



wwPDB EM Map/Model Validation Report ⓘ

Sep 20, 2016 – 07:42 PM EDT

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

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>

MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20027939

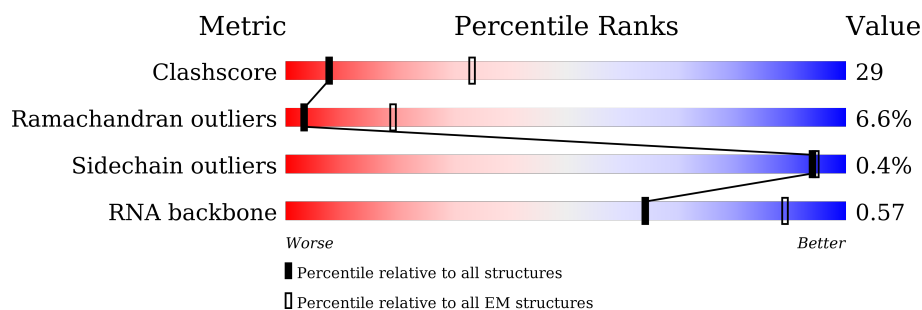
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 Å.

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




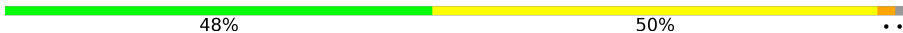



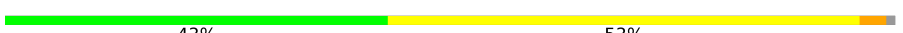
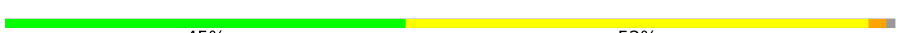




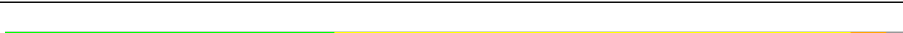













Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	273	
2	B	209	
3	C	201	
4	D	179	
5	E	177	
6	F	149	
7	G	165	
8	H	142	


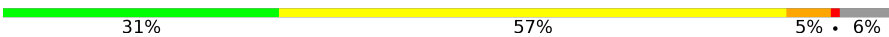
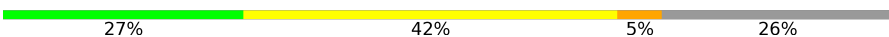


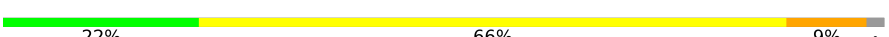
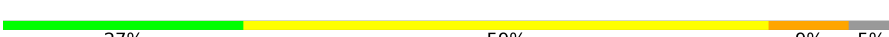
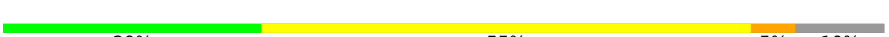
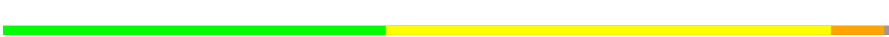

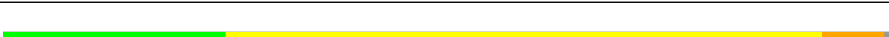


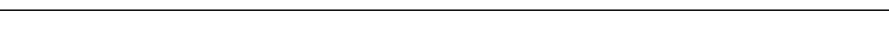
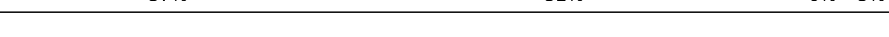
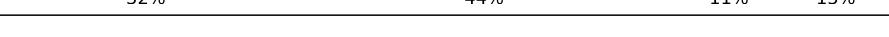


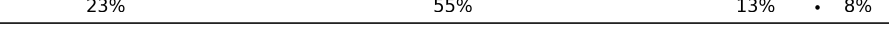
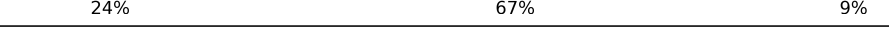


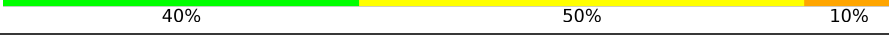
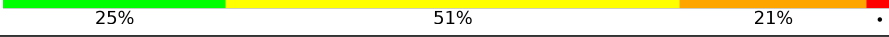

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Mol	Chain	Length	Quality of chain
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	
30	4	65	
31	5	38	
32	6	241	
33	7	233	

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Mol	Chain	Length	Quality of chain
34	8	206	
35	9	167	
36	10	135	
37	11	179	
38	12	130	
39	13	130	
40	14	103	
41	15	129	
42	16	124	
43	17	118	
44	18	101	
45	19	89	
46	20	82	
47	21	84	
48	22	75	
49	23	92	
50	24	87	
51	25	71	
52	26	1539	
53	27	2903	
54	28	120	
55	29	20	
56	30	76	
57	31	77	
58	32	77	

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Mol	Chain	Length	Quality of chain
59	33	750	<div><div></div><div>37%</div><div>46%</div><div>7%</div><div>10%</div></div>

2 Entry composition [i](#)

There are 59 unique types of molecules in this entry. The entry contains 154603 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 50S ribosomal protein L2.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

There is a discrepancy between the modelled and reference sequences:

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

- Molecule 55 is a RNA chain called mRNA.

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

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

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

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

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

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

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

- Molecule 59 is a protein called GTP pyrophosphokinase.

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

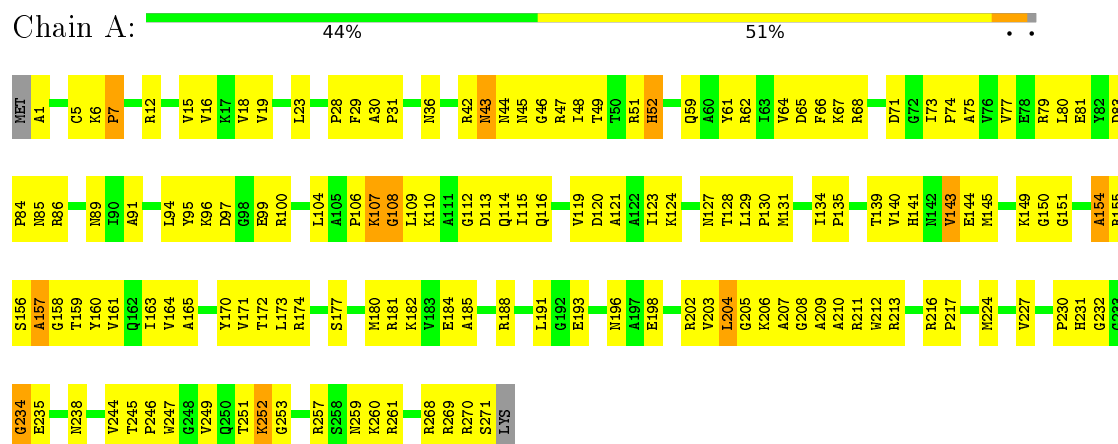
There are 7 discrepancies between the modelled and reference sequences:

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

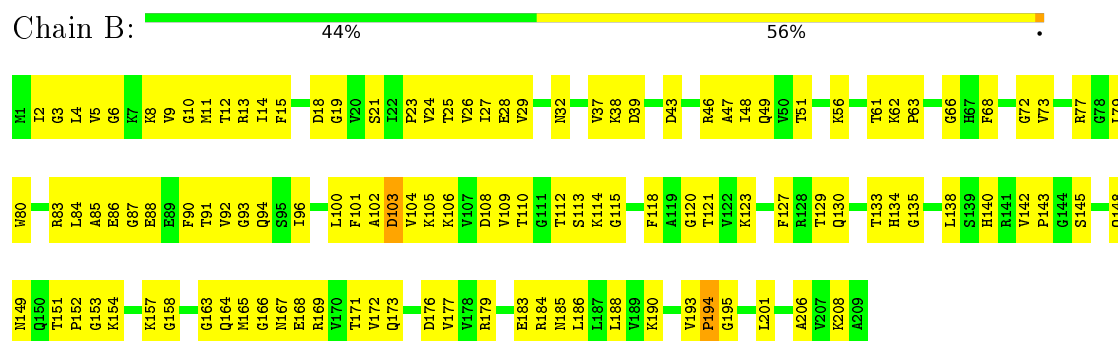
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 50S ribosomal protein L2



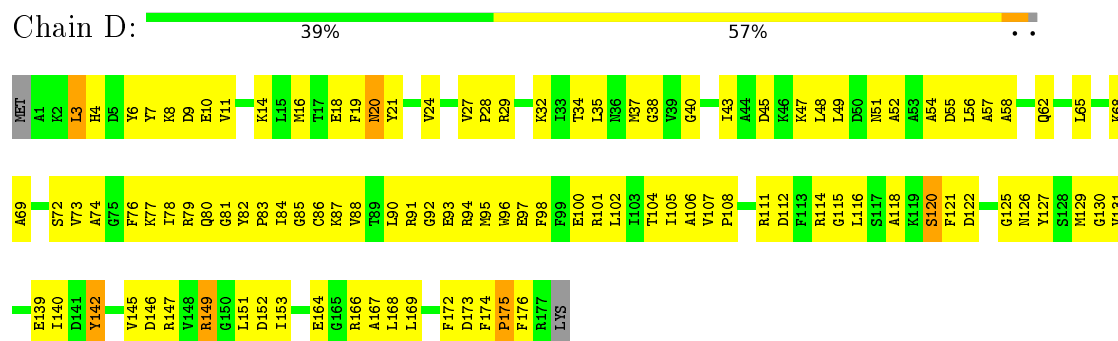
- Molecule 2: 50S ribosomal protein L3



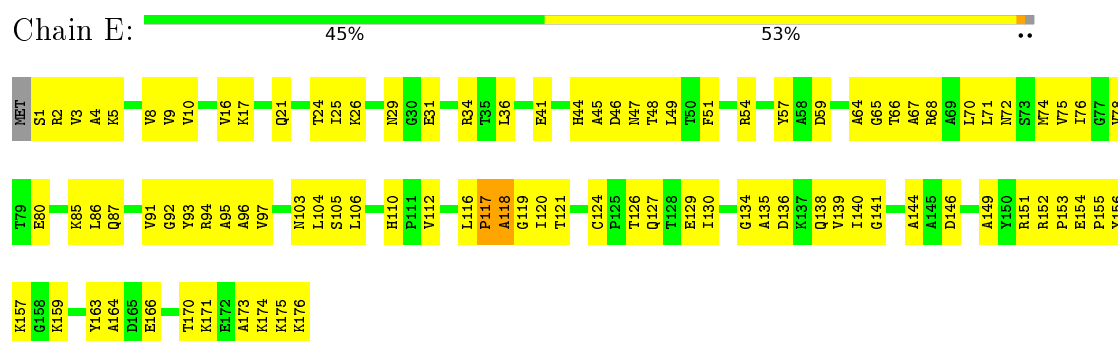
- Molecule 3: 50S ribosomal protein L4



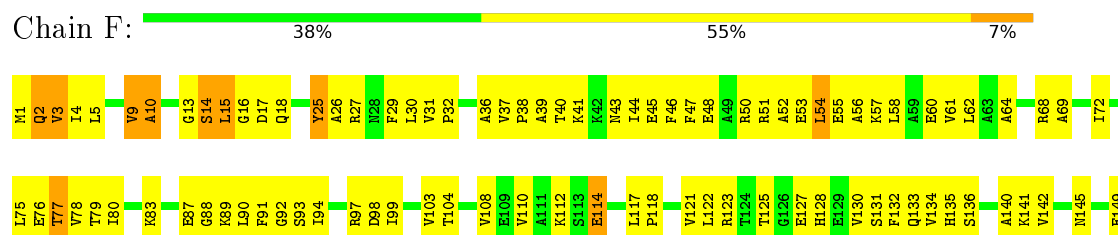
- Molecule 4: 50S ribosomal protein L5



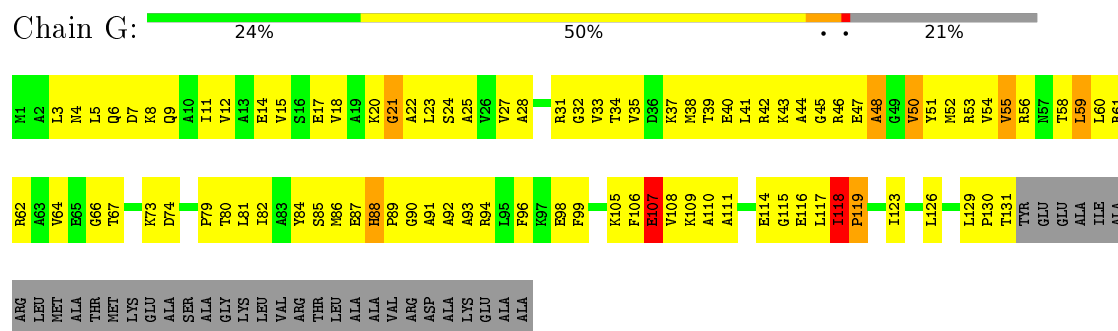
- Molecule 5: 50S ribosomal protein L6



- Molecule 6: 50S ribosomal protein L9



- Molecule 7: 50S ribosomal protein L10



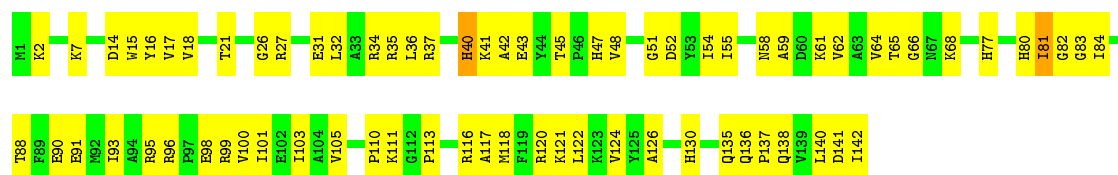
- Molecule 8: 50S ribosomal protein L11





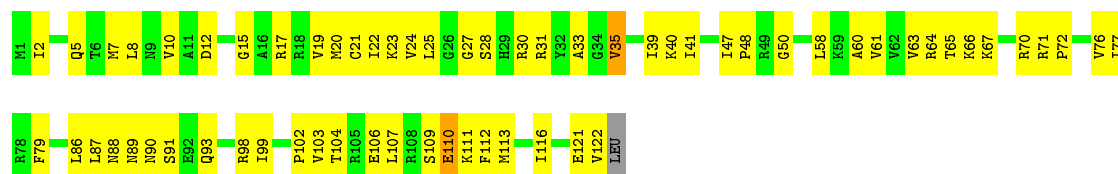
• Molecule 9: 50S ribosomal protein L13

Chain I: 49% 49%



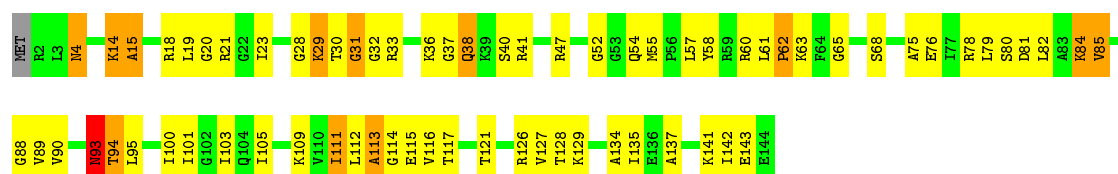
• Molecule 10: 50S ribosomal protein L14

Chain J: 48% 50%



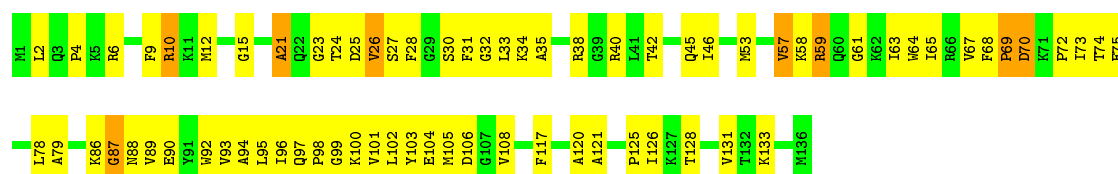
• Molecule 11: 50S ribosomal protein L15

Chain K: 51% 39% 8%

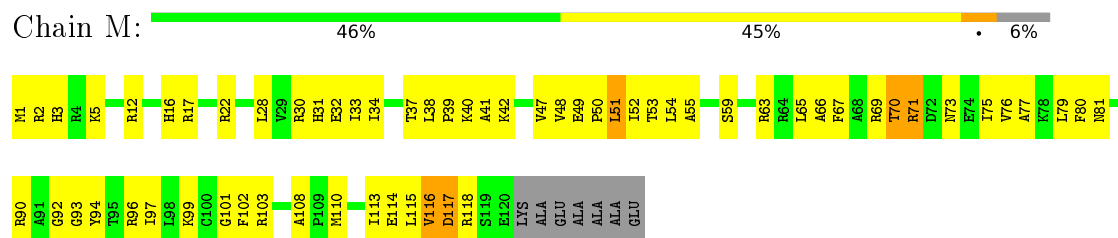


• Molecule 12: 50S ribosomal protein L16

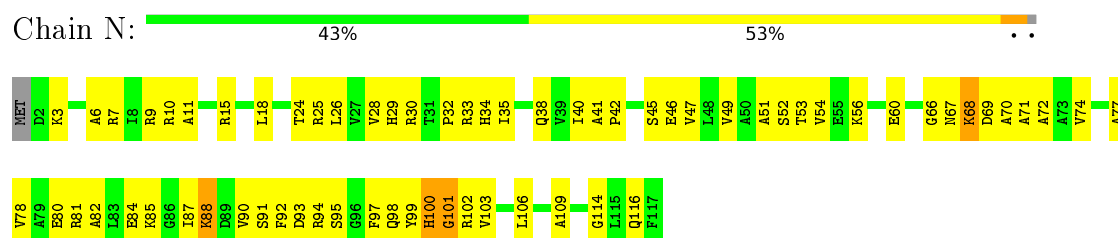
Chain L: 47% 47% 6%



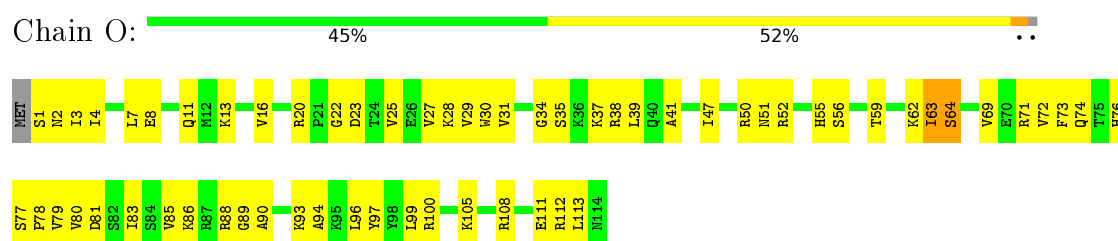
• Molecule 13: 50S ribosomal protein L17



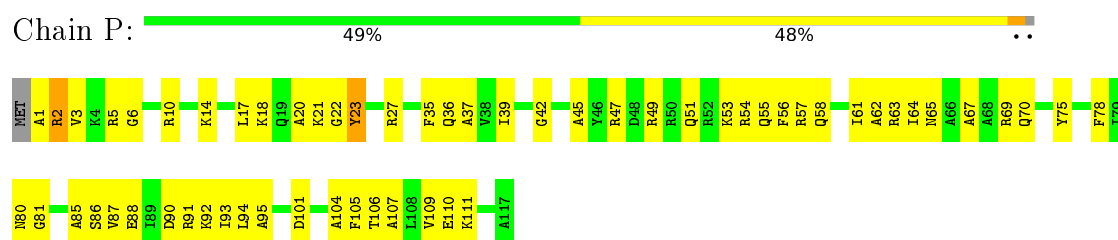
- Molecule 14: 50S ribosomal protein L18



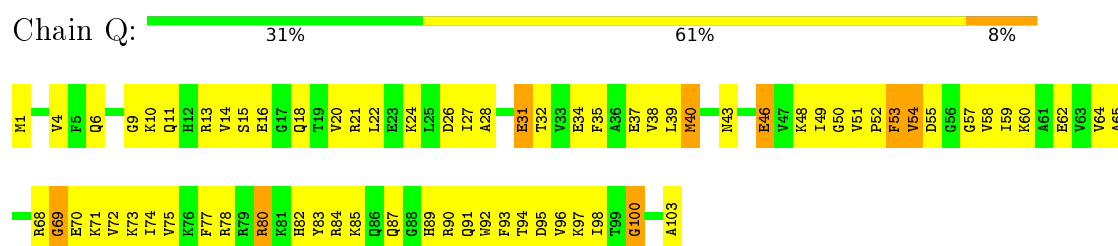
- Molecule 15: 50S ribosomal protein L19



- Molecule 16: 50S ribosomal protein L20

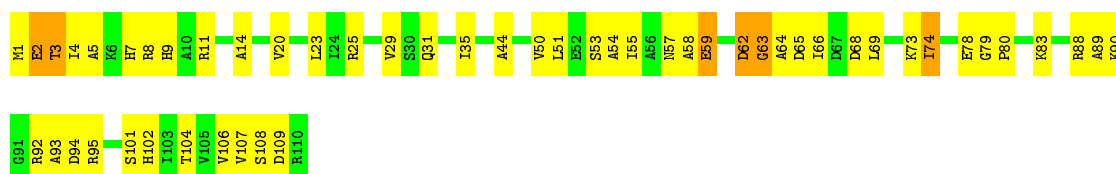


- Molecule 17: 50S ribosomal protein L21



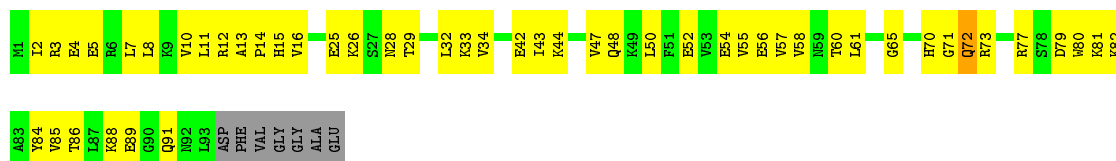
- Molecule 18: 50S ribosomal protein L22





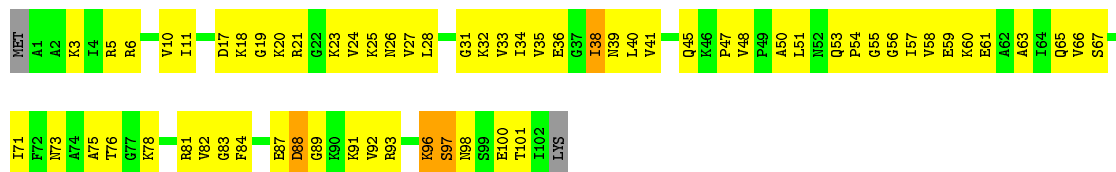
- Molecule 19: 50S ribosomal protein L23

Chain S: 43% 49% 7%



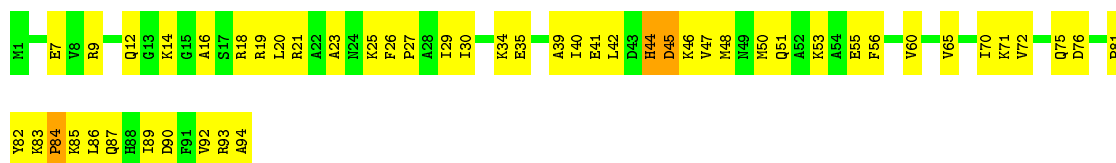
- Molecule 20: 50S ribosomal protein L24

Chain T: 37% 58% 2%



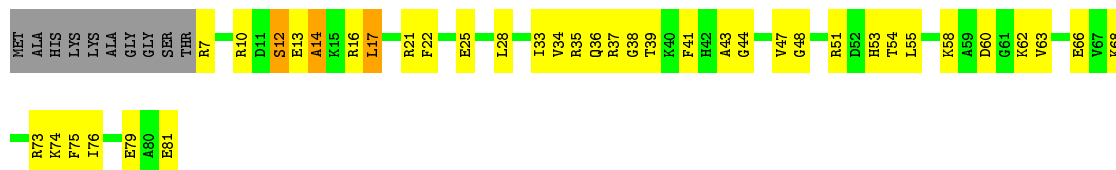
- Molecule 21: 50S ribosomal protein L25

Chain U: 47% 50% 2%



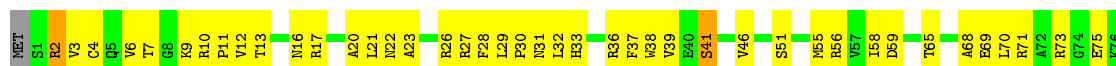
- Molecule 22: 50S ribosomal protein L27

Chain V: 42% 42% 12%



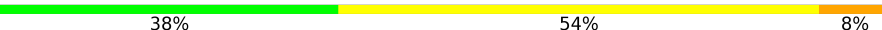
- Molecule 23: 50S ribosomal protein L28

Chain W: 44% 53% 2%



Y77

- Molecule 24: 50S ribosomal protein L29

Chain X: 



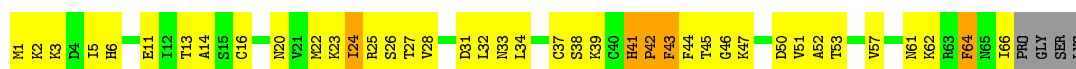
- Molecule 25: 50S ribosomal protein L30

Chain Y: 



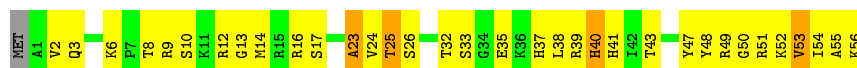
- Molecule 26: 50S ribosomal protein L31

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: 



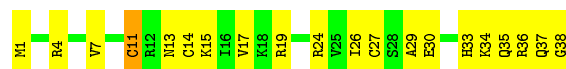
- Molecule 30: 50S ribosomal protein L35

Chain 4: 



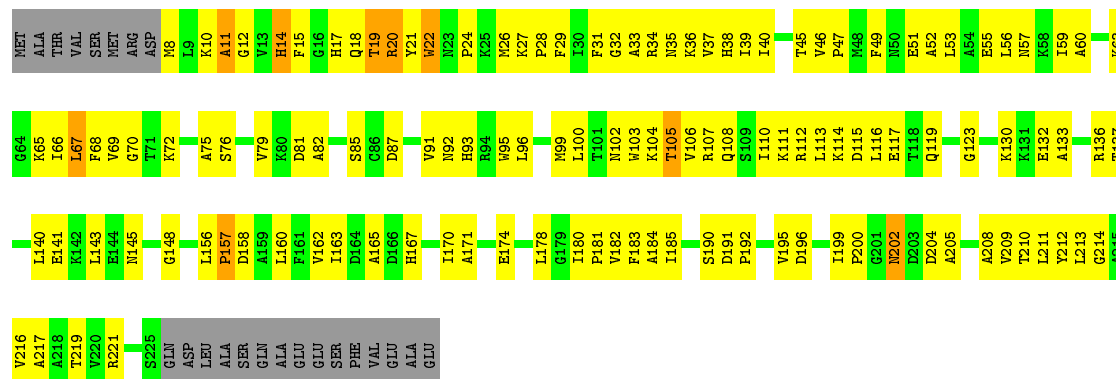
- Molecule 31: 50S ribosomal protein L36

Chain 5: 47% 50% .



- Molecule 32: 30S ribosomal protein S2

Chain 6: 38% 49% 10%



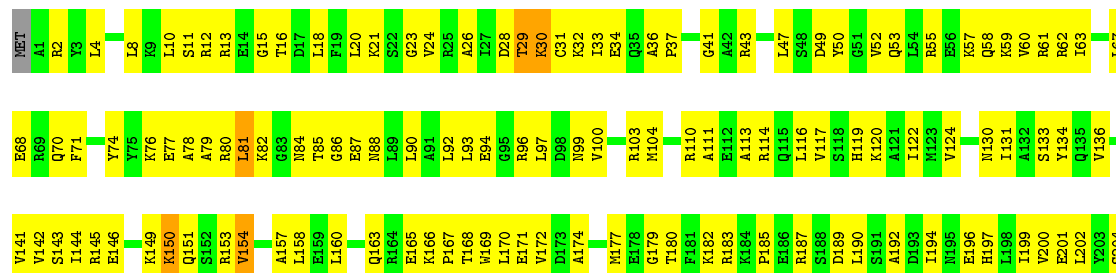
- Molecule 33: 30S ribosomal protein S3

Chain 7:  39% 47% 12%



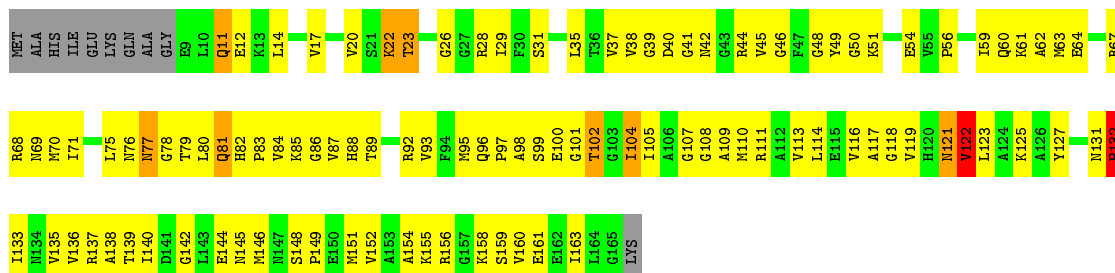
- Molecule 34: 30S ribosomal protein S4

Chain 8:  39% 58% .

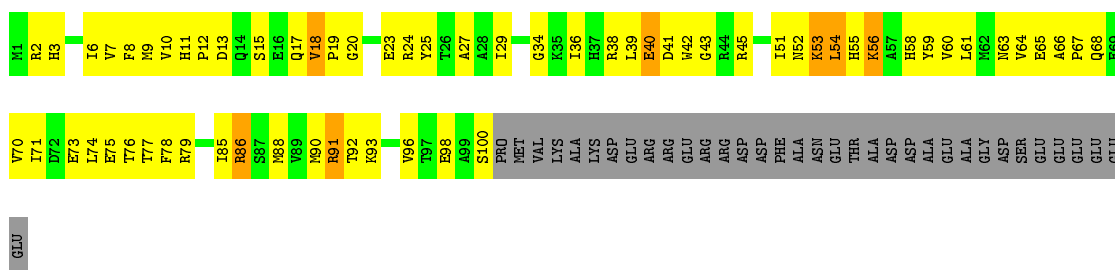


K205

- Molecule 35: 30S ribosomal protein S5

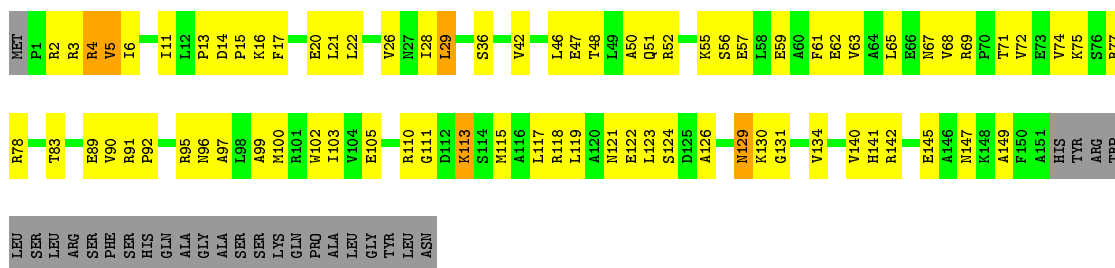
Chain 9:  31% 57% 5% • 6%

- Molecule 36: 30S ribosomal protein S6

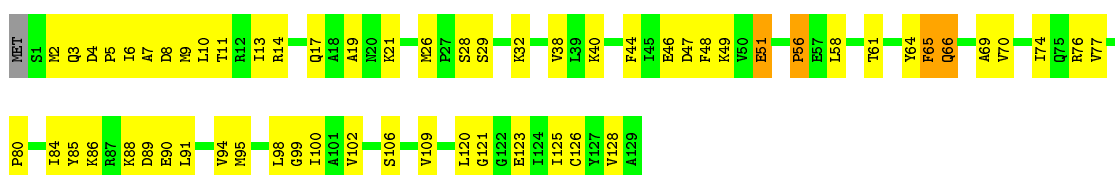
Chain 10:  27% 42% 5% 26%

GLU

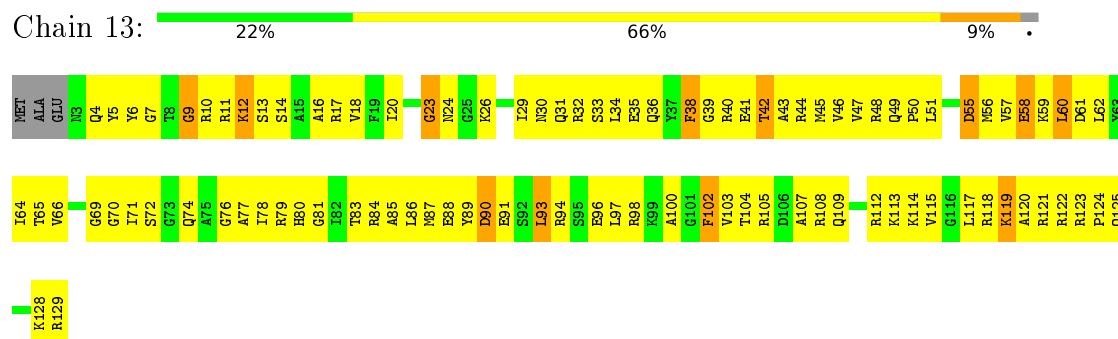
- Molecule 37: 30S ribosomal protein S7

Chain 11:  41% 40% • 16%

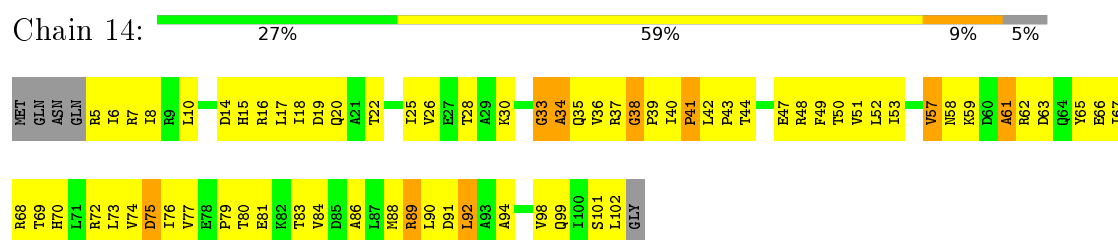
- Molecule 38: 30S ribosomal protein S8

Chain 12:  53% 43% • •

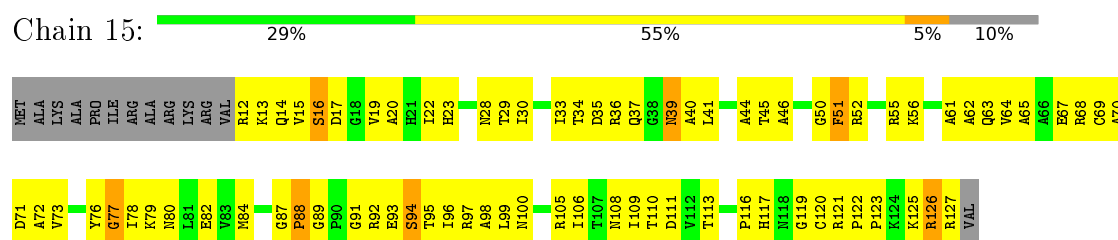
- Molecule 39: 30S ribosomal protein S9



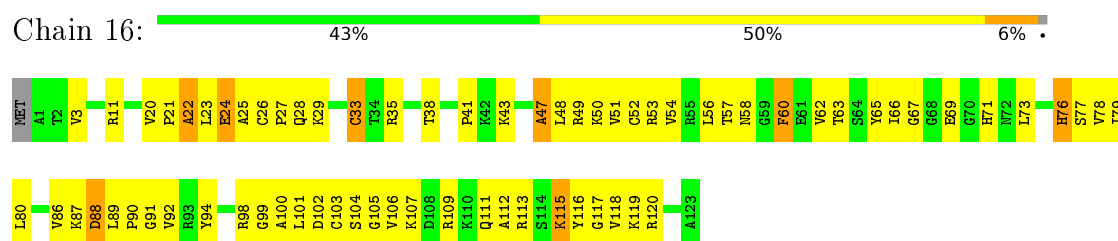
- Molecule 40: 30S ribosomal protein S10



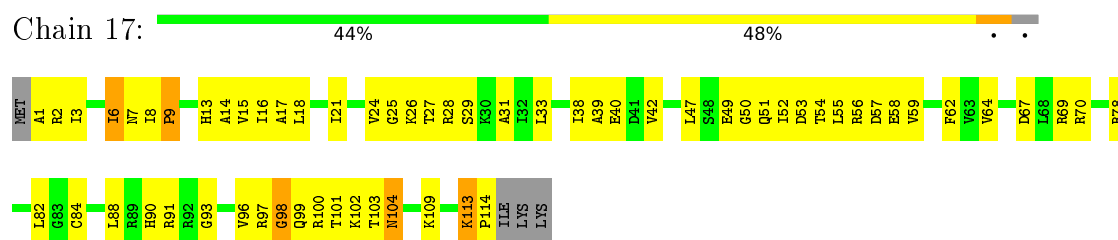
- Molecule 41: 30S ribosomal protein S11



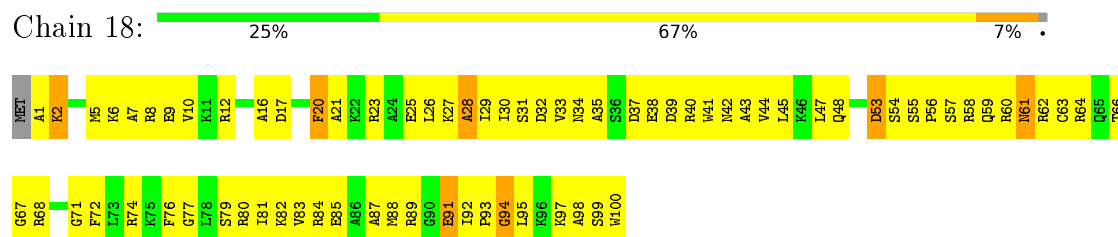
- Molecule 42: 30S ribosomal protein S12



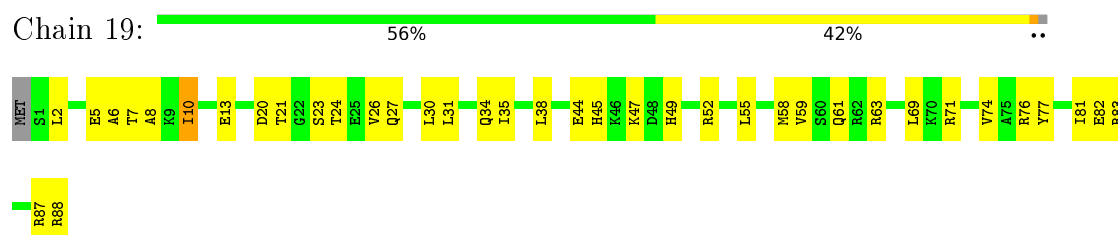
- Molecule 43: 30S ribosomal protein S13



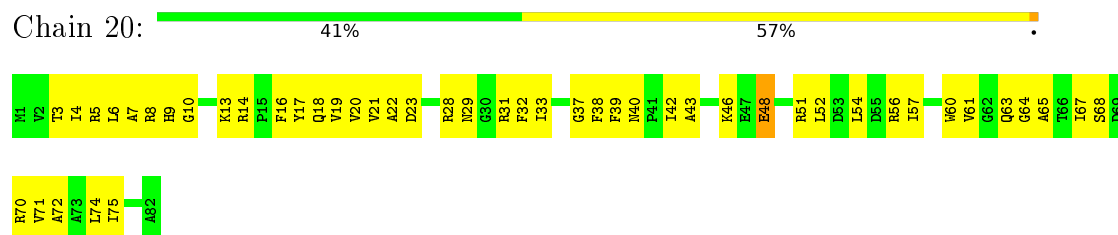
- Molecule 44: 30S ribosomal protein S14



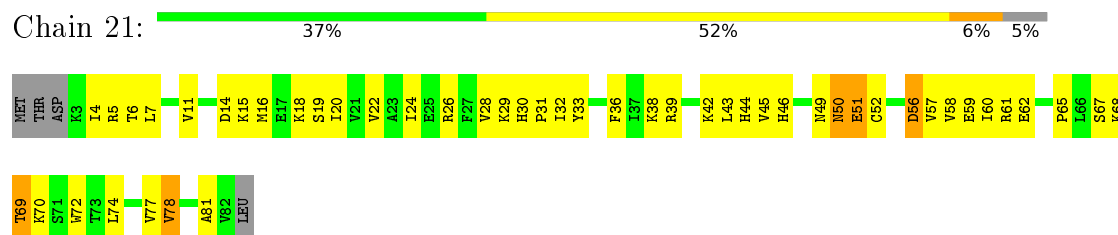
- Molecule 45: 30S ribosomal protein S15



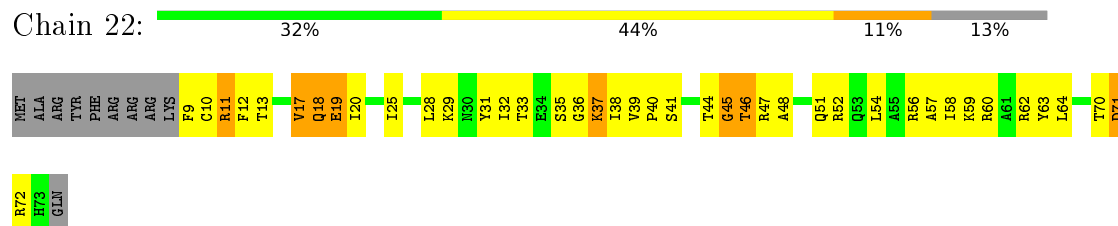
- Molecule 46: 30S ribosomal protein S16



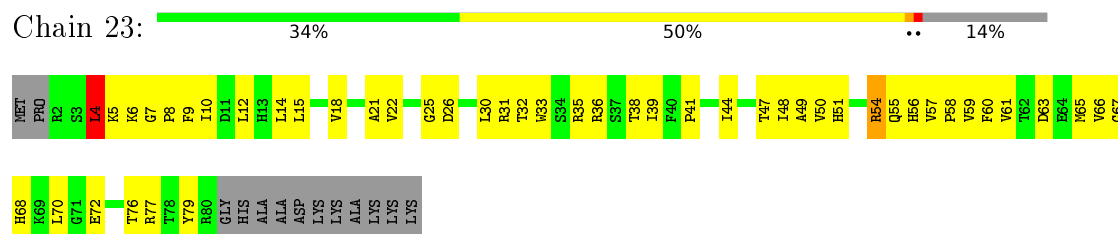
- Molecule 47: 30S ribosomal protein S17



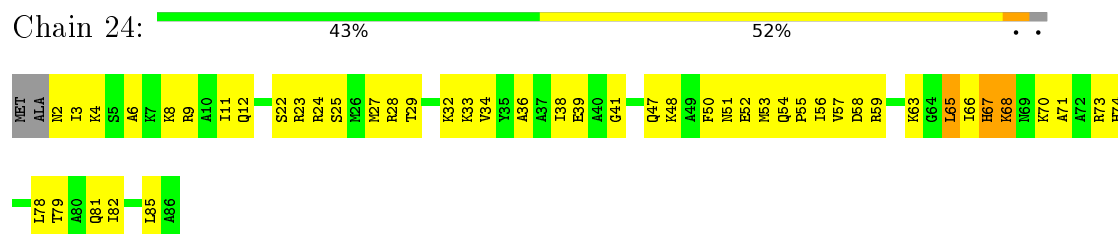
- Molecule 48: 30S ribosomal protein S18



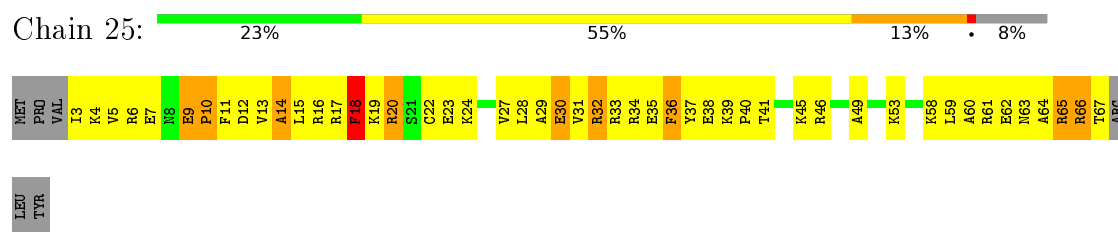
- Molecule 49: 30S ribosomal protein S19



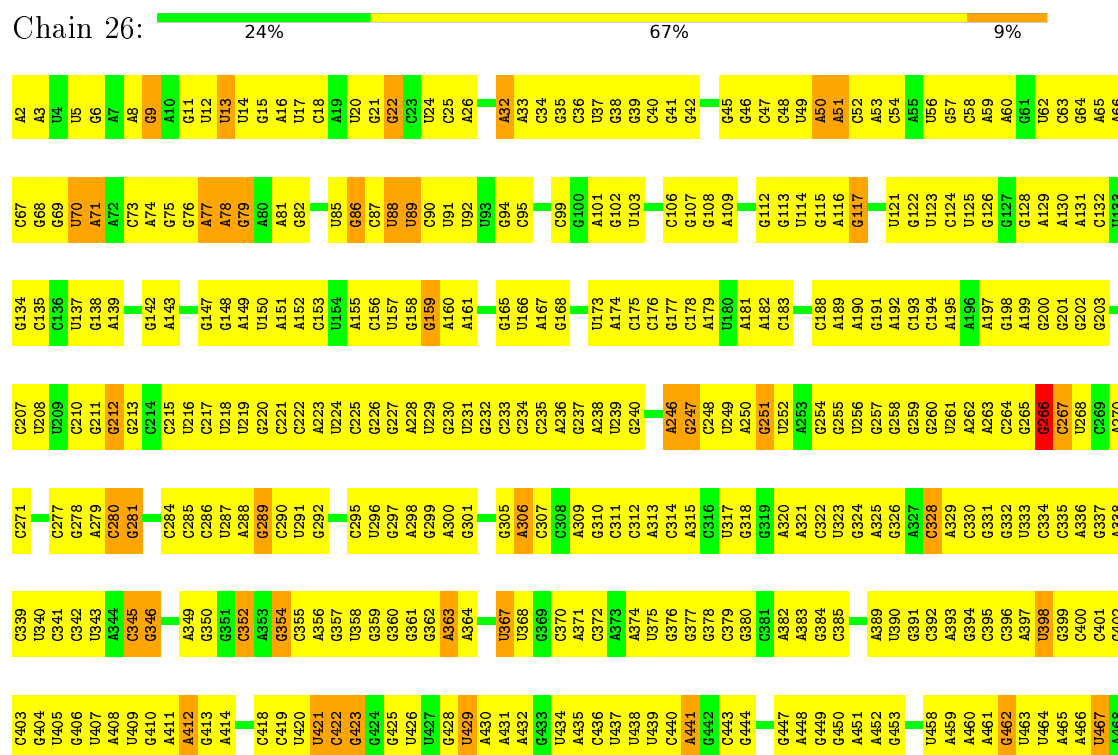
- Molecule 50: 30S ribosomal protein S20



- Molecule 51: 30S ribosomal protein S21



- Molecule 52: 16S ribosomal RNA



A1458	A1394	A1333	U1264	G1203	G1139	G1074	A1005	A937	U875	C811	C744	A675	A596	A532	C469
G1459	C1395	G1334	C1265	A1204	C1140	U1075	G1006	U942	C876	G812	G745	A676	A597	A533	C470
G1460	A1396	U1335	G1268	U1205	C1141	U1076	U1007	G942	A877	A815	A746	U677	U598	U534	U471
G1461	C1397	C1336	A1269	G1206	G1142	G1077	U1008	U943	A878	A816	A747	U678	C599	A535	U472
C1462	A1398	A1269	G1207	G1207	G1143	U1078	U1009	G945	C879	A817	G748	C679	A600	C536	U473
A1463	C1400	C1339	C1208	C1208	G1144	U1079	U1010	G946	C880	C818	A749	A681	A601	G537	U474
U1464	G1401	A1340	G1273	C1209	A1145	A1080	C1011	A946	G881	G818	C750	U682	A602	G538	C475
A1465	C1342	U1341	C1210	G1209	A1146	A1081	A1014	G947	C882	U820	U751	A682	U603	A539	U476
G1468	A1402	C1342	A1275	U1211	C1147	G1084	G1015	C948	C883	G821	A753	G683	G604	G540	C477
C1469	C1403	G1343	G1278	A1212	U1148	U1085	U1018	A949	U884	U820	A754	U684	U605	G541	A478
C1470	A1404	C1344	G1279	A1213	U1149	U1085	G1018	U950	G885	G821	C754	U685	G606	G542	U479
U1470	G1405	U1345	A1280	G1214	A1151	G1088	A1018	G951	G886	G824	G755	U686	A607	U543	U480
U1471	U1406	A1346	G1281	G1215	A1150	G1089	A1019	U952	G889	G825	C756	A608	A608	G544	U481
C1472	C1407	G1347	C1282	A1216	A1152	U1090	G1024	G953	U889	C826	C757	C689	A609	C546	A482
G1473	A1408	U1348	C1282	C1217	A1152	G1089	U1025	G954	G890	U827	C758	G690	C613	A546	C483
U1474	C1409	A1349	U1283	C1218	U1091	U1091	G1026	U955	U891	U828	A759	G691	G614	A547	C484
G1475	A1410	U1350	A1284	A1219	G1156	A1092	G1026	U956	A892	G829	U762	U692	G615	G548	U485
A1476	C1411	A1351	A1285	G1220	A1157	A1093	C1027	U957	C893	G830	U763	G692	G616	C549	U486
U1477	A1412	C1352	U1286	G1221	C1158	G1094	C1028	A958	G894	A831	G763	A694	G617	G550	A487
C1478	C1413	G1353	A1287	G1222	U1159	U1095	U1029	A959	G895	G832	C764	A695	G618	U551	C488
G1482	U1414	U1354	A1288	C1223	U1160	C1096	U1030	U960	C896	G833	C765	A696	C619	U552	C489
U1483	G1415	G1355	A1289	U1224	C1161	C1097	C1031	U961	C897	U834	A766	U697	A621	A553	C490
C1484	G1416	C1356	A1225	A1225	C1162	C1098	G1032	C962	G898	U835	A767	A698	A622	A554	C491
U1485	A1417	A1357	C1226	C1226	A1163	G1099	G1033	G963	C899	G836	G768	G703	G623	U555	C492
G1486	A1418	U1358	A1227	A1227	A1163	G1100	G1034	A964	A900	U837	C770	G705	G624	C556	C493
G1487	G1419	C1359	G1294	C1228	G1166	A1101	C1037	U965	A901	G838	C771	A706	U625	G557	G494
U1488	U1420	A1360	U1295	A1229	A1167	A1102	G1038	G966	G902	U839	C772	A707	U626	G558	A495
C1489	G1421	C1361	C1230	C1230	U1168	C1103	C1038	C967	G903	C840	U772	U707	G626	A559	A496
U1490	G1422	A1362	G1297	G1231	A1169	U1094	G1039	A968	U904	C841	G773	C708	G627	A560	C497
C1491	C1423	A1363	U1298	U1232	A1170	G1106	U1040	A969	U905	U842	G774	U709	G628	U561	A498
U1492	U1424	U1364	A1299	G1233	A1171	C1107	G1041	C970	A906	U843	G775	G710	A629	U562	C499
U1493	G1425	G1365	G1300	C1234	C1172	G1108	C1045	G971	A907	C844	C776	C711	A630	A563	G500
G1496	C1427	C1366	U1301	U1235	C1172	C1109	C1045	C972	A908	A845	A777	A712	C631	C563	C501
C1497	A1428	C1367	C1302	A1236	G1175	A1110	U1046	G973	A909	G846	C778	G713	U632	U565	A502
U1498	G1429	A1368	G1303	C1237	A1176	A1111	G1047	A974	C910	G847	C779	G714	G633	G566	C503
A1499	C1430	C1369	G1304	A1238	G1177	C1112	G1048	A975	U911	C848	A780	A715	C634	G567	C504
U1500	U1431	G1370	A1305	U1239	G1178	C1113	U1049	G976	C912	G849	A781	A635	A635	G568	G505
C1501	G1432	U1372	U1307	G1241	A1179	C1114	G1050	A977	A913	U850	A782	A716	U636	C569	
A1502	A1433	G1373	U1308	G1242	A1180	U1115	C1051	A978	A914	G851	C783	C720	A642	A572	A510
C1503	A1434	A1375	G1309	C1243	G1181	U1116	U1052	C979	A915	G852	A784	G721	A643	A573	C511
G1504	U1436	U1376	G1310	G1244	G1182	A1117	G1053	C980	U916	C853	G785	G722	C643	A574	C512
U1505	A1437	A1377	U1313	C1245	U1183	U1118	C1054	U981	G917	U854	G786	U723	U644	G575	C513
C1506	G1438	C1378	G1314	G1246	G1184	C1119	U1055	U982	A918	U855	A787	G724	G645	C576	C514
A1507	U1439	U1379	G1316	A1248	G1187	U1121	G1057	A983	A919	C856	C725	C726	G656	G577	U516
C1508	C1440	C1380	A1317	C1249	A1188	U1122	G1058	G988	U921	G858	U793	A728	U657	C578	C517
U1509	A1441	U1381	A1318	A1251	U1189	U1123	C1059	U992	G922	G861	A794	C658	U658	C579	C518
G1510	G1446	C1382	A1319	A1252	G1190	G1124	U1060	A994	A923	G862	C796	U659	C660	C580	C519
C1511	A1447	C1383	G1323	G1253	A1191	U1125	G1061	G993	C924	A864	C797	G731	G661	G581	A520
A1512	C1448	G1384	A1324	A1254	G1192	G1127	U1062	A994	G925	U865	C798	G734	G664	G584	C522
G1513	U1449	C1385	A1325	G1255	U1194	C1128	G1063	G994	G926	A866	U798	C735	G665	G585	A523
C1514	A1451	G1386	U1326	A1256	C1195	U1065	U1065	A996	G927	G867	C799	C736	A665	C586	C524
G1515	U1452	C1387	C1327	A1257	A1196	A1130	U1066	U997	G928	G868	A802	C737	G666	G587	C525
U1516	C1453	C1388	C1328	G1258	A1197	G1131	C1066	C998	G930	G869	C806	C738	G667	G588	C526
C1517	A1454	U1389	C1329	C1259	G1198	C1132	U1069	G998	C930	U870	C807	C739	G668	U589	C527
A1518	G1455	U1390	A1329	G1260	U1199	G1133	C1070	G999	G933	U871	A807	U740	G669	U590	C528
U1519	C1456	C1391	U1330	A1261	C1200	G1133	U1070	G1001	G934	A872	A808	G741	G670	U591	C529
C1520	A1457	G1392	C1262	A1201	A1201	C1137	G1071	G1002	C935	A873	C809	G742	A673	G592	C530
C1521	G1457	U1393	A1332	C1263	U1202	G1138	U1073	A1004	C936	G874	C910	A743	G674	G593	U531

U1522
G1523
C1524
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G1526
U1527
U1528
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C1539
U1540

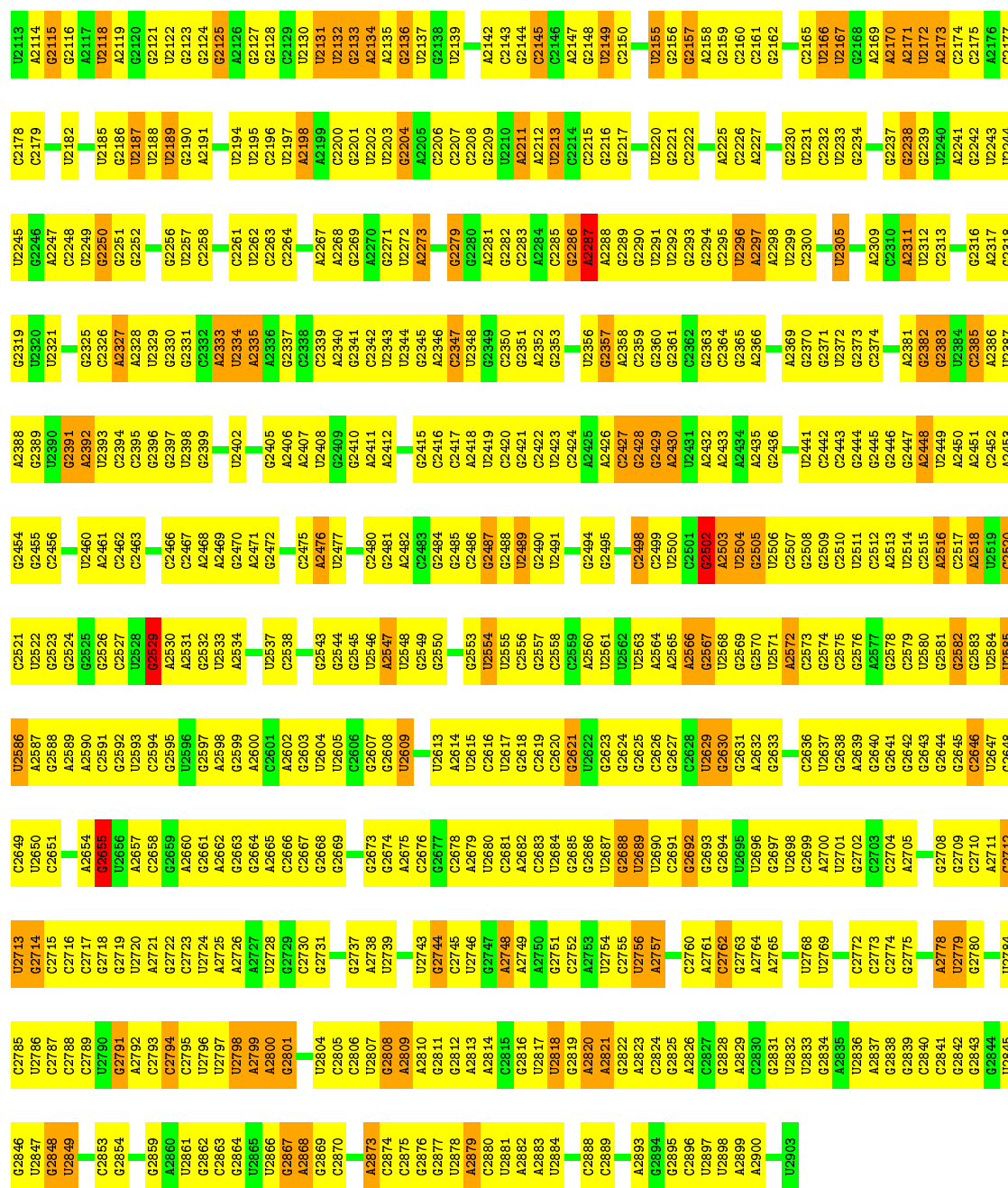
• Molecule 53: 23S ribosomal RNA

Chain 27: 26% 62% 11%

G1
A5
A6
A7
G7
C8
G9
A10
C11
U12
A13
A14
G15
C16
G17
U18
A19
C20
G21
A22
C23
G24
U25
G26
C27
A28
U29
G30
C31
U34
G35
A38
G39
U40
G45
G46
C47
G48
A49
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C66
G67
A68
C69

G70
A71
U72
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G2079	G1942	G1942	G1873	C1806	A1745	A1671	U1599	G1528	U1448	G1380	C1305	G1237	A1169	A1103	G1042
A2080	U1943	U1943	G1874	A1807	U1746	A1672	C1600	G1529	G1449	C1381	C1306	G1238	C1170	C1104	G1043
U2081	G1944	G1944	G1875	U1808	A1747	G1673	U1599	G1530	G1450	G1382	A1307	G1239	G1171	U1105	G1044
A2082	U1945	U1945	G1876	A1810	C1748	G1674	A1603	U1537	C1451	A1383	A1308	U1241	C1172	G1106	C1045
G2083	G1946	G1946	G1877	C1814	A1749	C1675	C1604	G1538	G1452	A1384	G1309	A1242	U1173	G1107	A1046
A2084	U1947	U1947	G1878	U1811	G1750	A1676	C1605	U1539	A1453	A1385	G1310	U1242	U1174	U1108	G1047
U2085	C1948	C1948	G1879	A1812	U1751	A1677	G1606	U1534	C1454	C1386	G1311	C1243	A1175	C1109	A1048
G2086	G1949	G1949	G1880	G1813	G1752	A1678	C1607	U1535	G1455	A1387	U1312	G1244	U1176	G1110	C1049
A2087	U1950	U1950	G1881	U1814	U1753	G1679	A1608	G1536	G1461	G1388	U1313	U1245	G1177	A1111	G1052
G2088	C1951	C1951	G1882	A1815	A1754	U1680	A1609	U1537	C1462	C1389	G1314	G1246	C1178	G1112	C1053
A2089	U1952	U1952	G1883	C1816	G1755	G1681	A1610	G1538	U1463	U1390	C1315	G1247	G1179	U1113	G1054
G2090	G1953	G1953	G1884	U1817	G1756	G1682	C1611	U1539	C1463	U1391	U1316	C1251	U1180	C1114	G1055
C2091	U1954	U1954	G1885	G1818	U1757	U1683	G1612	U1540	G1464	U1392	G1317	G1252	U1181	G1115	G1056
G2092	G1955	G1955	G1886	U1819	A1758	G1684	G1613	C1541	G1465	U1393	U1318	A1253	U1182	G1116	G1057
A2093	U1956	U1956	G1887	U1820	A1759	G1685	A1614	U1542	U1466	A1394	C1319	A1254	U1183	C1117	U1058
G2094	C1956	C1956	G1888	A1821	C1760	C1686	G1615	G1543	U1467	U1395	C1320	U1255	U1184	C1118	G1059
G2095	U1957	U1957	G1889	C1822	C1761	G1687	A1616	G1544	A1468	U1397	A1321	G1256	G1185	U1119	U1060
A2096	G1958	G1958	G1890	G1823	A1762	U1688	A1617	U1545	A1469	U1400	C1322	C1257	G1186	G1122	G1061
G2097	C1959	C1959	G1891	U1824	G1763	U1689	C1618	A1546	A1470	U1401	U1326	U1258	U1187	G1123	G1062
A2098	U1960	U1960	G1892	C1825	U1764	G1690	G1619	C1547	U1474	G1402	U1327	G1259	U1188	C1124	G1063
G2099	G1961	G1961	G1893	U1826	G1765	A1691	U1620	A1548	G1475	U1403	A1328	A1261	A1189	G1125	C1064
A2100	C1962	C1962	G1894	G1827	G1766	C1692	U1621	A1549	U1476	C1404	G1331	A1262	G1190	G1126	U1065
G2101	U1963	U1963	G1895	U1828	U1767	U1693	G1622	C1550	U1479	U1405	G1332	U1263	G1191	A1126	U1066
A2102	G1964	G1964	G1896	A1829	A1768	U1694	G1623	A1551	G1480	U1406	G1333	A1264	G1192	A1127	A1067
G2103	C1965	C1965	G1897	G1830	G1769	U1695	G1624	A1552	U1481	G1407	A1336	A1265	G1193	G1128	G1068
A2104	U1966	U1966	G1898	C1831	A1772	G1696	U1629	U1552	U1481	G1407	A1336	A1265	G1193	G1128	G1068



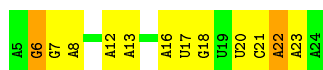
- Molecule 54: 5S ribosomal RNA

Chain 28: 25% 67% 8%

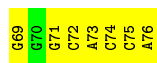
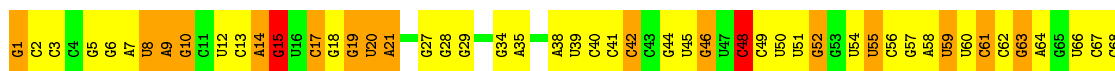
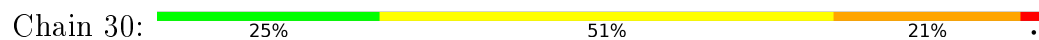


- Molecule 55: mRNA

Chain 29: 40% 50% 10%



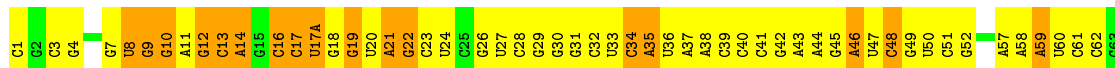
- Molecule 56: A-site tRNAPhe



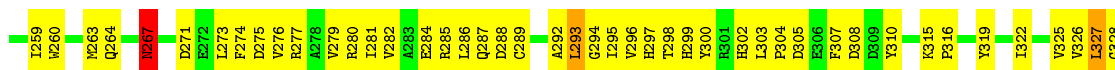
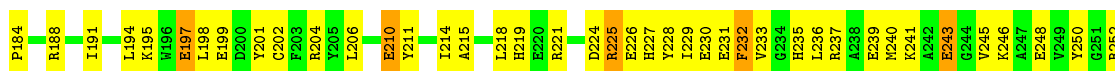
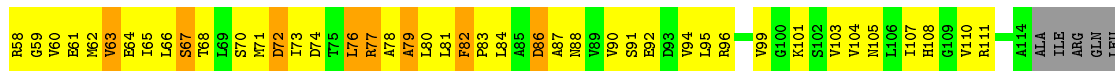
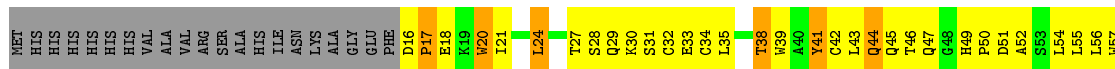
- Molecule 57: P-site tRNA^{fMet}



- Molecule 58: E-site tRNA^{fMet}



- Molecule 59: GTP pyrophosphokinase





4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	57430	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Not provided	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	Not provided	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	30488	Depositor
Image detector	Not provided	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	$\# Z > 2$	RMSZ	$\# Z > 2$
1	A	0.34	0/2121	0.70	0/2852
10	J	0.35	0/947	0.68	0/1268
11	K	0.36	0/1054	0.71	1/1403 (0.1%)
12	L	0.35	0/1093	0.64	0/1460
13	M	0.33	0/973	0.64	0/1301
14	N	0.32	0/902	0.63	0/1209
15	O	0.34	0/929	0.73	1/1242 (0.1%)
16	P	0.37	0/960	0.57	0/1278
17	Q	0.39	0/829	0.77	1/1107 (0.1%)
18	R	0.33	0/864	0.68	0/1156
19	S	0.34	0/744	0.66	0/994
2	B	0.37	0/1586	0.67	0/2134
20	T	0.35	0/787	0.76	1/1051 (0.1%)
21	U	0.36	0/766	0.63	0/1025
22	V	0.37	0/582	0.62	0/769
23	W	0.37	0/635	0.70	0/848
24	X	0.36	0/510	0.62	0/677
25	Y	0.34	0/453	0.62	0/605
26	Z	0.42	0/531	0.71	1/709 (0.1%)
27	1	0.35	0/450	0.72	0/599
28	2	0.37	0/416	0.60	0/554
29	3	0.41	0/380	0.64	0/498
3	C	0.39	0/1571	0.71	1/2113 (0.0%)
30	4	0.35	0/513	0.70	0/676
31	5	0.33	0/303	0.68	0/397
32	6	0.42	0/1735	0.68	1/2338 (0.0%)
33	7	0.35	0/1651	0.63	1/2225 (0.0%)
34	8	0.36	0/1665	0.64	0/2227
35	9	0.35	0/1169	0.69	0/1573
36	10	0.38	0/835	0.69	0/1128
37	11	0.34	0/1195	0.65	0/1602
38	12	0.34	0/989	0.68	0/1326
39	13	0.36	0/1034	0.72	0/1375
4	D	0.36	0/1434	0.66	0/1926

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
40	14	0.38	0/796	0.72	1/1077 (0.1%)
41	15	0.36	0/885	0.75	0/1195
42	16	0.36	0/969	0.76	3/1300 (0.2%)
43	17	0.32	0/892	0.62	0/1193
44	18	0.33	0/817	0.58	0/1088
45	19	0.33	0/722	0.60	0/964
46	20	0.39	0/659	0.67	0/884
47	21	0.36	0/657	0.71	0/881
48	22	0.38	0/544	0.73	0/731
49	23	0.37	0/652	0.70	1/877 (0.1%)
5	E	0.35	0/1343	0.69	0/1816
50	24	0.32	0/671	0.56	0/888
51	25	0.42	0/550	0.73	1/728 (0.1%)
52	26	0.55	1/36967 (0.0%)	0.71	3/57666 (0.0%)
53	27	0.60	1/69801 (0.0%)	0.72	10/108894 (0.0%)
54	28	0.45	1/2876 (0.0%)	0.69	1/4483 (0.0%)
55	29	0.63	0/486	0.67	0/757
56	30	0.67	1/1813 (0.1%)	0.78	1/2823 (0.0%)
57	31	0.49	1/1836 (0.1%)	0.69	1/2859 (0.0%)
58	32	0.87	1/1835 (0.1%)	0.78	0/2857
59	33	0.67	6/4985 (0.1%)	1.09	37/6770 (0.5%)
6	F	0.44	0/1122	0.64	0/1515
7	G	0.50	0/1001	0.79	2/1350 (0.1%)
8	H	0.49	0/1046	0.69	1/1410 (0.1%)
9	I	0.33	0/1152	0.63	0/1551
All	All	0.54	12/167683 (0.0%)	0.72	70/250202 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
52	26	0	16
53	27	0	37
56	30	0	2
58	32	0	1
59	33	0	2
All	All	0	58

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.57	1.19	1.33
59	33	152	LYS	CD-CE	-7.77	1.31	1.51
59	33	17	PRO	CA-CB	-7.25	1.39	1.53
57	31	1	C	OP3-P	-6.97	1.52	1.61
56	30	1	G	OP3-P	-6.93	1.52	1.61
53	27	1	G	OP3-P	-6.90	1.52	1.61
52	26	2	A	OP3-P	-6.89	1.52	1.61
54	28	1	U	OP3-P	-6.82	1.52	1.61
58	32	1	C	OP3-P	-6.72	1.53	1.61
59	33	20	TRP	NE1-CE2	-6.56	1.29	1.37
59	33	20	TRP	CG-CD1	-6.00	1.28	1.36
59	33	20	TRP	CD2-CE2	-5.19	1.35	1.41

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	33	156	ARG	NE-CZ-NH1	19.92	130.26	120.30
59	33	156	ARG	NH1-CZ-NH2	-13.88	104.13	119.40
59	33	17	PRO	N-CA-CB	-11.14	89.93	103.30
59	33	17	PRO	CA-CB-CG	10.28	124.33	104.80
59	33	63	VAL	CG1-CB-CG2	-9.24	96.12	110.90
59	33	156	ARG	NE-CZ-NH2	-9.19	115.71	120.30
56	30	15	G	N9-C1'-C2'	8.98	125.67	114.00
59	33	152	LYS	CD-CE-NZ	8.56	131.38	111.70
59	33	38	THR	CA-CB-CG2	-8.37	100.69	112.40
59	33	332	LYS	CA-CB-CG	8.33	131.72	113.40
59	33	197	GLU	OE1-CD-OE2	-8.24	113.41	123.30
59	33	232	PHE	CD1-CE1-CZ	7.83	129.49	120.10
59	33	24	LEU	CB-CG-CD2	-7.69	97.93	111.00
59	33	327	LEU	CD1-CG-CD2	-7.29	88.62	110.50
53	27	2502	G	N9-C1'-C2'	7.26	123.44	114.00
59	33	152	LYS	CB-CG-CD	-7.26	92.71	111.60
52	26	89	U	N1-C1'-C2'	7.19	123.35	114.00
59	33	17	PRO	CB-CA-C	-6.89	94.78	112.00
59	33	169	ASP	CB-CG-OD1	6.59	124.23	118.30
59	33	351	VAL	CB-CA-C	6.33	123.43	111.40
59	33	86	ASP	CB-CG-OD1	-6.30	112.63	118.30
59	33	225	ARG	NE-CZ-NH2	-6.10	117.25	120.30
59	33	469	PRO	N-CA-CB	6.08	110.60	103.30
51	25	20	ARG	N-CA-C	-6.03	94.73	111.00
59	33	170	GLU	OE1-CD-OE2	6.02	130.52	123.30
59	33	76	LEU	N-CA-CB	-5.94	98.53	110.40
59	33	79	ALA	CB-CA-C	5.93	118.99	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	27	421	C	N1-C1'-C2'	5.92	121.70	114.00
53	27	2287	A	N9-C1'-C2'	5.89	121.66	114.00
59	33	587	PRO	N-CA-CB	5.86	110.33	103.30
59	33	149	VAL	CA-CB-CG1	-5.82	102.17	110.90
42	16	22	ALA	N-CA-C	-5.81	95.32	111.00
59	33	77	ARG	NE-CZ-NH2	5.76	123.18	120.30
40	14	38	GLY	N-CA-C	5.74	127.44	113.10
53	27	1320	C	N1-C1'-C2'	5.74	121.46	114.00
59	33	82	PHE	CB-CG-CD2	5.65	124.76	120.80
59	33	225	ARG	NE-CZ-NH1	5.49	123.05	120.30
3	C	56	GLY	N-CA-C	5.49	126.82	113.10
53	27	301	G	N9-C1'-C2'	5.45	121.09	114.00
59	33	293	LEU	CB-CG-CD1	-5.43	101.76	111.00
32	6	32	GLY	N-CA-C	-5.42	99.55	113.10
17	Q	46	GLU	N-CA-C	5.38	125.53	111.00
59	33	243	GLU	OE1-CD-OE2	5.36	129.73	123.30
20	T	96	LYS	N-CA-C	-5.35	96.55	111.00
8	H	66	PHE	N-CA-C	5.35	125.44	111.00
59	33	232	PHE	CG-CD1-CE1	-5.34	114.93	120.80
57	31	19	G	N9-C1'-C2'	5.29	120.87	114.00
49	23	4	LEU	CA-CB-CG	5.29	127.46	115.30
59	33	210	GLU	CA-CB-CG	-5.27	101.81	113.40
42	16	105	GLY	N-CA-C	-5.25	99.97	113.10
53	27	746	U	N1-C1'-C2'	5.25	120.83	114.00
52	26	1504	G	N9-C1'-C2'	5.23	120.80	114.00
59	33	67	SER	O-C-N	-5.22	114.34	122.70
26	Z	41	HIS	N-CA-C	-5.20	96.96	111.00
33	7	105	VAL	N-CA-C	-5.20	96.97	111.00
53	27	2655	G	C1'-O4'-C4'	-5.19	105.75	109.90
59	33	161	ARG	NE-CZ-NH1	5.17	122.89	120.30
7	G	118	ILE	N-CA-C	-5.15	97.09	111.00
15	O	34	GLY	N-CA-C	-5.15	100.22	113.10
52	26	572	A	N9-C1'-C2'	5.12	120.66	114.00
53	27	2134	A	O4'-C1'-N9	5.12	112.29	108.20
59	33	471	PRO	N-CA-CB	5.11	109.44	103.30
59	33	197	GLU	CG-CD-OE2	5.06	128.43	118.30
53	27	1395	A	N9-C1'-C2'	5.05	120.57	114.00
11	K	93	ASN	N-CA-C	-5.05	97.36	111.00
59	33	555	GLN	N-CA-C	-5.05	97.37	111.00
42	16	115	LYS	N-CA-C	-5.03	97.42	111.00
53	27	2529	G	N9-C1'-C2'	5.03	120.53	114.00
7	G	107	GLU	N-CA-C	-5.01	97.48	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	28	87	U	N1-C1'-C2'	5.00	120.51	114.00

There are no chirality outliers.

All (58) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1055	A	Sidechain
52	26	1151	A	Sidechain
52	26	1167	A	Sidechain
52	26	117	G	Sidechain
52	26	1194	U	Sidechain
52	26	1299	A	Sidechain
52	26	1345	U	Sidechain
52	26	1504	G	Sidechain
52	26	159	G	Sidechain
52	26	239	U	Sidechain
52	26	266	G	Sidechain
52	26	438	U	Sidechain
52	26	529	G	Sidechain
52	26	820	U	Sidechain
52	26	898	G	Sidechain
53	27	1126	A	Sidechain
53	27	1186	G	Sidechain
53	27	1241	A	Sidechain
53	27	1251	C	Sidechain
53	27	1663	G	Sidechain
53	27	1769	U	Sidechain
53	27	1784	A	Sidechain
53	27	1802	A	Sidechain
53	27	1937	A	Sidechain
53	27	196	A	Sidechain
53	27	1961	C	Sidechain
53	27	1981	A	Sidechain
53	27	1982	U	Sidechain
53	27	1993	U	Sidechain
53	27	2139	U	Sidechain
53	27	214	G	Sidechain
53	27	2155	U	Sidechain
53	27	2187	U	Sidechain
53	27	2273	A	Sidechain
53	27	2489	U	Sidechain

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Mol	Chain	Res	Type	Group
53	27	2516	A	Sidechain
53	27	2518	A	Sidechain
53	27	2529	G	Sidechain
53	27	2532	G	Sidechain
53	27	26	G	Sidechain
53	27	2688	G	Sidechain
53	27	2692	G	Sidechain
53	27	27	G	Sidechain
53	27	446	G	Sidechain
53	27	463	G	Sidechain
53	27	488	G	Sidechain
53	27	512	G	Sidechain
53	27	562	U	Sidechain
53	27	683	U	Sidechain
53	27	734	A	Sidechain
53	27	800	A	Sidechain
53	27	975	A	Sidechain
56	30	15	G	Sidechain
56	30	48	C	Sidechain
58	32	46	A	Sidechain
59	33	156	ARG	Sidechain
59	33	41	TYR	Sidechain

5.2 Too-close contacts ⓘ

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	166	0
2	B	1565	0	1616	126	0
3	C	1552	0	1619	123	0
4	D	1410	0	1447	111	0
5	E	1323	0	1374	81	0
6	F	1111	0	1148	85	0
7	G	988	0	1025	114	0
8	H	1032	0	1088	101	0
9	I	1129	0	1162	73	0
10	J	938	0	1012	59	0
11	K	1045	0	1117	85	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	L	1074	0	1157	67	0
13	M	960	0	1000	65	0
14	N	892	0	923	68	0
15	O	917	0	965	75	0
16	P	947	0	1022	82	0
17	Q	816	0	839	86	0
18	R	857	0	922	47	0
19	S	738	0	807	48	0
20	T	779	0	834	50	0
21	U	753	0	780	49	0
22	V	575	0	592	35	0
23	W	625	0	655	39	0
24	X	509	0	543	33	0
25	Y	449	0	491	18	0
26	Z	522	0	521	46	0
27	1	444	0	461	39	0
28	2	409	0	440	25	0
29	3	377	0	418	35	0
30	4	504	0	574	41	0
31	5	302	0	343	33	0
32	6	1704	0	1732	105	0
33	7	1624	0	1699	111	0
34	8	1643	0	1710	145	0
35	9	1156	0	1199	122	0
36	10	817	0	808	74	0
37	11	1181	0	1240	74	0
38	12	979	0	1034	70	0
39	13	1022	0	1070	109	0
40	14	786	0	828	82	0
41	15	869	0	878	90	0
42	16	955	0	1019	97	0
43	17	883	0	944	77	0
44	18	805	0	847	104	0
45	19	714	0	737	31	0
46	20	649	0	666	70	0
47	21	648	0	691	64	0
48	22	535	0	552	51	0
49	23	637	0	665	55	0
50	24	665	0	714	60	0
51	25	544	0	579	72	0
52	26	33016	0	16617	1357	0
53	27	62322	0	31345	2394	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	28	2572	0	1302	112	0
55	29	432	0	218	15	0
56	30	1623	0	821	58	0
57	31	1644	0	836	33	0
58	32	1643	0	836	78	0
59	33	4911	0	4550	627	0
All	All	154603	0	105189	7602	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 29.

