:G:N2	53:27:491:G:H5''	2.02	0.73
53:27:1252:G:O2'	53:27:1253:A:H5''	1.87	0.73
53:27:1320:C:O2'	53:27:1321:A:H5''	1.88	0.73
53:27:2807:U:H3'	53:27:2808:G:H5''	1.69	0.73
6:F:112:LYS:HE2	53:27:2220:U:H5''	1.71	0.73
52:26:219:U:H2'	52:26:220:G:H8	1.54	0.73
53:27:208:C:H2'	53:27:209:C:H6	1.52	0.73
53:27:1370:C:H2'	53:27:1371:G:O4'	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2073:C:H2'	53:27:2074:U:H6	1.51	0.73
53:27:2620:C:H2'	53:27:2621:G:H5''	1.71	0.73
56:30:19:G:N3	56:30:57:G:H1'	2.04	0.73
5:E:96:ALA:HB3	5:E:103:ASN:HB3	1.70	0.73
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.03	0.73
53:27:799:G:H5''	53:27:800:A:H2'	1.70	0.73
56:30:54:U:H3'	56:30:55:U:C5'	2.17	0.73
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.73
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.73
20:T:92:VAL:HG11	20:T:101:THR:HG23	1.68	0.73
52:26:216:U:H2'	52:26:217:C:C6	2.23	0.73
53:27:198:C:O2'	53:27:199:A:H5'	1.89	0.73
53:27:634:C:H2'	53:27:635:C:C6	2.24	0.73
53:27:833:A:H2'	53:27:834:G:C8	2.24	0.73
14:N:33:ARG:O	14:N:34:HIS:HB2	1.89	0.72
53:27:882:G:H3'	53:27:883:G:H5''	1.71	0.72
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.71	0.72
20:T:65:GLN:HE21	53:27:328:U:H4'	1.52	0.72
36:10:90:MET:HG2	36:10:91:ARG:H	1.52	0.72
52:26:359:G:H5''	59:33:451:PHE:CD2	2.24	0.72
52:26:440:C:H2'	52:26:441:A:H5''	1.69	0.72
53:27:796:C:H2'	53:27:797:G:C8	2.25	0.72
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.72
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.72
1:A:74:PRO:HG3	1:A:116:GLN:HE22	1.54	0.72
37:11:11:ILE:HD11	37:11:20:GLU:HB2	1.70	0.72
42:16:78:VAL:HG12	42:16:101:LEU:HD23	1.70	0.72
52:26:714:G:H2'	52:26:715:A:H8	1.54	0.72
53:27:1721:G:H2'	53:27:1738:G:H22	1.53	0.72
15:O:47:ILE:HA	15:O:96:LEU:HD12	1.70	0.72
52:26:56:U:H2'	52:26:57:G:C8	2.23	0.72
52:26:1010:U:H2'	52:26:1011:C:C6	2.24	0.72
11:K:57:LEU:HB2	11:K:60:ARG:NH1	2.04	0.72
32:6:185:ILE:HG22	32:6:199:ILE:HB	1.71	0.72
48:22:11:ARG:HD3	52:26:845:A:C1'	2.19	0.72
52:26:413:G:H1'	52:26:428:G:N2	2.03	0.72
53:27:1258:U:H2'	53:27:1259:G:C8	2.24	0.72
53:27:1636:U:H2'	53:27:1637:A:H8	1.55	0.72
7:G:94:ARG:HH21	7:G:131:THR:HG22	1.55	0.72
27:1:3:GLN:HA	53:27:2615:U:C2	2.25	0.72
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:121:ARG:HE	51:25:35:GLU:CD	1.97	0.72
42:16:113:ARG:HE	42:16:120:ARG:HA	1.52	0.72
52:26:106:C:H2'	52:26:107:G:H8	1.54	0.72
53:27:1807:G:H2'	53:27:1808:A:H5'	1.70	0.72
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.72
4:D:122:ASP:OD2	4:D:126:ASN:HB2	1.89	0.72
17:Q:14:VAL:HG23	17:Q:98:ILE:HG13	1.71	0.72
49:23:5:LYS:HG3	49:23:6:LYS:HG2	1.71	0.72
52:26:632:U:H3'	52:26:633:G:H5'	1.71	0.72
53:27:1403:A:H2'	53:27:1404:C:C6	2.24	0.72
2:B:4:LEU:HD23	2:B:29:VAL:HG11	1.69	0.72
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.23	0.72
24:X:39:GLN:HE21	24:X:42:LEU:HD11	1.55	0.72
50:24:23:ARG:HH21	52:26:176:C:C5'	2.03	0.72
56:30:66:U:H2'	56:30:67:C:C6	2.24	0.72
52:26:751:U:H2'	52:26:752:G:O4'	1.90	0.72
53:27:1021:A:C8	53:27:1023:U:H1'	2.24	0.72
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.72
59:33:686:ILE:O	59:33:690:GLU:HB2	1.90	0.72
1:A:149:LYS:CD	53:27:2204:G:H4'	2.19	0.72
6:F:133:GLN:HE21	6:F:136:SER:HA	1.55	0.72
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.72
8:H:102:ARG:O	8:H:106:GLN:HG3	1.90	0.71
11:K:62:PRO:HD3	30:4:26:ALA:CB	2.19	0.71
33:7:13:ILE:HG22	33:7:14:VAL:HG23	1.70	0.71
51:25:65:ARG:O	51:25:66:ARG:HB2	1.90	0.71
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.71
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.71
12:L:30:SER:H	12:L:106:ASP:HB3	1.55	0.71
48:22:59:LYS:HD3	52:26:735:C:H5'	1.72	0.71
7:G:32:GLY:O	53:27:1055:G:H5'	1.89	0.71
27:1:3:GLN:NE2	27:1:6:LYS:HA	2.04	0.71
34:8:141:VAL:HA	34:8:180:THR:HA	1.71	0.71
36:10:10:VAL:HB	36:10:58:HIS:HB3	1.72	0.71
51:25:64:ALA:O	51:25:66:ARG:N	2.23	0.71
52:26:576:C:OP2	52:26:577:G:H5''	1.90	0.71
38:12:106:SER:HA	52:26:642:A:N7	2.06	0.71
52:26:75:G:H2'	52:26:76:G:C8	2.26	0.71
53:27:1066:U:H1'	53:27:1073:A:H61	1.55	0.71
53:27:1406:U:H2'	53:27:1407:G:H5''	1.72	0.71
53:27:2467:C:H2'	53:27:2468:A:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:115:A:H2'	54:28:116:G:C8	2.25	0.71
6:F:64:ALA:O	6:F:68:ARG:HG3	1.90	0.71
7:G:41:LEU:HB2	53:27:1082:U:O2'	1.90	0.71
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.06	0.71
31:5:19:ARG:NH1	31:5:26:ILE:HD11	2.06	0.71
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.55	0.71
52:26:484:G:H4'	52:26:485:U:C5'	2.19	0.71
53:27:1537:G:C6	53:27:1538:G:H1'	2.26	0.71
32:6:160:LEU:HB3	32:6:182:VAL:HG12	1.71	0.71
45:19:44:GLU:HG3	45:19:45:HIS:ND1	2.05	0.71
50:24:41:GLY:HA2	50:24:85:LEU:HD11	1.72	0.71
52:26:360:G:OP1	59:33:472:SER:HA	1.91	0.71
52:26:762:U:H2'	52:26:763:G:H8	1.54	0.71
52:26:1162:C:H2'	52:26:1163:A:H8	1.56	0.71
52:26:1402:C:H2'	52:26:1403:C:O4'	1.90	0.71
53:27:45:G:H5''	53:27:46:G:C5'	2.09	0.71
53:27:971:G:H2'	53:27:972:A:O4'	1.91	0.71
53:27:2019:A:H2	53:27:2035:G:H22	1.36	0.71
53:27:2144:G:H4'	53:27:2145:C:C5	2.25	0.71
53:27:2208:C:H2'	53:27:2209:G:H8	1.55	0.71
1:A:164:VAL:HG21	1:A:180:MET:HE1	1.73	0.71
3:C:155:GLU:O	3:C:159:LEU:HG	1.90	0.71
30:4:61:LEU:HD13	30:4:64:ALA:HB3	1.73	0.71
52:26:1318:A:H2'	52:26:1319:A:H5'	1.71	0.71
53:27:1664:A:H61	53:27:1996:C:N4	1.89	0.71
53:27:2065:C:H2'	53:27:2066:C:H6	1.54	0.71
53:27:2710:C:H2'	53:27:2711:A:H8	1.56	0.71
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
10:J:7:MET:HE1	10:J:44:LYS:HG3	1.71	0.71
52:26:46:G:OP1	52:26:307:C:H4'	1.90	0.71
53:27:1447:C:H2'	53:27:1448:G:H8	1.54	0.71
53:27:1758:U:C5	53:27:2696:U:H5'	2.26	0.71
8:H:92:PRO:HD2	53:27:1076:C:H1'	1.73	0.71
32:6:69:VAL:HG23	32:6:160:LEU:HD11	1.72	0.71
52:26:842:U:H2'	52:26:844:G:H5'	1.73	0.71
52:26:1509:C:H2'	52:26:1510:C:H6	1.56	0.71
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.71
59:33:466:GLN:HG3	59:33:467:LYS:H	1.56	0.71
24:X:16:THR:HA	24:X:19:LEU:HD12	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:36:GLN:HA	39:13:40:ARG:HG3	1.72	0.71
43:17:54:THR:O	43:17:58:GLU:HG2	1.90	0.71
52:26:1109:C:H2'	52:26:1110:A:O4'	1.91	0.71
52:26:1346:A:O2'	52:26:1347:G:H4'	1.89	0.71
53:27:821:A:C5'	53:27:822:G:H5''	2.19	0.71
54:28:4:C:H6	54:28:4:C:H5'	1.56	0.71
59:33:731:GLN:HG3	59:33:732:VAL:N	2.04	0.71
3:C:90:GLN:OE1	3:C:90:GLN:N	2.23	0.70
5:E:9:VAL:HB	5:E:48:THR:HG22	1.73	0.70
11:K:135:ILE:HD12	11:K:142:ILE:HD11	1.71	0.70
32:6:65:LYS:HG3	32:6:153:MET:HE1	1.73	0.70
34:8:171:GLU:HG2	34:8:182:LYS:HD2	1.71	0.70
51:25:3:ILE:N	51:25:19:LYS:HG2	2.05	0.70
52:26:1218:C:H2'	52:26:1219:A:C8	2.26	0.70
53:27:18:U:H2'	53:27:19:A:C8	2.26	0.70
53:27:680:C:H2'	53:27:681:G:C8	2.26	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
11:K:18:ARG:HH22	53:27:1249:U:C2'	2.03	0.70
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.72	0.70
16:P:54:ARG:NE	53:27:1155:A:H5''	2.06	0.70
53:27:1533:C:H2'	53:27:1534:U:H5''	1.74	0.70
53:27:2545:G:H2'	53:27:2546:U:O4'	1.91	0.70
53:27:2710:C:H2'	53:27:2711:A:C8	2.26	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
12:L:26:VAL:HG12	12:L:104:GLU:HG2	1.73	0.70
34:8:84:ASN:HD22	34:8:87:GLU:CG	1.91	0.70
53:27:248:G:H5'	53:27:249:C:H5'	1.71	0.70
53:27:1297:C:OP1	53:27:2710:C:H4'	1.90	0.70
54:28:6:G:H2'	54:28:7:G:H8	1.56	0.70
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.70
1:A:224:MET:O	1:A:232:GLY:HA3	1.90	0.70
14:N:38:GLN:HB3	14:N:47:VAL:HG11	1.73	0.70
35:9:76:ASN:O	35:9:78:GLY:N	2.24	0.70
41:15:116:PRO:HB2	41:15:119:GLY:H	1.57	0.70
52:26:335:C:H2'	52:26:336:A:C8	2.26	0.70
52:26:1511:G:H2'	52:26:1512:U:O4'	1.91	0.70
53:27:248:G:C5'	53:27:249:C:H5'	2.22	0.70
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.70
36:10:29:ILE:HG22	36:10:34:GLY:HA3	1.72	0.70
53:27:1005:C:H2'	53:27:1006:C:H6	1.55	0.70
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:28:PRO:HG3	1:A:62:ARG:HH21	1.55	0.70
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.73	0.70
35:9:79:THR:HB	35:9:121:ASN:HD21	1.56	0.70
44:18:92:ILE:HG21	44:18:95:LEU:HD22	1.73	0.70
52:26:203:G:H1'	52:26:466:A:H2	1.57	0.70
53:27:522:A:H2'	53:27:523:C:C6	2.26	0.70
53:27:1790:C:H3'	53:27:1828:G:N2	2.07	0.70
53:27:1794:A:H2'	53:27:1795:C:H6	1.55	0.70
56:30:62:C:H2'	56:30:63:G:C8	2.27	0.70
58:32:13:C:H2'	58:32:22:G:H22	1.55	0.70
1:A:155:ARG:HD3	53:27:1818:U:H6	1.57	0.70
7:G:31:ARG:H	7:G:108:VAL:HG21	1.55	0.70
40:14:41:PRO:O	40:14:42:LEU:HB2	1.90	0.70
52:26:830:G:H2'	52:26:831:A:C8	2.25	0.70
53:27:145:C:H2'	53:27:146:A:C8	2.27	0.70
53:27:1551:A:H2'	53:27:1552:A:O4'	1.91	0.70
53:27:1709:U:H2'	53:27:1710:G:H8	1.56	0.70
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.70
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.73	0.70
19:S:28:ASN:HB3	19:S:91:GLN:HE22	1.56	0.70
40:14:6:ILE:HG12	40:14:102:LEU:HD12	1.72	0.70
52:26:131:A:H2'	52:26:132:C:C6	2.27	0.70
53:27:2800:A:H3'	53:27:2801:G:C5'	2.22	0.70
53:27:2846:G:H2'	53:27:2847:U:O4'	1.92	0.70
13:M:42:LYS:NZ	53:27:2817:U:H5''	2.06	0.70
23:W:35:HIS:CD2	23:W:55:MET:HE1	2.27	0.70
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.74	0.70
53:27:1087:G:H2'	53:27:1088:A:H4'	1.74	0.70
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.70
1:A:106:PRO:HD2	1:A:109:LEU:HD22	1.73	0.69
30:4:61:LEU:O	30:4:61:LEU:HD12	1.92	0.69
46:20:6:LEU:HD12	52:26:375:U:H4'	1.73	0.69
48:22:9:PHE:O	48:22:11:ARG:HG2	1.92	0.69
53:27:2128:G:O6	53:27:2160:C:H2'	1.90	0.69
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.69
7:G:45:GLY:HA2	7:G:50:VAL:H	1.54	0.69
27:1:53:VAL:HG23	27:1:54:ILE:H	1.57	0.69
39:13:44:ARG:O	39:13:47:VAL:HG22	1.91	0.69
52:26:1031:C:O3'	52:26:1033:G:H1'	1.91	0.69
53:27:639:U:H2'	53:27:640:C:C6	2.26	0.69
53:27:784:G:H5'	53:27:785:G:OP1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2327:A:H2'	53:27:2328:A:C8	2.27	0.69
57:31:75:C:H2'	57:31:76:A:C2	2.27	0.69
2:B:73:VAL:CG1	2:B:93:GLY:HA2	2.21	0.69
10:J:102:PRO:HG3	15:O:69:VAL:HG21	1.73	0.69
16:P:104:ALA:HA	17:Q:46:GLU:CD	2.16	0.69
53:27:1727:C:H2'	53:27:1728:C:O4'	1.91	0.69
53:27:2789:C:H3'	53:27:2893:A:H62	1.57	0.69
54:28:66:A:N1	54:28:107:G:H2'	2.07	0.69
18:R:29:VAL:CG1	18:R:55:ILE:HD11	2.22	0.69
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.74	0.69
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.73	0.69
53:27:481:G:H1'	53:27:506:G:N2	2.08	0.69
53:27:729:G:H2'	53:27:1775:U:H1'	1.74	0.69
53:27:871:U:H2'	53:27:872:U:C6	2.26	0.69
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.04	0.69
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.69
11:K:18:ARG:NH2	53:27:1249:U:H2'	2.02	0.69
32:6:33:ALA:HB3	32:6:37:VAL:O	1.92	0.69
58:32:29:G:H2'	58:32:30:G:C8	2.27	0.69
58:32:37:A:H2'	58:32:38:A:O4'	1.92	0.69
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.69
7:G:4:ASN:HD21	7:G:8:LYS:HE3	1.58	0.69
39:13:125:GLN:NE2	52:26:942:G:H21	1.90	0.69
45:19:13:GLU:HG2	45:19:83:ARG:HH21	1.56	0.69
49:23:54:ARG:HD3	52:26:958:A:C4	2.27	0.69
52:26:484:G:C5	52:26:486:U:H1'	2.28	0.69
53:27:955:U:H5	53:27:962:G:N1	1.89	0.69
4:D:7:TYR:OH	4:D:29:ARG:HB3	1.92	0.69
6:F:127:GLU:HB2	6:F:145:ASN:HA	1.75	0.69
23:W:65:THR:O	23:W:69:GLU:HG3	1.93	0.69
52:26:631:C:OP1	52:26:632:U:H4'	1.92	0.69
53:27:141:G:H3'	53:27:142:A:O4'	1.93	0.69
53:27:145:C:H2'	53:27:146:A:H8	1.58	0.69
53:27:464:U:H2'	53:27:465:G:O4'	1.93	0.69
53:27:1796:U:H2'	53:27:1797:G:H8	1.57	0.69
53:27:2352:A:H2'	53:27:2353:G:H5'	1.74	0.69
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.75	0.69
1:A:119:VAL:HG21	6:F:91:PHE:O	1.93	0.69
20:T:31:GLY:O	20:T:66:VAL:HG23	1.93	0.69
21:U:21:ARG:HH21	21:U:87:GLN:HB3	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:52:LYS:HZ3	27:1:55:ALA:HA	1.58	0.69
27:1:54:ILE:HG13	27:1:56:LYS:HB3	1.75	0.69
33:7:10:ARG:HA	33:7:13:ILE:HD13	1.75	0.69
34:8:18:LEU:HB2	34:8:20:LEU:HG	1.73	0.69
52:26:668:G:H2'	52:26:669:G:H8	1.57	0.69
53:27:570:G:H2'	53:27:2030:A:N7	2.07	0.69
53:27:594:U:H2'	53:27:595:C:C6	2.27	0.69
53:27:1096:A:C3'	53:27:1097:U:H5''	2.22	0.69
53:27:2553:G:H3'	53:27:2554:U:H5''	1.74	0.69
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.69
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
8:H:46:ASP:HA	8:H:50:LYS:HD3	1.75	0.69
10:J:25:LEU:HD11	10:J:40:LYS:HG2	1.75	0.69
32:6:165:ALA:HB3	32:6:190:SER:HB3	1.74	0.69
36:10:45:ARG:HD2	36:10:59:TYR:HE2	1.57	0.69
52:26:484:G:H4'	52:26:485:U:H5''	1.75	0.69
53:27:2147:A:C5	53:27:2148:G:H1'	2.28	0.69
52:26:676:A:H2'	52:26:677:U:C6	2.28	0.69
52:26:1052:U:H2'	52:26:1200:C:H41	1.56	0.69
52:26:1306:A:N6	52:26:1331:G:H1'	2.08	0.69
52:26:1406:U:H2'	52:26:1407:C:O4'	1.93	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.57	0.68
34:8:113:ALA:O	34:8:117:VAL:HG23	1.93	0.68
42:16:109:ARG:HH12	52:26:537:G:H5''	1.56	0.68
51:25:66:ARG:HG3	52:26:1099:G:H5'	1.75	0.68
52:26:309:A:H2'	52:26:310:G:H8	1.58	0.68
53:27:1363:C:H2'	53:27:1364:G:C8	2.28	0.68
53:27:1844:C:H2'	53:27:1845:G:H8	1.57	0.68
12:L:78:LEU:HD23	12:L:79:ALA:N	2.08	0.68
47:21:18:LYS:HA	47:21:50:ASN:HB3	1.73	0.68
14:N:45:SER:O	54:28:112:G:N2	2.24	0.68
46:20:51:ARG:C	46:20:52:LEU:HD12	2.18	0.68
52:26:817:C:H4'	52:26:818:G:OP1	1.92	0.68
53:27:1636:U:H2'	53:27:1637:A:C8	2.28	0.68
58:32:36:U:C2'	58:32:37:A:H5'	2.22	0.68
1:A:259:ASN:C	1:A:261:ARG:H	2.01	0.68
42:16:27:PRO:HB2	42:16:28:GLN:NE2	2.09	0.68
52:26:762:U:H2'	52:26:763:G:C8	2.28	0.68
52:26:1038:C:H2'	52:26:1039:G:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:191:A:O2'	53:27:192:C:H5'	1.93	0.68
53:27:310:A:H2'	53:27:311:A:H5''	1.75	0.68
53:27:1744:A:H3'	53:27:1745:A:H8	1.57	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
3:C:40:ARG:HD2	3:C:92:HIS:CG	2.28	0.68
7:G:88:HIS:H	7:G:89:PRO:CD	2.07	0.68
34:8:31:CYS:SG	34:8:33:ILE:HB	2.34	0.68
37:11:36:SER:HA	39:13:42:THR:HG21	1.75	0.68
43:17:38:ILE:HG13	43:17:55:LEU:HD11	1.75	0.68
52:26:34:C:H2'	52:26:35:G:C8	2.28	0.68
52:26:123:U:OP1	52:26:312:C:H5'	1.93	0.68
53:27:140:C:H2'	53:27:141:G:H4'	1.76	0.68
53:27:680:C:H2'	53:27:681:G:H8	1.59	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.93	0.68
53:27:1790:C:H2'	53:27:1791:A:C5	2.29	0.68
53:27:2788:C:H2'	53:27:2789:C:H6	1.59	0.68
59:33:432:HIS:HB3	59:33:435:VAL:HG23	1.75	0.68
33:7:148:ILE:HD12	33:7:200:TRP:O	1.94	0.68
44:18:12:ARG:HB3	44:18:59:GLN:OE1	1.92	0.68
52:26:296:U:H2'	52:26:297:G:C8	2.28	0.68
53:27:1386:C:H2'	53:27:1387:A:C8	2.29	0.68
59:33:622:VAL:HG23	59:33:636:ALA:HA	1.75	0.68
8:H:100:ILE:HG13	8:H:100:ILE:O	1.92	0.68
32:6:53:LEU:HB3	32:6:219:THR:HG21	1.76	0.68
35:9:35:LEU:HD22	35:9:133:ILE:HG13	1.75	0.68
46:20:43:ALA:HB1	46:20:46:LYS:CD	2.23	0.68
48:22:25:ILE:O	48:22:29:LYS:HG2	1.94	0.68
53:27:39:G:H2'	53:27:40:U:C6	2.29	0.68
53:27:732:C:H2'	53:27:733:G:O4'	1.94	0.68
53:27:1464:G:H2'	53:27:1465:G:H8	1.59	0.68
53:27:2494:G:H2'	53:27:2495:G:H8	1.58	0.68
54:28:65:U:H3'	54:28:108:A:N6	2.07	0.68
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.75	0.68
26:Z:42:PRO:HB2	26:Z:46:GLY:CA	2.22	0.68
50:24:66:ILE:HG23	50:24:70:LYS:HD3	1.75	0.68
52:26:501:C:H2'	52:26:502:A:C8	2.29	0.68
53:27:809:G:O2'	53:27:810:U:H5'	1.93	0.68
53:27:2590:A:H2'	53:27:2591:C:H6	1.58	0.68
8:H:125:THR:O	8:H:129:GLU:HG3	1.94	0.68
11:K:61:LEU:HA	30:4:26:ALA:CB	2.24	0.68
30:4:39:ARG:HD2	53:27:2363:G:OP2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:117:GLU:HG3	32:6:140:LEU:HD11	1.76	0.68
48:22:13:THR:HG21	48:22:20:ILE:HD11	1.76	0.68
51:25:11:PHE:O	51:25:13:VAL:N	2.27	0.68
52:26:235:C:H2'	52:26:236:A:C8	2.29	0.68
53:27:1336:A:H2'	53:27:1337:G:C8	2.29	0.68
53:27:1853:A:H2'	53:27:1854:A:C8	2.29	0.68
53:27:2316:G:H2'	53:27:2317:A:C8	2.28	0.68
59:33:418:LEU:HD21	59:33:430:HIS:CD2	2.29	0.68
2:B:13:ARG:HH11	15:O:55:HIS:HA	1.58	0.68
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.74	0.68
42:16:113:ARG:NE	42:16:120:ARG:HA	2.08	0.68
53:27:2118:U:C5	53:27:2149:U:H1'	2.29	0.68
53:27:2578:G:O2'	53:27:2579:C:H5'	1.94	0.68
59:33:679:LEU:O	59:33:683:ILE:HD12	1.94	0.68
7:G:61:ARG:HG3	53:27:1047:G:C8	2.29	0.67
29:3:12:ARG:HH22	53:27:464:U:H4'	1.59	0.67
52:26:556:C:H2'	52:26:557:G:H8	1.59	0.67
53:27:1908:C:H2'	53:27:1909:C:H6	1.58	0.67
53:27:2007:U:H2'	53:27:2008:C:H6	1.59	0.67
53:27:2233:U:H2'	53:27:2234:G:C8	2.29	0.67
53:27:2508:G:H1	53:27:2580:U:H3	1.42	0.67
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.76	0.67
35:9:104:ILE:HD11	35:9:114:LEU:HB3	1.74	0.67
43:17:7:ASN:C	43:17:9:PRO:HD3	2.19	0.67
47:21:26:ARG:NH2	47:21:39:ARG:HG2	2.08	0.67
53:27:1191:G:H2'	53:27:1192:G:H8	1.60	0.67
53:27:1550:C:H2'	53:27:1551:A:H8	1.59	0.67
53:27:2427:C:H5''	53:27:2428:G:H5''	1.76	0.67
19:S:65:GLY:HA3	19:S:77:ARG:O	1.93	0.67
22:V:36:GLN:NE2	22:V:39:THR:HA	2.08	0.67
23:W:2:ARG:O	23:W:11:PRO:HD3	1.94	0.67
36:10:18:VAL:H	36:10:19:PRO:HD3	1.60	0.67
37:11:52:ARG:HD2	37:11:124:SER:OG	1.94	0.67
51:25:33:ARG:HG3	51:25:34:ARG:HG2	1.76	0.67
52:26:513:C:H2'	52:26:514:C:C6	2.29	0.67
52:26:524:G:H2'	52:26:525:C:C6	2.29	0.67
52:26:1206:G:C3'	52:26:1207:G:H5''	2.24	0.67
53:27:1662:U:H2'	53:27:1663:G:H8	1.59	0.67
53:27:2786:U:H2'	53:27:2787:C:H6	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:66:A:H5''	54:28:67:G:OP1	1.92	0.67
59:33:188:ARG:HH22	59:33:380:LEU:CB	2.07	0.67
5:E:44:HIS:HA	5:E:49:LEU:HD23	1.76	0.67
16:P:107:ALA:CB	17:Q:46:GLU:HG3	2.24	0.67
52:26:1432:G:H1'	52:26:1468:A:H62	1.59	0.67
53:27:796:C:H2'	53:27:797:G:H8	1.58	0.67
58:32:59:A:H5''	58:32:60:U:H5	1.58	0.67
1:A:128:THR:HG22	1:A:188:ARG:HD3	1.76	0.67
15:O:90:ALA:HB2	15:O:112:ARG:HA	1.75	0.67
53:27:1066:U:H2'	53:27:1068:G:OP2	1.93	0.67
53:27:1258:U:H2'	53:27:1259:G:H8	1.59	0.67
53:27:1440:U:H2'	53:27:1441:G:C8	2.29	0.67
59:33:634:HIS:ND1	59:33:634:HIS:O	2.26	0.67
34:8:49:ASP:O	34:8:52:VAL:HG22	1.94	0.67
44:18:27:LYS:O	44:18:31:SER:HB2	1.95	0.67
47:21:20:ILE:HG23	47:21:45:VAL:HB	1.76	0.67
52:26:1061:G:H2'	52:26:1062:U:O4'	1.94	0.67
53:27:839:U:H2'	53:27:840:C:C6	2.28	0.67
53:27:1199:U:H2'	53:27:1200:C:C6	2.28	0.67
53:27:1394:U:H4'	53:27:1603:A:H4'	1.76	0.67
53:27:1597:A:H5''	53:27:1598:A:H5'	1.77	0.67
53:27:2161:C:H5'	53:27:2171:A:H62	1.59	0.67
35:9:121:ASN:O	35:9:122:VAL:HG22	1.95	0.67
53:27:70:G:H4'	53:27:71:A:OP1	1.94	0.67
53:27:805:G:H22	53:27:828:U:H5''	1.60	0.67
53:27:1059:G:H2'	53:27:1060:U:C5	2.28	0.67
4:D:94:ARG:NE	26:Z:1:MET:HE1	2.10	0.67
22:V:74:LYS:HE3	53:27:858:G:OP1	1.95	0.67
35:9:64:GLU:HB3	35:9:68:ARG:HH22	1.59	0.67
47:21:4:ILE:HD12	47:21:61:ARG:HD3	1.77	0.67
53:27:657:U:H2'	53:27:658:U:C6	2.30	0.67
53:27:1213:A:N6	53:27:1236:G:H1'	2.09	0.67
58:32:34:C:H3'	58:32:35:A:H5''	1.75	0.67
2:B:179:ARG:HB3	2:B:188:LEU:HD12	1.77	0.67
9:I:105:VAL:HG11	9:I:122:LEU:HD22	1.75	0.67
12:L:63:ILE:HG22	12:L:64:TRP:N	2.09	0.67
28:2:7:LYS:HA	28:2:23:THR:HA	1.75	0.67
47:21:31:PRO:HB2	47:21:32:ILE:HD12	1.76	0.67
52:26:1515:G:H2'	52:26:1516:G:C8	2.29	0.67
53:27:1069:A:H4'	53:27:1070:A:H5''	1.75	0.67
59:33:188:ARG:HH11	59:33:377:LEU:CB	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:58:LYS:HZ2	3:C:70:SER:HB2	1.58	0.67
4:D:98:PHE:HA	4:D:101:ARG:NH2	2.10	0.67
11:K:4:ASN:O	53:27:1243:C:H1'	1.95	0.67
11:K:80:SER:HB3	11:K:114:GLY:HA3	1.77	0.67
14:N:18:LEU:HD23	14:N:25:ARG:HB3	1.76	0.67
27:1:52:LYS:NZ	27:1:55:ALA:HA	2.10	0.67
33:7:109:GLU:HB2	33:7:143:LEU:HD12	1.77	0.67
40:14:30:LYS:HA	40:14:34:ALA:H	1.59	0.67
9:I:108:MET:HE2	53:27:1138:G:N3	2.10	0.66
36:10:29:ILE:HD13	36:10:64:VAL:HG21	1.75	0.66
52:26:52:C:H2'	52:26:53:A:C8	2.30	0.66
52:26:1384:C:H2'	52:26:1385:G:H8	1.60	0.66
53:27:154:U:H2'	53:27:155:A:C8	2.30	0.66
53:27:1061:U:C5'	53:27:1070:A:H1'	2.24	0.66
58:32:19:G:H5''	58:32:20:U:C5	2.30	0.66
5:E:1:SER:HB3	53:27:2749:A:H5''	1.77	0.66
10:J:7:MET:C	10:J:8:LEU:HD12	2.20	0.66
33:7:76:ILE:HA	33:7:83:VAL:HG23	1.77	0.66
35:9:98:ALA:HB1	35:9:101:GLY:HA3	1.77	0.66
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.24	0.66
52:26:392:C:H2'	52:26:393:A:C8	2.29	0.66
52:26:405:U:H1'	52:26:498:A:H2'	1.76	0.66
52:26:440:C:C3'	52:26:441:A:H5''	2.26	0.66
15:O:97:TYR:O	15:O:100:ARG:HB3	1.96	0.66
33:7:121:SER:O	33:7:125:ARG:HG2	1.95	0.66
43:17:3:ILE:HD11	43:17:21:ILE:HD11	1.77	0.66
53:27:123:G:H5''	53:27:1375:U:O2'	1.95	0.66
53:27:1213:A:H61	53:27:1236:G:H1'	1.60	0.66
53:27:1825:U:H2'	53:27:1826:G:C8	2.30	0.66
53:27:2195:U:H2'	53:27:2196:C:H6	1.60	0.66
56:30:1:G:H2'	56:30:2:C:C6	2.30	0.66
56:30:74:C:C5	59:33:432:HIS:HA	2.29	0.66
56:30:76:A:N3	59:33:412:LYS:HG3	2.10	0.66
58:32:17:C:H3'	58:32:17(A):U:H6	1.60	0.66
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.25	0.66
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.77	0.66
8:H:124:MET:O	8:H:128:ILE:HG12	1.96	0.66
15:O:23:ASP:O	15:O:25:VAL:HG23	1.94	0.66
42:16:113:ARG:NH2	42:16:120:ARG:HG3	2.11	0.66
53:27:634:C:H2'	53:27:635:C:H6	1.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1709:U:H2'	53:27:1710:G:C8	2.30	0.66
53:27:2834:G:H2'	53:27:2879:A:H61	1.61	0.66
2:B:151:THR:OG1	2:B:152:PRO:HD3	1.95	0.66
8:H:101:SER:O	8:H:104:GLN:HG2	1.95	0.66
10:J:113:MET:HA	10:J:116:ILE:HD12	1.78	0.66
33:7:183:TYR:OH	33:7:198:LYS:HE3	1.96	0.66
38:12:46:GLU:O	38:12:61:THR:HB	1.95	0.66
40:14:36:VAL:HG23	40:14:76:ILE:HG12	1.78	0.66
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.77	0.66
47:21:26:ARG:NH2	52:26:237:G:H5''	2.11	0.66
34:8:201:GLU:HA	34:8:204:SER:HB2	1.77	0.66
41:15:17:ASP:HB2	41:15:36:ARG:NH2	2.11	0.66
42:16:89:LEU:O	42:16:91:GLY:N	2.29	0.66
43:17:27:THR:HG21	52:26:1328:C:H5''	1.78	0.66
46:20:70:ARG:HG3	52:26:375:U:H5''	1.78	0.66
52:26:422:C:H4'	52:26:423:G:C4	2.31	0.66
53:27:569:U:H1'	53:27:947:A:O4'	1.96	0.66
53:27:1868:C:C3'	53:27:1869:G:H5''	2.22	0.66
53:27:2393:U:H2'	53:27:2394:C:H6	1.60	0.66
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.66
1:A:206:LYS:NZ	53:27:729:G:OP2	2.25	0.66
4:D:118:ALA:HB1	4:D:166:ARG:HE	1.61	0.66
7:G:54:VAL:HA	7:G:84:TYR:O	1.95	0.66
16:P:2:ARG:HB2	53:27:1248:G:C5	2.30	0.66
49:23:77:ARG:HD2	52:26:1225:A:O2'	1.96	0.66
52:26:333:U:H2'	52:26:334:C:C6	2.31	0.66
52:26:458:U:H2'	52:26:459:A:C8	2.31	0.66
52:26:695:A:H2'	52:26:696:A:H8	1.55	0.66
52:26:1128:C:H2'	52:26:1129:C:O4'	1.96	0.66
53:27:2554:U:H2'	53:27:2555:U:C6	2.30	0.66
5:E:2:ARG:HD3	53:27:2751:G:C4	2.31	0.66
47:21:69:THR:HB	52:26:254:G:OP1	1.96	0.66
53:27:528:A:H2	53:27:2042:A:H2'	1.57	0.66
53:27:882:G:C3'	53:27:883:G:H5''	2.26	0.66
53:27:2149:U:H2'	53:27:2150:C:C6	2.30	0.66
53:27:2511:U:H2'	53:27:2512:C:C6	2.31	0.66
53:27:2697:G:H2'	53:27:2698:U:O4'	1.95	0.66
56:30:5:G:H2'	56:30:6:G:H8	1.61	0.66
34:8:120:LYS:HG2	34:8:130:ASN:OD1	1.95	0.66
48:22:11:ARG:HG3	48:22:12:PHE:N	2.11	0.66
52:26:835:U:C2'	52:26:836:G:H5''	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1439:G:H2'	52:26:1440:U:O4'	1.96	0.66
52:26:1464:U:H2'	52:26:1465:A:C8	2.30	0.66
53:27:5:A:H2'	53:27:6:A:H8	1.60	0.66
53:27:758:C:O2	53:27:758:C:H2'	1.96	0.66
53:27:1326:U:H2'	53:27:1327:A:C8	2.28	0.66
53:27:2895:G:H2'	53:27:2896:C:C6	2.31	0.66
54:28:91:C:H2'	54:28:92:C:H6	1.61	0.66
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.66
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.66
2:B:91:THR:HG23	2:B:94:GLN:HB2	1.77	0.66
26:Z:13:THR:HG22	26:Z:23:LYS:HG2	1.77	0.66
35:9:114:LEU:HD23	35:9:122:VAL:HG21	1.78	0.66
52:26:129:A:H1'	52:26:130:A:C8	2.31	0.66
52:26:709:U:H2'	52:26:710:G:H8	1.61	0.66
52:26:1512:U:H2'	52:26:1513:A:H8	1.58	0.66
53:27:656:G:H2'	53:27:657:U:O4'	1.95	0.66
53:27:2834:G:H2'	53:27:2879:A:N6	2.10	0.66
53:27:2861:U:H2'	53:27:2862:G:H8	1.61	0.66
2:B:49:GLN:HE21	2:B:79:LEU:HD13	1.59	0.65
5:E:51:PHE:CE1	5:E:71:LEU:HD12	2.32	0.65
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.78	0.65
39:13:5:TYR:CE1	39:13:88:GLU:HA	2.32	0.65
52:26:1493:A:H2'	53:27:1913:A:N1	2.11	0.65
53:27:947:A:H2'	53:27:948:C:H6	1.61	0.65
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.65
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.65
2:B:123:LYS:HG2	2:B:165:MET:HE1	1.78	0.65
6:F:43:ASN:HA	6:F:46:PHE:HD2	1.60	0.65
18:R:25:ARG:HH22	53:27:519:U:H5''	1.60	0.65
34:8:58:GLN:HG3	52:26:544:G:OP1	1.96	0.65
51:25:19:LYS:O	51:25:22:CYS:HB2	1.96	0.65
52:26:425:G:H2'	52:26:426:U:O4'	1.95	0.65
54:28:30:C:H2'	54:28:31:C:H5'	1.78	0.65
2:B:109:VAL:HG11	2:B:193:VAL:HB	1.78	0.65
11:K:127:VAL:HG21	11:K:142:ILE:HD13	1.79	0.65
33:7:89:VAL:O	33:7:93:ILE:HG13	1.96	0.65
36:10:88:MET:HB3	48:22:63:TYR:CE2	2.31	0.65
41:15:34:THR:HA	41:15:41:LEU:HG	1.78	0.65
43:17:9:PRO:HG2	43:17:17:ALA:HB1	1.78	0.65
50:24:28:ARG:HD3	52:26:1438:G:OP1	1.96	0.65
52:26:431:A:H2'	52:26:432:A:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1912:A:H62	53:27:1917:U:H5	1.42	0.65
54:28:3:C:H2'	54:28:4:C:C5'	2.17	0.65
6:F:57:LYS:HD2	6:F:57:LYS:H	1.62	0.65
7:G:114:GLU:HG3	7:G:115:GLY:N	2.11	0.65
10:J:10:VAL:HG23	10:J:17:ARG:O	1.97	0.65
14:N:33:ARG:HG2	14:N:34:HIS:CD2	2.31	0.65
16:P:86:SER:OG	17:Q:52:PRO:HD3	1.97	0.65
24:X:48:ARG:O	24:X:51:ALA:HB3	1.96	0.65
52:26:626:G:H2'	52:26:627:G:C8	2.31	0.65
52:26:1171:A:H2'	52:26:1172:C:H6	1.60	0.65
53:27:1139:G:O2'	53:27:1140:C:H5'	1.96	0.65
53:27:1174:U:H2'	53:27:1175:A:H4'	1.78	0.65
53:27:1475:G:HO2'	53:27:1476:U:H6	1.44	0.65
53:27:2026:U:H2'	53:27:2027:G:H8	1.61	0.65
53:27:2258:C:O2'	53:27:2426:A:H4'	1.97	0.65
2:B:133:THR:HG22	53:27:1993:U:H4'	1.79	0.65
5:E:26:LYS:HD3	5:E:31:GLU:HB2	1.78	0.65
14:N:46:GLU:HB2	54:28:113:C:O2'	1.96	0.65
32:6:163:ILE:HD11	32:6:209:VAL:HG12	1.78	0.65
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.77	0.65
44:18:30:ILE:CG2	44:18:43:ALA:HB2	2.26	0.65
48:22:11:ARG:HB3	48:22:47:ARG:HH12	1.61	0.65
48:22:33:THR:HG22	48:22:36:GLY:O	1.96	0.65
52:26:374:A:H2'	52:26:375:U:C6	2.32	0.65
52:26:1096:C:H2'	52:26:1097:C:C6	2.32	0.65
53:27:70:G:O2'	53:27:113:U:H4'	1.96	0.65
53:27:247:G:H4'	53:27:386:G:C2	2.32	0.65
53:27:49:A:H4'	53:27:50:U:H5''	1.78	0.65
53:27:584:C:H2'	53:27:585:G:C8	2.31	0.65
53:27:1266:G:H22	53:27:2012:G:H2'	1.60	0.65
53:27:2133:G:H2'	53:27:2158:A:C2	2.32	0.65
53:27:2817:U:C3'	53:27:2818:U:H5''	2.26	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
59:33:617:PRO:HA	59:33:657:TRP:CD2	2.32	0.65
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.79	0.65
17:Q:64:VAL:HG21	17:Q:97:LYS:HE3	1.79	0.65
27:1:33:SER:OG	27:1:35:GLU:HG3	1.96	0.65
52:26:629:A:H2'	52:26:630:A:O4'	1.95	0.65
53:27:2248:C:C2'	53:27:2249:U:H5'	2.27	0.65
58:32:12:G:H22	58:32:23:C:H2'	1.62	0.65
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.76	0.65
59:33:622:VAL:HB	59:33:641:LEU:HD21	1.78	0.65
2:B:173:GLN:HE22	2:B:208:LYS:HE2	1.61	0.65
13:M:96:ARG:NH2	13:M:116:VAL:HG13	2.11	0.65
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.77	0.65
29:3:31:LEU:HG	29:3:42:LEU:HD21	1.77	0.65
52:26:52:C:H2'	52:26:53:A:H8	1.61	0.65
52:26:216:U:H2'	52:26:217:C:H6	1.61	0.65
52:26:396:C:H2'	52:26:397:A:H5''	1.78	0.65
52:26:918:A:H2'	52:26:919:A:C8	2.32	0.65
53:27:1937:A:O2'	53:27:1938:A:H3'	1.97	0.65
54:28:93:C:H2'	54:28:94:A:C8	2.31	0.65
2:B:73:VAL:HG11	2:B:93:GLY:HA2	1.79	0.65
4:D:91:ARG:HA	4:D:95:MET:HB3	1.79	0.65
24:X:2:LYS:HE2	53:27:102:U:H1'	1.78	0.65
28:2:12:SER:HB2	28:2:48:TYR:CE1	2.32	0.65
34:8:60:VAL:HA	34:8:63:ILE:HD12	1.79	0.65
37:11:14:ASP:CG	37:11:22:LEU:HD23	2.22	0.65
40:14:49:PHE:HB2	40:14:65:TYR:HB2	1.79	0.65
51:25:35:GLU:O	51:25:37:TYR:N	2.30	0.65
52:26:778:G:H2'	52:26:779:C:O4'	1.97	0.65
52:26:1273:C:H2'	52:26:1274:A:O4'	1.97	0.65
53:27:1946:U:H2'	53:27:1947:C:C6	2.32	0.65
56:30:21:A:N6	56:30:46:G:H2'	2.11	0.65
58:32:8:U:O4	58:32:13:C:H3'	1.96	0.65
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	0.65
6:F:97:ARG:NH1	6:F:112:LYS:HD2	2.12	0.65
8:H:76:ALA:CB	53:27:1063:G:H5'	2.27	0.65
42:16:120:ARG:CZ	52:26:500:G:H5'	2.26	0.65
43:17:8:ILE:N	43:17:9:PRO:HD3	2.12	0.65
52:26:255:G:H2'	52:26:256:U:C6	2.32	0.65
53:27:1266:G:N2	53:27:2012:G:H2'	2.12	0.65
53:27:1427:A:H4'	53:27:1428:C:O4'	1.96	0.65
53:27:2231:U:H2'	53:27:2232:C:H6	1.61	0.65
53:27:2508:G:H2'	53:27:2509:G:C8	2.29	0.65
2:B:38:LYS:HB2	2:B:47:ALA:HB3	1.76	0.64
4:D:28:PRO:HB2	4:D:168:LEU:HD12	1.79	0.64
44:18:45:LEU:HD21	49:23:12:LEU:HD13	1.78	0.64
45:19:7:THR:HA	45:19:10:ILE:HD12	1.79	0.64
45:19:71:ARG:HH21	52:26:754:C:H5'	1.60	0.64
52:26:193:C:H2'	52:26:194:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:512:U:H2'	52:26:513:C:C6	2.33	0.64
53:27:1721:G:H2'	53:27:1738:G:N2	2.12	0.64
53:27:2352:A:C2'	53:27:2353:G:H5'	2.27	0.64
56:30:76:A:H2'	59:33:431:ILE:HD13	1.79	0.64
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.64
3:C:189:THR:HG22	3:C:191:ASP:H	1.61	0.64
5:E:29:ASN:HD22	5:E:78:VAL:C	2.05	0.64
29:3:21:ARG:O	29:3:27:GLY:HA3	1.97	0.64
47:21:30:HIS:HD2	47:21:33:TYR:H	1.45	0.64
51:25:67:THR:HA	52:26:1167:A:C5	2.31	0.64
52:26:1343:G:H2'	52:26:1344:C:C6	2.32	0.64
53:27:7:G:H2'	53:27:8:C:C6	2.33	0.64
53:27:2155:U:H2'	53:27:2156:G:H5'	1.79	0.64
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.64
16:P:93:ILE:HG21	17:Q:4:VAL:HG11	1.78	0.64
33:7:111:ASP:OD2	33:7:114:LEU:HG	1.96	0.64
42:16:117:GLY:HA2	52:26:35:G:O2'	1.98	0.64
49:23:58:PRO:HG2	59:33:631:ILE:HG13	1.79	0.64
52:26:542:G:H2'	52:26:543:U:C6	2.32	0.64
52:26:1347:G:N2	52:26:1373:G:H2'	2.12	0.64
53:27:1830:C:H2'	53:27:1831:G:H8	1.63	0.64
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.64
4:D:4:HIS:O	4:D:7:TYR:HB3	1.97	0.64
29:3:7:PRO:CB	53:27:1309:G:H4'	2.22	0.64
34:8:149:LYS:O	34:8:150:LYS:HG2	1.98	0.64
37:11:50:ALA:HB2	37:11:57:GLU:CG	2.28	0.64
39:13:70:GLY:HA3	52:26:1371:G:O3'	1.97	0.64
52:26:1326:U:H2'	52:26:1327:C:C6	2.33	0.64
52:26:1356:G:H2'	52:26:1357:A:C8	2.31	0.64
53:27:397:U:H2'	53:27:398:C:C6	2.31	0.64
53:27:815:C:H2'	53:27:816:C:H6	1.61	0.64
53:27:1594:U:H2'	53:27:1595:C:C6	2.32	0.64
53:27:2557:G:H2'	53:27:2558:C:C6	2.32	0.64
53:27:2685:G:H2'	53:27:2686:G:H8	1.63	0.64
3:C:23:PHE:HB2	3:C:114:ARG:NH2	2.13	0.64
11:K:62:PRO:HB3	53:27:2393:U:H5''	1.79	0.64
14:N:94:ARG:HB3	14:N:97:PHE:O	1.97	0.64
22:V:38:GLY:HA2	53:27:2330:G:H21	1.62	0.64
34:8:169:TRP:CZ3	34:8:189:ASP:HB3	2.33	0.64
35:9:110:MET:HG3	35:9:139:THR:HG21	1.80	0.64
40:14:15:HIS:HB3	40:14:70:HIS:CE1	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:355:C:H2'	52:26:356:A:O4'	1.97	0.64
52:26:1413:A:H2	52:26:1487:G:H22	1.44	0.64
53:27:11:C:H2'	53:27:12:U:H5''	1.79	0.64
53:27:302:C:H2'	53:27:303:G:H8	1.61	0.64
53:27:947:A:H2'	53:27:948:C:C6	2.33	0.64
53:27:1026:G:H2'	53:27:1027:A:H8	1.62	0.64
53:27:1447:C:H2'	53:27:1448:G:C8	2.33	0.64
53:27:2114:A:H3'	53:27:2115:G:C5'	2.25	0.64
13:M:42:LYS:HZ2	53:27:2817:U:H5''	1.62	0.64
29:3:10:LEU:HD23	53:27:770:G:H5''	1.79	0.64
52:26:399:G:H2'	52:26:400:C:C6	2.32	0.64
52:26:513:C:H2'	52:26:514:C:H6	1.60	0.64
53:27:207:A:H2'	53:27:208:C:O4'	1.98	0.64
53:27:395:U:H2'	53:27:396:G:C8	2.33	0.64
53:27:622:G:H2'	53:27:623:C:H6	1.62	0.64
53:27:1637:A:H2'	53:27:1638:C:C6	2.33	0.64
53:27:1708:C:H2'	53:27:1709:U:C6	2.32	0.64
53:27:2698:U:H2'	53:27:2699:C:C6	2.33	0.64
59:33:612:CYS:HG	59:33:634:HIS:CD2	2.15	0.64
7:G:59:LEU:HA	53:27:1107:G:OP1	1.97	0.64
7:G:118:ILE:HB	7:G:119:PRO:CD	2.26	0.64
20:T:25:LYS:CG	20:T:36:GLU:HB2	2.28	0.64
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.79	0.64
41:15:92:ARG:HH21	51:25:24:LYS:HD3	1.63	0.64
46:20:31:ARG:HB2	52:26:310:G:H5''	1.79	0.64
47:21:11:VAL:CG1	47:21:20:ILE:HD11	2.28	0.64
52:26:265:G:O2'	52:26:266:G:H5'	1.98	0.64
52:26:1161:C:H2'	52:26:1162:C:C6	2.33	0.64
53:27:189:G:H2'	53:27:205:G:H22	1.62	0.64
53:27:1310:G:H3'	53:27:1311:G:C8	2.33	0.64
53:27:2124:G:H3'	53:27:2125:G:C5'	2.27	0.64
53:27:2297:A:N1	53:27:2321:U:C5	2.66	0.64
53:27:2660:A:H2'	53:27:2661:G:O4'	1.97	0.64
54:28:113:C:H2'	54:28:114:C:C6	2.33	0.64
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.80	0.64
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.63	0.64
7:G:61:ARG:HG3	53:27:1047:G:N7	2.12	0.64
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.63	0.64
38:12:14:ARG:HG3	38:12:74:ILE:HG22	1.79	0.64
39:13:17:ARG:HB2	39:13:65:THR:HB	1.79	0.64
44:18:17:ASP:HA	44:18:21:ALA:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:285:C:H2'	52:26:286:C:C6	2.32	0.64
52:26:864:A:H2'	52:26:865:A:C8	2.32	0.64
53:27:420:C:H2'	53:27:421:C:H6	1.61	0.64
53:27:1536:C:H4'	53:27:1537:G:N2	2.13	0.64
53:27:1539:U:H2'	53:27:1540:G:H8	1.63	0.64
53:27:2799:A:C2'	53:27:2800:A:H5'	2.28	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
5:E:70:LEU:O	5:E:74:MET:HG3	1.97	0.64
52:26:312:C:H2'	52:26:313:A:C8	2.32	0.64
52:26:1202:U:H2'	52:26:1203:C:H5'	1.78	0.64
53:27:1098:A:H2'	53:27:1099:G:O4'	1.98	0.64
53:27:1301:A:O2'	53:27:1302:A:H5''	1.98	0.64
53:27:2884:U:O2	53:27:2884:U:H3'	1.98	0.64
54:28:40:U:H1'	54:28:43:C:H5	1.63	0.64
56:30:40:C:H2'	56:30:41:C:C6	2.33	0.64
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HB2	1.63	0.64
19:S:29:THR:HG23	19:S:85:VAL:C	2.22	0.64
21:U:20:LEU:HB3	21:U:25:LYS:O	1.98	0.64
21:U:23:ALA:O	21:U:25:LYS:HG2	1.98	0.64
26:Z:14:ALA:HB3	26:Z:22:MET:O	1.98	0.64
41:15:121:ARG:NH2	51:25:35:GLU:HG2	2.13	0.64
52:26:59:A:H3'	52:26:331:G:H22	1.63	0.64
52:26:656:G:O2'	52:26:657:U:H5'	1.97	0.64
52:26:868:C:H2'	52:26:869:G:O4'	1.98	0.64
52:26:1384:C:H2'	52:26:1385:G:C8	2.32	0.64
53:27:593:U:H2'	53:27:594:U:C6	2.33	0.64
53:27:767:U:O2'	53:27:768:G:H5'	1.97	0.64
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.64
59:33:274:PHE:HB3	59:33:333:THR:HB	1.80	0.64
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.64
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.64
8:H:18:ASN:H	8:H:19:PRO:HD2	1.63	0.63
16:P:20:ALA:HA	16:P:23:TYR:HE2	1.61	0.63
36:10:53:LYS:O	36:10:54:LEU:HG	1.97	0.63
39:13:56:MET:O	39:13:58:GLU:N	2.31	0.63
52:26:1349:A:H2'	52:26:1350:A:O4'	1.98	0.63
53:27:1506:U:H2'	53:27:1507:C:C6	2.33	0.63
53:27:2079:U:H2'	53:27:2080:A:H5''	1.79	0.63
53:27:2292:U:H2'	53:27:2293:G:C8	2.32	0.63
53:27:2590:A:H2'	53:27:2591:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:50:U:H2'	58:32:51:C:C6	2.33	0.63
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.28	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
59:33:425:LEU:H	59:33:425:LEU:HD12	1.62	0.63
7:G:7:ASP:O	7:G:11:ILE:HG12	1.98	0.63
11:K:103:ILE:HD12	53:27:259:G:H4'	1.79	0.63
16:P:22:GLY:HA2	53:27:18:U:O3'	1.98	0.63
36:10:9:MET:HG2	36:10:59:TYR:CD1	2.34	0.63
37:11:115:MET:HA	37:11:118:ARG:NE	2.13	0.63
42:16:98:ARG:NH2	42:16:106:VAL:HA	2.12	0.63
51:25:67:THR:HA	52:26:1167:A:N7	2.12	0.63
53:27:1278:C:H2'	53:27:1279:G:C8	2.33	0.63
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.63
4:D:69:ALA:H	4:D:82:TYR:H	1.47	0.63
16:P:64:ILE:HD11	16:P:91:ARG:O	1.97	0.63
17:Q:34:GLU:HG2	17:Q:60:LYS:HA	1.79	0.63
40:14:33:GLY:O	40:14:34:ALA:HB3	1.98	0.63
52:26:1409:C:H2'	52:26:1410:A:C8	2.32	0.63
52:26:1509:C:H2'	52:26:1510:C:C6	2.32	0.63
52:26:1517:G:H2'	52:26:1518:A:O4'	1.96	0.63
53:27:1041:G:H2'	53:27:1042:G:H8	1.62	0.63
58:32:41:C:H2'	58:32:42:G:C8	2.33	0.63
46:20:43:ALA:HB1	46:20:46:LYS:HD3	1.80	0.63
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.81	0.63
52:26:560:A:H5'	52:26:566:G:N2	2.13	0.63
52:26:988:G:H1'	52:26:1014:A:H61	1.63	0.63
52:26:1142:G:H3'	52:26:1143:G:H8	1.63	0.63
53:27:84:A:N1	53:27:99:U:H5'	2.14	0.63
53:27:150:U:H2'	53:27:151:C:C6	2.33	0.63
53:27:443:A:N3	53:27:1201:U:H1'	2.14	0.63
53:27:2092:U:C4'	53:27:2093:G:H5''	2.21	0.63
53:27:2816:G:H2'	53:27:2817:U:H6	1.63	0.63
8:H:106:GLN:O	8:H:110:GLN:HG3	1.98	0.63
48:22:38:ILE:H	48:22:38:ILE:HD12	1.64	0.63
52:26:102:G:H2'	52:26:103:U:C6	2.33	0.63
58:32:8:U:H4'	58:32:48:C:H4'	1.79	0.63
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
5:E:163:TYR:HB2	5:E:166:GLU:HB2	1.80	0.63
10:J:19:VAL:HB	10:J:41:ILE:HD12	1.80	0.63
50:24:2:ASN:CG	50:24:3:ILE:H	2.05	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2104:C:H2'	53:27:2105:U:C6	2.33	0.63
58:32:42:G:H2'	58:32:43:A:H8	1.63	0.63
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63
19:S:73:ARG:HG3	19:S:73:ARG:HH21	1.63	0.63
44:18:99:SER:OG	52:26:1114:C:H1'	1.99	0.63
47:21:6:THR:HA	47:21:60:ILE:O	1.99	0.63
52:26:440:C:C2'	52:26:441:A:H5''	2.27	0.63
52:26:501:C:H2'	52:26:502:A:H8	1.64	0.63
52:26:1254:A:H2'	52:26:1255:G:C8	2.34	0.63
52:26:1434:A:H2'	52:26:1435:G:O4'	1.98	0.63
52:26:1464:U:H2'	52:26:1465:A:H8	1.63	0.63
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.63
53:27:2286:G:H5''	53:27:2287:A:OP1	1.99	0.63
1:A:159:THR:HG22	1:A:160:TYR:H	1.63	0.63
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.99	0.63
32:6:137:THR:O	32:6:141:GLU:HG3	1.99	0.63
39:13:4:GLN:NE2	52:26:1131:G:H5'	2.14	0.63
41:15:122:PRO:HG2	51:25:34:ARG:O	1.99	0.63
46:20:33:ILE:HD12	46:20:33:ILE:N	2.14	0.63
53:27:692:C:H2'	53:27:693:A:C8	2.34	0.63
53:27:801:G:H3'	53:27:802:A:H5''	1.79	0.63
53:27:2632:A:H2'	53:27:2633:G:C8	2.34	0.63
53:27:2693:G:O2'	53:27:2694:G:H5'	1.99	0.63
58:32:42:G:H2'	58:32:43:A:C8	2.34	0.63
1:A:28:PRO:HG3	1:A:62:ARG:NH2	2.14	0.63
3:C:84:THR:HG21	53:27:586:A:H5'	1.80	0.63
11:K:47:ARG:HH21	53:27:251:A:H4'	1.63	0.63
22:V:22:PHE:CD2	53:27:922:C:H1'	2.33	0.63
31:5:24:ARG:NH2	31:5:36:ARG:HG3	2.13	0.63
43:17:16:ILE:H	43:17:16:ILE:HD12	1.64	0.63
52:26:539:A:H2'	52:26:540:G:H8	1.64	0.63
52:26:634:C:H2'	52:26:635:A:C8	2.34	0.63
52:26:1162:C:H2'	52:26:1163:A:C8	2.34	0.63
53:27:123:G:H2'	53:27:124:G:H8	1.64	0.63
53:27:154:U:H2'	53:27:155:A:H8	1.62	0.63
53:27:1060:U:C2	53:27:1062:G:H5'	2.34	0.63
53:27:2220:U:H2'	53:27:2221:G:H8	1.64	0.63
53:27:2297:A:N1	53:27:2321:U:H5	1.95	0.63
53:27:2837:A:H2'	53:27:2838:G:H8	1.64	0.63
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:46:ARG:NH2	2:B:88:GLU:O	2.31	0.62
15:O:52:ARG:H	15:O:56:SER:HB2	1.64	0.62
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.81	0.62
26:Z:44:PHE:HD1	26:Z:45:THR:HG23	1.64	0.62
36:10:86:ARG:HE	52:26:673:A:H4'	1.64	0.62
51:25:20:ARG:CZ	55:29:7:G:H21	2.11	0.62
52:26:147:G:H2'	52:26:148:G:C8	2.34	0.62
52:26:216:U:H4'	52:26:464:U:H4'	1.80	0.62
52:26:1379:G:O2'	52:26:1380:U:H5'	1.99	0.62
53:27:1485:U:H2'	53:27:1486:U:C6	2.34	0.62
53:27:2839:G:H2'	53:27:2840:C:C6	2.34	0.62
54:28:95:U:H2'	54:28:96:G:H8	1.63	0.62
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.62
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.80	0.62
20:T:10:VAL:O	20:T:21:ARG:HB2	1.99	0.62
21:U:86:LEU:N	21:U:86:LEU:HD12	2.14	0.62
33:7:122:GLN:O	33:7:127:VAL:HG12	1.99	0.62
35:9:154:ALA:HB1	38:12:65:PHE:CZ	2.34	0.62
52:26:328:C:H4'	52:26:329:A:H5'	1.81	0.62
52:26:708:C:H2'	52:26:709:U:C6	2.34	0.62
53:27:1872:A:H2'	53:27:1873:G:O4'	1.99	0.62
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.62
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.62
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.62
1:A:155:ARG:HD3	53:27:1818:U:C6	2.33	0.62
3:C:117:ARG:NH2	3:C:181:ILE:O	2.31	0.62
5:E:16:VAL:HG12	5:E:17:LYS:N	2.15	0.62
7:G:4:ASN:ND2	7:G:8:LYS:HE3	2.13	0.62
19:S:28:ASN:HB3	19:S:91:GLN:NE2	2.14	0.62
33:7:60:ALA:C	33:7:62:SER:H	2.07	0.62
35:9:39:GLY:HA2	35:9:44:ARG:O	1.99	0.62
39:13:51:LEU:HB3	39:13:56:MET:HB3	1.80	0.62
41:15:37:GLN:HB2	41:15:39:ASN:ND2	2.15	0.62
48:22:11:ARG:CB	48:22:47:ARG:HH12	2.12	0.62
52:26:950:U:H2'	52:26:951:G:H8	1.64	0.62
53:27:397:U:H2'	53:27:398:C:H6	1.64	0.62
53:27:1358:G:H2'	53:27:1372:U:O4	1.99	0.62
53:27:1509:A:H2'	53:27:1510:G:C8	2.34	0.62
53:27:1773:A:H2'	53:27:1774:C:O4'	1.99	0.62
53:27:2093:G:H1'	53:27:2198:A:C2	2.33	0.62
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1:ALA:N	1:A:19:VAL:O	2.30	0.62
2:B:51:THR:HB	2:B:79:LEU:HD23	1.81	0.62
6:F:94:ILE:HB	6:F:122:LEU:HB2	1.81	0.62
13:M:1:MET:HG3	13:M:3:HIS:ND1	2.15	0.62
30:4:12:ARG:HH12	53:27:250:G:P	2.22	0.62
34:8:58:GLN:O	34:8:62:ARG:HG2	1.99	0.62
37:11:2:ARG:HA	52:26:1380:U:O4	1.99	0.62
52:26:471:U:H2'	52:26:472:U:C6	2.35	0.62
52:26:660:C:H2'	52:26:661:G:O4'	1.98	0.62
53:27:811:U:H1'	53:27:1251:C:H5'	1.82	0.62
53:27:1657:U:H2'	53:27:1658:C:C6	2.35	0.62
22:V:44:GLY:H	22:V:47:VAL:HB	1.63	0.62
27:1:49:ARG:HG2	53:27:2884:U:C6	2.34	0.62
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.64	0.62
39:13:26:LYS:HG3	39:13:61:ASP:OD1	2.00	0.62
39:13:120:ALA:HB1	52:26:1348:U:H5''	1.81	0.62
52:26:233:C:H2'	52:26:234:C:C6	2.35	0.62
53:27:123:G:H2'	53:27:124:G:C8	2.34	0.62
53:27:598:U:H2'	53:27:599:A:H8	1.61	0.62
53:27:1435:G:O2'	53:27:1436:G:H5'	1.98	0.62
53:27:1669:A:H2'	53:27:1670:C:H5'	1.80	0.62
53:27:2644:G:H3'	53:27:2645:G:N2	2.14	0.62
53:27:2786:U:H2'	53:27:2787:C:C6	2.35	0.62
57:31:57:A:H2'	57:31:58:A:H5'	1.82	0.62
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.62
2:B:116:LYS:HG3	2:B:165:MET:HE3	1.79	0.62
16:P:51:GLN:HG2	16:P:54:ARG:NH1	2.14	0.62
33:7:71:ARG:HE	33:7:74:ILE:HD12	1.63	0.62
33:7:125:ARG:O	33:7:126:ARG:HB2	1.98	0.62
34:8:150:LYS:HB3	34:8:177:MET:HE3	1.81	0.62
39:13:108:ARG:HG2	52:26:1347:G:O5'	2.00	0.62
46:20:40:ASN:CG	46:20:43:ALA:HB2	2.25	0.62
52:26:946:A:H2'	52:26:947:G:C8	2.34	0.62
53:27:532:A:N1	53:27:2020:A:H1'	2.15	0.62
54:28:30:C:C2'	54:28:31:C:H5'	2.30	0.62
1:A:184:GLU:OE2	53:27:2222:C:H4'	2.00	0.62
21:U:14:LYS:HB2	54:28:98:G:H1	1.64	0.62
44:18:35:ALA:O	44:18:40:ARG:HB2	1.99	0.62
52:26:285:C:H2'	52:26:286:C:H6	1.64	0.62
52:26:490:C:H2'	52:26:491:G:H8	1.63	0.62
53:27:613:A:H3'	53:27:613:A:N3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:721:A:H2'	53:27:722:A:C8	2.34	0.62
53:27:1779:U:H5	53:27:1784:A:N7	1.98	0.62
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.62
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.62
1:A:123:ILE:HG23	1:A:191:LEU:HD13	1.82	0.62
7:G:35:VAL:HG23	53:27:1056:G:OP1	1.98	0.62
11:K:21:ARG:NE	53:27:811:U:C5	2.68	0.62
23:W:26:ARG:NH1	23:W:28:PHE:CE1	2.68	0.62
40:14:52:LEU:HB2	44:18:80:ARG:HD2	1.81	0.62
49:23:66:VAL:HG23	49:23:67:GLY:H	1.63	0.62
50:24:67:HIS:ND1	52:26:262:A:H4'	2.15	0.62
51:25:19:LYS:HG3	51:25:22:CYS:SG	2.39	0.62
52:26:16:A:O2'	52:26:17:U:H5'	2.00	0.62
53:27:105:C:H2'	53:27:106:C:H6	1.64	0.62
53:27:666:A:H2'	53:27:667:U:C6	2.35	0.62
53:27:1463:C:H2'	53:27:1464:G:C8	2.35	0.62
53:27:2455:G:H2'	53:27:2456:C:C6	2.35	0.62
59:33:676:ARG:HG3	59:33:677:SER:N	2.12	0.62
2:B:129:THR:HG23	2:B:140:HIS:O	2.00	0.62
5:E:10:VAL:HG12	5:E:47:ASN:O	2.00	0.62
26:Z:64:PHE:C	26:Z:66:ILE:H	2.07	0.62
28:2:46:VAL:HG12	28:2:47:ILE:N	2.12	0.62
36:10:45:ARG:HD2	36:10:59:TYR:CE2	2.34	0.62
38:12:77:VAL:HG12	38:12:84:ILE:CD1	2.30	0.62
52:26:181:A:H61	52:26:194:C:H2'	1.65	0.62
52:26:234:C:H2'	52:26:235:C:C6	2.35	0.62
52:26:1229:A:H2'	52:26:1230:C:H6	1.65	0.62
52:26:1469:C:H2'	52:26:1470:U:O4'	2.00	0.62
56:30:2:C:H2'	56:30:3:C:C6	2.34	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
2:B:118:PHE:CE1	2:B:163:GLY:HA2	2.35	0.62
6:F:87:GLU:OE1	36:10:17:GLN:HB2	2.00	0.62
32:6:56:LEU:HD13	32:6:216:VAL:HG13	1.82	0.62
36:10:38:ARG:HB3	36:10:63:ASN:HB2	1.82	0.62
36:10:67:PRO:HG2	36:10:70:VAL:CG2	2.29	0.62
39:13:66:VAL:HB	39:13:78:ILE:HD11	1.82	0.62
42:16:65:TYR:HE2	42:16:67:GLY:HA2	1.65	0.62
53:27:226:A:H3'	53:27:227:A:H8	1.63	0.62
53:27:1176:U:H2'	53:27:1177:G:C8	2.34	0.62
53:27:2231:U:H2'	53:27:2232:C:C6	2.35	0.62
53:27:2617:U:H2'	53:27:2618:G:O4'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:40:C:H2'	56:30:41:C:H6	1.63	0.62
58:32:40:C:H2'	58:32:41:C:C6	2.35	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
2:B:56:LYS:NZ	53:27:2831:G:OP1	2.33	0.61
18:R:51:LEU:HD12	18:R:54:ALA:HB3	1.81	0.61
20:T:96:LYS:O	20:T:97:SER:HB3	2.00	0.61
22:V:35:ARG:HD2	22:V:54:THR:HG23	1.82	0.61
34:8:61:ARG:HH21	34:8:68:GLU:N	1.97	0.61
35:9:108:GLY:O	35:9:110:MET:N	2.33	0.61
41:15:111:ASP:HB2	51:25:16:ARG:HH22	1.64	0.61
43:17:6:ILE:HD12	43:17:7:ASN:H	1.63	0.61
52:26:715:A:H2'	52:26:716:A:C8	2.35	0.61
52:26:715:A:H2'	52:26:716:A:H8	1.65	0.61
53:27:644:A:H2'	53:27:645:C:H5''	1.81	0.61
58:32:61:C:O2'	58:32:62:C:H5'	2.00	0.61
10:J:64:ARG:HD2	10:J:79:PHE:CD1	2.34	0.61
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
41:15:22:ILE:HD13	41:15:95:THR:HG23	1.82	0.61
41:15:30:ILE:HD12	52:26:705:G:H21	1.63	0.61
52:26:41:G:H2'	52:26:42:G:H8	1.65	0.61
52:26:280:C:H4'	52:26:281:G:OP2	2.00	0.61
52:26:664:G:N2	52:26:741:G:H1	1.98	0.61
52:26:1261:A:H3'	52:26:1262:C:H6	1.65	0.61
52:26:1436:U:H2'	52:26:1437:A:C8	2.34	0.61
53:27:1021:A:H2'	53:27:1022:G:H4'	1.82	0.61
53:27:2147:A:C4	53:27:2148:G:H1'	2.35	0.61
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.81	0.61
59:33:721:VAL:HG13	59:33:724:ARG:NE	2.14	0.61
4:D:68:LYS:HE3	54:28:41:G:O6	1.99	0.61
18:R:25:ARG:NH2	53:27:519:U:H5''	2.15	0.61
18:R:57:ASN:HD21	53:27:495:G:C1'	2.13	0.61
20:T:25:LYS:HG2	20:T:36:GLU:HB2	1.82	0.61
23:W:39:VAL:HG21	23:W:46:VAL:HG23	1.81	0.61
26:Z:61:ASN:CA	26:Z:64:PHE:HB2	2.15	0.61
31:5:17:VAL:HG11	31:5:19:ARG:NH1	2.15	0.61
35:9:41:GLY:O	35:9:118:GLY:HA3	2.00	0.61
39:13:18:VAL:HG21	39:13:81:GLY:C	2.25	0.61
52:26:117:G:O6	52:26:289:G:H1'	1.99	0.61
52:26:247:G:H2'	52:26:248:C:C6	2.35	0.61
52:26:555:U:H2'	52:26:556:C:C6	2.36	0.61
52:26:1106:G:O2'	52:26:1107:C:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:162:U:O2'	53:27:163:C:H5'	1.99	0.61
53:27:980:A:N7	53:27:981:A:C6	2.68	0.61
53:27:1036:G:H2'	53:27:1037:G:H8	1.63	0.61
53:27:2087:G:H2'	53:27:2088:A:C8	2.35	0.61
54:28:4:C:H6	54:28:4:C:C5'	2.13	0.61
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.00	0.61
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.61
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
15:O:2:ASN:HD21	53:27:2876:G:H5''	1.65	0.61
31:5:33:HIS:O	31:5:35:GLN:N	2.34	0.61
32:6:24:PRO:HB3	52:26:828:U:H2'	1.82	0.61
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.82	0.61
52:26:539:A:H2'	52:26:540:G:C8	2.33	0.61
52:26:631:C:C5'	52:26:632:U:H5'	2.31	0.61
52:26:690:G:H2'	52:26:691:G:O4'	2.00	0.61
52:26:1030:U:H5''	52:26:1031:C:C5	2.34	0.61
52:26:1376:U:H2'	52:26:1377:A:C8	2.36	0.61
53:27:1386:C:H2'	53:27:1387:A:H8	1.65	0.61
53:27:2038:G:H2'	53:27:2039:U:O4'	2.01	0.61
53:27:2623:G:H2'	53:27:2624:G:H8	1.64	0.61
56:30:48:C:H2'	56:30:59:U:H5'	1.81	0.61
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.61
1:A:230:PRO:HB2	1:A:244:VAL:HG21	1.82	0.61
7:G:20:LYS:HB2	7:G:88:HIS:CE1	2.35	0.61
11:K:14:LYS:O	11:K:15:ALA:HB3	1.99	0.61
20:T:6:ARG:O	20:T:24:VAL:HB	2.00	0.61
43:17:101:THR:HG22	52:26:1226:C:H2'	1.82	0.61
44:18:20:PHE:CE1	44:18:47:LEU:HD11	2.34	0.61
52:26:270:A:H2'	52:26:271:C:C6	2.35	0.61
52:26:601:G:H2'	52:26:602:A:H8	1.65	0.61
52:26:1502:A:C8	52:26:1505:G:N2	2.69	0.61
53:27:1906:G:C3'	53:27:1907:G:H5''	2.30	0.61
53:27:2410:G:H2'	53:27:2411:A:O4'	2.00	0.61
53:27:2428:G:H5''	53:27:2429:G:OP1	2.01	0.61
