Full wwPDB EM Validation Report ⓘ

Nov 27, 2022 – 01:11 AM EST

PDB ID	:	5KPW
EMDB ID	:	EMD-8281
Title	:	Structure of RelA bound to ribosome in presence of A/R tRNA (Structure III)
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:

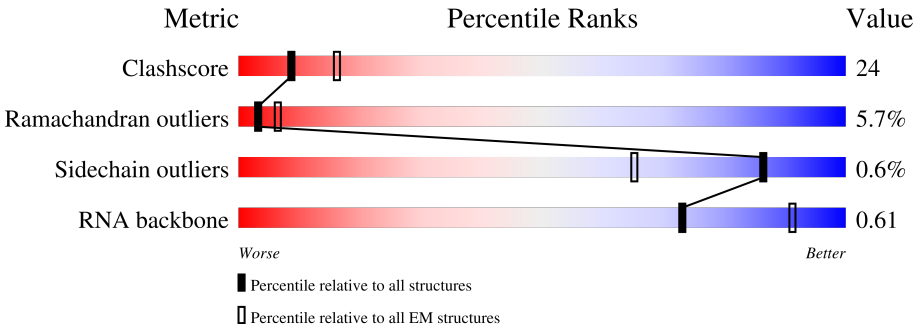
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 3.90 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)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	A	273	58% 40%
2	B	209	46% 50%
3	C	201	48% 49%
4	D	179	41% 54%
5	E	177	50% 48%
6	F	149	17% 40% 54% 5%
7	G	165	18% 17% 52% 10% 21%

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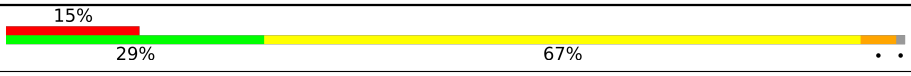
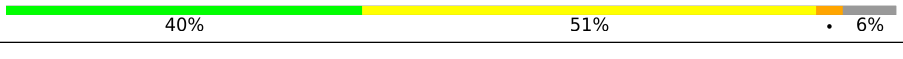
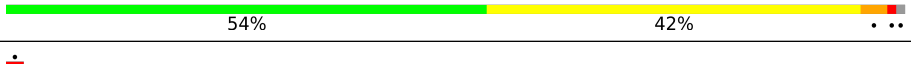
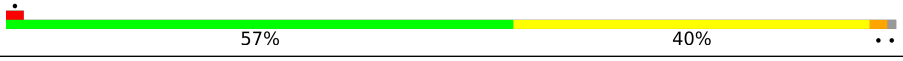
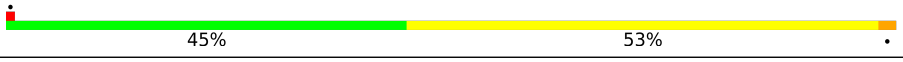
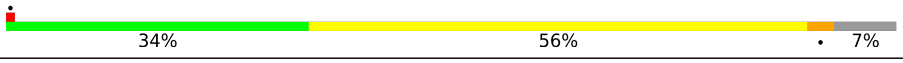
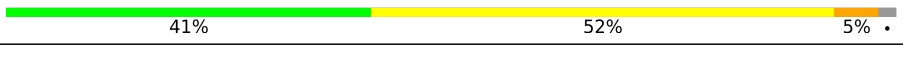
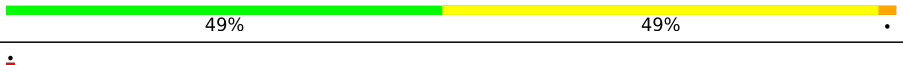
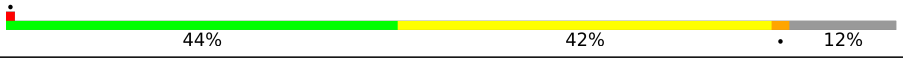
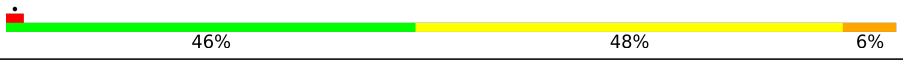
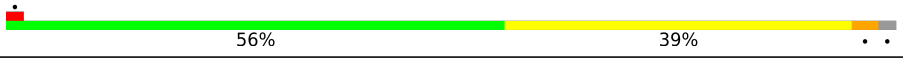
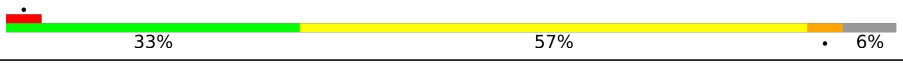
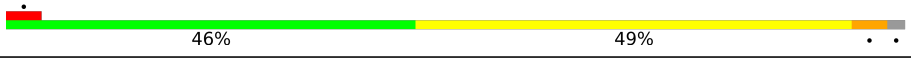
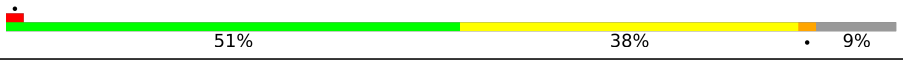
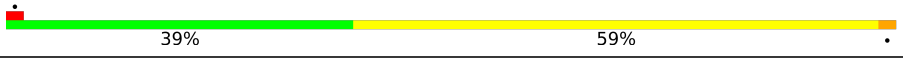
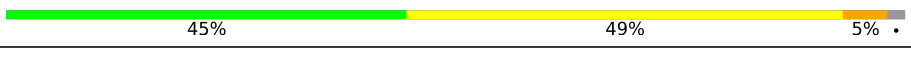
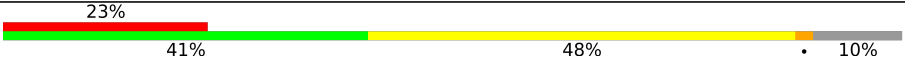
Mol	Chain	Length	Quality of chain
8	H	142	
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	
30	4	65	
31	5	38	
32	6	241	

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Mol	Chain	Length	Quality of chain
33	7	233	35% 50% 12%
34	8	206	42% 53% 5%
35	9	167	40% 47% 7% 6%
36	10	135	26% 44% 26%
37	11	179	32% 50% 16%
38	12	130	52% 46%
39	13	130	28% 63% 6%
40	14	103	25% 64% 6% 5%
41	15	129	47% 41% 10%
42	16	124	44% 50% 6%
43	17	118	35% 53% 8%
44	18	101	42% 52% 5%
45	19	89	63% 34%
46	20	82	32% 62% 6%
47	21	84	36% 56% 5%
48	22	75	41% 36% 9% 13%
49	23	92	34% 49% 14%
50	24	87	51% 46%
51	25	71	34% 46% 11% 8%
52	26	1539	38% 55% 7%
53	27	2903	40% 52% 8%
54	28	120	30% 62% 8%
55	29	20	45% 45% 10%
56	30	76	29% 43% 28%
57	31	77	52% 47%

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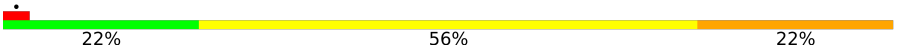
Mol	Chain	Length	Quality of chain
58	32	77	
59	33	750	

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
			Total	C	N	O	S		
1	A	271	2082	1288	423	364	7	0	0

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

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

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

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

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

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

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

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

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

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

- 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 892	C 552	N 178	O 162	0	0

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

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

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

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

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

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

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

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

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

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

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

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

- 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 409	C 263	N 75	O 71	0	0

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

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

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

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

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

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

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

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

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

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

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

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

- 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:

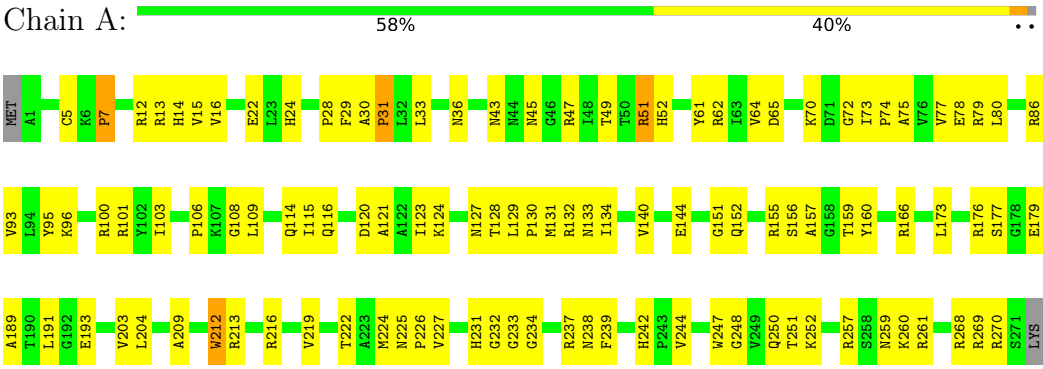
Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag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

3 Residue-property plots (i)

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.

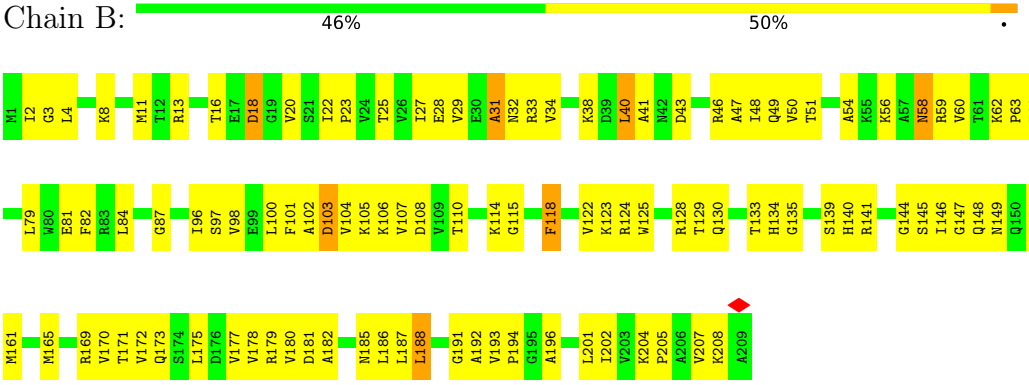
• Molecule 1: 50S ribosomal protein L2

Chain A:



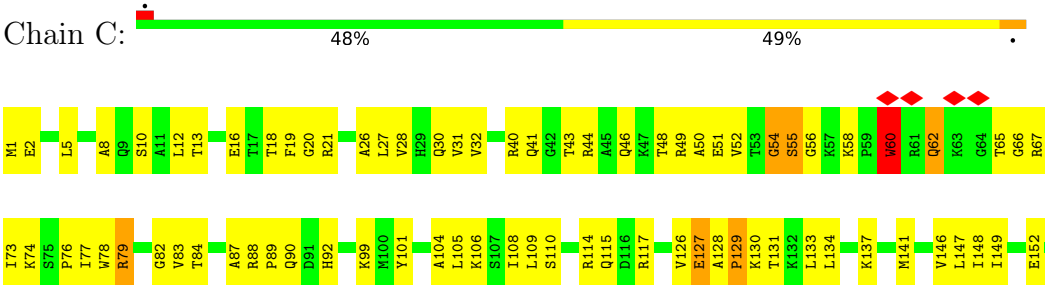
• Molecule 2: 50S ribosomal protein L3

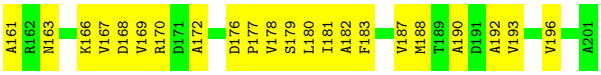
Chain B:



• Molecule 3: 50S ribosomal protein L4

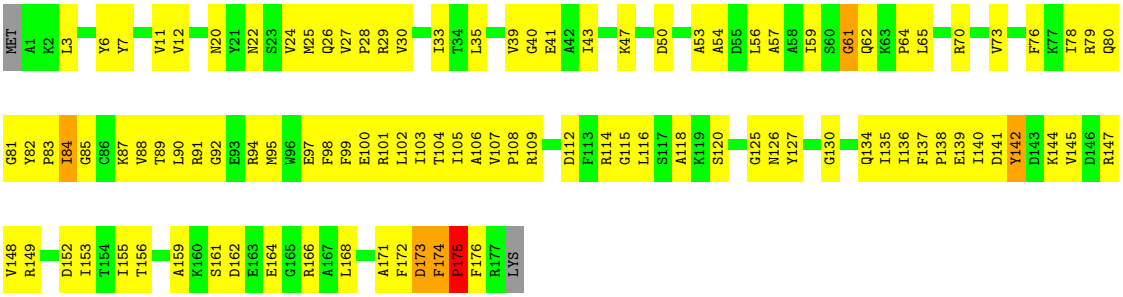
Chain C:





• Molecule 4: 50S ribosomal protein L5

Chain D:

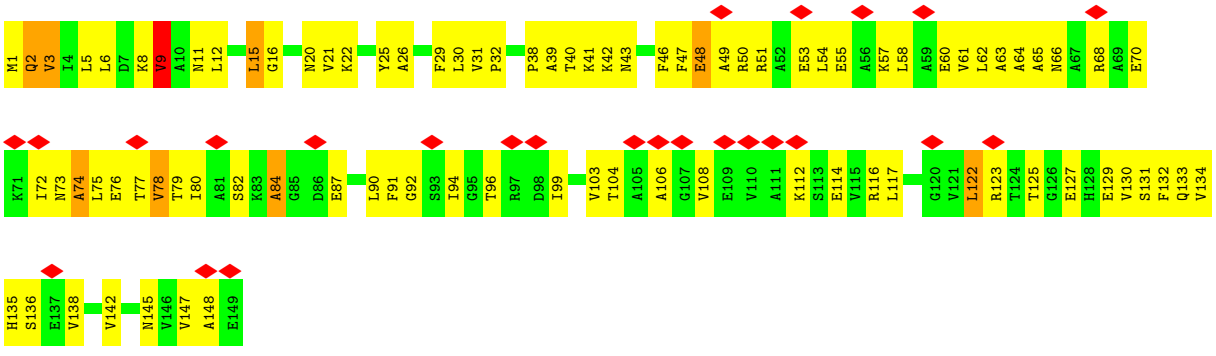


• Molecule 5: 50S ribosomal protein L6

Chain E:

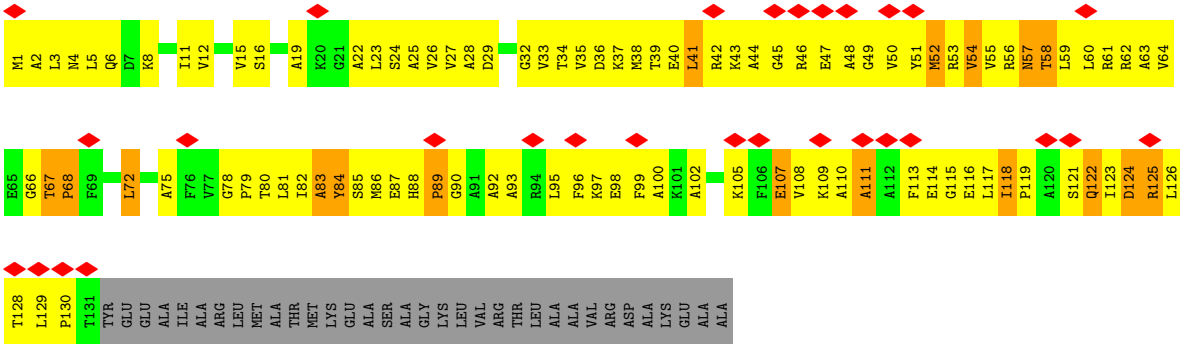
• Molecule 6: 50S ribosomal protein L9

Chain F:

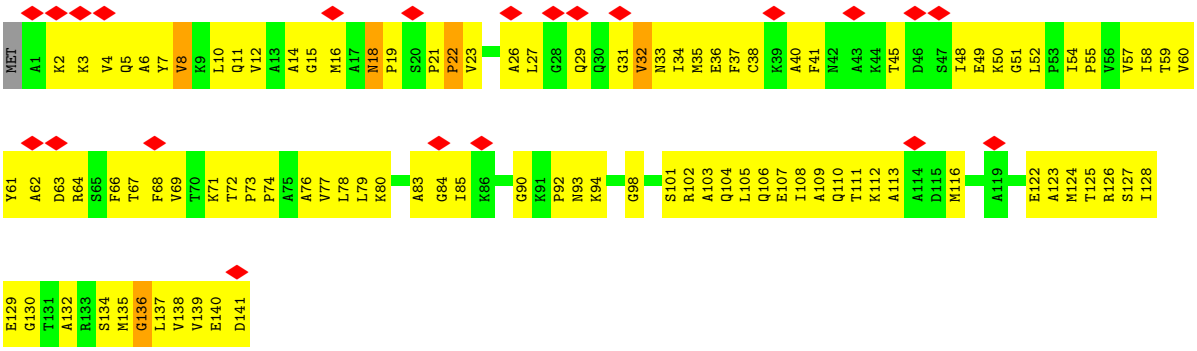


• Molecule 7: 50S ribosomal protein L10

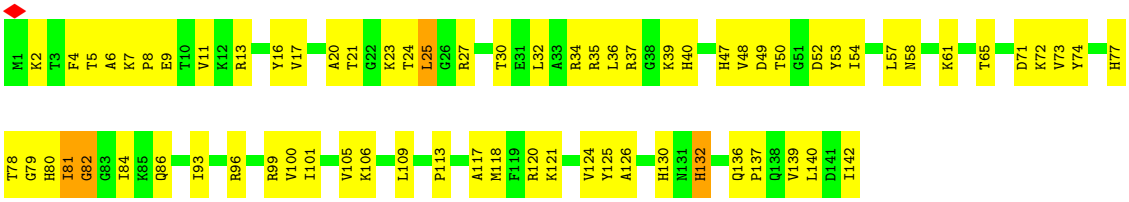
Chain G:



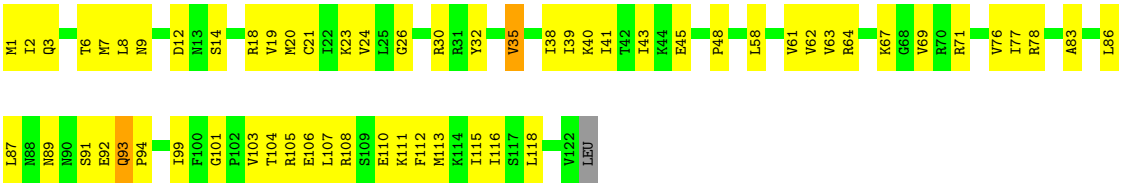
• Molecule 8: 50S ribosomal protein L11



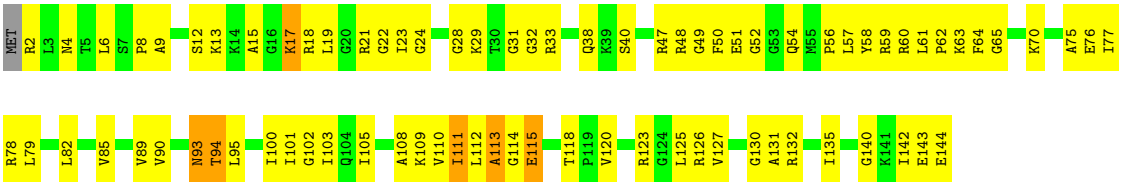
• Molecule 9: 50S ribosomal protein L13

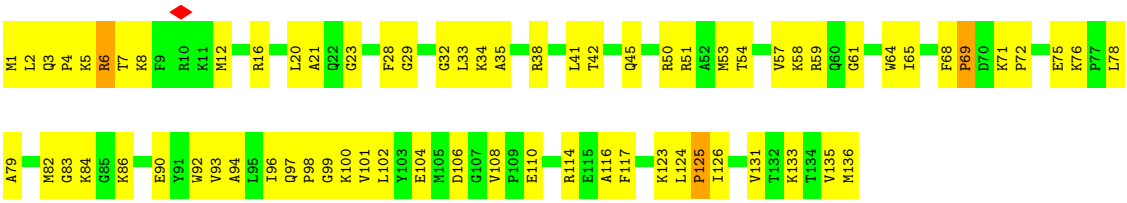


• Molecule 10: 50S ribosomal protein L14



• Molecule 11: 50S ribosomal protein L15



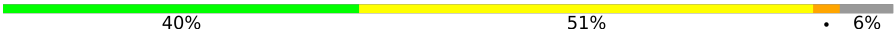


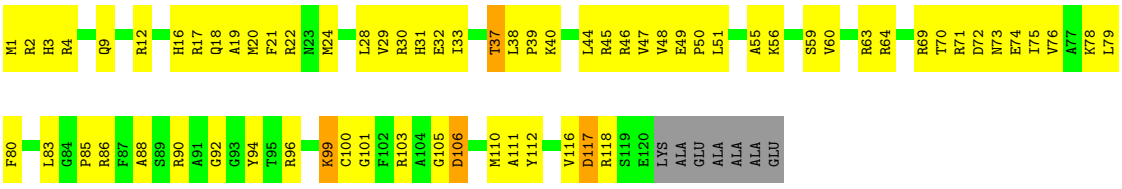
• Molecule 12: 50S ribosomal protein L16

Chain L:

• Molecule 13: 50S ribosomal protein L17

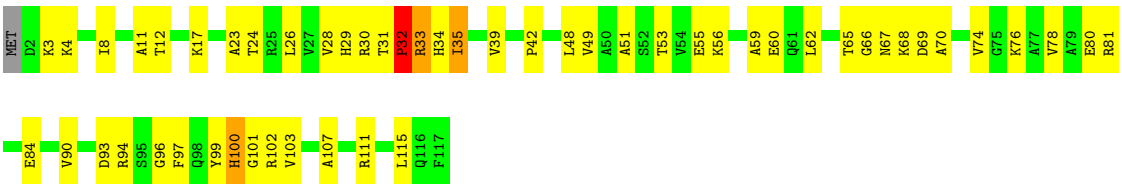
Chain M:





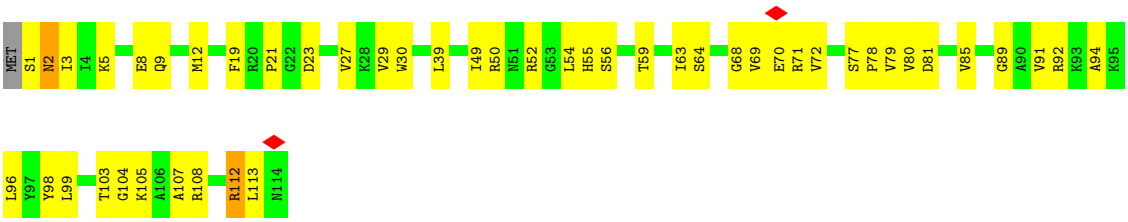
• Molecule 14: 50S ribosomal protein L18

Chain N:



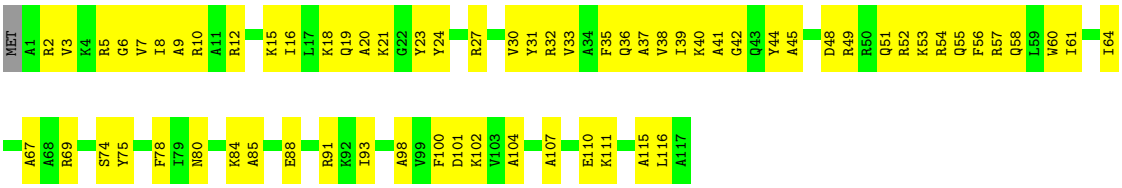
• Molecule 15: 50S ribosomal protein L19

Chain O:



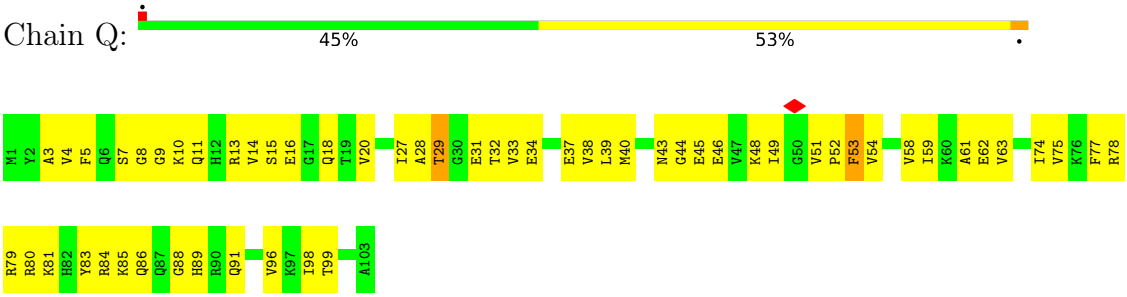
• Molecule 16: 50S ribosomal protein L20

Chain P:



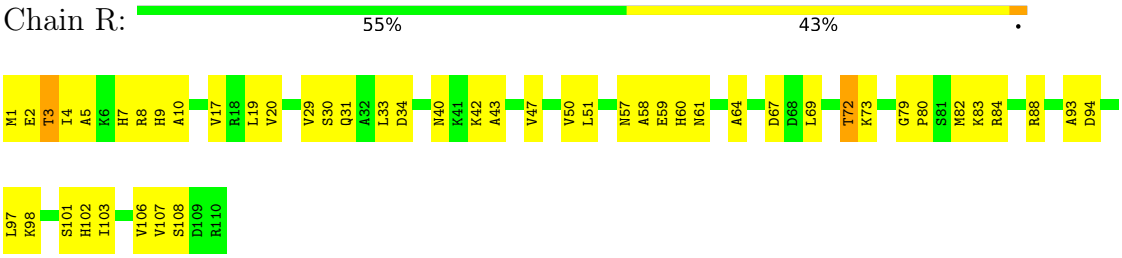
• Molecule 17: 50S ribosomal protein L21

Chain Q:



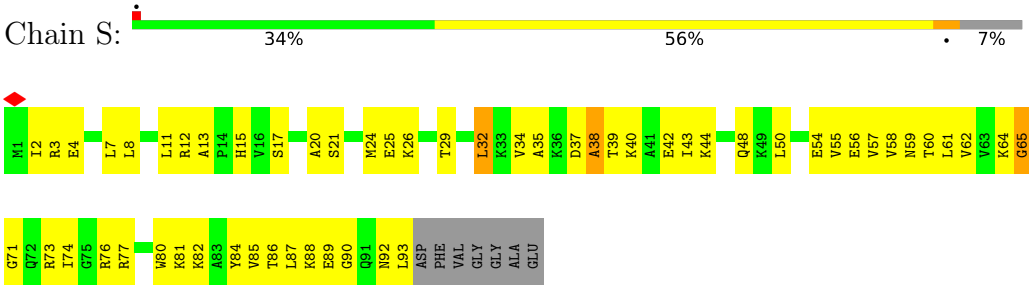
• Molecule 18: 50S ribosomal protein L22

Chain R:



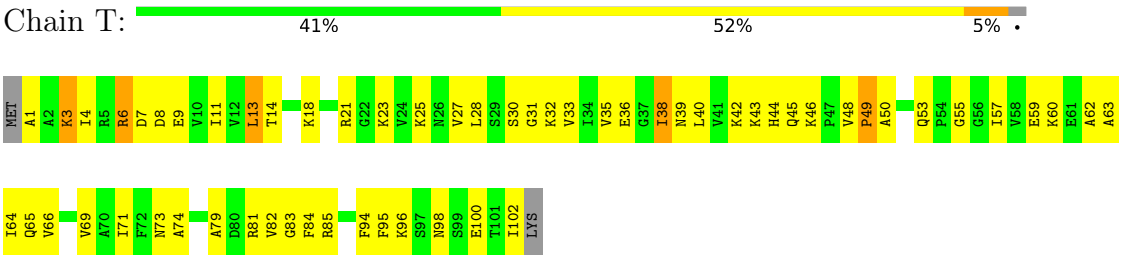
• Molecule 19: 50S ribosomal protein L23

Chain S:



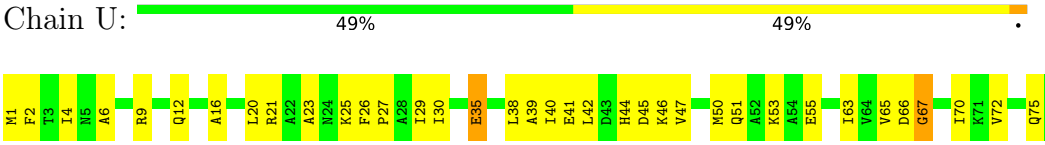
• Molecule 20: 50S ribosomal protein L24

Chain T:



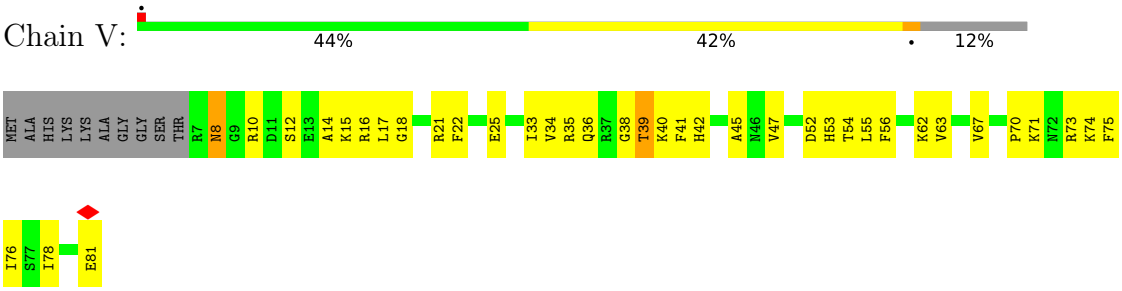
• Molecule 21: 50S ribosomal protein L25

Chain U:



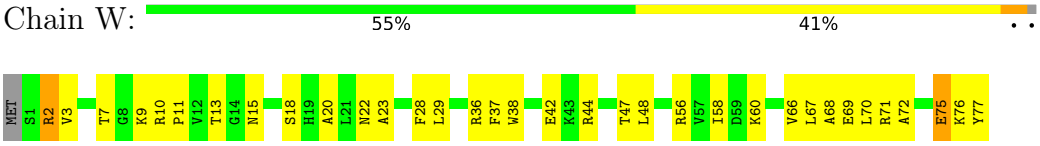
• Molecule 22: 50S ribosomal protein L27

Chain V:



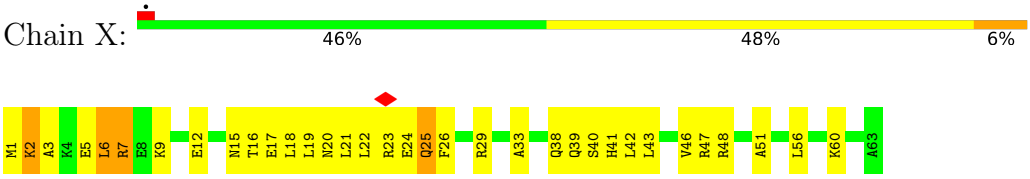
• Molecule 23: 50S ribosomal protein L28

Chain W:



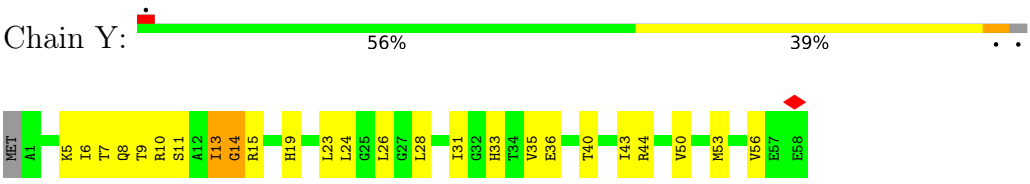
• Molecule 24: 50S ribosomal protein L29

Chain X:



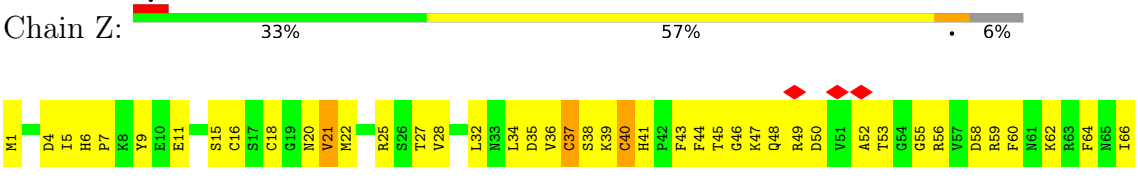
• Molecule 25: 50S ribosomal protein L30

Chain Y:



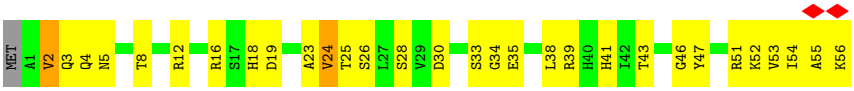
• Molecule 26: 50S ribosomal protein L31

Chain Z:



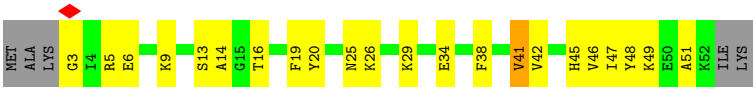
• Molecule 27: 50S ribosomal protein L32

Chain 1:



• Molecule 28: 50S ribosomal protein L33

Chain 2:

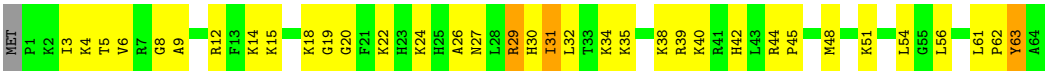


• Molecule 29: 50S ribosomal protein L34

Chain 3:

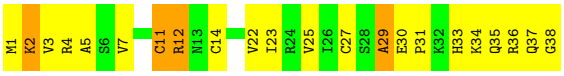
• Molecule 30: 50S ribosomal protein L35

Chain 4:



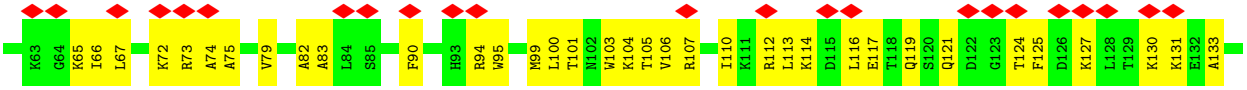
• Molecule 31: 50S ribosomal protein L36

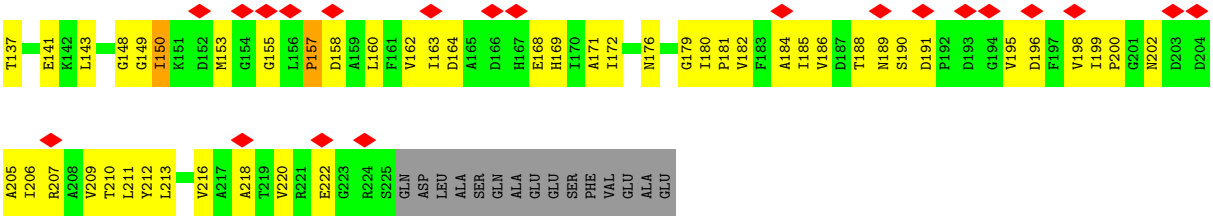
Chain 5:



• Molecule 32: 30S ribosomal protein S2

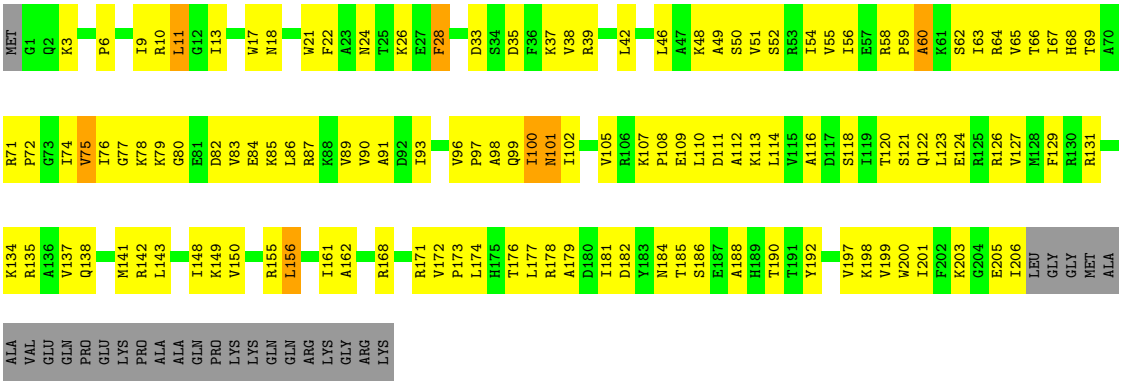
Chain 6:





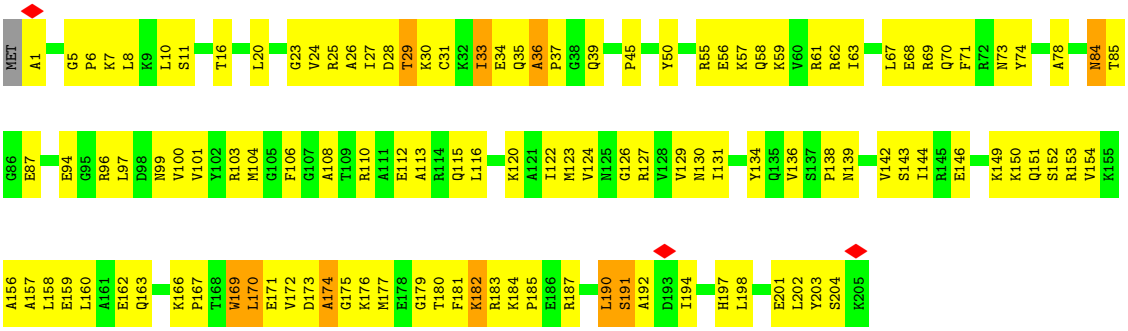
• Molecule 33: 30S ribosomal protein S3

Chain 7:



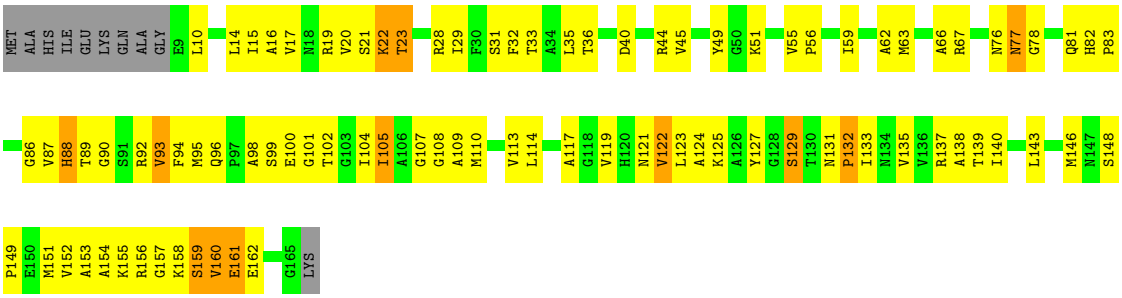
• Molecule 34: 30S ribosomal protein S4

Chain 8:



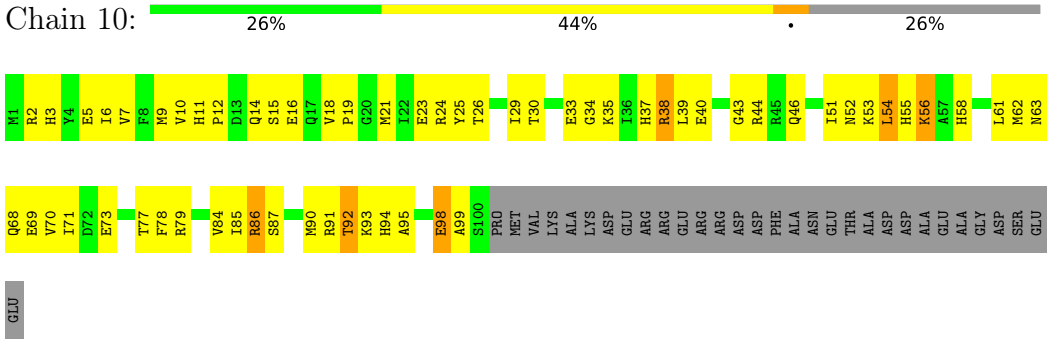
• Molecule 35: 30S ribosomal protein S5

Chain 9:



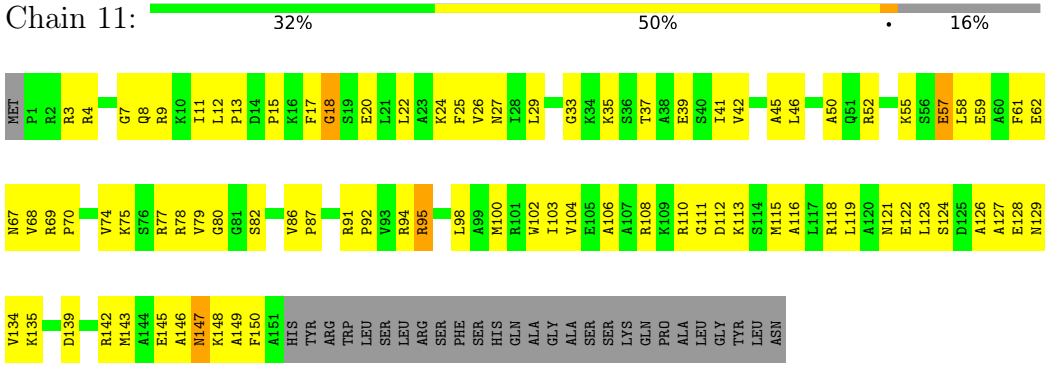
• Molecule 36: 30S ribosomal protein S6

Chain 10:



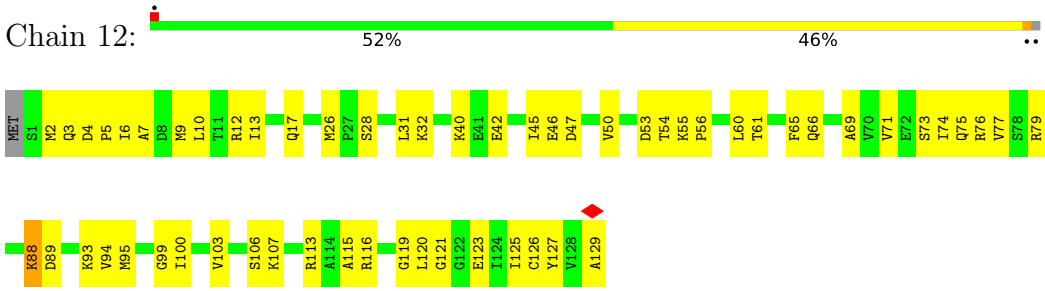
• Molecule 37: 30S ribosomal protein S7

Chain 11:



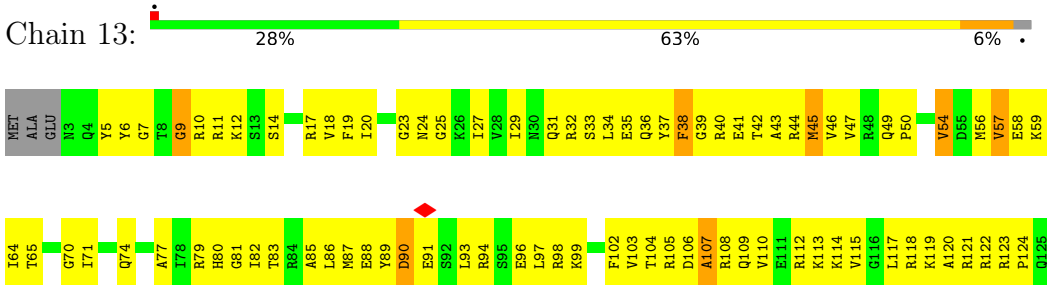
• Molecule 38: 30S ribosomal protein S8

Chain 12:



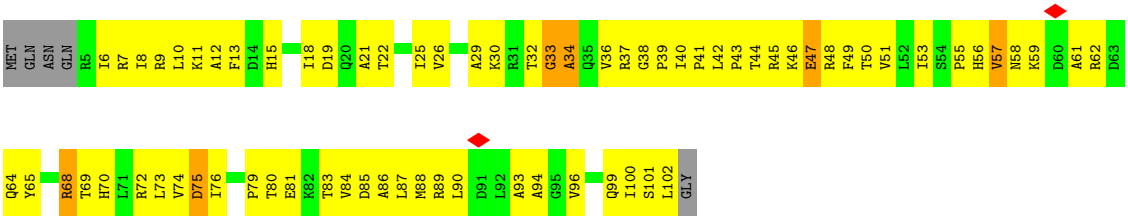
• Molecule 39: 30S ribosomal protein S9

Chain 13:



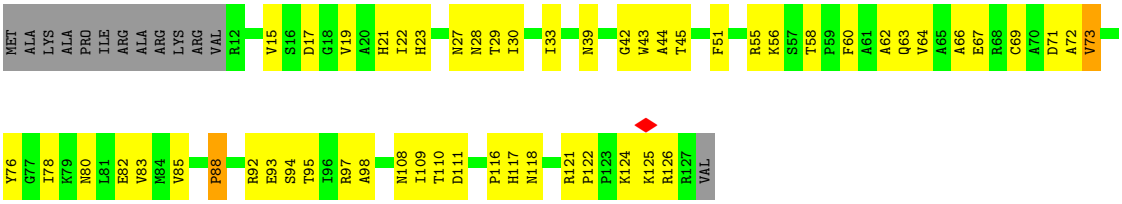
• Molecule 40: 30S ribosomal protein S10

Chain 14:



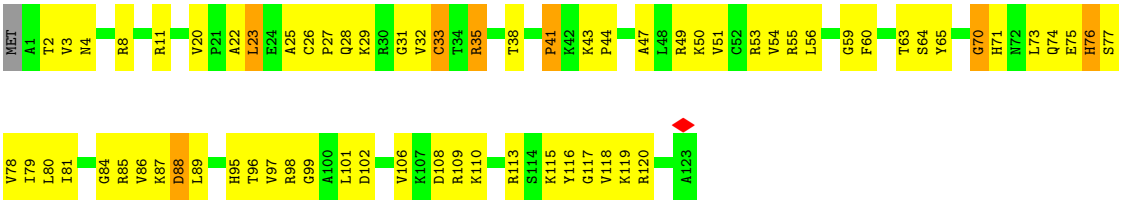
• Molecule 41: 30S ribosomal protein S11

Chain 15:



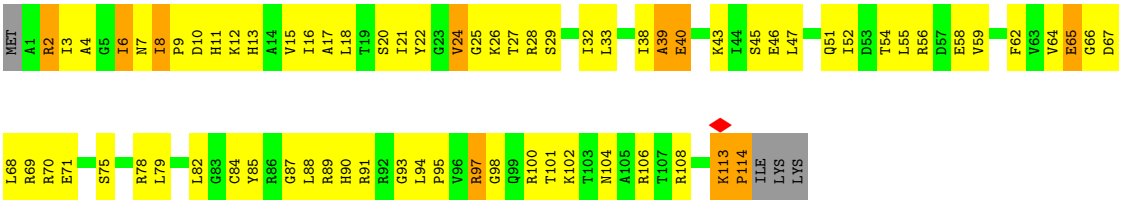
• Molecule 42: 30S ribosomal protein S12

Chain 16:



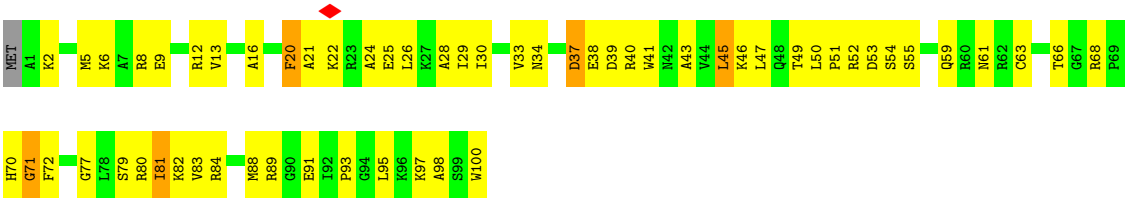
• Molecule 43: 30S ribosomal protein S13

Chain 17:



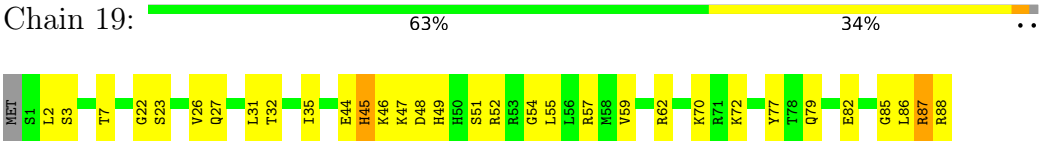
• Molecule 44: 30S ribosomal protein S14

Chain 18:



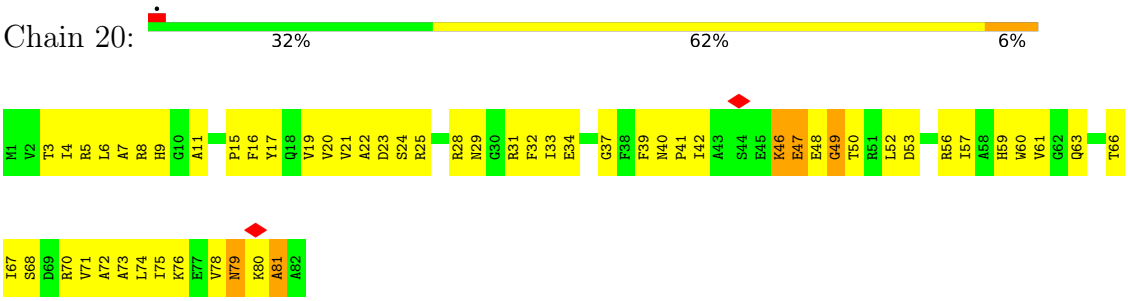
• Molecule 45: 30S ribosomal protein S15

Chain 19:



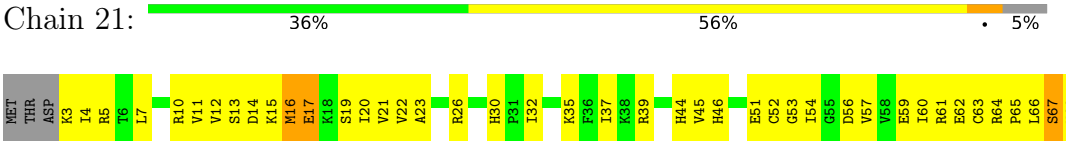
• Molecule 46: 30S ribosomal protein S16

Chain 20:



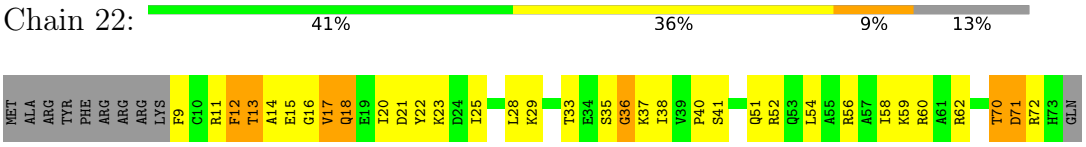
• Molecule 47: 30S ribosomal protein S17

Chain 21:



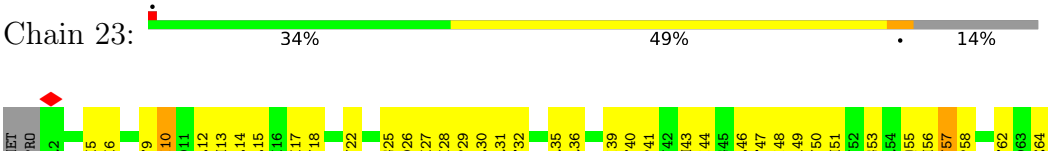
• Molecule 48: 30S ribosomal protein S18

Chain 22:



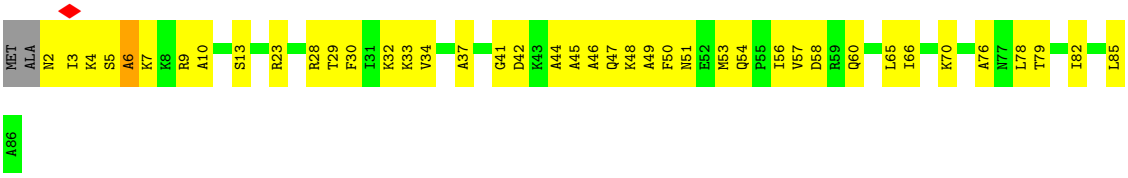
• Molecule 49: 30S ribosomal protein S19

Chain 23:



• Molecule 50: 30S ribosomal protein S20

Chain 24:

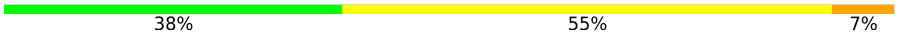


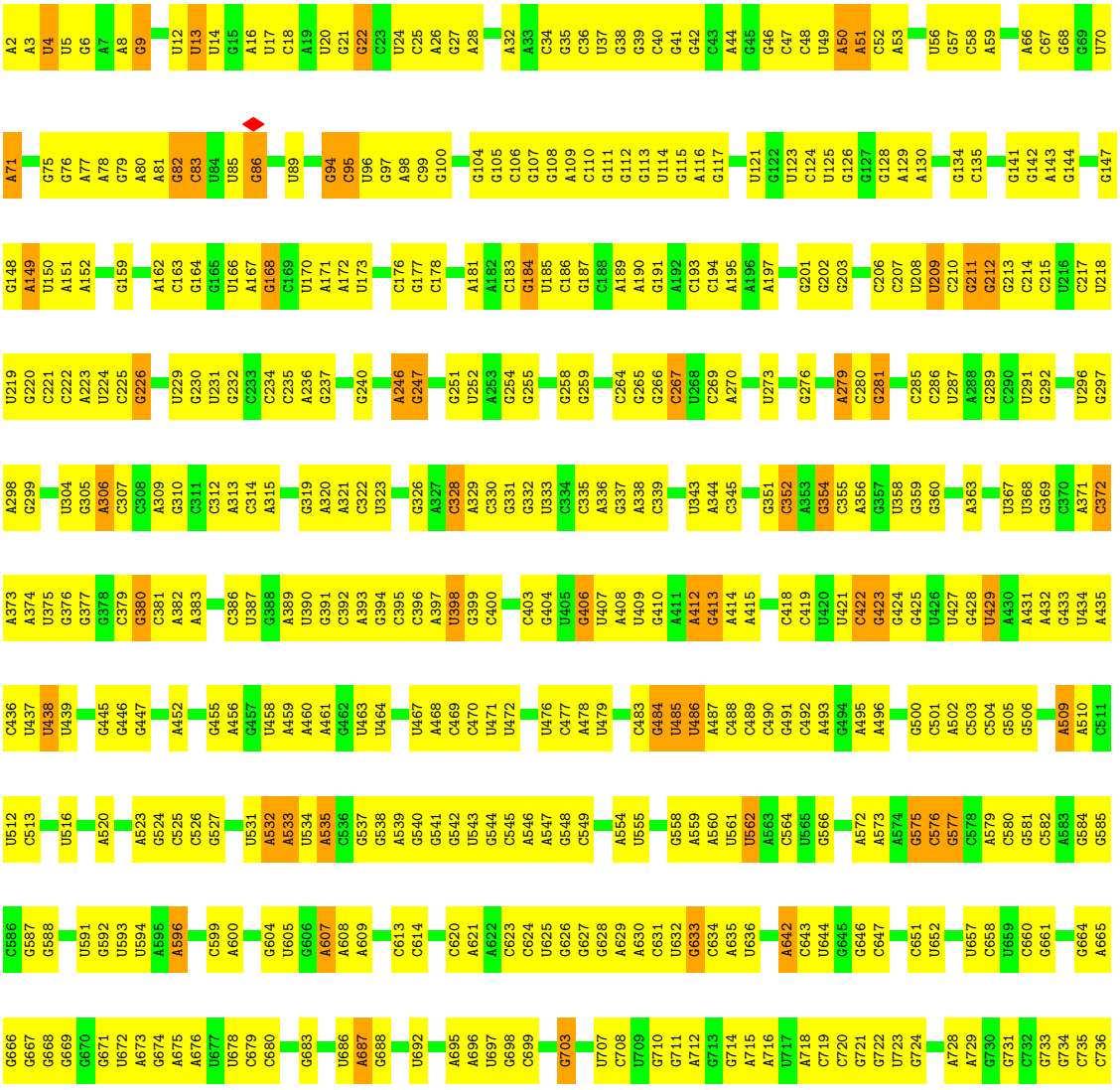
• Molecule 51: 30S ribosomal protein S21

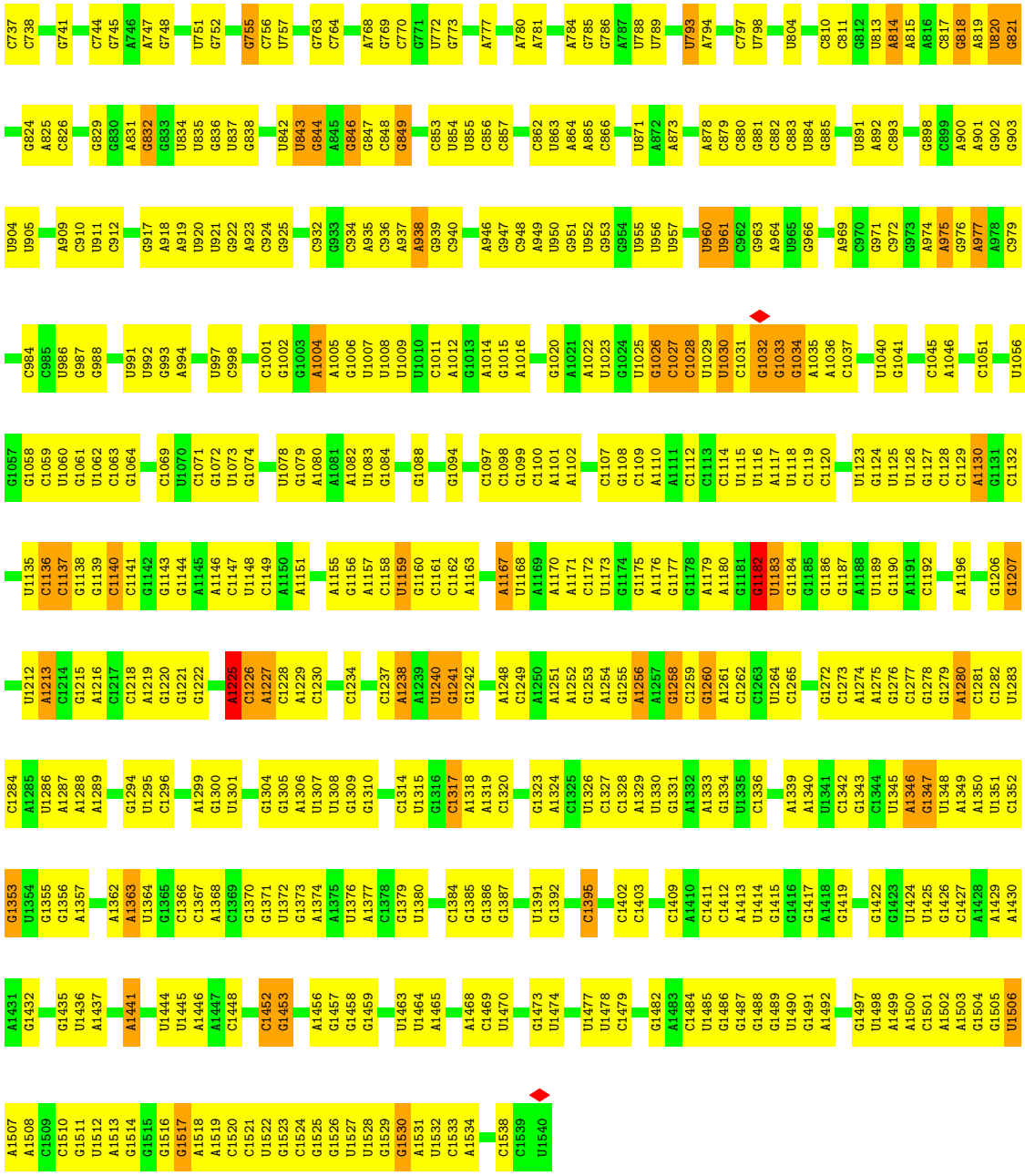
Chain 25:

• Molecule 52: 16S ribosomal RNA

Chain 26:

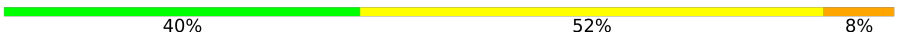


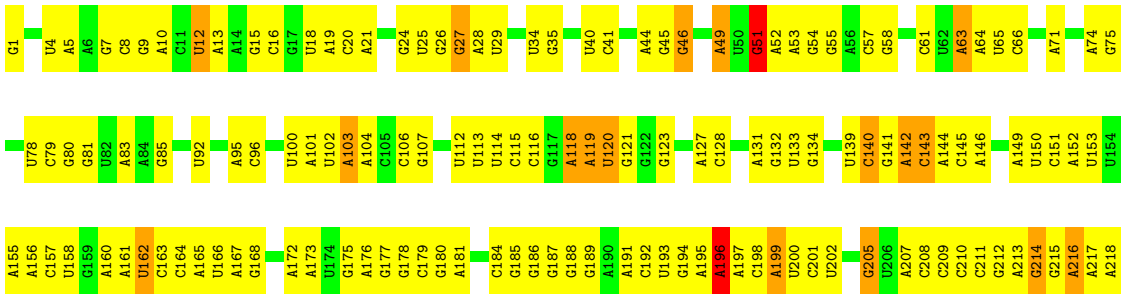


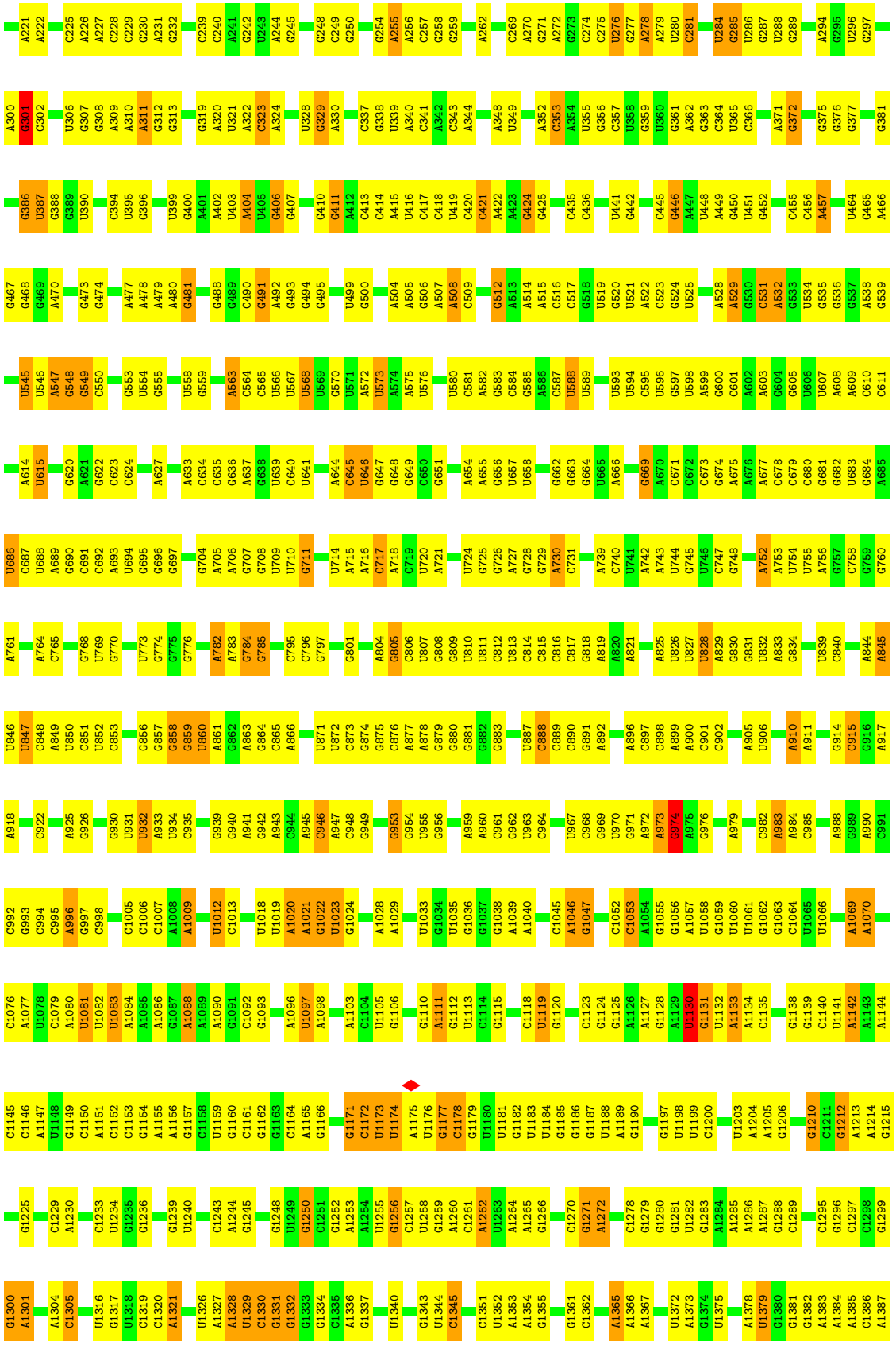


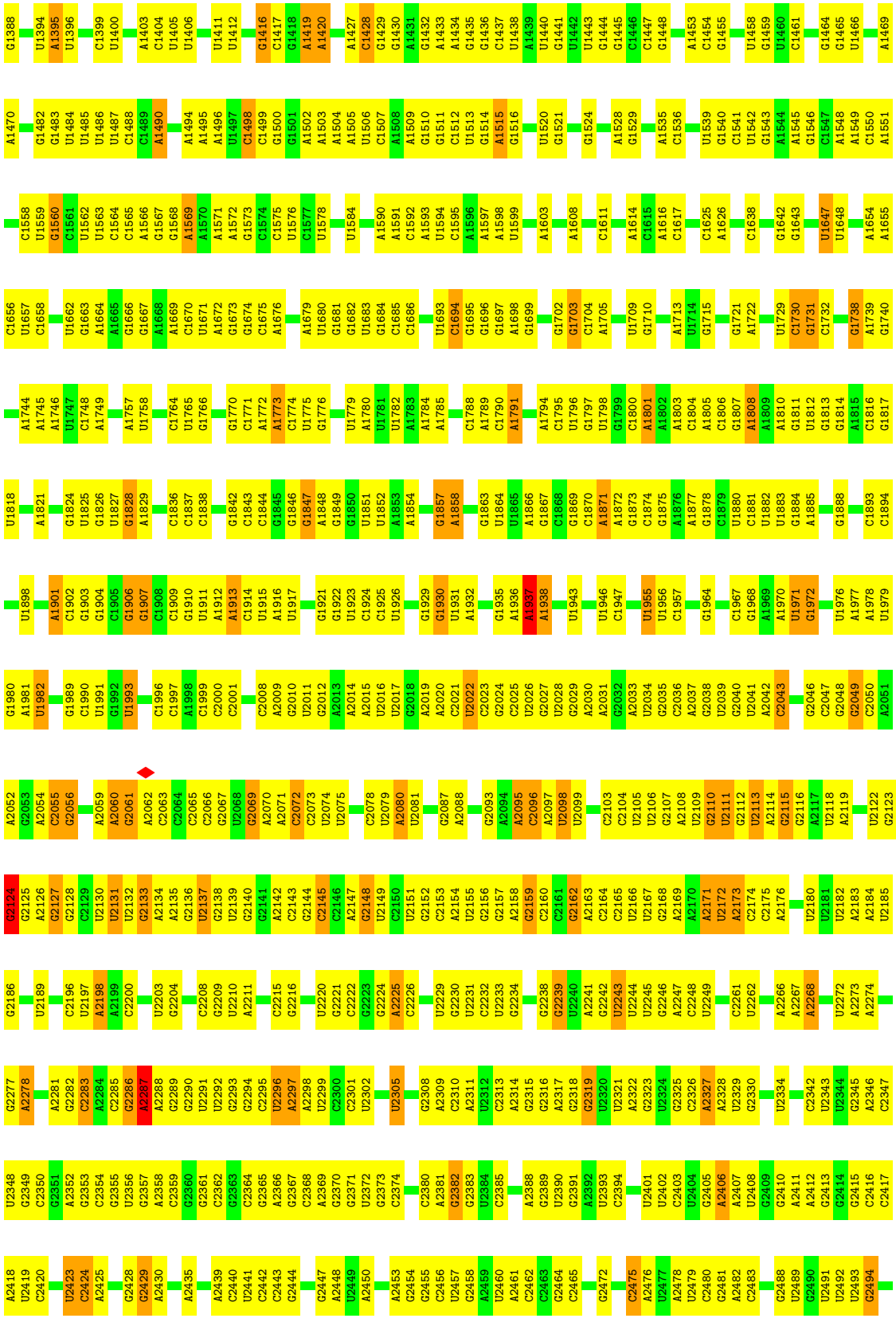
• Molecule 53: 23S ribosomal RNA

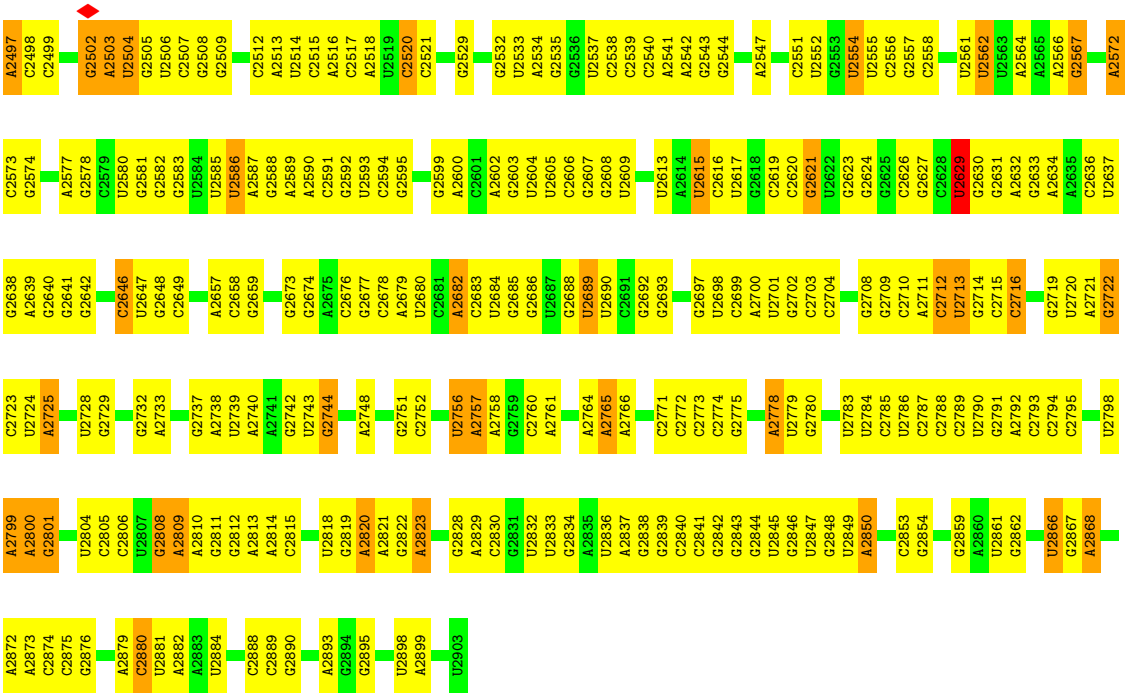
Chain 27:





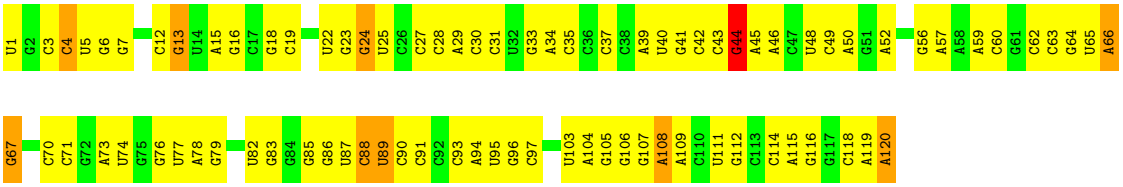






• Molecule 54: 5S ribosomal RNA

Chain 28:

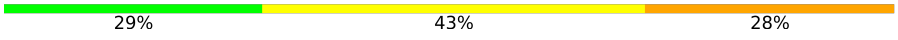


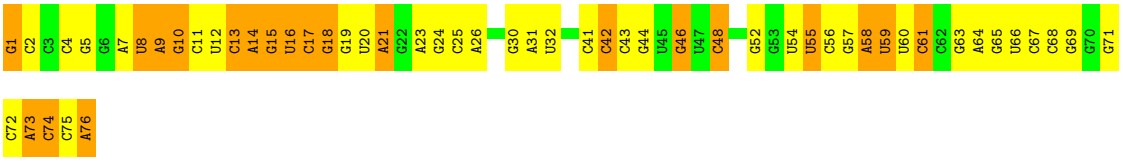
• Molecule 55: mRNA

Chain 29:

• Molecule 56: A-site tRNAPhe

Chain 30:



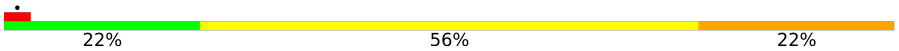


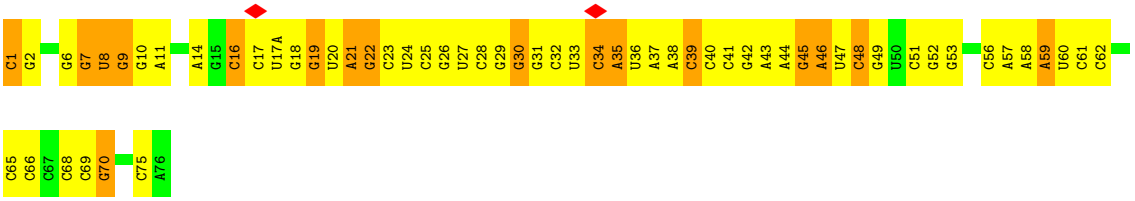
• Molecule 57: P-site tRNAfMet

Chain 31:

• Molecule 58: E-site tRNAfMet

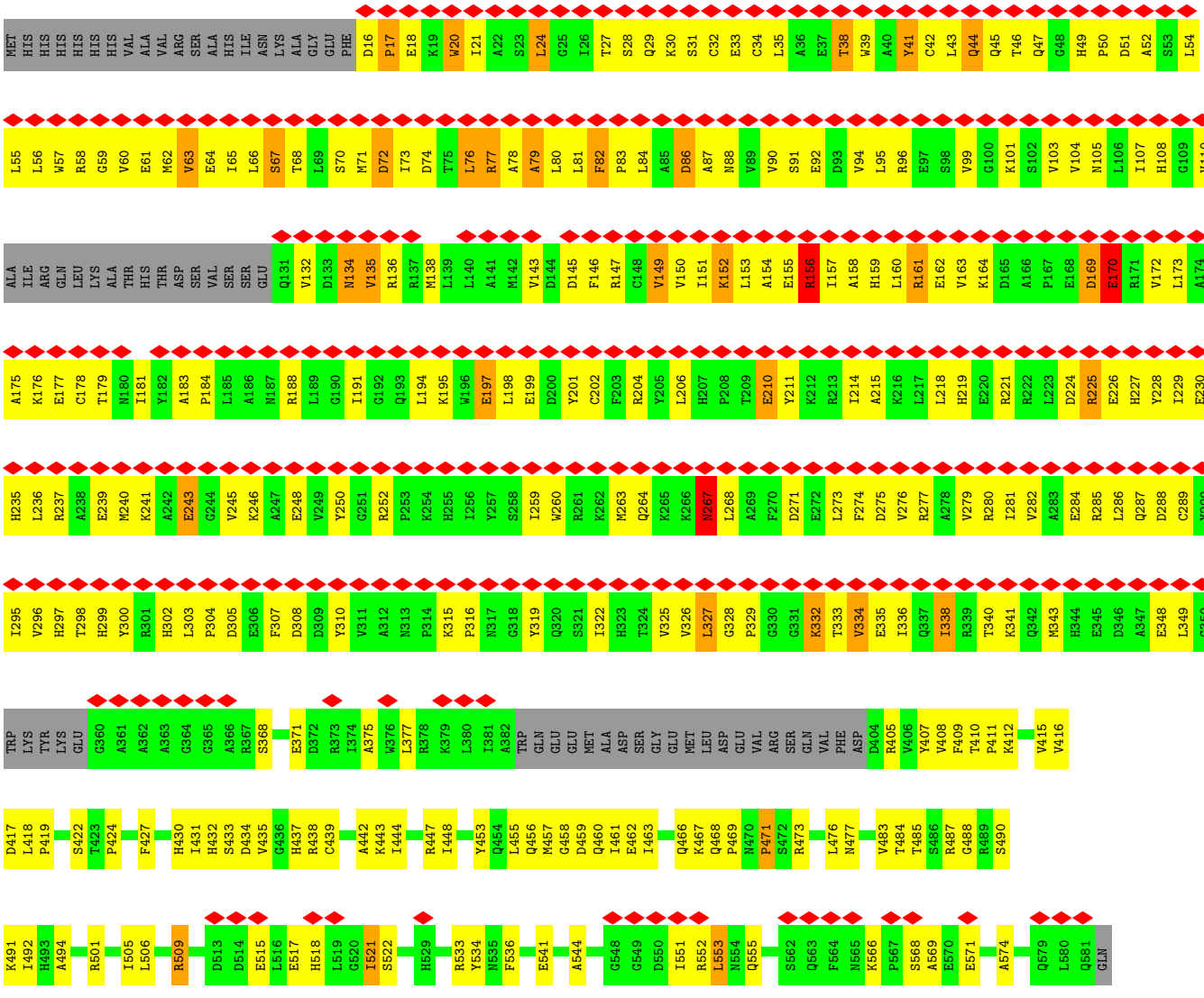
Chain 32:

