Full wwPDB EM Validation Report

Mar 20, 2026 – 12:19 AM UTC

PDB ID	:	5KPV / pdb_00005kpv
EMDB ID	:	EMD-8280
Title	:	Structure of RelA bound to ribosome in presence of A/R tRNA (Structure II)
Authors	:	Loveland, A.B.; Bah, E.; Madireddy, R.; Zhang, Y.; Brilot, A.F.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	2016-07-05
Resolution	:	4.10 Å(reported)

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

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

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

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

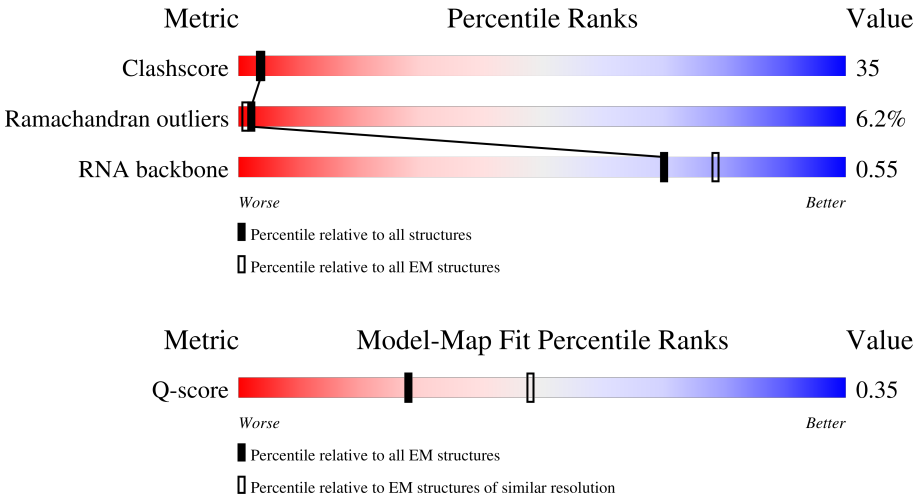
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

1 Overall quality at a glance

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

The reported resolution of this entry is 4.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
RNA backbone	8273	3508	-
Q-score	-	25397	6458 (3.60 - 4.60)

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	37% 56% 7%
2	B	209	44% 52% 5%
3	C	201	39% 52% 9%
4	D	179	32% 61%

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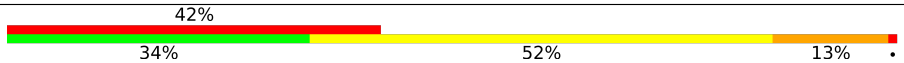
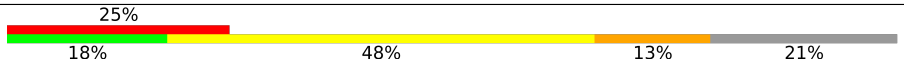
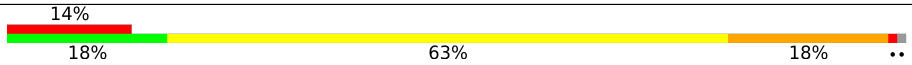
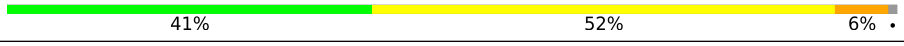
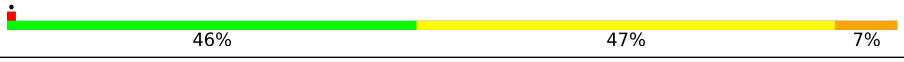
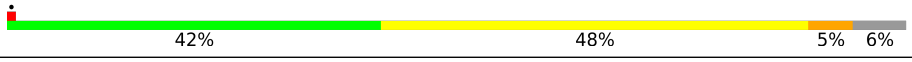
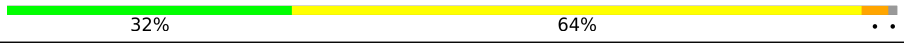
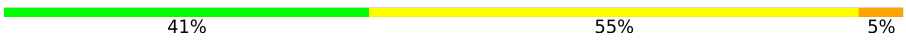
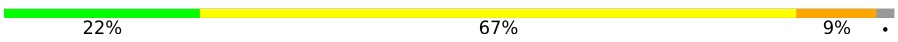
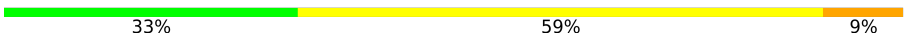
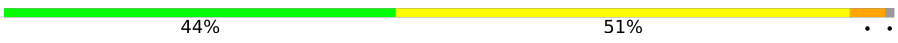
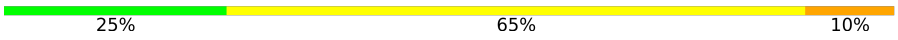
Mol	Chain	Length	Quality of chain
5	E	177	
6	F	149	
7	G	165	
8	H	142	
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	

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Mol	Chain	Length	Quality of chain
30	4	65	45% 51%
31	5	38	32% 55% 13%
32	6	241	17% 33% 48% 10% 10%
33	7	233	34% 50% 12%
34	8	206	29% 63% 8%
35	9	167	31% 51% 12% 6%
36	10	135	16% 45% 13% 26%
37	11	179	27% 53% 5% 16%
38	12	130	34% 57% 8%
39	13	130	21% 65% 12%
40	14	103	22% 65% 8% 5%
41	15	129	26% 53% 11% 10%
42	16	124	29% 54% 15%
43	17	118	35% 53% 9%
44	18	101	28% 65% 6%
45	19	89	40% 53% 6%
46	20	82	23% 66% 11%
47	21	84	33% 50% 12% 5%
48	22	75	24% 49% 13% 13%
49	23	92	22% 55% 9% 14%
50	24	87	29% 66%
51	25	71	20% 61% 11% 8%
52	26	1539	20% 70% 10%
53	27	2903	19% 68% 12%
54	28	120	20% 71% 8%

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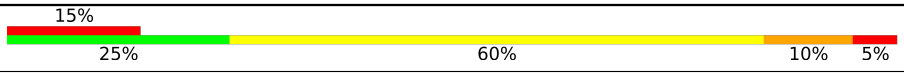
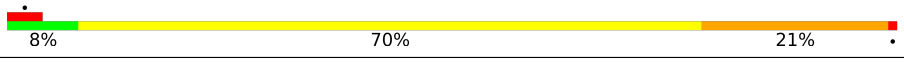
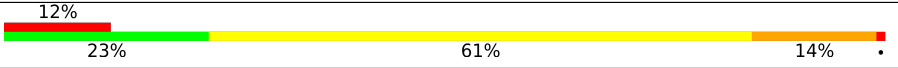
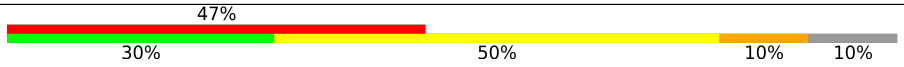
Mol	Chain	Length	Quality of chain
55	29	20	
56	30	76	
57	31	77	
58	32	77	
59	33	750	

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:

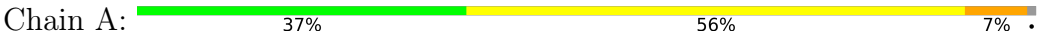
Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag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

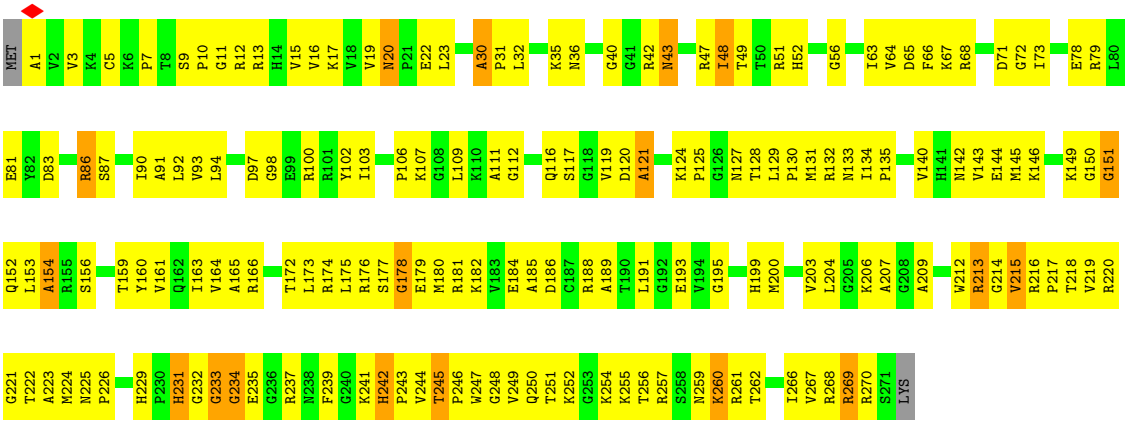
3 Residue-property plots (i)

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:



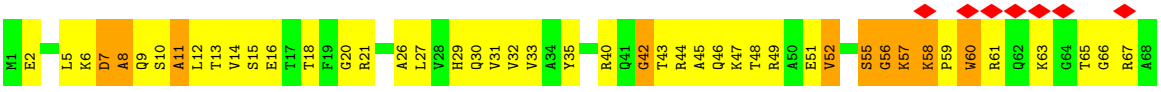


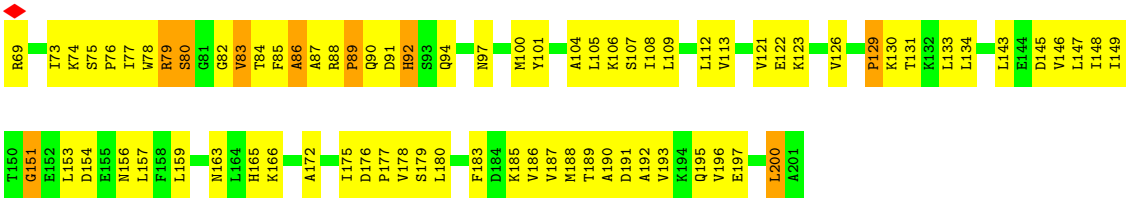
• Molecule 2: 50S ribosomal protein L3

Chain B:

• Molecule 3: 50S ribosomal protein L4

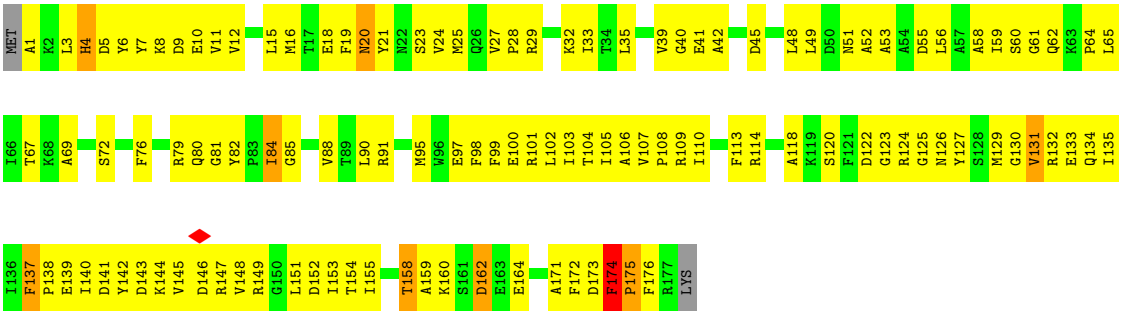
Chain C:





• Molecule 4: 50S ribosomal protein L5

Chain D:

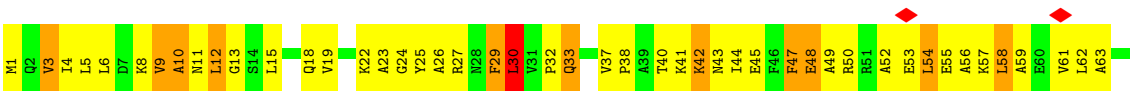


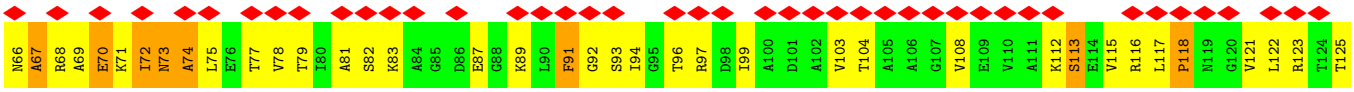
• Molecule 5: 50S ribosomal protein L6

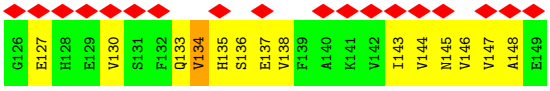
Chain E:

• Molecule 6: 50S ribosomal protein L9

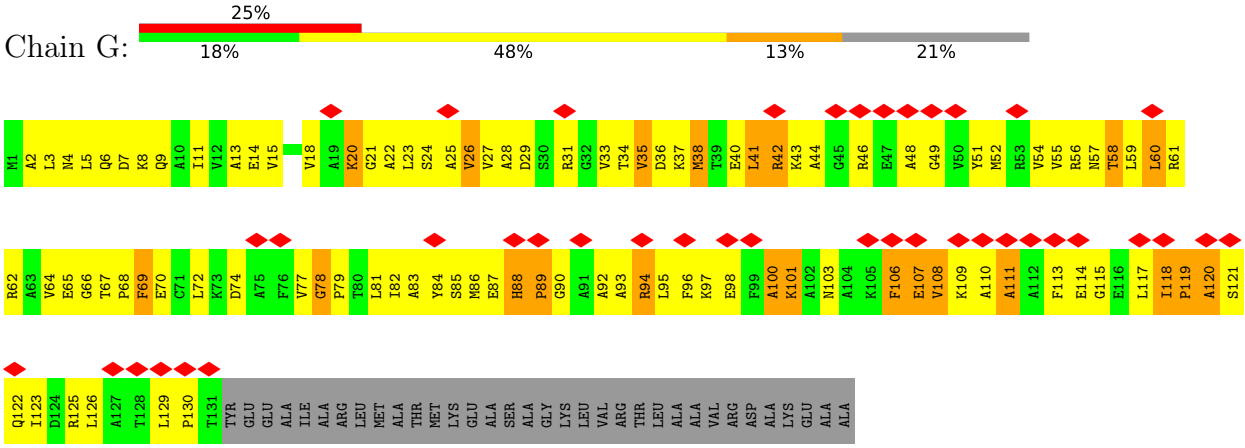
Chain F:



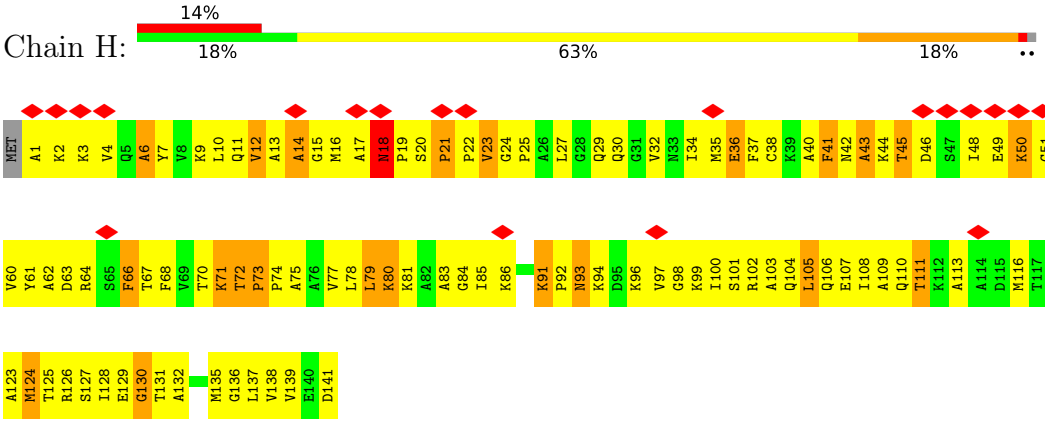




• Molecule 7: 50S ribosomal protein L10

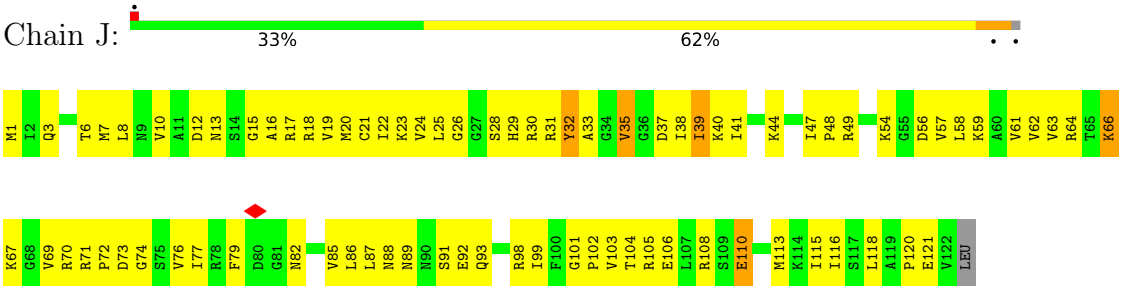


• Molecule 8: 50S ribosomal protein L11



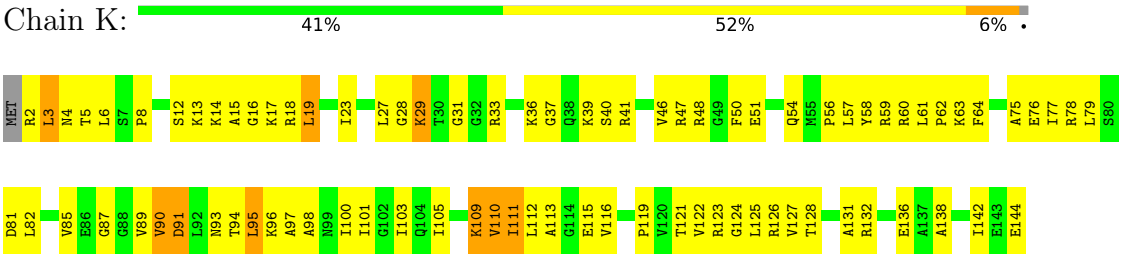
• Molecule 9: 50S ribosomal protein L13

• Molecule 10: 50S ribosomal protein L14



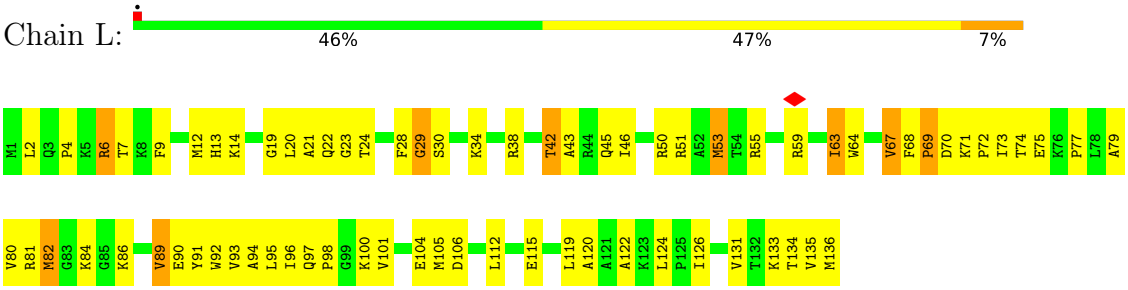
• Molecule 11: 50S ribosomal protein L15

Chain K:



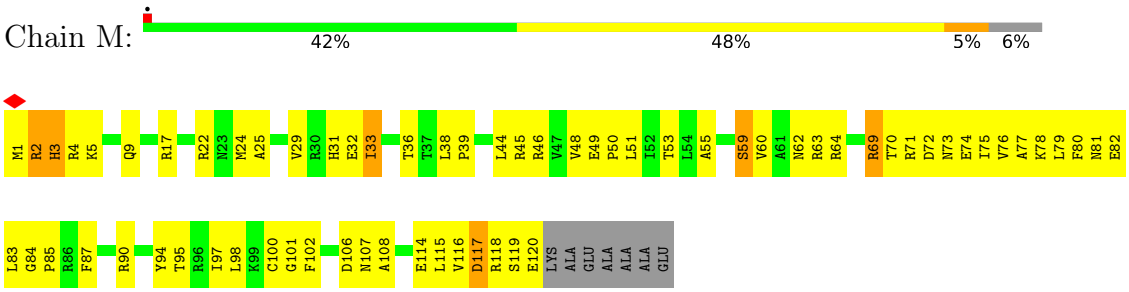
• Molecule 12: 50S ribosomal protein L16

Chain L:



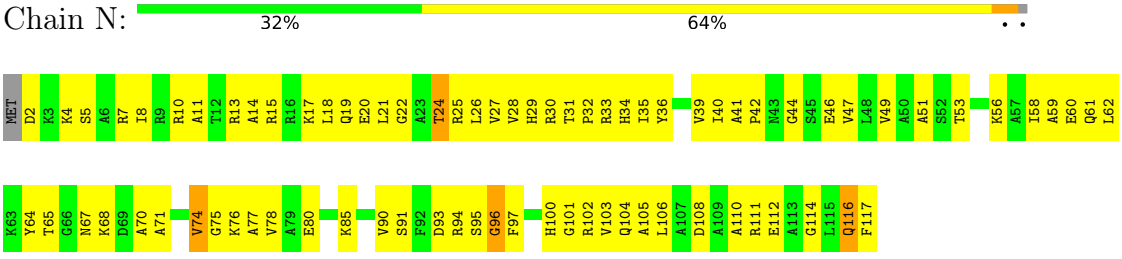
• Molecule 13: 50S ribosomal protein L17

Chain M:



• Molecule 14: 50S ribosomal protein L18

Chain N:

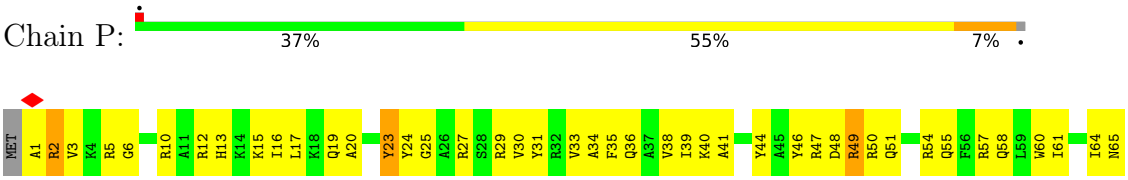


• Molecule 15: 50S ribosomal protein L19

Chain O:

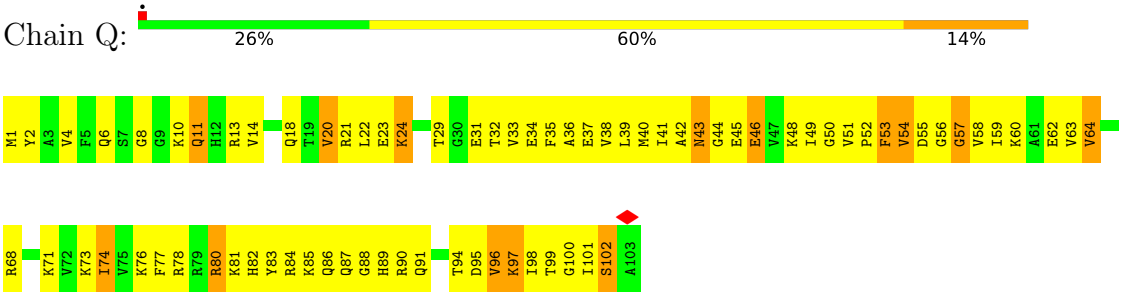
• Molecule 16: 50S ribosomal protein L20

Chain P:



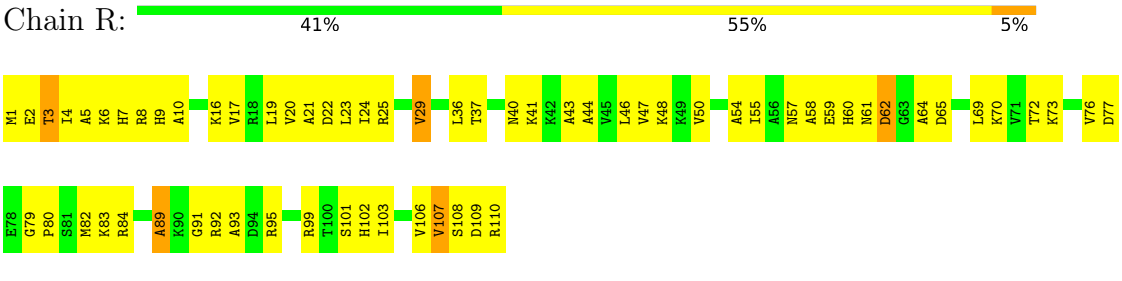
• Molecule 17: 50S ribosomal protein L21

Chain Q:



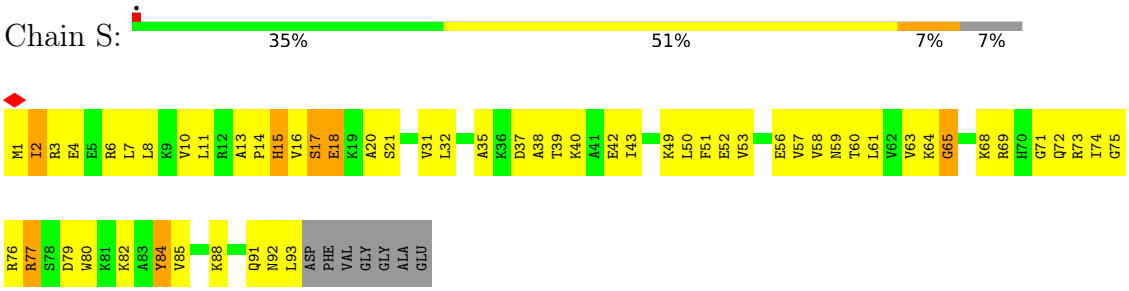
• Molecule 18: 50S ribosomal protein L22

Chain R:



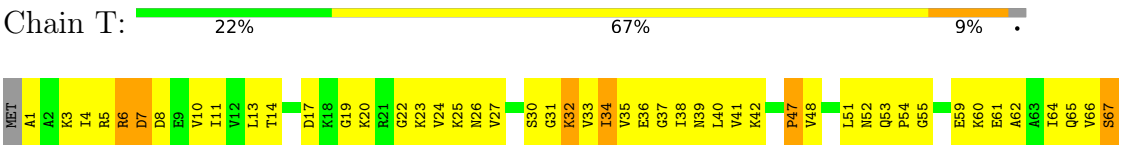
• Molecule 19: 50S ribosomal protein L23

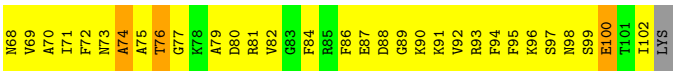
Chain S:



• Molecule 20: 50S ribosomal protein L24

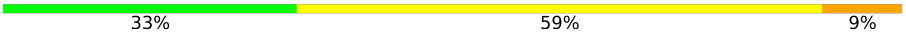
Chain T:

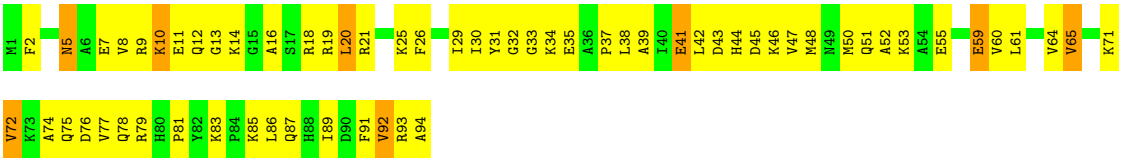




• Molecule 21: 50S ribosomal protein L25

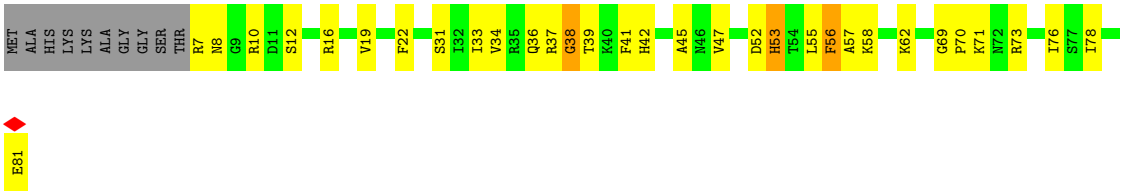
Chain U:





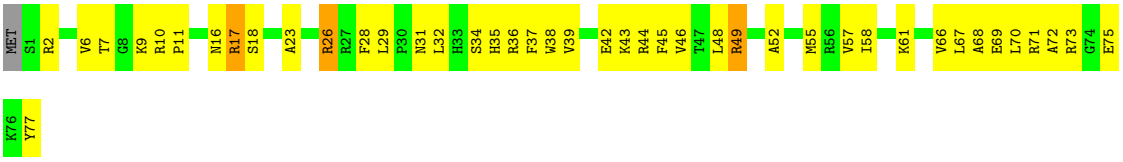
• Molecule 22: 50S ribosomal protein L27

Chain V:



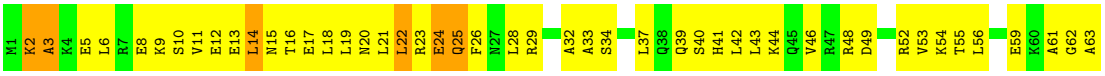
• Molecule 23: 50S ribosomal protein L28

Chain W:



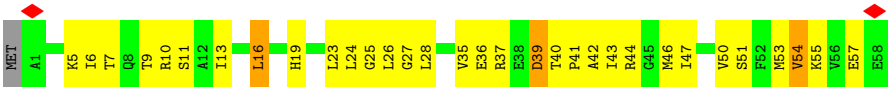
• Molecule 24: 50S ribosomal protein L29

Chain X:



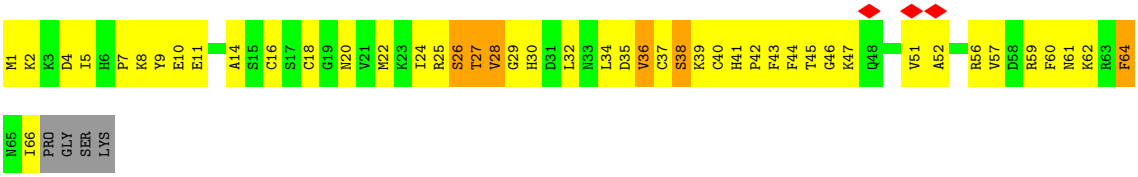
• Molecule 25: 50S ribosomal protein L30

Chain Y:



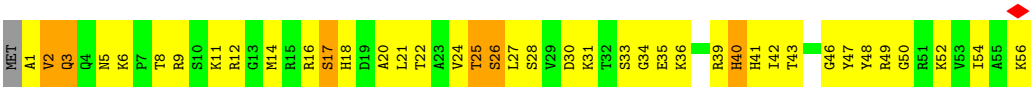
• Molecule 26: 50S ribosomal protein L31

Chain Z:



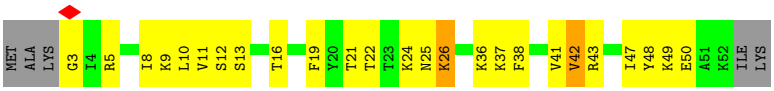
• Molecule 27: 50S ribosomal protein L32

Chain 1:



• Molecule 28: 50S ribosomal protein L33

Chain 2:



• Molecule 29: 50S ribosomal protein L34

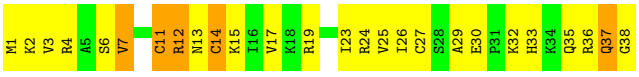
Chain 3:

• Molecule 30: 50S ribosomal protein L35

Chain 4:

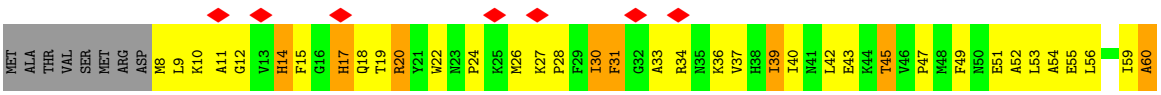
• Molecule 31: 50S ribosomal protein L36

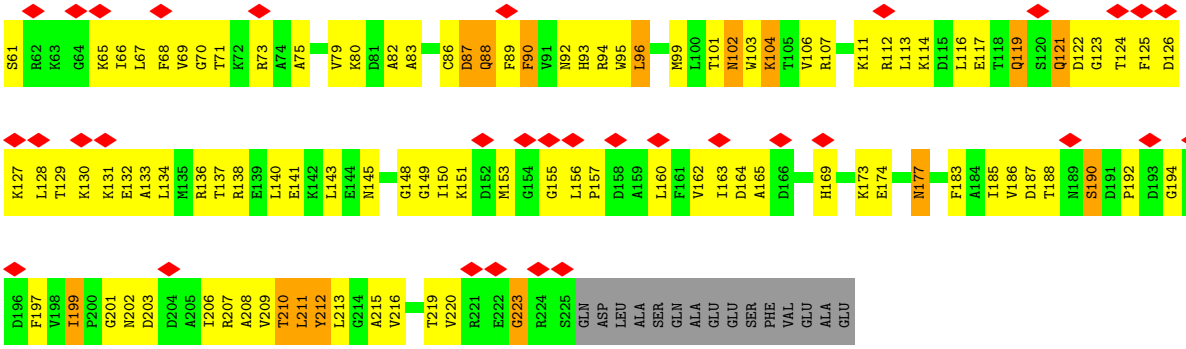
Chain 5:



• Molecule 32: 30S ribosomal protein S2

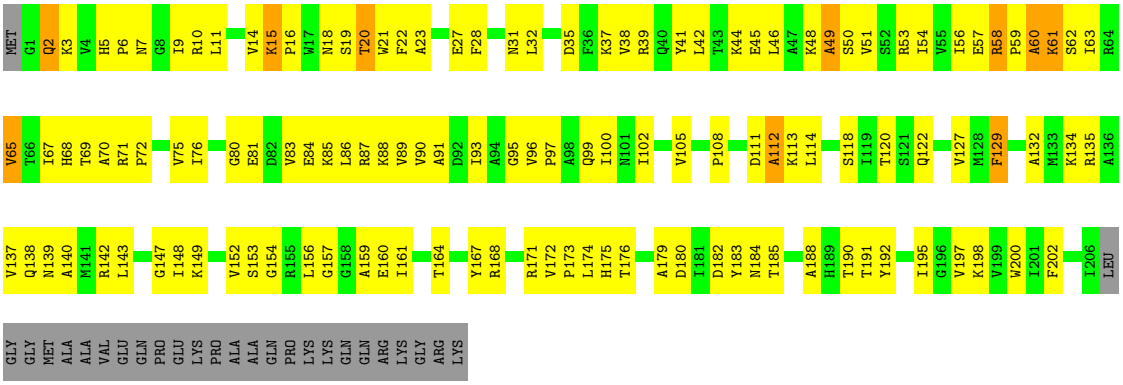
Chain 6:





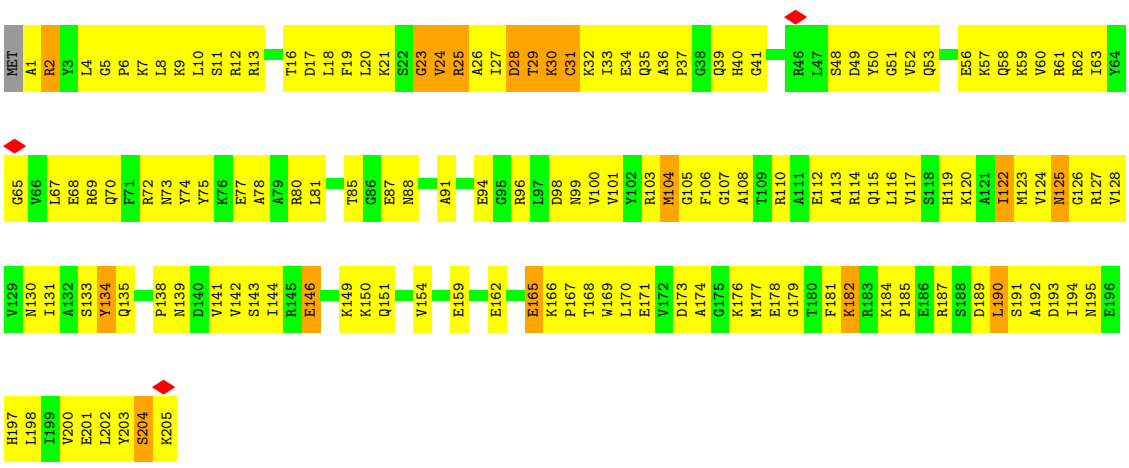
• Molecule 33: 30S ribosomal protein S3

Chain 7:



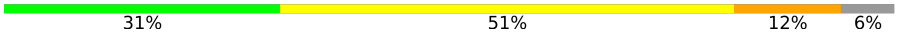
• Molecule 34: 30S ribosomal protein S4

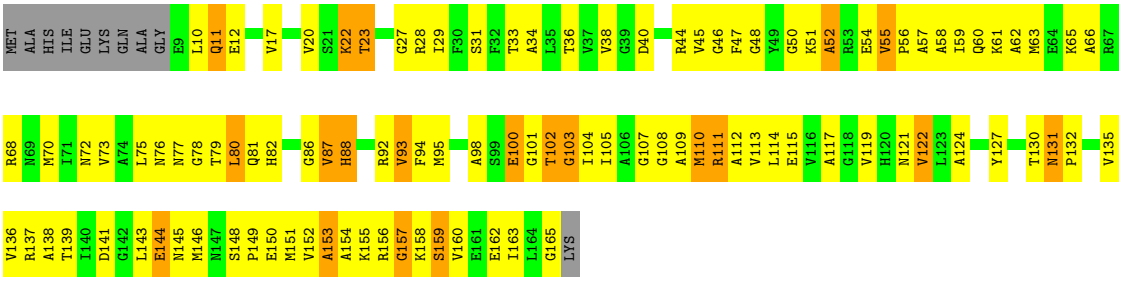
Chain 8:



• Molecule 35: 30S ribosomal protein S5

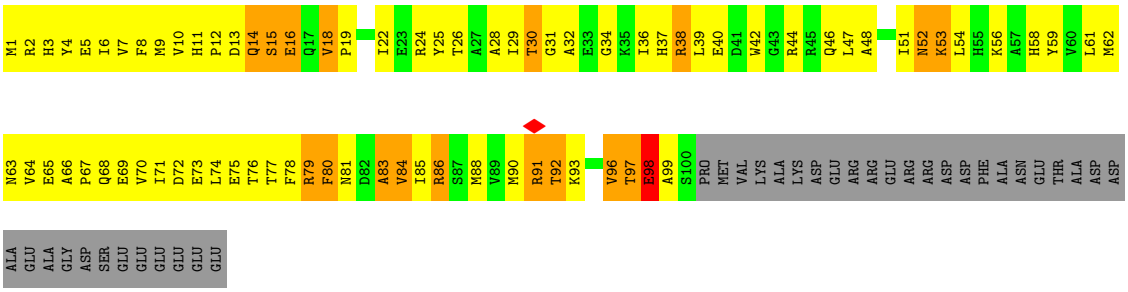
Chain 9:





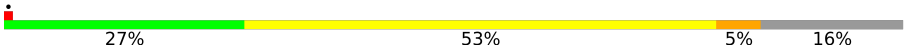
• Molecule 36: 30S ribosomal protein S6

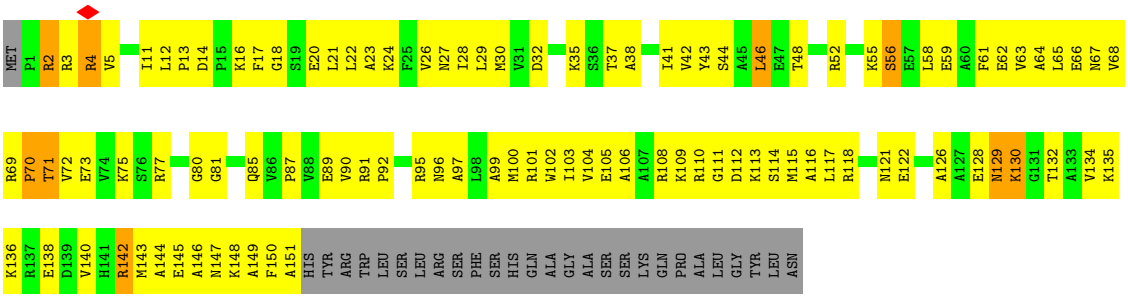
Chain 10:



• Molecule 37: 30S ribosomal protein S7

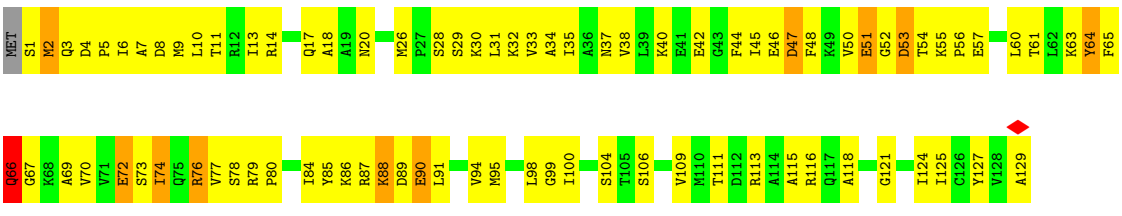
Chain 11:





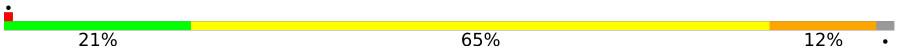
• Molecule 38: 30S ribosomal protein S8

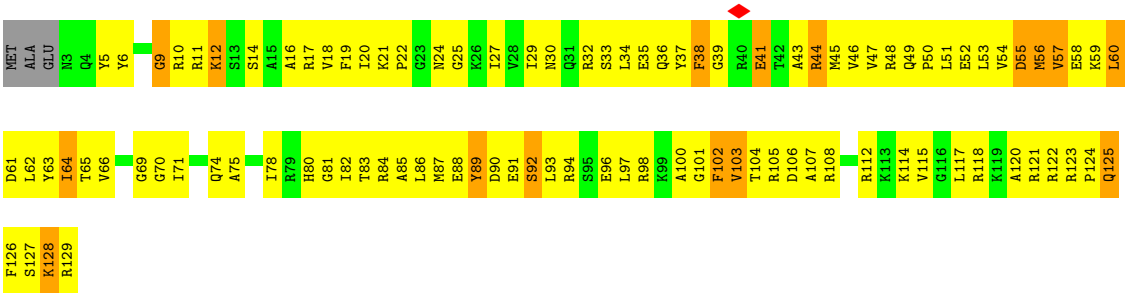
Chain 12:



• Molecule 39: 30S ribosomal protein S9

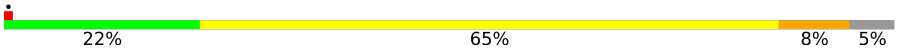
Chain 13:

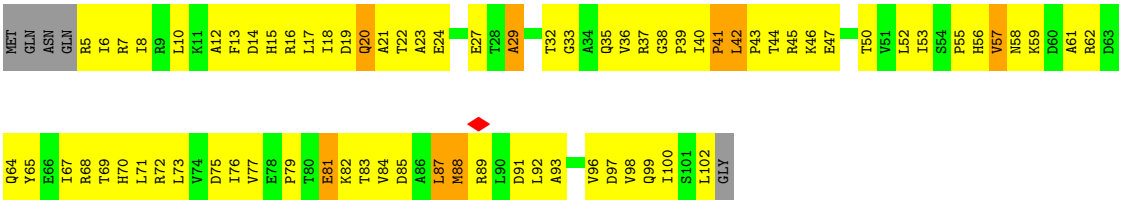




• Molecule 40: 30S ribosomal protein S10

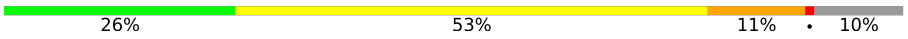
Chain 14:

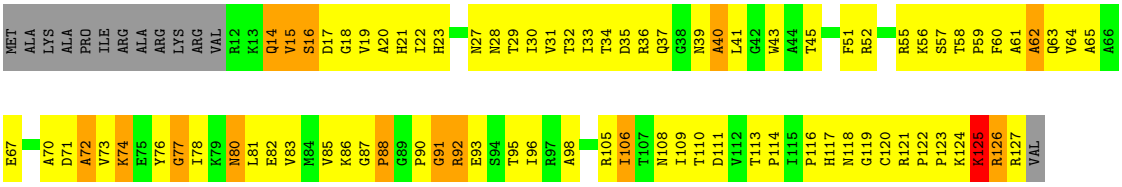




• Molecule 41: 30S ribosomal protein S11

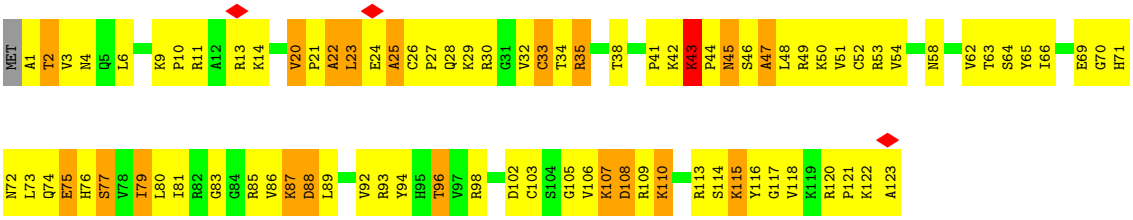
Chain 15:





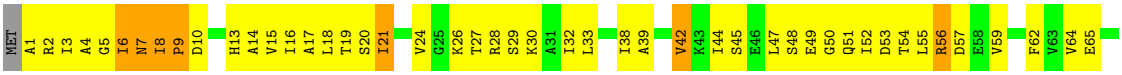
• Molecule 42: 30S ribosomal protein S12

Chain 16:



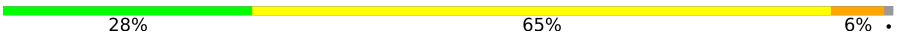
• Molecule 43: 30S ribosomal protein S13

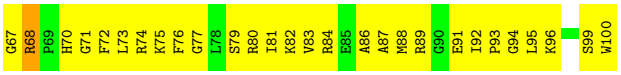
Chain 17:



• Molecule 44: 30S ribosomal protein S14

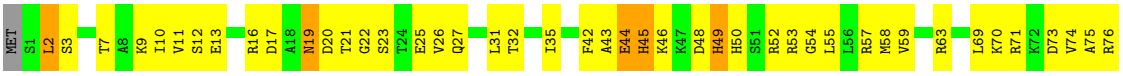
Chain 18:

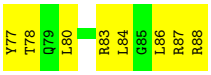




• Molecule 45: 30S ribosomal protein S15

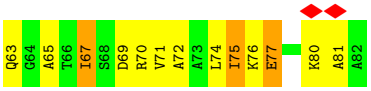
Chain 19:





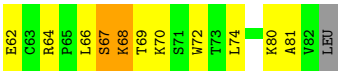
• Molecule 46: 30S ribosomal protein S16

Chain 20:



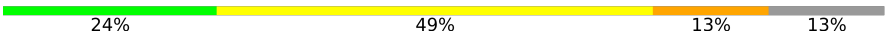
• Molecule 47: 30S ribosomal protein S17

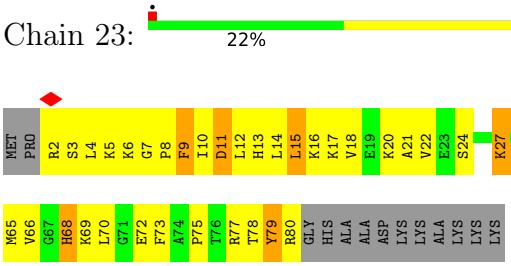
Chain 21:



• Molecule 48: 30S ribosomal protein S18

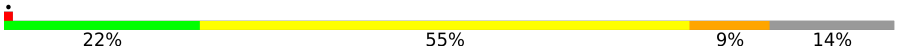
Chain 22:

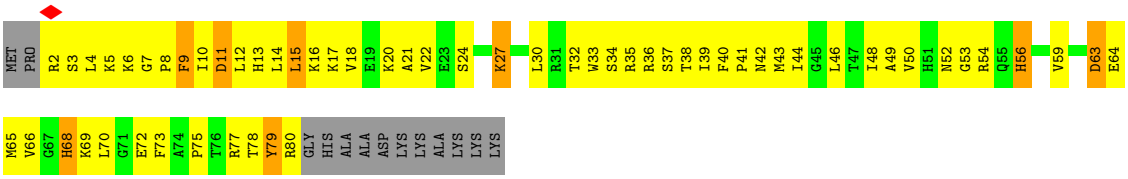




• Molecule 49: 30S ribosomal protein S19

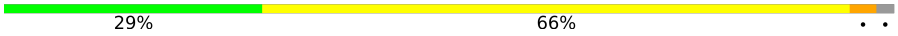
Chain 23:





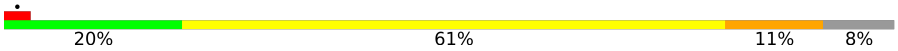
• Molecule 50: 30S ribosomal protein S20

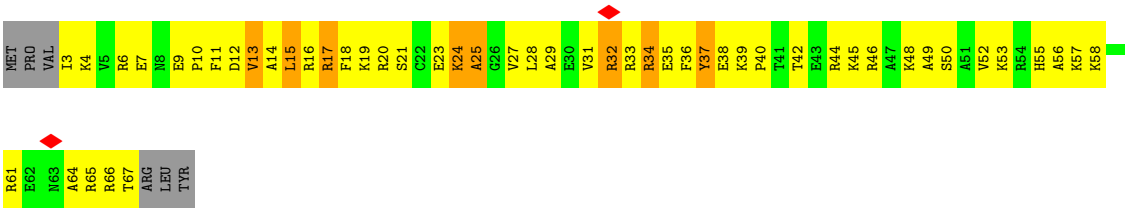
Chain 24:



• Molecule 51: 30S ribosomal protein S21

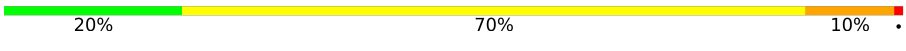
Chain 25:

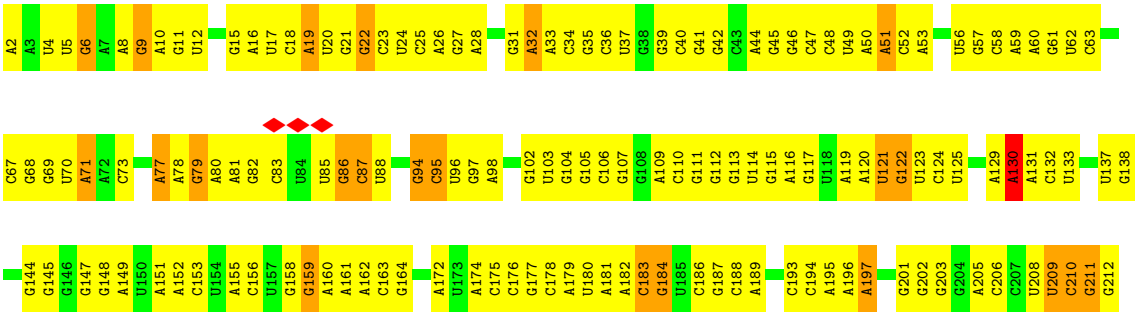


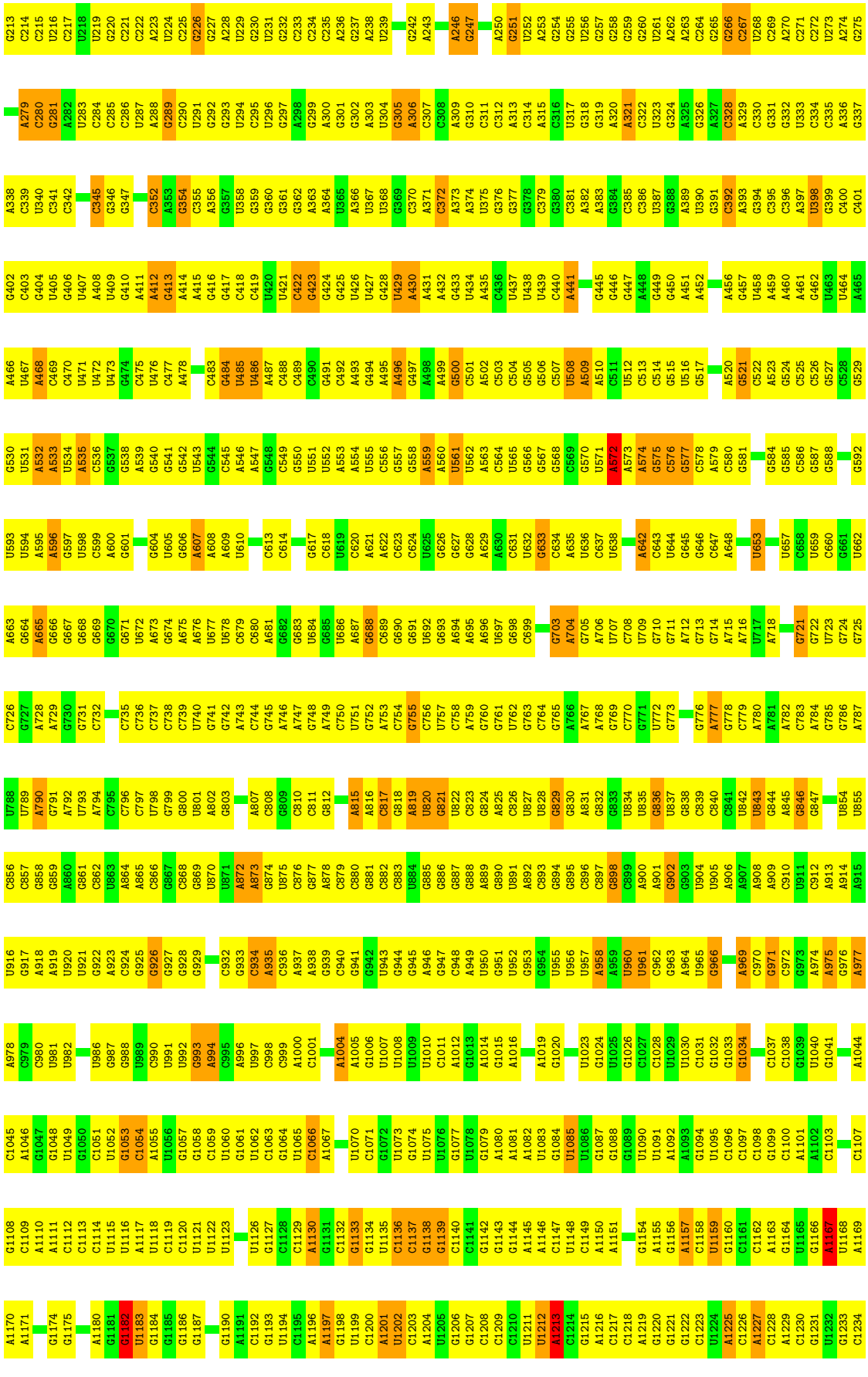


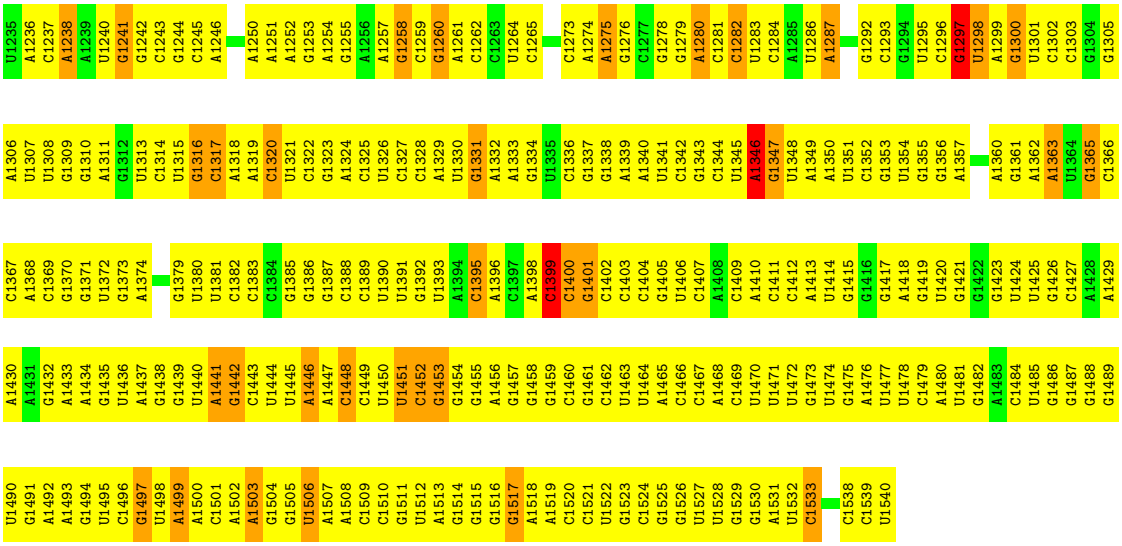
• Molecule 52: 16S ribosomal RNA

Chain 26:



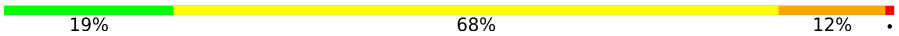


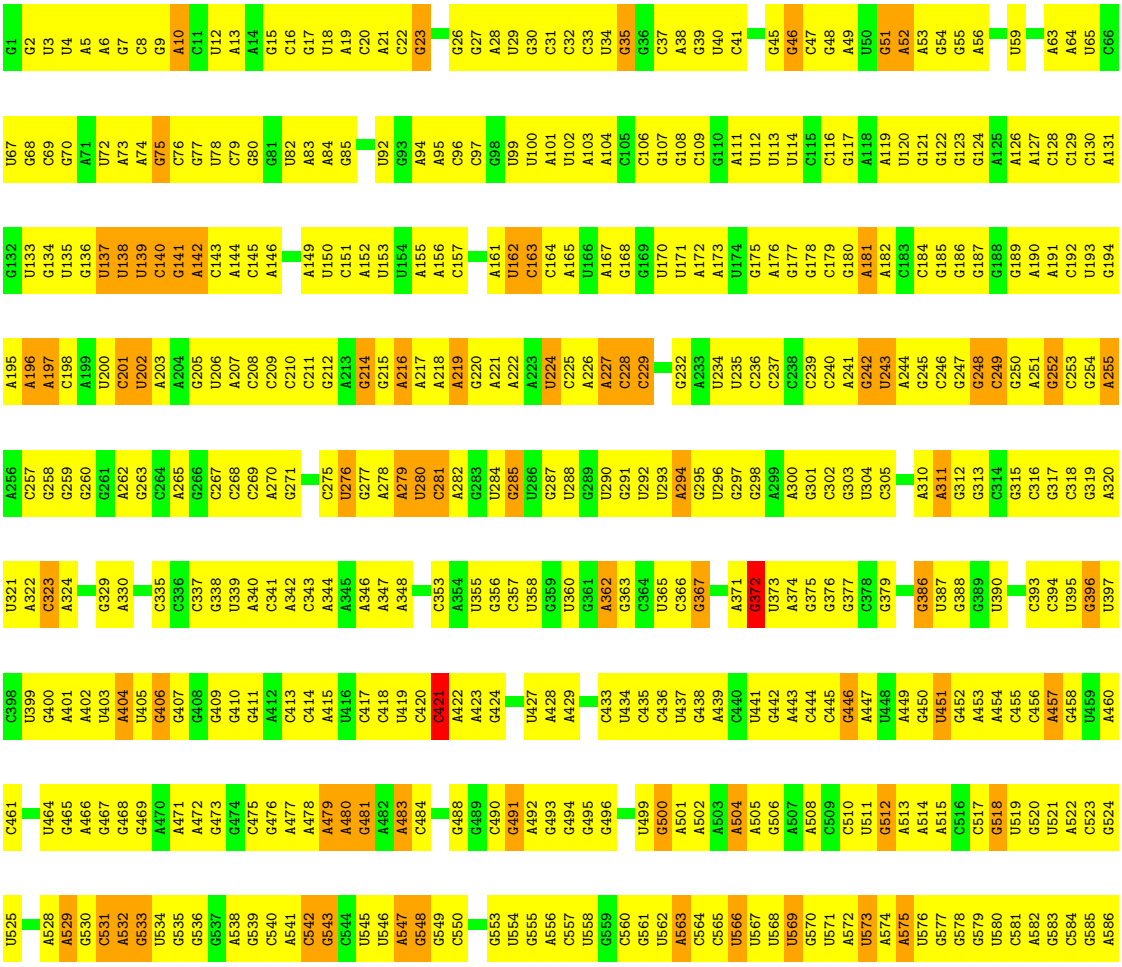


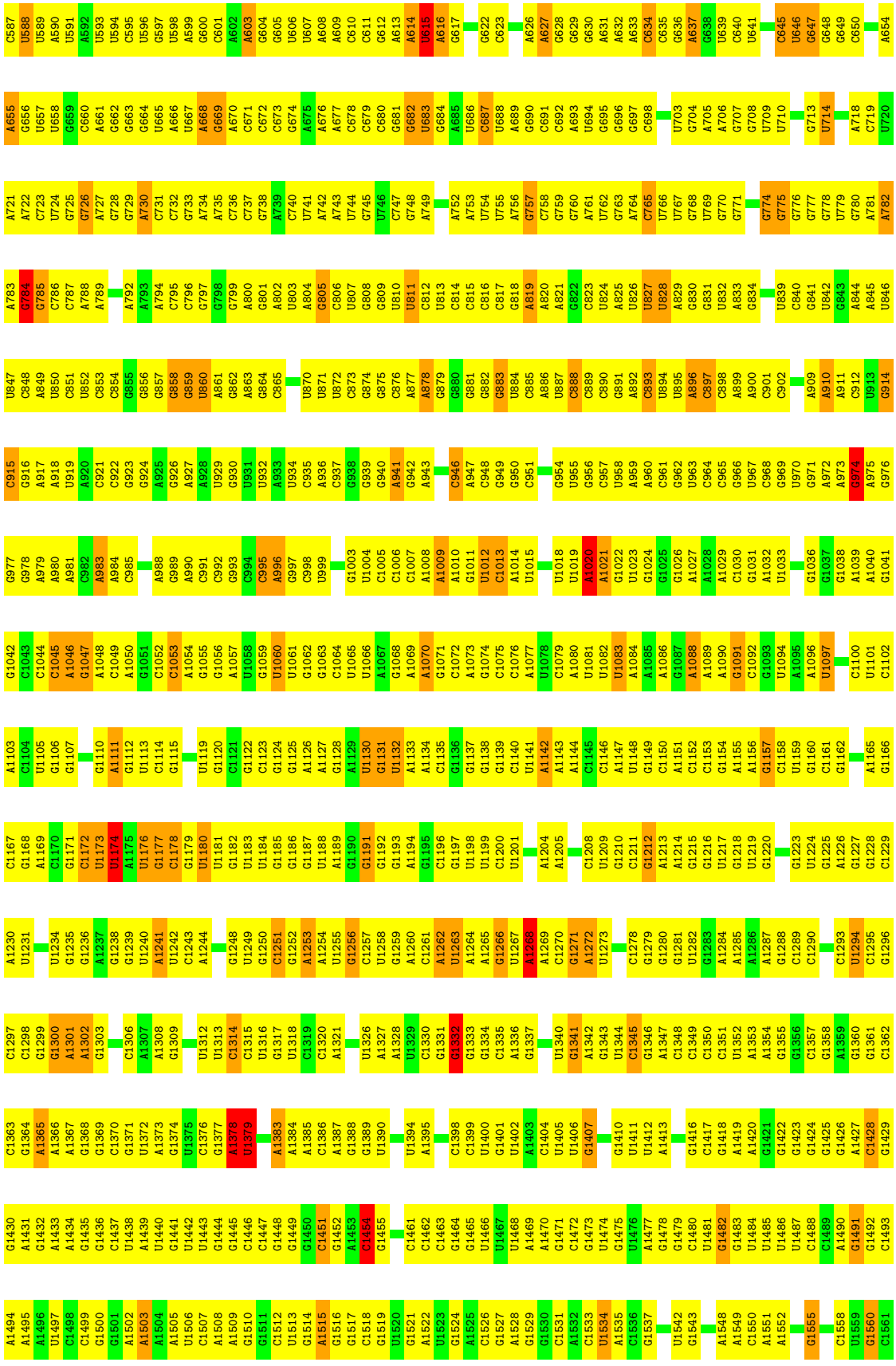


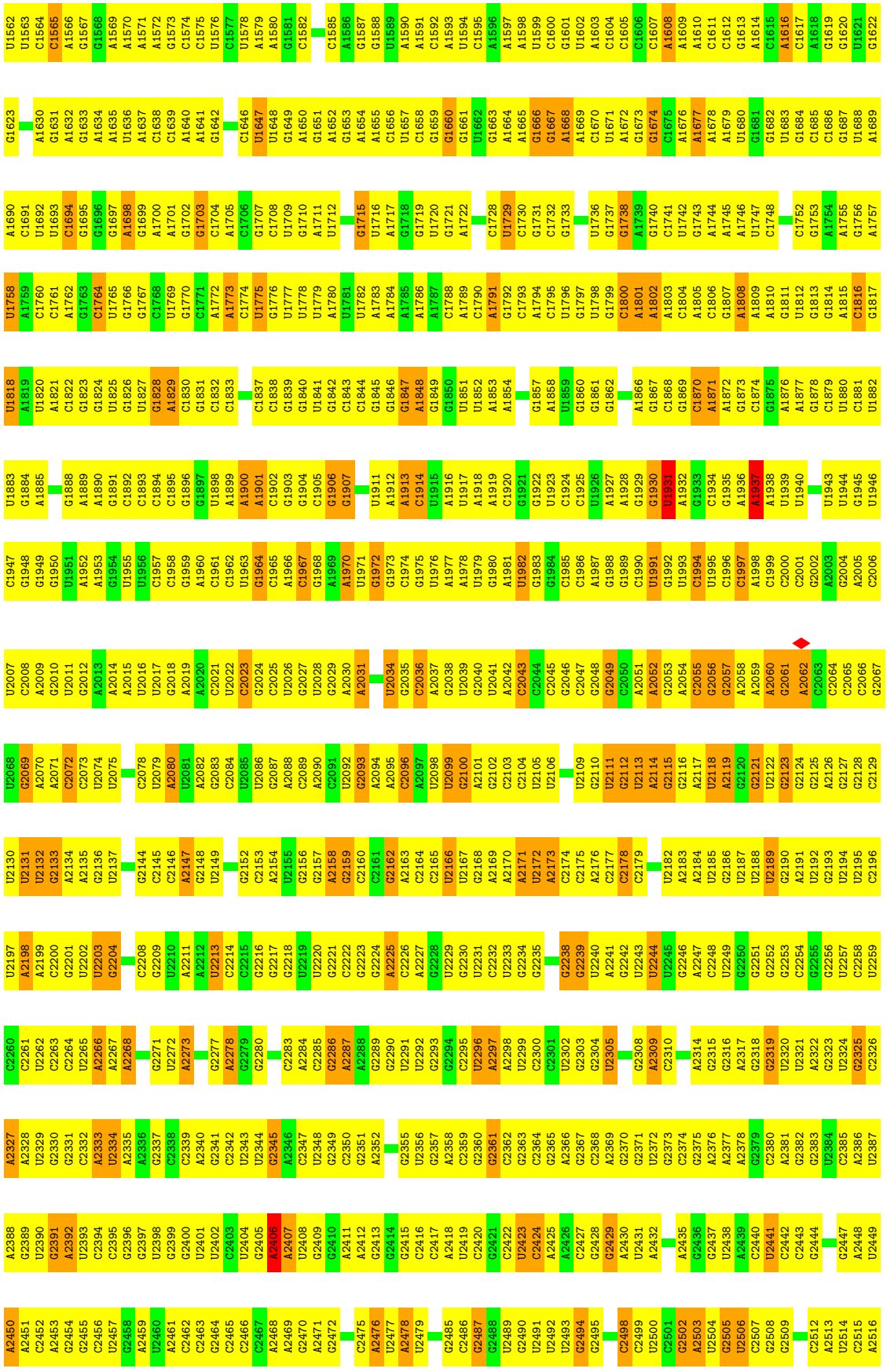
• Molecule 53: 23S ribosomal RNA

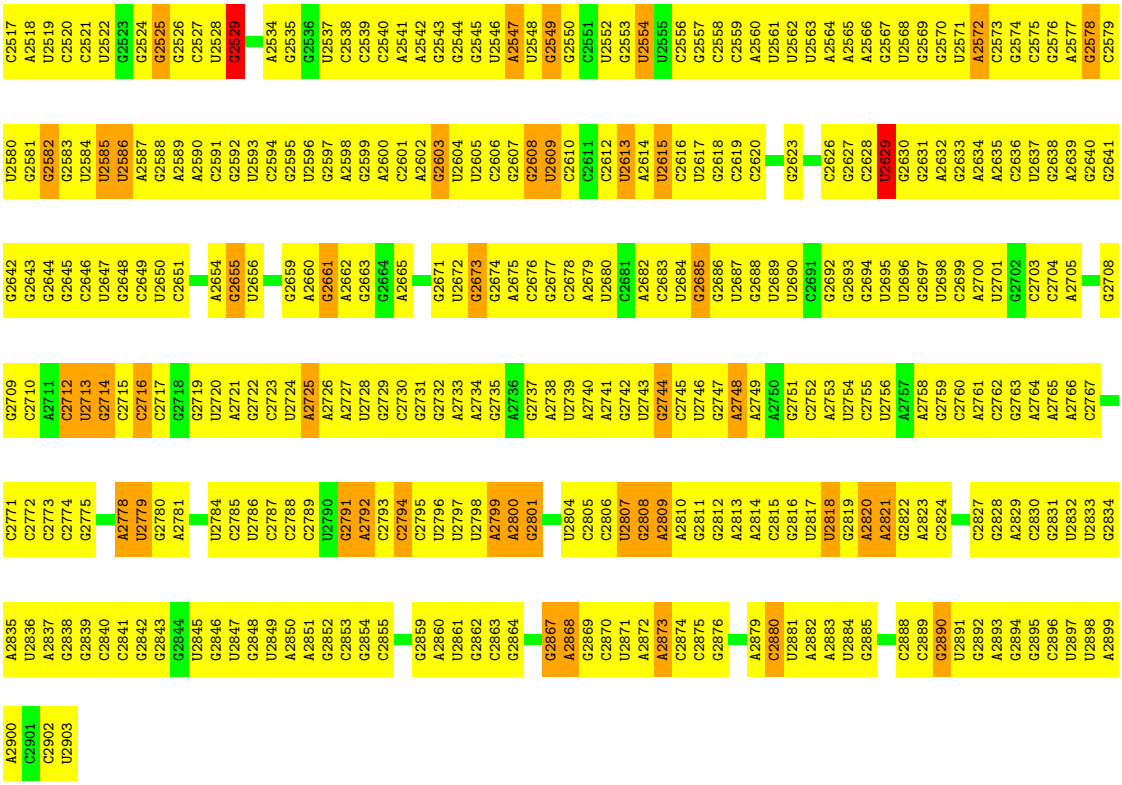
Chain 27:





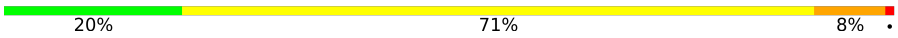


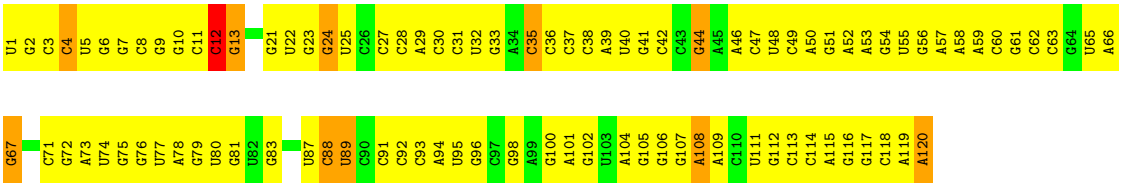




• Molecule 54: 5S ribosomal RNA

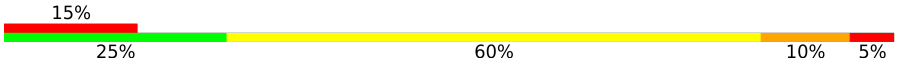
Chain 28:

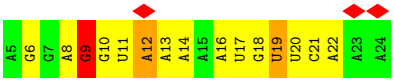




• Molecule 55: mRNA

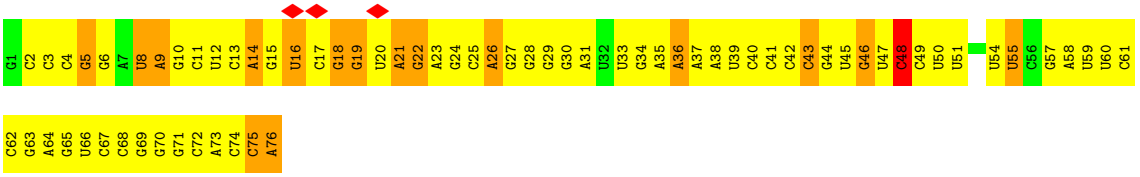
Chain 29:





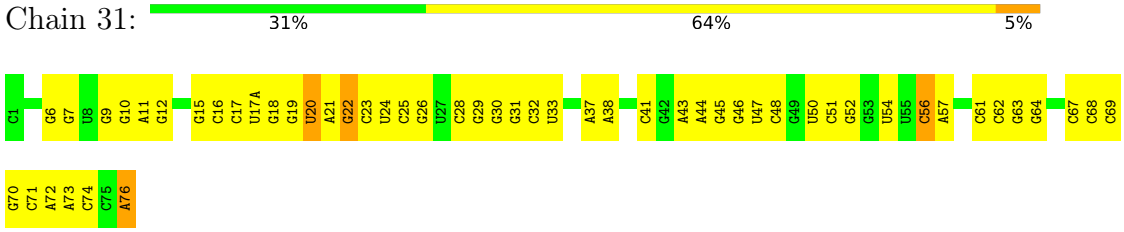
• Molecule 56: A-site tRNAPhe

Chain 30:



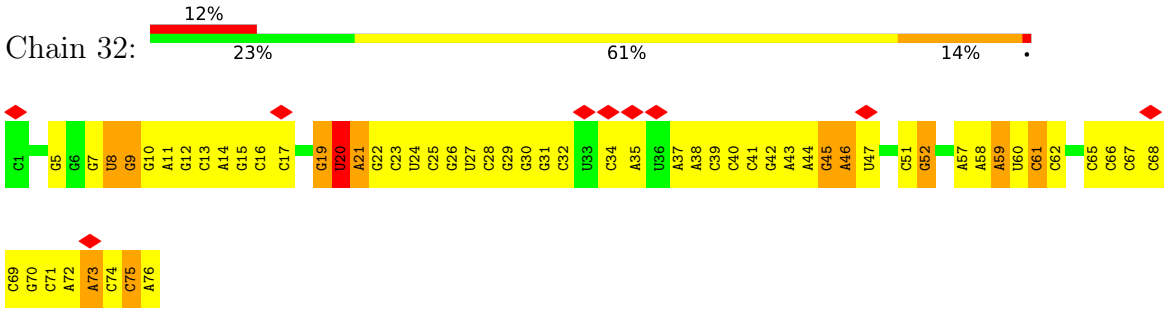
• Molecule 57: P-site tRNAfMet

Chain 31:



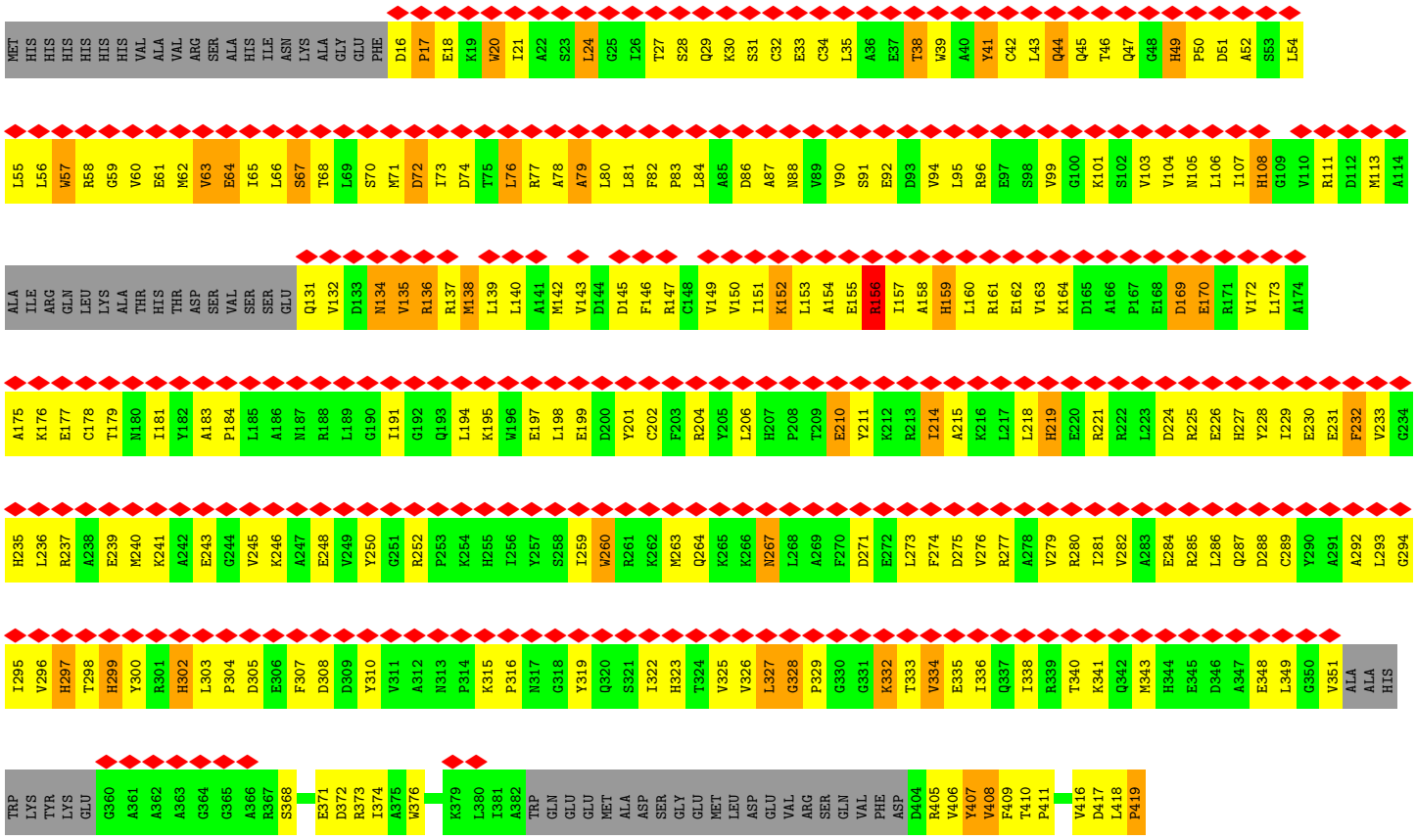
• Molecule 58: E-site tRNAfMet

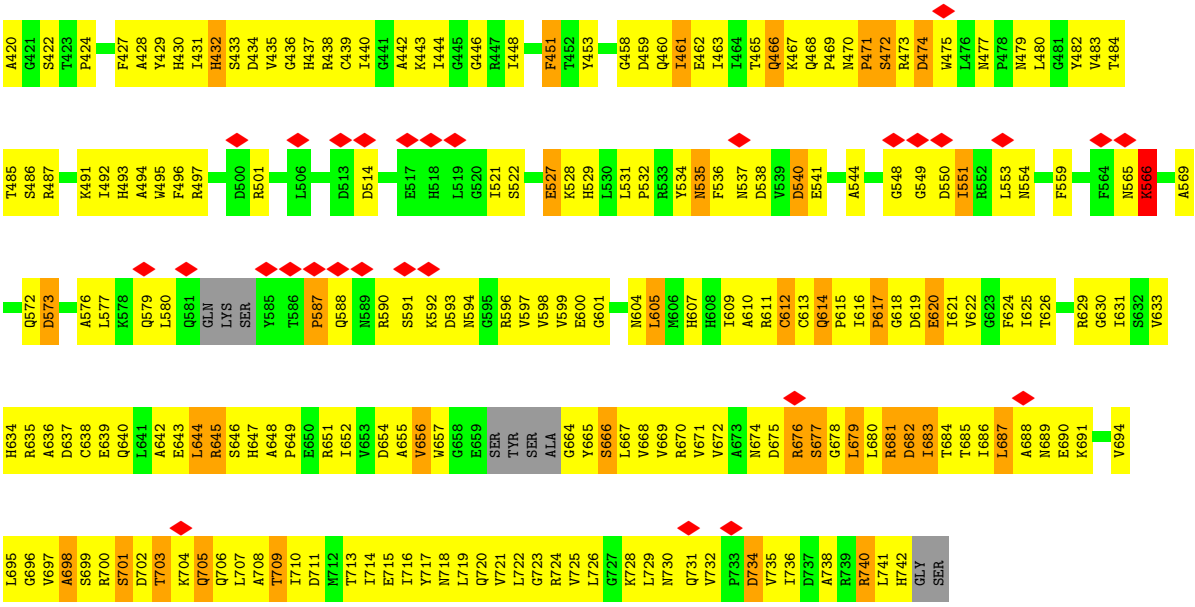
Chain 32:



• Molecule 59: GTP pyrophosphokinase

Chain 33:




A420 G421 S422 T423 P424 F427 A428 Y429 H430 I431 H432 S433 D434 V435 G436 H437 R438 C439 I440 G441 A442 K443 I444 G445 G446 R447 I448 F451 T452 Y453 G458 D459 Q460 I461 E462 I463 I464 T465 Q466 K467 Q468 P469 N470 P471 S472 R473 D474 W475 L476 N477 P478 N479 L480 G481 Y482 V483 T484
T485 S486 R487 K491 I492 H493 A494 W495 F496 R497 D500 R501 L506 D513 D514 E517 H518 L519 G520 T521 S522 E527 K528 H529 L530 L531 P532 R533 Y534 N535 F536 N537 D538 V539 D540 E541 A544 G548 G549 D550 I551 R552 L553 N554 F559 F564 N565 K566 A569
Q572 D573 A576 L577 K578 Q579 L580 Q581 GLN LYS SER Y585 T586 P587 Q588 N589 R590 S591 K592 D593 N594 G595 R596 V597 V598 V599 E600 G601 N604 L605 M606 H607 H608 I609 A610 R611 C612 C613 Q614 P615 I616 P617 G618 D619 E620 I621 V622 G623 F624 I625 T626 R629 G630 I631 S632 V633
H634 R635 A636 D637 C638 E639 Q640 L641 A642 E643 L644 R645 S646 H647 A648 P649 E650 R651 I652 V653 D654 A655 V656 W657 G658 E659 SER TYR SER ALA G664 Y665 S666 L667 V668 V669 R670 V671 V672 A673 N674 D675 R676 S677 G678 L679 L680 R681 D682 I683 T684 T685 I686 L687 A688 N689 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 G723 R724 V725 L726 G727 K728 L729 N730 Q731 V732 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	46935	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	0.503	Depositor
Minimum map value	-0.155	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.042	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	393.6, 393.6, 393.6	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.38	0/2121	1.08	22/2852 (0.8%)
2	B	0.39	0/1586	1.09	12/2134 (0.6%)
3	C	0.41	0/1571	1.07	8/2113 (0.4%)
4	D	0.35	0/1434	1.02	12/1926 (0.6%)
5	E	0.36	0/1343	1.04	7/1816 (0.4%)
6	F	0.45	0/1122	1.13	13/1515 (0.9%)
7	G	0.51	0/1001	1.40	21/1350 (1.6%)
8	H	0.54	0/1046	1.49	34/1410 (2.4%)
9	I	0.38	0/1152	1.03	10/1551 (0.6%)
10	J	0.36	0/947	1.09	7/1268 (0.6%)
11	K	0.37	0/1054	1.21	10/1403 (0.7%)
12	L	0.38	0/1093	1.03	7/1460 (0.5%)
13	M	0.38	0/973	1.07	2/1301 (0.2%)
14	N	0.35	0/902	0.99	4/1209 (0.3%)
15	O	0.35	0/929	1.01	5/1242 (0.4%)
16	P	0.37	0/960	1.01	8/1278 (0.6%)
17	Q	0.37	0/829	1.21	12/1107 (1.1%)
18	R	0.35	0/864	1.03	6/1156 (0.5%)
19	S	0.37	0/744	1.17	8/994 (0.8%)
20	T	0.37	0/787	1.05	6/1051 (0.6%)
21	U	0.36	0/766	1.06	6/1025 (0.6%)
22	V	0.38	0/582	1.09	4/769 (0.5%)
23	W	0.35	0/635	1.05	4/848 (0.5%)
24	X	0.35	0/510	1.00	3/677 (0.4%)
25	Y	0.39	0/453	1.09	4/605 (0.7%)
26	Z	0.45	0/531	1.24	7/709 (1.0%)
27	1	0.35	0/450	1.09	3/599 (0.5%)
28	2	0.37	0/416	1.03	3/554 (0.5%)
29	3	0.43	0/380	1.05	2/498 (0.4%)
30	4	0.35	0/513	0.93	0/676
31	5	0.37	0/303	1.13	2/397 (0.5%)
32	6	0.42	0/1735	1.15	24/2338 (1.0%)
33	7	0.39	0/1651	1.07	9/2225 (0.4%)
34	8	0.36	0/1665	1.11	13/2227 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	9	0.36	0/1169	1.05	10/1573 (0.6%)
36	10	0.42	0/835	1.22	18/1128 (1.6%)
37	11	0.34	0/1195	1.04	3/1602 (0.2%)
38	12	0.40	0/989	1.14	8/1326 (0.6%)
39	13	0.37	0/1034	1.14	8/1375 (0.6%)
40	14	0.41	0/796	1.12	8/1077 (0.7%)
41	15	0.39	0/885	1.19	9/1195 (0.8%)
42	16	0.39	0/969	1.22	10/1300 (0.8%)
43	17	0.37	0/892	1.14	6/1193 (0.5%)
44	18	0.47	0/817	0.99	7/1088 (0.6%)
45	19	0.33	0/722	0.94	3/964 (0.3%)
46	20	0.40	0/659	1.15	10/884 (1.1%)
47	21	0.40	0/657	1.08	6/881 (0.7%)
48	22	0.40	0/544	1.02	5/731 (0.7%)
49	23	0.39	0/652	1.18	9/877 (1.0%)
50	24	0.38	0/671	0.96	2/888 (0.2%)
51	25	0.45	0/550	1.23	7/728 (1.0%)
52	26	0.45	0/36967	0.59	14/57666 (0.0%)
53	27	0.47	1/69801 (0.0%)	0.60	18/108894 (0.0%)
54	28	0.43	0/2876	0.58	1/4483 (0.0%)
55	29	0.75	0/486	0.76	1/757 (0.1%)
56	30	0.55	0/1813	0.64	1/2823 (0.0%)
57	31	0.44	0/1836	0.52	1/2859 (0.0%)
58	32	0.66	0/1835	0.67	2/2857 (0.1%)
59	33	0.82	15/4985 (0.3%)	1.39	80/6770 (1.2%)
All	All	0.46	16/167683 (0.0%)	0.79	545/250202 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
52	26	0	13
53	27	0	34
56	30	0	1
59	33	0	3
All	All	0	51

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.96	1.19	1.33
59	33	17	PRO	CA-CB	-9.93	1.39	1.53
59	33	20	TRP	NE1-CE2	-7.69	1.28	1.37
59	33	152	LYS	CD-CE	-6.87	1.31	1.52
59	33	159	HIS	CG-ND1	-6.55	1.31	1.38
59	33	159	HIS	CD2-NE2	-6.33	1.30	1.37
53	27	1379	U	O3'-P	-6.21	1.51	1.61
59	33	299	HIS	CD2-NE2	-6.05	1.31	1.37
59	33	299	HIS	CG-ND1	-5.62	1.32	1.38
59	33	260	TRP	NE1-CE2	-5.61	1.31	1.37
59	33	323	HIS	CD2-NE2	-5.40	1.31	1.37
59	33	297	HIS	CD2-NE2	-5.39	1.31	1.37
59	33	219	HIS	CG-ND1	-5.32	1.32	1.38
59	33	108	HIS	CG-ND1	-5.32	1.32	1.38
59	33	302	HIS	CG-ND1	-5.13	1.32	1.38
59	33	49	HIS	CG-ND1	-5.01	1.32	1.38

All (545) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	M	119	SER	N-CA-C	-14.91	94.35	112.54
42	16	20	VAL	N-CA-C	13.84	122.41	107.60
7	G	60	LEU	N-CA-C	-12.53	96.17	113.20
59	33	17	PRO	N-CA-CB	-12.21	89.90	103.33
39	13	87	MET	N-CA-C	-12.05	98.56	113.38
59	33	156	ARG	NH1-CZ-NH2	-11.63	104.19	119.30
34	8	25	ARG	N-CA-C	-11.55	99.16	113.02
26	Z	43	PHE	N-CA-C	-11.34	99.46	113.18
42	16	22	ALA	N-CA-C	-10.98	98.98	112.38
7	G	9	GLN	N-CA-C	-10.90	99.48	111.36
59	33	17	PRO	CB-CA-C	-10.82	94.77	112.62
7	G	107	GLU	N-CA-C	-10.76	96.29	112.54
59	33	17	PRO	CA-CB-CG	10.44	124.33	104.50
17	Q	44	GLY	N-CA-C	-10.43	101.66	115.32
6	F	75	LEU	N-CA-C	-10.17	99.76	112.88
11	K	87	GLY	N-CA-C	-10.14	100.44	114.64
59	33	327	LEU	CD1-CG-CD2	-10.08	88.63	110.80
6	F	72	ILE	N-CA-C	-9.98	99.49	113.07
41	15	40	ALA	N-CA-C	9.75	123.61	110.35
33	7	49	ALA	N-CA-C	-9.52	101.79	113.50
8	H	80	LYS	N-CA-C	-9.49	100.81	111.82
59	33	328	GLY	CA-C-N	9.46	129.55	119.05
59	33	328	GLY	C-N-CA	9.46	129.55	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	25	17	ARG	N-CA-C	-9.38	100.94	111.82
39	13	44	ARG	N-CA-C	-9.37	101.77	113.01
11	K	16	GLY	N-CA-C	-9.33	102.25	114.85
7	G	100	ALA	N-CA-C	-9.21	100.83	112.90
51	25	25	ALA	N-CA-C	-9.14	96.87	111.04
17	Q	36	ALA	N-CA-C	-9.03	101.57	112.59
49	23	9	PHE	N-CA-C	8.91	123.93	109.59
59	33	332	LYS	CA-CB-CG	8.83	131.77	114.10
21	U	8	VAL	N-CA-C	-8.83	97.20	109.21
36	10	96	VAL	N-CA-C	8.82	120.85	108.23
8	H	72	THR	N-CA-C	-8.71	98.06	110.08
33	7	129	PHE	N-CA-C	8.69	122.00	111.40
59	33	156	ARG	NE-CZ-NH1	8.68	130.18	121.50
59	33	540	ASP	N-CA-C	-8.68	102.13	112.89
34	8	151	GLN	N-CA-C	-8.64	96.03	109.76
38	12	67	GLY	N-CA-C	-8.61	102.24	115.66
59	33	372	ASP	N-CA-C	-8.48	102.93	113.28
34	8	23	GLY	N-CA-C	8.47	133.26	113.18
40	14	82	LYS	N-CA-C	-8.45	102.98	113.38
8	H	91	LYS	CA-C-N	8.43	130.38	119.84
8	H	91	LYS	C-N-CA	8.43	130.38	119.84
19	S	18	GLU	N-CA-C	-8.39	102.22	111.36
24	X	62	GLY	N-CA-C	-8.36	104.52	115.47
49	23	27	LYS	N-CA-C	8.35	121.85	109.24
26	Z	38	SER	N-CA-C	-8.34	101.73	112.23
43	17	56	ARG	N-CA-C	-8.27	102.34	111.36
34	8	204	SER	N-CA-C	-8.25	102.25	111.82
45	19	49	HIS	N-CA-C	8.23	121.18	111.71
34	8	190	LEU	N-CA-C	8.22	121.83	110.24
45	19	43	ALA	N-CA-C	-8.21	102.30	111.82
42	16	43	LYS	N-CA-C	8.10	127.71	109.81
59	33	152	LYS	CB-CG-CD	-8.06	92.75	111.30
6	F	70	GLU	N-CA-C	-8.04	102.10	112.23
43	17	42	VAL	N-CA-C	8.04	119.30	110.21
59	33	683	ILE	N-CA-C	-8.03	102.98	110.53
32	6	30	ILE	N-CA-C	7.99	119.66	108.23
27	1	52	LYS	N-CA-C	-7.98	97.99	109.96
5	E	166	GLU	N-CA-C	7.97	122.06	110.42
18	R	24	ILE	N-CA-C	7.97	120.56	112.90
11	K	113	ALA	N-CA-C	-7.93	103.50	113.01
7	G	7	ASP	N-CA-C	-7.91	103.61	113.18
59	33	76	LEU	N-CA-CB	-7.89	98.52	110.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	58	LYS	CA-C-N	7.88	127.44	119.24
3	C	58	LYS	C-N-CA	7.88	127.44	119.24
3	C	79	ARG	N-CA-C	-7.88	97.75	110.20
32	6	31	PHE	N-CA-C	-7.87	97.35	109.24
7	G	58	THR	N-CA-C	7.86	122.94	112.25
46	20	80	LYS	N-CA-C	-7.84	102.35	112.23
36	10	15	SER	N-CA-C	-7.82	103.00	112.54
16	P	87	VAL	N-CA-C	-7.79	101.56	110.05
38	12	91	LEU	N-CA-C	7.76	119.12	109.57
3	C	56	GLY	N-CA-C	-7.74	103.58	115.66
51	25	21	SER	N-CA-C	-7.74	102.90	112.88
47	21	68	LYS	N-CA-C	-7.73	98.58	110.10
34	8	24	VAL	N-CA-C	7.72	117.68	110.42
31	5	14	CYS	N-CA-C	-7.66	99.19	110.52
7	G	129	LEU	CA-C-N	7.62	129.36	119.84
7	G	129	LEU	C-N-CA	7.62	129.36	119.84
36	10	18	VAL	N-CA-C	7.61	122.18	112.67
1	A	40	GLY	N-CA-C	-7.59	104.73	115.43
32	6	102	ASN	N-CA-C	-7.52	103.84	113.16
26	Z	46	GLY	N-CA-C	-7.51	105.48	115.32
7	G	38	MET	N-CA-C	-7.51	102.45	111.69
8	H	43	ALA	N-CA-C	-7.50	103.22	112.38
8	H	54	ILE	CA-C-N	7.50	127.26	119.76
8	H	54	ILE	C-N-CA	7.50	127.26	119.76
59	33	528	LYS	N-CA-C	-7.50	103.12	111.82
59	33	169	ASP	CA-C-O	-7.50	112.76	121.16
2	B	184	ARG	N-CA-C	-7.50	102.05	113.89
29	3	44	VAL	N-CA-C	-7.50	99.93	109.30
8	H	124	MET	N-CA-C	-7.47	103.14	111.28
46	20	77	GLU	N-CA-C	-7.47	102.29	111.40
6	F	67	ALA	N-CA-C	-7.47	103.16	111.82
59	33	471	PRO	N-CA-CB	7.44	111.06	103.25
44	18	49	THR	N-CA-C	-7.43	103.16	111.71
17	Q	64	VAL	N-CA-C	7.43	117.51	110.30
5	E	102	ILE	N-CA-C	7.42	118.50	108.11
17	Q	97	LYS	N-CA-C	-7.42	99.50	110.48
36	10	18	VAL	CB-CA-C	-7.39	106.68	113.70
48	22	69	TYR	N-CA-C	-7.37	103.27	111.82
8	H	111	THR	N-CA-C	-7.35	102.23	112.45
7	G	42	ARG	N-CA-C	-7.34	102.98	112.23
8	H	50	LYS	N-CA-C	7.34	120.04	110.43
59	33	474	ASP	N-CA-C	-7.32	104.32	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	11	128	GLU	N-CA-C	-7.32	104.38	112.72
4	D	118	ALA	N-CA-C	-7.31	104.22	113.72
17	Q	50	GLY	N-CA-C	-7.28	95.92	113.18
59	33	566	LYS	N-CA-C	7.27	125.88	109.81
59	33	587	PRO	N-CA-CB	7.27	110.49	103.51
46	20	75	ILE	N-CA-C	-7.25	101.89	112.04
14	N	61	GLN	N-CA-C	7.24	119.17	111.28
59	33	373	ARG	N-CA-C	-7.21	104.75	113.97
36	10	98	GLU	N-CA-C	7.19	126.12	110.80
49	23	33	TRP	N-CA-C	-7.19	104.37	113.72
4	D	4	HIS	N-CA-C	-7.19	103.38	111.07
43	17	21	ILE	N-CA-C	-7.18	100.24	109.80
59	33	593	ASP	N-CA-C	-7.18	104.50	113.18
48	22	16	GLY	N-CA-C	-7.16	106.45	114.40
10	J	32	TYR	N-CA-C	7.14	119.52	110.24
22	V	69	GLY	CA-C-N	7.14	126.76	119.19
22	V	69	GLY	C-N-CA	7.14	126.76	119.19
28	2	42	VAL	N-CA-C	-7.12	103.31	113.07
32	6	60	ALA	N-CA-C	-7.12	103.58	112.90
8	H	66	PHE	N-CA-C	7.10	117.40	108.45
41	15	125	LYS	N-CA-C	7.10	125.92	110.80
8	H	52	LEU	CA-C-N	7.09	128.70	119.84
8	H	52	LEU	C-N-CA	7.09	128.70	119.84
7	G	41	LEU	N-CA-C	-7.07	104.12	112.89
9	I	71	ASP	N-CA-C	7.06	124.20	113.61
59	33	475	TRP	N-CA-C	-7.04	103.86	113.30
9	I	7	LYS	CA-C-N	7.04	128.63	119.84
9	I	7	LYS	C-N-CA	7.04	128.63	119.84
8	H	36	GLU	N-CA-C	-7.02	103.67	111.82
1	A	242	HIS	N-CA-C	-7.01	100.96	109.72
47	21	13	SER	N-CA-C	6.98	119.00	108.46
24	X	14	LEU	N-CA-C	-6.98	103.60	111.07
2	B	36	GLN	N-CA-C	6.94	120.97	108.48
59	33	480	LEU	N-CA-C	-6.93	104.77	113.23
8	H	130	GLY	N-CA-C	-6.93	104.41	112.73
59	33	645	ARG	N-CA-C	-6.92	103.81	111.36
38	12	64	TYR	N-CA-C	-6.92	99.73	108.45
5	E	27	GLY	N-CA-C	-6.91	101.97	112.89
4	D	158	THR	N-CA-C	-6.87	104.64	113.16
23	W	17	ARG	N-CA-C	6.86	119.91	110.24
12	L	124	LEU	CA-C-N	6.85	126.45	119.19
12	L	124	LEU	C-N-CA	6.85	126.45	119.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	541	GLU	N-CA-C	-6.85	103.90	111.36
32	6	96	LEU	N-CA-C	6.84	120.15	110.23
8	H	18	ASN	N-CA-C	6.84	124.92	109.81
40	14	55	PRO	N-CA-C	-6.83	105.33	113.86
20	T	34	ILE	N-CA-C	6.82	118.12	107.28
26	Z	62	LYS	N-CA-C	-6.81	103.10	111.40
59	33	591	SER	N-CA-C	-6.80	104.24	112.54
8	H	79	LEU	N-CA-C	-6.80	105.52	113.88
3	C	8	ALA	N-CA-C	-6.78	104.97	113.18
8	H	71	LYS	N-CA-C	-6.75	100.52	110.52
34	8	122	ILE	N-CA-C	6.75	117.45	106.72
8	H	86	LYS	N-CA-C	-6.74	106.00	114.56
59	33	138	MET	N-CA-C	-6.71	104.31	113.30
17	Q	13	ARG	N-CA-C	-6.70	100.56	110.48
17	Q	46	GLU	N-CA-C	6.70	119.62	109.23
59	33	63	VAL	CG1-CB-CG2	-6.68	96.11	110.80
52	26	1297	G	C2'-C3'-O3'	6.67	119.51	109.50
34	8	168	THR	N-CA-C	6.65	119.87	111.69
1	A	245	THR	N-CA-C	-6.65	100.42	110.39
39	13	92	SER	N-CA-C	-6.63	104.91	112.87
7	G	129	LEU	N-CA-C	-6.61	95.33	109.01
43	17	49	GLU	N-CA-C	-6.60	104.12	111.71
53	27	1320	C	N1-C1'-C2'	6.58	121.86	112.00
51	25	37	TYR	N-CA-C	-6.57	103.84	112.24
16	P	49	ARG	N-CA-C	-6.55	104.77	112.89
59	33	648	ALA	CA-C-N	6.54	127.06	119.47
59	33	648	ALA	C-N-CA	6.54	127.06	119.47
59	33	559	PHE	N-CA-C	-6.53	104.09	111.14
40	14	20	GLN	N-CA-C	-6.53	104.25	111.82
49	23	79	TYR	N-CA-C	6.49	118.94	109.07
59	33	681	ARG	N-CA-C	-6.47	104.65	112.54
5	E	61	TRP	N-CA-C	6.46	120.03	111.75
52	26	1399	C	C2'-C3'-O3'	6.46	119.19	109.50
50	24	5	SER	N-CA-C	-6.44	104.35	111.82
43	17	7	ASN	N-CA-C	-6.43	99.16	109.39
59	33	67	SER	O-C-N	-6.43	114.36	122.27
23	W	26	ARG	N-CA-C	-6.42	101.27	110.59
10	J	121	GLU	N-CA-C	6.42	118.70	109.14
25	Y	39	ASP	N-CA-C	-6.41	99.84	110.17
41	15	18	GLY	N-CA-C	6.41	119.38	112.33
34	8	110	ARG	N-CA-C	-6.39	103.56	112.45
32	6	211	LEU	N-CA-C	-6.39	103.94	111.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	3	23	ALA	N-CA-C	-6.36	105.28	113.16
8	H	49	GLU	N-CA-C	6.34	119.44	110.50
59	33	351	VAL	CB-CA-C	6.33	123.43	111.40
37	11	142	ARG	N-CA-C	-6.33	104.26	112.23
28	2	13	SER	N-CA-C	-6.32	102.68	110.65
41	15	72	ALA	N-CA-C	-6.32	104.78	113.56
59	33	529	HIS	N-CA-C	-6.32	105.85	112.93
59	33	451	PHE	N-CA-C	-6.32	104.47	111.36
36	10	91	ARG	N-CA-C	6.29	118.83	110.53
15	O	74	GLN	N-CA-C	-6.29	100.53	109.96
59	33	469	PRO	N-CA-CB	6.29	109.85	103.25
2	B	120	GLY	N-CA-C	-6.28	103.03	113.02
23	W	34	SER	N-CA-C	-6.26	101.21	110.48
42	16	96	THR	N-CA-C	-6.26	101.21	110.48
19	S	16	VAL	N-CA-C	6.25	118.91	112.90
8	H	41	PHE	N-CA-C	-6.24	104.54	111.71
18	R	60	HIS	N-CA-C	6.24	118.08	111.28
54	28	12	C	N1-C1'-C2'	6.23	121.35	112.00
44	18	24	ALA	N-CA-C	-6.23	104.38	112.23
42	16	25	ALA	N-CA-C	-6.23	102.80	111.52
46	20	44	SER	N-CA-C	-6.22	103.24	111.02
6	F	69	ALA	N-CA-C	-6.22	104.40	112.23
19	S	84	TYR	N-CA-C	-6.20	99.16	109.46
8	H	73	PRO	CA-C-N	6.20	126.22	119.89
8	H	73	PRO	C-N-CA	6.20	126.22	119.89
53	27	1020	A	C2'-C3'-O3'	6.20	118.80	109.50
35	9	144	GLU	N-CA-C	-6.20	104.61	111.36
59	33	79	ALA	CA-C-O	6.18	126.98	120.42
32	6	51	GLU	N-CA-C	-6.18	104.54	111.28
13	M	69	ARG	N-CA-C	-6.18	101.31	110.46
35	9	153	ALA	N-CA-C	-6.18	104.65	111.82
2	B	107	VAL	N-CA-C	6.18	116.36	108.82
35	9	117	ALA	N-CA-C	-6.18	105.71	113.18
33	7	15	LYS	N-CA-C	6.16	117.15	109.57
16	P	83	LYS	N-CA-C	-6.16	105.71	113.72
49	23	11	ASP	N-CA-C	6.16	119.23	109.50
2	B	142	VAL	CA-C-N	6.15	126.04	119.28
2	B	142	VAL	C-N-CA	6.15	126.04	119.28
59	33	210	GLU	CA-CB-CG	-6.14	101.81	114.10
4	D	137	PHE	CA-C-N	6.14	127.52	119.84
4	D	137	PHE	C-N-CA	6.14	127.52	119.84
47	21	14	ASP	N-CA-C	-6.14	103.21	111.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	G	110	ALA	N-CA-C	-6.14	105.75	113.18
35	9	55	VAL	N-CA-C	6.14	122.14	108.88
45	19	44	GLU	N-CA-C	-6.13	101.70	110.59
59	33	680	LEU	N-CA-C	-6.11	103.95	112.45
59	33	573	ASP	N-CA-C	-6.10	104.74	111.82
7	G	111	ALA	N-CA-C	6.09	119.80	111.39
35	9	110	MET	N-CA-C	-6.09	104.71	111.71
59	33	152	LYS	CD-CE-NZ	6.09	131.39	111.90
31	5	13	ASN	N-CA-C	-6.08	105.91	113.15
37	11	2	ARG	N-CA-C	-6.08	105.34	112.89
40	14	81	GLU	N-CA-C	6.07	120.38	113.15
59	33	644	LEU	N-CA-C	-6.07	105.13	112.54
8	H	84	GLY	N-CA-C	-6.06	105.74	115.08
52	26	130	A	N9-C1'-C2'	6.06	121.09	112.00
19	S	15	HIS	N-CA-C	-6.05	101.96	110.50
58	32	45	G	N9-C1'-C2'	6.05	121.08	112.00
20	T	76	THR	N-CA-C	-6.04	105.91	113.28
7	G	20	LYS	N-CA-C	-6.04	105.92	113.28
15	O	16	VAL	CA-C-N	-6.03	113.73	119.76
15	O	16	VAL	C-N-CA	-6.03	113.73	119.76
40	14	38	GLY	N-CA-C	-6.01	100.08	112.34
41	15	52	ARG	N-CA-C	-6.01	102.44	110.55
59	33	139	LEU	N-CA-C	-6.00	104.54	112.34
36	10	8	PHE	N-CA-C	6.00	118.53	109.23
12	L	63	ILE	N-CA-C	5.99	116.63	107.77
52	26	496	A	N9-C1'-C2'	5.99	120.98	112.00
36	10	83	ALA	N-CA-C	-5.98	105.24	112.54
59	33	419	PRO	N-CA-C	-5.98	101.80	111.19
59	33	137	ARG	N-CA-C	-5.98	104.84	113.21
32	6	121	GLN	N-CA-C	-5.97	104.89	111.82
33	7	65	VAL	N-CA-C	5.96	116.19	106.72
59	33	57	TRP	O-C-N	-5.95	115.94	122.07
32	6	210	THR	N-CA-C	-5.95	104.87	111.71
40	14	37	ARG	N-CA-C	5.95	118.55	111.71
59	33	734	ASP	N-CA-C	-5.92	104.95	111.82
44	18	45	LEU	N-CA-C	-5.92	104.02	112.13
1	A	48	ILE	N-CA-C	-5.92	101.90	109.30
35	9	100	GLU	N-CA-C	-5.92	103.75	111.74
9	I	72	LYS	N-CA-C	-5.92	101.08	109.96
19	S	71	GLY	N-CA-C	-5.91	101.22	111.50
53	27	1174	U	N1-C1'-C2'	5.90	120.85	112.00
53	27	1565	C	N1-C1'-C2'	5.90	120.85	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	U	92	VAL	N-CA-C	-5.89	101.11	108.89
20	T	51	LEU	CB-CA-C	-5.89	108.09	116.34
6	F	30	LEU	N-CA-C	5.88	123.33	110.80
17	Q	20	VAL	N-CA-C	5.88	116.58	107.99
50	24	43	LYS	N-CA-C	5.88	119.27	111.75
53	27	1451	C	N1-C1'-C2'	5.87	120.80	112.00
25	Y	16	LEU	CA-C-N	5.86	125.34	119.24
25	Y	16	LEU	C-N-CA	5.86	125.34	119.24
44	18	68	ARG	CA-C-N	5.86	125.47	119.56
44	18	68	ARG	C-N-CA	5.86	125.47	119.56
59	33	592	LYS	N-CA-C	-5.84	105.64	112.89
46	20	20	VAL	N-CA-C	5.83	115.93	107.88
51	25	55	HIS	N-CA-C	-5.83	105.06	111.82
44	18	21	ALA	N-CA-C	-5.83	101.63	113.29
4	D	162	ASP	N-CA-C	-5.83	105.06	111.82
22	V	56	PHE	N-CA-C	5.83	117.07	108.86
19	S	65	GLY	N-CA-C	5.82	118.63	111.93
53	27	1267	U	N1-C1'-C2'	5.82	120.73	112.00
18	R	40	ASN	N-CA-C	5.82	118.93	108.17
36	10	30	THR	N-CA-C	-5.82	105.44	112.54
41	15	74	LYS	N-CA-C	-5.81	105.45	112.54
7	G	13	ALA	N-CA-C	-5.81	104.87	111.14
2	B	35	THR	N-CA-C	5.80	117.61	111.28
59	33	416	VAL	N-CA-C	5.80	115.48	108.06
1	A	11	GLY	N-CA-C	-5.79	106.75	115.32
53	27	2333	A	C2'-C3'-O3'	-5.78	105.03	113.70
11	K	61	LEU	CA-C-N	5.78	125.73	119.78
11	K	61	LEU	C-N-CA	5.78	125.73	119.78
59	33	408	VAL	N-CA-C	5.77	118.47	108.95
3	C	52	VAL	N-CA-C	-5.77	102.09	109.30
7	G	35	VAL	N-CA-C	5.76	116.50	110.62
59	33	461	ILE	N-CA-C	5.75	115.87	106.72
4	D	123	GLY	N-CA-C	-5.75	107.17	115.27
59	33	38	THR	CA-CB-CG2	-5.75	100.73	110.50
59	33	79	ALA	O-C-N	-5.75	115.60	122.15
11	K	91	ASP	N-CA-C	-5.75	102.40	110.50
8	H	105	LEU	N-CA-C	-5.74	105.16	111.82
33	7	18	ASN	N-CA-C	-5.74	106.12	113.01
49	23	68	HIS	N-CA-C	5.74	118.11	110.53
52	26	1300	G	N9-C1'-C2'	5.74	120.62	112.00
32	6	111	LYS	N-CA-C	-5.74	104.93	111.07
32	6	34	ARG	N-CA-C	-5.72	105.18	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	687	LEU	N-CA-C	-5.72	105.18	111.82
1	A	260	LYS	N-CA-C	-5.72	105.88	112.86
53	27	1565	C	C4'-C3'-O3'	-5.71	104.43	113.00
59	33	64	GLU	O-C-N	5.71	128.17	122.12
19	S	72	GLN	N-CA-C	-5.70	106.37	113.38
10	J	39	ILE	N-CA-C	5.70	117.19	108.71
42	16	115	LYS	N-CA-C	-5.70	101.26	110.32
28	2	26	LYS	N-CA-C	5.69	117.97	111.02
11	K	95	LEU	N-CA-C	-5.69	105.08	111.28
1	A	35	LYS	N-CA-C	5.68	117.63	110.24
34	8	108	ALA	N-CA-C	-5.68	107.60	114.75
3	C	151	GLY	N-CA-C	5.67	120.03	112.77
39	13	64	ILE	N-CA-C	5.67	116.03	107.75
25	Y	54	VAL	N-CA-C	5.67	116.16	107.77
12	L	124	LEU	N-CA-C	5.66	116.83	109.64
18	R	21	ALA	N-CA-C	5.64	117.88	111.11
59	33	214	ILE	CB-CG1-CD1	-5.64	101.96	113.80
38	12	90	GLU	N-CA-C	5.63	119.25	112.38
39	13	56	MET	N-CA-C	-5.63	98.80	110.80
1	A	3	VAL	N-CA-C	5.63	115.96	107.80
52	26	1346	A	N9-C1'-C2'	5.62	120.44	112.00
53	27	1378	A	C2'-C3'-O3'	5.62	117.93	109.50
59	33	430	HIS	N-CA-C	-5.62	105.30	111.82
53	27	615	U	C2'-C3'-O3'	-5.61	105.29	113.70
59	33	679	LEU	N-CA-C	-5.60	106.29	113.01
11	K	110	VAL	N-CA-C	5.60	116.74	111.48
21	U	41	GLU	N-CA-C	-5.59	102.00	110.28
1	A	213	ARG	N-CA-C	-5.59	106.50	113.15
10	J	89	ASN	N-CA-C	5.59	117.82	111.11
33	7	45	GLU	N-CA-C	5.59	118.10	111.33
4	D	174	PHE	CA-C-N	5.59	126.83	119.84
4	D	174	PHE	C-N-CA	5.59	126.83	119.84
8	H	14	ALA	CB-CA-C	-5.58	110.12	116.54
34	8	104	MET	N-CA-C	-5.58	106.55	113.19
52	26	1182	G	C2'-C3'-O3'	-5.58	105.34	113.70
44	18	67	GLY	N-CA-C	-5.57	106.88	116.01
51	25	32	ARG	N-CA-C	-5.57	106.70	112.93
39	13	60	LEU	N-CA-C	5.56	118.52	109.06
32	6	15	PHE	N-CA-C	5.56	119.93	113.20
1	A	261	ARG	N-CA-C	-5.55	107.51	114.56
38	12	66	GLN	N-CA-C	-5.55	98.98	110.80
7	G	106	PHE	N-CA-C	5.55	122.62	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	G	26	VAL	N-CA-C	5.54	116.15	108.23
36	10	11	HIS	CA-C-N	5.53	126.76	119.84
36	10	11	HIS	C-N-CA	5.53	126.76	119.84
14	N	24	THR	N-CA-C	-5.53	101.86	110.10
7	G	108	VAL	N-CA-C	-5.52	97.85	109.34
51	25	34	ARG	N-CA-C	5.52	122.56	110.80
14	N	96	GLY	N-CA-C	-5.51	108.52	115.08
59	33	709	THR	N-CA-C	5.51	116.35	108.74
33	7	60	ALA	N-CA-C	5.50	118.46	110.42
2	B	152	PRO	N-CA-C	-5.50	106.23	113.65
11	K	19	LEU	N-CA-C	5.50	117.79	110.53
34	8	107	GLY	N-CA-C	-5.50	104.74	112.60
16	P	84	LYS	N-CA-C	-5.50	104.15	111.24
47	21	12	VAL	N-CA-C	-5.50	107.50	112.12
53	27	974	G	N9-C1'-C2'	5.50	122.25	114.00
18	R	99	ARG	N-CA-C	5.49	117.78	110.53
19	S	56	GLU	N-CA-C	-5.48	104.15	112.04
32	6	61	SER	N-CA-C	-5.48	106.09	112.89
36	10	79	ARG	N-CA-C	-5.48	105.39	111.36
36	10	80	PHE	N-CA-C	5.48	119.59	113.02
59	33	139	LEU	CA-C-O	-5.47	113.15	119.61
49	23	4	LEU	N-CA-C	-5.47	104.51	110.91
36	10	16	GLU	N-CA-C	-5.46	105.41	111.36
33	7	58	ARG	N-CA-C	5.45	119.12	108.21
52	26	1331	G	N9-C1'-C2'	5.45	120.18	112.00
59	33	376	TRP	N-CA-C	-5.45	106.58	113.18
24	X	34	SER	N-CA-C	-5.45	105.89	112.54
12	L	42	THR	N-CA-C	-5.44	102.82	110.50
12	L	67	VAL	N-CA-C	5.44	117.55	109.17
7	G	101	LYS	N-CA-C	-5.44	105.43	111.36
38	12	127	TYR	N-CA-C	-5.44	102.47	110.52
48	22	47	ARG	N-CA-C	-5.44	102.23	110.28
21	U	59	GLU	N-CA-C	5.43	117.09	110.41
32	6	190	SER	N-CA-C	5.43	117.91	109.60
9	I	37	ARG	N-CA-C	-5.42	105.47	111.71
12	L	29	GLY	N-CA-C	5.42	120.81	111.98
46	20	25	ARG	N-CA-C	5.42	119.38	112.34
2	B	98	VAL	N-CA-C	-5.42	104.97	112.50
52	26	1167	A	N9-C1'-C2'	5.41	120.12	112.00
52	26	572	A	N9-C1'-C2'	5.41	120.12	112.00
4	D	5	ASP	N-CA-C	-5.41	105.39	111.28
10	J	92	GLU	CB-CA-C	-5.41	110.32	116.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	T	32	LYS	N-CA-C	-5.40	100.98	109.25
32	6	177	ASN	N-CA-C	-5.40	105.95	112.54
39	13	89	TYR	N-CA-C	-5.40	106.61	114.12
1	A	269	ARG	N-CA-C	-5.39	102.00	110.36
38	12	45	ILE	N-CA-C	5.39	117.15	108.85
9	I	60	ASP	N-CA-C	5.39	117.15	111.28
49	23	78	THR	N-CA-C	-5.38	103.03	110.35
4	D	131	VAL	N-CA-C	-5.38	104.13	110.21
52	26	305	G	C2'-C3'-O3'	-5.38	105.64	113.70
1	A	120	ASP	N-CA-C	-5.38	103.34	111.56
59	33	579	GLN	N-CA-C	-5.37	106.78	113.38
42	16	79	ILE	N-CA-C	5.36	117.50	109.20
1	A	20	ASN	CA-C-N	5.36	125.42	119.32
1	A	20	ASN	C-N-CA	5.36	125.42	119.32
52	26	2	A	N9-C1'-C2'	5.35	120.03	112.00
52	26	78	A	N9-C1'-C2'	5.35	120.03	112.00
35	9	52	ALA	N-CA-C	5.35	117.22	108.76
1	A	30	ALA	N-CA-C	5.35	121.63	109.81
8	H	19	PRO	N-CA-C	5.35	119.71	111.21
40	14	87	LEU	N-CA-C	-5.34	105.45	111.28
53	27	784	G	C4'-C3'-O3'	-5.34	104.99	113.00
5	E	19	ASN	N-CA-C	-5.34	103.92	110.65
49	23	56	HIS	N-CA-C	5.34	117.61	110.35
59	33	527	GLU	N-CA-C	-5.34	105.50	112.23
4	D	61	GLY	N-CA-C	-5.34	107.74	115.27
46	20	33	ILE	CB-CA-C	-5.34	105.03	112.02
59	33	549	GLY	N-CA-C	-5.33	107.62	115.30
1	A	223	ALA	N-CA-C	5.33	117.84	111.71
35	9	70	MET	N-CA-C	5.32	117.29	108.13
36	10	52	ASN	N-CA-C	-5.32	104.05	111.39
32	6	199	ILE	CA-C-N	5.31	125.32	119.90
32	6	199	ILE	C-N-CA	5.31	125.32	119.90
5	E	165	ASP	N-CA-C	5.31	117.14	111.36
59	33	24	LEU	CD1-CG-CD2	5.31	122.47	110.80
1	A	22	GLU	N-CA-C	5.30	117.47	111.11
32	6	20	ARG	N-CA-C	5.29	119.36	113.01
3	C	60	TRP	N-CA-C	5.29	117.57	109.95
32	6	194	GLY	N-CA-C	-5.29	107.22	113.99
42	16	47	ALA	N-CA-C	-5.29	99.53	110.80
27	1	34	GLY	N-CA-C	-5.29	106.76	114.90
1	A	10	PRO	N-CA-C	-5.29	102.80	111.21
41	15	119	GLY	N-CA-C	-5.29	105.05	112.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	232	PHE	CD1-CE1-CZ	5.29	129.51	120.00
46	20	76	LYS	N-CA-C	-5.28	106.88	113.38
32	6	90	PHE	N-CA-C	5.28	116.30	108.60
2	B	96	ILE	N-CA-C	5.27	117.21	109.63
48	22	66	LEU	N-CA-C	-5.26	106.81	113.18
26	Z	41	HIS	N-CA-C	5.26	116.55	109.24
21	U	20	LEU	N-CA-C	-5.26	105.55	111.28
34	8	50	TYR	N-CA-C	-5.26	105.55	111.28
41	15	80	ASN	N-CA-C	-5.26	101.89	110.20
27	1	3	GLN	N-CA-C	-5.25	102.70	110.48
20	T	7	ASP	N-CA-C	5.25	119.56	113.20
2	B	151	THR	CA-C-N	-5.25	113.50	119.28
2	B	151	THR	C-N-CA	-5.25	113.50	119.28
59	33	588	GLN	N-CA-C	-5.25	106.13	112.54
16	P	70	GLN	N-CA-C	-5.25	105.67	111.71
6	F	12	LEU	N-CA-C	5.25	119.16	112.34
59	33	594	ASN	CB-CA-C	-5.24	109.55	115.79
18	R	107	VAL	N-CA-C	5.24	115.39	107.75
35	9	131	ASN	CA-C-N	5.24	126.38	119.84
35	9	131	ASN	C-N-CA	5.24	126.38	119.84
32	6	54	ALA	N-CA-C	-5.23	105.48	111.07
21	U	5	ASN	N-CA-C	-5.22	102.04	110.14
59	33	485	THR	CB-CA-C	-5.22	109.00	115.89
59	33	677	SER	N-CA-C	-5.22	104.70	111.74
8	H	45	THR	N-CA-C	5.21	118.67	112.72
26	Z	59	ARG	N-CA-C	-5.21	106.02	112.38
42	16	110	LYS	N-CA-C	-5.21	106.05	112.72
15	O	76	HIS	N-CA-C	5.21	120.28	113.30
32	6	11	ALA	N-CA-C	-5.20	108.19	114.75
36	10	14	GLN	N-CA-C	-5.20	106.90	113.20
33	7	161	ILE	N-CA-C	5.20	115.70	108.84
43	17	8	ILE	N-CA-C	5.20	120.11	108.88
8	H	139	VAL	N-CA-C	5.19	119.36	112.76
23	W	49	ARG	N-CA-C	-5.19	101.31	109.25
32	6	130	LYS	N-CA-C	-5.19	106.05	112.38
26	Z	4	ASP	N-CA-C	5.19	118.48	111.17
39	13	6	TYR	N-CA-C	5.18	116.95	109.07
1	A	178	GLY	N-CA-C	-5.17	100.92	113.18
8	H	103	ALA	N-CA-C	-5.17	106.24	112.54
36	10	31	GLY	N-CA-C	-5.17	108.67	114.40
47	21	58	VAL	N-CA-C	5.15	115.07	107.75
6	F	104	THR	N-CA-C	-5.15	105.85	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	33	299	HIS	ND1-CG-CD2	5.15	111.25	106.10
9	I	45	THR	CA-C-N	5.15	126.27	119.84
9	I	45	THR	C-N-CA	5.15	126.27	119.84
57	31	56	C	N1-C1'-C2'	5.14	119.71	112.00
52	26	1363	A	N9-C1'-C2'	5.14	119.70	112.00
6	F	42	LYS	N-CA-C	-5.13	105.69	111.28
42	16	107	LYS	N-CA-C	-5.13	101.39	109.50
6	F	113	SER	N-CA-C	5.12	118.31	111.75
48	22	31	TYR	N-CA-C	5.12	119.51	113.16
16	P	31	TYR	N-CA-C	5.12	116.54	111.07
41	15	62	ALA	N-CA-C	-5.11	105.79	111.36
1	A	86	ARG	N-CA-C	5.11	117.57	109.50
5	E	148	ARG	N-CA-C	-5.11	105.41	111.69
8	H	11	GLN	N-CA-C	5.11	117.36	110.06
17	Q	33	VAL	N-CA-C	-5.10	101.36	108.80
17	Q	96	VAL	N-CA-C	5.10	115.61	108.17
46	20	10	GLY	N-CA-C	-5.10	103.35	112.22
53	27	421	C	N1-C1'-C2'	5.10	119.65	112.00
59	33	740	ARG	N-CA-C	-5.09	102.22	110.32
15	O	15	ASP	N-CA-C	5.09	116.58	108.79
8	H	27	LEU	N-CA-C	-5.09	107.73	114.04
59	33	731	GLN	N-CA-C	-5.09	105.82	111.36
9	I	28	LEU	N-CA-C	-5.08	105.39	111.03
16	P	104	ALA	N-CA-C	-5.08	105.75	111.28
46	20	67	ILE	N-CA-C	5.08	116.94	109.63
8	H	46	ASP	N-CA-C	-5.07	106.35	112.54
10	J	66	LYS	N-CA-C	-5.07	105.75	111.28
53	27	1931	U	N1-C1'-C2'	5.07	119.61	112.00
58	32	20	U	C3'-C2'-O2'	5.06	118.29	110.70
59	33	136	ARG	CA-C-N	5.06	127.85	119.35
59	33	136	ARG	C-N-CA	5.06	127.85	119.35
6	F	33	GLN	N-CA-C	-5.06	106.37	112.54
9	I	79	GLY	N-CA-C	-5.06	108.34	114.92
36	10	84	VAL	N-CA-C	5.06	114.03	106.85
40	14	88	MET	N-CA-C	-5.06	103.72	110.55
53	27	2406	A	C2'-C3'-O3'	-5.06	106.11	113.70
20	T	22	GLY	N-CA-C	5.05	117.81	111.09
53	27	1454	C	N1-C1'-C2'	5.05	119.58	112.00
59	33	17	PRO	CB-CG-CD	-5.05	89.93	106.10
10	J	88	ASN	N-CA-C	-5.05	102.57	110.10
56	30	41	C	N1-C1'-C2'	5.05	119.57	112.00
16	P	30	VAL	N-CA-C	5.05	115.91	109.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	109	LYS	N-CA-C	-5.04	103.28	110.59
17	Q	74	ILE	N-CA-C	-5.04	103.08	109.58
22	V	38	GLY	N-CA-C	-5.04	104.89	112.60
6	F	8	LYS	N-CA-C	-5.04	106.39	112.54
55	29	9	G	N9-C1'-C2'	5.04	119.55	112.00
14	N	116	GLN	N-CA-C	5.03	118.15	110.20
17	Q	11	GLN	N-CA-C	5.03	117.02	110.53
1	A	215	VAL	N-CA-C	5.03	115.89	108.45
1	A	225	ASN	N-CA-C	-5.02	102.85	110.39
53	27	372	G	N9-C1'-C2'	5.02	119.53	112.00
59	33	67	SER	CA-C-O	5.02	125.74	119.97
32	6	133	ALA	N-CA-C	-5.01	105.81	111.28
38	12	76	ARG	N-CA-C	-5.01	102.96	110.23
6	F	58	LEU	N-CA-C	-5.01	105.90	111.36
47	21	40	THR	N-CA-C	-5.01	103.11	110.52
59	33	682	ASP	N-CA-C	-5.01	106.01	111.82
53	27	566	U	N1-C1'-C2'	5.00	119.51	112.00
8	H	21	PRO	N-CA-C	5.00	116.80	110.70