57:31:19:G:H5''	57:31:20:U:C4	2.35	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
59:33:553:LEU:C	59:33:555:GLN:H	2.08	0.61
1:A:159:THR:HG22	1:A:160:TYR:N	2.15	0.61
1:A:206:LYS:HG3	1:A:209:ALA:H	1.65	0.61
8:H:93:ASN:OD1	53:27:1077:A:H4'	2.00	0.61
9:I:65:THR:HG22	9:I:66:GLY:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:6:ALA:O	14:N:9:ARG:HG2	2.01	0.61
23:W:16:ASN:ND2	23:W:26:ARG:HB3	2.15	0.61
32:6:53:LEU:HD23	32:6:56:LEU:HD12	1.83	0.61
32:6:158:ASP:O	32:6:180:ILE:HG23	2.01	0.61
35:9:98:ALA:HB2	35:9:123:LEU:HG	1.83	0.61
49:23:35:ARG:HG2	49:23:50:VAL:CG1	2.31	0.61
51:25:20:ARG:NH2	55:29:7:G:H21	1.98	0.61
52:26:543:U:H2'	52:26:544:G:H8	1.65	0.61
52:26:1229:A:H2'	52:26:1230:C:C6	2.35	0.61
53:27:121:G:H4'	53:27:149:A:H5'	1.83	0.61
53:27:507:A:H5''	53:27:508:A:H2'	1.82	0.61
53:27:655:A:H4'	53:27:656:G:H5'	1.82	0.61
53:27:737:C:H2'	53:27:738:G:O4'	2.00	0.61
53:27:783:A:H2'	53:27:784:G:H5'	1.81	0.61
53:27:2447:G:C4	53:27:2500:U:C5	2.89	0.61
53:27:2469:A:H2'	53:27:2470:G:H5'	1.82	0.61
53:27:2786:U:O2'	53:27:2787:C:H5'	2.01	0.61
58:32:71:C:H2'	58:32:72:A:O4'	1.99	0.61
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.61
59:33:425:LEU:HD11	59:33:451:PHE:HB3	1.82	0.61
3:C:84:THR:HG21	53:27:586:A:C5'	2.30	0.61
4:D:76:PHE:HB3	53:27:2311:A:C2	2.36	0.61
15:O:39:LEU:HD13	15:O:81:ASP:OD2	2.00	0.61
15:O:74:GLN:HB2	15:O:77:SER:HB2	1.83	0.61
31:5:27:CYS:SG	31:5:33:HIS:ND1	2.68	0.61
38:12:80:PRO:HG2	52:26:878:A:C5'	2.31	0.61
52:26:574:A:N3	52:26:883:C:H1'	2.16	0.61
53:27:115:C:O2'	53:27:116:C:H5'	2.01	0.61
53:27:766:U:H2'	53:27:767:U:C6	2.36	0.61
53:27:1255:U:H5''	53:27:1256:G:H5''	1.81	0.61
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.61
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.61
10:J:66:LYS:HA	10:J:79:PHE:O	2.01	0.61
11:K:88:GLY:O	11:K:121:THR:N	2.32	0.61
11:K:116:VAL:HG22	11:K:117:THR:N	2.15	0.61
16:P:75:TYR:O	16:P:78:PHE:HB3	2.01	0.61
33:7:13:ILE:HD12	33:7:13:ILE:N	2.16	0.61
33:7:113:LYS:HB2	33:7:184:ASN:ND2	2.16	0.61
52:26:67:C:H2'	52:26:68:G:C8	2.35	0.61
52:26:584:G:H2'	52:26:585:G:H8	1.65	0.61
52:26:971:G:C8	52:26:1365:G:H4'	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1301:U:H2'	52:26:1301:U:O2	1.99	0.61
53:27:63:A:O2'	53:27:64:A:H5'	2.01	0.61
53:27:587:C:C5	53:27:671:C:H1'	2.36	0.61
53:27:1269:A:H2'	53:27:1270:C:C6	2.36	0.61
53:27:1405:U:H2'	53:27:1406:U:C6	2.36	0.61
53:27:1916:A:H2'	53:27:1917:U:O2	2.00	0.61
53:27:2105:U:H2'	53:27:2106:U:O4'	2.01	0.61
55:29:13:A:H61	58:32:35:A:N6	1.98	0.61
59:33:444:ILE:HD11	59:33:449:VAL:HG11	1.82	0.61
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.83	0.61
2:B:133:THR:CG2	53:27:1993:U:H4'	2.31	0.61
7:G:34:THR:HA	7:G:37:LYS:HB3	1.82	0.61
7:G:43:LYS:O	7:G:47:GLU:HG3	2.01	0.61
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.83	0.61
14:N:71:ALA:HB1	14:N:106:LEU:HB2	1.82	0.61
21:U:86:LEU:HD12	21:U:86:LEU:H	1.66	0.61
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.82	0.61
38:12:14:ARG:HD3	38:12:74:ILE:O	2.01	0.61
40:14:81:GLU:O	40:14:84:VAL:HG12	2.00	0.61
44:18:25:GLU:HG3	44:18:26:LEU:N	2.15	0.61
46:20:70:ARG:O	46:20:74:LEU:HG	2.01	0.61
53:27:5:A:H2'	53:27:6:A:C8	2.34	0.61
53:27:892:A:H2'	53:27:893:C:C6	2.36	0.61
53:27:1030:C:H2'	53:27:1031:G:C8	2.36	0.61
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.61
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.61
1:A:18:VAL:HG21	1:A:202:ARG:HH21	1.66	0.61
18:R:53:SER:O	18:R:57:ASN:HB2	2.01	0.61
31:5:37:GLN:OE1	53:27:1124:G:O2'	2.19	0.61
42:16:99:GLY:HA3	42:16:117:GLY:HA3	1.82	0.61
52:26:21:G:H2'	52:26:22:G:C8	2.36	0.61
52:26:601:G:H2'	52:26:602:A:C8	2.36	0.61
52:26:1397:C:H42	55:29:22:A:H2'	1.65	0.61
53:27:176:A:O2'	53:27:177:G:H5'	2.00	0.61
53:27:547:A:H3'	53:27:547:A:N3	2.16	0.61
53:27:1094:U:H1'	53:27:1097:U:H5	1.66	0.61
53:27:1306:C:H2'	53:27:1307:A:H8	1.64	0.61
53:27:1426:G:H8	53:27:1426:G:O5'	1.84	0.61
53:27:2644:G:H3'	53:27:2645:G:H21	1.66	0.61
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.61
59:33:434:ASP:O	59:33:438:ARG:HG3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:65:ILE:HG22	12:L:67:VAL:H	1.64	0.60
16:P:91:ARG:HH22	53:27:998:C:P	2.24	0.60
38:12:95:MET:O	38:12:98:LEU:HG	2.01	0.60
40:14:36:VAL:HG22	40:14:38:GLY:N	2.13	0.60
42:16:33:CYS:HA	42:16:54:VAL:HA	1.83	0.60
42:16:111:GLN:HB3	52:26:538:G:OP2	2.01	0.60
53:27:890:C:H2'	53:27:891:G:O4'	2.00	0.60
53:27:1794:A:H2'	53:27:1795:C:C6	2.35	0.60
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.60
1:A:270:ARG:HG2	1:A:271:SER:N	2.17	0.60
2:B:151:THR:HG23	53:27:2032:G:H21	1.66	0.60
6:F:54:LEU:N	6:F:57:LYS:HD3	2.15	0.60
22:V:14:ALA:HB1	53:27:2271:G:OP1	2.00	0.60
23:W:13:THR:HG22	23:W:27:ARG:HA	1.81	0.60
40:14:59:LYS:HG3	40:14:62:ARG:HH21	1.65	0.60
45:19:30:LEU:HD21	52:26:658:C:H5'	1.83	0.60
53:27:107:G:H2'	53:27:108:G:H8	1.65	0.60
54:28:113:C:H2'	54:28:114:C:H6	1.65	0.60
2:B:105:LYS:O	2:B:177:VAL:HG12	2.01	0.60
5:E:85:LYS:C	5:E:86:LEU:HD12	2.26	0.60
12:L:57:VAL:O	12:L:59:ARG:N	2.34	0.60
32:6:33:ALA:CB	32:6:39:ILE:HG13	2.25	0.60
39:13:24:ASN:HA	39:13:58:GLU:O	2.00	0.60
47:21:29:LYS:HB2	47:21:36:PHE:CE1	2.36	0.60
52:26:478:A:H2'	52:26:479:U:H5''	1.82	0.60
52:26:841:C:O2'	52:26:843:U:H4'	2.00	0.60
52:26:1405:G:O2'	52:26:1406:U:H5'	2.01	0.60
53:27:601:C:H2'	53:27:602:A:O4'	2.01	0.60
53:27:1810:A:C2'	53:27:1811:G:H5'	2.31	0.60
53:27:2174:C:C2'	53:27:2175:C:H5'	2.30	0.60
59:33:581:GLN:HA	59:33:695:LEU:HD22	1.83	0.60
3:C:63:LYS:C	3:C:65:THR:H	2.08	0.60
5:E:2:ARG:HA	5:E:5:LYS:HE2	1.83	0.60
5:E:25:ILE:HG22	5:E:78:VAL:HG21	1.84	0.60
8:H:122:GLU:O	8:H:126:ARG:HG2	2.01	0.60
17:Q:14:VAL:CG2	17:Q:98:ILE:HG13	2.31	0.60
21:U:30:ILE:HG22	21:U:93:ARG:HD3	1.84	0.60
37:11:118:ARG:HA	37:11:121:ASN:HD22	1.66	0.60
50:24:8:LYS:O	50:24:11:ILE:HG13	2.01	0.60
51:25:32:ARG:HG3	51:25:33:ARG:H	1.65	0.60
52:26:70:U:H2'	52:26:94:G:N7	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:215:C:H2'	52:26:216:U:C6	2.36	0.60
52:26:621:A:H2'	52:26:622:A:O4'	2.01	0.60
53:27:2172:U:OP2	53:27:2173:A:H5'	2.02	0.60
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.60
59:33:438:ARG:HG2	59:33:467:LYS:O	2.01	0.60
10:J:110:GLU:HA	10:J:113:MET:HG2	1.82	0.60
32:6:209:VAL:O	32:6:213:LEU:HB3	2.01	0.60
34:8:12:ARG:HG2	34:8:34:GLU:H	1.66	0.60
37:11:13:PRO:HA	37:11:20:GLU:HA	1.84	0.60
42:16:41:PRO:HB3	42:16:88:ASP:OD2	2.02	0.60
53:27:226:A:H3'	53:27:227:A:C8	2.36	0.60
53:27:818:G:N1	53:27:1187:G:H2'	2.17	0.60
53:27:1506:U:H2'	53:27:1507:C:H6	1.67	0.60
53:27:1682:G:C4	53:27:1757:A:H1'	2.36	0.60
53:27:1825:U:H2'	53:27:1826:G:H8	1.66	0.60
53:27:2432:A:H2'	53:27:2433:A:C8	2.37	0.60
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.60
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.60
18:R:2:GLU:HA	18:R:108:SER:HB2	1.82	0.60
27:1:38:LEU:HD23	27:1:39:ARG:N	2.16	0.60
27:1:39:ARG:CZ	53:27:2884:U:H3	2.14	0.60
40:14:6:ILE:CG1	40:14:102:LEU:HD12	2.32	0.60
52:26:81:A:H2'	52:26:82:G:C8	2.35	0.60
52:26:549:C:C2'	52:26:550:G:H5''	2.30	0.60
53:27:904:G:H2'	53:27:905:A:C8	2.37	0.60
53:27:2685:G:H2'	53:27:2686:G:C8	2.36	0.60
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.60
59:33:621:ILE:HD11	59:33:655:ALA:HB3	1.82	0.60
59:33:668:VAL:HA	59:33:713:THR:HA	1.82	0.60
1:A:224:MET:HE2	53:27:782:A:C6	2.35	0.60
7:G:39:THR:HA	7:G:42:ARG:HB3	1.83	0.60
19:S:3:ARG:O	19:S:7:LEU:HG	2.01	0.60
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.17	0.60
32:6:95:TRP:CZ3	32:6:171:ALA:HA	2.36	0.60
53:27:319:G:H2'	53:27:320:A:O4'	2.02	0.60
53:27:1228:G:H2'	53:27:1229:C:C6	2.37	0.60
53:27:1315:C:H2'	53:27:1316:U:C6	2.37	0.60
53:27:2026:U:H2'	53:27:2027:G:C8	2.37	0.60
53:27:2130:U:H2'	53:27:2131:U:H5''	1.84	0.60
53:27:2242:G:H8	53:27:2242:G:O5'	1.82	0.60
57:31:59:A:H2'	57:31:60:U:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:31:GLU:HG2	9:I:142:ILE:HG12	1.83	0.60
10:J:5:GLN:HA	10:J:20:MET:SD	2.42	0.60
14:N:101:GLY:HA3	54:28:49:C:OP1	2.01	0.60
17:Q:28:ALA:HB3	17:Q:31:GLU:HG2	1.84	0.60
28:2:32:LYS:HA	28:2:50:GLU:OE1	2.01	0.60
33:7:168:ARG:NH2	52:26:1106:G:H1'	2.17	0.60
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.16	0.60
38:12:14:ARG:CG	38:12:74:ILE:HG22	2.32	0.60
39:13:108:ARG:HD2	52:26:1347:G:C8	2.37	0.60
41:15:80:ASN:HB3	41:15:105:ARG:HB3	1.83	0.60
52:26:13:U:O2'	52:26:14:U:H5'	2.01	0.60
52:26:147:G:H2'	52:26:148:G:H8	1.67	0.60
52:26:845:A:N3	52:26:845:A:H2'	2.15	0.60
52:26:923:A:H2'	52:26:924:C:C6	2.36	0.60
52:26:1057:G:H2'	52:26:1058:G:C8	2.36	0.60
53:27:639:U:H2'	53:27:640:C:H6	1.67	0.60
53:27:938:G:H2'	53:27:939:G:H8	1.67	0.60
53:27:1584:U:C2'	53:27:1585:C:H5'	2.31	0.60
53:27:2241:A:H2'	53:27:2242:G:C8	2.37	0.60
53:27:2281:A:O2'	53:27:2282:G:H5'	2.01	0.60
9:I:18:VAL:HG22	9:I:140:LEU:HB3	1.83	0.60
32:6:182:VAL:HG23	32:6:195:VAL:HG13	1.84	0.60
51:25:18:PHE:C	51:25:19:LYS:HD2	2.27	0.60
52:26:556:C:H2'	52:26:557:G:C8	2.36	0.60
52:26:769:G:H4'	52:26:1513:A:H4'	1.84	0.60
52:26:1029:U:H2'	52:26:1031:C:C2	2.36	0.60
53:27:19:A:H2'	53:27:20:C:C6	2.37	0.60
53:27:23:G:H2'	53:27:24:G:H8	1.67	0.60
53:27:157:C:H2'	53:27:158:U:O4'	2.00	0.60
53:27:243:U:H2'	53:27:244:A:H5'	1.84	0.60
53:27:357:C:H2'	53:27:358:U:C6	2.37	0.60
53:27:567:U:H2'	53:27:568:U:O4'	2.02	0.60
53:27:1010:A:N3	53:27:1153:C:H1'	2.17	0.60
53:27:1287:A:O2'	53:27:1288:G:H5'	2.00	0.60
53:27:1720:U:H2'	53:27:1721:G:O4'	2.02	0.60
53:27:1801:A:H5''	53:27:2203:U:C2'	2.29	0.60
53:27:2511:U:H2'	53:27:2512:C:H6	1.67	0.60
53:27:2682:A:O2'	53:27:2683:C:H5'	2.01	0.60
53:27:2754:U:H2'	53:27:2755:C:H5''	1.82	0.60
2:B:115:GLY:O	13:M:3:HIS:NE2	2.35	0.60
11:K:85:VAL:CG1	11:K:94:THR:HG22	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:91:VAL:HG21	32:6:95:TRP:HD1	1.67	0.60
35:9:11:GLN:HB2	35:9:39:GLY:O	2.01	0.60
36:10:29:ILE:CG2	36:10:34:GLY:HA3	2.32	0.60
45:19:6:ALA:O	45:19:10:ILE:HG13	2.02	0.60
52:26:335:C:H2'	52:26:336:A:H8	1.66	0.60
53:27:2503:A:H1'	53:27:2505:G:OP2	2.01	0.60
53:27:2582:G:O2'	53:27:2583:G:H5'	2.02	0.60
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.60
59:33:439:CYS:HA	59:33:465:THR:HG22	1.83	0.60
4:D:72:SER:HB2	4:D:80:GLN:H	1.67	0.59
13:M:79:LEU:O	13:M:81:ASN:N	2.35	0.59
34:8:116:LEU:HD11	34:8:153:ARG:HD2	1.83	0.59
49:23:79:TYR:CZ	52:26:1226:C:H4'	2.37	0.59
51:25:17:ARG:C	51:25:19:LYS:N	2.60	0.59
52:26:470:C:H2'	52:26:471:U:C6	2.37	0.59
53:27:2721:A:H2'	53:27:2722:G:O4'	2.02	0.59
58:32:32:C:H2'	58:32:33:U:O4'	2.02	0.59
1:A:269:ARG:NH2	53:27:1798:U:OP1	2.35	0.59
5:E:36:LEU:HD11	5:E:67:ALA:HB1	1.84	0.59
7:G:24:SER:H	7:G:118:ILE:HG13	1.66	0.59
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.83	0.59
33:7:115:VAL:O	33:7:118:SER:HB3	2.02	0.59
34:8:142:VAL:HG12	34:8:179:GLY:O	2.01	0.59
39:13:98:ARG:NH2	52:26:1178:G:C5	2.70	0.59
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.42	0.59
52:26:543:U:H2'	52:26:544:G:C8	2.36	0.59
52:26:1401:G:H2'	52:26:1402:C:O4'	2.01	0.59
53:27:20:C:H2'	53:27:21:A:H8	1.67	0.59
53:27:61:C:C2'	53:27:62:U:H5'	2.31	0.59
53:27:547:A:H4'	53:27:548:G:C4	2.37	0.59
53:27:1444:G:H2'	53:27:1445:G:C8	2.36	0.59
53:27:2248:C:H2'	53:27:2249:U:H5'	1.83	0.59
53:27:2271:G:H2'	53:27:2272:U:C6	2.36	0.59
53:27:2607:G:H2'	53:27:2608:G:O4'	2.02	0.59
53:27:2620:C:C2'	53:27:2621:G:H5''	2.31	0.59
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.37	0.59
2:B:66:GLY:HA3	53:27:2787:C:H5'	1.83	0.59
23:W:36:ARG:HD3	53:27:2200:C:OP2	2.02	0.59
34:8:104:MET:CE	34:8:172:VAL:HB	2.32	0.59
52:26:88:U:H2'	52:26:89:U:C4'	2.32	0.59
52:26:950:U:H2'	52:26:951:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1506:U:O2'	52:26:1507:A:H5'	2.02	0.59
53:27:464:U:C6	53:27:788:A:C2	2.91	0.59
53:27:1005:C:O5'	53:27:1005:C:H6	1.85	0.59
53:27:1199:U:H2'	53:27:1200:C:H6	1.67	0.59
53:27:1664:A:N6	53:27:1996:C:H42	1.95	0.59
53:27:1843:C:H2'	53:27:1844:C:C6	2.38	0.59
53:27:2016:U:H2'	53:27:2017:U:O4'	2.02	0.59
53:27:2393:U:H2'	53:27:2394:C:C6	2.37	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.02	0.59
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.59
2:B:158:GLY:HA3	9:I:80:HIS:NE2	2.17	0.59
3:C:132:LYS:O	3:C:136:GLN:HB2	2.01	0.59
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.35	0.59
21:U:30:ILE:CG2	21:U:93:ARG:HD3	2.32	0.59
36:10:3:HIS:O	36:10:92:THR:HA	2.00	0.59
38:12:94:VAL:HB	38:12:99:GLY:O	2.02	0.59
42:16:63:THR:HG23	42:16:92:VAL:HA	1.82	0.59
46:20:5:ARG:HH12	52:26:377:G:H5'	1.66	0.59
52:26:1201:A:H1'	52:26:1202:U:OP2	2.03	0.59
52:26:1414:U:H2'	52:26:1415:G:H8	1.66	0.59
53:27:1197:G:H2'	53:27:1198:U:C6	2.38	0.59
53:27:1868:C:H3'	53:27:1869:G:C5'	2.25	0.59
58:32:60:U:H2'	58:32:61:C:C5	2.37	0.59
8:H:37:PHE:O	8:H:41:PHE:HB2	2.02	0.59
11:K:19:LEU:HG	11:K:31:GLY:HA3	1.83	0.59
29:3:42:LEU:HD23	29:3:43:THR:HG23	1.85	0.59
43:17:2:ARG:HA	43:17:6:ILE:O	2.01	0.59
52:26:218:U:H2'	52:26:219:U:O4'	2.02	0.59
53:27:858:G:H4'	53:27:859:G:OP2	2.01	0.59
53:27:1304:A:C3'	53:27:1305:C:H5''	2.33	0.59
53:27:1306:C:H2'	53:27:1307:A:C8	2.38	0.59
53:27:1401:G:H2'	53:27:1402:U:O4'	2.02	0.59
53:27:1906:G:H2'	53:27:1907:G:H5''	1.83	0.59
53:27:2024:G:H2'	53:27:2025:C:O4'	2.02	0.59
53:27:2507:C:H2'	53:27:2508:G:H8	1.68	0.59
53:27:2619:C:H2'	53:27:2620:C:C6	2.37	0.59
54:28:1:U:H2'	54:28:2:G:C8	2.38	0.59
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.59
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.59
3:C:148:ILE:HG13	3:C:187:VAL:HG11	1.84	0.59
4:D:24:VAL:O	4:D:27:VAL:HG12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:112:ARG:HH12	39:13:114:LYS:HA	1.68	0.59
41:15:71:ASP:O	41:15:72:ALA:HB3	2.01	0.59
44:18:5:MET:HE3	44:18:62:ARG:NH2	2.18	0.59
52:26:17:U:H2'	52:26:18:C:C6	2.37	0.59
52:26:741:G:H2'	52:26:742:G:H8	1.68	0.59
52:26:891:U:H2'	52:26:892:A:H8	1.66	0.59
52:26:1202:U:C2'	52:26:1203:C:H5'	2.33	0.59
53:27:1061:U:H5'	53:27:1070:A:N3	2.17	0.59
53:27:1725:U:H2'	53:27:1726:C:C6	2.37	0.59
53:27:1881:C:H2'	53:27:1882:U:O4'	2.01	0.59
53:27:2086:U:H2'	53:27:2087:G:C8	2.37	0.59
53:27:2514:U:H2'	53:27:2515:C:H6	1.67	0.59
56:30:13:C:H2'	56:30:14:A:H5''	1.84	0.59
58:32:31:G:H3'	58:32:32:C:C6	2.38	0.59
13:M:30:ARG:NH1	13:M:75:ILE:HD11	2.18	0.59
24:X:14:LEU:O	24:X:17:GLU:HB3	2.03	0.59
24:X:18:LEU:O	24:X:22:LEU:HB3	2.03	0.59
39:13:11:ARG:HB3	39:13:77:ALA:N	2.17	0.59
40:14:5:ARG:N	40:14:77:VAL:HA	2.16	0.59
51:25:9:GLU:CG	51:25:10:PRO:HD3	2.23	0.59
52:26:349:A:H2'	52:26:350:G:C8	2.37	0.59
53:27:538:A:H2'	53:27:539:G:C8	2.38	0.59
53:27:2110:G:H5'	53:27:2111:U:H5''	1.83	0.59
8:H:59:THR:HB	8:H:67:THR:O	2.03	0.59
10:J:15:GLY:O	10:J:47:ILE:HG12	2.02	0.59
17:Q:1:MET:N	17:Q:43:ASN:HA	2.17	0.59
22:V:22:PHE:H	22:V:25:GLU:CD	2.10	0.59
28:2:12:SER:HB2	28:2:48:TYR:CZ	2.38	0.59
32:6:96:LEU:O	32:6:99:MET:HG2	2.02	0.59
49:23:49:ALA:HA	49:23:58:PRO:HA	1.84	0.59
50:24:2:ASN:OD1	50:24:3:ILE:N	2.35	0.59
52:26:744:C:H2'	52:26:745:G:H8	1.68	0.59
53:27:975:A:H1'	53:27:990:A:N1	2.17	0.59
53:27:1153:C:H2'	53:27:1154:G:O4'	2.03	0.59
53:27:1285:A:H2'	53:27:1286:A:H5'	1.85	0.59
53:27:1931:U:H2'	53:27:1932:A:H8	1.67	0.59
54:28:38:C:O2	54:28:48:U:H1'	2.03	0.59
3:C:149:ILE:HG23	3:C:188:MET:HG3	1.85	0.59
8:H:76:ALA:HB3	53:27:1063:G:H5'	1.83	0.59
12:L:31:PHE:O	12:L:105:MET:N	2.31	0.59
21:U:86:LEU:CD2	21:U:89:ILE:HD11	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:5:ARG:NH1	40:14:79:PRO:HG3	2.17	0.59
41:15:17:ASP:CB	41:15:36:ARG:HH22	2.15	0.59
41:15:109:ILE:H	41:15:109:ILE:HD12	1.66	0.59
43:17:15:VAL:HG23	43:17:40:GLU:O	2.02	0.59
52:26:418:C:H2'	52:26:419:C:C6	2.37	0.59
52:26:579:A:H2'	52:26:580:C:C6	2.38	0.59
53:27:286:U:H2'	53:27:287:G:C8	2.37	0.59
53:27:1331:G:C2'	53:27:1332:G:H5''	2.33	0.59
53:27:2505:G:N3	53:27:2505:G:H2'	2.18	0.59
2:B:166:GLY:C	2:B:168:GLU:H	2.11	0.59
3:C:63:LYS:C	3:C:65:THR:N	2.57	0.59
7:G:42:ARG:C	7:G:45:GLY:H	2.10	0.59
8:H:42:ASN:O	8:H:46:ASP:HB3	2.01	0.59
11:K:63:LYS:HA	30:4:12:ARG:HG2	1.85	0.59
26:Z:20:ASN:CG	26:Z:39:LYS:HD3	2.28	0.59
35:9:79:THR:HB	35:9:121:ASN:ND2	2.18	0.59
35:9:137:ARG:HH12	52:26:1078:U:C4'	2.12	0.59
35:9:137:ARG:HH22	52:26:1078:U:H4'	1.68	0.59
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.84	0.59
52:26:40:C:O2'	52:26:41:G:H5'	2.03	0.59
52:26:420:U:H4'	52:26:421:U:H5	1.68	0.59
52:26:768:A:H4'	52:26:1523:G:N2	2.16	0.59
52:26:988:G:H21	52:26:1015:G:N2	2.01	0.59
53:27:2845:U:H2'	53:27:2846:G:C8	2.38	0.59
59:33:428:ALA:HB1	59:33:435:VAL:HG12	1.85	0.59
3:C:188:MET:HE2	3:C:193:VAL:HA	1.84	0.58
27:1:51:ARG:HG3	27:1:53:VAL:HG13	1.85	0.58
33:7:174:LEU:HD23	33:7:181:ILE:HD13	1.85	0.58
37:11:62:GLU:HA	37:11:65:LEU:HB3	1.83	0.58
39:13:16:ALA:HB1	39:13:65:THR:O	2.03	0.58
43:17:88:LEU:HA	43:17:91:ARG:HE	1.67	0.58
47:21:14:ASP:C	47:21:16:MET:H	2.10	0.58
52:26:197:A:N3	52:26:198:G:H1'	2.18	0.58
52:26:202:G:H2'	52:26:203:G:C8	2.38	0.58
52:26:572:A:H4'	52:26:917:G:H5'	1.84	0.58
52:26:692:U:H1'	52:26:695:A:N7	2.18	0.58
52:26:1292:G:H2'	52:26:1293:C:C6	2.38	0.58
53:27:296:U:H2'	53:27:297:G:C8	2.38	0.58
53:27:787:C:H3'	53:27:791:C:H41	1.68	0.58
53:27:2037:A:H2'	53:27:2038:G:C8	2.38	0.58
53:27:2373:G:H2'	53:27:2374:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2739:U:H5'	53:27:2763:G:O6	2.03	0.58
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.58
1:A:59:GLN:NE2	1:A:84:PRO:HB2	2.18	0.58
1:A:227:VAL:HG11	53:27:784:G:C2	2.37	0.58
8:H:2:LYS:NZ	8:H:62:ALA:HB2	2.18	0.58
14:N:40:ILE:HD11	54:28:8:C:H4'	1.85	0.58
16:P:61:ILE:HG12	16:P:91:ARG:HD3	1.85	0.58
26:Z:61:ASN:HA	26:Z:64:PHE:CB	2.15	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.29	0.58
39:13:89:TYR:O	39:13:90:ASP:HB3	2.02	0.58
44:18:37:ASP:OD1	44:18:39:ASP:HB3	2.03	0.58
52:26:1176:A:H2'	52:26:1177:G:O4'	2.03	0.58
53:27:2070:A:H2'	53:27:2071:A:C8	2.38	0.58
2:B:6:GLY:HA3	2:B:29:VAL:HG22	1.86	0.58
2:B:121:THR:HB	2:B:127:PHE:CD2	2.38	0.58
5:E:171:LYS:NZ	53:27:2530:A:N7	2.51	0.58
6:F:14:SER:HB2	6:F:17:ASP:OD2	2.03	0.58
7:G:38:MET:HE1	53:27:1058:U:H4'	1.85	0.58
9:I:37:ARG:HH21	9:I:37:ARG:HG3	1.68	0.58
35:9:28:ARG:HH12	52:26:15:G:H4'	1.69	0.58
44:18:71:GLY:HA2	52:26:975:A:O2'	2.03	0.58
47:21:58:VAL:HG22	47:21:59:GLU:O	2.03	0.58
49:23:48:ILE:O	49:23:59:VAL:HG22	2.04	0.58
52:26:333:U:H2'	52:26:334:C:H6	1.68	0.58
52:26:406:G:H2'	52:26:407:U:H6	1.68	0.58
52:26:1225:A:H5'	52:26:1226:C:OP2	2.03	0.58
52:26:1522:U:H2'	52:26:1523:G:H8	1.68	0.58
53:27:288:U:H2'	53:27:289:G:C8	2.39	0.58
53:27:1637:A:H5'	53:27:1760:C:O2'	2.02	0.58
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.58
8:H:13:ALA:HA	8:H:53:PRO:HA	1.86	0.58
10:J:76:VAL:H	15:O:72:VAL:HG22	1.68	0.58
21:U:60:VAL:HG11	21:U:71:LYS:HB3	1.86	0.58
32:6:210:THR:O	32:6:214:GLY:HA3	2.04	0.58
42:16:113:ARG:HH21	42:16:120:ARG:HG3	1.66	0.58
48:22:17:VAL:CG1	48:22:18:GLN:HG3	2.31	0.58
52:26:102:G:H2'	52:26:103:U:H6	1.67	0.58
52:26:505:G:H5'	52:26:534:U:H2'	1.85	0.58
52:26:580:C:H2'	52:26:581:G:C8	2.38	0.58
53:27:414:C:H2'	53:27:415:A:C8	2.38	0.58
53:27:1297:C:H2'	53:27:1298:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2256:G:H2'	53:27:2257:U:H6	1.67	0.58
53:27:2475:C:H2'	53:27:2476:A:H5'	1.84	0.58
53:27:2849:U:H1'	53:27:2866:U:O2	2.03	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
3:C:163:ASN:HB2	53:27:322:A:OP2	2.03	0.58
4:D:139:GLU:HA	26:Z:28:VAL:HG12	1.85	0.58
9:I:59:ALA:HB1	9:I:101:ILE:HG13	1.83	0.58
23:W:71:ARG:HH11	23:W:77:TYR:HE2	1.48	0.58
37:11:110:ARG:HD3	37:11:122:GLU:OE2	2.02	0.58
50:24:9:ARG:HG2	52:26:108:G:C6	2.38	0.58
52:26:81:A:H2'	52:26:82:G:H8	1.67	0.58
52:26:128:G:O2'	52:26:129:A:H5'	2.03	0.58
53:27:110:G:H2'	53:27:111:A:C8	2.38	0.58
53:27:435:C:H2'	53:27:436:C:H5'	1.84	0.58
53:27:1293:C:C2'	53:27:1294:U:H5''	2.32	0.58
53:27:1662:U:H2'	53:27:1663:G:C8	2.38	0.58
53:27:2011:U:H2'	53:27:2012:G:O4'	2.04	0.58
53:27:2039:U:H2'	53:27:2040:G:C8	2.39	0.58
53:27:2329:U:H2'	53:27:2330:G:H8	1.64	0.58
53:27:2620:C:C3'	53:27:2621:G:H5''	2.33	0.58
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
59:33:634:HIS:NE2	59:33:640:GLN:HB2	2.18	0.58
2:B:4:LEU:HD11	2:B:100:LEU:HD22	1.85	0.58
15:O:99:LEU:O	15:O:99:LEU:HD23	2.02	0.58
19:S:54:GLU:H	19:S:54:GLU:CD	2.12	0.58
21:U:16:ALA:O	21:U:20:LEU:HD13	2.03	0.58
26:Z:11:GLU:HA	26:Z:25:ARG:HG2	1.85	0.58
34:8:149:LYS:O	34:8:151:GLN:N	2.37	0.58
43:17:38:ILE:HD12	43:17:47:LEU:HD11	1.86	0.58
43:17:54:THR:HA	43:17:57:ASP:OD2	2.03	0.58
50:24:4:LYS:HE3	52:26:60:A:H3'	1.85	0.58
52:26:1129:C:H2'	52:26:1139:G:O6	2.04	0.58
53:27:1053:C:H5'	53:27:1053:C:H6	1.66	0.58
53:27:1622:G:H2'	53:27:1623:G:H8	1.68	0.58
53:27:1726:C:H2'	53:27:1727:C:C6	2.37	0.58
53:27:2071:A:H2'	53:27:2072:C:C6	2.38	0.58
53:27:2799:A:H2'	53:27:2800:A:H5'	1.84	0.58
53:27:2800:A:H3'	53:27:2801:G:H5'	1.85	0.58
53:27:2800:A:C2	53:27:2895:G:H1'	2.38	0.58
59:33:294:GLY:O	59:33:298:THR:HG23	2.03	0.58
15:O:13:LYS:HE3	15:O:76:HIS:C	2.28	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:36:GLN:HE21	53:27:563:A:C2'	2.16	0.58
17:Q:1:MET:N	17:Q:43:ASN:HD22	2.02	0.58
17:Q:4:VAL:HG22	17:Q:13:ARG:HA	1.86	0.58
21:U:46:LYS:O	21:U:50:MET:HG2	2.04	0.58
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.86	0.58
24:X:39:GLN:HE21	24:X:42:LEU:CD1	2.16	0.58
40:14:22:THR:HA	40:14:25:ILE:HG22	1.84	0.58
41:15:121:ARG:HE	51:25:35:GLU:CG	2.16	0.58
44:18:8:ARG:HG2	44:18:12:ARG:NH1	2.19	0.58
45:19:23:SER:HA	52:26:751:U:H4'	1.84	0.58
52:26:478:A:C3'	52:26:479:U:H5''	2.34	0.58
52:26:1028:C:H2'	52:26:1029:U:H4'	1.85	0.58
52:26:1323:G:H2'	52:26:1324:A:C8	2.38	0.58
53:27:279:A:N6	53:27:361:G:HO2'	2.00	0.58
53:27:523:C:O2'	53:27:524:G:H5'	2.03	0.58
53:27:1263:U:H2'	53:27:1264:A:C4	2.38	0.58
53:27:1869:G:N2	53:27:1871:A:H5''	2.18	0.58
53:27:2756:U:H1'	53:27:2757:A:H5''	1.84	0.58
56:30:50:U:H2'	56:30:51:U:O4'	2.03	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.58
59:33:267:ASN:H	59:33:267:ASN:HD22	1.49	0.58
59:33:699:SER:OG	59:33:710:ILE:HG23	2.04	0.58
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.86	0.58
8:H:99:LYS:HG3	8:H:140:GLU:HG2	1.85	0.58
10:J:10:VAL:HG12	10:J:12:ASP:H	1.67	0.58
14:N:67:ASN:O	14:N:70:ALA:N	2.32	0.58
16:P:67:ALA:O	16:P:70:GLN:HB3	2.03	0.58
20:T:87:GLU:O	20:T:88:ASP:HB3	2.03	0.58
33:7:112:ALA:HB1	33:7:199:VAL:HG13	1.85	0.58
34:8:100:VAL:O	34:8:104:MET:HG2	2.04	0.58
35:9:80:LEU:HD21	35:9:95:MET:HE2	1.86	0.58
36:10:39:LEU:O	36:10:41:ASP:N	2.36	0.58
42:16:87:LYS:O	42:16:88:ASP:HB2	2.04	0.58
47:21:7:LEU:HD23	47:21:24:ILE:HD13	1.84	0.58
50:24:4:LYS:C	50:24:6:ALA:H	2.10	0.58
50:24:32:LYS:HE2	52:26:1439:G:OP1	2.03	0.58
51:25:61:ARG:O	51:25:63:ASN:N	2.35	0.58
52:26:212:G:H2'	52:26:213:G:C8	2.35	0.58
53:27:904:G:H2'	53:27:905:A:H8	1.68	0.58
53:27:1659:G:H2'	53:27:1660:G:H5''	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1901:A:H2'	53:27:1902:C:C6	2.39	0.58
53:27:2543:G:H2'	53:27:2544:G:C8	2.38	0.58
53:27:2840:C:H2'	53:27:2841:C:C6	2.38	0.58
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.84	0.58
8:H:21:PRO:CB	8:H:22:PRO:HD3	2.28	0.58
8:H:32:VAL:HG22	8:H:60:VAL:HG21	1.86	0.58
8:H:60:VAL:HA	8:H:66:PHE:CB	2.33	0.58
20:T:73:ASN:OD1	20:T:75:ALA:HB3	2.04	0.58
32:6:93:HIS:CE1	32:6:145:ASN:HB2	2.39	0.58
35:9:133:ILE:H	35:9:133:ILE:HD12	1.68	0.58
38:12:14:ARG:HH12	52:26:876:C:P	2.27	0.58
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.86	0.58
49:23:39:ILE:HB	49:23:66:VAL:HA	1.86	0.58
52:26:912:C:H2'	52:26:913:A:C8	2.39	0.58
52:26:949:A:H1'	52:26:1364:U:O2	2.04	0.58
52:26:1415:G:H2'	52:26:1416:G:H8	1.68	0.58
53:27:1169:A:H61	53:27:1180:U:H3	1.52	0.58
53:27:1746:A:H2'	53:27:1747:U:C6	2.39	0.58
53:27:2515:C:O2'	53:27:2516:A:H5'	2.03	0.58
53:27:2547:A:H2'	53:27:2548:U:C6	2.38	0.58
54:28:3:C:C3'	54:28:4:C:H5''	2.34	0.58
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58
10:J:22:ILE:HB	53:27:1952:A:C2	2.39	0.58
12:L:46:ILE:HD12	12:L:69:PRO:HG3	1.86	0.58
38:12:40:LYS:HD3	38:12:47:ASP:H	1.68	0.58
52:26:1037:C:H2'	52:26:1038:C:H6	1.68	0.58
52:26:1096:C:H2'	52:26:1097:C:H6	1.68	0.58
53:27:29:U:H2'	53:27:30:G:C8	2.39	0.58
53:27:538:A:H2'	53:27:539:G:O4'	2.03	0.58
53:27:2340:A:H2'	53:27:2341:G:H8	1.69	0.58
9:I:113:PRO:HG3	53:27:529:A:OP2	2.04	0.57
13:M:101:GLY:H	27:1:41:HIS:HD2	1.51	0.57
30:4:63:TYR:HE1	53:27:593:U:H5'	1.69	0.57
34:8:8:LEU:HB3	52:26:430:A:OP1	2.04	0.57
39:13:38:PHE:HA	39:13:41:GLU:OE1	2.02	0.57
42:16:21:PRO:C	42:16:23:LEU:N	2.56	0.57
45:19:55:LEU:O	45:19:59:VAL:HG23	2.04	0.57
47:21:46:HIS:HA	47:21:70:LYS:HD2	1.85	0.57
49:23:30:LEU:HD22	49:23:48:ILE:HG22	1.86	0.57
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:88:U:H2'	52:26:89:U:H4'	1.86	0.57
52:26:1347:G:H22	52:26:1373:G:H2'	1.69	0.57
53:27:479:A:H4'	53:27:480:A:OP1	2.04	0.57
53:27:1182:G:H2'	53:27:1183:U:O4'	2.04	0.57
53:27:1810:A:H2'	53:27:1811:G:H5'	1.85	0.57
53:27:1866:A:H2'	53:27:1867:G:O4'	2.04	0.57
53:27:2081:U:H2'	53:27:2082:A:H8	1.67	0.57
58:32:57:A:C2'	58:32:58:A:H5'	2.34	0.57
59:33:79:ALA:O	59:33:82:PHE:CE1	2.57	0.57
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.57
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.86	0.57
11:K:55:MET:HG2	53:27:2392:A:C2	2.38	0.57
16:P:80:ASN:HB2	53:27:1151:A:O2'	2.04	0.57
19:S:70:HIS:O	19:S:72:GLN:N	2.37	0.57
30:4:25:HIS:HB3	30:4:43:LEU:HD22	1.85	0.57
37:11:102:TRP:CH2	37:11:140:VAL:HG21	2.39	0.57
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.34	0.57
42:16:29:LYS:HE2	42:16:58:ASN:ND2	2.19	0.57
42:16:87:LYS:HE3	52:26:526:C:OP2	2.04	0.57
53:27:1188:U:O2'	53:27:1189:A:H5'	2.04	0.57
53:27:1537:G:N1	53:27:1538:G:H1'	2.19	0.57
53:27:2195:U:H2'	53:27:2196:C:C6	2.39	0.57
53:27:2446:G:H2'	53:27:2447:G:H5''	1.85	0.57
56:30:12:U:H2'	56:30:13:C:O4'	2.04	0.57
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.57
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.57
59:33:267:ASN:HD22	59:33:267:ASN:N	2.02	0.57
6:F:3:VAL:HA	6:F:39:ALA:N	2.19	0.57
19:S:5:GLU:HA	19:S:8:LEU:HD12	1.86	0.57
33:7:86:LEU:O	33:7:90:VAL:HG23	2.04	0.57
35:9:46:GLY:HA3	35:9:69:ASN:O	2.03	0.57
39:13:56:MET:O	39:13:59:LYS:HG2	2.04	0.57
41:15:12:ARG:O	41:15:14:GLN:N	2.37	0.57
43:17:109:LYS:HE3	52:26:1227:A:OP2	2.03	0.57
52:26:265:G:H2'	52:26:267:C:H5	1.69	0.57
52:26:579:A:H2'	52:26:580:C:H6	1.69	0.57
53:27:1144:A:H2'	53:27:1145:C:C6	2.39	0.57
53:27:1821:A:H2'	53:27:1822:C:H6	1.67	0.57
54:28:53:A:H2'	54:28:54:G:H5'	1.86	0.57
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:64:VAL:HB	1:A:66:PHE:HE1	1.69	0.57
1:A:94:LEU:HD21	53:27:1501:G:H4'	1.85	0.57
1:A:107:LYS:O	1:A:109:LEU:N	2.38	0.57
2:B:62:LYS:HB2	2:B:63:PRO:HD3	1.85	0.57
14:N:52:SER:OG	14:N:54:VAL:HG12	2.04	0.57
14:N:98:GLN:O	14:N:100:HIS:N	2.37	0.57
35:9:154:ALA:HB1	38:12:65:PHE:CE2	2.39	0.57
36:10:18:VAL:H	36:10:19:PRO:CD	2.17	0.57
37:11:78:ARG:HD3	52:26:1382:C:H1'	1.85	0.57
39:13:12:LYS:O	39:13:14:SER:N	2.35	0.57
40:14:59:LYS:HE2	40:14:62:ARG:NH2	2.19	0.57
42:16:41:PRO:HG3	42:16:49:ARG:HG2	1.84	0.57
52:26:460:A:H2'	52:26:461:A:C8	2.39	0.57
52:26:741:G:H2'	52:26:742:G:C8	2.39	0.57
52:26:865:A:H2	52:26:918:A:H4'	1.70	0.57
53:27:371:A:H5''	53:27:423:A:C2	2.40	0.57
53:27:721:A:H2'	53:27:722:A:H8	1.70	0.57
53:27:975:A:H1'	53:27:990:A:C6	2.39	0.57
53:27:1316:U:H2'	53:27:1317:G:H8	1.70	0.57
53:27:1564:C:H2'	53:27:1565:C:O4'	2.05	0.57
53:27:2405:G:H2'	53:27:2411:A:H62	1.68	0.57
53:27:2760:C:O2'	53:27:2761:A:H5'	2.03	0.57
59:33:657:TRP:O	59:33:659:GLU:N	2.37	0.57
3:C:23:PHE:HD1	3:C:111:GLU:HB2	1.70	0.57
19:S:70:HIS:C	19:S:72:GLN:H	2.12	0.57
20:T:98:ASN:O	20:T:100:GLU:HG2	2.05	0.57
35:9:14:LEU:HD12	35:9:14:LEU:C	2.29	0.57
39:13:112:ARG:NH1	39:13:114:LYS:HA	2.19	0.57
52:26:1359:C:H4'	52:26:1362:A:N6	2.19	0.57
53:27:1028:A:H2'	53:27:1029:A:C8	2.39	0.57
53:27:1403:A:H2'	53:27:1404:C:H6	1.66	0.57
53:27:2134:A:C5	53:27:2157:G:H4'	2.39	0.57
58:32:9:G:H2'	58:32:11:A:N7	2.20	0.57
58:32:34:C:H2'	58:32:35:A:C8	2.40	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:504:ASN:CB	59:33:547:GLY:HA3	2.34	0.57
4:D:87:LYS:HD3	53:27:2313:C:H5''	1.85	0.57
11:K:28:GLY:O	11:K:29:LYS:HB3	2.05	0.57
20:T:67:SER:HB2	53:27:335:C:O2	2.04	0.57
23:W:70:LEU:HB3	23:W:75:GLU:HB2	1.85	0.57
46:20:3:THR:HG22	46:20:22:ALA:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:6:LEU:HB3	46:20:17:TYR:HD1	1.69	0.57
48:22:37:LYS:NZ	51:25:22:CYS:O	2.38	0.57
49:23:9:PHE:CD2	52:26:1318:A:H4'	2.40	0.57
52:26:357:G:O2'	52:26:358:U:H5'	2.04	0.57
52:26:406:G:H2'	52:26:407:U:C6	2.40	0.57
52:26:1028:C:C3'	52:26:1029:U:H4'	2.35	0.57
53:27:140:C:H3'	53:27:140:C:OP2	2.04	0.57
53:27:366:C:H2'	53:27:367:G:O4'	2.02	0.57
53:27:723:C:H2'	53:27:724:U:O4'	2.03	0.57
53:27:2093:G:O2'	53:27:2094:A:H5'	2.04	0.57
54:28:111:U:H2'	54:28:112:G:C8	2.38	0.57
2:B:5:VAL:N	2:B:32:ASN:HD21	1.88	0.57
3:C:149:ILE:HD12	3:C:170:ARG:O	2.05	0.57
4:D:90:LEU:HD12	4:D:90:LEU:O	2.04	0.57
9:I:42:ALA:O	16:P:63:ARG:HG3	2.05	0.57
11:K:115:GLU:HG3	11:K:116:VAL:H	1.69	0.57
12:L:28:PHE:N	12:L:104:GLU:OE1	2.36	0.57
17:Q:52:PRO:O	17:Q:53:PHE:HB2	2.05	0.57
18:R:59:GLU:HA	18:R:64:ALA:HA	1.86	0.57
19:S:15:HIS:HE1	53:27:1339:G:OP2	1.87	0.57
32:6:51:GLU:O	32:6:55:GLU:HG2	2.05	0.57
36:10:8:PHE:HE2	36:10:62:MET:HE2	1.69	0.57
50:24:9:ARG:HG2	52:26:108:G:H1	1.68	0.57
52:26:88:U:C2	52:26:89:U:H1'	2.39	0.57
52:26:106:C:C2	52:26:107:G:C8	2.92	0.57
52:26:569:C:H5'	52:26:574:A:N6	2.19	0.57
53:27:138:U:H2'	53:27:139:U:H5''	1.84	0.57
53:27:445:C:O2'	53:27:446:G:H5'	2.04	0.57
53:27:1024:G:H21	53:27:1144:A:H5'	1.70	0.57
53:27:1149:G:H2'	53:27:1150:C:C6	2.40	0.57
53:27:1336:A:H2'	53:27:1337:G:H8	1.68	0.57
53:27:1432:G:H2'	53:27:1433:A:C8	2.39	0.57
58:32:17:C:H3'	58:32:17(A):U:C6	2.40	0.57
58:32:34:C:H2'	58:32:35:A:N7	2.19	0.57
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.57
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.57
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.57
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.57
1:A:180:MET:CB	1:A:268:ARG:HB3	2.32	0.57
10:J:23:LYS:HG2	10:J:24:VAL:O	2.04	0.57
10:J:88:ASN:O	10:J:90:ASN:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:11:ALA:O	14:N:15:ARG:HG2	2.05	0.57
15:O:4:ILE:O	15:O:8:GLU:HG3	2.05	0.57
33:7:76:ILE:HA	33:7:83:VAL:CG2	2.34	0.57
43:17:28:ARG:HH21	43:17:62:PHE:HB2	1.69	0.57
52:26:336:A:H2'	52:26:337:G:H8	1.70	0.57
52:26:1207:G:H2'	52:26:1208:C:O4'	2.05	0.57
52:26:1418:A:H3'	52:26:1419:G:H5''	1.87	0.57
53:27:65:U:H2'	53:27:66:C:C6	2.40	0.57
53:27:297:G:H2'	53:27:298:G:O4'	2.05	0.57
53:27:754:U:H2'	53:27:755:U:C6	2.39	0.57
53:27:1354:A:H2'	53:27:1355:G:O4'	2.05	0.57
53:27:1529:G:H2'	53:27:1530:G:O4'	2.05	0.57
53:27:2074:U:H2'	53:27:2075:U:C6	2.39	0.57
53:27:2149:U:H2'	53:27:2150:C:H6	1.69	0.57
56:30:71:G:H2'	56:30:72:C:C6	2.40	0.57
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.57
4:D:40:GLY:HA2	4:D:84:ILE:HD11	1.86	0.57
34:8:149:LYS:C	34:8:150:LYS:HG2	2.29	0.57
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.35	0.57
42:16:106:VAL:O	42:16:118:VAL:HG21	2.05	0.57
46:20:17:TYR:HB2	46:20:39:PHE:HB3	1.84	0.57
50:24:4:LYS:C	50:24:6:ALA:N	2.62	0.57
52:26:142:G:H2'	52:26:143:A:O4'	2.04	0.57
52:26:338:A:H2'	52:26:339:C:O4'	2.05	0.57
52:26:1097:C:H2'	52:26:1098:C:C6	2.40	0.57
52:26:1218:C:H2'	52:26:1219:A:H8	1.69	0.57
52:26:1401:G:C2	52:26:1402:C:H1'	2.40	0.57
53:27:175:G:H2'	53:27:176:A:O4'	2.04	0.57
53:27:383:C:H2'	53:27:383:C:O2	2.04	0.57
53:27:1115:G:H2'	53:27:1116:G:H8	1.70	0.57
53:27:1960:A:O2'	53:27:1961:C:H5'	2.04	0.57
53:27:2061:G:OP1	53:27:2061:G:H4'	2.04	0.57
53:27:2131:U:H5'	53:27:2132:U:C5'	2.34	0.57
53:27:2704:C:H2'	53:27:2705:A:O4'	2.04	0.57
53:27:2730:C:O2'	53:27:2731:G:H5'	2.04	0.57
3:C:60:TRP:HZ2	3:C:63:LYS:HA	1.70	0.57
10:J:103:VAL:HG12	10:J:104:THR:N	2.15	0.57
22:V:48:GLY:H	22:V:58:LYS:HG3	1.70	0.57
23:W:26:ARG:NH1	53:27:2232:C:OP1	2.38	0.57
37:11:117:LEU:HD23	37:11:121:ASN:HD21	1.69	0.57
42:16:26:CYS:SG	42:16:29:LYS:HD3	2.45	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.40	0.57
52:26:540:G:H2'	52:26:541:G:C8	2.40	0.57
52:26:677:U:H2'	52:26:678:U:C6	2.40	0.57
52:26:708:C:H2'	52:26:709:U:H6	1.68	0.57
52:26:1342:C:H2'	52:26:1343:G:C8	2.39	0.57
53:27:390:U:H4'	53:27:391:A:H5'	1.85	0.57
53:27:657:U:H2'	53:27:658:U:H6	1.68	0.57
53:27:2087:G:H2'	53:27:2088:A:H8	1.69	0.57
53:27:2097:A:H2'	53:27:2098:U:O4'	2.05	0.57
53:27:2586:U:H2'	53:27:2587:A:H8	1.70	0.57
54:28:40:U:H1'	54:28:43:C:C5	2.40	0.57
59:33:621:ILE:HA	59:33:636:ALA:N	2.19	0.57
2:B:108:ASP:CG	2:B:206:ALA:HA	2.29	0.56
11:K:33:ARG:HG2	11:K:40:SER:HA	1.86	0.56
17:Q:57:GLY:HA2	17:Q:103:ALA:C	2.29	0.56
23:W:37:PHE:CE2	23:W:58:ILE:HD13	2.40	0.56
31:5:4:ARG:HB3	53:27:2466:C:OP1	2.05	0.56
32:6:91:VAL:HG21	32:6:95:TRP:CD1	2.40	0.56
40:14:88:MET:O	40:14:89:ARG:HB3	2.04	0.56
50:24:2:ASN:HB3	52:26:332:G:OP2	2.05	0.56
50:24:3:ILE:O	50:24:4:LYS:HG2	2.04	0.56
52:26:632:U:H3'	52:26:633:G:C5'	2.34	0.56
52:26:908:A:H2'	52:26:909:A:H8	1.70	0.56
52:26:1305:G:N2	52:26:1331:G:H2'	2.19	0.56
53:27:572:A:C2	53:27:2033:A:C2	2.93	0.56
53:27:815:C:H2'	53:27:816:C:C6	2.39	0.56
53:27:1785:A:OP2	53:27:1982:U:H5'	2.05	0.56
53:27:1924:C:H2'	53:27:1925:C:C6	2.40	0.56
53:27:1936:A:H2	53:27:1943:U:N3	1.91	0.56
53:27:2124:G:H3'	53:27:2125:G:H5''	1.87	0.56
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.56
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.34	0.56
7:G:44:ALA:HB2	7:G:52:MET:HB2	1.86	0.56
8:H:14:ALA:HB2	8:H:52:LEU:N	2.19	0.56
20:T:50:ALA:O	20:T:51:LEU:HB2	2.06	0.56
24:X:41:HIS:NE2	53:27:96:C:H4'	2.20	0.56
33:7:18:ASN:HD22	33:7:53:ARG:NH2	2.03	0.56
33:7:161:ILE:HG21	55:29:23:A:C2	2.40	0.56
52:26:1161:C:H2'	52:26:1162:C:H6	1.71	0.56
53:27:52:A:O2'	53:27:53:A:H5'	2.05	0.56
53:27:118:A:OP2	53:27:119:A:H5''	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:312:G:H2'	53:27:313:G:H8	1.70	0.56
53:27:545:U:C2	53:27:546:U:H1'	2.40	0.56
53:27:1842:G:H2'	53:27:1843:C:C6	2.40	0.56
53:27:1908:C:H2'	53:27:1909:C:C6	2.40	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:406:VAL:O	59:33:418:LEU:N	2.38	0.56
1:A:170:TYR:HE1	1:A:184:GLU:HG2	1.71	0.56
3:C:58:LYS:HD3	3:C:70:SER:HB3	1.86	0.56
4:D:43:ILE:HG21	4:D:78:ILE:CG2	2.34	0.56
4:D:114:ARG:HE	43:17:70:ARG:NH2	2.00	0.56
6:F:56:ALA:O	6:F:60:GLU:HG2	2.05	0.56
8:H:20:SER:O	8:H:25:PRO:HD2	2.04	0.56
9:I:98:GLU:CD	9:I:98:GLU:H	2.13	0.56
11:K:85:VAL:HG12	11:K:94:THR:HG22	1.87	0.56
13:M:90:ARG:HH21	53:27:2881:U:H5'	1.69	0.56
15:O:27:VAL:HG12	15:O:29:VAL:HG23	1.86	0.56
15:O:90:ALA:HB2	15:O:112:ARG:CA	2.34	0.56
17:Q:1:MET:H2	17:Q:43:ASN:ND2	2.02	0.56
19:S:89:GLU:H	19:S:89:GLU:CD	2.14	0.56
23:W:20:ALA:O	23:W:21:LEU:HB2	2.04	0.56
23:W:22:ASN:ND2	53:27:2079:U:O2'	2.38	0.56
23:W:37:PHE:HE2	23:W:58:ILE:HD13	1.70	0.56
27:1:12:ARG:NH2	53:27:517:C:OP1	2.38	0.56
29:3:24:THR:CG2	29:3:27:GLY:H	2.17	0.56
32:6:20:ARG:HA	32:6:38:HIS:HE1	1.71	0.56
33:7:130:ARG:HD3	35:9:54:GLU:OE1	2.06	0.56
39:13:89:TYR:HB3	39:13:93:LEU:HD21	1.86	0.56
43:17:6:ILE:HD12	43:17:7:ASN:N	2.20	0.56
43:17:113:LYS:HB2	43:17:114:PRO:CD	2.35	0.56
46:20:43:ALA:HB1	46:20:46:LYS:HD2	1.87	0.56
52:26:193:C:H2'	52:26:194:C:H6	1.70	0.56
52:26:359:G:H4'	59:33:451:PHE:CE2	2.41	0.56
52:26:606:G:H5''	52:26:607:A:H5'	1.85	0.56
52:26:709:U:H2'	52:26:710:G:C8	2.39	0.56
52:26:731:G:H5'	52:26:766:A:H4'	1.87	0.56
52:26:923:A:H2'	52:26:924:C:H6	1.69	0.56
52:26:1399:C:H1'	52:26:1400:C:OP2	2.06	0.56
53:27:1785:A:O2'	53:27:1786:A:H2'	2.05	0.56
53:27:1878:G:H2'	53:27:1879:C:O4'	2.05	0.56
53:27:2768:U:H2'	53:27:2769:U:O4'	2.05	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.35	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.56
18:R:57:ASN:OD1	53:27:495:G:H1'	2.05	0.56
19:S:12:ARG:HB2	19:S:33:LYS:O	2.05	0.56
34:8:53:GLN:HE22	34:8:201:GLU:HB2	1.70	0.56
36:10:73:GLU:O	36:10:77:THR:HG23	2.04	0.56
44:18:45:LEU:HD21	49:23:12:LEU:HD22	1.88	0.56
48:22:28:LEU:HD23	48:22:58:ILE:HD13	1.86	0.56
52:26:295:C:H2'	52:26:296:U:C6	2.41	0.56
52:26:358:U:H2'	52:26:359:G:O4'	2.05	0.56
53:27:195:A:H2'	53:27:198:C:N4	2.20	0.56
53:27:600:G:H2'	53:27:601:C:C6	2.41	0.56
53:27:1912:A:N7	53:27:1917:U:O4	2.38	0.56
53:27:2897:U:H2'	53:27:2898:U:C6	2.41	0.56
54:28:5:U:H2'	54:28:6:G:H8	1.69	0.56
54:28:111:U:H2'	54:28:112:G:H8	1.71	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.56
59:33:731:GLN:HG3	59:33:732:VAL:H	1.69	0.56
1:A:205:GLY:O	53:27:1791:A:H1'	2.06	0.56
8:H:12:VAL:HG23	8:H:56:VAL:HG11	1.86	0.56
13:M:53:THR:OG1	53:27:2840:C:H5''	2.05	0.56
13:M:63:ARG:HG2	53:27:1454:C:O4'	2.05	0.56
33:7:5:HIS:CE1	33:7:7:ASN:HB3	2.40	0.56
34:8:150:LYS:HA	34:8:154:VAL:HG11	1.87	0.56
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.20	0.56
41:15:41:LEU:HD13	41:15:78:ILE:HD11	1.88	0.56
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.56
47:21:6:THR:C	47:21:7:LEU:HD12	2.31	0.56
52:26:202:G:H2'	52:26:203:G:H8	1.70	0.56
52:26:458:U:H2'	52:26:459:A:H8	1.70	0.56
52:26:977:A:H1'	52:26:1223:C:N3	2.20	0.56
53:27:539:G:O2'	53:27:540:C:H5'	2.05	0.56
53:27:755:U:H2'	53:27:756:A:C8	2.41	0.56
53:27:1198:U:H2'	53:27:1199:U:C6	2.40	0.56
53:27:1509:A:H2'	53:27:1510:G:H8	1.69	0.56
53:27:2036:C:H2'	53:27:2037:A:C8	2.41	0.56
53:27:2507:C:H2'	53:27:2508:G:C8	2.41	0.56
53:27:2784:U:H2'	53:27:2785:C:H6	1.70	0.56
2:B:152:PRO:O	2:B:154:LYS:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:143:LEU:HB3	3:C:146:VAL:CG1	2.32	0.56
4:D:68:LYS:HA	4:D:82:TYR:O	2.06	0.56
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.41	0.56
17:Q:83:TYR:OH	17:Q:85:LYS:HE2	2.05	0.56
30:4:33:THR:HG23	30:4:34:LYS:N	2.21	0.56
33:7:8:GLY:HA3	44:18:88:MET:HE3	1.87	0.56
33:7:87:ARG:HB3	33:7:100:ILE:HG21	1.88	0.56
39:13:109:GLN:NE2	52:26:1117:A:H5'	2.21	0.56
45:19:23:SER:HB3	45:19:26:VAL:HG23	1.88	0.56
50:24:27:MET:SD	50:24:66:ILE:HG13	2.46	0.56
52:26:224:U:H2'	52:26:225:C:C6	2.41	0.56
53:27:151:C:H2'	53:27:152:A:C8	2.40	0.56
53:27:1464:G:H2'	53:27:1465:G:C8	2.39	0.56
53:27:2108:A:H3'	53:27:2109:U:H6	1.70	0.56
53:27:2580:U:H2'	53:27:2581:G:H5'	1.86	0.56
53:27:2678:C:H2'	53:27:2679:A:O4'	2.05	0.56
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.56
59:33:432:HIS:HD2	59:33:434:ASP:HB3	1.71	0.56
59:33:690:GLU:O	59:33:691:LYS:HB2	2.05	0.56
17:Q:32:THR:HG23	17:Q:32:THR:O	2.06	0.56
19:S:44:LYS:HG3	19:S:55:VAL:HG11	1.87	0.56
24:X:56:LEU:O	24:X:60:LYS:HG2	2.06	0.56
32:6:26:MET:HG3	32:6:192:PRO:HD3	1.87	0.56
32:6:107:ARG:HG3	32:6:108:GLN:N	2.20	0.56
33:7:93:ILE:HG22	33:7:93:ILE:O	2.04	0.56
38:12:120:LEU:HD12	38:12:120:LEU:O	2.06	0.56
40:14:50:THR:HG21	52:26:1367:C:H4'	1.87	0.56
41:15:111:ASP:OD1	41:15:113:THR:HG23	2.05	0.56
52:26:45:G:H2'	52:26:46:G:C8	2.41	0.56
52:26:297:G:H4'	52:26:557:G:H4'	1.88	0.56
52:26:449:G:H2'	52:26:450:G:C8	2.41	0.56
52:26:1488:G:H2'	52:26:1489:G:H8	1.71	0.56
53:27:329:G:O4'	53:27:477:A:H1'	2.05	0.56
53:27:692:C:H2'	53:27:693:A:H8	1.70	0.56
53:27:1071:G:H1'	53:27:1089:A:C5	2.40	0.56
53:27:1889:A:H1'	53:27:2086:U:O2'	2.06	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
1:A:207:ALA:CB	53:27:1790:C:H4'	2.36	0.56
2:B:101:PHE:HD1	2:B:104:VAL:HG21	1.71	0.56
14:N:40:ILE:HG22	14:N:41:ALA:O	2.06	0.56
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:34:VAL:HG12	22:V:36:GLN:H	1.69	0.56
30:4:31:ILE:O	30:4:31:ILE:HG22	2.05	0.56
33:7:30:ASP:HA	44:18:64:ARG:HH12	1.70	0.56
36:10:23:GLU:O	36:10:27:ALA:HB2	2.06	0.56
41:15:120:CYS:HB2	52:26:778:G:H1'	1.87	0.56
43:17:104:ASN:HB3	52:26:948:C:OP2	2.06	0.56
45:19:5:GLU:O	45:19:8:ALA:HB3	2.05	0.56
52:26:231:U:H2'	52:26:232:G:H8	1.71	0.56
52:26:339:C:H2'	52:26:340:U:C6	2.41	0.56
52:26:634:C:H2'	52:26:635:A:H8	1.70	0.56
52:26:744:C:H2'	52:26:745:G:C8	2.40	0.56
52:26:1324:A:H2'	52:26:1325:C:C6	2.40	0.56
53:27:404:A:H1'	53:27:406:G:C4	2.41	0.56
53:27:1138:G:H2'	53:27:1139:G:O4'	2.06	0.56
53:27:2162:G:H4'	53:27:2171:A:H5'	1.88	0.56
53:27:2839:G:H2'	53:27:2840:C:H6	1.69	0.56
58:32:10:G:H2'	58:32:11:A:O4'	2.06	0.56
59:33:409:PHE:HA	59:33:415:VAL:HG22	1.88	0.56
10:J:7:MET:HE3	10:J:18:ARG:HB3	1.88	0.56
12:L:40:ARG:HG2	12:L:95:LEU:HD23	1.88	0.56
24:X:49:ASP:O	24:X:53:VAL:HG23	2.06	0.56
35:9:28:ARG:NH1	52:26:15:G:H4'	2.21	0.56
40:14:91:ASP:O	40:14:92:LEU:HB2	2.06	0.56
41:15:126:ARG:NH2	52:26:692:U:O3'	2.38	0.56
52:26:71:A:H61	52:26:99:C:H1'	1.71	0.56
53:27:443:A:H5''	53:27:444:C:C5'	2.35	0.56
53:27:942:G:H2'	53:27:943:A:O4'	2.06	0.56
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.56
56:30:20:U:H5''	59:33:724:ARG:NH1	2.21	0.56
59:33:62:MET:HE2	59:33:79:ALA:HA	1.85	0.56
1:A:12:ARG:HA	1:A:15:VAL:HG23	1.87	0.56
4:D:114:ARG:HA	26:Z:47:LYS:HD3	1.88	0.56
8:H:100:ILE:HG12	8:H:138:VAL:O	2.05	0.56
24:X:41:HIS:CD2	53:27:96:C:H4'	2.41	0.56
27:1:13:GLY:HA3	53:27:16:C:H5'	1.88	0.56
39:13:74:GLN:O	39:13:78:ILE:HG12	2.06	0.56
40:14:62:ARG:NH1	52:26:1367:C:H5'	2.17	0.56
50:24:66:ILE:HD12	50:24:70:LYS:HD3	1.87	0.56
52:26:130:A:O2'	52:26:264:C:H5'	2.04	0.56
52:26:401:C:O2'	52:26:402:G:H5'	2.06	0.56
52:26:409:U:H2'	52:26:410:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:725:G:O2'	52:26:726:C:H5'	2.06	0.56
52:26:1009:U:H2'	52:26:1010:U:C6	2.41	0.56
52:26:1123:U:O2'	52:26:1124:G:H5'	2.06	0.56
53:27:27:G:N2	53:27:512:G:H1'	2.20	0.56
53:27:197:A:H4'	53:27:2069:G:OP2	2.06	0.56
53:27:364:C:H2'	53:27:365:U:C6	2.41	0.56
53:27:689:A:H2'	53:27:690:G:C8	2.41	0.56
53:27:2616:C:H2'	53:27:2617:U:H6	1.70	0.56
59:33:113:MET:SD	59:33:142:MET:HE1	2.46	0.56
3:C:176:ASP:OD1	3:C:179:SER:HB2	2.05	0.55
29:3:34:ARG:CZ	29:3:39:ARG:HD2	2.35	0.55
35:9:104:ILE:HG23	35:9:104:ILE:O	2.06	0.55
52:26:109:A:H2'	52:26:326:G:N2	2.21	0.55
52:26:750:C:O2'	52:26:751:U:H5'	2.06	0.55
52:26:1033:G:H2'	52:26:1034:G:H5''	1.88	0.55
52:26:1534:A:H8	52:26:1534:A:O5'	1.88	0.55
53:27:1170:C:H2'	53:27:1171:G:C8	2.41	0.55
53:27:1515:A:H2'	53:27:1516:G:O4'	2.06	0.55
53:27:1656:C:H2'	53:27:1657:U:H6	1.70	0.55
53:27:2394:C:H2'	53:27:2395:C:H6	1.71	0.55
54:28:6:G:H2'	54:28:7:G:C8	2.39	0.55
58:32:7:G:H3'	58:32:8:U:H5'	1.87	0.55
58:32:27:U:O2'	58:32:28:C:H5'	2.06	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
4:D:28:PRO:HG2	4:D:164:GLU:HG2	1.88	0.55
6:F:104:THR:HA	6:F:108:VAL:O	2.05	0.55
7:G:35:VAL:CG2	53:27:1057:A:H4'	2.37	0.55
7:G:108:VAL:HG12	7:G:109:LYS:HG2	1.88	0.55
11:K:52:GLY:O	53:27:826:U:H1'	2.07	0.55
11:K:68:SER:HB2	53:27:632:A:O3'	2.05	0.55
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.87	0.55
13:M:116:VAL:HG21	53:27:2881:U:H4'	1.87	0.55
18:R:88:ARG:HB2	18:R:92:ARG:O	2.05	0.55
32:6:76:SER:OG	32:6:92:ASN:HB2	2.06	0.55
33:7:59:PRO:HB3	40:14:94:ALA:HB1	1.88	0.55
33:7:69:THR:C	33:7:105:VAL:HG12	2.31	0.55
36:10:2:ARG:HD2	36:10:68:GLN:NE2	2.21	0.55
37:11:67:ASN:ND2	37:11:126:ALA:O	2.40	0.55
37:11:129:ASN:C	37:11:134:VAL:HG21	2.31	0.55
42:16:51:VAL:HG22	42:16:52:CYS:H	1.70	0.55
44:18:45:LEU:HD11	49:23:12:LEU:HD13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:561:U:O2	52:26:561:U:H2'	2.05	0.55
52:26:773:G:H3'	52:26:774:G:H5''	1.88	0.55
52:26:880:C:O2'	52:26:881:G:H5'	2.06	0.55
52:26:922:G:H2'	52:26:923:A:C8	2.41	0.55
52:26:974:A:H4'	52:26:975:A:O5'	2.06	0.55
52:26:1079:G:H2'	52:26:1080:A:C8	2.40	0.55
52:26:1327:C:H2'	52:26:1328:C:H6	1.70	0.55
53:27:161:A:H3'	53:27:162:U:H5''	1.87	0.55
53:27:848:C:H2'	53:27:849:A:C8	2.37	0.55
53:27:968:C:H2'	53:27:969:G:C8	2.41	0.55
53:27:1220:G:H2'	53:27:1221:C:C6	2.42	0.55
53:27:1525:A:H2'	53:27:1526:C:O4'	2.06	0.55
53:27:1607:C:H5''	53:27:1608:A:H5'	1.88	0.55
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.68	0.55
2:B:11:MET:HG2	2:B:25:THR:HA	1.87	0.55
14:N:33:ARG:HB2	54:28:52:A:N6	2.22	0.55
14:N:38:GLN:HB3	14:N:47:VAL:CG1	2.35	0.55
14:N:56:LYS:O	14:N:60:GLU:HG3	2.06	0.55
19:S:33:LYS:HG2	19:S:80:TRP:CZ3	2.40	0.55
21:U:27:PRO:HA	21:U:41:GLU:HA	1.88	0.55
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.42	0.55
33:7:122:GLN:HB3	33:7:127:VAL:CG1	2.34	0.55
34:8:80:ARG:HE	52:26:613:C:P	2.30	0.55
42:16:49:ARG:NH1	52:26:523:A:H61	2.04	0.55
52:26:3:A:N3	52:26:613:C:H1'	2.22	0.55
52:26:901:A:C5	52:26:902:G:H1'	2.41	0.55
52:26:1074:G:H2'	52:26:1075:U:C6	2.41	0.55
52:26:1305:G:O2'	52:26:1306:A:H8	1.89	0.55
52:26:1516:G:H2'	52:26:1518:A:OP2	2.05	0.55
53:27:296:U:H2'	53:27:297:G:H8	1.70	0.55
53:27:1056:G:H5''	53:27:1057:A:O4'	2.06	0.55
53:27:1061:U:C4'	53:27:1070:A:H1'	2.35	0.55
53:27:1321:A:H2'	53:27:1321:A:N3	2.20	0.55
53:27:1979:U:O2'	53:27:1980:G:H5'	2.06	0.55
53:27:2475:C:H42	53:27:2529:G:H22	1.53	0.55
56:30:2:C:H2'	56:30:3:C:H6	1.69	0.55
56:30:59:U:H2'	56:30:60:U:C2	2.41	0.55
57:31:69:C:H2'	57:31:70:G:H8	1.71	0.55
12:L:9:PHE:CZ	53:27:911:A:H2'	2.42	0.55
19:S:15:HIS:CD2	19:S:16:VAL:H	2.25	0.55
31:5:36:ARG:HG2	31:5:37:GLN:H	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:156:LEU:HD12	33:7:156:LEU:O	2.07	0.55
33:7:205:GLU:HG3	33:7:206:ILE:N	2.21	0.55
37:11:69:ARG:CG	37:11:95:ARG:HG2	2.29	0.55
41:15:51:PHE:CE2	41:15:64:VAL:HG11	2.42	0.55
45:19:13:GLU:HG2	45:19:83:ARG:NH2	2.21	0.55
45:19:38:LEU:HD23	45:19:55:LEU:HD13	1.88	0.55
47:21:44:HIS:O	47:21:70:LYS:HG3	2.06	0.55
52:26:631:C:H5''	52:26:632:U:H5'	1.88	0.55
52:26:781:A:OP1	52:26:1523:G:H5'	2.07	0.55
52:26:1121:U:H2'	52:26:1122:U:C6	2.41	0.55
52:26:1318:A:C2'	52:26:1319:A:H5'	2.37	0.55
53:27:16:C:O2'	53:27:17:G:H5'	2.07	0.55
53:27:127:A:H5''	53:27:128:C:O4'	2.07	0.55
53:27:163:C:H2'	53:27:164:C:O4'	2.06	0.55
53:27:742:A:H2'	53:27:743:A:H8	1.68	0.55
53:27:1242:U:H2'	53:27:1243:C:C6	2.41	0.55
53:27:1475:G:O2'	53:27:1476:U:H6	1.88	0.55
53:27:1570:A:H2'	53:27:1571:A:C8	2.41	0.55
53:27:1591:A:H2'	53:27:1592:C:C6	2.41	0.55
53:27:2328:A:H2'	53:27:2329:U:H6	1.72	0.55
53:27:2689:U:O2	53:27:2713:U:H5''	2.06	0.55
54:28:106:G:H2'	54:28:107:G:O4'	2.06	0.55
59:33:714:ILE:HD12	59:33:716:ILE:HB	1.87	0.55
3:C:7:ASP:O	3:C:9:GLN:HG3	2.06	0.55
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.71	0.55
4:D:91:ARG:HA	4:D:95:MET:SD	2.47	0.55
5:E:29:ASN:HB2	5:E:78:VAL:HA	1.88	0.55
7:G:50:VAL:CG1	53:27:1082:U:H5''	2.37	0.55
7:G:94:ARG:O	7:G:98:GLU:HG2	2.07	0.55
8:H:123:ALA:HB1	53:27:1081:U:H5''	1.88	0.55
16:P:51:GLN:O	16:P:55:GLN:HG3	2.07	0.55
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.72	0.55
31:5:11:CYS:HB3	31:5:33:HIS:CE1	2.41	0.55
33:7:55:VAL:HB	33:7:66:THR:HB	1.88	0.55
35:9:98:ALA:O	35:9:100:GLU:N	2.39	0.55
37:11:119:LEU:HA	37:11:122:GLU:HG2	1.89	0.55
40:14:57:VAL:HG22	40:14:58:ASN:N	2.18	0.55
41:15:28:ASN:HD21	41:15:56:LYS:HE3	1.71	0.55
49:23:41:PRO:O	49:23:44:ILE:HG13	2.07	0.55
52:26:844:G:N3	52:26:844:G:H2'	2.21	0.55
52:26:947:G:H2'	52:26:948:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1967:C:H2'	53:27:1968:G:H5'	1.87	0.55
53:27:2121:G:N2	53:27:2177:C:O2	2.39	0.55
53:27:2789:C:H3'	53:27:2893:A:N6	2.21	0.55