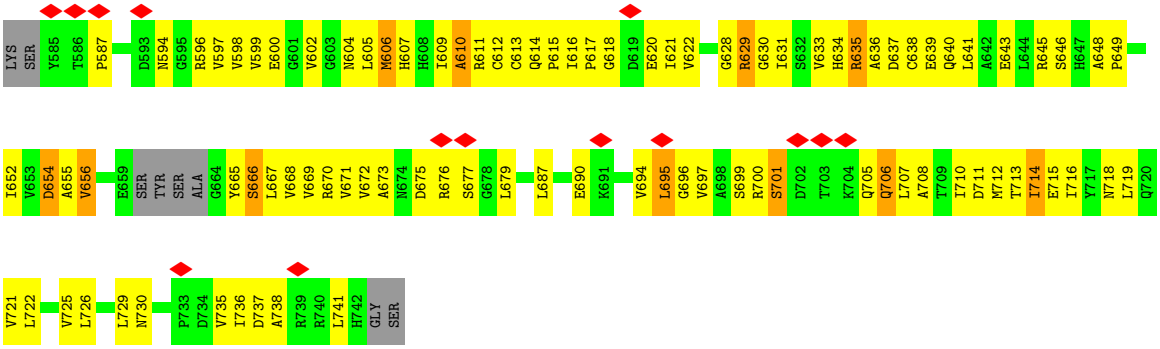




• Molecule 59: GTP pyrophosphokinase

Chain 33:




LYS SER Y585 T586 P587 D593 N594 G595 R596 V597 V598 V599 E600 G601 V602 G603 N604 L605 M606 H607 H608 I609 A610 R611 C612 C613 Q614 P615 I616 P617 G618 D619 E620 I621 V622 G628 R629 G630 I631 S632 V633 H634 R635 A636 D637 C638 E639 Q640 L641 A642 E643 L644 R645 S646 H647 A648 P649
I652 V653 D654 A655 V656 E659 SER TYR SER ALA G664 Y665 S666 L667 V668 V669 R670 V671 V672 A673 N674 D675 R676 S677 G678 L679 L687 E690 K691 V694 L695 G696 V697 A698 S699 R700 S701 D702 T703 K704 Q705 Q706 L707 A708 T709 I710 D711 M712 T713 I714 E715 I716 Y717 N718 L719 Q720
V721 L722 V725 L726 L729 N730 P733 D734 V735 I736 D737 A738 R739 R740 L741 H742 GLY SER

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	77862	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 ($e^-/Å^2$)	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	0.469	Depositor
Minimum map value	-0.137	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.041	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 (i)

5.1 Standard geometry (i)

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	0.29	0/2121	0.64	0/2852
2	B	0.33	0/1586	0.62	0/2134
3	C	0.34	0/1571	0.62	0/2113
4	D	0.34	0/1434	0.58	0/1926
5	E	0.30	0/1343	0.62	0/1816
6	F	0.36	0/1122	0.68	0/1515
7	G	0.41	0/1001	0.74	1/1350 (0.1%)
8	H	0.38	0/1046	0.72	1/1410 (0.1%)
9	I	0.30	0/1152	0.61	0/1551
10	J	0.30	0/947	0.63	0/1268
11	K	0.30	0/1054	0.66	0/1403
12	L	0.33	0/1093	0.59	0/1460
13	M	0.32	0/973	0.63	0/1301
14	N	0.28	0/902	0.57	0/1209
15	O	0.32	0/929	0.61	0/1242
16	P	0.32	0/960	0.56	0/1278
17	Q	0.35	0/829	0.67	1/1107 (0.1%)
18	R	0.27	0/864	0.65	0/1156
19	S	0.30	0/744	0.61	0/994
20	T	0.35	0/787	0.69	0/1051
21	U	0.32	0/766	0.58	0/1025
22	V	0.34	0/582	0.60	0/769
23	W	0.34	0/635	0.63	0/848
24	X	0.31	0/510	0.59	0/677
25	Y	0.30	0/453	0.55	0/605
26	Z	0.37	0/531	0.91	3/709 (0.4%)
27	1	0.28	0/450	0.56	0/599
28	2	0.32	0/416	0.57	0/554
29	3	0.35	0/380	0.58	0/498
30	4	0.32	0/513	0.61	0/676
31	5	0.29	0/303	0.63	0/397
32	6	0.37	0/1735	0.60	0/2338
33	7	0.32	0/1651	0.60	0/2225
34	8	0.32	0/1665	0.60	0/2227

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	9	0.31	0/1169	0.70	1/1573 (0.1%)
36	10	0.34	0/835	0.64	0/1128
37	11	0.29	0/1195	0.60	0/1602
38	12	0.31	0/989	0.60	0/1326
39	13	0.33	0/1034	0.66	0/1375
40	14	0.31	0/796	0.62	0/1077
41	15	0.33	0/885	0.68	0/1195
42	16	0.33	0/969	0.73	0/1300
43	17	0.28	0/892	0.63	0/1193
44	18	0.40	0/817	0.58	0/1088
45	19	0.28	0/722	0.55	0/964
46	20	0.35	0/659	0.64	1/884 (0.1%)
47	21	0.33	0/657	0.66	0/881
48	22	0.34	0/544	0.67	0/731
49	23	0.33	0/652	0.62	0/877
50	24	0.29	0/671	0.55	0/888
51	25	0.38	0/550	0.73	0/728
52	26	0.38	1/36967 (0.0%)	0.70	5/57666 (0.0%)
53	27	0.39	1/69801 (0.0%)	0.70	5/108894 (0.0%)
54	28	0.36	1/2876 (0.0%)	0.70	1/4483 (0.0%)
55	29	0.84	0/486	0.70	0/757
56	30	0.50	1/1813 (0.1%)	0.74	0/2823
57	31	0.37	1/1836 (0.1%)	0.68	0/2859
58	32	0.80	2/1835 (0.1%)	0.74	1/2857 (0.0%)
59	33	0.66	6/4985 (0.1%)	1.08	38/6770 (0.6%)
All	All	0.39	13/167683 (0.0%)	0.70	58/250202 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
52	26	0	9
53	27	0	22
56	30	0	1
59	33	0	2
All	All	0	34

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.64	1.19	1.33
59	33	152	LYS	CD-CE	-7.75	1.31	1.51
59	33	17	PRO	CA-CB	-7.24	1.39	1.53
52	26	2	A	OP3-P	-7.10	1.52	1.61
58	32	1	C	OP3-P	-7.09	1.52	1.61
53	27	1	G	OP3-P	-7.00	1.52	1.61
57	31	1	C	OP3-P	-6.96	1.52	1.61
54	28	1	U	OP3-P	-6.94	1.52	1.61
56	30	1	G	OP3-P	-6.92	1.52	1.61
59	33	20	TRP	NE1-CE2	-6.60	1.28	1.37
59	33	20	TRP	CG-CD1	-6.12	1.28	1.36
58	32	39	C	N1-C2	5.39	1.45	1.40
59	33	20	TRP	CD2-CE2	-5.16	1.35	1.41

All (58) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	156	ARG	NE-CZ-NH1	19.60	130.10	120.30
59	33	156	ARG	NH1-CZ-NH2	-13.76	104.26	119.40
59	33	17	PRO	N-CA-CB	-11.19	89.87	103.30
59	33	17	PRO	CA-CB-CG	10.30	124.37	104.80
59	33	63	VAL	CG1-CB-CG2	-9.24	96.11	110.90
59	33	156	ARG	NE-CZ-NH2	-9.01	115.79	120.30
26	Z	18	CYS	CA-CB-SG	8.90	130.03	114.00
59	33	152	LYS	CD-CE-NZ	8.56	131.38	111.70
59	33	38	THR	CA-CB-CG2	-8.37	100.68	112.40
59	33	332	LYS	CA-CB-CG	8.36	131.80	113.40
59	33	197	GLU	OE1-CD-OE2	-8.23	113.42	123.30
59	33	232	PHE	CD1-CE1-CZ	7.80	129.46	120.10
59	33	24	LEU	CB-CG-CD2	-7.71	97.90	111.00
59	33	327	LEU	CD1-CG-CD2	-7.28	88.66	110.50
59	33	152	LYS	CB-CG-CD	-7.26	92.73	111.60
59	33	17	PRO	CB-CA-C	-6.91	94.74	112.00
59	33	169	ASP	CB-CG-OD1	6.63	124.26	118.30
26	Z	40	CYS	CA-CB-SG	6.62	125.92	114.00
35	9	101	GLY	N-CA-C	-6.58	96.66	113.10
59	33	86	ASP	CB-CG-OD1	-6.38	112.56	118.30
59	33	351	VAL	CB-CA-C	6.36	123.48	111.40
59	33	225	ARG	NE-CZ-NH2	-6.15	117.22	120.30
59	33	170	GLU	OE1-CD-OE2	6.05	130.57	123.30
59	33	76	LEU	N-CA-CB	-5.97	98.47	110.40
59	33	79	ALA	CB-CA-C	5.91	118.97	110.10
59	33	77	ARG	NE-CZ-NH2	5.84	123.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	27	974	G	N9-C1'-C2'	5.83	121.57	114.00
59	33	149	VAL	CA-CB-CG1	-5.82	102.17	110.90
59	33	471	PRO	N-CA-CB	5.78	110.23	103.30
46	20	46	LYS	N-CA-C	-5.66	95.72	111.00
53	27	2287	A	N9-C1'-C2'	5.62	121.31	114.00
59	33	469	PRO	N-CA-CB	5.60	110.02	103.30
59	33	82	PHE	CB-CG-CD2	5.60	124.72	120.80
59	33	587	PRO	N-CA-CB	5.59	110.01	103.30
26	Z	21	VAL	N-CA-C	-5.59	95.91	111.00
52	26	1182	G	N9-C1'-C2'	5.55	121.22	114.00
53	27	1130	U	C2'-C3'-O3'	5.50	122.50	113.70
59	33	293	LEU	CB-CG-CD1	-5.49	101.67	111.00
53	27	2504	U	O4'-C1'-N1	5.45	112.56	108.20
59	33	490	SER	N-CA-C	-5.45	96.30	111.00
54	28	44	G	N9-C1'-C2'	5.38	120.99	114.00
59	33	243	GLU	OE1-CD-OE2	5.35	129.72	123.30
53	27	301	G	N9-C1'-C2'	5.30	120.89	114.00
59	33	225	ARG	NE-CZ-NH1	5.30	122.95	120.30
52	26	1225	A	N9-C1'-C2'	5.27	120.85	114.00
59	33	232	PHE	CG-CD1-CE1	-5.26	115.01	120.80
59	33	210	GLU	CA-CB-CG	-5.26	101.83	113.40
52	26	1256	A	N9-C1'-C2'	5.24	120.82	114.00
59	33	67	SER	O-C-N	-5.23	114.33	122.70
52	26	818	G	N9-C1'-C2'	5.15	120.70	114.00
7	G	107	GLU	N-CA-C	-5.10	97.24	111.00
8	H	5	GLN	N-CA-C	-5.06	97.33	111.00
17	Q	44	GLY	N-CA-C	-5.05	100.47	113.10
59	33	197	GLU	CG-CD-OE2	5.05	128.41	118.30
59	33	161	ARG	NE-CZ-NH1	5.05	122.82	120.30
52	26	1363	A	N9-C1'-C2'	5.05	120.56	114.00
59	33	77	ARG	NE-CZ-NH1	-5.02	117.79	120.30
58	32	1	C	OP1-P-OP2	-5.00	112.10	119.60

There are no chirality outliers.

All (34) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1167	A	Sidechain
52	26	1182	G	Sidechain
52	26	1504	G	Sidechain
52	26	159	G	Sidechain

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Mol	Chain	Res	Type	Group
52	26	380	G	Sidechain
52	26	820	U	Sidechain
52	26	898	G	Sidechain
52	26	938	A	Sidechain
53	27	1081	U	Sidechain
53	27	1171	G	Sidechain
53	27	1328	A	Sidechain
53	27	1331	G	Sidechain
53	27	1647	U	Sidechain
53	27	1713	A	Sidechain
53	27	1814	G	Sidechain
53	27	1828	G	Sidechain
53	27	1937	A	Sidechain
53	27	196	A	Sidechain
53	27	2124	G	Sidechain
53	27	214	G	Sidechain
53	27	2210	U	Sidechain
53	27	2401	U	Sidechain
53	27	2475	C	Sidechain
53	27	2629	U	Sidechain
53	27	27	G	Sidechain
53	27	2725	A	Sidechain
53	27	2751	G	Sidechain
53	27	446	G	Sidechain
53	27	51	G	Sidechain
53	27	512	G	Sidechain
56	30	15	G	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	111	0
2	B	1565	0	1616	100	0
3	C	1552	0	1619	102	0
4	D	1410	0	1447	120	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	E	1323	0	1374	77	0
6	F	1111	0	1148	93	0
7	G	988	0	1025	135	0
8	H	1032	0	1088	109	0
9	I	1129	0	1162	65	0
10	J	938	0	1012	64	0
11	K	1045	0	1117	88	0
12	L	1074	0	1157	62	0
13	M	960	0	1000	65	0
14	N	892	0	923	51	0
15	O	917	0	965	61	0
16	P	947	0	1022	72	0
17	Q	816	0	839	54	0
18	R	857	0	922	45	0
19	S	738	0	807	51	0
20	T	779	0	834	55	0
21	U	753	0	780	37	0
22	V	575	0	592	31	0
23	W	625	0	655	32	0
24	X	509	0	543	40	0
25	Y	449	0	491	25	0
26	Z	522	0	521	41	0
27	1	444	0	461	36	0
28	2	409	0	440	17	0
29	3	377	0	418	35	0
30	4	504	0	574	32	0
31	5	302	0	343	28	0
32	6	1704	0	1732	100	0
33	7	1624	0	1699	126	0
34	8	1643	0	1710	136	0
35	9	1156	0	1199	80	0
36	10	817	0	808	68	0
37	11	1181	0	1240	65	0
38	12	979	0	1034	59	0
39	13	1022	0	1070	118	0
40	14	786	0	828	83	0
41	15	869	0	878	65	0
42	16	955	0	1019	65	0
43	17	883	0	944	85	0
44	18	805	0	847	62	0
45	19	714	0	737	26	0
46	20	649	0	666	62	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	21	648	0	691	50	0
48	22	535	0	552	40	0
49	23	637	0	665	52	0
50	24	665	0	714	42	0
51	25	544	0	579	72	0
52	26	33016	0	16617	892	0
53	27	62322	0	31345	1639	0
54	28	2572	0	1302	90	0
55	29	432	0	218	13	0
56	30	1623	0	821	66	0
57	31	1644	0	836	26	0
58	32	1643	0	836	76	0
59	33	4911	0	4550	616	0
All	All	154603	0	105189	6144	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 24.