There are no chirality outliers.

All (51) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1167	A	Sidechain
52	26	1213	A	Sidechain
52	26	130	A	Sidechain
52	26	1316	G	Sidechain
52	26	159	G	Sidechain
52	26	266	G	Sidechain
52	26	820	U	Sidechain
52	26	872	A	Sidechain
52	26	873	A	Sidechain
52	26	88	U	Sidechain
52	26	898	G	Sidechain
52	26	958	A	Sidechain
53	27	1091	G	Sidechain
53	27	1191	G	Sidechain
53	27	1204	A	Sidechain
53	27	1266	G	Sidechain
53	27	1268	A	Sidechain
53	27	1332	G	Sidechain

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Mol	Chain	Res	Type	Group
53	27	1666	G	Sidechain
53	27	1814	G	Sidechain
53	27	1828	G	Sidechain
53	27	1937	A	Sidechain
53	27	1964	G	Sidechain
53	27	1983	G	Sidechain
53	27	201	C	Sidechain
53	27	202	U	Sidechain
53	27	2109	U	Sidechain
53	27	2121	G	Sidechain
53	27	214	G	Sidechain
53	27	2244	U	Sidechain
53	27	2266	A	Sidechain
53	27	2529	G	Sidechain
53	27	2595	G	Sidechain
53	27	2596	U	Sidechain
53	27	2629	U	Sidechain
53	27	2661	G	Sidechain
53	27	2725	A	Sidechain
53	27	2807	U	Sidechain
53	27	2890	G	Sidechain
53	27	446	G	Sidechain
53	27	500	G	Sidechain
53	27	512	G	Sidechain
53	27	52	A	Sidechain
53	27	683	U	Sidechain
53	27	726	G	Sidechain
53	27	757	G	Sidechain
56	30	48	C	Sidechain
59	33	156	ARG	Sidechain
59	33	407	TYR	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	191	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	1565	0	1616	124	0
3	C	1552	0	1619	141	0
4	D	1410	0	1447	151	0
5	E	1323	0	1374	90	0
6	F	1111	0	1148	86	0
7	G	988	0	1025	127	0
8	H	1032	0	1088	140	0
9	I	1129	0	1162	94	0
10	J	938	0	1012	93	0
11	K	1045	0	1117	88	0
12	L	1074	0	1157	77	0
13	M	960	0	1000	78	0
14	N	892	0	923	75	0
15	O	917	0	965	79	0
16	P	947	0	1022	96	0
17	Q	816	0	839	94	0
18	R	857	0	922	54	0
19	S	738	0	807	54	0
20	T	779	0	834	80	0
21	U	753	0	780	77	0
22	V	575	0	592	30	0
23	W	625	0	655	45	0
24	X	509	0	543	62	0
25	Y	449	0	491	41	0
26	Z	522	0	521	53	0
27	1	444	0	461	53	0
28	2	409	0	440	20	0
29	3	377	0	418	32	0
30	4	504	0	574	33	0
31	5	302	0	343	29	0
32	6	1704	0	1732	130	0
33	7	1624	0	1699	114	0
34	8	1643	0	1710	176	0
35	9	1156	0	1199	113	0
36	10	817	0	808	104	0
37	11	1181	0	1240	100	0
38	12	979	0	1034	90	0
39	13	1022	0	1070	135	0
40	14	786	0	828	92	0
41	15	869	0	878	94	0
42	16	955	0	1019	120	0
43	17	883	0	944	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	18	805	0	847	101	0
45	19	714	0	737	57	0
46	20	649	0	666	90	0
47	21	648	0	691	55	0
48	22	535	0	552	56	0
49	23	637	0	665	72	0
50	24	665	0	714	67	0
51	25	544	0	579	82	0
52	26	33016	0	16617	1573	0
53	27	62322	0	31345	2871	0
54	28	2572	0	1302	116	0
55	29	432	0	218	14	0
56	30	1623	0	821	75	0
57	31	1644	0	836	46	0
58	32	1643	0	836	66	0
59	33	4911	0	4550	671	0
All	All	154603	0	105189	8961	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 35.