54:28:28:C:H2'	54:28:29:A:C8	2.42	0.55
59:33:587:PRO:O	59:33:591:SER:N	2.37	0.55
59:33:679:LEU:HD12	59:33:682:ASP:HB2	1.88	0.55
12:L:61:GLY:HA3	12:L:108:VAL:HG13	1.88	0.55
16:P:2:ARG:HB2	53:27:1248:G:N7	2.22	0.55
36:10:9:MET:HG2	36:10:59:TYR:HD1	1.70	0.55
52:26:250:A:H4'	52:26:251:G:O5'	2.07	0.55
52:26:587:G:O2'	52:26:588:G:H5'	2.06	0.55
52:26:838:G:H2'	52:26:839:C:C6	2.41	0.55
52:26:855:U:H2'	52:26:856:C:C6	2.42	0.55
53:27:962:G:H2'	53:27:963:U:O4'	2.06	0.55
53:27:1124:G:H2'	53:27:1125:G:O4'	2.05	0.55
53:27:1287:A:C2'	53:27:1288:G:H5'	2.37	0.55
53:27:1967:C:C2'	53:27:1968:G:H5'	2.36	0.55
53:27:2108:A:H3'	53:27:2109:U:C6	2.42	0.55
53:27:2121:G:H2'	53:27:2122:U:O4'	2.07	0.55
53:27:2662:A:H2'	53:27:2663:G:O4'	2.07	0.55
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.89	0.55
2:B:27:ILE:HD11	2:B:193:VAL:HG11	1.89	0.55
4:D:7:TYR:HB2	4:D:172:PHE:CZ	2.42	0.55
5:E:51:PHE:HE1	5:E:71:LEU:HD12	1.71	0.55
7:G:58:THR:HG23	7:G:82:ILE:HG12	1.89	0.55
17:Q:68:ARG:NH1	17:Q:90:ARG:HB2	2.22	0.55
21:U:82:TYR:O	21:U:84:PRO:HD3	2.06	0.55
22:V:17:LEU:HD21	22:V:37:ARG:HH21	1.72	0.55
27:1:39:ARG:C	27:1:41:HIS:H	2.14	0.55
34:8:117:VAL:HG12	34:8:130:ASN:O	2.06	0.55
34:8:143:SER:HA	34:8:177:MET:O	2.07	0.55
42:16:20:VAL:C	42:16:22:ALA:H	2.14	0.55
47:21:60:ILE:CG2	47:21:72:TRP:HB3	2.36	0.55
50:24:73:ARG:NH2	52:26:263:A:OP1	2.40	0.55
51:25:41:THR:O	51:25:45:LYS:HG2	2.07	0.55
52:26:428:G:H4'	52:26:429:U:O5'	2.07	0.55
52:26:503:C:H2'	52:26:504:C:H6	1.72	0.55
52:26:824:G:H2'	52:26:825:A:H8	1.71	0.55
52:26:877:G:H2'	52:26:878:A:H8	1.72	0.55
52:26:1258:G:H2'	52:26:1259:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2453:A:H2'	53:27:2454:G:O4'	2.07	0.55
53:27:2709:G:H2'	53:27:2710:C:C6	2.41	0.55
54:28:48:U:H2'	54:28:49:C:C6	2.42	0.55
59:33:55:LEU:HD23	59:33:55:LEU:C	2.32	0.55
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.87	0.55
59:33:679:LEU:HD13	59:33:734:ASP:HB2	1.88	0.55
2:B:186:LEU:HD13	15:O:7:LEU:HD11	1.88	0.55
5:E:104:LEU:HB2	5:E:112:VAL:HB	1.89	0.55
6:F:133:GLN:NE2	6:F:136:SER:HA	2.20	0.55
12:L:24:THR:HG23	12:L:99:GLY:O	2.07	0.55
17:Q:1:MET:H2	17:Q:43:ASN:HD22	1.55	0.55
17:Q:16:GLU:OE2	17:Q:100:GLY:HA2	2.07	0.55
18:R:3:THR:HG21	18:R:58:ALA:HA	1.89	0.55
32:6:205:ALA:HB3	32:6:208:ALA:HB2	1.88	0.55
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.88	0.55
40:14:48:ARG:HH21	44:18:100:TRP:HB3	1.71	0.55
41:15:126:ARG:HB2	51:25:33:ARG:HD2	1.88	0.55
42:16:106:VAL:HG23	42:16:116:TYR:HB3	1.88	0.55
46:20:16:PHE:CE1	52:26:625:U:H4'	2.41	0.55
52:26:288:A:H2'	52:26:289:G:H4'	1.88	0.55
52:26:313:A:H2'	52:26:314:C:C6	2.42	0.55
52:26:1142:G:C2	52:26:1143:G:H1'	2.41	0.55
53:27:501:A:H2'	53:27:502:A:C8	2.41	0.55
53:27:960:A:C8	53:27:962:G:C8	2.95	0.55
53:27:1058:U:O2'	53:27:1059:G:H5'	2.07	0.55
53:27:1173:U:H2'	53:27:1174:U:H4'	1.88	0.55
53:27:1528:A:H2'	53:27:1529:G:H5'	1.87	0.55
53:27:1545:A:H2'	53:27:1546:G:O4'	2.07	0.55
53:27:1777:U:H2'	53:27:1778:U:H6	1.70	0.55
53:27:2642:G:O2'	53:27:2643:G:H5'	2.06	0.55
53:27:2682:A:H61	53:27:2728:U:H1'	1.72	0.55
54:28:114:C:H2'	54:28:115:A:C8	2.41	0.55
58:32:30:G:H2'	58:32:31:G:O4'	2.07	0.55
1:A:253:GLY:O	53:27:1843:C:O2'	2.25	0.55
19:S:29:THR:HG23	19:S:85:VAL:O	2.06	0.55
34:8:169:TRP:HZ3	34:8:189:ASP:HB3	1.71	0.55
50:24:2:ASN:OD1	50:24:3:ILE:HG13	2.07	0.55
52:26:65:A:H5'	52:26:200:G:C5'	2.36	0.55
52:26:397:A:O2'	52:26:398:U:H3'	2.07	0.55
52:26:872:A:H3'	52:26:872:A:OP1	2.06	0.55
52:26:1328:C:H2'	52:26:1329:A:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1522:U:H2'	52:26:1523:G:C8	2.41	0.55
53:27:183:C:C2'	53:27:184:C:H5'	2.36	0.55
53:27:528:A:C8	53:27:528:A:H3'	2.42	0.55
53:27:768:G:H2'	53:27:769:U:O4'	2.07	0.55
53:27:1180:U:H2'	53:27:1181:U:O4'	2.07	0.55
53:27:1871:A:H3'	53:27:1872:A:C8	2.42	0.55
53:27:2075:U:H2'	53:27:2238:G:H22	1.72	0.55
53:27:2257:U:O2'	53:27:2258:C:H5'	2.05	0.55
53:27:2631:G:O2'	53:27:2632:A:H5'	2.07	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
59:33:368:SER:HA	59:33:409:PHE:CZ	2.42	0.55
2:B:112:THR:HG23	2:B:167:ASN:O	2.07	0.55
4:D:56:LEU:HD12	4:D:86:CYS:SG	2.47	0.55
6:F:83:LYS:HA	6:F:149:GLU:OE1	2.07	0.55
10:J:109:SER:O	10:J:111:LYS:N	2.39	0.55
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.07	0.55
34:8:77:GLU:O	34:8:81:LEU:HB2	2.07	0.55
35:9:75:LEU:HD12	35:9:75:LEU:O	2.06	0.55
42:16:98:ARG:HD2	42:16:103:CYS:SG	2.47	0.55
44:18:8:ARG:HH21	52:26:1217:C:P	2.30	0.55
47:21:11:VAL:HG11	47:21:20:ILE:HD11	1.88	0.55
52:26:320:A:H2'	52:26:321:A:C8	2.42	0.55
52:26:459:A:H2'	52:26:460:A:C8	2.41	0.55
52:26:842:U:H5''	52:26:846:G:C6	2.42	0.55
53:27:12:U:C2'	53:27:13:A:H5'	2.36	0.55
53:27:609:A:H2'	53:27:610:C:O4'	2.07	0.55
53:27:840:C:H2'	53:27:841:G:H8	1.71	0.55
53:27:962:G:O2'	53:27:963:U:H5'	2.07	0.55
53:27:983:A:C6	53:27:984:A:C2	2.94	0.55
53:27:1130:U:O2'	53:27:1131:G:OP1	2.24	0.55
53:27:1993:U:H2'	53:27:1994:C:H6	1.72	0.55
53:27:1999:C:H5''	53:27:2723:C:O2'	2.07	0.55
53:27:2256:G:H2'	53:27:2257:U:C6	2.42	0.55
53:27:2318:G:H2'	53:27:2319:G:O4'	2.06	0.55
53:27:2480:C:H2'	53:27:2481:G:O4'	2.07	0.55
53:27:2494:G:H2'	53:27:2495:G:C8	2.41	0.55
53:27:2863:C:H2'	53:27:2864:G:H8	1.72	0.55
59:33:422:SER:O	59:33:454:GLN:HA	2.07	0.55
3:C:60:TRP:O	3:C:61:ARG:HB2	2.07	0.54
3:C:105:LEU:O	3:C:109:LEU:HD13	2.07	0.54
4:D:90:LEU:HD13	4:D:95:MET:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:142:TYR:CE2	43:17:8:ILE:HG21	2.41	0.54
13:M:63:ARG:NE	13:M:80:PHE:HD2	2.05	0.54
24:X:15:ASN:O	24:X:19:LEU:HG	2.06	0.54
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.36	0.54
27:1:49:ARG:HG2	53:27:2884:U:C5	2.42	0.54
32:6:56:LEU:HG	32:6:183:PHE:CE2	2.41	0.54
34:8:12:ARG:C	34:8:15:GLY:H	2.15	0.54
35:9:22:LYS:CB	35:9:29:ILE:HG22	2.36	0.54
49:23:32:THR:C	49:23:33:TRP:HD1	2.14	0.54
50:24:22:SER:OG	50:24:23:ARG:NH1	2.39	0.54
50:24:47:GLN:O	50:24:50:PHE:HB3	2.06	0.54
52:26:613:C:H2'	52:26:614:C:C6	2.41	0.54
52:26:1026:G:H21	52:26:1027:C:N4	2.04	0.54
53:27:1109:C:H2'	53:27:1110:G:O4'	2.06	0.54
53:27:1266:G:N2	53:27:2012:G:C4	2.75	0.54
53:27:1744:A:H3'	53:27:1745:A:C8	2.42	0.54
53:27:1900:A:H1'	53:27:1970:A:H2'	1.89	0.54
53:27:2580:U:C2'	53:27:2581:G:H5'	2.37	0.54
54:28:5:U:H2'	54:28:6:G:C8	2.42	0.54
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.54
2:B:66:GLY:HA3	53:27:2786:U:O2'	2.07	0.54
3:C:23:PHE:HB2	3:C:114:ARG:HH21	1.71	0.54
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.43	0.54
10:J:77:ILE:HG12	15:O:71:ARG:HG3	1.88	0.54
15:O:2:ASN:ND2	53:27:2876:G:H5''	2.22	0.54
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.88	0.54
34:8:81:LEU:O	34:8:82:LYS:HB2	2.06	0.54
36:10:18:VAL:HG11	36:10:58:HIS:CD2	2.42	0.54
37:11:147:ASN:C	37:11:149:ALA:H	2.16	0.54
39:13:6:TYR:O	39:13:85:ALA:HA	2.07	0.54
40:14:73:LEU:HD21	40:14:75:ASP:HB2	1.89	0.54
47:21:51:GLU:OE1	47:21:51:GLU:N	2.40	0.54
48:22:72:ARG:HH22	51:25:4:LYS:HZ3	1.55	0.54
52:26:106:C:O2	52:26:379:C:H4'	2.07	0.54
53:27:547:A:H4'	53:27:548:G:C5	2.43	0.54
53:27:1520:U:H2'	53:27:1521:G:O4'	2.06	0.54
53:27:2075:U:H2'	53:27:2238:G:N2	2.22	0.54
53:27:2345:G:H21	53:27:2381:A:H3'	1.72	0.54
53:27:2588:G:C2'	53:27:2589:A:H5'	2.37	0.54
5:E:36:LEU:HD11	5:E:67:ALA:CB	2.36	0.54
8:H:93:ASN:HA	8:H:96:LYS:NZ	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:74:THR:HG21	12:L:86:LYS:HE3	1.89	0.54
17:Q:39:LEU:O	17:Q:40:MET:HB2	2.07	0.54
34:8:30:LYS:HA	52:26:413:G:O6	2.08	0.54
43:17:113:LYS:HB2	43:17:114:PRO:HD3	1.89	0.54
50:24:27:MET:HE1	50:24:66:ILE:HD11	1.88	0.54
52:26:190:A:H2'	52:26:191:G:O4'	2.06	0.54
52:26:781:A:N6	52:26:802:A:H1'	2.22	0.54
53:27:110:G:H2'	53:27:111:A:H8	1.72	0.54
53:27:803:U:H2'	53:27:804:A:O4'	2.07	0.54
53:27:938:G:H2'	53:27:939:G:C8	2.42	0.54
53:27:1036:G:H2'	53:27:1037:G:C8	2.42	0.54
53:27:1406:U:C2'	53:27:1407:G:H5''	2.38	0.54
53:27:1444:G:H2'	53:27:1445:G:H8	1.71	0.54
53:27:1880:U:H2'	53:27:1881:C:C6	2.42	0.54
59:33:407:TYR:O	59:33:458:GLY:HA2	2.07	0.54
1:A:115:ILE:HD12	1:A:116:GLN:N	2.22	0.54
3:C:58:LYS:HD3	3:C:70:SER:CB	2.36	0.54
3:C:144:GLU:H	3:C:146:VAL:HG13	1.73	0.54
5:E:3:VAL:HG23	53:27:2751:G:H4'	1.89	0.54
30:4:63:TYR:CE2	53:27:242:G:H5''	2.41	0.54
33:7:174:LEU:HD23	33:7:181:ILE:CD1	2.36	0.54
35:9:12:GLU:HB3	35:9:38:VAL:HG12	1.88	0.54
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.89	0.54
51:25:29:ALA:HA	51:25:32:ARG:HD3	1.90	0.54
51:25:65:ARG:O	51:25:66:ARG:CB	2.56	0.54
52:26:211:G:C2'	52:26:212:G:H5'	2.37	0.54
52:26:374:A:H2'	52:26:375:U:H6	1.73	0.54
52:26:684:U:H2'	52:26:685:G:O4'	2.08	0.54
53:27:215:G:C4'	53:27:216:A:H4'	2.36	0.54
53:27:1443:U:H2'	53:27:1444:G:C8	2.42	0.54
53:27:2078:C:H2'	53:27:2079:U:O4'	2.07	0.54
53:27:2487:G:H2'	53:27:2488:G:H8	1.71	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.89	0.54
59:33:666:SER:H	59:33:715:GLU:HA	1.71	0.54
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.72	0.54
4:D:104:THR:HA	26:Z:38:SER:HB3	1.90	0.54
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.90	0.54
8:H:14:ALA:HB2	8:H:52:LEU:H	1.71	0.54
8:H:33:ASN:ND2	8:H:64:ARG:HB3	2.23	0.54
46:20:20:VAL:HG22	46:20:21:VAL:O	2.07	0.54
46:20:21:VAL:HG12	46:20:33:ILE:HD13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:11:ARG:HG2	48:22:11:ARG:HH11	1.72	0.54
52:26:259:G:H2'	52:26:260:G:H8	1.73	0.54
52:26:337:G:H2'	52:26:338:A:H8	1.72	0.54
52:26:674:G:H2'	52:26:675:A:H8	1.72	0.54
52:26:1210:C:H2'	52:26:1211:U:O4'	2.07	0.54
52:26:1305:G:H1'	52:26:1332:A:N6	2.22	0.54
53:27:451:U:O4	53:27:453:A:H2'	2.08	0.54
53:27:552:U:H2'	53:27:553:G:C8	2.42	0.54
53:27:741:U:H2'	53:27:742:A:C8	2.42	0.54
53:27:1789:A:H2'	53:27:1790:C:O4'	2.07	0.54
53:27:1849:G:H2'	53:27:1850:G:C8	2.43	0.54
53:27:1849:G:H2'	53:27:1850:G:H8	1.73	0.54
53:27:2271:G:H2'	53:27:2272:U:H6	1.73	0.54
53:27:2848:G:N2	53:27:2867:G:H2'	2.21	0.54
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.54
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.54
4:D:19:PHE:HB2	4:D:21:TYR:CE2	2.43	0.54
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.34	0.54
7:G:44:ALA:HB1	7:G:51:TYR:H	1.73	0.54
18:R:29:VAL:HG11	18:R:55:ILE:CD1	2.31	0.54
32:6:82:ALA:HB3	32:6:213:LEU:HG	1.89	0.54
33:7:152:VAL:HA	33:7:196:GLY:O	2.07	0.54
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.43	0.54
36:10:15:SER:HB2	36:10:58:HIS:HB2	1.89	0.54
38:12:4:ASP:HB2	38:12:80:PRO:HG3	1.88	0.54
52:26:575:G:H4'	52:26:576:C:O5'	2.07	0.54
52:26:677:U:H2'	52:26:678:U:H6	1.72	0.54
52:26:1486:G:H2'	52:26:1487:G:O4'	2.08	0.54
53:27:795:C:H2'	53:27:796:C:C6	2.42	0.54
53:27:833:A:H2'	53:27:834:G:H8	1.70	0.54
53:27:2127:G:H1'	53:27:2173:A:N3	2.22	0.54
53:27:2391:G:H2'	53:27:2424:C:N4	2.23	0.54
53:27:2619:C:H2'	53:27:2620:C:H6	1.72	0.54
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.54
59:33:425:LEU:H	59:33:425:LEU:CD1	2.20	0.54
1:A:44:ASN:ND2	53:27:1812:U:H1'	2.22	0.54
1:A:200:MET:HE2	53:27:1820:U:N3	2.22	0.54
3:C:31:VAL:HG11	3:C:177:PRO:HG2	1.90	0.54
3:C:105:LEU:HB3	3:C:200:LEU:HD21	1.89	0.54
4:D:7:TYR:HB2	4:D:172:PHE:HZ	1.73	0.54
5:E:119:GLY:O	5:E:120:ILE:HD13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:176:LYS:HD3	53:27:2660:A:H62	1.70	0.54
6:F:9:VAL:HG12	6:F:10:ALA:N	2.22	0.54
8:H:40:ALA:HA	8:H:43:ALA:HB3	1.89	0.54
18:R:73:LYS:HB2	18:R:106:VAL:CB	2.32	0.54
31:5:38:GLY:O	53:27:1031:G:N2	2.41	0.54
34:8:80:ARG:HH21	52:26:613:C:P	2.31	0.54
34:8:205:LYS:HA	52:26:8:A:C5	2.42	0.54
36:10:20:GLY:O	36:10:24:ARG:HG3	2.08	0.54
44:18:25:GLU:HA	44:18:28:ALA:HB3	1.90	0.54
47:21:39:ARG:HH11	52:26:280:C:H1'	1.73	0.54
48:22:56:ARG:HB3	48:22:60:ARG:NH1	2.23	0.54
51:25:5:VAL:HG11	51:25:16:ARG:HB3	1.89	0.54
52:26:885:G:H2'	52:26:886:G:H8	1.72	0.54
53:27:671:C:H2'	53:27:672:C:C6	2.43	0.54
53:27:1097:U:H2'	53:27:1098:A:H5'	1.90	0.54
53:27:1191:G:H2'	53:27:1192:G:C8	2.42	0.54
53:27:1804:C:H2'	53:27:1805:A:H8	1.72	0.54
53:27:1924:C:H2'	53:27:1925:C:H6	1.72	0.54
53:27:2024:G:OP2	53:27:2034:U:H4'	2.08	0.54
53:27:2036:C:H2'	53:27:2037:A:H8	1.73	0.54
53:27:2220:U:H2'	53:27:2221:G:C8	2.43	0.54
53:27:2393:U:O2'	53:27:2394:C:H5'	2.08	0.54
53:27:2502:G:H5'	53:27:2503:A:H5'	1.89	0.54
57:31:31:G:H2'	57:31:32:C:C6	2.42	0.54
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.54
6:F:89:LYS:O	6:F:125:THR:HG23	2.08	0.54
13:M:12:ARG:HD3	13:M:16:HIS:CE1	2.42	0.54
14:N:106:LEU:HD23	14:N:106:LEU:C	2.32	0.54
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.40	0.54
20:T:81:ARG:HH12	53:27:300:A:P	2.30	0.54
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.90	0.54
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.90	0.54
39:13:39:GLY:O	39:13:44:ARG:NE	2.41	0.54
48:22:32:ILE:HD12	48:22:32:ILE:O	2.08	0.54
49:23:7:GLY:O	49:23:9:PHE:N	2.41	0.54
52:26:573:A:H2'	52:26:574:A:O4'	2.08	0.54
52:26:1014:A:H2'	52:26:1015:G:O4'	2.08	0.54
53:27:152:A:H2'	53:27:153:U:C6	2.43	0.54
53:27:286:U:H2'	53:27:287:G:H8	1.72	0.54
53:27:1812:U:H2'	53:27:1813:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1906:G:C2'	53:27:1907:G:H5''	2.38	0.54
53:27:2136:G:C5	53:27:2137:U:H1'	2.42	0.54
53:27:2286:G:H5'	53:27:2287:A:C1'	2.38	0.54
53:27:2583:G:H2'	53:27:2584:U:O4'	2.08	0.54
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.54
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.54
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.54
4:D:49:LEU:HD22	4:D:83:PRO:O	2.08	0.54
5:E:21:GLN:HE21	5:E:36:LEU:HB3	1.73	0.54
6:F:112:LYS:CE	53:27:2220:U:H5''	2.38	0.54
7:G:23:LEU:HD11	7:G:116:GLU:O	2.07	0.54
13:M:103:ARG:HB2	13:M:110:MET:HG2	1.90	0.54
17:Q:49:ILE:HG22	17:Q:54:VAL:N	2.23	0.54
18:R:69:LEU:HD11	18:R:107:VAL:HG22	1.90	0.54
26:Z:66:ILE:CD1	44:18:38:GLU:HA	2.34	0.54
33:7:161:ILE:HG21	55:29:23:A:H2	1.71	0.54
33:7:174:LEU:HD21	33:7:200:TRP:CD1	2.43	0.54
37:11:91:ARG:O	37:11:95:ARG:N	2.41	0.54
39:13:89:TYR:CB	39:13:93:LEU:HD21	2.37	0.54
41:15:96:ILE:HG13	41:15:97:ARG:N	2.23	0.54
52:26:510:A:N3	52:26:543:U:H1'	2.22	0.54
53:27:1361:G:H2'	53:27:1362:C:C6	2.43	0.54
53:27:1501:G:O2'	53:27:1502:A:H5'	2.08	0.54
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.54
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.54
59:33:620:GLU:O	59:33:621:ILE:HG23	2.07	0.54
1:A:86:ARG:NH2	53:27:1817:G:OP1	2.41	0.54
2:B:164:GLN:HE22	53:27:2822:G:H5''	1.73	0.54
29:3:3:ARG:NH1	53:27:752:A:OP1	2.41	0.54
34:8:8:LEU:O	34:8:11:SER:HB3	2.09	0.54
37:11:68:VAL:HG23	37:11:99:ALA:HB1	1.90	0.54
37:11:102:TRP:O	37:11:105:GLU:HB3	2.07	0.54
39:13:34:LEU:HD11	39:13:47:VAL:HG21	1.88	0.54
40:14:80:THR:HB	40:14:83:THR:OG1	2.08	0.54
44:18:53:ASP:O	44:18:55:SER:N	2.39	0.54
46:20:28:ARG:HE	46:20:29:ASN:ND2	2.06	0.54
48:22:18:GLN:HB3	48:22:19:GLU:OE1	2.08	0.54
48:22:71:ASP:OD1	48:22:72:ARG:N	2.41	0.54
51:25:19:LYS:C	51:25:22:CYS:H	2.15	0.54
52:26:91:U:H2'	52:26:92:U:C6	2.43	0.54
52:26:755:G:H2'	52:26:756:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1514:G:H2'	52:26:1515:G:H8	1.73	0.54
53:27:801:G:H3'	53:27:802:A:C5'	2.38	0.54
53:27:972:A:H3'	53:27:973:A:H2'	1.90	0.54
53:27:2673:G:H2'	53:27:2674:G:H8	1.73	0.54
54:28:71:C:H2'	54:28:72:G:C8	2.43	0.54
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.54
59:33:645:ARG:HA	59:33:649:PRO:HB3	1.89	0.54
59:33:728:LYS:C	59:33:729:LEU:HD12	2.33	0.54
1:A:66:PHE:HZ	1:A:86:ARG:HH21	1.56	0.53
1:A:141:HIS:O	1:A:143:VAL:N	2.38	0.53
2:B:101:PHE:O	2:B:103:ASP:N	2.33	0.53
3:C:47:LYS:NZ	53:27:451:U:H4'	2.23	0.53
12:L:35:ALA:HB1	12:L:126:ILE:HD12	1.90	0.53
37:11:59:GLU:HA	37:11:62:GLU:OE1	2.09	0.53
42:16:28:GLN:HG3	42:16:80:LEU:HD21	1.90	0.53
52:26:106:C:H2'	52:26:107:G:C8	2.40	0.53
52:26:123:U:H5''	52:26:311:C:O2'	2.08	0.53
52:26:376:G:H2'	52:26:377:G:H8	1.73	0.53
53:27:222:A:N6	53:27:232:G:H1'	2.24	0.53
53:27:1548:A:H2'	53:27:1549:A:H8	1.74	0.53
53:27:1709:U:O2'	53:27:2859:G:H1'	2.07	0.53
53:27:2127:G:H1'	53:27:2173:A:H1'	1.89	0.53
53:27:2639:A:H2'	53:27:2640:G:O4'	2.08	0.53
53:27:2680:U:H2'	53:27:2681:C:C6	2.43	0.53
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.53
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.53
1:A:43:ASN:ND2	53:27:1806:C:H1'	2.23	0.53
2:B:38:LYS:HA	2:B:43:ASP:OD2	2.08	0.53
8:H:72:THR:HG21	8:H:112:LYS:CA	2.38	0.53
8:H:98:GLY:HA3	8:H:137:LEU:HD23	1.90	0.53
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.89	0.53
16:P:3:VAL:HG22	53:27:1199:U:C1'	2.33	0.53
17:Q:83:TYR:CZ	53:27:1187:G:H5''	2.43	0.53
29:3:34:ARG:HH21	29:3:39:ARG:CD	2.21	0.53
33:7:69:THR:O	33:7:105:VAL:HG12	2.09	0.53
40:14:38:GLY:O	40:14:74:VAL:HA	2.08	0.53
41:15:80:ASN:CB	41:15:105:ARG:HB3	2.37	0.53
42:16:23:LEU:HG	42:16:24:GLU:H	1.73	0.53
45:19:21:THR:O	52:26:750:C:H1'	2.08	0.53
46:20:57:ILE:O	46:20:61:VAL:HG23	2.08	0.53
47:21:14:ASP:O	47:21:16:MET:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:11:PHE:CE2	51:25:13:VAL:HA	2.42	0.53
52:26:745:G:H2'	52:26:746:A:C8	2.43	0.53
52:26:755:G:H2'	52:26:756:C:C6	2.44	0.53
52:26:900:A:C2	52:26:901:A:C4	2.97	0.53
52:26:1496:C:H1'	52:26:1517:G:H22	1.74	0.53
53:27:191:A:H2'	53:27:192:C:C6	2.43	0.53
53:27:376:G:H2'	53:27:377:G:H8	1.73	0.53
53:27:595:C:H2'	53:27:596:U:C6	2.43	0.53
53:27:969:G:H2'	53:27:970:U:H6	1.73	0.53
53:27:2073:C:O2'	53:27:2074:U:H5'	2.08	0.53
53:27:2261:C:O2'	53:27:2262:U:H5'	2.07	0.53
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.53
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.38	0.53
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.53
59:33:444:ILE:HG22	59:33:461:ILE:HA	1.91	0.53
1:A:171:VAL:HG13	1:A:185:ALA:HB2	1.90	0.53
2:B:8:LYS:HB2	2:B:201:LEU:CD1	2.38	0.53
3:C:148:ILE:HA	3:C:187:VAL:HG13	1.90	0.53
4:D:78:ILE:HG13	4:D:78:ILE:O	2.07	0.53
6:F:18:GLN:HE22	6:F:39:ALA:CB	2.21	0.53
7:G:59:LEU:CA	53:27:1107:G:OP1	2.56	0.53
7:G:114:GLU:HB2	7:G:123:ILE:HA	1.90	0.53
11:K:65:GLY:C	53:27:2415:G:H4'	2.34	0.53
13:M:41:ALA:HB1	13:M:97:ILE:HD12	1.90	0.53
35:9:45:VAL:HG21	35:9:117:ALA:HA	1.90	0.53
52:26:13:U:O2	52:26:914:A:H3'	2.08	0.53
52:26:451:A:H4'	52:26:452:A:O4'	2.08	0.53
52:26:900:A:H2'	52:26:901:A:C8	2.44	0.53
52:26:1268:G:H2'	52:26:1269:A:C8	2.43	0.53
52:26:1292:G:H2'	52:26:1293:C:H6	1.72	0.53
53:27:527:C:H2'	53:27:2779:U:O2	2.09	0.53
53:27:1454:C:O2'	53:27:1455:G:H8	1.92	0.53
53:27:1680:U:H2'	53:27:1681:G:O4'	2.08	0.53
53:27:1726:C:H2'	53:27:1727:C:H6	1.73	0.53
53:27:1734:G:H2'	53:27:1735:A:C8	2.43	0.53
53:27:2743:U:H2'	53:27:2744:G:O4'	2.08	0.53
55:29:13:A:H61	58:32:35:A:H62	1.54	0.53
6:F:117:LEU:HD13	6:F:121:VAL:HA	1.91	0.53
8:H:21:PRO:HB2	8:H:22:PRO:CD	2.29	0.53
9:I:21:THR:HG23	9:I:61:LYS:HB3	1.91	0.53
16:P:49:ARG:HH21	17:Q:72:VAL:HB	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:28:LEU:HD12	20:T:32:LYS:HB2	1.89	0.53
23:W:6:VAL:HG21	23:W:58:ILE:HD11	1.89	0.53
24:X:23:ARG:O	24:X:25:GLN:N	2.42	0.53
30:4:56:LEU:O	30:4:60:CYS:HB2	2.09	0.53
38:12:65:PHE:CD2	38:12:66:GLN:HG2	2.43	0.53
39:13:115:VAL:HG23	52:26:1367:C:H5'	1.90	0.53
44:18:68:ARG:HD2	52:26:1202:U:O4'	2.08	0.53
52:26:211:G:H2'	52:26:212:G:H5'	1.90	0.53
52:26:247:G:H2'	52:26:248:C:H6	1.73	0.53
52:26:1349:A:H3'	52:26:1350:A:H8	1.74	0.53
53:27:364:C:H2'	53:27:365:U:H6	1.72	0.53
53:27:471:A:H2'	53:27:472:A:O4'	2.08	0.53
53:27:968:C:H2'	53:27:969:G:H8	1.73	0.53
53:27:1967:C:H2'	53:27:1968:G:C5'	2.37	0.53
53:27:2637:U:H2'	53:27:2638:G:O4'	2.09	0.53
53:27:2818:U:H2'	53:27:2819:G:C8	2.43	0.53
56:30:34:G:H2'	56:30:35:A:C8	2.44	0.53
59:33:617:PRO:HG2	59:33:664:GLY:HA2	1.90	0.53
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.38	0.53
5:E:153:PRO:HG2	5:E:166:GLU:OE2	2.08	0.53
7:G:50:VAL:HG11	53:27:1082:U:OP1	2.09	0.53
9:I:113:PRO:HA	9:I:116:ARG:NH2	2.23	0.53
17:Q:77:PHE:HD1	17:Q:84:ARG:HB3	1.74	0.53
35:9:40:ASP:OD1	35:9:44:ARG:HB2	2.08	0.53
52:26:201:G:H2'	52:26:202:G:O4'	2.08	0.53
52:26:317:U:H2'	52:26:318:G:H8	1.72	0.53
52:26:377:G:H2'	52:26:378:G:H8	1.74	0.53
52:26:1074:G:H2'	52:26:1075:U:H6	1.74	0.53
53:27:597:G:H2'	53:27:598:U:O4'	2.08	0.53
53:27:1352:U:O2'	53:27:1353:A:H5'	2.08	0.53
53:27:2641:G:H2'	53:27:2642:G:H8	1.74	0.53
58:32:59:A:H3'	58:32:60:U:H6	1.72	0.53
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.53
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.53
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.53
4:D:101:ARG:HD2	4:D:139:GLU:OE2	2.09	0.53
5:E:156:TYR:CE2	53:27:2531:A:H4'	2.43	0.53
9:I:58:ASN:HA	9:I:126:ALA:O	2.09	0.53
14:N:28:VAL:HG22	14:N:29:HIS:H	1.73	0.53
20:T:17:ASP:HB3	20:T:20:LYS:HB3	1.89	0.53
20:T:39:ASN:O	20:T:61:GLU:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:79:GLU:HG3	22:V:81:GLU:HG2	1.89	0.53
32:6:182:VAL:C	32:6:183:PHE:HD1	2.17	0.53
33:7:132:ALA:O	33:7:135:ARG:HB3	2.08	0.53
40:14:14:ASP:OD1	40:14:16:ARG:HG2	2.09	0.53
41:15:35:ASP:OD1	41:15:36:ARG:N	2.42	0.53
43:17:1:ALA:O	43:17:8:ILE:HG13	2.09	0.53
46:20:5:ARG:NH1	52:26:377:G:H5'	2.23	0.53
47:21:68:LYS:O	52:26:254:G:OP1	2.26	0.53
51:25:36:PHE:O	51:25:38:GLU:N	2.35	0.53
52:26:1254:A:H2'	52:26:1255:G:H8	1.72	0.53
53:27:208:C:H2'	53:27:209:C:C6	2.40	0.53
53:27:399:U:OP1	53:27:2090:A:H5''	2.09	0.53
53:27:463:G:C2	53:27:467:G:C6	2.97	0.53
53:27:584:C:H2'	53:27:585:G:H8	1.73	0.53
53:27:1666:G:C2'	53:27:1667:G:H5'	2.39	0.53
53:27:1771:C:H2'	53:27:1772:A:C8	2.43	0.53
53:27:1998:A:H2'	53:27:1999:C:H6	1.72	0.53
53:27:2544:G:O2'	53:27:2545:G:H5'	2.08	0.53
54:28:30:C:H2'	54:28:31:C:C5'	2.38	0.53
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.53
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.53
8:H:23:VAL:HG13	8:H:24:GLY:H	1.72	0.53
8:H:35:MET:HB2	8:H:39:LYS:NZ	2.23	0.53
32:6:49:PHE:O	32:6:52:ALA:HB3	2.08	0.53
33:7:87:ARG:HB3	33:7:100:ILE:CG2	2.39	0.53
34:8:171:GLU:HB2	34:8:180:THR:HB	1.91	0.53
36:10:18:VAL:N	36:10:19:PRO:CD	2.72	0.53
39:13:118:ARG:O	39:13:119:LYS:HB3	2.08	0.53
44:18:17:ASP:O	44:18:21:ALA:HB3	2.09	0.53
52:26:34:C:H2'	52:26:35:G:H8	1.72	0.53
52:26:882:C:O2'	52:26:883:C:H5'	2.08	0.53
52:26:1390:U:H2'	52:26:1391:U:C6	2.43	0.53
53:27:19:A:H2'	53:27:20:C:H6	1.73	0.53
53:27:552:U:H2'	53:27:553:G:H8	1.73	0.53
53:27:689:A:H2	53:27:779:U:H4'	1.74	0.53
53:27:2185:U:H2'	53:27:2186:G:C8	2.43	0.53
53:27:2263:C:H2'	53:27:2264:C:H6	1.72	0.53
53:27:2648:G:H2'	53:27:2649:C:O4'	2.09	0.53
54:28:91:C:H2'	54:28:92:C:C6	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.38	0.53
59:33:423:THR:HB	59:33:425:LEU:HD13	1.90	0.53
1:A:99:GLU:HB2	53:27:1491:G:H1'	1.90	0.53
2:B:109:VAL:HG21	2:B:193:VAL:HG12	1.90	0.53
4:D:146:ASP:CG	4:D:147:ARG:H	2.16	0.53
4:D:172:PHE:O	4:D:174:PHE:N	2.41	0.53
6:F:18:GLN:HE22	6:F:39:ALA:HB1	1.73	0.53
6:F:50:ARG:HD2	6:F:51:ARG:HH12	1.74	0.53
11:K:38:GLN:HB3	53:27:832:U:OP1	2.09	0.53
15:O:4:ILE:HG22	15:O:8:GLU:CD	2.34	0.53
16:P:54:ARG:HG3	53:27:1155:A:OP1	2.08	0.53
25:Y:8:GLN:HB2	25:Y:28:LEU:HD13	1.90	0.53
34:8:50:TYR:O	34:8:53:GLN:HB2	2.08	0.53
34:8:149:LYS:HE2	34:8:177:MET:HG2	1.91	0.53
34:8:169:TRP:CG	34:8:185:PRO:HG3	2.44	0.53
35:9:84:VAL:HG22	35:9:85:LYS:O	2.08	0.53
35:9:104:ILE:HG23	35:9:111:ARG:HH11	1.74	0.53
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.53
36:10:88:MET:HB3	48:22:63:TYR:HE2	1.72	0.53
43:17:96:VAL:C	43:17:98:GLY:H	2.17	0.53
46:20:33:ILE:HD12	46:20:33:ILE:H	1.73	0.53
46:20:67:ILE:HD12	46:20:67:ILE:N	2.22	0.53
52:26:370:C:O2'	52:26:371:A:H5'	2.09	0.53
52:26:1168:U:H5''	52:26:1169:A:OP2	2.09	0.53
52:26:1329:A:O2'	52:26:1330:U:H5'	2.09	0.53
52:26:1451:U:H5''	52:26:1452:C:C5	2.43	0.53
53:27:570:G:H22	53:27:2499:C:H5'	1.74	0.53
53:27:679:C:H2'	53:27:680:C:C6	2.44	0.53
53:27:681:G:H2'	53:27:682:G:O4'	2.08	0.53
53:27:1278:C:H2'	53:27:1279:G:H8	1.72	0.53
53:27:2486:C:H2'	53:27:2487:G:C5'	2.36	0.53
53:27:2486:C:C2'	53:27:2487:G:H5''	2.38	0.53
53:27:2514:U:H2'	53:27:2515:C:C6	2.43	0.53
53:27:2643:G:H2'	53:27:2644:G:O4'	2.09	0.53
53:27:2881:U:H2'	53:27:2882:A:C8	2.43	0.53
54:28:94:A:H2'	54:28:95:U:O4'	2.09	0.53
56:30:55:U:C6	56:30:58:A:H2'	2.44	0.53
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.53
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.53
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.53
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:170:TYR:CE1	1:A:184:GLU:HG2	2.44	0.53
13:M:96:ARG:HG3	13:M:116:VAL:HG22	1.91	0.53
14:N:51:ALA:HB3	14:N:78:VAL:CG2	2.38	0.53
16:P:53:LYS:NZ	53:27:994:C:OP2	2.42	0.53
21:U:9:ARG:NH1	54:28:76:G:OP1	2.42	0.53
23:W:73:ARG:HB3	23:W:75:GLU:HG2	1.91	0.53
33:7:20:THR:O	33:7:57:GLU:HA	2.09	0.53
34:8:131:ILE:CD1	34:8:134:TYR:HB2	2.37	0.53
34:8:142:VAL:O	34:8:179:GLY:N	2.42	0.53
40:14:37:ARG:HB2	40:14:75:ASP:HB3	1.89	0.53
52:26:237:G:H2'	52:26:238:A:H8	1.74	0.53
52:26:1261:A:H3'	52:26:1262:C:C6	2.44	0.53
53:27:140:C:H3'	53:27:140:C:P	2.48	0.53
53:27:622:G:H2'	53:27:623:C:C6	2.43	0.53
53:27:999:U:H5''	53:27:1154:G:O6	2.09	0.53
53:27:1055:G:H2'	53:27:1056:G:O4'	2.09	0.53
53:27:1463:C:H2'	53:27:1464:G:H8	1.73	0.53
53:27:1956:U:H2'	53:27:1957:C:H5'	1.91	0.53
53:27:2396:G:H2'	53:27:2397:G:H8	1.74	0.53
53:27:2570:G:H2'	53:27:2571:U:O4'	2.08	0.53
56:30:9:A:H5'	56:30:10:G:OP2	2.07	0.53
58:32:11:A:H2	58:32:24:U:H3	1.50	0.53
1:A:64:VAL:HB	1:A:66:PHE:CE1	2.43	0.53
2:B:112:THR:O	2:B:195:GLY:HA2	2.09	0.53
7:G:17:GLU:OE2	7:G:53:ARG:HB3	2.08	0.53
13:M:3:HIS:HD2	53:27:2820:A:O3'	1.92	0.53
14:N:25:ARG:NH1	54:28:8:C:O3'	2.41	0.53
19:S:25:GLU:HG3	19:S:26:LYS:N	2.23	0.53
24:X:39:GLN:HA	53:27:95:A:H4'	1.91	0.53
32:6:45:THR:OG1	32:6:200:PRO:HB2	2.09	0.53
35:9:114:LEU:O	35:9:119:VAL:HG22	2.08	0.53
37:11:72:VAL:HG12	37:11:89:GLU:HA	1.91	0.53
47:21:5:ARG:HD3	52:26:636:U:C5'	2.38	0.53
48:22:10:CYS:O	48:22:11:ARG:HG3	2.09	0.53
52:26:33:A:O2'	52:26:34:C:H5'	2.09	0.53
52:26:70:U:H1'	52:26:71:A:N7	2.24	0.53
53:27:216:A:H2'	53:27:217:A:O4'	2.09	0.53
53:27:551:G:O2'	53:27:552:U:H5'	2.09	0.53
53:27:672:C:O2'	53:27:673:C:H5'	2.09	0.53
53:27:1801:A:C5'	53:27:2203:U:H2'	2.30	0.53
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:367:ARG:O	59:33:409:PHE:HZ	1.92	0.53
2:B:5:VAL:HG11	2:B:80:TRP:CZ3	2.44	0.52
3:C:65:THR:HG23	53:27:2059:A:OP1	2.09	0.52
6:F:29:PHE:O	6:F:32:PRO:HG2	2.09	0.52
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.44	0.52
15:O:105:LYS:O	15:O:108:ARG:NH2	2.43	0.52
18:R:7:HIS:HB2	18:R:50:VAL:HG22	1.91	0.52
18:R:90:LYS:HA	53:27:751:A:H5'	1.90	0.52
20:T:39:ASN:O	20:T:41:VAL:N	2.43	0.52
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.44	0.52
36:10:11:HIS:CE1	36:10:54:LEU:HD22	2.44	0.52
37:11:71:THR:O	37:11:90:VAL:HG12	2.09	0.52
52:26:963:G:H2'	52:26:964:A:H8	1.73	0.52
52:26:1127:G:H5'	52:26:1280:A:O2'	2.10	0.52
52:26:1244:G:H2'	52:26:1245:C:C6	2.45	0.52
53:27:340:A:H2'	53:27:341:C:O4'	2.08	0.52
53:27:563:A:C6	53:27:2018:G:C5	2.97	0.52
53:27:599:A:H2'	53:27:600:G:H8	1.74	0.52
53:27:669:G:N3	53:27:669:G:H2'	2.24	0.52
53:27:1486:U:H2'	53:27:1487:U:H6	1.73	0.52
53:27:2398:U:H2'	53:27:2399:G:C8	2.45	0.52
53:27:2603:G:O2'	53:27:2604:U:H5'	2.09	0.52
53:27:2751:G:O2'	53:27:2752:C:H5'	2.09	0.52
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.52
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.52
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.52
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.52
5:E:71:LEU:HD23	5:E:74:MET:SD	2.50	0.52
5:E:85:LYS:HB2	5:E:164:ALA:HB2	1.91	0.52
11:K:58:TYR:O	30:4:12:ARG:NH2	2.43	0.52
21:U:29:ILE:HD12	54:28:75:G:O4'	2.09	0.52
42:16:20:VAL:O	42:16:22:ALA:N	2.39	0.52
42:16:98:ARG:HA	42:16:103:CYS:SG	2.49	0.52
52:26:49:U:O2'	52:26:50:A:H2'	2.09	0.52
52:26:336:A:H2'	52:26:337:G:C8	2.45	0.52
52:26:1147:C:H2'	52:26:1148:U:C6	2.45	0.52
52:26:1436:U:H2'	52:26:1437:A:H8	1.74	0.52
53:27:202:U:H2'	53:27:203:A:O4'	2.08	0.52
53:27:235:U:H2'	53:27:236:C:H6	1.74	0.52
53:27:566:U:H4'	53:27:809:G:OP2	2.09	0.52
53:27:717:C:H2'	53:27:718:A:H5'	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2136:G:C6	53:27:2137:U:H1'	2.45	0.52
53:27:2370:G:H2'	53:27:2371:G:C8	2.44	0.52
53:27:2863:C:H2'	53:27:2864:G:C8	2.44	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
59:33:410:THR:HG23	59:33:414:ASP:O	2.10	0.52
7:G:25:ALA:HB3	7:G:85:SER:C	2.35	0.52
8:H:98:GLY:HA3	8:H:137:LEU:CD2	2.39	0.52
9:I:84:ILE:HG13	9:I:84:ILE:O	2.09	0.52
11:K:23:ILE:H	11:K:23:ILE:HD12	1.73	0.52
16:P:2:ARG:HB2	53:27:1248:G:C8	2.44	0.52
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.91	0.52
18:R:62:ASP:CG	18:R:63:GLY:H	2.18	0.52
20:T:5:ARG:HD2	20:T:93:ARG:HH11	1.75	0.52
33:7:18:ASN:O	33:7:55:VAL:HA	2.09	0.52
41:15:92:ARG:O	41:15:94:SER:N	2.42	0.52
41:15:123:PRO:O	51:25:34:ARG:N	2.42	0.52
43:17:78:ARG:HH12	49:23:68:HIS:HE1	1.56	0.52
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.75	0.52
52:26:947:G:H2'	52:26:948:C:C6	2.44	0.52
52:26:1404:C:H2'	52:26:1405:G:C8	2.44	0.52
53:27:173:A:H2'	53:27:174:U:C6	2.45	0.52
53:27:373:U:H3	53:27:401:A:H62	1.56	0.52
53:27:559:G:O5'	53:27:559:G:H8	1.93	0.52
53:27:859:G:O2'	53:27:860:U:P	2.66	0.52
53:27:967:U:H2'	53:27:968:C:C6	2.44	0.52
53:27:1041:G:H2'	53:27:1042:G:C8	2.44	0.52
53:27:1685:C:H2'	53:27:1686:C:C6	2.44	0.52
53:27:2131:U:H5'	53:27:2132:U:H5''	1.91	0.52
53:27:2373:G:H2'	53:27:2374:C:H6	1.73	0.52
54:28:114:C:H2'	54:28:115:A:H8	1.74	0.52
58:32:57:A:O2'	58:32:58:A:H5'	2.09	0.52
58:32:58:A:H1'	58:32:60:U:C5	2.44	0.52
59:33:620:GLU:HG2	59:33:621:ILE:N	2.25	0.52
1:A:157:ALA:HB1	1:A:196:ASN:O	2.09	0.52
1:A:230:PRO:CB	1:A:244:VAL:HG21	2.39	0.52
7:G:35:VAL:HG22	53:27:1057:A:O2'	2.10	0.52
18:R:5:ALA:CB	18:R:54:ALA:HA	2.40	0.52
35:9:131:ASN:O	35:9:133:ILE:N	2.43	0.52
42:16:50:LYS:HD2	42:16:50:LYS:N	2.24	0.52
52:26:112:G:H22	52:26:315:A:H2	1.56	0.52
52:26:1205:U:H2'	52:26:1206:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1487:G:O2'	52:26:1488:G:H5'	2.10	0.52
53:27:276:U:C2	53:27:277:G:H1'	2.45	0.52
53:27:356:G:H2'	53:27:357:C:O4'	2.10	0.52
53:27:689:A:H2'	53:27:690:G:H8	1.74	0.52
53:27:863:A:H2'	53:27:864:G:C8	2.44	0.52
53:27:945:A:C5	53:27:2448:A:C2	2.98	0.52
53:27:1083:U:H2'	53:27:1085:A:OP2	2.09	0.52
53:27:1782:U:H2'	53:27:1783:A:H5'	1.90	0.52
53:27:1876:A:H2'	53:27:1877:A:O4'	2.08	0.52
53:27:2000:C:O2'	53:27:2001:C:H5'	2.10	0.52
53:27:2106:U:H2'	53:27:2107:G:H8	1.75	0.52
53:27:2162:G:O3'	53:27:2171:A:H5''	2.09	0.52
53:27:2795:C:C2'	53:27:2796:U:H5'	2.39	0.52
59:33:607:HIS:HA	59:33:631:ILE:O	2.09	0.52
59:33:621:ILE:HA	59:33:636:ALA:H	1.74	0.52
1:A:259:ASN:C	1:A:261:ARG:N	2.67	0.52
3:C:128:ALA:HB1	3:C:129:PRO:CD	2.39	0.52
4:D:105:ILE:HD13	26:Z:24:ILE:HD11	1.92	0.52
5:E:8:VAL:HG21	5:E:68:ARG:HG3	1.91	0.52
5:E:140:ILE:HD12	5:E:141:GLY:N	2.24	0.52
12:L:35:ALA:HA	12:L:128:THR:HG22	1.90	0.52
12:L:63:ILE:CG2	12:L:64:TRP:N	2.71	0.52
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.91	0.52
13:M:51:LEU:O	13:M:54:LEU:HB3	2.10	0.52
13:M:73:ASN:HA	13:M:76:VAL:HG12	1.92	0.52
29:3:10:LEU:HD11	29:3:14:ARG:HD2	1.92	0.52
32:6:113:LEU:HD13	32:6:143:LEU:CB	2.40	0.52
34:8:2:ARG:O	34:8:4:LEU:HG	2.09	0.52
34:8:104:MET:HE2	34:8:179:GLY:HA2	1.90	0.52
34:8:120:LYS:HG2	34:8:130:ASN:CG	2.35	0.52
34:8:187:ARG:HD2	34:8:190:LEU:HD21	1.90	0.52
34:8:187:ARG:O	34:8:190:LEU:HG	2.08	0.52
35:9:45:VAL:CG2	35:9:117:ALA:HA	2.39	0.52
36:10:68:GLN:O	36:10:71:ILE:HG22	2.10	0.52
38:12:85:TYR:HE1	38:12:123:GLU:HB2	1.74	0.52
38:12:102:VAL:HG12	38:12:125:ILE:HD12	1.90	0.52
39:13:59:LYS:HG3	39:13:60:LEU:HG	1.92	0.52
41:15:121:ARG:HE	51:25:35:GLU:HG2	1.73	0.52
49:23:47:THR:HG22	49:23:60:PHE:HD1	1.74	0.52
52:26:502:A:H2'	52:26:503:C:C6	2.45	0.52
52:26:1088:G:N2	52:26:1167:A:H61	2.05	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:323:C:H2'	53:27:1205:A:N1	2.24	0.52
53:27:753:A:H2'	53:27:754:U:C6	2.45	0.52
53:27:819:A:C4	53:27:1189:A:C2	2.98	0.52
53:27:985:C:H2'	53:27:986:C:C6	2.44	0.52
53:27:1406:U:H2'	53:27:1407:G:O4'	2.08	0.52
53:27:2346:A:H3'	53:27:2347:C:C5'	2.39	0.52
53:27:2450:A:O2'	53:27:2451:A:H5'	2.10	0.52
57:31:21:A:H61	57:31:46:G:H2'	1.75	0.52
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.52
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.52
59:33:169:ASP:O	59:33:169:ASP:OD1	2.27	0.52
8:H:96:LYS:HD2	8:H:138:VAL:HG13	1.92	0.52
12:L:35:ALA:O	12:L:99:GLY:N	2.43	0.52
16:P:18:LYS:O	16:P:21:LYS:HG2	2.09	0.52
30:4:20:GLY:HA3	30:4:48:MET:HE1	1.91	0.52
35:9:137:ARG:NH2	52:26:1078:U:H4'	2.25	0.52
39:13:7:GLY:HA3	39:13:85:ALA:HB2	1.91	0.52
40:14:44:THR:HG23	40:14:69:THR:C	2.35	0.52
42:16:51:VAL:HG22	42:16:52:CYS:N	2.25	0.52
46:20:13:LYS:N	52:26:392:C:OP1	2.35	0.52
46:20:71:VAL:O	46:20:75:ILE:HG13	2.10	0.52
50:24:53:MET:HG3	50:24:54:GLN:N	2.23	0.52
52:26:1327:C:H2'	52:26:1328:C:C6	2.44	0.52
53:27:595:C:H2'	53:27:596:U:H6	1.74	0.52
53:27:811:U:O2	53:27:1251:C:C6	2.62	0.52
53:27:1948:G:H2'	53:27:1949:G:H8	1.75	0.52
53:27:2838:G:H2'	53:27:2839:G:O4'	2.10	0.52
57:31:59:A:C2'	57:31:60:U:H5'	2.39	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.08	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.10	0.52
59:33:427:PHE:HE2	59:33:463:ILE:HD11	1.75	0.52
1:A:140:VAL:O	1:A:161:VAL:N	2.42	0.52
1:A:202:ARG:HH11	1:A:213:ARG:HH22	1.57	0.52
1:A:259:ASN:O	1:A:260:LYS:HB2	2.09	0.52
6:F:69:ALA:HA	6:F:72:ILE:HD12	1.90	0.52
7:G:31:ARG:HB3	53:27:1054:A:H4'	1.92	0.52
10:J:70:ARG:NH1	53:27:2684:U:O4'	2.42	0.52
13:M:94:TYR:O	13:M:116:VAL:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:67:ASN:O	14:N:68:LYS:C	2.52	0.52
18:R:14:ALA:HB2	18:R:78:GLU:HB3	1.90	0.52
18:R:23:LEU:HD11	27:1:23:ALA:CA	2.39	0.52
20:T:24:VAL:HA	20:T:35:VAL:HA	1.91	0.52
24:X:9:LYS:HG2	24:X:11:VAL:H	1.73	0.52
29:3:10:LEU:O	29:3:14:ARG:HG3	2.10	0.52
32:6:181:PRO:HA	32:6:196:ASP:OD2	2.10	0.52
34:8:150:LYS:CB	34:8:177:MET:HE3	2.40	0.52
34:8:169:TRP:CD2	34:8:185:PRO:HG3	2.45	0.52
35:9:46:GLY:HA3	35:9:70:MET:HA	1.91	0.52
35:9:86:GLY:O	35:9:138:ALA:HB1	2.08	0.52
35:9:96:GLN:CG	35:9:97:PRO:HD2	2.40	0.52
36:10:67:PRO:HG2	36:10:70:VAL:HG21	1.91	0.52
49:23:50:VAL:HG21	49:23:70:LEU:HB3	1.92	0.52
52:26:262:A:H2'	52:26:263:A:C8	2.44	0.52
52:26:398:U:H2'	52:26:399:G:C8	2.44	0.52
53:27:95:A:H2'	53:27:96:C:O4'	2.09	0.52
53:27:421:C:O2	53:27:421:C:H2'	2.07	0.52
53:27:454:A:H4'	53:27:455:C:OP2	2.10	0.52
53:27:1192:G:O2'	53:27:1193:G:H5'	2.10	0.52
53:27:1779:U:H2'	53:27:1783:A:N7	2.24	0.52
53:27:2719:G:O2'	53:27:2720:U:H5'	2.09	0.52
54:28:55:U:H2'	54:28:56:G:C8	2.44	0.52
56:30:7:A:C3'	56:30:8:U:H5''	2.26	0.52
58:32:3:C:H2'	58:32:4:G:C8	2.45	0.52
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.52
6:F:112:LYS:CD	53:27:2220:U:H5''	2.40	0.52
9:I:117:ALA:HA	9:I:120:ARG:NH2	2.25	0.52
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
15:O:113:LEU:HD21	52:26:1441:A:N1	2.24	0.52
35:9:12:GLU:HA	35:9:37:VAL:O	2.10	0.52
35:9:104:ILE:HG23	35:9:111:ARG:NH1	2.24	0.52
36:10:12:PRO:O	36:10:15:SER:HB3	2.10	0.52
44:18:30:ILE:HG21	44:18:43:ALA:HB2	1.91	0.52
45:19:74:VAL:O	45:19:77:TYR:HB3	2.09	0.52
48:22:31:TYR:CG	48:22:54:LEU:HD11	2.44	0.52
52:26:484:G:N7	52:26:486:U:H1'	2.23	0.52
52:26:843:U:OP1	52:26:846:G:H1'	2.10	0.52
52:26:1018:G:O2'	52:26:1019:A:H5'	2.09	0.52
53:27:309:A:H1'	53:27:329:G:N3	2.25	0.52
53:27:616:A:H2'	53:27:617:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1111:A:C2	53:27:1112:G:H1'	2.45	0.52
53:27:1417:C:H2'	53:27:1418:G:O4'	2.10	0.52
53:27:1448:G:H2'	53:27:1449:G:C8	2.45	0.52
53:27:1448:G:H2'	53:27:1449:G:H8	1.74	0.52
53:27:1604:C:H2'	53:27:1605:C:H6	1.74	0.52
53:27:2588:G:O2'	53:27:2589:A:H5'	2.10	0.52
53:27:2779:U:OP1	53:27:2780:G:H2'	2.09	0.52
53:27:2899:A:H2'	53:27:2900:A:C8	2.45	0.52
56:30:14:A:H2'	56:30:15:G:C4'	2.40	0.52
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.25	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
1:A:36:ASN:HB2	1:A:61:TYR:HB2	1.91	0.52
2:B:68:PHE:O	2:B:72:GLY:N	2.42	0.52
5:E:116:LEU:HB3	5:E:117:PRO:HD2	1.91	0.52
13:M:2:ARG:CA	13:M:5:LYS:HD3	2.31	0.52
15:O:80:VAL:HG23	15:O:80:VAL:O	2.09	0.52
17:Q:69:GLY:N	17:Q:91:GLN:O	2.34	0.52
26:Z:1:MET:HB2	54:28:43:C:OP1	2.09	0.52
35:9:75:LEU:HD12	35:9:75:LEU:C	2.34	0.52
41:15:15:VAL:HG22	41:15:16:SER:N	2.25	0.52
43:17:3:ILE:HD11	43:17:21:ILE:CD1	2.39	0.52
46:20:18:GLN:OE1	46:20:38:PHE:HB3	2.10	0.52
51:25:36:PHE:HD1	51:25:40:PRO:HD3	1.73	0.52
52:26:257:G:H2'	52:26:258:G:H8	1.75	0.52
52:26:323:U:H2'	52:26:324:G:O4'	2.10	0.52
52:26:478:A:C2'	52:26:479:U:H5''	2.40	0.52
52:26:599:C:H2'	52:26:600:A:H8	1.74	0.52
52:26:825:A:H2'	52:26:826:C:H6	1.75	0.52
52:26:1141:C:H2'	52:26:1142:G:H8	1.75	0.52
53:27:291:G:H2'	53:27:292:U:C6	2.44	0.52
53:27:697:G:H2'	53:27:698:C:C6	2.45	0.52
53:27:784:G:N7	53:27:792:A:C5	2.78	0.52
53:27:1400:U:O2'	53:27:1401:G:H5'	2.10	0.52
53:27:1404:C:O2'	53:27:1405:U:H5'	2.10	0.52
53:27:1713:A:H61	53:27:1745:A:H61	1.57	0.52
53:27:1788:C:H2'	53:27:1789:A:C8	2.45	0.52
53:27:2026:U:C2	53:27:2027:G:C8	2.98	0.52
53:27:2070:A:H2'	53:27:2071:A:O4'	2.09	0.52
54:28:79:G:H2'	54:28:80:U:O4'	2.10	0.52
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.52
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
3:C:23:PHE:CD1	3:C:111:GLU:HB2	2.44	0.52
7:G:37:LYS:HG3	7:G:40:GLU:OE1	2.09	0.52
15:O:30:TRP:CD2	15:O:37:LYS:HE3	2.45	0.52
17:Q:24:LYS:HA	17:Q:94:THR:OG1	2.10	0.52
20:T:91:LYS:HE3	53:27:83:A:OP1	2.10	0.52
32:6:165:ALA:HB3	32:6:190:SER:CB	2.40	0.52
34:8:71:PHE:HE1	34:8:93:LEU:HD11	1.75	0.52
36:10:9:MET:HE1	36:10:86:ARG:HD2	1.91	0.52
38:12:38:VAL:HG21	38:12:109:VAL:HG12	1.92	0.52
39:13:105:ARG:NE	52:26:1118:U:OP1	2.41	0.52
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.92	0.52
46:20:7:ALA:O	46:20:8:ARG:HB3	2.10	0.52
47:21:58:VAL:HG21	47:21:74:LEU:HG	1.91	0.52
50:24:55:PRO:HB2	50:24:59:ARG:HH22	1.74	0.52
52:26:236:A:H2'	52:26:237:G:C8	2.44	0.52
52:26:1026:G:H21	52:26:1027:C:H41	1.57	0.52
52:26:1179:A:H2'	52:26:1180:A:O4'	2.10	0.52
52:26:1333:A:H2'	52:26:1334:G:O4'	2.10	0.52
52:26:1353:G:H2'	52:26:1354:U:C6	2.45	0.52
53:27:418:C:H2'	53:27:419:U:C6	2.45	0.52
53:27:1108:U:O5'	53:27:1108:U:H6	1.93	0.52
53:27:2298:A:H2'	53:27:2299:U:O4'	2.10	0.52
53:27:2417:C:O2'	53:27:2418:A:H5'	2.10	0.52
53:27:2805:C:H2'	53:27:2806:C:C6	2.45	0.52
59:33:534:TYR:O	59:33:535:ASN:C	2.53	0.52
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.24	0.52
1:A:119:VAL:HG12	1:A:130:PRO:HG2	1.92	0.51
4:D:175:PRO:O	4:D:176:PHE:HB2	2.10	0.51
6:F:3:VAL:HG22	6:F:38:PRO:HA	1.92	0.51
14:N:18:LEU:HD23	14:N:25:ARG:CB	2.40	0.51
15:O:29:VAL:CG1	15:O:79:VAL:HG22	2.38	0.51
16:P:57:ARG:HD2	53:27:997:G:OP2	2.10	0.51
20:T:84:PHE:HB2	53:27:298:G:P	2.50	0.51
22:V:33:ILE:HG21	22:V:76:ILE:HG21	1.92	0.51
36:10:76:THR:O	36:10:79:ARG:HB3	2.10	0.51
41:15:35:ASP:HB3	41:15:39:ASN:OD1	2.10	0.51
42:16:29:LYS:HA	52:26:363:A:H5'	1.92	0.51
43:17:6:ILE:HD11	43:17:21:ILE:HG23	1.92	0.51
52:26:134:G:H2'	52:26:135:C:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:452:A:H61	52:26:480:U:H3	1.58	0.51
52:26:1202:U:H2'	52:26:1203:C:C5'	2.40	0.51
52:26:1306:A:H62	52:26:1331:G:H1'	1.75	0.51
52:26:1332:A:H2'	52:26:1333:A:H8	1.74	0.51
53:27:783:A:H2'	53:27:784:G:C5'	2.40	0.51
53:27:1268:A:H2'	53:27:1269:A:O4'	2.09	0.51
53:27:2037:A:H2'	53:27:2038:G:H8	1.74	0.51
53:27:2343:U:H2'	53:27:2344:U:C6	2.45	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.51
59:33:613:CYS:HB2	59:33:635:ARG:HB3	1.91	0.51
1:A:80:LEU:HD21	1:A:109:LEU:HD23	1.92	0.51
3:C:131:THR:HG21	53:27:320:A:H2'	1.92	0.51
3:C:148:ILE:HG13	3:C:187:VAL:CG1	2.40	0.51
4:D:116:LEU:HD13	4:D:175:PRO:HB2	1.92	0.51
6:F:46:PHE:O	6:F:50:ARG:HB2	2.10	0.51
7:G:117:LEU:HD12	7:G:117:LEU:O	2.11	0.51
10:J:61:VAL:HB	10:J:87:LEU:HD11	1.92	0.51
11:K:65:GLY:HA2	53:27:2415:G:H4'	1.92	0.51
11:K:135:ILE:CD1	11:K:142:ILE:HD11	2.38	0.51
12:L:68:PHE:CZ	53:27:871:U:H5''	2.45	0.51
16:P:53:LYS:HE3	53:27:994:C:H3'	1.92	0.51
18:R:23:LEU:HD11	27:1:23:ALA:HA	1.92	0.51
33:7:151:GLU:HA	33:7:165:GLU:O	2.09	0.51
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.92	0.51
37:11:63:VAL:O	37:11:67:ASN:ND2	2.43	0.51
40:14:7:ARG:HA	40:14:75:ASP:HA	1.92	0.51
45:19:81:ILE:HD12	45:19:82:GLU:N	2.26	0.51
48:22:56:ARG:O	48:22:60:ARG:HG3	2.09	0.51
50:24:34:VAL:O	50:24:38:ILE:HG13	2.10	0.51
50:24:57:VAL:HG13	50:24:58:ASP:N	2.25	0.51
52:26:260:G:H2'	52:26:261:U:C6	2.46	0.51
53:27:2523:G:O2'	53:27:2524:G:H5'	2.09	0.51
53:27:2564:A:C2	53:27:2647:U:H4'	2.45	0.51
53:27:2688:G:H1'	53:27:2721:A:H61	1.74	0.51
54:28:87:U:H5''	54:28:88:C:OP2	2.10	0.51
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.51
2:B:194:PRO:HA	53:27:2680:U:H5'	1.92	0.51
4:D:91:ARG:CA	4:D:95:MET:HB3	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:89:LYS:O	6:F:90:LEU:HG	2.10	0.51
7:G:105:LYS:O	7:G:106:PHE:HB3	2.10	0.51
16:P:36:GLN:NE2	53:27:563:A:H2'	2.26	0.51
21:U:86:LEU:H	21:U:86:LEU:CD1	2.24	0.51
26:Z:5:ILE:HG13	26:Z:6:HIS:N	2.24	0.51
27:1:12:ARG:HD2	27:1:16:ARG:CZ	2.41	0.51
34:8:82:LYS:O	34:8:88:ASN:ND2	2.42	0.51
37:11:4:ARG:O	37:11:6:ILE:N	2.43	0.51
37:11:47:GLU:HA	37:11:57:GLU:OE2	2.10	0.51
41:15:39:ASN:HA	52:26:683:G:N2	2.25	0.51
44:18:1:ALA:O	44:18:2:LYS:HB2	2.10	0.51
46:20:14:ARG:HH12	52:26:618:C:C1'	2.17	0.51
48:22:54:LEU:O	48:22:57:ALA:HB3	2.09	0.51
49:23:50:VAL:HG12	49:23:51:HIS:O	2.10	0.51
52:26:584:G:H2'	52:26:585:G:C8	2.43	0.51
52:26:911:U:H2'	52:26:912:C:C6	2.46	0.51
52:26:1309:G:O2'	52:26:1310:G:H5'	2.10	0.51
53:27:84:A:H4'	53:27:85:G:O5'	2.10	0.51
53:27:473:G:H2'	53:27:474:G:H8	1.74	0.51
53:27:557:C:H2'	53:27:558:U:H6	1.75	0.51
53:27:1889:A:H2'	53:27:1890:A:C8	2.46	0.51
53:27:2249:U:H3'	53:27:2250:G:C5'	2.40	0.51
53:27:2544:G:H2'	53:27:2545:G:H8	1.75	0.51
53:27:2832:U:H1'	53:27:2834:G:C4	2.45	0.51
58:32:8:U:H5'	58:32:49:G:H5'	1.92	0.51
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.51
1:A:79:ARG:HG3	1:A:81:GLU:OE2	2.11	0.51
4:D:100:GLU:O	4:D:104:THR:HB	2.11	0.51
6:F:93:SER:OG	6:F:123:ARG:HG2	2.10	0.51
6:F:135:HIS:CD2	6:F:136:SER:H	2.29	0.51
12:L:73:ILE:HG12	12:L:93:VAL:HG22	1.93	0.51
16:P:86:SER:O	17:Q:52:PRO:HD3	2.10	0.51
26:Z:11:GLU:OE2	26:Z:23:LYS:HB3	2.09	0.51
33:7:129:PHE:CG	33:7:130:ARG:N	2.78	0.51
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.40	0.51
39:13:113:LYS:HZ1	52:26:1367:C:P	2.34	0.51
41:15:109:ILE:HD12	41:15:109:ILE:N	2.25	0.51
47:21:26:ARG:CZ	52:26:237:G:H5''	2.40	0.51
48:22:31:TYR:CD2	48:22:54:LEU:HD11	2.45	0.51
49:23:48:ILE:HD11	49:23:70:LEU:HD21	1.92	0.51
52:26:403:C:O2'	52:26:404:G:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:735:C:H2'	52:26:736:C:H6	1.76	0.51
52:26:775:G:H2'	52:26:776:G:O4'	2.10	0.51
52:26:1496:C:H2'	52:26:1497:G:O4'	2.11	0.51
53:27:394:C:H2'	53:27:395:U:O4'	2.11	0.51
53:27:533:G:H2'	53:27:534:U:O4'	2.10	0.51
53:27:738:G:N2	53:27:759:G:C4	2.79	0.51
53:27:853:C:H2'	53:27:854:C:C6	2.45	0.51
53:27:1260:A:O2'	53:27:1261:C:H5'	2.11	0.51
53:27:1721:G:N2	53:27:1738:G:H2'	2.25	0.51
53:27:1930:G:H2'	53:27:1968:G:C6	2.45	0.51
53:27:2161:C:C5'	53:27:2171:A:H62	2.23	0.51
53:27:2793:C:H2'	53:27:2794:C:C6	2.45	0.51
59:33:600:GLU:N	59:33:654:ASP:O	2.39	0.51
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.91	0.51
1:A:202:ARG:HH11	1:A:213:ARG:NH2	2.08	0.51
3:C:1:MET:O	3:C:13:THR:HA	2.11	0.51
4:D:32:LYS:HD3	4:D:91:ARG:CZ	2.40	0.51
9:I:43:GLU:OE1	9:I:43:GLU:N	2.31	0.51
10:J:8:LEU:O	10:J:19:VAL:HG22	2.11	0.51
10:J:24:VAL:HG12	10:J:33:ALA:HB2	1.92	0.51
11:K:21:ARG:HE	53:27:811:U:H5	1.56	0.51
11:K:62:PRO:HD3	30:4:26:ALA:CA	2.40	0.51
11:K:76:GLU:HB2	11:K:111:ILE:HD13	1.91	0.51
13:M:28:LEU:HD23	13:M:48:VAL:HG21	1.91	0.51
14:N:33:ARG:O	14:N:34:HIS:CB	2.57	0.51
15:O:28:LYS:HB3	15:O:39:LEU:HD21	1.91	0.51
16:P:36:GLN:HE21	53:27:563:A:H2'	1.76	0.51
30:4:37:THR:HA	30:4:40:LYS:HD3	1.93	0.51
30:4:63:TYR:CD2	53:27:242:G:H5''	2.45	0.51
34:8:157:ALA:O	34:8:160:LEU:HB3	2.10	0.51
35:9:40:ASP:OD2	35:9:42:ASN:HB2	2.10	0.51
35:9:105:ILE:CD1	35:9:123:LEU:HA	2.36	0.51
39:13:6:TYR:CG	39:13:7:GLY:N	2.78	0.51
39:13:72:SER:HB3	52:26:1373:G:OP2	2.10	0.51
42:16:65:TYR:CE2	42:16:67:GLY:HA2	2.46	0.51
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.25	0.51
52:26:478:A:H3'	52:26:479:U:H5''	1.92	0.51
52:26:768:A:H1'	52:26:1512:U:O2'	2.11	0.51
52:26:1064:G:H1'	52:26:1190:G:H21	1.75	0.51
52:26:1250:A:H2'	52:26:1251:A:C8	2.46	0.51
52:26:1456:A:H2'	52:26:1457:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:564:C:H2'	53:27:565:C:C6	2.46	0.51
53:27:919:U:O2'	54:28:81:G:H4'	2.09	0.51
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.51
53:27:1534:U:H2'	53:27:1536:C:O4'	2.11	0.51
53:27:2118:U:H5	53:27:2149:U:H1'	1.73	0.51
53:27:2215:C:H2'	53:27:2216:G:H8	1.76	0.51
53:27:2655:G:H22	53:27:2664:G:H2'	1.75	0.51
53:27:2849:U:H4'	53:27:2868:A:C2	2.46	0.51
2:B:32:ASN:N	2:B:96:ILE:O	2.44	0.51
3:C:71:GLY:HA3	53:27:674:G:H5''	1.91	0.51
8:H:11:GLN:HE21	8:H:53:PRO:HB3	1.75	0.51
9:I:99:ARG:O	9:I:103:ILE:HG13	2.11	0.51
11:K:60:ARG:HH21	53:27:2360:G:H1'	1.76	0.51
11:K:79:LEU:HD11	11:K:112:LEU:HA	1.93	0.51
15:O:30:TRP:CE3	15:O:37:LYS:HG2	2.46	0.51
22:V:7:ARG:O	22:V:7:ARG:HG2	2.10	0.51
30:4:35:LYS:HG2	30:4:39:ARG:HH22	1.76	0.51
32:6:205:ALA:O	32:6:208:ALA:HB3	2.11	0.51
41:15:67:GLU:O	41:15:70:ALA:HB3	2.10	0.51
42:16:21:PRO:C	42:16:23:LEU:H	2.07	0.51
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.26	0.51
46:20:8:ARG:NH2	52:26:392:C:OP1	2.44	0.51
46:20:28:ARG:HE	46:20:29:ASN:HD21	1.59	0.51
48:22:56:ARG:HB3	48:22:60:ARG:HH12	1.75	0.51
51:25:65:ARG:HG3	51:25:66:ARG:N	2.26	0.51
51:25:67:THR:HG23	52:26:1167:A:H62	1.76	0.51
52:26:430:A:C2'	52:26:431:A:H5'	2.40	0.51
52:26:643:C:H2'	52:26:644:U:C6	2.45	0.51
53:27:662:G:H2'	53:27:663:G:H8	1.75	0.51
53:27:1219:U:H2'	53:27:1220:G:H8	1.76	0.51
53:27:2422:C:H6	53:27:2422:C:H5''	1.76	0.51
53:27:2724:U:H2'	53:27:2725:A:C8	2.45	0.51
53:27:2875:C:O2'	53:27:2876:G:H5'	2.10	0.51
57:31:31:G:H2'	57:31:32:C:H6	1.76	0.51
59:33:599:VAL:HB	59:33:605:LEU:HD12	1.92	0.51
2:B:15:PHE:CD2	15:O:78:PRO:HD3	2.46	0.51
3:C:108:ILE:O	3:C:111:GLU:HB3	2.10	0.51
5:E:54:ARG:HD2	5:E:57:TYR:CE2	2.46	0.51
13:M:92:GLY:HA2	13:M:94:TYR:CE2	2.46	0.51
14:N:25:ARG:HH12	54:28:9:G:P	2.33	0.51
17:Q:21:ARG:C	17:Q:22:LEU:HD12	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:26:ASN:HB3	20:T:34:ILE:HB	1.93	0.51
32:6:65:LYS:O	32:6:66:ILE:HD13	2.11	0.51
34:8:165:GLU:N	34:8:165:GLU:OE1	2.40	0.51
48:22:44:THR:O	48:22:46:THR:HG22	2.11	0.51
49:23:65:MET:HE3	49:23:73:PHE:CD1	2.45	0.51
50:24:28:ARG:C	50:24:32:LYS:HG2	2.36	0.51
52:26:943:U:H2'	52:26:944:G:H8	1.75	0.51
52:26:1051:C:H2'	52:26:1052:U:O4'	2.11	0.51
52:26:1157:A:H4'	52:26:1158:C:O5'	2.11	0.51
52:26:1385:G:O2'	52:26:1386:G:H5'	2.10	0.51
52:26:1448:C:H2'	52:26:1449:C:C6	2.45	0.51
53:27:167:A:H2'	53:27:168:G:O4'	2.11	0.51
53:27:1730:C:H1'	53:27:1731:G:C6	2.46	0.51