All (7602) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:188:ARG:NH1	59:33:377:LEU:HA	1.23	1.40
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.16
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.58	1.15
34:8:84:ASN:HD22	34:8:87:GLU:HG3	0.98	1.15
59:33:188:ARG:NH1	59:33:377:LEU:CA	2.09	1.14
36:10:6:ILE:HD11	36:10:71:ILE:HD11	1.28	1.12
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.11
56:30:41:C:H2'	56:30:42:C:H5''	1.29	1.10
40:14:7:ARG:HH12	52:26:1125:U:H4'	1.17	1.09
53:27:45:G:H5''	53:27:46:G:H5'	1.14	1.08
26:Z:61:ASN:HA	26:Z:64:PHE:HB2	1.24	1.08
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.08
7:G:62:ARG:HH12	53:27:1106:G:H5''	0.94	1.07
53:27:2092:U:H4'	53:27:2093:G:H5''	1.35	1.07
29:3:7:PRO:HB2	53:27:1309:G:H4'	1.37	1.06
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.06
9:I:81:ILE:HG23	9:I:82:GLY:H	1.14	1.05
54:28:3:C:H2'	54:28:4:C:H5''	1.31	1.04
56:30:7:A:H3'	56:30:8:U:H5''	1.38	1.03
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.92	1.03
51:25:9:GLU:HG2	51:25:10:PRO:HD3	1.40	1.03
59:33:188:ARG:HH12	59:33:377:LEU:CA	1.71	1.02
11:K:95:LEU:HD22	11:K:100:ILE:HD11	1.35	1.02
11:K:18:ARG:HH22	53:27:1249:U:H2'	1.24	1.01
53:27:275:C:H2'	53:27:276:U:H4'	1.38	1.01
34:8:190:LEU:HD12	34:8:192:ALA:H	1.24	1.01
57:31:75:C:H3'	57:31:76:A:H5''	1.42	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:97:ASN:HB2	3:C:100:MET:HG2	1.43	1.01
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	1.00
53:27:1868:C:H3'	53:27:1869:G:H5''	1.40	1.00
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.24	0.99
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	0.99
29:3:34:ARG:HE	29:3:39:ARG:HD2	1.22	0.99
17:Q:65:ALA:HB3	17:Q:95:ASP:HB2	1.43	0.99
3:C:127:GLU:HB2	3:C:133:LEU:HD13	1.43	0.99
48:22:11:ARG:HD3	52:26:845:A:H1'	1.44	0.99
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.98
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.98
59:33:696:GLY:HA3	59:33:713:THR:H	1.29	0.97
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.47	0.97
7:G:62:ARG:NH1	53:27:1106:G:H5''	1.78	0.97
34:8:30:LYS:HD3	52:26:429:U:H6	1.29	0.97
13:M:2:ARG:HA	13:M:5:LYS:HD3	1.47	0.96
37:11:111:GLY:HA2	37:11:118:ARG:HD3	1.47	0.96
43:17:38:ILE:HD11	43:17:51:GLN:HB3	1.47	0.96
34:8:84:ASN:ND2	34:8:87:GLU:HG3	1.80	0.96
53:27:2629:U:O2'	53:27:2630:G:H5''	1.65	0.95
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.47	0.95
58:32:69:C:H2'	58:32:70:G:H5''	1.48	0.95
53:27:1801:A:H5''	53:27:2203:U:H2'	1.49	0.95
59:33:574:ALA:HB2	59:33:680:LEU:HD21	1.46	0.95
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.95
42:16:73:LEU:HD21	42:16:79:ILE:HG21	1.47	0.94
53:27:1304:A:H2'	53:27:1305:C:H5''	1.48	0.94
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.94
59:33:95:LEU:O	59:33:99:VAL:HG12	1.66	0.94
52:26:1130:A:H61	52:26:1144:G:H1'	1.29	0.94
16:P:3:VAL:HG22	53:27:1199:U:H1'	1.49	0.94
37:11:69:ARG:HG2	37:11:95:ARG:HG2	1.46	0.94
53:27:1936:A:H2	53:27:1943:U:H3	1.06	0.94
16:P:54:ARG:HE	53:27:1155:A:H5''	1.33	0.93
52:26:1206:G:H2'	52:26:1207:G:H5''	1.50	0.93
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.93
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.50	0.93
6:F:76:GLU:HA	6:F:142:VAL:HG13	1.51	0.93
50:24:23:ARG:HH21	52:26:176:C:H5''	1.32	0.93
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.93
32:6:33:ALA:HB2	32:6:39:ILE:HG13	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:86:LEU:HD23	21:U:89:ILE:HD11	1.50	0.93
48:22:33:THR:HG23	48:22:35:SER:H	1.34	0.93
56:30:51:U:H2'	56:30:52:G:C8	2.04	0.92
56:30:54:U:H3'	56:30:55:U:H5''	1.51	0.92
2:B:5:VAL:H	2:B:32:ASN:HD21	1.03	0.92
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.52	0.92
53:27:2443:C:H2'	53:27:2444:G:H8	1.33	0.92
9:I:80:HIS:HD1	9:I:81:ILE:HG22	1.33	0.92
54:28:65:U:H3'	54:28:108:A:H61	1.32	0.92
1:A:180:MET:HB2	1:A:268:ARG:HB3	1.52	0.91
52:26:411:A:H61	52:26:430:A:H62	1.17	0.91
18:R:73:LYS:HB2	18:R:106:VAL:HB	1.51	0.91
53:27:1454:C:HO2'	53:27:1455:G:H8	1.12	0.90
7:G:62:ARG:HH12	53:27:1106:G:C5'	1.83	0.90
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.90
52:26:1412:C:H2'	52:26:1413:A:H8	1.35	0.90
53:27:807:U:H2'	53:27:808:G:H8	1.36	0.90
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.90
26:Z:42:PRO:HB2	26:Z:46:GLY:HA3	1.51	0.90
59:33:670:ARG:HB2	59:33:741:LEU:HD12	1.50	0.90
48:22:11:ARG:HG3	48:22:12:PHE:H	1.37	0.90
35:9:137:ARG:HH12	52:26:1078:U:H4'	1.34	0.90
53:27:581:C:H2'	53:27:582:A:C8	2.07	0.90
53:27:821:A:H5''	53:27:822:G:H5''	1.52	0.90
6:F:97:ARG:HH11	6:F:112:LYS:HD2	1.37	0.90
53:27:2111:U:H3	53:27:2147:A:H1'	1.38	0.89
53:27:612:G:H1'	53:27:616:A:H61	1.35	0.89
53:27:1664:A:H61	53:27:1996:C:H42	1.18	0.89
10:J:65:THR:HG22	10:J:67:LYS:H	1.36	0.89
27:1:37:HIS:HB3	27:1:43:THR:HG22	1.54	0.89
53:27:2208:C:H2'	53:27:2209:G:C8	2.08	0.89
58:32:36:U:H2'	58:32:37:A:H5'	1.54	0.89
31:5:19:ARG:HH12	31:5:26:ILE:HD11	1.38	0.89
53:27:581:C:H2'	53:27:582:A:H8	1.38	0.88
42:16:98:ARG:HH21	42:16:106:VAL:HA	1.35	0.88
52:26:1512:U:H2'	52:26:1513:A:C8	2.08	0.88
10:J:121:GLU:HG2	10:J:122:VAL:HG23	1.55	0.88
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.35	0.88
46:20:14:ARG:HH12	52:26:618:C:H1'	1.38	0.88
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.55	0.88
39:13:23:GLY:H	39:13:60:LEU:HA	1.39	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:3:C:C2'	54:28:4:C:H5''	2.03	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.88
53:27:582:A:H2'	53:27:583:G:C8	2.09	0.88
3:C:143:LEU:HB3	3:C:146:VAL:HG11	1.53	0.88
14:N:49:VAL:HG21	14:N:82:ALA:HA	1.56	0.88
42:16:109:ARG:NH1	52:26:537:G:H5''	1.89	0.88
59:33:676:ARG:HG3	59:33:677:SER:H	1.35	0.88
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.87
53:27:690:G:H2'	53:27:691:C:H6	1.38	0.87
59:33:62:MET:HE3	59:33:79:ALA:HA	1.56	0.87
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.87
53:27:2604:U:H2'	53:27:2605:U:H6	1.40	0.87
35:9:83:PRO:HB3	35:9:96:GLN:HG3	1.55	0.87
56:30:41:C:C2'	56:30:42:C:H5''	2.04	0.87
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.87
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.87
52:26:767:A:H2'	52:26:768:A:H8	1.39	0.87
12:L:53:MET:HE3	12:L:63:ILE:HD13	1.55	0.87
18:R:29:VAL:HG11	18:R:55:ILE:HD11	1.55	0.87
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.87
53:27:2537:U:H2'	53:27:2538:C:C6	2.10	0.87
54:28:44:G:H1'	54:28:47:C:H42	1.39	0.87
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.87
29:3:34:ARG:NE	29:3:39:ARG:HD2	1.88	0.86
10:J:103:VAL:HG12	10:J:104:THR:H	1.39	0.86
53:27:878:A:H3'	53:27:879:G:H8	1.40	0.86
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.86
52:26:695:A:H2'	52:26:696:A:C8	2.10	0.86
38:12:11:THR:HG21	52:26:876:C:H1'	1.56	0.86
53:27:1326:U:H2'	53:27:1327:A:H8	1.39	0.86
58:32:46:A:H2'	58:32:47:U:H5''	1.58	0.86
8:H:108:ILE:O	8:H:112:LYS:HB3	1.75	0.86
53:27:1779:U:H5''	53:27:1780:A:H5''	1.58	0.86
45:19:71:ARG:NH2	52:26:754:C:H5'	1.91	0.86
54:28:88:C:H5''	54:28:89:U:OP1	1.76	0.86
53:27:1434:A:H2'	53:27:1435:G:C8	2.08	0.86
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.86
53:27:1857:G:H1'	53:27:1885:A:H61	1.39	0.86
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.86
43:17:25:GLY:H	52:26:1329:A:H5''	1.37	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:5:ARG:NH2	52:26:128:G:H5'	1.90	0.85
11:K:61:LEU:HA	30:4:26:ALA:HB2	1.58	0.85
39:13:51:LEU:HD11	39:13:62:LEU:HD11	1.58	0.85
53:27:2508:G:H2'	53:27:2509:G:H8	1.40	0.85
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
8:H:73:PRO:HB2	8:H:78:LEU:HD11	1.58	0.85
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.12	0.85
6:F:78:VAL:HG21	6:F:103:VAL:HG22	1.58	0.85
41:15:88:PRO:HD3	51:25:28:LEU:HD13	1.57	0.85
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.85
36:10:88:MET:HG2	48:22:64:LEU:HD21	1.58	0.85
4:D:130:GLY:HA3	53:27:2305:U:H5''	1.58	0.85
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.85
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
4:D:114:ARG:HE	43:17:70:ARG:HH21	1.25	0.85
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.85
27:1:54:ILE:HG23	27:1:56:LYS:H	1.41	0.85
26:Z:66:ILE:HD11	44:18:38:GLU:HA	1.58	0.85
53:27:582:A:H2'	53:27:583:G:H8	1.40	0.85
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.84
52:26:1130:A:N6	52:26:1144:G:HI'	1.93	0.84
52:26:1259:C:H3'	52:26:1260:G:H5''	1.58	0.84
53:27:2136:G:O6	53:27:2156:G:HI'	1.78	0.84
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.58	0.84
53:27:528:A:C2	53:27:2042:A:H2'	2.13	0.84
53:27:955:U:H5	53:27:962:G:H1	1.24	0.84
41:15:121:ARG:HH21	51:25:35:GLU:HG2	1.43	0.84
52:26:1062:U:H2'	52:26:1063:C:C6	2.12	0.84
44:18:60:ARG:HG2	52:26:981:U:H4'	1.58	0.84
52:26:628:G:H2'	52:26:629:A:H8	1.43	0.84
52:26:1144:G:H21	52:26:1146:A:H62	1.22	0.83
52:26:405:U:H3'	52:26:406:G:H5'	1.58	0.83
34:8:8:LEU:HD21	34:8:31:CYS:HB3	1.60	0.83
40:14:57:VAL:HG22	40:14:58:ASN:H	1.42	0.83
52:26:714:G:H2'	52:26:715:A:C8	2.13	0.83
52:26:628:G:H2'	52:26:629:A:C8	2.14	0.83
41:15:34:THR:HG22	41:15:40:ALA:HA	1.60	0.83
43:17:100:ARG:HH22	52:26:950:U:H3'	1.44	0.83
5:E:176:LYS:HD3	53:27:2660:A:N6	1.92	0.83
59:33:463:ILE:HD12	59:33:463:ILE:H	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:62:PRO:HD3	30:4:26:ALA:HB2	1.61	0.83
44:18:12:ARG:HD3	44:18:58:ARG:O	1.77	0.83
23:W:17:ARG:NE	23:W:23:ALA:HB2	1.94	0.83
53:27:1101:U:H2'	53:27:1102:C:H5'	1.59	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
8:H:109:ALA:O	8:H:113:ALA:HB3	1.78	0.82
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.79	0.82
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
34:8:97:LEU:HB2	34:8:134:TYR:HB3	1.61	0.82
9:I:81:ILE:HG23	9:I:82:GLY:N	1.92	0.82
40:14:5:ARG:HG2	40:14:79:PRO:HB3	1.61	0.82
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.42	0.82
52:26:960:U:H4'	52:26:961:U:O5'	1.80	0.82
59:33:188:ARG:HH11	59:33:377:LEU:HA	1.41	0.82
53:27:1111:A:O2'	53:27:1112:G:H4'	1.79	0.82
49:23:31:ARG:HD3	59:33:602:VAL:HG21	1.61	0.82
22:V:62:LYS:HB3	22:V:79:GLU:HB3	1.62	0.82
2:B:49:GLN:NE2	2:B:79:LEU:HD13	1.95	0.82
52:26:1219:A:H2'	52:26:1220:G:H8	1.45	0.82
8:H:85:ILE:HD13	8:H:137:LEU:HD21	1.62	0.82
38:12:80:PRO:HG2	52:26:878:A:H5''	1.62	0.81
53:27:184:C:H2'	53:27:185:G:H8	1.44	0.81
53:27:2604:U:H2'	53:27:2605:U:C6	2.14	0.81
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.81
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.62	0.81
53:27:1821:A:H2'	53:27:1822:C:C6	2.15	0.81
52:26:1219:A:H2'	52:26:1220:G:C8	2.15	0.81
35:9:107:GLY:HA3	52:26:9:G:H5'	1.63	0.81
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.61	0.81
52:26:1171:A:H2'	52:26:1172:C:C6	2.15	0.81
52:26:392:C:H2'	52:26:393:A:H8	1.45	0.81
53:27:2443:C:H2'	53:27:2444:G:C8	2.13	0.81
40:14:62:ARG:HH12	52:26:1367:C:H5'	1.45	0.81
19:S:2:ILE:HD11	53:27:144:A:H5''	1.62	0.81
52:26:352:C:H4'	52:26:354:G:OP1	1.79	0.81
53:27:1300:G:H4'	53:27:1301:A:H5'	1.62	0.81
1:A:149:LYS:HD3	53:27:2204:G:H4'	1.60	0.81
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.81	0.81
59:33:599:VAL:HA	59:33:655:ALA:HB2	1.61	0.81
53:27:2174:C:H2'	53:27:2175:C:H5'	1.61	0.81
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1352:C:H2'	52:26:1353:G:C8	2.15	0.81
40:14:8:ILE:HB	40:14:74:VAL:HB	1.60	0.80
53:27:807:U:H2'	53:27:808:G:C8	2.15	0.80
59:33:696:GLY:HA3	59:33:713:THR:N	1.95	0.80
8:H:88:GLY:HA3	53:27:1063:G:O2'	1.81	0.80
53:27:2817:U:H3'	53:27:2818:U:H5''	1.61	0.80
8:H:55:PRO:HD3	8:H:74:PRO:HD3	1.62	0.80
52:26:1412:C:H2'	52:26:1413:A:C8	2.16	0.80
52:26:85:U:H5''	52:26:86:G:H5'	1.63	0.80
53:27:884:U:H4'	59:33:612:CYS:SG	2.22	0.80
4:D:43:ILE:HG21	4:D:78:ILE:HG22	1.64	0.80
6:F:32:PRO:HB3	23:W:38:TRP:HB2	1.61	0.80
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.44	0.80
54:28:93:C:H2'	54:28:94:A:H8	1.46	0.80
42:16:73:LEU:HD11	42:16:103:CYS:HA	1.63	0.80
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.80
36:10:51:ILE:HD13	36:10:86:ARG:HH12	1.47	0.80
37:11:113:LYS:NZ	52:26:1297:G:H1'	1.96	0.80
57:31:75:C:H3'	57:31:76:A:C5'	2.11	0.80
59:33:188:ARG:HH11	59:33:377:LEU:CA	1.94	0.80
15:O:29:VAL:HG13	15:O:79:VAL:HG22	1.61	0.80
9:I:35:ARG:HA	9:I:40:HIS:HD2	1.46	0.80
53:27:2788:C:H2'	53:27:2789:C:C6	2.16	0.80
3:C:146:VAL:HG12	3:C:185:LYS:HB2	1.64	0.80
6:F:27:ARG:HE	23:W:55:MET:HE2	1.46	0.80
31:5:36:ARG:HG2	31:5:37:GLN:N	1.98	0.79
52:26:35:G:H2'	52:26:36:C:C6	2.17	0.79
52:26:56:U:H2'	52:26:57:G:H8	1.46	0.79
37:11:50:ALA:HB2	37:11:57:GLU:HG2	1.64	0.79
53:27:878:A:H3'	53:27:879:G:C8	2.16	0.79
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.65	0.79
59:33:721:VAL:HG13	59:33:724:ARG:HE	1.47	0.79
41:15:87:GLY:N	41:15:113:THR:HG22	1.98	0.79
52:26:1206:G:C2'	52:26:1207:G:H5''	2.11	0.79
53:27:1503:A:H3'	53:27:1504:A:H5''	1.63	0.79
53:27:851:C:H2'	53:27:852:U:C6	2.17	0.79
11:K:57:LEU:HB2	11:K:60:ARG:HH11	1.45	0.79
17:Q:6:GLN:HE21	17:Q:9:GLY:HA2	1.47	0.79
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.79
51:25:36:PHE:HB2	51:25:39:LYS:HB3	1.64	0.79
53:27:1293:C:H2'	53:27:1294:U:H5''	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2060:A:H3'	53:27:2060:A:N3	1.97	0.79
53:27:2188:U:H2'	53:27:2189:U:O4'	1.82	0.79
50:24:55:PRO:HG2	50:24:56:ILE:HD12	1.65	0.79
52:26:835:U:H2'	52:26:836:G:H5''	1.62	0.79
53:27:1061:U:H5'	53:27:1070:A:H1'	1.62	0.79
53:27:848:C:H2'	53:27:849:A:H8	1.48	0.78
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
40:14:36:VAL:HG22	40:14:38:GLY:H	1.48	0.78
52:26:1170:A:H2'	52:26:1171:A:O4'	1.83	0.78
52:26:673:A:H2'	52:26:674:G:C8	2.18	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.83	0.78
53:27:2292:U:H2'	53:27:2293:G:H8	1.48	0.78
13:M:30:ARG:HH11	13:M:75:ILE:HD11	1.47	0.78
46:20:67:ILE:H	46:20:67:ILE:HD12	1.48	0.78
53:27:2296:U:H5''	53:27:2297:A:OP1	1.83	0.78
54:28:95:U:H2'	54:28:96:G:C8	2.18	0.78
16:P:27:ARG:HH12	53:27:532:A:H5''	1.46	0.78
48:22:17:VAL:HG12	48:22:18:GLN:HG3	1.64	0.78
46:20:6:LEU:HD22	46:20:17:TYR:HB3	1.64	0.78
47:21:5:ARG:HH22	52:26:128:G:H5'	1.48	0.78
12:L:45:GLN:NE2	53:27:2485:G:H5''	1.98	0.78
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.19	0.78
1:A:77:VAL:HG21	1:A:109:LEU:HD11	1.65	0.78
41:15:33:ILE:HG22	41:15:41:LEU:HD12	1.65	0.78
41:15:126:ARG:NH2	52:26:692:U:H5''	1.98	0.78
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.78
12:L:33:LEU:HD11	12:L:121:ALA:HB2	1.66	0.78
13:M:96:ARG:HH22	13:M:116:VAL:HG13	1.49	0.78
19:S:8:LEU:HD22	24:X:22:LEU:HA	1.65	0.78
50:24:28:ARG:O	50:24:32:LYS:HG2	1.83	0.78
28:2:46:VAL:HG12	28:2:47:ILE:H	1.48	0.78
53:27:546:U:H2'	53:27:547:A:C8	2.19	0.78
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.78
20:T:27:VAL:HA	20:T:33:VAL:HG12	1.64	0.78
38:12:28:SER:HB2	38:12:58:LEU:HB2	1.66	0.78
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.64	0.78
53:27:193:U:H2'	53:27:194:G:H8	1.47	0.78
35:9:63:MET:HB3	35:9:67:ARG:HH12	1.48	0.78
7:G:3:LEU:HD12	7:G:5:LEU:H	1.49	0.78
9:I:81:ILE:CG2	9:I:82:GLY:H	1.96	0.78
41:15:84:MET:HG2	41:15:110:THR:HB	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:66:THR:HB	52:26:1202:U:O2'	1.84	0.78
52:26:112:G:H21	52:26:354:G:H5'	1.49	0.78
52:26:1088:G:H21	52:26:1167:A:H61	1.30	0.78
20:T:45:GLN:O	53:27:483:A:H4'	1.83	0.78
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.78
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.78
52:26:549:C:H2'	52:26:550:G:H5''	1.65	0.77
53:27:1434:A:H2'	53:27:1435:G:H8	1.49	0.77
56:30:7:A:H3'	56:30:8:U:C5'	2.12	0.77
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.77
31:5:33:HIS:O	31:5:35:GLN:HG3	1.84	0.77
9:I:65:THR:HG22	9:I:66:GLY:H	1.48	0.77
46:20:10:GLY:HA2	52:26:624:C:H4'	1.66	0.77
43:17:100:ARG:NH2	52:26:950:U:H3'	1.99	0.77
53:27:1341:G:H2'	53:27:1397:U:O2	1.84	0.77
58:32:38:A:H2'	58:32:39:C:O4'	1.84	0.77
52:26:151:A:H2'	52:26:152:A:O4'	1.85	0.77
53:27:1096:A:H3'	53:27:1097:U:H5''	1.63	0.77
53:27:1584:U:H2'	53:27:1585:C:H5'	1.66	0.77
53:27:215:G:H4'	53:27:216:A:H4'	1.66	0.77
52:26:830:G:H2'	52:26:831:A:H8	1.49	0.77
53:27:580:U:H2'	53:27:581:C:C6	2.20	0.77
58:32:69:C:C2'	58:32:70:G:H5''	2.13	0.77
35:9:22:LYS:HB3	35:9:29:ILE:HG22	1.65	0.77
3:C:105:LEU:HD23	3:C:108:ILE:HD12	1.67	0.77
52:26:1397:C:N4	55:29:22:A:H2'	1.99	0.77
53:27:2114:A:H3'	53:27:2115:G:H5''	1.66	0.77
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.77
6:F:9:VAL:HB	6:F:13:GLY:HA2	1.67	0.77
50:24:73:ARG:HH22	52:26:263:A:P	2.08	0.77
54:28:44:G:H1'	54:28:47:C:N4	1.99	0.77
58:32:65:C:H2'	58:32:66:C:C6	2.19	0.77
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.67	0.77
32:6:156:LEU:HD11	32:6:178:LEU:HD13	1.66	0.77
2:B:5:VAL:H	2:B:32:ASN:ND2	1.81	0.77
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.67	0.77
9:I:140:LEU:HD23	9:I:141:ASP:N	2.00	0.77
18:R:83:LYS:HD3	18:R:95:ARG:HH12	1.49	0.77
41:15:23:HIS:HB3	41:15:30:ILE:HB	1.65	0.77
52:26:1305:G:HO2'	52:26:1306:A:H8	1.31	0.77
53:27:1304:A:C2'	53:27:1305:C:H5''	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.64	0.77
39:13:33:SER:HB3	39:13:36:GLN:HG2	1.66	0.77
34:8:205:LYS:HA	52:26:8:A:N7	2.00	0.77
7:G:11:ILE:HD12	7:G:66:GLY:HA3	1.65	0.77
53:27:779:U:H2'	53:27:780:G:C8	2.20	0.77
39:13:123:ARG:HD3	39:13:124:PRO:HD2	1.67	0.76
52:26:212:G:H2'	52:26:213:G:H8	1.50	0.76
52:26:70:U:H5''	52:26:71:A:OP1	1.83	0.76
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.76
41:15:126:ARG:HH21	52:26:692:U:H5''	1.48	0.76
44:18:100:TRP:HZ2	52:26:1368:A:H5''	1.50	0.76
45:19:69:LEU:HD11	45:19:76:ARG:HD2	1.67	0.76
50:24:9:ARG:HG2	52:26:108:G:N1	2.00	0.76
39:13:123:ARG:HB3	52:26:1343:G:H4'	1.67	0.76
53:27:2065:C:H2'	53:27:2066:C:C6	2.20	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
44:18:92:ILE:HD12	44:18:92:ILE:H	1.50	0.76
53:27:184:C:H2'	53:27:185:G:C8	2.19	0.76
53:27:283:G:H3'	53:27:284:U:H5''	1.68	0.76
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.67	0.76
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.76
34:8:131:ILE:HD12	34:8:134:TYR:HB2	1.64	0.76
35:9:137:ARG:NH1	52:26:1078:U:H4'	2.00	0.76
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.66	0.76
41:15:17:ASP:HB2	41:15:36:ARG:HH22	1.51	0.76
52:26:884:U:H4'	52:26:885:G:H5''	1.68	0.76
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.76
7:G:114:GLU:HG3	7:G:115:GLY:H	1.50	0.76
37:11:142:ARG:HD2	58:32:41:C:O2'	1.85	0.76
52:26:1305:G:H22	52:26:1331:G:H2'	1.50	0.76
52:26:516:U:H5	52:26:533:A:H62	1.34	0.76
8:H:72:THR:HG21	8:H:112:LYS:HA	1.68	0.76
12:L:42:THR:HA	12:L:93:VAL:HG12	1.66	0.76
36:10:42:TRP:HB2	36:10:59:TYR:HB2	1.67	0.76
40:14:7:ARG:NH1	52:26:1125:U:H4'	1.96	0.76
53:27:612:G:H1'	53:27:616:A:N6	2.00	0.76
11:K:93:ASN:O	11:K:95:LEU:N	2.18	0.76
2:B:118:PHE:HB2	53:27:2823:A:OP1	1.86	0.76
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:33:LEU:HD12	12:L:117:PHE:HB3	1.68	0.76
53:27:1141:U:H4'	53:27:1142:A:O4'	1.86	0.76
53:27:1857:G:H1'	53:27:1885:A:N6	2.01	0.76
53:27:598:U:H2'	53:27:599:A:C8	2.20	0.76
52:26:473:U:H2'	52:26:474:G:C8	2.21	0.76
52:26:767:A:H2'	52:26:768:A:C8	2.20	0.76
34:8:30:LYS:HD3	52:26:429:U:C6	2.19	0.76
12:L:12:MET:HA	53:27:910:A:H62	1.50	0.76
39:13:4:GLN:HE22	52:26:1131:G:H5'	1.50	0.76
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.76
52:26:664:G:H22	52:26:741:G:H1	1.33	0.75
38:12:85:TYR:CE1	38:12:123:GLU:HB2	2.21	0.75
53:27:2329:U:H2'	53:27:2330:G:C8	2.20	0.75
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.75
59:33:368:SER:HA	59:33:409:PHE:CE2	2.21	0.75
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.01	0.75
52:26:114:U:H2'	52:26:115:G:C8	2.21	0.75
52:26:20:U:H2'	52:26:21:G:O4'	1.85	0.75
52:26:32:A:H2'	52:26:33:A:C8	2.21	0.75
58:32:59:A:H5"	58:32:60:U:C5	2.22	0.75
6:F:44:ILE:O	6:F:48:GLU:HG3	1.86	0.75
17:Q:40:MET:HG3	17:Q:48:LYS:HA	1.67	0.75
21:U:30:ILE:HG13	21:U:40:ILE:HG13	1.69	0.75
7:G:67:THR:HG21	7:G:74:ASP:HB2	1.68	0.75
53:27:1181:U:H2'	53:27:1182:G:C8	2.22	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.87	0.75
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.50	0.75
48:22:70:THR:HG23	48:22:71:ASP:H	1.52	0.75
53:27:1550:C:H2'	53:27:1551:A:C8	2.21	0.75
53:27:2816:G:H2'	53:27:2817:U:C6	2.22	0.75
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.75
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.75
35:9:149:PRO:O	35:9:152:VAL:HG22	1.87	0.75
46:20:46:LYS:HG3	46:20:48:GLU:H	1.52	0.75
52:26:1432:G:H1'	52:26:1468:A:N6	2.02	0.75
53:27:2486:C:H2'	53:27:2487:G:H5"	1.69	0.75
53:27:310:A:C2'	53:27:311:A:H5"	2.17	0.75
59:33:634:HIS:HB3	59:33:641:LEU:HD22	1.69	0.75
33:7:64:ARG:HG2	33:7:99:GLN:HB2	1.68	0.75
35:9:105:ILE:HD11	35:9:123:LEU:HA	1.66	0.75
22:V:39:THR:H	53:27:2331:G:H4'	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:35:ARG:HA	9:I:40:HIS:CD2	2.22	0.75
52:26:1513:A:H2'	52:26:1514:G:H8	1.51	0.75
2:B:48:ILE:HG12	2:B:84:LEU:HD11	1.68	0.75
9:I:80:HIS:ND1	9:I:81:ILE:HG22	2.02	0.75
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.68	0.74
34:8:120:LYS:HE3	52:26:439:U:H4'	1.69	0.74
53:27:2230:G:H2'	53:27:2231:U:C6	2.22	0.74
53:27:2498:C:O2'	53:27:2499:C:H5'	1.87	0.74
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.46	0.74
53:27:2591:C:H2'	53:27:2592:G:H8	1.52	0.74
53:27:690:G:H2'	53:27:691:C:C6	2.22	0.74
33:7:84:GLU:HA	33:7:87:ARG:HG2	1.68	0.74
38:12:9:MET:HB2	38:12:26:MET:SD	2.27	0.74
40:14:89:ARG:HH12	40:14:90:LEU:HD12	1.52	0.74
52:26:337:G:H2'	52:26:338:A:C8	2.23	0.74
52:26:50:A:H4'	52:26:51:A:H5'	1.67	0.74
53:27:2287:A:O2'	53:27:2288:A:H2'	1.86	0.74
53:27:2328:A:H2'	53:27:2329:U:C6	2.21	0.74
29:3:24:THR:HG23	29:3:27:GLY:H	1.52	0.74
59:33:188:ARG:HH12	59:33:377:LEU:HA	0.81	0.74
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.74
41:15:87:GLY:H	41:15:113:THR:HG22	1.48	0.74
52:26:473:U:H2'	52:26:474:G:H8	1.51	0.74
53:27:2646:C:H2'	53:27:2647:U:O4'	1.88	0.74
53:27:2340:A:H5'	54:28:41:G:H21	1.53	0.74
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.74
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.74
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.69	0.74
16:P:35:PHE:CZ	16:P:39:ILE:HD11	2.23	0.74
46:20:61:VAL:HG22	46:20:67:ILE:HD11	1.67	0.74
54:28:104:A:H2'	54:28:105:G:O4'	1.88	0.74
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.22	0.74
37:11:113:LYS:HZ1	52:26:1297:G:H1'	1.50	0.74
39:13:113:LYS:HG3	39:13:119:LYS:HA	1.70	0.74
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.68	0.74
40:14:28:THR:HG22	40:14:86:ALA:HB1	1.69	0.74
53:27:1331:G:O2'	53:27:1332:G:H5''	1.88	0.74
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.74
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.70	0.74
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.67	0.74
56:30:58:A:H1'	56:30:60:U:OP2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:92:GLY:O	4:D:95:MET:HG2	1.87	0.74
6:F:40:THR:HB	6:F:43:ASN:HD22	1.52	0.74
40:14:30:LYS:HG3	40:14:34:ALA:HA	1.70	0.74
52:26:1010:U:H2'	52:26:1011:C:H6	1.51	0.74
44:18:2:LYS:HG2	52:26:1048:G:H5''	1.70	0.74
5:E:9:VAL:HA	5:E:48:THR:HA	1.68	0.74
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.52	0.74
52:26:1513:A:H2'	52:26:1514:G:C8	2.23	0.74
42:16:20:VAL:HG21	52:26:553:A:H5''	1.69	0.74
53:27:12:U:H2'	53:27:13:A:H5'	1.69	0.74
53:27:2591:C:H2'	53:27:2592:G:C8	2.22	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
53:27:1363:C:H2'	53:27:1364:G:H8	1.51	0.73
53:27:45:G:C5'	53:27:46:G:H5'	2.08	0.73
29:3:13:ASN:O	29:3:17:GLY:N	2.20	0.73
44:18:20:PHE:HE1	44:18:47:LEU:HD11	1.52	0.73
53:27:1102:C:H2'	53:27:1103:A:C8	2.23	0.73
53:27:1441:G:H2'	53:27:1442:U:C6	2.23	0.73
53:27:1957:C:H2'	53:27:1958:C:C6	2.23	0.73
53:27:2043:C:H1'	53:27:2779:U:O4	1.88	0.73
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.73
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.22	0.73
7:G:126:LEU:HD13	7:G:129:LEU:HD21	1.70	0.73
40:14:66:GLU:HB3	44:18:98:ALA:HB2	1.70	0.73
51:25:13:VAL:HG13	51:25:15:LEU:HG	1.71	0.73
53:27:1565:C:O2'	53:27:1566:A:H2'	1.87	0.73
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.70	0.73
16:P:20:ALA:HA	16:P:23:TYR:CE2	2.24	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.73
34:8:28:ASP:HB2	34:8:31:CYS:SG	2.28	0.73
41:15:100:ASN:HB2	41:15:106:ILE:HD11	1.70	0.73
52:26:909:A:H2'	52:26:910:C:O4'	1.87	0.73
53:27:742:A:H2'	53:27:743:A:C8	2.23	0.73
6:F:57:LYS:HD2	6:F:57:LYS:N	2.04	0.73
45:19:87:ARG:HG3	45:19:88:ARG:H	1.54	0.73
52:26:1409:C:H2'	52:26:1410:A:H8	1.54	0.73
52:26:477:C:H2'	52:26:478:A:C8	2.24	0.73
12:L:45:GLN:HE21	53:27:2485:G:H5''	1.54	0.73
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.73
34:8:94:GLU:HA	34:8:99:ASN:ND2	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:17:ARG:C	51:25:19:LYS:H	1.92	0.73
53:27:1252:G:O2'	53:27:1253:A:H5''	1.87	0.73
53:27:1320:C:O2'	53:27:1321:A:H5''	1.88	0.73
53:27:2807:U:H3'	53:27:2808:G:H5''	1.69	0.73
53:27:488:G:N2	53:27:491:G:H5''	2.02	0.73
52:26:219:U:H2'	52:26:220:G:H8	1.54	0.73
53:27:1370:C:H2'	53:27:1371:G:O4'	1.89	0.73
53:27:2073:C:H2'	53:27:2074:U:H6	1.51	0.73
53:27:208:C:H2'	53:27:209:C:H6	1.52	0.73
6:F:112:LYS:HE2	53:27:2220:U:H5''	1.71	0.73
53:27:2620:C:H2'	53:27:2621:G:H5''	1.71	0.73
56:30:19:G:N3	56:30:57:G:H1'	2.04	0.73
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.03	0.73
53:27:799:G:H5''	53:27:800:A:H2'	1.70	0.73
56:30:54:U:H3'	56:30:55:U:C5'	2.17	0.73
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.73
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.73
5:E:96:ALA:HB3	5:E:103:ASN:HB3	1.70	0.73
52:26:216:U:H2'	52:26:217:C:C6	2.23	0.73
53:27:198:C:O2'	53:27:199:A:H5'	1.89	0.73
53:27:634:C:H2'	53:27:635:C:C6	2.24	0.73
53:27:833:A:H2'	53:27:834:G:C8	2.24	0.73
20:T:92:VAL:HG11	20:T:101:THR:HG23	1.68	0.73
53:27:882:G:H3'	53:27:883:G:H5''	1.71	0.72
14:N:33:ARG:O	14:N:34:HIS:HB2	1.89	0.72
36:10:90:MET:HG2	36:10:91:ARG:H	1.52	0.72
52:26:440:C:H2'	52:26:441:A:H5''	1.69	0.72
20:T:65:GLN:HE21	53:27:328:U:H4'	1.52	0.72
53:27:796:C:H2'	53:27:797:G:C8	2.25	0.72
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.72
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.72
52:26:359:G:H5''	59:33:451:PHE:CD2	2.24	0.72
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.71	0.72
37:11:11:ILE:HD11	37:11:20:GLU:HB2	1.70	0.72
42:16:78:VAL:HG12	42:16:101:LEU:HD23	1.70	0.72
52:26:714:G:H2'	52:26:715:A:H8	1.54	0.72
53:27:1721:G:H2'	53:27:1738:G:H22	1.53	0.72
1:A:74:PRO:HG3	1:A:116:GLN:HE22	1.54	0.72
10:J:98:ARG:C	10:J:99:ILE:HD12	2.09	0.72
52:26:1010:U:H2'	52:26:1011:C:C6	2.24	0.72
52:26:56:U:H2'	52:26:57:G:C8	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:47:ILE:HA	15:O:96:LEU:HD12	1.70	0.72
48:22:11:ARG:HD3	52:26:845:A:C1'	2.19	0.72
52:26:413:G:H1'	52:26:428:G:N2	2.03	0.72
53:27:1258:U:H2'	53:27:1259:G:C8	2.24	0.72
53:27:1636:U:H2'	53:27:1637:A:H8	1.55	0.72
32:6:185:ILE:HG22	32:6:199:ILE:HB	1.71	0.72
11:K:57:LEU:HB2	11:K:60:ARG:NH1	2.04	0.72
27:1:3:GLN:HA	53:27:2615:U:C2	2.25	0.72
42:16:113:ARG:HE	42:16:120:ARG:HA	1.52	0.72
52:26:106:C:H2'	52:26:107:G:H8	1.54	0.72
53:27:1807:G:H2'	53:27:1808:A:H5'	1.70	0.72
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.72
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.71	0.72
7:G:94:ARG:HH21	7:G:131:THR:HG22	1.55	0.72
49:23:5:LYS:HG3	49:23:6:LYS:HG2	1.71	0.72
52:26:632:U:H3'	52:26:633:G:H5'	1.71	0.72
53:27:1403:A:H2'	53:27:1404:C:C6	2.24	0.72
4:D:122:ASP:OD2	4:D:126:ASN:HB2	1.89	0.72
17:Q:14:VAL:HG23	17:Q:98:ILE:HG13	1.71	0.72
50:24:23:ARG:HH21	52:26:176:C:C5'	2.03	0.72
56:30:66:U:H2'	56:30:67:C:C6	2.24	0.72
2:B:4:LEU:HD23	2:B:29:VAL:HG11	1.69	0.72
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.23	0.72
24:X:39:GLN:HE21	24:X:42:LEU:HD11	1.55	0.72
52:26:751:U:H2'	52:26:752:G:O4'	1.90	0.72
53:27:1021:A:C8	53:27:1023:U:H1'	2.24	0.72
59:33:686:ILE:O	59:33:690:GLU:HB2	1.90	0.72
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.72
1:A:149:LYS:CD	53:27:2204:G:H4'	2.19	0.72
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.72
6:F:133:GLN:HE21	6:F:136:SER:HA	1.55	0.72
51:25:65:ARG:O	51:25:66:ARG:HB2	1.90	0.71
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.71
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.71
11:K:62:PRO:HD3	30:4:26:ALA:CB	2.19	0.71
33:7:13:ILE:HG22	33:7:14:VAL:HG23	1.70	0.71
8:H:102:ARG:O	8:H:106:GLN:HG3	1.90	0.71
48:22:59:LYS:HD3	52:26:735:C:H5'	1.72	0.71
12:L:30:SER:H	12:L:106:ASP:HB3	1.55	0.71
36:10:10:VAL:HB	36:10:58:HIS:HB3	1.72	0.71
27:1:3:GLN:NE2	27:1:6:LYS:HA	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:64:ALA:O	51:25:66:ARG:N	2.23	0.71
52:26:576:C:OP2	52:26:577:G:H5''	1.90	0.71
7:G:32:GLY:O	53:27:1055:G:H5'	1.89	0.71
34:8:141:VAL:HA	34:8:180:THR:HA	1.71	0.71
38:12:106:SER:HA	52:26:642:A:N7	2.06	0.71
52:26:75:G:H2'	52:26:76:G:C8	2.26	0.71
53:27:1066:U:H1'	53:27:1073:A:H61	1.55	0.71
53:27:1406:U:H2'	53:27:1407:G:H5''	1.72	0.71
53:27:2467:C:H2'	53:27:2468:A:O4'	1.91	0.71
54:28:115:A:H2'	54:28:116:G:C8	2.25	0.71
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.55	0.71
52:26:484:G:H4'	52:26:485:U:C5'	2.19	0.71
7:G:41:LEU:HB2	53:27:1082:U:O2'	1.90	0.71
53:27:1537:G:C6	53:27:1538:G:H1'	2.26	0.71
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.06	0.71
31:5:19:ARG:NH1	31:5:26:ILE:HD11	2.06	0.71
6:F:64:ALA:O	6:F:68:ARG:HG3	1.90	0.71
45:19:44:GLU:HG3	45:19:45:HIS:ND1	2.05	0.71
50:24:41:GLY:HA2	50:24:85:LEU:HD11	1.72	0.71
52:26:1162:C:H2'	52:26:1163:A:H8	1.56	0.71
52:26:1402:C:H2'	52:26:1403:C:O4'	1.90	0.71
52:26:360:G:OP1	59:33:472:SER:HA	1.91	0.71
52:26:762:U:H2'	52:26:763:G:H8	1.54	0.71
53:27:2019:A:H2	53:27:2035:G:H22	1.36	0.71
53:27:2144:G:H4'	53:27:2145:C:C5	2.25	0.71
53:27:2208:C:H2'	53:27:2209:G:H8	1.55	0.71
53:27:45:G:H5''	53:27:46:G:C5'	2.09	0.71
53:27:971:G:H2'	53:27:972:A:O4'	1.91	0.71
32:6:160:LEU:HB3	32:6:182:VAL:HG12	1.71	0.71
52:26:1318:A:H2'	52:26:1319:A:H5'	1.71	0.71
53:27:1664:A:H61	53:27:1996:C:N4	1.89	0.71
53:27:2065:C:H2'	53:27:2066:C:H6	1.54	0.71
53:27:2710:C:H2'	53:27:2711:A:H8	1.56	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
30:4:61:LEU:HD13	30:4:64:ALA:HB3	1.73	0.71
3:C:155:GLU:O	3:C:159:LEU:HG	1.90	0.71
52:26:46:G:OP1	52:26:307:C:H4'	1.90	0.71
53:27:1447:C:H2'	53:27:1448:G:H8	1.54	0.71
53:27:1758:U:C5	53:27:2696:U:H5'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1509:C:H2'	52:26:1510:C:H6	1.56	0.71
52:26:842:U:H2'	52:26:844:G:H5'	1.73	0.71
8:H:92:PRO:HD2	53:27:1076:C:H1'	1.73	0.71
59:33:466:GLN:HG3	59:33:467:LYS:H	1.56	0.71
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.71
32:6:69:VAL:HG23	32:6:160:LEU:HD11	1.72	0.71
39:13:36:GLN:HA	39:13:40:ARG:HG3	1.72	0.71
43:17:54:THR:O	43:17:58:GLU:HG2	1.90	0.71
52:26:1109:C:H2'	52:26:1110:A:O4'	1.91	0.71
52:26:1346:A:O2'	52:26:1347:G:H4'	1.89	0.71
53:27:821:A:C5'	53:27:822:G:H5''	2.19	0.71
54:28:4:C:H6	54:28:4:C:H5'	1.56	0.71
59:33:731:GLN:HG3	59:33:732:VAL:N	2.04	0.71
24:X:16:THR:HA	24:X:19:LEU:HD12	1.73	0.71
51:25:3:ILE:N	51:25:19:LYS:HG2	2.05	0.70
52:26:1218:C:H2'	52:26:1219:A:C8	2.26	0.70
53:27:18:U:H2'	53:27:19:A:C8	2.26	0.70
53:27:680:C:H2'	53:27:681:G:C8	2.26	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
34:8:171:GLU:HG2	34:8:182:LYS:HD2	1.71	0.70
3:C:90:GLN:OE1	3:C:90:GLN:N	2.23	0.70
5:E:9:VAL:HB	5:E:48:THR:HG22	1.73	0.70
11:K:135:ILE:HD12	11:K:142:ILE:HD11	1.71	0.70
16:P:54:ARG:NE	53:27:1155:A:H5''	2.06	0.70
53:27:1533:C:H2'	53:27:1534:U:H5''	1.74	0.70
53:27:2545:G:H2'	53:27:2546:U:O4'	1.91	0.70
53:27:2710:C:H2'	53:27:2711:A:C8	2.26	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
11:K:18:ARG:HH22	53:27:1249:U:C2'	2.03	0.70
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.72	0.70
53:27:248:G:H5'	53:27:249:C:H5'	1.71	0.70
53:27:1297:C:OP1	53:27:2710:C:H4'	1.90	0.70
54:28:6:G:H2'	54:28:7:G:H8	1.56	0.70
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.70
34:8:84:ASN:HD22	34:8:87:GLU:CG	1.91	0.70
12:L:26:VAL:HG12	12:L:104:GLU:HG2	1.73	0.70
41:15:116:PRO:HB2	41:15:119:GLY:H	1.57	0.70
52:26:1511:G:H2'	52:26:1512:U:O4'	1.91	0.70
52:26:335:C:H2'	52:26:336:A:C8	2.26	0.70
53:27:248:G:C5'	53:27:249:C:H5'	2.22	0.70
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:76:ASN:O	35:9:78:GLY:N	2.24	0.70
1:A:224:MET:O	1:A:232:GLY:HA3	1.90	0.70
14:N:38:GLN:HB3	14:N:47:VAL:HG11	1.73	0.70
36:10:29:ILE:HG22	36:10:34:GLY:HA3	1.72	0.70
53:27:1005:C:H2'	53:27:1006:C:H6	1.55	0.70
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70
13:M:42:LYS:HZ1	53:27:2817:U:H5''	1.54	0.70
44:18:92:ILE:HG21	44:18:95:LEU:HD22	1.73	0.70
52:26:203:G:H1'	52:26:466:A:H2	1.57	0.70
53:27:1790:C:H3'	53:27:1828:G:N2	2.07	0.70
53:27:1794:A:H2'	53:27:1795:C:H6	1.55	0.70
53:27:522:A:H2'	53:27:523:C:C6	2.26	0.70
56:30:62:C:H2'	56:30:63:G:C8	2.27	0.70
58:32:13:C:H2'	58:32:22:G:H22	1.55	0.70
35:9:79:THR:HB	35:9:121:ASN:HD21	1.56	0.70
1:A:28:PRO:HG3	1:A:62:ARG:HH21	1.55	0.70
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.73	0.70
40:14:41:PRO:O	40:14:42:LEU:HB2	1.90	0.70
52:26:830:G:H2'	52:26:831:A:C8	2.25	0.70
53:27:145:C:H2'	53:27:146:A:C8	2.27	0.70
53:27:1551:A:H2'	53:27:1552:A:O4'	1.91	0.70
53:27:1709:U:H2'	53:27:1710:G:H8	1.56	0.70
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.73	0.70
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.70
1:A:155:ARG:HD3	53:27:1818:U:H6	1.57	0.70
7:G:31:ARG:H	7:G:108:VAL:HG21	1.55	0.70
40:14:6:ILE:HG12	40:14:102:LEU:HD12	1.72	0.70
52:26:131:A:H2'	52:26:132:C:C6	2.27	0.70
53:27:2800:A:H3'	53:27:2801:G:C5'	2.22	0.70
53:27:2846:G:H2'	53:27:2847:U:O4'	1.92	0.70
19:S:28:ASN:HB3	19:S:91:GLN:HE22	1.56	0.70
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.74	0.70
53:27:1087:G:H2'	53:27:1088:A:H4'	1.74	0.70
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.70
13:M:42:LYS:NZ	53:27:2817:U:H5''	2.06	0.70
48:22:9:PHE:O	48:22:11:ARG:HG2	1.92	0.69
46:20:6:LEU:HD12	52:26:375:U:H4'	1.73	0.69
53:27:2128:G:O6	53:27:2160:C:H2'	1.90	0.69
30:4:61:LEU:O	30:4:61:LEU:HD12	1.92	0.69
1:A:106:PRO:HD2	1:A:109:LEU:HD22	1.73	0.69
39:13:44:ARG:O	39:13:47:VAL:HG22	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:53:VAL:HG23	27:1:54:ILE:H	1.57	0.69
52:26:1031:C:O3'	52:26:1033:G:H1'	1.91	0.69
53:27:2327:A:H2'	53:27:2328:A:C8	2.27	0.69
53:27:639:U:H2'	53:27:640:C:C6	2.26	0.69
53:27:784:G:H5'	53:27:785:G:OP1	1.92	0.69
57:31:75:C:H2'	57:31:76:A:C2	2.27	0.69
7:G:45:GLY:HA2	7:G:50:VAL:H	1.54	0.69
53:27:1727:C:H2'	53:27:1728:C:O4'	1.91	0.69
53:27:2789:C:H3'	53:27:2893:A:H62	1.57	0.69
54:28:66:A:N1	54:28:107:G:H2'	2.07	0.69
2:B:73:VAL:CG1	2:B:93:GLY:HA2	2.21	0.69
10:J:102:PRO:HG3	15:O:69:VAL:HG21	1.73	0.69
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.73	0.69
53:27:729:G:H2'	53:27:1775:U:H1'	1.74	0.69
53:27:481:G:H1'	53:27:506:G:N2	2.08	0.69
53:27:871:U:H2'	53:27:872:U:C6	2.26	0.69
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.69
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.04	0.69
18:R:29:VAL:CG1	18:R:55:ILE:HD11	2.22	0.69
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.74	0.69
58:32:29:G:H2'	58:32:30:G:C8	2.27	0.69
58:32:37:A:H2'	58:32:38:A:O4'	1.92	0.69
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.69
32:6:33:ALA:HB3	32:6:37:VAL:O	1.92	0.69
11:K:18:ARG:NH2	53:27:1249:U:H2'	2.02	0.69
39:13:125:GLN:NE2	52:26:942:G:H21	1.90	0.69
45:19:13:GLU:HG2	45:19:83:ARG:HH21	1.56	0.69
49:23:54:ARG:HD3	52:26:958:A:C4	2.27	0.69
52:26:484:G:C5	52:26:486:U:H1'	2.28	0.69
1:A:206:LYS:NZ	53:27:729:G:OP2	2.25	0.69
53:27:955:U:H5	53:27:962:G:N1	1.89	0.69
7:G:4:ASN:HD21	7:G:8:LYS:HE3	1.58	0.69
52:26:631:C:OP1	52:26:632:U:H4'	1.92	0.69
53:27:141:G:H3'	53:27:142:A:O4'	1.93	0.69
53:27:145:C:H2'	53:27:146:A:H8	1.58	0.69
53:27:1796:U:H2'	53:27:1797:G:H8	1.57	0.69
53:27:2352:A:H2'	53:27:2353:G:H5'	1.74	0.69
53:27:464:U:H2'	53:27:465:G:O4'	1.93	0.69
4:D:7:TYR:OH	4:D:29:ARG:HB3	1.92	0.69
6:F:127:GLU:HB2	6:F:145:ASN:HA	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:65:THR:O	23:W:69:GLU:HG3	1.93	0.69
53:27:570:G:H2'	53:27:2030:A:N7	2.07	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
34:8:18:LEU:HB2	34:8:20:LEU:HG	1.73	0.69
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.75	0.69
1:A:119:VAL:HG21	6:F:91:PHE:O	1.93	0.69
21:U:21:ARG:HH21	21:U:87:GLN:HB3	1.57	0.69
27:1:54:ILE:HG13	27:1:56:LYS:HB3	1.75	0.69
52:26:668:G:H2'	52:26:669:G:H8	1.57	0.69
53:27:1096:A:C3'	53:27:1097:U:H5''	2.22	0.69
53:27:2553:G:H3'	53:27:2554:U:H5''	1.74	0.69
53:27:594:U:H2'	53:27:595:C:C6	2.27	0.69
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.69
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.69
33:7:10:ARG:HA	33:7:13:ILE:HD13	1.75	0.69
20:T:31:GLY:O	20:T:66:VAL:HG23	1.93	0.69
36:10:45:ARG:HD2	36:10:59:TYR:HE2	1.57	0.69
52:26:484:G:H4'	52:26:485:U:H5''	1.75	0.69
53:27:2147:A:C5	53:27:2148:G:H1'	2.28	0.69
32:6:165:ALA:HB3	32:6:190:SER:HB3	1.74	0.69
8:H:46:ASP:HA	8:H:50:LYS:HD3	1.75	0.69
10:J:25:LEU:HD11	10:J:40:LYS:HG2	1.75	0.69
52:26:1052:U:H2'	52:26:1200:C:H41	1.56	0.69
52:26:1306:A:N6	52:26:1331:G:H1'	2.08	0.69
52:26:1406:U:H2'	52:26:1407:C:O4'	1.93	0.69
52:26:676:A:H2'	52:26:677:U:C6	2.28	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
51:25:66:ARG:HG3	52:26:1099:G:H5'	1.75	0.68
52:26:309:A:H2'	52:26:310:G:H8	1.58	0.68
42:16:109:ARG:HH12	52:26:537:G:H5''	1.56	0.68
53:27:1363:C:H2'	53:27:1364:G:C8	2.28	0.68
53:27:1844:C:H2'	53:27:1845:G:H8	1.57	0.68
34:8:113:ALA:O	34:8:117:VAL:HG23	1.93	0.68
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.57	0.68
47:21:18:LYS:HA	47:21:50:ASN:HB3	1.73	0.68
12:L:78:LEU:HD23	12:L:79:ALA:N	2.08	0.68
52:26:817:C:H4'	52:26:818:G:OP1	1.92	0.68
53:27:1636:U:H2'	53:27:1637:A:C8	2.28	0.68
58:32:36:U:C2'	58:32:37:A:H5'	2.22	0.68
14:N:45:SER:O	54:28:112:G:N2	2.24	0.68
42:16:27:PRO:HB2	42:16:28:GLN:NE2	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1038:C:H2'	52:26:1039:G:C8	2.29	0.68
52:26:762:U:H2'	52:26:763:G:C8	2.28	0.68
53:27:1744:A:H3'	53:27:1745:A:H8	1.57	0.68
53:27:191:A:O2'	53:27:192:C:H5'	1.93	0.68
53:27:310:A:H2'	53:27:311:A:H5''	1.75	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
37:11:36:SER:HA	39:13:42:THR:HG21	1.75	0.68
43:17:38:ILE:HG13	43:17:55:LEU:HD11	1.75	0.68
52:26:123:U:OP1	52:26:312:C:H5'	1.93	0.68
52:26:34:C:H2'	52:26:35:G:C8	2.28	0.68
53:27:140:C:H2'	53:27:141:G:H4'	1.76	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.93	0.68
53:27:1790:C:H2'	53:27:1791:A:C5	2.29	0.68
53:27:2788:C:H2'	53:27:2789:C:H6	1.59	0.68
53:27:680:C:H2'	53:27:681:G:H8	1.59	0.68
59:33:432:HIS:HB3	59:33:435:VAL:HG23	1.75	0.68
34:8:31:CYS:SG	34:8:33:ILE:HB	2.34	0.68
3:C:40:ARG:HD2	3:C:92:HIS:CG	2.28	0.68
7:G:88:HIS:H	7:G:89:PRO:CD	2.07	0.68
44:18:12:ARG:HB3	44:18:59:GLN:OE1	1.92	0.68
52:26:296:U:H2'	52:26:297:G:C8	2.28	0.68
53:27:1386:C:H2'	53:27:1387:A:C8	2.29	0.68
59:33:622:VAL:HG23	59:33:636:ALA:HA	1.75	0.68
33:7:148:ILE:HD12	33:7:200:TRP:O	1.94	0.68
46:20:43:ALA:HB1	46:20:46:LYS:CD	2.23	0.68
48:22:25:ILE:O	48:22:29:LYS:HG2	1.94	0.68
53:27:1464:G:H2'	53:27:1465:G:H8	1.59	0.68
53:27:2494:G:H2'	53:27:2495:G:H8	1.58	0.68
53:27:39:G:H2'	53:27:40:U:C6	2.29	0.68
53:27:732:C:H2'	53:27:733:G:O4'	1.94	0.68
54:28:65:U:H3'	54:28:108:A:N6	2.07	0.68
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.75	0.68
32:6:53:LEU:HB3	32:6:219:THR:HG21	1.76	0.68
35:9:35:LEU:HD22	35:9:133:ILE:HG13	1.75	0.68
8:H:100:ILE:O	8:H:100:ILE:HG13	1.92	0.68
50:24:66:ILE:HG23	50:24:70:LYS:HD3	1.75	0.68
52:26:501:C:H2'	52:26:502:A:C8	2.29	0.68
53:27:2590:A:H2'	53:27:2591:C:H6	1.58	0.68
53:27:809:G:O2'	53:27:810:U:H5'	1.93	0.68
26:Z:42:PRO:HB2	26:Z:46:GLY:CA	2.22	0.68
48:22:13:THR:HG21	48:22:20:ILE:HD11	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:11:PHE:O	51:25:13:VAL:N	2.27	0.68
52:26:235:C:H2'	52:26:236:A:C8	2.29	0.68
53:27:1336:A:H2'	53:27:1337:G:C8	2.29	0.68
53:27:1853:A:H2'	53:27:1854:A:C8	2.29	0.68
53:27:2316:G:H2'	53:27:2317:A:C8	2.28	0.68
59:33:418:LEU:HD21	59:33:430:HIS:CD2	2.29	0.68
11:K:61:LEU:HA	30:4:26:ALA:CB	2.24	0.68
30:4:39:ARG:HD2	53:27:2363:G:OP2	1.94	0.68
32:6:117:GLU:HG3	32:6:140:LEU:HD11	1.76	0.68
8:H:125:THR:O	8:H:129:GLU:HG3	1.94	0.68
42:16:113:ARG:NE	42:16:120:ARG:HA	2.08	0.68
53:27:2118:U:C5	53:27:2149:U:H1'	2.29	0.68
53:27:2578:G:O2'	53:27:2579:C:H5'	1.94	0.68
59:33:679:LEU:O	59:33:683:ILE:HD12	1.94	0.68
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.74	0.68
2:B:13:ARG:HH11	15:O:55:HIS:HA	1.58	0.68
52:26:556:C:H2'	52:26:557:G:H8	1.59	0.67
53:27:1908:C:H2'	53:27:1909:C:H6	1.58	0.67
53:27:2007:U:H2'	53:27:2008:C:H6	1.59	0.67
53:27:2233:U:H2'	53:27:2234:G:C8	2.29	0.67
53:27:2508:G:H1	53:27:2580:U:H3	1.42	0.67
29:3:12:ARG:HH22	53:27:464:U:H4'	1.59	0.67
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
7:G:61:ARG:HG3	53:27:1047:G:C8	2.29	0.67
47:21:26:ARG:NH2	47:21:39:ARG:HG2	2.08	0.67
53:27:1191:G:H2'	53:27:1192:G:H8	1.60	0.67
53:27:1550:C:H2'	53:27:1551:A:H8	1.59	0.67
53:27:2427:C:H5''	53:27:2428:G:H5''	1.76	0.67
35:9:104:ILE:HD11	35:9:114:LEU:HB3	1.74	0.67
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.76	0.67
36:10:18:VAL:H	36:10:19:PRO:HD3	1.60	0.67
37:11:52:ARG:HD2	37:11:124:SER:OG	1.94	0.67
51:25:33:ARG:HG3	51:25:34:ARG:HG2	1.76	0.67
52:26:1206:G:C3'	52:26:1207:G:H5''	2.24	0.67
52:26:513:C:H2'	52:26:514:C:C6	2.29	0.67
52:26:524:G:H2'	52:26:525:C:C6	2.29	0.67
53:27:1662:U:H2'	53:27:1663:G:H8	1.59	0.67
53:27:2786:U:H2'	53:27:2787:C:H6	1.60	0.67
54:28:66:A:H5''	54:28:67:G:OP1	1.92	0.67
59:33:188:ARG:HH22	59:33:380:LEU:CB	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:65:GLY:HA3	19:S:77:ARG:O	1.93	0.67
22:V:36:GLN:NE2	22:V:39:THR:HA	2.08	0.67
23:W:2:ARG:O	23:W:11:PRO:HD3	1.94	0.67
36:10:9:MET:HE3	36:10:86:ARG:HB3	1.76	0.67
52:26:1432:G:H1'	52:26:1468:A:H62	1.59	0.67
53:27:796:C:H2'	53:27:797:G:H8	1.58	0.67
58:32:59:A:H5''	58:32:60:U:H5	1.58	0.67
5:E:44:HIS:HA	5:E:49:LEU:HD23	1.76	0.67
16:P:107:ALA:CB	17:Q:46:GLU:HG3	2.24	0.67
53:27:1066:U:H2'	53:27:1068:G:OP2	1.93	0.67
53:27:1258:U:H2'	53:27:1259:G:H8	1.59	0.67
53:27:1440:U:H2'	53:27:1441:G:C8	2.29	0.67
59:33:634:HIS:ND1	59:33:634:HIS:O	2.26	0.67
1:A:128:THR:HG22	1:A:188:ARG:HD3	1.76	0.67
15:O:90:ALA:HB2	15:O:112:ARG:HA	1.75	0.67
44:18:27:LYS:O	44:18:31:SER:HB2	1.95	0.67
47:21:20:ILE:HG23	47:21:45:VAL:HB	1.76	0.67
52:26:1061:G:H2'	52:26:1062:U:O4'	1.94	0.67
53:27:1199:U:H2'	53:27:1200:C:C6	2.28	0.67
53:27:1597:A:H5''	53:27:1598:A:H5'	1.77	0.67
53:27:1394:U:H4'	53:27:1603:A:H4'	1.76	0.67
53:27:2161:C:H5'	53:27:2171:A:H62	1.59	0.67
53:27:839:U:H2'	53:27:840:C:C6	2.28	0.67
34:8:49:ASP:O	34:8:52:VAL:HG22	1.94	0.67
53:27:1059:G:H2'	53:27:1060:U:C5	2.28	0.67
53:27:70:G:H4'	53:27:71:A:OP1	1.94	0.67
53:27:805:G:H22	53:27:828:U:H5''	1.60	0.67
35:9:121:ASN:O	35:9:122:VAL:HG22	1.95	0.67
41:15:121:ARG:HE	51:25:35:GLU:CD	1.97	0.67
47:21:4:ILE:HD12	47:21:61:ARG:HD3	1.77	0.67
53:27:1213:A:N6	53:27:1236:G:H1'	2.09	0.67
53:27:657:U:H2'	53:27:658:U:C6	2.30	0.67
22:V:74:LYS:HE3	53:27:858:G:OP1	1.95	0.67
58:32:34:C:H3'	58:32:35:A:H5''	1.75	0.67
35:9:64:GLU:HB3	35:9:68:ARG:HH22	1.59	0.67
47:21:31:PRO:HB2	47:21:32:ILE:HD12	1.76	0.67
52:26:1515:G:H2'	52:26:1516:G:C8	2.29	0.67
53:27:1069:A:H4'	53:27:1070:A:H5''	1.75	0.67
28:2:7:LYS:HA	28:2:23:THR:HA	1.75	0.67
59:33:188:ARG:HH11	59:33:377:LEU:CB	2.08	0.67
2:B:179:ARG:HB3	2:B:188:LEU:HD12	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:105:VAL:HG11	9:I:122:LEU:HD22	1.75	0.67
12:L:63:ILE:HG22	12:L:64:TRP:N	2.09	0.67
40:14:30:LYS:HA	40:14:34:ALA:H	1.59	0.67
27:1:52:LYS:NZ	27:1:55:ALA:HA	2.10	0.67
33:7:109:GLU:HB2	33:7:143:LEU:HD12	1.77	0.67
4:D:98:PHE:HA	4:D:101:ARG:NH2	2.10	0.67
11:K:80:SER:HB3	11:K:114:GLY:HA3	1.77	0.67
11:K:4:ASN:O	53:27:1243:C:H1'	1.95	0.67
14:N:18:LEU:HD23	14:N:25:ARG:HB3	1.76	0.67
36:10:29:ILE:HD13	36:10:64:VAL:HG21	1.75	0.66
52:26:1384:C:H2'	52:26:1385:G:H8	1.60	0.66
52:26:52:C:H2'	52:26:53:A:C8	2.30	0.66
53:27:1061:U:C5'	53:27:1070:A:H1'	2.24	0.66
53:27:154:U:H2'	53:27:155:A:C8	2.30	0.66
58:32:19:G:H5''	58:32:20:U:C5	2.30	0.66
31:5:1:MET:CE	31:5:36:ARG:HB2	2.24	0.66
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.24	0.66
52:26:392:C:H2'	52:26:393:A:C8	2.29	0.66
52:26:405:U:H1'	52:26:498:A:H2'	1.76	0.66
52:26:440:C:C3'	52:26:441:A:H5''	2.26	0.66
31:5:1:MET:HE1	31:5:36:ARG:HB2	1.77	0.66
33:7:76:ILE:HA	33:7:83:VAL:HG23	1.77	0.66
35:9:98:ALA:HB1	35:9:101:GLY:HA3	1.77	0.66
5:E:1:SER:HB3	53:27:2749:A:H5''	1.77	0.66
43:17:3:ILE:HD11	43:17:21:ILE:HD11	1.77	0.66
53:27:1213:A:H61	53:27:1236:G:H1'	1.60	0.66
53:27:123:G:H5''	53:27:1375:U:O2'	1.95	0.66
53:27:1825:U:H2'	53:27:1826:G:C8	2.30	0.66
53:27:2195:U:H2'	53:27:2196:C:H6	1.60	0.66
56:30:1:G:H2'	56:30:2:C:C6	2.30	0.66
56:30:74:C:C5	59:33:432:HIS:HA	2.29	0.66
56:30:76:A:N3	59:33:412:LYS:HG3	2.10	0.66
58:32:17:C:H3'	58:32:17(A):U:H6	1.60	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.25	0.66
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.66
33:7:121:SER:O	33:7:125:ARG:HG2	1.95	0.66
15:O:97:TYR:O	15:O:100:ARG:HB3	1.96	0.66
42:16:113:ARG:NH2	42:16:120:ARG:HG3	2.11	0.66
53:27:1709:U:H2'	53:27:1710:G:C8	2.30	0.66
53:27:2834:G:H2'	53:27:2879:A:H61	1.61	0.66
53:27:634:C:H2'	53:27:635:C:H6	1.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:124:MET:O	8:H:128:ILE:HG12	1.96	0.66
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.77	0.66
15:O:23:ASP:O	15:O:25:VAL:HG23	1.94	0.66
38:12:46:GLU:O	38:12:61:THR:HB	1.95	0.66
40:14:36:VAL:HG23	40:14:76:ILE:HG12	1.78	0.66
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.77	0.66
47:21:26:ARG:NH2	52:26:237:G:H5"	2.11	0.66
33:7:183:TYR:OH	33:7:198:LYS:HE3	1.96	0.66
2:B:151:THR:OG1	2:B:152:PRO:HD3	1.95	0.66
8:H:101:SER:O	8:H:104:GLN:HG2	1.95	0.66
10:J:113:MET:HA	10:J:116:ILE:HD12	1.78	0.66
41:15:17:ASP:HB2	41:15:36:ARG:NH2	2.11	0.66
42:16:89:LEU:O	42:16:91:GLY:N	2.29	0.66
43:17:27:THR:HG21	52:26:1328:C:H5"	1.78	0.66
46:20:70:ARG:HG3	52:26:375:U:H5"	1.78	0.66
52:26:422:C:H4'	52:26:423:G:C4	2.31	0.66
53:27:1868:C:C3'	53:27:1869:G:H5"	2.22	0.66
53:27:2393:U:H2'	53:27:2394:C:H6	1.60	0.66
53:27:569:U:H1'	53:27:947:A:O4'	1.96	0.66
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.66
34:8:201:GLU:HA	34:8:204:SER:HB2	1.77	0.66
49:23:77:ARG:HD2	52:26:1225:A:O2'	1.96	0.66
52:26:1128:C:H2'	52:26:1129:C:O4'	1.96	0.66
52:26:333:U:H2'	52:26:334:C:C6	2.31	0.66
52:26:458:U:H2'	52:26:459:A:C8	2.31	0.66
52:26:695:A:H2'	52:26:696:A:H8	1.55	0.66
53:27:2554:U:H2'	53:27:2555:U:C6	2.30	0.66
4:D:118:ALA:HB1	4:D:166:ARG:HE	1.61	0.66
7:G:54:VAL:HA	7:G:84:TYR:O	1.95	0.66
16:P:2:ARG:HB2	53:27:1248:G:C5	2.30	0.66
47:21:69:THR:HB	52:26:254:G:OP1	1.96	0.66
53:27:528:A:H2	53:27:2042:A:H2'	1.57	0.66
53:27:2149:U:H2'	53:27:2150:C:C6	2.30	0.66
53:27:2511:U:H2'	53:27:2512:C:C6	2.31	0.66
53:27:2697:G:H2'	53:27:2698:U:O4'	1.95	0.66
5:E:2:ARG:HD3	53:27:2751:G:C4	2.31	0.66
53:27:882:G:C3'	53:27:883:G:H5"	2.26	0.66
56:30:5:G:H2'	56:30:6:G:H8	1.61	0.66
48:22:11:ARG:HG3	48:22:12:PHE:N	2.11	0.66
52:26:1439:G:H2'	52:26:1440:U:O4'	1.96	0.66
52:26:1464:U:H2'	52:26:1465:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:835:U:C2'	52:26:836:G:H5''	2.26	0.66
53:27:1326:U:H2'	53:27:1327:A:C8	2.28	0.66
53:27:2895:G:H2'	53:27:2896:C:C6	2.31	0.66
53:27:5:A:H2'	53:27:6:A:H8	1.60	0.66
53:27:758:C:H2'	53:27:758:C:O2	1.96	0.66
54:28:91:C:H2'	54:28:92:C:H6	1.61	0.66
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.66
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.66
34:8:120:LYS:HG2	34:8:130:ASN:OD1	1.95	0.66
52:26:129:A:H1'	52:26:130:A:C8	2.31	0.66
52:26:1512:U:H2'	52:26:1513:A:H8	1.58	0.66
52:26:709:U:H2'	52:26:710:G:H8	1.61	0.66
53:27:2861:U:H2'	53:27:2862:G:H8	1.61	0.66
53:27:2834:G:H2'	53:27:2879:A:N6	2.10	0.66
53:27:656:G:H2'	53:27:657:U:O4'	1.95	0.66
35:9:114:LEU:HD23	35:9:122:VAL:HG21	1.78	0.66
2:B:91:THR:HG23	2:B:94:GLN:HB2	1.77	0.66
26:Z:13:THR:HG22	26:Z:23:LYS:HG2	1.77	0.66
39:13:5:TYR:CE1	39:13:88:GLU:HA	2.32	0.65
52:26:1493:A:H2'	53:27:1913:A:N1	2.11	0.65
53:27:947:A:H2'	53:27:948:C:H6	1.61	0.65
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.65
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.65
2:B:49:GLN:HE21	2:B:79:LEU:HD13	1.59	0.65
5:E:51:PHE:CE1	5:E:71:LEU:HD12	2.32	0.65
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.78	0.65
51:25:19:LYS:O	51:25:22:CYS:HB2	1.96	0.65
52:26:425:G:H2'	52:26:426:U:O4'	1.95	0.65
18:R:25:ARG:HH22	53:27:519:U:H5''	1.60	0.65
54:28:30:C:H2'	54:28:31:C:H5'	1.78	0.65
34:8:58:GLN:HG3	52:26:544:G:OP1	1.96	0.65
6:F:43:ASN:HA	6:F:46:PHE:HD2	1.60	0.65
41:15:34:THR:HA	41:15:41:LEU:HG	1.78	0.65
43:17:9:PRO:HG2	43:17:17:ALA:HB1	1.78	0.65
36:10:88:MET:HB3	48:22:63:TYR:CE2	2.31	0.65
50:24:28:ARG:HD3	52:26:1438:G:OP1	1.96	0.65
52:26:431:A:H2'	52:26:432:A:O4'	1.96	0.65
53:27:1912:A:H62	53:27:1917:U:H5	1.42	0.65
54:28:3:C:H2'	54:28:4:C:C5'	2.17	0.65
33:7:89:VAL:O	33:7:93:ILE:HG13	1.96	0.65
2:B:109:VAL:HG11	2:B:193:VAL:HB	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:127:VAL:HG21	11:K:142:ILE:HD13	1.79	0.65
52:26:1171:A:H2'	52:26:1172:C:H6	1.60	0.65
52:26:626:G:H2'	52:26:627:G:C8	2.31	0.65
53:27:1139:G:O2'	53:27:1140:C:H5'	1.96	0.65
53:27:1174:U:H2'	53:27:1175:A:H4'	1.78	0.65
53:27:1475:G:HO2'	53:27:1476:U:H6	1.44	0.65
53:27:2026:U:H2'	53:27:2027:G:H8	1.61	0.65
53:27:2258:C:O2'	53:27:2426:A:H4'	1.97	0.65
6:F:57:LYS:HD2	6:F:57:LYS:H	1.62	0.65
7:G:114:GLU:HG3	7:G:115:GLY:N	2.11	0.65
10:J:10:VAL:HG23	10:J:17:ARG:O	1.97	0.65
14:N:33:ARG:HG2	14:N:34:HIS:CD2	2.31	0.65
16:P:86:SER:OG	17:Q:52:PRO:HD3	1.97	0.65
24:X:48:ARG:O	24:X:51:ALA:HB3	1.96	0.65
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.77	0.65
44:18:30:ILE:CG2	44:18:43:ALA:HB2	2.26	0.65
48:22:33:THR:HG22	48:22:36:GLY:O	1.96	0.65
48:22:11:ARG:HB3	48:22:47:ARG:HH12	1.61	0.65
52:26:1096:C:H2'	52:26:1097:C:C6	2.32	0.65
52:26:374:A:H2'	52:26:375:U:C6	2.32	0.65
53:27:70:G:O2'	53:27:113:U:H4'	1.96	0.65
53:27:247:G:H4'	53:27:386:G:C2	2.32	0.65
32:6:163:ILE:HD11	32:6:209:VAL:HG12	1.78	0.65
2:B:133:THR:HG22	53:27:1993:U:H4'	1.79	0.65
5:E:26:LYS:HD3	5:E:31:GLU:HB2	1.78	0.65
14:N:46:GLU:HB2	54:28:113:C:O2'	1.96	0.65
53:27:1266:G:H22	53:27:2012:G:H2'	1.60	0.65
53:27:2133:G:H2'	53:27:2158:A:C2	2.32	0.65
53:27:2817:U:C3'	53:27:2818:U:H5''	2.26	0.65
53:27:49:A:H4'	53:27:50:U:H5''	1.78	0.65
53:27:584:C:H2'	53:27:585:G:C8	2.31	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
59:33:617:PRO:HA	59:33:657:TRP:CD2	2.32	0.65
27:1:33:SER:OG	27:1:35:GLU:HG3	1.96	0.65
52:26:629:A:H2'	52:26:630:A:O4'	1.95	0.65
53:27:2248:C:C2'	53:27:2249:U:H5'	2.27	0.65
58:32:12:G:H22	58:32:23:C:H2'	1.62	0.65
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.76	0.65
59:33:622:VAL:HB	59:33:641:LEU:HD21	1.78	0.65
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.65
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.79	0.65
17:Q:64:VAL:HG21	17:Q:97:LYS:HE3	1.79	0.65
52:26:216:U:H2'	52:26:217:C:H6	1.61	0.65
52:26:396:C:H2'	52:26:397:A:H5''	1.78	0.65
52:26:52:C:H2'	52:26:53:A:H8	1.61	0.65
52:26:918:A:H2'	52:26:919:A:C8	2.32	0.65
53:27:1937:A:O2'	53:27:1938:A:H3'	1.97	0.65
54:28:93:C:H2'	54:28:94:A:C8	2.31	0.65
29:3:31:LEU:HG	29:3:42:LEU:HD21	1.77	0.65
2:B:173:GLN:HE22	2:B:208:LYS:HE2	1.61	0.65
13:M:96:ARG:NH2	13:M:116:VAL:HG13	2.11	0.65
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.77	0.65
40:14:49:PHE:HB2	40:14:65:TYR:HB2	1.79	0.65
28:2:12:SER:HB2	28:2:48:TYR:CE1	2.32	0.65
51:25:35:GLU:O	51:25:37:TYR:N	2.30	0.65
52:26:1273:C:H2'	52:26:1274:A:O4'	1.97	0.65
52:26:778:G:H2'	52:26:779:C:O4'	1.97	0.65
53:27:1946:U:H2'	53:27:1947:C:C6	2.32	0.65
56:30:21:A:N6	56:30:46:G:H2'	2.11	0.65
58:32:8:U:O4	58:32:13:C:H3'	1.96	0.65
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	0.65
34:8:60:VAL:HA	34:8:63:ILE:HD12	1.79	0.65
2:B:73:VAL:HG11	2:B:93:GLY:HA2	1.79	0.65
4:D:91:ARG:HA	4:D:95:MET:HB3	1.79	0.65
24:X:2:LYS:HE2	53:27:102:U:H1'	1.78	0.65
43:17:8:ILE:N	43:17:9:PRO:HD3	2.12	0.65
52:26:255:G:H2'	52:26:256:U:C6	2.32	0.65
42:16:120:ARG:CZ	52:26:500:G:H5'	2.26	0.65
8:H:124:MET:HE2	53:27:1081:U:H4'	1.79	0.65
53:27:1266:G:N2	53:27:2012:G:H2'	2.12	0.65
53:27:1427:A:H4'	53:27:1428:C:O4'	1.96	0.65
53:27:2231:U:H2'	53:27:2232:C:H6	1.61	0.65
53:27:2508:G:H2'	53:27:2509:G:C8	2.29	0.65
6:F:97:ARG:NH1	6:F:112:LYS:HD2	2.12	0.65
8:H:76:ALA:CB	53:27:1063:G:H5'	2.27	0.65
16:P:104:ALA:HA	17:Q:46:GLU:CD	2.16	0.65
45:19:7:THR:HA	45:19:10:ILE:HD12	1.79	0.64
44:18:45:LEU:HD21	49:23:12:LEU:HD13	1.78	0.64
52:26:193:C:H2'	52:26:194:C:C6	2.32	0.64
52:26:512:U:H2'	52:26:513:C:C6	2.33	0.64
45:19:71:ARG:HH21	52:26:754:C:H5'	1.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1721:G:H2'	53:27:1738:G:N2	2.12	0.64
53:27:2352:A:C2'	53:27:2353:G:H5'	2.27	0.64
56:30:76:A:H2'	59:33:431:ILE:HD13	1.79	0.64
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.64
2:B:38:LYS:HB2	2:B:47:ALA:HB3	1.76	0.64
4:D:28:PRO:HB2	4:D:168:LEU:HD12	1.79	0.64
47:21:30:HIS:HD2	47:21:33:TYR:H	1.45	0.64
51:25:67:THR:HA	52:26:1167:A:C5	2.31	0.64
52:26:1343:G:H2'	52:26:1344:C:C6	2.32	0.64
53:27:2155:U:H2'	53:27:2156:G:H5'	1.79	0.64
53:27:7:G:H2'	53:27:8:C:C6	2.33	0.64
29:3:21:ARG:O	29:3:27:GLY:HA3	1.97	0.64
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.64
3:C:189:THR:HG22	3:C:191:ASP:H	1.61	0.64
52:26:1347:G:N2	52:26:1373:G:H2'	2.12	0.64
42:16:117:GLY:HA2	52:26:35:G:O2'	1.98	0.64
52:26:542:G:H2'	52:26:543:U:C6	2.32	0.64
53:27:1830:C:H2'	53:27:1831:G:H8	1.63	0.64
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.64
49:23:58:PRO:HG2	59:33:631:ILE:HG13	1.79	0.64
33:7:111:ASP:OD2	33:7:114:LEU:HG	1.96	0.64
16:P:93:ILE:HG21	17:Q:4:VAL:HG11	1.78	0.64
37:11:50:ALA:HB2	37:11:57:GLU:CG	2.28	0.64
39:13:70:GLY:HA3	52:26:1371:G:O3'	1.97	0.64
52:26:1326:U:H2'	52:26:1327:C:C6	2.33	0.64
52:26:1356:G:H2'	52:26:1357:A:C8	2.31	0.64
29:3:7:PRO:CB	53:27:1309:G:H4'	2.22	0.64
53:27:1594:U:H2'	53:27:1595:C:C6	2.32	0.64
53:27:2557:G:H2'	53:27:2558:C:C6	2.32	0.64
53:27:2685:G:H2'	53:27:2686:G:H8	1.63	0.64
53:27:397:U:H2'	53:27:398:C:C6	2.31	0.64
53:27:815:C:H2'	53:27:816:C:H6	1.61	0.64
34:8:149:LYS:O	34:8:150:LYS:HG2	1.98	0.64
4:D:4:HIS:O	4:D:7:TYR:HB3	1.97	0.64
40:14:15:HIS:HB3	40:14:70:HIS:CE1	2.32	0.64
52:26:1413:A:H2	52:26:1487:G:H22	1.44	0.64
52:26:355:C:H2'	52:26:356:A:O4'	1.97	0.64
53:27:1026:G:H2'	53:27:1027:A:H8	1.62	0.64
53:27:11:C:H2'	53:27:12:U:H5''	1.79	0.64
53:27:1447:C:H2'	53:27:1448:G:C8	2.33	0.64
53:27:2114:A:H3'	53:27:2115:G:C5'	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:38:GLY:HA2	53:27:2330:G:H21	1.62	0.64
53:27:302:C:H2'	53:27:303:G:H8	1.61	0.64
53:27:947:A:H2'	53:27:948:C:C6	2.33	0.64
34:8:169:TRP:CZ3	34:8:189:ASP:HB3	2.33	0.64
35:9:110:MET:HG3	35:9:139:THR:HG21	1.80	0.64
3:C:23:PHE:HB2	3:C:114:ARG:NH2	2.13	0.64
11:K:62:PRO:HB3	53:27:2393:U:H5''	1.79	0.64
14:N:94:ARG:HB3	14:N:97:PHE:O	1.97	0.64
52:26:399:G:H2'	52:26:400:C:C6	2.32	0.64
52:26:513:C:H2'	52:26:514:C:H6	1.60	0.64
53:27:1637:A:H2'	53:27:1638:C:C6	2.33	0.64
53:27:1708:C:H2'	53:27:1709:U:C6	2.32	0.64
53:27:207:A:H2'	53:27:208:C:O4'	1.98	0.64
53:27:2698:U:H2'	53:27:2699:C:C6	2.33	0.64
53:27:395:U:H2'	53:27:396:G:C8	2.33	0.64
53:27:622:G:H2'	53:27:623:C:H6	1.62	0.64
29:3:10:LEU:HD23	53:27:770:G:H5''	1.79	0.64
59:33:612:CYS:HG	59:33:634:HIS:CD2	2.15	0.64
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.79	0.64
40:14:33:GLY:O	40:14:34:ALA:HB3	1.98	0.64
41:15:92:ARG:HH21	51:25:24:LYS:HD3	1.63	0.64
47:21:11:VAL:CG1	47:21:20:ILE:HD11	2.28	0.64
52:26:1161:C:H2'	52:26:1162:C:C6	2.33	0.64
52:26:265:G:O2'	52:26:266:G:H5'	1.98	0.64
46:20:31:ARG:HB2	52:26:310:G:H5''	1.79	0.64
53:27:1310:G:H3'	53:27:1311:G:C8	2.33	0.64
53:27:189:G:H2'	53:27:205:G:H22	1.62	0.64
53:27:2124:G:H3'	53:27:2125:G:C5'	2.27	0.64
53:27:2297:A:N1	53:27:2321:U:C5	2.66	0.64
53:27:2660:A:H2'	53:27:2661:G:O4'	1.97	0.64
54:28:113:C:H2'	54:28:114:C:C6	2.33	0.64
7:G:118:ILE:HB	7:G:119:PRO:CD	2.26	0.64
7:G:59:LEU:HA	53:27:1107:G:OP1	1.97	0.64
20:T:25:LYS:CG	20:T:36:GLU:HB2	2.28	0.64
38:12:14:ARG:HG3	38:12:74:ILE:HG22	1.79	0.64
39:13:17:ARG:HB2	39:13:65:THR:HB	1.79	0.64
44:18:17:ASP:HA	44:18:21:ALA:HB2	1.80	0.64
52:26:285:C:H2'	52:26:286:C:C6	2.32	0.64
52:26:864:A:H2'	52:26:865:A:C8	2.32	0.64
7:G:61:ARG:HG3	53:27:1047:G:N7	2.12	0.64
53:27:1536:C:H4'	53:27:1537:G:N2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1539:U:H2'	53:27:1540:G:H8	1.63	0.64
53:27:2799:A:C2'	53:27:2800:A:H5'	2.28	0.64
53:27:420:C:H2'	53:27:421:C:H6	1.61	0.64
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.63	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.80	0.64
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.63	0.64
52:26:1202:U:H2'	52:26:1203:C:H5'	1.78	0.64
52:26:312:C:H2'	52:26:313:A:C8	2.32	0.64
53:27:1098:A:H2'	53:27:1099:G:O4'	1.98	0.64
53:27:1301:A:O2'	53:27:1302:A:H5''	1.98	0.64
53:27:2884:U:H3'	53:27:2884:U:O2	1.98	0.64
54:28:40:U:H1'	54:28:43:C:H5	1.63	0.64
56:30:40:C:H2'	56:30:41:C:C6	2.33	0.64
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.64
5:E:70:LEU:O	5:E:74:MET:HG3	1.97	0.64
41:15:121:ARG:NH2	51:25:35:GLU:HG2	2.13	0.64