All (6144) 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)
52:26:484:G:H4'	52:26:485:U:H5'	1.23	1.18
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.57	1.18
51:25:20:ARG:HH22	52:26:1538:C:H1'	1.05	1.13
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.11
59:33:188:ARG:HH12	59:33:377:LEU:HA	1.08	1.11
59:33:188:ARG:NH1	59:33:377:LEU:HA	1.67	1.10
53:27:45:G:H5"	53:27:46:G:H5'	1.25	1.09
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.08
53:27:1172:C:H2'	53:27:1173:U:H4'	1.15	1.08
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.08
9:I:32:LEU:HD11	9:I:54:ILE:HG21	1.35	1.07
53:27:2109:U:H2'	53:27:2110:G:H4'	1.35	1.07
56:30:54:U:H3'	56:30:55:U:H5"	1.34	1.06
41:15:30:ILE:HD13	41:15:45:THR:HG22	1.38	1.06
51:25:66:ARG:HG3	52:26:1099:G:H4'	1.38	1.06
35:9:107:GLY:HA3	52:26:9:G:H5'	1.32	1.06
33:7:63:ILE:HG23	33:7:98:ALA:HA	1.36	1.05
43:17:8:ILE:H	43:17:9:PRO:CD	1.70	1.05
12:L:12:MET:HA	53:27:910:A:H62	1.18	1.04
59:33:188:ARG:HH11	59:33:377:LEU:CB	1.70	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.93	1.04
29:3:34:ARG:HE	29:3:39:ARG:HD2	1.18	1.03
1:A:116:GLN:HE21	1:A:121:ALA:HA	1.24	1.02
8:H:113:ALA:HA	8:H:116:MET:HB2	1.41	1.02
14:N:17:LYS:HZ1	53:27:2380:C:H5'	1.23	1.02
7:G:34:THR:HG21	53:27:1057:A:H1'	1.42	1.01
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	1.01
52:26:1033:G:H3'	52:26:1034:G:H5"	1.43	1.00
33:7:107:LYS:HD2	33:7:143:LEU:HD21	1.44	1.00
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.00
56:30:18:G:H1	56:30:55:U:H1'	1.27	0.99
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	0.99
52:26:1259:C:H3'	52:26:1260:G:H5"	1.43	0.99
59:33:188:ARG:NH1	59:33:377:LEU:CB	2.26	0.98
39:13:11:ARG:HH21	39:13:108:ARG:HH21	1.10	0.98
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.98
51:25:20:ARG:NH2	52:26:1538:C:H1'	1.79	0.97
59:33:188:ARG:NH1	59:33:377:LEU:CA	2.28	0.97
59:33:188:ARG:HH12	59:33:377:LEU:CA	1.78	0.97
46:20:46:LYS:HG3	46:20:47:GLU:H	1.26	0.96
6:F:84:ALA:HB2	6:F:90:LEU:HD12	1.48	0.96
43:17:18:LEU:HD12	43:17:33:LEU:HD11	1.47	0.96
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.96
34:8:36:ALA:H	34:8:37:PRO:HD3	1.32	0.95
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.95
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.95
59:33:617:PRO:HB2	59:33:719:LEU:HD11	1.46	0.95
59:33:95:LEU:O	59:33:99:VAL:HG12	1.67	0.94
42:16:32:VAL:HA	42:16:78:VAL:HG12	1.49	0.94
53:27:1326:U:H2'	53:27:1327:A:H8	1.30	0.94
34:8:172:VAL:HG22	34:8:174:ALA:H	1.29	0.94
53:27:1172:C:C2'	53:27:1173:U:H4'	1.97	0.94
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.94
8:H:101:SER:HB2	8:H:104:GLN:HG3	1.48	0.94
53:27:1304:A:H2'	53:27:1305:C:H5"	1.50	0.93
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.93
8:H:29:GLN:HE22	53:27:1096:A:H61	1.16	0.93
53:27:1300:G:H4'	53:27:1301:A:H5'	1.48	0.93
7:G:82:ILE:HG22	7:G:83:ALA:H	1.31	0.92
52:26:167:A:H2'	52:26:168:G:H5"	1.51	0.92
4:D:161:SER:HB3	4:D:164:GLU:HG3	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:96:VAL:HB	33:7:97:PRO:HD2	1.52	0.91
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.52	0.91
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.91
37:11:149:ALA:HB1	41:15:58:THR:HG21	1.51	0.90
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.90
52:26:235:C:H2'	52:26:236:A:H8	1.36	0.89
52:26:484:G:H4'	52:26:485:U:C5'	2.02	0.89
59:33:432:HIS:HB3	59:33:435:VAL:HG23	1.52	0.89
27:1:46:GLY:HA3	27:1:54:ILE:HB	1.52	0.89
47:21:46:HIS:HB2	47:21:70:LYS:HD3	1.52	0.89
53:27:2800:A:H3'	53:27:2801:G:H5'	1.52	0.89
3:C:108:ILE:HD11	3:C:181:ILE:HG23	1.54	0.89
31:5:1:MET:HG3	31:5:2:LYS:H	1.36	0.89
47:21:64:ARG:HD2	52:26:264:C:H4'	1.55	0.89
8:H:15:GLY:HA3	8:H:50:LYS:HD2	1.54	0.88
53:27:1702:G:H2'	53:27:1703:G:H5"	1.56	0.88
2:B:122:VAL:HG21	2:B:141:ARG:HH21	1.37	0.88
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.54	0.88
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.88
51:25:66:ARG:HG3	52:26:1099:G:C4'	2.03	0.87
53:27:581:C:H2'	53:27:582:A:C8	2.09	0.87
53:27:1172:C:H2'	53:27:1173:U:C4'	2.04	0.87
7:G:28:ALA:HB3	7:G:111:ALA:HB3	1.55	0.87
12:L:29:GLY:HA2	12:L:106:ASP:HB2	1.57	0.87
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.87
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.87
1:A:156:SER:HB2	53:27:1818:U:H5'	1.57	0.87
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.87
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.87
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.87
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.39	0.86
53:27:2156:G:H2'	53:27:2157:G:H5'	1.56	0.86
43:17:65:GLU:HG3	43:17:66:GLY:H	1.40	0.86
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.86
4:D:28:PRO:HB3	4:D:159:ALA:HB2	1.56	0.86
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.86
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.86
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.86
5:E:37:ASN:ND2	5:E:63:GLN:HE21	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:53:ARG:HB3	7:G:86:MET:H	1.41	0.86
59:33:375:ALA:HB1	59:33:457:MET:CE	2.06	0.86
40:14:40:ILE:HD12	40:14:73:LEU:HD22	1.58	0.85
21:U:9:ARG:HD3	21:U:39:ALA:HB1	1.58	0.85
33:7:155:ARG:HE	33:7:192:TYR:HB3	1.41	0.85
59:33:62:MET:HE3	59:33:79:ALA:HA	1.59	0.85
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.85
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.85
20:T:3:LYS:HD2	20:T:82:VAL:HB	1.58	0.85
56:30:7:A:H3'	56:30:8:U:H5"	1.56	0.85
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.85
26:Z:11:GLU:HA	26:Z:25:ARG:HA	1.58	0.84
33:7:64:ARG:HG2	33:7:99:GLN:HB2	1.57	0.84
52:26:235:C:H2'	52:26:236:A:C8	2.12	0.84
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.42	0.84
43:17:8:ILE:H	43:17:9:PRO:HD3	1.42	0.84
49:23:76:THR:HG21	52:26:1221:G:O3'	1.77	0.84
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.84
8:H:98:GLY:HA3	8:H:137:LEU:HD13	1.58	0.84
20:T:14:THR:HB	53:27:310:A:H5"	1.59	0.84
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.84
39:13:40:ARG:HA	39:13:44:ARG:HD3	1.60	0.84
7:G:118:ILE:H	7:G:119:PRO:HD2	1.43	0.83
34:8:120:LYS:HE2	52:26:439:U:H5"	1.60	0.83
34:8:173:ASP:HB3	34:8:176:LYS:HB2	1.59	0.83
14:N:17:LYS:NZ	53:27:2380:C:H5'	1.93	0.83
15:O:91:VAL:HG21	15:O:96:LEU:HD11	1.60	0.83
53:27:1709:U:H2'	53:27:1710:G:H8	1.42	0.83
43:17:3:ILE:HG22	43:17:56:ARG:HG2	1.59	0.83
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.83
24:X:2:LYS:HE3	53:27:102:U:H1'	1.60	0.83
40:14:7:ARG:HD3	40:14:75:ASP:HB2	1.59	0.83
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.83
7:G:25:ALA:HA	7:G:115:GLY:HA2	1.60	0.83
53:27:2277:G:H2'	53:27:2278:A:H5"	1.59	0.83
2:B:4:LEU:HD11	2:B:100:LEU:HD21	1.60	0.83
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.83
43:17:113:LYS:HB2	43:17:114:PRO:HD3	1.61	0.83
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.61	0.83
35:9:104:ILE:HD11	35:9:119:VAL:HG23	1.59	0.82
39:13:33:SER:HB3	39:13:36:GLN:HG2	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:132:ARG:HG2	1:A:166:ARG:HE	1.45	0.82
52:26:412:A:H62	52:26:431:A:H61	1.25	0.82
23:W:71:ARG:HB3	23:W:77:TYR:HE2	1.44	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
35:9:16:ALA:HB3	35:9:35:LEU:HB3	1.59	0.82
53:27:1906:G:H2'	53:27:1907:G:H5"	1.61	0.82
5:E:123:GLU:HG3	5:E:125:PRO:HD3	1.61	0.82
44:18:13:VAL:HA	44:18:59:GLN:HE22	1.42	0.82
25:Y:8:GLN:HB2	25:Y:28:LEU:HD23	1.62	0.82
54:28:3:C:H2'	54:28:4:C:H5"	1.61	0.82
44:18:68:ARG:NH1	44:18:70:HIS:HB2	1.95	0.82
41:15:23:HIS:HB3	41:15:30:ILE:HG23	1.62	0.82
16:P:3:VAL:HG22	53:27:1199:U:H1'	1.62	0.81
35:9:14:LEU:HA	35:9:36:THR:HG22	1.63	0.81
56:30:14:A:H2'	56:30:15:G:H8	1.44	0.81
58:32:34:C:H3'	58:32:35:A:H5"	1.61	0.81
24:X:6:LEU:HD13	24:X:56:LEU:HD22	1.62	0.81
53:27:955:U:H5	53:27:962:G:H1	1.28	0.81
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.80	0.81
40:14:57:VAL:HG22	40:14:58:ASN:H	1.46	0.81
53:27:2267:A:H5"	53:27:2268:A:H5'	1.61	0.81
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.81
34:8:170:LEU:HA	34:8:182:LYS:H	1.46	0.81
53:27:1796:U:H2'	53:27:1797:G:H8	1.45	0.81
53:27:2636:C:H2'	53:27:2637:U:C6	2.16	0.81
58:32:69:C:H2'	58:32:70:G:H5"	1.60	0.81
38:12:3:GLN:HE22	52:26:755:G:H21	1.27	0.81
53:27:2457:U:H5	53:27:2494:G:H1	1.26	0.81
12:L:20:LEU:HD13	21:U:81:PRO:HG2	1.63	0.81
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.81	0.80
53:27:1872:A:H2'	53:27:1873:G:O4'	1.82	0.80
7:G:41:LEU:HD11	53:27:1082:U:H4'	1.62	0.80
52:26:112:G:H21	52:26:354:G:H5'	1.45	0.80
53:27:274:C:H2'	53:27:275:C:H5'	1.63	0.80
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.80
49:23:58:PRO:HG2	59:33:631:ILE:HG13	1.64	0.80
52:26:960:U:H4'	52:26:961:U:O5'	1.80	0.80
6:F:84:ALA:HA	6:F:91:PHE:HB2	1.63	0.80
26:Z:58:ASP:O	26:Z:62:LYS:HG2	1.81	0.80
34:8:27:ILE:HD12	34:8:27:ILE:H	1.47	0.80
37:11:12:LEU:HD12	37:11:13:PRO:HD2	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:167:A:C2'	52:26:168:G:H5"	2.12	0.80
8:H:126:ARG:HB3	53:27:1080:A:H4'	1.64	0.80
7:G:59:LEU:HG	7:G:61:ARG:H	1.47	0.80
34:8:36:ALA:N	34:8:37:PRO:HD3	1.95	0.80
41:15:118:ASN:HB2	52:26:718:A:H5'	1.63	0.80
53:27:310:A:O2'	53:27:311:A:H5"	1.82	0.80
53:27:1664:A:H61	53:27:1996:C:H42	1.26	0.80
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.80
11:K:108:ALA:HB3	11:K:125:LEU:HG	1.63	0.80
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.64	0.80
53:27:581:C:H2'	53:27:582:A:H8	1.47	0.80
42:16:109:ARG:NH1	52:26:537:G:H5"	1.96	0.79
33:7:59:PRO:HB3	40:14:94:ALA:HB2	1.64	0.79
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.64	0.79
3:C:129:PRO:HG3	3:C:156:ASN:HA	1.64	0.79
15:O:52:ARG:NH2	53:27:2720:U:H5"	1.98	0.79
40:14:30:LYS:HA	40:14:34:ALA:HA	1.63	0.79
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.79
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.79
7:G:82:ILE:HG22	7:G:83:ALA:N	1.97	0.79
49:23:10:ILE:HD12	49:23:15:LEU:HB2	1.63	0.79
27:1:51:ARG:HB3	27:1:53:VAL:HG13	1.65	0.79
46:20:5:ARG:HB2	52:26:376:G:H5"	1.65	0.79
55:29:7:G:H2'	55:29:8:A:C8	2.17	0.79
20:T:71:ILE:HD13	20:T:82:VAL:HG22	1.62	0.79
1:A:177:SER:O	1:A:270:ARG:HG3	1.82	0.79
2:B:151:THR:HB	2:B:152:PRO:HD3	1.64	0.79
8:H:35:MET:HG3	8:H:36:GLU:H	1.48	0.79
11:K:76:GLU:OE1	11:K:111:ILE:HD11	1.83	0.79
40:14:29:ALA:HB1	40:14:76:ILE:HD11	1.65	0.79
53:27:1857:G:H1'	53:27:1885:A:N6	1.98	0.79
7:G:88:HIS:HB3	7:G:89:PRO:HD3	1.65	0.78
51:25:5:VAL:HG22	51:25:7:GLU:H	1.48	0.78
53:27:528:A:C2	53:27:2042:A:H2'	2.18	0.78
33:7:101:ASN:C	33:7:102:ILE:HD12	2.04	0.78
34:8:58:GLN:O	34:8:62:ARG:HG2	1.84	0.78
44:18:81:ILE:H	44:18:81:ILE:HD12	1.49	0.78
52:26:422:C:H4'	52:26:423:G:C2	2.19	0.78
52:26:1088:G:H21	52:26:1167:A:H61	1.31	0.78
53:27:1597:A:H5"	53:27:1598:A:H5'	1.65	0.78
52:26:813:U:H2'	52:26:814:A:H5"	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:594:U:H2'	53:27:595:C:C6	2.19	0.78
53:27:176:A:H3'	53:27:177:G:H21	1.49	0.78
4:D:105:ILE:HD12	4:D:138:PRO:HG2	1.63	0.78
39:13:114:LYS:HB2	39:13:117:LEU:HD12	1.66	0.78
50:24:28:ARG:HH12	52:26:1437:A:H5"	1.49	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.84	0.78
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.78
7:G:23:LEU:HD13	7:G:118:ILE:HB	1.66	0.78
11:K:63:LYS:HD3	53:27:2394:C:H5"	1.66	0.78
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.78
17:Q:61:ALA:HA	17:Q:99:THR:H	1.49	0.78
24:X:21:LEU:HA	24:X:25:GLN:HB3	1.66	0.77
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.66	0.77
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.45	0.77
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.77
2:B:2:ILE:HG13	2:B:3:GLY:H	1.49	0.77
13:M:118:ARG:HH12	27:1:55:ALA:HB1	1.48	0.77
52:26:1306:A:N6	52:26:1331:G:H1'	1.98	0.77
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
59:33:416:VAL:HG21	59:33:430:HIS:CE1	2.20	0.77
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.67	0.77
34:8:33:ILE:HG23	34:8:34:GLU:H	1.48	0.77
43:17:38:ILE:HG13	43:17:55:LEU:HD11	1.66	0.77
53:27:2629:U:O2'	53:27:2630:G:H5"	1.84	0.77
3:C:105:LEU:HD21	3:C:177:PRO:HG3	1.66	0.77
21:U:9:ARG:HH21	21:U:12:GLN:HA	1.48	0.77
53:27:2048:G:H3'	53:27:2049:G:H5"	1.66	0.77
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.77
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.66	0.77
35:9:114:LEU:HD23	35:9:122:VAL:HG21	1.67	0.77
53:27:760:G:H2'	53:27:761:A:O4'	1.84	0.77
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.77
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.67	0.77
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.77
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.77
29:3:10:LEU:HG	29:3:14:ARG:HH22	1.50	0.76
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.65	0.76
58:32:16:C:O2'	58:32:17:C:H5'	1.86	0.76
4:D:140:ILE:HG22	4:D:142:TYR:H	1.50	0.76
42:16:119:LYS:HB2	52:26:37:U:OP1	1.85	0.76
50:24:65:LEU:HD23	50:24:66:ILE:HG12	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:30:C:H2'	54:28:31:C:H5'	1.66	0.76
25:Y:40:THR:HG22	25:Y:43:ILE:HG12	1.66	0.76
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
8:H:106:GLN:O	8:H:110:GLN:HG3	1.84	0.76
39:13:57:VAL:HG23	39:13:59:LYS:HE3	1.67	0.76
48:22:70:THR:HG23	48:22:71:ASP:H	1.48	0.76
53:27:1173:U:C6	53:27:1174:U:H1'	2.20	0.76
1:A:36:ASN:HB2	1:A:61:TYR:HB2	1.67	0.76
13:M:30:ARG:HG3	13:M:75:ILE:HD11	1.68	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.76
59:33:410:THR:HG22	59:33:427:PHE:HZ	1.51	0.76
17:Q:27:ILE:HG13	17:Q:33:VAL:HG11	1.66	0.76
52:26:484:G:C4'	52:26:485:U:H5'	2.11	0.76
52:26:950:U:H2'	52:26:951:G:H8	1.50	0.76
52:26:1026:G:H1	52:26:1035:A:H61	1.33	0.76
53:27:704:G:H2'	53:27:726:G:H22	1.49	0.76
56:30:41:C:H2'	56:30:42:C:H5"	1.68	0.76
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.76
33:7:46:LEU:HB3	33:7:49:ALA:HB3	1.68	0.75
53:27:279:A:N6	53:27:361:G:H1'	2.00	0.75
23:W:58:ILE:HG12	23:W:66:VAL:HG21	1.68	0.75
52:26:352:C:H4'	52:26:354:G:OP1	1.86	0.75
11:K:93:ASN:O	11:K:95:LEU:N	2.19	0.75
32:6:8:MET:HE2	32:6:10:LYS:HE3	1.67	0.75
52:26:501:C:H2'	52:26:502:A:H8	1.50	0.75
53:27:1539:U:H2'	53:27:1540:G:C8	2.20	0.75
56:30:55:U:H2'	56:30:57:G:OP2	1.86	0.75
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.75
59:33:617:PRO:HD2	59:33:719:LEU:HD21	1.68	0.75
41:15:88:PRO:HD3	51:25:28:LEU:HD23	1.69	0.75
42:16:26:CYS:HB2	42:16:29:LYS:HG2	1.68	0.75
52:26:476:U:H2'	52:26:477:C:C6	2.20	0.75
53:27:742:A:H2'	53:27:743:A:C8	2.21	0.75
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.75
8:H:101:SER:HA	8:H:141:ASP:HA	1.69	0.75
10:J:108:ARG:HA	10:J:116:ILE:HD11	1.68	0.75
14:N:3:LYS:HE2	54:28:46:A:H5"	1.67	0.75
41:15:108:ASN:HB3	51:25:6:ARG:HB3	1.68	0.75
3:C:76:PRO:HG3	3:C:84:THR:HG22	1.68	0.75
21:U:72:VAL:HG12	21:U:93:ARG:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:43:LYS:HE2	55:29:21:C:H5'	1.68	0.75
53:27:1807:G:H2'	53:27:1808:A:H5'	1.68	0.75
7:G:33:VAL:HG12	7:G:35:VAL:H	1.51	0.75
54:28:65:U:H3'	54:28:108:A:H61	1.51	0.75
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.75
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.87	0.75
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.75
2:B:124:ARG:HE	2:B:125:TRP:HE1	1.33	0.75
7:G:52:MET:HG2	53:27:1083:U:OP1	1.86	0.75
47:21:45:VAL:HG21	47:21:60:ILE:HD13	1.69	0.75
52:26:1144:G:H21	52:26:1146:A:H62	1.33	0.75
53:27:2286:G:H5"	53:27:2287:A:OP1	1.87	0.75
13:M:73:ASN:HA	13:M:76:VAL:HG12	1.68	0.74
19:S:25:GLU:HG3	19:S:26:LYS:H	1.51	0.74
19:S:35:ALA:HB3	19:S:38:ALA:HB2	1.68	0.74
34:8:104:MET:HE3	34:8:170:LEU:HD22	1.69	0.74
52:26:427:U:H4'	52:26:541:G:H5"	1.69	0.74
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.74
5:E:154:GLU:HG2	5:E:156:TYR:H	1.51	0.74
53:27:145:C:H2'	53:27:146:A:C8	2.23	0.74
58:32:29:G:H3'	58:32:30:G:H5"	1.68	0.74
53:27:833:A:H2'	53:27:834:G:H8	1.51	0.74
31:5:37:GLN:HE21	53:27:1125:G:C5'	2.00	0.74
52:26:884:U:H4'	52:26:885:G:H5"	1.68	0.74
53:27:1709:U:H2'	53:27:1710:G:C8	2.23	0.74
56:30:15:G:H3'	56:30:16:U:H5"	1.70	0.74
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.74
36:10:38:ARG:HB3	36:10:63:ASN:HD22	1.51	0.74
52:26:176:C:H3'	52:26:177:G:H21	1.53	0.74
20:T:81:ARG:HG3	20:T:96:LYS:HD3	1.67	0.74
33:7:149:LYS:HD2	33:7:168:ARG:HD3	1.68	0.74
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.74
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.74
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.69	0.74
58:32:19:G:H5"	58:32:20:U:H5	1.51	0.74
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.74
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.68	0.74
6:F:50:ARG:HH12	6:F:54:LEU:HD22	1.53	0.74
42:16:27:PRO:O	42:16:28:GLN:HG3	1.87	0.74
53:27:2638:G:H1'	53:27:2778:A:N6	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.74
5:E:85:LYS:HG2	5:E:131:VAL:HG22	1.69	0.73
8:H:33:ASN:HB2	8:H:66:PHE:HE2	1.53	0.73
53:27:1261:C:H2'	53:27:1262:A:H5"	1.68	0.73
53:27:2561:U:H2'	53:27:2562:U:H5"	1.70	0.73
4:D:3:LEU:HD13	4:D:100:GLU:HB2	1.69	0.73
13:M:28:LEU:HD23	13:M:48:VAL:HG21	1.70	0.73
52:26:1391:U:H2'	52:26:1392:G:C8	2.24	0.73
53:27:118:A:H5'	53:27:119:A:H8	1.53	0.73
53:27:548:G:H2'	53:27:549:G:H4'	1.70	0.73
54:28:95:U:H2'	54:28:96:G:H8	1.52	0.73
56:30:7:A:H3'	56:30:8:U:C5'	2.16	0.73
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.73
27:1:54:ILE:HG23	27:1:56:LYS:H	1.53	0.73
53:27:720:U:H2'	53:27:721:A:C8	2.24	0.73
53:27:2095:A:H3'	53:27:2096:C:H5"	1.69	0.73
53:27:2166:U:H2'	53:27:2167:U:H5'	1.71	0.73
53:27:2287:A:O2'	53:27:2288:A:H2'	1.88	0.73
33:7:102:ILE:HD12	33:7:102:ILE:N	2.02	0.73
41:15:33:ILE:HD12	41:15:73:VAL:HG21	1.70	0.73
42:16:109:ARG:HH11	52:26:537:G:H5"	1.51	0.73
7:G:54:VAL:HG21	7:G:83:ALA:HB1	1.71	0.73
54:28:115:A:H2'	54:28:116:G:C8	2.23	0.73
53:27:1825:U:H2'	53:27:1826:G:C8	2.23	0.73
54:28:13:G:H21	54:28:16:G:H1'	1.53	0.73
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.23	0.73
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.73
4:D:144:LYS:HD2	4:D:144:LYS:N	2.04	0.73
36:10:68:GLN:O	36:10:71:ILE:HG22	1.88	0.73
51:25:35:GLU:O	51:25:37:TYR:N	2.21	0.73
52:26:501:C:H2'	52:26:502:A:C8	2.24	0.73
52:26:948:C:H2'	52:26:949:A:H8	1.54	0.73
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.73
12:L:50:ARG:HD2	12:L:65:ILE:HD11	1.69	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
3:C:40:ARG:HD2	3:C:92:HIS:CG	2.23	0.73
16:P:10:ARG:NH2	53:27:514:A:H5'	2.02	0.73
52:26:328:C:H4'	52:26:329:A:H5'	1.71	0.73
43:17:100:ARG:NH2	52:26:950:U:H3'	2.04	0.73
50:24:9:ARG:HG2	52:26:108:G:N1	2.03	0.73
52:26:70:U:H2'	52:26:94:G:N7	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.70	0.73
2:B:118:PHE:HB2	53:27:2823:A:OP1	1.89	0.72
40:14:80:THR:HB	40:14:83:THR:HB	1.71	0.72
52:26:1352:C:H2'	52:26:1353:G:C8	2.24	0.72
5:E:88:LEU:HD22	5:E:161:VAL:HG22	1.69	0.72
9:I:35:ARG:NE	9:I:140:LEU:HD21	2.04	0.72
23:W:71:ARG:HB3	23:W:77:TYR:CE2	2.24	0.72
59:33:407:TYR:HA	59:33:417:ASP:HA	1.70	0.72
52:26:1516:G:H2'	52:26:1518:A:OP2	1.90	0.72
53:27:2493:U:H3'	53:27:2494:G:H5"	1.71	0.72
14:N:3:LYS:CE	54:28:46:A:H5"	2.19	0.72
41:15:63:GLN:HG3	41:15:98:ALA:HB2	1.71	0.72
5:E:15:ASP:HB3	5:E:26:LYS:HB3	1.71	0.72
33:7:150:VAL:HG12	33:7:199:VAL:HG23	1.72	0.72
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.72
6:F:51:ARG:HA	6:F:54:LEU:HB3	1.70	0.72
50:24:66:ILE:HG23	50:24:70:LYS:HD3	1.71	0.72
53:27:144:A:H2'	53:27:145:C:C6	2.25	0.72
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.72
4:D:118:ALA:HB1	4:D:166:ARG:HE	1.54	0.72
10:J:48:PRO:HB3	52:26:1422:G:H5'	1.72	0.72
34:8:36:ALA:H	34:8:37:PRO:CD	2.03	0.72
37:11:67:ASN:HB3	37:11:129:ASN:HB3	1.71	0.72
39:13:35:GLU:HB3	39:13:40:ARG:CZ	2.20	0.72
52:26:1323:G:H2'	52:26:1324:A:C8	2.25	0.72
7:G:23:LEU:HD11	7:G:119:PRO:HD3	1.71	0.72
11:K:70:LYS:HD2	53:27:633:A:H5"	1.71	0.72
11:K:79:LEU:H	11:K:113:ALA:HB3	1.54	0.72
30:4:18:LYS:HB2	53:27:651:G:H5'	1.72	0.72
39:13:14:SER:OG	39:13:74:GLN:HA	1.88	0.72
53:27:1857:G:N2	53:27:1884:G:H2'	2.05	0.72
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.72
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.72
4:D:91:ARG:HA	4:D:95:MET:HB3	1.70	0.72
11:K:90:VAL:HG13	11:K:95:LEU:HD11	1.72	0.72
51:25:67:THR:HG23	52:26:1167:A:H62	1.55	0.72
52:26:607:A:H2'	52:26:608:A:C8	2.25	0.72
52:26:1409:C:H4'	53:27:1915:U:O4	1.90	0.72
53:27:12:U:H2'	53:27:13:A:H5'	1.71	0.72
53:27:679:C:H2'	53:27:680:C:C6	2.25	0.72
53:27:973:A:H5'	53:27:1188:U:H1'	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:28:SER:HB2	27:1:39:ARG:HD2	1.72	0.71
4:D:30:VAL:HG22	4:D:95:MET:HE1	1.71	0.71
5:E:41:GLU:HB2	5:E:54:ARG:HG3	1.71	0.71
38:12:10:LEU:HD22	38:12:74:ILE:HD11	1.72	0.71
48:22:11:ARG:HG2	48:22:15:GLU:HG2	1.72	0.71
53:27:2297:A:N1	53:27:2321:U:C5	2.58	0.71
59:33:615:PRO:HB3	59:33:635:ARG:HB2	1.72	0.71
4:D:33:ILE:HG12	4:D:155:ILE:HG12	1.71	0.71
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.72	0.71
52:26:714:G:H2'	52:26:715:A:C8	2.25	0.71
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.71
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.71
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.71
3:C:41:GLN:HG2	3:C:43:THR:HG23	1.71	0.71
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.71
59:33:676:ARG:HA	59:33:679:LEU:HB2	1.71	0.71
52:26:403:C:H2'	52:26:404:G:H8	1.56	0.71
5:E:37:ASN:HD22	5:E:63:GLN:HE21	1.39	0.71
6:F:2:GLN:HB3	6:F:39:ALA:HB3	1.73	0.71
16:P:100:PHE:HD2	17:Q:13:ARG:HH12	1.39	0.71
24:X:16:THR:HA	24:X:19:LEU:HD12	1.73	0.71
7:G:118:ILE:H	7:G:119:PRO:CD	2.03	0.71
15:O:105:LYS:O	15:O:108:ARG:HG2	1.89	0.71
20:T:44:HIS:HA	20:T:57:ILE:HG22	1.73	0.71
53:27:279:A:H61	53:27:361:G:H1'	1.55	0.71
53:27:863:A:H2'	53:27:864:G:H8	1.54	0.71
59:33:517:GLU:HA	59:33:521:ILE:HA	1.73	0.71
8:H:130:GLY:HA3	53:27:1079:C:O2	1.90	0.71
27:1:30:ASP:HB3	27:1:35:GLU:H	1.56	0.71
47:21:16:MET:HG3	47:21:19:SER:OG	1.89	0.71
7:G:117:LEU:HB2	7:G:122:GLN:HE21	1.56	0.71
53:27:53:A:H2'	53:27:54:G:O4'	1.91	0.71
53:27:891:G:H2'	53:27:892:A:H8	1.55	0.71
2:B:172:VAL:HG12	2:B:175:LEU:HD11	1.73	0.71
21:U:4:ILE:HD11	21:U:63:ILE:HG12	1.72	0.71
22:V:47:VAL:HG21	22:V:76:ILE:O	1.91	0.71
53:27:596:U:H2'	53:27:597:G:C8	2.26	0.71
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.71
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:47:VAL:O	13:M:50:PRO:HD2	1.91	0.70
52:26:1033:G:H3'	52:26:1034:G:C5'	2.19	0.70
53:27:2799:A:H2'	53:27:2800:A:H5'	1.71	0.70
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.70
59:33:416:VAL:HG21	59:33:430:HIS:NE2	2.06	0.70
1:A:62:ARG:O	1:A:64:VAL:HG23	1.92	0.70
52:26:1062:U:H2'	52:26:1063:C:C6	2.25	0.70
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.55	0.70
4:D:56:LEU:HD22	4:D:88:VAL:HG21	1.73	0.70
4:D:87:LYS:HD2	53:27:2313:C:H5"	1.73	0.70
32:6:18:GLN:HB3	32:6:188:THR:HB	1.72	0.70
36:10:79:ARG:NH2	52:26:671:G:O2'	2.24	0.70
40:14:7:ARG:HB3	40:14:101:SER:HB2	1.73	0.70
17:Q:14:VAL:HG23	17:Q:18:GLN:HE21	1.55	0.70
53:27:2788:C:H2'	53:27:2789:C:C6	2.27	0.70
52:26:516:U:H5	52:26:533:A:H62	1.36	0.70
53:27:2134:A:H4'	53:27:2159:G:H21	1.56	0.70
2:B:2:ILE:HD11	2:B:100:LEU:HD22	1.74	0.70
20:T:42:LYS:HB2	53:27:499:U:H4'	1.74	0.70
31:5:37:GLN:HE21	53:27:1125:G:H5"	1.55	0.70
34:8:101:VAL:HG11	34:8:116:LEU:HD23	1.72	0.70
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.74	0.70
52:26:413:G:N2	52:26:428:G:H1'	2.06	0.70
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.70
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.70
1:A:209:ALA:HA	1:A:212:TRP:NE1	2.07	0.70
19:S:25:GLU:HG3	19:S:26:LYS:N	2.07	0.70
32:6:105:THR:HG21	52:26:1072:G:H21	1.57	0.70
33:7:131:ARG:HA	33:7:134:LYS:HE3	1.72	0.70
34:8:28:ASP:O	34:8:30:LYS:N	2.24	0.70
53:27:844:A:H2'	53:27:845:A:H5"	1.73	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
5:E:27:GLY:HA3	5:E:78:VAL:HB	1.72	0.70
46:20:21:VAL:HG21	46:20:60:TRP:CD1	2.27	0.70
46:20:31:ARG:HB2	52:26:310:G:H5"	1.73	0.70
10:J:18:ARG:HB2	10:J:45:GLU:HB2	1.74	0.70
27:1:5:ASN:ND2	53:27:2020:A:H62	1.89	0.70
29:3:10:LEU:HD11	29:3:14:ARG:HH12	1.56	0.70
37:11:58:LEU:HD12	37:11:59:GLU:N	2.07	0.70
52:26:673:A:H2'	52:26:674:G:C8	2.27	0.70
58:32:8:U:H5'	58:32:49:G:H5'	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:24:U:H2'	58:32:25:C:C6	2.26	0.70
30:4:15:LYS:HE2	30:4:19:GLY:HA2	1.73	0.70
36:10:73:GLU:O	36:10:77:THR:HG23	1.91	0.70
46:20:46:LYS:HE2	46:20:48:GLU:HB3	1.73	0.70
52:26:279:A:H5'	52:26:281:G:H5'	1.74	0.70
56:30:54:U:C3'	56:30:55:U:H5"	2.18	0.70
8:H:23:VAL:HA	8:H:26:ALA:HB3	1.73	0.69
8:H:57:VAL:HB	8:H:69:VAL:HB	1.74	0.69
13:M:79:LEU:HG	13:M:83:LEU:HD12	1.72	0.69
24:X:17:GLU:HA	24:X:20:ASN:HD22	1.57	0.69
46:20:70:ARG:HG3	52:26:375:U:H5"	1.74	0.69
53:27:296:U:H2'	53:27:297:G:C8	2.27	0.69
54:28:65:U:H3'	54:28:108:A:N6	2.07	0.69
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.69
3:C:149:ILE:HD11	3:C:172:ALA:HA	1.73	0.69
10:J:76:VAL:H	15:O:72:VAL:HG22	1.57	0.69
37:11:110:ARG:NH2	37:11:121:ASN:HB3	2.07	0.69
44:18:68:ARG:HH12	44:18:70:HIS:HB2	1.54	0.69
53:27:567:U:H2'	53:27:568:U:O4'	1.92	0.69
53:27:2771:C:H2'	53:27:2772:C:H6	1.56	0.69
3:C:148:ILE:HG21	3:C:157:LEU:HD21	1.73	0.69
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.74	0.69
52:26:458:U:H2'	52:26:459:A:C8	2.27	0.69
53:27:2243:U:H2'	53:27:2244:U:H6	1.56	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
9:I:7:LYS:HE3	53:27:538:A:H5"	1.74	0.69
53:27:284:U:H2'	53:27:285:G:H5"	1.74	0.69
53:27:955:U:H5	53:27:962:G:N1	1.89	0.69
9:I:17:VAL:HG13	9:I:137:PRO:HB2	1.75	0.69
15:O:63:ILE:HA	15:O:68:GLY:HA2	1.72	0.69
33:7:120:THR:HG23	33:7:188:ALA:HA	1.74	0.69
43:17:33:LEU:HD23	43:17:40:GLU:HA	1.74	0.69
52:26:946:A:H2'	52:26:947:G:H8	1.57	0.69
53:27:917:A:H5"	53:27:2268:A:H61	1.56	0.69
53:27:1060:U:C2	53:27:1062:G:H5'	2.27	0.69
53:27:2508:G:H2'	53:27:2509:G:H8	1.57	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.04	0.69
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.69
2:B:149:ASN:HB3	53:27:2572:A:OP2	1.92	0.69
7:G:82:ILE:CG2	7:G:83:ALA:H	2.05	0.69
34:8:158:LEU:HD21	34:8:174:ALA:HB1	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:148:G:H2'	52:26:149:A:H5"	1.75	0.69
53:27:2329:U:H2'	53:27:2330:G:C8	2.27	0.69
48:22:13:THR:HG21	48:22:20:ILE:HD11	1.74	0.69
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.69
7:G:11:ILE:HD11	7:G:63:ALA:HA	1.75	0.69
19:S:44:LYS:HG2	19:S:55:VAL:HG11	1.75	0.69
30:4:26:ALA:HB3	53:27:2361:G:H5'	1.75	0.69
35:9:82:HIS:HB2	35:9:83:PRO:HD2	1.74	0.69
38:12:5:PRO:HB2	38:12:32:LYS:NZ	2.08	0.69
38:12:73:SER:HB3	38:12:129:ALA:HB3	1.73	0.69
44:18:80:ARG:O	44:18:83:VAL:HG12	1.93	0.69
52:26:1259:C:C3'	52:26:1260:G:H5"	2.19	0.69
53:27:704:G:H2'	53:27:726:G:N2	2.08	0.69
53:27:1304:A:C2'	53:27:1305:C:H5"	2.22	0.69
54:28:95:U:H2'	54:28:96:G:C8	2.28	0.69
3:C:117:ARG:HH12	11:K:2:ARG:HG2	1.56	0.69
4:D:84:ILE:HD11	53:27:2311:A:N3	2.08	0.69
6:F:16:GLY:HA2	6:F:47:PHE:CE2	2.28	0.69
39:13:32:ARG:HB3	39:13:36:GLN:HE21	1.58	0.69
57:31:48:C:H2'	57:31:59:A:H4'	1.75	0.69
52:26:613:C:H2'	52:26:614:C:C6	2.28	0.69
52:26:848:C:H2'	52:26:849:G:H5"	1.74	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
33:7:71:ARG:HE	33:7:74:ILE:HD12	1.56	0.68
1:A:238:ASN:HD21	53:27:2595:G:H1	1.40	0.68
46:20:78:VAL:HG13	46:20:79:ASN:N	2.08	0.68
52:26:1097:C:H2'	52:26:1098:C:C6	2.28	0.68
52:26:1512:U:H2'	52:26:1513:A:H8	1.57	0.68
53:27:1702:G:C2'	53:27:1703:G:H5"	2.22	0.68
53:27:2070:A:H2'	53:27:2071:A:C8	2.29	0.68
7:G:33:VAL:N	53:27:1055:G:H4'	2.07	0.68
12:L:41:LEU:HD22	12:L:124:LEU:HD22	1.74	0.68
15:O:8:GLU:O	15:O:12:MET:HG3	1.93	0.68
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
24:X:3:ALA:HA	24:X:6:LEU:HB3	1.74	0.68
41:15:19:VAL:HG22	41:15:82:GLU:HB2	1.74	0.68
43:17:54:THR:O	43:17:58:GLU:HB2	1.93	0.68
52:26:946:A:H2'	52:26:947:G:C8	2.29	0.68
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.76	0.68
53:27:1165:A:H2'	53:27:1166:G:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:21:VAL:HG21	6:F:26:ALA:HB2	1.75	0.68
6:F:63:ALA:HB1	6:F:135:HIS:HE2	1.58	0.68
7:G:95:LEU:HA	7:G:98:GLU:HG2	1.76	0.68
8:H:60:VAL:CG1	8:H:64:ARG:HA	2.24	0.68
14:N:4:LYS:O	14:N:8:ILE:HG13	1.93	0.68
21:U:4:ILE:HD12	21:U:4:ILE:O	1.93	0.68
43:17:8:ILE:H	43:17:9:PRO:HD2	1.58	0.68
53:27:1395:A:O2'	53:27:1396:U:H5"	1.93	0.68
53:27:1594:U:H2'	53:27:1595:C:C6	2.29	0.68
54:28:48:U:H2'	54:28:49:C:H6	1.59	0.68
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.29	0.68
9:I:6:ALA:HB1	9:I:11:VAL:HG21	1.74	0.68
12:L:32:GLY:O	12:L:131:VAL:HG22	1.94	0.68
14:N:80:GLU:O	14:N:84:GLU:HG3	1.94	0.68
32:6:34:ARG:HG3	32:6:35:ASN:H	1.59	0.68
41:15:111:ASP:HB2	51:25:16:ARG:HH12	1.59	0.68
45:19:45:HIS:C	45:19:47:LYS:H	1.97	0.68
52:26:1143:G:H2'	52:26:1144:G:H8	1.58	0.68
53:27:118:A:H5'	53:27:119:A:C8	2.29	0.68
53:27:161:A:H3'	53:27:162:U:H5"	1.76	0.68
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.68
16:P:84:LYS:NZ	16:P:116:LEU:HA	2.08	0.68
34:8:59:LYS:NZ	34:8:194:ILE:HG22	2.09	0.68
36:10:54:LEU:HD12	36:10:54:LEU:O	1.93	0.68
39:13:11:ARG:NH2	39:13:108:ARG:HH21	1.88	0.68
52:26:1135:U:H4'	52:26:1136:C:H5	1.58	0.68
53:27:419:U:H2'	53:27:420:C:H6	1.59	0.68
53:27:807:U:H2'	53:27:808:G:C8	2.29	0.68
53:27:1062:G:H2'	53:27:1063:G:H8	1.59	0.68
16:P:5:ARG:HD2	53:27:1250:G:H5"	1.76	0.68
43:17:114:PRO:HD2	52:26:1228:C:H5'	1.76	0.68
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.68
32:6:32:GLY:HA2	32:6:39:ILE:H	1.59	0.68
40:14:8:ILE:HB	40:14:74:VAL:HB	1.74	0.68
1:A:74:PRO:HD2	1:A:96:LYS:HD3	1.76	0.67
4:D:141:ASP:HB2	4:D:144:LYS:HB2	1.75	0.67
21:U:9:ARG:NH1	21:U:27:PRO:HB3	2.10	0.67
42:16:99:GLY:HA3	42:16:117:GLY:HA3	1.76	0.67
48:22:38:ILE:H	48:22:38:ILE:HD12	1.58	0.67
53:27:121:G:H4'	53:27:149:A:H5'	1.76	0.67
53:27:2208:C:H2'	53:27:2209:G:C8	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2443:C:H2'	53:27:2444:G:H8	1.59	0.67
8:H:2:LYS:HG3	8:H:61:TYR:HA	1.75	0.67
8:H:123:ALA:HB1	53:27:1081:U:H5"	1.74	0.67
44:18:50:LEU:HB3	44:18:51:PRO:HD2	1.76	0.67
50:24:4:LYS:O	50:24:6:ALA:N	2.27	0.67
52:26:539:A:H2'	52:26:540:G:C8	2.29	0.67
52:26:1162:C:H2'	52:26:1163:A:H8	1.60	0.67
53:27:176:A:H3'	53:27:177:G:N2	2.09	0.67
53:27:2591:C:H2'	53:27:2592:G:C8	2.28	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
4:D:125:GLY:HA2	4:D:162:ASP:HA	1.74	0.67
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.74	0.67
20:T:6:ARG:N	53:27:85:G:OP1	2.20	0.67
23:W:36:ARG:HA	23:W:47:THR:HA	1.77	0.67
48:22:9:PHE:HZ	48:22:11:ARG:HE	1.42	0.67
53:27:992:C:H2'	53:27:993:G:H8	1.59	0.67
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.67
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.67
4:D:135:ILE:HG22	4:D:140:ILE:HG21	1.76	0.67
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.77	0.67
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.77	0.67
34:8:8:LEU:HD21	34:8:31:CYS:HA	1.77	0.67
39:13:18:VAL:HG11	39:13:82:ILE:HA	1.77	0.67
49:23:29:PRO:HD3	59:33:600:GLU:OE1	1.95	0.67
52:26:1218:C:H2'	52:26:1219:A:C8	2.29	0.67
53:27:1023:U:H3'	53:27:1024:G:H8	1.59	0.67
3:C:148:ILE:HD13	3:C:187:VAL:HG11	1.76	0.67
27:1:46:GLY:CA	27:1:54:ILE:HB	2.25	0.67
34:8:71:PHE:HA	34:8:74:TYR:HD2	1.59	0.67
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.76	0.67
52:26:1477:U:H2'	52:26:1478:U:C6	2.30	0.67
53:27:310:A:C2'	53:27:311:A:H5"	2.25	0.67
53:27:507:A:H5"	53:27:508:A:C5'	2.24	0.67
59:33:609:ILE:HG23	59:33:615:PRO:HG2	1.76	0.67
6:F:112:LYS:HE2	53:27:2220:U:H5"	1.75	0.67
46:20:78:VAL:HG13	46:20:79:ASN:H	1.59	0.67
52:26:1219:A:H2'	52:26:1220:G:C8	2.30	0.67
54:28:115:A:H2'	54:28:116:G:H8	1.60	0.67
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.67
59:33:666:SER:HA	59:33:715:GLU:HA	1.77	0.67
2:B:122:VAL:HG21	2:B:141:ARG:NH2	2.08	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:84:LYS:HG2	5:E:140:ILE:HD13	1.76	0.66
38:12:65:PHE:CD2	38:12:66:GLN:HG3	2.30	0.66
47:21:56:ASP:HB3	47:21:81:ALA:H	1.60	0.66
52:26:17:U:H2'	52:26:18:C:C6	2.31	0.66
53:27:20:C:H2'	53:27:21:A:H8	1.60	0.66
53:27:215:G:H4'	53:27:216:A:H4'	1.77	0.66
53:27:570:G:H2'	53:27:2030:A:N7	2.09	0.66
53:27:599:A:H2'	53:27:600:G:C8	2.30	0.66
53:27:1906:G:C2'	53:27:1907:G:H5"	2.24	0.66
53:27:2156:G:C2'	53:27:2157:G:H5'	2.23	0.66
53:27:2391:G:H2'	53:27:2424:C:H41	1.60	0.66
29:3:8:SER:O	29:3:10:LEU:N	2.28	0.66
42:16:115:LYS:O	42:16:116:TYR:HB2	1.96	0.66
53:27:1565:C:O2'	53:27:1566:A:H2'	1.94	0.66
53:27:2098:U:H2'	53:27:2099:U:H5'	1.78	0.66
53:27:2462:C:H1'	53:27:2491:U:O4	1.95	0.66
6:F:94:ILE:HB	6:F:122:LEU:HB2	1.77	0.66
8:H:102:ARG:O	8:H:106:GLN:HG3	1.96	0.66
35:9:160:VAL:HG13	35:9:161:GLU:H	1.60	0.66
39:13:34:LEU:HD13	39:13:47:VAL:HG11	1.77	0.66
39:13:119:LYS:HG3	39:13:122:ARG:HB3	1.76	0.66
52:26:225:C:H2'	52:26:226:G:H5"	1.77	0.66
52:26:398:U:H2'	52:26:399:G:C8	2.30	0.66
56:30:18:G:H22	56:30:55:U:H6	1.43	0.66
1:A:159:THR:HG23	1:A:176:ARG:HG3	1.75	0.66
2:B:56:LYS:NZ	53:27:2830:C:H5"	2.11	0.66
5:E:116:LEU:HD11	5:E:122:ALA:HB2	1.76	0.66
7:G:37:LYS:HE3	7:G:52:MET:HG3	1.76	0.66
28:2:14:ALA:HB2	28:2:46:VAL:HG21	1.77	0.66
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.78	0.66
52:26:963:G:H2'	52:26:964:A:H8	1.59	0.66
53:27:269:C:H2'	53:27:270:A:H8	1.59	0.66
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.66
4:D:91:ARG:CA	4:D:95:MET:HB3	2.25	0.66
52:26:231:U:H2'	52:26:232:G:H8	1.59	0.66
52:26:1512:U:H2'	52:26:1513:A:C8	2.30	0.66
53:27:242:G:N2	53:27:254:G:H2'	2.10	0.66
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.66
3:C:48:THR:HG23	3:C:88:ARG:HH11	1.59	0.66
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.10	0.66
34:8:27:ILE:HD12	34:8:27:ILE:N	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:12:PRO:HB3	36:10:44:ARG:HH11	1.61	0.66
53:27:648:G:H2'	53:27:649:G:H8	1.61	0.66
53:27:1105:U:H2'	53:27:1106:G:H8	1.58	0.66
53:27:2038:G:H2'	53:27:2039:U:O4'	1.96	0.66
53:27:2277:G:C2'	53:27:2278:A:H5"	2.26	0.66
53:27:2557:G:H2'	53:27:2558:C:C6	2.30	0.66
58:32:32:C:H2'	58:32:33:U:O4'	1.95	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.26	0.66
10:J:30:ARG:HG3	53:27:2674:G:H4'	1.78	0.66
33:7:178:ARG:HH21	52:26:1112:C:H4'	1.61	0.66
38:12:3:GLN:NE2	52:26:755:G:H21	1.93	0.66
39:13:109:GLN:O	52:26:1347:G:H5"	1.96	0.66
46:20:71:VAL:O	46:20:75:ILE:HG13	1.96	0.66
53:27:1843:C:H2'	53:27:1844:C:C6	2.31	0.66
53:27:2286:G:H4'	53:27:2287:A:O4'	1.96	0.66
11:K:132:ARG:HG3	11:K:142:ILE:HD12	1.77	0.66
14:N:55:GLU:HG2	54:28:116:G:H5'	1.76	0.66
16:P:36:GLN:HE21	53:27:1252:G:H1	1.43	0.66
22:V:36:GLN:NE2	22:V:39:THR:HA	2.11	0.66
26:Z:5:ILE:HG13	26:Z:6:HIS:N	2.09	0.66
33:7:134:LYS:O	33:7:138:GLN:HG3	1.96	0.66
39:13:46:VAL:HA	39:13:49:GLN:HG3	1.77	0.66
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.11	0.66
58:32:69:C:H2'	58:32:70:G:C5'	2.26	0.66
7:G:41:LEU:O	7:G:44:ALA:HB3	1.96	0.66
12:L:135:VAL:HG12	12:L:136:MET:HG3	1.77	0.66
26:Z:45:THR:HA	26:Z:48:GLN:HB3	1.78	0.66
29:3:13:ASN:O	29:3:17:GLY:N	2.28	0.66
32:6:206:ILE:O	32:6:209:VAL:HG22	1.96	0.66
33:7:118:SER:O	33:7:122:GLN:HG3	1.96	0.66
49:23:31:ARG:HD2	59:33:602:VAL:HG23	1.78	0.66
52:26:950:U:H2'	52:26:951:G:C8	2.31	0.66
52:26:1513:A:H2'	52:26:1514:G:H8	1.60	0.66
59:33:491:LYS:O	59:33:494:ALA:HB3	1.96	0.66
1:A:180:MET:HB2	1:A:268:ARG:HB3	1.76	0.66
8:H:116:MET:HG2	53:27:1059:G:H4'	1.78	0.66
9:I:35:ARG:HG2	9:I:40:HIS:CD2	2.31	0.66
50:24:53:MET:O	50:24:56:ILE:HG22	1.96	0.66
52:26:769:G:H4'	52:26:1513:A:H4'	1.77	0.66
52:26:1206:G:C3'	52:26:1207:G:H5"	2.27	0.66
53:27:78:U:H2'	53:27:79:C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2840:C:H2'	53:27:2841:C:C6	2.31	0.66
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.77	0.66
4:D:73:VAL:H	4:D:78:ILE:HD11	1.61	0.65
7:G:37:LYS:O	7:G:41:LEU:HB2	1.96	0.65
32:6:79:VAL:HG22	32:6:213:LEU:HD21	1.78	0.65
41:15:121:ARG:NH2	51:25:35:GLU:HG2	2.11	0.65
52:26:82:G:H3'	52:26:83:C:H5'	1.77	0.65
53:27:596:U:H2'	53:27:597:G:H8	1.59	0.65
56:30:54:U:H3'	56:30:55:U:C5'	2.18	0.65
9:I:57:LEU:HD11	9:I:130:HIS:HD2	1.60	0.65
30:4:44:ARG:N	30:4:45:PRO:HD2	2.11	0.65
40:14:6:ILE:HA	40:14:102:LEU:HD23	1.78	0.65
52:26:477:C:H2'	52:26:478:A:H8	1.60	0.65
53:27:1796:U:H2'	53:27:1797:G:C8	2.30	0.65
53:27:2122:U:H3	53:27:2176:A:H61	1.44	0.65
53:27:2861:U:H2'	53:27:2862:G:H8	1.59	0.65
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.65
59:33:473:ARG:O	59:33:477:ASN:N	2.26	0.65
11:K:120:VAL:H	11:K:140:GLY:HA2	1.60	0.65
16:P:18:LYS:HA	16:P:21:LYS:HD3	1.79	0.65
29:3:42:LEU:HD23	29:3:43:THR:HG23	1.77	0.65
41:15:58:THR:HG22	41:15:60:PHE:H	1.60	0.65
47:21:62:GLU:OE2	52:26:235:C:H1'	1.95	0.65
53:27:742:A:H2'	53:27:743:A:H8	1.61	0.65
8:H:103:ALA:O	8:H:107:GLU:HG3	1.96	0.65
19:S:57:VAL:HG12	19:S:86:THR:OG1	1.95	0.65
43:17:43:LYS:HB2	43:17:46:GLU:HG2	1.79	0.65
52:26:1179:A:H2'	52:26:1180:A:O4'	1.97	0.65
52:26:1513:A:H2'	52:26:1514:G:C8	2.32	0.65
53:27:507:A:H5"	53:27:508:A:H5"	1.79	0.65
53:27:1213:A:N6	53:27:1236:G:H1'	2.10	0.65
53:27:1541:C:H2'	53:27:1542:U:C6	2.31	0.65
53:27:2592:G:H2'	53:27:2593:U:O4'	1.97	0.65
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.65
2:B:3:GLY:C	2:B:4:LEU:HD12	2.17	0.65
50:24:34:VAL:HG11	50:24:78:LEU:HD21	1.78	0.65
53:27:879:G:H2'	53:27:880:G:C8	2.31	0.65
59:33:645:ARG:HA	59:33:652:ILE:HD11	1.77	0.65
36:10:10:VAL:HG22	36:10:84:VAL:HG22	1.77	0.65
52:26:880:C:H2'	52:26:881:G:H8	1.61	0.65
53:27:2345:G:N3	53:27:2381:A:H2'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2591:C:H2'	53:27:2592:G:H8	1.59	0.65
8:H:124:MET:HE2	8:H:124:MET:HA	1.78	0.65
32:6:198:VAL:HG22	32:6:200:PRO:HD3	1.78	0.65
32:6:216:VAL:O	32:6:220:VAL:HG23	1.96	0.65
34:8:104:MET:CE	34:8:170:LEU:HD22	2.27	0.65
36:10:11:HIS:HD2	36:10:12:PRO:HD2	1.62	0.65
52:26:882:C:O2'	52:26:883:C:H5'	1.96	0.65
52:26:1143:G:H2'	52:26:1144:G:C8	2.32	0.65
52:26:1206:G:H3'	52:26:1207:G:H5"	1.79	0.65
53:27:2292:U:H2'	53:27:2293:G:H8	1.62	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
59:33:673:ALA:O	59:33:707:LEU:HG	1.97	0.65
2:B:34:VAL:HG22	2:B:50:VAL:HG12	1.77	0.65
22:V:67:VAL:HG12	22:V:74:LYS:HG2	1.79	0.65
26:Z:1:MET:HA	54:28:44:G:OP2	1.96	0.65
52:26:487:A:H2'	52:26:488:C:O4'	1.97	0.65
52:26:813:U:C2'	52:26:814:A:H5"	2.27	0.65
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.65
1:A:213:ARG:HH22	53:27:1566:A:H5'	1.61	0.65
12:L:35:ALA:HB2	12:L:102:LEU:HD11	1.77	0.65
53:27:729:G:H2'	53:27:1775:U:H1'	1.77	0.65
53:27:784:G:H5'	53:27:785:G:OP1	1.97	0.65
53:27:1096:A:H3'	53:27:1097:U:H5"	1.78	0.65
53:27:2243:U:H2'	53:27:2244:U:C6	2.32	0.65
53:27:2636:C:H2'	53:27:2637:U:H6	1.61	0.65
58:32:57:A:O2'	58:32:58:A:H5'	1.97	0.65
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.65
6:F:32:PRO:HA	23:W:38:TRP:CD1	2.32	0.65
9:I:32:LEU:CD1	9:I:54:ILE:HG21	2.19	0.65
16:P:24:TYR:HE2	53:27:2020:A:H4'	1.61	0.65
53:27:1443:U:H2'	53:27:1444:G:H8	1.60	0.65
56:30:23:A:H2'	56:30:24:G:H8	1.62	0.65
23:W:60:LYS:HD2	53:27:372:G:H5"	1.78	0.64
25:Y:5:LYS:HG2	25:Y:36:GLU:HG2	1.78	0.64
34:8:187:ARG:HD2	34:8:190:LEU:HD11	1.78	0.64
39:13:17:ARG:HH12	52:26:1147:C:H1'	1.61	0.64
46:20:46:LYS:HG3	46:20:47:GLU:N	2.07	0.64
52:26:418:C:H2'	52:26:419:C:C6	2.32	0.64
52:26:747:A:H2'	52:26:748:G:O4'	1.96	0.64
52:26:1130:A:H61	52:26:1144:G:H1'	1.60	0.64
53:27:284:U:H3	53:27:356:G:H1	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2267:A:H5”	53:27:2268:A:C5’	2.27	0.64
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.64
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.64
13:M:56:LYS:HD2	13:M:94:TYR:OH	1.98	0.64
43:17:8:ILE:N	43:17:9:PRO:CD	2.49	0.64
52:26:70:U:H5”	52:26:71:A:OP1	1.97	0.64
52:26:920:U:H2’	52:26:921:U:C6	2.32	0.64
52:26:1097:C:H2’	52:26:1098:C:H6	1.60	0.64
54:28:37:C:H42	54:28:49:C:H1’	1.61	0.64
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.64
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.77	0.64
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.32	0.64
12:L:71:LYS:HB3	12:L:93:VAL:O	1.97	0.64
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.80	0.64
34:8:57:LYS:O	34:8:61:ARG:HG2	1.96	0.64
38:12:93:LYS:HB3	38:12:116:ARG:HH22	1.62	0.64
47:21:26:ARG:HG2	47:21:39:ARG:O	1.96	0.64
52:26:309:A:H2’	52:26:310:G:H8	1.62	0.64
53:27:720:U:H2’	53:27:721:A:H8	1.62	0.64
53:27:863:A:H2’	53:27:864:G:C8	2.31	0.64
53:27:1794:A:H2’	53:27:1795:C:H6	1.62	0.64
59:33:443:LYS:HB2	59:33:462:GLU:HB2	1.80	0.64
2:B:40:LEU:HD13	2:B:46:ARG:HG3	1.80	0.64
29:3:25:LYS:NZ	53:27:210:C:H5”	2.12	0.64
41:15:39:ASN:HD22	52:26:683:G:H21	1.45	0.64
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.64
17:Q:32:THR:HA	17:Q:62:GLU:HA	1.78	0.64
23:W:15:ASN:HD22	53:27:381:G:H5”	1.61	0.64
40:14:88:MET:O	40:14:89:ARG:HG2	1.98	0.64
52:26:1170:A:H2’	52:26:1171:A:O4’	1.97	0.64
53:27:2039:U:H2’	53:27:2040:G:C8	2.33	0.64
54:28:48:U:H2’	54:28:49:C:C6	2.32	0.64
56:30:21:A:H62	56:30:46:G:H2’	1.61	0.64
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.32	0.64
40:14:53:ILE:HG13	44:18:84:ARG:HD2	1.79	0.64
51:25:36:PHE:O	51:25:38:GLU:N	2.29	0.64
51:25:67:THR:HA	52:26:1167:A:C5	2.32	0.64
52:26:79:G:H2’	52:26:80:A:H8	1.62	0.64
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.13	0.64
16:P:12:ARG:O	16:P:15:LYS:HB3	1.98	0.64
19:S:65:GLY:HA3	19:S:77:ARG:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:45:LEU:CG	49:23:12:LEU:HD21	2.27	0.64
44:18:45:LEU:HG	49:23:12:LEU:HD21	1.80	0.64
53:27:1283:G:H1'	53:27:1329:U:O2	1.98	0.64
53:27:2692:G:H2'	53:27:2693:G:H8	1.63	0.64
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.64
59:33:466:GLN:HG2	59:33:467:LYS:HG2	1.80	0.64
33:7:63:ILE:HG23	33:7:98:ALA:CA	2.22	0.64
52:26:664:G:H22	52:26:741:G:H1	1.45	0.64
52:26:843:U:OP1	52:26:844:G:H5'	1.98	0.64
52:26:902:G:H2'	52:26:903:G:H8	1.61	0.64
53:27:45:G:H5"	53:27:46:G:C5'	2.15	0.64
53:27:49:A:H2'	53:27:49:A:N3	2.13	0.64
53:27:833:A:H2'	53:27:834:G:C8	2.32	0.64
53:27:2538:C:H2'	53:27:2539:C:H6	1.63	0.64
54:28:66:A:N1	54:28:107:G:H2'	2.11	0.64
59:33:600:GLU:HG3	59:33:654:ASP:OD1	1.96	0.64
4:D:147:ARG:HG2	4:D:148:VAL:N	2.13	0.64
13:M:96:ARG:HG3	53:27:2882:A:H5'	1.80	0.64
16:P:10:ARG:HH22	53:27:514:A:H5'	1.62	0.64
32:6:22:TRP:CD1	32:6:22:TRP:N	2.65	0.64
43:17:16:ILE:H	43:17:16:ILE:HD12	1.63	0.64
44:18:80:ARG:NH1	44:18:81:ILE:HG13	2.13	0.64
49:23:49:ALA:HB1	49:23:56:HIS:HB3	1.78	0.64
51:25:48:LYS:HG3	52:26:723:U:OP1	1.98	0.64
52:26:412:A:N6	52:26:431:A:H61	1.95	0.64
56:30:18:G:H5"	56:30:58:A:C2	2.33	0.64
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.64
6:F:84:ALA:HB1	6:F:90:LEU:HA	1.78	0.64
52:26:193:C:H2'	52:26:194:C:C6	2.32	0.64
52:26:744:C:H2'	52:26:745:G:C8	2.33	0.64
52:26:1304:G:H1'	52:26:1333:A:H61	1.63	0.64
53:27:1040:A:H2	53:27:1115:G:H22	1.46	0.64
53:27:1331:G:C2'	53:27:1332:G:H5"	2.28	0.64
53:27:1936:A:H2	53:27:1943:U:H3	1.44	0.64
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.64
2:B:133:THR:HG22	53:27:1993:U:H4'	1.80	0.63
37:11:131:GLY:O	37:11:134:VAL:HG22	1.96	0.63
51:25:5:VAL:HG21	51:25:7:GLU:HG3	1.78	0.63
52:26:1088:G:N2	52:26:1167:A:H61	1.94	0.63
53:27:813:U:H2'	53:27:814:C:C6	2.32	0.63
53:27:844:A:C2'	53:27:845:A:H5"	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2246:G:H2'	53:27:2247:A:C8	2.33	0.63
54:28:3:C:C2'	54:28:4:C:H5"	2.27	0.63
34:8:23:GLY:HA3	34:8:160:LEU:HD11	1.80	0.63
35:9:114:LEU:O	35:9:119:VAL:HG22	1.98	0.63
38:12:42:GLU:HG2	38:12:100:ILE:HG21	1.79	0.63
52:26:1506:U:O2'	52:26:1507:A:H5'	1.98	0.63
53:27:1203:U:H3'	53:27:1204:A:H2'	1.79	0.63
53:27:2638:G:H1'	53:27:2778:A:H61	1.62	0.63
53:27:2710:C:H2'	53:27:2711:A:C8	2.33	0.63
28:2:20:TYR:OH	53:27:2348:U:H5'	1.98	0.63
39:13:19:PHE:HB2	39:13:63:TYR:O	1.99	0.63
52:26:484:G:C5	52:26:486:U:H1'	2.32	0.63
53:27:1258:U:H2'	53:27:1259:G:C8	2.32	0.63
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63
1:A:78:GLU:HG3	1:A:79:ARG:HG2	1.79	0.63
4:D:142:TYR:CE2	43:17:8:ILE:HG12	2.34	0.63
21:U:53:LYS:HB3	21:U:55:GLU:OE1	1.99	0.63
37:11:13:PRO:HB2	37:11:18:GLY:HA2	1.80	0.63
39:13:40:ARG:CA	39:13:44:ARG:HD3	2.28	0.63
52:26:224:U:H2'	52:26:225:C:C6	2.33	0.63
53:27:598:U:H2'	53:27:599:A:H8	1.63	0.63
53:27:1038:G:H2'	53:27:1039:A:C8	2.34	0.63
56:30:41:C:C2'	56:30:42:C:H5"	2.29	0.63
56:30:72:C:H2'	56:30:73:A:C8	2.33	0.63
58:32:58:A:H1'	58:32:60:U:C5	2.32	0.63
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.63
2:B:27:ILE:HD12	2:B:187:LEU:HD23	1.80	0.63
21:U:21:ARG:NE	21:U:87:GLN:HG3	2.13	0.63
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.64	0.63
31:5:36:ARG:HG2	31:5:37:GLN:N	2.13	0.63
41:15:64:VAL:HA	41:15:67:GLU:OE1	1.98	0.63
53:27:2327:A:H2'	53:27:2328:A:C8	2.33	0.63
54:28:24:G:H1'	54:28:27:C:H42	1.64	0.63
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
8:H:60:VAL:HG13	8:H:64:ARG:HA	1.79	0.63
10:J:64:ARG:HH12	10:J:101:GLY:HA3	1.64	0.63
13:M:29:VAL:HB	13:M:75:ILE:HD12	1.79	0.63
15:O:103:THR:HA	15:O:107:ALA:HB2	1.81	0.63
22:V:15:LYS:HB2	22:V:17:LEU:HD11	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:6:ILE:HG22	25:Y:56:VAL:HA	1.80	0.63
27:1:24:VAL:O	27:1:26:SER:N	2.32	0.63
30:4:61:LEU:O	30:4:61:LEU:HD12	1.99	0.63
32:6:153:MET:SD	32:6:157:PRO:HG3	2.39	0.63
36:10:5:GLU:HG3	36:10:63:ASN:OD1	1.98	0.63
37:11:65:LEU:O	37:11:68:VAL:HG12	1.99	0.63
41:15:51:PHE:HD1	41:15:55:ARG:HB3	1.63	0.63
53:27:807:U:H2'	53:27:808:G:H8	1.63	0.63
53:27:851:C:H2'	53:27:852:U:C6	2.33	0.63
53:27:967:U:H2'	53:27:968:C:C6	2.33	0.63
53:27:2646:C:H2'	53:27:2647:U:O4'	1.98	0.63
53:27:2789:C:H2'	53:27:2893:A:N7	2.14	0.63
53:27:2800:A:H3'	53:27:2801:G:C5'	2.25	0.63
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.14	0.63
2:B:108:ASP:OD2	2:B:207:VAL:HG12	1.99	0.63
8:H:78:LEU:HB2	8:H:108:ILE:HG23	1.81	0.63
29:3:35:ARG:HE	29:3:42:LEU:HD11	1.62	0.63
34:8:190:LEU:HD12	34:8:190:LEU:O	1.98	0.63
46:20:75:ILE:O	46:20:79:ASN:N	2.31	0.63
53:27:639:U:H2'	53:27:640:C:C6	2.33	0.63
53:27:2048:G:C3'	53:27:2049:G:H5"	2.28	0.63
53:27:2861:U:H2'	53:27:2862:G:C8	2.34	0.63
59:33:274:PHE:HB3	59:33:333:THR:HB	1.80	0.63
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.80	0.63
59:33:599:VAL:O	59:33:602:VAL:HG12	1.97	0.63
2:B:106:LYS:HA	2:B:175:LEU:O	1.98	0.63
11:K:51:GLU:O	53:27:833:A:H1'	1.97	0.63
21:U:1:MET:HG3	21:U:2:PHE:H	1.64	0.63
34:8:33:ILE:HG23	34:8:34:GLU:N	2.13	0.63
49:23:10:ILE:HD11	49:23:15:LEU:HD22	1.80	0.63
52:26:491:G:O2'	52:26:492:C:H5'	1.99	0.63
52:26:1530:G:H2'	52:26:1531:A:C8	2.33	0.63
53:27:879:G:H2'	53:27:880:G:H8	1.62	0.63
53:27:1295:C:H2'	53:27:1296:G:H8	1.63	0.63
53:27:1775:U:H2'	53:27:1776:G:O4'	1.98	0.63
53:27:2246:G:H2'	53:27:2247:A:H8	1.63	0.63
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.63
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.63
11:K:33:ARG:HD2	11:K:40:SER:HA	1.80	0.63
13:M:29:VAL:HG12	13:M:78:LYS:HD3	1.81	0.63
33:7:59:PRO:HG2	33:7:62:SER:HB3	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:167:A:C3'	52:26:168:G:H5"	2.29	0.63
53:27:2144:G:H4'	53:27:2145:C:H3'	1.81	0.63
53:27:2457:U:H5	53:27:2494:G:N1	1.97	0.63
54:28:62:C:H2'	54:28:63:C:H6	1.64	0.63
54:28:119:A:C2	54:28:120:A:H1'	2.34	0.63
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.63
59:33:432:HIS:HB3	59:33:435:VAL:CG2	2.25	0.63
59:33:676:ARG:HG3	59:33:677:SER:H	1.63	0.63
3:C:2:GLU:HB3	3:C:13:THR:HG22	1.80	0.62
7:G:60:LEU:HD13	7:G:79:PRO:HB3	1.80	0.62
8:H:124:MET:O	8:H:128:ILE:HG12	1.98	0.62
53:27:172:A:H2'	53:27:173:A:C8	2.34	0.62
53:27:873:C:H2'	53:27:874:G:H8	1.62	0.62
53:27:1326:U:H2'	53:27:1327:A:C8	2.22	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.62
32:6:113:LEU:HD13	32:6:143:LEU:HB3	1.82	0.62
43:17:10:ASP:HB3	43:17:45:SER:HB3	1.81	0.62
51:25:25:ALA:CB	55:29:9:G:H4'	2.29	0.62
53:27:1146:C:H2'	53:27:1147:A:H8	1.62	0.62
2:B:47:ALA:HA	2:B:84:LEU:HG	1.81	0.62
4:D:139:GLU:CD	4:D:139:GLU:H	2.02	0.62
6:F:3:VAL:HG22	6:F:38:PRO:HA	1.82	0.62
6:F:135:HIS:HB3	6:F:138:VAL:H	1.64	0.62
15:O:96:LEU:HB3	15:O:99:LEU:HD13	1.80	0.62
33:7:161:ILE:HG13	33:7:161:ILE:O	1.97	0.62
33:7:174:LEU:HA	33:7:181:ILE:HD11	1.81	0.62
36:10:38:ARG:HD3	36:10:98:GLU:H	1.64	0.62
46:20:46:LYS:CG	46:20:47:GLU:H	2.07	0.62
52:26:79:G:H2'	52:26:80:A:C8	2.34	0.62
53:27:1176:U:H2'	53:27:1177:G:C8	2.33	0.62
59:33:409:PHE:HA	59:33:415:VAL:HA	1.81	0.62
29:3:10:LEU:CG	29:3:14:ARG:HH22	2.11	0.62
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.80	0.62
35:9:95:MET:HG2	35:9:124:ALA:CB	2.29	0.62
53:27:296:U:H2'	53:27:297:G:H8	1.64	0.62
53:27:528:A:H2	53:27:2042:A:H2'	1.64	0.62
53:27:992:C:H2'	53:27:993:G:C8	2.35	0.62
53:27:2047:C:H2'	53:27:2048:G:H8	1.64	0.62
53:27:2593:U:H2'	53:27:2594:C:C6	2.35	0.62
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:161:SER:HB3	4:D:164:GLU:CG	2.29	0.62
31:5:25:VAL:HB	31:5:35:GLN:HG2	1.80	0.62
46:20:22:ALA:HA	46:20:33:ILE:HG13	1.80	0.62
53:27:1266:G:H22	53:27:2012:G:H2'	1.64	0.62
56:30:18:G:H5"	56:30:58:A:H2	1.63	0.62
10:J:76:VAL:H	15:O:72:VAL:CG2	2.12	0.62
16:P:2:ARG:HD2	53:27:1248:G:C2	2.35	0.62
52:26:1062:U:H2'	52:26:1063:C:C5	2.33	0.62
53:27:1300:G:H4'	53:27:1301:A:C5'	2.27	0.62
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.62
4:D:89:THR:CG2	4:D:91:ARG:HH11	2.13	0.62
41:15:126:ARG:NH2	52:26:692:U:H5"	2.14	0.62
52:26:80:A:H61	52:26:89:U:H3	1.46	0.62
52:26:177:G:H2'	52:26:178:C:C6	2.35	0.62
52:26:447:G:H1'	52:26:487:A:H61	1.65	0.62
53:27:1447:C:H2'	53:27:1448:G:H8	1.64	0.62
53:27:1869:G:H2'	53:27:1871:A:OP1	2.00	0.62
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.29	0.62
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.62
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.62
7:G:114:GLU:HB3	7:G:122:GLN:HB3	1.82	0.62
10:J:87:LEU:HA	10:J:94:PRO:HA	1.80	0.62
32:6:32:GLY:HA3	32:6:38:HIS:HA	1.80	0.62
33:7:63:ILE:CG2	33:7:98:ALA:HA	2.23	0.62
33:7:76:ILE:HA	33:7:83:VAL:HG23	1.82	0.62
46:20:70:ARG:O	46:20:74:LEU:HG	1.99	0.62
49:23:77:ARG:HD2	52:26:1225:A:H1'	1.81	0.62
53:27:1197:G:H2'	53:27:1198:U:C6	2.35	0.62
54:28:78:A:H2'	54:28:79:G:O4'	1.99	0.62
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.81	0.62
3:C:134:LEU:HD23	3:C:161:ALA:HB2	1.81	0.62
4:D:142:TYR:O	4:D:145:VAL:HG22	1.99	0.62
18:R:83:LYS:HG2	18:R:97:LEU:HD22	1.82	0.62
33:7:108:PRO:HA	33:7:114:LEU:HD12	1.82	0.62
52:26:16:A:O2'	52:26:17:U:H5'	1.99	0.62
52:26:82:G:H3'	52:26:83:C:C5'	2.29	0.62
53:27:1164:C:H2'	53:27:1165:A:C8	2.35	0.62
53:27:1794:A:H2'	53:27:1795:C:C6	2.35	0.62
6:F:64:ALA:O	6:F:68:ARG:HG3	2.00	0.62
10:J:77:ILE:HG12	15:O:71:ARG:HG3	1.81	0.62
32:6:46:VAL:HB	32:6:47:PRO:HD3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:67:LEU:HD11	32:6:157:PRO:HG2	1.82	0.62
35:9:98:ALA:HB2	35:9:123:LEU:HG	1.80	0.62
35:9:156:ARG:O	35:9:158:LYS:N	2.31	0.62
40:14:50:THR:HG22	40:14:62:ARG:HD3	1.81	0.62
45:19:88:ARG:HD3	53:27:714:U:C6	2.35	0.62
53:27:2297:A:N1	53:27:2321:U:H5	1.96	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
4:D:82:TYR:CD1	4:D:83:PRO:HD2	2.35	0.61
34:8:158:LEU:O	34:8:162:GLU:HG2	2.00	0.61
41:15:126:ARG:O	51:25:34:ARG:NH2	2.33	0.61
52:26:584:G:H2'	52:26:585:G:H8	1.65	0.61
53:27:2515:C:H2'	53:27:2516:A:H8	1.64	0.61
54:28:30:C:C2'	54:28:31:C:H5'	2.30	0.61
59:33:694:VAL:HG12	59:33:714:ILE:HG22	1.82	0.61
12:L:33:LEU:HB2	12:L:117:PHE:CD1	2.35	0.61
17:Q:77:PHE:HD1	17:Q:84:ARG:HB3	1.64	0.61
20:T:43:LYS:HB2	20:T:60:LYS:HE2	1.80	0.61
39:13:5:TYR:HB2	39:13:20:ILE:HG23	1.81	0.61
52:26:3:A:H1'	52:26:613:C:H1'	1.81	0.61
52:26:396:C:H2'	52:26:397:A:H5"	1.83	0.61
53:27:2133:G:H2'	53:27:2157:G:O2'	2.00	0.61
53:27:2183:A:H2'	53:27:2184:A:H8	1.63	0.61
1:A:5:CYS:SG	1:A:12:ARG:HD2	2.41	0.61
13:M:100:CYS:H	13:M:111:ALA:HA	1.64	0.61
14:N:53:THR:HG21	14:N:65:THR:O	2.01	0.61
17:Q:15:SER:O	17:Q:18:GLN:HG2	2.00	0.61
19:S:44:LYS:HA	19:S:55:VAL:HG21	1.82	0.61
32:6:186:VAL:HG11	32:6:195:VAL:HG21	1.81	0.61
35:9:108:GLY:H	52:26:9:G:H4'	1.64	0.61
36:10:29:ILE:HG13	36:10:30:THR:N	2.15	0.61
43:17:89:ARG:NH2	43:17:95:PRO:HG2	2.15	0.61
44:18:45:LEU:HD21	49:23:12:LEU:HD21	1.83	0.61
52:26:687:A:N3	52:26:688:G:H1'	2.15	0.61
53:27:1266:G:N2	53:27:2012:G:H2'	2.15	0.61
58:32:7:G:H2'	58:32:49:G:C8	2.34	0.61
59:33:62:MET:HE2	59:33:79:ALA:HA	1.81	0.61
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.61
1:A:86:ARG:HG2	1:A:86:ARG:HH11	1.65	0.61
7:G:117:LEU:HD13	7:G:122:GLN:HG3	1.82	0.61
11:K:51:GLU:CG	11:K:56:PRO:HA	2.31	0.61
35:9:133:ILE:H	35:9:133:ILE:HD12	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:23:GLU:HA	36:10:26:THR:HG22	1.81	0.61
52:26:112:G:N2	52:26:354:G:H5'	2.15	0.61
52:26:986:U:H2'	52:26:987:G:C8	2.35	0.61
53:27:2171:A:C2'	53:27:2172:U:H5'	2.30	0.61
2:B:105:LYS:O	2:B:177:VAL:HG12	2.00	0.61
2:B:146:ILE:HG13	2:B:147:GLY:H	1.66	0.61
7:G:99:PHE:HA	7:G:102:ALA:HB3	1.83	0.61
7:G:126:LEU:HB3	7:G:128:THR:HG23	1.83	0.61
8:H:76:ALA:O	8:H:80:LYS:HG3	2.00	0.61
14:N:51:ALA:HB3	14:N:78:VAL:CG2	2.30	0.61
17:Q:5:PHE:O	17:Q:11:GLN:HA	2.00	0.61
19:S:80:TRP:CZ3	19:S:82:LYS:HB2	2.34	0.61
21:U:1:MET:HG3	21:U:2:PHE:N	2.16	0.61
37:11:58:LEU:O	37:11:61:PHE:HB3	2.01	0.61
37:11:74:VAL:HG13	37:11:143:MET:HB3	1.82	0.61
39:13:126:PHE:O	52:26:1342:C:H4'	1.99	0.61
51:25:3:ILE:N	51:25:19:LYS:HZ2	1.99	0.61
52:26:737:C:H2'	52:26:738:C:C6	2.35	0.61
52:26:1032:G:H3'	52:26:1032:G:N3	2.15	0.61
52:26:1527:U:O2'	52:26:1528:U:H5'	2.00	0.61
53:27:112:U:H2'	53:27:113:U:H5'	1.81	0.61
53:27:464:U:H2'	53:27:465:G:O4'	2.01	0.61
53:27:1881:C:H2'	53:27:1882:U:O4'	2.00	0.61
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.61
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.61
4:D:130:GLY:HA3	53:27:2305:U:H5"	1.82	0.61
37:11:145:GLU:HA	37:11:148:LYS:HB2	1.82	0.61
46:20:21:VAL:HG12	46:20:33:ILE:HD12	1.82	0.61
47:21:45:VAL:HG22	47:21:72:TRP:HB2	1.82	0.61
52:26:477:C:H2'	52:26:478:A:C8	2.36	0.61
52:26:607:A:H2'	52:26:608:A:H8	1.62	0.61
52:26:1412:C:H2'	52:26:1413:A:C8	2.35	0.61
53:27:145:C:H2'	53:27:146:A:H8	1.64	0.61
53:27:1261:C:C2'	53:27:1262:A:H5"	2.31	0.61
8:H:3:LYS:HG2	8:H:4:VAL:HG23	1.82	0.61
13:M:103:ARG:HB2	13:M:110:MET:HG3	1.83	0.61
18:R:42:LYS:HB2	53:27:2010:G:H5"	1.82	0.61
32:6:104:LYS:HE2	52:26:1073:U:H4'	1.82	0.61
53:27:889:C:H2'	53:27:890:C:C6	2.35	0.61
53:27:1680:U:H2'	53:27:1681:G:O4'	2.01	0.61
56:30:41:C:C3'	56:30:42:C:H5"	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.61
4:D:56:LEU:HA	4:D:59:ILE:HD12	1.81	0.61
7:G:28:ALA:HB1	7:G:81:LEU:HG	1.82	0.61
9:I:39:LYS:HD2	53:27:1007:C:OP1	2.00	0.61
13:M:72:ASP:OD2	13:M:74:GLU:HB3	1.99	0.61
41:15:109:ILE:HD12	51:25:16:ARG:HE	1.64	0.61
42:16:27:PRO:HG2	52:26:363:A:C2	2.35	0.61
52:26:27:G:H2'	52:26:28:A:C8	2.35	0.61
52:26:855:U:H2'	52:26:856:C:C6	2.36	0.61
53:27:876:C:H2'	53:27:877:A:O4'	2.01	0.61
53:27:910:A:H2'	53:27:911:A:C8	2.36	0.61
53:27:1440:U:H2'	53:27:1441:G:C8	2.36	0.61
53:27:1848:A:H2'	53:27:1849:G:O4'	2.01	0.61
53:27:2130:U:H5'	53:27:2159:G:H1	1.64	0.61
53:27:2515:C:H2'	53:27:2516:A:C8	2.36	0.61
53:27:2698:U:H2'	53:27:2699:C:C6	2.35	0.61
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.61
1:A:24:HIS:CD2	1:A:79:ARG:HE	2.18	0.61
2:B:125:TRP:CG	2:B:160:LYS:HB3	2.36	0.61
7:G:124:ASP:O	7:G:126:LEU:N	2.31	0.61
35:9:121:ASN:O	35:9:122:VAL:HG22	2.01	0.61
40:14:7:ARG:HA	40:14:75:ASP:HA	1.83	0.61
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.01	0.61
52:26:631:C:H3'	52:26:632:U:H5'	1.83	0.61
54:28:66:A:H5"	54:28:67:G:OP1	2.01	0.61
59:33:409:PHE:HB2	59:33:415:VAL:HG12	1.83	0.61
2:B:101:PHE:O	2:B:103:ASP:N	2.32	0.61
7:G:23:LEU:CD1	7:G:119:PRO:HD3	2.31	0.61
8:H:77:VAL:O	8:H:80:LYS:HB2	2.01	0.61
16:P:88:GLU:HG2	17:Q:52:PRO:HB3	1.82	0.61
33:7:156:LEU:HD12	33:7:156:LEU:O	1.99	0.61
48:22:17:VAL:HG22	48:22:18:GLN:H	1.66	0.61
52:26:399:G:H2'	52:26:400:C:C6	2.36	0.61
52:26:864:A:H2'	52:26:865:A:C8	2.36	0.61
53:27:534:U:H2'	53:27:535:G:H8	1.64	0.61
53:27:548:G:H2'	53:27:549:G:C4'	2.31	0.61
7:G:3:LEU:HD12	7:G:5:LEU:H	1.66	0.60
7:G:32:GLY:C	53:27:1055:G:H4'	2.21	0.60
33:7:123:LEU:HD21	33:7:129:PHE:HB3	1.83	0.60
44:18:84:ARG:NH1	44:18:88:MET:HG3	2.15	0.60
52:26:46:G:OP1	52:26:307:C:H4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:410:G:H2'	52:26:429:U:C5	2.36	0.60
53:27:184:C:H2'	53:27:185:G:C8	2.35	0.60
53:27:859:G:H1'	53:27:860:U:H5	1.65	0.60
59:33:730:ASN:ND2	59:33:738:ALA:HB3	2.16	0.60
3:C:62:GLN:HA	3:C:67:ARG:HD3	1.83	0.60
3:C:137:LYS:O	3:C:141:MET:N	2.34	0.60
8:H:125:THR:O	8:H:129:GLU:HG3	2.01	0.60
9:I:80:HIS:O	9:I:82:GLY:N	2.34	0.60
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.66	0.60
32:6:137:THR:O	32:6:141:GLU:HG3	2.00	0.60
37:11:7:GLY:O	37:11:9:ARG:N	2.34	0.60
41:15:44:ALA:HB3	41:15:69:CYS:HB2	1.82	0.60
52:26:1033:G:C2	52:26:1034:G:H1'	2.37	0.60
53:27:508:A:H3'	53:27:509:C:H5'	1.82	0.60
53:27:1070:A:H2'	53:27:1097:U:OP1	2.01	0.60
53:27:2215:C:H2'	53:27:2216:G:H8	1.67	0.60
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.60
1:A:216:ARG:HH11	1:A:216:ARG:HG3	1.66	0.60
9:I:96:ARG:HH11	9:I:99:ARG:HD3	1.66	0.60
12:L:3:GLN:HG3	12:L:92:TRP:NE1	2.16	0.60
40:14:59:LYS:HE3	52:26:972:C:O3'	2.01	0.60
42:16:120:ARG:HG2	52:26:37:U:H5"	1.83	0.60
53:27:394:C:H2'	53:27:395:U:O4'	2.01	0.60
53:27:494:G:O2'	53:27:495:G:H5'	2.01	0.60
53:27:1295:C:H2'	53:27:1296:G:C8	2.35	0.60
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.60
9:I:21:THR:HG23	9:I:61:LYS:HE3	1.83	0.60
11:K:48:ARG:HD3	53:27:666:A:H4'	1.83	0.60
53:27:547:A:H4'	53:27:548:G:N7	2.17	0.60
53:27:1062:G:H2'	53:27:1063:G:C8	2.36	0.60
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.60
20:T:27:VAL:HG22	20:T:28:LEU:N	2.15	0.60
41:15:92:ARG:HG3	41:15:93:GLU:H	1.66	0.60
52:26:1345:U:H5"	52:26:1346:A:OP1	2.00	0.60
53:27:1542:U:H2'	53:27:1543:G:O4'	2.01	0.60
53:27:2319:G:H4'	53:27:2321:U:O4	2.01	0.60
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.00	0.60
4:D:90:LEU:HD12	4:D:90:LEU:O	2.02	0.60
6:F:73:ASN:HA	6:F:108:VAL:HG21	1.82	0.60
8:H:27:LEU:HD22	8:H:32:VAL:HB	1.84	0.60
14:N:49:VAL:HG11	14:N:81:ARG:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:56:LEU:HD23	32:6:59:ILE:HD11	1.81	0.60
34:8:169:TRP:CD1	34:8:185:PRO:HG3	2.37	0.60
52:26:1219:A:H2'	52:26:1220:G:H8	1.66	0.60
53:27:554:U:H2'	53:27:555:G:O4'	2.02	0.60
53:27:1344:U:H3'	53:27:1345:C:H5'	1.84	0.60
54:28:119:A:H2'	54:28:120:A:H4'	1.83	0.60
56:30:16:U:O2'	56:30:60:U:H1'	2.02	0.60
1:A:43:ASN:HB3	1:A:49:THR:HG21	1.82	0.60
3:C:31:VAL:HG21	3:C:104:ALA:HB2	1.83	0.60
3:C:192:ALA:O	3:C:196:VAL:HG23	2.02	0.60
52:26:918:A:H2'	52:26:919:A:C8	2.35	0.60
53:27:1664:A:H61	53:27:1996:C:N4	1.97	0.60
54:28:62:C:H2'	54:28:63:C:C6	2.37	0.60
56:30:76:A:H8	59:33:410:THR:HG21	1.67	0.60
59:33:267:ASN:H	59:33:267:ASN:HD22	1.49	0.60
26:Z:20:ASN:HB2	26:Z:39:LYS:HE3	1.82	0.60
34:8:151:GLN:O	34:8:153:ARG:N	2.35	0.60
35:9:105:ILE:HG13	35:9:105:ILE:O	2.01	0.60
52:26:264:C:H2'	52:26:265:G:O4'	2.02	0.60
52:26:379:C:H2'	52:26:380:G:C8	2.37	0.60
52:26:455:G:H2'	52:26:456:A:C8	2.37	0.60
52:26:695:A:H2'	52:26:696:A:C8	2.37	0.60
53:27:657:U:H2'	53:27:658:U:C6	2.37	0.60
56:30:4:C:H2'	56:30:5:G:H8	1.67	0.60
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.60
1:A:204:LEU:HD22	1:A:209:ALA:HB1	1.81	0.60
1:A:244:VAL:HG12	1:A:250:GLN:HA	1.83	0.60
3:C:79:ARG:HH21	53:27:448:U:H5'	1.66	0.60
4:D:141:ASP:HB3	4:D:144:LYS:HD3	1.83	0.60
17:Q:85:LYS:HE3	53:27:815:C:OP2	2.01	0.60
25:Y:9:THR:HG23	25:Y:10:ARG:HG3	1.84	0.60
36:10:44:ARG:HA	36:10:58:HIS:HA	1.83	0.60
39:13:122:ARG:HB2	52:26:1349:A:H5"	1.82	0.60
42:16:27:PRO:C	42:16:28:GLN:HG3	2.21	0.60
52:26:1225:A:H5'	52:26:1226:C:OP2	2.02	0.60
53:27:607:U:O4	53:27:620:G:H5'	2.02	0.60
58:32:1:C:H2'	58:32:2:G:C8	2.37	0.60
9:I:113:PRO:HD2	53:27:558:U:OP1	2.02	0.60
39:13:27:ILE:HA	39:13:62:LEU:HD11	1.84	0.60
40:14:6:ILE:HD11	40:14:79:PRO:HA	1.83	0.60
52:26:793:U:H5'	52:26:794:A:H5"	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:164:C:H2'	53:27:165:A:O4'	2.02	0.60
53:27:2070:A:H2'	53:27:2071:A:H8	1.65	0.60
53:27:2153:C:H2'	53:27:2154:A:C8	2.37	0.60
56:30:43:C:O2'	56:30:44:G:H5'	2.01	0.60
56:30:76:A:H2'	59:33:431:ILE:HD13	1.84	0.60
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.60
18:R:1:MET:HG3	18:R:2:GLU:H	1.66	0.59
23:W:2:ARG:HD2	23:W:29:LEU:HD22	1.84	0.59
36:10:55:HIS:O	36:10:56:LYS:HB2	2.02	0.59
46:20:61:VAL:HG21	46:20:67:ILE:HD11	1.84	0.59
53:27:580:U:H2'	53:27:581:C:C6	2.37	0.59
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.59
2:B:16:THR:OG1	2:B:20:VAL:HB	2.03	0.59
8:H:11:GLN:HE21	8:H:55:PRO:HB3	1.67	0.59
11:K:17:LYS:HD3	53:27:663:G:H5"	1.83	0.59
19:S:29:THR:HG23	19:S:85:VAL:C	2.22	0.59
31:5:3:VAL:HG21	53:27:2539:C:H5'	1.83	0.59
33:7:63:ILE:HG21	33:7:96:VAL:HG23	1.84	0.59
40:14:40:ILE:HB	40:14:73:LEU:HB3	1.83	0.59
52:26:21:G:H2'	52:26:22:G:C8	2.36	0.59
52:26:129:A:H1'	52:26:130:A:C8	2.37	0.59
52:26:177:G:H2'	52:26:178:C:H6	1.67	0.59
53:27:871:U:H2'	53:27:872:U:C6	2.37	0.59
53:27:1139:G:O2'	53:27:1140:C:H5'	2.02	0.59
2:B:81:GLU:OE1	53:27:2636:C:H4'	2.01	0.59
2:B:122:VAL:CG2	2:B:141:ARG:HH21	2.12	0.59
7:G:8:LYS:HG2	53:27:1046:A:C6	2.37	0.59
20:T:40:LEU:HD22	20:T:59:GLU:HB3	1.83	0.59
22:V:34:VAL:HG12	22:V:36:GLN:H	1.67	0.59
34:8:120:LYS:HG2	34:8:130:ASN:HB2	1.84	0.59
47:21:19:SER:HB3	47:21:70:LYS:NZ	2.18	0.59
52:26:1478:U:H2'	52:26:1479:C:C6	2.38	0.59
53:27:547:A:H5"	53:27:548:G:OP1	2.03	0.59
53:27:889:C:H2'	53:27:890:C:H6	1.66	0.59
59:33:615:PRO:HB3	59:33:635:ARG:CB	2.32	0.59
3:C:110:SER:O	3:C:114:ARG:HG3	2.03	0.59
24:X:42:LEU:O	24:X:46:VAL:HG23	2.02	0.59
27:1:2:VAL:HG12	27:1:3:GLN:H	1.66	0.59
32:6:83:ALA:CB	32:6:90:PHE:HB3	2.33	0.59
52:26:85:U:H5"	52:26:86:G:O4'	2.03	0.59
52:26:104:G:H2'	52:26:105:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1118:U:H2'	52:26:1119:C:C6	2.37	0.59
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.59
8:H:60:VAL:HG12	8:H:61:TYR:H	1.67	0.59
13:M:90:ARG:HH12	13:M:116:VAL:HG11	1.67	0.59
18:R:93:ALA:HB2	53:27:1614:A:N1	2.17	0.59
43:17:18:LEU:CD1	43:17:33:LEU:HD11	2.28	0.59
52:26:884:U:H4'	52:26:885:G:C5'	2.32	0.59
53:27:1444:G:H2'	53:27:1445:G:H8	1.66	0.59
53:27:1506:U:H2'	53:27:1507:C:C6	2.37	0.59
53:27:2221:G:O2'	53:27:2222:C:H5'	2.02	0.59
3:C:58:LYS:HD3	3:C:62:GLN:HB2	1.85	0.59
5:E:153:PRO:HG3	5:E:161:VAL:O	2.02	0.59
8:H:73:PRO:HG2	8:H:78:LEU:HD21	1.85	0.59
9:I:81:ILE:HG23	9:I:82:GLY:N	2.17	0.59
14:N:11:ALA:HB2	14:N:96:GLY:N	2.17	0.59
17:Q:79:ARG:HE	17:Q:80:ARG:HH21	1.51	0.59
33:7:199:VAL:HG22	33:7:201:ILE:HD11	1.83	0.59
37:11:15:PRO:HA	39:13:45:MET:SD	2.43	0.59
38:12:80:PRO:HG2	52:26:878:A:H5"	1.84	0.59
39:13:123:ARG:HD3	39:13:124:PRO:HD2	1.83	0.59
41:15:83:VAL:HB	41:15:109:ILE:HA	1.84	0.59
41:15:111:ASP:CB	51:25:19:LYS:HZ1	2.14	0.59
53:27:2116:G:O6	53:27:2165:C:H1'	2.02	0.59
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.59
3:C:1:MET:HG2	3:C:16:GLU:HA	1.85	0.59
17:Q:10:LYS:NZ	53:27:994:C:H1'	2.18	0.59
20:T:3:LYS:CD	20:T:82:VAL:HB	2.32	0.59
35:9:51:LYS:HZ2	52:26:1080:A:P	2.26	0.59
52:26:269:C:H2'	52:26:270:A:C8	2.37	0.59
52:26:715:A:H2'	52:26:716:A:C8	2.38	0.59
52:26:737:C:H2'	52:26:738:C:H6	1.68	0.59
52:26:1256:A:H1'	52:26:1258:G:C5	2.36	0.59
52:26:1379:G:O2'	52:26:1380:U:H5'	2.01	0.59
4:D:61:GLY:HA3	4:D:94:ARG:NH1	2.17	0.59
6:F:53:GLU:HA	6:F:57:LYS:HE3	1.85	0.59
16:P:48:ASP:HA	16:P:51:GLN:CB	2.33	0.59
44:18:45:LEU:CD2	49:23:12:LEU:HD21	2.33	0.59
46:20:8:ARG:HD3	46:20:17:TYR:CE1	2.38	0.59
47:21:64:ARG:HD2	52:26:264:C:C4'	2.31	0.59
53:27:215:G:C4'	53:27:216:A:H4'	2.32	0.59
53:27:1297:C:OP1	53:27:2710:C:H4'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.59
8:H:32:VAL:HG13	8:H:64:ARG:HD2	1.84	0.59
8:H:49:GLU:HG3	8:H:52:LEU:HD12	1.84	0.59
19:S:73:ARG:HH11	53:27:456:C:H2'	1.68	0.59
22:V:22:PHE:CD2	53:27:922:C:H1'	2.38	0.59
37:11:80:GLY:HA3	55:29:12:A:O2'	2.01	0.59
39:13:112:ARG:NH1	39:13:114:LYS:HG2	2.17	0.59
42:16:109:ARG:HB2	42:16:118:VAL:HG21	1.85	0.59
49:23:51:HIS:HA	49:23:56:HIS:HA	1.84	0.59
50:24:6:ALA:O	50:24:9:ARG:HB3	2.02	0.59
51:25:28:LEU:O	51:25:32:ARG:HB3	2.01	0.59
52:26:246:A:H4'	52:26:247:G:OP1	2.03	0.59
53:27:644:A:C2	53:27:2369:A:H1'	2.38	0.59
53:27:897:C:H2'	53:27:898:C:C6	2.38	0.59
53:27:1863:G:H2'	53:27:1864:U:O4'	2.03	0.59
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.59
59:33:697:VAL:HG22	59:33:712:MET:HE1	1.84	0.59
2:B:62:LYS:HB3	2:B:63:PRO:HD3	1.85	0.59
2:B:115:GLY:O	13:M:3:HIS:NE2	2.36	0.59
7:G:4:ASN:O	7:G:8:LYS:HG3	2.03	0.59
8:H:14:ALA:HB1	8:H:49:GLU:O	2.03	0.59
8:H:60:VAL:HG12	8:H:61:TYR:N	2.18	0.59
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.68	0.59
18:R:4:ILE:HG22	18:R:106:VAL:HG22	1.84	0.59
35:9:22:LYS:HB3	35:9:29:ILE:HG22	1.85	0.59
52:26:166:U:H2'	52:26:167:A:C8	2.38	0.59
53:27:64:A:H2'	53:27:65:U:C6	2.38	0.59
53:27:2368:C:H2'	53:27:2369:A:H8	1.68	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.03	0.59
53:27:2800:A:C2	53:27:2895:G:H1'	2.38	0.59
57:31:6:G:O2'	57:31:7:G:H5'	2.03	0.59
7:G:27:VAL:HG23	7:G:110:ALA:HB1	1.85	0.58
17:Q:45:GLU:CD	17:Q:46:GLU:H	2.06	0.58
32:6:30:ILE:HG22	32:6:40:ILE:HG12	1.85	0.58
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.32	0.58
41:15:97:ARG:HH12	51:25:13:VAL:HG23	1.68	0.58
53:27:419:U:H2'	53:27:420:C:C6	2.38	0.58
59:33:641:LEU:O	59:33:645:ARG:HG3	2.02	0.58
1:A:7:PRO:HB3	1:A:13:ARG:HG3	1.85	0.58
12:L:12:MET:HG2	12:L:72:PRO:HG2	1.84	0.58
32:6:65:LYS:HD3	32:6:153:MET:HG3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:36:ALA:N	34:8:37:PRO:CD	2.62	0.58
46:20:40:ASN:HD22	46:20:46:LYS:NZ	2.01	0.58
52:26:707:U:H2'	52:26:708:C:C6	2.38	0.58
53:27:1387:A:H2'	53:27:1388:G:H8	1.68	0.58
53:27:1464:G:H2'	53:27:1465:G:C8	2.38	0.58
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.58
1:A:24:HIS:CG	1:A:79:ARG:HE	2.20	0.58
8:H:23:VAL:HA	8:H:26:ALA:CB	2.32	0.58
22:V:35:ARG:HD2	22:V:54:THR:HG23	1.83	0.58
32:6:162:VAL:HG12	32:6:164:ASP:H	1.68	0.58
35:9:110:MET:HG3	35:9:139:THR:HG21	1.83	0.58
40:14:12:ALA:HB2	40:14:96:VAL:HG22	1.85	0.58
40:14:65:TYR:HA	44:18:98:ALA:H	1.66	0.58
50:24:23:ARG:HH12	52:26:176:C:H4'	1.67	0.58
52:26:98:A:H2'	52:26:99:C:C6	2.38	0.58
53:27:848:C:H2'	53:27:849:A:H8	1.68	0.58
53:27:1499:C:H2'	53:27:1500:G:H8	1.68	0.58
53:27:2215:C:H2'	53:27:2216:G:C8	2.38	0.58
53:27:2508:G:H1	53:27:2580:U:H3	1.52	0.58
59:33:79:ALA:O	59:33:82:PHE:CE1	2.57	0.58
4:D:147:ARG:HG2	4:D:148:VAL:H	1.68	0.58
6:F:3:VAL:HA	6:F:38:PRO:HA	1.85	0.58
13:M:63:ARG:HD2	13:M:80:PHE:CE2	2.37	0.58
41:15:27:ASN:HB3	41:15:56:LYS:NZ	2.19	0.58
48:22:40:PRO:HA	52:26:720:C:H5"	1.86	0.58
52:26:234:C:H2'	52:26:235:C:C6	2.39	0.58
52:26:593:U:H2'	52:26:594:U:C6	2.38	0.58
53:27:817:C:H2'	53:27:818:G:O4'	2.02	0.58
53:27:832:U:H2'	53:27:833:A:C8	2.39	0.58
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.58
3:C:69:ARG:HH21	53:27:2502:G:H22	1.49	0.58
7:G:47:GLU:HB3	7:G:51:TYR:HE2	1.68	0.58
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.85	0.58
42:16:28:GLN:HE22	52:26:34:C:H1'	1.69	0.58
49:23:77:ARG:HH11	52:26:1222:G:H5"	1.68	0.58
52:26:1006:G:H2'	52:26:1007:U:C6	2.39	0.58
52:26:1517:G:C2'	52:26:1518:A:H5'	2.33	0.58
53:27:1771:C:H2'	53:27:1772:A:C8	2.38	0.58
54:28:29:A:H2'	54:28:30:C:C6	2.38	0.58
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.58
3:C:65:THR:HB	3:C:67:ARG:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:5:LEU:HD22	6:F:12:LEU:HD11	1.85	0.58
9:I:8:PRO:HG3	9:I:48:VAL:HG13	1.84	0.58
9:I:57:LEU:HD21	9:I:130:HIS:HB3	1.86	0.58
33:7:109:GLU:HB2	33:7:143:LEU:HD13	1.85	0.58
39:13:115:VAL:HG21	40:14:62:ARG:HB2	1.85	0.58
52:26:20:U:H2'	52:26:21:G:O4'	2.03	0.58
53:27:2508:G:H2'	53:27:2509:G:C8	2.38	0.58
53:27:2537:U:H2'	53:27:2538:C:C6	2.38	0.58
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.58
59:33:634:HIS:ND1	59:33:641:LEU:HB2	2.17	0.58
5:E:25:ILE:HD12	5:E:74:MET:CB	2.34	0.58
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.18	0.58
40:14:59:LYS:HD3	40:14:62:ARG:NH2	2.19	0.58
42:16:43:LYS:HB3	42:16:44:PRO:HD3	1.85	0.58
53:27:1204:A:H4'	53:27:1205:A:H5"	1.84	0.58
53:27:2808:G:H5'	53:27:2809:A:OP1	2.03	0.58
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.58
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.58
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
1:A:74:PRO:HA	1:A:116:GLN:HB3	1.86	0.58
4:D:134:GLN:OE1	4:D:149:ARG:HB2	2.03	0.58
7:G:11:ILE:HG13	53:27:1046:A:H2	1.69	0.58
34:8:96:ARG:O	34:8:100:VAL:HG23	2.04	0.58
50:24:2:ASN:OD1	50:24:3:ILE:N	2.34	0.58
52:26:81:A:HO2'	52:26:82:G:H8	1.52	0.58
53:27:140:C:O2	53:27:140:C:H2'	2.03	0.58
53:27:2682:A:O2'	53:27:2683:C:H5'	2.03	0.58
53:27:2756:U:H1'	53:27:2757:A:H5"	1.86	0.58
53:27:2805:C:H2'	53:27:2806:C:H6	1.68	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.58
1:A:270:ARG:NH2	53:27:1798:U:OP2	2.35	0.58
4:D:73:VAL:HG22	4:D:78:ILE:HD11	1.85	0.58
11:K:103:ILE:HD12	53:27:259:G:H4'	1.84	0.58
17:Q:45:GLU:CG	17:Q:46:GLU:H	2.16	0.58
34:8:122:ILE:HD12	34:8:144:ILE:HG13	1.85	0.58
36:10:7:VAL:HG22	36:10:61:LEU:HG	1.85	0.58
41:15:23:HIS:HB3	41:15:30:ILE:CG2	2.34	0.58
53:27:598:U:H2'	53:27:599:A:C8	2.39	0.58
53:27:1434:A:H2'	53:27:1435:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.58
2:B:13:ARG:HH11	15:O:55:HIS:HA	1.69	0.58
7:G:8:LYS:HG2	53:27:1046:A:N6	2.19	0.58
7:G:29:ASP:O	7:G:81:LEU:HD21	2.04	0.58
9:I:117:ALA:HA	9:I:120:ARG:HH21	1.68	0.58
16:P:107:ALA:O	17:Q:48:LYS:HE3	2.04	0.58
32:6:182:VAL:HG23	32:6:196:ASP:H	1.68	0.58
52:26:398:U:H2'	52:26:399:G:H8	1.68	0.58
52:26:1162:C:H2'	52:26:1163:A:C8	2.39	0.58
53:27:214:G:H2'	53:27:215:G:C8	2.38	0.58
53:27:839:U:H2'	53:27:840:C:C6	2.38	0.58
53:27:1385:A:H1'	53:27:1386:C:C6	2.38	0.58
53:27:1440:U:H2'	53:27:1441:G:H8	1.68	0.58
53:27:2786:U:H2'	53:27:2787:C:H6	1.69	0.58
56:30:21:A:N6	56:30:46:G:H2'	2.19	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58
59:33:616:ILE:O	59:33:618:GLY:N	2.36	0.58
59:33:672:VAL:CG1	59:33:707:LEU:HD21	2.34	0.58
7:G:58:THR:HB	7:G:82:ILE:HB	1.86	0.57
20:T:6:ARG:H	53:27:85:G:P	2.25	0.57
33:7:96:VAL:HB	33:7:97:PRO:CD	2.30	0.57
34:8:56:GLU:HG3	34:8:198:LEU:CD1	2.33	0.57
36:10:6:ILE:HD11	36:10:71:ILE:CD1	2.34	0.57
40:14:56:HIS:O	40:14:57:VAL:HG12	2.04	0.57
47:21:14:ASP:O	47:21:16:MET:N	2.37	0.57
52:26:540:G:H2'	52:26:541:G:C8	2.39	0.57
52:26:955:U:H2'	52:26:956:U:H6	1.68	0.57
53:27:1320:C:O2'	53:27:1321:A:H5"	2.03	0.57
53:27:2732:G:O2'	53:27:2733:A:H5'	2.03	0.57
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.57
29:3:35:ARG:HG3	29:3:35:ARG:HH11	1.67	0.57
33:7:122:GLN:O	33:7:127:VAL:HG12	2.04	0.57
43:17:65:GLU:CG	43:17:66:GLY:H	2.10	0.57
52:26:309:A:H2'	52:26:310:G:C8	2.40	0.57
52:26:321:A:O2'	52:26:322:C:H5'	2.03	0.57
52:26:407:U:H2'	52:26:408:A:C8	2.39	0.57
52:26:672:U:H2'	52:26:673:A:C8	2.38	0.57
52:26:1259:C:H3'	52:26:1260:G:C5'	2.28	0.57
53:27:488:G:N2	53:27:491:G:H5"	2.18	0.57
56:30:25:C:H2'	56:30:26:A:O4'	2.03	0.57
58:32:51:C:H2'	58:32:52:G:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:294:GLY:O	59:33:298:THR:HG23	2.04	0.57
3:C:55:SER:HB3	53:27:468:G:H5"	1.86	0.57
5:E:25:ILE:HD12	5:E:74:MET:HB2	1.85	0.57
35:9:20:VAL:HG23	35:9:31:SER:HB2	1.86	0.57
35:9:110:MET:HG3	35:9:139:THR:CG2	2.34	0.57
41:15:15:VAL:HG12	41:15:76:TYR:HB3	1.86	0.57
52:26:229:U:H2'	52:26:230:G:H8	1.69	0.57
52:26:1028:C:H2'	52:26:1029:U:O4'	2.04	0.57
52:26:1280:A:O2'	52:26:1281:C:H5'	2.03	0.57
53:27:2715:C:H2'	53:27:2716:C:O4'	2.04	0.57
53:27:2799:A:C2'	53:27:2800:A:H5'	2.34	0.57
1:A:224:MET:O	1:A:232:GLY:HA3	2.05	0.57
2:B:29:VAL:O	2:B:185:ASN:HB3	2.05	0.57
19:S:59:ASN:HB2	19:S:84:TYR:HB2	1.86	0.57
22:V:15:LYS:HB2	22:V:17:LEU:CD1	2.34	0.57
32:6:162:VAL:HG12	32:6:163:ILE:H	1.68	0.57
42:16:88:ASP:HB2	52:26:523:A:N1	2.20	0.57
45:19:86:LEU:O	45:19:87:ARG:HB2	2.03	0.57
46:20:76:LYS:HA	46:20:79:ASN:ND2	2.19	0.57
53:27:44:A:H2'	53:27:45:G:O4'	2.04	0.57
53:27:1924:C:H2'	53:27:1925:C:C6	2.39	0.57
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.34	0.57
59:33:461:ILE:CG2	59:33:463:ILE:HG23	2.34	0.57
4:D:26:GLN:HE21	54:28:57:A:H4'	1.70	0.57
10:J:14:SER:OG	10:J:86:LEU:HD12	2.04	0.57
12:L:50:ARG:HG3	12:L:51:ARG:N	2.19	0.57
34:8:122:ILE:HG23	34:8:143:SER:O	2.05	0.57
52:26:460:A:H2'	52:26:461:A:C8	2.40	0.57
52:26:788:U:H2'	52:26:789:U:O4'	2.04	0.57
52:26:1306:A:H62	52:26:1331:G:H1'	1.69	0.57
53:27:1165:A:H2'	53:27:1166:G:C8	2.38	0.57
53:27:1210:G:OP1	53:27:1212:G:H5'	2.03	0.57
53:27:2087:G:H2'	53:27:2088:A:H8	1.69	0.57
53:27:2888:C:H2'	53:27:2889:C:C6	2.40	0.57
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.57
5:E:17:LYS:HB2	5:E:24:THR:HB	1.85	0.57
29:3:34:ARG:HD3	53:27:467:G:OP2	2.04	0.57
34:8:181:PHE:HZ	34:8:184:LYS:HA	1.70	0.57
35:9:55:VAL:HG23	35:9:56:PRO:HD3	1.86	0.57
38:12:5:PRO:HB2	38:12:32:LYS:HZ2	1.69	0.57
40:14:10:LEU:HD12	40:14:10:LEU:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:5:U:H4'	52:26:6:G:C4	2.40	0.57
53:27:946:C:H2'	53:27:947:A:H8	1.70	0.57
53:27:1278:C:H2'	53:27:1279:G:H8	1.70	0.57
53:27:2148:G:H2'	53:27:2149:U:C6	2.38	0.57
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.68	0.57
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.57
3:C:99:LYS:NZ	53:27:601:C:H4'	2.20	0.57
4:D:22:ASN:N	4:D:26:GLN:OE1	2.37	0.57
7:G:53:ARG:HD2	7:G:86:MET:HB2	1.86	0.57
11:K:78:ARG:CZ	11:K:113:ALA:HB1	2.35	0.57
35:9:94:PHE:O	35:9:124:ALA:HA	2.04	0.57
37:11:74:VAL:CG1	37:11:143:MET:HB3	2.34	0.57
52:26:4:U:H2'	52:26:6:G:OP1	2.04	0.57
52:26:166:U:H2'	52:26:167:A:H8	1.70	0.57
52:26:314:C:O2'	52:26:315:A:H5'	2.05	0.57
53:27:441:U:O2'	53:27:442:G:H5'	2.05	0.57
53:27:891:G:H2'	53:27:892:A:C8	2.39	0.57
53:27:1066:U:O2	53:27:1069:A:H2'	2.03	0.57
53:27:1857:G:H21	53:27:1884:G:H2'	1.70	0.57
53:27:1874:C:H2'	53:27:1875:G:O4'	2.05	0.57
53:27:1936:A:H2	53:27:1943:U:N3	2.02	0.57
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.57
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.69	0.57
6:F:99:ILE:HD13	6:F:117:LEU:HD11	1.87	0.57
16:P:84:LYS:HZ1	16:P:116:LEU:HA	1.67	0.57
19:S:37:ASP:CG	19:S:38:ALA:H	2.08	0.57
32:6:185:ILE:HD12	32:6:199:ILE:HB	1.85	0.57
37:11:24:LYS:HA	37:11:27:ASN:HD22	1.67	0.57
46:20:78:VAL:O	46:20:80:LYS:N	2.38	0.57
50:24:41:GLY:HA2	50:24:85:LEU:HD11	1.86	0.57
52:26:194:C:O2'	52:26:195:A:H5'	2.04	0.57
52:26:697:U:H2'	52:26:698:G:H5'	1.86	0.57
53:27:609:A:H2'	53:27:610:C:O4'	2.04	0.57
53:27:1520:U:H2'	53:27:1521:G:O4'	2.05	0.57
53:27:1683:U:H2'	53:27:1684:G:C8	2.39	0.57
53:27:2281:A:O2'	53:27:2282:G:H5'	2.04	0.57
53:27:2393:U:H2'	53:27:2394:C:O4'	2.04	0.57
53:27:2805:C:H2'	53:27:2806:C:C6	2.39	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
2:B:82:PHE:HE1	2:B:202:ILE:HG23	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:133:LEU:O	3:C:137:LYS:HG3	2.04	0.57
27:1:18:HIS:ND1	53:27:2046:G:H1'	2.20	0.57
32:6:95:TRP:CZ3	32:6:171:ALA:HA	2.39	0.57
34:8:171:GLU:HB3	34:8:180:THR:HB	1.87	0.57
39:13:35:GLU:H	39:13:35:GLU:CD	2.09	0.57
40:14:65:TYR:C	44:18:98:ALA:HB2	2.25	0.57
41:15:111:ASP:HB2	51:25:16:ARG:NH1	2.20	0.57
45:19:88:ARG:HD3	53:27:714:U:H6	1.70	0.57
53:27:172:A:H2'	53:27:173:A:H8	1.70	0.57
53:27:1511:G:H2'	53:27:1512:C:C6	2.39	0.57
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.57
59:33:267:ASN:HD22	59:33:267:ASN:N	2.03	0.57
9:I:52:ASP:O	9:I:54:ILE:HD12	2.04	0.57
34:8:8:LEU:HD21	34:8:31:CYS:CA	2.34	0.57
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.86	0.57
37:11:58:LEU:HD12	37:11:59:GLU:H	1.70	0.57
48:22:17:VAL:HG22	48:22:18:GLN:N	2.19	0.57
49:23:18:VAL:O	49:23:22:VAL:HG23	2.05	0.57
52:26:338:A:H2'	52:26:339:C:O4'	2.04	0.57
52:26:1004:A:H2'	52:26:1005:A:O4'	2.04	0.57
53:27:492:A:H2'	53:27:493:G:O4'	2.04	0.57
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.57
4:D:104:THR:O	26:Z:38:SER:HB3	2.05	0.56
7:G:27:VAL:O	7:G:83:ALA:N	2.38	0.56
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.15	0.56
13:M:72:ASP:OD2	13:M:75:ILE:HG12	2.04	0.56
15:O:52:ARG:HG2	15:O:52:ARG:HH11	1.70	0.56
18:R:82:MET:HB3	18:R:84:ARG:NH2	2.20	0.56
31:5:36:ARG:HD2	53:27:2742:G:OP1	2.05	0.56
34:8:103:ARG:O	34:8:167:PRO:HG2	2.05	0.56
39:13:56:MET:H	39:13:59:LYS:HD2	1.68	0.56
52:26:408:A:H2'	52:26:409:U:O4'	2.04	0.56
52:26:437:U:O2'	52:26:438:U:H5'	2.04	0.56
52:26:628:G:H2'	52:26:629:A:C8	2.39	0.56
52:26:666:G:H2'	52:26:667:G:H8	1.69	0.56
53:27:20:C:H2'	53:27:21:A:C8	2.38	0.56
53:27:704:G:H1'	53:27:727:A:N6	2.20	0.56
53:27:1331:G:O2'	53:27:1332:G:H5"	2.04	0.56
53:27:2588:G:H2'	53:27:2589:A:O4'	2.04	0.56
53:27:2648:G:H2'	53:27:2649:C:O4'	2.05	0.56
56:30:12:U:C2	56:30:13:C:H1'	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.56
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.56
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.56
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.56
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.56
1:A:75:ALA:HB2	1:A:95:TYR:CD1	2.39	0.56
10:J:91:SER:O	10:J:93:GLN:HG3	2.05	0.56
14:N:53:THR:HG22	14:N:65:THR:HB	1.87	0.56
32:6:94:ARG:HE	52:26:1100:C:P	2.29	0.56
32:6:212:TYR:O	32:6:216:VAL:HG23	2.05	0.56
35:9:153:ALA:O	35:9:158:LYS:HA	2.05	0.56
53:27:1118:C:H2'	53:27:1119:U:O4'	2.05	0.56
53:27:1685:C:H2'	53:27:1686:C:H6	1.71	0.56
53:27:2162:G:H2'	53:27:2163:A:O4'	2.05	0.56
53:27:2692:G:H2'	53:27:2693:G:C8	2.40	0.56
1:A:173:LEU:O	1:A:180:MET:HA	2.05	0.56
3:C:134:LEU:CD2	3:C:161:ALA:HB2	2.35	0.56
6:F:103:VAL:HG11	6:F:132:PHE:HE2	1.70	0.56
9:I:117:ALA:HA	9:I:120:ARG:NH2	2.20	0.56
9:I:124:VAL:HG12	9:I:125:TYR:N	2.21	0.56
10:J:2:ILE:HG23	10:J:6:THR:HG21	1.87	0.56
10:J:35:VAL:HG22	10:J:69:VAL:HB	1.86	0.56
11:K:95:LEU:HG	11:K:100:ILE:HD11	1.87	0.56
12:L:125:PRO:HG2	12:L:126:ILE:H	1.71	0.56
14:N:56:LYS:O	14:N:60:GLU:HG3	2.05	0.56
16:P:36:GLN:NE2	53:27:1252:G:H22	2.03	0.56
28:2:34:GLU:HG2	28:2:49:LYS:HG2	1.87	0.56
33:7:77:GLY:HA3	33:7:82:ASP:HB2	1.86	0.56
33:7:84:GLU:O	33:7:87:ARG:HB3	2.04	0.56
41:15:109:ILE:HD12	51:25:16:ARG:NE	2.21	0.56
42:16:32:VAL:O	42:16:33:CYS:HB3	2.04	0.56
43:17:7:ASN:ND2	43:17:17:ALA:O	2.37	0.56
43:17:94:LEU:HB3	43:17:95:PRO:HD2	1.85	0.56
52:26:229:U:H2'	52:26:230:G:C8	2.40	0.56
52:26:403:C:H2'	52:26:404:G:C8	2.39	0.56
52:26:632:U:H3'	52:26:633:G:H5'	1.87	0.56
52:26:1342:C:H2'	52:26:1343:G:C8	2.40	0.56
53:27:208:C:H2'	53:27:209:C:C6	2.40	0.56
53:27:679:C:H2'	53:27:680:C:H6	1.70	0.56
53:27:873:C:H2'	53:27:874:G:C8	2.39	0.56
53:27:1052:C:H2'	53:27:1053:C:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1052:C:C2’	53:27:1053:C:H5’	2.36	0.56
53:27:1092:C:H2’	53:27:1093:G:O4’	2.05	0.56
53:27:1097:U:H2’	53:27:1098:A:O4’	2.05	0.56
53:27:1152:C:H2’	53:27:1153:C:H6	1.70	0.56
53:27:1197:G:H2’	53:27:1198:U:H6	1.70	0.56
53:27:1352:U:O2’	53:27:1353:A:H5’	2.05	0.56
53:27:2737:G:H2’	53:27:2738:A:C8	2.40	0.56
58:32:60:U:H2’	58:32:61:C:C5	2.41	0.56
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.56
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.56
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.56
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.56
59:33:676:ARG:CA	59:33:679:LEU:HB2	2.35	0.56
5:E:93:TYR:CD1	5:E:106:LEU:HA	2.41	0.56
13:M:3:HIS:ND1	53:27:2820:A:H4’	2.20	0.56
16:P:55:GLN:O	16:P:58:GLN:HB3	2.05	0.56
28:2:16:THR:OG1	28:2:41:VAL:HG11	2.05	0.56
40:14:53:ILE:HG13	44:18:84:ARG:CD	2.35	0.56
49:23:55:GLN:NE2	59:33:594:ASN:HD21	2.03	0.56
52:26:721:G:H4’	52:26:722:G:O4’	2.05	0.56
52:26:994:A:C8	52:26:1216:A:H4’	2.40	0.56
53:27:208:C:H2’	53:27:209:C:H6	1.71	0.56
53:27:1118:C:H3’	53:27:1119:U:H5”	1.87	0.56
53:27:1765:U:H2’	53:27:1766:G:H8	1.70	0.56
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.35	0.56
59:33:610:ALA:HB2	59:33:634:HIS:HA	1.88	0.56
6:F:22:LYS:CD	53:27:2093:G:H5’	2.35	0.56
14:N:74:VAL:O	14:N:78:VAL:HG23	2.05	0.56
32:6:124:THR:HB	32:6:127:LYS:HB2	1.88	0.56
33:7:71:ARG:O	33:7:75:VAL:HG23	2.06	0.56
40:14:41:PRO:HB2	52:26:1151:A:H1’	1.87	0.56
41:15:27:ASN:HB3	41:15:56:LYS:HZ3	1.71	0.56
53:27:1076:C:H2’	53:27:1077:A:H8	1.70	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
59:33:541:GLU:HA	59:33:544:ALA:HB3	1.86	0.56
59:33:635:ARG:O	59:33:641:LEU:HD13	2.05	0.56
4:D:120:SER:HB2	4:D:127:TYR:CE1	2.40	0.56
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.46	0.56
9:I:30:THR:HG21	53:27:1005:C:O2’	2.06	0.56
10:J:23:LYS:NZ	53:27:2562:U:H1’	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:79:LEU:HB3	11:K:115:GLU:O	2.06	0.56
34:8:70:GLN:O	34:8:73:ASN:HB3	2.05	0.56
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.87	0.56
40:14:36:VAL:HG22	40:14:38:GLY:H	1.71	0.56
43:17:28:ARG:HH21	43:17:62:PHE:HB2	1.70	0.56
52:26:211:G:H2'	52:26:212:G:H5'	1.88	0.56
52:26:335:C:H2'	52:26:336:A:H8	1.71	0.56
53:27:796:C:H2'	53:27:797:G:H8	1.70	0.56
53:27:2296:U:H5"	53:27:2297:A:OP1	2.06	0.56
58:32:48:C:H2'	58:32:59:A:C1'	2.36	0.56
58:32:48:C:H2'	58:32:59:A:C4'	2.36	0.56
59:33:427:PHE:CE2	59:33:461:ILE:HG13	2.41	0.56
1:A:65:ASP:HB3	1:A:101:ARG:HD3	1.86	0.56
1:A:124:LYS:HB3	1:A:127:ASN:HD22	1.71	0.56
4:D:98:PHE:HD1	4:D:101:ARG:HH11	1.54	0.56
10:J:38:ILE:HD11	10:J:112:PHE:HZ	1.70	0.56
15:O:2:ASN:ND2	53:27:2876:G:H5"	2.20	0.56
16:P:80:ASN:HB2	53:27:1151:A:O2'	2.06	0.56
17:Q:88:GLY:HA3	53:27:1225:G:OP1	2.06	0.56
20:T:3:LYS:HZ2	20:T:84:PHE:HE2	1.53	0.56
24:X:9:LYS:HB3	24:X:12:GLU:OE1	2.06	0.56
31:5:1:MET:HE1	53:27:2742:G:H5"	1.86	0.56
34:8:56:GLU:HG3	34:8:198:LEU:HD12	1.86	0.56
34:8:94:GLU:HA	34:8:99:ASN:ND2	2.21	0.56
36:10:67:PRO:HB2	36:10:69:GLU:OE1	2.06	0.56
39:13:6:TYR:CG	39:13:7:GLY:N	2.74	0.56
43:17:79:LEU:HD22	43:17:84:CYS:SG	2.46	0.56
48:22:54:LEU:O	48:22:58:ILE:HG12	2.05	0.56
52:26:170:U:O2'	52:26:171:A:H5'	2.05	0.56
52:26:825:A:H2'	52:26:826:C:C6	2.41	0.56
52:26:1160:G:H22	52:26:1176:A:H2	1.52	0.56
53:27:157:C:H2'	53:27:158:U:O4'	2.04	0.56
53:27:257:C:H2'	53:27:258:G:O4'	2.05	0.56
53:27:845:A:H3'	53:27:845:A:N3	2.21	0.56
53:27:1080:A:H2'	53:27:1081:U:H6	1.71	0.56
53:27:1177:G:H2'	53:27:1178:C:O4'	2.06	0.56
53:27:1186:G:H2'	53:27:1187:G:H8	1.71	0.56
53:27:2771:C:H2'	53:27:2772:C:C6	2.40	0.56
56:30:7:A:C3'	56:30:8:U:H5"	2.33	0.56
59:33:613:CYS:HB3	59:33:638:CYS:SG	2.46	0.56
16:P:2:ARG:HB2	53:27:1248:G:C5	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:38:ILE:HG22	20:T:39:ASN:N	2.21	0.56
20:T:48:VAL:O	20:T:53:GLN:HB3	2.06	0.56
30:4:51:LYS:HA	30:4:54:LEU:HB2	1.87	0.56
31:5:36:ARG:CG	31:5:37:GLN:N	2.69	0.56
32:6:74:ALA:HB1	32:6:206:ILE:HG22	1.87	0.56
32:6:100:LEU:HA	32:6:103:TRP:HB2	1.88	0.56
35:9:95:MET:HG2	35:9:124:ALA:HB2	1.87	0.56
36:10:78:PHE:HB3	36:10:87:SER:OG	2.05	0.56
52:26:489:C:H2'	52:26:490:C:C6	2.41	0.56
52:26:948:C:H2'	52:26:949:A:C8	2.37	0.56
52:26:1140:C:H2'	52:26:1141:C:C6	2.41	0.56
52:26:1432:G:H1'	52:26:1468:A:N6	2.20	0.56
53:27:286:U:H2'	53:27:287:G:H8	1.70	0.56
53:27:947:A:H2'	53:27:948:C:C6	2.40	0.56
53:27:1177:G:H2'	53:27:1178:C:C1'	2.35	0.56
53:27:1447:C:H2'	53:27:1448:G:C8	2.40	0.56
53:27:2131:U:OP1	53:27:2133:G:H4'	2.05	0.56
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.87	0.56
59:33:410:THR:HG22	59:33:427:PHE:CZ	2.37	0.56
2:B:115:GLY:N	53:27:2821:A:OP2	2.38	0.56
5:E:49:LEU:HD13	5:E:71:LEU:HD23	1.87	0.56
8:H:2:LYS:HE3	8:H:62:ALA:H	1.70	0.56
8:H:109:ALA:HB2	8:H:128:ILE:HG13	1.88	0.56
33:7:42:LEU:HD21	33:7:67:ILE:HD11	1.86	0.56
52:26:70:U:H4'	52:26:71:A:H8	1.69	0.56
52:26:736:C:H2'	52:26:737:C:C6	2.40	0.56
52:26:1088:G:H21	52:26:1167:A:N6	2.02	0.56
53:27:150:U:H2'	53:27:151:C:C6	2.41	0.56
53:27:176:A:O2'	53:27:177:G:H5'	2.06	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.56
1:A:51:ARG:O	1:A:52:HIS:ND1	2.39	0.56
9:I:71:ASP:O	9:I:73:VAL:N	2.39	0.56
16:P:38:VAL:O	16:P:41:ALA:HB3	2.06	0.56
18:R:59:GLU:HA	18:R:64:ALA:HA	1.88	0.56
35:9:59:ILE:O	35:9:63:MET:HG2	2.06	0.56
35:9:160:VAL:HG13	35:9:161:GLU:N	2.20	0.56
36:10:37:HIS:O	36:10:39:LEU:N	2.39	0.56
44:18:6:LYS:O	44:18:9:GLU:HB3	2.07	0.56
52:26:67:C:H2'	52:26:68:G:C8	2.41	0.56
53:27:280:U:H2'	53:27:281:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1827:U:O2'	53:27:1828:G:H5'	2.06	0.56
53:27:1912:A:N7	53:27:1917:U:O4	2.39	0.56
2:B:56:LYS:HZ1	53:27:2830:C:H5"	1.69	0.55
4:D:108:PRO:HG2	26:Z:38:SER:HA	1.88	0.55
6:F:42:LYS:HB3	6:F:46:PHE:CZ	2.41	0.55
11:K:51:GLU:HG3	11:K:56:PRO:HA	1.87	0.55
11:K:54:GLN:HE21	53:27:2428:G:N2	2.04	0.55
25:Y:13:ILE:HG22	25:Y:14:GLY:N	2.21	0.55
36:10:2:ARG:NE	36:10:68:GLN:HE21	2.03	0.55
37:11:87:PRO:HG3	37:11:148:LYS:HA	1.87	0.55
52:26:1248:A:H2'	52:26:1249:C:C6	2.41	0.55
53:27:645:C:H2'	53:27:647:G:N7	2.21	0.55
53:27:745:G:O2'	53:27:748:G:H1'	2.06	0.55
53:27:1146:C:H2'	53:27:1147:A:C8	2.41	0.55
53:27:2443:C:H2'	53:27:2444:G:C8	2.41	0.55
53:27:2552:U:H2'	53:27:2554:U:H5"	1.87	0.55
53:27:2673:G:H2'	53:27:2674:G:H8	1.71	0.55
53:27:2684:U:H2'	53:27:2685:G:O4'	2.06	0.55
58:32:39:C:H2'	58:32:40:C:C6	2.41	0.55
59:33:424:PRO:O	59:33:427:PHE:HB3	2.06	0.55
5:E:72:ASN:O	5:E:76:ILE:HG12	2.06	0.55
6:F:80:ILE:HG22	6:F:82:SER:H	1.71	0.55
24:X:15:ASN:O	24:X:19:LEU:HG	2.06	0.55
33:7:54:ILE:HG22	33:7:67:ILE:HG23	1.88	0.55
34:8:11:SER:HB2	34:8:16:THR:O	2.06	0.55
34:8:33:ILE:HG12	34:8:34:GLU:N	2.22	0.55
34:8:71:PHE:HA	34:8:74:TYR:CD2	2.40	0.55
43:17:13:HIS:CE1	52:26:1296:C:H5'	2.41	0.55
52:26:1299:A:H2'	52:26:1301:U:H1'	1.87	0.55
53:27:644:A:H2'	53:27:645:C:O4'	2.06	0.55
53:27:1133:A:H4'	53:27:1134:A:H5"	1.87	0.55
55:29:17:U:H2'	55:29:18:G:C8	2.41	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
1:A:213:ARG:NH2	53:27:1566:A:H5'	2.20	0.55
1:A:216:ARG:HG3	1:A:216:ARG:NH1	2.22	0.55
4:D:39:VAL:HG12	4:D:85:GLY:HA2	1.87	0.55
6:F:104:THR:HA	6:F:108:VAL:O	2.05	0.55
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.89	0.55
19:S:8:LEU:HD22	24:X:22:LEU:HA	1.87	0.55
19:S:12:ARG:HD2	24:X:29:ARG:HH21	1.71	0.55
19:S:15:HIS:H	19:S:32:LEU:HA	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:51:GLU:O	32:6:55:GLU:HG2	2.07	0.55
40:14:9:ARG:O	40:14:99:GLN:HB2	2.07	0.55
41:15:116:PRO:HB3	52:26:676:A:H1'	1.87	0.55
52:26:151:A:H2'	52:26:152:A:O4'	2.05	0.55
52:26:220:G:O2'	52:26:221:C:H5'	2.06	0.55
52:26:1026:G:N2	52:26:1027:C:N4	2.55	0.55
53:27:225:C:H2'	53:27:226:A:O4'	2.05	0.55
53:27:1105:U:H2'	53:27:1106:G:C8	2.40	0.55
53:27:1843:C:H2'	53:27:1844:C:H6	1.70	0.55
53:27:2834:G:H2'	53:27:2879:A:H61	1.71	0.55
4:D:114:ARG:HH21	26:Z:47:LYS:HG2	1.71	0.55
5:E:165:ASP:OD1	5:E:165:ASP:N	2.35	0.55
7:G:58:THR:HG21	7:G:83:ALA:N	2.21	0.55
8:H:3:LYS:O	8:H:7:TYR:HB2	2.07	0.55
25:Y:11:SER:OG	25:Y:13:ILE:HG13	2.07	0.55
33:7:63:ILE:CG2	33:7:96:VAL:HG23	2.36	0.55
34:8:143:SER:C	34:8:144:ILE:HD12	2.27	0.55
39:13:6:TYR:O	39:13:85:ALA:HA	2.07	0.55
39:13:112:ARG:HH11	39:13:114:LYS:HG2	1.71	0.55
50:24:29:THR:HG21	52:26:1458:G:OP1	2.07	0.55
52:26:593:U:H2'	52:26:594:U:H6	1.70	0.55
52:26:904:U:H2'	52:26:905:U:C6	2.41	0.55
53:27:1045:C:OP1	53:27:1046:A:H3'	2.06	0.55
56:30:18:G:N1	56:30:55:U:H1'	2.11	0.55
2:B:192:ALA:HB1	53:27:2680:U:H4'	1.88	0.55
6:F:62:LEU:HA	6:F:65:ALA:HB3	1.88	0.55
6:F:76:GLU:HB3	6:F:142:VAL:HG22	1.86	0.55
8:H:35:MET:HG3	8:H:36:GLU:N	2.19	0.55
9:I:140:LEU:HG	9:I:142:ILE:HG22	1.89	0.55
16:P:75:TYR:O	16:P:78:PHE:HB3	2.07	0.55
21:U:78:GLN:O	21:U:87:GLN:HB3	2.06	0.55
39:13:33:SER:HB3	39:13:36:GLN:CG	2.34	0.55
40:14:15:HIS:HB3	40:14:70:HIS:CD2	2.42	0.55
52:26:1484:C:H2'	52:26:1485:U:O4'	2.07	0.55
53:27:796:C:H2'	53:27:797:G:C8	2.42	0.55
53:27:1330:C:O2'	53:27:1331:G:H5'	2.06	0.55
53:27:1825:U:H2'	53:27:1826:G:H8	1.68	0.55
53:27:1866:A:H2'	53:27:1867:G:O4'	2.06	0.55
53:27:2873:A:O2'	53:27:2874:C:H5'	2.07	0.55
7:G:64:VAL:HG22	7:G:78:GLY:HA3	1.88	0.55
15:O:23:ASP:HA	15:O:89:GLY:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:2:ILE:HG12	53:27:144:A:H5'	1.89	0.55
25:Y:28:LEU:HD11	25:Y:35:VAL:HG11	1.88	0.55
30:4:5:THR:HG22	30:4:62:PRO:HD2	1.89	0.55
30:4:63:TYR:CE2	53:27:242:G:H5"	2.42	0.55
32:6:162:VAL:HG12	32:6:163:ILE:N	2.22	0.55
33:7:69:THR:HG21	33:7:75:VAL:HG21	1.89	0.55
37:11:104:VAL:O	37:11:108:ARG:HG2	2.06	0.55
39:13:44:ARG:HG3	39:13:45:MET:N	2.22	0.55
39:13:98:ARG:HH12	52:26:1180:A:P	2.30	0.55
52:26:579:A:H2'	52:26:580:C:H6	1.71	0.55
52:26:1045:C:H2'	52:26:1046:A:O4'	2.07	0.55
52:26:1395:C:H5'	52:26:1395:C:H6	1.71	0.55
53:27:1443:U:H2'	53:27:1444:G:C8	2.41	0.55
3:C:52:VAL:HG21	3:C:82:GLY:H	1.71	0.55
3:C:105:LEU:HA	3:C:108:ILE:HG22	1.89	0.55
3:C:163:ASN:OD1	53:27:323:C:H5"	2.06	0.55
4:D:76:PHE:HE2	53:27:2310:C:H2'	1.71	0.55
11:K:78:ARG:NH1	11:K:113:ALA:HB1	2.22	0.55
19:S:62:VAL:HG22	19:S:81:LYS:HG3	1.89	0.55
29:3:34:ARG:NE	29:3:39:ARG:HD2	2.04	0.55
35:9:152:VAL:HG12	35:9:155:LYS:HE2	1.89	0.55
38:12:94:VAL:HB	38:12:99:GLY:O	2.06	0.55
44:18:20:PHE:O	44:18:21:ALA:HB3	2.05	0.55
53:27:352:A:H2'	53:27:353:C:C6	2.42	0.55
53:27:2074:U:H2'	53:27:2075:U:C6	2.42	0.55
53:27:2127:G:H2'	53:27:2128:G:O4'	2.06	0.55
57:31:28:C:H2'	57:31:29:G:H8	1.71	0.55
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.55
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.55
59:33:456:GLN:OE1	59:33:456:GLN:N	2.39	0.55
59:33:596:ARG:NH1	59:33:609:ILE:HD11	2.21	0.55
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.42	0.55
15:O:105:LYS:HB3	15:O:108:ARG:NH2	2.21	0.55
35:9:131:ASN:H	35:9:135:VAL:HG13	1.72	0.55
42:16:38:THR:HG22	42:16:50:LYS:HA	1.88	0.55
45:19:87:ARG:HG3	45:19:88:ARG:H	1.71	0.55
47:21:44:HIS:HB2	47:21:69:THR:O	2.06	0.55
51:25:44:ARG:NH2	51:25:48:LYS:HD3	2.20	0.55
52:26:576:C:OP2	52:26:577:G:H5"	2.06	0.55
52:26:1391:U:H2'	52:26:1392:G:H8	1.67	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1413:A:H2	52:26:1487:G:H22	1.55	0.55
53:27:2638:G:HO2'	53:27:2639:A:H8	1.52	0.55
56:30:10:G:H2'	56:30:11:C:C6	2.42	0.55
2:B:4:LEU:HD23	2:B:29:VAL:HG11	1.88	0.55
8:H:74:PRO:HG3	53:27:1060:U:H5'	1.88	0.55
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.42	0.55
22:V:55:LEU:HD12	22:V:76:ILE:HD12	1.89	0.55
26:Z:37:CYS:HB2	26:Z:40:CYS:H	1.72	0.55
34:8:63:ILE:O	34:8:110:ARG:HD2	2.06	0.55
46:20:3:THR:HG22	46:20:66:THR:OG1	2.07	0.55
47:21:67:SER:HA	52:26:265:G:H4'	1.89	0.55
50:24:28:ARG:NH1	52:26:1437:A:H5"	2.19	0.55
53:27:49:A:H5'	53:27:51:G:O4'	2.07	0.55
53:27:1930:G:H2'	53:27:1968:G:H1	1.71	0.55
10:J:7:MET:HB3	10:J:18:ARG:HH21	1.72	0.55
12:L:41:LEU:HA	12:L:45:GLN:OE1	2.06	0.55
12:L:96:ILE:HG21	12:L:126:ILE:CD1	2.36	0.55
17:Q:38:VAL:HG13	17:Q:54:VAL:HB	1.88	0.55
32:6:17:HIS:HD2	32:6:37:VAL:HG11	1.72	0.55
36:10:2:ARG:HE	36:10:68:GLN:HE21	1.54	0.55
52:26:337:G:H2'	52:26:338:A:C8	2.42	0.55
53:27:844:A:C3'	53:27:845:A:H5"	2.36	0.55
53:27:1281:G:H2'	53:27:1282:U:C6	2.42	0.55
53:27:1437:C:H2'	53:27:1438:U:C6	2.42	0.55
53:27:1739:A:H2'	53:27:1740:G:O4'	2.07	0.55
53:27:2813:A:H2'	53:27:2814:A:C8	2.42	0.55
3:C:131:THR:HG23	53:27:321:U:H5"	1.88	0.54
6:F:94:ILE:HD12	6:F:122:LEU:HB3	1.89	0.54
7:G:2:ALA:HB3	7:G:6:GLN:HG3	1.88	0.54
12:L:110:GLU:OE2	12:L:114:ARG:HD2	2.05	0.54
16:P:54:ARG:HE	53:27:1155:A:H5"	1.72	0.54
32:6:103:TRP:CZ3	32:6:107:ARG:HD3	2.42	0.54
32:6:172:ILE:O	32:6:176:ASN:HB2	2.08	0.54
52:26:471:U:H2'	52:26:472:U:C6	2.42	0.54
52:26:1498:U:H6	52:26:1499:A:H62	1.54	0.54
53:27:507:A:H5"	53:27:508:A:H5'	1.89	0.54
53:27:704:G:H1'	53:27:727:A:H61	1.72	0.54
53:27:849:A:H2'	53:27:850:U:C6	2.42	0.54
53:27:2183:A:H2'	53:27:2184:A:C8	2.42	0.54
53:27:2520:C:O2'	53:27:2521:C:H5'	2.07	0.54
53:27:2809:A:H2'	53:27:2810:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:101:PHE:O	2:B:104:VAL:HG22	2.07	0.54
5:E:116:LEU:HD13	5:E:120:ILE:O	2.07	0.54
6:F:66:ASN:HB3	6:F:134:VAL:O	2.08	0.54
9:I:47:HIS:ND1	9:I:48:VAL:HG23	2.22	0.54
12:L:29:GLY:CA	12:L:106:ASP:HB2	2.34	0.54
16:P:40:LYS:HE3	16:P:44:TYR:CE2	2.42	0.54
20:T:39:ASN:HB3	20:T:62:ALA:HB3	1.88	0.54
23:W:37:PHE:HE2	23:W:48:LEU:HD12	1.72	0.54
23:W:37:PHE:CE2	23:W:48:LEU:HD12	2.43	0.54
29:3:24:THR:HG23	29:3:27:GLY:H	1.72	0.54
34:8:84:ASN:HB3	34:8:87:GLU:HB3	1.89	0.54
43:17:65:GLU:HG3	43:17:66:GLY:N	2.18	0.54
44:18:45:LEU:HG	49:23:12:LEU:CD2	2.36	0.54
52:26:218:U:H2'	52:26:219:U:O4'	2.07	0.54
52:26:368:U:O4	59:33:447:ARG:HA	2.07	0.54
52:26:977:A:H3'	52:26:977:A:N3	2.22	0.54
53:27:356:G:H2'	53:27:357:C:C6	2.42	0.54
53:27:1387:A:H2'	53:27:1388:G:C8	2.42	0.54
53:27:1989:G:H2'	53:27:1990:C:O4'	2.07	0.54
53:27:2098:U:C2'	53:27:2099:U:H5'	2.37	0.54
53:27:2715:C:H3'	53:27:2716:C:H5"	1.89	0.54
1:A:22:GLU:HB3	1:A:80:LEU:HD12	1.90	0.54
3:C:148:ILE:HB	3:C:169:VAL:HG13	1.89	0.54
11:K:77:ILE:HG12	11:K:109:LYS:O	2.07	0.54
19:S:67:VAL:HG22	19:S:76:ARG:HD2	1.89	0.54
52:26:524:G:H2'	52:26:525:C:C6	2.43	0.54
52:26:880:C:H2'	52:26:881:G:C8	2.42	0.54