53:27:2638:G:H1'	53:27:2778:A:H61	1.75	0.51
53:27:2717:C:H2'	53:27:2718:G:O4'	2.09	0.51
53:27:2813:A:H2'	53:27:2814:A:C8	2.46	0.51
58:32:59:A:H3'	58:32:60:U:C6	2.45	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
8:H:20:SER:HB3	8:H:21:PRO:HD3	1.92	0.51
9:I:35:ARG:NE	9:I:140:LEU:HD11	2.26	0.51
11:K:21:ARG:HD3	53:27:811:U:C6	2.46	0.51
34:8:163:GLN:OE1	34:8:163:GLN:N	2.40	0.51
36:10:43:GLY:HA2	36:10:58:HIS:CE1	2.45	0.51
38:12:9:MET:CB	38:12:26:MET:SD	2.98	0.51
52:26:197:A:N6	52:26:221:C:H4'	2.24	0.51
52:26:374:A:H2	52:26:390:U:HO2'	1.59	0.51
52:26:476:U:H2'	52:26:477:C:C6	2.46	0.51
52:26:540:G:H2'	52:26:541:G:O4'	2.10	0.51
52:26:779:C:O2'	52:26:780:A:H5'	2.10	0.51
53:27:276:U:H2'	53:27:277:G:O4'	2.11	0.51
53:27:984:A:H5''	53:27:985:C:OP2	2.10	0.51
53:27:1443:U:H2'	53:27:1444:G:H8	1.74	0.51
53:27:1503:A:C3'	53:27:1504:A:H5''	2.35	0.51
53:27:2297:A:H2'	53:27:2298:A:H5'	1.93	0.51
53:27:2593:U:H2'	53:27:2594:C:C6	2.46	0.51
53:27:2861:U:H2'	53:27:2862:G:C8	2.44	0.51
56:30:28:G:O2'	56:30:29:G:H5'	2.11	0.51
58:32:46:A:C2'	58:32:47:U:H5''	2.37	0.51
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.51
3:C:179:SER:O	3:C:183:PHE:HD2	1.94	0.51
4:D:52:ALA:HB2	4:D:149:ARG:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:62:PRO:CD	30:4:26:ALA:HB2	2.38	0.51
12:L:75:GLU:OE1	12:L:90:GLU:HG3	2.11	0.51
13:M:99:LYS:HE2	53:27:2816:G:H5''	1.93	0.51
16:P:10:ARG:HH12	53:27:28:A:H2	1.57	0.51
29:3:4:THR:CG2	53:27:788:A:H1'	2.40	0.51
29:3:34:ARG:NH1	53:27:466:A:OP1	2.24	0.51
40:14:57:VAL:HG23	52:26:972:C:O2'	2.11	0.51
43:17:38:ILE:HD11	43:17:51:GLN:CB	2.32	0.51
44:18:39:ASP:HA	44:18:42:ASN:ND2	2.26	0.51
51:25:32:ARG:HG3	51:25:33:ARG:N	2.26	0.51
52:26:155:A:H2'	52:26:156:C:C6	2.46	0.51
52:26:1520:C:H2'	52:26:1521:C:H6	1.76	0.51
53:27:420:C:H2'	53:27:421:C:C6	2.45	0.51
53:27:1077:A:C2	53:27:1088:A:H3'	2.45	0.51
53:27:1084:A:H2	53:27:1106:G:H1'	1.76	0.51
53:27:1804:C:H2'	53:27:1805:A:C8	2.46	0.51
53:27:2007:U:O2'	53:27:2008:C:H5'	2.11	0.51
53:27:2446:G:C2'	53:27:2447:G:H5''	2.41	0.51
59:33:732:VAL:HB	59:33:735:VAL:CG2	2.40	0.51
1:A:48:ILE:HG23	1:A:48:ILE:O	2.11	0.51
4:D:104:THR:HG21	26:Z:22:MET:SD	2.51	0.51
7:G:34:THR:HA	7:G:37:LYS:CB	2.40	0.51
7:G:50:VAL:CG2	53:27:1082:U:H5''	2.40	0.51
11:K:79:LEU:HD12	11:K:113:ALA:H	1.76	0.51
15:O:51:ASN:O	53:27:2845:U:H5''	2.11	0.51
18:R:79:GLY:H	18:R:101:SER:HA	1.76	0.51
25:Y:13:ILE:HG22	25:Y:14:GLY:N	2.25	0.51
25:Y:25:GLY:HA2	53:27:929:U:O2	2.11	0.51
32:6:22:TRP:CD1	32:6:22:TRP:H	2.28	0.51
33:7:102:ILE:O	33:7:102:ILE:HG13	2.11	0.51
36:10:71:ILE:HD12	36:10:74:LEU:HD13	1.91	0.51
37:11:2:ARG:HA	52:26:1380:U:C4	2.46	0.51
37:11:62:GLU:OE1	37:11:62:GLU:N	2.42	0.51
37:11:142:ARG:HD3	58:32:41:C:H4'	1.92	0.51
38:12:28:SER:OG	38:12:29:SER:N	2.44	0.51
45:19:49:HIS:O	45:19:52:ARG:HB3	2.11	0.51
48:22:33:THR:HG23	48:22:35:SER:N	2.15	0.51
51:25:65:ARG:HG3	51:25:66:ARG:H	1.75	0.51
52:26:257:G:H2'	52:26:258:G:C8	2.46	0.51
53:27:72:U:O2'	53:27:73:A:H5'	2.10	0.51
53:27:751:A:C6	53:27:789:A:N7	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:821:A:C4'	53:27:822:G:H5''	2.41	0.51
53:27:822:G:OP2	53:27:946:C:H5''	2.11	0.51
53:27:1005:C:H2'	53:27:1006:C:C6	2.42	0.51
53:27:1271:G:C2	53:27:1617:C:H4'	2.46	0.51
53:27:2812:G:H2'	53:27:2813:A:C8	2.45	0.51
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.51
59:33:556:MET:O	59:33:560:LEU:N	2.43	0.51
1:A:129:LEU:HD11	1:A:134:ILE:HG12	1.92	0.50
1:A:235:GLU:HG3	53:27:2600:A:N7	2.27	0.50
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.11	0.50
7:G:45:GLY:HA2	7:G:50:VAL:N	2.23	0.50
16:P:92:LYS:O	16:P:95:ALA:HB3	2.12	0.50
18:R:88:ARG:HG3	18:R:94:ASP:OD2	2.11	0.50
20:T:23:LYS:C	20:T:35:VAL:HG13	2.37	0.50
34:8:13:ARG:NH2	34:8:37:PRO:HB2	2.26	0.50
38:12:76:ARG:NH1	38:12:125:ILE:HG23	2.26	0.50
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.93	0.50
41:15:28:ASN:ND2	41:15:56:LYS:HE3	2.25	0.50
42:16:23:LEU:C	42:16:25:ALA:H	2.19	0.50
49:23:18:VAL:O	49:23:22:VAL:HG23	2.10	0.50
52:26:399:G:H2'	52:26:400:C:H6	1.74	0.50
52:26:797:C:H2'	52:26:798:U:C6	2.46	0.50
52:26:950:U:H4'	52:26:971:G:C2	2.46	0.50
52:26:984:C:O5'	52:26:984:C:H6	1.92	0.50
52:26:1251:A:H2'	52:26:1252:A:O4'	2.12	0.50
52:26:1391:U:H2'	52:26:1392:G:C8	2.47	0.50
52:26:1399:C:H4'	52:26:1400:C:H2'	1.93	0.50
53:27:487:C:H2'	53:27:488:G:O4'	2.11	0.50
53:27:622:G:O2'	53:27:623:C:H5'	2.11	0.50
53:27:1437:C:H2'	53:27:1438:U:C6	2.46	0.50
53:27:2798:U:H6	53:27:2798:U:P	2.33	0.50
54:28:63:C:H2'	54:28:64:G:H8	1.75	0.50
2:B:84:LEU:HD21	2:B:90:PHE:HD2	1.74	0.50
3:C:147:LEU:HB2	3:C:183:PHE:CG	2.46	0.50
8:H:23:VAL:HG13	8:H:24:GLY:N	2.27	0.50
34:8:31:CYS:O	34:8:32:LYS:HB2	2.11	0.50
34:8:53:GLN:HB3	34:8:202:LEU:HD12	1.91	0.50
34:8:149:LYS:C	34:8:151:GLN:H	2.19	0.50
35:9:87:VAL:HG22	35:9:88:HIS:N	2.25	0.50
44:18:47:LEU:HD21	52:26:1317:C:H4'	1.92	0.50
52:26:24:U:O2'	52:26:25:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:68:G:H22	52:26:101:A:H2	1.59	0.50
52:26:502:A:H2'	52:26:503:C:O4'	2.11	0.50
52:26:599:C:H2'	52:26:600:A:C8	2.45	0.50
52:26:1130:A:H61	52:26:1144:G:C1'	2.13	0.50
53:27:832:U:H2'	53:27:833:A:C8	2.46	0.50
53:27:1794:A:O2'	53:27:1795:C:H5'	2.11	0.50
53:27:2066:C:H2'	53:27:2067:G:C8	2.46	0.50
53:27:2372:U:H2'	53:27:2373:G:C8	2.46	0.50
53:27:2486:C:H2'	53:27:2487:G:O4'	2.11	0.50
53:27:2779:U:P	53:27:2779:U:H3'	2.52	0.50
54:28:28:C:H2'	54:28:29:A:O4'	2.11	0.50
54:28:80:U:H2'	54:28:81:G:C8	2.46	0.50
58:32:19:G:C5'	58:32:20:U:C5	2.93	0.50
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.50
59:33:545:ALA:O	59:33:549:GLY:N	2.40	0.50
8:H:33:ASN:HD22	8:H:64:ARG:HB3	1.76	0.50
14:N:3:LYS:NZ	54:28:47:C:OP2	2.44	0.50
23:W:68:ALA:HA	23:W:71:ARG:NH2	2.26	0.50
26:Z:26:SER:OG	26:Z:27:THR:N	2.44	0.50
27:1:9:ARG:O	27:1:12:ARG:HB3	2.12	0.50
34:8:61:ARG:HD2	34:8:71:PHE:CD2	2.46	0.50
35:9:71:ILE:HG21	35:9:144:GLU:HB3	1.92	0.50
36:10:53:LYS:HE3	52:26:710:G:OP1	2.11	0.50
39:13:79:ARG:HD2	39:13:102:PHE:HE1	1.76	0.50
42:16:53:ARG:HH11	42:16:63:THR:HB	1.77	0.50
43:17:21:ILE:HB	43:17:24:VAL:CG1	2.41	0.50
43:17:49:GLU:C	43:17:51:GLN:H	2.20	0.50
52:26:410:G:C6	52:26:429:U:H1'	2.47	0.50
52:26:440:C:H3'	52:26:441:A:H5''	1.92	0.50
52:26:765:G:C6	52:26:812:G:C4	2.99	0.50
52:26:848:C:H2'	52:26:849:G:C4'	2.42	0.50
53:27:712:G:H2'	53:27:713:G:H5'	1.94	0.50
53:27:914:G:H5'	53:27:915:C:OP2	2.12	0.50
53:27:2070:A:H2'	53:27:2071:A:H8	1.76	0.50
53:27:2116:G:H1	53:27:2165:C:H1'	1.77	0.50
53:27:2713:U:H3'	53:27:2714:G:H5''	1.92	0.50
53:27:2853:C:H2'	53:27:2854:G:C8	2.46	0.50
58:32:29:G:H2'	58:32:30:G:H8	1.73	0.50
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.50
1:A:75:ALA:HB2	1:A:95:TYR:HA	1.92	0.50
1:A:216:ARG:NH2	53:27:781:A:OP1	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:113:VAL:HG12	3:C:118:LEU:HD23	1.92	0.50
3:C:134:LEU:CD2	3:C:161:ALA:HA	2.42	0.50
6:F:41:LYS:O	6:F:45:GLU:HG3	2.11	0.50
9:I:7:LYS:HE3	53:27:538:A:H5'	1.94	0.50
9:I:14:ASP:O	9:I:52:ASP:HB3	2.11	0.50
15:O:89:GLY:C	15:O:112:ARG:HG3	2.36	0.50
19:S:57:VAL:HG22	19:S:58:VAL:N	2.27	0.50
20:T:32:LYS:HB3	20:T:63:ALA:CB	2.41	0.50
23:W:17:ARG:NH2	53:27:201:C:OP1	2.44	0.50
29:3:34:ARG:NH2	29:3:39:ARG:HD2	2.27	0.50
31:5:11:CYS:HB3	31:5:33:HIS:HE1	1.75	0.50
32:6:217:ALA:O	32:6:221:ARG:HB2	2.12	0.50
33:7:122:GLN:OE1	33:7:132:ALA:HB1	2.11	0.50
33:7:133:MET:HE2	33:7:167:TYR:CD2	2.45	0.50
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.93	0.50
43:17:62:PHE:O	43:17:64:VAL:HG13	2.12	0.50
46:20:67:ILE:HG22	46:20:68:SER:O	2.11	0.50
52:26:57:G:H2'	52:26:58:C:C6	2.46	0.50
52:26:382:A:H2'	52:26:383:A:C8	2.47	0.50
52:26:431:A:H2'	52:26:432:A:C8	2.46	0.50
52:26:736:C:H2'	52:26:737:C:C6	2.46	0.50
52:26:965:U:H4'	52:26:969:A:C8	2.47	0.50
52:26:1004:A:H3'	52:26:1024:G:N2	2.26	0.50
52:26:1175:G:O2'	52:26:1176:A:H5'	2.12	0.50
52:26:1258:G:H2'	52:26:1259:C:H6	1.76	0.50
52:26:1306:A:H2'	52:26:1307:U:O4'	2.11	0.50
52:26:1498:U:H1'	52:26:1499:A:N7	2.26	0.50
53:27:149:A:H2'	53:27:150:U:C6	2.46	0.50
53:27:149:A:H2'	53:27:150:U:H6	1.76	0.50
53:27:720:U:H2'	53:27:721:A:C8	2.46	0.50
53:27:851:C:H2'	53:27:852:U:H6	1.75	0.50
53:27:853:C:H2'	53:27:854:C:H6	1.76	0.50
53:27:1682:G:C2	53:27:1757:A:H1'	2.46	0.50
53:27:1914:C:O2	53:27:1914:C:O4'	2.29	0.50
53:27:2028:U:O5'	53:27:2028:U:H6	1.94	0.50
53:27:2167:U:H1'	53:27:2169:A:C8	2.46	0.50
53:27:2196:C:O2'	53:27:2197:U:H5'	2.11	0.50
53:27:2442:C:O2'	53:27:2443:C:H5'	2.12	0.50
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.50
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.50
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:409:PHE:HB2	59:33:460:GLN:HA	1.93	0.50
59:33:671:VAL:HA	59:33:737:ASP:O	2.11	0.50
2:B:9:VAL:HG12	15:O:4:ILE:HD11	1.93	0.50
4:D:102:LEU:O	4:D:107:VAL:HG23	2.12	0.50
5:E:1:SER:CB	53:27:2749:A:H5''	2.40	0.50
14:N:7:ARG:HD2	14:N:97:PHE:CZ	2.47	0.50
16:P:65:ASN:CB	16:P:75:TYR:HB2	2.41	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.44	0.50
40:14:33:GLY:O	40:14:34:ALA:CB	2.58	0.50
43:17:53:ASP:OD1	43:17:54:THR:N	2.44	0.50
43:17:100:ARG:HD3	43:17:103:THR:HB	1.93	0.50
47:21:6:THR:OG1	47:21:59:GLU:HB3	2.12	0.50
52:26:89:U:O2	52:26:89:U:H2'	2.10	0.50
52:26:545:C:H2'	52:26:546:A:C8	2.46	0.50
52:26:626:G:H2'	52:26:627:G:H8	1.74	0.50
52:26:1033:G:H3'	52:26:1034:G:H5'	1.93	0.50
52:26:1169:A:H2'	52:26:1170:A:C8	2.47	0.50
52:26:1511:G:O2'	52:26:1512:U:H5'	2.11	0.50
53:27:182:A:H2'	53:27:183:C:C6	2.46	0.50
53:27:235:U:H2'	53:27:236:C:C6	2.46	0.50
53:27:243:U:C2'	53:27:244:A:H5'	2.42	0.50
53:27:279:A:N6	53:27:361:G:H1'	2.26	0.50
53:27:548:G:H2'	53:27:549:G:O4'	2.12	0.50
53:27:971:G:H4'	53:27:983:A:O2'	2.11	0.50
53:27:1045:C:H4'	53:27:1047:G:C8	2.46	0.50
53:27:1666:G:O2'	53:27:1667:G:H5'	2.12	0.50
53:27:1672:A:H4'	53:27:2553:G:H4'	1.93	0.50
53:27:2345:G:H5'	53:27:2347:C:O4'	2.10	0.50
53:27:2773:C:H2'	53:27:2774:C:H6	1.77	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:305:ASP:O	59:33:305:ASP:OD1	2.29	0.50
1:A:109:LEU:HG	1:A:110:LYS:N	2.26	0.50
2:B:12:THR:HG21	15:O:8:GLU:HG2	1.93	0.50
2:B:85:ALA:N	2:B:88:GLU:OE2	2.43	0.50
3:C:192:ALA:O	3:C:195:GLN:HB2	2.11	0.50
9:I:136:GLN:HE21	53:27:2899:A:C5'	2.25	0.50
16:P:5:ARG:CD	53:27:1250:G:H5''	2.42	0.50
16:P:56:PHE:CZ	53:27:536:G:H4'	2.47	0.50
32:6:79:VAL:HA	32:6:213:LEU:HD21	1.94	0.50
32:6:110:ILE:HG22	32:6:114:LYS:HE2	1.92	0.50
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:46:GLY:HA2	35:9:140:ILE:HD11	1.93	0.50
36:10:42:TRP:CH2	36:10:100:SER:HA	2.46	0.50
42:16:86:VAL:HG23	42:16:87:LYS:N	2.26	0.50
44:18:61:ASN:ND2	44:18:72:PHE:CE2	2.78	0.50
47:21:4:ILE:CD1	47:21:61:ARG:HD3	2.42	0.50
49:23:60:PHE:CE1	59:33:651:ARG:HG2	2.46	0.50
52:26:259:G:H2'	52:26:260:G:C8	2.46	0.50
52:26:331:G:O5'	52:26:331:G:H8	1.94	0.50
52:26:476:U:H2'	52:26:477:C:H6	1.77	0.50
52:26:865:A:C2	52:26:918:A:H4'	2.47	0.50
52:26:1242:G:O2'	52:26:1243:C:H5'	2.12	0.50
52:26:1346:A:N3	52:26:1346:A:H2'	2.27	0.50
53:27:176:A:C2'	53:27:177:G:H5'	2.42	0.50
53:27:268:C:H2'	53:27:269:C:H6	1.77	0.50
53:27:665:U:H2'	53:27:666:A:H8	1.76	0.50
53:27:871:U:H2'	53:27:872:U:H6	1.73	0.50
53:27:1062:G:H2'	53:27:1063:G:C8	2.47	0.50
53:27:1640:A:O2'	53:27:1641:A:H5'	2.11	0.50
53:27:1995:U:H2'	53:27:1996:C:C5	2.46	0.50
53:27:2186:G:O2'	53:27:2187:U:H5'	2.11	0.50
53:27:2533:U:H2'	53:27:2534:A:O4'	2.12	0.50
53:27:2597:G:H2'	53:27:2598:A:C8	2.47	0.50
57:31:38:A:H2'	57:31:39:C:O4'	2.11	0.50
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.93	0.50
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.34	0.50
1:A:106:PRO:O	1:A:108:GLY:N	2.44	0.50
3:C:137:LYS:O	3:C:140:ASP:HB2	2.11	0.50
3:C:171:ASP:O	3:C:172:ALA:C	2.54	0.50
4:D:139:GLU:HA	26:Z:28:VAL:CG1	2.42	0.50
7:G:28:ALA:H	7:G:111:ALA:H	1.59	0.50
8:H:116:MET:HE3	53:27:1059:G:O2'	2.11	0.50
16:P:111:LYS:NZ	17:Q:50:GLY:O	2.44	0.50
19:S:50:LEU:HD13	24:X:26:PHE:CE2	2.47	0.50
27:1:54:ILE:HG23	27:1:56:LYS:N	2.19	0.50
34:8:70:GLN:HE22	34:8:133:SER:HB2	1.75	0.50
34:8:160:LEU:HD23	34:8:160:LEU:C	2.37	0.50
37:11:69:ARG:HA	37:11:99:ALA:HB2	1.92	0.50
41:15:100:ASN:CB	41:15:106:ILE:HD11	2.40	0.50
42:16:69:GLU:HB3	52:26:521:G:O5'	2.12	0.50
52:26:411:A:H4'	52:26:412:A:O5'	2.11	0.50
52:26:413:G:H1'	52:26:428:G:H22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1144:G:N2	52:26:1146:A:H62	2.01	0.50
53:27:418:C:H2'	53:27:419:U:O4'	2.12	0.50
53:27:554:U:H2'	53:27:555:G:O4'	2.12	0.50
53:27:1310:G:H3'	53:27:1311:G:H8	1.76	0.50
53:27:1432:G:H2'	53:27:1433:A:H8	1.75	0.50
53:27:1682:G:H2'	53:27:1683:U:C6	2.47	0.50
53:27:1790:C:H3'	53:27:1828:G:H21	1.77	0.50
53:27:2299:U:H2'	53:27:2300:C:C6	2.47	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
59:33:599:VAL:HA	59:33:655:ALA:CB	2.37	0.50
2:B:48:ILE:HG23	2:B:84:LEU:CD1	2.42	0.50
2:B:145:SER:HB2	53:27:2578:G:N7	2.27	0.50
3:C:48:THR:CG2	3:C:86:ALA:HB3	2.42	0.50
5:E:72:ASN:O	5:E:76:ILE:HG12	2.12	0.50
9:I:52:ASP:O	9:I:54:ILE:HG13	2.11	0.50
16:P:90:ASP:OD2	17:Q:11:GLN:HB2	2.12	0.50
17:Q:34:GLU:HA	17:Q:59:ILE:O	2.12	0.50
20:T:48:VAL:C	20:T:53:GLN:HB3	2.37	0.50
33:7:185:THR:HG22	33:7:186:SER:N	2.26	0.50
34:8:70:GLN:HE22	34:8:133:SER:CB	2.24	0.50
35:9:12:GLU:HG3	35:9:63:MET:CE	2.42	0.50
38:12:8:ASP:OD1	52:26:825:A:H1'	2.10	0.50
40:14:59:LYS:O	40:14:62:ARG:NE	2.44	0.50
44:18:7:ALA:HB1	52:26:995:C:H5'	1.94	0.50
50:24:11:ILE:C	50:24:11:ILE:HD12	2.37	0.50
52:26:512:U:H2'	52:26:513:C:H6	1.76	0.50
52:26:644:U:H2'	52:26:645:G:H8	1.76	0.50
52:26:773:G:C3'	52:26:774:G:H5''	2.42	0.50
52:26:797:C:H2'	52:26:798:U:H6	1.77	0.50
52:26:1057:G:H2'	52:26:1058:G:H8	1.76	0.50
52:26:1143:G:H2'	52:26:1144:G:H8	1.75	0.50
53:27:780:G:H21	53:27:783:A:H62	1.59	0.50
53:27:804:A:H2'	53:27:806:C:C4	2.47	0.50
53:27:911:A:H8	53:27:911:A:O5'	1.93	0.50
53:27:1992:G:H5'	53:27:1994:C:H41	1.77	0.50
53:27:2093:G:H1'	53:27:2198:A:H2	1.74	0.50
53:27:2372:U:H2'	53:27:2373:G:H8	1.77	0.50
53:27:2592:G:C2'	53:27:2593:U:H5'	2.42	0.50
58:32:11:A:C2	58:32:24:U:N3	2.71	0.50
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.50
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.50
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.50
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.50
59:33:732:VAL:HB	59:33:735:VAL:HB	1.94	0.50
4:D:131:VAL:CG2	4:D:151:LEU:HG	2.41	0.50
6:F:37:VAL:HG13	6:F:38:PRO:HD2	1.94	0.50
6:F:130:VAL:HB	6:F:142:VAL:O	2.11	0.50
6:F:140:ALA:C	6:F:141:LYS:HD2	2.37	0.50
16:P:17:LEU:HA	16:P:20:ALA:HB3	1.94	0.50
16:P:90:ASP:O	16:P:94:LEU:HG	2.11	0.50
22:V:13:GLU:O	22:V:14:ALA:C	2.53	0.50
32:6:82:ALA:CB	32:6:213:LEU:HG	2.42	0.50
34:8:103:ARG:HG3	34:8:170:LEU:HD21	1.93	0.50
34:8:116:LEU:HD23	34:8:122:ILE:HD11	1.94	0.50
36:10:24:ARG:O	36:10:27:ALA:HB3	2.12	0.50
39:13:79:ARG:HD2	39:13:102:PHE:CE1	2.47	0.50
44:18:1:ALA:N	44:18:6:LYS:HE3	2.27	0.50
47:21:11:VAL:HB	47:21:56:ASP:OD1	2.11	0.50
52:26:519:C:N4	52:26:520:A:C6	2.79	0.50
52:26:635:A:H2'	52:26:636:U:C6	2.46	0.50
52:26:842:U:H5''	52:26:846:G:N1	2.27	0.50
52:26:943:U:H2'	52:26:944:G:O4'	2.12	0.50
52:26:1388:C:H2'	52:26:1389:C:H6	1.76	0.50
53:27:83:A:H2'	53:27:84:A:C8	2.47	0.50
53:27:212:G:O2'	53:27:213:A:H5'	2.12	0.50
53:27:527:C:P	53:27:2779:U:H3	2.35	0.50
53:27:587:C:H5''	53:27:588:U:H5'	1.94	0.50
53:27:974:G:C6	53:27:1186:G:C5	3.00	0.50
53:27:1654:A:O2'	53:27:1655:A:H5'	2.12	0.50
53:27:1672:A:C2	53:27:2582:G:H5'	2.47	0.50
53:27:2364:C:C2'	53:27:2365:G:H5'	2.42	0.50
53:27:2391:G:H2'	53:27:2424:C:H41	1.77	0.50
53:27:2716:C:H2'	53:27:2717:C:C6	2.47	0.50
54:28:4:C:H5'	54:28:4:C:C6	2.42	0.50
56:30:54:U:C3'	56:30:55:U:H5''	2.35	0.50
1:A:171:VAL:HG13	1:A:185:ALA:CB	2.41	0.49
5:E:8:VAL:CG2	5:E:68:ARG:HG3	2.41	0.49
8:H:17:ALA:HB1	8:H:38:CYS:HA	1.93	0.49
17:Q:37:GLU:HB2	17:Q:53:PHE:CE1	2.47	0.49
18:R:83:LYS:NZ	53:27:1260:A:OP1	2.45	0.49
23:W:3:VAL:HG22	23:W:10:ARG:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:116:LEU:HA	32:6:119:GLN:HG2	1.94	0.49
35:9:104:ILE:HD13	35:9:119:VAL:HG23	1.94	0.49
36:10:74:LEU:HG	36:10:78:PHE:HE2	1.76	0.49
36:10:88:MET:O	36:10:88:MET:HG3	2.10	0.49
37:11:46:LEU:HB3	37:11:57:GLU:OE1	2.12	0.49
40:14:8:ILE:HB	40:14:74:VAL:CB	2.37	0.49
44:18:7:ALA:O	44:18:10:VAL:HG12	2.12	0.49
44:18:21:ALA:HA	52:26:1257:A:N1	2.27	0.49
52:26:925:G:C2	52:26:927:G:C8	3.00	0.49
53:27:350:G:H2'	53:27:351:C:O4'	2.12	0.49
53:27:498:G:O2'	53:27:499:U:H5'	2.11	0.49
53:27:2201:G:H2'	53:27:2202:U:O4'	2.12	0.49
53:27:2290:G:H2'	53:27:2291:U:O4'	2.11	0.49
59:33:435:VAL:HA	59:33:438:ARG:HD3	1.93	0.49
59:33:450:PRO:C	59:33:452:THR:H	2.20	0.49
1:A:206:LYS:HB2	53:27:729:G:C5	2.47	0.49
2:B:186:LEU:HD21	15:O:3:ILE:HG21	1.94	0.49
5:E:71:LEU:O	5:E:75:VAL:HG23	2.12	0.49
6:F:14:SER:O	6:F:15:LEU:HB3	2.12	0.49
13:M:77:ALA:O	13:M:81:ASN:HB2	2.12	0.49
14:N:34:HIS:HA	14:N:53:THR:OG1	2.12	0.49
19:S:61:LEU:HB3	53:27:1341:G:H5'	1.94	0.49
26:Z:14:ALA:HA	26:Z:31:ASP:OD1	2.12	0.49
29:3:34:ARG:HH21	29:3:39:ARG:HD2	1.77	0.49
36:10:52:ASN:O	36:10:53:LYS:HB2	2.11	0.49
39:13:87:MET:HA	39:13:90:ASP:HA	1.93	0.49
40:14:72:ARG:HH22	52:26:1152:A:P	2.34	0.49
52:26:434:U:H2'	52:26:435:A:C8	2.47	0.49
52:26:1326:U:O2'	52:26:1327:C:H5'	2.13	0.49
53:27:419:U:H2'	53:27:420:C:C6	2.47	0.49
53:27:635:C:H2'	53:27:636:G:O4'	2.11	0.49
53:27:729:G:H4'	53:27:763:G:H5'	1.94	0.49
53:27:863:A:H2'	53:27:864:G:H8	1.76	0.49
53:27:1280:G:O2'	53:27:1281:G:H5'	2.12	0.49
53:27:1669:A:C2'	53:27:1670:C:H5'	2.42	0.49
53:27:1772:A:H2'	53:27:1773:A:H4'	1.94	0.49
53:27:1985:C:O2'	53:27:1986:C:H5'	2.12	0.49
53:27:2081:U:H2'	53:27:2082:A:C8	2.48	0.49
53:27:2144:G:H4'	53:27:2145:C:C4	2.47	0.49
53:27:2316:G:H2'	53:27:2317:A:H8	1.76	0.49
53:27:2351:G:H2'	53:27:2365:G:H22	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.49
59:33:741:LEU:HD23	59:33:742:HIS:N	2.27	0.49
2:B:85:ALA:O	2:B:87:GLY:N	2.43	0.49
2:B:135:GLY:HA2	53:27:743:A:OP1	2.12	0.49
3:C:60:TRP:CH2	3:C:67:ARG:HB3	2.47	0.49
6:F:53:GLU:O	6:F:54:LEU:HB2	2.10	0.49
13:M:37:THR:HG22	13:M:110:MET:HE1	1.94	0.49
13:M:115:LEU:O	13:M:115:LEU:HD12	2.12	0.49
16:P:51:GLN:HA	16:P:54:ARG:NH1	2.27	0.49
23:W:4:CYS:HB2	23:W:51:SER:HB3	1.94	0.49
32:6:46:VAL:HB	32:6:47:PRO:HD3	1.94	0.49
32:6:132:GLU:O	32:6:136:ARG:HG2	2.12	0.49
36:10:2:ARG:HD2	36:10:68:GLN:HE21	1.77	0.49
36:10:9:MET:HE3	36:10:86:ARG:HB3	1.94	0.49
37:11:113:LYS:HZ3	52:26:1297:G:H1'	1.75	0.49
42:16:99:GLY:O	52:26:35:G:H5''	2.13	0.49
44:18:66:THR:HG22	52:26:1203:C:H4'	1.93	0.49
45:19:45:HIS:O	45:19:47:LYS:N	2.39	0.49
52:26:54:C:C2	52:26:352:C:H5	2.30	0.49
52:26:237:G:H2'	52:26:238:A:C8	2.47	0.49
52:26:300:A:H2'	52:26:301:G:O4'	2.13	0.49
52:26:363:A:H2'	52:26:364:A:O4'	2.13	0.49
52:26:524:G:H2'	52:26:525:C:H6	1.74	0.49
52:26:737:C:H2'	52:26:738:C:C6	2.47	0.49
52:26:827:U:H2'	52:26:870:U:O4	2.12	0.49
52:26:848:C:H2'	52:26:849:G:H5''	1.93	0.49
52:26:920:U:H2'	52:26:921:U:C6	2.48	0.49
52:26:948:C:O2'	52:26:949:A:H5'	2.12	0.49
52:26:953:G:H2'	52:26:954:G:O4'	2.13	0.49
52:26:1288:A:H2'	52:26:1289:A:O4'	2.12	0.49
53:27:818:G:H1	53:27:1187:G:H2'	1.77	0.49
53:27:1114:C:H2'	53:27:1115:G:C8	2.47	0.49
53:27:1222:U:H2'	53:27:1223:G:C8	2.47	0.49
53:27:1273:U:H4'	53:27:1275:A:OP1	2.11	0.49
53:27:1548:A:H2'	53:27:1549:A:C8	2.47	0.49
53:27:1585:C:H2'	53:27:1586:A:H5'	1.94	0.49
56:30:55:U:H6	56:30:58:A:H2'	1.77	0.49
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.49
1:A:94:LEU:HD13	1:A:100:ARG:HG2	1.93	0.49
1:A:257:ARG:HD2	53:27:1799:G:OP1	2.13	0.49
4:D:40:GLY:HA2	4:D:84:ILE:CD1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:101:ARG:HG3	4:D:105:ILE:HD11	1.95	0.49
8:H:76:ALA:HB1	53:27:1063:G:H5'	1.95	0.49
15:O:30:TRP:CE2	15:O:37:LYS:HE3	2.47	0.49
17:Q:93:PHE:C	17:Q:93:PHE:CD1	2.90	0.49
20:T:56:GLY:O	20:T:58:VAL:N	2.46	0.49
22:V:34:VAL:HG12	22:V:36:GLN:N	2.26	0.49
33:7:155:ARG:HG3	33:7:192:TYR:HB3	1.94	0.49
34:8:190:LEU:HD12	34:8:192:ALA:N	2.08	0.49
40:14:19:ASP:O	40:14:22:THR:HB	2.13	0.49
44:18:6:LYS:HE2	44:18:67:GLY:HA3	1.95	0.49
47:21:28:VAL:HG22	47:21:29:LYS:N	2.28	0.49
52:26:65:A:H5'	52:26:200:G:H5''	1.95	0.49
52:26:746:A:H2'	52:26:747:A:C8	2.47	0.49
52:26:848:C:C3'	52:26:849:G:H5''	2.43	0.49
52:26:1474:U:H2'	52:26:1475:G:O4'	2.12	0.49
53:27:171:U:H2'	53:27:172:A:H8	1.77	0.49
53:27:250:G:C6	53:27:251:A:C6	3.00	0.49
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.49
53:27:566:U:O2'	53:27:567:U:H5'	2.11	0.49
53:27:594:U:H2'	53:27:595:C:H6	1.75	0.49
53:27:974:G:H1'	53:27:975:A:C8	2.47	0.49
53:27:1528:A:C2'	53:27:1529:G:H5'	2.42	0.49
53:27:2452:C:C2	53:27:2504:U:O4	2.65	0.49
59:33:188:ARG:NH1	59:33:377:LEU:CB	2.70	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49
59:33:696:GLY:CA	59:33:713:THR:H	2.13	0.49
1:A:74:PRO:O	1:A:96:LYS:HG2	2.13	0.49
2:B:106:LYS:HE2	2:B:176:ASP:OD1	2.12	0.49
3:C:29:HIS:O	3:C:33:VAL:HG23	2.13	0.49
6:F:54:LEU:H	6:F:57:LYS:HD3	1.77	0.49
8:H:100:ILE:HA	8:H:104:GLN:NE2	2.28	0.49
12:L:26:VAL:HG11	12:L:32:GLY:HA3	1.94	0.49
14:N:40:ILE:CD1	54:28:8:C:H4'	2.42	0.49
20:T:6:ARG:HB2	53:27:85:G:OP2	2.11	0.49
29:3:5:PHE:HD1	53:27:464:U:H5'	1.78	0.49
29:3:21:ARG:HG2	29:3:31:LEU:HD11	1.94	0.49
31:5:24:ARG:HG2	31:5:24:ARG:HH21	1.76	0.49
35:9:79:THR:OG1	35:9:80:LEU:N	2.42	0.49
43:17:3:ILE:HG12	43:17:7:ASN:HD22	1.77	0.49
44:18:20:PHE:HA	44:18:23:ARG:C	2.38	0.49
46:20:19:VAL:HB	46:20:37:GLY:C	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:197:A:C6	52:26:221:C:H4'	2.46	0.49
52:26:376:G:H2'	52:26:377:G:C8	2.48	0.49
52:26:591:U:H2'	52:26:592:G:H8	1.77	0.49
52:26:721:G:H4'	52:26:722:G:O4'	2.13	0.49
52:26:1237:C:H4'	52:26:1300:G:N2	2.28	0.49
53:27:1485:U:H2'	53:27:1486:U:H6	1.77	0.49
53:27:1660:G:H2'	53:27:1661:G:H8	1.77	0.49
53:27:1708:C:H2'	53:27:1709:U:H6	1.74	0.49
54:28:35:C:H2'	54:28:36:C:H5'	1.93	0.49
57:31:24:U:H2'	57:31:25:C:C6	2.48	0.49
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.49
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.49
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.13	0.49
3:C:35:TYR:CE1	53:27:615:U:H2'	2.47	0.49
7:G:34:THR:CB	53:27:1085:A:H61	2.25	0.49
7:G:87:GLU:HG2	7:G:92:ALA:N	2.28	0.49
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.24	0.49
21:U:39:ALA:O	21:U:40:ILE:HD13	2.12	0.49
24:X:23:ARG:O	24:X:24:GLU:C	2.55	0.49
27:1:25:THR:OG1	27:1:26:SER:N	2.46	0.49
33:7:46:LEU:HD11	33:7:75:VAL:HG22	1.94	0.49
33:7:178:ARG:O	33:7:205:GLU:HA	2.13	0.49
34:8:103:ARG:NH2	34:8:110:ARG:HH21	2.10	0.49
37:11:102:TRP:HH2	37:11:140:VAL:HG21	1.78	0.49
40:14:14:ASP:O	40:14:18:ILE:HG22	2.12	0.49
49:23:54:ARG:HB3	52:26:958:A:C2	2.47	0.49
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	0.49
53:27:26:G:O2'	53:27:27:G:H5'	2.12	0.49
53:27:171:U:H2'	53:27:172:A:C8	2.48	0.49
53:27:389:G:O2'	53:27:412:A:H1'	2.13	0.49
53:27:462:C:H2'	53:27:463:G:O4'	2.13	0.49
53:27:499:U:H2'	53:27:500:G:O4'	2.13	0.49
53:27:783:A:C2'	53:27:784:G:H5'	2.43	0.49
53:27:1836:C:O2'	53:27:1837:C:H5'	2.13	0.49
53:27:2064:C:H2'	53:27:2065:C:C6	2.47	0.49
53:27:2128:G:H1	53:27:2161:C:H4'	1.77	0.49
53:27:2267:A:H3'	53:27:2267:A:N3	2.28	0.49
53:27:2471:A:H2'	53:27:2472:G:H5'	1.95	0.49
53:27:2650:U:H2'	53:27:2651:C:H6	1.78	0.49
59:33:293:LEU:HD23	59:33:293:LEU:C	2.37	0.49
2:B:3:GLY:C	2:B:4:LEU:HD12	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:13:ARG:HA	2:B:23:PRO:HA	1.94	0.49
4:D:127:TYR:HE2	4:D:129:MET:HE2	1.77	0.49
6:F:3:VAL:HG13	6:F:37:VAL:O	2.13	0.49
6:F:27:ARG:NE	23:W:55:MET:HE2	2.20	0.49
7:G:23:LEU:HD12	7:G:118:ILE:CG1	2.43	0.49
12:L:97:GLN:OE1	12:L:97:GLN:N	2.46	0.49
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.95	0.49
19:S:56:GLU:HB3	19:S:86:THR:O	2.13	0.49
32:6:70:GLY:HA2	32:6:163:ILE:HG22	1.94	0.49
32:6:115:ASP:O	32:6:119:GLN:HG2	2.13	0.49
39:13:100:ALA:HB1	39:13:102:PHE:HE2	1.76	0.49
40:14:89:ARG:NH1	40:14:90:LEU:HB2	2.28	0.49
51:25:38:GLU:OE1	52:26:1526:G:H3'	2.13	0.49
52:26:291:U:O2'	52:26:292:G:H5'	2.12	0.49
52:26:955:U:H1'	52:26:1227:A:H61	1.77	0.49
52:26:1147:C:H2'	52:26:1148:U:H6	1.77	0.49
53:27:100:U:H4'	53:27:101:A:O4'	2.13	0.49
53:27:105:C:H2'	53:27:106:C:C6	2.44	0.49
53:27:452:G:N2	53:27:458:G:C4	2.81	0.49
53:27:649:G:H2'	53:27:650:C:O4'	2.12	0.49
53:27:677:A:H2'	53:27:678:C:H6	1.78	0.49
53:27:797:G:H2'	53:27:798:G:H8	1.77	0.49
53:27:1023:U:O2'	53:27:1122:G:H5'	2.13	0.49
53:27:1300:G:H4'	53:27:1301:A:C5'	2.38	0.49
53:27:1930:G:H2'	53:27:1968:G:O6	2.13	0.49
53:27:1957:C:H2'	53:27:1958:C:H6	1.75	0.49
53:27:2221:G:O2'	53:27:2222:C:H5'	2.13	0.49
58:32:51:C:H2'	58:32:52:G:H8	1.78	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.49
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.49
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.49
59:33:425:LEU:HD12	59:33:425:LEU:N	2.28	0.49
59:33:721:VAL:O	59:33:725:VAL:HG23	2.12	0.49
1:A:245:THR:CG2	1:A:249:VAL:HB	2.43	0.49
3:C:188:MET:HE1	3:C:196:VAL:HG21	1.93	0.49
4:D:121:PHE:CE1	4:D:127:TYR:HB2	2.47	0.49
6:F:79:THR:HG23	6:F:145:ASN:O	2.13	0.49
8:H:67:THR:HG23	8:H:69:VAL:HG23	1.95	0.49
12:L:26:VAL:HG23	12:L:133:LYS:HB2	1.95	0.49
14:N:49:VAL:HG13	14:N:81:ARG:HB2	1.95	0.49
26:Z:31:ASP:OD1	26:Z:32:LEU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:5:13:ASN:O	31:5:15:LYS:HG2	2.13	0.49
32:6:8:MET:O	32:6:10:LYS:HG3	2.12	0.49
32:6:57:ASN:HA	32:6:60:ALA:HB3	1.95	0.49
32:6:93:HIS:ND1	32:6:145:ASN:O	2.45	0.49
32:6:108:GLN:NE2	32:6:111:LYS:HD3	2.28	0.49
35:9:156:ARG:HD2	38:12:44:PHE:CZ	2.48	0.49
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.43	0.49
38:12:105:THR:OG1	38:12:110:MET:HE3	2.12	0.49
40:14:102:LEU:HD23	40:14:102:LEU:C	2.37	0.49
41:15:108:ASN:HD22	51:25:4:LYS:HE3	1.78	0.49
41:15:126:ARG:HA	41:15:126:ARG:HD3	1.59	0.49
42:16:56:LEU:HD12	42:16:60:PHE:HB2	1.93	0.49
46:20:7:ALA:O	46:20:29:ASN:ND2	2.45	0.49
46:20:67:ILE:H	46:20:67:ILE:CD1	2.20	0.49
52:26:203:G:H1'	52:26:466:A:C2	2.41	0.49
52:26:825:A:H2'	52:26:826:C:C6	2.48	0.49
52:26:831:A:H2'	52:26:832:G:O4'	2.12	0.49
52:26:1032:G:N3	52:26:1032:G:H2'	2.27	0.49
52:26:1225:A:H2'	52:26:1225:A:N3	2.27	0.49
53:27:1183:U:H2'	53:27:1184:U:C6	2.47	0.49
53:27:1484:U:H2'	53:27:1485:U:C6	2.48	0.49
53:27:1826:G:C6	53:27:1827:U:C4	3.01	0.49
53:27:1908:C:O5'	53:27:1908:C:H6	1.96	0.49
53:27:2415:G:C5	53:27:2416:C:C4	3.01	0.49
53:27:2702:G:H2'	53:27:2702:G:N3	2.27	0.49
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
1:A:104:LEU:O	1:A:106:PRO:HD3	2.13	0.49
1:A:270:ARG:NH2	53:27:1798:U:OP2	2.45	0.49
3:C:75:SER:O	3:C:78:TRP:HB2	2.12	0.49
6:F:4:ILE:N	6:F:37:VAL:O	2.46	0.49
7:G:114:GLU:CG	7:G:115:GLY:H	2.22	0.49
8:H:89:SER:HB2	8:H:97:VAL:HG22	1.94	0.49
17:Q:31:GLU:O	17:Q:62:GLU:HG3	2.12	0.49
17:Q:39:LEU:HD12	17:Q:49:ILE:HG21	1.95	0.49
17:Q:39:LEU:CD1	17:Q:53:PHE:H	2.26	0.49
22:V:73:ARG:NH2	53:27:2333:A:OP2	2.44	0.49
25:Y:50:VAL:O	25:Y:52:PHE:N	2.46	0.49
28:2:20:TYR:HE2	28:2:37:LYS:HB3	1.77	0.49
30:4:23:HIS:ND1	30:4:24:LYS:O	2.44	0.49
32:6:15:PHE:O	32:6:40:ILE:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:29:LYS:HE2	42:16:58:ASN:HD22	1.77	0.49
52:26:299:G:C6	52:26:300:A:C6	3.01	0.49
52:26:484:G:H4'	52:26:485:U:H5'	1.92	0.49
52:26:963:G:C4	52:26:964:A:C8	3.01	0.49
52:26:1457:G:O2'	52:26:1458:G:H5'	2.13	0.49
53:27:141:G:OP1	53:27:142:A:C6	2.66	0.49
53:27:155:A:H2'	53:27:156:A:C8	2.48	0.49
53:27:155:A:H2'	53:27:156:A:H8	1.78	0.49
53:27:760:G:H2'	53:27:761:A:O4'	2.12	0.49
53:27:813:U:H2'	53:27:814:C:C6	2.47	0.49
53:27:1094:U:H2'	53:27:1096:A:OP2	2.13	0.49
53:27:1117:C:H2'	53:27:1118:C:C6	2.47	0.49
53:27:1998:A:H2'	53:27:1999:C:C6	2.47	0.49
53:27:2487:G:H2'	53:27:2488:G:C8	2.47	0.49
53:27:2655:G:N2	53:27:2664:G:H2'	2.28	0.49
54:28:35:C:C2'	54:28:36:C:H5'	2.42	0.49
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.49
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.49
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.49
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.49
59:33:673:ALA:C	59:33:707:LEU:HD12	2.38	0.49
59:33:681:ARG:O	59:33:685:THR:N	2.27	0.49
1:A:139:THR:HG21	1:A:193:GLU:OE2	2.13	0.49
7:G:23:LEU:HB3	7:G:87:GLU:OE1	2.13	0.49
11:K:47:ARG:NH2	53:27:195:A:H4'	2.28	0.49
13:M:103:ARG:HB3	13:M:108:ALA:HB3	1.95	0.49
24:X:23:ARG:HA	24:X:27:ASN:OD1	2.13	0.49
29:3:4:THR:HG23	53:27:788:A:H1'	1.95	0.49
34:8:88:ASN:O	34:8:92:LEU:HG	2.12	0.49
52:26:600:A:O2'	52:26:601:G:H5'	2.13	0.49
52:26:915:A:H2'	52:26:916:U:O4'	2.13	0.49
52:26:950:U:H4'	52:26:971:G:N2	2.28	0.49
52:26:1296:C:H4'	52:26:1302:C:N4	2.28	0.49
53:27:250:G:C5	53:27:251:A:C5	3.01	0.49
53:27:255:A:H2'	53:27:256:A:O4'	2.13	0.49
53:27:514:A:H2'	53:27:515:A:O4'	2.12	0.49
53:27:754:U:H2'	53:27:755:U:H6	1.76	0.49
53:27:883:G:H2'	53:27:884:U:C6	2.47	0.49
53:27:1934:C:O2'	53:27:1935:G:H5'	2.13	0.49
53:27:2124:G:O6	53:27:2175:C:H1'	2.13	0.49
53:27:2251:G:C2	53:27:2252:G:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2358:A:H2'	53:27:2359:C:O4'	2.13	0.49
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.49
6:F:44:ILE:O	6:F:48:GLU:N	2.46	0.48
7:G:88:HIS:HB2	7:G:89:PRO:HD3	1.95	0.48
8:H:75:ALA:HB3	53:27:1060:U:H5	1.78	0.48
11:K:75:ALA:HB2	11:K:105:ILE:HD12	1.95	0.48
13:M:47:VAL:C	13:M:50:PRO:HD2	2.38	0.48
18:R:62:ASP:N	18:R:62:ASP:OD1	2.45	0.48
19:S:79:ASP:N	19:S:79:ASP:OD1	2.44	0.48
26:Z:41:HIS:CE1	26:Z:43:PHE:HB3	2.48	0.48
29:3:39:ARG:NH2	53:27:468:G:N7	2.61	0.48
34:8:171:GLU:CG	34:8:182:LYS:HD2	2.41	0.48
35:9:51:LYS:NZ	52:26:1081:A:OP2	2.45	0.48
35:9:76:ASN:O	35:9:77:ASN:C	2.56	0.48
35:9:88:HIS:CE1	35:9:137:ARG:HG2	2.48	0.48
35:9:160:VAL:O	35:9:163:ILE:HG13	2.13	0.48
37:11:91:ARG:HG3	37:11:92:PRO:HD2	1.95	0.48
41:15:52:ARG:H	41:15:55:ARG:HB2	1.78	0.48
42:16:88:ASP:HB2	52:26:523:A:N1	2.27	0.48
44:18:2:LYS:HA	52:26:1048:G:OP1	2.13	0.48
44:18:48:GLN:NE2	49:23:9:PHE:HE1	2.10	0.48
52:26:192:A:H2'	52:26:193:C:C6	2.48	0.48
52:26:452:A:H2'	52:26:453:G:O4'	2.13	0.48
52:26:1222:G:O2'	52:26:1223:C:H5'	2.12	0.48
53:27:1030:C:H2'	53:27:1031:G:H8	1.76	0.48
53:27:1259:G:H2'	53:27:1260:A:C8	2.47	0.48
53:27:1479:G:O2'	53:27:1480:C:H5'	2.13	0.48
53:27:1504:A:H2'	53:27:1505:A:O4'	2.13	0.48
53:27:1632:A:H2'	53:27:1633:G:O4'	2.12	0.48
53:27:1770:G:C6	53:27:1983:G:C5	3.01	0.48
53:27:1844:C:H2'	53:27:1845:G:C8	2.42	0.48
53:27:2623:G:H5'	53:27:2826:A:O2'	2.13	0.48
58:32:34:C:H3'	58:32:35:A:C5'	2.42	0.48
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.48
5:E:41:GLU:HG3	5:E:54:ARG:HA	1.96	0.48
7:G:34:THR:HG21	53:27:1085:A:H61	1.78	0.48
7:G:34:THR:O	7:G:38:MET:HG3	2.13	0.48
7:G:40:GLU:O	7:G:43:LYS:HB3	2.13	0.48
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.94	0.48
14:N:49:VAL:HG21	14:N:82:ALA:CA	2.34	0.48
22:V:16:ARG:HG3	53:27:2356:U:H4'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:94:ALA:O	33:7:96:VAL:HG22	2.13	0.48
34:8:68:GLU:HB3	52:26:546:A:P	2.53	0.48
41:15:78:ILE:HG22	41:15:79:LYS:O	2.13	0.48
44:18:2:LYS:HE3	44:18:5:MET:HG2	1.95	0.48
44:18:48:GLN:OE1	44:18:48:GLN:N	2.37	0.48
44:18:92:ILE:HD12	44:18:92:ILE:N	2.24	0.48
52:26:37:U:H2'	52:26:38:G:C8	2.48	0.48
52:26:41:G:H2'	52:26:42:G:C8	2.48	0.48
52:26:78:A:H2'	52:26:79:G:N7	2.28	0.48
52:26:320:A:H2'	52:26:321:A:H8	1.75	0.48
52:26:676:A:H2'	52:26:677:U:H6	1.75	0.48
52:26:810:C:H2'	52:26:811:C:O4'	2.13	0.48
52:26:945:G:C2	52:26:946:A:C8	3.02	0.48
53:27:528:A:N1	53:27:2042:A:H2'	2.28	0.48
53:27:583:G:H2'	53:27:584:C:C6	2.48	0.48
53:27:801:G:H4'	53:27:802:A:OP2	2.12	0.48
53:27:1533:C:C2'	53:27:1534:U:H5''	2.41	0.48
53:27:1732:C:O2'	53:27:1733:G:H5'	2.13	0.48
53:27:1793:C:H2'	53:27:1794:A:H8	1.78	0.48
53:27:2262:U:H2'	53:27:2263:C:C6	2.49	0.48
53:27:2537:U:H2'	53:27:2538:C:H6	1.73	0.48
58:32:48:C:O2	58:32:59:A:H1'	2.13	0.48
59:33:49:HIS:CB	59:33:50:PRO:HD2	2.33	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:443:LYS:HB2	59:33:462:GLU:HB2	1.95	0.48
1:A:165:ALA:HB3	1:A:172:THR:HB	1.95	0.48
3:C:98:LYS:O	3:C:102:ARG:HG2	2.13	0.48
4:D:54:ALA:O	4:D:57:ALA:HB3	2.13	0.48
6:F:69:ALA:O	6:F:72:ILE:HB	2.14	0.48
8:H:11:GLN:NE2	8:H:74:PRO:HG2	2.28	0.48
8:H:60:VAL:HG12	8:H:61:TYR:N	2.29	0.48
10:J:66:LYS:HD3	53:27:1666:G:P	2.54	0.48
12:L:34:LYS:HD3	21:U:81:PRO:O	2.14	0.48
13:M:96:ARG:HD3	53:27:2882:A:OP1	2.14	0.48
18:R:23:LEU:HD11	27:1:23:ALA:N	2.28	0.48
33:7:39:ARG:NH2	33:7:56:ILE:HG12	2.28	0.48
33:7:95:GLY:O	33:7:96:VAL:HG13	2.13	0.48
37:11:48:THR:O	37:11:51:GLN:HB3	2.14	0.48
39:13:70:GLY:O	39:13:74:GLN:HG3	2.13	0.48
39:13:113:LYS:HE2	39:13:118:ARG:C	2.38	0.48
40:14:18:ILE:HG23	40:14:19:ASP:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.95	0.48
46:20:7:ALA:HB1	46:20:9:HIS:CE1	2.47	0.48
49:23:14:LEU:HD12	49:23:32:THR:OG1	2.12	0.48
52:26:1282:C:H2'	52:26:1283:U:C6	2.47	0.48
52:26:1370:G:C2	52:26:1371:G:C8	3.01	0.48
53:27:870:U:C2'	53:27:871:U:H5'	2.43	0.48
53:27:926:G:H2'	53:27:927:A:H8	1.77	0.48
53:27:1390:U:O2'	53:27:1391:U:H5'	2.13	0.48
53:27:1900:A:C2	53:27:1970:A:C5	3.01	0.48
53:27:2247:A:H2'	53:27:2248:C:C6	2.48	0.48
53:27:2369:A:H2'	53:27:2370:G:H8	1.77	0.48
53:27:2603:G:C2'	53:27:2604:U:H5'	2.44	0.48
56:30:14:A:H2'	56:30:15:G:H4'	1.95	0.48
56:30:61:C:O2'	56:30:62:C:H5'	2.13	0.48
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.48
2:B:112:THR:HG22	2:B:113:SER:O	2.14	0.48
2:B:145:SER:O	53:27:2512:C:H1'	2.14	0.48
4:D:55:ASP:O	4:D:58:ALA:HB3	2.13	0.48
5:E:173:ALA:O	5:E:175:LYS:N	2.46	0.48
16:P:27:ARG:HH11	53:27:532:A:H2'	1.79	0.48
18:R:31:GLN:O	18:R:35:ILE:HG13	2.12	0.48
29:3:5:PHE:CD1	53:27:464:U:H5'	2.49	0.48
32:6:112:ARG:O	32:6:116:LEU:HB2	2.14	0.48
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.28	0.48
38:12:106:SER:HA	52:26:642:A:C8	2.48	0.48
39:13:51:LEU:HD11	39:13:62:LEU:CD1	2.38	0.48
42:16:106:VAL:HB	42:16:109:ARG:HG3	1.95	0.48
51:25:7:GLU:OE2	51:25:14:ALA:HA	2.13	0.48
52:26:738:C:H2'	52:26:739:C:C6	2.48	0.48
52:26:834:U:H2'	52:26:835:U:C6	2.48	0.48
52:26:917:G:H2'	52:26:918:A:C8	2.48	0.48
52:26:1248:A:H2'	52:26:1249:C:C6	2.49	0.48
52:26:1332:A:H2'	52:26:1333:A:C8	2.48	0.48
52:26:1476:A:H2'	52:26:1477:U:O4'	2.14	0.48
53:27:61:C:H2'	53:27:62:U:H5'	1.95	0.48
53:27:524:G:H2'	53:27:525:U:C6	2.48	0.48
53:27:690:G:O2'	53:27:691:C:H5'	2.13	0.48
53:27:1270:C:H5''	53:27:1271:G:O5'	2.14	0.48
53:27:1468:U:H2'	53:27:1522:A:N6	2.28	0.48
53:27:2026:U:H2'	53:27:2027:G:O4'	2.13	0.48
53:27:2419:U:H2'	53:27:2420:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:29:6:G:H2'	55:29:7:G:O4'	2.13	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.13	0.48
3:C:163:ASN:HB2	53:27:322:A:P	2.53	0.48
4:D:9:ASP:CG	4:D:10:GLU:H	2.20	0.48
7:G:59:LEU:HD23	7:G:61:ARG:H	1.79	0.48
9:I:32:LEU:CD2	9:I:54:ILE:HG21	2.44	0.48
13:M:55:ALA:HA	13:M:80:PHE:CD1	2.49	0.48
16:P:107:ALA:HB3	17:Q:46:GLU:HG3	1.94	0.48
17:Q:22:LEU:HD13	17:Q:96:VAL:HG22	1.96	0.48
20:T:27:VAL:HG11	53:27:85:G:C5'	2.43	0.48
21:U:45:ASP:O	21:U:48:MET:HB3	2.14	0.48
22:V:21:ARG:HA	22:V:25:GLU:OE1	2.14	0.48
27:1:48:TYR:CE2	27:1:49:ARG:HG3	2.49	0.48
33:7:56:ILE:CD1	33:7:65:VAL:HG13	2.44	0.48
34:8:43:ARG:HH21	52:26:512:U:P	2.36	0.48
34:8:61:ARG:HH21	34:8:68:GLU:H	1.62	0.48
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.95	0.48
38:12:88:LYS:O	38:12:91:LEU:HG	2.13	0.48
43:17:78:ARG:O	43:17:82:LEU:HB2	2.14	0.48
52:26:137:U:H2'	52:26:138:G:H8	1.78	0.48
52:26:608:A:H2'	52:26:609:A:C8	2.48	0.48
52:26:1070:U:H2'	52:26:1071:C:C6	2.48	0.48
52:26:1406:U:C2'	52:26:1407:C:H5'	2.44	0.48
53:27:1054:A:H2'	53:27:1055:G:H8	1.79	0.48
53:27:1076:C:O2'	53:27:1077:A:H5'	2.14	0.48
53:27:1683:U:H2'	53:27:1684:G:H8	1.79	0.48
53:27:1783:A:N1	53:27:2587:A:H2'	2.28	0.48
53:27:1914:C:H2'	53:27:1915:U:O4'	2.13	0.48
53:27:2073:C:H2'	53:27:2074:U:C6	2.40	0.48
53:27:2586:U:H2'	53:27:2587:A:C8	2.48	0.48
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.48
59:33:333:THR:O	59:33:333:THR:CG2	2.62	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
59:33:671:VAL:HG13	59:33:710:ILE:HB	1.96	0.48
1:A:251:THR:OG1	1:A:252:LYS:N	2.45	0.48
2:B:5:VAL:HG11	2:B:80:TRP:CE3	2.48	0.48
4:D:84:ILE:HG21	53:27:2312:U:H5'	1.95	0.48
4:D:115:GLY:O	4:D:116:LEU:HD12	2.13	0.48
8:H:77:VAL:HG23	53:27:1063:G:OP1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:26:LEU:HD23	14:N:92:PHE:HD1	1.79	0.48
14:N:80:GLU:O	14:N:84:GLU:HG3	2.14	0.48
20:T:48:VAL:H	20:T:53:GLN:HA	1.77	0.48
30:4:54:LEU:O	30:4:58:ILE:HG13	2.14	0.48
32:6:107:ARG:HG3	32:6:108:GLN:H	1.79	0.48
35:9:77:ASN:OD1	35:9:78:GLY:N	2.43	0.48
38:12:121:GLY:C	52:26:599:C:H4'	2.38	0.48
44:18:92:ILE:H	44:18:92:ILE:CD1	2.23	0.48
46:20:21:VAL:HG21	46:20:60:TRP:CD1	2.49	0.48
52:26:1004:A:H3'	52:26:1024:G:H22	1.78	0.48
53:27:47:C:H2'	53:27:48:G:H8	1.79	0.48
53:27:310:A:O2'	53:27:311:A:H5''	2.13	0.48
53:27:1529:G:H2'	53:27:1530:G:C1'	2.43	0.48
53:27:1542:U:H2'	53:27:1543:G:O4'	2.14	0.48
53:27:1549:A:H2'	53:27:1550:C:H6	1.78	0.48
53:27:1575:C:H2'	53:27:1576:U:C6	2.49	0.48
53:27:1770:G:C5	53:27:1983:G:C6	3.02	0.48
53:27:2626:C:H2'	53:27:2627:G:C8	2.49	0.48
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.78	0.48
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.48
4:D:34:THR:C	4:D:35:LEU:HD12	2.38	0.48
4:D:151:LEU:HD12	4:D:152:ASP:N	2.29	0.48
5:E:117:PRO:HG2	5:E:118:ALA:H	1.77	0.48
8:H:72:THR:CG2	8:H:112:LYS:HA	2.42	0.48
14:N:34:HIS:ND1	14:N:53:THR:OG1	2.42	0.48
15:O:20:ARG:HD3	15:O:112:ARG:NE	2.29	0.48
16:P:88:GLU:HG2	17:Q:52:PRO:HB3	1.96	0.48
18:R:65:ASP:OD2	18:R:68:ASP:N	2.46	0.48
20:T:3:LYS:HB3	20:T:82:VAL:HG21	1.95	0.48
21:U:44:HIS:CE1	21:U:48:MET:HB2	2.49	0.48
27:1:38:LEU:HD22	27:1:41:HIS:ND1	2.29	0.48
28:2:40:PRO:HG2	28:2:41:VAL:H	1.79	0.48
32:6:162:VAL:O	32:6:184:ALA:HA	2.13	0.48
36:10:8:PHE:CG	36:10:78:PHE:HE1	2.31	0.48
38:12:46:GLU:HB3	38:12:61:THR:HG22	1.95	0.48
39:13:29:ILE:HA	39:13:64:ILE:O	2.13	0.48
44:18:9:GLU:O	44:18:12:ARG:HB2	2.13	0.48
47:21:67:SER:OG	47:21:68:LYS:N	2.47	0.48
52:26:25:C:H2'	52:26:26:A:C8	2.49	0.48
52:26:908:A:H2'	52:26:909:A:C8	2.47	0.48
52:26:1387:G:H2'	52:26:1388:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:121:G:H2'	53:27:122:G:C8	2.49	0.48
53:27:887:U:O2'	53:27:888:C:H5''	2.14	0.48
53:27:1177:G:H2'	53:27:1178:C:O4'	2.14	0.48
53:27:1186:G:N2	53:27:1187:G:H1'	2.29	0.48
53:27:1259:G:H2'	53:27:1260:A:H8	1.77	0.48
53:27:2190:G:H2'	53:27:2191:A:C8	2.49	0.48
53:27:2555:U:H2'	53:27:2556:C:H5'	1.96	0.48
53:27:2821:A:H2'	53:27:2822:G:C8	2.49	0.48
59:33:410:THR:N	59:33:414:ASP:O	2.45	0.48
59:33:621:ILE:C	59:33:621:ILE:HD12	2.38	0.48
1:A:109:LEU:HG	1:A:110:LYS:H	1.78	0.48
1:A:124:LYS:HB3	1:A:127:ASN:ND2	2.29	0.48
1:A:170:TYR:HB3	1:A:182:LYS:HG2	1.95	0.48
3:C:34:ALA:HB2	3:C:94:GLN:HE21	1.78	0.48
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.48
3:C:52:VAL:HG13	53:27:452:G:OP1	2.13	0.48
4:D:97:GLU:OE1	26:Z:25:ARG:HD2	2.14	0.48
6:F:1:MET:HG3	6:F:3:VAL:HG23	1.95	0.48
7:G:117:LEU:HD12	7:G:117:LEU:C	2.39	0.48
8:H:106:GLN:O	8:H:109:ALA:HB3	2.13	0.48
10:J:63:VAL:HG23	10:J:64:ARG:HG3	1.95	0.48
32:6:15:PHE:O	32:6:40:ILE:HB	2.13	0.48
33:7:177:LEU:HG	52:26:1112:C:N3	2.29	0.48
34:8:59:LYS:O	34:8:63:ILE:HG13	2.13	0.48
34:8:131:ILE:HG22	52:26:403:C:H5'	1.96	0.48
35:9:163:ILE:C	35:9:163:ILE:HD12	2.38	0.48
40:14:53:ILE:HD13	52:26:1060:U:H5''	1.95	0.48
44:18:63:CYS:HB3	44:18:67:GLY:H	1.79	0.48
48:22:48:ALA:O	48:22:51:GLN:HB3	2.13	0.48
50:24:70:LYS:O	50:24:73:ARG:HB3	2.14	0.48
52:26:177:G:H2'	52:26:178:C:H5'	1.96	0.48
52:26:971:G:H3'	52:26:971:G:OP1	2.14	0.48
52:26:1301:U:O2	52:26:1301:U:C2'	2.61	0.48
52:26:1477:U:H2'	52:26:1478:U:C6	2.49	0.48
53:27:300:A:N3	53:27:319:G:H1'	2.29	0.48
53:27:528:A:H2	53:27:2043:C:H5'	1.79	0.48
53:27:770:G:H2'	53:27:771:G:H8	1.79	0.48
53:27:1797:G:C5	53:27:1798:U:C4	3.01	0.48
53:27:2502:G:H5'	53:27:2503:A:C5'	2.44	0.48
53:27:2556:C:H2'	53:27:2557:G:O4'	2.13	0.48
53:27:2568:U:C4	53:27:2569:G:N7	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.48
1:A:206:LYS:CG	1:A:209:ALA:H	2.26	0.48
2:B:13:ARG:HH22	15:O:74:GLN:CD	2.22	0.48
4:D:111:ARG:O	4:D:112:ASP:HB3	2.14	0.48
7:G:43:LYS:HD2	7:G:98:GLU:HB3	1.96	0.48
7:G:97:LYS:HZ1	7:G:126:LEU:HB2	1.79	0.48
11:K:47:ARG:NH1	53:27:196:A:OP2	2.47	0.48
14:N:85:LYS:HB2	14:N:87:ILE:HG12	1.96	0.48
19:S:60:THR:O	53:27:1341:G:H4'	2.13	0.48
33:7:174:LEU:HD21	33:7:200:TRP:HD1	1.78	0.48
34:8:2:ARG:HD2	34:8:114:ARG:HE	1.79	0.48
36:10:38:ARG:NH2	36:10:40:GLU:OE1	2.47	0.48
41:15:40:ALA:O	52:26:684:U:O2'	2.26	0.48
41:15:76:TYR:O	41:15:77:GLY:C	2.56	0.48
44:18:58:ARG:HH12	52:26:979:C:C2'	2.27	0.48
48:22:39:VAL:HG13	48:22:40:PRO:HD2	1.96	0.48
52:26:255:G:H2'	52:26:256:U:H6	1.78	0.48
52:26:540:G:H2'	52:26:541:G:H8	1.77	0.48
52:26:1029:U:H2'	52:26:1031:C:O2	2.13	0.48
52:26:1205:U:H2'	52:26:1206:G:H8	1.79	0.48
53:27:279:A:H2'	53:27:280:U:O4'	2.14	0.48
53:27:354:A:H2'	53:27:355:U:O4'	2.14	0.48
53:27:581:C:O5'	53:27:581:C:H6	1.96	0.48
53:27:819:A:C2	53:27:820:A:C4	3.02	0.48
53:27:927:A:H2'	53:27:928:A:C8	2.49	0.48
53:27:1076:C:C2'	53:27:1077:A:H5'	2.44	0.48
53:27:1539:U:H2'	53:27:1540:G:C8	2.47	0.48
53:27:2470:G:O2'	53:27:2471:A:H5'	2.14	0.48
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.48
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.48
2:B:26:VAL:HG22	2:B:188:LEU:CD2	2.44	0.48
3:C:43:THR:O	53:27:38:A:H1'	2.13	0.48
3:C:175:ILE:HB	3:C:180:LEU:HD11	1.96	0.48
4:D:131:VAL:HG21	4:D:151:LEU:HG	1.95	0.48
5:E:155:PRO:O	5:E:170:THR:HA	2.13	0.48
6:F:58:LEU:O	6:F:61:VAL:HG22	2.14	0.48
11:K:55:MET:HE3	53:27:2392:A:C2	2.49	0.48
12:L:26:VAL:HA	12:L:104:GLU:CD	2.38	0.48
28:2:24:LYS:NZ	28:2:26:LYS:HA	2.29	0.48
43:17:28:ARG:O	43:17:31:ALA:HB3	2.14	0.48
44:18:80:ARG:O	44:18:83:VAL:HG12	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:575:G:O2'	52:26:821:G:H5'	2.13	0.48
52:26:768:A:O2'	52:26:769:G:H5'	2.13	0.48
52:26:772:U:H2'	52:26:773:G:C8	2.49	0.48
53:27:191:A:C2	53:27:192:C:C2	3.02	0.48
53:27:306:U:H2'	53:27:307:G:O4'	2.14	0.48
53:27:531:C:C5	53:27:2035:G:C2	3.02	0.48
53:27:647:G:H8	53:27:647:G:OP2	1.96	0.48
53:27:910:A:H2'	53:27:911:A:C8	2.48	0.48
53:27:974:G:C8	53:27:990:A:N6	2.79	0.48
53:27:1293:C:H2'	53:27:1294:U:O4'	2.14	0.48
53:27:2116:G:N1	53:27:2165:C:H1'	2.29	0.48
53:27:2661:G:C6	53:27:2662:A:C2	3.02	0.48
53:27:2812:G:H2'	53:27:2813:A:O4'	2.13	0.48
54:28:29:A:H2'	54:28:30:C:C6	2.48	0.48
54:28:53:A:C2'	54:28:54:G:H5'	2.44	0.48
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.48
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
59:33:669:VAL:HG23	59:33:739:ARG:C	2.39	0.48
1:A:68:ARG:HH21	1:A:115:ILE:HD13	1.79	0.47
1:A:131:MET:HG2	1:A:134:ILE:HD12	1.96	0.47
2:B:13:ARG:O	2:B:14:ILE:HD13	2.14	0.47
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.13	0.47
7:G:14:GLU:O	7:G:18:VAL:HG23	2.14	0.47
7:G:50:VAL:HG13	53:27:1082:U:H5''	1.96	0.47
10:J:60:ALA:HA	10:J:87:LEU:HG	1.95	0.47
15:O:30:TRP:NE1	15:O:81:ASP:OD1	2.47	0.47
28:2:14:ALA:HB2	28:2:46:VAL:HG21	1.96	0.47
33:7:174:LEU:HB2	52:26:1108:G:OP1	2.13	0.47
33:7:184:ASN:OD1	33:7:185:THR:N	2.47	0.47
34:8:84:ASN:HB3	34:8:87:GLU:OE1	2.14	0.47
35:9:12:GLU:OE1	35:9:12:GLU:N	2.48	0.47
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.14	0.47
35:9:148:SER:HB2	35:9:149:PRO:HD2	1.95	0.47
35:9:155:LYS:HG3	35:9:156:ARG:H	1.78	0.47
36:10:40:GLU:HB3	36:10:61:LEU:HD23	1.96	0.47
37:11:26:VAL:HG22	37:11:42:VAL:HG21	1.95	0.47
38:12:7:ALA:O	38:12:11:THR:HG23	2.14	0.47
38:12:64:TYR:CD1	38:12:69:ALA:HA	2.45	0.47
47:21:49:ASN:O	47:21:50:ASN:C	2.57	0.47
49:23:10:ILE:HG22	49:23:38:THR:N	2.29	0.47
52:26:197:A:H1'	52:26:198:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:265:G:H2'	52:26:267:C:C5	2.49	0.47
52:26:696:A:H1'	52:26:786:G:O2'	2.14	0.47
52:26:1053:G:N7	52:26:1199:U:H3'	2.29	0.47
52:26:1376:U:H2'	52:26:1377:A:H8	1.79	0.47
53:27:197:A:C6	53:27:198:C:C2	3.02	0.47
53:27:648:G:O4'	53:27:2351:G:H5''	2.13	0.47
53:27:666:A:H2'	53:27:667:U:H6	1.78	0.47
53:27:671:C:H2'	53:27:672:C:H6	1.78	0.47
53:27:752:A:H62	53:27:2609:U:H3	1.62	0.47
53:27:799:G:H3'	53:27:800:A:H8	1.79	0.47
53:27:1656:C:H2'	53:27:1657:U:C6	2.47	0.47
53:27:1895:C:C3'	53:27:1896:G:H5''	2.44	0.47
53:27:2407:A:H2'	53:27:2408:U:C6	2.48	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
59:33:551:ILE:O	59:33:552:ARG:CB	2.61	0.47
59:33:671:VAL:HG22	59:33:671:VAL:O	2.14	0.47
1:A:140:VAL:HG12	1:A:191:LEU:HD23	1.95	0.47
2:B:2:ILE:HD13	2:B:90:PHE:CZ	2.48	0.47
4:D:52:ALA:CB	4:D:149:ARG:HD2	2.44	0.47
8:H:18:ASN:N	8:H:19:PRO:HD2	2.27	0.47
9:I:45:THR:HB	9:I:48:VAL:HB	1.96	0.47
13:M:116:VAL:O	13:M:117:ASP:HB2	2.14	0.47
22:V:12:SER:HB2	53:27:2262:U:OP2	2.14	0.47
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.96	0.47
52:26:430:A:H2'	52:26:431:A:H5'	1.96	0.47
52:26:737:C:H2'	52:26:738:C:H6	1.80	0.47
52:26:1028:C:C2'	52:26:1029:U:H4'	2.43	0.47
53:27:287:G:O2'	53:27:288:U:H5'	2.13	0.47
53:27:615:U:H5''	53:27:616:A:OP2	2.14	0.47
53:27:629:G:H5''	53:27:650:C:O2'	2.14	0.47
53:27:965:C:O2'	53:27:966:G:H5'	2.14	0.47
53:27:1174:U:H5'	53:27:1175:A:OP2	2.14	0.47
53:27:1209:U:C2'	53:27:1210:G:H5''	2.44	0.47
53:27:1396:U:H5''	53:27:1397:U:OP2	2.14	0.47
53:27:1421:G:C2	53:27:1422:G:C8	3.02	0.47
53:27:1474:U:H2'	53:27:1475:G:O4'	2.14	0.47
53:27:2385:C:O2'	53:27:2386:A:H5'	2.14	0.47
53:27:2489:U:H2'	53:27:2490:G:O4'	2.14	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.47
59:33:686:ILE:HG22	59:33:690:GLU:OE1	2.14	0.47
1:A:158:GLY:HA3	53:27:1820:U:N3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:204:LEU:HD21	1:A:213:ARG:NE	2.29	0.47
2:B:114:LYS:HD3	53:27:2723:C:OP1	2.14	0.47
4:D:100:GLU:C	4:D:102:LEU:H	2.22	0.47
5:E:51:PHE:CZ	5:E:71:LEU:HD12	2.49	0.47
7:G:6:GLN:O	7:G:9:GLN:HB3	2.14	0.47
7:G:35:VAL:HG22	53:27:1057:A:H4'	1.94	0.47
7:G:52:MET:HE2	7:G:54:VAL:CB	2.39	0.47
8:H:79:LEU:HD21	8:H:128:ILE:HG22	1.96	0.47
9:I:2:LYS:HA	53:27:995:C:C4	2.49	0.47
9:I:120:ARG:NE	53:27:2780:G:OP2	2.46	0.47
14:N:72:ALA:HA	14:N:109:ALA:HB2	1.94	0.47
17:Q:70:GLU:O	17:Q:90:ARG:HA	2.14	0.47
27:1:13:GLY:HA3	53:27:16:C:C5'	2.43	0.47
32:6:113:LEU:HD13	32:6:143:LEU:HB2	1.96	0.47
34:8:96:ARG:O	34:8:100:VAL:HG23	2.14	0.47
35:9:137:ARG:CZ	52:26:1078:U:H4'	2.44	0.47
37:11:6:ILE:HD12	37:11:6:ILE:O	2.14	0.47
42:16:113:ARG:HE	42:16:120:ARG:CA	2.25	0.47
52:26:192:A:H2'	52:26:193:C:H6	1.79	0.47
52:26:1004:A:H2'	52:26:1005:A:C8	2.49	0.47
52:26:1137:C:H4'	52:26:1138:G:H5'	1.95	0.47
53:27:346:A:H5'	53:27:346:A:C8	2.50	0.47
53:27:401:A:C2	53:27:402:A:C4	3.02	0.47
53:27:727:A:H2'	53:27:728:G:O4'	2.14	0.47
53:27:837:C:H2'	53:27:838:C:H5'	1.97	0.47
53:27:1026:G:H2'	53:27:1027:A:C8	2.47	0.47
53:27:1416:G:H2'	53:27:1417:C:C6	2.49	0.47
53:27:1663:G:N1	53:27:1998:A:C6	2.82	0.47
53:27:1805:A:H2'	53:27:1806:C:H6	1.79	0.47
53:27:1949:G:H2'	53:27:1950:G:C8	2.49	0.47