All (8961) 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)
53:27:45:G:H5”	53:27:46:G:H5’	1.22	1.18
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.57	1.17
7:G:55:VAL:HA	53:27:1084:A:H5’	1.26	1.15
53:27:1702:G:H2’	53:27:1703:G:H5”	1.15	1.14
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.12
8:H:126:ARG:HB3	53:27:1080:A:H4’	1.27	1.12
53:27:1300:G:H4’	53:27:1301:A:H5”	1.19	1.11
7:G:8:LYS:HA	7:G:11:ILE:HG22	1.34	1.10
34:8:116:LEU:HB3	34:8:122:ILE:HD11	1.33	1.09
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.09
53:27:2672:U:H2’	53:27:2673:G:H5”	1.30	1.09
39:13:20:ILE:HD11	39:13:60:LEU:HD13	1.36	1.08
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.08
39:13:41:GLU:HB2	39:13:44:ARG:HH22	1.19	1.07
53:27:279:A:H2’	53:27:280:U:H5’	1.36	1.06
8:H:123:ALA:HB1	53:27:1081:U:H5”	1.30	1.06
53:27:742:A:H2’	53:27:743:A:C8	1.91	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1869:G:H3'	53:27:1870:C:H5"	1.32	1.06
41:15:88:PRO:HD3	51:25:28:LEU:HD21	1.38	1.05
1:A:81:GLU:HB2	1:A:90:ILE:HD11	1.36	1.04
37:11:4:ARG:HH22	52:26:1092:A:H5'	1.18	1.04
8:H:20:SER:HA	8:H:24:GLY:HA3	1.40	1.04
53:27:189:G:H2'	53:27:205:G:H22	1.18	1.03
53:27:2243:U:H2'	53:27:2244:U:H6	1.23	1.03
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.92	1.03
59:33:703:THR:HG23	59:33:705:GLN:H	1.23	1.03
13:M:95:THR:HA	13:M:115:LEU:HA	1.38	1.03
53:27:1702:G:C2'	53:27:1703:G:H5"	1.89	1.03
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	1.03
43:17:15:VAL:HG23	43:17:16:ILE:HD12	1.42	1.02
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.02
37:11:4:ARG:NH2	52:26:1092:A:H5'	1.75	1.02
43:17:7:ASN:HD22	43:17:21:ILE:HG13	1.19	1.02
53:27:248:G:H5'	53:27:249:C:H5'	1.41	1.02
7:G:58:THR:HG21	7:G:82:ILE:H	1.25	1.00
53:27:1659:G:H2'	53:27:1660:G:H5"	1.43	1.00
53:27:1827:U:H5'	53:27:1971:U:H5"	1.44	1.00
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	0.99
41:15:109:ILE:H	51:25:4:LYS:HZ3	1.06	0.98
52:26:1412:C:H2'	52:26:1413:A:C8	1.97	0.98
18:R:59:GLU:HA	18:R:64:ALA:HA	1.46	0.98
52:26:1259:C:H3'	52:26:1260:G:H5"	1.43	0.98
53:27:275:C:H2'	53:27:276:U:H4'	1.46	0.98
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.97
41:15:87:GLY:H	41:15:113:THR:HG22	1.27	0.97
53:27:1180:U:H2'	53:27:1181:U:C6	1.99	0.97
53:27:528:A:H2	53:27:2042:A:H2'	1.30	0.97
1:A:255:LYS:HG2	53:27:1844:C:H5"	1.44	0.97
53:27:2241:A:H2'	53:27:2242:G:C8	2.00	0.97
9:I:81:ILE:HG23	9:I:82:GLY:H	1.25	0.97
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.96
13:M:90:ARG:HH21	53:27:2881:U:H5'	1.25	0.96
48:22:70:THR:HG23	48:22:71:ASP:H	1.29	0.96
53:27:1796:U:H2'	53:27:1797:G:H8	1.29	0.96
9:I:108:MET:HE1	53:27:1138:G:H21	1.30	0.96
52:26:835:U:H2'	52:26:836:G:H5"	1.47	0.96
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.95
32:6:66:ILE:HB	32:6:88:GLN:HG3	1.49	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:184:C:H2'	53:27:185:G:C8	2.02	0.95
4:D:139:GLU:HA	26:Z:28:VAL:HG13	1.47	0.95
7:G:88:HIS:HB3	7:G:89:PRO:HD3	1.49	0.95
9:I:27:ARG:HH22	53:27:1142:A:H4'	1.32	0.95
32:6:104:LYS:NZ	52:26:1073:U:H4'	1.82	0.94
41:15:109:ILE:HD12	51:25:16:ARG:HD2	1.49	0.94
10:J:49:ARG:HH22	52:26:1423:G:H5'	1.30	0.94
53:27:742:A:H2'	53:27:743:A:H8	1.26	0.94
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.94
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.94
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.94
53:27:807:U:H2'	53:27:808:G:C8	2.03	0.94
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.68	0.94
53:27:1502:A:H2'	53:27:1503:A:H5"	1.50	0.93
59:33:95:LEU:O	59:33:99:VAL:HG12	1.67	0.93
34:8:21:LYS:HE3	34:8:25:ARG:HB3	1.51	0.93
48:22:17:VAL:HG22	48:22:18:GLN:H	1.31	0.93
11:K:77:ILE:HD11	11:K:110:VAL:HG13	1.50	0.93
41:15:34:THR:HG22	41:15:40:ALA:HA	1.46	0.93
52:26:1412:C:H2'	52:26:1413:A:H8	1.30	0.93
52:26:664:G:H22	52:26:741:G:H1	0.95	0.93
53:27:2508:G:H1	53:27:2580:U:H5	1.04	0.93
29:3:1:MET:H1	53:27:1620:G:H5'	1.33	0.93
39:13:27:ILE:HD11	39:13:34:LEU:HB2	1.49	0.92
53:27:2277:G:H2'	53:27:2278:A:H5"	1.49	0.92
58:32:9:G:H2'	58:32:11:A:H62	1.31	0.92
32:6:8:MET:HE3	32:6:10:LYS:HG2	1.51	0.92
43:17:88:LEU:HA	43:17:91:ARG:HE	1.35	0.92
52:26:18:C:H2'	52:26:19:A:H5"	1.51	0.92
35:9:107:GLY:HA3	52:26:9:G:H5'	1.52	0.92
36:10:29:ILE:HG21	36:10:64:VAL:HG21	1.51	0.92
52:26:1132:C:H2'	52:26:1133:G:H5"	1.51	0.92
10:J:30:ARG:HD2	53:27:2674:G:H4'	1.51	0.92
22:V:19:VAL:HA	22:V:34:VAL:HG22	1.51	0.92
53:27:184:C:H2'	53:27:185:G:H8	1.33	0.92
53:27:1173:U:H2'	53:27:1174:U:H4'	1.51	0.92
53:27:807:U:H2'	53:27:808:G:H8	1.35	0.92
46:20:5:ARG:HB2	52:26:376:G:H5"	1.50	0.91
54:28:3:C:H2'	54:28:4:C:H5"	1.50	0.91
53:27:528:A:C2	53:27:2042:A:H2'	2.05	0.91
59:33:676:ARG:HG3	59:33:677:SER:H	1.36	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:36:LEU:HD13	18:R:48:LYS:HA	1.52	0.91
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.91
1:A:129:LEU:HD11	1:A:134:ILE:HG13	1.51	0.91
53:27:140:C:H2'	53:27:141:G:H4'	1.52	0.91
53:27:1869:G:H3'	53:27:1870:C:C5'	2.01	0.91
40:14:57:VAL:HG22	40:14:58:ASN:H	1.35	0.91
52:26:235:C:H2'	52:26:236:A:C8	2.05	0.91
52:26:1033:G:H2'	52:26:1034:G:H4'	1.50	0.91
33:7:185:THR:HG22	33:7:198:LYS:HG2	1.53	0.91
50:24:34:VAL:HG11	50:24:78:LEU:HD21	1.53	0.91
42:16:53:ARG:HA	42:16:63:THR:HA	1.52	0.90
11:K:85:VAL:HG21	11:K:95:LEU:HD23	1.53	0.90
56:30:18:G:H1	56:30:55:U:H1'	1.34	0.90
53:27:1965:C:H3'	53:27:1966:A:H8	1.37	0.90
27:1:54:ILE:HG23	27:1:56:LYS:H	1.35	0.90
52:26:828:U:H3'	52:26:829:G:H5"	1.53	0.90
52:26:963:G:H2'	52:26:964:A:H8	1.33	0.90
52:26:1129:C:H2'	52:26:1139:G:N7	1.86	0.90
53:27:195:A:H2'	53:27:198:C:H41	1.36	0.90
27:1:8:THR:HG23	27:1:11:LYS:H	1.36	0.90
50:24:9:ARG:HD3	52:26:107:G:O6	1.72	0.90
41:15:116:PRO:HB3	52:26:676:A:H1'	1.51	0.90
47:21:64:ARG:HD2	52:26:264:C:H4'	1.54	0.90
14:N:62:LEU:HD13	14:N:70:ALA:HA	1.53	0.90
37:11:129:ASN:HA	37:11:134:VAL:HG11	1.54	0.90
53:27:1300:G:C4'	53:27:1301:A:H5"	2.02	0.89
53:27:2114:A:H61	53:27:2117:A:H62	1.19	0.89
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.89
40:14:43:PRO:HA	52:26:1151:A:H5'	1.51	0.89
53:27:1172:C:H2'	53:27:1173:U:H5"	1.55	0.89
40:14:15:HIS:HB3	40:14:70:HIS:NE2	1.88	0.89
52:26:440:C:H3'	52:26:441:A:H5"	1.54	0.89
52:26:405:U:H3'	52:26:406:G:H5'	1.53	0.89
1:A:131:MET:HA	1:A:134:ILE:HD12	1.53	0.89
53:27:1171:G:H3'	53:27:1172:C:H4'	1.55	0.89
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.89
59:33:698:ALA:HB3	59:33:711:ASP:HB2	1.53	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
42:16:49:ARG:HG3	42:16:89:LEU:HD11	1.55	0.88
53:27:1300:G:H4'	53:27:1301:A:C5'	2.04	0.88
21:U:72:VAL:HG12	21:U:93:ARG:HA	1.52	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.56	0.88
3:C:60:TRP:HE1	3:C:69:ARG:HG3	1.37	0.88
35:9:80:LEU:HD13	35:9:122:VAL:HG11	1.54	0.88
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.55	0.88
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.55	0.88
53:27:596:U:H2'	53:27:597:G:C8	2.09	0.88
53:27:2553:G:H1'	53:27:2582:G:H21	1.38	0.88
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.88
52:26:193:C:H2'	52:26:194:C:C6	2.08	0.88
15:O:52:ARG:HH21	53:27:2720:U:H5"	1.39	0.88
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.53	0.88
53:27:2800:A:H3'	53:27:2801:G:H5'	1.55	0.88
43:17:27:THR:HG21	52:26:1328:C:H5"	1.55	0.87
51:25:3:ILE:N	51:25:19:LYS:HZ1	1.71	0.87
53:27:2086:U:H2'	53:27:2087:G:C8	2.09	0.87
53:27:2848:G:H2'	53:27:2867:G:H21	1.39	0.87
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.87
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.87
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.87
53:27:2747:G:H1	53:27:2754:U:H2'	1.39	0.87
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.87
8:H:56:VAL:HA	8:H:70:THR:HA	1.53	0.87
32:6:53:LEU:HD22	32:6:219:THR:HG21	1.55	0.87
52:26:664:G:N2	52:26:741:G:H1	1.71	0.87
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.39	0.87
53:27:1261:C:H2'	53:27:1262:A:H5"	1.56	0.87
4:D:147:ARG:HD3	4:D:148:VAL:H	1.38	0.87
20:T:17:ASP:HB3	20:T:20:LYS:HG3	1.55	0.87
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.87
34:8:61:ARG:HH21	34:8:67:LEU:HA	1.40	0.86
53:27:1076:C:H2'	53:27:1077:A:H8	1.40	0.86
53:27:1796:U:H2'	53:27:1797:G:C8	2.10	0.86
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.86
45:19:71:ARG:NH2	52:26:754:C:H5'	1.91	0.86
53:27:955:U:H5	53:27:962:G:H1	1.23	0.86
53:27:2685:G:H2'	53:27:2686:G:H8	1.41	0.86
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.06	0.86
40:14:65:TYR:HB3	44:18:95:LEU:HD11	1.58	0.86
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.86
18:R:3:THR:HG21	18:R:58:ALA:HB2	1.55	0.86
34:8:28:ASP:O	34:8:30:LYS:N	2.07	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.86
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.86
39:13:17:ARG:NH2	52:26:1129:C:H5"	1.91	0.85
53:27:2604:U:H2'	53:27:2605:U:C6	2.10	0.85
3:C:57:LYS:HE3	3:C:73:ILE:HG21	1.59	0.85
37:11:12:LEU:HD12	37:11:13:PRO:HD2	1.56	0.85
4:D:76:PHE:HE2	53:27:2310:C:H2'	1.39	0.85
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
1:A:124:LYS:HD2	1:A:125:PRO:HD2	1.56	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
59:33:444:ILE:HG22	59:33:461:ILE:HD12	1.58	0.85
53:27:1597:A:H5"	53:27:1598:A:H5'	1.58	0.85
53:27:2786:U:H2'	53:27:2787:C:H6	1.42	0.85
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.85
39:13:17:ARG:HH22	52:26:1129:C:H5"	1.39	0.85
46:20:20:VAL:HG23	46:20:35:ARG:HA	1.59	0.85
39:13:18:VAL:HA	39:13:64:ILE:HG22	1.59	0.85
53:27:1904:G:H21	53:27:1905:C:H1'	1.42	0.85
52:26:309:A:H2'	52:26:310:G:H8	1.42	0.85
59:33:62:MET:HE3	59:33:79:ALA:HA	1.56	0.85
41:15:83:VAL:HB	41:15:109:ILE:HA	1.59	0.84
36:10:29:ILE:HG23	36:10:70:VAL:HG11	1.57	0.84
47:21:15:LYS:O	52:26:275:G:H4'	1.76	0.84
53:27:1843:C:H2'	53:27:1844:C:C6	2.11	0.84
41:15:15:VAL:HG22	41:15:16:SER:H	1.40	0.84
53:27:1965:C:H3'	53:27:1966:A:C8	2.11	0.84
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.84
52:26:531:U:H4'	52:26:532:A:H5'	1.60	0.84
50:24:43:LYS:HB2	50:24:86:ALA:HB2	1.56	0.84
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.84
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.57	0.84
23:W:67:LEU:HD11	23:W:77:TYR:HB2	1.60	0.84
41:15:124:LYS:HD3	52:26:780:A:H5"	1.58	0.84
40:14:32:THR:HG23	40:14:83:THR:HG23	1.59	0.84
53:27:2508:G:N1	53:27:2580:U:H5	1.74	0.84
53:27:2514:U:H2'	53:27:2515:C:C6	2.12	0.84
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.59	0.84
46:20:39:PHE:HA	46:20:50:THR:HG23	1.59	0.84
53:27:581:C:H2'	53:27:582:A:C8	2.13	0.84
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.84
7:G:55:VAL:HA	53:27:1084:A:C5'	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:61:LEU:HD11	19:S:82:LYS:HE2	1.58	0.83
53:27:2162:G:H2'	53:27:2163:A:H5'	1.59	0.83
36:10:86:ARG:HD3	48:22:63:TYR:O	1.78	0.83
39:13:98:ARG:HG3	39:13:103:VAL:HG21	1.61	0.83
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.83
1:A:12:ARG:HH21	53:27:728:G:H4'	1.43	0.83
7:G:81:LEU:HD13	53:27:1107:G:H5'	1.56	0.83
53:27:287:G:H2'	53:27:288:U:C6	2.12	0.83
53:27:596:U:H2'	53:27:597:G:H8	1.40	0.83
52:26:235:C:H2'	52:26:236:A:H8	1.42	0.83
53:27:2672:U:C2'	53:27:2673:G:H5"	2.07	0.83
58:32:41:C:H2'	58:32:42:G:C8	2.13	0.83
33:7:89:VAL:O	33:7:93:ILE:HG13	1.79	0.83
35:9:23:THR:HA	35:9:28:ARG:HA	1.58	0.83
53:27:1266:G:H22	53:27:2012:G:H2'	1.44	0.83
53:27:2329:U:H2'	53:27:2330:G:C8	2.14	0.83
18:R:83:LYS:HD3	18:R:95:ARG:HH12	1.43	0.83
52:26:1119:C:H2'	52:26:1120:C:C6	2.14	0.83
5:E:154:GLU:HG2	5:E:156:TYR:H	1.43	0.83
33:7:31:ASN:HD21	33:7:58:ARG:HD2	1.43	0.83
47:21:45:VAL:HG21	47:21:60:ILE:HD13	1.61	0.83
9:I:27:ARG:NH2	53:27:1142:A:H4'	1.94	0.82
24:X:21:LEU:HA	24:X:25:GLN:HB3	1.58	0.82
52:26:940:C:H2'	52:26:941:G:C8	2.14	0.82
53:27:565:C:H2'	53:27:566:U:C6	2.14	0.82
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
11:K:79:LEU:HD12	11:K:112:LEU:HA	1.60	0.82
32:6:174:GLU:HA	32:6:177:ASN:HD22	1.43	0.82
52:26:695:A:H2'	52:26:696:A:C8	2.14	0.82
53:27:799:G:H5"	53:27:800:A:H2'	1.60	0.82
53:27:2453:A:H2'	53:27:2454:G:H8	1.43	0.82
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.60	0.82
39:13:53:LEU:HD12	39:13:54:VAL:HG13	1.61	0.82
46:20:46:LYS:HG3	46:20:47:GLU:H	1.42	0.82
53:27:760:G:H2'	53:27:761:A:O4'	1.78	0.82
53:27:435:C:H2'	53:27:436:C:H5'	1.59	0.82
9:I:56:VAL:HB	9:I:124:VAL:HG12	1.62	0.82
53:27:1693:U:H3'	53:27:1694:C:H5'	1.61	0.82
58:32:22:G:N7	58:32:46:A:N1	2.27	0.82
24:X:17:GLU:HB2	24:X:53:VAL:HG11	1.62	0.82
52:26:62:U:H2'	52:26:63:C:C6	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2591:C:H2'	53:27:2592:G:C8	2.14	0.82
34:8:149:LYS:HG2	34:8:150:LYS:H	1.43	0.82
53:27:2014:A:H2'	53:27:2015:A:C8	2.14	0.82
53:27:2327:A:H2'	53:27:2328:A:C8	2.15	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
8:H:4:VAL:HG13	8:H:7:TYR:HB2	1.61	0.82
52:26:352:C:H4'	52:26:354:G:OP1	1.79	0.82
59:33:686:ILE:HG21	59:33:729:LEU:HD23	1.61	0.82
33:7:5:HIS:HB3	44:18:88:MET:HE3	1.61	0.81
3:C:188:MET:HE2	3:C:193:VAL:HA	1.60	0.81
34:8:16:THR:HG22	34:8:17:ASP:H	1.44	0.81
51:25:4:LYS:HE3	51:25:6:ARG:HB2	1.58	0.81
52:26:112:G:H21	52:26:354:G:H5'	1.45	0.81
52:26:1052:U:H2'	52:26:1200:C:H41	1.44	0.81
4:D:147:ARG:HD3	4:D:148:VAL:N	1.95	0.81
31:5:2:LYS:HB2	31:5:35:GLN:HB3	1.59	0.81
53:27:2243:U:H2'	53:27:2244:U:C6	2.12	0.81
52:26:1527:U:H2'	52:26:1528:U:C6	2.16	0.81
53:27:833:A:H2'	53:27:834:G:H8	1.46	0.81
53:27:1594:U:H2'	53:27:1595:C:C6	2.15	0.81
3:C:46:GLN:HB2	3:C:86:ALA:HB1	1.62	0.81
41:15:16:SER:HA	41:15:78:ILE:HA	1.63	0.81
52:26:920:U:H2'	52:26:921:U:C6	2.15	0.81
52:26:1033:G:C2'	52:26:1034:G:H4'	2.09	0.81
53:27:1697:G:H3'	53:27:1698:A:H5"	1.63	0.81
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.63	0.81
35:9:156:ARG:HD2	38:12:42:GLU:HG3	1.60	0.81
40:14:36:VAL:HG23	40:14:76:ILE:HA	1.61	0.81
52:26:1011:C:H2'	52:26:1012:A:H8	1.46	0.81
52:26:1218:C:H2'	52:26:1219:A:C8	2.14	0.81
53:27:2848:G:H2'	53:27:2867:G:N2	1.95	0.81
4:D:35:LEU:HG	4:D:153:ILE:HG22	1.63	0.81
36:10:10:VAL:HB	36:10:58:HIS:HB3	1.63	0.81
52:26:1513:A:H2'	52:26:1514:G:H8	1.44	0.81
50:24:3:ILE:HA	50:24:7:LYS:HD3	1.62	0.81
51:25:23:GLU:HG3	51:25:24:LYS:H	1.44	0.81
52:26:677:U:H2'	52:26:678:U:C6	2.15	0.81
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.81
32:6:39:ILE:HG22	32:6:40:ILE:H	1.46	0.81
37:11:113:LYS:HB2	37:11:117:LEU:HD13	1.61	0.81
39:13:41:GLU:HB2	39:13:44:ARG:NH2	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:398:U:H2'	52:26:399:G:C8	2.15	0.81
52:26:673:A:H2'	52:26:674:G:C8	2.16	0.81
52:26:955:U:H1'	52:26:1227:A:H61	1.46	0.81
53:27:1667:G:H22	53:27:1991:U:H3'	1.46	0.81
58:32:31:G:H2'	58:32:32:C:H5'	1.63	0.81
15:O:3:ILE:HD12	15:O:3:ILE:H	1.46	0.80
53:27:2047:C:H2'	53:27:2048:G:H8	1.45	0.80
58:32:14:A:H3'	58:32:15:G:H8	1.45	0.80
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.80	0.80
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.80
34:8:123:MET:HA	34:8:128:VAL:HA	1.63	0.80
46:20:67:ILE:HG23	46:20:71:VAL:HB	1.61	0.80
52:26:502:A:H2'	52:26:503:C:C6	2.15	0.80
53:27:1266:G:N2	53:27:2012:G:H2'	1.95	0.80
56:30:18:G:H22	56:30:55:U:H6	1.26	0.80
7:G:59:LEU:C	7:G:61:ARG:H	1.89	0.80
8:H:25:PRO:O	8:H:29:GLN:HG2	1.80	0.80
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.63	0.80
53:27:890:C:H2'	53:27:891:G:O4'	1.80	0.80
53:27:2092:U:H4'	53:27:2093:G:H5"	1.61	0.80
32:6:183:PHE:HB3	32:6:197:PHE:HD2	1.46	0.80
53:27:2087:G:H2'	53:27:2088:A:C8	2.16	0.80
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.21	0.80
8:H:14:ALA:HB2	8:H:50:LYS:HA	1.62	0.80
22:V:52:ASP:O	22:V:53:HIS:HB2	1.81	0.80
59:33:409:PHE:O	59:33:460:GLN:HA	1.81	0.80
52:26:532:A:H3'	52:26:533:A:H5"	1.62	0.80
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.63	0.80
53:27:594:U:H2'	53:27:595:C:C6	2.17	0.80
10:J:110:GLU:H	10:J:113:MET:HE2	1.45	0.80
43:17:82:LEU:HD11	49:23:65:MET:HG2	1.63	0.80
53:27:565:C:H2'	53:27:566:U:H6	1.47	0.80
5:E:23:ILE:HD13	5:E:71:LEU:HD21	1.61	0.80
44:18:39:ASP:HA	44:18:42:ASN:HD22	1.47	0.80
46:20:7:ALA:HB3	46:20:18:GLN:HB3	1.64	0.80
53:27:2564:A:C2	53:27:2647:U:H4'	2.17	0.80
58:32:51:C:H2'	58:32:52:G:C8	2.16	0.80
6:F:44:ILE:O	6:F:48:GLU:HG3	1.82	0.80
34:8:169:TRP:CD1	34:8:185:PRO:HG3	2.17	0.80
53:27:191:A:H2'	53:27:192:C:C6	2.17	0.80
53:27:2493:U:H3'	53:27:2494:G:H5"	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:27:PRO:HG2	52:26:363:A:C2	2.17	0.79
52:26:1306:A:N6	52:26:1331:G:H1'	1.97	0.79
54:28:115:A:H2'	54:28:116:G:C8	2.17	0.79
59:33:645:ARG:HA	59:33:649:PRO:HB3	1.64	0.79
52:26:677:U:H3	52:26:713:G:H22	1.27	0.79
53:27:1659:G:C2'	53:27:1660:G:H5"	2.11	0.79
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.79
5:E:162:ARG:CZ	5:E:168:VAL:HG21	2.12	0.79
44:18:45:LEU:HD22	44:18:46:LYS:HD2	1.63	0.79
56:30:72:C:H2'	56:30:73:A:H8	1.48	0.79
3:C:79:ARG:NH2	53:27:471:A:H5"	1.98	0.79
51:25:49:ALA:O	51:25:53:LYS:HG3	1.82	0.79
6:F:68:ARG:HA	6:F:71:LYS:HB2	1.64	0.79
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.65	0.79
40:14:81:GLU:HA	40:14:84:VAL:HG12	1.62	0.79
52:26:1391:U:H2'	52:26:1392:G:C8	2.17	0.79
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.79
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.65	0.79
52:26:1259:C:C3'	52:26:1260:G:H5"	2.12	0.79
52:26:1391:U:H2'	52:26:1392:G:H8	1.45	0.79
53:27:2508:G:H2'	53:27:2509:G:H8	1.48	0.79
6:F:4:ILE:HG22	6:F:37:VAL:O	1.82	0.79
23:W:28:PHE:HE2	53:27:379:G:H21	1.31	0.79
52:26:1513:A:H2'	52:26:1514:G:C8	2.18	0.79
53:27:355:U:H2'	53:27:356:G:C8	2.18	0.79
53:27:1825:U:H2'	53:27:1826:G:C8	2.18	0.79
1:A:256:THR:OG1	53:27:1798:U:H5'	1.83	0.79
8:H:126:ARG:HH21	53:27:1080:A:H5"	1.46	0.79
32:6:96:LEU:HB2	32:6:99:MET:HB3	1.64	0.79
52:26:880:C:H2'	52:26:881:G:H8	1.47	0.79
53:27:2071:A:H2'	53:27:2072:C:C6	2.18	0.79
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.79
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.79
1:A:200:MET:HB2	53:27:1820:U:C2	2.16	0.78
35:9:114:LEU:O	35:9:119:VAL:HG22	1.83	0.78
36:10:12:PRO:O	36:10:15:SER:HB3	1.82	0.78
41:15:108:ASN:HA	51:25:4:LYS:HZ1	1.45	0.78
43:17:114:PRO:HG2	52:26:1228:C:H5'	1.65	0.78
53:27:2065:C:H2'	53:27:2066:C:C6	2.17	0.78
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:183:PHE:HB3	32:6:197:PHE:CD2	2.18	0.78
52:26:440:C:C3'	52:26:441:A:H5"	2.12	0.78
53:27:2443:C:H2'	53:27:2444:G:C8	2.19	0.78
53:27:2788:C:H2'	53:27:2789:C:C6	2.17	0.78
39:13:51:LEU:HB3	39:13:56:MET:HB2	1.66	0.78
52:26:403:C:H2'	52:26:404:G:H8	1.48	0.78
53:27:1281:G:H2'	53:27:1282:U:C6	2.18	0.78
53:27:248:G:C5'	53:27:249:C:H5'	2.12	0.78
53:27:577:G:H2'	53:27:578:G:C8	2.18	0.78
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.78
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.17	0.78
42:16:98:ARG:HH21	42:16:106:VAL:HA	1.48	0.78
52:26:17:U:H2'	52:26:18:C:C6	2.18	0.78
53:27:2417:C:H2'	53:27:2418:A:C8	2.19	0.78
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.64	0.78
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.65	0.78
36:10:78:PHE:HD1	36:10:84:VAL:HG11	1.46	0.78
38:12:106:SER:HA	52:26:642:A:N7	1.99	0.78
41:15:109:ILE:H	51:25:4:LYS:NZ	1.82	0.78
52:26:917:G:H2'	52:26:918:A:C8	2.18	0.78
53:27:138:U:H3'	53:27:139:U:H5'	1.65	0.78
53:27:613:A:H3'	53:27:613:A:N3	1.98	0.78
4:D:140:ILE:HG22	4:D:142:TYR:H	1.49	0.78
7:G:56:ARG:HE	7:G:83:ALA:HA	1.47	0.78
36:10:38:ARG:HE	36:10:97:THR:HA	1.48	0.78
45:19:71:ARG:HH22	52:26:754:C:H5'	1.48	0.78
52:26:1352:C:H2'	52:26:1353:G:C8	2.19	0.78
53:27:1502:A:C2'	53:27:1503:A:H5"	2.12	0.78
59:33:611:ARG:HA	59:33:614:GLN:HE21	1.49	0.78
59:33:613:CYS:HA	59:33:742:HIS:HB3	1.64	0.78
6:F:96:THR:HA	6:F:115:VAL:HG11	1.66	0.78
53:27:2036:C:H2'	53:27:2037:A:C8	2.19	0.78
53:27:2786:U:H2'	53:27:2787:C:C6	2.18	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.83	0.78
3:C:146:VAL:HG12	3:C:185:LYS:HB2	1.66	0.78
19:S:80:TRP:HZ3	19:S:82:LYS:HB3	1.48	0.78
20:T:10:VAL:HG12	20:T:71:ILE:HA	1.65	0.78
53:27:1478:G:H2'	53:27:1479:G:H8	1.47	0.78
12:L:21:ALA:HB1	12:L:100:LYS:HD3	1.65	0.78
40:14:7:ARG:HA	40:14:75:ASP:HA	1.65	0.78
47:21:11:VAL:HB	47:21:56:ASP:H	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:25:ALA:HB2	55:29:9:G:H4'	1.65	0.78
58:32:41:C:H2'	58:32:42:G:H8	1.49	0.78
19:S:7:LEU:HD13	19:S:49:LYS:HG3	1.67	0.77
53:27:704:G:H2'	53:27:726:G:H22	1.49	0.77
53:27:891:G:H2'	53:27:892:A:H8	1.47	0.77
33:7:51:VAL:HG21	33:7:54:ILE:HG23	1.66	0.77
52:26:769:G:H4'	52:26:1513:A:H4'	1.67	0.77
52:26:1356:G:H2'	52:26:1357:A:C8	2.19	0.77
53:27:646:U:H3'	53:27:647:G:H5"	1.65	0.77
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.77
8:H:83:ALA:HB3	8:H:85:ILE:HG12	1.66	0.77
13:M:117:ASP:CG	13:M:118:ARG:H	1.90	0.77
21:U:10:LYS:HG3	21:U:11:GLU:H	1.47	0.77
24:X:9:LYS:HZ2	24:X:11:VAL:HG23	1.48	0.77
53:27:59:U:O2'	53:27:73:A:H2'	1.84	0.77
53:27:609:A:H2'	53:27:610:C:O4'	1.85	0.77
53:27:1923:U:H2'	53:27:1924:C:H6	1.49	0.77
54:28:65:U:H3'	54:28:108:A:N6	2.00	0.77
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.45	0.77
8:H:9:LYS:HE2	53:27:1061:U:OP1	1.84	0.77
17:Q:32:THR:HA	17:Q:62:GLU:HA	1.66	0.77
22:V:36:GLN:NE2	22:V:39:THR:HA	2.00	0.77
53:27:20:C:H2'	53:27:21:A:C8	2.19	0.77
53:27:189:G:H2'	53:27:205:G:N2	1.99	0.77
53:27:1906:G:H2'	53:27:1907:G:H5"	1.67	0.77
53:27:2396:G:H2'	53:27:2397:G:H8	1.48	0.77
52:26:20:U:H2'	52:26:21:G:O4'	1.84	0.77
52:26:412:A:H62	52:26:431:A:H61	1.31	0.77
52:26:742:G:H2'	52:26:743:A:H8	1.49	0.77
52:26:1142:G:H3'	52:26:1143:G:H8	1.50	0.77
52:26:1512:U:H2'	52:26:1513:A:C8	2.19	0.77
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.77
13:M:2:ARG:HG3	13:M:5:LYS:HB2	1.65	0.77
43:17:109:LYS:HD2	52:26:1227:A:OP2	1.84	0.77
49:23:10:ILE:HG22	49:23:38:THR:H	1.49	0.77
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.77
59:33:674:ASN:HD21	59:33:736:ILE:HG21	1.49	0.77
4:D:3:LEU:HG	4:D:100:GLU:HG2	1.67	0.77
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.64	0.77
53:27:873:C:H2'	53:27:874:G:C8	2.20	0.77
53:27:1314:C:H2'	53:27:1315:C:H6	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1394:U:H4'	53:27:1603:A:H4'	1.65	0.77
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.66	0.77
42:16:25:ALA:HB2	52:26:554:A:H5'	1.66	0.77
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.77
3:C:57:LYS:HG2	3:C:59:PRO:HG3	1.65	0.77
20:T:10:VAL:HA	20:T:72:PHE:H	1.48	0.77
52:26:79:G:H2'	52:26:80:A:C8	2.19	0.77
53:27:1904:G:N2	53:27:1905:C:H1'	1.99	0.77
53:27:2104:C:H42	53:27:2185:U:H3	1.31	0.77
44:18:80:ARG:HA	44:18:83:VAL:CG1	2.13	0.77
52:26:460:A:H2'	52:26:461:A:C8	2.19	0.77
53:27:1775:U:H2'	53:27:1776:G:O4'	1.84	0.77
10:J:13:ASN:HB3	10:J:98:ARG:HB2	1.65	0.76
14:N:13:ARG:HH22	53:27:2335:A:H5'	1.49	0.76
53:27:955:U:H5	53:27:962:G:N1	1.83	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
1:A:129:LEU:HD13	1:A:133:ASN:HB2	1.68	0.76
21:U:16:ALA:HA	21:U:19:ARG:NE	1.99	0.76
53:27:163:C:H2'	53:27:164:C:O4'	1.85	0.76
53:27:302:C:H2'	53:27:303:G:H8	1.48	0.76
53:27:859:G:H1'	53:27:860:U:H5	1.50	0.76
53:27:1076:C:H2'	53:27:1077:A:C8	2.20	0.76
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.76
58:32:7:G:H3'	58:32:8:U:H5'	1.68	0.76
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.68	0.76
44:18:5:MET:HE2	52:26:982:U:H5"	1.67	0.76
52:26:687:A:N3	52:26:688:G:H1'	2.01	0.76
53:27:851:C:H2'	53:27:852:U:C6	2.20	0.76
59:33:670:ARG:HH22	59:33:700:ARG:HH21	1.31	0.76
53:27:640:C:H2'	53:27:641:U:C6	2.21	0.76
53:27:1173:U:C2'	53:27:1174:U:H4'	2.16	0.76
42:16:41:PRO:HD2	42:16:46:SER:HA	1.68	0.76
53:27:873:C:H2'	53:27:874:G:H8	1.50	0.76
53:27:2082:A:H2'	53:27:2083:G:O4'	1.85	0.76
59:33:616:ILE:HG21	59:33:667:LEU:HD12	1.67	0.76
7:G:48:ALA:HB3	7:G:51:TYR:CE2	2.20	0.76
12:L:20:LEU:HD23	21:U:81:PRO:HG2	1.65	0.76
50:24:14:GLU:HA	50:24:17:ARG:HG2	1.67	0.76
35:9:52:ALA:HB3	35:9:58:ALA:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:195:A:H2'	53:27:198:C:N4	2.01	0.76
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.76
32:6:39:ILE:H	32:6:39:ILE:HD12	1.48	0.76
32:6:113:LEU:HA	32:6:143:LEU:HD13	1.67	0.76
53:27:20:C:H2'	53:27:21:A:H8	1.51	0.76
53:27:2060:A:H1'	53:27:2502:G:H1'	1.65	0.76
1:A:269:ARG:HG2	1:A:270:ARG:H	1.50	0.76
22:V:62:LYS:HG3	22:V:81:GLU:HG3	1.66	0.76
52:26:216:U:H4'	52:26:464:U:H4'	1.68	0.76
53:27:2628:C:O2'	53:27:2781:A:H2'	1.85	0.76
57:31:62:C:H2'	57:31:63:G:C8	2.21	0.76
21:U:9:ARG:HH22	21:U:12:GLN:HA	1.52	0.75
34:8:125:ASN:HA	34:8:141:VAL:HG23	1.68	0.75
53:27:2231:U:H2'	53:27:2232:C:C6	2.22	0.75
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.67	0.75
45:19:63:ARG:HH22	45:19:87:ARG:HH22	1.32	0.75
52:26:123:U:H5"	52:26:311:C:O2'	1.86	0.75
53:27:197:A:H4'	53:27:2069:G:OP2	1.86	0.75
53:27:1434:A:H2'	53:27:1435:G:H8	1.51	0.75
53:27:1591:A:H2'	53:27:1592:C:C6	2.21	0.75
53:27:2286:G:H4'	53:27:2287:A:O5'	1.85	0.75
53:27:1664:A:H61	53:27:1996:C:H42	1.34	0.75
53:27:2131:U:H5'	53:27:2132:U:H5"	1.68	0.75
53:27:2591:C:H2'	53:27:2592:G:H8	1.50	0.75
54:28:30:C:H1'	54:28:57:A:H61	1.50	0.75
7:G:28:ALA:HA	7:G:81:LEU:HB3	1.67	0.75
8:H:102:ARG:HB3	8:H:141:ASP:HB3	1.67	0.75
14:N:56:LYS:HA	14:N:59:ALA:HB3	1.68	0.75
20:T:25:LYS:HD2	20:T:36:GLU:HB3	1.67	0.75
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.68	0.75
52:26:429:U:H4'	52:26:430:A:O5'	1.87	0.75
52:26:458:U:H2'	52:26:459:A:C8	2.21	0.75
53:27:1447:C:H2'	53:27:1448:G:H8	1.51	0.75
53:27:2629:U:O2'	53:27:2630:G:H5"	1.86	0.75
57:31:62:C:H2'	57:31:63:G:H8	1.51	0.75
13:M:24:MET:HE3	13:M:44:LEU:HD22	1.67	0.75
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.67	0.75
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.22	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.86	0.75
1:A:106:PRO:HG2	1:A:109:LEU:HB2	1.68	0.75
2:B:116:LYS:HD2	13:M:1:MET:HE1	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:35:ASP:CG	26:Z:36:VAL:H	1.95	0.75
39:13:50:PRO:HB3	39:13:83:THR:HG22	1.68	0.75
53:27:1270:C:H5"	53:27:1271:G:O5'	1.86	0.75
53:27:2740:A:H2'	53:27:2741:A:C8	2.22	0.75
7:G:61:ARG:HD2	53:27:1046:A:O4'	1.87	0.75
11:K:95:LEU:HB3	11:K:100:ILE:HD11	1.68	0.75
39:13:39:GLY:HA2	39:13:44:ARG:NE	2.02	0.75
42:16:41:PRO:HB3	42:16:88:ASP:OD2	1.87	0.75
53:27:1261:C:C2'	53:27:1262:A:H5"	2.17	0.75
59:33:642:ALA:O	59:33:645:ARG:HB2	1.87	0.75
47:21:26:ARG:NH2	52:26:237:G:H5"	2.01	0.75
52:26:830:G:H2'	52:26:831:A:H8	1.50	0.75
53:27:680:C:H2'	53:27:681:G:H8	1.50	0.75
53:27:814:C:H1'	53:27:1225:G:H21	1.52	0.75
53:27:1258:U:H2'	53:27:1259:G:C8	2.22	0.75
9:I:93:ILE:HD13	9:I:100:VAL:HG21	1.68	0.74
52:26:1347:G:N2	52:26:1373:G:H2'	2.02	0.74
53:27:634:C:H2'	53:27:635:C:C6	2.21	0.74
53:27:1096:A:H3'	53:27:1097:U:H5"	1.67	0.74
14:N:7:ARG:HA	14:N:10:ARG:HH11	1.52	0.74
41:15:118:ASN:HB2	52:26:718:A:H5'	1.69	0.74
52:26:309:A:H2'	52:26:310:G:C8	2.22	0.74
52:26:317:U:H2'	52:26:318:G:H8	1.52	0.74
52:26:955:U:C1'	52:26:1227:A:H61	2.00	0.74
53:27:755:U:H2'	53:27:756:A:C8	2.22	0.74
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.68	0.74
20:T:31:GLY:O	20:T:66:VAL:HG23	1.87	0.74
36:10:44:ARG:HA	36:10:58:HIS:HA	1.68	0.74
39:13:32:ARG:HD2	39:13:37:TYR:HD1	1.51	0.74
41:15:23:HIS:HB3	41:15:30:ILE:HG23	1.67	0.74
52:26:1119:C:H2'	52:26:1120:C:H6	1.49	0.74
53:27:365:U:H2'	53:27:366:C:C6	2.23	0.74
53:27:404:A:H1'	53:27:406:G:C4	2.22	0.74
53:27:1903:G:H2'	53:27:1904:G:H8	1.52	0.74
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.74
7:G:58:THR:HG21	7:G:82:ILE:N	2.01	0.74
34:8:149:LYS:HG2	34:8:150:LYS:N	2.02	0.74
35:9:98:ALA:HB1	35:9:101:GLY:HA3	1.68	0.74
38:12:6:ILE:HD11	38:12:76:ARG:CZ	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:181:A:H2'	53:27:182:A:C8	2.22	0.74
53:27:2406:A:H5'	53:27:2407:A:OP1	1.87	0.74
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.22	0.74
22:V:22:PHE:CD2	53:27:922:C:H1'	2.22	0.74
45:19:53:ARG:NH2	52:26:579:A:H4'	2.03	0.74
53:27:479:A:H4'	53:27:480:A:OP1	1.87	0.74
53:27:740:C:H5"	53:27:1784:A:OP1	1.88	0.74
53:27:2514:U:H2'	53:27:2515:C:H6	1.50	0.74
53:27:2547:A:H2'	53:27:2548:U:C6	2.22	0.74
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.74
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.74
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.74
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.74
30:4:49:VAL:HG11	30:4:57:VAL:HG21	1.70	0.74
52:26:1402:C:H2'	52:26:1403:C:O4'	1.88	0.74
53:27:581:C:H2'	53:27:582:A:H8	1.51	0.74
53:27:1405:U:H2'	53:27:1406:U:C6	2.23	0.74
53:27:2019:A:H2	53:27:2035:G:H22	1.36	0.74
53:27:2277:G:C2'	53:27:2278:A:H5"	2.16	0.74
11:K:110:VAL:HG21	11:K:127:VAL:HG22	1.67	0.74
16:P:55:GLN:HE22	53:27:535:G:H21	1.34	0.74
1:A:180:MET:HB2	1:A:267:VAL:HB	1.69	0.74
21:U:25:LYS:HG2	21:U:43:ASP:HA	1.70	0.74
1:A:5:CYS:SG	1:A:12:ARG:HD2	2.28	0.74
39:13:44:ARG:O	39:13:47:VAL:HG22	1.88	0.74
53:27:1199:U:H2'	53:27:1200:C:C6	2.22	0.74
53:27:2508:G:H2'	53:27:2509:G:C8	2.23	0.74
4:D:105:ILE:HG13	4:D:106:ALA:H	1.52	0.74
8:H:53:PRO:O	8:H:77:VAL:HG21	1.88	0.74
25:Y:27:GLY:HA3	25:Y:37:ARG:HH21	1.52	0.74
49:23:39:ILE:HB	49:23:66:VAL:HA	1.68	0.74
53:27:2105:U:H2'	53:27:2106:U:C6	2.23	0.74
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.74
41:15:23:HIS:HB3	41:15:30:ILE:CG2	2.17	0.73
52:26:81:A:H2'	52:26:82:G:C8	2.22	0.73
53:27:1857:G:N2	53:27:1884:G:H2'	2.02	0.73
54:28:88:C:H5"	54:28:89:U:OP1	1.87	0.73
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
11:K:82:LEU:HD11	11:K:90:VAL:HG21	1.70	0.73
42:16:114:SER:HB3	52:26:35:G:H21	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:323:U:H2'	52:26:324:G:O4'	1.88	0.73
52:26:513:C:H2'	52:26:514:C:C6	2.24	0.73
52:26:1241:G:H2'	52:26:1242:G:H8	1.53	0.73
53:27:2177:C:H3'	53:27:2178:C:H5"	1.69	0.73
34:8:120:LYS:HG2	34:8:130:ASN:HD21	1.52	0.73
52:26:715:A:H2'	52:26:716:A:H8	1.53	0.73
52:26:901:A:C5	52:26:902:G:H1'	2.23	0.73
53:27:1478:G:H2'	53:27:1479:G:C8	2.23	0.73
32:6:33:ALA:HB2	32:6:39:ILE:HD11	1.69	0.73
37:11:75:LYS:HE2	37:11:77:ARG:HB2	1.70	0.73
52:26:178:C:H2'	52:26:179:A:H8	1.52	0.73
52:26:835:U:C2'	52:26:836:G:H5"	2.18	0.73
53:27:959:A:H2'	53:27:960:A:C8	2.24	0.73
53:27:2423:U:O2'	53:27:2425:A:H2'	1.89	0.73
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.70	0.73
52:26:628:G:H2'	52:26:629:A:H8	1.53	0.73
52:26:946:A:H2'	52:26:947:G:C8	2.24	0.73
53:27:1179:G:H2'	53:27:1180:U:H4'	1.70	0.73
53:27:1611:C:H2'	53:27:1612:C:H6	1.52	0.73
53:27:1635:A:H2'	53:27:1636:U:O4'	1.89	0.73
53:27:1853:A:H2'	53:27:1854:A:C8	2.23	0.73
53:27:2646:C:H2'	53:27:2647:U:O4'	1.88	0.73
53:27:2650:U:H2'	53:27:2651:C:C6	2.23	0.73
53:27:2853:C:H2'	53:27:2854:G:H8	1.54	0.73
59:33:408:VAL:HG22	59:33:458:GLY:HA2	1.70	0.73
45:19:53:ARG:HH22	52:26:579:A:H4'	1.54	0.73
52:26:229:U:H2'	52:26:230:G:C8	2.22	0.73
53:27:796:C:H2'	53:27:797:G:C8	2.24	0.73
16:P:27:ARG:HA	16:P:33:VAL:HG12	1.70	0.73
24:X:3:ALA:HA	24:X:6:LEU:HD13	1.71	0.73
53:27:96:C:H2'	53:27:97:C:H6	1.52	0.73
53:27:2185:U:H2'	53:27:2186:G:C8	2.24	0.73
53:27:2261:C:H1'	53:27:2388:A:N3	2.04	0.73
53:27:2604:U:H2'	53:27:2605:U:H6	1.53	0.73
16:P:10:ARG:HH22	53:27:514:A:H5'	1.53	0.73
53:27:825:A:H2'	53:27:826:U:C6	2.24	0.73
6:F:9:VAL:HB	6:F:13:GLY:HA3	1.70	0.73
6:F:93:SER:HB2	6:F:123:ARG:HE	1.52	0.73
6:F:134:VAL:HG23	6:F:135:HIS:H	1.53	0.73
15:O:105:LYS:HD2	52:26:1433:A:OP1	1.89	0.73
30:4:4:LYS:NZ	53:27:254:G:N7	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.70	0.73
39:13:41:GLU:CB	39:13:44:ARG:HH22	1.99	0.73
52:26:721:G:H4'	52:26:722:G:O4'	1.88	0.73
53:27:2493:U:C3'	53:27:2494:G:H5"	2.19	0.73
56:30:54:U:H2'	56:30:55:U:H5"	1.70	0.73
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.73
59:33:599:VAL:HG21	59:33:631:ILE:HD13	1.71	0.73
32:6:56:LEU:O	32:6:59:ILE:HG12	1.89	0.73
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.73
36:10:73:GLU:O	36:10:77:THR:HG23	1.88	0.72
40:14:88:MET:HE1	40:14:100:ILE:HD13	1.71	0.72
51:25:48:LYS:HG2	52:26:723:U:C6	2.23	0.72
52:26:714:G:H2'	52:26:715:A:C8	2.24	0.72
52:26:715:A:H2'	52:26:716:A:C8	2.23	0.72
53:27:171:U:H2'	53:27:172:A:H8	1.52	0.72
53:27:741:U:H2'	53:27:742:A:C8	2.24	0.72
4:D:114:ARG:HH11	43:17:70:ARG:HH11	1.38	0.72
52:26:784:A:H2'	52:26:785:G:C8	2.23	0.72
52:26:1007:U:H2'	52:26:1008:U:C6	2.24	0.72
53:27:1599:U:H2'	53:27:1600:C:C6	2.24	0.72
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.72
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.72
11:K:33:ARG:HG2	11:K:40:SER:HA	1.71	0.72
11:K:39:LYS:HG2	53:27:832:U:OP1	1.89	0.72
32:6:215:ALA:O	32:6:219:THR:HG23	1.88	0.72
52:26:211:G:H3'	52:26:211:G:N3	2.03	0.72
53:27:1744:A:H3'	53:27:1745:A:H8	1.54	0.72
47:21:30:HIS:CD2	47:21:32:ILE:H	2.06	0.72
52:26:317:U:H2'	52:26:318:G:C8	2.25	0.72
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.72
59:33:408:VAL:CG1	59:33:409:PHE:N	2.52	0.72
11:K:91:ASP:HA	11:K:123:ARG:HB3	1.72	0.72
52:26:628:G:H2'	52:26:629:A:C8	2.24	0.72
53:27:1197:G:H2'	53:27:1198:U:H6	1.53	0.72
53:27:1406:U:H2'	53:27:1407:G:O4'	1.90	0.72
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.72
4:D:24:VAL:O	4:D:27:VAL:HG12	1.88	0.72
7:G:26:VAL:HG11	7:G:77:VAL:HG11	1.71	0.72
17:Q:76:LYS:HB2	17:Q:85:LYS:HB2	1.70	0.72
52:26:1494:G:H5'	53:27:1913:A:C2	2.24	0.72
53:27:399:U:H2'	53:27:400:G:C8	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1857:G:H1'	53:27:1885:A:N6	2.04	0.72
53:27:2432:A:H1'	58:32:75:C:O4'	1.90	0.72
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.72
53:27:2685:G:H2'	53:27:2686:G:C8	2.24	0.72
52:26:963:G:H2'	52:26:964:A:C8	2.22	0.72
53:27:676:A:H62	53:27:802:A:H61	1.36	0.72
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.72
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.72
59:33:616:ILE:O	59:33:618:GLY:N	2.23	0.72
59:33:689:ASN:HD21	59:33:728:LYS:HD3	1.54	0.72
46:20:13:LYS:NZ	52:26:392:C:O3'	2.22	0.72
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.72
10:J:49:ARG:HH22	52:26:1423:G:C5'	2.03	0.72
20:T:27:VAL:HG23	20:T:33:VAL:HG12	1.72	0.72
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.54	0.72
52:26:21:G:H2'	52:26:22:G:C8	2.25	0.72
52:26:764:C:H2'	52:26:765:G:O4'	1.90	0.72
53:27:2537:U:H2'	53:27:2538:C:C6	2.25	0.72
59:33:411:PRO:HD3	59:33:461:ILE:O	1.89	0.72
3:C:18:THR:HA	3:C:106:LYS:HE3	1.72	0.72
20:T:6:ARG:O	20:T:24:VAL:HB	1.90	0.72
31:5:32:LYS:HE3	53:27:2478:A:H5'	1.70	0.72
53:27:220:G:H22	53:27:427:U:H2'	1.55	0.72
53:27:1486:U:H2'	53:27:1487:U:C6	2.25	0.72
53:27:1923:U:H2'	53:27:1924:C:C6	2.24	0.72
53:27:2262:U:H2'	53:27:2263:C:C6	2.24	0.72
1:A:146:LYS:HB2	1:A:149:LYS:HB2	1.70	0.71
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.54	0.71
20:T:17:ASP:HB3	20:T:20:LYS:CG	2.19	0.71
52:26:1011:C:H2'	52:26:1012:A:C8	2.24	0.71
52:26:1346:A:O2'	52:26:1347:G:H4'	1.89	0.71
53:27:16:C:H2'	53:27:17:G:H8	1.55	0.71
53:27:1133:A:H4'	53:27:1134:A:H5"	1.71	0.71
53:27:1440:U:H2'	53:27:1441:G:C8	2.24	0.71
53:27:1778:U:H3'	53:27:1784:A:N6	2.04	0.71
53:27:2730:C:H2'	53:27:2731:G:C8	2.25	0.71
53:27:2799:A:C2'	53:27:2800:A:H5'	2.20	0.71
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.71
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.90	0.71
16:P:86:SER:O	17:Q:52:PRO:HD3	1.89	0.71
32:6:67:LEU:HD12	32:6:153:MET:HE1	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:2:ARG:HH12	52:26:932:C:N4	1.88	0.71
52:26:328:C:H4’	52:26:329:A:H5’	1.71	0.71
52:26:1157:A:H4’	52:26:1158:C:O5’	1.89	0.71
53:27:960:A:O5’	53:27:960:A:H8	1.72	0.71
53:27:1946:U:H2’	53:27:1947:C:C6	2.25	0.71
53:27:2146:C:H4’	53:27:2147:A:C5	2.25	0.71
4:D:139:GLU:HB3	26:Z:28:VAL:HG22	1.72	0.71
16:P:19:GLN:HE22	17:Q:73:LYS:HE2	1.55	0.71
32:6:113:LEU:HD13	32:6:143:LEU:HB3	1.72	0.71
39:13:114:LYS:HB2	39:13:117:LEU:HD22	1.70	0.71
51:25:46:ARG:NH1	52:26:1532:U:H5	1.88	0.71
52:26:1413:A:H2	52:26:1487:G:H22	1.38	0.71
53:27:64:A:H2’	53:27:65:U:C6	2.25	0.71
53:27:2417:C:H2’	53:27:2418:A:H8	1.54	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
9:I:30:THR:HG21	53:27:1005:C:O2’	1.89	0.71
17:Q:24:LYS:HA	17:Q:94:THR:OG1	1.89	0.71
34:8:120:LYS:HB3	34:8:128:VAL:HG21	1.72	0.71
43:17:94:LEU:HB3	43:17:95:PRO:HD2	1.72	0.71
51:25:65:ARG:HD2	52:26:1088:G:H4’	1.72	0.71
52:26:1219:A:H2’	52:26:1220:G:C8	2.25	0.71
53:27:207:A:H2’	53:27:208:C:O4’	1.90	0.71
53:27:280:U:H3	53:27:360:U:H3	1.37	0.71
53:27:310:A:O2’	53:27:311:A:H5”	1.90	0.71
53:27:1064:C:H2’	53:27:1065:U:O4’	1.91	0.71
53:27:1447:C:H2’	53:27:1448:G:C8	2.26	0.71
53:27:2498:C:O2’	53:27:2499:C:H5’	1.91	0.71
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.71
5:E:157:LYS:HD3	5:E:159:LYS:HE2	1.72	0.71
8:H:10:LEU:HD21	8:H:12:VAL:HG22	1.73	0.71
10:J:17:ARG:HG3	10:J:18:ARG:HG2	1.73	0.71
34:8:21:LYS:HD3	34:8:28:ASP:HA	1.72	0.71
52:26:56:U:H2’	52:26:57:G:H8	1.54	0.71
53:27:1746:A:H2’	53:27:1747:U:C6	2.25	0.71
59:33:424:PRO:HD2	59:33:451:PHE:O	1.91	0.71
16:P:36:GLN:O	16:P:39:ILE:HG22	1.91	0.71
16:P:54:ARG:HD3	53:27:1155:A:H5”	1.72	0.71
24:X:41:HIS:CD2	53:27:96:C:H4’	2.25	0.71
48:22:70:THR:HG23	48:22:71:ASP:N	2.03	0.71
52:26:81:A:H62	52:26:86:G:H21	1.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1107:C:H2'	52:26:1108:G:O4'	1.91	0.71
53:27:1590:A:H2'	53:27:1591:A:C8	2.26	0.71
54:28:12:C:O2'	54:28:13:G:H5'	1.90	0.71
44:18:16:ALA:HA	44:18:54:SER:HA	1.72	0.71
47:21:50:ASN:O	47:21:52:CYS:N	2.24	0.71
52:26:885:G:H2'	52:26:886:G:H8	1.55	0.71
53:27:1268:A:H2'	53:27:1269:A:O4'	1.91	0.71
53:27:2697:G:H2'	53:27:2698:U:O4'	1.91	0.71
1:A:47:ARG:NH2	53:27:774:G:H5"	2.06	0.71
8:H:135:MET:HB2	53:27:1063:G:H4'	1.72	0.71
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.73	0.71
40:14:6:ILE:HG12	40:14:102:LEU:HA	1.73	0.71
44:18:39:ASP:HA	44:18:42:ASN:ND2	2.05	0.71
50:24:4:LYS:O	50:24:7:LYS:HG2	1.91	0.71
52:26:1437:A:H2'	52:26:1438:G:H8	1.56	0.71
53:27:2731:G:H2'	53:27:2732:G:C8	2.25	0.71
59:33:612:CYS:HG	59:33:634:HIS:CD2	2.09	0.71
52:26:918:A:H2'	52:26:919:A:C8	2.25	0.71
56:30:4:C:H2'	56:30:5:G:C8	2.26	0.71
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.71
4:D:141:ASP:O	4:D:142:TYR:HB3	1.90	0.71
6:F:1:MET:HE2	6:F:38:PRO:HB3	1.71	0.71
7:G:97:LYS:HG2	7:G:101:LYS:HE2	1.73	0.71
34:8:12:ARG:HA	34:8:33:ILE:HG13	1.73	0.71
35:9:160:VAL:HA	35:9:163:ILE:HG12	1.71	0.71
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.24	0.71
41:15:122:PRO:HG2	51:25:34:ARG:O	1.91	0.71
42:16:81:ILE:HD13	42:16:96:THR:HA	1.72	0.71
52:26:24:U:H2'	52:26:25:C:H6	1.56	0.71
52:26:212:G:H2'	52:26:213:G:H8	1.56	0.71
52:26:1395:C:H5'	52:26:1395:C:H6	1.56	0.71
53:27:1709:U:H2'	53:27:1710:G:C8	2.26	0.71
53:27:1830:C:H2'	53:27:1831:G:H8	1.55	0.71
21:U:55:GLU:HB3	21:U:59:GLU:CD	2.15	0.70
32:6:104:LYS:HZ3	52:26:1073:U:H4'	1.53	0.70
51:25:19:LYS:HB3	51:25:24:LYS:HG3	1.72	0.70
52:26:361:G:H2'	52:26:362:G:O4'	1.91	0.70
52:26:1206:G:C2	52:26:1207:G:H1'	2.26	0.70
53:27:419:U:H2'	53:27:420:C:C6	2.26	0.70
53:27:2131:U:O5'	53:27:2133:G:H4'	1.91	0.70
53:27:2208:C:H2'	53:27:2209:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2698:U:H2'	53:27:2699:C:C6	2.26	0.70
52:26:1287:A:H2	52:26:1353:G:H1'	1.54	0.70
52:26:1432:G:H1'	52:26:1468:A:N6	2.07	0.70
53:27:1059:G:H3'	53:27:1060:U:H2'	1.73	0.70
24:X:2:LYS:HD3	53:27:102:U:H1'	1.72	0.70
35:9:107:GLY:HA3	52:26:9:G:C5'	2.20	0.70
48:22:11:ARG:HD2	48:22:14:ALA:CB	2.22	0.70
53:27:783:A:H2'	53:27:784:G:H4'	1.74	0.70
56:30:65:G:H2'	56:30:66:U:C6	2.26	0.70
2:B:125:TRP:CD1	2:B:160:LYS:HB3	2.26	0.70
32:6:52:ALA:O	32:6:56:LEU:HD13	1.90	0.70
53:27:690:G:H2'	53:27:691:C:H6	1.56	0.70
53:27:1477:A:H2'	53:27:1478:G:O4'	1.91	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.70
1:A:12:ARG:HA	1:A:15:VAL:HG23	1.73	0.70
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.74	0.70
25:Y:16:LEU:HB2	25:Y:19:HIS:HD2	1.57	0.70
34:8:131:ILE:HG21	52:26:620:C:H1'	1.73	0.70
36:10:38:ARG:NE	36:10:98:GLU:H	1.90	0.70
52:26:834:U:H2'	52:26:835:U:C6	2.27	0.70
52:26:1307:U:H2'	52:26:1308:U:C6	2.26	0.70
52:26:1464:U:H2'	52:26:1465:A:C8	2.27	0.70
53:27:488:G:H1'	53:27:492:A:N6	2.06	0.70
53:27:871:U:H2'	53:27:872:U:C6	2.27	0.70
53:27:1152:C:H2'	53:27:1153:C:H6	1.57	0.70
53:27:2073:C:H2'	53:27:2074:U:H6	1.57	0.70
53:27:2231:U:H2'	53:27:2232:C:H6	1.55	0.70
53:27:2415:G:H2'	53:27:2416:C:C6	2.27	0.70
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.70
1:A:51:ARG:HH22	53:27:1825:U:P	2.13	0.70
10:J:98:ARG:HH21	52:26:339:C:H3'	1.56	0.70
44:18:42:ASN:O	44:18:45:LEU:HB3	1.91	0.70
47:21:14:ASP:C	47:21:16:MET:H	1.99	0.70
52:26:1301:U:H2'	52:26:1301:U:O2	1.92	0.70
53:27:679:C:H2'	53:27:680:C:C6	2.27	0.70
53:27:2715:C:C3'	53:27:2716:C:H5"	2.22	0.70
37:11:71:THR:HG23	37:11:95:ARG:HH22	1.56	0.70
52:26:70:U:H5"	52:26:71:A:OP1	1.91	0.70
53:27:2504:U:H2'	53:27:2505:G:H3'	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:434:ASP:HA	59:33:437:HIS:ND1	2.05	0.70
7:G:5:LEU:HA	7:G:8:LYS:HB2	1.74	0.70
52:26:1070:U:H2'	52:26:1071:C:C6	2.27	0.70
53:27:218:A:H3'	53:27:219:A:H8	1.56	0.70
53:27:1259:G:H2'	53:27:1260:A:H8	1.56	0.70
53:27:1370:C:H2'	53:27:1371:G:O4'	1.92	0.70
53:27:1842:G:H2'	53:27:1843:C:C6	2.27	0.70
53:27:2136:G:N7	53:27:2156:G:H1'	2.07	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.70
1:A:257:ARG:NH2	1:A:266:ILE:HD11	2.06	0.70
9:I:58:ASN:HD21	9:I:128:ASN:HB2	1.56	0.70
19:S:80:TRP:CZ3	19:S:82:LYS:HB3	2.26	0.70
48:22:15:GLU:HG2	52:26:845:A:OP1	1.92	0.70
53:27:394:C:H2'	53:27:395:U:O4'	1.92	0.70
18:R:29:VAL:HG21	18:R:69:LEU:HG	1.73	0.70
35:9:20:VAL:HG23	35:9:31:SER:HB3	1.73	0.70
42:16:41:PRO:HG3	42:16:49:ARG:HG2	1.74	0.70
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.70
8:H:20:SER:O	8:H:25:PRO:HD3	1.91	0.69
53:27:5:A:H2'	53:27:6:A:C8	2.27	0.69
53:27:197:A:H2'	53:27:198:C:O4'	1.91	0.69
53:27:878:A:H3'	53:27:879:G:H8	1.56	0.69
53:27:2638:G:H1'	53:27:2778:A:H61	1.57	0.69
53:27:2704:C:H2'	53:27:2705:A:O4'	1.91	0.69
55:29:21:C:H2'	55:29:22:A:H8	1.57	0.69
58:32:46:A:H2'	58:32:47:U:H5"	1.72	0.69
58:32:65:C:H2'	58:32:66:C:C6	2.27	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.05	0.69
2:B:98:VAL:HG11	2:B:182:ALA:HA	1.73	0.69
18:R:89:ALA:O	18:R:92:ARG:HG2	1.91	0.69
20:T:11:ILE:HG13	20:T:20:LYS:O	1.92	0.69
33:7:102:ILE:HD12	33:7:102:ILE:O	1.92	0.69
34:8:7:LYS:HG2	52:26:430:A:OP2	1.92	0.69
36:10:9:MET:HB2	36:10:85:ILE:HG13	1.74	0.69
52:26:512:U:H2'	52:26:513:C:C6	2.26	0.69
53:27:419:U:H2'	53:27:420:C:H6	1.57	0.69
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.69
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.69
59:33:675:ASP:N	59:33:706:GLN:O	2.24	0.69
8:H:56:VAL:HB	8:H:70:THR:HG22	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:58:GLN:O	34:8:62:ARG:HG2	1.92	0.69
42:16:117:GLY:HA2	52:26:35:G:O2'	1.92	0.69
52:26:800:G:H2'	52:26:801:U:C5	2.26	0.69
52:26:1409:C:H2'	52:26:1410:A:C8	2.27	0.69
53:27:891:G:H2'	53:27:892:A:C8	2.26	0.69
53:27:1021:A:C8	53:27:1023:U:H1'	2.27	0.69
59:33:410:THR:HB	59:33:411:PRO:HD2	1.74	0.69
52:26:1409:C:H2'	52:26:1410:A:H8	1.58	0.69
53:27:1180:U:H2'	53:27:1181:U:C5	2.27	0.69
54:28:95:U:H2'	54:28:96:G:H8	1.58	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
4:D:76:PHE:CE2	53:27:2310:C:H2'	2.26	0.69
15:O:24:THR:HB	15:O:87:ARG:HB2	1.73	0.69
15:O:51:ASN:O	53:27:2845:U:H5"	1.92	0.69
16:P:91:ARG:HH22	53:27:998:C:P	2.16	0.69
39:13:83:THR:HB	39:13:97:LEU:HD21	1.75	0.69
49:23:65:MET:HB3	49:23:73:PHE:HE2	1.57	0.69
50:24:32:LYS:HE2	52:26:1439:G:OP1	1.93	0.69
53:27:215:G:H4'	53:27:216:A:H4'	1.74	0.69
53:27:814:C:H1'	53:27:1225:G:N2	2.08	0.69
56:30:14:A:H61	56:30:21:A:H1'	1.56	0.69
2:B:125:TRP:CG	2:B:160:LYS:HB3	2.28	0.69
4:D:105:ILE:HD12	4:D:138:PRO:HG2	1.75	0.69
15:O:91:VAL:HG21	15:O:96:LEU:HD11	1.73	0.69
35:9:59:ILE:O	35:9:63:MET:HG2	1.92	0.69
40:14:12:ALA:HB2	40:14:96:VAL:HG13	1.73	0.69
52:26:18:C:C2'	52:26:19:A:H5"	2.20	0.69
52:26:56:U:H2'	52:26:57:G:C8	2.28	0.69
52:26:148:G:H2'	52:26:149:A:O4'	1.92	0.69
53:27:689:A:H2'	53:27:690:G:C8	2.27	0.69
53:27:2168:G:H2'	53:27:2169:A:O4'	1.93	0.69
53:27:2291:U:H2'	53:27:2292:U:C6	2.28	0.69
53:27:2389:G:H5"	53:27:2390:U:O4'	1.92	0.69
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.69
35:9:79:THR:HG22	35:9:121:ASN:HB2	1.75	0.69
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.74	0.69
44:18:7:ALA:HA	44:18:10:VAL:HG12	1.73	0.69
53:27:538:A:H2'	53:27:539:G:O4'	1.92	0.69
55:29:8:A:H2'	55:29:9:G:C8	2.28	0.69
56:30:15:G:H3'	56:30:16:U:H5"	1.73	0.69
3:C:189:THR:HG22	3:C:191:ASP:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:81:ARG:HD3	53:27:2251:G:OP1	1.93	0.69
19:S:10:VAL:HA	19:S:35:ALA:HB2	1.75	0.69
24:X:9:LYS:HD2	24:X:10:SER:H	1.57	0.69
24:X:17:GLU:HA	24:X:20:ASN:HD22	1.58	0.69
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.75	0.69
34:8:30:LYS:H	34:8:30:LYS:HD2	1.58	0.69
41:15:109:ILE:N	51:25:4:LYS:HZ3	1.86	0.69
44:18:48:GLN:HG2	49:23:11:ASP:OD1	1.93	0.69
46:20:46:LYS:HG3	46:20:47:GLU:N	2.07	0.69
52:26:265:G:H2'	52:26:267:C:H5	1.56	0.69
52:26:286:C:H2'	52:26:287:U:C6	2.27	0.69
52:26:439:U:H2'	52:26:440:C:O4'	1.90	0.69
53:27:755:U:H2'	53:27:756:A:H8	1.57	0.69
53:27:1070:A:H2'	53:27:1097:U:OP1	1.93	0.69
53:27:1251:C:O2'	53:27:1252:G:H3'	1.93	0.69
53:27:1297:C:H2'	53:27:1298:C:H6	1.55	0.69
53:27:1825:U:H2'	53:27:1826:G:H8	1.56	0.69
53:27:2059:A:H2'	53:27:2503:A:N6	2.07	0.69
55:29:8:A:H2'	55:29:9:G:H8	1.57	0.69
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.69
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
10:J:98:ARG:NH2	52:26:339:C:H3'	2.08	0.69
15:O:47:ILE:HD11	15:O:61:ARG:HB2	1.75	0.69
41:15:126:ARG:HB3	51:25:34:ARG:HH21	1.58	0.69
52:26:620:C:H2'	52:26:621:A:O4'	1.92	0.69
52:26:1507:A:H2'	52:26:1508:A:C8	2.28	0.69
53:27:138:U:H3'	53:27:139:U:C5'	2.23	0.69
53:27:910:A:H2'	53:27:911:A:C8	2.27	0.69
53:27:1159:U:H2'	53:27:1160:G:H8	1.58	0.69
53:27:2195:U:H2'	53:27:2196:C:H6	1.58	0.69
53:27:2372:U:H2'	53:27:2373:G:C8	2.28	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
59:33:371:GLU:HA	59:33:374:ILE:CB	2.22	0.69
1:A:90:ILE:C	1:A:90:ILE:HD12	2.18	0.69
31:5:37:GLN:CD	53:27:1125:G:H5'	2.18	0.69
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.74	0.69
34:8:39:GLN:HG3	34:8:40:HIS:ND1	2.08	0.69
36:10:38:ARG:HB3	36:10:63:ASN:HD22	1.56	0.69
52:26:208:U:H4'	52:26:209:U:C5	2.27	0.69
52:26:635:A:H2'	52:26:636:U:C6	2.28	0.69
53:27:2092:U:C4'	53:27:2093:G:H5"	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:78:ARG:CZ	53:27:626:A:H2'	2.22	0.68
27:1:46:GLY:HA3	27:1:54:ILE:CG2	2.23	0.68
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.08	0.68
38:12:79:ARG:HB2	38:12:80:PRO:HD2	1.74	0.68
52:26:819:A:H4'	52:26:820:U:OP2	1.92	0.68
53:27:300:A:N3	53:27:319:G:H1'	2.08	0.68
53:27:340:A:H2'	53:27:341:C:O4'	1.93	0.68
53:27:582:A:H2'	53:27:583:G:H8	1.58	0.68
53:27:939:G:H2'	53:27:940:G:H8	1.57	0.68
53:27:1019:U:H3	53:27:1142:A:H62	1.38	0.68
55:29:19:U:H2'	55:29:20:U:C6	2.28	0.68
2:B:6:GLY:HA3	2:B:29:VAL:HG22	1.72	0.68
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.74	0.68
7:G:119:PRO:HG2	7:G:120:ALA:H	1.57	0.68
34:8:167:PRO:HB2	34:8:170:LEU:HD21	1.75	0.68
52:26:1379:G:O2'	52:26:1380:U:H5'	1.93	0.68
53:27:1794:A:H2'	53:27:1795:C:H6	1.58	0.68
56:30:50:U:H2'	56:30:51:U:O4'	1.92	0.68
59:33:666:SER:HA	59:33:715:GLU:HA	1.74	0.68
59:33:714:ILE:HD13	59:33:716:ILE:HB	1.75	0.68
1:A:71:ASP:O	1:A:73:ILE:N	2.27	0.68
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.28	0.68
7:G:59:LEU:H	7:G:62:ARG:HE	1.42	0.68
17:Q:49:ILE:HG22	17:Q:54:VAL:N	2.08	0.68
22:V:42:HIS:NE2	22:V:73:ARG:HD3	2.07	0.68
38:12:40:LYS:HD3	38:12:47:ASP:HA	1.75	0.68
46:20:17:TYR:HB2	46:20:39:PHE:HB3	1.75	0.68
52:26:1033:G:C3'	52:26:1034:G:H4'	2.22	0.68
52:26:1170:A:H2'	52:26:1171:A:O4'	1.93	0.68
53:27:593:U:H2'	53:27:594:U:C6	2.29	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.94	0.68
54:28:3:C:C2'	54:28:4:C:H5"	2.21	0.68
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.68
15:O:52:ARG:NH2	53:27:2720:U:H5"	2.08	0.68
52:26:491:G:H2'	52:26:492:C:C6	2.29	0.68
53:27:1038:G:H2'	53:27:1039:A:C8	2.28	0.68
53:27:2678:C:H2'	53:27:2679:A:O4'	1.94	0.68
53:27:2884:U:O2	53:27:2884:U:H3'	1.93	0.68
7:G:4:ASN:O	7:G:8:LYS:HG3	1.93	0.68
29:3:34:ARG:NE	29:3:39:ARG:HD2	2.08	0.68
35:9:38:VAL:HG22	35:9:66:ALA:HB1	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:48:ALA:HB1	48:22:68:PRO:HG3	1.75	0.68
52:26:1382:C:H2'	52:26:1383:C:H6	1.57	0.68
53:27:2721:A:H1'	53:27:2873:A:C8	2.28	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
59:33:622:VAL:HA	59:33:654:ASP:HA	1.75	0.68
15:O:26:GLU:HB3	15:O:84:SER:OG	1.93	0.68
25:Y:40:THR:HG22	25:Y:43:ILE:HG12	1.76	0.68
42:16:45:ASN:O	42:16:46:SER:HB2	1.93	0.68
52:26:574:A:N3	52:26:883:C:H1'	2.09	0.68
53:27:1177:G:H2'	53:27:1178:C:H4'	1.76	0.68
2:B:9:VAL:O	15:O:4:ILE:HD11	1.93	0.68
5:E:57:TYR:HB3	5:E:59:ASP:OD1	1.94	0.68
5:E:98:LYS:HZ1	5:E:103:ASN:HB2	1.59	0.68
8:H:83:ALA:HB1	8:H:98:GLY:HA3	1.74	0.68
10:J:10:VAL:HG12	10:J:12:ASP:H	1.59	0.68
20:T:6:ARG:N	53:27:85:G:OP1	2.25	0.68
34:8:115:GLN:HE22	52:26:406:G:H21	1.40	0.68
52:26:129:A:H1'	52:26:130:A:N7	2.08	0.68
52:26:578:C:H2'	52:26:579:A:H8	1.58	0.68
53:27:319:G:H2'	53:27:320:A:O4'	1.93	0.68
53:27:1801:A:H5'	53:27:1801:A:H8	1.59	0.68
53:27:2247:A:H2'	53:27:2248:C:C6	2.29	0.68
56:30:49:C:H2'	56:30:50:U:C6	2.29	0.68
59:33:409:PHE:HB2	59:33:458:GLY:O	1.94	0.68
27:1:49:ARG:HG2	53:27:2884:U:C6	2.29	0.68
34:8:21:LYS:NZ	34:8:25:ARG:HE	1.91	0.68
34:8:70:GLN:HA	34:8:73:ASN:HD22	1.59	0.68
37:11:111:GLY:HA2	37:11:118:ARG:HD3	1.76	0.68
52:26:422:C:H5"	52:26:423:G:OP1	1.94	0.68
52:26:878:A:H2'	52:26:879:C:C6	2.29	0.68
53:27:688:U:H2'	53:27:689:A:C8	2.28	0.68
53:27:1196:C:H2'	53:27:1197:G:C8	2.29	0.68
53:27:2617:U:H2'	53:27:2618:G:O4'	1.93	0.68
4:D:105:ILE:HG13	4:D:106:ALA:N	2.08	0.68
5:E:88:LEU:HB3	5:E:93:TYR:HB3	1.75	0.68
8:H:61:TYR:HE2	8:H:67:THR:HG23	1.59	0.68
9:I:80:HIS:CD2	53:27:2642:G:H5'	2.29	0.68
13:M:33:ILE:HD12	13:M:118:ARG:HH22	1.58	0.68
39:13:118:ARG:H	39:13:124:PRO:HD3	1.58	0.68
50:24:34:VAL:O	50:24:38:ILE:HG13	1.94	0.68
52:26:193:C:H2'	52:26:194:C:H6	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:943:U:H2'	52:26:944:G:H8	1.59	0.68
53:27:281:C:H2'	53:27:282:A:H8	1.58	0.68
53:27:634:C:H2'	53:27:635:C:H6	1.58	0.68
59:33:725:VAL:O	59:33:729:LEU:HG	1.94	0.68
3:C:57:LYS:HE3	3:C:73:ILE:HD13	1.75	0.68
10:J:120:PRO:HB2	15:O:65:ASN:ND2	2.09	0.68
14:N:71:ALA:HB2	14:N:102:ARG:HG2	1.76	0.68
19:S:40:LYS:HZ2	19:S:60:THR:HG22	1.59	0.68
23:W:9:LYS:HE2	53:27:397:U:OP2	1.93	0.68
41:15:30:ILE:CD1	41:15:45:THR:HG22	2.24	0.68
53:27:704:G:H2'	53:27:726:G:N2	2.07	0.68
53:27:1807:G:H2'	53:27:1808:A:H5'	1.74	0.68
53:27:2272:U:H5"	53:27:2273:A:OP1	1.94	0.68
53:27:2328:A:H2'	53:27:2329:U:C6	2.28	0.68
59:33:719:LEU:HD12	59:33:720:GLN:N	2.09	0.68
2:B:51:THR:HB	2:B:79:LEU:HD23	1.76	0.67
10:J:22:ILE:HD12	10:J:23:LYS:HB2	1.77	0.67
23:W:37:PHE:O	23:W:45:PHE:HA	1.94	0.67
24:X:16:THR:HA	24:X:19:LEU:HD12	1.75	0.67
25:Y:13:ILE:HD11	53:27:989:G:C5	2.28	0.67
41:15:124:LYS:CD	52:26:780:A:H5"	2.24	0.67
51:25:29:ALA:HA	51:25:32:ARG:NE	2.09	0.67
52:26:313:A:H2'	52:26:314:C:C6	2.30	0.67
52:26:1096:C:H2'	52:26:1097:C:C6	2.30	0.67
52:26:1274:A:O2'	52:26:1275:A:H5"	1.94	0.67
53:27:29:U:H2'	53:27:30:G:C8	2.29	0.67
53:27:45:G:C5'	53:27:46:G:H5'	2.14	0.67
53:27:795:C:H2'	53:27:796:C:C6	2.28	0.67
53:27:2538:C:H2'	53:27:2539:C:H6	1.58	0.67
1:A:172:THR:HG22	1:A:182:LYS:HG2	1.76	0.67
4:D:7:TYR:O	4:D:12:VAL:HG23	1.94	0.67
9:I:81:ILE:HG23	9:I:82:GLY:N	2.06	0.67
16:P:10:ARG:NH2	53:27:514:A:H5'	2.10	0.67
19:S:40:LYS:HZ3	19:S:59:ASN:HA	1.59	0.67
21:U:16:ALA:HA	21:U:19:ARG:HE	1.58	0.67
51:25:50:SER:HA	51:25:53:LYS:HD2	1.77	0.67
53:27:971:G:H2'	53:27:972:A:O4'	1.93	0.67
53:27:1686:C:H2'	53:27:1687:G:O4'	1.95	0.67
53:27:2131:U:H5'	53:27:2132:U:H3'	1.77	0.67
56:30:13:C:O2'	56:30:14:A:H5"	1.94	0.67
59:33:686:ILE:HD13	59:33:729:LEU:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.77	0.67
1:A:269:ARG:HG2	1:A:270:ARG:N	2.10	0.67
2:B:142:VAL:HB	2:B:143:PRO:HD2	1.75	0.67
9:I:78:THR:HG22	53:27:2641:G:H5"	1.77	0.67
12:L:59:ARG:NH2	59:33:736:ILE:HB	2.08	0.67
41:15:30:ILE:HD13	41:15:45:THR:HG22	1.77	0.67
42:16:74:GLN:O	42:16:76:HIS:N	2.28	0.67
52:26:112:G:H22	52:26:315:A:H2	1.42	0.67
52:26:1010:U:H2'	52:26:1011:C:C6	2.29	0.67
52:26:1052:U:H2'	52:26:1200:C:N4	2.08	0.67
52:26:1472:U:H2'	52:26:1473:G:C8	2.29	0.67
53:27:534:U:H2'	53:27:535:G:H8	1.59	0.67
53:27:688:U:H2'	53:27:689:A:H8	1.59	0.67
53:27:1788:C:H2'	53:27:1789:A:H8	1.57	0.67
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.76	0.67
5:E:37:ASN:HD22	5:E:63:GLN:CD	2.02	0.67
14:N:56:LYS:O	14:N:60:GLU:HG3	1.92	0.67
22:V:58:LYS:NZ	53:27:2366:A:H4'	2.10	0.67
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.29	0.67
34:8:1:ALA:CB	34:8:67:LEU:HD11	2.24	0.67
39:13:17:ARG:HD3	52:26:1147:C:O2'	1.93	0.67
53:27:228:C:H42	53:27:417:C:H1'	1.60	0.67
56:30:72:C:H2'	56:30:73:A:C8	2.29	0.67
58:32:67:C:H2'	58:32:68:C:C6	2.30	0.67
2:B:40:LEU:H	2:B:40:LEU:HD12	1.57	0.67
8:H:78:LEU:HA	8:H:81:LYS:HB3	1.74	0.67
18:R:76:VAL:HG22	18:R:103:ILE:HA	1.77	0.67
24:X:12:GLU:N	24:X:12:GLU:OE1	2.26	0.67
36:10:3:HIS:O	36:10:92:THR:HG22	1.95	0.67
51:25:48:LYS:HG2	52:26:723:U:H6	1.59	0.67
52:26:1023:U:H2'	52:26:1024:G:C8	2.30	0.67
53:27:2024:G:H2'	53:27:2025:C:C6	2.29	0.67
53:27:2195:U:H2'	53:27:2196:C:C6	2.28	0.67
53:27:2644:G:H3'	53:27:2645:G:N2	2.08	0.67
53:27:2715:C:H3'	53:27:2716:C:H5"	1.77	0.67
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.60	0.67
5:E:87:GLN:C	5:E:88:LEU:HD12	2.20	0.67
20:T:84:PHE:CE1	20:T:93:ARG:HG2	2.30	0.67
42:16:85:ARG:HA	42:16:93:ARG:HA	1.75	0.67
52:26:613:C:H2'	52:26:614:C:C6	2.30	0.67
53:27:1611:C:H2'	53:27:1612:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
59:33:701:SER:HA	59:33:708:ALA:HA	1.75	0.67
14:N:29:HIS:HB3	14:N:36:TYR:HB2	1.76	0.67
17:Q:37:GLU:HA	17:Q:53:PHE:HD1	1.60	0.67
37:11:72:VAL:HG12	37:11:89:GLU:HA	1.77	0.67
46:20:22:ALA:HA	46:20:33:ILE:HD12	1.77	0.67
52:26:810:C:H2'	52:26:811:C:H6	1.60	0.67
52:26:1305:G:HO2'	52:26:1306:A:H8	1.42	0.67
53:27:660:C:H2'	53:27:661:A:C8	2.29	0.67
53:27:704:G:H1'	53:27:727:A:N6	2.10	0.67
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.67
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.67
29:3:39:ARG:NH2	53:27:468:G:N7	2.40	0.67
33:7:80:GLY:O	33:7:84:GLU:HG3	1.95	0.67
39:13:66:VAL:HG21	39:13:74:GLN:HB3	1.76	0.67
42:16:88:ASP:HB2	52:26:523:A:N1	2.10	0.67
43:17:48:SER:HB2	43:17:51:GLN:HG3	1.75	0.67
53:27:191:A:H2'	53:27:192:C:H6	1.56	0.67
54:28:51:G:H2'	54:28:52:A:C8	2.30	0.67
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.67
3:C:43:THR:O	53:27:38:A:H1'	1.94	0.67
6:F:12:LEU:HD22	6:F:19:VAL:HG11	1.77	0.67
11:K:2:ARG:HG2	11:K:2:ARG:O	1.94	0.67
13:M:90:ARG:HH21	53:27:2881:U:C5'	2.05	0.67
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.07	0.67
23:W:7:THR:OG1	23:W:9:LYS:HG3	1.95	0.67
25:Y:27:GLY:HA3	25:Y:37:ARG:NH2	2.09	0.67
52:26:830:G:H2'	52:26:831:A:C8	2.29	0.67
53:27:872:U:H2'	53:27:873:C:C6	2.30	0.67
53:27:1716:U:H2'	53:27:1717:A:H8	1.60	0.67
53:27:2226:C:H3'	53:27:2227:A:H8	1.60	0.67
53:27:2572:A:OP1	53:27:2574:G:H4'	1.95	0.67
24:X:9:LYS:HZ3	24:X:10:SER:HB2	1.60	0.67
26:Z:20:ASN:HB2	26:Z:39:LYS:HD3	1.77	0.67
27:1:46:GLY:HA3	27:1:54:ILE:HG22	1.77	0.67
33:7:120:THR:HG23	33:7:188:ALA:HB2	1.77	0.67
34:8:33:ILE:HG23	34:8:34:GLU:OE1	1.95	0.67
42:16:47:ALA:HB2	52:26:529:G:H22	1.60	0.67
46:20:19:VAL:HG12	46:20:37:GLY:C	2.20	0.67
49:23:63:ASP:O	49:23:66:VAL:HG23	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:501:C:H2'	52:26:502:A:C8	2.29	0.67
52:26:778:G:H2'	52:26:779:C:O4'	1.95	0.67
52:26:1162:C:H2'	52:26:1163:A:C8	2.30	0.67
54:28:24:G:H1'	54:28:27:C:H42	1.58	0.67
59:33:598:VAL:HB	59:33:656:VAL:CG2	2.25	0.67
34:8:1:ALA:HB2	34:8:67:LEU:HD11	1.76	0.66
52:26:286:C:H2'	52:26:287:U:H6	1.60	0.66
53:27:1443:U:H2'	53:27:1444:G:H8	1.59	0.66
53:27:2791:G:H2'	53:27:2792:A:C8	2.29	0.66
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.76	0.66
31:5:14:CYS:SG	31:5:33:HIS:ND1	2.68	0.66
34:8:134:TYR:HD1	52:26:620:C:H4'	1.60	0.66
38:12:46:GLU:N	38:12:63:LYS:HG3	2.10	0.66
52:26:677:U:H2'	52:26:678:U:H6	1.57	0.66
53:27:2233:U:H2'	53:27:2234:G:C8	2.30	0.66
1:A:32:LEU:HD22	1:A:63:ILE:HD11	1.76	0.66
5:E:34:ARG:HE	5:E:70:LEU:HD21	1.59	0.66
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.78	0.66
8:H:61:TYR:CE2	8:H:67:THR:HG23	2.30	0.66
35:9:152:VAL:HG12	35:9:155:LYS:HZ1	1.61	0.66
36:10:78:PHE:CD1	36:10:84:VAL:HG11	2.29	0.66
52:26:1162:C:H2'	52:26:1163:A:H8	1.59	0.66
53:27:1851:U:H2'	53:27:1852:U:O4'	1.96	0.66
57:31:44:A:H2'	57:31:45:G:O4'	1.96	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.26	0.66
59:33:409:PHE:C	59:33:460:GLN:HA	2.20	0.66
1:A:42:ARG:HG2	1:A:48:ILE:HA	1.77	0.66
10:J:19:VAL:HB	10:J:41:ILE:HD13	1.76	0.66
13:M:22:ARG:HH11	13:M:71:ARG:HB2	1.60	0.66
41:15:15:VAL:HG22	41:15:16:SER:N	2.09	0.66
42:16:110:LYS:HG3	52:26:539:A:P	2.35	0.66
52:26:668:G:H2'	52:26:669:G:H8	1.60	0.66
52:26:1349:A:H3'	52:26:1350:A:H8	1.61	0.66
53:27:1990:C:H2'	53:27:1991:U:C6	2.30	0.66
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.76	0.66
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.10	0.66
2:B:28:GLU:OE2	2:B:30:GLU:HG3	1.95	0.66
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.77	0.66
3:C:57:LYS:HD3	53:27:469:G:H5'	1.78	0.66
8:H:135:MET:HE2	8:H:137:LEU:HD21	1.76	0.66
37:11:132:THR:O	37:11:135:LYS:HB3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:7:ASN:ND2	43:17:21:ILE:HG13	2.03	0.66
52:26:426:U:H2'	52:26:427:U:C6	2.31	0.66
53:27:2087:G:H2'	53:27:2088:A:H8	1.59	0.66
53:27:2462:C:H2'	53:27:2463:C:C6	2.30	0.66
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.66
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.66
59:33:634:HIS:NE2	59:33:640:GLN:HB2	2.09	0.66
2:B:55:LYS:HG3	2:B:77:ARG:HA	1.78	0.66
2:B:63:PRO:HG3	53:27:2787:C:H1'	1.76	0.66
5:E:86:LEU:HD11	5:E:144:ALA:HB1	1.77	0.66
7:G:2:ALA:HB1	7:G:6:GLN:OE1	1.95	0.66
35:9:45:VAL:HG12	35:9:46:GLY:N	2.11	0.66
36:10:86:ARG:HE	52:26:673:A:H4'	1.60	0.66
37:11:80:GLY:HA2	55:29:11:U:O2'	1.94	0.66
39:13:45:MET:O	39:13:49:GLN:N	2.27	0.66
45:19:88:ARG:HE	53:27:713:G:H3'	1.60	0.66
52:26:801:U:H2'	52:26:802:A:H8	1.61	0.66
52:26:827:U:H2'	52:26:870:U:O4	1.96	0.66
53:27:1077:A:N1	53:27:1088:A:H2'	2.11	0.66
53:27:2064:C:H2'	53:27:2065:C:C6	2.31	0.66
58:32:14:A:H3'	58:32:15:G:C8	2.30	0.66
58:32:19:G:H2'	58:32:20:U:C5	2.30	0.66
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.66
4:D:90:LEU:HD12	4:D:90:LEU:O	1.96	0.66
5:E:72:ASN:O	5:E:76:ILE:HG12	1.95	0.66
23:W:70:LEU:HA	23:W:73:ARG:HG2	1.77	0.66
34:8:125:ASN:HD22	34:8:141:VAL:HG22	1.61	0.66
38:12:3:GLN:OE1	38:12:3:GLN:N	2.29	0.66
53:27:181:A:H2'	53:27:182:A:H8	1.58	0.66
53:27:185:G:H2'	53:27:186:G:H8	1.60	0.66
53:27:208:C:H2'	53:27:209:C:H6	1.60	0.66
53:27:2189:U:H2'	53:27:2190:G:H8	1.59	0.66
53:27:2661:G:H2'	53:27:2662:A:C8	2.31	0.66
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.66
11:K:132:ARG:O	11:K:136:GLU:HG2	1.95	0.66
12:L:70:ASP:OD1	12:L:71:LYS:N	2.29	0.66
20:T:42:LYS:HD2	53:27:499:U:H5"	1.76	0.66
29:3:1:MET:N	53:27:1620:G:H5'	2.10	0.66
33:7:134:LYS:O	33:7:138:GLN:HG2	1.96	0.66
40:14:20:GLN:O	40:14:24:GLU:HG3	1.96	0.66
44:18:81:ILE:HG21	52:26:1202:U:C2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:88:ARG:HD2	53:27:714:U:C5	2.30	0.66
52:26:1236:A:H2'	52:26:1237:C:C6	2.31	0.66
53:27:1199:U:H2'	53:27:1200:C:H6	1.59	0.66
54:28:65:U:H3'	54:28:108:A:H61	1.61	0.66
54:28:75:G:H2'	54:28:76:G:H8	1.59	0.66
59:33:527:GLU:O	59:33:531:LEU:N	2.22	0.66
8:H:9:LYS:HB2	53:27:1061:U:H5	1.61	0.66
12:L:42:THR:HA	12:L:93:VAL:HG12	1.77	0.66
15:O:77:SER:O	15:O:80:VAL:HG22	1.96	0.66
19:S:11:LEU:HD12	19:S:50:LEU:HD22	1.77	0.66
32:6:186:VAL:HG21	32:6:192:PRO:HB3	1.78	0.66
34:8:87:GLU:HB2	34:8:187:ARG:HB2	1.78	0.66
34:8:115:GLN:NE2	52:26:406:G:H21	1.94	0.66
42:16:49:ARG:HH12	52:26:523:A:H61	1.42	0.66
52:26:381:C:H2'	52:26:382:A:O4'	1.95	0.66
52:26:1399:C:H1'	52:26:1400:C:OP2	1.95	0.66
52:26:1464:U:H2'	52:26:1465:A:H8	1.59	0.66
53:27:962:G:H2'	53:27:963:U:O4'	1.96	0.66
53:27:1082:U:H2'	53:27:1083:U:H4'	1.76	0.66
53:27:2144:G:N3	53:27:2146:C:H1'	2.09	0.66
59:33:621:ILE:HA	59:33:635:ARG:O	1.95	0.66
9:I:27:ARG:HH22	53:27:1142:A:C4'	2.08	0.66
15:O:62:LYS:HE2	15:O:64:SER:HB3	1.78	0.66
16:P:36:GLN:HE21	53:27:563:A:C2'	2.08	0.66
25:Y:10:ARG:HB2	25:Y:53:MET:HB2	1.77	0.66
27:1:8:THR:HG23	27:1:11:LYS:N	2.09	0.66
41:15:14:GLN:HA	41:15:76:TYR:HA	1.78	0.66
52:26:765:G:H3'	52:26:812:G:H22	1.61	0.66
52:26:946:A:H2'	52:26:947:G:H8	1.58	0.66
53:27:1197:G:H2'	53:27:1198:U:C6	2.31	0.66
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.77	0.66
59:33:703:THR:HG21	59:33:707:LEU:HB2	1.78	0.66
4:D:141:ASP:HB2	4:D:144:LYS:HB2	1.78	0.65
7:G:59:LEU:C	7:G:61:ARG:N	2.54	0.65
34:8:149:LYS:HD3	34:8:177:MET:HG3	1.78	0.65
38:12:76:ARG:NH1	38:12:125:ILE:HG23	2.11	0.65
39:13:121:ARG:HD3	52:26:1345:U:OP1	1.97	0.65
46:20:70:ARG:O	46:20:74:LEU:HG	1.96	0.65
52:26:950:U:H2'	52:26:951:G:H8	1.60	0.65
52:26:1463:U:H2'	52:26:1464:U:C6	2.31	0.65
53:27:1172:C:C2'	53:27:1173:U:H5"	2.24	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:117:LEU:HD13	6:F:121:VAL:HA	1.78	0.65
18:R:70:LYS:HB3	18:R:110:ARG:OXT	1.97	0.65
20:T:36:GLU:HA	20:T:61:GLU:HG2	1.78	0.65
32:6:206:ILE:HG13	32:6:207:ARG:N	2.11	0.65
42:16:11:ARG:HG3	52:26:562:U:H1'	1.78	0.65
52:26:555:U:H2'	52:26:556:C:C6	2.30	0.65
52:26:736:C:H2'	52:26:737:C:C6	2.31	0.65
52:26:755:G:H2'	52:26:756:C:H6	1.61	0.65
52:26:878:A:H2'	52:26:879:C:H6	1.59	0.65
52:26:936:C:H2'	52:26:937:A:H8	1.61	0.65
52:26:950:U:H2'	52:26:951:G:C8	2.32	0.65
53:27:1111:A:O2'	53:27:1112:G:H4'	1.96	0.65
53:27:1704:C:H2'	53:27:1705:A:C8	2.32	0.65
53:27:2024:G:H2'	53:27:2025:C:H6	1.60	0.65
53:27:2557:G:H2'	53:27:2558:C:C6	2.31	0.65
53:27:2688:G:H1'	53:27:2721:A:N6	2.11	0.65
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.65
59:33:668:VAL:HG13	59:33:713:THR:HG22	1.78	0.65
4:D:51:ASN:HB3	4:D:149:ARG:NH2	2.10	0.65
14:N:26:LEU:HB2	14:N:90:VAL:HG21	1.78	0.65
21:U:51:GLN:OE1	21:U:86:LEU:HD21	1.97	0.65
33:7:70:ALA:HA	33:7:105:VAL:HG12	1.78	0.65
36:10:71:ILE:HA	36:10:74:LEU:HD12	1.78	0.65
52:26:34:C:H2'	52:26:35:G:C8	2.32	0.65
53:27:129:C:H2'	53:27:130:C:C6	2.31	0.65
53:27:839:U:H2'	53:27:840:C:C6	2.31	0.65
58:32:7:G:H3'	58:32:8:U:C5'	2.24	0.65
15:O:97:TYR:HD1	15:O:100:ARG:HD2	1.62	0.65
32:6:12:GLY:H	32:6:14:HIS:HE1	1.44	0.65
33:7:27:GLU:OE1	33:7:27:GLU:N	2.30	0.65
38:12:88:LYS:HG3	38:12:89:ASP:H	1.60	0.65
52:26:398:U:H2'	52:26:399:G:H8	1.61	0.65
52:26:936:C:H2'	52:26:937:A:C8	2.32	0.65
52:26:1307:U:H2'	52:26:1308:U:H6	1.62	0.65
52:26:1342:C:H2'	52:26:1343:G:C8	2.31	0.65
53:27:783:A:H8	53:27:784:G:H4'	1.60	0.65
53:27:984:A:H5"	53:27:985:C:OP2	1.97	0.65
4:D:130:GLY:HA3	53:27:2305:U:H5"	1.78	0.65
16:P:49:ARG:HH21	17:Q:74:ILE:HD12	1.60	0.65
21:U:30:ILE:HG22	21:U:91:PHE:HB2	1.78	0.65
22:V:70:PRO:HD3	54:28:12:C:N4	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:44:PHE:HD1	26:Z:45:THR:HG23	1.62	0.65
37:11:134:VAL:O	37:11:138:GLU:HG3	1.97	0.65
42:16:43:LYS:HB3	42:16:44:PRO:CD	2.27	0.65
50:24:67:HIS:O	50:24:69:ASN:N	2.29	0.65
51:25:4:LYS:HE2	51:25:6:ARG:NH1	2.11	0.65
52:26:113:G:H2'	52:26:114:U:C6	2.31	0.65
52:26:484:G:C5	52:26:486:U:H1'	2.31	0.65
52:26:1159:U:H5	52:26:1182:G:H2'	1.61	0.65
53:27:813:U:H1'	53:27:1226:A:N3	2.12	0.65
53:27:2455:G:H2'	53:27:2456:C:C6	2.30	0.65
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.65
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	0.65
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.65
59:33:670:ARG:HH21	59:33:709:THR:HG21	1.61	0.65
2:B:164:GLN:HE22	53:27:2822:G:H5"	1.61	0.65
5:E:93:TYR:HD1	5:E:106:LEU:HA	1.62	0.65
9:I:110:PRO:HB3	53:27:1007:C:O3'	1.95	0.65
16:P:2:ARG:HA	53:27:1248:G:O2'	1.96	0.65
28:2:21:THR:HG21	30:4:33:THR:HA	1.78	0.65
40:14:40:ILE:HB	40:14:73:LEU:HB3	1.77	0.65
43:17:113:LYS:H	43:17:114:PRO:HD2	1.60	0.65
53:27:542:C:H2'	53:27:543:G:H5'	1.78	0.65
53:27:2784:U:H2'	53:27:2785:C:H6	1.60	0.65
58:32:51:C:H2'	58:32:52:G:H8	1.59	0.65
5:E:157:LYS:HD2	53:27:2659:G:OP1	1.97	0.65
30:4:1:PRO:HA	53:27:591:U:O2'	1.96	0.65
32:6:185:ILE:HG13	32:6:199:ILE:O	1.97	0.65
38:12:6:ILE:CG2	38:12:31:LEU:HD11	2.27	0.65
51:25:46:ARG:HH12	52:26:1532:U:H5	1.45	0.65
52:26:406:G:H2'	52:26:407:U:H6	1.61	0.65
52:26:514:C:H2'	52:26:515:G:H8	1.61	0.65
52:26:578:C:H2'	52:26:579:A:C8	2.32	0.65
53:27:1441:G:H2'	53:27:1442:U:C6	2.32	0.65
53:27:2247:A:H2'	53:27:2248:C:H6	1.62	0.65
3:C:10:SER:O	3:C:12:LEU:N	2.29	0.65
6:F:79:THR:HG21	6:F:147:VAL:HG23	1.79	0.65
9:I:37:ARG:HG3	9:I:39:LYS:HG3	1.77	0.65
12:L:29:GLY:HA2	12:L:106:ASP:HB2	1.79	0.65
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.79	0.65
23:W:17:ARG:NE	23:W:23:ALA:HB2	2.11	0.65
38:12:95:MET:O	38:12:98:LEU:HG	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:505:G:OP2	52:26:535:A:H5'	1.97	0.65
52:26:1157:A:H5'	52:26:1158:C:C6	2.32	0.65
52:26:1477:U:H2'	52:26:1478:U:C6	2.31	0.65
53:27:491:G:N2	53:27:492:A:H1'	2.12	0.65
53:27:2010:G:H2'	53:27:2011:U:H6	1.61	0.65
53:27:2112:G:H2'	53:27:2113:U:H5'	1.78	0.65
58:32:27:U:O2'	58:32:28:C:H5'	1.97	0.65
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.65
59:33:684:THR:HA	59:33:687:LEU:HD12	1.79	0.65
1:A:180:MET:HB2	1:A:268:ARG:H	1.61	0.65
7:G:31:ARG:HG3	53:27:1054:A:H4'	1.79	0.65
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.62	0.65
33:7:23:ALA:HB3	33:7:28:PHE:HD1	1.61	0.65
43:17:14:ALA:HA	43:17:44:ILE:HD11	1.79	0.65
49:23:30:LEU:HD22	49:23:48:ILE:HG22	1.79	0.65
53:27:2037:A:H2'	53:27:2038:G:C8	2.32	0.65
53:27:2073:C:O2'	53:27:2074:U:H5'	1.97	0.65
53:27:2615:U:H6	53:27:2615:U:H5'	1.60	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
1:A:47:ARG:HH21	53:27:774:G:H5"	1.62	0.65
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.78	0.65
34:8:12:ARG:CD	34:8:37:PRO:HA	2.27	0.65
41:15:124:LYS:HG3	41:15:125:LYS:N	2.10	0.65
43:17:21:ILE:HB	43:17:24:VAL:CG1	2.26	0.65
45:19:86:LEU:O	45:19:87:ARG:HB3	1.97	0.65
52:26:33:A:H2'	52:26:34:C:C6	2.32	0.65
52:26:270:A:H2'	52:26:271:C:C6	2.32	0.65
53:27:3:U:H2'	53:27:4:U:C6	2.32	0.65
35:9:122:VAL:O	35:9:122:VAL:HG23	1.97	0.64
37:11:3:ARG:O	37:11:5:VAL:N	2.30	0.64
48:22:54:LEU:O	48:22:57:ALA:HB3	1.96	0.64
52:26:1007:U:H2'	52:26:1008:U:H6	1.59	0.64
53:27:2246:G:H2'	53:27:2247:A:C8	2.31	0.64
10:J:30:ARG:HA	53:27:2675:A:H5'	1.80	0.64
10:J:71:ARG:HB2	10:J:73:ASP:OD1	1.97	0.64
35:9:156:ARG:O	35:9:158:LYS:N	2.31	0.64
37:11:97:ALA:HA	37:11:100:MET:HE2	1.80	0.64
50:24:19:HIS:O	50:24:23:ARG:HG2	1.98	0.64
52:26:678:U:H2'	52:26:679:C:O4'	1.97	0.64
52:26:1137:C:H4'	52:26:1138:G:N1	2.12	0.64
53:27:437:U:H2'	53:27:438:G:H8	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:580:U:H2'	53:27:581:C:C6	2.31	0.64
53:27:2297:A:N1	53:27:2321:U:C5	2.66	0.64
53:27:2443:C:H2'	53:27:2444:G:H8	1.61	0.64
8:H:126:ARG:HE	53:27:1080:A:H5"	1.62	0.64
17:Q:37:GLU:HA	17:Q:53:PHE:CD1	2.32	0.64
19:S:40:LYS:NZ	19:S:59:ASN:HA	2.13	0.64
40:14:12:ALA:HB3	40:14:18:ILE:HD12	1.79	0.64
49:23:53:GLY:HA3	52:26:958:A:H61	1.60	0.64
52:26:690:G:H2'	52:26:691:G:C8	2.32	0.64
52:26:1251:A:H2'	52:26:1252:A:O4'	1.97	0.64
53:27:18:U:H2'	53:27:19:A:C8	2.32	0.64
53:27:1794:A:H2'	53:27:1795:C:C6	2.32	0.64
53:27:2008:C:H2'	53:27:2009:A:H8	1.62	0.64
53:27:2220:U:H2'	53:27:2221:G:H8	1.62	0.64
53:27:2810:A:H2'	53:27:2811:G:O4'	1.98	0.64
5:E:104:LEU:HD21	5:E:130:ILE:HD11	1.78	0.64
12:L:67:VAL:HG12	12:L:100:LYS:NZ	2.11	0.64
44:18:43:ALA:C	44:18:45:LEU:H	2.05	0.64
46:20:5:ARG:HB2	52:26:376:G:C5'	2.26	0.64
52:26:458:U:H2'	52:26:459:A:H8	1.60	0.64
53:27:1387:A:H2'	53:27:1388:G:C8	2.33	0.64
53:27:1935:G:H3'	53:27:1962:C:H42	1.63	0.64
53:27:1936:A:H3'	53:27:1937:A:H5'	1.77	0.64
53:27:1987:A:H2'	53:27:1988:G:H8	1.62	0.64
53:27:1999:C:H5"	53:27:2723:C:O2'	1.98	0.64
53:27:2845:U:H2'	53:27:2846:G:O4'	1.98	0.64
54:28:119:A:C3'	54:28:120:A:H5"	2.28	0.64
24:X:49:ASP:O	24:X:53:VAL:HG23	1.96	0.64
35:9:131:ASN:HD21	52:26:18:C:P	2.21	0.64
52:26:600:A:H2'	52:26:601:G:C8	2.33	0.64
53:27:445:C:O2'	53:27:446:G:H5'	1.98	0.64
53:27:833:A:H2'	53:27:834:G:C8	2.32	0.64
53:27:963:U:H2'	53:27:964:C:H6	1.61	0.64
53:27:1287:A:H3'	53:27:1288:G:H21	1.63	0.64
53:27:1720:U:H2'	53:27:1721:G:O4'	1.98	0.64
53:27:2515:C:H2'	53:27:2516:A:C8	2.32	0.64
53:27:2708:G:H2'	53:27:2709:G:H8	1.63	0.64
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.64
10:J:6:THR:HG23	53:27:1666:G:O3'	1.97	0.64
11:K:3:LEU:O	11:K:5:THR:N	2.29	0.64
12:L:29:GLY:CA	12:L:106:ASP:HB2	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:21:ARG:HA	21:U:25:LYS:O	1.98	0.64
32:6:9:LEU:HB3	32:6:12:GLY:HA2	1.80	0.64
51:25:4:LYS:HE2	51:25:6:ARG:HH11	1.60	0.64
52:26:797:C:H2'	52:26:798:U:C6	2.32	0.64
53:27:441:U:H2'	53:27:442:G:C8	2.33	0.64
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.64
53:27:909:A:H2'	53:27:912:C:C5	2.33	0.64
53:27:1367:A:H2'	53:27:1368:G:H5'	1.80	0.64
53:27:1484:U:H2'	53:27:1485:U:C6	2.32	0.64
53:27:1709:U:H2'	53:27:1710:G:H8	1.60	0.64
53:27:2644:G:H3'	53:27:2645:G:H21	1.61	0.64
53:27:2671:G:H2'	53:27:2672:U:C6	2.33	0.64
56:30:13:C:C2'	56:30:14:A:H5"	2.28	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
14:N:13:ARG:NH2	53:27:2335:A:H5'	2.12	0.64
41:15:39:ASN:HA	52:26:683:G:H21	1.61	0.64
48:22:54:LEU:HG	48:22:58:ILE:HD11	1.78	0.64
49:23:65:MET:HB3	49:23:73:PHE:CE2	2.33	0.64
52:26:1299:A:C2'	52:26:1301:U:H1'	2.27	0.64
53:27:1387:A:H2'	53:27:1388:G:H8	1.61	0.64
53:27:1502:A:C3'	53:27:1503:A:H5"	2.27	0.64
53:27:1842:G:H2'	53:27:1843:C:H6	1.62	0.64
53:27:2637:U:H2'	53:27:2638:G:O4'	1.97	0.64
53:27:2869:G:H2'	53:27:2870:C:H6	1.62	0.64
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.64
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.64
4:D:175:PRO:O	4:D:176:PHE:HB2	1.96	0.64
12:L:75:GLU:OE2	53:27:957:C:H5'	1.98	0.64
23:W:10:ARG:HG3	23:W:11:PRO:HD2	1.80	0.64
33:7:54:ILE:HG22	33:7:67:ILE:HG12	1.78	0.64
33:7:149:LYS:HG2	33:7:200:TRP:HB2	1.78	0.64
35:9:152:VAL:HA	35:9:155:LYS:HZ1	1.62	0.64
44:18:68:ARG:NH1	44:18:70:HIS:HB2	2.13	0.64
49:23:21:ALA:HA	49:23:27:LYS:HZ2	1.62	0.64
52:26:86:G:H4'	52:26:87:C:C6	2.33	0.64
53:27:2450:A:O2'	53:27:2451:A:H5'	1.97	0.64
53:27:2899:A:H2'	53:27:2900:A:C8	2.32	0.64
56:30:9:A:H1'	56:30:46:G:C2	2.32	0.64
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.64
59:33:671:VAL:HG21	59:33:735:VAL:HG13	1.79	0.64
1:A:237:ARG:HD3	53:27:2591:C:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:114:ARG:HH11	43:17:70:ARG:HD2	1.62	0.64
10:J:38:ILE:HD12	10:J:38:ILE:N	2.13	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HD3	1.62	0.64
17:Q:73:LYS:NZ	17:Q:86:GLN:HE21	1.96	0.64
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.27	0.64
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.79	0.64
52:26:382:A:H2'	52:26:383:A:C8	2.32	0.64
52:26:1206:G:H2'	52:26:1207:G:O4'	1.98	0.64
53:27:106:C:H2'	53:27:107:G:H8	1.63	0.64
53:27:1113:U:H2'	53:27:1114:C:C6	2.32	0.64
53:27:1486:U:H2'	53:27:1487:U:H6	1.61	0.64
2:B:52:THR:O	2:B:77:ARG:HG2	1.96	0.64
2:B:180:VAL:HG13	2:B:187:LEU:HD13	1.79	0.64
4:D:39:VAL:O	4:D:41:GLU:HG3	1.98	0.64
11:K:93:ASN:O	11:K:95:LEU:N	2.27	0.64
32:6:124:THR:HA	32:6:127:LYS:HD2	1.80	0.64
36:10:63:ASN:HB2	36:10:96:VAL:HG21	1.80	0.64
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.13	0.64
47:21:68:LYS:O	47:21:69:THR:HB	1.98	0.64
52:26:999:C:H2'	52:26:1000:A:C8	2.33	0.64
52:26:1159:U:C5	52:26:1182:G:H2'	2.33	0.64
53:27:247:G:H4'	53:27:386:G:C2	2.33	0.64
53:27:947:A:H2'	53:27:948:C:C6	2.32	0.64
53:27:1089:A:H2	53:27:1090:A:H62	1.45	0.64
53:27:1341:G:C2	53:27:1398:C:H4'	2.33	0.64
53:27:1357:C:H2'	53:27:1358:G:O4'	1.98	0.64
53:27:2369:A:H2'	53:27:2370:G:H8	1.62	0.64
4:D:4:HIS:O	4:D:7:TYR:HB3	1.98	0.63
26:Z:11:GLU:HG2	26:Z:25:ARG:HD2	1.81	0.63
26:Z:66:ILE:HG23	26:Z:66:ILE:O	1.97	0.63
33:7:19:SER:HB3	33:7:21:TRP:HE1	1.63	0.63
33:7:96:VAL:HB	33:7:97:PRO:HD2	1.80	0.63
37:11:92:PRO:O	37:11:95:ARG:HB3	1.96	0.63
43:17:106:ARG:NH1	52:26:1228:C:OP1	2.30	0.63
50:24:82:ILE:O	50:24:86:ALA:N	2.22	0.63
51:25:66:ARG:HG3	52:26:1099:G:H5'	1.79	0.63
52:26:287:U:H2'	52:26:288:A:C8	2.33	0.63
53:27:435:C:C2'	53:27:436:C:H5'	2.26	0.63
53:27:1570:A:H2'	53:27:1571:A:C8	2.33	0.63
53:27:1906:G:C2'	53:27:1907:G:H5"	2.27	0.63
53:27:2888:C:H2'	53:27:2889:C:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.63
3:C:47:LYS:HE3	53:27:451:U:H4'	1.80	0.63
9:I:47:HIS:ND1	9:I:48:VAL:HG23	2.13	0.63
18:R:6:LYS:HB2	18:R:103:ILE:O	1.98	0.63
18:R:93:ALA:HB2	53:27:1614:A:N1	2.14	0.63
52:26:149:A:H61	52:26:172:A:H62	1.47	0.63
52:26:341:C:H2'	52:26:342:C:H6	1.63	0.63
53:27:780:G:H2'	53:27:782:A:C5	2.33	0.63
53:27:872:U:H2'	53:27:873:C:H6	1.62	0.63
53:27:1383:A:H2'	53:27:1384:A:C8	2.34	0.63
53:27:1508:A:H2'	53:27:1509:A:O4'	1.98	0.63
53:27:1660:G:H2'	53:27:1661:G:H8	1.62	0.63
53:27:1741:C:H2'	53:27:1742:U:C6	2.33	0.63
53:27:2693:G:H2'	53:27:2694:G:H8	1.62	0.63
54:28:119:A:H3'	54:28:120:A:H5"	1.79	0.63
57:31:69:C:H2'	57:31:70:G:H8	1.63	0.63
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.12	0.63
3:C:2:GLU:HA	3:C:13:THR:HA	1.78	0.63
33:7:67:ILE:HB	33:7:102:ILE:HG22	1.80	0.63
45:19:20:ASP:HA	52:26:750:C:O2'	1.98	0.63
52:26:824:G:H2'	52:26:825:A:H8	1.63	0.63
52:26:1365:G:H2'	52:26:1366:C:O4'	1.98	0.63
53:27:2114:A:N6	53:27:2117:A:H62	1.93	0.63
53:27:2162:G:O2'	53:27:2171:A:H5'	1.98	0.63
53:27:2316:G:H2'	53:27:2317:A:H8	1.63	0.63
53:27:2552:U:C6	53:27:2554:U:H5'	2.32	0.63
53:27:2588:G:C2'	53:27:2589:A:H5'	2.28	0.63
53:27:2773:C:H2'	53:27:2774:C:H6	1.63	0.63
19:S:1:MET:C	19:S:3:ARG:H	2.05	0.63
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.80	0.63
33:7:113:LYS:HD3	33:7:184:ASN:CG	2.23	0.63
36:10:46:GLN:HB2	36:10:56:LYS:HG2	1.80	0.63
52:26:233:C:H2'	52:26:234:C:H6	1.64	0.63
52:26:742:G:H2'	52:26:743:A:C8	2.33	0.63
52:26:1516:G:H2'	52:26:1518:A:OP2	1.98	0.63
53:27:202:U:H2'	53:27:203:A:O4'	1.98	0.63
53:27:277:G:H4'	53:27:278:A:C8	2.34	0.63
53:27:499:U:H2'	53:27:500:G:O4'	1.98	0.63
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.63
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.63
59:33:429:TYR:HD1	59:33:433:SER:HA	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:672:VAL:HG12	59:33:736:ILE:HD11	1.80	0.63
20:T:11:ILE:HG22	20:T:70:ALA:O	1.98	0.63
21:U:14:LYS:NZ	54:28:98:G:H22	1.96	0.63
22:V:38:GLY:HA2	53:27:2330:G:H21	1.63	0.63
26:Z:56:ARG:HH22	49:23:68:HIS:HE1	1.46	0.63
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.79	0.63
34:8:120:LYS:HE3	52:26:439:U:H5"	1.81	0.63
35:9:61:LYS:HE3	52:26:1073:U:P	2.38	0.63
51:25:44:ARG:NH2	52:26:722:G:OP2	2.31	0.63
52:26:1005:A:H2'	52:26:1006:G:O4'	1.98	0.63
52:26:1347:G:O2'	52:26:1373:G:N1	2.31	0.63
53:27:680:C:H2'	53:27:681:G:C8	2.32	0.63
53:27:1174:U:O2	53:27:1174:U:H2'	1.97	0.63
53:27:1740:G:H2'	53:27:1741:C:O4'	1.98	0.63
53:27:1854:A:N6	53:27:1888:G:H1'	2.14	0.63
53:27:2208:C:H2'	53:27:2209:G:H8	1.63	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
3:C:151:GLY:HA2	3:C:195:GLN:OE1	1.99	0.63
40:14:62:ARG:NH1	52:26:1367:C:H5'	2.13	0.63
48:22:38:ILE:H	48:22:38:ILE:HD12	1.62	0.63
53:27:2869:G:H2'	53:27:2870:C:C6	2.33	0.63
59:33:640:GLN:H	59:33:640:GLN:CD	2.06	0.63
13:M:72:ASP:OD2	13:M:75:ILE:HG12	1.98	0.63
52:26:597:G:H2'	52:26:598:U:H5'	1.81	0.63
52:26:1287:A:C2	52:26:1353:G:H1'	2.33	0.63
53:27:1563:U:H2'	53:27:1564:C:C6	2.34	0.63
53:27:1783:A:C6	53:27:2587:A:C2	2.87	0.63
53:27:2028:U:H2'	53:27:2029:G:C8	2.33	0.63
1:A:233:GLY:HA3	53:27:2598:A:H5"	1.81	0.63
36:10:63:ASN:CB	36:10:96:VAL:HG21	2.29	0.63
41:15:111:ASP:OD1	41:15:113:THR:HG23	1.98	0.63
42:16:25:ALA:CB	52:26:554:A:H5'	2.27	0.63
47:21:68:LYS:HB2	52:26:267:C:OP1	1.99	0.63
52:26:1138:G:H3'	52:26:1138:G:N3	2.13	0.63
53:27:784:G:O2'	53:27:785:G:H5'	1.98	0.63
53:27:2291:U:O2'	53:27:2374:C:H1'	1.99	0.63
16:P:2:ARG:HD2	53:27:1248:G:C2	2.34	0.63
20:T:73:ASN:HB3	20:T:76:THR:OG1	1.99	0.63
24:X:61:ALA:C	24:X:63:ALA:H	2.07	0.63
40:14:85:ASP:HB3	40:14:89:ARG:NH2	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:80:ARG:CA	44:18:83:VAL:HG12	2.28	0.63
52:26:707:U:H2'	52:26:708:C:C6	2.34	0.63
52:26:1033:G:C4	52:26:1034:G:H1'	2.34	0.63
53:27:186:G:H2'	53:27:187:G:H8	1.64	0.63
53:27:849:A:H2'	53:27:850:U:C6	2.34	0.63
53:27:1658:C:H2'	53:27:1659:G:C8	2.33	0.63
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.63
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63
10:J:22:ILE:HG13	10:J:40:LYS:O	1.99	0.62
10:J:71:ARG:HB3	10:J:72:PRO:HD2	1.80	0.62
18:R:82:MET:HB3	18:R:84:ARG:HH22	1.64	0.62
42:16:29:LYS:HE3	42:16:58:ASN:HD22	1.64	0.62
47:21:12:VAL:HB	47:21:21:VAL:HG13	1.81	0.62
52:26:151:A:H2'	52:26:152:A:O4'	1.99	0.62
52:26:175:C:H2'	52:26:176:C:H6	1.64	0.62
52:26:560:A:H4'	52:26:561:U:H5'	1.79	0.62
52:26:607:A:H2'	52:26:608:A:H8	1.63	0.62
53:27:171:U:H2'	53:27:172:A:C8	2.33	0.62
53:27:1059:G:H2'	53:27:1060:U:C5	2.33	0.62
53:27:1139:G:O2'	53:27:1140:C:H5'	1.98	0.62
53:27:1564:C:H2'	53:27:1565:C:C6	2.34	0.62
53:27:1967:C:H2'	53:27:1968:G:O4'	1.98	0.62
53:27:2099:U:H2'	53:27:2100:G:H5"	1.81	0.62
56:30:2:C:H2'	56:30:3:C:O4'	1.99	0.62
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.62	0.62
8:H:1:ALA:HB1	8:H:61:TYR:CE1	2.35	0.62
8:H:72:THR:HB	8:H:111:THR:HG22	1.80	0.62
11:K:23:ILE:H	11:K:23:ILE:HD12	1.63	0.62
13:M:114:GLU:OE2	13:M:118:ARG:HD3	1.99	0.62
33:7:39:ARG:HG3	33:7:54:ILE:HD11	1.81	0.62
37:11:22:LEU:O	37:11:26:VAL:HG23	1.99	0.62
38:12:10:LEU:HD12	38:12:76:ARG:HB2	1.80	0.62
42:16:106:VAL:O	42:16:118:VAL:HG22	2.00	0.62
46:20:19:VAL:HG13	46:20:36:VAL:O	1.99	0.62
46:20:50:THR:HG22	46:20:52:LEU:HD11	1.80	0.62
50:24:11:ILE:HG13	50:24:12:GLN:N	2.14	0.62
52:26:223:A:H2'	52:26:224:U:C6	2.34	0.62
52:26:1142:G:H3'	52:26:1143:G:C8	2.33	0.62
52:26:1360:A:H2'	52:26:1361:G:O4'	1.98	0.62
53:27:969:G:H2'	53:27:970:U:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1514:G:O2'	53:27:1515:A:H5"	1.98	0.62
53:27:1702:G:H2'	53:27:1703:G:C5'	2.10	0.62
1:A:119:VAL:HG12	1:A:130:PRO:HG2	1.80	0.62
8:H:126:ARG:NH2	53:27:1080:A:H5"	2.11	0.62
24:X:11:VAL:HA	24:X:14:LEU:HD12	1.80	0.62
31:5:4:ARG:HB2	53:27:2466:C:OP1	1.99	0.62
34:8:24:VAL:C	34:8:26:ALA:H	2.07	0.62
40:14:40:ILE:HD12	40:14:73:LEU:HD22	1.82	0.62
41:15:39:ASN:HB2	52:26:684:U:H1'	1.81	0.62
49:23:5:LYS:HG3	49:23:6:LYS:N	2.14	0.62
50:24:17:ARG:HG3	50:24:18:LYS:N	2.14	0.62
52:26:607:A:H2'	52:26:608:A:C8	2.34	0.62
52:26:999:C:H2'	52:26:1000:A:H8	1.65	0.62
52:26:1144:G:H21	52:26:1146:A:H62	1.45	0.62
53:27:2037:A:H2'	53:27:2038:G:H8	1.62	0.62
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
1:A:124:LYS:HB3	1:A:127:ASN:ND2	2.14	0.62
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.81	0.62
9:I:95:ARG:HG2	9:I:96:ARG:HG2	1.81	0.62
10:J:108:ARG:HG3	10:J:113:MET:HE1	1.81	0.62
12:L:45:GLN:HE21	53:27:2485:G:H5"	1.65	0.62
18:R:57:ASN:OD1	53:27:495:G:H1'	1.98	0.62
20:T:11:ILE:HD11	20:T:19:GLY:HA2	1.81	0.62
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.29	0.62
41:15:17:ASP:HB3	41:15:36:ARG:HH21	1.62	0.62
53:27:1433:A:H2'	53:27:1434:A:C8	2.35	0.62
53:27:1434:A:H2'	53:27:1435:G:C8	2.34	0.62
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.62
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.80	0.62
7:G:121:SER:HB3	7:G:126:LEU:HD23	1.82	0.62
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.34	0.62
19:S:51:PHE:O	19:S:53:VAL:HG13	1.99	0.62
21:U:37:PRO:HG2	54:28:73:A:H2	1.65	0.62
24:X:12:GLU:O	24:X:15:ASN:HB3	1.99	0.62
27:1:8:THR:HG21	53:27:2021:C:OP1	1.99	0.62
40:14:73:LEU:CD2	40:14:75:ASP:HB2	2.30	0.62
52:26:188:C:H2'	52:26:189:A:O4'	1.98	0.62
52:26:990:C:H2'	52:26:991:U:O4'	1.99	0.62
53:27:225:C:H2'	53:27:226:A:O4'	1.98	0.62
53:27:514:A:H2'	53:27:515:A:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:1:U:H6	54:28:1:U:H5'	1.65	0.62
4:D:125:GLY:HA2	4:D:162:ASP:HA	1.81	0.62
6:F:40:THR:O	6:F:42:LYS:N	2.32	0.62
8:H:45:THR:HA	8:H:48:ILE:HG12	1.80	0.62
9:I:5:THR:HG23	9:I:45:THR:HG21	1.82	0.62
17:Q:63:VAL:HA	17:Q:96:VAL:HG12	1.80	0.62
32:6:132:GLU:O	32:6:136:ARG:HG2	2.00	0.62
35:9:34:ALA:HB3	35:9:50:GLY:HA3	1.81	0.62
38:12:46:GLU:O	38:12:61:THR:HB	2.00	0.62
44:18:95:LEU:HD12	44:18:96:LYS:H	1.65	0.62
53:27:155:A:H2'	53:27:156:A:C8	2.35	0.62
53:27:193:U:H2'	53:27:194:G:H8	1.65	0.62
53:27:795:C:H2'	53:27:796:C:H6	1.65	0.62
53:27:876:C:H2'	53:27:877:A:O4'	2.00	0.62
53:27:2118:U:H5	53:27:2149:U:H1'	1.64	0.62
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.29	0.62
59:33:726:LEU:HA	59:33:729:LEU:HD12	1.82	0.62
3:C:57:LYS:NZ	3:C:59:PRO:HG3	2.14	0.62
33:7:32:LEU:O	33:7:35:ASP:HB3	2.00	0.62
43:17:14:ALA:CB	43:17:33:LEU:HD21	2.30	0.62
49:23:79:TYR:CZ	49:23:80:ARG:HB3	2.34	0.62
52:26:741:G:H2'	52:26:742:G:H8	1.64	0.62
53:27:216:A:H2'	53:27:217:A:C8	2.35	0.62
53:27:1388:G:H2'	53:27:1389:G:H8	1.65	0.62
53:27:1772:A:H2'	53:27:1773:A:H4'	1.81	0.62
53:27:2585:U:O2'	53:27:2586:U:H5'	1.99	0.62
53:27:2841:C:H2'	53:27:2842:G:H8	1.62	0.62
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.62
59:33:429:TYR:CE1	59:33:436:GLY:HA3	2.34	0.62
9:I:69:ARG:HE	9:I:89:PHE:HE2	1.47	0.62
9:I:98:GLU:O	9:I:102:GLU:HG3	2.00	0.62
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.29	0.62
37:11:129:ASN:CA	37:11:134:VAL:HG11	2.29	0.62
43:17:28:ARG:CZ	43:17:62:PHE:HB2	2.29	0.62
52:26:477:C:H2'	52:26:478:A:H8	1.65	0.62
52:26:843:U:O5'	52:26:844:G:H5"	1.98	0.62
53:27:566:U:H2'	53:27:567:U:C6	2.34	0.62
53:27:709:U:H2'	53:27:710:U:C6	2.35	0.62
53:27:1386:C:H2'	53:27:1387:A:C8	2.35	0.62
53:27:1464:G:H2'	53:27:1465:G:C8	2.35	0.62
53:27:2086:U:H3	53:27:2233:U:H3	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2103:C:H2'	53:27:2104:C:C6	2.34	0.62
53:27:2316:G:H2'	53:27:2317:A:C8	2.35	0.62
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
59:33:613:CYS:SG	59:33:634:HIS:ND1	2.71	0.62
9:I:7:LYS:HE3	53:27:538:A:H5"	1.81	0.62
12:L:79:ALA:HA	53:27:2494:G:O2'	2.00	0.62
33:7:49:ALA:HB1	33:7:75:VAL:HG22	1.82	0.62
46:20:51:ARG:C	46:20:52:LEU:HD12	2.25	0.62
51:25:44:ARG:HD2	52:26:723:U:P	2.40	0.62
52:26:106:C:H2'	52:26:107:G:H8	1.65	0.62
52:26:499:A:H4'	52:26:500:G:O5'	1.99	0.62
52:26:530:G:N3	52:26:530:G:H2'	2.14	0.62
53:27:279:A:H2'	53:27:280:U:C5'	2.24	0.62
53:27:1105:U:H2'	53:27:1106:G:H8	1.65	0.62
53:27:1316:U:H2'	53:27:1317:G:H8	1.65	0.62
54:28:75:G:H2'	54:28:76:G:C8	2.33	0.62
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.82	0.62
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.62
8:H:4:VAL:HA	8:H:7:TYR:CD2	2.34	0.62
19:S:8:LEU:HD13	24:X:21:LEU:HB2	1.82	0.62
30:4:5:THR:O	30:4:7:ARG:N	2.33	0.62
32:6:153:MET:HE1	32:6:157:PRO:HG3	1.82	0.62
33:7:62:SER:HB2	33:7:99:GLN:NE2	2.15	0.62
39:13:125:GLN:HE22	52:26:1342:C:H4'	1.64	0.62
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.80	0.62
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.81	0.62
44:18:32:ASP:HB2	44:18:34:ASN:HD21	1.65	0.62
49:23:39:ILE:HD12	49:23:68:HIS:O	1.99	0.62
52:26:256:U:H2'	52:26:257:G:C8	2.35	0.62
52:26:1435:G:H2'	52:26:1436:U:C6	2.34	0.62
53:27:16:C:H2'	53:27:17:G:C8	2.35	0.62
53:27:277:G:H2'	53:27:277:G:N3	2.15	0.62
53:27:1214:A:H2'	53:27:1215:G:O4'	1.99	0.62
53:27:1485:U:H2'	53:27:1486:U:C6	2.35	0.62
53:27:1550:C:H2'	53:27:1551:A:C8	2.35	0.62
53:27:2136:G:N3	53:27:2136:G:H2'	2.14	0.62
53:27:2470:G:H2'	53:27:2471:A:H8	1.64	0.62
58:32:59:A:H2'	58:32:60:U:O4'	2.00	0.62
7:G:34:THR:OG1	53:27:1056:G:H5'	1.99	0.61
16:P:44:TYR:HD1	16:P:47:ARG:HH11	1.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:98:ASN:C	20:T:100:GLU:H	2.08	0.61
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
34:8:2:ARG:HE	34:8:114:ARG:HD3	1.65	0.61
40:14:67:ILE:HG13	40:14:67:ILE:O	1.99	0.61
42:16:79:ILE:CG2	42:16:103:CYS:HB2	2.30	0.61
46:20:6:LEU:HD22	46:20:17:TYR:HB3	1.82	0.61
52:26:460:A:H2'	52:26:461:A:H8	1.62	0.61
52:26:796:C:O2'	52:26:797:C:H5'	1.99	0.61
52:26:1347:G:H22	52:26:1373:G:H2'	1.65	0.61
53:27:78:U:H2'	53:27:79:C:C6	2.35	0.61
53:27:441:U:H2'	53:27:442:G:H8	1.65	0.61
53:27:723:C:H2'	53:27:724:U:O4'	2.00	0.61
53:27:1667:G:N2	53:27:1991:U:H3'	2.14	0.61
53:27:1773:A:H2'	53:27:1774:C:O4'	1.99	0.61
53:27:1947:C:H2'	53:27:1948:G:H8	1.63	0.61
53:27:2229:U:H2'	53:27:2230:G:H8	1.64	0.61
54:28:111:U:H2'	54:28:112:G:H8	1.65	0.61
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.61
59:33:274:PHE:HB3	59:33:333:THR:HB	1.79	0.61
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.82	0.61
7:G:96:PHE:HE1	7:G:125:ARG:HB2	1.64	0.61
14:N:108:ASP:O	14:N:112:GLU:HG3	2.00	0.61
15:O:38:ARG:CZ	52:26:345:C:H5'	2.29	0.61
19:S:65:GLY:HA3	19:S:77:ARG:HB2	1.82	0.61
25:Y:26:LEU:HD21	25:Y:46:MET:SD	2.39	0.61
32:6:103:TRP:CE3	32:6:156:LEU:HD21	2.36	0.61
44:18:92:ILE:N	44:18:92:ILE:HD12	2.15	0.61
51:25:36:PHE:HB3	51:25:40:PRO:HD3	1.81	0.61
52:26:291:U:O2'	52:26:292:G:H5'	2.00	0.61
52:26:801:U:H2'	52:26:802:A:C8	2.34	0.61
52:26:1219:A:H2'	52:26:1220:G:H8	1.61	0.61
52:26:1510:C:H2'	52:26:1511:G:C8	2.35	0.61
53:27:666:A:H2'	53:27:667:U:C6	2.35	0.61
53:27:825:A:H2'	53:27:826:U:H6	1.65	0.61
53:27:1333:G:H2'	53:27:1334:G:H8	1.65	0.61
53:27:1443:U:H2'	53:27:1444:G:C8	2.33	0.61
53:27:1688:U:H2'	53:27:1698:A:N1	2.15	0.61
53:27:1844:C:H2'	53:27:1845:G:H8	1.65	0.61
53:27:2692:G:H2'	53:27:2693:G:H8	1.65	0.61
53:27:2868:A:H3'	53:27:2869:G:C8	2.35	0.61
56:30:18:G:N1	56:30:55:U:H1'	2.12	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.61
4:D:58:ALA:O	4:D:139:GLU:HG3	1.99	0.61
7:G:18:VAL:HA	7:G:86:MET:HE1	1.81	0.61
52:26:49:U:H3	52:26:362:G:H1'	1.65	0.61
53:27:1463:C:H2'	53:27:1464:G:H8	1.66	0.61
53:27:1752:C:H2'	53:27:1753:G:C8	2.35	0.61
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.61
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.61
1:A:161:VAL:HG11	1:A:173:LEU:HD13	1.81	0.61
6:F:67:ALA:O	6:F:71:LYS:HG3	2.01	0.61
11:K:122:VAL:HB	11:K:142:ILE:HA	1.81	0.61
19:S:37:ASP:OD1	19:S:38:ALA:N	2.32	0.61
33:7:190:THR:HG21	33:7:195:ILE:HD12	1.82	0.61
40:14:57:VAL:HG22	40:14:58:ASN:N	2.13	0.61
41:15:32:THR:HG23	41:15:43:TRP:HB3	1.81	0.61
50:24:67:HIS:HB3	52:26:262:A:H5'	1.83	0.61
52:26:937:A:H2'	52:26:938:A:H8	1.65	0.61
52:26:1524:C:H2'	52:26:1525:G:C8	2.36	0.61
53:27:437:U:H2'	53:27:438:G:C8	2.36	0.61
53:27:1130:U:O2'	53:27:1131:G:OP1	2.17	0.61
53:27:1297:C:H2'	53:27:1298:C:C6	2.35	0.61
53:27:1599:U:H2'	53:27:1600:C:H6	1.65	0.61
53:27:1993:U:H2'	53:27:1994:C:H5'	1.81	0.61
53:27:2394:C:H2'	53:27:2395:C:O4'	2.00	0.61
53:27:2570:G:H2'	53:27:2571:U:O4'	2.00	0.61
54:28:35:C:C2'	54:28:36:C:H5'	2.29	0.61
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.61
1:A:200:MET:HE3	52:26:773:G:H4'	1.81	0.61
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.83	0.61
4:D:56:LEU:O	4:D:60:SER:N	2.27	0.61
8:H:2:LYS:HB2	8:H:61:TYR:HD1	1.65	0.61
17:Q:83:TYR:CZ	53:27:1187:G:H5"	2.36	0.61
26:Z:2:LYS:HB2	26:Z:5:ILE:CD1	2.30	0.61
27:1:49:ARG:HG2	53:27:2884:U:H6	1.62	0.61
38:12:34:ALA:O	38:12:38:VAL:HG23	2.00	0.61
39:13:100:ALA:HB1	39:13:102:PHE:HE2	1.64	0.61
41:15:88:PRO:CD	51:25:28:LEU:HD21	2.24	0.61
52:26:175:C:H2'	52:26:176:C:C6	2.36	0.61
52:26:418:C:H2'	52:26:419:C:C6	2.35	0.61
52:26:737:C:H2'	52:26:738:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:696:G:H2'	53:27:697:G:H8	1.65	0.61
53:27:809:G:H2'	53:27:810:U:C6	2.36	0.61
53:27:1056:G:H4'	53:27:1086:A:C8	2.36	0.61
53:27:2267:A:H5"	53:27:2268:A:H5'	1.82	0.61
53:27:2837:A:H2'	53:27:2838:G:H8	1.65	0.61
55:29:19:U:H2'	55:29:20:U:H6	1.64	0.61
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.61
1:A:146:LYS:HB2	1:A:149:LYS:HD2	1.81	0.61
16:P:48:ASP:OD2	53:27:534:U:O2'	2.18	0.61
16:P:58:GLN:HE21	53:27:1009:A:H5"	1.66	0.61
38:12:121:GLY:C	52:26:599:C:H4'	2.26	0.61
41:15:17:ASP:HA	41:15:80:ASN:OD1	2.01	0.61
52:26:82:G:H2'	52:26:83:C:O4'	2.00	0.61
52:26:359:G:H5"	59:33:451:PHE:CE2	2.36	0.61
52:26:1258:G:H2'	52:26:1259:C:C6	2.36	0.61
53:27:357:C:H2'	53:27:358:U:C6	2.35	0.61
53:27:443:A:H1'	53:27:1201:U:O4'	2.00	0.61
53:27:660:C:H2'	53:27:661:A:H8	1.62	0.61
53:27:1147:A:H2'	53:27:1148:U:O4'	2.01	0.61
53:27:1474:U:H2'	53:27:1475:G:H5'	1.83	0.61
53:27:1637:A:H2'	53:27:1638:C:C6	2.36	0.61
53:27:2026:U:H2'	53:27:2027:G:O4'	2.00	0.61
53:27:2027:G:H2'	53:27:2028:U:C6	2.35	0.61
53:27:2805:C:H2'	53:27:2806:C:H6	1.64	0.61
7:G:58:THR:HG21	7:G:81:LEU:HD12	1.82	0.61
11:K:132:ARG:HH21	11:K:142:ILE:HG21	1.65	0.61
16:P:87:VAL:HG12	16:P:89:ILE:H	1.65	0.61
17:Q:81:LYS:HD2	53:27:973:A:H5"	1.81	0.61
20:T:73:ASN:O	20:T:75:ALA:N	2.34	0.61
34:8:123:MET:HE1	34:8:126:GLY:HA2	1.83	0.61
34:8:144:ILE:HD13	34:8:177:MET:HB3	1.83	0.61
35:9:86:GLY:O	35:9:87:VAL:HG12	2.01	0.61
39:13:37:TYR:O	39:13:38:PHE:HB3	1.99	0.61
40:14:85:ASP:HB3	40:14:89:ARG:HH21	1.66	0.61
42:16:42:LYS:NZ	52:26:912:C:OP1	2.34	0.61
43:17:14:ALA:HB3	43:17:33:LEU:HD21	1.83	0.61
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.82	0.61
46:20:50:THR:HG22	46:20:52:LEU:CD1	2.31	0.61
52:26:487:A:H2'	52:26:488:C:O4'	2.00	0.61
52:26:551:U:H2'	52:26:552:U:C6	2.35	0.61
52:26:994:A:N7	52:26:1216:A:H4'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1000:A:H2'	52:26:1001:C:C6	2.36	0.61
52:26:1053:G:N7	52:26:1199:U:H3'	2.16	0.61
53:27:22:C:H2'	53:27:23:G:H5"	1.83	0.61
53:27:96:C:H2'	53:27:97:C:C6	2.34	0.61
53:27:583:G:H2'	53:27:584:C:C6	2.36	0.61
53:27:616:A:H2'	53:27:617:G:O4'	2.01	0.61
53:27:859:G:H1'	53:27:860:U:C5	2.33	0.61
54:28:59:A:H2'	54:28:60:C:O4'	2.01	0.61
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.61
3:C:55:SER:OG	3:C:56:GLY:N	2.34	0.61
39:13:125:GLN:HE22	52:26:1342:C:C4'	2.13	0.61
41:15:71:ASP:O	41:15:72:ALA:HB3	2.00	0.61
52:26:214:C:H2'	52:26:215:C:C6	2.35	0.61
53:27:151:C:H2'	53:27:152:A:C8	2.36	0.61
53:27:1995:U:H2'	53:27:1996:C:C5	2.35	0.61
53:27:2853:C:H2'	53:27:2854:G:C8	2.36	0.61
58:32:9:G:H2'	58:32:11:A:N6	2.11	0.61
58:32:22:G:H2'	58:32:23:C:C6	2.35	0.61
8:H:71:LYS:NZ	53:27:1060:U:H5"	2.15	0.61
13:M:33:ILE:HD12	13:M:118:ARG:NH2	2.16	0.61
17:Q:38:VAL:HG11	17:Q:57:GLY:HA3	1.83	0.61
34:8:113:ALA:O	34:8:117:VAL:HG23	2.01	0.61
39:13:74:GLN:O	39:13:78:ILE:HG13	2.01	0.61
52:26:665:A:N3	52:26:732:C:H2'	2.16	0.61
52:26:1254:A:H2'	52:26:1255:G:C8	2.36	0.61
52:26:1305:G:O2'	52:26:1306:A:H8	1.83	0.61
53:27:466:A:N3	53:27:683:U:H1'	2.15	0.61
53:27:522:A:H2'	53:27:523:C:H6	1.65	0.61
53:27:607:U:H2'	53:27:608:A:H8	1.65	0.61
53:27:708:G:N2	53:27:724:U:H1'	2.15	0.61
53:27:935:C:H2'	53:27:936:A:H8	1.64	0.61
53:27:1259:G:H2'	53:27:1260:A:C8	2.35	0.61
53:27:1987:A:H2'	53:27:1988:G:C8	2.36	0.61
53:27:2174:C:H2'	53:27:2175:C:H5'	1.82	0.61
53:27:2524:G:C3'	53:27:2525:G:H5"	2.31	0.61
4:D:131:VAL:HG23	4:D:151:LEU:H	1.66	0.61
14:N:40:ILE:HG12	14:N:47:VAL:HG12	1.82	0.61
18:R:69:LEU:HA	18:R:109:ASP:HA	1.82	0.61
20:T:40:LEU:HA	20:T:60:LYS:O	2.01	0.61
21:U:46:LYS:O	21:U:50:MET:HG2	2.00	0.61
27:1:28:SER:HB2	27:1:39:ARG:HD3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:16:THR:O	34:8:33:ILE:HD11	2.00	0.61
35:9:152:VAL:HA	35:9:155:LYS:NZ	2.15	0.61
36:10:3:HIS:HB2	36:10:92:THR:HA	1.83	0.61
52:26:767:A:H2'	52:26:768:A:C8	2.36	0.61
53:27:818:G:H2'	53:27:1187:G:N2	2.16	0.61
53:27:1010:A:N3	53:27:1153:C:H1'	2.16	0.61
53:27:1173:U:C3'	53:27:1174:U:H4'	2.30	0.61
53:27:1406:U:H2'	53:27:1407:G:H5"	1.82	0.61
53:27:1683:U:H2'	53:27:1684:G:C8	2.36	0.61
53:27:2162:G:C2'	53:27:2163:A:H5'	2.29	0.61
53:27:2699:C:H2'	53:27:2700:A:H8	1.64	0.61
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
2:B:25:THR:HG21	2:B:193:VAL:HG22	1.82	0.60
3:C:121:VAL:HG12	3:C:123:LYS:H	1.66	0.60
6:F:93:SER:HB2	6:F:123:ARG:NE	2.16	0.60
8:H:10:LEU:CD2	8:H:12:VAL:HG22	2.31	0.60
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.83	0.60
38:12:5:PRO:O	38:12:8:ASP:HB3	2.01	0.60
39:13:51:LEU:HD13	39:13:56:MET:HB2	1.83	0.60
40:14:46:LYS:HE2	40:14:68:ARG:HE	1.66	0.60
42:16:79:ILE:HG22	42:16:103:CYS:HB2	1.82	0.60
43:17:16:ILE:HD12	43:17:16:ILE:H	1.65	0.60
44:18:20:PHE:C	44:18:22:LYS:H	2.06	0.60
52:26:755:G:H2'	52:26:756:C:C6	2.37	0.60
52:26:904:U:H2'	52:26:905:U:C6	2.36	0.60
53:27:134:G:H2'	53:27:135:U:C6	2.36	0.60
53:27:302:C:H2'	53:27:303:G:C8	2.34	0.60
53:27:549:G:H2'	53:27:550:C:C6	2.36	0.60
53:27:1363:C:H2'	53:27:1364:G:H8	1.65	0.60
53:27:2159:G:H2'	53:27:2160:C:O4'	2.01	0.60
59:33:267:ASN:H	59:33:267:ASN:HD22	1.49	0.60
59:33:683:ILE:O	59:33:687:LEU:N	2.33	0.60
1:A:12:ARG:HA	1:A:15:VAL:CG2	2.31	0.60
2:B:146:ILE:HD11	53:27:2051:A:H4'	1.83	0.60
10:J:76:VAL:H	15:O:72:VAL:HG22	1.66	0.60
10:J:105:ARG:NH2	15:O:31:VAL:HG21	2.16	0.60
14:N:70:ALA:O	14:N:74:VAL:HG23	2.00	0.60
21:U:65:VAL:HG13	21:U:65:VAL:O	2.00	0.60
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.36	0.60
32:6:206:ILE:O	32:6:210:THR:HG23	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:12:ARG:HA	34:8:34:GLU:H	1.66	0.60
40:14:19:ASP:O	40:14:22:THR:HB	2.01	0.60
52:26:406:G:H2'	52:26:407:U:C6	2.36	0.60
52:26:747:A:H2'	52:26:748:G:O4'	2.00	0.60
52:26:825:A:H2'	52:26:826:C:C6	2.36	0.60
52:26:857:C:H2'	52:26:858:G:O4'	2.00	0.60
53:27:467:G:O2'	53:27:468:G:H5'	2.01	0.60
53:27:570:G:H2'	53:27:2030:A:N7	2.16	0.60
53:27:584:C:H2'	53:27:585:G:C8	2.37	0.60
53:27:1176:U:H2'	53:27:1177:G:C8	2.36	0.60
53:27:2828:G:H2'	53:27:2829:A:H8	1.64	0.60
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.60
1:A:164:VAL:HG21	1:A:180:MET:HE1	1.82	0.60
1:A:213:ARG:NH2	53:27:1566:A:H5'	2.17	0.60
1:A:269:ARG:HH11	1:A:269:ARG:HG3	1.67	0.60
3:C:5:LEU:HD13	3:C:12:LEU:H	1.66	0.60
11:K:60:ARG:O	53:27:2393:U:H5'	2.02	0.60
16:P:80:ASN:O	16:P:84:LYS:HG2	2.01	0.60
24:X:55:THR:HG21	53:27:77:G:O4'	2.01	0.60
32:6:103:TRP:CH2	32:6:107:ARG:HD3	2.36	0.60
35:9:113:VAL:HG13	35:9:114:LEU:HD12	1.83	0.60
42:16:33:CYS:HA	42:16:54:VAL:HA	1.82	0.60
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.83	0.60
43:17:87:GLY:O	43:17:91:ARG:HG3	2.00	0.60
52:26:81:A:N6	52:26:86:G:H21	1.98	0.60
52:26:376:G:O2'	52:26:377:G:H5'	2.00	0.60
52:26:1211:U:H4'	52:26:1213:A:H1'	1.83	0.60
53:27:566:U:H4'	53:27:809:G:OP2	2.01	0.60
53:27:1892:C:H2'	53:27:1893:C:C6	2.35	0.60
53:27:2115:G:H2'	53:27:2117:A:OP2	2.01	0.60
53:27:2233:U:H2'	53:27:2234:G:H8	1.65	0.60
53:27:2372:U:H2'	53:27:2373:G:H8	1.63	0.60
53:27:2812:G:H2'	53:27:2813:A:C8	2.35	0.60
53:27:2840:C:H2'	53:27:2841:C:C6	2.36	0.60
58:32:72:A:H2	58:32:73:A:H62	1.49	0.60
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.60
3:C:29:HIS:NE2	11:K:8:PRO:HD3	2.15	0.60
8:H:71:LYS:HZ1	53:27:1060:U:H5"	1.66	0.60
15:O:29:VAL:HG13	15:O:79:VAL:HG22	1.83	0.60
16:P:87:VAL:HG13	17:Q:49:ILE:HD11	1.83	0.60
34:8:57:LYS:HZ3	34:8:61:ARG:HD3	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:35:GLN:HG3	40:14:77:VAL:HB	1.82	0.60
40:14:44:THR:HG22	40:14:70:HIS:HA	1.84	0.60
46:20:71:VAL:O	46:20:75:ILE:HG13	2.01	0.60
50:24:2:ASN:OD1	50:24:3:ILE:N	2.34	0.60
53:27:796:C:H2'	53:27:797:G:H8	1.65	0.60
53:27:1604:C:H2'	53:27:1605:C:C6	2.36	0.60
53:27:1657:U:H2'	53:27:1658:C:C6	2.36	0.60
53:27:2699:C:H2'	53:27:2700:A:C8	2.36	0.60
53:27:2898:U:H2'	53:27:2899:A:H8	1.66	0.60
13:M:64:ARG:HH22	53:27:2852:G:P	2.24	0.60
34:8:30:LYS:N	34:8:30:LYS:HD2	2.16	0.60
41:15:39:ASN:HA	52:26:683:G:N2	2.17	0.60
42:16:106:VAL:HG23	42:16:116:TYR:HB3	1.82	0.60
51:25:11:PHE:O	51:25:12:ASP:HB2	2.01	0.60
53:27:145:C:H2'	53:27:146:A:H8	1.66	0.60
53:27:215:G:C4'	53:27:216:A:H4'	2.31	0.60
53:27:418:C:H2'	53:27:419:U:C6	2.37	0.60
53:27:1053:C:H5'	53:27:1053:C:H6	1.64	0.60
53:27:1260:A:H2'	53:27:1261:C:C6	2.36	0.60
53:27:1741:C:H2'	53:27:1742:U:H6	1.66	0.60
53:27:2271:G:C5	53:27:2272:U:C4	2.90	0.60
53:27:2593:U:H2'	53:27:2594:C:C6	2.36	0.60
53:27:2619:C:O2'	53:27:2620:C:H5'	2.02	0.60
54:28:29:A:H2'	54:28:30:C:C6	2.36	0.60
58:32:45:G:H5'	58:32:46:A:OP2	2.01	0.60
6:F:42:LYS:O	6:F:45:GLU:HB3	2.01	0.60
15:O:7:LEU:HD23	15:O:7:LEU:O	2.00	0.60
15:O:101:GLU:OE1	15:O:101:GLU:N	2.33	0.60
34:8:120:LYS:CG	34:8:130:ASN:HD21	2.15	0.60
41:15:27:ASN:HA	41:15:57:SER:HB3	1.83	0.60
49:23:10:ILE:HG22	49:23:38:THR:N	2.15	0.60
52:26:637:C:H2'	52:26:638:U:C6	2.36	0.60
52:26:1314:C:H2'	52:26:1315:U:C6	2.37	0.60
53:27:128:C:H2'	53:27:129:C:H6	1.67	0.60
53:27:404:A:H1'	53:27:406:G:N9	2.15	0.60
53:27:433:C:O2'	53:27:434:U:H5'	2.02	0.60
53:27:582:A:H2'	53:27:583:G:C8	2.36	0.60
53:27:690:G:H2'	53:27:691:C:C6	2.35	0.60
53:27:967:U:H2'	53:27:968:C:C6	2.37	0.60
53:27:1388:G:H2'	53:27:1389:G:C8	2.37	0.60
53:27:2183:A:H2'	53:27:2184:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2834:G:O2'	53:27:2835:A:H5'	2.00	0.60
56:30:42:C:H2'	56:30:43:C:C1'	2.31	0.60
14:N:30:ARG:HG3	14:N:102:ARG:NH2	2.17	0.60
26:Z:11:GLU:CG	26:Z:25:ARG:HD2	2.32	0.60
31:5:6:SER:O	31:5:7:VAL:HG22	2.01	0.60
35:9:107:GLY:HA3	52:26:9:G:H4'	1.84	0.60
52:26:403:C:H2'	52:26:404:G:C8	2.34	0.60
52:26:643:C:H2'	52:26:644:U:C6	2.37	0.60
52:26:940:C:H2'	52:26:941:G:H8	1.64	0.60
52:26:1147:C:H2'	52:26:1148:U:H6	1.67	0.60
52:26:1406:U:H2'	52:26:1407:C:O4'	2.01	0.60
53:27:116:C:H2'	53:27:117:G:O4'	2.02	0.60
53:27:2060:A:C1'	53:27:2502:G:H1'	2.31	0.60
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.60
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.01	0.60
59:33:612:CYS:HG	59:33:634:HIS:CE1	2.14	0.60
8:H:12:VAL:O	8:H:53:PRO:HA	2.01	0.60
9:I:81:ILE:CG2	9:I:82:GLY:H	2.08	0.60
10:J:105:ARG:CZ	15:O:31:VAL:HG21	2.32	0.60
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.36	0.60
26:Z:37:CYS:N	26:Z:40:CYS:SG	2.75	0.60
32:6:17:HIS:HB2	32:6:202:ASN:ND2	2.17	0.60
35:9:17:VAL:HA	35:9:33:THR:O	2.02	0.60
37:11:140:VAL:O	37:11:143:MET:HB2	2.01	0.60
40:14:8:ILE:HG12	40:14:100:ILE:HA	1.83	0.60
42:16:26:CYS:SG	42:16:29:LYS:HG2	2.41	0.60
52:26:484:G:C4	52:26:486:U:H1'	2.37	0.60
53:27:588:U:H2'	53:27:589:U:C6	2.37	0.60
53:27:671:C:H2'	53:27:672:C:C6	2.37	0.60
53:27:1044:C:H4'	53:27:1048:A:H1'	1.82	0.60
53:27:1165:A:H2'	53:27:1166:G:H8	1.66	0.60
54:28:49:C:H2'	54:28:50:A:H8	1.67	0.60
58:32:19:G:H2'	58:32:20:U:H5	1.64	0.60
58:32:31:G:C2'	58:32:32:C:H5'	2.31	0.60
2:B:151:THR:HB	2:B:152:PRO:HD3	1.84	0.60
5:E:153:PRO:HG3	5:E:161:VAL:O	2.02	0.60
10:J:98:ARG:NH2	52:26:340:U:OP2	2.34	0.60
16:P:24:TYR:HB3	53:27:533:G:OP1	2.01	0.60
17:Q:2:TYR:CE2	17:Q:42:ALA:HB3	2.37	0.60
25:Y:9:THR:HG22	25:Y:53:MET:C	2.27	0.60
34:8:9:LYS:NZ	52:26:428:G:H5"	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:63:LYS:HB3	38:12:70:VAL:HG21	1.83	0.60
41:15:33:ILE:O	41:15:41:LEU:HB2	2.02	0.60
45:19:7:THR:O	45:19:11:VAL:HG23	2.01	0.60
48:22:11:ARG:HD3	48:22:47:ARG:NE	2.16	0.60
48:22:17:VAL:HG22	48:22:18:GLN:N	2.11	0.60
48:22:70:THR:CG2	48:22:71:ASP:H	2.06	0.60
52:26:271:C:H2'	52:26:272:C:H6	1.67	0.60
52:26:437:U:C2'	52:26:438:U:H5'	2.32	0.60
52:26:587:G:O2'	52:26:588:G:H5'	2.01	0.60
52:26:1448:C:H2'	52:26:1449:C:H6	1.67	0.60
52:26:1460:C:H2'	52:26:1461:G:H8	1.67	0.60
53:27:372:G:H2'	53:27:400:G:O6	2.02	0.60
53:27:692:C:O2'	53:27:693:A:H5'	2.02	0.60
53:27:2099:U:C3'	53:27:2100:G:H5"	2.32	0.60
58:32:28:C:H2'	58:32:29:G:O4'	2.02	0.60
59:33:572:GLN:O	59:33:576:ALA:N	2.35	0.60
4:D:90:LEU:HD13	4:D:95:MET:HA	1.83	0.60
13:M:3:HIS:O	13:M:4:ARG:HB2	2.01	0.60
22:V:56:PHE:CZ	53:27:2365:G:H4'	2.36	0.60
39:13:33:SER:OG	39:13:36:GLN:HG2	2.00	0.60
42:16:21:PRO:C	42:16:23:LEU:N	2.55	0.60
42:16:83:GLY:HA3	52:26:552:U:O3'	2.01	0.60
44:18:48:GLN:H	44:18:48:GLN:NE2	1.99	0.60
50:24:3:ILE:O	50:24:4:LYS:HG3	2.02	0.60
52:26:633:G:H2'	52:26:634:C:C6	2.36	0.60
52:26:1113:C:H2'	52:26:1114:C:C6	2.37	0.60
53:27:310:A:C2'	53:27:311:A:H5"	2.32	0.60
53:27:1188:U:O2'	53:27:1189:A:H5'	2.02	0.60
53:27:1931:U:H2'	53:27:1932:A:H8	1.66	0.60
53:27:2229:U:H2'	53:27:2230:G:C8	2.36	0.60
53:27:2290:G:H2'	53:27:2291:U:O4'	2.02	0.60
53:27:2328:A:H2'	53:27:2329:U:H6	1.67	0.60
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.60
59:33:621:ILE:HD11	59:33:656:VAL:O	2.02	0.60
6:F:40:THR:HB	6:F:43:ASN:HD22	1.67	0.59
11:K:111:ILE:HD11	53:27:636:G:N1	2.17	0.59
12:L:75:GLU:HB2	12:L:90:GLU:HG3	1.84	0.59
17:Q:23:GLU:HG2	53:27:1161:C:O2'	2.02	0.59
22:V:16:ARG:HE	53:27:2357:G:P	2.25	0.59
26:Z:37:CYS:HB2	26:Z:39:LYS:HG2	1.83	0.59
30:4:24:LYS:HB2	30:4:46:LYS:HE3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:35:TYR:HA	50:24:38:ILE:HD12	1.83	0.59
52:26:16:A:O2'	52:26:17:U:H5'	2.02	0.59
52:26:864:A:H2'	52:26:865:A:C8	2.36	0.59
53:27:1071:G:H4'	53:27:1089:A:OP2	2.01	0.59
53:27:1844:C:H2'	53:27:1845:G:C8	2.37	0.59
53:27:2475:C:C2'	53:27:2476:A:H5'	2.32	0.59
53:27:2475:C:H2'	53:27:2476:A:H5'	1.84	0.59
53:27:2648:G:H2'	53:27:2649:C:C6	2.36	0.59
54:28:95:U:H2'	54:28:96:G:C8	2.37	0.59
59:33:645:ARG:O	59:33:649:PRO:HD3	2.01	0.59
9:I:74:TYR:HB2	9:I:87:ALA:HB3	1.83	0.59
15:O:45:VAL:O	15:O:60:VAL:HA	2.01	0.59
15:O:105:LYS:HB3	15:O:108:ARG:NH2	2.18	0.59
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.84	0.59
22:V:22:PHE:HD2	53:27:922:C:H1'	1.67	0.59
53:27:151:C:H2'	53:27:152:A:H8	1.67	0.59
53:27:688:U:O2'	53:27:689:A:H5'	2.02	0.59
53:27:1427:A:H4'	53:27:1428:C:O5'	2.01	0.59
53:27:1440:U:H2'	53:27:1441:G:H8	1.65	0.59
53:27:1777:U:O2'	53:27:1778:U:H5'	2.01	0.59
53:27:2841:C:H2'	53:27:2842:G:C8	2.37	0.59
2:B:101:PHE:HZ	2:B:203:VAL:O	1.85	0.59
4:D:122:ASP:CG	4:D:126:ASN:HB2	2.27	0.59
5:E:34:ARG:HB2	5:E:74:MET:SD	2.42	0.59
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.01	0.59
24:X:28:LEU:HD22	24:X:37:LEU:HD22	1.83	0.59
33:7:118:SER:O	33:7:122:GLN:HG3	2.01	0.59
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.32	0.59
52:26:823:C:H2'	52:26:824:G:C8	2.36	0.59
52:26:1137:C:H4'	52:26:1138:G:C2	2.37	0.59
53:27:576:U:H2'	53:27:577:G:C8	2.37	0.59
53:27:1788:C:H2'	53:27:1789:A:C8	2.36	0.59
53:27:1827:U:C5'	53:27:1971:U:H5"	2.26	0.59
53:27:1843:C:H2'	53:27:1844:C:H6	1.66	0.59
53:27:2134:A:H61	53:27:2156:G:H2'	1.66	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.02	0.59
57:31:21:A:H61	57:31:46:G:H2'	1.68	0.59
2:B:56:LYS:O	2:B:59:ARG:HB2	2.03	0.59
7:G:59:LEU:HB3	7:G:61:ARG:HB3	1.83	0.59
10:J:31:ARG:NH2	53:27:2676:C:OP2	2.34	0.59
13:M:77:ALA:O	13:M:81:ASN:HB2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:34:GLU:HA	17:Q:60:LYS:HA	1.84	0.59
24:X:39:GLN:HA	53:27:95:A:O2'	2.01	0.59
27:1:54:ILE:HG23	27:1:56:LYS:N	2.14	0.59
39:13:118:ARG:NH1	52:26:1233:G:H5'	2.18	0.59
51:25:64:ALA:O	51:25:65:ARG:HB3	2.02	0.59
52:26:216:U:H1'	52:26:466:A:N6	2.17	0.59
52:26:216:U:H2'	52:26:217:C:H6	1.67	0.59
52:26:815:A:H4'	52:26:817:C:C5	2.38	0.59
53:27:832:U:H2'	53:27:833:A:C8	2.37	0.59
53:27:1906:G:C3'	53:27:1907:G:H5"	2.32	0.59
53:27:2267:A:H5"	53:27:2268:A:C5'	2.33	0.59
54:28:24:G:H1'	54:28:27:C:N4	2.18	0.59
56:30:26:A:H2'	56:30:27:G:H5'	1.84	0.59
59:33:408:VAL:HG12	59:33:409:PHE:N	2.16	0.59
2:B:9:VAL:HA	2:B:197:THR:HG23	1.83	0.59
3:C:63:LYS:HE2	53:27:2060:A:OP2	2.02	0.59
5:E:102:ILE:HD11	5:E:116:LEU:HD11	1.83	0.59
8:H:7:TYR:HE1	8:H:59:THR:HG23	1.67	0.59
8:H:124:MET:O	8:H:128:ILE:HG12	2.02	0.59
14:N:7:ARG:CA	14:N:10:ARG:HH11	2.15	0.59
17:Q:35:PHE:HB2	17:Q:59:ILE:HB	1.83	0.59
34:8:21:LYS:CE	34:8:25:ARG:HB3	2.29	0.59
36:10:59:TYR:HE2	48:22:66:LEU:HD21	1.67	0.59
39:13:57:VAL:HG12	39:13:58:GLU:HG2	1.83	0.59
52:26:666:G:H2'	52:26:667:G:H8	1.66	0.59
52:26:1252:A:H2'	52:26:1253:G:O4'	2.02	0.59
53:27:1361:G:H2'	53:27:1362:C:C6	2.37	0.59
53:27:1579:A:H2'	53:27:1580:A:C8	2.38	0.59
53:27:2047:C:H2'	53:27:2048:G:C8	2.32	0.59
53:27:2812:G:H2'	53:27:2813:A:H8	1.67	0.59
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.59
1:A:15:VAL:HA	1:A:204:LEU:O	2.02	0.59
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.03	0.59
3:C:97:ASN:CG	53:27:606:U:H5"	2.28	0.59
10:J:33:ALA:HB1	10:J:37:ASP:OD2	2.02	0.59
24:X:6:LEU:HG	24:X:56:LEU:HD21	1.83	0.59
39:13:25:GLY:N	39:13:58:GLU:HA	2.17	0.59
39:13:91:GLU:C	39:13:93:LEU:N	2.61	0.59
41:15:14:GLN:HE22	41:15:77:GLY:N	2.00	0.59
52:26:96:U:H2'	52:26:97:G:H8	1.68	0.59
52:26:229:U:H2'	52:26:230:G:H8	1.63	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:955:U:H2'	52:26:956:U:H6	1.67	0.59
52:26:1163:A:H2'	52:26:1164:G:C8	2.38	0.59
52:26:1506:U:O2'	52:26:1507:A:H5'	2.02	0.59
53:27:1179:G:C2'	53:27:1180:U:H4'	2.32	0.59
53:27:1182:G:H2'	53:27:1183:U:O4'	2.03	0.59
53:27:2419:U:H2'	53:27:2420:C:C5	2.38	0.59
14:N:100:HIS:CD2	54:28:48:U:H4'	2.37	0.59
18:R:82:MET:HB3	18:R:84:ARG:NH2	2.17	0.59
34:8:1:ALA:HA	34:8:67:LEU:HD21	1.85	0.59
34:8:173:ASP:OD2	34:8:176:LYS:HB3	2.03	0.59
35:9:44:ARG:HA	35:9:72:ASN:HA	1.85	0.59
52:26:335:C:H2'	52:26:336:A:H8	1.67	0.59
52:26:672:U:H2'	52:26:673:A:C8	2.37	0.59
52:26:1390:U:H2'	52:26:1391:U:C6	2.37	0.59
53:27:1931:U:H2'	53:27:1932:A:C8	2.38	0.59
53:27:2544:G:H2'	53:27:2545:G:H8	1.68	0.59
53:27:2852:G:H2'	53:27:2853:C:C6	2.38	0.59
54:28:76:G:H2'	54:28:77:U:H6	1.66	0.59
54:28:87:U:H5"	54:28:88:C:OP2	2.02	0.59
3:C:88:ARG:HG3	3:C:89:PRO:HD2	1.84	0.59
5:E:53:PRO:HB3	5:E:64:ALA:HB2	1.84	0.59
13:M:32:GLU:HB3	13:M:115:LEU:HD11	1.85	0.59
14:N:111:ARG:NH1	53:27:2376:A:N3	2.50	0.59
20:T:66:VAL:C	20:T:68:ASN:H	2.10	0.59
26:Z:44:PHE:O	26:Z:47:LYS:HE2	2.03	0.59
27:1:2:VAL:HG22	27:1:3:GLN:O	2.01	0.59
33:7:5:HIS:CB	44:18:88:MET:HE3	2.32	0.59
34:8:8:LEU:HB3	52:26:430:A:OP1	2.02	0.59
46:20:44:SER:O	46:20:45:GLU:C	2.46	0.59
47:21:13:SER:O	47:21:20:ILE:HG13	2.02	0.59
52:26:67:C:H2'	52:26:68:G:C8	2.38	0.59
52:26:1354:U:H2'	52:26:1355:G:C8	2.37	0.59
53:27:728:G:C2	53:27:730:A:C4	2.90	0.59
53:27:1312:U:H4'	53:27:1313:U:O5'	2.03	0.59
53:27:1826:G:H2'	53:27:1827:U:C6	2.37	0.59
53:27:1981:A:H5"	53:27:1982:U:OP2	2.02	0.59
53:27:2694:G:H2'	53:27:2695:U:C6	2.38	0.59
54:28:28:C:H2'	54:28:29:A:C8	2.37	0.59
1:A:52:HIS:CD2	1:A:218:THR:HA	2.38	0.59
1:A:91:ALA:HB3	1:A:103:ILE:CD1	2.32	0.59
1:A:257:ARG:NH1	53:27:1799:G:OP1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:115:LEU:O	13:M:115:LEU:HD12	2.02	0.59
32:6:65:LYS:HE3	32:6:155:GLY:HA3	1.85	0.59
33:7:56:ILE:HG23	33:7:63:ILE:HD11	1.84	0.59
36:10:4:TYR:CE2	36:10:71:ILE:HG13	2.38	0.59
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.33	0.59
37:11:13:PRO:HA	37:11:20:GLU:HA	1.85	0.59
52:26:271:C:H2'	52:26:272:C:C6	2.38	0.59
52:26:1019:A:H2'	52:26:1020:G:O4'	2.01	0.59
53:27:522:A:H2'	53:27:523:C:C6	2.37	0.59
53:27:949:G:H2'	53:27:950:G:H8	1.68	0.59
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.59
4:D:107:VAL:HB	4:D:108:PRO:HD3	1.85	0.59
6:F:32:PRO:HB3	23:W:38:TRP:HB2	1.84	0.59
6:F:49:ALA:O	6:F:53:GLU:N	2.36	0.59
9:I:132:HIS:HD1	53:27:6:A:HO2'	1.51	0.59
14:N:15:ARG:NH1	54:28:9:G:OP2	2.35	0.59
33:7:185:THR:CG2	33:7:198:LYS:HG2	2.29	0.59
40:14:15:HIS:HB3	40:14:70:HIS:CD2	2.38	0.59
43:17:42:VAL:HG21	43:17:47:LEU:HD13	1.85	0.59
49:23:10:ILE:HD11	49:23:15:LEU:HB2	1.84	0.59
52:26:52:C:O2'	52:26:53:A:H5'	2.03	0.59
52:26:470:C:H2'	52:26:471:U:C6	2.38	0.59
52:26:666:G:H5'	52:26:726:C:H1'	1.85	0.59
53:27:185:G:H2'	53:27:186:G:C8	2.37	0.59
53:27:279:A:C2'	53:27:280:U:H5'	2.25	0.59
53:27:296:U:H2'	53:27:297:G:H8	1.68	0.59
53:27:500:G:N2	53:27:502:A:H3'	2.18	0.59
53:27:1059:G:H2'	53:27:1060:U:C6	2.38	0.59
53:27:1542:U:H2'	53:27:1543:G:O4'	2.02	0.59
53:27:2377:A:O2'	53:27:2378:A:H5'	2.03	0.59
59:33:639:GLU:O	59:33:643:GLU:HG3	2.03	0.59
59:33:703:THR:HG23	59:33:705:GLN:N	2.06	0.59
1:A:145:MET:HE2	1:A:181:ARG:HH21	1.68	0.58
9:I:15:TRP:CE2	9:I:135:GLN:HG2	2.38	0.58
12:L:12:MET:HA	53:27:910:A:H62	1.67	0.58
52:26:540:G:H2'	52:26:541:G:C8	2.38	0.58
52:26:981:U:H2'	52:26:982:U:C5	2.38	0.58
53:27:673:C:H2'	53:27:674:G:O4'	2.03	0.58
53:27:815:C:H2'	53:27:816:C:H6	1.68	0.58
53:27:1066:U:H2'	53:27:1068:G:OP2	2.03	0.58
53:27:2600:A:H2'	53:27:2601:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2655:G:H1'	53:27:2656:U:H5	1.68	0.58
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.58
1:A:43:ASN:HB3	1:A:49:THR:HG21	1.83	0.58
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.86	0.58
7:G:37:LYS:HA	7:G:40:GLU:HB2	1.84	0.58
8:H:15:GLY:HA2	8:H:45:THR:OG1	2.03	0.58
8:H:92:PRO:HG2	53:27:1076:C:O2	2.04	0.58
8:H:101:SER:HA	8:H:141:ASP:HA	1.86	0.58
9:I:132:HIS:ND1	53:27:6:A:O2'	2.36	0.58
11:K:132:ARG:NH2	11:K:142:ILE:HG21	2.18	0.58
12:L:53:MET:HE3	12:L:63:ILE:HD13	1.83	0.58
13:M:72:ASP:O	13:M:76:VAL:HG23	2.02	0.58
20:T:93:ARG:HB2	20:T:102:ILE:HD12	1.86	0.58
34:8:10:LEU:HD22	34:8:62:ARG:NH1	2.18	0.58
43:17:7:ASN:HD22	43:17:21:ILE:CG1	2.05	0.58
43:17:15:VAL:HG13	43:17:33:LEU:HD22	1.85	0.58
52:26:477:C:H2'	52:26:478:A:C8	2.37	0.58
52:26:529:G:H4'	52:26:533:A:C2	2.38	0.58
53:27:2194:U:H2'	53:27:2195:U:C6	2.38	0.58
53:27:2579:C:H2'	53:27:2580:U:O2	2.03	0.58
57:31:6:G:O2'	57:31:7:G:H5'	2.03	0.58
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.58
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.69	0.58
3:C:159:LEU:O	53:27:321:U:H4'	2.03	0.58
5:E:98:LYS:NZ	5:E:103:ASN:HB2	2.17	0.58
7:G:114:GLU:O	7:G:122:GLN:HB3	2.02	0.58
10:J:25:LEU:HD23	10:J:26:GLY:N	2.18	0.58
17:Q:38:VAL:CG1	17:Q:57:GLY:HA3	2.33	0.58
40:14:22:THR:HG21	40:14:39:PRO:HG3	1.83	0.58
47:21:43:LEU:HD21	52:26:236:A:H5"	1.85	0.58
52:26:197:A:C6	52:26:221:C:H4'	2.39	0.58
52:26:1057:G:H2'	52:26:1058:G:C8	2.39	0.58
52:26:1245:C:H2'	52:26:1246:A:H8	1.66	0.58
52:26:1338:G:H2'	52:26:1339:A:C8	2.39	0.58
53:27:611:C:H2'	53:27:612:G:O4'	2.03	0.58
53:27:779:U:H2'	53:27:780:G:C8	2.38	0.58
53:27:2112:G:H2'	53:27:2112:G:N3	2.17	0.58
53:27:2241:A:H2'	53:27:2242:G:H8	1.63	0.58
58:32:9:G:OP1	58:32:9:G:H4'	2.03	0.58
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.58
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1:MET:HG3	2:B:2:ILE:HG23	1.86	0.58
4:D:142:TYR:O	4:D:145:VAL:HG22	2.04	0.58
10:J:28:SER:O	10:J:30:ARG:N	2.37	0.58
11:K:75:ALA:H	11:K:105:ILE:HG23	1.68	0.58
11:K:89:VAL:HA	11:K:121:THR:HB	1.85	0.58
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.85	0.58
18:R:61:ASN:OD1	53:27:496:G:H1'	2.03	0.58
20:T:41:VAL:O	20:T:59:GLU:HA	2.04	0.58
31:5:23:ILE:HD11	53:27:1032:A:H1'	1.86	0.58
33:7:105:VAL:HG11	33:7:114:LEU:HD11	1.86	0.58
41:15:28:ASN:OD1	41:15:29:THR:N	2.36	0.58
44:18:57:SER:OG	52:26:1316:G:H4'	2.03	0.58
47:21:51:GLU:HG2	47:21:52:CYS:H	1.68	0.58
51:25:4:LYS:CE	51:25:6:ARG:HB2	2.31	0.58
52:26:538:G:H2'	52:26:539:A:C8	2.37	0.58
52:26:707:U:H2'	52:26:708:C:H6	1.68	0.58
53:27:144:A:H2'	53:27:145:C:C6	2.37	0.58
53:27:1096:A:C3'	53:27:1097:U:H5"	2.32	0.58
53:27:1464:G:H2'	53:27:1465:G:H8	1.67	0.58
53:27:2799:A:O2'	53:27:2800:A:H5'	2.03	0.58
56:30:54:U:C2'	56:30:55:U:H5"	2.33	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:79:ALA:O	59:33:82:PHE:CE1	2.56	0.58
2:B:146:ILE:CD1	53:27:2051:A:H4'	2.33	0.58
3:C:66:GLY:O	53:27:1255:U:N3	2.36	0.58
3:C:79:ARG:HH22	53:27:471:A:H5"	1.65	0.58
4:D:105:ILE:O	4:D:108:PRO:HD2	2.03	0.58
5:E:140:ILE:HD12	5:E:141:GLY:N	2.19	0.58
6:F:125:THR:OG1	6:F:148:ALA:HB2	2.03	0.58
8:H:125:THR:O	8:H:129:GLU:HG3	2.04	0.58
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.03	0.58
13:M:117:ASP:CG	13:M:118:ARG:N	2.61	0.58
14:N:17:LYS:HZ1	53:27:2380:C:H5"	1.67	0.58
19:S:50:LEU:HD23	24:X:26:PHE:CZ	2.38	0.58
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.68	0.58
33:7:176:THR:O	33:7:179:ALA:HB3	2.04	0.58
36:10:64:VAL:HG22	36:10:65:GLU:N	2.19	0.58
40:14:21:ALA:HA	40:14:24:GLU:CD	2.28	0.58
52:26:532:A:H3'	52:26:533:A:C5'	2.31	0.58
53:27:94:A:H2'	53:27:95:A:C8	2.38	0.58
53:27:693:A:H2'	53:27:694:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:894:U:H5'	59:33:643:GLU:OE2	2.03	0.58
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.58
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.58
2:B:1:MET:N	2:B:205:PRO:HG2	2.19	0.58
7:G:96:PHE:CE2	7:G:126:LEU:HB2	2.38	0.58
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.03	0.58
24:X:42:LEU:O	24:X:46:VAL:HG23	2.04	0.58
32:6:209:VAL:HA	32:6:212:TYR:HD2	1.67	0.58
34:8:29:THR:O	34:8:31:CYS:N	2.35	0.58
43:17:62:PHE:O	43:17:64:VAL:HG13	2.04	0.58
50:24:50:PHE:HA	50:24:53:MET:HG2	1.84	0.58
52:26:414:A:H2'	52:26:415:A:O4'	2.04	0.58
52:26:678:U:H2'	52:26:679:C:H6	1.69	0.58
52:26:1237:C:H4'	52:26:1334:G:N2	2.18	0.58
53:27:1562:U:H2'	53:27:1563:U:O4'	2.04	0.58
53:27:1646:C:H5"	53:27:1647:U:H5'	1.86	0.58
53:27:2628:C:H4'	53:27:2781:A:C5	2.38	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.58
10:J:104:THR:HG22	10:J:105:ARG:H	1.67	0.58
13:M:2:ARG:HH11	13:M:2:ARG:HG2	1.68	0.58
16:P:51:GLN:HE22	53:27:560:C:H4'	1.68	0.58
24:X:15:ASN:O	24:X:19:LEU:HG	2.04	0.58
28:2:47:ILE:HG22	28:2:48:TYR:N	2.18	0.58
33:7:96:VAL:HB	33:7:97:PRO:CD	2.33	0.58
34:8:169:TRP:NE1	34:8:185:PRO:HG3	2.19	0.58
39:13:91:GLU:C	39:13:93:LEU:H	2.10	0.58
40:14:45:ARG:HG3	40:14:47:GLU:OE1	2.04	0.58
52:26:693:G:H2'	52:26:694:A:O4'	2.03	0.58
52:26:900:A:H2'	52:26:901:A:C8	2.38	0.58
53:27:1188:U:H2'	53:27:1189:A:O4'	2.03	0.58
53:27:1882:U:H2'	53:27:1883:U:C6	2.39	0.58
56:30:43:C:O2'	56:30:44:G:H5'	2.04	0.58
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.58
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.58
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
3:C:175:ILE:O	3:C:177:PRO:HD3	2.04	0.58
21:U:78:GLN:O	21:U:87:GLN:HB3	2.03	0.58
34:8:53:GLN:HE22	35:9:111:ARG:NH2	2.02	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.32	0.58
35:9:65:LYS:HA	35:9:68:ARG:HG2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:5:ARG:CB	40:14:79:PRO:HD3	2.33	0.58
47:21:14:ASP:HB2	47:21:20:ILE:HD12	1.85	0.58
51:25:25:ALA:HB2	55:29:9:G:C4'	2.32	0.58
52:26:488:C:H2'	52:26:489:C:C6	2.39	0.58
52:26:545:C:H2'	52:26:546:A:O4'	2.03	0.58
52:26:920:U:H2'	52:26:921:U:H6	1.64	0.58
52:26:994:A:C8	52:26:1216:A:H4'	2.39	0.58
52:26:1237:C:H4'	52:26:1334:G:H21	1.69	0.58
52:26:1275:A:H2'	52:26:1276:G:O4'	2.04	0.58
52:26:1282:C:H2'	52:26:1283:U:C6	2.39	0.58
52:26:1366:C:H2'	52:26:1367:C:C6	2.39	0.58
53:27:2052:A:H2'	53:27:2053:G:H8	1.69	0.58
53:27:2147:A:H2'	53:27:2148:G:O4'	2.03	0.58
53:27:2189:U:H2'	53:27:2190:G:C8	2.37	0.58
53:27:2800:A:H3'	53:27:2801:G:C5'	2.29	0.58
54:28:2:G:H2'	54:28:3:C:C6	2.38	0.58
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.58
59:33:691:LYS:HE3	59:33:724:ARG:NH2	2.19	0.58
4:D:4:HIS:O	4:D:8:LYS:HG2	2.03	0.58
5:E:173:ALA:O	5:E:175:LYS:N	2.37	0.58
8:H:60:VAL:HA	8:H:66:PHE:CB	2.34	0.58
11:K:76:GLU:OE1	53:27:636:G:N1	2.36	0.58
14:N:14:ALA:O	14:N:18:LEU:HB2	2.04	0.58
16:P:57:ARG:HA	16:P:60:TRP:CE3	2.39	0.58
34:8:200:VAL:HG11	35:9:102:THR:HG22	1.85	0.58
35:9:153:ALA:O	35:9:158:LYS:HA	2.04	0.58
36:10:47:LEU:HB2	48:22:65:SER:OG	2.04	0.58
46:20:69:ASP:OD1	46:20:70:ARG:N	2.37	0.58
52:26:77:A:H5'	52:26:77:A:H8	1.68	0.58
52:26:556:C:C2'	52:26:557:G:H5'	2.33	0.58
52:26:570:G:H2'	52:26:571:U:C6	2.39	0.58
52:26:1352:C:H2'	52:26:1353:G:H8	1.69	0.58
53:27:250:G:H2'	53:27:251:A:O4'	2.03	0.58
53:27:281:C:H2'	53:27:282:A:C8	2.38	0.58
53:27:438:G:H2'	53:27:439:A:C8	2.38	0.58
53:27:646:U:H3'	53:27:647:G:C5'	2.33	0.58
53:27:657:U:H2'	53:27:658:U:C6	2.39	0.58
53:27:2178:C:H2'	53:27:2179:C:C6	2.39	0.58
53:27:2737:G:H2'	53:27:2738:A:C8	2.38	0.58
54:28:35:C:H2'	54:28:36:C:H5'	1.85	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:431:ILE:O	59:33:432:HIS:HB2	2.04	0.58
59:33:491:LYS:O	59:33:494:ALA:HB3	2.04	0.58
4:D:59:ILE:HG22	4:D:98:PHE:HE1	1.68	0.58
7:G:43:LYS:HE2	7:G:98:GLU:HB3	1.86	0.58
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.86	0.58
9:I:43:GLU:OE1	9:I:43:GLU:N	2.35	0.58
12:L:67:VAL:HG12	12:L:100:LYS:HZ1	1.68	0.58
24:X:9:LYS:NZ	24:X:10:SER:HB2	2.19	0.58
32:6:75:ALA:O	32:6:79:VAL:HG23	2.04	0.58
35:9:93:VAL:HG13	35:9:110:MET:HE2	1.84	0.58
35:9:100:GLU:C	35:9:102:THR:H	2.10	0.58
46:20:31:ARG:HG2	46:20:32:PHE:N	2.19	0.58
46:20:33:ILE:HD12	46:20:33:ILE:H	1.69	0.58
52:26:27:G:H2'	52:26:28:A:C8	2.39	0.58
52:26:160:A:H2'	52:26:161:A:O4'	2.04	0.58
52:26:214:C:H2'	52:26:215:C:H6	1.69	0.58
52:26:713:G:H2'	52:26:714:G:C8	2.39	0.58
52:26:825:A:H2'	52:26:826:C:H6	1.69	0.58
52:26:1079:G:H2'	52:26:1080:A:C8	2.38	0.58
52:26:1255:G:O2'	52:26:1258:G:H1'	2.04	0.58
52:26:1520:C:H2'	52:26:1521:C:C6	2.38	0.58
53:27:409:G:H2'	53:27:410:G:C8	2.39	0.58
53:27:669:G:N3	53:27:669:G:H2'	2.19	0.58
53:27:1484:U:H2'	53:27:1485:U:H6	1.69	0.58
53:27:1824:G:O2'	53:27:1825:U:H5'	2.04	0.58
53:27:2010:G:H2'	53:27:2011:U:C6	2.38	0.58
53:27:2503:A:H5'	53:27:2503:A:N3	2.19	0.58
53:27:2784:U:H2'	53:27:2785:C:C6	2.38	0.58
53:27:2840:C:H2'	53:27:2841:C:H6	1.69	0.58
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.58
59:33:635:ARG:HG2	59:33:636:ALA:H	1.67	0.58
4:D:97:GLU:HG2	26:Z:25:ARG:HB2	1.86	0.57
6:F:24:GLY:HA3	53:27:2092:U:H4'	1.86	0.57
6:F:83:LYS:HB2	6:F:91:PHE:HB2	1.86	0.57
10:J:44:LYS:O	10:J:54:LYS:HD3	2.04	0.57
13:M:100:CYS:O	27:1:41:HIS:HD2	1.86	0.57
16:P:49:ARG:NH2	17:Q:74:ILE:HD12	2.19	0.57
21:U:37:PRO:HG2	54:28:73:A:C2	2.38	0.57
23:W:2:ARG:HD2	23:W:29:LEU:HD22	1.86	0.57
34:8:16:THR:HG22	34:8:17:ASP:N	2.18	0.57
39:13:70:GLY:O	39:13:74:GLN:HG3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:43:LYS:NZ	42:16:44:PRO:HD3	2.19	0.57
52:26:552:U:H2'	52:26:553:A:H8	1.69	0.57
52:26:1448:C:H2'	52:26:1449:C:C6	2.39	0.57
52:26:1456:A:H2'	52:26:1457:G:O4'	2.04	0.57
53:27:1404:C:O2'	53:27:1405:U:H5'	2.04	0.57
53:27:1432:G:H2'	53:27:1433:A:C8	2.39	0.57
53:27:1463:C:H2'	53:27:1464:G:C8	2.39	0.57
53:27:1622:G:H2'	53:27:1623:G:H8	1.69	0.57
53:27:1651:G:C4	53:27:1652:A:C8	2.93	0.57
53:27:1652:A:H3'	53:27:1653:G:C8	2.39	0.57
53:27:1665:A:H2'	53:27:1666:G:O4'	2.03	0.57