52:26:1301:U:H2'	52:26:1301:U:O2	2.06	0.54
52:26:1458:G:H2'	52:26:1459:G:H8	1.70	0.54
53:27:809:G:H2'	53:27:810:U:C6	2.42	0.54
53:27:1138:G:H2'	53:27:1139:G:O4'	2.08	0.54
53:27:1664:A:N6	53:27:1996:C:H42	2.01	0.54
53:27:2122:U:O2'	53:27:2123:G:H5'	2.07	0.54
53:27:2155:U:H2'	53:27:2156:G:O4'	2.06	0.54
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.54
1:A:128:THR:HG23	1:A:189:ALA:O	2.08	0.54
6:F:40:THR:H	6:F:43:ASN:HD22	1.54	0.54
7:G:67:THR:H	7:G:68:PRO:CD	2.20	0.54
8:H:14:ALA:N	8:H:52:LEU:O	2.40	0.54
8:H:40:ALA:HB1	8:H:68:PHE:CE2	2.43	0.54
27:1:30:ASP:OD2	27:1:33:SER:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:38:LEU:HD23	27:1:39:ARG:N	2.23	0.54
33:7:21:TRP:CE2	44:18:93:PRO:HG2	2.43	0.54
39:13:43:ALA:O	39:13:46:VAL:HG22	2.07	0.54
42:16:98:ARG:HE	42:16:106:VAL:CG2	2.20	0.54
53:27:196:A:H61	53:27:831:G:H21	1.55	0.54
53:27:2134:A:H2'	53:27:2135:A:O4'	2.06	0.54
57:31:18:G:N2	57:31:57:A:H2'	2.23	0.54
59:33:639:GLU:O	59:33:643:GLU:HG3	2.08	0.54
2:B:146:ILE:HG13	2:B:147:GLY:N	2.22	0.54
4:D:64:PRO:HA	4:D:88:VAL:HG22	1.89	0.54
8:H:101:SER:HA	8:H:141:ASP:OD1	2.08	0.54
13:M:69:ARG:O	13:M:71:ARG:N	2.37	0.54
16:P:55:GLN:NE2	53:27:559:G:H1'	2.23	0.54
31:5:7:VAL:HB	31:5:35:GLN:HE21	1.72	0.54
35:9:45:VAL:CG2	35:9:117:ALA:HA	2.37	0.54
39:13:10:ARG:HE	52:26:1149:C:P	2.30	0.54
42:16:28:GLN:HE22	52:26:34:C:C1'	2.21	0.54
52:26:57:G:H2'	52:26:58:C:C6	2.43	0.54
52:26:579:A:H2'	52:26:580:C:C6	2.42	0.54
53:27:18:U:H2'	53:27:19:A:C8	2.42	0.54
53:27:2208:C:H2'	53:27:2209:G:H8	1.71	0.54
54:28:119:A:H3'	54:28:120:A:H5"	1.89	0.54
1:A:257:ARG:HG2	1:A:257:ARG:HH11	1.73	0.54
9:I:7:LYS:O	9:I:11:VAL:HG23	2.08	0.54
10:J:92:GLU:O	10:J:93:GLN:O	2.25	0.54
19:S:8:LEU:HD23	19:S:50:LEU:HD11	1.90	0.54
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.07	0.54
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.90	0.54
29:3:35:ARG:NH1	53:27:53:A:C2	2.75	0.54
35:9:23:THR:HA	35:9:28:ARG:HA	1.89	0.54
35:9:108:GLY:O	35:9:110:MET:N	2.39	0.54
49:23:28:LYS:HA	59:33:600:GLU:OE1	2.07	0.54
52:26:81:A:H61	52:26:86:G:H22	1.54	0.54
52:26:381:C:H2'	52:26:382:A:O4'	2.08	0.54
53:27:677:A:H2'	53:27:678:C:C6	2.42	0.54
53:27:828:U:H2'	53:27:829:A:C8	2.43	0.54
53:27:990:A:N6	53:27:1186:G:H1'	2.22	0.54
53:27:1239:G:H2'	53:27:1240:U:O4'	2.08	0.54
53:27:1434:A:H2'	53:27:1435:G:H8	1.73	0.54
53:27:1903:G:H2'	53:27:1904:G:H8	1.72	0.54
53:27:2024:G:OP2	53:27:2034:U:H4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:56:G:H4'	54:28:57:A:H8	1.72	0.54
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.54
59:33:407:TYR:HB3	59:33:417:ASP:OD1	2.08	0.54
1:A:75:ALA:O	1:A:115:ILE:HG13	2.07	0.54
11:K:59:ARG:HD2	53:27:250:G:H4'	1.89	0.54
24:X:56:LEU:O	24:X:60:LYS:HG2	2.08	0.54
32:6:206:ILE:O	32:6:210:THR:HG23	2.08	0.54
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.89	0.54
46:20:9:HIS:O	46:20:16:PHE:HB3	2.08	0.54
49:23:43:MET:HA	49:23:46:LEU:HD12	1.88	0.54
52:26:672:U:H2'	52:26:673:A:H8	1.73	0.54
53:27:917:A:H5"	53:27:2268:A:N6	2.21	0.54
53:27:1057:A:O2'	53:27:1058:U:H5'	2.07	0.54
53:27:1694:C:H6	53:27:1694:C:H5'	1.72	0.54
53:27:2233:U:H2'	53:27:2234:G:C8	2.43	0.54
54:28:33:G:H2'	54:28:34:A:O4'	2.07	0.54
56:30:56:C:H2'	56:30:57:G:O4'	2.08	0.54
58:32:48:C:H5"	58:32:59:A:H4'	1.90	0.54
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.54
59:33:668:VAL:HA	59:33:712:MET:O	2.08	0.54
6:F:79:THR:OG1	6:F:145:ASN:HB3	2.08	0.54
7:G:123:ILE:O	7:G:124:ASP:HB2	2.08	0.54
52:26:599:C:H2'	52:26:600:A:H8	1.72	0.54
52:26:1031:C:H5'	52:26:1033:G:H1'	1.88	0.54
53:27:528:A:C8	53:27:528:A:H3'	2.43	0.54
53:27:580:U:H2'	53:27:581:C:H6	1.73	0.54
53:27:897:C:H4'	59:33:700:ARG:HH22	1.73	0.54
53:27:1005:C:O5'	53:27:1005:C:H6	1.91	0.54
53:27:1464:G:H2'	53:27:1465:G:H8	1.73	0.54
53:27:2087:G:H2'	53:27:2088:A:C8	2.42	0.54
53:27:2144:G:C5'	53:27:2145:C:H3'	2.38	0.54
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.54
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.54
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.90	0.54
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.54
2:B:180:VAL:O	2:B:182:ALA:N	2.41	0.54
7:G:117:LEU:HB2	7:G:122:GLN:NE2	2.23	0.54
10:J:6:THR:H	10:J:20:MET:HG3	1.73	0.54
11:K:49:GLY:HA2	30:4:56:LEU:HD11	1.89	0.54
11:K:77:ILE:HG12	11:K:110:VAL:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:31:THR:HG23	54:28:29:A:OP2	2.07	0.54
16:P:111:LYS:HG2	17:Q:48:LYS:HD2	1.88	0.54
25:Y:6:ILE:O	25:Y:35:VAL:HG12	2.07	0.54
33:7:66:THR:HA	33:7:101:ASN:O	2.08	0.54
39:13:108:ARG:HG3	52:26:1347:G:O5'	2.08	0.54
40:14:65:TYR:HB3	44:18:95:LEU:HD11	1.90	0.54
47:21:26:ARG:NH2	52:26:237:G:H5"	2.23	0.54
47:21:68:LYS:O	52:26:254:G:OP1	2.25	0.54
50:24:66:ILE:HD12	50:24:70:LYS:HD3	1.90	0.54
53:27:1914:C:H3'	53:27:1914:C:O2	2.07	0.54
56:30:41:C:H2'	56:30:42:C:C5'	2.37	0.54
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.89	0.54
12:L:123:LYS:HE3	53:27:2483:C:N3	2.23	0.54
16:P:85:ALA:HB2	16:P:115:ALA:HB2	1.89	0.54
26:Z:60:PHE:CE2	49:23:41:PRO:HD3	2.43	0.54
32:6:55:GLU:O	32:6:58:LYS:HB3	2.08	0.54
39:13:37:TYR:O	39:13:38:PHE:HB3	2.08	0.54
42:16:33:CYS:HA	42:16:54:VAL:HA	1.90	0.54
43:17:101:THR:HG22	52:26:1226:C:H2'	1.90	0.54
46:20:59:HIS:O	46:20:63:GLN:HG3	2.08	0.54
52:26:95:C:H2'	52:26:96:U:C6	2.43	0.54
52:26:427:U:H2'	52:26:428:G:C8	2.43	0.54
52:26:599:C:H2'	52:26:600:A:C8	2.42	0.54
52:26:865:A:H2'	52:26:866:C:C6	2.42	0.54
52:26:1342:C:H2'	52:26:1343:G:H8	1.73	0.54
53:27:362:A:H3'	53:27:363:G:H8	1.72	0.54
53:27:576:U:H4'	53:27:2502:G:N7	2.23	0.54
53:27:1076:C:H2'	53:27:1077:A:C8	2.42	0.54
53:27:1730:C:H5'	53:27:1731:G:OP1	2.08	0.54
53:27:1803:A:H2'	53:27:1804:C:O4'	2.07	0.54
53:27:2318:G:H2'	53:27:2319:G:O4'	2.08	0.54
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.54
59:33:456:GLN:HG2	59:33:457:MET:N	2.22	0.54
2:B:170:VAL:HG23	2:B:194:PRO:CG	2.38	0.53
4:D:33:ILE:HG13	4:D:95:MET:HE3	1.88	0.53
5:E:43:LYS:HB2	5:E:50:THR:OG1	2.08	0.53
9:I:17:VAL:HG22	9:I:139:VAL:HA	1.90	0.53
11:K:126:ARG:HH22	53:27:634:C:H5"	1.73	0.53
12:L:78:LEU:HD23	12:L:79:ALA:N	2.24	0.53
13:M:2:ARG:HH11	13:M:2:ARG:HG2	1.73	0.53
16:P:56:PHE:CZ	53:27:536:G:H4'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:41:HIS:ND1	26:Z:43:PHE:HB3	2.24	0.53
32:6:169:HIS:HA	32:6:172:ILE:HG12	1.90	0.53
33:7:185:THR:HG23	33:7:197:VAL:O	2.09	0.53
37:11:45:ALA:HB2	37:11:116:ALA:HA	1.89	0.53
38:12:80:PRO:HG2	52:26:878:A:C5'	2.38	0.53
39:13:25:GLY:HA2	39:13:60:LEU:O	2.08	0.53
49:23:50:VAL:N	49:23:56:HIS:O	2.41	0.53
50:24:53:MET:HA	50:24:56:ILE:HG22	1.91	0.53
52:26:413:G:H21	52:26:428:G:H1'	1.71	0.53
52:26:434:U:H2'	52:26:435:A:C8	2.42	0.53
52:26:1155:A:H2'	52:26:1156:G:O4'	2.08	0.53
53:27:52:A:O2'	53:27:53:A:H5'	2.07	0.53
53:27:167:A:H2'	53:27:168:G:O4'	2.08	0.53
53:27:1144:A:H2'	53:27:1145:C:C6	2.44	0.53
53:27:2898:U:H2'	53:27:2899:A:C8	2.42	0.53
54:28:3:C:C3'	54:28:4:C:H5"	2.38	0.53
54:28:49:C:H2'	54:28:50:A:C8	2.43	0.53
58:32:27:U:H3	58:32:43:A:H61	1.56	0.53
58:32:59:A:H2'	58:32:60:U:O4'	2.08	0.53
59:33:405:ARG:HG3	59:33:419:PRO:HA	1.90	0.53
3:C:168:ASP:HB3	3:C:183:PHE:HE2	1.73	0.53
6:F:74:ALA:O	6:F:76:GLU:HG3	2.08	0.53
11:K:8:PRO:HD3	53:27:1244:A:H4'	1.89	0.53
12:L:42:THR:HA	12:L:93:VAL:HG12	1.89	0.53
16:P:20:ALA:HB1	16:P:23:TYR:CD2	2.43	0.53
18:R:31:GLN:HA	18:R:34:ASP:OD2	2.08	0.53
24:X:39:GLN:HA	53:27:95:A:O2'	2.08	0.53
39:13:34:LEU:HG	39:13:39:GLY:HA3	1.90	0.53
39:13:62:LEU:HD12	39:13:62:LEU:O	2.09	0.53
43:17:10:ASP:O	43:17:11:HIS:HB2	2.08	0.53
52:26:208:U:H5'	52:26:209:U:OP1	2.09	0.53
52:26:1082:A:H2'	52:26:1083:U:O4'	2.08	0.53
53:27:402:A:H2'	53:27:403:U:H5'	1.90	0.53
53:27:1061:U:O4'	53:27:1070:A:H1'	2.07	0.53
53:27:2372:U:H2'	53:27:2373:G:C8	2.44	0.53
59:33:31:SER:O	59:33:35:LEU:HD13	2.09	0.53
2:B:28:GLU:HG2	2:B:28:GLU:O	2.08	0.53
2:B:48:ILE:HG23	2:B:84:LEU:HD21	1.90	0.53
3:C:148:ILE:HD13	3:C:187:VAL:CG1	2.36	0.53
4:D:140:ILE:H	4:D:140:ILE:HD12	1.73	0.53
7:G:56:ARG:HG2	53:27:1084:A:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:61:VAL:HG12	10:J:87:LEU:HD11	1.90	0.53
35:9:137:ARG:NH1	52:26:1078:U:H4'	2.23	0.53
36:10:18:VAL:HG12	36:10:19:PRO:HD3	1.90	0.53
39:13:46:VAL:O	39:13:79:ARG:HG3	2.08	0.53
39:13:56:MET:O	39:13:58:GLU:N	2.40	0.53
39:13:113:LYS:HG3	52:26:1368:A:OP2	2.08	0.53
43:17:21:ILE:HB	43:17:24:VAL:HG11	1.89	0.53
47:21:74:LEU:HD23	47:21:75:VAL:N	2.23	0.53
52:26:106:C:H2'	52:26:107:G:O4'	2.07	0.53
52:26:1136:C:H5"	52:26:1137:C:OP2	2.08	0.53
52:26:1524:C:H2'	52:26:1525:G:C8	2.43	0.53
53:27:522:A:H2'	53:27:523:C:C6	2.44	0.53
53:27:553:G:H2'	53:27:554:U:O4'	2.08	0.53
53:27:1906:G:C3'	53:27:1907:G:H5"	2.38	0.53
53:27:2720:U:H2'	53:27:2721:A:O4'	2.07	0.53
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.53
2:B:191:GLY:HA3	53:27:2729:G:O2'	2.08	0.53
9:I:34:ARG:NH1	9:I:40:HIS:HB3	2.23	0.53
11:K:132:ARG:HA	11:K:142:ILE:HD11	1.90	0.53
12:L:16:ARG:HH11	53:27:953:G:H5"	1.74	0.53
15:O:39:LEU:HD11	15:O:81:ASP:HB2	1.91	0.53
21:U:70:ILE:HG22	21:U:72:VAL:HG13	1.90	0.53
28:2:38:PHE:HB2	28:2:45:HIS:CE1	2.43	0.53
34:8:27:ILE:H	34:8:27:ILE:CD1	2.18	0.53
35:9:81:GLN:HE21	35:9:149:PRO:HD2	1.74	0.53
46:20:76:LYS:HD3	46:20:79:ASN:HD21	1.72	0.53
52:26:848:C:C2'	52:26:849:G:H5"	2.38	0.53
53:27:1562:U:H2'	53:27:1563:U:O4'	2.07	0.53
53:27:2095:A:C3'	53:27:2096:C:H5"	2.37	0.53
53:27:2126:A:H2'	53:27:2162:G:N2	2.23	0.53
53:27:2241:A:H2'	53:27:2242:G:C8	2.43	0.53
53:27:2266:A:H4'	53:27:2267:A:N3	2.24	0.53
58:32:6:G:H2'	58:32:7:G:O4'	2.09	0.53
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.53
59:33:553:LEU:O	59:33:555:GLN:N	2.40	0.53
59:33:721:VAL:O	59:33:725:VAL:HG23	2.09	0.53
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.90	0.53
15:O:55:HIS:CE1	53:27:2682:A:H4'	2.44	0.53
16:P:40:LYS:HE3	16:P:44:TYR:HE2	1.73	0.53
16:P:48:ASP:HA	16:P:51:GLN:HB3	1.90	0.53
32:6:101:THR:HG23	52:26:1074:G:O2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:143:LEU:O	35:9:146:MET:HB3	2.08	0.53
44:18:68:ARG:HH12	44:18:70:HIS:CB	2.21	0.53
47:21:61:ARG:HG2	47:21:75:VAL:CG2	2.39	0.53
48:22:41:SER:CB	48:22:51:GLN:HE21	2.20	0.53
52:26:252:U:O2	52:26:252:U:H2'	2.08	0.53
52:26:447:G:H1'	52:26:487:A:N6	2.24	0.53
52:26:484:G:N7	52:26:486:U:H1'	2.23	0.53
53:27:312:G:H2'	53:27:313:G:H8	1.74	0.53
53:27:1399:C:H2'	53:27:1400:U:C6	2.44	0.53
53:27:1925:C:O2'	53:27:1926:U:H5'	2.08	0.53
54:28:64:G:H2'	54:28:65:U:C6	2.44	0.53
55:29:6:G:H2'	55:29:7:G:O4'	2.08	0.53
57:31:63:G:H2'	57:31:64:G:H8	1.73	0.53
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.39	0.53
59:33:368:SER:CB	59:33:460:GLN:NE2	2.72	0.53
3:C:73:ILE:HG13	3:C:78:TRP:CE3	2.44	0.53
4:D:114:ARG:HH11	43:17:70:ARG:CZ	2.22	0.53
8:H:14:ALA:HB3	8:H:52:LEU:H	1.74	0.53
9:I:93:ILE:HD13	9:I:100:VAL:HG21	1.90	0.53
29:3:26:ASN:O	29:3:30:VAL:HG23	2.08	0.53
33:7:76:ILE:HA	33:7:83:VAL:CG2	2.39	0.53
33:7:190:THR:HG22	33:7:192:TYR:H	1.74	0.53
39:13:20:ILE:HA	39:13:62:LEU:HA	1.90	0.53
42:16:49:ARG:NH1	52:26:523:A:H61	2.07	0.53
49:23:39:ILE:HB	49:23:66:VAL:O	2.08	0.53
51:25:45:LYS:HE3	52:26:723:U:C1'	2.39	0.53
52:26:979:C:H1'	52:26:1317:C:H41	1.73	0.53
52:26:1452:C:H4'	52:26:1453:G:N2	2.24	0.53
52:26:1510:C:H2'	52:26:1511:G:C8	2.43	0.53
53:27:415:A:H2'	53:27:416:U:C6	2.43	0.53
53:27:635:C:H2'	53:27:636:G:C8	2.44	0.53
53:27:1077:A:C2	53:27:1088:A:H2'	2.44	0.53
53:27:1111:A:O2'	53:27:1112:G:H4'	2.09	0.53
53:27:1287:A:H3'	53:27:1288:G:N2	2.22	0.53
53:27:1666:G:C2'	53:27:1667:G:H5'	2.38	0.53
53:27:2229:U:H2'	53:27:2230:G:H8	1.73	0.53
53:27:2607:G:H2'	53:27:2608:G:O4'	2.08	0.53
53:27:2898:U:H2'	53:27:2899:A:H8	1.74	0.53
56:30:4:C:H2'	56:30:5:G:C8	2.44	0.53
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.53
1:A:257:ARG:HD2	1:A:269:ARG:NH1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:44:ALA:O	7:G:49:GLY:N	2.42	0.53
8:H:33:ASN:HB2	8:H:66:PHE:CE2	2.39	0.53
24:X:41:HIS:CD2	53:27:96:C:H4'	2.43	0.53
29:3:21:ARG:HG2	29:3:21:ARG:HH21	1.74	0.53
34:8:26:ALA:O	34:8:28:ASP:N	2.41	0.53
34:8:169:TRP:NE1	34:8:170:LEU:HD23	2.24	0.53
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.90	0.53
50:24:30:PHE:O	50:24:34:VAL:HG23	2.09	0.53
51:25:5:VAL:CG2	51:25:7:GLU:HG3	2.38	0.53
51:25:67:THR:HG23	52:26:1167:A:N6	2.23	0.53
52:26:392:C:H2'	52:26:393:A:H8	1.74	0.53
52:26:1240:U:H5"	52:26:1241:G:OP2	2.09	0.53
52:26:1294:G:H2'	52:26:1295:U:C6	2.43	0.53
52:26:1517:G:H2'	52:26:1518:A:H5'	1.90	0.53
53:27:825:A:H2'	53:27:826:U:C6	2.43	0.53
53:27:973:A:H5'	53:27:1188:U:C1'	2.38	0.53
53:27:1056:G:H4'	53:27:1086:A:C8	2.44	0.53
53:27:1279:G:H2'	53:27:1280:G:H8	1.73	0.53
53:27:2292:U:H2'	53:27:2293:G:C8	2.42	0.53
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.53
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.53
6:F:22:LYS:HD3	53:27:2093:G:H5'	1.90	0.53
7:G:1:MET:HG3	7:G:2:ALA:N	2.24	0.53
7:G:110:ALA:HB3	7:G:113:PHE:CG	2.44	0.53
8:H:78:LEU:HD12	8:H:108:ILE:HG23	1.89	0.53
43:17:26:LYS:O	43:17:29:SER:HB3	2.09	0.53
52:26:12:U:H4'	52:26:526:C:H4'	1.91	0.53
52:26:664:G:N2	52:26:741:G:H1	2.07	0.53
52:26:810:C:H2'	52:26:811:C:O4'	2.09	0.53
52:26:1520:C:H2'	52:26:1521:C:H6	1.73	0.53
53:27:49:A:C6	53:27:177:G:C5	2.96	0.53
53:27:167:A:C2	53:27:168:G:H1'	2.44	0.53
53:27:1563:U:H2'	53:27:1564:C:C6	2.43	0.53
53:27:2630:G:H2'	53:27:2631:G:H8	1.73	0.53
58:32:19:G:H5"	58:32:20:U:C5	2.39	0.53
58:32:48:C:H2'	58:32:59:A:H4'	1.91	0.53
2:B:49:GLN:NE2	2:B:79:LEU:HD13	2.24	0.53
5:E:154:GLU:HG2	5:E:156:TYR:N	2.23	0.53
7:G:48:ALA:HB3	7:G:51:TYR:HD2	1.73	0.53
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.90	0.53
14:N:35:ILE:HG23	14:N:35:ILE:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:16:GLU:HA	17:Q:98:ILE:HG21	1.90	0.53
26:Z:56:ARG:HG3	49:23:64:GLU:O	2.09	0.53
32:6:15:PHE:O	32:6:40:ILE:HB	2.09	0.53
35:9:104:ILE:CD1	35:9:119:VAL:HG23	2.35	0.53
37:11:100:MET:O	37:11:104:VAL:HG23	2.09	0.53
38:12:4:ASP:HB2	38:12:80:PRO:HG3	1.89	0.53
38:12:95:MET:SD	38:12:129:ALA:HB1	2.49	0.53
39:13:11:ARG:H	39:13:77:ALA:HB2	1.74	0.53
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.42	0.53
47:21:30:HIS:HB2	47:21:37:ILE:HD11	1.91	0.53
53:27:1702:G:C3'	53:27:1703:G:H5"	2.39	0.53
53:27:2679:A:H2'	53:27:2680:U:O4'	2.09	0.53
59:33:27:THR:HG23	59:33:28:SER:N	2.22	0.53
59:33:427:PHE:CZ	59:33:461:ILE:HG13	2.43	0.53
59:33:434:ASP:O	59:33:438:ARG:HG2	2.09	0.53
2:B:58:ASN:N	2:B:60:VAL:HG12	2.23	0.53
3:C:65:THR:HG22	3:C:66:GLY:H	1.74	0.53
4:D:112:ASP:OD1	43:17:65:GLU:HG3	2.08	0.53
11:K:126:ARG:HH22	53:27:634:C:C5'	2.22	0.53
14:N:33:ARG:HG3	54:28:52:A:H62	1.73	0.53
20:T:39:ASN:OD1	20:T:64:ILE:HB	2.09	0.53
25:Y:9:THR:HG22	25:Y:53:MET:C	2.30	0.53
34:8:173:ASP:O	34:8:175:GLY:N	2.42	0.53
38:12:4:ASP:OD2	38:12:7:ALA:HB2	2.08	0.53
47:21:17:GLU:OE1	52:26:273:U:H1'	2.09	0.53
52:26:463:U:H2'	52:26:464:U:O4'	2.09	0.53
52:26:626:G:H2'	52:26:627:G:C8	2.44	0.53
53:27:355:U:H2'	53:27:356:G:H8	1.73	0.53
53:27:386:G:H3'	53:27:387:U:H5"	1.90	0.53
53:27:1086:A:H4'	53:27:1103:A:C2	2.43	0.53
53:27:1444:G:H2'	53:27:1445:G:C8	2.44	0.53
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
59:33:444:ILE:HB	59:33:459:ASP:OD2	2.09	0.53
59:33:620:GLU:O	59:33:621:ILE:HG23	2.08	0.53
1:A:62:ARG:HH11	1:A:62:ARG:HG3	1.74	0.52
7:G:2:ALA:HB3	7:G:6:GLN:CG	2.39	0.52
10:J:9:ASN:O	10:J:83:ALA:HA	2.09	0.52
11:K:33:ARG:CD	11:K:40:SER:HA	2.39	0.52
16:P:80:ASN:CG	53:27:1151:A:H4'	2.30	0.52
18:R:47:VAL:O	18:R:50:VAL:HB	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:59:GLU:HA	18:R:64:ALA:CB	2.39	0.52
27:1:30:ASP:HB3	27:1:35:GLU:N	2.22	0.52
29:3:25:LYS:HZ1	53:27:210:C:H5"	1.74	0.52
32:6:104:LYS:CE	52:26:1073:U:H4'	2.39	0.52
33:7:90:VAL:O	33:7:93:ILE:HB	2.09	0.52
33:7:113:LYS:HB2	33:7:184:ASN:ND2	2.24	0.52
37:11:75:LYS:O	37:11:86:VAL:N	2.40	0.52
44:18:61:ASN:HB3	44:18:72:PHE:CE2	2.43	0.52
51:25:33:ARG:HH11	51:25:34:ARG:HG2	1.74	0.52
53:27:1141:U:H4'	53:27:1142:A:O4'	2.09	0.52
53:27:1744:A:H3'	53:27:1745:A:C8	2.44	0.52
53:27:1773:A:H2'	53:27:1774:C:O4'	2.08	0.52
53:27:2167:U:H2'	53:27:2169:A:OP2	2.09	0.52
53:27:2658:C:H2'	53:27:2659:G:O4'	2.08	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.38	0.52
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.52
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.52
59:33:375:ALA:HB1	59:33:457:MET:HE2	1.88	0.52
3:C:54:GLY:O	3:C:56:GLY:N	2.42	0.52
6:F:75:LEU:HD12	6:F:76:GLU:N	2.24	0.52
8:H:109:ALA:O	8:H:113:ALA:HB3	2.09	0.52
13:M:86:ARG:HG2	13:M:117:ASP:OD2	2.09	0.52
16:P:49:ARG:HG2	16:P:49:ARG:HH11	1.74	0.52
21:U:26:PHE:HZ	21:U:47:VAL:HG11	1.74	0.52
32:6:8:MET:HG3	32:6:10:LYS:H	1.74	0.52
33:7:89:VAL:O	33:7:93:ILE:HG13	2.09	0.52
33:7:116:ALA:HB1	33:7:186:SER:HB3	1.91	0.52
33:7:148:ILE:O	33:7:168:ARG:HA	2.10	0.52
43:17:67:ASP:HA	43:17:70:ARG:HH11	1.75	0.52
47:21:56:ASP:OD1	47:21:56:ASP:N	2.42	0.52
50:24:53:MET:O	50:24:57:VAL:HG12	2.09	0.52
52:26:147:G:H2'	52:26:148:G:C8	2.45	0.52
52:26:628:G:H2'	52:26:629:A:H8	1.74	0.52
53:27:189:G:H2'	53:27:205:G:N2	2.24	0.52
53:27:1301:A:H2'	53:27:1301:A:N3	2.24	0.52
53:27:2699:C:H2'	53:27:2700:A:C8	2.44	0.52
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.52
59:33:156:ARG:O	59:33:160:LEU:HG	2.09	0.52
10:J:1:MET:HB2	10:J:67:LYS:HG2	1.91	0.52
12:L:96:ILE:HG21	12:L:126:ILE:HD13	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:60:TRP:O	16:P:64:ILE:HG13	2.10	0.52
29:3:35:ARG:HH12	53:27:53:A:H2	1.53	0.52
33:7:172:VAL:HG12	33:7:174:LEU:CD1	2.39	0.52
34:8:57:LYS:HB2	34:8:202:LEU:HD13	1.90	0.52
37:11:39:GLU:OE1	39:13:42:THR:HG22	2.09	0.52
41:15:88:PRO:HD3	51:25:28:LEU:CD2	2.39	0.52
46:20:15:PRO:HG2	46:20:41:PRO:HG3	1.90	0.52
51:25:25:ALA:O	51:25:29:ALA:HB3	2.09	0.52
52:26:356:A:N3	52:26:368:U:O2'	2.42	0.52
52:26:686:U:O4	52:26:703:G:H2'	2.09	0.52
53:27:271:G:H1'	53:27:272:A:C8	2.45	0.52
53:27:764:A:O2'	53:27:765:C:H5'	2.08	0.52
53:27:1082:U:H2'	53:27:1083:U:O4'	2.09	0.52
53:27:1279:G:H2'	53:27:1280:G:C8	2.44	0.52
53:27:1351:C:H2'	53:27:1352:U:C6	2.43	0.52
53:27:2166:U:C2'	53:27:2167:U:H5'	2.40	0.52
59:33:169:ASP:O	59:33:169:ASP:OD1	2.28	0.52
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.52
4:D:80:GLN:NE2	4:D:81:GLY:H	2.06	0.52
10:J:104:THR:HG22	10:J:106:GLU:H	1.74	0.52
16:P:10:ARG:HH22	53:27:514:A:C5'	2.21	0.52
36:10:2:ARG:HD2	36:10:68:GLN:HG3	1.91	0.52
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.40	0.52
37:11:3:ARG:HB3	37:11:4:ARG:NH1	2.25	0.52
38:12:85:TYR:CE1	38:12:123:GLU:HB2	2.44	0.52
41:15:43:TRP:HZ3	41:15:45:THR:HG23	1.74	0.52
48:22:35:SER:HB3	51:25:3:ILE:HG13	1.91	0.52
48:22:59:LYS:HD3	52:26:734:G:O2'	2.10	0.52
52:26:358:U:H2'	52:26:359:G:C8	2.44	0.52
53:27:1149:G:H2'	53:27:1150:C:C6	2.44	0.52
53:27:1336:A:H2'	53:27:1337:G:C8	2.44	0.52
56:30:13:C:H2'	56:30:14:A:H5"	1.91	0.52
56:30:23:A:H2'	56:30:24:G:C8	2.44	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
4:D:175:PRO:O	4:D:176:PHE:HB2	2.10	0.52
5:E:51:PHE:CE1	5:E:71:LEU:HD22	2.44	0.52
7:G:51:TYR:HB2	7:G:53:ARG:NH2	2.24	0.52
10:J:61:VAL:H	10:J:87:LEU:HD13	1.75	0.52
10:J:91:SER:O	10:J:92:GLU:HB2	2.10	0.52
12:L:64:TRP:HB2	12:L:104:GLU:HB2	1.91	0.52
17:Q:20:VAL:O	17:Q:96:VAL:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:88:ARG:HD2	18:R:94:ASP:OD2	2.09	0.52
35:9:137:ARG:HH12	52:26:1078:U:H4'	1.75	0.52
39:13:54:VAL:HG12	39:13:93:LEU:HD22	1.90	0.52
41:15:111:ASP:HB2	51:25:19:LYS:HZ1	1.75	0.52
52:26:698:G:H2'	52:26:699:C:C6	2.45	0.52
53:27:1499:C:H2'	53:27:1500:G:C8	2.44	0.52
53:27:2623:G:H2'	53:27:2624:G:H8	1.74	0.52
53:27:2677:G:H2'	53:27:2678:C:C6	2.44	0.52
53:27:2840:C:H2'	53:27:2841:C:H6	1.74	0.52
59:33:643:GLU:O	59:33:646:SER:HB3	2.10	0.52
2:B:2:ILE:HG13	2:B:3:GLY:N	2.21	0.52
6:F:65:ALA:HA	6:F:68:ARG:HH11	1.75	0.52
6:F:68:ARG:O	6:F:72:ILE:HG13	2.09	0.52
8:H:101:SER:HB2	8:H:104:GLN:CG	2.31	0.52
13:M:37:THR:HA	13:M:110:MET:HA	1.91	0.52
18:R:82:MET:HB2	18:R:98:LYS:HB2	1.91	0.52
20:T:11:ILE:HA	20:T:21:ARG:HA	1.91	0.52
24:X:39:GLN:O	24:X:42:LEU:HB3	2.09	0.52
26:Z:66:ILE:HD11	44:18:41:TRP:N	2.25	0.52
41:15:82:GLU:HG3	41:15:108:ASN:OD1	2.10	0.52
52:26:77:A:H2'	52:26:78:A:O4'	2.10	0.52
52:26:206:C:H2'	52:26:207:C:C6	2.44	0.52
52:26:432:A:H2'	52:26:433:G:O4'	2.10	0.52
52:26:1251:A:H2'	52:26:1252:A:C8	2.44	0.52
53:27:284:U:C2'	53:27:285:G:H5"	2.40	0.52
53:27:547:A:H4'	53:27:548:G:C5	2.45	0.52
53:27:2114:A:O2'	53:27:2167:U:H4'	2.09	0.52
53:27:2328:A:H2'	53:27:2329:U:C6	2.45	0.52
53:27:2888:C:H2'	53:27:2889:C:H6	1.74	0.52
56:30:9:A:H62	56:30:23:A:H62	1.58	0.52
57:31:57:A:H2'	57:31:58:A:H5'	1.92	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
59:33:443:LYS:HA	59:33:448:ILE:HA	1.91	0.52
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.91	0.52
3:C:60:TRP:HE3	3:C:62:GLN:N	2.08	0.52
8:H:79:LEU:HD11	8:H:132:ALA:HA	1.92	0.52
15:O:105:LYS:HG2	52:26:1432:G:O5'	2.09	0.52
18:R:20:VAL:HG11	18:R:47:VAL:HG11	1.92	0.52
21:U:46:LYS:O	21:U:50:MET:HG2	2.10	0.52
32:6:27:LYS:N	32:6:28:PRO:CD	2.72	0.52
33:7:63:ILE:O	33:7:63:ILE:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:156:ALA:O	34:8:159:GLU:HG2	2.10	0.52
35:9:107:GLY:CA	52:26:9:G:H5'	2.24	0.52
39:13:25:GLY:HA3	39:13:58:GLU:HA	1.90	0.52
44:18:47:LEU:HD21	52:26:1317:C:H4'	1.91	0.52
46:20:76:LYS:HA	46:20:79:ASN:HD21	1.74	0.52
50:24:23:ARG:NH1	52:26:176:C:H5"	2.23	0.52
53:27:52:A:C6	53:27:118:A:C2	2.97	0.52
53:27:207:A:H2'	53:27:208:C:O4'	2.10	0.52
53:27:1181:U:H2'	53:27:1182:G:C8	2.44	0.52
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.52
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.52
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.52
3:C:69:ARG:HH21	53:27:2502:G:N2	2.06	0.52
10:J:76:VAL:HG12	15:O:72:VAL:HG21	1.91	0.52
13:M:19:ALA:O	13:M:22:ARG:HB3	2.10	0.52
16:P:88:GLU:CG	17:Q:52:PRO:HB3	2.40	0.52
35:9:135:VAL:O	35:9:139:THR:HG23	2.10	0.52
47:21:63:CYS:SG	47:21:64:ARG:N	2.83	0.52
48:22:17:VAL:O	48:22:18:GLN:HB2	2.10	0.52
53:27:57:C:H2'	53:27:58:G:O4'	2.09	0.52
53:27:811:U:O2	53:27:1250:G:H2'	2.09	0.52
53:27:914:G:H5'	53:27:915:C:OP2	2.10	0.52
53:27:2073:C:H2'	53:27:2074:U:H6	1.75	0.52
58:32:38:A:H2'	58:32:39:C:C6	2.45	0.52
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.52
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.52
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.52
59:33:606:MET:HB3	59:33:630:GLY:HA3	1.92	0.52
59:33:722:LEU:O	59:33:726:LEU:HG	2.09	0.52
4:D:102:LEU:HD12	4:D:106:ALA:HB3	1.90	0.52
7:G:39:THR:HB	7:G:105:LYS:CE	2.39	0.52
7:G:78:GLY:N	7:G:79:PRO:HD2	2.25	0.52
15:O:2:ASN:O	15:O:5:LYS:HB3	2.09	0.52
16:P:36:GLN:NE2	53:27:564:C:H1'	2.25	0.52
19:S:74:ILE:HD12	19:S:74:ILE:O	2.10	0.52
20:T:13:LEU:O	20:T:18:LYS:HG3	2.09	0.52
32:6:130:LYS:O	32:6:133:ALA:HB3	2.10	0.52
32:6:160:LEU:HD23	32:6:182:VAL:HG12	1.92	0.52
36:10:91:ARG:HH21	48:22:60:ARG:HH22	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:28:ASN:OD1	41:15:56:LYS:HD2	2.10	0.52
41:15:124:LYS:HD3	52:26:780:A:H5”	1.92	0.52
44:18:13:VAL:CA	44:18:59:GLN:HE22	2.19	0.52
51:25:25:ALA:HB3	55:29:9:G:H4’	1.90	0.52
52:26:489:C:H2’	52:26:490:C:H6	1.74	0.52
53:27:364:C:H2’	53:27:365:U:C6	2.45	0.52
53:27:1198:U:H2’	53:27:1199:U:C6	2.44	0.52
53:27:1882:U:H2’	53:27:1883:U:C6	2.44	0.52
53:27:2405:G:H2’	53:27:2411:A:H62	1.74	0.52
54:28:70:C:H2’	54:28:71:C:C6	2.45	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.52
59:33:697:VAL:HG13	59:33:712:MET:HE2	1.92	0.52
4:D:24:VAL:O	4:D:27:VAL:HG12	2.10	0.52
6:F:127:GLU:HG3	6:F:145:ASN:HA	1.91	0.52
11:K:103:ILE:CD1	53:27:259:G:H4’	2.40	0.52
42:16:41:PRO:HB3	42:16:88:ASP:OD2	2.10	0.52
52:26:70:U:H4’	52:26:71:A:C8	2.45	0.52
52:26:900:A:H2’	52:26:901:A:C8	2.45	0.52
52:26:1119:C:O2’	52:26:1120:C:H5’	2.10	0.52
52:26:1276:G:H2’	52:26:1277:C:O4’	2.10	0.52
52:26:1327:C:H2’	52:26:1328:C:C6	2.44	0.52
53:27:286:U:H2’	53:27:287:G:C8	2.44	0.52
53:27:934:U:H2’	53:27:935:C:C6	2.45	0.52
53:27:984:A:H5”	53:27:985:C:OP2	2.10	0.52
53:27:1979:U:O2’	53:27:1980:G:H5’	2.10	0.52
53:27:2028:U:H2’	53:27:2029:G:C8	2.44	0.52
56:30:71:G:H2’	56:30:72:C:C6	2.45	0.52
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.52
59:33:371:GLU:O	59:33:407:TYR:OH	2.28	0.52
1:A:259:ASN:OD1	1:A:261:ARG:HB3	2.10	0.51
7:G:53:ARG:HG3	7:G:86:MET:HB2	1.92	0.51
13:M:37:THR:HG21	13:M:40:LYS:NZ	2.26	0.51
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.74	0.51
15:O:5:LYS:O	15:O:9:GLN:HB2	2.11	0.51
16:P:107:ALA:O	16:P:110:GLU:HB2	2.10	0.51
19:S:92:ASN:OD1	19:S:93:LEU:N	2.43	0.51
32:6:82:ALA:HB2	32:6:213:LEU:HD23	1.93	0.51
34:8:131:ILE:HG22	34:8:134:TYR:N	2.26	0.51
36:10:6:ILE:HB	36:10:62:MET:HB2	1.92	0.51
41:15:111:ASP:HB3	51:25:19:LYS:HZ1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:9:PHE:HE2	49:23:36:ARG:HD3	1.75	0.51
52:26:1432:G:H1'	52:26:1468:A:H62	1.75	0.51
53:27:971:G:H2'	53:27:972:A:O4'	2.09	0.51
53:27:1056:G:H5"	53:27:1057:A:O4'	2.10	0.51
53:27:2290:G:H2'	53:27:2291:U:O4'	2.10	0.51
53:27:2841:C:H2'	53:27:2842:G:H8	1.75	0.51
54:28:41:G:N3	54:28:41:G:H2'	2.25	0.51
57:31:23:C:H2'	57:31:24:U:C6	2.45	0.51
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.51
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.75	0.51
1:A:248:GLY:HA3	53:27:2239:G:H5'	1.91	0.51
6:F:90:LEU:HD21	6:F:94:ILE:HG13	1.92	0.51
6:F:125:THR:HG21	6:F:148:ALA:HB2	1.92	0.51
11:K:85:VAL:CG1	11:K:94:THR:HG22	2.40	0.51
13:M:30:ARG:HG3	13:M:75:ILE:CD1	2.39	0.51
13:M:45:ARG:O	13:M:49:GLU:HG3	2.09	0.51
24:X:12:GLU:CD	24:X:12:GLU:H	2.13	0.51
33:7:112:ALA:HB2	33:7:182:ASP:O	2.10	0.51
33:7:116:ALA:HB1	33:7:186:SER:CB	2.40	0.51
34:8:181:PHE:CZ	34:8:184:LYS:HA	2.45	0.51
37:11:50:ALA:HA	37:11:55:LYS:O	2.10	0.51
38:12:45:ILE:HD13	38:12:60:LEU:HD22	1.91	0.51
39:13:97:LEU:HB3	39:13:103:VAL:HG13	1.93	0.51
40:14:80:THR:HB	40:14:83:THR:CB	2.39	0.51
41:15:33:ILE:CD1	41:15:73:VAL:HG21	2.38	0.51
42:16:80:LEU:HB3	42:16:97:VAL:HB	1.91	0.51
52:26:225:C:C2'	52:26:226:G:H5"	2.40	0.51
52:26:846:G:H2'	52:26:847:G:H8	1.75	0.51
52:26:939:G:H2'	52:26:940:C:C6	2.45	0.51
53:27:704:G:HO2'	53:27:705:A:H8	1.57	0.51
53:27:857:G:H2'	53:27:858:G:C1'	2.41	0.51
53:27:864:G:O2'	53:27:865:C:H5'	2.10	0.51
53:27:2412:A:H2'	53:27:2413:G:O4'	2.10	0.51
53:27:2845:U:H2'	53:27:2846:G:C8	2.46	0.51
56:30:48:C:C2	56:30:59:U:H1'	2.46	0.51
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.51
59:33:227:HIS:O	59:33:231:GLU:HG3	2.09	0.51
3:C:16:GLU:O	3:C:20:GLY:N	2.40	0.51
7:G:100:ALA:CB	7:G:125:ARG:HD2	2.41	0.51
9:I:35:ARG:HA	9:I:40:HIS:CD2	2.46	0.51
14:N:35:ILE:HD12	14:N:102:ARG:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:79:ARG:NE	17:Q:80:ARG:HH21	2.08	0.51
19:S:39:THR:O	19:S:43:ILE:HG13	2.11	0.51
25:Y:40:THR:CG2	25:Y:43:ILE:HG12	2.36	0.51
29:3:10:LEU:HD11	29:3:14:ARG:NH1	2.23	0.51
39:13:114:LYS:HD3	52:26:1187:G:C5'	2.40	0.51
39:13:122:ARG:HH11	52:26:1343:G:H1'	1.76	0.51
46:20:4:ILE:O	46:20:71:VAL:HG21	2.11	0.51
52:26:298:A:H2'	52:26:299:G:O4'	2.10	0.51
52:26:1241:G:H2'	52:26:1242:G:H8	1.74	0.51
53:27:693:A:H2'	53:27:694:U:C6	2.45	0.51
53:27:2291:U:O2'	53:27:2374:C:H1'	2.11	0.51
53:27:2786:U:O2'	53:27:2787:C:H5'	2.10	0.51
56:30:58:A:H1'	56:30:61:C:N4	2.26	0.51
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.51
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.51
4:D:104:THR:HA	26:Z:38:SER:HB3	1.92	0.51
5:E:154:GLU:OE1	5:E:157:LYS:HB2	2.09	0.51
6:F:73:ASN:ND2	6:F:76:GLU:HG2	2.26	0.51
9:I:8:PRO:HG3	9:I:48:VAL:CG1	2.41	0.51
14:N:31:THR:O	14:N:32:PRO:C	2.48	0.51
15:O:108:ARG:HD2	52:26:1463:U:OP1	2.11	0.51
39:13:70:GLY:O	39:13:74:GLN:HG3	2.10	0.51
46:20:3:THR:HG23	46:20:24:SER:HB3	1.92	0.51
48:22:41:SER:HB3	48:22:51:GLN:HG2	1.92	0.51
52:26:1282:C:H2'	52:26:1283:U:C6	2.46	0.51
53:27:1188:U:O2'	53:27:1189:A:H5'	2.11	0.51
53:27:1540:G:O2'	53:27:1541:C:H5'	2.11	0.51
53:27:1642:G:H2'	53:27:1643:G:O4'	2.10	0.51
53:27:1846:G:H5"	53:27:1847:G:OP2	2.10	0.51
53:27:1956:U:H2'	53:27:1957:C:H5'	1.91	0.51
53:27:2047:C:H2'	53:27:2048:G:C8	2.45	0.51
53:27:2620:C:H2'	53:27:2621:G:O4'	2.10	0.51
54:28:30:C:H2'	54:28:31:C:C5'	2.39	0.51
2:B:179:ARG:HB3	2:B:188:LEU:HD12	1.92	0.51
4:D:89:THR:O	54:28:43:C:H1'	2.11	0.51
7:G:44:ALA:HA	7:G:51:TYR:CE2	2.46	0.51
8:H:80:LYS:O	8:H:84:GLY:N	2.41	0.51
13:M:60:VAL:O	13:M:64:ARG:HG2	2.10	0.51
14:N:28:VAL:HG22	14:N:29:HIS:N	2.26	0.51
20:T:31:GLY:O	20:T:66:VAL:HG23	2.11	0.51
39:13:121:ARG:HH12	52:26:1345:U:H5"	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1182:G:O2'	52:26:1183:U:H5"	2.11	0.51
52:26:1339:A:H2'	52:26:1340:A:O4'	2.10	0.51
53:27:27:G:N2	53:27:512:G:H1'	2.24	0.51
53:27:473:G:O2'	53:27:474:G:H5'	2.11	0.51
53:27:1923:U:H5"	57:31:24:U:O2'	2.11	0.51
53:27:2822:G:H2'	53:27:2823:A:H5"	1.92	0.51
57:31:24:U:H2'	57:31:25:C:C6	2.46	0.51
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.51
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.24	0.51
4:D:126:ASN:OD1	4:D:156:THR:HA	2.10	0.51
5:E:90:GLY:HA3	5:E:93:TYR:CE2	2.45	0.51
8:H:4:VAL:N	8:H:7:TYR:HD2	2.08	0.51
9:I:11:VAL:HG11	9:I:50:THR:HG22	1.92	0.51
10:J:76:VAL:O	15:O:72:VAL:HG22	2.11	0.51
14:N:4:LYS:HE2	14:N:8:ILE:HD11	1.93	0.51
22:V:52:ASP:O	22:V:53:HIS:HB2	2.11	0.51
27:1:5:ASN:HD22	53:27:2020:A:H62	1.56	0.51
32:6:179:GLY:C	32:6:180:ILE:HD12	2.30	0.51
35:9:10:LEU:HD11	35:9:67:ARG:HG2	1.91	0.51
35:9:105:ILE:HD11	35:9:123:LEU:CD2	2.41	0.51
38:12:53:ASP:O	38:12:56:PRO:HG3	2.10	0.51
38:12:115:ALA:O	38:12:119:GLY:N	2.44	0.51
40:14:65:TYR:OH	44:18:84:ARG:HG3	2.10	0.51
43:17:6:ILE:HD11	43:17:65:GLU:CD	2.31	0.51
46:20:67:ILE:CG2	46:20:71:VAL:HB	2.41	0.51
51:25:13:VAL:CG1	51:25:15:LEU:HG	2.40	0.51
52:26:286:C:H2'	52:26:287:U:C6	2.46	0.51
52:26:516:U:H5	52:26:533:A:N6	2.07	0.51
52:26:1206:G:H2'	52:26:1207:G:H5"	1.91	0.51
52:26:1305:G:HO2'	52:26:1306:A:H8	1.58	0.51
52:26:1355:G:H2'	52:26:1356:G:H8	1.76	0.51
53:27:848:C:H2'	53:27:849:A:C8	2.45	0.51
53:27:942:G:H2'	53:27:943:A:O4'	2.11	0.51
53:27:1020:A:H1'	53:27:1021:A:OP2	2.11	0.51
53:27:1901:A:H2'	53:27:1902:C:C6	2.45	0.51
53:27:2792:A:C2	53:27:2793:C:H1'	2.46	0.51
53:27:2836:U:H2'	53:27:2837:A:C8	2.45	0.51
53:27:2841:C:H2'	53:27:2842:G:C8	2.46	0.51
54:28:65:U:C3'	54:28:108:A:H61	2.21	0.51
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.51
3:C:115:GLN:HB3	3:C:117:ARG:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:70:LEU:HD11	53:27:2758:A:C2	2.45	0.51
5:E:70:LEU:O	5:E:74:MET:HG3	2.11	0.51
7:G:54:VAL:HG13	7:G:54:VAL:O	2.10	0.51
7:G:97:LYS:NZ	7:G:127:ALA:HB2	2.25	0.51
17:Q:5:PHE:HA	17:Q:39:LEU:HD13	1.92	0.51
27:1:8:THR:HB	53:27:2020:A:H5'	1.92	0.51
34:8:131:ILE:HG13	52:26:620:C:C6	2.46	0.51
38:12:77:VAL:HG23	38:12:126:CYS:HA	1.93	0.51
51:25:20:ARG:NH2	52:26:1538:C:O2	2.44	0.51
52:26:225:C:C3'	52:26:226:G:H5"	2.41	0.51
52:26:1329:A:O2'	52:26:1330:U:H5'	2.11	0.51
53:27:176:A:C2'	53:27:177:G:H5'	2.41	0.51
53:27:191:A:H2'	53:27:192:C:C6	2.46	0.51
53:27:970:U:H2'	53:27:971:G:C8	2.46	0.51
53:27:2105:U:H2'	53:27:2106:U:O4'	2.10	0.51
53:27:2743:U:H2'	53:27:2744:G:O4'	2.11	0.51
53:27:2832:U:H1'	53:27:2834:G:C2	2.44	0.51
58:32:29:G:H2'	58:32:30:G:O4'	2.10	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.51
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.51
59:33:305:ASP:O	59:33:305:ASP:OD1	2.29	0.51
59:33:736:ILE:HG13	59:33:737:ASP:N	2.25	0.51
1:A:204:LEU:HD21	1:A:213:ARG:HE	1.76	0.51
6:F:62:LEU:HA	6:F:65:ALA:CB	2.41	0.51
14:N:8:ILE:O	14:N:12:THR:HG23	2.10	0.51
19:S:39:THR:OG1	19:S:42:GLU:HG3	2.11	0.51
27:1:12:ARG:HD2	27:1:16:ARG:CZ	2.41	0.51
35:9:45:VAL:HG21	35:9:117:ALA:HA	1.92	0.51
37:11:66:GLU:HA	37:11:69:ARG:HG3	1.93	0.51
40:14:99:GLN:C	40:14:100:ILE:HD12	2.31	0.51
44:18:5:MET:HE1	44:18:8:ARG:HD2	1.93	0.51
52:26:26:A:N6	52:26:558:G:H1'	2.25	0.51
52:26:319:G:H2'	52:26:320:A:H8	1.75	0.51
52:26:374:A:H2'	52:26:375:U:C6	2.46	0.51
52:26:936:C:H2'	52:26:937:A:O4'	2.11	0.51
53:27:435:C:H2'	53:27:436:C:H5'	1.93	0.51
53:27:669:G:N3	53:27:669:G:H2'	2.26	0.51
53:27:859:G:O2'	53:27:860:U:P	2.67	0.51
53:27:946:C:H2'	53:27:947:A:C8	2.46	0.51
53:27:1386:C:H2'	53:27:1387:A:C8	2.45	0.51
53:27:1693:U:H3'	53:27:1694:C:H5'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2514:U:H2'	53:27:2515:C:C6	2.46	0.51
57:31:28:C:H2'	57:31:29:G:C8	2.46	0.51
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.51
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.51
6:F:8:LYS:O	6:F:9:VAL:HG12	2.11	0.51
6:F:87:GLU:OE1	36:10:21:MET:HG2	2.10	0.51
15:O:52:ARG:HH22	53:27:2720:U:H5"	1.73	0.51
33:7:120:THR:HG23	33:7:188:ALA:CA	2.41	0.51
35:9:93:VAL:HG22	35:9:110:MET:HE2	1.92	0.51
39:13:114:LYS:HE2	39:13:117:LEU:CD1	2.41	0.51
48:22:17:VAL:HG13	48:22:18:GLN:HG2	1.92	0.51
50:24:23:ARG:HH12	52:26:176:C:H5"	1.76	0.51
53:27:127:A:H5"	53:27:128:C:O4'	2.10	0.51
53:27:1023:U:H5'	53:27:1024:G:OP2	2.11	0.51
53:27:1913:A:H4'	53:27:1914:C:C5'	2.41	0.51
53:27:2055:C:H5'	53:27:2056:G:H5"	1.92	0.51
53:27:2488:G:H2'	53:27:2489:U:C6	2.46	0.51
54:28:114:C:H2'	54:28:115:A:H8	1.76	0.51
58:32:41:C:H2'	58:32:42:G:H8	1.76	0.51
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.39	0.51
59:33:488:GLY:O	59:33:492:ILE:N	2.44	0.51
1:A:159:THR:HG22	1:A:160:TYR:N	2.26	0.51
2:B:114:LYS:HD3	53:27:2723:C:OP1	2.11	0.51
4:D:30:VAL:HG22	4:D:95:MET:CE	2.41	0.51
5:E:136:ASP:OD2	5:E:139:VAL:HG23	2.11	0.51
5:E:167:VAL:O	5:E:167:VAL:HG13	2.11	0.51
6:F:76:GLU:O	6:F:142:VAL:HG13	2.12	0.51
7:G:23:LEU:HB3	7:G:92:ALA:HB2	1.92	0.51
14:N:70:ALA:O	14:N:74:VAL:HG23	2.11	0.51
31:5:1:MET:HG3	31:5:2:LYS:N	2.17	0.51
32:6:18:GLN:CB	32:6:188:THR:HB	2.41	0.51
32:6:105:THR:HG21	52:26:1072:G:N2	2.26	0.51
32:6:184:ALA:O	32:6:199:ILE:HD12	2.11	0.51
33:7:10:ARG:HH11	33:7:10:ARG:HG3	1.76	0.51
33:7:178:ARG:HE	52:26:1112:C:H1'	1.74	0.51
34:8:59:LYS:HZ2	34:8:194:ILE:HG22	1.76	0.51
36:10:91:ARG:NH2	48:22:60:ARG:HH22	2.09	0.51
40:14:65:TYR:HD1	44:18:97:LYS:HA	1.76	0.51
44:18:72:PHE:CE1	44:18:77:GLY:HA2	2.46	0.51
50:24:28:ARG:O	50:24:32:LYS:HG2	2.10	0.51
52:26:813:U:H2'	52:26:814:A:C5'	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1424:U:H2'	52:26:1425:U:C6	2.46	0.51
52:26:1520:C:H2'	52:26:1521:C:C6	2.46	0.51
53:27:445:C:O2'	53:27:446:G:H5'	2.11	0.51
53:27:1270:C:H5"	53:27:1271:G:O5'	2.12	0.51
53:27:1709:U:O2'	53:27:2859:G:H1'	2.11	0.51
53:27:2111:U:H1'	53:27:2145:C:H1'	1.92	0.51
53:27:2811:G:H2'	53:27:2812:G:C8	2.46	0.51
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.51
5:E:40:VAL:HG21	5:E:64:ALA:HA	1.92	0.50
8:H:106:GLN:HG2	8:H:125:THR:OG1	2.10	0.50
10:J:78:ARG:O	15:O:69:VAL:HG13	2.10	0.50
11:K:19:LEU:HD11	11:K:31:GLY:HA3	1.93	0.50
11:K:58:TYR:O	30:4:12:ARG:HD2	2.10	0.50
27:1:5:ASN:HB2	53:27:2022:U:O4	2.11	0.50
28:2:25:ASN:HD22	53:27:2285:C:P	2.34	0.50
33:7:60:ALA:C	33:7:62:SER:H	2.14	0.50
35:9:125:LYS:HG2	35:9:127:TYR:CE1	2.46	0.50
38:12:12:ARG:NH2	52:26:826:C:H5'	2.26	0.50
39:13:11:ARG:H	39:13:77:ALA:CB	2.24	0.50
52:26:1429:A:H2'	52:26:1430:A:C8	2.46	0.50
53:27:274:C:C2'	53:27:275:C:H5'	2.39	0.50
53:27:516:C:H2'	53:27:517:C:C6	2.46	0.50
53:27:1186:G:H8	53:27:1186:G:O5'	1.93	0.50
53:27:1287:A:H3'	53:27:1288:G:H21	1.76	0.50
53:27:2163:A:H2'	53:27:2164:C:H5'	1.92	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.50
3:C:65:THR:HG22	3:C:66:GLY:N	2.26	0.50
4:D:79:ARG:HH21	4:D:79:ARG:HG2	1.75	0.50
7:G:47:GLU:HB3	7:G:51:TYR:CE2	2.46	0.50
7:G:102:ALA:HA	7:G:105:LYS:HD3	1.93	0.50
17:Q:5:PHE:HB3	17:Q:38:VAL:HA	1.94	0.50
17:Q:81:LYS:HE3	53:27:973:A:OP2	2.11	0.50
22:V:62:LYS:O	22:V:78:ILE:HG23	2.11	0.50
29:3:42:LEU:CD2	29:3:43:THR:HG23	2.40	0.50
31:5:5:ALA:O	31:5:38:GLY:HA3	2.12	0.50
32:6:83:ALA:HB3	32:6:90:PHE:HD2	1.76	0.50
32:6:206:ILE:HG13	32:6:207:ARG:N	2.27	0.50
35:9:93:VAL:HG22	35:9:110:MET:CE	2.41	0.50
39:13:27:ILE:HG21	39:13:34:LEU:HB2	1.93	0.50
47:21:45:VAL:HG13	47:21:72:TRP:C	2.31	0.50
52:26:1347:G:C2'	52:26:1348:U:OP2	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:52:A:C5	53:27:118:A:C2	2.99	0.50
53:27:648:G:H2'	53:27:649:G:C8	2.44	0.50
53:27:1159:U:O2'	53:27:1160:G:H5'	2.11	0.50
53:27:1343:G:H2'	53:27:1384:A:H2	1.76	0.50
53:27:1666:G:H2'	53:27:1667:G:H5'	1.93	0.50
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
59:33:566:LYS:HA	59:33:569:ALA:HB3	1.92	0.50
3:C:88:ARG:O	3:C:90:GLN:N	2.44	0.50
4:D:7:TYR:OH	4:D:29:ARG:HB3	2.12	0.50
6:F:46:PHE:HB3	6:F:51:ARG:NH1	2.26	0.50
8:H:23:VAL:O	8:H:23:VAL:HG22	2.11	0.50
34:8:201:GLU:O	34:8:204:SER:HB2	2.11	0.50
37:11:110:ARG:NH1	37:11:122:GLU:HA	2.26	0.50
39:13:20:ILE:HG21	39:13:85:ALA:HB1	1.93	0.50
43:17:93:GLY:HA2	43:17:108:ARG:HH12	1.76	0.50
52:26:1148:U:C2'	52:26:1149:C:H5'	2.42	0.50
52:26:1426:G:H2'	52:26:1427:C:C6	2.46	0.50
53:27:217:A:H2'	53:27:218:A:O4'	2.11	0.50
53:27:753:A:O2'	53:27:754:U:H5'	2.12	0.50
53:27:852:U:H2'	53:27:853:C:H6	1.76	0.50
53:27:1550:C:H2'	53:27:1551:A:C8	2.46	0.50
53:27:2632:A:H2'	53:27:2633:G:H8	1.76	0.50
53:27:2773:C:H2'	53:27:2774:C:C6	2.45	0.50
1:A:28:PRO:CG	1:A:33:LEU:HD21	2.41	0.50
3:C:56:GLY:O	3:C:72:SER:HA	2.12	0.50
4:D:137:PHE:HB2	4:D:140:ILE:HD13	1.92	0.50
7:G:23:LEU:HD21	7:G:119:PRO:HB3	1.93	0.50
12:L:86:LYS:HE3	53:27:956:G:OP2	2.12	0.50
13:M:2:ARG:HG2	13:M:2:ARG:NH1	2.26	0.50
13:M:63:ARG:HD2	13:M:80:PHE:CD2	2.46	0.50
15:O:2:ASN:HD21	53:27:2876:G:H5"	1.75	0.50
18:R:19:LEU:HD11	27:1:19:ASP:O	2.12	0.50
21:U:9:ARG:HH11	21:U:27:PRO:HB3	1.76	0.50
22:V:70:PRO:HA	54:28:12:C:N3	2.27	0.50
31:5:37:GLN:NE2	53:27:1125:G:H5"	2.24	0.50
32:6:83:ALA:HB2	32:6:90:PHE:HB3	1.93	0.50
34:8:57:LYS:HD2	34:8:203:TYR:OH	2.10	0.50
38:12:106:SER:HA	52:26:642:A:N7	2.26	0.50
46:20:39:PHE:HA	46:20:50:THR:HG23	1.93	0.50
46:20:40:ASN:HD22	46:20:46:LYS:HZ1	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:197:A:C6	52:26:221:C:H4'	2.45	0.50
52:26:797:C:H2'	52:26:798:U:C6	2.47	0.50
53:27:54:G:N2	53:27:55:G:H1'	2.26	0.50
53:27:709:U:H2'	53:27:710:U:C6	2.46	0.50
53:27:2688:G:H1'	53:27:2721:A:N6	2.27	0.50
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.50
59:33:741:LEU:HD23	59:33:741:LEU:C	2.31	0.50
1:A:156:SER:HB2	53:27:1818:U:C5'	2.37	0.50
4:D:3:LEU:CD1	4:D:100:GLU:HB2	2.41	0.50
4:D:91:ARG:C	4:D:95:MET:HB3	2.32	0.50
5:E:87:GLN:HE21	5:E:162:ARG:HD2	1.76	0.50
7:G:118:ILE:N	7:G:119:PRO:CD	2.69	0.50
15:O:63:ILE:HA	15:O:68:GLY:CA	2.38	0.50
29:3:19:ARG:O	29:3:23:ALA:N	2.45	0.50
32:6:10:LYS:HB3	32:6:211:LEU:HD11	1.93	0.50
32:6:95:TRP:CH2	32:6:99:MET:HB3	2.47	0.50
34:8:8:LEU:HD21	34:8:31:CYS:HB3	1.92	0.50
34:8:194:ILE:O	34:8:194:ILE:HG13	2.11	0.50
36:10:6:ILE:HD11	36:10:71:ILE:HD11	1.93	0.50
37:11:110:ARG:HH12	37:11:122:GLU:HA	1.76	0.50
39:13:104:THR:HG22	39:13:106:ASP:H	1.76	0.50
40:14:57:VAL:O	40:14:58:ASN:HB2	2.12	0.50
49:23:25:GLY:O	49:23:27:LYS:HG2	2.10	0.50
52:26:148:G:C2'	52:26:149:A:H5"	2.40	0.50
52:26:853:C:H2'	52:26:854:U:O4'	2.12	0.50
52:26:1435:G:H2'	52:26:1436:U:C6	2.47	0.50
53:27:40:U:H2'	53:27:41:C:C6	2.46	0.50
53:27:195:A:H2'	53:27:198:C:N4	2.27	0.50
53:27:1173:U:H6	53:27:1174:U:H1'	1.75	0.50
53:27:2055:C:H5'	53:27:2056:G:C5'	2.41	0.50
53:27:2358:A:H2'	53:27:2359:C:O4'	2.11	0.50
53:27:2372:U:H2'	53:27:2373:G:H8	1.76	0.50
53:27:2699:C:H2'	53:27:2700:A:H8	1.76	0.50
59:33:55:LEU:HD23	59:33:55:LEU:C	2.32	0.50
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.50
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.50
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.50
59:33:671:VAL:O	59:33:671:VAL:HG13	2.11	0.50
1:A:52:HIS:CE1	53:27:1824:G:OP2	2.65	0.50
3:C:5:LEU:HD11	3:C:12:LEU:HD23	1.94	0.50
5:E:100:ASN:ND2	5:E:115:GLN:HE22	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:44:ALA:O	7:G:48:ALA:N	2.45	0.50
8:H:90:GLY:HA2	53:27:1064:C:H1'	1.94	0.50
9:I:84:ILE:O	9:I:84:ILE:HG23	2.11	0.50
10:J:24:VAL:HG13	10:J:39:ILE:HG22	1.94	0.50
15:O:77:SER:OG	15:O:79:VAL:HG12	2.11	0.50
17:Q:61:ALA:HA	17:Q:99:THR:N	2.23	0.50
26:Z:66:ILE:HG23	26:Z:66:ILE:O	2.12	0.50
36:10:35:LYS:HB3	36:10:65:GLU:HB3	1.94	0.50
41:15:71:ASP:O	41:15:73:VAL:HG22	2.11	0.50
42:16:115:LYS:O	42:16:116:TYR:CB	2.60	0.50
44:18:89:ARG:HD2	44:18:91:GLU:OE1	2.12	0.50
52:26:190:A:C5	52:26:191:G:H1'	2.46	0.50
52:26:305:G:H5"	52:26:306:A:OP1	2.12	0.50
52:26:545:C:O2'	52:26:549:C:H5"	2.11	0.50
53:27:878:A:H3'	53:27:879:G:H8	1.77	0.50
53:27:890:C:H2'	53:27:891:G:O4'	2.11	0.50
53:27:1784:A:H4'	53:27:1785:A:C5'	2.41	0.50
53:27:2026:U:O5'	53:27:2026:U:H6	1.95	0.50
53:27:2461:A:H1'	53:27:2492:U:N3	2.26	0.50
53:27:2540:C:H2'	53:27:2541:A:O4'	2.11	0.50
53:27:2631:G:O2'	53:27:2632:A:H5'	2.12	0.50
54:28:85:G:H2'	54:28:86:G:H8	1.76	0.50
54:28:104:A:H2'	54:28:105:G:O4'	2.11	0.50
59:33:645:ARG:HG2	59:33:652:ILE:HD13	1.92	0.50
1:A:28:PRO:HB2	1:A:33:LEU:HD11	1.94	0.50
1:A:86:ARG:HG2	1:A:86:ARG:NH1	2.27	0.50
7:G:72:LEU:H	7:G:72:LEU:HD12	1.75	0.50
10:J:113:MET:HA	10:J:116:ILE:HD12	1.93	0.50
19:S:8:LEU:HD13	24:X:21:LEU:HB2	1.93	0.50
21:U:44:HIS:HD1	21:U:45:ASP:N	2.10	0.50
34:8:29:THR:O	34:8:31:CYS:N	2.36	0.50
36:10:3:HIS:O	36:10:92:THR:HA	2.12	0.50
36:10:30:THR:HA	36:10:34:GLY:H	1.77	0.50
37:11:78:ARG:HA	37:11:82:SER:O	2.12	0.50
43:17:38:ILE:HG22	43:17:39:ALA:N	2.26	0.50
44:18:25:GLU:HA	44:18:28:ALA:HB3	1.94	0.50
46:20:3:THR:CG2	46:20:24:SER:HB3	2.41	0.50
46:20:25:ARG:O	52:26:110:C:O2'	2.30	0.50
52:26:104:G:H2'	52:26:105:G:C8	2.45	0.50
52:26:437:U:C2'	52:26:438:U:H5'	2.42	0.50
52:26:1324:A:O4'	52:26:1362:A:H4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:348:A:H2'	53:27:349:U:O4'	2.12	0.50
53:27:418:C:H2'	53:27:419:U:C6	2.47	0.50
53:27:1548:A:H2'	53:27:1549:A:C8	2.46	0.50
53:27:1571:A:H2'	53:27:1572:A:C8	2.46	0.50
53:27:2097:A:H2'	53:27:2098:U:C6	2.47	0.50
53:27:2174:C:H2'	53:27:2175:C:H5'	1.94	0.50
53:27:2273:A:H2'	53:27:2274:A:C8	2.47	0.50
53:27:2329:U:H2'	53:27:2330:G:H8	1.75	0.50
53:27:2478:A:H2'	53:27:2479:U:O4'	2.11	0.50
54:28:5:U:H2'	54:28:6:G:H8	1.76	0.50
56:30:43:C:H2'	56:30:44:G:O4'	2.12	0.50
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.50
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.50
4:D:65:LEU:HD13	54:28:42:C:C5	2.47	0.50
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.92	0.50
12:L:86:LYS:HG3	53:27:956:G:P	2.51	0.50
13:M:4:ARG:HB3	53:27:2722:G:H4'	1.94	0.50
24:X:21:LEU:HA	24:X:25:GLN:CB	2.39	0.50
33:7:102:ILE:N	33:7:102:ILE:CD1	2.71	0.50
33:7:174:LEU:HB2	52:26:1108:G:OP1	2.12	0.50
38:12:53:ASP:CG	38:12:54:THR:H	2.14	0.50
52:26:219:U:H2'	52:26:220:G:H8	1.75	0.50
52:26:1417:G:H2'	52:26:1482:G:N2	2.27	0.50
53:27:269:C:H2'	53:27:270:A:C8	2.44	0.50
53:27:386:G:H3'	53:27:387:U:C5'	2.41	0.50
53:27:1361:G:H2'	53:27:1362:C:C6	2.47	0.50
53:27:1496:A:H2'	53:27:1498:C:C4	2.47	0.50
53:27:1593:A:H2'	53:27:1594:U:C6	2.47	0.50
53:27:1679:A:H2'	53:27:1680:U:C6	2.46	0.50
53:27:1697:G:H4'	53:27:1978:A:H5"	1.93	0.50
53:27:2366:A:H2'	53:27:2367:G:O4'	2.12	0.50
54:28:13:G:N2	54:28:16:G:H1'	2.26	0.50
54:28:82:U:H2'	54:28:83:G:C8	2.46	0.50
58:32:16:C:O2	58:32:60:U:H4'	2.10	0.50
58:32:68:C:H2'	58:32:69:C:C6	2.47	0.50
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.50
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.50
1:A:144:GLU:HB2	1:A:187:CYS:HB3	1.94	0.50
6:F:47:PHE:HA	6:F:51:ARG:HB2	1.93	0.50
7:G:43:LYS:HD2	7:G:98:GLU:HG3	1.94	0.50
7:G:118:ILE:N	7:G:119:PRO:HD2	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:109:ALA:O	8:H:113:ALA:CB	2.59	0.50
11:K:51:GLU:HG2	11:K:56:PRO:HA	1.93	0.50
11:K:89:VAL:HG21	11:K:123:ARG:NH2	2.27	0.50
17:Q:28:ALA:O	17:Q:31:GLU:HG3	2.12	0.50
17:Q:45:GLU:CG	17:Q:46:GLU:N	2.75	0.50
17:Q:88:GLY:H	53:27:1225:G:H5'	1.75	0.50
19:S:34:VAL:HG22	19:S:81:LYS:O	2.12	0.50
23:W:11:PRO:HA	23:W:28:PHE:O	2.12	0.50
30:4:35:LYS:HG2	30:4:39:ARG:NH2	2.27	0.50
38:12:3:GLN:NE2	52:26:755:G:N2	2.60	0.50
38:12:93:LYS:HE2	38:12:116:ARG:HH12	1.76	0.50
43:17:16:ILE:HD12	43:17:16:ILE:N	2.26	0.50
52:26:623:C:H2'	52:26:624:C:H6	1.76	0.50
53:27:28:A:H2'	53:27:29:U:C6	2.47	0.50
53:27:175:G:H2'	53:27:176:A:C8	2.47	0.50
53:27:519:U:H2'	53:27:520:G:H8	1.77	0.50
53:27:1233:C:H2'	53:27:1234:U:H6	1.77	0.50
53:27:1287:A:O2'	53:27:1288:G:H5'	2.12	0.50
53:27:2261:C:O2'	53:27:2262:U:H5'	2.12	0.50
53:27:2298:A:H2'	53:27:2299:U:O4'	2.12	0.50
53:27:2345:G:H5'	53:27:2347:C:O4'	2.12	0.50
53:27:2573:C:H5"	53:27:2574:G:H5"	1.94	0.50
53:27:2682:A:H61	53:27:2728:U:H1'	1.76	0.50
53:27:2834:G:O6	53:27:2879:A:H2'	2.12	0.50
54:28:3:C:H2'	54:28:4:C:C5'	2.39	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.50
5:E:51:PHE:HE1	5:E:71:LEU:HD22	1.77	0.49
8:H:29:GLN:NE2	53:27:1096:A:H61	1.98	0.49
12:L:79:ALA:HA	53:27:2494:G:O2'	2.12	0.49
16:P:51:GLN:NE2	16:P:54:ARG:HH11	2.10	0.49
17:Q:8:GLY:O	17:Q:10:LYS:HE3	2.12	0.49
23:W:68:ALA:O	23:W:71:ARG:HG2	2.12	0.49
33:7:155:ARG:O	33:7:156:LEU:O	2.29	0.49
34:8:116:LEU:HD11	34:8:122:ILE:HD11	1.93	0.49
34:8:146:GLU:HA	34:8:149:LYS:HB3	1.94	0.49
35:9:15:ILE:HG12	35:9:35:LEU:O	2.11	0.49
39:13:98:ARG:HA	39:13:103:VAL:HG22	1.94	0.49
42:16:53:ARG:NE	42:16:63:THR:HG22	2.27	0.49
42:16:119:LYS:HB2	52:26:37:U:P	2.52	0.49
43:17:68:LEU:O	43:17:71:GLU:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:30:LEU:HB2	49:23:48:ILE:HG22	1.92	0.49
52:26:217:C:H2'	52:26:218:U:C6	2.47	0.49
52:26:955:U:H2'	52:26:956:U:C6	2.46	0.49
52:26:1502:A:C8	52:26:1505:G:N2	2.77	0.49
53:27:499:U:H2'	53:27:500:G:O4'	2.11	0.49
53:27:534:U:H2'	53:27:535:G:C8	2.46	0.49
53:27:1096:A:C3'	53:27:1097:U:H5"	2.42	0.49
53:27:1171:G:H1'	53:27:1179:G:N2	2.26	0.49
53:27:1669:A:H2'	53:27:1670:C:H5'	1.94	0.49
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.49
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.49
2:B:110:THR:OG1	2:B:171:THR:HG23	2.12	0.49
3:C:44:ARG:HD3	3:C:46:GLN:HE22	1.75	0.49
5:E:138:GLN:HG3	5:E:139:VAL:N	2.25	0.49
6:F:5:LEU:HD23	6:F:15:LEU:N	2.28	0.49
7:G:55:VAL:HA	53:27:1084:A:H5'	1.94	0.49
11:K:101:ILE:HB	11:K:105:ILE:HG13	1.93	0.49
12:L:5:LYS:O	12:L:6:ARG:O	2.30	0.49
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.47	0.49
32:6:153:MET:HE1	32:6:157:PRO:HG3	1.94	0.49
34:8:74:TYR:OH	34:8:96:ARG:NH1	2.45	0.49
35:9:89:THR:HG22	35:9:90:GLY:N	2.27	0.49
35:9:98:ALA:CB	35:9:123:LEU:HG	2.41	0.49
37:11:142:ARG:O	37:11:146:ALA:HB3	2.12	0.49
39:13:41:GLU:O	39:13:44:ARG:HG2	2.13	0.49
40:14:59:LYS:HD2	52:26:972:C:OP2	2.12	0.49
42:16:3:VAL:HG13	42:16:4:ASN:N	2.27	0.49
52:26:382:A:H2'	52:26:383:A:C8	2.46	0.49
52:26:1234:C:H1'	52:26:1364:U:O2	2.12	0.49
52:26:1372:U:H2'	52:26:1373:G:O4'	2.12	0.49
53:27:198:C:H4'	53:27:2243:U:O2'	2.12	0.49
53:27:508:A:H3'	53:27:509:C:C5'	2.42	0.49
53:27:688:U:H2'	53:27:689:A:H8	1.77	0.49
53:27:1077:A:H2	53:27:1088:A:H2'	1.78	0.49
53:27:1082:U:H2'	53:27:1083:U:C4'	2.42	0.49
53:27:1790:C:H2'	53:27:1791:A:C5	2.47	0.49
54:28:27:C:H2'	54:28:28:C:C6	2.47	0.49
54:28:49:C:H2'	54:28:50:A:H8	1.78	0.49
58:32:60:U:H2'	58:32:61:C:C6	2.47	0.49
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.49
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:515:GLU:HA	59:33:518:HIS:CB	2.42	0.49
59:33:718:ASN:HB2	59:33:721:VAL:CG2	2.41	0.49
5:E:82:PHE:CE2	5:E:137:LYS:HB2	2.47	0.49
9:I:24:THR:HG21	9:I:27:ARG:HD2	1.93	0.49
10:J:18:ARG:HD3	10:J:45:GLU:OE1	2.13	0.49
13:M:99:LYS:O	27:1:41:HIS:HA	2.13	0.49
29:3:22:MET:SD	29:3:28:ARG:HG2	2.52	0.49
34:8:112:GLU:HB2	52:26:408:A:H5'	1.95	0.49
39:13:83:THR:HB	39:13:97:LEU:HD23	1.94	0.49
39:13:108:ARG:HG2	52:26:1347:G:O4'	2.12	0.49
49:23:10:ILE:HD13	49:23:40:PHE:CE2	2.47	0.49
52:26:560:A:H5'	52:26:566:G:N2	2.28	0.49
53:27:878:A:H1'	53:27:900:A:C6	2.48	0.49
53:27:1487:U:H2'	53:27:1488:C:C6	2.47	0.49
53:27:2000:C:H2'	53:27:2001:C:C6	2.47	0.49
53:27:2224:G:H4'	53:27:2226:C:C2	2.47	0.49
58:32:19:G:H2'	58:32:20:U:C5	2.47	0.49
58:32:22:G:O2'	58:32:23:C:H5'	2.13	0.49
58:32:43:A:H2'	58:32:44:A:O4'	2.13	0.49
1:A:219:VAL:HG21	53:27:782:A:C8	2.48	0.49
2:B:186:LEU:HD21	15:O:3:ILE:HG21	1.94	0.49
3:C:5:LEU:HD13	3:C:10:SER:O	2.12	0.49
4:D:140:ILE:HD12	4:D:140:ILE:N	2.27	0.49
5:E:9:VAL:O	5:E:9:VAL:HG13	2.12	0.49
5:E:103:ASN:HA	5:E:113:ASP:OD1	2.13	0.49
7:G:33:VAL:HB	7:G:36:ASP:OD2	2.12	0.49
10:J:78:ARG:HB2	15:O:70:GLU:CG	2.42	0.49
12:L:4:PRO:HG3	12:L:68:PHE:HE2	1.78	0.49
12:L:86:LYS:HG3	53:27:956:G:OP1	2.12	0.49
14:N:62:LEU:HD13	14:N:70:ALA:HA	1.95	0.49
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.46	0.49
32:6:117:GLU:O	32:6:121:GLN:HG2	2.12	0.49
35:9:100:GLU:C	35:9:102:THR:N	2.65	0.49
37:11:68:VAL:HG21	37:11:133:ALA:HB1	1.93	0.49
43:17:113:LYS:CB	43:17:114:PRO:HD3	2.39	0.49
46:20:67:ILE:HG22	46:20:68:SER:O	2.11	0.49
51:25:65:ARG:O	51:25:66:ARG:HB2	2.12	0.49
52:26:37:U:H2'	52:26:38:G:C8	2.47	0.49
52:26:343:U:O2'	52:26:344:A:H2'	2.12	0.49
52:26:1318:A:H2'	52:26:1319:A:H5'	1.94	0.49
53:27:610:C:H2'	53:27:611:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:783:A:H2'	53:27:784:G:H5'	1.95	0.49
53:27:1177:G:H2'	53:27:1178:C:H1'	1.93	0.49
53:27:2772:C:H2'	53:27:2773:C:C6	2.48	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.49
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.94	0.49
2:B:25:THR:HG21	2:B:193:VAL:HG22	1.95	0.49
5:E:122:ALA:HA	5:E:132:LEU:HA	1.95	0.49
7:G:35:VAL:O	7:G:39:THR:HG23	2.12	0.49
7:G:38:MET:HA	7:G:41:LEU:HD12	1.94	0.49
8:H:92:PRO:CA	8:H:136:GLY:HA3	2.42	0.49
9:I:9:GLU:OE2	53:27:539:G:H4'	2.13	0.49
11:K:50:PHE:CE2	11:K:52:GLY:HA2	2.48	0.49
29:3:3:ARG:NH1	53:27:752:A:OP1	2.45	0.49
33:7:3:LYS:HA	52:26:1190:G:OP1	2.11	0.49
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.28	0.49
41:15:85:VAL:HG23	41:15:111:ASP:OD1	2.12	0.49
49:23:56:HIS:O	49:23:57:VAL:C	2.50	0.49
51:25:28:LEU:HA	51:25:31:VAL:HG12	1.94	0.49
52:26:917:G:H2'	52:26:918:A:C8	2.47	0.49
52:26:1304:G:H1'	52:26:1333:A:N6	2.27	0.49
53:27:825:A:H2'	53:27:826:U:O4'	2.12	0.49
53:27:1722:A:N6	53:27:1738:G:H1'	2.28	0.49
53:27:2180:U:O2'	58:32:17(A):U:H1'	2.12	0.49
53:27:2301:C:H2'	53:27:2302:U:C6	2.47	0.49
58:32:18:G:H1'	58:32:58:A:C2	2.47	0.49
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.92	0.49
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.49
1:A:234:GLY:HA3	1:A:238:ASN:HB3	1.93	0.49
2:B:123:LYS:HG2	2:B:165:MET:SD	2.52	0.49
3:C:149:ILE:HG23	3:C:149:ILE:O	2.12	0.49
4:D:73:VAL:H	4:D:78:ILE:CD1	2.24	0.49
6:F:79:THR:HG22	6:F:147:VAL:HG23	1.94	0.49
15:O:69:VAL:HG12	15:O:70:GLU:N	2.28	0.49
21:U:30:ILE:HB	21:U:38:LEU:HB3	1.95	0.49
26:Z:58:ASP:OD1	26:Z:59:ARG:N	2.40	0.49
33:7:48:LYS:O	33:7:71:ARG:NH2	2.46	0.49
34:8:1:ALA:HB2	52:26:404:G:O6	2.12	0.49
34:8:108:ALA:HB3	34:8:112:GLU:OE1	2.13	0.49
39:13:35:GLU:HA	39:13:39:GLY:CA	2.43	0.49
41:15:29:THR:HG21	41:15:62:ALA:HB2	1.94	0.49
44:18:8:ARG:CD	44:18:12:ARG:HH21	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:20:VAL:HG23	46:20:34:GLU:O	2.13	0.49
52:26:106:C:O2'	52:26:107:G:H5'	2.13	0.49
52:26:407:U:H2'	52:26:408:A:H8	1.78	0.49
52:26:591:U:H2'	52:26:592:G:H8	1.77	0.49
52:26:624:C:H2'	52:26:625:U:O4'	2.12	0.49
53:27:106:C:H2'	53:27:107:G:C8	2.48	0.49
53:27:310:A:H2'	53:27:311:A:H5"	1.94	0.49
53:27:545:U:O2	53:27:545:U:H2'	2.13	0.49
53:27:608:A:H2'	53:27:609:A:C8	2.47	0.49
53:27:888:C:H2'	53:27:889:C:O4'	2.12	0.49
53:27:2538:C:H2'	53:27:2539:C:C6	2.47	0.49
54:28:70:C:H2'	54:28:71:C:H6	1.77	0.49
2:B:114:LYS:HE2	2:B:196:ALA:HB2	1.93	0.49
3:C:28:VAL:O	3:C:32:VAL:HG12	2.12	0.49
5:E:5:LYS:C	5:E:7:PRO:HD3	2.32	0.49
5:E:89:VAL:HG21	5:E:162:ARG:NH1	2.27	0.49
6:F:75:LEU:HD12	6:F:77:THR:H	1.78	0.49
10:J:35:VAL:HG11	10:J:106:GLU:HB3	1.94	0.49
11:K:21:ARG:HH21	11:K:21:ARG:HG3	1.78	0.49
19:S:17:SER:H	19:S:20:ALA:HB3	1.78	0.49
32:6:185:ILE:HG23	32:6:185:ILE:O	2.12	0.49
33:7:39:ARG:HD3	33:7:54:ILE:CD1	2.42	0.49
33:7:176:THR:O	33:7:179:ALA:HB3	2.12	0.49
39:13:45:MET:HG2	39:13:46:VAL:N	2.28	0.49
39:13:56:MET:O	39:13:57:VAL:C	2.50	0.49
39:13:119:LYS:O	39:13:121:ARG:N	2.46	0.49
45:19:32:THR:HA	45:19:62:ARG:NH1	2.27	0.49
52:26:376:G:O2'	52:26:377:G:H5'	2.13	0.49
53:27:481:G:H1'	53:27:506:G:N2	2.28	0.49
53:27:956:G:N2	53:27:959:A:H3'	2.28	0.49
53:27:1199:U:H2'	53:27:1200:C:C6	2.48	0.49
53:27:1428:C:C5	53:27:1569:A:H5"	2.48	0.49
53:27:1838:C:N4	53:27:1898:U:H2'	2.28	0.49
53:27:2632:A:H2'	53:27:2633:G:C8	2.48	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.49
3:C:44:ARG:HD2	3:C:87:ALA:CB	2.42	0.49
4:D:107:VAL:HB	4:D:108:PRO:HD3	1.95	0.49
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.94	0.49
12:L:41:LEU:HG	12:L:96:ILE:HG13	1.94	0.49
13:M:2:ARG:HG2	13:M:2:ARG:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:80:ASN:OD1	53:27:1151:A:H4'	2.13	0.49
17:Q:3:ALA:HA	17:Q:40:MET:O	2.13	0.49
17:Q:37:GLU:O	17:Q:39:LEU:HD12	2.13	0.49
29:3:21:ARG:O	29:3:27:GLY:HA3	2.12	0.49
30:4:5:THR:HG23	30:4:63:TYR:HD2	1.77	0.49
32:6:119:GLN:O	32:6:125:PHE:HB3	2.13	0.49
33:7:76:ILE:O	33:7:82:ASP:HB2	2.12	0.49
37:11:46:LEU:HD21	37:11:57:GLU:HB3	1.94	0.49
43:17:75:SER:O	43:17:78:ARG:HB3	2.12	0.49
52:26:952:U:H2'	52:26:953:G:H8	1.77	0.49
52:26:1069:C:O2'	52:26:1192:C:H1'	2.13	0.49
52:26:1206:G:C2'	52:26:1207:G:H5"	2.43	0.49
53:27:281:C:H42	53:27:359:G:N2	2.11	0.49
53:27:1548:A:H2'	53:27:1549:A:H8	1.77	0.49
53:27:1801:A:H5"	53:27:2203:U:O2'	2.12	0.49
53:27:2025:C:H2'	53:27:2026:U:C6	2.47	0.49
53:27:2407:A:H2'	53:27:2408:U:C6	2.48	0.49
53:27:2590:A:H61	53:27:2604:U:H3	1.61	0.49
53:27:2619:C:H2'	53:27:2620:C:C6	2.47	0.49
53:27:2697:G:H2'	53:27:2698:U:O4'	2.13	0.49
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.49
59:33:435:VAL:O	59:33:439:CYS:HB2	2.13	0.49
3:C:49:ARG:O	3:C:74:LYS:HE2	2.13	0.49
6:F:50:ARG:NH1	6:F:54:LEU:HD22	2.23	0.49
7:G:3:LEU:HD12	7:G:5:LEU:N	2.27	0.49
8:H:94:LYS:HD2	53:27:1076:C:O3'	2.12	0.49
12:L:12:MET:HA	53:27:910:A:N6	2.04	0.49
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.13	0.49
14:N:32:PRO:HD2	54:28:29:A:OP2	2.13	0.49
23:W:13:THR:CG2	53:27:188:G:H5'	2.41	0.49
24:X:20:ASN:O	24:X:24:GLU:HB2	2.13	0.49
28:2:3:GLY:N	53:27:2283:C:H5'	2.27	0.49
29:3:10:LEU:HD23	53:27:770:G:H5"	1.94	0.49
32:6:110:ILE:HG22	32:6:114:LYS:HE3	1.94	0.49
34:8:8:LEU:HD21	34:8:31:CYS:CB	2.42	0.49
35:9:63:MET:O	35:9:66:ALA:HB3	2.13	0.49
36:10:15:SER:O	36:10:18:VAL:HG12	2.12	0.49
43:17:100:ARG:HH22	52:26:950:U:H3'	1.76	0.49
45:19:45:HIS:O	45:19:47:LYS:N	2.45	0.49
50:24:7:LYS:O	50:24:10:ALA:HB3	2.13	0.49
52:26:371:A:H2'	52:26:372:C:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:548:G:O2'	52:26:549:C:H5'	2.12	0.49
52:26:856:C:O2'	52:26:857:C:H5'	2.12	0.49
52:26:1032:G:H21	52:26:1033:G:H4'	1.78	0.49
52:26:1326:U:H2'	52:26:1327:C:C6	2.47	0.49
52:26:1402:C:H2'	52:26:1403:C:O4'	2.13	0.49
53:27:662:G:H2'	53:27:663:G:H8	1.78	0.49
53:27:2382:G:H8	53:27:2382:G:OP2	1.95	0.49
53:27:2440:C:H5"	53:27:2587:A:H4'	1.95	0.49
53:27:2721:A:H2'	53:27:2722:G:H8	1.77	0.49
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.49
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.49
2:B:13:ARG:NH1	15:O:55:HIS:HA	2.28	0.49
3:C:26:ALA:HB1	11:K:9:ALA:HB2	1.94	0.49
6:F:84:ALA:CA	6:F:91:PHE:HB2	2.39	0.49
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.93	0.49
11:K:102:GLY:O	11:K:105:ILE:HG12	2.13	0.49
21:U:29:ILE:HG13	21:U:30:ILE:N	2.28	0.49
31:5:23:ILE:HB	31:5:38:GLY:OXT	2.13	0.49
32:6:19:THR:OG1	32:6:20:ARG:N	2.46	0.49
34:8:123:MET:HB2	34:8:127:ARG:C	2.33	0.49
38:12:9:MET:HG3	38:12:26:MET:SD	2.53	0.49
39:13:54:VAL:CG1	39:13:93:LEU:HD22	2.43	0.49
39:13:105:ARG:NH1	39:13:107:ALA:HA	2.28	0.49
43:17:85:TYR:O	43:17:88:LEU:HB3	2.13	0.49
44:18:33:VAL:O	44:18:33:VAL:HG23	2.13	0.49
48:22:16:GLY:O	48:22:17:VAL:HG12	2.13	0.49
52:26:1256:A:H1'	52:26:1258:G:C4	2.48	0.49
52:26:1258:G:H2'	52:26:1259:C:C6	2.48	0.49
53:27:8:C:H2'	53:27:9:G:C8	2.48	0.49
53:27:821:A:H61	53:27:972:A:C2'	2.26	0.49
53:27:955:U:H5	53:27:962:G:C6	2.31	0.49
53:27:2346:A:H3'	53:27:2347:C:C5'	2.43	0.49
53:27:2461:A:H2'	53:27:2462:C:C6	2.48	0.49
53:27:2605:U:H2'	53:27:2606:C:C6	2.47	0.49
56:30:41:C:H2'	56:30:42:C:O4'	2.13	0.49
56:30:48:C:OP1	56:30:48:C:H2'	2.13	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.49
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.49
1:A:77:VAL:HG21	1:A:109:LEU:HD21	1.94	0.48
3:C:48:THR:OG1	3:C:51:GLU:HG3	2.12	0.48
3:C:126:VAL:HG22	3:C:127:GLU:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:53:ARG:CG	7:G:86:MET:HB2	2.43	0.48
12:L:61:GLY:HA3	12:L:108:VAL:HG13	1.94	0.48
14:N:17:LYS:HZ1	53:27:2380:C:C5'	2.10	0.48
15:O:8:GLU:HA	15:O:54:LEU:HD22	1.93	0.48
32:6:22:TRP:CZ3	32:6:24:PRO:HA	2.48	0.48
36:10:35:LYS:HG2	36:10:37:HIS:CE1	2.47	0.48
38:12:85:TYR:HE1	38:12:123:GLU:HB2	1.78	0.48
46:20:6:LEU:HB3	46:20:17:TYR:HB3	1.94	0.48
46:20:8:ARG:HG2	46:20:28:ARG:CZ	2.43	0.48
46:20:70:ARG:HD3	52:26:452:A:H8	1.77	0.48
49:23:29:PRO:HB3	49:23:47:THR:O	2.13	0.48
52:26:126:G:H5'	52:26:633:G:N2	2.28	0.48
52:26:643:C:H2'	52:26:644:U:C6	2.48	0.48
52:26:1226:C:H4'	52:26:1227:A:OP1	2.12	0.48
52:26:1305:G:O2'	52:26:1306:A:H8	1.95	0.48
53:27:198:C:C2'	53:27:199:A:H5"	2.43	0.48
53:27:1564:C:H2'	53:27:1565:C:O4'	2.12	0.48
53:27:2423:U:O2'	53:27:2425:A:H2'	2.13	0.48
53:27:2623:G:H2'	53:27:2624:G:C8	2.48	0.48
53:27:2721:A:H2'	53:27:2722:G:C8	2.48	0.48
58:32:23:C:H2'	58:32:24:U:O4'	2.13	0.48
58:32:69:C:C2'	58:32:70:G:H5"	2.37	0.48
59:33:598:VAL:HB	59:33:656:VAL:HG21	1.94	0.48
59:33:672:VAL:HB	59:33:737:ASP:HB3	1.94	0.48
1:A:226:PRO:HD3	1:A:233:GLY:HA2	1.95	0.48
3:C:68:ALA:HA	53:27:1255:U:C5	2.47	0.48
6:F:99:ILE:CG2	6:F:130:VAL:HG11	2.43	0.48
9:I:17:VAL:CG2	9:I:139:VAL:HA	2.42	0.48
11:K:9:ALA:HB3	11:K:12:SER:HB2	1.95	0.48
14:N:56:LYS:HA	14:N:59:ALA:HB3	1.94	0.48
19:S:48:GLN:HG3	19:S:55:VAL:HG23	1.94	0.48
37:11:103:ILE:HG21	37:11:123:LEU:HD21	1.95	0.48
39:13:10:ARG:O	39:13:105:ARG:CZ	2.62	0.48
40:14:59:LYS:HD3	40:14:62:ARG:HH22	1.78	0.48
43:17:10:ASP:C	43:17:12:LYS:H	2.17	0.48
46:20:78:VAL:O	46:20:81:ALA:N	2.46	0.48
52:26:358:U:H2'	52:26:359:G:H8	1.77	0.48
52:26:604:G:H2'	52:26:605:U:O4'	2.14	0.48
52:26:1034:G:H2'	52:26:1035:A:C8	2.47	0.48
52:26:1261:A:H2'	52:26:1262:C:H5'	1.95	0.48
53:27:198:C:H2'	53:27:199:A:H5"	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:449:A:H2'	53:27:450:G:O4'	2.13	0.48
53:27:888:C:O2'	53:27:889:C:H5'	2.13	0.48
53:27:1487:U:H2'	53:27:1488:C:H6	1.79	0.48
53:27:1946:U:H2'	53:27:1947:C:C6	2.48	0.48
53:27:2185:U:H2'	53:27:2186:G:C8	2.48	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.48
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
1:A:252:LYS:HE2	53:27:1825:U:O2'	2.13	0.48
2:B:23:PRO:HB3	53:27:2682:A:C2	2.48	0.48
5:E:14:VAL:HG13	5:E:27:GLY:HA2	1.95	0.48
5:E:156:TYR:O	5:E:170:THR:HG23	2.13	0.48
30:4:44:ARG:N	30:4:45:PRO:CD	2.76	0.48
32:6:75:ALA:O	32:6:79:VAL:HG23	2.13	0.48
33:7:83:VAL:HG13	33:7:100:ILE:HG21	1.96	0.48
40:14:53:ILE:HG22	40:14:61:ALA:O	2.12	0.48
49:23:55:GLN:HE22	59:33:594:ASN:HD21	1.61	0.48
50:24:42:ASP:CG	50:24:45:ALA:HB3	2.33	0.48
52:26:98:A:H2'	52:26:99:C:H6	1.77	0.48
52:26:113:G:H2'	52:26:114:U:C6	2.48	0.48
52:26:1206:G:H2'	52:26:1207:G:O4'	2.14	0.48
52:26:1436:U:H2'	52:26:1437:A:C8	2.48	0.48
52:26:1527:U:H2'	52:26:1528:U:C6	2.48	0.48
53:27:100:U:H4'	53:27:101:A:O4'	2.13	0.48
53:27:395:U:H2'	53:27:396:G:C8	2.49	0.48
53:27:564:C:H2'	53:27:565:C:C6	2.47	0.48
53:27:1183:U:H2'	53:27:1184:U:C6	2.48	0.48
53:27:1528:A:H2'	53:27:1529:G:H5'	1.94	0.48
54:28:5:U:H2'	54:28:6:G:C8	2.48	0.48
54:28:37:C:N4	54:28:49:C:H1'	2.27	0.48
54:28:94:A:H2'	54:28:95:U:O4'	2.13	0.48
57:31:29:G:H2'	57:31:30:G:H8	1.79	0.48
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.48
59:33:456:GLN:HG2	59:33:457:MET:H	1.78	0.48
59:33:506:LEU:O	59:33:509:ARG:CB	2.62	0.48
59:33:694:VAL:HG23	59:33:694:VAL:O	2.14	0.48
1:A:123:ILE:HG23	1:A:191:LEU:HD13	1.95	0.48
2:B:3:GLY:HA2	2:B:204:LYS:HA	1.94	0.48
2:B:133:THR:HG23	2:B:134:HIS:N	2.27	0.48
5:E:140:ILE:HD12	5:E:141:GLY:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:24:SER:HB3	7:G:87:GLU:HG3	1.95	0.48
7:G:58:THR:HG21	7:G:82:ILE:C	2.33	0.48
15:O:1:SER:N	53:27:2875:C:O3'	2.46	0.48
19:S:54:GLU:H	19:S:54:GLU:CD	2.17	0.48
19:S:60:THR:OG1	19:S:81:LYS:HE2	2.13	0.48
35:9:95:MET:HG2	35:9:124:ALA:HB1	1.95	0.48
36:10:24:ARG:NH1	36:10:24:ARG:O	2.47	0.48
39:13:105:ARG:HH11	39:13:105:ARG:HG3	1.78	0.48
45:19:45:HIS:C	45:19:47:LYS:N	2.65	0.48
46:20:19:VAL:HG12	46:20:37:GLY:C	2.34	0.48
47:21:57:VAL:HG12	47:21:78:VAL:HG23	1.95	0.48
52:26:715:A:H2'	52:26:716:A:H8	1.78	0.48
52:26:1356:G:H2'	52:26:1357:A:C8	2.48	0.48
53:27:601:C:O2'	53:27:605:G:H5"	2.13	0.48
53:27:1419:A:H5'	53:27:1420:A:OP2	2.12	0.48
53:27:1485:U:H2'	53:27:1486:U:C6	2.49	0.48
53:27:1873:G:O2'	53:27:1874:C:H5'	2.14	0.48
53:27:2080:A:H2'	53:27:2081:U:O4'	2.13	0.48
53:27:2171:A:H2'	53:27:2172:U:H5'	1.95	0.48
53:27:2708:G:O2'	53:27:2709:G:H5'	2.13	0.48
10:J:48:PRO:HB3	52:26:1422:G:C5'	2.43	0.48
15:O:94:ALA:HB2	53:27:2848:G:C8	2.48	0.48
20:T:32:LYS:HB3	20:T:63:ALA:HB1	1.95	0.48
28:2:9:LYS:HG3	28:2:19:PHE:CD1	2.48	0.48
29:3:5:PHE:CD2	29:3:7:PRO:HD3	2.48	0.48
32:6:218:ALA:O	32:6:222:GLU:HG3	2.14	0.48
33:7:39:ARG:HD3	33:7:54:ILE:HD11	1.96	0.48
35:9:89:THR:HG23	52:26:864:A:H4'	1.96	0.48
38:12:9:MET:O	38:12:13:ILE:HG13	2.13	0.48
42:16:35:ARG:HH11	42:16:35:ARG:HG3	1.77	0.48
52:26:458:U:H2'	52:26:459:A:H8	1.77	0.48
52:26:1252:A:H2'	52:26:1253:G:O4'	2.13	0.48
53:27:847:U:O2	53:27:847:U:H2'	2.14	0.48
53:27:1021:A:H2'	53:27:1022:G:H4'	1.95	0.48
53:27:1023:U:O2	53:27:1023:U:H2'	2.13	0.48
53:27:1590:A:H2'	53:27:1591:A:C8	2.48	0.48
53:27:2457:U:O2'	53:27:2458:G:H5'	2.13	0.48
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.48
59:33:424:PRO:HD3	59:33:453:TYR:O	2.12	0.48
1:A:28:PRO:HG3	1:A:62:ARG:HH21	1.78	0.48
1:A:106:PRO:HG2	1:A:109:LEU:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:172:PHE:O	4:D:174:PHE:N	2.47	0.48
6:F:53:GLU:O	6:F:57:LYS:HD2	2.13	0.48
7:G:39:THR:O	7:G:42:ARG:HB3	2.13	0.48
8:H:93:ASN:N	8:H:136:GLY:HA3	2.29	0.48
8:H:112:LYS:O	8:H:116:MET:N	2.47	0.48
12:L:53:MET:HG3	12:L:116:ALA:HB1	1.96	0.48
16:P:30:VAL:HG12	16:P:33:VAL:H	1.77	0.48
17:Q:49:ILE:HD12	17:Q:53:PHE:N	2.29	0.48
18:R:7:HIS:HB2	18:R:50:VAL:HG22	1.95	0.48
20:T:32:LYS:NZ	53:27:478:A:H4'	2.28	0.48
26:Z:59:ARG:O	26:Z:62:LYS:HB2	2.13	0.48
33:7:76:ILE:HB	33:7:80:GLY:HA2	1.94	0.48
34:8:154:VAL:O	34:8:157:ALA:HB3	2.13	0.48
36:10:69:GLU:O	36:10:73:GLU:HG3	2.12	0.48
39:13:105:ARG:HB3	52:26:1179:A:O2'	2.13	0.48
46:20:7:ALA:O	46:20:8:ARG:HB3	2.13	0.48
47:21:20:ILE:HG22	47:21:45:VAL:O	2.13	0.48
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.77	0.48
48:22:71:ASP:OD1	48:22:72:ARG:N	2.45	0.48
52:26:37:U:H2'	52:26:38:G:H8	1.78	0.48
52:26:630:A:H2'	52:26:631:C:O4'	2.13	0.48
52:26:1140:C:H2'	52:26:1141:C:H6	1.79	0.48
53:27:2590:A:H2'	53:27:2591:C:C6	2.48	0.48
58:32:8:U:H1'	58:32:21:A:C2	2.48	0.48
58:32:10:G:N7	58:32:45:G:H4'	2.29	0.48
59:33:281:ILE:HG13	59:33:281:ILE:O	2.14	0.48
3:C:101:TYR:HE1	3:C:177:PRO:HG2	1.79	0.48
6:F:1:MET:H2	6:F:20:ASN:HA	1.79	0.48
7:G:42:ARG:O	7:G:46:ARG:HB2	2.14	0.48
7:G:87:GLU:OE2	7:G:96:PHE:HA	2.14	0.48
12:L:23:GLY:O	12:L:100:LYS:HA	2.14	0.48
16:P:16:ILE:O	16:P:19:GLN:HB3	2.14	0.48
32:6:30:ILE:HA	32:6:40:ILE:HA	1.95	0.48
35:9:96:GLN:HG2	35:9:98:ALA:H	1.78	0.48
38:12:5:PRO:HB2	38:12:32:LYS:HZ1	1.79	0.48
38:12:50:VAL:HG22	38:12:50:VAL:O	2.14	0.48
42:16:11:ARG:HD2	52:26:562:U:H1'	1.94	0.48
44:18:26:LEU:HA	44:18:30:ILE:HD12	1.96	0.48
45:19:3:SER:O	45:19:7:THR:HG23	2.13	0.48
51:25:11:PHE:O	51:25:14:ALA:N	2.46	0.48
52:26:67:C:H2'	52:26:68:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1125:U:H2'	52:26:1126:U:H2'	1.94	0.48
52:26:1254:A:H2'	52:26:1255:G:C8	2.49	0.48
53:27:528:A:H3'	53:27:528:A:H8	1.78	0.48
53:27:710:U:H2'	53:27:711:G:C8	2.49	0.48
53:27:1591:A:H2'	53:27:1592:C:C6	2.47	0.48
53:27:1730:C:H4'	53:27:1731:G:O5'	2.13	0.48
56:30:73:A:H2'	56:30:74:C:O4'	2.13	0.48
58:32:25:C:H2'	58:32:26:G:H8	1.78	0.48
58:32:26:G:O6	58:32:44:A:N1	2.47	0.48
4:D:92:GLY:O	4:D:95:MET:HG2	2.13	0.48
6:F:16:GLY:HA2	6:F:47:PHE:HE2	1.74	0.48
11:K:112:LEU:HD13	11:K:130:GLY:O	2.13	0.48
13:M:100:CYS:SG	13:M:101:GLY:N	2.87	0.48
15:O:105:LYS:O	15:O:108:ARG:NH2	2.47	0.48
32:6:35:ASN:O	32:6:37:VAL:HG23	2.14	0.48
34:8:169:TRP:CG	34:8:185:PRO:HG3	2.48	0.48
37:11:77:ARG:HG2	37:11:78:ARG:N	2.29	0.48
39:13:56:MET:N	39:13:59:LYS:HD2	2.28	0.48
41:15:63:GLN:O	41:15:66:ALA:HB3	2.14	0.48
44:18:61:ASN:HB3	44:18:72:PHE:CD2	2.49	0.48
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.94	0.48
47:21:5:ARG:HH12	47:21:7:LEU:CD1	2.26	0.48
52:26:41:G:H2'	52:26:42:G:H8	1.79	0.48
52:26:855:U:H2'	52:26:856:C:H6	1.75	0.48
52:26:1128:C:H2'	52:26:1129:C:H5'	1.96	0.48
53:27:65:U:H2'	53:27:66:C:C6	2.48	0.48
53:27:306:U:H2'	53:27:307:G:O4'	2.14	0.48
53:27:404:A:H1'	53:27:406:G:C4	2.49	0.48
53:27:689:A:H2'	53:27:690:G:C8	2.48	0.48
53:27:970:U:H2'	53:27:971:G:H8	1.79	0.48
53:27:1484:U:H2'	53:27:1485:U:H6	1.79	0.48
53:27:2001:C:H1'	53:27:2689:U:C4	2.49	0.48
53:27:2786:U:H2'	53:27:2787:C:C6	2.48	0.48
58:32:34:C:H3'	58:32:35:A:C5'	2.40	0.48
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.14	0.48
59:33:267:ASN:N	59:33:267:ASN:ND2	2.62	0.48
59:33:612:CYS:SG	59:33:634:HIS:NE2	2.87	0.48
2:B:148:GLN:O	53:27:2052:A:H4'	2.14	0.48
4:D:144:LYS:N	4:D:144:LYS:CD	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:102:ILE:HG22	5:E:104:LEU:HG	1.94	0.48
8:H:102:ARG:HA	8:H:105:LEU:HD12	1.95	0.48
8:H:138:VAL:HB	8:H:140:GLU:HG3	1.96	0.48
16:P:7:VAL:HG13	16:P:8:ILE:N	2.29	0.48
22:V:42:HIS:HB2	22:V:75:PHE:CD1	2.48	0.48
30:4:6:VAL:HG12	30:4:8:GLY:H	1.79	0.48
34:8:124:VAL:HA	34:8:142:VAL:HA	1.96	0.48
38:12:54:THR:C	38:12:56:PRO:HD3	2.34	0.48
38:12:88:LYS:HZ2	38:12:89:ASP:HB3	1.79	0.48
40:14:33:GLY:O	40:14:34:ALA:HB3	2.14	0.48
41:15:126:ARG:HH12	52:26:797:C:P	2.36	0.48
43:17:33:LEU:CD2	43:17:40:GLU:HA	2.44	0.48
44:18:16:ALA:HA	44:18:54:SER:O	2.14	0.48
52:26:181:A:N6	52:26:194:C:H2’	2.29	0.48
52:26:478:A:N3	52:26:479:U:H1’	2.28	0.48
52:26:545:C:H2’	52:26:546:A:O4’	2.13	0.48
52:26:784:A:H2’	52:26:785:G:C8	2.49	0.48
52:26:891:U:O2’	52:26:892:A:H5’	2.13	0.48
52:26:1366:C:H2’	52:26:1367:C:C6	2.49	0.48
53:27:201:C:O2’	53:27:202:U:H5’	2.14	0.48
53:27:1858:A:C2	53:27:1885:A:H1’	2.49	0.48
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.48
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.48
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.48
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.48
4:D:35:LEU:HG	4:D:153:ILE:HG12	1.96	0.48
4:D:47:LYS:HA	4:D:50:ASP:OD2	2.14	0.48
8:H:92:PRO:HB3	8:H:136:GLY:N	2.28	0.48
9:I:142:ILE:HG23	9:I:142:ILE:OXT	2.14	0.48
12:L:76:LYS:HE2	53:27:956:G:H5”	1.96	0.48
14:N:31:THR:HG23	14:N:32:PRO:HD2	1.96	0.48
16:P:104:ALA:O	16:P:107:ALA:HB3	2.14	0.48
21:U:55:GLU:H	21:U:55:GLU:CD	2.17	0.48
29:3:35:ARG:NE	29:3:42:LEU:HD11	2.26	0.48
32:6:34:ARG:HG3	32:6:35:ASN:N	2.27	0.48
33:7:110:LEU:HB3	33:7:203:LYS:NZ	2.29	0.48
35:9:55:VAL:N	35:9:56:PRO:HD2	2.29	0.48
35:9:151:MET:O	35:9:154:ALA:HB3	2.14	0.48
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.44	0.48
41:15:44:ALA:CB	41:15:69:CYS:HB2	2.43	0.48
48:22:37:LYS:HG2	52:26:719:C:O2’	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:51:HIS:ND1	49:23:55:GLN:O	2.45	0.48
49:23:55:GLN:HE22	59:33:594:ASN:ND2	2.11	0.48
52:26:848:C:C3'	52:26:849:G:H5"	2.44	0.48
53:27:24:G:H2'	53:27:25:U:C6	2.49	0.48
53:27:939:G:H2'	53:27:940:G:H8	1.79	0.48
53:27:1255:U:H5"	53:27:1256:G:H5"	1.96	0.48
53:27:1336:A:H2'	53:27:1337:G:H8	1.78	0.48
53:27:2060:A:H5'	53:27:2061:G:OP2	2.14	0.48
53:27:2406:A:N3	53:27:2406:A:H2'	2.28	0.48
53:27:2480:C:H2'	53:27:2481:G:O4'	2.14	0.48
58:32:65:C:H2'	58:32:66:C:C6	2.49	0.48
3:C:73:ILE:HG13	3:C:78:TRP:CZ3	2.49	0.47
4:D:101:ARG:HH22	26:Z:9:TYR:HE1	1.61	0.47
7:G:8:LYS:O	7:G:12:VAL:HG23	2.14	0.47
7:G:59:LEU:HD21	53:27:1047:G:H8	1.78	0.47
8:H:27:LEU:HD21	8:H:33:ASN:O	2.14	0.47
8:H:134:SER:HB3	53:27:1088:A:N1	2.29	0.47
10:J:32:TYR:OH	53:27:1996:C:C5	2.67	0.47
10:J:71:ARG:HH12	10:J:105:ARG:HB3	1.77	0.47
24:X:1:MET:O	24:X:5:GLU:HG3	2.14	0.47
24:X:48:ARG:O	24:X:51:ALA:HB3	2.14	0.47
30:4:32:LEU:HB3	30:4:40:LYS:HD3	1.96	0.47
34:8:120:LYS:CE	52:26:439:U:H5"	2.36	0.47
34:8:131:ILE:HG13	52:26:620:C:N1	2.29	0.47
34:8:191:SER:O	34:8:192:ALA:HB3	2.14	0.47
36:10:38:ARG:HH12	36:10:40:GLU:HA	1.79	0.47
40:14:22:THR:O	40:14:26:VAL:HG23	2.14	0.47
40:14:86:ALA:O	40:14:90:LEU:HD12	2.14	0.47
49:23:57:VAL:HG13	49:23:57:VAL:O	2.14	0.47
52:26:510:A:N3	52:26:543:U:H1'	2.29	0.47
52:26:987:G:H2'	52:26:988:G:H8	1.79	0.47
52:26:1355:G:H2'	52:26:1356:G:C8	2.49	0.47
52:26:1464:U:H2'	52:26:1465:A:C8	2.49	0.47
53:27:1182:G:H2'	53:27:1183:U:O4'	2.14	0.47
59:33:333:THR:O	59:33:333:THR:CG2	2.61	0.47
59:33:375:ALA:CB	59:33:457:MET:CE	2.87	0.47
1:A:52:HIS:C	1:A:216:ARG:HB3	2.34	0.47
1:A:160:TYR:HB3	1:A:193:GLU:CB	2.44	0.47
4:D:11:VAL:HG22	4:D:171:ALA:HB1	1.94	0.47
5:E:93:TYR:HD1	5:E:106:LEU:HA	1.77	0.47
7:G:60:LEU:HD12	7:G:64:VAL:HG11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:54:ILE:HG13	8:H:71:LYS:O	2.14	0.47
11:K:143:GLU:HG3	11:K:144:GLU:N	2.29	0.47
16:P:16:ILE:HG13	16:P:31:TYR:HE1	1.80	0.47
16:P:58:GLN:HE21	53:27:1009:A:H5"	1.78	0.47
20:T:65:GLN:NE2	53:27:328:U:H4'	2.28	0.47
22:V:38:GLY:HA2	53:27:2330:G:H21	1.79	0.47
24:X:19:LEU:O	24:X:23:ARG:HB2	2.14	0.47
29:3:12:ARG:HE	29:3:44:VAL:CG2	2.27	0.47
34:8:138:PRO:HA	34:8:181:PHE:HD2	1.78	0.47
35:9:77:ASN:CG	35:9:78:GLY:H	2.17	0.47
37:11:94:ARG:O	37:11:98:LEU:HD13	2.14	0.47
39:13:17:ARG:HB2	39:13:65:THR:OG1	2.14	0.47
39:13:18:VAL:HG21	39:13:81:GLY:HA3	1.96	0.47
41:15:71:ASP:C	41:15:73:VAL:H	2.17	0.47
41:15:121:ARG:HE	51:25:35:GLU:HB2	1.76	0.47
42:16:49:ARG:HH12	52:26:523:A:H61	1.61	0.47
42:16:110:LYS:HD2	42:16:110:LYS:N	2.29	0.47
49:23:53:GLY:HA2	52:26:1220:G:H21	1.78	0.47
52:26:824:G:H2'	52:26:825:A:H8	1.79	0.47
52:26:1001:C:H2'	52:26:1002:G:C8	2.49	0.47
52:26:1282:C:H2'	52:26:1283:U:H6	1.78	0.47
53:27:905:A:O2'	53:27:906:U:H5'	2.14	0.47
53:27:1185:G:H5"	53:27:1186:G:OP1	2.13	0.47
53:27:1655:A:H2'	53:27:1656:C:O4'	2.14	0.47
53:27:1999:C:O2'	53:27:2000:C:H5'	2.13	0.47
53:27:2112:G:H5"	53:27:2113:U:C5	2.49	0.47
53:27:2561:U:C2'	53:27:2562:U:H5"	2.39	0.47
56:30:67:C:H2'	56:30:68:C:H6	1.80	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.47
59:33:621:ILE:HG13	59:33:655:ALA:HB1	1.96	0.47
59:33:666:SER:H	59:33:715:GLU:HA	1.79	0.47
3:C:12:LEU:HD11	3:C:193:VAL:HG11	1.96	0.47
3:C:71:GLY:HA3	53:27:675:A:OP1	2.14	0.47
5:E:137:LYS:O	5:E:140:ILE:HG13	2.14	0.47
6:F:47:PHE:O	6:F:48:GLU:C	2.52	0.47
6:F:55:GLU:O	6:F:58:LEU:HB2	2.15	0.47
8:H:60:VAL:HA	8:H:66:PHE:CA	2.44	0.47
8:H:92:PRO:HB3	8:H:136:GLY:HA3	1.96	0.47
16:P:45:ALA:O	16:P:49:ARG:HG3	2.14	0.47
16:P:93:ILE:HG21	17:Q:4:VAL:HG11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:12:ARG:HH11	24:X:29:ARG:NH2	2.12	0.47
23:W:11:PRO:HG3	23:W:29:LEU:HD23	1.95	0.47
26:Z:15:SER:HB2	26:Z:21:VAL:HA	1.96	0.47
39:13:11:ARG:N	39:13:77:ALA:HB2	2.30	0.47
46:20:73:ALA:O	46:20:76:LYS:HB2	2.14	0.47
50:24:34:VAL:HG22	50:24:49:ALA:HB1	1.96	0.47
52:26:668:G:H2'	52:26:669:G:H8	1.79	0.47
52:26:1015:G:H2'	52:26:1016:A:O4'	2.13	0.47
52:26:1109:C:H2'	52:26:1110:A:O4'	2.13	0.47
53:27:231:A:H2'	53:27:232:G:O4'	2.14	0.47
53:27:1070:A:C2	53:27:1097:U:H4'	2.49	0.47
53:27:1411:U:H2'	53:27:1412:U:C6	2.50	0.47
53:27:1575:C:H2'	53:27:1576:U:O4'	2.13	0.47
53:27:1765:U:H2'	53:27:1766:G:C8	2.49	0.47
53:27:1955:U:C5	53:27:2552:U:H1'	2.49	0.47
53:27:2811:G:H2'	53:27:2812:G:H8	1.79	0.47
56:30:18:G:N2	56:30:57:G:H3'	2.28	0.47
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.47
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
1:A:29:PHE:CZ	1:A:100:ARG:HD2	2.49	0.47
5:E:114:HIS:CD2	5:E:147:LEU:HD21	2.48	0.47
7:G:24:SER:OG	7:G:87:GLU:N	2.47	0.47
7:G:57:ASN:HB2	7:G:62:ARG:CD	2.44	0.47
10:J:99:ILE:HD13	10:J:115:ILE:HG23	1.97	0.47
10:J:108:ARG:HA	10:J:116:ILE:CD1	2.40	0.47
12:L:7:THR:HG22	12:L:8:LYS:N	2.30	0.47
17:Q:49:ILE:HD12	17:Q:52:PRO:HA	1.97	0.47
18:R:69:LEU:HD12	18:R:108:SER:O	2.14	0.47
19:S:64:LYS:N	19:S:64:LYS:HD2	2.28	0.47
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.30	0.47
32:6:153:MET:HG2	32:6:155:GLY:O	2.13	0.47
33:7:198:LYS:HE3	52:26:1058:G:OP1	2.14	0.47
38:12:88:LYS:NZ	38:12:89:ASP:HB3	2.29	0.47
39:13:9:GLY:HA2	39:13:80:HIS:ND1	2.29	0.47
40:14:7:ARG:CD	40:14:75:ASP:HB2	2.39	0.47
44:18:68:ARG:HD3	44:18:79:SER:OG	2.14	0.47
46:20:67:ILE:HG23	46:20:71:VAL:HB	1.96	0.47
47:21:59:GLU:OE1	47:21:76:ARG:HD3	2.15	0.47
50:24:42:ASP:O	50:24:46:ALA:N	2.45	0.47
51:25:36:PHE:CE1	51:25:40:PRO:HG3	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:34:C:H2'	52:26:35:G:C8	2.49	0.47
52:26:258:G:H2'	52:26:259:G:O4'	2.14	0.47
52:26:1376:U:H2'	52:26:1377:A:C8	2.49	0.47
53:27:887:U:C5	59:33:629:ARG:NH2	2.82	0.47
53:27:1161:C:H2'	53:27:1162:G:H8	1.78	0.47
53:27:1827:U:C2'	53:27:1828:G:H5'	2.44	0.47
53:27:2415:G:H2'	53:27:2416:C:H6	1.79	0.47
53:27:2561:U:H2'	53:27:2562:U:C5'	2.41	0.47
53:27:2577:A:H5"	53:27:2578:G:H5'	1.96	0.47
56:30:72:C:H2'	56:30:73:A:H8	1.76	0.47
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.47
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
1:A:222:THR:O	1:A:232:GLY:HA2	2.15	0.47
2:B:4:LEU:HD13	2:B:101:PHE:CE2	2.49	0.47
5:E:123:GLU:HB3	5:E:131:VAL:O	2.14	0.47
7:G:40:GLU:CG	7:G:52:MET:HE1	2.44	0.47
10:J:111:LYS:HG3	10:J:112:PHE:CD2	2.49	0.47
19:S:29:THR:HG23	19:S:85:VAL:O	2.14	0.47
19:S:56:GLU:HB3	19:S:86:THR:OG1	2.15	0.47
20:T:7:ASP:HB3	20:T:23:LYS:HZ1	1.78	0.47
33:7:100:ILE:HG23	33:7:102:ILE:HD11	1.95	0.47
34:8:5:GLY:O	34:8:7:LYS:N	2.48	0.47
34:8:78:ALA:O	34:8:85:THR:HG23	2.13	0.47
34:8:183:ARG:HG2	34:8:183:ARG:HH11	1.79	0.47
35:9:148:SER:HB3	35:9:151:MET:HG3	1.96	0.47
39:13:122:ARG:NH1	52:26:1343:G:H1'	2.30	0.47
47:21:13:SER:HB3	47:21:21:VAL:CG1	2.44	0.47
50:24:23:ARG:HH12	52:26:176:C:C4'	2.28	0.47
52:26:372:C:H42	52:26:389:A:H62	1.62	0.47
52:26:1008:U:H2'	52:26:1009:U:C6	2.49	0.47
53:27:123:G:H5"	53:27:1375:U:O2'	2.14	0.47
53:27:1679:A:H2'	53:27:1680:U:H6	1.80	0.47
53:27:1893:C:H2'	53:27:1894:C:H5'	1.96	0.47
53:27:2586:U:H2'	53:27:2587:A:C8	2.49	0.47
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.47
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.47
59:33:605:LEU:O	59:33:607:HIS:N	2.41	0.47
59:33:695:LEU:HB2	59:33:713:THR:OG1	2.14	0.47
1:A:116:GLN:NE2	1:A:121:ALA:HA	2.09	0.47
1:A:152:GLN:HB2	53:27:1818:U:C4	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2:ILE:HD12	2:B:96:ILE:HD13	1.96	0.47
7:G:29:ASP:C	7:G:81:LEU:HD21	2.35	0.47
7:G:53:ARG:O	7:G:54:VAL:HB	2.15	0.47
10:J:64:ARG:HH12	10:J:101:GLY:CA	2.26	0.47
14:N:76:LYS:O	14:N:80:GLU:HG2	2.15	0.47
19:S:87:LEU:HD12	19:S:87:LEU:O	2.14	0.47
24:X:18:LEU:O	24:X:22:LEU:HB3	2.15	0.47
28:2:47:ILE:HG22	28:2:48:TYR:N	2.30	0.47
32:6:83:ALA:HB3	32:6:90:PHE:HB3	1.96	0.47
34:8:149:LYS:HG2	34:8:150:LYS:N	2.29	0.47
39:13:114:LYS:HD3	52:26:1187:G:H5”	1.96	0.47
41:15:42:GLY:HA3	41:15:73:VAL:CG1	2.44	0.47
43:17:8:ILE:N	43:17:9:PRO:HD3	2.20	0.47
47:21:19:SER:CB	47:21:70:LYS:HZ1	2.27	0.47
51:25:13:VAL:HG13	51:25:15:LEU:HG	1.96	0.47
52:26:1040:U:H2’	52:26:1041:G:H8	1.79	0.47
52:26:1118:U:H2’	52:26:1119:C:H6	1.76	0.47
52:26:1273:C:H2’	52:26:1274:A:H5’	1.96	0.47
53:27:1435:G:O2’	53:27:1436:G:H5’	2.14	0.47
53:27:2410:G:H2’	53:27:2411:A:O4’	2.15	0.47
53:27:2554:U:H2’	53:27:2555:U:C6	2.49	0.47
53:27:2765:A:H5’	53:27:2766:A:OP2	2.15	0.47
54:28:106:G:H2’	54:28:107:G:O4’	2.14	0.47
56:30:58:A:N3	56:30:60:U:H5	2.12	0.47
1:A:140:VAL:HG12	1:A:191:LEU:HD23	1.97	0.47
2:B:11:MET:HG2	2:B:25:THR:HA	1.97	0.47
4:D:33:ILE:HG13	4:D:95:MET:CE	2.45	0.47
4:D:109:ARG:HH22	4:D:138:PRO:HA	1.79	0.47
6:F:125:THR:HG22	6:F:125:THR:O	2.15	0.47
7:G:53:ARG:O	7:G:85:SER:HA	2.15	0.47
7:G:80:THR:O	7:G:82:ILE:HG12	2.15	0.47
8:H:83:ALA:HB3	8:H:85:ILE:HG12	1.96	0.47
10:J:64:ARG:NH1	10:J:101:GLY:HA3	2.29	0.47
10:J:104:THR:O	10:J:107:LEU:HB3	2.15	0.47
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.15	0.47
18:R:79:GLY:H	18:R:101:SER:HA	1.78	0.47
20:T:73:ASN:O	20:T:74:ALA:HB3	2.15	0.47
21:U:16:ALA:O	21:U:20:LEU:HG	2.14	0.47
25:Y:7:THR:HG23	25:Y:33:HIS:O	2.15	0.47
26:Z:11:GLU:CA	26:Z:25:ARG:HA	2.39	0.47
28:2:42:VAL:O	28:2:42:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:63:TYR:CD2	53:27:242:G:H5”	2.49	0.47
32:6:79:VAL:HA	32:6:213:LEU:HD23	1.96	0.47
32:6:168:GLU:OE1	32:6:168:GLU:N	2.47	0.47
33:7:39:ARG:HH21	33:7:56:ILE:HG12	1.80	0.47
34:8:172:VAL:HG22	34:8:174:ALA:N	2.13	0.47
34:8:197:HIS:O	34:8:201:GLU:HG2	2.14	0.47
36:10:29:ILE:HD12	36:10:64:VAL:HG21	1.96	0.47
39:13:41:GLU:O	39:13:44:ARG:NH1	2.48	0.47
40:14:15:HIS:O	40:14:18:ILE:HG22	2.15	0.47
40:14:45:ARG:HB3	40:14:47:GLU:OE1	2.15	0.47
40:14:81:GLU:O	40:14:84:VAL:HG12	2.14	0.47
42:16:51:VAL:HG23	42:16:64:SER:O	2.15	0.47
43:17:27:THR:HG21	52:26:1328:C:H5”	1.96	0.47
47:21:11:VAL:CG2	47:21:20:ILE:HD11	2.45	0.47
48:22:38:ILE:HD12	48:22:38:ILE:N	2.29	0.47
52:26:36:C:H2’	52:26:37:U:O4’	2.13	0.47
52:26:171:A:H2’	52:26:172:A:C8	2.50	0.47
52:26:769:G:O2’	52:26:770:C:H5’	2.14	0.47
52:26:1171:A:H2’	52:26:1172:C:C6	2.50	0.47
52:26:1333:A:H2’	52:26:1334:G:O4’	2.14	0.47
52:26:1413:A:O2’	52:26:1414:U:H5’	2.15	0.47
53:27:7:G:H2’	53:27:8:C:C6	2.50	0.47
53:27:65:U:H2’	53:27:66:C:H6	1.80	0.47
53:27:80:G:O2’	53:27:81:G:H5’	2.15	0.47
53:27:493:G:H2’	53:27:494:G:O4’	2.14	0.47
53:27:743:A:O2’	53:27:744:U:H5’	2.14	0.47
53:27:814:C:H2’	53:27:815:C:H6	1.79	0.47
53:27:839:U:H2’	53:27:840:C:H6	1.78	0.47
53:27:974:G:H8	53:27:990:A:H62	1.61	0.47
53:27:979:A:H2’	53:27:982:C:H42	1.80	0.47
53:27:1045:C:H1’	53:27:1047:G:N1	2.29	0.47
53:27:1299:G:H5”	53:27:1300:G:H5”	1.97	0.47
53:27:1433:A:H2’	53:27:1434:A:C8	2.49	0.47
53:27:1779:U:OP2	53:27:1784:A:N6	2.44	0.47
53:27:1901:A:H2’	53:27:1902:C:H6	1.78	0.47
53:27:2106:U:H2’	53:27:2107:G:H8	1.79	0.47
53:27:2125:G:H2’	53:27:2173:A:N1	2.29	0.47
53:27:2346:A:H3’	53:27:2347:C:H5’	1.96	0.47
53:27:2415:G:H2’	53:27:2416:C:C6	2.50	0.47
53:27:2566:A:H4’	53:27:2567:G:H5”	1.96	0.47
53:27:2715:C:C3’	53:27:2716:C:H5”	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2785:C:H2'	53:27:2786:U:C6	2.49	0.47
57:31:44:A:O2'	57:31:45:G:H5'	2.15	0.47
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.47
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.49	0.47
59:33:466:GLN:O	59:33:467:LYS:HD2	2.15	0.47
59:33:534:TYR:C	59:33:536:PHE:N	2.68	0.47
59:33:665:TYR:HA	59:33:716:ILE:O	2.14	0.47
59:33:670:ARG:NE	59:33:741:LEU:HD12	2.30	0.47
2:B:31:ALA:HA	2:B:97:SER:HA	1.97	0.47
7:G:57:ASN:HB2	7:G:62:ARG:HD3	1.96	0.47
8:H:2:LYS:HE3	8:H:62:ALA:N	2.29	0.47
8:H:60:VAL:HA	8:H:66:PHE:HA	1.96	0.47
10:J:6:THR:HG23	53:27:1666:G:H4'	1.96	0.47
15:O:89:GLY:O	15:O:112:ARG:HG3	2.15	0.47
16:P:8:ILE:HG13	16:P:9:ALA:N	2.30	0.47
20:T:14:THR:CB	53:27:310:A:H5"	2.39	0.47
20:T:73:ASN:HA	20:T:95:PHE:CE1	2.50	0.47
25:Y:13:ILE:O	25:Y:15:ARG:N	2.48	0.47
25:Y:19:HIS:CD2	25:Y:50:VAL:HG12	2.50	0.47
27:1:2:VAL:HG12	27:1:3:GLN:N	2.30	0.47
35:9:107:GLY:HA2	52:26:8:A:H1'	1.97	0.47
36:10:46:GLN:HA	36:10:56:LYS:HA	1.96	0.47
41:15:43:TRP:HA	41:15:69:CYS:SG	2.55	0.47
42:16:3:VAL:HG21	47:21:35:LYS:HB2	1.96	0.47
44:18:43:ALA:C	44:18:45:LEU:H	2.17	0.47
44:18:55:SER:HB2	52:26:1317:C:OP1	2.14	0.47
48:22:11:ARG:CG	48:22:15:GLU:HG2	2.44	0.47
52:26:979:C:H1'	52:26:1317:C:N4	2.30	0.47
52:26:1148:U:H2'	52:26:1149:C:H5'	1.95	0.47
53:27:1405:U:H2'	53:27:1406:U:C6	2.50	0.47
56:30:41:C:H3'	56:30:42:C:H5"	1.95	0.47
58:32:30:G:H2'	58:32:31:G:C8	2.50	0.47
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.47
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.97	0.47
59:33:667:LEU:C	59:33:667:LEU:HD12	2.35	0.47
3:C:148:ILE:HB	3:C:169:VAL:HA	1.97	0.47
4:D:104:THR:HG21	26:Z:22:MET:SD	2.54	0.47
4:D:114:ARG:NH2	26:Z:47:LYS:HG2	2.29	0.47
8:H:79:LEU:HD23	8:H:79:LEU:O	2.14	0.47
9:I:101:ILE:O	9:I:105:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:19:LEU:HD23	53:27:587:C:C2	2.50	0.47
15:O:39:LEU:HD11	15:O:81:ASP:CB	2.44	0.47
21:U:38:LEU:HG	21:U:40:ILE:HG12	1.97	0.47
25:Y:24:LEU:HD11	53:27:930:G:O2'	2.15	0.47
32:6:158:ASP:O	32:6:181:PRO:HD2	2.15	0.47
34:8:202:LEU:C	34:8:202:LEU:HD23	2.34	0.47
39:13:35:GLU:HB3	39:13:40:ARG:NH1	2.29	0.47
44:18:52:ARG:HD2	52:26:1317:C:C4	2.50	0.47
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.50	0.47
52:26:123:U:H2'	52:26:124:C:C6	2.50	0.47
52:26:469:C:H2'	52:26:470:C:O4'	2.15	0.47
52:26:1412:C:H2'	52:26:1413:A:H8	1.80	0.47
53:27:691:C:H2'	53:27:692:C:C6	2.50	0.47
53:27:858:G:O2'	53:27:859:G:OP1	2.29	0.47
53:27:1258:U:H2'	53:27:1259:G:H8	1.76	0.47
53:27:1366:A:H2'	53:27:1367:A:O4'	2.15	0.47
53:27:1484:U:H2'	53:27:1485:U:C6	2.50	0.47
53:27:2139:U:H2'	53:27:2140:G:C8	2.50	0.47
53:27:2503:A:O2'	53:27:2504:U:H5"	2.14	0.47
53:27:2837:A:H2'	53:27:2838:G:C8	2.50	0.47
57:31:25:C:H2'	57:31:26:G:H8	1.79	0.47
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.47
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.44	0.47
6:F:114:GLU:HB3	6:F:133:GLN:O	2.14	0.47
7:G:99:PHE:HA	7:G:102:ALA:CB	2.45	0.47
12:L:21:ALA:CB	12:L:100:LYS:HB2	2.45	0.47
12:L:78:LEU:HD23	12:L:79:ALA:HB2	1.97	0.47
13:M:31:HIS:C	13:M:33:ILE:H	2.18	0.47
27:1:39:ARG:CZ	53:27:2884:U:H3	2.28	0.47
31:5:25:VAL:O	31:5:34:LYS:HA	2.14	0.47
37:11:13:PRO:HB3	37:11:20:GLU:HG2	1.97	0.47
37:11:139:ASP:O	37:11:143:MET:HG2	2.15	0.47
38:12:40:LYS:HD3	38:12:47:ASP:HA	1.96	0.47
39:13:54:VAL:HG11	39:13:93:LEU:HD13	1.97	0.47
40:14:12:ALA:CB	40:14:96:VAL:HG22	2.43	0.47
43:17:46:GLU:HG3	43:17:47:LEU:N	2.30	0.47
45:19:46:LYS:HA	45:19:52:ARG:NH2	2.30	0.47
51:25:20:ARG:NH1	55:29:7:G:N2	2.63	0.47
51:25:34:ARG:HB3	51:25:36:PHE:HD2	1.80	0.47
52:26:176:C:H3'	52:26:177:G:N2	2.26	0.47
52:26:505:G:OP2	52:26:535:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1157:A:H4'	52:26:1158:C:O5'	2.14	0.47
52:26:1172:C:H2'	52:26:1173:U:C6	2.50	0.47
53:27:141:G:H5'	53:27:142:A:OP2	2.15	0.47
53:27:524:G:H2'	53:27:525:U:C6	2.50	0.47
53:27:584:C:H2'	53:27:585:G:C8	2.50	0.47
53:27:845:A:N7	53:27:847:U:H1'	2.30	0.47
53:27:1035:U:H2'	53:27:1036:G:H8	1.79	0.47
53:27:1130:U:O2'	53:27:1131:G:OP1	2.24	0.47
53:27:1935:G:H1'	53:27:1964:G:N2	2.29	0.47
53:27:2124:G:N3	53:27:2124:G:H2'	2.30	0.47
53:27:2266:A:H4'	53:27:2267:A:C2	2.50	0.47
53:27:2615:U:H2'	53:27:2616:C:H6	1.80	0.47
54:28:28:C:H2'	54:28:29:A:C8	2.50	0.47
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.79	0.47
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.47
2:B:54:ALA:HA	2:B:76:GLY:HA2	1.96	0.46
4:D:116:LEU:O	4:D:176:PHE:HA	2.15	0.46
5:E:157:LYS:HD2	53:27:2658:C:O3'	2.15	0.46
11:K:58:TYR:CE1	11:K:59:ARG:HG3	2.49	0.46
29:3:35:ARG:HG3	29:3:35:ARG:NH1	2.29	0.46
31:5:1:MET:CG	31:5:2:LYS:N	2.77	0.46
32:6:31:PHE:O	32:6:39:ILE:HB	2.15	0.46
33:7:91:ALA:HB1	33:7:96:VAL:O	2.15	0.46
34:8:100:VAL:HG21	34:8:136:VAL:HG21	1.95	0.46
35:9:113:VAL:HG11	35:9:139:THR:OG1	2.14	0.46
43:17:25:GLY:N	52:26:1329:A:OP1	2.48	0.46
52:26:478:A:C2	52:26:479:U:H1'	2.50	0.46
52:26:1221:G:H2'	52:26:1222:G:C8	2.49	0.46
52:26:1264:U:H2'	52:26:1265:C:C6	2.50	0.46
53:27:103:A:H2'	53:27:104:A:O4'	2.15	0.46
53:27:709:U:H2'	53:27:710:U:H6	1.81	0.46
53:27:769:U:H2'	53:27:770:G:H8	1.79	0.46
53:27:1080:A:O2'	53:27:1081:U:H5'	2.15	0.46
53:27:2604:U:H2'	53:27:2605:U:C6	2.51	0.46
54:28:73:A:H3'	54:28:74:U:H6	1.78	0.46
58:32:59:A:C2'	58:32:60:U:H5'	2.45	0.46
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.46
2:B:135:GLY:HA2	53:27:743:A:OP1	2.15	0.46
3:C:78:TRP:HA	53:27:1257:C:H1'	1.96	0.46
5:E:123:GLU:HB3	5:E:131:VAL:HB	1.97	0.46
6:F:99:ILE:HG21	6:F:130:VAL:HG11	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.97	0.46
12:L:16:ARG:NH1	53:27:953:G:H5"	2.30	0.46
15:O:77:SER:O	15:O:80:VAL:HG22	2.16	0.46
19:S:11:LEU:HB2	24:X:26:PHE:HE1	1.80	0.46
20:T:82:VAL:HG12	20:T:83:GLY:N	2.30	0.46
22:V:40:LYS:HG3	22:V:41:PHE:CD2	2.49	0.46
32:6:112:ARG:O	32:6:116:LEU:HB2	2.14	0.46
33:7:200:TRP:C	33:7:201:ILE:HD12	2.36	0.46
36:10:9:MET:HA	36:10:58:HIS:O	2.15	0.46
36:10:90:MET:HE2	48:22:60:ARG:HD3	1.96	0.46
39:13:105:ARG:HH12	39:13:107:ALA:HA	1.79	0.46
41:15:117:HIS:CD2	52:26:675:A:H1'	2.50	0.46
42:16:23:LEU:O	42:16:26:CYS:HB3	2.16	0.46
47:21:44:HIS:NE2	52:26:276:G:H4'	2.30	0.46
48:22:25:ILE:O	48:22:29:LYS:HB2	2.15	0.46
48:22:28:LEU:HD21	48:22:58:ILE:HD13	1.97	0.46
51:25:32:ARG:HH12	51:25:33:ARG:HD3	1.80	0.46
52:26:631:C:C3'	52:26:632:U:H5'	2.46	0.46
52:26:1036:A:H3'	52:26:1037:C:C6	2.50	0.46
52:26:1148:U:H2'	52:26:1149:C:O4'	2.15	0.46
53:27:477:A:H2'	53:27:478:A:C8	2.50	0.46
53:27:706:A:H2'	53:27:707:G:O4'	2.16	0.46
53:27:852:U:H2'	53:27:853:C:C6	2.49	0.46
53:27:901:C:H2'	53:27:902:C:O4'	2.15	0.46
53:27:2813:A:H2'	53:27:2814:A:H8	1.80	0.46
56:30:64:A:H2'	56:30:65:G:C8	2.51	0.46
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.46
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.46
59:33:710:ILE:H	59:33:710:ILE:HD12	1.80	0.46
1:A:216:ARG:NH2	53:27:690:G:H4'	2.30	0.46
5:E:157:LYS:HD2	53:27:2659:G:P	2.54	0.46
12:L:50:ARG:HD2	12:L:65:ILE:CD1	2.43	0.46
14:N:30:ARG:HB3	14:N:97:PHE:CE1	2.51	0.46
20:T:66:VAL:HA	20:T:69:VAL:HG22	1.97	0.46
24:X:24:GLU:O	24:X:25:GLN:C	2.53	0.46
26:Z:20:ASN:HB2	26:Z:37:CYS:HB3	1.96	0.46
26:Z:66:ILE:HD11	44:18:40:ARG:HB3	1.97	0.46
34:8:113:ALA:O	34:8:116:LEU:HB3	2.15	0.46
35:9:40:ASP:HB3	35:9:44:ARG:HB2	1.97	0.46
37:11:61:PHE:O	37:11:65:LEU:N	2.47	0.46
37:11:79:VAL:O	55:29:12:A:H4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:50:LYS:HD2	42:16:50:LYS:N	2.30	0.46
43:17:38:ILE:HD11	43:17:51:GLN:HB3	1.97	0.46
43:17:65:GLU:CG	43:17:66:GLY:N	2.77	0.46
49:23:65:MET:O	49:23:66:VAL:HG23	2.16	0.46
50:24:79:THR:HA	50:24:82:ILE:HG12	1.96	0.46
52:26:114:U:H2'	52:26:115:G:C8	2.50	0.46
52:26:587:G:O2'	52:26:588:G:H5'	2.15	0.46
53:27:516:C:H2'	53:27:517:C:H6	1.79	0.46
53:27:959:A:H2'	53:27:960:A:C8	2.50	0.46
53:27:1023:U:H3'	53:27:1024:G:C8	2.45	0.46
53:27:1271:G:O3'	53:27:1272:A:H4'	2.14	0.46
53:27:1842:G:H2'	53:27:1843:C:C6	2.51	0.46
53:27:2342:C:H2'	53:27:2343:U:O4'	2.16	0.46
53:27:2685:G:H2'	53:27:2686:G:H8	1.80	0.46
53:27:2837:A:H2'	53:27:2838:G:H8	1.80	0.46
58:32:26:G:H1	58:32:44:A:H2	1.63	0.46
59:33:44:GLN:HA	59:33:45:GLN:HA	1.66	0.46
59:33:427:PHE:CE2	59:33:461:ILE:HG21	2.51	0.46
59:33:649:PRO:HA	59:33:652:ILE:HD12	1.97	0.46
7:G:107:GLU:C	7:G:109:LYS:H	2.18	0.46
8:H:59:THR:O	8:H:66:PHE:HA	2.16	0.46
11:K:57:LEU:HD13	11:K:60:ARG:NH1	2.30	0.46
12:L:28:PHE:N	12:L:104:GLU:OE1	2.45	0.46
12:L:83:GLY:O	12:L:84:LYS:HB2	2.16	0.46
13:M:73:ASN:HA	13:M:76:VAL:CG1	2.41	0.46
18:R:82:MET:HB3	18:R:84:ARG:HH22	1.80	0.46
30:4:51:LYS:HA	30:4:54:LEU:CB	2.46	0.46
40:14:43:PRO:HG3	52:26:1280:A:O4'	2.15	0.46
52:26:222:C:H2'	52:26:223:A:H8	1.79	0.46
52:26:335:C:H2'	52:26:336:A:C8	2.50	0.46
52:26:396:C:C2'	52:26:397:A:H5"	2.44	0.46
52:26:714:G:H2'	52:26:715:A:H8	1.76	0.46
52:26:1272:G:H2'	52:26:1273:C:C6	2.50	0.46
52:26:1273:C:C2'	52:26:1274:A:H5'	2.46	0.46
53:27:479:A:H4'	53:27:480:A:OP1	2.15	0.46
53:27:782:A:H5'	53:27:783:A:C2	2.50	0.46
53:27:1056:G:H4'	53:27:1086:A:H8	1.80	0.46
53:27:1259:G:H2'	53:27:1260:A:C8	2.50	0.46
53:27:2065:C:H2'	53:27:2066:C:C6	2.50	0.46
57:31:37:A:H2'	57:31:38:A:O4'	2.16	0.46
58:32:38:A:H2'	58:32:39:C:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.46
1:A:15:VAL:HA	1:A:204:LEU:O	2.15	0.46
1:A:65:ASP:CB	1:A:101:ARG:HD3	2.46	0.46
3:C:48:THR:HG23	3:C:88:ARG:NH1	2.29	0.46
3:C:55:SER:OG	3:C:56:GLY:N	2.47	0.46
3:C:178:VAL:O	3:C:182:ALA:HB2	2.16	0.46
4:D:115:GLY:O	4:D:116:LEU:HD12	2.15	0.46
7:G:11:ILE:CD1	7:G:63:ALA:HA	2.44	0.46
11:K:89:VAL:HG21	11:K:123:ARG:HH21	1.80	0.46
11:K:118:THR:O	11:K:120:VAL:HG23	2.15	0.46
17:Q:83:TYR:CE1	53:27:1187:G:H5”	2.51	0.46
19:S:44:LYS:O	19:S:48:GLN:HG3	2.15	0.46
19:S:67:VAL:HG22	19:S:76:ARG:CD	2.45	0.46
22:V:42:HIS:CD2	22:V:73:ARG:HD3	2.50	0.46
26:Z:15:SER:HA	26:Z:20:ASN:O	2.15	0.46
31:5:1:MET:CE	53:27:2742:G:H5”	2.45	0.46
32:6:186:VAL:CG2	32:6:198:VAL:HG23	2.46	0.46
33:7:42:LEU:HD21	33:7:67:ILE:CD1	2.45	0.46
34:8:61:ARG:NH1	34:8:68:GLU:HB2	2.31	0.46
34:8:78:ALA:C	34:8:85:THR:HG23	2.36	0.46
35:9:108:GLY:O	35:9:109:ALA:HB3	2.15	0.46
36:10:25:TYR:O	36:10:29:ILE:HG12	2.15	0.46
37:11:62:GLU:HA	37:11:65:LEU:HB3	1.97	0.46
37:11:115:MET:HG2	52:26:1240:U:OP1	2.15	0.46
38:12:77:VAL:HG23	38:12:127:TYR:H	1.80	0.46
38:12:113:ARG:HA	38:12:116:ARG:HG2	1.97	0.46
40:14:51:VAL:HB	44:18:80:ARG:HB2	1.97	0.46
40:14:57:VAL:HG22	40:14:58:ASN:N	2.23	0.46
43:17:33:LEU:HD12	43:17:33:LEU:N	2.31	0.46
47:21:11:VAL:HG12	47:21:12:VAL:N	2.31	0.46
50:24:65:LEU:CD2	50:24:66:ILE:HG12	2.42	0.46
51:25:45:LYS:HE3	52:26:723:U:H1’	1.97	0.46
51:25:67:THR:HA	52:26:1167:A:C6	2.50	0.46
52:26:313:A:H2’	52:26:314:C:C6	2.50	0.46
53:27:193:U:H2’	53:27:194:G:H8	1.79	0.46
53:27:588:U:H2’	53:27:589:U:C6	2.51	0.46
53:27:1123:C:H2’	53:27:1124:G:H8	1.80	0.46
53:27:1399:C:H2’	53:27:1400:U:H6	1.79	0.46
53:27:1558:C:O4’	53:27:1560:G:C8	2.69	0.46
53:27:1880:U:H2’	53:27:1881:C:C6	2.51	0.46
54:28:3:C:H3’	54:28:4:C:H5”	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.46
59:33:599:VAL:HG21	59:33:631:ILE:HD13	1.97	0.46
1:A:45:ASN:O	53:27:773:U:H5"	2.15	0.46
5:E:70:LEU:O	5:E:73:SER:HB3	2.15	0.46
10:J:71:ARG:NH1	10:J:105:ARG:HB3	2.30	0.46
11:K:110:VAL:O	11:K:111:ILE:HB	2.15	0.46
13:M:96:ARG:HA	53:27:2881:U:O2'	2.16	0.46
26:Z:20:ASN:CB	26:Z:37:CYS:HB3	2.46	0.46
32:6:148:GLY:O	32:6:150:ILE:N	2.46	0.46
35:9:76:ASN:O	35:9:77:ASN:C	2.53	0.46
36:10:90:MET:CE	48:22:60:ARG:HD3	2.46	0.46
38:12:79:ARG:HB3	52:26:878:A:OP1	2.15	0.46
47:21:19:SER:HB3	47:21:70:LYS:HZ1	1.80	0.46
52:26:163:C:H2'	52:26:164:G:O4'	2.16	0.46
52:26:406:G:H1'	52:26:495:A:N1	2.31	0.46
52:26:414:A:H2'	52:26:415:A:O4'	2.15	0.46
53:27:310:A:O2'	53:27:311:A:H2'	2.16	0.46
53:27:528:A:H2	53:27:2043:C:H5'	1.80	0.46
53:27:2556:C:H2'	53:27:2557:G:H5'	1.97	0.46
54:28:3:C:O5'	54:28:3:C:H6	1.99	0.46
54:28:29:A:H2'	54:28:30:C:O4'	2.15	0.46
56:30:18:G:H21	56:30:57:G:H3'	1.81	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.46
59:33:434:ASP:HA	59:33:437:HIS:HB2	1.97	0.46
1:A:28:PRO:HG3	1:A:33:LEU:HD21	1.97	0.46
3:C:52:VAL:O	3:C:74:LYS:HE3	2.15	0.46
3:C:68:ALA:HA	53:27:1255:U:C6	2.51	0.46
4:D:79:ARG:HG2	4:D:79:ARG:NH2	2.31	0.46
5:E:64:ALA:O	5:E:67:ALA:HB3	2.15	0.46
7:G:50:VAL:O	7:G:50:VAL:HG12	2.15	0.46
7:G:59:LEU:HB3	7:G:62:ARG:HB2	1.96	0.46
8:H:11:GLN:HG2	8:H:55:PRO:HA	1.97	0.46
15:O:52:ARG:HG2	15:O:52:ARG:NH1	2.29	0.46
19:S:88:LYS:O	19:S:90:GLY:N	2.48	0.46
24:X:39:GLN:HB3	24:X:41:HIS:CE1	2.49	0.46
37:11:13:PRO:HB3	37:11:20:GLU:CG	2.46	0.46
39:13:70:GLY:HA3	52:26:1371:G:O3'	2.15	0.46
41:15:110:THR:CA	51:25:16:ARG:HH22	2.29	0.46
44:18:84:ARG:HH12	44:18:88:MET:HG3	1.81	0.46
46:20:6:LEU:HB3	46:20:17:TYR:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:53:ASP:OD2	46:20:56:ARG:HB2	2.16	0.46
48:22:12:PHE:O	48:22:14:ALA:N	2.49	0.46
52:26:148:G:H2'	52:26:149:A:C5'	2.44	0.46
52:26:502:A:H2'	52:26:503:C:O4'	2.16	0.46
52:26:620:C:H2'	52:26:621:A:O4'	2.16	0.46
52:26:755:G:O5'	52:26:755:G:H8	1.98	0.46
53:27:285:G:H2'	53:27:286:U:O4'	2.16	0.46
53:27:564:C:H2'	53:27:565:C:H6	1.79	0.46
53:27:856:G:H2'	53:27:857:G:C8	2.50	0.46
53:27:878:A:H2'	53:27:878:A:N3	2.30	0.46
53:27:1214:A:H2'	53:27:1215:G:O4'	2.15	0.46
53:27:1404:C:H2'	53:27:1405:U:C6	2.51	0.46
53:27:2144:G:H5"	53:27:2145:C:H3'	1.98	0.46
53:27:2232:C:C2'	53:27:2233:U:H5'	2.46	0.46
53:27:2291:U:H2'	53:27:2292:U:C6	2.49	0.46
53:27:2439:A:H1'	53:27:2587:A:OP1	2.16	0.46
53:27:2481:G:HO2'	53:27:2482:A:H8	1.60	0.46
53:27:2884:U:O2	53:27:2884:U:H3'	2.16	0.46
54:28:66:A:H61	54:28:107:G:H3'	1.80	0.46
58:32:53:G:H21	58:32:62:C:H1'	1.80	0.46
58:32:53:G:N2	58:32:62:C:H1'	2.29	0.46
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.46
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.46
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.46
59:33:303:LEU:HD12	59:33:304:PRO:HD2	1.97	0.46
59:33:327:LEU:CD2	59:33:332:LYS:HB3	2.45	0.46
59:33:640:GLN:HA	59:33:643:GLU:HG3	1.97	0.46
2:B:4:LEU:HB3	2:B:32:ASN:HD21	1.80	0.46
2:B:48:ILE:HG13	2:B:48:ILE:O	2.14	0.46
2:B:146:ILE:HG22	2:B:159:LYS:HZ2	1.81	0.46
3:C:179:SER:HA	3:C:182:ALA:HB3	1.97	0.46
14:N:29:HIS:NE2	54:28:7:G:H5"	2.31	0.46
14:N:94:ARG:HB3	14:N:97:PHE:O	2.16	0.46
16:P:48:ASP:HA	16:P:51:GLN:HB2	1.97	0.46
19:S:59:ASN:CB	19:S:84:TYR:HB2	2.46	0.46
32:6:49:PHE:O	32:6:53:LEU:HG	2.15	0.46
33:7:13:ILE:CD1	33:7:177:LEU:HB3	2.46	0.46