52:26:1384:C:H2'	52:26:1385:G:C8	2.32	0.64
52:26:59:A:H3'	52:26:331:G:H22	1.63	0.64
52:26:656:G:O2'	52:26:657:U:H5'	1.97	0.64
52:26:868:C:H2'	52:26:869:G:O4'	1.98	0.64
53:27:593:U:H2'	53:27:594:U:C6	2.33	0.64
53:27:767:U:O2'	53:27:768:G:H5'	1.97	0.64
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.64
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.64
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.64
59:33:274:PHE:HB3	59:33:333:THR:HB	1.80	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HB2	1.63	0.64
21:U:20:LEU:HB3	21:U:25:LYS:O	1.98	0.64
21:U:23:ALA:O	21:U:25:LYS:HG2	1.98	0.64
26:Z:14:ALA:HB3	26:Z:22:MET:O	1.98	0.64
36:10:53:LYS:O	36:10:54:LEU:HG	1.97	0.63
39:13:56:MET:O	39:13:58:GLU:N	2.31	0.63
46:20:51:ARG:C	46:20:52:LEU:HD12	2.18	0.63
52:26:1349:A:H2'	52:26:1350:A:O4'	1.98	0.63
53:27:1506:U:H2'	53:27:1507:C:C6	2.33	0.63
53:27:2079:U:H2'	53:27:2080:A:H5''	1.79	0.63
53:27:2292:U:H2'	53:27:2293:G:C8	2.32	0.63
53:27:2590:A:H2'	53:27:2591:C:C6	2.33	0.63
58:32:50:U:H2'	58:32:51:C:C6	2.33	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:425:LEU:H	59:33:425:LEU:HD12	1.62	0.63
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.28	0.63
1:A:259:ASN:C	1:A:261:ARG:H	2.01	0.63
8:H:18:ASN:H	8:H:19:PRO:HD2	1.63	0.63
16:P:20:ALA:HA	16:P:23:TYR:HE2	1.61	0.63
36:10:9:MET:HG2	36:10:59:TYR:CD1	2.34	0.63
37:11:115:MET:HA	37:11:118:ARG:NE	2.13	0.63
42:16:98:ARG:NH2	42:16:106:VAL:HA	2.12	0.63
51:25:67:THR:HA	52:26:1167:A:N7	2.12	0.63
53:27:1278:C:H2'	53:27:1279:G:C8	2.33	0.63
16:P:22:GLY:HA2	53:27:18:U:O3'	1.98	0.63
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.63
7:G:7:ASP:O	7:G:11:ILE:HG12	1.98	0.63
11:K:103:ILE:HD12	53:27:259:G:H4'	1.79	0.63
52:26:1409:C:H2'	52:26:1410:A:C8	2.32	0.63
52:26:1509:C:H2'	52:26:1510:C:C6	2.32	0.63
52:26:1517:G:H2'	52:26:1518:A:O4'	1.96	0.63
53:27:1041:G:H2'	53:27:1042:G:H8	1.62	0.63
58:32:41:C:H2'	58:32:42:G:C8	2.33	0.63
4:D:69:ALA:H	4:D:82:TYR:H	1.47	0.63
16:P:64:ILE:HD11	16:P:91:ARG:O	1.97	0.63
17:Q:34:GLU:HG2	17:Q:60:LYS:HA	1.79	0.63
46:20:43:ALA:HB1	46:20:46:LYS:HD3	1.80	0.63
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.81	0.63
52:26:988:G:H1'	52:26:1014:A:H61	1.63	0.63
52:26:1142:G:H3'	52:26:1143:G:H8	1.63	0.63
52:26:560:A:H5'	52:26:566:G:N2	2.13	0.63
53:27:150:U:H2'	53:27:151:C:C6	2.33	0.63
53:27:2092:U:C4'	53:27:2093:G:H5''	2.21	0.63
53:27:2816:G:H2'	53:27:2817:U:H6	1.63	0.63
53:27:443:A:N3	53:27:1201:U:H1'	2.14	0.63
53:27:84:A:N1	53:27:99:U:H5'	2.14	0.63
48:22:38:ILE:HD12	48:22:38:ILE:H	1.64	0.63
52:26:102:G:H2'	52:26:103:U:C6	2.33	0.63
58:32:8:U:H4'	58:32:48:C:H4'	1.79	0.63
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
8:H:106:GLN:O	8:H:110:GLN:HG3	1.98	0.63
53:27:2104:C:H2'	53:27:2105:U:C6	2.33	0.63
58:32:42:G:H2'	58:32:43:A:H8	1.63	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:80:LEU:HD21	35:9:95:MET:HE2	1.79	0.63
5:E:163:TYR:HB2	5:E:166:GLU:HB2	1.80	0.63
10:J:19:VAL:HB	10:J:41:ILE:HD12	1.80	0.63
47:21:6:THR:HA	47:21:60:ILE:O	1.99	0.63
44:18:99:SER:OG	52:26:1114:C:H1'	1.99	0.63
52:26:1254:A:H2'	52:26:1255:G:C8	2.34	0.63
52:26:1434:A:H2'	52:26:1435:G:O4'	1.98	0.63
52:26:1464:U:H2'	52:26:1465:A:H8	1.63	0.63
52:26:440:C:C2'	52:26:441:A:H5''	2.27	0.63
52:26:501:C:H2'	52:26:502:A:H8	1.64	0.63
53:27:2286:G:H5''	53:27:2287:A:OP1	1.99	0.63
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.63
19:S:73:ARG:HG3	19:S:73:ARG:HH21	1.63	0.63
46:20:33:ILE:HD12	46:20:33:ILE:N	2.14	0.63
41:15:122:PRO:HG2	51:25:34:ARG:O	1.99	0.63
39:13:4:GLN:NE2	52:26:1131:G:H5'	2.14	0.63
53:27:2632:A:H2'	53:27:2633:G:C8	2.34	0.63
53:27:2693:G:O2'	53:27:2694:G:H5'	1.99	0.63
53:27:692:C:H2'	53:27:693:A:C8	2.34	0.63
53:27:801:G:H3'	53:27:802:A:H5''	1.79	0.63
58:32:42:G:H2'	58:32:43:A:C8	2.34	0.63
32:6:137:THR:O	32:6:141:GLU:HG3	1.99	0.63
1:A:159:THR:HG22	1:A:160:TYR:H	1.63	0.63
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.99	0.63
43:17:16:ILE:H	43:17:16:ILE:HD12	1.64	0.63
43:17:7:ASN:C	43:17:9:PRO:HD3	2.19	0.63
52:26:1162:C:H2'	52:26:1163:A:C8	2.34	0.63
52:26:539:A:H2'	52:26:540:G:H8	1.64	0.63
52:26:634:C:H2'	52:26:635:A:C8	2.34	0.63
53:27:1060:U:C2	53:27:1062:G:H5'	2.34	0.63
53:27:123:G:H2'	53:27:124:G:H8	1.64	0.63
53:27:154:U:H2'	53:27:155:A:H8	1.62	0.63
53:27:2220:U:H2'	53:27:2221:G:H8	1.64	0.63
53:27:2297:A:N1	53:27:2321:U:H5	1.95	0.63
11:K:47:ARG:HH21	53:27:251:A:H4'	1.63	0.63
53:27:2837:A:H2'	53:27:2838:G:H8	1.64	0.63
22:V:22:PHE:CD2	53:27:922:C:H1'	2.33	0.63
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.13	0.63
31:5:24:ARG:NH2	31:5:36:ARG:HG3	2.13	0.63
1:A:28:PRO:HG3	1:A:62:ARG:NH2	2.14	0.63
3:C:84:THR:HG21	53:27:586:A:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1379:G:O2'	52:26:1380:U:H5'	1.99	0.62
52:26:147:G:H2'	52:26:148:G:C8	2.34	0.62
52:26:216:U:H4'	52:26:464:U:H4'	1.80	0.62
36:10:86:ARG:HE	52:26:673:A:H4'	1.64	0.62
53:27:1485:U:H2'	53:27:1486:U:C6	2.34	0.62
53:27:2839:G:H2'	53:27:2840:C:C6	2.34	0.62
54:28:95:U:H2'	54:28:96:G:H8	1.63	0.62
51:25:20:ARG:CZ	55:29:7:G:H21	2.11	0.62
2:B:46:ARG:NH2	2:B:88:GLU:O	2.31	0.62
15:O:52:ARG:H	15:O:56:SER:HB2	1.64	0.62
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.81	0.62
26:Z:44:PHE:HD1	26:Z:45:THR:HG23	1.64	0.62
52:26:328:C:H4'	52:26:329:A:H5'	1.81	0.62
52:26:708:C:H2'	52:26:709:U:C6	2.34	0.62
53:27:1872:A:H2'	53:27:1873:G:O4'	1.99	0.62
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.62
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.62
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.62
33:7:122:GLN:O	33:7:127:VAL:HG12	1.99	0.62
35:9:154:ALA:HB1	38:12:65:PHE:CZ	2.34	0.62
20:T:10:VAL:O	20:T:21:ARG:HB2	1.99	0.62
21:U:86:LEU:N	21:U:86:LEU:HD12	2.14	0.62
39:13:51:LEU:HB3	39:13:56:MET:HB3	1.80	0.62
41:15:37:GLN:HB2	41:15:39:ASN:ND2	2.15	0.62
48:22:11:ARG:CB	48:22:47:ARG:HH12	2.12	0.62
52:26:950:U:H2'	52:26:951:G:H8	1.64	0.62
53:27:1358:G:H2'	53:27:1372:U:O4	1.99	0.62
53:27:1509:A:H2'	53:27:1510:G:C8	2.34	0.62
53:27:1773:A:H2'	53:27:1774:C:O4'	1.99	0.62
53:27:2093:G:H1'	53:27:2198:A:C2	2.33	0.62
53:27:397:U:H2'	53:27:398:C:H6	1.64	0.62
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.62
35:9:39:GLY:HA2	35:9:44:ARG:O	1.99	0.62
1:A:155:ARG:HD3	53:27:1818:U:C6	2.33	0.62
3:C:117:ARG:NH2	3:C:181:ILE:O	2.31	0.62
5:E:16:VAL:HG12	5:E:17:LYS:N	2.15	0.62
7:G:4:ASN:ND2	7:G:8:LYS:HE3	2.13	0.62
19:S:28:ASN:HB3	19:S:91:GLN:NE2	2.14	0.62
37:11:2:ARG:HA	52:26:1380:U:O4	1.99	0.62
52:26:471:U:H2'	52:26:472:U:C6	2.35	0.62
52:26:660:C:H2'	52:26:661:G:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:811:U:H1'	53:27:1251:C:H5'	1.82	0.62
53:27:1657:U:H2'	53:27:1658:C:C6	2.35	0.62
30:4:12:ARG:HH12	53:27:250:G:P	2.22	0.62
34:8:58:GLN:O	34:8:62:ARG:HG2	1.99	0.62
2:B:51:THR:HB	2:B:79:LEU:HD23	1.81	0.62
6:F:94:ILE:HB	6:F:122:LEU:HB2	1.81	0.62
13:M:1:MET:HG3	13:M:3:HIS:ND1	2.15	0.62
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.64	0.62
39:13:120:ALA:HB1	52:26:1348:U:H5''	1.81	0.62
39:13:26:LYS:HG3	39:13:61:ASP:OD1	2.00	0.62
52:26:233:C:H2'	52:26:234:C:C6	2.35	0.62
53:27:123:G:H2'	53:27:124:G:C8	2.34	0.62
53:27:1435:G:O2'	53:27:1436:G:H5'	1.98	0.62
53:27:1669:A:H2'	53:27:1670:C:H5'	1.80	0.62
53:27:2644:G:H3'	53:27:2645:G:N2	2.14	0.62
53:27:2786:U:H2'	53:27:2787:C:C6	2.35	0.62
27:1:49:ARG:HG2	53:27:2884:U:C6	2.34	0.62
53:27:598:U:H2'	53:27:599:A:H8	1.61	0.62
57:31:57:A:H2'	57:31:58:A:H5'	1.82	0.62
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.62
22:V:44:GLY:H	22:V:47:VAL:HB	1.63	0.62
39:13:108:ARG:HG2	52:26:1347:G:O5'	2.00	0.62
52:26:946:A:H2'	52:26:947:G:C8	2.34	0.62
53:27:532:A:N1	53:27:2020:A:H1'	2.15	0.62
54:28:30:C:C2'	54:28:31:C:H5'	2.30	0.62
33:7:125:ARG:O	33:7:126:ARG:HB2	1.98	0.62
33:7:71:ARG:HE	33:7:74:ILE:HD12	1.63	0.62
16:P:51:GLN:HG2	16:P:54:ARG:NH1	2.14	0.62
44:18:35:ALA:O	44:18:40:ARG:HB2	1.99	0.62
52:26:285:C:H2'	52:26:286:C:H6	1.64	0.62
52:26:490:C:H2'	52:26:491:G:H8	1.63	0.62
53:27:1779:U:H5	53:27:1784:A:N7	1.98	0.62
53:27:613:A:N3	53:27:613:A:H3'	2.14	0.62
53:27:721:A:H2'	53:27:722:A:C8	2.34	0.62
21:U:14:LYS:HB2	54:28:98:G:H1	1.64	0.62
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.62
1:A:184:GLU:OE2	53:27:2222:C:H4'	2.00	0.62
40:14:52:LEU:HB2	44:18:80:ARG:HD2	1.81	0.62
49:23:66:VAL:HG23	49:23:67:GLY:H	1.63	0.62
51:25:19:LYS:HG3	51:25:22:CYS:SG	2.39	0.62
52:26:16:A:O2'	52:26:17:U:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:67:HIS:ND1	52:26:262:A:H4'	2.15	0.62
53:27:105:C:H2'	53:27:106:C:H6	1.64	0.62
53:27:1463:C:H2'	53:27:1464:G:C8	2.35	0.62
53:27:2455:G:H2'	53:27:2456:C:C6	2.35	0.62
53:27:666:A:H2'	53:27:667:U:C6	2.35	0.62
59:33:676:ARG:HG3	59:33:677:SER:N	2.12	0.62
1:A:123:ILE:HG23	1:A:191:LEU:HD13	1.82	0.62
7:G:35:VAL:HG23	53:27:1056:G:OP1	1.98	0.62
11:K:21:ARG:NE	53:27:811:U:C5	2.68	0.62
23:W:26:ARG:NH1	23:W:28:PHE:CE1	2.68	0.62
36:10:45:ARG:HD2	36:10:59:TYR:CE2	2.34	0.62
38:12:77:VAL:HG12	38:12:84:ILE:CD1	2.30	0.62
28:2:46:VAL:HG12	28:2:47:ILE:N	2.12	0.62
52:26:1229:A:H2'	52:26:1230:C:H6	1.65	0.62
52:26:1469:C:H2'	52:26:1470:U:O4'	2.00	0.62
52:26:181:A:H61	52:26:194:C:H2'	1.65	0.62
52:26:234:C:H2'	52:26:235:C:C6	2.35	0.62
56:30:2:C:H2'	56:30:3:C:C6	2.34	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
2:B:129:THR:HG23	2:B:140:HIS:O	2.00	0.62
5:E:10:VAL:HG12	5:E:47:ASN:O	2.00	0.62
6:F:87:GLU:OE1	36:10:17:GLN:HB2	2.00	0.62
36:10:38:ARG:HB3	36:10:63:ASN:HB2	1.82	0.62
36:10:67:PRO:HG2	36:10:70:VAL:CG2	2.29	0.62
39:13:66:VAL:HB	39:13:78:ILE:HD11	1.82	0.62
42:16:65:TYR:HE2	42:16:67:GLY:HA2	1.65	0.62
53:27:1176:U:H2'	53:27:1177:G:C8	2.34	0.62
53:27:2231:U:H2'	53:27:2232:C:C6	2.35	0.62
53:27:226:A:H3'	53:27:227:A:H8	1.63	0.62
53:27:2617:U:H2'	53:27:2618:G:O4'	2.00	0.62
56:30:40:C:H2'	56:30:41:C:H6	1.63	0.62
58:32:40:C:H2'	58:32:41:C:C6	2.35	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
32:6:56:LEU:HD13	32:6:216:VAL:HG13	1.82	0.62
2:B:118:PHE:CE1	2:B:163:GLY:HA2	2.35	0.62
10:J:7:MET:C	10:J:8:LEU:HD12	2.20	0.62
11:K:14:LYS:O	11:K:15:ALA:HB3	1.99	0.62
43:17:6:ILE:HD12	43:17:7:ASN:H	1.63	0.61
41:15:111:ASP:HB2	51:25:16:ARG:HH22	1.64	0.61
52:26:715:A:H2'	52:26:716:A:H8	1.65	0.61
52:26:715:A:H2'	52:26:716:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:644:A:H2'	53:27:645:C:H5''	1.81	0.61
58:32:61:C:O2'	58:32:62:C:H5'	2.00	0.61
34:8:61:ARG:HH21	34:8:68:GLU:N	1.97	0.61
35:9:108:GLY:O	35:9:110:MET:N	2.33	0.61
2:B:56:LYS:NZ	53:27:2831:G:OP1	2.33	0.61
18:R:51:LEU:HD12	18:R:54:ALA:HB3	1.81	0.61
20:T:96:LYS:O	20:T:97:SER:HB3	2.00	0.61
22:V:35:ARG:HD2	22:V:54:THR:HG23	1.82	0.61
41:15:22:ILE:HD13	41:15:95:THR:HG23	1.82	0.61
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
52:26:1261:A:H3'	52:26:1262:C:H6	1.65	0.61
52:26:1436:U:H2'	52:26:1437:A:C8	2.34	0.61
52:26:280:C:H4'	52:26:281:G:OP2	2.00	0.61
52:26:41:G:H2'	52:26:42:G:H8	1.65	0.61
52:26:664:G:N2	52:26:741:G:H1	1.98	0.61
41:15:30:ILE:HD12	52:26:705:G:H21	1.63	0.61
53:27:1021:A:H2'	53:27:1022:G:H4'	1.82	0.61
53:27:2147:A:C4	53:27:2148:G:H1'	2.35	0.61
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.61
59:33:721:VAL:HG13	59:33:724:ARG:NE	2.14	0.61
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.81	0.61
10:J:64:ARG:HD2	10:J:79:PHE:CD1	2.34	0.61
52:26:1106:G:O2'	52:26:1107:C:H5'	2.00	0.61
52:26:117:G:O6	52:26:289:G:H1'	1.99	0.61
52:26:247:G:H2'	52:26:248:C:C6	2.35	0.61
52:26:555:U:H2'	52:26:556:C:C6	2.36	0.61
53:27:1036:G:H2'	53:27:1037:G:H8	1.63	0.61
53:27:162:U:O2'	53:27:163:C:H5'	1.99	0.61
53:27:2087:G:H2'	53:27:2088:A:C8	2.35	0.61
18:R:25:ARG:NH2	53:27:519:U:H5''	2.15	0.61
53:27:980:A:N7	53:27:981:A:C6	2.68	0.61
4:D:68:LYS:HE3	54:28:41:G:O6	1.99	0.61
54:28:4:C:H6	54:28:4:C:C5'	2.13	0.61
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.61
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.00	0.61
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
31:5:17:VAL:HG11	31:5:19:ARG:NH1	2.15	0.61
35:9:41:GLY:O	35:9:118:GLY:HA3	2.00	0.61
18:R:57:ASN:HD21	53:27:495:G:C1'	2.13	0.61
20:T:25:LYS:HG2	20:T:36:GLU:HB2	1.82	0.61
23:W:39:VAL:HG21	23:W:46:VAL:HG23	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:61:ASN:CA	26:Z:64:PHE:HB2	2.15	0.61
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.82	0.61
52:26:1030:U:H5''	52:26:1031:C:C5	2.34	0.61
52:26:1376:U:H2'	52:26:1377:A:C8	2.36	0.61
52:26:539:A:H2'	52:26:540:G:C8	2.33	0.61
52:26:631:C:C5'	52:26:632:U:H5'	2.31	0.61
52:26:690:G:H2'	52:26:691:G:O4'	2.00	0.61
32:6:24:PRO:HB3	52:26:828:U:H2'	1.82	0.61
53:27:1386:C:H2'	53:27:1387:A:H8	1.65	0.61
53:27:2038:G:H2'	53:27:2039:U:O4'	2.01	0.61
53:27:2623:G:H2'	53:27:2624:G:H8	1.64	0.61
56:30:48:C:H2'	56:30:59:U:H5'	1.81	0.61
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.61
31:5:33:HIS:O	31:5:35:GLN:N	2.34	0.61
15:O:2:ASN:HD21	53:27:2876:G:H5''	1.65	0.61
44:18:20:PHE:CE1	44:18:47:LEU:HD11	2.34	0.61
43:17:101:THR:HG22	52:26:1226:C:H2'	1.82	0.61
52:26:1502:A:C8	52:26:1505:G:N2	2.69	0.61
52:26:270:A:H2'	52:26:271:C:C6	2.35	0.61
52:26:601:G:H2'	52:26:602:A:H8	1.65	0.61
53:27:1906:G:C3'	53:27:1907:G:H5''	2.30	0.61
53:27:2410:G:H2'	53:27:2411:A:O4'	2.00	0.61
53:27:2428:G:H5''	53:27:2429:G:OP1	2.01	0.61
57:31:19:G:H5''	57:31:20:U:C4	2.35	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
1:A:230:PRO:HB2	1:A:244:VAL:HG21	1.82	0.61
7:G:20:LYS:HB2	7:G:88:HIS:CE1	2.35	0.61
11:K:116:VAL:HG22	11:K:117:THR:N	2.15	0.61
20:T:6:ARG:O	20:T:24:VAL:HB	2.00	0.61
49:23:35:ARG:HG2	49:23:50:VAL:CG1	2.31	0.61
51:25:20:ARG:NH2	55:29:7:G:H21	1.98	0.61
52:26:1229:A:H2'	52:26:1230:C:C6	2.35	0.61
52:26:543:U:H2'	52:26:544:G:H8	1.65	0.61
8:H:93:ASN:OD1	53:27:1077:A:H4'	2.00	0.61
53:27:121:G:H4'	53:27:149:A:H5'	1.83	0.61
53:27:2469:A:H2'	53:27:2470:G:H5'	1.82	0.61
53:27:2447:G:C4	53:27:2500:U:C5	2.89	0.61
53:27:2786:U:O2'	53:27:2787:C:H5'	2.01	0.61
53:27:507:A:H5''	53:27:508:A:H2'	1.82	0.61
53:27:655:A:H4'	53:27:656:G:H5'	1.82	0.61
53:27:737:C:H2'	53:27:738:G:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:783:A:H2'	53:27:784:G:H5'	1.81	0.61
58:32:71:C:H2'	58:32:72:A:O4'	1.99	0.61
59:33:425:LEU:HD11	59:33:451:PHE:HB3	1.82	0.61
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.61
32:6:158:ASP:O	32:6:180:ILE:HG23	2.01	0.61
32:6:53:LEU:HD23	32:6:56:LEU:HD12	1.83	0.61
35:9:98:ALA:HB2	35:9:123:LEU:HG	1.83	0.61
1:A:159:THR:HG22	1:A:160:TYR:N	2.15	0.61
1:A:206:LYS:HG3	1:A:209:ALA:H	1.65	0.61
9:I:65:THR:HG22	9:I:66:GLY:N	2.15	0.61
14:N:6:ALA:O	14:N:9:ARG:HG2	2.01	0.61
23:W:16:ASN:ND2	23:W:26:ARG:HB3	2.15	0.61
38:12:80:PRO:HG2	52:26:878:A:C5'	2.31	0.61
52:26:574:A:N3	52:26:883:C:H1'	2.16	0.61
53:27:115:C:O2'	53:27:116:C:H5'	2.01	0.61
53:27:1255:U:H5''	53:27:1256:G:H5''	1.81	0.61
4:D:76:PHE:HB3	53:27:2311:A:C2	2.36	0.61
53:27:766:U:H2'	53:27:767:U:C6	2.36	0.61
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.61
31:5:27:CYS:SG	31:5:33:HIS:ND1	2.68	0.61
3:C:84:THR:HG21	53:27:586:A:C5'	2.30	0.61
15:O:39:LEU:HD13	15:O:81:ASP:OD2	2.00	0.61
15:O:74:GLN:HB2	15:O:77:SER:HB2	1.83	0.61
52:26:1301:U:H2'	52:26:1301:U:O2	1.99	0.61
52:26:584:G:H2'	52:26:585:G:H8	1.65	0.61
52:26:67:C:H2'	52:26:68:G:C8	2.35	0.61
52:26:971:G:C8	52:26:1365:G:H4'	2.36	0.61
53:27:1269:A:H2'	53:27:1270:C:C6	2.36	0.61
53:27:1405:U:H2'	53:27:1406:U:C6	2.36	0.61
53:27:1916:A:H2'	53:27:1917:U:O2	2.00	0.61
53:27:2105:U:H2'	53:27:2106:U:O4'	2.01	0.61
53:27:587:C:C5	53:27:671:C:H1'	2.36	0.61
53:27:63:A:O2'	53:27:64:A:H5'	2.01	0.61
55:29:13:A:H61	58:32:35:A:N6	1.98	0.61
59:33:444:ILE:HD11	59:33:449:VAL:HG11	1.82	0.61
33:7:13:ILE:HD12	33:7:13:ILE:N	2.16	0.61
33:7:113:LYS:HB2	33:7:184:ASN:ND2	2.16	0.61
10:J:66:LYS:HA	10:J:79:PHE:O	2.01	0.61
11:K:88:GLY:O	11:K:121:THR:N	2.32	0.61
16:P:75:TYR:O	16:P:78:PHE:HB3	2.01	0.61
38:12:14:ARG:HD3	38:12:74:ILE:O	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:81:GLU:O	40:14:84:VAL:HG12	2.00	0.61
44:18:25:GLU:HG3	44:18:26:LEU:N	2.15	0.61
46:20:70:ARG:O	46:20:74:LEU:HG	2.01	0.61
53:27:1030:C:H2'	53:27:1031:G:C8	2.36	0.61
53:27:5:A:H2'	53:27:6:A:C8	2.34	0.61
53:27:892:A:H2'	53:27:893:C:C6	2.36	0.61
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.61
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.82	0.61
2:B:133:THR:CG2	53:27:1993:U:H4'	2.31	0.61
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.83	0.61
7:G:34:THR:HA	7:G:37:LYS:HB3	1.82	0.61
7:G:43:LYS:O	7:G:47:GLU:HG3	2.01	0.61
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.83	0.61
14:N:71:ALA:HB1	14:N:106:LEU:HB2	1.82	0.61
21:U:86:LEU:H	21:U:86:LEU:HD12	1.66	0.61
42:16:99:GLY:HA3	42:16:117:GLY:HA3	1.82	0.61
52:26:1397:C:H42	55:29:22:A:H2'	1.65	0.61
52:26:21:G:H2'	52:26:22:G:C8	2.36	0.61
52:26:601:G:H2'	52:26:602:A:C8	2.36	0.61
53:27:1094:U:H1'	53:27:1097:U:H5	1.66	0.61
53:27:1306:C:H2'	53:27:1307:A:H8	1.64	0.61
53:27:1426:G:O5'	53:27:1426:G:H8	1.84	0.61
53:27:176:A:O2'	53:27:177:G:H5'	2.00	0.61
53:27:2644:G:H3'	53:27:2645:G:H21	1.66	0.61
53:27:547:A:N3	53:27:547:A:H3'	2.16	0.61
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.61
59:33:434:ASP:O	59:33:438:ARG:HG3	2.01	0.61
1:A:18:VAL:HG21	1:A:202:ARG:HH21	1.66	0.61
18:R:53:SER:O	18:R:57:ASN:HB2	2.01	0.61
38:12:95:MET:O	38:12:98:LEU:HG	2.01	0.60
40:14:36:VAL:HG22	40:14:38:GLY:N	2.13	0.60
42:16:33:CYS:HA	42:16:54:VAL:HA	1.83	0.60
42:16:111:GLN:HB3	52:26:538:G:OP2	2.01	0.60
53:27:1794:A:H2'	53:27:1795:C:C6	2.35	0.60
53:27:890:C:H2'	53:27:891:G:O4'	2.00	0.60
16:P:91:ARG:HH22	53:27:998:C:P	2.24	0.60
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.81	0.60
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.60
12:L:65:ILE:HG22	12:L:67:VAL:H	1.64	0.60
40:14:59:LYS:HG3	40:14:62:ARG:HH21	1.65	0.60
45:19:30:LEU:HD21	52:26:658:C:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:107:G:H2'	53:27:108:G:H8	1.65	0.60
2:B:151:THR:HG23	53:27:2032:G:H21	1.66	0.60
22:V:14:ALA:HB1	53:27:2271:G:OP1	2.00	0.60
54:28:113:C:H2'	54:28:114:C:H6	1.65	0.60
1:A:270:ARG:HG2	1:A:271:SER:N	2.17	0.60
6:F:54:LEU:N	6:F:57:LYS:HD3	2.15	0.60
23:W:13:THR:HG22	23:W:27:ARG:HA	1.81	0.60
39:13:24:ASN:HA	39:13:58:GLU:O	2.00	0.60
47:21:29:LYS:HB2	47:21:36:PHE:CE1	2.36	0.60
52:26:1405:G:O2'	52:26:1406:U:H5'	2.01	0.60
52:26:478:A:H2'	52:26:479:U:H5''	1.82	0.60
52:26:841:C:O2'	52:26:843:U:H4'	2.00	0.60
53:27:1810:A:C2'	53:27:1811:G:H5'	2.31	0.60
53:27:2174:C:C2'	53:27:2175:C:H5'	2.30	0.60
53:27:601:C:H2'	53:27:602:A:O4'	2.01	0.60
59:33:581:GLN:HA	59:33:695:LEU:HD22	1.83	0.60
32:6:33:ALA:CB	32:6:39:ILE:HG13	2.25	0.60
2:B:105:LYS:O	2:B:177:VAL:HG12	2.01	0.60
12:L:57:VAL:O	12:L:59:ARG:N	2.34	0.60
37:11:118:ARG:HA	37:11:121:ASN:HD22	1.66	0.60
50:24:8:LYS:O	50:24:11:ILE:HG13	2.01	0.60
51:25:32:ARG:HG3	51:25:33:ARG:H	1.65	0.60
52:26:215:C:H2'	52:26:216:U:C6	2.36	0.60
52:26:621:A:H2'	52:26:622:A:O4'	2.01	0.60
52:26:70:U:H2'	52:26:94:G:N7	2.17	0.60
53:27:2172:U:OP2	53:27:2173:A:H5'	2.02	0.60
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.60
59:33:438:ARG:HG2	59:33:467:LYS:O	2.01	0.60
5:E:2:ARG:HA	5:E:5:LYS:HE2	1.83	0.60
5:E:25:ILE:HG22	5:E:78:VAL:HG21	1.84	0.60
8:H:122:GLU:O	8:H:126:ARG:HG2	2.01	0.60
17:Q:14:VAL:CG2	17:Q:98:ILE:HG13	2.31	0.60
21:U:30:ILE:HG22	21:U:93:ARG:HD3	1.84	0.60
37:11:13:PRO:HA	37:11:20:GLU:HA	1.84	0.60
42:16:41:PRO:HB3	42:16:88:ASP:OD2	2.02	0.60
53:27:1506:U:H2'	53:27:1507:C:H6	1.67	0.60
53:27:1682:G:C4	53:27:1757:A:H1'	2.36	0.60
53:27:1825:U:H2'	53:27:1826:G:H8	1.66	0.60
53:27:226:A:H3'	53:27:227:A:C8	2.36	0.60
53:27:2432:A:H2'	53:27:2433:A:C8	2.37	0.60
53:27:818:G:N1	53:27:1187:G:H2'	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.60
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.60
32:6:209:VAL:O	32:6:213:LEU:HB3	2.01	0.60
34:8:12:ARG:HG2	34:8:34:GLU:H	1.66	0.60
10:J:110:GLU:HA	10:J:113:MET:HG2	1.82	0.60
27:1:38:LEU:HD23	27:1:39:ARG:N	2.16	0.60
40:14:6:ILE:CG1	40:14:102:LEU:HD12	2.32	0.60
52:26:549:C:C2'	52:26:550:G:H5''	2.30	0.60
52:26:81:A:H2'	52:26:82:G:C8	2.35	0.60
53:27:2685:G:H2'	53:27:2686:G:C8	2.36	0.60
27:1:39:ARG:CZ	53:27:2884:U:H3	2.14	0.60
53:27:904:G:H2'	53:27:905:A:C8	2.37	0.60
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.60
59:33:621:ILE:HD11	59:33:655:ALA:HB3	1.82	0.60
59:33:668:VAL:HA	59:33:713:THR:HA	1.82	0.60
18:R:2:GLU:HA	18:R:108:SER:HB2	1.82	0.60
53:27:1228:G:H2'	53:27:1229:C:C6	2.37	0.60
53:27:1315:C:H2'	53:27:1316:U:C6	2.37	0.60
53:27:2026:U:H2'	53:27:2027:G:C8	2.37	0.60
53:27:2130:U:H2'	53:27:2131:U:H5''	1.84	0.60
53:27:2242:G:H8	53:27:2242:G:O5'	1.82	0.60
53:27:319:G:H2'	53:27:320:A:O4'	2.02	0.60
57:31:59:A:H2'	57:31:60:U:H5'	1.83	0.60
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.17	0.60
32:6:95:TRP:CZ3	32:6:171:ALA:HA	2.36	0.60
7:G:39:THR:HA	7:G:42:ARG:HB3	1.83	0.60
19:S:3:ARG:O	19:S:7:LEU:HG	2.01	0.60
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.16	0.60
38:12:14:ARG:CG	38:12:74:ILE:HG22	2.32	0.60
39:13:108:ARG:HD2	52:26:1347:G:C8	2.37	0.60
41:15:80:ASN:HB3	41:15:105:ARG:HB3	1.83	0.60
28:2:32:LYS:HA	28:2:50:GLU:OE1	2.01	0.60
52:26:1057:G:H2'	52:26:1058:G:C8	2.36	0.60
52:26:13:U:O2'	52:26:14:U:H5'	2.01	0.60
52:26:147:G:H2'	52:26:148:G:H8	1.67	0.60
52:26:845:A:N3	52:26:845:A:H2'	2.15	0.60
52:26:923:A:H2'	52:26:924:C:C6	2.36	0.60
53:27:1584:U:C2'	53:27:1585:C:H5'	2.31	0.60
53:27:2241:A:H2'	53:27:2242:G:C8	2.37	0.60
53:27:2281:A:O2'	53:27:2282:G:H5'	2.01	0.60
53:27:639:U:H2'	53:27:640:C:H6	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:938:G:H2'	53:27:939:G:H8	1.67	0.60
14:N:101:GLY:HA3	54:28:49:C:OP1	2.01	0.60
33:7:168:ARG:NH2	52:26:1106:G:H1'	2.17	0.60
9:I:31:GLU:HG2	9:I:142:ILE:HG12	1.83	0.60
10:J:5:GLN:HA	10:J:20:MET:SD	2.42	0.60
17:Q:28:ALA:HB3	17:Q:31:GLU:HG2	1.84	0.60
37:11:14:ASP:CG	37:11:22:LEU:HD23	2.22	0.60
52:26:1029:U:H2'	52:26:1031:C:C2	2.36	0.60
52:26:556:C:H2'	52:26:557:G:C8	2.36	0.60
52:26:769:G:H4'	52:26:1513:A:H4'	1.84	0.60
53:27:1010:A:N3	53:27:1153:C:H1'	2.17	0.60
53:27:1287:A:O2'	53:27:1288:G:H5'	2.00	0.60
53:27:157:C:H2'	53:27:158:U:O4'	2.00	0.60
53:27:1720:U:H2'	53:27:1721:G:O4'	2.02	0.60
53:27:1801:A:H5''	53:27:2203:U:C2'	2.29	0.60
53:27:19:A:H2'	53:27:20:C:C6	2.37	0.60
53:27:23:G:H2'	53:27:24:G:H8	1.67	0.60
53:27:243:U:H2'	53:27:244:A:H5'	1.84	0.60
53:27:2511:U:H2'	53:27:2512:C:H6	1.67	0.60
53:27:2682:A:O2'	53:27:2683:C:H5'	2.01	0.60
53:27:2754:U:H2'	53:27:2755:C:H5''	1.82	0.60
53:27:357:C:H2'	53:27:358:U:C6	2.37	0.60
53:27:567:U:H2'	53:27:568:U:O4'	2.02	0.60
32:6:182:VAL:HG23	32:6:195:VAL:HG13	1.84	0.60
9:I:18:VAL:HG22	9:I:140:LEU:HB3	1.83	0.60
36:10:29:ILE:CG2	36:10:34:GLY:HA3	2.32	0.60
45:19:6:ALA:O	45:19:10:ILE:HG13	2.02	0.60
52:26:335:C:H2'	52:26:336:A:H8	1.66	0.60
53:27:2503:A:H1'	53:27:2505:G:OP2	2.01	0.60
53:27:2582:G:O2'	53:27:2583:G:H5'	2.02	0.60
59:33:439:CYS:HA	59:33:465:THR:HG22	1.83	0.60
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.60
32:6:91:VAL:HG21	32:6:95:TRP:HD1	1.67	0.60
35:9:11:GLN:HB2	35:9:39:GLY:O	2.01	0.60
2:B:115:GLY:O	13:M:3:HIS:NE2	2.35	0.60
11:K:85:VAL:CG1	11:K:94:THR:HG22	2.32	0.60
49:23:79:TYR:CZ	52:26:1226:C:H4'	2.37	0.59
52:26:470:C:H2'	52:26:471:U:C6	2.37	0.59
53:27:2721:A:H2'	53:27:2722:G:O4'	2.02	0.59
58:32:32:C:H2'	58:32:33:U:O4'	2.02	0.59
34:8:116:LEU:HD11	34:8:153:ARG:HD2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:72:SER:HB2	4:D:80:GLN:H	1.67	0.59
5:E:29:ASN:HD22	5:E:78:VAL:C	2.05	0.59
13:M:79:LEU:O	13:M:81:ASN:N	2.35	0.59
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.42	0.59
39:13:98:ARG:NH2	52:26:1178:G:C5	2.70	0.59
52:26:1401:G:H2'	52:26:1402:C:O4'	2.01	0.59
52:26:543:U:H2'	52:26:544:G:C8	2.36	0.59
53:27:1444:G:H2'	53:27:1445:G:C8	2.36	0.59
1:A:269:ARG:NH2	53:27:1798:U:OP1	2.35	0.59
53:27:20:C:H2'	53:27:21:A:H8	1.67	0.59
53:27:2248:C:H2'	53:27:2249:U:H5'	1.83	0.59
53:27:2271:G:H2'	53:27:2272:U:C6	2.36	0.59
53:27:2607:G:H2'	53:27:2608:G:O4'	2.02	0.59
53:27:2620:C:C2'	53:27:2621:G:H5''	2.31	0.59
53:27:547:A:H4'	53:27:548:G:C4	2.37	0.59
53:27:61:C:C2'	53:27:62:U:H5'	2.31	0.59
33:7:115:VAL:O	33:7:118:SER:HB3	2.02	0.59
34:8:142:VAL:HG12	34:8:179:GLY:O	2.01	0.59
5:E:36:LEU:HD11	5:E:67:ALA:HB1	1.84	0.59
7:G:24:SER:H	7:G:118:ILE:HG13	1.66	0.59
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.83	0.59
52:26:1506:U:O2'	52:26:1507:A:H5'	2.02	0.59
52:26:88:U:H2'	52:26:89:U:C4'	2.32	0.59
52:26:950:U:H2'	52:26:951:G:C8	2.37	0.59
53:27:1005:C:H6	53:27:1005:C:O5'	1.85	0.59
53:27:1199:U:H2'	53:27:1200:C:H6	1.67	0.59
53:27:1843:C:H2'	53:27:1844:C:C6	2.38	0.59
53:27:1664:A:N6	53:27:1996:C:H42	1.95	0.59
53:27:2016:U:H2'	53:27:2017:U:O4'	2.02	0.59
23:W:36:ARG:HD3	53:27:2200:C:OP2	2.02	0.59
53:27:2393:U:H2'	53:27:2394:C:C6	2.37	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.02	0.59
53:27:464:U:C6	53:27:788:A:C2	2.91	0.59
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.59
34:8:104:MET:CE	34:8:172:VAL:HB	2.32	0.59
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.37	0.59
2:B:66:GLY:HA3	53:27:2787:C:H5'	1.83	0.59
36:10:3:HIS:O	36:10:92:THR:HA	2.00	0.59
38:12:94:VAL:HB	38:12:99:GLY:O	2.02	0.59
42:16:63:THR:HG23	42:16:92:VAL:HA	1.82	0.59
46:20:5:ARG:HH12	52:26:377:G:H5'	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:2:ASN:CG	50:24:3:ILE:H	2.05	0.59
52:26:1201:A:H1'	52:26:1202:U:OP2	2.03	0.59
52:26:1414:U:H2'	52:26:1415:G:H8	1.66	0.59
53:27:1197:G:H2'	53:27:1198:U:C6	2.38	0.59
53:27:1868:C:H3'	53:27:1869:G:C5'	2.25	0.59
58:32:60:U:H2'	58:32:61:C:C5	2.37	0.59
2:B:158:GLY:HA3	9:I:80:HIS:NE2	2.17	0.59
3:C:132:LYS:O	3:C:136:GLN:HB2	2.01	0.59
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.35	0.59
19:S:29:THR:HG23	19:S:85:VAL:C	2.22	0.59
21:U:30:ILE:CG2	21:U:93:ARG:HD3	2.32	0.59
43:17:2:ARG:HA	43:17:6:ILE:O	2.01	0.59
52:26:218:U:H2'	52:26:219:U:O4'	2.02	0.59
53:27:1304:A:C3'	53:27:1305:C:H5''	2.33	0.59
53:27:1306:C:H2'	53:27:1307:A:C8	2.38	0.59
53:27:1401:G:H2'	53:27:1402:U:O4'	2.02	0.59
53:27:1906:G:H2'	53:27:1907:G:H5''	1.83	0.59
53:27:2024:G:H2'	53:27:2025:C:O4'	2.02	0.59
53:27:2507:C:H2'	53:27:2508:G:H8	1.68	0.59
53:27:2619:C:H2'	53:27:2620:C:C6	2.37	0.59
53:27:858:G:H4'	53:27:859:G:OP2	2.01	0.59
54:28:1:U:H2'	54:28:2:G:C8	2.38	0.59
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.59
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.59
29:3:42:LEU:HD23	29:3:43:THR:HG23	1.85	0.59
8:H:37:PHE:O	8:H:41:PHE:HB2	2.02	0.59
11:K:19:LEU:HG	11:K:31:GLY:HA3	1.83	0.59
39:13:112:ARG:HH12	39:13:114:LYS:HA	1.68	0.59
41:15:71:ASP:O	41:15:72:ALA:HB3	2.01	0.59
52:26:1202:U:C2'	52:26:1203:C:H5'	2.33	0.59
52:26:17:U:H2'	52:26:18:C:C6	2.37	0.59
52:26:741:G:H2'	52:26:742:G:H8	1.68	0.59
52:26:891:U:H2'	52:26:892:A:H8	1.66	0.59
53:27:1061:U:H5'	53:27:1070:A:N3	2.17	0.59
53:27:1725:U:H2'	53:27:1726:C:C6	2.37	0.59
53:27:1881:C:H2'	53:27:1882:U:O4'	2.01	0.59
53:27:2086:U:H2'	53:27:2087:G:C8	2.37	0.59
53:27:2514:U:H2'	53:27:2515:C:H6	1.67	0.59
56:30:13:C:H2'	56:30:14:A:H5''	1.84	0.59
58:32:31:G:H3'	58:32:32:C:C6	2.38	0.59
3:C:148:ILE:HG13	3:C:187:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:24:VAL:O	4:D:27:VAL:HG12	2.02	0.59
39:13:11:ARG:HB3	39:13:77:ALA:N	2.17	0.59
40:14:5:ARG:N	40:14:77:VAL:HA	2.16	0.59
51:25:9:GLU:CG	51:25:10:PRO:HD3	2.23	0.59
52:26:349:A:H2'	52:26:350:G:C8	2.37	0.59
53:27:2110:G:H5'	53:27:2111:U:H5''	1.83	0.59
53:27:538:A:H2'	53:27:539:G:C8	2.38	0.59
13:M:30:ARG:NH1	13:M:75:ILE:HD11	2.18	0.59
24:X:14:LEU:O	24:X:17:GLU:HB3	2.03	0.59
24:X:18:LEU:O	24:X:22:LEU:HB3	2.03	0.59
49:23:49:ALA:HA	49:23:58:PRO:HA	1.84	0.59
50:24:2:ASN:OD1	50:24:3:ILE:N	2.35	0.59
28:2:12:SER:HB2	28:2:48:TYR:CZ	2.38	0.59
52:26:744:C:H2'	52:26:745:G:H8	1.68	0.59
53:27:1153:C:H2'	53:27:1154:G:O4'	2.03	0.59
53:27:1285:A:H2'	53:27:1286:A:H5'	1.85	0.59
53:27:1931:U:H2'	53:27:1932:A:H8	1.67	0.59
53:27:975:A:H1'	53:27:990:A:N1	2.17	0.59
54:28:38:C:O2	54:28:48:U:H1'	2.03	0.59
32:6:96:LEU:O	32:6:99:MET:HG2	2.02	0.59
8:H:59:THR:HB	8:H:67:THR:O	2.03	0.59
10:J:15:GLY:O	10:J:47:ILE:HG12	2.02	0.59
17:Q:1:MET:N	17:Q:43:ASN:HA	2.17	0.59
40:14:5:ARG:NH1	40:14:79:PRO:HG3	2.17	0.59
41:15:109:ILE:HD12	41:15:109:ILE:H	1.66	0.59
41:15:17:ASP:CB	41:15:36:ARG:HH22	2.15	0.59
43:17:15:VAL:HG23	43:17:40:GLU:O	2.02	0.59
52:26:418:C:H2'	52:26:419:C:C6	2.37	0.59
52:26:579:A:H2'	52:26:580:C:C6	2.38	0.59
53:27:1331:G:C2'	53:27:1332:G:H5''	2.33	0.59
53:27:2505:G:H2'	53:27:2505:G:N3	2.18	0.59
53:27:286:U:H2'	53:27:287:G:C8	2.37	0.59
3:C:149:ILE:HG23	3:C:188:MET:HG3	1.85	0.59
8:H:76:ALA:HB3	53:27:1063:G:H5'	1.83	0.59
12:L:31:PHE:O	12:L:105:MET:N	2.31	0.59
21:U:86:LEU:CD2	21:U:89:ILE:HD11	2.29	0.59
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.84	0.59
52:26:40:C:O2'	52:26:41:G:H5'	2.03	0.59
52:26:420:U:H4'	52:26:421:U:H5	1.68	0.59
52:26:768:A:H4'	52:26:1523:G:N2	2.16	0.59
52:26:988:G:H21	52:26:1015:G:N2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2845:U:H2'	53:27:2846:G:C8	2.38	0.59
59:33:428:ALA:HB1	59:33:435:VAL:HG12	1.85	0.59
35:9:79:THR:HB	35:9:121:ASN:ND2	2.18	0.59
35:9:137:ARG:HH12	52:26:1078:U:C4'	2.12	0.59
35:9:137:ARG:HH22	52:26:1078:U:H4'	1.68	0.59
8:H:42:ASN:O	8:H:46:ASP:HB3	2.01	0.59
11:K:63:LYS:HA	30:4:12:ARG:HG2	1.85	0.59
37:11:62:GLU:HA	37:11:65:LEU:HB3	1.83	0.58
39:13:16:ALA:HB1	39:13:65:THR:O	2.03	0.58
27:1:51:ARG:HG3	27:1:53:VAL:HG13	1.85	0.58
43:17:88:LEU:HA	43:17:91:ARG:HE	1.67	0.58
52:26:1292:G:H2'	52:26:1293:C:C6	2.38	0.58
52:26:197:A:N3	52:26:198:G:H1'	2.18	0.58
52:26:202:G:H2'	52:26:203:G:C8	2.38	0.58
52:26:572:A:H4'	52:26:917:G:H5'	1.84	0.58
52:26:692:U:H1'	52:26:695:A:N7	2.18	0.58
53:27:2037:A:H2'	53:27:2038:G:C8	2.38	0.58
53:27:2373:G:H2'	53:27:2374:C:C6	2.38	0.58
53:27:2739:U:H5''	53:27:2763:G:O6	2.03	0.58
53:27:296:U:H2'	53:27:297:G:C8	2.38	0.58
53:27:787:C:H3'	53:27:791:C:H41	1.68	0.58
33:7:174:LEU:HD23	33:7:181:ILE:HD13	1.85	0.58
6:F:27:ARG:NE	23:W:55:MET:HE2	2.16	0.58
39:13:89:TYR:O	39:13:90:ASP:HB3	2.02	0.58
44:18:37:ASP:OD1	44:18:39:ASP:HB3	2.03	0.58
52:26:1176:A:H2'	52:26:1177:G:O4'	2.03	0.58
53:27:2070:A:H2'	53:27:2071:A:C8	2.38	0.58
1:A:227:VAL:HG11	53:27:784:G:C2	2.37	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.29	0.58
1:A:59:GLN:NE2	1:A:84:PRO:HB2	2.18	0.58
8:H:2:LYS:NZ	8:H:62:ALA:HB2	2.18	0.58
14:N:40:ILE:HD11	54:28:8:C:H4'	1.85	0.58
16:P:61:ILE:HG12	16:P:91:ARG:HD3	1.85	0.58
26:Z:61:ASN:HA	26:Z:64:PHE:CB	2.15	0.58
47:21:58:VAL:HG22	47:21:59:GLU:O	2.03	0.58
49:23:48:ILE:O	49:23:59:VAL:HG22	2.04	0.58
52:26:1225:A:H5'	52:26:1226:C:OP2	2.03	0.58
52:26:1522:U:H2'	52:26:1523:G:H8	1.68	0.58
52:26:333:U:H2'	52:26:334:C:H6	1.68	0.58
52:26:406:G:H2'	52:26:407:U:H6	1.68	0.58
44:18:71:GLY:HA2	52:26:975:A:O2'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1637:A:H5'	53:27:1760:C:O2'	2.02	0.58
53:27:288:U:H2'	53:27:289:G:C8	2.39	0.58
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.58
35:9:28:ARG:HH12	52:26:15:G:H4'	1.69	0.58
2:B:121:THR:HB	2:B:127:PHE:CD2	2.38	0.58
2:B:6:GLY:HA3	2:B:29:VAL:HG22	1.86	0.58
6:F:14:SER:HB2	6:F:17:ASP:OD2	2.03	0.58
9:I:37:ARG:HH21	9:I:37:ARG:HG3	1.68	0.58
42:16:113:ARG:HH21	42:16:120:ARG:HG3	1.66	0.58
48:22:17:VAL:CG1	48:22:18:GLN:HG3	2.31	0.58
52:26:102:G:H2'	52:26:103:U:H6	1.67	0.58
52:26:505:G:H5'	52:26:534:U:H2'	1.85	0.58
52:26:580:C:H2'	52:26:581:G:C8	2.38	0.58
53:27:1297:C:H2'	53:27:1298:C:H6	1.68	0.58
53:27:2256:G:H2'	53:27:2257:U:H6	1.67	0.58
53:27:2475:C:H2'	53:27:2476:A:H5'	1.84	0.58
53:27:2849:U:H1'	53:27:2866:U:O2	2.03	0.58
53:27:414:C:H2'	53:27:415:A:C8	2.38	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
32:6:210:THR:O	32:6:214:GLY:HA3	2.04	0.58
8:H:13:ALA:HA	8:H:53:PRO:HA	1.86	0.58
10:J:76:VAL:H	15:O:72:VAL:HG22	1.68	0.58
21:U:60:VAL:HG11	21:U:71:LYS:HB3	1.86	0.58
37:11:110:ARG:HD3	37:11:122:GLU:OE2	2.02	0.58
50:24:9:ARG:HG2	52:26:108:G:C6	2.38	0.58
52:26:128:G:O2'	52:26:129:A:H5'	2.03	0.58
52:26:81:A:H2'	52:26:82:G:H8	1.67	0.58
53:27:110:G:H2'	53:27:111:A:C8	2.38	0.58
53:27:1293:C:C2'	53:27:1294:U:H5''	2.32	0.58
53:27:1662:U:H2'	53:27:1663:G:C8	2.38	0.58
53:27:2011:U:H2'	53:27:2012:G:O4'	2.04	0.58
53:27:2039:U:H2'	53:27:2040:G:C8	2.39	0.58
53:27:2329:U:H2'	53:27:2330:G:H8	1.64	0.58
53:27:2620:C:C3'	53:27:2621:G:H5''	2.33	0.58
3:C:163:ASN:HB2	53:27:322:A:OP2	2.03	0.58
53:27:435:C:H2'	53:27:436:C:H5'	1.84	0.58
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.58
59:33:634:HIS:NE2	59:33:640:GLN:HB2	2.18	0.58
1:A:1:ALA:N	1:A:19:VAL:O	2.30	0.58
9:I:59:ALA:HB1	9:I:101:ILE:HG13	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:71:ARG:HH11	23:W:77:TYR:HE2	1.48	0.58
4:D:139:GLU:HA	26:Z:28:VAL:HG12	1.85	0.58
43:17:38:ILE:HD12	43:17:47:LEU:HD11	1.86	0.58
43:17:54:THR:HA	43:17:57:ASP:OD2	2.03	0.58
50:24:4:LYS:HE3	52:26:60:A:H3'	1.85	0.58
52:26:1129:C:H2'	52:26:1139:G:O6	2.04	0.58
53:27:1053:C:H5'	53:27:1053:C:H6	1.66	0.58
53:27:1622:G:H2'	53:27:1623:G:H8	1.68	0.58
53:27:1726:C:H2'	53:27:1727:C:C6	2.37	0.58
53:27:2071:A:H2'	53:27:2072:C:C6	2.38	0.58
53:27:2800:A:H3'	53:27:2801:G:H5'	1.85	0.58
53:27:2799:A:H2'	53:27:2800:A:H5'	1.84	0.58
53:27:2800:A:C2	53:27:2895:G:H1'	2.38	0.58
59:33:294:GLY:O	59:33:298:THR:HG23	2.03	0.58
34:8:149:LYS:O	34:8:151:GLN:N	2.37	0.58
2:B:4:LEU:HD11	2:B:100:LEU:HD22	1.85	0.58
15:O:99:LEU:HD23	15:O:99:LEU:O	2.02	0.58
21:U:16:ALA:O	21:U:20:LEU:HD13	2.03	0.58
26:Z:11:GLU:HA	26:Z:25:ARG:HG2	1.85	0.58
40:14:22:THR:HA	40:14:25:ILE:HG22	1.84	0.58
44:18:8:ARG:HG2	44:18:12:ARG:NH1	2.19	0.58
45:19:23:SER:HA	52:26:751:U:H4'	1.84	0.58
41:15:121:ARG:HE	51:25:35:GLU:CG	2.16	0.58
52:26:1028:C:H2'	52:26:1029:U:H4'	1.85	0.58
52:26:1323:G:H2'	52:26:1324:A:C8	2.38	0.58
52:26:478:A:C3'	52:26:479:U:H5''	2.34	0.58
53:27:1263:U:H2'	53:27:1264:A:C4	2.38	0.58
53:27:1869:G:N2	53:27:1871:A:H5''	2.18	0.58
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.86	0.58
53:27:2756:U:H1'	53:27:2757:A:H5''	1.84	0.58
53:27:279:A:N6	53:27:361:G:HO2'	2.00	0.58
53:27:523:C:O2'	53:27:524:G:H5'	2.03	0.58
56:30:50:U:H2'	56:30:51:U:O4'	2.03	0.58
59:33:267:ASN:HD22	59:33:267:ASN:H	1.49	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:699:SER:OG	59:33:710:ILE:HG23	2.04	0.58
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.58
16:P:36:GLN:HE21	53:27:563:A:C2'	2.16	0.58
17:Q:4:VAL:HG22	17:Q:13:ARG:HA	1.86	0.58
17:Q:1:MET:N	17:Q:43:ASN:HD22	2.02	0.58
21:U:46:LYS:O	21:U:50:MET:HG2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:39:GLN:HE21	24:X:42:LEU:CD1	2.16	0.58
36:10:39:LEU:O	36:10:41:ASP:N	2.36	0.58
42:16:87:LYS:O	42:16:88:ASP:HB2	2.04	0.58
47:21:7:LEU:HD23	47:21:24:ILE:HD13	1.84	0.58
51:25:61:ARG:O	51:25:63:ASN:N	2.35	0.58
50:24:32:LYS:HE2	52:26:1439:G:OP1	2.03	0.58
52:26:212:G:H2'	52:26:213:G:C8	2.35	0.58
53:27:1659:G:H2'	53:27:1660:G:H5''	1.84	0.58
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.86	0.58
53:27:1901:A:H2'	53:27:1902:C:C6	2.39	0.58
53:27:2543:G:H2'	53:27:2544:G:C8	2.38	0.58
53:27:2840:C:H2'	53:27:2841:C:C6	2.38	0.58
53:27:904:G:H2'	53:27:905:A:H8	1.68	0.58
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.58
33:7:112:ALA:HB1	33:7:199:VAL:HG13	1.85	0.58
34:8:100:VAL:O	34:8:104:MET:HG2	2.04	0.58
8:H:99:LYS:HG3	8:H:140:GLU:HG2	1.85	0.58
10:J:10:VAL:HG12	10:J:12:ASP:H	1.67	0.58
14:N:67:ASN:O	14:N:70:ALA:N	2.32	0.58
16:P:67:ALA:O	16:P:70:GLN:HB3	2.03	0.58
20:T:87:GLU:O	20:T:88:ASP:HB3	2.03	0.58
38:12:14:ARG:HH12	52:26:876:C:P	2.27	0.58
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.86	0.58
49:23:39:ILE:HB	49:23:66:VAL:HA	1.86	0.58
52:26:1415:G:H2'	52:26:1416:G:H8	1.68	0.58
52:26:912:C:H2'	52:26:913:A:C8	2.39	0.58
52:26:949:A:H1'	52:26:1364:U:O2	2.04	0.58
53:27:1169:A:H61	53:27:1180:U:H3	1.52	0.58
53:27:1746:A:H2'	53:27:1747:U:C6	2.39	0.58
53:27:2515:C:O2'	53:27:2516:A:H5'	2.03	0.58
53:27:2547:A:H2'	53:27:2548:U:C6	2.38	0.58
54:28:3:C:C3'	54:28:4:C:H5''	2.34	0.58
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58
32:6:93:HIS:CE1	32:6:145:ASN:HB2	2.39	0.58
35:9:133:ILE:HD12	35:9:133:ILE:H	1.68	0.58
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.84	0.58
8:H:21:PRO:CB	8:H:22:PRO:HD3	2.28	0.58
8:H:60:VAL:HA	8:H:66:PHE:CB	2.33	0.58
8:H:32:VAL:HG22	8:H:60:VAL:HG21	1.86	0.58
20:T:73:ASN:OD1	20:T:75:ALA:HB3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:40:LYS:HD3	38:12:47:ASP:H	1.68	0.58
52:26:1037:C:H2'	52:26:1038:C:H6	1.68	0.58
52:26:1096:C:H2'	52:26:1097:C:H6	1.68	0.58
10:J:22:ILE:HB	53:27:1952:A:C2	2.39	0.58
53:27:2340:A:H2'	53:27:2341:G:H8	1.69	0.58
53:27:29:U:H2'	53:27:30:G:C8	2.39	0.58
53:27:538:A:H2'	53:27:539:G:O4'	2.03	0.58
12:L:46:ILE:HD12	12:L:69:PRO:HG3	1.86	0.58
39:13:38:PHE:HA	39:13:41:GLU:OE1	2.02	0.57
40:14:88:MET:O	40:14:89:ARG:HB3	2.04	0.57
45:19:55:LEU:O	45:19:59:VAL:HG23	2.04	0.57
47:21:46:HIS:HA	47:21:70:LYS:HD2	1.85	0.57
49:23:30:LEU:HD22	49:23:48:ILE:HG22	1.86	0.57
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.04	0.57
52:26:1347:G:H22	52:26:1373:G:H2'	1.69	0.57
52:26:88:U:H2'	52:26:89:U:H4'	1.86	0.57
53:27:1182:G:H2'	53:27:1183:U:O4'	2.04	0.57
53:27:1810:A:H2'	53:27:1811:G:H5'	1.85	0.57
53:27:1866:A:H2'	53:27:1867:G:O4'	2.04	0.57
53:27:2081:U:H2'	53:27:2082:A:H8	1.67	0.57
53:27:479:A:H4'	53:27:480:A:OP1	2.04	0.57
58:32:57:A:C2'	58:32:58:A:H5'	2.34	0.57
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.57
59:33:79:ALA:O	59:33:82:PHE:CE1	2.57	0.57
30:4:63:TYR:HE1	53:27:593:U:H5'	1.69	0.57
33:7:60:ALA:C	33:7:62:SER:H	2.07	0.57
34:8:8:LEU:HB3	52:26:430:A:OP1	2.04	0.57
9:I:113:PRO:HG3	53:27:529:A:OP2	2.04	0.57
13:M:101:GLY:H	27:1:41:HIS:HD2	1.51	0.57
37:11:102:TRP:CH2	37:11:140:VAL:HG21	2.39	0.57
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.34	0.57
42:16:29:LYS:HE2	42:16:58:ASN:ND2	2.19	0.57
42:16:87:LYS:HE3	52:26:526:C:OP2	2.04	0.57
46:20:40:ASN:CG	46:20:43:ALA:HB2	2.25	0.57
53:27:1188:U:O2'	53:27:1189:A:H5'	2.04	0.57
53:27:1537:G:N1	53:27:1538:G:H1'	2.19	0.57
53:27:2195:U:H2'	53:27:2196:C:C6	2.39	0.57
11:K:55:MET:HG2	53:27:2392:A:C2	2.38	0.57
53:27:2446:G:H2'	53:27:2447:G:H5''	1.85	0.57
56:30:12:U:H2'	56:30:13:C:O4'	2.04	0.57
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.57
59:33:267:ASN:N	59:33:267:ASN:HD22	2.02	0.57
30:4:25:HIS:HB3	30:4:43:LEU:HD22	1.85	0.57
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.86	0.57
16:P:80:ASN:HB2	53:27:1151:A:O2'	2.04	0.57
19:S:70:HIS:O	19:S:72:GLN:N	2.37	0.57
39:13:56:MET:O	39:13:59:LYS:HG2	2.04	0.57
41:15:12:ARG:O	41:15:14:GLN:N	2.37	0.57
43:17:109:LYS:HE3	52:26:1227:A:OP2	2.03	0.57
52:26:265:G:H2'	52:26:267:C:H5	1.69	0.57
52:26:579:A:H2'	52:26:580:C:H6	1.69	0.57
53:27:1144:A:H2'	53:27:1145:C:C6	2.39	0.57
53:27:1821:A:H2'	53:27:1822:C:H6	1.67	0.57
54:28:53:A:H2'	54:28:54:G:H5'	1.86	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.68	0.57
33:7:86:LEU:O	33:7:90:VAL:HG23	2.04	0.57
35:9:46:GLY:HA3	35:9:69:ASN:O	2.03	0.57
6:F:3:VAL:HA	6:F:39:ALA:N	2.19	0.57
19:S:5:GLU:HA	19:S:8:LEU:HD12	1.86	0.57
36:10:18:VAL:H	36:10:19:PRO:CD	2.17	0.57
35:9:154:ALA:HB1	38:12:65:PHE:CE2	2.39	0.57
39:13:12:LYS:O	39:13:14:SER:N	2.35	0.57
40:14:59:LYS:HE2	40:14:62:ARG:NH2	2.19	0.57
42:16:41:PRO:HG3	42:16:49:ARG:HG2	1.84	0.57
37:11:78:ARG:HD3	52:26:1382:C:H1'	1.85	0.57
52:26:460:A:H2'	52:26:461:A:C8	2.39	0.57
52:26:741:G:H2'	52:26:742:G:C8	2.39	0.57
52:26:865:A:H2	52:26:918:A:H4'	1.70	0.57
53:27:1316:U:H2'	53:27:1317:G:H8	1.70	0.57
1:A:94:LEU:HD21	53:27:1501:G:H4'	1.85	0.57
53:27:1564:C:H2'	53:27:1565:C:O4'	2.05	0.57
53:27:2405:G:H2'	53:27:2411:A:H62	1.68	0.57
53:27:2760:C:O2'	53:27:2761:A:H5'	2.03	0.57
53:27:371:A:H5''	53:27:423:A:C2	2.40	0.57
53:27:721:A:H2'	53:27:722:A:H8	1.70	0.57
53:27:975:A:H1'	53:27:990:A:C6	2.39	0.57
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.57
59:33:657:TRP:O	59:33:659:GLU:N	2.37	0.57
1:A:107:LYS:O	1:A:109:LEU:N	2.38	0.57
1:A:64:VAL:HB	1:A:66:PHE:HE1	1.69	0.57
2:B:62:LYS:HB2	2:B:63:PRO:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:98:GLN:O	14:N:100:HIS:N	2.37	0.57
14:N:52:SER:OG	14:N:54:VAL:HG12	2.04	0.57
17:Q:52:PRO:O	17:Q:53:PHE:HB2	2.05	0.57
39:13:112:ARG:NH1	39:13:114:LYS:HA	2.19	0.57
52:26:1359:C:H4'	52:26:1362:A:N6	2.19	0.57
53:27:1028:A:H2'	53:27:1029:A:C8	2.39	0.57
53:27:1403:A:H2'	53:27:1404:C:H6	1.66	0.57
53:27:2134:A:C5	53:27:2157:G:H4'	2.39	0.57
58:32:34:C:H2'	58:32:35:A:C8	2.40	0.57
58:32:9:G:H2'	58:32:11:A:N7	2.20	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:504:ASN:CB	59:33:547:GLY:HA3	2.34	0.57
3:C:23:PHE:HD1	3:C:111:GLU:HB2	1.70	0.57
20:T:98:ASN:O	20:T:100:GLU:HG2	2.05	0.57
46:20:6:LEU:HB3	46:20:17:TYR:HD1	1.69	0.57
46:20:3:THR:HG22	46:20:22:ALA:O	2.04	0.57
52:26:1028:C:C3'	52:26:1029:U:H4'	2.35	0.57
49:23:9:PHE:CD2	52:26:1318:A:H4'	2.40	0.57
52:26:357:G:O2'	52:26:358:U:H5'	2.04	0.57
52:26:406:G:H2'	52:26:407:U:C6	2.40	0.57
53:27:140:C:OP2	53:27:140:C:H3'	2.04	0.57
53:27:2093:G:O2'	53:27:2094:A:H5'	2.04	0.57
4:D:87:LYS:HD3	53:27:2313:C:H5''	1.85	0.57
53:27:366:C:H2'	53:27:367:G:O4'	2.02	0.57
53:27:723:C:H2'	53:27:724:U:O4'	2.03	0.57
54:28:111:U:H2'	54:28:112:G:C8	2.38	0.57
11:K:28:GLY:O	11:K:29:LYS:HB3	2.05	0.57
20:T:67:SER:HB2	53:27:335:C:O2	2.04	0.57
23:W:70:LEU:HB3	23:W:75:GLU:HB2	1.85	0.57
26:Z:64:PHE:C	26:Z:66:ILE:H	2.07	0.57
52:26:106:C:C2	52:26:107:G:C8	2.92	0.57
50:24:9:ARG:HG2	52:26:108:G:H1	1.68	0.57
52:26:569:C:H5'	52:26:574:A:N6	2.19	0.57
52:26:88:U:C2	52:26:89:U:H1'	2.39	0.57
53:27:1024:G:H21	53:27:1144:A:H5'	1.70	0.57
53:27:1149:G:H2'	53:27:1150:C:C6	2.40	0.57
53:27:1336:A:H2'	53:27:1337:G:H8	1.68	0.57
53:27:138:U:H2'	53:27:139:U:H5''	1.84	0.57
53:27:1432:G:H2'	53:27:1433:A:C8	2.39	0.57
53:27:445:C:O2'	53:27:446:G:H5'	2.04	0.57
58:32:17:C:H3'	58:32:17(A):U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:34:C:H2'	58:32:35:A:N7	2.19	0.57
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.57
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.85	0.57
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.57
32:6:51:GLU:O	32:6:55:GLU:HG2	2.05	0.57
2:B:5:VAL:N	2:B:32:ASN:HD21	1.88	0.57
3:C:149:ILE:HD12	3:C:170:ARG:O	2.05	0.57
4:D:90:LEU:O	4:D:90:LEU:HD12	2.04	0.57
9:I:42:ALA:O	16:P:63:ARG:HG3	2.05	0.57
11:K:115:GLU:HG3	11:K:116:VAL:H	1.69	0.57
12:L:28:PHE:N	12:L:104:GLU:OE1	2.36	0.57
18:R:59:GLU:HA	18:R:64:ALA:HA	1.86	0.57
19:S:15:HIS:HE1	53:27:1339:G:OP2	1.87	0.57
43:17:28:ARG:HH21	43:17:62:PHE:HB2	1.69	0.57
52:26:1207:G:H2'	52:26:1208:C:O4'	2.05	0.57
52:26:1418:A:H3'	52:26:1419:G:H5''	1.87	0.57
52:26:336:A:H2'	52:26:337:G:H8	1.70	0.57
53:27:1354:A:H2'	53:27:1355:G:O4'	2.05	0.57
53:27:1529:G:H2'	53:27:1530:G:O4'	2.05	0.57
53:27:2074:U:H2'	53:27:2075:U:C6	2.39	0.57
53:27:2149:U:H2'	53:27:2150:C:H6	1.69	0.57
53:27:297:G:H2'	53:27:298:G:O4'	2.05	0.57
53:27:65:U:H2'	53:27:66:C:C6	2.40	0.57
53:27:754:U:H2'	53:27:755:U:C6	2.39	0.57
56:30:71:G:H2'	56:30:72:C:C6	2.40	0.57
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.57
33:7:76:ILE:HA	33:7:83:VAL:CG2	2.34	0.57
1:A:180:MET:CB	1:A:268:ARG:HB3	2.32	0.57
10:J:23:LYS:HG2	10:J:24:VAL:O	2.04	0.57
10:J:88:ASN:O	10:J:90:ASN:N	2.37	0.57
14:N:11:ALA:O	14:N:15:ARG:HG2	2.05	0.57
15:O:4:ILE:O	15:O:8:GLU:HG3	2.05	0.57
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.35	0.57
42:16:106:VAL:O	42:16:118:VAL:HG21	2.05	0.57
46:20:17:TYR:HB2	46:20:39:PHE:HB3	1.84	0.57
52:26:1097:C:H2'	52:26:1098:C:C6	2.40	0.57
52:26:1218:C:H2'	52:26:1219:A:H8	1.69	0.57
52:26:1401:G:C2	52:26:1402:C:H1'	2.40	0.57
52:26:142:G:H2'	52:26:143:A:O4'	2.04	0.57
52:26:338:A:H2'	52:26:339:C:O4'	2.05	0.57
53:27:1115:G:H2'	53:27:1116:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:175:G:H2'	53:27:176:A:O4'	2.04	0.57
53:27:1960:A:O2'	53:27:1961:C:H5'	2.04	0.57
53:27:2061:G:H4'	53:27:2061:G:OP1	2.04	0.57
53:27:2131:U:H5'	53:27:2132:U:C5'	2.34	0.57
53:27:2704:C:H2'	53:27:2705:A:O4'	2.04	0.57
53:27:2730:C:O2'	53:27:2731:G:H5'	2.04	0.57
53:27:383:C:O2	53:27:383:C:H2'	2.04	0.57
3:C:63:LYS:C	3:C:65:THR:N	2.57	0.57
4:D:40:GLY:HA2	4:D:84:ILE:HD11	1.86	0.57
37:11:117:LEU:HD23	37:11:121:ASN:HD21	1.69	0.57
42:16:26:CYS:SG	42:16:29:LYS:HD3	2.45	0.57
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.40	0.57
52:26:1342:C:H2'	52:26:1343:G:C8	2.39	0.57
52:26:540:G:H2'	52:26:541:G:C8	2.40	0.57
52:26:677:U:H2'	52:26:678:U:C6	2.40	0.57
52:26:708:C:H2'	52:26:709:U:H6	1.68	0.57
53:27:2087:G:H2'	53:27:2088:A:H8	1.69	0.57
53:27:2097:A:H2'	53:27:2098:U:O4'	2.05	0.57
23:W:26:ARG:NH1	53:27:2232:C:OP1	2.38	0.57
53:27:2586:U:H2'	53:27:2587:A:H8	1.70	0.57
53:27:390:U:H4'	53:27:391:A:H5'	1.85	0.57
53:27:657:U:H2'	53:27:658:U:H6	1.68	0.57
54:28:40:U:H1'	54:28:43:C:C5	2.40	0.57
59:33:621:ILE:HA	59:33:636:ALA:N	2.19	0.57
3:C:60:TRP:HZ2	3:C:63:LYS:HA	1.70	0.57
10:J:103:VAL:HG12	10:J:104:THR:N	2.15	0.57
22:V:48:GLY:H	22:V:58:LYS:HG3	1.70	0.57
50:24:2:ASN:HB3	52:26:332:G:OP2	2.05	0.56
50:24:3:ILE:O	50:24:4:LYS:HG2	2.04	0.56
52:26:1305:G:N2	52:26:1331:G:H2'	2.19	0.56
52:26:632:U:H3'	52:26:633:G:C5'	2.34	0.56
52:26:908:A:H2'	52:26:909:A:H8	1.70	0.56
53:27:1785:A:OP2	53:27:1982:U:H5'	2.05	0.56
53:27:1924:C:H2'	53:27:1925:C:C6	2.40	0.56
53:27:1936:A:H2	53:27:1943:U:N3	1.91	0.56
53:27:2124:G:H3'	53:27:2125:G:H5''	1.87	0.56
53:27:572:A:C2	53:27:2033:A:C2	2.93	0.56
53:27:815:C:H2'	53:27:816:C:C6	2.39	0.56
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.56
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.34	0.56
31:5:4:ARG:HB3	53:27:2466:C:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:91:VAL:HG21	32:6:95:TRP:CD1	2.40	0.56
11:K:33:ARG:HG2	11:K:40:SER:HA	1.86	0.56
23:W:37:PHE:CE2	23:W:58:ILE:HD13	2.40	0.56
37:11:97:ALA:HA	37:11:100:MET:HE2	1.86	0.56
52:26:1161:C:H2'	52:26:1162:C:H6	1.71	0.56
53:27:118:A:OP2	53:27:119:A:H5''	2.05	0.56
53:27:1842:G:H2'	53:27:1843:C:C6	2.40	0.56
53:27:1908:C:H2'	53:27:1909:C:C6	2.40	0.56
53:27:312:G:H2'	53:27:313:G:H8	1.70	0.56
53:27:52:A:O2'	53:27:53:A:H5'	2.05	0.56
53:27:545:U:C2	53:27:546:U:H1'	2.40	0.56
24:X:41:HIS:NE2	53:27:96:C:H4'	2.20	0.56
33:7:161:ILE:HG21	55:29:23:A:C2	2.40	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:406:VAL:O	59:33:418:LEU:N	2.38	0.56
32:6:107:ARG:HG3	32:6:108:GLN:N	2.20	0.56
33:7:18:ASN:HD22	33:7:53:ARG:NH2	2.03	0.56
7:G:44:ALA:HB2	7:G:52:MET:HB2	1.86	0.56
8:H:14:ALA:HB2	8:H:52:LEU:N	2.19	0.56
20:T:50:ALA:O	20:T:51:LEU:HB2	2.06	0.56
46:20:43:ALA:HB1	46:20:46:LYS:HD2	1.87	0.56
52:26:193:C:H2'	52:26:194:C:H6	1.70	0.56
52:26:731:G:H5'	52:26:766:A:H4'	1.87	0.56
53:27:1785:A:O2'	53:27:1786:A:H2'	2.05	0.56
53:27:1878:G:H2'	53:27:1879:C:O4'	2.05	0.56
23:W:22:ASN:ND2	53:27:2079:U:O2'	2.38	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:553:LEU:C	59:33:555:GLN:H	2.08	0.56
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.35	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
32:6:20:ARG:HA	32:6:38:HIS:HE1	1.71	0.56
1:A:170:TYR:HE1	1:A:184:GLU:HG2	1.71	0.56
4:D:114:ARG:HE	43:17:70:ARG:NH2	2.00	0.56
13:M:90:ARG:HH21	53:27:2881:U:H5'	1.69	0.56
15:O:90:ALA:HB2	15:O:112:ARG:CA	2.34	0.56
17:Q:1:MET:H2	17:Q:43:ASN:ND2	2.02	0.56
23:W:20:ALA:O	23:W:21:LEU:HB2	2.04	0.56
23:W:37:PHE:HE2	23:W:58:ILE:HD13	1.70	0.56
27:1:12:ARG:NH2	53:27:517:C:OP1	2.38	0.56
39:13:18:VAL:HG21	39:13:81:GLY:C	2.25	0.56
39:13:89:TYR:HB3	39:13:93:LEU:HD21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:113:LYS:HB2	43:17:114:PRO:CD	2.35	0.56
43:17:6:ILE:HD12	43:17:7:ASN:N	2.20	0.56
52:26:1399:C:H1'	52:26:1400:C:OP2	2.06	0.56
52:26:606:G:H5'	52:26:607:A:H5'	1.85	0.56
52:26:709:U:H2'	52:26:710:G:C8	2.39	0.56
52:26:923:A:H2'	52:26:924:C:H6	1.69	0.56
53:27:2768:U:H2'	53:27:2769:U:O4'	2.05	0.56
29:3:24:THR:CG2	29:3:27:GLY:H	2.17	0.56
52:26:359:G:H4'	59:33:451:PHE:CE2	2.41	0.56
33:7:130:ARG:HD3	35:9:54:GLU:OE1	2.06	0.56
3:C:58:LYS:HD3	3:C:70:SER:HB3	1.86	0.56
4:D:43:ILE:HG21	4:D:78:ILE:CG2	2.34	0.56
6:F:56:ALA:O	6:F:60:GLU:HG2	2.05	0.56
8:H:20:SER:O	8:H:25:PRO:HD2	2.04	0.56
11:K:85:VAL:HG12	11:K:94:THR:HG22	1.87	0.56
15:O:27:VAL:HG12	15:O:29:VAL:HG23	1.86	0.56
36:10:73:GLU:O	36:10:77:THR:HG23	2.04	0.56
44:18:45:LEU:HD21	49:23:12:LEU:HD22	1.88	0.56
48:22:28:LEU:HD23	48:22:58:ILE:HD13	1.86	0.56
52:26:295:C:H2'	52:26:296:U:C6	2.41	0.56
52:26:358:U:H2'	52:26:359:G:O4'	2.05	0.56
53:27:1912:A:N7	53:27:1917:U:O4	2.38	0.56
53:27:195:A:H2'	53:27:198:C:N4	2.20	0.56
53:27:2897:U:H2'	53:27:2898:U:C6	2.41	0.56
18:R:57:ASN:OD1	53:27:495:G:H1'	2.05	0.56
53:27:600:G:H2'	53:27:601:C:C6	2.41	0.56
54:28:111:U:H2'	54:28:112:G:H8	1.71	0.56
54:28:5:U:H2'	54:28:6:G:H8	1.69	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.56
59:33:731:GLN:HG3	59:33:732:VAL:H	1.69	0.56
34:8:53:GLN:HE22	34:8:201:GLU:HB2	1.70	0.56
19:S:12:ARG:HB2	19:S:33:LYS:O	2.05	0.56
41:15:41:LEU:HD13	41:15:78:ILE:HD11	1.88	0.56
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.20	0.56
48:22:37:LYS:NZ	51:25:22:CYS:O	2.38	0.56
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.56
52:26:202:G:H2'	52:26:203:G:H8	1.70	0.56
52:26:458:U:H2'	52:26:459:A:H8	1.70	0.56
52:26:977:A:H1'	52:26:1223:C:N3	2.20	0.56
53:27:1198:U:H2'	53:27:1199:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1509:A:H2'	53:27:1510:G:H8	1.69	0.56
1:A:205:GLY:O	53:27:1791:A:H1'	2.06	0.56
53:27:2036:C:H2'	53:27:2037:A:C8	2.41	0.56
53:27:2507:C:H2'	53:27:2508:G:C8	2.41	0.56
53:27:2784:U:H2'	53:27:2785:C:H6	1.70	0.56
13:M:53:THR:OG1	53:27:2840:C:H5''	2.05	0.56
53:27:539:G:O2'	53:27:540:C:H5'	2.05	0.56
53:27:755:U:H2'	53:27:756:A:C8	2.41	0.56
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.56
33:7:5:HIS:CE1	33:7:7:ASN:HB3	2.40	0.56
34:8:150:LYS:HA	34:8:154:VAL:HG11	1.87	0.56
8:H:12:VAL:HG23	8:H:56:VAL:HG11	1.86	0.56
13:M:63:ARG:HG2	53:27:1454:C:O4'	2.05	0.56
39:13:109:GLN:NE2	52:26:1117:A:H5'	2.21	0.56
45:19:23:SER:HB3	45:19:26:VAL:HG23	1.88	0.56
50:24:27:MET:SD	50:24:66:ILE:HG13	2.46	0.56
52:26:224:U:H2'	52:26:225:C:C6	2.41	0.56
53:27:1464:G:H2'	53:27:1465:G:C8	2.39	0.56
53:27:151:C:H2'	53:27:152:A:C8	2.40	0.56
53:27:2108:A:H3'	53:27:2109:U:H6	1.70	0.56
53:27:2580:U:H2'	53:27:2581:G:H5'	1.86	0.56
53:27:2678:C:H2'	53:27:2679:A:O4'	2.05	0.56
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.56
59:33:432:HIS:HD2	59:33:434:ASP:HB3	1.71	0.56
59:33:690:GLU:O	59:33:691:LYS:HB2	2.05	0.56
30:4:33:THR:HG23	30:4:34:LYS:N	2.21	0.56
33:7:87:ARG:HB3	33:7:100:ILE:HG21	1.88	0.56
2:B:152:PRO:O	2:B:154:LYS:N	2.39	0.56
3:C:143:LEU:HB3	3:C:146:VAL:CG1	2.32	0.56
4:D:68:LYS:HA	4:D:82:TYR:O	2.06	0.56
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.41	0.56
17:Q:83:TYR:OH	17:Q:85:LYS:HE2	2.05	0.56
38:12:120:LEU:HD12	38:12:120:LEU:O	2.06	0.56
41:15:111:ASP:OD1	41:15:113:THR:HG23	2.05	0.56
40:14:50:THR:HG21	52:26:1367:C:H4'	1.87	0.56
52:26:1488:G:H2'	52:26:1489:G:H8	1.71	0.56
52:26:449:G:H2'	52:26:450:G:C8	2.41	0.56
52:26:45:G:H2'	52:26:46:G:C8	2.41	0.56
52:26:297:G:H4'	52:26:557:G:H4'	1.88	0.56
53:27:1071:G:H1'	53:27:1089:A:C5	2.40	0.56
53:27:1889:A:H1'	53:27:2086:U:O2'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:329:G:O4'	53:27:477:A:H1'	2.05	0.56
53:27:692:C:H2'	53:27:693:A:H8	1.70	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
32:6:26:MET:HG3	32:6:192:PRO:HD3	1.87	0.56
33:7:93:ILE:O	33:7:93:ILE:HG22	2.04	0.56
17:Q:32:THR:O	17:Q:32:THR:HG23	2.06	0.56
19:S:44:LYS:HG3	19:S:55:VAL:HG11	1.87	0.56
24:X:56:LEU:O	24:X:60:LYS:HG2	2.06	0.56
36:10:23:GLU:O	36:10:27:ALA:HB2	2.06	0.56
41:15:120:CYS:HB2	52:26:778:G:H1'	1.87	0.56
45:19:5:GLU:O	45:19:8:ALA:HB3	2.05	0.56
52:26:1324:A:H2'	52:26:1325:C:C6	2.40	0.56
52:26:231:U:H2'	52:26:232:G:H8	1.71	0.56
52:26:339:C:H2'	52:26:340:U:C6	2.41	0.56
52:26:634:C:H2'	52:26:635:A:H8	1.70	0.56
52:26:744:C:H2'	52:26:745:G:C8	2.40	0.56
43:17:104:ASN:HB3	52:26:948:C:OP2	2.06	0.56
53:27:1138:G:H2'	53:27:1139:G:O4'	2.06	0.56
53:27:2162:G:H4'	53:27:2171:A:H5'	1.88	0.56
53:27:2839:G:H2'	53:27:2840:C:H6	1.69	0.56
53:27:404:A:H1'	53:27:406:G:C4	2.41	0.56
58:32:10:G:H2'	58:32:11:A:O4'	2.06	0.56
59:33:409:PHE:HA	59:33:415:VAL:HG22	1.88	0.56
30:4:31:ILE:HG22	30:4:31:ILE:O	2.05	0.56
33:7:30:ASP:HA	44:18:64:ARG:HH12	1.70	0.56
1:A:207:ALA:CB	53:27:1790:C:H4'	2.36	0.56
2:B:101:PHE:HD1	2:B:104:VAL:HG21	1.71	0.56
3:C:63:LYS:C	3:C:65:THR:H	2.08	0.56
14:N:40:ILE:HG22	14:N:41:ALA:O	2.06	0.56
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.21	0.56
22:V:34:VAL:HG12	22:V:36:GLN:H	1.69	0.56
40:14:91:ASP:O	40:14:92:LEU:HB2	2.06	0.56
35:9:28:ARG:NH1	52:26:15:G:H4'	2.21	0.56
41:15:126:ARG:NH2	52:26:692:U:O3'	2.38	0.56
52:26:71:A:H61	52:26:99:C:H1'	1.71	0.56
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.56
53:27:443:A:H5''	53:27:444:C:C5'	2.35	0.56
53:27:942:G:H2'	53:27:943:A:O4'	2.06	0.56
56:30:20:U:H5''	59:33:724:ARG:NH1	2.21	0.56
59:33:62:MET:HE2	59:33:79:ALA:HA	1.85	0.56
5:E:85:LYS:C	5:E:86:LEU:HD12	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:40:ARG:HG2	12:L:95:LEU:HD23	1.88	0.56
24:X:49:ASP:O	24:X:53:VAL:HG23	2.06	0.56
27:1:13:GLY:HA3	53:27:16:C:H5'	1.88	0.56
39:13:74:GLN:O	39:13:78:ILE:HG12	2.06	0.56
40:14:62:ARG:NH1	52:26:1367:C:H5'	2.17	0.56
50:24:66:ILE:HD12	50:24:70:LYS:HD3	1.87	0.56
48:22:72:ARG:HH22	51:25:4:LYS:HZ3	1.54	0.56
52:26:1009:U:H2'	52:26:1010:U:C6	2.41	0.56
52:26:1123:U:O2'	52:26:1124:G:H5'	2.06	0.56
52:26:130:A:O2'	52:26:264:C:H5'	2.04	0.56
52:26:401:C:O2'	52:26:402:G:H5'	2.06	0.56
52:26:409:U:H2'	52:26:410:G:O4'	2.05	0.56
52:26:725:G:O2'	52:26:726:C:H5'	2.06	0.56
53:27:197:A:H4'	53:27:2069:G:OP2	2.06	0.56
53:27:2616:C:H2'	53:27:2617:U:H6	1.70	0.56
53:27:27:G:N2	53:27:512:G:H1'	2.20	0.56
53:27:364:C:H2'	53:27:365:U:C6	2.41	0.56
53:27:689:A:H2'	53:27:690:G:C8	2.41	0.56
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.56
1:A:12:ARG:HA	1:A:15:VAL:HG23	1.87	0.56
4:D:114:ARG:HA	26:Z:47:LYS:HD3	1.88	0.56
8:H:100:ILE:HG12	8:H:138:VAL:O	2.05	0.56
24:X:41:HIS:CD2	53:27:96:C:H4'	2.41	0.56
52:26:1033:G:H2'	52:26:1034:G:H5''	1.88	0.55
52:26:109:A:H2'	52:26:326:G:N2	2.21	0.55
52:26:1534:A:H8	52:26:1534:A:O5'	1.88	0.55
52:26:750:C:O2'	52:26:751:U:H5'	2.06	0.55
53:27:1170:C:H2'	53:27:1171:G:C8	2.41	0.55
53:27:1515:A:H2'	53:27:1516:G:O4'	2.06	0.55
53:27:1656:C:H2'	53:27:1657:U:H6	1.70	0.55
53:27:2394:C:H2'	53:27:2395:C:H6	1.71	0.55
54:28:6:G:H2'	54:28:7:G:C8	2.39	0.55
58:32:27:U:O2'	58:32:28:C:H5'	2.06	0.55
58:32:7:G:H3'	58:32:8:U:H5'	1.87	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
29:3:34:ARG:CZ	29:3:39:ARG:HD2	2.35	0.55
35:9:104:ILE:HG23	35:9:104:ILE:O	2.06	0.55
3:C:176:ASP:OD1	3:C:179:SER:HB2	2.05	0.55
36:10:2:ARG:HD2	36:10:68:GLN:NE2	2.21	0.55
37:11:67:ASN:ND2	37:11:126:ALA:O	2.40	0.55
42:16:51:VAL:HG22	42:16:52:CYS:H	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:45:LEU:HD11	49:23:12:LEU:HD13	1.88	0.55
52:26:1079:G:H2'	52:26:1080:A:C8	2.40	0.55
52:26:1327:C:H2'	52:26:1328:C:H6	1.70	0.55
52:26:561:U:H2'	52:26:561:U:O2	2.05	0.55
52:26:773:G:H3'	52:26:774:G:H5''	1.88	0.55
52:26:880:C:O2'	52:26:881:G:H5'	2.06	0.55
52:26:922:G:H2'	52:26:923:A:C8	2.41	0.55
52:26:974:A:H4'	52:26:975:A:O5'	2.06	0.55
7:G:35:VAL:CG2	53:27:1057:A:H4'	2.37	0.55
53:27:1220:G:H2'	53:27:1221:C:C6	2.42	0.55
53:27:1525:A:H2'	53:27:1526:C:O4'	2.06	0.55
53:27:1607:C:H5''	53:27:1608:A:H5'	1.88	0.55
53:27:161:A:H3'	53:27:162:U:H5''	1.87	0.55
11:K:68:SER:HB2	53:27:632:A:O3'	2.05	0.55
53:27:848:C:H2'	53:27:849:A:C8	2.37	0.55
53:27:968:C:H2'	53:27:969:G:C8	2.41	0.55
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.68	0.55
32:6:76:SER:OG	32:6:92:ASN:HB2	2.06	0.55
33:7:59:PRO:HB3	40:14:94:ALA:HB1	1.88	0.55
4:D:28:PRO:HG2	4:D:164:GLU:HG2	1.88	0.55
6:F:104:THR:HA	6:F:108:VAL:O	2.05	0.55
7:G:108:VAL:HG12	7:G:109:LYS:HG2	1.88	0.55
11:K:52:GLY:O	53:27:826:U:H1'	2.07	0.55
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.87	0.55
13:M:116:VAL:HG21	53:27:2881:U:H4'	1.87	0.55
18:R:88:ARG:HB2	18:R:92:ARG:O	2.05	0.55
42:16:49:ARG:NH1	52:26:523:A:H61	2.04	0.55
47:21:16:MET:HE2	47:21:19:SER:HB3	1.88	0.55
52:26:1074:G:H2'	52:26:1075:U:C6	2.41	0.55
52:26:1305:G:O2'	52:26:1306:A:H8	1.89	0.55
52:26:1516:G:H2'	52:26:1518:A:OP2	2.05	0.55
52:26:3:A:N3	52:26:613:C:H1'	2.22	0.55
52:26:901:A:C5	52:26:902:G:H1'	2.41	0.55
53:27:1056:G:H5''	53:27:1057:A:O4'	2.06	0.55
53:27:1061:U:C4'	53:27:1070:A:H1'	2.35	0.55
53:27:1321:A:N3	53:27:1321:A:H2'	2.20	0.55
53:27:1979:U:O2'	53:27:1980:G:H5'	2.06	0.55
53:27:2475:C:H42	53:27:2529:G:H22	1.53	0.55
53:27:296:U:H2'	53:27:297:G:H8	1.70	0.55
14:N:33:ARG:HB2	54:28:52:A:N6	2.22	0.55
56:30:2:C:H2'	56:30:3:C:H6	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:59:U:H2'	56:30:60:U:C2	2.41	0.55
57:31:69:C:H2'	57:31:70:G:H8	1.71	0.55
33:7:122:GLN:HB3	33:7:127:VAL:CG1	2.34	0.55
34:8:80:ARG:HE	52:26:613:C:P	2.30	0.55
2:B:11:MET:HG2	2:B:25:THR:HA	1.87	0.55
14:N:38:GLN:HB3	14:N:47:VAL:CG1	2.35	0.55
14:N:56:LYS:O	14:N:60:GLU:HG3	2.06	0.55
19:S:33:LYS:HG2	19:S:80:TRP:CZ3	2.40	0.55
21:U:27:PRO:HA	21:U:41:GLU:HA	1.88	0.55
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.42	0.55
37:11:69:ARG:CG	37:11:95:ARG:HG2	2.29	0.55