53:27:2418:A:C2	53:27:2419:U:H1'	2.39	0.57
53:27:2794:C:O2	53:27:2794:C:H2'	2.02	0.57
1:A:178:GLY:O	1:A:270:ARG:HA	2.04	0.57
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.39	0.57
3:C:77:ILE:HG13	3:C:78:TRP:CD1	2.37	0.57
4:D:127:TYR:CE2	4:D:129:MET:HB3	2.38	0.57
5:E:101:VAL:HA	5:E:115:GLN:HA	1.86	0.57
7:G:61:ARG:NH2	53:27:1045:C:O2'	2.37	0.57
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.37	0.57
16:P:104:ALA:HB1	17:Q:40:MET:HE1	1.86	0.57
32:6:90:PHE:O	32:6:149:GLY:HA3	2.04	0.57
33:7:108:PRO:HA	33:7:114:LEU:HD12	1.85	0.57
33:7:191:THR:O	52:26:1206:G:O2'	2.20	0.57
49:23:54:ARG:HD3	52:26:958:A:C4	2.40	0.57
52:26:502:A:H2'	52:26:503:C:H6	1.65	0.57
52:26:986:U:H2'	52:26:987:G:C8	2.39	0.57
52:26:1441:A:H2'	52:26:1441:A:N3	2.18	0.57
53:27:478:A:N1	53:27:500:G:H4'	2.19	0.57
53:27:893:C:O2'	59:33:643:GLU:CD	2.47	0.57
53:27:1550:C:H2'	53:27:1551:A:H8	1.69	0.57
53:27:1657:U:H2'	53:27:1658:C:H6	1.69	0.57
53:27:2086:U:H2'	53:27:2087:G:H8	1.67	0.57
53:27:2171:A:C2'	53:27:2172:U:H5'	2.34	0.57
53:27:2248:C:H3'	53:27:2249:U:H6	1.69	0.57
53:27:2547:A:H2'	53:27:2548:U:H6	1.67	0.57
56:30:27:G:H2'	56:30:28:G:C8	2.39	0.57
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:408:VAL:HG13	59:33:409:PHE:H	1.69	0.57
59:33:687:LEU:HA	59:33:690:GLU:CD	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:48:PRO:HB2	10:J:49:ARG:HH11	1.68	0.57
13:M:29:VAL:HG12	13:M:78:LYS:HG2	1.86	0.57
21:U:43:ASP:OD2	21:U:46:LYS:HD3	2.04	0.57
38:12:8:ASP:HA	38:12:11:THR:HG22	1.86	0.57
39:13:118:ARG:NH2	52:26:1234:C:OP1	2.34	0.57
41:15:108:ASN:HA	51:25:4:LYS:NZ	2.18	0.57
42:16:4:ASN:ND2	52:26:880:C:OP1	2.38	0.57
43:17:7:ASN:ND2	43:17:21:ILE:N	2.52	0.57
43:17:54:THR:HA	43:17:57:ASP:HB3	1.86	0.57
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.68	0.57
49:23:21:ALA:HA	49:23:27:LYS:NZ	2.19	0.57
52:26:1136:C:H5”	52:26:1137:C:OP2	2.03	0.57
53:27:133:U:H2’	53:27:134:G:C8	2.39	0.57
53:27:488:G:N2	53:27:491:G:H5”	2.19	0.57
53:27:873:C:OP1	59:33:704:LYS:HE2	2.05	0.57
53:27:1055:G:H2’	53:27:1056:G:O4’	2.05	0.57
53:27:1081:U:H2’	53:27:1082:U:C6	2.39	0.57
53:27:1670:C:H2’	53:27:1671:U:O4’	2.04	0.57
53:27:1676:A:H2’	53:27:1677:A:C8	2.40	0.57
57:31:24:U:H2’	57:31:25:C:C6	2.39	0.57
59:33:294:GLY:O	59:33:298:THR:HG23	2.03	0.57
4:D:139:GLU:N	4:D:139:GLU:OE1	2.37	0.57
8:H:18:ASN:H	8:H:37:PHE:HE2	1.49	0.57
32:6:49:PHE:O	32:6:52:ALA:HB3	2.03	0.57
35:9:33:THR:HA	35:9:50:GLY:O	2.04	0.57
36:10:7:VAL:HG22	36:10:61:LEU:HG	1.85	0.57
51:25:23:GLU:HG3	51:25:24:LYS:N	2.16	0.57
52:26:24:U:H2’	52:26:25:C:C6	2.39	0.57
52:26:85:U:H5”	52:26:86:G:H5’	1.86	0.57
52:26:358:U:H2’	52:26:359:G:H8	1.70	0.57
52:26:680:C:H2’	52:26:681:A:C8	2.39	0.57
52:26:892:A:H2’	52:26:893:C:C6	2.40	0.57
52:26:1326:U:H2’	52:26:1327:C:C6	2.39	0.57
53:27:22:C:C3’	53:27:23:G:H5”	2.34	0.57
53:27:227:A:C2	53:27:2407:A:H1’	2.39	0.57
53:27:262:A:H2’	53:27:263:G:O4’	2.05	0.57
53:27:963:U:H2’	53:27:964:C:C6	2.38	0.57
57:31:28:C:H2’	57:31:29:G:H8	1.70	0.57
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.57
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.57
59:33:267:ASN:HD22	59:33:267:ASN:N	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:28:SER:C	10:J:30:ARG:H	2.11	0.57
13:M:32:GLU:O	13:M:114:GLU:HG3	2.03	0.57
24:X:48:ARG:NH2	53:27:75:G:H4'	2.19	0.57
32:6:18:GLN:O	32:6:37:VAL:HG23	2.04	0.57
34:8:12:ARG:HD2	34:8:37:PRO:HA	1.85	0.57
36:10:51:ILE:HG21	36:10:86:ARG:HH12	1.70	0.57
37:11:136:LYS:O	37:11:140:VAL:HG23	2.03	0.57
53:27:681:G:H2'	53:27:682:G:O4'	2.04	0.57
53:27:2009:A:H2'	53:27:2010:G:H8	1.70	0.57
53:27:2292:U:H2'	53:27:2293:G:H8	1.70	0.57
53:27:2524:G:H3'	53:27:2525:G:H5"	1.85	0.57
53:27:2805:C:H2'	53:27:2806:C:C6	2.39	0.57
53:27:2821:A:O2'	53:27:2822:G:H5'	2.05	0.57
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.57
1:A:153:LEU:HD23	53:27:1799:G:H21	1.69	0.57
3:C:29:HIS:CE1	11:K:8:PRO:HD3	2.39	0.57
3:C:163:ASN:HB2	53:27:322:A:OP2	2.04	0.57
4:D:155:ILE:HD12	4:D:155:ILE:N	2.19	0.57
9:I:58:ASN:ND2	9:I:128:ASN:HB2	2.20	0.57
10:J:40:LYS:HE3	10:J:57:VAL:HG12	1.86	0.57
17:Q:74:ILE:CG2	17:Q:87:GLN:HB3	2.35	0.57
21:U:9:ARG:HH12	21:U:12:GLN:HA	1.69	0.57
52:26:59:A:H1'	52:26:354:G:C2	2.39	0.57
52:26:767:A:H2'	52:26:768:A:H8	1.70	0.57
53:27:546:U:H5'	53:27:547:A:OP2	2.04	0.57
53:27:689:A:H2'	53:27:690:G:H8	1.67	0.57
53:27:736:C:H2'	53:27:737:C:H6	1.69	0.57
53:27:852:U:H2'	53:27:853:C:C6	2.39	0.57
53:27:914:G:H5'	53:27:915:C:OP2	2.03	0.57
53:27:1792:G:H2'	53:27:1793:C:H6	1.68	0.57
53:27:1979:U:O2'	53:27:1980:G:H5'	2.05	0.57
53:27:2123:G:H21	53:27:2176:A:H61	1.52	0.57
53:27:2170:A:H2'	53:27:2171:A:C4'	2.35	0.57
53:27:2671:G:H2'	53:27:2672:U:H6	1.68	0.57
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.57
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.35	0.57
59:33:443:LYS:HB3	59:33:446:GLY:O	2.04	0.57
4:D:105:ILE:C	4:D:108:PRO:HD2	2.30	0.57
4:D:134:GLN:OE1	4:D:134:GLN:N	2.34	0.57
7:G:117:LEU:HB2	7:G:122:GLN:HE21	1.70	0.57
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:4:PRO:HB3	12:L:68:PHE:CE2	2.40	0.57
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.70	0.57
23:W:18:SER:HB2	53:27:2080:A:H4'	1.85	0.57
28:2:47:ILE:HD12	28:2:47:ILE:H	1.69	0.57
41:15:125:LYS:HD2	52:26:797:C:OP1	2.03	0.57
45:19:73:ASP:HB3	45:19:76:ARG:HH21	1.70	0.57
52:26:520:A:H3'	52:26:521:G:H5"	1.87	0.57
52:26:609:A:H2'	52:26:610:U:O4'	2.04	0.57
52:26:741:G:H2'	52:26:742:G:C8	2.40	0.57
52:26:1515:G:H2'	52:26:1516:G:H8	1.70	0.57
53:27:234:U:H2'	53:27:235:U:C6	2.40	0.57
53:27:647:G:H2'	53:27:648:G:O4'	2.04	0.57
53:27:783:A:H2'	53:27:784:G:C5'	2.35	0.57
53:27:962:G:O2'	53:27:963:U:H5'	2.04	0.57
53:27:1499:C:H2'	53:27:1500:G:H8	1.69	0.57
53:27:1609:A:H1'	53:27:1616:A:H1'	1.86	0.57
53:27:2074:U:H1'	53:27:2598:A:N3	2.20	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.69	0.57
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.57
3:C:29:HIS:CD2	11:K:8:PRO:HD3	2.40	0.57
11:K:111:ILE:HD11	53:27:636:G:C2	2.39	0.57
17:Q:56:GLY:O	17:Q:58:VAL:N	2.35	0.57
19:S:2:ILE:HG12	53:27:144:A:H5"	1.87	0.57
21:U:10:LYS:HG3	21:U:11:GLU:N	2.17	0.57
27:1:6:LYS:HZ1	53:27:1262:A:H1'	1.69	0.57
32:6:112:ARG:HH22	32:6:136:ARG:HH12	1.53	0.57
34:8:56:GLU:HG2	34:8:198:LEU:HB2	1.86	0.57
52:26:123:U:H2'	52:26:124:C:C6	2.39	0.57
52:26:728:A:H2'	52:26:729:A:C8	2.40	0.57
53:27:1998:A:H2'	53:27:1999:C:C6	2.40	0.57
54:28:53:A:H2'	54:28:54:G:H5'	1.87	0.57
56:30:10:G:H2'	56:30:11:C:H6	1.69	0.57
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.57
59:33:596:ARG:HH11	59:33:665:TYR:HE2	1.53	0.57
6:F:67:ALA:HB2	6:F:138:VAL:HG21	1.87	0.57
6:F:82:SER:O	6:F:83:LYS:HG3	2.05	0.57
25:Y:23:LEU:HD11	25:Y:53:MET:HE1	1.86	0.57
33:7:175:HIS:ND1	52:26:1108:G:H5'	2.20	0.57
39:13:105:ARG:HG2	52:26:1117:A:O2'	2.05	0.57
42:16:38:THR:HG22	42:16:50:LYS:HA	1.87	0.57
42:16:47:ALA:CB	52:26:529:G:H22	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1033:G:H2'	52:26:1034:G:C4'	2.31	0.57
52:26:1401:G:H5'	52:26:1401:G:H8	1.70	0.57
53:27:729:G:H2'	53:27:1775:U:H1'	1.86	0.57
53:27:1073:A:H3'	53:27:1074:G:C8	2.40	0.57
53:27:2194:U:H2'	53:27:2195:U:H6	1.70	0.57
53:27:2793:C:H2'	53:27:2794:C:H6	1.70	0.57
53:27:2868:A:H3'	53:27:2869:G:H8	1.70	0.57
56:30:66:U:H2'	56:30:67:C:C6	2.39	0.57
58:32:46:A:H2'	58:32:47:U:C5'	2.35	0.57
59:33:408:VAL:HG13	59:33:459:ASP:O	2.05	0.57
59:33:674:ASN:ND2	59:33:736:ILE:HG21	2.20	0.57
1:A:254:LYS:O	53:27:1797:G:H4'	2.05	0.57
3:C:16:GLU:O	3:C:20:GLY:N	2.38	0.57
7:G:64:VAL:O	7:G:68:PRO:HD3	2.05	0.57
7:G:117:LEU:O	7:G:117:LEU:HD23	2.05	0.57
12:L:19:GLY:C	12:L:20:LEU:HD12	2.29	0.57
14:N:22:GLY:O	14:N:42:PRO:HG3	2.05	0.57
15:O:38:ARG:HH21	15:O:38:ARG:HG3	1.69	0.57
29:3:27:GLY:O	29:3:30:VAL:HB	2.05	0.57
34:8:124:VAL:HG23	34:8:142:VAL:HB	1.85	0.57
35:9:149:PRO:HG2	35:9:150:GLU:OE1	2.05	0.57
52:26:81:A:H62	52:26:86:G:N2	2.02	0.57
52:26:283:U:H2'	52:26:284:C:C6	2.40	0.57
52:26:572:A:N3	52:26:917:G:H1'	2.20	0.57
52:26:1132:C:C2'	52:26:1133:G:H5"	2.30	0.57
52:26:1296:C:H4'	52:26:1302:C:N4	2.20	0.57
52:26:1323:G:H2'	52:26:1324:A:C8	2.40	0.57
52:26:1460:C:H2'	52:26:1461:G:C8	2.40	0.57
52:26:1490:U:H2'	52:26:1491:G:O4'	2.03	0.57
53:27:190:A:H3'	53:27:191:A:H8	1.69	0.57
53:27:990:A:H1'	53:27:1156:A:N3	2.20	0.57
53:27:997:G:O2'	53:27:998:C:H5'	2.05	0.57
53:27:1153:C:H2'	53:27:1154:G:O4'	2.04	0.57
53:27:1165:A:H2'	53:27:1166:G:C8	2.40	0.57
53:27:1287:A:H3'	53:27:1288:G:N2	2.19	0.57
53:27:1509:A:H2'	53:27:1510:G:C8	2.40	0.57
53:27:1590:A:H2'	53:27:1591:A:H8	1.68	0.57
53:27:1854:A:H61	53:27:1888:G:H1'	1.70	0.57
53:27:2262:U:H2'	53:27:2263:C:H6	1.67	0.57
53:27:2452:C:C2	53:27:2504:U:O4	2.58	0.57
59:33:613:CYS:O	59:33:614:GLN:C	2.47	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:48:ALA:HB3	7:G:51:TYR:CD2	2.38	0.56
32:6:165:ALA:O	32:6:169:HIS:HB3	2.05	0.56
40:14:41:PRO:O	40:14:42:LEU:HB2	2.04	0.56
44:18:5:MET:HE2	52:26:982:U:C5'	2.35	0.56
52:26:18:C:H2'	52:26:19:A:C5'	2.31	0.56
52:26:532:A:H4'	52:26:533:A:OP2	2.04	0.56
53:27:826:U:H5"	53:27:2428:G:O3'	2.05	0.56
53:27:1593:A:H2'	53:27:1594:U:C6	2.40	0.56
53:27:1766:G:C6	53:27:1987:A:C6	2.92	0.56
53:27:2026:U:H2'	53:27:2027:G:C8	2.40	0.56
53:27:2216:G:H2'	53:27:2217:G:C8	2.40	0.56
54:28:49:C:H2'	54:28:50:A:C8	2.41	0.56
57:31:21:A:H2'	57:31:46:G:H1	1.70	0.56
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.56
59:33:466:GLN:HG2	59:33:467:LYS:HG2	1.87	0.56
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.34	0.56
28:2:22:THR:HG23	53:27:2286:G:O6	2.05	0.56
36:10:91:ARG:HG2	36:10:92:THR:N	2.20	0.56
38:12:94:VAL:HB	38:12:99:GLY:O	2.05	0.56
41:15:20:ALA:N	41:15:82:GLU:O	2.38	0.56
42:16:113:ARG:CG	42:16:118:VAL:HB	2.35	0.56
44:18:1:ALA:HB1	52:26:1049:U:H5	1.70	0.56
52:26:49:U:O2'	52:26:50:A:H2'	2.05	0.56
52:26:219:U:H2'	52:26:220:G:H8	1.69	0.56
52:26:233:C:H2'	52:26:234:C:C6	2.41	0.56
52:26:564:C:H2'	52:26:565:U:O4'	2.05	0.56
52:26:679:C:H2'	52:26:680:C:C6	2.40	0.56
52:26:846:G:H2'	52:26:847:G:C8	2.40	0.56
53:27:269:C:H2'	53:27:270:A:C8	2.40	0.56
53:27:942:G:H2'	53:27:943:A:H8	1.69	0.56
53:27:1216:G:H2'	53:27:1217:U:O4'	2.05	0.56
53:27:1506:U:H2'	53:27:1507:C:C6	2.41	0.56
53:27:1697:G:H3'	53:27:1698:A:C5'	2.35	0.56
53:27:2099:U:C2'	53:27:2100:G:H5"	2.35	0.56
53:27:2134:A:H1'	53:27:2158:A:H1'	1.86	0.56
53:27:2220:U:H2'	53:27:2221:G:C8	2.40	0.56
53:27:2504:U:C2'	53:27:2505:G:H3'	2.34	0.56
53:27:2626:C:H2'	53:27:2627:G:C8	2.39	0.56
53:27:2799:A:H2'	53:27:2800:A:H5'	1.87	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.56
59:33:672:VAL:HG22	59:33:709:THR:HG22	1.87	0.56
2:B:116:LYS:CD	13:M:1:MET:HE1	2.35	0.56
3:C:57:LYS:HG2	3:C:59:PRO:CG	2.34	0.56
4:D:110:ILE:O	4:D:113:PHE:HB2	2.05	0.56
7:G:87:GLU:HG3	7:G:92:ALA:H	1.70	0.56
8:H:123:ALA:CB	53:27:1081:U:H5"	2.20	0.56
12:L:14:LYS:NZ	53:27:958:U:OP2	2.38	0.56
15:O:13:LYS:HD3	15:O:76:HIS:HA	1.87	0.56
16:P:2:ARG:HB2	53:27:1248:G:C8	2.39	0.56
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.86	0.56
26:Z:16:CYS:SG	26:Z:20:ASN:N	2.78	0.56
31:5:7:VAL:HG22	31:5:38:GLY:HA2	1.87	0.56
31:5:38:GLY:OXT	53:27:1124:G:H1'	2.03	0.56
34:8:18:LEU:HB2	34:8:20:LEU:HG	1.87	0.56
36:10:52:ASN:O	36:10:53:LYS:HB2	2.04	0.56
38:12:6:ILE:HG21	38:12:31:LEU:HD11	1.87	0.56
39:13:32:ARG:HD2	39:13:37:TYR:CD1	2.38	0.56
39:13:70:GLY:HA3	52:26:1371:G:O3'	2.04	0.56
40:14:53:ILE:HG22	40:14:61:ALA:O	2.04	0.56
43:17:15:VAL:O	43:17:19:THR:HG23	2.04	0.56
48:22:70:THR:HG22	48:22:73:HIS:CE1	2.40	0.56
50:24:55:PRO:HB3	52:26:193:C:H4'	1.87	0.56
52:26:257:G:H2'	52:26:258:G:H8	1.69	0.56
52:26:405:U:C3'	52:26:406:G:H5'	2.31	0.56
52:26:1220:G:H2'	52:26:1221:G:H8	1.70	0.56
52:26:1261:A:H3'	52:26:1262:C:H6	1.70	0.56
52:26:1342:C:H2'	52:26:1343:G:H8	1.71	0.56
52:26:1370:G:O2'	52:26:1371:G:H5'	2.05	0.56
53:27:449:A:H2'	53:27:450:G:O4'	2.05	0.56
53:27:662:G:H2'	53:27:663:G:H8	1.70	0.56
53:27:693:A:H2'	53:27:694:U:O4'	2.06	0.56
53:27:1435:G:O2'	53:27:1436:G:H5'	2.06	0.56
53:27:2061:G:H5"	53:27:2503:A:C4	2.39	0.56
53:27:2693:G:H2'	53:27:2694:G:C8	2.40	0.56
53:27:2772:C:H2'	53:27:2773:C:C6	2.41	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
59:33:612:CYS:HG	59:33:634:HIS:HE2	1.48	0.56
3:C:105:LEU:HD21	3:C:177:PRO:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:148:ILE:HD13	3:C:187:VAL:HG11	1.86	0.56
7:G:113:PHE:O	7:G:123:ILE:HA	2.06	0.56
12:L:75:GLU:CD	53:27:957:C:H5'	2.31	0.56
15:O:17:PRO:HG3	15:O:83:ILE:O	2.04	0.56
19:S:14:PRO:HA	19:S:32:LEU:HB3	1.85	0.56
31:5:30:GLU:OE2	31:5:32:LYS:HD3	2.05	0.56
36:10:10:VAL:HA	36:10:83:ALA:O	2.05	0.56
36:10:25:TYR:O	36:10:29:ILE:HG13	2.06	0.56
41:15:95:THR:HG23	41:15:96:ILE:N	2.21	0.56
42:16:107:LYS:O	42:16:108:ASP:CB	2.53	0.56
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.88	0.56
48:22:14:ALA:HA	48:22:50:TYR:HE2	1.71	0.56
50:24:20:ASN:OD1	50:24:65:LEU:HD13	2.04	0.56
52:26:408:A:H2'	52:26:409:U:C6	2.40	0.56
52:26:1006:G:H2'	52:26:1007:U:C6	2.41	0.56
52:26:1033:G:H3'	52:26:1034:G:H4'	1.87	0.56
52:26:1113:C:H2'	52:26:1114:C:H6	1.69	0.56
52:26:1512:U:H2'	52:26:1513:A:H8	1.68	0.56
53:27:464:U:O2'	53:27:465:G:H5'	2.06	0.56
53:27:1052:C:H2'	53:27:1053:C:H5'	1.88	0.56
53:27:1515:A:H2'	53:27:1516:G:O4'	2.05	0.56
53:27:1571:A:H2'	53:27:1572:A:C8	2.40	0.56
53:27:1655:A:H2'	53:27:1656:C:O4'	2.06	0.56
53:27:2031:A:H3'	53:27:2031:A:OP2	2.04	0.56
53:27:2730:C:H2'	53:27:2731:G:H8	1.69	0.56
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.36	0.56
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.56
1:A:226:PRO:HG3	1:A:233:GLY:CA	2.35	0.56
2:B:62:LYS:HB2	2:B:63:PRO:HD3	1.87	0.56
5:E:93:TYR:CD1	5:E:106:LEU:HA	2.41	0.56
6:F:49:ALA:HA	6:F:52:ALA:HB3	1.87	0.56
11:K:77:ILE:HG13	11:K:110:VAL:HA	1.86	0.56
12:L:95:LEU:O	12:L:96:ILE:HD13	2.06	0.56
14:N:53:THR:O	14:N:59:ALA:HB2	2.05	0.56
29:3:34:ARG:CZ	29:3:39:ARG:HD2	2.35	0.56
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.19	0.56
32:6:104:LYS:HZ1	52:26:1073:U:H4'	1.70	0.56
37:11:21:LEU:C	37:11:21:LEU:HD23	2.31	0.56
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.86	0.56
39:13:17:ARG:HB2	39:13:65:THR:OG1	2.05	0.56
39:13:25:GLY:HA3	39:13:57:VAL:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:67:ILE:HG22	44:18:95:LEU:HA	1.87	0.56
45:19:49:HIS:O	45:19:52:ARG:HB3	2.06	0.56
52:26:34:C:H2'	52:26:35:G:H8	1.69	0.56
52:26:223:A:H2'	52:26:224:U:H6	1.70	0.56
52:26:483:C:H2'	52:26:484:G:C8	2.41	0.56
52:26:1230:C:H5'	57:31:30:G:H5"	1.87	0.56
52:26:1507:A:H2'	52:26:1508:A:H8	1.68	0.56
53:27:639:U:H2'	53:27:640:C:C6	2.41	0.56
53:27:778:G:H3'	53:27:779:U:H6	1.71	0.56
53:27:1565:C:O2'	53:27:1566:A:H2'	2.06	0.56
53:27:1873:G:O2'	53:27:1874:C:H5'	2.05	0.56
53:27:2322:A:H2'	53:27:2323:G:O4'	2.05	0.56
53:27:2692:G:H2'	53:27:2693:G:C8	2.41	0.56
53:27:2817:U:H3'	53:27:2818:U:H5"	1.86	0.56
1:A:52:HIS:NE2	1:A:218:THR:HA	2.20	0.56
6:F:78:VAL:HG12	6:F:79:THR:N	2.21	0.56
7:G:29:ASP:C	7:G:81:LEU:HD23	2.30	0.56
10:J:64:ARG:O	10:J:82:ASN:HA	2.05	0.56
18:R:46:LEU:O	18:R:50:VAL:HG23	2.06	0.56
34:8:125:ASN:HD22	34:8:141:VAL:CG2	2.19	0.56
38:12:10:LEU:HD22	38:12:74:ILE:HD11	1.87	0.56
43:17:10:ASP:OD1	43:17:45:SER:N	2.39	0.56
52:26:1225:A:H5'	52:26:1226:C:OP2	2.05	0.56
53:27:531:C:C5	53:27:2035:G:C2	2.93	0.56
53:27:706:A:H2'	53:27:707:G:O4'	2.05	0.56
53:27:741:U:H2'	53:27:742:A:H8	1.70	0.56
53:27:1062:G:OP1	53:27:1070:A:H4'	2.06	0.56
53:27:1127:A:C2'	53:27:1128:G:H5"	2.35	0.56
53:27:2124:G:C5	53:27:2125:G:H1'	2.40	0.56
53:27:2573:C:H5"	53:27:2574:G:H5"	1.87	0.56
59:33:622:VAL:HG12	59:33:652:ILE:HG22	1.86	0.56
3:C:148:ILE:HD13	3:C:187:VAL:CG1	2.36	0.56
4:D:134:GLN:HE22	4:D:148:VAL:HA	1.71	0.56
7:G:28:ALA:CA	7:G:81:LEU:HB3	2.36	0.56
11:K:78:ARG:NH1	53:27:626:A:H2'	2.19	0.56
13:M:49:GLU:OE2	13:M:95:THR:HG22	2.05	0.56
17:Q:34:GLU:OE1	17:Q:34:GLU:N	2.38	0.56
18:R:8:ARG:HG3	18:R:102:HIS:ND1	2.20	0.56
21:U:9:ARG:HH12	21:U:12:GLN:CB	2.19	0.56
21:U:26:PHE:HE1	21:U:89:ILE:HG13	1.70	0.56
32:6:70:GLY:HA3	32:6:79:VAL:HG21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:209:VAL:HA	32:6:212:TYR:HB2	1.88	0.56
50:24:28:ARG:O	50:24:32:LYS:HG2	2.06	0.56
52:26:1034:G:N3	52:26:1034:G:H2'	2.20	0.56
52:26:1241:G:H2'	52:26:1242:G:C8	2.37	0.56
53:27:145:C:H2'	53:27:146:A:C8	2.40	0.56
53:27:775:G:C5	53:27:794:A:C8	2.94	0.56
53:27:878:A:H5'	53:27:879:G:OP2	2.06	0.56
53:27:1326:U:O2'	53:27:1327:A:H5'	2.05	0.56
53:27:1810:A:H2'	53:27:1811:G:O4'	2.06	0.56
4:D:3:LEU:N	4:D:100:GLU:OE2	2.36	0.56
16:P:75:TYR:O	16:P:78:PHE:HB3	2.06	0.56
19:S:91:GLN:H	19:S:91:GLN:CD	2.14	0.56
32:6:102:ASN:O	32:6:106:VAL:HG23	2.05	0.56
34:8:72:ARG:O	34:8:75:TYR:HB3	2.05	0.56
36:10:67:PRO:HB2	36:10:69:GLU:OE1	2.05	0.56
45:19:48:ASP:OD1	52:26:667:G:N3	2.39	0.56
52:26:152:A:H3'	52:26:153:C:H6	1.71	0.56
52:26:246:A:O2'	52:26:247:G:O5'	2.08	0.56
52:26:584:G:H2'	52:26:585:G:H8	1.70	0.56
52:26:1057:G:H2'	52:26:1058:G:H8	1.71	0.56
53:27:142:A:H2'	53:27:143:C:H6	1.71	0.56
53:27:172:A:H2'	53:27:173:A:H8	1.71	0.56
59:33:113:MET:SD	59:33:142:MET:HE1	2.46	0.56
59:33:678:GLY:O	59:33:682:ASP:N	2.38	0.56
1:A:117:SER:O	1:A:121:ALA:HB2	2.06	0.56
7:G:27:VAL:HG23	7:G:111:ALA:HB3	1.88	0.56
8:H:122:GLU:O	8:H:125:THR:HB	2.06	0.56
9:I:105:VAL:HG11	9:I:122:LEU:HD13	1.87	0.56
18:R:8:ARG:HG2	18:R:9:HIS:ND1	2.21	0.56
27:1:27:LEU:HD21	27:1:36:LYS:HB3	1.88	0.56
32:6:112:ARG:HH22	32:6:136:ARG:NH1	2.04	0.56
34:8:8:LEU:HD21	34:8:31:CYS:HB2	1.86	0.56
36:10:19:PRO:HA	36:10:22:ILE:HD12	1.88	0.56
39:13:9:GLY:HA2	39:13:80:HIS:ND1	2.21	0.56
39:13:10:ARG:HG3	39:13:10:ARG:O	2.06	0.56
42:16:121:PRO:O	42:16:123:ALA:N	2.39	0.56
45:19:88:ARG:NE	53:27:714:U:OP2	2.39	0.56
46:20:13:LYS:N	46:20:13:LYS:HD2	2.21	0.56
52:26:579:A:O2'	52:26:580:C:H5'	2.05	0.56
53:27:1702:G:C3'	53:27:1703:G:H5"	2.36	0.56
53:27:1760:C:H2'	53:27:1761:C:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2095:A:H2'	53:27:2096:C:C6	2.41	0.56
53:27:2643:G:C4	53:27:2644:G:C8	2.94	0.56
53:27:2650:U:H2'	53:27:2651:C:H6	1.67	0.56
53:27:2837:A:H2'	53:27:2838:G:C8	2.41	0.56
54:28:91:C:H2'	54:28:92:C:H6	1.70	0.56
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
5:E:88:LEU:HD23	5:E:93:TYR:HB3	1.87	0.56
6:F:47:PHE:O	6:F:49:ALA:N	2.39	0.56
19:S:8:LEU:HD13	24:X:21:LEU:CB	2.35	0.56
40:14:42:LEU:CD1	40:14:71:LEU:HD11	2.36	0.56
52:26:106:C:O2	52:26:379:C:H4'	2.05	0.56
52:26:1457:G:O2'	52:26:1458:G:H5'	2.06	0.56
53:27:220:G:N2	53:27:427:U:H2'	2.20	0.56
53:27:248:G:H3'	53:27:249:C:C5'	2.35	0.56
53:27:520:G:H2'	53:27:521:U:C6	2.41	0.56
53:27:1152:C:H2'	53:27:1153:C:C6	2.38	0.56
53:27:1352:U:O2'	53:27:1353:A:H5'	2.06	0.56
53:27:1881:C:H2'	53:27:1882:U:O4'	2.06	0.56
53:27:1995:U:H2'	53:27:1996:C:C6	2.41	0.56
53:27:2649:C:H2'	53:27:2650:U:H6	1.70	0.56
3:C:57:LYS:CE	3:C:73:ILE:HG21	2.34	0.55
4:D:80:GLN:NE2	4:D:81:GLY:H	2.04	0.55
12:L:97:GLN:OE1	12:L:97:GLN:N	2.38	0.55
26:Z:44:PHE:C	26:Z:47:LYS:HE2	2.31	0.55
28:2:36:LYS:HD3	53:27:2344:U:OP1	2.05	0.55
41:15:63:GLN:HG3	41:15:98:ALA:HB2	1.87	0.55
52:26:697:U:H2'	52:26:698:G:H5'	1.88	0.55
52:26:922:G:H3'	52:26:923:A:C8	2.41	0.55
52:26:927:G:H4'	52:26:1503:A:N7	2.21	0.55
53:27:218:A:H2	53:27:235:U:H4'	1.70	0.55
53:27:898:C:H2'	53:27:899:A:O4'	2.05	0.55
53:27:1410:G:H2'	53:27:1411:U:C6	2.40	0.55
53:27:1423:G:N2	53:27:1576:U:H1'	2.21	0.55
53:27:1451:C:H4'	53:27:1452:G:C8	2.41	0.55
53:27:1922:G:H2'	53:27:1923:U:C6	2.41	0.55
53:27:2368:C:H2'	53:27:2369:A:C8	2.41	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.87	0.55
59:33:634:HIS:HE2	59:33:640:GLN:HB2	1.71	0.55
2:B:13:ARG:HG2	15:O:55:HIS:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:51:TYR:HE1	7:G:95:LEU:HD22	1.71	0.55
8:H:7:TYR:CE1	8:H:59:THR:HA	2.41	0.55
8:H:78:LEU:CD1	8:H:108:ILE:HG23	2.35	0.55
12:L:21:ALA:H	12:L:97:GLN:HB2	1.71	0.55
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.55
44:18:20:PHE:O	44:18:21:ALA:HB3	2.06	0.55
47:21:30:HIS:CE1	47:21:31:PRO:HD2	2.41	0.55
52:26:368:U:N3	59:33:448:ILE:HG22	2.21	0.55
52:26:1283:U:H2'	52:26:1284:C:C6	2.41	0.55
53:27:2:G:H2'	53:27:3:U:C6	2.41	0.55
53:27:395:U:H2'	53:27:396:G:N7	2.20	0.55
53:27:557:C:H2'	53:27:558:U:H6	1.72	0.55
53:27:1485:U:H2'	53:27:1486:U:H6	1.69	0.55
53:27:1992:G:H4'	53:27:1993:U:C5'	2.35	0.55
53:27:2016:U:H2'	53:27:2017:U:C6	2.41	0.55
53:27:2039:U:H2'	53:27:2040:G:H8	1.70	0.55
53:27:2333:A:O4'	53:27:2335:A:H1'	2.05	0.55
54:28:60:C:H2'	54:28:61:G:C8	2.42	0.55
58:32:30:G:H3'	58:32:31:G:H8	1.70	0.55
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.55
6:F:93:SER:OG	6:F:121:VAL:HG23	2.06	0.55
10:J:6:THR:O	10:J:20:MET:HA	2.06	0.55
12:L:7:THR:HG22	12:L:9:PHE:H	1.71	0.55
13:M:69:ARG:O	13:M:71:ARG:N	2.37	0.55
40:14:42:LEU:CB	40:14:71:LEU:HD11	2.36	0.55
45:19:23:SER:HB3	45:19:26:VAL:HG23	1.87	0.55
46:20:67:ILE:HD13	46:20:75:ILE:HD11	1.88	0.55
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.40	0.55
52:26:305:G:H5"	52:26:306:A:OP1	2.05	0.55
52:26:579:A:H2'	52:26:580:C:H6	1.72	0.55
52:26:1218:C:H2'	52:26:1219:A:H8	1.70	0.55
52:26:1332:A:H2'	52:26:1333:A:H8	1.71	0.55
52:26:1527:U:O2'	52:26:1528:U:H5'	2.06	0.55
53:27:493:G:O2'	53:27:494:G:H5'	2.06	0.55
53:27:1041:G:H2'	53:27:1042:G:C8	2.42	0.55
53:27:1137:G:O2'	53:27:1138:G:H5'	2.05	0.55
53:27:1858:A:H1'	53:27:1885:A:C2	2.42	0.55
53:27:2043:C:H1'	53:27:2779:U:O4	2.06	0.55
53:27:2123:G:N2	53:27:2176:A:H61	2.03	0.55
53:27:2677:G:O2'	53:27:2678:C:H5'	2.07	0.55
53:27:2807:U:H1'	53:27:2892:G:N2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2848:G:O2'	53:27:2868:A:N6	2.39	0.55
57:31:69:C:H2'	57:31:70:G:C8	2.40	0.55
59:33:432:HIS:HD2	59:33:433:SER:H	1.55	0.55
15:O:46:VAL:HA	15:O:59:THR:O	2.07	0.55
21:U:14:LYS:HZ3	54:28:98:G:H22	1.54	0.55
28:2:16:THR:OG1	28:2:41:VAL:HG11	2.07	0.55
34:8:17:ASP:CG	34:8:19:PHE:H	2.14	0.55
35:9:107:GLY:HA3	52:26:9:G:C4'	2.37	0.55
47:21:62:GLU:OE2	52:26:235:C:H1'	2.07	0.55
52:26:488:C:H2'	52:26:489:C:H6	1.72	0.55
52:26:692:U:H2'	52:26:694:A:OP2	2.06	0.55
52:26:1258:G:H2'	52:26:1259:C:H6	1.70	0.55
53:27:7:G:H2'	53:27:8:C:C6	2.41	0.55
53:27:728:G:O2'	53:27:730:A:H8	1.89	0.55
53:27:2053:G:H2'	53:27:2054:A:C8	2.41	0.55
53:27:2393:U:O2'	53:27:2394:C:H5'	2.05	0.55
53:27:2638:G:H1'	53:27:2778:A:N6	2.21	0.55
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.55
1:A:180:MET:CB	1:A:267:VAL:HB	2.35	0.55
1:A:220:ARG:HH21	53:27:1827:U:P	2.29	0.55
9:I:109:LEU:HD13	9:I:118:MET:HG3	1.87	0.55
11:K:54:GLN:HE22	53:27:2358:A:H61	1.55	0.55
11:K:124:GLY:H	11:K:144:GLU:HA	1.70	0.55
12:L:22:GLN:O	12:L:24:THR:N	2.39	0.55
12:L:34:LYS:HA	12:L:101:VAL:HA	1.87	0.55
32:6:86:CYS:O	32:6:87:ASP:HB3	2.06	0.55
32:6:112:ARG:HH12	32:6:136:ARG:HH22	1.54	0.55
34:8:25:ARG:HB2	52:26:410:G:OP2	2.07	0.55
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.07	0.55
36:10:4:TYR:CD2	36:10:71:ILE:HG13	2.41	0.55
42:16:110:LYS:HG3	52:26:539:A:OP1	2.06	0.55
45:19:9:LYS:O	45:19:12:SER:HB2	2.07	0.55
46:20:25:ARG:NH2	52:26:230:G:H4'	2.20	0.55
49:23:79:TYR:CG	49:23:80:ARG:N	2.75	0.55
51:25:65:ARG:HD2	52:26:1088:G:C4'	2.36	0.55
52:26:440:C:H2'	52:26:441:A:C4'	2.37	0.55
52:26:945:G:H21	52:26:1334:G:H4'	1.71	0.55
52:26:1226:C:H4'	52:26:1227:A:OP1	2.06	0.55
52:26:1354:U:H2'	52:26:1355:G:H8	1.71	0.55
53:27:84:A:C6	53:27:99:U:H5'	2.40	0.55
53:27:1472:C:H2'	53:27:1473:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1790:C:H3'	53:27:1828:G:N2	2.21	0.55
56:30:10:G:H2'	56:30:11:C:C6	2.41	0.55
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.55
59:33:424:PRO:O	59:33:427:PHE:HB3	2.07	0.55
59:33:599:VAL:HG21	59:33:631:ILE:CD1	2.35	0.55
2:B:101:PHE:O	2:B:103:ASP:N	2.40	0.55
3:C:131:THR:HG21	53:27:320:A:H2'	1.89	0.55
10:J:30:ARG:HB2	53:27:2674:G:O2'	2.07	0.55
20:T:82:VAL:O	20:T:96:LYS:HE2	2.06	0.55
32:6:165:ALA:HB3	32:6:190:SER:HB3	1.89	0.55
34:8:21:LYS:CE	34:8:25:ARG:HE	2.20	0.55
34:8:201:GLU:HG2	35:9:104:ILE:O	2.05	0.55
40:14:59:LYS:HD2	52:26:972:C:O3'	2.07	0.55
50:24:4:LYS:HZ1	52:26:331:G:C2'	2.20	0.55
51:25:13:VAL:O	51:25:13:VAL:HG13	2.06	0.55
52:26:491:G:H2'	52:26:492:C:H6	1.69	0.55
52:26:923:A:H2'	52:26:924:C:O4'	2.07	0.55
52:26:1299:A:C1'	52:26:1301:U:H1'	2.37	0.55
53:27:315:G:H2'	53:27:316:C:C6	2.41	0.55
53:27:414:C:H2'	53:27:415:A:C8	2.42	0.55
53:27:1038:G:H2'	53:27:1039:A:H8	1.70	0.55
53:27:1196:C:H2'	53:27:1197:G:H8	1.71	0.55
53:27:2055:C:H5'	53:27:2056:G:O5'	2.07	0.55
53:27:2075:U:H1'	53:27:2597:G:H21	1.69	0.55
53:27:2152:G:H2'	53:27:2153:C:C6	2.41	0.55
1:A:144:GLU:HG3	1:A:188:ARG:O	2.05	0.55
4:D:35:LEU:HG	4:D:153:ILE:CG2	2.35	0.55
5:E:38:ASP:OD1	5:E:39:ALA:N	2.40	0.55
10:J:22:ILE:HB	53:27:1952:A:C2	2.42	0.55
12:L:29:GLY:O	12:L:133:LYS:HD3	2.07	0.55
28:2:3:GLY:O	28:2:5:ARG:N	2.37	0.55
30:4:41:ARG:HA	30:4:44:ARG:HH12	1.71	0.55
34:8:34:GLU:HG2	34:8:35:GLN:N	2.22	0.55
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.88	0.55
34:8:96:ARG:O	34:8:100:VAL:HG23	2.06	0.55
39:13:17:ARG:NH2	39:13:65:THR:HG21	2.22	0.55
43:17:28:ARG:O	43:17:32:ILE:HG12	2.06	0.55
52:26:234:C:H2'	52:26:235:C:C6	2.42	0.55
52:26:540:G:H2'	52:26:541:G:H8	1.72	0.55
52:26:728:A:H2'	52:26:729:A:H8	1.71	0.55
52:26:955:U:H2'	52:26:956:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1274:A:C2’	52:26:1275:A:H5”	2.37	0.55
53:27:803:U:O2’	53:27:804:A:H5’	2.06	0.55
53:27:1071:G:H1’	53:27:1089:A:H2’	1.88	0.55
53:27:1213:A:N6	53:27:1236:G:H1’	2.22	0.55
53:27:2266:A:H4’	53:27:2267:A:N3	2.22	0.55
53:27:2545:G:O2’	53:27:2546:U:H5’	2.07	0.55
53:27:2836:U:H2’	53:27:2837:A:C8	2.42	0.55
56:30:9:A:H1’	56:30:46:G:N3	2.22	0.55
5:E:95:ALA:HA	5:E:104:LEU:HD23	1.88	0.55
14:N:34:HIS:NE2	54:28:27:C:OP1	2.33	0.55
20:T:10:VAL:HA	20:T:72:PHE:N	2.20	0.55
21:U:14:LYS:NZ	54:28:98:G:N2	2.54	0.55
27:1:21:LEU:HD12	27:1:22:THR:H	1.71	0.55
33:7:62:SER:HB2	33:7:99:GLN:HE21	1.71	0.55
36:10:46:GLN:HA	36:10:56:LYS:HA	1.88	0.55
38:12:76:ARG:HH11	38:12:125:ILE:HG23	1.71	0.55
44:18:26:LEU:HA	44:18:30:ILE:HD12	1.89	0.55
44:18:73:LEU:C	44:18:75:LYS:H	2.14	0.55
46:20:11:ALA:HB1	52:26:44:A:OP1	2.07	0.55
52:26:51:A:C2	52:26:116:A:H1’	2.41	0.55
52:26:382:A:O2’	52:26:383:A:H5’	2.07	0.55
52:26:580:C:H2’	52:26:581:G:O4’	2.07	0.55
52:26:927:G:H2’	52:26:928:G:H8	1.72	0.55
53:27:139:U:H2’	53:27:140:C:H5	1.72	0.55
53:27:337:C:H2’	53:27:338:G:O4’	2.07	0.55
53:27:1287:A:O2’	53:27:1288:G:H5’	2.07	0.55
53:27:1526:C:H2’	53:27:1527:G:O4’	2.07	0.55
53:27:2646:C:H6	53:27:2646:C:O5’	1.90	0.55
1:A:78:GLU:OE1	1:A:100:ARG:NE	2.40	0.55
4:D:40:GLY:HA2	4:D:84:ILE:HD11	1.89	0.55
4:D:64:PRO:HA	4:D:88:VAL:HG22	1.88	0.55
4:D:124:ARG:HA	4:D:160:LYS:O	2.07	0.55
4:D:172:PHE:O	4:D:174:PHE:N	2.40	0.55
5:E:86:LEU:HD21	5:E:144:ALA:O	2.07	0.55
21:U:44:HIS:NE2	21:U:85:LYS:HB2	2.21	0.55
32:6:10:LYS:HB2	32:6:211:LEU:HD21	1.89	0.55
33:7:90:VAL:HA	33:7:93:ILE:HD12	1.89	0.55
37:11:142:ARG:HD3	58:32:41:C:H4’	1.88	0.55
40:14:10:LEU:HB3	40:14:98:VAL:HA	1.89	0.55
44:18:27:LYS:O	44:18:31:SER:HB2	2.07	0.55
45:19:31:LEU:O	45:19:35:ILE:HG13	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:70:U:H4'	52:26:71:A:C8	2.42	0.55
52:26:184:G:H4'	52:26:224:U:H4'	1.88	0.55
52:26:475:C:H2'	52:26:476:U:C6	2.41	0.55
52:26:512:U:H2'	52:26:513:C:H6	1.69	0.55
52:26:1432:G:C2	52:26:1467:C:C5	2.94	0.55
53:27:161:A:H3'	53:27:162:U:H5"	1.87	0.55
53:27:909:A:H2'	53:27:912:C:H5	1.70	0.55
53:27:996:A:H2'	53:27:997:G:H8	1.71	0.55
53:27:1252:G:O2'	53:27:1253:A:H5"	2.07	0.55
53:27:1704:C:H2'	53:27:1705:A:H8	1.72	0.55
53:27:1809:A:H2'	53:27:1810:A:C8	2.42	0.55
53:27:2191:A:H2'	53:27:2192:U:C6	2.41	0.55
53:27:2524:G:H2'	53:27:2525:G:O4'	2.06	0.55
53:27:2553:G:H1'	53:27:2582:G:N2	2.15	0.55
56:30:68:C:H2'	56:30:69:G:C8	2.42	0.55
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.55
59:33:55:LEU:HD23	59:33:55:LEU:C	2.32	0.55
2:B:77:ARG:O	2:B:77:ARG:HG3	2.07	0.55
3:C:44:ARG:HD2	53:27:444:C:P	2.47	0.55
14:N:33:ARG:O	14:N:34:HIS:HB2	2.07	0.55
23:W:11:PRO:HB3	23:W:29:LEU:HD23	1.88	0.55
24:X:9:LYS:NZ	24:X:11:VAL:HG23	2.19	0.55
35:9:92:ARG:HB2	35:9:127:TYR:HB2	1.89	0.55
40:14:42:LEU:HD12	40:14:71:LEU:HD11	1.89	0.55
42:16:24:GLU:HG2	42:16:24:GLU:O	2.07	0.55
43:17:88:LEU:HB2	43:17:91:ARG:HH21	1.72	0.55
44:18:48:GLN:HG2	49:23:11:ASP:CG	2.32	0.55
46:20:20:VAL:HG22	46:20:21:VAL:O	2.07	0.55
46:20:61:VAL:HA	46:20:65:ALA:HB3	1.88	0.55
49:23:39:ILE:HA	49:23:43:MET:SD	2.47	0.55
52:26:404:G:H2'	52:26:405:U:C6	2.42	0.55
52:26:434:U:H2'	52:26:435:A:O4'	2.07	0.55
53:27:580:U:H2'	53:27:581:C:H6	1.72	0.55
53:27:677:A:H2'	53:27:678:C:H6	1.71	0.55
53:27:1534:U:H4'	53:27:1537:G:O6	2.07	0.55
53:27:1830:C:H2'	53:27:1831:G:C8	2.40	0.55
53:27:2008:C:H2'	53:27:2009:A:C8	2.41	0.55
53:27:2102:G:N2	53:27:2188:U:H1'	2.22	0.55
53:27:2111:U:H2'	53:27:2113:U:OP2	2.07	0.55
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.55
53:27:2626:C:H2'	53:27:2627:G:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
59:33:408:VAL:HA	59:33:458:GLY:CA	2.37	0.55
2:B:5:VAL:HG11	2:B:80:TRP:CE3	2.42	0.54
5:E:155:PRO:O	5:E:171:LYS:N	2.37	0.54
8:H:36:GLU:O	8:H:40:ALA:HB3	2.07	0.54
15:O:29:VAL:HG22	15:O:80:VAL:HA	1.88	0.54
20:T:26:ASN:OD1	20:T:34:ILE:HB	2.07	0.54
32:6:114:LYS:O	32:6:117:GLU:HB3	2.06	0.54
34:8:12:ARG:O	34:8:34:GLU:HA	2.07	0.54
36:10:29:ILE:HG22	36:10:34:GLY:HA2	1.88	0.54
42:16:83:GLY:N	52:26:552:U:H4'	2.21	0.54
45:19:63:ARG:HH22	45:19:87:ARG:NH2	2.00	0.54
46:20:31:ARG:HG2	46:20:32:PHE:H	1.71	0.54
49:23:3:SER:HA	52:26:1314:C:H41	1.71	0.54
50:24:61:ALA:HB1	50:24:68:LYS:HA	1.87	0.54
52:26:81:A:H2'	52:26:82:G:H8	1.72	0.54
52:26:668:G:H2'	52:26:669:G:C8	2.41	0.54
52:26:858:G:O6	52:26:869:G:H3'	2.07	0.54
52:26:1245:C:H2'	52:26:1246:A:C8	2.42	0.54
53:27:155:A:H2'	53:27:156:A:H8	1.71	0.54
53:27:395:U:H2'	53:27:396:G:C8	2.42	0.54
53:27:402:A:H2'	53:27:403:U:H5'	1.89	0.54
53:27:2027:G:H2'	53:27:2028:U:H6	1.71	0.54
53:27:2464:G:H2'	53:27:2465:C:H6	1.70	0.54
1:A:129:LEU:CD1	1:A:133:ASN:HB2	2.37	0.54
1:A:226:PRO:HG3	1:A:233:GLY:HA2	1.89	0.54
4:D:103:ILE:HA	4:D:107:VAL:CG2	2.37	0.54
8:H:130:GLY:C	53:27:1088:A:H61	2.15	0.54
11:K:81:ASP:C	11:K:81:ASP:OD1	2.49	0.54
27:1:11:LYS:HA	27:1:14:MET:HE3	1.89	0.54
33:7:132:ALA:O	33:7:135:ARG:HB2	2.07	0.54
34:8:165:GLU:O	34:8:166:LYS:HB2	2.07	0.54
35:9:113:VAL:HG13	35:9:114:LEU:N	2.23	0.54
37:11:71:THR:HG22	37:11:72:VAL:HG13	1.87	0.54
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.89	0.54
39:13:35:GLU:H	39:13:35:GLU:CD	2.14	0.54
43:17:39:ALA:HB3	43:17:42:VAL:HG13	1.88	0.54
52:26:112:G:H21	52:26:354:G:C5'	2.18	0.54
52:26:299:G:H2'	52:26:300:A:C8	2.42	0.54
52:26:335:C:H2'	52:26:336:A:C8	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:909:A:H2'	52:26:910:C:O4'	2.05	0.54
53:27:111:A:H2'	53:27:112:U:O4'	2.07	0.54
53:27:142:A:H2'	53:27:143:C:C6	2.43	0.54
53:27:167:A:H2'	53:27:168:G:O4'	2.06	0.54
53:27:421:C:O2	53:27:421:C:H2'	2.07	0.54
53:27:633:A:H2'	53:27:634:C:H5'	1.88	0.54
53:27:1609:A:H1'	53:27:1616:A:C1'	2.37	0.54
53:27:1664:A:H61	53:27:1996:C:N4	2.01	0.54
53:27:2162:G:H8	53:27:2162:G:H5'	1.72	0.54
53:27:2641:G:H2'	53:27:2642:G:H8	1.72	0.54
53:27:2686:G:H2'	53:27:2687:U:O4'	2.07	0.54
3:C:85:PHE:O	3:C:86:ALA:C	2.51	0.54
5:E:85:LYS:HG2	5:E:131:VAL:HG22	1.90	0.54
6:F:18:GLN:NE2	6:F:44:ILE:HD11	2.22	0.54
12:L:59:ARG:HH22	59:33:736:ILE:HB	1.72	0.54
23:W:67:LEU:HD11	23:W:77:TYR:CB	2.36	0.54
26:Z:16:CYS:HB2	26:Z:36:VAL:O	2.07	0.54
34:8:12:ARG:O	34:8:37:PRO:HG3	2.08	0.54
38:12:4:ASP:OD2	38:12:7:ALA:HB2	2.07	0.54
40:14:67:ILE:HG22	44:18:95:LEU:CA	2.37	0.54
43:17:16:ILE:HG12	52:26:1302:C:C5	2.42	0.54
43:17:97:ARG:HB2	43:17:99:GLN:HE22	1.73	0.54
44:18:25:GLU:HG3	44:18:26:LEU:N	2.22	0.54
44:18:65:GLN:HB3	44:18:82:LYS:HE2	1.89	0.54
50:24:43:LYS:HB2	50:24:86:ALA:CB	2.33	0.54
52:26:45:G:H2'	52:26:46:G:C8	2.42	0.54
52:26:735:C:H2'	52:26:736:C:C6	2.42	0.54
52:26:1096:C:H2'	52:26:1097:C:H6	1.72	0.54
52:26:1275:A:H5'	52:26:1275:A:H8	1.72	0.54
53:27:373:U:H2'	53:27:374:A:H8	1.72	0.54
53:27:406:G:H2'	53:27:407:G:O4'	2.07	0.54
53:27:572:A:H5"	53:27:573:U:OP2	2.07	0.54
53:27:782:A:H4'	53:27:783:A:O5'	2.07	0.54
53:27:2061:G:H1'	53:27:2062:A:H2'	1.90	0.54
53:27:2193:G:H2'	53:27:2194:U:C6	2.42	0.54
53:27:2216:G:H2'	53:27:2217:G:H8	1.71	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.89	0.54
59:33:597:VAL:HG13	59:33:655:ALA:HB1	1.90	0.54
59:33:698:ALA:CB	59:33:711:ASP:HB2	2.34	0.54
1:A:248:GLY:HA3	53:27:2239:G:H5'	1.88	0.54
3:C:97:ASN:HB3	3:C:100:MET:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:140:ILE:HG22	4:D:142:TYR:N	2.21	0.54
5:E:23:ILE:CD1	5:E:71:LEU:HD21	2.36	0.54
7:G:56:ARG:NE	7:G:83:ALA:HA	2.20	0.54
10:J:58:LEU:HD12	10:J:59:LYS:O	2.08	0.54
27:1:31:LYS:HA	53:27:2885:G:N2	2.23	0.54
29:3:29:GLN:O	29:3:32:ALA:HB3	2.07	0.54
38:12:86:LYS:HB3	38:12:90:GLU:HB3	1.89	0.54
45:19:27:GLN:HG2	52:26:657:U:H4'	1.89	0.54
50:24:77:ASN:OD1	50:24:78:LEU:N	2.40	0.54
52:26:406:G:O2'	52:26:407:U:H5'	2.07	0.54
52:26:425:G:C2'	52:26:426:U:H5'	2.38	0.54
52:26:631:C:H5"	52:26:632:U:O4'	2.08	0.54
52:26:977:A:H1'	52:26:1223:C:N3	2.21	0.54
53:27:531:C:O2'	53:27:563:A:H5"	2.06	0.54
53:27:598:U:H2'	53:27:599:A:C8	2.43	0.54
53:27:917:A:H5"	53:27:2268:A:H61	1.71	0.54
53:27:2041:U:H2'	53:27:2042:A:H8	1.72	0.54
54:28:101:A:H2'	54:28:102:G:O4'	2.07	0.54
59:33:438:ARG:HG3	59:33:465:THR:HB	1.90	0.54
59:33:610:ALA:HB2	59:33:633:VAL:O	2.08	0.54
1:A:64:VAL:HG21	1:A:86:ARG:NH2	2.21	0.54
4:D:16:MET:HE1	4:D:27:VAL:HB	1.88	0.54
7:G:31:ARG:HB3	7:G:108:VAL:HG21	1.90	0.54
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.36	0.54
17:Q:14:VAL:HG21	17:Q:98:ILE:HG13	1.89	0.54
19:S:59:ASN:ND2	53:27:1342:A:H5"	2.23	0.54
25:Y:39:ASP:OD1	25:Y:40:THR:N	2.40	0.54
27:1:6:LYS:NZ	53:27:1262:A:H1'	2.23	0.54
36:10:69:GLU:O	36:10:73:GLU:HG2	2.08	0.54
39:13:51:LEU:CB	39:13:56:MET:HB2	2.37	0.54
39:13:83:THR:HG21	39:13:102:PHE:CB	2.36	0.54
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.41	0.54
44:18:80:ARG:HH11	44:18:80:ARG:HG3	1.73	0.54
50:24:70:LYS:HA	50:24:73:ARG:NH1	2.22	0.54
52:26:33:A:H2'	52:26:34:C:H6	1.72	0.54
52:26:184:G:C4'	52:26:224:U:H4'	2.37	0.54
52:26:413:G:H1'	52:26:428:G:N2	2.22	0.54
52:26:596:A:H5'	52:26:596:A:H8	1.72	0.54
52:26:1044:A:C5	52:26:1045:C:H1'	2.41	0.54
52:26:1264:U:H2'	52:26:1265:C:C6	2.42	0.54
53:27:818:G:H2'	53:27:1187:G:H22	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:974:G:H8	53:27:990:A:H62	1.55	0.54
53:27:1191:G:H2'	53:27:1192:G:H8	1.72	0.54
53:27:1812:U:H2'	53:27:1813:G:C8	2.43	0.54
53:27:1977:A:H2'	53:27:1978:A:O4'	2.08	0.54
53:27:2065:C:H2'	53:27:2066:C:H6	1.68	0.54
53:27:2411:A:H2'	53:27:2412:A:C8	2.43	0.54
54:28:62:C:H2'	54:28:63:C:H6	1.72	0.54
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.54
59:33:664:GLY:O	59:33:717:TYR:HA	2.07	0.54
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.88	0.54
2:B:25:THR:HG21	2:B:193:VAL:CG2	2.37	0.54
5:E:82:PHE:CE2	5:E:137:LYS:HB2	2.43	0.54
8:H:106:GLN:O	8:H:110:GLN:HG3	2.08	0.54
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.72	0.54
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.71	0.54
16:P:5:ARG:NH1	53:27:585:G:N7	2.56	0.54
21:U:14:LYS:HE2	54:28:98:G:C2	2.43	0.54
33:7:86:LEU:O	33:7:90:VAL:HG23	2.07	0.54
34:8:49:ASP:O	34:8:52:VAL:HG22	2.08	0.54
37:11:110:ARG:HH22	37:11:121:ASN:C	2.16	0.54
39:13:12:LYS:HG2	52:26:1371:G:OP1	2.07	0.54
41:15:86:LYS:NZ	41:15:114:PRO:HD3	2.23	0.54
49:23:12:LEU:HA	49:23:15:LEU:HB3	1.90	0.54
49:23:18:VAL:O	49:23:22:VAL:HG23	2.07	0.54
51:25:32:ARG:HE	51:25:33:ARG:HH12	1.52	0.54
52:26:1259:C:H3'	52:26:1260:G:C5'	2.28	0.54
52:26:1324:A:H2'	52:26:1325:C:C6	2.43	0.54
53:27:542:C:H2'	53:27:543:G:C5'	2.38	0.54
53:27:1200:C:H2'	53:27:1201:U:H6	1.72	0.54
53:27:1239:G:H2'	53:27:1240:U:O4'	2.08	0.54
53:27:1316:U:H2'	53:27:1317:G:C8	2.41	0.54
53:27:1430:G:H2'	53:27:1431:A:C8	2.43	0.54
53:27:1935:G:H1'	53:27:1964:G:N2	2.21	0.54
53:27:2070:A:H2'	53:27:2071:A:C8	2.42	0.54
53:27:2297:A:N1	53:27:2321:U:H5	2.04	0.54
57:31:23:C:H2'	57:31:24:U:H6	1.73	0.54
1:A:239:PHE:O	1:A:241:LYS:HG3	2.07	0.54
4:D:16:MET:CE	4:D:27:VAL:HB	2.37	0.54
7:G:15:VAL:HG21	7:G:69:PHE:CE2	2.42	0.54
7:G:81:LEU:HD12	7:G:82:ILE:H	1.72	0.54
8:H:2:LYS:HG3	8:H:62:ALA:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:22:ILE:HD11	10:J:40:LYS:CG	2.38	0.54
10:J:71:ARG:NH2	10:J:105:ARG:HG3	2.22	0.54
11:K:90:VAL:CG1	11:K:95:LEU:HD11	2.38	0.54
14:N:68:LYS:HE3	54:28:49:C:O3'	2.08	0.54
21:U:60:VAL:O	21:U:61:LEU:HD12	2.08	0.54
32:6:53:LEU:HA	32:6:56:LEU:HB2	1.89	0.54
39:13:129:ARG:HH21	57:31:33:U:H3'	1.71	0.54
41:15:40:ALA:HB3	52:26:684:U:O2	2.08	0.54
41:15:92:ARG:O	41:15:95:THR:HG22	2.07	0.54
42:16:41:PRO:HG3	42:16:49:ARG:CG	2.36	0.54
43:17:7:ASN:OD1	43:17:20:SER:HB2	2.08	0.54
47:21:11:VAL:HG11	47:21:54:ILE:HA	1.89	0.54
52:26:987:G:H2'	52:26:988:G:H8	1.71	0.54
52:26:1297:G:H1'	52:26:1298:U:OP2	2.06	0.54
52:26:1436:U:H2'	52:26:1437:A:C8	2.42	0.54
52:26:1478:U:O2'	52:26:1479:C:H5'	2.08	0.54
53:27:530:G:C4	53:27:2035:G:H4'	2.42	0.54
53:27:936:A:H2'	53:27:937:C:C6	2.43	0.54
53:27:1582:C:H2'	53:27:1585:C:H42	1.73	0.54
53:27:1654:A:C1'	53:27:2823:A:H5'	2.38	0.54
53:27:1801:A:H5'	53:27:1801:A:C8	2.40	0.54
53:27:1901:A:H2'	53:27:1902:C:H6	1.73	0.54
53:27:2257:U:H2'	53:27:2258:C:C6	2.42	0.54
53:27:2461:A:H2'	53:27:2462:C:C6	2.43	0.54
53:27:2626:C:H2'	53:27:2627:G:H8	1.71	0.54
54:28:6:G:H2'	54:28:7:G:H8	1.71	0.54
1:A:124:LYS:HB3	1:A:127:ASN:HD21	1.72	0.54
1:A:146:LYS:HD3	1:A:149:LYS:HD2	1.90	0.54
7:G:78:GLY:N	7:G:79:PRO:HD2	2.22	0.54
8:H:78:LEU:HD12	8:H:108:ILE:HG23	1.88	0.54
13:M:2:ARG:HG2	13:M:2:ARG:NH1	2.23	0.54
16:P:90:ASP:OD1	16:P:90:ASP:N	2.39	0.54
34:8:12:ARG:NH2	34:8:31:CYS:O	2.38	0.54
37:11:38:ALA:O	37:11:42:VAL:HG23	2.08	0.54
39:13:5:TYR:HB2	39:13:20:ILE:HG23	1.90	0.54
42:16:51:VAL:HG23	42:16:64:SER:C	2.33	0.54
46:20:8:ARG:HB3	46:20:28:ARG:NE	2.23	0.54
52:26:538:G:H2'	52:26:539:A:H8	1.73	0.54
52:26:769:G:O2'	52:26:770:C:H5'	2.07	0.54
52:26:1157:A:H5'	52:26:1158:C:N1	2.23	0.54
53:27:1268:A:H2'	53:27:1269:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1827:U:H5'	53:27:1971:U:C5'	2.27	0.54
53:27:1832:C:H2'	53:27:1833:C:O4'	2.08	0.54
53:27:1930:G:O2'	53:27:1931:U:P	2.66	0.54
53:27:2098:U:H2'	53:27:2099:U:O4'	2.08	0.54
53:27:2277:G:C3'	53:27:2278:A:H5"	2.38	0.54
53:27:2739:U:H5"	53:27:2763:G:O6	2.07	0.54
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.54
4:D:105:ILE:HB	26:Z:34:LEU:HD21	1.90	0.54
8:H:44:LYS:HG2	8:H:68:PHE:HE1	1.72	0.54
11:K:82:LEU:HD11	11:K:90:VAL:CG2	2.37	0.54
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.90	0.54
13:M:59:SER:HG	13:M:62:ASN:H	1.56	0.54
13:M:82:GLU:O	13:M:85:PRO:HG2	2.07	0.54
20:T:94:PHE:CE1	20:T:96:LYS:HA	2.43	0.54
34:8:85:THR:HA	34:8:88:ASN:ND2	2.23	0.54
34:8:167:PRO:HB2	34:8:170:LEU:CD2	2.37	0.54
35:9:156:ARG:HG2	35:9:157:GLY:N	2.22	0.54
36:10:67:PRO:HG2	36:10:70:VAL:HG23	1.90	0.54
36:10:86:ARG:NH1	36:10:86:ARG:HB2	2.23	0.54
37:11:17:PHE:CE1	37:11:22:LEU:HD22	2.43	0.54
49:23:52:ASN:CG	49:23:53:GLY:H	2.16	0.54
52:26:846:G:H2'	52:26:847:G:H8	1.72	0.54
52:26:1090:U:H2'	52:26:1091:U:C6	2.43	0.54
53:27:176:A:O2'	53:27:177:G:H5'	2.08	0.54
53:27:217:A:H2'	53:27:218:A:O4'	2.07	0.54
53:27:1587:G:H2'	53:27:1588:G:H8	1.73	0.54
53:27:1676:A:C6	53:27:1677:A:C6	2.95	0.54
53:27:1692:U:H2'	53:27:1694:C:C5	2.43	0.54
53:27:2153:C:H2'	53:27:2154:A:H5'	1.89	0.54
53:27:2286:G:H5"	53:27:2287:A:OP1	2.07	0.54
54:28:22:U:H2'	54:28:23:G:C8	2.43	0.54
54:28:30:C:H2'	54:28:31:C:O4'	2.07	0.54
54:28:39:A:H2'	54:28:40:U:C6	2.43	0.54
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.54
59:33:702:ASP:O	59:33:703:THR:HG22	2.08	0.54
1:A:269:ARG:NH2	53:27:1798:U:P	2.81	0.54
6:F:112:LYS:O	6:F:115:VAL:HG23	2.08	0.54
17:Q:77:PHE:HD1	17:Q:84:ARG:HG2	1.72	0.54
24:X:17:GLU:O	24:X:20:ASN:HB2	2.08	0.54
32:6:113:LEU:HD13	32:6:143:LEU:CB	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:7:LYS:O	34:8:20:LEU:HD12	2.07	0.54
35:9:114:LEU:HB3	35:9:119:VAL:HG21	1.89	0.54
39:13:93:LEU:O	39:13:96:GLU:HG2	2.08	0.54
41:15:15:VAL:HG13	41:15:16:SER:N	2.23	0.54
42:16:98:ARG:HH21	42:16:106:VAL:CA	2.20	0.54
46:20:12:LYS:HA	52:26:392:C:OP2	2.08	0.54
46:20:53:ASP:OD2	46:20:56:ARG:HB2	2.09	0.54
52:26:386:C:H2'	52:26:387:U:O4'	2.08	0.54
52:26:943:U:H2'	52:26:944:G:C8	2.41	0.54
52:26:1127:G:H22	52:26:1145:A:H2	1.55	0.54
52:26:1332:A:H2'	52:26:1333:A:C8	2.43	0.54
53:27:211:C:H2'	53:27:212:G:C8	2.43	0.54
53:27:732:C:H2'	53:27:733:G:O4'	2.08	0.54
53:27:1141:U:H4'	53:27:1142:A:O4'	2.07	0.54
53:27:1159:U:H2'	53:27:1160:G:C8	2.42	0.54
53:27:1641:A:H2'	53:27:1642:G:O4'	2.08	0.54
53:27:1793:C:O2'	53:27:1794:A:H5'	2.08	0.54
53:27:1916:A:H2'	53:27:1917:U:O4'	2.07	0.54
53:27:1937:A:O2'	53:27:1938:A:H3'	2.07	0.54
53:27:2898:U:H2'	53:27:2899:A:C8	2.43	0.54
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.54
4:D:4:HIS:NE2	4:D:8:LYS:HD3	2.23	0.53
15:O:89:GLY:O	15:O:112:ARG:HB2	2.08	0.53
16:P:58:GLN:HE21	53:27:1009:A:C5'	2.21	0.53
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.90	0.53
23:W:52:ALA:O	23:W:55:MET:HB2	2.08	0.53
33:7:149:LYS:HA	33:7:167:TYR:O	2.08	0.53
39:13:125:GLN:NE2	52:26:1342:C:H4'	2.22	0.53
40:14:73:LEU:HD21	40:14:75:ASP:HB2	1.90	0.53
42:16:65:TYR:OH	52:26:522:C:OP2	2.26	0.53
45:19:27:GLN:O	45:19:31:LEU:HG	2.08	0.53
45:19:71:ARG:HH22	52:26:754:C:C5'	2.18	0.53
46:20:25:ARG:HH22	52:26:230:G:H4'	1.72	0.53
46:20:36:VAL:HG23	46:20:53:ASP:HB3	1.90	0.53
50:24:14:GLU:C	50:24:16:ALA:H	2.15	0.53
52:26:263:A:H2'	52:26:264:C:H6	1.73	0.53
52:26:514:C:H2'	52:26:515:G:C8	2.40	0.53
52:26:1280:A:O2'	52:26:1281:C:H5'	2.08	0.53
53:27:1442:U:H2'	53:27:1443:U:C6	2.43	0.53
53:27:1894:C:H2'	53:27:1895:C:H6	1.73	0.53
53:27:2164:C:N4	53:27:2171:A:H62	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2503:A:N3	53:27:2503:A:H2'	2.23	0.53
54:28:118:C:H2'	54:28:119:A:C8	2.42	0.53
56:30:6:G:O5'	56:30:6:G:H8	1.91	0.53
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.53
1:A:87:SER:HB2	1:A:199:HIS:CD2	2.44	0.53
3:C:88:ARG:CG	3:C:89:PRO:HD2	2.38	0.53
8:H:59:THR:OG1	8:H:68:PHE:HA	2.08	0.53
10:J:22:ILE:HD11	10:J:40:LYS:HG2	1.91	0.53
10:J:98:ARG:HH22	52:26:340:U:P	2.31	0.53
15:O:25:VAL:HG13	15:O:84:SER:O	2.07	0.53
22:V:47:VAL:HG21	22:V:76:ILE:O	2.08	0.53
38:12:9:MET:O	38:12:13:ILE:HG13	2.08	0.53
44:18:48:GLN:NE2	44:18:48:GLN:N	2.55	0.53
45:19:74:VAL:O	45:19:78:THR:HG23	2.08	0.53
52:26:222:C:H2'	52:26:223:A:C8	2.43	0.53
52:26:468:A:H2'	52:26:469:C:C6	2.43	0.53
52:26:1236:A:H2'	52:26:1237:C:H6	1.73	0.53
52:26:1237:C:OP1	52:26:1238:A:H1'	2.08	0.53
53:27:9:G:H2'	53:27:2629:U:O4	2.08	0.53
53:27:534:U:H2'	53:27:535:G:C8	2.40	0.53
53:27:1744:A:H3'	53:27:1745:A:C8	2.39	0.53
53:27:2234:G:C4	53:27:2235:G:C8	2.96	0.53
53:27:2367:G:H2'	53:27:2368:C:H6	1.73	0.53
57:31:11:A:O2'	57:31:12:G:H5'	2.08	0.53
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.53
8:H:75:ALA:O	8:H:79:LEU:HG	2.08	0.53
13:M:45:ARG:HG2	13:M:95:THR:HG21	1.90	0.53
17:Q:6:GLN:HB2	17:Q:11:GLN:HE21	1.73	0.53
21:U:5:ASN:HA	21:U:64:VAL:HB	1.91	0.53
21:U:87:GLN:NE2	54:28:77:U:H4'	2.23	0.53
27:1:42:ILE:HG22	27:1:48:TYR:HB2	1.89	0.53
32:6:55:GLU:O	32:6:59:ILE:HG23	2.08	0.53
36:10:1:MET:HG2	36:10:67:PRO:HD3	1.89	0.53
44:18:68:ARG:HH12	44:18:70:HIS:HB2	1.73	0.53
46:20:39:PHE:HA	46:20:50:THR:CG2	2.35	0.53
50:24:54:GLN:HE21	52:26:193:C:H1'	1.73	0.53
52:26:1414:U:H2'	52:26:1415:G:H8	1.72	0.53
53:27:13:A:N1	53:27:525:U:H2'	2.24	0.53
53:27:100:U:H1'	53:27:101:A:C6	2.42	0.53
53:27:357:C:H2'	53:27:358:U:H6	1.73	0.53
53:27:468:G:H2'	53:27:469:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:491:G:H3'	53:27:492:A:H8	1.73	0.53
53:27:1056:G:O2'	53:27:1086:A:H1'	2.06	0.53
53:27:1758:U:C5	53:27:2696:U:H5'	2.43	0.53
53:27:2453:A:H2'	53:27:2454:G:C8	2.33	0.53
53:27:2813:A:H2'	53:27:2814:A:C8	2.43	0.53
57:31:23:C:H2'	57:31:24:U:C6	2.43	0.53
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.53
1:A:23:LEU:HD22	1:A:81:GLU:C	2.33	0.53
17:Q:74:ILE:HG22	17:Q:87:GLN:N	2.24	0.53
17:Q:81:LYS:HE3	53:27:973:A:OP2	2.09	0.53
39:13:14:SER:OG	39:13:74:GLN:HG2	2.09	0.53
42:16:106:VAL:HG12	42:16:107:LYS:N	2.24	0.53
44:18:100:TRP:HZ2	52:26:1368:A:H5"	1.74	0.53
51:25:66:ARG:CG	52:26:1099:G:H5'	2.38	0.53
52:26:250:A:H4'	52:26:251:G:O5'	2.08	0.53
53:27:211:C:H2'	53:27:212:G:H8	1.73	0.53
53:27:254:G:C2'	53:27:255:A:H5"	2.38	0.53
53:27:672:C:O2'	53:27:673:C:H5'	2.08	0.53
53:27:885:C:H2'	53:27:886:A:O4'	2.09	0.53
53:27:950:G:H2'	53:27:951:C:C6	2.43	0.53
53:27:1056:G:H4'	53:27:1086:A:H8	1.72	0.53
53:27:1260:A:H2'	53:27:1261:C:H6	1.73	0.53
53:27:1659:G:C3'	53:27:1660:G:H5"	2.38	0.53
53:27:2345:G:N3	53:27:2381:A:H2'	2.24	0.53
53:27:2368:C:H2'	53:27:2369:A:H8	1.73	0.53
53:27:2799:A:H1'	53:27:2801:G:O4'	2.09	0.53
1:A:180:MET:HG2	1:A:268:ARG:HB2	1.89	0.53
3:C:57:LYS:O	3:C:59:PRO:HD3	2.08	0.53
4:D:97:GLU:CG	26:Z:25:ARG:HB2	2.39	0.53
6:F:55:GLU:HA	6:F:58:LEU:HD12	1.90	0.53
7:G:4:ASN:HD22	53:27:1046:A:H2'	1.73	0.53
9:I:29:ALA:HA	9:I:32:LEU:HD12	1.90	0.53
11:K:33:ARG:CG	11:K:40:SER:HA	2.39	0.53
12:L:50:ARG:HA	12:L:53:MET:HE2	1.89	0.53
12:L:53:MET:HE3	12:L:63:ILE:HG21	1.89	0.53
21:U:55:GLU:CD	21:U:55:GLU:H	2.16	0.53
25:Y:25:GLY:O	53:27:929:U:H1'	2.09	0.53
34:8:159:GLU:O	34:8:162:GLU:HG2	2.08	0.53
39:13:29:ILE:O	39:13:30:ASN:HB2	2.09	0.53
39:13:29:ILE:HA	39:13:64:ILE:HG13	1.91	0.53
40:14:7:ARG:NH2	52:26:1126:U:OP1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:113:ARG:HG2	42:16:118:VAL:HB	1.90	0.53
46:20:36:VAL:CG2	46:20:53:ASP:HB3	2.38	0.53
50:24:59:ARG:O	50:24:63:LYS:HG2	2.09	0.53
52:26:283:U:H2'	52:26:284:C:H6	1.74	0.53
52:26:457:G:H2'	52:26:458:U:C6	2.43	0.53
52:26:1097:C:H2'	52:26:1098:C:H6	1.73	0.53
52:26:1213:A:N1	52:26:1215:G:H1'	2.24	0.53
53:27:128:C:H2'	53:27:129:C:C6	2.43	0.53
53:27:236:C:H2'	53:27:237:C:H6	1.74	0.53
53:27:290:U:H2'	53:27:291:G:H8	1.73	0.53
53:27:401:A:H2'	53:27:402:A:C8	2.43	0.53
53:27:999:U:H5"	53:27:1154:G:O6	2.08	0.53
53:27:1094:U:H2'	53:27:1096:A:OP2	2.08	0.53
53:27:2038:G:H2'	53:27:2039:U:C6	2.43	0.53
53:27:2039:U:H2'	53:27:2040:G:C8	2.43	0.53
53:27:2073:C:H2'	53:27:2074:U:C6	2.42	0.53
53:27:2472:G:H2'	53:27:2475:C:H42	1.73	0.53
53:27:2590:A:H61	53:27:2604:U:H3	1.56	0.53
58:32:66:C:H2'	58:32:67:C:O4'	2.08	0.53
1:A:79:ARG:HE	1:A:92:LEU:HD23	1.74	0.53
2:B:85:ALA:O	2:B:87:GLY:N	2.39	0.53
9:I:108:MET:CE	53:27:1138:G:H21	2.14	0.53
10:J:22:ILE:HD12	10:J:22:ILE:C	2.34	0.53
13:M:118:ARG:C	13:M:120:GLU:N	2.64	0.53
23:W:57:VAL:HG22	53:27:372:G:H5'	1.91	0.53
25:Y:43:ILE:O	25:Y:47:ILE:HG13	2.08	0.53
33:7:149:LYS:HG3	33:7:200:TRP:CE3	2.44	0.53
43:17:21:ILE:HB	43:17:24:VAL:HG12	1.90	0.53
44:18:40:ARG:O	44:18:43:ALA:HB3	2.09	0.53
52:26:149:A:N6	52:26:172:A:H62	2.07	0.53
52:26:494:G:O2'	52:26:496:A:H1'	2.08	0.53
52:26:689:C:H2'	52:26:690:G:O4'	2.08	0.53
52:26:1109:C:H2'	52:26:1110:A:O4'	2.08	0.53
53:27:655:A:H1'	53:27:656:G:C8	2.43	0.53
53:27:745:G:O2'	53:27:748:G:H1'	2.08	0.53
53:27:1262:A:H2'	53:27:1263:U:O4'	2.09	0.53
53:27:1747:U:H2'	53:27:1748:C:C6	2.43	0.53
53:27:1752:C:H2'	53:27:1753:G:H8	1.72	0.53
53:27:2026:U:H2'	53:27:2027:G:H8	1.73	0.53
54:28:66:A:H5"	54:28:67:G:OP1	2.08	0.53
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.53
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.89	0.53
2:B:4:LEU:CD2	2:B:98:VAL:HA	2.38	0.53
6:F:135:HIS:ND1	6:F:137:GLU:HB2	2.23	0.53
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.90	0.53
23:W:39:VAL:HG12	23:W:42:GLU:H	1.73	0.53
23:W:58:ILE:HD13	23:W:66:VAL:HG21	1.91	0.53
25:Y:23:LEU:HD11	25:Y:53:MET:CE	2.39	0.53
27:1:18:HIS:C	27:1:20:ALA:H	2.17	0.53
33:7:46:LEU:HD11	33:7:86:LEU:HD11	1.90	0.53
34:8:80:ARG:HH21	52:26:613:C:P	2.32	0.53
35:9:10:LEU:HD12	35:9:38:VAL:HB	1.90	0.53
35:9:52:ALA:HB3	35:9:58:ALA:CB	2.37	0.53
43:17:100:ARG:HH21	52:26:950:U:P	2.31	0.53
51:25:49:ALA:O	51:25:52:VAL:HG12	2.08	0.53
52:26:524:G:H2'	52:26:525:C:C6	2.44	0.53
52:26:1462:C:H2'	52:26:1463:U:C6	2.44	0.53
53:27:721:A:H2'	53:27:722:A:C8	2.44	0.53
53:27:1127:A:O2'	53:27:1128:G:H5"	2.08	0.53
53:27:1646:C:H5"	53:27:1647:U:C5'	2.38	0.53
53:27:2113:U:H2'	53:27:2114:A:C8	2.43	0.53
53:27:2396:G:H2'	53:27:2397:G:C8	2.37	0.53
58:32:21:A:H62	58:32:47:U:C5'	2.22	0.53
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.53
59:33:681:ARG:O	59:33:685:THR:N	2.42	0.53
2:B:131:ASP:OD2	2:B:134:HIS:HB2	2.09	0.53
5:E:10:VAL:HG12	5:E:47:ASN:O	2.09	0.53
32:6:9:LEU:HA	32:6:14:HIS:HE2	1.74	0.53
33:7:16:PRO:HG2	33:7:53:ARG:HH22	1.74	0.53
34:8:53:GLN:HE22	35:9:111:ARG:HH21	1.57	0.53
34:8:94:GLU:HG3	34:8:185:PRO:HG2	1.91	0.53
38:12:73:SER:O	38:12:129:ALA:N	2.39	0.53
39:13:19:PHE:HB2	39:13:63:TYR:O	2.09	0.53
40:14:42:LEU:HB2	40:14:71:LEU:HD11	1.91	0.53
42:16:86:VAL:O	42:16:87:LYS:C	2.50	0.53
46:20:38:PHE:CE2	46:20:51:ARG:HG2	2.44	0.53
52:26:673:A:H2'	52:26:674:G:H8	1.73	0.53
53:27:136:G:H2'	53:27:137:U:C6	2.43	0.53
53:27:379:G:O4'	53:27:2232:C:H5"	2.09	0.53
53:27:677:A:H2'	53:27:678:C:C6	2.44	0.53
53:27:875:G:H2'	53:27:876:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1721:G:H2'	53:27:1738:G:H22	1.74	0.53
53:27:1782:U:H2'	53:27:1783:A:H5'	1.90	0.53
53:27:1789:A:C5	53:27:1790:C:C4	2.97	0.53
53:27:2041:U:H2'	53:27:2042:A:C8	2.44	0.53
53:27:2464:G:H2'	53:27:2465:C:C6	2.44	0.53
53:27:2590:A:O2'	53:27:2591:C:H5'	2.09	0.53
54:28:100:G:H2'	54:28:101:A:H8	1.74	0.53
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.53
19:S:58:VAL:HG12	19:S:85:VAL:HG13	1.91	0.53
20:T:48:VAL:O	20:T:53:GLN:HG3	2.08	0.53
27:1:30:ASP:OD2	27:1:33:SER:N	2.40	0.53
34:8:56:GLU:O	34:8:59:LYS:HB3	2.09	0.53
34:8:103:ARG:HB3	34:8:170:LEU:CD2	2.39	0.53
35:9:165:GLY:HA2	38:12:113:ARG:HD2	1.90	0.53
38:12:6:ILE:HG22	38:12:31:LEU:HD11	1.89	0.53
38:12:106:SER:HA	52:26:642:A:C5	2.42	0.53
45:19:3:SER:O	45:19:7:THR:HG23	2.09	0.53
47:21:46:HIS:N	47:21:72:TRP:O	2.41	0.53
48:22:44:THR:OG1	48:22:46:THR:HG22	2.09	0.53
50:24:74:HIS:HA	50:24:77:ASN:HD21	1.73	0.53
52:26:178:C:H2'	52:26:179:A:C8	2.39	0.53
52:26:735:C:H2'	52:26:736:C:H6	1.73	0.53
52:26:1109:C:H2'	52:26:1110:A:C8	2.43	0.53
52:26:1135:U:H4'	52:26:1136:C:C5	2.44	0.53
53:27:778:G:H3'	53:27:779:U:C6	2.44	0.53
53:27:813:U:H2'	53:27:814:C:C6	2.43	0.53
53:27:1023:U:O2'	53:27:1122:G:H5'	2.08	0.53
53:27:1769:U:H2'	53:27:1770:G:H8	1.74	0.53
58:32:70:G:H2'	58:32:71:C:O4'	2.09	0.53
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.53
3:C:51:GLU:OE1	3:C:51:GLU:N	2.38	0.53
3:C:147:LEU:HD23	3:C:180:LEU:HD23	1.91	0.53
4:D:151:LEU:HD12	4:D:152:ASP:N	2.24	0.53
23:W:9:LYS:CE	53:27:397:U:OP2	2.56	0.53
26:Z:35:ASP:CG	26:Z:36:VAL:N	2.65	0.53
33:7:71:ARG:O	33:7:75:VAL:HG23	2.08	0.53
39:13:123:ARG:O	52:26:1343:G:H4'	2.09	0.53
45:19:32:THR:OG1	45:19:84:LEU:HD21	2.08	0.53
52:26:1133:G:H2'	52:26:1134:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:217:A:C2	53:27:218:A:H1'	2.44	0.53
53:27:2317:A:H2'	53:27:2318:G:O4'	2.09	0.53
53:27:2485:G:H2'	53:27:2486:C:C6	2.43	0.53
53:27:2872:A:O2'	53:27:2873:A:H5'	2.08	0.53
53:27:2873:A:O2'	53:27:2874:C:H5'	2.08	0.53
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.53
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.44	0.52
7:G:34:THR:HG21	53:27:1057:A:H1'	1.91	0.52
10:J:106:GLU:CD	10:J:106:GLU:H	2.17	0.52
12:L:45:GLN:HE21	53:27:2485:G:C5'	2.22	0.52
22:V:52:ASP:O	22:V:53:HIS:CB	2.53	0.52
24:X:40:SER:O	24:X:43:LEU:HB3	2.09	0.52
27:1:18:HIS:CD2	53:27:2046:G:H1'	2.44	0.52
33:7:156:LEU:HD12	33:7:156:LEU:O	2.09	0.52
36:10:30:THR:HA	36:10:34:GLY:H	1.74	0.52
42:16:35:ARG:HD3	42:16:53:ARG:NH2	2.24	0.52
43:17:21:ILE:HB	43:17:24:VAL:HG11	1.91	0.52
46:20:46:LYS:HD2	52:26:617:G:H5'	1.92	0.52
46:20:60:TRP:HB3	46:20:65:ALA:HB2	1.91	0.52
51:25:46:ARG:NE	52:26:1533:C:H41	2.06	0.52
52:26:155:A:H2'	52:26:156:C:C6	2.44	0.52
52:26:676:A:O2'	52:26:677:U:H5'	2.09	0.52
52:26:680:C:H2'	52:26:681:A:H8	1.73	0.52
52:26:838:G:H2'	52:26:839:C:C6	2.43	0.52
52:26:1301:U:O2	52:26:1301:U:C2'	2.56	0.52
52:26:1327:C:H2'	52:26:1328:C:C6	2.43	0.52
53:27:172:A:H2'	53:27:173:A:C8	2.44	0.52
53:27:228:C:N4	53:27:417:C:H1'	2.24	0.52
53:27:347:A:H2'	53:27:348:A:C8	2.44	0.52
53:27:1013:C:H2'	53:27:1014:A:H8	1.72	0.52
53:27:1314:C:O2'	53:27:1315:C:H5'	2.09	0.52
53:27:1483:G:H1'	53:27:1509:A:H2	1.74	0.52
53:27:1838:C:H4'	53:27:1839:G:H8	1.73	0.52
53:27:2075:U:H2'	53:27:2238:G:N2	2.24	0.52
53:27:2217:G:O2'	53:27:2218:G:H5'	2.09	0.52
53:27:2534:A:H2'	53:27:2535:G:O4'	2.10	0.52
53:27:2545:G:C2'	53:27:2546:U:H5'	2.39	0.52
53:27:2593:U:H2'	53:27:2594:C:H6	1.74	0.52
53:27:2834:G:O6	53:27:2879:A:H2'	2.09	0.52
56:30:65:G:H2'	56:30:66:U:H6	1.74	0.52
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:91:ALA:HB3	1:A:103:ILE:HD11	1.90	0.52
2:B:118:PHE:HB2	53:27:2823:A:OP1	2.08	0.52
2:B:129:THR:HG22	53:27:1997:C:P	2.49	0.52
4:D:134:GLN:HE21	4:D:145:VAL:HG21	1.74	0.52
6:F:1:MET:HG3	6:F:3:VAL:HG23	1.92	0.52
9:I:35:ARG:HA	9:I:40:HIS:HD2	1.74	0.52
12:L:73:ILE:H	12:L:89:VAL:HG13	1.73	0.52
34:8:120:LYS:HG2	34:8:130:ASN:ND2	2.21	0.52
36:10:42:TRP:HB2	36:10:59:TYR:HB2	1.90	0.52
37:11:118:ARG:HA	37:11:121:ASN:HD22	1.74	0.52
39:13:49:GLN:N	39:13:50:PRO:HD2	2.24	0.52
39:13:115:VAL:HG21	40:14:62:ARG:HB2	1.91	0.52
46:20:38:PHE:O	46:20:50:THR:HG23	2.09	0.52
52:26:181:A:H61	52:26:194:C:H2'	1.72	0.52
52:26:485:U:H5'	52:26:486:U:OP2	2.10	0.52
52:26:542:G:H2'	52:26:543:U:C6	2.44	0.52
52:26:593:U:H2'	52:26:594:U:C6	2.44	0.52
52:26:1182:G:H4'	52:26:1183:U:O5'	2.09	0.52
52:26:1365:G:H2'	52:26:1366:C:C6	2.44	0.52
53:27:2271:G:H2'	53:27:2272:U:C6	2.44	0.52
53:27:2357:G:N2	53:27:2359:C:H3'	2.24	0.52
53:27:2590:A:H2'	53:27:2591:C:H6	1.73	0.52
58:32:57:A:H2'	58:32:58:A:H5'	1.89	0.52
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.52
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.52
59:33:599:VAL:HG22	59:33:655:ALA:HB2	1.90	0.52
1:A:17:LYS:CE	53:27:1565:C:H5'	2.39	0.52
5:E:91:VAL:HG22	5:E:92:GLY:N	2.24	0.52
9:I:80:HIS:CG	53:27:2642:G:H5'	2.45	0.52
9:I:113:PRO:HD2	53:27:558:U:OP1	2.10	0.52
15:O:7:LEU:HA	15:O:10:GLU:OE2	2.09	0.52
18:R:89:ALA:C	18:R:91:GLY:H	2.16	0.52
20:T:84:PHE:HE1	20:T:93:ARG:HG2	1.72	0.52
31:5:36:ARG:HG2	31:5:37:GLN:N	2.25	0.52
32:6:209:VAL:O	32:6:213:LEU:HD13	2.08	0.52
34:8:169:TRP:O	34:8:182:LYS:HB2	2.09	0.52
36:10:88:MET:HE2	36:10:90:MET:HE2	1.89	0.52
37:11:12:LEU:HD12	37:11:13:PRO:CD	2.34	0.52
42:16:51:VAL:HG23	42:16:64:SER:O	2.10	0.52
42:16:98:ARG:HB3	42:16:105:GLY:HA2	1.91	0.52
43:17:52:ILE:O	43:17:55:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:132:C:H2'	52:26:133:U:H6	1.73	0.52
52:26:201:G:H2'	52:26:202:G:C8	2.44	0.52
52:26:337:G:H2'	52:26:338:A:C8	2.44	0.52
52:26:556:C:O2'	52:26:557:G:H5'	2.09	0.52
52:26:1163:A:H2'	52:26:1164:G:H8	1.74	0.52
53:27:583:G:H2'	53:27:584:C:H6	1.74	0.52
53:27:584:C:H2'	53:27:585:G:H8	1.72	0.52
53:27:780:G:H5"	53:27:781:A:P	2.48	0.52
53:27:974:G:O2'	53:27:989:G:N2	2.39	0.52
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.52
53:27:1289:C:H2'	53:27:1290:C:H6	1.75	0.52
53:27:1700:A:H5'	53:27:1701:A:OP2	2.09	0.52
53:27:1804:C:H2'	53:27:1805:A:H8	1.74	0.52
53:27:2897:U:H2'	53:27:2898:U:C6	2.44	0.52
56:30:22:G:H2'	56:30:23:A:H8	1.74	0.52
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.09	0.52
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.52
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.09	0.52
59:33:634:HIS:CE1	59:33:638:CYS:HB3	2.45	0.52
1:A:119:VAL:HB	1:A:132:ARG:HH21	1.74	0.52
1:A:130:PRO:HA	1:A:188:ARG:HA	1.92	0.52
1:A:132:ARG:CA	1:A:166:ARG:HH22	2.22	0.52
1:A:135:PRO:HG2	36:10:80:PHE:CD1	2.44	0.52
1:A:218:THR:N	53:27:1790:C:OP1	2.34	0.52
7:G:27:VAL:HG12	7:G:83:ALA:CB	2.39	0.52
9:I:69:ARG:O	9:I:69:ARG:HD3	2.09	0.52
12:L:74:THR:HG22	12:L:89:VAL:N	2.25	0.52
16:P:65:ASN:CB	16:P:75:TYR:HB2	2.39	0.52
18:R:41:LYS:HB2	18:R:44:ALA:HB2	1.92	0.52
29:3:5:PHE:CD2	29:3:7:PRO:HD3	2.45	0.52
33:7:38:VAL:O	33:7:42:LEU:HD13	2.09	0.52
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.90	0.52
34:8:28:ASP:CG	34:8:29:THR:H	2.18	0.52
34:8:77:GLU:O	34:8:81:LEU:HG	2.10	0.52
34:8:149:LYS:CD	34:8:177:MET:HG3	2.39	0.52
37:11:2:ARG:NH1	52:26:932:C:C5	2.77	0.52
38:12:42:GLU:HG2	38:12:100:ILE:HD13	1.91	0.52
39:13:108:ARG:HB3	52:26:1347:G:H8	1.75	0.52
44:18:92:ILE:HD12	44:18:92:ILE:H	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:44:GLU:O	45:19:46:LYS:N	2.42	0.52
52:26:284:C:H2'	52:26:285:C:H6	1.75	0.52
52:26:483:C:H2'	52:26:484:G:N7	2.24	0.52
52:26:600:A:H2'	52:26:601:G:H8	1.72	0.52
53:27:190:A:H3'	53:27:191:A:C8	2.45	0.52
53:27:476:G:H1'	53:27:480:A:H61	1.74	0.52
53:27:839:U:H2'	53:27:840:C:H6	1.74	0.52
53:27:1387:A:H5'	53:27:1469:A:H1'	1.90	0.52
53:27:1960:A:O2'	53:27:1961:C:H5'	2.10	0.52
53:27:2171:A:O2'	53:27:2172:U:H5'	2.09	0.52
53:27:2246:G:H2'	53:27:2247:A:H8	1.74	0.52
53:27:2486:C:H2'	53:27:2487:G:O4'	2.10	0.52
53:27:2606:C:O2'	53:27:2607:G:H5'	2.10	0.52
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.52
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.52
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.25	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
59:33:432:HIS:O	59:33:435:VAL:HG12	2.08	0.52
2:B:83:ARG:HD3	53:27:2637:U:OP1	2.09	0.52
3:C:57:LYS:C	3:C:59:PRO:HD3	2.33	0.52
4:D:72:SER:OG	4:D:79:ARG:HA	2.09	0.52
10:J:49:ARG:NH2	52:26:1423:G:H5'	2.13	0.52
12:L:75:GLU:HG3	12:L:90:GLU:OE1	2.09	0.52
22:V:38:GLY:CA	53:27:2330:G:H21	2.22	0.52
26:Z:11:GLU:HA	26:Z:25:ARG:HA	1.91	0.52
26:Z:22:MET:HE3	26:Z:24:ILE:HD13	1.91	0.52
33:7:19:SER:HB3	33:7:21:TRP:NE1	2.24	0.52
34:8:27:ILE:HD12	34:8:27:ILE:H	1.74	0.52
42:16:72:ASN:C	42:16:73:LEU:HD12	2.34	0.52
44:18:8:ARG:O	44:18:12:ARG:HG3	2.09	0.52
45:19:42:PHE:CE2	45:19:55:LEU:HD22	2.44	0.52
50:24:59:ARG:HH21	52:26:194:C:H5"	1.74	0.52
52:26:106:C:H2'	52:26:107:G:C8	2.44	0.52
52:26:422:C:H4'	52:26:423:G:N3	2.24	0.52
52:26:745:G:H2'	52:26:746:A:C8	2.45	0.52
52:26:1023:U:H2'	52:26:1024:G:H8	1.74	0.52
52:26:1337:G:H5"	52:26:1338:G:OP1	2.08	0.52
52:26:1347:G:O2'	52:26:1348:U:OP2	2.28	0.52
53:27:141:G:H5"	53:27:142:A:C8	2.44	0.52
53:27:666:A:H2'	53:27:667:U:H6	1.74	0.52
53:27:1314:C:H2'	53:27:1315:C:C6	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1684:G:H2'	53:27:1685:C:O4'	2.09	0.52
53:27:1790:C:H2'	53:27:1791:A:C5	2.44	0.52
53:27:1871:A:H2'	53:27:1872:A:O4'	2.09	0.52
53:27:2298:A:H4'	53:27:2322:A:H4'	1.92	0.52
53:27:2323:G:H2'	53:27:2324:U:O4'	2.08	0.52
53:27:2331:G:H2'	53:27:2332:C:C6	2.44	0.52
53:27:2369:A:H2'	53:27:2370:G:C8	2.44	0.52
53:27:2437:G:H2'	53:27:2438:U:C6	2.45	0.52
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.52
59:33:726:LEU:HD23	59:33:729:LEU:HD12	1.92	0.52
1:A:32:LEU:O	1:A:63:ILE:HG12	2.10	0.52
1:A:165:ALA:HB3	1:A:172:THR:OG1	2.09	0.52
4:D:1:ALA:O	4:D:4:HIS:HB3	2.09	0.52
7:G:96:PHE:CD1	7:G:97:LYS:N	2.78	0.52
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
14:N:40:ILE:HG22	14:N:41:ALA:O	2.09	0.52
14:N:49:VAL:HG22	14:N:85:LYS:HD2	1.91	0.52
21:U:2:PHE:HD1	21:U:50:MET:HE3	1.75	0.52
21:U:20:LEU:HD21	21:U:41:GLU:HG2	1.92	0.52
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.52
37:11:37:THR:O	37:11:41:ILE:HG13	2.09	0.52
39:13:17:ARG:HH21	39:13:65:THR:HG21	1.74	0.52
39:13:21:LYS:HB2	39:13:61:ASP:OD1	2.10	0.52
41:15:22:ILE:HG12	41:15:31:VAL:HG22	1.90	0.52
41:15:51:PHE:CE2	41:15:64:VAL:HG11	2.44	0.52
42:16:27:PRO:HD2	52:26:363:A:C5	2.45	0.52
42:16:43:LYS:CB	42:16:44:PRO:CD	2.88	0.52
48:22:15:GLU:C	48:22:17:VAL:H	2.16	0.52
52:26:955:U:H3	52:26:1225:A:H61	1.56	0.52
52:26:1463:U:H2'	52:26:1464:U:C5	2.44	0.52
53:27:37:C:H2'	53:27:38:A:H8	1.75	0.52
53:27:730:A:O2'	53:27:731:C:H5'	2.10	0.52
53:27:888:C:H2'	53:27:889:C:O4'	2.09	0.52
53:27:1372:U:H1'	53:27:2214:C:O2	2.09	0.52
53:27:1423:G:H2'	53:27:1424:G:H8	1.74	0.52
53:27:1534:U:H1'	53:27:1537:G:H1	1.74	0.52
53:27:1719:G:H2'	53:27:1720:U:O4'	2.10	0.52
53:27:1838:C:N4	53:27:1898:U:H2'	2.24	0.52
53:27:2308:G:H5"	53:27:2309:A:OP2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2347:C:H2'	53:27:2348:U:H6	1.75	0.52
53:27:2643:G:C5	53:27:2644:G:N7	2.78	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
1:A:174:ARG:HA	1:A:179:GLU:O	2.10	0.52
8:H:104:GLN:HA	8:H:107:GLU:HG2	1.91	0.52
10:J:32:TYR:OH	53:27:2726:A:H5'	2.09	0.52
14:N:94:ARG:HB3	14:N:97:PHE:O	2.10	0.52
34:8:61:ARG:O	34:8:65:GLY:N	2.43	0.52
40:14:47:GLU:HG3	52:26:1254:A:OP1	2.09	0.52
40:14:67:ILE:HG23	44:18:95:LEU:HD13	1.90	0.52
40:14:88:MET:O	40:14:89:ARG:HB2	2.10	0.52
45:19:63:ARG:NH2	45:19:87:ARG:HH22	2.06	0.52
46:20:14:ARG:HH22	52:26:618:C:H1'	1.74	0.52
49:23:5:LYS:HB3	52:26:1313:U:OP2	2.10	0.52
52:26:736:C:H2'	52:26:737:C:H6	1.73	0.52
52:26:1144:G:N2	52:26:1146:A:H62	2.08	0.52
53:27:40:U:H2'	53:27:41:C:C6	2.45	0.52
53:27:140:C:H2'	53:27:141:G:C4'	2.31	0.52
53:27:1271:G:O3'	53:27:1272:A:H4'	2.09	0.52
53:27:1927:A:H2'	53:27:1928:A:C8	2.45	0.52
53:27:1997:C:O2'	53:27:1998:A:H5'	2.09	0.52
53:27:2333:A:H5"	53:27:2334:U:OP1	2.10	0.52
53:27:2386:A:H2'	53:27:2387:U:O4'	2.10	0.52
53:27:2478:A:H2'	53:27:2479:U:O4'	2.09	0.52
56:30:39:U:H2'	56:30:40:C:C6	2.45	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.52
59:33:405:ARG:HD2	59:33:419:PRO:HA	1.91	0.52
3:C:35:TYR:CE1	53:27:615:U:H2'	2.44	0.52
3:C:134:LEU:HD13	3:C:157:LEU:CD1	2.39	0.52
6:F:81:ALA:HA	6:F:147:VAL:O	2.10	0.52
8:H:121:ILE:HD12	8:H:122:GLU:N	2.25	0.52
16:P:36:GLN:HE21	53:27:563:A:H2'	1.72	0.52
17:Q:38:VAL:O	17:Q:53:PHE:HA	2.10	0.52
19:S:2:ILE:HG12	53:27:144:A:C5'	2.40	0.52
19:S:13:ALA:HB1	24:X:33:ALA:CB	2.40	0.52
32:6:124:THR:HG22	32:6:127:LYS:HD2	1.91	0.52
33:7:5:HIS:CG	44:18:88:MET:HB3	2.44	0.52
33:7:149:LYS:HG3	33:7:149:LYS:O	2.10	0.52
34:8:124:VAL:O	34:8:126:GLY:N	2.43	0.52
35:9:68:ARG:HH22	52:26:1075:U:P	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:73:SER:HB3	38:12:129:ALA:HB3	1.92	0.52
39:13:41:GLU:OE1	39:13:44:ARG:NH2	2.43	0.52
47:21:64:ARG:O	47:21:66:LEU:HG	2.09	0.52
51:25:17:ARG:O	51:25:20:ARG:HG2	2.09	0.52
52:26:287:U:H2'	52:26:288:A:H8	1.72	0.52
52:26:824:G:H2'	52:26:825:A:C8	2.45	0.52
53:27:236:C:H2'	53:27:237:C:C6	2.45	0.52
53:27:513:A:H2'	53:27:514:A:C8	2.45	0.52
53:27:940:G:H3'	53:27:941:A:H5"	1.92	0.52
53:27:1293:C:H2'	53:27:1294:U:C6	2.44	0.52
53:27:1604:C:H2'	53:27:1605:C:H6	1.75	0.52
53:27:1651:G:H2'	53:27:1652:A:O4'	2.09	0.52
53:27:2092:U:H4'	53:27:2093:G:C5'	2.37	0.52
53:27:2391:G:H2'	53:27:2424:C:N4	2.24	0.52
53:27:2808:G:H5'	53:27:2809:A:OP1	2.09	0.52
54:28:115:A:H2'	54:28:116:G:H8	1.73	0.52
56:30:70:G:H2'	56:30:71:G:C8	2.44	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.52
59:33:169:ASP:O	59:33:169:ASP:OD1	2.27	0.52
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.52
59:33:444:ILE:HG22	59:33:461:ILE:HG23	1.91	0.52
2:B:149:ASN:HB2	53:27:2574:G:O2'	2.09	0.52
3:C:75:SER:OG	3:C:77:ILE:HG12	2.10	0.52
3:C:126:VAL:HG12	3:C:157:LEU:HB2	1.92	0.52
3:C:191:ASP:O	3:C:195:GLN:HG3	2.10	0.52
5:E:3:VAL:CG2	53:27:2751:G:H4'	2.40	0.52
5:E:88:LEU:HB3	5:E:93:TYR:CB	2.40	0.52
7:G:27:VAL:HG12	7:G:83:ALA:HB2	1.91	0.52
9:I:40:HIS:CE1	9:I:41:LYS:HG3	2.44	0.52
9:I:72:LYS:HZ3	9:I:74:TYR:HE1	1.58	0.52
9:I:84:ILE:O	9:I:84:ILE:HG23	2.10	0.52
10:J:35:VAL:HG22	10:J:69:VAL:HG12	1.91	0.52
14:N:18:LEU:HD11	14:N:91:SER:HB2	1.91	0.52
25:Y:7:THR:HB	25:Y:55:LYS:HB3	1.92	0.52
28:2:38:PHE:HZ	28:2:43:ARG:HG3	1.73	0.52
33:7:20:THR:H	33:7:21:TRP:HD1	1.56	0.52
37:11:112:ASP:H	37:11:118:ARG:HD3	1.74	0.52
39:13:105:ARG:HG2	52:26:1117:A:O3'	2.09	0.52
40:14:14:ASP:OD2	40:14:17:LEU:HB2	2.09	0.52
52:26:549:C:H2'	52:26:550:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:635:A:H2'	52:26:636:U:H6	1.75	0.52
52:26:765:G:H3'	52:26:812:G:N2	2.24	0.52
52:26:1015:G:H2'	52:26:1016:A:O4'	2.10	0.52
53:27:30:G:H2'	53:27:31:C:O4'	2.10	0.52
53:27:218:A:H3'	53:27:219:A:C8	2.41	0.52
53:27:828:U:H2'	53:27:829:A:C8	2.44	0.52
53:27:828:U:C6	53:27:829:A:N7	2.78	0.52
53:27:935:C:H2'	53:27:936:A:C8	2.45	0.52
53:27:1336:A:H2'	53:27:1337:G:H8	1.75	0.52
53:27:2113:U:H2'	53:27:2114:A:H8	1.74	0.52
53:27:2508:G:C6	53:27:2580:U:H5	2.27	0.52
53:27:2639:A:H2'	53:27:2640:G:O4'	2.09	0.52
53:27:2753:A:H2'	53:27:2754:U:O4'	2.09	0.52
53:27:2760:C:O2'	53:27:2761:A:H5'	2.10	0.52
54:28:76:G:H2'	54:28:77:U:C6	2.43	0.52
59:33:406:VAL:HG22	59:33:420:ALA:HA	1.92	0.52
1:A:154:ALA:HA	1:A:159:THR:HG21	1.91	0.52
4:D:72:SER:CB	4:D:79:ARG:HA	2.39	0.52
4:D:76:PHE:HE1	53:27:2308:G:C5	2.27	0.52
5:E:39:ALA:HA	5:E:57:TYR:CE2	2.45	0.52
8:H:83:ALA:HA	8:H:99:LYS:O	2.10	0.52
24:X:24:GLU:O	24:X:28:LEU:HB2	2.10	0.52
32:6:26:MET:SD	32:6:188:THR:HA	2.49	0.52
33:7:129:PHE:CE2	33:7:156:LEU:HB2	2.45	0.52
37:11:2:ARG:HD3	52:26:1380:U:C4	2.45	0.52
38:12:88:LYS:HG2	52:26:600:A:OP1	2.10	0.52
39:13:22:PRO:HA	39:13:60:LEU:HD23	1.92	0.52
42:16:107:LYS:O	42:16:108:ASP:HB2	2.09	0.52
46:20:54:LEU:HD11	46:20:75:ILE:HG23	1.92	0.52
46:20:67:ILE:HD13	46:20:75:ILE:CD1	2.40	0.52
52:26:70:U:H4'	52:26:71:A:H8	1.74	0.52
52:26:790:A:H2'	52:26:791:G:C8	2.45	0.52
52:26:1118:U:H2'	52:26:1119:C:C6	2.45	0.52
52:26:1353:G:H2'	52:26:1354:U:C6	2.45	0.52
53:27:205:G:O2'	53:27:206:U:OP2	2.28	0.52
53:27:247:G:H4'	53:27:386:G:C4	2.45	0.52
53:27:296:U:H2'	53:27:297:G:C8	2.45	0.52
53:27:569:U:H2'	53:27:570:G:C8	2.45	0.52
53:27:740:C:H2'	53:27:741:U:H6	1.75	0.52
53:27:877:A:H1'	53:27:900:A:H62	1.75	0.52
53:27:886:A:H2'	53:27:887:U:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1693:U:C3'	53:27:1694:C:H5'	2.37	0.52
53:27:2846:G:H2'	53:27:2847:U:O4'	2.09	0.52
54:28:35:C:H2'	54:28:36:C:C5'	2.40	0.52
56:30:20:U:O2	56:30:20:U:H2'	2.10	0.52
59:33:62:MET:HE2	59:33:79:ALA:HA	1.85	0.52
3:C:29:HIS:CE1	3:C:33:VAL:HG21	2.45	0.51
4:D:41:GLU:HB2	4:D:48:LEU:HD23	1.91	0.51
4:D:48:LEU:HA	4:D:51:ASN:ND2	2.17	0.51
7:G:96:PHE:CG	7:G:97:LYS:N	2.78	0.51
8:H:52:LEU:CD2	8:H:81:LYS:HB2	2.40	0.51
9:I:4:PHE:CE2	9:I:43:GLU:HB2	2.46	0.51
9:I:31:GLU:OE1	9:I:34:ARG:HD3	2.10	0.51
11:K:33:ARG:HD3	11:K:40:SER:O	2.10	0.51
16:P:51:GLN:HE22	53:27:560:C:C4'	2.23	0.51
17:Q:14:VAL:CG2	17:Q:98:ILE:HG13	2.40	0.51
18:R:36:LEU:CD1	18:R:48:LYS:HA	2.35	0.51
32:6:26:MET:HG2	32:6:192:PRO:HG3	1.92	0.51
37:11:115:MET:HA	37:11:118:ARG:HH21	1.76	0.51
38:12:29:SER:HB3	38:12:32:LYS:HG3	1.92	0.51
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.91	0.51
52:26:144:G:H2'	52:26:145:G:O4'	2.10	0.51
52:26:626:G:H2'	52:26:627:G:C8	2.44	0.51
52:26:823:C:H2'	52:26:824:G:H8	1.75	0.51
52:26:874:G:C6	52:26:875:U:C4	2.99	0.51
52:26:1306:A:H62	52:26:1331:G:H1'	1.72	0.51
53:27:48:G:O3'	53:27:51:G:H5'	2.10	0.51
53:27:127:A:H5"	53:27:128:C:O4'	2.10	0.51
53:27:562:U:O4'	53:27:2036:C:H5'	2.10	0.51
53:27:1123:C:H2'	53:27:1124:G:H8	1.75	0.51
53:27:1386:C:H2'	53:27:1387:A:H8	1.75	0.51
53:27:1821:A:H2'	53:27:1822:C:C6	2.45	0.51
53:27:2358:A:H2'	53:27:2359:C:O4'	2.10	0.51
53:27:2583:G:H2'	53:27:2584:U:O4'	2.11	0.51
53:27:2839:G:H2'	53:27:2840:C:C6	2.46	0.51
56:30:37:A:H2'	56:30:38:A:O4'	2.09	0.51
58:32:40:C:H2'	58:32:41:C:C6	2.44	0.51
59:33:439:CYS:HA	59:33:465:THR:HG22	1.92	0.51
1:A:20:ASN:ND2	1:A:23:LEU:HG	2.26	0.51
1:A:93:VAL:HG12	1:A:94:LEU:N	2.25	0.51
2:B:12:THR:HG21	15:O:4:ILE:HG23	1.91	0.51
2:B:146:ILE:HD12	2:B:146:ILE:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:79:ARG:O	3:C:80:SER:HB2	2.11	0.51
7:G:90:GLY:O	7:G:93:ALA:HB3	2.11	0.51
17:Q:2:TYR:HE2	17:Q:42:ALA:HB3	1.73	0.51
18:R:62:ASP:N	18:R:62:ASP:OD1	2.41	0.51
24:X:61:ALA:C	24:X:63:ALA:N	2.67	0.51
26:Z:20:ASN:HB2	26:Z:39:LYS:CD	2.39	0.51
32:6:89:PHE:HB3	32:6:150:ILE:HA	1.92	0.51
33:7:153:SER:CB	33:7:164:THR:HG22	2.39	0.51
36:10:75:GLU:HA	36:10:78:PHE:HD2	1.74	0.51
37:11:77:ARG:NH2	37:11:151:ALA:O	2.44	0.51
38:12:48:PHE:HB3	38:12:60:LEU:HD23	1.92	0.51
39:13:29:ILE:O	39:13:29:ILE:HG23	2.09	0.51
42:16:28:GLN:O	42:16:29:LYS:HG2	2.09	0.51
43:17:56:ARG:HA	43:17:59:VAL:HG22	1.91	0.51
48:22:68:PRO:HB3	48:22:73:HIS:CD2	2.45	0.51
52:26:132:C:H2'	52:26:133:U:C6	2.45	0.51
52:26:268:U:H2'	52:26:269:C:C6	2.45	0.51
52:26:1527:U:H2'	52:26:1528:U:H6	1.71	0.51
53:27:37:C:H2'	53:27:38:A:C8	2.45	0.51
53:27:162:U:O2'	53:27:163:C:H5'	2.09	0.51
53:27:2126:A:H5'	53:27:2127:G:O5'	2.10	0.51
53:27:2376:A:H2'	53:27:2377:A:O4'	2.10	0.51
53:27:2415:G:H2'	53:27:2416:C:H6	1.73	0.51
53:27:2828:G:H2'	53:27:2829:A:C8	2.45	0.51
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.51
1:A:132:ARG:O	1:A:166:ARG:NH2	2.44	0.51
2:B:109:VAL:HG12	2:B:110:THR:N	2.25	0.51
3:C:40:ARG:HG2	3:C:42:GLY:H	1.76	0.51
5:E:3:VAL:HG12	5:E:68:ARG:HD3	1.93	0.51
5:E:137:LYS:O	5:E:140:ILE:HG13	2.10	0.51
7:G:5:LEU:O	7:G:8:LYS:HB2	2.10	0.51
11:K:110:VAL:O	11:K:111:ILE:HB	2.10	0.51
14:N:68:LYS:HG3	54:28:50:A:OP1	2.11	0.51
16:P:74:SER:OG	16:P:77:LYS:HE2	2.10	0.51
17:Q:74:ILE:HG21	17:Q:87:GLN:HB3	1.91	0.51
18:R:16:LYS:O	18:R:19:LEU:HB3	2.09	0.51
25:Y:19:HIS:O	25:Y:23:LEU:HG	2.09	0.51
36:10:18:VAL:HG12	36:10:19:PRO:HD3	1.90	0.51
41:15:80:ASN:HA	41:15:105:ARG:O	2.11	0.51
52:26:162:A:H2'	52:26:163:C:O4'	2.11	0.51
52:26:257:G:H2'	52:26:258:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:319:G:H2'	52:26:320:A:C8	2.45	0.51
52:26:1202:U:H2'	52:26:1203:C:O4'	2.11	0.51
52:26:1221:G:N2	52:26:1222:G:H1'	2.25	0.51
52:26:1305:G:H1'	52:26:1332:A:N6	2.24	0.51
53:27:64:A:H2'	53:27:65:U:H6	1.74	0.51
53:27:234:U:H2'	53:27:235:U:H6	1.76	0.51
53:27:595:C:H2'	53:27:596:U:C6	2.45	0.51
53:27:595:C:H2'	53:27:596:U:H6	1.75	0.51
53:27:697:G:H2'	53:27:698:C:C6	2.45	0.51
53:27:718:A:H2'	53:27:719:C:O4'	2.10	0.51
53:27:948:C:H2'	53:27:949:G:H8	1.75	0.51
53:27:1919:A:C2	53:27:1920:C:H1'	2.45	0.51
53:27:2051:A:H2'	53:27:2614:A:H61	1.75	0.51
53:27:2060:A:O2'	53:27:2061:G:OP2	2.25	0.51
53:27:2314:A:H2'	53:27:2315:G:C8	2.46	0.51
53:27:2418:A:H2'	53:27:2419:U:O4'	2.11	0.51
53:27:2713:U:H3'	53:27:2714:G:H5"	1.92	0.51
2:B:188:LEU:HD11	15:O:7:LEU:HD11	1.92	0.51
4:D:3:LEU:CG	4:D:100:GLU:HG2	2.38	0.51
5:E:154:GLU:CD	5:E:156:TYR:HB2	2.36	0.51
5:E:173:ALA:O	5:E:174:LYS:C	2.53	0.51
9:I:26:GLY:HA3	53:27:1140:C:H5'	1.92	0.51
9:I:37:ARG:NH2	9:I:110:PRO:HG3	2.24	0.51
10:J:64:ARG:NE	15:O:67:GLU:OE1	2.43	0.51
10:J:76:VAL:HG12	15:O:72:VAL:HG21	1.92	0.51
11:K:111:ILE:H	11:K:128:THR:HG23	1.75	0.51
11:K:132:ARG:HG3	11:K:142:ILE:HD13	1.92	0.51
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.91	0.51
13:M:2:ARG:HG2	13:M:3:HIS:N	2.26	0.51
15:O:13:LYS:HB2	15:O:76:HIS:ND1	2.25	0.51
21:U:60:VAL:C	21:U:61:LEU:HD12	2.35	0.51
37:11:14:ASP:OD1	37:11:43:TYR:OH	2.28	0.51
38:12:86:LYS:HD2	38:12:90:GLU:HG2	1.92	0.51
40:14:32:THR:HG23	40:14:83:THR:CG2	2.35	0.51
41:15:58:THR:HG23	41:15:59:PRO:HD2	1.93	0.51
42:16:113:ARG:NH2	52:26:501:C:OP1	2.43	0.51
52:26:263:A:H2'	52:26:264:C:C6	2.45	0.51
52:26:826:C:H2'	52:26:827:U:C6	2.45	0.51
52:26:855:U:H2'	52:26:856:C:C6	2.45	0.51
52:26:1208:C:H2'	52:26:1209:C:C6	2.46	0.51
53:27:413:C:H2'	53:27:414:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:575:A:O2'	53:27:576:U:H5'	2.10	0.51
53:27:841:G:H2'	53:27:842:U:C6	2.45	0.51
53:27:1040:A:H2	53:27:1115:G:H22	1.58	0.51
53:27:1494:A:H2	53:27:1579:A:H1'	1.73	0.51
53:27:1793:C:H2'	53:27:1794:A:H8	1.76	0.51
53:27:1936:A:H3'	53:27:1937:A:C5'	2.40	0.51
53:27:2196:C:O2'	53:27:2197:U:H5'	2.11	0.51
53:27:2719:G:H5'	53:27:2847:U:OP1	2.09	0.51
54:28:6:G:H2'	54:28:7:G:C8	2.45	0.51
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.51
59:33:697:VAL:O	59:33:699:SER:N	2.43	0.51
4:D:11:VAL:HG22	4:D:171:ALA:HB1	1.92	0.51
7:G:60:LEU:HD12	7:G:64:VAL:CG2	2.41	0.51
8:H:40:ALA:HA	8:H:43:ALA:HB2	1.92	0.51
8:H:59:THR:HB	8:H:67:THR:C	2.35	0.51
9:I:34:ARG:NH2	16:P:69:ARG:HD2	2.25	0.51
17:Q:71:LYS:HA	17:Q:90:ARG:HG3	1.93	0.51
32:6:30:ILE:HA	32:6:40:ILE:HA	1.91	0.51
32:6:42:LEU:HA	32:6:45:THR:OG1	2.10	0.51
35:9:10:LEU:HB2	35:9:40:ASP:HA	1.92	0.51
44:18:52:ARG:NE	52:26:1317:C:N3	2.58	0.51
45:19:54:GLY:O	45:19:57:ARG:HB3	2.11	0.51
51:25:53:LYS:O	51:25:56:ALA:HB3	2.11	0.51
52:26:174:A:C2'	52:26:175:C:H5'	2.41	0.51
52:26:842:U:H2'	52:26:844:G:OP2	2.11	0.51
52:26:1082:A:H2'	52:26:1083:U:O4'	2.10	0.51
52:26:1401:G:H2'	52:26:1402:C:O4'	2.09	0.51
53:27:294:A:H2'	53:27:295:G:O4'	2.10	0.51
53:27:399:U:H2'	53:27:400:G:H8	1.74	0.51
53:27:1229:C:H2'	53:27:1230:A:C8	2.46	0.51
53:27:1667:G:H22	53:27:1991:U:C3'	2.21	0.51
53:27:2164:C:H41	53:27:2171:A:H62	1.58	0.51
53:27:2493:U:C2'	53:27:2494:G:H5"	2.41	0.51
53:27:2583:G:H2'	53:27:2584:U:H5'	1.92	0.51
54:28:91:C:H2'	54:28:92:C:C6	2.46	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.51
59:33:444:ILE:CG2	59:33:461:ILE:HD12	2.38	0.51
59:33:683:ILE:O	59:33:687:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:29:PHE:O	6:F:33:GLN:HB2	2.10	0.51
10:J:40:LYS:HE3	10:J:57:VAL:CG1	2.40	0.51
11:K:64:PHE:HZ	30:4:14:LYS:HG2	1.75	0.51
25:Y:46:MET:O	25:Y:50:VAL:HG22	2.10	0.51
26:Z:2:LYS:HB2	26:Z:5:ILE:HD11	1.92	0.51
35:9:12:GLU:HA	35:9:38:VAL:HG12	1.92	0.51
35:9:57:ALA:HA	35:9:60:GLN:HG2	1.92	0.51
37:11:23:ALA:O	37:11:26:VAL:HB	2.11	0.51
37:11:27:ASN:HB3	52:26:1374:A:O2'	2.11	0.51
42:16:45:ASN:ND2	42:16:88:ASP:OD1	2.44	0.51
44:18:44:VAL:C	44:18:48:GLN:HE22	2.19	0.51
52:26:20:U:C2'	52:26:21:G:H5'	2.41	0.51
52:26:202:G:H2'	52:26:203:G:C8	2.46	0.51
52:26:633:G:H2'	52:26:634:C:H6	1.74	0.51
52:26:839:C:H2'	52:26:840:C:C6	2.45	0.51
52:26:950:U:H4'	52:26:971:G:N2	2.25	0.51
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	0.51
53:27:32:C:H2'	53:27:33:C:C6	2.45	0.51
53:27:630:G:H4'	53:27:640:C:H4'	1.91	0.51
53:27:852:U:H2'	53:27:853:C:H6	1.76	0.51
53:27:1013:C:H2'	53:27:1014:A:C8	2.46	0.51
53:27:1312:U:H1'	53:27:1314:C:H41	1.75	0.51
53:27:1801:A:H5"	53:27:2203:U:H2'	1.92	0.51
53:27:1889:A:H8	53:27:1889:A:O5'	1.94	0.51
53:27:1930:G:N2	53:27:1968:G:H2'	2.26	0.51
53:27:2411:A:H2'	53:27:2412:A:H8	1.76	0.51
53:27:2861:U:H2'	53:27:2862:G:H8	1.75	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.51
5:E:114:HIS:CD2	5:E:147:LEU:HD21	2.46	0.51
8:H:126:ARG:NE	53:27:1080:A:H5"	2.24	0.51
11:K:109:LYS:HG2	11:K:126:ARG:HB2	1.93	0.51
12:L:20:LEU:CD2	21:U:81:PRO:HG2	2.37	0.51
20:T:84:PHE:CD1	20:T:93:ARG:HG2	2.45	0.51
23:W:37:PHE:HE1	23:W:55:MET:HE1	1.76	0.51
24:X:21:LEU:HD23	24:X:25:GLN:HG2	1.91	0.51
24:X:23:ARG:O	24:X:25:GLN:N	2.44	0.51
34:8:190:LEU:HD12	34:8:190:LEU:O	2.10	0.51
38:12:77:VAL:HG11	38:12:124:ILE:HD11	1.92	0.51
39:13:30:ASN:HD21	39:13:65:THR:HA	1.76	0.51
39:13:48:ARG:HB3	39:13:52:GLU:OE2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:15:GLU:C	48:22:17:VAL:N	2.67	0.51
52:26:320:A:H2'	52:26:321:A:O4'	2.10	0.51
52:26:1346:A:H61	52:26:1374:A:H5"	1.76	0.51
53:27:528:A:C2	53:27:2042:A:C4	2.99	0.51
53:27:859:G:O2'	53:27:860:U:P	2.68	0.51
53:27:1793:C:H2'	53:27:1794:A:C8	2.45	0.51
53:27:1892:C:H2'	53:27:1893:C:H6	1.76	0.51
53:27:1947:C:H2'	53:27:1948:G:C8	2.44	0.51
53:27:2126:A:H1'	53:27:2173:A:N6	2.26	0.51
53:27:2475:C:H42	53:27:2529:G:H22	1.59	0.51
53:27:2583:G:C2'	53:27:2584:U:H5'	2.41	0.51
53:27:2607:G:H2'	53:27:2608:G:O4'	2.11	0.51
53:27:2773:C:H2'	53:27:2774:C:C6	2.44	0.51
54:28:104:A:H2'	54:28:105:G:O4'	2.11	0.51
56:30:44:G:H2'	56:30:45:U:H5'	1.93	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.51
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.51
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.51
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.51
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.93	0.51
6:F:112:LYS:HE2	53:27:2220:U:H5"	1.93	0.51
7:G:59:LEU:HG	7:G:62:ARG:NH2	2.26	0.51
7:G:107:GLU:O	7:G:108:VAL:HB	2.11	0.51
22:V:42:HIS:CD2	22:V:73:ARG:HD3	2.45	0.51
27:1:9:ARG:O	27:1:12:ARG:HG2	2.10	0.51
35:9:95:MET:HA	35:9:124:ALA:HA	1.92	0.51
42:16:66:ILE:HG12	42:16:96:THR:HG21	1.91	0.51
49:23:35:ARG:NH1	52:26:1320:C:N3	2.59	0.51
52:26:46:G:OP1	52:26:307:C:H4'	2.10	0.51
52:26:698:G:H2'	52:26:699:C:H6	1.76	0.51
52:26:987:G:H2'	52:26:988:G:C8	2.46	0.51
53:27:7:G:H2'	53:27:8:C:H6	1.74	0.51
53:27:1494:A:H2'	53:27:1495:A:C8	2.46	0.51
53:27:1779:U:H5	53:27:1784:A:C8	2.29	0.51
53:27:1901:A:H2'	53:27:1902:C:C6	2.45	0.51
53:27:1912:A:N7	53:27:1917:U:C5	2.78	0.51
53:27:2135:A:H3'	53:27:2156:G:N2	2.26	0.51
53:27:2461:A:H2'	53:27:2462:C:H6	1.75	0.51
53:27:2527:C:H2'	53:27:2528:U:O4'	2.10	0.51
53:27:2700:A:H2'	53:27:2701:U:C6	2.46	0.51
53:27:2804:U:H2'	53:27:2805:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.51
3:C:129:PRO:HG3	3:C:156:ASN:HA	1.93	0.51
5:E:42:VAL:O	5:E:42:VAL:HG13	2.11	0.51
8:H:92:PRO:O	8:H:94:LYS:N	2.40	0.51
18:R:83:LYS:CD	18:R:95:ARG:HH12	2.21	0.51
27:1:3:GLN:HA	53:27:2615:U:C2	2.46	0.51
32:6:60:ALA:HB3	32:6:223:GLY:HA3	1.92	0.51
36:10:5:GLU:O	36:10:90:MET:HE3	2.11	0.51
39:13:90:ASP:CG	39:13:91:GLU:H	2.18	0.51
42:16:23:LEU:HD12	42:16:24:GLU:H	1.75	0.51
44:18:25:GLU:HG3	44:18:26:LEU:H	1.76	0.51
50:24:54:GLN:NE2	52:26:193:C:H1'	2.25	0.51
52:26:151:A:C2'	52:26:152:A:H5'	2.41	0.51
52:26:299:G:C6	52:26:300:A:C6	2.99	0.51
52:26:1432:G:H1'	52:26:1468:A:H62	1.74	0.51
53:27:54:G:N2	53:27:55:G:H1'	2.26	0.51
53:27:138:U:H5	53:27:139:U:C6	2.29	0.51
53:27:1019:U:H2'	53:27:1020:A:C8	2.46	0.51
53:27:1112:G:H2'	53:27:1113:U:O4'	2.11	0.51
53:27:1480:C:H2'	53:27:1481:U:O4'	2.10	0.51
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.51
59:33:621:ILE:HA	59:33:635:ARG:C	2.36	0.51
3:C:143:LEU:HB3	3:C:146:VAL:HG11	1.93	0.51
8:H:105:LEU:HB3	8:H:125:THR:HG23	1.93	0.51
9:I:80:HIS:O	9:I:81:ILE:C	2.54	0.51
15:O:12:MET:HG2	15:O:54:LEU:HA	1.92	0.51
18:R:8:ARG:HG3	18:R:102:HIS:CE1	2.46	0.51
27:1:46:GLY:HA3	27:1:54:ILE:HG21	1.93	0.51
32:6:19:THR:OG1	32:6:20:ARG:N	2.41	0.51
33:7:35:ASP:OD1	33:7:56:ILE:HG21	2.11	0.51
33:7:148:ILE:HG12	33:7:149:LYS:N	2.26	0.51
39:13:121:ARG:HH11	52:26:1348:U:H4'	1.75	0.51
40:14:50:THR:HG23	40:14:64:GLN:HG2	1.91	0.51
43:17:84:CYS:HB3	49:23:73:PHE:HE1	1.76	0.51
47:21:45:VAL:HG13	47:21:72:TRP:O	2.10	0.51
49:23:37:SER:O	49:23:70:LEU:HG	2.11	0.51
52:26:358:U:H2'	52:26:359:G:C8	2.45	0.51
52:26:828:U:H5'	52:26:829:G:OP2	2.11	0.51
52:26:1155:A:H2'	52:26:1156:G:O4'	2.11	0.51
52:26:1220:G:H2'	52:26:1221:G:C8	2.46	0.51
52:26:1473:G:H2'	52:26:1474:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:211:C:H5'	53:27:1366:A:O2'	2.10	0.51
53:27:540:C:H2'	53:27:541:A:H8	1.75	0.51
53:27:613:A:H4'	53:27:614:A:C8	2.46	0.51
53:27:1454:C:O2'	53:27:1455:G:H8	1.94	0.51
53:27:1630:A:H2'	53:27:1631:G:O4'	2.11	0.51
53:27:1635:A:O2'	53:27:1636:U:H5'	2.11	0.51
53:27:1827:U:O2'	53:27:1828:G:H5'	2.10	0.51
53:27:2134:A:H2'	53:27:2134:A:N3	2.26	0.51
53:27:2329:U:H2'	53:27:2330:G:H8	1.70	0.51
53:27:2581:G:N3	53:27:2581:G:H2'	2.26	0.51
58:32:21:A:H62	58:32:47:U:H5"	1.75	0.51
59:33:305:ASP:O	59:33:305:ASP:OD1	2.29	0.51
59:33:612:CYS:SG	59:33:634:HIS:NE2	2.64	0.51
59:33:626:THR:OG1	59:33:630:GLY:O	2.29	0.51
1:A:71:ASP:HA	1:A:117:SER:OG	2.11	0.50
3:C:48:THR:O	3:C:52:VAL:HG23	2.11	0.50
4:D:16:MET:HE3	4:D:24:VAL:HA	1.92	0.50
5:E:140:ILE:HD12	5:E:140:ILE:C	2.37	0.50
5:E:165:ASP:OD1	5:E:166:GLU:N	2.45	0.50
8:H:120:ASP:O	8:H:123:ALA:HB3	2.11	0.50
10:J:76:VAL:H	15:O:72:VAL:CG2	2.24	0.50
10:J:77:ILE:HG13	15:O:71:ARG:HG3	1.93	0.50
11:K:90:VAL:HG13	11:K:95:LEU:HD11	1.93	0.50
23:W:68:ALA:HA	23:W:71:ARG:HG2	1.92	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.42	0.50
30:4:41:ARG:HD3	53:27:2349:G:OP2	2.11	0.50
33:7:102:ILE:HD12	33:7:102:ILE:C	2.36	0.50
34:8:30:LYS:H	34:8:30:LYS:CD	2.22	0.50
38:12:113:ARG:HA	38:12:116:ARG:HH12	1.76	0.50
47:21:11:VAL:HG23	47:21:56:ASP:O	2.10	0.50
47:21:68:LYS:O	52:26:254:G:OP1	2.29	0.50
52:26:85:U:H5"	52:26:86:G:OP1	2.11	0.50
52:26:112:G:N2	52:26:354:G:H5'	2.22	0.50
52:26:501:C:H2'	52:26:502:A:H8	1.72	0.50
52:26:678:U:H2'	52:26:679:C:C6	2.46	0.50
52:26:1327:C:H2'	52:26:1328:C:H6	1.75	0.50
52:26:1429:A:H2'	52:26:1430:A:H8	1.75	0.50
53:27:141:G:H3'	53:27:142:A:O4'	2.10	0.50
53:27:338:G:H2'	53:27:339:U:C6	2.46	0.50
53:27:631:A:H2	53:27:2415:G:H21	1.60	0.50
53:27:983:A:H3'	53:27:984:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1030:C:H2'	53:27:1031:G:H8	1.77	0.50
53:27:1278:C:H2'	53:27:1279:G:H8	1.76	0.50
53:27:1558:C:O4'	53:27:1560:G:C8	2.64	0.50
53:27:1903:G:H2'	53:27:1904:G:C8	2.41	0.50
53:27:2070:A:H2'	53:27:2071:A:H8	1.76	0.50
58:32:43:A:H2'	58:32:44:A:H8	1.76	0.50
1:A:257:ARG:NH1	53:27:1800:C:OP1	2.43	0.50
2:B:13:ARG:HG2	15:O:55:HIS:CE1	2.46	0.50
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.45	0.50
3:C:134:LEU:HD13	3:C:157:LEU:HD11	1.93	0.50
7:G:67:THR:N	7:G:68:PRO:CD	2.74	0.50
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.94	0.50
11:K:12:SER:C	11:K:13:LYS:HD2	2.36	0.50
12:L:28:PHE:N	12:L:104:GLU:OE2	2.44	0.50
14:N:40:ILE:CG2	14:N:44:GLY:HA2	2.41	0.50
17:Q:101:ILE:O	17:Q:102:SER:HB2	2.12	0.50
18:R:23:LEU:HD11	27:1:21:LEU:HG	1.94	0.50
20:T:36:GLU:H	20:T:36:GLU:CD	2.20	0.50
21:U:77:VAL:HG21	21:U:86:LEU:HD22	1.93	0.50
31:5:3:VAL:HG21	53:27:2539:C:H5'	1.93	0.50
32:6:71:THR:HA	32:6:92:ASN:O	2.10	0.50
33:7:142:ARG:HG3	33:7:143:LEU:HD12	1.93	0.50
37:11:56:SER:HB3	37:11:59:GLU:HG2	1.92	0.50
37:11:64:ALA:HB1	37:11:126:ALA:HB3	1.92	0.50
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.93	0.50
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.76	0.50
39:13:126:PHE:CG	39:13:127:SER:N	2.79	0.50
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.11	0.50
51:25:31:VAL:HG22	51:25:31:VAL:O	2.11	0.50
52:26:147:G:H2'	52:26:148:G:C8	2.45	0.50
52:26:1087:G:OP1	52:26:1389:C:H4'	2.11	0.50
53:27:22:C:C2'	53:27:23:G:H5"	2.40	0.50
53:27:227:A:N1	53:27:2407:A:H1'	2.25	0.50
53:27:645:C:H2'	53:27:647:G:C8	2.45	0.50
53:27:766:U:H2'	53:27:767:U:H6	1.75	0.50
53:27:1268:A:H2'	53:27:1269:A:C8	2.46	0.50
53:27:1437:C:H2'	53:27:1438:U:C6	2.46	0.50
53:27:1462:C:H2'	53:27:1463:C:C6	2.47	0.50
53:27:1972:G:H2'	53:27:1973:G:H8	1.76	0.50
53:27:2170:A:C2'	53:27:2171:A:H4'	2.41	0.50
53:27:2902:C:H2'	53:27:2903:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:53:A:C2'	54:28:54:G:H5'	2.41	0.50
54:28:55:U:H2'	54:28:56:G:C8	2.47	0.50
54:28:105:G:O2'	54:28:106:G:H5'	2.11	0.50
56:30:3:C:O2'	56:30:4:C:H5'	2.11	0.50
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.50
1:A:79:ARG:HA	1:A:111:ALA:HB1	1.93	0.50
4:D:147:ARG:CD	4:D:148:VAL:N	2.73	0.50
5:E:152:ARG:HH21	5:E:152:ARG:HG3	1.76	0.50
9:I:98:GLU:N	9:I:98:GLU:OE1	2.44	0.50
22:V:36:GLN:OE1	22:V:41:PHE:N	2.36	0.50
32:6:93:HIS:ND1	32:6:145:ASN:O	2.44	0.50
36:10:93:LYS:HZ3	48:22:19:GLU:HG2	1.76	0.50
39:13:89:TYR:O	39:13:92:SER:HB2	2.11	0.50
42:16:33:CYS:H	42:16:54:VAL:HG13	1.76	0.50
43:17:16:ILE:HG12	52:26:1302:C:C6	2.46	0.50
44:18:20:PHE:C	44:18:22:LYS:N	2.68	0.50
52:26:332:G:O2'	52:26:333:U:H5'	2.11	0.50
52:26:390:U:H2'	52:26:391:G:C8	2.47	0.50
52:26:476:U:H2'	52:26:477:C:C6	2.46	0.50
52:26:890:G:H22	52:26:906:A:H3'	1.76	0.50
52:26:1115:U:H2'	52:26:1116:U:C6	2.46	0.50
52:26:1198:G:H2'	52:26:1199:U:O4'	2.11	0.50
52:26:1499:A:O2'	52:26:1500:A:H5'	2.12	0.50
53:27:52:A:O2'	53:27:53:A:H5'	2.11	0.50
53:27:139:U:H2'	53:27:140:C:C5	2.45	0.50
53:27:156:A:O2'	53:27:157:C:H5'	2.10	0.50
53:27:355:U:H2'	53:27:356:G:H8	1.73	0.50
53:27:402:A:C2'	53:27:403:U:H5'	2.42	0.50
53:27:780:G:H3'	53:27:782:A:H62	1.75	0.50
53:27:1906:G:OP2	53:27:1930:G:H8	1.93	0.50
53:27:1937:A:C8	53:27:1939:U:H2'	2.47	0.50
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.50
59:33:612:CYS:SG	59:33:634:HIS:CD2	3.05	0.50
4:D:109:ARG:HH22	4:D:138:PRO:N	2.10	0.50
6:F:6:LEU:HD23	6:F:6:LEU:O	2.10	0.50
9:I:18:VAL:HG13	9:I:142:ILE:OXT	2.11	0.50
11:K:48:ARG:HD3	53:27:666:A:H4'	1.93	0.50
17:Q:46:GLU:CD	17:Q:46:GLU:C	2.79	0.50
21:U:9:ARG:HD3	21:U:39:ALA:HB1	1.94	0.50
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.11	0.50
25:Y:46:MET:HG2	53:27:851:C:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:14:MET:HA	53:27:15:G:O2'	2.12	0.50
33:7:72:PRO:O	33:7:76:ILE:HG12	2.12	0.50
36:10:36:ILE:HA	36:10:64:VAL:HA	1.92	0.50
41:15:27:ASN:O	41:15:56:LYS:HG2	2.11	0.50
52:26:216:U:H2'	52:26:217:C:C6	2.45	0.50
52:26:427:U:H4'	52:26:541:G:H5"	1.93	0.50
52:26:950:U:H4'	52:26:971:G:C2	2.45	0.50
52:26:1326:U:H2'	52:26:1327:C:H6	1.76	0.50
52:26:1508:A:H2'	52:26:1509:C:H6	1.77	0.50
53:27:18:U:H2'	53:27:19:A:H8	1.74	0.50
53:27:468:G:H3'	53:27:469:G:H8	1.76	0.50
53:27:827:U:H5'	53:27:828:U:O5'	2.11	0.50
53:27:2580:U:C4	53:27:2581:G:N7	2.79	0.50
57:31:21:A:H2'	57:31:46:G:N1	2.26	0.50
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.50
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.50
1:A:132:ARG:HB3	1:A:185:ALA:HB1	1.93	0.50
1:A:156:SER:HB3	1:A:159:THR:OG1	2.12	0.50
1:A:220:ARG:N	53:27:1789:A:OP1	2.41	0.50
3:C:88:ARG:O	3:C:90:GLN:N	2.43	0.50
4:D:40:GLY:HA2	4:D:84:ILE:CD1	2.41	0.50
5:E:102:ILE:O	5:E:113:ASP:HA	2.11	0.50
12:L:74:THR:HA	12:L:89:VAL:HA	1.92	0.50
20:T:47:PRO:HD3	20:T:55:GLY:HA2	1.93	0.50
23:W:29:LEU:HB2	53:27:2230:G:O3'	2.12	0.50
26:Z:22:MET:HG2	26:Z:24:ILE:HG23	1.93	0.50
38:12:106:SER:HA	52:26:642:A:C8	2.46	0.50
40:14:6:ILE:HB	40:14:76:ILE:HD12	1.93	0.50
46:20:46:LYS:HD3	52:26:617:G:H4'	1.93	0.50
52:26:922:G:H2'	52:26:923:A:C8	2.47	0.50
52:26:1310:G:O2'	52:26:1311:A:H5'	2.11	0.50
53:27:103:A:H2'	53:27:104:A:O4'	2.11	0.50
53:27:108:G:O2'	53:27:109:C:H5'	2.12	0.50
53:27:343:C:O2'	53:27:344:A:H5'	2.11	0.50
53:27:524:G:O2'	53:27:525:U:H5'	2.12	0.50
53:27:668:A:C2	53:27:670:A:C6	2.99	0.50
53:27:1257:C:H2'	53:27:1258:U:C6	2.47	0.50
53:27:2186:G:H2'	53:27:2187:U:O4'	2.11	0.50
53:27:2660:A:H2'	53:27:2661:G:O4'	2.11	0.50
54:28:3:C:C3'	54:28:4:C:H5"	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.93	0.50
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.94	0.50
16:P:38:VAL:HG13	16:P:39:ILE:N	2.27	0.50
17:Q:49:ILE:HG22	17:Q:53:PHE:C	2.37	0.50
20:T:86:PHE:CE1	20:T:91:LYS:HB2	2.46	0.50
21:U:7:GLU:HB2	21:U:41:GLU:OE1	2.12	0.50
24:X:28:LEU:O	24:X:32:ALA:N	2.44	0.50
34:8:198:LEU:HA	34:8:201:GLU:OE1	2.12	0.50
36:10:51:ILE:CG2	36:10:86:ARG:HH12	2.25	0.50
37:11:101:ARG:NH1	52:26:939:G:H5'	2.26	0.50
43:17:75:SER:O	43:17:78:ARG:HB3	2.11	0.50
43:17:104:ASN:C	43:17:106:ARG:H	2.20	0.50
46:20:8:ARG:HB3	46:20:28:ARG:CZ	2.42	0.50
53:27:141:G:C5	53:27:142:A:H1'	2.47	0.50
53:27:754:U:H2'	53:27:755:U:C6	2.46	0.50
53:27:921:C:H2'	53:27:922:C:H6	1.75	0.50
53:27:1178:C:H2'	53:27:1180:U:C6	2.46	0.50
53:27:1287:A:C2'	53:27:1288:G:H5'	2.42	0.50
53:27:1591:A:H2'	53:27:1592:C:H6	1.76	0.50
56:30:58:A:H5'	56:30:60:U:O4	2.12	0.50
59:33:676:ARG:O	59:33:679:LEU:HD13	2.11	0.50
1:A:140:VAL:HG23	1:A:161:VAL:HB	1.93	0.50
4:D:39:VAL:HG13	4:D:40:GLY:N	2.27	0.50
8:H:23:VAL:O	8:H:23:VAL:HG22	2.11	0.50
10:J:73:ASP:OD2	15:O:79:VAL:HG11	2.12	0.50
11:K:57:LEU:HA	11:K:60:ARG:NH1	2.26	0.50
12:L:70:ASP:OD1	12:L:70:ASP:C	2.54	0.50
16:P:25:GLY:O	16:P:29:ARG:NH1	2.44	0.50
21:U:20:LEU:HD23	21:U:25:LYS:O	2.11	0.50
34:8:59:LYS:O	34:8:63:ILE:HG13	2.12	0.50
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.27	0.50
38:12:47:ASP:OD1	38:12:48:PHE:N	2.44	0.50
39:13:50:PRO:O	39:13:54:VAL:HG22	2.12	0.50
40:14:39:PRO:HB2	40:14:72:ARG:HD2	1.94	0.50
42:16:25:ALA:O	52:26:553:A:O2'	2.30	0.50
46:20:25:ARG:O	52:26:110:C:O2'	2.28	0.50
52:26:431:A:H2'	52:26:432:A:O4'	2.12	0.50
52:26:440:C:C2'	52:26:441:A:H5"	2.42	0.50
52:26:1158:C:C2	52:26:1160:G:C8	2.99	0.50
52:26:1169:A:H2'	52:26:1170:A:C8	2.47	0.50
52:26:1206:G:N3	52:26:1207:G:H1'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:708:G:H2'	53:27:709:U:C6	2.46	0.50
53:27:1912:A:N7	53:27:1917:U:O4	2.45	0.50
53:27:2064:C:H1'	53:27:2450:A:C5	2.47	0.50
53:27:2114:A:H61	53:27:2117:A:N6	1.99	0.50
53:27:2364:C:H2'	53:27:2365:G:O4'	2.11	0.50
53:27:2590:A:H2'	53:27:2591:C:C6	2.47	0.50
53:27:2609:U:H5'	53:27:2610:C:OP2	2.11	0.50
53:27:2795:C:H2'	53:27:2796:U:O4'	2.12	0.50
56:30:26:A:C2'	56:30:27:G:H5'	2.42	0.50
58:32:60:U:P	58:32:61:C:H5	2.35	0.50
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
1:A:124:LYS:HD2	1:A:125:PRO:CD	2.34	0.50
1:A:132:ARG:HA	1:A:166:ARG:HH12	1.76	0.50
1:A:231:HIS:O	1:A:241:LYS:NZ	2.45	0.50
7:G:55:VAL:HG12	53:27:1084:A:H5"	1.94	0.50
27:1:3:GLN:HA	53:27:2615:U:N1	2.27	0.50
33:7:21:TRP:HB3	33:7:58:ARG:H	1.76	0.50
33:7:61:LYS:O	33:7:61:LYS:HG2	2.11	0.50
36:10:2:ARG:HB3	36:10:92:THR:CG2	2.41	0.50
42:16:74:GLN:OE1	42:16:74:GLN:N	2.45	0.50
45:19:50:HIS:CE1	52:26:667:G:H4'	2.46	0.50
47:21:30:HIS:ND1	47:21:31:PRO:HD2	2.26	0.50
52:26:121:U:H5'	52:26:122:G:OP2	2.12	0.50
52:26:158:G:H21	52:26:162:A:N6	2.10	0.50
52:26:215:C:H2'	52:26:216:U:C6	2.47	0.50
52:26:237:G:H2'	52:26:238:A:H8	1.77	0.50
52:26:446:G:H2'	52:26:447:G:O4'	2.12	0.50
52:26:772:U:H2'	52:26:773:G:C8	2.47	0.50
52:26:916:U:H2'	52:26:917:G:H8	1.77	0.50
52:26:1206:G:C5	52:26:1207:G:C8	2.99	0.50
52:26:1387:G:H2'	52:26:1388:C:C6	2.46	0.50
52:26:1508:A:H2'	52:26:1509:C:O4'	2.12	0.50
52:26:1520:C:H2'	52:26:1521:C:H6	1.77	0.50
53:27:362:A:H3'	53:27:363:G:H8	1.76	0.50
53:27:540:C:H2'	53:27:541:A:C8	2.47	0.50
53:27:1210:G:H5"	53:27:1212:G:O4'	2.12	0.50
53:27:2221:G:H2'	53:27:2222:C:C6	2.45	0.50
53:27:2223:G:H3'	53:27:2224:G:H8	1.77	0.50
53:27:2679:A:H2'	53:27:2680:U:C6	2.47	0.50
53:27:2893:A:H4'	53:27:2894:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:43:A:H2'	58:32:44:A:C8	2.47	0.50
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.93	0.50
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.41	0.50
8:H:45:THR:HB	8:H:48:ILE:HB	1.93	0.50
8:H:104:GLN:O	8:H:107:GLU:HG2	2.12	0.50
11:K:19:LEU:HD22	53:27:587:C:O2'	2.12	0.50
15:O:108:ARG:NE	52:26:1463:U:OP1	2.44	0.50
16:P:27:ARG:HA	16:P:33:VAL:CG1	2.42	0.50
20:T:70:ALA:HB1	20:T:79:ALA:HB1	1.94	0.50
21:U:14:LYS:HE2	54:28:98:G:N1	2.27	0.50
24:X:41:HIS:NE2	53:27:96:C:H4'	2.26	0.50
26:Z:20:ASN:HB2	26:Z:39:LYS:CE	2.41	0.50
26:Z:26:SER:OG	26:Z:28:VAL:HG23	2.12	0.50
37:11:62:GLU:HG3	37:11:66:GLU:OE2	2.12	0.50
38:12:4:ASP:CG	38:12:80:PRO:HD3	2.36	0.50
40:14:59:LYS:O	40:14:62:ARG:HG3	2.12	0.50
43:17:81:ASP:OD1	53:27:888:C:N4	2.41	0.50
44:18:19:TYR:O	44:18:22:LYS:HB3	2.10	0.50
49:23:16:LYS:O	49:23:20:LYS:HG3	2.12	0.50
50:24:38:ILE:HD11	50:24:78:LEU:HD11	1.94	0.50
51:25:34:ARG:HB2	51:25:36:PHE:CZ	2.46	0.50
52:26:60:A:N3	52:26:61:G:H1'	2.26	0.50
52:26:507:C:H5"	52:26:508:U:OP2	2.12	0.50
52:26:1369:C:H2'	52:26:1370:G:C8	2.46	0.50
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.50
53:27:878:A:H3'	53:27:879:G:C8	2.43	0.50
53:27:1707:G:H1'	53:27:1756:G:C4	2.47	0.50
53:27:2359:C:O2'	53:27:2360:G:H5'	2.12	0.50
53:27:2641:G:H2'	53:27:2642:G:C8	2.47	0.50
54:28:28:C:H2'	54:28:29:A:H8	1.74	0.50
56:30:74:C:H2'	59:33:432:HIS:HA	1.93	0.50
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:444:ILE:HG13	59:33:444:ILE:O	2.12	0.50
2:B:177:VAL:HG22	2:B:178:VAL:N	2.27	0.49
7:G:60:LEU:HD12	7:G:64:VAL:HG21	1.94	0.49
8:H:73:PRO:HG2	8:H:78:LEU:HD11	1.93	0.49
13:M:49:GLU:HB2	13:M:50:PRO:HD3	1.94	0.49
16:P:77:LYS:HB3	16:P:116:LEU:HD21	1.93	0.49
21:U:9:ARG:HH12	21:U:12:GLN:CA	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:40:THR:HG22	25:Y:43:ILE:H	1.76	0.49
32:6:40:ILE:HD12	32:6:201:GLY:HA2	1.94	0.49
44:18:71:GLY:HA2	52:26:975:A:O2'	2.11	0.49
46:20:31:ARG:NH1	52:26:310:G:O3'	2.45	0.49
47:21:14:ASP:C	47:21:16:MET:N	2.63	0.49
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.93	0.49
49:23:77:ARG:HD3	52:26:1225:A:O2'	2.11	0.49
52:26:184:G:H5'	52:26:224:U:O2'	2.11	0.49
52:26:424:G:H2'	52:26:425:G:H8	1.77	0.49
52:26:789:U:O2	52:26:792:A:H2'	2.11	0.49
52:26:1385:G:O2'	52:26:1386:G:H5'	2.12	0.49
53:27:123:G:H2'	53:27:124:G:H8	1.77	0.49
53:27:226:A:H5"	53:27:257:C:O2'	2.12	0.49
53:27:262:A:C2'	53:27:263:G:H5'	2.42	0.49
53:27:1263:U:H2'	53:27:1264:A:C4	2.47	0.49
53:27:1344:U:H3'	53:27:1345:C:H5'	1.93	0.49
53:27:1404:C:H2'	53:27:1405:U:H6	1.76	0.49
53:27:1654:A:H1'	53:27:2823:A:H5'	1.94	0.49
53:27:1880:U:H2'	53:27:1881:C:C6	2.46	0.49
53:27:1972:G:H2'	53:27:1973:G:C8	2.47	0.49
53:27:2114:A:N6	53:27:2115:G:N3	2.60	0.49
53:27:2355:G:H2'	53:27:2356:U:O4'	2.12	0.49
53:27:2755:C:O2'	53:27:2756:U:H2'	2.12	0.49
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.49
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.49
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.49
59:33:473:ARG:O	59:33:477:ASN:N	2.45	0.49
59:33:732:VAL:HB	59:33:735:VAL:HG23	1.94	0.49
1:A:52:HIS:O	1:A:215:VAL:HG23	2.12	0.49
6:F:78:VAL:O	6:F:144:VAL:HG13	2.12	0.49
9:I:108:MET:HE1	53:27:1138:G:N2	2.13	0.49
14:N:35:ILE:HG22	14:N:53:THR:CG2	2.36	0.49
17:Q:51:VAL:HB	17:Q:52:PRO:HD2	1.93	0.49
32:6:24:PRO:O	32:6:27:LYS:HB2	2.12	0.49
32:6:31:PHE:HB3	32:6:39:ILE:HD13	1.95	0.49
35:9:47:PHE:HZ	35:9:137:ARG:NH1	2.10	0.49
37:11:41:ILE:HG23	37:11:116:ALA:HB2	1.95	0.49
39:13:129:ARG:NH2	57:31:33:U:H3'	2.27	0.49
45:19:13:GLU:HB3	45:19:83:ARG:HH21	1.76	0.49
51:25:64:ALA:HB1	51:25:66:ARG:NH2	2.27	0.49
52:26:913:A:H4'	52:26:914:A:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:960:U:O2'	52:26:1223:C:H5"	2.12	0.49
52:26:1229:A:H2'	52:26:1230:C:C6	2.47	0.49
53:27:242:G:N2	53:27:254:G:H2'	2.27	0.49
53:27:530:G:N9	53:27:2035:G:H4'	2.28	0.49
53:27:1804:C:H2'	53:27:1805:A:C8	2.47	0.49
53:27:2748:A:H2'	53:27:2749:A:O4'	2.13	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.49
59:33:432:HIS:CD2	59:33:433:SER:H	2.30	0.49
1:A:245:THR:HG23	1:A:249:VAL:O	2.12	0.49
2:B:55:LYS:N	2:B:76:GLY:O	2.43	0.49
3:C:145:ASP:HA	3:C:166:LYS:HB3	1.94	0.49
5:E:37:ASN:HD22	5:E:63:GLN:NE2	2.10	0.49
6:F:4:ILE:HG23	6:F:4:ILE:O	2.12	0.49
9:I:15:TRP:CD1	9:I:135:GLN:HB3	2.47	0.49
13:M:3:HIS:CD2	53:27:2820:A:H4'	2.47	0.49
16:P:55:GLN:O	16:P:58:GLN:HB3	2.11	0.49
24:X:48:ARG:O	24:X:52:ARG:HG3	2.13	0.49
31:5:37:GLN:OE1	31:5:37:GLN:HA	2.10	0.49
32:6:39:ILE:HG22	32:6:40:ILE:N	2.22	0.49
35:9:135:VAL:O	35:9:139:THR:HG23	2.12	0.49
40:14:5:ARG:HG2	40:14:79:PRO:HD3	1.94	0.49
42:16:33:CYS:N	42:16:54:VAL:HG13	2.26	0.49
43:17:108:ARG:HD3	52:26:1307:U:O3'	2.11	0.49
52:26:113:G:C5	52:26:114:U:C4	3.01	0.49
52:26:663:A:H5'	52:26:836:G:OP1	2.12	0.49
52:26:961:U:OP2	52:26:1223:C:H4'	2.12	0.49
52:26:1040:U:H2'	52:26:1041:G:C8	2.47	0.49
52:26:1251:A:O2'	52:26:1370:G:H5'	2.12	0.49
52:26:1486:G:H2'	52:26:1487:G:C8	2.48	0.49
53:27:31:C:H2'	53:27:32:C:H6	1.77	0.49
53:27:539:G:H2'	53:27:540:C:C6	2.47	0.49
53:27:809:G:C5	53:27:810:U:C4	3.00	0.49
53:27:1255:U:H5"	53:27:1256:G:H5"	1.94	0.49
53:27:1911:U:H2'	53:27:1918:A:C2	2.47	0.49
53:27:2046:G:H2'	53:27:2047:C:C6	2.47	0.49
53:27:2543:G:H2'	53:27:2544:G:C8	2.47	0.49
53:27:2818:U:H2'	53:27:2819:G:C8	2.47	0.49
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.49
59:33:408:VAL:CG1	59:33:409:PHE:H	2.22	0.49
59:33:676:ARG:CG	59:33:677:SER:H	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:68:ARG:NH1	1:A:128:THR:OG1	2.45	0.49
2:B:183:GLU:CD	2:B:183:GLU:N	2.71	0.49
4:D:98:PHE:HA	4:D:101:ARG:NH1	2.27	0.49
5:E:4:ALA:HB2	5:E:65:GLY:HA2	1.93	0.49
5:E:46:ASP:CG	5:E:47:ASN:H	2.21	0.49
6:F:9:VAL:O	6:F:10:ALA:C	2.55	0.49
7:G:41:LEU:HB3	53:27:1082:U:O3'	2.12	0.49
7:G:52:MET:CG	7:G:86:MET:H	2.25	0.49
9:I:64:VAL:HG23	9:I:69:ARG:HB2	1.95	0.49
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.94	0.49
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.78	0.49
12:L:86:LYS:HD2	53:27:956:G:OP1	2.13	0.49
13:M:90:ARG:NH2	53:27:2880:C:O3'	2.45	0.49
14:N:19:GLN:HG3	14:N:20:GLU:N	2.26	0.49
15:O:64:SER:O	15:O:65:ASN:C	2.55	0.49
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.23	0.49
26:Z:56:ARG:HG3	49:23:64:GLU:HA	1.93	0.49
31:5:24:ARG:NH1	53:27:2742:G:OP2	2.45	0.49
34:8:173:ASP:HB3	34:8:178:GLU:HB3	1.94	0.49
37:11:59:GLU:O	37:11:62:GLU:HB3	2.12	0.49
38:12:116:ARG:NH1	38:12:116:ARG:HB2	2.27	0.49
44:18:7:ALA:O	44:18:8:ARG:C	2.56	0.49
50:24:14:GLU:C	50:24:16:ALA:N	2.71	0.49
50:24:50:PHE:HD1	50:24:78:LEU:HD23	1.78	0.49
50:24:81:GLN:O	50:24:84:LYS:HB3	2.12	0.49
52:26:24:U:O2'	52:26:25:C:H5'	2.13	0.49
52:26:579:A:H2'	52:26:580:C:C6	2.48	0.49
52:26:828:U:C4	52:26:859:G:C4	3.00	0.49
52:26:880:C:H2'	52:26:881:G:C8	2.36	0.49
52:26:919:A:H2'	52:26:920:U:C6	2.47	0.49
52:26:969:A:O2'	52:26:970:C:H5'	2.12	0.49
52:26:1061:G:H2'	52:26:1062:U:O4'	2.12	0.49
52:26:1062:U:H2'	52:26:1063:C:C6	2.47	0.49
53:27:80:G:O5'	53:27:346:A:H1'	2.13	0.49
53:27:123:G:H4'	53:27:1376:C:O5'	2.12	0.49
53:27:1406:U:C3'	53:27:1407:G:H5"	2.42	0.49
56:30:71:G:H2'	56:30:72:C:C6	2.47	0.49
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.49
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.49
59:33:419:PRO:HG2	59:33:422:SER:HB2	1.94	0.49
2:B:85:ALA:N	2:B:88:GLU:OE2	2.45	0.49
3:C:91:ASP:CG	3:C:92:HIS:H	2.20	0.49
4:D:53:ALA:HA	4:D:64:PRO:HG3	1.93	0.49
7:G:24:SER:O	7:G:115:GLY:HA2	2.12	0.49
7:G:38:MET:O	7:G:42:ARG:HB2	2.12	0.49
7:G:57:ASN:OD1	7:G:57:ASN:N	2.42	0.49
8:H:6:ALA:H	8:H:7:TYR:HD2	1.61	0.49
14:N:2:ASP:N	14:N:5:SER:HG	2.10	0.49
15:O:20:ARG:HD2	15:O:112:ARG:CZ	2.42	0.49
15:O:47:ILE:CD1	15:O:61:ARG:HB2	2.42	0.49
17:Q:40:MET:HE3	17:Q:46:GLU:HG3	1.94	0.49
20:T:61:GLU:OE1	20:T:61:GLU:N	2.45	0.49
25:Y:50:VAL:O	25:Y:54:VAL:HG22	2.12	0.49
32:6:68:PHE:HE2	32:6:88:GLN:HB2	1.77	0.49
32:6:113:LEU:CA	32:6:143:LEU:HD13	2.40	0.49
32:6:202:ASN:OD1	32:6:203:ASP:N	2.45	0.49
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.77	0.49
38:12:72:GLU:N	38:12:129:ALA:O	2.45	0.49
38:12:104:SER:HA	38:12:109:VAL:HG22	1.93	0.49
41:15:120:CYS:HB3	52:26:777:A:H2	1.78	0.49
44:18:9:GLU:O	44:18:13:VAL:HG23	2.13	0.49
44:18:89:ARG:HB2	44:18:89:ARG:CZ	2.43	0.49
47:21:68:LYS:HD3	52:26:267:C:OP2	2.12	0.49
52:26:129:A:H1'	52:26:130:A:C8	2.47	0.49
52:26:1511:G:H2'	52:26:1512:U:C6	2.47	0.49
53:27:28:A:H1'	53:27:513:A:C2	2.48	0.49
53:27:53:A:C8	53:27:54:G:C8	3.01	0.49
53:27:998:C:H2'	53:27:999:U:O4'	2.13	0.49
53:27:1271:G:C2	53:27:1617:C:H4'	2.47	0.49
53:27:1399:C:H2'	53:27:1400:U:H6	1.76	0.49
53:27:1826:G:C6	53:27:1827:U:C4	3.01	0.49
53:27:1938:A:O2'	53:27:1939:U:H5'	2.13	0.49
53:27:2716:C:O2'	53:27:2717:C:H5'	2.12	0.49
58:32:17:C:H5'	58:32:61:C:OP1	2.12	0.49
59:33:569:ALA:O	59:33:573:ASP:N	2.45	0.49
59:33:722:LEU:HD21	59:33:740:ARG:HB3	1.94	0.49
1:A:231:HIS:ND1	53:27:1826:G:OP1	2.39	0.49
3:C:63:LYS:HD2	3:C:69:ARG:NH1	2.27	0.49
3:C:97:ASN:OD1	53:27:606:U:H5"	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:69:ALA:N	4:D:82:TYR:O	2.38	0.49
4:D:72:SER:OG	57:31:56:C:H1'	2.13	0.49
11:K:41:ARG:HH11	53:27:806:C:H3'	1.78	0.49
12:L:6:ARG:HD2	53:27:870:U:OP1	2.13	0.49
14:N:64:TYR:CD2	54:28:51:G:H5"	2.47	0.49
18:R:3:THR:HG21	18:R:58:ALA:CB	2.35	0.49
33:7:5:HIS:CE1	33:7:7:ASN:HB3	2.47	0.49
35:9:88:HIS:CE1	35:9:137:ARG:HD3	2.48	0.49
38:12:74:ILE:HG23	38:12:74:ILE:O	2.12	0.49
39:13:94:ARG:HA	39:13:97:LEU:HB3	1.93	0.49
40:14:45:ARG:HB3	40:14:69:THR:HB	1.94	0.49
42:16:27:PRO:O	42:16:28:GLN:HG3	2.12	0.49
45:19:69:LEU:HD21	45:19:77:TYR:HA	1.93	0.49
46:20:19:VAL:HG12	46:20:37:GLY:O	2.12	0.49
48:22:17:VAL:HG13	48:22:18:GLN:N	2.27	0.49
49:23:32:THR:HG23	49:23:50:VAL:HA	1.95	0.49
52:26:20:U:O2'	52:26:21:G:H5'	2.12	0.49
52:26:471:U:H2'	52:26:472:U:C6	2.48	0.49
52:26:908:A:O2'	52:26:909:A:H5'	2.13	0.49
53:27:783:A:H2'	53:27:784:G:C4'	2.41	0.49
53:27:1060:U:C2	53:27:1062:G:H5'	2.47	0.49
53:27:1089:A:H2	53:27:1090:A:N6	2.11	0.49
53:27:1171:G:C3'	53:27:1172:C:H4'	2.35	0.49
53:27:1353:A:C5	53:27:1378:A:C6	3.01	0.49
53:27:1353:A:C8	53:27:1378:A:N6	2.81	0.49
53:27:1563:U:H2'	53:27:1564:C:C5	2.48	0.49
53:27:1786:A:H1'	53:27:1938:A:N6	2.27	0.49
53:27:2700:A:H2'	53:27:2701:U:H6	1.77	0.49
53:27:2793:C:H2'	53:27:2794:C:C6	2.47	0.49
54:28:119:A:H2'	54:28:120:A:H5"	1.94	0.49
57:31:73:A:H5"	57:31:74:C:H5'	1.95	0.49
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.49
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.49
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.49
59:33:613:CYS:SG	59:33:634:HIS:C	2.95	0.49
3:C:31:VAL:HG21	3:C:104:ALA:HB3	1.94	0.49
3:C:122:GLU:HA	3:C:190:ALA:CB	2.43	0.49
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.43	0.49
5:E:2:ARG:HD2	53:27:2751:G:O4'	2.13	0.49
5:E:34:ARG:NE	5:E:70:LEU:HD21	2.26	0.49
6:F:5:LEU:HD21	6:F:12:LEU:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:57:ASN:HB2	7:G:62:ARG:HD2	1.94	0.49
8:H:20:SER:N	8:H:21:PRO:CD	2.75	0.49
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.48	0.49
13:M:100:CYS:SG	13:M:101:GLY:N	2.85	0.49
16:P:10:ARG:CZ	53:27:513:A:O2'	2.61	0.49
16:P:57:ARG:O	16:P:61:ILE:HG13	2.13	0.49
27:1:14:MET:SD	53:27:2045:C:H5"	2.52	0.49
29:3:13:ASN:O	29:3:17:GLY:N	2.44	0.49
30:4:41:ARG:HA	30:4:44:ARG:NH1	2.28	0.49
33:7:149:LYS:HB3	33:7:168:ARG:HG3	1.95	0.49
39:13:17:ARG:CD	52:26:1147:C:O2'	2.58	0.49
40:14:17:LEU:HD23	40:14:17:LEU:C	2.37	0.49
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.94	0.49
43:17:3:ILE:O	43:17:5:GLY:N	2.45	0.49
45:19:25:GLU:HG3	45:19:80:LEU:HD22	1.95	0.49
50:24:72:ALA:HA	50:24:75:LYS:HD3	1.93	0.49
51:25:23:GLU:O	51:25:25:ALA:N	2.46	0.49
52:26:117:G:O6	52:26:289:G:H1'	2.12	0.49
52:26:303:A:H2'	52:26:304:U:O4'	2.13	0.49
52:26:843:U:OP1	52:26:844:G:H8	1.95	0.49
52:26:1147:C:H2'	52:26:1148:U:C6	2.47	0.49
52:26:1237:C:C4'	52:26:1334:G:H21	2.25	0.49
53:27:414:C:H2'	53:27:415:A:H8	1.76	0.49
53:27:513:A:H2'	53:27:514:A:H8	1.76	0.49
53:27:586:A:N1	53:27:809:G:O2'	2.42	0.49
53:27:611:C:H3'	53:27:612:G:H8	1.78	0.49
53:27:780:G:H21	53:27:783:A:H62	1.61	0.49
53:27:926:G:H2'	53:27:927:A:H8	1.77	0.49
53:27:1297:C:OP1	53:27:2710:C:H4'	2.13	0.49
53:27:1439:A:H2'	53:27:1440:U:H5'	1.94	0.49
53:27:1468:U:H2'	53:27:1522:A:N6	2.27	0.49
53:27:1914:C:O2	53:27:1914:C:O4'	2.27	0.49
53:27:2848:G:O2'	53:27:2849:U:H5'	2.12	0.49
58:32:22:G:H8	58:32:46:A:H61	1.59	0.49
58:32:29:G:H2'	58:32:30:G:O4'	2.12	0.49
59:33:624:PHE:HD1	59:33:652:ILE:HG12	1.77	0.49
1:A:130:PRO:HD3	1:A:188:ARG:NH1	2.28	0.49
3:C:55:SER:N	53:27:469:G:OP1	2.45	0.49
3:C:149:ILE:HG23	3:C:188:MET:HG3	1.95	0.49
4:D:110:ILE:HB	4:D:113:PHE:CD1	2.47	0.49
4:D:122:ASP:OD2	4:D:124:ARG:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:7:TYR:CD2	8:H:7:TYR:N	2.81	0.49
9:I:98:GLU:HB2	9:I:124:VAL:HG23	1.95	0.49
13:M:46:ARG:HG2	53:27:2838:G:O3'	2.13	0.49
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.46	0.49
22:V:37:ARG:NH1	53:27:2387:U:H4'	2.27	0.49
32:6:89:PHE:CE1	32:6:153:MET:HA	2.48	0.49
35:9:45:VAL:CG1	35:9:46:GLY:N	2.76	0.49
35:9:110:MET:HG3	35:9:139:THR:HG21	1.94	0.49
37:11:30:MET:SD	37:11:35:LYS:HB2	2.52	0.49
38:12:80:PRO:HG2	52:26:878:A:H5"	1.95	0.49
42:16:4:ASN:CG	47:21:35:LYS:HZ3	2.21	0.49
43:17:109:LYS:CD	52:26:1227:A:OP2	2.58	0.49
52:26:231:U:O2'	52:26:232:G:H5'	2.11	0.49
52:26:751:U:H2'	52:26:752:G:O4'	2.13	0.49
52:26:757:U:O2'	52:26:879:C:H1'	2.13	0.49
52:26:882:C:O2'	52:26:883:C:H5'	2.12	0.49
52:26:928:G:H2'	52:26:929:G:H8	1.78	0.49
52:26:1404:C:H2'	52:26:1405:G:C8	2.48	0.49
53:27:226:A:H2'	53:27:227:A:O4'	2.12	0.49
53:27:942:G:H2'	53:27:943:A:C8	2.46	0.49
53:27:969:G:H2'	53:27:970:U:H6	1.75	0.49
53:27:1011:G:C6	53:27:1151:A:C6	3.01	0.49
53:27:1565:C:C2	53:27:1567:G:C8	3.01	0.49
53:27:1652:A:H3'	53:27:1653:G:H8	1.78	0.49
56:30:47:U:H2'	56:30:50:U:OP1	2.12	0.49
57:31:71:C:H2'	57:31:72:A:O4'	2.12	0.49
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.49
59:33:624:PHE:CG	59:33:644:LEU:HD13	2.48	0.49
1:A:17:LYS:HE3	53:27:1565:C:H5'	1.95	0.49
6:F:135:HIS:CD2	6:F:136:SER:H	2.30	0.49
9:I:93:ILE:CD1	9:I:100:VAL:HG21	2.40	0.49
15:O:108:ARG:HE	52:26:1463:U:P	2.36	0.49
18:R:5:ALA:HB3	18:R:54:ALA:HB2	1.94	0.49
22:V:71:LYS:HD2	22:V:73:ARG:NH2	2.28	0.49
28:2:10:LEU:HD23	28:2:50:GLU:HA	1.93	0.49
29:3:24:THR:O	29:3:28:ARG:HG3	2.12	0.49
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.94	0.49
33:7:154:GLY:HA3	33:7:195:ILE:HA	1.94	0.49
34:8:12:ARG:NH2	52:26:429:U:OP2	2.46	0.49
39:13:98:ARG:HG3	39:13:103:VAL:CG2	2.37	0.49
40:14:71:LEU:C	40:14:71:LEU:HD12	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:72:ARG:NH2	52:26:1151:A:O2'	2.46	0.49
43:17:52:ILE:HG22	43:17:56:ARG:HH12	1.78	0.49
49:23:38:THR:HA	49:23:69:LYS:HA	1.94	0.49
51:25:37:TYR:O	51:25:37:TYR:CG	2.65	0.49
52:26:236:A:H2'	52:26:237:G:H8	1.78	0.49
52:26:520:A:N7	52:26:521:G:C8	2.81	0.49
52:26:686:U:O4	52:26:703:G:H2'	2.13	0.49
52:26:762:U:H2'	52:26:763:G:C8	2.47	0.49
52:26:927:G:H4'	52:26:1503:A:C8	2.48	0.49
52:26:1139:G:H5"	52:26:1140:C:H5	1.78	0.49
52:26:1238:A:N7	52:26:1301:U:O4	2.46	0.49
52:26:1250:A:H2'	52:26:1251:A:O4'	2.12	0.49
52:26:1349:A:H3'	52:26:1350:A:C8	2.44	0.49
52:26:1395:C:O2'	52:26:1396:A:H5'	2.13	0.49
52:26:1484:C:H2'	52:26:1485:U:O4'	2.12	0.49
52:26:1494:G:H5'	53:27:1913:A:N1	2.27	0.49
53:27:744:U:H2'	53:27:745:G:O4'	2.13	0.49
53:27:1074:G:H2'	53:27:1075:C:C6	2.48	0.49
53:27:1353:A:H2'	53:27:1354:A:C8	2.48	0.49
53:27:1469:A:H2'	53:27:1470:A:C8	2.48	0.49
53:27:2036:C:H2'	53:27:2037:A:H8	1.76	0.49
53:27:2676:C:H2'	53:27:2677:G:H8	1.77	0.49
53:27:2694:G:H2'	53:27:2695:U:H6	1.78	0.49
53:27:2715:C:H2'	53:27:2716:C:H5"	1.95	0.49
53:27:2720:U:H2'	53:27:2721:A:O4'	2.13	0.49
58:32:60:U:H3'	58:32:61:C:H5"	1.94	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.49
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.49
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.49
2:B:124:ARG:HH12	2:B:163:GLY:HA3	1.78	0.49
3:C:121:VAL:O	3:C:189:THR:HA	2.13	0.49
4:D:76:PHE:HE2	53:27:2310:C:C2'	2.19	0.49
7:G:56:ARG:HH21	7:G:83:ALA:HA	1.77	0.49
14:N:76:LYS:O	14:N:80:GLU:HG3	2.13	0.49
15:O:23:ASP:HA	15:O:89:GLY:H	1.77	0.49
23:W:37:PHE:CD2	23:W:48:LEU:HD12	2.47	0.49
24:X:8:GLU:OE1	24:X:8:GLU:N	2.46	0.49
25:Y:13:ILE:HD11	53:27:989:G:C4	2.48	0.49
33:7:35:ASP:O	33:7:38:VAL:HG22	2.13	0.49
36:10:79:ARG:NH2	52:26:671:G:O2'	2.45	0.49
37:11:73:GLU:O	37:11:87:PRO:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:285:C:H2'	52:26:286:C:C6	2.48	0.49
52:26:409:U:H2'	52:26:410:G:C8	2.48	0.49
52:26:1037:C:H2'	52:26:1038:C:H6	1.77	0.49
53:27:555:G:O2'	53:27:556:A:H8	1.96	0.49
53:27:733:G:H3'	53:27:761:A:H61	1.77	0.49
53:27:877:A:O2'	53:27:900:A:N6	2.44	0.49
53:27:1012:U:H4'	53:27:1013:C:H5"	1.94	0.49
53:27:1146:C:H2'	53:27:1147:A:H8	1.78	0.49
53:27:1548:A:H2'	53:27:1549:A:C8	2.47	0.49
53:27:2182:U:H2'	53:27:2183:A:C8	2.47	0.49
53:27:2339:C:H2'	53:27:2340:A:C8	2.47	0.49
53:27:2588:G:H2'	53:27:2589:A:H5'	1.95	0.49
53:27:2888:C:H2'	53:27:2889:C:C6	2.45	0.49
54:28:12:C:O2	54:28:12:C:O4'	2.31	0.49
54:28:106:G:H2'	54:28:107:G:O4'	2.13	0.49
56:30:31:A:C2	56:30:39:U:O2	2.66	0.49
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.49
59:33:607:HIS:HB2	59:33:633:VAL:HG23	1.95	0.49
59:33:667:LEU:HD22	59:33:714:ILE:HD11	1.95	0.49
59:33:694:VAL:HA	59:33:714:ILE:HG22	1.95	0.49
1:A:129:LEU:HD11	1:A:134:ILE:CG1	2.36	0.48
8:H:32:VAL:HG22	8:H:64:ARG:NH1	2.27	0.48
11:K:90:VAL:O	11:K:90:VAL:HG12	2.12	0.48
15:O:29:VAL:HG13	15:O:79:VAL:O	2.12	0.48
17:Q:99:THR:OG1	17:Q:100:GLY:N	2.46	0.48
25:Y:35:VAL:HG22	25:Y:36:GLU:H	1.78	0.48
25:Y:39:ASP:OD1	25:Y:44:ARG:HD3	2.13	0.48
31:5:23:ILE:CD1	53:27:1032:A:H1'	2.42	0.48
32:6:117:GLU:O	32:6:121:GLN:HB2	2.13	0.48
35:9:113:VAL:HG13	35:9:114:LEU:CD1	2.43	0.48
36:10:97:THR:O	36:10:98:GLU:HB2	2.12	0.48
37:11:2:ARG:HA	52:26:1380:U:C5	2.48	0.48
41:15:86:LYS:HZ1	41:15:114:PRO:HD3	1.77	0.48
51:25:48:LYS:HZ2	52:26:723:U:H3'	1.78	0.48
52:26:5:U:H4'	52:26:6:G:C4	2.48	0.48
52:26:593:U:H2'	52:26:594:U:H6	1.78	0.48
52:26:900:A:C2	52:26:901:A:C4	3.01	0.48
52:26:924:C:H2'	52:26:925:G:C8	2.48	0.48
52:26:1417:G:N2	52:26:1482:G:H2'	2.28	0.48
53:27:22:C:H3'	53:27:23:G:H5"	1.95	0.48
53:27:72:U:C4	53:27:112:U:H4'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:753:A:H2'	53:27:754:U:H6	1.78	0.48
53:27:1715:G:O2'	53:27:1716:U:C6	2.66	0.48
53:27:1923:U:H5"	57:31:24:U:O2'	2.12	0.48
53:27:2616:C:H2'	53:27:2617:U:H6	1.78	0.48
54:28:60:C:H2'	54:28:61:G:H8	1.78	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
59:33:676:ARG:O	59:33:679:LEU:HB2	2.13	0.48
59:33:684:THR:HA	59:33:687:LEU:HB2	1.95	0.48
1:A:36:ASN:HD21	53:27:1816:C:P	2.36	0.48
1:A:117:SER:HA	1:A:128:THR:O	2.13	0.48
1:A:184:GLU:HG3	1:A:186:ASP:H	1.78	0.48
6:F:29:PHE:HB2	53:27:2198:A:C2	2.48	0.48
8:H:9:LYS:HB2	53:27:1061:U:C5	2.45	0.48
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.94	0.48
10:J:104:THR:HG22	10:J:105:ARG:N	2.28	0.48
17:Q:87:GLN:HG3	53:27:1224:U:O2'	2.13	0.48
20:T:30:SER:OG	20:T:32:LYS:HG2	2.14	0.48
26:Z:60:PHE:CE2	49:23:41:PRO:HD3	2.48	0.48
32:6:20:ARG:HH11	32:6:20:ARG:HG3	1.78	0.48
32:6:52:ALA:C	32:6:56:LEU:HD13	2.38	0.48
37:11:2:ARG:HB3	52:26:933:G:OP2	2.12	0.48
38:12:26:MET:N	38:12:57:GLU:OE2	2.45	0.48
41:15:117:HIS:HB3	52:26:718:A:C8	2.48	0.48
44:18:43:ALA:C	44:18:45:LEU:N	2.71	0.48
44:18:100:TRP:O	52:26:1115:U:H1'	2.14	0.48
52:26:18:C:C3'	52:26:19:A:H5"	2.43	0.48
52:26:672:U:H2'	52:26:673:A:H8	1.76	0.48
52:26:838:G:H2'	52:26:839:C:H6	1.78	0.48
52:26:1515:G:H2'	52:26:1516:G:C8	2.48	0.48
53:27:84:A:H4'	53:27:85:G:O5'	2.12	0.48
53:27:452:G:H2'	53:27:453:A:H8	1.78	0.48
53:27:649:G:H2'	53:27:650:C:C6	2.48	0.48
53:27:1482:G:H1'	53:27:1509:A:N6	2.27	0.48
53:27:1689:A:C6	53:27:1700:A:C2	3.01	0.48
53:27:1934:C:H2'	53:27:1935:G:H8	1.77	0.48
53:27:2747:G:O6	53:27:2755:C:H5"	2.13	0.48
53:27:2836:U:H2'	53:27:2837:A:H8	1.78	0.48
59:33:435:VAL:HG22	59:33:465:THR:HG21	1.94	0.48
3:C:7:ASP:OD1	3:C:8:ALA:N	2.44	0.48
9:I:47:HIS:CE1	9:I:48:VAL:HG23	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:36:GLN:NE2	53:27:563:A:H2'	2.28	0.48
19:S:10:VAL:HG11	19:S:43:ILE:HA	1.96	0.48
26:Z:57:VAL:O	26:Z:60:PHE:HB3	2.13	0.48
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.78	0.48
32:6:116:LEU:HD21	32:6:140:LEU:HB2	1.94	0.48
34:8:190:LEU:O	34:8:192:ALA:N	2.46	0.48
35:9:107:GLY:O	35:9:111:ARG:HB2	2.13	0.48
39:13:114:LYS:O	39:13:117:LEU:HB2	2.14	0.48
42:16:22:ALA:O	42:16:23:LEU:HB3	2.13	0.48
43:17:7:ASN:ND2	43:17:18:LEU:HA	2.28	0.48
49:23:10:ILE:HD12	49:23:11:ASP:N	2.27	0.48
52:26:578:C:O2'	52:26:728:A:N3	2.46	0.48
52:26:916:U:H2'	52:26:917:G:C8	2.48	0.48
52:26:1221:G:C4	52:26:1222:G:C8	3.01	0.48
53:27:26:G:C6	53:27:27:G:N1	2.81	0.48
53:27:239:C:H2'	53:27:240:C:O4'	2.14	0.48
53:27:284:U:H2'	53:27:285:G:C8	2.49	0.48
53:27:1438:U:O2'	53:27:1439:A:H5'	2.13	0.48
53:27:1664:A:N6	53:27:1996:C:H42	2.06	0.48
53:27:1728:C:C3'	53:27:1729:U:H5"	2.43	0.48
53:27:2135:A:H3'	53:27:2156:G:H21	1.78	0.48
53:27:2345:G:H5'	53:27:2347:C:O4'	2.13	0.48
53:27:2452:C:C2	53:27:2504:U:C4	3.01	0.48
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.48
59:33:424:PRO:HD3	59:33:453:TYR:O	2.12	0.48
1:A:222:THR:HA	1:A:231:HIS:HB3	1.95	0.48
6:F:72:ILE:O	6:F:73:ASN:C	2.55	0.48
7:G:22:ALA:HA	7:G:118:ILE:HG21	1.94	0.48
8:H:96:LYS:HB2	8:H:138:VAL:HA	1.95	0.48
9:I:17:VAL:HG13	9:I:57:LEU:HD13	1.95	0.48
15:O:27:VAL:N	15:O:42:PHE:O	2.38	0.48
21:U:71:LYS:O	21:U:94:ALA:HB3	2.13	0.48
24:X:9:LYS:HB3	24:X:12:GLU:CD	2.38	0.48
32:6:86:CYS:SG	32:6:220:VAL:HG11	2.53	0.48
33:7:112:ALA:N	33:7:182:ASP:OD2	2.43	0.48
35:9:132:PRO:O	35:9:135:VAL:HG22	2.13	0.48
36:10:66:ALA:HB1	36:10:67:PRO:CD	2.35	0.48
43:17:1:ALA:C	43:17:8:ILE:HG21	2.38	0.48
48:22:41:SER:HB3	48:22:51:GLN:HG2	1.94	0.48
52:26:585:G:H2'	52:26:586:C:C6	2.48	0.48
52:26:1255:G:H2'	52:26:1279:G:H1	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:466:A:O4'	53:27:683:U:H4'	2.13	0.48
53:27:476:G:H1'	53:27:480:A:N6	2.27	0.48
53:27:635:C:H2'	53:27:636:G:C8	2.49	0.48
53:27:1023:U:O2	53:27:1023:U:H2'	2.11	0.48
53:27:1341:G:N1	53:27:1398:C:H4'	2.29	0.48
53:27:1649:G:H2'	53:27:1650:A:H8	1.78	0.48
53:27:1690:A:H2'	53:27:1691:C:O4'	2.13	0.48
53:27:2114:A:N3	53:27:2114:A:H2'	2.28	0.48
58:32:9:G:O5'	58:32:46:A:N3	2.46	0.48
2:B:149:ASN:ND2	53:27:2572:A:H2'	2.29	0.48
3:C:166:LYS:NZ	53:27:1205:A:O2'	2.47	0.48
4:D:141:ASP:CB	4:D:144:LYS:HB2	2.43	0.48
6:F:68:ARG:HA	6:F:71:LYS:CB	2.42	0.48
7:G:33:VAL:HG12	7:G:35:VAL:H	1.79	0.48
8:H:13:ALA:HB3	8:H:16:MET:HE3	1.96	0.48
8:H:106:GLN:O	8:H:109:ALA:HB3	2.13	0.48
18:R:4:ILE:HG22	18:R:106:VAL:HA	1.94	0.48
33:7:137:VAL:HA	33:7:148:ILE:HD13	1.94	0.48
34:8:143:SER:HB2	34:8:177:MET:O	2.14	0.48
38:12:85:TYR:CD1	52:26:598:U:H4'	2.48	0.48
40:14:73:LEU:HD23	40:14:75:ASP:HB2	1.95	0.48
45:19:53:ARG:NH2	52:26:579:A:C4'	2.75	0.48
45:19:55:LEU:HA	45:19:58:MET:HE3	1.95	0.48
49:23:43:MET:HE1	49:23:70:LEU:HD21	1.95	0.48
52:26:41:G:H2'	52:26:42:G:C8	2.48	0.48
52:26:437:U:O2'	52:26:438:U:H5'	2.13	0.48
52:26:584:G:H2'	52:26:585:G:C8	2.47	0.48
52:26:779:C:H2'	52:26:780:A:O4'	2.13	0.48
52:26:917:G:H2'	52:26:918:A:H8	1.72	0.48
52:26:1273:C:H2'	52:26:1274:A:O4'	2.14	0.48
52:26:1283:U:O2'	52:26:1284:C:H5'	2.12	0.48
53:27:48:G:C2	53:27:178:G:C6	3.01	0.48
53:27:538:A:H61	53:27:555:G:H1'	1.78	0.48
53:27:676:A:N6	53:27:802:A:H61	2.07	0.48
53:27:2078:C:H2'	53:27:2079:U:C6	2.49	0.48
53:27:2758:A:H2'	53:27:2759:G:H5'	1.96	0.48
53:27:2806:C:H2'	53:27:2807:U:O4'	2.13	0.48
53:27:2834:G:C2'	53:27:2835:A:H5'	2.44	0.48
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.14	0.48
1:A:56:GLY:HA2	1:A:212:TRP:O	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:131:MET:HA	1:A:134:ILE:CD1	2.34	0.48
2:B:42:ASN:OD1	2:B:43:ASP:N	2.47	0.48
5:E:126:THR:HG22	5:E:127:GLN:N	2.29	0.48
7:G:36:ASP:O	7:G:40:GLU:HG2	2.13	0.48
7:G:51:TYR:CE1	7:G:95:LEU:HD22	2.49	0.48
8:H:34:ILE:O	8:H:37:PHE:HD2	1.96	0.48
13:M:64:ARG:NH2	53:27:2851:A:O3'	2.47	0.48
20:T:65:GLN:HB3	20:T:68:ASN:OD1	2.13	0.48
29:3:1:MET:H1	53:27:1620:G:C5'	2.17	0.48
36:10:92:THR:OG1	36:10:93:LYS:N	2.36	0.48
40:14:52:LEU:HD23	40:14:62:ARG:HG2	1.96	0.48
48:22:14:ALA:HA	48:22:50:TYR:CE2	2.49	0.48
52:26:27:G:H2'	52:26:28:A:O4'	2.14	0.48
52:26:451:A:H4'	52:26:452:A:O4'	2.13	0.48
52:26:486:U:O2	52:26:486:U:H2'	2.12	0.48
52:26:769:G:C2	52:26:770:C:C6	3.01	0.48
52:26:859:G:O6	52:26:869:G:H2'	2.14	0.48
52:26:1077:G:N2	52:26:1080:A:OP2	2.39	0.48
52:26:1088:G:H21	52:26:1167:A:H61	1.61	0.48
52:26:1264:U:H2'	52:26:1265:C:H6	1.79	0.48
52:26:1439:G:H2'	52:26:1440:U:O4'	2.14	0.48
53:27:30:G:H4'	53:27:1214:A:O2'	2.13	0.48
53:27:501:A:H2'	53:27:502:A:C8	2.49	0.48
53:27:586:A:C2	53:27:1254:A:C2	3.02	0.48
53:27:758:C:O2	53:27:758:C:H2'	2.12	0.48
53:27:794:A:H2'	53:27:795:C:C6	2.49	0.48
53:27:805:G:H5'	53:27:806:C:C5	2.48	0.48
53:27:1299:G:H5"	53:27:1300:G:OP1	2.13	0.48
53:27:1336:A:H2'	53:27:1337:G:C8	2.49	0.48
53:27:1839:G:C5	53:27:1840:G:N7	2.82	0.48
53:27:2259:U:C4	53:27:2427:C:N4	2.82	0.48
53:27:2398:U:H2'	53:27:2399:G:H8	1.78	0.48
53:27:2493:U:H2'	53:27:2494:G:H5"	1.94	0.48
53:27:2542:A:H4'	53:27:2543:G:C8	2.48	0.48
53:27:2842:G:H2'	53:27:2843:G:H8	1.79	0.48
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.48
59:33:407:TYR:O	59:33:458:GLY:CA	2.62	0.48
1:A:177:SER:HB3	53:27:1799:G:O6	2.14	0.48
4:D:7:TYR:OH	4:D:29:ARG:HB3	2.13	0.48
12:L:43:ALA:HA	12:L:46:ILE:HD13	1.95	0.48
17:Q:59:ILE:HA	17:Q:101:ILE:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:5:36:ARG:O	31:5:37:GLN:CB	2.61	0.48
33:7:81:GLU:HG2	33:7:85:LYS:HE3	1.96	0.48
34:8:205:LYS:HE2	52:26:26:A:O2'	2.14	0.48
43:17:95:PRO:HB2	43:17:99:GLN:OE1	2.13	0.48
43:17:95:PRO:HA	43:17:108:ARG:HG3	1.94	0.48
46:20:12:LYS:C	46:20:14:ARG:H	2.21	0.48
51:25:27:VAL:O	51:25:31:VAL:HG12	2.14	0.48
52:26:810:C:H2'	52:26:811:C:C6	2.44	0.48
52:26:1498:U:H1'	52:26:1499:A:N7	2.29	0.48
53:27:304:U:H2'	53:27:305:C:C6	2.49	0.48
53:27:671:C:H2'	53:27:672:C:H6	1.79	0.48
53:27:1065:U:H1'	53:27:1074:G:N2	2.28	0.48
53:27:1229:C:H2'	53:27:1230:A:H8	1.77	0.48
53:27:1594:U:H2'	53:27:1595:C:H6	1.72	0.48
53:27:1975:G:H2'	53:27:1976:U:O4'	2.13	0.48
53:27:2075:U:C1'	53:27:2597:G:H21	2.27	0.48
53:27:2720:U:O2'	53:27:2721:A:H5'	2.14	0.48
54:28:4:C:H6	54:28:4:C:H5'	1.79	0.48
58:32:10:G:H3'	58:32:11:A:C8	2.49	0.48
58:32:19:G:H4'	58:32:60:U:O4	2.13	0.48
59:33:293:LEU:HD23	59:33:293:LEU:C	2.37	0.48
2:B:26:VAL:HG22	2:B:188:LEU:HD22	1.95	0.48
2:B:49:GLN:NE2	2:B:79:LEU:HD13	2.29	0.48
4:D:52:ALA:O	4:D:55:ASP:HB2	2.13	0.48
4:D:105:ILE:O	4:D:109:ARG:HG3	2.14	0.48
5:E:93:TYR:HA	5:E:105:SER:O	2.13	0.48
7:G:18:VAL:C	7:G:21:GLY:H	2.21	0.48
8:H:20:SER:HB3	8:H:21:PRO:HD3	1.96	0.48
11:K:119:PRO:HG3	11:K:138:ALA:O	2.14	0.48
13:M:83:LEU:O	13:M:84:GLY:C	2.56	0.48
13:M:87:PHE:HZ	13:M:116:VAL:O	1.96	0.48
14:N:75:GLY:HA3	14:N:106:LEU:HG	1.96	0.48
16:P:12:ARG:O	16:P:15:LYS:HB3	2.14	0.48
18:R:1:MET:HE2	18:R:109:ASP:HB3	1.95	0.48
20:T:71:ILE:O	20:T:71:ILE:HG13	2.13	0.48
33:7:111:ASP:OD2	33:7:114:LEU:HG	2.14	0.48
35:9:82:HIS:CE1	35:9:146:MET:HA	2.49	0.48
36:10:9:MET:HE2	36:10:9:MET:N	2.29	0.48
38:12:116:ARG:HB2	38:12:116:ARG:CZ	2.44	0.48
40:14:14:ASP:HB3	40:14:17:LEU:HB3	1.96	0.48
44:18:13:VAL:HA	44:18:59:GLN:HE22	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:87:ALA:HA	44:18:92:ILE:HD13	1.94	0.48
49:23:10:ILE:HD11	49:23:15:LEU:HD13	1.94	0.48
49:23:54:ARG:HB3	52:26:958:A:C2	2.48	0.48
52:26:36:C:H2'	52:26:37:U:O4'	2.14	0.48
52:26:83:C:O5'	52:26:83:C:H6	1.97	0.48
52:26:264:C:H2'	52:26:265:G:O4'	2.13	0.48
52:26:559:A:H4'	52:26:560:A:H3'	1.96	0.48
52:26:621:A:H2'	52:26:622:A:C8	2.49	0.48
52:26:698:G:H2'	52:26:699:C:C6	2.48	0.48
52:26:865:A:H2'	52:26:866:C:O4'	2.13	0.48
52:26:1230:C:H2'	52:26:1231:G:H8	1.77	0.48
52:26:1243:C:H2'	52:26:1244:G:C8	2.49	0.48
52:26:1261:A:H3'	52:26:1262:C:C6	2.47	0.48
53:27:338:G:N2	53:27:339:U:H1'	2.29	0.48
53:27:808:G:H2'	53:27:809:G:C8	2.48	0.48
53:27:864:G:H2'	53:27:865:C:C6	2.49	0.48
53:27:1360:G:H3'	53:27:1361:G:H8	1.79	0.48
53:27:1406:U:C2'	53:27:1407:G:H5"	2.43	0.48
53:27:1613:G:H3'	53:27:1614:A:C5'	2.44	0.48
53:27:1788:C:C2	53:27:1789:A:C8	3.02	0.48
53:27:1894:C:H2'	53:27:1895:C:C6	2.49	0.48
53:27:2472:G:H1'	53:27:2478:A:H61	1.78	0.48