33:7:86:LEU:HA	33:7:89:VAL:HG22	1.98	0.46
33:7:111:ASP:HB3	33:7:114:LEU:HD12	1.97	0.46
34:8:7:LYS:O	34:8:20:LEU:HD12	2.15	0.46
34:8:115:GLN:HG3	34:8:116:LEU:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:91:ARG:HH21	48:22:60:ARG:NH2	2.14	0.46
42:16:31:GLY:O	42:16:78:VAL:HA	2.15	0.46
42:16:81:ILE:HD13	42:16:96:THR:HA	1.98	0.46
44:18:70:HIS:O	44:18:71:GLY:C	2.54	0.46
46:20:78:VAL:CG1	46:20:79:ASN:N	2.76	0.46
52:26:410:G:C6	52:26:429:U:H1'	2.50	0.46
52:26:538:G:H2'	52:26:539:A:H8	1.81	0.46
53:27:284:U:H2'	53:27:285:G:C5'	2.45	0.46
53:27:424:G:H2'	53:27:425:G:O4'	2.16	0.46
53:27:515:A:H2'	53:27:516:C:H5'	1.98	0.46
53:27:755:U:H2'	53:27:756:A:C8	2.51	0.46
53:27:1111:A:H2'	53:27:1112:G:H4'	1.98	0.46
53:27:1285:A:H2'	53:27:1286:A:H5'	1.98	0.46
53:27:1979:U:C2'	53:27:1980:G:H5'	2.46	0.46
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.46
59:33:617:PRO:HB2	59:33:719:LEU:CD1	2.34	0.46
59:33:618:GLY:C	59:33:620:GLU:H	2.19	0.46
59:33:726:LEU:HA	59:33:729:LEU:HD12	1.98	0.46
1:A:132:ARG:CD	1:A:166:ARG:HH21	2.29	0.46
5:E:101:VAL:HG22	5:E:115:GLN:NE2	2.30	0.46
16:P:91:ARG:HH22	53:27:998:C:P	2.39	0.46
19:S:4:GLU:HA	19:S:7:LEU:HB2	1.98	0.46
23:W:9:LYS:HG2	53:27:396:G:OP1	2.15	0.46
35:9:87:VAL:HG22	35:9:88:HIS:N	2.30	0.46
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.31	0.46
42:16:106:VAL:HB	42:16:109:ARG:HG3	1.98	0.46
44:18:80:ARG:HH11	44:18:80:ARG:HG3	1.81	0.46
52:26:657:U:O2'	52:26:658:C:H5'	2.16	0.46
52:26:924:C:H2'	52:26:925:G:C8	2.51	0.46
52:26:1414:U:H2'	52:26:1415:G:H8	1.81	0.46
53:27:645:C:H2'	53:27:647:G:C8	2.51	0.46
53:27:724:U:H2'	53:27:725:G:O4'	2.16	0.46
53:27:809:G:O2'	53:27:810:U:H5'	2.15	0.46
53:27:1910:G:O2'	53:27:1911:U:H5'	2.16	0.46
53:27:2054:A:OP1	53:27:2055:C:H4'	2.16	0.46
53:27:2582:G:O2'	53:27:2583:G:H5'	2.16	0.46
53:27:2616:C:H2'	53:27:2617:U:H6	1.81	0.46
53:27:2834:G:H2'	53:27:2879:A:N6	2.30	0.46
58:32:42:G:H2'	58:32:43:A:H8	1.81	0.46
59:33:668:VAL:HG22	59:33:713:THR:HA	1.98	0.46
59:33:670:ARG:HG3	59:33:711:ASP:OD1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:25:THR:HG21	2:B:193:VAL:CG2	2.46	0.46
2:B:38:LYS:HA	2:B:43:ASP:OD2	2.16	0.46
3:C:146:VAL:O	3:C:167:VAL:HG13	2.15	0.46
3:C:147:LEU:HD11	3:C:170:ARG:CD	2.46	0.46
3:C:176:ASP:OD1	3:C:179:SER:HB2	2.16	0.46
6:F:42:LYS:HB3	6:F:46:PHE:CE2	2.51	0.46
7:G:26:VAL:HG23	7:G:113:PHE:HA	1.98	0.46
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.96	0.46
14:N:100:HIS:H	14:N:103:VAL:HG23	1.81	0.46
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.25	0.46
21:U:29:ILE:HG13	21:U:30:ILE:H	1.80	0.46
21:U:86:LEU:N	21:U:86:LEU:HD12	2.30	0.46
23:W:20:ALA:HB3	23:W:22:ASN:OD1	2.15	0.46
31:5:2:LYS:HE2	31:5:4:ARG:HD3	1.98	0.46
33:7:11:LEU:HD13	33:7:17:TRP:HE1	1.80	0.46
35:9:159:SER:O	35:9:162:GLU:N	2.42	0.46
37:11:145:GLU:C	37:11:147:ASN:H	2.19	0.46
38:12:12:ARG:HG2	52:26:826:C:H4'	1.98	0.46
42:16:20:VAL:HG23	42:16:20:VAL:O	2.15	0.46
44:18:66:THR:HG23	44:18:82:LYS:HG3	1.98	0.46
45:19:44:GLU:HG3	45:19:45:HIS:CG	2.51	0.46
45:19:47:LYS:O	45:19:49:HIS:N	2.47	0.46
50:24:13:SER:HB2	52:26:323:U:H1'	1.98	0.46
52:26:96:U:H2'	52:26:97:G:H8	1.81	0.46
52:26:396:C:C3'	52:26:397:A:H5"	2.46	0.46
52:26:505:G:H2'	52:26:506:G:H8	1.81	0.46
52:26:559:A:H4'	52:26:560:A:H3'	1.98	0.46
52:26:608:A:H2'	52:26:609:A:C8	2.51	0.46
52:26:763:G:H2'	52:26:764:C:C6	2.51	0.46
52:26:848:C:H2'	52:26:849:G:C5'	2.45	0.46
52:26:1025:U:O3'	52:26:1026:G:H8	1.98	0.46
52:26:1032:G:N2	52:26:1033:G:H4'	2.31	0.46
52:26:1458:G:H2'	52:26:1459:G:C8	2.49	0.46
53:27:388:G:N7	53:27:390:U:H2'	2.31	0.46
53:27:599:A:H2'	53:27:600:G:H8	1.77	0.46
53:27:690:G:H2'	53:27:691:C:C6	2.51	0.46
53:27:1854:A:N6	53:27:1888:G:H1'	2.31	0.46
53:27:2159:G:H2'	53:27:2160:C:C5	2.52	0.46
53:27:2229:U:H2'	53:27:2230:G:C8	2.51	0.46
53:27:2630:G:H2'	53:27:2631:G:C8	2.50	0.46
53:27:2679:A:O2'	53:27:2680:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:93:C:H2'	54:28:94:A:C8	2.50	0.46
57:31:63:G:H2'	57:31:64:G:C8	2.51	0.46
59:33:410:THR:CG2	59:33:427:PHE:HZ	2.27	0.46
1:A:62:ARG:NH2	53:27:1568:G:OP2	2.46	0.45
6:F:79:THR:HG23	6:F:145:ASN:HB3	1.98	0.45
6:F:84:ALA:HA	6:F:91:PHE:CB	2.41	0.45
7:G:96:PHE:CE2	7:G:126:LEU:HB2	2.51	0.45
20:T:4:ILE:HD13	20:T:71:ILE:HG23	1.98	0.45
22:V:10:ARG:HH11	22:V:10:ARG:HG3	1.82	0.45
22:V:25:GLU:O	22:V:63:VAL:HG23	2.15	0.45
33:7:205:GLU:HG3	33:7:206:ILE:N	2.30	0.45
39:13:27:ILE:HA	39:13:62:LEU:CD1	2.46	0.45
40:14:15:HIS:O	40:14:19:ASP:HB2	2.15	0.45
49:23:14:LEU:HD12	49:23:32:THR:HG21	1.97	0.45
52:26:162:A:H2'	52:26:163:C:O4'	2.15	0.45
53:27:362:A:H3'	53:27:363:G:C8	2.51	0.45
53:27:375:G:O2'	53:27:376:G:H5'	2.16	0.45
53:27:805:G:H22	53:27:828:U:H5"	1.80	0.45
53:27:898:C:H2'	53:27:899:A:H5'	1.97	0.45
53:27:1057:A:C2'	53:27:1058:U:H5'	2.46	0.45
53:27:1112:G:H2'	53:27:1113:U:C6	2.51	0.45
53:27:1427:A:H4'	53:27:1428:C:O4'	2.15	0.45
53:27:1877:A:H2'	53:27:1878:G:O4'	2.16	0.45
53:27:2037:A:H2'	53:27:2038:G:C8	2.51	0.45
53:27:2152:G:H2'	53:27:2153:C:O4'	2.17	0.45
53:27:2316:G:H2'	53:27:2317:A:C8	2.51	0.45
53:27:2657:A:H2'	53:27:2658:C:H5'	1.98	0.45
53:27:2719:G:H5'	53:27:2847:U:OP1	2.16	0.45
53:27:2794:C:H2'	53:27:2795:C:C6	2.50	0.45
59:33:65:ILE:CG1	59:33:161:ARG:NH2	2.75	0.45
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
2:B:128:ARG:HG2	53:27:2512:C:OP1	2.16	0.45
6:F:90:LEU:CD2	6:F:94:ILE:HG13	2.46	0.45
10:J:63:VAL:HG23	10:J:107:LEU:HD22	1.99	0.45
14:N:26:LEU:HB2	14:N:90:VAL:HG21	1.98	0.45
16:P:27:ARG:HH11	16:P:37:ALA:HB2	1.80	0.45
16:P:49:ARG:HG2	16:P:49:ARG:NH1	2.31	0.45
16:P:84:LYS:HZ3	16:P:116:LEU:HA	1.79	0.45
34:8:103:ARG:HD3	34:8:103:ARG:HA	1.68	0.45
34:8:106:PHE:HE1	34:8:177:MET:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:112:ASP:HB2	37:11:118:ARG:HG2	1.99	0.45
41:15:17:ASP:HA	41:15:80:ASN:O	2.16	0.45
42:16:31:GLY:HA3	42:16:54:VAL:CG1	2.46	0.45
43:17:62:PHE:O	43:17:64:VAL:HG13	2.17	0.45
46:20:6:LEU:HD13	46:20:17:TYR:CG	2.50	0.45
46:20:11:ALA:HA	52:26:44:A:OP1	2.17	0.45
47:21:10:ARG:O	47:21:22:VAL:HG13	2.17	0.45
50:24:53:MET:HG3	50:24:54:GLN:N	2.30	0.45
51:25:13:VAL:O	51:25:15:LEU:N	2.42	0.45
52:26:265:G:H2'	52:26:267:C:H5	1.82	0.45
52:26:987:G:H2'	52:26:988:G:C8	2.52	0.45
52:26:1030:U:H2'	52:26:1032:G:H22	1.81	0.45
52:26:1213:A:C2	52:26:1215:G:H1'	2.51	0.45
52:26:1326:U:H2'	52:26:1327:C:H6	1.81	0.45
53:27:457:A:H61	53:27:470:A:H5"	1.80	0.45
53:27:491:G:N3	53:27:491:G:H2'	2.31	0.45
53:27:640:C:H2'	53:27:641:U:C6	2.51	0.45
53:27:1174:U:H2'	53:27:1175:A:H4'	1.98	0.45
53:27:2450:A:OP1	53:27:2497:A:H2'	2.15	0.45
53:27:2843:G:O2'	53:27:2844:G:H5'	2.16	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
7:G:11:ILE:O	7:G:15:VAL:HG23	2.16	0.45
8:H:6:ALA:HB3	8:H:60:VAL:HG21	1.99	0.45
14:N:31:THR:HG23	54:28:29:A:P	2.56	0.45
18:R:17:VAL:HA	18:R:43:ALA:HB1	1.98	0.45
18:R:83:LYS:HG2	18:R:97:LEU:CD2	2.46	0.45
19:S:32:LEU:O	19:S:32:LEU:HD12	2.17	0.45
20:T:27:VAL:CB	20:T:33:VAL:HG12	2.47	0.45
20:T:32:LYS:HA	20:T:64:ILE:O	2.17	0.45
31:5:12:ARG:HG2	31:5:12:ARG:HH21	1.81	0.45
34:8:127:ARG:O	34:8:129:VAL:HG23	2.17	0.45
37:11:45:ALA:HB1	37:11:119:LEU:HD22	1.99	0.45
46:20:72:ALA:O	46:20:75:ILE:HB	2.17	0.45
52:26:306:A:O2'	52:26:307:C:H5'	2.17	0.45
52:26:1230:C:H5'	57:31:30:G:H5"	1.99	0.45
52:26:1237:C:OP1	52:26:1238:A:H1'	2.16	0.45
52:26:1463:U:H2'	52:26:1464:U:C6	2.52	0.45
53:27:155:A:H2'	53:27:156:A:C8	2.51	0.45
53:27:165:A:H2'	53:27:166:U:C6	2.52	0.45
53:27:343:C:H2'	53:27:344:A:H5'	1.97	0.45
53:27:399:U:H2'	53:27:400:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:623:C:H2'	53:27:624:C:C6	2.51	0.45
53:27:883:G:H5'	59:33:611:ARG:HD3	1.98	0.45
53:27:1264:A:O3'	53:27:2615:U:H5'	2.16	0.45
53:27:1550:C:H2'	53:27:1551:A:H8	1.81	0.45
53:27:2024:G:H2'	53:27:2025:C:O4'	2.15	0.45
53:27:2059:A:N6	53:27:2503:A:H2'	2.31	0.45
53:27:2070:A:H2'	53:27:2071:A:O4'	2.17	0.45
53:27:2142:A:H2'	53:27:2143:C:H5'	1.98	0.45
53:27:2196:C:O2'	53:27:2197:U:H5'	2.15	0.45
53:27:2282:G:H4'	53:27:2389:G:O2'	2.17	0.45
54:28:111:U:H2'	54:28:112:G:C8	2.51	0.45
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
1:A:79:ARG:NH1	1:A:92:LEU:HD23	2.31	0.45
12:L:75:GLU:HB2	12:L:90:GLU:HG3	1.98	0.45
14:N:31:THR:O	14:N:33:ARG:N	2.49	0.45
16:P:2:ARG:HA	53:27:1248:G:O2'	2.17	0.45
16:P:35:PHE:CZ	16:P:39:ILE:HD11	2.51	0.45
18:R:59:GLU:HA	18:R:64:ALA:CA	2.47	0.45
20:T:11:ILE:HG21	20:T:79:ALA:HB2	1.99	0.45
20:T:71:ILE:CD1	20:T:82:VAL:HG22	2.41	0.45
30:4:20:GLY:HA3	30:4:48:MET:HE1	1.98	0.45
31:5:37:GLN:HE21	53:27:1125:G:H5'	1.78	0.45
34:8:190:LEU:O	34:8:192:ALA:N	2.49	0.45
35:9:49:TYR:O	35:9:62:ALA:HB2	2.17	0.45
35:9:100:GLU:C	35:9:102:THR:H	2.19	0.45
52:26:58:C:O2'	52:26:59:A:H5'	2.17	0.45
52:26:109:A:C6	52:26:326:G:C6	3.05	0.45
52:26:584:G:H2'	52:26:585:G:C8	2.48	0.45
52:26:1147:C:H2'	52:26:1148:U:C6	2.52	0.45
53:27:323:C:H2'	53:27:1205:A:N1	2.31	0.45
53:27:758:C:O2	53:27:758:C:H2'	2.15	0.45
53:27:816:C:H2'	53:27:817:C:C6	2.51	0.45
53:27:1365:A:H2'	53:27:1365:A:N3	2.31	0.45
53:27:1428:C:C4	53:27:1569:A:H5"	2.50	0.45
53:27:1744:A:H3'	53:27:1745:A:H8	1.81	0.45
53:27:2059:A:H2'	53:27:2503:A:N1	2.31	0.45
53:27:2322:A:H2'	53:27:2323:G:O4'	2.16	0.45
53:27:2393:U:O2'	53:27:2394:C:H5'	2.16	0.45
53:27:2516:A:O2'	53:27:2517:C:H5'	2.17	0.45
56:30:17:C:H3'	56:30:19:G:OP1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.45
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.81	0.45
59:33:433:SER:O	59:33:437:HIS:N	2.46	0.45
1:A:159:THR:HG22	1:A:160:TYR:H	1.82	0.45
3:C:147:LEU:HB2	3:C:183:PHE:HD2	1.81	0.45
7:G:67:THR:N	7:G:68:PRO:CD	2.79	0.45
12:L:76:LYS:NZ	12:L:82:MET:HA	2.31	0.45
16:P:67:ALA:HB2	16:P:98:ALA:HB1	1.99	0.45
18:R:107:VAL:HG13	18:R:107:VAL:O	2.16	0.45
20:T:7:ASP:HB3	20:T:23:LYS:NZ	2.32	0.45
22:V:8:ASN:HD21	53:27:2277:G:H3'	1.81	0.45
25:Y:5:LYS:HA	25:Y:35:VAL:O	2.17	0.45
25:Y:40:THR:CG2	25:Y:43:ILE:H	2.30	0.45
26:Z:36:VAL:HG23	26:Z:36:VAL:O	2.17	0.45
32:6:24:PRO:HG3	52:26:829:G:O2'	2.17	0.45
32:6:153:MET:CE	32:6:157:PRO:HG3	2.46	0.45
34:8:96:ARG:HB2	34:8:99:ASN:CB	2.47	0.45
35:9:152:VAL:HA	35:9:155:LYS:HG2	1.98	0.45
36:10:67:PRO:HG2	36:10:70:VAL:HG23	1.98	0.45
36:10:69:GLU:H	36:10:69:GLU:CD	2.19	0.45
37:11:3:ARG:HB2	52:26:932:C:OP1	2.16	0.45
38:12:103:VAL:HG23	38:12:123:GLU:O	2.16	0.45
39:13:49:GLN:N	39:13:50:PRO:HD2	2.31	0.45
42:16:27:PRO:O	42:16:28:GLN:CG	2.62	0.45
47:21:70:LYS:NZ	52:26:254:G:O3'	2.45	0.45
52:26:52:C:H2'	52:26:53:A:C8	2.52	0.45
52:26:554:A:H2'	52:26:555:U:C6	2.52	0.45
52:26:596:A:H5'	52:26:596:A:H8	1.82	0.45
53:27:580:U:O2'	53:27:581:C:H5'	2.16	0.45
53:27:918:A:H4'	54:28:97:C:O2	2.17	0.45
53:27:1111:A:C2'	53:27:1112:G:H4'	2.46	0.45
53:27:1351:C:H2'	53:27:1352:U:H6	1.81	0.45
53:27:1495:A:O5'	53:27:1495:A:H8	1.99	0.45
53:27:1656:C:H2'	53:27:1657:U:C6	2.52	0.45
53:27:1695:G:H2'	53:27:1696:G:O4'	2.16	0.45
53:27:1869:G:H3'	53:27:1870:C:C5'	2.46	0.45
53:27:1923:U:H2'	53:27:1924:C:C6	2.51	0.45
53:27:2016:U:H2'	53:27:2017:U:C6	2.51	0.45
53:27:2773:C:H2'	53:27:2774:C:H6	1.82	0.45
57:31:44:A:H2'	57:31:45:G:O4'	2.17	0.45
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:123:ALA:O	8:H:126:ARG:HB2	2.17	0.45
12:L:34:LYS:HD3	21:U:81:PRO:O	2.17	0.45
13:M:20:MET:HG3	13:M:21:PHE:N	2.32	0.45
14:N:100:HIS:HD2	54:28:48:U:H4'	1.80	0.45
17:Q:9:GLY:O	53:27:996:A:H1'	2.17	0.45
18:R:60:HIS:HD1	18:R:61:ASN:N	2.14	0.45
20:T:27:VAL:CG2	20:T:28:LEU:N	2.79	0.45
20:T:71:ILE:HD12	20:T:95:PHE:CD1	2.52	0.45
22:V:21:ARG:HB3	22:V:33:ILE:HG23	1.97	0.45
28:2:29:LYS:HD2	53:27:2286:G:OP1	2.16	0.45
31:5:11:CYS:SG	31:5:12:ARG:N	2.83	0.45
33:7:51:VAL:HA	33:7:69:THR:OG1	2.15	0.45
38:12:106:SER:HA	52:26:642:A:C8	2.51	0.45
42:16:47:ALA:HB1	52:26:520:A:OP2	2.17	0.45
43:17:16:ILE:H	43:17:16:ILE:CD1	2.29	0.45
43:17:102:LYS:HG3	52:26:1226:C:C4	2.52	0.45
52:26:332:G:O2'	52:26:333:U:H5'	2.17	0.45
52:26:424:G:O2'	52:26:425:G:H5'	2.16	0.45
52:26:831:A:H2'	52:26:832:G:O4'	2.17	0.45
52:26:1347:G:H2'	52:26:1348:U:OP2	2.17	0.45
52:26:1444:U:H2'	52:26:1445:U:C6	2.51	0.45
52:26:1502:A:H8	52:26:1505:G:N2	2.15	0.45
53:27:239:C:H2'	53:27:240:C:O4'	2.17	0.45
53:27:2112:G:N3	53:27:2112:G:H2'	2.31	0.45
53:27:2458:G:H1'	53:27:2460:U:O4	2.16	0.45
58:32:33:U:H2'	58:32:36:U:OP2	2.16	0.45
59:33:259:ILE:O	59:33:263:MET:HG3	2.16	0.45
1:A:86:ARG:NH1	1:A:155:ARG:HH21	2.15	0.45
1:A:257:ARG:HG2	1:A:257:ARG:NH1	2.31	0.45
3:C:60:TRP:HB3	3:C:67:ARG:HH12	1.82	0.45
4:D:130:GLY:HA2	4:D:152:ASP:HA	1.98	0.45
5:E:41:GLU:N	5:E:54:ARG:HB2	2.30	0.45
6:F:134:VAL:HG22	6:F:138:VAL:O	2.16	0.45
7:G:34:THR:HG21	53:27:1057:A:C1'	2.30	0.45
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.99	0.45
12:L:38:ARG:HG3	12:L:98:PRO:HD3	1.99	0.45
13:M:1:MET:HA	53:27:1654:A:OP2	2.17	0.45
15:O:112:ARG:O	15:O:113:LEU:HB2	2.16	0.45
16:P:32:ARG:HG3	53:27:1252:G:N3	2.32	0.45
20:T:45:GLN:HB3	20:T:55:GLY:O	2.17	0.45
21:U:23:ALA:O	21:U:25:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:39:ARG:NH2	53:27:2884:U:H3	2.15	0.45
27:1:54:ILE:HG23	27:1:56:LYS:N	2.27	0.45
32:6:103:TRP:HA	32:6:106:VAL:HB	1.98	0.45
33:7:62:SER:HA	33:7:97:PRO:HG2	1.97	0.45
41:15:39:ASN:ND2	52:26:683:G:H21	2.12	0.45
41:15:71:ASP:C	41:15:73:VAL:N	2.70	0.45
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.31	0.45
52:26:781:A:OP1	52:26:1523:G:H5'	2.17	0.45
52:26:1015:G:H1'	52:26:1218:C:O2'	2.17	0.45
52:26:1456:A:H2'	52:26:1457:G:O4'	2.17	0.45
53:27:25:U:H2'	53:27:26:G:O4'	2.16	0.45
53:27:301:G:H1'	53:27:302:C:C6	2.52	0.45
53:27:1505:A:H2'	53:27:1506:U:O4'	2.17	0.45
53:27:2073:C:O2'	53:27:2074:U:H5'	2.16	0.45
53:27:2272:U:H5"	53:27:2273:A:OP1	2.17	0.45
53:27:2321:U:H5"	53:27:2322:A:OP2	2.17	0.45
53:27:2417:C:H2'	53:27:2418:A:H8	1.82	0.45
53:27:2689:U:O2	53:27:2713:U:H5"	2.17	0.45
59:33:456:GLN:CG	59:33:457:MET:H	2.28	0.45
59:33:501:ARG:O	59:33:505:ILE:N	2.50	0.45
2:B:27:ILE:HG22	2:B:29:VAL:HG23	1.98	0.45
3:C:108:ILE:HG23	3:C:109:LEU:HD12	1.99	0.45
4:D:73:VAL:O	4:D:78:ILE:HG13	2.16	0.45
4:D:112:ASP:CG	43:17:66:GLY:HA3	2.37	0.45
7:G:43:LYS:HA	7:G:46:ARG:HB3	1.99	0.45
7:G:53:ARG:HB3	7:G:86:MET:N	2.21	0.45
7:G:67:THR:HB	7:G:68:PRO:HD3	1.98	0.45
7:G:107:GLU:HG2	7:G:109:LYS:O	2.16	0.45
8:H:10:LEU:CD1	8:H:26:ALA:HA	2.47	0.45
14:N:28:VAL:HG12	14:N:93:ASP:O	2.16	0.45
16:P:57:ARG:O	16:P:61:ILE:HG13	2.17	0.45
20:T:82:VAL:O	20:T:96:LYS:HD2	2.17	0.45
22:V:45:ALA:O	22:V:47:VAL:HG23	2.16	0.45
26:Z:46:GLY:HA2	26:Z:49:ARG:HH21	1.81	0.45
33:7:50:SER:HB2	33:7:71:ARG:HH12	1.81	0.45
34:8:142:VAL:HG13	34:8:179:GLY:HA3	1.98	0.45
34:8:143:SER:OG	34:8:144:ILE:N	2.50	0.45
40:14:45:ARG:HB2	40:14:69:THR:HB	1.98	0.45
48:22:52:ARG:O	48:22:56:ARG:HG3	2.17	0.45
52:26:785:G:O2'	52:26:786:G:H5'	2.16	0.45
52:26:1301:U:O2	52:26:1301:U:C2'	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:962:G:H2'	53:27:963:U:C6	2.52	0.45
53:27:1080:A:H2'	53:27:1081:U:C6	2.52	0.45
53:27:1176:U:H2'	53:27:1177:G:N7	2.31	0.45
53:27:1354:A:H2'	53:27:1355:G:O4'	2.17	0.45
53:27:1484:U:O2'	53:27:1485:U:H5'	2.17	0.45
53:27:1877:A:H2'	53:27:1878:G:C8	2.52	0.45
53:27:2020:A:O2'	53:27:2021:C:H5'	2.17	0.45
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.45
59:33:424:PRO:HB3	59:33:455:LEU:HD21	1.98	0.45
2:B:145:SER:O	53:27:2512:C:H1'	2.17	0.45
4:D:89:THR:HG22	4:D:91:ARG:HH11	1.82	0.45
15:O:50:ARG:HG3	15:O:50:ARG:HH11	1.81	0.45
16:P:56:PHE:HZ	53:27:536:G:H4'	1.80	0.45
20:T:85:ARG:HB3	20:T:94:PHE:CE2	2.52	0.45
23:W:15:ASN:HD22	53:27:381:G:C5'	2.30	0.45
34:8:96:ARG:HB2	34:8:99:ASN:HB2	1.99	0.45
36:10:84:VAL:O	36:10:84:VAL:HG12	2.17	0.45
37:11:11:ILE:HD12	37:11:11:ILE:N	2.32	0.45
37:11:26:VAL:HG22	37:11:42:VAL:HG21	1.97	0.45
41:15:71:ASP:O	41:15:72:ALA:HB3	2.17	0.45
51:25:44:ARG:HD2	51:25:47:ALA:HB3	1.99	0.45
52:26:744:C:H2'	52:26:745:G:H8	1.79	0.45
52:26:938:A:H1'	52:26:1376:U:O2'	2.17	0.45
52:26:1011:C:H2'	52:26:1012:A:H8	1.80	0.45
52:26:1107:C:C4	52:26:1108:G:C8	3.05	0.45
53:27:364:C:H2'	53:27:365:U:H6	1.80	0.45
53:27:673:C:O2'	53:27:674:G:H5'	2.17	0.45
53:27:696:G:O2'	53:27:697:G:H5'	2.16	0.45
53:27:708:G:H2'	53:27:709:U:C6	2.52	0.45
53:27:1278:C:H2'	53:27:1279:G:C8	2.52	0.45
53:27:2066:C:O2'	53:27:2067:G:H5'	2.17	0.45
53:27:2455:G:H2'	53:27:2456:C:C6	2.52	0.45
53:27:2534:A:H2'	53:27:2535:G:O4'	2.17	0.45
53:27:2641:G:H2'	53:27:2642:G:H8	1.80	0.45
54:28:4:C:C5'	54:28:4:C:H6	2.30	0.45
54:28:85:G:H2'	54:28:86:G:C8	2.52	0.45
57:31:34:C:H2'	57:31:35:A:C8	2.52	0.45
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.45
59:33:293:LEU:HD23	59:33:293:LEU:C	2.37	0.45
59:33:696:GLY:N	59:33:713:THR:OG1	2.48	0.45
1:A:259:ASN:C	1:A:261:ARG:H	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:49:GLN:HE22	2:B:79:LEU:HD13	1.82	0.45
8:H:12:VAL:HG11	8:H:37:PHE:CE2	2.52	0.45
8:H:33:ASN:HB3	8:H:35:MET:HG3	1.98	0.45
9:I:113:PRO:HG3	53:27:529:A:OP2	2.17	0.45
9:I:136:GLN:HE21	53:27:2899:A:C5'	2.29	0.45
11:K:22:GLY:H	53:27:811:U:H2'	1.82	0.45
18:R:57:ASN:OD1	53:27:495:G:H1'	2.17	0.45
31:5:14:CYS:SG	31:5:33:HIS:ND1	2.90	0.45
32:6:23:ASN:ND2	32:6:190:SER:O	2.39	0.45
33:7:22:PHE:HA	40:14:13:PHE:CE2	2.52	0.45
34:8:169:TRP:CE2	34:8:185:PRO:HG3	2.51	0.45
37:11:132:THR:O	37:11:135:LYS:HB3	2.16	0.45
42:16:32:VAL:HB	42:16:55:ARG:HB3	1.99	0.45
51:25:67:THR:O	52:26:1167:A:C8	2.70	0.45
52:26:40:C:H2'	52:26:41:G:H8	1.82	0.45
52:26:41:G:H2'	52:26:42:G:C8	2.52	0.45
52:26:125:U:H2'	52:26:126:G:O4'	2.17	0.45
52:26:1007:U:H2'	52:26:1008:U:H6	1.82	0.45
53:27:53:A:C8	53:27:54:G:C8	3.05	0.45
53:27:275:C:H2'	53:27:276:U:H4'	1.98	0.45
53:27:532:A:N1	53:27:2020:A:H1'	2.32	0.45
53:27:593:U:H2'	53:27:594:U:C6	2.52	0.45
53:27:1178:C:H2'	53:27:1179:G:C8	2.51	0.45
53:27:1675:C:H2'	53:27:1676:A:O4'	2.17	0.45
53:27:1721:G:HO2'	53:27:1722:A:H8	1.61	0.45
53:27:1812:U:H2'	53:27:1813:G:C8	2.51	0.45
53:27:1930:G:C2'	53:27:1931:U:OP2	2.65	0.45
53:27:2221:G:C2'	53:27:2222:C:H5'	2.47	0.45
53:27:2294:G:H2'	53:27:2295:C:H6	1.81	0.45
53:27:2453:A:H2'	53:27:2454:G:H8	1.82	0.45
57:31:68:C:H2'	57:31:69:C:C6	2.52	0.45
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.45
59:33:639:GLU:H	59:33:639:GLU:CD	2.20	0.45
1:A:103:ILE:HD12	1:A:103:ILE:O	2.17	0.44
3:C:190:ALA:O	3:C:193:VAL:HB	2.17	0.44
7:G:37:LYS:HZ1	7:G:52:MET:HE3	1.82	0.44
14:N:100:HIS:H	14:N:103:VAL:CG2	2.31	0.44
19:S:13:ALA:HB1	24:X:33:ALA:HB1	1.98	0.44
31:5:1:MET:CG	31:5:2:LYS:H	2.08	0.44
33:7:173:PRO:HB2	33:7:176:THR:OG1	2.17	0.44
39:13:34:LEU:CD1	39:13:47:VAL:HG11	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:105:ARG:HG2	52:26:1118:U:H5'	1.99	0.44
41:15:122:PRO:HB2	51:25:33:ARG:HA	1.98	0.44
51:25:5:VAL:HB	51:25:18:PHE:CE2	2.51	0.44
51:25:20:ARG:NH1	55:29:7:G:H22	2.15	0.44
51:25:36:PHE:HD1	51:25:40:PRO:HD3	1.82	0.44
52:26:1123:U:O2'	52:26:1124:G:H5'	2.16	0.44
52:26:1255:G:H2'	52:26:1279:G:H1	1.82	0.44
53:27:1036:G:C6	53:27:1120:G:C6	3.05	0.44
53:27:1161:C:H2'	53:27:1162:G:C8	2.52	0.44
53:27:1326:U:H5'	53:27:2011:U:H1'	1.99	0.44
53:27:1429:G:H2'	53:27:1430:G:H8	1.82	0.44
53:27:2048:G:H1'	53:27:2823:A:N6	2.32	0.44
53:27:2814:A:H2'	53:27:2815:C:C6	2.51	0.44
54:28:64:G:H2'	54:28:65:U:H6	1.82	0.44
56:30:48:C:P	56:30:48:C:H6	2.40	0.44
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.44
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.44
2:B:59:ARG:HH11	53:27:2830:C:H3'	1.82	0.44
2:B:124:ARG:NE	2:B:125:TRP:HE1	2.10	0.44
3:C:148:ILE:HA	3:C:187:VAL:HG13	1.98	0.44
4:D:134:GLN:HB3	4:D:149:ARG:O	2.17	0.44
4:D:139:GLU:HG2	26:Z:27:THR:HG22	1.97	0.44
5:E:157:LYS:HB2	5:E:159:LYS:HG3	1.98	0.44
6:F:90:LEU:HD22	6:F:123:ARG:HA	1.99	0.44
8:H:2:LYS:HB3	8:H:7:TYR:CE2	2.52	0.44
11:K:75:ALA:HB2	11:K:105:ILE:HD12	1.98	0.44
21:U:51:GLN:OE1	21:U:86:LEU:HD21	2.17	0.44
22:V:14:ALA:HB2	53:27:2272:U:OP2	2.18	0.44
29:3:30:VAL:HA	29:3:33:ARG:NH2	2.32	0.44
32:6:29:PHE:CG	32:6:200:PRO:HG2	2.52	0.44
33:7:82:ASP:O	33:7:85:LYS:HB3	2.17	0.44
34:8:139:ASN:N	34:8:181:PHE:O	2.49	0.44
35:9:86:GLY:O	35:9:138:ALA:HB1	2.17	0.44
37:11:33:GLY:O	37:11:35:LYS:N	2.44	0.44
39:13:24:ASN:OD1	39:13:25:GLY:N	2.50	0.44
41:15:21:HIS:CD2	52:26:707:U:H5"	2.52	0.44
52:26:185:U:H2'	52:26:186:C:C6	2.52	0.44
52:26:543:U:H2'	52:26:544:G:C8	2.52	0.44
52:26:1426:G:H2'	52:26:1427:C:H6	1.83	0.44
53:27:570:G:H2'	53:27:2030:A:C8	2.52	0.44
53:27:1111:A:C2	53:27:1112:G:H1'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2314:A:H2'	53:27:2315:G:C8	2.52	0.44
53:27:2472:G:H2'	53:27:2475:C:H42	1.82	0.44
53:27:2849:U:H4'	53:27:2850:A:H5'	1.99	0.44
56:30:13:C:H2'	56:30:13:C:O2	2.16	0.44
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.44
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.44
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.44
1:A:132:ARG:HG2	1:A:166:ARG:NE	2.22	0.44
3:C:19:PHE:O	3:C:110:SER:HA	2.18	0.44
7:G:22:ALA:HB3	7:G:88:HIS:HA	1.98	0.44
11:K:82:LEU:HD23	11:K:82:LEU:C	2.38	0.44
13:M:69:ARG:O	13:M:70:THR:OG1	2.33	0.44
13:M:92:GLY:O	53:27:2880:C:H1'	2.17	0.44
18:R:69:LEU:HG	18:R:107:VAL:CG2	2.48	0.44
21:U:65:VAL:O	21:U:67:GLY:N	2.50	0.44
36:10:29:ILE:HG13	36:10:30:THR:H	1.81	0.44
36:10:35:LYS:NZ	36:10:37:HIS:HE1	2.14	0.44
38:12:12:ARG:HH11	38:12:26:MET:CB	2.30	0.44
42:16:113:ARG:HH21	42:16:120:ARG:CD	2.30	0.44
43:17:108:ARG:HH11	43:17:108:ARG:HG3	1.82	0.44
52:26:483:C:H2'	52:26:484:G:C8	2.52	0.44
52:26:843:U:OP2	52:26:846:G:N3	2.50	0.44
53:27:211:C:H2'	53:27:212:G:C8	2.52	0.44
53:27:230:G:O2'	53:27:231:A:H5'	2.17	0.44
53:27:478:A:N1	53:27:500:G:H4'	2.33	0.44
53:27:1458:U:H4'	53:27:1459:G:C4	2.52	0.44
53:27:2093:G:N7	53:27:2225:A:H2'	2.32	0.44
53:27:2168:G:H1'	58:32:56:C:N3	2.32	0.44
53:27:2171:A:O2'	53:27:2172:U:H5'	2.16	0.44
53:27:2673:G:H2'	53:27:2674:G:C8	2.51	0.44
56:30:13:C:H2'	56:30:14:A:C5'	2.47	0.44
56:30:14:A:H2'	56:30:15:G:C8	2.36	0.44
58:32:19:G:H3'	58:32:20:U:C6	2.53	0.44
59:33:20:TRP:NE1	59:33:63:VAL:O	2.45	0.44
2:B:58:ASN:H	2:B:60:VAL:HG12	1.81	0.44
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.82	0.44
6:F:63:ALA:HB1	6:F:135:HIS:NE2	2.31	0.44
7:G:23:LEU:HD21	7:G:119:PRO:CG	2.47	0.44
8:H:16:MET:HE1	8:H:51:GLY:HA2	1.99	0.44
8:H:41:PHE:CE1	8:H:45:THR:HG21	2.53	0.44
10:J:32:TYR:OH	53:27:1996:C:H5	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:22:GLY:O	11:K:28:GLY:HA3	2.17	0.44
18:R:5:ALA:O	18:R:50:VAL:HG13	2.17	0.44
18:R:43:ALA:O	18:R:47:VAL:HG12	2.17	0.44
27:1:54:ILE:HG12	27:1:56:LYS:HB3	1.99	0.44
33:7:22:PHE:HA	40:14:13:PHE:HE2	1.81	0.44
38:12:17:GLN:HG3	38:12:71:VAL:HB	2.00	0.44
42:16:70:GLY:O	42:16:98:ARG:NH2	2.50	0.44
44:18:38:GLU:O	44:18:41:TRP:HB3	2.18	0.44
45:19:35:ILE:HD13	45:19:59:VAL:HG22	2.00	0.44
50:24:54:GLN:HG2	52:26:193:C:H4'	1.99	0.44
51:25:3:ILE:CA	51:25:19:LYS:HZ2	2.31	0.44
52:26:354:G:O2'	52:26:355:C:H5'	2.16	0.44
52:26:591:U:H2'	52:26:592:G:C8	2.51	0.44
52:26:1417:G:N2	52:26:1482:G:H2'	2.33	0.44
53:27:150:U:H2'	53:27:151:C:H6	1.81	0.44
53:27:488:G:H1'	53:27:492:A:N6	2.32	0.44
53:27:857:G:H2'	53:27:858:G:O4'	2.17	0.44
53:27:968:C:H2'	53:27:969:G:H8	1.81	0.44
53:27:1372:U:O2'	53:27:1373:A:H5'	2.18	0.44
53:27:2701:U:H3'	53:27:2702:G:H5"	1.99	0.44
54:28:12:C:H1'	54:28:15:A:C2	2.53	0.44
55:29:20:U:H2'	55:29:21:C:C6	2.53	0.44
57:31:35:A:H2'	57:31:36:U:C6	2.53	0.44
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.44
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.44
59:33:411:PRO:HD3	59:33:461:ILE:O	2.18	0.44
4:D:139:GLU:HA	26:Z:28:VAL:HG11	2.00	0.44
8:H:12:VAL:HG11	8:H:37:PHE:CZ	2.53	0.44
11:K:109:LYS:HA	11:K:126:ARG:O	2.18	0.44
11:K:123:ARG:HA	11:K:144:GLU:OXT	2.17	0.44
11:K:132:ARG:HA	11:K:142:ILE:CD1	2.47	0.44
12:L:35:ALA:HB1	12:L:126:ILE:HD12	1.98	0.44
15:O:1:SER:O	15:O:3:ILE:N	2.51	0.44
20:T:1:ALA:N	53:27:83:A:H5"	2.32	0.44
24:X:2:LYS:CE	53:27:102:U:H1'	2.41	0.44
32:6:42:LEU:HA	32:6:45:THR:HB	2.00	0.44
33:7:24:ASN:O	33:7:28:PHE:HB2	2.18	0.44
33:7:131:ARG:HD3	33:7:135:ARG:HH21	1.83	0.44
34:8:123:MET:SD	34:8:126:GLY:HA2	2.57	0.44
42:16:49:ARG:HB3	42:16:65:TYR:HE1	1.82	0.44
42:16:73:LEU:CD2	42:16:79:ILE:HD13	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:78:VAL:CG1	46:20:79:ASN:H	2.26	0.44
52:26:189:A:H2'	52:26:190:A:C8	2.53	0.44
52:26:319:G:H2'	52:26:320:A:C8	2.52	0.44
52:26:460:A:H2'	52:26:461:A:H8	1.81	0.44
52:26:1071:C:H2'	52:26:1072:G:H8	1.83	0.44
52:26:1128:C:C2'	52:26:1129:C:H5'	2.47	0.44
53:27:115:C:O2'	53:27:116:C:H5'	2.17	0.44
53:27:329:G:O4'	53:27:477:A:H1'	2.18	0.44
53:27:449:A:O2'	53:27:450:G:H5'	2.16	0.44
53:27:825:A:H2'	53:27:826:U:H6	1.82	0.44
53:27:1259:G:H2'	53:27:1260:A:H8	1.82	0.44
53:27:1405:U:O2'	53:27:1406:U:H5'	2.17	0.44
53:27:1494:A:H2'	53:27:1495:A:C8	2.52	0.44
53:27:2114:A:H3'	53:27:2115:G:O4'	2.17	0.44
53:27:2289:G:H2'	53:27:2290:G:H8	1.82	0.44
53:27:2419:U:H2'	53:27:2420:C:C6	2.53	0.44
53:27:2533:U:H2'	53:27:2534:A:O4'	2.17	0.44
54:28:114:C:H2'	54:28:115:A:C8	2.52	0.44
57:31:67:C:H2'	57:31:68:C:C6	2.53	0.44
58:32:9:G:H2'	58:32:11:A:H62	1.82	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.44
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.44
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.44
59:33:466:GLN:HG2	59:33:467:LYS:N	2.33	0.44
59:33:634:HIS:HB3	59:33:641:LEU:HD12	1.99	0.44
1:A:47:ARG:NH2	53:27:774:G:H5"	2.33	0.44
2:B:129:THR:HG22	2:B:130:GLN:O	2.18	0.44
2:B:161:MET:CE	53:27:2050:C:H1'	2.48	0.44
6:F:65:ALA:CA	6:F:68:ARG:HH11	2.30	0.44
6:F:70:GLU:HB2	6:F:134:VAL:HG11	1.99	0.44
6:F:84:ALA:HA	6:F:91:PHE:N	2.32	0.44
11:K:57:LEU:HD13	11:K:60:ARG:HH12	1.82	0.44
19:S:69:ARG:HA	19:S:74:ILE:HA	2.00	0.44
20:T:25:LYS:HD3	20:T:36:GLU:OE2	2.18	0.44
30:4:51:LYS:HE3	30:4:51:LYS:HB2	1.81	0.44
34:8:29:THR:C	34:8:31:CYS:N	2.71	0.44
34:8:33:ILE:HG12	34:8:34:GLU:H	1.81	0.44
34:8:151:GLN:HG3	52:26:437:U:H5"	1.98	0.44
51:25:36:PHE:CD1	51:25:40:PRO:HG3	2.53	0.44
52:26:291:U:O2'	52:26:292:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:575:G:O2'	52:26:821:G:H5'	2.17	0.44
52:26:1441:A:H2'	52:26:1441:A:N3	2.32	0.44
52:26:1488:G:H2'	52:26:1489:G:H8	1.81	0.44
52:26:1490:U:O2'	52:26:1491:G:H5'	2.18	0.44
53:27:280:U:H2'	53:27:281:C:N1	2.32	0.44
53:27:570:G:OP1	53:27:972:A:H4'	2.17	0.44
53:27:860:U:H2'	53:27:861:A:H8	1.82	0.44
53:27:1079:C:H2'	53:27:1080:A:C8	2.53	0.44
53:27:1444:G:C4	53:27:1445:G:C8	3.06	0.44
53:27:1936:A:H3'	53:27:1937:A:H5'	1.99	0.44
53:27:2114:A:N3	53:27:2114:A:H2'	2.33	0.44
54:28:18:G:H2'	54:28:19:C:C6	2.52	0.44
58:32:41:C:H2'	58:32:42:G:C8	2.52	0.44
59:33:214:ILE:HG21	59:33:214:ILE:HD13	1.78	0.44
1:A:28:PRO:HG3	1:A:62:ARG:NH2	2.33	0.44
6:F:29:PHE:HB2	53:27:2198:A:N3	2.33	0.44
7:G:40:GLU:OE2	7:G:43:LYS:HD3	2.16	0.44
7:G:54:VAL:HB	7:G:84:TYR:O	2.18	0.44
7:G:88:HIS:HB3	7:G:89:PRO:CD	2.41	0.44
8:H:27:LEU:HD11	8:H:34:ILE:N	2.33	0.44
8:H:102:ARG:NH1	8:H:139:VAL:O	2.51	0.44
13:M:117:ASP:O	13:M:118:ARG:HB2	2.17	0.44
16:P:57:ARG:HH21	16:P:91:ARG:CZ	2.30	0.44
17:Q:34:GLU:HA	17:Q:59:ILE:O	2.18	0.44
22:V:16:ARG:HD3	53:27:2356:U:O3'	2.18	0.44
23:W:69:GLU:O	23:W:72:ALA:HB3	2.18	0.44
25:Y:11:SER:HB2	53:27:988:A:H3'	2.00	0.44
32:6:180:ILE:HD12	32:6:180:ILE:N	2.32	0.44
33:7:108:PRO:HA	33:7:114:LEU:CD1	2.45	0.44
37:11:91:ARG:O	37:11:95:ARG:N	2.47	0.44
49:23:69:LYS:HE3	52:26:1319:A:H5"	1.99	0.44
51:25:20:ARG:NH1	52:26:1538:C:O2	2.50	0.44
52:26:285:C:H2'	52:26:286:C:C6	2.53	0.44
52:26:1127:G:O2'	52:26:1128:C:H5'	2.18	0.44
52:26:1251:A:O2'	52:26:1370:G:H5'	2.18	0.44
53:27:156:A:H2'	53:27:157:C:C6	2.52	0.44
53:27:406:G:H2'	53:27:407:G:C8	2.52	0.44
53:27:656:G:H2'	53:27:657:U:O4'	2.18	0.44
53:27:948:C:OP1	53:27:962:G:OP1	2.35	0.44
53:27:1824:G:H2'	53:27:1825:U:O4'	2.18	0.44
53:27:2849:U:H1'	53:27:2866:U:O2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
4:D:100:GLU:C	4:D:102:LEU:H	2.21	0.44
6:F:5:LEU:HD23	6:F:15:LEU:H	1.82	0.44
7:G:45:GLY:HA2	7:G:49:GLY:HA2	1.99	0.44
10:J:19:VAL:HG12	10:J:43:ILE:HA	2.00	0.44
11:K:4:ASN:O	53:27:1243:C:H1'	2.17	0.44
17:Q:45:GLU:HG3	17:Q:46:GLU:H	1.82	0.44
25:Y:23:LEU:HD11	25:Y:53:MET:SD	2.57	0.44
26:Z:55:GLY:O	26:Z:56:ARG:HD2	2.18	0.44
30:4:8:GLY:O	30:4:12:ARG:NH2	2.50	0.44
30:4:14:LYS:HB2	30:4:22:LYS:HG2	2.00	0.44
32:6:206:ILE:HG13	32:6:207:ARG:H	1.81	0.44
33:7:64:ARG:HG2	33:7:99:GLN:CB	2.38	0.44
33:7:178:ARG:HH21	52:26:1112:C:C4'	2.29	0.44
39:13:89:TYR:HB2	39:13:93:LEU:CD1	2.47	0.44
39:13:89:TYR:HB2	39:13:93:LEU:HD12	1.99	0.44
43:17:10:ASP:CB	43:17:45:SER:HB3	2.46	0.44
44:18:80:ARG:NH1	44:18:80:ARG:HG3	2.33	0.44
45:19:45:HIS:O	45:19:46:LYS:HB2	2.18	0.44
47:21:51:GLU:HG3	47:21:51:GLU:O	2.17	0.44
49:23:35:ARG:HE	49:23:71:GLY:HA2	1.81	0.44
52:26:909:A:H2'	52:26:910:C:O4'	2.18	0.44
53:27:466:A:N3	53:27:683:U:H1'	2.32	0.44
53:27:521:U:H2'	53:27:522:A:C8	2.53	0.44
53:27:566:U:H2'	53:27:567:U:O4'	2.18	0.44
53:27:715:A:H8	53:27:715:A:OP1	2.00	0.44
53:27:834:G:H1'	53:27:2358:A:N3	2.33	0.44
53:27:947:A:H2'	53:27:948:C:H6	1.83	0.44
53:27:969:G:H2'	53:27:970:U:O4'	2.18	0.44
53:27:1047:G:N2	53:27:1110:G:H2'	2.33	0.44
53:27:1528:A:C2'	53:27:1529:G:H5'	2.48	0.44
53:27:1971:U:H5'	53:27:1972:G:H5"	1.99	0.44
53:27:2163:A:C2'	53:27:2164:C:H5'	2.47	0.44
53:27:2417:C:H2'	53:27:2418:A:C8	2.52	0.44
53:27:2626:C:H2'	53:27:2627:G:C8	2.53	0.44
53:27:2846:G:H2'	53:27:2847:U:O4'	2.17	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
4:D:61:GLY:O	26:Z:7:PRO:HD2	2.18	0.44
4:D:91:ARG:HG2	54:28:43:C:O2'	2.18	0.44
6:F:6:LEU:HD23	6:F:6:LEU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:40:THR:HB	6:F:43:ASN:ND2	2.33	0.44
9:I:47:HIS:CE1	9:I:48:VAL:HG23	2.52	0.44
12:L:35:ALA:O	12:L:99:GLY:N	2.46	0.44
13:M:55:ALA:HB2	13:M:79:LEU:HD23	1.99	0.44
16:P:5:ARG:HD2	53:27:1250:G:C5'	2.44	0.44
19:S:61:LEU:C	19:S:61:LEU:HD12	2.37	0.44
20:T:42:LYS:HG3	53:27:499:U:H5"	2.00	0.44
21:U:6:ALA:HB1	21:U:40:ILE:CG2	2.48	0.44
24:X:43:LEU:HD21	24:X:47:ARG:HH22	1.83	0.44
29:3:10:LEU:CD1	29:3:14:ARG:HH22	2.31	0.44
33:7:11:LEU:HD13	33:7:17:TRP:NE1	2.33	0.44
34:8:101:VAL:HG13	34:8:106:PHE:HB2	2.00	0.44
36:10:92:THR:OG1	36:10:93:LYS:N	2.51	0.44
37:11:128:GLU:HG3	37:11:130:LYS:HG2	2.00	0.44
38:12:55:LYS:N	38:12:56:PRO:HD3	2.32	0.44
45:19:23:SER:OG	45:19:26:VAL:HG23	2.18	0.44
50:24:23:ARG:HH12	52:26:176:C:C5'	2.29	0.44
52:26:629:A:H2'	52:26:630:A:O4'	2.18	0.44
52:26:837:U:H2'	52:26:838:G:H8	1.83	0.44
53:27:149:A:H2'	53:27:150:U:C6	2.53	0.44
53:27:151:C:H2'	53:27:152:A:H8	1.82	0.44
53:27:634:C:H6	53:27:634:C:O5'	2.01	0.44
53:27:1495:A:H2'	53:27:1496:A:O4'	2.18	0.44
53:27:2588:G:O2'	53:27:2589:A:H5'	2.18	0.44
54:28:39:A:H2'	54:28:40:U:C6	2.52	0.44
59:33:438:ARG:HD2	59:33:466:GLN:C	2.38	0.44
3:C:31:VAL:HG21	3:C:104:ALA:CB	2.47	0.43
7:G:59:LEU:CD2	53:27:1047:G:H2'	2.48	0.43
20:T:6:ARG:HB2	53:27:85:G:P	2.58	0.43
32:6:74:ALA:CB	32:6:206:ILE:HG22	2.48	0.43
34:8:33:ILE:O	34:8:34:GLU:C	2.56	0.43
34:8:96:ARG:O	34:8:100:VAL:N	2.48	0.43
39:13:25:GLY:N	39:13:58:GLU:O	2.51	0.43
39:13:41:GLU:OE1	39:13:41:GLU:N	2.51	0.43
40:14:44:THR:OG1	52:26:1151:A:H5"	2.18	0.43
40:14:53:ILE:HG23	52:26:1060:U:H4'	2.00	0.43
40:14:62:ARG:NH2	52:26:1366:C:O2'	2.51	0.43
43:17:66:GLY:O	43:17:69:ARG:HB2	2.17	0.43
44:18:13:VAL:HA	44:18:59:GLN:NE2	2.19	0.43
47:21:3:LYS:C	47:21:4:ILE:HG13	2.39	0.43
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:231:U:H2'	52:26:232:G:C8	2.45	0.43
53:27:4:U:H2'	53:27:5:A:H8	1.84	0.43
53:27:131:A:H2'	53:27:132:G:C8	2.53	0.43
53:27:337:C:H2'	53:27:338:G:O4'	2.18	0.43
53:27:339:U:O5'	53:27:339:U:H6	2.01	0.43
53:27:983:A:N6	53:27:984:A:C2	2.86	0.43
53:27:1092:C:O2'	53:27:1093:G:H5'	2.18	0.43
53:27:1379:U:C6	53:27:1379:U:OP1	2.71	0.43
53:27:1745:A:O2'	53:27:1746:A:H5'	2.18	0.43
53:27:1784:A:H4'	53:27:1785:A:O5'	2.18	0.43
53:27:2030:A:C2	53:27:2499:C:H5"	2.53	0.43
54:28:82:U:H2'	54:28:83:G:H8	1.83	0.43
56:30:30:G:H2'	56:30:31:A:C8	2.53	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.43
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.30	0.43
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.43
59:33:634:HIS:CE1	59:33:640:GLN:HB2	2.53	0.43
3:C:176:ASP:HA	3:C:177:PRO:HD3	1.90	0.43
4:D:56:LEU:HD22	4:D:88:VAL:CG2	2.46	0.43
4:D:114:ARG:HH11	43:17:70:ARG:NH1	2.16	0.43
6:F:40:THR:O	6:F:42:LYS:N	2.51	0.43
7:G:53:ARG:HD3	7:G:53:ARG:HA	1.63	0.43
10:J:6:THR:O	10:J:20:MET:HA	2.17	0.43
10:J:41:ILE:C	10:J:41:ILE:HD12	2.39	0.43
11:K:13:LYS:HG3	53:27:1245:G:OP1	2.18	0.43
11:K:48:ARG:NH1	30:4:6:VAL:HG23	2.34	0.43
14:N:66:GLY:C	14:N:102:ARG:HD3	2.38	0.43
19:S:68:LYS:HD3	19:S:68:LYS:HA	1.86	0.43
26:Z:16:CYS:HB3	26:Z:34:LEU:HB2	2.00	0.43
27:1:12:ARG:HD2	27:1:16:ARG:NH2	2.33	0.43
29:3:25:LYS:NZ	53:27:211:C:P	2.92	0.43
33:7:96:VAL:CB	33:7:97:PRO:HD2	2.31	0.43
35:9:32:PHE:O	35:9:51:LYS:HA	2.18	0.43
36:10:43:GLY:HA2	36:10:58:HIS:CE1	2.53	0.43
37:11:106:ALA:HB1	37:11:132:THR:HB	2.00	0.43
39:13:117:LEU:CD2	39:13:123:ARG:HE	2.31	0.43
39:13:118:ARG:H	39:13:124:PRO:HD3	1.82	0.43
40:14:86:ALA:C	40:14:90:LEU:HD12	2.39	0.43
41:15:85:VAL:HG22	41:15:111:ASP:HA	2.00	0.43
47:21:19:SER:HB3	47:21:70:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:35:ARG:HG2	49:23:50:VAL:CG1	2.48	0.43
50:24:41:GLY:HA2	50:24:85:LEU:HD21	2.00	0.43
50:24:44:ALA:O	50:24:47:GLN:HB3	2.18	0.43
52:26:112:G:H21	52:26:354:G:C5'	2.21	0.43
52:26:148:G:C3'	52:26:149:A:H5"	2.47	0.43
52:26:296:U:H2'	52:26:297:G:C8	2.53	0.43
52:26:1144:G:N2	52:26:1146:A:H62	2.08	0.43
52:26:1486:G:H2'	52:26:1487:G:O4'	2.19	0.43
52:26:1518:A:H2'	52:26:1519:A:O4'	2.18	0.43
52:26:1520:C:O2'	52:26:1521:C:H5'	2.18	0.43
53:27:15:G:O2'	53:27:16:C:H5'	2.19	0.43
53:27:410:G:OP1	53:27:411:G:H5'	2.18	0.43
53:27:622:G:H2'	53:27:623:C:C6	2.53	0.43
53:27:1028:A:H2'	53:27:1029:A:C8	2.53	0.43
53:27:2285:C:O2'	53:27:2287:A:H1'	2.17	0.43
53:27:2314:A:H2'	53:27:2315:G:H8	1.83	0.43
53:27:2832:U:H1'	53:27:2834:G:N3	2.33	0.43
53:27:2889:C:H2'	53:27:2890:G:O4'	2.19	0.43
54:28:77:U:O2'	54:28:78:A:H5'	2.17	0.43
58:32:29:G:C3'	58:32:30:G:H5"	2.41	0.43
1:A:237:ARG:HG3	53:27:2591:C:OP1	2.18	0.43
2:B:151:THR:HB	2:B:152:PRO:CD	2.43	0.43
3:C:99:LYS:HZ3	53:27:601:C:H4'	1.81	0.43
9:I:65:THR:HG1	53:27:1141:U:H6	1.64	0.43
15:O:8:GLU:HB3	15:O:54:LEU:HB2	2.01	0.43
18:R:7:HIS:ND1	18:R:10:ALA:HB2	2.33	0.43
23:W:42:GLU:HB2	23:W:44:ARG:HG2	2.00	0.43
24:X:20:ASN:O	24:X:24:GLU:N	2.49	0.43
40:14:15:HIS:HA	40:14:18:ILE:CG2	2.47	0.43
43:17:67:ASP:HA	43:17:70:ARG:NH1	2.33	0.43
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.83	0.43
52:26:751:U:C2'	52:26:752:G:H5'	2.48	0.43
52:26:1186:G:H2'	52:26:1187:G:O4'	2.19	0.43
52:26:1314:C:H2'	52:26:1315:U:C6	2.53	0.43
52:26:1453:G:H3'	52:26:1453:G:N3	2.33	0.43
53:27:365:U:H2'	53:27:366:C:O4'	2.18	0.43
53:27:465:G:H21	53:27:684:G:H1'	1.83	0.43
53:27:1316:U:H2'	53:27:1317:G:H8	1.83	0.43
53:27:1846:G:H2'	53:27:1847:G:H1'	2.01	0.43
58:32:48:C:H2'	58:32:59:A:H1'	2.01	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:621:ILE:HG13	59:33:655:ALA:CB	2.48	0.43
59:33:670:ARG:HA	59:33:711:ASP:OD1	2.18	0.43
4:D:152:ASP:OD1	4:D:152:ASP:N	2.50	0.43
5:E:154:GLU:O	5:E:158:GLY:HA2	2.18	0.43
6:F:49:ALA:O	6:F:53:GLU:HB3	2.18	0.43
6:F:96:THR:HA	6:F:99:ILE:HD12	2.00	0.43
11:K:79:LEU:HB2	11:K:114:GLY:H	1.83	0.43
15:O:23:ASP:OD1	15:O:89:GLY:N	2.52	0.43
16:P:57:ARG:HD2	53:27:997:G:OP2	2.18	0.43
17:Q:34:GLU:HB3	17:Q:58:VAL:HG22	2.00	0.43
26:Z:47:LYS:O	26:Z:50:ASP:HB3	2.18	0.43
37:11:92:PRO:O	37:11:95:ARG:HB3	2.18	0.43
42:16:85:ARG:HG2	42:16:87:LYS:H	1.82	0.43
43:17:15:VAL:CG2	43:17:40:GLU:HB2	2.49	0.43
43:17:56:ARG:O	43:17:59:VAL:HG22	2.19	0.43
43:17:114:PRO:HD2	52:26:1228:C:C5’	2.45	0.43
49:23:9:PHE:CE2	49:23:36:ARG:HD3	2.53	0.43
51:25:11:PHE:O	51:25:13:VAL:N	2.52	0.43
51:25:64:ALA:O	51:25:65:ARG:CB	2.66	0.43
52:26:383:A:H8	52:26:383:A:O5’	2.01	0.43
52:26:710:G:O2’	52:26:711:G:H5’	2.19	0.43
52:26:1064:G:O2’	52:26:1190:G:N2	2.51	0.43
52:26:1073:U:H2’	52:26:1074:G:H8	1.83	0.43
52:26:1116:U:O2’	52:26:1117:A:H5’	2.19	0.43
52:26:1254:A:H2’	52:26:1255:G:H8	1.84	0.43
53:27:814:C:H2’	53:27:815:C:C6	2.52	0.43
53:27:925:A:H2’	53:27:926:G:C8	2.54	0.43
53:27:1495:A:H2’	53:27:1496:A:C8	2.54	0.43
53:27:1801:A:H5”	53:27:2203:U:H2’	1.99	0.43
53:27:1956:U:C2’	53:27:1957:C:H5’	2.47	0.43
53:27:2151:U:H2’	53:27:2152:G:C8	2.54	0.43
53:27:2604:U:H2’	53:27:2605:U:H6	1.83	0.43
53:27:2853:C:H2’	53:27:2854:G:H8	1.83	0.43
54:28:118:C:H2’	54:28:119:A:C8	2.52	0.43
56:30:76:A:O4’	59:33:412:LYS:HG3	2.19	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
59:33:286:LEU:CD2	59:33:343:MET:HE1	2.48	0.43
59:33:666:SER:CA	59:33:715:GLU:HA	2.48	0.43
3:C:21:ARG:HD2	3:C:106:LYS:HE2	2.00	0.43
3:C:90:GLN:HE21	3:C:92:HIS:CD2	2.37	0.43
4:D:97:GLU:OE1	26:Z:25:ARG:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:129:LEU:N	7:G:130:PRO:HD3	2.32	0.43
9:I:124:VAL:CG1	9:I:125:TYR:N	2.82	0.43
11:K:38:GLN:HB2	53:27:831:G:O2'	2.17	0.43
13:M:48:VAL:O	13:M:51:LEU:N	2.50	0.43
13:M:106:ASP:OD2	53:27:1287:A:N7	2.51	0.43
16:P:42:GLY:HA3	17:Q:75:VAL:HG21	2.00	0.43
18:R:29:VAL:HG23	18:R:69:LEU:O	2.18	0.43
19:S:57:VAL:HG22	19:S:58:VAL:H	1.84	0.43
20:T:94:PHE:HA	20:T:102:ILE:HG13	2.00	0.43
23:W:15:ASN:ND2	53:27:381:G:H5"	2.32	0.43
23:W:70:LEU:HD23	23:W:70:LEU:HA	1.80	0.43
34:8:1:ALA:N	34:8:67:LEU:HD11	2.34	0.43
34:8:149:LYS:O	34:8:150:LYS:HG2	2.19	0.43
36:10:46:GLN:NE2	36:10:56:LYS:HG3	2.34	0.43
40:14:55:PRO:HD3	52:26:1059:C:O2'	2.18	0.43
52:26:910:C:H2'	52:26:911:U:H6	1.84	0.43
52:26:1175:G:O2'	52:26:1176:A:H5'	2.18	0.43
53:27:528:A:C8	53:27:528:A:C3'	3.00	0.43
53:27:1432:G:O2'	53:27:1433:A:H5'	2.19	0.43
53:27:1683:U:H2'	53:27:1684:G:H8	1.82	0.43
53:27:2231:U:H2'	53:27:2232:C:C6	2.54	0.43
53:27:2739:U:O2'	53:27:2740:A:H5'	2.19	0.43
1:A:52:HIS:HA	1:A:216:ARG:HB3	2.00	0.43
1:A:52:HIS:HB2	1:A:216:ARG:O	2.18	0.43
1:A:225:ASN:HD21	53:27:784:G:P	2.42	0.43
1:A:227:VAL:HG11	53:27:784:G:C2	2.54	0.43
2:B:107:VAL:HG12	2:B:205:PRO:HA	2.00	0.43
3:C:188:MET:SD	3:C:193:VAL:HG22	2.59	0.43
5:E:3:VAL:HG12	5:E:68:ARG:HD3	2.00	0.43
7:G:59:LEU:HD21	53:27:1047:G:H2'	2.00	0.43
8:H:45:THR:HB	8:H:48:ILE:HB	2.01	0.43
11:K:77:ILE:CG1	11:K:110:VAL:HA	2.48	0.43
11:K:95:LEU:CG	11:K:100:ILE:HD11	2.48	0.43
13:M:12:ARG:HD3	13:M:16:HIS:CE1	2.53	0.43
15:O:98:TYR:CE1	15:O:99:LEU:HD12	2.54	0.43
33:7:6:PRO:O	33:7:9:ILE:HG22	2.19	0.43
33:7:69:THR:C	33:7:105:VAL:HG12	2.38	0.43
34:8:29:THR:C	34:8:31:CYS:H	2.19	0.43
34:8:160:LEU:O	34:8:163:GLN:HG3	2.19	0.43
35:9:17:VAL:HA	35:9:33:THR:O	2.17	0.43
35:9:19:ARG:HA	35:9:31:SER:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:98:ARG:HA	39:13:103:VAL:CG2	2.48	0.43
40:14:39:PRO:HA	40:14:73:LEU:O	2.19	0.43
44:18:100:TRP:OXT	52:26:1187:G:H1'	2.18	0.43
46:20:23:ASP:OD1	52:26:229:U:O2'	2.36	0.43
52:26:208:U:H1'	52:26:212:G:N2	2.33	0.43
52:26:486:U:O2	52:26:486:U:H2'	2.18	0.43
52:26:711:G:O2'	52:26:712:A:H5'	2.18	0.43
52:26:1011:C:H2'	52:26:1012:A:C8	2.54	0.43
52:26:1429:A:H2'	52:26:1430:A:H8	1.83	0.43
52:26:1498:U:N3	55:29:17:U:H5"	2.34	0.43
53:27:40:U:H2'	53:27:41:C:H6	1.83	0.43
53:27:832:U:H2'	53:27:833:A:H8	1.83	0.43
53:27:1127:A:H2'	53:27:1128:G:H5"	2.00	0.43
53:27:1903:G:H2'	53:27:1904:G:C8	2.51	0.43
53:27:2071:A:H2'	53:27:2072:C:C6	2.53	0.43
53:27:2352:A:H2'	53:27:2353:G:H5'	2.00	0.43
56:30:74:C:H2'	59:33:431:ILE:O	2.18	0.43
58:32:19:G:C5'	58:32:20:U:H5	2.25	0.43
59:33:442:ALA:CB	59:33:463:ILE:HA	2.48	0.43
1:A:131:MET:HA	1:A:134:ILE:HD12	2.00	0.43
2:B:173:GLN:HE22	2:B:208:LYS:NZ	2.16	0.43
3:C:149:ILE:HG23	3:C:188:MET:HA	1.99	0.43
4:D:70:ARG:C	4:D:80:GLN:HE22	2.22	0.43
5:E:25:ILE:HG22	5:E:78:VAL:HG21	2.01	0.43
5:E:83:THR:OG1	5:E:133:LYS:HG2	2.18	0.43
11:K:65:GLY:HA2	53:27:2415:G:H4'	2.01	0.43
11:K:112:LEU:HD22	11:K:130:GLY:HA3	1.99	0.43
13:M:103:ARG:HG2	13:M:105:GLY:H	1.84	0.43
18:R:69:LEU:HG	18:R:107:VAL:HG22	2.00	0.43
34:8:35:GLN:O	34:8:36:ALA:HB2	2.18	0.43
36:10:38:ARG:HD3	36:10:98:GLU:N	2.31	0.43
39:13:114:LYS:HD3	52:26:1187:G:H5'	2.00	0.43
40:14:40:ILE:HD13	52:26:1125:U:C6	2.53	0.43
40:14:68:ARG:HH22	52:26:1115:U:P	2.42	0.43
47:21:64:ARG:CD	52:26:264:C:H4'	2.36	0.43
50:24:9:ARG:HG2	52:26:108:G:C2	2.54	0.43
52:26:116:A:H2'	52:26:117:G:O4'	2.18	0.43
52:26:254:G:O2'	52:26:255:G:H5'	2.18	0.43
52:26:634:C:H2'	52:26:635:A:C8	2.54	0.43
52:26:911:U:H2'	52:26:912:C:C6	2.53	0.43
52:26:1350:A:H2'	52:26:1351:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1413:A:H2'	52:26:1414:U:O4'	2.19	0.43
53:27:549:G:H2'	53:27:550:C:H6	1.84	0.43
53:27:813:U:H2'	53:27:814:C:H6	1.83	0.43
53:27:1038:G:H2'	53:27:1039:A:H8	1.82	0.43
53:27:1509:A:H2'	53:27:1510:G:C8	2.54	0.43
53:27:1662:U:H2'	53:27:1663:G:C8	2.54	0.43
53:27:1704:C:H2'	53:27:1705:A:C8	2.54	0.43
53:27:2041:U:O2'	53:27:2042:A:H5'	2.18	0.43
53:27:2564:A:OP1	53:27:2648:G:H4'	2.18	0.43
53:27:2756:U:C1'	53:27:2757:A:H5"	2.47	0.43
53:27:2774:C:H2'	53:27:2775:G:O4'	2.19	0.43
53:27:2839:G:H2'	53:27:2840:C:O4'	2.19	0.43
59:33:621:ILE:O	59:33:655:ALA:HB3	2.19	0.43
2:B:68:PHE:CZ	2:B:79:LEU:HD21	2.54	0.43
6:F:29:PHE:HB2	53:27:2198:A:C4	2.53	0.43
9:I:30:THR:HG23	53:27:1006:C:O4'	2.19	0.43
12:L:3:GLN:HG3	12:L:92:TRP:CE2	2.54	0.43
12:L:50:ARG:HG3	12:L:51:ARG:H	1.83	0.43
13:M:12:ARG:HD3	13:M:16:HIS:CG	2.54	0.43
16:P:52:ARG:HG3	16:P:53:LYS:N	2.33	0.43
16:P:74:SER:O	16:P:78:PHE:HB2	2.18	0.43
23:W:22:ASN:HA	53:27:200:U:H5"	2.01	0.43
23:W:56:ARG:HH11	23:W:56:ARG:HG3	1.84	0.43
24:X:38:GLN:O	53:27:95:A:H4'	2.19	0.43
25:Y:8:GLN:HG2	25:Y:31:ILE:HG22	2.01	0.43
28:2:13:SER:OG	28:2:47:ILE:HB	2.18	0.43
33:7:142:ARG:HG3	33:7:143:LEU:N	2.33	0.43
33:7:162:ALA:HB2	52:26:1056:U:H4'	2.00	0.43
34:8:149:LYS:HG2	34:8:177:MET:HE1	2.00	0.43
36:10:66:ALA:HB1	36:10:67:PRO:HD2	2.00	0.43
37:11:64:ALA:O	37:11:126:ALA:HB1	2.19	0.43
38:12:107:LYS:HG2	38:12:120:LEU:HD13	2.00	0.43
39:13:54:VAL:HG21	39:13:86:LEU:HD13	2.00	0.43
42:16:113:ARG:HB2	42:16:118:VAL:O	2.19	0.43
47:21:56:ASP:HB3	47:21:81:ALA:N	2.32	0.43
48:22:35:SER:HA	48:22:71:ASP:OD2	2.19	0.43
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.34	0.43
52:26:134:G:H2'	52:26:135:C:O4'	2.19	0.43
52:26:646:G:O2'	52:26:647:C:H5'	2.19	0.43
52:26:848:C:H2'	52:26:849:G:O4'	2.18	0.43
52:26:1084:G:H5'	52:26:1102:A:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:768:G:N2	53:27:1379:U:O2'	2.52	0.43
53:27:1229:C:H2'	53:27:1230:A:C8	2.53	0.43
53:27:1807:G:C2'	53:27:1808:A:H5'	2.45	0.43
53:27:2107:G:C2	53:27:2108:A:H1'	2.54	0.43
53:27:2142:A:C2'	53:27:2143:C:H5'	2.49	0.43
53:27:2615:U:O5'	53:27:2615:U:H6	2.01	0.43
57:31:43:A:H2'	57:31:44:A:C8	2.54	0.43
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.43
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.43
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.43
1:A:75:ALA:N	1:A:114:GLN:HE22	2.16	0.43
1:A:75:ALA:HB1	1:A:93:VAL:HG12	2.01	0.43
4:D:54:ALA:O	4:D:57:ALA:HB3	2.18	0.43
11:K:23:ILE:HD12	11:K:24:GLY:N	2.34	0.43
11:K:48:ARG:CD	53:27:666:A:H4'	2.48	0.43
11:K:61:LEU:O	30:4:12:ARG:NE	2.52	0.43
14:N:67:ASN:OD1	14:N:67:ASN:N	2.51	0.43
14:N:107:ALA:O	14:N:111:ARG:HG3	2.18	0.43
16:P:69:ARG:NH1	53:27:1012:U:OP2	2.50	0.43
16:P:100:PHE:O	16:P:102:LYS:N	2.52	0.43
26:Z:50:ASP:O	26:Z:53:THR:HG23	2.19	0.43
34:8:185:PRO:HB2	34:8:190:LEU:HD23	2.00	0.43
35:9:129:SER:HB2	52:26:20:U:OP2	2.18	0.43
36:10:30:THR:HA	36:10:34:GLY:N	2.34	0.43
39:13:29:ILE:HG23	39:13:29:ILE:O	2.19	0.43
40:14:61:ALA:HB2	52:26:1061:G:C5'	2.48	0.43
43:17:93:GLY:HA2	43:17:108:ARG:HH22	1.83	0.43
51:25:32:ARG:NH1	51:25:33:ARG:HD3	2.34	0.43
52:26:202:G:H2'	52:26:203:G:O4'	2.19	0.43
52:26:478:A:H2'	52:26:479:U:O4'	2.19	0.43
52:26:862:C:O2'	52:26:863:U:H5'	2.18	0.43
52:26:984:C:O5'	52:26:984:C:H6	2.01	0.43
52:26:1051:C:H6	52:26:1051:C:O5'	2.01	0.43
52:26:1079:G:H2'	52:26:1080:A:C8	2.53	0.43
52:26:1189:U:H2'	52:26:1190:G:H5'	2.00	0.43
52:26:1228:C:H2'	52:26:1229:A:H8	1.83	0.43
52:26:1347:G:H22	52:26:1374:A:P	2.42	0.43
53:27:106:C:H2'	53:27:107:G:H8	1.83	0.43
53:27:255:A:H2'	53:27:256:A:O4'	2.18	0.43
53:27:932:U:H5'	53:27:933:A:C8	2.54	0.43
53:27:1264:A:N7	53:27:1265:A:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1821:A:H8	53:27:1821:A:O5'	2.02	0.43
53:27:1880:U:H2'	53:27:1881:C:H6	1.83	0.43
53:27:1931:U:H2'	53:27:1932:A:H8	1.82	0.43
53:27:2008:C:H2'	53:27:2009:A:H8	1.84	0.43
53:27:2027:G:O2'	53:27:2028:U:H5'	2.19	0.43
53:27:2423:U:H1'	53:27:2425:A:C5	2.54	0.43
56:30:10:G:H22	56:30:26:A:H1'	1.84	0.43
57:31:58:A:H2	57:31:60:U:HO2'	1.66	0.43
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.43
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.43
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.43
59:33:622:VAL:HG23	59:33:636:ALA:HA	2.00	0.43
2:B:144:GLY:O	2:B:145:SER:C	2.57	0.43
3:C:8:ALA:O	3:C:10:SER:N	2.45	0.43
4:D:28:PRO:HB2	4:D:168:LEU:HD22	2.01	0.43
7:G:72:LEU:H	7:G:72:LEU:CD1	2.32	0.43
12:L:57:VAL:O	12:L:58:LYS:HB2	2.17	0.43
17:Q:29:THR:O	17:Q:63:VAL:HB	2.19	0.43
23:W:18:SER:CB	53:27:2080:A:H4'	2.49	0.43
28:2:5:ARG:NH1	28:2:25:ASN:N	2.66	0.43
28:2:6:GLU:OE2	28:2:26:LYS:HD3	2.18	0.43
33:7:18:ASN:O	33:7:55:VAL:HA	2.18	0.43
34:8:97:LEU:CB	34:8:134:TYR:HB3	2.48	0.43
35:9:159:SER:OG	35:9:162:GLU:HB3	2.19	0.43
38:12:42:GLU:HG2	38:12:100:ILE:HD13	2.01	0.43
42:16:56:LEU:HB2	42:16:59:GLY:O	2.19	0.43
45:19:70:LYS:HB2	45:19:77:TYR:CD1	2.54	0.43
48:22:13:THR:CG2	48:22:20:ILE:HD11	2.43	0.43
52:26:728:A:H2'	52:26:729:A:C8	2.54	0.43
52:26:1386:G:O2'	52:26:1387:G:H5'	2.19	0.43
52:26:1488:G:H2'	52:26:1489:G:C8	2.54	0.43
53:27:420:C:H2'	53:27:421:C:C6	2.53	0.43
53:27:948:C:H2'	53:27:949:G:H8	1.83	0.43
53:27:1175:A:H5'	53:27:1176:U:H5'	2.01	0.43
53:27:1403:A:H2'	53:27:1404:C:O4'	2.18	0.43
53:27:2442:C:O2'	53:27:2443:C:H5'	2.18	0.43
57:31:72:A:H2'	57:31:73:A:O4'	2.19	0.43
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.43
59:33:701:SER:HA	59:33:708:ALA:HA	2.01	0.43
1:A:73:ILE:HG12	53:27:1490:A:N1	2.34	0.42
3:C:40:ARG:HD2	3:C:92:HIS:ND1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:105:LEU:CD2	3:C:177:PRO:HG3	2.42	0.42
4:D:25:MET:HB3	54:28:57:A:C4	2.53	0.42
8:H:11:GLN:NE2	8:H:55:PRO:HB3	2.34	0.42
16:P:32:ARG:HH11	53:27:1252:G:H4'	1.84	0.42
23:W:3:VAL:HG12	23:W:10:ARG:HB3	2.02	0.42
24:X:43:LEU:O	24:X:46:VAL:HB	2.19	0.42
31:5:27:CYS:SG	31:5:29:ALA:HB3	2.59	0.42
33:7:126:ARG:HH12	33:7:192:TYR:HE2	1.67	0.42
34:8:8:LEU:CD2	34:8:31:CYS:HA	2.47	0.42
34:8:68:GLU:HB3	52:26:546:A:P	2.59	0.42
39:13:85:ALA:C	39:13:87:MET:H	2.22	0.42
49:23:51:HIS:CD2	49:23:53:GLY:H	2.37	0.42
50:24:50:PHE:HA	50:24:53:MET:HG2	2.00	0.42
52:26:633:G:H2'	52:26:634:C:C6	2.53	0.42
52:26:1030:U:H5"	52:26:1031:C:OP2	2.19	0.42
52:26:1220:G:O2'	52:26:1221:G:H5'	2.19	0.42
52:26:1309:G:H2'	52:26:1310:G:C8	2.54	0.42
53:27:372:G:N2	53:27:400:G:H2'	2.34	0.42
53:27:1572:A:O2'	53:27:1573:G:H5'	2.18	0.42
53:27:1906:G:OP2	53:27:1930:G:H8	2.01	0.42
53:27:1916:A:H2'	53:27:1917:U:O4'	2.18	0.42
53:27:2676:C:H2'	53:27:2677:G:H8	1.84	0.42
53:27:2849:U:H4'	53:27:2868:A:C2	2.54	0.42
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.42
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.42
59:33:628:GLY:O	59:33:630:GLY:N	2.52	0.42
1:A:123:ILE:HA	1:A:191:LEU:CD1	2.49	0.42
1:A:222:THR:HG22	1:A:239:PHE:CD1	2.54	0.42
2:B:18:ASP:N	2:B:18:ASP:OD1	2.51	0.42
2:B:130:GLN:NE2	53:27:2578:G:H21	2.16	0.42
3:C:76:PRO:CG	3:C:84:THR:HG22	2.46	0.42
4:D:109:ARG:HD2	4:D:136:ILE:O	2.19	0.42
8:H:19:PRO:HG2	8:H:21:PRO:HD2	2.01	0.42
13:M:46:ARG:HG3	53:27:2839:G:OP1	2.18	0.42
15:O:94:ALA:HB2	53:27:2848:G:H8	1.83	0.42
22:V:56:PHE:CZ	53:27:2365:G:H4'	2.54	0.42
25:Y:6:ILE:HD12	25:Y:26:LEU:HD13	2.01	0.42
39:13:121:ARG:HH11	39:13:121:ARG:HG3	1.84	0.42
44:18:80:ARG:HG3	44:18:81:ILE:N	2.34	0.42
52:26:66:A:H4'	52:26:173:U:C5	2.54	0.42
52:26:312:C:H2'	52:26:313:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:533:A:O2'	52:26:534:U:H5"	2.19	0.42
52:26:836:G:H2'	52:26:837:U:O4'	2.19	0.42
52:26:1305:G:H22	52:26:1331:G:H2'	1.84	0.42
52:26:1307:U:H2'	52:26:1308:U:C6	2.55	0.42
52:26:1356:G:O2'	52:26:1357:A:H5'	2.19	0.42
52:26:1507:A:H2'	52:26:1508:A:C8	2.54	0.42
53:27:18:U:H2'	53:27:19:A:H8	1.84	0.42
53:27:152:A:H2'	53:27:153:U:C6	2.54	0.42
53:27:634:C:H2'	53:27:635:C:O4'	2.19	0.42
53:27:1331:G:H2'	53:27:1332:G:C5'	2.50	0.42
53:27:1545:A:H2'	53:27:1546:G:O4'	2.19	0.42
53:27:1851:U:H2'	53:27:1852:U:O4'	2.19	0.42
53:27:2136:G:H2'	53:27:2137:U:C6	2.54	0.42
56:30:31:A:H2'	56:30:32:U:O4'	2.18	0.42
59:33:62:MET:HE1	59:33:82:PHE:CD1	2.52	0.42
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.42
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.42
59:33:597:VAL:HG21	59:33:633:VAL:HG21	2.00	0.42
59:33:648:ALA:HA	59:33:649:PRO:HD2	1.92	0.42
2:B:64:GLU:OE2	53:27:2634:A:H4'	2.19	0.42
4:D:159:ALA:HB1	4:D:164:GLU:HB2	2.00	0.42
5:E:37:ASN:HD22	5:E:63:GLN:NE2	2.10	0.42
5:E:97:VAL:HG21	5:E:122:ALA:O	2.19	0.42
6:F:78:VAL:HG11	6:F:106:ALA:HB2	2.01	0.42
7:G:25:ALA:HA	7:G:115:GLY:CA	2.41	0.42
9:I:25:LEU:HB3	53:27:1140:C:OP1	2.19	0.42
11:K:18:ARG:HH11	11:K:18:ARG:HG3	1.84	0.42
12:L:29:GLY:O	12:L:133:LYS:HD3	2.19	0.42
13:M:31:HIS:O	13:M:33:ILE:N	2.52	0.42
19:S:40:LYS:HG3	53:27:1599:U:OP1	2.19	0.42
26:Z:5:ILE:HG13	26:Z:6:HIS:H	1.82	0.42
28:2:34:GLU:HA	28:2:48:TYR:O	2.18	0.42
38:12:3:GLN:HE22	52:26:755:G:N2	2.06	0.42
40:14:29:ALA:CA	40:14:87:LEU:HD21	2.49	0.42
40:14:61:ALA:HB2	52:26:1061:G:H5'	2.01	0.42
43:17:38:ILE:CD1	43:17:51:GLN:HB3	2.50	0.42
47:21:4:ILE:O	47:21:4:ILE:HD12	2.19	0.42
52:26:110:C:H2'	52:26:111:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:543:U:H2'	52:26:544:G:H8	1.83	0.42
52:26:921:U:H2'	52:26:922:G:O4'	2.19	0.42
52:26:974:A:H4'	52:26:975:A:H3'	2.01	0.42
53:27:413:C:O5'	53:27:413:C:H6	2.03	0.42
53:27:1018:U:H2'	53:27:1019:U:H6	1.84	0.42
53:27:1515:A:H2'	53:27:1516:G:O4'	2.18	0.42
53:27:1672:A:C2	53:27:2582:G:H5'	2.54	0.42
53:27:1846:G:H2'	53:27:1847:G:C1'	2.49	0.42
53:27:2014:A:H2'	53:27:2015:A:C8	2.54	0.42
53:27:2361:G:O2'	53:27:2362:C:H5'	2.17	0.42
58:32:9:G:H2'	58:32:11:A:N7	2.35	0.42
58:32:37:A:H2'	58:32:38:A:O4'	2.19	0.42
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.42
59:33:368:SER:CB	59:33:460:GLN:HE21	2.32	0.42
3:C:50:ALA:HB2	53:27:801:G:C8	2.55	0.42
3:C:137:LYS:O	3:C:141:MET:HG3	2.20	0.42
4:D:7:TYR:O	4:D:12:VAL:HG23	2.19	0.42
4:D:173:ASP:O	4:D:174:PHE:O	2.37	0.42
5:E:25:ILE:HD12	5:E:74:MET:HB3	2.01	0.42
7:G:16:SER:O	7:G:19:ALA:HB3	2.19	0.42
9:I:34:ARG:HH12	9:I:40:HIS:HB3	1.83	0.42
10:J:61:VAL:HG22	10:J:62:VAL:O	2.19	0.42
10:J:67:LYS:HA	10:J:67:LYS:HD2	1.87	0.42
10:J:99:ILE:HD12	10:J:118:LEU:HB2	2.00	0.42
11:K:111:ILE:HG22	11:K:113:ALA:N	2.34	0.42
13:M:74:GLU:HA	53:27:1453:A:N1	2.35	0.42
14:N:23:ALA:C	14:N:42:PRO:HG3	2.40	0.42
31:5:22:VAL:CG1	31:5:36:ARG:HG3	2.50	0.42
32:6:131:LYS:NZ	52:26:1159:U:OP1	2.52	0.42
33:7:78:LYS:O	33:7:79:LYS:HB2	2.20	0.42
34:8:33:ILE:CG2	34:8:34:GLU:H	2.21	0.42
35:9:92:ARG:HB2	35:9:127:TYR:HB2	2.00	0.42
39:13:24:ASN:OD1	39:13:58:GLU:HB3	2.19	0.42
40:14:18:ILE:O	40:14:21:ALA:HB3	2.19	0.42
52:26:390:U:H2'	52:26:391:G:H8	1.84	0.42
52:26:503:C:H2'	52:26:504:C:H6	1.85	0.42
53:27:52:A:C6	53:27:118:A:N3	2.87	0.42
53:27:646:U:O4	53:27:2368:C:H1'	2.19	0.42
53:27:1469:A:H2'	53:27:1470:A:C8	2.55	0.42
53:27:1909:C:H2'	53:27:1910:G:C8	2.53	0.42
53:27:2287:A:HO2'	53:27:2288:A:H2'	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2677:G:H2'	53:27:2678:C:H6	1.84	0.42
53:27:2784:U:H2'	53:27:2785:C:C6	2.54	0.42
53:27:2853:C:H2'	53:27:2854:G:C8	2.54	0.42
58:32:21:A:H62	58:32:46:A:H2'	1.84	0.42
58:32:30:G:O2'	58:32:31:G:H5'	2.19	0.42
59:33:18:GLU:O	59:33:21:ILE:CG1	2.68	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.42
59:33:424:PRO:HA	59:33:455:LEU:HD11	2.01	0.42
7:G:72:LEU:HD12	7:G:72:LEU:N	2.34	0.42
8:H:79:LEU:HD22	8:H:135:MET:SD	2.59	0.42
10:J:71:ARG:HA	10:J:71:ARG:HD3	1.82	0.42
12:L:1:MET:C	12:L:2:LEU:HD12	2.40	0.42
12:L:51:ARG:NH1	59:33:706:GLN:HE22	2.17	0.42
15:O:52:ARG:HH21	53:27:2720:U:H5"	1.79	0.42
16:P:111:LYS:CG	17:Q:48:LYS:HD2	2.49	0.42
17:Q:78:ARG:H	17:Q:83:TYR:HD2	1.68	0.42
18:R:107:VAL:O	18:R:107:VAL:HG22	2.19	0.42
20:T:7:ASP:CA	20:T:23:LYS:HZ1	2.33	0.42
22:V:62:LYS:HG2	22:V:81:GLU:O	2.20	0.42
23:W:67:LEU:HD23	23:W:77:TYR:CD1	2.54	0.42
32:6:18:GLN:HG2	32:6:189:ASN:H	1.85	0.42
33:7:21:TRP:CB	33:7:58:ARG:HB2	2.50	0.42
33:7:110:LEU:HG	33:7:143:LEU:HD22	2.02	0.42
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.54	0.42
39:13:29:ILE:HA	39:13:64:ILE:O	2.20	0.42
40:14:22:THR:O	40:14:25:ILE:HG22	2.19	0.42
41:15:43:TRP:CZ3	41:15:45:THR:HG23	2.54	0.42
41:15:92:ARG:HG3	41:15:93:GLU:N	2.31	0.42
43:17:17:ALA:O	43:17:20:SER:HB2	2.20	0.42
43:17:28:ARG:CZ	43:17:62:PHE:HB2	2.50	0.42
48:22:33:THR:HG22	48:22:37:LYS:HB3	2.02	0.42
50:24:33:LYS:O	50:24:37:ALA:N	2.49	0.42
52:26:214:C:H2'	52:26:215:C:C6	2.54	0.42
52:26:660:C:H2'	52:26:661:G:O4'	2.19	0.42
52:26:820:U:N3	52:26:873:A:N7	2.68	0.42
52:26:1376:U:O5'	52:26:1376:U:H6	2.03	0.42
53:27:228:C:H42	53:27:417:C:H1'	1.84	0.42
53:27:244:A:H2'	53:27:245:G:O4'	2.18	0.42
53:27:883:G:O3'	59:33:611:ARG:HB2	2.20	0.42
53:27:1328:A:H2'	53:27:1330:C:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1559:U:H5”	53:27:1560:G:OP2	2.19	0.42
53:27:2348:U:O2’	53:27:2349:G:H5’	2.19	0.42
53:27:2616:C:H2’	53:27:2617:U:C6	2.54	0.42
53:27:2719:G:O2’	53:27:2720:U:H5’	2.19	0.42
53:27:2790:U:H5’	53:27:2893:A:N7	2.33	0.42
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.42
59:33:418:LEU:HD23	59:33:418:LEU:HA	1.90	0.42
2:B:124:ARG:HD3	2:B:161:MET:O	2.19	0.42
5:E:70:LEU:HD11	53:27:2758:A:H2	1.84	0.42
6:F:5:LEU:HD21	6:F:9:VAL:HB	2.01	0.42
6:F:8:LYS:HD3	6:F:60:GLU:OE1	2.20	0.42
7:G:41:LEU:HD11	53:27:1082:U:O2’	2.19	0.42
11:K:64:PHE:HZ	30:4:14:LYS:HG2	1.84	0.42
11:K:126:ARG:NH2	53:27:634:C:H5”	2.35	0.42
17:Q:49:ILE:CG2	17:Q:54:VAL:HA	2.50	0.42
25:Y:19:HIS:HD2	25:Y:50:VAL:HG12	1.84	0.42
37:11:29:LEU:HD23	37:11:29:LEU:C	2.40	0.42
43:17:65:GLU:O	43:17:68:LEU:HB3	2.20	0.42
46:20:75:ILE:O	46:20:79:ASN:ND2	2.52	0.42
49:23:79:TYR:CZ	52:26:1226:C:H4’	2.55	0.42
50:24:45:ALA:O	50:24:48:LYS:HB3	2.19	0.42
51:25:5:VAL:HG22	51:25:6:ARG:N	2.35	0.42
51:25:19:LYS:N	51:25:19:LYS:HD2	2.33	0.42
52:26:49:U:O2’	52:26:50:A:H2’	2.19	0.42
52:26:394:G:O2’	52:26:395:C:H5’	2.19	0.42
52:26:409:U:H2’	52:26:410:G:C8	2.54	0.42
52:26:651:C:H2’	52:26:652:U:C6	2.54	0.42
52:26:763:G:H2’	52:26:764:C:H6	1.84	0.42
52:26:797:C:H2’	52:26:798:U:H6	1.84	0.42
52:26:923:A:H2’	52:26:924:C:O4’	2.18	0.42
52:26:1176:A:H2’	52:26:1177:G:C8	2.55	0.42
53:27:532:A:H2’	53:27:532:A:N3	2.35	0.42
53:27:633:A:H2’	53:27:634:C:H5’	2.01	0.42
53:27:680:C:H2’	53:27:681:G:H8	1.85	0.42
53:27:1340:U:H4’	53:27:1394:U:O2’	2.20	0.42
53:27:1858:A:H1’	53:27:1885:A:C2	2.54	0.42
53:27:1915:U:H2’	53:27:1916:A:O4’	2.20	0.42
53:27:1981:A:H3’	53:27:1982:U:C5’	2.49	0.42
53:27:2095:A:H5’	53:27:2096:C:OP2	2.20	0.42
53:27:2112:G:H5”	53:27:2113:U:H5	1.85	0.42
53:27:2173:A:O2’	53:27:2174:C:H5’	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2352:A:C2’	53:27:2353:G:H5’	2.49	0.42
53:27:2428:G:H5”	53:27:2429:G:OP1	2.19	0.42
54:28:66:A:C5’	54:28:67:G:OP1	2.66	0.42
54:28:88:C:H5”	54:28:89:U:OP1	2.19	0.42
58:32:14:A:C2	58:32:22:G:H1’	2.55	0.42
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.42
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.42
59:33:666:SER:HA	59:33:714:ILE:O	2.19	0.42
2:B:130:GLN:NE2	53:27:2578:G:N2	2.67	0.42
6:F:135:HIS:ND1	6:F:136:SER:N	2.67	0.42
8:H:122:GLU:O	8:H:126:ARG:HG2	2.20	0.42
13:M:24:MET:SD	13:M:44:LEU:HD22	2.59	0.42
13:M:94:TYR:O	13:M:116:VAL:HG23	2.20	0.42
17:Q:45:GLU:HG3	17:Q:46:GLU:N	2.35	0.42
20:T:25:LYS:HD2	20:T:25:LYS:HA	1.69	0.42
23:W:15:ASN:OD1	23:W:23:ALA:HB1	2.19	0.42
25:Y:40:THR:O	25:Y:44:ARG:HG2	2.19	0.42
33:7:35:ASP:O	33:7:38:VAL:HG22	2.19	0.42
33:7:35:ASP:O	33:7:39:ARG:HG2	2.19	0.42
33:7:72:PRO:O	33:7:76:ILE:HG12	2.19	0.42
35:9:148:SER:OG	35:9:149:PRO:HD2	2.20	0.42
36:10:9:MET:HG3	36:10:85:ILE:HD12	2.01	0.42
39:13:31:GLN:HB2	39:13:32:ARG:NH1	2.34	0.42
42:16:11:ARG:HD2	52:26:562:U:O2	2.20	0.42
42:16:74:GLN:O	42:16:76:HIS:N	2.53	0.42
53:27:1086:A:H4’	53:27:1103:A:H2	1.84	0.42
53:27:1152:C:H2’	53:27:1153:C:C6	2.52	0.42
53:27:1999:C:H5”	53:27:2723:C:O2’	2.20	0.42
53:27:2139:U:H2’	53:27:2140:G:N7	2.34	0.42
53:27:2542:A:H4’	53:27:2543:G:C8	2.54	0.42
53:27:2626:C:H2’	53:27:2627:G:H8	1.84	0.42
53:27:2712:C:O2’	53:27:2713:U:OP1	2.28	0.42
58:32:37:A:C2’	58:32:38:A:H5’	2.50	0.42
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.42
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.42
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.42
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
1:A:242:HIS:CD2	53:27:1842:G:H1’	2.55	0.42
4:D:61:GLY:HA3	4:D:94:ARG:HH11	1.82	0.42
4:D:76:PHE:HE1	53:27:2308:G:C6	2.38	0.42
6:F:103:VAL:HG11	6:F:132:PHE:CE2	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:24:SER:O	7:G:116:GLU:HG3	2.20	0.42
7:G:37:LYS:HE2	53:27:1083:U:O3'	2.20	0.42
8:H:107:GLU:HA	8:H:110:GLN:HG3	2.02	0.42
9:I:74:TYR:O	9:I:86:GLN:HA	2.20	0.42
9:I:77:HIS:C	9:I:79:GLY:H	2.22	0.42
19:S:8:LEU:CD2	24:X:22:LEU:HA	2.49	0.42
20:T:30:SER:OG	20:T:32:LYS:HB2	2.20	0.42
21:U:88:HIS:HE1	21:U:90:ASP:OD1	2.03	0.42
23:W:10:ARG:HB2	23:W:11:PRO:CD	2.50	0.42
27:1:47:TYR:HA	27:1:51:ARG:O	2.19	0.42
33:7:137:VAL:O	33:7:141:MET:HB2	2.20	0.42
34:8:69:ARG:N	52:26:546:A:OP1	2.38	0.42
35:9:148:SER:O	35:9:151:MET:HB2	2.19	0.42
39:13:14:SER:HB3	39:13:77:ALA:HB2	2.02	0.42
41:15:126:ARG:HH22	52:26:692:U:H5"	1.85	0.42
43:17:106:ARG:HH22	52:26:1228:C:P	2.43	0.42
46:20:22:ALA:HB2	46:20:32:PHE:HB2	2.02	0.42
52:26:52:C:H2'	52:26:53:A:H8	1.84	0.42
52:26:459:A:H2'	52:26:460:A:C8	2.54	0.42
52:26:532:A:H3'	52:26:533:A:C5'	2.49	0.42
53:27:300:A:N3	53:27:319:G:H1'	2.35	0.42
53:27:522:A:H2'	53:27:523:C:H6	1.84	0.42
53:27:615:U:H6	53:27:615:U:O5'	2.03	0.42
53:27:953:G:C2	53:27:954:G:C8	3.07	0.42
53:27:1257:C:H6	53:27:1257:C:O5'	2.02	0.42
53:27:1496:A:H2'	53:27:1498:C:N4	2.35	0.42
53:27:1976:U:HO2'	53:27:1977:A:H8	1.62	0.42
53:27:2606:C:O2'	53:27:2607:G:H5'	2.19	0.42
53:27:2678:C:H2'	53:27:2679:A:O4'	2.19	0.42
53:27:2765:A:H3'	53:27:2765:A:N3	2.35	0.42
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.42
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.42
1:A:179:GLU:OE2	1:A:269:ARG:HA	2.19	0.42
1:A:259:ASN:O	1:A:260:LYS:HB2	2.20	0.42
4:D:53:ALA:O	4:D:64:PRO:HG3	2.20	0.42
4:D:135:ILE:C	4:D:135:ILE:HD12	2.40	0.42
6:F:25:TYR:CZ	6:F:30:LEU:HD21	2.55	0.42
9:I:13:ARG:HD3	9:I:121:LYS:HE3	2.01	0.42
18:R:3:THR:HG21	18:R:58:ALA:N	2.35	0.42
18:R:82:MET:HB3	18:R:84:ARG:CZ	2.50	0.42
24:X:41:HIS:CG	24:X:42:LEU:N	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:38:LYS:HG2	30:4:42:HIS:CD2	2.55	0.42
34:8:169:TRP:CD2	34:8:185:PRO:HG3	2.55	0.42
34:8:187:ARG:O	34:8:190:LEU:HG	2.20	0.42
36:10:33:GLU:HG3	36:10:33:GLU:O	2.19	0.42
36:10:90:MET:HE1	48:22:22:TYR:CE2	2.55	0.42
37:11:37:THR:O	37:11:41:ILE:HG13	2.19	0.42
39:13:11:ARG:O	39:13:14:SER:HB3	2.20	0.42
39:13:27:ILE:CG2	39:13:34:LEU:HB2	2.49	0.42
40:14:49:PHE:O	40:14:64:GLN:HA	2.19	0.42
40:14:84:VAL:HG13	40:14:85:ASP:N	2.34	0.42
41:15:15:VAL:HG13	41:15:78:ILE:HG12	2.01	0.42
41:15:39:ASN:HD22	52:26:683:G:N2	2.14	0.42
42:16:113:ARG:HH21	42:16:120:ARG:HD2	1.85	0.42
42:16:120:ARG:NH1	52:26:500:G:H5'	2.35	0.42
43:17:87:GLY:HA2	43:17:90:HIS:HD2	1.84	0.42
44:18:20:PHE:C	44:18:22:LYS:H	2.23	0.42
46:20:19:VAL:HG12	46:20:37:GLY:O	2.19	0.42
51:25:46:ARG:HH12	51:25:50:SER:N	2.18	0.42
52:26:186:C:H2'	52:26:187:G:O4'	2.19	0.42
52:26:879:C:O2'	52:26:880:C:H5'	2.20	0.42
52:26:902:G:H2'	52:26:903:G:C8	2.48	0.42
52:26:1040:U:H2'	52:26:1041:G:C8	2.55	0.42
52:26:1100:C:H2'	52:26:1102:A:O5'	2.19	0.42
52:26:1114:C:O2'	52:26:1115:U:H5'	2.20	0.42
52:26:1521:C:H2'	52:26:1522:U:C6	2.55	0.42
53:27:262:A:H5'	53:27:610:C:O2'	2.20	0.42
53:27:488:G:H1'	53:27:492:A:H61	1.84	0.42
53:27:531:C:C5	53:27:2035:G:C2	3.08	0.42
53:27:728:G:O2'	53:27:730:A:H8	2.02	0.42
53:27:795:C:H2'	53:27:796:C:C6	2.55	0.42
53:27:948:C:H2'	53:27:949:G:C8	2.54	0.42
53:27:956:G:H22	53:27:959:A:H3'	1.83	0.42
53:27:963:U:O2'	53:27:964:C:H5'	2.19	0.42
53:27:1625:C:H2'	53:27:1626:A:O4'	2.19	0.42
53:27:2079:U:H2'	53:27:2080:A:H5"	2.01	0.42
53:27:2134:A:H1'	53:27:2158:A:H4'	2.02	0.42
53:27:2354:C:H2'	53:27:2355:G:C8	2.55	0.42
53:27:2760:C:O2'	53:27:2761:A:H5'	2.19	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:315:LYS:CB	59:33:316:PRO:HD2	2.42	0.42
59:33:634:HIS:ND1	59:33:634:HIS:O	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:148:ILE:HG13	3:C:169:VAL:HG22	2.01	0.42
4:D:30:VAL:HG23	4:D:155:ILE:CG2	2.50	0.42
5:E:51:PHE:CD2	5:E:68:ARG:HB2	2.54	0.42
5:E:99:GLY:O	5:E:100:ASN:HB3	2.20	0.42
8:H:72:THR:CG2	8:H:111:THR:HG22	2.50	0.42
9:I:136:GLN:NE2	53:27:2899:A:H5'	2.33	0.42
13:M:118:ARG:HH12	27:1:55:ALA:CB	2.26	0.42
14:N:33:ARG:O	14:N:34:HIS:HB2	2.19	0.42
14:N:69:ASP:OD1	14:N:69:ASP:N	2.53	0.42
17:Q:89:HIS:HE1	17:Q:91:GLN:HB2	1.84	0.42
19:S:2:ILE:O	19:S:2:ILE:HG13	2.19	0.42
21:U:82:TYR:CE1	21:U:83:LYS:HG3	2.55	0.42
24:X:3:ALA:HA	24:X:6:LEU:CB	2.47	0.42
32:6:202:ASN:CG	32:6:205:ALA:HB2	2.40	0.42
33:7:76:ILE:CA	33:7:83:VAL:HG23	2.49	0.42
33:7:155:ARG:NE	33:7:192:TYR:HB3	2.20	0.42
34:8:131:ILE:HG21	52:26:620:C:H1'	2.01	0.42
34:8:187:ARG:HH12	34:8:192:ALA:HA	1.83	0.42
36:10:37:HIS:CD2	36:10:95:ALA:HB1	2.54	0.42
36:10:39:LEU:O	36:10:39:LEU:HD23	2.20	0.42
37:11:94:ARG:HG2	37:11:98:LEU:HD13	2.01	0.42
39:13:88:GLU:C	39:13:90:ASP:H	2.22	0.42
47:21:66:LEU:O	47:21:67:SER:HB3	2.20	0.42
50:24:3:ILE:HG23	50:24:7:LYS:NZ	2.35	0.42
50:24:57:VAL:HG13	50:24:58:ASP:N	2.35	0.42
50:24:60:GLN:HE21	50:24:65:LEU:HD13	1.85	0.42
50:24:66:ILE:CG2	50:24:70:LYS:HD3	2.47	0.42
52:26:379:C:H2'	52:26:380:G:H8	1.83	0.42
52:26:735:C:H2'	52:26:736:C:H6	1.84	0.42
53:27:179:C:O2'	53:27:180:G:H5'	2.20	0.42
53:27:520:G:H2'	53:27:521:U:C6	2.55	0.42
53:27:717:C:H2'	53:27:718:A:H5'	2.02	0.42
53:27:769:U:H2'	53:27:770:G:C8	2.54	0.42
53:27:1282:U:H2'	53:27:1283:G:O4'	2.19	0.42
53:27:1801:A:H5"	53:27:2203:U:C2'	2.50	0.42
53:27:2055:C:H5'	53:27:2056:G:O5'	2.20	0.42
53:27:2685:G:H2'	53:27:2686:G:C8	2.54	0.42
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.42
59:33:405:ARG:HG3	59:33:419:PRO:CA	2.48	0.42
2:B:13:ARG:HA	2:B:22:ILE:O	2.20	0.41
3:C:177:PRO:HA	3:C:180:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:154:GLU:HB3	5:E:159:LYS:N	2.35	0.41
6:F:116:ARG:C	6:F:117:LEU:HD12	2.41	0.41
8:H:2:LYS:NZ	8:H:62:ALA:HB2	2.35	0.41
8:H:18:ASN:HA	8:H:38:CYS:SG	2.59	0.41
8:H:27:LEU:HD12	8:H:27:LEU:C	2.40	0.41
10:J:61:VAL:HG12	10:J:87:LEU:CD1	2.50	0.41
11:K:19:LEU:HD11	11:K:31:GLY:CA	2.49	0.41
12:L:54:THR:HA	12:L:57:VAL:HG22	2.01	0.41
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.53	0.41
16:P:49:ARG:O	16:P:53:LYS:NZ	2.49	0.41
17:Q:63:VAL:HA	17:Q:96:VAL:HG12	2.02	0.41
18:R:79:GLY:N	18:R:101:SER:HA	2.35	0.41
21:U:77:VAL:HG23	21:U:89:ILE:HG12	2.02	0.41
24:X:5:GLU:O	24:X:7:ARG:N	2.51	0.41
25:Y:56:VAL:O	25:Y:56:VAL:HG13	2.20	0.41
27:1:47:TYR:CE1	27:1:52:LYS:HG2	2.55	0.41
30:4:9:ALA:HB1	30:4:61:LEU:HD23	2.02	0.41
33:7:56:ILE:HD13	33:7:65:VAL:HG13	2.02	0.41
35:9:20:VAL:CG2	35:9:31:SER:HB2	2.49	0.41
35:9:21:SER:OG	52:26:16:A:H5'	2.20	0.41
40:14:37:ARG:HD2	52:26:1125:U:OP1	2.20	0.41
43:17:87:GLY:O	43:17:90:HIS:HB2	2.20	0.41
43:17:94:LEU:C	43:17:108:ARG:HG2	2.40	0.41
43:17:108:ARG:HG3	43:17:108:ARG:NH1	2.35	0.41
47:21:30:HIS:CD2	47:21:32:ILE:H	2.37	0.41
52:26:26:A:H62	52:26:558:G:H1'	1.84	0.41
52:26:51:A:C2	52:26:116:A:H1'	2.55	0.41
52:26:1082:A:H8	52:26:1082:A:O5'	2.03	0.41
52:26:1500:A:O2'	52:26:1501:C:H5'	2.19	0.41
53:27:112:U:C2'	53:27:113:U:H5'	2.49	0.41
53:27:210:C:H2'	53:27:211:C:C6	2.55	0.41
53:27:340:A:H2'	53:27:341:C:O4'	2.20	0.41
53:27:492:A:O5'	53:27:492:A:H8	2.03	0.41
53:27:681:G:H2'	53:27:682:G:O4'	2.20	0.41
53:27:1123:C:H2'	53:27:1124:G:C8	2.55	0.41
53:27:1916:A:H8	53:27:1916:A:O5'	2.03	0.41
53:27:2543:G:H2'	53:27:2544:G:C8	2.55	0.41
53:27:2828:G:O2'	53:27:2829:A:H5'	2.20	0.41
58:32:16:C:O4'	58:32:59:A:C2	2.74	0.41
59:33:152:LYS:HD2	59:33:152:LYS:HA	1.76	0.41
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41
59:33:669:VAL:HG13	59:33:669:VAL:O	2.20	0.41
59:33:735:VAL:CG1	59:33:738:ALA:HB2	2.50	0.41
2:B:34:VAL:HA	2:B:50:VAL:HA	2.01	0.41
3:C:27:LEU:O	3:C:30:GLN:HB3	2.20	0.41
4:D:101:ARG:HG3	4:D:105:ILE:HD11	2.01	0.41
6:F:29:PHE:O	6:F:32:PRO:HG2	2.19	0.41
7:G:53:ARG:CD	7:G:86:MET:HB2	2.50	0.41
8:H:107:GLU:HA	8:H:110:GLN:CG	2.50	0.41
9:I:16:TYR:CD1	9:I:140:LEU:HB2	2.55	0.41
9:I:20:ALA:HA	9:I:23:LYS:HG3	2.01	0.41
10:J:26:GLY:HA3	10:J:30:ARG:HD2	2.01	0.41
11:K:109:LYS:HD2	11:K:126:ARG:O	2.20	0.41
13:M:18:GLN:NE2	13:M:22:ARG:NH1	2.69	0.41
15:O:92:ARG:HG3	53:27:2849:U:OP2	2.21	0.41
33:7:58:ARG:HH11	33:7:58:ARG:HG3	1.85	0.41
33:7:84:GLU:HA	33:7:87:ARG:HB3	2.01	0.41
33:7:101:ASN:CA	33:7:102:ILE:HD12	2.49	0.41
33:7:121:SER:O	33:7:124:GLU:HB3	2.19	0.41
39:13:88:GLU:HG3	39:13:89:TYR:N	2.35	0.41
40:14:32:THR:CG2	40:14:83:THR:HG23	2.51	0.41
42:16:25:ALA:O	42:16:27:PRO:HD3	2.20	0.41
47:21:5:ARG:HD2	52:26:636:U:OP1	2.19	0.41
49:23:5:LYS:O	49:23:6:LYS:HD3	2.20	0.41
51:25:41:THR:O	51:25:45:LYS:HB2	2.20	0.41
52:26:24:U:H2'	52:26:25:C:H6	1.85	0.41
52:26:201:G:H2'	52:26:202:G:O4'	2.19	0.41
52:26:304:U:H2'	52:26:305:G:O4'	2.20	0.41
52:26:338:A:H2	52:26:351:G:H22	1.66	0.41
52:26:678:U:H2'	52:26:679:C:C6	2.55	0.41
52:26:679:C:H2'	52:26:680:C:H6	1.84	0.41
52:26:697:U:C2'	52:26:698:G:H5'	2.49	0.41
52:26:1220:G:H2'	52:26:1221:G:O4'	2.20	0.41
52:26:1299:A:C2'	52:26:1301:U:H1'	2.49	0.41
53:27:288:U:H2'	53:27:289:G:C8	2.55	0.41
53:27:622:G:O2'	53:27:623:C:H5'	2.19	0.41
53:27:783:A:H2'	53:27:784:G:C5'	2.50	0.41
53:27:1088:A:H2'	53:27:1088:A:N3	2.35	0.41
53:27:1381:G:H2'	53:27:1382:G:H5'	2.02	0.41
53:27:1748:C:H2'	53:27:1749:A:C8	2.55	0.41
53:27:2544:G:H1'	53:27:2646:C:H5'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2724:U:H2'	53:27:2725:A:C8	2.55	0.41
58:32:21:A:C2	58:32:48:C:H1'	2.55	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
59:33:172:VAL:HG13	59:33:173:LEU:N	2.34	0.41
59:33:419:PRO:O	59:33:422:SER:HB2	2.20	0.41
1:A:121:ALA:HB3	1:A:129:LEU:HD23	2.01	0.41
1:A:129:LEU:HD13	1:A:133:ASN:HB2	2.02	0.41
2:B:110:THR:HG21	2:B:169:ARG:NE	2.36	0.41
5:E:3:VAL:CG1	5:E:68:ARG:HD3	2.50	0.41
9:I:81:ILE:CG2	9:I:82:GLY:N	2.82	0.41
12:L:78:LEU:O	12:L:79:ALA:HB3	2.21	0.41
15:O:19:PHE:HB3	15:O:85:VAL:CG2	2.50	0.41
18:R:8:ARG:HG3	53:27:494:G:H5'	2.02	0.41
18:R:94:ASP:OD2	53:27:2014:A:H5'	2.20	0.41
25:Y:5:LYS:HE3	25:Y:36:GLU:OE2	2.20	0.41
27:1:3:GLN:HA	53:27:2615:U:C2	2.55	0.41
32:6:12:GLY:H	32:6:14:HIS:CE1	2.38	0.41
32:6:95:TRP:CZ2	32:6:99:MET:HB3	2.55	0.41
34:8:131:ILE:HG13	52:26:620:C:C2	2.55	0.41
34:8:169:TRP:CD1	34:8:170:LEU:HD23	2.55	0.41
37:11:22:LEU:O	37:11:25:PHE:HB3	2.19	0.41
38:12:4:ASP:CG	38:12:80:PRO:HD3	2.41	0.41
40:14:6:ILE:HA	40:14:102:LEU:CD2	2.48	0.41
40:14:37:ARG:O	52:26:1124:G:H5"	2.20	0.41
43:17:4:ALA:O	43:17:6:ILE:HG13	2.20	0.41
44:18:21:ALA:H	44:18:24:ALA:HB2	1.85	0.41
45:19:22:GLY:O	52:26:751:U:H1'	2.20	0.41
45:19:44:GLU:HG3	45:19:45:HIS:CD2	2.55	0.41
46:20:20:VAL:CG2	46:20:21:VAL:N	2.83	0.41
46:20:23:ASP:C	46:20:25:ARG:N	2.72	0.41
46:20:29:ASN:O	52:26:309:A:H5"	2.20	0.41
52:26:113:G:H1'	52:26:354:G:H5"	2.02	0.41
52:26:222:C:H2'	52:26:223:A:C8	2.55	0.41
52:26:735:C:H2'	52:26:736:C:C6	2.55	0.41
53:27:143:C:O2	53:27:143:C:H2'	2.20	0.41
53:27:242:G:H21	53:27:254:G:H2'	1.84	0.41
53:27:1394:U:H4'	53:27:1603:A:H4'	2.02	0.41
53:27:1638:C:H4'	53:27:2710:C:O2	2.20	0.41
53:27:1682:G:C4	53:27:1757:A:H1'	2.55	0.41
53:27:1770:G:H4'	53:27:1938:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1869:G:H3'	53:27:1870:C:H5"	2.02	0.41
53:27:2641:G:H2'	53:27:2642:G:C8	2.55	0.41
53:27:2703:C:H2'	53:27:2704:C:C6	2.55	0.41
56:30:68:C:H2'	56:30:69:G:O4'	2.18	0.41
58:32:17:C:OP1	58:32:17(A):U:H3'	2.20	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.41
59:33:616:ILE:HD12	59:33:618:GLY:N	2.35	0.41
1:A:14:HIS:O	1:A:203:VAL:HG21	2.21	0.41
4:D:39:VAL:O	4:D:41:GLU:N	2.40	0.41
4:D:95:MET:O	4:D:99:PHE:HB2	2.21	0.41
4:D:97:GLU:OE2	26:Z:25:ARG:HD3	2.20	0.41
4:D:126:ASN:OD1	4:D:156:THR:HG23	2.20	0.41
8:H:8:VAL:O	8:H:58:ILE:O	2.39	0.41
10:J:40:LYS:HD3	53:27:2562:U:OP1	2.21	0.41
32:6:23:ASN:ND2	32:6:191:ASP:HA	2.35	0.41
33:7:149:LYS:O	33:7:200:TRP:HE3	2.03	0.41
36:10:52:ASN:O	36:10:53:LYS:HB2	2.21	0.41
39:13:57:VAL:HB	39:13:59:LYS:HG3	2.02	0.41
43:17:21:ILE:HG22	43:17:22:TYR:O	2.19	0.41
43:17:82:LEU:HD13	49:23:64:GLU:HB2	2.02	0.41
45:19:35:ILE:HG23	45:19:55:LEU:HD11	2.02	0.41
47:21:26:ARG:CZ	52:26:237:G:H5"	2.50	0.41
52:26:75:G:H2'	52:26:76:G:O4'	2.21	0.41
52:26:581:G:HO2'	52:26:582:C:H6	1.66	0.41
52:26:1288:A:H2'	52:26:1289:A:O4'	2.21	0.41
53:27:151:C:H2'	53:27:152:A:C8	2.55	0.41
53:27:197:A:H4'	53:27:2069:G:OP2	2.20	0.41
53:27:523:C:H2'	53:27:524:G:H8	1.85	0.41
53:27:804:A:H2'	53:27:806:C:C4	2.55	0.41
53:27:1319:C:H1'	53:27:1334:G:N2	2.35	0.41
53:27:1498:C:H2'	53:27:1499:C:C6	2.56	0.41
53:27:1672:A:C6	53:27:1673:G:C6	3.08	0.41
53:27:2162:G:H4'	53:27:2173:A:H5"	2.03	0.41
53:27:2464:G:H2'	53:27:2465:C:C6	2.55	0.41
53:27:2557:G:H2'	53:27:2558:C:H6	1.82	0.41
53:27:2818:U:H2'	53:27:2819:G:C8	2.56	0.41
59:33:699:SER:HA	59:33:710:ILE:HA	2.03	0.41
5:E:15:ASP:OD1	5:E:16:VAL:N	2.53	0.41
5:E:52:GLY:O	5:E:54:ARG:N	2.54	0.41
7:G:63:ALA:HB1	7:G:84:TYR:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:4:PHE:CG	9:I:5:THR:N	2.89	0.41
9:I:53:TYR:C	9:I:54:ILE:HD12	2.41	0.41
9:I:106:LYS:HA	9:I:109:LEU:HD12	2.02	0.41
11:K:62:PRO:HG2	30:4:24:LYS:HB3	2.01	0.41
11:K:101:ILE:HG13	11:K:102:GLY:N	2.35	0.41
20:T:8:ASP:OD1	20:T:9:GLU:N	2.54	0.41
23:W:7:THR:OG1	23:W:9:LYS:HG3	2.19	0.41
33:7:148:ILE:HG13	33:7:200:TRP:O	2.21	0.41
34:8:50:TYR:HD2	52:26:509:A:H5"	1.86	0.41
34:8:106:PHE:CE1	34:8:177:MET:HA	2.55	0.41
40:14:44:THR:HG22	40:14:45:ARG:O	2.21	0.41
40:14:65:TYR:CD1	44:18:97:LYS:HA	2.55	0.41
42:16:28:GLN:OE1	42:16:80:LEU:HD21	2.21	0.41
47:21:22:VAL:HG12	47:21:23:ALA:O	2.19	0.41
47:21:52:CYS:SG	47:21:53:GLY:N	2.94	0.41
48:22:21:ASP:OD2	48:22:23:LYS:HB2	2.20	0.41
51:25:54:ARG:O	51:25:58:LYS:HG3	2.20	0.41
53:27:545:U:H3'	53:27:546:U:O4'	2.21	0.41
53:27:878:A:H3'	53:27:879:G:C8	2.56	0.41
53:27:878:A:H1'	53:27:900:A:N1	2.35	0.41
53:27:901:C:H2'	53:27:902:C:C6	2.55	0.41
53:27:1028:A:N6	53:27:1125:G:H2'	2.36	0.41
53:27:1173:U:H3'	53:27:1174:U:C4'	2.51	0.41
53:27:1513:U:H2'	53:27:1514:G:O4'	2.20	0.41
53:27:1921:G:O2'	53:27:1922:G:H5'	2.20	0.41
58:32:21:A:C8	58:32:47:U:H1'	2.54	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41
59:33:671:VAL:HA	59:33:737:ASP:O	2.20	0.41
59:33:676:ARG:H	59:33:676:ARG:HG2	1.74	0.41
2:B:33:ARG:HG3	2:B:51:THR:CG2	2.51	0.41
3:C:115:GLN:CB	3:C:117:ARG:HG3	2.51	0.41
4:D:99:PHE:O	4:D:102:LEU:HB3	2.21	0.41
5:E:93:TYR:HA	5:E:105:SER:O	2.21	0.41
5:E:148:ARG:HA	5:E:161:VAL:HG11	2.02	0.41
6:F:31:VAL:N	6:F:32:PRO:HD2	2.36	0.41
8:H:2:LYS:HD2	8:H:7:TYR:OH	2.21	0.41
8:H:112:LYS:O	8:H:116:MET:HG3	2.21	0.41
9:I:93:ILE:CD1	9:I:100:VAL:HG21	2.49	0.41
9:I:132:HIS:CD2	53:27:7:G:H5'	2.55	0.41
10:J:2:ILE:HD12	10:J:8:LEU:HD21	2.02	0.41
11:K:131:ALA:O	11:K:135:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:67:ASN:O	14:N:70:ALA:N	2.54	0.41
15:O:79:VAL:HG13	15:O:80:VAL:N	2.34	0.41
19:S:21:SER:O	19:S:24:MET:HB3	2.20	0.41
27:1:43:THR:HG23	27:1:47:TYR:O	2.21	0.41
32:6:104:LYS:NZ	52:26:1073:U:H4'	2.36	0.41
34:8:123:MET:O	34:8:142:VAL:HG23	2.20	0.41
36:10:12:PRO:HB3	36:10:44:ARG:NH1	2.32	0.41
37:11:70:PRO:HB3	37:11:102:TRP:CH2	2.56	0.41
38:12:46:GLU:O	38:12:61:THR:HB	2.20	0.41
39:13:110:VAL:HG23	39:13:110:VAL:O	2.20	0.41
42:16:84:GLY:O	42:16:95:HIS:CE1	2.74	0.41
49:23:13:HIS:NE2	52:26:1014:A:H4'	2.36	0.41
52:26:12:U:C3'	52:26:13:U:H5"	2.51	0.41
52:26:40:C:H2'	52:26:41:G:C8	2.55	0.41
52:26:142:G:H2'	52:26:143:A:O4'	2.20	0.41
52:26:922:G:H2'	52:26:923:A:C8	2.55	0.41
52:26:952:U:H2'	52:26:953:G:C8	2.55	0.41
52:26:1510:C:H2'	52:26:1511:G:H8	1.86	0.41
53:27:226:A:H2'	53:27:227:A:O4'	2.21	0.41
53:27:279:A:H2'	53:27:280:U:H5'	2.02	0.41
53:27:880:G:O2'	53:27:881:G:H5'	2.21	0.41
53:27:976:G:H4'	53:27:1156:A:N7	2.35	0.41
53:27:1305:C:C5'	53:27:1305:C:H6	2.34	0.41
53:27:2144:G:C4'	53:27:2145:C:H3'	2.51	0.41
53:27:2370:G:H2'	53:27:2371:G:C8	2.55	0.41
53:27:2423:U:H5'	53:27:2424:C:C5'	2.51	0.41
53:27:2700:A:H2'	53:27:2701:U:C6	2.55	0.41
55:29:14:A:N6	58:32:35:A:H61	2.19	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.41
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:634:HIS:O	59:33:635:ARG:O	2.38	0.41
1:A:88:ALA:HA	1:A:157:ALA:HB2	2.02	0.41
10:J:78:ARG:HB2	15:O:70:GLU:HG2	2.03	0.41
14:N:115:LEU:HD12	14:N:115:LEU:HA	1.84	0.41
15:O:29:VAL:HG12	15:O:30:TRP:O	2.21	0.41
15:O:59:THR:HG22	15:O:72:VAL:CG1	2.48	0.41
17:Q:4:VAL:HG22	17:Q:13:ARG:HA	2.02	0.41
17:Q:11:GLN:OE1	17:Q:11:GLN:N	2.53	0.41
22:V:17:LEU:HB3	22:V:18:GLY:H	1.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:39:ARG:C	27:1:41:HIS:H	2.24	0.41
37:11:86:VAL:HG13	37:11:150:PHE:HB2	2.02	0.41
40:14:100:ILE:HD12	40:14:100:ILE:N	2.35	0.41
44:18:46:LYS:O	44:18:49:THR:HB	2.21	0.41
45:19:48:ASP:CG	45:19:51:SER:HB2	2.41	0.41
46:20:5:ARG:CB	52:26:376:G:H5”	2.44	0.41
46:20:52:LEU:HD11	46:20:57:ILE:HD11	2.03	0.41
47:21:74:LEU:HD23	47:21:74:LEU:C	2.41	0.41
48:22:58:ILE:O	48:22:62:ARG:HG3	2.20	0.41
52:26:13:U:O2’	52:26:14:U:H5’	2.21	0.41
52:26:246:A:O2’	52:26:247:G:O5’	2.21	0.41
52:26:445:G:N2	52:26:446:G:H1’	2.36	0.41
52:26:1161:C:H2’	52:26:1162:C:C6	2.56	0.41
53:27:464:U:H1’	53:27:686:U:H5	1.85	0.41
53:27:567:U:H2’	53:27:568:U:C4’	2.50	0.41
53:27:1328:A:H2’	53:27:1330:C:C4	2.56	0.41
53:27:1331:G:H2’	53:27:1332:G:H5”	2.00	0.41
53:27:1789:A:H2’	53:27:1790:C:O4’	2.20	0.41
53:27:2008:C:H2’	53:27:2009:A:C8	2.56	0.41
53:27:2196:C:H2’	53:27:2197:U:C6	2.56	0.41
53:27:2507:C:C2	53:27:2583:G:C2	3.08	0.41
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.41
59:33:57:TRP:C	59:33:60:VAL:HG22	2.41	0.41
1:A:130:PRO:HA	1:A:187:CYS:O	2.21	0.41
4:D:43:ILE:HG21	4:D:78:ILE:HG22	2.03	0.41
8:H:7:TYR:CD1	8:H:60:VAL:HB	2.55	0.41
9:I:49:ASP:OD2	9:I:118:MET:HA	2.21	0.41
10:J:12:ASP:OD2	10:J:86:LEU:N	2.53	0.41
12:L:7:THR:HG22	12:L:8:LYS:H	1.84	0.41
13:M:96:ARG:NH1	13:M:116:VAL:HG13	2.34	0.41
15:O:52:ARG:H	15:O:56:SER:HB3	1.86	0.41
18:R:73:LYS:HB2	18:R:106:VAL:HB	2.02	0.41
20:T:46:LYS:HB2	20:T:46:LYS:HE3	1.84	0.41
22:V:42:HIS:HB2	22:V:75:PHE:CE1	2.56	0.41
22:V:71:LYS:C	22:V:73:ARG:H	2.23	0.41
23:W:13:THR:HG21	53:27:188:G:H5’	2.03	0.41
31:5:1:MET:HE3	53:27:2742:G:OP1	2.21	0.41
33:7:126:ARG:NH1	33:7:192:TYR:HE2	2.19	0.41
36:10:92:THR:HG23	36:10:93:LYS:H	1.85	0.41
39:13:96:GLU:O	39:13:99:LYS:HB3	2.21	0.41
42:16:8:ARG:NH2	52:26:880:C:OP1	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:54:GLY:O	45:19:57:ARG:HB3	2.20	0.41
52:26:492:C:H2'	52:26:493:A:C8	2.55	0.41
52:26:542:G:H2'	52:26:543:U:C6	2.56	0.41
52:26:956:U:O2'	52:26:957:U:H5'	2.20	0.41
52:26:1411:C:H2'	52:26:1412:C:C6	2.56	0.41
53:27:15:G:H1	53:27:525:U:H3	1.68	0.41
53:27:414:C:H2'	53:27:415:A:C8	2.56	0.41
53:27:714:U:H2'	53:27:716:A:N7	2.36	0.41
53:27:890:C:C2'	53:27:891:G:H5'	2.50	0.41
53:27:1059:G:H2'	53:27:1060:U:C6	2.56	0.41
53:27:1173:U:H2'	53:27:1176:U:O2	2.20	0.41
53:27:1233:C:H2'	53:27:1234:U:C6	2.54	0.41
53:27:1483:G:H1'	53:27:1509:A:H2	1.85	0.41
53:27:1657:U:O2'	53:27:1658:C:H5'	2.21	0.41
53:27:1796:U:O2'	53:27:1797:G:H5'	2.21	0.41
53:27:2137:U:H2'	53:27:2138:G:H8	1.84	0.41
53:27:2389:G:H5"	53:27:2390:U:O4'	2.20	0.41
53:27:2710:C:H2'	53:27:2711:A:H8	1.82	0.41
53:27:2804:U:H2'	53:27:2805:C:C6	2.56	0.41
54:28:87:U:H5"	54:28:88:C:OP2	2.20	0.41
56:30:66:U:H2'	56:30:67:C:C6	2.56	0.41
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.56	0.41
1:A:219:VAL:HA	53:27:1789:A:OP1	2.20	0.41
1:A:270:ARG:HB3	1:A:270:ARG:CZ	2.51	0.41
2:B:8:LYS:HD2	2:B:193:VAL:CG2	2.51	0.41
3:C:32:VAL:HG11	11:K:6:LEU:CD1	2.51	0.41
3:C:41:GLN:HG2	3:C:43:THR:CG2	2.45	0.41
4:D:3:LEU:HA	4:D:6:TYR:HB3	2.03	0.41
6:F:48:GLU:HG2	6:F:49:ALA:N	2.35	0.41
7:G:11:ILE:CG2	7:G:66:GLY:HA3	2.51	0.41
7:G:28:ALA:HB2	7:G:82:ILE:HA	2.02	0.41
8:H:63:ASP:O	8:H:64:ARG:HB2	2.21	0.41
10:J:35:VAL:CG1	10:J:106:GLU:HB3	2.51	0.41
10:J:64:ARG:HH12	10:J:101:GLY:C	2.24	0.41
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.51	0.41
11:K:48:ARG:NH2	30:4:4:LYS:O	2.54	0.41
13:M:12:ARG:HD3	13:M:16:HIS:ND1	2.36	0.41
14:N:39:VAL:HG23	14:N:48:LEU:HB2	2.03	0.41
15:O:27:VAL:HG12	15:O:29:VAL:HG23	2.02	0.41
15:O:104:GLY:HA3	52:26:1432:G:OP1	2.20	0.41
20:T:32:LYS:HZ1	53:27:478:A:H4'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:36:ARG:N	53:27:2200:C:OP1	2.53	0.41
28:2:38:PHE:HB2	28:2:45:HIS:NE2	2.36	0.41
29:3:4:THR:HA	53:27:687:C:H5'	2.03	0.41
32:6:42:LEU:O	32:6:46:VAL:HG23	2.20	0.41
32:6:75:ALA:HB1	32:6:163:ILE:HG12	2.03	0.41
33:7:162:ALA:CB	52:26:1056:U:H4'	2.51	0.41
34:8:25:ARG:HD3	52:26:410:G:OP2	2.21	0.41
34:8:55:ARG:HA	34:8:55:ARG:HD3	1.73	0.41
34:8:170:LEU:HB2	34:8:171:GLU:H	1.75	0.41
35:9:55:VAL:HG23	35:9:56:PRO:CD	2.49	0.41
36:10:14:GLN:C	36:10:16:GLU:N	2.73	0.41
37:11:119:LEU:HD23	37:11:119:LEU:C	2.41	0.41
38:12:53:ASP:N	38:12:53:ASP:OD1	2.53	0.41
38:12:75:GLN:O	38:12:126:CYS:HB2	2.21	0.41
42:16:20:VAL:C	42:16:22:ALA:H	2.24	0.41
42:16:23:LEU:HD12	42:16:23:LEU:HA	1.74	0.41
43:17:2:ARG:HB3	43:17:56:ARG:HH21	1.86	0.41
43:17:7:ASN:HD22	43:17:20:SER:HB2	1.85	0.41
43:17:28:ARG:O	43:17:32:ILE:HG12	2.20	0.41
44:18:26:LEU:HD23	44:18:30:ILE:HD12	2.02	0.41
49:23:13:HIS:ND1	49:23:14:LEU:N	2.68	0.41
52:26:207:C:H42	52:26:212:G:H1	1.69	0.41
52:26:212:G:H2'	52:26:213:G:H8	1.86	0.41
52:26:338:A:O2'	52:26:339:C:H5'	2.21	0.41
52:26:538:G:H2'	52:26:539:A:C8	2.55	0.41
52:26:698:G:H2'	52:26:699:C:H6	1.84	0.41
52:26:834:U:H2'	52:26:835:U:C6	2.56	0.41
52:26:846:G:H2'	52:26:847:G:C8	2.55	0.41
52:26:918:A:H2'	52:26:919:A:O4'	2.20	0.41
52:26:997:U:C2'	52:26:998:C:H5'	2.51	0.41
52:26:1022:A:H2'	52:26:1023:U:O4'	2.21	0.41
52:26:1469:C:H2'	52:26:1470:U:O4'	2.21	0.41
52:26:1473:G:H2'	52:26:1474:U:C6	2.55	0.41
52:26:1486:G:H2'	52:26:1487:G:C8	2.55	0.41
52:26:1524:C:H2'	52:26:1525:G:H8	1.86	0.41
53:27:119:A:H4'	53:27:120:U:H5'	2.02	0.41
53:27:213:A:H2'	53:27:214:G:C8	2.56	0.41
53:27:355:U:H2'	53:27:356:G:C8	2.55	0.41
53:27:572:A:H5"	53:27:573:U:OP2	2.20	0.41
53:27:594:U:H2'	53:27:595:C:H6	1.79	0.41
53:27:730:A:O2'	53:27:731:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1118:C:C3’	53:27:1119:U:H5”	2.49	0.41
53:27:1127:A:C2’	53:27:1128:G:H5”	2.51	0.41
53:27:1280:G:O2’	53:27:1281:G:H5’	2.21	0.41
53:27:1343:G:H2’	53:27:1343:G:N3	2.36	0.41
53:27:1566:A:O2’	53:27:1567:G:H5’	2.21	0.41
53:27:1916:A:H2’	53:27:1917:U:O2	2.20	0.41
53:27:1930:G:H2’	53:27:1931:U:OP2	2.21	0.41
53:27:2136:G:H21	53:27:2156:G:N2	2.19	0.41
53:27:2543:G:H2’	53:27:2544:G:H8	1.86	0.41
53:27:2543:G:N3	53:27:2765:A:H2’	2.36	0.41
53:27:2581:G:N3	53:27:2581:G:H2’	2.36	0.41
53:27:2599:G:H2’	53:27:2600:A:C8	2.55	0.41
53:27:2626:C:H2’	53:27:2627:G:O4’	2.20	0.41
54:28:76:G:O2’	54:28:77:U:H5’	2.20	0.41
56:30:54:U:H6	56:30:54:U:O5’	2.03	0.41
57:31:25:C:H2’	57:31:26:G:O4’	2.20	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.20	0.41
59:33:443:LYS:HG2	59:33:448:ILE:HG13	2.03	0.41
59:33:594:ASN:HB3	59:33:604:ASN:ND2	2.36	0.41
59:33:635:ARG:HG2	59:33:636:ALA:N	2.36	0.41
1:A:51:ARG:HG3	53:27:1824:G:OP1	2.20	0.41
2:B:170:VAL:HG23	2:B:194:PRO:HG3	2.03	0.41
4:D:114:ARG:NH1	43:17:70:ARG:HD2	2.36	0.41
4:D:116:LEU:HD13	4:D:175:PRO:CB	2.51	0.41
7:G:40:GLU:HG2	7:G:52:MET:HE1	2.03	0.41
9:I:30:THR:HB	53:27:1012:U:O4	2.21	0.41
10:J:2:ILE:HG22	10:J:3:GLN:N	2.36	0.41
11:K:110:VAL:CG2	11:K:127:VAL:HG22	2.50	0.41
13:M:85:PRO:HA	13:M:88:ALA:HB2	2.03	0.41
15:O:77:SER:HA	15:O:78:PRO:HD3	1.92	0.41
22:V:12:SER:HB3	53:27:2262:U:OP2	2.21	0.41
24:X:17:GLU:O	24:X:20:ASN:HB2	2.21	0.41
27:1:5:ASN:HD21	53:27:2019:A:H62	1.68	0.41
33:7:67:ILE:O	33:7:102:ILE:HG23	2.21	0.41
33:7:131:ARG:O	33:7:134:LYS:HG2	2.21	0.41
37:11:25:PHE:HD1	37:11:100:MET:HB3	1.85	0.41
37:11:63:VAL:O	37:11:67:ASN:ND2	2.54	0.41
38:12:6:ILE:HD11	38:12:31:LEU:HD23	2.02	0.41
39:13:46:VAL:HA	39:13:49:GLN:CG	2.49	0.41
40:14:29:ALA:HA	40:14:87:LEU:HD21	2.02	0.41
41:15:110:THR:CG2	51:25:4:LYS:HG3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:88:LEU:HA	43:17:91:ARG:HE	1.85	0.41
45:19:27:GLN:O	45:19:31:LEU:HG	2.21	0.41
45:19:88:ARG:NH2	53:27:715:A:OP2	2.54	0.41
46:20:48:GLU:CD	46:20:49:GLY:H	2.23	0.41
51:25:16:ARG:C	51:25:18:PHE:H	2.23	0.41
52:26:374:A:H2'	52:26:375:U:H6	1.85	0.41
52:26:418:C:H2'	52:26:419:C:H6	1.84	0.41
52:26:512:U:H2'	52:26:513:C:C6	2.56	0.41
52:26:768:A:OP1	52:26:804:U:H4'	2.21	0.41
52:26:772:U:H2'	52:26:773:G:H8	1.86	0.41
52:26:952:U:O2'	52:26:953:G:H5'	2.21	0.41
52:26:1218:C:H2'	52:26:1219:A:H8	1.82	0.41
52:26:1348:U:O4	52:26:1374:A:C8	2.74	0.41
53:27:4:U:H2'	53:27:5:A:C8	2.56	0.41
53:27:133:U:O2'	53:27:134:G:H5'	2.21	0.41
53:27:186:G:H2'	53:27:187:G:H8	1.85	0.41
53:27:523:C:H2'	53:27:524:G:C8	2.56	0.41
53:27:582:A:H2'	53:27:583:G:C8	2.56	0.41
53:27:1144:A:H2'	53:27:1145:C:H6	1.84	0.41
53:27:1806:C:H2'	53:27:1807:G:O4'	2.20	0.41
53:27:2033:A:H1'	53:27:2035:G:OP2	2.21	0.41
53:27:2232:C:O2'	53:27:2233:U:H5'	2.21	0.41
53:27:2296:U:H4'	53:27:2297:A:O5'	2.21	0.41
53:27:2818:U:H2'	53:27:2819:G:H8	1.86	0.41
54:28:22:U:H2'	54:28:23:G:C8	2.56	0.41
54:28:105:G:H2'	54:28:106:G:H8	1.86	0.41
56:30:8:U:C2	56:30:14:A:N7	2.89	0.41
56:30:30:G:H2'	56:30:31:A:H8	1.86	0.41
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.02	0.41
59:33:267:ASN:HB2	59:33:268:LEU:H	1.69	0.41
59:33:571:GLU:O	59:33:574:ALA:HB3	2.21	0.41
1:A:155:ARG:HH22	53:27:1817:G:P	2.45	0.40
2:B:4:LEU:HD12	2:B:4:LEU:N	2.36	0.40
2:B:129:THR:HG23	2:B:140:HIS:O	2.21	0.40
4:D:115:GLY:C	4:D:116:LEU:HD12	2.42	0.40
5:E:96:ALA:HA	5:E:124:CYS:SG	2.61	0.40
8:H:59:THR:HB	8:H:67:THR:HB	2.02	0.40
8:H:127:SER:HA	53:27:1080:A:H1'	2.04	0.40
9:I:37:ARG:HH21	53:27:1007:C:H5"	1.86	0.40
11:K:120:VAL:N	11:K:140:GLY:HA2	2.34	0.40
12:L:21:ALA:HB2	12:L:97:GLN:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:100:CYS:HB2	13:M:112:TYR:CD2	2.56	0.40
17:Q:5:PHE:HE1	17:Q:7:SER:HB2	1.86	0.40
18:R:9:HIS:H	18:R:102:HIS:CE1	2.39	0.40
18:R:72:THR:OG1	18:R:108:SER:HB3	2.21	0.40
20:T:8:ASP:N	20:T:23:LYS:HZ1	2.18	0.40
21:U:35:GLU:HB2	21:U:93:ARG:NH1	2.36	0.40
23:W:75:GLU:O	23:W:76:LYS:HG2	2.22	0.40
26:Z:56:ARG:NH2	49:23:64:GLU:O	2.53	0.40
31:5:30:GLU:HA	31:5:31:PRO:HD3	1.95	0.40
33:7:21:TRP:HB2	33:7:58:ARG:HB2	2.02	0.40
33:7:33:ASP:O	33:7:37:LYS:HG3	2.21	0.40
33:7:52:SER:HB3	33:7:68:HIS:O	2.21	0.40
33:7:174:LEU:HA	33:7:181:ILE:CD1	2.50	0.40
36:10:46:GLN:HA	36:10:56:LYS:HG2	2.04	0.40
38:12:10:LEU:CD2	38:12:74:ILE:HD11	2.46	0.40
38:12:76:ARG:HH12	38:12:125:ILE:HG23	1.86	0.40
38:12:121:GLY:C	52:26:599:C:H4'	2.42	0.40
39:13:90:ASP:HB3	39:13:91:GLU:H	1.69	0.40
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.51	0.40
44:18:20:PHE:O	44:18:21:ALA:CB	2.69	0.40
49:23:62:THR:O	49:23:65:MET:HG2	2.22	0.40
51:25:65:ARG:HD2	52:26:1088:G:H4'	2.02	0.40
52:26:386:C:C2'	52:26:387:U:H5'	2.50	0.40
52:26:756:C:H2'	52:26:757:U:O4'	2.21	0.40
52:26:1126:U:O2	52:26:1280:A:H2'	2.21	0.40
52:26:1229:A:H2'	52:26:1230:C:C6	2.56	0.40
52:26:1531:A:O2'	52:26:1532:U:H5'	2.21	0.40
53:27:1454:C:O2'	53:27:1455:G:H8	2.03	0.40
53:27:1788:C:O2'	53:27:1789:A:H5'	2.21	0.40
53:27:2039:U:H2'	53:27:2040:G:H8	1.80	0.40
53:27:2070:A:O2'	53:27:2071:A:H5'	2.20	0.40
53:27:2173:A:H2'	53:27:2173:A:N3	2.36	0.40
53:27:2244:U:H2'	53:27:2245:U:O4'	2.21	0.40
53:27:2364:C:H2'	53:27:2365:G:O4'	2.21	0.40
54:28:103:U:O2'	54:28:104:A:H5'	2.20	0.40
56:30:41:C:H2'	56:30:42:C:C4'	2.51	0.40
58:32:10:G:N3	58:32:10:G:H2'	2.35	0.40
59:33:35:LEU:HD12	59:33:35:LEU:N	2.36	0.40
59:33:39:TRP:O	59:33:42:CYS:SG	2.71	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.40
59:33:303:LEU:HA	59:33:304:PRO:HD3	1.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:488:GLY:O	59:33:491:LYS:N	2.54	0.40
2:B:149:ASN:HB3	53:27:2572:A:P	2.62	0.40
3:C:52:VAL:HG13	53:27:452:G:OP1	2.21	0.40
3:C:99:LYS:HZ1	53:27:601:C:H4'	1.86	0.40
4:D:3:LEU:N	4:D:3:LEU:HD12	2.36	0.40
7:G:61:ARG:HD3	7:G:61:ARG:HA	1.89	0.40
8:H:124:MET:HA	8:H:124:MET:CE	2.48	0.40
11:K:109:LYS:HA	11:K:109:LYS:HD2	1.99	0.40
13:M:9:GLN:O	13:M:17:ARG:HD3	2.21	0.40
16:P:54:ARG:HG3	53:27:1155:A:OP1	2.20	0.40
18:R:4:ILE:CG2	18:R:106:VAL:HG22	2.50	0.40
18:R:17:VAL:HG11	18:R:103:ILE:HG12	2.02	0.40
18:R:33:LEU:HD23	18:R:51:LEU:HD23	2.01	0.40
18:R:80:PRO:HD3	18:R:102:HIS:NE2	2.37	0.40
20:T:27:VAL:HG23	20:T:33:VAL:HG12	2.04	0.40
24:X:48:ARG:HG3	24:X:48:ARG:HH11	1.86	0.40
31:5:25:VAL:HB	31:5:35:GLN:CG	2.48	0.40
32:6:83:ALA:HB3	32:6:90:PHE:CD2	2.55	0.40
33:7:86:LEU:O	33:7:90:VAL:HG23	2.22	0.40
34:8:97:LEU:HB2	34:8:134:TYR:HB3	2.03	0.40
35:9:76:ASN:N	35:9:81:GLN:OE1	2.54	0.40
35:9:159:SER:O	35:9:160:VAL:C	2.60	0.40
36:10:91:ARG:N	52:26:737:C:OP1	2.54	0.40
38:12:10:LEU:HA	38:12:13:ILE:HD12	2.03	0.40
38:12:12:ARG:HH21	52:26:826:C:H5'	1.85	0.40
39:13:45:MET:O	39:13:49:GLN:HG3	2.20	0.40
40:14:19:ASP:O	40:14:22:THR:HB	2.22	0.40
40:14:46:LYS:HD2	40:14:48:ARG:HH12	1.86	0.40
43:17:100:ARG:HH21	52:26:950:U:H3'	1.83	0.40
44:18:30:ILE:O	44:18:40:ARG:HG3	2.21	0.40
52:26:24:U:H2'	52:26:25:C:C6	2.56	0.40
52:26:56:U:H2'	52:26:57:G:C8	2.57	0.40
52:26:149:A:H2'	52:26:150:U:O4'	2.20	0.40
52:26:184:G:H4'	52:26:224:U:O3'	2.21	0.40
52:26:435:A:H2'	52:26:436:C:O4'	2.22	0.40
52:26:1073:U:H2'	52:26:1074:G:C8	2.57	0.40
53:27:118:A:OP2	53:27:119:A:H2'	2.21	0.40
53:27:308:G:N2	53:27:309:A:N3	2.69	0.40
53:27:739:A:H1'	53:27:740:C:H5	1.86	0.40
53:27:1502:A:H2'	53:27:1503:A:O4'	2.21	0.40
53:27:1836:C:O2'	53:27:1837:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2551:C:H2'	53:27:2552:U:O4'	2.21	0.40
53:27:2783:U:H2'	53:27:2784:U:C6	2.55	0.40
53:27:2832:U:O2	53:27:2832:U:H2'	2.22	0.40
54:28:59:A:H2'	54:28:60:C:O4'	2.22	0.40
58:32:18:G:C1'	58:32:58:A:C2	3.05	0.40
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.84	0.40
59:33:232:PHE:HE1	59:33:329:PRO:HG2	1.86	0.40
1:A:115:ILE:C	1:A:115:ILE:HD12	2.41	0.40
1:A:247:TRP:CD2	53:27:1805:A:H5"	2.57	0.40
3:C:128:ALA:O	3:C:130:LYS:N	2.54	0.40
4:D:27:VAL:O	4:D:27:VAL:HG13	2.21	0.40
5:E:37:ASN:HD21	5:E:63:GLN:HE21	1.63	0.40
7:G:67:THR:H	7:G:68:PRO:HD2	1.86	0.40
9:I:58:ASN:HA	9:I:126:ALA:O	2.21	0.40
14:N:67:ASN:H	14:N:70:ALA:HB3	1.85	0.40
18:R:29:VAL:HG12	18:R:30:SER:N	2.37	0.40
20:T:94:PHE:HB2	20:T:100:GLU:C	2.41	0.40
34:8:57:LYS:HD2	34:8:203:TYR:CZ	2.56	0.40
45:19:79:GLN:HA	45:19:82:GLU:OE2	2.21	0.40
45:19:87:ARG:HD3	45:19:87:ARG:HA	1.81	0.40
46:20:42:ILE:HD12	46:20:42:ILE:O	2.22	0.40
48:22:11:ARG:HD2	48:22:14:ALA:HB3	2.02	0.40
48:22:36:GLY:O	48:22:70:THR:HA	2.21	0.40
52:26:128:G:O2'	52:26:129:A:H5'	2.22	0.40
52:26:286:C:H2'	52:26:287:U:H6	1.86	0.40
52:26:720:C:H2'	52:26:721:G:C8	2.56	0.40
52:26:837:U:H2'	52:26:838:G:C8	2.57	0.40
52:26:1026:G:H21	52:26:1027:C:N4	2.18	0.40
52:26:1251:A:H2'	52:26:1252:A:O4'	2.21	0.40
52:26:1424:U:H2'	52:26:1425:U:H6	1.85	0.40
53:27:28:A:H2'	53:27:29:U:H6	1.85	0.40
53:27:185:G:H2'	53:27:186:G:H8	1.85	0.40
53:27:376:G:H2'	53:27:377:G:H8	1.86	0.40
53:27:570:G:H22	53:27:2499:C:H5'	1.85	0.40
53:27:1810:A:H2'	53:27:1811:G:O4'	2.22	0.40
53:27:2540:C:O2'	53:27:2541:A:H5'	2.22	0.40
53:27:2582:G:N2	53:27:2583:G:H1'	2.36	0.40
53:27:2881:U:H2'	53:27:2882:A:C8	2.56	0.40
58:32:30:G:H2'	58:32:31:G:H8	1.86	0.40
59:33:43:LEU:HD21	59:33:44:GLN:HE22	1.85	0.40
59:33:110:VAL:HG13	59:33:152:LYS:HD3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:134:ASN:O	59:33:135:VAL:CB	2.68	0.40
59:33:705:GLN:O	59:33:707:LEU:N	2.55	0.40
3:C:130:LYS:HA	3:C:130:LYS:HD2	1.88	0.40
5:E:37:ASN:OD1	5:E:38:ASP:N	2.55	0.40
8:H:92:PRO:CB	8:H:136:GLY:HA3	2.51	0.40
9:I:78:THR:OG1	9:I:80:HIS:HB3	2.21	0.40
17:Q:83:TYR:CZ	53:27:1187:G:H5"	2.56	0.40
22:V:38:GLY:HA2	53:27:2330:G:N3	2.36	0.40
24:X:40:SER:HB2	53:27:61:C:O4'	2.22	0.40
27:1:16:ARG:HA	27:1:19:ASP:OD2	2.22	0.40
27:1:38:LEU:HD22	27:1:41:HIS:ND1	2.37	0.40
28:2:9:LYS:O	28:2:51:ALA:HB3	2.21	0.40
32:6:17:HIS:CG	32:6:18:GLN:H	2.38	0.40
34:8:151:GLN:OE1	34:8:151:GLN:HA	2.21	0.40
39:13:121:ARG:NH1	52:26:1345:U:H5"	2.37	0.40
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.87	0.40
43:17:97:ARG:NE	52:26:1309:G:OP2	2.50	0.40
44:18:37:ASP:OD2	44:18:39:ASP:HB3	2.21	0.40
48:22:23:LYS:C	48:22:25:ILE:H	2.25	0.40
49:23:13:HIS:O	49:23:17:LYS:HB2	2.21	0.40
49:23:41:PRO:O	49:23:44:ILE:HG13	2.22	0.40
52:26:772:U:H2'	52:26:773:G:C8	2.56	0.40
52:26:892:A:C5	52:26:893:C:C4	3.09	0.40
52:26:1261:A:H1'	52:26:1283:U:H5"	2.02	0.40
52:26:1326:U:O2'	52:26:1327:C:H5'	2.22	0.40
52:26:1478:U:H2'	52:26:1479:C:H6	1.85	0.40
53:27:63:A:O2'	53:27:64:A:H5'	2.21	0.40
53:27:277:G:O3'	53:27:278:A:H3'	2.21	0.40
53:27:587:C:C5	53:27:671:C:H1'	2.56	0.40
53:27:1289:C:O2'	53:27:1330:C:H4'	2.22	0.40
53:27:1331:G:C2'	53:27:1332:G:C5'	2.98	0.40
53:27:1465:G:H2'	53:27:1466:U:O4'	2.22	0.40
53:27:1670:C:H2'	53:27:1671:U:O4'	2.21	0.40
53:27:1883:U:H2'	53:27:1884:G:O4'	2.22	0.40
53:27:2078:C:H2'	53:27:2079:U:C6	2.57	0.40
53:27:2079:U:H2'	53:27:2080:A:O4'	2.21	0.40
53:27:2248:C:H2'	53:27:2249:U:O4'	2.21	0.40
58:32:18:G:C4	58:32:58:A:N1	2.89	0.40
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:348:GLU:C	59:33:349:LEU:HD12	2.42	0.40
1:A:222:THR:HA	1:A:232:GLY:H	1.85	0.40
1:A:225:ASN:ND2	53:27:784:G:O5'	2.54	0.40
1:A:244:VAL:HA	1:A:251:THR:HG22	2.03	0.40
2:B:4:LEU:HD13	2:B:101:PHE:CZ	2.56	0.40
3:C:163:ASN:ND2	53:27:320:A:N3	2.69	0.40
6:F:26:ALA:HA	6:F:30:LEU:HD12	2.03	0.40
6:F:26:ALA:O	6:F:31:VAL:HG23	2.22	0.40
6:F:129:GLU:OE2	6:F:131:SER:N	2.54	0.40
7:G:3:LEU:HD12	7:G:4:ASN:N	2.36	0.40
9:I:7:LYS:HA	9:I:8:PRO:HD3	1.83	0.40
11:K:32:GLY:HA2	53:27:1190:G:H5"	2.03	0.40
12:L:34:LYS:HA	12:L:101:VAL:HA	2.02	0.40
15:O:19:PHE:CD1	15:O:49:ILE:HD11	2.55	0.40
17:Q:74:ILE:O	17:Q:86:GLN:HA	2.21	0.40
18:R:1:MET:HG3	18:R:2:GLU:N	2.34	0.40
19:S:38:ALA:HA	19:S:42:GLU:OE1	2.22	0.40
27:1:46:GLY:HA3	27:1:54:ILE:HD12	2.02	0.40
30:4:34:LYS:HE2	30:4:34:LYS:HB3	1.79	0.40
32:6:59:ILE:HD12	32:6:66:ILE:HD12	2.03	0.40
34:8:138:PRO:HA	34:8:181:PHE:CD2	2.56	0.40
37:11:124:SER:O	37:11:127:ALA:HB3	2.21	0.40
40:14:11:LYS:HA	40:14:18:ILE:HD11	2.04	0.40
42:16:101:LEU:HB3	42:16:102:ASP:H	1.57	0.40
45:19:88:ARG:HD3	53:27:714:U:C5	2.57	0.40
51:25:46:ARG:HH11	51:25:49:ALA:HB3	1.86	0.40
52:26:331:G:OP1	52:26:332:G:H8	2.05	0.40
52:26:359:G:H2'	52:26:360:G:O4'	2.21	0.40
52:26:393:A:H5'	52:26:483:C:O2'	2.21	0.40
52:26:397:A:H3'	52:26:397:A:N3	2.36	0.40
52:26:575:G:H4'	52:26:576:C:O5'	2.21	0.40
52:26:1260:G:OP1	52:26:1284:C:H4'	2.22	0.40
52:26:1384:C:H2'	52:26:1385:G:C8	2.57	0.40
53:27:160:A:H2'	53:27:161:A:C8	2.56	0.40
53:27:531:C:O2'	53:27:563:A:H5"	2.20	0.40
53:27:644:A:N1	53:27:2369:A:H1'	2.36	0.40
53:27:874:G:O2'	53:27:875:G:H5'	2.22	0.40
53:27:876:C:C2'	53:27:877:A:H5'	2.50	0.40
53:27:1416:G:H2'	53:27:1417:C:C6	2.56	0.40
53:27:2060:A:N3	53:27:2060:A:H3'	2.36	0.40
53:27:2103:C:H2'	53:27:2104:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2297:A:H62	53:27:2319:G:H1'	1.86	0.40
53:27:2493:U:C3'	53:27:2494:G:H5"	2.44	0.40
53:27:2532:G:H4'	53:27:2657:A:C2	2.56	0.40
53:27:2639:A:H2'	53:27:2640:G:O4'	2.22	0.40
56:30:1:G:H2'	56:30:2:C:C6	2.56	0.40
57:31:11:A:O2'	57:31:12:G:H5'	2.22	0.40
58:32:28:C:H2'	58:32:29:G:H8	1.87	0.40
58:32:59:A:H2'	58:32:60:U:H5'	2.04	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:221:ARG:HB3	59:33:273:LEU:HD21	2.02	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.61	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
59:33:438:ARG:HD3	59:33:467:LYS:O	2.22	0.40
59:33:670:ARG:HB2	59:33:741:LEU:HD12	2.04	0.40
59:33:687:LEU:HA	59:33:690:GLU:CD	2.42	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	269/273 (98%)	226 (84%)	34 (13%)	9 (3%)	4 31
2	B	207/209 (99%)	165 (80%)	29 (14%)	13 (6%)	1 19
3	C	199/201 (99%)	164 (82%)	23 (12%)	12 (6%)	1 20
4	D	175/179 (98%)	140 (80%)	27 (15%)	8 (5%)	2 25
5	E	174/177 (98%)	145 (83%)	22 (13%)	7 (4%)	3 27
6	F	147/149 (99%)	119 (81%)	16 (11%)	12 (8%)	1 14
7	G	129/165 (78%)	92 (71%)	17 (13%)	20 (16%)	0 3
8	H	139/142 (98%)	106 (76%)	27 (19%)	6 (4%)	2 26