53:27:2021:C:H3'	53:27:2022:U:H5''	1.96	0.47
53:27:2508:G:C4	53:27:2509:G:C8	3.02	0.47
53:27:2625:G:H2'	53:27:2626:C:C6	2.48	0.47
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.47
59:33:679:LEU:HD22	59:33:734:ASP:HB3	1.96	0.47
1:A:51:ARG:O	1:A:52:HIS:HB2	2.15	0.47
6:F:90:LEU:HG	6:F:123:ARG:O	2.14	0.47
6:F:122:LEU:CD2	6:F:128:HIS:HB2	2.43	0.47
7:G:27:VAL:HG12	7:G:110:ALA:HB1	1.96	0.47
9:I:18:VAL:CG2	9:I:140:LEU:HB3	2.44	0.47
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:95:LEU:HB2	11:K:101:ILE:CD1	2.45	0.47
14:N:74:VAL:O	14:N:78:VAL:HG23	2.14	0.47
15:O:59:THR:CG2	15:O:72:VAL:HG12	2.44	0.47
16:P:47:ARG:NH2	53:27:560:C:O2'	2.47	0.47
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.49	0.47
16:P:80:ASN:OD1	53:27:1151:A:H4'	2.14	0.47
17:Q:49:ILE:HD12	17:Q:49:ILE:O	2.14	0.47
24:X:26:PHE:HD1	24:X:29:ARG:HH11	1.62	0.47
34:8:68:GLU:HG2	52:26:545:C:H5''	1.96	0.47
34:8:196:GLU:OE1	34:8:196:GLU:N	2.48	0.47
37:11:103:ILE:HG21	37:11:123:LEU:HD21	1.96	0.47
39:13:64:ILE:HG21	39:13:78:ILE:HD12	1.96	0.47
39:13:105:ARG:HG2	52:26:1118:U:H5'	1.96	0.47
42:16:23:LEU:O	42:16:25:ALA:N	2.48	0.47
47:21:52:CYS:SG	47:21:74:LEU:HD11	2.54	0.47
48:22:45:GLY:O	48:22:46:THR:O	2.32	0.47
49:23:31:ARG:HA	49:23:56:HIS:NE2	2.29	0.47
52:26:66:A:H4'	52:26:173:U:H5	1.77	0.47
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.47
52:26:160:A:C2	52:26:343:U:H4'	2.49	0.47
52:26:668:G:H2'	52:26:669:G:C8	2.44	0.47
52:26:714:G:N2	52:26:777:A:H1'	2.29	0.47
52:26:766:A:H2'	52:26:767:A:O4'	2.14	0.47
52:26:936:C:H2'	52:26:937:A:O4'	2.15	0.47
52:26:994:A:C8	52:26:1216:A:H4'	2.50	0.47
52:26:1058:G:H2'	52:26:1059:C:O4'	2.14	0.47
53:27:160:A:N3	53:27:2208:C:O2'	2.47	0.47
53:27:291:G:H2'	53:27:292:U:H6	1.77	0.47
53:27:547:A:H4'	53:27:548:G:C8	2.50	0.47
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.47
53:27:1604:C:H2'	53:27:1605:C:C6	2.50	0.47
53:27:1758:U:H5	53:27:2696:U:H5'	1.76	0.47
53:27:2573:C:OP1	53:27:2574:G:H5''	2.14	0.47
56:30:63:G:H2'	56:30:64:A:H8	1.79	0.47
58:32:57:A:H2'	58:32:58:A:H5'	1.95	0.47
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.48	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
2:B:18:ASP:OD1	2:B:19:GLY:N	2.46	0.47
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.80	0.47
3:C:118:LEU:HG	3:C:120:VAL:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:5:LEU:HD22	6:F:14:SER:OG	2.14	0.47
7:G:34:THR:CG2	53:27:1084:A:H62	2.28	0.47
8:H:2:LYS:HB3	8:H:7:TYR:CD2	2.48	0.47
12:L:75:GLU:O	12:L:87:GLY:HA3	2.13	0.47
16:P:107:ALA:HB2	17:Q:46:GLU:HG3	1.97	0.47
17:Q:20:VAL:O	17:Q:96:VAL:HG22	2.14	0.47
21:U:83:LYS:O	21:U:85:LYS:N	2.48	0.47
35:9:64:GLU:HB3	35:9:68:ARG:NH2	2.28	0.47
35:9:125:LYS:HG2	35:9:127:TYR:CZ	2.49	0.47
35:9:155:LYS:CB	38:12:70:VAL:HG13	2.45	0.47
36:10:70:VAL:HA	36:10:73:GLU:OE1	2.14	0.47
38:12:77:VAL:HG23	38:12:126:CYS:HA	1.96	0.47
39:13:33:SER:CB	39:13:36:GLN:HG2	2.41	0.47
42:16:78:VAL:O	42:16:102:ASP:HB3	2.14	0.47
42:16:113:ARG:HG2	42:16:113:ARG:HH11	1.78	0.47
44:18:23:ARG:O	44:18:23:ARG:HG2	2.15	0.47
46:20:63:GLN:NE2	52:26:227:G:O2'	2.46	0.47
48:22:10:CYS:O	48:22:12:PHE:N	2.48	0.47
50:24:48:LYS:O	50:24:52:GLU:HG3	2.14	0.47
52:26:720:C:H2'	52:26:721:G:C8	2.48	0.47
52:26:767:A:C4	52:26:768:A:C8	3.02	0.47
52:26:1359:C:H2'	52:26:1361:G:OP2	2.14	0.47
53:27:29:U:H2'	53:27:30:G:H8	1.76	0.47
53:27:360:U:H2'	53:27:361:G:N9	2.29	0.47
53:27:602:A:H1'	53:27:656:G:N2	2.30	0.47
53:27:687:C:H6	53:27:687:C:H5''	1.78	0.47
53:27:1498:C:H2'	53:27:1499:C:C6	2.49	0.47
53:27:1647:U:P	53:27:1647:U:H3'	2.55	0.47
53:27:2345:G:N3	53:27:2381:A:H2'	2.29	0.47
59:33:327:LEU:CD2	59:33:332:LYS:HB3	2.45	0.47
1:A:6:LYS:HG3	1:A:7:PRO:HD2	1.96	0.47
2:B:84:LEU:HD23	2:B:88:GLU:HG3	1.95	0.47
5:E:17:LYS:HB2	5:E:24:THR:HB	1.96	0.47
5:E:126:THR:HB	5:E:129:GLU:OE1	2.14	0.47
7:G:25:ALA:HA	7:G:96:PHE:CE1	2.50	0.47
7:G:43:LYS:O	7:G:46:ARG:HG2	2.15	0.47
8:H:11:GLN:HB3	53:27:1061:U:C5	2.50	0.47
8:H:112:LYS:HE2	8:H:116:MET:HG2	1.97	0.47
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.44	0.47
16:P:62:ALA:HB2	53:27:1009:A:H5''	1.97	0.47
21:U:21:ARG:NH2	21:U:87:GLN:HB3	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:43:ARG:HH11	53:27:2370:G:H1'	1.80	0.47
33:7:129:PHE:CD1	33:7:130:ARG:N	2.83	0.47
34:8:33:ILE:HG12	34:8:34:GLU:N	2.30	0.47
41:15:20:ALA:HB2	41:15:33:ILE:HG12	1.96	0.47
41:15:80:ASN:HB2	41:15:105:ARG:O	2.14	0.47
43:17:78:ARG:HH12	49:23:68:HIS:CE1	2.31	0.47
43:17:102:LYS:HG3	52:26:1226:C:C4	2.50	0.47
52:26:1010:U:O2'	52:26:1011:C:H5'	2.15	0.47
52:26:1064:G:H1'	52:26:1190:G:N2	2.29	0.47
52:26:1282:C:H2'	52:26:1283:U:H6	1.79	0.47
53:27:20:C:H2'	53:27:21:A:C8	2.47	0.47
53:27:49:A:H5'	53:27:51:G:O4'	2.14	0.47
53:27:689:A:C2	53:27:779:U:H4'	2.50	0.47
53:27:1059:G:H2'	53:27:1060:U:C6	2.50	0.47
53:27:1549:A:H2'	53:27:1550:C:C6	2.49	0.47
53:27:2131:U:O4'	53:27:2133:G:H4'	2.14	0.47
53:27:2592:G:H2'	53:27:2593:U:O4'	2.15	0.47
1:A:51:ARG:O	1:A:52:HIS:CB	2.63	0.47
1:A:134:ILE:HG22	1:A:135:PRO:O	2.14	0.47
1:A:203:VAL:O	1:A:205:GLY:N	2.48	0.47
2:B:13:ARG:HD2	2:B:21:SER:OG	2.14	0.47
2:B:24:VAL:HG12	2:B:190:LYS:HA	1.96	0.47
2:B:171:THR:HG22	2:B:172:VAL:N	2.30	0.47
3:C:147:LEU:CD1	3:C:168:ASP:HB3	2.44	0.47
3:C:164:LEU:HD22	3:C:167:VAL:HG23	1.96	0.47
4:D:18:GLU:C	4:D:20:ASN:H	2.23	0.47
5:E:64:ALA:O	5:E:67:ALA:HB3	2.14	0.47
10:J:2:ILE:HB	10:J:33:ALA:HB3	1.96	0.47
10:J:22:ILE:HD11	10:J:40:LYS:HB2	1.97	0.47
12:L:4:PRO:CG	12:L:70:ASP:HA	2.43	0.47
16:P:36:GLN:NE2	53:27:563:A:N3	2.54	0.47
17:Q:37:GLU:CD	17:Q:37:GLU:H	2.22	0.47
18:R:3:THR:HG21	18:R:58:ALA:CA	2.44	0.47
19:S:25:GLU:HG3	19:S:26:LYS:H	1.78	0.47
32:6:130:LYS:HD2	32:6:133:ALA:HB3	1.95	0.47
33:7:111:ASP:OD1	33:7:112:ALA:N	2.47	0.47
34:8:28:ASP:O	34:8:29:THR:C	2.57	0.47
34:8:201:GLU:O	34:8:204:SER:N	2.48	0.47
35:9:135:VAL:HG23	35:9:136:VAL:N	2.30	0.47
35:9:152:VAL:C	35:9:154:ALA:N	2.71	0.47
37:11:147:ASN:C	37:11:149:ALA:N	2.71	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:5:TYR:CD2	39:13:88:GLU:HG2	2.49	0.47
39:13:9:GLY:HA3	39:13:81:GLY:N	2.29	0.47
40:14:48:ARG:HA	40:14:65:TYR:O	2.14	0.47
41:15:19:VAL:HG22	41:15:82:GLU:HB2	1.96	0.47
43:17:16:ILE:HD12	43:17:16:ILE:N	2.29	0.47
45:19:27:GLN:O	45:19:31:LEU:HG	2.14	0.47
48:22:72:ARG:NH2	51:25:4:LYS:HD3	2.30	0.47
50:24:73:ARG:NH2	52:26:261:U:C4	2.83	0.47
52:26:109:A:C6	52:26:326:G:C6	3.03	0.47
52:26:219:U:H2'	52:26:220:G:C8	2.42	0.47
52:26:418:C:H2'	52:26:419:C:H6	1.78	0.47
52:26:609:A:H8	52:26:609:A:O5'	1.97	0.47
52:26:658:C:H2'	52:26:659:U:C6	2.50	0.47
52:26:848:C:H2'	52:26:849:G:O4'	2.15	0.47
52:26:884:U:H4'	52:26:885:G:C5'	2.41	0.47
52:26:1028:C:H3'	52:26:1029:U:H4'	1.94	0.47
52:26:1365:G:H2'	52:26:1366:C:H6	1.80	0.47
53:27:18:U:H2'	53:27:19:A:H8	1.75	0.47
53:27:239:C:H2'	53:27:240:C:O4'	2.15	0.47
53:27:324:A:H2'	53:27:325:G:O4'	2.15	0.47
53:27:406:G:H2'	53:27:407:G:H8	1.78	0.47
53:27:516:C:H2'	53:27:517:C:C6	2.50	0.47
53:27:520:G:H2'	53:27:521:U:C6	2.49	0.47
53:27:532:A:H2'	53:27:532:A:N3	2.30	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.78	0.47
53:27:729:G:H4'	53:27:763:G:C5'	2.44	0.47
53:27:743:A:O2'	53:27:744:U:H5'	2.14	0.47
53:27:744:U:H2'	53:27:745:G:O4'	2.15	0.47
53:27:859:G:HO2'	53:27:860:U:P	2.37	0.47
53:27:926:G:H2'	53:27:927:A:C8	2.50	0.47
53:27:1127:A:H2'	53:27:1128:G:H5''	1.97	0.47
53:27:1431:A:O2'	53:27:1432:G:H5'	2.15	0.47
53:27:1736:U:H2'	53:27:1737:G:C8	2.49	0.47
53:27:1788:C:H2'	53:27:1789:A:H8	1.78	0.47
53:27:1882:U:O2'	53:27:1883:U:H5'	2.14	0.47
53:27:2249:U:H3'	53:27:2250:G:H5'	1.96	0.47
53:27:2286:G:C5'	53:27:2287:A:O4'	2.63	0.47
54:28:110:C:C2'	54:28:111:U:H5'	2.45	0.47
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.76	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.47
59:33:432:HIS:CD2	59:33:434:ASP:H	2.33	0.47
59:33:504:ASN:O	59:33:508:GLY:N	2.47	0.47
59:33:639:GLU:O	59:33:643:GLU:HG3	2.15	0.47
59:33:696:GLY:O	59:33:712:MET:HA	2.14	0.47
4:D:147:ARG:HB3	4:D:149:ARG:NH1	2.29	0.47
10:J:15:GLY:HA2	10:J:47:ILE:HD11	1.97	0.47
16:P:55:GLN:HA	16:P:58:GLN:HG2	1.97	0.47
23:W:56:ARG:O	23:W:59:ASP:HB3	2.15	0.47
35:9:80:LEU:HB2	35:9:97:PRO:HA	1.97	0.47
39:13:17:ARG:NH2	52:26:1147:C:H1'	2.29	0.47
39:13:94:ARG:HA	39:13:97:LEU:CB	2.44	0.47
40:14:59:LYS:HD3	52:26:973:G:OP1	2.15	0.47
41:15:50:GLY:O	41:15:51:PHE:HB2	2.15	0.47
42:16:43:LYS:HE3	55:29:21:C:OP1	2.15	0.47
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.50	0.47
47:21:5:ARG:HD3	52:26:636:U:H5'	1.97	0.47
50:24:25:SER:HA	50:24:28:ARG:HD2	1.96	0.47
52:26:68:G:C2	52:26:69:G:H1'	2.49	0.47
52:26:518:C:H2'	52:26:530:G:C4	2.50	0.47
52:26:554:A:H2'	52:26:555:U:C6	2.50	0.47
52:26:1226:C:H4'	52:26:1227:A:OP1	2.14	0.47
52:26:1488:G:C4	52:26:1489:G:C8	3.02	0.47
53:27:173:A:H2'	53:27:174:U:H6	1.78	0.47
53:27:201:C:O2'	53:27:202:U:H5'	2.15	0.47
53:27:1097:U:C2'	53:27:1098:A:H5'	2.45	0.47
53:27:1313:U:H2'	53:27:1610:A:C2	2.50	0.47
53:27:1824:G:O2'	53:27:1825:U:H5'	2.14	0.47
53:27:1924:C:O2'	53:27:1925:C:H5'	2.14	0.47
53:27:2081:U:C4	53:27:2237:G:C2	3.02	0.47
53:27:2115:G:OP1	53:27:2166:U:H1'	2.15	0.47
53:27:2347:C:H2'	53:27:2348:U:C6	2.50	0.47
53:27:2553:G:H2'	53:27:2554:U:C4'	2.45	0.47
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.47
59:33:673:ALA:HB1	59:33:734:ASP:O	2.15	0.47
1:A:206:LYS:HB2	53:27:729:G:N7	2.30	0.47
4:D:140:ILE:HD12	4:D:140:ILE:N	2.30	0.47
11:K:126:ARG:NH1	53:27:635:C:OP2	2.48	0.47
15:O:52:ARG:H	15:O:56:SER:CB	2.28	0.47
16:P:90:ASP:OD1	16:P:90:ASP:C	2.56	0.47
25:Y:23:LEU:HD11	25:Y:53:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:90:MET:HE3	48:22:60:ARG:NE	2.30	0.47
43:17:101:THR:HG21	52:26:1226:C:OP2	2.15	0.47
47:21:50:ASN:OD1	47:21:50:ASN:N	2.47	0.47
52:26:279:A:H5''	52:26:280:C:H3'	1.97	0.47
52:26:300:A:H1'	52:26:565:U:O2	2.15	0.47
52:26:309:A:H2'	52:26:310:G:C8	2.44	0.47
53:27:595:C:O2'	53:27:596:U:H5'	2.15	0.47
53:27:694:U:H2'	53:27:695:G:C8	2.49	0.47
53:27:819:A:H3'	53:27:973:A:N6	2.30	0.47
53:27:922:C:C2	53:27:923:G:C8	3.03	0.47
53:27:1571:A:H2'	53:27:1572:A:C8	2.50	0.47
53:27:1613:G:H3'	53:27:1614:A:C5'	2.45	0.47
53:27:2079:U:C2'	53:27:2080:A:H5''	2.45	0.47
53:27:2272:U:H5''	53:27:2273:A:OP1	2.15	0.47
53:27:2821:A:O2'	53:27:2822:G:H5'	2.15	0.47
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.97	0.47
59:33:710:ILE:N	59:33:710:ILE:HD12	2.30	0.47
1:A:77:VAL:HG13	1:A:91:ALA:HB1	1.97	0.47
2:B:83:ARG:NH2	53:27:2637:U:H5''	2.30	0.47
11:K:41:ARG:HH21	11:K:41:ARG:HG3	1.80	0.47
24:X:20:ASN:HA	24:X:24:GLU:OE1	2.15	0.47
24:X:58:ASN:O	24:X:63:ALA:HB2	2.15	0.47
25:Y:13:ILE:O	25:Y:15:ARG:N	2.46	0.47
25:Y:56:VAL:HG22	25:Y:57:GLU:N	2.30	0.47
26:Z:64:PHE:C	26:Z:66:ILE:N	2.73	0.47
32:6:91:VAL:HG11	32:6:95:TRP:CD1	2.50	0.47
36:10:75:GLU:O	36:10:78:PHE:HB2	2.14	0.47
43:17:6:ILE:CD1	43:17:7:ASN:H	2.27	0.47
43:17:25:GLY:N	52:26:1329:A:H5''	2.18	0.47
45:19:87:ARG:HG3	45:19:88:ARG:N	2.25	0.47
49:23:5:LYS:HG3	49:23:6:LYS:N	2.29	0.47
50:24:59:ARG:O	50:24:63:LYS:HB2	2.14	0.47
52:26:252:U:O2	52:26:252:U:H2'	2.15	0.47
52:26:591:U:H2'	52:26:592:G:C8	2.50	0.47
52:26:692:U:H2'	52:26:694:A:OP2	2.15	0.47
52:26:826:C:O2'	52:26:827:U:H5'	2.15	0.47
53:27:652:U:H2'	53:27:653:U:H5'	1.97	0.47
53:27:959:A:O2'	53:27:960:A:H5'	2.15	0.47
53:27:1096:A:C2'	53:27:1097:U:H5''	2.45	0.47
53:27:1173:U:C3'	53:27:1174:U:H4'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1186:G:H2'	53:27:1187:G:C8	2.50	0.47
53:27:1677:A:H2'	53:27:1678:A:C8	2.50	0.47
53:27:1695:G:H2'	53:27:1696:G:O4'	2.15	0.47
53:27:2351:G:H1'	53:27:2366:A:H61	1.79	0.47
53:27:2657:A:H2'	53:27:2658:C:O4'	2.15	0.47
53:27:2686:G:H2'	53:27:2687:U:O4'	2.15	0.47
53:27:2812:G:H2'	53:27:2813:A:H8	1.80	0.47
57:31:22:G:O2'	57:31:23:C:H5'	2.15	0.47
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.47
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.45	0.46
1:A:204:LEU:CD2	1:A:213:ARG:HE	2.28	0.46
5:E:21:GLN:OE1	5:E:54:ARG:NH2	2.48	0.46
6:F:54:LEU:O	6:F:58:LEU:N	2.30	0.46
8:H:82:ALA:HB1	8:H:104:GLN:CD	2.40	0.46
11:K:111:ILE:HD11	53:27:636:G:C6	2.51	0.46
15:O:8:GLU:O	15:O:11:GLN:HB3	2.15	0.46
15:O:50:ARG:CZ	15:O:52:ARG:HG3	2.44	0.46
22:V:43:ALA:HB1	22:V:47:VAL:O	2.15	0.46
26:Z:16:CYS:SG	26:Z:34:LEU:HB2	2.55	0.46
27:1:32:THR:OG1	27:1:50:GLY:HA2	2.15	0.46
32:6:20:ARG:HD2	52:26:831:A:OP1	2.15	0.46
32:6:70:GLY:HA2	32:6:163:ILE:CG2	2.45	0.46
34:8:149:LYS:O	34:8:151:GLN:HG2	2.14	0.46
37:11:21:LEU:C	37:11:21:LEU:HD23	2.40	0.46
39:13:24:ASN:O	39:13:60:LEU:N	2.44	0.46
41:15:121:ARG:NH1	52:26:779:C:O2'	2.48	0.46
43:17:7:ASN:OD1	43:17:9:PRO:HD3	2.15	0.46
48:22:41:SER:CB	48:22:51:GLN:HE21	2.22	0.46
52:26:176:C:H2'	52:26:177:G:N3	2.31	0.46
52:26:321:A:O2'	52:26:322:C:H5'	2.14	0.46
52:26:951:G:O2'	52:26:952:U:H5'	2.15	0.46
52:26:955:U:H2'	52:26:956:U:H6	1.79	0.46
52:26:1365:G:H2'	52:26:1366:C:C6	2.50	0.46
52:26:1527:U:O2'	52:26:1528:U:H5'	2.16	0.46
53:27:35:G:C4	53:27:454:A:C2	3.03	0.46
53:27:435:C:C2'	53:27:436:C:H5'	2.46	0.46
53:27:449:A:H2'	53:27:450:G:O4'	2.15	0.46
53:27:1314:C:H2'	53:27:1315:C:H6	1.80	0.46
53:27:1685:C:H2'	53:27:1686:C:H6	1.80	0.46
53:27:1773:A:H2	53:27:1977:A:N1	2.13	0.46
53:27:2216:G:H2'	53:27:2217:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2888:C:H2'	53:27:2889:C:C6	2.50	0.46
1:A:95:TYR:HB2	1:A:99:GLU:O	2.15	0.46
1:A:269:ARG:HG2	1:A:270:ARG:N	2.31	0.46
2:B:120:GLY:HA2	53:27:1655:A:O2'	2.16	0.46
8:H:11:GLN:CD	8:H:74:PRO:HG2	2.39	0.46
8:H:55:PRO:HD3	8:H:74:PRO:CD	2.40	0.46
9:I:77:HIS:HA	9:I:83:GLY:O	2.15	0.46
13:M:31:HIS:O	13:M:32:GLU:HB2	2.16	0.46
17:Q:57:GLY:HA2	17:Q:103:ALA:OXT	2.15	0.46
17:Q:74:ILE:HB	17:Q:87:GLN:HB3	1.98	0.46
38:12:14:ARG:CD	38:12:74:ILE:HG22	2.45	0.46
38:12:86:LYS:HD2	38:12:90:GLU:HG2	1.97	0.46
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.48	0.46
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.30	0.46
44:18:93:PRO:O	44:18:94:GLY:C	2.59	0.46
48:22:10:CYS:HB2	48:22:45:GLY:HA3	1.98	0.46
52:26:532:A:H4'	52:26:533:A:OP2	2.15	0.46
52:26:689:C:C2'	52:26:690:G:H5'	2.45	0.46
52:26:1127:G:H22	52:26:1145:A:H2	1.62	0.46
53:27:20:C:O2'	53:27:21:A:H5'	2.16	0.46
53:27:979:A:H2'	53:27:982:C:H42	1.80	0.46
53:27:1019:U:H3	53:27:1142:A:H62	1.63	0.46
53:27:1162:G:H2'	53:27:1163:G:H8	1.79	0.46
53:27:1229:C:H2'	53:27:1230:A:H8	1.81	0.46
53:27:1810:A:H2'	53:27:1811:G:C5'	2.46	0.46
53:27:2124:G:O5'	53:27:2124:G:H8	1.97	0.46
53:27:2285:C:O2'	53:27:2287:A:H1'	2.15	0.46
53:27:2405:G:O2'	53:27:2411:A:N6	2.48	0.46
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.46
58:32:49:G:H2'	58:32:49:G:N3	2.31	0.46
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.46
59:33:281:ILE:HG13	59:33:281:ILE:O	2.14	0.46
4:D:120:SER:HB2	4:D:127:TYR:CE1	2.50	0.46
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.56	0.46
6:F:2:GLN:HB3	6:F:39:ALA:HB3	1.97	0.46
7:G:8:LYS:O	7:G:12:VAL:HG23	2.15	0.46
7:G:34:THR:CG2	53:27:1085:A:H61	2.28	0.46
7:G:55:VAL:HG23	7:G:55:VAL:O	2.15	0.46
9:I:68:LYS:HD3	53:27:1022:G:N7	2.30	0.46
11:K:81:ASP:C	11:K:81:ASP:OD1	2.58	0.46
11:K:109:LYS:HE3	11:K:128:THR:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:93:ILE:HG13	17:Q:11:GLN:HB3	1.96	0.46
25:Y:47:ILE:O	25:Y:51:SER:N	2.47	0.46
35:9:142:GLY:O	35:9:145:ASN:HB3	2.15	0.46
36:10:65:GLU:O	36:10:66:ALA:HB2	2.15	0.46
38:12:9:MET:HG3	38:12:10:LEU:N	2.29	0.46
50:24:23:ARG:NH2	52:26:176:C:C5'	2.77	0.46
52:26:389:A:H3'	52:26:390:U:C6	2.51	0.46
52:26:624:C:H2'	52:26:625:U:H6	1.81	0.46
52:26:798:U:H2'	52:26:799:G:O4'	2.15	0.46
52:26:1317:C:H5'	52:26:1318:A:OP2	2.15	0.46
52:26:1375:A:H2'	52:26:1376:U:O4'	2.15	0.46
53:27:279:A:H61	53:27:361:G:H1'	1.80	0.46
53:27:308:G:C8	53:27:501:A:O4'	2.68	0.46
53:27:589:U:O2'	53:27:590:A:H5'	2.15	0.46
53:27:778:G:C6	53:27:779:U:N3	2.83	0.46
53:27:975:A:H5'	53:27:976:G:OP2	2.16	0.46
53:27:1895:C:H2'	53:27:1896:G:O4'	2.15	0.46
53:27:1980:G:O2'	53:27:1981:A:H5''	2.15	0.46
53:27:2053:G:O6	53:27:2614:A:H2	1.98	0.46
54:28:85:G:H2'	54:28:86:G:H8	1.81	0.46
56:30:63:G:H2'	56:30:64:A:C8	2.50	0.46
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.29	0.46
1:A:224:MET:HE2	53:27:782:A:C5	2.51	0.46
3:C:153:LEU:HD11	3:C:158:PHE:HB2	1.97	0.46
5:E:152:ARG:HH21	5:E:152:ARG:HG3	1.80	0.46
7:G:25:ALA:HB3	7:G:85:SER:O	2.15	0.46
8:H:67:THR:CG2	8:H:69:VAL:HG23	2.46	0.46
8:H:76:ALA:HA	8:H:79:LEU:HD12	1.98	0.46
12:L:4:PRO:HG2	12:L:70:ASP:HA	1.98	0.46
12:L:88:ASN:O	12:L:90:GLU:N	2.49	0.46
14:N:28:VAL:HG12	14:N:93:ASP:O	2.16	0.46
15:O:50:ARG:O	15:O:56:SER:HA	2.16	0.46
16:P:107:ALA:O	16:P:110:GLU:HB2	2.15	0.46
18:R:7:HIS:CD2	53:27:492:A:H2	2.33	0.46
20:T:59:GLU:OE1	20:T:59:GLU:N	2.48	0.46
24:X:24:GLU:O	24:X:28:LEU:HG	2.16	0.46
25:Y:4:ILE:HG23	25:Y:4:ILE:O	2.14	0.46
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.98	0.46
35:9:135:VAL:O	35:9:139:THR:HG23	2.15	0.46
36:10:21:MET:HE2	36:10:25:TYR:OH	2.16	0.46
37:11:14:ASP:OD2	37:11:17:PHE:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:29:LEU:HD23	37:11:29:LEU:O	2.15	0.46
42:16:62:VAL:HG11	42:16:94:TYR:CE2	2.50	0.46
44:18:16:ALA:HA	44:18:54:SER:O	2.16	0.46
46:20:19:VAL:H	46:20:38:PHE:HA	1.80	0.46
50:24:55:PRO:HA	52:26:193:C:O2'	2.16	0.46
52:26:764:C:H2'	52:26:765:G:O4'	2.16	0.46
52:26:877:G:H2'	52:26:878:A:C8	2.48	0.46
52:26:1109:C:H2'	52:26:1110:A:C8	2.50	0.46
52:26:1198:G:H2'	52:26:1199:U:C6	2.51	0.46
52:26:1410:A:H2'	52:26:1411:C:C6	2.51	0.46
52:26:1473:G:O2'	52:26:1474:U:H5'	2.15	0.46
53:27:214:G:H21	53:27:216:A:H1'	1.81	0.46
53:27:488:G:H1'	53:27:492:A:N6	2.30	0.46
53:27:563:A:C6	53:27:2018:G:C4	3.04	0.46
53:27:768:G:N2	53:27:1379:U:O2'	2.48	0.46
53:27:819:A:OP2	53:27:1187:G:N2	2.45	0.46
53:27:1196:C:H2'	53:27:1197:G:C8	2.50	0.46
53:27:1216:G:N2	53:27:1234:U:H1'	2.31	0.46
53:27:1357:C:H2'	53:27:1358:G:O4'	2.15	0.46
53:27:1609:A:H1'	53:27:1616:A:C1'	2.45	0.46
53:27:1843:C:H2'	53:27:1844:C:H6	1.77	0.46
53:27:2589:A:H2'	53:27:2590:A:H8	1.80	0.46
57:31:48:C:H2'	57:31:59:A:H4'	1.98	0.46
57:31:50:U:H2'	57:31:51:C:C6	2.51	0.46
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	0.46
59:33:267:ASN:N	59:33:267:ASN:ND2	2.62	0.46
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.46
59:33:573:ASP:O	59:33:576:ALA:HB3	2.16	0.46
59:33:594:ASN:CG	59:33:595:GLY:H	2.23	0.46
1:A:23:LEU:HD21	1:A:89:ASN:CG	2.40	0.46
1:A:145:MET:HE1	1:A:181:ARG:CZ	2.45	0.46
5:E:110:HIS:HE1	53:27:2667:C:O2'	1.98	0.46
9:I:41:LYS:HE2	9:I:43:GLU:OE2	2.15	0.46
16:P:87:VAL:HA	17:Q:49:ILE:HD11	1.97	0.46
20:T:26:ASN:OD1	20:T:27:VAL:N	2.48	0.46
21:U:92:VAL:O	21:U:94:ALA:N	2.48	0.46
30:4:11:LYS:NZ	53:27:249:C:O2	2.41	0.46
31:5:24:ARG:NH2	31:5:24:ARG:HG2	2.31	0.46
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.45	0.46
34:8:133:SER:HB3	52:26:403:C:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:187:ARG:NH1	34:8:190:LEU:HD11	2.30	0.46
35:9:107:GLY:HA2	52:26:8:A:H1'	1.98	0.46
37:11:3:ARG:O	37:11:5:VAL:N	2.49	0.46
42:16:106:VAL:CG2	42:16:116:TYR:HB3	2.45	0.46
44:18:85:GLU:O	44:18:89:ARG:NH1	2.48	0.46
48:22:40:PRO:HB3	52:26:720:C:OP1	2.15	0.46
50:24:24:ARG:HH22	52:26:323:U:P	2.39	0.46
52:26:138:G:C2'	52:26:139:A:H5'	2.46	0.46
52:26:490:C:H2'	52:26:491:G:C8	2.46	0.46
52:26:538:G:H2'	52:26:539:A:C8	2.51	0.46
52:26:580:C:H2'	52:26:581:G:H8	1.76	0.46
52:26:763:G:H2'	52:26:764:C:H6	1.81	0.46
52:26:924:C:H2'	52:26:925:G:C8	2.50	0.46
52:26:981:U:H2'	52:26:982:U:C5	2.51	0.46
52:26:1033:G:H2'	52:26:1033:G:N3	2.31	0.46
52:26:1298:U:H4'	52:26:1299:A:C4	2.50	0.46
53:27:118:A:H2'	53:27:120:U:O4	2.15	0.46
53:27:586:A:H2	53:27:809:G:N3	2.14	0.46
53:27:1268:A:H1'	53:27:2013:A:N6	2.31	0.46
53:27:1394:U:H5''	53:27:1603:A:O3'	2.14	0.46
53:27:1967:C:H2'	53:27:1968:G:O4'	2.16	0.46
53:27:2128:G:N3	53:27:2173:A:H4'	2.31	0.46
53:27:2226:C:H3'	53:27:2227:A:H8	1.80	0.46
53:27:2286:G:H4'	53:27:2287:A:O4'	2.14	0.46
53:27:2516:A:O2'	53:27:2517:C:H5'	2.16	0.46
53:27:2795:C:H2'	53:27:2796:U:H5'	1.98	0.46
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.46
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.46
1:A:42:ARG:HD3	1:A:46:GLY:O	2.15	0.46
2:B:115:GLY:HA3	53:27:2821:A:OP2	2.15	0.46
3:C:31:VAL:CG1	3:C:177:PRO:HG2	2.46	0.46
3:C:178:VAL:HG13	3:C:179:SER:N	2.30	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.97	0.46
11:K:65:GLY:CA	53:27:2415:G:H4'	2.45	0.46
12:L:24:THR:O	12:L:24:THR:HG22	2.14	0.46
23:W:22:ASN:OD1	23:W:22:ASN:O	2.34	0.46
31:5:1:MET:CE	31:5:36:ARG:HB2	2.24	0.46
33:7:46:LEU:HD11	33:7:75:VAL:HG13	1.97	0.46
34:8:144:ILE:CG2	34:8:149:LYS:HA	2.45	0.46
39:13:94:ARG:HA	39:13:97:LEU:HB3	1.96	0.46
39:13:128:LYS:NZ	57:31:34:C:OP2	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:17:LEU:O	40:14:20:GLN:HG2	2.16	0.46
41:15:70:ALA:O	41:15:73:VAL:HG22	2.16	0.46
42:16:115:LYS:O	42:16:116:TYR:CB	2.63	0.46
52:26:12:U:C3'	52:26:13:U:H5''	2.46	0.46
52:26:49:U:H3	52:26:362:G:H1'	1.81	0.46
52:26:58:C:O2'	52:26:59:A:H5'	2.15	0.46
52:26:345:C:H4'	52:26:346:G:C2	2.51	0.46
52:26:393:A:C2	52:26:394:G:C8	3.04	0.46
52:26:1417:G:H2'	52:26:1482:G:N2	2.31	0.46
53:27:360:U:H2'	53:27:361:G:C8	2.51	0.46
53:27:780:G:H5''	53:27:781:A:OP1	2.16	0.46
53:27:2297:A:N6	53:27:2319:G:H1'	2.31	0.46
53:27:2339:C:H2'	53:27:2340:A:C8	2.50	0.46
53:27:2881:U:H2'	53:27:2882:A:H8	1.79	0.46
56:30:68:C:H2'	56:30:69:G:C8	2.51	0.46
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.97	0.46
2:B:2:ILE:HD11	2:B:100:LEU:HD21	1.98	0.46
3:C:191:ASP:O	3:C:195:GLN:HG2	2.16	0.46
14:N:28:VAL:HG22	14:N:29:HIS:N	2.30	0.46
17:Q:73:LYS:O	17:Q:75:VAL:HG23	2.16	0.46
18:R:93:ALA:HB2	53:27:1614:A:C2	2.51	0.46
19:S:57:VAL:HG12	19:S:86:THR:OG1	2.16	0.46
22:V:17:LEU:HD21	22:V:37:ARG:NH2	2.30	0.46
25:Y:30:ARG:O	25:Y:33:HIS:HB2	2.15	0.46
26:Z:57:VAL:HG23	49:23:63:ASP:OD1	2.15	0.46
30:4:41:ARG:HA	30:4:44:ARG:NH1	2.31	0.46
31:5:19:ARG:HG2	53:27:2756:U:OP2	2.16	0.46
31:5:36:ARG:O	31:5:37:GLN:HB3	2.16	0.46
32:6:153:MET:HE2	32:6:157:PRO:HG3	1.97	0.46
33:7:60:ALA:O	33:7:62:SER:N	2.49	0.46
37:11:118:ARG:O	37:11:122:GLU:HG2	2.15	0.46
39:13:24:ASN:HB3	39:13:58:GLU:HG2	1.97	0.46
39:13:123:ARG:HB3	52:26:1343:G:C4'	2.42	0.46
40:14:6:ILE:HA	40:14:101:SER:O	2.15	0.46
40:14:40:ILE:O	40:14:73:LEU:N	2.45	0.46
41:15:84:MET:HA	41:15:110:THR:O	2.15	0.46
43:17:33:LEU:CD2	43:17:40:GLU:HA	2.46	0.46
52:26:128:G:H2'	52:26:129:A:C8	2.51	0.46
52:26:207:C:H2'	52:26:208:U:O4'	2.15	0.46
52:26:226:G:O2'	52:26:227:G:H5'	2.15	0.46
52:26:1177:G:H2'	52:26:1178:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1220:G:H2'	52:26:1221:G:O4'	2.15	0.46
52:26:1353:G:H2'	52:26:1354:U:H6	1.79	0.46
53:27:83:A:H2'	53:27:84:A:N7	2.30	0.46
53:27:195:A:H2'	53:27:198:C:H42	1.79	0.46
53:27:218:A:H3'	53:27:219:A:H8	1.81	0.46
53:27:426:C:H2'	53:27:427:U:H6	1.80	0.46
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.46
53:27:784:G:C8	53:27:792:A:N7	2.84	0.46
53:27:785:G:C6	53:27:786:C:C4	3.04	0.46
53:27:1313:U:C2	53:27:1610:A:H2	2.32	0.46
53:27:1555:G:H5'	53:27:1555:G:C8	2.51	0.46
53:27:2472:G:H2'	53:27:2529:G:N2	2.31	0.46
53:27:2520:C:C6	53:27:2567:G:H1'	2.51	0.46
53:27:2526:G:H2'	53:27:2527:C:C6	2.51	0.46
53:27:2682:A:C2	53:27:2683:C:C2	3.03	0.46
53:27:2688:G:H1'	53:27:2721:A:N6	2.30	0.46
53:27:2708:G:H2'	53:27:2709:G:H8	1.80	0.46
56:30:74:C:N4	59:33:429:TYR:O	2.47	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.46
1:A:131:MET:HA	1:A:134:ILE:HD12	1.97	0.46
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.46	0.46
10:J:28:SER:HB3	53:27:2563:U:O2'	2.16	0.46
11:K:57:LEU:CB	11:K:60:ARG:HH11	2.21	0.46
13:M:114:GLU:OE1	13:M:118:ARG:NH2	2.49	0.46
17:Q:48:LYS:HG3	17:Q:49:ILE:N	2.31	0.46
17:Q:72:VAL:HG22	17:Q:89:HIS:O	2.15	0.46
31:5:19:ARG:HH22	31:5:26:ILE:HD11	1.80	0.46
32:6:27:LYS:HB3	32:6:28:PRO:HD3	1.98	0.46
32:6:103:TRP:O	32:6:107:ARG:HG2	2.15	0.46
33:7:46:LEU:HD12	33:7:49:ALA:HB3	1.98	0.46
33:7:72:PRO:O	33:7:76:ILE:HG12	2.16	0.46
33:7:131:ARG:HA	33:7:131:ARG:HD2	1.76	0.46
33:7:154:GLY:O	33:7:156:LEU:HG	2.15	0.46
34:8:144:ILE:CD1	34:8:177:MET:HB3	2.45	0.46
36:10:54:LEU:C	36:10:54:LEU:HD12	2.41	0.46
42:16:20:VAL:C	42:16:22:ALA:N	2.74	0.46
42:16:38:THR:HA	42:16:49:ARG:O	2.16	0.46
47:21:32:ILE:HD12	47:21:32:ILE:N	2.29	0.46
50:24:2:ASN:CG	50:24:3:ILE:N	2.74	0.46
50:24:34:VAL:HG11	50:24:78:LEU:HD23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:17:ARG:O	51:25:19:LYS:N	2.48	0.46
52:26:66:A:H4'	52:26:173:U:C5	2.50	0.46
52:26:158:G:H2'	52:26:159:G:O4'	2.15	0.46
52:26:603:U:H2'	52:26:604:G:C8	2.50	0.46
52:26:604:G:H2'	52:26:605:U:O4'	2.15	0.46
52:26:771:G:H2'	52:26:772:U:C6	2.51	0.46
52:26:831:A:H3'	52:26:832:G:H5''	1.98	0.46
52:26:848:C:H3'	52:26:849:G:H5''	1.98	0.46
52:26:1072:G:C5	52:26:1073:U:C4	3.03	0.46
53:27:17:G:H2'	53:27:18:U:C6	2.51	0.46
53:27:21:A:H2'	53:27:22:C:O4'	2.15	0.46
53:27:709:U:H2'	53:27:710:U:H6	1.81	0.46
53:27:817:C:H2'	53:27:818:G:O4'	2.16	0.46
53:27:1705:A:C5	53:27:1706:C:C4	3.04	0.46
53:27:1746:A:H2'	53:27:1747:U:H6	1.76	0.46
53:27:2462:C:H1'	53:27:2491:U:O4	2.15	0.46
53:27:2504:U:H2'	53:27:2505:G:H5'	1.96	0.46
54:28:79:G:O2'	54:28:80:U:H5'	2.16	0.46
55:29:20:U:H2'	55:29:21:C:C6	2.51	0.46
58:32:24:U:O5'	58:32:24:U:H6	1.97	0.46
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.46
59:33:303:LEU:HD12	59:33:304:PRO:HD2	1.97	0.46
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.97	0.46
1:A:207:ALA:HA	53:27:1791:A:H5'	1.98	0.46
3:C:21:ARG:HG2	3:C:110:SER:OG	2.15	0.46
3:C:88:ARG:O	3:C:89:PRO:C	2.56	0.46
3:C:164:LEU:HD22	3:C:167:VAL:CG2	2.46	0.46
3:C:165:HIS:CD2	3:C:165:HIS:C	2.94	0.46
7:G:34:THR:HB	53:27:1085:A:H61	1.81	0.46
8:H:37:PHE:HB2	8:H:66:PHE:CZ	2.51	0.46
11:K:14:LYS:O	11:K:15:ALA:CB	2.63	0.46
12:L:53:MET:SD	12:L:117:PHE:HE1	2.39	0.46
16:P:55:GLN:NE2	53:27:559:G:H1'	2.30	0.46
19:S:61:LEU:HD21	19:S:82:LYS:HD2	1.98	0.46
28:2:20:TYR:CE2	28:2:37:LYS:HB3	2.50	0.46
35:9:156:ARG:C	35:9:158:LYS:H	2.24	0.46
37:11:2:ARG:HB3	52:26:933:G:OP2	2.16	0.46
42:16:25:ALA:O	52:26:553:A:O2'	2.34	0.46
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.96	0.46
44:18:89:ARG:HB2	44:18:89:ARG:CZ	2.45	0.46
47:21:59:GLU:C	47:21:60:ILE:HG13	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:17:ARG:CZ	52:26:1538:C:O2'	2.64	0.46
52:26:41:G:O2'	52:26:42:G:H5'	2.16	0.46
52:26:178:C:H2'	52:26:179:A:H8	1.80	0.46
52:26:370:C:HO2'	52:26:371:A:H5'	1.80	0.46
52:26:735:C:H2'	52:26:736:C:C6	2.51	0.46
53:27:5:A:O2'	53:27:6:A:H5'	2.16	0.46
53:27:183:C:O2'	53:27:184:C:H5'	2.16	0.46
53:27:528:A:H8	53:27:528:A:O5'	1.99	0.46
53:27:587:C:C6	53:27:671:C:H1'	2.51	0.46
53:27:825:A:H2'	53:27:826:U:C6	2.51	0.46
53:27:1190:G:H2'	53:27:1191:G:H8	1.81	0.46
53:27:1451:C:H4'	53:27:1452:G:N9	2.30	0.46
53:27:1640:A:H2'	53:27:1641:A:O4'	2.16	0.46
53:27:2028:U:O2'	53:27:2029:G:H5'	2.16	0.46
53:27:2592:G:H2'	53:27:2593:U:H5'	1.98	0.46
53:27:2620:C:H2'	53:27:2621:G:C5'	2.44	0.46
56:30:14:A:H2'	56:30:15:G:C1'	2.46	0.46
56:30:38:A:H2'	56:30:39:U:O4'	2.16	0.46
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.46
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.46
3:C:132:LYS:HE2	53:27:320:A:OP2	2.16	0.46
3:C:178:VAL:HG13	3:C:179:SER:H	1.81	0.46
5:E:154:GLU:HG3	5:E:157:LYS:H	1.80	0.46
7:G:48:ALA:HB3	7:G:51:TYR:CD2	2.51	0.46
10:J:28:SER:HB2	53:27:2566:A:N1	2.30	0.46
12:L:70:ASP:C	12:L:70:ASP:OD1	2.57	0.46
13:M:34:ILE:HG22	53:27:1279:G:H5'	1.98	0.46
14:N:81:ARG:O	14:N:85:LYS:HG2	2.16	0.46
17:Q:15:SER:O	17:Q:18:GLN:HG2	2.15	0.46
19:S:4:GLU:O	19:S:8:LEU:HG	2.16	0.46
26:Z:32:LEU:O	26:Z:34:LEU:N	2.48	0.46
33:7:60:ALA:C	33:7:62:SER:N	2.74	0.46
37:11:75:LYS:NZ	37:11:77:ARG:HD3	2.30	0.46
42:16:23:LEU:HG	42:16:24:GLU:N	2.31	0.46
42:16:47:ALA:C	42:16:48:LEU:HD12	2.41	0.46
44:18:12:ARG:NH2	52:26:980:C:O3'	2.49	0.46
47:21:68:LYS:HB2	52:26:267:C:OP1	2.16	0.46
52:26:106:C:H2'	52:26:107:G:O4'	2.15	0.46
52:26:376:G:O2'	52:26:377:G:H5'	2.16	0.46
52:26:405:U:C3'	52:26:406:G:H5'	2.39	0.46
52:26:447:G:H8	52:26:447:G:O5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:549:C:C3'	52:26:550:G:H5''	2.45	0.46
53:27:325:G:H2'	53:27:326:G:H8	1.81	0.46
53:27:996:A:O2'	53:27:997:G:H5'	2.15	0.46
53:27:1748:C:H2'	53:27:1749:A:C8	2.51	0.46
53:27:1935:G:H3'	53:27:1962:C:H42	1.80	0.46
53:27:1948:G:H2'	53:27:1949:G:C8	2.51	0.46
53:27:2194:U:H2'	53:27:2195:U:C6	2.51	0.46
53:27:2737:G:H2'	53:27:2738:A:O4'	2.16	0.46
53:27:2873:A:O2'	53:27:2874:C:H5'	2.16	0.46
54:28:37:C:H2'	54:28:38:C:O4'	2.16	0.46
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.46
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.81	0.46
2:B:56:LYS:NZ	53:27:2831:G:P	2.89	0.45
2:B:110:THR:HG21	2:B:169:ARG:NH1	2.31	0.45
2:B:130:GLN:NE2	53:27:2578:G:N2	2.64	0.45
3:C:44:ARG:NE	53:27:444:C:OP2	2.48	0.45
4:D:49:LEU:CD2	4:D:83:PRO:HB2	2.46	0.45
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.52	0.45
6:F:93:SER:HB3	6:F:121:VAL:HG23	1.99	0.45
11:K:55:MET:HG2	53:27:2392:A:H2	1.80	0.45
18:R:69:LEU:HA	18:R:109:ASP:HA	1.98	0.45
21:U:70:ILE:HG22	21:U:72:VAL:HG13	1.98	0.45
23:W:73:ARG:HD2	23:W:75:GLU:HG2	1.99	0.45
31:5:36:ARG:CG	31:5:37:GLN:N	2.74	0.45
38:12:49:LYS:HB3	38:12:51:GLU:HG3	1.98	0.45
40:14:63:ASP:OD2	44:18:84:ARG:NE	2.42	0.45
43:17:99:GLN:NE2	52:26:1307:U:OP1	2.44	0.45
52:26:160:A:N6	52:26:161:A:C2	2.84	0.45
52:26:1404:C:H2'	52:26:1405:G:H8	1.80	0.45
53:27:93:G:H2'	53:27:94:A:O4'	2.15	0.45
53:27:492:A:H2'	53:27:493:G:O4'	2.15	0.45
53:27:858:G:H8	53:27:858:G:OP2	1.99	0.45
53:27:1078:U:H5''	53:27:1079:C:O5'	2.15	0.45
53:27:1091:G:O2'	53:27:1092:C:H5'	2.16	0.45
53:27:2861:U:O2'	53:27:2862:G:H5'	2.16	0.45
58:32:39:C:H2'	58:32:40:C:C6	2.51	0.45
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
2:B:37:VAL:HG23	2:B:92:VAL:HG22	1.97	0.45
2:B:135:GLY:O	53:27:2580:U:H5''	2.16	0.45
3:C:84:THR:CB	53:27:586:A:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:85:LYS:O	5:E:164:ALA:N	2.46	0.45
7:G:81:LEU:O	7:G:82:ILE:HD13	2.16	0.45
8:H:112:LYS:HE2	8:H:116:MET:CG	2.46	0.45
10:J:121:GLU:OE2	15:O:62:LYS:NZ	2.49	0.45
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.17	0.45
13:M:69:ARG:C	13:M:71:ARG:H	2.23	0.45
17:Q:34:GLU:OE2	17:Q:60:LYS:HG2	2.17	0.45
17:Q:71:LYS:N	17:Q:90:ARG:HG2	2.32	0.45
17:Q:77:PHE:CD1	17:Q:84:ARG:HB3	2.52	0.45
18:R:4:ILE:HG22	18:R:106:VAL:HG22	1.98	0.45
20:T:32:LYS:HB3	20:T:63:ALA:HB1	1.98	0.45
23:W:22:ASN:HA	53:27:200:U:H5''	1.97	0.45
25:Y:52:PHE:CD1	54:28:83:G:H4'	2.51	0.45
28:2:40:PRO:O	28:2:43:ARG:HG2	2.16	0.45
31:5:11:CYS:N	31:5:14:CYS:SG	2.88	0.45
32:6:49:PHE:CD1	32:6:199:ILE:HD13	2.52	0.45
34:8:117:VAL:O	34:8:130:ASN:HA	2.17	0.45
35:9:82:HIS:O	35:9:83:PRO:C	2.59	0.45
35:9:155:LYS:HB2	38:12:70:VAL:HG13	1.97	0.45
41:15:44:ALA:HB3	41:15:69:CYS:HB2	1.98	0.45
42:16:25:ALA:HB1	52:26:554:A:H5'	1.98	0.45
46:20:5:ARG:HD2	52:26:376:G:H5''	1.97	0.45
47:21:57:VAL:HG12	47:21:78:VAL:HG23	1.98	0.45
52:26:317:U:H2'	52:26:318:G:C8	2.49	0.45
52:26:1088:G:H21	52:26:1167:A:N6	2.06	0.45
52:26:1112:C:O5'	52:26:1112:C:H6	2.00	0.45
52:26:1129:C:H2'	52:26:1139:G:C6	2.51	0.45
53:27:443:A:H5''	53:27:444:C:H5''	1.97	0.45
53:27:513:A:H4'	53:27:1217:U:H5'	1.98	0.45
53:27:685:A:H1'	53:27:688:U:O4	2.16	0.45
53:27:969:G:H2'	53:27:970:U:C6	2.51	0.45
53:27:1029:A:O5'	53:27:1029:A:H8	2.00	0.45
53:27:1268:A:H2'	53:27:1269:A:C8	2.51	0.45
53:27:1372:U:H2'	53:27:1373:A:H8	1.81	0.45
53:27:1381:G:O2'	53:27:1382:G:H5'	2.16	0.45
53:27:2114:A:N3	53:27:2114:A:H2'	2.31	0.45
53:27:2356:U:H2'	53:27:2357:G:O4'	2.16	0.45
53:27:2772:C:H2'	53:27:2773:C:C6	2.52	0.45
56:30:7:A:O2'	56:30:49:C:H5'	2.16	0.45
57:31:28:C:H2'	57:31:29:G:H8	1.81	0.45
58:32:68:C:O2'	58:32:69:C:H5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:553:LEU:C	59:33:555:GLN:N	2.73	0.45
59:33:699:SER:HA	59:33:710:ILE:HA	1.96	0.45
1:A:210:ALA:O	1:A:213:ARG:HB2	2.16	0.45
2:B:13:ARG:NH1	15:O:55:HIS:HA	2.28	0.45
4:D:91:ARG:HG2	54:28:43:C:O2'	2.15	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.16	0.45
7:G:11:ILE:O	7:G:15:VAL:HG23	2.17	0.45
7:G:33:VAL:HA	53:27:1055:G:H4'	1.98	0.45
32:6:35:ASN:O	32:6:37:VAL:N	2.46	0.45
33:7:32:LEU:O	33:7:35:ASP:HB3	2.16	0.45
34:8:103:ARG:NH2	34:8:110:ARG:NH2	2.64	0.45
35:9:113:VAL:HG13	35:9:114:LEU:CD1	2.46	0.45
36:10:25:TYR:O	36:10:29:ILE:HG13	2.16	0.45
38:12:9:MET:HB2	38:12:26:MET:CE	2.47	0.45
38:12:19:ALA:C	38:12:21:LYS:N	2.72	0.45
42:16:27:PRO:HD2	52:26:363:A:C4	2.51	0.45
44:18:66:THR:HG21	52:26:1202:U:O2	2.17	0.45
46:20:6:LEU:HD12	52:26:375:U:O3'	2.16	0.45
47:21:16:MET:HE2	47:21:19:SER:CB	2.46	0.45
47:21:30:HIS:CD2	47:21:32:ILE:H	2.34	0.45
52:26:305:G:H5''	52:26:306:A:OP1	2.16	0.45
52:26:607:A:H2'	52:26:608:A:C8	2.52	0.45
52:26:895:G:H2'	52:26:896:C:C6	2.52	0.45
52:26:928:G:O2'	52:26:929:G:H5'	2.17	0.45
52:26:1417:G:N2	52:26:1482:G:H2'	2.31	0.45
53:27:14:A:N6	53:27:15:G:C2	2.84	0.45
53:27:64:A:H2'	53:27:65:U:C6	2.52	0.45
53:27:709:U:H2'	53:27:710:U:C6	2.52	0.45
53:27:828:U:H2'	53:27:829:A:C8	2.51	0.45
53:27:1111:A:N3	53:27:1112:G:H1'	2.31	0.45
53:27:1385:A:C4	53:27:1386:C:C5	3.03	0.45
53:27:1793:C:H2'	53:27:1794:A:C8	2.51	0.45
53:27:2122:U:H2'	53:27:2123:G:O4'	2.16	0.45
53:27:2233:U:H2'	53:27:2234:G:H8	1.78	0.45
53:27:2418:A:H2'	53:27:2419:U:O4'	2.17	0.45
53:27:2712:C:O2'	53:27:2713:U:OP1	2.28	0.45
53:27:2774:C:H2'	53:27:2775:G:O4'	2.16	0.45
53:27:2828:G:C2	53:27:2829:A:C8	3.05	0.45
56:30:60:U:H5''	56:30:61:C:OP2	2.16	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
59:33:418:LEU:HD21	59:33:430:HIS:HD2	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:259:ASN:O	1:A:261:ARG:N	2.43	0.45
4:D:48:LEU:HD21	4:D:147:ARG:HE	1.81	0.45
4:D:74:ALA:C	4:D:77:LYS:H	2.24	0.45
6:F:132:PHE:CE2	6:F:142:VAL:HB	2.51	0.45
11:K:116:VAL:CG2	11:K:117:THR:N	2.79	0.45
12:L:125:PRO:HG2	12:L:126:ILE:H	1.81	0.45
16:P:14:LYS:O	16:P:18:LYS:HG3	2.15	0.45
19:S:2:ILE:O	19:S:3:ARG:C	2.60	0.45
34:8:58:GLN:OE1	34:8:61:ARG:NH1	2.49	0.45
43:17:49:GLU:C	43:17:49:GLU:CD	2.85	0.45
44:18:72:PHE:CE1	44:18:77:GLY:HA2	2.52	0.45
46:20:72:ALA:O	46:20:75:ILE:HB	2.16	0.45
50:24:24:ARG:O	50:24:28:ARG:HG3	2.16	0.45
52:26:122:G:C6	52:26:123:U:C4	3.05	0.45
52:26:130:A:H1'	52:26:264:C:O4'	2.16	0.45
52:26:234:C:H2'	52:26:235:C:H6	1.77	0.45
52:26:314:C:O2'	52:26:315:A:H5'	2.17	0.45
52:26:545:C:O2'	52:26:546:A:H5'	2.16	0.45
52:26:563:A:C2	52:26:567:G:C5	3.04	0.45
52:26:796:C:O2'	52:26:797:C:H5'	2.16	0.45
52:26:997:U:O2'	52:26:998:C:H5'	2.17	0.45
52:26:1090:U:O2'	52:26:1091:U:H5'	2.17	0.45
53:27:183:C:H2'	53:27:184:C:H5'	1.99	0.45
53:27:242:G:N2	53:27:254:G:H2'	2.31	0.45
53:27:600:G:H2'	53:27:601:C:H6	1.82	0.45
53:27:644:A:H2'	53:27:645:C:C5'	2.44	0.45
53:27:704:G:H2'	53:27:726:G:N1	2.31	0.45
53:27:1096:A:H3'	53:27:1097:U:C5'	2.42	0.45
53:27:1754:A:H2'	53:27:1755:A:C8	2.51	0.45
53:27:2515:C:H2'	53:27:2516:A:C8	2.52	0.45
53:27:2648:G:H2'	53:27:2649:C:H6	1.81	0.45
57:31:69:C:H2'	57:31:70:G:C8	2.49	0.45
58:32:7:G:H3'	58:32:8:U:C5'	2.46	0.45
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.45
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.45
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.45
59:33:315:LYS:CB	59:33:316:PRO:HD2	2.42	0.45
59:33:639:GLU:O	59:33:643:GLU:N	2.49	0.45
6:F:61:VAL:HG23	6:F:62:LEU:N	2.31	0.45
9:I:18:VAL:CG2	9:I:140:LEU:HD22	2.47	0.45
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:48:PRO:HG3	52:26:1422:G:H5'	1.98	0.45
16:P:65:ASN:HD21	16:P:69:ARG:HH11	1.65	0.45
17:Q:49:ILE:HG22	17:Q:54:VAL:CA	2.47	0.45
38:12:5:PRO:O	38:12:8:ASP:HB3	2.17	0.45
40:14:25:ILE:HG23	40:14:26:VAL:N	2.32	0.45
40:14:66:GLU:HB3	44:18:98:ALA:CB	2.44	0.45
42:16:23:LEU:C	42:16:25:ALA:N	2.75	0.45
42:16:28:GLN:NE2	52:26:33:A:O2'	2.50	0.45
43:17:57:ASP:C	43:17:57:ASP:OD1	2.60	0.45
46:20:7:ALA:CB	46:20:18:GLN:HB3	2.46	0.45
50:24:4:LYS:HB3	50:24:6:ALA:HB3	1.99	0.45
52:26:45:G:H2'	52:26:46:G:H8	1.81	0.45
52:26:298:A:H2'	52:26:299:G:O4'	2.17	0.45
52:26:892:A:C6	52:26:893:C:C4	3.04	0.45
52:26:976:G:H1'	52:26:1363:A:N6	2.31	0.45
52:26:978:A:H2	52:26:1319:A:O4'	1.99	0.45
52:26:1095:U:O2'	52:26:1096:C:H5'	2.17	0.45
52:26:1179:A:C2'	52:26:1180:A:H5'	2.47	0.45
52:26:1305:G:N2	52:26:1331:G:C2'	2.80	0.45
52:26:1403:C:O5'	52:26:1403:C:H6	1.99	0.45
52:26:1461:G:H2'	52:26:1462:C:C6	2.51	0.45
52:26:1468:A:O2'	52:26:1469:C:H5'	2.16	0.45
52:26:1488:G:H2'	52:26:1489:G:C8	2.51	0.45
53:27:30:G:H2'	53:27:31:C:C6	2.51	0.45
53:27:319:G:H2'	53:27:320:A:C8	2.51	0.45
53:27:776:G:C5	53:27:793:A:C8	3.05	0.45
53:27:1111:A:O2'	53:27:1112:G:OP1	2.32	0.45
53:27:1206:G:H2'	53:27:1207:C:C6	2.51	0.45
53:27:1304:A:H2'	53:27:1305:C:C5'	2.34	0.45
53:27:1316:U:H2'	53:27:1317:G:C8	2.51	0.45
53:27:1408:G:H2'	53:27:1409:U:O4'	2.17	0.45
53:27:1670:C:C5	53:27:1671:U:C4	3.04	0.45
53:27:1748:C:H2'	53:27:1749:A:H8	1.81	0.45
53:27:1796:U:H2'	53:27:1797:G:C8	2.44	0.45
53:27:2648:G:H2'	53:27:2649:C:C6	2.52	0.45
53:27:2784:U:O2'	53:27:2785:C:H5'	2.17	0.45
53:27:2809:A:H5'	53:27:2810:A:OP2	2.17	0.45
54:28:119:A:C2	54:28:120:A:H1'	2.52	0.45
59:33:675:ASP:HB2	59:33:706:GLN:CG	2.47	0.45
59:33:690:GLU:OE2	59:33:725:VAL:HG22	2.16	0.45
1:A:177:SER:HB3	53:27:1799:G:O6	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:12:THR:HG23	15:O:55:HIS:CE1	2.52	0.45
7:G:11:ILE:O	7:G:14:GLU:HB3	2.17	0.45
7:G:52:MET:CE	7:G:54:VAL:HB	2.41	0.45
8:H:2:LYS:HZ3	8:H:62:ALA:HB2	1.79	0.45
8:H:75:ALA:CB	8:H:131:THR:HG21	2.47	0.45
9:I:37:ARG:HG3	9:I:37:ARG:NH2	2.30	0.45
11:K:134:ALA:O	11:K:137:ALA:HB3	2.16	0.45
15:O:50:ARG:NH2	53:27:2683:C:OP1	2.47	0.45
23:W:39:VAL:HG12	23:W:41:SER:HB3	1.97	0.45
34:8:100:VAL:HG21	34:8:136:VAL:HG21	1.99	0.45
34:8:119:HIS:ND1	52:26:437:U:O2'	2.39	0.45
37:11:141:HIS:O	37:11:145:GLU:HG2	2.16	0.45
39:13:10:ARG:HH21	52:26:1149:C:P	2.39	0.45
39:13:60:LEU:HD12	39:13:60:LEU:O	2.17	0.45
41:15:108:ASN:HA	51:25:6:ARG:HA	1.97	0.45
42:16:49:ARG:NH1	52:26:523:A:N6	2.63	0.45
42:16:49:ARG:HH12	52:26:523:A:H61	1.63	0.45
43:17:33:LEU:HD23	43:17:40:GLU:HA	1.99	0.45
46:20:6:LEU:CD1	52:26:375:U:H4'	2.42	0.45
49:23:57:VAL:HA	49:23:58:PRO:HD3	1.67	0.45
52:26:78:A:H2'	52:26:79:G:C8	2.51	0.45
52:26:286:C:H2'	52:26:287:U:H6	1.82	0.45
52:26:606:G:N2	52:26:631:C:H3'	2.32	0.45
52:26:918:A:H2'	52:26:919:A:O4'	2.17	0.45
52:26:926:G:C6	52:26:1505:G:N7	2.85	0.45
52:26:982:U:H4'	52:26:983:A:O5'	2.17	0.45
52:26:1084:G:H1'	52:26:1103:C:H41	1.82	0.45
52:26:1236:A:H2'	52:26:1237:C:C6	2.51	0.45
53:27:494:G:O2'	53:27:495:G:H5'	2.16	0.45
53:27:809:G:H2'	53:27:810:U:H6	1.82	0.45
53:27:1565:C:HO2'	53:27:1566:A:H2'	1.81	0.45
53:27:1721:G:H22	53:27:1738:G:H2'	1.81	0.45
53:27:1809:A:N7	53:27:1810:A:C6	2.85	0.45
53:27:1904:G:N2	53:27:1905:C:H1'	2.31	0.45
53:27:1935:G:H1'	53:27:1964:G:N2	2.32	0.45
53:27:1979:U:C2'	53:27:1980:G:H5'	2.47	0.45
53:27:2521:C:H2'	53:27:2522:U:O4'	2.16	0.45
57:31:17:C:H2'	57:31:17(A):U:H5	1.81	0.45
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.45
59:33:259:ILE:O	59:33:263:MET:HG3	2.17	0.45
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:473:ARG:O	59:33:474:ASP:C	2.59	0.45
2:B:166:GLY:O	2:B:168:GLU:N	2.46	0.45
7:G:22:ALA:HB1	7:G:91:ALA:HB1	1.97	0.45
7:G:51:TYR:HE1	7:G:89:PRO:HG2	1.81	0.45
7:G:60:LEU:HA	7:G:64:VAL:CG2	2.47	0.45
9:I:27:ARG:NH2	53:27:1142:A:H4'	2.32	0.45
9:I:49:ASP:OD2	9:I:121:LYS:NZ	2.49	0.45
10:J:22:ILE:HD11	10:J:40:LYS:CB	2.46	0.45
18:R:65:ASP:OD2	18:R:68:ASP:HB3	2.16	0.45
20:T:45:GLN:O	20:T:55:GLY:HA2	2.16	0.45
21:U:35:GLU:H	21:U:35:GLU:CD	2.24	0.45
29:3:18:PHE:O	29:3:21:ARG:HB3	2.17	0.45
33:7:196:GLY:N	52:26:1057:G:H4'	2.32	0.45
35:9:82:HIS:HE1	35:9:146:MET:HA	1.81	0.45
35:9:110:MET:O	35:9:113:VAL:HG12	2.17	0.45
36:10:36:ILE:HD11	36:10:39:LEU:HG	1.97	0.45
37:11:129:ASN:O	37:11:134:VAL:HG21	2.16	0.45
39:13:17:ARG:CB	39:13:65:THR:HB	2.46	0.45
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.46	0.45
43:17:3:ILE:HD12	43:17:59:VAL:HG11	1.98	0.45
44:18:29:ILE:O	44:18:32:ASP:HB3	2.17	0.45
44:18:81:ILE:HG21	52:26:1202:U:C2	2.52	0.45
51:25:19:LYS:HB3	51:25:24:LYS:HE3	1.99	0.45
52:26:90:C:H6	52:26:90:C:H5''	1.81	0.45
52:26:461:A:H2'	52:26:462:G:C8	2.51	0.45
52:26:538:G:H2'	52:26:539:A:H8	1.82	0.45
52:26:596:A:H2'	52:26:597:G:H8	1.82	0.45
52:26:810:C:O2'	52:26:811:C:H5'	2.17	0.45
52:26:811:C:H4'	52:26:900:A:N6	2.31	0.45
52:26:1415:G:C4	52:26:1416:G:C8	3.05	0.45
53:27:24:G:C2	53:27:25:U:C2	3.04	0.45
53:27:237:C:H2'	53:27:238:C:H6	1.81	0.45
53:27:528:A:C8	53:27:528:A:C3'	3.00	0.45
53:27:826:U:H5''	53:27:2428:G:O3'	2.17	0.45
53:27:1353:A:H2'	53:27:1354:A:C8	2.51	0.45
53:27:1505:A:H2'	53:27:1506:U:C6	2.52	0.45
53:27:1660:G:C2	53:27:1661:G:C5	3.04	0.45
53:27:1858:A:H1'	53:27:1885:A:C2	2.52	0.45
53:27:2051:A:H2'	53:27:2614:A:N6	2.32	0.45
53:27:2262:U:H2'	53:27:2263:C:H6	1.81	0.45
53:27:2297:A:C2	53:27:2321:U:H5	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2415:G:H2'	53:27:2416:C:C6	2.51	0.45
53:27:2556:C:C5	53:27:2557:G:N7	2.85	0.45
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.45
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
59:33:634:HIS:O	59:33:635:ARG:HB3	2.16	0.45
3:C:109:LEU:HA	3:C:112:LEU:HD12	1.99	0.45
6:F:2:GLN:H	6:F:2:GLN:CD	2.22	0.45
9:I:15:TRP:CZ2	9:I:135:GLN:HG3	2.52	0.45
9:I:36:LEU:O	9:I:51:GLY:HA3	2.17	0.45
16:P:14:LYS:HE3	53:27:1218:G:OP2	2.17	0.45
21:U:21:ARG:NH2	21:U:87:GLN:O	2.50	0.45
31:5:11:CYS:SG	31:5:33:HIS:CE1	3.09	0.45
32:6:19:THR:OG1	32:6:20:ARG:N	2.49	0.45
32:6:27:LYS:O	32:6:29:PHE:N	2.45	0.45
32:6:204:ASP:OD1	32:6:205:ALA:N	2.46	0.45
33:7:10:ARG:HH11	33:7:10:ARG:HG3	1.81	0.45
33:7:21:TRP:CE2	44:18:93:PRO:HG2	2.51	0.45
35:9:100:GLU:C	35:9:102:THR:N	2.72	0.45
39:13:80:HIS:CD2	39:13:84:ARG:HG2	2.52	0.45
39:13:112:ARG:HE	44:18:100:TRP:NE1	2.14	0.45
41:15:62:ALA:O	41:15:65:ALA:HB3	2.16	0.45
44:18:27:LYS:C	44:18:31:SER:HB2	2.42	0.45
47:21:42:LYS:HZ3	52:26:277:C:P	2.39	0.45
49:23:31:ARG:HD3	59:33:602:VAL:CG2	2.40	0.45
49:23:76:THR:OG1	49:23:77:ARG:N	2.48	0.45
50:24:56:ILE:HD12	50:24:56:ILE:H	1.82	0.45
50:24:57:VAL:HG13	50:24:58:ASP:H	1.81	0.45
52:26:390:U:H2'	52:26:391:G:H8	1.81	0.45
52:26:422:C:O2'	52:26:423:G:H5''	2.17	0.45
52:26:895:G:H2'	52:26:896:C:H6	1.81	0.45
52:26:1031:C:H4'	52:26:1033:G:N3	2.32	0.45
52:26:1064:G:O2'	52:26:1190:G:N2	2.49	0.45
52:26:1516:G:N2	52:26:1520:C:C2	2.85	0.45
53:27:210:C:H2'	53:27:211:C:H6	1.82	0.45
53:27:302:C:O2'	53:27:303:G:H5'	2.17	0.45
53:27:341:C:H2'	53:27:342:A:C8	2.51	0.45
53:27:496:G:H2'	53:27:497:A:O4'	2.17	0.45
53:27:599:A:H2'	53:27:600:G:C8	2.50	0.45
53:27:638:G:H2'	53:27:639:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:807:U:O2'	53:27:808:G:H5'	2.17	0.45
53:27:1166:G:O2'	53:27:1167:C:H5'	2.17	0.45
53:27:1345:C:H5'	53:27:1345:C:H6	1.81	0.45
53:27:2248:C:H2'	53:27:2249:U:C5'	2.46	0.45
54:28:59:A:H2'	54:28:60:C:O4'	2.17	0.45
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.45
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.45
59:33:406:VAL:HG23	59:33:418:LEU:HB2	1.99	0.45
59:33:678:GLY:O	59:33:681:ARG:HB2	2.17	0.45
1:A:230:PRO:HB2	1:A:244:VAL:CG2	2.45	0.45
1:A:234:GLY:CA	1:A:238:ASN:HD22	2.30	0.45
3:C:189:THR:O	3:C:193:VAL:HG23	2.17	0.45
6:F:9:VAL:HB	6:F:13:GLY:CA	2.43	0.45
8:H:88:GLY:H	53:27:1064:C:H5'	1.82	0.45
13:M:52:ILE:O	13:M:55:ALA:N	2.48	0.45
15:O:29:VAL:HG21	15:O:73:PHE:HE1	1.82	0.45
15:O:108:ARG:NH1	52:26:1464:U:P	2.90	0.45
22:V:51:ARG:C	22:V:53:HIS:H	2.24	0.45
28:2:31:GLU:H	28:2:31:GLU:CD	2.24	0.45
29:3:24:THR:OG1	29:3:25:LYS:N	2.50	0.45
29:3:34:ARG:HH12	53:27:466:A:P	2.37	0.45
32:6:56:LEU:HG	32:6:183:PHE:HE2	1.82	0.45
34:8:111:ALA:O	34:8:114:ARG:HB3	2.17	0.45
34:8:168:THR:HB	34:8:183:ARG:HH22	1.82	0.45
34:8:174:ALA:C	34:8:177:MET:H	2.24	0.45
35:9:23:THR:HA	35:9:28:ARG:HA	1.99	0.45
39:13:36:GLN:HB2	39:13:40:ARG:HH11	1.81	0.45
49:23:30:LEU:HD22	49:23:48:ILE:CG2	2.47	0.45
52:26:384:G:H2'	52:26:385:C:C6	2.52	0.45
52:26:413:G:H1'	52:26:428:G:H21	1.78	0.45
52:26:466:A:H5''	52:26:467:U:OP1	2.17	0.45
52:26:686:U:O4	52:26:703:G:H2'	2.16	0.45
52:26:880:C:H2'	52:26:881:G:H8	1.81	0.45
52:26:1002:G:H2'	52:26:1003:G:O4'	2.17	0.45
52:26:1006:G:O2'	52:26:1007:U:H5'	2.16	0.45
53:27:441:U:H2'	53:27:442:G:C8	2.52	0.45
53:27:466:A:N3	53:27:683:U:H1'	2.32	0.45
53:27:910:A:C6	53:27:911:A:C6	3.05	0.45
53:27:1080:A:O2'	53:27:1081:U:H5'	2.17	0.45
53:27:1293:C:H2'	53:27:1294:U:C5'	2.42	0.45
53:27:1909:C:H2'	53:27:1910:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2190:G:H2'	53:27:2191:A:H8	1.82	0.45
53:27:2398:U:H2'	53:27:2399:G:H8	1.80	0.45
53:27:2407:A:H2'	53:27:2408:U:H6	1.80	0.45
53:27:2632:A:H2'	53:27:2633:G:H8	1.81	0.45
53:27:2681:C:C4	53:27:2724:U:C5	3.05	0.45
53:27:2805:C:H2'	53:27:2806:C:H6	1.80	0.45
53:27:2821:A:C2	53:27:2822:G:C4	3.05	0.45
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.45
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.45
2:B:148:GLN:OE1	2:B:148:GLN:N	2.50	0.45
3:C:119:ILE:HB	3:C:187:VAL:HA	1.99	0.45
5:E:16:VAL:CG1	5:E:17:LYS:N	2.80	0.45
6:F:75:LEU:O	6:F:77:THR:HG22	2.17	0.45
7:G:25:ALA:HA	7:G:96:PHE:HE1	1.82	0.45
8:H:93:ASN:O	8:H:94:LYS:HG3	2.17	0.45
9:I:17:VAL:CG2	9:I:137:PRO:HB2	2.44	0.45
11:K:19:LEU:HD23	11:K:20:GLY:N	2.32	0.45
11:K:54:GLN:NE2	53:27:2358:A:H61	2.14	0.45
12:L:53:MET:HE1	12:L:63:ILE:HG21	1.98	0.45
15:O:105:LYS:HG2	52:26:1432:G:O5'	2.17	0.45
26:Z:66:ILE:HG21	44:18:40:ARG:NH2	2.32	0.45
33:7:131:ARG:HE	33:7:135:ARG:HH21	1.65	0.45
33:7:149:LYS:HA	33:7:167:TYR:O	2.17	0.45
34:8:78:ALA:HB1	34:8:85:THR:O	2.17	0.45
44:18:25:GLU:O	44:18:28:ALA:HB3	2.17	0.45
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.45
52:26:181:A:N6	52:26:194:C:H2'	2.29	0.45
52:26:363:A:O2'	52:26:364:A:H5'	2.17	0.45
52:26:406:G:O6	52:26:495:A:H2'	2.17	0.45
52:26:408:A:H2'	52:26:409:U:C6	2.52	0.45
52:26:1329:A:H2'	52:26:1330:U:O4'	2.16	0.45
53:27:164:C:H2'	53:27:165:A:H5'	1.98	0.45
53:27:214:G:O2'	53:27:215:G:H5'	2.17	0.45
53:27:538:A:H2'	53:27:539:G:H8	1.78	0.45
53:27:840:C:O5'	53:27:840:C:H6	1.99	0.45
53:27:1115:G:H2'	53:27:1116:G:C8	2.51	0.45
53:27:1351:C:O2'	53:27:1571:A:H1'	2.17	0.45
53:27:1790:C:H5''	53:27:1791:A:OP1	2.17	0.45
53:27:1901:A:H2'	53:27:1902:C:H6	1.78	0.45
53:27:1977:A:H2'	53:27:1978:A:O4'	2.17	0.45
53:27:2107:G:H2'	53:27:2108:A:Cl'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2135:A:C6	53:27:2136:G:H1'	2.51	0.45
53:27:2294:G:H2'	53:27:2295:C:H6	1.82	0.45
53:27:2589:A:H2'	53:27:2590:A:C8	2.52	0.45
53:27:2591:C:C2	53:27:2592:G:N7	2.85	0.45
53:27:2665:A:O2'	53:27:2666:C:H5'	2.17	0.45
53:27:2876:G:H2'	53:27:2877:G:O4'	2.17	0.45
58:32:7:G:H2'	58:32:49:G:O4'	2.16	0.45
58:32:60:U:H2'	58:32:61:C:H5	1.77	0.45