53:27:2648:G:N2	53:27:2673:G:H1'	2.29	0.48
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.49	0.48
59:33:267:ASN:N	59:33:267:ASN:ND2	2.62	0.48
59:33:613:CYS:O	59:33:615:PRO:N	2.46	0.48
2:B:155:VAL:O	53:27:2619:C:H5'	2.14	0.48
8:H:55:PRO:HD2	8:H:74:PRO:HD3	1.96	0.48
8:H:98:GLY:C	8:H:138:VAL:HB	2.39	0.48
12:L:72:PRO:HB3	12:L:92:TRP:CZ3	2.49	0.48
13:M:63:ARG:HD2	13:M:80:PHE:CE2	2.49	0.48
15:O:54:LEU:C	15:O:56:SER:H	2.22	0.48
16:P:90:ASP:OD2	17:Q:11:GLN:HB2	2.14	0.48
20:T:6:ARG:NH2	20:T:24:VAL:O	2.46	0.48
24:X:43:LEU:O	24:X:46:VAL:HB	2.14	0.48
27:1:11:LYS:NZ	53:27:2616:C:H5"	2.29	0.48
31:5:12:ARG:C	31:5:14:CYS:H	2.20	0.48
33:7:69:THR:HG21	33:7:75:VAL:HG21	1.95	0.48
33:7:147:GLY:HA3	33:7:171:ARG:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:80:LEU:HD13	35:9:122:VAL:CG1	2.34	0.48
39:13:56:MET:O	39:13:58:GLU:N	2.46	0.48
44:18:72:PHE:HE2	44:18:74:ARG:HA	1.78	0.48
46:20:14:ARG:HE	46:20:42:ILE:CD1	2.27	0.48
46:20:70:ARG:HD3	52:26:452:A:H8	1.77	0.48
49:23:79:TYR:CE1	52:26:1226:C:H5'	2.49	0.48
52:26:49:U:C4	52:26:364:A:C6	3.02	0.48
52:26:694:A:H2'	52:26:695:A:O4'	2.14	0.48
52:26:1203:C:H2'	52:26:1204:A:H8	1.79	0.48
52:26:1417:G:H2'	52:26:1482:G:N2	2.29	0.48
52:26:1469:C:H2'	52:26:1470:U:O4'	2.13	0.48
53:27:227:A:C6	53:27:2407:A:H1'	2.49	0.48
53:27:452:G:H2'	53:27:453:A:C8	2.49	0.48
53:27:732:C:H2'	53:27:733:G:C8	2.49	0.48
53:27:764:A:C3'	53:27:765:C:H5'	2.44	0.48
53:27:2104:C:H2'	53:27:2105:U:O4'	2.14	0.48
53:27:2405:G:H1'	53:27:2412:A:H61	1.78	0.48
53:27:2485:G:H2'	53:27:2486:C:H6	1.78	0.48
53:27:2872:A:C2'	53:27:2873:A:H5'	2.44	0.48
57:31:17(A):U:H3'	57:31:18:G:C5'	2.44	0.48
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.48
59:33:333:THR:O	59:33:333:THR:CG2	2.61	0.48
2:B:130:GLN:HG3	2:B:139:SER:O	2.14	0.48
5:E:2:ARG:HD3	53:27:2751:G:C4	2.49	0.48
7:G:52:MET:HG3	7:G:86:MET:H	1.79	0.48
8:H:17:ALA:O	8:H:18:ASN:HB3	2.14	0.48
9:I:113:PRO:HG3	53:27:529:A:OP2	2.14	0.48
14:N:116:GLN:O	14:N:117:PHE:HB3	2.13	0.48
19:S:51:PHE:C	19:S:52:GLU:HG2	2.39	0.48
26:Z:37:CYS:CB	26:Z:39:LYS:HG2	2.44	0.48
39:13:43:ALA:O	39:13:46:VAL:HG13	2.14	0.48
40:14:5:ARG:N	40:14:76:ILE:O	2.47	0.48
41:15:21:HIS:CD2	52:26:707:U:H5"	2.49	0.48
41:15:55:ARG:HA	41:15:58:THR:OG1	2.14	0.48
45:19:88:ARG:HD2	53:27:714:U:H5	1.78	0.48
48:22:17:VAL:HG13	48:22:18:GLN:HG2	1.95	0.48
48:22:24:ASP:O	48:22:28:LEU:HD13	2.14	0.48
51:25:42:THR:O	51:25:45:LYS:HB3	2.13	0.48
52:26:542:G:O2'	52:26:543:U:H5'	2.13	0.48
52:26:598:U:H2'	52:26:599:C:C6	2.49	0.48
52:26:1130:A:H1'	52:26:1146:A:C2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1282:C:H2'	52:26:1283:U:H6	1.78	0.48
52:26:1446:A:O2'	52:26:1447:A:H5'	2.14	0.48
53:27:491:G:H3'	53:27:492:A:C8	2.49	0.48
53:27:940:G:C3'	53:27:941:A:H5"	2.43	0.48
53:27:990:A:H1'	53:27:1156:A:C2	2.49	0.48
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.48
53:27:1343:G:H1'	53:27:1597:A:H2'	1.96	0.48
53:27:1348:C:H2'	53:27:1349:C:O4'	2.14	0.48
53:27:1354:A:H2'	53:27:1355:G:O4'	2.14	0.48
53:27:1473:G:H2'	53:27:1474:U:O4'	2.14	0.48
53:27:2360:G:C8	53:27:2361:G:H1'	2.49	0.48
53:27:2553:G:H2'	53:27:2554:U:O4'	2.14	0.48
53:27:2884:U:O2	53:27:2884:U:C3'	2.61	0.48
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.48
57:31:18:G:OP1	57:31:18:G:H2'	2.14	0.48
59:33:696:GLY:N	59:33:713:THR:OG1	2.46	0.48
6:F:18:GLN:HE22	6:F:44:ILE:HD11	1.77	0.47
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.95	0.47
11:K:41:ARG:NH1	53:27:807:U:OP2	2.45	0.47
14:N:100:HIS:HD2	54:28:48:U:H4'	1.78	0.47
16:P:10:ARG:HH22	53:27:514:A:C5'	2.21	0.47
19:S:50:LEU:CD1	19:S:50:LEU:H	2.26	0.47
19:S:75:GLY:HA3	53:27:64:A:O3'	2.13	0.47
20:T:87:GLU:OE1	20:T:92:VAL:HG21	2.14	0.47
23:W:37:PHE:O	23:W:45:PHE:HD1	1.97	0.47
26:Z:1:MET:N	54:28:44:G:OP2	2.40	0.47
27:1:30:ASP:CG	27:1:31:LYS:N	2.72	0.47
32:6:128:LEU:HB2	32:6:132:GLU:OE1	2.14	0.47
33:7:50:SER:HB2	33:7:71:ARG:NH2	2.29	0.47
35:9:45:VAL:HG12	35:9:46:GLY:H	1.78	0.47
35:9:100:GLU:C	35:9:102:THR:N	2.70	0.47
41:15:80:ASN:HB3	41:15:105:ARG:HH11	1.78	0.47
42:16:69:GLU:OE1	42:16:69:GLU:N	2.46	0.47
47:21:69:THR:HG22	47:21:70:LYS:N	2.28	0.47
49:23:24:SER:HB3	49:23:27:LYS:HZ2	1.79	0.47
52:26:112:G:O2'	52:26:113:G:H5'	2.14	0.47
52:26:119:A:H4'	52:26:120:A:C8	2.49	0.47
52:26:179:A:H2'	52:26:180:U:O4'	2.13	0.47
52:26:227:G:H2'	52:26:228:A:C8	2.48	0.47
52:26:755:G:O2'	52:26:756:C:H5'	2.13	0.47
52:26:880:C:O2'	52:26:881:G:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1081:A:H8	52:26:1081:A:OP2	1.97	0.47
52:26:1330:U:H2'	52:26:1331:G:O4'	2.14	0.47
53:27:224:U:O4	53:27:420:C:H5'	2.13	0.47
53:27:569:U:H5'	53:27:946:C:H1'	1.96	0.47
53:27:749:A:H4'	53:27:1271:G:N3	2.28	0.47
53:27:759:G:H2'	53:27:760:G:H8	1.79	0.47
53:27:848:C:H2'	53:27:849:A:C8	2.48	0.47
53:27:859:G:O2'	53:27:860:U:O5'	2.32	0.47
53:27:888:C:O5'	53:27:888:C:H6	1.97	0.47
53:27:1048:A:N3	53:27:1048:A:H2'	2.29	0.47
53:27:1171:G:H5"	53:27:1172:C:OP2	2.13	0.47
53:27:1506:U:H2'	53:27:1507:C:C5	2.49	0.47
53:27:1613:G:C2	53:27:1619:G:C5	3.02	0.47
53:27:1672:A:H5"	53:27:2554:U:OP1	2.14	0.47
53:27:2066:C:O2'	53:27:2067:G:H5'	2.14	0.47
53:27:2129:C:H2'	53:27:2130:U:H5'	1.96	0.47
53:27:2314:A:H2'	53:27:2315:G:H8	1.79	0.47
53:27:2475:C:H42	53:27:2529:G:N2	2.11	0.47
56:30:25:C:H2'	56:30:26:A:C1'	2.44	0.47
59:33:636:ALA:O	59:33:637:ASP:HB2	2.14	0.47
59:33:640:GLN:CD	59:33:640:GLN:N	2.72	0.47
1:A:235:GLU:O	1:A:235:GLU:CD	2.57	0.47
1:A:269:ARG:NH2	53:27:1798:U:OP2	2.42	0.47
2:B:56:LYS:HB2	2:B:59:ARG:CG	2.44	0.47
3:C:5:LEU:O	3:C:7:ASP:N	2.48	0.47
6:F:78:VAL:HG12	6:F:79:THR:H	1.78	0.47
7:G:118:ILE:H	7:G:119:PRO:HD2	1.79	0.47
8:H:135:MET:HG3	8:H:137:LEU:HG	1.97	0.47
9:I:106:LYS:HB2	9:I:119:PHE:CE1	2.49	0.47
14:N:4:LYS:O	14:N:8:ILE:HG13	2.13	0.47
23:W:66:VAL:O	23:W:69:GLU:HB3	2.14	0.47
23:W:73:ARG:HG3	23:W:75:GLU:OE2	2.13	0.47
29:3:35:ARG:NH1	53:27:53:A:C2	2.81	0.47
34:8:134:TYR:CD1	52:26:620:C:H4'	2.46	0.47
38:12:65:PHE:CD2	38:12:66:GLN:HG2	2.49	0.47
38:12:88:LYS:HG3	38:12:89:ASP:N	2.28	0.47
41:15:95:THR:HG23	41:15:96:ILE:H	1.79	0.47
46:20:40:ASN:CG	46:20:43:ALA:HA	2.38	0.47
51:25:17:ARG:O	51:25:19:LYS:N	2.47	0.47
51:25:58:LYS:O	51:25:61:ARG:NH2	2.48	0.47
52:26:1251:A:H2'	52:26:1252:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1511:G:O2'	52:26:1512:U:H5'	2.14	0.47
53:27:399:U:O2'	53:27:400:G:H5'	2.13	0.47
53:27:917:A:H5"	53:27:2268:A:N6	2.28	0.47
53:27:965:C:O2'	53:27:966:G:H5'	2.14	0.47
53:27:968:C:H2'	53:27:969:G:H8	1.79	0.47
53:27:1335:C:H2'	53:27:1336:A:C8	2.48	0.47
53:27:1430:G:H2'	53:27:1431:A:O4'	2.15	0.47
53:27:1444:G:H2'	53:27:1445:G:H8	1.78	0.47
53:27:1688:U:H2'	53:27:1698:A:C6	2.49	0.47
53:27:2129:C:C2'	53:27:2130:U:H5'	2.44	0.47
57:31:20:U:H2'	57:31:21:A:H5"	1.95	0.47
58:32:39:C:H2'	58:32:40:C:C6	2.49	0.47
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.78	0.47
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
2:B:154:LYS:NZ	53:27:2024:G:O2'	2.47	0.47
3:C:9:GLN:O	3:C:11:ALA:N	2.43	0.47
3:C:48:THR:HA	3:C:82:GLY:O	2.14	0.47
3:C:83:VAL:O	3:C:83:VAL:HG12	2.13	0.47
4:D:65:LEU:HD22	54:28:42:C:C5	2.48	0.47
6:F:116:ARG:HG3	6:F:133:GLN:CD	2.38	0.47
7:G:65:GLU:OE1	53:27:1046:A:C4	2.68	0.47
7:G:100:ALA:O	7:G:103:ASN:HB3	2.14	0.47
11:K:23:ILE:HD12	11:K:23:ILE:N	2.29	0.47
27:1:1:ALA:O	27:1:2:VAL:HG12	2.14	0.47
32:6:208:ALA:O	32:6:211:LEU:HB3	2.14	0.47
36:10:2:ARG:HD3	36:10:68:GLN:HE21	1.79	0.47
36:10:61:LEU:HD23	36:10:62:MET:N	2.29	0.47
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.44	0.47
43:17:18:LEU:HD22	43:17:21:ILE:HD11	1.95	0.47
48:22:19:GLU:HA	48:22:53:GLN:HE22	1.79	0.47
50:24:6:ALA:O	50:24:9:ARG:HG2	2.14	0.47
52:26:296:U:H2'	52:26:297:G:C8	2.49	0.47
52:26:425:G:H2'	52:26:426:U:H5'	1.96	0.47
52:26:500:G:H2'	52:26:501:C:C6	2.49	0.47
52:26:1130:A:H61	52:26:1144:G:H1'	1.79	0.47
52:26:1169:A:C2	52:26:1170:A:C4	3.03	0.47
53:27:48:G:N1	53:27:178:G:C6	2.83	0.47
53:27:186:G:H2'	53:27:187:G:C8	2.45	0.47
53:27:1266:G:N2	53:27:2012:G:C4	2.81	0.47
53:27:1301:A:O2'	53:27:1302:A:H3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1373:A:H2'	53:27:1374:G:O4'	2.14	0.47
53:27:1531:C:O5'	53:27:1531:C:H6	1.98	0.47
53:27:2001:C:H2'	53:27:2002:G:C8	2.50	0.47
53:27:2183:A:H2'	53:27:2184:A:H8	1.76	0.47
53:27:2299:U:H2'	53:27:2300:C:O4'	2.14	0.47
53:27:2743:U:C3'	53:27:2744:G:H5"	2.44	0.47
53:27:2875:C:H2'	53:27:2876:G:C8	2.49	0.47
54:28:116:G:O2'	54:28:117:G:H5'	2.14	0.47
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.47
59:33:534:TYR:O	59:33:535:ASN:C	2.56	0.47
59:33:609:ILE:HG23	59:33:615:PRO:HD2	1.97	0.47
2:B:119:ALA:CB	2:B:165:MET:HB2	2.44	0.47
4:D:3:LEU:O	4:D:6:TYR:HB3	2.14	0.47
14:N:28:VAL:HG12	14:N:93:ASP:O	2.15	0.47
17:Q:20:VAL:HG12	17:Q:22:LEU:HD23	1.97	0.47
18:R:17:VAL:CG1	18:R:76:VAL:HG21	2.45	0.47
18:R:29:VAL:HG21	18:R:69:LEU:CG	2.44	0.47
20:T:39:ASN:HB2	20:T:62:ALA:O	2.13	0.47
20:T:94:PHE:HB2	20:T:100:GLU:O	2.14	0.47
27:1:9:ARG:HA	27:1:12:ARG:HG2	1.95	0.47
27:1:18:HIS:C	27:1:20:ALA:N	2.72	0.47
29:3:24:THR:OG1	29:3:25:LYS:N	2.47	0.47
34:8:5:GLY:O	34:8:7:LYS:N	2.48	0.47
39:13:37:TYR:CD2	39:13:38:PHE:HD2	2.31	0.47
40:14:13:PHE:O	40:14:70:HIS:ND1	2.47	0.47
41:15:61:ALA:O	41:15:64:VAL:HG12	2.14	0.47
44:18:7:ALA:O	44:18:10:VAL:HG12	2.14	0.47
44:18:89:ARG:HB2	44:18:89:ARG:NH1	2.29	0.47
45:19:69:LEU:CD2	45:19:77:TYR:HA	2.43	0.47
47:21:59:GLU:C	47:21:60:ILE:HG13	2.39	0.47
52:26:256:U:H2'	52:26:257:G:H8	1.79	0.47
52:26:333:U:H2'	52:26:334:C:C6	2.50	0.47
52:26:1099:G:O2'	52:26:1100:C:H5'	2.15	0.47
52:26:1192:C:O5'	52:26:1192:C:H6	1.98	0.47
52:26:1488:G:H2'	52:26:1489:G:H8	1.78	0.47
53:27:170:U:H2'	53:27:171:U:C6	2.49	0.47
53:27:250:G:C5	53:27:251:A:C5	3.02	0.47
53:27:811:U:O2'	53:27:1250:G:H2'	2.13	0.47
53:27:921:C:H2'	53:27:922:C:C6	2.48	0.47
53:27:1130:U:H2'	53:27:1131:G:H8	1.80	0.47
53:27:1509:A:H2'	53:27:1510:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1677:A:H2'	53:27:1678:A:O4'	2.15	0.47
53:27:1869:G:H5'	53:27:1870:C:OP2	2.13	0.47
53:27:1895:C:C2	53:27:1896:G:C8	3.02	0.47
53:27:2242:G:H8	53:27:2242:G:O5'	1.98	0.47
53:27:2303:G:O2'	53:27:2304:G:H5'	2.14	0.47
53:27:2544:G:H2'	53:27:2545:G:C8	2.48	0.47
53:27:2766:A:C5	53:27:2767:C:C5	3.02	0.47
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.47
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.47
59:33:281:ILE:HG13	59:33:281:ILE:O	2.14	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.96	0.47
1:A:260:LYS:O	53:27:2227:A:H4'	2.15	0.47
2:B:130:GLN:HE22	53:27:2578:G:N2	2.13	0.47
2:B:137:SER:C	2:B:138:LEU:HG	2.39	0.47
3:C:65:THR:HB	3:C:67:ARG:HG2	1.97	0.47
3:C:196:VAL:O	3:C:200:LEU:N	2.39	0.47
4:D:42:ALA:HA	4:D:45:ASP:O	2.14	0.47
8:H:54:ILE:HG23	8:H:54:ILE:O	2.14	0.47
33:7:15:LYS:HD3	33:7:180:ASP:OD1	2.14	0.47
39:13:82:ILE:O	39:13:85:ALA:HB3	2.13	0.47
45:19:55:LEU:O	45:19:59:VAL:HG23	2.14	0.47
49:23:43:MET:HA	49:23:46:LEU:HD12	1.95	0.47
52:26:40:C:O2'	52:26:41:G:H5'	2.14	0.47
52:26:123:U:OP1	52:26:312:C:H5'	2.13	0.47
52:26:236:A:H2'	52:26:237:G:C8	2.48	0.47
52:26:254:G:O2'	52:26:255:G:H5'	2.14	0.47
52:26:469:C:H2'	52:26:470:C:O4'	2.14	0.47
52:26:785:G:H2'	52:26:786:G:H8	1.80	0.47
52:26:1424:U:H2'	52:26:1425:U:O4'	2.14	0.47
53:27:55:G:H2'	53:27:56:A:H8	1.79	0.47
53:27:555:G:O2'	53:27:556:A:C8	2.66	0.47
53:27:586:A:H2	53:27:809:G:N3	2.13	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.79	0.47
53:27:819:A:OP2	53:27:1187:G:N2	2.47	0.47
53:27:957:C:O2'	53:27:958:U:H5"	2.15	0.47
53:27:1003:G:H2'	53:27:1004:U:C6	2.50	0.47
53:27:1082:U:H3'	53:27:1083:U:H5"	1.96	0.47
53:27:1268:A:C2	53:27:1269:A:H1'	2.50	0.47
53:27:1298:C:C4	53:27:1299:G:C6	3.02	0.47
53:27:1788:C:H2'	53:27:1789:A:O4'	2.13	0.47
53:27:1988:G:H2'	53:27:1989:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2461:A:H1'	53:27:2492:U:N3	2.29	0.47
53:27:2516:A:H2'	53:27:2517:C:C6	2.50	0.47
53:27:2516:A:O2'	53:27:2517:C:H5'	2.14	0.47
53:27:2549:G:H8	53:27:2549:G:H5"	1.80	0.47
53:27:2588:G:H8	53:27:2588:G:O5'	1.97	0.47
54:28:46:A:H2'	54:28:47:C:O4'	2.15	0.47
56:30:33:U:O5'	56:30:33:U:H6	1.97	0.47
56:30:54:U:H6	56:30:54:U:O5'	1.98	0.47
59:33:435:VAL:CG2	59:33:465:THR:HG21	2.44	0.47
59:33:670:ARG:NH2	59:33:700:ARG:HH21	2.06	0.47
1:A:241:LYS:O	53:27:1902:C:H4'	2.15	0.47
1:A:251:THR:O	1:A:252:LYS:HB3	2.15	0.47
3:C:148:ILE:CD1	3:C:187:VAL:HG11	2.45	0.47
4:D:3:LEU:HD13	4:D:172:PHE:CE1	2.50	0.47
4:D:127:TYR:O	4:D:154:THR:HG23	2.15	0.47
5:E:51:PHE:HZ	5:E:71:LEU:HB2	1.80	0.47
8:H:131:THR:O	8:H:135:MET:HG2	2.15	0.47
10:J:21:CYS:HB2	10:J:39:ILE:HD12	1.96	0.47
12:L:30:SER:N	12:L:105:MET:O	2.48	0.47
21:U:9:ARG:HH12	21:U:12:GLN:HB3	1.78	0.47
21:U:14:LYS:HB2	54:28:98:G:H1	1.78	0.47
21:U:64:VAL:HG12	21:U:65:VAL:N	2.28	0.47
24:X:37:LEU:HD21	24:X:40:SER:HA	1.95	0.47
27:1:39:ARG:C	27:1:41:HIS:H	2.22	0.47
33:7:46:LEU:HB3	33:7:49:ALA:CB	2.44	0.47
34:8:124:VAL:N	34:8:127:ARG:O	2.34	0.47
36:10:36:ILE:HD13	36:10:39:LEU:HD12	1.97	0.47
36:10:86:ARG:NH1	36:10:86:ARG:CB	2.78	0.47
37:11:44:SER:O	37:11:48:THR:HG23	2.14	0.47
39:13:20:ILE:CD1	39:13:60:LEU:HD13	2.24	0.47
40:14:36:VAL:HA	40:14:77:VAL:HG23	1.95	0.47
44:18:73:LEU:C	44:18:75:LYS:N	2.72	0.47
46:20:40:ASN:HB3	46:20:43:ALA:HB2	1.96	0.47
49:23:39:ILE:HB	49:23:66:VAL:O	2.14	0.47
50:24:82:ILE:HG13	50:24:83:ASN:N	2.29	0.47
51:25:39:LYS:N	51:25:40:PRO:CD	2.77	0.47
52:26:122:G:O2'	52:26:123:U:H5'	2.14	0.47
52:26:355:C:H2'	52:26:356:A:O4'	2.15	0.47
52:26:401:C:O2'	52:26:402:G:H5'	2.14	0.47
52:26:562:U:H4'	52:26:563:A:O5'	2.14	0.47
53:27:372:G:N2	53:27:400:G:H2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:753:A:H2'	53:27:754:U:C6	2.50	0.47
53:27:820:A:H2'	53:27:821:A:C8	2.49	0.47
53:27:1041:G:H2'	53:27:1042:G:H8	1.78	0.47
53:27:1056:G:H5"	53:27:1057:A:O4'	2.15	0.47
53:27:1289:C:H2'	53:27:1290:C:C6	2.48	0.47
53:27:1635:A:C2'	53:27:1636:U:H5'	2.44	0.47
53:27:1806:C:H2'	53:27:1807:G:O4'	2.15	0.47
53:27:1822:C:H2'	53:27:1823:G:H8	1.78	0.47
53:27:2190:G:H2'	53:27:2191:A:C8	2.49	0.47
53:27:2261:C:O2'	53:27:2262:U:H5'	2.14	0.47
53:27:2539:C:O2'	53:27:2540:C:H5'	2.14	0.47
53:27:2896:C:H2'	53:27:2897:U:H6	1.80	0.47
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.47
59:33:721:VAL:O	59:33:724:ARG:HB3	2.15	0.47
1:A:159:THR:HG22	1:A:160:TYR:N	2.30	0.47
1:A:206:LYS:HB2	53:27:729:G:N7	2.30	0.47
2:B:138:LEU:HA	53:27:1658:C:OP1	2.15	0.47
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.47
3:C:60:TRP:HZ2	3:C:69:ARG:HA	1.80	0.47
3:C:188:MET:HE2	3:C:193:VAL:CA	2.39	0.47
4:D:3:LEU:HG	4:D:100:GLU:CG	2.42	0.47
4:D:19:PHE:O	4:D:20:ASN:C	2.57	0.47
4:D:103:ILE:HG13	4:D:104:THR:N	2.30	0.47
4:D:110:ILE:HB	4:D:113:PHE:HD1	1.80	0.47
5:E:155:PRO:HG2	5:E:156:TYR:CD2	2.49	0.47
6:F:73:ASN:O	6:F:74:ALA:O	2.33	0.47
8:H:17:ALA:O	8:H:18:ASN:CB	2.62	0.47
8:H:58:ILE:HG22	8:H:60:VAL:HG23	1.97	0.47
8:H:130:GLY:HA3	53:27:1079:C:O2	2.15	0.47
9:I:15:TRP:CG	9:I:135:GLN:HB3	2.50	0.47
9:I:80:HIS:O	9:I:82:GLY:N	2.48	0.47
9:I:136:GLN:NE2	53:27:2899:A:H5'	2.30	0.47
10:J:56:ASP:OD1	10:J:57:VAL:N	2.47	0.47
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.29	0.47
11:K:79:LEU:HD11	11:K:131:ALA:HA	1.97	0.47
11:K:111:ILE:HD11	53:27:636:G:C6	2.50	0.47
12:L:64:TRP:HB2	12:L:104:GLU:HB3	1.96	0.47
12:L:75:GLU:OE1	53:27:957:C:H5'	2.15	0.47
16:P:81:GLY:O	16:P:84:LYS:HB2	2.15	0.47
18:R:17:VAL:HA	18:R:43:ALA:HB1	1.95	0.47
20:T:52:ASN:C	20:T:54:PRO:HD3	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:10:ARG:HG3	23:W:11:PRO:CD	2.44	0.47
23:W:18:SER:CB	53:27:2080:A:H4'	2.45	0.47
26:Z:10:GLU:HA	26:Z:25:ARG:HH21	1.80	0.47
32:6:65:LYS:HE2	32:6:156:LEU:O	2.14	0.47
33:7:7:ASN:O	33:7:11:LEU:HG	2.14	0.47
33:7:84:GLU:O	33:7:88:LYS:HG2	2.14	0.47
34:8:9:LYS:O	34:8:12:ARG:HB3	2.15	0.47
34:8:94:GLU:OE2	34:8:103:ARG:HG3	2.14	0.47
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.50	0.47
34:8:173:ASP:HB2	34:8:178:GLU:OE1	2.15	0.47
36:10:3:HIS:HB2	36:10:92:THR:CA	2.43	0.47
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.29	0.47
40:14:76:ILE:HD11	40:14:87:LEU:HD11	1.97	0.47
43:17:7:ASN:CG	43:17:20:SER:HB2	2.40	0.47
43:17:98:GLY:HA3	52:26:1322:C:H5"	1.97	0.47
47:21:58:VAL:HG22	47:21:59:GLU:N	2.28	0.47
48:22:69:TYR:HB2	48:22:73:HIS:HE1	1.80	0.47
50:24:10:ALA:O	50:24:13:SER:HB3	2.15	0.47
51:25:23:GLU:CG	51:25:24:LYS:H	2.23	0.47
52:26:15:G:C6	52:26:16:A:C5	3.03	0.47
52:26:102:G:H2'	52:26:103:U:H6	1.80	0.47
52:26:113:G:H2'	52:26:114:U:H6	1.77	0.47
52:26:371:A:H2'	52:26:372:C:O4'	2.14	0.47
52:26:412:A:H62	52:26:431:A:N6	2.05	0.47
52:26:439:U:H2'	52:26:440:C:C6	2.50	0.47
52:26:503:C:O2'	52:26:504:C:H5'	2.15	0.47
52:26:575:G:C6	52:26:881:G:C6	3.02	0.47
52:26:725:G:H2'	52:26:726:C:H6	1.79	0.47
52:26:865:A:H1'	52:26:918:A:O2'	2.14	0.47
52:26:948:C:H2'	52:26:949:A:H8	1.79	0.47
52:26:962:C:H1'	52:26:1201:A:C6	2.49	0.47
52:26:974:A:H4'	52:26:975:A:O5'	2.15	0.47
52:26:1037:C:H2'	52:26:1038:C:C6	2.50	0.47
52:26:1371:G:H2'	52:26:1372:U:O4'	2.15	0.47
52:26:1478:U:H2'	52:26:1479:C:H6	1.80	0.47
53:27:37:C:H4'	53:27:451:U:OP1	2.15	0.47
53:27:191:A:O2'	53:27:192:C:H5'	2.14	0.47
53:27:291:G:O2'	53:27:292:U:H5'	2.15	0.47
53:27:447:A:O2'	53:27:473:G:N7	2.46	0.47
53:27:481:G:H1'	53:27:506:G:N2	2.29	0.47
53:27:524:G:H2'	53:27:525:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:553:G:H2'	53:27:554:U:O4'	2.15	0.47
53:27:569:U:C4	53:27:570:G:C6	3.02	0.47
53:27:603:A:H4'	53:27:604:G:O5'	2.14	0.47
53:27:731:C:OP2	53:27:761:A:OP1	2.33	0.47
53:27:851:C:H2'	53:27:852:U:H6	1.78	0.47
53:27:858:G:H5'	53:27:859:G:OP2	2.14	0.47
53:27:946:C:H2'	53:27:947:A:H8	1.80	0.47
53:27:1072:C:O5'	53:27:1072:C:H6	1.97	0.47
53:27:1223:G:C6	53:27:1227:G:C6	3.03	0.47
53:27:1367:A:C2'	53:27:1368:G:H5'	2.45	0.47
53:27:1399:C:H2'	53:27:1400:U:C6	2.49	0.47
53:27:1551:A:H2'	53:27:1552:A:O4'	2.14	0.47
53:27:1736:U:H2'	53:27:1737:G:O4'	2.14	0.47
53:27:1789:A:C6	53:27:1790:C:C4	3.02	0.47
53:27:1790:C:H3'	53:27:1828:G:H22	1.78	0.47
53:27:2051:A:H2'	53:27:2614:A:N6	2.30	0.47
53:27:2051:A:H5'	53:27:2578:G:O5'	2.15	0.47
53:27:2232:C:O2'	53:27:2233:U:H5'	2.15	0.47
53:27:2234:G:H2'	53:27:2235:G:O4'	2.14	0.47
53:27:2348:U:H2'	53:27:2349:G:H8	1.79	0.47
53:27:2371:G:O2'	53:27:2372:U:H5'	2.14	0.47
53:27:2468:A:C8	53:27:2476:A:N1	2.82	0.47
53:27:2469:A:H2'	53:27:2470:G:O4'	2.14	0.47
53:27:2576:G:H2'	53:27:2576:G:N3	2.29	0.47
53:27:2649:C:H2'	53:27:2650:U:C6	2.48	0.47
53:27:2818:U:H2'	53:27:2819:G:H8	1.79	0.47
53:27:2859:G:C6	53:27:2860:A:N6	2.83	0.47
53:27:2881:U:H2'	53:27:2882:A:O4'	2.14	0.47
56:30:35:A:H2'	56:30:36:A:O4'	2.14	0.47
56:30:61:C:O5'	56:30:61:C:H6	1.98	0.47
57:31:50:U:H3	57:31:64:G:H1	1.62	0.47
58:32:30:G:O6	58:32:40:C:N4	2.39	0.47
58:32:61:C:H2'	58:32:62:C:H6	1.78	0.47
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.47
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.47
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.47
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
59:33:616:ILE:CG2	59:33:667:LEU:HD12	2.42	0.47
59:33:732:VAL:O	59:33:735:VAL:HB	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:232:GLY:O	1:A:234:GLY:N	2.47	0.47
1:A:250:GLN:NE2	1:A:251:THR:O	2.45	0.47
2:B:190:LYS:HE2	53:27:2729:G:O3'	2.15	0.47
7:G:5:LEU:CA	7:G:8:LYS:HB2	2.42	0.47
8:H:35:MET:HA	8:H:38:CYS:SG	2.55	0.47
8:H:80:LYS:HA	8:H:85:ILE:HG13	1.97	0.47
8:H:94:LYS:NZ	53:27:1077:A:H5'	2.29	0.47
8:H:127:SER:HA	53:27:1080:A:H1'	1.97	0.47
9:I:104:ALA:HA	53:27:1139:G:OP1	2.14	0.47
11:K:23:ILE:HB	17:Q:84:ARG:HH11	1.80	0.47
11:K:62:PRO:CB	30:4:29:ARG:HH11	2.28	0.47
12:L:73:ILE:HG21	12:L:91:TYR:CZ	2.49	0.47
13:M:25:ALA:HB1	13:M:48:VAL:HG22	1.96	0.47
14:N:47:VAL:O	14:N:47:VAL:HG23	2.15	0.47
15:O:26:GLU:HA	15:O:43:GLU:HA	1.96	0.47
19:S:50:LEU:HD12	19:S:50:LEU:N	2.30	0.47
19:S:64:LYS:HA	19:S:79:ASP:OD1	2.15	0.47
22:V:70:PRO:HD3	54:28:12:C:H42	1.80	0.47
24:X:39:GLN:HB2	24:X:41:HIS:CE1	2.50	0.47
33:7:157:GLY:C	33:7:159:ALA:N	2.72	0.47
33:7:184:ASN:OD1	33:7:185:THR:N	2.47	0.47
35:9:114:LEU:HB3	35:9:119:VAL:CG2	2.44	0.47
37:11:2:ARG:HA	52:26:1380:U:C4	2.49	0.47
38:12:78:SER:OG	38:12:84:ILE:N	2.47	0.47
38:12:111:THR:HG22	38:12:113:ARG:H	1.80	0.47
40:14:56:HIS:O	40:14:57:VAL:HG12	2.15	0.47
42:16:21:PRO:C	42:16:23:LEU:H	2.20	0.47
42:16:43:LYS:HB3	42:16:44:PRO:HD3	1.95	0.47
46:20:74:LEU:HA	46:20:77:GLU:HB2	1.96	0.47
49:23:7:GLY:O	49:23:8:PRO:C	2.58	0.47
52:26:205:A:H2'	52:26:206:C:C6	2.49	0.47
52:26:493:A:H2'	52:26:494:G:C8	2.50	0.47
52:26:922:G:H2'	52:26:922:G:N3	2.30	0.47
52:26:1486:G:H2'	52:26:1487:G:O4'	2.14	0.47
53:27:100:U:H4'	53:27:101:A:O4'	2.15	0.47
53:27:347:A:H2'	53:27:348:A:H8	1.78	0.47
53:27:697:G:C6	53:27:698:C:N4	2.83	0.47
53:27:813:U:H2'	53:27:814:C:H6	1.78	0.47
53:27:991:C:H5'	53:27:1185:G:H2'	1.97	0.47
53:27:1200:C:H2'	53:27:1201:U:C6	2.49	0.47
53:27:2178:C:H2'	53:27:2179:C:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2295:C:H2'	53:27:2296:U:C6	2.49	0.47
53:27:2588:G:H2'	53:27:2589:A:C5'	2.45	0.47
53:27:2631:G:O2'	53:27:2632:A:H5'	2.15	0.47
53:27:2715:C:C2'	53:27:2716:C:H5"	2.44	0.47
54:28:37:C:H2'	54:28:38:C:O4'	2.15	0.47
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
1:A:255:LYS:HZ2	1:A:269:ARG:HE	1.63	0.47
2:B:101:PHE:O	2:B:102:ALA:C	2.58	0.47
3:C:122:GLU:HA	3:C:190:ALA:HB3	1.97	0.47
4:D:59:ILE:HD13	4:D:137:PHE:CD2	2.50	0.47
16:P:91:ARG:NH1	53:27:997:G:H5"	2.30	0.47
17:Q:8:GLY:O	17:Q:10:LYS:HG2	2.15	0.47
23:W:42:GLU:HB3	23:W:44:ARG:NE	2.29	0.47
25:Y:40:THR:O	25:Y:44:ARG:HG2	2.15	0.47
29:3:7:PRO:HG2	53:27:1309:G:H4'	1.97	0.47
31:5:1:MET:N	53:27:2526:G:H21	2.12	0.47
31:5:7:VAL:HG23	31:5:7:VAL:O	2.14	0.47
32:6:137:THR:O	32:6:141:GLU:HG3	2.15	0.47
34:8:21:LYS:CD	34:8:28:ASP:HA	2.43	0.47
35:9:155:LYS:HG2	38:12:65:PHE:CG	2.50	0.47
36:10:5:GLU:HB2	36:10:90:MET:CG	2.45	0.47
38:12:31:LEU:HD12	38:12:31:LEU:C	2.40	0.47
42:16:38:THR:HA	42:16:49:ARG:O	2.14	0.47
43:17:7:ASN:ND2	43:17:21:ILE:H	2.11	0.47
45:19:2:LEU:CD2	45:19:7:THR:HG22	2.45	0.47
47:21:6:THR:OG1	47:21:7:LEU:N	2.47	0.47
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.80	0.47
49:23:13:HIS:CE1	49:23:34:SER:HB2	2.50	0.47
52:26:35:G:H2'	52:26:36:C:C6	2.49	0.47
52:26:475:C:H2'	52:26:476:U:H6	1.80	0.47
52:26:533:A:O2'	52:26:534:U:H5"	2.14	0.47
52:26:606:G:H5"	52:26:607:A:H5'	1.96	0.47
52:26:893:C:H2'	52:26:894:G:C8	2.50	0.47
52:26:1260:G:OP1	52:26:1284:C:H4'	2.15	0.47
53:27:310:A:O2'	53:27:311:A:H2'	2.14	0.47
53:27:1192:G:O2'	53:27:1193:G:H5'	2.14	0.47
53:27:1424:G:H2'	53:27:1425:G:C8	2.50	0.47
54:28:62:C:H2'	54:28:63:C:C6	2.49	0.47
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.47
9:I:49:ASP:OD2	9:I:121:LYS:NZ	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:72:LYS:NZ	9:I:74:TYR:HE1	2.11	0.47
9:I:108:MET:HE3	53:27:1006:C:H1'	1.96	0.47
16:P:2:ARG:HD2	53:27:1248:G:C4	2.50	0.47
16:P:100:PHE:O	16:P:102:LYS:N	2.46	0.47
17:Q:14:VAL:HG23	17:Q:18:GLN:HG2	1.96	0.47
17:Q:83:TYR:CE1	53:27:1187:G:H5"	2.50	0.47
21:U:35:GLU:HB2	21:U:93:ARG:CZ	2.44	0.47
21:U:76:ASP:CG	21:U:77:VAL:N	2.73	0.47
22:V:45:ALA:O	22:V:47:VAL:HG23	2.16	0.47
24:X:9:LYS:HD2	24:X:10:SER:N	2.27	0.47
30:4:3:ILE:HG22	30:4:4:LYS:O	2.15	0.47
30:4:49:VAL:HG11	30:4:57:VAL:CG2	2.44	0.47
31:5:17:VAL:CG1	31:5:19:ARG:HG3	2.46	0.47
34:8:49:ASP:HA	34:8:52:VAL:HG22	1.96	0.47
37:11:16:LYS:HB2	37:11:43:TYR:CZ	2.50	0.47
37:11:61:PHE:CD1	37:11:61:PHE:C	2.92	0.47
39:13:101:GLY:O	39:13:103:VAL:N	2.48	0.47
41:15:67:GLU:O	41:15:70:ALA:HB3	2.14	0.47
42:16:43:LYS:HG2	42:16:44:PRO:N	2.30	0.47
50:24:3:ILE:HG23	50:24:7:LYS:NZ	2.30	0.47
52:26:174:A:H2'	52:26:175:C:H5'	1.96	0.47
52:26:333:U:H2'	52:26:334:C:H6	1.80	0.47
52:26:749:A:O2'	52:26:750:C:H5'	2.15	0.47
52:26:991:U:C4	52:26:1212:U:H4'	2.50	0.47
53:27:724:U:H2'	53:27:725:G:C8	2.50	0.47
53:27:1077:A:C2	53:27:1088:A:H2'	2.49	0.47
53:27:1114:C:H2'	53:27:1115:G:C8	2.50	0.47
53:27:1132:U:H2'	53:27:1133:A:C8	2.50	0.47
53:27:1470:A:H61	53:27:1521:G:H1'	1.79	0.47
53:27:1775:U:O2'	53:27:1776:G:H5'	2.15	0.47
53:27:1998:A:H2'	53:27:1999:C:H6	1.77	0.47
53:27:2115:G:H4'	53:27:2166:U:O2	2.14	0.47
53:27:2543:G:H2'	53:27:2544:G:O4'	2.15	0.47
56:30:54:U:C3'	56:30:55:U:H5"	2.44	0.47
58:32:24:U:H2'	58:32:25:C:C6	2.50	0.47
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.47
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.47
2:B:116:LYS:HA	13:M:1:MET:SD	2.55	0.46
5:E:19:ASN:HB3	5:E:22:VAL:HB	1.95	0.46
7:G:96:PHE:CZ	7:G:126:LEU:HB2	2.50	0.46
7:G:97:LYS:O	7:G:100:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:108:VAL:O	7:G:109:LYS:HB3	2.14	0.46
8:H:118:GLY:HA3	8:H:124:MET:HE2	1.96	0.46
13:M:36:THR:HA	53:27:1278:C:OP1	2.15	0.46
14:N:77:ALA:HA	14:N:80:GLU:CD	2.39	0.46
16:P:2:ARG:HD2	53:27:1248:G:C6	2.50	0.46
16:P:111:LYS:HD3	17:Q:48:LYS:HE2	1.95	0.46
17:Q:90:ARG:NE	53:27:1223:G:OP2	2.47	0.46
17:Q:100:GLY:O	17:Q:101:ILE:HD13	2.14	0.46
23:W:36:ARG:HG3	53:27:2200:C:OP1	2.15	0.46
26:Z:9:TYR:HA	26:Z:27:THR:HB	1.96	0.46
27:1:9:ARG:HA	27:1:12:ARG:CD	2.45	0.46
32:6:9:LEU:HA	32:6:14:HIS:NE2	2.29	0.46
32:6:20:ARG:NH1	52:26:831:A:H5'	2.30	0.46
32:6:185:ILE:HA	32:6:199:ILE:HB	1.96	0.46
34:8:98:ASP:O	34:8:101:VAL:HB	2.14	0.46
39:13:43:ALA:C	39:13:45:MET:N	2.72	0.46
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.45	0.46
42:16:6:LEU:HD11	42:16:11:ARG:HH21	1.80	0.46
42:16:98:ARG:HA	42:16:103:CYS:SG	2.55	0.46
44:18:83:VAL:O	44:18:84:ARG:C	2.58	0.46
44:18:99:SER:OG	52:26:1114:C:H1'	2.15	0.46
46:20:52:LEU:O	46:20:54:LEU:N	2.46	0.46
52:26:176:C:H3'	52:26:177:G:H21	1.79	0.46
52:26:212:G:H2'	52:26:213:G:C8	2.44	0.46
52:26:604:G:H2'	52:26:605:U:O4'	2.15	0.46
52:26:746:A:H2'	52:26:747:A:C8	2.50	0.46
53:27:121:G:C2	53:27:131:A:C4	3.03	0.46
53:27:130:C:H2'	53:27:131:A:O4'	2.15	0.46
53:27:492:A:H2'	53:27:493:G:O4'	2.16	0.46
53:27:1157:G:O2'	53:27:1158:C:H5'	2.14	0.46
53:27:1186:G:H2'	53:27:1187:G:H8	1.80	0.46
53:27:1432:G:H2'	53:27:1433:A:H8	1.79	0.46
53:27:1444:G:H2'	53:27:1445:G:C8	2.49	0.46
53:27:1715:G:H2'	53:27:1743:G:O6	2.15	0.46
53:27:1807:G:C2'	53:27:1808:A:H5'	2.43	0.46
53:27:2465:C:O2'	53:27:2466:C:H5'	2.15	0.46
53:27:2812:G:H2'	53:27:2813:A:O4'	2.15	0.46
56:30:15:G:H2'	56:30:16:U:O4'	2.14	0.46
2:B:99:GLU:O	2:B:100:LEU:C	2.58	0.46
2:B:148:GLN:OE1	2:B:148:GLN:N	2.48	0.46
3:C:40:ARG:HB2	53:27:443:A:N7	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.45	0.46
4:D:175:PRO:O	4:D:176:PHE:CB	2.63	0.46
5:E:138:GLN:HG3	5:E:139:VAL:N	2.30	0.46
11:K:89:VAL:O	11:K:89:VAL:HG13	2.15	0.46
13:M:70:THR:O	13:M:71:ARG:HB2	2.15	0.46
15:O:23:ASP:O	15:O:25:VAL:HG23	2.15	0.46
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.97	0.46
19:S:76:ARG:HH12	19:S:79:ASP:CG	2.22	0.46
20:T:37:GLY:HA2	20:T:40:LEU:HD11	1.97	0.46
20:T:66:VAL:O	20:T:69:VAL:HG22	2.15	0.46
21:U:87:GLN:HE21	54:28:77:U:C5'	2.28	0.46
34:8:201:GLU:HA	34:8:204:SER:OG	2.14	0.46
36:10:46:GLN:CB	36:10:56:LYS:HG2	2.45	0.46
42:16:20:VAL:C	42:16:22:ALA:H	2.24	0.46
43:17:28:ARG:NE	43:17:62:PHE:HB2	2.30	0.46
44:18:83:VAL:HG13	44:18:84:ARG:N	2.30	0.46
48:22:56:ARG:O	48:22:60:ARG:HG3	2.15	0.46
51:25:64:ALA:HB3	52:26:1099:G:O2'	2.15	0.46
52:26:393:A:C2	52:26:394:G:C8	3.04	0.46
52:26:1292:G:H2'	52:26:1293:C:C6	2.50	0.46
52:26:1325:C:O2'	52:26:1326:U:H5'	2.16	0.46
53:27:734:A:C4	53:27:735:A:C8	3.02	0.46
53:27:737:C:O2'	53:27:738:G:H5'	2.15	0.46
53:27:794:A:H2'	53:27:795:C:H6	1.81	0.46
53:27:1111:A:H2'	53:27:1111:A:N3	2.30	0.46
53:27:1241:A:H3'	53:27:1242:U:C6	2.50	0.46
53:27:2027:G:O2'	53:27:2028:U:H5'	2.15	0.46
53:27:2339:C:H2'	53:27:2340:A:H8	1.80	0.46
53:27:2552:U:H2'	53:27:2554:U:H5"	1.98	0.46
57:31:16:C:O2'	57:31:17:C:H5'	2.15	0.46
58:32:26:G:H1	58:32:44:A:H61	1.64	0.46
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.80	0.46
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.46
59:33:598:VAL:HB	59:33:656:VAL:HG22	1.98	0.46
59:33:639:GLU:O	59:33:643:GLU:N	2.44	0.46
2:B:81:GLU:CD	53:27:2636:C:H4'	2.40	0.46
2:B:196:ALA:HB1	53:27:2820:A:C4	2.50	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.95	0.46
7:G:43:LYS:NZ	7:G:51:TYR:OH	2.49	0.46
7:G:81:LEU:HB2	53:27:1107:G:H4'	1.96	0.46
8:H:91:LYS:HZ3	53:27:1075:C:C2'	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:64:TRP:HZ3	12:L:106:ASP:HB3	1.79	0.46
13:M:59:SER:OG	13:M:60:VAL:N	2.48	0.46
20:T:86:PHE:HA	20:T:90:LYS:O	2.15	0.46
29:3:35:ARG:HE	29:3:42:LEU:HD21	1.79	0.46
31:5:27:CYS:CB	31:5:33:HIS:HB2	2.45	0.46
35:9:73:VAL:HG11	35:9:143:LEU:HB3	1.97	0.46
35:9:156:ARG:CG	35:9:157:GLY:N	2.78	0.46
37:11:106:ALA:HB1	37:11:132:THR:HB	1.96	0.46
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.97	0.46
41:15:40:ALA:CB	52:26:684:U:O2	2.62	0.46
42:16:109:ARG:HA	52:26:538:G:OP1	2.15	0.46
43:17:104:ASN:C	43:17:106:ARG:N	2.74	0.46
48:22:23:LYS:O	48:22:25:ILE:N	2.43	0.46
48:22:28:LEU:HD12	48:22:28:LEU:N	2.30	0.46
52:26:234:C:H2’	52:26:235:C:H6	1.79	0.46
52:26:1511:G:C5	52:26:1512:U:C4	3.03	0.46
53:27:138:U:H5	53:27:139:U:H6	1.62	0.46
53:27:338:G:H2’	53:27:339:U:H6	1.81	0.46
53:27:1069:A:H5’	53:27:1070:A:C8	2.50	0.46
53:27:1308:A:N7	53:27:1309:G:C5	2.84	0.46
53:27:1379:U:C6	53:27:1379:U:OP1	2.67	0.46
53:27:1608:A:C5	53:27:1611:C:C4	3.03	0.46
53:27:1831:G:H2’	53:27:1832:C:C6	2.51	0.46
53:27:2136:G:H5”	53:27:2137:U:H5	1.80	0.46
53:27:2297:A:N6	53:27:2319:G:H1’	2.30	0.46
53:27:2408:U:H2’	53:27:2409:G:C8	2.50	0.46
53:27:2737:G:H2’	53:27:2738:A:H8	1.79	0.46
54:28:10:G:H2’	54:28:11:C:O4’	2.15	0.46
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.97	0.46
59:33:723:GLY:HA2	59:33:726:LEU:HD12	1.96	0.46
1:A:68:ARG:CB	1:A:128:THR:HG21	2.45	0.46
1:A:217:PRO:HB3	53:27:1789:A:O3’	2.15	0.46
3:C:131:THR:HG23	53:27:321:U:H5”	1.98	0.46
8:H:52:LEU:HD22	8:H:81:LYS:HB2	1.97	0.46
10:J:15:GLY:O	10:J:47:ILE:HG12	2.16	0.46
11:K:126:ARG:NH1	53:27:635:C:OP2	2.49	0.46
12:L:4:PRO:HB3	12:L:68:PHE:HE2	1.79	0.46
18:R:4:ILE:HG22	18:R:106:VAL:HG13	1.97	0.46
21:U:26:PHE:CE2	21:U:44:HIS:HA	2.50	0.46
23:W:32:LEU:HD13	23:W:49:ARG:HH21	1.80	0.46
32:6:173:LYS:O	32:6:177:ASN:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:152:VAL:HG22	33:7:197:VAL:HG22	1.97	0.46
33:7:176:THR:HG23	52:26:1111:A:H2	1.80	0.46
36:10:2:ARG:HB3	36:10:92:THR:HG21	1.97	0.46
37:11:48:THR:O	37:11:52:ARG:HB2	2.15	0.46
39:13:122:ARG:NE	52:26:1350:A:OP1	2.48	0.46
40:14:53:ILE:HG12	52:26:1060:U:H5"	1.97	0.46
41:15:63:GLN:O	41:15:67:GLU:HG3	2.15	0.46
42:16:71:HIS:ND1	42:16:71:HIS:O	2.48	0.46
45:19:25:GLU:HA	45:19:80:LEU:HD21	1.98	0.46
46:20:2:VAL:CG2	46:20:65:ALA:HA	2.46	0.46
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.46
52:26:336:A:H2'	52:26:337:G:H8	1.80	0.46
52:26:370:C:H2'	52:26:371:A:C8	2.50	0.46
52:26:686:U:H2'	52:26:687:A:C8	2.51	0.46
52:26:705:G:H2'	52:26:706:A:H5'	1.96	0.46
52:26:1472:U:H2'	52:26:1473:G:H8	1.78	0.46
53:27:135:U:O5'	53:27:135:U:H6	1.98	0.46
53:27:196:A:C8	53:27:805:G:N7	2.84	0.46
53:27:197:A:C2	53:27:198:C:H1'	2.50	0.46
53:27:690:G:O2'	53:27:691:C:H5'	2.16	0.46
53:27:895:U:H2'	53:27:897:C:C5	2.51	0.46
53:27:1014:A:O2'	53:27:1015:U:H5'	2.16	0.46
53:27:1448:G:H2'	53:27:1449:G:C8	2.50	0.46
53:27:1487:U:H2'	53:27:1488:C:C6	2.51	0.46
53:27:1564:C:H2'	53:27:1565:C:O4'	2.14	0.46
53:27:2248:C:H2'	53:27:2249:U:O4'	2.15	0.46
54:28:119:A:C2'	54:28:120:A:H5"	2.45	0.46
59:33:616:ILE:HG12	59:33:740:ARG:NH2	2.30	0.46
59:33:671:VAL:HG23	59:33:738:ALA:HA	1.98	0.46
1:A:91:ALA:HB3	1:A:103:ILE:HD12	1.96	0.46
1:A:144:GLU:CA	1:A:151:GLY:HA2	2.42	0.46
1:A:159:THR:O	1:A:160:TYR:HB3	2.15	0.46
2:B:178:VAL:HG12	2:B:179:ARG:N	2.30	0.46
3:C:21:ARG:HD3	3:C:107:SER:N	2.31	0.46
8:H:92:PRO:C	8:H:94:LYS:H	2.23	0.46
10:J:74:GLY:C	15:O:74:GLN:HE21	2.24	0.46
11:K:78:ARG:O	11:K:81:ASP:N	2.47	0.46
16:P:57:ARG:HH12	53:27:1154:G:P	2.37	0.46
23:W:39:VAL:HG11	23:W:42:GLU:HG2	1.97	0.46
32:6:212:TYR:O	32:6:216:VAL:HG23	2.15	0.46
34:8:181:PHE:HE1	34:8:185:PRO:HD3	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:15:SER:OG	36:10:44:ARG:HD3	2.16	0.46
46:20:74:LEU:C	46:20:77:GLU:H	2.24	0.46
52:26:252:U:C2	52:26:253:A:N7	2.83	0.46
52:26:782:A:H4'	52:26:1514:G:O2'	2.16	0.46
52:26:876:C:H2'	52:26:877:G:H8	1.81	0.46
52:26:986:U:H2'	52:26:987:G:H8	1.81	0.46
52:26:1121:U:H2'	52:26:1122:U:C6	2.51	0.46
52:26:1388:C:H2'	52:26:1389:C:H6	1.81	0.46
52:26:1496:C:H2'	52:26:1497:G:O4'	2.16	0.46
53:27:123:G:H2'	53:27:124:G:C8	2.50	0.46
53:27:422:A:H3'	53:27:423:A:H8	1.81	0.46
53:27:1138:G:H2'	53:27:1139:G:O4'	2.15	0.46
53:27:1168:G:H2'	53:27:1169:A:C8	2.51	0.46
53:27:1208:C:H2'	53:27:1209:U:O4'	2.15	0.46
53:27:1638:C:H5"	53:27:2710:C:H1'	1.98	0.46
53:27:1711:A:H2'	53:27:1712:U:C6	2.51	0.46
53:27:1721:G:H2'	53:27:1738:G:N2	2.31	0.46
53:27:1857:G:H21	53:27:1884:G:H2'	1.78	0.46
53:27:2079:U:H2'	53:27:2080:A:O4'	2.15	0.46
53:27:2327:A:H2'	53:27:2328:A:H8	1.73	0.46
53:27:2391:G:O2'	53:27:2392:A:O5'	2.19	0.46
53:27:2475:C:N4	53:27:2529:G:H22	2.13	0.46
53:27:2521:C:O2'	53:27:2522:U:H5'	2.16	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:407:TYR:O	59:33:458:GLY:HA2	2.15	0.46
59:33:669:VAL:HG23	59:33:740:ARG:HA	1.97	0.46
1:A:262:THR:HB	53:27:1800:C:OP2	2.15	0.46
5:E:51:PHE:CE2	5:E:68:ARG:HG3	2.51	0.46
6:F:4:ILE:HD11	6:F:47:PHE:CZ	2.50	0.46
8:H:102:ARG:HA	8:H:105:LEU:HD12	1.98	0.46
9:I:110:PRO:O	9:I:115:GLY:HA3	2.15	0.46
10:J:6:THR:H	10:J:20:MET:HG3	1.81	0.46
10:J:12:ASP:C	10:J:12:ASP:OD1	2.58	0.46
12:L:21:ALA:HB2	12:L:97:GLN:HB2	1.97	0.46
16:P:73:ILE:HG13	16:P:77:LYS:HE3	1.97	0.46
17:Q:68:ARG:HH11	17:Q:90:ARG:HB2	1.81	0.46
21:U:79:ARG:HG2	21:U:86:LEU:HD23	1.97	0.46
28:2:10:LEU:HA	28:2:49:LYS:O	2.16	0.46
33:7:93:ILE:HG22	33:7:93:ILE:O	2.15	0.46
35:9:60:GLN:HG3	35:9:61:LYS:N	2.30	0.46
36:10:86:ARG:HB2	36:10:86:ARG:CZ	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:28:ILE:O	37:11:104:VAL:HG21	2.15	0.46
40:14:5:ARG:HG2	40:14:79:PRO:CG	2.46	0.46
43:17:69:ARG:HG2	43:17:69:ARG:HH11	1.81	0.46
51:25:36:PHE:HB2	51:25:37:TYR:H	1.48	0.46
52:26:149:A:H2'	52:26:149:A:N3	2.31	0.46
52:26:314:C:O2'	52:26:315:A:H5'	2.16	0.46
52:26:402:G:H4'	52:26:620:C:O2	2.16	0.46
52:26:484:G:H4'	52:26:485:U:H5"	1.98	0.46
52:26:509:A:C8	52:26:509:A:H3'	2.51	0.46
52:26:543:U:O5'	52:26:543:U:H6	1.99	0.46
52:26:594:U:H2'	52:26:595:A:C8	2.50	0.46
52:26:759:A:H2'	52:26:760:G:O4'	2.16	0.46
52:26:1426:G:H2'	52:26:1427:C:C6	2.51	0.46
53:27:226:A:H3'	53:27:227:A:H8	1.80	0.46
53:27:409:G:H2'	53:27:410:G:H8	1.79	0.46
53:27:674:G:C2	53:27:804:A:C2	3.04	0.46
53:27:971:G:C2'	53:27:972:A:H5'	2.45	0.46
53:27:1172:C:C3'	53:27:1173:U:H5"	2.45	0.46
53:27:1777:U:O5'	53:27:1777:U:H6	1.99	0.46
53:27:1891:G:C6	53:27:1892:C:C4	3.04	0.46
53:27:1992:G:H4'	53:27:1993:U:H5"	1.97	0.46
53:27:2004:G:H2'	53:27:2005:A:O4'	2.16	0.46
57:31:68:C:H2'	57:31:69:C:C6	2.50	0.46
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.15	0.46
3:C:27:LEU:HD22	53:27:600:G:H4'	1.98	0.46
3:C:97:ASN:ND2	53:27:606:U:H5"	2.30	0.46
4:D:19:PHE:O	4:D:21:TYR:N	2.49	0.46
9:I:69:ARG:HA	9:I:89:PHE:CD2	2.51	0.46
10:J:35:VAL:HG22	10:J:69:VAL:CG1	2.46	0.46
11:K:100:ILE:HG13	11:K:101:ILE:HG23	1.98	0.46
13:M:79:LEU:O	13:M:80:PHE:HB2	2.16	0.46
15:O:71:ARG:HG2	15:O:72:VAL:O	2.16	0.46
18:R:77:ASP:OD1	18:R:102:HIS:HB2	2.16	0.46
19:S:10:VAL:HA	19:S:35:ALA:CB	2.42	0.46
21:U:31:TYR:O	21:U:93:ARG:N	2.40	0.46
25:Y:5:LYS:HB2	25:Y:57:GLU:HG2	1.98	0.46
28:2:25:ASN:ND2	53:27:2285:C:OP1	2.43	0.46
32:6:27:LYS:HB3	32:6:28:PRO:HD3	1.97	0.46
33:7:91:ALA:O	33:7:95:GLY:N	2.49	0.46
34:8:24:VAL:C	34:8:26:ALA:N	2.67	0.46
34:8:52:VAL:HG23	34:8:53:GLN:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:13:ASP:O	36:10:16:GLU:HB3	2.15	0.46
37:11:142:ARG:HD2	58:32:41:C:O2'	2.15	0.46
37:11:145:GLU:C	37:11:147:ASN:H	2.23	0.46
51:25:9:GLU:N	51:25:10:PRO:HD2	2.30	0.46
52:26:279:A:H5'	52:26:281:G:O4'	2.15	0.46
52:26:1005:A:H2'	52:26:1006:G:C4'	2.45	0.46
52:26:1109:C:H2'	52:26:1110:A:H8	1.81	0.46
52:26:1420:U:H2'	52:26:1421:G:C8	2.50	0.46
53:27:393:C:O2'	53:27:394:C:H5'	2.16	0.46
53:27:538:A:N6	53:27:555:G:H1'	2.31	0.46
53:27:630:G:N2	53:27:632:A:H3'	2.30	0.46
53:27:877:A:H1'	53:27:900:A:N6	2.31	0.46
53:27:2001:C:H2'	53:27:2002:G:H8	1.81	0.46
53:27:2146:C:H4'	53:27:2147:A:N7	2.30	0.46
53:27:2331:G:H2'	53:27:2332:C:H6	1.81	0.46
53:27:2703:C:H2'	53:27:2704:C:C6	2.51	0.46
53:27:2832:U:H1'	53:27:2834:G:C4	2.51	0.46
54:28:48:U:H2'	54:28:49:C:C6	2.51	0.46
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	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
1:A:66:PHE:O	1:A:68:ARG:HG2	2.15	0.46
2:B:40:LEU:H	2:B:40:LEU:CD1	2.27	0.46
7:G:93:ALA:O	7:G:95:LEU:N	2.49	0.46
8:H:45:THR:HG22	8:H:48:ILE:HG13	1.97	0.46
8:H:72:THR:CB	8:H:111:THR:HG22	2.46	0.46
19:S:31:VAL:HG12	19:S:84:TYR:HA	1.98	0.46
19:S:63:VAL:HG21	19:S:80:TRP:CH2	2.51	0.46
23:W:37:PHE:CE2	23:W:48:LEU:HD12	2.51	0.46
29:3:34:ARG:HB3	29:3:42:LEU:HD12	1.98	0.46
30:4:15:LYS:HE2	30:4:19:GLY:HA2	1.97	0.46
34:8:119:HIS:CG	52:26:438:U:H4'	2.51	0.46
37:11:65:LEU:CD2	37:11:69:ARG:HH21	2.28	0.46
38:12:6:ILE:O	38:12:10:LEU:HG	2.16	0.46
38:12:86:LYS:HD2	38:12:90:GLU:CG	2.44	0.46
43:17:18:LEU:HD12	43:17:33:LEU:HD11	1.98	0.46
45:19:19:ASN:C	45:19:21:THR:H	2.23	0.46
46:20:5:ARG:NH2	46:20:23:ASP:O	2.49	0.46
50:24:67:HIS:CE1	52:26:132:C:H5"	2.50	0.46
52:26:62:U:H2'	52:26:63:C:H6	1.72	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:576:C:OP2	52:26:577:G:H5”	2.16	0.46
52:26:659:U:O2’	52:26:660:C:H5’	2.16	0.46
52:26:811:C:H4’	52:26:900:A:N6	2.31	0.46
52:26:971:G:C5	52:26:1365:G:H5’	2.51	0.46
52:26:1349:A:C3’	52:26:1350:A:H8	2.28	0.46
52:26:1351:U:H2’	52:26:1352:C:H6	1.81	0.46
52:26:1454:G:H2’	52:26:1455:G:H8	1.79	0.46
53:27:388:G:N7	53:27:390:U:H2’	2.31	0.46
53:27:614:A:H4’	53:27:616:A:N7	2.30	0.46
53:27:1149:G:H2’	53:27:1150:C:C6	2.51	0.46
53:27:1429:G:H2’	53:27:1430:G:H8	1.80	0.46
53:27:1919:A:N3	53:27:1919:A:H2’	2.31	0.46
53:27:2018:G:C6	53:27:2019:A:C5	3.03	0.46
56:30:21:A:H2’	56:30:22:G:C8	2.51	0.46
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.46
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.39	0.46
59:33:432:HIS:CD2	59:33:433:SER:N	2.84	0.46
59:33:639:GLU:H	59:33:639:GLU:CD	2.23	0.46
2:B:56:LYS:HB2	2:B:59:ARG:HG2	1.97	0.46
3:C:176:ASP:CG	3:C:179:SER:HB2	2.40	0.46
7:G:18:VAL:HA	7:G:86:MET:CE	2.44	0.46
8:H:73:PRO:HA	8:H:74:PRO:HD3	1.77	0.46
9:I:38:GLY:O	9:I:44:TYR:HB2	2.15	0.46
11:K:75:ALA:H	11:K:105:ILE:CG2	2.28	0.46
13:M:9:GLN:O	13:M:17:ARG:HD3	2.16	0.46
16:P:40:LYS:HG3	16:P:44:TYR:CE2	2.51	0.46
20:T:25:LYS:O	20:T:26:ASN:HB3	2.15	0.46
25:Y:9:THR:HG22	25:Y:53:MET:O	2.15	0.46
29:3:34:ARG:NH2	53:27:466:A:P	2.89	0.46
32:6:17:HIS:CG	32:6:18:GLN:H	2.33	0.46
33:7:48:LYS:HD3	33:7:48:LYS:HA	1.81	0.46
34:8:57:LYS:HD2	34:8:203:TYR:OH	2.16	0.46
34:8:116:LEU:HB3	34:8:122:ILE:CD1	2.23	0.46
42:16:4:ASN:HD22	52:26:880:C:P	2.38	0.46
45:19:55:LEU:O	45:19:58:MET:HG2	2.16	0.46
52:26:11:G:H2’	52:26:12:U:O4’	2.15	0.46
52:26:284:C:H2’	52:26:285:C:C6	2.50	0.46
52:26:433:G:H2’	52:26:434:U:C6	2.51	0.46
52:26:541:G:H2’	52:26:542:G:O4’	2.16	0.46
52:26:784:A:H2’	52:26:785:G:H8	1.76	0.46
52:26:937:A:H2’	52:26:938:A:C8	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:19:A:O2'	53:27:20:C:H5'	2.16	0.46
53:27:488:G:H1'	53:27:492:A:H61	1.80	0.46
53:27:598:U:H2'	53:27:599:A:H8	1.79	0.46
53:27:633:A:H2'	53:27:634:C:C5'	2.46	0.46
53:27:681:G:C4	53:27:682:G:C8	3.04	0.46
53:27:693:A:H2'	53:27:694:U:H6	1.78	0.46
53:27:734:A:H2'	53:27:735:A:H8	1.81	0.46
53:27:736:C:H2'	53:27:737:C:C6	2.49	0.46
53:27:1086:A:H4'	53:27:1103:A:C2	2.51	0.46
53:27:1255:U:C5'	53:27:1256:G:H5"	2.46	0.46
53:27:1317:G:H2'	53:27:1318:U:C6	2.51	0.46
53:27:1390:U:O5'	53:27:1390:U:H6	1.99	0.46
53:27:1494:A:H2'	53:27:1495:A:H8	1.80	0.46
53:27:1494:A:C2	53:27:1579:A:H1'	2.50	0.46
53:27:1528:A:H2'	53:27:1529:G:H5'	1.98	0.46
53:27:1641:A:C8	53:27:1642:G:C8	3.04	0.46
53:27:1918:A:H1'	53:27:1919:A:N7	2.31	0.46
53:27:2263:C:H2'	53:27:2264:C:H6	1.81	0.46
53:27:2343:U:H2'	53:27:2344:U:C6	2.51	0.46
53:27:2489:U:H2'	53:27:2490:G:O4'	2.16	0.46
53:27:2787:C:O2'	53:27:2788:C:H5'	2.16	0.46
53:27:2867:G:O2'	53:27:2868:A:P	2.73	0.46
57:31:10:G:N2	57:31:26:G:H1'	2.30	0.46
59:33:57:TRP:C	59:33:60:VAL:HG22	2.41	0.46
59:33:497:ARG:O	59:33:501:ARG:N	2.44	0.46
59:33:725:VAL:O	59:33:729:LEU:N	2.47	0.46
4:D:29:ARG:HG2	4:D:29:ARG:HH11	1.81	0.46
10:J:86:LEU:C	10:J:87:LEU:HD12	2.41	0.46
11:K:28:GLY:O	11:K:29:LYS:O	2.34	0.46
15:O:4:ILE:O	15:O:8:GLU:HG3	2.16	0.46
16:P:41:ALA:O	16:P:44:TYR:HB2	2.16	0.46
17:Q:14:VAL:HG23	17:Q:18:GLN:CG	2.46	0.46
21:U:83:LYS:NZ	53:27:1119:U:OP1	2.49	0.46
23:W:26:ARG:NE	23:W:28:PHE:HE1	2.14	0.46
34:8:120:LYS:HB3	34:8:128:VAL:CG2	2.44	0.46
34:8:171:GLU:OE1	34:8:182:LYS:HE3	2.16	0.46
35:9:122:VAL:O	35:9:122:VAL:CG2	2.63	0.46
39:13:30:ASN:O	39:13:32:ARG:N	2.47	0.46
42:16:120:ARG:HG3	42:16:121:PRO:HD2	1.97	0.46
45:19:10:ILE:HA	45:19:13:GLU:OE1	2.16	0.46
48:22:35:SER:HA	48:22:71:ASP:OD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:67:THR:HG23	52:26:1167:A:N7	2.31	0.46
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.46
52:26:567:G:H2'	52:26:568:G:O4'	2.15	0.46
52:26:711:G:H2'	52:26:712:A:H8	1.81	0.46
52:26:1051:C:H2'	52:26:1052:U:O4'	2.15	0.46
52:26:1074:G:H2'	52:26:1075:U:C6	2.51	0.46
52:26:1387:G:H2'	52:26:1388:C:H6	1.81	0.46
52:26:1514:G:H2'	52:26:1515:G:H8	1.81	0.46
53:27:216:A:H2'	53:27:217:A:H8	1.78	0.46
53:27:455:C:O2	53:27:473:G:H5'	2.16	0.46
53:27:622:G:H2'	53:27:623:C:H6	1.81	0.46
53:27:775:G:N3	53:27:777:G:C6	2.84	0.46
53:27:831:G:C6	53:27:832:U:C4	3.04	0.46
53:27:1065:U:H1'	53:27:1074:G:H22	1.81	0.46
53:27:1555:G:H5'	53:27:1555:G:H8	1.81	0.46
53:27:1878:G:H2'	53:27:1879:C:C6	2.51	0.46
53:27:2011:U:H2'	53:27:2012:G:O4'	2.16	0.46
53:27:2040:G:H2'	53:27:2041:U:C6	2.50	0.46
53:27:2632:A:H2'	53:27:2633:G:C8	2.51	0.46
53:27:2644:G:C2'	53:27:2645:G:H5'	2.46	0.46
54:28:94:A:H2'	54:28:95:U:O4'	2.16	0.46
56:30:54:U:H3'	56:30:55:U:C5'	2.46	0.46
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.46
59:33:495:TRP:O	59:33:496:PHE:C	2.59	0.46
59:33:624:PHE:O	59:33:631:ILE:HG23	2.16	0.46
1:A:12:ARG:NH1	1:A:15:VAL:HG11	2.31	0.45
3:C:40:ARG:HD2	3:C:92:HIS:CE1	2.50	0.45
7:G:54:VAL:HG22	7:G:84:TYR:HB2	1.98	0.45
7:G:96:PHE:CE1	7:G:125:ARG:HB2	2.46	0.45
8:H:56:VAL:HG13	8:H:56:VAL:O	2.15	0.45
8:H:85:ILE:HG21	8:H:97:VAL:HG23	1.98	0.45
10:J:70:ARG:HD3	53:27:2728:U:OP1	2.16	0.45
12:L:45:GLN:NE2	53:27:2485:G:H5"	2.29	0.45
16:P:23:TYR:HD1	53:27:533:G:H5'	1.80	0.45
16:P:102:LYS:O	16:P:105:PHE:HB3	2.15	0.45
17:Q:1:MET:O	17:Q:2:TYR:C	2.58	0.45
19:S:2:ILE:HD11	19:S:6:ARG:HH21	1.81	0.45
20:T:96:LYS:HD3	53:27:300:A:P	2.56	0.45
29:3:8:SER:O	29:3:9:VAL:C	2.59	0.45
29:3:37:LYS:HE3	53:27:469:G:O6	2.16	0.45
30:4:51:LYS:HG3	30:4:52:GLY:N	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:103:ARG:C	34:8:105:GLY:H	2.23	0.45
40:14:5:ARG:HB2	40:14:79:PRO:HD3	1.98	0.45
46:20:67:ILE:HG23	46:20:71:VAL:CB	2.39	0.45
49:23:44:ILE:HG23	49:23:63:ASP:H	1.82	0.45
52:26:255:G:H2'	52:26:256:U:C6	2.51	0.45
52:26:383:A:H8	52:26:383:A:O5'	1.99	0.45
52:26:416:G:H2'	52:26:417:G:H8	1.81	0.45
52:26:965:U:H5"	52:26:966:G:OP1	2.16	0.45
52:26:1054:C:N3	56:30:34:G:H1'	2.31	0.45
53:27:343:C:C2'	53:27:344:A:H5'	2.46	0.45
53:27:443:A:N3	53:27:1201:U:H1'	2.31	0.45
53:27:477:A:H2'	53:27:478:A:O4'	2.16	0.45
53:27:563:A:C6	53:27:2018:G:C5	3.04	0.45
53:27:738:G:C2	53:27:759:G:C4	3.03	0.45
53:27:780:G:H2'	53:27:782:A:N7	2.31	0.45
53:27:884:U:H2'	53:27:885:C:C6	2.50	0.45
53:27:1219:U:H2'	53:27:1220:G:H8	1.81	0.45
53:27:1682:G:C4	53:27:1757:A:H1'	2.51	0.45
53:27:2292:U:H2'	53:27:2293:G:C8	2.49	0.45
53:27:2386:A:H2'	53:27:2387:U:C6	2.52	0.45
53:27:2544:G:C4	53:27:2545:G:C8	3.04	0.45
53:27:2564:A:H2'	53:27:2565:A:O4'	2.16	0.45
1:A:235:GLU:HB3	53:27:2599:G:N7	2.31	0.45
4:D:114:ARG:HH11	43:17:70:ARG:NH1	2.09	0.45
8:H:78:LEU:HB3	8:H:108:ILE:CD1	2.47	0.45
15:O:30:TRP:CE3	15:O:37:LYS:HG2	2.52	0.45
30:4:22:LYS:HA	30:4:47:ALA:O	2.17	0.45
33:7:41:TYR:OH	33:7:89:VAL:HG21	2.16	0.45
34:8:9:LYS:HZ1	52:26:428:G:H5"	1.80	0.45
34:8:178:GLU:CD	34:8:179:GLY:N	2.75	0.45
35:9:27:GLY:H	52:26:1398:A:N6	2.14	0.45
35:9:54:GLU:HG2	35:9:56:PRO:HD2	1.99	0.45
35:9:132:PRO:O	35:9:136:VAL:HG23	2.16	0.45
42:16:49:ARG:HB2	42:16:89:LEU:HD21	1.99	0.45
42:16:73:LEU:HD23	42:16:79:ILE:HG21	1.98	0.45
45:19:88:ARG:NE	53:27:713:G:H3'	2.30	0.45
47:21:56:ASP:OD1	47:21:81:ALA:HB2	2.17	0.45
52:26:10:A:H2'	52:26:11:G:H8	1.81	0.45
52:26:158:G:H2'	52:26:159:G:O4'	2.16	0.45
52:26:294:U:O5'	52:26:294:U:H6	1.99	0.45
52:26:576:C:H3'	52:26:577:G:H5"	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:744:C:H2'	52:26:745:G:H8	1.81	0.45
52:26:868:C:H2'	52:26:869:G:O4'	2.16	0.45
52:26:901:A:O5'	52:26:901:A:H8	2.00	0.45
52:26:1488:G:H2'	52:26:1489:G:C8	2.51	0.45
52:26:1522:U:O2'	52:26:1523:G:H5'	2.16	0.45
53:27:759:G:H2'	53:27:760:G:C8	2.50	0.45
53:27:818:G:C2'	53:27:1187:G:H22	2.29	0.45
53:27:1080:A:HO2'	53:27:1081:U:H5'	1.80	0.45
53:27:1300:G:N2	53:27:1634:A:C2	2.84	0.45
53:27:1505:A:H2'	53:27:1506:U:O4'	2.16	0.45
53:27:1985:C:H2'	53:27:1986:C:H6	1.80	0.45
53:27:2075:U:C4	53:27:2238:G:C6	3.04	0.45
53:27:2374:C:H2'	53:27:2375:G:C8	2.51	0.45
57:31:22:G:H2'	57:31:23:C:C6	2.51	0.45
58:32:14:A:H2'	58:32:15:G:O4'	2.16	0.45
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.45
59:33:62:MET:HE3	59:33:79:ALA:CA	2.38	0.45
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.45
59:33:259:ILE:O	59:33:263:MET:HG3	2.17	0.45
59:33:434:ASP:OD1	59:33:435:VAL:N	2.49	0.45
1:A:207:ALA:CB	53:27:1790:C:H4'	2.45	0.45
4:D:16:MET:CE	4:D:24:VAL:HA	2.47	0.45
5:E:27:GLY:H	5:E:78:VAL:HB	1.81	0.45
5:E:90:GLY:HA3	5:E:93:TYR:HE2	1.81	0.45
6:F:70:GLU:C	6:F:72:ILE:H	2.24	0.45
7:G:107:GLU:C	7:G:109:LYS:N	2.74	0.45
8:H:78:LEU:HB3	8:H:108:ILE:HD13	1.97	0.45
9:I:135:GLN:OE1	9:I:135:GLN:N	2.49	0.45
11:K:37:GLY:HA2	53:27:831:G:H5"	1.98	0.45
19:S:61:LEU:C	19:S:61:LEU:HD12	2.41	0.45
24:X:18:LEU:HD11	24:X:22:LEU:HD13	1.98	0.45
25:Y:35:VAL:HG22	25:Y:36:GLU:N	2.31	0.45
32:6:163:ILE:O	32:6:185:ILE:HG23	2.16	0.45
33:7:22:PHE:CD2	40:14:97:ASP:HB2	2.52	0.45
36:10:38:ARG:NE	36:10:97:THR:HA	2.24	0.45
37:11:71:THR:O	37:11:90:VAL:HG12	2.17	0.45
37:11:91:ARG:O	37:11:95:ARG:N	2.46	0.45
38:12:9:MET:HE1	38:12:35:ILE:HB	1.97	0.45
39:13:44:ARG:C	39:13:46:VAL:N	2.71	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:112:ARG:NH2	40:14:64:GLN:OE1	2.49	0.45
40:14:68:ARG:HH12	40:14:70:HIS:CE1	2.33	0.45
41:15:58:THR:CG2	41:15:59:PRO:HD2	2.45	0.45
42:16:11:ARG:CG	52:26:562:U:H1'	2.45	0.45
44:18:92:ILE:HG21	44:18:95:LEU:HD22	1.99	0.45
50:24:70:LYS:HG3	50:24:73:ARG:NH2	2.32	0.45
51:25:7:GLU:CD	51:25:14:ALA:HA	2.42	0.45
51:25:29:ALA:HA	51:25:32:ARG:CD	2.46	0.45
52:26:385:C:H2'	52:26:386:C:H6	1.80	0.45
52:26:495:A:H4'	52:26:496:A:C5'	2.46	0.45
52:26:692:U:H1'	52:26:695:A:N7	2.32	0.45
52:26:962:C:O2'	52:26:963:G:H5'	2.16	0.45
52:26:1066:C:H2'	52:26:1067:A:C8	2.50	0.45
52:26:1328:C:H2'	52:26:1329:A:O4'	2.17	0.45
53:27:72:U:O2'	53:27:73:A:H5'	2.16	0.45
53:27:122:G:O5'	53:27:122:G:H8	1.99	0.45
53:27:679:C:H2'	53:27:680:C:H6	1.76	0.45
53:27:770:G:H2'	53:27:771:G:H8	1.80	0.45
53:27:882:G:H2'	53:27:883:G:O4'	2.16	0.45
53:27:954:G:C6	53:27:955:U:C4	3.04	0.45
53:27:1007:C:H2'	53:27:1008:A:C8	2.52	0.45
53:27:1044:C:H4'	53:27:1048:A:C1'	2.46	0.45
53:27:1133:A:H4'	53:27:1134:A:C5'	2.44	0.45
53:27:1363:C:H2'	53:27:1364:G:C8	2.49	0.45
53:27:1587:G:H2'	53:27:1588:G:C8	2.51	0.45
53:27:2034:U:O2'	53:27:2035:G:H5'	2.15	0.45
53:27:2175:C:H2'	53:27:2176:A:N7	2.30	0.45
55:29:16:A:O2'	55:29:17:U:H5'	2.17	0.45
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.45
1:A:78:GLU:CD	1:A:100:ARG:HE	2.24	0.45
7:G:11:ILE:HD11	7:G:66:GLY:HA3	1.98	0.45
9:I:140:LEU:HG	9:I:142:ILE:HG22	1.97	0.45
10:J:48:PRO:HB2	10:J:49:ARG:NH1	2.32	0.45
12:L:20:LEU:HD12	12:L:20:LEU:N	2.31	0.45
16:P:1:ALA:O	16:P:2:ARG:C	2.59	0.45
19:S:17:SER:O	19:S:20:ALA:HB3	2.17	0.45
23:W:39:VAL:O	23:W:43:LYS:N	2.50	0.45
30:4:41:ARG:NH1	53:27:2351:G:O6	2.49	0.45
35:9:108:GLY:O	35:9:110:MET:N	2.48	0.45
36:10:37:HIS:O	36:10:39:LEU:N	2.50	0.45
37:11:112:ASP:OD2	37:11:118:ARG:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:38:PHE:O	39:13:38:PHE:CG	2.69	0.45
41:15:30:ILE:HD12	41:15:45:THR:HG22	1.97	0.45
43:17:7:ASN:ND2	43:17:17:ALA:O	2.46	0.45
44:18:8:ARG:NE	52:26:1217:C:OP1	2.49	0.45
47:21:30:HIS:CG	47:21:31:PRO:HD2	2.51	0.45
52:26:224:U:H2'	52:26:225:C:H6	1.82	0.45
52:26:506:G:H2'	52:26:507:C:O4'	2.16	0.45
52:26:525:C:O5'	52:26:525:C:H6	2.00	0.45
52:26:574:A:C2	52:26:883:C:H1'	2.52	0.45
52:26:709:U:O2'	52:26:710:G:H5'	2.17	0.45
52:26:714:G:C2'	52:26:715:A:C8	2.98	0.45
52:26:828:U:H3	52:26:859:G:H1'	1.82	0.45
52:26:1309:G:H2'	52:26:1310:G:H8	1.80	0.45
52:26:1414:U:H2'	52:26:1415:G:C8	2.50	0.45
53:27:721:A:H2'	53:27:722:A:H8	1.82	0.45
53:27:730:A:OP2	53:27:731:C:OP2	2.35	0.45
53:27:1259:G:C4	53:27:1260:A:C8	3.05	0.45
53:27:1317:G:H2'	53:27:1318:U:H6	1.82	0.45
53:27:1637:A:H2'	53:27:1638:C:H6	1.80	0.45
53:27:1703:G:H2'	53:27:1704:C:C6	2.52	0.45
53:27:2119:A:N6	53:27:2169:A:H61	2.14	0.45
53:27:2552:U:C5	53:27:2554:U:H5'	2.50	0.45
53:27:2743:U:H2'	53:27:2744:G:H5"	1.98	0.45
55:29:13:A:H2'	55:29:14:A:H5'	1.98	0.45
59:33:60:VAL:C	59:33:63:VAL:HG22	2.42	0.45
1:A:163:ILE:HA	1:A:173:LEU:CD2	2.47	0.45
3:C:7:ASP:CG	3:C:8:ALA:H	2.25	0.45
4:D:23:SER:OG	54:28:55:U:H4'	2.16	0.45
8:H:24:GLY:N	8:H:25:PRO:CD	2.79	0.45
9:I:2:LYS:HA	53:27:995:C:N4	2.32	0.45
11:K:85:VAL:HG22	11:K:98:ALA:HB2	1.98	0.45
12:L:20:LEU:HD23	21:U:81:PRO:CG	2.41	0.45
13:M:53:THR:OG1	53:27:2840:C:H5"	2.15	0.45
15:O:22:GLY:N	15:O:46:VAL:O	2.44	0.45
18:R:55:ILE:O	18:R:58:ALA:N	2.49	0.45
19:S:50:LEU:CD1	19:S:50:LEU:N	2.80	0.45
20:T:74:ALA:C	20:T:77:GLY:H	2.25	0.45
26:Z:7:PRO:O	26:Z:9:TYR:N	2.50	0.45
32:6:148:GLY:HA2	32:6:151:LYS:HB2	1.99	0.45
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	0.45
36:10:22:ILE:O	36:10:26:THR:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:1:SER:O	38:12:2:MET:C	2.59	0.45
39:13:16:ALA:CB	39:13:66:VAL:HA	2.46	0.45
39:13:44:ARG:CZ	39:13:44:ARG:HB3	2.42	0.45
39:13:46:VAL:HA	39:13:49:GLN:HB2	1.98	0.45
40:14:22:THR:HG21	40:14:39:PRO:CG	2.47	0.45
43:17:15:VAL:HG23	43:17:16:ILE:H	1.81	0.45
46:20:46:LYS:CG	46:20:47:GLU:H	2.20	0.45
46:20:48:GLU:OE2	46:20:51:ARG:N	2.50	0.45
52:26:205:A:H2'	52:26:206:C:O4'	2.16	0.45
52:26:978:A:C5	52:26:1318:A:C6	3.05	0.45
52:26:1193:G:O2'	52:26:1194:U:H5'	2.17	0.45
52:26:1342:C:O2'	52:26:1343:G:H5'	2.17	0.45
52:26:1405:G:H21	52:26:1518:A:H1'	1.82	0.45
52:26:1466:C:H2'	52:26:1467:C:O4'	2.17	0.45
52:26:1526:G:H2'	52:26:1527:U:H6	1.82	0.45
53:27:242:G:O2'	53:27:243:U:P	2.75	0.45
53:27:531:C:H5"	53:27:532:A:C2	2.52	0.45
53:27:613:A:N3	53:27:613:A:C3'	2.77	0.45
53:27:766:U:H2'	53:27:767:U:C6	2.52	0.45
53:27:783:A:N7	53:27:785:G:C8	2.84	0.45
53:27:1047:G:HO2'	53:27:1110:G:H1	1.65	0.45
53:27:1462:C:H2'	53:27:1463:C:H6	1.82	0.45
53:27:1649:G:H2'	53:27:1650:A:C8	2.52	0.45
53:27:1842:G:H2'	53:27:1843:C:O4'	2.16	0.45
53:27:1948:G:H2'	53:27:1949:G:H8	1.80	0.45
53:27:2006:C:H5'	53:27:2049:G:OP1	2.15	0.45
53:27:2335:A:C8	53:27:2337:G:C5	3.04	0.45
53:27:2643:G:H2'	53:27:2644:G:H8	1.81	0.45
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.45
1:A:116:GLN:NE2	1:A:121:ALA:HA	2.31	0.45
1:A:176:ARG:HG2	53:27:1820:U:OP1	2.16	0.45
1:A:257:ARG:NH2	1:A:262:THR:OG1	2.50	0.45
2:B:46:ARG:NH2	2:B:88:GLU:O	2.49	0.45
4:D:18:GLU:C	4:D:20:ASN:H	2.24	0.45
4:D:62:GLN:HE21	4:D:88:VAL:CG1	2.29	0.45
6:F:67:ALA:CB	6:F:138:VAL:HG21	2.46	0.45
7:G:26:VAL:HG11	7:G:77:VAL:CG1	2.43	0.45
8:H:100:ILE:HD11	8:H:137:LEU:HD13	1.97	0.45
8:H:123:ALA:O	8:H:126:ARG:HB2	2.16	0.45
11:K:14:LYS:HZ1	53:27:1194:A:P	2.39	0.45
14:N:103:VAL:HG23	14:N:104:GLN:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:2:ARG:HD2	53:27:1248:G:N1	2.32	0.45
20:T:36:GLU:O	20:T:38:ILE:HG12	2.16	0.45
32:6:68:PHE:CE2	32:6:88:GLN:HB2	2.52	0.45
32:6:209:VAL:HA	32:6:212:TYR:CD2	2.48	0.45
32:6:209:VAL:O	32:6:213:LEU:N	2.44	0.45
35:9:51:LYS:NZ	52:26:1081:A:N7	2.65	0.45
39:13:10:ARG:NH2	52:26:1149:C:OP2	2.48	0.45
40:14:59:LYS:HE3	40:14:62:ARG:NH2	2.32	0.45
41:15:127:ARG:NH1	52:26:1522:U:OP1	2.48	0.45
44:18:52:ARG:CD	52:26:1317:C:N3	2.80	0.45
49:23:5:LYS:HB2	49:23:6:LYS:HZ3	1.82	0.45
49:23:13:HIS:HB2	52:26:1014:A:H5"	1.98	0.45
52:26:116:A:H2'	52:26:117:G:O4'	2.17	0.45
52:26:821:G:H2'	52:26:822:U:C6	2.52	0.45
52:26:836:G:H2'	52:26:837:U:O4'	2.16	0.45
52:26:1429:A:H2'	52:26:1430:A:C8	2.52	0.45
53:27:341:C:H2'	53:27:342:A:O4'	2.17	0.45
53:27:413:C:H2'	53:27:414:C:H6	1.81	0.45
53:27:562:U:N1	53:27:2036:C:H5'	2.31	0.45
53:27:664:G:H2'	53:27:665:U:C6	2.52	0.45
53:27:786:C:O2'	53:27:787:C:H5'	2.16	0.45
53:27:1372:U:O2'	53:27:1373:A:H5'	2.17	0.45
53:27:1792:G:H2'	53:27:1793:C:C6	2.51	0.45
53:27:2755:C:O5'	53:27:2755:C:H6	1.99	0.45
53:27:2827:C:H2'	53:27:2828:G:H8	1.81	0.45
53:27:2863:C:H2'	53:27:2864:G:C8	2.52	0.45
56:30:22:G:H2'	56:30:23:A:C8	2.50	0.45
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.45
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.45
3:C:14:VAL:HB	3:C:197:GLU:CD	2.41	0.45
4:D:59:ILE:HA	4:D:139:GLU:OE2	2.17	0.45
7:G:119:PRO:CG	7:G:120:ALA:H	2.26	0.45
9:I:4:PHE:CG	9:I:5:THR:N	2.85	0.45
12:L:112:LEU:O	12:L:115:GLU:HB3	2.17	0.45
13:M:48:VAL:O	13:M:51:LEU:HB2	2.17	0.45
14:N:56:LYS:C	14:N:58:ILE:N	2.73	0.45
19:S:10:VAL:HG21	19:S:42:GLU:HG2	1.97	0.45
19:S:74:ILE:HG13	19:S:74:ILE:O	2.17	0.45
20:T:96:LYS:O	20:T:98:ASN:N	2.46	0.45
29:3:34:ARG:CD	29:3:39:ARG:HD2	2.47	0.45
32:6:103:TRP:CD2	32:6:156:LEU:HD21	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:195:ASN:HB3	34:8:197:HIS:CD2	2.52	0.45
35:9:47:PHE:CZ	35:9:137:ARG:NH1	2.84	0.45
37:11:114:SER:O	37:11:117:LEU:HB3	2.16	0.45
41:15:71:ASP:O	41:15:72:ALA:CB	2.65	0.45
45:19:25:GLU:HA	45:19:80:LEU:CD2	2.46	0.45
47:21:13:SER:OG	47:21:15:LYS:HG2	2.16	0.45
47:21:20:ILE:O	47:21:45:VAL:HB	2.16	0.45
50:24:17:ARG:HG3	50:24:18:LYS:H	1.82	0.45
52:26:461:A:H2'	52:26:462:G:C8	2.52	0.45
52:26:542:G:H2'	52:26:543:U:H6	1.81	0.45
52:26:597:G:C2'	52:26:598:U:H5'	2.45	0.45
52:26:605:U:H2'	52:26:606:G:O4'	2.16	0.45
52:26:1338:G:H21	57:31:41:C:H1'	1.82	0.45
52:26:1426:G:H2'	52:26:1427:C:H6	1.82	0.45
53:27:35:G:H1'	53:27:454:A:C4	2.52	0.45
53:27:67:U:H2'	53:27:68:G:O4'	2.16	0.45
53:27:396:G:C6	53:27:397:U:C4	3.04	0.45
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.45
53:27:600:G:H2'	53:27:601:C:C6	2.52	0.45
53:27:1086:A:H3'	53:27:1086:A:N3	2.31	0.45
53:27:1179:G:H3'	53:27:1180:U:H4'	1.99	0.45
53:27:1882:U:H2'	53:27:1883:U:H6	1.82	0.45
53:27:2144:G:H21	53:27:2148:G:H1	1.64	0.45
53:27:2226:C:H3'	53:27:2227:A:C8	2.47	0.45
53:27:2322:A:O2'	53:27:2323:G:H5'	2.16	0.45
53:27:2366:A:H2'	53:27:2367:G:O4'	2.17	0.45
53:27:2441:U:O2'	53:27:2442:C:H5'	2.17	0.45
53:27:2634:A:H2'	53:27:2635:A:O4'	2.17	0.45
53:27:2676:C:H2'	53:27:2677:G:C8	2.51	0.45
56:30:15:G:H2'	56:30:16:U:C4'	2.46	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
59:33:604:ASN:O	59:33:605:LEU:C	2.59	0.45
2:B:119:ALA:HB3	2:B:165:MET:HB2	1.98	0.45
3:C:105:LEU:HD21	3:C:177:PRO:CG	2.47	0.45
3:C:105:LEU:O	3:C:109:LEU:HD13	2.17	0.45
5:E:144:ALA:HB1	5:E:163:TYR:HE1	1.81	0.45
7:G:54:VAL:HG11	7:G:56:ARG:NH2	2.31	0.45
8:H:15:GLY:O	8:H:42:ASN:ND2	2.50	0.45
9:I:14:ASP:CG	9:I:15:TRP:N	2.75	0.45
10:J:41:ILE:C	10:J:41:ILE:HD12	2.42	0.45
10:J:115:ILE:O	10:J:118:LEU:N	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:110:VAL:CG2	11:K:127:VAL:HG22	2.43	0.45
13:M:4:ARG:HA	53:27:2820:A:OP1	2.15	0.45
14:N:11:ALA:HB2	14:N:96:GLY:N	2.32	0.45
14:N:29:HIS:CD2	14:N:30:ARG:N	2.85	0.45
15:O:48:ALA:CB	15:O:95:LYS:HG3	2.47	0.45
17:Q:49:ILE:HG21	17:Q:53:PHE:H	1.81	0.45
18:R:70:LYS:O	18:R:107:VAL:HG23	2.17	0.45
20:T:1:ALA:N	53:27:84:A:OP1	2.50	0.45
28:2:11:VAL:HG12	28:2:12:SER:N	2.31	0.45
28:2:12:SER:HA	28:2:48:TYR:CD1	2.52	0.45
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.81	0.45
32:6:96:LEU:HD13	52:26:1103:C:H4'	1.99	0.45
35:9:77:ASN:CG	35:9:78:GLY:H	2.24	0.45
38:12:52:GLY:HA3	38:12:56:PRO:HA	1.98	0.45
40:14:29:ALA:O	40:14:33:GLY:N	2.40	0.45
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.98	0.45
41:15:124:LYS:CG	41:15:125:LYS:N	2.77	0.45
42:16:45:ASN:HD22	42:16:88:ASP:CG	2.25	0.45
51:25:44:ARG:HD2	52:26:723:U:OP1	2.16	0.45
52:26:116:A:H61	52:26:313:A:H1'	1.82	0.45
52:26:151:A:H2'	52:26:152:A:C5'	2.47	0.45
52:26:152:A:H3'	52:26:153:C:C6	2.51	0.45
52:26:158:G:H2'	52:26:159:G:C8	2.51	0.45
52:26:495:A:H4'	52:26:496:A:H5'	1.99	0.45
52:26:517:G:OP2	52:26:517:G:H8	1.99	0.45
52:26:885:G:H2'	52:26:886:G:C8	2.44	0.45
52:26:945:G:N2	52:26:1334:G:H4'	2.32	0.45
52:26:1299:A:H1'	52:26:1301:U:H1'	1.98	0.45
52:26:1360:A:C2'	52:26:1361:G:H5'	2.47	0.45
53:27:179:C:H2'	53:27:180:G:O4'	2.16	0.45
53:27:465:G:C6	53:27:466:A:N6	2.85	0.45
53:27:476:G:N2	53:27:478:A:H3'	2.32	0.45
53:27:1708:C:H2'	53:27:1709:U:H6	1.81	0.45
53:27:1755:A:H2'	53:27:1756:G:H5'	1.98	0.45
53:27:1822:C:O2'	53:27:1823:G:H5'	2.17	0.45
53:27:2167:U:H5	53:27:2169:A:OP2	2.00	0.45
53:27:2373:G:H2'	53:27:2374:C:C6	2.52	0.45
53:27:2564:A:C6	53:27:2565:A:N1	2.85	0.45
53:27:2600:A:H2'	53:27:2601:C:H6	1.82	0.45
54:28:114:C:H2'	54:28:115:A:H8	1.82	0.45
56:30:28:G:H2'	56:30:29:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:61:C:H2'	56:30:62:C:C6	2.51	0.45
56:30:66:U:H2'	56:30:67:C:O4'	2.17	0.45
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.45
3:C:74:LYS:NZ	53:27:801:G:OP2	2.50	0.45
4:D:102:LEU:HG	4:D:103:ILE:N	2.32	0.45
5:E:82:PHE:CZ	5:E:137:LYS:HB2	2.51	0.45
5:E:122:ALA:HA	5:E:132:LEU:HA	1.99	0.45
7:G:14:GLU:O	7:G:18:VAL:HG23	2.17	0.45
7:G:25:ALA:HB3	7:G:85:SER:HB2	1.98	0.45
9:I:78:THR:CG2	53:27:2641:G:H5"	2.46	0.45
9:I:81:ILE:HD11	53:27:2515:C:P	2.57	0.45
9:I:135:GLN:O	9:I:136:GLN:C	2.60	0.45
10:J:98:ARG:HE	52:26:339:C:P	2.39	0.45
14:N:26:LEU:HB2	14:N:90:VAL:CG2	2.47	0.45
17:Q:46:GLU:OE2	17:Q:48:LYS:N	2.50	0.45
17:Q:49:ILE:O	17:Q:49:ILE:HG13	2.15	0.45
17:Q:89:HIS:ND1	17:Q:90:ARG:N	2.65	0.45
20:T:27:VAL:HG23	20:T:33:VAL:CG1	2.46	0.45
26:Z:56:ARG:HH22	49:23:68:HIS:CE1	2.31	0.45
27:1:2:VAL:HG23	53:27:2016:U:H1'	1.99	0.45
32:6:125:PHE:CD1	32:6:126:ASP:N	2.85	0.45
34:8:11:SER:HB3	34:8:16:THR:O	2.17	0.45
34:8:25:ARG:HB2	52:26:410:G:P	2.57	0.45
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.31	0.45
36:10:98:GLU:O	36:10:99:ALA:HB3	2.17	0.45
37:11:67:ASN:HD21	37:11:129:ASN:ND2	2.15	0.45
37:11:102:TRP:O	37:11:105:GLU:HB3	2.17	0.45
46:20:69:ASP:O	46:20:72:ALA:HB3	2.17	0.45
48:22:52:ARG:O	48:22:55:ALA:HB3	2.17	0.45
48:22:72:ARG:NE	48:22:72:ARG:HA	2.31	0.45
49:23:22:VAL:HG21	49:23:42:ASN:HB2	1.98	0.45
52:26:124:C:H2'	52:26:125:U:H6	1.82	0.45
52:26:202:G:H2'	52:26:203:G:H8	1.80	0.45
52:26:521:G:H1'	52:26:536:C:O2'	2.17	0.45
52:26:613:C:H2'	52:26:614:C:H6	1.78	0.45
52:26:739:C:H2'	52:26:740:U:O4'	2.17	0.45
52:26:798:U:H2'	52:26:799:G:O4'	2.17	0.45
52:26:955:U:O2'	52:26:956:U:H5'	2.17	0.45
52:26:1413:A:O2'	52:26:1414:U:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1450:U:O2'	52:26:1452:C:H5'	2.17	0.45
52:26:1515:G:O2'	52:26:1516:G:H5'	2.17	0.45
53:27:197:A:C2'	53:27:198:C:H5'	2.46	0.45
53:27:259:G:O2'	53:27:260:G:H5'	2.17	0.45
53:27:529:A:C4	53:27:2023:C:C5	3.05	0.45
53:27:665:U:H2'	53:27:666:A:H8	1.82	0.45
53:27:1210:G:O5'	53:27:1212:G:H5'	2.16	0.45
53:27:1516:G:O2'	53:27:1517:G:H5'	2.17	0.45
53:27:1952:A:H2'	53:27:1953:A:O4'	2.17	0.45
53:27:1972:G:N3	53:27:1973:G:N7	2.65	0.45
53:27:2038:G:H2'	53:27:2039:U:O4'	2.17	0.45
53:27:2817:U:H2'	53:27:2818:U:O4'	2.16	0.45
53:27:2861:U:H2'	53:27:2862:G:C8	2.51	0.45
53:27:2890:G:H8	53:27:2890:G:O5'	2.00	0.45
57:31:18:G:N2	57:31:57:A:H2'	2.32	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.17	0.45
5:E:148:ARG:HA	5:E:161:VAL:CG1	2.47	0.45
6:F:29:PHE:HB2	53:27:2198:A:N3	2.31	0.45
7:G:42:ARG:HG2	7:G:46:ARG:NE	2.31	0.45
7:G:118:ILE:HB	7:G:119:PRO:CD	2.46	0.45
8:H:132:ALA:HA	8:H:137:LEU:HD12	1.99	0.45
10:J:1:MET:HG3	10:J:67:LYS:HG2	1.99	0.45
10:J:66:LYS:HD2	10:J:79:PHE:O	2.17	0.45
16:P:1:ALA:N	53:27:1248:G:OP1	2.50	0.45
17:Q:11:GLN:HG2	17:Q:39:LEU:HD12	1.98	0.45
20:T:23:LYS:O	20:T:35:VAL:HG13	2.17	0.45
24:X:54:LYS:HE2	53:27:72:U:OP2	2.17	0.45
26:Z:61:ASN:O	26:Z:64:PHE:HB3	2.16	0.45
35:9:105:ILE:HG22	52:26:8:A:H5'	1.99	0.45
36:10:48:ALA:HB1	48:22:68:PRO:CG	2.44	0.45
41:15:90:PRO:O	41:15:91:GLY:C	2.60	0.45
42:16:106:VAL:HG12	42:16:107:LYS:H	1.82	0.45
50:24:2:ASN:N	52:26:332:G:H5'	2.32	0.45
50:24:30:PHE:O	50:24:34:VAL:HG23	2.16	0.45
52:26:138:G:C6	52:26:226:G:C6	3.05	0.45
52:26:208:U:H2'	52:26:210:C:H1'	1.99	0.45
52:26:314:C:H2'	52:26:315:A:C8	2.52	0.45
52:26:509:A:H3'	52:26:509:A:H8	1.82	0.45
52:26:1261:A:H2	52:26:1274:A:H2	1.65	0.45
53:27:54:G:C2	53:27:55:G:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:214:G:H2'	53:27:215:G:C8	2.52	0.45
53:27:684:G:C2	53:27:794:A:C2	3.05	0.45
53:27:709:U:H2'	53:27:710:U:H6	1.82	0.45
53:27:1472:C:H2'	53:27:1473:G:H8	1.81	0.45
53:27:1669:A:C2	53:27:1994:C:H1'	2.51	0.45
53:27:1707:G:H1'	53:27:1756:G:N3	2.32	0.45
53:27:2038:G:H2'	53:27:2039:U:H6	1.82	0.45
53:27:2367:G:H2'	53:27:2368:C:C6	2.52	0.45
53:27:2751:G:O2'	53:27:2752:C:H5'	2.17	0.45
57:31:21:A:N6	57:31:46:G:H2'	2.30	0.45
59:33:709:THR:C	59:33:710:ILE:HD12	2.41	0.45
1:A:146:LYS:HB2	1:A:149:LYS:CB	2.44	0.44
2:B:183:GLU:N	2:B:183:GLU:OE1	2.47	0.44
5:E:167:VAL:O	5:E:167:VAL:HG13	2.16	0.44
11:K:63:LYS:HA	30:4:11:LYS:O	2.18	0.44
13:M:73:ASN:O	13:M:76:VAL:HB	2.17	0.44
20:T:53:GLN:OE1	20:T:53:GLN:N	2.50	0.44
21:U:93:ARG:O	21:U:94:ALA:C	2.60	0.44
26:Z:14:ALA:HB3	26:Z:22:MET:O	2.16	0.44
27:1:39:ARG:HB3	27:1:40:HIS:ND1	2.31	0.44
30:4:22:LYS:NZ	53:27:631:A:OP2	2.50	0.44
32:6:39:ILE:HD12	32:6:39:ILE:N	2.23	0.44
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.33	0.44
38:12:50:VAL:O	38:12:51:GLU:C	2.60	0.44
41:15:71:ASP:HB2	41:15:74:LYS:NZ	2.33	0.44
44:18:3:GLN:HG2	52:26:1048:G:OP1	2.17	0.44
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.52	0.44
46:20:5:ARG:NH2	46:20:24:SER:HA	2.31	0.44
47:21:26:ARG:CZ	52:26:237:G:H5"	2.46	0.44
47:21:51:GLU:HG2	47:21:52:CYS:N	2.31	0.44
50:24:24:ARG:O	50:24:28:ARG:HG3	2.17	0.44
52:26:80:A:H2'	52:26:81:A:O4'	2.17	0.44
52:26:797:C:H2'	52:26:798:U:H6	1.76	0.44
52:26:894:G:H2'	52:26:895:G:H8	1.82	0.44
52:26:997:U:O2'	52:26:998:C:H5'	2.17	0.44
52:26:1443:C:H2'	52:26:1444:U:C6	2.51	0.44
53:27:19:A:H2'	53:27:20:C:C6	2.53	0.44
53:27:1112:G:O2'	53:27:1113:U:H5'	2.17	0.44
53:27:1130:U:N3	53:27:2025:C:H5"	2.32	0.44
53:27:1166:G:H2'	53:27:1167:C:C6	2.51	0.44
53:27:1317:G:H2'	53:27:1318:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1326:U:H4'	53:27:2011:U:O4'	2.17	0.44
53:27:1470:A:H2'	53:27:1471:G:O4'	2.16	0.44
53:27:1657:U:H2'	53:27:1658:C:O4'	2.17	0.44
53:27:1679:A:H8	53:27:1679:A:O5'	2.01	0.44
53:27:1694:C:H5"	53:27:1695:G:C5	2.52	0.44
53:27:2244:U:O2	53:27:2244:U:H2'	2.16	0.44
53:27:2296:U:H4'	53:27:2297:A:O5'	2.16	0.44
53:27:2398:U:H2'	53:27:2399:G:C8	2.51	0.44
53:27:2472:G:O5'	53:27:2472:G:H8	2.01	0.44
53:27:2538:C:H2'	53:27:2539:C:C6	2.46	0.44
53:27:2734:A:C5	53:27:2735:G:C8	3.05	0.44
58:32:61:C:H2'	58:32:62:C:C6	2.51	0.44
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.44
59:33:732:VAL:HG12	59:33:734:ASP:H	1.82	0.44
1:A:244:VAL:CA	1:A:251:THR:HG22	2.47	0.44
3:C:66:GLY:CA	53:27:2060:A:H5"	2.48	0.44
4:D:109:ARG:CZ	43:17:2:ARG:NH1	2.81	0.44
4:D:124:ARG:HB2	4:D:126:ASN:HD22	1.81	0.44
7:G:61:ARG:HD2	53:27:1046:A:C4'	2.47	0.44
7:G:61:ARG:HG2	53:27:1046:A:H4'	1.99	0.44
7:G:88:HIS:CB	7:G:89:PRO:HD3	2.32	0.44
8:H:52:LEU:HD11	8:H:81:LYS:HD3	2.00	0.44
8:H:135:MET:HA	53:27:1063:G:H1'	1.98	0.44
9:I:2:LYS:HA	53:27:995:C:C4	2.52	0.44
12:L:86:LYS:HE3	53:27:956:G:OP2	2.17	0.44
16:P:13:HIS:O	16:P:17:LEU:HD13	2.17	0.44
16:P:51:GLN:NE2	53:27:560:C:H4'	2.31	0.44
17:Q:49:ILE:HB	17:Q:51:VAL:C	2.37	0.44
17:Q:49:ILE:HD12	17:Q:52:PRO:HA	1.98	0.44
20:T:98:ASN:ND2	20:T:100:GLU:HB2	2.32	0.44
32:6:69:VAL:CG2	32:6:160:LEU:HD11	2.47	0.44
34:8:125:ASN:HA	34:8:141:VAL:CG2	2.43	0.44
34:8:133:SER:O	34:8:135:GLN:N	2.51	0.44
34:8:187:ARG:HH22	34:8:192:ALA:HA	1.82	0.44
37:11:2:ARG:NH2	52:26:935:A:C2	2.84	0.44
37:11:3:ARG:HG2	37:11:4:ARG:N	2.32	0.44
42:16:28:GLN:HB2	42:16:80:LEU:HD11	1.98	0.44
43:17:1:ALA:O	43:17:8:ILE:HG21	2.16	0.44
46:20:15:PRO:HB2	46:20:17:TYR:CE2	2.52	0.44
46:20:59:HIS:CE1	46:20:63:GLN:OE1	2.70	0.44
49:23:49:ALA:O	49:23:56:HIS:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:67:HIS:O	50:24:68:LYS:C	2.60	0.44
50:24:79:THR:HA	50:24:82:ILE:HG12	1.98	0.44
52:26:27:G:H2'	52:26:28:A:H8	1.81	0.44
52:26:445:G:H2'	52:26:446:G:O4'	2.17	0.44
52:26:755:G:O5'	52:26:755:G:H8	2.00	0.44
52:26:825:A:O2'	52:26:826:C:H5'	2.17	0.44
52:26:919:A:H2'	52:26:920:U:H6	1.82	0.44
52:26:956:U:H2'	52:26:957:U:O4'	2.17	0.44
52:26:1261:A:H2	52:26:1274:A:C2	2.35	0.44
52:26:1499:A:OP2	52:26:1500:A:OP2	2.35	0.44
53:27:250:G:H2'	53:27:251:A:C8	2.52	0.44
53:27:290:U:H2'	53:27:291:G:C8	2.53	0.44
53:27:492:A:H3'	53:27:493:G:H8	1.82	0.44
53:27:1091:G:O2'	53:27:1092:C:H5'	2.18	0.44
53:27:1173:U:H2'	53:27:1174:U:C4'	2.34	0.44
53:27:1346:G:H2'	53:27:1347:A:C8	2.52	0.44
53:27:1518:C:H2'	53:27:1519:G:H8	1.82	0.44
53:27:1679:A:O2'	53:27:1680:U:H5'	2.17	0.44
53:27:1924:C:H2'	53:27:1925:C:C6	2.53	0.44
53:27:2561:U:H2'	53:27:2562:U:O4'	2.17	0.44
53:27:2589:A:N6	53:27:2590:A:H62	2.15	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
59:33:43:LEU:C	59:33:44:GLN:OE1	2.61	0.44
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.44
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
2:B:15:PHE:CE2	15:O:54:LEU:HD11	2.52	0.44
2:B:152:PRO:O	2:B:154:LYS:HG2	2.17	0.44
3:C:101:TYR:CE2	3:C:105:LEU:HD11	2.52	0.44
6:F:50:ARG:NH1	6:F:54:LEU:HD23	2.32	0.44
6:F:96:THR:HG22	6:F:115:VAL:HB	1.98	0.44
8:H:109:ALA:O	8:H:113:ALA:N	2.50	0.44
14:N:29:HIS:HD2	14:N:97:PHE:CZ	2.35	0.44
14:N:49:VAL:CG2	14:N:85:LYS:HD2	2.48	0.44
17:Q:21:ARG:HA	17:Q:95:ASP:OD1	2.17	0.44
32:6:93:HIS:O	32:6:95:TRP:N	2.51	0.44
33:7:139:ASN:O	33:7:142:ARG:HG2	2.17	0.44
34:8:21:LYS:HE2	34:8:26:ALA:O	2.17	0.44
37:11:87:PRO:HG3	37:11:148:LYS:HA	1.99	0.44
39:13:59:LYS:C	39:13:60:LEU:HG	2.42	0.44
39:13:104:THR:HG22	39:13:106:ASP:H	1.82	0.44
43:17:7:ASN:HD22	43:17:21:ILE:N	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:104:ASN:O	43:17:106:ARG:N	2.51	0.44
47:21:7:LEU:CD2	47:21:24:ILE:HD13	2.48	0.44
49:23:24:SER:HB3	49:23:27:LYS:NZ	2.32	0.44
52:26:32:A:H2'	52:26:33:A:C8	2.53	0.44
52:26:123:U:O2'	52:26:124:C:H5'	2.18	0.44
52:26:182:A:H62	52:26:194:C:H42	1.64	0.44
52:26:1198:G:H2'	52:26:1199:U:C6	2.53	0.44
53:27:15:G:C6	53:27:16:C:C4	3.05	0.44
53:27:21:A:H2'	53:27:22:C:C6	2.53	0.44
53:27:300:A:H2	53:27:319:G:N3	2.14	0.44
53:27:449:A:H2'	53:27:450:G:C8	2.52	0.44
53:27:570:G:H22	53:27:2499:C:H5'	1.83	0.44
53:27:1018:U:O2'	53:27:1019:U:H5'	2.16	0.44
53:27:1663:G:O2'	53:27:1664:A:H5'	2.17	0.44
53:27:1667:G:H4'	53:27:1668:A:OP1	2.16	0.44
53:27:2018:G:O2'	53:27:2019:A:H5'	2.18	0.44
53:27:2121:G:H2'	53:27:2122:U:O4'	2.17	0.44
53:27:2589:A:C6	53:27:2590:A:N7	2.85	0.44
53:27:2662:A:H2'	53:27:2663:G:O4'	2.17	0.44
53:27:2682:A:H61	53:27:2728:U:H1'	1.82	0.44
53:27:2807:U:H1'	53:27:2892:G:H22	1.82	0.44
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.44
1:A:7:PRO:HB3	1:A:13:ARG:HA	1.98	0.44
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.16	0.44
2:B:129:THR:HG22	53:27:1997:C:OP2	2.16	0.44
4:D:120:SER:HB3	53:27:2303:G:O2'	2.18	0.44
5:E:10:VAL:HG13	5:E:10:VAL:O	2.16	0.44
10:J:120:PRO:HB2	15:O:65:ASN:HD21	1.80	0.44
11:K:23:ILE:HG13	17:Q:82:HIS:NE2	2.33	0.44
12:L:82:MET:HE2	12:L:82:MET:HA	2.00	0.44
13:M:84:GLY:N	13:M:85:PRO:HD2	2.33	0.44
20:T:39:ASN:OD1	20:T:64:ILE:HB	2.17	0.44
25:Y:24:LEU:HD21	53:27:930:G:H1'	1.99	0.44
30:4:21:PHE:O	30:4:49:VAL:HG23	2.17	0.44
36:10:6:ILE:CD1	36:10:74:LEU:HD13	2.48	0.44
37:11:62:GLU:OE2	37:11:66:GLU:HB3	2.18	0.44
37:11:104:VAL:O	37:11:108:ARG:HG2	2.17	0.44
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.47	0.44
43:17:88:LEU:HD13	43:17:91:ARG:NH2	2.32	0.44
43:17:100:ARG:NH2	52:26:951:G:OP2	2.51	0.44
44:18:7:ALA:HA	44:18:10:VAL:CG1	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:20:ASN:ND2	52:26:323:U:OP1	2.47	0.44
52:26:549:C:H2'	52:26:550:G:C8	2.52	0.44
52:26:596:A:H5'	52:26:596:A:C8	2.52	0.44
52:26:646:G:O2'	52:26:647:C:H5'	2.17	0.44
52:26:703:G:H5'	52:26:704:A:H5'	1.99	0.44
52:26:922:G:C2	52:26:923:A:C4	3.05	0.44
52:26:1469:C:H3'	52:26:1470:U:H6	1.82	0.44
52:26:1511:G:H2'	52:26:1512:U:O4'	2.17	0.44
53:27:175:G:O2'	53:27:176:A:H5'	2.17	0.44
53:27:254:G:O2'	53:27:255:A:H5"	2.17	0.44
53:27:475:C:OP1	53:27:475:C:H3'	2.18	0.44
53:27:780:G:H5"	53:27:781:A:OP1	2.17	0.44
53:27:786:C:H2'	53:27:787:C:O4'	2.17	0.44
53:27:817:C:H2'	53:27:818:G:O4'	2.17	0.44
53:27:976:G:H2'	53:27:977:G:H8	1.83	0.44
53:27:1368:G:C2	53:27:1369:G:C8	3.05	0.44
53:27:2093:G:H2'	53:27:2094:A:H8	1.83	0.44
53:27:2362:C:O2'	53:27:2363:G:H5'	2.18	0.44
54:28:4:C:H6	54:28:4:C:C5'	2.30	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.44
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.44
59:33:348:GLU:C	59:33:349:LEU:HD12	2.42	0.44
59:33:408:VAL:HG21	59:33:418:LEU:HD12	1.99	0.44
1:A:12:ARG:NH2	53:27:728:G:H4'	2.22	0.44
1:A:146:LYS:CB	1:A:149:LYS:HB2	2.42	0.44
1:A:152:GLN:HB3	53:27:1818:U:C2	2.52	0.44
2:B:29:VAL:O	2:B:185:ASN:HB3	2.17	0.44
2:B:51:THR:HG21	2:B:68:PHE:HE1	1.82	0.44
2:B:191:GLY:HA3	53:27:2729:G:O2'	2.18	0.44
3:C:46:GLN:OE1	3:C:87:ALA:N	2.50	0.44
3:C:58:LYS:HD2	3:C:58:LYS:N	2.32	0.44
6:F:59:ALA:O	6:F:63:ALA:HB2	2.17	0.44
6:F:103:VAL:CG1	6:F:108:VAL:HB	2.47	0.44
10:J:10:VAL:HG21	10:J:16:ALA:HB3	2.00	0.44
10:J:61:VAL:HG12	10:J:87:LEU:HD11	2.00	0.44
10:J:61:VAL:HG22	10:J:62:VAL:O	2.18	0.44
13:M:106:ASP:C	13:M:106:ASP:OD1	2.59	0.44
14:N:74:VAL:O	14:N:78:VAL:HG23	2.18	0.44
17:Q:1:MET:HA	17:Q:43:ASN:HD21	1.83	0.44
21:U:41:GLU:CD	21:U:41:GLU:C	2.85	0.44
33:7:46:LEU:HB3	33:7:49:ALA:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:172:VAL:HG12	33:7:174:LEU:CD1	2.48	0.44
33:7:179:ALA:HB1	33:7:202:PHE:CE1	2.53	0.44
35:9:77:ASN:OD1	35:9:78:GLY:N	2.51	0.44
35:9:156:ARG:HD3	38:12:44:PHE:CD1	2.51	0.44
38:12:13:ILE:O	38:12:17:GLN:HG2	2.18	0.44
38:12:104:SER:OG	38:12:109:VAL:HG22	2.18	0.44
39:13:50:PRO:O	39:13:53:LEU:HG	2.18	0.44
41:15:62:ALA:O	41:15:65:ALA:HB3	2.18	0.44
43:17:85:TYR:O	43:17:88:LEU:HB3	2.18	0.44
50:24:28:ARG:HG2	50:24:28:ARG:HH11	1.83	0.44
52:26:300:A:H2'	52:26:301:G:O4'	2.18	0.44
52:26:502:A:H8	52:26:502:A:O5'	2.00	0.44
52:26:505:G:C6	52:26:535:A:C2	3.05	0.44
52:26:854:U:H2'	52:26:855:U:H6	1.81	0.44
52:26:895:G:C6	52:26:896:C:C4	3.05	0.44
52:26:955:U:H3	52:26:1225:A:N6	2.15	0.44
53:27:228:C:O2'	53:27:229:C:H5"	2.18	0.44
53:27:467:G:C2'	53:27:468:G:H5'	2.47	0.44
53:27:627:A:N6	53:27:637:A:O5'	2.46	0.44
53:27:696:G:H2'	53:27:697:G:C8	2.50	0.44
53:27:792:A:C6	53:27:2440:C:C6	3.06	0.44
53:27:856:G:H2'	53:27:857:G:C8	2.53	0.44
53:27:884:U:O4'	59:33:640:GLN:HG2	2.16	0.44
53:27:959:A:C6	53:27:960:A:C6	3.05	0.44
53:27:1020:A:H8	53:27:1020:A:O5'	1.99	0.44
53:27:1179:G:C3'	53:27:1180:U:H4'	2.48	0.44
53:27:1654:A:C2'	53:27:1655:A:H5'	2.47	0.44
53:27:1764:C:H2'	53:27:1765:U:C6	2.52	0.44
53:27:1868:C:H2'	53:27:1869:G:H8	1.82	0.44
53:27:2060:A:N9	53:27:2502:G:H1'	2.33	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.52	0.44
53:27:2328:A:O2'	53:27:2329:U:H5'	2.18	0.44
53:27:2341:G:H2'	53:27:2342:C:O4'	2.18	0.44
53:27:2584:U:C3'	53:27:2585:U:H5"	2.48	0.44
53:27:2598:A:C8	53:27:2599:G:H1'	2.53	0.44
53:27:2612:C:H5"	53:27:2613:U:OP1	2.17	0.44
53:27:2817:U:H2'	53:27:2818:U:C4'	2.48	0.44
53:27:2852:G:H2'	53:27:2853:C:H6	1.82	0.44
56:30:49:C:H2'	56:30:50:U:C5	2.53	0.44
59:33:18:GLU:C	59:33:21:ILE:HG12	2.42	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:408:VAL:CG2	59:33:458:GLY:HA2	2.44	0.44
1:A:52:HIS:HD2	1:A:217:PRO:O	2.00	0.44
1:A:219:VAL:O	1:A:220:ARG:C	2.61	0.44
1:A:259:ASN:O	1:A:260:LYS:HB2	2.17	0.44
2:B:88:GLU:OE1	2:B:88:GLU:N	2.51	0.44
9:I:108:MET:CE	53:27:1006:C:H1'	2.48	0.44
10:J:79:PHE:CD1	15:O:69:VAL:HG22	2.53	0.44
17:Q:74:ILE:HG22	17:Q:87:GLN:H	1.81	0.44
19:S:1:MET:C	19:S:3:ARG:N	2.73	0.44
20:T:25:LYS:CD	20:T:36:GLU:HB3	2.44	0.44
22:V:57:ALA:HA	22:V:78:ILE:HD11	1.99	0.44
26:Z:60:PHE:HZ	49:23:40:PHE:CD1	2.35	0.44
30:4:5:THR:HG21	53:27:243:U:OP1	2.18	0.44
31:5:37:GLN:NE2	53:27:1125:G:H5'	2.32	0.44
34:8:7:LYS:HG2	52:26:430:A:P	2.58	0.44
34:8:21:LYS:HE3	34:8:25:ARG:HE	1.82	0.44
34:8:78:ALA:C	34:8:85:THR:HG23	2.42	0.44
34:8:122:ILE:HD12	34:8:122:ILE:N	2.33	0.44
39:13:128:LYS:HG2	39:13:129:ARG:N	2.32	0.44
40:14:23:ALA:O	40:14:27:GLU:HB2	2.17	0.44
41:15:22:ILE:HD13	41:15:95:THR:HG21	1.99	0.44
43:17:92:ARG:O	43:17:94:LEU:HG	2.17	0.44
44:18:80:ARG:HG3	44:18:80:ARG:NH1	2.33	0.44
45:19:63:ARG:HD2	45:19:63:ARG:HA	1.79	0.44
48:22:19:GLU:OE1	48:22:19:GLU:N	2.38	0.44
48:22:23:LYS:O	48:22:25:ILE:HG23	2.18	0.44
51:25:15:LEU:CD2	51:25:17:ARG:HG3	2.47	0.44
52:26:59:A:H3'	52:26:331:G:H22	1.82	0.44
52:26:182:A:O2'	52:26:183:C:H5"	2.18	0.44
52:26:666:G:H2'	52:26:667:G:C8	2.51	0.44
52:26:1014:A:H2'	52:26:1015:G:O4'	2.17	0.44
52:26:1356:G:H2'	52:26:1357:A:H8	1.78	0.44
53:27:70:G:H5"	53:27:112:U:O2	2.17	0.44
53:27:76:C:O2'	53:27:77:G:H5'	2.18	0.44
53:27:152:A:H2'	53:27:153:U:C6	2.52	0.44
53:27:251:A:C5	53:27:252:G:H1'	2.53	0.44
53:27:280:U:H2'	53:27:281:C:N1	2.32	0.44
53:27:452:G:N2	53:27:457:A:O2'	2.51	0.44
53:27:532:A:H2'	53:27:532:A:N3	2.32	0.44
53:27:815:C:H2'	53:27:816:C:C6	2.48	0.44
53:27:1672:A:C6	53:27:1673:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1701:A:H2'	53:27:1702:G:O4'	2.18	0.44
53:27:2174:C:C2'	53:27:2175:C:H5'	2.47	0.44
53:27:2296:U:H5"	53:27:2297:A:OP1	2.18	0.44
53:27:2557:G:H2'	53:27:2558:C:H6	1.82	0.44
53:27:2875:C:H2'	53:27:2876:G:H8	1.80	0.44
58:32:42:G:H2'	58:32:43:A:C8	2.52	0.44
58:32:72:A:H2	58:32:73:A:N6	2.16	0.44
59:33:460:GLN:O	59:33:461:ILE:HD13	2.17	0.44
59:33:587:PRO:HA	59:33:590:ARG:CB	2.48	0.44
1:A:242:HIS:O	1:A:244:VAL:HG13	2.18	0.44
2:B:4:LEU:HD21	2:B:98:VAL:HA	1.98	0.44
4:D:19:PHE:CZ	4:D:164:GLU:HA	2.52	0.44
4:D:91:ARG:HA	4:D:95:MET:HB2	2.00	0.44
4:D:114:ARG:NH1	43:17:70:ARG:HD2	2.31	0.44
6:F:79:THR:CG2	6:F:147:VAL:HG23	2.47	0.44
12:L:21:ALA:CB	12:L:100:LYS:HD3	2.40	0.44
13:M:29:VAL:HG12	13:M:78:LYS:CG	2.48	0.44
16:P:87:VAL:HG12	16:P:88:GLU:N	2.33	0.44
17:Q:24:LYS:HA	17:Q:94:THR:HG1	1.83	0.44
17:Q:68:ARG:NH1	17:Q:90:ARG:HD3	2.30	0.44
20:T:14:THR:OG1	20:T:68:ASN:ND2	2.51	0.44
20:T:96:LYS:HD3	53:27:300:A:OP2	2.18	0.44
21:U:48:MET:O	21:U:51:GLN:HG2	2.17	0.44
27:1:5:ASN:OD1	27:1:5:ASN:N	2.51	0.44
29:3:8:SER:HB3	29:3:11:LYS:HB3	2.00	0.44
32:6:20:ARG:HG3	32:6:20:ARG:NH1	2.32	0.44
32:6:60:ALA:CB	32:6:223:GLY:HA3	2.48	0.44
35:9:151:MET:O	35:9:154:ALA:HB3	2.17	0.44
36:10:4:TYR:OH	52:26:738:C:OP1	2.29	0.44
36:10:16:GLU:C	36:10:16:GLU:CD	2.86	0.44
36:10:24:ARG:NH1	36:10:24:ARG:O	2.49	0.44
37:11:2:ARG:HH12	52:26:932:C:H41	1.62	0.44
38:12:6:ILE:HG13	38:12:7:ALA:N	2.33	0.44
40:14:53:ILE:HG12	52:26:1060:U:C5'	2.48	0.44
42:16:113:ARG:HG3	42:16:118:VAL:HB	2.00	0.44
44:18:83:VAL:HG13	44:18:84:ARG:H	1.83	0.44
45:19:19:ASN:CG	45:19:20:ASP:H	2.25	0.44
46:20:13:LYS:HZ2	52:26:392:C:H4'	1.82	0.44
48:22:11:ARG:HD2	48:22:14:ALA:HB2	1.96	0.44
52:26:195:A:H2'	52:26:196:A:C8	2.53	0.44
52:26:556:C:H2'	52:26:557:G:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:592:G:H2'	52:26:593:U:C6	2.53	0.44
52:26:711:G:O2'	52:26:712:A:H5'	2.18	0.44
52:26:1143:G:H2'	52:26:1144:G:H8	1.81	0.44
52:26:1170:A:H2'	52:26:1171:A:C5'	2.47	0.44
53:27:449:A:H2'	53:27:450:G:H8	1.83	0.44
53:27:590:A:H2'	53:27:591:U:C6	2.52	0.44
53:27:762:U:H4'	53:27:763:G:O5'	2.18	0.44
53:27:1027:A:C6	53:27:1126:A:C4	3.05	0.44
53:27:1779:U:C2'	53:27:1783:A:H62	2.30	0.44
53:27:1829:A:C2	53:27:1830:C:H1'	2.53	0.44
53:27:1857:G:H1'	53:27:1885:A:H61	1.77	0.44
53:27:2056:G:C2	53:27:2057:G:C8	3.06	0.44
53:27:2284:A:H1'	53:27:2325:G:C2	2.52	0.44
53:27:2400:G:O2'	53:27:2401:U:H5'	2.17	0.44
53:27:2549:G:O2'	53:27:2550:G:H5'	2.18	0.44
53:27:2568:U:H2'	53:27:2569:G:O4'	2.17	0.44
53:27:2822:G:H8	53:27:2822:G:O5'	2.01	0.44
54:28:66:A:N1	54:28:107:G:H2'	2.33	0.44
54:28:80:U:H2'	54:28:81:G:H8	1.83	0.44
54:28:100:G:H2'	54:28:101:A:C8	2.52	0.44
56:30:63:G:O2'	56:30:64:A:H5'	2.18	0.44
58:32:11:A:H2'	58:32:12:G:C8	2.52	0.44
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.44
59:33:607:HIS:HA	59:33:631:ILE:O	2.16	0.44
59:33:671:VAL:CG2	59:33:735:VAL:HG13	2.47	0.44
59:33:678:GLY:HA2	59:33:681:ARG:HB3	2.00	0.44
59:33:716:ILE:HD11	59:33:721:VAL:CG1	2.48	0.44
1:A:9:SER:O	1:A:12:ARG:HB3	2.17	0.44
3:C:78:TRP:CE2	53:27:1257:C:H4'	2.53	0.44
4:D:98:PHE:HD1	4:D:101:ARG:HH11	1.66	0.44
5:E:64:ALA:O	5:E:67:ALA:HB3	2.16	0.44
6:F:96:THR:O	6:F:115:VAL:HG21	2.18	0.44
7:G:72:LEU:C	7:G:74:ASP:H	2.24	0.44
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.99	0.44
11:K:81:ASP:OD1	11:K:82:LEU:N	2.51	0.44
12:L:55:ARG:NH2	53:27:2469:A:H1'	2.33	0.44
12:L:134:THR:HG22	12:L:135:VAL:N	2.32	0.44
14:N:11:ALA:HB2	14:N:95:SER:C	2.43	0.44
16:P:78:PHE:HE1	16:P:109:VAL:HA	1.81	0.44
17:Q:49:ILE:HG21	17:Q:53:PHE:N	2.33	0.44
17:Q:71:LYS:NZ	53:27:1223:G:N7	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.98	0.44
28:2:9:LYS:HD2	28:2:19:PHE:CG	2.52	0.44
32:6:116:LEU:C	32:6:116:LEU:HD23	2.43	0.44
34:8:154:VAL:HG11	34:8:177:MET:HE1	1.98	0.44
35:9:36:THR:HG23	35:9:62:ALA:HB3	2.00	0.44
37:11:97:ALA:HA	37:11:100:MET:CE	2.46	0.44
38:12:87:ARG:HB3	52:26:600:A:OP1	2.17	0.44
42:16:51:VAL:HG22	42:16:52:CYS:N	2.33	0.44
43:17:6:ILE:O	43:17:8:ILE:HG12	2.17	0.44
45:19:70:LYS:HB2	45:19:77:TYR:CD1	2.52	0.44
46:20:18:GLN:O	46:20:19:VAL:C	2.61	0.44
49:23:5:LYS:HG3	49:23:6:LYS:H	1.83	0.44
52:26:195:A:H1'	52:26:222:C:O2'	2.18	0.44
52:26:265:G:H2'	52:26:267:C:C5	2.44	0.44
52:26:290:C:O2'	52:26:291:U:H5'	2.17	0.44
52:26:408:A:H2'	52:26:409:U:O4'	2.17	0.44
52:26:581:G:N2	52:26:761:G:C6	2.86	0.44
52:26:790:A:H2	52:26:1497:G:OP1	2.01	0.44
52:26:802:A:H3'	52:26:803:G:H8	1.83	0.44
52:26:975:A:H5'	52:26:975:A:N3	2.33	0.44
52:26:1062:U:H2'	52:26:1063:C:C5	2.53	0.44
52:26:1361:G:H2'	52:26:1362:A:O4'	2.18	0.44
53:27:164:C:H2'	53:27:165:A:H5'	1.99	0.44
53:27:246:C:O5'	53:27:246:C:H6	2.01	0.44
53:27:376:G:C2	53:27:377:G:N7	2.86	0.44
53:27:1183:U:H2'	53:27:1184:U:C6	2.52	0.44
53:27:1406:U:H2'	53:27:1407:G:C5'	2.47	0.44
53:27:1639:C:O2'	53:27:1640:A:H5'	2.18	0.44
53:27:1891:G:C5	53:27:1892:C:C5	3.06	0.44
53:27:1930:G:O2'	53:27:1931:U:O5'	2.31	0.44
53:27:1934:C:O2'	53:27:1935:G:H5'	2.18	0.44
53:27:2315:G:H2'	53:27:2316:G:H8	1.83	0.44
59:33:44:GLN:HA	59:33:45:GLN:HA	1.66	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
59:33:466:GLN:HG2	59:33:467:LYS:N	2.32	0.44
59:33:599:VAL:O	59:33:601:GLY:N	2.50	0.44
1:A:83:ASP:OD2	1:A:86:ARG:NH2	2.51	0.44
4:D:39:VAL:HG12	4:D:84:ILE:O	2.18	0.44
8:H:10:LEU:O	8:H:55:PRO:HB3	2.17	0.44
8:H:20:SER:HA	8:H:24:GLY:CA	2.29	0.44
10:J:8:LEU:O	10:J:19:VAL:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:18:ARG:NH1	53:27:1249:U:C2	2.86	0.44
15:O:1:SER:C	15:O:3:ILE:N	2.75	0.44
15:O:26:GLU:HG2	15:O:43:GLU:HB2	1.99	0.44
15:O:64:SER:O	15:O:66:GLY:N	2.51	0.44
17:Q:74:ILE:HG22	17:Q:87:GLN:HB3	1.99	0.44
26:Z:35:ASP:OD1	26:Z:35:ASP:N	2.50	0.44
33:7:140:ALA:CB	33:7:148:ILE:HD12	2.48	0.44
35:9:92:ARG:CB	35:9:127:TYR:HB2	2.48	0.44
35:9:159:SER:O	35:9:162:GLU:N	2.47	0.44
36:10:39:LEU:O	36:10:39:LEU:HD23	2.17	0.44
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.33	0.44
44:18:86:ALA:HB1	44:18:91:GLU:HB2	2.00	0.44
52:26:237:G:H2'	52:26:238:A:C8	2.53	0.44
52:26:440:C:H2'	52:26:441:A:H5"	2.00	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.83	0.44
53:27:628:G:O2'	53:27:629:G:H5'	2.18	0.44
53:27:799:G:H5"	53:27:800:A:C2'	2.40	0.44
53:27:859:G:H2'	53:27:916:G:O6	2.18	0.44
53:27:1295:C:H2'	53:27:1296:G:H8	1.82	0.44
53:27:1957:C:H2'	53:27:1958:C:C6	2.52	0.44
53:27:2082:A:H3'	53:27:2083:G:H8	1.82	0.44
53:27:2133:G:O2'	53:27:2134:A:H8	2.01	0.44
53:27:2221:G:H2'	53:27:2222:C:H6	1.82	0.44
53:27:2360:G:H3'	53:27:2361:G:O4'	2.18	0.44
53:27:2733:A:H2'	53:27:2734:A:O4'	2.18	0.44
53:27:2845:U:H2'	53:27:2846:G:C8	2.52	0.44
56:30:13:C:H2'	56:30:14:A:H5"	1.99	0.44
56:30:19:G:N3	56:30:57:G:H1'	2.33	0.44
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.44
1:A:97:ASP:OD1	1:A:98:GLY:N	2.51	0.43
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.48	0.43
5:E:51:PHE:CE2	5:E:68:ARG:HA	2.53	0.43
6:F:56:ALA:O	6:F:59:ALA:HB3	2.18	0.43
7:G:11:ILE:HG21	53:27:1046:A:C2	2.53	0.43
7:G:44:ALA:HA	7:G:51:TYR:CE2	2.53	0.43
10:J:41:ILE:HG13	10:J:58:LEU:O	2.18	0.43
12:L:82:MET:O	12:L:84:LYS:HG2	2.17	0.43
12:L:119:LEU:O	12:L:122:ALA:HB3	2.18	0.43
14:N:27:VAL:HG21	14:N:40:ILE:HD12	2.00	0.43
18:R:37:THR:HG22	18:R:37:THR:O	2.17	0.43
22:V:7:ARG:CZ	22:V:8:ASN:ND2	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:66:ILE:HD13	44:18:41:TRP:HE3	1.83	0.43
29:3:35:ARG:HG3	29:3:35:ARG:HH11	1.82	0.43
32:6:69:VAL:HG21	32:6:160:LEU:HD11	1.99	0.43
33:7:135:ARG:HH11	33:7:138:GLN:HE22	1.66	0.43
37:11:42:VAL:O	37:11:46:LEU:HB2	2.18	0.43
38:12:29:SER:O	38:12:33:VAL:HG23	2.17	0.43
42:16:49:ARG:NH1	52:26:523:A:H61	2.13	0.43
42:16:120:ARG:HB2	52:26:37:U:H5"	2.00	0.43
43:17:53:ASP:OD1	43:17:54:THR:N	2.50	0.43
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.99	0.43
46:20:56:ARG:O	46:20:59:HIS:HB3	2.18	0.43
46:20:74:LEU:HA	46:20:77:GLU:CB	2.48	0.43
47:21:37:ILE:HD12	47:21:37:ILE:H	1.83	0.43
47:21:74:LEU:HD23	47:21:74:LEU:C	2.43	0.43
52:26:59:A:H1'	52:26:354:G:N2	2.33	0.43
52:26:210:C:H4'	52:26:211:G:C6	2.53	0.43
52:26:424:G:H2'	52:26:425:G:C8	2.53	0.43
52:26:786:G:H2'	52:26:787:A:O4'	2.18	0.43
52:26:869:G:H4'	52:26:872:A:C8	2.53	0.43
52:26:1004:A:H2'	52:26:1005:A:O4'	2.18	0.43
52:26:1426:G:O2'	52:26:1427:C:H5'	2.18	0.43
53:27:108:G:C2'	53:27:109:C:H5'	2.48	0.43
53:27:242:G:C2'	53:27:243:U:OP2	2.65	0.43
53:27:271:G:C6	53:27:367:G:C6	3.07	0.43
53:27:523:C:H2'	53:27:524:G:H8	1.83	0.43
53:27:523:C:H2'	53:27:524:G:C8	2.53	0.43
53:27:615:U:H5"	53:27:616:A:OP2	2.18	0.43
53:27:768:G:N2	53:27:1379:U:O2'	2.50	0.43
53:27:1029:A:O5'	53:27:1029:A:H8	2.01	0.43
53:27:1270:C:H5"	53:27:1271:G:C5'	2.46	0.43
53:27:1330:C:O2'	53:27:1331:G:H5'	2.18	0.43
53:27:1499:C:H2'	53:27:1500:G:C8	2.51	0.43
53:27:1573:G:H2'	53:27:1574:C:H5'	1.99	0.43
53:27:1993:U:H5"	53:27:1993:U:C6	2.52	0.43
53:27:2543:G:H2'	53:27:2544:G:H8	1.82	0.43
53:27:2589:A:N1	53:27:2605:U:O2	2.51	0.43
53:27:2723:C:H2'	53:27:2724:U:O4'	2.17	0.43
56:30:31:A:H2	56:30:39:U:O2	2.01	0.43
59:33:686:ILE:CD1	59:33:729:LEU:HA	2.47	0.43
4:D:133:GLU:HB2	4:D:148:VAL:HG13	1.99	0.43
5:E:26:LYS:HB2	5:E:31:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:62:LEU:O	6:F:66:ASN:CG	2.61	0.43
12:L:51:ARG:C	12:L:53:MET:H	2.25	0.43
14:N:110:ALA:HB3	14:N:117:PHE:HE2	1.84	0.43
15:O:30:TRP:CZ3	15:O:37:LYS:HG2	2.52	0.43
18:R:47:VAL:O	18:R:50:VAL:HB	2.18	0.43
20:T:66:VAL:O	20:T:68:ASN:N	2.44	0.43
21:U:44:HIS:HD1	21:U:45:ASP:N	2.15	0.43
24:X:9:LYS:HB3	24:X:12:GLU:OE2	2.18	0.43
24:X:44:LYS:NZ	24:X:48:ARG:CZ	2.81	0.43
32:6:49:PHE:HB2	32:6:199:ILE:HG23	1.99	0.43
32:6:68:PHE:HB2	32:6:90:PHE:CB	2.49	0.43
32:6:90:PHE:CZ	32:6:149:GLY:HA2	2.53	0.43
33:7:38:VAL:HG23	33:7:39:ARG:N	2.33	0.43
34:8:12:ARG:HD3	34:8:36:ALA:C	2.43	0.43
35:9:10:LEU:O	35:9:11:GLN:O	2.36	0.43
35:9:130:THR:HG21	52:26:10:A:OP2	2.18	0.43
35:9:156:ARG:HD3	38:12:44:PHE:CG	2.54	0.43
37:11:70:PRO:C	37:11:71:THR:HG1	2.25	0.43
38:12:55:LYS:HE3	52:26:653:U:O2	2.18	0.43
39:13:118:ARG:HH22	52:26:1234:C:P	2.39	0.43
42:16:30:ARG:HB3	52:26:363:A:OP2	2.18	0.43
43:17:14:ALA:O	43:17:17:ALA:HB3	2.17	0.43
43:17:48:SER:HB2	43:17:51:GLN:CG	2.46	0.43
46:20:20:VAL:CG2	46:20:21:VAL:N	2.79	0.43
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.99	0.43
49:23:39:ILE:HG22	49:23:40:PHE:N	2.33	0.43
52:26:201:G:H2'	52:26:202:G:H8	1.81	0.43
52:26:334:C:O2'	52:26:335:C:H5'	2.18	0.43
52:26:552:U:O2'	52:26:553:A:H5'	2.18	0.43
52:26:952:U:O2'	52:26:953:G:H5'	2.17	0.43
52:26:971:G:OP1	52:26:972:C:H5"	2.18	0.43
52:26:1295:U:H2'	52:26:1296:C:C6	2.53	0.43
52:26:1339:A:C2'	52:26:1340:A:H5'	2.48	0.43
52:26:1476:A:H2'	52:26:1477:U:O4'	2.18	0.43
53:27:465:G:C2	53:27:466:A:N1	2.86	0.43
53:27:514:A:H2'	53:27:515:A:H8	1.81	0.43
53:27:705:A:C2	53:27:727:A:H1'	2.53	0.43
53:27:860:U:H2'	53:27:861:A:H8	1.83	0.43
53:27:992:C:H2'	53:27:993:G:H8	1.83	0.43
53:27:1026:G:H2'	53:27:1027:A:H8	1.84	0.43
53:27:1295:C:H2'	53:27:1296:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1328:A:H2'	53:27:1330:C:C4	2.53	0.43
53:27:1613:G:H3'	53:27:1614:A:H5"	1.99	0.43
53:27:1802:A:O2'	53:27:1803:A:H5'	2.18	0.43
53:27:2094:A:H2'	53:27:2095:A:H8	1.82	0.43
53:27:2455:G:H2'	53:27:2456:C:H6	1.79	0.43
53:27:2478:A:C2'	53:27:2479:U:H5'	2.48	0.43
53:27:2506:U:O2'	53:27:2507:C:H5'	2.18	0.43
53:27:2647:U:H2'	53:27:2648:G:H8	1.83	0.43
53:27:2654:A:N1	53:27:2665:A:H5"	2.33	0.43
53:27:2817:U:C3'	53:27:2818:U:H5"	2.49	0.43
54:28:21:G:H2'	54:28:22:U:O4'	2.18	0.43
56:30:8:U:OP1	56:30:49:C:H5'	2.18	0.43
58:32:40:C:H2'	58:32:41:C:H6	1.82	0.43
59:33:617:PRO:HG3	59:33:657:TRP:CE3	2.52	0.43
1:A:32:LEU:CD2	1:A:63:ILE:HD11	2.47	0.43
1:A:257:ARG:HH12	53:27:1799:G:H3'	1.84	0.43
4:D:146:ASP:OD1	4:D:146:ASP:N	2.52	0.43
7:G:18:VAL:HG12	7:G:70:GLU:HB2	1.98	0.43
7:G:58:THR:CG2	7:G:81:LEU:HD12	2.46	0.43
11:K:19:LEU:HA	11:K:27:LEU:CD1	2.48	0.43
14:N:46:GLU:HA	54:28:113:C:O2'	2.19	0.43
14:N:100:HIS:CG	14:N:101:GLY:N	2.85	0.43
19:S:39:THR:OG1	19:S:42:GLU:HB2	2.18	0.43
19:S:40:LYS:HG3	53:27:1599:U:OP1	2.18	0.43
21:U:26:PHE:HE2	21:U:44:HIS:HA	1.83	0.43
29:3:35:ARG:HE	29:3:42:LEU:CD2	2.31	0.43
33:7:6:PRO:HD2	33:7:183:TYR:CD2	2.53	0.43
33:7:129:PHE:CZ	33:7:156:LEU:HD13	2.53	0.43
34:8:70:GLN:CA	34:8:73:ASN:HD22	2.30	0.43
35:9:22:LYS:HB3	35:9:29:ILE:CG2	2.48	0.43
39:13:46:VAL:HG21	39:13:75:ALA:HB1	1.99	0.43
40:14:15:HIS:CG	40:14:16:ARG:N	2.86	0.43
41:15:19:VAL:HA	41:15:82:GLU:HB2	2.01	0.43
42:16:32:VAL:O	42:16:33:CYS:HB3	2.18	0.43
42:16:62:VAL:HG21	42:16:94:TYR:CE2	2.53	0.43
43:17:7:ASN:HD22	43:17:21:ILE:H	1.66	0.43
43:17:88:LEU:O	43:17:91:ARG:HB2	2.18	0.43
50:24:56:ILE:HG23	50:24:57:VAL:N	2.32	0.43
52:26:767:A:H2'	52:26:768:A:O4'	2.19	0.43
53:27:530:G:C1'	53:27:2035:G:H4'	2.48	0.43
53:27:622:G:O2'	53:27:623:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:664:G:C5	53:27:665:U:C4	3.07	0.43
53:27:1049:C:O2'	53:27:1050:A:H5'	2.18	0.43
53:27:1161:C:H2'	53:27:1162:G:H8	1.83	0.43
53:27:1317:G:O2'	53:27:1318:U:H5'	2.18	0.43
53:27:1448:G:H2'	53:27:1449:G:H8	1.83	0.43
53:27:1601:G:C6	53:27:1602:U:N3	2.87	0.43
53:27:1765:U:O2'	53:27:1766:G:H5'	2.19	0.43
53:27:2059:A:N6	53:27:2503:A:H2'	2.33	0.43
53:27:2544:G:H1'	53:27:2646:C:H5'	1.99	0.43
54:28:111:U:H2'	54:28:112:G:C8	2.49	0.43
58:32:37:A:H2'	58:32:38:A:O4'	2.18	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:407:TYR:HA	59:33:417:ASP:HA	2.00	0.43
3:C:32:VAL:HG11	11:K:6:LEU:CD1	2.47	0.43
3:C:179:SER:HB3	3:C:183:PHE:CD2	2.53	0.43
11:K:58:TYR:O	30:4:12:ARG:NH2	2.46	0.43
13:M:25:ALA:O	13:M:29:VAL:HG23	2.18	0.43
16:P:50:ARG:HG2	16:P:50:ARG:HH11	1.82	0.43
16:P:67:ALA:O	16:P:70:GLN:HB3	2.18	0.43
17:Q:74:ILE:HD12	17:Q:74:ILE:HA	1.91	0.43
17:Q:78:ARG:HB3	17:Q:83:TYR:HB3	2.00	0.43
18:R:17:VAL:HG12	18:R:76:VAL:HG21	2.00	0.43
18:R:73:LYS:O	18:R:106:VAL:HB	2.19	0.43
21:U:61:LEU:O	21:U:71:LYS:HA	2.18	0.43
23:W:2:ARG:O	23:W:11:PRO:HD3	2.17	0.43
23:W:16:ASN:HB2	23:W:26:ARG:HD2	2.01	0.43
24:X:9:LYS:NZ	24:X:11:VAL:H	2.16	0.43
24:X:56:LEU:HD23	24:X:59:GLU:OE1	2.18	0.43
33:7:153:SER:HB3	33:7:164:THR:HG22	2.00	0.43
34:8:144:ILE:HD12	34:8:144:ILE:H	1.82	0.43
36:10:38:ARG:HD2	36:10:40:GLU:OE1	2.18	0.43
36:10:93:LYS:NZ	48:22:19:GLU:HG2	2.32	0.43
38:12:104:SER:HB2	38:12:125:ILE:HD11	1.99	0.43
41:15:43:TRP:HZ3	41:15:45:THR:HG23	1.83	0.43
46:20:14:ARG:HE	46:20:42:ILE:HD12	1.82	0.43
47:21:18:LYS:HE2	52:26:256:U:OP1	2.18	0.43
50:24:47:GLN:HG3	50:24:51:ASN:HD21	1.83	0.43
52:26:399:G:H2'	52:26:400:C:C6	2.54	0.43
52:26:1016:A:H4'	52:26:1218:C:H4'	2.00	0.43
52:26:1327:C:C2	52:26:1328:C:C5	3.07	0.43
52:26:1392:G:H2'	52:26:1393:U:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1450:U:H4'	52:26:1451:U:C5	2.54	0.43
52:26:1478:U:H2'	52:26:1479:C:C6	2.54	0.43
53:27:200:U:C6	53:27:201:C:C6	3.07	0.43
53:27:250:G:C6	53:27:251:A:C6	3.06	0.43
53:27:562:U:C6	53:27:2036:C:H5'	2.54	0.43
53:27:892:A:H2'	53:27:893:C:C6	2.53	0.43
53:27:976:G:H5'	53:27:1156:A:N6	2.34	0.43
53:27:983:A:H3'	53:27:984:A:C8	2.53	0.43
53:27:1622:G:H2'	53:27:1623:G:C8	2.53	0.43
53:27:1936:A:C2	53:27:1945:G:C8	3.06	0.43
53:27:2524:G:H2'	53:27:2525:G:H5"	2.00	0.43
56:30:26:A:H2'	56:30:27:G:C5'	2.47	0.43
58:32:19:G:C5	58:32:57:A:C2	3.07	0.43
58:32:22:G:C8	58:32:46:A:N6	2.85	0.43
59:33:16:ASP:CG	59:33:17:PRO:CD	2.92	0.43
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.43
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.43
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.43
59:33:536:PHE:O	59:33:538:ASP:N	2.52	0.43
59:33:551:ILE:C	59:33:553:LEU:H	2.26	0.43
59:33:732:VAL:HG12	59:33:734:ASP:HB2	2.01	0.43
3:C:65:THR:O	3:C:69:ARG:NH1	2.51	0.43
5:E:51:PHE:CE1	5:E:71:LEU:HD22	2.54	0.43
7:G:23:LEU:HD21	7:G:96:PHE:HB3	2.00	0.43
7:G:41:LEU:HD11	53:27:1084:A:OP1	2.19	0.43
8:H:14:ALA:CB	8:H:50:LYS:HA	2.41	0.43
8:H:40:ALA:C	8:H:43:ALA:H	2.27	0.43
15:O:28:LYS:HB2	15:O:82:SER:OG	2.18	0.43
16:P:58:GLN:HG3	53:27:1009:A:O4'	2.18	0.43
17:Q:64:VAL:HG23	17:Q:97:LYS:H	1.83	0.43
18:R:7:HIS:CE1	18:R:10:ALA:HA	2.53	0.43
19:S:18:GLU:O	19:S:21:SER:HB2	2.19	0.43
25:Y:6:ILE:HG22	25:Y:28:LEU:HD11	1.99	0.43
31:5:25:VAL:HG21	31:5:35:GLN:HE21	1.82	0.43
33:7:153:SER:OG	33:7:164:THR:HG22	2.18	0.43
34:8:33:ILE:O	34:8:34:GLU:CD	2.61	0.43
34:8:103:ARG:C	34:8:105:GLY:N	2.75	0.43
35:9:112:ALA:HA	35:9:115:GLU:HB3	1.99	0.43
38:12:94:VAL:HG12	38:12:95:MET:HG3	1.99	0.43
43:17:8:ILE:N	43:17:9:PRO:HD3	2.33	0.43
43:17:26:LYS:O	43:17:29:SER:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:88:ARG:CZ	53:27:714:U:OP2	2.66	0.43
48:22:24:ASP:C	48:22:26:ALA:N	2.76	0.43
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.33	0.43
48:22:42:ARG:O	48:22:43:ILE:HD13	2.17	0.43
48:22:67:LEU:HD23	48:22:67:LEU:HA	1.82	0.43
50:24:29:THR:OG1	52:26:1458:G:OP1	2.35	0.43
52:26:70:U:O5'	52:26:70:U:H6	2.01	0.43
52:26:273:U:O5'	52:26:273:U:H6	2.00	0.43
52:26:772:U:H2'	52:26:773:G:H8	1.83	0.43
52:26:824:G:O2'	52:26:825:A:H5'	2.18	0.43
52:26:951:G:H2'	52:26:952:U:H6	1.81	0.43
52:26:1114:C:H2'	52:26:1115:U:C6	2.54	0.43
52:26:1143:G:H2'	52:26:1144:G:C8	2.53	0.43
52:26:1496:C:H2'	52:26:1497:G:C1'	2.48	0.43
53:27:297:G:H2'	53:27:298:G:O4'	2.17	0.43
53:27:818:G:C3'	53:27:1187:G:H22	2.31	0.43
53:27:819:A:C8	53:27:1189:A:C6	3.07	0.43
53:27:955:U:H2'	53:27:956:G:C8	2.54	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.18	0.43
53:27:1284:A:H2'	53:27:1285:A:O4'	2.18	0.43
53:27:1364:G:N2	53:27:1367:A:OP2	2.43	0.43
53:27:1494:A:H2	53:27:1579:A:C1'	2.30	0.43
53:27:1600:C:H2'	53:27:1601:G:H8	1.83	0.43
53:27:2259:U:C5	53:27:2427:C:N4	2.85	0.43
54:28:65:U:C3'	54:28:108:A:H61	2.31	0.43
56:30:15:G:H3'	56:30:16:U:C5'	2.44	0.43
57:31:30:G:O2'	57:31:31:G:H5'	2.18	0.43
58:32:60:U:H3'	58:32:61:C:C5'	2.48	0.43
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.43
59:33:281:ILE:HD13	59:33:281:ILE:HG21	1.80	0.43
59:33:676:ARG:CG	59:33:677:SER:N	2.81	0.43
1:A:206:LYS:HE3	53:27:729:G:C8	2.53	0.43
2:B:47:ALA:HB2	2:B:83:ARG:HA	2.00	0.43
2:B:150:GLN:OE1	53:27:2572:A:N7	2.51	0.43
4:D:41:GLU:OE1	4:D:48:LEU:HD21	2.19	0.43
4:D:104:THR:O	26:Z:38:SER:HB3	2.19	0.43
5:E:37:ASN:ND2	5:E:63:GLN:CD	2.75	0.43
7:G:117:LEU:HB2	7:G:122:GLN:NE2	2.34	0.43
13:M:51:LEU:HD21	13:M:69:ARG:HD2	2.01	0.43
15:O:20:ARG:HD3	15:O:112:ARG:HD2	2.00	0.43
16:P:16:ILE:HG21	16:P:35:PHE:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:69:ARG:HA	19:S:73:ARG:O	2.18	0.43
20:T:13:LEU:N	20:T:68:ASN:O	2.46	0.43
30:4:40:LYS:O	30:4:43:LEU:HB2	2.19	0.43
34:8:61:ARG:HH21	34:8:67:LEU:CA	2.21	0.43
35:9:48:GLY:O	35:9:62:ALA:HB1	2.19	0.43
35:9:103:GLY:N	35:9:121:ASN:HD22	2.15	0.43
35:9:144:GLU:CD	35:9:144:GLU:C	2.87	0.43
36:10:14:GLN:OE1	36:10:14:GLN:N	2.51	0.43
37:11:148:LYS:O	37:11:150:PHE:N	2.44	0.43
39:13:115:VAL:C	39:13:117:LEU:H	2.25	0.43
41:15:35:ASP:OD2	41:15:37:GLN:HB3	2.18	0.43
41:15:123:PRO:O	51:25:34:ARG:N	2.52	0.43
42:16:43:LYS:CE	42:16:44:PRO:HD3	2.49	0.43
45:19:2:LEU:HG	45:19:7:THR:HG22	1.99	0.43
46:20:8:ARG:NH1	46:20:9:HIS:O	2.52	0.43
51:25:46:ARG:NH1	52:26:1532:U:C5	2.76	0.43
52:26:151:A:H2'	52:26:152:A:H5'	2.01	0.43
52:26:259:G:C4	52:26:260:G:C8	3.06	0.43
52:26:440:C:H2'	52:26:441:A:O4'	2.19	0.43
52:26:637:C:H2'	52:26:638:U:H6	1.81	0.43
52:26:783:C:O2'	52:26:784:A:H5'	2.18	0.43
52:26:1346:A:N3	52:26:1346:A:H2'	2.34	0.43
52:26:1445:U:H1'	52:26:1458:G:N2	2.34	0.43
53:27:374:A:H2'	53:27:375:G:O4'	2.19	0.43
53:27:428:A:H2'	53:27:429:A:O4'	2.19	0.43
53:27:519:U:H2'	53:27:520:G:C8	2.53	0.43
53:27:567:U:H2'	53:27:568:U:O4'	2.18	0.43
53:27:972:A:C6	53:27:973:A:C6	3.06	0.43
53:27:1555:G:H5'	53:27:1555:G:C8	2.53	0.43
53:27:1574:C:H2'	53:27:1575:C:C6	2.54	0.43
53:27:1632:A:H2'	53:27:1633:G:C8	2.53	0.43
53:27:1769:U:O2'	53:27:1770:G:H5'	2.19	0.43
53:27:1999:C:O2'	53:27:2000:C:H5'	2.19	0.43
53:27:2838:G:C4	53:27:2839:G:C8	3.06	0.43
53:27:2880:C:H2'	53:27:2881:U:C6	2.53	0.43
57:31:51:C:H2'	57:31:52:G:O4'	2.18	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.43
59:33:676:ARG:HG3	59:33:677:SER:N	2.18	0.43
59:33:681:ARG:HA	59:33:684:THR:HB	2.01	0.43
4:D:3:LEU:CA	4:D:6:TYR:HB3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:10:LEU:HD23	8:H:12:VAL:H	1.84	0.43
15:O:61:ARG:HA	15:O:69:VAL:O	2.19	0.43
16:P:20:ALA:HA	16:P:23:TYR:CE2	2.53	0.43
20:T:80:ASP:OD2	20:T:95:PHE:HB3	2.18	0.43
27:1:9:ARG:HA	27:1:12:ARG:HD3	1.99	0.43
27:1:31:LYS:HD3	27:1:49:ARG:O	2.18	0.43
29:3:12:ARG:HE	29:3:44:VAL:CG2	2.31	0.43
32:6:22:TRP:HZ3	32:6:27:LYS:HA	1.83	0.43
32:6:212:TYR:O	32:6:213:LEU:C	2.61	0.43
34:8:106:PHE:CD1	34:8:144:ILE:HD11	2.53	0.43
34:8:193:ASP:OD1	34:8:194:ILE:N	2.51	0.43
35:9:55:VAL:O	35:9:58:ALA:HB3	2.19	0.43
37:11:63:VAL:O	37:11:67:ASN:HB2	2.18	0.43
39:13:55:ASP:O	39:13:59:LYS:HD3	2.18	0.43
39:13:91:GLU:CA	39:13:94:ARG:HB2	2.36	0.43
41:15:81:LEU:HD11	41:15:106:ILE:HD12	2.00	0.43
42:16:47:ALA:O	42:16:48:LEU:C	2.62	0.43
46:20:28:ARG:NH2	52:26:390:U:H4'	2.34	0.43
50:24:22:SER:OG	50:24:23:ARG:N	2.51	0.43
52:26:238:A:C2'	52:26:239:U:H5'	2.49	0.43
52:26:319:G:H2'	52:26:320:A:H8	1.84	0.43
52:26:395:C:H2'	52:26:396:C:C6	2.53	0.43
52:26:413:G:H1'	52:26:428:G:H22	1.82	0.43
52:26:496:A:H2'	52:26:497:G:C8	2.54	0.43
52:26:553:A:H2'	52:26:554:A:C8	2.53	0.43
52:26:1166:G:H5"	52:26:1167:A:OP2	2.19	0.43
52:26:1325:C:H2'	52:26:1326:U:H6	1.84	0.43
52:26:1411:C:H2'	52:26:1412:C:C6	2.54	0.43
52:26:1502:A:N6	52:26:1504:G:N2	2.67	0.43
53:27:9:G:C2	53:27:2895:G:C6	3.07	0.43
53:27:601:C:O2	53:27:605:G:H4'	2.18	0.43
53:27:610:C:H2'	53:27:611:C:C6	2.54	0.43
53:27:862:G:H2'	53:27:863:A:H8	1.84	0.43
53:27:1425:G:C6	53:27:1426:G:C6	3.07	0.43
53:27:1502:A:H2'	53:27:1503:A:C5'	2.34	0.43
53:27:1716:U:H2'	53:27:1717:A:C8	2.48	0.43
53:27:1876:A:H2'	53:27:1877:A:O4'	2.19	0.43
53:27:2239:G:C6	53:27:2240:U:C4	3.06	0.43
53:27:2256:G:H2'	53:27:2257:U:O4'	2.19	0.43
53:27:2287:A:C5	53:27:2289:G:C8	3.06	0.43
53:27:2447:G:C4	53:27:2500:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2519:U:C4	53:27:2542:A:C5	3.07	0.43
53:27:2579:C:O2'	53:27:2580:U:H5'	2.18	0.43
53:27:2644:G:O2'	53:27:2645:G:H5'	2.17	0.43
53:27:2869:G:C2	53:27:2870:C:C2	3.07	0.43
54:28:35:C:H2'	54:28:36:C:O4'	2.19	0.43
54:28:78:A:H2'	54:28:79:G:O4'	2.18	0.43
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.43
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.43
1:A:90:ILE:HD13	1:A:102:TYR:CD1	2.54	0.43
1:A:132:ARG:HH12	6:F:92:GLY:HA2	1.83	0.43
3:C:88:ARG:HD3	3:C:89:PRO:HD2	2.00	0.43
5:E:37:ASN:ND2	5:E:63:GLN:NE2	2.67	0.43
5:E:126:THR:HG22	5:E:127:GLN:H	1.84	0.43
7:G:15:VAL:HA	7:G:18:VAL:CG2	2.49	0.43
8:H:40:ALA:HB1	8:H:68:PHE:CZ	2.53	0.43
9:I:35:ARG:HH11	9:I:40:HIS:CG	2.36	0.43
11:K:47:ARG:HG3	11:K:50:PHE:HB2	1.99	0.43
14:N:39:VAL:O	14:N:47:VAL:HA	2.17	0.43
15:O:25:VAL:CG1	15:O:26:GLU:N	2.82	0.43
16:P:73:ILE:HG21	16:P:109:VAL:HG13	2.01	0.43
17:Q:38:VAL:HG21	17:Q:41:ILE:HG13	1.99	0.43
18:R:2:GLU:OE1	18:R:108:SER:HB2	2.18	0.43
32:6:18:GLN:HG3	32:6:187:ASP:OD2	2.19	0.43
34:8:48:SER:O	34:8:51:GLY:N	2.49	0.43
36:10:91:ARG:HG2	36:10:92:THR:H	1.82	0.43
42:16:113:ARG:CZ	42:16:120:ARG:HA	2.48	0.43
43:17:18:LEU:HD12	43:17:33:LEU:CD1	2.48	0.43
52:26:516:U:O2	52:26:516:U:O4'	2.35	0.43
52:26:551:U:H2'	52:26:552:U:H6	1.82	0.43
52:26:765:G:H2'	52:26:812:G:H21	1.82	0.43
52:26:861:G:O2'	52:26:862:C:H5'	2.19	0.43
52:26:897:C:H2'	52:26:898:G:H8	1.84	0.43
52:26:981:U:O4	52:26:1222:G:O6	2.36	0.43
52:26:1005:A:C5	52:26:1006:G:H1'	2.54	0.43
52:26:1182:G:H5'	52:26:1183:U:OP1	2.19	0.43
52:26:1418:A:N3	53:27:1959:G:H1'	2.34	0.43
52:26:1495:U:H2'	52:26:1496:C:H6	1.83	0.43
52:26:1526:G:H2'	52:26:1527:U:C6	2.54	0.43
53:27:10:A:H2	53:27:2800:A:HO2'	1.67	0.43
53:27:112:U:H2'	53:27:113:U:H5'	2.00	0.43
53:27:980:A:C6	53:27:981:A:N1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1243:C:C2	53:27:1244:A:C8	3.07	0.43
53:27:1350:C:O2'	53:27:1351:C:H5'	2.19	0.43
53:27:1355:G:C6	53:27:1377:G:N2	2.87	0.43
53:27:1655:A:C6	53:27:1656:C:C2	3.07	0.43
53:27:1824:G:C6	53:27:1825:U:C4	3.06	0.43
53:27:2251:G:N1	57:31:76:A:N6	2.66	0.43
53:27:2256:G:H2'	53:27:2257:U:C6	2.54	0.43
53:27:2302:U:H2'	53:27:2303:G:H8	1.82	0.43
53:27:2347:C:H2'	53:27:2348:U:C6	2.53	0.43
53:27:2588:G:C5	53:27:2589:A:C8	3.06	0.43
53:27:2730:C:O2'	53:27:2731:G:H5'	2.19	0.43
53:27:2838:G:H2'	53:27:2839:G:O4'	2.19	0.43
53:27:2850:A:O4'	53:27:2868:A:H2	2.02	0.43
53:27:2854:G:H2'	53:27:2855:C:C6	2.54	0.43
54:28:5:U:O2'	54:28:6:G:H5'	2.19	0.43
56:30:48:C:H5'	56:30:50:U:OP2	2.19	0.43
57:31:25:C:H2'	57:31:26:G:O4'	2.19	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.43
59:33:577:LEU:HA	59:33:580:LEU:CB	2.49	0.43
59:33:668:VAL:HA	59:33:713:THR:HA	2.00	0.43
2:B:125:TRP:CE3	2:B:160:LYS:HD2	2.53	0.43
3:C:189:THR:HG22	3:C:191:ASP:N	2.30	0.43
4:D:99:PHE:O	4:D:102:LEU:HB3	2.18	0.43
4:D:109:ARG:NH1	4:D:135:ILE:O	2.52	0.43
7:G:3:LEU:N	7:G:6:GLN:OE1	2.51	0.43
7:G:5:LEU:C	7:G:8:LYS:HB2	2.44	0.43
8:H:17:ALA:HB1	8:H:37:PHE:CZ	2.54	0.43
12:L:21:ALA:H	12:L:97:GLN:CB	2.31	0.43
12:L:75:GLU:HG3	12:L:90:GLU:CD	2.44	0.43
25:Y:9:THR:HG23	25:Y:10:ARG:HG2	2.00	0.43
25:Y:40:THR:HG23	25:Y:42:ALA:N	2.34	0.43
32:6:101:THR:HG23	52:26:1074:G:H4'	2.01	0.43
33:7:39:ARG:NH1	33:7:54:ILE:O	2.51	0.43
33:7:60:ALA:C	33:7:62:SER:H	2.25	0.43
34:8:68:GLU:HB3	52:26:546:A:P	2.58	0.43
34:8:96:ARG:HB3	34:8:98:ASP:OD1	2.19	0.43
35:9:23:THR:HG22	52:26:922:G:O2'	2.19	0.43
39:13:125:GLN:HB3	52:26:1233:G:P	2.59	0.43
40:14:91:ASP:CG	40:14:92:LEU:H	2.26	0.43
41:15:64:VAL:HA	41:15:67:GLU:CD	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:6:ILE:O	43:17:8:ILE:N	2.52	0.43
43:17:14:ALA:HB1	43:17:33:LEU:HD21	2.01	0.43
45:19:69:LEU:HG	45:19:77:TYR:HB2	2.00	0.43
47:21:40:THR:HG22	47:21:41:THR:N	2.33	0.43
49:23:2:ARG:O	52:26:1313:U:O4	2.37	0.43
52:26:585:G:O2'	52:26:879:C:H5"	2.19	0.43
52:26:888:G:H1'	52:26:909:A:H61	1.84	0.43
52:26:1480:A:H3'	52:26:1481:U:H6	1.82	0.43
53:27:530:G:H1'	53:27:2035:G:H4'	2.01	0.43
53:27:763:G:C5	53:27:765:C:C4	3.07	0.43
53:27:813:U:O2'	53:27:1225:G:H1'	2.19	0.43
53:27:853:C:O2'	53:27:854:C:H5'	2.19	0.43
53:27:1564:C:O5'	53:27:1564:C:H6	2.02	0.43
53:27:1579:A:H2'	53:27:1580:A:H8	1.84	0.43
53:27:1656:C:H2'	53:27:1657:U:C6	2.53	0.43
53:27:1753:G:N2	53:27:1755:A:H3'	2.33	0.43
53:27:1912:A:N6	53:27:1917:U:C5	2.84	0.43
53:27:2213:U:H5"	53:27:2214:C:OP2	2.19	0.43
53:27:2590:A:N1	53:27:2604:U:O2	2.52	0.43
53:27:2672:U:H2'	53:27:2673:G:C5'	2.23	0.43
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.43
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.41	0.43
2:B:184:ARG:HB3	2:B:186:LEU:HG	2.00	0.43
3:C:112:LEU:HD13	3:C:186:VAL:HG21	2.01	0.43
3:C:165:HIS:HB2	53:27:1205:A:N1	2.34	0.43
3:C:189:THR:O	3:C:192:ALA:HB3	2.19	0.43
7:G:41:LEU:HD22	53:27:1083:U:OP1	2.19	0.43
10:J:3:GLN:HB3	10:J:32:TYR:HB3	2.00	0.43
10:J:31:ARG:HB3	10:J:32:TYR:H	1.71	0.43
10:J:64:ARG:HG2	10:J:79:PHE:CE2	2.54	0.43
14:N:47:VAL:HG21	54:28:114:C:H1'	1.99	0.43
14:N:102:ARG:O	14:N:105:ALA:HB3	2.18	0.43
16:P:54:ARG:CD	53:27:1155:A:H5"	2.46	0.43
18:R:22:ASP:OD1	18:R:25:ARG:NH1	2.52	0.43
21:U:51:GLN:O	21:U:52:ALA:C	2.61	0.43
31:5:15:LYS:N	31:5:26:ILE:O	2.48	0.43
32:6:43:GLU:O	32:6:47:PRO:HG2	2.18	0.43
33:7:37:LYS:HA	33:7:37:LYS:HD3	1.78	0.43
36:10:47:LEU:HB2	36:10:48:ALA:H	1.56	0.43
37:11:32:ASP:HB3	52:26:1351:U:O4'	2.18	0.43
37:11:89:GLU:OE1	37:11:89:GLU:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:34:ALA:O	38:12:37:ASN:HB3	2.19	0.43
38:12:53:ASP:CG	38:12:54:THR:H	2.24	0.43
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.59	0.43
42:16:120:ARG:CG	42:16:121:PRO:HD2	2.49	0.43
46:20:39:PHE:HD1	46:20:50:THR:HG21	1.82	0.43
49:23:5:LYS:CB	52:26:1313:U:OP2	2.66	0.43
52:26:70:U:H2'	52:26:94:G:N7	2.33	0.43
52:26:180:U:O2	52:26:195:A:N7	2.52	0.43
52:26:525:C:H2'	52:26:526:C:C6	2.53	0.43
52:26:776:G:H8	52:26:776:G:O5'	2.01	0.43
52:26:856:C:O2'	52:26:857:C:H5'	2.19	0.43
52:26:981:U:H2'	52:26:982:U:H5	1.79	0.43
52:26:1053:G:H4'	52:26:1054:C:H3'	2.01	0.43
52:26:1324:A:H2'	52:26:1325:C:H6	1.82	0.43
53:27:116:C:H2'	53:27:117:G:C8	2.53	0.43
53:27:195:A:H3'	53:27:196:A:H4'	2.00	0.43
53:27:208:C:H2'	53:27:209:C:C6	2.46	0.43
53:27:244:A:H2'	53:27:245:G:O4'	2.19	0.43
53:27:372:G:C2'	53:27:373:U:OP2	2.67	0.43
53:27:511:U:H2'	53:27:512:G:H5'	1.99	0.43
53:27:775:G:C4	53:27:794:A:C8	3.06	0.43
53:27:782:A:O5'	53:27:783:A:C2	2.72	0.43
53:27:785:G:C6	53:27:786:C:C4	3.07	0.43
53:27:785:G:H2'	53:27:786:C:C6	2.54	0.43
53:27:861:A:H2'	53:27:862:G:O4'	2.18	0.43
53:27:896:A:H5'	53:27:897:C:OP2	2.19	0.43
53:27:1266:G:H22	53:27:2012:G:C2'	2.21	0.43
53:27:1366:A:H2'	53:27:1367:A:O4'	2.19	0.43
53:27:1477:A:C4	53:27:1515:A:C6	3.06	0.43
53:27:1638:C:H1'	53:27:2698:U:O2'	2.19	0.43
53:27:1877:A:H2'	53:27:1878:G:O4'	2.19	0.43
53:27:1952:A:C6	53:27:1953:A:N1	2.86	0.43
53:27:2588:G:H2'	53:27:2589:A:C4'	2.48	0.43
53:27:2725:A:C4	53:27:2727:A:C8	3.07	0.43
54:28:112:G:H2'	54:28:113:C:C6	2.54	0.43
57:31:20:U:H2'	57:31:21:A:C5'	2.49	0.43
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.43
59:33:597:VAL:CG1	59:33:598:VAL:N	2.82	0.43
59:33:669:VAL:HG22	59:33:670:ARG:N	2.33	0.43
1:A:229:HIS:CD2	1:A:246:PRO:HG3	2.54	0.42
1:A:257:ARG:HH21	1:A:266:ILE:HD11	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:146:ILE:HD12	2:B:146:ILE:H	1.83	0.42
3:C:48:THR:CG2	3:C:86:ALA:HB3	2.47	0.42
6:F:127:GLU:HA	6:F:145:ASN:HA	1.99	0.42
7:G:34:THR:HG22	7:G:38:MET:HE3	2.01	0.42
9:I:92:MET:SD	9:I:96:ARG:HB2	2.59	0.42
10:J:13:ASN:CG	10:J:98:ARG:H	2.27	0.42
24:X:3:ALA:CA	24:X:6:LEU:HD13	2.46	0.42
25:Y:40:THR:OG1	25:Y:41:PRO:HD2	2.19	0.42
29:3:4:THR:O	29:3:5:PHE:HB2	2.19	0.42
33:7:53:ARG:HG3	33:7:68:HIS:ND1	2.34	0.42
35:9:27:GLY:H	52:26:1398:A:H61	1.67	0.42
35:9:80:LEU:HB3	35:9:81:GLN:H	1.57	0.42
37:11:67:ASN:CG	37:11:129:ASN:HB3	2.44	0.42
37:11:81:GLY:HA3	55:29:12:A:H1'	2.01	0.42
39:13:5:TYR:CD2	39:13:88:GLU:CD	2.97	0.42
39:13:112:ARG:HD2	44:18:100:TRP:OXT	2.18	0.42
41:15:117:HIS:CD2	52:26:675:A:H1'	2.54	0.42
44:18:41:TRP:HA	44:18:44:VAL:HG22	2.01	0.42
50:24:82:ILE:HG13	50:24:83:ASN:H	1.84	0.42
51:25:15:LEU:HD23	51:25:17:ARG:HG3	2.01	0.42
51:25:23:GLU:O	51:25:24:LYS:HB2	2.19	0.42
52:26:18:C:H2'	52:26:19:A:O4'	2.19	0.42
52:26:26:A:N6	52:26:558:G:H1'	2.34	0.42
52:26:123:U:H6	52:26:123:U:O5'	2.01	0.42
52:26:320:A:H2'	52:26:321:A:C8	2.54	0.42
52:26:488:C:O5'	52:26:488:C:H6	2.01	0.42
52:26:947:G:H2'	52:26:948:C:O4'	2.19	0.42
52:26:1055:A:C5	52:26:1206:G:C6	3.07	0.42
52:26:1333:A:H2'	52:26:1334:G:O4'	2.18	0.42
52:26:1340:A:H2'	52:26:1341:U:O4'	2.19	0.42
52:26:1403:C:N4	55:29:18:G:OP1	2.52	0.42
52:26:1526:G:O2'	52:26:1527:U:H5'	2.19	0.42
52:26:1531:A:O2'	52:26:1532:U:H5'	2.19	0.42
53:27:28:A:H2'	53:27:29:U:C6	2.54	0.42
53:27:202:U:N3	53:27:203:A:C2	2.86	0.42
53:27:304:U:H2'	53:27:305:C:H6	1.84	0.42
53:27:703:U:H2'	53:27:704:G:O4'	2.18	0.42
53:27:975:A:C4	53:27:976:G:C8	3.07	0.42
53:27:1719:G:N2	53:27:1742:U:H1'	2.33	0.42
53:27:2093:G:N7	53:27:2225:A:H2'	2.33	0.42
53:27:2137:U:N3	53:27:2154:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2187:U:O2'	53:27:2188:U:H5'	2.19	0.42
53:27:2762:C:H2'	53:27:2763:G:H5'	2.01	0.42
56:30:76:A:H2'	59:33:431:ILE:HD13	2.01	0.42
57:31:15:G:N2	57:31:21:A:H1'	2.34	0.42
58:32:20:U:O2'	58:32:21:A:OP1	2.34	0.42
1:A:160:TYR:CB	1:A:193:GLU:HG2	2.48	0.42
1:A:173:LEU:O	1:A:180:MET:HA	2.19	0.42
1:A:245:THR:HG21	1:A:249:VAL:HB	2.01	0.42
3:C:44:ARG:HD2	53:27:444:C:OP2	2.19	0.42
4:D:90:LEU:HD12	4:D:90:LEU:C	2.44	0.42
4:D:122:ASP:OD1	4:D:126:ASN:N	2.52	0.42
7:G:20:LYS:HE2	7:G:88:HIS:CD2	2.54	0.42
8:H:6:ALA:HB3	8:H:60:VAL:HB	2.00	0.42
8:H:85:ILE:HG23	8:H:98:GLY:HA3	2.01	0.42
8:H:126:ARG:CZ	53:27:1080:A:H5"	2.49	0.42
11:K:77:ILE:HD11	11:K:110:VAL:CG1	2.35	0.42
12:L:2:LEU:HG	12:L:2:LEU:O	2.18	0.42
13:M:115:LEU:H	13:M:115:LEU:HG	1.60	0.42
16:P:40:LYS:HG3	16:P:44:TYR:HE2	1.83	0.42
20:T:35:VAL:O	20:T:38:ILE:HG12	2.19	0.42
21:U:11:GLU:HG2	21:U:13:GLY:H	1.83	0.42
23:W:44:ARG:HH12	23:W:46:VAL:HG22	1.84	0.42
23:W:61:LYS:HE3	53:27:372:G:OP2	2.19	0.42
24:X:23:ARG:O	24:X:24:GLU:C	2.61	0.42
25:Y:11:SER:HB3	53:27:988:A:OP2	2.19	0.42
34:8:104:MET:HB3	34:8:106:PHE:CE2	2.53	0.42
35:9:60:GLN:O	35:9:63:MET:HB2	2.19	0.42
38:12:14:ARG:NH1	38:12:74:ILE:O	2.52	0.42
42:16:13:ARG:HD2	42:16:14:LYS:H	1.84	0.42
42:16:34:THR:HA	42:16:75:GLU:O	2.20	0.42
42:16:35:ARG:HD3	42:16:53:ARG:HH22	1.84	0.42
44:18:72:PHE:CZ	44:18:77:GLY:HA2	2.54	0.42
46:20:43:ALA:HB1	46:20:46:LYS:NZ	2.34	0.42
49:23:52:ASN:ND2	49:23:75:PRO:O	2.50	0.42
52:26:46:G:N1	52:26:366:A:C2	2.87	0.42
52:26:373:A:H2'	52:26:374:A:H8	1.84	0.42
52:26:499:A:O3'	52:26:500:G:H8	2.02	0.42
52:26:539:A:H2'	52:26:540:G:C8	2.55	0.42
52:26:621:A:H2'	52:26:622:A:O4'	2.19	0.42
52:26:886:G:N2	52:26:887:G:H1'	2.34	0.42
53:27:683:U:O5'	53:27:683:U:H6	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:889:C:O2'	53:27:890:C:H5'	2.20	0.42
53:27:915:C:H2'	53:27:916:G:O4'	2.19	0.42
53:27:1024:G:OP2	53:27:1026:G:OP1	2.37	0.42
53:27:1101:U:O2'	53:27:1102:C:H5'	2.18	0.42
53:27:1279:G:H2'	53:27:1280:G:O4'	2.19	0.42
53:27:1412:U:H2'	53:27:1413:A:H8	1.84	0.42
53:27:1422:G:H2'	53:27:1423:G:O4'	2.18	0.42
53:27:1574:C:H2'	53:27:1575:C:H6	1.83	0.42
53:27:1761:C:C4	53:27:1762:A:C6	3.06	0.42
53:27:1828:G:H4'	53:27:1829:A:OP1	2.18	0.42
53:27:1846:G:C2	53:27:1895:C:C2	3.07	0.42
53:27:2101:A:H2'	53:27:2102:G:O4'	2.19	0.42
53:27:2373:G:O2'	53:27:2374:C:H5'	2.18	0.42
53:27:2459:A:H2'	53:27:2459:A:N3	2.34	0.42
53:27:2521:C:H2'	53:27:2522:U:O4'	2.19	0.42
53:27:2570:G:O2'	53:27:2571:U:H5'	2.19	0.42
56:30:9:A:H1'	56:30:46:G:N2	2.33	0.42
59:33:96:ARG:CG	59:33:104:VAL:HG11	2.38	0.42
59:33:138:MET:C	59:33:140:LEU:N	2.75	0.42
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.42
59:33:440:ILE:C	59:33:440:ILE:HD12	2.44	0.42
59:33:492:ILE:O	59:33:493:HIS:C	2.62	0.42
59:33:540:ASP:O	59:33:544:ALA:N	2.52	0.42
1:A:48:ILE:HG23	1:A:48:ILE:O	2.18	0.42
2:B:23:PRO:HG3	53:27:2728:U:O2'	2.20	0.42
2:B:40:LEU:HD12	2:B:46:ARG:HB3	2.01	0.42
2:B:109:VAL:HG23	2:B:175:LEU:HD12	1.99	0.42
2:B:140:HIS:HD2	53:27:1658:C:OP2	2.03	0.42
3:C:130:LYS:HA	53:27:321:U:OP2	2.19	0.42
6:F:30:LEU:O	6:F:33:GLN:N	2.52	0.42
9:I:84:ILE:O	9:I:84:ILE:HG13	2.19	0.42
11:K:56:PRO:HD2	11:K:59:ARG:HG3	2.01	0.42
14:N:7:ARG:HA	14:N:10:ARG:NH1	2.28	0.42
14:N:21:LEU:HD23	14:N:21:LEU:HA	1.88	0.42
14:N:94:ARG:O	14:N:97:PHE:HB2	2.19	0.42
15:O:111:GLU:OE1	15:O:111:GLU:N	2.50	0.42
22:V:55:LEU:HD23	22:V:55:LEU:HA	1.78	0.42
24:X:16:THR:O	24:X:19:LEU:HB2	2.19	0.42
26:Z:28:VAL:HG12	26:Z:29:GLY:N	2.33	0.42
27:1:40:HIS:C	27:1:48:TYR:HE1	2.26	0.42
30:4:7:ARG:NH2	53:27:244:A:OP2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:5:11:CYS:SG	31:5:12:ARG:N	2.75	0.42
32:6:165:ALA:HB3	32:6:190:SER:CB	2.49	0.42
36:10:18:VAL:HG11	36:10:58:HIS:HE2	1.84	0.42
37:11:142:ARG:CD	58:32:41:C:H4'	2.49	0.42
38:12:54:THR:C	38:12:56:PRO:HD3	2.45	0.42
39:13:114:LYS:HE2	52:26:1187:G:H5'	2.01	0.42
43:17:16:ILE:HG12	52:26:1302:C:C4	2.54	0.42
43:17:24:VAL:N	52:26:1330:U:OP1	2.51	0.42
46:20:13:LYS:HZ3	52:26:393:A:P	2.42	0.42
47:21:7:LEU:HD23	47:21:24:ILE:HD13	2.01	0.42
49:23:59:VAL:HG23	49:23:59:VAL:O	2.19	0.42
52:26:174:A:O2'	52:26:175:C:H5'	2.20	0.42
52:26:222:C:H2'	52:26:223:A:H8	1.82	0.42
52:26:232:G:O2'	52:26:233:C:H5'	2.19	0.42
52:26:396:C:C3'	52:26:397:A:H5"	2.50	0.42
52:26:472:U:O2'	52:26:473:U:H5'	2.19	0.42
52:26:644:U:O2'	52:26:645:G:H5'	2.19	0.42
52:26:922:G:C3'	52:26:923:A:C8	3.02	0.42
52:26:946:A:H4'	52:26:1333:A:O2'	2.19	0.42
52:26:1206:G:C4	52:26:1207:G:C8	3.07	0.42
52:26:1306:A:H61	52:26:1331:G:H1'	1.78	0.42
52:26:1401:G:O2'	52:26:1402:C:H5'	2.19	0.42
53:27:196:A:C5	53:27:805:G:C5	3.07	0.42
53:27:500:G:H22	53:27:502:A:H3'	1.83	0.42
53:27:604:G:O2'	53:27:605:G:H5'	2.19	0.42
53:27:923:G:O2'	53:27:924:G:H5'	2.19	0.42
53:27:1077:A:N1	53:27:1088:A:C2'	2.82	0.42
53:27:1111:A:C2'	53:27:1112:G:H4'	2.49	0.42
53:27:1152:C:O2'	53:27:1153:C:H5'	2.18	0.42
53:27:1340:U:O2	53:27:1340:U:O4'	2.37	0.42
53:27:1345:C:H2'	53:27:1346:G:H8	1.84	0.42
53:27:1516:G:H2'	53:27:1517:G:H8	1.84	0.42
53:27:1861:G:N2	53:27:1882:U:H1'	2.33	0.42
53:27:1936:A:H2	53:27:1943:U:N3	2.17	0.42
53:27:2001:C:C2	53:27:2002:G:C8	3.07	0.42
53:27:2066:C:H2'	53:27:2067:G:C8	2.54	0.42
53:27:2083:G:C6	53:27:2084:C:C4	3.06	0.42
53:27:2412:A:H2'	53:27:2413:G:O4'	2.19	0.42
53:27:2675:A:C6	53:27:2676:C:C4	3.08	0.42
53:27:2869:G:O2'	53:27:2870:C:H5'	2.19	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.42
59:33:685:THR:O	59:33:688:ALA:HB3	2.19	0.42
1:A:245:THR:CG2	1:A:249:VAL:HB	2.50	0.42
3:C:145:ASP:OD1	3:C:166:LYS:HA	2.19	0.42
4:D:25:MET:HB3	54:28:57:A:C4	2.54	0.42
4:D:27:VAL:O	4:D:27:VAL:HG13	2.19	0.42
6:F:145:ASN:OD1	6:F:146:VAL:N	2.52	0.42
10:J:1:MET:CG	10:J:67:LYS:HG2	2.50	0.42
14:N:33:ARG:HG2	14:N:34:HIS:CD2	2.55	0.42
16:P:2:ARG:HD2	53:27:1248:G:C5	2.54	0.42
16:P:54:ARG:NH1	53:27:977:G:H5"	2.34	0.42
18:R:41:LYS:O	18:R:44:ALA:HB3	2.19	0.42
20:T:47:PRO:CD	20:T:55:GLY:HA2	2.50	0.42
21:U:92:VAL:O	21:U:94:ALA:N	2.49	0.42
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.50	0.42
33:7:54:ILE:O	33:7:54:ILE:HG13	2.19	0.42
34:8:96:ARG:HH22	34:8:114:ARG:HH12	1.68	0.42
35:9:108:GLY:O	35:9:109:ALA:HB3	2.20	0.42
37:11:110:ARG:HH12	37:11:121:ASN:HB3	1.84	0.42
41:15:82:GLU:HA	41:15:108:ASN:OD1	2.19	0.42
48:22:38:ILE:HD12	48:22:38:ILE:N	2.32	0.42
48:22:54:LEU:HG	48:22:58:ILE:CD1	2.48	0.42
49:23:39:ILE:CB	49:23:66:VAL:HA	2.43	0.42
49:23:79:TYR:OH	52:26:1226:C:H4'	2.18	0.42
51:25:25:ALA:HB1	51:25:29:ALA:HB2	2.02	0.42
52:26:21:G:H2'	52:26:22:G:H8	1.82	0.42
52:26:117:G:O6	52:26:289:G:C1'	2.68	0.42
52:26:516:U:O4	52:26:533:A:N7	2.52	0.42
52:26:606:G:C5'	52:26:607:A:H5'	2.50	0.42
52:26:1084:G:H2'	52:26:1085:U:C5	2.55	0.42
52:26:1157:A:C5	52:26:1180:A:C6	3.08	0.42
52:26:1201:A:H4'	52:26:1203:C:OP2	2.18	0.42
52:26:1208:C:H2'	52:26:1209:C:H6	1.83	0.42
52:26:1213:A:C5	52:26:1215:G:C4	3.07	0.42
52:26:1382:C:H2'	52:26:1383:C:C6	2.46	0.42
52:26:1452:C:H4'	52:26:1453:G:N1	2.34	0.42
52:26:1487:G:O2'	52:26:1488:G:H5'	2.20	0.42
53:27:106:C:H2'	53:27:107:G:C8	2.47	0.42
53:27:780:G:H2'	53:27:782:A:C6	2.54	0.42
53:27:1268:A:OP1	53:27:2006:C:OP1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1279:G:C4	53:27:1280:G:C8	3.08	0.42
53:27:1425:G:H2'	53:27:1426:G:C8	2.54	0.42
53:27:1430:G:H2'	53:27:1431:A:H8	1.83	0.42
53:27:1766:G:H2'	53:27:1767:G:H8	1.83	0.42
53:27:2683:C:H2'	53:27:2684:U:C6	2.54	0.42
53:27:2830:C:H2'	53:27:2831:G:H8	1.85	0.42
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
59:33:152:LYS:HD2	59:33:152:LYS:HA	1.76	0.42
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:654:ASP:C	59:33:654:ASP:OD1	2.61	0.42
1:A:93:VAL:CG1	1:A:94:LEU:N	2.83	0.42
1:A:143:VAL:O	1:A:151:GLY:HA2	2.20	0.42
2:B:118:PHE:HE2	53:27:1655:A:H1'	1.84	0.42
3:C:9:GLN:C	3:C:11:ALA:N	2.78	0.42
3:C:32:VAL:HG11	11:K:6:LEU:HD12	2.00	0.42
3:C:88:ARG:CD	3:C:89:PRO:HD2	2.49	0.42
4:D:76:PHE:HE1	53:27:2308:G:C6	2.37	0.42
4:D:76:PHE:HE1	53:27:2308:G:N7	2.18	0.42
4:D:134:GLN:NE2	4:D:148:VAL:HA	2.34	0.42
5:E:132:LEU:C	5:E:132:LEU:HD12	2.44	0.42
8:H:1:ALA:HB1	8:H:61:TYR:HE1	1.84	0.42
14:N:31:THR:O	14:N:32:PRO:C	2.62	0.42
16:P:46:TYR:HA	16:P:49:ARG:NH2	2.34	0.42
20:T:38:ILE:HG22	20:T:39:ASN:ND2	2.33	0.42
20:T:96:LYS:O	20:T:97:SER:HB3	2.19	0.42
22:V:31:SER:O	22:V:56:PHE:HB2	2.19	0.42
24:X:10:SER:O	24:X:13:GLU:HG2	2.20	0.42
39:13:27:ILE:HG21	39:13:62:LEU:HD12	2.01	0.42
39:13:37:TYR:CD2	39:13:38:PHE:CD2	3.08	0.42
39:13:48:ARG:C	39:13:50:PRO:HD2	2.44	0.42
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.40	0.42
44:18:45:LEU:CD2	44:18:46:LYS:HD2	2.43	0.42
46:20:7:ALA:CB	46:20:18:GLN:HB3	2.44	0.42
48:22:59:LYS:HD3	52:26:735:C:H5'	2.01	0.42
51:25:46:ARG:NE	52:26:1533:C:N4	2.67	0.42
52:26:27:G:O2'	52:26:28:A:H5'	2.19	0.42
52:26:182:A:C2'	52:26:183:C:H5"	2.49	0.42
52:26:260:G:H2'	52:26:261:U:C6	2.55	0.42
52:26:375:U:H2'	52:26:376:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:636:U:H2'	52:26:637:C:C6	2.55	0.42
52:26:705:G:H2'	52:26:706:A:C5'	2.50	0.42
52:26:889:A:H5'	52:26:891:U:H1'	2.00	0.42
52:26:978:A:C2	52:26:1319:A:O4'	2.73	0.42
52:26:1111:A:H2'	52:26:1112:C:C6	2.54	0.42
52:26:1149:C:H2'	52:26:1150:A:O4'	2.19	0.42
52:26:1464:U:O5'	52:26:1464:U:H6	2.02	0.42
53:27:133:U:H2'	53:27:134:G:H8	1.81	0.42
53:27:241:A:H8	53:27:241:A:OP1	2.01	0.42
53:27:292:U:H2'	53:27:293:U:C6	2.55	0.42
53:27:319:G:H1	53:27:323:C:H5	1.63	0.42
53:27:768:G:H2'	53:27:769:U:C6	2.54	0.42
53:27:1689:A:O2'	53:27:1690:A:H5'	2.20	0.42
53:27:1803:A:H2'	53:27:1804:C:O4'	2.19	0.42
53:27:1824:G:H2'	53:27:1825:U:H6	1.85	0.42
53:27:1847:G:O2'	53:27:1848:A:C8	2.67	0.42
53:27:1866:A:H3'	53:27:1867:G:H8	1.85	0.42
53:27:1930:G:HO2'	53:27:1931:U:P	2.42	0.42
53:27:1973:G:O2'	53:27:1974:C:H5'	2.20	0.42
53:27:2053:G:C2	53:27:2617:U:C2	3.07	0.42
53:27:2116:G:O2'	53:27:2117:A:H5'	2.20	0.42
53:27:2348:U:H2'	53:27:2349:G:C8	2.54	0.42
53:27:2494:G:O2'	53:27:2495:G:H5'	2.20	0.42
53:27:2545:G:H2'	53:27:2546:U:H5'	2.02	0.42
53:27:2683:C:H2'	53:27:2684:U:H6	1.85	0.42
56:30:75:C:H4'	59:33:431:ILE:HG23	2.02	0.42
57:31:43:A:H2'	57:31:44:A:C8	2.54	0.42
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.42
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.42
59:33:428:ALA:O	59:33:431:ILE:HB	2.19	0.42
59:33:705:GLN:HB2	59:33:706:GLN:H	1.46	0.42
2:B:5:VAL:HG11	2:B:80:TRP:CD2	2.55	0.42
2:B:13:ARG:HA	2:B:24:VAL:HG22	2.00	0.42
3:C:57:LYS:HG2	3:C:59:PRO:CD	2.49	0.42
3:C:148:ILE:HA	3:C:187:VAL:CG1	2.49	0.42
5:E:39:ALA:HA	5:E:57:TYR:CD2	2.54	0.42
11:K:96:LYS:HD3	11:K:103:ILE:HG23	2.01	0.42
17:Q:29:THR:O	17:Q:31:GLU:N	2.53	0.42
18:R:89:ALA:C	18:R:91:GLY:N	2.77	0.42
19:S:57:VAL:HG22	19:S:58:VAL:N	2.34	0.42
24:X:5:GLU:HA	24:X:8:GLU:OE1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:9:LYS:HZ3	24:X:11:VAL:H	1.67	0.42
25:Y:40:THR:CG2	25:Y:43:ILE:H	2.33	0.42
26:Z:9:TYR:HD2	26:Z:25:ARG:NH2	2.16	0.42
27:1:17:SER:OG	27:1:18:HIS:N	2.53	0.42
34:8:28:ASP:OD1	34:8:28:ASP:N	2.51	0.42
34:8:88:ASN:O	34:8:91:ALA:HB3	2.19	0.42
39:13:10:ARG:O	39:13:105:ARG:NH2	2.52	0.42
39:13:24:ASN:HA	39:13:58:GLU:O	2.19	0.42
39:13:25:GLY:H	39:13:58:GLU:HA	1.83	0.42
39:13:80:HIS:CE1	39:13:84:ARG:HD2	2.55	0.42
39:13:81:GLY:O	39:13:85:ALA:HB2	2.20	0.42
42:16:3:VAL:HG13	42:16:4:ASN:N	2.34	0.42
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.84	0.42
44:18:55:SER:HA	44:18:56:PRO:HD2	1.89	0.42
45:19:42:PHE:CD2	45:19:55:LEU:HD22	2.55	0.42
47:21:5:ARG:HB3	47:21:5:ARG:NH1	2.34	0.42
47:21:66:LEU:O	47:21:67:SER:HB3	2.19	0.42
49:23:10:ILE:HG23	49:23:40:PHE:HE2	1.84	0.42
52:26:288:A:H2'	52:26:289:G:H4'	2.02	0.42
52:26:553:A:N6	52:26:554:A:N6	2.67	0.42
52:26:631:C:OP1	52:26:632:U:H4'	2.20	0.42
52:26:694:A:H2'	52:26:695:A:C5'	2.49	0.42
52:26:777:A:O2'	52:26:778:G:H5'	2.19	0.42
52:26:790:A:C5	52:26:791:G:C6	3.08	0.42
52:26:897:C:H2'	52:26:898:G:C8	2.55	0.42
52:26:1333:A:C4	52:26:1334:G:C8	3.08	0.42
52:26:1468:A:O2'	52:26:1469:C:H5'	2.19	0.42
53:27:3:U:H2'	53:27:4:U:H6	1.83	0.42
53:27:47:C:C4	53:27:48:G:N7	2.88	0.42
53:27:541:A:H2'	53:27:542:C:C6	2.55	0.42
53:27:1348:C:H3'	53:27:1349:C:H6	1.84	0.42
53:27:1379:U:OP1	53:27:1379:U:H6	2.02	0.42
53:27:1401:G:H2'	53:27:1402:U:O4'	2.19	0.42
53:27:1823:G:O2'	53:27:1824:G:H5'	2.19	0.42
53:27:1829:A:H2'	53:27:1830:C:O4'	2.20	0.42
53:27:2093:G:C5	53:27:2225:A:C8	3.07	0.42
53:27:2126:A:H4'	53:27:2127:G:O4'	2.19	0.42
53:27:2251:G:C4	53:27:2252:G:C8	3.08	0.42
53:27:2638:G:N2	53:27:2775:G:H2'	2.34	0.42
53:27:2684:U:C4	53:27:2685:G:N7	2.88	0.42
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	0.42