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	I	140/142 (99%)	127 (91%)	7 (5%)	6 (4%)	2 26
10	J	120/123 (98%)	101 (84%)	14 (12%)	5 (4%)	3 26
11	K	141/144 (98%)	116 (82%)	16 (11%)	9 (6%)	1 19
12	L	134/136 (98%)	110 (82%)	20 (15%)	4 (3%)	4 33
13	M	118/127 (93%)	99 (84%)	14 (12%)	5 (4%)	3 26
14	N	114/117 (97%)	92 (81%)	16 (14%)	6 (5%)	2 22
15	O	112/115 (97%)	88 (79%)	20 (18%)	4 (4%)	3 29
16	P	115/118 (98%)	108 (94%)	5 (4%)	2 (2%)	9 43
17	Q	101/103 (98%)	82 (81%)	16 (16%)	3 (3%)	4 33
18	R	108/110 (98%)	85 (79%)	19 (18%)	4 (4%)	3 29
19	S	91/100 (91%)	73 (80%)	13 (14%)	5 (6%)	2 22
20	T	100/104 (96%)	80 (80%)	13 (13%)	7 (7%)	1 17
21	U	92/94 (98%)	76 (83%)	13 (14%)	3 (3%)	4 31
22	V	73/85 (86%)	64 (88%)	7 (10%)	2 (3%)	5 35
23	W	75/78 (96%)	67 (89%)	6 (8%)	2 (3%)	5 35
24	X	61/63 (97%)	52 (85%)	5 (8%)	4 (7%)	1 19
25	Y	56/59 (95%)	50 (89%)	4 (7%)	2 (4%)	3 29
26	Z	64/70 (91%)	50 (78%)	9 (14%)	5 (8%)	1 15
27	1	54/57 (95%)	42 (78%)	6 (11%)	6 (11%)	0 8
28	2	48/55 (87%)	41 (85%)	6 (12%)	1 (2%)	7 39
29	3	44/46 (96%)	35 (80%)	7 (16%)	2 (4%)	2 25
30	4	62/65 (95%)	51 (82%)	6 (10%)	5 (8%)	1 14
31	5	36/38 (95%)	26 (72%)	6 (17%)	4 (11%)	0 8
32	6	216/241 (90%)	177 (82%)	31 (14%)	8 (4%)	3 29
33	7	204/233 (88%)	172 (84%)	26 (13%)	6 (3%)	4 33
34	8	203/206 (98%)	158 (78%)	30 (15%)	15 (7%)	1 16
35	9	155/167 (93%)	116 (75%)	25 (16%)	14 (9%)	1 13
36	10	98/135 (73%)	76 (78%)	15 (15%)	7 (7%)	1 17
37	11	149/179 (83%)	123 (83%)	17 (11%)	9 (6%)	1 20
38	12	127/130 (98%)	112 (88%)	13 (10%)	2 (2%)	9 44
39	13	125/130 (96%)	98 (78%)	17 (14%)	10 (8%)	1 15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
40	14	96/103 (93%)	77 (80%)	11 (12%)	8 (8%)	1 14
41	15	114/129 (88%)	92 (81%)	18 (16%)	4 (4%)	3 30
42	16	121/124 (98%)	98 (81%)	11 (9%)	12 (10%)	0 10
43	17	112/118 (95%)	90 (80%)	11 (10%)	11 (10%)	0 10
44	18	98/101 (97%)	71 (72%)	20 (20%)	7 (7%)	1 17
45	19	86/89 (97%)	73 (85%)	8 (9%)	5 (6%)	1 21
46	20	80/82 (98%)	64 (80%)	12 (15%)	4 (5%)	2 23
47	21	78/84 (93%)	53 (68%)	19 (24%)	6 (8%)	1 16
48	22	63/75 (84%)	48 (76%)	9 (14%)	6 (10%)	0 11
49	23	77/92 (84%)	60 (78%)	13 (17%)	4 (5%)	2 23
50	24	83/87 (95%)	75 (90%)	5 (6%)	3 (4%)	3 29
51	25	63/71 (89%)	44 (70%)	9 (14%)	10 (16%)	0 3
59	33	663/750 (88%)	550 (83%)	78 (12%)	35 (5%)	2 22
All	All	6509/6970 (93%)	5299 (81%)	841 (13%)	369 (6%)	3 21