41:15:51:PHE:CE2	41:15:64:VAL:HG11	2.42	0.55
45:19:38:LEU:HD23	45:19:55:LEU:HD13	1.88	0.55
45:19:13:GLU:HG2	45:19:83:ARG:NH2	2.21	0.55
47:21:44:HIS:O	47:21:70:LYS:HG3	2.06	0.55
51:25:18:PHE:C	51:25:19:LYS:HD2	2.27	0.55
52:26:1121:U:H2'	52:26:1122:U:C6	2.41	0.55
52:26:1318:A:C2'	52:26:1319:A:H5'	2.37	0.55
52:26:631:C:H5''	52:26:632:U:H5'	1.88	0.55
52:26:781:A:OP1	52:26:1523:G:H5'	2.07	0.55
53:27:1242:U:H2'	53:27:1243:C:C6	2.41	0.55
53:27:127:A:H5''	53:27:128:C:O4'	2.07	0.55
53:27:1475:G:O2'	53:27:1476:U:H6	1.88	0.55
53:27:1570:A:H2'	53:27:1571:A:C8	2.41	0.55
53:27:1591:A:H2'	53:27:1592:C:C6	2.41	0.55
53:27:163:C:H2'	53:27:164:C:O4'	2.06	0.55
53:27:16:C:O2'	53:27:17:G:H5'	2.07	0.55
53:27:2328:A:H2'	53:27:2329:U:H6	1.72	0.55
53:27:2689:U:O2	53:27:2713:U:H5''	2.06	0.55
53:27:742:A:H2'	53:27:743:A:H8	1.68	0.55
12:L:9:PHE:CZ	53:27:911:A:H2'	2.42	0.55
54:28:106:G:H2'	54:28:107:G:O4'	2.06	0.55
59:33:714:ILE:HD12	59:33:716:ILE:HB	1.87	0.55
31:5:36:ARG:HG2	31:5:37:GLN:H	1.69	0.55
33:7:156:LEU:O	33:7:156:LEU:HD12	2.07	0.55
33:7:205:GLU:HG3	33:7:206:ILE:N	2.21	0.55
19:S:15:HIS:CD2	19:S:16:VAL:H	2.25	0.55
37:11:119:LEU:HA	37:11:122:GLU:HG2	1.89	0.55
40:14:57:VAL:HG22	40:14:58:ASN:N	2.18	0.55
41:15:28:ASN:HD21	41:15:56:LYS:HE3	1.71	0.55
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:41:PRO:O	49:23:44:ILE:HG13	2.07	0.55
52:26:844:G:N3	52:26:844:G:H2'	2.21	0.55
52:26:947:G:H2'	52:26:948:C:H6	1.71	0.55
8:H:123:ALA:HB1	53:27:1081:U:H5''	1.88	0.55
53:27:1967:C:H2'	53:27:1968:G:H5'	1.87	0.55
53:27:2121:G:N2	53:27:2177:C:O2	2.39	0.55
53:27:2789:C:H3'	53:27:2893:A:N6	2.21	0.55
54:28:28:C:H2'	54:28:29:A:C8	2.42	0.55
59:33:587:PRO:O	59:33:591:SER:N	2.37	0.55
59:33:679:LEU:HD12	59:33:682:ASP:HB2	1.88	0.55
31:5:11:CYS:HB3	31:5:33:HIS:CE1	2.41	0.55
33:7:55:VAL:HB	33:7:66:THR:HB	1.88	0.55
35:9:98:ALA:O	35:9:100:GLU:N	2.39	0.55
3:C:7:ASP:O	3:C:9:GLN:HG3	2.06	0.55
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.71	0.55
4:D:91:ARG:HA	4:D:95:MET:SD	2.47	0.55
5:E:29:ASN:HB2	5:E:78:VAL:HA	1.88	0.55
7:G:50:VAL:CG1	53:27:1082:U:H5''	2.37	0.55
7:G:94:ARG:O	7:G:98:GLU:HG2	2.07	0.55
16:P:51:GLN:O	16:P:55:GLN:HG3	2.07	0.55
36:10:9:MET:HG2	36:10:59:TYR:HD1	1.70	0.55
52:26:250:A:H4'	52:26:251:G:O5'	2.07	0.55
52:26:587:G:O2'	52:26:588:G:H5'	2.06	0.55
52:26:838:G:H2'	52:26:839:C:C6	2.41	0.55
52:26:855:U:H2'	52:26:856:C:C6	2.42	0.55
53:27:1124:G:H2'	53:27:1125:G:O4'	2.05	0.55
16:P:2:ARG:HB2	53:27:1248:G:N7	2.22	0.55
53:27:1287:A:C2'	53:27:1288:G:H5'	2.37	0.55
53:27:1967:C:C2'	53:27:1968:G:H5'	2.36	0.55
53:27:2108:A:H3'	53:27:2109:U:C6	2.42	0.55
53:27:2121:G:H2'	53:27:2122:U:O4'	2.07	0.55
53:27:2662:A:H2'	53:27:2663:G:O4'	2.07	0.55
53:27:962:G:H2'	53:27:963:U:O4'	2.06	0.55
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
12:L:61:GLY:HA3	12:L:108:VAL:HG13	1.88	0.55
47:21:60:ILE:CG2	47:21:72:TRP:HB3	2.36	0.55
51:25:41:THR:O	51:25:45:LYS:HG2	2.07	0.55
52:26:1258:G:H2'	52:26:1259:C:C6	2.42	0.55
50:24:73:ARG:NH2	52:26:263:A:OP1	2.40	0.55
52:26:428:G:H4'	52:26:429:U:O5'	2.07	0.55
52:26:503:C:H2'	52:26:504:C:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:824:G:H2'	52:26:825:A:H8	1.71	0.55
52:26:877:G:H2'	52:26:878:A:H8	1.72	0.55
53:27:2453:A:H2'	53:27:2454:G:O4'	2.07	0.55
53:27:2481:G:HO2'	53:27:2482:A:H8	1.54	0.55
53:27:2709:G:H2'	53:27:2710:C:C6	2.41	0.55
54:28:48:U:H2'	54:28:49:C:C6	2.42	0.55
59:33:679:LEU:HD13	59:33:734:ASP:HB2	1.88	0.55
34:8:117:VAL:HG12	34:8:130:ASN:O	2.06	0.55
34:8:143:SER:HA	34:8:177:MET:O	2.07	0.55
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.89	0.55
2:B:27:ILE:HD11	2:B:193:VAL:HG11	1.89	0.55
4:D:7:TYR:HB2	4:D:172:PHE:CZ	2.42	0.55
5:E:51:PHE:HE1	5:E:71:LEU:HD12	1.71	0.55
7:G:58:THR:HG23	7:G:82:ILE:HG12	1.89	0.55
17:Q:68:ARG:NH1	17:Q:90:ARG:HB2	2.22	0.55
21:U:82:TYR:O	21:U:84:PRO:HD3	2.06	0.55
22:V:17:LEU:HD21	22:V:37:ARG:HH21	1.72	0.55
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.88	0.55
41:15:126:ARG:HB2	51:25:33:ARG:HD2	1.88	0.55
42:16:106:VAL:HG23	42:16:116:TYR:HB3	1.88	0.55
40:14:48:ARG:HH21	44:18:100:TRP:HB3	1.71	0.55
46:20:16:PHE:CE1	52:26:625:U:H4'	2.41	0.55
52:26:1142:G:C2	52:26:1143:G:H1'	2.41	0.55
52:26:288:A:H2'	52:26:289:G:H4'	1.88	0.55
52:26:313:A:H2'	52:26:314:C:C6	2.42	0.55
53:27:1058:U:O2'	53:27:1059:G:H5'	2.07	0.55
53:27:1173:U:H2'	53:27:1174:U:H4'	1.88	0.55
53:27:1528:A:H2'	53:27:1529:G:H5'	1.87	0.55
53:27:1545:A:H2'	53:27:1546:G:O4'	2.07	0.55
53:27:1777:U:H2'	53:27:1778:U:H6	1.70	0.55
53:27:2642:G:O2'	53:27:2643:G:H5'	2.06	0.55
53:27:2682:A:H61	53:27:2728:U:H1'	1.72	0.55
53:27:501:A:H2'	53:27:502:A:C8	2.41	0.55
53:27:960:A:C8	53:27:962:G:C8	2.95	0.55
54:28:114:C:H2'	54:28:115:A:C8	2.41	0.55
58:32:30:G:H2'	58:32:31:G:O4'	2.07	0.55
32:6:205:ALA:HB3	32:6:208:ALA:HB2	1.88	0.55
2:B:186:LEU:HD13	15:O:7:LEU:HD11	1.88	0.55
5:E:104:LEU:HB2	5:E:112:VAL:HB	1.89	0.55
6:F:133:GLN:NE2	6:F:136:SER:HA	2.20	0.55
12:L:24:THR:HG23	12:L:99:GLY:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:16:GLU:OE2	17:Q:100:GLY:HA2	2.07	0.55
17:Q:1:MET:H2	17:Q:43:ASN:HD22	1.55	0.55
18:R:3:THR:HG21	18:R:58:ALA:HA	1.89	0.55
50:24:2:ASN:OD1	50:24:3:ILE:HG13	2.07	0.55
52:26:1328:C:H2'	52:26:1329:A:O4'	2.07	0.55
52:26:1522:U:H2'	52:26:1523:G:C8	2.41	0.55
52:26:65:A:H5'	52:26:200:G:C5'	2.36	0.55
52:26:397:A:O2'	52:26:398:U:H3'	2.07	0.55
52:26:872:A:H3'	52:26:872:A:OP1	2.06	0.55
53:27:1180:U:H2'	53:27:1181:U:O4'	2.07	0.55
53:27:183:C:C2'	53:27:184:C:H5'	2.36	0.55
53:27:1871:A:H3'	53:27:1872:A:C8	2.42	0.55
53:27:2075:U:H2'	53:27:2238:G:H22	1.72	0.55
53:27:2257:U:O2'	53:27:2258:C:H5'	2.05	0.55
53:27:2631:G:O2'	53:27:2632:A:H5'	2.07	0.55
53:27:528:A:H3'	53:27:528:A:C8	2.42	0.55
53:27:768:G:H2'	53:27:769:U:O4'	2.07	0.55
59:33:368:SER:HA	59:33:409:PHE:CZ	2.42	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
34:8:169:TRP:HZ3	34:8:189:ASP:HB3	1.71	0.55
1:A:253:GLY:O	53:27:1843:C:O2'	2.25	0.55
19:S:29:THR:HG23	19:S:85:VAL:O	2.06	0.55
42:16:98:ARG:HD2	42:16:103:CYS:SG	2.47	0.55
47:21:11:VAL:HG11	47:21:20:ILE:HD11	1.88	0.55
44:18:8:ARG:HH21	52:26:1217:C:P	2.30	0.55
52:26:320:A:H2'	52:26:321:A:C8	2.42	0.55
52:26:459:A:H2'	52:26:460:A:C8	2.41	0.55
52:26:842:U:H5''	52:26:846:G:C6	2.42	0.55
53:27:1130:U:O2'	53:27:1131:G:OP1	2.24	0.55
53:27:12:U:C2'	53:27:13:A:H5'	2.36	0.55
53:27:1993:U:H2'	53:27:1994:C:H6	1.72	0.55
53:27:2256:G:H2'	53:27:2257:U:C6	2.42	0.55
53:27:2318:G:H2'	53:27:2319:G:O4'	2.06	0.55
53:27:2480:C:H2'	53:27:2481:G:O4'	2.07	0.55
53:27:2494:G:H2'	53:27:2495:G:C8	2.41	0.55
53:27:1999:C:H5''	53:27:2723:C:O2'	2.07	0.55
53:27:2863:C:H2'	53:27:2864:G:H8	1.72	0.55
53:27:609:A:H2'	53:27:610:C:O4'	2.07	0.55
53:27:840:C:H2'	53:27:841:G:H8	1.71	0.55
53:27:962:G:O2'	53:27:963:U:H5'	2.07	0.55
53:27:983:A:C6	53:27:984:A:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:422:SER:O	59:33:454:GLN:HA	2.07	0.55
34:8:77:GLU:O	34:8:81:LEU:HB2	2.07	0.55
35:9:75:LEU:O	35:9:75:LEU:HD12	2.06	0.55
2:B:112:THR:HG23	2:B:167:ASN:O	2.07	0.55
4:D:56:LEU:HD12	4:D:86:CYS:SG	2.47	0.55
6:F:83:LYS:HA	6:F:149:GLU:OE1	2.07	0.55
10:J:109:SER:O	10:J:111:LYS:N	2.39	0.55
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.07	0.55
27:1:49:ARG:HG2	53:27:2884:U:C5	2.42	0.54
4:D:142:TYR:CE2	43:17:8:ILE:HG21	2.41	0.54
50:24:22:SER:OG	50:24:23:ARG:NH1	2.39	0.54
50:24:47:GLN:O	50:24:50:PHE:HB3	2.06	0.54
52:26:1026:G:H21	52:26:1027:C:N4	2.04	0.54
52:26:613:C:H2'	52:26:614:C:C6	2.41	0.54
53:27:1109:C:H2'	53:27:1110:G:O4'	2.06	0.54
53:27:1744:A:H3'	53:27:1745:A:C8	2.42	0.54
53:27:1900:A:H1'	53:27:1970:A:H2'	1.89	0.54
53:27:1266:G:N2	53:27:2012:G:C4	2.75	0.54
53:27:2580:U:C2'	53:27:2581:G:H5'	2.37	0.54
54:28:5:U:H2'	54:28:6:G:C8	2.42	0.54
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.54
32:6:56:LEU:HG	32:6:183:PHE:CE2	2.41	0.54
35:9:22:LYS:CB	35:9:29:ILE:HG22	2.36	0.54
3:C:105:LEU:O	3:C:109:LEU:HD13	2.07	0.54
3:C:60:TRP:O	3:C:61:ARG:HB2	2.07	0.54
4:D:90:LEU:HD13	4:D:95:MET:HA	1.89	0.54
13:M:63:ARG:NE	13:M:80:PHE:HD2	2.05	0.54
24:X:15:ASN:O	24:X:19:LEU:HG	2.06	0.54
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.36	0.54
36:10:18:VAL:HG11	36:10:58:HIS:CD2	2.42	0.54
39:13:6:TYR:O	39:13:85:ALA:HA	2.07	0.54
40:14:73:LEU:HD21	40:14:75:ASP:HB2	1.89	0.54
47:21:51:GLU:N	47:21:51:GLU:OE1	2.40	0.54
52:26:106:C:O2	52:26:379:C:H4'	2.07	0.54
53:27:1520:U:H2'	53:27:1521:G:O4'	2.06	0.54
53:27:2075:U:H2'	53:27:2238:G:N2	2.22	0.54
53:27:2345:G:H21	53:27:2381:A:H3'	1.72	0.54
53:27:2588:G:C2'	53:27:2589:A:H5'	2.37	0.54
2:B:66:GLY:HA3	53:27:2786:U:O2'	2.07	0.54
15:O:2:ASN:ND2	53:27:2876:G:H5''	2.22	0.54
53:27:547:A:H4'	53:27:548:G:C5	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:81:LEU:O	34:8:82:LYS:HB2	2.06	0.54
3:C:23:PHE:HB2	3:C:114:ARG:HH21	1.71	0.54
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.43	0.54
10:J:77:ILE:HG12	15:O:71:ARG:HG3	1.88	0.54
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.88	0.54
27:1:52:LYS:HZ2	27:1:55:ALA:HA	1.70	0.54
43:17:113:LYS:HB2	43:17:114:PRO:HD3	1.89	0.54
52:26:190:A:H2'	52:26:191:G:O4'	2.06	0.54
52:26:781:A:N6	52:26:802:A:H1'	2.22	0.54
53:27:1036:G:H2'	53:27:1037:G:C8	2.42	0.54
53:27:110:G:H2'	53:27:111:A:H8	1.72	0.54
53:27:1406:U:C2'	53:27:1407:G:H5''	2.38	0.54
53:27:1444:G:H2'	53:27:1445:G:H8	1.71	0.54
53:27:1880:U:H2'	53:27:1881:C:C6	2.42	0.54
53:27:803:U:H2'	53:27:804:A:O4'	2.07	0.54
53:27:938:G:H2'	53:27:939:G:C8	2.42	0.54
59:33:407:TYR:O	59:33:458:GLY:HA2	2.07	0.54
34:8:30:LYS:HA	52:26:413:G:O6	2.08	0.54
5:E:36:LEU:HD11	5:E:67:ALA:CB	2.36	0.54
8:H:93:ASN:HA	8:H:96:LYS:NZ	2.23	0.54
12:L:74:THR:HG21	12:L:86:LYS:HE3	1.89	0.54
17:Q:39:LEU:O	17:Q:40:MET:HB2	2.07	0.54
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.89	0.54
51:25:29:ALA:HA	51:25:32:ARG:HD3	1.90	0.54
51:25:65:ARG:O	51:25:66:ARG:CB	2.56	0.54
52:26:211:G:C2'	52:26:212:G:H5'	2.37	0.54
52:26:374:A:H2'	52:26:375:U:H6	1.73	0.54
52:26:684:U:H2'	52:26:685:G:O4'	2.08	0.54
53:27:1443:U:H2'	53:27:1444:G:C8	2.42	0.54
53:27:2078:C:H2'	53:27:2079:U:O4'	2.07	0.54
53:27:215:G:C4'	53:27:216:A:H4'	2.36	0.54
30:4:63:TYR:CE2	53:27:242:G:H5''	2.41	0.54
53:27:2487:G:H2'	53:27:2488:G:H8	1.71	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.89	0.54
59:33:666:SER:H	59:33:715:GLU:HA	1.71	0.54
33:7:174:LEU:HD23	33:7:181:ILE:CD1	2.36	0.54
35:9:12:GLU:HB3	35:9:38:VAL:HG12	1.88	0.54
1:A:115:ILE:HD12	1:A:116:GLN:N	2.22	0.54
3:C:144:GLU:H	3:C:146:VAL:HG13	1.73	0.54
3:C:58:LYS:HD3	3:C:70:SER:CB	2.36	0.54
5:E:3:VAL:HG23	53:27:2751:G:H4'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:22:PHE:H	22:V:25:GLU:CD	2.10	0.54
46:20:21:VAL:HG12	46:20:33:ILE:HD13	1.89	0.54
46:20:20:VAL:HG22	46:20:21:VAL:O	2.07	0.54
48:22:11:ARG:HH11	48:22:11:ARG:HG2	1.72	0.54
50:24:4:LYS:C	50:24:6:ALA:H	2.10	0.54
52:26:1210:C:H2'	52:26:1211:U:O4'	2.07	0.54
52:26:1305:G:H1'	52:26:1332:A:N6	2.22	0.54
52:26:259:G:H2'	52:26:260:G:H8	1.73	0.54
52:26:337:G:H2'	52:26:338:A:H8	1.72	0.54
52:26:674:G:H2'	52:26:675:A:H8	1.72	0.54
53:27:1789:A:H2'	53:27:1790:C:O4'	2.07	0.54
53:27:1849:G:H2'	53:27:1850:G:C8	2.43	0.54
53:27:1849:G:H2'	53:27:1850:G:H8	1.73	0.54
53:27:2271:G:H2'	53:27:2272:U:H6	1.73	0.54
53:27:2848:G:N2	53:27:2867:G:H2'	2.21	0.54
53:27:451:U:O4	53:27:453:A:H2'	2.08	0.54
53:27:552:U:H2'	53:27:553:G:C8	2.42	0.54
53:27:741:U:H2'	53:27:742:A:C8	2.42	0.54
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.54
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.54
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.72	0.54
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.90	0.54
8:H:14:ALA:HB2	8:H:52:LEU:H	1.71	0.54
8:H:33:ASN:ND2	8:H:64:ARG:HB3	2.23	0.54
4:D:104:THR:HA	26:Z:38:SER:HB3	1.90	0.54
36:10:15:SER:HB2	36:10:58:HIS:HB2	1.89	0.54
38:12:4:ASP:HB2	38:12:80:PRO:HG3	1.88	0.54
52:26:1486:G:H2'	52:26:1487:G:O4'	2.08	0.54
52:26:575:G:H4'	52:26:576:C:O5'	2.07	0.54
52:26:677:U:H2'	52:26:678:U:H6	1.72	0.54
53:27:2127:G:H1'	53:27:2173:A:N3	2.22	0.54
53:27:2391:G:H2'	53:27:2424:C:N4	2.23	0.54
53:27:2619:C:H2'	53:27:2620:C:H6	1.72	0.54
53:27:795:C:H2'	53:27:796:C:C6	2.42	0.54
53:27:833:A:H2'	53:27:834:G:H8	1.70	0.54
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.54
59:33:425:LEU:H	59:33:425:LEU:CD1	2.20	0.54
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.54
32:6:82:ALA:HB3	32:6:213:LEU:HG	1.89	0.54
33:7:152:VAL:HA	33:7:196:GLY:O	2.07	0.54
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:GLY:C	2:B:168:GLU:H	2.11	0.54
4:D:19:PHE:HB2	4:D:21:TYR:CE2	2.43	0.54
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.34	0.54
6:F:9:VAL:HG12	6:F:10:ALA:N	2.22	0.54
7:G:44:ALA:HB1	7:G:51:TYR:H	1.73	0.54
18:R:29:VAL:HG11	18:R:55:ILE:CD1	2.31	0.54
26:Z:20:ASN:CG	26:Z:39:LYS:HD3	2.28	0.54
36:10:20:GLY:O	36:10:24:ARG:HG3	2.08	0.54
44:18:25:GLU:HA	44:18:28:ALA:HB3	1.90	0.54
47:21:14:ASP:C	47:21:16:MET:H	2.10	0.54
47:21:39:ARG:HH11	52:26:280:C:H1'	1.73	0.54
48:22:56:ARG:HB3	48:22:60:ARG:NH1	2.23	0.54
51:25:5:VAL:HG11	51:25:16:ARG:HB3	1.89	0.54
52:26:885:G:H2'	52:26:886:G:H8	1.72	0.54
34:8:205:LYS:HA	52:26:8:A:C5	2.42	0.54
53:27:1097:U:H2'	53:27:1098:A:H5'	1.90	0.54
53:27:1191:G:H2'	53:27:1192:G:C8	2.42	0.54
53:27:1804:C:H2'	53:27:1805:A:H8	1.72	0.54
53:27:1924:C:H2'	53:27:1925:C:H6	1.72	0.54
53:27:2024:G:OP2	53:27:2034:U:H4'	2.08	0.54
53:27:2036:C:H2'	53:27:2037:A:H8	1.73	0.54
53:27:2220:U:H2'	53:27:2221:G:C8	2.43	0.54
53:27:2393:U:O2'	53:27:2394:C:H5'	2.08	0.54
53:27:2502:G:H5'	53:27:2503:A:H5'	1.89	0.54
53:27:671:C:H2'	53:27:672:C:C6	2.43	0.54
57:31:31:G:H2'	57:31:32:C:C6	2.42	0.54
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.54
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
31:5:37:GLN:OE1	53:27:1124:G:O2'	2.19	0.54
31:5:38:GLY:O	53:27:1031:G:N2	2.41	0.54
34:8:80:ARG:HH21	52:26:613:C:P	2.31	0.54
1:A:44:ASN:ND2	53:27:1812:U:H1'	2.22	0.54
3:C:105:LEU:HB3	3:C:200:LEU:HD21	1.89	0.54
3:C:31:VAL:HG11	3:C:177:PRO:HG2	1.90	0.54
4:D:7:TYR:HB2	4:D:172:PHE:HZ	1.73	0.54
5:E:119:GLY:O	5:E:120:ILE:HD13	2.08	0.54
5:E:176:LYS:HD3	53:27:2660:A:H62	1.70	0.54
7:G:42:ARG:C	7:G:45:GLY:H	2.10	0.54
8:H:40:ALA:HA	8:H:43:ALA:HB3	1.89	0.54
18:R:73:LYS:HB2	18:R:106:VAL:CB	2.32	0.54
39:13:39:GLY:O	39:13:44:ARG:NE	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:32:ILE:HD12	48:22:32:ILE:O	2.08	0.54
49:23:7:GLY:O	49:23:9:PHE:N	2.41	0.54
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.90	0.54
52:26:1014:A:H2'	52:26:1015:G:O4'	2.08	0.54
52:26:573:A:H2'	52:26:574:A:O4'	2.08	0.54
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.40	0.54
53:27:152:A:H2'	53:27:153:U:C6	2.43	0.54
53:27:1812:U:H2'	53:27:1813:G:C8	2.42	0.54
53:27:1906:G:C2'	53:27:1907:G:H5''	2.38	0.54
53:27:2136:G:C5	53:27:2137:U:H1'	2.42	0.54
53:27:2286:G:H5'	53:27:2287:A:C1'	2.38	0.54
53:27:2583:G:H2'	53:27:2584:U:O4'	2.08	0.54
53:27:286:U:H2'	53:27:287:G:H8	1.72	0.54
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.54
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.54
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.90	0.54
6:F:89:LYS:O	6:F:125:THR:HG23	2.08	0.54
13:M:12:ARG:HD3	13:M:16:HIS:CE1	2.42	0.54
20:T:81:ARG:HH12	53:27:300:A:P	2.30	0.54
37:11:91:ARG:O	37:11:95:ARG:N	2.41	0.54
39:13:89:TYR:CB	39:13:93:LEU:HD21	2.37	0.54
41:15:96:ILE:HG13	41:15:97:ARG:N	2.23	0.54
26:Z:66:ILE:CD1	44:18:38:GLU:HA	2.34	0.54
52:26:510:A:N3	52:26:543:U:H1'	2.22	0.54
53:27:1361:G:H2'	53:27:1362:C:C6	2.43	0.54
53:27:1501:G:O2'	53:27:1502:A:H5'	2.08	0.54
6:F:112:LYS:CE	53:27:2220:U:H5''	2.38	0.54
33:7:161:ILE:HG21	55:29:23:A:H2	1.71	0.54
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.54
59:33:620:GLU:O	59:33:621:ILE:HG23	2.07	0.54
33:7:174:LEU:HD21	33:7:200:TRP:CD1	2.43	0.54
4:D:49:LEU:HD22	4:D:83:PRO:O	2.08	0.54
5:E:21:GLN:HE21	5:E:36:LEU:HB3	1.73	0.54
7:G:23:LEU:HD11	7:G:116:GLU:O	2.07	0.54
13:M:103:ARG:HB2	13:M:110:MET:HG2	1.90	0.54
17:Q:49:ILE:HG22	17:Q:54:VAL:N	2.23	0.54
18:R:69:LEU:HD11	18:R:107:VAL:HG22	1.90	0.54
37:11:102:TRP:O	37:11:105:GLU:HB3	2.07	0.54
37:11:68:VAL:HG23	37:11:99:ALA:HB1	1.90	0.54
39:13:34:LEU:HD11	39:13:47:VAL:HG21	1.88	0.54
40:14:80:THR:HB	40:14:83:THR:OG1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:53:ASP:O	44:18:55:SER:N	2.39	0.54
46:20:28:ARG:HE	46:20:29:ASN:ND2	2.06	0.54
48:22:18:GLN:HB3	48:22:19:GLU:OE1	2.08	0.54
48:22:71:ASP:OD1	48:22:72:ARG:N	2.41	0.54
52:26:1514:G:H2'	52:26:1515:G:H8	1.73	0.54
52:26:755:G:H2'	52:26:756:C:H6	1.73	0.54
52:26:91:U:H2'	52:26:92:U:C6	2.43	0.54
53:27:2673:G:H2'	53:27:2674:G:H8	1.73	0.54
29:3:3:ARG:NH1	53:27:752:A:OP1	2.41	0.54
53:27:801:G:H3'	53:27:802:A:C5'	2.38	0.54
53:27:972:A:H3'	53:27:973:A:H2'	1.90	0.54
54:28:71:C:H2'	54:28:72:G:C8	2.43	0.54
59:33:645:ARG:HA	59:33:649:PRO:HB3	1.89	0.54
34:8:8:LEU:O	34:8:11:SER:HB3	2.09	0.54
1:A:86:ARG:NH2	53:27:1817:G:OP1	2.41	0.54
2:B:164:GLN:HE22	53:27:2822:G:H5''	1.73	0.54
37:11:59:GLU:HA	37:11:62:GLU:OE1	2.09	0.53
42:16:28:GLN:HG3	42:16:80:LEU:HD21	1.90	0.53
52:26:106:C:H2'	52:26:107:G:C8	2.40	0.53
52:26:123:U:H5''	52:26:311:C:O2'	2.08	0.53
52:26:376:G:H2'	52:26:377:G:H8	1.73	0.53
53:27:1548:A:H2'	53:27:1549:A:H8	1.74	0.53
53:27:1709:U:O2'	53:27:2859:G:H1'	2.07	0.53
53:27:2127:G:H1'	53:27:2173:A:H1'	1.89	0.53
53:27:222:A:N6	53:27:232:G:H1'	2.24	0.53
53:27:2639:A:H2'	53:27:2640:G:O4'	2.08	0.53
53:27:2680:U:H2'	53:27:2681:C:C6	2.43	0.53
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.53
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.53
1:A:141:HIS:O	1:A:143:VAL:N	2.38	0.53
1:A:66:PHE:HZ	1:A:86:ARG:HH21	1.56	0.53
2:B:101:PHE:O	2:B:103:ASP:N	2.33	0.53
3:C:47:LYS:NZ	53:27:451:U:H4'	2.23	0.53
12:L:35:ALA:HB1	12:L:126:ILE:HD12	1.90	0.53
40:14:38:GLY:O	40:14:74:VAL:HA	2.08	0.53
41:15:80:ASN:CB	41:15:105:ARG:HB3	2.37	0.53
42:16:23:LEU:HG	42:16:24:GLU:H	1.73	0.53
45:19:21:THR:O	52:26:750:C:H1'	2.08	0.53
46:20:57:ILE:O	46:20:61:VAL:HG23	2.08	0.53
47:21:14:ASP:O	47:21:16:MET:N	2.40	0.53
51:25:11:PHE:CE2	51:25:13:VAL:HA	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1496:C:H1'	52:26:1517:G:H22	1.74	0.53
52:26:745:G:H2'	52:26:746:A:C8	2.43	0.53
52:26:755:G:H2'	52:26:756:C:C6	2.44	0.53
52:26:900:A:C2	52:26:901:A:C4	2.97	0.53
17:Q:83:TYR:CZ	53:27:1187:G:H5''	2.43	0.53
1:A:43:ASN:ND2	53:27:1806:C:H1'	2.23	0.53
53:27:191:A:H2'	53:27:192:C:C6	2.43	0.53
53:27:2073:C:O2'	53:27:2074:U:H5'	2.08	0.53
53:27:2261:C:O2'	53:27:2262:U:H5'	2.07	0.53
53:27:376:G:H2'	53:27:377:G:H8	1.73	0.53
53:27:595:C:H2'	53:27:596:U:C6	2.43	0.53
53:27:969:G:H2'	53:27:970:U:H6	1.73	0.53
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.53
59:33:444:ILE:HG22	59:33:461:ILE:HA	1.91	0.53
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.53
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.38	0.53
29:3:34:ARG:HH21	29:3:39:ARG:CD	2.21	0.53
33:7:69:THR:O	33:7:105:VAL:HG12	2.09	0.53
2:B:38:LYS:HA	2:B:43:ASP:OD2	2.08	0.53
8:H:72:THR:HG21	8:H:112:LYS:CA	2.38	0.53
8:H:98:GLY:HA3	8:H:137:LEU:HD23	1.90	0.53
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.89	0.53
16:P:3:VAL:HG22	53:27:1199:U:C1'	2.33	0.53
52:26:1268:G:H2'	52:26:1269:A:C8	2.43	0.53
52:26:1292:G:H2'	52:26:1293:C:H6	1.72	0.53
52:26:451:A:H4'	52:26:452:A:O4'	2.08	0.53
52:26:900:A:H2'	52:26:901:A:C8	2.44	0.53
52:26:13:U:O2	52:26:914:A:H3'	2.08	0.53
53:27:1680:U:H2'	53:27:1681:G:O4'	2.08	0.53
53:27:1726:C:H2'	53:27:1727:C:H6	1.73	0.53
53:27:1734:G:H2'	53:27:1735:A:C8	2.43	0.53
53:27:2743:U:H2'	53:27:2744:G:O4'	2.08	0.53
53:27:527:C:H2'	53:27:2779:U:O2	2.09	0.53
55:29:13:A:H61	58:32:35:A:H62	1.54	0.53
35:9:45:VAL:HG21	35:9:117:ALA:HA	1.90	0.53
1:A:171:VAL:HG13	1:A:185:ALA:HB2	1.90	0.53
2:B:8:LYS:HB2	2:B:201:LEU:CD1	2.38	0.53
3:C:148:ILE:HA	3:C:187:VAL:HG13	1.90	0.53
4:D:78:ILE:HG13	4:D:78:ILE:O	2.07	0.53
6:F:18:GLN:HE22	6:F:39:ALA:CB	2.21	0.53
7:G:114:GLU:HB2	7:G:123:ILE:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:59:LEU:CA	53:27:1107:G:OP1	2.56	0.53
13:M:41:ALA:HB1	13:M:97:ILE:HD12	1.90	0.53
15:O:13:LYS:HE3	15:O:76:HIS:C	2.28	0.53
38:12:65:PHE:CD2	38:12:66:GLN:HG2	2.43	0.53
39:13:115:VAL:HG23	52:26:1367:C:H5'	1.90	0.53
44:18:68:ARG:HD2	52:26:1202:U:O4'	2.08	0.53
52:26:1349:A:H3'	52:26:1350:A:H8	1.74	0.53
52:26:211:G:H2'	52:26:212:G:H5'	1.90	0.53
52:26:247:G:H2'	52:26:248:C:H6	1.73	0.53
53:27:1967:C:H2'	53:27:1968:G:C5'	2.37	0.53
53:27:2637:U:H2'	53:27:2638:G:O4'	2.09	0.53
53:27:2818:U:H2'	53:27:2819:G:C8	2.43	0.53
53:27:364:C:H2'	53:27:365:U:H6	1.72	0.53
53:27:471:A:H2'	53:27:472:A:O4'	2.08	0.53
53:27:968:C:H2'	53:27:969:G:H8	1.73	0.53
56:30:34:G:H2'	56:30:35:A:C8	2.44	0.53
59:33:617:PRO:HG2	59:33:664:GLY:HA2	1.90	0.53
30:4:56:LEU:O	30:4:60:CYS:HB2	2.09	0.53
6:F:117:LEU:HD13	6:F:121:VAL:HA	1.91	0.53
8:H:21:PRO:HB2	8:H:22:PRO:CD	2.29	0.53
9:I:21:THR:HG23	9:I:61:LYS:HB3	1.91	0.53
16:P:49:ARG:HH21	17:Q:72:VAL:HB	1.72	0.53
20:T:28:LEU:HD12	20:T:32:LYS:HB2	1.89	0.53
23:W:6:VAL:HG21	23:W:58:ILE:HD11	1.89	0.53
24:X:23:ARG:O	24:X:25:GLN:N	2.42	0.53
52:26:1074:G:H2'	52:26:1075:U:H6	1.74	0.53
52:26:201:G:H2'	52:26:202:G:O4'	2.08	0.53
52:26:317:U:H2'	52:26:318:G:H8	1.72	0.53
52:26:377:G:H2'	52:26:378:G:H8	1.74	0.53
53:27:1352:U:O2'	53:27:1353:A:H5'	2.08	0.53
5:E:171:LYS:NZ	53:27:2530:A:N7	2.51	0.53
53:27:2641:G:H2'	53:27:2642:G:H8	1.74	0.53
53:27:597:G:H2'	53:27:598:U:O4'	2.08	0.53
58:32:59:A:H3'	58:32:60:U:H6	1.72	0.53
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.53
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.53
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.53
35:9:40:ASP:OD1	35:9:44:ARG:HB2	2.08	0.53
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.38	0.53
5:E:153:PRO:HG2	5:E:166:GLU:OE2	2.08	0.53
7:G:50:VAL:HG11	53:27:1082:U:OP1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:113:PRO:HA	9:I:116:ARG:NH2	2.23	0.53
17:Q:77:PHE:HD1	17:Q:84:ARG:HB3	1.74	0.53
40:14:14:ASP:OD1	40:14:16:ARG:HG2	2.09	0.53
41:15:35:ASP:OD1	41:15:36:ARG:N	2.42	0.53
43:17:1:ALA:O	43:17:8:ILE:HG13	2.09	0.53
46:20:5:ARG:NH1	52:26:377:G:H5'	2.23	0.53
47:21:68:LYS:O	52:26:254:G:OP1	2.26	0.53
51:25:36:PHE:O	51:25:38:GLU:N	2.35	0.53
52:26:1254:A:H2'	52:26:1255:G:H8	1.72	0.53
53:27:1666:G:C2'	53:27:1667:G:H5'	2.39	0.53
53:27:1771:C:H2'	53:27:1772:A:C8	2.43	0.53
53:27:1998:A:H2'	53:27:1999:C:H6	1.72	0.53
53:27:208:C:H2'	53:27:209:C:C6	2.40	0.53
53:27:2544:G:O2'	53:27:2545:G:H5'	2.08	0.53
53:27:399:U:OP1	53:27:2090:A:H5''	2.09	0.53
53:27:463:G:C2	53:27:467:G:C6	2.97	0.53
53:27:584:C:H2'	53:27:585:G:H8	1.73	0.53
54:28:30:C:H2'	54:28:31:C:C5'	2.38	0.53
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
33:7:132:ALA:O	33:7:135:ARG:HB3	2.08	0.53
3:C:58:LYS:HZ2	3:C:70:SER:HB2	1.73	0.53
4:D:101:ARG:HD2	4:D:139:GLU:OE2	2.09	0.53
4:D:37:MET:HE3	4:D:151:LEU:HB3	1.91	0.53
5:E:156:TYR:CE2	53:27:2531:A:H4'	2.43	0.53
9:I:58:ASN:HA	9:I:126:ALA:O	2.09	0.53
14:N:28:VAL:HG22	14:N:29:HIS:H	1.73	0.53
20:T:17:ASP:HB3	20:T:20:LYS:HB3	1.89	0.53
20:T:39:ASN:O	20:T:61:GLU:HA	2.08	0.53
22:V:79:GLU:HG3	22:V:81:GLU:HG2	1.89	0.53
36:10:18:VAL:N	36:10:19:PRO:CD	2.72	0.53
39:13:118:ARG:O	39:13:119:LYS:HB3	2.08	0.53
44:18:17:ASP:O	44:18:21:ALA:HB3	2.09	0.53
52:26:1390:U:H2'	52:26:1391:U:C6	2.43	0.53
52:26:34:C:H2'	52:26:35:G:H8	1.72	0.53
52:26:882:C:O2'	52:26:883:C:H5'	2.08	0.53
53:27:19:A:H2'	53:27:20:C:H6	1.73	0.53
53:27:2185:U:H2'	53:27:2186:G:C8	2.43	0.53
53:27:2263:C:H2'	53:27:2264:C:H6	1.72	0.53
53:27:2648:G:H2'	53:27:2649:C:O4'	2.09	0.53
53:27:552:U:H2'	53:27:553:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:689:A:H2	53:27:779:U:H4'	1.74	0.53
54:28:91:C:H2'	54:28:92:C:C6	2.41	0.53
59:33:423:THR:HB	59:33:425:LEU:HD13	1.90	0.53
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.38	0.53
32:6:49:PHE:O	32:6:52:ALA:HB3	2.08	0.53
33:7:87:ARG:HB3	33:7:100:ILE:CG2	2.39	0.53
34:8:171:GLU:HB2	34:8:180:THR:HB	1.91	0.53
2:B:108:ASP:CG	2:B:206:ALA:HA	2.29	0.53
8:H:23:VAL:HG13	8:H:24:GLY:H	1.72	0.53
8:H:35:MET:HB2	8:H:39:LYS:NZ	2.23	0.53
36:10:88:MET:HB3	48:22:63:TYR:HE2	1.72	0.53
46:20:33:ILE:HD12	46:20:33:ILE:H	1.73	0.53
46:20:67:ILE:HD12	46:20:67:ILE:N	2.22	0.53
52:26:1168:U:H5''	52:26:1169:A:OP2	2.09	0.53
52:26:1329:A:O2'	52:26:1330:U:H5'	2.09	0.53
52:26:1451:U:H5''	52:26:1452:C:C5	2.43	0.53
52:26:370:C:O2'	52:26:371:A:H5'	2.09	0.53
16:P:54:ARG:HG3	53:27:1155:A:OP1	2.08	0.53
53:27:1278:C:H2'	53:27:1279:G:H8	1.72	0.53
1:A:99:GLU:HB2	53:27:1491:G:H1'	1.90	0.53
53:27:2486:C:C2'	53:27:2487:G:H5''	2.38	0.53
53:27:2486:C:H2'	53:27:2487:G:C5'	2.36	0.53
53:27:2514:U:H2'	53:27:2515:C:C6	2.43	0.53
53:27:2643:G:H2'	53:27:2644:G:O4'	2.09	0.53
53:27:2881:U:H2'	53:27:2882:A:C8	2.43	0.53
53:27:570:G:H22	53:27:2499:C:H5'	1.74	0.53
53:27:679:C:H2'	53:27:680:C:C6	2.44	0.53
53:27:681:G:H2'	53:27:682:G:O4'	2.08	0.53
54:28:94:A:H2'	54:28:95:U:O4'	2.09	0.53
56:30:55:U:C6	56:30:58:A:H2'	2.44	0.53
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.53
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.53
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.53
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.53
34:8:149:LYS:HE2	34:8:177:MET:HG2	1.91	0.53
34:8:169:TRP:CG	34:8:185:PRO:HG3	2.44	0.53
34:8:50:TYR:O	34:8:53:GLN:HB2	2.08	0.53
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.53
35:9:104:ILE:HG23	35:9:111:ARG:HH11	1.74	0.53
35:9:84:VAL:HG22	35:9:85:LYS:O	2.08	0.53
2:B:109:VAL:HG21	2:B:193:VAL:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:172:PHE:O	4:D:174:PHE:N	2.41	0.53
6:F:18:GLN:HE22	6:F:39:ALA:HB1	1.73	0.53
6:F:50:ARG:HD2	6:F:51:ARG:HH12	1.74	0.53
11:K:38:GLN:HB3	53:27:832:U:OP1	2.09	0.53
25:Y:8:GLN:HB2	25:Y:28:LEU:HD13	1.90	0.53
40:14:37:ARG:HB2	40:14:75:ASP:HB3	1.89	0.53
52:26:1261:A:H3'	52:26:1262:C:C6	2.44	0.53
52:26:237:G:H2'	52:26:238:A:H8	1.74	0.53
53:27:1055:G:H2'	53:27:1056:G:O4'	2.09	0.53
53:27:140:C:P	53:27:140:C:H3'	2.48	0.53
53:27:1463:C:H2'	53:27:1464:G:H8	1.73	0.53
53:27:1956:U:H2'	53:27:1957:C:H5'	1.91	0.53
53:27:2396:G:H2'	53:27:2397:G:H8	1.74	0.53
53:27:2570:G:H2'	53:27:2571:U:O4'	2.08	0.53
53:27:622:G:H2'	53:27:623:C:C6	2.43	0.53
16:P:53:LYS:NZ	53:27:994:C:OP2	2.42	0.53
53:27:999:U:H5''	53:27:1154:G:O6	2.09	0.53
21:U:9:ARG:NH1	54:28:76:G:OP1	2.42	0.53
56:30:9:A:H5'	56:30:10:G:OP2	2.07	0.53
58:32:11:A:H2	58:32:24:U:H3	1.50	0.53
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.53
33:7:20:THR:O	33:7:57:GLU:HA	2.09	0.53
34:8:131:ILE:CD1	34:8:134:TYR:HB2	2.37	0.53
34:8:142:VAL:O	34:8:179:GLY:N	2.42	0.53
1:A:170:TYR:CE1	1:A:184:GLU:HG2	2.44	0.53
13:M:96:ARG:HG3	13:M:116:VAL:HG22	1.91	0.53
14:N:51:ALA:HB3	14:N:78:VAL:CG2	2.38	0.53
23:W:73:ARG:HB3	23:W:75:GLU:HG2	1.91	0.53
37:11:72:VAL:HG12	37:11:89:GLU:HA	1.91	0.53
47:21:5:ARG:HD3	52:26:636:U:C5'	2.38	0.53
48:22:10:CYS:O	48:22:11:ARG:HG3	2.09	0.53
52:26:33:A:O2'	52:26:34:C:H5'	2.09	0.53
52:26:70:U:H1'	52:26:71:A:N7	2.24	0.53
53:27:216:A:H2'	53:27:217:A:O4'	2.09	0.53
53:27:1801:A:C5'	53:27:2203:U:H2'	2.30	0.53
53:27:551:G:O2'	53:27:552:U:H5'	2.09	0.53
53:27:672:C:O2'	53:27:673:C:H5'	2.09	0.53
59:33:367:ARG:O	59:33:409:PHE:HZ	1.92	0.53
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.53
32:6:45:THR:OG1	32:6:200:PRO:HB2	2.09	0.53
35:9:114:LEU:O	35:9:119:VAL:HG22	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:14:LEU:HD12	35:9:14:LEU:C	2.29	0.53
1:A:64:VAL:HB	1:A:66:PHE:CE1	2.43	0.53
2:B:112:THR:O	2:B:195:GLY:HA2	2.09	0.53
7:G:17:GLU:OE2	7:G:53:ARG:HB3	2.08	0.53
13:M:3:HIS:HD2	53:27:2820:A:O3'	1.92	0.53
14:N:25:ARG:NH1	54:28:8:C:O3'	2.41	0.53
19:S:25:GLU:HG3	19:S:26:LYS:N	2.23	0.53
24:X:39:GLN:HA	53:27:95:A:H4'	1.91	0.53
36:10:11:HIS:CE1	36:10:54:LEU:HD22	2.44	0.52
37:11:71:THR:O	37:11:90:VAL:HG12	2.09	0.52
52:26:1244:G:H2'	52:26:1245:C:C6	2.45	0.52
52:26:1127:G:H5'	52:26:1280:A:O2'	2.10	0.52
52:26:963:G:H2'	52:26:964:A:H8	1.73	0.52
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.44	0.52
53:27:1486:U:H2'	53:27:1487:U:H6	1.73	0.52
53:27:563:A:C6	53:27:2018:G:C5	2.97	0.52
53:27:2398:U:H2'	53:27:2399:G:C8	2.45	0.52
53:27:2603:G:O2'	53:27:2604:U:H5'	2.09	0.52
53:27:2751:G:O2'	53:27:2752:C:H5'	2.09	0.52
53:27:340:A:H2'	53:27:341:C:O4'	2.08	0.52
53:27:599:A:H2'	53:27:600:G:H8	1.74	0.52
53:27:669:G:H2'	53:27:669:G:N3	2.24	0.52
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.52
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.52
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.52
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.52
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.44	0.52
2:B:5:VAL:HG11	2:B:80:TRP:CZ3	2.44	0.52
3:C:65:THR:HG23	53:27:2059:A:OP1	2.09	0.52
6:F:29:PHE:O	6:F:32:PRO:HG2	2.09	0.52
15:O:105:LYS:O	15:O:108:ARG:NH2	2.43	0.52
18:R:7:HIS:HB2	18:R:50:VAL:HG22	1.91	0.52
18:R:90:LYS:HA	53:27:751:A:H5'	1.90	0.52
19:S:70:HIS:C	19:S:72:GLN:H	2.12	0.52
20:T:39:ASN:O	20:T:41:VAL:N	2.43	0.52
42:16:98:ARG:HA	42:16:103:CYS:SG	2.49	0.52
42:16:20:VAL:O	42:16:22:ALA:N	2.39	0.52
52:26:1147:C:H2'	52:26:1148:U:C6	2.45	0.52
52:26:1436:U:H2'	52:26:1437:A:H8	1.74	0.52
52:26:336:A:H2'	52:26:337:G:C8	2.45	0.52
52:26:49:U:O2'	52:26:50:A:H2'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:202:U:H2'	53:27:203:A:O4'	2.08	0.52
53:27:2136:G:C6	53:27:2137:U:H1'	2.45	0.52
53:27:235:U:H2'	53:27:236:C:H6	1.74	0.52
53:27:2370:G:H2'	53:27:2371:G:C8	2.44	0.52
53:27:2863:C:H2'	53:27:2864:G:C8	2.44	0.52
53:27:717:C:H2'	53:27:718:A:H5'	1.89	0.52
53:27:566:U:H4'	53:27:809:G:OP2	2.09	0.52
21:U:29:ILE:HD12	54:28:75:G:O4'	2.09	0.52
59:33:410:THR:HG23	59:33:414:ASP:O	2.10	0.52
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
11:K:58:TYR:O	30:4:12:ARG:NH2	2.43	0.52
5:E:85:LYS:HB2	5:E:164:ALA:HB2	1.91	0.52
5:E:71:LEU:HD23	5:E:74:MET:SD	2.50	0.52
19:S:54:GLU:CD	19:S:54:GLU:H	2.12	0.52
41:15:123:PRO:O	51:25:34:ARG:N	2.42	0.52
41:15:92:ARG:O	41:15:94:SER:N	2.42	0.52
43:17:78:ARG:HH12	49:23:68:HIS:HE1	1.56	0.52
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.75	0.52
52:26:1404:C:H2'	52:26:1405:G:C8	2.44	0.52
52:26:947:G:H2'	52:26:948:C:C6	2.44	0.52
53:27:1041:G:H2'	53:27:1042:G:C8	2.44	0.52
16:P:2:ARG:HB2	53:27:1248:G:C8	2.44	0.52
53:27:1685:C:H2'	53:27:1686:C:C6	2.44	0.52
53:27:173:A:H2'	53:27:174:U:C6	2.45	0.52
53:27:2131:U:H5'	53:27:2132:U:H5''	1.91	0.52
53:27:2373:G:H2'	53:27:2374:C:H6	1.73	0.52
53:27:373:U:H3	53:27:401:A:H62	1.56	0.52
53:27:559:G:H8	53:27:559:G:O5'	1.93	0.52
53:27:859:G:O2'	53:27:860:U:P	2.66	0.52
53:27:967:U:H2'	53:27:968:C:C6	2.44	0.52
54:28:114:C:H2'	54:28:115:A:H8	1.74	0.52
58:32:57:A:O2'	58:32:58:A:H5'	2.09	0.52
58:32:58:A:H1'	58:32:60:U:C5	2.44	0.52
59:33:620:GLU:HG2	59:33:621:ILE:N	2.25	0.52
33:7:18:ASN:O	33:7:55:VAL:HA	2.09	0.52
8:H:98:GLY:HA3	8:H:137:LEU:CD2	2.39	0.52
9:I:84:ILE:HG13	9:I:84:ILE:O	2.09	0.52
11:K:23:ILE:HD12	11:K:23:ILE:H	1.73	0.52
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.91	0.52
20:T:5:ARG:HD2	20:T:93:ARG:HH11	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:50:LYS:N	42:16:50:LYS:HD2	2.24	0.52
50:24:53:MET:HG3	50:24:54:GLN:N	2.23	0.52
52:26:1205:U:H2'	52:26:1206:G:C8	2.45	0.52
52:26:1487:G:O2'	52:26:1488:G:H5'	2.10	0.52
52:26:112:G:H22	52:26:315:A:H2	1.56	0.52
7:G:35:VAL:HG22	53:27:1057:A:O2'	2.10	0.52
53:27:1083:U:H2'	53:27:1085:A:OP2	2.09	0.52
53:27:1782:U:H2'	53:27:1783:A:H5'	1.90	0.52
53:27:1876:A:H2'	53:27:1877:A:O4'	2.08	0.52
53:27:2000:C:O2'	53:27:2001:C:H5'	2.10	0.52
53:27:2106:U:H2'	53:27:2107:G:H8	1.75	0.52
53:27:2162:G:O3'	53:27:2171:A:H5''	2.09	0.52
53:27:276:U:C2	53:27:277:G:H1'	2.45	0.52
53:27:2795:C:C2'	53:27:2796:U:H5'	2.39	0.52
53:27:356:G:H2'	53:27:357:C:O4'	2.10	0.52
53:27:689:A:H2'	53:27:690:G:H8	1.74	0.52
53:27:863:A:H2'	53:27:864:G:C8	2.44	0.52
53:27:945:A:C5	53:27:2448:A:C2	2.98	0.52
59:33:607:HIS:HA	59:33:631:ILE:O	2.09	0.52
59:33:621:ILE:HA	59:33:636:ALA:H	1.74	0.52
34:8:149:LYS:C	34:8:150:LYS:HG2	2.29	0.52
35:9:131:ASN:O	35:9:133:ILE:N	2.43	0.52
1:A:157:ALA:HB1	1:A:196:ASN:O	2.09	0.52
1:A:230:PRO:CB	1:A:244:VAL:HG21	2.39	0.52
18:R:5:ALA:CB	18:R:54:ALA:HA	2.40	0.52
36:10:68:GLN:O	36:10:71:ILE:HG22	2.10	0.52
38:12:85:TYR:HE1	38:12:123:GLU:HB2	1.74	0.52
38:12:102:VAL:HG12	38:12:125:ILE:HD12	1.90	0.52
39:13:59:LYS:HG3	39:13:60:LEU:HG	1.92	0.52
49:23:47:THR:HG22	49:23:60:PHE:HD1	1.74	0.52
41:15:121:ARG:HE	51:25:35:GLU:HG2	1.73	0.52
52:26:1088:G:N2	52:26:1167:A:H61	2.05	0.52
52:26:502:A:H2'	52:26:503:C:C6	2.45	0.52
53:27:819:A:C4	53:27:1189:A:C2	2.98	0.52
53:27:1406:U:H2'	53:27:1407:G:O4'	2.08	0.52
53:27:2346:A:H3'	53:27:2347:C:C5'	2.39	0.52
53:27:2450:A:O2'	53:27:2451:A:H5'	2.10	0.52
53:27:323:C:H2'	53:27:1205:A:N1	2.24	0.52
53:27:753:A:H2'	53:27:754:U:C6	2.45	0.52
53:27:985:C:H2'	53:27:986:C:C6	2.44	0.52
57:31:21:A:H61	57:31:46:G:H2'	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:10:LEU:HD11	29:3:14:ARG:HD2	1.92	0.52
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.52
59:33:169:ASP:OD1	59:33:169:ASP:O	2.27	0.52
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.52
32:6:113:LEU:HD13	32:6:143:LEU:CB	2.40	0.52
34:8:187:ARG:O	34:8:190:LEU:HG	2.08	0.52
34:8:187:ARG:HD2	34:8:190:LEU:HD21	1.90	0.52
34:8:2:ARG:O	34:8:4:LEU:HG	2.09	0.52
35:9:45:VAL:CG2	35:9:117:ALA:HA	2.39	0.52
3:C:128:ALA:HB1	3:C:129:PRO:CD	2.39	0.52
5:E:140:ILE:HD12	5:E:141:GLY:N	2.24	0.52
5:E:8:VAL:HG21	5:E:68:ARG:HG3	1.91	0.52
12:L:35:ALA:HA	12:L:128:THR:HG22	1.90	0.52
12:L:63:ILE:CG2	12:L:64:TRP:N	2.71	0.52
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.91	0.52
13:M:51:LEU:O	13:M:54:LEU:HB3	2.10	0.52
13:M:73:ASN:HA	13:M:76:VAL:HG12	1.92	0.52
4:D:105:ILE:HD13	26:Z:24:ILE:HD11	1.92	0.52
39:13:7:GLY:HA3	39:13:85:ALA:HB2	1.91	0.52
42:16:51:VAL:HG22	42:16:52:CYS:N	2.25	0.52
46:20:71:VAL:O	46:20:75:ILE:HG13	2.10	0.52
52:26:1327:C:H2'	52:26:1328:C:C6	2.44	0.52
46:20:13:LYS:N	52:26:392:C:OP1	2.35	0.52
53:27:811:U:O2	53:27:1251:C:C6	2.62	0.52
53:27:1948:G:H2'	53:27:1949:G:H8	1.75	0.52
53:27:2838:G:H2'	53:27:2839:G:O4'	2.10	0.52
53:27:595:C:H2'	53:27:596:U:H6	1.74	0.52
57:31:59:A:C2'	57:31:60:U:H5'	2.39	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.10	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.08	0.52
59:33:427:PHE:HE2	59:33:463:ILE:HD11	1.75	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
35:9:137:ARG:NH2	52:26:1078:U:H4'	2.25	0.52
8:H:96:LYS:HD2	8:H:138:VAL:HG13	1.92	0.52
12:L:35:ALA:O	12:L:99:GLY:N	2.43	0.52
15:O:80:VAL:O	15:O:80:VAL:HG23	2.09	0.52
16:P:18:LYS:O	16:P:21:LYS:HG2	2.09	0.52
36:10:67:PRO:HG2	36:10:70:VAL:HG21	1.91	0.52
42:16:21:PRO:C	42:16:23:LEU:N	2.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:50:VAL:HG21	49:23:70:LEU:HB3	1.92	0.52
52:26:262:A:H2'	52:26:263:A:C8	2.44	0.52
52:26:398:U:H2'	52:26:399:G:C8	2.44	0.52
7:G:31:ARG:HB3	53:27:1054:A:H4'	1.92	0.52
53:27:1192:G:O2'	53:27:1193:G:H5'	2.10	0.52
53:27:1779:U:H2'	53:27:1783:A:N7	2.24	0.52
10:J:70:ARG:NH1	53:27:2684:U:O4'	2.42	0.52
53:27:2719:G:O2'	53:27:2720:U:H5'	2.09	0.52
53:27:421:C:H2'	53:27:421:C:O2	2.07	0.52
53:27:454:A:H4'	53:27:455:C:OP2	2.10	0.52
53:27:95:A:H2'	53:27:96:C:O4'	2.09	0.52
54:28:55:U:H2'	54:28:56:G:C8	2.44	0.52
56:30:7:A:C3'	56:30:8:U:H5''	2.26	0.52
29:3:10:LEU:O	29:3:14:ARG:HG3	2.10	0.52
58:32:3:C:H2'	58:32:4:G:C8	2.45	0.52
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.52
32:6:181:PRO:HA	32:6:196:ASP:OD2	2.10	0.52
34:8:169:TRP:CD2	34:8:185:PRO:HG3	2.45	0.52
35:9:86:GLY:O	35:9:138:ALA:HB1	2.08	0.52
35:9:46:GLY:HA3	35:9:70:MET:HA	1.91	0.52
35:9:96:GLN:CG	35:9:97:PRO:HD2	2.40	0.52
1:A:140:VAL:O	1:A:161:VAL:N	2.42	0.52
1:A:202:ARG:HH11	1:A:213:ARG:HH22	1.57	0.52
1:A:259:ASN:O	1:A:260:LYS:HB2	2.09	0.52
6:F:69:ALA:HA	6:F:72:ILE:HD12	1.90	0.52
13:M:94:TYR:O	13:M:116:VAL:N	2.39	0.52
18:R:14:ALA:HB2	18:R:78:GLU:HB3	1.90	0.52
18:R:23:LEU:HD11	27:1:23:ALA:CA	2.39	0.52
20:T:24:VAL:HA	20:T:35:VAL:HA	1.91	0.52
24:X:9:LYS:HG2	24:X:11:VAL:H	1.73	0.52
36:10:12:PRO:O	36:10:15:SER:HB3	2.10	0.52
44:18:30:ILE:HG21	44:18:43:ALA:HB2	1.91	0.52
45:19:74:VAL:O	45:19:77:TYR:HB3	2.09	0.52
48:22:31:TYR:CG	48:22:54:LEU:HD11	2.44	0.52
52:26:1018:G:O2'	52:26:1019:A:H5'	2.09	0.52
52:26:484:G:N7	52:26:486:U:H1'	2.23	0.52
52:26:843:U:OP1	52:26:846:G:H1'	2.10	0.52
53:27:1111:A:C2	53:27:1112:G:H1'	2.45	0.52
53:27:1417:C:H2'	53:27:1418:G:O4'	2.10	0.52
53:27:1448:G:H2'	53:27:1449:G:H8	1.74	0.52
53:27:1448:G:H2'	53:27:1449:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1604:C:H2'	53:27:1605:C:H6	1.74	0.52
6:F:112:LYS:CD	53:27:2220:U:H5''	2.40	0.52
53:27:2588:G:O2'	53:27:2589:A:H5'	2.10	0.52
53:27:2779:U:OP1	53:27:2780:G:H2'	2.09	0.52
53:27:2899:A:H2'	53:27:2900:A:C8	2.45	0.52
53:27:309:A:H1'	53:27:329:G:N3	2.25	0.52
53:27:616:A:H2'	53:27:617:G:O4'	2.10	0.52
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
56:30:14:A:H2'	56:30:15:G:C4'	2.40	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.25	0.52
35:9:104:ILE:HG23	35:9:111:ARG:NH1	2.24	0.52
35:9:12:GLU:HA	35:9:37:VAL:O	2.10	0.52
9:I:117:ALA:HA	9:I:120:ARG:NH2	2.25	0.52
15:O:113:LEU:HD21	52:26:1441:A:N1	2.24	0.52
41:15:15:VAL:HG22	41:15:16:SER:N	2.25	0.52
43:17:3:ILE:HD11	43:17:21:ILE:CD1	2.39	0.52
46:20:18:GLN:OE1	46:20:38:PHE:HB3	2.10	0.52
51:25:36:PHE:HD1	51:25:40:PRO:HD3	1.73	0.52
52:26:1141:C:H2'	52:26:1142:G:H8	1.75	0.52
52:26:257:G:H2'	52:26:258:G:H8	1.75	0.52
52:26:323:U:H2'	52:26:324:G:O4'	2.10	0.52
52:26:478:A:C2'	52:26:479:U:H5''	2.40	0.52
52:26:599:C:H2'	52:26:600:A:H8	1.74	0.52
52:26:825:A:H2'	52:26:826:C:H6	1.75	0.52
53:27:1400:U:O2'	53:27:1401:G:H5'	2.10	0.52
53:27:1404:C:O2'	53:27:1405:U:H5'	2.10	0.52
53:27:1713:A:H61	53:27:1745:A:H61	1.57	0.52
53:27:1788:C:H2'	53:27:1789:A:C8	2.45	0.52
53:27:2026:U:C2	53:27:2027:G:C8	2.98	0.52
53:27:2070:A:H2'	53:27:2071:A:O4'	2.09	0.52
53:27:291:G:H2'	53:27:292:U:C6	2.44	0.52
53:27:697:G:H2'	53:27:698:C:C6	2.45	0.52
53:27:784:G:N7	53:27:792:A:C5	2.78	0.52
54:28:79:G:H2'	54:28:80:U:O4'	2.10	0.52
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.92	0.52
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.52
1:A:36:ASN:HB2	1:A:61:TYR:HB2	1.91	0.52
2:B:68:PHE:O	2:B:72:GLY:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:116:LEU:HB3	5:E:117:PRO:HD2	1.91	0.52
9:I:98:GLU:H	9:I:98:GLU:CD	2.13	0.52
13:M:2:ARG:CA	13:M:5:LYS:HD3	2.31	0.52
17:Q:69:GLY:N	17:Q:91:GLN:O	2.34	0.52
26:Z:1:MET:HB2	54:28:43:C:OP1	2.09	0.52
38:12:38:VAL:HG21	38:12:109:VAL:HG12	1.92	0.52
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.92	0.52
46:20:7:ALA:O	46:20:8:ARG:HB3	2.10	0.52
47:21:58:VAL:HG21	47:21:74:LEU:HG	1.91	0.52
50:24:55:PRO:HB2	50:24:59:ARG:HH22	1.74	0.52
52:26:1026:G:H21	52:26:1027:C:H41	1.57	0.52
39:13:105:ARG:NE	52:26:1118:U:OP1	2.41	0.52
52:26:1179:A:H2'	52:26:1180:A:O4'	2.10	0.52
52:26:1333:A:H2'	52:26:1334:G:O4'	2.10	0.52
52:26:1353:G:H2'	52:26:1354:U:C6	2.45	0.52
52:26:236:A:H2'	52:26:237:G:C8	2.44	0.52
53:27:1108:U:O5'	53:27:1108:U:H6	1.93	0.52
53:27:2298:A:H2'	53:27:2299:U:O4'	2.10	0.52
53:27:2417:C:O2'	53:27:2418:A:H5'	2.10	0.52
53:27:2805:C:H2'	53:27:2806:C:C6	2.45	0.52
53:27:418:C:H2'	53:27:419:U:C6	2.45	0.52
20:T:91:LYS:HE3	53:27:83:A:OP1	2.10	0.52
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.24	0.52
32:6:165:ALA:HB3	32:6:190:SER:CB	2.40	0.52
34:8:71:PHE:HE1	34:8:93:LEU:HD11	1.75	0.52
3:C:23:PHE:CD1	3:C:111:GLU:HB2	2.44	0.52
7:G:37:LYS:HG3	7:G:40:GLU:OE1	2.09	0.52
15:O:30:TRP:CD2	15:O:37:LYS:HE3	2.45	0.52
17:Q:24:LYS:HA	17:Q:94:THR:OG1	2.10	0.52
17:Q:57:GLY:HA2	17:Q:103:ALA:C	2.29	0.52
19:S:89:GLU:CD	19:S:89:GLU:H	2.14	0.52
36:10:76:THR:O	36:10:79:ARG:HB3	2.10	0.51
41:15:35:ASP:HB3	41:15:39:ASN:OD1	2.10	0.51
43:17:6:ILE:HD11	43:17:21:ILE:HG23	1.92	0.51
50:24:4:LYS:C	50:24:6:ALA:N	2.62	0.51
52:26:1202:U:H2'	52:26:1203:C:C5'	2.40	0.51
52:26:1306:A:H62	52:26:1331:G:H1'	1.75	0.51
52:26:1332:A:H2'	52:26:1333:A:H8	1.74	0.51
52:26:134:G:H2'	52:26:135:C:O4'	2.10	0.51
39:13:113:LYS:HZ1	52:26:1367:C:P	2.34	0.51
42:16:29:LYS:HA	52:26:363:A:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:452:A:H61	52:26:480:U:H3	1.58	0.51
53:27:1268:A:H2'	53:27:1269:A:O4'	2.09	0.51
53:27:2037:A:H2'	53:27:2038:G:H8	1.74	0.51
53:27:2343:U:H2'	53:27:2344:U:C6	2.45	0.51
20:T:84:PHE:HB2	53:27:298:G:P	2.50	0.51
53:27:783:A:H2'	53:27:784:G:C5'	2.40	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.51
59:33:613:CYS:HB2	59:33:635:ARG:HB3	1.91	0.51
1:A:119:VAL:HG12	1:A:130:PRO:HG2	1.92	0.51
4:D:175:PRO:O	4:D:176:PHE:HB2	2.10	0.51
6:F:3:VAL:HG22	6:F:38:PRO:HA	1.92	0.51
14:N:18:LEU:HD23	14:N:25:ARG:CB	2.40	0.51
15:O:29:VAL:CG1	15:O:79:VAL:HG22	2.38	0.51
16:P:57:ARG:HD2	53:27:997:G:OP2	2.10	0.51
22:V:33:ILE:HG21	22:V:76:ILE:HG21	1.92	0.51
37:11:63:VAL:O	37:11:67:ASN:ND2	2.43	0.51
18:R:23:LEU:HD11	27:1:23:ALA:HA	1.92	0.51
40:14:7:ARG:HA	40:14:75:ASP:HA	1.92	0.51
45:19:81:ILE:HD12	45:19:82:GLU:N	2.26	0.51
47:21:6:THR:C	47:21:7:LEU:HD12	2.31	0.51
48:22:56:ARG:O	48:22:60:ARG:HG3	2.09	0.51
50:24:34:VAL:O	50:24:38:ILE:HG13	2.10	0.51
50:24:57:VAL:HG13	50:24:58:ASP:N	2.25	0.51
52:26:260:G:H2'	52:26:261:U:C6	2.46	0.51
11:K:65:GLY:HA2	53:27:2415:G:H4'	1.92	0.51
53:27:2523:G:O2'	53:27:2524:G:H5'	2.09	0.51
53:27:2564:A:C2	53:27:2647:U:H4'	2.45	0.51
53:27:2688:G:H1'	53:27:2721:A:H61	1.74	0.51
3:C:131:THR:HG21	53:27:320:A:H2'	1.92	0.51
12:L:68:PHE:CZ	53:27:871:U:H5"	2.45	0.51
16:P:53:LYS:HE3	53:27:994:C:H3'	1.92	0.51
54:28:87:U:H5"	54:28:88:C:OP2	2.10	0.51
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.51
33:7:151:GLU:HA	33:7:165:GLU:O	2.09	0.51
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.92	0.51
1:A:80:LEU:HD21	1:A:109:LEU:HD23	1.92	0.51
3:C:148:ILE:HG13	3:C:187:VAL:CG1	2.40	0.51
4:D:116:LEU:HD13	4:D:175:PRO:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:46:PHE:O	6:F:50:ARG:HB2	2.10	0.51
7:G:117:LEU:HD12	7:G:117:LEU:O	2.11	0.51
10:J:61:VAL:HB	10:J:87:LEU:HD11	1.92	0.51
11:K:135:ILE:CD1	11:K:142:ILE:HD11	2.38	0.51
27:1:12:ARG:HD2	27:1:16:ARG:CZ	2.41	0.51
37:11:47:GLU:HA	37:11:57:GLU:OE2	2.10	0.51
37:11:4:ARG:O	37:11:6:ILE:N	2.43	0.51
41:15:39:ASN:HA	52:26:683:G:N2	2.25	0.51
44:18:1:ALA:O	44:18:2:LYS:HB2	2.10	0.51
46:20:14:ARG:HH12	52:26:618:C:C1'	2.17	0.51
48:22:54:LEU:O	48:22:57:ALA:HB3	2.09	0.51
49:23:50:VAL:HG12	49:23:51:HIS:O	2.10	0.51
52:26:1309:G:O2'	52:26:1310:G:H5'	2.10	0.51
52:26:584:G:H2'	52:26:585:G:C8	2.43	0.51
52:26:911:U:H2'	52:26:912:C:C6	2.46	0.51
53:27:1889:A:H2'	53:27:1890:A:C8	2.46	0.51
53:27:2249:U:H3'	53:27:2250:G:C5'	2.40	0.51
53:27:2544:G:H2'	53:27:2545:G:H8	1.75	0.51
53:27:2832:U:H1'	53:27:2834:G:C4	2.45	0.51
53:27:473:G:H2'	53:27:474:G:H8	1.74	0.51
53:27:557:C:H2'	53:27:558:U:H6	1.75	0.51
53:27:84:A:H4'	53:27:85:G:O5'	2.10	0.51
58:32:8:U:H5'	58:32:49:G:H5'	1.92	0.51
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.51
34:8:82:LYS:O	34:8:88:ASN:ND2	2.42	0.51
2:B:194:PRO:HA	53:27:2680:U:H5'	1.92	0.51
4:D:91:ARG:CA	4:D:95:MET:HB3	2.41	0.51
6:F:89:LYS:O	6:F:90:LEU:HG	2.10	0.51
7:G:105:LYS:O	7:G:106:PHE:HB3	2.10	0.51
16:P:36:GLN:NE2	53:27:563:A:H2'	2.26	0.51
21:U:86:LEU:CD1	21:U:86:LEU:H	2.24	0.51
26:Z:5:ILE:HG13	26:Z:6:HIS:N	2.24	0.51
39:13:6:TYR:CG	39:13:7:GLY:N	2.78	0.51
41:15:109:ILE:HD12	41:15:109:ILE:N	2.25	0.51
47:21:26:ARG:CZ	52:26:237:G:H5''	2.40	0.51
48:22:31:TYR:CD2	48:22:54:LEU:HD11	2.45	0.51
49:23:48:ILE:HD11	49:23:70:LEU:HD21	1.92	0.51
52:26:1496:C:H2'	52:26:1497:G:O4'	2.11	0.51
52:26:403:C:O2'	52:26:404:G:H5'	2.09	0.51
52:26:735:C:H2'	52:26:736:C:H6	1.76	0.51
52:26:775:G:H2'	52:26:776:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1260:A:O2'	53:27:1261:C:H5'	2.11	0.51
53:27:1721:G:N2	53:27:1738:G:H2'	2.25	0.51
53:27:1930:G:H2'	53:27:1968:G:C6	2.45	0.51
53:27:2161:C:C5'	53:27:2171:A:H62	2.23	0.51
53:27:2793:C:H2'	53:27:2794:C:C6	2.45	0.51
53:27:394:C:H2'	53:27:395:U:O4'	2.11	0.51
53:27:533:G:H2'	53:27:534:U:O4'	2.10	0.51
53:27:738:G:N2	53:27:759:G:C4	2.79	0.51
53:27:853:C:H2'	53:27:854:C:C6	2.45	0.51
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.51
59:33:600:GLU:N	59:33:654:ASP:O	2.39	0.51
33:7:129:PHE:CG	33:7:130:ARG:N	2.78	0.51
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.40	0.51
1:A:79:ARG:HG3	1:A:81:GLU:OE2	2.11	0.51
4:D:100:GLU:O	4:D:104:THR:HB	2.11	0.51
6:F:93:SER:OG	6:F:123:ARG:HG2	2.10	0.51
6:F:135:HIS:CD2	6:F:136:SER:H	2.29	0.51
12:L:73:ILE:HG12	12:L:93:VAL:HG22	1.93	0.51
16:P:86:SER:O	17:Q:52:PRO:HD3	2.10	0.51
22:V:7:ARG:O	22:V:7:ARG:HG2	2.10	0.51
26:Z:11:GLU:OE2	26:Z:23:LYS:HB3	2.09	0.51
39:13:72:SER:HB3	52:26:1373:G:OP2	2.10	0.51
42:16:65:TYR:CE2	42:16:67:GLY:HA2	2.46	0.51
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.25	0.51
52:26:1064:G:H1'	52:26:1190:G:H21	1.75	0.51
52:26:1250:A:H2'	52:26:1251:A:C8	2.46	0.51
52:26:1456:A:H2'	52:26:1457:G:O4'	2.11	0.51
52:26:478:A:H3'	52:26:479:U:H5''	1.92	0.51
52:26:768:A:H1'	52:26:1512:U:O2'	2.11	0.51
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.51
53:27:1534:U:H2'	53:27:1536:C:O4'	2.11	0.51
53:27:2118:U:H5	53:27:2149:U:H1'	1.73	0.51
53:27:2215:C:H2'	53:27:2216:G:H8	1.76	0.51
53:27:2655:G:H22	53:27:2664:G:H2'	1.75	0.51
53:27:2849:U:H4'	53:27:2868:A:C2	2.46	0.51
53:27:564:C:H2'	53:27:565:C:C6	2.46	0.51
53:27:919:U:O2'	54:28:81:G:H4'	2.09	0.51
30:4:37:THR:HA	30:4:40:LYS:HD3	1.93	0.51
30:4:63:TYR:CD2	53:27:242:G:H5''	2.45	0.51
34:8:157:ALA:O	34:8:160:LEU:HB3	2.10	0.51
35:9:105:ILE:CD1	35:9:123:LEU:HA	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:40:ASP:OD2	35:9:42:ASN:HB2	2.10	0.51
1:A:202:ARG:HH11	1:A:213:ARG:NH2	2.08	0.51
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.91	0.51
3:C:1:MET:O	3:C:13:THR:HA	2.11	0.51
4:D:32:LYS:HD3	4:D:91:ARG:CZ	2.40	0.51
6:F:53:GLU:O	6:F:54:LEU:HB2	2.10	0.51
9:I:43:GLU:N	9:I:43:GLU:OE1	2.31	0.51
10:J:8:LEU:O	10:J:19:VAL:HG22	2.11	0.51
10:J:24:VAL:HG12	10:J:33:ALA:HB2	1.92	0.51
11:K:21:ARG:HE	53:27:811:U:H5	1.56	0.51
11:K:62:PRO:HD3	30:4:26:ALA:CA	2.40	0.51
11:K:76:GLU:HB2	11:K:111:ILE:HD13	1.91	0.51
13:M:28:LEU:HD23	13:M:48:VAL:HG21	1.91	0.51
14:N:33:ARG:O	14:N:34:HIS:CB	2.57	0.51
15:O:28:LYS:HB3	15:O:39:LEU:HD21	1.91	0.51
16:P:36:GLN:HE21	53:27:563:A:H2'	1.76	0.51
41:15:67:GLU:O	41:15:70:ALA:HB3	2.10	0.51
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.26	0.51
46:20:28:ARG:HE	46:20:29:ASN:HD21	1.59	0.51
46:20:8:ARG:NH2	52:26:392:C:OP1	2.44	0.51
48:22:56:ARG:HB3	48:22:60:ARG:HH12	1.75	0.51
51:25:65:ARG:HG3	51:25:66:ARG:N	2.26	0.51
51:25:67:THR:HG23	52:26:1167:A:H62	1.76	0.51
52:26:430:A:C2'	52:26:431:A:H5'	2.40	0.51
52:26:643:C:H2'	52:26:644:U:C6	2.45	0.51
52:26:575:G:HO2'	52:26:821:G:H5'	1.75	0.51
53:27:1219:U:H2'	53:27:1220:G:H8	1.76	0.51
11:K:60:ARG:HH21	53:27:2360:G:H1'	1.76	0.51
53:27:2422:C:H5''	53:27:2422:C:H6	1.76	0.51
53:27:2724:U:H2'	53:27:2725:A:C8	2.45	0.51
53:27:2875:C:O2'	53:27:2876:G:H5'	2.10	0.51
53:27:662:G:H2'	53:27:663:G:H8	1.75	0.51
57:31:31:G:H2'	57:31:32:C:H6	1.76	0.51
59:33:599:VAL:HB	59:33:605:LEU:HD12	1.92	0.51
30:4:35:LYS:HG2	30:4:39:ARG:HH22	1.76	0.51
32:6:205:ALA:O	32:6:208:ALA:HB3	2.11	0.51
35:9:79:THR:OG1	35:9:80:LEU:N	2.42	0.51
2:B:32:ASN:N	2:B:96:ILE:O	2.44	0.51
3:C:71:GLY:HA3	53:27:674:G:H5''	1.91	0.51
8:H:11:GLN:HE21	8:H:53:PRO:HB3	1.75	0.51
9:I:99:ARG:O	9:I:103:ILE:HG13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:79:LEU:HD11	11:K:112:LEU:HA	1.93	0.51
15:O:30:TRP:CE3	15:O:37:LYS:HG2	2.46	0.51
37:11:129:ASN:C	37:11:134:VAL:HG21	2.31	0.51
48:22:44:THR:O	48:22:46:THR:HG22	2.11	0.51
52:26:1051:C:H2'	52:26:1052:U:O4'	2.11	0.51
52:26:1157:A:H4'	52:26:1158:C:O5'	2.11	0.51
52:26:1385:G:O2'	52:26:1386:G:H5'	2.10	0.51
52:26:1448:C:H2'	52:26:1449:C:C6	2.45	0.51
52:26:943:U:H2'	52:26:944:G:H8	1.75	0.51
53:27:167:A:H2'	53:27:168:G:O4'	2.11	0.51
53:27:1730:C:H1'	53:27:1731:G:C6	2.46	0.51
53:27:2717:C:H2'	53:27:2718:G:O4'	2.09	0.51
53:27:2638:G:H1'	53:27:2778:A:H61	1.75	0.51
53:27:2813:A:H2'	53:27:2814:A:C8	2.46	0.51
58:32:59:A:H3'	58:32:60:U:C6	2.45	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
32:6:65:LYS:O	32:6:66:ILE:HD13	2.11	0.51
34:8:165:GLU:OE1	34:8:165:GLU:N	2.40	0.51
2:B:15:PHE:CD2	15:O:78:PRO:HD3	2.46	0.51
3:C:108:ILE:O	3:C:111:GLU:HB3	2.10	0.51
5:E:54:ARG:HD2	5:E:57:TYR:CE2	2.46	0.51
13:M:92:GLY:HA2	13:M:94:TYR:CE2	2.46	0.51
14:N:25:ARG:HH12	54:28:9:G:P	2.33	0.51
20:T:26:ASN:HB3	20:T:34:ILE:HB	1.93	0.51
36:10:43:GLY:HA2	36:10:58:HIS:CE1	2.45	0.51
38:12:9:MET:CB	38:12:26:MET:SD	2.98	0.51
52:26:197:A:N6	52:26:221:C:H4'	2.24	0.51
52:26:476:U:H2'	52:26:477:C:C6	2.46	0.51
52:26:540:G:H2'	52:26:541:G:O4'	2.10	0.51
52:26:779:C:O2'	52:26:780:A:H5'	2.10	0.51
53:27:1443:U:H2'	53:27:1444:G:H8	1.74	0.51
53:27:1503:A:C3'	53:27:1504:A:H5''	2.35	0.51
53:27:2297:A:H2'	53:27:2298:A:H5'	1.93	0.51
53:27:2593:U:H2'	53:27:2594:C:C6	2.46	0.51
53:27:276:U:H2'	53:27:277:G:O4'	2.11	0.51
53:27:2861:U:H2'	53:27:2862:G:C8	2.44	0.51
53:27:984:A:H5''	53:27:985:C:OP2	2.10	0.51
56:30:28:G:O2'	56:30:29:G:H5'	2.11	0.51
58:32:46:A:C2'	58:32:47:U:H5''	2.37	0.51
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.51
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:163:GLN:N	34:8:163:GLN:OE1	2.40	0.51
8:H:20:SER:HB3	8:H:21:PRO:HD3	1.92	0.51
9:I:35:ARG:NE	9:I:140:LEU:HD11	2.26	0.51
11:K:21:ARG:HD3	53:27:811:U:C6	2.46	0.51
43:17:38:ILE:HD11	43:17:51:GLN:CB	2.32	0.51
44:18:39:ASP:HA	44:18:42:ASN:ND2	2.26	0.51
51:25:32:ARG:HG3	51:25:33:ARG:N	2.26	0.51
44:18:99:SER:HG	52:26:1114:C:H1'	1.76	0.51
52:26:1520:C:H2'	52:26:1521:C:H6	1.76	0.51
52:26:155:A:H2'	52:26:156:C:C6	2.46	0.51
40:14:57:VAL:HG23	52:26:972:C:O2'	2.11	0.51
53:27:1084:A:H2	53:27:1106:G:H1'	1.76	0.51
53:27:1077:A:C2	53:27:1088:A:H3'	2.45	0.51
53:27:1804:C:H2'	53:27:1805:A:C8	2.46	0.51
53:27:2007:U:O2'	53:27:2008:C:H5'	2.11	0.51
53:27:2446:G:C2'	53:27:2447:G:H5''	2.41	0.51
16:P:10:ARG:HH12	53:27:28:A:H2	1.57	0.51
53:27:420:C:H2'	53:27:421:C:C6	2.45	0.51
29:3:34:ARG:NH1	53:27:466:A:OP1	2.24	0.51
29:3:4:THR:CG2	53:27:788:A:H1'	2.40	0.51
59:33:732:VAL:HB	59:33:735:VAL:CG2	2.40	0.51
11:K:62:PRO:CD	30:4:26:ALA:HB2	2.38	0.51
33:7:69:THR:C	33:7:105:VAL:HG12	2.31	0.51
3:C:179:SER:O	3:C:183:PHE:HD2	1.94	0.51
4:D:52:ALA:HB2	4:D:149:ARG:HD2	1.93	0.51
12:L:75:GLU:OE1	12:L:90:GLU:HG3	2.11	0.51
13:M:99:LYS:HE2	53:27:2816:G:H5''	1.93	0.51
36:10:71:ILE:HD12	36:10:74:LEU:HD13	1.91	0.51
37:11:62:GLU:OE1	37:11:62:GLU:N	2.42	0.51
38:12:28:SER:OG	38:12:29:SER:N	2.44	0.51
45:19:49:HIS:O	45:19:52:ARG:HB3	2.11	0.51
48:22:33:THR:HG23	48:22:35:SER:N	2.15	0.51
51:25:65:ARG:HG3	51:25:66:ARG:H	1.75	0.51
37:11:2:ARG:HA	52:26:1380:U:C4	2.46	0.51
52:26:257:G:H2'	52:26:258:G:C8	2.46	0.51
53:27:1005:C:H2'	53:27:1006:C:C6	2.42	0.51
53:27:1271:G:C2	53:27:1617:C:H4'	2.46	0.51
53:27:2812:G:H2'	53:27:2813:A:C8	2.45	0.51
53:27:72:U:O2'	53:27:73:A:H5'	2.10	0.51
53:27:751:A:C6	53:27:789:A:N7	2.79	0.51
53:27:821:A:C4'	53:27:822:G:H5''	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:822:G:OP2	53:27:946:C:H5''	2.11	0.51
25:Y:25:GLY:HA2	53:27:929:U:O2	2.11	0.51
37:11:142:ARG:HD3	58:32:41:C:H4'	1.92	0.51
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.51
59:33:556:MET:O	59:33:560:LEU:N	2.43	0.51
33:7:102:ILE:O	33:7:102:ILE:HG13	2.11	0.51
1:A:48:ILE:HG23	1:A:48:ILE:O	2.11	0.51
4:D:104:THR:HG21	26:Z:22:MET:SD	2.51	0.51
7:G:34:THR:HA	7:G:37:LYS:CB	2.40	0.51
7:G:50:VAL:CG2	53:27:1082:U:H5''	2.40	0.51
11:K:79:LEU:HD12	11:K:113:ALA:H	1.76	0.51
15:O:51:ASN:O	53:27:2845:U:H5''	2.11	0.51
18:R:79:GLY:H	18:R:101:SER:HA	1.76	0.51
25:Y:13:ILE:HG22	25:Y:14:GLY:N	2.25	0.51
36:10:88:MET:HG3	36:10:88:MET:O	2.10	0.50
38:12:76:ARG:NH1	38:12:125:ILE:HG23	2.26	0.50
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.93	0.50
41:15:28:ASN:ND2	41:15:56:LYS:HE3	2.25	0.50
49:23:18:VAL:O	49:23:22:VAL:HG23	2.10	0.50
52:26:1251:A:H2'	52:26:1252:A:O4'	2.12	0.50
52:26:1391:U:H2'	52:26:1392:G:C8	2.47	0.50
52:26:1399:C:H4'	52:26:1400:C:H2'	1.93	0.50
52:26:399:G:H2'	52:26:400:C:H6	1.74	0.50
52:26:797:C:H2'	52:26:798:U:C6	2.46	0.50
52:26:950:U:H4'	52:26:971:G:C2	2.46	0.50
52:26:984:C:H6	52:26:984:C:O5'	1.92	0.50
53:27:1437:C:H2'	53:27:1438:U:C6	2.46	0.50
1:A:235:GLU:HG3	53:27:2600:A:N7	2.27	0.50
53:27:2798:U:P	53:27:2798:U:H6	2.33	0.50
53:27:487:C:H2'	53:27:488:G:O4'	2.11	0.50
53:27:622:G:O2'	53:27:623:C:H5'	2.11	0.50
54:28:63:C:H2'	54:28:64:G:H8	1.75	0.50
34:8:13:ARG:NH2	34:8:37:PRO:HB2	2.26	0.50
1:A:129:LEU:HD11	1:A:134:ILE:HG12	1.92	0.50
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.11	0.50
7:G:45:GLY:HA2	7:G:50:VAL:N	2.23	0.50
16:P:92:LYS:O	16:P:95:ALA:HB3	2.12	0.50
18:R:88:ARG:HG3	18:R:94:ASP:OD2	2.11	0.50
52:26:68:G:H22	52:26:101:A:H2	1.59	0.50
52:26:1130:A:H61	52:26:1144:G:C1'	2.13	0.50
44:18:47:LEU:HD21	52:26:1317:C:H4'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:24:U:O2'	52:26:25:C:H5'	2.11	0.50
52:26:502:A:H2'	52:26:503:C:O4'	2.11	0.50
52:26:599:C:H2'	52:26:600:A:C8	2.45	0.50
53:27:1794:A:O2'	53:27:1795:C:H5'	2.11	0.50
53:27:2066:C:H2'	53:27:2067:G:C8	2.46	0.50
53:27:2372:U:H2'	53:27:2373:G:C8	2.46	0.50
53:27:2486:C:H2'	53:27:2487:G:O4'	2.11	0.50
53:27:2779:U:H3'	53:27:2779:U:P	2.52	0.50
53:27:832:U:H2'	53:27:833:A:C8	2.46	0.50
54:28:28:C:H2'	54:28:29:A:O4'	2.11	0.50
54:28:80:U:H2'	54:28:81:G:C8	2.46	0.50
58:32:19:G:C5'	58:32:20:U:C5	2.93	0.50
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.50
59:33:545:ALA:O	59:33:549:GLY:N	2.40	0.50
34:8:53:GLN:HB3	34:8:202:LEU:HD12	1.91	0.50
34:8:31:CYS:O	34:8:32:LYS:HB2	2.11	0.50
35:9:87:VAL:HG22	35:9:88:HIS:N	2.25	0.50
2:B:84:LEU:HD21	2:B:90:PHE:HD2	1.74	0.50
3:C:147:LEU:HB2	3:C:183:PHE:CG	2.46	0.50
8:H:23:VAL:HG13	8:H:24:GLY:N	2.27	0.50
27:1:9:ARG:O	27:1:12:ARG:HB3	2.12	0.50
39:13:79:ARG:HD2	39:13:102:PHE:HE1	1.76	0.50
27:1:39:ARG:C	27:1:41:HIS:H	2.14	0.50
42:16:21:PRO:C	42:16:23:LEU:H	2.07	0.50
42:16:53:ARG:HH11	42:16:63:THR:HB	1.77	0.50
43:17:21:ILE:HB	43:17:24:VAL:CG1	2.41	0.50
52:26:410:G:C6	52:26:429:U:H1'	2.47	0.50
52:26:440:C:H3'	52:26:441:A:H5''	1.92	0.50
36:10:53:LYS:HE3	52:26:710:G:OP1	2.11	0.50
52:26:765:G:C6	52:26:812:G:C4	2.99	0.50
52:26:848:C:H2'	52:26:849:G:C4'	2.42	0.50
53:27:2070:A:H2'	53:27:2071:A:H8	1.76	0.50
53:27:2116:G:H1	53:27:2165:C:H1'	1.77	0.50
53:27:2713:U:H3'	53:27:2714:G:H5''	1.92	0.50
53:27:2853:C:H2'	53:27:2854:G:C8	2.46	0.50
53:27:712:G:H2'	53:27:713:G:H5'	1.94	0.50
53:27:914:G:H5'	53:27:915:C:OP2	2.12	0.50
14:N:3:LYS:NZ	54:28:47:C:OP2	2.44	0.50
58:32:29:G:H2'	58:32:30:G:H8	1.73	0.50
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.50
34:8:61:ARG:HD2	34:8:71:PHE:CD2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:71:ILE:HG21	35:9:144:GLU:HB3	1.92	0.50
8:H:33:ASN:HD22	8:H:64:ARG:HB3	1.76	0.50
23:W:68:ALA:HA	23:W:71:ARG:NH2	2.26	0.50
26:Z:26:SER:OG	26:Z:27:THR:N	2.44	0.50
42:16:20:VAL:C	42:16:22:ALA:H	2.14	0.50
43:17:62:PHE:O	43:17:64:VAL:HG13	2.12	0.50
46:20:67:ILE:HG22	46:20:68:SER:O	2.11	0.50
52:26:1004:A:H3'	52:26:1024:G:N2	2.26	0.50
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.93	0.50
52:26:1175:G:O2'	52:26:1176:A:H5'	2.12	0.50
52:26:1258:G:H2'	52:26:1259:C:H6	1.76	0.50
52:26:1306:A:H2'	52:26:1307:U:O4'	2.11	0.50
52:26:1498:U:H1'	52:26:1499:A:N7	2.26	0.50
52:26:382:A:H2'	52:26:383:A:C8	2.47	0.50
52:26:431:A:H2'	52:26:432:A:C8	2.46	0.50
52:26:57:G:H2'	52:26:58:C:C6	2.46	0.50
52:26:736:C:H2'	52:26:737:C:C6	2.46	0.50
52:26:965:U:H4'	52:26:969:A:C8	2.47	0.50
53:27:149:A:H2'	53:27:150:U:C6	2.46	0.50
53:27:149:A:H2'	53:27:150:U:H6	1.76	0.50
53:27:1682:G:C2	53:27:1757:A:H1'	2.46	0.50
53:27:1914:C:O4'	53:27:1914:C:O2	2.29	0.50
53:27:2028:U:H6	53:27:2028:U:O5'	1.94	0.50
53:27:2167:U:H1'	53:27:2169:A:C8	2.46	0.50
53:27:2196:C:O2'	53:27:2197:U:H5'	2.11	0.50
53:27:2442:C:O2'	53:27:2443:C:H5'	2.12	0.50
9:I:7:LYS:HE3	53:27:538:A:H5"	1.94	0.50
53:27:720:U:H2'	53:27:721:A:C8	2.46	0.50
1:A:216:ARG:NH2	53:27:781:A:OP1	2.45	0.50
53:27:851:C:H2'	53:27:852:U:H6	1.75	0.50
53:27:853:C:H2'	53:27:854:C:H6	1.76	0.50
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.50
59:33:409:PHE:HB2	59:33:460:GLN:HA	1.93	0.50
29:3:34:ARG:NH2	29:3:39:ARG:HD2	2.27	0.50
59:33:55:LEU:C	59:33:55:LEU:HD23	2.32	0.50
59:33:671:VAL:HA	59:33:737:ASP:O	2.11	0.50
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.50
31:5:11:CYS:HB3	31:5:33:HIS:HE1	1.75	0.50
32:6:217:ALA:O	32:6:221:ARG:HB2	2.12	0.50
33:7:122:GLN:OE1	33:7:132:ALA:HB1	2.11	0.50
1:A:75:ALA:HB2	1:A:95:TYR:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:113:VAL:HG12	3:C:118:LEU:HD23	1.92	0.50
3:C:134:LEU:CD2	3:C:161:ALA:HA	2.42	0.50
6:F:41:LYS:O	6:F:45:GLU:HG3	2.11	0.50
7:G:52:MET:CE	7:G:54:VAL:HB	2.41	0.50
9:I:14:ASP:O	9:I:52:ASP:HB3	2.11	0.50
19:S:57:VAL:HG22	19:S:58:VAL:N	2.27	0.50
20:T:32:LYS:HB3	20:T:63:ALA:CB	2.41	0.50
23:W:17:ARG:NH2	53:27:201:C:OP1	2.44	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.44	0.50
40:14:33:GLY:O	40:14:34:ALA:CB	2.58	0.50
43:17:100:ARG:HD3	43:17:103:THR:HB	1.93	0.50
43:17:53:ASP:OD1	43:17:54:THR:N	2.44	0.50