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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	0.42
59:33:565:ASN:O	59:33:566:LYS:CB	2.67	0.42
1:A:1:ALA:N	1:A:19:VAL:O	2.50	0.42
1:A:51:ARG:NH2	53:27:1825:U:OP2	2.40	0.42
3:C:40:ARG:NH1	3:C:92:HIS:NE2	2.65	0.42
5:E:103:ASN:OD1	5:E:104:LEU:N	2.53	0.42
5:E:154:GLU:HG2	5:E:155:PRO:N	2.33	0.42
6:F:57:LYS:O	6:F:61:VAL:HG22	2.20	0.42
8:H:116:MET:SD	53:27:1059:G:H4'	2.59	0.42
12:L:29:GLY:HA3	12:L:106:ASP:HB2	2.01	0.42
16:P:60:TRP:O	16:P:64:ILE:HG13	2.19	0.42
18:R:64:ALA:O	18:R:65:ASP:HB3	2.19	0.42
27:1:25:THR:O	27:1:27:LEU:N	2.48	0.42
33:7:60:ALA:C	33:7:62:SER:N	2.78	0.42
39:13:43:ALA:HB1	39:13:45:MET:HG2	2.02	0.42
42:16:120:ARG:HB2	52:26:37:U:C5'	2.49	0.42
47:21:16:MET:HE2	47:21:19:SER:CB	2.50	0.42
48:22:38:ILE:HD12	48:22:62:ARG:HH22	1.84	0.42
49:23:17:LYS:HA	49:23:20:LYS:HD3	2.00	0.42
50:24:77:ASN:O	50:24:81:GLN:HG2	2.20	0.42
52:26:110:C:H2'	52:26:111:G:O4'	2.20	0.42
52:26:114:U:H2'	52:26:115:G:C8	2.55	0.42
52:26:505:G:P	52:26:535:A:H5'	2.59	0.42
52:26:586:C:O2	52:26:755:G:N2	2.52	0.42
52:26:678:U:O2'	52:26:679:C:H5'	2.19	0.42
52:26:721:G:O4'	52:26:722:G:C4	2.72	0.42
52:26:1497:G:H3'	52:26:1498:U:O2	2.20	0.42
52:26:1501:C:C2	52:26:1504:G:C6	3.07	0.42
53:27:257:C:H2'	53:27:258:G:O4'	2.19	0.42
53:27:338:G:H3'	53:27:339:U:C6	2.54	0.42
53:27:676:A:H62	53:27:802:A:N6	2.08	0.42
53:27:804:A:H2'	53:27:806:C:N4	2.34	0.42
53:27:881:G:O2'	53:27:882:G:H5'	2.20	0.42
53:27:966:G:H1'	53:27:2267:A:N7	2.35	0.42
53:27:1179:G:N7	53:27:1180:U:H1'	2.35	0.42
53:27:1446:C:H6	53:27:1446:C:O5'	2.03	0.42
53:27:1537:G:H3'	53:27:1537:G:N3	2.34	0.42
53:27:1878:G:H2'	53:27:1879:C:O4'	2.20	0.42
53:27:2165:C:H2'	53:27:2166:U:C2	2.55	0.42
53:27:2556:C:H2'	53:27:2557:G:H5'	2.02	0.42
53:27:2588:G:C6	53:27:2607:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2629:U:HO2'	53:27:2630:G:H5"	1.84	0.42
53:27:2633:G:H2'	53:27:2634:A:O4'	2.19	0.42
53:27:2785:C:H2'	53:27:2786:U:O4'	2.19	0.42
55:29:17:U:H2'	55:29:18:G:C8	2.55	0.42
57:31:31:G:H2'	57:31:32:C:O4'	2.20	0.42
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.42
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.42
59:33:656:VAL:HG23	59:33:657:TRP:N	2.35	0.42
2:B:148:GLN:O	53:27:2052:A:H4'	2.20	0.42
3:C:178:VAL:HG13	3:C:179:SER:N	2.34	0.42
5:E:53:PRO:HG3	5:E:61:TRP:CD2	2.55	0.42
6:F:134:VAL:HG23	6:F:138:VAL:HB	2.02	0.42
8:H:79:LEU:HD23	8:H:79:LEU:HA	1.91	0.42
11:K:51:GLU:OE2	30:4:56:LEU:HD13	2.19	0.42
12:L:38:ARG:NH1	12:L:98:PRO:HD3	2.35	0.42
18:R:7:HIS:HE1	18:R:10:ALA:HA	1.84	0.42
19:S:1:MET:O	19:S:3:ARG:N	2.52	0.42
19:S:13:ALA:O	19:S:32:LEU:HB2	2.19	0.42
27:1:39:ARG:O	27:1:41:HIS:N	2.52	0.42
33:7:83:VAL:HG12	33:7:87:ARG:HH12	1.84	0.42
33:7:191:THR:HG23	33:7:192:TYR:CD2	2.55	0.42
34:8:60:VAL:O	34:8:63:ILE:HB	2.20	0.42
35:9:148:SER:OG	35:9:150:GLU:OE1	2.38	0.42
36:10:51:ILE:O	36:10:52:ASN:C	2.62	0.42
37:11:11:ILE:HD13	37:11:24:LYS:HD3	2.00	0.42
38:12:64:TYR:CD1	38:12:69:ALA:HA	2.52	0.42
39:13:51:LEU:CD1	39:13:56:MET:HB2	2.49	0.42
43:17:53:ASP:OD1	43:17:54:THR:HG23	2.20	0.42
44:18:34:ASN:HB2	44:18:35:ALA:H	1.68	0.42
48:22:20:ILE:H	48:22:53:GLN:NE2	2.18	0.42
51:25:36:PHE:CB	51:25:40:PRO:HD3	2.49	0.42
52:26:105:G:C6	52:26:106:C:C4	3.08	0.42
52:26:124:C:H2'	52:26:125:U:C6	2.55	0.42
52:26:137:U:H2'	52:26:138:G:H8	1.85	0.42
52:26:389:A:H2'	52:26:390:U:H5'	2.02	0.42
52:26:516:U:C5	52:26:533:A:N6	2.87	0.42
52:26:768:A:H5'	52:26:1524:C:O2'	2.20	0.42
52:26:934:C:H5	52:26:1344:C:H2'	1.84	0.42
52:26:993:G:H2'	52:26:993:G:N3	2.35	0.42
52:26:1084:G:H5"	52:26:1085:U:OP2	2.19	0.42
52:26:1213:A:C2	52:26:1215:G:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:510:C:H2'	53:27:511:U:C6	2.54	0.42
53:27:910:A:C6	53:27:911:A:C6	3.08	0.42
53:27:917:A:H2'	53:27:918:A:O4'	2.20	0.42
53:27:988:A:H4'	53:27:1155:A:C2	2.55	0.42
53:27:1210:G:P	53:27:1212:G:H5'	2.60	0.42
53:27:1278:C:O2'	53:27:1279:G:H5'	2.19	0.42
53:27:1360:G:C8	53:27:1361:G:C8	3.07	0.42
53:27:1435:G:H2'	53:27:1436:G:H8	1.84	0.42
53:27:1841:U:C2	53:27:1842:G:C8	3.08	0.42
53:27:2134:A:N3	53:27:2134:A:C2'	2.83	0.42
53:27:2201:G:H2'	53:27:2202:U:O4'	2.20	0.42
53:27:2253:G:H2'	53:27:2254:C:C6	2.55	0.42
53:27:2264:C:H2'	53:27:2265:U:O4'	2.20	0.42
53:27:2520:C:O2'	53:27:2521:C:H5'	2.19	0.42
53:27:2603:G:O2'	53:27:2604:U:H5'	2.20	0.42
53:27:2824:C:H6	53:27:2824:C:O5'	2.02	0.42
54:28:35:C:O2'	54:28:36:C:H5'	2.18	0.42
57:31:31:G:H2'	57:31:32:C:C6	2.54	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:62:MET:HE2	59:33:82:PHE:CE1	2.53	0.42
59:33:442:ALA:HA	59:33:462:GLU:O	2.20	0.42
59:33:472:SER:C	59:33:474:ASP:H	2.26	0.42
59:33:683:ILE:HG22	59:33:687:LEU:HG	2.02	0.42
1:A:109:LEU:HD12	1:A:109:LEU:HA	1.85	0.42
1:A:212:TRP:C	1:A:214:GLY:H	2.26	0.42
2:B:55:LYS:HG3	2:B:77:ARG:CA	2.49	0.42
3:C:27:LEU:O	3:C:30:GLN:HB3	2.19	0.42
3:C:94:GLN:HB2	53:27:660:C:OP1	2.20	0.42
3:C:97:ASN:HB3	3:C:100:MET:SD	2.60	0.42
4:D:9:ASP:HB2	4:D:10:GLU:OE1	2.19	0.42
4:D:19:PHE:O	4:D:20:ASN:OD1	2.38	0.42
6:F:5:LEU:HD23	6:F:9:VAL:HG21	2.02	0.42
7:G:52:MET:O	7:G:52:MET:HG2	2.20	0.42
7:G:121:SER:HB3	7:G:126:LEU:CD2	2.50	0.42
8:H:37:PHE:O	8:H:41:PHE:HB2	2.19	0.42
8:H:99:LYS:HA	8:H:138:VAL:O	2.20	0.42
9:I:31:GLU:O	9:I:35:ARG:HG2	2.20	0.42
13:M:38:LEU:HB3	13:M:39:PRO:CD	2.45	0.42
16:P:5:ARG:HD3	53:27:1250:G:H5"	2.02	0.42
18:R:79:GLY:H	18:R:101:SER:HA	1.84	0.42
20:T:5:ARG:HG3	20:T:93:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:39:THR:C	53:27:2331:G:H4'	2.45	0.42
25:Y:47:ILE:O	25:Y:51:SER:N	2.53	0.42
27:1:12:ARG:NH2	27:1:16:ARG:NH1	2.67	0.42
28:2:47:ILE:CG2	28:2:48:TYR:N	2.82	0.42
32:6:80:LYS:HG3	32:6:90:PHE:CE1	2.55	0.42
35:9:156:ARG:HG3	38:12:42:GLU:O	2.20	0.42
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.33	0.42
44:18:2:LYS:O	44:18:3:GLN:C	2.63	0.42
47:21:30:HIS:HD2	47:21:33:TYR:H	1.67	0.42
52:26:15:G:C4	52:26:16:A:C8	3.07	0.42
52:26:314:C:O5'	52:26:314:C:H6	2.03	0.42
52:26:341:C:H2'	52:26:342:C:C6	2.48	0.42
52:26:412:A:C2	52:26:414:A:H1'	2.55	0.42
52:26:449:G:H2'	52:26:450:G:O4'	2.20	0.42
52:26:493:A:H2'	52:26:494:G:O4'	2.20	0.42
52:26:529:G:C4'	52:26:533:A:C2	3.03	0.42
52:26:539:A:H2'	52:26:540:G:H8	1.85	0.42
52:26:552:U:H2'	52:26:553:A:C8	2.51	0.42
52:26:628:G:C2	52:26:629:A:C4	3.08	0.42
52:26:969:A:C2'	52:26:970:C:H5'	2.50	0.42
52:26:1436:U:H2'	52:26:1437:A:H8	1.85	0.42
53:27:564:C:H2'	53:27:565:C:C6	2.55	0.42
53:27:1112:G:H2'	53:27:1113:U:C6	2.55	0.42
53:27:1351:C:H4'	53:27:1572:A:O4'	2.20	0.42
53:27:1412:U:H2'	53:27:1413:A:C8	2.54	0.42
53:27:2404:U:C4	53:27:2405:G:C6	3.08	0.42
53:27:2428:G:H5"	53:27:2429:G:OP1	2.19	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
1:A:116:GLN:HE21	1:A:121:ALA:HA	1.83	0.42
1:A:243:PRO:O	1:A:250:GLN:NE2	2.53	0.42
2:B:115:GLY:HA2	2:B:167:ASN:HB2	2.02	0.42
2:B:197:THR:HB	53:27:2820:A:N6	2.34	0.42
3:C:2:GLU:HB2	3:C:11:ALA:O	2.20	0.42
3:C:57:LYS:HZ3	3:C:59:PRO:HG3	1.82	0.42
4:D:109:ARG:NH2	4:D:138:PRO:N	2.67	0.42
5:E:114:HIS:HD2	5:E:147:LEU:HD21	1.85	0.42
6:F:30:LEU:O	6:F:33:GLN:HB3	2.20	0.42
7:G:25:ALA:HB3	7:G:85:SER:CB	2.50	0.42
8:H:36:GLU:O	8:H:40:ALA:CB	2.68	0.42
9:I:47:HIS:CB	53:27:536:G:H21	2.33	0.42
12:L:75:GLU:HB2	12:L:90:GLU:CD	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:22:ARG:NH1	13:M:71:ARG:HB2	2.31	0.42
15:O:50:ARG:HH11	15:O:50:ARG:HG3	1.84	0.42
16:P:36:GLN:NE2	53:27:563:A:C2'	2.79	0.42
16:P:51:GLN:HA	16:P:54:ARG:HE	1.85	0.42
17:Q:6:GLN:HG3	17:Q:11:GLN:NE2	2.34	0.42
17:Q:73:LYS:HZ3	17:Q:86:GLN:HE21	1.65	0.42
18:R:109:ASP:OD1	18:R:110:ARG:NH2	2.48	0.42
20:T:6:ARG:NH2	20:T:7:ASP:OD1	2.53	0.42
20:T:67:SER:HB3	53:27:335:C:O2	2.20	0.42
21:U:29:ILE:HD12	21:U:38:LEU:O	2.19	0.42
27:1:43:THR:HG23	27:1:47:TYR:O	2.20	0.42
33:7:113:LYS:HD3	33:7:184:ASN:ND2	2.35	0.42
34:8:57:LYS:HE3	34:8:57:LYS:HB3	1.95	0.42
38:12:10:LEU:O	38:12:13:ILE:HB	2.20	0.42
39:13:32:ARG:HA	39:13:36:GLN:HE21	1.85	0.42
39:13:125:GLN:NE2	39:13:126:PHE:O	2.43	0.42
44:18:44:VAL:O	44:18:48:GLN:NE2	2.52	0.42
45:19:22:GLY:O	52:26:751:U:H1'	2.20	0.42
46:20:70:ARG:HD2	46:20:70:ARG:HA	1.86	0.42
50:24:33:LYS:NZ	52:26:1457:G:OP1	2.50	0.42
52:26:41:G:H2'	52:26:42:G:H8	1.85	0.42
52:26:211:G:N3	52:26:211:G:C3'	2.79	0.42
52:26:295:C:H2'	52:26:296:U:C6	2.54	0.42
52:26:312:C:H2'	52:26:313:A:H8	1.85	0.42
52:26:440:C:C3'	52:26:441:A:C5'	2.92	0.42
52:26:744:C:H2'	52:26:745:G:C8	2.54	0.42
53:27:232:G:H8	53:27:232:G:OP2	2.02	0.42
53:27:310:A:H2'	53:27:311:A:H5"	2.02	0.42
53:27:665:U:H2'	53:27:666:A:C8	2.54	0.42
53:27:671:C:H2'	53:27:672:C:C5	2.55	0.42
53:27:901:C:C4	53:27:902:C:C4	3.08	0.42
53:27:934:U:H2'	53:27:935:C:C6	2.54	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.35	0.42
53:27:992:C:H2'	53:27:993:G:C8	2.55	0.42
53:27:1668:A:H5'	53:27:1669:A:C5	2.55	0.42
53:27:2175:C:H2'	53:27:2176:A:C8	2.55	0.42
53:27:2573:C:H5"	53:27:2574:G:C5'	2.50	0.42
55:29:13:A:H2'	55:29:13:A:N3	2.34	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.83	0.42
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.42
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:214:ILE:HG21	59:33:214:ILE:HD13	1.79	0.42
59:33:597:VAL:HG12	59:33:598:VAL:N	2.34	0.42
1:A:52:HIS:HE2	1:A:218:THR:HA	1.85	0.41
1:A:175:LEU:HD23	53:27:1799:G:C2	2.54	0.41
1:A:209:ALA:HA	1:A:212:TRP:CD2	2.55	0.41
2:B:120:GLY:HA3	53:27:1655:A:O3'	2.20	0.41
7:G:81:LEU:HD13	53:27:1107:G:C5'	2.39	0.41
8:H:40:ALA:O	8:H:43:ALA:HB3	2.20	0.41
9:I:64:VAL:HG21	9:I:89:PHE:CE2	2.54	0.41
9:I:114:LEU:O	9:I:117:ALA:HB3	2.19	0.41
13:M:90:ARG:HG3	13:M:90:ARG:NH1	2.34	0.41
13:M:97:ILE:HG22	13:M:98:LEU:N	2.35	0.41
14:N:34:HIS:HA	14:N:65:THR:HB	2.02	0.41
16:P:24:TYR:CG	16:P:25:GLY:N	2.87	0.41
21:U:64:VAL:CG1	21:U:65:VAL:N	2.82	0.41
24:X:29:ARG:O	24:X:32:ALA:HB3	2.20	0.41
28:2:42:VAL:O	28:2:42:VAL:HG12	2.20	0.41
32:6:82:ALA:HB2	32:6:213:LEU:HB3	2.01	0.41
37:11:68:VAL:HG12	37:11:134:VAL:HG12	2.02	0.41
37:11:110:ARG:HH21	37:11:122:GLU:HA	1.85	0.41
38:12:115:ALA:HA	38:12:118:ALA:HB3	2.01	0.41
38:12:121:GLY:O	52:26:599:C:H4'	2.20	0.41
41:15:124:LYS:O	51:25:34:ARG:HD3	2.19	0.41
46:20:21:VAL:O	46:20:32:PHE:HB2	2.19	0.41
50:24:78:LEU:O	50:24:81:GLN:HB2	2.20	0.41
52:26:22:G:C6	52:26:23:C:C4	3.08	0.41
52:26:27:G:C6	52:26:28:A:C6	3.08	0.41
52:26:225:C:H2'	52:26:226:G:O4'	2.19	0.41
52:26:354:G:O2'	52:26:355:C:H5'	2.19	0.41
52:26:399:G:H2'	52:26:400:C:H6	1.86	0.41
52:26:425:G:H2'	52:26:426:U:C5'	2.50	0.41
52:26:437:U:H2'	52:26:438:U:H5'	2.02	0.41
52:26:876:C:H2'	52:26:877:G:C8	2.55	0.41
52:26:971:G:N9	52:26:1365:G:H4'	2.35	0.41
52:26:977:A:H2'	52:26:977:A:N3	2.35	0.41
52:26:1186:G:H2'	52:26:1187:G:H8	1.85	0.41
52:26:1305:G:H22	52:26:1331:G:H2'	1.84	0.41
52:26:1497:G:H2'	52:26:1519:A:H2	1.85	0.41
53:27:284:U:H5'	53:27:285:G:OP1	2.20	0.41
53:27:687:C:O2	53:27:687:C:H2'	2.20	0.41
53:27:737:C:H2'	53:27:738:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:740:C:H2'	53:27:741:U:C6	2.55	0.41
53:27:853:C:H2'	53:27:854:C:H6	1.85	0.41
53:27:948:C:H2'	53:27:949:G:C8	2.54	0.41
53:27:965:C:H2'	53:27:966:G:H8	1.85	0.41
53:27:1264:A:N7	53:27:1265:A:C5	2.88	0.41
53:27:1268:A:C2'	53:27:1269:A:H8	2.33	0.41
53:27:1465:G:H2'	53:27:1466:U:C6	2.55	0.41
53:27:1838:C:C4	53:27:1899:A:C5	3.08	0.41
53:27:1858:A:N6	53:27:1884:G:O2'	2.52	0.41
53:27:2058:A:H2'	53:27:2059:A:C8	2.54	0.41
53:27:2134:A:N6	53:27:2157:G:H5'	2.34	0.41
53:27:2542:A:H4'	53:27:2543:G:H8	1.84	0.41
53:27:2583:G:H2'	53:27:2584:U:C5'	2.48	0.41
53:27:2772:C:H2'	53:27:2773:C:H6	1.84	0.41
53:27:2812:G:O2'	53:27:2813:A:H5'	2.20	0.41
53:27:2845:U:H2'	53:27:2846:G:H8	1.85	0.41
56:30:75:C:H5'	59:33:431:ILE:O	2.20	0.41
58:32:65:C:H2'	58:32:66:C:C5	2.55	0.41
59:33:172:VAL:HG13	59:33:173:LEU:N	2.35	0.41
2:B:98:VAL:CG1	2:B:182:ALA:HA	2.46	0.41
3:C:129:PRO:HG3	3:C:156:ASN:O	2.20	0.41
4:D:15:LEU:HA	4:D:18:GLU:HB2	2.02	0.41
4:D:33:ILE:HB	4:D:95:MET:HG3	2.02	0.41
6:F:23:ALA:O	6:F:27:ARG:HG3	2.19	0.41
6:F:62:LEU:O	6:F:66:ASN:ND2	2.53	0.41
9:I:105:VAL:O	9:I:108:MET:HB2	2.20	0.41
10:J:99:ILE:N	10:J:99:ILE:HD12	2.35	0.41
11:K:23:ILE:HD13	17:Q:84:ARG:NH1	2.35	0.41
13:M:107:ASN:HD22	53:27:2009:A:C4'	2.33	0.41
23:W:69:GLU:O	23:W:72:ALA:HB3	2.19	0.41
25:Y:11:SER:HB3	53:27:988:A:P	2.60	0.41
25:Y:46:MET:HG2	53:27:851:C:C4'	2.51	0.41
29:3:21:ARG:HB3	29:3:31:LEU:HD13	2.02	0.41
30:4:16:THR:O	30:4:17:GLY:C	2.63	0.41
32:6:17:HIS:CD2	32:6:18:GLN:H	2.38	0.41
33:7:59:PRO:HG2	33:7:62:SER:OG	2.20	0.41
34:8:11:SER:OG	34:8:17:ASP:HA	2.20	0.41
34:8:68:GLU:HG2	52:26:545:C:H5"	2.01	0.41
35:9:93:VAL:HG21	35:9:138:ALA:HB3	2.01	0.41
37:11:134:VAL:HG23	37:11:135:LYS:N	2.36	0.41
38:12:29:SER:O	38:12:32:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:108:ARG:HB3	52:26:1347:G:C8	2.55	0.41
42:16:20:VAL:HG23	42:16:20:VAL:O	2.20	0.41
43:17:26:LYS:NZ	43:17:30:LYS:HE2	2.35	0.41
52:26:429:U:C1'	52:26:430:A:H5"	2.51	0.41
52:26:496:A:H2'	52:26:497:G:N7	2.35	0.41
52:26:662:U:H2'	52:26:663:A:C8	2.55	0.41
52:26:697:U:C2'	52:26:698:G:H5'	2.49	0.41
52:26:1197:A:O2'	52:26:1198:G:H5'	2.20	0.41
52:26:1420:U:H2'	52:26:1421:G:H8	1.85	0.41
52:26:1493:A:H2'	53:27:1913:A:N1	2.35	0.41
53:27:68:G:H2'	53:27:69:C:C6	2.55	0.41
53:27:116:C:O2'	53:27:117:G:H5'	2.21	0.41
53:27:611:C:H3'	53:27:612:G:C8	2.55	0.41
53:27:646:U:C4	53:27:2368:C:H1'	2.55	0.41
53:27:778:G:C6	53:27:779:U:N3	2.88	0.41
53:27:959:A:O2'	53:27:960:A:H5'	2.19	0.41
53:27:966:G:C5	53:27:967:U:C4	3.08	0.41
53:27:980:A:N7	53:27:981:A:C6	2.88	0.41
53:27:1174:U:O2	53:27:1174:U:C2'	2.65	0.41
53:27:1636:U:H2'	53:27:1637:A:C8	2.55	0.41
53:27:1731:G:C6	53:27:1733:G:C5	3.07	0.41
53:27:1829:A:H3'	53:27:1830:C:C6	2.55	0.41
53:27:1848:A:H2'	53:27:1849:G:O4'	2.19	0.41
53:27:2247:A:O2'	53:27:2248:C:H5'	2.20	0.41
53:27:2457:U:O2	53:27:2457:U:O4'	2.35	0.41
53:27:2685:G:O2'	53:27:2686:G:H5'	2.19	0.41
54:28:27:C:H2'	54:28:28:C:C6	2.54	0.41
54:28:88:C:C5'	54:28:89:U:OP1	2.64	0.41
56:30:24:G:O2'	56:30:25:C:H5'	2.20	0.41
57:31:37:A:H2'	57:31:38:A:H8	1.85	0.41
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.41
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	0.41
59:33:131:GLN:C	59:33:132:VAL:HG23	2.45	0.41
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.41
59:33:625:ILE:O	59:33:651:ARG:NH1	2.53	0.41
1:A:143:VAL:HG22	1:A:189:ALA:HB1	2.02	0.41
2:B:27:ILE:HG22	2:B:29:VAL:CG2	2.50	0.41
4:D:29:ARG:N	4:D:158:THR:OG1	2.49	0.41
4:D:131:VAL:CG2	4:D:151:LEU:H	2.31	0.41
5:E:36:LEU:HG	5:E:37:ASN:N	2.36	0.41
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:49:ALA:O	6:F:50:ARG:C	2.64	0.41
6:F:97:ARG:HG3	6:F:112:LYS:HD2	2.02	0.41
8:H:93:ASN:ND2	53:27:1077:A:O2'	2.53	0.41
10:J:63:VAL:HG11	10:J:85:VAL:HG23	2.03	0.41
10:J:77:ILE:N	10:J:77:ILE:HD12	2.35	0.41
16:P:46:TYR:CZ	16:P:50:ARG:NH2	2.88	0.41
16:P:90:ASP:CG	17:Q:11:GLN:HB2	2.45	0.41
18:R:5:ALA:CB	18:R:54:ALA:HA	2.50	0.41
23:W:35:HIS:ND1	23:W:36:ARG:O	2.53	0.41
25:Y:5:LYS:HB2	25:Y:57:GLU:CG	2.50	0.41
31:5:36:ARG:CG	31:5:37:GLN:N	2.82	0.41
33:7:6:PRO:O	33:7:9:ILE:HG22	2.21	0.41
33:7:122:GLN:O	33:7:127:VAL:HG12	2.21	0.41
34:8:133:SER:O	34:8:134:TYR:C	2.63	0.41
34:8:138:PRO:O	34:8:139:ASN:HB2	2.20	0.41
34:8:154:VAL:CG1	34:8:177:MET:HE1	2.50	0.41
35:9:58:ALA:O	35:9:61:LYS:HB3	2.20	0.41
36:10:59:TYR:CE2	48:22:66:LEU:HD21	2.52	0.41
36:10:98:GLU:HB3	36:10:99:ALA:H	1.49	0.41
37:11:96:ASN:O	37:11:100:MET:HG3	2.20	0.41
38:12:18:ALA:C	38:12:20:ASN:H	2.28	0.41
40:14:17:LEU:O	40:14:20:GLN:HG2	2.20	0.41
42:16:34:THR:O	42:16:35:ARG:HB2	2.20	0.41
46:20:42:ILE:C	46:20:44:SER:N	2.75	0.41
47:21:16:MET:HE2	47:21:19:SER:HB2	2.02	0.41
52:26:61:G:C6	52:26:62:U:C4	3.08	0.41
52:26:186:C:H2'	52:26:187:G:O4'	2.20	0.41
52:26:541:G:H2'	52:26:542:G:H8	1.85	0.41
52:26:757:U:H2'	52:26:758:C:O4'	2.21	0.41
52:26:865:A:H2'	52:26:866:C:C6	2.55	0.41
52:26:927:G:H2'	52:26:928:G:C8	2.52	0.41
52:26:1339:A:H2'	52:26:1340:A:H5'	2.02	0.41
52:26:1349:A:H2'	52:26:1350:A:O4'	2.20	0.41
52:26:1434:A:O2'	52:26:1435:G:H5'	2.20	0.41
53:27:455:C:O2	53:27:472:A:H2'	2.21	0.41
53:27:628:G:C5	53:27:636:G:N2	2.88	0.41
53:27:804:A:H5"	53:27:805:G:OP1	2.20	0.41
53:27:808:G:H2'	53:27:809:G:H8	1.85	0.41
53:27:818:G:H3'	53:27:1187:G:H22	1.86	0.41
53:27:823:C:C4	53:27:824:U:C4	3.08	0.41
53:27:1230:A:H2'	53:27:1231:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1608:A:C8	53:27:1611:C:N4	2.88	0.41
53:27:1668:A:C4	53:27:1674:G:C8	3.09	0.41
53:27:1708:C:H2'	53:27:1709:U:C6	2.55	0.41
53:27:1710:G:H2'	53:27:1711:A:O4'	2.20	0.41
53:27:1789:A:C5	53:27:1790:C:C5	3.08	0.41
53:27:1795:C:H2'	53:27:1796:U:O4'	2.20	0.41
53:27:1831:G:H2'	53:27:1832:C:H6	1.85	0.41
53:27:1900:A:H1'	53:27:1970:A:H2'	2.03	0.41
53:27:2052:A:C4	53:27:2053:G:C8	3.08	0.41
53:27:2442:C:O2'	53:27:2443:C:H5'	2.20	0.41
53:27:2805:C:H6	53:27:2805:C:O5'	2.04	0.41
59:33:463:ILE:HD12	59:33:463:ILE:O	2.20	0.41
2:B:8:LYS:HD2	2:B:193:VAL:HG23	2.01	0.41
2:B:149:ASN:ND2	53:27:2575:C:OP1	2.53	0.41
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.02	0.41
3:C:108:ILE:HG13	3:C:109:LEU:HD12	2.01	0.41
3:C:154:ASP:HB2	3:C:157:LEU:HB3	2.03	0.41
5:E:93:TYR:HE1	5:E:106:LEU:O	2.03	0.41
7:G:77:VAL:HG13	7:G:82:ILE:HD12	2.02	0.41
8:H:6:ALA:O	8:H:30:GLN:NE2	2.53	0.41
11:K:19:LEU:HA	11:K:27:LEU:HD13	2.03	0.41
13:M:63:ARG:HD2	13:M:80:PHE:CD2	2.55	0.41
14:N:41:ALA:HB3	14:N:46:GLU:HG3	2.03	0.41
16:P:57:ARG:NH1	53:27:1154:G:P	2.94	0.41
16:P:94:LEU:HA	16:P:94:LEU:HD23	1.87	0.41
17:Q:51:VAL:O	17:Q:52:PRO:C	2.64	0.41
17:Q:80:ARG:NH2	53:27:571:U:H3'	2.36	0.41
20:T:81:ARG:NH2	20:T:96:LYS:HD2	2.34	0.41
24:X:21:LEU:CD2	24:X:25:GLN:HG2	2.50	0.41
24:X:25:GLN:HG3	24:X:29:ARG:HH22	1.85	0.41
26:Z:32:LEU:HG	26:Z:34:LEU:HD12	2.02	0.41
32:6:39:ILE:H	32:6:39:ILE:CD1	2.25	0.41
32:6:129:THR:OG1	32:6:132:GLU:HB2	2.19	0.41
32:6:156:LEU:HA	32:6:157:PRO:HD3	1.92	0.41
34:8:8:LEU:CD2	34:8:31:CYS:HB2	2.51	0.41
37:11:130:LYS:CA	37:11:134:VAL:HG21	2.50	0.41
42:16:63:THR:HG23	42:16:92:VAL:HG22	2.03	0.41
46:20:20:VAL:CG2	46:20:35:ARG:HA	2.40	0.41
50:24:4:LYS:HE2	52:26:331:G:H2'	2.02	0.41
51:25:20:ARG:NH2	52:26:1538:C:O2'	2.53	0.41
52:26:23:C:O5'	52:26:23:C:H6	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:302:G:O2'	52:26:556:C:H5"	2.20	0.41
52:26:404:G:H2'	52:26:405:U:H6	1.82	0.41
52:26:560:A:H5'	52:26:566:G:N2	2.36	0.41
52:26:694:A:C2'	52:26:695:A:H5'	2.50	0.41
52:26:698:G:C4	52:26:699:C:C5	3.08	0.41
52:26:753:A:H4'	52:26:754:C:O5'	2.20	0.41
52:26:872:A:C5	52:26:874:G:C8	3.07	0.41
52:26:926:G:C6	52:26:1505:G:C6	3.08	0.41
52:26:996:A:C6	52:26:1046:A:H4'	2.56	0.41
52:26:1057:G:C5	52:26:1058:G:C5	3.08	0.41
53:27:126:A:C6	53:27:127:A:N1	2.89	0.41
53:27:190:A:C6	53:27:191:A:C6	3.09	0.41
53:27:217:A:H8	53:27:217:A:O5'	2.03	0.41
53:27:252:G:N2	53:27:253:C:H1'	2.36	0.41
53:27:579:G:C2	53:27:1262:A:C4	3.09	0.41
53:27:593:U:H2'	53:27:594:U:H6	1.80	0.41
53:27:681:G:C2	53:27:682:G:C4	3.09	0.41
53:27:1061:U:O4'	53:27:1070:A:H1'	2.20	0.41
53:27:1788:C:O5'	53:27:1788:C:H6	2.02	0.41
53:27:1815:A:C5	53:27:1817:G:C6	3.08	0.41
53:27:1853:A:N6	53:27:1889:A:C5	2.89	0.41
53:27:2078:C:H2'	53:27:2079:U:O4'	2.19	0.41
54:28:53:A:C2	54:28:54:G:N7	2.89	0.41
57:31:54:U:O5'	57:31:54:U:H6	2.03	0.41
59:33:18:GLU:O	59:33:21:ILE:CG1	2.67	0.41
59:33:221:ARG:HB3	59:33:273:LEU:HD21	2.02	0.41
59:33:613:CYS:HG	59:33:634:HIS:CE1	2.33	0.41
59:33:684:THR:HA	59:33:687:LEU:CD1	2.49	0.41
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.85	0.41
2:B:164:GLN:NE2	53:27:2822:G:H5"	2.30	0.41
3:C:57:LYS:C	3:C:58:LYS:HD2	2.46	0.41
3:C:63:LYS:HD2	3:C:69:ARG:CZ	2.50	0.41
4:D:139:GLU:HB2	26:Z:28:VAL:HA	2.02	0.41
6:F:99:ILE:CD1	6:F:117:LEU:HD21	2.51	0.41
7:G:54:VAL:HG13	7:G:84:TYR:CD2	2.55	0.41
10:J:7:MET:C	10:J:8:LEU:HD12	2.45	0.41
10:J:105:ARG:NE	15:O:31:VAL:HG21	2.34	0.41
12:L:67:VAL:HG12	12:L:100:LYS:HZ2	1.84	0.41
13:M:72:ASP:OD2	13:M:74:GLU:HB3	2.21	0.41
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
14:N:36:TYR:OH	54:28:28:C:OP1	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:77:PHE:CD1	17:Q:84:ARG:HG2	2.54	0.41
19:S:76:ARG:NH1	19:S:79:ASP:OD1	2.53	0.41
26:Z:56:ARG:CG	49:23:64:GLU:HA	2.51	0.41
27:1:39:ARG:C	27:1:41:HIS:N	2.78	0.41
29:3:11:LYS:HE3	29:3:11:LYS:HB2	1.87	0.41
30:4:39:ARG:O	30:4:43:LEU:HG	2.20	0.41
34:8:31:CYS:O	34:8:32:LYS:HB2	2.21	0.41
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.55	0.41
34:8:184:LYS:HA	34:8:185:PRO:HD3	1.93	0.41
35:9:12:GLU:O	35:9:63:MET:HE1	2.21	0.41
35:9:94:PHE:CG	35:9:95:MET:N	2.87	0.41
37:11:13:PRO:HB3	37:11:20:GLU:HB2	2.02	0.41
37:11:144:ALA:O	37:11:148:LYS:N	2.54	0.41
38:12:48:PHE:HB3	38:12:60:LEU:CD2	2.50	0.41
41:15:71:ASP:HB2	41:15:74:LYS:HZ2	1.86	0.41
42:16:1:ALA:O	42:16:2:THR:O	2.39	0.41
42:16:49:ARG:HG3	42:16:49:ARG:HH11	1.86	0.41
44:18:16:ALA:HA	44:18:54:SER:CA	2.47	0.41
45:19:25:GLU:H	45:19:25:GLU:CD	2.27	0.41
47:21:27:PHE:CE1	47:21:38:LYS:HG3	2.55	0.41
51:25:38:GLU:H	51:25:40:PRO:HD2	1.85	0.41
52:26:57:G:H2'	52:26:58:C:C6	2.56	0.41
52:26:647:C:H2'	52:26:648:A:C8	2.56	0.41
52:26:1425:U:H2'	52:26:1426:G:H8	1.85	0.41
53:27:483:A:H3'	53:27:484:C:H6	1.85	0.41
53:27:816:C:H2'	53:27:817:C:H6	1.84	0.41
53:27:1333:G:O2'	53:27:1334:G:H5'	2.20	0.41
53:27:1491:G:O2'	53:27:1492:G:H5'	2.19	0.41
53:27:1861:G:H2'	53:27:1862:G:H8	1.84	0.41
53:27:1889:A:H2'	53:27:1890:A:C8	2.55	0.41
53:27:1912:A:N7	53:27:1917:U:H5	2.19	0.41
53:27:2007:U:H4'	53:27:2824:C:H4'	2.03	0.41
53:27:2476:A:H2'	53:27:2477:U:O4'	2.20	0.41
53:27:2540:C:H2'	53:27:2541:A:O4'	2.21	0.41
53:27:2867:G:O2'	53:27:2868:A:H8	2.03	0.41
56:30:12:U:H2'	56:30:13:C:O4'	2.20	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
59:33:106:LEU:HD21	59:33:145:ASP:CG	2.45	0.41
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.41
59:33:643:GLU:O	59:33:646:SER:HB3	2.21	0.41
3:C:77:ILE:HD12	53:27:1256:G:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:67:THR:N	4:D:85:GLY:O	2.40	0.41
4:D:137:PHE:HA	4:D:138:PRO:HD3	1.82	0.41
11:K:62:PRO:HG2	30:4:24:LYS:HB3	2.02	0.41
19:S:68:LYS:HD3	19:S:68:LYS:HA	1.82	0.41
21:U:32:GLY:O	21:U:93:ARG:NH1	2.52	0.41
24:X:43:LEU:HD23	24:X:43:LEU:C	2.46	0.41
33:7:65:VAL:O	33:7:100:ILE:HG13	2.19	0.41
35:9:50:GLY:N	35:9:62:ALA:HB2	2.35	0.41
36:10:72:ASP:O	36:10:76:THR:HG23	2.20	0.41
37:11:2:ARG:NH1	52:26:932:C:C4	2.88	0.41
40:14:8:ILE:HG23	40:14:99:GLN:O	2.21	0.41
40:14:10:LEU:CB	40:14:98:VAL:HA	2.50	0.41
43:17:50:GLY:C	43:17:53:ASP:OD1	2.63	0.41
46:20:59:HIS:O	46:20:63:GLN:HG3	2.20	0.41
48:22:24:ASP:C	48:22:26:ALA:H	2.27	0.41
52:26:44:A:H2'	52:26:45:G:O4'	2.20	0.41
52:26:86:G:H5"	52:26:87:C:O5'	2.21	0.41
52:26:102:G:H2'	52:26:103:U:C6	2.54	0.41
52:26:123:U:H2'	52:26:124:C:H6	1.81	0.41
52:26:312:C:H2'	52:26:313:A:C8	2.55	0.41
52:26:1059:C:H2'	52:26:1060:U:H6	1.85	0.41
52:26:1174:G:O2'	52:26:1175:G:H5'	2.20	0.41
52:26:1459:G:O2'	52:26:1460:C:H5'	2.20	0.41
53:27:1020:A:H1'	53:27:1021:A:OP2	2.21	0.41
53:27:1178:C:H2'	53:27:1180:U:N1	2.34	0.41
53:27:1333:G:H8	53:27:1333:G:O5'	2.03	0.41
53:27:1613:G:H2'	53:27:1617:C:H42	1.84	0.41
53:27:2000:C:O2'	53:27:2001:C:H5'	2.21	0.41
53:27:2053:G:H2'	53:27:2054:A:H8	1.84	0.41
53:27:2367:G:O2'	53:27:2368:C:H5'	2.20	0.41
53:27:2516:A:O5'	53:27:2516:A:H8	2.03	0.41
53:27:2743:U:H3'	53:27:2744:G:H5"	2.01	0.41
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.41
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.41
59:33:444:ILE:HG22	59:33:461:ILE:CD1	2.42	0.41
59:33:615:PRO:HB3	59:33:635:ARG:HA	2.02	0.41
59:33:741:LEU:HD23	59:33:742:HIS:N	2.35	0.41
1:A:142:ASN:N	1:A:154:ALA:O	2.36	0.41
3:C:108:ILE:HG13	3:C:109:LEU:N	2.35	0.41
4:D:25:MET:HA	4:D:25:MET:HE2	2.02	0.41
6:F:22:LYS:HB3	53:27:2093:G:P	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:77:THR:HA	6:F:143:ILE:O	2.21	0.41
6:F:94:ILE:HD11	6:F:146:VAL:HG22	2.03	0.41
7:G:94:ARG:HA	7:G:96:PHE:CE2	2.55	0.41
9:I:14:ASP:CG	9:I:15:TRP:H	2.28	0.41
10:J:58:LEU:HD11	10:J:86:LEU:HB3	2.02	0.41
10:J:113:MET:O	10:J:116:ILE:HG13	2.20	0.41
12:L:75:GLU:HB2	12:L:90:GLU:CG	2.48	0.41
12:L:136:MET:HE1	21:U:74:ALA:O	2.20	0.41
13:M:22:ARG:HH11	13:M:71:ARG:CB	2.32	0.41
14:N:18:LEU:HD11	14:N:91:SER:CB	2.50	0.41
14:N:24:THR:OG1	14:N:90:VAL:HG12	2.21	0.41
14:N:114:GLY:O	14:N:116:GLN:NE2	2.53	0.41
17:Q:83:TYR:OH	53:27:1187:G:H5"	2.21	0.41
17:Q:91:GLN:NE2	53:27:993:G:H1'	2.36	0.41
20:T:3:LYS:C	20:T:4:ILE:HD12	2.46	0.41
21:U:55:GLU:HB3	21:U:59:GLU:OE2	2.20	0.41
23:W:71:ARG:HG3	23:W:72:ALA:N	2.36	0.41
26:Z:36:VAL:HG23	26:Z:37:CYS:N	2.36	0.41
27:1:1:ALA:O	27:1:2:VAL:O	2.39	0.41
29:3:5:PHE:CE2	29:3:7:PRO:HD3	2.56	0.41
31:5:7:VAL:HA	31:5:35:GLN:NE2	2.36	0.41
32:6:203:ASP:N	32:6:203:ASP:OD1	2.51	0.41
33:7:10:ARG:NE	33:7:179:ALA:O	2.52	0.41
33:7:28:PHE:HE2	44:18:76:PHE:CD1	2.38	0.41
34:8:123:MET:O	34:8:142:VAL:HG23	2.20	0.41
35:9:48:GLY:HA3	35:9:62:ALA:O	2.19	0.41
36:10:18:VAL:HG13	36:10:19:PRO:CD	2.51	0.41
36:10:34:GLY:C	36:10:36:ILE:H	2.27	0.41
38:12:6:ILE:HD11	38:12:76:ARG:NH2	2.36	0.41
39:13:118:ARG:HH11	52:26:1233:G:H5'	1.86	0.41
42:16:41:PRO:CD	42:16:47:ALA:H	2.34	0.41
44:18:91:GLU:O	44:18:93:PRO:HD3	2.21	0.41
45:19:21:THR:HG23	52:26:657:U:O2	2.21	0.41
48:22:21:ASP:CG	48:22:23:LYS:H	2.29	0.41
50:24:14:GLU:CA	50:24:17:ARG:HG2	2.44	0.41
51:25:31:VAL:C	51:25:33:ARG:H	2.27	0.41
51:25:46:ARG:NH2	52:26:1533:C:C5	2.88	0.41
52:26:429:U:O4'	52:26:430:A:H5"	2.21	0.41
52:26:501:C:H1'	52:26:549:C:H1'	2.01	0.41
52:26:570:G:H1'	52:26:820:U:C4	2.56	0.41
52:26:922:G:C3'	52:26:923:A:H8	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1259:C:C2’	52:26:1260:G:H5”	2.51	0.41
52:26:1468:A:H2’	52:26:1469:C:O4’	2.21	0.41
53:27:197:A:N6	53:27:2430:A:H2’	2.35	0.41
53:27:278:A:H2’	53:27:278:A:N3	2.35	0.41
53:27:840:C:H2’	53:27:841:G:O4’	2.21	0.41
53:27:862:G:H2’	53:27:863:A:C8	2.56	0.41
53:27:1080:A:O2’	53:27:1081:U:H5’	2.20	0.41
53:27:1082:U:C4	53:27:1083:U:H1’	2.56	0.41
53:27:1146:C:H2’	53:27:1147:A:C8	2.56	0.41
53:27:1313:U:O3’	53:27:1332:G:H4’	2.21	0.41
53:27:1377:G:H8	53:27:1377:G:O5’	2.04	0.41
53:27:1667:G:O5’	53:27:1667:G:H8	2.04	0.41
53:27:2024:G:H2’	53:27:2025:C:O4’	2.20	0.41
53:27:2177:C:C3’	53:27:2178:C:H5”	2.45	0.41
53:27:2251:G:P	53:27:2251:G:H8	2.44	0.41
53:27:2352:A:N6	53:27:2365:G:O2’	2.54	0.41
53:27:2559:C:H2’	53:27:2560:A:C8	2.55	0.41
53:27:2563:U:H2’	53:27:2565:A:OP2	2.21	0.41
53:27:2745:C:C4	53:27:2746:U:C4	3.09	0.41
53:27:2794:C:O2	53:27:2794:C:C2’	2.67	0.41
53:27:2870:C:H2’	53:27:2871:U:O4’	2.20	0.41
53:27:2896:C:H2’	53:27:2897:U:C6	2.56	0.41
57:31:68:C:H2’	57:31:69:C:H6	1.86	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.21	0.41
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.41
59:33:284:GLU:OE2	59:33:341:LYS:CE	2.58	0.41
4:D:141:ASP:HB3	4:D:143:ASP:OD1	2.20	0.41
4:D:154:THR:C	4:D:155:ILE:HD12	2.46	0.41
6:F:94:ILE:CG2	6:F:99:ILE:HG13	2.50	0.41
9:I:69:ARG:NE	9:I:89:PHE:HE2	2.15	0.41
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.20	0.41
13:M:44:LEU:O	13:M:45:ARG:C	2.63	0.41
13:M:94:TYR:O	13:M:116:VAL:N	2.54	0.41
15:O:27:VAL:HG12	15:O:29:VAL:HG23	2.02	0.41
16:P:39:ILE:CG2	16:P:40:LYS:N	2.83	0.41
16:P:77:LYS:O	16:P:116:LEU:HD22	2.21	0.41
17:Q:68:ARG:NH1	53:27:1224:U:OP2	2.54	0.41
21:U:65:VAL:O	21:U:65:VAL:CG1	2.69	0.41
37:11:85:GLN:HB2	37:11:147:ASN:HD21	1.85	0.41
43:17:79:LEU:HD22	43:17:84:CYS:SG	2.61	0.41
44:18:13:VAL:O	44:18:16:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:95:C:H2'	52:26:96:U:H6	1.86	0.41
52:26:163:C:H2'	52:26:164:G:O4'	2.21	0.41
52:26:374:A:C6	52:26:375:U:C4	3.09	0.41
52:26:513:C:H2'	52:26:514:C:H6	1.76	0.41
52:26:522:C:H6	52:26:522:C:O5'	2.04	0.41
52:26:565:U:C4	52:26:566:G:C5	3.08	0.41
52:26:577:G:C4	52:26:816:A:C2	3.09	0.41
52:26:599:C:O2'	52:26:600:A:H5'	2.21	0.41
52:26:762:U:H2'	52:26:763:G:H8	1.86	0.41
52:26:789:U:H2'	52:26:791:G:OP2	2.21	0.41
52:26:791:G:H8	52:26:791:G:O5'	2.03	0.41
52:26:955:U:H1'	52:26:1227:A:N6	2.25	0.41
52:26:1065:U:P	52:26:1190:G:H22	2.43	0.41
52:26:1229:A:H2'	52:26:1230:C:H6	1.85	0.41
52:26:1251:A:N1	52:26:1354:U:H1'	2.36	0.41
52:26:1314:C:H2'	52:26:1315:U:H6	1.84	0.41
52:26:1347:G:H22	52:26:1373:G:C2'	2.31	0.41
52:26:1405:G:N2	52:26:1517:G:N2	2.69	0.41
53:27:267:C:H2'	53:27:268:C:H6	1.86	0.41
53:27:315:G:H2'	53:27:316:C:H6	1.82	0.41
53:27:317:G:H2'	53:27:318:C:C6	2.55	0.41
53:27:372:G:H2'	53:27:400:G:C6	2.56	0.41
53:27:517:C:H2'	53:27:518:G:O4'	2.20	0.41
53:27:579:G:H4'	53:27:2017:U:H2'	2.02	0.41
53:27:706:A:C2	53:27:707:G:H1'	2.56	0.41
53:27:722:A:H2'	53:27:723:C:C6	2.56	0.41
53:27:955:U:H5	53:27:962:G:C6	2.35	0.41
53:27:1168:G:H2'	53:27:1169:A:H8	1.85	0.41
53:27:1357:C:O2'	53:27:1358:G:H5'	2.21	0.41
53:27:1406:U:H2'	53:27:1407:G:C4'	2.50	0.41
53:27:1632:A:C6	53:27:1633:G:C6	3.09	0.41
53:27:1668:A:C5	53:27:1674:G:C5	3.09	0.41
53:27:1775:U:C2'	53:27:1776:G:H5'	2.50	0.41
53:27:1789:A:C4	53:27:1790:C:C5	3.09	0.41
53:27:2191:A:H2'	53:27:2192:U:H6	1.81	0.41
53:27:2638:G:H22	53:27:2775:G:H2'	1.86	0.41
53:27:2814:A:H2'	53:27:2815:C:H6	1.86	0.41
53:27:2889:C:C4	53:27:2890:G:C6	3.09	0.41
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.41
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.41
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:619:ASP:O	59:33:620:GLU:O	2.38	0.41
59:33:726:LEU:O	59:33:730:ASN:N	2.47	0.41
2:B:129:THR:HG23	2:B:130:GLN:O	2.21	0.41
3:C:66:GLY:HA2	53:27:2060:A:H5"	2.03	0.41
4:D:29:ARG:HG2	4:D:29:ARG:NH1	2.35	0.41
5:E:37:ASN:OD1	5:E:38:ASP:N	2.54	0.41
6:F:29:PHE:HB2	53:27:2198:A:C4	2.56	0.41
6:F:117:LEU:HA	6:F:118:PRO:HD3	1.81	0.41
7:G:52:MET:O	7:G:54:VAL:HG23	2.21	0.41
7:G:61:ARG:CD	53:27:1046:A:O4'	2.64	0.41
10:J:20:MET:HE2	10:J:44:LYS:CE	2.51	0.41
10:J:64:ARG:HD3	10:J:102:PRO:O	2.21	0.41
11:K:94:THR:O	11:K:97:ALA:HB3	2.21	0.41
12:L:77:PRO:HB2	12:L:80:VAL:HG21	2.02	0.41
14:N:18:LEU:HD21	14:N:25:ARG:HB2	2.02	0.41
16:P:5:ARG:NH1	53:27:1251:C:C5	2.89	0.41
16:P:50:ARG:HG2	16:P:50:ARG:NH1	2.36	0.41
17:Q:1:MET:HA	17:Q:43:ASN:ND2	2.36	0.41
17:Q:43:ASN:N	17:Q:45:GLU:O	2.52	0.41
19:S:92:ASN:HB3	19:S:93:LEU:H	1.42	0.41
22:V:12:SER:HB3	53:27:2261:C:C6	2.55	0.41
24:X:18:LEU:O	24:X:22:LEU:HB2	2.20	0.41
25:Y:44:ARG:HA	25:Y:47:ILE:HD12	2.03	0.41
28:2:10:LEU:HD23	28:2:10:LEU:HA	1.87	0.41
29:3:31:LEU:O	29:3:35:ARG:HG2	2.20	0.41
30:4:62:PRO:HG2	30:4:63:TYR:CE2	2.56	0.41
32:6:103:TRP:CZ3	32:6:156:LEU:HD21	2.56	0.41
32:6:119:GLN:O	32:6:123:GLY:N	2.53	0.41
32:6:134:LEU:O	32:6:138:ARG:HB2	2.21	0.41
34:8:69:ARG:N	52:26:546:A:OP1	2.42	0.41
36:10:9:MET:HG2	36:10:86:ARG:O	2.21	0.41
36:10:24:ARG:HH12	36:10:28:ALA:HB2	1.86	0.41
36:10:70:VAL:O	36:10:74:LEU:HG	2.20	0.41
37:11:48:THR:HB	37:11:52:ARG:NH2	2.36	0.41
39:13:25:GLY:CA	39:13:58:GLU:HA	2.51	0.41
39:13:44:ARG:C	39:13:46:VAL:H	2.28	0.41
39:13:86:LEU:HD23	39:13:86:LEU:HA	1.79	0.41
41:15:30:ILE:HD11	52:26:705:G:N2	2.35	0.41
41:15:92:ARG:HB3	41:15:93:GLU:H	1.64	0.41
41:15:109:ILE:CD1	51:25:16:ARG:HD2	2.35	0.41
42:16:9:LYS:NZ	42:16:10:PRO:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:97:ARG:HB2	43:17:99:GLN:NE2	2.35	0.41
44:18:31:SER:HA	44:18:40:ARG:HD2	2.02	0.41
44:18:80:ARG:C	44:18:83:VAL:HG12	2.45	0.41
46:20:46:LYS:CD	52:26:617:G:H4'	2.51	0.41
47:21:28:VAL:HG12	47:21:39:ARG:HG2	2.03	0.41
48:22:71:ASP:N	48:22:71:ASP:OD1	2.54	0.41
49:23:41:PRO:O	49:23:44:ILE:HG13	2.21	0.41
50:24:53:MET:HG3	50:24:54:GLN:N	2.33	0.41
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.21	0.41
52:26:44:A:C4	52:26:45:G:C8	3.08	0.41
52:26:104:G:C2	52:26:105:G:C5	3.09	0.41
52:26:359:G:H2'	52:26:360:G:O4'	2.21	0.41
52:26:584:G:C4	52:26:585:G:C8	3.09	0.41
52:26:819:A:H5"	52:26:819:A:H8	1.85	0.41
52:26:952:U:H2'	52:26:953:G:H8	1.85	0.41
52:26:1054:C:C4	56:30:34:G:H1'	2.56	0.41
52:26:1055:A:C6	52:26:1206:G:C5	3.09	0.41
52:26:1064:G:O2'	52:26:1190:G:N2	2.54	0.41
52:26:1122:U:H2'	52:26:1123:U:C6	2.56	0.41
53:27:21:A:H2'	53:27:22:C:H6	1.86	0.41
53:27:483:A:H3'	53:27:484:C:C6	2.55	0.41
53:27:493:G:C2'	53:27:494:G:H5'	2.51	0.41
53:27:573:U:O2'	53:27:574:A:H3'	2.21	0.41
53:27:857:G:H2'	53:27:858:G:C1'	2.51	0.41
53:27:1351:C:H2'	53:27:1352:U:O4'	2.21	0.41
53:27:1660:G:C2	53:27:1661:G:N7	2.89	0.41
53:27:1703:G:H2'	53:27:1704:C:H6	1.85	0.41
53:27:1826:G:H2'	53:27:1827:U:H6	1.82	0.41
53:27:1860:G:O2'	53:27:1861:G:H5'	2.20	0.41
53:27:1945:G:C6	53:27:1946:U:C4	3.08	0.41
53:27:2131:U:C5'	53:27:2132:U:H5"	2.46	0.41
53:27:2298:A:H2'	53:27:2299:U:O4'	2.21	0.41
53:27:2319:G:H4'	53:27:2321:U:O4	2.20	0.41
53:27:2358:A:C2	53:27:2359:C:C2	3.09	0.41
53:27:2492:U:H2'	53:27:2493:U:C6	2.55	0.41
53:27:2558:C:H2'	53:27:2559:C:O4'	2.20	0.41
53:27:2674:G:C4	53:27:2675:A:C8	3.08	0.41
53:27:2809:A:H2'	53:27:2810:A:C8	2.56	0.41
53:27:2838:G:C6	53:27:2839:G:C5	3.09	0.41
53:27:2869:G:H2'	53:27:2870:C:O4'	2.21	0.41
54:28:66:A:H4'	54:28:67:G:N7	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:92:C:H2'	54:28:93:C:C6	2.55	0.41
56:30:29:G:H2'	56:30:30:G:H8	1.86	0.41
58:32:46:A:H3'	58:32:46:A:C8	2.56	0.41
58:32:67:C:H2'	58:32:68:C:C5	2.55	0.41
59:33:34:CYS:C	59:33:77:ARG:HD3	2.46	0.41
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.41
59:33:408:VAL:CG2	59:33:418:LEU:HD12	2.51	0.41
1:A:206:LYS:HD2	53:27:729:G:OP2	2.21	0.41
2:B:7:LYS:HB3	2:B:28:GLU:OE1	2.21	0.41
2:B:9:VAL:HG23	2:B:26:VAL:HB	2.03	0.41
2:B:51:THR:HB	2:B:79:LEU:CD2	2.47	0.41
2:B:124:ARG:NH1	2:B:163:GLY:HA3	2.35	0.41
2:B:173:GLN:NE2	53:27:2771:C:O2'	2.48	0.41
3:C:14:VAL:O	3:C:15:SER:C	2.65	0.41
3:C:45:ALA:HB2	3:C:89:PRO:HD3	2.03	0.41
4:D:137:PHE:HB2	4:D:140:ILE:HD13	2.03	0.41
7:G:3:LEU:HG	7:G:6:GLN:CD	2.46	0.41
7:G:43:LYS:CA	7:G:46:ARG:HH21	2.34	0.41
7:G:97:LYS:O	7:G:101:LYS:HG2	2.21	0.41
8:H:91:LYS:HA	8:H:92:PRO:HD3	1.74	0.41
9:I:56:VAL:C	9:I:57:LEU:HD12	2.46	0.41
9:I:93:ILE:HG22	9:I:94:ALA:N	2.35	0.41
9:I:98:GLU:OE2	9:I:99:ARG:HG2	2.21	0.41
15:O:105:LYS:HB3	15:O:105:LYS:HE2	1.93	0.41
16:P:34:ALA:O	16:P:35:PHE:C	2.63	0.41
16:P:96:ASP:O	16:P:99:VAL:HB	2.21	0.41
19:S:13:ALA:HB1	24:X:33:ALA:HB3	2.03	0.41
20:T:48:VAL:HG13	20:T:52:ASN:O	2.21	0.41
21:U:18:ARG:O	21:U:21:ARG:HB3	2.20	0.41
24:X:21:LEU:O	24:X:23:ARG:N	2.54	0.41
27:1:30:ASP:N	27:1:35:GLU:O	2.54	0.41
32:6:24:PRO:HG2	52:26:829:G:O4'	2.21	0.41
32:6:42:LEU:HD12	32:6:43:GLU:N	2.36	0.41
32:6:102:ASN:C	32:6:104:LYS:N	2.77	0.41
33:7:5:HIS:HE1	33:7:7:ASN:HB3	1.85	0.41
36:10:86:ARG:CB	36:10:86:ARG:HH11	2.34	0.41
37:11:67:ASN:OD1	37:11:129:ASN:HB3	2.21	0.41
38:12:14:ARG:NH2	52:26:876:C:H4'	2.36	0.41
38:12:18:ALA:C	38:12:20:ASN:N	2.78	0.41
40:14:21:ALA:HA	40:14:24:GLU:OE1	2.20	0.41
40:14:42:LEU:HD23	40:14:42:LEU:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:108:ASN:CA	51:25:4:LYS:HZ1	2.26	0.41
42:16:73:LEU:HD21	42:16:103:CYS:HB2	2.03	0.41
43:17:54:THR:C	43:17:57:ASP:HB3	2.45	0.41
44:18:25:GLU:O	44:18:27:LYS:N	2.55	0.41
45:19:16:ARG:HB2	45:19:19:ASN:OD1	2.21	0.41
52:26:116:A:C2	52:26:117:G:H1'	2.56	0.41
52:26:147:G:H2'	52:26:148:G:H8	1.85	0.41
52:26:242:G:H2'	52:26:243:A:H5'	2.03	0.41
52:26:338:A:H2'	52:26:339:C:O4'	2.21	0.41
52:26:425:G:O2'	52:26:426:U:H5'	2.21	0.41
52:26:446:G:C2	52:26:447:G:H1'	2.56	0.41
52:26:865:A:O5'	52:26:865:A:H8	2.04	0.41
52:26:928:G:H2'	52:26:929:G:C8	2.55	0.41
52:26:1033:G:C5	52:26:1034:G:H1'	2.56	0.41
52:26:1197:A:C2'	52:26:1198:G:H5'	2.50	0.41
52:26:1315:U:H2'	52:26:1316:G:C8	2.56	0.41
52:26:1499:A:H2'	52:26:1500:A:H8	1.86	0.41
53:27:39:G:H2'	53:27:40:U:C6	2.56	0.41
53:27:150:U:H2'	53:27:151:C:C6	2.55	0.41
53:27:242:G:HO2'	53:27:243:U:P	2.44	0.41
53:27:504:A:N3	53:27:504:A:H2'	2.36	0.41
53:27:522:A:O2'	53:27:523:C:H5'	2.21	0.41
53:27:546:U:O2'	53:27:548:G:O6	2.35	0.41
53:27:770:G:C4	53:27:771:G:C8	3.09	0.41
53:27:941:A:H2'	53:27:942:G:C8	2.56	0.41
53:27:988:A:H4'	53:27:1155:A:H2	1.85	0.41
53:27:1009:A:OP2	53:27:1010:A:OP2	2.38	0.41
53:27:1301:A:C6	53:27:1303:G:C4	3.09	0.41
53:27:1385:A:C4	53:27:1386:C:C5	3.09	0.41
53:27:1512:C:H2'	53:27:1513:U:O4'	2.20	0.41
53:27:1716:U:C5	53:27:1743:G:C2	3.09	0.41
53:27:1811:G:H2'	53:27:1812:U:H6	1.86	0.41
53:27:1957:C:H2'	53:27:1958:C:H6	1.86	0.41
53:27:2075:U:H1'	53:27:2597:G:N2	2.34	0.41
53:27:2302:U:H2'	53:27:2303:G:C8	2.56	0.41
53:27:2618:G:C4	53:27:2619:C:C5	3.09	0.41
54:28:35:C:H6	54:28:35:C:H5'	1.86	0.41
54:28:74:U:H2'	54:28:75:G:O4'	2.21	0.41
57:31:67:C:H2'	57:31:68:C:C6	2.56	0.41
59:33:35:LEU:N	59:33:35:LEU:HD12	2.36	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:436:GLY:O	59:33:439:CYS:HB3	2.21	0.41
59:33:548:GLY:C	59:33:550:ASP:N	2.78	0.41
1:A:144:GLU:CD	1:A:188:ARG:HB2	2.47	0.40
1:A:149:LYS:HG3	53:27:2204:G:H4'	2.03	0.40
2:B:15:PHE:HE2	15:O:76:HIS:HB2	1.86	0.40
2:B:55:LYS:CG	2:B:77:ARG:HA	2.49	0.40
2:B:110:THR:HA	2:B:170:VAL:O	2.20	0.40
2:B:115:GLY:O	53:27:2822:G:OP2	2.39	0.40
3:C:179:SER:HB3	3:C:183:PHE:HD2	1.86	0.40
4:D:3:LEU:CD2	4:D:100:GLU:HG2	2.50	0.40
4:D:132:ARG:HB2	4:D:133:GLU:OE1	2.22	0.40
8:H:120:ASP:OD2	8:H:123:ALA:HB2	2.21	0.40
11:K:125:LEU:HB3	11:K:126:ARG:H	1.69	0.40
17:Q:11:GLN:OE1	17:Q:11:GLN:N	2.54	0.40
17:Q:58:VAL:O	17:Q:58:VAL:HG13	2.20	0.40
17:Q:88:GLY:O	53:27:1224:U:H4'	2.21	0.40
18:R:69:LEU:HD12	18:R:108:SER:O	2.21	0.40
20:T:66:VAL:C	20:T:68:ASN:N	2.74	0.40
21:U:51:GLN:OE1	21:U:86:LEU:HD11	2.20	0.40
27:1:31:LYS:HB3	27:1:50:GLY:N	2.36	0.40
34:8:112:GLU:O	34:8:116:LEU:HD13	2.21	0.40
34:8:169:TRP:O	34:8:182:LYS:HD2	2.20	0.40
34:8:202:LEU:HD12	34:8:202:LEU:HA	1.73	0.40
36:10:24:ARG:NH1	36:10:28:ALA:HB2	2.36	0.40
36:10:30:THR:C	36:10:32:ALA:H	2.29	0.40
36:10:30:THR:C	36:10:32:ALA:N	2.77	0.40
37:11:26:VAL:HG22	37:11:42:VAL:HG21	2.03	0.40
37:11:61:PHE:HE1	37:11:65:LEU:HD13	1.86	0.40
39:13:11:ARG:HA	39:13:105:ARG:NH1	2.36	0.40
39:13:64:ILE:HG13	39:13:64:ILE:O	2.22	0.40
44:18:35:ALA:HB1	44:18:39:ASP:HB3	2.02	0.40
44:18:68:ARG:HD2	52:26:1202:U:O4'	2.20	0.40
44:18:80:ARG:O	44:18:83:VAL:HG12	2.20	0.40
44:18:92:ILE:N	44:18:92:ILE:CD1	2.84	0.40
47:21:48:GLU:O	47:21:49:ASN:C	2.63	0.40
52:26:300:A:O5'	52:26:300:A:H8	2.04	0.40
52:26:322:C:H2'	52:26:323:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:403:C:O2'	52:26:404:G:H5'	2.21	0.40
52:26:456:A:H2'	52:26:457:G:O4'	2.21	0.40
52:26:900:A:C6	52:26:901:A:C6	3.09	0.40
52:26:947:G:H2'	52:26:948:C:C6	2.55	0.40
52:26:1080:A:H8	52:26:1080:A:O5'	2.03	0.40
53:27:455:C:H5"	53:27:456:C:OP2	2.21	0.40
53:27:763:G:H1'	53:27:765:C:O4'	2.21	0.40
53:27:824:U:H2'	53:27:825:A:C8	2.56	0.40
53:27:871:U:H2'	53:27:872:U:C5	2.56	0.40
53:27:978:G:H2'	53:27:979:A:H8	1.86	0.40
53:27:1343:G:C1'	53:27:1597:A:H2'	2.51	0.40
53:27:1446:C:H2'	53:27:1447:C:C6	2.56	0.40
53:27:1499:C:C2	53:27:1500:G:C8	3.09	0.40
53:27:1672:A:C5'	53:27:2554:U:OP1	2.69	0.40
53:27:1722:A:N6	53:27:1738:G:H1'	2.36	0.40
53:27:2067:G:C2	53:27:2444:G:C2	3.09	0.40
53:27:2089:C:H2'	53:27:2090:A:H8	1.86	0.40
53:27:2131:U:H5"	53:27:2132:U:C6	2.56	0.40
53:27:2674:G:C6	53:27:2675:A:C5	3.09	0.40
53:27:2712:C:H2'	53:27:2715:C:OP1	2.21	0.40
54:28:71:C:H2'	54:28:72:G:C8	2.56	0.40
56:30:29:G:O2'	56:30:30:G:H5'	2.21	0.40
59:33:43:LEU:HD21	59:33:44:GLN:HE22	1.85	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.62	0.40
1:A:209:ALA:O	1:A:213:ARG:N	2.54	0.40
1:A:216:ARG:NH1	53:27:690:G:O3'	2.53	0.40
1:A:221:GLY:HA3	53:27:1826:G:OP1	2.21	0.40
1:A:224:MET:HE2	53:27:782:A:C2	2.56	0.40
2:B:207:VAL:HG13	2:B:208:LYS:N	2.36	0.40
3:C:97:ASN:HB3	3:C:100:MET:CG	2.50	0.40
4:D:49:LEU:O	4:D:52:ALA:HB3	2.21	0.40
7:G:34:THR:O	7:G:38:MET:HB2	2.21	0.40
8:H:7:TYR:CE1	8:H:59:THR:HG23	2.52	0.40
11:K:46:VAL:HG21	11:K:50:PHE:HD2	1.85	0.40
12:L:126:ILE:O	12:L:126:ILE:HG13	2.21	0.40
16:P:3:VAL:HG22	53:27:1199:U:H1'	2.02	0.40
20:T:8:ASP:OD2	20:T:93:ARG:NH1	2.36	0.40
21:U:30:ILE:HG22	21:U:91:PHE:CB	2.48	0.40
22:V:10:ARG:HD2	53:27:2280:G:O6	2.21	0.40
25:Y:40:THR:CG2	25:Y:43:ILE:HG12	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:53:MET:HG3	25:Y:54:VAL:HG13	2.01	0.40
26:Z:16:CYS:SG	26:Z:18:CYS:HB2	2.61	0.40
26:Z:56:ARG:NH2	43:17:78:ARG:HH12	2.19	0.40
32:6:66:ILE:H	32:6:88:GLN:CD	2.30	0.40
35:9:141:ASP:O	35:9:145:ASN:HB2	2.21	0.40
36:10:48:ALA:N	48:22:65:SER:O	2.54	0.40
37:11:105:GLU:HG3	37:11:109:LYS:HE3	2.02	0.40
39:13:39:GLY:HA2	39:13:44:ARG:CD	2.51	0.40
41:15:55:ARG:C	41:15:57:SER:N	2.79	0.40
41:15:108:ASN:CA	51:25:4:LYS:NZ	2.84	0.40
42:16:83:GLY:CA	52:26:552:U:H4'	2.51	0.40
42:16:114:SER:CB	52:26:35:G:H21	2.28	0.40
42:16:115:LYS:O	42:16:116:TYR:CB	2.69	0.40
46:20:12:LYS:HA	52:26:392:C:P	2.61	0.40
46:20:40:ASN:HA	46:20:41:PRO:HD2	1.86	0.40
48:22:32:ILE:O	48:22:32:ILE:HD12	2.22	0.40
49:23:40:PHE:O	49:23:43:MET:HB2	2.20	0.40
50:24:54:GLN:N	50:24:55:PRO:HD2	2.36	0.40
51:25:19:LYS:HA	51:25:19:LYS:HD3	1.87	0.40
52:26:705:G:C2'	52:26:706:A:H5'	2.51	0.40
52:26:784:A:H4'	53:27:1837:C:OP1	2.21	0.40
52:26:980:C:C5	52:26:981:U:C2	3.10	0.40
52:26:1259:C:C3'	52:26:1260:G:C5'	2.91	0.40
52:26:1442:G:H2'	52:26:1443:C:C6	2.56	0.40
52:26:1497:G:H21	52:26:1519:A:H1'	1.85	0.40
53:27:312:G:C2	53:27:313:G:C8	3.09	0.40
53:27:323:C:H2'	53:27:1205:A:H61	1.86	0.40
53:27:548:G:C5	53:27:549:G:H1'	2.57	0.40
53:27:610:C:H2'	53:27:611:C:H6	1.86	0.40
53:27:692:C:O5'	53:27:692:C:H6	2.04	0.40
53:27:704:G:H1'	53:27:727:A:H61	1.84	0.40
53:27:1822:C:H2'	53:27:1823:G:C8	2.56	0.40
53:27:2127:G:H21	53:27:2173:A:C1'	2.34	0.40
59:33:49:HIS:CB	59:33:50:PRO:HD2	2.33	0.40
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.03	0.40
1:A:68:ARG:HG3	1:A:128:THR:OG1	2.20	0.40
1:A:107:LYS:HA	1:A:195:GLY:HA2	2.03	0.40
2:B:155:VAL:HG21	53:27:2618:G:H21	1.86	0.40
4:D:28:PRO:HB3	4:D:159:ALA:HB2	2.03	0.40
4:D:32:LYS:O	4:D:32:LYS:HG3	2.21	0.40
4:D:125:GLY:CA	4:D:162:ASP:HA	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:14:VAL:HG22	5:E:27:GLY:HA2	2.03	0.40
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.36	0.40
8:H:34:ILE:O	8:H:37:PHE:HB3	2.21	0.40
8:H:45:THR:HA	8:H:48:ILE:CG1	2.47	0.40
9:I:98:GLU:HB2	9:I:124:VAL:CG2	2.52	0.40
9:I:135:GLN:N	9:I:135:GLN:CD	2.80	0.40
13:M:115:LEU:O	13:M:116:VAL:C	2.62	0.40
16:P:60:TRP:CH2	16:P:92:LYS:HB2	2.56	0.40
18:R:107:VAL:HG13	18:R:107:VAL:O	2.21	0.40
20:T:7:ASP:O	20:T:23:LYS:HG3	2.22	0.40
20:T:87:GLU:O	20:T:89:GLY:N	2.54	0.40
20:T:98:ASN:C	20:T:100:GLU:N	2.71	0.40
23:W:17:ARG:HD3	23:W:17:ARG:HA	1.85	0.40
30:4:34:LYS:HD2	53:27:2391:G:OP2	2.21	0.40
32:6:83:ALA:O	32:6:86:CYS:HB3	2.20	0.40
32:6:129:THR:C	32:6:131:LYS:N	2.79	0.40
34:8:13:ARG:NH2	52:26:542:G:O3'	2.54	0.40
34:8:194:ILE:C	34:8:194:ILE:HD12	2.46	0.40
36:10:15:SER:O	36:10:18:VAL:HG12	2.21	0.40
37:11:58:LEU:HD12	37:11:58:LEU:C	2.46	0.40
37:11:69:ARG:HG3	37:11:95:ARG:HG2	2.02	0.40
39:13:90:ASP:O	39:13:93:LEU:N	2.48	0.40
40:14:41:PRO:CB	52:26:1151:A:H1'	2.50	0.40
41:15:40:ALA:O	52:26:684:U:O2'	2.19	0.40
41:15:85:VAL:HG22	41:15:110:THR:O	2.21	0.40
42:16:77:SER:HA	42:16:102:ASP:OD2	2.21	0.40
45:19:44:GLU:HG2	45:19:45:HIS:N	2.36	0.40
46:20:13:LYS:NZ	52:26:393:A:P	2.95	0.40
47:21:5:ARG:O	47:21:6:THR:HB	2.21	0.40
47:21:58:VAL:CG2	47:21:59:GLU:N	2.84	0.40
50:24:69:ASN:O	50:24:72:ALA:HB3	2.22	0.40
51:25:57:LYS:NZ	51:25:61:ARG:HA	2.37	0.40
52:26:161:A:H2'	52:26:162:A:C8	2.56	0.40
52:26:293:G:C6	52:26:294:U:C4	3.10	0.40
52:26:422:C:H4'	52:26:423:G:C2	2.56	0.40
52:26:450:G:OP1	52:26:452:A:OP1	2.39	0.40
52:26:564:C:C4	52:26:565:U:C4	3.09	0.40
52:26:951:G:H2'	52:26:952:U:C6	2.55	0.40
52:26:1331:G:O2'	52:26:1332:A:C8	2.75	0.40
52:26:1370:G:C2	52:26:1371:G:C8	3.09	0.40
53:27:78:U:H2'	53:27:79:C:H6	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:338:G:H3'	53:27:339:U:H6	1.86	0.40
53:27:483:A:H2'	53:27:484:C:O4'	2.21	0.40
53:27:563:A:C6	53:27:564:C:C4	3.09	0.40
53:27:635:C:H2'	53:27:636:G:O4'	2.21	0.40
53:27:1030:C:H2'	53:27:1031:G:C8	2.55	0.40
53:27:1173:U:C5	53:27:1174:U:H1'	2.56	0.40
53:27:1518:C:H2'	53:27:1519:G:C8	2.57	0.40
53:27:1664:A:C2	53:27:1665:A:C4	3.09	0.40
53:27:1677:A:C2	53:27:1678:A:C4	3.09	0.40
53:27:1775:U:H2'	53:27:1776:G:C5'	2.51	0.40
53:27:1824:G:H2'	53:27:1825:U:C6	2.56	0.40
53:27:2545:G:N1	53:27:2546:U:O2	2.54	0.40
53:27:2569:G:O2'	53:27:2570:G:H5'	2.21	0.40
54:28:83:G:C6	54:28:94:A:C6	3.10	0.40
59:33:155:GLU:CD	59:33:159:HIS:HE2	2.27	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
1:A:124:LYS:C	1:A:191:LEU:HD23	2.46	0.40
2:B:112:THR:HG22	2:B:113:SER:O	2.22	0.40
6:F:117:LEU:HD23	6:F:130:VAL:HG13	2.03	0.40
8:H:21:PRO:HB2	8:H:22:PRO:CD	2.43	0.40
11:K:79:LEU:HG	11:K:111:ILE:O	2.21	0.40
12:L:13:HIS:CE1	53:27:910:A:C4	3.10	0.40
14:N:67:ASN:OD1	14:N:70:ALA:N	2.49	0.40
15:O:23:ASP:HA	15:O:89:GLY:N	2.36	0.40
19:S:15:HIS:H	19:S:32:LEU:HA	1.86	0.40
23:W:29:LEU:HD12	53:27:2230:G:H5"	2.02	0.40
32:6:206:ILE:CG1	32:6:207:ARG:N	2.83	0.40
33:7:20:THR:HB	33:7:57:GLU:HG2	2.02	0.40
34:8:21:LYS:O	34:8:21:LYS:HG2	2.22	0.40
34:8:21:LYS:HD2	34:8:25:ARG:HH21	1.87	0.40
35:9:75:LEU:HD13	35:9:79:THR:O	2.22	0.40
35:9:110:MET:O	35:9:113:VAL:HG12	2.21	0.40
36:10:91:ARG:CG	36:10:92:THR:N	2.84	0.40
38:12:46:GLU:HB3	38:12:61:THR:O	2.22	0.40
39:13:50:PRO:HG2	39:13:51:LEU:HG	2.02	0.40
40:14:5:ARG:CG	40:14:79:PRO:HD3	2.51	0.40
41:15:121:ARG:CZ	51:25:35:GLU:HG2	2.52	0.40
43:17:82:LEU:HD23	43:17:84:CYS:SG	2.62	0.40
44:18:70:HIS:O	44:18:71:GLY:C	2.64	0.40
46:20:43:ALA:O	46:20:44:SER:C	2.64	0.40
49:23:14:LEU:O	49:23:18:VAL:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:36:ARG:HA	52:26:1320:C:C5	2.56	0.40
50:24:66:ILE:HG22	50:24:70:LYS:HB3	2.02	0.40
50:24:77:ASN:O	50:24:80:ALA:HB3	2.22	0.40
52:26:31:G:H21	52:26:46:G:H5"	1.86	0.40
52:26:112:G:C2'	52:26:113:G:H5'	2.51	0.40
52:26:273:U:O2'	52:26:274:A:H5'	2.21	0.40
52:26:280:C:H4'	52:26:281:G:OP2	2.21	0.40
52:26:623:C:H2'	52:26:624:C:H6	1.87	0.40
52:26:725:G:O2'	52:26:726:C:H5'	2.21	0.40
52:26:780:A:C2	52:26:803:G:C6	3.10	0.40
52:26:908:A:H2'	52:26:909:A:H8	1.85	0.40
52:26:1170:A:H2'	52:26:1171:A:H5'	2.04	0.40
52:26:1320:C:O2'	52:26:1321:U:H5'	2.20	0.40
53:27:82:U:H2'	53:27:83:A:O4'	2.20	0.40
53:27:1036:G:C6	53:27:1120:G:C6	3.10	0.40
53:27:1082:U:H3'	53:27:1083:U:C5'	2.51	0.40
53:27:1228:G:O2'	53:27:1229:C:H5'	2.22	0.40
53:27:1252:G:C5	53:27:1253:A:N1	2.89	0.40
53:27:1360:G:C6	53:27:1372:U:C2	3.09	0.40
53:27:1417:C:H2'	53:27:1418:G:O4'	2.22	0.40
53:27:1528:A:C2'	53:27:1529:G:H5'	2.52	0.40
53:27:1608:A:H1'	53:27:1610:A:OP2	2.21	0.40
53:27:1965:C:H5"	53:27:1966:A:H2'	2.03	0.40
53:27:1988:G:H2'	53:27:1989:G:C8	2.56	0.40
53:27:2047:C:C2	53:27:2048:G:C8	3.10	0.40
53:27:2128:G:N3	53:27:2173:A:H1'	2.36	0.40
53:27:2564:A:OP1	53:27:2648:G:H4'	2.21	0.40
53:27:2703:C:H2'	53:27:2704:C:H6	1.87	0.40
53:27:2785:C:O2'	53:27:2786:U:H5'	2.21	0.40
53:27:2815:C:H2'	53:27:2816:G:H8	1.86	0.40
53:27:2860:A:H2'	53:27:2861:U:H5'	2.04	0.40
54:28:57:A:OP2	54:28:58:A:OP2	2.39	0.40
59:33:175:ALA:C	59:33:178:CYS:SG	3.05	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
1:A:51:ARG:HB2	53:27:1824:G:OP1	2.21	0.40
1:A:90:ILE:C	1:A:90:ILE:CD1	2.87	0.40
2:B:151:THR:O	2:B:152:PRO:C	2.64	0.40
3:C:15:SER:HB2	3:C:197:GLU:OE2	2.20	0.40
5:E:154:GLU:N	5:E:159:LYS:O	2.53	0.40
6:F:113:SER:O	6:F:116:ARG:NH1	2.51	0.40
8:H:83:ALA:HB1	8:H:98:GLY:CA	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:4:VAL:HG12	17:Q:39:LEU:HB2	2.04	0.40
20:T:98:ASN:O	20:T:100:GLU:N	2.54	0.40
21:U:35:GLU:H	21:U:35:GLU:CD	2.29	0.40
29:3:29:GLN:NE2	53:27:210:C:OP1	2.55	0.40
31:5:12:ARG:C	31:5:14:CYS:N	2.79	0.40
31:5:25:VAL:HB	31:5:35:GLN:CG	2.52	0.40
32:6:162:VAL:HG12	32:6:164:ASP:H	1.87	0.40
33:7:2:GLN:HG3	33:7:3:LYS:N	2.37	0.40
34:8:197:HIS:O	34:8:200:VAL:HB	2.22	0.40
35:9:75:LEU:C	35:9:75:LEU:HD12	2.47	0.40
35:9:98:ALA:HB1	35:9:101:GLY:CA	2.44	0.40
36:10:77:THR:O	36:10:81:ASN:N	2.55	0.40
37:11:99:ALA:O	37:11:103:ILE:HG13	2.21	0.40
40:14:65:TYR:CB	44:18:95:LEU:HD11	2.39	0.40
41:15:60:PHE:O	41:15:63:GLN:HB3	2.21	0.40
42:16:11:ARG:NH2	52:26:564:C:OP1	2.53	0.40
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.37	0.40
44:18:16:ALA:CA	44:18:54:SER:HA	2.46	0.40
45:19:44:GLU:HG2	45:19:45:HIS:CD2	2.57	0.40
51:25:32:ARG:O	51:25:33:ARG:HB3	2.22	0.40
52:26:96:U:H2'	52:26:97:G:C8	2.52	0.40
52:26:109:A:C6	52:26:326:G:C6	3.10	0.40
52:26:336:A:O2'	52:26:337:G:H5'	2.21	0.40
52:26:807:A:C6	52:26:808:C:C4	3.10	0.40
53:27:449:A:C6	53:27:450:G:C4	3.10	0.40
53:27:460:A:H2'	53:27:461:C:O4'	2.21	0.40
53:27:491:G:H2'	53:27:491:G:N3	2.37	0.40
53:27:560:C:H2'	53:27:561:G:O4'	2.21	0.40
53:27:655:A:O3'	53:27:656:G:H8	2.05	0.40
53:27:887:U:H4'	53:27:889:C:H5	1.86	0.40
53:27:962:G:C6	53:27:963:U:C4	3.09	0.40
53:27:1100:C:H2'	53:27:1101:U:C6	2.57	0.40
53:27:1113:U:H2'	53:27:1114:C:H6	1.82	0.40
53:27:1365:A:H2'	53:27:1365:A:N3	2.37	0.40
53:27:1949:G:H2'	53:27:1950:G:C8	2.56	0.40
53:27:1967:C:H3'	53:27:1968:G:H8	1.87	0.40
53:27:2134:A:C5	53:27:2157:G:H4'	2.56	0.40
53:27:2144:G:N2	53:27:2148:G:H1	2.19	0.40
53:27:2251:G:H2'	53:27:2252:G:H8	1.86	0.40
53:27:2386:A:O2'	53:27:2387:U:H5'	2.21	0.40
53:27:2618:G:C6	53:27:2619:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2752:C:C5	53:27:2753:A:C5	3.09	0.40
56:30:2:C:H6	56:30:2:C:O5'	2.03	0.40
57:31:43:A:O2'	57:31:44:A:H5'	2.21	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HA	2.51	0.40
59:33:670:ARG:HA	59:33:710:ILE:O	2.21	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%)	218 (81%)	41 (15%)	10 (4%)	2 22
2	B	207/209 (99%)	172 (83%)	28 (14%)	7 (3%)	3 23
3	C	199/201 (99%)	147 (74%)	32 (16%)	20 (10%)	0 7
4	D	175/179 (98%)	143 (82%)	27 (15%)	5 (3%)	3 26
5	E	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	3 26
6	F	147/149 (99%)	108 (74%)	20 (14%)	19 (13%)	0 3
7	G	129/165 (78%)	93 (72%)	25 (19%)	11 (8%)	0 10
8	H	139/142 (98%)	104 (75%)	25 (18%)	10 (7%)	1 13
9	I	140/142 (99%)	120 (86%)	14 (10%)	6 (4%)	2 20
10	J	120/123 (98%)	97 (81%)	16 (13%)	7 (6%)	1 16
11	K	141/144 (98%)	110 (78%)	20 (14%)	11 (8%)	1 12
12	L	134/136 (98%)	113 (84%)	15 (11%)	6 (4%)	2 19
13	M	118/127 (93%)	91 (77%)	22 (19%)	5 (4%)	2 20
14	N	114/117 (97%)	98 (86%)	15 (13%)	1 (1%)	14 49
15	O	112/115 (97%)	93 (83%)	15 (13%)	4 (4%)	2 22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
16	P	115/118 (98%)	103 (90%)	7 (6%)	5 (4%)	2 20
17	Q	101/103 (98%)	77 (76%)	16 (16%)	8 (8%)	1 11
18	R	108/110 (98%)	87 (81%)	15 (14%)	6 (6%)	1 17
19	S	91/100 (91%)	71 (78%)	16 (18%)	4 (4%)	2 20
20	T	100/104 (96%)	79 (79%)	14 (14%)	7 (7%)	1 13
21	U	92/94 (98%)	76 (83%)	11 (12%)	5 (5%)	1 17
22	V	73/85 (86%)	65 (89%)	7 (10%)	1 (1%)	9 39
23	W	75/78 (96%)	67 (89%)	6 (8%)	2 (3%)	4 28
24	X	61/63 (97%)	49 (80%)	7 (12%)	5 (8%)	0 10
25	Y	56/59 (95%)	52 (93%)	4 (7%)	0	100 100
26	Z	64/70 (91%)	47 (73%)	7 (11%)	10 (16%)	0 2
27	1	54/57 (95%)	43 (80%)	6 (11%)	5 (9%)	0 9
28	2	48/55 (87%)	41 (85%)	7 (15%)	0	100 100
29	3	44/46 (96%)	32 (73%)	11 (25%)	1 (2%)	5 31
30	4	62/65 (95%)	51 (82%)	8 (13%)	3 (5%)	2 18
31	5	36/38 (95%)	26 (72%)	5 (14%)	5 (14%)	0 3
32	6	216/241 (90%)	170 (79%)	32 (15%)	14 (6%)	1 15
33	7	204/233 (88%)	175 (86%)	22 (11%)	7 (3%)	3 23
34	8	203/206 (98%)	157 (77%)	30 (15%)	16 (8%)	1 11
35	9	155/167 (93%)	109 (70%)	33 (21%)	13 (8%)	0 10
36	10	98/135 (73%)	77 (79%)	14 (14%)	7 (7%)	1 13
37	11	149/179 (83%)	123 (83%)	14 (9%)	12 (8%)	1 11
38	12	127/130 (98%)	110 (87%)	8 (6%)	9 (7%)	1 13
39	13	125/130 (96%)	93 (74%)	19 (15%)	13 (10%)	0 7
40	14	96/103 (93%)	76 (79%)	15 (16%)	5 (5%)	1 17
41	15	114/129 (88%)	90 (79%)	13 (11%)	11 (10%)	0 8
42	16	121/124 (98%)	95 (78%)	13 (11%)	13 (11%)	0 6
43	17	112/118 (95%)	88 (79%)	14 (12%)	10 (9%)	0 10
44	18	98/101 (97%)	72 (74%)	21 (21%)	5 (5%)	1 17
45	19	86/89 (97%)	70 (81%)	11 (13%)	5 (6%)	1 16
46	20	80/82 (98%)	59 (74%)	18 (22%)	3 (4%)	2 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	21	78/84 (93%)	54 (69%)	19 (24%)	5 (6%)	1 15
48	22	63/75 (84%)	50 (79%)	5 (8%)	8 (13%)	0 4
49	23	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	4 28
50	24	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	4 30
51	25	63/71 (89%)	40 (64%)	19 (30%)	4 (6%)	1 15
59	33	663/750 (88%)	557 (84%)	60 (9%)	46 (7%)	1 13
All	All	6509/6970 (93%)	5226 (80%)	879 (14%)	404 (6%)	2 15