All (369) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	18	ASP
2	B	181	ASP
2	B	188	LEU
3	C	55	SER
3	C	127	GLU
4	D	175	PRO
5	E	46	ASP
5	E	100	ASN
6	F	9	VAL
6	F	48	GLU
6	F	74	ALA
7	G	54	VAL
7	G	57	ASN
7	G	67	THR
7	G	83	ALA
7	G	111	ALA
7	G	124	ASP
8	H	8	VAL
8	H	18	ASN

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Mol	Chain	Res	Type
8	H	22	PRO
9	I	2	LYS
9	I	81	ILE
10	J	89	ASN
11	K	15	ALA
11	K	94	THR
12	L	6	ARG
12	L	69	PRO
13	M	59	SER
13	M	117	ASP
16	P	101	ASP
18	R	67	ASP
19	S	3	ARG
20	T	6	ARG
20	T	49	PRO
24	X	2	LYS
24	X	25	GLN
25	Y	13	ILE
26	Z	35	ASP
27	1	25	THR
29	3	9	VAL
31	5	12	ARG
32	6	19	THR
33	7	11	LEU
33	7	156	LEU
34	8	29	THR
34	8	33	ILE
34	8	36	ALA
34	8	84	ASN
34	8	152	SER
34	8	166	LYS
34	8	169	TRP
34	8	174	ALA
35	9	77	ASN
35	9	105	ILE
35	9	122	VAL
35	9	159	SER
35	9	160	VAL
36	10	38	ARG
37	11	8	GLN
37	11	57	GLU
39	13	38	PHE