47:21:6:THR:OG1	47:21:59:GLU:HB3	2.12	0.50
52:26:1033:G:H3'	52:26:1034:G:H5'	1.93	0.50
52:26:1169:A:H2'	52:26:1170:A:C8	2.47	0.50
52:26:1511:G:O2'	52:26:1512:U:H5'	2.11	0.50
52:26:545:C:H2'	52:26:546:A:C8	2.46	0.50
52:26:626:G:H2'	52:26:627:G:H8	1.74	0.50
52:26:89:U:H2'	52:26:89:U:O2	2.10	0.50
53:27:1045:C:H4'	53:27:1047:G:C8	2.46	0.50
53:27:1666:G:O2'	53:27:1667:G:H5'	2.12	0.50
53:27:182:A:H2'	53:27:183:C:C6	2.46	0.50
53:27:2345:G:H5'	53:27:2347:C:O4'	2.10	0.50
53:27:235:U:H2'	53:27:236:C:C6	2.46	0.50
53:27:243:U:C2'	53:27:244:A:H5'	2.42	0.50
53:27:1672:A:H4'	53:27:2553:G:H4'	1.93	0.50
53:27:2773:C:H2'	53:27:2774:C:H6	1.77	0.50
53:27:279:A:N6	53:27:361:G:H1'	2.26	0.50
53:27:548:G:H2'	53:27:549:G:O4'	2.12	0.50
53:27:971:G:H4'	53:27:983:A:O2'	2.11	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:305:ASP:OD1	59:33:305:ASP:O	2.29	0.50
2:B:9:VAL:HG12	15:O:4:ILE:HD11	1.93	0.50
4:D:102:LEU:O	4:D:107:VAL:HG23	2.12	0.50
5:E:1:SER:CB	53:27:2749:A:H5''	2.40	0.50
14:N:7:ARG:HD2	14:N:97:PHE:CZ	2.47	0.50
16:P:65:ASN:CB	16:P:75:TYR:HB2	2.41	0.50
36:10:42:TRP:CH2	36:10:100:SER:HA	2.46	0.50
42:16:86:VAL:HG23	42:16:87:LYS:N	2.26	0.50
44:18:61:ASN:ND2	44:18:72:PHE:CE2	2.78	0.50
47:21:4:ILE:CD1	47:21:61:ARG:HD3	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:60:PHE:CE1	59:33:651:ARG:HG2	2.46	0.50
52:26:1242:G:O2'	52:26:1243:C:H5'	2.12	0.50
52:26:1346:A:N3	52:26:1346:A:H2'	2.27	0.50
52:26:259:G:H2'	52:26:260:G:C8	2.46	0.50
52:26:331:G:H8	52:26:331:G:O5'	1.94	0.50
52:26:476:U:H2'	52:26:477:C:H6	1.77	0.50
52:26:865:A:C2	52:26:918:A:H4'	2.47	0.50
53:27:1062:G:H2'	53:27:1063:G:C8	2.47	0.50
53:27:1640:A:O2'	53:27:1641:A:H5'	2.11	0.50
53:27:176:A:C2'	53:27:177:G:H5'	2.42	0.50
53:27:1995:U:H2'	53:27:1996:C:C5	2.46	0.50
53:27:2186:G:O2'	53:27:2187:U:H5'	2.11	0.50
53:27:2533:U:H2'	53:27:2534:A:O4'	2.12	0.50
53:27:2597:G:H2'	53:27:2598:A:C8	2.47	0.50
53:27:268:C:H2'	53:27:269:C:H6	1.77	0.50
16:P:56:PHE:CZ	53:27:536:G:H4'	2.47	0.50
53:27:665:U:H2'	53:27:666:A:H8	1.76	0.50
53:27:871:U:H2'	53:27:872:U:H6	1.73	0.50
57:31:38:A:H2'	57:31:39:C:O4'	2.11	0.50
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.93	0.50
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.34	0.50
32:6:110:ILE:HG22	32:6:114:LYS:HE2	1.92	0.50
32:6:79:VAL:HA	32:6:213:LEU:HD21	1.94	0.50
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.39	0.50
35:9:46:GLY:HA2	35:9:140:ILE:HD11	1.93	0.50
1:A:109:LEU:HG	1:A:110:LYS:N	2.26	0.50
2:B:12:THR:HG21	15:O:8:GLU:HG2	1.93	0.50
2:B:85:ALA:N	2:B:88:GLU:OE2	2.43	0.50
3:C:192:ALA:O	3:C:195:GLN:HB2	2.11	0.50
9:I:136:GLN:HE21	53:27:2899:A:C5'	2.25	0.50
16:P:5:ARG:CD	53:27:1250:G:H5''	2.42	0.50
37:11:69:ARG:HA	37:11:99:ALA:HB2	1.92	0.50
41:15:100:ASN:CB	41:15:106:ILE:HD11	2.40	0.50
27:1:54:ILE:HG23	27:1:56:LYS:N	2.19	0.50
52:26:1144:G:N2	52:26:1146:A:H62	2.01	0.50
52:26:411:A:H4'	52:26:412:A:O5'	2.11	0.50
52:26:413:G:H1'	52:26:428:G:H22	1.77	0.50
42:16:69:GLU:HB3	52:26:521:G:O5'	2.12	0.50
53:27:1310:G:H3'	53:27:1311:G:H8	1.76	0.50
53:27:1432:G:H2'	53:27:1433:A:H8	1.75	0.50
53:27:1682:G:H2'	53:27:1683:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1790:C:H3'	53:27:1828:G:H21	1.77	0.50
53:27:2299:U:H2'	53:27:2300:C:C6	2.47	0.50
53:27:418:C:H2'	53:27:419:U:O4'	2.12	0.50
53:27:554:U:H2'	53:27:555:G:O4'	2.12	0.50
54:28:13:G:H1	54:28:69:G:HO2'	1.59	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
59:33:599:VAL:HA	59:33:655:ALA:CB	2.37	0.50
34:8:70:GLN:HE22	34:8:133:SER:HB2	1.75	0.50
1:A:106:PRO:O	1:A:108:GLY:N	2.44	0.50
3:C:137:LYS:O	3:C:140:ASP:HB2	2.11	0.50
4:D:139:GLU:HA	26:Z:28:VAL:CG1	2.42	0.50
7:G:28:ALA:H	7:G:111:ALA:H	1.59	0.50
19:S:50:LEU:HD13	24:X:26:PHE:CE2	2.47	0.50
40:14:59:LYS:O	40:14:62:ARG:NE	2.44	0.50
49:23:32:THR:C	49:23:33:TRP:HD1	2.14	0.50
52:26:1057:G:H2'	52:26:1058:G:H8	1.76	0.50
52:26:1143:G:H2'	52:26:1144:G:H8	1.75	0.50
52:26:512:U:H2'	52:26:513:C:H6	1.76	0.50
52:26:644:U:H2'	52:26:645:G:H8	1.76	0.50
52:26:773:G:C3'	52:26:774:G:H5''	2.42	0.50
52:26:797:C:H2'	52:26:798:U:H6	1.77	0.50
38:12:8:ASP:OD1	52:26:825:A:H1'	2.10	0.50
44:18:7:ALA:HB1	52:26:995:C:H5'	1.94	0.50
53:27:1992:G:H5'	53:27:1994:C:H41	1.77	0.50
53:27:2093:G:H1'	53:27:2198:A:H2	1.74	0.50
53:27:2372:U:H2'	53:27:2373:G:H8	1.77	0.50
53:27:2592:G:C2'	53:27:2593:U:H5'	2.42	0.50
53:27:780:G:H21	53:27:783:A:H62	1.59	0.50
53:27:804:A:H2'	53:27:806:C:C4	2.47	0.50
53:27:911:A:H8	53:27:911:A:O5'	1.93	0.50
58:32:11:A:C2	58:32:24:U:N3	2.71	0.50
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.50
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.50
59:33:732:VAL:HB	59:33:735:VAL:HB	1.94	0.50
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.50
33:7:185:THR:HG22	33:7:186:SER:N	2.26	0.50
34:8:12:ARG:C	34:8:15:GLY:H	2.15	0.50
34:8:70:GLN:HE22	34:8:133:SER:CB	2.24	0.50
35:9:12:GLU:HG3	35:9:63:MET:CE	2.42	0.50
2:B:145:SER:HB2	53:27:2578:G:N7	2.27	0.50
2:B:48:ILE:HG23	2:B:84:LEU:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:48:THR:CG2	3:C:86:ALA:HB3	2.42	0.50
5:E:72:ASN:O	5:E:76:ILE:HG12	2.12	0.50
9:I:52:ASP:O	9:I:54:ILE:HG13	2.11	0.50
16:P:90:ASP:OD2	17:Q:11:GLN:HB2	2.12	0.50
17:Q:34:GLU:HA	17:Q:59:ILE:O	2.12	0.50
36:10:24:ARG:O	36:10:27:ALA:HB3	2.12	0.50
37:11:147:ASN:C	37:11:149:ALA:H	2.16	0.50
39:13:79:ARG:HD2	39:13:102:PHE:CE1	2.47	0.50
44:18:1:ALA:N	44:18:6:LYS:HE3	2.27	0.50
47:21:11:VAL:HB	47:21:56:ASP:OD1	2.11	0.50
52:26:1388:C:H2'	52:26:1389:C:H6	1.76	0.50
52:26:519:C:N4	52:26:520:A:C6	2.79	0.50
52:26:635:A:H2'	52:26:636:U:C6	2.46	0.50
52:26:842:U:H5''	52:26:846:G:N1	2.27	0.50
52:26:943:U:H2'	52:26:944:G:O4'	2.12	0.50
53:27:1654:A:O2'	53:27:1655:A:H5'	2.12	0.50
53:27:1672:A:C2	53:27:2582:G:H5'	2.47	0.50
53:27:212:G:O2'	53:27:213:A:H5'	2.12	0.50
53:27:2364:C:C2'	53:27:2365:G:H5'	2.42	0.50
53:27:2391:G:H2'	53:27:2424:C:H41	1.77	0.50
53:27:2716:C:H2'	53:27:2717:C:C6	2.47	0.50
53:27:527:C:P	53:27:2779:U:H3	2.35	0.50
53:27:587:C:H5''	53:27:588:U:H5'	1.94	0.50
53:27:83:A:H2'	53:27:84:A:C8	2.47	0.50
53:27:974:G:C6	53:27:1186:G:C5	3.00	0.50
54:28:4:C:C6	54:28:4:C:H5'	2.42	0.50
56:30:54:U:C3'	56:30:55:U:H5''	2.35	0.50
32:6:82:ALA:CB	32:6:213:LEU:HG	2.42	0.50
34:8:103:ARG:HG3	34:8:170:LEU:HD21	1.93	0.50
34:8:116:LEU:HD23	34:8:122:ILE:HD11	1.94	0.50
4:D:131:VAL:CG2	4:D:151:LEU:HG	2.41	0.50
6:F:130:VAL:HB	6:F:142:VAL:O	2.11	0.50
6:F:37:VAL:HG13	6:F:38:PRO:HD2	1.94	0.50
16:P:17:LEU:HA	16:P:20:ALA:HB3	1.94	0.50
16:P:90:ASP:O	16:P:94:LEU:HG	2.11	0.50
36:10:74:LEU:HG	36:10:78:PHE:HE2	1.76	0.49
37:11:46:LEU:HB3	37:11:57:GLU:OE1	2.12	0.49
40:14:8:ILE:HB	40:14:74:VAL:CB	2.37	0.49
44:18:7:ALA:O	44:18:10:VAL:HG12	2.12	0.49
44:18:21:ALA:HA	52:26:1257:A:N1	2.27	0.49
52:26:925:G:C2	52:26:927:G:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2201:G:H2'	53:27:2202:U:O4'	2.12	0.49
53:27:2290:G:H2'	53:27:2291:U:O4'	2.11	0.49
53:27:350:G:H2'	53:27:351:C:O4'	2.12	0.49
53:27:498:G:O2'	53:27:499:U:H5'	2.11	0.49
59:33:435:VAL:HA	59:33:438:ARG:HD3	1.93	0.49
32:6:116:LEU:HA	32:6:119:GLN:HG2	1.94	0.49
35:9:104:ILE:HD13	35:9:119:VAL:HG23	1.94	0.49
1:A:171:VAL:HG13	1:A:185:ALA:CB	2.41	0.49
5:E:8:VAL:CG2	5:E:68:ARG:HG3	2.41	0.49
8:H:17:ALA:HB1	8:H:38:CYS:HA	1.93	0.49
17:Q:37:GLU:HB2	17:Q:53:PHE:CE1	2.47	0.49
18:R:83:LYS:NZ	53:27:1260:A:OP1	2.45	0.49
23:W:3:VAL:HG22	23:W:10:ARG:HB3	1.93	0.49
36:10:52:ASN:O	36:10:53:LYS:HB2	2.11	0.49
39:13:87:MET:HA	39:13:90:ASP:HA	1.93	0.49
40:14:72:ARG:HH22	52:26:1152:A:P	2.34	0.49
52:26:1326:U:O2'	52:26:1327:C:H5'	2.13	0.49
52:26:434:U:H2'	52:26:435:A:C8	2.47	0.49
53:27:1280:G:O2'	53:27:1281:G:H5'	2.12	0.49
53:27:1669:A:C2'	53:27:1670:C:H5'	2.42	0.49
53:27:1772:A:H2'	53:27:1773:A:H4'	1.94	0.49
53:27:1985:C:O2'	53:27:1986:C:H5'	2.12	0.49
53:27:2081:U:H2'	53:27:2082:A:C8	2.48	0.49
53:27:2144:G:H4'	53:27:2145:C:C4	2.47	0.49
53:27:2316:G:H2'	53:27:2317:A:H8	1.76	0.49
53:27:2351:G:H2'	53:27:2365:G:H22	1.77	0.49
53:27:419:U:H2'	53:27:420:C:C6	2.47	0.49
53:27:635:C:H2'	53:27:636:G:O4'	2.11	0.49
53:27:729:G:H4'	53:27:763:G:H5'	1.94	0.49
53:27:863:A:H2'	53:27:864:G:H8	1.76	0.49
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.49
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.49
59:33:741:LEU:HD23	59:33:742:HIS:N	2.27	0.49
29:3:34:ARG:HH21	29:3:39:ARG:HD2	1.77	0.49
1:A:206:LYS:HB2	53:27:729:G:C5	2.47	0.49
2:B:186:LEU:HD21	15:O:3:ILE:HG21	1.94	0.49
5:E:71:LEU:O	5:E:75:VAL:HG23	2.12	0.49
6:F:14:SER:O	6:F:15:LEU:HB3	2.12	0.49
13:M:77:ALA:O	13:M:81:ASN:HB2	2.12	0.49
14:N:34:HIS:HA	14:N:53:THR:OG1	2.12	0.49
19:S:61:LEU:HB3	53:27:1341:G:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:14:ALA:HA	26:Z:31:ASP:OD1	2.12	0.49
36:10:2:ARG:HD2	36:10:68:GLN:HE21	1.77	0.49
45:19:45:HIS:O	45:19:47:LYS:N	2.39	0.49
44:18:66:THR:HG22	52:26:1203:C:H4'	1.93	0.49
52:26:1288:A:H2'	52:26:1289:A:O4'	2.12	0.49
37:11:113:LYS:HZ3	52:26:1297:G:H1'	1.75	0.49
52:26:237:G:H2'	52:26:238:A:C8	2.47	0.49
52:26:300:A:H2'	52:26:301:G:O4'	2.13	0.49
42:16:99:GLY:O	52:26:35:G:H5''	2.13	0.49
52:26:363:A:H2'	52:26:364:A:O4'	2.13	0.49
52:26:524:G:H2'	52:26:525:C:H6	1.74	0.49
52:26:54:C:C2	52:26:352:C:H5	2.30	0.49
52:26:737:C:H2'	52:26:738:C:C6	2.47	0.49
52:26:848:C:H2'	52:26:849:G:H5''	1.93	0.49
52:26:827:U:H2'	52:26:870:U:O4	2.12	0.49
52:26:920:U:H2'	52:26:921:U:C6	2.48	0.49
52:26:948:C:O2'	52:26:949:A:H5'	2.12	0.49
52:26:953:G:H2'	52:26:954:G:O4'	2.13	0.49
53:27:1114:C:H2'	53:27:1115:G:C8	2.47	0.49
53:27:818:G:H1	53:27:1187:G:H2'	1.77	0.49
53:27:1222:U:H2'	53:27:1223:G:C8	2.47	0.49
53:27:1273:U:H4'	53:27:1275:A:OP1	2.11	0.49
53:27:1548:A:H2'	53:27:1549:A:C8	2.47	0.49
53:27:1585:C:H2'	53:27:1586:A:H5'	1.94	0.49
2:B:135:GLY:HA2	53:27:743:A:OP1	2.12	0.49
56:30:55:U:H6	56:30:58:A:H2'	1.77	0.49
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.49
32:6:132:GLU:O	32:6:136:ARG:HG2	2.12	0.49
32:6:46:VAL:HB	32:6:47:PRO:HD3	1.94	0.49
2:B:85:ALA:O	2:B:87:GLY:N	2.43	0.49
3:C:60:TRP:CH2	3:C:67:ARG:HB3	2.47	0.49
13:M:115:LEU:HD12	13:M:115:LEU:O	2.12	0.49
16:P:51:GLN:HA	16:P:54:ARG:NH1	2.27	0.49
23:W:4:CYS:HB2	23:W:51:SER:HB3	1.94	0.49
40:14:19:ASP:O	40:14:22:THR:HB	2.13	0.49
44:18:6:LYS:HE2	44:18:67:GLY:HA3	1.95	0.49
47:21:28:VAL:HG22	47:21:29:LYS:N	2.28	0.49
52:26:1474:U:H2'	52:26:1475:G:O4'	2.12	0.49
52:26:65:A:H5'	52:26:200:G:H5''	1.95	0.49
52:26:746:A:H2'	52:26:747:A:C8	2.47	0.49
52:26:848:C:C3'	52:26:849:G:H5''	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:76:ALA:HB1	53:27:1063:G:H5'	1.95	0.49
53:27:1528:A:C2'	53:27:1529:G:H5'	2.42	0.49
53:27:171:U:H2'	53:27:172:A:H8	1.77	0.49
1:A:257:ARG:HD2	53:27:1799:G:OP1	2.13	0.49
53:27:2452:C:C2	53:27:2504:U:O4	2.65	0.49
53:27:250:G:C6	53:27:251:A:C6	3.00	0.49
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.49
53:27:566:U:O2'	53:27:567:U:H5'	2.11	0.49
53:27:594:U:H2'	53:27:595:C:H6	1.75	0.49
53:27:974:G:H1'	53:27:975:A:C8	2.47	0.49
59:33:188:ARG:NH1	59:33:377:LEU:CB	2.70	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49
59:33:696:GLY:CA	59:33:713:THR:H	2.13	0.49
33:7:155:ARG:HG3	33:7:192:TYR:HB3	1.94	0.49
34:8:190:LEU:HD12	34:8:192:ALA:N	2.08	0.49
1:A:94:LEU:HD13	1:A:100:ARG:HG2	1.93	0.49
4:D:101:ARG:HG3	4:D:105:ILE:HD11	1.95	0.49
4:D:40:GLY:HA2	4:D:84:ILE:CD1	2.42	0.49
15:O:30:TRP:CE2	15:O:37:LYS:HE3	2.47	0.49
20:T:56:GLY:O	20:T:58:VAL:N	2.46	0.49
22:V:34:VAL:HG12	22:V:36:GLN:N	2.26	0.49
43:17:3:ILE:HG12	43:17:7:ASN:HD22	1.77	0.49
52:26:1237:C:H4'	52:26:1300:G:N2	2.28	0.49
52:26:197:A:C6	52:26:221:C:H4'	2.46	0.49
52:26:376:G:H2'	52:26:377:G:C8	2.48	0.49
52:26:591:U:H2'	52:26:592:G:H8	1.77	0.49
52:26:721:G:H4'	52:26:722:G:O4'	2.13	0.49
53:27:1485:U:H2'	53:27:1486:U:H6	1.77	0.49
53:27:1660:G:H2'	53:27:1661:G:H8	1.77	0.49
53:27:1708:C:H2'	53:27:1709:U:H6	1.74	0.49
29:3:5:PHE:HD1	53:27:464:U:H5'	1.78	0.49
54:28:35:C:H2'	54:28:36:C:H5'	1.93	0.49
57:31:24:U:H2'	57:31:25:C:C6	2.48	0.49
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.49
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.49
29:3:21:ARG:HG2	29:3:31:LEU:HD11	1.94	0.49
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.49
31:5:24:ARG:HG2	31:5:24:ARG:HH21	1.76	0.49
1:A:74:PRO:O	1:A:96:LYS:HG2	2.13	0.49
2:B:106:LYS:HE2	2:B:176:ASP:OD1	2.12	0.49
3:C:29:HIS:O	3:C:33:VAL:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:54:LEU:H	6:F:57:LYS:HD3	1.77	0.49
8:H:100:ILE:HA	8:H:104:GLN:NE2	2.28	0.49
12:L:26:VAL:HG11	12:L:32:GLY:HA3	1.94	0.49
14:N:106:LEU:C	14:N:106:LEU:HD23	2.32	0.49
14:N:40:ILE:CD1	54:28:8:C:H4'	2.42	0.49
20:T:6:ARG:HB2	53:27:85:G:OP2	2.11	0.49
37:11:102:TRP:HH2	37:11:140:VAL:HG21	1.78	0.49
27:1:25:THR:OG1	27:1:26:SER:N	2.46	0.49
40:14:14:ASP:O	40:14:18:ILE:HG22	2.12	0.49
49:23:54:ARG:HB3	52:26:958:A:C2	2.47	0.49
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	0.49
53:27:171:U:H2'	53:27:172:A:C8	2.48	0.49
53:27:1836:C:O2'	53:27:1837:C:H5'	2.13	0.49
53:27:2064:C:H2'	53:27:2065:C:C6	2.47	0.49
53:27:2128:G:H1	53:27:2161:C:H4'	1.77	0.49
53:27:2267:A:N3	53:27:2267:A:H3'	2.28	0.49
53:27:2471:A:H2'	53:27:2472:G:H5'	1.95	0.49
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.13	0.49
53:27:2650:U:H2'	53:27:2651:C:H6	1.78	0.49
53:27:26:G:O2'	53:27:27:G:H5'	2.12	0.49
53:27:389:G:O2'	53:27:412:A:H1'	2.13	0.49
53:27:462:C:H2'	53:27:463:G:O4'	2.13	0.49
53:27:499:U:H2'	53:27:500:G:O4'	2.13	0.49
53:27:783:A:C2'	53:27:784:G:H5'	2.43	0.49
33:7:178:ARG:O	33:7:205:GLU:HA	2.13	0.49
33:7:46:LEU:HD11	33:7:75:VAL:HG22	1.94	0.49
34:8:103:ARG:NH2	34:8:110:ARG:HH21	2.10	0.49
3:C:35:TYR:CE1	53:27:615:U:H2'	2.47	0.49
7:G:34:THR:CB	53:27:1085:A:H61	2.25	0.49
7:G:87:GLU:HG2	7:G:92:ALA:N	2.28	0.49
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.24	0.49
21:U:39:ALA:O	21:U:40:ILE:HD13	2.12	0.49
39:13:100:ALA:HB1	39:13:102:PHE:HE2	1.76	0.49
40:14:89:ARG:NH1	40:14:90:LEU:HB2	2.28	0.49
51:25:38:GLU:OE1	52:26:1526:G:H3'	2.13	0.49
52:26:1147:C:H2'	52:26:1148:U:H6	1.77	0.49
52:26:291:U:O2'	52:26:292:G:H5'	2.12	0.49
52:26:955:U:H1'	52:26:1227:A:H61	1.77	0.49
53:27:100:U:H4'	53:27:101:A:O4'	2.13	0.49
53:27:1023:U:O2'	53:27:1122:G:H5'	2.13	0.49
53:27:105:C:H2'	53:27:106:C:C6	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1300:G:H4'	53:27:1301:A:C5'	2.38	0.49
53:27:1957:C:H2'	53:27:1958:C:H6	1.75	0.49
53:27:1930:G:H2'	53:27:1968:G:O6	2.13	0.49
53:27:2221:G:O2'	53:27:2222:C:H5'	2.13	0.49
53:27:452:G:N2	53:27:458:G:C4	2.81	0.49
53:27:649:G:H2'	53:27:650:C:O4'	2.12	0.49
53:27:677:A:H2'	53:27:678:C:H6	1.78	0.49
53:27:797:G:H2'	53:27:798:G:H8	1.77	0.49
58:32:51:C:H2'	58:32:52:G:H8	1.78	0.49
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.49
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.49
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.49
59:33:425:LEU:N	59:33:425:LEU:HD12	2.28	0.49
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.49
59:33:721:VAL:O	59:33:725:VAL:HG23	2.12	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.49
32:6:115:ASP:O	32:6:119:GLN:HG2	2.13	0.49
32:6:70:GLY:HA2	32:6:163:ILE:HG22	1.94	0.49
2:B:13:ARG:HA	2:B:23:PRO:HA	1.94	0.49
6:F:3:VAL:HG13	6:F:37:VAL:O	2.13	0.49
7:G:23:LEU:HD12	7:G:118:ILE:CG1	2.43	0.49
12:L:97:GLN:OE1	12:L:97:GLN:N	2.46	0.49
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.95	0.49
19:S:56:GLU:HB3	19:S:86:THR:O	2.13	0.49
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.43	0.49
41:15:108:ASN:HD22	51:25:4:LYS:HE3	1.78	0.49
41:15:126:ARG:HD3	41:15:126:ARG:HA	1.59	0.49
42:16:56:LEU:HD12	42:16:60:PHE:HB2	1.93	0.49
46:20:7:ALA:O	46:20:29:ASN:ND2	2.45	0.49
46:20:67:ILE:H	46:20:67:ILE:CD1	2.20	0.49
51:25:19:LYS:C	51:25:22:CYS:H	2.15	0.49
52:26:1032:G:H2'	52:26:1032:G:N3	2.27	0.49
52:26:1225:A:N3	52:26:1225:A:H2'	2.27	0.49
52:26:203:G:H1'	52:26:466:A:C2	2.41	0.49
52:26:825:A:H2'	52:26:826:C:C6	2.48	0.49
52:26:831:A:H2'	52:26:832:G:O4'	2.12	0.49
53:27:1183:U:H2'	53:27:1184:U:C6	2.47	0.49
53:27:1484:U:H2'	53:27:1485:U:C6	2.48	0.49
53:27:1826:G:C6	53:27:1827:U:C4	3.01	0.49
53:27:1908:C:H6	53:27:1908:C:O5'	1.96	0.49
53:27:2415:G:C5	53:27:2416:C:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2702:G:N3	53:27:2702:G:H2'	2.27	0.49
59:33:728:LYS:C	59:33:729:LEU:HD12	2.33	0.49
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
31:5:13:ASN:O	31:5:15:LYS:HG2	2.13	0.49
32:6:8:MET:O	32:6:10:LYS:HG3	2.12	0.49
32:6:108:GLN:NE2	32:6:111:LYS:HD3	2.28	0.49
32:6:93:HIS:ND1	32:6:145:ASN:O	2.45	0.49
32:6:57:ASN:HA	32:6:60:ALA:HB3	1.95	0.49
35:9:156:ARG:HD2	38:12:44:PHE:CZ	2.48	0.49
1:A:245:THR:CG2	1:A:249:VAL:HB	2.43	0.49
4:D:121:PHE:CE1	4:D:127:TYR:HB2	2.47	0.49
6:F:79:THR:HG23	6:F:145:ASN:O	2.13	0.49
8:H:67:THR:HG23	8:H:69:VAL:HG23	1.95	0.49
12:L:26:VAL:HG23	12:L:133:LYS:HB2	1.95	0.49
14:N:49:VAL:HG13	14:N:81:ARG:HB2	1.95	0.49
26:Z:31:ASP:OD1	26:Z:32:LEU:N	2.45	0.49
42:16:29:LYS:HE2	42:16:58:ASN:HD22	1.77	0.49
28:2:20:TYR:HE2	28:2:37:LYS:HB3	1.77	0.49
52:26:1457:G:O2'	52:26:1458:G:H5'	2.13	0.49
52:26:299:G:C6	52:26:300:A:C6	3.01	0.49
52:26:484:G:H4'	52:26:485:U:H5'	1.92	0.49
52:26:963:G:C4	52:26:964:A:C8	3.01	0.49
53:27:1094:U:H2'	53:27:1096:A:OP2	2.13	0.49
53:27:1117:C:H2'	53:27:1118:C:C6	2.47	0.49
53:27:141:G:OP1	53:27:142:A:C6	2.66	0.49
53:27:155:A:H2'	53:27:156:A:C8	2.48	0.49
53:27:155:A:H2'	53:27:156:A:H8	1.78	0.49
1:A:270:ARG:NH2	53:27:1798:U:OP2	2.45	0.49
53:27:1998:A:H2'	53:27:1999:C:C6	2.47	0.49
22:V:73:ARG:NH2	53:27:2333:A:OP2	2.44	0.49
53:27:2487:G:H2'	53:27:2488:G:C8	2.47	0.49
53:27:2655:G:N2	53:27:2664:G:H2'	2.28	0.49
53:27:760:G:H2'	53:27:761:A:O4'	2.12	0.49
53:27:813:U:H2'	53:27:814:C:C6	2.47	0.49
54:28:35:C:C2'	54:28:36:C:H5'	2.42	0.49
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.49
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.49
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.49
59:33:681:ARG:O	59:33:685:THR:N	2.27	0.49
30:4:23:HIS:ND1	30:4:24:LYS:O	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:5:1:MET:HE2	31:5:36:ARG:HB2	1.95	0.49
32:6:15:PHE:O	32:6:40:ILE:N	2.45	0.49
1:A:104:LEU:O	1:A:106:PRO:HD3	2.13	0.49
3:C:75:SER:O	3:C:78:TRP:HB2	2.12	0.49
6:F:4:ILE:N	6:F:37:VAL:O	2.46	0.49
7:G:114:GLU:CG	7:G:115:GLY:H	2.22	0.49
8:H:89:SER:HB2	8:H:97:VAL:HG22	1.94	0.49
17:Q:31:GLU:O	17:Q:62:GLU:HG3	2.12	0.49
17:Q:39:LEU:HD12	17:Q:49:ILE:HG21	1.95	0.49
17:Q:39:LEU:CD1	17:Q:53:PHE:H	2.26	0.49
25:Y:50:VAL:O	25:Y:52:PHE:N	2.46	0.49
52:26:1296:C:H4'	52:26:1302:C:N4	2.28	0.49
52:26:600:A:O2'	52:26:601:G:H5'	2.13	0.49
52:26:915:A:H2'	52:26:916:U:O4'	2.13	0.49
52:26:950:U:H4'	52:26:971:G:N2	2.28	0.49
53:27:1934:C:O2'	53:27:1935:G:H5'	2.13	0.49
11:K:47:ARG:NH2	53:27:195:A:H4'	2.28	0.49
53:27:2124:G:O6	53:27:2175:C:H1'	2.13	0.49
53:27:2251:G:C2	53:27:2252:G:C4	3.01	0.49
53:27:2358:A:H2'	53:27:2359:C:O4'	2.13	0.49
53:27:250:G:C5	53:27:251:A:C5	3.01	0.49
53:27:255:A:H2'	53:27:256:A:O4'	2.13	0.49
53:27:514:A:H2'	53:27:515:A:O4'	2.12	0.49
53:27:754:U:H2'	53:27:755:U:H6	1.76	0.49
53:27:883:G:H2'	53:27:884:U:C6	2.47	0.49
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.49
29:3:4:THR:HG23	53:27:788:A:H1'	1.95	0.49
34:8:88:ASN:O	34:8:92:LEU:HG	2.12	0.49
1:A:139:THR:HG21	1:A:193:GLU:OE2	2.13	0.49
7:G:23:LEU:HB3	7:G:87:GLU:OE1	2.13	0.49
13:M:103:ARG:HB3	13:M:108:ALA:HB3	1.95	0.49
24:X:23:ARG:HA	24:X:27:ASN:OD1	2.13	0.49
37:11:91:ARG:HG3	37:11:92:PRO:HD2	1.95	0.48
41:15:52:ARG:H	41:15:55:ARG:HB2	1.78	0.48
42:16:88:ASP:HB2	52:26:523:A:N1	2.27	0.48
44:18:2:LYS:HA	52:26:1048:G:OP1	2.13	0.48
44:18:48:GLN:NE2	49:23:9:PHE:HE1	2.10	0.48
52:26:1222:G:O2'	52:26:1223:C:H5'	2.12	0.48
52:26:192:A:H2'	52:26:193:C:C6	2.48	0.48
52:26:452:A:H2'	52:26:453:G:O4'	2.13	0.48
53:27:1030:C:H2'	53:27:1031:G:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1259:G:H2'	53:27:1260:A:C8	2.47	0.48
53:27:1479:G:O2'	53:27:1480:C:H5'	2.13	0.48
53:27:1504:A:H2'	53:27:1505:A:O4'	2.13	0.48
53:27:1632:A:H2'	53:27:1633:G:O4'	2.12	0.48
53:27:1770:G:C6	53:27:1983:G:C5	3.01	0.48
53:27:1844:C:H2'	53:27:1845:G:C8	2.42	0.48
53:27:2623:G:H5'	53:27:2826:A:O2'	2.13	0.48
58:32:34:C:H3'	58:32:35:A:C5'	2.42	0.48
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.48
29:3:39:ARG:NH2	53:27:468:G:N7	2.61	0.48
34:8:171:GLU:CG	34:8:182:LYS:HD2	2.41	0.48
35:9:88:HIS:CE1	35:9:137:ARG:HG2	2.48	0.48
35:9:160:VAL:O	35:9:163:ILE:HG13	2.13	0.48
35:9:51:LYS:NZ	52:26:1081:A:OP2	2.45	0.48
6:F:44:ILE:O	6:F:48:GLU:N	2.46	0.48
7:G:88:HIS:HB2	7:G:89:PRO:HD3	1.95	0.48
8:H:75:ALA:HB3	53:27:1060:U:H5	1.78	0.48
11:K:75:ALA:HB2	11:K:105:ILE:HD12	1.95	0.48
18:R:62:ASP:N	18:R:62:ASP:OD1	2.45	0.48
19:S:79:ASP:N	19:S:79:ASP:OD1	2.44	0.48
26:Z:41:HIS:CE1	26:Z:43:PHE:HB3	2.48	0.48
41:15:78:ILE:HG22	41:15:79:LYS:O	2.13	0.48
44:18:2:LYS:HE3	44:18:5:MET:HG2	1.95	0.48
44:18:48:GLN:N	44:18:48:GLN:OE1	2.37	0.48
44:18:92:ILE:N	44:18:92:ILE:HD12	2.24	0.48
52:26:320:A:H2'	52:26:321:A:H8	1.75	0.48
52:26:37:U:H2'	52:26:38:G:C8	2.48	0.48
52:26:41:G:H2'	52:26:42:G:C8	2.48	0.48
34:8:68:GLU:HB3	52:26:546:A:P	2.53	0.48
52:26:676:A:H2'	52:26:677:U:H6	1.75	0.48
52:26:78:A:H2'	52:26:79:G:N7	2.28	0.48
52:26:810:C:H2'	52:26:811:C:O4'	2.13	0.48
52:26:945:G:C2	52:26:946:A:C8	3.02	0.48
7:G:34:THR:HG21	53:27:1085:A:H61	1.78	0.48
53:27:1533:C:C2'	53:27:1534:U:H5''	2.41	0.48
53:27:1732:C:O2'	53:27:1733:G:H5'	2.13	0.48
53:27:1793:C:H2'	53:27:1794:A:H8	1.78	0.48
53:27:2262:U:H2'	53:27:2263:C:C6	2.49	0.48
53:27:2537:U:H2'	53:27:2538:C:H6	1.73	0.48
53:27:528:A:N1	53:27:2042:A:H2'	2.28	0.48
53:27:583:G:H2'	53:27:584:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:801:G:H4'	53:27:802:A:OP2	2.12	0.48
58:32:48:C:O2	58:32:59:A:H1'	2.13	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:443:LYS:HB2	59:33:462:GLU:HB2	1.95	0.48
59:33:49:HIS:CB	59:33:50:PRO:HD2	2.33	0.48
33:7:94:ALA:O	33:7:96:VAL:HG22	2.13	0.48
5:E:41:GLU:HG3	5:E:54:ARG:HA	1.96	0.48
7:G:34:THR:O	7:G:38:MET:HG3	2.13	0.48
7:G:40:GLU:O	7:G:43:LYS:HB3	2.13	0.48
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.94	0.48
14:N:49:VAL:HG21	14:N:82:ALA:CA	2.34	0.48
22:V:16:ARG:HG3	53:27:2356:U:H4'	1.95	0.48
37:11:48:THR:O	37:11:51:GLN:HB3	2.14	0.48
39:13:70:GLY:O	39:13:74:GLN:HG3	2.13	0.48
40:14:18:ILE:HG23	40:14:19:ASP:N	2.27	0.48
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.95	0.48
46:20:7:ALA:HB1	46:20:9:HIS:CE1	2.47	0.48
49:23:14:LEU:HD12	49:23:32:THR:OG1	2.12	0.48
52:26:1282:C:H2'	52:26:1283:U:C6	2.47	0.48
52:26:1370:G:C2	52:26:1371:G:C8	3.01	0.48
53:27:1390:U:O2'	53:27:1391:U:H5'	2.13	0.48
10:J:66:LYS:HD3	53:27:1666:G:P	2.54	0.48
53:27:1900:A:C2	53:27:1970:A:C5	3.01	0.48
53:27:2247:A:H2'	53:27:2248:C:C6	2.48	0.48
53:27:2369:A:H2'	53:27:2370:G:H8	1.77	0.48
53:27:2603:G:C2'	53:27:2604:U:H5'	2.44	0.48
53:27:870:U:C2'	53:27:871:U:H5'	2.43	0.48
53:27:926:G:H2'	53:27:927:A:H8	1.77	0.48
56:30:14:A:H2'	56:30:15:G:H4'	1.95	0.48
56:30:61:C:O2'	56:30:62:C:H5'	2.13	0.48
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.48
33:7:39:ARG:NH2	33:7:56:ILE:HG12	2.28	0.48
33:7:95:GLY:O	33:7:96:VAL:HG13	2.13	0.48
1:A:165:ALA:HB3	1:A:172:THR:HB	1.95	0.48
3:C:98:LYS:O	3:C:102:ARG:HG2	2.13	0.48
4:D:54:ALA:O	4:D:57:ALA:HB3	2.13	0.48
6:F:69:ALA:O	6:F:72:ILE:HB	2.14	0.48
8:H:11:GLN:NE2	8:H:74:PRO:HG2	2.28	0.48
8:H:60:VAL:HG12	8:H:61:TYR:N	2.29	0.48
12:L:34:LYS:HD3	21:U:81:PRO:O	2.14	0.48
13:M:37:THR:HG22	13:M:110:MET:HE1	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:96:ARG:HD3	53:27:2882:A:OP1	2.14	0.48
18:R:23:LEU:HD11	27:1:23:ALA:N	2.28	0.48
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.28	0.48
39:13:51:LEU:HD11	39:13:62:LEU:CD1	2.38	0.48
42:16:106:VAL:HB	42:16:109:ARG:HG3	1.95	0.48
51:25:7:GLU:OE2	51:25:14:ALA:HA	2.13	0.48
52:26:1248:A:H2'	52:26:1249:C:C6	2.49	0.48
52:26:1332:A:H2'	52:26:1333:A:C8	2.48	0.48
52:26:1476:A:H2'	52:26:1477:U:O4'	2.14	0.48
38:12:106:SER:HA	52:26:642:A:C8	2.48	0.48
52:26:738:C:H2'	52:26:739:C:C6	2.48	0.48
52:26:834:U:H2'	52:26:835:U:C6	2.48	0.48
52:26:917:G:H2'	52:26:918:A:C8	2.48	0.48
53:27:1270:C:H5''	53:27:1271:G:O5'	2.14	0.48
53:27:1468:U:H2'	53:27:1522:A:N6	2.28	0.48
53:27:2026:U:H2'	53:27:2027:G:O4'	2.13	0.48
53:27:2419:U:H2'	53:27:2420:C:C6	2.49	0.48
2:B:145:SER:O	53:27:2512:C:H1'	2.14	0.48
53:27:524:G:H2'	53:27:525:U:C6	2.48	0.48
16:P:27:ARG:HH11	53:27:532:A:H2'	1.79	0.48
53:27:61:C:H2'	53:27:62:U:H5'	1.95	0.48
53:27:690:G:O2'	53:27:691:C:H5'	2.13	0.48
55:29:6:G:H2'	55:29:7:G:O4'	2.13	0.48
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.13	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.48
29:3:5:PHE:CD1	53:27:464:U:H5'	2.49	0.48
32:6:112:ARG:O	32:6:116:LEU:HB2	2.14	0.48
2:B:112:THR:HG22	2:B:113:SER:O	2.14	0.48
4:D:55:ASP:O	4:D:58:ALA:HB3	2.13	0.48
5:E:173:ALA:O	5:E:175:LYS:N	2.46	0.48
18:R:31:GLN:O	18:R:35:ILE:HG13	2.12	0.48
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.95	0.48
38:12:88:LYS:O	38:12:91:LEU:HG	2.13	0.48
27:1:48:TYR:CE2	27:1:49:ARG:HG3	2.49	0.48
43:17:78:ARG:O	43:17:82:LEU:HB2	2.14	0.48
52:26:1070:U:H2'	52:26:1071:C:C6	2.48	0.48
52:26:137:U:H2'	52:26:138:G:H8	1.78	0.48
52:26:1406:U:C2'	52:26:1407:C:H5'	2.44	0.48
34:8:43:ARG:HH21	52:26:512:U:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:608:A:H2'	52:26:609:A:C8	2.48	0.48
53:27:1054:A:H2'	53:27:1055:G:H8	1.79	0.48
53:27:1076:C:O2'	53:27:1077:A:H5'	2.14	0.48
53:27:1683:U:H2'	53:27:1684:G:H8	1.79	0.48
53:27:1783:A:N1	53:27:2587:A:H2'	2.28	0.48
53:27:1914:C:H2'	53:27:1915:U:O4'	2.13	0.48
53:27:2073:C:H2'	53:27:2074:U:C6	2.40	0.48
53:27:2586:U:H2'	53:27:2587:A:C8	2.48	0.48
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.48
59:33:333:THR:O	59:33:333:THR:CG2	2.62	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.48
59:33:671:VAL:HG13	59:33:710:ILE:HB	1.96	0.48
33:7:56:ILE:CD1	33:7:65:VAL:HG13	2.44	0.48
34:8:61:ARG:HH21	34:8:68:GLU:H	1.62	0.48
3:C:163:ASN:HB2	53:27:322:A:P	2.53	0.48
7:G:59:LEU:HD23	7:G:61:ARG:H	1.79	0.48
9:I:32:LEU:CD2	9:I:54:ILE:HG21	2.44	0.48
13:M:55:ALA:HA	13:M:80:PHE:CD1	2.49	0.48
17:Q:22:LEU:HD13	17:Q:96:VAL:HG22	1.96	0.48
16:P:107:ALA:HB3	17:Q:46:GLU:HG3	1.94	0.48
20:T:27:VAL:HG11	53:27:85:G:C5'	2.43	0.48
21:U:45:ASP:O	21:U:48:MET:HB3	2.14	0.48
22:V:21:ARG:HA	22:V:25:GLU:OE1	2.14	0.48
44:18:92:ILE:CD1	44:18:92:ILE:H	2.23	0.48
46:20:21:VAL:HG21	46:20:60:TRP:CD1	2.49	0.48
52:26:1004:A:H3'	52:26:1024:G:H22	1.78	0.48
53:27:1529:G:H2'	53:27:1530:G:C1'	2.43	0.48
53:27:1542:U:H2'	53:27:1543:G:O4'	2.14	0.48
53:27:1549:A:H2'	53:27:1550:C:H6	1.78	0.48
53:27:1575:C:H2'	53:27:1576:U:C6	2.49	0.48
53:27:1770:G:C5	53:27:1983:G:C6	3.02	0.48
4:D:84:ILE:HG21	53:27:2312:U:H5'	1.95	0.48
53:27:2626:C:H2'	53:27:2627:G:C8	2.49	0.48
53:27:310:A:O2'	53:27:311:A:H5''	2.13	0.48
53:27:47:C:H2'	53:27:48:G:H8	1.79	0.48
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.48
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.78	0.48
30:4:54:LEU:O	30:4:58:ILE:HG13	2.14	0.48
32:6:107:ARG:HG3	32:6:108:GLN:H	1.79	0.48
35:9:77:ASN:OD1	35:9:78:GLY:N	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:251:THR:OG1	1:A:252:LYS:N	2.45	0.48
2:B:5:VAL:HG11	2:B:80:TRP:CE3	2.48	0.48
4:D:115:GLY:O	4:D:116:LEU:HD12	2.13	0.48
8:H:77:VAL:HG23	53:27:1063:G:OP1	2.14	0.48
11:K:65:GLY:C	53:27:2415:G:H4'	2.34	0.48
14:N:80:GLU:O	14:N:84:GLU:HG3	2.14	0.48
14:N:26:LEU:HD23	14:N:92:PHE:HD1	1.79	0.48
15:O:4:ILE:HG22	15:O:8:GLU:CD	2.34	0.48
20:T:48:VAL:H	20:T:53:GLN:HA	1.77	0.48
36:10:8:PHE:CG	36:10:78:PHE:HE1	2.31	0.48
38:12:46:GLU:HB3	38:12:61:THR:HG22	1.95	0.48
39:13:29:ILE:HA	39:13:64:ILE:O	2.13	0.48
27:1:38:LEU:HD22	27:1:41:HIS:ND1	2.29	0.48
43:17:96:VAL:C	43:17:98:GLY:H	2.17	0.48
44:18:9:GLU:O	44:18:12:ARG:HB2	2.13	0.48
47:21:67:SER:OG	47:21:68:LYS:N	2.47	0.48
28:2:40:PRO:HG2	28:2:41:VAL:H	1.79	0.48
52:26:1387:G:H2'	52:26:1388:C:C6	2.49	0.48
52:26:25:C:H2'	52:26:26:A:C8	2.49	0.48
52:26:908:A:H2'	52:26:909:A:C8	2.47	0.48
53:27:1177:G:H2'	53:27:1178:C:O4'	2.14	0.48
53:27:1186:G:N2	53:27:1187:G:H1'	2.29	0.48
53:27:121:G:H2'	53:27:122:G:C8	2.49	0.48
53:27:1259:G:H2'	53:27:1260:A:H8	1.77	0.48
53:27:2190:G:H2'	53:27:2191:A:C8	2.49	0.48
53:27:2555:U:H2'	53:27:2556:C:H5'	1.96	0.48
53:27:2821:A:H2'	53:27:2822:G:C8	2.49	0.48
53:27:887:U:O2'	53:27:888:C:H5''	2.14	0.48
59:33:410:THR:N	59:33:414:ASP:O	2.45	0.48
32:6:182:VAL:C	32:6:183:PHE:HD1	2.17	0.48
32:6:162:VAL:O	32:6:184:ALA:HA	2.13	0.48
4:D:146:ASP:CG	4:D:147:ARG:H	2.16	0.48
4:D:151:LEU:HD12	4:D:152:ASP:N	2.29	0.48
5:E:117:PRO:HG2	5:E:118:ALA:H	1.77	0.48
8:H:72:THR:CG2	8:H:112:LYS:HA	2.42	0.48
14:N:34:HIS:ND1	14:N:53:THR:OG1	2.42	0.48
15:O:20:ARG:HD3	15:O:112:ARG:NE	2.29	0.48
16:P:88:GLU:HG2	17:Q:52:PRO:HB3	1.96	0.48
18:R:65:ASP:OD2	18:R:68:ASP:N	2.46	0.48
20:T:3:LYS:HB3	20:T:82:VAL:HG21	1.95	0.48
21:U:44:HIS:CE1	21:U:48:MET:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:63:CYS:HB3	44:18:67:GLY:H	1.79	0.48
48:22:48:ALA:O	48:22:51:GLN:HB3	2.13	0.48
50:24:70:LYS:O	50:24:73:ARG:HB3	2.14	0.48
40:14:53:ILE:HD13	52:26:1060:U:H5'	1.95	0.48
52:26:1301:U:O2	52:26:1301:U:C2'	2.61	0.48
52:26:1477:U:H2'	52:26:1478:U:C6	2.49	0.48
52:26:177:G:H2'	52:26:178:C:H5'	1.96	0.48
52:26:971:G:H3'	52:26:971:G:OP1	2.14	0.48
53:27:1797:G:C5	53:27:1798:U:C4	3.01	0.48
53:27:528:A:H2	53:27:2043:C:H5'	1.79	0.48
53:27:2502:G:H5'	53:27:2503:A:C5'	2.44	0.48
53:27:2556:C:H2'	53:27:2557:G:O4'	2.13	0.48
53:27:2568:U:C4	53:27:2569:G:N7	2.82	0.48
53:27:300:A:N3	53:27:319:G:H1'	2.29	0.48
53:27:770:G:H2'	53:27:771:G:H8	1.79	0.48
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.48
32:6:15:PHE:O	32:6:40:ILE:HB	2.13	0.48
33:7:177:LEU:HG	52:26:1112:C:N3	2.29	0.48
34:8:131:ILE:HG22	52:26:403:C:H5'	1.96	0.48
34:8:59:LYS:O	34:8:63:ILE:HG13	2.13	0.48
1:A:109:LEU:HG	1:A:110:LYS:H	1.78	0.48
1:A:124:LYS:HB3	1:A:127:ASN:ND2	2.29	0.48
1:A:170:TYR:HB3	1:A:182:LYS:HG2	1.95	0.48
3:C:52:VAL:HG13	53:27:452:G:OP1	2.13	0.48
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.48
3:C:34:ALA:HB2	3:C:94:GLN:HE21	1.78	0.48
6:F:1:MET:HG3	6:F:3:VAL:HG23	1.95	0.48
8:H:106:GLN:O	8:H:109:ALA:HB3	2.13	0.48
10:J:63:VAL:HG23	10:J:64:ARG:HG3	1.95	0.48
4:D:97:GLU:OE1	26:Z:25:ARG:HD2	2.14	0.48
36:10:38:ARG:NH2	36:10:40:GLU:OE1	2.47	0.48
41:15:40:ALA:O	52:26:684:U:O2'	2.26	0.48
48:22:39:VAL:HG13	48:22:40:PRO:HD2	1.96	0.48
51:25:17:ARG:C	51:25:19:LYS:N	2.60	0.48
52:26:1029:U:H2'	52:26:1031:C:O2	2.13	0.48
52:26:1205:U:H2'	52:26:1206:G:H8	1.79	0.48
52:26:255:G:H2'	52:26:256:U:H6	1.78	0.48
52:26:540:G:H2'	52:26:541:G:H8	1.77	0.48
44:18:58:ARG:HH12	52:26:979:C:C2'	2.27	0.48
53:27:1076:C:C2'	53:27:1077:A:H5'	2.44	0.48
53:27:1539:U:H2'	53:27:1540:G:C8	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:47:ARG:NH1	53:27:196:A:OP2	2.47	0.48
53:27:2470:G:O2'	53:27:2471:A:H5'	2.14	0.48
53:27:279:A:H2'	53:27:280:U:O4'	2.14	0.48
53:27:354:A:H2'	53:27:355:U:O4'	2.14	0.48
53:27:581:C:O5'	53:27:581:C:H6	1.96	0.48
53:27:819:A:C2	53:27:820:A:C4	3.02	0.48
53:27:927:A:H2'	53:27:928:A:C8	2.49	0.48
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.48
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.48
33:7:174:LEU:HD21	33:7:200:TRP:HD1	1.78	0.48
34:8:2:ARG:HD2	34:8:114:ARG:HE	1.79	0.48
1:A:206:LYS:CG	1:A:209:ALA:H	2.26	0.48
4:D:111:ARG:O	4:D:112:ASP:HB3	2.14	0.48
7:G:43:LYS:HD2	7:G:98:GLU:HB3	1.96	0.48
14:N:85:LYS:HB2	14:N:87:ILE:HG12	1.96	0.48
19:S:60:THR:O	53:27:1341:G:H4'	2.13	0.48
43:17:28:ARG:O	43:17:31:ALA:HB3	2.14	0.48
44:18:80:ARG:O	44:18:83:VAL:HG12	2.14	0.48
28:2:24:LYS:NZ	28:2:26:LYS:HA	2.29	0.48
52:26:768:A:O2'	52:26:769:G:H5'	2.13	0.48
52:26:772:U:H2'	52:26:773:G:C8	2.49	0.48
52:26:575:G:O2'	52:26:821:G:H5'	2.13	0.48
53:27:1293:C:H2'	53:27:1294:U:O4'	2.14	0.48
53:27:191:A:C2	53:27:192:C:C2	3.02	0.48
53:27:531:C:C5	53:27:2035:G:C2	3.02	0.48
53:27:2116:G:N1	53:27:2165:C:H1'	2.29	0.48
53:27:2661:G:C6	53:27:2662:A:C2	3.02	0.48
53:27:2812:G:H2'	53:27:2813:A:O4'	2.13	0.48
53:27:306:U:H2'	53:27:307:G:O4'	2.14	0.48
3:C:43:THR:O	53:27:38:A:H1'	2.13	0.48
53:27:647:G:H8	53:27:647:G:OP2	1.96	0.48
53:27:910:A:H2'	53:27:911:A:C8	2.48	0.48
53:27:974:G:C8	53:27:990:A:N6	2.79	0.48
54:28:29:A:H2'	54:28:30:C:C6	2.48	0.48
54:28:53:A:C2'	54:28:54:G:H5'	2.44	0.48
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.48
2:B:26:VAL:HG22	2:B:188:LEU:CD2	2.44	0.48
3:C:175:ILE:HB	3:C:180:LEU:HD11	1.96	0.48
4:D:131:VAL:HG21	4:D:151:LEU:HG	1.95	0.48
5:E:155:PRO:O	5:E:170:THR:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:58:LEU:O	6:F:61:VAL:HG22	2.14	0.48
36:10:40:GLU:HB3	36:10:61:LEU:HD23	1.96	0.47
37:11:26:VAL:HG22	37:11:42:VAL:HG21	1.95	0.47
38:12:7:ALA:O	38:12:11:THR:HG23	2.14	0.47
38:12:64:TYR:CD1	38:12:69:ALA:HA	2.45	0.47
28:2:14:ALA:HB2	28:2:46:VAL:HG21	1.96	0.47
49:23:10:ILE:HG22	49:23:38:THR:N	2.29	0.47
52:26:1053:G:N7	52:26:1199:U:H3'	2.29	0.47
52:26:1376:U:H2'	52:26:1377:A:H8	1.79	0.47
52:26:197:A:H1'	52:26:198:G:O4'	2.14	0.47
52:26:265:G:H2'	52:26:267:C:C5	2.49	0.47
52:26:696:A:H1'	52:26:786:G:O2'	2.14	0.47
52:26:562:U:H5	52:26:884:U:HO2'	1.61	0.47
7:G:50:VAL:HG13	53:27:1082:U:H5''	1.96	0.47
53:27:1656:C:H2'	53:27:1657:U:C6	2.47	0.47
53:27:1895:C:C3'	53:27:1896:G:H5''	2.44	0.47
53:27:197:A:C6	53:27:198:C:C2	3.02	0.47
53:27:648:G:O4'	53:27:2351:G:H5''	2.13	0.47
53:27:2407:A:H2'	53:27:2408:U:C6	2.48	0.47
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.13	0.47
53:27:666:A:H2'	53:27:667:U:H6	1.78	0.47
53:27:671:C:H2'	53:27:672:C:H6	1.78	0.47
53:27:752:A:H62	53:27:2609:U:H3	1.62	0.47
53:27:799:G:H3'	53:27:800:A:H8	1.79	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
59:33:551:ILE:O	59:33:552:ARG:CB	2.61	0.47
59:33:671:VAL:O	59:33:671:VAL:HG22	2.14	0.47
33:7:174:LEU:HB2	52:26:1108:G:OP1	2.13	0.47
33:7:184:ASN:OD1	33:7:185:THR:N	2.47	0.47
34:8:84:ASN:HB3	34:8:87:GLU:OE1	2.14	0.47
35:9:12:GLU:N	35:9:12:GLU:OE1	2.48	0.47
35:9:148:SER:HB2	35:9:149:PRO:HD2	1.95	0.47
35:9:155:LYS:HG3	35:9:156:ARG:H	1.78	0.47
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.14	0.47
1:A:131:MET:HG2	1:A:134:ILE:HD12	1.96	0.47
1:A:68:ARG:HH21	1:A:115:ILE:HD13	1.79	0.47
2:B:13:ARG:O	2:B:14:ILE:HD13	2.14	0.47
7:G:14:GLU:O	7:G:18:VAL:HG23	2.14	0.47
7:G:25:ALA:HB3	7:G:85:SER:C	2.35	0.47
10:J:60:ALA:HA	10:J:87:LEU:HG	1.95	0.47
15:O:30:TRP:NE1	15:O:81:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:62:ASP:CG	18:R:63:GLY:H	2.18	0.47
52:26:1028:C:C2'	52:26:1029:U:H4'	2.43	0.47
52:26:430:A:H2'	52:26:431:A:H5'	1.96	0.47
52:26:737:C:H2'	52:26:738:C:H6	1.80	0.47
53:27:1174:U:H5'	53:27:1175:A:OP2	2.14	0.47
53:27:1209:U:C2'	53:27:1210:G:H5''	2.44	0.47
53:27:1396:U:H5''	53:27:1397:U:OP2	2.14	0.47
53:27:1421:G:C2	53:27:1422:G:C8	3.02	0.47
53:27:1474:U:H2'	53:27:1475:G:O4'	2.14	0.47
53:27:2385:C:O2'	53:27:2386:A:H5'	2.14	0.47
53:27:2489:U:H2'	53:27:2490:G:O4'	2.14	0.47
53:27:287:G:O2'	53:27:288:U:H5'	2.13	0.47
53:27:615:U:H5''	53:27:616:A:OP2	2.14	0.47
53:27:629:G:H5''	53:27:650:C:O2'	2.14	0.47
53:27:965:C:O2'	53:27:966:G:H5'	2.14	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.47
59:33:686:ILE:HG22	59:33:690:GLU:OE1	2.14	0.47
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.96	0.47
1:A:140:VAL:HG12	1:A:191:LEU:HD23	1.95	0.47
1:A:259:ASN:C	1:A:261:ARG:N	2.67	0.47
2:B:2:ILE:HD13	2:B:90:PHE:CZ	2.48	0.47
4:D:52:ALA:CB	4:D:149:ARG:HD2	2.44	0.47
8:H:18:ASN:N	8:H:19:PRO:HD2	2.27	0.47
9:I:45:THR:HB	9:I:48:VAL:HB	1.96	0.47
13:M:116:VAL:O	13:M:117:ASP:HB2	2.14	0.47
22:V:12:SER:HB2	53:27:2262:U:OP2	2.14	0.47
37:11:6:ILE:HD12	37:11:6:ILE:O	2.14	0.47
42:16:113:ARG:HE	42:16:120:ARG:CA	2.25	0.47
52:26:1004:A:H2'	52:26:1005:A:C8	2.49	0.47
35:9:137:ARG:CZ	52:26:1078:U:H4'	2.44	0.47
52:26:1137:C:H4'	52:26:1138:G:H5'	1.95	0.47
52:26:192:A:H2'	52:26:193:C:H6	1.79	0.47
53:27:1026:G:H2'	53:27:1027:A:C8	2.47	0.47
53:27:1416:G:H2'	53:27:1417:C:C6	2.49	0.47
53:27:1663:G:N1	53:27:1998:A:C6	2.82	0.47
27:1:13:GLY:HA3	53:27:16:C:C5'	2.43	0.47
53:27:1805:A:H2'	53:27:1806:C:H6	1.79	0.47
53:27:1949:G:H2'	53:27:1950:G:C8	2.49	0.47
53:27:2021:C:H3'	53:27:2022:U:H5''	1.96	0.47
53:27:2508:G:C4	53:27:2509:G:C8	3.02	0.47
53:27:2625:G:H2'	53:27:2626:C:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:114:LYS:HD3	53:27:2723:C:OP1	2.14	0.47
9:I:120:ARG:NE	53:27:2780:G:OP2	2.46	0.47
53:27:346:A:H5'	53:27:346:A:C8	2.50	0.47
53:27:401:A:C2	53:27:402:A:C4	3.02	0.47
53:27:727:A:H2'	53:27:728:G:O4'	2.14	0.47
53:27:837:C:H2'	53:27:838:C:H5'	1.97	0.47
9:I:2:LYS:HA	53:27:995:C:C4	2.49	0.47
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.47
59:33:679:LEU:HD22	59:33:734:ASP:HB3	1.96	0.47
32:6:113:LEU:HD13	32:6:143:LEU:HB2	1.96	0.47
34:8:96:ARG:O	34:8:100:VAL:HG23	2.14	0.47
34:8:120:LYS:HG2	34:8:130:ASN:CG	2.35	0.47
1:A:158:GLY:HA3	53:27:1820:U:N3	2.29	0.47
1:A:204:LEU:HD21	1:A:213:ARG:NE	2.29	0.47
5:E:51:PHE:CZ	5:E:71:LEU:HD12	2.49	0.47
7:G:35:VAL:HG22	53:27:1057:A:H4'	1.94	0.47
7:G:6:GLN:O	7:G:9:GLN:HB3	2.14	0.47
8:H:79:LEU:HD21	8:H:128:ILE:HG22	1.96	0.47
2:B:123:LYS:HE2	13:M:1:MET:CE	2.44	0.47
14:N:72:ALA:HA	14:N:109:ALA:HB2	1.94	0.47
17:Q:70:GLU:O	17:Q:90:ARG:HA	2.14	0.47
37:11:103:ILE:HG21	37:11:123:LEU:HD21	1.96	0.47
39:13:105:ARG:HG2	52:26:1118:U:H5'	1.96	0.47
39:13:64:ILE:HG21	39:13:78:ILE:HD12	1.96	0.47
40:14:44:THR:HG23	40:14:69:THR:C	2.35	0.47
42:16:23:LEU:O	42:16:25:ALA:N	2.48	0.47
47:21:52:CYS:SG	47:21:74:LEU:HD11	2.54	0.47
48:22:45:GLY:O	48:22:46:THR:O	2.32	0.47
49:23:31:ARG:HA	49:23:56:HIS:NE2	2.29	0.47
52:26:1058:G:H2'	52:26:1059:C:O4'	2.14	0.47
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.47
52:26:66:A:H4'	52:26:173:U:H5	1.77	0.47
52:26:160:A:C2	52:26:343:U:H4'	2.49	0.47
52:26:668:G:H2'	52:26:669:G:C8	2.44	0.47
52:26:714:G:N2	52:26:777:A:H1'	2.29	0.47
52:26:766:A:H2'	52:26:767:A:O4'	2.14	0.47
52:26:936:C:H2'	52:26:937:A:O4'	2.15	0.47
52:26:994:A:C8	52:26:1216:A:H4'	2.50	0.47
16:P:80:ASN:OD1	53:27:1151:A:H4'	2.14	0.47
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.47
53:27:1604:C:H2'	53:27:1605:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:160:A:N3	53:27:2208:C:O2'	2.47	0.47
53:27:2573:C:OP1	53:27:2574:G:H5''	2.14	0.47
53:27:1758:U:H5	53:27:2696:U:H5'	1.76	0.47
53:27:291:G:H2'	53:27:292:U:H6	1.77	0.47
53:27:547:A:H4'	53:27:548:G:C8	2.50	0.47
16:P:47:ARG:NH2	53:27:560:C:O2'	2.47	0.47
56:30:63:G:H2'	56:30:64:A:H8	1.79	0.47
58:32:57:A:H2'	58:32:58:A:H5'	1.95	0.47
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.48	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
34:8:196:GLU:N	34:8:196:GLU:OE1	2.48	0.47
34:8:68:GLU:HG2	52:26:545:C:H5''	1.96	0.47
1:A:1:ALA:N	1:A:198:GLU:OE1	2.47	0.47
1:A:51:ARG:O	1:A:52:HIS:HB2	2.15	0.47
6:F:90:LEU:HG	6:F:123:ARG:O	2.14	0.47
6:F:122:LEU:CD2	6:F:128:HIS:HB2	2.43	0.47
7:G:27:VAL:HG12	7:G:110:ALA:HB1	1.96	0.47
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.96	0.47
9:I:18:VAL:CG2	9:I:140:LEU:HB3	2.44	0.47
11:K:95:LEU:HB2	11:K:101:ILE:CD1	2.45	0.47
14:N:74:VAL:O	14:N:78:VAL:HG23	2.14	0.47
15:O:59:THR:CG2	15:O:72:VAL:HG12	2.44	0.47
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.49	0.47
17:Q:49:ILE:HD12	17:Q:49:ILE:O	2.14	0.47
24:X:26:PHE:HD1	24:X:29:ARG:HH11	1.62	0.47
36:10:70:VAL:HA	36:10:73:GLU:OE1	2.14	0.47
38:12:77:VAL:HG23	38:12:126:CYS:HA	1.96	0.47
39:13:33:SER:CB	39:13:36:GLN:HG2	2.41	0.47
42:16:113:ARG:HG2	42:16:113:ARG:HH11	1.78	0.47
42:16:78:VAL:O	42:16:102:ASP:HB3	2.14	0.47
44:18:23:ARG:HG2	44:18:23:ARG:O	2.15	0.47
46:20:63:GLN:NE2	52:26:227:G:O2'	2.46	0.47
48:22:10:CYS:O	48:22:12:PHE:N	2.48	0.47
50:24:48:LYS:O	50:24:52:GLU:HG3	2.14	0.47
52:26:1359:C:H2'	52:26:1361:G:OP2	2.14	0.47
52:26:720:C:H2'	52:26:721:G:C8	2.48	0.47
52:26:767:A:C4	52:26:768:A:C8	3.02	0.47
53:27:1498:C:H2'	53:27:1499:C:C6	2.49	0.47
53:27:1647:U:H3'	53:27:1647:U:P	2.55	0.47
53:27:2345:G:N3	53:27:2381:A:H2'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2629:U:HO2'	53:27:2630:G:H5''	1.75	0.47
53:27:29:U:H2'	53:27:30:G:H8	1.76	0.47
53:27:360:U:H2'	53:27:361:G:N9	2.29	0.47
53:27:602:A:H1'	53:27:656:G:N2	2.30	0.47
53:27:687:C:H6	53:27:687:C:H5''	1.78	0.47
59:33:327:LEU:CD2	59:33:332:LYS:HB3	2.45	0.47
35:9:125:LYS:HG2	35:9:127:TYR:CZ	2.49	0.47
35:9:155:LYS:CB	38:12:70:VAL:HG13	2.45	0.47
35:9:64:GLU:HB3	35:9:68:ARG:NH2	2.28	0.47
2:B:18:ASP:OD1	2:B:19:GLY:N	2.46	0.47
3:C:118:LEU:HG	3:C:120:VAL:HG23	1.96	0.47
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.80	0.47
6:F:5:LEU:HD22	6:F:14:SER:OG	2.14	0.47
7:G:34:THR:CG2	53:27:1084:A:H62	2.28	0.47
8:H:2:LYS:HB3	8:H:7:TYR:CD2	2.48	0.47
12:L:75:GLU:O	12:L:87:GLY:HA3	2.13	0.47
14:N:67:ASN:O	14:N:68:LYS:C	2.52	0.47
16:P:107:ALA:HB2	17:Q:46:GLU:HG3	1.97	0.47
17:Q:20:VAL:O	17:Q:96:VAL:HG22	2.14	0.47
21:U:83:LYS:O	21:U:85:LYS:N	2.48	0.47
41:15:80:ASN:HB2	41:15:105:ARG:O	2.14	0.47
41:15:20:ALA:HB2	41:15:33:ILE:HG12	1.96	0.47
43:17:102:LYS:HG3	52:26:1226:C:C4	2.50	0.47
43:17:78:ARG:HH12	49:23:68:HIS:CE1	2.31	0.47
52:26:1010:U:O2'	52:26:1011:C:H5'	2.15	0.47
52:26:1064:G:H1'	52:26:1190:G:N2	2.29	0.47
52:26:1282:C:H2'	52:26:1283:U:H6	1.79	0.47
16:P:62:ALA:HB2	53:27:1009:A:H5''	1.97	0.47
53:27:1059:G:H2'	53:27:1060:U:C6	2.50	0.47
53:27:1549:A:H2'	53:27:1550:C:C6	2.49	0.47
53:27:20:C:H2'	53:27:21:A:C8	2.47	0.47
53:27:2131:U:O4'	53:27:2133:G:H4'	2.14	0.47
28:2:43:ARG:HH11	53:27:2370:G:H1'	1.80	0.47
53:27:2592:G:H2'	53:27:2593:U:O4'	2.15	0.47
53:27:49:A:H5'	53:27:51:G:O4'	2.14	0.47
53:27:689:A:C2	53:27:779:U:H4'	2.50	0.47
59:33:267:ASN:ND2	59:33:267:ASN:N	2.62	0.47
33:7:129:PHE:CD1	33:7:130:ARG:N	2.83	0.47
34:8:33:ILE:HG12	34:8:34:GLU:N	2.30	0.47
1:A:6:LYS:HG3	1:A:7:PRO:HD2	1.96	0.47
2:B:84:LEU:HD23	2:B:88:GLU:HG3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:126:THR:HB	5:E:129:GLU:OE1	2.14	0.47
5:E:17:LYS:HB2	5:E:24:THR:HB	1.96	0.47
7:G:43:LYS:O	7:G:46:ARG:HG2	2.15	0.47
7:G:25:ALA:HA	7:G:96:PHE:CE1	2.50	0.47
8:H:112:LYS:HE2	8:H:116:MET:HG2	1.97	0.47
8:H:11:GLN:HB3	53:27:1061:U:C5	2.50	0.47
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.44	0.47
21:U:21:ARG:NH2	21:U:87:GLN:HB3	2.25	0.47
45:19:27:GLN:O	45:19:31:LEU:HG	2.14	0.47
48:22:72:ARG:NH2	51:25:4:LYS:HD3	2.30	0.47
52:26:1365:G:H2'	52:26:1366:C:H6	1.80	0.47
52:26:219:U:H2'	52:26:220:G:C8	2.42	0.47
52:26:418:C:H2'	52:26:419:C:H6	1.78	0.47
52:26:609:A:H8	52:26:609:A:O5'	1.97	0.47
52:26:848:C:H2'	52:26:849:G:O4'	2.15	0.47
52:26:884:U:H4'	52:26:885:G:C5'	2.41	0.47
53:27:1431:A:O2'	53:27:1432:G:H5'	2.15	0.47
53:27:1736:U:H2'	53:27:1737:G:C8	2.49	0.47
53:27:1788:C:H2'	53:27:1789:A:H8	1.78	0.47
53:27:18:U:H2'	53:27:19:A:H8	1.75	0.47
53:27:2286:G:C5'	53:27:2287:A:O4'	2.63	0.47
53:27:239:C:H2'	53:27:240:C:O4'	2.15	0.47
53:27:324:A:H2'	53:27:325:G:O4'	2.15	0.47
53:27:406:G:H2'	53:27:407:G:H8	1.78	0.47
53:27:516:C:H2'	53:27:517:C:C6	2.50	0.47
53:27:520:G:H2'	53:27:521:U:C6	2.49	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.78	0.47
53:27:743:A:O2'	53:27:744:U:H5'	2.14	0.47
53:27:729:G:H4'	53:27:763:G:C5'	2.44	0.47
53:27:926:G:H2'	53:27:927:A:C8	2.50	0.47
54:28:110:C:C2'	54:28:111:U:H5'	2.45	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.76	0.47
59:33:432:HIS:CD2	59:33:434:ASP:H	2.33	0.47
59:33:504:ASN:O	59:33:508:GLY:N	2.47	0.47
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.47
59:33:696:GLY:O	59:33:712:MET:HA	2.14	0.47
34:8:201:GLU:O	34:8:204:SER:N	2.48	0.47
35:9:75:LEU:HD12	35:9:75:LEU:C	2.34	0.47
1:A:134:ILE:HG22	1:A:135:PRO:O	2.14	0.47
1:A:203:VAL:O	1:A:205:GLY:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:171:THR:HG22	2:B:172:VAL:N	2.30	0.47
2:B:13:ARG:HD2	2:B:21:SER:OG	2.14	0.47
3:C:147:LEU:CD1	3:C:168:ASP:HB3	2.44	0.47
3:C:164:LEU:HD22	3:C:167:VAL:HG23	1.96	0.47
5:E:64:ALA:O	5:E:67:ALA:HB3	2.14	0.47
10:J:22:ILE:HD11	10:J:40:LYS:HB2	1.97	0.47
12:L:53:MET:HE1	12:L:63:ILE:HG21	1.96	0.47
2:B:123:LYS:HE2	13:M:1:MET:HE1	1.95	0.47
18:R:3:THR:HG21	18:R:58:ALA:CA	2.44	0.47
19:S:25:GLU:HG3	19:S:26:LYS:H	1.78	0.47
39:13:5:TYR:CD2	39:13:88:GLU:HG2	2.49	0.47
39:13:9:GLY:HA3	39:13:81:GLY:N	2.29	0.47
40:14:48:ARG:HA	40:14:65:TYR:O	2.14	0.47
41:15:19:VAL:HG22	41:15:82:GLU:HB2	1.96	0.47
43:17:16:ILE:HD12	43:17:16:ILE:N	2.29	0.47
50:24:73:ARG:NH2	52:26:261:U:C4	2.83	0.47
52:26:1028:C:H3'	52:26:1029:U:H4'	1.94	0.47
52:26:109:A:C6	52:26:326:G:C6	3.03	0.47
52:26:658:C:H2'	52:26:659:U:C6	2.50	0.47
53:27:1127:A:H2'	53:27:1128:G:H5''	1.97	0.47
53:27:1882:U:O2'	53:27:1883:U:H5'	2.14	0.47
53:27:2249:U:H3'	53:27:2250:G:H5'	1.96	0.47
53:27:532:A:N3	53:27:532:A:H2'	2.30	0.47
16:P:36:GLN:NE2	53:27:563:A:N3	2.54	0.47
53:27:744:U:H2'	53:27:745:G:O4'	2.15	0.47
59:33:534:TYR:O	59:33:535:ASN:C	2.53	0.47
59:33:639:GLU:O	59:33:643:GLU:HG3	2.15	0.47
32:6:130:LYS:HD2	32:6:133:ALA:HB3	1.95	0.47
33:7:111:ASP:OD1	33:7:112:ALA:N	2.47	0.47
35:9:135:VAL:HG23	35:9:136:VAL:N	2.30	0.47
1:A:51:ARG:O	1:A:52:HIS:CB	2.63	0.47
2:B:24:VAL:HG12	2:B:190:LYS:HA	1.96	0.47
10:J:2:ILE:HB	10:J:33:ALA:HB3	1.96	0.47
12:L:4:PRO:CG	12:L:70:ASP:HA	2.43	0.47
39:13:94:ARG:HA	39:13:97:LEU:CB	2.44	0.47
41:15:50:GLY:O	41:15:51:PHE:HB2	2.15	0.47
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.50	0.47
47:21:5:ARG:HD3	52:26:636:U:H5'	1.97	0.47
50:24:25:SER:HA	50:24:28:ARG:HD2	1.96	0.47
39:13:17:ARG:NH2	52:26:1147:C:H1'	2.29	0.47
52:26:1226:C:H4'	52:26:1227:A:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1488:G:C4	52:26:1489:G:C8	3.02	0.47
52:26:518:C:H2'	52:26:530:G:C4	2.50	0.47
52:26:554:A:H2'	52:26:555:U:C6	2.50	0.47
52:26:68:G:C2	52:26:69:G:H1'	2.49	0.47
40:14:59:LYS:HD3	52:26:973:G:OP1	2.15	0.47
53:27:1097:U:C2'	53:27:1098:A:H5'	2.45	0.47
53:27:1313:U:H2'	53:27:1610:A:C2	2.50	0.47
53:27:173:A:H2'	53:27:174:U:H6	1.78	0.47
53:27:1824:G:O2'	53:27:1825:U:H5'	2.14	0.47
53:27:1924:C:O2'	53:27:1925:C:H5'	2.14	0.47
53:27:201:C:O2'	53:27:202:U:H5'	2.15	0.47
53:27:2115:G:OP1	53:27:2166:U:H1'	2.15	0.47
53:27:2081:U:C4	53:27:2237:G:C2	3.02	0.47
53:27:2347:C:H2'	53:27:2348:U:C6	2.50	0.47
53:27:2553:G:H2'	53:27:2554:U:C4'	2.45	0.47
42:16:43:LYS:HE3	55:29:21:C:OP1	2.15	0.47
59:33:673:ALA:HB1	59:33:734:ASP:O	2.15	0.47
35:9:80:LEU:HB2	35:9:97:PRO:HA	1.97	0.47
4:D:147:ARG:HB3	4:D:149:ARG:NH1	2.29	0.47
10:J:15:GLY:HA2	10:J:47:ILE:HD11	1.97	0.47
16:P:55:GLN:HA	16:P:58:GLN:HG2	1.97	0.47
23:W:56:ARG:O	23:W:59:ASP:HB3	2.15	0.47
47:21:50:ASN:OD1	47:21:50:ASN:N	2.47	0.47
43:17:101:THR:HG21	52:26:1226:C:OP2	2.15	0.47
52:26:279:A:H5''	52:26:280:C:H3'	1.97	0.47
52:26:309:A:H2'	52:26:310:G:C8	2.44	0.47
52:26:300:A:H1'	52:26:565:U:O2	2.15	0.47
53:27:1571:A:H2'	53:27:1572:A:C8	2.50	0.47
53:27:1613:G:H3'	53:27:1614:A:C5'	2.45	0.47
53:27:2079:U:C2'	53:27:2080:A:H5''	2.45	0.47
53:27:2272:U:H5''	53:27:2273:A:OP1	2.15	0.47
53:27:2821:A:O2'	53:27:2822:G:H5'	2.15	0.47
53:27:595:C:O2'	53:27:596:U:H5'	2.15	0.47
53:27:694:U:H2'	53:27:695:G:C8	2.49	0.47
53:27:819:A:H3'	53:27:973:A:N6	2.30	0.47
53:27:922:C:C2	53:27:923:G:C8	3.03	0.47
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.97	0.47
59:33:710:ILE:N	59:33:710:ILE:HD12	2.30	0.47
1:A:206:LYS:HB2	53:27:729:G:N7	2.30	0.47
4:D:140:ILE:N	4:D:140:ILE:HD12	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:126:ARG:NH1	53:27:635:C:OP2	2.48	0.47
15:O:52:ARG:H	15:O:56:SER:CB	2.28	0.47
25:Y:23:LEU:HD11	25:Y:53:MET:SD	2.55	0.47
36:10:75:GLU:O	36:10:78:PHE:HB2	2.14	0.47
43:17:6:ILE:CD1	43:17:7:ASN:H	2.27	0.47
45:19:87:ARG:HG3	45:19:88:ARG:N	2.25	0.47
49:23:5:LYS:HG3	49:23:6:LYS:N	2.29	0.47
50:24:59:ARG:O	50:24:63:LYS:HB2	2.14	0.47
43:17:25:GLY:N	52:26:1329:A:H5''	2.18	0.47
52:26:252:U:O2	52:26:252:U:H2'	2.15	0.47
52:26:591:U:H2'	52:26:592:G:C8	2.50	0.47
52:26:692:U:H2'	52:26:694:A:OP2	2.15	0.47
52:26:826:C:O2'	52:26:827:U:H5'	2.15	0.47
53:27:1096:A:C2'	53:27:1097:U:H5''	2.45	0.47
53:27:1173:U:C3'	53:27:1174:U:H4'	2.45	0.47
53:27:1186:G:H2'	53:27:1187:G:C8	2.50	0.47
53:27:1677:A:H2'	53:27:1678:A:C8	2.50	0.47
53:27:1695:G:H2'	53:27:1696:G:O4'	2.15	0.47
53:27:2351:G:H1'	53:27:2366:A:H61	1.79	0.47
2:B:83:ARG:NH2	53:27:2637:U:H5''	2.30	0.47
53:27:2657:A:H2'	53:27:2658:C:O4'	2.15	0.47
53:27:2686:G:H2'	53:27:2687:U:O4'	2.15	0.47
53:27:2812:G:H2'	53:27:2813:A:H8	1.80	0.47
53:27:652:U:H2'	53:27:653:U:H5'	1.97	0.47
53:27:959:A:O2'	53:27:960:A:H5'	2.15	0.47
57:31:22:G:O2'	57:31:23:C:H5'	2.15	0.47
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.47
32:6:91:VAL:HG11	32:6:95:TRP:CD1	2.50	0.47
1:A:77:VAL:HG13	1:A:91:ALA:HB1	1.97	0.47
11:K:41:ARG:HG3	11:K:41:ARG:HH21	1.80	0.47
24:X:20:ASN:HA	24:X:24:GLU:OE1	2.15	0.47
24:X:58:ASN:O	24:X:63:ALA:HB2	2.15	0.47
25:Y:13:ILE:O	25:Y:15:ARG:N	2.46	0.47
25:Y:56:VAL:HG22	25:Y:57:GLU:N	2.30	0.47
39:13:24:ASN:O	39:13:60:LEU:N	2.44	0.46
27:1:32:THR:OG1	27:1:50:GLY:HA2	2.15	0.46
43:17:7:ASN:OD1	43:17:9:PRO:HD3	2.15	0.46
48:22:41:SER:CB	48:22:51:GLN:HE21	2.22	0.46
52:26:1300:G:O2'	52:26:1301:U:O5'	2.34	0.46
52:26:1365:G:H2'	52:26:1366:C:C6	2.50	0.46
52:26:1527:U:O2'	52:26:1528:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:176:C:H2'	52:26:177:G:N3	2.31	0.46
52:26:321:A:O2'	52:26:322:C:H5'	2.14	0.46
41:15:121:ARG:NH1	52:26:779:C:O2'	2.48	0.46
52:26:951:G:O2'	52:26:952:U:H5'	2.15	0.46
52:26:955:U:H2'	52:26:956:U:H6	1.79	0.46
52:26:981:U:H5	52:26:982:U:HO2'	1.62	0.46
53:27:1314:C:H2'	53:27:1315:C:H6	1.80	0.46
53:27:1685:C:H2'	53:27:1686:C:H6	1.80	0.46
53:27:1773:A:H2	53:27:1977:A:N1	2.13	0.46
53:27:2216:G:H2'	53:27:2217:G:H8	1.80	0.46
53:27:2888:C:H2'	53:27:2889:C:C6	2.50	0.46
53:27:35:G:C4	53:27:454:A:C2	3.03	0.46
53:27:435:C:C2'	53:27:436:C:H5'	2.46	0.46
53:27:449:A:H2'	53:27:450:G:O4'	2.15	0.46
11:K:111:ILE:HD11	53:27:636:G:C6	2.51	0.46
32:6:70:GLY:HA2	32:6:163:ILE:CG2	2.45	0.46
32:6:20:ARG:HD2	52:26:831:A:OP1	2.15	0.46
34:8:149:LYS:O	34:8:151:GLN:HG2	2.14	0.46
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.45	0.46
1:A:204:LEU:CD2	1:A:213:ARG:HE	2.28	0.46
5:E:21:GLN:OE1	5:E:54:ARG:NH2	2.48	0.46
6:F:54:LEU:O	6:F:58:LEU:N	2.30	0.46
15:O:50:ARG:CZ	15:O:52:ARG:HG3	2.44	0.46
15:O:8:GLU:O	15:O:11:GLN:HB3	2.15	0.46
22:V:43:ALA:HB1	22:V:47:VAL:O	2.15	0.46
26:Z:16:CYS:SG	26:Z:34:LEU:HB2	2.55	0.46
38:12:14:ARG:CD	38:12:74:ILE:HG22	2.45	0.46
38:12:86:LYS:HD2	38:12:90:GLU:HG2	1.97	0.46
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.48	0.46
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.30	0.46
48:22:10:CYS:HB2	48:22:45:GLY:HA3	1.98	0.46
52:26:1127:G:H22	52:26:1145:A:H2	1.62	0.46
52:26:532:A:H4'	52:26:533:A:OP2	2.15	0.46
52:26:689:C:C2'	52:26:690:G:H5'	2.45	0.46
53:27:1019:U:H3	53:27:1142:A:H62	1.63	0.46
53:27:1162:G:H2'	53:27:1163:G:H8	1.79	0.46
53:27:1229:C:H2'	53:27:1230:A:H8	1.81	0.46
2:B:120:GLY:HA2	53:27:1655:A:O2'	2.16	0.46
53:27:1810:A:H2'	53:27:1811:G:C5'	2.46	0.46
53:27:2124:G:H8	53:27:2124:G:O5'	1.97	0.46
53:27:20:C:O2'	53:27:21:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2285:C:O2'	53:27:2287:A:H1'	2.15	0.46
53:27:2405:G:O2'	53:27:2411:A:N6	2.48	0.46
53:27:979:A:H2'	53:27:982:C:H42	1.80	0.46
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.46
58:32:49:G:N3	58:32:49:G:H2'	2.31	0.46
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.46
59:33:281:ILE:O	59:33:281:ILE:HG13	2.14	0.46
1:A:269:ARG:HG2	1:A:270:ARG:N	2.31	0.46
1:A:95:TYR:HB2	1:A:99:GLU:O	2.15	0.46
8:H:55:PRO:HD3	8:H:74:PRO:CD	2.40	0.46
9:I:77:HIS:HA	9:I:83:GLY:O	2.15	0.46
13:M:31:HIS:O	13:M:32:GLU:HB2	2.16	0.46
17:Q:57:GLY:HA2	17:Q:103:ALA:OXT	2.15	0.46
17:Q:74:ILE:HB	17:Q:87:GLN:HB3	1.98	0.46
36:10:65:GLU:O	36:10:66:ALA:HB2	2.15	0.46
38:12:9:MET:HG3	38:12:10:LEU:N	2.29	0.46
52:26:1317:C:H5'	52:26:1318:A:OP2	2.15	0.46
52:26:1375:A:H2'	52:26:1376:U:O4'	2.15	0.46
50:24:23:ARG:NH2	52:26:176:C:C5'	2.77	0.46
52:26:389:A:H3'	52:26:390:U:C6	2.51	0.46
52:26:624:C:H2'	52:26:625:U:H6	1.81	0.46
52:26:798:U:H2'	52:26:799:G:O4'	2.15	0.46
7:G:34:THR:CG2	53:27:1085:A:H61	2.28	0.46
53:27:1895:C:H2'	53:27:1896:G:O4'	2.15	0.46
53:27:1980:G:O2'	53:27:1981:A:H5''	2.15	0.46
53:27:2053:G:O6	53:27:2614:A:H2	1.98	0.46
53:27:279:A:H61	53:27:361:G:H1'	1.80	0.46
53:27:308:G:C8	53:27:501:A:O4'	2.68	0.46
53:27:589:U:O2'	53:27:590:A:H5'	2.15	0.46
53:27:778:G:C6	53:27:779:U:N3	2.83	0.46
53:27:975:A:H5'	53:27:976:G:OP2	2.16	0.46
54:28:85:G:H2'	54:28:86:G:H8	1.81	0.46
56:30:63:G:H2'	56:30:64:A:C8	2.50	0.46
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.29	0.46
35:9:142:GLY:O	35:9:145:ASN:HB3	2.15	0.46
4:D:120:SER:HB2	4:D:127:TYR:CE1	2.50	0.46
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.56	0.46
6:F:2:GLN:HB3	6:F:39:ALA:HB3	1.97	0.46
7:G:55:VAL:HG23	7:G:55:VAL:O	2.15	0.46
7:G:8:LYS:O	7:G:12:VAL:HG23	2.15	0.46
9:I:68:LYS:HD3	53:27:1022:G:N7	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:109:LYS:HE3	11:K:128:THR:HG22	1.97	0.46
16:P:93:ILE:HG13	17:Q:11:GLN:HB3	1.96	0.46
25:Y:47:ILE:O	25:Y:51:SER:N	2.47	0.46
37:11:14:ASP:OD2	37:11:17:PHE:N	2.49	0.46
37:11:29:LEU:O	37:11:29:LEU:HD23	2.15	0.46
42:16:62:VAL:HG11	42:16:94:TYR:CE2	2.50	0.46
44:18:16:ALA:HA	44:18:54:SER:O	2.16	0.46
46:20:19:VAL:H	46:20:38:PHE:HA	1.80	0.46
49:23:76:THR:OG1	49:23:77:ARG:N	2.48	0.46
50:24:28:ARG:C	50:24:32:LYS:HG2	2.36	0.46
50:24:55:PRO:HA	52:26:193:C:O2'	2.16	0.46
52:26:1109:C:H2'	52:26:1110:A:C8	2.50	0.46
52:26:1198:G:H2'	52:26:1199:U:C6	2.51	0.46
52:26:1410:A:H2'	52:26:1411:C:C6	2.51	0.46
52:26:1473:G:O2'	52:26:1474:U:H5'	2.15	0.46
52:26:764:C:H2'	52:26:765:G:O4'	2.16	0.46
52:26:877:G:H2'	52:26:878:A:C8	2.48	0.46
53:27:819:A:OP2	53:27:1187:G:N2	2.45	0.46
53:27:1196:C:H2'	53:27:1197:G:C8	2.50	0.46
53:27:1216:G:N2	53:27:1234:U:H1'	2.31	0.46
53:27:1357:C:H2'	53:27:1358:G:O4'	2.15	0.46
53:27:768:G:N2	53:27:1379:U:O2'	2.48	0.46
53:27:1609:A:H1'	53:27:1616:A:C1'	2.45	0.46
53:27:1843:C:H2'	53:27:1844:C:H6	1.77	0.46
53:27:214:G:H21	53:27:216:A:H1'	1.81	0.46
53:27:2589:A:H2'	53:27:2590:A:H8	1.80	0.46
53:27:488:G:H1'	53:27:492:A:N6	2.30	0.46
53:27:563:A:C6	53:27:2018:G:C4	3.04	0.46
57:31:50:U:H2'	57:31:51:C:C6	2.51	0.46
57:31:48:C:H2'	57:31:59:A:H4'	1.98	0.46
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	0.46
59:33:573:ASP:O	59:33:576:ALA:HB3	2.16	0.46
35:9:135:VAL:O	35:9:139:THR:HG23	2.15	0.46
3:C:153:LEU:HD11	3:C:158:PHE:HB2	1.97	0.46
5:E:152:ARG:HG3	5:E:152:ARG:HH21	1.80	0.46
7:G:25:ALA:HB3	7:G:85:SER:O	2.15	0.46
8:H:67:THR:CG2	8:H:69:VAL:HG23	2.46	0.46
8:H:76:ALA:HA	8:H:79:LEU:HD12	1.98	0.46
12:L:4:PRO:HG2	12:L:70:ASP:HA	1.98	0.46
12:L:88:ASN:O	12:L:90:GLU:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:28:VAL:HG12	14:N:93:ASP:O	2.16	0.46
15:O:50:ARG:O	15:O:56:SER:HA	2.16	0.46
16:P:107:ALA:O	16:P:110:GLU:HB2	2.15	0.46
17:Q:21:ARG:C	17:Q:22:LEU:HD12	2.35	0.46
18:R:7:HIS:CD2	53:27:492:A:H2	2.33	0.46
20:T:59:GLU:OE1	20:T:59:GLU:N	2.48	0.46
24:X:24:GLU:O	24:X:28:LEU:HG	2.16	0.46
25:Y:4:ILE:HG23	25:Y:4:ILE:O	2.14	0.46
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.98	0.46
37:11:3:ARG:O	37:11:5:VAL:N	2.49	0.46
42:16:106:VAL:CG2	42:16:116:TYR:HB3	2.45	0.46
44:18:85:GLU:O	44:18:89:ARG:NH1	2.48	0.46
52:26:1033:G:N3	52:26:1033:G:H2'	2.31	0.46
52:26:1298:U:H4'	52:26:1299:A:C4	2.50	0.46
52:26:138:G:C2'	52:26:139:A:H5'	2.46	0.46
50:24:24:ARG:HH22	52:26:323:U:P	2.39	0.46
34:8:133:SER:HB3	52:26:403:C:OP1	2.15	0.46
52:26:490:C:H2'	52:26:491:G:C8	2.46	0.46
52:26:538:G:H2'	52:26:539:A:C8	2.51	0.46
52:26:580:C:H2'	52:26:581:G:H8	1.76	0.46
48:22:40:PRO:HB3	52:26:720:C:OP1	2.15	0.46
52:26:763:G:H2'	52:26:764:C:H6	1.81	0.46
35:9:107:GLY:HA2	52:26:8:A:H1'	1.98	0.46
52:26:924:C:H2'	52:26:925:G:C8	2.50	0.46
52:26:981:U:H2'	52:26:982:U:C5	2.51	0.46
53:27:118:A:H2'	53:27:120:U:O4	2.15	0.46
53:27:1268:A:H1'	53:27:2013:A:N6	2.31	0.46
53:27:1394:U:H5''	53:27:1603:A:O3'	2.14	0.46
53:27:1967:C:H2'	53:27:1968:G:O4'	2.16	0.46
53:27:2128:G:N3	53:27:2173:A:H4'	2.31	0.46
53:27:2226:C:H3'	53:27:2227:A:H8	1.80	0.46
53:27:2286:G:H4'	53:27:2287:A:O4'	2.14	0.46
53:27:2287:A:HO2'	53:27:2288:A:H2'	1.79	0.46
53:27:2516:A:O2'	53:27:2517:C:H5'	2.16	0.46
53:27:2795:C:H2'	53:27:2796:U:H5'	1.98	0.46
53:27:586:A:H2	53:27:809:G:N3	2.14	0.46
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.46
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.46
31:5:24:ARG:HG2	31:5:24:ARG:NH2	2.31	0.46
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.45	0.46
34:8:187:ARG:NH1	34:8:190:LEU:HD11	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:110:HIS:HE1	53:27:2667:C:O2'	1.98	0.46
9:I:41:LYS:HE2	9:I:43:GLU:OE2	2.15	0.46
16:P:87:VAL:HA	17:Q:49:ILE:HD11	1.97	0.46
20:T:26:ASN:OD1	20:T:27:VAL:N	2.48	0.46
21:U:92:VAL:O	21:U:94:ALA:N	2.48	0.46
39:13:94:ARG:HA	39:13:97:LEU:HB3	1.96	0.46
40:14:17:LEU:O	40:14:20:GLN:HG2	2.16	0.46
41:15:70:ALA:O	41:15:73:VAL:HG22	2.16	0.46
42:16:115:LYS:O	42:16:116:TYR:CB	2.63	0.46
52:26:12:U:C3'	52:26:13:U:H5''	2.46	0.46
52:26:1417:G:H2'	52:26:1482:G:N2	2.31	0.46
52:26:345:C:H4'	52:26:346:G:C2	2.51	0.46
52:26:49:U:H3	52:26:362:G:H1'	1.81	0.46
52:26:393:A:C2	52:26:394:G:C8	3.04	0.46
52:26:58:C:O2'	52:26:59:A:H5'	2.15	0.46
53:27:2297:A:N6	53:27:2319:G:H1'	2.31	0.46
53:27:2339:C:H2'	53:27:2340:A:C8	2.50	0.46