All (404) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	86	GLU
2	B	102	ALA
3	C	6	LYS
3	C	11	ALA
3	C	57	LYS
3	C	61	ARG
3	C	86	ALA
4	D	20	ASN
4	D	175	PRO
5	E	174	LYS
6	F	10	ALA
6	F	30	LEU
6	F	54	LEU
6	F	74	ALA
6	F	118	PRO
7	G	88	HIS
7	G	94	ARG
8	H	3	LYS
8	H	6	ALA
8	H	18	ASN
8	H	63	ASP
9	I	81	ILE
11	K	3	LEU
11	K	4	ASN
11	K	15	ALA
11	K	29	LYS
11	K	36	LYS
15	O	65	ASN
17	Q	57	GLY

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Mol	Chain	Res	Type
18	R	3	THR
18	R	29	VAL
19	S	77	ARG
20	T	6	ARG
21	U	65	VAL
24	X	24	GLU
26	Z	28	VAL
27	1	2	VAL
30	4	62	PRO
31	5	11	CYS
31	5	12	ARG
31	5	29	ALA
31	5	37	GLN
32	6	14	HIS
32	6	45	THR
32	6	73	ARG
32	6	87	ASP
32	6	94	ARG
32	6	122	ASP
33	7	160	GLU
34	8	23	GLY
34	8	28	ASP
34	8	29	THR
34	8	189	ASP
34	8	191	SER
35	9	11	GLN
35	9	87	VAL
35	9	122	VAL
35	9	157	GLY
36	10	38	ARG
36	10	54	LEU
36	10	92	THR
37	11	4	ARG
37	11	29	LEU
38	12	88	LYS
39	13	38	PHE
39	13	128	LYS
40	14	57	VAL
41	15	91	GLY
41	15	125	LYS
42	16	2	THR
42	16	43	LYS