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Mol	Chain	Res	Type
39	13	57	VAL
39	13	107	ALA
39	13	120	ALA
40	14	57	VAL
41	15	125	LYS
42	16	76	HIS
43	17	8	ILE
43	17	97	ARG
43	17	104	ASN
44	18	53	ASP
45	19	87	ARG
47	21	15	LYS
48	22	13	THR
48	22	17	VAL
50	24	5	SER
51	25	7	GLU
51	25	36	PHE
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	471	PRO
59	33	483	VAL
59	33	487	ARG
59	33	521	ILE
59	33	533	ARG
59	33	552	ARG
59	33	629	ARG
59	33	635	ARG
59	33	666	SER
1	A	72	GLY
1	A	88	ALA
1	A	120	ASP
2	B	58	ASN
2	B	98	VAL
2	B	118	PHE
3	C	60	TRP
4	D	20	ASN
4	D	40	GLY
6	F	2	GLN
6	F	84	ALA
7	G	52	MET

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Mol	Chain	Res	Type
7	G	84	TYR
7	G	122	GLN
7	G	125	ARG
8	H	31	GLY
8	H	32	VAL
8	H	136	GLY
9	I	25	LEU
9	I	72	LYS
10	J	35	VAL
10	J	93	GLN
10	J	110	GLU
11	K	17	LYS
11	K	29	LYS
11	K	93	ASN
11	K	111	ILE
11	K	113	ALA
13	M	99	LYS
14	N	101	GLY
15	O	64	SER
15	O	112	ARG
16	P	6	GLY
17	Q	29	THR
19	S	71	GLY
19	S	89	GLU
21	U	35	GLU
23	W	2	ARG
23	W	75	GLU
24	X	7	ARG
26	Z	4	ASP
26	Z	52	ALA
27	1	23	ALA
27	1	24	VAL
31	5	2	LYS
32	6	72	LYS
32	6	73	ARG
32	6	150	ILE
33	7	60	ALA
34	8	24	VAL
34	8	182	LYS
34	8	190	LEU
35	9	22	LYS
35	9	132	PRO

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Mol	Chain	Res	Type
35	9	157	GLY
36	10	86	ARG
36	10	99	ALA
37	11	52	ARG
38	12	88	LYS
39	13	12	LYS
39	13	23	GLY
39	13	71	ILE
40	14	68	ARG
42	16	41	PRO
42	16	60	PHE
42	16	70	GLY
42	16	75	GLU
42	16	77	SER
42	16	88	ASP
43	17	2	ARG
43	17	6	ILE
43	17	39	ALA
43	17	40	GLU
47	21	16	MET
49	23	66	VAL
50	24	6	ALA
50	24	76	ALA
51	25	65	ARG
59	33	468	GLN
59	33	476	LEU
59	33	551	ILE
59	33	706	GLN
1	A	51	ARG
2	B	31	ALA
2	B	102	ALA
2	B	103	ASP
2	B	139	SER
2	B	178	VAL
3	C	79	ARG
3	C	129	PRO
4	D	142	TYR
4	D	173	ASP
4	D	174	PHE
5	E	118	ALA
5	E	175	LYS
6	F	15	LEU

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Mol	Chain	Res	Type
7	G	72	LEU
7	G	75	ALA
7	G	89	PRO
7	G	90	GLY
7	G	93	ALA
9	I	132	HIS
10	J	103	VAL
11	K	115	GLU
12	L	59	ARG
12	L	125	PRO
13	M	32	GLU
15	O	2	ASN
17	Q	53	PHE
18	R	40	ASN
19	S	38	ALA
20	T	98	ASN
21	U	66	ASP
27	1	2	VAL
29	3	5	PHE
30	4	3	ILE
30	4	27	ASN
30	4	29	ARG
30	4	63	TYR
31	5	11	CYS
31	5	29	ALA
32	6	11	ALA
32	6	33	ALA
34	8	6	PRO
34	8	191	SER
35	9	23	THR
35	9	99	SER
35	9	129	SER
36	10	94	HIS
37	11	18	GLY
37	11	111	GLY
37	11	147	ASN
39	13	90	ASP
41	15	94	SER
42	16	2	THR
42	16	23	LEU
42	16	35	ARG
44	18	2	LYS

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Mol	Chain	Res	Type
44	18	20	PHE
44	18	29	ILE
45	19	72	LYS
46	20	79	ASN
46	20	81	ALA
47	21	17	GLU
48	22	71	ASP
51	25	8	ASN
51	25	13	VAL
51	25	34	ARG
51	25	37	TYR
51	25	64	ALA
51	25	66	ARG
59	33	267	ASN
59	33	334	VAL
59	33	485	THR
59	33	509	ARG
59	33	522	SER
59	33	553	LEU
59	33	610	ALA
59	33	654	ASP
59	33	695	LEU
1	A	70	LYS
3	C	18	THR
3	C	62	GLN
6	F	3	VAL
6	F	11	ASN
6	F	41	LYS
6	F	122	LEU
7	G	58	THR
11	K	47	ARG
14	N	100	HIS
18	R	3	THR
18	R	72	THR
20	T	13	LEU
20	T	50	ALA
32	6	149	GLY
33	7	28	PHE
35	9	93	VAL
36	10	98	GLU
37	11	17	PHE
37	11	113	LYS

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Mol	Chain	Res	Type
38	12	2	MET
40	14	34	ALA
40	14	47	GLU
40	14	75	ASP
44	18	37	ASP
45	19	45	HIS
48	22	18	GLN
48	22	36	GLY
48	22	70	THR
49	23	57	VAL
59	33	52	ALA
59	33	484	THR
59	33	568	SER
59	33	606	MET
59	33	637	ASP
59	33	701	SER
1	A	231	HIS
2	B	41	ALA
2	B	87	GLY
3	C	83	VAL
3	C	152	GLU
3	C	166	LYS
4	D	84	ILE
5	E	174	LYS
14	N	68	LYS
14	N	99	TYR
17	Q	43	ASN
19	S	65	GLY
22	V	8	ASN
22	V	39	THR
24	X	6	LEU
27	1	4	GLN
32	6	157	PRO
33	7	26	LYS
34	8	39	GLN
35	9	88	HIS
36	10	54	LEU
37	11	95	ARG
39	13	54	VAL
40	14	93	ALA
41	15	88	PRO
42	16	33	CYS

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Mol	Chain	Res	Type
42	16	108	ASP
43	17	65	GLU
44	18	71	GLY
45	19	2	LEU
49	23	26	ASP
51	25	12	ASP
1	A	31	PRO
7	G	118	ILE
7	G	121	SER
13	M	106	ASP
20	T	3	LYS
21	U	67	GLY
26	Z	32	LEU
26	Z	64	PHE
30	4	31	ILE
36	10	56	LYS
43	17	98	GLY
44	18	34	ASN
46	20	47	GLU
46	20	49	GLY
47	21	65	PRO
47	21	67	SER
59	33	44	GLN
59	33	675	ASP
3	C	54	GLY
5	E	7	PRO
9	I	82	GLY
25	Y	14	GLY
27	1	34	GLY
40	14	42	LEU
41	15	73	VAL
45	19	85	GLY
1	A	7	PRO
1	A	108	GLY
6	F	92	GLY
7	G	68	PRO
14	N	32	PRO
14	N	35	ILE
43	17	24	VAL
3	C	89	PRO
5	E	53	PRO
15	O	21	PRO

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Mol	Chain	Res	Type
20	T	38	ILE
28	2	41	VAL
33	7	75	VAL
47	21	54	ILE
49	23	10	ILE
4	D	61	GLY
6	F	78	VAL
7	G	108	VAL
34	8	45	PRO
39	13	9	GLY
59	33	656	VAL
35	9	140	ILE
40	14	33	GLY
43	17	113	LYS

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%)	88 93
2	B	164/164 (100%)	163 (99%)	1 (1%)	86 91
3	C	165/165 (100%)	164 (99%)	1 (1%)	86 91
4	D	148/150 (99%)	146 (99%)	2 (1%)	67 81
5	E	137/138 (99%)	136 (99%)	1 (1%)	84 90
6	F	114/114 (100%)	113 (99%)	1 (1%)	78 87
7	G	100/123 (81%)	99 (99%)	1 (1%)	76 86
8	H	109/110 (99%)	109 (100%)	0	100 100
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%)	102 (100%)	0	100 100
12	L	109/109 (100%)	109 (100%)	0	100 100
13	M	100/103 (97%)	99 (99%)	1 (1%)	76 86

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
14	N	86/87 (99%)	84 (98%)	2 (2%)	50 71
15	O	99/100 (99%)	99 (100%)	0	100 100
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%)	79 (99%)	1 (1%)	69 82
20	T	83/85 (98%)	82 (99%)	1 (1%)	71 83
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%)	60 78
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%)	38 (100%)	0	100 100
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%)	179 (99%)	1 (1%)	86 91
33	7	170/190 (90%)	168 (99%)	2 (1%)	71 83
34	8	172/173 (99%)	171 (99%)	1 (1%)	86 91
35	9	119/126 (94%)	117 (98%)	2 (2%)	60 78
36	10	87/116 (75%)	86 (99%)	1 (1%)	73 84
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%)	57 75
40	14	86/90 (96%)	86 (100%)	0	100 100
41	15	89/99 (90%)	89 (100%)	0	100 100
42	16	103/104 (99%)	103 (100%)	0	100 100
43	17	92/96 (96%)	91 (99%)	1 (1%)	73 84
44	18	83/84 (99%)	81 (98%)	2 (2%)	49 69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	19	76/77 (99%)	76 (100%)	0	100 100
46	20	65/65 (100%)	65 (100%)	0	100 100
47	21	74/78 (95%)	74 (100%)	0	100 100
48	22	56/65 (86%)	55 (98%)	1 (2%)	59 77
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%)	449 (99%)	3 (1%)	84 90
All	All	5303/5698 (93%)	5273 (99%)	30 (1%)	86 91

All (30) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	212	TRP
2	B	40	LEU
3	C	60	TRP
4	D	103	ILE
4	D	175	PRO
5	E	138	GLN
6	F	9	VAL
7	G	41	LEU
13	M	37	THR
14	N	32	PRO
14	N	33	ARG
19	S	32	LEU
20	T	49	PRO
26	Z	37	CYS
32	6	22	TRP
33	7	100	ILE
33	7	101	ASN
34	8	170	LEU
35	9	132	PRO
35	9	161	GLU
36	10	92	THR
39	13	45	MET
39	13	126	PHE
43	17	114	PRO
44	18	45	LEU
44	18	81	ILE

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Mol	Chain	Res	Type
48	22	12	PHE
59	33	267	ASN
59	33	338	ILE
59	33	714	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (94) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	114	GLN
1	A	116	GLN
1	A	127	ASN
2	B	49	GLN
2	B	130	GLN
2	B	173	GLN
3	C	94	GLN
3	C	156	ASN
4	D	51	ASN
4	D	62	GLN
4	D	80	GLN
5	E	47	ASN
5	E	63	GLN
5	E	72	ASN
5	E	87	GLN
5	E	115	GLN
6	F	28	ASN
6	F	43	ASN
6	F	119	ASN
7	G	122	GLN
8	H	11	GLN
8	H	29	GLN
8	H	30	GLN
8	H	42	ASN
9	I	136	GLN
13	M	18	GLN
14	N	100	HIS
15	O	6	GLN
15	O	11	GLN
16	P	36	GLN
16	P	51	GLN
16	P	55	GLN
16	P	58	GLN
16	P	71	ASN

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Mol	Chain	Res	Type
17	Q	18	GLN
17	Q	43	ASN
17	Q	66	HIS
17	Q	89	HIS
20	T	73	ASN
22	V	8	ASN
23	W	15	ASN
24	X	20	ASN
24	X	58	ASN
26	Z	61	ASN
27	1	5	ASN
29	3	13	ASN
31	5	35	GLN
31	5	37	GLN
32	6	17	HIS
32	6	18	GLN
32	6	38	HIS
32	6	167	HIS
32	6	177	ASN
34	8	70	GLN
35	9	42	ASN
35	9	134	ASN
36	10	11	HIS
36	10	37	HIS
37	11	27	ASN
37	11	121	ASN
37	11	129	ASN
38	12	17	GLN
38	12	20	ASN
39	13	36	GLN
39	13	74	GLN
39	13	109	GLN
40	14	58	ASN
41	15	28	ASN
41	15	39	ASN
42	16	28	GLN
42	16	45	ASN
46	20	9	HIS
46	20	26	ASN
46	20	29	ASN
46	20	40	ASN
46	20	79	ASN

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Mol	Chain	Res	Type
47	21	30	HIS
47	21	46	HIS
48	22	18	GLN
48	22	51	GLN
48	22	73	HIS
50	24	51	ASN
50	24	60	GLN
50	24	83	ASN
59	33	88	ASN
59	33	235	HIS
59	33	264	GLN
59	33	267	ASN
59	33	432	HIS
59	33	594	ASN
59	33	604	ASN
59	33	614	GLN
59	33	706	GLN
59	33	730	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	178 (11%)	5 (0%)
53	27	2902/2903 (99%)	379 (13%)	17 (0%)
54	28	119/120 (99%)	15 (12%)	1 (0%)
55	29	19/20 (95%)	3 (15%)	0
56	30	75/76 (98%)	22 (29%)	1 (1%)
57	31	76/77 (98%)	5 (6%)	0
58	32	76/77 (98%)	16 (21%)	0
All	All	4805/4812 (99%)	618 (12%)	24 (0%)

All (618) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	26	4	U
52	26	9	G
52	26	13	U
52	26	22	G
52	26	32	A
52	26	39	G
52	26	47	C

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Mol	Chain	Res	Type
52	26	48	C
52	26	50	A
52	26	51	A
52	26	71	A
52	26	82	G
52	26	83	C
52	26	86	G
52	26	94	G
52	26	95	C
52	26	100	G
52	26	121	U
52	26	141	G
52	26	144	G
52	26	149	A
52	26	168	G
52	26	183	C
52	26	184	G
52	26	209	U
52	26	210	C
52	26	211	G
52	26	212	G
52	26	226	G
52	26	240	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	279	A
52	26	280	C
52	26	281	G
52	26	289	G
52	26	306	A
52	26	328	C
52	26	330	C
52	26	345	C
52	26	352	C
52	26	354	G
52	26	367	U
52	26	369	G
52	26	372	C
52	26	373	A
52	26	398	U

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Mol	Chain	Res	Type
52	26	406	G
52	26	412	A
52	26	413	G
52	26	421	U
52	26	422	C
52	26	423	G
52	26	429	U
52	26	467	U
52	26	468	A
52	26	484	G
52	26	485	U
52	26	486	U
52	26	496	A
52	26	509	A
52	26	527	G
52	26	531	U
52	26	532	A
52	26	533	A
52	26	535	A
52	26	547	A
52	26	561	U
52	26	562	U
52	26	564	C
52	26	572	A
52	26	573	A
52	26	575	G
52	26	576	C
52	26	577	G
52	26	596	A
52	26	607	A
52	26	633	G
52	26	642	A
52	26	665	A
52	26	687	A
52	26	703	G
52	26	724	G
52	26	731	G
52	26	733	G
52	26	755	G
52	26	777	A
52	26	793	U
52	26	814	A

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Mol	Chain	Res	Type
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	821	G
52	26	832	G
52	26	842	U
52	26	843	U
52	26	844	G
52	26	846	G
52	26	849	G
52	26	871	U
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	991	U
52	26	992	U
52	26	993	G
52	26	1004	A
52	26	1020	G
52	26	1027	C
52	26	1028	C
52	26	1030	U
52	26	1032	G
52	26	1033	G
52	26	1034	G
52	26	1094	G
52	26	1101	A
52	26	1130	A
52	26	1132	C
52	26	1136	C
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1140	C

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Mol	Chain	Res	Type
52	26	1159	U
52	26	1168	U
52	26	1183	U
52	26	1184	G
52	26	1196	A
52	26	1207	G
52	26	1212	U
52	26	1213	A
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
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1286	U
52	26	1287	A
52	26	1300	G
52	26	1317	C
52	26	1320	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1353	G
52	26	1363	A
52	26	1395	C
52	26	1419	G
52	26	1441	A
52	26	1446	A
52	26	1448	C
52	26	1452	C
52	26	1453	G
52	26	1492	A
52	26	1497	G
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1529	G

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Mol	Chain	Res	Type
52	26	1530	G
52	26	1533	C
52	26	1534	A
53	27	10	A
53	27	12	U
53	27	34	U
53	27	35	G
53	27	46	G
53	27	49	A
53	27	51	G
53	27	63	A
53	27	71	A
53	27	74	A
53	27	75	G
53	27	92	U
53	27	103	A
53	27	114	U
53	27	118	A
53	27	119	A
53	27	120	U
53	27	139	U
53	27	140	C
53	27	142	A
53	27	143	C
53	27	162	U
53	27	163	C
53	27	178	G
53	27	181	A
53	27	196	A
53	27	199	A
53	27	205	G
53	27	216	A
53	27	221	A
53	27	222	A
53	27	229	C
53	27	248	G
53	27	249	C
53	27	255	A
53	27	276	U
53	27	278	A
53	27	281	C
53	27	284	U

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Mol	Chain	Res	Type
53	27	285	G
53	27	294	A
53	27	301	G
53	27	311	A
53	27	322	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A
53	27	353	C
53	27	371	A
53	27	372	G
53	27	386	G
53	27	387	U
53	27	404	A
53	27	406	G
53	27	411	G
53	27	422	A
53	27	424	G
53	27	451	U
53	27	455	C
53	27	457	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	531	C
53	27	532	A
53	27	545	U
53	27	547	A
53	27	548	G
53	27	549	G
53	27	563	A
53	27	568	U
53	27	573	U
53	27	575	A
53	27	588	U
53	27	603	A
53	27	614	A
53	27	615	U

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Mol	Chain	Res	Type
53	27	627	A
53	27	637	A
53	27	645	C
53	27	646	U
53	27	654	A
53	27	655	A
53	27	664	G
53	27	669	G
53	27	686	U
53	27	695	G
53	27	711	G
53	27	717	C
53	27	730	A
53	27	747	C
53	27	752	A
53	27	776	G
53	27	782	A
53	27	784	G
53	27	785	G
53	27	805	G
53	27	812	C
53	27	819	A
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	866	A
53	27	888	C
53	27	896	A
53	27	910	A
53	27	915	C
53	27	931	U
53	27	932	U
53	27	941	A
53	27	945	A
53	27	946	C
53	27	953	G

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Mol	Chain	Res	Type
53	27	961	C
53	27	973	A
53	27	974	G
53	27	983	A
53	27	995	C
53	27	996	A
53	27	1009	A
53	27	1012	U
53	27	1013	C
53	27	1021	A
53	27	1022	G
53	27	1023	U
53	27	1033	U
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1069	A
53	27	1070	A
53	27	1083	U
53	27	1088	A
53	27	1090	A
53	27	1097	U
53	27	1111	A
53	27	1119	U
53	27	1130	U
53	27	1131	G
53	27	1132	U
53	27	1133	A
53	27	1135	C
53	27	1142	A
53	27	1157	G
53	27	1172	C
53	27	1173	U
53	27	1174	U
53	27	1177	G
53	27	1178	C
53	27	1206	G
53	27	1210	G
53	27	1212	G
53	27	1250	G
53	27	1253	A
53	27	1256	G

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Mol	Chain	Res	Type
53	27	1262	A
53	27	1271	G
53	27	1272	A
53	27	1300	G
53	27	1301	A
53	27	1305	C
53	27	1321	A
53	27	1329	U
53	27	1330	C
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	1416	G
53	27	1419	A
53	27	1420	A
53	27	1428	C
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1498	C
53	27	1504	A
53	27	1515	A
53	27	1524	G
53	27	1535	A
53	27	1536	C
53	27	1560	G
53	27	1569	A
53	27	1578	U
53	27	1584	U
53	27	1608	A
53	27	1611	C
53	27	1616	A
53	27	1617	C
53	27	1647	U
53	27	1648	U
53	27	1674	G
53	27	1694	C
53	27	1698	A

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Mol	Chain	Res	Type
53	27	1699	G
53	27	1703	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1731	G
53	27	1732	C
53	27	1738	G
53	27	1758	U
53	27	1764	C
53	27	1773	A
53	27	1780	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	1829	A
53	27	1847	G
53	27	1858	A
53	27	1871	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	1937	A
53	27	1938	A
53	27	1955	U
53	27	1967	C
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

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Mol	Chain	Res	Type
53	27	2036	C
53	27	2043	C
53	27	2049	G
53	27	2055	C
53	27	2056	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2063	C
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2095	A
53	27	2096	C
53	27	2098	U
53	27	2110	G
53	27	2111	U
53	27	2113	U
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2124	G
53	27	2127	G
53	27	2131	U
53	27	2132	U
53	27	2133	G
53	27	2137	U
53	27	2145	C
53	27	2147	A
53	27	2148	G
53	27	2159	G
53	27	2162	G
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	2225	A
53	27	2238	G

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Mol	Chain	Res	Type
53	27	2239	G
53	27	2243	U
53	27	2268	A
53	27	2278	A
53	27	2283	C
53	27	2287	A
53	27	2297	A
53	27	2305	U
53	27	2309	A
53	27	2319	G
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2350	C
53	27	2357	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2388	A
53	27	2402	U
53	27	2403	C
53	27	2406	A
53	27	2423	U
53	27	2424	C
53	27	2429	G
53	27	2430	A
53	27	2435	A
53	27	2441	U
53	27	2447	G
53	27	2448	A
53	27	2476	A
53	27	2494	G
53	27	2497	A
53	27	2498	C
53	27	2502	G
53	27	2503	A
53	27	2505	G
53	27	2506	U
53	27	2518	A
53	27	2520	C
53	27	2529	G
53	27	2547	A

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Mol	Chain	Res	Type
53	27	2554	U
53	27	2562	U
53	27	2567	G
53	27	2572	A
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2603	G
53	27	2609	U
53	27	2613	U
53	27	2615	U
53	27	2621	G
53	27	2629	U
53	27	2646	C
53	27	2682	A
53	27	2689	U
53	27	2690	U
53	27	2713	U
53	27	2714	G
53	27	2716	C
53	27	2722	G
53	27	2744	G
53	27	2748	A
53	27	2752	C
53	27	2757	A
53	27	2764	A
53	27	2765	A
53	27	2778	A
53	27	2779	U
53	27	2780	G
53	27	2791	G
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	2820	A
53	27	2823	A
53	27	2833	U
53	27	2850	A
53	27	2866	U

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Mol	Chain	Res	Type
53	27	2867	G
53	27	2868	A
53	27	2872	A
53	27	2880	C
54	28	4	C
54	28	13	G
54	28	24	G
54	28	25	U
54	28	35	C
54	28	44	G
54	28	45	A
54	28	67	G
54	28	88	C
54	28	89	U
54	28	90	C
54	28	91	C
54	28	108	A
54	28	109	A
54	28	120	A
55	29	8	A
55	29	12	A
55	29	13	A
56	30	8	U
56	30	9	A
56	30	10	G
56	30	13	C
56	30	14	A
56	30	16	U
56	30	17	C
56	30	18	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	58	A
56	30	59	U
56	30	61	C
56	30	63	G
56	30	74	C

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Mol	Chain	Res	Type
56	30	75	C
56	30	76	A
57	31	9	G
57	31	19	G
57	31	20	U
57	31	47	U
57	31	48	C
58	32	7	G
58	32	8	U
58	32	9	G
58	32	16	C
58	32	19	G
58	32	21	A
58	32	22	G
58	32	30	G
58	32	34	C
58	32	35	A
58	32	45	G
58	32	46	A
58	32	48	C
58	32	59	A
58	32	70	G
58	32	75	C

All (24) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	26	246	A
52	26	438	U
52	26	561	U
52	26	960	U
52	26	1240	U
53	27	139	U
53	27	421	C
53	27	490	C
53	27	858	G
53	27	859	G
53	27	1020	A
53	27	1130	U
53	27	1378	A
53	27	1694	C
53	27	1730	C

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Mol	Chain	Res	Type
53	27	1857	G
53	27	2286	G
53	27	2296	U
53	27	2326	C
53	27	2712	C
53	27	2756	U
53	27	2808	G
54	28	66	A
56	30	73	A

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

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

5.5 Carbohydrates (i)

There are no monosaccharides 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.

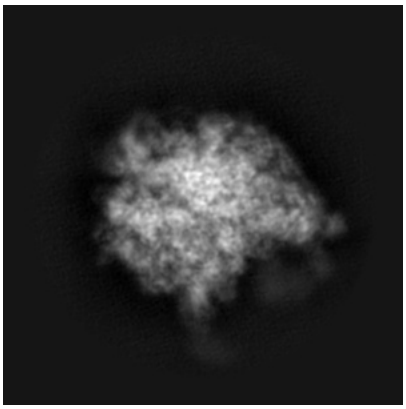
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-8281. These allow visual inspection of the internal detail of the map and identification of artifacts.

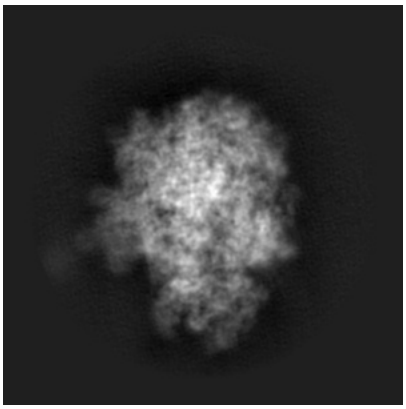
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

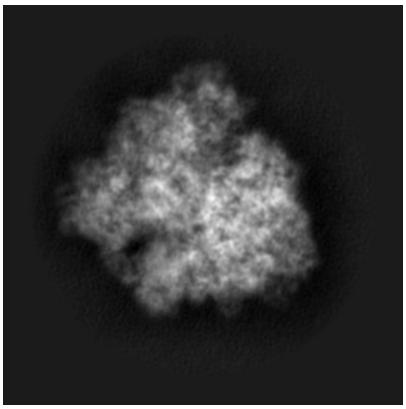
6.1.1 Primary map



X

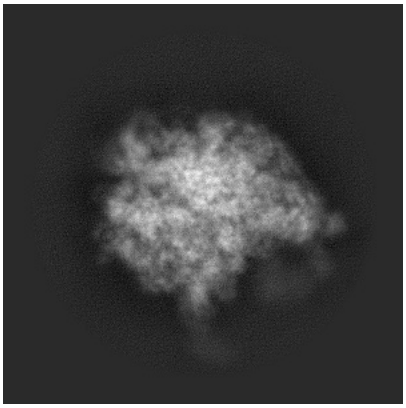


Y

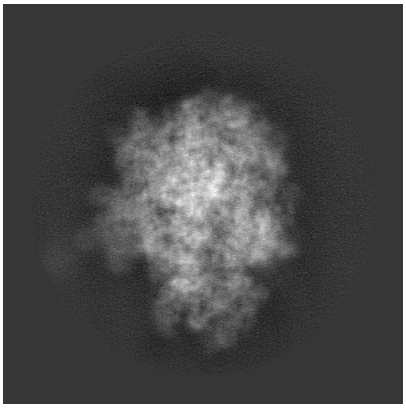


Z

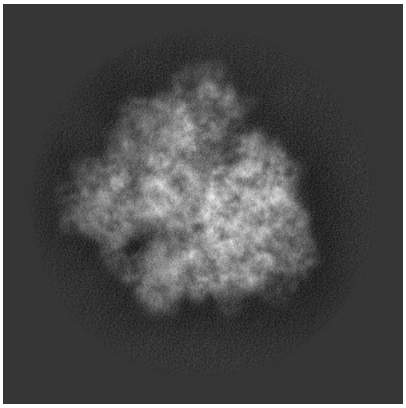
6.1.2 Raw map



X



Y

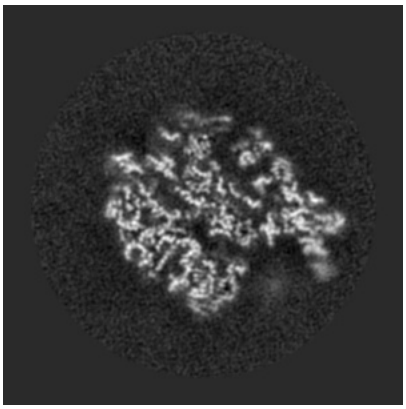


Z

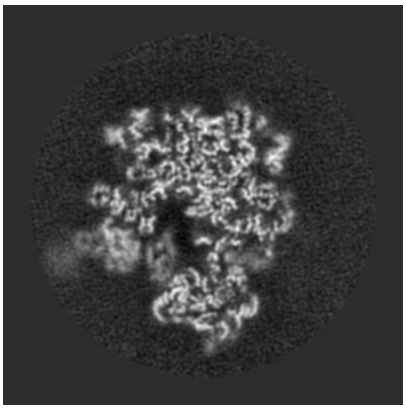
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

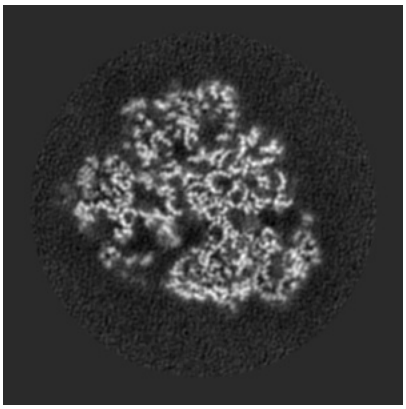
6.2.1 Primary map



X Index: 240

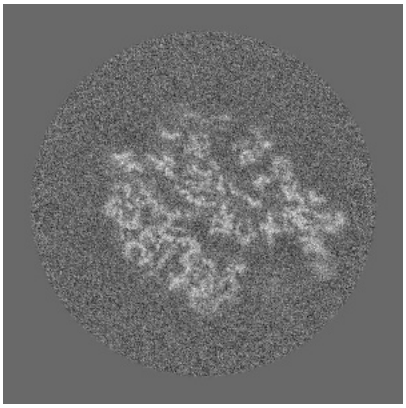


Y Index: 240

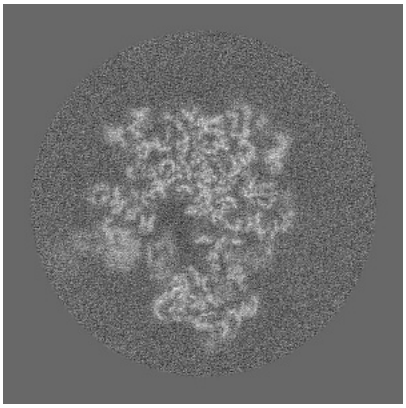


Z Index: 240

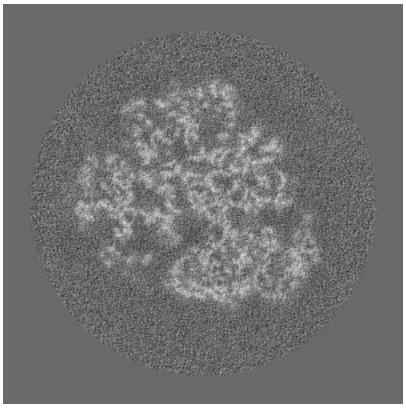
6.2.2 Raw map



X Index: 240



Y Index: 240

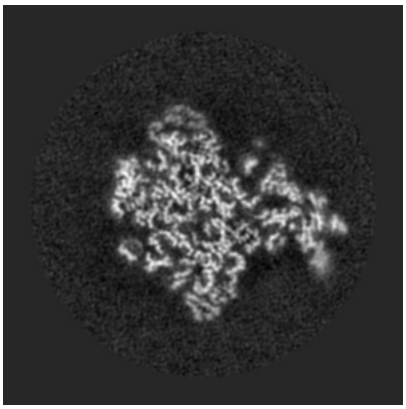


Z Index: 240

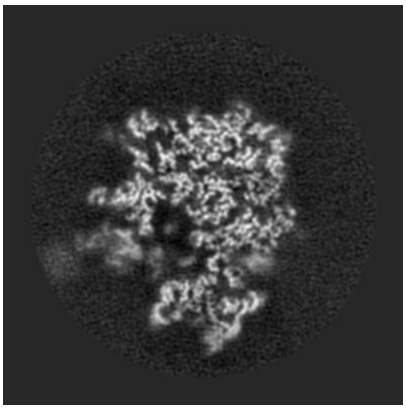
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

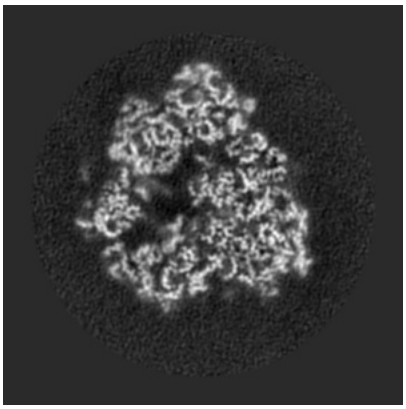
6.3.1 Primary map



X Index: 249

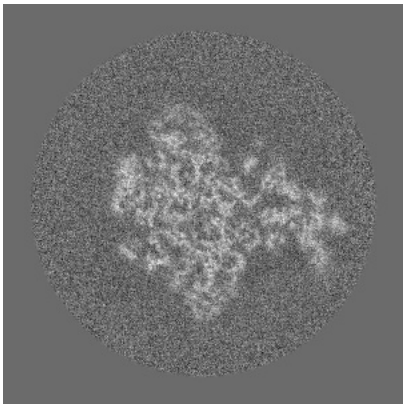


Y Index: 247

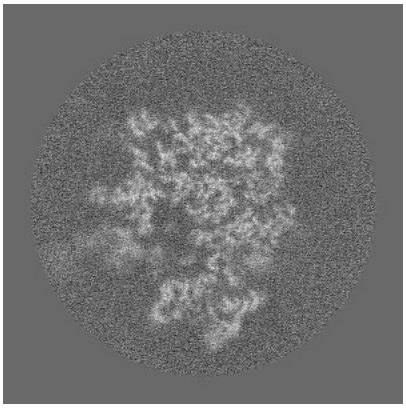


Z Index: 220

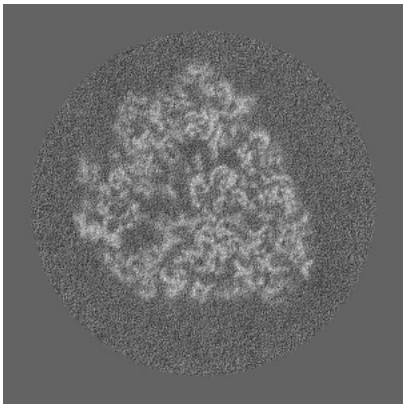
6.3.2 Raw map



X Index: 249



Y Index: 247



Z Index: 227

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

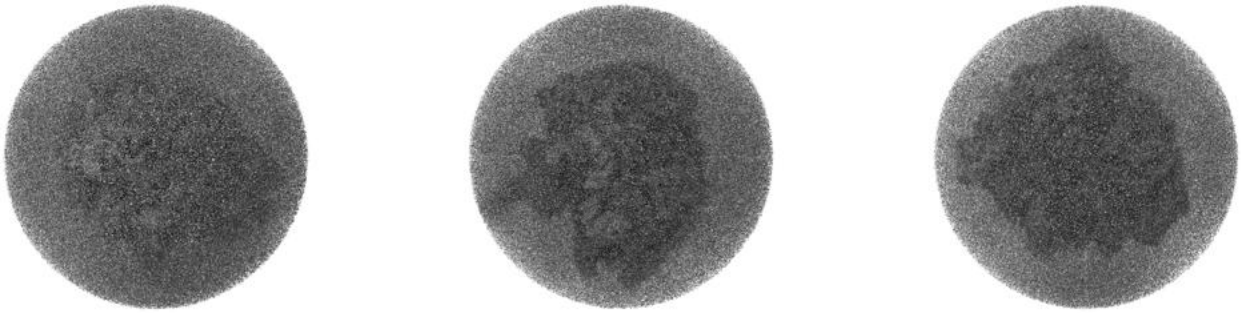
6.4 Orthogonal surface views (i)

6.4.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

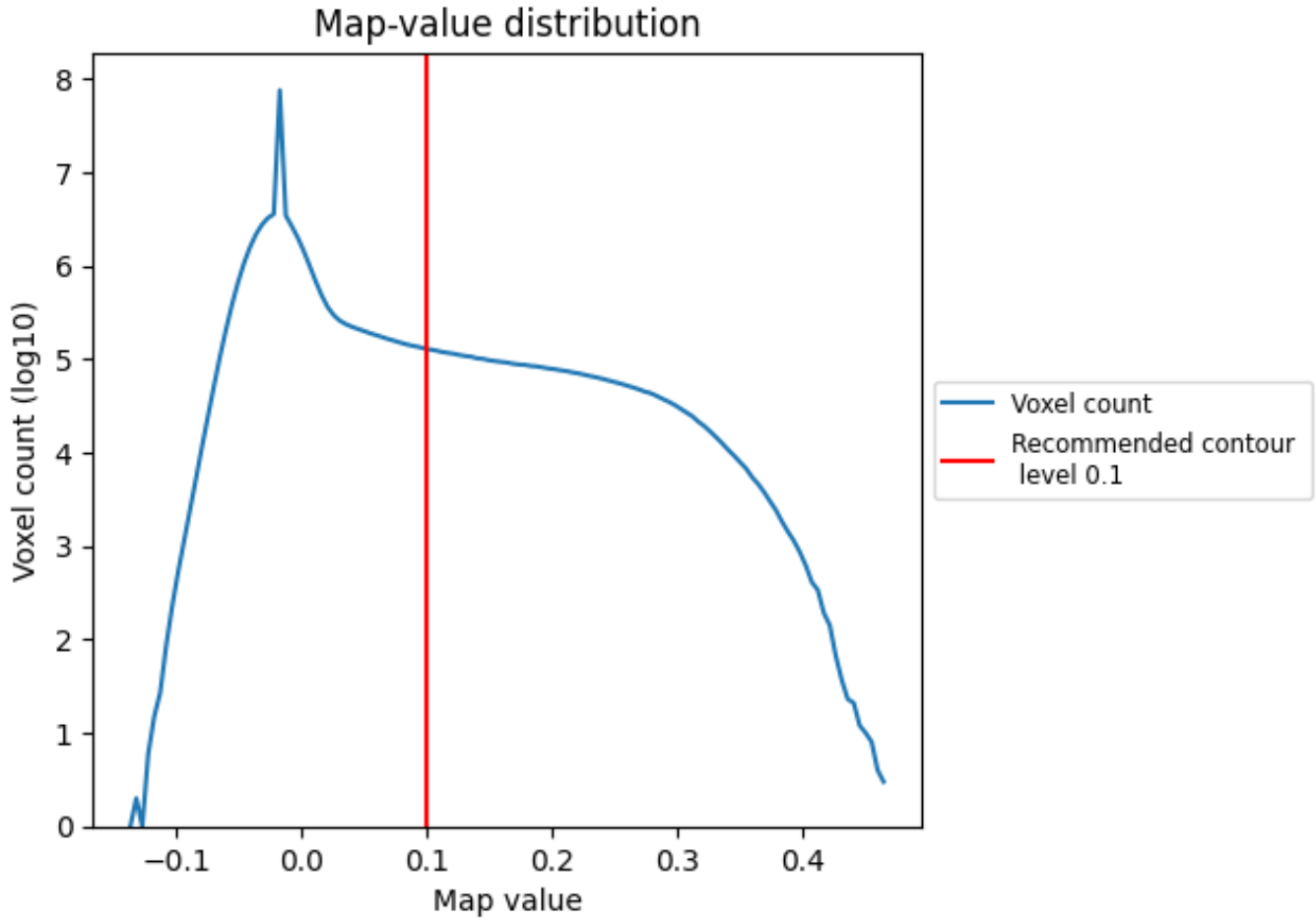
6.5 Mask visualisation (i)

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

7 Map analysis

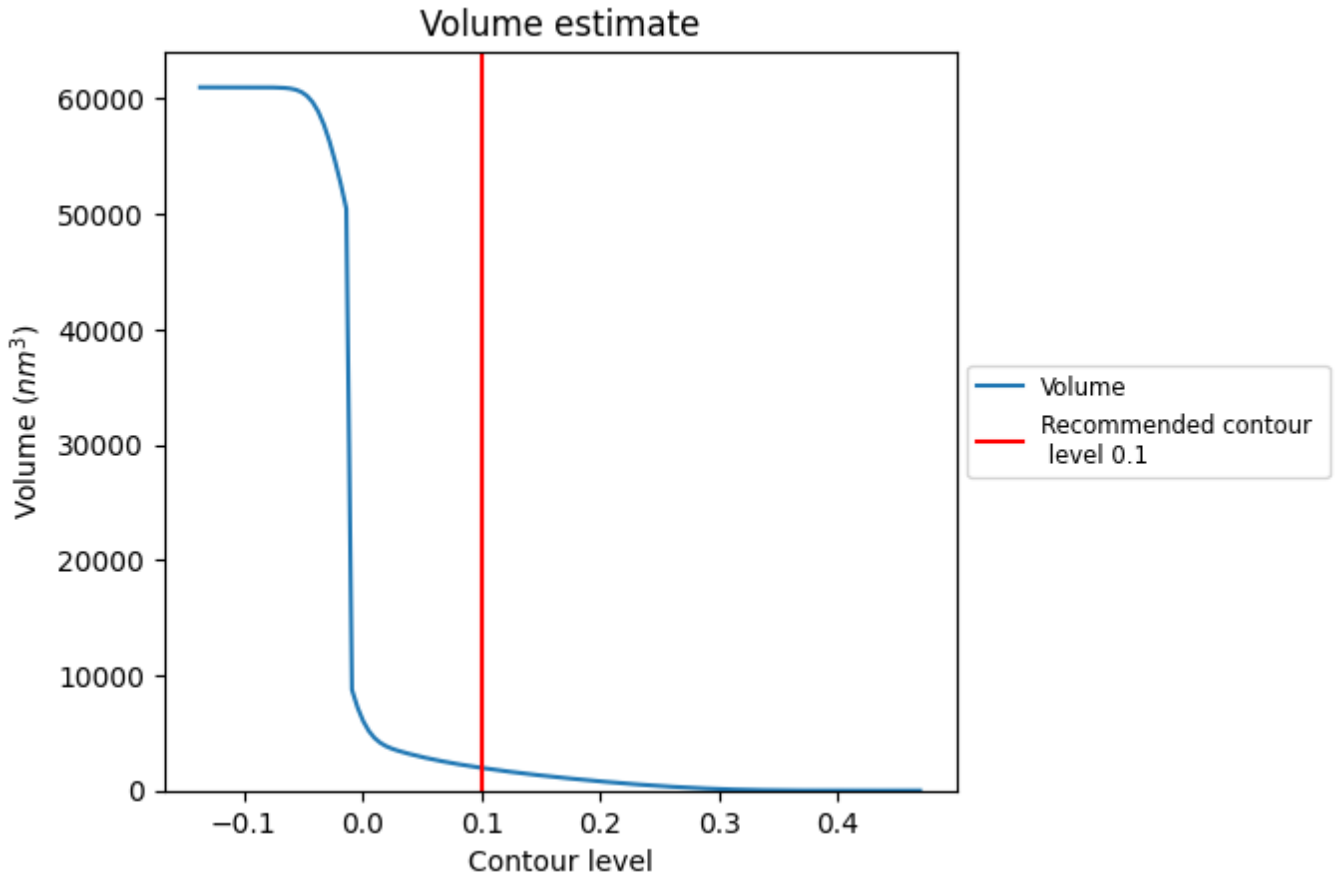
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

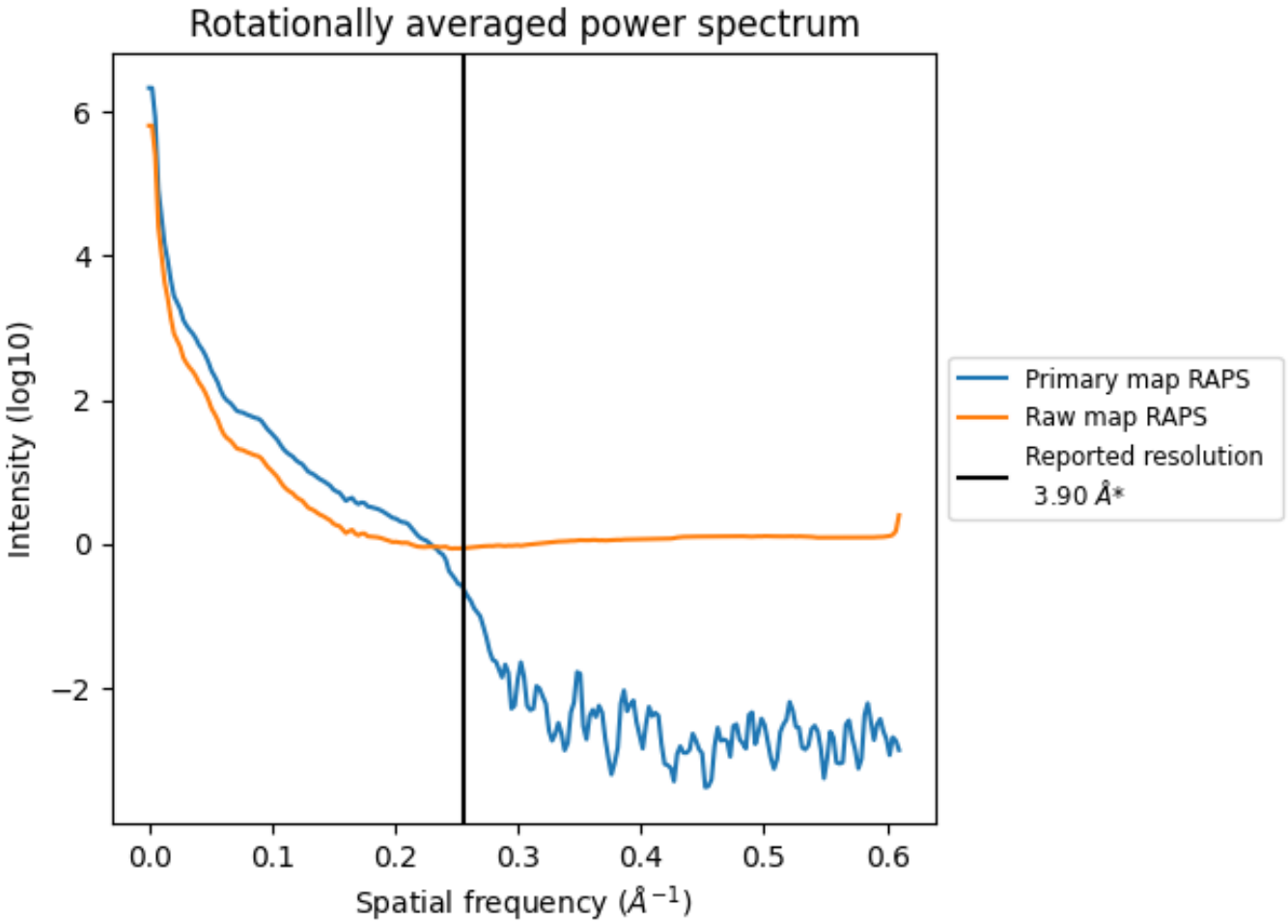
7.2 Volume estimate



The volume at the recommended contour level is 1970 nm^3; this corresponds to an approximate mass of 1779 kDa.

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

7.3 Rotationally averaged power spectrum (i)

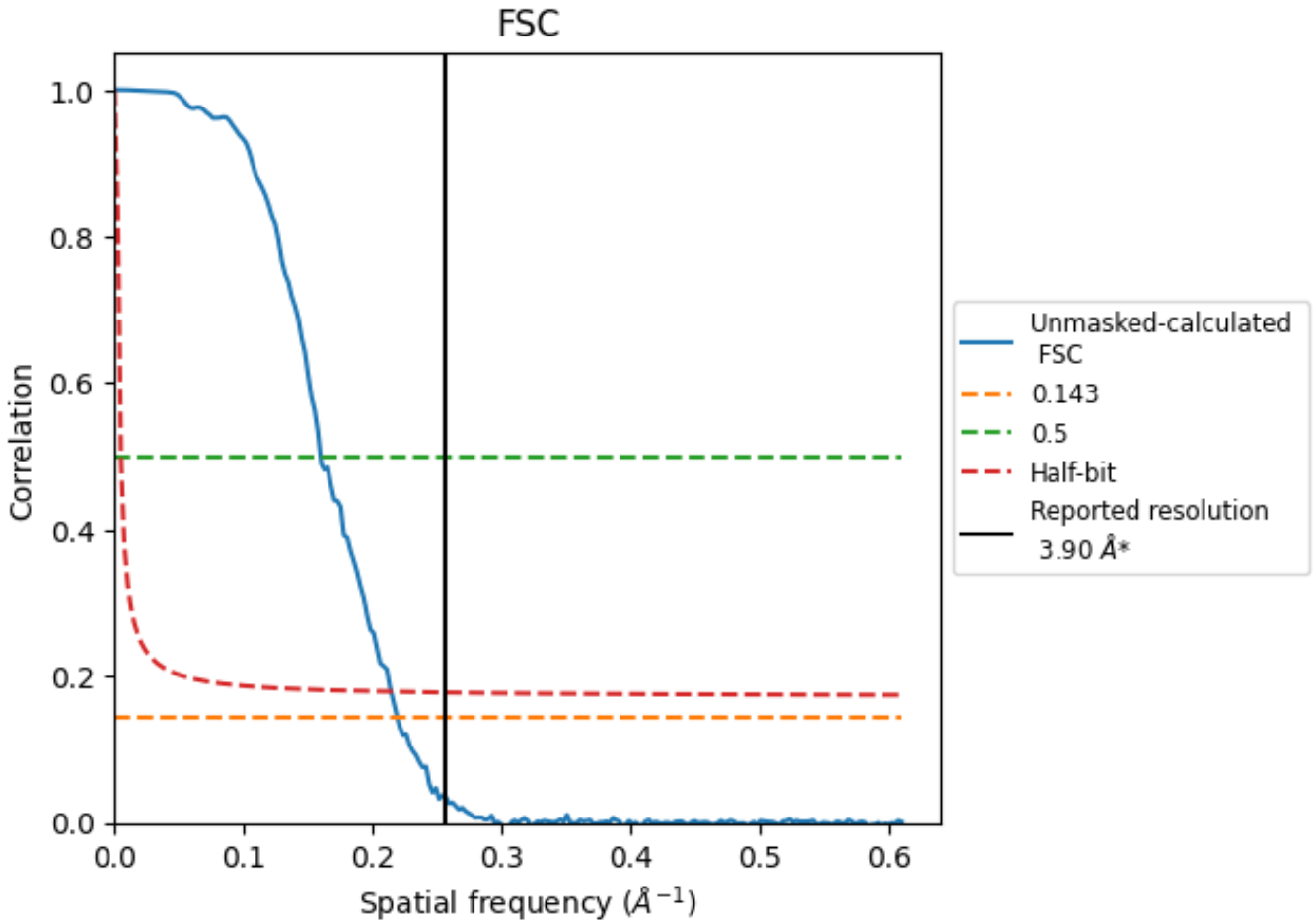


*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8.2 Resolution estimates (i)

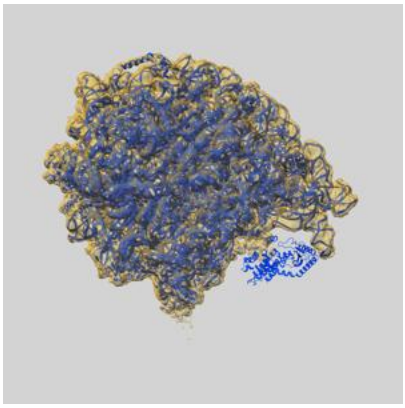
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.57	6.27	4.67

*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 4.57 differs from the reported value 3.9 by more than 10 %

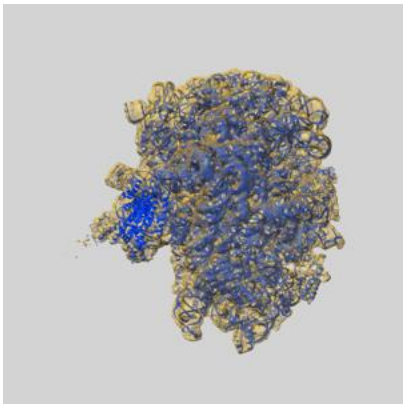
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-8281 and PDB model 5KPW. Per-residue inclusion information can be found in section 3 on page 15.

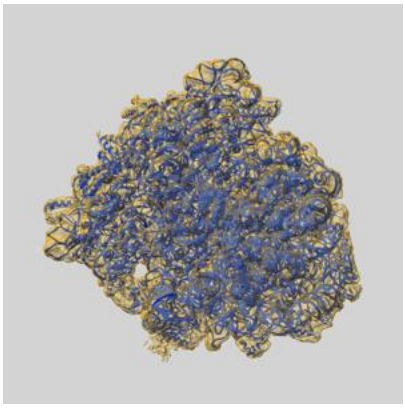
9.1 Map-model overlay



X



Y



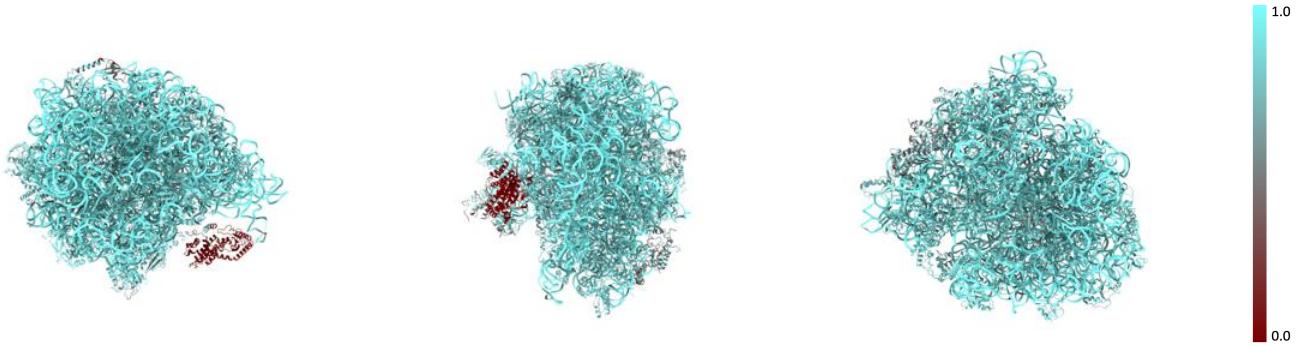
Z

The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model

This section was not generated.

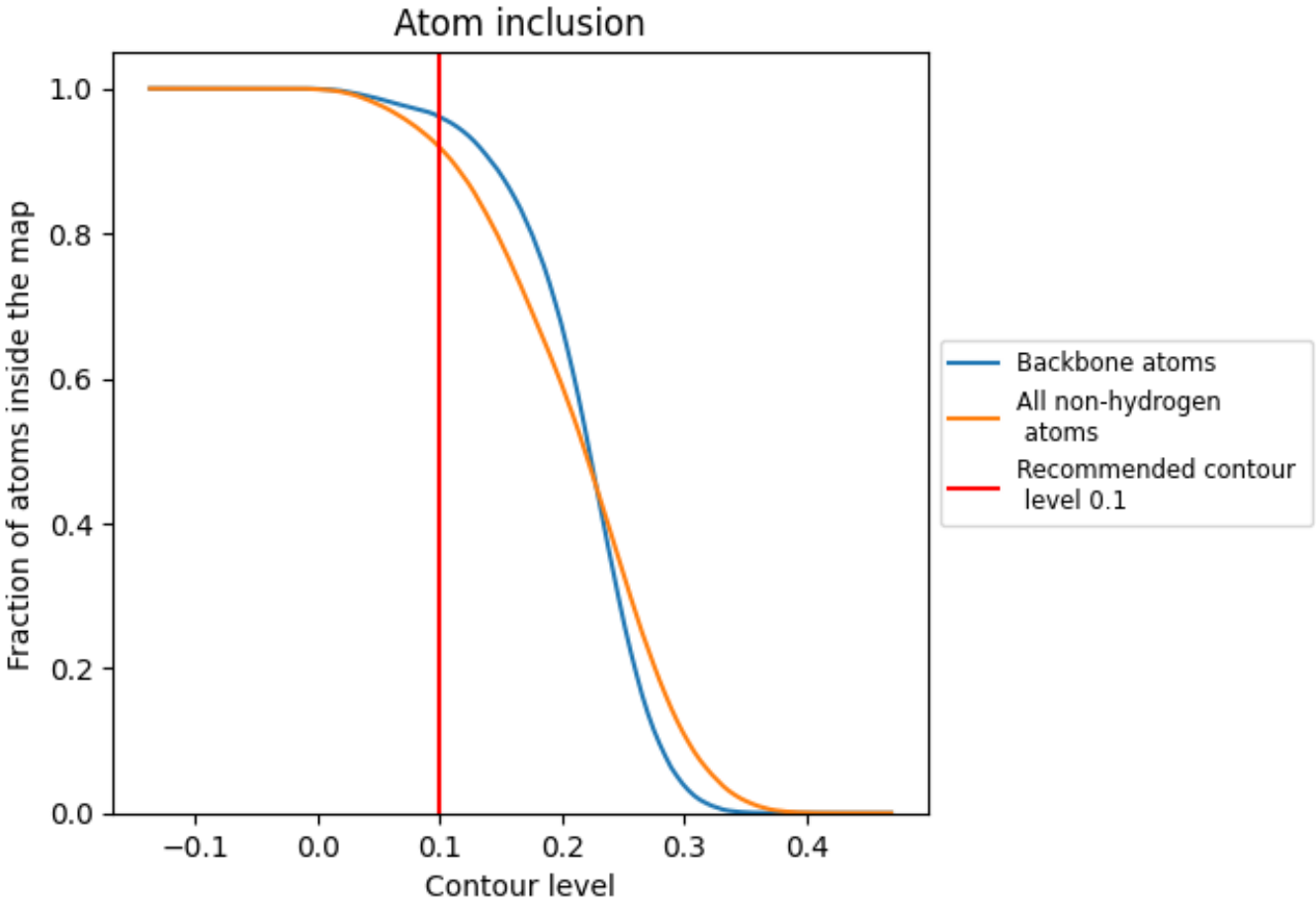
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 96% of all backbone atoms, 92% 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
All	0.9187
1	0.8435
10	0.8518
11	0.8531
12	0.8479
13	0.8631
14	0.7740
15	0.8746
16	0.7991
17	0.8684
18	0.8463
19	0.8754
2	0.7781
20	0.8628
21	0.8434
22	0.8852
23	0.8551
24	0.8508
25	0.7660
26	0.9887
27	0.9906
28	0.9911
29	0.9190
3	0.8563
30	0.9532
31	0.9635
32	0.9026
33	0.3879
4	0.8208
5	0.8390
6	0.5301
7	0.8093
8	0.8176
9	0.8633
A	0.8621

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Chain	Atom inclusion
B	0.8368
C	0.7895
D	0.8471
E	0.8743
F	0.6542
G	0.6508
H	0.7016
I	0.8518
J	0.7788
K	0.8602
L	0.8129
M	0.8829
N	0.8876
O	0.8367
P	0.8623
Q	0.8595
R	0.8062
S	0.8504
T	0.8579
U	0.8469
V	0.8301
W	0.8586
X	0.8290
Y	0.8467
Z	0.8532