59:33:60:VAL:C	59:33:63:VAL:HG22	2.41	0.45
59:33:348:GLU:C	59:33:349:LEU:HD12	2.42	0.45
59:33:675:ASP:HB2	59:33:706:GLN:HG2	1.99	0.45
59:33:676:ARG:O	59:33:679:LEU:HB2	2.17	0.45
1:A:227:VAL:HG11	53:27:784:G:N1	2.32	0.44
5:E:93:TYR:HA	5:E:105:SER:O	2.16	0.44
9:I:117:ALA:HA	9:I:120:ARG:HH22	1.81	0.44
11:K:136:GLU:C	11:K:139:GLY:H	2.25	0.44
15:O:31:VAL:HG12	15:O:38:ARG:O	2.17	0.44
16:P:105:PHE:O	16:P:109:VAL:HG23	2.17	0.44
17:Q:21:ARG:O	17:Q:22:LEU:HD12	2.16	0.44
17:Q:78:ARG:NH2	17:Q:78:ARG:CB	2.80	0.44
21:U:51:GLN:HA	21:U:56:PHE:CD2	2.51	0.44
30:4:51:LYS:HD2	53:27:937:C:OP1	2.17	0.44
32:6:67:LEU:HD23	32:6:68:PHE:N	2.32	0.44
32:6:156:LEU:HA	32:6:157:PRO:HD3	1.84	0.44
33:7:24:ASN:O	33:7:28:PHE:N	2.50	0.44
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	0.44
35:9:96:GLN:HG3	35:9:97:PRO:HD2	1.98	0.44
37:11:3:ARG:HD3	37:11:4:ARG:NH1	2.32	0.44
37:11:15:PRO:HA	39:13:45:MET:SD	2.56	0.44
42:16:120:ARG:HH22	52:26:500:G:P	2.40	0.44
43:17:15:VAL:HG22	43:17:33:LEU:HD22	1.99	0.44
46:20:42:ILE:HD12	46:20:42:ILE:O	2.17	0.44
52:26:21:G:H1'	52:26:915:A:H61	1.82	0.44
52:26:122:G:H8	52:26:122:G:O5'	1.99	0.44
52:26:680:C:H2'	52:26:681:A:H8	1.81	0.44
52:26:1040:U:O2'	52:26:1041:G:H5'	2.17	0.44
52:26:1369:C:H2'	52:26:1370:G:C8	2.52	0.44
53:27:282:A:H2'	53:27:283:G:C8	2.51	0.44
53:27:1687:G:H2'	53:27:1688:U:C6	2.52	0.44
53:27:1691:C:O2'	53:27:1692:U:H5'	2.17	0.44
53:27:1842:G:H2'	53:27:1843:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2016:U:O5'	53:27:2016:U:H6	1.99	0.44
53:27:2039:U:H2'	53:27:2040:G:H8	1.81	0.44
53:27:2049:G:C4	53:27:2050:C:C5	3.06	0.44
53:27:2135:A:C5	53:27:2136:G:H1'	2.51	0.44
53:27:2675:A:O2'	53:27:2676:C:H5'	2.16	0.44
57:31:25:C:C2	57:31:26:G:C8	3.05	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.44
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.44
1:A:245:THR:HG23	1:A:249:VAL:O	2.17	0.44
2:B:121:THR:HB	2:B:127:PHE:CE2	2.51	0.44
3:C:27:LEU:O	3:C:28:VAL:C	2.59	0.44
7:G:47:GLU:HB2	7:G:51:TYR:HE2	1.82	0.44
9:I:15:TRP:CE2	9:I:135:GLN:HG3	2.51	0.44
9:I:98:GLU:HB3	9:I:124:VAL:CG2	2.46	0.44
14:N:24:THR:OG1	14:N:90:VAL:HG22	2.16	0.44
15:O:16:VAL:HG13	15:O:83:ILE:HD12	1.99	0.44
16:P:5:ARG:HD2	53:27:1250:G:H5''	1.99	0.44
19:S:2:ILE:HG22	19:S:5:GLU:OE1	2.16	0.44
25:Y:53:MET:HG3	25:Y:54:VAL:HG13	1.99	0.44
28:2:29:LYS:HD2	53:27:2286:G:OP1	2.17	0.44
40:14:53:ILE:HG22	40:14:61:ALA:O	2.17	0.44
41:15:29:THR:HG21	41:15:62:ALA:HB2	1.98	0.44
47:21:74:LEU:HD23	47:21:74:LEU:C	2.42	0.44
51:25:49:ALA:O	51:25:53:LYS:HG3	2.17	0.44
52:26:24:U:H2'	52:26:25:C:C6	2.52	0.44
52:26:86:G:H21	52:26:87:C:N4	2.16	0.44
52:26:341:C:O2'	52:26:342:C:H5'	2.16	0.44
52:26:1074:G:C6	52:26:1102:A:N6	2.85	0.44
52:26:1509:C:C6	52:26:1510:C:H5	2.35	0.44
53:27:383:C:O2	53:27:383:C:C2'	2.65	0.44
53:27:677:A:H2'	53:27:678:C:C6	2.51	0.44
53:27:973:A:H5'	53:27:1188:U:H1'	1.99	0.44
53:27:1209:U:O2'	53:27:1210:G:H5''	2.17	0.44
53:27:1869:G:C2	53:27:1871:A:H5''	2.52	0.44
53:27:2060:A:N3	53:27:2060:A:C3'	2.74	0.44
53:27:2162:G:H4'	53:27:2171:A:C5'	2.46	0.44
53:27:2178:C:H2'	53:27:2179:C:C6	2.53	0.44
53:27:2335:A:N7	53:27:2337:G:C5	2.85	0.44
54:28:35:C:H2'	54:28:36:C:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:31:2:G:H2'	57:31:3:C:C6	2.52	0.44
59:33:57:TRP:C	59:33:60:VAL:HG22	2.41	0.44
59:33:473:ARG:HA	59:33:477:ASN:H	1.82	0.44
59:33:676:ARG:CG	59:33:677:SER:H	2.17	0.44
4:D:168:LEU:HD23	4:D:168:LEU:C	2.43	0.44
5:E:26:LYS:HB2	5:E:31:GLU:CD	2.42	0.44
12:L:95:LEU:O	12:L:96:ILE:HD13	2.18	0.44
17:Q:32:THR:HA	17:Q:62:GLU:HA	2.00	0.44
20:T:10:VAL:HG12	20:T:71:ILE:HA	1.99	0.44
22:V:36:GLN:OE1	22:V:41:PHE:N	2.50	0.44
31:5:7:VAL:HG12	31:5:35:GLN:HB3	2.00	0.44
32:6:18:GLN:O	32:6:19:THR:HB	2.17	0.44
35:9:148:SER:OG	35:9:151:MET:HG2	2.17	0.44
37:11:131:GLY:O	37:11:134:VAL:HG22	2.18	0.44
38:12:2:MET:HG3	38:12:2:MET:O	2.17	0.44
41:15:111:ASP:OD2	51:25:24:LYS:HG2	2.17	0.44
43:17:28:ARG:HG2	43:17:62:PHE:CE2	2.53	0.44
44:18:44:VAL:O	44:18:48:GLN:NE2	2.47	0.44
47:21:14:ASP:C	47:21:16:MET:N	2.75	0.44
52:26:734:G:H2'	52:26:735:C:C6	2.52	0.44
53:27:23:G:H2'	53:27:24:G:C8	2.51	0.44
53:27:308:G:H2'	53:27:309:A:C8	2.52	0.44
53:27:764:A:O2'	53:27:765:C:H5'	2.17	0.44
53:27:780:G:H2'	53:27:782:A:N7	2.31	0.44
53:27:869:G:H2'	53:27:870:U:O4'	2.17	0.44
53:27:1309:G:H2'	53:27:1310:G:O4'	2.16	0.44
53:27:1651:G:C2	53:27:1652:A:C4	3.05	0.44
53:27:1810:A:H2'	53:27:1811:G:O4'	2.17	0.44
53:27:2391:G:H1'	53:27:2429:G:N2	2.33	0.44
53:27:2471:A:C2'	53:27:2472:G:H5'	2.47	0.44
53:27:2565:A:H5''	53:27:2566:A:OP2	2.16	0.44
59:33:461:ILE:HG22	59:33:462:GLU:N	2.32	0.44
59:33:599:VAL:HG21	59:33:631:ILE:CD1	2.47	0.44
1:A:160:TYR:HB3	1:A:193:GLU:HB3	1.98	0.44
1:A:164:VAL:HG23	1:A:174:ARG:HB2	2.00	0.44
4:D:104:THR:O	26:Z:38:SER:HB3	2.16	0.44
14:N:30:ARG:NH2	54:28:48:U:P	2.90	0.44
15:O:13:LYS:HB3	15:O:13:LYS:HE2	1.77	0.44
17:Q:21:ARG:HG3	17:Q:95:ASP:OD1	2.17	0.44
17:Q:78:ARG:HB3	17:Q:78:ARG:HH21	1.83	0.44
21:U:7:GLU:HA	21:U:65:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:86:LEU:N	21:U:86:LEU:CD1	2.80	0.44
32:6:27:LYS:C	32:6:29:PHE:H	2.23	0.44
34:8:86:GLY:O	34:8:90:LEU:HG	2.17	0.44
37:11:115:MET:O	37:11:118:ARG:HG2	2.17	0.44
37:11:128:GLU:O	37:11:129:ASN:C	2.60	0.44
39:13:11:ARG:NH1	39:13:12:LYS:HB2	2.32	0.44
39:13:121:ARG:HH12	52:26:1346:A:P	2.40	0.44
41:15:51:PHE:HE2	41:15:64:VAL:HG11	1.82	0.44
42:16:112:ALA:HA	52:26:502:A:OP1	2.18	0.44
43:17:25:GLY:H	52:26:1329:A:C5'	2.20	0.44
44:18:40:ARG:O	44:18:43:ALA:HB3	2.17	0.44
52:26:1120:C:H2'	52:26:1121:U:H6	1.82	0.44
53:27:197:A:C4	53:27:2430:A:C6	3.06	0.44
53:27:588:U:H2'	53:27:589:U:C6	2.52	0.44
53:27:995:C:H5'	53:27:995:C:C6	2.53	0.44
53:27:1637:A:H2'	53:27:1638:C:H6	1.82	0.44
53:27:2206:C:H2'	53:27:2207:C:H6	1.83	0.44
53:27:2216:G:H2'	53:27:2217:G:C8	2.52	0.44
53:27:2475:C:C2'	53:27:2476:A:H5'	2.47	0.44
53:27:2636:C:O2'	53:27:2637:U:H5'	2.17	0.44
53:27:2824:C:C4	53:27:2825:G:C5	3.04	0.44
59:33:18:GLU:C	59:33:21:ILE:HG12	2.42	0.44
59:33:692:VAL:CG1	59:33:716:ILE:HG13	2.47	0.44
2:B:2:ILE:O	2:B:2:ILE:HG13	2.18	0.44
2:B:62:LYS:N	2:B:63:PRO:CD	2.81	0.44
2:B:77:ARG:O	2:B:77:ARG:HG3	2.18	0.44
3:C:94:GLN:OE1	53:27:660:C:H5''	2.17	0.44
3:C:158:PHE:HD1	3:C:169:VAL:HB	1.83	0.44
4:D:45:ASP:HB2	4:D:48:LEU:HB3	1.99	0.44
5:E:120:ILE:HG23	5:E:134:GLY:HA3	1.99	0.44
9:I:80:HIS:O	9:I:82:GLY:N	2.51	0.44
10:J:25:LEU:HD21	10:J:40:LYS:HG2	1.98	0.44
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.48	0.44
10:J:98:ARG:HA	10:J:98:ARG:HD3	1.74	0.44
10:J:112:PHE:O	10:J:113:MET:C	2.61	0.44
11:K:84:LYS:HG2	11:K:84:LYS:O	2.18	0.44
17:Q:26:ASP:O	17:Q:27:ILE:HD13	2.17	0.44
24:X:26:PHE:O	24:X:30:MET:HG2	2.18	0.44
33:7:56:ILE:HD12	33:7:65:VAL:HG22	1.98	0.44
33:7:105:VAL:O	33:7:105:VAL:HG13	2.18	0.44
35:9:137:ARG:O	35:9:140:ILE:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:148:SER:O	35:9:151:MET:HB2	2.18	0.44
42:16:113:ARG:HG2	42:16:113:ARG:NH1	2.31	0.44
43:17:39:ALA:O	43:17:42:VAL:HG22	2.17	0.44
47:21:11:VAL:HG13	47:21:20:ILE:HD11	1.99	0.44
51:25:11:PHE:CZ	51:25:13:VAL:HA	2.53	0.44
52:26:229:U:H2'	52:26:230:G:C8	2.53	0.44
52:26:552:U:O2'	52:26:553:A:H5'	2.17	0.44
52:26:707:U:H2'	52:26:708:C:C6	2.53	0.44
52:26:731:G:C5'	52:26:766:A:H4'	2.46	0.44
52:26:806:C:O2'	52:26:807:A:H5'	2.18	0.44
52:26:1093:A:O2'	52:26:1094:G:H5'	2.17	0.44
52:26:1339:A:H2'	52:26:1340:A:O4'	2.17	0.44
52:26:1515:G:H2'	52:26:1516:G:H8	1.78	0.44
53:27:68:G:H2'	53:27:69:C:O4'	2.18	0.44
53:27:84:A:C6	53:27:99:U:H5'	2.52	0.44
53:27:103:A:H2'	53:27:104:A:O4'	2.17	0.44
53:27:222:A:H61	53:27:232:G:H1'	1.81	0.44
53:27:603:A:H4'	53:27:604:G:O5'	2.17	0.44
53:27:637:A:C6	53:27:652:U:H4'	2.53	0.44
53:27:745:G:O2'	53:27:748:G:H1'	2.18	0.44
53:27:1683:U:H2'	53:27:1684:G:C8	2.53	0.44
53:27:1999:C:H2'	53:27:2000:C:C6	2.53	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.53	0.44
53:27:2448:A:H3'	53:27:2449:U:H2'	1.98	0.44
53:27:2549:G:O2'	53:27:2550:G:H5'	2.17	0.44
53:27:2668:G:H2'	53:27:2669:G:H8	1.83	0.44
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.44
59:33:428:ALA:HB3	59:33:436:GLY:HA2	1.99	0.44
2:B:112:THR:O	2:B:195:GLY:CA	2.65	0.44
3:C:44:ARG:NH1	53:27:1248:G:OP1	2.51	0.44
3:C:46:GLN:O	3:C:86:ALA:HB1	2.17	0.44
4:D:127:TYR:CE2	4:D:129:MET:HB3	2.52	0.44
5:E:2:ARG:CD	53:27:2751:G:C4	3.00	0.44
6:F:114:GLU:OE2	6:F:134:VAL:HA	2.18	0.44
7:G:21:GLY:HA2	7:G:86:MET:CE	2.48	0.44
8:H:108:ILE:HG23	8:H:112:LYS:HB3	1.99	0.44
8:H:124:MET:HE1	53:27:1081:U:O3'	2.18	0.44
12:L:9:PHE:HZ	53:27:911:A:H2'	1.82	0.44
14:N:95:SER:HB2	14:N:97:PHE:HD2	1.82	0.44
18:R:9:HIS:CE1	18:R:80:PRO:HG2	2.51	0.44
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:59:GLU:HA	24:X:63:ALA:CB	2.47	0.44
31:5:19:ARG:O	31:5:20:ASP:C	2.61	0.44
32:6:11:ALA:HB2	32:6:211:LEU:HD21	1.98	0.44
32:6:66:ILE:HG22	32:6:67:LEU:N	2.32	0.44
32:6:95:TRP:HH2	32:6:174:GLU:HB3	1.81	0.44
36:10:11:HIS:CD2	36:10:13:ASP:H	2.36	0.44
41:15:127:ARG:HD2	52:26:1506:U:O2	2.17	0.44
47:21:16:MET:HE2	47:21:19:SER:HB3	2.00	0.44
50:24:53:MET:O	50:24:57:VAL:HG12	2.18	0.44
52:26:193:C:O2'	52:26:194:C:H5'	2.18	0.44
52:26:589:U:H2'	52:26:590:U:C6	2.52	0.44
52:26:893:C:H2'	52:26:894:G:C8	2.52	0.44
52:26:1120:C:H2'	52:26:1121:U:C6	2.53	0.44
52:26:1130:A:H2'	52:26:1131:G:O4'	2.18	0.44
53:27:47:C:H2'	53:27:48:G:C8	2.53	0.44
53:27:80:G:N2	53:27:81:G:H1'	2.33	0.44
53:27:307:G:H2'	53:27:309:A:OP2	2.17	0.44
53:27:556:A:H3'	53:27:557:C:H6	1.83	0.44
53:27:568:U:C6	53:27:570:G:OP2	2.71	0.44
53:27:678:C:H2'	53:27:679:C:H6	1.82	0.44
53:27:795:C:H2'	53:27:796:C:H6	1.83	0.44
53:27:985:C:H2'	53:27:986:C:H6	1.81	0.44
53:27:1387:A:H2'	53:27:1388:G:C8	2.52	0.44
53:27:1678:A:H8	53:27:1678:A:O5'	2.00	0.44
53:27:1765:U:O2'	53:27:1766:G:H5'	2.17	0.44
53:27:2159:G:C2'	53:27:2160:C:H5'	2.48	0.44
53:27:2574:G:H2'	53:27:2575:C:O4'	2.18	0.44
53:27:2791:G:H2'	53:27:2792:A:O4'	2.16	0.44
54:28:48:U:H2'	54:28:49:C:H6	1.80	0.44
56:30:27:G:H2'	56:30:28:G:C8	2.53	0.44
56:30:57:G:H2'	56:30:58:A:H5'	2.00	0.44
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
59:33:408:VAL:O	59:33:415:VAL:HA	2.17	0.44
1:A:61:TYR:CE1	53:27:1816:C:H3'	2.52	0.44
2:B:133:THR:HG23	2:B:134:HIS:N	2.32	0.44
3:C:31:VAL:HG21	3:C:104:ALA:CB	2.48	0.44
3:C:66:GLY:H	53:27:2060:A:H5''	1.83	0.44
3:C:84:THR:OG1	53:27:586:A:H5'	2.17	0.44
3:C:177:PRO:O	3:C:181:ILE:HG13	2.18	0.44
6:F:7:ASP:CG	6:F:8:LYS:H	2.26	0.44
6:F:47:PHE:O	6:F:52:ALA:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:109:LYS:HE2	53:27:636:G:N7	2.32	0.44
13:M:2:ARG:NH1	53:27:2822:G:O6	2.48	0.44
13:M:28:LEU:CD2	13:M:48:VAL:HG21	2.47	0.44
14:N:18:LEU:HD21	14:N:91:SER:HB2	1.99	0.44
24:X:38:GLN:HB3	24:X:39:GLN:OE1	2.18	0.44
34:8:31:CYS:HA	52:26:429:U:OP2	2.17	0.44
34:8:71:PHE:O	34:8:74:TYR:HB2	2.17	0.44
35:9:156:ARG:HH11	38:12:100:ILE:CG2	2.30	0.44
38:12:3:GLN:O	52:26:587:G:H4'	2.17	0.44
39:13:117:LEU:HG	39:13:123:ARG:HE	1.83	0.44
41:15:76:TYR:O	41:15:78:ILE:N	2.51	0.44
42:16:109:ARG:NH1	52:26:537:G:C5'	2.73	0.44
44:18:56:PRO:HA	44:18:59:GLN:HG2	2.00	0.44
47:21:39:ARG:HA	52:26:280:C:O2	2.17	0.44
52:26:152:A:H2'	52:26:153:C:H5'	1.99	0.44
52:26:166:U:H2'	52:26:167:A:H8	1.81	0.44
52:26:229:U:H2'	52:26:230:G:O4'	2.18	0.44
52:26:409:U:O5'	52:26:409:U:H6	2.00	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.82	0.44
52:26:1114:C:O2'	52:26:1115:U:H5'	2.18	0.44
53:27:130:C:H2'	53:27:131:A:O4'	2.18	0.44
53:27:237:C:H2'	53:27:238:C:C6	2.53	0.44
53:27:406:G:H2'	53:27:407:G:C8	2.52	0.44
53:27:809:G:C5	53:27:810:U:C5	3.06	0.44
53:27:1185:G:H5''	53:27:1186:G:OP1	2.18	0.44
53:27:1195:G:C2	53:27:1196:C:C5	3.05	0.44
53:27:1223:G:C6	53:27:1227:G:C6	3.06	0.44
53:27:1430:G:H2'	53:27:1431:A:C8	2.53	0.44
53:27:1486:U:H2'	53:27:1487:U:C6	2.53	0.44
53:27:1609:A:H1'	53:27:1616:A:O4'	2.18	0.44
53:27:1930:G:H2'	53:27:1931:U:OP2	2.17	0.44
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.44
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.44
59:33:642:ALA:HA	59:33:645:ARG:HD2	1.98	0.44
1:A:83:ASP:OD1	1:A:84:PRO:HD2	2.17	0.44
1:A:205:GLY:O	53:27:1791:A:C1'	2.65	0.44
2:B:28:GLU:HA	2:B:185:ASN:O	2.18	0.44
2:B:101:PHE:C	2:B:103:ASP:H	2.23	0.44
3:C:14:VAL:HG21	3:C:19:PHE:CD2	2.53	0.44
4:D:37:MET:SD	4:D:52:ALA:HB1	2.58	0.44
4:D:104:THR:CA	26:Z:38:SER:HB3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:27:ARG:HH21	53:27:1141:U:H5''	1.82	0.44
9:I:90:GLU:O	9:I:93:ILE:HB	2.17	0.44
11:K:81:ASP:OD1	11:K:82:LEU:N	2.50	0.44
16:P:23:TYR:HD1	53:27:533:G:O5'	1.99	0.44
21:U:14:LYS:HB2	54:28:98:G:N1	2.30	0.44
29:3:33:ARG:O	29:3:36:ALA:HB3	2.17	0.44
29:3:34:ARG:HA	29:3:34:ARG:HD2	1.61	0.44
32:6:108:GLN:HE22	32:6:111:LYS:HD3	1.83	0.44
33:7:182:ASP:OD1	33:7:183:TYR:N	2.51	0.44
34:8:191:SER:C	34:8:193:ASP:H	2.26	0.44
35:9:152:VAL:C	35:9:154:ALA:H	2.25	0.44
42:16:87:LYS:HE3	52:26:526:C:P	2.58	0.44
43:17:24:VAL:HA	52:26:1329:A:H5''	2.00	0.44
48:22:19:GLU:CD	48:22:19:GLU:H	2.26	0.44
52:26:62:U:H2'	52:26:63:C:C6	2.53	0.44
52:26:211:G:H2'	52:26:212:G:C4'	2.48	0.44
52:26:811:C:H4'	52:26:900:A:H62	1.83	0.44
52:26:971:G:H1'	52:26:1365:G:O2'	2.18	0.44
52:26:978:A:C2	52:26:1319:A:C4	3.05	0.44
52:26:994:A:C5	52:26:1216:A:H4'	2.53	0.44
52:26:1008:U:H2'	52:26:1009:U:C6	2.52	0.44
52:26:1032:G:H3'	52:26:1033:G:H4'	1.99	0.44
52:26:1453:G:H3'	52:26:1453:G:N3	2.32	0.44
53:27:181:A:O2'	53:27:182:A:H5'	2.16	0.44
53:27:520:G:H2'	53:27:521:U:H6	1.83	0.44
53:27:758:C:O2	53:27:758:C:C2'	2.63	0.44
53:27:891:G:H2'	53:27:892:A:H8	1.82	0.44
53:27:996:A:H2'	53:27:997:G:H8	1.82	0.44
53:27:1130:U:C2	53:27:2025:C:H5''	2.53	0.44
53:27:1406:U:C3'	53:27:1407:G:H5''	2.48	0.44
53:27:1425:G:H2'	53:27:1426:G:C8	2.53	0.44
53:27:1838:C:H4'	53:27:1839:G:H8	1.82	0.44
53:27:2083:G:H2'	53:27:2084:C:C6	2.53	0.44
53:27:2629:U:HO2'	53:27:2630:G:H5''	1.77	0.44
57:31:66:C:H2'	57:31:67:C:H6	1.82	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.44
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
59:33:444:ILE:HG13	59:33:444:ILE:O	2.18	0.44
59:33:675:ASP:HB2	59:33:706:GLN:HE21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:174:ARG:HD3	1:A:180:MET:SD	2.58	0.44
3:C:44:ARG:CD	3:C:90:GLN:HE22	2.31	0.44
4:D:16:MET:O	4:D:20:ASN:HA	2.18	0.44
4:D:93:GLU:HA	4:D:96:TRP:HD1	1.83	0.44
7:G:54:VAL:O	7:G:55:VAL:C	2.61	0.44
11:K:28:GLY:HA2	53:27:811:U:OP2	2.18	0.44
15:O:113:LEU:HD11	52:26:1441:A:C2	2.53	0.44
23:W:73:ARG:HD2	23:W:75:GLU:CG	2.47	0.44
24:X:45:GLN:HG3	24:X:46:VAL:N	2.31	0.44
30:4:18:LYS:HB3	53:27:651:G:OP1	2.17	0.44
32:6:95:TRP:CH2	32:6:171:ALA:HA	2.53	0.44
33:7:205:GLU:HG3	33:7:206:ILE:H	1.83	0.44
35:9:20:VAL:HG23	35:9:31:SER:HB3	2.00	0.44
38:12:14:ARG:HD3	38:12:74:ILE:HG22	1.99	0.44
39:13:39:GLY:C	39:13:44:ARG:HE	2.26	0.44
39:13:89:TYR:O	39:13:90:ASP:CB	2.66	0.44
39:13:115:VAL:HG21	40:14:62:ARG:HG3	2.00	0.44
40:14:72:ARG:NH2	52:26:1152:A:O5'	2.49	0.44
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.99	0.44
45:19:58:MET:O	45:19:61:GLN:HB3	2.17	0.44
51:25:34:ARG:HB3	51:25:36:PHE:HD2	1.83	0.44
52:26:70:U:H4'	52:26:71:A:O5'	2.18	0.44
52:26:77:A:H61	52:26:92:U:H3	1.66	0.44
52:26:151:A:O2'	52:26:152:A:H5'	2.18	0.44
52:26:220:G:O2'	52:26:221:C:H5'	2.17	0.44
52:26:726:C:H2'	52:26:727:G:O4'	2.18	0.44
52:26:783:C:H2'	52:26:784:A:C8	2.53	0.44
52:26:1428:A:H2'	52:26:1429:A:O4'	2.17	0.44
52:26:1520:C:H2'	52:26:1521:C:C6	2.51	0.44
53:27:188:G:H3'	53:27:189:G:H8	1.83	0.44
53:27:291:G:O2'	53:27:292:U:H5'	2.18	0.44
53:27:395:U:H2'	53:27:396:G:H8	1.80	0.44
53:27:551:G:C2'	53:27:552:U:H5'	2.48	0.44
53:27:1668:A:C5	53:27:1674:G:C5	3.06	0.44
53:27:1811:G:C6	53:27:1812:U:C4	3.05	0.44
53:27:1997:C:H2'	53:27:1998:A:H8	1.83	0.44
53:27:2057:G:H2'	53:27:2058:A:H8	1.83	0.44
53:27:2079:U:H2'	53:27:2080:A:O4'	2.18	0.44
56:30:17:C:H5'	56:30:19:G:OP1	2.18	0.44
58:32:69:C:C3'	58:32:70:G:H5''	2.47	0.44
59:33:62:MET:HE3	59:33:79:ALA:CA	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.44
1:A:12:ARG:HA	1:A:15:VAL:CG2	2.47	0.43
2:B:37:VAL:HG12	2:B:39:ASP:OD1	2.18	0.43
2:B:154:LYS:HD3	53:27:2024:G:H4'	2.00	0.43
5:E:87:GLN:OE1	5:E:164:ALA:HA	2.18	0.43
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.33	0.43
7:G:87:GLU:HB3	7:G:90:GLY:O	2.18	0.43
8:H:89:SER:OG	8:H:95:ASP:O	2.34	0.43
8:H:103:ALA:O	8:H:107:GLU:HG3	2.17	0.43
9:I:135:GLN:O	9:I:136:GLN:C	2.61	0.43
10:J:69:VAL:HG21	10:J:106:GLU:CD	2.43	0.43
10:J:90:ASN:OD1	10:J:91:SER:N	2.51	0.43
17:Q:35:PHE:O	17:Q:58:VAL:HA	2.18	0.43
17:Q:83:TYR:CE1	53:27:1187:G:H5''	2.52	0.43
18:R:65:ASP:CG	18:R:66:ILE:N	2.76	0.43
23:W:12:VAL:O	23:W:28:PHE:HB2	2.18	0.43
32:6:20:ARG:O	32:6:22:TRP:N	2.51	0.43
33:7:141:MET:HE2	33:7:169:GLU:HB3	2.00	0.43
33:7:173:PRO:HB2	33:7:176:THR:OG1	2.18	0.43
37:11:33:GLY:C	37:11:35:LYS:H	2.24	0.43
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.39	0.43
39:13:129:ARG:OXT	39:13:129:ARG:HG3	2.18	0.43
41:15:28:ASN:HD21	41:15:56:LYS:CE	2.31	0.43
41:15:61:ALA:O	41:15:64:VAL:HG12	2.17	0.43
44:18:30:ILE:HG22	44:18:43:ALA:HB2	1.99	0.43
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.99	0.43
52:26:165:G:H2'	52:26:166:U:C6	2.52	0.43
52:26:696:A:O2'	52:26:697:U:H5'	2.19	0.43
52:26:747:A:H2'	52:26:748:G:O4'	2.17	0.43
53:27:263:G:H2'	53:27:264:C:O4'	2.18	0.43
53:27:271:G:O2'	53:27:272:A:H5''	2.17	0.43
53:27:1078:U:H4'	53:27:1088:A:OP1	2.17	0.43
53:27:1562:U:H2'	53:27:1563:U:O4'	2.18	0.43
53:27:1672:A:C4'	53:27:2553:G:H4'	2.48	0.43
53:27:1853:A:C6	53:27:1889:A:C5	3.06	0.43
54:28:42:C:C2'	54:28:43:C:H5'	2.48	0.43
54:28:71:C:H2'	54:28:72:G:H8	1.80	0.43
59:33:62:MET:HE2	59:33:82:PHE:CE1	2.53	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.43
59:33:716:ILE:HD11	59:33:721:VAL:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:140:VAL:CG1	1:A:191:LEU:HD23	2.48	0.43
2:B:84:LEU:HD21	2:B:90:PHE:CD2	2.53	0.43
3:C:46:GLN:C	3:C:86:ALA:HB1	2.43	0.43
3:C:110:SER:O	3:C:114:ARG:HG3	2.18	0.43
6:F:108:VAL:HG12	6:F:110:VAL:N	2.33	0.43
8:H:7:TYR:CE1	8:H:60:VAL:HB	2.54	0.43
8:H:75:ALA:HB3	53:27:1060:U:C5	2.53	0.43
11:K:89:VAL:HA	11:K:121:THR:O	2.18	0.43
14:N:7:ARG:HG3	14:N:10:ARG:HH11	1.83	0.43
17:Q:91:GLN:HE22	53:27:1162:G:H21	1.64	0.43
26:Z:51:VAL:O	26:Z:53:THR:N	2.51	0.43
32:6:158:ASP:O	32:6:181:PRO:HD2	2.17	0.43
33:7:15:LYS:HA	33:7:16:PRO:HD2	1.93	0.43
33:7:155:ARG:O	33:7:156:LEU:C	2.61	0.43
34:8:12:ARG:HD3	34:8:33:ILE:HA	2.00	0.43
35:9:56:PRO:O	35:9:59:ILE:HG12	2.17	0.43
41:15:68:ARG:O	41:15:71:ASP:HB3	2.18	0.43
42:16:113:ARG:HD2	42:16:118:VAL:O	2.16	0.43
52:26:130:A:H1'	52:26:264:C:C4'	2.47	0.43
52:26:299:G:C6	52:26:300:A:N1	2.86	0.43
52:26:589:U:H2'	52:26:590:U:H6	1.82	0.43
52:26:770:C:H2'	52:26:771:G:H8	1.82	0.43
52:26:878:A:H2'	52:26:879:C:C6	2.53	0.43
52:26:1103:C:O5'	52:26:1103:C:H6	2.01	0.43
52:26:1125:U:O2'	52:26:1126:U:H2'	2.17	0.43
53:27:283:G:H3'	53:27:284:U:C5'	2.42	0.43
53:27:544:C:H5'	53:27:545:U:OP1	2.18	0.43
53:27:696:G:O2'	53:27:697:G:H5'	2.18	0.43
53:27:2207:C:H2'	53:27:2208:C:C6	2.53	0.43
53:27:2584:U:H3'	53:27:2585:U:H5''	2.00	0.43
53:27:2745:C:H2'	53:27:2746:U:C6	2.52	0.43
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.43
4:D:93:GLU:O	4:D:96:TRP:HB2	2.18	0.43
6:F:15:LEU:HD12	6:F:16:GLY:N	2.33	0.43
9:I:35:ARG:HB2	9:I:54:ILE:HD11	2.00	0.43
10:J:28:SER:C	10:J:30:ARG:H	2.25	0.43
13:M:12:ARG:O	13:M:17:ARG:NH2	2.51	0.43
14:N:100:HIS:HD2	54:28:48:U:H4'	1.83	0.43
22:V:10:ARG:NH2	53:27:2279:G:N7	2.66	0.43
26:Z:1:MET:O	26:Z:2:LYS:C	2.61	0.43
26:Z:62:LYS:HD3	26:Z:62:LYS:HA	1.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:97:LEU:CB	34:8:134:TYR:HB3	2.41	0.43
36:10:63:ASN:ND2	36:10:96:VAL:HG21	2.33	0.43
37:11:24:LYS:HG2	37:11:100:MET:HE1	1.99	0.43
38:12:94:VAL:HG12	38:12:95:MET:HG3	2.01	0.43
39:13:51:LEU:O	39:13:55:ASP:N	2.51	0.43
40:14:89:ARG:HG2	40:14:90:LEU:N	2.33	0.43
44:18:26:LEU:O	44:18:30:ILE:HB	2.19	0.43
46:20:23:ASP:OD2	52:26:230:G:H5'	2.18	0.43
47:21:16:MET:HG3	47:21:19:SER:HB3	1.99	0.43
52:26:235:C:H2'	52:26:236:A:H8	1.79	0.43
52:26:371:A:H4'	52:26:482:A:H4'	2.00	0.43
52:26:631:C:O5'	52:26:632:U:H5'	2.18	0.43
52:26:836:G:H2'	52:26:837:U:O4'	2.17	0.43
52:26:1237:C:H4'	52:26:1300:G:H22	1.83	0.43
53:27:191:A:H2'	53:27:192:C:H6	1.79	0.43
53:27:211:C:H2'	53:27:212:G:C8	2.53	0.43
53:27:287:G:C2'	53:27:288:U:H5'	2.48	0.43
53:27:346:A:C2	53:27:347:A:H1'	2.53	0.43
53:27:377:G:C6	53:27:378:C:C4	3.07	0.43
53:27:540:C:H2'	53:27:541:A:O4'	2.18	0.43
53:27:776:G:H4'	53:27:777:G:O5'	2.19	0.43
53:27:852:U:H2'	53:27:853:C:C6	2.53	0.43
53:27:955:U:H5	53:27:962:G:C6	2.36	0.43
53:27:1228:G:H2'	53:27:1229:C:H6	1.81	0.43
53:27:1536:C:H4'	53:27:1537:G:C2	2.53	0.43
53:27:1923:U:H5''	57:31:24:U:O2'	2.18	0.43
53:27:2364:C:H2'	53:27:2365:G:H5'	1.99	0.43
53:27:2595:G:N1	53:27:2599:G:C6	2.87	0.43
54:28:33:G:H2'	54:28:34:A:O4'	2.18	0.43
58:32:16:C:H4'	58:32:59:A:N1	2.32	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.43
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.43
3:C:104:ALA:O	3:C:108:ILE:HG13	2.19	0.43
3:C:105:LEU:CB	3:C:200:LEU:HD21	2.47	0.43
6:F:88:GLY:HA2	6:F:125:THR:OG1	2.18	0.43
6:F:122:LEU:HD23	6:F:128:HIS:HB2	2.00	0.43
7:G:6:GLN:OE1	7:G:6:GLN:N	2.48	0.43
9:I:43:GLU:H	9:I:43:GLU:CD	2.22	0.43
9:I:113:PRO:HD2	53:27:558:U:OP1	2.18	0.43
11:K:30:THR:O	11:K:32:GLY:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:67:PHE:O	13:M:71:ARG:HA	2.18	0.43
17:Q:82:HIS:ND1	17:Q:82:HIS:O	2.51	0.43
19:S:84:TYR:CD2	53:27:1341:G:C4	3.07	0.43
30:4:16:THR:HG21	30:4:48:MET:SD	2.59	0.43
32:6:81:ASP:O	32:6:85:SER:N	2.48	0.43
32:6:95:TRP:O	32:6:170:ILE:HD11	2.18	0.43
33:7:10:ARG:NH2	33:7:174:LEU:O	2.51	0.43
33:7:174:LEU:HA	33:7:181:ILE:HD12	2.00	0.43
33:7:201:ILE:O	33:7:203:LYS:NZ	2.51	0.43
37:11:119:LEU:C	37:11:119:LEU:HD23	2.44	0.43
38:12:13:ILE:O	38:12:17:GLN:HG2	2.19	0.43
38:12:14:ARG:NH1	52:26:875:U:O2'	2.51	0.43
39:13:11:ARG:HH12	39:13:12:LYS:HE3	1.83	0.43
40:14:48:ARG:NE	44:18:100:TRP:CD2	2.85	0.43
45:19:47:LYS:O	45:19:49:HIS:N	2.47	0.43
47:21:56:ASP:OD1	47:21:56:ASP:N	2.51	0.43
52:26:222:C:H2'	52:26:223:A:C8	2.54	0.43
52:26:1053:G:N7	52:26:1200:C:H5'	2.34	0.43
52:26:1397:C:H41	55:29:22:A:H2'	1.82	0.43
52:26:1427:C:H2'	52:26:1428:A:H8	1.83	0.43
53:27:458:G:N2	53:27:469:G:H2'	2.34	0.43
53:27:1075:C:O2'	53:27:1076:C:H5'	2.18	0.43
53:27:1164:C:O2'	53:27:1165:A:H5'	2.18	0.43
53:27:1599:U:H2'	53:27:1600:C:H6	1.83	0.43
53:27:2142:A:H2'	53:27:2142:A:N3	2.34	0.43
53:27:2809:A:H3'	53:27:2810:A:H8	1.83	0.43
53:27:2878:U:H6	53:27:2878:U:O5'	2.02	0.43
3:C:90:GLN:NE2	3:C:92:HIS:HE1	2.17	0.43
5:E:106:LEU:O	5:E:151:ARG:NH2	2.52	0.43
6:F:25:TYR:O	6:F:29:PHE:HB3	2.17	0.43
6:F:51:ARG:HA	6:F:55:GLU:HG2	2.01	0.43
8:H:2:LYS:HB3	8:H:7:TYR:CE2	2.53	0.43
8:H:112:LYS:O	8:H:116:MET:HG3	2.18	0.43
9:I:98:GLU:HB3	9:I:124:VAL:HG21	1.99	0.43
27:1:8:THR:CG2	27:1:10:SER:HB3	2.49	0.43
28:2:10:LEU:HD23	28:2:50:GLU:HA	2.00	0.43
32:6:22:TRP:CH2	32:6:24:PRO:HA	2.53	0.43
41:15:88:PRO:HG2	41:15:89:GLY:H	1.83	0.43
42:16:80:LEU:HB2	42:16:101:LEU:HD13	2.01	0.43
42:16:109:ARG:HH12	52:26:537:G:C5'	2.26	0.43
49:23:9:PHE:HE2	49:23:36:ARG:HE	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:27:VAL:O	51:25:31:VAL:N	2.32	0.43
52:26:107:G:N2	52:26:108:G:H1'	2.33	0.43
52:26:465:A:H2'	52:26:466:A:O4'	2.18	0.43
52:26:734:G:H2'	52:26:735:C:H6	1.84	0.43
52:26:766:A:C2'	52:26:767:A:H5'	2.48	0.43
52:26:956:U:O2'	52:26:957:U:H5'	2.17	0.43
52:26:965:U:H5''	52:26:966:G:OP1	2.18	0.43
52:26:1524:C:H2'	52:26:1525:G:C8	2.52	0.43
53:27:182:A:O2'	53:27:183:C:H5'	2.19	0.43
53:27:205:G:O2'	53:27:206:U:P	2.76	0.43
53:27:418:C:H2'	53:27:419:U:H6	1.84	0.43
53:27:585:G:H3'	53:27:1251:C:N4	2.33	0.43
53:27:840:C:H2'	53:27:841:G:C8	2.53	0.43
53:27:1178:C:H2'	53:27:1179:G:C8	2.53	0.43
53:27:1372:U:H2'	53:27:1373:A:C8	2.53	0.43
53:27:1669:A:O3'	53:27:2549:G:H5'	2.19	0.43
53:27:1912:A:N6	53:27:1917:U:H5	2.13	0.43
53:27:2111:U:N3	53:27:2147:A:H1'	2.18	0.43
53:27:2661:G:H2'	53:27:2662:A:O4'	2.19	0.43
56:30:44:G:H2'	56:30:45:U:H5'	2.00	0.43
59:33:43:LEU:C	59:33:44:GLN:OE1	2.61	0.43
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.43
1:A:43:ASN:HB3	1:A:49:THR:HG21	2.01	0.43
1:A:52:HIS:O	1:A:216:ARG:N	2.44	0.43
1:A:211:ARG:HA	1:A:211:ARG:HD2	1.80	0.43
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.49	0.43
6:F:108:VAL:C	6:F:110:VAL:H	2.26	0.43
8:H:79:LEU:HD11	8:H:128:ILE:O	2.18	0.43
9:I:16:TYR:CD1	9:I:140:LEU:HB2	2.54	0.43
12:L:10:ARG:CZ	12:L:10:ARG:HB2	2.48	0.43
14:N:7:ARG:HD2	14:N:97:PHE:CE2	2.53	0.43
15:O:62:LYS:HE2	15:O:64:SER:HB2	2.00	0.43
16:P:42:GLY:O	16:P:45:ALA:HB3	2.19	0.43
17:Q:24:LYS:HE2	53:27:1163:G:H5'	2.00	0.43
17:Q:49:ILE:HG22	17:Q:54:VAL:HA	2.00	0.43
20:T:96:LYS:HZ1	53:27:299:A:P	2.41	0.43
23:W:7:THR:OG1	23:W:9:LYS:HG3	2.19	0.43
28:2:11:VAL:HG12	28:2:12:SER:N	2.34	0.43
32:6:182:VAL:CG2	32:6:195:VAL:HA	2.48	0.43
33:7:41:TYR:O	33:7:44:LYS:HB2	2.19	0.43
34:8:94:GLU:CD	34:8:99:ASN:HD21	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:141:VAL:HG12	34:8:180:THR:HG23	2.00	0.43
40:14:68:ARG:HH22	52:26:1115:U:P	2.40	0.43
42:16:119:LYS:HA	52:26:36:C:H5''	2.00	0.43
46:20:14:ARG:NH1	52:26:618:C:H1'	2.20	0.43
49:23:14:LEU:HD23	49:23:14:LEU:C	2.43	0.43
51:25:16:ARG:O	51:25:19:LYS:HB2	2.18	0.43
51:25:18:PHE:O	51:25:19:LYS:HD2	2.18	0.43
52:26:379:C:H2'	52:26:380:G:C8	2.54	0.43
52:26:423:G:H3'	52:26:423:G:N3	2.33	0.43
52:26:667:G:H2'	52:26:668:G:C8	2.52	0.43
52:26:836:G:C5	52:26:851:G:C6	3.07	0.43
52:26:1415:G:C6	52:26:1486:G:C6	3.06	0.43
52:26:1499:A:H2'	52:26:1500:A:H8	1.84	0.43
53:27:481:G:H1'	53:27:506:G:H22	1.78	0.43
53:27:1112:G:H2'	53:27:1113:U:O4'	2.19	0.43
53:27:1173:U:C2'	53:27:1174:U:H4'	2.49	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.19	0.43
53:27:1279:G:C4	53:27:1280:G:C8	3.06	0.43
53:27:2021:C:H3'	53:27:2022:U:C5'	2.49	0.43
53:27:2576:G:H2'	53:27:2576:G:N3	2.34	0.43
53:27:2620:C:H3'	53:27:2621:G:H5''	2.00	0.43
56:30:5:G:H2'	56:30:6:G:C8	2.47	0.43
56:30:5:G:O2'	56:30:6:G:H5'	2.18	0.43
57:31:4:G:H2'	57:31:5:G:H8	1.84	0.43
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.43
59:33:450:PRO:C	59:33:452:THR:N	2.77	0.43
59:33:624:PHE:CG	59:33:644:LEU:HD13	2.54	0.43
1:A:71:ASP:OD2	1:A:188:ARG:NH2	2.49	0.43
1:A:253:GLY:N	53:27:1796:U:H4'	2.34	0.43
7:G:23:LEU:HA	7:G:118:ILE:HG13	2.00	0.43
9:I:111:LYS:HE3	9:I:111:LYS:HB2	1.89	0.43
10:J:30:ARG:HD2	53:27:2674:G:H4'	1.99	0.43
10:J:109:SER:O	10:J:111:LYS:HG2	2.19	0.43
18:R:1:MET:HG3	18:R:2:GLU:N	2.33	0.43
20:T:41:VAL:HG23	20:T:60:LYS:HB2	2.00	0.43
25:Y:10:ARG:NH2	25:Y:52:PHE:O	2.51	0.43
34:8:2:ARG:HH21	34:8:111:ALA:HB1	1.84	0.43
35:9:110:MET:HA	35:9:113:VAL:HG12	2.00	0.43
39:13:5:TYR:CD1	39:13:88:GLU:HA	2.54	0.43
39:13:9:GLY:HA3	39:13:81:GLY:CA	2.49	0.43
39:13:30:ASN:O	39:13:32:ARG:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:63:GLN:HG3	41:15:98:ALA:HB1	2.00	0.43
42:16:100:ALA:HB2	52:26:35:G:H5'	2.01	0.43
44:18:89:ARG:HB3	44:18:91:GLU:HG2	2.00	0.43
45:19:24:THR:HG21	45:19:69:LEU:HB2	2.01	0.43
48:22:72:ARG:NH2	51:25:4:LYS:HZ3	2.17	0.43
50:24:78:LEU:O	50:24:81:GLN:HB2	2.19	0.43
52:26:228:A:H2'	52:26:229:U:C6	2.53	0.43
52:26:841:C:H1'	52:26:843:U:H1'	2.01	0.43
52:26:861:G:H21	52:26:874:G:C4'	2.32	0.43
52:26:1166:G:O2'	52:26:1169:A:N6	2.51	0.43
52:26:1203:C:H2'	52:26:1204:A:C8	2.54	0.43
52:26:1256:A:N7	52:26:1278:G:H1'	2.34	0.43
52:26:1325:C:O2'	52:26:1326:U:H5'	2.19	0.43
52:26:1448:C:H2'	52:26:1449:C:H6	1.83	0.43
52:26:1514:G:H2'	52:26:1515:G:C8	2.52	0.43
53:27:270:A:OP1	53:27:271:G:H8	2.02	0.43
53:27:488:G:H22	53:27:491:G:H5''	1.82	0.43
53:27:496:G:C2	53:27:497:A:H1'	2.53	0.43
53:27:858:G:C4'	53:27:859:G:OP2	2.65	0.43
53:27:1575:C:H2'	53:27:1576:U:H6	1.84	0.43
53:27:1892:C:H2'	53:27:1893:C:C6	2.53	0.43
53:27:2359:C:O2'	53:27:2360:G:H5'	2.19	0.43
53:27:2428:G:O5'	53:27:2428:G:H8	2.02	0.43
53:27:2591:C:C2	53:27:2592:G:C8	3.07	0.43
53:27:2616:C:H2'	53:27:2617:U:C6	2.51	0.43
58:32:12:G:H22	58:32:23:C:C2'	2.31	0.43
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.43
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.43
59:33:686:ILE:HG21	59:33:729:LEU:HD11	1.99	0.43
1:A:48:ILE:HG22	53:27:779:U:P	2.59	0.43
2:B:133:THR:OG1	2:B:134:HIS:N	2.51	0.43
3:C:34:ALA:CB	3:C:94:GLN:HE21	2.32	0.43
3:C:109:LEU:N	3:C:109:LEU:HD12	2.33	0.43
4:D:164:GLU:O	4:D:167:ALA:HB3	2.18	0.43
7:G:50:VAL:HG22	53:27:1082:U:H5''	2.00	0.43
8:H:73:PRO:HA	8:H:74:PRO:HD3	1.77	0.43
10:J:71:ARG:HB3	10:J:72:PRO:HD2	2.00	0.43
17:Q:16:GLU:HG3	17:Q:100:GLY:HA2	2.01	0.43
22:V:39:THR:C	22:V:41:PHE:N	2.76	0.43
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.32	0.43
34:8:8:LEU:CB	52:26:430:A:OP1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:159:SER:HB2	35:9:161:GLU:HG2	2.00	0.43
35:9:162:GLU:C	35:9:162:GLU:CD	2.87	0.43
51:25:28:LEU:C	51:25:30:GLU:N	2.77	0.43
52:26:742:G:O2'	52:26:743:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:H6	1.83	0.43
52:26:915:A:C2'	52:26:916:U:H5'	2.48	0.43
52:26:992:U:H1'	52:26:993:G:C2	2.54	0.43
52:26:1371:G:H2'	52:26:1372:U:O4'	2.19	0.43
53:27:26:G:H2'	53:27:27:G:O4'	2.18	0.43
53:27:146:A:H2'	53:27:147:C:C6	2.54	0.43
53:27:192:C:H2'	53:27:193:U:O4'	2.19	0.43
53:27:308:G:O4'	53:27:501:A:H5'	2.18	0.43
53:27:404:A:O2'	53:27:405:U:H5'	2.17	0.43
53:27:1293:C:C3'	53:27:1294:U:H5''	2.48	0.43
53:27:1313:U:H2'	53:27:1313:U:O2	2.18	0.43
53:27:1682:G:N3	53:27:1757:A:H1'	2.34	0.43
53:27:1747:U:O2'	53:27:1748:C:H5'	2.18	0.43
53:27:1804:C:H6	53:27:1804:C:O5'	2.01	0.43
53:27:2576:G:H3'	53:27:2576:G:OP1	2.18	0.43
53:27:2618:G:C6	53:27:2619:C:C4	3.07	0.43
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.43
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.43
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.43
59:33:442:ALA:O	59:33:448:ILE:HG13	2.19	0.43
1:A:5:CYS:SG	1:A:12:ARG:NE	2.92	0.43
1:A:29:PHE:CE2	1:A:31:PRO:HB2	2.54	0.43
9:I:130:HIS:ND1	9:I:130:HIS:O	2.51	0.43
10:J:40:LYS:HE2	53:27:2561:U:O3'	2.19	0.43
11:K:62:PRO:HD2	30:4:24:LYS:HB3	2.00	0.43
11:K:85:VAL:HG21	11:K:90:VAL:HG22	1.99	0.43
12:L:21:ALA:HA	12:L:97:GLN:HG2	2.00	0.43
14:N:32:PRO:C	14:N:102:ARG:HH12	2.26	0.43
14:N:66:GLY:HA2	14:N:102:ARG:NH2	2.33	0.43
17:Q:39:LEU:O	17:Q:49:ILE:HG23	2.19	0.43
17:Q:91:GLN:HE21	53:27:993:G:H1'	1.83	0.43
18:R:57:ASN:HD21	53:27:495:G:H1'	1.84	0.43
20:T:76:THR:O	20:T:78:LYS:HG2	2.17	0.43
22:V:28:LEU:HA	22:V:60:ASP:OD1	2.19	0.43
26:Z:26:SER:OG	26:Z:28:VAL:HG13	2.19	0.43
29:3:3:ARG:HH12	53:27:752:A:P	2.42	0.43
32:6:113:LEU:HD13	32:6:143:LEU:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:154:VAL:O	34:8:158:LEU:HD13	2.19	0.43
35:9:76:ASN:N	35:9:79:THR:O	2.52	0.43
37:11:68:VAL:HG21	37:11:103:ILE:CG1	2.48	0.43
39:13:90:ASP:C	39:13:92:SER:H	2.27	0.43
47:21:45:VAL:HG21	47:21:60:ILE:HD13	2.00	0.43
49:23:49:ALA:HB1	49:23:56:HIS:O	2.19	0.43
52:26:89:U:O2	52:26:90:C:C5	2.72	0.43
52:26:149:A:O2'	52:26:150:U:H5'	2.19	0.43
52:26:360:G:C6	52:26:361:G:C6	3.07	0.43
52:26:436:C:H2'	52:26:437:U:C6	2.54	0.43
52:26:505:G:OP2	52:26:535:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:O4'	2.18	0.43
52:26:963:G:N2	52:26:972:C:O2	2.48	0.43
52:26:1119:C:H2'	52:26:1120:C:C6	2.54	0.43
53:27:276:U:H2'	53:27:277:G:C4'	2.49	0.43
53:27:648:G:H1'	53:27:2351:G:OP1	2.18	0.43
53:27:674:G:H2'	53:27:804:A:H61	1.83	0.43
53:27:1096:A:H2'	53:27:1097:U:H5''	2.01	0.43
53:27:1164:C:H2'	53:27:1165:A:C8	2.54	0.43
53:27:1164:C:H2'	53:27:1165:A:H8	1.82	0.43
53:27:1313:U:O2	53:27:1313:U:C2'	2.66	0.43
53:27:1659:G:C2'	53:27:1660:G:H5''	2.48	0.43
53:27:1906:G:H1'	53:27:1929:G:C6	2.54	0.43
53:27:2066:C:H2'	53:27:2067:G:H8	1.83	0.43
53:27:2156:G:C2'	53:27:2157:G:H5'	2.49	0.43
53:27:2333:A:H4'	53:27:2334:U:O5'	2.19	0.43
54:28:85:G:H2'	54:28:86:G:C8	2.53	0.43
58:32:51:C:H2'	58:32:52:G:C8	2.54	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43
1:A:130:PRO:HA	1:A:188:ARG:HA	2.00	0.43
7:G:94:ARG:HH21	7:G:131:THR:CG2	2.25	0.43
8:H:74:PRO:O	8:H:78:LEU:HG	2.19	0.43
11:K:60:ARG:NH2	53:27:2428:G:N2	2.67	0.43
12:L:4:PRO:HG3	12:L:68:PHE:HE2	1.83	0.43
12:L:78:LEU:HD23	12:L:79:ALA:HB2	2.01	0.43
13:M:42:LYS:HZ1	53:27:2817:U:H5''	1.81	0.43
13:M:96:ARG:O	13:M:113:ILE:HA	2.19	0.43
15:O:22:GLY:O	15:O:89:GLY:HA3	2.19	0.43
16:P:42:GLY:HA3	17:Q:75:VAL:HG21	2.00	0.43
17:Q:80:ARG:HH12	53:27:571:U:P	2.42	0.43
19:S:44:LYS:HG3	19:S:55:VAL:CG1	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:2:ARG:HD2	34:8:114:ARG:NE	2.34	0.43
38:12:3:GLN:NE2	52:26:755:G:H21	2.17	0.43
39:13:11:ARG:HG2	39:13:76:GLY:HA3	2.00	0.43
43:17:15:VAL:HG21	43:17:40:GLU:HB2	2.00	0.43
43:17:69:ARG:HG2	43:17:69:ARG:HH11	1.84	0.43
44:18:5:MET:HB3	44:18:62:ARG:HH21	1.79	0.43
46:20:6:LEU:HD12	52:26:375:U:C4'	2.46	0.43
52:26:395:C:C4	52:26:396:C:N4	2.87	0.43
52:26:422:C:OP2	52:26:422:C:C6	2.72	0.43
52:26:808:C:H2'	52:26:809:G:O4'	2.19	0.43
52:26:1259:C:H3'	52:26:1260:G:C5'	2.39	0.43
52:26:1484:C:H2'	52:26:1485:U:O4'	2.19	0.43
53:27:80:G:H2'	53:27:81:G:O4'	2.18	0.43
53:27:236:C:O2'	53:27:431:U:H4'	2.19	0.43
53:27:563:A:C6	53:27:564:C:C4	3.07	0.43
53:27:586:A:C2	53:27:1254:A:C2	3.06	0.43
53:27:610:C:H2'	53:27:611:C:H6	1.83	0.43
53:27:784:G:OP2	53:27:2589:A:OP1	2.37	0.43
53:27:1065:U:H1'	53:27:1074:G:N2	2.34	0.43
53:27:1361:G:C6	53:27:1371:G:N2	2.87	0.43
53:27:1666:G:H2'	53:27:1667:G:H5'	2.00	0.43
53:27:1951:U:O2	53:27:1953:A:H8	2.02	0.43
53:27:2312:U:C2'	53:27:2313:C:H5'	2.48	0.43
53:27:2388:A:H5'	53:27:2389:G:OP2	2.19	0.43
53:27:2584:U:C3'	53:27:2585:U:H5''	2.49	0.43
53:27:2679:A:O2'	53:27:2680:U:H5'	2.19	0.43
54:28:11:C:C2'	54:28:12:C:H5'	2.49	0.43
54:28:30:C:H2'	54:28:31:C:O4'	2.19	0.43
59:33:16:ASP:CG	59:33:17:PRO:CD	2.92	0.43
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.43
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.43
59:33:729:LEU:O	59:33:735:VAL:HG11	2.18	0.43
3:C:68:ALA:O	3:C:70:SER:N	2.51	0.42
5:E:91:VAL:HG22	5:E:92:GLY:N	2.33	0.42
8:H:102:ARG:HA	8:H:105:LEU:HD12	2.00	0.42
15:O:13:LYS:HE3	15:O:76:HIS:O	2.19	0.42
17:Q:37:GLU:OE1	17:Q:37:GLU:N	2.51	0.42
17:Q:64:VAL:HG21	17:Q:97:LYS:HB2	2.01	0.42
19:S:48:GLN:O	19:S:52:GLU:HA	2.19	0.42
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.19	0.42
21:U:93:ARG:HA	21:U:93:ARG:HD2	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:68:GLN:O	36:10:69:GLU:C	2.61	0.42
44:18:30:ILE:O	44:18:40:ARG:HG3	2.19	0.42
44:18:95:LEU:HG	44:18:95:LEU:O	2.18	0.42
46:20:14:ARG:HH21	46:20:42:ILE:HD11	1.83	0.42
52:26:290:C:O5'	52:26:290:C:H6	2.02	0.42
52:26:431:A:H2'	52:26:432:A:H8	1.85	0.42
52:26:529:G:H4'	52:26:533:A:C2	2.54	0.42
52:26:890:G:O2'	52:26:906:A:N6	2.52	0.42
52:26:1069:C:O2'	52:26:1192:C:HI'	2.19	0.42
52:26:1187:G:O2'	52:26:1188:A:H5'	2.19	0.42
53:27:193:U:H2'	53:27:194:G:C8	2.38	0.42
53:27:527:C:C4	53:27:2779:U:H2'	2.54	0.42
53:27:556:A:H3'	53:27:557:C:C6	2.54	0.42
53:27:957:C:O2'	53:27:958:U:H5''	2.19	0.42
53:27:1178:C:C2	53:27:1179:G:N7	2.87	0.42
53:27:1912:A:N7	53:27:1917:U:C5	2.87	0.42
53:27:1930:G:H2'	53:27:1968:G:N1	2.33	0.42
53:27:1973:G:H2'	53:27:1974:C:O4'	2.18	0.42
53:27:2248:C:H2'	53:27:2249:U:O4'	2.19	0.42
53:27:2312:U:O2'	53:27:2313:C:H5'	2.19	0.42
53:27:2617:U:H3'	53:27:2618:G:H8	1.84	0.42
53:27:2636:C:H2'	53:27:2637:U:C6	2.54	0.42
53:27:2869:G:H2'	53:27:2870:C:C6	2.54	0.42
54:28:82:U:H2'	54:28:83:G:H8	1.84	0.42
56:30:62:C:H2'	56:30:63:G:N9	2.34	0.42
58:32:12:G:H2'	58:32:13:C:O4'	2.19	0.42
59:33:57:TRP:O	59:33:60:VAL:CG2	2.63	0.42
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.42
59:33:172:VAL:HG13	59:33:173:LEU:N	2.34	0.42
59:33:281:ILE:HD13	59:33:281:ILE:HG21	1.80	0.42
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.01	0.42
4:D:33:ILE:HG13	4:D:95:MET:HE3	2.01	0.42
5:E:10:VAL:HG13	5:E:10:VAL:O	2.19	0.42
5:E:95:ALA:HB3	5:E:127:GLN:O	2.19	0.42
6:F:131:SER:OG	6:F:141:LYS:HE3	2.18	0.42
7:G:20:LYS:O	7:G:22:ALA:N	2.45	0.42
8:H:93:ASN:OD1	8:H:133:ARG:O	2.38	0.42
8:H:123:ALA:HB3	8:H:124:MET:HE2	2.01	0.42
9:I:34:ARG:HH11	9:I:34:ARG:HG3	1.84	0.42
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.83	0.42
11:K:63:LYS:HA	30:4:11:LYS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:22:ARG:HG3	13:M:70:THR:HA	2.01	0.42
13:M:33:ILE:O	13:M:33:ILE:HG23	2.19	0.42
13:M:51:LEU:HD11	13:M:70:THR:HG23	2.01	0.42
14:N:32:PRO:O	14:N:102:ARG:NH1	2.50	0.42
14:N:49:VAL:HG11	14:N:78:VAL:O	2.19	0.42
17:Q:38:VAL:HG22	17:Q:40:MET:H	1.83	0.42
25:Y:25:GLY:O	53:27:929:U:H1'	2.19	0.42
31:5:26:ILE:HG22	31:5:27:CYS:N	2.34	0.42
32:6:116:LEU:HA	32:6:119:GLN:CG	2.48	0.42
33:7:2:GLN:HE21	52:26:1191:A:P	2.42	0.42
33:7:38:VAL:HG23	33:7:39:ARG:N	2.34	0.42
35:9:92:ARG:HB2	35:9:127:TYR:HB2	2.01	0.42
41:15:30:ILE:HD13	41:15:45:THR:HG23	2.01	0.42
48:22:32:ILE:HD12	48:22:33:THR:O	2.19	0.42
48:22:33:THR:HG22	48:22:37:LYS:HB3	2.01	0.42
52:26:73:C:H2'	52:26:74:A:H8	1.83	0.42
52:26:786:G:C4	52:26:787:A:C8	3.07	0.42
52:26:943:U:H2'	52:26:944:G:C8	2.53	0.42
52:26:961:U:P	52:26:1223:C:H4'	2.58	0.42
52:26:1073:U:C4	52:26:1074:G:N7	2.87	0.42
52:26:1429:A:H2'	52:26:1430:A:H8	1.83	0.42
53:27:564:C:H2'	53:27:565:C:H6	1.81	0.42
53:27:572:A:C6	53:27:573:U:N3	2.88	0.42
53:27:691:C:O2'	53:27:692:C:H5'	2.19	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.34	0.42
53:27:1360:G:C8	53:27:1361:G:C8	3.08	0.42
53:27:1736:U:H2'	53:27:1737:G:O4'	2.20	0.42
53:27:1842:G:C6	53:27:1843:C:C4	3.06	0.42
53:27:1842:G:C5	53:27:1843:C:C4	3.06	0.42
53:27:2110:G:H5'	53:27:2111:U:C5'	2.48	0.42
53:27:2363:G:H2'	53:27:2364:C:C6	2.54	0.42
53:27:2568:U:H2'	53:27:2569:G:O4'	2.19	0.42
58:32:40:C:H2'	58:32:41:C:H6	1.82	0.42
59:33:702:ASP:CG	59:33:703:THR:H	2.26	0.42
1:A:47:ARG:NH1	53:27:1807:G:OP1	2.50	0.42
2:B:157:LYS:HA	53:27:2619:C:H5''	2.00	0.42
3:C:45:ALA:CB	53:27:38:A:H4'	2.49	0.42
4:D:65:LEU:HD23	4:D:87:LYS:HE2	2.00	0.42
5:E:91:VAL:HG12	5:E:159:LYS:HE2	2.00	0.42
5:E:144:ALA:HB1	5:E:163:TYR:HE1	1.84	0.42
6:F:80:ILE:HD13	6:F:98:ASP:OD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:73:PRO:CB	8:H:78:LEU:HD21	2.49	0.42
9:I:15:TRP:O	9:I:138:GLN:HB3	2.20	0.42
11:K:54:GLN:HE22	53:27:2358:A:H61	1.66	0.42
19:S:73:ARG:HG3	19:S:73:ARG:NH2	2.29	0.42
26:Z:66:ILE:HD13	44:18:41:TRP:HB2	2.01	0.42
32:6:202:ASN:HD21	32:6:208:ALA:HB2	1.83	0.42
34:8:131:ILE:HD12	34:8:131:ILE:O	2.19	0.42
35:9:113:VAL:HG13	35:9:114:LEU:HD13	2.01	0.42
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.34	0.42
40:14:17:LEU:HD23	40:14:17:LEU:C	2.44	0.42
40:14:50:THR:HB	52:26:975:A:H62	1.84	0.42
40:14:98:VAL:HG22	40:14:99:GLN:N	2.34	0.42
46:20:8:ARG:O	46:20:8:ARG:HG3	2.19	0.42
49:23:21:ALA:O	49:23:25:GLY:N	2.50	0.42
49:23:55:GLN:NE2	59:33:606:MET:HA	2.34	0.42
52:26:199:A:O2'	52:26:200:G:H5'	2.19	0.42
52:26:705:G:H2'	52:26:706:A:H5'	1.99	0.42
52:26:756:C:H2'	52:26:757:U:H6	1.85	0.42
52:26:793:U:H5'	52:26:794:A:O5'	2.18	0.42
52:26:1118:U:H1'	52:26:1179:A:C4	2.55	0.42
52:26:1241:G:H2'	52:26:1242:G:H8	1.84	0.42
53:27:279:A:N6	53:27:361:G:O2'	2.51	0.42
53:27:522:A:H2'	53:27:523:C:H6	1.81	0.42
53:27:532:A:H4'	53:27:533:G:C8	2.53	0.42
53:27:784:G:C5'	53:27:785:G:OP1	2.63	0.42
53:27:823:C:C4	53:27:824:U:C4	3.07	0.42
53:27:870:U:O2'	53:27:871:U:H5'	2.19	0.42
53:27:1001:A:H2'	53:27:1002:G:O4'	2.19	0.42
53:27:1277:G:H2'	53:27:1278:C:C6	2.55	0.42
53:27:1310:G:O2'	53:27:1611:C:H5''	2.18	0.42
53:27:1629:U:H1'	53:27:2698:U:H5''	2.01	0.42
53:27:2061:G:C8	53:27:2503:A:O4'	2.72	0.42
53:27:2691:C:O2'	53:27:2692:G:H5'	2.19	0.42
55:29:17:U:H2'	55:29:18:G:C8	2.54	0.42
59:33:18:GLU:O	59:33:21:ILE:CG1	2.68	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42
1:A:103:ILE:C	1:A:103:ILE:HD12	2.44	0.42
1:A:217:PRO:HB2	53:27:1789:A:O3'	2.19	0.42
3:C:84:THR:CG2	53:27:586:A:H5'	2.45	0.42
3:C:132:LYS:HD3	53:27:319:G:OP2	2.20	0.42
5:E:16:VAL:HG12	5:E:17:LYS:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:34:THR:HG21	53:27:1085:A:N6	2.34	0.42
7:G:44:ALA:O	7:G:50:VAL:N	2.52	0.42
9:I:16:TYR:O	9:I:55:ILE:N	2.52	0.42
9:I:26:GLY:HA3	53:27:1140:C:H5'	2.01	0.42
10:J:31:ARG:HH12	53:27:2676:C:P	2.42	0.42
12:L:42:THR:HG23	12:L:45:GLN:CD	2.45	0.42
14:N:49:VAL:CG2	14:N:82:ALA:HA	2.37	0.42
18:R:11:ARG:HH21	53:27:1322:A:H5'	1.83	0.42
20:T:94:PHE:HB2	20:T:100:GLU:C	2.45	0.42
21:U:18:ARG:HH21	54:28:78:A:P	2.42	0.42
29:3:12:ARG:NH2	53:27:686:U:O4	2.52	0.42
32:6:35:ASN:C	32:6:37:VAL:H	2.26	0.42
32:6:191:ASP:OD1	32:6:192:PRO:HD2	2.19	0.42
33:7:86:LEU:HA	33:7:89:VAL:CG2	2.50	0.42
36:10:54:LEU:HD12	36:10:55:HIS:N	2.35	0.42
37:11:2:ARG:NH2	52:26:935:A:C2	2.87	0.42
39:13:43:ALA:O	39:13:46:VAL:HG22	2.19	0.42
41:15:71:ASP:O	41:15:72:ALA:CB	2.66	0.42
41:15:126:ARG:HB2	51:25:33:ARG:CD	2.48	0.42
43:17:49:GLU:C	43:17:51:GLN:N	2.76	0.42
44:18:33:VAL:O	44:18:33:VAL:HG23	2.19	0.42
45:19:71:ARG:HH22	52:26:754:C:H5'	1.78	0.42
47:21:26:ARG:CZ	47:21:39:ARG:HG2	2.50	0.42
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.48	0.42
52:26:5:U:H4'	52:26:6:G:C4	2.54	0.42
52:26:123:U:H2'	52:26:124:C:C6	2.55	0.42
52:26:157:U:H1'	52:26:165:G:C2	2.54	0.42
52:26:496:A:C2	52:26:497:G:C5	3.07	0.42
52:26:967:C:H2'	52:26:968:A:C8	2.54	0.42
52:26:969:A:O2'	52:26:970:C:H5'	2.20	0.42
52:26:1054:C:OP2	52:26:1197:A:OP2	2.37	0.42
52:26:1234:C:C2'	52:26:1235:U:H5'	2.49	0.42
53:27:483:A:N7	53:27:497:A:H2	2.18	0.42
53:27:635:C:H2'	53:27:636:G:C8	2.55	0.42
53:27:770:G:C4	53:27:771:G:C8	3.07	0.42
53:27:860:U:H1'	53:27:2268:A:H5'	2.01	0.42
53:27:996:A:C6	53:27:1160:G:N1	2.87	0.42
53:27:1356:G:C5	53:27:1357:C:C5	3.08	0.42
53:27:1669:A:OP2	53:27:1670:C:OP2	2.37	0.42
53:27:1786:A:H1'	53:27:1938:A:N6	2.34	0.42
53:27:1869:G:H2'	53:27:1871:A:H2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1909:C:H2'	53:27:1910:G:C8	2.54	0.42
53:27:1923:U:H2'	53:27:1924:C:C6	2.54	0.42
53:27:1999:C:H1'	53:27:2687:U:O2'	2.19	0.42
53:27:2048:G:H2'	53:27:2049:G:O4'	2.20	0.42
53:27:2071:A:C6	53:27:2072:C:N4	2.87	0.42
53:27:2075:U:C4	53:27:2238:G:C6	3.08	0.42
53:27:2460:U:H2'	53:27:2461:A:H8	1.83	0.42
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.42
59:33:622:VAL:CB	59:33:641:LEU:HD21	2.48	0.42
59:33:664:GLY:N	59:33:717:TYR:O	2.52	0.42
2:B:144:GLY:O	2:B:145:SER:C	2.62	0.42
2:B:149:ASN:CG	2:B:150:GLN:H	2.28	0.42
20:T:82:VAL:HG12	20:T:83:GLY:N	2.34	0.42
23:W:32:LEU:O	23:W:33:HIS:CG	2.72	0.42
24:X:7:ARG:HG3	24:X:8:GLU:N	2.34	0.42
30:4:38:LYS:HG3	30:4:41:ARG:NH1	2.35	0.42
32:6:76:SER:HB2	32:6:92:ASN:O	2.19	0.42
32:6:105:THR:N	32:6:107:ARG:HG2	2.35	0.42
35:9:63:MET:HB3	35:9:67:ARG:NH1	2.25	0.42
41:15:96:ILE:O	41:15:99:LEU:HB3	2.18	0.42
42:16:112:ALA:HA	52:26:502:A:P	2.59	0.42
44:18:20:PHE:C	44:18:23:ARG:H	2.28	0.42
52:26:177:G:O2'	52:26:1448:C:H4'	2.20	0.42
52:26:207:C:H1'	52:26:212:G:H22	1.84	0.42
52:26:542:G:H2'	52:26:543:U:H6	1.79	0.42
52:26:711:G:H2'	52:26:712:A:H8	1.84	0.42
52:26:880:C:H2'	52:26:881:G:O4'	2.19	0.42
52:26:900:A:H2'	52:26:901:A:O4'	2.19	0.42
52:26:922:G:C6	52:26:923:A:C6	3.08	0.42
52:26:1414:U:H2'	52:26:1415:G:C8	2.50	0.42
52:26:1434:A:O2'	52:26:1435:G:H5'	2.18	0.42
53:27:303:G:H2'	53:27:304:U:O4'	2.19	0.42
53:27:1049:C:H1'	53:27:1113:U:H4'	2.02	0.42
53:27:1105:U:H2'	53:27:1106:G:H8	1.84	0.42
53:27:1255:U:C5'	53:27:1256:G:H5''	2.49	0.42
53:27:1620:G:O2'	53:27:1621:U:H5'	2.19	0.42
53:27:1891:G:H2'	53:27:1892:C:H6	1.83	0.42
53:27:2090:A:H2'	53:27:2091:C:H6	1.83	0.42
53:27:2662:A:C4	53:27:2663:G:H1'	2.55	0.42
54:28:56:G:H4'	54:28:57:A:H8	1.83	0.42
55:29:13:A:O5'	55:29:13:A:H8	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42
59:33:599:VAL:N	59:33:602:VAL:O	2.53	0.42
1:A:154:ALA:HB2	1:A:161:VAL:HG23	2.00	0.42
2:B:104:VAL:O	2:B:177:VAL:HG11	2.20	0.42
3:C:103:GLY:O	3:C:106:LYS:HB2	2.19	0.42
4:D:102:LEU:HA	4:D:106:ALA:HB3	2.02	0.42
4:D:114:ARG:NH1	43:17:67:ASP:OD1	2.50	0.42
14:N:100:HIS:H	14:N:103:VAL:HG23	1.85	0.42
16:P:53:LYS:HE2	53:27:994:C:C6	2.54	0.42
20:T:38:ILE:HG22	20:T:39:ASN:N	2.34	0.42
21:U:60:VAL:HG13	21:U:72:VAL:O	2.20	0.42
30:4:3:ILE:N	30:4:63:TYR:OH	2.52	0.42
33:7:46:LEU:CD1	33:7:75:VAL:HG13	2.50	0.42
34:8:67:LEU:HD23	34:8:67:LEU:HA	1.88	0.42
35:9:35:LEU:HD12	35:9:48:GLY:O	2.19	0.42
35:9:101:GLY:O	35:9:102:THR:O	2.36	0.42
37:11:28:ILE:O	37:11:28:ILE:HG22	2.20	0.42
39:13:90:ASP:C	39:13:92:SER:N	2.77	0.42
41:15:21:HIS:NE2	41:15:84:MET:HE3	2.34	0.42
41:15:40:ALA:HB3	52:26:685:G:O4'	2.20	0.42
43:17:28:ARG:HG2	43:17:62:PHE:CD2	2.55	0.42
44:18:26:LEU:HA	44:18:30:ILE:HD12	2.00	0.42
45:19:35:ILE:HG12	45:19:55:LEU:HD11	2.02	0.42
46:20:21:VAL:O	46:20:32:PHE:HB2	2.20	0.42
47:21:6:THR:O	47:21:7:LEU:HD12	2.18	0.42
51:25:27:VAL:O	51:25:31:VAL:HG12	2.19	0.42
52:26:88:U:C2'	52:26:89:U:H4'	2.49	0.42
52:26:137:U:O2'	52:26:138:G:H5'	2.19	0.42
52:26:236:A:H2'	52:26:237:G:H8	1.84	0.42
52:26:434:U:H2'	52:26:435:A:H8	1.85	0.42
52:26:731:G:H5'	52:26:766:A:C4'	2.49	0.42
52:26:1026:G:H2'	52:26:1026:G:N3	2.33	0.42
52:26:1037:C:H2'	52:26:1038:C:C6	2.52	0.42
52:26:1114:C:H2'	52:26:1115:U:O4'	2.18	0.42
52:26:1231:G:O2'	52:26:1232:U:H5'	2.19	0.42
52:26:1415:G:N3	52:26:1416:G:C8	2.88	0.42
53:27:426:C:H2'	53:27:427:U:C6	2.54	0.42
53:27:687:C:H5'	53:27:688:U:OP2	2.19	0.42
53:27:1070:A:H2'	53:27:1097:U:OP1	2.20	0.42
53:27:1187:G:H8	53:27:1187:G:O5'	2.03	0.42
53:27:2007:U:H2'	53:27:2008:C:C6	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2107:G:H2'	53:27:2108:A:O4'	2.19	0.42
53:27:2341:G:H2'	53:27:2342:C:H6	1.85	0.42
53:27:2654:A:N1	53:27:2665:A:H5''	2.35	0.42
53:27:2800:A:H3'	53:27:2801:G:H5''	2.01	0.42
54:28:34:A:H2'	54:28:44:G:O6	2.18	0.42
58:32:40:C:C2	58:32:41:C:C5	3.06	0.42
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.42
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:432:HIS:HB3	59:33:435:VAL:CG2	2.46	0.42
59:33:702:ASP:OD1	59:33:703:THR:N	2.48	0.42
1:A:12:ARG:HD2	53:27:728:G:H4'	2.02	0.42
4:D:14:LYS:O	4:D:18:GLU:HG3	2.19	0.42
4:D:72:SER:OG	4:D:79:ARG:HA	2.20	0.42
6:F:3:VAL:HA	6:F:39:ALA:H	1.84	0.42
6:F:83:LYS:C	6:F:91:PHE:HB2	2.44	0.42
7:G:82:ILE:HB	7:G:84:TYR:CE2	2.55	0.42
9:I:62:VAL:HG11	9:I:101:ILE:HD11	2.01	0.42
9:I:95:ARG:HG3	9:I:96:ARG:HG2	2.02	0.42
10:J:22:ILE:HD12	10:J:23:LYS:HB3	2.02	0.42
10:J:34:GLY:C	10:J:62:VAL:HG21	2.44	0.42
14:N:15:ARG:HD2	14:N:25:ARG:NH2	2.34	0.42
15:O:1:SER:N	15:O:4:ILE:HD12	2.35	0.42
15:O:93:LYS:HD3	53:27:2717:C:O2'	2.19	0.42
16:P:27:ARG:HH21	16:P:37:ALA:HA	1.84	0.42
19:S:48:GLN:HB2	19:S:55:VAL:HG21	2.01	0.42
20:T:11:ILE:HD11	20:T:19:GLY:HA2	2.02	0.42
25:Y:20:LYS:O	25:Y:23:LEU:HB2	2.19	0.42
29:3:8:SER:O	29:3:9:VAL:C	2.63	0.42
32:6:91:VAL:HG11	32:6:95:TRP:HD1	1.83	0.42
32:6:185:ILE:HG22	32:6:199:ILE:CB	2.47	0.42
33:7:68:HIS:HA	33:7:103:ALA:O	2.19	0.42