2:B:115:GLY:HA3	53:27:2821:A:OP2	2.15	0.46
53:27:2881:U:H2'	53:27:2882:A:H8	1.79	0.46
53:27:360:U:H2'	53:27:361:G:C8	2.51	0.46
53:27:780:G:H5''	53:27:781:A:OP1	2.16	0.46
56:30:68:C:H2'	56:30:69:G:C8	2.51	0.46
39:13:128:LYS:NZ	57:31:34:C:OP2	2.43	0.46
33:7:46:LEU:HD11	33:7:75:VAL:HG13	1.97	0.46
34:8:144:ILE:CG2	34:8:149:LYS:HA	2.45	0.46
1:A:42:ARG:HD3	1:A:46:GLY:O	2.15	0.46
3:C:31:VAL:CG1	3:C:177:PRO:HG2	2.46	0.46
3:C:178:VAL:HG13	3:C:179:SER:N	2.30	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.97	0.46
11:K:65:GLY:CA	53:27:2415:G:H4'	2.45	0.46
12:L:24:THR:O	12:L:24:THR:HG22	2.14	0.46
23:W:22:ASN:O	23:W:22:ASN:OD1	2.34	0.46
37:11:118:ARG:O	37:11:122:GLU:HG2	2.15	0.46
39:13:123:ARG:HB3	52:26:1343:G:C4'	2.42	0.46
39:13:24:ASN:HB3	39:13:58:GLU:HG2	1.97	0.46
40:14:40:ILE:O	40:14:73:LEU:N	2.45	0.46
40:14:6:ILE:HA	40:14:101:SER:O	2.15	0.46
41:15:84:MET:HA	41:15:110:THR:O	2.15	0.46
43:17:33:LEU:CD2	43:17:40:GLU:HA	2.46	0.46
26:Z:57:VAL:HG23	49:23:63:ASP:OD1	2.15	0.46
52:26:1177:G:H2'	52:26:1178:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1220:G:H2'	52:26:1221:G:O4'	2.15	0.46
52:26:128:G:H2'	52:26:129:A:C8	2.51	0.46
52:26:1353:G:H2'	52:26:1354:U:H6	1.79	0.46
52:26:207:C:H2'	52:26:208:U:O4'	2.15	0.46
52:26:226:G:O2'	52:26:227:G:H5'	2.15	0.46
53:27:1555:G:C8	53:27:1555:G:H5'	2.51	0.46
53:27:1313:U:C2	53:27:1610:A:H2	2.32	0.46
18:R:93:ALA:HB2	53:27:1614:A:C2	2.51	0.46
53:27:195:A:H2'	53:27:198:C:H42	1.79	0.46
53:27:218:A:H3'	53:27:219:A:H8	1.81	0.46
53:27:2472:G:H2'	53:27:2529:G:N2	2.31	0.46
53:27:2520:C:C6	53:27:2567:G:H1'	2.51	0.46
53:27:2526:G:H2'	53:27:2527:C:C6	2.51	0.46
53:27:2682:A:C2	53:27:2683:C:C2	3.03	0.46
53:27:2688:G:H1'	53:27:2721:A:N6	2.30	0.46
53:27:2708:G:H2'	53:27:2709:G:H8	1.80	0.46
53:27:426:C:H2'	53:27:427:U:H6	1.80	0.46
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.46
53:27:784:G:C8	53:27:792:A:N7	2.84	0.46
53:27:785:G:C6	53:27:786:C:C4	3.04	0.46
53:27:83:A:H2'	53:27:84:A:N7	2.30	0.46
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.46
56:30:74:C:N4	59:33:429:TYR:O	2.47	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
30:4:41:ARG:HA	30:4:44:ARG:NH1	2.31	0.46
31:5:19:ARG:HG2	53:27:2756:U:OP2	2.16	0.46
31:5:36:ARG:O	31:5:37:GLN:HB3	2.16	0.46
33:7:60:ALA:O	33:7:62:SER:N	2.49	0.46
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.97	0.46
2:B:2:ILE:HD11	2:B:100:LEU:HD21	1.98	0.46
3:C:191:ASP:O	3:C:195:GLN:HG2	2.16	0.46
14:N:28:VAL:HG22	14:N:29:HIS:N	2.30	0.46
17:Q:73:LYS:O	17:Q:75:VAL:HG23	2.16	0.46
19:S:57:VAL:HG12	19:S:86:THR:OG1	2.16	0.46
22:V:17:LEU:HD21	22:V:37:ARG:NH2	2.30	0.46
25:Y:30:ARG:O	25:Y:33:HIS:HB2	2.15	0.46
42:16:23:LEU:C	42:16:25:ALA:H	2.19	0.46
42:16:38:THR:HA	42:16:49:ARG:O	2.16	0.46
47:21:32:ILE:N	47:21:32:ILE:HD12	2.29	0.46
50:24:34:VAL:HG11	50:24:78:LEU:HD23	1.98	0.46
51:25:17:ARG:O	51:25:19:LYS:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1072:G:C5	52:26:1073:U:C4	3.03	0.46
52:26:158:G:H2'	52:26:159:G:O4'	2.15	0.46
52:26:603:U:H2'	52:26:604:G:C8	2.50	0.46
52:26:604:G:H2'	52:26:605:U:O4'	2.15	0.46
52:26:66:A:H4'	52:26:173:U:C5	2.50	0.46
52:26:771:G:H2'	52:26:772:U:C6	2.51	0.46
52:26:831:A:H3'	52:26:832:G:H5''	1.98	0.46
52:26:848:C:H3'	52:26:849:G:H5''	1.98	0.46
53:27:1705:A:C5	53:27:1706:C:C4	3.04	0.46
53:27:1746:A:H2'	53:27:1747:U:H6	1.76	0.46
53:27:17:G:H2'	53:27:18:U:C6	2.51	0.46
53:27:21:A:H2'	53:27:22:C:O4'	2.15	0.46
53:27:2462:C:H1'	53:27:2491:U:O4	2.15	0.46
30:4:11:LYS:NZ	53:27:249:C:O2	2.41	0.46
53:27:2504:U:H2'	53:27:2505:G:H5'	1.96	0.46
10:J:28:SER:HB3	53:27:2563:U:O2'	2.16	0.46
53:27:709:U:H2'	53:27:710:U:H6	1.81	0.46
53:27:817:C:H2'	53:27:818:G:O4'	2.16	0.46
54:28:79:G:O2'	54:28:80:U:H5'	2.16	0.46
55:29:20:U:H2'	55:29:21:C:C6	2.51	0.46
58:32:24:U:O5'	58:32:24:U:H6	1.97	0.46
59:33:303:LEU:HD12	59:33:304:PRO:HD2	1.97	0.46
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.46
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.97	0.46
31:5:19:ARG:HH22	31:5:26:ILE:HD11	1.80	0.46
32:6:103:TRP:O	32:6:107:ARG:HG2	2.15	0.46
32:6:27:LYS:HB3	32:6:28:PRO:HD3	1.98	0.46
33:7:131:ARG:HD2	33:7:131:ARG:HA	1.76	0.46
33:7:154:GLY:O	33:7:156:LEU:HG	2.15	0.46
33:7:46:LEU:HD12	33:7:49:ALA:HB3	1.98	0.46
33:7:72:PRO:O	33:7:76:ILE:HG12	2.16	0.46
34:8:144:ILE:CD1	34:8:177:MET:HB3	2.45	0.46
1:A:131:MET:HA	1:A:134:ILE:HD12	1.97	0.46
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.46	0.46
11:K:57:LEU:CB	11:K:60:ARG:HH11	2.21	0.46
13:M:114:GLU:OE1	13:M:118:ARG:NH2	2.49	0.46
17:Q:48:LYS:HG3	17:Q:49:ILE:N	2.31	0.46
17:Q:72:VAL:HG22	17:Q:89:HIS:O	2.15	0.46
20:T:96:LYS:HZ1	53:27:299:A:P	2.38	0.46
37:11:2:ARG:HB3	52:26:933:G:OP2	2.16	0.46
42:16:25:ALA:O	52:26:553:A:O2'	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.96	0.46
44:18:89:ARG:CZ	44:18:89:ARG:HB2	2.45	0.46
28:2:20:TYR:CE2	28:2:37:LYS:HB3	2.50	0.46
51:25:17:ARG:CZ	52:26:1538:C:O2'	2.64	0.46
52:26:178:C:H2'	52:26:179:A:H8	1.80	0.46
52:26:41:G:O2'	52:26:42:G:H5'	2.16	0.46
52:26:735:C:H2'	52:26:736:C:C6	2.51	0.46
53:27:1190:G:H2'	53:27:1191:G:H8	1.81	0.46
53:27:1451:C:H4'	53:27:1452:G:N9	2.30	0.46
53:27:1640:A:H2'	53:27:1641:A:O4'	2.16	0.46
1:A:207:ALA:HA	53:27:1791:A:H5'	1.98	0.46
53:27:183:C:O2'	53:27:184:C:H5'	2.16	0.46
53:27:2028:U:O2'	53:27:2029:G:H5'	2.16	0.46
53:27:2592:G:H2'	53:27:2593:U:H5'	1.98	0.46
53:27:2620:C:H2'	53:27:2621:G:C5'	2.44	0.46
53:27:528:A:H8	53:27:528:A:O5'	1.99	0.46
53:27:5:A:O2'	53:27:6:A:H5'	2.16	0.46
53:27:587:C:C6	53:27:671:C:H1'	2.51	0.46
53:27:825:A:H2'	53:27:826:U:C6	2.51	0.46
56:30:14:A:H2'	56:30:15:G:C1'	2.46	0.46
56:30:38:A:H2'	56:30:39:U:O4'	2.16	0.46
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.46
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.46
34:8:104:MET:HE2	34:8:179:GLY:HA2	1.98	0.46
3:C:21:ARG:HG2	3:C:110:SER:OG	2.15	0.46
3:C:164:LEU:HD22	3:C:167:VAL:CG2	2.46	0.46
7:G:34:THR:HB	53:27:1085:A:H61	1.81	0.46
8:H:37:PHE:HB2	8:H:66:PHE:CZ	2.51	0.46
11:K:14:LYS:O	11:K:15:ALA:CB	2.63	0.46
12:L:53:MET:SD	12:L:117:PHE:HE1	2.39	0.46
16:P:55:GLN:NE2	53:27:559:G:H1'	2.30	0.46
19:S:61:LEU:HD21	19:S:82:LYS:HD2	1.98	0.46
37:11:75:LYS:NZ	37:11:77:ARG:HD3	2.30	0.46
42:16:23:LEU:HG	42:16:24:GLU:N	2.31	0.46
43:17:49:GLU:C	43:17:51:GLN:H	2.20	0.46
44:18:12:ARG:NH2	52:26:980:C:O3'	2.49	0.46
52:26:106:C:H2'	52:26:107:G:O4'	2.15	0.46
47:21:68:LYS:HB2	52:26:267:C:OP1	2.16	0.46
52:26:376:G:O2'	52:26:377:G:H5'	2.16	0.46
52:26:405:U:C3'	52:26:406:G:H5'	2.39	0.46
52:26:447:G:O5'	52:26:447:G:H8	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:549:C:C3'	52:26:550:G:H5''	2.45	0.46
13:M:34:ILE:HG22	53:27:1279:G:H5'	1.98	0.46
53:27:1748:C:H2'	53:27:1749:A:C8	2.51	0.46
53:27:1935:G:H3'	53:27:1962:C:H42	1.80	0.46
53:27:1948:G:H2'	53:27:1949:G:C8	2.51	0.46
53:27:2194:U:H2'	53:27:2195:U:C6	2.51	0.46
53:27:2737:G:H2'	53:27:2738:A:O4'	2.16	0.46
53:27:2873:A:O2'	53:27:2874:C:H5'	2.16	0.46
3:C:132:LYS:HE2	53:27:320:A:OP2	2.16	0.46
53:27:325:G:H2'	53:27:326:G:H8	1.81	0.46
53:27:996:A:O2'	53:27:997:G:H5'	2.15	0.46
54:28:37:C:H2'	54:28:38:C:O4'	2.16	0.46
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.46
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.81	0.46
3:C:178:VAL:HG13	3:C:179:SER:H	1.81	0.46
5:E:154:GLU:HG3	5:E:157:LYS:H	1.80	0.46
7:G:48:ALA:HB3	7:G:51:TYR:CD2	2.51	0.46
10:J:28:SER:HB2	53:27:2566:A:N1	2.30	0.46
14:N:81:ARG:O	14:N:85:LYS:HG2	2.16	0.46
17:Q:15:SER:O	17:Q:18:GLN:HG2	2.15	0.46
19:S:4:GLU:O	19:S:8:LEU:HG	2.16	0.46
26:Z:32:LEU:O	26:Z:34:LEU:N	2.48	0.46
38:12:49:LYS:HB3	38:12:51:GLU:HG3	1.98	0.45
40:14:63:ASP:OD2	44:18:84:ARG:NE	2.42	0.45
43:17:99:GLN:NE2	52:26:1307:U:OP1	2.44	0.45
52:26:1404:C:H2'	52:26:1405:G:H8	1.80	0.45
52:26:160:A:N6	52:26:161:A:C2	2.84	0.45
53:27:1078:U:H5''	53:27:1079:C:O5'	2.15	0.45
53:27:1091:G:O2'	53:27:1092:C:H5'	2.16	0.45
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.52	0.45
11:K:55:MET:HG2	53:27:2392:A:H2	1.80	0.45
53:27:2861:U:O2'	53:27:2862:G:H5'	2.16	0.45
3:C:44:ARG:NE	53:27:444:C:OP2	2.48	0.45
53:27:492:A:H2'	53:27:493:G:O4'	2.15	0.45
53:27:858:G:H8	53:27:858:G:OP2	1.99	0.45
53:27:93:G:H2'	53:27:94:A:O4'	2.15	0.45
58:32:39:C:H2'	58:32:40:C:C6	2.51	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.45
31:5:36:ARG:CG	31:5:37:GLN:N	2.74	0.45
2:B:130:GLN:NE2	53:27:2578:G:N2	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:110:THR:HG21	2:B:169:ARG:NH1	2.31	0.45
2:B:56:LYS:NZ	53:27:2831:G:P	2.89	0.45
4:D:49:LEU:CD2	4:D:83:PRO:HB2	2.46	0.45
6:F:93:SER:HB3	6:F:121:VAL:HG23	1.99	0.45
15:O:89:GLY:C	15:O:112:ARG:HG3	2.36	0.45
18:R:69:LEU:HA	18:R:109:ASP:HA	1.98	0.45
21:U:70:ILE:HG22	21:U:72:VAL:HG13	1.98	0.45
23:W:73:ARG:HD2	23:W:75:GLU:HG2	1.99	0.45
35:9:155:LYS:HB2	38:12:70:VAL:HG13	1.97	0.45
41:15:44:ALA:HB3	41:15:69:CYS:HB2	1.98	0.45
47:21:57:VAL:HG12	47:21:78:VAL:HG23	1.98	0.45
28:2:40:PRO:O	28:2:43:ARG:HG2	2.16	0.45
52:26:1088:G:H21	52:26:1167:A:N6	2.06	0.45
52:26:1112:C:O5'	52:26:1112:C:H6	2.00	0.45
52:26:1129:C:H2'	52:26:1139:G:C6	2.51	0.45
52:26:317:U:H2'	52:26:318:G:C8	2.49	0.45
46:20:5:ARG:HD2	52:26:376:G:H5''	1.97	0.45
42:16:25:ALA:HB1	52:26:554:A:H5'	1.98	0.45
53:27:1029:A:O5'	53:27:1029:A:H8	2.00	0.45
53:27:513:A:H4'	53:27:1217:U:H5'	1.98	0.45
53:27:1268:A:H2'	53:27:1269:A:C8	2.51	0.45
53:27:1372:U:H2'	53:27:1373:A:H8	1.81	0.45
53:27:1381:G:O2'	53:27:1382:G:H5'	2.16	0.45
23:W:22:ASN:HA	53:27:200:U:H5''	1.97	0.45
53:27:2114:A:N3	53:27:2114:A:H2'	2.31	0.45
53:27:2356:U:H2'	53:27:2357:G:O4'	2.16	0.45
2:B:135:GLY:O	53:27:2580:U:H5''	2.16	0.45
53:27:2772:C:H2'	53:27:2773:C:C6	2.52	0.45
53:27:443:A:H5''	53:27:444:C:H5''	1.97	0.45
3:C:84:THR:CB	53:27:586:A:H5'	2.46	0.45
53:27:685:A:H1'	53:27:688:U:O4	2.16	0.45
53:27:969:G:H2'	53:27:970:U:C6	2.51	0.45
56:30:7:A:O2'	56:30:49:C:H5'	2.16	0.45
57:31:28:C:H2'	57:31:29:G:H8	1.81	0.45
58:32:68:C:O2'	58:32:69:C:H5'	2.15	0.45
59:33:699:SER:HA	59:33:710:ILE:HA	1.96	0.45
31:5:11:CYS:N	31:5:14:CYS:SG	2.88	0.45
32:6:49:PHE:CD1	32:6:199:ILE:HD13	2.52	0.45
34:8:117:VAL:O	34:8:130:ASN:HA	2.17	0.45
2:B:37:VAL:HG23	2:B:92:VAL:HG22	1.97	0.45
5:E:85:LYS:O	5:E:164:ALA:N	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:81:LEU:O	7:G:82:ILE:HD13	2.16	0.45
8:H:112:LYS:HE2	8:H:116:MET:CG	2.46	0.45
10:J:121:GLU:OE2	15:O:62:LYS:NZ	2.49	0.45
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.17	0.45
17:Q:34:GLU:OE2	17:Q:60:LYS:HG2	2.17	0.45
17:Q:77:PHE:CD1	17:Q:84:ARG:HB3	2.52	0.45
17:Q:71:LYS:N	17:Q:90:ARG:HG2	2.32	0.45
18:R:4:ILE:HG22	18:R:106:VAL:HG22	1.98	0.45
20:T:32:LYS:HB3	20:T:63:ALA:HB1	1.98	0.45
25:Y:52:PHE:CD1	54:28:83:G:H4'	2.51	0.45
36:10:25:TYR:O	36:10:29:ILE:HG13	2.16	0.45
38:12:9:MET:HB2	38:12:26:MET:CE	2.47	0.45
42:16:27:PRO:HD2	52:26:363:A:C4	2.51	0.45
44:18:66:THR:HG21	52:26:1202:U:O2	2.17	0.45
47:21:30:HIS:CD2	47:21:32:ILE:H	2.34	0.45
52:26:1417:G:N2	52:26:1482:G:H2'	2.31	0.45
52:26:305:G:H5''	52:26:306:A:OP1	2.16	0.45
46:20:6:LEU:HD12	52:26:375:U:O3'	2.16	0.45
52:26:607:A:H2'	52:26:608:A:C8	2.52	0.45
52:26:895:G:H2'	52:26:896:C:C6	2.52	0.45
52:26:928:G:O2'	52:26:929:G:H5'	2.17	0.45
53:27:1111:A:N3	53:27:1112:G:H1'	2.31	0.45
53:27:1385:A:C4	53:27:1386:C:C5	3.03	0.45
53:27:14:A:N6	53:27:15:G:C2	2.84	0.45
53:27:1793:C:H2'	53:27:1794:A:C8	2.51	0.45
53:27:2122:U:H2'	53:27:2123:G:O4'	2.16	0.45
53:27:2233:U:H2'	53:27:2234:G:H8	1.78	0.45
53:27:2418:A:H2'	53:27:2419:U:O4'	2.17	0.45
53:27:2712:C:O2'	53:27:2713:U:OP1	2.28	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.16	0.45
53:27:2774:C:H2'	53:27:2775:G:O4'	2.16	0.45
53:27:2828:G:C2	53:27:2829:A:C8	3.05	0.45
53:27:64:A:H2'	53:27:65:U:C6	2.52	0.45
53:27:709:U:H2'	53:27:710:U:C6	2.52	0.45
53:27:828:U:H2'	53:27:829:A:C8	2.51	0.45
56:30:60:U:H5''	56:30:61:C:OP2	2.16	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
59:33:418:LEU:HD21	59:33:430:HIS:HD2	1.79	0.45
32:6:35:ASN:O	32:6:37:VAL:N	2.46	0.45
33:7:32:LEU:O	33:7:35:ASP:HB3	2.16	0.45
34:8:103:ARG:NH2	34:8:110:ARG:NH2	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:113:VAL:HG13	35:9:114:LEU:CD1	2.46	0.45
1:A:210:ALA:O	1:A:213:ARG:HB2	2.16	0.45
4:D:91:ARG:HG2	54:28:43:C:O2'	2.15	0.45
7:G:11:ILE:O	7:G:15:VAL:HG23	2.17	0.45
7:G:33:VAL:HA	53:27:1055:G:H4'	1.98	0.45
2:B:13:ARG:NH1	15:O:55:HIS:HA	2.28	0.45
44:18:72:PHE:CE1	44:18:77:GLY:HA2	2.52	0.45
46:20:72:ALA:O	46:20:75:ILE:HB	2.16	0.45
50:24:11:ILE:C	50:24:11:ILE:HD12	2.37	0.45
50:24:24:ARG:O	50:24:28:ARG:HG3	2.16	0.45
52:26:1090:U:O2'	52:26:1091:U:H5'	2.17	0.45
52:26:122:G:C6	52:26:123:U:C4	3.05	0.45
52:26:234:C:H2'	52:26:235:C:H6	1.77	0.45
52:26:130:A:H1'	52:26:264:C:O4'	2.16	0.45
52:26:314:C:O2'	52:26:315:A:H5'	2.17	0.45
52:26:545:C:O2'	52:26:546:A:H5'	2.16	0.45
52:26:563:A:C2	52:26:567:G:C5	3.04	0.45
52:26:796:C:O2'	52:26:797:C:H5'	2.16	0.45
52:26:997:U:O2'	52:26:998:C:H5'	2.17	0.45
53:27:1096:A:H3'	53:27:1097:U:C5'	2.42	0.45
53:27:1754:A:H2'	53:27:1755:A:C8	2.51	0.45
53:27:183:C:H2'	53:27:184:C:H5'	1.99	0.45
53:27:242:G:N2	53:27:254:G:H2'	2.31	0.45
53:27:2515:C:H2'	53:27:2516:A:C8	2.52	0.45
53:27:2648:G:H2'	53:27:2649:C:H6	1.81	0.45
53:27:600:G:H2'	53:27:601:C:H6	1.82	0.45
53:27:644:A:H2'	53:27:645:C:C5'	2.44	0.45
53:27:704:G:H2'	53:27:726:G:N1	2.31	0.45
57:31:69:C:H2'	57:31:70:G:C8	2.49	0.45
58:32:7:G:H3'	58:32:8:U:C5'	2.46	0.45
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.45
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.45
59:33:315:LYS:CB	59:33:316:PRO:HD2	2.42	0.45
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.45
59:33:639:GLU:O	59:33:643:GLU:N	2.49	0.45
34:8:160:LEU:C	34:8:160:LEU:HD23	2.37	0.45
34:8:58:GLN:OE1	34:8:61:ARG:NH1	2.49	0.45
1:A:259:ASN:O	1:A:261:ARG:N	2.43	0.45
2:B:3:GLY:C	2:B:4:LEU:HD12	2.36	0.45
3:C:171:ASP:O	3:C:172:ALA:C	2.54	0.45
4:D:48:LEU:HD21	4:D:147:ARG:HE	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:94:ARG:HH21	26:Z:1:MET:HE3	1.81	0.45
6:F:132:PHE:CE2	6:F:142:VAL:HB	2.51	0.45
11:K:116:VAL:CG2	11:K:117:THR:N	2.79	0.45
12:L:125:PRO:HG2	12:L:126:ILE:H	1.81	0.45
16:P:14:LYS:O	16:P:18:LYS:HG3	2.15	0.45
20:T:23:LYS:C	20:T:35:VAL:HG13	2.37	0.45
38:12:5:PRO:O	38:12:8:ASP:HB3	2.17	0.45
40:14:25:ILE:HG23	40:14:26:VAL:N	2.32	0.45
40:14:66:GLU:HB3	44:18:98:ALA:CB	2.44	0.45
27:1:43:THR:HG1	27:1:47:TYR:N	2.14	0.45
46:20:7:ALA:CB	46:20:18:GLN:HB3	2.46	0.45
50:24:4:LYS:HB3	50:24:6:ALA:HB3	1.99	0.45
52:26:1095:U:O2'	52:26:1096:C:H5'	2.17	0.45
52:26:1179:A:C2'	52:26:1180:A:H5'	2.47	0.45
52:26:978:A:H2	52:26:1319:A:O4'	1.99	0.45
52:26:1305:G:N2	52:26:1331:G:C2'	2.80	0.45
52:26:1403:C:H6	52:26:1403:C:O5'	1.99	0.45
52:26:1461:G:H2'	52:26:1462:C:C6	2.51	0.45
52:26:1468:A:O2'	52:26:1469:C:H5'	2.16	0.45
52:26:1488:G:H2'	52:26:1489:G:C8	2.51	0.45
52:26:298:A:H2'	52:26:299:G:O4'	2.17	0.45
42:16:28:GLN:NE2	52:26:33:A:O2'	2.50	0.45
52:26:45:G:H2'	52:26:46:G:H8	1.81	0.45
52:26:892:A:C6	52:26:893:C:C4	3.04	0.45
52:26:976:G:H1'	52:26:1363:A:N6	2.31	0.45
53:27:1111:A:O2'	53:27:1112:G:OP1	2.32	0.45
53:27:1206:G:H2'	53:27:1207:C:C6	2.51	0.45
53:27:1304:A:H2'	53:27:1305:C:C5'	2.34	0.45
53:27:1316:U:H2'	53:27:1317:G:C8	2.51	0.45
53:27:1408:G:H2'	53:27:1409:U:O4'	2.17	0.45
53:27:1670:C:C5	53:27:1671:U:C4	3.04	0.45
53:27:1748:C:H2'	53:27:1749:A:H8	1.81	0.45
53:27:1796:U:H2'	53:27:1797:G:C8	2.44	0.45
53:27:2648:G:H2'	53:27:2649:C:C6	2.52	0.45
53:27:2784:U:O2'	53:27:2785:C:H5'	2.17	0.45
53:27:2809:A:H5'	53:27:2810:A:OP2	2.17	0.45
53:27:30:G:H2'	53:27:31:C:C6	2.51	0.45
53:27:319:G:H2'	53:27:320:A:C8	2.51	0.45
53:27:776:G:C5	53:27:793:A:C8	3.05	0.45
54:28:119:A:C2	54:28:120:A:H1'	2.52	0.45
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.45
59:33:675:ASP:HB2	59:33:706:GLN:CG	2.47	0.45
59:33:690:GLU:OE2	59:33:725:VAL:HG22	2.16	0.45
6:F:61:VAL:HG23	6:F:62:LEU:N	2.31	0.45
9:I:18:VAL:CG2	9:I:140:LEU:HD22	2.47	0.45
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.15	0.45
10:J:48:PRO:HG3	52:26:1422:G:H5'	1.98	0.45
16:P:65:ASN:HD21	16:P:69:ARG:HH11	1.65	0.45
17:Q:49:ILE:HG22	17:Q:54:VAL:CA	2.47	0.45
20:T:48:VAL:C	20:T:53:GLN:HB3	2.37	0.45
37:11:141:HIS:O	37:11:145:GLU:HG2	2.16	0.45
39:13:10:ARG:HH21	52:26:1149:C:P	2.39	0.45
39:13:60:LEU:HD12	39:13:60:LEU:O	2.17	0.45
41:15:108:ASN:HA	51:25:6:ARG:HA	1.97	0.45
43:17:33:LEU:HD23	43:17:40:GLU:HA	1.99	0.45
49:23:57:VAL:HA	49:23:58:PRO:HD3	1.67	0.45
52:26:1084:G:H1'	52:26:1103:C:H41	1.82	0.45
52:26:1236:A:H2'	52:26:1237:C:C6	2.51	0.45
52:26:286:C:H2'	52:26:287:U:H6	1.82	0.45
46:20:6:LEU:CD1	52:26:375:U:H4'	2.42	0.45
34:8:119:HIS:ND1	52:26:437:U:O2'	2.39	0.45
42:16:49:ARG:HH12	52:26:523:A:H61	1.63	0.45
42:16:49:ARG:NH1	52:26:523:A:N6	2.63	0.45
52:26:606:G:N2	52:26:631:C:H3'	2.32	0.45
52:26:78:A:H2'	52:26:79:G:C8	2.51	0.45
52:26:918:A:H2'	52:26:919:A:O4'	2.17	0.45
52:26:926:G:C6	52:26:1505:G:N7	2.85	0.45
52:26:982:U:H4'	52:26:983:A:O5'	2.17	0.45
53:27:1565:C:HO2'	53:27:1566:A:H2'	1.81	0.45
53:27:1721:G:H22	53:27:1738:G:H2'	1.81	0.45
1:A:177:SER:HB3	53:27:1799:G:O6	2.16	0.45
53:27:1809:A:N7	53:27:1810:A:C6	2.85	0.45
53:27:1904:G:N2	53:27:1905:C:H1'	2.31	0.45
53:27:1935:G:H1'	53:27:1964:G:N2	2.32	0.45
53:27:1979:U:C2'	53:27:1980:G:H5'	2.47	0.45
53:27:2521:C:H2'	53:27:2522:U:O4'	2.16	0.45
15:O:50:ARG:NH2	53:27:2683:C:OP1	2.47	0.45
53:27:494:G:O2'	53:27:495:G:H5'	2.16	0.45
53:27:809:G:H2'	53:27:810:U:H6	1.82	0.45
57:31:17:C:H2'	57:31:17(A):U:H5	1.81	0.45
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:259:ILE:O	59:33:263:MET:HG3	2.17	0.45
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.45
34:8:100:VAL:HG21	34:8:136:VAL:HG21	1.99	0.45
34:8:149:LYS:C	34:8:151:GLN:H	2.19	0.45
6:F:140:ALA:C	6:F:141:LYS:HD2	2.37	0.45
7:G:11:ILE:O	7:G:14:GLU:HB3	2.17	0.45
8:H:75:ALA:CB	8:H:131:THR:HG21	2.47	0.45
8:H:2:LYS:HZ3	8:H:62:ALA:HB2	1.79	0.45
9:I:37:ARG:NH2	9:I:37:ARG:HG3	2.30	0.45
11:K:134:ALA:O	11:K:137:ALA:HB3	2.16	0.45
2:B:12:THR:HG23	15:O:55:HIS:CE1	2.52	0.45
22:V:13:GLU:O	22:V:14:ALA:C	2.53	0.45
23:W:39:VAL:HG12	23:W:41:SER:HB3	1.97	0.45
36:10:36:ILE:HD11	36:10:39:LEU:HG	1.97	0.45
37:11:129:ASN:O	37:11:134:VAL:HG21	2.16	0.45
39:13:17:ARG:CB	39:13:65:THR:HB	2.46	0.45
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.46	0.45
43:17:3:ILE:HD12	43:17:59:VAL:HG11	1.98	0.45
44:18:29:ILE:O	44:18:32:ASP:HB3	2.17	0.45
44:18:81:ILE:HG21	52:26:1202:U:C2	2.52	0.45
51:25:19:LYS:HB3	51:25:24:LYS:HE3	1.99	0.45
52:26:1415:G:C4	52:26:1416:G:C8	3.05	0.45
52:26:461:A:H2'	52:26:462:G:C8	2.51	0.45
52:26:538:G:H2'	52:26:539:A:H8	1.82	0.45
52:26:596:A:H2'	52:26:597:G:H8	1.82	0.45
52:26:810:C:O2'	52:26:811:C:H5'	2.17	0.45
52:26:811:C:H4'	52:26:900:A:N6	2.31	0.45
52:26:90:C:H6	52:26:90:C:H5''	1.81	0.45
9:I:27:ARG:NH2	53:27:1142:A:H4'	2.32	0.45
53:27:1353:A:H2'	53:27:1354:A:C8	2.51	0.45
53:27:1505:A:H2'	53:27:1506:U:C6	2.52	0.45
53:27:1660:G:C2	53:27:1661:G:C5	3.04	0.45
53:27:1858:A:H1'	53:27:1885:A:C2	2.52	0.45
53:27:2051:A:H2'	53:27:2614:A:N6	2.32	0.45
53:27:2262:U:H2'	53:27:2263:C:H6	1.81	0.45
53:27:2297:A:C2	53:27:2321:U:H5	2.34	0.45
53:27:237:C:H2'	53:27:238:C:H6	1.81	0.45
53:27:2415:G:H2'	53:27:2416:C:C6	2.51	0.45
53:27:24:G:C2	53:27:25:U:C2	3.04	0.45
53:27:2556:C:C5	53:27:2557:G:N7	2.85	0.45
53:27:528:A:C3'	53:27:528:A:C8	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:826:U:H5''	53:27:2428:G:O3'	2.17	0.45
29:3:18:PHE:O	29:3:21:ARG:HB3	2.17	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.45
59:33:634:HIS:O	59:33:635:ARG:HB3	2.16	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.45
33:7:196:GLY:N	52:26:1057:G:H4'	2.32	0.45
35:9:110:MET:O	35:9:113:VAL:HG12	2.17	0.45
35:9:82:HIS:HE1	35:9:146:MET:HA	1.81	0.45
2:B:166:GLY:O	2:B:168:GLU:N	2.46	0.45
7:G:22:ALA:HB1	7:G:91:ALA:HB1	1.97	0.45
7:G:60:LEU:HA	7:G:64:VAL:CG2	2.47	0.45
7:G:51:TYR:HE1	7:G:89:PRO:HG2	1.81	0.45
10:J:22:ILE:HD11	10:J:40:LYS:CB	2.46	0.45
18:R:65:ASP:OD2	18:R:68:ASP:HB3	2.16	0.45
20:T:45:GLN:O	20:T:55:GLY:HA2	2.16	0.45
39:13:80:HIS:CD2	39:13:84:ARG:HG2	2.52	0.45
40:14:102:LEU:HD23	40:14:102:LEU:C	2.37	0.45
41:15:62:ALA:O	41:15:65:ALA:HB3	2.16	0.45
49:23:31:ARG:HD3	59:33:602:VAL:CG2	2.40	0.45
50:24:56:ILE:H	50:24:56:ILE:HD12	1.82	0.45
50:24:57:VAL:HG13	50:24:58:ASP:H	1.81	0.45
52:26:1031:C:H4'	52:26:1033:G:N3	2.32	0.45
52:26:1064:G:O2'	52:26:1190:G:N2	2.49	0.45
52:26:1516:G:N2	52:26:1520:C:C2	2.85	0.45
47:21:42:LYS:HZ3	52:26:277:C:P	2.39	0.45
52:26:390:U:H2'	52:26:391:G:H8	1.81	0.45
52:26:422:C:O2'	52:26:423:G:H5''	2.17	0.45
52:26:895:G:H2'	52:26:896:C:H6	1.81	0.45
53:27:1166:G:O2'	53:27:1167:C:H5'	2.17	0.45
53:27:1345:C:H5'	53:27:1345:C:H6	1.81	0.45
53:27:210:C:H2'	53:27:211:C:H6	1.82	0.45
53:27:2248:C:H2'	53:27:2249:U:C5'	2.46	0.45
53:27:302:C:O2'	53:27:303:G:H5'	2.17	0.45
53:27:341:C:H2'	53:27:342:A:C8	2.51	0.45
53:27:496:G:H2'	53:27:497:A:O4'	2.17	0.45
53:27:599:A:H2'	53:27:600:G:C8	2.50	0.45
53:27:638:G:H2'	53:27:639:U:O4'	2.17	0.45
53:27:807:U:O2'	53:27:808:G:H5'	2.17	0.45
54:28:59:A:H2'	54:28:60:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.45
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.45
59:33:406:VAL:HG23	59:33:418:LEU:HB2	1.99	0.45
59:33:678:GLY:O	59:33:681:ARG:HB2	2.17	0.45
31:5:11:CYS:SG	31:5:33:HIS:CE1	3.09	0.45
32:6:19:THR:OG1	32:6:20:ARG:N	2.49	0.45
32:6:204:ASP:OD1	32:6:205:ALA:N	2.46	0.45
32:6:27:LYS:O	32:6:29:PHE:N	2.45	0.45
33:7:10:ARG:HH11	33:7:10:ARG:HG3	1.81	0.45
33:7:21:TRP:CE2	44:18:93:PRO:HG2	2.51	0.45
3:C:109:LEU:HA	3:C:112:LEU:HD12	1.99	0.45
9:I:15:TRP:CZ2	9:I:135:GLN:HG3	2.52	0.45
9:I:36:LEU:O	9:I:51:GLY:HA3	2.17	0.45
16:P:14:LYS:HE3	53:27:1218:G:OP2	2.17	0.45
21:U:21:ARG:NH2	21:U:87:GLN:O	2.50	0.45
39:13:36:GLN:HB2	39:13:40:ARG:HH11	1.81	0.45
49:23:30:LEU:HD22	49:23:48:ILE:CG2	2.47	0.45
52:26:1002:G:H2'	52:26:1003:G:O4'	2.17	0.45
52:26:1006:G:O2'	52:26:1007:U:H5'	2.16	0.45
52:26:384:G:H2'	52:26:385:C:C6	2.52	0.45
52:26:413:G:H1'	52:26:428:G:H21	1.78	0.45
52:26:466:A:H5''	52:26:467:U:OP1	2.17	0.45
52:26:686:U:O4	52:26:703:G:H2'	2.16	0.45
52:26:880:C:H2'	52:26:881:G:H8	1.81	0.45
8:H:88:GLY:H	53:27:1064:C:H5'	1.82	0.45
53:27:1080:A:O2'	53:27:1081:U:H5'	2.17	0.45
53:27:1293:C:H2'	53:27:1294:U:C5'	2.42	0.45
53:27:1909:C:H2'	53:27:1910:G:H8	1.82	0.45
53:27:2190:G:H2'	53:27:2191:A:H8	1.82	0.45
53:27:2398:U:H2'	53:27:2399:G:H8	1.80	0.45
53:27:2407:A:H2'	53:27:2408:U:H6	1.80	0.45
53:27:2632:A:H2'	53:27:2633:G:H8	1.81	0.45
53:27:2681:C:C4	53:27:2724:U:C5	3.05	0.45
53:27:2805:C:H2'	53:27:2806:C:H6	1.80	0.45
53:27:2821:A:C2	53:27:2822:G:C4	3.05	0.45
53:27:441:U:H2'	53:27:442:G:C8	2.52	0.45
53:27:466:A:N3	53:27:683:U:H1'	2.32	0.45
53:27:910:A:C6	53:27:911:A:C6	3.05	0.45
29:3:24:THR:OG1	29:3:25:LYS:N	2.50	0.45
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.45
29:3:34:ARG:HH12	53:27:466:A:P	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.45
32:6:56:LEU:HG	32:6:183:PHE:HE2	1.82	0.45
34:8:111:ALA:O	34:8:114:ARG:HB3	2.17	0.45
34:8:168:THR:HB	34:8:183:ARG:HH22	1.82	0.45
35:9:23:THR:HA	35:9:28:ARG:HA	1.99	0.45
1:A:230:PRO:HB2	1:A:244:VAL:CG2	2.45	0.45
1:A:234:GLY:CA	1:A:238:ASN:HD22	2.30	0.45
3:C:189:THR:O	3:C:193:VAL:HG23	2.17	0.45
6:F:9:VAL:HB	6:F:13:GLY:CA	2.43	0.45
13:M:52:ILE:O	13:M:55:ALA:N	2.48	0.45
15:O:108:ARG:NH1	52:26:1464:U:P	2.90	0.45
15:O:29:VAL:HG21	15:O:73:PHE:HE1	1.82	0.45
17:Q:93:PHE:C	17:Q:93:PHE:CD1	2.90	0.45
44:18:25:GLU:O	44:18:28:ALA:HB3	2.17	0.45
52:26:1329:A:H2'	52:26:1330:U:O4'	2.16	0.45
52:26:181:A:N6	52:26:194:C:H2'	2.29	0.45
52:26:363:A:O2'	52:26:364:A:H5'	2.17	0.45
52:26:408:A:H2'	52:26:409:U:C6	2.52	0.45
52:26:406:G:O6	52:26:495:A:H2'	2.17	0.45
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.45
53:27:1115:G:H2'	53:27:1116:G:C8	2.51	0.45
53:27:1351:C:O2'	53:27:1571:A:H1'	2.17	0.45
53:27:164:C:H2'	53:27:165:A:H5'	1.98	0.45
53:27:1790:C:H5''	53:27:1791:A:OP1	2.17	0.45
53:27:1901:A:H2'	53:27:1902:C:H6	1.78	0.45
53:27:1977:A:H2'	53:27:1978:A:O4'	2.17	0.45
53:27:2107:G:H2'	53:27:2108:A:C1'	2.47	0.45
53:27:2135:A:C6	53:27:2136:G:H1'	2.51	0.45
53:27:214:G:O2'	53:27:215:G:H5'	2.17	0.45
53:27:2294:G:H2'	53:27:2295:C:H6	1.82	0.45
11:K:54:GLN:NE2	53:27:2358:A:H61	2.14	0.45
53:27:2589:A:H2'	53:27:2590:A:C8	2.52	0.45
53:27:2591:C:C2	53:27:2592:G:N7	2.85	0.45
53:27:2665:A:O2'	53:27:2666:C:H5'	2.17	0.45
53:27:2876:G:H2'	53:27:2877:G:O4'	2.17	0.45
53:27:538:A:H2'	53:27:539:G:H8	1.78	0.45
53:27:840:C:H6	53:27:840:C:O5'	1.99	0.45
58:32:7:G:H2'	58:32:49:G:O4'	2.16	0.45
58:32:60:U:H2'	58:32:61:C:H5	1.77	0.45
59:33:675:ASP:HB2	59:33:706:GLN:HG2	1.99	0.45
59:33:676:ARG:O	59:33:679:LEU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:131:ARG:HE	33:7:135:ARG:HH21	1.65	0.45
33:7:149:LYS:HA	33:7:167:TYR:O	2.17	0.45
34:8:78:ALA:HB1	34:8:85:THR:O	2.17	0.45
2:B:148:GLN:N	2:B:148:GLN:OE1	2.50	0.45
3:C:119:ILE:HB	3:C:187:VAL:HA	1.99	0.45
5:E:16:VAL:CG1	5:E:17:LYS:N	2.80	0.45
6:F:75:LEU:O	6:F:77:THR:HG22	2.17	0.45
7:G:25:ALA:HA	7:G:96:PHE:HE1	1.82	0.45
8:H:93:ASN:O	8:H:94:LYS:HG3	2.17	0.45
9:I:17:VAL:CG2	9:I:137:PRO:HB2	2.44	0.45
11:K:19:LEU:HD23	11:K:20:GLY:N	2.32	0.45
15:O:105:LYS:HG2	52:26:1432:G:O5'	2.17	0.45
26:Z:66:ILE:HG21	44:18:40:ARG:NH2	2.32	0.45
37:11:15:PRO:HA	39:13:45:MET:SD	2.56	0.44
37:11:3:ARG:HD3	37:11:4:ARG:NH1	2.32	0.44
43:17:15:VAL:HG22	43:17:33:LEU:HD22	1.99	0.44
44:18:20:PHE:HA	44:18:23:ARG:C	2.38	0.44
46:20:19:VAL:HB	46:20:37:GLY:C	2.37	0.44
46:20:42:ILE:HD12	46:20:42:ILE:O	2.17	0.44
52:26:1040:U:O2'	52:26:1041:G:H5'	2.17	0.44
52:26:122:G:O5'	52:26:122:G:H8	1.99	0.44
52:26:1369:C:H2'	52:26:1370:G:C8	2.52	0.44
42:16:120:ARG:HH22	52:26:500:G:P	2.40	0.44
52:26:680:C:H2'	52:26:681:A:H8	1.81	0.44
52:26:21:G:H1'	52:26:915:A:H61	1.82	0.44
53:27:1687:G:H2'	53:27:1688:U:C6	2.52	0.44
53:27:1691:C:O2'	53:27:1692:U:H5'	2.17	0.44
53:27:1842:G:H2'	53:27:1843:C:H6	1.81	0.44
53:27:2016:U:O5'	53:27:2016:U:H6	1.99	0.44
53:27:2039:U:H2'	53:27:2040:G:H8	1.81	0.44
53:27:2049:G:C4	53:27:2050:C:C5	3.06	0.44
53:27:2135:A:C5	53:27:2136:G:H1'	2.51	0.44
53:27:2675:A:O2'	53:27:2676:C:H5'	2.16	0.44
53:27:282:A:H2'	53:27:283:G:C8	2.51	0.44
57:31:25:C:C2	57:31:26:G:C8	3.05	0.44
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.44
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
30:4:51:LYS:HD2	53:27:937:C:OP1	2.17	0.44
32:6:156:LEU:HA	32:6:157:PRO:HD3	1.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:67:LEU:HD23	32:6:68:PHE:N	2.32	0.44
33:7:24:ASN:O	33:7:28:PHE:N	2.50	0.44
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	0.44
35:9:96:GLN:HG3	35:9:97:PRO:HD2	1.98	0.44
1:A:227:VAL:HG11	53:27:784:G:N1	2.32	0.44
2:B:133:THR:HG23	2:B:134:HIS:N	2.32	0.44
5:E:93:TYR:HA	5:E:105:SER:O	2.16	0.44
9:I:117:ALA:HA	9:I:120:ARG:HH22	1.81	0.44
15:O:31:VAL:HG12	15:O:38:ARG:O	2.17	0.44
16:P:105:PHE:O	16:P:109:VAL:HG23	2.17	0.44
17:Q:21:ARG:O	17:Q:22:LEU:HD12	2.16	0.44
17:Q:78:ARG:CB	17:Q:78:ARG:NH2	2.80	0.44
21:U:51:GLN:HA	21:U:56:PHE:CD2	2.51	0.44
40:14:53:ILE:HG22	40:14:61:ALA:O	2.17	0.44
41:15:29:THR:HG21	41:15:62:ALA:HB2	1.98	0.44
28:2:29:LYS:HD2	53:27:2286:G:OP1	2.17	0.44
51:25:49:ALA:O	51:25:53:LYS:HG3	2.17	0.44
52:26:1074:G:C6	52:26:1102:A:N6	2.85	0.44
52:26:1509:C:C6	52:26:1510:C:H5	2.35	0.44
52:26:24:U:H2'	52:26:25:C:C6	2.52	0.44
52:26:341:C:O2'	52:26:342:C:H5'	2.16	0.44
52:26:86:G:H21	52:26:87:C:N4	2.16	0.44
53:27:1209:U:O2'	53:27:1210:G:H5''	2.17	0.44
16:P:5:ARG:HD2	53:27:1250:G:H5''	1.99	0.44
53:27:1869:G:C2	53:27:1871:A:H5''	2.52	0.44
53:27:2060:A:N3	53:27:2060:A:C3'	2.74	0.44
53:27:2162:G:H4'	53:27:2171:A:C5'	2.46	0.44
53:27:2178:C:H2'	53:27:2179:C:C6	2.53	0.44
53:27:2335:A:N7	53:27:2337:G:C5	2.85	0.44
53:27:383:C:C2'	53:27:383:C:O2	2.65	0.44
53:27:677:A:H2'	53:27:678:C:C6	2.51	0.44
53:27:973:A:H5'	53:27:1188:U:H1'	1.99	0.44
54:28:35:C:H2'	54:28:36:C:C5'	2.47	0.44
57:31:2:G:H2'	57:31:3:C:C6	2.52	0.44
59:33:473:ARG:HA	59:33:477:ASN:H	1.82	0.44
59:33:676:ARG:CG	59:33:677:SER:H	2.17	0.44
1:A:245:THR:HG23	1:A:249:VAL:O	2.17	0.44
2:B:121:THR:HB	2:B:127:PHE:CE2	2.51	0.44
7:G:47:GLU:HB2	7:G:51:TYR:HE2	1.82	0.44
9:I:15:TRP:CE2	9:I:135:GLN:HG3	2.51	0.44
9:I:98:GLU:HB3	9:I:124:VAL:CG2	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:24:THR:OG1	14:N:90:VAL:HG22	2.16	0.44
15:O:16:VAL:HG13	15:O:83:ILE:HD12	1.99	0.44
19:S:2:ILE:HG22	19:S:5:GLU:OE1	2.16	0.44
24:X:23:ARG:O	24:X:24:GLU:C	2.55	0.44
25:Y:53:MET:HG3	25:Y:54:VAL:HG13	1.99	0.44
37:11:131:GLY:O	37:11:134:VAL:HG22	2.18	0.44
38:12:2:MET:HG3	38:12:2:MET:O	2.17	0.44
41:15:111:ASP:OD2	51:25:24:LYS:HG2	2.17	0.44
43:17:28:ARG:HG2	43:17:62:PHE:CE2	2.53	0.44
44:18:44:VAL:O	44:18:48:GLN:NE2	2.47	0.44
52:26:734:G:H2'	52:26:735:C:C6	2.52	0.44
53:27:1309:G:H2'	53:27:1310:G:O4'	2.16	0.44
53:27:1651:G:C2	53:27:1652:A:C4	3.05	0.44
53:27:1810:A:H2'	53:27:1811:G:O4'	2.17	0.44
53:27:2391:G:H1'	53:27:2429:G:N2	2.33	0.44
53:27:23:G:H2'	53:27:24:G:C8	2.51	0.44
53:27:2471:A:C2'	53:27:2472:G:H5'	2.47	0.44
53:27:2565:A:H5''	53:27:2566:A:OP2	2.16	0.44
53:27:308:G:H2'	53:27:309:A:C8	2.52	0.44
53:27:764:A:O2'	53:27:765:C:H5'	2.17	0.44
53:27:780:G:H2'	53:27:782:A:N7	2.31	0.44
53:27:869:G:H2'	53:27:870:U:O4'	2.17	0.44
59:33:293:LEU:HD23	59:33:293:LEU:C	2.37	0.44
59:33:461:ILE:HG22	59:33:462:GLU:N	2.32	0.44
59:33:599:VAL:HG21	59:33:631:ILE:CD1	2.47	0.44
31:5:7:VAL:HG12	31:5:35:GLN:HB3	2.00	0.44
32:6:18:GLN:O	32:6:19:THR:HB	2.17	0.44
35:9:148:SER:OG	35:9:151:MET:HG2	2.17	0.44
12:L:95:LEU:O	12:L:96:ILE:HD13	2.18	0.44
17:Q:32:THR:HA	17:Q:62:GLU:HA	2.00	0.44
20:T:10:VAL:HG12	20:T:71:ILE:HA	1.99	0.44
22:V:36:GLN:OE1	22:V:41:PHE:N	2.50	0.44
37:11:115:MET:O	37:11:118:ARG:HG2	2.17	0.44
39:13:11:ARG:NH1	39:13:12:LYS:HB2	2.32	0.44
41:15:51:PHE:HE2	41:15:64:VAL:HG11	1.82	0.44
43:17:25:GLY:H	52:26:1329:A:C5'	2.20	0.44
44:18:40:ARG:O	44:18:43:ALA:HB3	2.17	0.44
52:26:1120:C:H2'	52:26:1121:U:H6	1.82	0.44
39:13:121:ARG:HH12	52:26:1346:A:P	2.40	0.44
42:16:112:ALA:HA	52:26:502:A:OP1	2.18	0.44
53:27:1637:A:H2'	53:27:1638:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:197:A:C4	53:27:2430:A:C6	3.06	0.44
53:27:2206:C:H2'	53:27:2207:C:H6	1.83	0.44
53:27:2216:G:H2'	53:27:2217:G:C8	2.52	0.44
53:27:2475:C:C2'	53:27:2476:A:H5'	2.47	0.44
53:27:2636:C:O2'	53:27:2637:U:H5'	2.17	0.44
53:27:2824:C:C4	53:27:2825:G:C5	3.04	0.44
53:27:588:U:H2'	53:27:589:U:C6	2.52	0.44
53:27:995:C:C6	53:27:995:C:H5'	2.53	0.44
59:33:692:VAL:CG1	59:33:716:ILE:HG13	2.47	0.44
34:8:86:GLY:O	34:8:90:LEU:HG	2.17	0.44
1:A:164:VAL:HG23	1:A:174:ARG:HB2	2.00	0.44
1:A:160:TYR:HB3	1:A:193:GLU:HB3	1.98	0.44
14:N:30:ARG:NH2	54:28:48:U:P	2.90	0.44
15:O:13:LYS:HE2	15:O:13:LYS:HB3	1.77	0.44
17:Q:78:ARG:HH21	17:Q:78:ARG:HB3	1.83	0.44
17:Q:21:ARG:HG3	17:Q:95:ASP:OD1	2.17	0.44
21:U:7:GLU:HA	21:U:65:VAL:HG23	1.99	0.44
21:U:86:LEU:N	21:U:86:LEU:CD1	2.80	0.44
4:D:104:THR:O	26:Z:38:SER:HB3	2.16	0.44
42:16:113:ARG:NH1	42:16:113:ARG:HG2	2.31	0.44
43:17:39:ALA:O	43:17:42:VAL:HG22	2.17	0.44
47:21:11:VAL:HG13	47:21:20:ILE:HD11	1.99	0.44
51:25:11:PHE:CZ	51:25:13:VAL:HA	2.53	0.44
52:26:1093:A:O2'	52:26:1094:G:H5'	2.17	0.44
52:26:1339:A:H2'	52:26:1340:A:O4'	2.17	0.44
52:26:1515:G:H2'	52:26:1516:G:H8	1.78	0.44
52:26:229:U:H2'	52:26:230:G:C8	2.53	0.44
52:26:552:U:O2'	52:26:553:A:H5'	2.17	0.44
52:26:707:U:H2'	52:26:708:C:C6	2.53	0.44
52:26:731:G:C5'	52:26:766:A:H4'	2.46	0.44
52:26:806:C:O2'	52:26:807:A:H5'	2.18	0.44
53:27:103:A:H2'	53:27:104:A:O4'	2.17	0.44
53:27:1683:U:H2'	53:27:1684:G:C8	2.53	0.44
53:27:1999:C:H2'	53:27:2000:C:C6	2.53	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.53	0.44
53:27:222:A:H61	53:27:232:G:H1'	1.81	0.44
53:27:2448:A:H3'	53:27:2449:U:H2'	1.98	0.44
53:27:2549:G:O2'	53:27:2550:G:H5'	2.17	0.44
53:27:2668:G:H2'	53:27:2669:G:H8	1.83	0.44
53:27:603:A:H4'	53:27:604:G:O5'	2.17	0.44
53:27:637:A:C6	53:27:652:U:H4'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:94:GLN:OE1	53:27:660:C:H5''	2.17	0.44
53:27:68:G:H2'	53:27:69:C:O4'	2.18	0.44
53:27:745:G:O2'	53:27:748:G:H1'	2.18	0.44
53:27:84:A:C6	53:27:99:U:H5'	2.52	0.44
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.44
59:33:428:ALA:HB3	59:33:436:GLY:HA2	1.99	0.44
59:33:621:ILE:C	59:33:621:ILE:HD12	2.38	0.44
33:7:105:VAL:HG13	33:7:105:VAL:O	2.18	0.44
33:7:56:ILE:HD12	33:7:65:VAL:HG22	1.98	0.44
35:9:137:ARG:O	35:9:140:ILE:HG22	2.18	0.44
35:9:148:SER:O	35:9:151:MET:HB2	2.18	0.44
2:B:2:ILE:HG13	2:B:2:ILE:O	2.18	0.44
2:B:62:LYS:N	2:B:63:PRO:CD	2.81	0.44
2:B:77:ARG:O	2:B:77:ARG:HG3	2.18	0.44
3:C:158:PHE:HD1	3:C:169:VAL:HB	1.83	0.44
4:D:45:ASP:HB2	4:D:48:LEU:HB3	1.99	0.44
5:E:120:ILE:HG23	5:E:134:GLY:HA3	1.99	0.44
9:I:80:HIS:O	9:I:82:GLY:N	2.51	0.44
10:J:25:LEU:HD21	10:J:40:LYS:HG2	1.98	0.44
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.48	0.44
10:J:98:ARG:HA	10:J:98:ARG:HD3	1.74	0.44
11:K:84:LYS:HG2	11:K:84:LYS:O	2.18	0.44
17:Q:26:ASP:O	17:Q:27:ILE:HD13	2.17	0.44
24:X:26:PHE:O	24:X:30:MET:HG2	2.18	0.44
36:10:11:HIS:CD2	36:10:13:ASP:H	2.36	0.44
41:15:127:ARG:HD2	52:26:1506:U:O2	2.17	0.44
45:19:34:GLN:HB3	45:19:58:MET:HE2	2.00	0.44
50:24:53:MET:O	50:24:57:VAL:HG12	2.18	0.44
52:26:1120:C:H2'	52:26:1121:U:C6	2.53	0.44
52:26:1130:A:H2'	52:26:1131:G:O4'	2.18	0.44
52:26:193:C:O2'	52:26:194:C:H5'	2.18	0.44
52:26:589:U:H2'	52:26:590:U:C6	2.52	0.44
52:26:893:C:H2'	52:26:894:G:C8	2.52	0.44
3:C:44:ARG:NH1	53:27:1248:G:OP1	2.51	0.44
53:27:1387:A:H2'	53:27:1388:G:C8	2.52	0.44
53:27:1678:A:O5'	53:27:1678:A:H8	2.00	0.44
53:27:1765:U:O2'	53:27:1766:G:H5'	2.17	0.44
53:27:2159:G:C2'	53:27:2160:C:H5'	2.48	0.44
53:27:2574:G:H2'	53:27:2575:C:O4'	2.18	0.44
5:E:2:ARG:CD	53:27:2751:G:C4	3.00	0.44
53:27:2791:G:H2'	53:27:2792:A:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:307:G:H2'	53:27:309:A:OP2	2.17	0.44
53:27:47:C:H2'	53:27:48:G:C8	2.53	0.44
53:27:556:A:H3'	53:27:557:C:H6	1.83	0.44
53:27:568:U:C6	53:27:570:G:OP2	2.71	0.44
53:27:678:C:H2'	53:27:679:C:H6	1.82	0.44
53:27:795:C:H2'	53:27:796:C:H6	1.83	0.44
53:27:80:G:N2	53:27:81:G:H1'	2.33	0.44
12:L:9:PHE:HZ	53:27:911:A:H2'	1.82	0.44
53:27:985:C:H2'	53:27:986:C:H6	1.81	0.44
54:28:48:U:H2'	54:28:49:C:H6	1.80	0.44
56:30:27:G:H2'	56:30:28:G:C8	2.53	0.44
56:30:57:G:H2'	56:30:58:A:H5'	2.00	0.44
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
59:33:408:VAL:O	59:33:415:VAL:HA	2.17	0.44
59:33:673:ALA:C	59:33:707:LEU:HD12	2.38	0.44
32:6:11:ALA:HB2	32:6:211:LEU:HD21	1.98	0.44
32:6:66:ILE:HG22	32:6:67:LEU:N	2.32	0.44
32:6:95:TRP:HH2	32:6:174:GLU:HB3	1.81	0.44
35:9:163:ILE:HD12	35:9:163:ILE:C	2.38	0.44
2:B:112:THR:O	2:B:195:GLY:CA	2.65	0.44
3:C:46:GLN:O	3:C:86:ALA:HB1	2.17	0.44
4:D:127:TYR:CE2	4:D:129:MET:HB3	2.52	0.44
6:F:114:GLU:OE2	6:F:134:VAL:HA	2.18	0.44
7:G:21:GLY:HA2	7:G:86:MET:CE	2.48	0.44
8:H:108:ILE:HG23	8:H:112:LYS:HB3	1.99	0.44
14:N:95:SER:HB2	14:N:97:PHE:HD2	1.82	0.44
18:R:9:HIS:CE1	18:R:80:PRO:HG2	2.51	0.44
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.98	0.44
24:X:59:GLU:HA	24:X:63:ALA:CB	2.47	0.44
35:9:156:ARG:HH11	38:12:100:ILE:CG2	2.30	0.44
38:12:3:GLN:O	52:26:587:G:H4'	2.17	0.44
39:13:117:LEU:HG	39:13:123:ARG:HE	1.83	0.44
41:15:76:TYR:O	41:15:78:ILE:N	2.51	0.44
42:16:109:ARG:NH1	52:26:537:G:C5'	2.73	0.44
44:18:56:PRO:HA	44:18:59:GLN:HG2	2.00	0.44
47:21:39:ARG:HA	52:26:280:C:O2	2.17	0.44
52:26:1114:C:O2'	52:26:1115:U:H5'	2.18	0.44
52:26:152:A:H2'	52:26:153:C:H5'	1.99	0.44
52:26:166:U:H2'	52:26:167:A:H8	1.81	0.44
52:26:229:U:H2'	52:26:230:G:O4'	2.18	0.44
52:26:409:U:H6	52:26:409:U:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:31:CYS:HA	52:26:429:U:OP2	2.17	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.82	0.44
53:27:1185:G:H5''	53:27:1186:G:OP1	2.18	0.44
53:27:1195:G:C2	53:27:1196:C:C5	3.05	0.44
53:27:1223:G:C6	53:27:1227:G:C6	3.06	0.44
53:27:130:C:H2'	53:27:131:A:O4'	2.18	0.44
53:27:1430:G:H2'	53:27:1431:A:C8	2.53	0.44
53:27:1486:U:H2'	53:27:1487:U:C6	2.53	0.44
53:27:1609:A:H1'	53:27:1616:A:O4'	2.18	0.44
53:27:1930:G:H2'	53:27:1931:U:OP2	2.17	0.44
3:C:66:GLY:H	53:27:2060:A:H5''	1.83	0.44
53:27:237:C:H2'	53:27:238:C:C6	2.53	0.44
13:M:2:ARG:NH1	53:27:2822:G:O6	2.48	0.44
53:27:406:G:H2'	53:27:407:G:C8	2.52	0.44
53:27:809:G:C5	53:27:810:U:C5	3.06	0.44
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.44
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.44
59:33:642:ALA:HA	59:33:645:ARG:HD2	1.98	0.44
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.44
34:8:71:PHE:O	34:8:74:TYR:HB2	2.17	0.44
35:9:76:ASN:O	35:9:77:ASN:C	2.56	0.44
1:A:61:TYR:CE1	53:27:1816:C:H3'	2.52	0.44
3:C:31:VAL:HG21	3:C:104:ALA:CB	2.48	0.44
3:C:177:PRO:O	3:C:181:ILE:HG13	2.18	0.44
3:C:84:THR:OG1	53:27:586:A:H5'	2.17	0.44
6:F:47:PHE:O	6:F:52:ALA:N	2.49	0.44
7:G:52:MET:HE3	7:G:99:PHE:CE1	2.53	0.44
11:K:109:LYS:HE2	53:27:636:G:N7	2.32	0.44
13:M:28:LEU:CD2	13:M:48:VAL:HG21	2.47	0.44
13:M:47:VAL:C	13:M:50:PRO:HD2	2.38	0.44
14:N:18:LEU:HD21	14:N:91:SER:HB2	1.99	0.44
24:X:38:GLN:HB3	24:X:39:GLN:OE1	2.18	0.44
42:16:87:LYS:HE3	52:26:526:C:P	2.58	0.44
52:26:1008:U:H2'	52:26:1009:U:C6	2.52	0.44
52:26:1032:G:H3'	52:26:1033:G:H4'	1.99	0.44
52:26:978:A:C2	52:26:1319:A:C4	3.05	0.44
43:17:24:VAL:HA	52:26:1329:A:H5''	2.00	0.44
52:26:971:G:H1'	52:26:1365:G:O2'	2.18	0.44
52:26:1453:G:N3	52:26:1453:G:H3'	2.32	0.44
52:26:211:G:H2'	52:26:212:G:C4'	2.48	0.44
52:26:62:U:H2'	52:26:63:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:811:C:H4'	52:26:900:A:H62	1.83	0.44
52:26:994:A:C5	52:26:1216:A:H4'	2.53	0.44
53:27:1130:U:C2	53:27:2025:C:H5''	2.53	0.44
9:I:27:ARG:HH21	53:27:1141:U:H5''	1.82	0.44
53:27:1406:U:C3'	53:27:1407:G:H5''	2.48	0.44
53:27:1425:G:H2'	53:27:1426:G:C8	2.53	0.44
53:27:181:A:O2'	53:27:182:A:H5'	2.16	0.44
53:27:1838:C:H4'	53:27:1839:G:H8	1.82	0.44
53:27:2083:G:H2'	53:27:2084:C:C6	2.53	0.44
53:27:520:G:H2'	53:27:521:U:H6	1.83	0.44
53:27:758:C:O2	53:27:758:C:C2'	2.63	0.44
53:27:891:G:H2'	53:27:892:A:H8	1.82	0.44
53:27:996:A:H2'	53:27:997:G:H8	1.82	0.44
21:U:14:LYS:HB2	54:28:98:G:N1	2.30	0.44
57:31:66:C:H2'	57:31:67:C:H6	1.82	0.44
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
29:3:33:ARG:O	29:3:36:ALA:HB3	2.17	0.44
59:33:444:ILE:O	59:33:444:ILE:HG13	2.18	0.44
29:3:34:ARG:HD2	29:3:34:ARG:HA	1.61	0.44
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.44
59:33:675:ASP:HB2	59:33:706:GLN:HE21	1.83	0.44
32:6:108:GLN:HE22	32:6:111:LYS:HD3	1.83	0.44
33:7:182:ASP:OD1	33:7:183:TYR:N	2.51	0.44
34:8:150:LYS:HB3	34:8:177:MET:HE2	2.00	0.44
1:A:205:GLY:O	53:27:1791:A:C1'	2.65	0.44
1:A:83:ASP:OD1	1:A:84:PRO:HD2	2.17	0.44
2:B:28:GLU:HA	2:B:185:ASN:O	2.18	0.44
3:C:14:VAL:HG21	3:C:19:PHE:CD2	2.53	0.44
4:D:37:MET:SD	4:D:52:ALA:HB1	2.58	0.44
9:I:90:GLU:O	9:I:93:ILE:HB	2.17	0.44
11:K:81:ASP:OD1	11:K:82:LEU:N	2.50	0.44
16:P:23:TYR:HD1	53:27:533:G:O5'	1.99	0.44
4:D:104:THR:CA	26:Z:38:SER:HB3	2.48	0.44
38:12:14:ARG:HD3	38:12:74:ILE:HG22	1.99	0.44
39:13:115:VAL:HG21	40:14:62:ARG:HG3	2.00	0.44
39:13:89:TYR:O	39:13:90:ASP:CB	2.66	0.44
40:14:72:ARG:NH2	52:26:1152:A:O5'	2.49	0.44
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.99	0.44
45:19:58:MET:O	45:19:61:GLN:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:34:ARG:HB3	51:25:36:PHE:HD2	1.83	0.44
52:26:1428:A:H2'	52:26:1429:A:O4'	2.17	0.44
15:O:113:LEU:HD11	52:26:1441:A:C2	2.53	0.44
52:26:1520:C:H2'	52:26:1521:C:C6	2.51	0.44
52:26:151:A:O2'	52:26:152:A:H5'	2.18	0.44
52:26:220:G:O2'	52:26:221:C:H5'	2.17	0.44
52:26:70:U:H4'	52:26:71:A:O5'	2.18	0.44
52:26:726:C:H2'	52:26:727:G:O4'	2.18	0.44
52:26:77:A:H61	52:26:92:U:H3	1.66	0.44
52:26:783:C:H2'	52:26:784:A:C8	2.53	0.44
53:27:1668:A:C5	53:27:1674:G:C5	3.06	0.44
53:27:1811:G:C6	53:27:1812:U:C4	3.05	0.44
53:27:188:G:H3'	53:27:189:G:H8	1.83	0.44
53:27:1997:C:H2'	53:27:1998:A:H8	1.83	0.44
53:27:2057:G:H2'	53:27:2058:A:H8	1.83	0.44
53:27:2079:U:H2'	53:27:2080:A:O4'	2.18	0.44
53:27:291:G:O2'	53:27:292:U:H5'	2.18	0.44
53:27:395:U:H2'	53:27:396:G:H8	1.80	0.44
53:27:551:G:C2'	53:27:552:U:H5'	2.48	0.44
11:K:28:GLY:HA2	53:27:811:U:OP2	2.18	0.44
56:30:17:C:H5'	56:30:19:G:OP1	2.18	0.44
58:32:69:C:C3'	58:32:70:G:H5''	2.47	0.44
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.44
59:33:62:MET:HE3	59:33:79:ALA:CA	2.37	0.44
30:4:18:LYS:HB3	53:27:651:G:OP1	2.17	0.44
32:6:95:TRP:CH2	32:6:171:ALA:HA	2.53	0.44
33:7:205:GLU:HG3	33:7:206:ILE:H	1.83	0.44
35:9:12:GLU:HG3	35:9:63:MET:HE1	2.00	0.44
35:9:20:VAL:HG23	35:9:31:SER:HB3	2.00	0.44
1:A:174:ARG:HD3	1:A:180:MET:SD	2.58	0.44
3:C:44:ARG:CD	3:C:90:GLN:HE22	2.31	0.44
4:D:16:MET:O	4:D:20:ASN:HA	2.18	0.44
4:D:93:GLU:HA	4:D:96:TRP:HD1	1.83	0.44
23:W:73:ARG:HD2	23:W:75:GLU:CG	2.47	0.44
24:X:45:GLN:HG3	24:X:46:VAL:N	2.31	0.44
39:13:129:ARG:HG3	39:13:129:ARG:OXT	2.18	0.43
41:15:28:ASN:HD21	41:15:56:LYS:CE	2.31	0.43
41:15:61:ALA:O	41:15:64:VAL:HG12	2.17	0.43
44:18:30:ILE:HG22	44:18:43:ALA:HB2	1.99	0.43
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.99	0.43
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:165:G:H2'	52:26:166:U:C6	2.52	0.43
52:26:696:A:O2'	52:26:697:U:H5'	2.19	0.43
52:26:747:A:H2'	52:26:748:G:O4'	2.17	0.43
53:27:1078:U:H4'	53:27:1088:A:OP1	2.17	0.43
17:Q:83:TYR:CE1	53:27:1187:G:H5''	2.52	0.43
53:27:1562:U:H2'	53:27:1563:U:O4'	2.18	0.43
53:27:1853:A:C6	53:27:1889:A:C5	3.06	0.43
2:B:154:LYS:HD3	53:27:2024:G:H4'	2.00	0.43
53:27:1672:A:C4'	53:27:2553:G:H4'	2.48	0.43
53:27:263:G:H2'	53:27:264:C:O4'	2.18	0.43
53:27:271:G:O2'	53:27:272:A:H5''	2.17	0.43
53:27:555:G:HO2'	53:27:556:A:H8	1.66	0.43
54:28:42:C:C2'	54:28:43:C:H5'	2.48	0.43
54:28:71:C:H2'	54:28:72:G:H8	1.80	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.43
59:33:62:MET:HE2	59:33:82:PHE:CE1	2.53	0.43
59:33:716:ILE:HD11	59:33:721:VAL:HB	2.00	0.43
32:6:20:ARG:O	32:6:22:TRP:N	2.51	0.43
33:7:173:PRO:HB2	33:7:176:THR:OG1	2.18	0.43
1:A:12:ARG:HA	1:A:15:VAL:CG2	2.47	0.43
2:B:37:VAL:HG12	2:B:39:ASP:OD1	2.18	0.43
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.33	0.43
5:E:87:GLN:OE1	5:E:164:ALA:HA	2.18	0.43
7:G:87:GLU:HB3	7:G:90:GLY:O	2.18	0.43
8:H:103:ALA:O	8:H:107:GLU:HG3	2.17	0.43
10:J:90:ASN:OD1	10:J:91:SER:N	2.51	0.43
17:Q:35:PHE:O	17:Q:58:VAL:HA	2.18	0.43
23:W:12:VAL:O	23:W:28:PHE:HB2	2.18	0.43
38:12:121:GLY:C	52:26:599:C:H4'	2.38	0.43
41:15:68:ARG:O	41:15:71:ASP:HB3	2.18	0.43
42:16:113:ARG:HD2	42:16:118:VAL:O	2.16	0.43
52:26:1103:C:H6	52:26:1103:C:O5'	2.01	0.43
52:26:1125:U:O2'	52:26:1126:U:H2'	2.17	0.43
52:26:130:A:H1'	52:26:264:C:C4'	2.47	0.43
52:26:299:G:C6	52:26:300:A:N1	2.86	0.43
52:26:589:U:H2'	52:26:590:U:H6	1.82	0.43
52:26:770:C:H2'	52:26:771:G:H8	1.82	0.43
52:26:878:A:H2'	52:26:879:C:C6	2.53	0.43
8:H:75:ALA:HB3	53:27:1060:U:C5	2.53	0.43
53:27:2207:C:H2'	53:27:2208:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2584:U:H3'	53:27:2585:U:H5''	2.00	0.43
53:27:2745:C:H2'	53:27:2746:U:C6	2.52	0.43
53:27:283:G:H3'	53:27:284:U:C5'	2.42	0.43
53:27:544:C:H5'	53:27:545:U:OP1	2.18	0.43
53:27:696:G:O2'	53:27:697:G:H5'	2.18	0.43
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.43
32:6:158:ASP:O	32:6:181:PRO:HD2	2.17	0.43
33:7:15:LYS:HA	33:7:16:PRO:HD2	1.93	0.43
34:8:12:ARG:HD3	34:8:33:ILE:HA	2.00	0.43
35:9:56:PRO:O	35:9:59:ILE:HG12	2.17	0.43
1:A:140:VAL:CG1	1:A:191:LEU:HD23	2.48	0.43
2:B:84:LEU:HD21	2:B:90:PHE:CD2	2.53	0.43
3:C:110:SER:O	3:C:114:ARG:HG3	2.18	0.43
4:D:9:ASP:CG	4:D:10:GLU:H	2.20	0.43
6:F:108:VAL:HG12	6:F:110:VAL:N	2.33	0.43
8:H:7:TYR:CE1	8:H:60:VAL:HB	2.54	0.43
11:K:89:VAL:HA	11:K:121:THR:O	2.18	0.43
14:N:7:ARG:HG3	14:N:10:ARG:HH11	1.83	0.43
17:Q:91:GLN:HE22	53:27:1162:G:H21	1.64	0.43
26:Z:51:VAL:O	26:Z:53:THR:N	2.51	0.43
36:10:63:ASN:ND2	36:10:96:VAL:HG21	2.33	0.43
38:12:94:VAL:HG12	38:12:95:MET:HG3	2.01	0.43
39:13:51:LEU:O	39:13:55:ASP:N	2.51	0.43
40:14:89:ARG:HG2	40:14:90:LEU:N	2.33	0.43
44:18:26:LEU:O	44:18:30:ILE:HB	2.19	0.43
47:21:16:MET:HG3	47:21:19:SER:HB3	1.99	0.43
52:26:1237:C:H4'	52:26:1300:G:H22	1.83	0.43
46:20:23:ASP:OD2	52:26:230:G:H5'	2.18	0.43
52:26:235:C:H2'	52:26:236:A:H8	1.79	0.43
52:26:371:A:H4'	52:26:482:A:H4'	2.00	0.43
52:26:631:C:O5'	52:26:632:U:H5'	2.18	0.43
52:26:836:G:H2'	52:26:837:U:O4'	2.17	0.43
53:27:1228:G:H2'	53:27:1229:C:H6	1.81	0.43
53:27:1536:C:H4'	53:27:1537:G:C2	2.53	0.43
53:27:191:A:H2'	53:27:192:C:H6	1.79	0.43
53:27:1923:U:H5''	57:31:24:U:O2'	2.18	0.43
53:27:211:C:H2'	53:27:212:G:C8	2.53	0.43
22:V:10:ARG:NH2	53:27:2279:G:N7	2.66	0.43
53:27:2364:C:H2'	53:27:2365:G:H5'	1.99	0.43
53:27:2595:G:N1	53:27:2599:G:C6	2.87	0.43
53:27:287:G:C2'	53:27:288:U:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:346:A:C2	53:27:347:A:H1'	2.53	0.43
53:27:377:G:C6	53:27:378:C:C4	3.07	0.43
53:27:540:C:H2'	53:27:541:A:O4'	2.18	0.43
53:27:776:G:H4'	53:27:777:G:O5'	2.19	0.43
53:27:852:U:H2'	53:27:853:C:C6	2.53	0.43
53:27:955:U:H5	53:27:962:G:C6	2.36	0.43
54:28:33:G:H2'	54:28:34:A:O4'	2.18	0.43
58:32:16:C:H4'	58:32:59:A:N1	2.32	0.43
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.43
34:8:97:LEU:CB	34:8:134:TYR:HB3	2.41	0.43
4:D:93:GLU:O	4:D:96:TRP:HB2	2.18	0.43
6:F:15:LEU:HD12	6:F:16:GLY:N	2.33	0.43
9:I:35:ARG:HB2	9:I:54:ILE:HD11	2.00	0.43
13:M:12:ARG:O	13:M:17:ARG:NH2	2.51	0.43
14:N:100:HIS:HD2	54:28:48:U:H4'	1.83	0.43
26:Z:62:LYS:HD3	26:Z:62:LYS:HA	1.70	0.43
38:12:13:ILE:O	38:12:17:GLN:HG2	2.19	0.43
39:13:113:LYS:HE2	39:13:118:ARG:C	2.38	0.43
39:13:11:ARG:HH12	39:13:12:LYS:HE3	1.83	0.43
40:14:48:ARG:NE	44:18:100:TRP:CD2	2.85	0.43
45:19:47:LYS:O	45:19:49:HIS:N	2.47	0.43
47:21:56:ASP:N	47:21:56:ASP:OD1	2.51	0.43
52:26:1053:G:N7	52:26:1200:C:H5'	2.34	0.43
52:26:1427:C:H2'	52:26:1428:A:H8	1.83	0.43
52:26:222:C:H2'	52:26:223:A:C8	2.54	0.43
38:12:14:ARG:NH1	52:26:875:U:O2'	2.51	0.43
53:27:1075:C:O2'	53:27:1076:C:H5'	2.18	0.43
53:27:1164:C:O2'	53:27:1165:A:H5'	2.18	0.43
53:27:1599:U:H2'	53:27:1600:C:H6	1.83	0.43
53:27:2142:A:N3	53:27:2142:A:H2'	2.34	0.43
53:27:2809:A:H3'	53:27:2810:A:H8	1.83	0.43
53:27:2878:U:O5'	53:27:2878:U:H6	2.02	0.43
53:27:458:G:N2	53:27:469:G:H2'	2.34	0.43
52:26:1397:C:H41	55:29:22:A:H2'	1.82	0.43
30:4:16:THR:HG21	30:4:48:MET:SD	2.59	0.43
32:6:81:ASP:O	32:6:85:SER:N	2.48	0.43
32:6:95:TRP:O	32:6:170:ILE:HD11	2.18	0.43
33:7:174:LEU:HA	33:7:181:ILE:HD12	2.00	0.43
33:7:10:ARG:NH2	33:7:174:LEU:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:201:ILE:O	33:7:203:LYS:NZ	2.51	0.43
3:C:104:ALA:O	3:C:108:ILE:HG13	2.19	0.43
3:C:105:LEU:CB	3:C:200:LEU:HD21	2.47	0.43
4:D:34:THR:C	4:D:35:LEU:HD12	2.38	0.43
6:F:88:GLY:HA2	6:F:125:THR:OG1	2.18	0.43
6:F:122:LEU:HD23	6:F:128:HIS:HB2	2.00	0.43
7:G:6:GLN:OE1	7:G:6:GLN:N	2.48	0.43
9:I:113:PRO:HD2	53:27:558:U:OP1	2.18	0.43
11:K:30:THR:O	11:K:32:GLY:N	2.51	0.43
13:M:67:PHE:O	13:M:71:ARG:HA	2.18	0.43
17:Q:82:HIS:O	17:Q:82:HIS:ND1	2.51	0.43
19:S:84:TYR:CD2	53:27:1341:G:C4	3.07	0.43
27:1:8:THR:CG2	27:1:10:SER:HB3	2.49	0.43
41:15:88:PRO:HG2	41:15:89:GLY:H	1.83	0.43
42:16:80:LEU:HB2	42:16:101:LEU:HD13	2.01	0.43
42:16:109:ARG:HH12	52:26:537:G:C5'	2.26	0.43
28:2:10:LEU:HD23	28:2:50:GLU:HA	2.00	0.43
49:23:9:PHE:HE2	49:23:36:ARG:HE	1.65	0.43
51:25:27:VAL:O	51:25:31:VAL:N	2.32	0.43
52:26:107:G:N2	52:26:108:G:H1'	2.33	0.43
52:26:1524:C:H2'	52:26:1525:G:C8	2.52	0.43
52:26:465:A:H2'	52:26:466:A:O4'	2.18	0.43
52:26:734:G:H2'	52:26:735:C:H6	1.84	0.43
52:26:766:A:C2'	52:26:767:A:H5'	2.48	0.43
52:26:956:U:O2'	52:26:957:U:H5'	2.17	0.43
52:26:965:U:H5''	52:26:966:G:OP1	2.18	0.43
53:27:1178:C:H2'	53:27:1179:G:C8	2.53	0.43
53:27:1372:U:H2'	53:27:1373:A:C8	2.53	0.43
53:27:1669:A:O3'	53:27:2549:G:H5'	2.19	0.43
53:27:182:A:O2'	53:27:183:C:H5'	2.19	0.43
53:27:1912:A:N6	53:27:1917:U:H5	2.13	0.43
53:27:205:G:O2'	53:27:206:U:P	2.76	0.43
53:27:2111:U:N3	53:27:2147:A:H1'	2.18	0.43
53:27:2661:G:H2'	53:27:2662:A:O4'	2.19	0.43
53:27:418:C:H2'	53:27:419:U:H6	1.84	0.43
53:27:585:G:H3'	53:27:1251:C:N4	2.33	0.43
53:27:840:C:H2'	53:27:841:G:C8	2.53	0.43
56:30:44:G:H2'	56:30:45:U:H5'	2.00	0.43
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.43
32:6:22:TRP:CH2	32:6:24:PRO:HA	2.53	0.43
3:C:90:GLN:NE2	3:C:92:HIS:HE1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:106:LEU:O	5:E:151:ARG:NH2	2.52	0.43
6:F:25:TYR:O	6:F:29:PHE:HB3	2.17	0.43
6:F:51:ARG:HA	6:F:55:GLU:HG2	2.01	0.43
8:H:112:LYS:O	8:H:116:MET:HG3	2.18	0.43
8:H:2:LYS:HB3	8:H:7:TYR:CE2	2.53	0.43
9:I:98:GLU:HB3	9:I:124:VAL:HG21	1.99	0.43
42:16:119:LYS:HA	52:26:36:C:H5''	2.00	0.43
28:2:11:VAL:HG12	28:2:12:SER:N	2.34	0.43
51:25:16:ARG:O	51:25:19:LYS:HB2	2.18	0.43
51:25:18:PHE:O	51:25:19:LYS:HD2	2.18	0.43
40:14:68:ARG:HH22	52:26:1115:U:P	2.40	0.43
52:26:1415:G:C6	52:26:1486:G:C6	3.06	0.43
52:26:1499:A:H2'	52:26:1500:A:H8	1.84	0.43
52:26:379:C:H2'	52:26:380:G:C8	2.54	0.43
52:26:423:G:H3'	52:26:423:G:N3	2.33	0.43
46:20:14:ARG:NH1	52:26:618:C:H1'	2.20	0.43
52:26:667:G:H2'	52:26:668:G:C8	2.52	0.43
52:26:836:G:C5	52:26:851:G:C6	3.07	0.43
53:27:1112:G:H2'	53:27:1113:U:O4'	2.19	0.43
17:Q:24:LYS:HE2	53:27:1163:G:H5'	2.00	0.43
53:27:1173:U:C2'	53:27:1174:U:H4'	2.49	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.19	0.43
53:27:1279:G:C4	53:27:1280:G:C8	3.06	0.43
53:27:2021:C:H3'	53:27:2022:U:C5'	2.49	0.43
53:27:2576:G:N3	53:27:2576:G:H2'	2.34	0.43
53:27:2620:C:H3'	53:27:2621:G:H5''	2.00	0.43
53:27:481:G:H1'	53:27:506:G:H22	1.78	0.43
56:30:5:G:H2'	56:30:6:G:C8	2.47	0.43
56:30:5:G:O2'	56:30:6:G:H5'	2.18	0.43
57:31:4:G:H2'	57:31:5:G:H8	1.84	0.43
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.43
59:33:624:PHE:CG	59:33:644:LEU:HD13	2.54	0.43
32:6:182:VAL:CG2	32:6:195:VAL:HA	2.48	0.43
33:7:41:TYR:O	33:7:44:LYS:HB2	2.19	0.43
34:8:141:VAL:HG12	34:8:180:THR:HG23	2.00	0.43
35:9:100:GLU:C	35:9:102:THR:N	2.72	0.43
1:A:211:ARG:HA	1:A:211:ARG:HD2	1.80	0.43
1:A:43:ASN:HB3	1:A:49:THR:HG21	2.01	0.43
1:A:52:HIS:O	1:A:216:ARG:N	2.44	0.43
4:D:100:GLU:C	4:D:102:LEU:H	2.22	0.43
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:79:LEU:HD11	8:H:128:ILE:O	2.18	0.43
9:I:16:TYR:CD1	9:I:140:LEU:HB2	2.54	0.43
12:L:10:ARG:CZ	12:L:10:ARG:HB2	2.48	0.43
14:N:7:ARG:HD2	14:N:97:PHE:CE2	2.53	0.43
15:O:62:LYS:HE2	15:O:64:SER:HB2	2.00	0.43
2:B:13:ARG:HH22	15:O:74:GLN:CD	2.22	0.43
16:P:42:GLY:O	16:P:45:ALA:HB3	2.19	0.43
17:Q:49:ILE:HG22	17:Q:54:VAL:HA	2.00	0.43
23:W:7:THR:OG1	23:W:9:LYS:HG3	2.19	0.43
39:13:30:ASN:O	39:13:32:ARG:N	2.51	0.43
39:13:9:GLY:HA3	39:13:81:GLY:CA	2.49	0.43
39:13:5:TYR:CD1	39:13:88:GLU:HA	2.54	0.43
41:15:76:TYR:O	41:15:77:GLY:C	2.56	0.43
41:15:63:GLN:HG3	41:15:98:ALA:HB1	2.00	0.43
44:18:89:ARG:HB3	44:18:91:GLU:HG2	2.00	0.43
45:19:24:THR:HG21	45:19:69:LEU:HB2	2.01	0.43
50:24:78:LEU:O	50:24:81:GLN:HB2	2.19	0.43
52:26:1166:G:O2'	52:26:1169:A:N6	2.51	0.43
52:26:1203:C:H2'	52:26:1204:A:C8	2.54	0.43
52:26:1256:A:N7	52:26:1278:G:H1'	2.34	0.43
52:26:1325:C:O2'	52:26:1326:U:H5'	2.19	0.43
52:26:1448:C:H2'	52:26:1449:C:H6	1.83	0.43
52:26:1514:G:H2'	52:26:1515:G:C8	2.52	0.43
52:26:228:A:H2'	52:26:229:U:C6	2.53	0.43
42:16:100:ALA:HB2	52:26:35:G:H5'	2.01	0.43
52:26:841:C:H1'	52:26:843:U:H1'	2.01	0.43
52:26:861:G:H21	52:26:874:G:C4'	2.32	0.43
53:27:1575:C:H2'	53:27:1576:U:H6	1.84	0.43
1:A:253:GLY:N	53:27:1796:U:H4'	2.34	0.43
53:27:1892:C:H2'	53:27:1893:C:C6	2.53	0.43
53:27:2359:C:O2'	53:27:2360:G:H5'	2.19	0.43
53:27:2428:G:H8	53:27:2428:G:O5'	2.02	0.43
53:27:2591:C:C2	53:27:2592:G:C8	3.07	0.43
53:27:2616:C:H2'	53:27:2617:U:C6	2.51	0.43
10:J:30:ARG:HD2	53:27:2674:G:H4'	1.99	0.43
53:27:270:A:OP1	53:27:271:G:H8	2.02	0.43
53:27:488:G:H22	53:27:491:G:H5''	1.82	0.43
53:27:496:G:C2	53:27:497:A:H1'	2.53	0.43
53:27:858:G:C4'	53:27:859:G:OP2	2.65	0.43
58:32:12:G:H22	58:32:23:C:C2'	2.31	0.43
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.43
59:33:686:ILE:HG21	59:33:729:LEU:HD11	1.99	0.43
59:33:669:VAL:HG23	59:33:739:ARG:C	2.39	0.43
34:8:2:ARG:HH21	34:8:111:ALA:HB1	1.84	0.43
35:9:110:MET:HA	35:9:113:VAL:HG12	2.00	0.43
1:A:71:ASP:OD2	1:A:188:ARG:NH2	2.49	0.43
7:G:117:LEU:HD12	7:G:117:LEU:C	2.39	0.43
7:G:23:LEU:HA	7:G:118:ILE:HG13	2.00	0.43
8:H:11:GLN:CD	8:H:74:PRO:HG2	2.39	0.43
9:I:111:LYS:HE3	9:I:111:LYS:HB2	1.89	0.43
10:J:109:SER:O	10:J:111:LYS:HG2	2.19	0.43
12:L:26:VAL:HA	12:L:104:GLU:CD	2.38	0.43
12:L:70:ASP:C	12:L:70:ASP:OD1	2.57	0.43
18:R:1:MET:HG3	18:R:2:GLU:N	2.33	0.43
20:T:41:VAL:HG23	20:T:60:LYS:HB2	2.00	0.43
25:Y:10:ARG:NH2	25:Y:52:PHE:O	2.51	0.43
37:11:147:ASN:C	37:11:149:ALA:N	2.71	0.43
47:21:49:ASN:O	47:21:50:ASN:C	2.57	0.43
52:26:1371:G:H2'	52:26:1372:U:O4'	2.19	0.43
34:8:8:LEU:CB	52:26:430:A:OP1	2.67	0.43
52:26:742:G:O2'	52:26:743:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:H6	1.83	0.43
52:26:915:A:C2'	52:26:916:U:H5'	2.48	0.43
52:26:992:U:H1'	52:26:993:G:C2	2.54	0.43
53:27:1293:C:C3'	53:27:1294:U:H5''	2.48	0.43
53:27:1313:U:O2	53:27:1313:U:H2'	2.18	0.43
53:27:146:A:H2'	53:27:147:C:C6	2.54	0.43
53:27:1747:U:O2'	53:27:1748:C:H5'	2.18	0.43
53:27:1682:G:N3	53:27:1757:A:H1'	2.34	0.43
53:27:1804:C:O5'	53:27:1804:C:H6	2.01	0.43
53:27:192:C:H2'	53:27:193:U:O4'	2.19	0.43
53:27:2576:G:OP1	53:27:2576:G:H3'	2.18	0.43
53:27:2618:G:C6	53:27:2619:C:C4	3.07	0.43
53:27:26:G:H2'	53:27:27:G:O4'	2.18	0.43
53:27:308:G:O4'	53:27:501:A:H5'	2.18	0.43
53:27:404:A:O2'	53:27:405:U:H5'	2.17	0.43
1:A:48:ILE:HG22	53:27:779:U:P	2.59	0.43
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.43
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.43
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.43
59:33:442:ALA:O	59:33:448:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.32	0.43
31:5:26:ILE:HG22	31:5:27:CYS:N	2.34	0.43
34:8:28:ASP:O	34:8:29:THR:C	2.57	0.43
35:9:159:SER:HB2	35:9:161:GLU:HG2	2.00	0.43
2:B:133:THR:OG1	2:B:134:HIS:N	2.51	0.43
3:C:109:LEU:N	3:C:109:LEU:HD12	2.33	0.43
3:C:34:ALA:CB	3:C:94:GLN:HE21	2.32	0.43
4:D:164:GLU:O	4:D:167:ALA:HB3	2.18	0.43
7:G:50:VAL:HG22	53:27:1082:U:H5''	2.00	0.43
8:H:73:PRO:HA	8:H:74:PRO:HD3	1.77	0.43
10:J:71:ARG:HB3	10:J:72:PRO:HD2	2.00	0.43
17:Q:16:GLU:HG3	17:Q:100:GLY:HA2	2.01	0.43
37:11:68:VAL:HG21	37:11:103:ILE:CG1	2.48	0.43
47:21:45:VAL:HG21	47:21:60:ILE:HD13	2.00	0.43
49:23:49:ALA:HB1	49:23:56:HIS:O	2.19	0.43
52:26:1119:C:H2'	52:26:1120:C:C6	2.54	0.43
52:26:149:A:O2'	52:26:150:U:H5'	2.19	0.43
52:26:360:G:C6	52:26:361:G:C6	3.07	0.43
52:26:436:C:H2'	52:26:437:U:C6	2.54	0.43
52:26:505:G:OP2	52:26:535:A:H5'	2.18	0.43
52:26:878:A:H2'	52:26:879:C:O4'	2.18	0.43
52:26:89:U:O2	52:26:90:C:C5	2.72	0.43
52:26:963:G:N2	52:26:972:C:O2	2.48	0.43
53:27:1096:A:H2'	53:27:1097:U:H5''	2.01	0.43
53:27:1164:C:H2'	53:27:1165:A:H8	1.82	0.43
53:27:1164:C:H2'	53:27:1165:A:C8	2.54	0.43
53:27:1313:U:O2	53:27:1313:U:C2'	2.66	0.43
53:27:1659:G:C2'	53:27:1660:G:H5''	2.48	0.43
53:27:1906:G:H1'	53:27:1929:G:C6	2.54	0.43
53:27:2066:C:H2'	53:27:2067:G:H8	1.83	0.43
53:27:2156:G:C2'	53:27:2157:G:H5'	2.49	0.43
53:27:2333:A:H4'	53:27:2334:U:O5'	2.19	0.43
53:27:648:G:H1'	53:27:2351:G:OP1	2.18	0.43
53:27:276:U:H2'	53:27:277:G:C4'	2.49	0.43
2:B:56:LYS:HZ3	53:27:2831:G:P	2.42	0.43
53:27:674:G:H2'	53:27:804:A:H61	1.83	0.43
29:3:3:ARG:HH12	53:27:752:A:P	2.42	0.43
17:Q:91:GLN:HE21	53:27:993:G:H1'	1.83	0.43
54:28:85:G:H2'	54:28:86:G:C8	2.53	0.43
58:32:51:C:H2'	58:32:52:G:C8	2.54	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:62:PRO:HD2	30:4:24:LYS:HB3	2.00	0.43
32:6:113:LEU:HD13	32:6:143:LEU:HB3	2.01	0.43
34:8:154:VAL:O	34:8:158:LEU:HD13	2.19	0.43
35:9:76:ASN:N	35:9:79:THR:O	2.52	0.43
1:A:29:PHE:CE2	1:A:31:PRO:HB2	2.54	0.43
1:A:5:CYS:SG	1:A:12:ARG:NE	2.92	0.43
9:I:130:HIS:ND1	9:I:130:HIS:O	2.51	0.43
10:J:40:LYS:HE2	53:27:2561:U:O3'	2.19	0.43
11:K:85:VAL:HG21	11:K:90:VAL:HG22	1.99	0.43
12:L:21:ALA:HA	12:L:97:GLN:HG2	2.00	0.43
14:N:66:GLY:HA2	14:N:102:ARG:NH2	2.33	0.43
17:Q:39:LEU:O	17:Q:49:ILE:HG23	2.19	0.43
18:R:57:ASN:HD21	53:27:495:G:H1'	1.84	0.43
20:T:76:THR:O	20:T:78:LYS:HG2	2.17	0.43
22:V:28:LEU:HA	22:V:60:ASP:OD1	2.19	0.43
26:Z:26:SER:OG	26:Z:28:VAL:HG13	2.19	0.43
39:13:11:ARG:HG2	39:13:76:GLY:HA3	2.00	0.43
43:17:15:VAL:HG21	43:17:40:GLU:HB2	2.00	0.43
43:17:69:ARG:HH11	43:17:69:ARG:HG2	1.84	0.43
44:18:5:MET:HB3	44:18:62:ARG:HH21	1.79	0.43
46:20:6:LEU:HD12	52:26:375:U:C4'	2.46	0.43
52:26:1259:C:H3'	52:26:1260:G:C5'	2.39	0.43
52:26:1484:C:H2'	52:26:1485:U:O4'	2.19	0.43
52:26:395:C:C4	52:26:396:C:N4	2.87	0.43
52:26:422:C:C6	52:26:422:C:OP2	2.72	0.43
38:12:3:GLN:NE2	52:26:755:G:H21	2.17	0.43
52:26:808:C:H2'	52:26:809:G:O4'	2.19	0.43
53:27:1065:U:H1'	53:27:1074:G:N2	2.34	0.43
53:27:586:A:C2	53:27:1254:A:C2	3.06	0.43
53:27:1361:G:C6	53:27:1371:G:N2	2.87	0.43
53:27:1666:G:H2'	53:27:1667:G:H5'	2.00	0.43
53:27:1951:U:O2	53:27:1953:A:H8	2.02	0.43
53:27:2312:U:C2'	53:27:2313:C:H5'	2.48	0.43
53:27:236:C:O2'	53:27:431:U:H4'	2.19	0.43
53:27:2388:A:H5'	53:27:2389:G:OP2	2.19	0.43
11:K:60:ARG:NH2	53:27:2428:G:N2	2.67	0.43
53:27:2584:U:C3'	53:27:2585:U:H5''	2.49	0.43
53:27:2679:A:O2'	53:27:2680:U:H5'	2.19	0.43
53:27:563:A:C6	53:27:564:C:C4	3.07	0.43
17:Q:80:ARG:HH12	53:27:571:U:P	2.42	0.43
53:27:610:C:H2'	53:27:611:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:784:G:OP2	53:27:2589:A:OP1	2.37	0.43