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Mol	Chain	Res	Type
42	16	75	GLU
43	17	104	ASN
47	21	49	ASN
47	21	51	GLU
47	21	80	LYS
50	24	68	LYS
51	25	18	PHE
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	470	ASN
59	33	471	PRO
59	33	472	SER
59	33	479	ASN
59	33	487	ARG
59	33	532	PRO
59	33	566	LYS
59	33	600	GLU
59	33	620	GLU
59	33	656	VAL
59	33	695	LEU
59	33	698	ALA
1	A	43	ASN
1	A	72	GLY
1	A	121	ALA
1	A	154	ALA
2	B	44	GLY
2	B	178	VAL
3	C	26	ALA
3	C	84	THR
3	C	89	PRO
3	C	153	LEU
3	C	172	ALA
3	C	200	LEU
5	E	45	ALA
5	E	60	GLY
5	E	175	LYS
6	F	3	VAL
6	F	9	VAL
6	F	11	ASN
6	F	15	LEU

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Mol	Chain	Res	Type
6	F	47	PHE
6	F	48	GLU
6	F	89	LYS
6	F	91	PHE
7	G	49	GLY
7	G	69	PHE
7	G	106	PHE
7	G	120	ALA
7	G	130	PRO
8	H	51	GLY
8	H	93	ASN
8	H	136	GLY
9	I	83	GLY
9	I	111	LYS
10	J	29	HIS
10	J	35	VAL
10	J	93	GLN
11	K	111	ILE
11	K	115	GLU
11	K	116	VAL
12	L	23	GLY
12	L	69	PRO
12	L	82	MET
13	M	59	SER
13	M	117	ASP
15	O	112	ARG
15	O	113	LEU
16	P	2	ARG
16	P	23	TYR
16	P	101	ASP
17	Q	54	VAL
17	Q	80	ARG
18	R	62	ASP
18	R	89	ALA
19	S	2	ILE
19	S	88	LYS
21	U	33	GLY
22	V	53	HIS
23	W	31	ASN
24	X	2	LYS
26	Z	8	LYS
26	Z	26	SER

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Mol	Chain	Res	Type
26	Z	27	THR
26	Z	36	VAL
27	1	26	SER
29	3	5	PHE
30	4	17	GLY
31	5	7	VAL
32	6	88	GLN
34	8	2	ARG
34	8	4	LEU
34	8	31	CYS
34	8	165	GLU
35	9	23	THR
35	9	93	VAL
35	9	102	THR
35	9	103	GLY
36	10	98	GLU
37	11	18	GLY
37	11	129	ASN
37	11	149	ALA
38	12	51	GLU
38	12	72	GLU
39	13	9	GLY
39	13	12	LYS
39	13	55	ASP
39	13	57	VAL
41	15	77	GLY
41	15	88	PRO
41	15	92	ARG
42	16	45	ASN
42	16	122	LYS
43	17	65	GLU
43	17	98	GLY
44	18	26	LEU
44	18	53	ASP
45	19	17	ASP
45	19	75	ALA
48	22	11	ARG
48	22	12	PHE
48	22	14	ALA
48	22	17	VAL
48	22	71	ASP
49	23	63	ASP

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Mol	Chain	Res	Type
51	25	13	VAL
51	25	15	LEU
59	33	468	GLN
59	33	521	ILE
59	33	522	SER
59	33	535	ASN
59	33	554	ASN
59	33	612	CYS
59	33	629	ARG
59	33	666	SER
59	33	676	ARG
59	33	703	THR
1	A	112	GLY
1	A	231	HIS
2	B	148	GLN
4	D	84	ILE
4	D	173	ASP
6	F	41	LYS
6	F	73	ASN
6	F	134	VAL
7	G	89	PRO
7	G	119	PRO
8	H	53	PRO
10	J	91	SER
12	L	53	MET
13	M	3	HIS
17	Q	55	ASP
18	R	72	THR
19	S	17	SER
20	T	74	ALA
21	U	10	LYS
21	U	34	LYS
24	X	3	ALA
24	X	22	LEU
26	Z	30	HIS
27	1	25	THR
27	1	40	HIS
30	4	6	VAL
32	6	104	LYS
33	7	2	GLN
33	7	20	THR
33	7	44	LYS

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Mol	Chain	Res	Type
33	7	112	ALA
34	8	125	ASN
34	8	146	GLU
34	8	174	ALA
34	8	182	LYS
35	9	88	HIS
35	9	111	ARG
36	10	86	ARG
37	11	71	THR
37	11	146	ALA
38	12	53	ASP
39	13	102	PHE
39	13	107	ALA
39	13	120	ALA
40	14	29	ALA
40	14	41	PRO
41	15	14	GLN
41	15	16	SER
42	16	77	SER
42	16	108	ASP
43	17	4	ALA
43	17	38	ILE
43	17	97	ARG
43	17	105	ALA
43	17	113	LYS
45	19	2	LEU
46	20	45	GLU
46	20	81	ALA
47	21	50	ASN
47	21	67	SER
48	22	18	GLN
48	22	24	ASP
49	23	15	LEU
50	24	67	HIS
51	25	24	LYS
59	33	267	ASN
59	33	334	VAL
59	33	368	SER
59	33	432	HIS
59	33	466	GLN
59	33	484	THR
59	33	605	LEU

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Mol	Chain	Res	Type
59	33	647	HIS
59	33	701	SER
1	A	233	GLY
3	C	7	ASP
3	C	55	SER
3	C	92	HIS
5	E	118	ALA
6	F	29	PHE
6	F	87	GLU
6	F	122	LEU
7	G	118	ILE
8	H	23	VAL
10	J	110	GLU
11	K	17	LYS
11	K	90	VAL
15	O	109	ILE
17	Q	24	LYS
17	Q	102	SER
20	T	67	SER
26	Z	52	ALA
27	1	17	SER
32	6	223	GLY
34	8	30	LYS
34	8	134	TYR
35	9	22	LYS
35	9	80	LEU
35	9	159	SER
36	10	53	LYS
36	10	97	THR
37	11	55	LYS
37	11	56	SER
37	11	70	PRO
38	12	2	MET
38	12	47	ASP
38	12	66	GLN
38	12	74	ILE
39	13	41	GLU
39	13	71	ILE
39	13	125	GLN
40	14	93	ALA
42	16	35	ARG
42	16	87	LYS

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Mol	Chain	Res	Type
42	16	88	ASP
45	19	45	HIS
59	33	52	ALA
59	33	482	TYR
59	33	537	ASN
59	33	614	GLN
1	A	65	ASP
2	B	133	THR
3	C	80	SER
9	I	26	GLY
12	L	6	ARG
13	M	2	ARG
13	M	33	ILE
16	P	6	GLY
17	Q	43	ASN
17	Q	53	PHE
20	T	100	GLU
23	W	6	VAL
26	Z	64	PHE
32	6	17	HIS
32	6	36	LYS
33	7	61	LYS
37	11	46	LEU
40	14	42	LEU
41	15	15	VAL
41	15	126	ARG
42	16	33	CYS
44	18	44	VAL
45	19	19	ASN
48	22	57	ALA
59	33	486	SER
59	33	514	ASP
59	33	617	PRO
1	A	234	GLY
3	C	49	ARG
4	D	174	PHE
9	I	21	THR
9	I	93	ILE
12	L	89	VAL
20	T	47	PRO
20	T	88	ASP
20	T	99	SER

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Mol	Chain	Res	Type
21	U	72	VAL
24	X	25	GLN
26	Z	42	PRO
32	6	119	GLN
32	6	212	TYR
37	11	130	LYS
38	12	30	LYS
42	16	23	LEU
44	18	20	PHE
46	20	13	LYS
59	33	44	GLN
59	33	705	GLN
3	C	42	GLY
3	C	83	VAL
18	R	80	PRO
32	6	39	ILE
39	13	103	VAL
41	15	73	VAL
42	16	70	GLY
59	33	483	VAL
3	C	129	PRO
10	J	101	GLY
10	J	103	VAL
14	N	74	VAL
41	15	106	ILE
44	18	94	GLY
3	C	113	VAL
16	P	99	VAL
26	Z	51	VAL
34	8	6	PRO
59	33	551	ILE
1	A	151	GLY
11	K	31	GLY
33	7	14	VAL
43	17	6	ILE
43	17	9	PRO
2	B	146	ILE
7	G	78	GLY
8	H	12	VAL

5.3.2 Protein sidechains (i)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	205 (13%)	9 (0%)
53	27	2902/2903 (99%)	447 (15%)	24 (0%)
54	28	119/120 (99%)	14 (11%)	1 (0%)
55	29	19/20 (95%)	5 (26%)	1 (5%)
56	30	75/76 (98%)	19 (25%)	0
57	31	76/77 (98%)	8 (10%)	0
58	32	76/77 (98%)	19 (25%)	1 (1%)
All	All	4805/4812 (99%)	717 (14%)	36 (0%)

All (717) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	26	4	U
52	26	6	G
52	26	9	G
52	26	19	A
52	26	22	G
52	26	32	A
52	26	39	G
52	26	47	C
52	26	48	C
52	26	51	A
52	26	71	A
52	26	73	C
52	26	77	A
52	26	79	G
52	26	86	G
52	26	87	C
52	26	94	G
52	26	95	C
52	26	98	A
52	26	121	U
52	26	122	G
52	26	130	A
52	26	131	A
52	26	183	C

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Mol	Chain	Res	Type
52	26	184	G
52	26	197	A
52	26	209	U
52	26	210	C
52	26	211	G
52	26	226	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	279	A
52	26	281	G
52	26	289	G
52	26	306	A
52	26	321	A
52	26	328	C
52	26	330	C
52	26	345	C
52	26	346	G
52	26	347	G
52	26	352	C
52	26	354	G
52	26	367	U
52	26	372	C
52	26	392	C
52	26	398	U
52	26	411	A
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	430	A
52	26	441	A
52	26	467	U
52	26	468	A
52	26	484	G
52	26	485	U
52	26	486	U
52	26	500	G
52	26	508	U

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Mol	Chain	Res	Type
52	26	509	A
52	26	510	A
52	26	521	G
52	26	527	G
52	26	532	A
52	26	533	A
52	26	535	A
52	26	547	A
52	26	559	A
52	26	561	U
52	26	572	A
52	26	573	A
52	26	574	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	653	U
52	26	665	A
52	26	688	G
52	26	703	G
52	26	704	A
52	26	721	G
52	26	724	G
52	26	731	G
52	26	755	G
52	26	777	A
52	26	790	A
52	26	793	U
52	26	794	A
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	821	G
52	26	829	G
52	26	832	G
52	26	836	G
52	26	843	U

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Mol	Chain	Res	Type
52	26	846	G
52	26	873	A
52	26	902	G
52	26	926	G
52	26	934	C
52	26	935	A
52	26	960	U
52	26	961	U
52	26	966	G
52	26	969	A
52	26	971	G
52	26	975	A
52	26	976	G
52	26	977	A
52	26	992	U
52	26	993	G
52	26	994	A
52	26	1004	A
52	26	1028	C
52	26	1030	U
52	26	1031	C
52	26	1032	G
52	26	1034	G
52	26	1053	G
52	26	1054	C
52	26	1066	C
52	26	1085	U
52	26	1094	G
52	26	1095	U
52	26	1101	A
52	26	1130	A
52	26	1133	G
52	26	1136	C
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1154	G
52	26	1157	A
52	26	1159	U
52	26	1167	A
52	26	1168	U
52	26	1183	U

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Mol	Chain	Res	Type
52	26	1184	G
52	26	1196	A
52	26	1197	A
52	26	1201	A
52	26	1202	U
52	26	1212	U
52	26	1213	A
52	26	1225	A
52	26	1227	A
52	26	1238	A
52	26	1240	U
52	26	1241	G
52	26	1257	A
52	26	1258	G
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1282	C
52	26	1286	U
52	26	1287	A
52	26	1298	U
52	26	1300	G
52	26	1303	C
52	26	1317	C
52	26	1320	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1363	A
52	26	1365	G
52	26	1381	U
52	26	1395	C
52	26	1400	C
52	26	1401	G
52	26	1419	G
52	26	1441	A
52	26	1442	G
52	26	1446	A
52	26	1448	C
52	26	1451	U
52	26	1452	C

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Mol	Chain	Res	Type
52	26	1453	G
52	26	1475	G
52	26	1492	A
52	26	1497	G
52	26	1499	A
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1529	G
52	26	1530	G
52	26	1533	C
52	26	1539	C
52	26	1540	U
53	27	10	A
53	27	12	U
53	27	23	G
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	74	A
53	27	75	G
53	27	92	U
53	27	114	U
53	27	119	A
53	27	120	U
53	27	137	U
53	27	138	U
53	27	139	U
53	27	140	C
53	27	141	G
53	27	142	A
53	27	149	A
53	27	162	U
53	27	163	C
53	27	181	A
53	27	196	A
53	27	197	A
53	27	216	A
53	27	219	A

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Mol	Chain	Res	Type
53	27	221	A
53	27	222	A
53	27	224	U
53	27	228	C
53	27	229	C
53	27	242	G
53	27	243	U
53	27	248	G
53	27	249	C
53	27	252	G
53	27	255	A
53	27	265	A
53	27	276	U
53	27	279	A
53	27	280	U
53	27	281	C
53	27	285	G
53	27	294	A
53	27	301	G
53	27	311	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A
53	27	353	C
53	27	362	A
53	27	367	G
53	27	371	A
53	27	372	G
53	27	386	G
53	27	387	U
53	27	396	G
53	27	404	A
53	27	405	U
53	27	406	G
53	27	411	G
53	27	421	C
53	27	424	G
53	27	451	U
53	27	457	A
53	27	458	G
53	27	479	A

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Mol	Chain	Res	Type
53	27	480	A
53	27	481	G
53	27	483	A
53	27	491	G
53	27	504	A
53	27	505	A
53	27	508	A
53	27	518	G
53	27	529	A
53	27	531	C
53	27	532	A
53	27	533	G
53	27	542	C
53	27	543	G
53	27	545	U
53	27	547	A
53	27	548	G
53	27	563	A
53	27	569	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
53	27	616	A
53	27	627	A
53	27	634	C
53	27	637	A
53	27	645	C
53	27	646	U
53	27	647	G
53	27	654	A
53	27	655	A
53	27	668	A
53	27	669	G
53	27	682	G
53	27	686	U
53	27	687	C
53	27	695	G
53	27	714	U
53	27	730	A

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Mol	Chain	Res	Type
53	27	747	C
53	27	752	A
53	27	757	G
53	27	765	C
53	27	774	G
53	27	775	G
53	27	776	G
53	27	782	A
53	27	784	G
53	27	785	G
53	27	788	A
53	27	789	A
53	27	805	G
53	27	811	U
53	27	812	C
53	27	819	A
53	27	827	U
53	27	828	U
53	27	830	G
53	27	844	A
53	27	845	A
53	27	846	U
53	27	847	U
53	27	858	G
53	27	859	G
53	27	860	U
53	27	878	A
53	27	883	G
53	27	888	C
53	27	893	C
53	27	896	A
53	27	897	C
53	27	910	A
53	27	914	G
53	27	915	C
53	27	919	U
53	27	932	U
53	27	941	A
53	27	946	C
53	27	961	C
53	27	974	G
53	27	983	A

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Mol	Chain	Res	Type
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	1033	U
53	27	1045	C
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1060	U
53	27	1070	A
53	27	1083	U
53	27	1088	A
53	27	1097	U
53	27	1111	A
53	27	1131	G
53	27	1132	U
53	27	1135	C
53	27	1142	A
53	27	1143	A
53	27	1144	A
53	27	1157	G
53	27	1172	C
53	27	1173	U
53	27	1174	U
53	27	1176	U
53	27	1177	G
53	27	1178	C
53	27	1180	U
53	27	1211	C
53	27	1212	G
53	27	1218	G
53	27	1238	G
53	27	1241	A
53	27	1251	C
53	27	1253	A
53	27	1256	G
53	27	1262	A
53	27	1263	U

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Mol	Chain	Res	Type
53	27	1268	A
53	27	1271	G
53	27	1272	A
53	27	1273	U
53	27	1294	U
53	27	1300	G
53	27	1301	A
53	27	1302	A
53	27	1306	C
53	27	1314	C
53	27	1321	A
53	27	1332	G
53	27	1341	G
53	27	1345	C
53	27	1365	A
53	27	1378	A
53	27	1379	U
53	27	1383	A
53	27	1395	A
53	27	1407	G
53	27	1416	G
53	27	1419	A
53	27	1420	A
53	27	1428	C
53	27	1454	C
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1491	G
53	27	1493	C
53	27	1497	U
53	27	1503	A
53	27	1515	A
53	27	1524	G
53	27	1533	C
53	27	1534	U
53	27	1535	A
53	27	1555	G
53	27	1560	G
53	27	1569	A
53	27	1578	U
53	27	1608	A

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Mol	Chain	Res	Type
53	27	1616	A
53	27	1647	U
53	27	1648	U
53	27	1660	G
53	27	1667	G
53	27	1668	A
53	27	1674	G
53	27	1677	A
53	27	1694	C
53	27	1698	A
53	27	1699	G
53	27	1703	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1732	C
53	27	1738	G
53	27	1758	U
53	27	1764	C
53	27	1773	A
53	27	1775	U
53	27	1780	A
53	27	1791	A
53	27	1800	C
53	27	1801	A
53	27	1802	A
53	27	1808	A
53	27	1816	C
53	27	1829	A
53	27	1848	A
53	27	1870	C
53	27	1871	A
53	27	1900	A
53	27	1901	A
53	27	1906	G
53	27	1907	G
53	27	1913	A
53	27	1914	C
53	27	1929	G
53	27	1930	G
53	27	1931	U
53	27	1937	A

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Mol	Chain	Res	Type
53	27	1940	U
53	27	1944	U
53	27	1955	U
53	27	1963	U
53	27	1967	C
53	27	1970	A
53	27	1972	G
53	27	1982	U
53	27	1991	U
53	27	1994	C
53	27	1997	C
53	27	2022	U
53	27	2023	C
53	27	2031	A
53	27	2034	U
53	27	2036	C
53	27	2043	C
53	27	2049	G
53	27	2052	A
53	27	2055	C
53	27	2056	G
53	27	2057	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2093	G
53	27	2096	C
53	27	2099	U
53	27	2100	G
53	27	2110	G
53	27	2111	U
53	27	2112	G
53	27	2113	U
53	27	2114	A
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2123	G
53	27	2131	U

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Mol	Chain	Res	Type
53	27	2132	U
53	27	2133	G
53	27	2145	C
53	27	2147	A
53	27	2158	A
53	27	2159	G
53	27	2162	G
53	27	2166	U
53	27	2171	A
53	27	2172	U
53	27	2173	A
53	27	2178	C
53	27	2189	U
53	27	2198	A
53	27	2199	A
53	27	2203	U
53	27	2204	G
53	27	2211	A
53	27	2213	U
53	27	2225	A
53	27	2238	G
53	27	2239	G
53	27	2268	A
53	27	2273	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	2320	U
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2345	G
53	27	2350	C
53	27	2361	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2391	G

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Mol	Chain	Res	Type
53	27	2392	A
53	27	2402	U
53	27	2406	A
53	27	2407	A
53	27	2422	C
53	27	2423	U
53	27	2424	C
53	27	2429	G
53	27	2431	U
53	27	2435	A
53	27	2441	U
53	27	2448	A
53	27	2449	U
53	27	2450	A
53	27	2476	A
53	27	2478	A
53	27	2487	G
53	27	2491	U
53	27	2494	G
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	2525	G
53	27	2529	G
53	27	2547	A
53	27	2549	G
53	27	2554	U
53	27	2566	A
53	27	2567	G
53	27	2572	A
53	27	2577	A
53	27	2578	G
53	27	2582	G
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2603	G
53	27	2608	G
53	27	2609	U

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Mol	Chain	Res	Type
53	27	2613	U
53	27	2615	U
53	27	2623	G
53	27	2629	U
53	27	2655	G
53	27	2673	G
53	27	2685	G
53	27	2689	U
53	27	2690	U
53	27	2712	C
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	2764	A
53	27	2765	A
53	27	2778	A
53	27	2779	U
53	27	2780	G
53	27	2791	G
53	27	2792	A
53	27	2794	C
53	27	2797	U
53	27	2798	U
53	27	2799	A
53	27	2800	A
53	27	2801	G
53	27	2809	A
53	27	2818	U
53	27	2820	A
53	27	2821	A
53	27	2833	U
53	27	2867	G
53	27	2868	A
53	27	2873	A
53	27	2880	C
53	27	2883	A
53	27	2891	U
54	28	4	C
54	28	12	C

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Mol	Chain	Res	Type
54	28	13	G
54	28	24	G
54	28	25	U
54	28	35	C
54	28	41	G
54	28	44	G
54	28	67	G
54	28	88	C
54	28	89	U
54	28	108	A
54	28	109	A
54	28	120	A
55	29	6	G
55	29	9	G
55	29	10	G
55	29	12	A
55	29	19	U
56	30	5	G
56	30	8	U
56	30	9	A
56	30	14	A
56	30	16	U
56	30	17	C
56	30	18	G
56	30	19	G
56	30	21	A
56	30	22	G
56	30	26	A
56	30	36	A
56	30	43	C
56	30	46	G
56	30	48	C
56	30	55	U
56	30	59	U
56	30	75	C
56	30	76	A
57	31	9	G
57	31	19	G
57	31	20	U
57	31	22	G
57	31	47	U
57	31	48	C

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Mol	Chain	Res	Type
57	31	61	C
57	31	76	A
58	32	5	G
58	32	8	U
58	32	9	G
58	32	13	C
58	32	16	C
58	32	19	G
58	32	20	U
58	32	21	A
58	32	34	C
58	32	35	A
58	32	46	A
58	32	52	G
58	32	59	A
58	32	61	C
58	32	69	C
58	32	73	A
58	32	74	C
58	32	75	C
58	32	76	A

All (36) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	26	86	G
52	26	246	A
52	26	280	C
52	26	421	U
52	26	429	U
52	26	1182	G
52	26	1297	G
52	26	1347	G
52	26	1399	C
53	27	227	A
53	27	242	G
53	27	479	A
53	27	490	C
53	27	687	C
53	27	827	U
53	27	858	G
53	27	859	G

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Mol	Chain	Res	Type
53	27	1020	A
53	27	1130	U
53	27	1378	A
53	27	1801	A
53	27	1818	U
53	27	1847	G
53	27	1930	G
53	27	2286	G
53	27	2296	U
53	27	2326	C
53	27	2391	G
53	27	2406	A
53	27	2655	G
53	27	2712	C
53	27	2808	G
53	27	2867	G
54	28	88	C
55	29	9	G
58	32	20	U

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

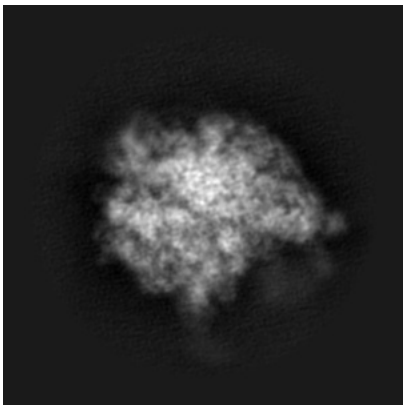
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-8280. These allow visual inspection of the internal detail of the map and identification of artifacts.

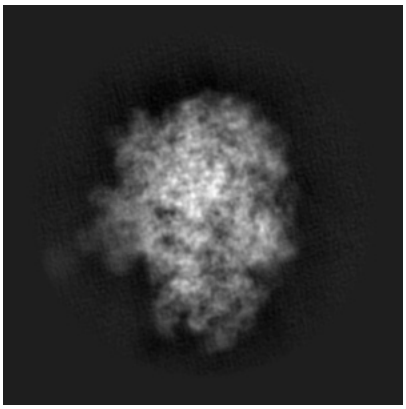
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

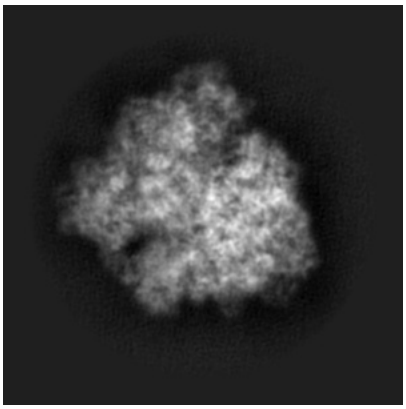
6.1.1 Primary map



X

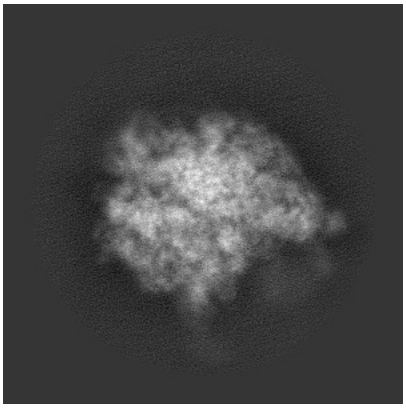


Y

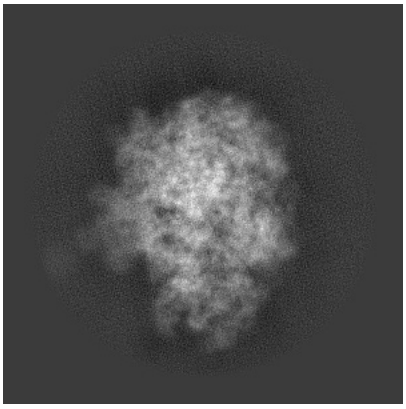


Z

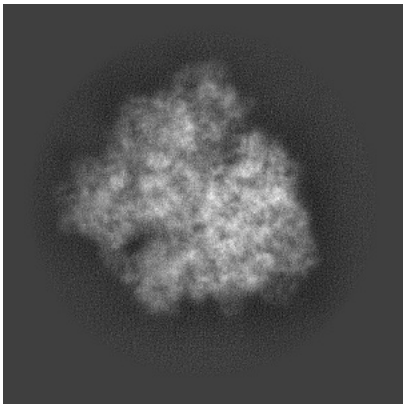
6.1.2 Raw map



X



Y

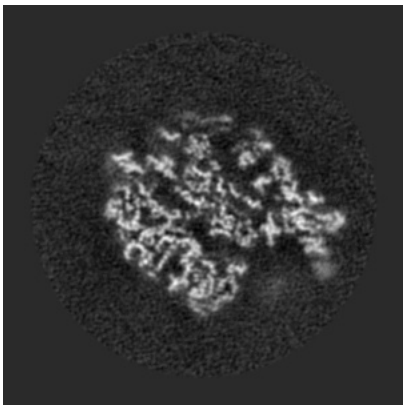


Z

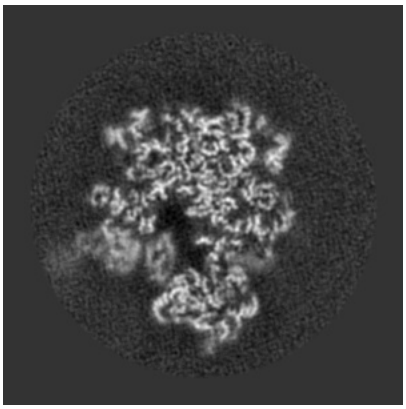
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

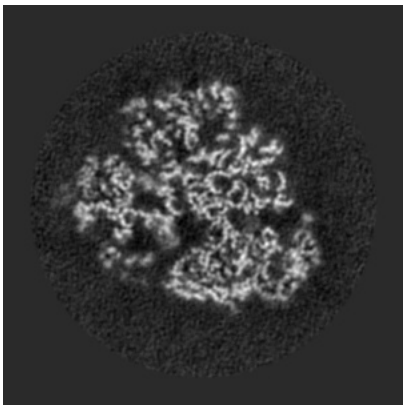
6.2.1 Primary map



X Index: 240

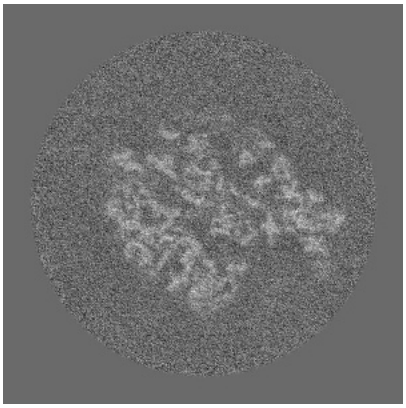


Y Index: 240

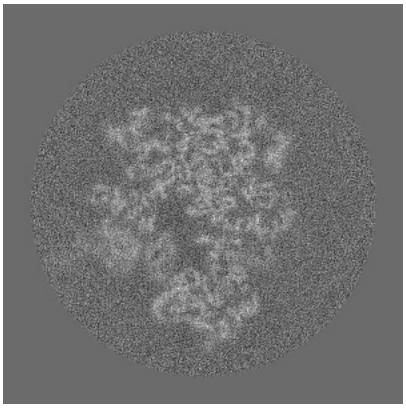


Z Index: 240

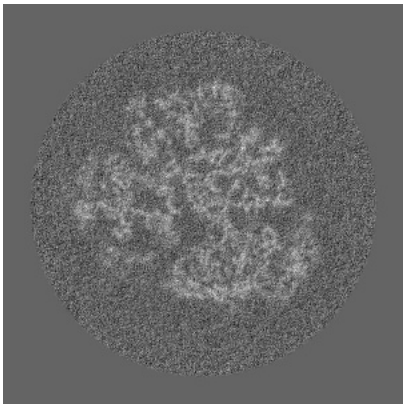
6.2.2 Raw map



X Index: 240



Y Index: 240

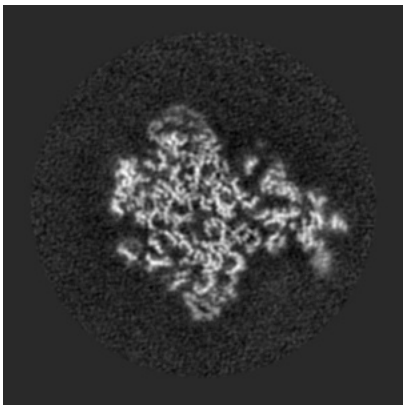


Z Index: 240

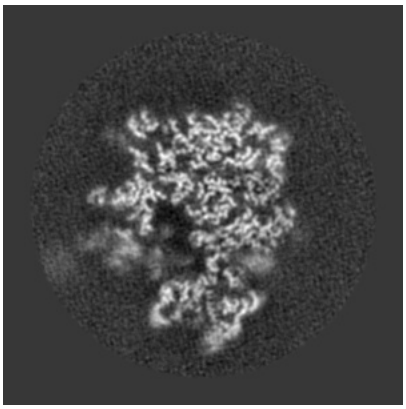
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

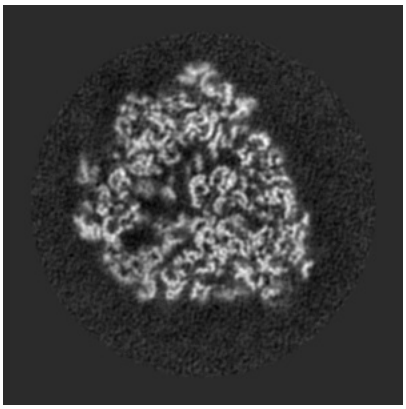
6.3.1 Primary map



X Index: 250

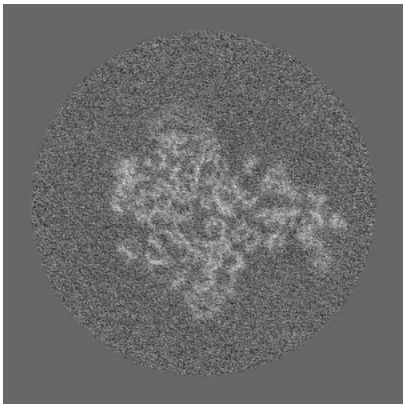


Y Index: 247

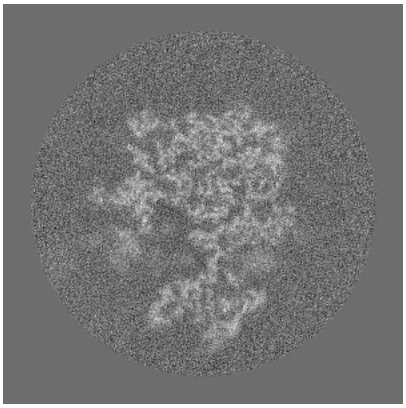


Z Index: 226

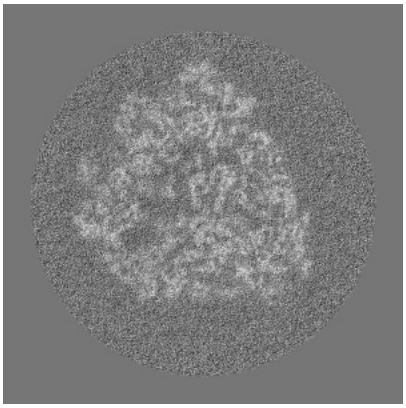
6.3.2 Raw map



X Index: 250



Y Index: 249

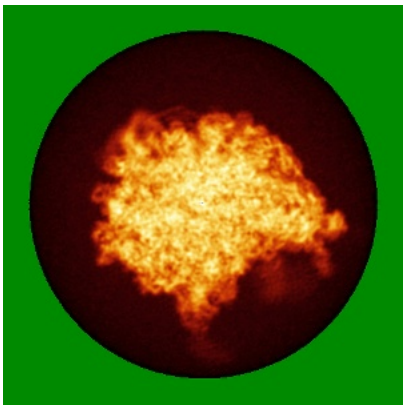


Z Index: 226

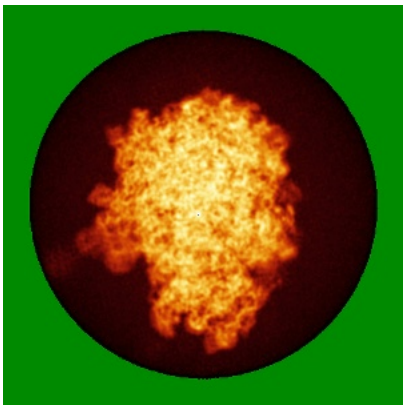
The images above show the largest variance slices of the map in three orthogonal directions.

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

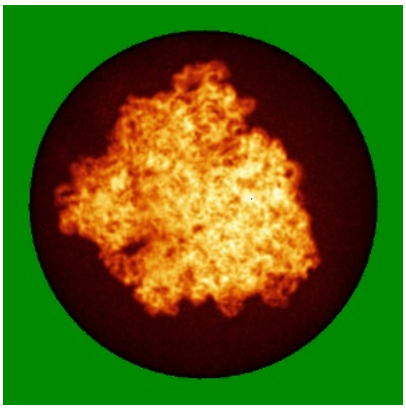
6.4.1 Primary map



X

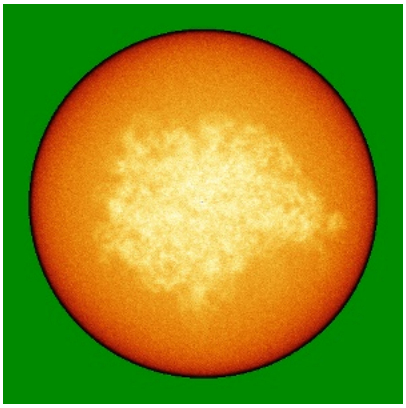


Y

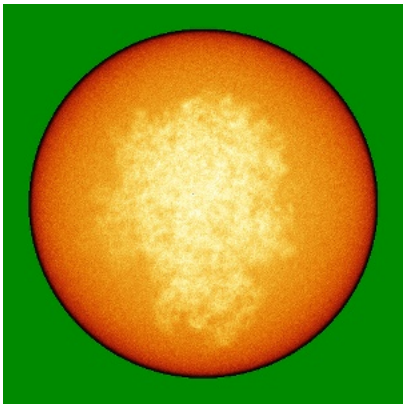


Z

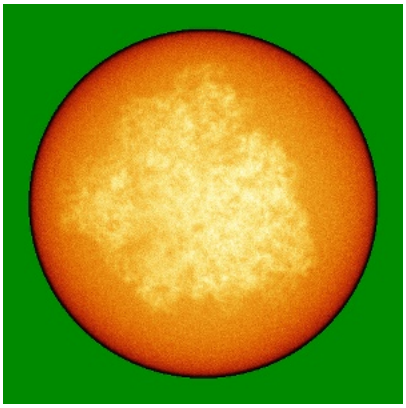
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

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

6.5.2 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.

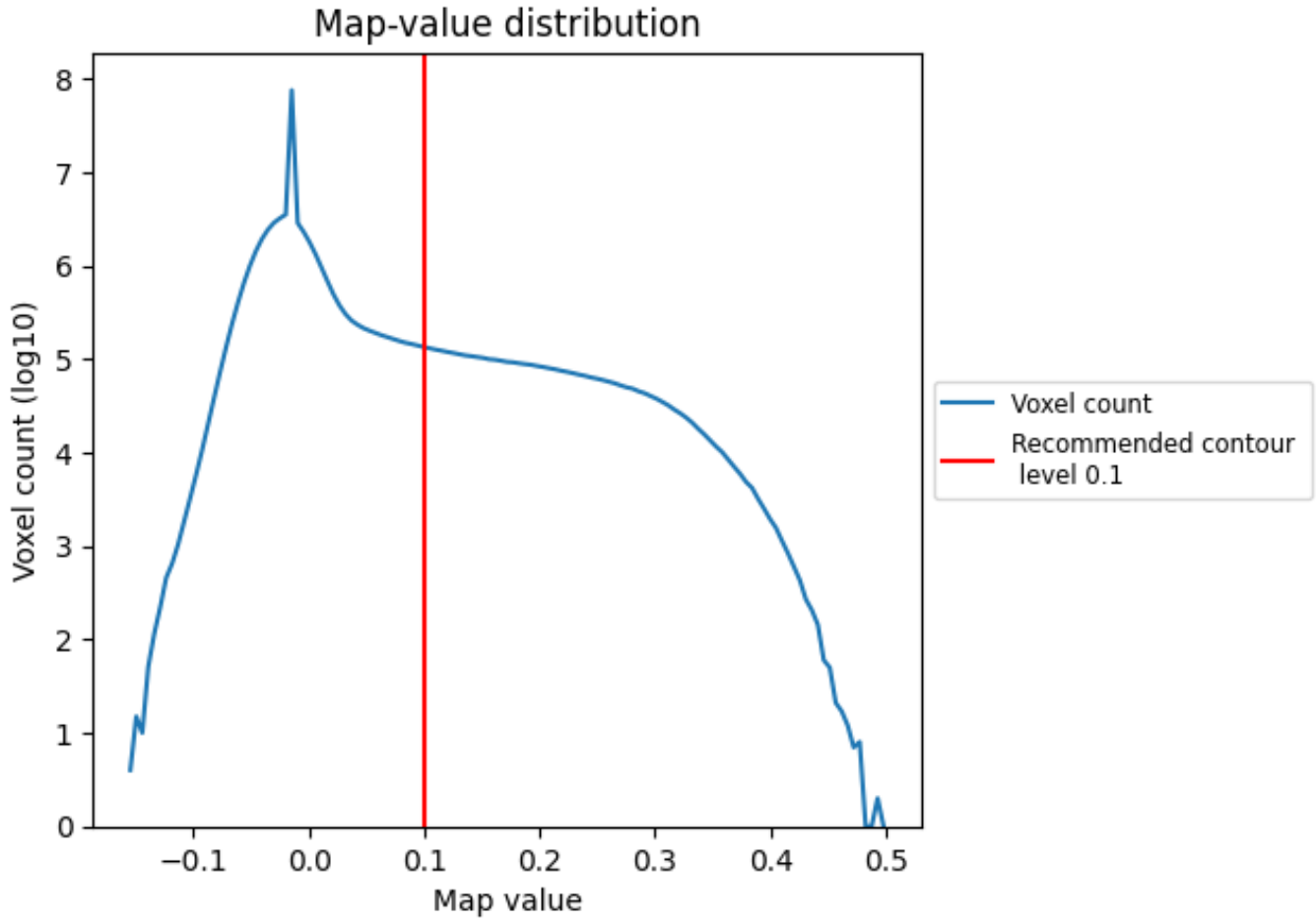
6.6 Mask visualisation (i)

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

7 Map analysis

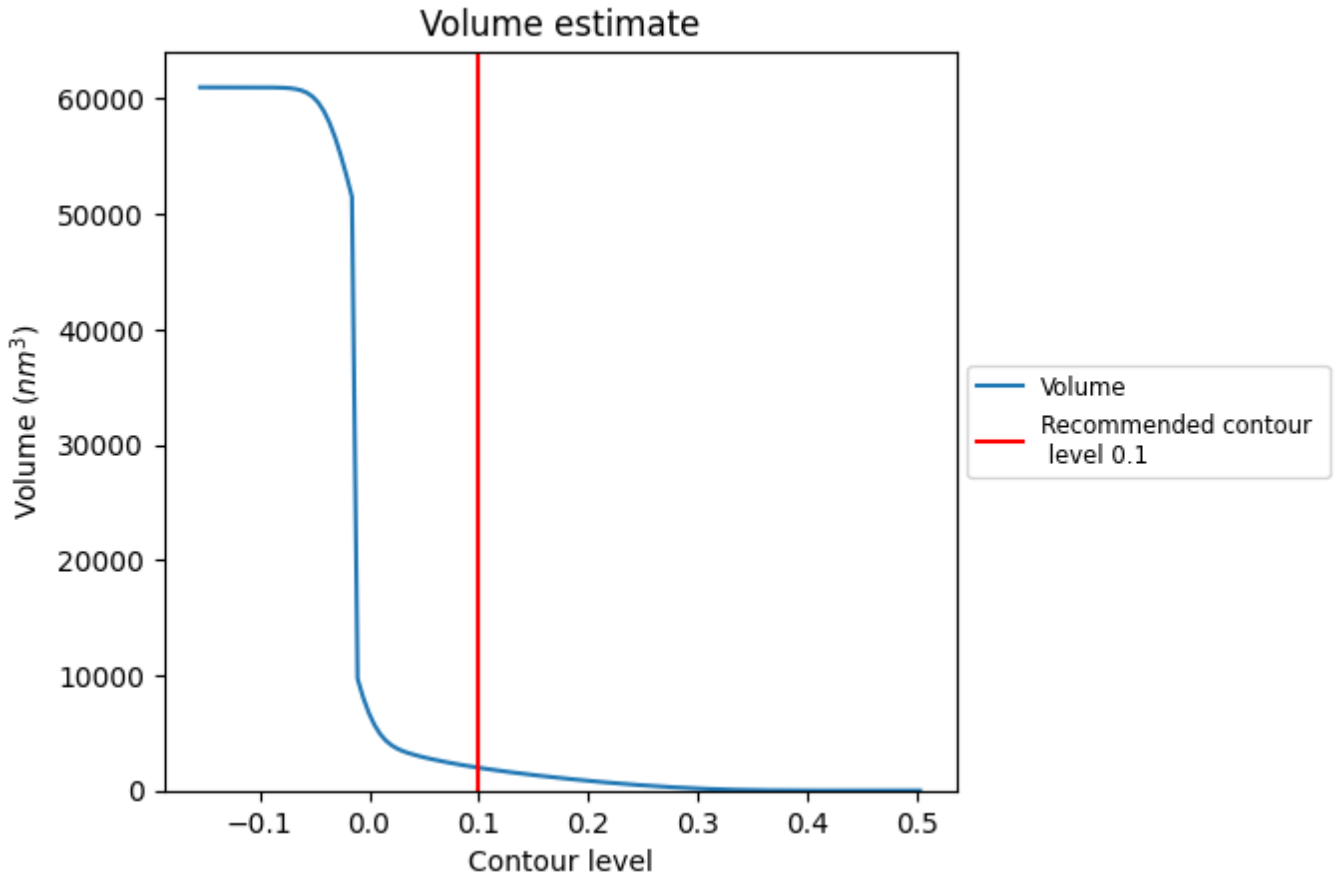
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

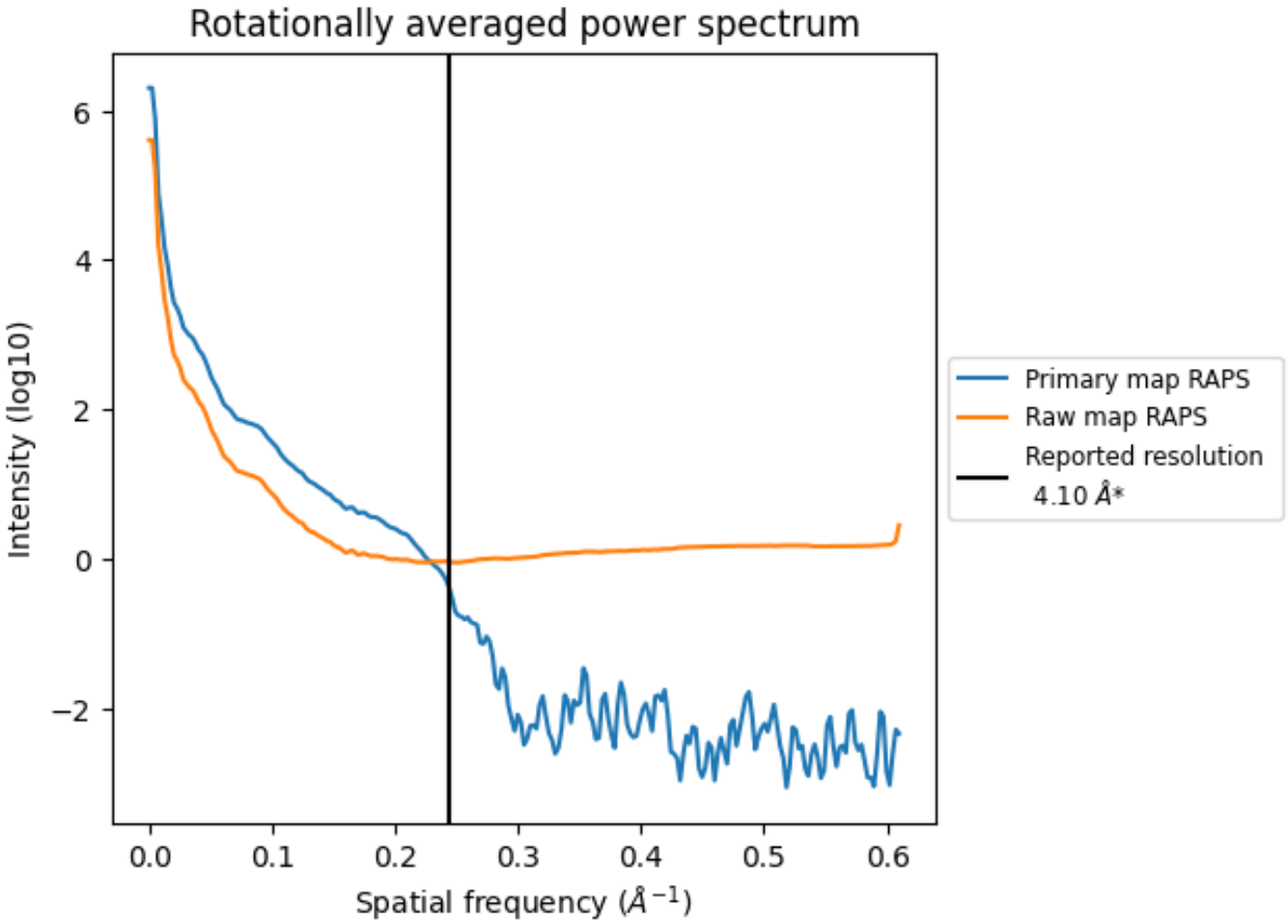
7.2 Volume estimate



The volume at the recommended contour level is 1983 nm^3; this corresponds to an approximate mass of 1791 kDa.

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

7.3 Rotationally averaged power spectrum (i)

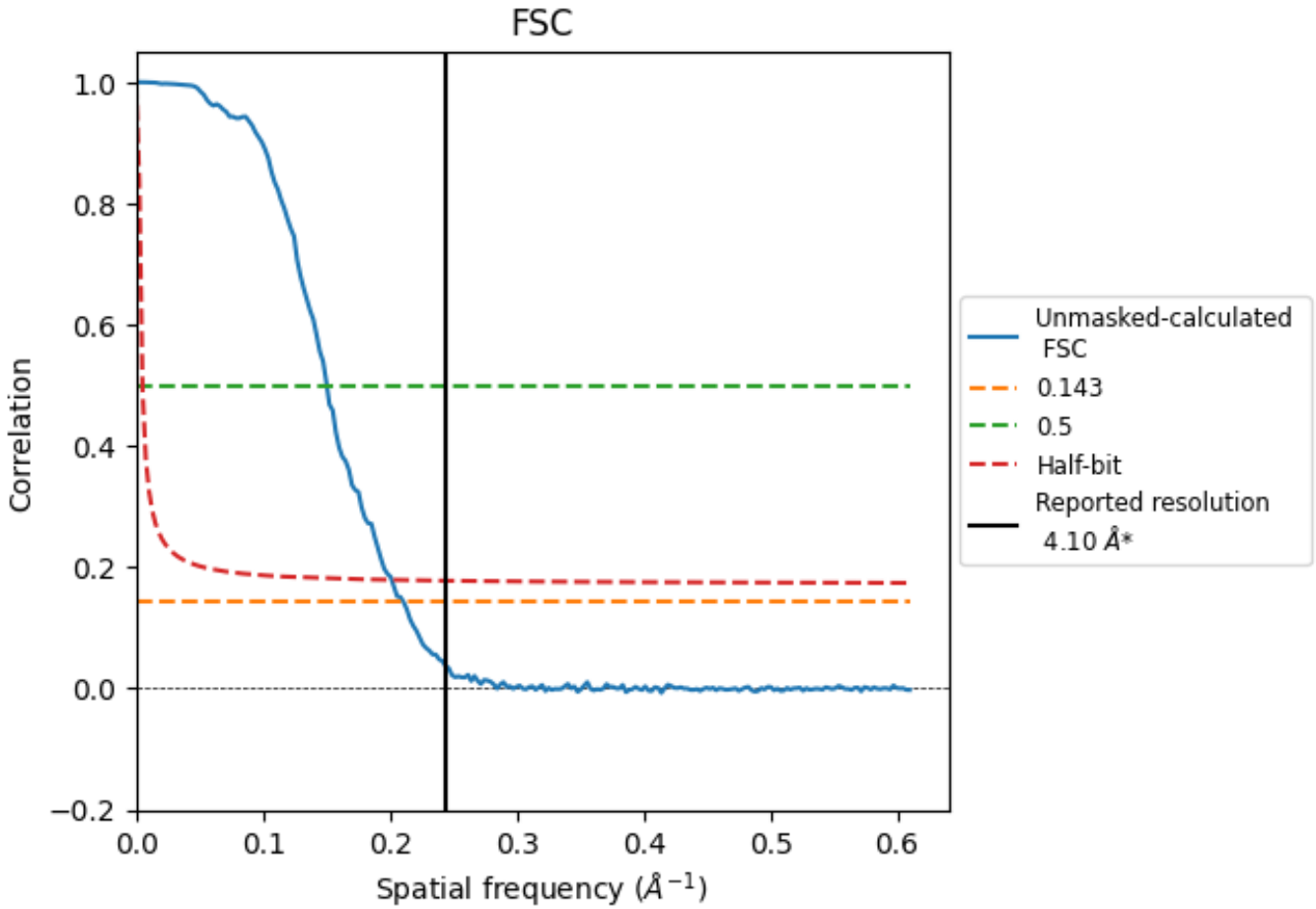


*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

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 0.244 Å^{-1}

8.2 Resolution estimates (i)

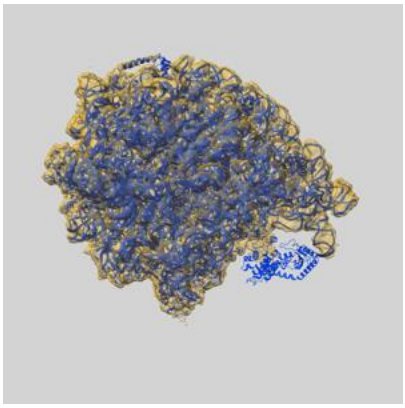
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.75	6.65	4.96

*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 4.75 differs from the reported value 4.1 by more than 10 %

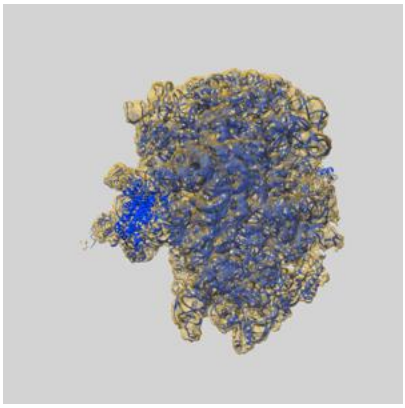
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-8280 and PDB model 5KPV. Per-residue inclusion information can be found in section 3 on page 15.

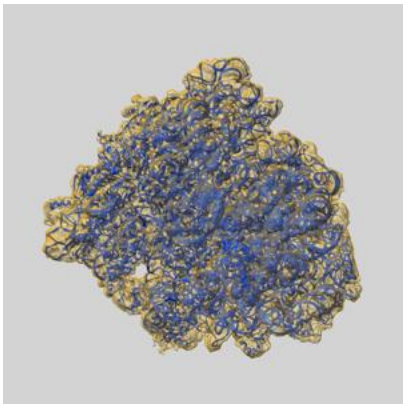
9.1 Map-model overlay



X



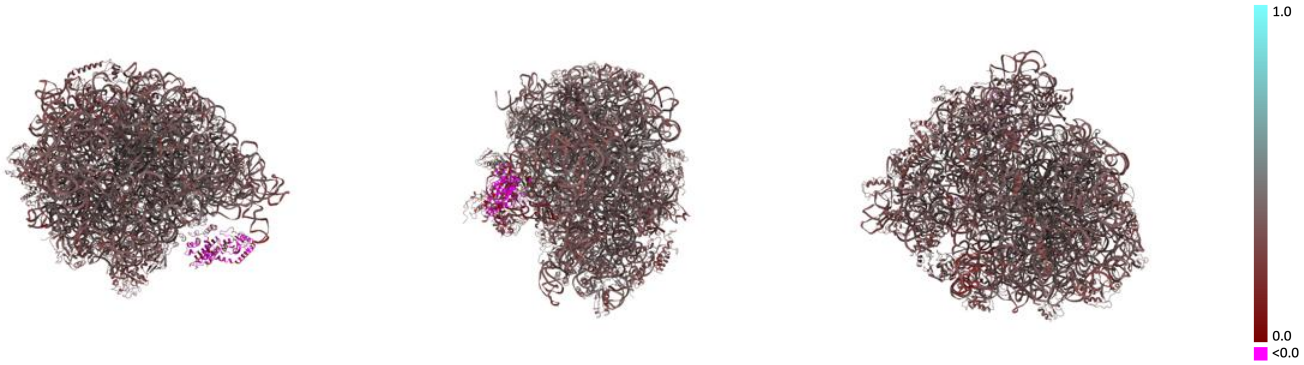
Y



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 (i)



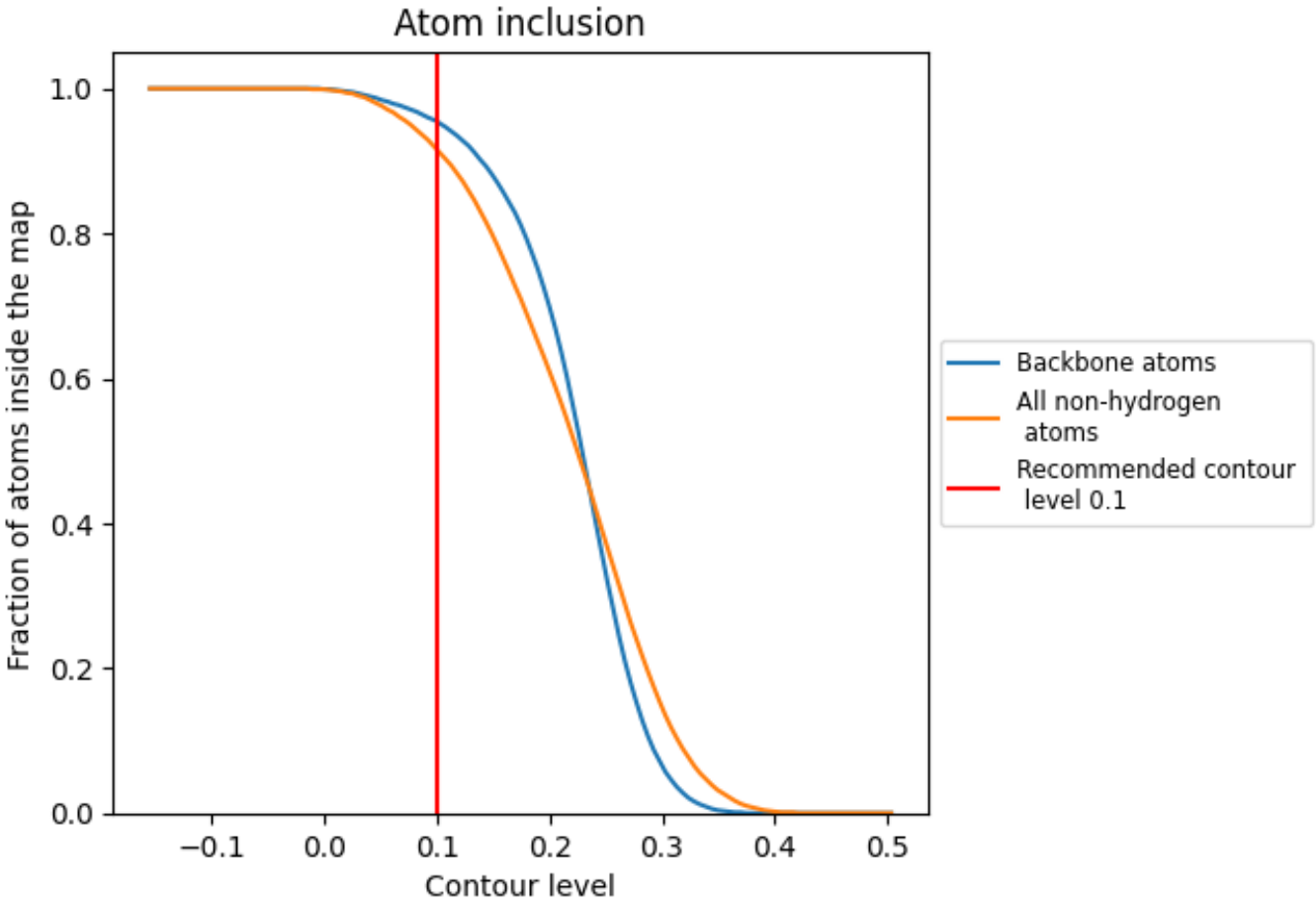
X Y Z

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

9.3 Atom inclusion mapped to coordinate model (i)

This section was not generated.

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	Q-score
All	0.9160	0.3500
1	0.8760	0.3710
10	0.8770	0.3530
11	0.8570	0.3250
12	0.8490	0.3570
13	0.8850	0.3410
14	0.7990	0.3440
15	0.8650	0.3510
16	0.7910	0.3770
17	0.8460	0.3370
18	0.8450	0.3360
19	0.8570	0.3220
2	0.7280	0.3520
20	0.8710	0.3510
21	0.8510	0.3640
22	0.8930	0.3520
23	0.8810	0.3430
24	0.8680	0.3230
25	0.7350	0.3160
26	0.9880	0.3630
27	0.9920	0.3650
28	0.9940	0.3590
29	0.7680	0.2970
3	0.8840	0.3610
30	0.8740	0.2400
31	0.9580	0.3470
32	0.7270	0.2370
33	0.4050	0.1560
4	0.8190	0.3740
5	0.8220	0.3680
6	0.5650	0.3130
7	0.8030	0.3620
8	0.8230	0.3300
9	0.8430	0.3680
A	0.8460	0.3840

Continued on next page...

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Chain	Atom inclusion	Q-score
B	0.8480	0.3850
C	0.7850	0.3360
D	0.8540	0.3440
E	0.8740	0.3680
F	0.4760	0.3210
G	0.5700	0.2520
H	0.7230	0.2430
I	0.8570	0.3670
J	0.8040	0.3940
K	0.8730	0.3700
L	0.8250	0.3810
M	0.8720	0.3580
N	0.8900	0.3430
O	0.8550	0.3900
P	0.8700	0.3390
Q	0.8810	0.3770
R	0.8110	0.3610
S	0.8660	0.3670
T	0.8810	0.3540
U	0.8790	0.3640
V	0.8610	0.3790
W	0.8590	0.3650
X	0.8550	0.3070
Y	0.8540	0.3640
Z	0.8360	0.3290