34:8:84:ASN:O	34:8:88:ASN:ND2	2.53	0.42
34:8:144:ILE:HG22	34:8:149:LYS:HA	2.01	0.42
37:11:110:ARG:HG2	37:11:110:ARG:O	2.20	0.42
44:18:57:SER:OG	52:26:1316:G:H4'	2.20	0.42
46:20:6:LEU:HD13	46:20:17:TYR:CD1	2.54	0.42
48:22:13:THR:CG2	48:22:20:ILE:HD11	2.48	0.42
52:26:357:G:OP1	52:26:367:U:H2'	2.19	0.42
52:26:441:A:H61	52:26:493:A:H2	1.67	0.42
52:26:514:C:H2'	52:26:515:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:602:A:H2'	52:26:603:U:C6	2.54	0.42
52:26:848:C:H2'	52:26:849:G:C5'	2.49	0.42
52:26:1001:C:H2'	52:26:1002:G:C8	2.54	0.42
52:26:1064:G:C2	52:26:1066:C:N4	2.88	0.42
53:27:514:A:O2'	53:27:515:A:H5'	2.20	0.42
53:27:1387:A:O2'	53:27:1388:G:H5'	2.19	0.42
53:27:1528:A:H2'	53:27:1529:G:C5'	2.50	0.42
53:27:1542:U:H2'	53:27:1543:G:C8	2.55	0.42
53:27:1772:A:H2'	53:27:1773:A:O3'	2.20	0.42
53:27:2287:A:C5	53:27:2289:G:C8	3.08	0.42
53:27:2326:C:O2'	53:27:2327:A:OP1	2.36	0.42
53:27:2452:C:C2	53:27:2504:U:C4	3.08	0.42
53:27:2828:G:O2'	53:27:2829:A:H5'	2.20	0.42
59:33:407:TYR:O	59:33:408:VAL:HG13	2.19	0.42
1:A:44:ASN:HD21	53:27:1812:U:C1'	2.31	0.42
1:A:163:ILE:HG12	1:A:173:LEU:CD2	2.49	0.42
1:A:204:LEU:HD21	1:A:213:ARG:HE	1.85	0.42
2:B:4:LEU:HD13	2:B:101:PHE:CE2	2.55	0.42
5:E:34:ARG:CG	5:E:74:MET:SD	3.08	0.42
5:E:85:LYS:HB2	5:E:164:ALA:CB	2.50	0.42
8:H:127:SER:CA	53:27:1059:G:H21	2.33	0.42
9:I:118:MET:O	9:I:121:LYS:HG2	2.20	0.42
12:L:67:VAL:HG12	12:L:100:LYS:HE3	2.01	0.42
12:L:69:PRO:CA	12:L:94:ALA:HB2	2.48	0.42
12:L:110:GLU:CD	12:L:110:GLU:C	2.88	0.42
14:N:69:ASP:N	14:N:69:ASP:OD1	2.52	0.42
15:O:52:ARG:NH2	53:27:2720:U:H5''	2.34	0.42
15:O:63:ILE:H	15:O:63:ILE:HG13	1.53	0.42
19:S:88:LYS:O	19:S:91:GLN:HB3	2.18	0.42
27:1:54:ILE:O	27:1:55:ALA:C	2.61	0.42
28:2:34:GLU:HA	28:2:48:TYR:O	2.19	0.42
30:4:24:LYS:C	30:4:26:ALA:H	2.28	0.42
31:5:19:ARG:HH12	31:5:26:ILE:CD1	2.20	0.42
33:7:76:ILE:CA	33:7:83:VAL:HG23	2.49	0.42
33:7:121:SER:O	33:7:124:GLU:HB3	2.19	0.42
33:7:196:GLY:H	52:26:1057:G:H4'	1.85	0.42
39:13:86:LEU:HA	39:13:86:LEU:HD23	1.78	0.42
42:16:113:ARG:HH21	42:16:120:ARG:CG	2.32	0.42
46:20:12:LYS:C	46:20:14:ARG:N	2.77	0.42
46:20:54:LEU:O	46:20:57:ILE:HB	2.20	0.42
49:23:30:LEU:N	49:23:30:LEU:HD12	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:123:U:H2'	52:26:124:C:H6	1.85	0.42
52:26:222:C:H2'	52:26:223:A:H8	1.84	0.42
52:26:321:A:H2'	52:26:322:C:C6	2.54	0.42
52:26:487:A:H2'	52:26:488:C:O4'	2.19	0.42
52:26:573:A:C6	52:26:574:A:N1	2.88	0.42
52:26:579:A:H5'	52:26:728:A:H1'	2.02	0.42
52:26:785:G:O2'	52:26:786:G:H5'	2.19	0.42
53:27:256:A:O2'	53:27:257:C:H5'	2.20	0.42
53:27:341:C:H2'	53:27:342:A:H8	1.83	0.42
53:27:342:A:H2'	53:27:343:C:O4'	2.20	0.42
53:27:868:U:C4	53:27:869:G:N7	2.88	0.42
53:27:884:U:O5'	53:27:884:U:H6	2.03	0.42
53:27:942:G:H2'	53:27:943:A:H8	1.85	0.42
53:27:1126:A:H8	53:27:1126:A:OP1	2.03	0.42
53:27:1272:A:C2	53:27:1618:A:C2	3.08	0.42
53:27:1795:C:C4	53:27:1796:U:C4	3.08	0.42
53:27:1815:A:H8	53:27:1815:A:OP1	2.02	0.42
53:27:2010:G:O2'	53:27:2011:U:H5'	2.20	0.42
53:27:2173:A:H2'	53:27:2174:C:C5	2.55	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.84	0.42
59:33:106:LEU:HD21	59:33:145:ASP:CG	2.45	0.42
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
59:33:566:LYS:CB	59:33:569:ALA:HB3	2.50	0.42
1:A:75:ALA:CB	1:A:95:TYR:HA	2.49	0.42
2:B:49:GLN:HE21	2:B:79:LEU:HB3	1.85	0.42
2:B:183:GLU:OE1	2:B:183:GLU:N	2.52	0.42
4:D:34:THR:HA	4:D:88:VAL:O	2.20	0.42
10:J:76:VAL:H	15:O:72:VAL:CG2	2.30	0.42
11:K:41:ARG:NH1	53:27:807:U:OP2	2.52	0.42
14:N:9:ARG:HG3	14:N:10:ARG:N	2.35	0.42
17:Q:37:GLU:HB2	17:Q:53:PHE:HE1	1.84	0.42
18:R:66:ILE:O	18:R:69:LEU:HB3	2.19	0.42
19:S:81:LYS:NZ	53:27:1600:C:OP1	2.43	0.42
23:W:17:ARG:HD3	23:W:17:ARG:HA	1.95	0.42
26:Z:43:PHE:HB2	26:Z:47:LYS:NZ	2.34	0.42
30:4:8:GLY:O	30:4:12:ARG:NH2	2.53	0.42
31:5:24:ARG:HH22	31:5:36:ARG:HG3	1.84	0.42
35:9:132:PRO:O	35:9:135:VAL:HG22	2.20	0.42
42:16:101:LEU:HB3	42:16:102:ASP:H	1.53	0.42
46:20:32:PHE:CD1	46:20:32:PHE:C	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.85	0.42
51:25:28:LEU:C	51:25:30:GLU:H	2.25	0.42
51:25:38:GLU:OE1	52:26:1527:U:OP2	2.38	0.42
52:26:267:C:O2'	52:26:268:U:H5'	2.19	0.42
52:26:605:U:H2'	52:26:606:G:H8	1.85	0.42
52:26:849:G:H2'	52:26:850:U:O4'	2.20	0.42
52:26:852:G:C5	52:26:853:C:C5	3.08	0.42
52:26:1143:G:H2'	52:26:1144:G:C8	2.55	0.42
53:27:864:G:O2'	53:27:865:C:H5'	2.19	0.42
53:27:962:G:H21	53:27:2250:G:H22	1.68	0.42
53:27:1271:G:O3'	53:27:1272:A:H4'	2.20	0.42
53:27:1528:A:H2'	53:27:1529:G:O4'	2.19	0.42
53:27:2340:A:H2'	53:27:2341:G:C8	2.54	0.42
53:27:2543:G:H2'	53:27:2544:G:H8	1.82	0.42
53:27:2553:G:H2'	53:27:2554:U:O4'	2.20	0.42
53:27:2623:G:H2'	53:27:2624:G:C8	2.51	0.42
54:28:118:C:H2'	54:28:119:A:H8	1.84	0.42
57:31:52:G:H2'	57:31:53:G:O4'	2.20	0.42
57:31:66:C:O2'	57:31:67:C:H5'	2.20	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
59:33:506:LEU:C	59:33:508:GLY:N	2.75	0.42
59:33:599:VAL:HG11	59:33:631:ILE:CD1	2.49	0.42
1:A:47:ARG:NH2	53:27:777:G:O2'	2.53	0.42
1:A:62:ARG:NH2	53:27:1568:G:OP2	2.44	0.42
1:A:155:ARG:NH1	53:27:1818:U:H5	2.18	0.42
1:A:164:VAL:CG2	1:A:180:MET:HE1	2.47	0.42
3:C:109:LEU:HD11	3:C:180:LEU:HD23	2.01	0.42
7:G:59:LEU:HD23	7:G:61:ARG:N	2.35	0.42
11:K:37:GLY:O	11:K:38:GLN:C	2.62	0.42
19:S:11:LEU:HD21	19:S:47:VAL:HG22	2.02	0.42
19:S:57:VAL:HG22	19:S:58:VAL:H	1.85	0.42
21:U:26:PHE:CZ	21:U:86:LEU:HD22	2.55	0.42
23:W:16:ASN:CG	23:W:26:ARG:HD2	2.45	0.42
24:X:59:GLU:HA	24:X:63:ALA:HB2	2.02	0.42
38:12:10:LEU:HD22	38:12:74:ILE:HD13	2.02	0.42
38:12:56:PRO:O	38:12:58:LEU:N	2.52	0.42
39:13:122:ARG:HB2	52:26:1349:A:OP1	2.20	0.42
42:16:24:GLU:C	42:16:26:CYS:N	2.71	0.42
44:18:99:SER:HG	52:26:1114:C:H1'	1.83	0.42
46:20:5:ARG:HB2	52:26:376:G:H5''	2.01	0.42
46:20:20:VAL:HG21	46:20:32:PHE:CG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:17:ARG:NH2	52:26:1538:C:O2'	2.53	0.42
52:26:24:U:H4'	52:26:524:G:O2'	2.20	0.42
52:26:236:A:H8	52:26:236:A:O5'	2.03	0.42
52:26:429:U:H4'	52:26:430:A:O5'	2.20	0.42
52:26:469:C:H2'	52:26:470:C:H5'	2.01	0.42
52:26:792:A:H1'	52:26:794:A:C8	2.55	0.42
52:26:824:G:O2'	52:26:825:A:H5'	2.19	0.42
52:26:892:A:H2'	52:26:893:C:H6	1.84	0.42
52:26:1155:A:H2'	52:26:1156:G:O4'	2.20	0.42
52:26:1300:G:O2'	52:26:1301:U:O5'	2.34	0.42
53:27:185:G:H2'	53:27:186:G:O4'	2.20	0.42
53:27:283:G:H2'	53:27:284:U:H4'	2.02	0.42
53:27:719:C:H2'	53:27:720:U:O4'	2.20	0.42
53:27:1306:C:O2'	53:27:1307:A:H5'	2.20	0.42
53:27:1555:G:H5'	53:27:1555:G:H8	1.84	0.42
53:27:1820:U:H4'	53:27:1821:A:OP2	2.20	0.42
53:27:2027:G:C2	53:27:2028:U:C2	3.07	0.42
53:27:2037:A:C6	53:27:2038:G:C6	3.08	0.42
54:28:35:C:H2'	54:28:36:C:O4'	2.19	0.42
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
59:33:134:ASN:O	59:33:135:VAL:CB	2.68	0.42
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.42
59:33:197:GLU:OE2	59:33:201:TYR:OH	2.35	0.42
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.42
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.42
59:33:333:THR:O	59:33:334:VAL:C	2.63	0.42
59:33:473:ARG:O	59:33:475:TRP:N	2.53	0.42
1:A:208:GLY:O	1:A:211:ARG:N	2.53	0.41
3:C:132:LYS:HE3	3:C:132:LYS:HB2	1.87	0.41
4:D:37:MET:CE	4:D:151:LEU:HB3	2.50	0.41
7:G:24:SER:N	7:G:118:ILE:HG13	2.32	0.41
8:H:109:ALA:HB1	8:H:121:ILE:HG23	2.02	0.41
10:J:12:ASP:HB2	10:J:98:ARG:O	2.20	0.41
15:O:77:SER:O	15:O:80:VAL:HG22	2.20	0.41
15:O:88:ARG:N	15:O:111:GLU:OE2	2.53	0.41
17:Q:10:LYS:CE	53:27:994:C:H1'	2.50	0.41
25:Y:44:ARG:HH22	25:Y:56:VAL:HG21	1.85	0.41
26:Z:1:MET:HA	54:28:44:G:OP2	2.20	0.41
26:Z:43:PHE:CD1	26:Z:43:PHE:C	2.98	0.41
27:1:51:ARG:CG	27:1:53:VAL:HG13	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:40:LYS:NZ	53:27:2419:U:OP1	2.52	0.41
30:4:44:ARG:N	30:4:45:PRO:HD2	2.35	0.41
32:6:17:HIS:CG	32:6:202:ASN:HB3	2.55	0.41
35:9:26:GLY:O	52:26:1194:U:H5'	2.20	0.41
36:10:6:ILE:HD13	36:10:74:LEU:HD21	2.00	0.41
39:13:9:GLY:HA3	39:13:81:GLY:HA2	2.02	0.41
41:15:30:ILE:HD13	41:15:45:THR:CG2	2.50	0.41
42:16:109:ARG:NH2	42:16:116:TYR:HE2	2.18	0.41
47:21:42:LYS:NZ	52:26:278:G:OP2	2.35	0.41
51:25:28:LEU:O	51:25:30:GLU:N	2.44	0.41
52:26:90:C:H2'	52:26:91:U:H5'	2.01	0.41
52:26:113:G:H1'	52:26:354:G:H5''	2.02	0.41
52:26:122:G:C5	52:26:123:U:C5	3.07	0.41
52:26:296:U:H2'	52:26:297:G:H8	1.80	0.41
52:26:312:C:H2'	52:26:313:A:H8	1.79	0.41
52:26:325:A:H2'	52:26:326:G:O4'	2.20	0.41
52:26:496:A:H2'	52:26:497:G:C8	2.55	0.41
52:26:514:C:H2'	52:26:515:G:H8	1.85	0.41
52:26:545:C:H2'	52:26:546:A:H8	1.85	0.41
52:26:1109:C:H2'	52:26:1110:A:H8	1.85	0.41
52:26:1197:A:O2'	52:26:1198:G:H5'	2.20	0.41
52:26:1353:G:O2'	52:26:1354:U:H5'	2.20	0.41
53:27:128:C:H2'	53:27:129:C:H6	1.85	0.41
53:27:316:C:O5'	53:27:316:C:H6	2.03	0.41
53:27:379:G:H4'	53:27:2232:C:H5''	2.01	0.41
53:27:524:G:C6	53:27:525:U:C4	3.08	0.41
53:27:565:C:H6	53:27:565:C:O5'	2.03	0.41
53:27:950:G:H2'	53:27:951:C:H6	1.85	0.41
53:27:1052:C:H2'	53:27:1053:C:H5'	2.01	0.41
53:27:1110:G:H2'	53:27:1111:A:C8	2.55	0.41
53:27:1172:C:H2'	53:27:1173:U:C2	2.55	0.41
53:27:1577:C:H2'	53:27:1578:U:C6	2.55	0.41
53:27:1874:C:H2'	53:27:1875:G:O4'	2.20	0.41
53:27:2066:C:O2'	53:27:2067:G:H5'	2.19	0.41
53:27:2069:G:C2	53:27:2070:A:C8	3.07	0.41
53:27:2544:G:H2'	53:27:2545:G:C8	2.55	0.41
53:27:2650:U:H2'	53:27:2651:C:C6	2.55	0.41
53:27:2714:G:O2'	53:27:2715:C:H5'	2.20	0.41
58:32:26:G:O6	58:32:44:A:C2	2.73	0.41
59:33:131:GLN:C	59:33:132:VAL:HG23	2.45	0.41
59:33:687:LEU:HA	59:33:690:GLU:OE1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:164:VAL:CG2	1:A:174:ARG:HB2	2.50	0.41
2:B:184:ARG:O	2:B:186:LEU:HG	2.20	0.41
4:D:72:SER:OG	4:D:79:ARG:HG2	2.20	0.41
7:G:88:HIS:C	7:G:90:GLY:H	2.28	0.41
8:H:54:ILE:HA	8:H:73:PRO:HA	2.02	0.41
9:I:110:PRO:HB3	53:27:1007:C:O3'	2.20	0.41
10:J:23:LYS:HE3	53:27:2561:U:O2	2.19	0.41
13:M:66:ALA:O	13:M:69:ARG:O	2.38	0.41
14:N:68:LYS:HG3	54:28:50:A:OP1	2.20	0.41
14:N:100:HIS:H	14:N:103:VAL:CG2	2.33	0.41
15:O:28:LYS:HA	15:O:41:ALA:HA	2.02	0.41
19:S:12:ARG:HD3	19:S:12:ARG:HA	1.82	0.41
20:T:27:VAL:HG11	53:27:85:G:H5''	2.02	0.41
21:U:42:LEU:CD1	21:U:47:VAL:HG21	2.46	0.41
23:W:16:ASN:OD1	23:W:26:ARG:HD2	2.19	0.41
32:6:100:LEU:O	32:6:103:TRP:HB2	2.20	0.41
33:7:28:PHE:HE2	44:18:76:PHE:HD1	1.68	0.41
33:7:120:THR:HG23	33:7:188:ALA:CB	2.50	0.41
34:8:59:LYS:CD	34:8:194:ILE:HG22	2.50	0.41
38:12:84:ILE:HG22	38:12:85:TYR:N	2.35	0.41
42:16:29:LYS:O	42:16:80:LEU:HD12	2.20	0.41
46:20:38:PHE:CE2	46:20:51:ARG:HB3	2.55	0.41
47:21:74:LEU:HD23	47:21:75:VAL:C	2.45	0.41
52:26:189:A:H2'	52:26:190:A:C8	2.55	0.41
52:26:398:U:H2'	52:26:399:G:H8	1.84	0.41
52:26:855:U:H2'	52:26:856:C:H6	1.83	0.41
52:26:1097:C:H2'	52:26:1098:C:H6	1.82	0.41
52:26:1264:U:H2'	52:26:1265:C:C6	2.55	0.41
53:27:16:C:O5'	53:27:16:C:H6	2.03	0.41
53:27:458:G:N2	53:27:469:G:C4	2.88	0.41
53:27:528:A:C2	53:27:2043:C:H5'	2.55	0.41
53:27:624:C:H2'	53:27:625:G:O4'	2.20	0.41
53:27:635:C:H2'	53:27:636:G:H8	1.85	0.41
53:27:714:U:H2'	53:27:716:A:N7	2.35	0.41
53:27:727:A:C6	53:27:728:G:C6	3.08	0.41
53:27:755:U:H2'	53:27:756:A:H8	1.81	0.41
53:27:814:C:O2'	53:27:815:C:H5'	2.20	0.41
53:27:820:A:H2'	53:27:821:A:C8	2.55	0.41
53:27:1015:U:H2'	53:27:1016:G:H8	1.84	0.41
53:27:1127:A:C2'	53:27:1128:G:H5''	2.50	0.41
53:27:1312:U:H4'	53:27:1313:U:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1358:G:C2	53:27:1372:U:C5	3.08	0.41
53:27:1361:G:C6	53:27:1362:C:N4	2.87	0.41
53:27:1656:C:C2	53:27:1657:U:C5	3.08	0.41
53:27:1689:A:N6	53:27:1697:G:H2'	2.35	0.41
53:27:1706:C:O2'	53:27:1757:A:H5'	2.20	0.41
53:27:1878:G:O2'	53:27:1879:C:H5'	2.20	0.41
53:27:1906:G:H3'	53:27:1907:G:H5''	2.02	0.41
53:27:2025:C:H2'	53:27:2026:U:C6	2.54	0.41
53:27:2040:G:H2'	53:27:2041:U:O4'	2.20	0.41
53:27:2291:U:O2'	53:27:2374:C:H1'	2.20	0.41
53:27:2454:G:C4	53:27:2455:G:C8	3.08	0.41
53:27:2773:C:H2'	53:27:2774:C:C6	2.55	0.41
58:32:21:A:H62	58:32:47:U:H4'	1.84	0.41
58:32:36:U:H2'	58:32:37:A:C5'	2.38	0.41
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:668:VAL:HG12	59:33:669:VAL:N	2.34	0.41
1:A:202:ARG:NH1	1:A:213:ARG:HH22	2.16	0.41
3:C:65:THR:O	3:C:65:THR:HG22	2.20	0.41
3:C:164:LEU:HD23	3:C:165:HIS:N	2.36	0.41
3:C:179:SER:C	3:C:181:ILE:H	2.28	0.41
6:F:1:MET:N	6:F:21:VAL:O	2.53	0.41
9:I:45:THR:HG22	9:I:47:HIS:H	1.85	0.41
16:P:1:ALA:O	16:P:3:VAL:N	2.53	0.41
16:P:2:ARG:HA	53:27:1248:G:O2'	2.20	0.41
17:Q:91:GLN:OE1	17:Q:92:TRP:N	2.54	0.41
18:R:74:ILE:HG13	18:R:104:THR:O	2.21	0.41
22:V:55:LEU:HD23	22:V:55:LEU:HA	1.83	0.41
28:2:9:LYS:HG3	28:2:19:PHE:CD1	2.56	0.41
28:2:46:VAL:CG1	28:2:47:ILE:H	2.25	0.41
30:4:2:LYS:HB2	53:27:242:G:C8	2.55	0.41
32:6:22:TRP:H	32:6:22:TRP:HD1	1.69	0.41
32:6:59:ILE:O	32:6:63:LYS:N	2.54	0.41
33:7:86:LEU:HA	33:7:89:VAL:HG22	2.02	0.41
33:7:116:ALA:O	33:7:119:ILE:HB	2.20	0.41
35:9:37:VAL:HG12	35:9:116:VAL:HG21	2.02	0.41
35:9:70:MET:O	35:9:71:ILE:HD13	2.20	0.41
35:9:154:ALA:HB1	38:12:65:PHE:CE1	2.54	0.41
38:12:19:ALA:HB3	38:12:21:LYS:HB2	2.01	0.41
39:13:102:PHE:O	39:13:104:THR:N	2.53	0.41
40:14:7:ARG:O	40:14:101:SER:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:34:ALA:O	40:14:36:VAL:HG12	2.21	0.41
43:17:18:LEU:HD22	43:17:21:ILE:HD11	2.02	0.41
43:17:90:HIS:HE2	52:26:1309:G:P	2.42	0.41
44:18:97:LYS:HE2	52:26:1189:U:OP1	2.21	0.41
52:26:166:U:O2'	52:26:167:A:H5'	2.21	0.41
52:26:232:G:C2'	52:26:233:C:H5'	2.50	0.41
52:26:720:C:C5	52:26:721:G:C4	3.08	0.41
52:26:926:G:O6	55:29:16:A:OP2	2.39	0.41
52:26:955:U:H2'	52:26:956:U:C6	2.56	0.41
53:27:71:A:H3'	53:27:71:A:OP2	2.21	0.41
53:27:186:G:H2'	53:27:187:G:H8	1.85	0.41
53:27:413:C:O2'	53:27:414:C:H5'	2.20	0.41
53:27:489:G:C5	53:27:1284:A:C2	3.08	0.41
53:27:524:G:C5	53:27:525:U:C4	3.08	0.41
53:27:696:G:H2'	53:27:697:G:H8	1.85	0.41
53:27:852:U:H2'	53:27:853:C:H6	1.85	0.41
53:27:2582:G:OP2	53:27:2583:G:OP2	2.37	0.41
54:28:24:G:N2	54:28:28:C:C2	2.88	0.41
54:28:62:C:O2'	54:28:63:C:H5'	2.20	0.41
56:30:44:G:C2'	56:30:45:U:H5'	2.51	0.41
59:33:214:ILE:HG21	59:33:214:ILE:HD13	1.79	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
1:A:206:LYS:HD3	53:27:729:G:C8	2.54	0.41
2:B:61:THR:HB	2:B:63:PRO:HD2	2.01	0.41
4:D:142:TYR:O	4:D:145:VAL:HG22	2.21	0.41
6:F:90:LEU:HB3	6:F:92:GLY:H	1.86	0.41
8:H:102:ARG:HD3	8:H:105:LEU:HD12	2.02	0.41
8:H:134:SER:HB2	53:27:1062:G:H21	1.85	0.41
10:J:58:LEU:CD1	10:J:86:LEU:HD22	2.48	0.41
12:L:72:PRO:HB3	12:L:92:TRP:CZ3	2.56	0.41
13:M:65:LEU:HD11	13:M:69:ARG:HH22	1.86	0.41
16:P:2:ARG:HD2	53:27:1248:G:C2	2.55	0.41
21:U:40:ILE:HG22	21:U:41:GLU:N	2.36	0.41
25:Y:36:GLU:O	25:Y:37:ARG:NH1	2.50	0.41
32:6:75:ALA:O	32:6:79:VAL:HG23	2.20	0.41
33:7:83:VAL:O	33:7:86:LEU:HB2	2.20	0.41
35:9:44:ARG:HB3	35:9:70:MET:HE2	2.02	0.41
37:11:130:LYS:HB2	37:11:130:LYS:HE3	1.84	0.41
38:12:29:SER:OG	38:12:32:LYS:HG3	2.21	0.41
39:13:33:SER:HB3	39:13:36:GLN:CG	2.44	0.41
42:16:49:ARG:HA	42:16:49:ARG:HD3	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:14:ALA:HA	43:17:17:ALA:HB3	2.01	0.41
43:17:18:LEU:HD12	43:17:33:LEU:CD1	2.50	0.41
44:18:48:GLN:NE2	49:23:9:PHE:CE1	2.86	0.41
46:20:12:LYS:C	46:20:14:ARG:H	2.27	0.41
47:21:57:VAL:O	47:21:77:VAL:HG13	2.19	0.41
50:24:9:ARG:NH2	52:26:107:G:N7	2.68	0.41
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.20	0.41
52:26:88:U:O2	52:26:89:U:H1'	2.21	0.41
52:26:89:U:C2	52:26:90:C:C5	3.07	0.41
52:26:188:C:H2'	52:26:189:A:O4'	2.21	0.41
52:26:581:G:H8	52:26:581:G:O5'	2.03	0.41
52:26:1129:C:O2'	52:26:1130:A:N7	2.47	0.41
52:26:1142:G:H3'	52:26:1143:G:C8	2.49	0.41
52:26:1368:A:O2'	52:26:1369:C:H5'	2.21	0.41
52:26:1519:A:C8	52:26:1519:A:H3'	2.56	0.41
53:27:69:C:O2'	53:27:70:G:H5'	2.20	0.41
53:27:205:G:HO2'	53:27:206:U:P	2.43	0.41
53:27:210:C:H2'	53:27:211:C:C6	2.56	0.41
53:27:1027:A:C6	53:27:1126:A:C4	3.08	0.41
53:27:1266:G:H22	53:27:2012:G:C2'	2.31	0.41
53:27:1378:A:C4	53:27:1380:G:N7	2.88	0.41
53:27:1750:G:O2'	53:27:1751:U:H5'	2.19	0.41
53:27:1776:G:C6	53:27:1777:U:C4	3.08	0.41
53:27:1911:U:H3'	53:27:1911:U:O2	2.20	0.41
53:27:1930:G:C2'	53:27:1931:U:OP2	2.68	0.41
53:27:1934:C:H2'	53:27:1935:G:O4'	2.20	0.41
53:27:2405:G:H2'	53:27:2411:A:N6	2.35	0.41
53:27:2405:G:H1'	53:27:2412:A:N6	2.36	0.41
53:27:2520:C:H2'	53:27:2521:C:H6	1.85	0.41
53:27:2564:A:OP1	53:27:2648:G:H4'	2.20	0.41
53:27:2578:G:C2'	53:27:2579:C:H5'	2.50	0.41
53:27:2592:G:C2	53:27:2593:U:H1'	2.56	0.41
53:27:2737:G:H2'	53:27:2738:A:C8	2.55	0.41
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.41
59:33:721:VAL:O	59:33:724:ARG:HG2	2.20	0.41
59:33:728:LYS:O	59:33:731:GLN:HG2	2.21	0.41
59:33:732:VAL:O	59:33:735:VAL:HB	2.20	0.41
1:A:113:ASP:OD1	1:A:114:GLN:N	2.54	0.41
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.86	0.41
3:C:147:LEU:HD22	3:C:183:PHE:CD2	2.55	0.41
3:C:175:ILE:O	3:C:175:ILE:HG13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:48:LEU:O	4:D:51:ASN:HB2	2.21	0.41
4:D:73:VAL:O	4:D:73:VAL:HG23	2.20	0.41
5:E:95:ALA:HB1	5:E:130:ILE:HD11	2.01	0.41
5:E:136:ASP:OD2	5:E:138:GLN:HB3	2.20	0.41
9:I:65:THR:HG21	53:27:1141:U:H2'	2.02	0.41
10:J:112:PHE:O	10:J:116:ILE:HG13	2.20	0.41
16:P:101:ASP:OD2	16:P:104:ALA:HB2	2.19	0.41
17:Q:24:LYS:HZ1	53:27:1163:G:P	2.43	0.41
17:Q:24:LYS:CE	53:27:1163:G:H5'	2.51	0.41
20:T:5:ARG:HB2	53:27:85:G:OP1	2.21	0.41
27:1:8:THR:HG23	27:1:10:SER:HB3	2.02	0.41
28:2:29:LYS:HA	28:2:30:PRO:HD2	1.91	0.41
30:4:30:HIS:O	30:4:32:LEU:HD23	2.20	0.41
34:8:63:ILE:HG22	34:8:110:ARG:HH12	1.86	0.41
34:8:144:ILE:HG22	34:8:145:ARG:O	2.20	0.41
35:9:28:ARG:HH12	52:26:15:G:C4'	2.30	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HG22	2.03	0.41
39:13:24:ASN:HB2	39:13:26:LYS:HG2	2.03	0.41
39:13:35:GLU:OE1	39:13:35:GLU:N	2.41	0.41
43:17:3:ILE:CD1	43:17:7:ASN:HD22	2.33	0.41
43:17:7:ASN:OD1	43:17:9:PRO:CD	2.68	0.41
44:18:45:LEU:CD2	49:23:12:LEU:HD22	2.48	0.41
45:19:87:ARG:CG	45:19:88:ARG:N	2.83	0.41
46:20:28:ARG:NH2	52:26:390:U:H4'	2.35	0.41
46:20:33:ILE:N	46:20:33:ILE:CD1	2.84	0.41
47:21:16:MET:HE2	47:21:19:SER:OG	2.19	0.41
49:23:4:LEU:HD21	49:23:9:PHE:H	1.84	0.41
49:23:5:LYS:HB2	52:26:1313:U:OP1	2.20	0.41
49:23:10:ILE:C	49:23:10:ILE:HD12	2.46	0.41
52:26:155:A:H2'	52:26:156:C:O4'	2.21	0.41
52:26:181:A:H2'	52:26:182:A:C8	2.56	0.41
52:26:616:G:O2'	52:26:617:G:H5'	2.20	0.41
52:26:842:U:C2'	52:26:844:G:H5'	2.48	0.41
52:26:857:C:H2'	52:26:858:G:C8	2.56	0.41
52:26:1005:A:H2'	52:26:1006:G:O4'	2.20	0.41
52:26:1137:C:H5'	52:26:1138:G:H5'	2.02	0.41
52:26:1295:U:H2'	52:26:1296:C:C6	2.55	0.41
52:26:1452:C:H5''	52:26:1453:G:C2	2.55	0.41
53:27:30:G:H2'	53:27:31:C:H6	1.86	0.41
53:27:269:C:C2	53:27:270:A:C8	3.09	0.41
53:27:414:C:H5''	53:27:1879:C:O2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:460:A:C2	53:27:470:A:C4	3.08	0.41
53:27:701:G:N2	53:27:702:U:H1'	2.35	0.41
53:27:717:C:C2'	53:27:718:A:H5'	2.51	0.41
53:27:780:G:H5''	53:27:781:A:P	2.60	0.41
53:27:882:G:C2'	53:27:883:G:H5''	2.51	0.41
53:27:1090:A:H61	53:27:1101:U:H3	1.67	0.41
53:27:1216:G:H2'	53:27:1217:U:O4'	2.21	0.41
53:27:1676:A:H8	53:27:1676:A:O5'	2.03	0.41
53:27:1863:G:H2'	53:27:1864:U:O4'	2.20	0.41
53:27:2333:A:H5''	53:27:2334:U:OP1	2.20	0.41
53:27:2463:C:O5'	53:27:2463:C:H6	2.04	0.41
57:31:40:C:H2'	57:31:41:C:H6	1.86	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41
59:33:634:HIS:CE1	59:33:638:CYS:SG	3.13	0.41
59:33:639:GLU:H	59:33:639:GLU:CD	2.28	0.41
1:A:206:LYS:HD3	1:A:208:GLY:HA3	2.01	0.41
3:C:195:GLN:O	3:C:198:GLU:HB3	2.20	0.41
4:D:19:PHE:O	4:D:20:ASN:C	2.63	0.41
7:G:126:LEU:HB3	7:G:129:LEU:HG	2.01	0.41
9:I:18:VAL:HG22	9:I:140:LEU:HD22	2.01	0.41
12:L:32:GLY:HA2	12:L:103:TYR:O	2.20	0.41
16:P:23:TYR:CE1	53:27:533:G:H4'	2.56	0.41
20:T:48:VAL:O	20:T:48:VAL:HG13	2.20	0.41
22:V:37:ARG:HD2	53:27:2387:U:H1'	2.01	0.41
26:Z:1:MET:O	26:Z:3:LYS:N	2.53	0.41
27:1:10:SER:O	27:1:14:MET:HG2	2.20	0.41
27:1:39:ARG:C	27:1:41:HIS:N	2.78	0.41
31:5:19:ARG:NH2	31:5:26:ILE:HD11	2.36	0.41
32:6:12:GLY:H	32:6:14:HIS:CE1	2.38	0.41
34:8:84:ASN:HB3	34:8:87:GLU:CD	2.46	0.41
35:9:104:ILE:O	35:9:104:ILE:HG13	2.21	0.41
37:11:61:PHE:CE2	37:11:65:LEU:HD22	2.56	0.41
43:17:49:GLU:O	43:17:51:GLN:N	2.53	0.41
48:22:38:ILE:HD12	48:22:62:ARG:HH22	1.85	0.41
48:22:59:LYS:HD3	52:26:734:G:O2'	2.21	0.41
50:24:36:ALA:O	50:24:39:GLU:HB2	2.20	0.41
52:26:51:A:H4'	52:26:52:C:C5'	2.50	0.41
52:26:768:A:H4'	52:26:1523:G:H21	1.83	0.41
52:26:922:G:H2'	52:26:923:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:957:U:H2'	52:26:959:A:OP2	2.21	0.41
52:26:1460:C:H2'	52:26:1461:G:H8	1.86	0.41
53:27:149:A:O2'	53:27:150:U:H5'	2.21	0.41
53:27:381:G:O2'	53:27:382:A:H5'	2.21	0.41
53:27:571:U:C4	53:27:2030:A:C6	3.09	0.41
53:27:821:A:H4'	53:27:822:G:H5''	2.03	0.41
53:27:921:C:O2'	53:27:922:C:H5'	2.20	0.41
53:27:1064:C:H2'	53:27:1065:U:O4'	2.20	0.41
53:27:1277:G:H2'	53:27:1278:C:O4'	2.21	0.41
53:27:1319:C:O2'	53:27:1320:C:H5'	2.20	0.41
53:27:1429:G:O2'	53:27:1430:G:H5'	2.21	0.41
53:27:1696:G:C6	53:27:1697:G:C4	3.09	0.41
53:27:1930:G:O2'	53:27:1931:U:C6	2.73	0.41
53:27:2330:G:H2'	53:27:2331:G:O4'	2.21	0.41
53:27:2633:G:H5'	53:27:2811:G:O2'	2.21	0.41
54:28:97:C:C2'	54:28:98:G:H5'	2.51	0.41
56:30:12:U:C2	56:30:13:C:H1'	2.55	0.41
58:32:9:G:H5''	58:32:11:A:C8	2.56	0.41
58:32:26:G:N7	58:32:44:A:C2	2.89	0.41
58:32:35:A:H2'	58:32:36:U:O4'	2.20	0.41
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.21	0.41
59:33:624:PHE:CD2	59:33:644:LEU:HD13	2.56	0.41
1:A:15:VAL:HG22	1:A:204:LEU:O	2.21	0.41
1:A:158:GLY:HA3	53:27:1820:U:C4	2.55	0.41
2:B:16:THR:OG1	2:B:18:ASP:OD1	2.33	0.41
2:B:164:GLN:OE1	2:B:165:MET:N	2.54	0.41
3:C:18:THR:HG22	3:C:19:PHE:CD1	2.56	0.41
6:F:31:VAL:HA	6:F:36:ALA:O	2.21	0.41
8:H:72:THR:OG1	8:H:115:ASP:HB2	2.21	0.41
11:K:141:LYS:HE2	11:K:143:GLU:HB3	2.02	0.41
12:L:59:ARG:NE	59:33:736:ILE:HD12	2.36	0.41
12:L:63:ILE:CG2	12:L:64:TRP:H	2.34	0.41
13:M:93:GLY:HA2	53:27:2838:G:N2	2.36	0.41
16:P:36:GLN:NE2	53:27:563:A:C2'	2.82	0.41
31:5:30:GLU:HB2	31:5:33:HIS:CE1	2.56	0.41
32:6:113:LEU:O	32:6:117:GLU:HB2	2.21	0.41
33:7:35:ASP:O	33:7:38:VAL:HG22	2.21	0.41
35:9:113:VAL:HG13	35:9:114:LEU:N	2.36	0.41
36:10:55:HIS:O	36:10:56:LYS:HB2	2.21	0.41
36:10:71:ILE:HD12	36:10:71:ILE:HA	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:78:ARG:HD3	52:26:1382:C:C1'	2.50	0.41
38:12:88:LYS:HG3	38:12:89:ASP:N	2.35	0.41
40:14:53:ILE:HD11	44:18:84:ARG:NH2	2.35	0.41
41:15:30:ILE:HD12	52:26:705:G:N2	2.34	0.41
44:18:20:PHE:O	44:18:21:ALA:C	2.63	0.41
44:18:66:THR:CG2	44:18:82:LYS:HD3	2.50	0.41
47:21:39:ARG:NH1	52:26:280:C:H1'	2.34	0.41
50:24:54:GLN:NE2	52:26:192:A:N3	2.64	0.41
52:26:60:A:P	52:26:60:A:H8	2.44	0.41
52:26:64:G:H4'	52:26:65:A:H3'	2.02	0.41
52:26:201:G:H2'	52:26:202:G:C8	2.56	0.41
52:26:246:A:H4'	52:26:247:G:OP1	2.20	0.41
52:26:903:G:C6	52:26:904:U:C4	3.09	0.41
52:26:1329:A:C2'	52:26:1330:U:H5'	2.51	0.41
52:26:1331:G:HO2'	52:26:1332:A:H8	1.66	0.41
53:27:56:A:O2'	53:27:57:C:H5'	2.20	0.41
53:27:246:C:O2'	53:27:385:C:H4'	2.21	0.41
53:27:325:G:H2'	53:27:326:G:C8	2.56	0.41
53:27:411:G:OP2	53:27:2407:A:OP2	2.39	0.41
53:27:876:C:C2'	53:27:877:A:H5'	2.50	0.41
53:27:1082:U:H3'	53:27:1083:U:H5''	2.03	0.41
53:27:1097:U:H2'	53:27:1098:A:C5'	2.50	0.41
53:27:1209:U:H2'	53:27:1210:G:H21	1.85	0.41
53:27:1376:C:H2'	53:27:1377:G:O4'	2.20	0.41
53:27:1967:C:O2'	53:27:1968:G:H5'	2.21	0.41
53:27:2060:A:N6	53:27:2502:G:N3	2.69	0.41
53:27:2211:A:H5'	53:27:2212:A:OP2	2.20	0.41
53:27:2382:G:H5'	53:27:2383:G:OP1	2.20	0.41
53:27:2631:G:C2'	53:27:2632:A:H5'	2.51	0.41
58:32:33:U:H2'	58:32:36:U:OP2	2.20	0.41
59:33:670:ARG:HG3	59:33:711:ASP:OD1	2.21	0.41
59:33:712:MET:HG3	59:33:714:ILE:HG23	2.02	0.41
1:A:45:ASN:O	53:27:773:U:H5''	2.21	0.41
1:A:73:ILE:HA	1:A:74:PRO:HD3	1.93	0.41
2:B:4:LEU:HD22	2:B:101:PHE:HE2	1.85	0.41
4:D:56:LEU:HD23	4:D:56:LEU:HA	1.93	0.41
4:D:169:LEU:HB2	4:D:176:PHE:CZ	2.56	0.41
5:E:136:ASP:OD2	5:E:139:VAL:HG23	2.21	0.41
10:J:35:VAL:HG13	10:J:106:GLU:HG3	2.03	0.41
14:N:88:LYS:HE2	14:N:116:GLN:HG3	2.01	0.41
14:N:102:ARG:N	54:28:49:C:OP1	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:23:ASP:OD1	15:O:89:GLY:N	2.54	0.41
15:O:94:ALA:HB2	53:27:2848:G:H8	1.86	0.41
16:P:5:ARG:HD3	53:27:1250:G:H5'	2.02	0.41
16:P:106:THR:O	16:P:110:GLU:HG2	2.21	0.41
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.21	0.41
32:6:11:ALA:CB	32:6:211:LEU:HD21	2.51	0.41
34:8:201:GLU:O	34:8:202:LEU:C	2.64	0.41
35:9:26:GLY:O	52:26:1194:U:C5'	2.68	0.41
36:10:90:MET:CG	36:10:91:ARG:H	2.22	0.41
38:12:3:GLN:HE22	52:26:755:G:H21	1.68	0.41
39:13:6:TYR:CZ	52:26:1147:C:H4'	2.55	0.41
39:13:90:ASP:CG	39:13:91:GLU:N	2.78	0.41
41:15:33:ILE:O	41:15:41:LEU:HB2	2.21	0.41
44:18:53:ASP:O	44:18:54:SER:OG	2.32	0.41
45:19:44:GLU:O	45:19:45:HIS:HB2	2.20	0.41
47:21:45:VAL:HG13	47:21:72:TRP:O	2.20	0.41
52:26:70:U:H4'	52:26:71:A:H8	1.86	0.41
52:26:443:C:O2'	52:26:444:G:H5'	2.21	0.41
52:26:558:G:C4	52:26:559:A:C2	3.09	0.41
52:26:1196:A:H2'	52:26:1196:A:N3	2.35	0.41
52:26:1489:G:C6	52:26:1490:U:C4	3.09	0.41
52:26:1522:U:O2'	52:26:1523:G:H5'	2.20	0.41
53:27:74:A:H4'	53:27:75:G:O5'	2.20	0.41
53:27:607:U:O4	53:27:619:G:H2'	2.21	0.41
53:27:628:G:O2'	53:27:629:G:H5'	2.21	0.41
53:27:654:A:H3'	53:27:654:A:N3	2.34	0.41
53:27:786:C:H2'	53:27:787:C:H6	1.85	0.41
53:27:1384:A:H2'	53:27:1385:A:C5'	2.51	0.41
53:27:1385:A:C6	53:27:1403:A:C6	3.08	0.41
53:27:1584:U:O5'	53:27:1584:U:H6	2.03	0.41
53:27:1672:A:C6	53:27:1673:G:C6	3.09	0.41
53:27:1788:C:O2'	53:27:1789:A:H5'	2.21	0.41
53:27:1941:C:O2	53:27:1941:C:H2'	2.21	0.41
53:27:2116:G:H1	53:27:2165:C:C1'	2.33	0.41
53:27:2364:C:O2'	53:27:2365:G:H5'	2.21	0.41
53:27:2469:A:C2'	53:27:2470:G:H5'	2.49	0.41
53:27:2510:C:H2'	53:27:2511:U:C6	2.56	0.41
54:28:39:A:C2	54:28:44:G:C2	3.09	0.41
56:30:13:C:H2'	56:30:13:C:O2	2.20	0.41
59:33:63:VAL:HG12	59:33:80:LEU:N	2.36	0.41
1:A:51:ARG:H	1:A:51:ARG:HG2	1.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:ASP:OD2	1:A:68:ARG:HD2	2.20	0.41
1:A:216:ARG:HG2	1:A:216:ARG:HH11	1.85	0.41
2:B:56:LYS:HZ3	53:27:2831:G:P	2.44	0.41
2:B:137:SER:O	2:B:138:LEU:C	2.64	0.41
2:B:148:GLN:O	53:27:2052:A:H4'	2.21	0.41
3:C:1:MET:N	3:C:13:THR:HG23	2.36	0.41
3:C:97:ASN:O	3:C:98:LYS:C	2.63	0.41
3:C:126:VAL:HG22	3:C:127:GLU:N	2.36	0.41
4:D:104:THR:HA	26:Z:38:SER:CB	2.50	0.41
4:D:127:TYR:CE2	4:D:129:MET:HE2	2.56	0.41
5:E:4:ALA:HB2	5:E:65:GLY:N	2.35	0.41
5:E:94:ARG:HB2	5:E:105:SER:HB2	2.02	0.41
5:E:146:ASP:O	5:E:149:ALA:HB3	2.21	0.41
5:E:154:GLU:HG3	5:E:157:LYS:N	2.35	0.41
7:G:88:HIS:N	7:G:89:PRO:CD	2.76	0.41
7:G:91:ALA:C	7:G:93:ALA:H	2.29	0.41
8:H:73:PRO:O	8:H:112:LYS:HD3	2.21	0.41
8:H:80:LYS:HG3	8:H:135:MET:HE1	2.02	0.41
8:H:92:PRO:HD3	53:27:1063:G:H21	1.86	0.41
9:I:90:GLU:CD	9:I:90:GLU:C	2.88	0.41
10:J:22:ILE:HG13	10:J:40:LYS:O	2.21	0.41
10:J:47:ILE:HA	10:J:48:PRO:HD3	1.91	0.41
11:K:57:LEU:HA	11:K:60:ARG:HE	1.86	0.41
12:L:25:ASP:O	12:L:27:SER:N	2.54	0.41
12:L:101:VAL:O	12:L:102:LEU:HD23	2.21	0.41
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
14:N:46:GLU:CD	54:28:113:C:H4'	2.46	0.41
15:O:97:TYR:HB2	53:27:2718:G:OP1	2.21	0.41
16:P:48:ASP:C	16:P:50:ARG:N	2.76	0.41
19:S:14:PRO:HA	19:S:32:LEU:HB3	2.03	0.41
20:T:47:PRO:HB2	20:T:53:GLN:HB2	2.03	0.41
21:U:19:ARG:NH1	54:28:94:A:OP1	2.54	0.41
22:V:21:ARG:HA	22:V:21:ARG:HD3	1.89	0.41
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.56	0.41
27:1:40:HIS:HA	27:1:48:TYR:OH	2.21	0.41
27:1:43:THR:OG1	27:1:47:TYR:N	2.53	0.41
33:7:49:ALA:HB1	33:7:75:VAL:HG22	2.02	0.41
33:7:121:SER:O	33:7:125:ARG:NH1	2.54	0.41
34:8:21:LYS:HE3	52:26:429:U:O2'	2.20	0.41
34:8:55:ARG:NE	34:8:55:ARG:HA	2.35	0.41
34:8:57:LYS:HA	34:8:199:ILE:CD1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:122:ILE:HG22	34:8:142:VAL:CG2	2.51	0.41
34:8:124:VAL:HG23	34:8:141:VAL:O	2.20	0.41
34:8:197:HIS:O	34:8:200:VAL:HB	2.21	0.41
35:9:131:ASN:HA	35:9:132:PRO:HD2	1.87	0.41
36:10:38:ARG:HA	36:10:38:ARG:HD2	1.85	0.41
36:10:38:ARG:HH21	36:10:40:GLU:HB2	1.84	0.41
36:10:64:VAL:HG22	36:10:65:GLU:N	2.36	0.41
36:10:85:ILE:O	36:10:86:ARG:HB3	2.21	0.41
37:11:13:PRO:HB3	37:11:20:GLU:HB3	2.03	0.41
37:11:21:LEU:CD1	37:11:96:ASN:HD22	2.33	0.41
37:11:74:VAL:O	37:11:74:VAL:HG23	2.21	0.41
38:12:6:ILE:HD13	38:12:6:ILE:N	2.36	0.41
39:13:10:ARG:O	39:13:105:ARG:CZ	2.69	0.41
40:14:46:LYS:O	40:14:47:GLU:C	2.63	0.41
41:15:29:THR:OG1	41:15:46:ALA:HB2	2.20	0.41
42:16:20:VAL:N	42:16:21:PRO:HD3	2.36	0.41
43:17:3:ILE:HG12	43:17:7:ASN:CB	2.50	0.41
44:18:92:ILE:HA	44:18:93:PRO:HD3	1.94	0.41
46:20:68:SER:HB3	46:20:71:VAL:HG23	2.02	0.41
47:21:39:ARG:HA	47:21:39:ARG:HD3	1.93	0.41
47:21:43:LEU:HD13	47:21:72:TRP:CE2	2.56	0.41
47:21:57:VAL:HG12	47:21:58:VAL:N	2.35	0.41
49:23:60:PHE:CZ	59:33:651:ARG:HG2	2.56	0.41
49:23:61:VAL:HA	49:23:65:MET:SD	2.61	0.41
50:24:11:ILE:HG13	50:24:12:GLN:N	2.36	0.41
50:24:38:ILE:HD13	50:24:81:GLN:HB3	2.03	0.41
50:24:68:LYS:O	50:24:71:ALA:HB3	2.21	0.41
50:24:79:THR:HA	50:24:82:ILE:HG12	2.01	0.41
51:25:32:ARG:CG	51:25:33:ARG:N	2.84	0.41
51:25:46:ARG:HA	51:25:46:ARG:HD3	1.86	0.41
52:26:54:C:C4	52:26:352:C:C5	3.09	0.41
52:26:116:A:H2'	52:26:117:G:O4'	2.21	0.41
52:26:129:A:O2'	52:26:130:A:H5''	2.20	0.41
52:26:248:C:O2'	52:26:249:U:H5'	2.21	0.41
52:26:519:C:C4	52:26:520:A:C5	3.09	0.41
52:26:635:A:H2'	52:26:636:U:H6	1.86	0.41
52:26:792:A:H1'	52:26:794:A:N7	2.36	0.41
52:26:818:G:H2'	52:26:820:U:C5	2.55	0.41
52:26:892:A:H2'	52:26:893:C:C6	2.55	0.41
52:26:930:C:O2	52:26:1387:G:N2	2.52	0.41
52:26:1168:U:H3'	52:26:1168:U:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1203:C:H2'	52:26:1204:A:H8	1.86	0.41
52:26:1234:C:O2'	52:26:1235:U:H5'	2.21	0.41
52:26:1303:C:O2	52:26:1303:C:H2'	2.21	0.41
52:26:1424:U:H2'	52:26:1425:U:O4'	2.20	0.41
53:27:440:C:H2'	53:27:441:U:H6	1.85	0.41
53:27:510:C:H2'	53:27:511:U:C6	2.56	0.41
53:27:531:C:H5''	53:27:532:A:C5	2.55	0.41
53:27:644:A:H2'	53:27:645:C:C4'	2.51	0.41
53:27:818:G:O2'	53:27:819:A:H5''	2.20	0.41
53:27:818:G:H2'	53:27:1187:G:N2	2.36	0.41
53:27:1438:U:O2'	53:27:1439:A:H5'	2.21	0.41
53:27:1537:G:N3	53:27:1537:G:H5''	2.36	0.41
53:27:1655:A:C8	53:27:1656:C:C5	3.09	0.41
53:27:1789:A:O2'	53:27:1790:C:H5'	2.20	0.41
53:27:1791:A:C2	53:27:1829:A:O4'	2.73	0.41
53:27:2079:U:C3'	53:27:2080:A:H5''	2.51	0.41
53:27:2089:C:H2'	53:27:2090:A:C8	2.55	0.41
53:27:2186:G:C2'	53:27:2187:U:H5'	2.51	0.41
53:27:2212:A:H4'	53:27:2213:U:O4	2.21	0.41
53:27:2244:U:H2'	53:27:2245:U:O4'	2.20	0.41
53:27:2549:G:C6	53:27:2560:A:C6	3.09	0.41
53:27:2641:G:H2'	53:27:2642:G:C8	2.53	0.41
53:27:2643:G:C6	53:27:2644:G:C5	3.09	0.41
54:28:14:U:OP2	54:28:71:C:H5'	2.20	0.41
54:28:82:U:H2'	54:28:83:G:C8	2.55	0.41
56:30:42:C:H5'	56:30:42:C:H6	1.85	0.41
56:30:73:A:C2	56:30:74:C:C4	3.09	0.41
57:31:42:G:O2'	57:31:43:A:H5'	2.21	0.41
59:33:35:LEU:N	59:33:35:LEU:HD12	2.36	0.41
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.03	0.41
59:33:405:ARG:HE	59:33:417:ASP:HB3	1.85	0.41
59:33:570:GLU:HA	59:33:681:ARG:HD3	2.02	0.41
59:33:619:ASP:O	59:33:620:GLU:O	2.38	0.41
1:A:75:ALA:HB2	1:A:95:TYR:CD1	2.56	0.41
1:A:245:THR:HG21	1:A:249:VAL:HB	2.02	0.41
3:C:15:SER:HB2	3:C:18:THR:OG1	2.21	0.41
3:C:29:HIS:O	3:C:32:VAL:HG12	2.21	0.41
7:G:87:GLU:OE2	7:G:96:PHE:HB2	2.21	0.41
12:L:2:LEU:HD12	12:L:2:LEU:HA	1.93	0.41
13:M:37:THR:HA	13:M:110:MET:HE2	2.02	0.41
13:M:40:LYS:HE3	53:27:1651:G:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:28:LYS:HB3	15:O:39:LEU:HD11	2.03	0.41
22:V:62:LYS:HG2	22:V:63:VAL:H	1.86	0.41
23:W:29:LEU:HA	23:W:30:PRO:HD2	1.91	0.41
27:1:8:THR:HB	53:27:2020:A:H5'	2.03	0.41
33:7:78:LYS:HG2	33:7:79:LYS:HD3	2.03	0.41
34:8:36:ALA:CA	34:8:41:GLY:HA3	2.44	0.41
34:8:171:GLU:HB2	34:8:180:THR:O	2.21	0.41
34:8:186:GLU:HB3	34:8:189:ASP:CG	2.46	0.41
36:10:9:MET:HG2	36:10:59:TYR:CE1	2.56	0.41
36:10:15:SER:HG	36:10:58:HIS:CG	2.39	0.41
38:12:9:MET:HE3	38:12:26:MET:HE1	2.03	0.41
38:12:46:GLU:HB3	38:12:61:THR:CG2	2.51	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HA	2.03	0.41
40:14:40:ILE:HA	40:14:41:PRO:HD2	1.76	0.41
41:15:20:ALA:HA	41:15:33:ILE:HA	2.02	0.41
44:18:87:ALA:CA	44:18:92:ILE:HD13	2.50	0.41
49:23:6:LYS:HA	49:23:6:LYS:HD3	1.80	0.41
50:24:29:THR:O	50:24:33:LYS:HG2	2.21	0.41
51:25:36:PHE:C	51:25:38:GLU:H	2.26	0.41
51:25:58:LYS:HG3	51:25:59:LEU:HD12	2.03	0.41
52:26:300:A:O5'	52:26:300:A:H8	2.04	0.41
52:26:835:U:C3'	52:26:836:G:H5''	2.50	0.41
52:26:848:C:C2'	52:26:849:G:H5''	2.52	0.41
52:26:1005:A:H4'	52:26:1037:C:O2'	2.21	0.41
53:27:53:A:C8	53:27:54:G:C8	3.09	0.41
53:27:189:G:C4	53:27:205:G:N2	2.89	0.41
53:27:228:C:H4'	53:27:229:C:C6	2.56	0.41
53:27:558:U:H2'	53:27:559:G:C8	2.56	0.41
53:27:882:G:H2'	53:27:883:G:H5''	2.02	0.41
53:27:896:A:H5''	53:27:897:C:OP2	2.22	0.41
53:27:1065:U:H2'	53:27:1066:U:O4'	2.21	0.41
53:27:1130:U:O2'	53:27:1131:G:P	2.79	0.41
53:27:1803:A:N6	53:27:1814:G:H1'	2.36	0.41
53:27:2716:C:H2'	53:27:2717:C:H6	1.86	0.41
53:27:2804:U:H2'	53:27:2805:C:C6	2.56	0.41
53:27:2837:A:H2'	53:27:2838:G:C8	2.48	0.41
54:28:49:C:H2'	54:28:50:A:C8	2.56	0.41
57:31:62:C:H2'	57:31:63:G:C8	2.56	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.41
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:52:HIS:CD2	53:27:1824:G:OP2	2.74	0.40
3:C:189:THR:HG22	3:C:191:ASP:N	2.32	0.40
4:D:19:PHE:HB2	4:D:21:TYR:CZ	2.56	0.40
5:E:76:ILE:O	5:E:80:GLU:N	2.55	0.40
5:E:120:ILE:HG22	5:E:121:THR:N	2.36	0.40
5:E:120:ILE:HG21	5:E:140:ILE:HG22	2.03	0.40
7:G:22:ALA:O	7:G:119:PRO:HD3	2.21	0.40
7:G:53:ARG:HA	7:G:53:ARG:HD3	1.88	0.40
11:K:78:ARG:HH11	53:27:626:A:H2'	1.86	0.40
11:K:95:LEU:HB2	11:K:101:ILE:HD11	2.03	0.40
16:P:81:GLY:O	16:P:85:ALA:N	2.51	0.40
19:S:34:VAL:HG21	19:S:43:ILE:HD11	2.03	0.40
21:U:26:PHE:O	21:U:26:PHE:CG	2.74	0.40
22:V:66:GLU:HB2	22:V:75:PHE:HB2	2.03	0.40
32:6:65:LYS:CG	32:6:153:MET:HE1	2.44	0.40
32:6:102:ASN:O	32:6:106:VAL:HG23	2.21	0.40
34:8:76:LYS:O	34:8:79:ALA:HB3	2.22	0.40
35:9:42:ASN:HA	35:9:75:LEU:HD21	2.03	0.40
36:10:69:GLU:H	36:10:69:GLU:CD	2.29	0.40
37:11:78:ARG:HB3	37:11:83:THR:HG23	2.03	0.40
39:13:33:SER:O	39:13:36:GLN:HG2	2.21	0.40
40:14:67:ILE:HG23	44:18:94:GLY:O	2.21	0.40
43:17:26:LYS:O	43:17:29:SER:HB3	2.20	0.40
46:20:56:ARG:HD2	46:20:56:ARG:HA	1.89	0.40
48:22:10:CYS:C	48:22:11:ARG:CG	2.94	0.40
52:26:11:G:H2'	52:26:12:U:O4'	2.21	0.40
52:26:86:G:H21	52:26:87:C:H42	1.70	0.40
52:26:125:U:H2'	52:26:126:G:C8	2.56	0.40
52:26:201:G:O2'	52:26:469:C:O2'	2.39	0.40
53:27:219:A:H5'	53:27:220:G:OP2	2.21	0.40
53:27:265:A:H4'	53:27:266:G:OP1	2.21	0.40
53:27:820:A:H2'	53:27:821:A:O4'	2.21	0.40
53:27:1264:A:N7	53:27:1265:A:C5	2.90	0.40
53:27:1648:U:H5''	53:27:1648:U:H6	1.86	0.40
53:27:2114:A:H62	53:27:2115:G:H21	1.68	0.40
53:27:2197:U:O3'	53:27:2198:A:H2'	2.21	0.40
53:27:2230:G:H2'	53:27:2231:U:H6	1.80	0.40
53:27:2626:C:H2'	53:27:2627:G:H8	1.86	0.40
53:27:2679:A:H2'	53:27:2680:U:H6	1.86	0.40
53:27:2784:U:H2'	53:27:2785:C:C6	2.54	0.40
53:27:2884:U:O2	53:27:2884:U:C3'	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:118:C:H2'	54:28:119:A:C8	2.56	0.40
59:33:110:VAL:HG13	59:33:152:LYS:HD3	2.04	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.61	0.40
59:33:673:ALA:HB3	59:33:679:LEU:HD21	2.03	0.40
1:A:49:THR:HB	53:27:1805:A:N3	2.36	0.40
3:C:130:LYS:NZ	53:27:320:A:OP1	2.53	0.40
4:D:72:SER:HB2	4:D:80:GLN:N	2.34	0.40
4:D:169:LEU:HB2	4:D:176:PHE:HZ	1.86	0.40
9:I:17:VAL:N	9:I:138:GLN:O	2.48	0.40
11:K:33:ARG:HD3	11:K:40:SER:O	2.21	0.40
12:L:30:SER:N	12:L:106:ASP:HB3	2.29	0.40
12:L:53:MET:CE	12:L:63:ILE:HG21	2.51	0.40
14:N:95:SER:HB2	14:N:97:PHE:CD2	2.56	0.40
15:O:29:VAL:HG22	15:O:80:VAL:HA	2.02	0.40
15:O:105:LYS:HD3	52:26:1433:A:OP1	2.21	0.40
18:R:25:ARG:NH1	53:27:519:U:H5''	2.37	0.40
18:R:25:ARG:HG2	18:R:74:ILE:HG22	2.03	0.40
24:X:47:ARG:HD2	53:27:73:A:OP2	2.22	0.40
39:13:11:ARG:H	39:13:77:ALA:HA	1.85	0.40
39:13:93:LEU:O	39:13:96:GLU:HB3	2.21	0.40
42:16:57:THR:OG1	52:26:362:G:OP1	2.39	0.40
42:16:115:LYS:C	42:16:116:TYR:CG	2.97	0.40
46:20:68:SER:HG	52:26:376:G:P	2.44	0.40
47:21:38:LYS:HD3	52:26:585:G:OP1	2.21	0.40
48:22:52:ARG:HH21	52:26:664:G:P	2.44	0.40
51:25:17:ARG:HH12	51:25:20:ARG:HE	1.69	0.40
52:26:88:U:H2'	52:26:89:U:O4'	2.22	0.40
52:26:174:A:C2'	52:26:175:C:H5'	2.52	0.40
52:26:284:C:H2'	52:26:285:C:C6	2.56	0.40
52:26:440:C:H2'	52:26:441:A:O4'	2.22	0.40
52:26:891:U:H2'	52:26:892:A:C8	2.51	0.40
53:27:197:A:OP1	53:27:198:C:OP2	2.39	0.40
53:27:275:C:C2'	53:27:276:U:H4'	2.26	0.40
53:27:740:C:O2'	53:27:741:U:H5'	2.22	0.40
53:27:818:G:C2'	53:27:819:A:H5''	2.51	0.40
53:27:941:A:H2'	53:27:942:G:O4'	2.22	0.40
53:27:947:A:H2'	53:27:948:C:O4'	2.20	0.40
53:27:1275:A:H4'	53:27:1276:A:O5'	2.21	0.40
53:27:1331:G:C2'	53:27:1332:G:C5'	2.99	0.40
53:27:1469:A:H2'	53:27:1470:A:C8	2.56	0.40
53:27:1659:G:C3'	53:27:1660:G:H5''	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2080:A:C5	53:27:2081:U:C4	3.09	0.40
53:27:2165:C:H6	53:27:2165:C:O5'	2.04	0.40
53:27:2296:U:C5'	53:27:2297:A:OP1	2.64	0.40
53:27:2453:A:O2'	53:27:2454:G:H5'	2.21	0.40
53:27:2520:C:O2'	53:27:2521:C:H5'	2.21	0.40
53:27:2673:G:H2'	53:27:2674:G:C8	2.55	0.40
53:27:2715:C:O5'	53:27:2715:C:H6	2.04	0.40
53:27:2762:C:H5'	53:27:2763:G:OP2	2.21	0.40
53:27:2809:A:H3'	53:27:2810:A:C8	2.56	0.40
54:28:56:G:H4'	54:28:57:A:C8	2.56	0.40
57:31:11:A:O2'	57:31:12:G:H5'	2.21	0.40
57:31:64:G:H2'	57:31:65:C:C6	2.56	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
59:33:626:THR:HG23	59:33:632:SER:HB2	2.03	0.40
1:A:124:LYS:HB3	1:A:127:ASN:HD21	1.87	0.40
2:B:123:LYS:HE2	13:M:1:MET:CE	2.44	0.40
2:B:130:GLN:HE22	53:27:2578:G:N2	2.19	0.40
3:C:145:ASP:OD2	3:C:183:PHE:HA	2.21	0.40
4:D:32:LYS:HD3	4:D:91:ARG:NH2	2.36	0.40
4:D:140:ILE:HG22	4:D:142:TYR:H	1.86	0.40
7:G:107:GLU:O	7:G:108:VAL:HB	2.22	0.40
12:L:59:ARG:CZ	59:33:736:ILE:HD12	2.52	0.40
14:N:77:ALA:O	14:N:81:ARG:HG3	2.22	0.40
15:O:13:LYS:HE3	15:O:76:HIS:HA	2.04	0.40
15:O:85:VAL:HG12	15:O:86:LYS:N	2.35	0.40
15:O:112:ARG:C	15:O:113:LEU:HG	2.47	0.40
18:R:8:ARG:HE	18:R:102:HIS:CE1	2.39	0.40
19:S:10:VAL:HG21	19:S:42:GLU:HG2	2.03	0.40
19:S:13:ALA:HB1	24:X:33:ALA:HB1	2.03	0.40
21:U:76:ASP:H	21:U:90:ASP:HB2	1.86	0.40
24:X:39:GLN:HG3	24:X:41:HIS:HE1	1.86	0.40
24:X:48:ARG:HD3	24:X:48:ARG:HA	1.90	0.40
28:2:9:LYS:O	28:2:51:ALA:HB3	2.21	0.40
31:5:36:ARG:HG2	31:5:36:ARG:HH11	1.85	0.40
33:7:150:VAL:O	33:7:166:TRP:HA	2.22	0.40
33:7:171:ARG:HG3	52:26:1107:C:OP1	2.21	0.40
34:8:173:ASP:C	34:8:175:GLY:H	2.29	0.40
37:11:91:ARG:CG	37:11:92:PRO:HD2	2.51	0.40
39:13:49:GLN:N	39:13:50:PRO:HD2	2.36	0.40
40:14:6:ILE:N	40:14:76:ILE:O	2.54	0.40
41:15:20:ALA:CB	41:15:33:ILE:HG12	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:16:PHE:CZ	52:26:625:U:H4'	2.55	0.40
47:21:62:GLU:OE2	52:26:128:G:H1'	2.21	0.40
50:24:22:SER:OG	50:24:23:ARG:N	2.54	0.40
50:24:74:HIS:O	50:24:78:LEU:HB2	2.21	0.40
52:26:75:G:H2'	52:26:76:G:H8	1.83	0.40
52:26:357:G:C2	52:26:358:U:C5	3.09	0.40
52:26:478:A:H2'	52:26:479:U:C5'	2.51	0.40
52:26:872:A:C5	52:26:874:G:C8	3.09	0.40
52:26:1284:C:H3'	52:26:1285:A:C8	2.57	0.40
52:26:1415:G:C2	52:26:1416:G:C8	3.10	0.40
53:27:216:A:C8	53:27:432:A:C6	3.10	0.40
53:27:431:U:O2'	53:27:432:A:H5'	2.21	0.40
53:27:1221:C:O2	53:27:1221:C:H2'	2.21	0.40
53:27:1268:A:H2'	53:27:1269:A:H8	1.86	0.40
53:27:1287:A:H2'	53:27:1288:G:H5'	2.04	0.40
53:27:1430:G:H2'	53:27:1431:A:H8	1.87	0.40
53:27:1761:C:C5	53:27:1762:A:C6	3.10	0.40
53:27:1777:U:C2	53:27:1778:U:C5	3.10	0.40
53:27:1805:A:H2'	53:27:1806:C:C6	2.56	0.40
53:27:1868:C:H2'	53:27:1869:G:C4'	2.51	0.40
53:27:1869:G:H2'	53:27:1871:A:C2	2.56	0.40
53:27:2391:G:H4'	53:27:2392:A:OP1	2.21	0.40
53:27:2700:A:H2'	53:27:2701:U:C6	2.56	0.40
53:27:2796:U:H6	53:27:2796:U:H3'	1.86	0.40
53:27:2796:U:O2	53:27:2801:G:N1	2.53	0.40
53:27:2836:U:H6	53:27:2836:U:O5'	2.04	0.40
53:27:2842:G:H2'	53:27:2843:G:H8	1.85	0.40
57:31:17:C:H2'	57:31:17(A):U:C5	2.57	0.40
59:33:69:LEU:O	59:33:71:MET:HE3	2.21	0.40
2:B:142:VAL:HB	2:B:143:PRO:HD2	2.03	0.40
3:C:121:VAL:O	3:C:190:ALA:N	2.55	0.40
4:D:38:GLY:HA2	4:D:85:GLY:HA3	2.04	0.40
7:G:60:LEU:HA	7:G:64:VAL:HG23	2.04	0.40
11:K:116:VAL:HG22	11:K:117:THR:H	1.86	0.40
12:L:38:ARG:HB2	12:L:98:PRO:HD3	2.02	0.40
21:U:18:ARG:HG3	21:U:18:ARG:HH11	1.85	0.40
30:4:25:HIS:HB2	30:4:43:LEU:O	2.21	0.40
32:6:49:PHE:HD1	32:6:199:ILE:HG21	1.87	0.40
33:7:173:PRO:HB2	33:7:176:THR:CB	2.52	0.40
35:9:49:TYR:O	35:9:62:ALA:HB2	2.21	0.40
36:10:7:VAL:HA	36:10:60:VAL:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:11:ARG:HH11	39:13:12:LYS:HB2	1.87	0.40
42:16:76:HIS:O	42:16:77:SER:HB2	2.20	0.40
45:19:63:ARG:HA	45:19:63:ARG:HD2	1.84	0.40
46:20:22:ALA:HA	46:20:33:ILE:HD12	2.02	0.40
46:20:60:TRP:O	46:20:64:GLY:N	2.55	0.40
50:24:23:ARG:HB2	50:24:65:LEU:HD22	2.03	0.40
52:26:36:C:H2'	52:26:37:U:O4'	2.22	0.40
52:26:211:G:H2'	52:26:212:G:C5'	2.52	0.40
52:26:256:U:H2'	52:26:257:G:C8	2.56	0.40
52:26:865:A:H2'	52:26:866:C:O4'	2.20	0.40
52:26:1038:C:H2'	52:26:1039:G:H8	1.83	0.40
52:26:1045:C:H2'	52:26:1046:A:O4'	2.22	0.40
52:26:1097:C:H2'	52:26:1098:C:O4'	2.21	0.40
52:26:1388:C:H2'	52:26:1389:C:C6	2.55	0.40
53:27:30:G:H2'	53:27:31:C:O4'	2.22	0.40
53:27:792:A:C3'	53:27:793:A:H5'	2.51	0.40
53:27:955:U:O2	53:27:955:U:O4'	2.40	0.40
53:27:976:G:H2'	53:27:977:G:H8	1.87	0.40
53:27:1111:A:O2'	53:27:1112:G:P	2.78	0.40
53:27:1664:A:C5	53:27:2726:A:N7	2.89	0.40
53:27:1754:A:C6	53:27:1755:A:C6	3.09	0.40
53:27:1810:A:H2'	53:27:1811:G:C4'	2.51	0.40
53:27:1846:G:C6	53:27:1847:G:N1	2.89	0.40
53:27:1891:G:H2'	53:27:1892:C:C6	2.57	0.40
53:27:2088:A:O2'	53:27:2089:C:H5'	2.22	0.40
53:27:2369:A:H2'	53:27:2370:G:C8	2.57	0.40
53:27:2396:G:C2	53:27:2421:G:C2	3.09	0.40
53:27:2472:G:O6	53:27:2476:A:H4'	2.21	0.40
53:27:2476:A:H2'	53:27:2477:U:O4'	2.22	0.40
53:27:2757:A:N3	53:27:2757:A:H2'	2.35	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
59:33:407:TYR:HB2	59:33:415:VAL:CG1	2.52	0.40
59:33:429:TYR:CZ	59:33:436:GLY:HA3	2.57	0.40
2:B:37:VAL:HG13	2:B:48:ILE:HG22	2.02	0.40
4:D:47:LYS:HE3	4:D:47:LYS:HB2	1.94	0.40
4:D:108:PRO:HA	26:Z:41:HIS:CD2	2.57	0.40
4:D:152:ASP:OD1	4:D:153:ILE:N	2.55	0.40
7:G:27:VAL:O	7:G:82:ILE:HA	2.22	0.40
7:G:56:ARG:H	53:27:1084:A:H5'	1.87	0.40
11:K:103:ILE:CD1	53:27:259:G:H4'	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:45:GLN:HE21	53:27:2485:G:C5'	2.29	0.40
12:L:86:LYS:HZ3	53:27:955:U:P	2.44	0.40
13:M:33:ILE:HD12	13:M:114:GLU:OE1	2.21	0.40
23:W:36:ARG:N	53:27:2200:C:OP1	2.53	0.40
28:2:20:TYR:OH	53:27:2348:U:H5'	2.21	0.40
32:6:183:PHE:N	32:6:183:PHE:CD1	2.89	0.40
34:8:11:SER:O	34:8:16:THR:N	2.50	0.40
34:8:103:ARG:HG3	34:8:167:PRO:HG2	2.03	0.40
35:9:60:GLN:HG3	35:9:61:LYS:N	2.37	0.40
38:12:47:ASP:OD1	38:12:48:PHE:N	2.51	0.40
39:13:20:ILE:HD11	39:13:60:LEU:HB2	2.03	0.40
39:13:48:ARG:O	39:13:51:LEU:HB2	2.22	0.40
40:14:5:ARG:CZ	40:14:79:PRO:HG3	2.51	0.40
40:14:14:ASP:OD1	40:14:15:HIS:N	2.54	0.40
40:14:51:VAL:HG22	40:14:63:ASP:O	2.22	0.40
41:15:33:ILE:HG13	41:15:69:CYS:SG	2.62	0.40
46:20:60:TRP:HB3	46:20:65:ALA:HB2	2.03	0.40
47:21:26:ARG:HG2	47:21:26:ARG:HH11	1.86	0.40
49:23:32:THR:O	49:23:56:HIS:HE1	2.04	0.40
52:26:50:A:H1'	52:26:52:C:C6	2.56	0.40
52:26:232:G:H1'	52:26:262:A:N1	2.36	0.40
52:26:356:A:N3	52:26:368:U:O2'	2.47	0.40
52:26:1077:G:N2	52:26:1080:A:OP2	2.54	0.40
52:26:1420:U:O2'	52:26:1421:G:H5'	2.22	0.40
53:27:332:A:C5	53:27:335:C:C4	3.09	0.40
53:27:426:C:O2'	53:27:427:U:H5'	2.22	0.40
53:27:648:G:H2'	53:27:649:G:H8	1.87	0.40
53:27:743:A:H2'	53:27:744:U:C6	2.56	0.40
53:27:1020:A:H1'	53:27:1021:A:OP2	2.21	0.40
53:27:1186:G:C2	53:27:1187:G:H1'	2.57	0.40
53:27:1277:G:H2'	53:27:1278:C:H6	1.86	0.40
53:27:1394:U:O3'	53:27:1603:A:H5''	2.21	0.40
53:27:2116:G:C6	53:27:2165:C:H1'	2.57	0.40
53:27:2286:G:H5'	53:27:2287:A:H1'	2.03	0.40
53:27:2364:C:H2'	53:27:2365:G:C5'	2.51	0.40
58:32:14:A:C8	58:32:22:G:N2	2.89	0.40
59:33:74:ASP:CA	59:33:77:ARG:HH21	2.35	0.40
59:33:155:GLU:CD	59:33:159:HIS:HE2	2.27	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HA	2.51	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	A	269/273 (98%)	218 (81%)	34 (13%)	17 (6%)	1	15
2	B	207/209 (99%)	175 (84%)	25 (12%)	7 (3%)	3	24
3	C	199/201 (99%)	157 (79%)	23 (12%)	19 (10%)	0	8
4	D	175/179 (98%)	143 (82%)	23 (13%)	9 (5%)	1	17
5	E	174/177 (98%)	148 (85%)	19 (11%)	7 (4%)	2	21
6	F	147/149 (99%)	116 (79%)	20 (14%)	11 (8%)	1	12
7	G	129/165 (78%)	91 (70%)	27 (21%)	11 (8%)	0	10
8	H	139/142 (98%)	107 (77%)	21 (15%)	11 (8%)	1	11
9	I	140/142 (99%)	120 (86%)	16 (11%)	4 (3%)	3	26
10	J	120/123 (98%)	94 (78%)	19 (16%)	7 (6%)	1	16
11	K	141/144 (98%)	108 (77%)	18 (13%)	15 (11%)	0	6
12	L	134/136 (98%)	104 (78%)	17 (13%)	13 (10%)	0	8
13	M	118/127 (93%)	95 (80%)	18 (15%)	5 (4%)	2	20
14	N	114/117 (97%)	92 (81%)	16 (14%)	6 (5%)	1	17
15	O	112/115 (97%)	96 (86%)	13 (12%)	3 (3%)	4	28
16	P	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	4	28
17	Q	101/103 (98%)	74 (73%)	19 (19%)	8 (8%)	1	11
18	R	108/110 (98%)	84 (78%)	17 (16%)	7 (6%)	1	15
19	S	91/100 (91%)	76 (84%)	13 (14%)	2 (2%)	5	31
20	T	100/104 (96%)	81 (81%)	11 (11%)	8 (8%)	1	11
21	U	92/94 (98%)	75 (82%)	13 (14%)	4 (4%)	2	20
22	V	73/85 (86%)	64 (88%)	5 (7%)	4 (6%)	1	17
23	W	75/78 (96%)	65 (87%)	7 (9%)	3 (4%)	2	21
24	X	61/63 (97%)	53 (87%)	2 (3%)	6 (10%)	0	8
25	Y	56/59 (95%)	48 (86%)	4 (7%)	4 (7%)	1	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	Z	64/70 (91%)	49 (77%)	8 (12%)	7 (11%)	0	6
27	1	54/57 (95%)	39 (72%)	9 (17%)	6 (11%)	0	6
28	2	48/55 (87%)	39 (81%)	8 (17%)	1 (2%)	5	31
29	3	44/46 (96%)	38 (86%)	4 (9%)	2 (4%)	2	19
30	4	62/65 (95%)	49 (79%)	11 (18%)	2 (3%)	3	25
31	5	36/38 (95%)	28 (78%)	5 (14%)	3 (8%)	0	10
32	6	216/241 (90%)	158 (73%)	40 (18%)	18 (8%)	0	10
33	7	204/233 (88%)	174 (85%)	24 (12%)	6 (3%)	3	26
34	8	203/206 (98%)	166 (82%)	27 (13%)	10 (5%)	1	18
35	9	155/167 (93%)	119 (77%)	20 (13%)	16 (10%)	0	7
36	10	98/135 (73%)	71 (72%)	18 (18%)	9 (9%)	0	9
37	11	149/179 (83%)	125 (84%)	16 (11%)	8 (5%)	1	17
38	12	127/130 (98%)	109 (86%)	14 (11%)	4 (3%)	3	25
39	13	125/130 (96%)	93 (74%)	16 (13%)	16 (13%)	0	4
40	14	96/103 (93%)	74 (77%)	10 (10%)	12 (12%)	0	4
41	15	114/129 (88%)	89 (78%)	15 (13%)	10 (9%)	0	10
42	16	121/124 (98%)	90 (74%)	21 (17%)	10 (8%)	0	10
43	17	112/118 (95%)	89 (80%)	15 (13%)	8 (7%)	1	13
44	18	98/101 (97%)	74 (76%)	16 (16%)	8 (8%)	0	11
45	19	86/89 (97%)	73 (85%)	10 (12%)	3 (4%)	3	23
46	20	80/82 (98%)	59 (74%)	20 (25%)	1 (1%)	9	40
47	21	78/84 (93%)	57 (73%)	14 (18%)	7 (9%)	0	10
48	22	63/75 (84%)	44 (70%)	11 (18%)	8 (13%)	0	4
49	23	77/92 (84%)	62 (80%)	11 (14%)	4 (5%)	1	17
50	24	83/87 (95%)	71 (86%)	9 (11%)	3 (4%)	2	23
51	25	63/71 (89%)	36 (57%)	14 (22%)	13 (21%)	0	1
59	33	663/750 (88%)	559 (84%)	61 (9%)	43 (6%)	1	15
All	All	6509/6970 (93%)	5217 (80%)	860 (13%)	432 (7%)	2	14