53:27:80:G:H2'	53:27:81:G:O4'	2.18	0.43
54:28:11:C:C2'	54:28:12:C:H5'	2.49	0.43
54:28:30:C:H2'	54:28:31:C:O4'	2.19	0.43
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.43
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.43
59:33:729:LEU:O	59:33:735:VAL:HG11	2.18	0.43
34:8:2:ARG:HD2	34:8:114:ARG:NE	2.34	0.43
1:A:130:PRO:HA	1:A:188:ARG:HA	2.00	0.43
7:G:94:ARG:HH21	7:G:131:THR:CG2	2.25	0.43
8:H:74:PRO:O	8:H:78:LEU:HG	2.19	0.43
12:L:4:PRO:HG3	12:L:68:PHE:HE2	1.83	0.43
12:L:78:LEU:HD23	12:L:79:ALA:HB2	2.01	0.43
13:M:96:ARG:O	13:M:113:ILE:HA	2.19	0.43
15:O:22:GLY:O	15:O:89:GLY:HA3	2.19	0.43
16:P:42:GLY:HA3	17:Q:75:VAL:HG21	2.00	0.43
19:S:44:LYS:HG3	19:S:55:VAL:CG1	2.48	0.43
44:18:30:ILE:O	44:18:40:ARG:HG3	2.19	0.42
44:18:95:LEU:HG	44:18:95:LEU:O	2.18	0.42
46:20:14:ARG:HH21	46:20:42:ILE:HD11	1.83	0.42
52:26:1069:C:O2'	52:26:1192:C:H1'	2.19	0.42
52:26:1187:G:O2'	52:26:1188:A:H5'	2.19	0.42
52:26:290:C:O5'	52:26:290:C:H6	2.02	0.42
52:26:431:A:H2'	52:26:432:A:H8	1.85	0.42
52:26:529:G:H4'	52:26:533:A:C2	2.54	0.42
52:26:890:G:O2'	52:26:906:A:N6	2.52	0.42
53:27:1178:C:C2	53:27:1179:G:N7	2.87	0.42
53:27:1912:A:N7	53:27:1917:U:C5	2.87	0.42
53:27:193:U:H2'	53:27:194:G:C8	2.38	0.42
53:27:1930:G:H2'	53:27:1968:G:N1	2.33	0.42
53:27:1973:G:H2'	53:27:1974:C:O4'	2.18	0.42
53:27:2248:C:H2'	53:27:2249:U:O4'	2.19	0.42
53:27:2312:U:O2'	53:27:2313:C:H5'	2.19	0.42
53:27:2617:U:H3'	53:27:2618:G:H8	1.84	0.42
53:27:2636:C:H2'	53:27:2637:U:C6	2.54	0.42
53:27:2869:G:H2'	53:27:2870:C:C6	2.54	0.42
53:27:527:C:C4	53:27:2779:U:H2'	2.54	0.42
53:27:556:A:H3'	53:27:557:C:C6	2.54	0.42
53:27:957:C:O2'	53:27:958:U:H5"	2.19	0.42
54:28:82:U:H2'	54:28:83:G:H8	1.84	0.42
56:30:62:C:H2'	56:30:63:G:N9	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:12:G:H2'	58:32:13:C:O4'	2.19	0.42
59:33:172:VAL:HG13	59:33:173:LEU:N	2.34	0.42
59:33:281:ILE:HG21	59:33:281:ILE:HD13	1.80	0.42
59:33:57:TRP:O	59:33:60:VAL:CG2	2.63	0.42
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.42
3:C:68:ALA:O	3:C:70:SER:N	2.51	0.42
5:E:91:VAL:HG22	5:E:92:GLY:N	2.33	0.42
8:H:102:ARG:HA	8:H:105:LEU:HD12	2.00	0.42
15:O:13:LYS:HE3	15:O:76:HIS:O	2.19	0.42
17:Q:37:GLU:OE1	17:Q:37:GLU:N	2.51	0.42
17:Q:64:VAL:HG21	17:Q:97:LYS:HB2	2.01	0.42
19:S:48:GLN:O	19:S:52:GLU:HA	2.19	0.42
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.19	0.42
21:U:93:ARG:HD2	21:U:93:ARG:HA	1.88	0.42
41:15:30:ILE:HD13	41:15:45:THR:HG23	2.01	0.42
47:21:6:THR:O	47:21:7:LEU:HD12	2.18	0.42
48:22:33:THR:HG22	48:22:37:LYS:HB3	2.01	0.42
48:22:32:ILE:HD12	48:22:33:THR:O	2.19	0.42
52:26:1073:U:C4	52:26:1074:G:N7	2.87	0.42
52:26:961:U:P	52:26:1223:C:H4'	2.58	0.42
52:26:1429:A:H2'	52:26:1430:A:H8	1.83	0.42
52:26:73:C:H2'	52:26:74:A:H8	1.83	0.42
52:26:786:G:C4	52:26:787:A:C8	3.07	0.42
52:26:943:U:H2'	52:26:944:G:C8	2.53	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.34	0.42
53:27:1360:G:C8	53:27:1361:G:C8	3.08	0.42
53:27:1736:U:H2'	53:27:1737:G:O4'	2.20	0.42
53:27:1842:G:C6	53:27:1843:C:C4	3.06	0.42
53:27:1842:G:C5	53:27:1843:C:C4	3.06	0.42
53:27:2110:G:H5'	53:27:2111:U:C5'	2.48	0.42
53:27:2363:G:H2'	53:27:2364:C:C6	2.54	0.42
53:27:2568:U:H2'	53:27:2569:G:O4'	2.19	0.42
53:27:564:C:H2'	53:27:565:C:H6	1.81	0.42
53:27:572:A:C6	53:27:573:U:N3	2.88	0.42
53:27:691:C:O2'	53:27:692:C:H5'	2.19	0.42
25:Y:25:GLY:O	53:27:929:U:H1'	2.19	0.42
58:32:40:C:H2'	58:32:41:C:H6	1.82	0.42
11:K:63:LYS:HA	30:4:11:LYS:O	2.19	0.42
32:6:116:LEU:HA	32:6:119:GLN:CG	2.48	0.42
33:7:2:GLN:HE21	52:26:1191:A:P	2.42	0.42
33:7:38:VAL:HG23	33:7:39:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:92:ARG:HB2	35:9:127:TYR:HB2	2.01	0.42
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.01	0.42
5:E:10:VAL:HG13	5:E:10:VAL:O	2.19	0.42
5:E:95:ALA:HB3	5:E:127:GLN:O	2.19	0.42
6:F:131:SER:OG	6:F:141:LYS:HE3	2.18	0.42
7:G:20:LYS:O	7:G:22:ALA:N	2.45	0.42
8:H:93:ASN:OD1	8:H:133:ARG:O	2.38	0.42
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.83	0.42
9:I:34:ARG:HH11	9:I:34:ARG:HG3	1.84	0.42
13:M:22:ARG:HG3	13:M:70:THR:HA	2.01	0.42
13:M:33:ILE:O	13:M:33:ILE:HG23	2.19	0.42
13:M:51:LEU:HD11	13:M:70:THR:HG23	2.01	0.42
14:N:32:PRO:O	14:N:102:ARG:NH1	2.50	0.42
14:N:49:VAL:HG11	14:N:78:VAL:O	2.19	0.42
17:Q:38:VAL:HG22	17:Q:40:MET:H	1.83	0.42
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.34	0.42
40:14:98:VAL:HG22	40:14:99:GLN:N	2.34	0.42
26:Z:66:ILE:HD13	44:18:41:TRP:HB2	2.01	0.42
46:20:8:ARG:HG3	46:20:8:ARG:O	2.19	0.42
49:23:21:ALA:O	49:23:25:GLY:N	2.50	0.42
52:26:1118:U:H1'	52:26:1179:A:C4	2.55	0.42
52:26:1241:G:H2'	52:26:1242:G:H8	1.84	0.42
52:26:199:A:O2'	52:26:200:G:H5'	2.19	0.42
52:26:705:G:H2'	52:26:706:A:H5'	1.99	0.42
52:26:756:C:H2'	52:26:757:U:H6	1.85	0.42
52:26:793:U:H5'	52:26:794:A:O5'	2.18	0.42
40:14:50:THR:HB	52:26:975:A:H62	1.84	0.42
53:27:1001:A:H2'	53:27:1002:G:O4'	2.19	0.42
7:G:38:MET:HE1	53:27:1058:U:H5'	2.00	0.42
53:27:1277:G:H2'	53:27:1278:C:C6	2.55	0.42
53:27:1310:G:O2'	53:27:1611:C:H5''	2.18	0.42
53:27:1629:U:H1'	53:27:2698:U:H5''	2.01	0.42
1:A:47:ARG:NH1	53:27:1807:G:OP1	2.50	0.42
11:K:54:GLN:HE22	53:27:2358:A:H61	1.66	0.42
53:27:2061:G:C8	53:27:2503:A:O4'	2.72	0.42
2:B:157:LYS:HA	53:27:2619:C:H5''	2.00	0.42
53:27:2691:C:O2'	53:27:2692:G:H5'	2.19	0.42
53:27:279:A:N6	53:27:361:G:O2'	2.51	0.42
53:27:522:A:H2'	53:27:523:C:H6	1.81	0.42
53:27:532:A:H4'	53:27:533:G:C8	2.53	0.42
53:27:784:G:C5'	53:27:785:G:OP1	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:823:C:C4	53:27:824:U:C4	3.07	0.42
53:27:870:U:O2'	53:27:871:U:H5'	2.19	0.42
55:29:17:U:H2'	55:29:18:G:C8	2.54	0.42
59:33:18:GLU:O	59:33:21:ILE:CG1	2.68	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42
49:23:55:GLN:NE2	59:33:606:MET:HA	2.34	0.42
32:6:202:ASN:HD21	32:6:208:ALA:HB2	1.83	0.42
34:8:131:ILE:HD12	34:8:131:ILE:O	2.19	0.42
35:9:113:VAL:HG13	35:9:114:LEU:HD13	2.01	0.42
35:9:152:VAL:C	35:9:154:ALA:N	2.71	0.42
3:C:45:ALA:CB	53:27:38:A:H4'	2.49	0.42
4:D:65:LEU:HD23	4:D:87:LYS:HE2	2.00	0.42
5:E:144:ALA:HB1	5:E:163:TYR:HE1	1.84	0.42
5:E:91:VAL:HG12	5:E:159:LYS:HE2	2.00	0.42
6:F:80:ILE:HD13	6:F:98:ASP:OD2	2.19	0.42
7:G:52:MET:HE3	7:G:99:PHE:CZ	2.54	0.42
8:H:73:PRO:CB	8:H:78:LEU:HD21	2.49	0.42
9:I:15:TRP:O	9:I:138:GLN:HB3	2.20	0.42
19:S:73:ARG:NH2	19:S:73:ARG:HG3	2.29	0.42
36:10:54:LEU:HD12	36:10:55:HIS:N	2.35	0.42
39:13:43:ALA:O	39:13:46:VAL:HG22	2.19	0.42
41:15:126:ARG:HB2	51:25:33:ARG:CD	2.48	0.42
41:15:71:ASP:O	41:15:72:ALA:CB	2.66	0.42
44:18:33:VAL:HG23	44:18:33:VAL:O	2.19	0.42
47:21:26:ARG:CZ	47:21:39:ARG:HG2	2.50	0.42
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.48	0.42
52:26:1054:C:OP2	52:26:1197:A:OP2	2.37	0.42
52:26:1234:C:C2'	52:26:1235:U:H5'	2.49	0.42
52:26:123:U:H2'	52:26:124:C:C6	2.55	0.42
52:26:157:U:H1'	52:26:165:G:C2	2.54	0.42
52:26:496:A:C2	52:26:497:G:C5	3.07	0.42
52:26:5:U:H4'	52:26:6:G:C4	2.54	0.42
45:19:71:ARG:HH22	52:26:754:C:H5'	1.78	0.42
37:11:2:ARG:NH2	52:26:935:A:C2	2.87	0.42
52:26:967:C:H2'	52:26:968:A:C8	2.54	0.42
52:26:969:A:O2'	52:26:970:C:H5'	2.20	0.42
9:I:26:GLY:HA3	53:27:1140:C:H5'	2.01	0.42
18:R:11:ARG:HH21	53:27:1322:A:H5'	1.83	0.42
53:27:1356:G:C5	53:27:1357:C:C5	3.08	0.42
53:27:1669:A:OP2	53:27:1670:C:OP2	2.37	0.42
1:A:217:PRO:HB2	53:27:1789:A:O3'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1869:G:H2'	53:27:1871:A:H2	1.85	0.42
53:27:1909:C:H2'	53:27:1910:G:C8	2.54	0.42
53:27:1923:U:H2'	53:27:1924:C:C6	2.54	0.42
53:27:1786:A:H1'	53:27:1938:A:N6	2.34	0.42
53:27:2048:G:H2'	53:27:2049:G:O4'	2.20	0.42
53:27:2071:A:C6	53:27:2072:C:N4	2.87	0.42
53:27:2075:U:C4	53:27:2238:G:C6	3.08	0.42
53:27:2460:U:H2'	53:27:2461:A:H8	1.83	0.42
53:27:1999:C:H1'	53:27:2687:U:O2'	2.19	0.42
53:27:483:A:N7	53:27:497:A:H2	2.18	0.42
3:C:84:THR:CG2	53:27:586:A:H5'	2.45	0.42
53:27:635:C:H2'	53:27:636:G:C8	2.55	0.42
29:3:12:ARG:NH2	53:27:686:U:O4	2.52	0.42
53:27:770:G:C4	53:27:771:G:C8	3.07	0.42
53:27:860:U:H1'	53:27:2268:A:H5'	2.01	0.42
53:27:996:A:C6	53:27:1160:G:N1	2.87	0.42
21:U:18:ARG:HH21	54:28:78:A:P	2.42	0.42
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.42
59:33:622:VAL:CB	59:33:641:LEU:HD21	2.48	0.42
59:33:664:GLY:N	59:33:717:TYR:O	2.52	0.42
32:6:191:ASP:OD1	32:6:192:PRO:HD2	2.19	0.42
33:7:86:LEU:HA	33:7:89:VAL:CG2	2.50	0.42
3:C:132:LYS:HD3	53:27:319:G:OP2	2.20	0.42
5:E:16:VAL:HG12	5:E:17:LYS:H	1.85	0.42
7:G:34:THR:HG21	53:27:1085:A:N6	2.34	0.42
7:G:44:ALA:O	7:G:50:VAL:N	2.52	0.42
9:I:16:TYR:O	9:I:55:ILE:N	2.52	0.42
10:J:31:ARG:HH12	53:27:2676:C:P	2.42	0.42
14:N:49:VAL:CG2	14:N:82:ALA:HA	2.37	0.42
17:Q:37:GLU:CD	17:Q:37:GLU:H	2.22	0.42
41:15:96:ILE:O	41:15:99:LEU:HB3	2.18	0.42
42:16:112:ALA:HA	52:26:502:A:P	2.59	0.42
52:26:1414:U:H2'	52:26:1415:G:C8	2.50	0.42
52:26:1434:A:O2'	52:26:1435:G:H5'	2.18	0.42
52:26:177:G:O2'	52:26:1448:C:H4'	2.20	0.42
52:26:207:C:H1'	52:26:212:G:H22	1.84	0.42
52:26:542:G:H2'	52:26:543:U:H6	1.79	0.42
52:26:711:G:H2'	52:26:712:A:H8	1.84	0.42
52:26:880:C:H2'	52:26:881:G:O4'	2.19	0.42
52:26:900:A:H2'	52:26:901:A:O4'	2.19	0.42
52:26:922:G:C6	52:26:923:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1049:C:H1'	53:27:1113:U:H4'	2.02	0.42
53:27:1105:U:H2'	53:27:1106:G:H8	1.84	0.42
53:27:1255:U:C5'	53:27:1256:G:H5''	2.49	0.42
53:27:1620:G:O2'	53:27:1621:U:H5'	2.19	0.42
53:27:1891:G:H2'	53:27:1892:C:H6	1.83	0.42
53:27:2090:A:H2'	53:27:2091:C:H6	1.83	0.42
53:27:2662:A:C4	53:27:2663:G:H1'	2.55	0.42
53:27:303:G:H2'	53:27:304:U:O4'	2.19	0.42
54:28:56:G:H4'	54:28:57:A:H8	1.83	0.42
55:29:13:A:O5'	55:29:13:A:H8	2.02	0.42
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42
59:33:599:VAL:N	59:33:602:VAL:O	2.53	0.42
30:4:38:LYS:HG3	30:4:41:ARG:NH1	2.35	0.42
32:6:105:THR:N	32:6:107:ARG:HG2	2.35	0.42
32:6:76:SER:HB2	32:6:92:ASN:O	2.19	0.42
35:9:63:MET:HB3	35:9:67:ARG:NH1	2.25	0.42
20:T:82:VAL:HG12	20:T:83:GLY:N	2.34	0.42
23:W:32:LEU:O	23:W:33:HIS:CG	2.72	0.42
24:X:7:ARG:HG3	24:X:8:GLU:N	2.34	0.42
37:11:28:ILE:O	37:11:28:ILE:HG22	2.20	0.42
41:15:40:ALA:HB3	52:26:685:G:O4'	2.20	0.42
43:17:28:ARG:HG2	43:17:62:PHE:CD2	2.55	0.42
4:D:114:ARG:NH1	43:17:67:ASP:OD1	2.50	0.42
44:18:26:LEU:HA	44:18:30:ILE:HD12	2.00	0.42
45:19:35:ILE:HG12	45:19:55:LEU:HD11	2.02	0.42
46:20:21:VAL:O	46:20:32:PHE:HB2	2.20	0.42
51:25:27:VAL:O	51:25:31:VAL:HG12	2.19	0.42
52:26:1026:G:N3	52:26:1026:G:H2'	2.33	0.42
52:26:1037:C:H2'	52:26:1038:C:C6	2.52	0.42
52:26:1114:C:H2'	52:26:1115:U:O4'	2.18	0.42
52:26:1231:G:O2'	52:26:1232:U:H5'	2.19	0.42
52:26:137:U:O2'	52:26:138:G:H5'	2.19	0.42
52:26:1415:G:N3	52:26:1416:G:C8	2.88	0.42
52:26:236:A:H2'	52:26:237:G:H8	1.84	0.42
52:26:434:U:H2'	52:26:435:A:H8	1.85	0.42
52:26:731:G:H5'	52:26:766:A:C4'	2.49	0.42
52:26:88:U:C2'	52:26:89:U:H4'	2.49	0.42
53:27:1070:A:H2'	53:27:1097:U:OP1	2.20	0.42
53:27:1187:G:H8	53:27:1187:G:O5'	2.03	0.42
53:27:2007:U:H2'	53:27:2008:C:C6	2.46	0.42
53:27:2107:G:H2'	53:27:2108:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2341:G:H2'	53:27:2342:C:H6	1.85	0.42
53:27:2654:A:N1	53:27:2665:A:H5''	2.35	0.42
53:27:2800:A:H3'	53:27:2801:G:H5''	2.01	0.42
53:27:426:C:H2'	53:27:427:U:C6	2.54	0.42
53:27:687:C:H5'	53:27:688:U:OP2	2.19	0.42
54:28:34:A:H2'	54:28:44:G:O6	2.18	0.42
58:32:40:C:C2	58:32:41:C:C5	3.06	0.42
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.42
59:33:432:HIS:HB3	59:33:435:VAL:CG2	2.46	0.42
59:33:702:ASP:OD1	59:33:703:THR:N	2.48	0.42
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.42
30:4:3:ILE:N	30:4:63:TYR:OH	2.52	0.42
33:7:46:LEU:CD1	33:7:75:VAL:HG13	2.50	0.42
34:8:67:LEU:HA	34:8:67:LEU:HD23	1.88	0.42
35:9:101:GLY:O	35:9:102:THR:O	2.36	0.42
35:9:35:LEU:HD12	35:9:48:GLY:O	2.19	0.42
1:A:154:ALA:HB2	1:A:161:VAL:HG23	2.00	0.42
2:B:104:VAL:O	2:B:177:VAL:HG11	2.20	0.42
3:C:103:GLY:O	3:C:106:LYS:HB2	2.19	0.42
4:D:102:LEU:HA	4:D:106:ALA:HB3	2.02	0.42
14:N:100:HIS:H	14:N:103:VAL:HG23	1.85	0.42
16:P:53:LYS:HE2	53:27:994:C:C6	2.54	0.42
20:T:38:ILE:HG22	20:T:39:ASN:N	2.34	0.42
21:U:60:VAL:HG13	21:U:72:VAL:O	2.20	0.42
37:11:110:ARG:O	37:11:110:ARG:HG2	2.20	0.42
42:16:104:SER:HB2	42:16:107:LYS:HZ1	1.84	0.42
44:18:57:SER:OG	52:26:1316:G:H4'	2.20	0.42
46:20:6:LEU:HD13	46:20:17:TYR:CD1	2.54	0.42
48:22:13:THR:CG2	48:22:20:ILE:HD11	2.48	0.42
52:26:1001:C:H2'	52:26:1002:G:C8	2.54	0.42
52:26:1064:G:C2	52:26:1066:C:N4	2.88	0.42
52:26:357:G:OP1	52:26:367:U:H2'	2.19	0.42
52:26:441:A:H61	52:26:493:A:H2	1.67	0.42
52:26:514:C:H2'	52:26:515:G:C8	2.53	0.42
52:26:602:A:H2'	52:26:603:U:C6	2.54	0.42
52:26:848:C:H2'	52:26:849:G:C5'	2.49	0.42
53:27:1387:A:O2'	53:27:1388:G:H5'	2.19	0.42
53:27:1528:A:H2'	53:27:1529:G:C5'	2.50	0.42
53:27:1542:U:H2'	53:27:1543:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1772:A:H2'	53:27:1773:A:O3'	2.20	0.42
53:27:2287:A:C5	53:27:2289:G:C8	3.08	0.42
53:27:2452:C:C2	53:27:2504:U:C4	3.08	0.42
53:27:2828:G:O2'	53:27:2829:A:H5'	2.20	0.42
53:27:514:A:O2'	53:27:515:A:H5'	2.20	0.42
1:A:12:ARG:HD2	53:27:728:G:H4'	2.02	0.42
59:33:407:TYR:O	59:33:408:VAL:HG13	2.19	0.42
32:6:185:ILE:HG22	32:6:199:ILE:CB	2.47	0.42
32:6:91:VAL:HG11	32:6:95:TRP:HD1	1.83	0.42
33:7:68:HIS:HA	33:7:103:ALA:O	2.19	0.42
34:8:144:ILE:HG22	34:8:149:LYS:HA	2.01	0.42
34:8:84:ASN:O	34:8:88:ASN:ND2	2.53	0.42
4:D:18:GLU:C	4:D:20:ASN:H	2.23	0.42
4:D:14:LYS:O	4:D:18:GLU:HG3	2.19	0.42
4:D:72:SER:OG	4:D:79:ARG:HA	2.20	0.42
6:F:3:VAL:HA	6:F:39:ALA:H	1.84	0.42
7:G:82:ILE:HB	7:G:84:TYR:CE2	2.55	0.42
9:I:62:VAL:HG11	9:I:101:ILE:HD11	2.01	0.42
9:I:95:ARG:HG3	9:I:96:ARG:HG2	2.02	0.42
10:J:22:ILE:HD12	10:J:23:LYS:HB3	2.02	0.42
14:N:15:ARG:HD2	14:N:25:ARG:NH2	2.34	0.42
15:O:1:SER:N	15:O:4:ILE:HD12	2.35	0.42
15:O:85:VAL:HG12	15:O:86:LYS:N	2.35	0.42
15:O:93:LYS:HD3	53:27:2717:C:O2'	2.19	0.42
16:P:27:ARG:HH21	16:P:37:ALA:HA	1.84	0.42
19:S:48:GLN:HB2	19:S:55:VAL:HG21	2.01	0.42
20:T:11:ILE:HD11	20:T:19:GLY:HA2	2.02	0.42
25:Y:20:LYS:O	25:Y:23:LEU:HB2	2.19	0.42
39:13:86:LEU:HA	39:13:86:LEU:HD23	1.78	0.42
42:16:113:ARG:HH21	42:16:120:ARG:CG	2.32	0.42
46:20:54:LEU:O	46:20:57:ILE:HB	2.20	0.42
49:23:30:LEU:N	49:23:30:LEU:HD12	2.34	0.42
28:2:34:GLU:HA	28:2:48:TYR:O	2.19	0.42
33:7:196:GLY:H	52:26:1057:G:H4'	1.85	0.42
52:26:123:U:H2'	52:26:124:C:H6	1.85	0.42
52:26:222:C:H2'	52:26:223:A:H8	1.84	0.42
52:26:321:A:H2'	52:26:322:C:C6	2.54	0.42
52:26:487:A:H2'	52:26:488:C:O4'	2.19	0.42
52:26:573:A:C6	52:26:574:A:N1	2.88	0.42
52:26:579:A:H5'	52:26:728:A:H1'	2.02	0.42
52:26:785:G:O2'	52:26:786:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1126:A:H8	53:27:1126:A:OP1	2.03	0.42
53:27:1272:A:C2	53:27:1618:A:C2	3.08	0.42
53:27:1795:C:C4	53:27:1796:U:C4	3.08	0.42
1:A:44:ASN:HD21	53:27:1812:U:C1'	2.31	0.42
53:27:1815:A:OP1	53:27:1815:A:H8	2.02	0.42
53:27:2010:G:O2'	53:27:2011:U:H5'	2.20	0.42
53:27:2173:A:H2'	53:27:2174:C:C5	2.55	0.42
53:27:256:A:O2'	53:27:257:C:H5'	2.20	0.42
15:O:52:ARG:NH2	53:27:2720:U:H5''	2.34	0.42
53:27:341:C:H2'	53:27:342:A:H8	1.83	0.42
53:27:342:A:H2'	53:27:343:C:O4'	2.20	0.42
53:27:868:U:C4	53:27:869:G:N7	2.88	0.42
53:27:884:U:O5'	53:27:884:U:H6	2.03	0.42
53:27:942:G:H2'	53:27:943:A:H8	1.85	0.42
12:L:86:LYS:HZ3	53:27:955:U:P	2.42	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.84	0.42
59:33:566:LYS:CB	59:33:569:ALA:HB3	2.50	0.42
31:5:19:ARG:HH12	31:5:26:ILE:CD1	2.20	0.42
33:7:121:SER:O	33:7:124:GLU:HB3	2.19	0.42
33:7:76:ILE:CA	33:7:83:VAL:HG23	2.49	0.42
1:A:163:ILE:HG12	1:A:173:LEU:CD2	2.49	0.42
1:A:204:LEU:HD21	1:A:213:ARG:HE	1.85	0.42
2:B:4:LEU:HD13	2:B:101:PHE:CE2	2.55	0.42
5:E:34:ARG:CG	5:E:74:MET:SD	3.08	0.42
5:E:85:LYS:HB2	5:E:164:ALA:CB	2.50	0.42
8:H:127:SER:CA	53:27:1059:G:H21	2.33	0.42
9:I:118:MET:O	9:I:121:LYS:HG2	2.20	0.42
12:L:67:VAL:HG12	12:L:100:LYS:HE3	2.01	0.42
12:L:69:PRO:CA	12:L:94:ALA:HB2	2.48	0.42
14:N:69:ASP:N	14:N:69:ASP:OD1	2.52	0.42
15:O:63:ILE:H	15:O:63:ILE:HG13	1.53	0.42
16:P:90:ASP:OD1	16:P:90:ASP:C	2.56	0.42
19:S:88:LYS:O	19:S:91:GLN:HB3	2.18	0.42
42:16:101:LEU:HB3	42:16:102:ASP:H	1.53	0.42
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.85	0.42
51:25:38:GLU:OE1	52:26:1527:U:OP2	2.38	0.42
52:26:1143:G:H2'	52:26:1144:G:C8	2.55	0.42
52:26:267:C:O2'	52:26:268:U:H5'	2.19	0.42
52:26:605:U:H2'	52:26:606:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:849:G:H2'	52:26:850:U:O4'	2.20	0.42
52:26:852:G:C5	52:26:853:C:C5	3.08	0.42
53:27:1271:G:O3'	53:27:1272:A:H4'	2.20	0.42
53:27:1528:A:H2'	53:27:1529:G:O4'	2.19	0.42
19:S:81:LYS:NZ	53:27:1600:C:OP1	2.43	0.42
53:27:2340:A:H2'	53:27:2341:G:C8	2.54	0.42
53:27:2543:G:H2'	53:27:2544:G:H8	1.82	0.42
53:27:2553:G:H2'	53:27:2554:U:O4'	2.20	0.42
53:27:2623:G:H2'	53:27:2624:G:C8	2.51	0.42
11:K:41:ARG:NH1	53:27:807:U:OP2	2.52	0.42
53:27:864:G:O2'	53:27:865:C:H5'	2.19	0.42
53:27:962:G:H21	53:27:2250:G:H22	1.68	0.42
54:28:118:C:H2'	54:28:119:A:H8	1.84	0.42
57:31:52:G:H2'	57:31:53:G:O4'	2.20	0.42
57:31:66:C:O2'	57:31:67:C:H5'	2.20	0.42
59:33:450:PRO:C	59:33:452:THR:H	2.20	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
59:33:599:VAL:HG11	59:33:631:ILE:CD1	2.49	0.42
30:4:8:GLY:O	30:4:12:ARG:NH2	2.53	0.42
31:5:24:ARG:HH22	31:5:36:ARG:HG3	1.84	0.42
35:9:132:PRO:O	35:9:135:VAL:HG22	2.20	0.42
1:A:75:ALA:CB	1:A:95:TYR:HA	2.49	0.42
2:B:183:GLU:OE1	2:B:183:GLU:N	2.52	0.42
2:B:49:GLN:HE21	2:B:79:LEU:HB3	1.85	0.42
4:D:34:THR:HA	4:D:88:VAL:O	2.20	0.42
10:J:76:VAL:H	15:O:72:VAL:CG2	2.30	0.42
14:N:9:ARG:HG3	14:N:10:ARG:N	2.35	0.42
17:Q:37:GLU:HB2	17:Q:53:PHE:HE1	1.84	0.42
18:R:66:ILE:O	18:R:69:LEU:HB3	2.19	0.42
23:W:17:ARG:HA	23:W:17:ARG:HD3	1.95	0.42
26:Z:43:PHE:HB2	26:Z:47:LYS:NZ	2.34	0.42
38:12:10:LEU:HD22	38:12:74:ILE:HD13	2.02	0.42
38:12:56:PRO:O	38:12:58:LEU:N	2.52	0.42
39:13:122:ARG:HB2	52:26:1349:A:OP1	2.20	0.42
44:18:93:PRO:O	44:18:94:GLY:C	2.59	0.42
46:20:20:VAL:HG21	46:20:32:PHE:CG	2.55	0.42
52:26:1155:A:H2'	52:26:1156:G:O4'	2.20	0.42
51:25:17:ARG:NH2	52:26:1538:C:O2'	2.53	0.42
52:26:236:A:H8	52:26:236:A:O5'	2.03	0.42
46:20:5:ARG:HB2	52:26:376:G:H5''	2.01	0.42
52:26:374:A:H2	52:26:390:U:HO2'	1.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:429:U:H4'	52:26:430:A:O5'	2.20	0.42
52:26:469:C:H2'	52:26:470:C:H5'	2.01	0.42
52:26:24:U:H4'	52:26:524:G:O2'	2.20	0.42
52:26:792:A:H1'	52:26:794:A:C8	2.55	0.42
52:26:824:G:O2'	52:26:825:A:H5'	2.19	0.42
52:26:892:A:H2'	52:26:893:C:H6	1.84	0.42
53:27:1306:C:O2'	53:27:1307:A:H5'	2.20	0.42
53:27:1555:G:H5'	53:27:1555:G:H8	1.84	0.42
1:A:62:ARG:NH2	53:27:1568:G:OP2	2.44	0.42
53:27:1820:U:H4'	53:27:1821:A:OP2	2.20	0.42
53:27:185:G:H2'	53:27:186:G:O4'	2.20	0.42
53:27:2027:G:C2	53:27:2028:U:C2	3.07	0.42
53:27:2037:A:C6	53:27:2038:G:C6	3.08	0.42
53:27:283:G:H2'	53:27:284:U:H4'	2.02	0.42
53:27:719:C:H2'	53:27:720:U:O4'	2.20	0.42
1:A:47:ARG:NH2	53:27:777:G:O2'	2.53	0.42
54:28:35:C:H2'	54:28:36:C:O4'	2.19	0.42
59:33:134:ASN:O	59:33:135:VAL:CB	2.68	0.42
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.42
59:33:197:GLU:OE2	59:33:201:TYR:OH	2.35	0.42
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.42
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.42
59:33:473:ARG:O	59:33:475:TRP:N	2.53	0.42
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
1:A:155:ARG:NH1	53:27:1818:U:H5	2.18	0.42
3:C:109:LEU:HD11	3:C:180:LEU:HD23	2.01	0.42
7:G:59:LEU:HD23	7:G:61:ARG:N	2.35	0.42
19:S:11:LEU:HD21	19:S:47:VAL:HG22	2.02	0.42
19:S:57:VAL:HG22	19:S:58:VAL:H	1.85	0.42
21:U:26:PHE:CZ	21:U:86:LEU:HD22	2.55	0.42
24:X:59:GLU:HA	24:X:63:ALA:HB2	2.02	0.42
36:10:6:ILE:HD13	36:10:74:LEU:HD21	2.00	0.41
37:11:21:LEU:C	37:11:21:LEU:HD23	2.40	0.41
39:13:9:GLY:HA3	39:13:81:GLY:HA2	2.02	0.41
27:1:51:ARG:CG	27:1:53:VAL:HG13	2.48	0.41
41:15:30:ILE:HD13	41:15:45:THR:CG2	2.50	0.41
42:16:109:ARG:NH2	42:16:116:TYR:HE2	2.18	0.41
51:25:28:LEU:O	51:25:30:GLU:N	2.44	0.41
52:26:1109:C:H2'	52:26:1110:A:H8	1.85	0.41
52:26:113:G:H1'	52:26:354:G:H5"	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1197:A:O2'	52:26:1198:G:H5'	2.20	0.41
52:26:122:G:C5	52:26:123:U:C5	3.07	0.41
52:26:1353:G:O2'	52:26:1354:U:H5'	2.20	0.41
47:21:42:LYS:NZ	52:26:278:G:OP2	2.35	0.41
52:26:296:U:H2'	52:26:297:G:H8	1.80	0.41
52:26:312:C:H2'	52:26:313:A:H8	1.79	0.41
52:26:325:A:H2'	52:26:326:G:O4'	2.20	0.41
52:26:496:A:H2'	52:26:497:G:C8	2.55	0.41
52:26:514:C:H2'	52:26:515:G:H8	1.85	0.41
52:26:545:C:H2'	52:26:546:A:H8	1.85	0.41
52:26:90:C:H2'	52:26:91:U:H5'	2.01	0.41
53:27:1052:C:H2'	53:27:1053:C:H5'	2.01	0.41
53:27:1110:G:H2'	53:27:1111:A:C8	2.55	0.41
53:27:1172:C:H2'	53:27:1173:U:C2	2.55	0.41
53:27:128:C:H2'	53:27:129:C:H6	1.85	0.41
53:27:1577:C:H2'	53:27:1578:U:C6	2.55	0.41
53:27:1874:C:H2'	53:27:1875:G:O4'	2.20	0.41
53:27:2066:C:O2'	53:27:2067:G:H5'	2.19	0.41
53:27:2069:G:C2	53:27:2070:A:C8	3.07	0.41
53:27:379:G:H4'	53:27:2232:C:H5''	2.01	0.41
53:27:2544:G:H2'	53:27:2545:G:C8	2.55	0.41
53:27:2650:U:H2'	53:27:2651:C:C6	2.55	0.41
53:27:2714:G:O2'	53:27:2715:C:H5'	2.20	0.41
53:27:316:C:H6	53:27:316:C:O5'	2.03	0.41
53:27:524:G:C6	53:27:525:U:C4	3.08	0.41
53:27:565:C:O5'	53:27:565:C:H6	2.03	0.41
53:27:950:G:H2'	53:27:951:C:H6	1.85	0.41
17:Q:10:LYS:CE	53:27:994:C:H1'	2.50	0.41
26:Z:1:MET:HA	54:28:44:G:OP2	2.20	0.41
58:32:26:G:O6	58:32:44:A:C2	2.73	0.41
59:33:687:LEU:HA	59:33:690:GLU:OE1	2.19	0.41
30:4:44:ARG:N	30:4:45:PRO:HD2	2.35	0.41
32:6:17:HIS:CG	32:6:202:ASN:HB3	2.55	0.41
35:9:26:GLY:O	52:26:1194:U:H5'	2.20	0.41
1:A:145:MET:HE3	1:A:181:ARG:HE	1.85	0.41
1:A:208:GLY:O	1:A:211:ARG:N	2.53	0.41
3:C:132:LYS:HE3	3:C:132:LYS:HB2	1.87	0.41
7:G:24:SER:N	7:G:118:ILE:HG13	2.32	0.41
8:H:109:ALA:HB1	8:H:121:ILE:HG23	2.02	0.41
10:J:12:ASP:HB2	10:J:98:ARG:O	2.20	0.41
15:O:88:ARG:N	15:O:111:GLU:OE2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:77:SER:O	15:O:80:VAL:HG22	2.20	0.41
25:Y:44:ARG:HH22	25:Y:56:VAL:HG21	1.85	0.41
38:12:84:ILE:HG22	38:12:85:TYR:N	2.35	0.41
42:16:29:LYS:O	42:16:80:LEU:HD12	2.20	0.41
33:7:28:PHE:HE2	44:18:76:PHE:HD1	1.68	0.41
46:20:38:PHE:CE2	46:20:51:ARG:HB3	2.55	0.41
52:26:1097:C:H2'	52:26:1098:C:H6	1.82	0.41
52:26:1264:U:H2'	52:26:1265:C:C6	2.55	0.41
52:26:189:A:H2'	52:26:190:A:C8	2.55	0.41
52:26:398:U:H2'	52:26:399:G:H8	1.84	0.41
52:26:855:U:H2'	52:26:856:C:H6	1.83	0.41
53:27:1015:U:H2'	53:27:1016:G:H8	1.84	0.41
53:27:1127:A:C2'	53:27:1128:G:H5''	2.50	0.41
53:27:1312:U:H4'	53:27:1313:U:O5'	2.21	0.41
53:27:1361:G:C6	53:27:1362:C:N4	2.87	0.41
53:27:1358:G:C2	53:27:1372:U:C5	3.08	0.41
53:27:1656:C:C2	53:27:1657:U:C5	3.08	0.41
53:27:1689:A:N6	53:27:1697:G:H2'	2.35	0.41
53:27:16:C:O5'	53:27:16:C:H6	2.03	0.41
53:27:1706:C:O2'	53:27:1757:A:H5'	2.20	0.41
53:27:1878:G:O2'	53:27:1879:C:H5'	2.20	0.41
53:27:1906:G:H3'	53:27:1907:G:H5''	2.02	0.41
53:27:2025:C:H2'	53:27:2026:U:C6	2.54	0.41
53:27:2040:G:H2'	53:27:2041:U:O4'	2.20	0.41
53:27:528:A:C2	53:27:2043:C:H5'	2.55	0.41
53:27:2291:U:O2'	53:27:2374:C:H1'	2.20	0.41
53:27:2454:G:C4	53:27:2455:G:C8	3.08	0.41
10:J:23:LYS:HE3	53:27:2561:U:O2	2.19	0.41
53:27:2773:C:H2'	53:27:2774:C:C6	2.55	0.41
53:27:458:G:N2	53:27:469:G:C4	2.88	0.41
53:27:624:C:H2'	53:27:625:G:O4'	2.20	0.41
53:27:635:C:H2'	53:27:636:G:H8	1.85	0.41
53:27:714:U:H2'	53:27:716:A:N7	2.35	0.41
53:27:727:A:C6	53:27:728:G:C6	3.08	0.41
53:27:755:U:H2'	53:27:756:A:H8	1.81	0.41
53:27:814:C:O2'	53:27:815:C:H5'	2.20	0.41
53:27:820:A:H2'	53:27:821:A:C8	2.55	0.41
58:32:21:A:H62	58:32:47:U:H4'	1.84	0.41
58:32:36:U:H2'	58:32:37:A:C5'	2.38	0.41
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:668:VAL:HG12	59:33:669:VAL:N	2.34	0.41
32:6:100:LEU:O	32:6:103:TRP:HB2	2.20	0.41
33:7:120:THR:HG23	33:7:188:ALA:CB	2.50	0.41
34:8:59:LYS:CD	34:8:194:ILE:HG22	2.50	0.41
1:A:164:VAL:CG2	1:A:174:ARG:HB2	2.50	0.41
2:B:184:ARG:O	2:B:186:LEU:HG	2.20	0.41
4:D:72:SER:OG	4:D:79:ARG:HG2	2.20	0.41
8:H:54:ILE:HA	8:H:73:PRO:HA	2.02	0.41
9:I:110:PRO:HB3	53:27:1007:C:O3'	2.20	0.41
11:K:81:ASP:C	11:K:81:ASP:OD1	2.58	0.41
13:M:66:ALA:O	13:M:69:ARG:O	2.38	0.41
14:N:100:HIS:H	14:N:103:VAL:CG2	2.33	0.41
14:N:68:LYS:HG3	54:28:50:A:OP1	2.20	0.41
15:O:28:LYS:HA	15:O:41:ALA:HA	2.02	0.41
19:S:12:ARG:HA	19:S:12:ARG:HD3	1.82	0.41
20:T:27:VAL:HG11	53:27:85:G:H5''	2.02	0.41
21:U:42:LEU:CD1	21:U:47:VAL:HG21	2.46	0.41
23:W:16:ASN:OD1	23:W:26:ARG:HD2	2.19	0.41
38:12:19:ALA:C	38:12:21:LYS:N	2.72	0.41
38:12:19:ALA:HB3	38:12:21:LYS:HB2	2.01	0.41
39:13:102:PHE:O	39:13:104:THR:N	2.53	0.41
40:14:7:ARG:O	40:14:101:SER:HB2	2.21	0.41
40:14:34:ALA:O	40:14:36:VAL:HG12	2.21	0.41
42:16:24:GLU:C	42:16:26:CYS:N	2.71	0.41
43:17:18:LEU:HD22	43:17:21:ILE:HD11	2.02	0.41
43:17:90:HIS:HE2	52:26:1309:G:P	2.42	0.41
28:2:46:VAL:CG1	28:2:47:ILE:H	2.25	0.41
44:18:97:LYS:HE2	52:26:1189:U:OP1	2.21	0.41
52:26:166:U:O2'	52:26:167:A:H5'	2.21	0.41
52:26:232:G:C2'	52:26:233:C:H5'	2.50	0.41
52:26:720:C:C5	52:26:721:G:C4	3.08	0.41
52:26:955:U:H2'	52:26:956:U:C6	2.56	0.41
16:P:2:ARG:HA	53:27:1248:G:O2'	2.20	0.41
53:27:186:G:H2'	53:27:187:G:H8	1.85	0.41
30:4:2:LYS:HB2	53:27:242:G:C8	2.55	0.41
53:27:2582:G:OP2	53:27:2583:G:OP2	2.37	0.41
53:27:413:C:O2'	53:27:414:C:H5'	2.20	0.41
53:27:489:G:C5	53:27:1284:A:C2	3.08	0.41
53:27:524:G:C5	53:27:525:U:C4	3.08	0.41
53:27:696:G:H2'	53:27:697:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:71:A:H3'	53:27:71:A:OP2	2.21	0.41
53:27:852:U:H2'	53:27:853:C:H6	1.85	0.41
54:28:24:G:N2	54:28:28:C:C2	2.88	0.41
54:28:62:C:O2'	54:28:63:C:H5'	2.20	0.41
52:26:926:G:O6	55:29:16:A:OP2	2.39	0.41
28:2:9:LYS:HG3	28:2:19:PHE:CD1	2.56	0.41
56:30:44:G:C2'	56:30:45:U:H5'	2.51	0.41
59:33:214:ILE:HD13	59:33:214:ILE:HG21	1.79	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
32:6:22:TRP:HD1	32:6:22:TRP:H	1.69	0.41
32:6:59:ILE:O	32:6:63:LYS:N	2.54	0.41
33:7:116:ALA:O	33:7:119:ILE:HB	2.20	0.41
33:7:86:LEU:HA	33:7:89:VAL:HG22	2.02	0.41
33:7:8:GLY:HA3	44:18:88:MET:HE3	2.02	0.41
35:9:37:VAL:HG12	35:9:116:VAL:HG21	2.02	0.41
35:9:154:ALA:HB1	38:12:65:PHE:CE1	2.54	0.41
35:9:70:MET:O	35:9:71:ILE:HD13	2.20	0.41
1:A:202:ARG:NH1	1:A:213:ARG:HH22	2.16	0.41
3:C:164:LEU:HD23	3:C:165:HIS:N	2.36	0.41
3:C:65:THR:HG22	3:C:65:THR:O	2.20	0.41
9:I:45:THR:HG22	9:I:47:HIS:H	1.85	0.41
16:P:1:ALA:O	16:P:3:VAL:N	2.53	0.41
17:Q:91:GLN:OE1	17:Q:92:TRP:N	2.54	0.41
18:R:74:ILE:HG13	18:R:104:THR:O	2.21	0.41
22:V:55:LEU:HA	22:V:55:LEU:HD23	1.83	0.41
36:10:9:MET:HE1	36:10:86:ARG:HD2	2.02	0.41
37:11:130:LYS:HE3	37:11:130:LYS:HB2	1.84	0.41
38:12:29:SER:OG	38:12:32:LYS:HG3	2.21	0.41
39:13:33:SER:HB3	39:13:36:GLN:CG	2.44	0.41
42:16:49:ARG:HA	42:16:49:ARG:HD3	1.79	0.41
43:17:14:ALA:HA	43:17:17:ALA:HB3	2.01	0.41
43:17:18:LEU:HD12	43:17:33:LEU:CD1	2.50	0.41
44:18:48:GLN:NE2	49:23:9:PHE:CE1	2.86	0.41
47:21:57:VAL:O	47:21:77:VAL:HG13	2.19	0.41
50:24:9:ARG:NH2	52:26:107:G:N7	2.68	0.41
52:26:1129:C:O2'	52:26:1130:A:N7	2.47	0.41
52:26:1142:G:H3'	52:26:1143:G:C8	2.49	0.41
52:26:1368:A:O2'	52:26:1369:C:H5'	2.21	0.41
52:26:1519:A:C8	52:26:1519:A:H3'	2.56	0.41
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.20	0.41
52:26:188:C:H2'	52:26:189:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:581:G:H8	52:26:581:G:O5'	2.03	0.41
52:26:89:U:C2	52:26:90:C:C5	3.07	0.41
52:26:88:U:O2	52:26:89:U:H1'	2.21	0.41
53:27:1027:A:C6	53:27:1126:A:C4	3.08	0.41
8:H:134:SER:HB2	53:27:1062:G:H21	1.85	0.41
53:27:1266:G:H22	53:27:2012:G:C2'	2.31	0.41
53:27:1378:A:C4	53:27:1380:G:N7	2.88	0.41
53:27:1750:G:O2'	53:27:1751:U:H5'	2.19	0.41
53:27:1776:G:C6	53:27:1777:U:C4	3.08	0.41
53:27:1911:U:H3'	53:27:1911:U:O2	2.20	0.41
53:27:1930:G:C2'	53:27:1931:U:OP2	2.68	0.41
53:27:1934:C:H2'	53:27:1935:G:O4'	2.20	0.41
53:27:210:C:H2'	53:27:211:C:C6	2.56	0.41
53:27:2405:G:H1'	53:27:2412:A:N6	2.36	0.41
53:27:2405:G:H2'	53:27:2411:A:N6	2.35	0.41
53:27:2520:C:H2'	53:27:2521:C:H6	1.85	0.41
53:27:2578:G:C2'	53:27:2579:C:H5'	2.50	0.41
53:27:2592:G:C2	53:27:2593:U:H1'	2.56	0.41
53:27:2564:A:OP1	53:27:2648:G:H4'	2.20	0.41
53:27:2737:G:H2'	53:27:2738:A:C8	2.55	0.41
53:27:69:C:O2'	53:27:70:G:H5'	2.20	0.41
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.41
59:33:721:VAL:O	59:33:724:ARG:HG2	2.20	0.41
59:33:728:LYS:O	59:33:731:GLN:HG2	2.21	0.41
59:33:732:VAL:O	59:33:735:VAL:HB	2.20	0.41
32:6:75:ALA:O	32:6:79:VAL:HG23	2.20	0.41
33:7:83:VAL:O	33:7:86:LEU:HB2	2.20	0.41
35:9:104:ILE:O	35:9:104:ILE:HG13	2.21	0.41
1:A:206:LYS:HD3	53:27:729:G:C8	2.54	0.41
1:A:23:LEU:HD21	1:A:89:ASN:CG	2.40	0.41
2:B:61:THR:HB	2:B:63:PRO:HD2	2.01	0.41
4:D:142:TYR:O	4:D:145:VAL:HG22	2.21	0.41
6:F:90:LEU:HB3	6:F:92:GLY:H	1.86	0.41
8:H:102:ARG:HD3	8:H:105:LEU:HD12	2.02	0.41
10:J:58:LEU:CD1	10:J:86:LEU:HD22	2.48	0.41
12:L:72:PRO:HB3	12:L:92:TRP:CZ3	2.56	0.41
13:M:65:LEU:HD11	13:M:69:ARG:HH22	1.86	0.41
16:P:2:ARG:HD2	53:27:1248:G:C2	2.55	0.41
21:U:40:ILE:HG22	21:U:41:GLU:N	2.36	0.41
25:Y:36:GLU:O	25:Y:37:ARG:NH1	2.50	0.41
36:10:64:VAL:HG22	36:10:65:GLU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:8:THR:HG23	27:1:10:SER:HB3	2.02	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HG22	2.03	0.41
39:13:24:ASN:HB2	39:13:26:LYS:HG2	2.03	0.41
39:13:35:GLU:N	39:13:35:GLU:OE1	2.41	0.41
42:16:20:VAL:C	42:16:22:ALA:N	2.74	0.41
43:17:3:ILE:CD1	43:17:7:ASN:HD22	2.33	0.41
43:17:7:ASN:OD1	43:17:9:PRO:CD	2.68	0.41
45:19:87:ARG:CG	45:19:88:ARG:N	2.83	0.41
46:20:28:ARG:NH2	52:26:390:U:H4'	2.35	0.41
46:20:33:ILE:CD1	46:20:33:ILE:N	2.84	0.41
28:2:29:LYS:HA	28:2:30:PRO:HD2	1.91	0.41
44:18:45:LEU:CD2	49:23:12:LEU:HD22	2.48	0.41
49:23:5:LYS:HB2	52:26:1313:U:OP1	2.20	0.41
49:23:4:LEU:HD21	49:23:9:PHE:H	1.84	0.41
52:26:1005:A:H2'	52:26:1006:G:O4'	2.20	0.41
52:26:1137:C:H5'	52:26:1138:G:H5'	2.02	0.41
52:26:1295:U:H2'	52:26:1296:C:C6	2.55	0.41
52:26:1452:C:H5''	52:26:1453:G:C2	2.55	0.41
52:26:155:A:H2'	52:26:156:C:O4'	2.21	0.41
52:26:181:A:H2'	52:26:182:A:C8	2.56	0.41
52:26:616:G:O2'	52:26:617:G:H5'	2.20	0.41
52:26:842:U:C2'	52:26:844:G:H5'	2.48	0.41
52:26:857:C:H2'	52:26:858:G:C8	2.56	0.41
53:27:1090:A:H61	53:27:1101:U:H3	1.67	0.41
9:I:65:THR:HG21	53:27:1141:U:H2'	2.02	0.41
53:27:1216:G:H2'	53:27:1217:U:O4'	2.21	0.41
53:27:1676:A:H8	53:27:1676:A:O5'	2.03	0.41
53:27:1863:G:H2'	53:27:1864:U:O4'	2.20	0.41
53:27:2333:A:H5''	53:27:2334:U:OP1	2.20	0.41
53:27:2463:C:H6	53:27:2463:C:O5'	2.04	0.41
53:27:269:C:C2	53:27:270:A:C8	3.09	0.41
53:27:30:G:H2'	53:27:31:C:H6	1.86	0.41
53:27:414:C:H5''	53:27:1879:C:O2'	2.21	0.41
53:27:460:A:C2	53:27:470:A:C4	3.08	0.41
53:27:701:G:N2	53:27:702:U:H1'	2.35	0.41
53:27:717:C:C2'	53:27:718:A:H5'	2.51	0.41
53:27:780:G:H5''	53:27:781:A:P	2.60	0.41
53:27:882:G:C2'	53:27:883:G:H5''	2.51	0.41
57:31:40:C:H2'	57:31:41:C:H6	1.86	0.41
59:33:136:ARG:HG3	59:33:136:ARG:NH1	2.36	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:634:HIS:CE1	59:33:638:CYS:SG	3.13	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
30:4:30:HIS:O	30:4:32:LEU:HD23	2.20	0.41
34:8:63:ILE:HG22	34:8:110:ARG:HH12	1.86	0.41
34:8:144:ILE:HG22	34:8:145:ARG:O	2.20	0.41
35:9:28:ARG:HH12	52:26:15:G:C4'	2.30	0.41
1:A:113:ASP:OD1	1:A:114:GLN:N	2.54	0.41
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.86	0.41
3:C:147:LEU:HD22	3:C:183:PHE:CD2	2.55	0.41
3:C:175:ILE:HG13	3:C:175:ILE:O	2.21	0.41
4:D:48:LEU:O	4:D:51:ASN:HB2	2.21	0.41
4:D:73:VAL:O	4:D:73:VAL:HG23	2.20	0.41
5:E:95:ALA:HB1	5:E:130:ILE:HD11	2.01	0.41
5:E:136:ASP:OD2	5:E:138:GLN:HB3	2.20	0.41
10:J:112:PHE:O	10:J:116:ILE:HG13	2.20	0.41
16:P:101:ASP:OD2	16:P:104:ALA:HB2	2.19	0.41
17:Q:24:LYS:CE	53:27:1163:G:H5'	2.51	0.41
20:T:5:ARG:HB2	53:27:85:G:OP1	2.21	0.41
27:1:10:SER:O	27:1:14:MET:HG2	2.20	0.41
37:11:61:PHE:CE2	37:11:65:LEU:HD22	2.56	0.41
43:17:49:GLU:O	43:17:51:GLN:N	2.53	0.41
48:22:59:LYS:HD3	52:26:734:G:O2'	2.21	0.41
48:22:38:ILE:HD12	48:22:62:ARG:HH22	1.85	0.41
50:24:36:ALA:O	50:24:39:GLU:HB2	2.20	0.41
52:26:1460:C:H2'	52:26:1461:G:H8	1.86	0.41
52:26:51:A:H4'	52:26:52:C:C5'	2.50	0.41
52:26:768:A:H4'	52:26:1523:G:H21	1.83	0.41
52:26:922:G:H2'	52:26:923:A:H8	1.86	0.41
52:26:957:U:H2'	52:26:959:A:OP2	2.21	0.41
53:27:1064:C:H2'	53:27:1065:U:O4'	2.20	0.41
53:27:1277:G:H2'	53:27:1278:C:O4'	2.21	0.41
53:27:1319:C:O2'	53:27:1320:C:H5'	2.20	0.41
53:27:1429:G:O2'	53:27:1430:G:H5'	2.21	0.41
53:27:149:A:O2'	53:27:150:U:H5'	2.21	0.41
53:27:1696:G:C6	53:27:1697:G:C4	3.09	0.41
53:27:1930:G:O2'	53:27:1931:U:C6	2.73	0.41
53:27:2330:G:H2'	53:27:2331:G:O4'	2.21	0.41
22:V:37:ARG:HD2	53:27:2387:U:H1'	2.01	0.41
53:27:2633:G:H5'	53:27:2811:G:O2'	2.21	0.41
2:B:171:THR:HG1	53:27:2773:C:P	2.44	0.41
53:27:381:G:O2'	53:27:382:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:23:TYR:CE1	53:27:533:G:H4'	2.56	0.41
53:27:571:U:C4	53:27:2030:A:C6	3.09	0.41
53:27:821:A:H4'	53:27:822:G:H5''	2.03	0.41
53:27:921:C:O2'	53:27:922:C:H5'	2.20	0.41
54:28:97:C:C2'	54:28:98:G:H5'	2.51	0.41
56:30:12:U:C2	56:30:13:C:H1'	2.55	0.41
58:32:35:A:H2'	58:32:36:U:O4'	2.20	0.41
58:32:26:G:N7	58:32:44:A:C2	2.89	0.41
58:32:9:G:H5''	58:32:11:A:C8	2.56	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.21	0.41
59:33:624:PHE:CD2	59:33:644:LEU:HD13	2.56	0.41
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	0.41
31:5:19:ARG:NH2	31:5:26:ILE:HD11	2.36	0.41
32:6:12:GLY:H	32:6:14:HIS:CE1	2.38	0.41
1:A:206:LYS:HD3	1:A:208:GLY:HA3	2.01	0.41
3:C:195:GLN:O	3:C:198:GLU:HB3	2.20	0.41
7:G:126:LEU:HB3	7:G:129:LEU:HG	2.01	0.41
9:I:18:VAL:HG22	9:I:140:LEU:HD22	2.01	0.41
12:L:32:GLY:HA2	12:L:103:TYR:O	2.20	0.41
20:T:48:VAL:O	20:T:48:VAL:HG13	2.20	0.41
26:Z:1:MET:O	26:Z:3:LYS:N	2.53	0.41
36:10:55:HIS:O	36:10:56:LYS:HB2	2.21	0.41
36:10:71:ILE:HA	36:10:71:ILE:HD12	1.87	0.41
37:11:78:ARG:HD3	52:26:1382:C:C1'	2.50	0.41
38:12:88:LYS:HG3	38:12:89:ASP:N	2.35	0.41
40:14:53:ILE:HD11	44:18:84:ARG:NH2	2.35	0.41
41:15:30:ILE:HD12	52:26:705:G:N2	2.34	0.41
44:18:66:THR:CG2	44:18:82:LYS:HD3	2.50	0.41
52:26:1329:A:C2'	52:26:1330:U:H5'	2.51	0.41
50:24:54:GLN:NE2	52:26:192:A:N3	2.64	0.41
52:26:201:G:H2'	52:26:202:G:C8	2.56	0.41
52:26:246:A:H4'	52:26:247:G:OP1	2.20	0.41
47:21:39:ARG:NH1	52:26:280:C:H1'	2.34	0.41
52:26:60:A:P	52:26:60:A:H8	2.44	0.41
52:26:64:G:H4'	52:26:65:A:H3'	2.02	0.41
52:26:903:G:C6	52:26:904:U:C4	3.09	0.41
53:27:1082:U:H3'	53:27:1083:U:H5''	2.03	0.41
53:27:1097:U:H2'	53:27:1098:A:C5'	2.50	0.41
53:27:1209:U:H2'	53:27:1210:G:H21	1.85	0.41
53:27:1376:C:H2'	53:27:1377:G:O4'	2.20	0.41
53:27:1967:C:O2'	53:27:1968:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2211:A:H5'	53:27:2212:A:OP2	2.20	0.41
53:27:2382:G:H5'	53:27:2383:G:OP1	2.20	0.41
53:27:246:C:O2'	53:27:385:C:H4'	2.21	0.41
53:27:2060:A:N6	53:27:2502:G:N3	2.69	0.41
53:27:2631:G:C2'	53:27:2632:A:H5'	2.51	0.41
53:27:325:G:H2'	53:27:326:G:C8	2.56	0.41
53:27:411:G:OP2	53:27:2407:A:OP2	2.39	0.41
16:P:36:GLN:NE2	53:27:563:A:C2'	2.82	0.41
53:27:56:A:O2'	53:27:57:C:H5'	2.20	0.41
53:27:876:C:C2'	53:27:877:A:H5'	2.50	0.41
58:32:33:U:H2'	58:32:36:U:OP2	2.20	0.41
59:33:670:ARG:HG3	59:33:711:ASP:OD1	2.21	0.41
59:33:712:MET:HG3	59:33:714:ILE:HG23	2.02	0.41
31:5:30:GLU:HB2	31:5:33:HIS:CE1	2.56	0.41
32:6:113:LEU:O	32:6:117:GLU:HB2	2.21	0.41
33:7:35:ASP:O	33:7:38:VAL:HG22	2.21	0.41
35:9:113:VAL:HG13	35:9:114:LEU:N	2.36	0.41
1:A:158:GLY:HA3	53:27:1820:U:C4	2.55	0.41
1:A:15:VAL:HG22	1:A:204:LEU:O	2.21	0.41
2:B:164:GLN:OE1	2:B:165:MET:N	2.54	0.41
3:C:18:THR:HG22	3:C:19:PHE:CD1	2.56	0.41
3:C:88:ARG:O	3:C:89:PRO:C	2.56	0.41
6:F:31:VAL:HA	6:F:36:ALA:O	2.21	0.41
8:H:72:THR:OG1	8:H:115:ASP:HB2	2.21	0.41
11:K:141:LYS:HE2	11:K:143:GLU:HB3	2.02	0.41
12:L:59:ARG:NE	59:33:736:ILE:HD12	2.36	0.41
12:L:63:ILE:CG2	12:L:64:TRP:H	2.34	0.41
13:M:93:GLY:HA2	53:27:2838:G:N2	2.36	0.41
36:10:90:MET:CG	36:10:91:ARG:H	2.22	0.41
39:13:6:TYR:CZ	52:26:1147:C:H4'	2.55	0.41
41:15:33:ILE:O	41:15:41:LEU:HB2	2.21	0.41
44:18:53:ASP:O	44:18:54:SER:OG	2.32	0.41
45:19:44:GLU:O	45:19:45:HIS:HB2	2.20	0.41
47:21:59:GLU:C	47:21:60:ILE:HG13	2.41	0.41
47:21:45:VAL:HG13	47:21:72:TRP:O	2.20	0.41
35:9:26:GLY:O	52:26:1194:U:C5'	2.68	0.41
52:26:1196:A:H2'	52:26:1196:A:N3	2.35	0.41
52:26:1489:G:C6	52:26:1490:U:C4	3.09	0.41
52:26:1522:U:O2'	52:26:1523:G:H5'	2.20	0.41
52:26:443:C:O2'	52:26:444:G:H5'	2.21	0.41
52:26:558:G:C4	52:26:559:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:70:U:H4'	52:26:71:A:H8	1.86	0.41
38:12:3:GLN:HE22	52:26:755:G:H21	1.68	0.41
16:P:5:ARG:HD3	53:27:1250:G:H5''	2.02	0.41
53:27:1384:A:H2'	53:27:1385:A:C5'	2.51	0.41
53:27:1385:A:C6	53:27:1403:A:C6	3.08	0.41
53:27:1584:U:O5'	53:27:1584:U:H6	2.03	0.41
53:27:1672:A:C6	53:27:1673:G:C6	3.09	0.41
53:27:176:A:HO2'	53:27:177:G:H5'	1.85	0.41
53:27:1788:C:O2'	53:27:1789:A:H5'	2.21	0.41
53:27:1941:C:O2	53:27:1941:C:H2'	2.21	0.41
53:27:2116:G:H1	53:27:2165:C:C1'	2.33	0.41
53:27:2364:C:O2'	53:27:2365:G:H5'	2.21	0.41
53:27:2469:A:C2'	53:27:2470:G:H5'	2.49	0.41
53:27:2510:C:H2'	53:27:2511:U:C6	2.56	0.41
15:O:94:ALA:HB2	53:27:2848:G:H8	1.86	0.41
53:27:607:U:O4	53:27:619:G:H2'	2.21	0.41
53:27:628:G:O2'	53:27:629:G:H5'	2.21	0.41
53:27:654:A:H3'	53:27:654:A:N3	2.34	0.41
53:27:74:A:H4'	53:27:75:G:O5'	2.20	0.41
1:A:45:ASN:O	53:27:773:U:H5''	2.21	0.41
53:27:786:C:H2'	53:27:787:C:H6	1.85	0.41
54:28:39:A:C2	54:28:44:G:C2	3.09	0.41
14:N:102:ARG:N	54:28:49:C:OP1	2.48	0.41
56:30:13:C:O2	56:30:13:C:H2'	2.20	0.41
59:33:138:MET:C	59:33:140:LEU:N	2.74	0.41
59:33:594:ASN:CG	59:33:595:GLY:H	2.23	0.41
59:33:63:VAL:HG12	59:33:80:LEU:N	2.36	0.41
32:6:11:ALA:CB	32:6:211:LEU:HD21	2.51	0.41
1:A:73:ILE:HA	1:A:74:PRO:HD3	1.93	0.41
2:B:4:LEU:HD22	2:B:101:PHE:HE2	1.85	0.41
3:C:165:HIS:C	3:C:165:HIS:CD2	2.94	0.41
4:D:169:LEU:HB2	4:D:176:PHE:CZ	2.56	0.41
4:D:56:LEU:HD23	4:D:56:LEU:HA	1.93	0.41
5:E:136:ASP:OD2	5:E:139:VAL:HG23	2.21	0.41
8:H:82:ALA:HB1	8:H:104:GLN:CD	2.40	0.41
10:J:35:VAL:HG13	10:J:106:GLU:HG3	2.03	0.41
14:N:88:LYS:HE2	14:N:116:GLN:HG3	2.01	0.41
15:O:23:ASP:OD1	15:O:89:GLY:N	2.54	0.41
16:P:106:THR:O	16:P:110:GLU:HG2	2.21	0.41
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.21	0.41
36:10:38:ARG:HD2	36:10:38:ARG:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:85:ILE:O	36:10:86:ARG:HB3	2.21	0.41
37:11:13:PRO:HB3	37:11:20:GLU:HB3	2.03	0.41
37:11:21:LEU:CD1	37:11:96:ASN:HD22	2.33	0.41
27:1:40:HIS:HA	27:1:48:TYR:OH	2.21	0.41
41:15:29:THR:OG1	41:15:46:ALA:HB2	2.20	0.41
43:17:3:ILE:HG12	43:17:7:ASN:CB	2.50	0.41
46:20:68:SER:HB3	46:20:71:VAL:HG23	2.02	0.41
49:23:61:VAL:HA	49:23:65:MET:SD	2.61	0.41
50:24:68:LYS:O	50:24:71:ALA:HB3	2.21	0.41
52:26:1234:C:O2'	52:26:1235:U:H5'	2.21	0.41
52:26:1424:U:H2'	52:26:1425:U:O4'	2.20	0.41
34:8:21:LYS:HE3	52:26:429:U:O2'	2.20	0.41
52:26:792:A:H1'	52:26:794:A:N7	2.36	0.41
52:26:818:G:H2'	52:26:820:U:C5	2.55	0.41
8:H:92:PRO:HD3	53:27:1063:G:H21	1.86	0.41
53:27:1438:U:O2'	53:27:1439:A:H5'	2.21	0.41
53:27:1537:G:H5''	53:27:1537:G:N3	2.36	0.41
53:27:1655:A:C8	53:27:1656:C:C5	3.09	0.41
53:27:1789:A:O2'	53:27:1790:C:H5'	2.20	0.41
53:27:1791:A:C2	53:27:1829:A:O4'	2.73	0.41
53:27:2079:U:C3'	53:27:2080:A:H5''	2.51	0.41
53:27:2212:A:H4'	53:27:2213:U:O4	2.21	0.41
53:27:2244:U:H2'	53:27:2245:U:O4'	2.20	0.41
53:27:2641:G:H2'	53:27:2642:G:C8	2.53	0.41
53:27:510:C:H2'	53:27:511:U:C6	2.56	0.41
53:27:818:G:O2'	53:27:819:A:H5''	2.20	0.41
54:28:82:U:H2'	54:28:83:G:C8	2.55	0.41
56:30:73:A:C2	56:30:74:C:C4	3.09	0.41
59:33:35:LEU:HD12	59:33:35:LEU:N	2.36	0.41
59:33:619:ASP:O	59:33:620:GLU:O	2.38	0.41
33:7:121:SER:O	33:7:125:ARG:NH1	2.54	0.41
33:7:49:ALA:HB1	33:7:75:VAL:HG22	2.02	0.41
34:8:122:ILE:HG22	34:8:142:VAL:CG2	2.51	0.41
34:8:124:VAL:HG23	34:8:141:VAL:O	2.20	0.41
34:8:55:ARG:NE	34:8:55:ARG:HA	2.35	0.41
35:9:131:ASN:HA	35:9:132:PRO:HD2	1.87	0.41
1:A:216:ARG:HH11	1:A:216:ARG:HG2	1.85	0.41
3:C:126:VAL:HG22	3:C:127:GLU:N	2.36	0.41
3:C:1:MET:N	3:C:13:THR:HG23	2.36	0.41
4:D:104:THR:HA	26:Z:38:SER:CB	2.50	0.41
5:E:146:ASP:O	5:E:149:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:73:PRO:O	8:H:112:LYS:HD3	2.21	0.41
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
19:S:14:PRO:HA	19:S:32:LEU:HB3	2.03	0.41
21:U:19:ARG:NH1	54:28:94:A:OP1	2.54	0.41
22:V:21:ARG:HA	22:V:21:ARG:HD3	1.89	0.41
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.56	0.41
36:10:38:ARG:HH21	36:10:40:GLU:HB2	1.84	0.41
37:11:74:VAL:O	37:11:74:VAL:HG23	2.21	0.41
38:12:6:ILE:HD13	38:12:6:ILE:N	2.36	0.41
39:13:10:ARG:O	39:13:105:ARG:CZ	2.69	0.41
27:1:43:THR:OG1	27:1:47:TYR:N	2.53	0.41
42:16:20:VAL:N	42:16:21:PRO:HD3	2.36	0.41
44:18:92:ILE:HA	44:18:93:PRO:HD3	1.94	0.41
47:21:39:ARG:HA	47:21:39:ARG:HD3	1.93	0.41
47:21:57:VAL:HG12	47:21:58:VAL:N	2.35	0.41
47:21:43:LEU:HD13	47:21:72:TRP:CE2	2.56	0.41
50:24:11:ILE:HG13	50:24:12:GLN:N	2.36	0.41
50:24:38:ILE:HD13	50:24:81:GLN:HB3	2.03	0.41
50:24:79:THR:HA	50:24:82:ILE:HG12	2.01	0.41
51:25:32:ARG:CG	51:25:33:ARG:N	2.84	0.41
51:25:46:ARG:HD3	51:25:46:ARG:HA	1.86	0.41
52:26:1168:U:OP2	52:26:1168:U:H3'	2.21	0.41
52:26:116:A:H2'	52:26:117:G:O4'	2.21	0.41
52:26:1203:C:H2'	52:26:1204:A:H8	1.86	0.41
52:26:1303:C:H2'	52:26:1303:C:O2	2.21	0.41
52:26:129:A:O2'	52:26:130:A:H5''	2.20	0.41
52:26:248:C:O2'	52:26:249:U:H5'	2.21	0.41
52:26:54:C:C4	52:26:352:C:C5	3.09	0.41
52:26:519:C:C4	52:26:520:A:C5	3.09	0.41
52:26:635:A:H2'	52:26:636:U:H6	1.86	0.41
52:26:892:A:H2'	52:26:893:C:C6	2.55	0.41
52:26:930:C:O2	52:26:1387:G:N2	2.52	0.41
53:27:2089:C:H2'	53:27:2090:A:C8	2.55	0.41
53:27:2186:G:C2'	53:27:2187:U:H5'	2.51	0.41
53:27:2549:G:C6	53:27:2560:A:C6	3.09	0.41
53:27:2643:G:C6	53:27:2644:G:C5	3.09	0.41
53:27:440:C:H2'	53:27:441:U:H6	1.85	0.41
53:27:531:C:H5''	53:27:532:A:C5	2.55	0.41
53:27:644:A:H2'	53:27:645:C:C4'	2.51	0.41
53:27:818:G:H2'	53:27:1187:G:N2	2.36	0.41
54:28:14:U:OP2	54:28:71:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:42:C:H6	56:30:42:C:H5'	1.85	0.41
57:31:42:G:O2'	57:31:43:A:H5'	2.21	0.41
59:33:405:ARG:HE	59:33:417:ASP:HB3	1.85	0.41
59:33:570:GLU:HA	59:33:681:ARG:HD3	2.02	0.41
49:23:60:PHE:CZ	59:33:651:ARG:HG2	2.56	0.41
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.03	0.41
34:8:197:HIS:O	34:8:200:VAL:HB	2.21	0.41
34:8:57:LYS:HA	34:8:199:ILE:CD1	2.51	0.41
35:9:82:HIS:O	35:9:83:PRO:C	2.59	0.41
1:A:51:ARG:H	1:A:51:ARG:HG2	1.61	0.41
1:A:65:ASP:OD2	1:A:68:ARG:HD2	2.20	0.41
2:B:148:GLN:O	53:27:2052:A:H4'	2.21	0.41
4:D:37:MET:CE	4:D:151:LEU:HB3	2.50	0.41
5:E:94:ARG:HB2	5:E:105:SER:HB2	2.02	0.41
5:E:154:GLU:HG3	5:E:157:LYS:N	2.35	0.41
5:E:4:ALA:HB2	5:E:65:GLY:N	2.35	0.41
7:G:88:HIS:N	7:G:89:PRO:CD	2.76	0.41
10:J:22:ILE:HG13	10:J:40:LYS:O	2.21	0.41
10:J:47:ILE:HA	10:J:48:PRO:HD3	1.91	0.41
11:K:57:LEU:HA	11:K:60:ARG:HE	1.86	0.41
12:L:101:VAL:O	12:L:102:LEU:HD23	2.21	0.41
12:L:25:ASP:O	12:L:27:SER:N	2.54	0.41
13:M:69:ARG:C	13:M:71:ARG:H	2.23	0.41
15:O:97:TYR:HB2	53:27:2718:G:OP1	2.21	0.41
20:T:47:PRO:HB2	20:T:53:GLN:HB2	2.03	0.41
36:10:15:SER:HG	36:10:58:HIS:CG	2.39	0.41
36:10:54:LEU:C	36:10:54:LEU:HD12	2.41	0.41
36:10:9:MET:HG2	36:10:59:TYR:CE1	2.56	0.41
38:12:46:GLU:HB3	38:12:61:THR:CG2	2.51	0.41
38:12:74:ILE:HG13	38:12:128:VAL:HA	2.03	0.41
40:14:40:ILE:HA	40:14:41:PRO:HD2	1.76	0.41
41:15:20:ALA:HA	41:15:33:ILE:HA	2.02	0.41
44:18:87:ALA:CA	44:18:92:ILE:HD13	2.50	0.41
47:21:16:MET:HE2	47:21:19:SER:CB	2.50	0.41
49:23:6:LYS:HA	49:23:6:LYS:HD3	1.80	0.41
50:24:29:THR:O	50:24:33:LYS:HG2	2.21	0.41
51:25:58:LYS:HG3	51:25:59:LEU:HD12	2.03	0.41
52:26:1005:A:H4'	52:26:1037:C:O2'	2.21	0.41
52:26:300:A:H8	52:26:300:A:O5'	2.04	0.41
52:26:835:U:C3'	52:26:836:G:H5''	2.50	0.41
52:26:848:C:C2'	52:26:849:G:H5''	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1065:U:H2'	53:27:1066:U:O4'	2.21	0.41
53:27:1130:U:O2'	53:27:1131:G:P	2.79	0.41
13:M:40:LYS:HE3	53:27:1651:G:OP1	2.20	0.41
53:27:1803:A:N6	53:27:1814:G:H1'	2.36	0.41
53:27:189:G:C4	53:27:205:G:N2	2.89	0.41
27:1:8:THR:HB	53:27:2020:A:H5'	2.03	0.41
53:27:228:C:H4'	53:27:229:C:C6	2.56	0.41
53:27:2716:C:H2'	53:27:2717:C:H6	1.86	0.41
53:27:2804:U:H2'	53:27:2805:C:C6	2.56	0.41
53:27:2837:A:H2'	53:27:2838:G:C8	2.48	0.41
53:27:53:A:C8	53:27:54:G:C8	3.09	0.41
53:27:558:U:H2'	53:27:559:G:C8	2.56	0.41
53:27:882:G:H2'	53:27:883:G:H5''	2.02	0.41
53:27:896:A:H5''	53:27:897:C:OP2	2.22	0.41
54:28:49:C:H2'	54:28:50:A:C8	2.56	0.41
57:31:62:C:H2'	57:31:63:G:C8	2.56	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.41
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.41
33:7:78:LYS:HG2	33:7:79:LYS:HD3	2.03	0.41
34:8:171:GLU:HB2	34:8:180:THR:O	2.21	0.41
34:8:36:ALA:CA	34:8:41:GLY:HA3	2.44	0.41
35:9:156:ARG:C	35:9:158:LYS:H	2.24	0.41
1:A:245:THR:HG21	1:A:249:VAL:HB	2.02	0.41
1:A:75:ALA:HB2	1:A:95:TYR:CD1	2.56	0.41
3:C:15:SER:HB2	3:C:18:THR:OG1	2.21	0.41
3:C:29:HIS:O	3:C:32:VAL:HG12	2.21	0.41
5:E:171:LYS:HZ2	53:27:2529:G:P	2.44	0.41
7:G:87:GLU:OE2	7:G:96:PHE:HB2	2.21	0.41
12:L:2:LEU:HA	12:L:2:LEU:HD12	1.93	0.41
15:O:28:LYS:HB3	15:O:39:LEU:HD11	2.03	0.41
22:V:62:LYS:HG2	22:V:63:VAL:H	1.86	0.41
23:W:29:LEU:HA	23:W:30:PRO:HD2	1.91	0.41
37:11:78:ARG:HB3	37:11:83:THR:HG23	2.03	0.40
39:13:33:SER:O	39:13:36:GLN:HG2	2.21	0.40
43:17:26:LYS:O	43:17:29:SER:HB3	2.20	0.40
40:14:67:ILE:HG23	44:18:94:GLY:O	2.21	0.40
46:20:56:ARG:HA	46:20:56:ARG:HD2	1.89	0.40
52:26:11:G:H2'	52:26:12:U:O4'	2.21	0.40
52:26:125:U:H2'	52:26:126:G:C8	2.56	0.40
52:26:201:G:O2'	52:26:469:C:O2'	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:86:G:H21	52:26:87:C:H42	1.70	0.40
53:27:1264:A:N7	53:27:1265:A:C5	2.90	0.40
53:27:1648:U:H5''	53:27:1648:U:H6	1.86	0.40
1:A:52:HIS:CD2	53:27:1824:G:OP2	2.74	0.40
53:27:2114:A:H62	53:27:2115:G:H21	1.68	0.40
53:27:2197:U:O3'	53:27:2198:A:H2'	2.21	0.40
53:27:219:A:H5'	53:27:220:G:OP2	2.21	0.40
53:27:2230:G:H2'	53:27:2231:U:H6	1.80	0.40
53:27:2626:C:H2'	53:27:2627:G:H8	1.86	0.40
53:27:265:A:H4'	53:27:266:G:OP1	2.21	0.40
53:27:2679:A:H2'	53:27:2680:U:H6	1.86	0.40
53:27:2784:U:H2'	53:27:2785:C:C6	2.54	0.40
53:27:2884:U:O2	53:27:2884:U:C3'	2.65	0.40
11:K:78:ARG:HH11	53:27:626:A:H2'	1.86	0.40
53:27:820:A:H2'	53:27:821:A:O4'	2.21	0.40
54:28:118:C:H2'	54:28:119:A:C8	2.56	0.40
59:33:110:VAL:HG13	59:33:152:LYS:HD3	2.04	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.61	0.40
59:33:673:ALA:HB3	59:33:679:LEU:HD21	2.03	0.40
32:6:102:ASN:O	32:6:106:VAL:HG23	2.21	0.40
34:8:76:LYS:O	34:8:79:ALA:HB3	2.22	0.40
35:9:42:ASN:HA	35:9:75:LEU:HD21	2.03	0.40
3:C:189:THR:HG22	3:C:191:ASP:N	2.32	0.40
4:D:19:PHE:HB2	4:D:21:TYR:CZ	2.56	0.40
4:D:74:ALA:C	4:D:77:LYS:H	2.24	0.40
5:E:120:ILE:HG22	5:E:121:THR:N	2.36	0.40
5:E:120:ILE:HG21	5:E:140:ILE:HG22	2.03	0.40
5:E:76:ILE:O	5:E:80:GLU:N	2.55	0.40
7:G:22:ALA:O	7:G:119:PRO:HD3	2.21	0.40
7:G:53:ARG:HA	7:G:53:ARG:HD3	1.88	0.40
11:K:95:LEU:HB2	11:K:101:ILE:HD11	2.03	0.40
16:P:81:GLY:O	16:P:85:ALA:N	2.51	0.40
19:S:2:ILE:O	19:S:3:ARG:C	2.60	0.40
19:S:34:VAL:HG21	19:S:43:ILE:HD11	2.03	0.40
21:U:26:PHE:CG	21:U:26:PHE:O	2.74	0.40
22:V:66:GLU:HB2	22:V:75:PHE:HB2	2.03	0.40
39:13:11:ARG:H	39:13:77:ALA:HA	1.85	0.40
39:13:93:LEU:O	39:13:96:GLU:HB3	2.21	0.40
42:16:47:ALA:C	42:16:48:LEU:HD12	2.41	0.40
43:17:57:ASP:OD1	43:17:57:ASP:C	2.60	0.40
51:25:17:ARG:HH12	51:25:20:ARG:HE	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:105:LYS:HD3	52:26:1433:A:OP1	2.21	0.40
52:26:174:A:C2'	52:26:175:C:H5'	2.52	0.40
52:26:284:C:H2'	52:26:285:C:C6	2.56	0.40
42:16:57:THR:OG1	52:26:362:G:OP1	2.39	0.40
52:26:440:C:H2'	52:26:441:A:O4'	2.22	0.40
47:21:38:LYS:HD3	52:26:585:G:OP1	2.21	0.40
48:22:52:ARG:HH21	52:26:664:G:P	2.44	0.40
52:26:891:U:H2'	52:26:892:A:C8	2.51	0.40
52:26:88:U:H2'	52:26:89:U:O4'	2.22	0.40
53:27:1275:A:H4'	53:27:1276:A:O5'	2.21	0.40
53:27:1331:G:C2'	53:27:1332:G:C5'	2.99	0.40
53:27:1469:A:H2'	53:27:1470:A:C8	2.56	0.40
53:27:1659:G:C3'	53:27:1660:G:H5''	2.51	0.40
53:27:197:A:OP1	53:27:198:C:OP2	2.39	0.40
53:27:2080:A:C5	53:27:2081:U:C4	3.09	0.40
53:27:2165:C:H6	53:27:2165:C:O5'	2.04	0.40
53:27:2296:U:C5'	53:27:2297:A:OP1	2.64	0.40
30:4:40:LYS:NZ	53:27:2419:U:OP1	2.52	0.40
53:27:2453:A:O2'	53:27:2454:G:H5'	2.21	0.40
53:27:2520:C:O2'	53:27:2521:C:H5'	2.21	0.40
53:27:2673:G:H2'	53:27:2674:G:C8	2.55	0.40
53:27:2715:C:H6	53:27:2715:C:O5'	2.04	0.40
53:27:2762:C:H5'	53:27:2763:G:OP2	2.21	0.40
53:27:275:C:C2'	53:27:276:U:H4'	2.26	0.40
53:27:2809:A:H3'	53:27:2810:A:C8	2.56	0.40
3:C:130:LYS:NZ	53:27:320:A:OP1	2.53	0.40
24:X:47:ARG:HD2	53:27:73:A:OP2	2.22	0.40
53:27:740:C:O2'	53:27:741:U:H5'	2.22	0.40
53:27:818:G:C2'	53:27:819:A:H5''	2.51	0.40
53:27:941:A:H2'	53:27:942:G:O4'	2.22	0.40
53:27:947:A:H2'	53:27:948:C:O4'	2.20	0.40
54:28:56:G:H4'	54:28:57:A:C8	2.56	0.40
57:31:11:A:O2'	57:31:12:G:H5'	2.21	0.40
57:31:64:G:H2'	57:31:65:C:C6	2.56	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
59:33:626:THR:HG23	59:33:632:SER:HB2	2.03	0.40
1:A:49:THR:HB	53:27:1805:A:N3	2.36	0.40
4:D:169:LEU:HB2	4:D:176:PHE:HZ	1.86	0.40
4:D:72:SER:HB2	4:D:80:GLN:N	2.34	0.40
9:I:17:VAL:N	9:I:138:GLN:O	2.48	0.40
11:K:33:ARG:HD3	11:K:40:SER:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:30:SER:N	12:L:106:ASP:HB3	2.29	0.40
12:L:53:MET:CE	12:L:63:ILE:HG21	2.51	0.40
14:N:95:SER:HB2	14:N:97:PHE:CD2	2.56	0.40
15:O:29:VAL:HG22	15:O:80:VAL:HA	2.02	0.40
18:R:25:ARG:NH1	53:27:519:U:H5''	2.37	0.40
18:R:25:ARG:HG2	18:R:74:ILE:HG22	2.03	0.40
37:11:91:ARG:CG	37:11:92:PRO:HD2	2.51	0.40
39:13:49:GLN:N	39:13:50:PRO:HD2	2.36	0.40
40:14:6:ILE:N	40:14:76:ILE:O	2.54	0.40
41:15:20:ALA:CB	41:15:33:ILE:HG12	2.50	0.40
47:21:62:GLU:OE2	52:26:128:G:H1'	2.21	0.40
50:24:22:SER:OG	50:24:23:ARG:N	2.54	0.40
50:24:74:HIS:O	50:24:78:LEU:HB2	2.21	0.40
52:26:1284:C:H3'	52:26:1285:A:C8	2.57	0.40
52:26:1415:G:C2	52:26:1416:G:C8	3.10	0.40
52:26:357:G:C2	52:26:358:U:C5	3.09	0.40
52:26:478:A:H2'	52:26:479:U:C5'	2.51	0.40
46:20:16:PHE:CZ	52:26:625:U:H4'	2.55	0.40
52:26:75:G:H2'	52:26:76:G:H8	1.83	0.40
52:26:872:A:C5	52:26:874:G:C8	3.09	0.40
53:27:1221:C:H2'	53:27:1221:C:O2	2.21	0.40
53:27:1268:A:H2'	53:27:1269:A:H8	1.86	0.40
53:27:1287:A:H2'	53:27:1288:G:H5'	2.04	0.40
53:27:1430:G:H2'	53:27:1431:A:H8	1.87	0.40
53:27:1761:C:C5	53:27:1762:A:C6	3.10	0.40
53:27:1777:U:C2	53:27:1778:U:C5	3.10	0.40
53:27:1805:A:H2'	53:27:1806:C:C6	2.56	0.40
53:27:1868:C:H2'	53:27:1869:G:C4'	2.51	0.40
53:27:1869:G:H2'	53:27:1871:A:C2	2.56	0.40
53:27:2391:G:H4'	53:27:2392:A:OP1	2.21	0.40
2:B:130:GLN:HE22	53:27:2578:G:N2	2.19	0.40
53:27:2700:A:H2'	53:27:2701:U:C6	2.56	0.40
53:27:2796:U:H6	53:27:2796:U:H3'	1.86	0.40
53:27:2796:U:O2	53:27:2801:G:N1	2.53	0.40
53:27:2836:U:O5'	53:27:2836:U:H6	2.04	0.40
53:27:2842:G:H2'	53:27:2843:G:H8	1.85	0.40
53:27:431:U:O2'	53:27:432:A:H5'	2.21	0.40
53:27:216:A:C8	53:27:432:A:C6	3.10	0.40
28:2:9:LYS:O	28:2:51:ALA:HB3	2.21	0.40
57:31:17:C:H2'	57:31:17(A):U:C5	2.57	0.40
31:5:36:ARG:HH11	31:5:36:ARG:HG2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:150:VAL:O	33:7:166:TRP:HA	2.22	0.40
33:7:171:ARG:HG3	52:26:1107:C:OP1	2.21	0.40
1:A:124:LYS:HB3	1:A:127:ASN:HD21	1.87	0.40
3:C:145:ASP:OD2	3:C:183:PHE:HA	2.21	0.40
4:D:140:ILE:HG22	4:D:142:TYR:H	1.86	0.40
4:D:32:LYS:HD3	4:D:91:ARG:NH2	2.36	0.40
7:G:107:GLU:O	7:G:108:VAL:HB	2.22	0.40
7:G:79:PRO:O	7:G:80:THR:OG1	2.33	0.40
12:L:59:ARG:CZ	59:33:736:ILE:HD12	2.52	0.40
14:N:77:ALA:O	14:N:81:ARG:HG3	2.22	0.40
15:O:13:LYS:HE3	15:O:76:HIS:HA	2.04	0.40
18:R:8:ARG:HE	18:R:102:HIS:CE1	2.39	0.40
19:S:10:VAL:HG21	19:S:42:GLU:HG2	2.03	0.40
19:S:13:ALA:HB1	24:X:33:ALA:HB1	2.03	0.40
21:U:76:ASP:H	21:U:90:ASP:HB2	1.86	0.40
24:X:39:GLN:HG3	24:X:41:HIS:HE1	1.86	0.40
24:X:48:ARG:HA	24:X:48:ARG:HD3	1.90	0.40
36:10:7:VAL:HA	36:10:60:VAL:O	2.21	0.40
39:13:11:ARG:HH11	39:13:12:LYS:HB2	1.87	0.40
42:16:76:HIS:O	42:16:77:SER:HB2	2.20	0.40
45:19:63:ARG:HD2	45:19:63:ARG:HA	1.84	0.40
46:20:22:ALA:HA	46:20:33:ILE:HD12	2.02	0.40
46:20:60:TRP:O	46:20:64:GLY:N	2.55	0.40
50:24:23:ARG:HB2	50:24:65:LEU:HD22	2.03	0.40
52:26:1038:C:H2'	52:26:1039:G:H8	1.83	0.40
52:26:1045:C:H2'	52:26:1046:A:O4'	2.22	0.40
52:26:1097:C:H2'	52:26:1098:C:O4'	2.21	0.40
52:26:1388:C:H2'	52:26:1389:C:C6	2.55	0.40
52:26:211:G:H2'	52:26:212:G:C5'	2.52	0.40
52:26:256:U:H2'	52:26:257:G:C8	2.56	0.40
52:26:36:C:H2'	52:26:37:U:O4'	2.22	0.40
52:26:865:A:H2'	52:26:866:C:O4'	2.20	0.40
53:27:1111:A:O2'	53:27:1112:G:P	2.78	0.40
53:27:1664:A:C5	53:27:2726:A:N7	2.89	0.40
53:27:1754:A:C6	53:27:1755:A:C6	3.09	0.40
53:27:1810:A:H2'	53:27:1811:G:C4'	2.51	0.40
53:27:1846:G:C6	53:27:1847:G:N1	2.89	0.40
53:27:1891:G:H2'	53:27:1892:C:C6	2.57	0.40
53:27:2088:A:O2'	53:27:2089:C:H5'	2.22	0.40
53:27:2369:A:H2'	53:27:2370:G:C8	2.57	0.40
53:27:2396:G:C2	53:27:2421:G:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2472:G:O6	53:27:2476:A:H4'	2.21	0.40
53:27:2476:A:H2'	53:27:2477:U:O4'	2.22	0.40
53:27:2757:A:N3	53:27:2757:A:H2'	2.35	0.40
53:27:30:G:H2'	53:27:31:C:O4'	2.22	0.40
53:27:792:A:C3'	53:27:793:A:H5'	2.51	0.40
53:27:955:U:O4'	53:27:955:U:O2	2.40	0.40
53:27:976:G:H2'	53:27:977:G:H8	1.87	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
59:33:407:TYR:HB2	59:33:415:VAL:CG1	2.52	0.40
59:33:429:TYR:CZ	59:33:436:GLY:HA3	2.57	0.40
59:33:473:ARG:O	59:33:474:ASP:C	2.59	0.40
30:4:25:HIS:HB2	30:4:43:LEU:O	2.21	0.40
32:6:49:PHE:HD1	32:6:199:ILE:HG21	1.87	0.40
33:7:173:PRO:HB2	33:7:176:THR:CB	2.52	0.40
35:9:49:TYR:O	35:9:62:ALA:HB2	2.21	0.40
2:B:142:VAL:HB	2:B:143:PRO:HD2	2.03	0.40
3:C:121:VAL:O	3:C:190:ALA:N	2.55	0.40
4:D:38:GLY:HA2	4:D:85:GLY:HA3	2.04	0.40
7:G:60:LEU:HA	7:G:64:VAL:HG23	2.04	0.40
11:K:116:VAL:HG22	11:K:117:THR:H	1.86	0.40
12:L:38:ARG:HB2	12:L:98:PRO:HD3	2.02	0.40
16:P:111:LYS:NZ	17:Q:50:GLY:O	2.44	0.40
21:U:18:ARG:HH11	21:U:18:ARG:HG3	1.85	0.40
21:U:35:GLU:H	21:U:35:GLU:CD	2.24	0.40
38:12:47:ASP:OD1	38:12:48:PHE:N	2.51	0.40
39:13:48:ARG:O	39:13:51:LEU:HB2	2.22	0.40
39:13:20:ILE:HD11	39:13:60:LEU:HB2	2.03	0.40
40:14:14:ASP:OD1	40:14:15:HIS:N	2.54	0.40
40:14:51:VAL:HG22	40:14:63:ASP:O	2.22	0.40
40:14:5:ARG:CZ	40:14:79:PRO:HG3	2.51	0.40
41:15:33:ILE:HG13	41:15:69:CYS:SG	2.62	0.40
46:20:60:TRP:HB3	46:20:65:ALA:HB2	2.03	0.40
47:21:26:ARG:HH11	47:21:26:ARG:HG2	1.86	0.40
49:23:32:THR:O	49:23:56:HIS:HE1	2.04	0.40
52:26:1077:G:N2	52:26:1080:A:OP2	2.54	0.40
52:26:1420:U:O2'	52:26:1421:G:H5'	2.22	0.40
52:26:232:G:H1'	52:26:262:A:N1	2.36	0.40
52:26:356:A:N3	52:26:368:U:O2'	2.47	0.40
52:26:50:A:H1'	52:26:52:C:C6	2.56	0.40
53:27:1020:A:H1'	53:27:1021:A:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1186:G:C2	53:27:1187:G:H1'	2.57	0.40
53:27:1277:G:H2'	53:27:1278:C:H6	1.86	0.40
53:27:1394:U:O3'	53:27:1603:A:H5''	2.21	0.40
53:27:2116:G:C6	53:27:2165:C:H1'	2.57	0.40
23:W:36:ARG:N	53:27:2200:C:OP1	2.53	0.40
53:27:2286:G:H5'	53:27:2287:A:H1'	2.03	0.40
28:2:20:TYR:OH	53:27:2348:U:H5'	2.21	0.40
53:27:2364:C:H2'	53:27:2365:G:C5'	2.51	0.40
11:K:103:ILE:CD1	53:27:259:G:H4'	2.49	0.40
53:27:332:A:C5	53:27:335:C:C4	3.09	0.40
53:27:426:C:O2'	53:27:427:U:H5'	2.22	0.40
53:27:648:G:H2'	53:27:649:G:H8	1.87	0.40
53:27:743:A:H2'	53:27:744:U:C6	2.56	0.40
58:32:14:A:C8	58:32:22:G:N2	2.89	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HA	2.51	0.40
59:33:74:ASP:CA	59:33:77:ARG:HH21	2.35	0.40
32:6:183:PHE:N	32:6:183:PHE:CD1	2.89	0.40
34:8:11:SER:O	34:8:16:THR:N	2.50	0.40
34:8:103:ARG:HG3	34:8:167:PRO:HG2	2.03	0.40
34:8:174:ALA:C	34:8:177:MET:H	2.24	0.40
35:9:60:GLN:HG3	35:9:61:LYS:N	2.37	0.40
2:B:37:VAL:HG13	2:B:48:ILE:HG22	2.02	0.40
4:D:152:ASP:OD1	4:D:153:ILE:N	2.55	0.40
4:D:47:LYS:HE3	4:D:47:LYS:HB2	1.94	0.40
6:F:2:GLN:CD	6:F:2:GLN:H	2.22	0.40
7:G:56:ARG:H	53:27:1084:A:H5'	1.87	0.40
7:G:27:VAL:O	7:G:82:ILE:HA	2.22	0.40
12:L:45:GLN:HE21	53:27:2485:G:C5'	2.29	0.40
13:M:33:ILE:HD12	13:M:114:GLU:OE1	2.21	0.40
22:V:51:ARG:C	22:V:53:HIS:H	2.24	0.40
4:D:108:PRO:HA	26:Z:41:HIS:CD2	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	269/273 (98%)	218 (81%)	34 (13%)	17 (6%)	2	26
2	B	207/209 (99%)	175 (84%)	25 (12%)	7 (3%)	5	42
3	C	199/201 (99%)	157 (79%)	23 (12%)	19 (10%)	1	15
4	D	175/179 (98%)	143 (82%)	23 (13%)	9 (5%)	2	31
5	E	174/177 (98%)	148 (85%)	19 (11%)	7 (4%)	4	37
6	F	147/149 (99%)	116 (79%)	20 (14%)	11 (8%)	1	21
7	G	129/165 (78%)	91 (70%)	27 (21%)	11 (8%)	1	17
8	H	139/142 (98%)	107 (77%)	21 (15%)	11 (8%)	1	19
9	I	140/142 (99%)	120 (86%)	16 (11%)	4 (3%)	6	45
10	J	120/123 (98%)	94 (78%)	19 (16%)	7 (6%)	2	28
11	K	141/144 (98%)	108 (77%)	18 (13%)	15 (11%)	0	11
12	L	134/136 (98%)	104 (78%)	17 (13%)	13 (10%)	1	14
13	M	118/127 (93%)	95 (80%)	18 (15%)	5 (4%)	3	35
14	N	114/117 (97%)	92 (81%)	16 (14%)	6 (5%)	2	30
15	O	112/115 (97%)	96 (86%)	13 (12%)	3 (3%)	6	46
16	P	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	7	47
17	Q	101/103 (98%)	74 (73%)	19 (19%)	8 (8%)	1	19
18	R	108/110 (98%)	84 (78%)	17 (16%)	7 (6%)	1	26
19	S	91/100 (91%)	76 (84%)	13 (14%)	2 (2%)	8	50
20	T	100/104 (96%)	81 (81%)	11 (11%)	8 (8%)	1	19
21	U	92/94 (98%)	75 (82%)	13 (14%)	4 (4%)	3	35
22	V	73/85 (86%)	64 (88%)	5 (7%)	4 (6%)	2	30
23	W	75/78 (96%)	65 (87%)	7 (9%)	3 (4%)	4	37
24	X	61/63 (97%)	53 (87%)	2 (3%)	6 (10%)	1	14
25	Y	56/59 (95%)	48 (86%)	4 (7%)	4 (7%)	1	23
26	Z	64/70 (91%)	49 (77%)	8 (12%)	7 (11%)	0	10
27	1	54/57 (95%)	39 (72%)	9 (17%)	6 (11%)	0	10
28	2	48/55 (87%)	39 (81%)	8 (17%)	1 (2%)	9	51
29	3	44/46 (96%)	38 (86%)	4 (9%)	2 (4%)	3	33
30	4	62/65 (95%)	49 (79%)	11 (18%)	2 (3%)	5	43