All (432) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	97	ASP

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Mol	Chain	Res	Type
1	A	107	LYS
1	A	121	ALA
1	A	143	VAL
1	A	154	ALA
3	C	61	ARG
3	C	71	GLY
3	C	199	MET
5	E	45	ALA
5	E	59	ASP
5	E	117	PRO
5	E	174	LYS
6	F	2	GLN
6	F	10	ALA
6	F	54	LEU
7	G	55	VAL
7	G	88	HIS
7	G	93	ALA
8	H	18	ASN
8	H	24	GLY
9	I	81	ILE
10	J	50	GLY
10	J	89	ASN
10	J	107	LEU
10	J	110	GLU
11	K	31	GLY
11	K	38	GLN
11	K	94	THR
12	L	87	GLY
13	M	117	ASP
14	N	68	LYS
16	P	2	ARG
17	Q	54	VAL
17	Q	80	ARG
18	R	62	ASP
20	T	57	ILE
23	W	2	ARG
24	X	24	GLU
24	X	25	GLN
25	Y	13	ILE
26	Z	52	ALA
27	1	23	ALA
30	4	26	ALA

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Mol	Chain	Res	Type
31	5	34	LYS
32	6	14	HIS
32	6	21	TYR
32	6	72	LYS
32	6	87	ASP
32	6	167	HIS
33	7	156	LEU
33	7	205	GLU
34	8	47	LEU
34	8	81	LEU
34	8	150	LYS
35	9	77	ASN
35	9	99	SER
35	9	121	ASN
35	9	122	VAL
35	9	132	PRO
36	10	91	ARG
37	11	4	ARG
39	13	12	LYS
39	13	55	ASP
39	13	58	GLU
39	13	71	ILE
40	14	34	ALA
40	14	41	PRO
41	15	125	LYS
42	16	76	HIS
42	16	88	ASP
43	17	9	PRO
43	17	104	ASN
48	22	11	ARG
48	22	46	THR
50	24	67	HIS
51	25	14	ALA
51	25	32	ARG
51	25	36	PHE
51	25	65	ARG
51	25	66	ARG
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	469	PRO

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Mol	Chain	Res	Type
59	33	471	PRO
59	33	484	THR
59	33	485	THR
59	33	612	CYS
59	33	620	GLU
59	33	688	ALA
1	A	43	ASN
1	A	108	GLY
1	A	120	ASP
1	A	157	ALA
1	A	234	GLY
1	A	252	LYS
2	B	102	ALA
2	B	103	ASP
2	B	153	GLY
3	C	42	GLY
3	C	56	GLY
3	C	70	SER
3	C	144	GLU
3	C	165	HIS
4	D	8	LYS
4	D	20	ASN
4	D	81	GLY
4	D	175	PRO
5	E	135	ALA
6	F	3	VAL
6	F	114	GLU
6	F	118	PRO
7	G	73	LYS
7	G	107	GLU
8	H	5	GLN
8	H	8	VAL
11	K	4	ASN
11	K	36	LYS
11	K	85	VAL
12	L	15	GLY
12	L	21	ALA
12	L	59	ARG
12	L	89	VAL
13	M	59	SER
14	N	99	TYR
14	N	101	GLY

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Mol	Chain	Res	Type
18	R	2	GLU
19	S	71	GLY
20	T	54	PRO
21	U	45	ASP
21	U	84	PRO
22	V	12	SER
22	V	68	LYS
23	W	41	SER
24	X	23	ARG
26	Z	33	ASN
26	Z	50	ASP
27	1	2	VAL
27	1	17	SER
27	1	25	THR
30	4	62	PRO
31	5	11	CYS
31	5	29	ALA
32	6	20	ARG
32	6	34	ARG
32	6	123	GLY
32	6	148	GLY
32	6	157	PRO
32	6	212	TYR
34	8	24	VAL
34	8	26	ALA
34	8	29	THR
34	8	30	LYS
34	8	154	VAL
35	9	11	GLN
35	9	50	GLY
35	9	93	VAL
35	9	102	THR
36	10	40	GLU
36	10	54	LEU
37	11	29	LEU
37	11	55	LYS
37	11	129	ASN
38	12	51	GLU
38	12	66	GLN
39	13	38	PHE
39	13	57	VAL
39	13	103	VAL

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Mol	Chain	Res	Type
40	14	47	GLU
40	14	57	VAL
41	15	13	LYS
41	15	16	SER
41	15	88	PRO
41	15	91	GLY
41	15	93	GLU
41	15	94	SER
42	16	11	ARG
42	16	47	ALA
42	16	90	PRO
43	17	6	ILE
43	17	98	GLY
44	18	28	ALA
44	18	53	ASP
44	18	94	GLY
45	19	20	ASP
47	21	15	LYS
47	21	81	ALA
48	22	17	VAL
48	22	37	LYS
48	22	45	GLY
48	22	71	ASP
49	23	54	ARG
50	24	65	LEU
50	24	68	LYS
51	25	30	GLU
51	25	62	GLU
59	33	521	ILE
59	33	533	ARG
59	33	552	ARG
59	33	613	CYS
59	33	629	ARG
59	33	658	GLY
59	33	666	SER
59	33	676	ARG
59	33	691	LYS
59	33	703	THR
1	A	7	PRO
2	B	194	PRO
3	C	68	ALA
3	C	69	ARG

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Mol	Chain	Res	Type
3	C	101	TYR
3	C	166	LYS
4	D	120	SER
4	D	142	TYR
4	D	149	ARG
5	E	46	ASP
5	E	118	ALA
6	F	9	VAL
7	G	118	ILE
8	H	49	GLU
8	H	75	ALA
8	H	94	LYS
8	H	97	VAL
11	K	14	LYS
11	K	93	ASN
11	K	111	ILE
11	K	113	ALA
11	K	129	LYS
12	L	58	LYS
12	L	69	PRO
13	M	71	ARG
14	N	114	GLY
16	P	23	TYR
17	Q	31	GLU
17	Q	55	ASP
17	Q	69	GLY
17	Q	100	GLY
18	R	3	THR
18	R	89	ALA
20	T	18	LYS
21	U	34	LYS
21	U	44	HIS
22	V	14	ALA
22	V	17	LEU
25	Y	51	SER
25	Y	52	PHE
26	Z	2	LYS
27	1	53	VAL
28	2	40	PRO
32	6	11	ALA
32	6	19	THR
32	6	22	TRP

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Mol	Chain	Res	Type
32	6	36	LYS
32	6	104	LYS
32	6	105	THR
32	6	202	ASN
33	7	44	LYS
34	8	23	GLY
35	9	22	LYS
35	9	81	GLN
35	9	89	THR
35	9	109	ALA
36	10	56	LYS
37	11	16	LYS
38	12	56	PRO
39	13	23	GLY
39	13	102	PHE
39	13	107	ALA
40	14	35	GLN
40	14	43	PRO
40	14	92	LEU
41	15	51	PHE
42	16	33	CYS
42	16	35	ARG
43	17	113	LYS
45	19	2	LEU
46	20	48	GLU
47	21	50	ASN
47	21	56	ASP
49	23	26	ASP
51	25	12	ASP
51	25	23	GLU
51	25	60	ALA
59	33	267	ASN
59	33	334	VAL
59	33	474	ASP
59	33	476	LEU
59	33	510	GLN
59	33	529	HIS
59	33	618	GLY
59	33	619	ASP
59	33	635	ARG
59	33	637	ASP
59	33	697	VAL

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Mol	Chain	Res	Type
59	33	740	ARG
1	A	52	HIS
1	A	112	GLY
1	A	204	LEU
1	A	231	HIS
2	B	138	LEU
3	C	62	GLN
3	C	65	THR
3	C	80	SER
4	D	125	GLY
4	D	173	ASP
6	F	14	SER
6	F	25	TYR
6	F	77	THR
8	H	13	ALA
9	I	40	HIS
10	J	35	VAL
11	K	29	LYS
11	K	37	GLY
12	L	6	ARG
13	M	70	THR
13	M	116	VAL
14	N	88	LYS
17	Q	53	PHE
18	R	59	GLU
19	S	72	GLN
20	T	40	LEU
20	T	88	ASP
23	W	31	ASN
24	X	22	LEU
26	Z	42	PRO
27	1	40	HIS
29	3	4	THR
29	3	8	SER
33	7	21	TRP
33	7	46	LEU
36	10	86	ARG
36	10	93	LYS
36	10	98	GLU
37	11	56	SER
37	11	113	LYS
38	12	65	PHE

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Mol	Chain	Res	Type
39	13	13	SER
39	13	90	ASP
39	13	119	LYS
40	14	75	ASP
40	14	89	ARG
41	15	77	GLY
44	18	34	ASN
44	18	61	ASN
48	22	18	GLN
48	22	19	GLU
49	23	4	LEU
49	23	8	PRO
51	25	18	PHE
59	33	52	ALA
59	33	532	PRO
59	33	537	ASN
59	33	548	GLY
59	33	567	PRO
59	33	656	VAL
2	B	10	GLY
2	B	86	GLU
3	C	27	LEU
3	C	63	LYS
3	C	83	VAL
6	F	15	LEU
7	G	48	ALA
7	G	119	PRO
11	K	15	ALA
11	K	84	LYS
12	L	10	ARG
12	L	26	VAL
14	N	100	HIS
15	O	64	SER
17	Q	40	MET
18	R	63	GLY
20	T	97	SER
25	Y	4	ILE
26	Z	24	ILE
26	Z	64	PHE
34	8	166	LYS
36	10	53	LYS
39	13	9	GLY

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Mol	Chain	Res	Type
39	13	31	GLN
39	13	42	THR
40	14	33	GLY
40	14	39	PRO
40	14	61	ALA
41	15	126	ARG
42	16	24	GLU
42	16	60	PHE
43	17	97	ARG
44	18	2	LYS
44	18	20	PHE
44	18	91	GLU
47	21	51	GLU
47	21	65	PRO
47	21	69	THR
51	25	10	PRO
1	A	85	ASN
7	G	50	VAL
7	G	130	PRO
9	I	64	VAL
12	L	70	ASP
15	O	35	SER
20	T	89	GLY
24	X	20	ASN
24	X	55	THR
33	7	61	LYS
35	9	17	VAL
35	9	23	THR
36	10	18	VAL
43	17	93	GLY
59	33	44	GLN
59	33	621	ILE
59	33	692	VAL
8	H	21	PRO
9	I	100	VAL
15	O	63	ILE
16	P	6	GLY
45	19	10	ILE
7	G	21	GLY
12	L	23	GLY
43	17	50	GLY
59	33	483	VAL

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Mol	Chain	Res	Type
3	C	121	VAL
18	R	74	ILE
35	9	104	ILE
8	H	73	PRO
10	J	27	GLY
12	L	57	VAL
20	T	38	ILE
37	11	5	VAL
42	16	3	VAL
51	25	9	GLU
10	J	93	GLN

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	A	216/218 (99%)	215 (100%)	1 (0%)	81	82
2	B	164/164 (100%)	164 (100%)	0	100	100
3	C	165/165 (100%)	163 (99%)	2 (1%)	63	72
4	D	148/150 (99%)	147 (99%)	1 (1%)	76	78
5	E	137/138 (99%)	137 (100%)	0	100	100
6	F	114/114 (100%)	114 (100%)	0	100	100
7	G	100/123 (81%)	99 (99%)	1 (1%)	68	75
8	H	109/110 (99%)	108 (99%)	1 (1%)	70	75
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	103 (100%)	0	100	100
11	K	102/103 (99%)	100 (98%)	2 (2%)	48	65
12	L	109/109 (100%)	109 (100%)	0	100	100
13	M	100/103 (97%)	99 (99%)	1 (1%)	68	75
14	N	86/87 (99%)	86 (100%)	0	100	100
15	O	99/100 (99%)	98 (99%)	1 (1%)	68	75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	P	89/90 (99%)	89 (100%)	0	100	100
17	Q	84/84 (100%)	84 (100%)	0	100	100
18	R	93/93 (100%)	93 (100%)	0	100	100
19	S	80/84 (95%)	80 (100%)	0	100	100
20	T	83/85 (98%)	83 (100%)	0	100	100
21	U	78/78 (100%)	78 (100%)	0	100	100
22	V	57/63 (90%)	57 (100%)	0	100	100
23	W	67/68 (98%)	67 (100%)	0	100	100
24	X	55/55 (100%)	55 (100%)	0	100	100
25	Y	48/49 (98%)	48 (100%)	0	100	100
26	Z	59/62 (95%)	58 (98%)	1 (2%)	53	68
27	1	47/48 (98%)	47 (100%)	0	100	100
28	2	45/49 (92%)	45 (100%)	0	100	100
29	3	38/38 (100%)	37 (97%)	1 (3%)	40	60
30	4	51/52 (98%)	51 (100%)	0	100	100
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	178 (99%)	2 (1%)	65	74
33	7	170/190 (90%)	168 (99%)	2 (1%)	63	72
34	8	172/173 (99%)	171 (99%)	1 (1%)	78	80
35	9	119/126 (94%)	116 (98%)	3 (2%)	42	62
36	10	87/116 (75%)	87 (100%)	0	100	100
37	11	124/147 (84%)	124 (100%)	0	100	100
38	12	104/105 (99%)	104 (100%)	0	100	100
39	13	105/107 (98%)	103 (98%)	2 (2%)	50	66
40	14	86/90 (96%)	86 (100%)	0	100	100
41	15	89/99 (90%)	88 (99%)	1 (1%)	65	74
42	16	103/104 (99%)	103 (100%)	0	100	100
43	17	92/96 (96%)	91 (99%)	1 (1%)	65	74
44	18	83/84 (99%)	83 (100%)	0	100	100
45	19	76/77 (99%)	76 (100%)	0	100	100
46	20	65/65 (100%)	65 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	21	74/78 (95%)	73 (99%)	1 (1%)	59	71
48	22	56/65 (86%)	56 (100%)	0	100	100
49	23	70/79 (89%)	70 (100%)	0	100	100
50	24	65/66 (98%)	65 (100%)	0	100	100
51	25	55/61 (90%)	55 (100%)	0	100	100
59	33	452/635 (71%)	446 (99%)	6 (1%)	61	71
All	All	5303/5698 (93%)	5272 (99%)	31 (1%)	76	80

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	156	SER
3	C	65	THR
3	C	149	ILE
4	D	3	LEU
7	G	59	LEU
8	H	73	PRO
11	K	62	PRO
11	K	85	VAL
13	M	51	LEU
15	O	63	ILE
26	Z	37	CYS
29	3	44	VAL
32	6	67	LEU
32	6	185	ILE
33	7	102	ILE
33	7	156	LEU
34	8	52	VAL
35	9	122	VAL
35	9	132	PRO
35	9	152	VAL
39	13	60	LEU
39	13	93	LEU
41	15	39	ASN
43	17	6	ILE
47	21	78	VAL
59	33	138	MET
59	33	139	LEU
59	33	267	ASN
59	33	338	ILE

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Mol	Chain	Res	Type
59	33	425	LEU
59	33	463	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (117) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	59	GLN
1	A	116	GLN
1	A	162	GLN
1	A	225	ASN
1	A	238	ASN
1	A	242	HIS
2	B	32	ASN
2	B	49	GLN
2	B	167	ASN
2	B	173	GLN
3	C	62	GLN
3	C	92	HIS
3	C	94	GLN
4	D	51	ASN
4	D	62	GLN
4	D	80	GLN
5	E	29	ASN
5	E	47	ASN
5	E	63	GLN
5	E	110	HIS
6	F	18	GLN
6	F	43	ASN
6	F	73	ASN
6	F	133	GLN
6	F	135	HIS
7	G	4	ASN
7	G	103	ASN
8	H	11	GLN
8	H	33	ASN
8	H	104	GLN
9	I	58	ASN
9	I	136	GLN
10	J	93	GLN
11	K	54	GLN
12	L	22	GLN
13	M	9	GLN

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Mol	Chain	Res	Type
13	M	62	ASN
13	M	81	ASN
14	N	100	HIS
14	N	104	GLN
15	O	55	HIS
15	O	114	ASN
16	P	36	GLN
16	P	55	GLN
17	Q	6	GLN
17	Q	12	HIS
17	Q	43	ASN
19	S	15	HIS
20	T	65	GLN
21	U	44	HIS
21	U	78	GLN
22	V	8	ASN
22	V	46	ASN
22	V	72	ASN
23	W	15	ASN
23	W	22	ASN
24	X	58	ASN
25	Y	8	GLN
26	Z	30	HIS
26	Z	61	ASN
32	6	35	ASN
32	6	38	HIS
32	6	108	GLN
33	7	18	ASN
33	7	24	ASN
33	7	99	GLN
33	7	138	GLN
33	7	139	ASN
34	8	35	GLN
34	8	70	GLN
34	8	84	ASN
34	8	99	ASN
34	8	125	ASN
34	8	151	GLN
35	9	81	GLN
35	9	88	HIS
36	10	11	HIS
36	10	63	ASN

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Mol	Chain	Res	Type
37	11	67	ASN
37	11	121	ASN
38	12	20	ASN
39	13	4	GLN
39	13	30	ASN
39	13	36	GLN
39	13	125	GLN
40	14	35	GLN
41	15	23	HIS
41	15	37	GLN
41	15	100	ASN
41	15	108	ASN
42	16	4	ASN
42	16	28	GLN
43	17	13	HIS
44	18	42	ASN
44	18	65	GLN
45	19	34	GLN
45	19	37	HIS
45	19	45	HIS
45	19	49	HIS
46	20	9	HIS
46	20	26	ASN
46	20	29	ASN
47	21	30	HIS
48	22	51	GLN
50	24	20	ASN
50	24	51	ASN
51	25	63	ASN
59	33	88	ASN
59	33	180	ASN
59	33	235	HIS
59	33	264	GLN
59	33	267	ASN
59	33	432	HIS
59	33	604	ASN
59	33	607	HIS
59	33	614	GLN
59	33	706	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	190 (12%)	8 (0%)
53	27	2902/2903 (99%)	411 (14%)	22 (0%)
54	28	119/120 (99%)	9 (7%)	1 (0%)
55	29	19/20 (95%)	4 (21%)	0
56	30	75/76 (98%)	20 (26%)	1 (1%)
57	31	76/77 (98%)	6 (7%)	0
58	32	76/77 (98%)	22 (28%)	1 (1%)
All	All	4805/4812 (99%)	662 (13%)	33 (0%)

All (662) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	26	9	G
52	26	13	U
52	26	22	G
52	26	32	A
52	26	39	G
52	26	47	C
52	26	48	C
52	26	50	A
52	26	51	A
52	26	70	U
52	26	71	A
52	26	77	A
52	26	78	A
52	26	79	G
52	26	86	G
52	26	88	U
52	26	95	C
52	26	121	U
52	26	168	G
52	26	183	C
52	26	195	A
52	26	210	C
52	26	212	G
52	26	240	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	281	G
52	26	289	G
52	26	306	A

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Mol	Chain	Res	Type
52	26	328	C
52	26	330	C
52	26	345	C
52	26	346	G
52	26	352	C
52	26	354	G
52	26	363	A
52	26	367	U
52	26	372	C
52	26	398	U
52	26	412	A
52	26	414	A
52	26	421	U
52	26	422	C
52	26	423	G
52	26	429	U
52	26	441	A
52	26	448	A
52	26	462	G
52	26	463	U
52	26	467	U
52	26	479	U
52	26	484	G
52	26	485	U
52	26	486	U
52	26	495	A
52	26	510	A
52	26	518	C
52	26	527	G
52	26	531	U
52	26	534	U
52	26	547	A
52	26	550	G
52	26	559	A
52	26	561	U
52	26	564	C
52	26	566	G
52	26	572	A
52	26	573	A
52	26	574	A
52	26	575	G
52	26	576	C

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Mol	Chain	Res	Type
52	26	577	G
52	26	633	G
52	26	642	A
52	26	661	G
52	26	665	A
52	26	703	G
52	26	713	G
52	26	721	G
52	26	723	U
52	26	724	G
52	26	755	G
52	26	759	A
52	26	774	G
52	26	777	A
52	26	794	A
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	820	U
52	26	832	G
52	26	836	G
52	26	842	U
52	26	843	U
52	26	845	A
52	26	849	G
52	26	871	U
52	26	872	A
52	26	873	A
52	26	889	A
52	26	902	G
52	26	934	C
52	26	935	A
52	26	960	U
52	26	961	U
52	26	966	G
52	26	969	A
52	26	971	G
52	26	975	A
52	26	976	G
52	26	977	A
52	26	992	U

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Mol	Chain	Res	Type
52	26	993	G
52	26	994	A
52	26	1004	A
52	26	1026	G
52	26	1027	C
52	26	1029	U
52	26	1030	U
52	26	1031	C
52	26	1033	G
52	26	1034	G
52	26	1053	G
52	26	1054	C
52	26	1055	A
52	26	1085	U
52	26	1094	G
52	26	1101	A
52	26	1130	A
52	26	1133	G
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1140	C
52	26	1151	A
52	26	1159	U
52	26	1168	U
52	26	1182	G
52	26	1184	G
52	26	1196	A
52	26	1197	A
52	26	1201	A
52	26	1202	U
52	26	1207	G
52	26	1212	U
52	26	1213	A
52	26	1214	C
52	26	1225	A
52	26	1226	C
52	26	1227	A
52	26	1238	A
52	26	1240	U
52	26	1241	G
52	26	1258	G

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Mol	Chain	Res	Type
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1282	C
52	26	1286	U
52	26	1287	A
52	26	1300	G
52	26	1301	U
52	26	1317	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1363	A
52	26	1370	G
52	26	1381	U
52	26	1394	A
52	26	1395	C
52	26	1400	C
52	26	1419	G
52	26	1446	A
52	26	1451	U
52	26	1452	C
52	26	1492	A
52	26	1497	G
52	26	1499	A
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1519	A
52	26	1520	C
52	26	1529	G
52	26	1530	G
53	27	10	A
53	27	12	U
53	27	34	U
53	27	46	G
53	27	49	A
53	27	51	G
53	27	63	A
53	27	71	A
53	27	74	A

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Mol	Chain	Res	Type
53	27	75	G
53	27	98	G
53	27	114	U
53	27	119	A
53	27	120	U
53	27	138	U
53	27	139	U
53	27	140	C
53	27	141	G
53	27	142	A
53	27	162	U
53	27	163	C
53	27	181	A
53	27	196	A
53	27	216	A
53	27	219	A
53	27	221	A
53	27	222	A
53	27	228	C
53	27	229	C
53	27	233	A
53	27	248	G
53	27	249	C
53	27	255	A
53	27	266	G
53	27	272	A
53	27	276	U
53	27	284	U
53	27	294	A
53	27	311	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A
53	27	334	C
53	27	346	A
53	27	349	U
53	27	361	G
53	27	363	G
53	27	371	A
53	27	372	G
53	27	380	G

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Mol	Chain	Res	Type
53	27	386	G
53	27	387	U
53	27	404	A
53	27	405	U
53	27	406	G
53	27	411	G
53	27	421	C
53	27	424	G
53	27	451	U
53	27	457	A
53	27	458	G
53	27	480	A
53	27	481	G
53	27	491	G
53	27	504	A
53	27	505	A
53	27	508	A
53	27	529	A
53	27	532	A
53	27	533	G
53	27	545	U
53	27	546	U
53	27	563	A
53	27	573	U
53	27	575	A
53	27	586	A
53	27	588	U
53	27	603	A
53	27	614	A
53	27	615	U
53	27	616	A
53	27	627	A
53	27	637	A
53	27	646	U
53	27	654	A
53	27	655	A
53	27	669	G
53	27	686	U
53	27	687	C
53	27	694	U
53	27	695	G
53	27	711	G

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Mol	Chain	Res	Type
53	27	730	A
53	27	734	A
53	27	747	C
53	27	752	A
53	27	757	G
53	27	764	A
53	27	775	G
53	27	776	G
53	27	782	A
53	27	784	G
53	27	805	G
53	27	812	C
53	27	819	A
53	27	822	G
53	27	827	U
53	27	828	U
53	27	830	G
53	27	845	A
53	27	846	U
53	27	847	U
53	27	858	G
53	27	859	G
53	27	860	U
53	27	878	A
53	27	883	G
53	27	888	C
53	27	893	C
53	27	896	A
53	27	902	C
53	27	907	G
53	27	910	A
53	27	915	C
53	27	932	U
53	27	941	A
53	27	945	A
53	27	946	C
53	27	953	G
53	27	961	C
53	27	962	G
53	27	974	G
53	27	975	A
53	27	983	A

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Mol	Chain	Res	Type
53	27	990	A
53	27	995	C
53	27	996	A
53	27	999	U
53	27	1012	U
53	27	1013	C
53	27	1021	A
53	27	1022	G
53	27	1033	U
53	27	1045	C
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1060	U
53	27	1061	U
53	27	1070	A
53	27	1071	G
53	27	1073	A
53	27	1083	U
53	27	1088	A
53	27	1090	A
53	27	1097	U
53	27	1111	A
53	27	1112	G
53	27	1119	U
53	27	1129	A
53	27	1131	G
53	27	1132	U
53	27	1135	C
53	27	1143	A
53	27	1157	G
53	27	1173	U
53	27	1174	U
53	27	1175	A
53	27	1177	G
53	27	1180	U
53	27	1206	G
53	27	1212	G
53	27	1221	C
53	27	1238	G
53	27	1250	G
53	27	1251	C

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Mol	Chain	Res	Type
53	27	1253	A
53	27	1256	G
53	27	1271	G
53	27	1272	A
53	27	1273	U
53	27	1294	U
53	27	1300	G
53	27	1301	A
53	27	1302	A
53	27	1305	C
53	27	1314	C
53	27	1321	A
53	27	1332	G
53	27	1345	C
53	27	1365	A
53	27	1378	A
53	27	1379	U
53	27	1383	A
53	27	1395	A
53	27	1407	G
53	27	1416	G
53	27	1419	A
53	27	1420	A
53	27	1421	G
53	27	1428	C
53	27	1452	G
53	27	1453	A
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1504	A
53	27	1508	A
53	27	1509	A
53	27	1515	A
53	27	1524	G
53	27	1530	G
53	27	1534	U
53	27	1535	A
53	27	1536	C
53	27	1555	G
53	27	1560	G
53	27	1569	A

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Mol	Chain	Res	Type
53	27	1578	U
53	27	1587	G
53	27	1608	A
53	27	1616	A
53	27	1647	U
53	27	1648	U
53	27	1660	G
53	27	1674	G
53	27	1694	C
53	27	1699	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1731	G
53	27	1735	A
53	27	1738	G
53	27	1757	A
53	27	1758	U
53	27	1763	G
53	27	1764	C
53	27	1773	A
53	27	1782	U
53	27	1791	A
53	27	1800	C
53	27	1801	A
53	27	1808	A
53	27	1816	C
53	27	1848	A
53	27	1869	G
53	27	1871	A
53	27	1896	G
53	27	1900	A
53	27	1901	A
53	27	1906	G
53	27	1907	G
53	27	1913	A
53	27	1929	G
53	27	1930	G
53	27	1931	U
53	27	1937	A
53	27	1955	U
53	27	1967	C

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Mol	Chain	Res	Type
53	27	1970	A
53	27	1971	U
53	27	1972	G
53	27	1982	U
53	27	1991	U
53	27	1993	U
53	27	1997	C
53	27	2022	U
53	27	2023	C
53	27	2031	A
53	27	2033	A
53	27	2036	C
53	27	2043	C
53	27	2052	A
53	27	2055	C
53	27	2056	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2093	G
53	27	2108	A
53	27	2110	G
53	27	2111	U
53	27	2112	G
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2125	G
53	27	2131	U
53	27	2132	U
53	27	2133	G
53	27	2136	G
53	27	2143	C
53	27	2145	C
53	27	2149	U
53	27	2157	G
53	27	2166	U
53	27	2167	U
53	27	2170	A

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Mol	Chain	Res	Type
53	27	2171	A
53	27	2172	U
53	27	2173	A
53	27	2182	U
53	27	2189	U
53	27	2198	A
53	27	2204	G
53	27	2211	A
53	27	2213	U
53	27	2225	A
53	27	2238	G
53	27	2239	G
53	27	2243	U
53	27	2250	G
53	27	2269	G
53	27	2279	G
53	27	2283	C
53	27	2287	A
53	27	2297	A
53	27	2305	U
53	27	2309	A
53	27	2311	A
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2335	A
53	27	2347	C
53	27	2350	C
53	27	2357	G
53	27	2361	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2392	A
53	27	2402	U
53	27	2406	A
53	27	2423	U
53	27	2427	C
53	27	2428	G
53	27	2429	G
53	27	2430	A
53	27	2435	A

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Mol	Chain	Res	Type
53	27	2436	G
53	27	2441	U
53	27	2445	G
53	27	2448	A
53	27	2476	A
53	27	2484	G
53	27	2487	G
53	27	2498	C
53	27	2502	G
53	27	2503	A
53	27	2504	U
53	27	2505	G
53	27	2506	U
53	27	2518	A
53	27	2520	C
53	27	2529	G
53	27	2547	A
53	27	2554	U
53	27	2566	A
53	27	2567	G
53	27	2572	A
53	27	2582	G
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2609	U
53	27	2613	U
53	27	2621	G
53	27	2629	U
53	27	2630	G
53	27	2646	C
53	27	2655	G
53	27	2689	U
53	27	2690	U
53	27	2713	U
53	27	2714	G
53	27	2744	G
53	27	2748	A
53	27	2757	A
53	27	2762	C
53	27	2764	A
53	27	2765	A

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Mol	Chain	Res	Type
53	27	2778	A
53	27	2779	U
53	27	2791	G
53	27	2794	C
53	27	2797	U
53	27	2798	U
53	27	2799	A
53	27	2800	A
53	27	2801	G
53	27	2808	G
53	27	2809	A
53	27	2818	U
53	27	2820	A
53	27	2821	A
53	27	2833	U
53	27	2848	G
53	27	2849	U
53	27	2867	G
53	27	2868	A
53	27	2873	A
53	27	2874	C
53	27	2879	A
53	27	2880	C
53	27	2883	A
54	28	4	C
54	28	13	G
54	28	35	C
54	28	44	G
54	28	45	A
54	28	67	G
54	28	89	U
54	28	108	A
54	28	109	A
55	29	6	G
55	29	8	A
55	29	12	A
55	29	22	A
56	30	8	U
56	30	9	A
56	30	10	G
56	30	14	A
56	30	15	G

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Mol	Chain	Res	Type
56	30	17	C
56	30	18	G
56	30	19	G
56	30	20	U
56	30	21	A
56	30	42	C
56	30	46	G
56	30	48	C
56	30	52	G
56	30	55	U
56	30	56	C
56	30	59	U
56	30	61	C
56	30	63	G
56	30	75	C
57	31	9	G
57	31	19	G
57	31	20	U
57	31	47	U
57	31	48	C
57	31	76	A
58	32	8	U
58	32	9	G
58	32	10	G
58	32	12	G
58	32	13	C
58	32	14	A
58	32	16	C
58	32	17	C
58	32	17(A)	U
58	32	18	G
58	32	19	G
58	32	21	A
58	32	22	G
58	32	34	C
58	32	35	A
58	32	45	G
58	32	48	C
58	32	59	A
58	32	64	G
58	32	70	G
58	32	75	C

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Mol	Chain	Res	Type
58	32	76	A

All (33) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	26	70	U
52	26	246	A
52	26	280	C
52	26	758	C
52	26	960	U
52	26	1201	A
52	26	1300	G
52	26	1399	C
53	27	227	A
53	27	405	U
53	27	490	C
53	27	774	G
53	27	858	G
53	27	859	G
53	27	1020	A
53	27	1111	A
53	27	1130	U
53	27	1378	A
53	27	1730	C
53	27	1847	G
53	27	1930	G
53	27	2286	G
53	27	2296	U
53	27	2326	C
53	27	2333	A
53	27	2391	G
53	27	2428	G
53	27	2712	C
53	27	2756	U
53	27	2873	A
54	28	88	C
56	30	15	G
58	32	16	C

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 [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

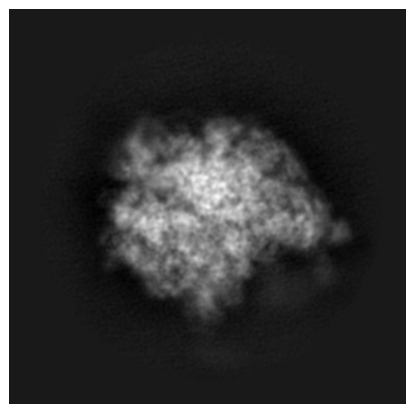
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8282. These allow visual inspection of the internal detail of the map and identification of artifacts.

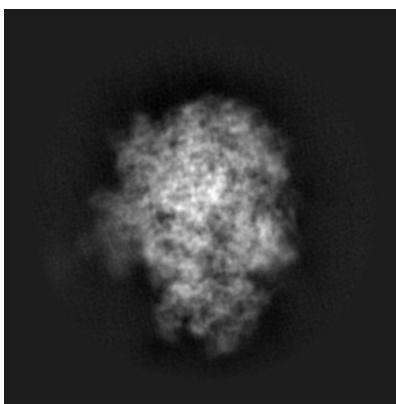
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

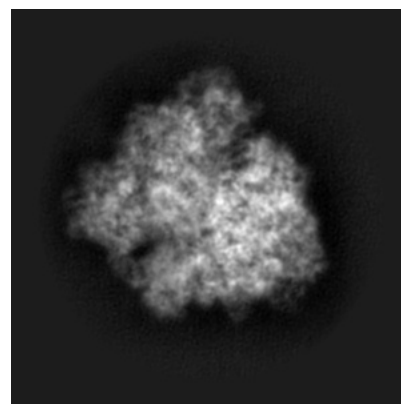
6.1.1 Primary map



X

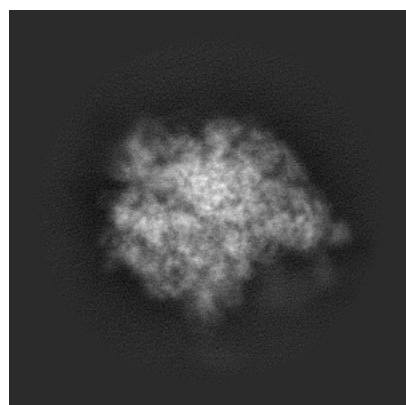


Y

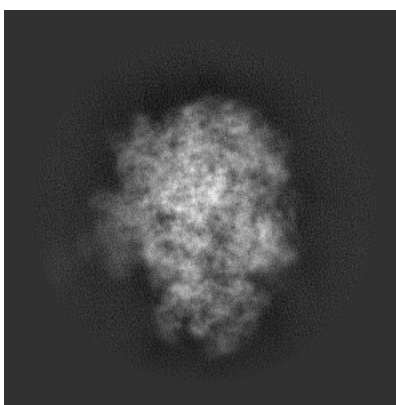


Z

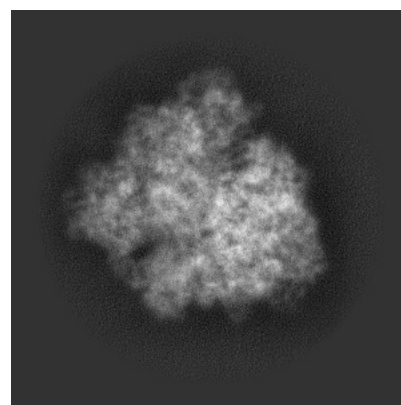
6.1.2 Raw map



X



Y

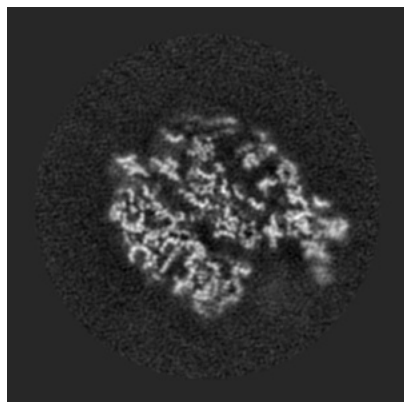


Z

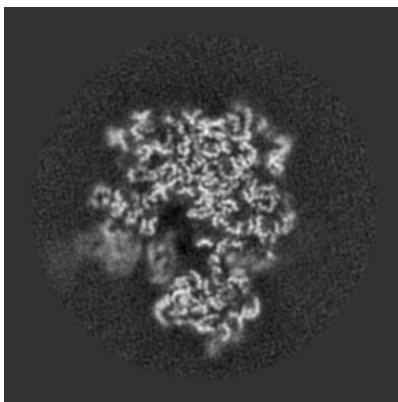
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

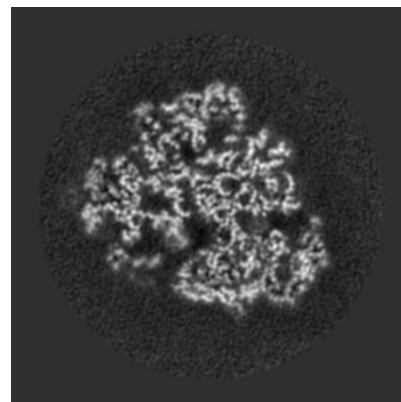
6.2.1 Primary map



X Index: 240

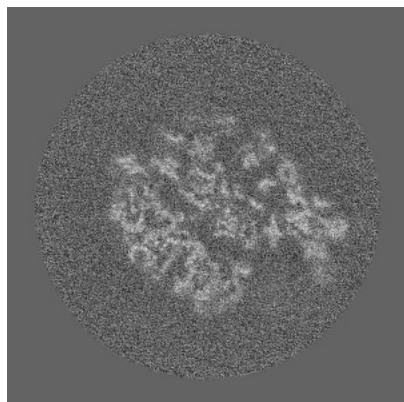


Y Index: 240

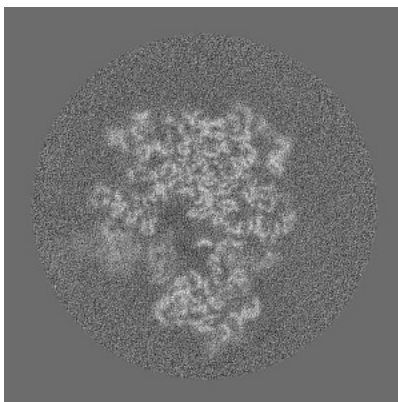


Z Index: 240

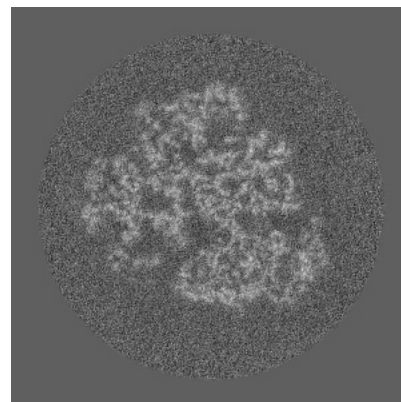
6.2.2 Raw map



X Index: 240



Y Index: 240

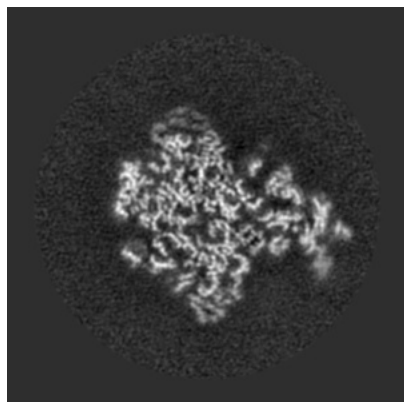


Z Index: 240

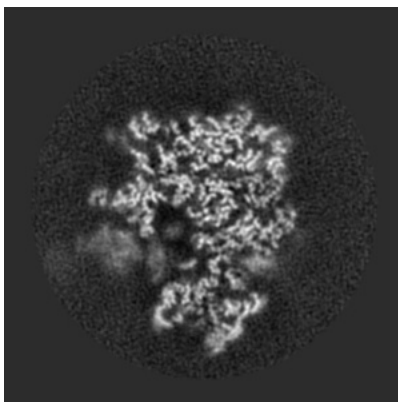
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

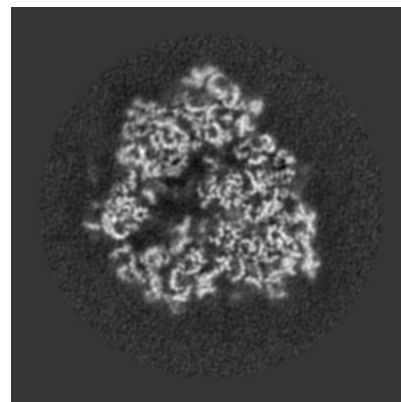
6.3.1 Primary map



X Index: 250

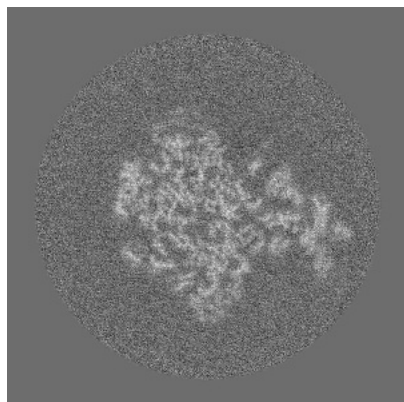


Y Index: 247

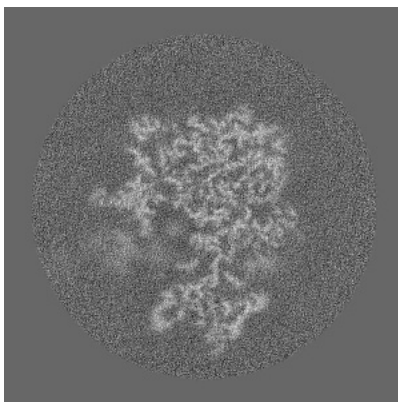


Z Index: 220

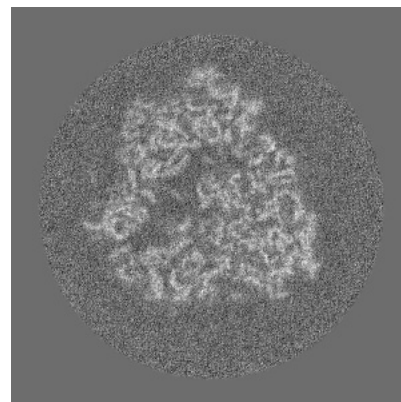
6.3.2 Raw map



X Index: 250



Y Index: 250

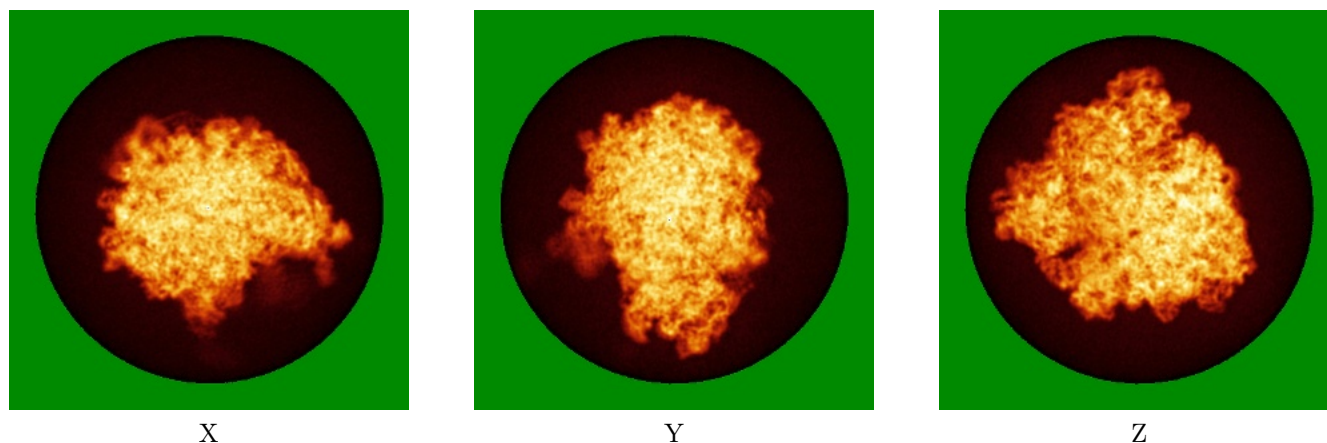


Z Index: 222

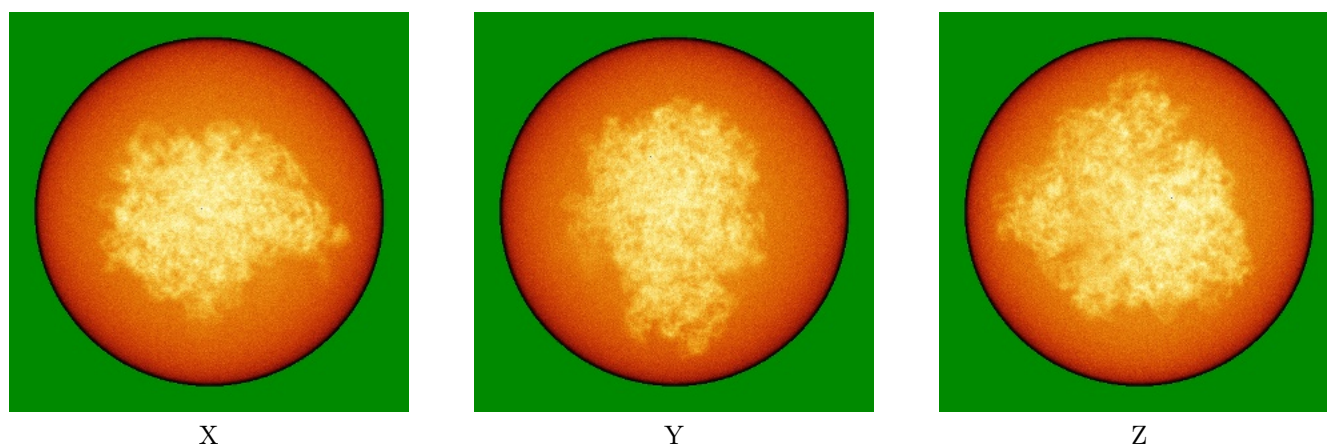
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



6.4.2 Raw map



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](#)

This section was not generated.

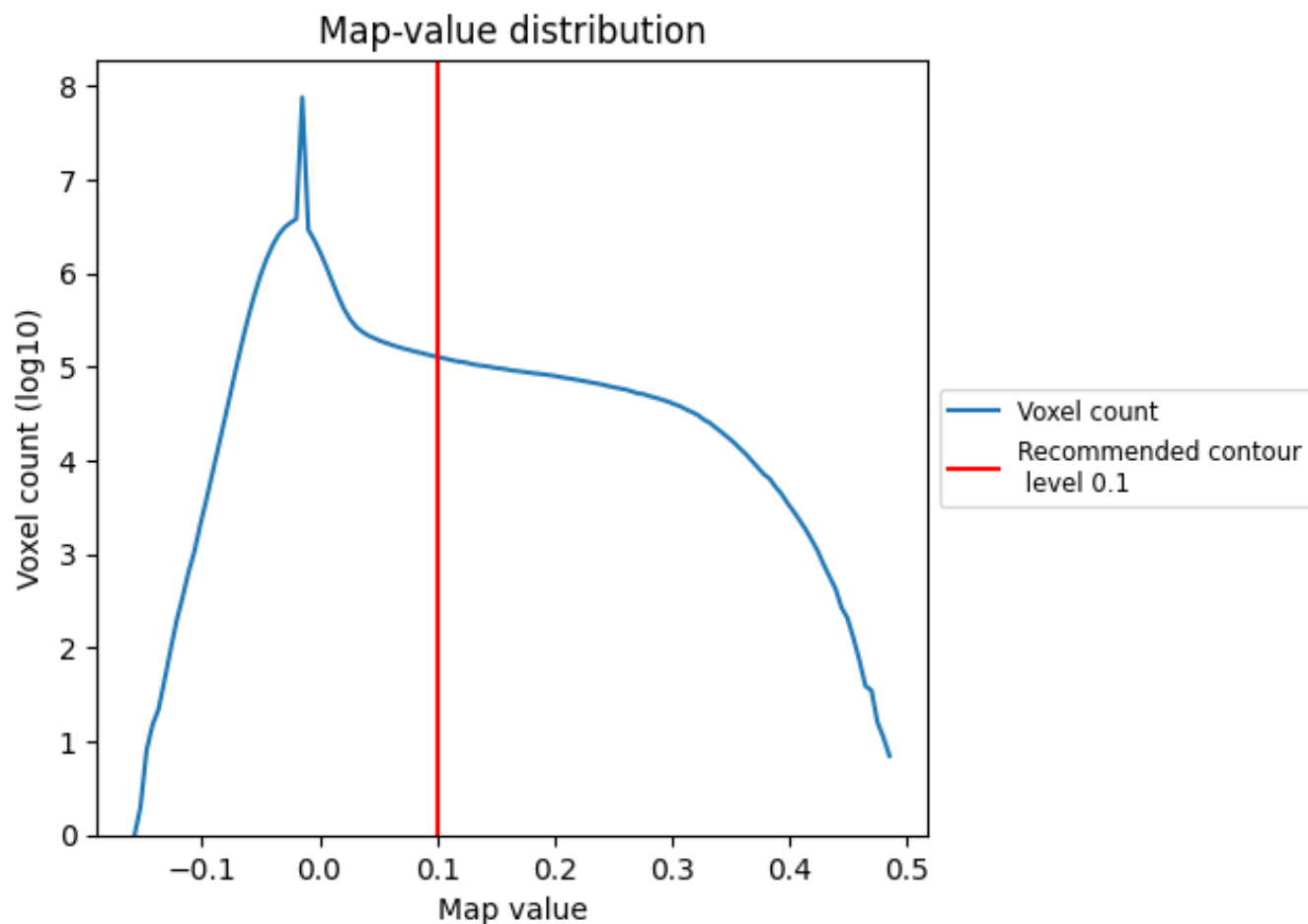
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

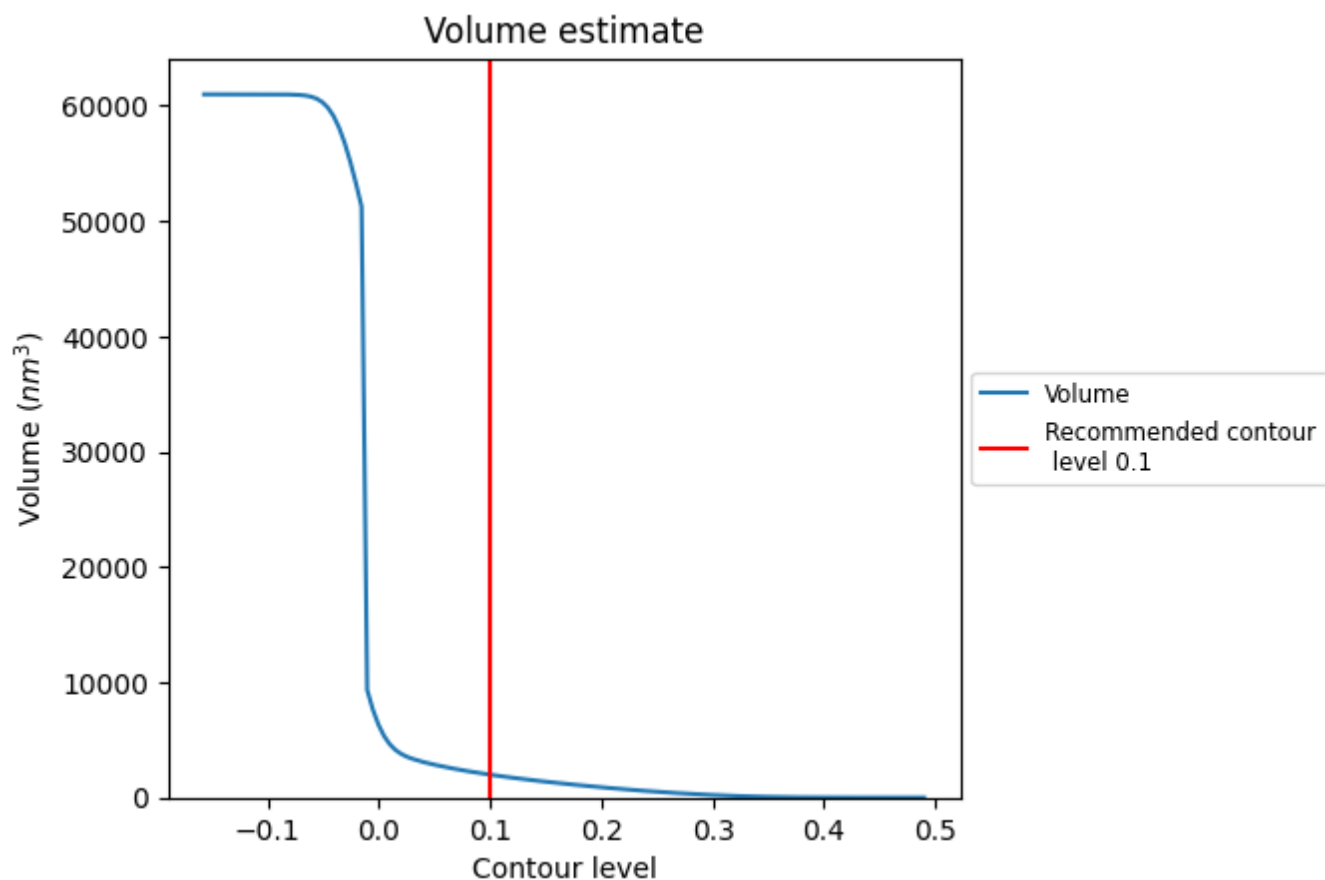
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

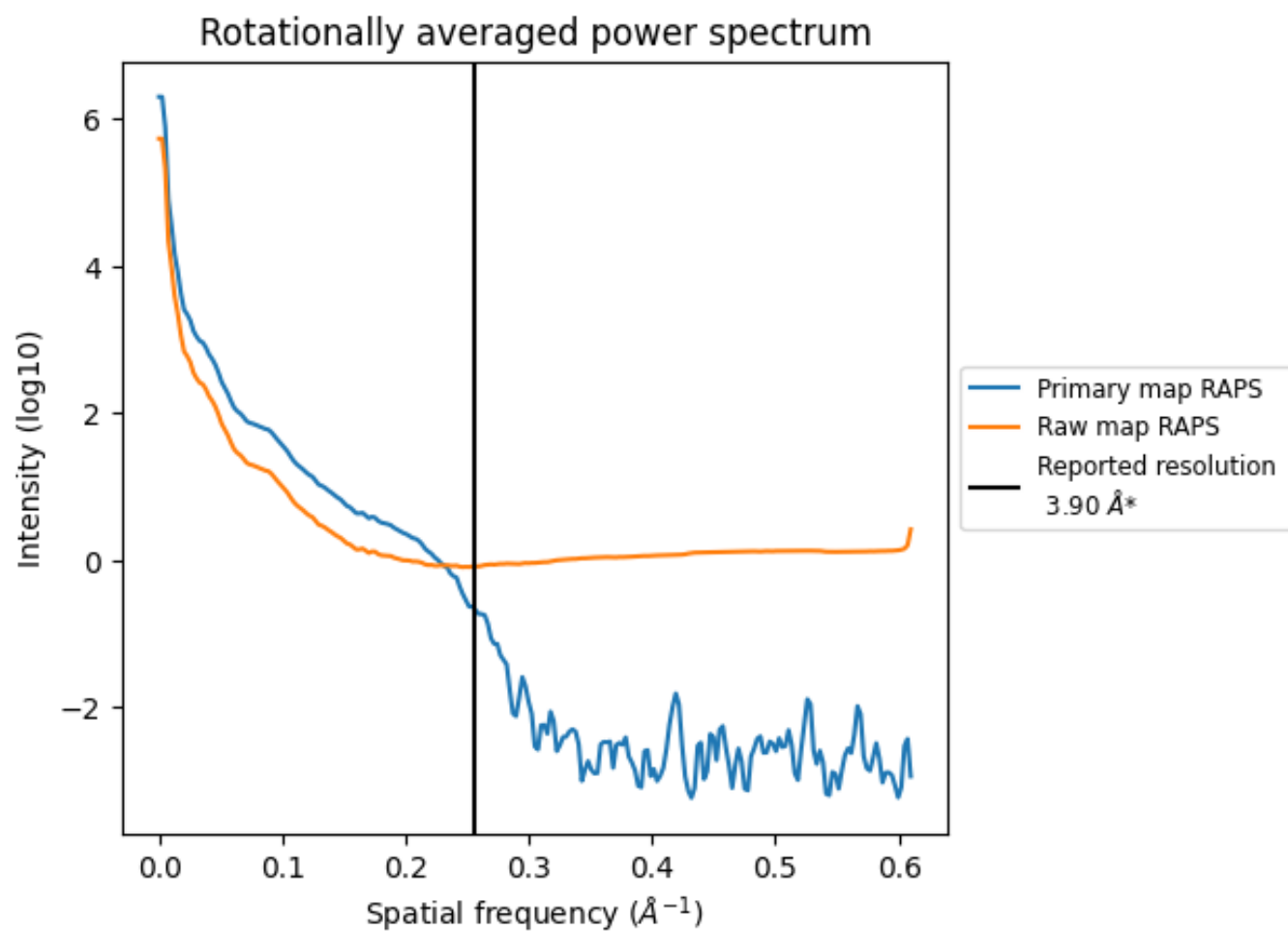
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1983 nm³; this corresponds to an approximate mass of 1791 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 ⓘ

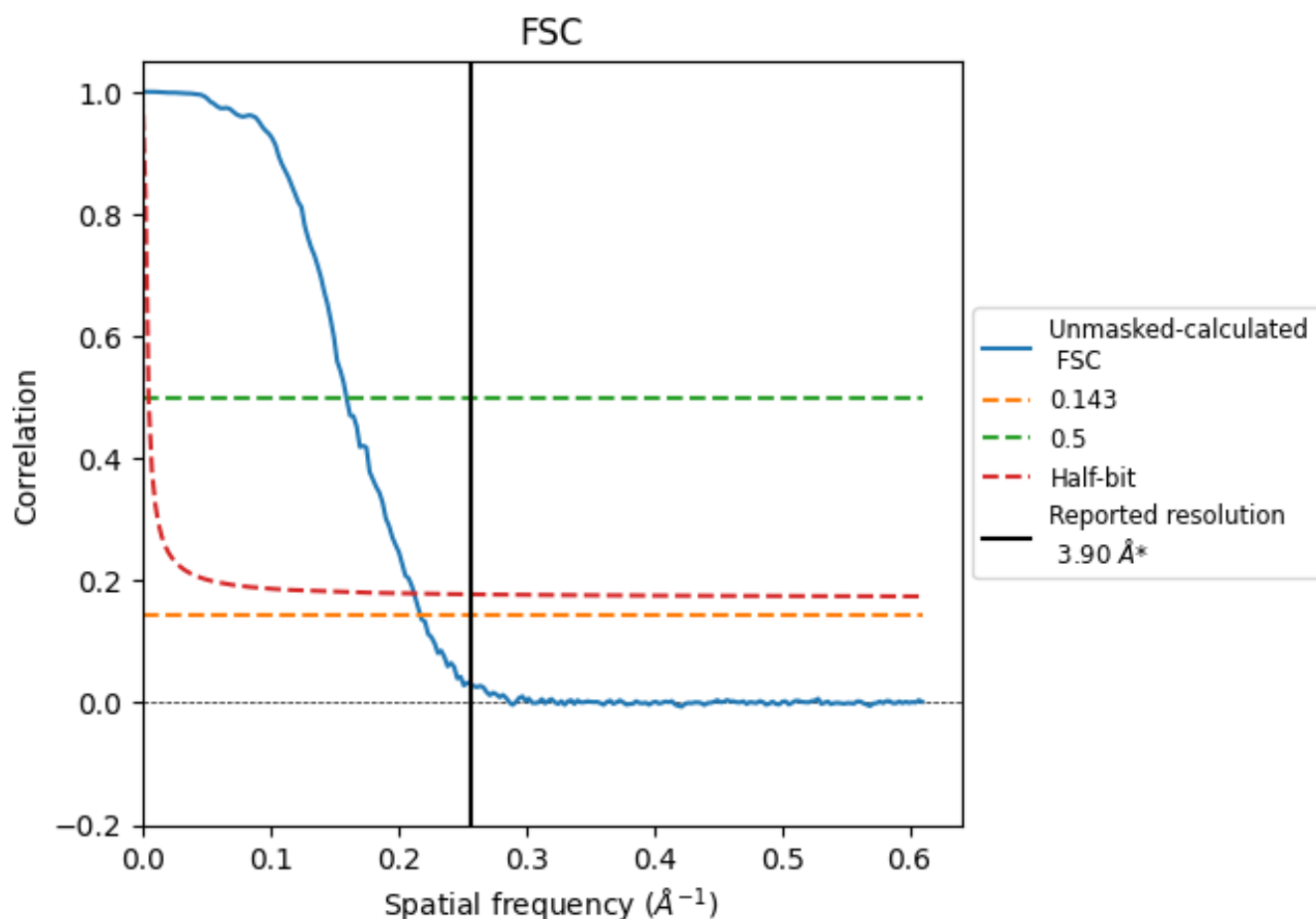


*Reported resolution corresponds to spatial frequency of 0.256 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.256 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.60	6.27	4.70

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.60 differs from the reported value 3.9 by more than 10 %

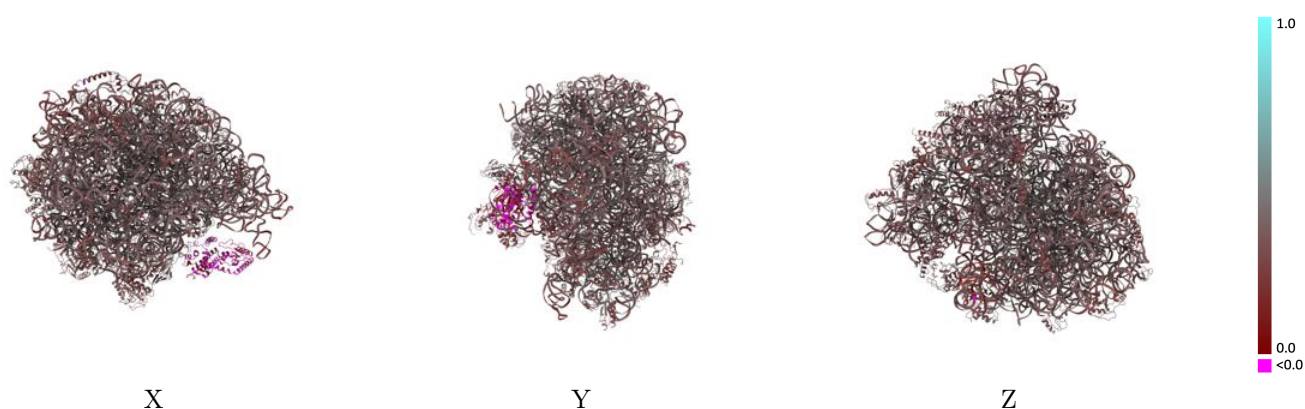
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-8282 and PDB model 5KPX. Per-residue inclusion information can be found in section 3 on page 15.

9.1 Map-model overlay [i](#)

This section was not generated.

9.2 Q-score mapped to coordinate model [i](#)

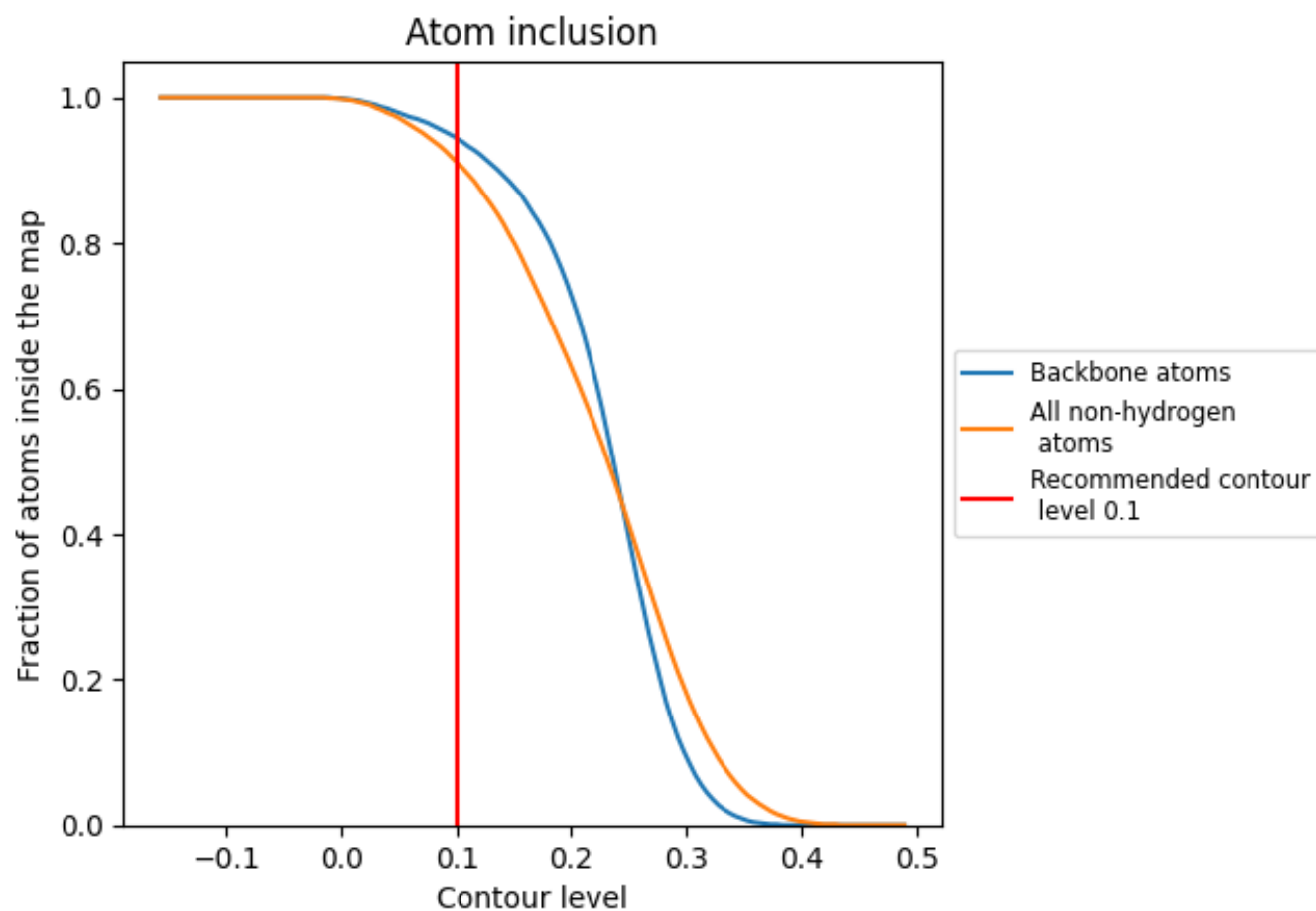


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 [i](#)

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 91% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9120	 0.3580
1	 0.8690	 0.3750
10	 0.8790	 0.3680
11	 0.8610	 0.3410
12	 0.8490	 0.3650
13	 0.8740	 0.3400
14	 0.8200	 0.3440
15	 0.8770	 0.3640
16	 0.7890	 0.3860
17	 0.8580	 0.3420
18	 0.8590	 0.3500
19	 0.8670	 0.3410
2	 0.7850	 0.3840
20	 0.8610	 0.3570
21	 0.8590	 0.3780
22	 0.8870	 0.3740
23	 0.8650	 0.3510
24	 0.8620	 0.3240
25	 0.7700	 0.3200
26	 0.9900	 0.3690
27	 0.9880	 0.3720
28	 0.9940	 0.3690
29	 0.9260	 0.3270
3	 0.8730	 0.3670
30	 0.9530	 0.2870
31	 0.9650	 0.3590
32	 0.8090	 0.2580
33	 0.3570	 0.1640
4	 0.8330	 0.3790
5	 0.8600	 0.3810
6	 0.4950	 0.3230
7	 0.8330	 0.3720
8	 0.8290	 0.3240
9	 0.8540	 0.3800
A	 0.8500	 0.3970



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Chain	Atom inclusion	Q-score
B	 0.8620	 0.3950
C	 0.7900	 0.3460
D	 0.8670	 0.3520
E	 0.8760	 0.3640
F	 0.4120	 0.3110
G	 0.2890	 0.2640
H	 0.3830	 0.2580
I	 0.8740	 0.3680
J	 0.8010	 0.4000
K	 0.8680	 0.3750
L	 0.8240	 0.3960
M	 0.8850	 0.3680
N	 0.8920	 0.3440
O	 0.8580	 0.3920
P	 0.8770	 0.3470
Q	 0.8790	 0.3790
R	 0.8210	 0.3720
S	 0.8640	 0.3700
T	 0.8890	 0.3650
U	 0.8350	 0.3680
V	 0.8640	 0.3950
W	 0.8700	 0.3670
X	 0.8430	 0.2950
Y	 0.8470	 0.3630
Z	 0.8650	 0.3540