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

All (432) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	97	ASP
1	A	107	LYS
1	A	121	ALA
1	A	143	VAL
1	A	154	ALA
3	C	61	ARG
3	C	71	GLY

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Mol	Chain	Res	Type
3	C	199	MET
5	E	45	ALA
5	E	59	ASP
5	E	117	PRO
5	E	174	LYS
6	F	2	GLN
6	F	10	ALA
6	F	54	LEU
7	G	55	VAL
7	G	88	HIS
7	G	93	ALA
8	H	18	ASN
8	H	24	GLY
9	I	81	ILE
10	J	50	GLY
10	J	89	ASN
10	J	107	LEU
10	J	110	GLU
11	K	31	GLY
11	K	38	GLN
11	K	94	THR
12	L	87	GLY
13	M	117	ASP
14	N	68	LYS
16	P	2	ARG
17	Q	54	VAL
17	Q	80	ARG
18	R	62	ASP
20	T	57	ILE
23	W	2	ARG
24	X	24	GLU
24	X	25	GLN
25	Y	13	ILE
26	Z	52	ALA
27	1	23	ALA
30	4	26	ALA
31	5	34	LYS
32	6	14	HIS
32	6	21	TYR
32	6	72	LYS
32	6	87	ASP
32	6	167	HIS

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Mol	Chain	Res	Type
33	7	156	LEU
33	7	205	GLU
34	8	47	LEU
34	8	81	LEU
34	8	150	LYS
35	9	77	ASN
35	9	99	SER
35	9	121	ASN
35	9	122	VAL
35	9	132	PRO
36	10	91	ARG
37	11	4	ARG
39	13	12	LYS
39	13	55	ASP
39	13	58	GLU
39	13	71	ILE
40	14	34	ALA
40	14	41	PRO
41	15	125	LYS
42	16	76	HIS
42	16	88	ASP
43	17	9	PRO
43	17	104	ASN
48	22	11	ARG
48	22	46	THR
50	24	67	HIS
51	25	14	ALA
51	25	32	ARG
51	25	36	PHE
51	25	65	ARG
51	25	66	ARG
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	469	PRO
59	33	471	PRO
59	33	484	THR
59	33	485	THR
59	33	612	CYS
59	33	620	GLU
59	33	688	ALA

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Mol	Chain	Res	Type
1	A	43	ASN
1	A	108	GLY
1	A	120	ASP
1	A	157	ALA
1	A	234	GLY
1	A	252	LYS
2	B	102	ALA
2	B	103	ASP
2	B	153	GLY
3	C	42	GLY
3	C	56	GLY
3	C	70	SER
3	C	144	GLU
3	C	165	HIS
4	D	8	LYS
4	D	20	ASN
4	D	81	GLY
4	D	175	PRO
5	E	135	ALA
6	F	3	VAL
6	F	114	GLU
6	F	118	PRO
7	G	73	LYS
7	G	107	GLU
8	H	5	GLN
8	H	8	VAL
11	K	4	ASN
11	K	36	LYS
11	K	85	VAL
12	L	15	GLY
12	L	21	ALA
12	L	59	ARG
12	L	89	VAL
13	M	59	SER
14	N	99	TYR
14	N	101	GLY
18	R	2	GLU
19	S	71	GLY
20	T	54	PRO
21	U	45	ASP
21	U	84	PRO
22	V	12	SER

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Mol	Chain	Res	Type
22	V	68	LYS
23	W	41	SER
24	X	23	ARG
26	Z	33	ASN
26	Z	50	ASP
27	1	2	VAL
27	1	17	SER
27	1	25	THR
30	4	62	PRO
31	5	11	CYS
31	5	29	ALA
32	6	20	ARG
32	6	34	ARG
32	6	123	GLY
32	6	148	GLY
32	6	157	PRO
32	6	212	TYR
34	8	24	VAL
34	8	26	ALA
34	8	29	THR
34	8	30	LYS
34	8	154	VAL
35	9	11	GLN
35	9	50	GLY
35	9	93	VAL
35	9	102	THR
36	10	40	GLU
36	10	54	LEU
37	11	29	LEU
37	11	55	LYS
37	11	129	ASN
38	12	51	GLU
38	12	66	GLN
39	13	38	PHE
39	13	57	VAL
39	13	103	VAL
40	14	47	GLU
40	14	57	VAL
41	15	13	LYS
41	15	16	SER
41	15	88	PRO
41	15	91	GLY

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Mol	Chain	Res	Type
41	15	93	GLU
41	15	94	SER
42	16	11	ARG
42	16	47	ALA
42	16	90	PRO
43	17	6	ILE
43	17	98	GLY
44	18	28	ALA
44	18	53	ASP
44	18	94	GLY
45	19	20	ASP
47	21	15	LYS
47	21	81	ALA
48	22	17	VAL
48	22	37	LYS
48	22	45	GLY
48	22	71	ASP
49	23	54	ARG
50	24	65	LEU
50	24	68	LYS
51	25	30	GLU
51	25	62	GLU
59	33	521	ILE
59	33	533	ARG
59	33	552	ARG
59	33	613	CYS
59	33	629	ARG
59	33	658	GLY
59	33	666	SER
59	33	676	ARG
59	33	691	LYS
59	33	703	THR
1	A	7	PRO
2	B	194	PRO
3	C	68	ALA
3	C	69	ARG
3	C	101	TYR
3	C	166	LYS
4	D	120	SER
4	D	142	TYR
4	D	149	ARG
5	E	46	ASP

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Mol	Chain	Res	Type
5	E	118	ALA
6	F	9	VAL
7	G	118	ILE
8	H	49	GLU
8	H	75	ALA
8	H	94	LYS
8	H	97	VAL
11	K	14	LYS
11	K	93	ASN
11	K	111	ILE
11	K	113	ALA
11	K	129	LYS
12	L	58	LYS
12	L	69	PRO
13	M	71	ARG
14	N	114	GLY
16	P	23	TYR
17	Q	31	GLU
17	Q	55	ASP
17	Q	69	GLY
17	Q	100	GLY
18	R	3	THR
18	R	89	ALA
20	T	18	LYS
21	U	34	LYS
21	U	44	HIS
22	V	14	ALA
22	V	17	LEU
25	Y	51	SER
25	Y	52	PHE
26	Z	2	LYS
27	1	53	VAL
28	2	40	PRO
32	6	11	ALA
32	6	19	THR
32	6	22	TRP
32	6	36	LYS
32	6	104	LYS
32	6	105	THR
32	6	202	ASN
33	7	44	LYS
34	8	23	GLY

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Mol	Chain	Res	Type
35	9	22	LYS
35	9	81	GLN
35	9	89	THR
35	9	109	ALA
36	10	56	LYS
37	11	16	LYS
38	12	56	PRO
39	13	23	GLY
39	13	102	PHE
39	13	107	ALA
40	14	35	GLN
40	14	43	PRO
40	14	92	LEU
41	15	51	PHE
42	16	33	CYS
42	16	35	ARG
43	17	113	LYS
45	19	2	LEU
46	20	48	GLU
47	21	50	ASN
47	21	56	ASP
49	23	26	ASP
51	25	12	ASP
51	25	23	GLU
51	25	60	ALA
59	33	267	ASN
59	33	334	VAL
59	33	474	ASP
59	33	476	LEU
59	33	510	GLN
59	33	529	HIS
59	33	618	GLY
59	33	619	ASP
59	33	635	ARG
59	33	637	ASP
59	33	697	VAL
59	33	740	ARG
1	A	52	HIS
1	A	112	GLY
1	A	204	LEU
1	A	231	HIS
2	B	138	LEU

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Mol	Chain	Res	Type
3	C	62	GLN
3	C	65	THR
3	C	80	SER
4	D	125	GLY
4	D	173	ASP
6	F	14	SER
6	F	25	TYR
6	F	77	THR
8	H	13	ALA
9	I	40	HIS
10	J	35	VAL
11	K	29	LYS
11	K	37	GLY
12	L	6	ARG
13	M	70	THR
13	M	116	VAL
14	N	88	LYS
17	Q	53	PHE
18	R	59	GLU
19	S	72	GLN
20	T	40	LEU
20	T	88	ASP
23	W	31	ASN
24	X	22	LEU
26	Z	42	PRO
27	1	40	HIS
29	3	4	THR
29	3	8	SER
33	7	21	TRP
33	7	46	LEU
36	10	86	ARG
36	10	93	LYS
36	10	98	GLU
37	11	56	SER
37	11	113	LYS
38	12	65	PHE
39	13	13	SER
39	13	90	ASP
39	13	119	LYS
40	14	75	ASP
40	14	89	ARG
41	15	77	GLY

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Mol	Chain	Res	Type
44	18	34	ASN
44	18	61	ASN
48	22	18	GLN
48	22	19	GLU
49	23	4	LEU
49	23	8	PRO
51	25	18	PHE
59	33	52	ALA
59	33	532	PRO
59	33	537	ASN
59	33	548	GLY
59	33	567	PRO
59	33	656	VAL
2	B	10	GLY
2	B	86	GLU
3	C	27	LEU
3	C	63	LYS
3	C	83	VAL
6	F	15	LEU
7	G	48	ALA
7	G	119	PRO
11	K	15	ALA
11	K	84	LYS
12	L	10	ARG
12	L	26	VAL
14	N	100	HIS
15	O	64	SER
17	Q	40	MET
18	R	63	GLY
20	T	97	SER
25	Y	4	ILE
26	Z	24	ILE
26	Z	64	PHE
34	8	166	LYS
36	10	53	LYS
39	13	9	GLY
39	13	31	GLN
39	13	42	THR
40	14	33	GLY
40	14	39	PRO
40	14	61	ALA
41	15	126	ARG

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Mol	Chain	Res	Type
42	16	24	GLU
42	16	60	PHE
43	17	97	ARG
44	18	2	LYS
44	18	20	PHE
44	18	91	GLU
47	21	51	GLU
47	21	65	PRO
47	21	69	THR
51	25	10	PRO
1	A	85	ASN
7	G	50	VAL
7	G	130	PRO
9	I	64	VAL
12	L	70	ASP
15	O	35	SER
20	T	89	GLY
24	X	20	ASN
24	X	55	THR
33	7	61	LYS
35	9	17	VAL
35	9	23	THR
36	10	18	VAL
43	17	93	GLY
59	33	44	GLN
59	33	621	ILE
59	33	692	VAL
8	H	21	PRO
9	I	100	VAL
15	O	63	ILE
16	P	6	GLY
45	19	10	ILE
7	G	21	GLY
12	L	23	GLY
43	17	50	GLY
59	33	483	VAL
3	C	121	VAL
18	R	74	ILE
35	9	104	ILE
8	H	73	PRO
10	J	27	GLY
12	L	57	VAL

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Mol	Chain	Res	Type
20	T	38	ILE
37	11	5	VAL
42	16	3	VAL
51	25	9	GLU
10	J	93	GLN

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	216/218 (99%)	215 (100%)	1 (0%)	92	96
2	B	164/164 (100%)	164 (100%)	0	100	100
3	C	165/165 (100%)	163 (99%)	2 (1%)	78	90
4	D	148/150 (99%)	147 (99%)	1 (1%)	88	94
5	E	137/138 (99%)	137 (100%)	0	100	100
6	F	114/114 (100%)	114 (100%)	0	100	100
7	G	100/123 (81%)	99 (99%)	1 (1%)	82	91
8	H	109/110 (99%)	109 (100%)	0	100	100
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	103 (100%)	0	100	100
11	K	102/103 (99%)	101 (99%)	1 (1%)	82	91
12	L	109/109 (100%)	109 (100%)	0	100	100
13	M	100/103 (97%)	99 (99%)	1 (1%)	82	91
14	N	86/87 (99%)	86 (100%)	0	100	100
15	O	99/100 (99%)	99 (100%)	0	100	100
16	P	89/90 (99%)	89 (100%)	0	100	100
17	Q	84/84 (100%)	84 (100%)	0	100	100
18	R	93/93 (100%)	93 (100%)	0	100	100
19	S	80/84 (95%)	80 (100%)	0	100	100
20	T	83/85 (98%)	83 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	U	78/78 (100%)	78 (100%)	0	100	100
22	V	57/63 (90%)	57 (100%)	0	100	100
23	W	67/68 (98%)	67 (100%)	0	100	100
24	X	55/55 (100%)	55 (100%)	0	100	100
25	Y	48/49 (98%)	48 (100%)	0	100	100
26	Z	59/62 (95%)	57 (97%)	2 (3%)	44	77
27	1	47/48 (98%)	47 (100%)	0	100	100
28	2	45/49 (92%)	45 (100%)	0	100	100
29	3	38/38 (100%)	38 (100%)	0	100	100
30	4	51/52 (98%)	51 (100%)	0	100	100
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	179 (99%)	1 (1%)	90	95
33	7	170/190 (90%)	169 (99%)	1 (1%)	90	95
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	68	88
36	10	87/116 (75%)	87 (100%)	0	100	100
37	11	124/147 (84%)	124 (100%)	0	100	100
38	12	104/105 (99%)	104 (100%)	0	100	100
39	13	105/107 (98%)	103 (98%)	2 (2%)	65	86
40	14	86/90 (96%)	86 (100%)	0	100	100
41	15	89/99 (90%)	87 (98%)	2 (2%)	60	84
42	16	103/104 (99%)	103 (100%)	0	100	100
43	17	92/96 (96%)	92 (100%)	0	100	100
44	18	83/84 (99%)	83 (100%)	0	100	100
45	19	76/77 (99%)	76 (100%)	0	100	100
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	74	89
48	22	56/65 (86%)	56 (100%)	0	100	100
49	23	70/79 (89%)	70 (100%)	0	100	100
50	24	65/66 (98%)	65 (100%)	0	100	100
51	25	55/61 (90%)	54 (98%)	1 (2%)	66	87

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	33	452/635 (71%)	448 (99%)	4 (1%)	84	92
All	All	5303/5698 (93%)	5280 (100%)	23 (0%)	94	97

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	156	SER
3	C	44	ARG
3	C	149	ILE
4	D	3	LEU
7	G	59	LEU
11	K	62	PRO
13	M	51	LEU
26	Z	37	CYS
26	Z	43	PHE
32	6	67	LEU
33	7	102	ILE
35	9	122	VAL
35	9	132	PRO
39	13	60	LEU
39	13	93	LEU
41	15	39	ASN
41	15	117	HIS
47	21	78	VAL
51	25	18	PHE
59	33	267	ASN
59	33	338	ILE
59	33	425	LEU
59	33	463	ILE

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

Mol	Chain	Res	Type
1	A	89	ASN
1	A	116	GLN
1	A	225	ASN
1	A	238	ASN
1	A	242	HIS
2	B	32	ASN
2	B	49	GLN
2	B	173	GLN

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Mol	Chain	Res	Type
3	C	62	GLN
3	C	92	HIS
3	C	94	GLN
4	D	51	ASN
4	D	62	GLN
4	D	80	GLN
5	E	29	ASN
5	E	47	ASN
5	E	110	HIS
6	F	18	GLN
6	F	43	ASN
6	F	73	ASN
6	F	133	GLN
6	F	135	HIS
7	G	4	ASN
7	G	9	GLN
8	H	11	GLN
8	H	33	ASN
8	H	104	GLN
9	I	58	ASN
9	I	136	GLN
10	J	3	GLN
11	K	54	GLN
12	L	22	GLN
13	M	81	ASN
14	N	100	HIS
17	Q	6	GLN
17	Q	43	ASN
19	S	15	HIS
20	T	39	ASN
20	T	65	GLN
20	T	73	ASN
21	U	44	HIS
22	V	8	ASN
22	V	72	ASN
23	W	16	ASN
23	W	22	ASN
24	X	58	ASN
25	Y	8	GLN
26	Z	20	ASN
26	Z	30	HIS
27	1	4	GLN

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Mol	Chain	Res	Type
32	6	35	ASN
32	6	38	HIS
32	6	57	ASN
32	6	108	GLN
33	7	18	ASN
33	7	24	ASN
34	8	35	GLN
34	8	70	GLN
34	8	84	ASN
34	8	99	ASN
34	8	125	ASN
34	8	151	GLN
35	9	42	ASN
36	10	11	HIS
36	10	63	ASN
37	11	67	ASN
37	11	121	ASN
38	12	20	ASN
39	13	4	GLN
39	13	30	ASN
39	13	36	GLN
39	13	125	GLN
41	15	108	ASN
42	16	4	ASN
42	16	28	GLN
43	17	13	HIS
45	19	45	HIS
45	19	49	HIS
46	20	9	HIS
46	20	26	ASN
46	20	29	ASN
46	20	63	GLN
47	21	30	HIS
48	22	51	GLN
49	23	68	HIS
50	24	51	ASN
59	33	88	ASN
59	33	235	HIS
59	33	264	GLN
59	33	267	ASN
59	33	432	HIS
59	33	437	HIS

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Mol	Chain	Res	Type
59	33	614	GLN
59	33	720	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	190 (12%)	8 (0%)
53	27	2902/2903 (99%)	410 (14%)	22 (0%)
54	28	119/120 (99%)	9 (7%)	1 (0%)
55	29	19/20 (95%)	4 (21%)	0
56	30	75/76 (98%)	20 (26%)	1 (1%)
57	31	76/77 (98%)	6 (7%)	0
58	32	76/77 (98%)	22 (28%)	1 (1%)
All	All	4805/4812 (99%)	661 (13%)	33 (0%)

All (661) RNA backbone outliers are listed below:

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

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Mol	Chain	Res	Type
52	26	240	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	281	G
52	26	289	G
52	26	306	A
52	26	328	C
52	26	330	C
52	26	345	C
52	26	346	G
52	26	352	C
52	26	354	G
52	26	363	A
52	26	367	U
52	26	372	C
52	26	398	U
52	26	412	A
52	26	414	A
52	26	421	U
52	26	422	C
52	26	423	G
52	26	429	U
52	26	441	A
52	26	448	A
52	26	462	G
52	26	463	U
52	26	467	U
52	26	479	U
52	26	484	G
52	26	485	U
52	26	486	U
52	26	495	A
52	26	510	A
52	26	518	C
52	26	527	G
52	26	531	U
52	26	534	U
52	26	547	A
52	26	550	G
52	26	559	A

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Mol	Chain	Res	Type
52	26	561	U
52	26	564	C
52	26	566	G
52	26	572	A
52	26	573	A
52	26	574	A
52	26	575	G
52	26	576	C
52	26	577	G
52	26	633	G
52	26	642	A
52	26	661	G
52	26	665	A
52	26	703	G
52	26	713	G
52	26	721	G
52	26	723	U
52	26	724	G
52	26	755	G
52	26	759	A
52	26	774	G
52	26	777	A
52	26	794	A
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	820	U
52	26	832	G
52	26	836	G
52	26	842	U
52	26	843	U
52	26	845	A
52	26	849	G
52	26	871	U
52	26	872	A
52	26	873	A
52	26	889	A
52	26	902	G
52	26	934	C
52	26	935	A
52	26	960	U

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Mol	Chain	Res	Type
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	1026	G
52	26	1027	C
52	26	1029	U
52	26	1030	U
52	26	1031	C
52	26	1033	G
52	26	1034	G
52	26	1053	G
52	26	1054	C
52	26	1055	A
52	26	1085	U
52	26	1094	G
52	26	1101	A
52	26	1130	A
52	26	1133	G
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1140	C
52	26	1151	A
52	26	1159	U
52	26	1168	U
52	26	1182	G
52	26	1184	G
52	26	1196	A
52	26	1197	A
52	26	1201	A
52	26	1202	U
52	26	1207	G
52	26	1212	U
52	26	1213	A

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Mol	Chain	Res	Type
52	26	1214	C
52	26	1225	A
52	26	1226	C
52	26	1227	A
52	26	1238	A
52	26	1240	U
52	26	1241	G
52	26	1258	G
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1282	C
52	26	1286	U
52	26	1287	A
52	26	1300	G
52	26	1301	U
52	26	1317	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1363	A
52	26	1370	G
52	26	1381	U
52	26	1394	A
52	26	1395	C
52	26	1400	C
52	26	1419	G
52	26	1446	A
52	26	1451	U
52	26	1452	C
52	26	1492	A
52	26	1497	G
52	26	1499	A
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1519	A
52	26	1520	C
52	26	1529	G
52	26	1530	G
53	27	10	A

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Mol	Chain	Res	Type
53	27	12	U
53	27	34	U
53	27	46	G
53	27	49	A
53	27	51	G
53	27	63	A
53	27	71	A
53	27	74	A
53	27	75	G
53	27	98	G
53	27	114	U
53	27	119	A
53	27	120	U
53	27	138	U
53	27	139	U
53	27	140	C
53	27	141	G
53	27	142	A
53	27	162	U
53	27	163	C
53	27	181	A
53	27	196	A
53	27	216	A
53	27	219	A
53	27	221	A
53	27	222	A
53	27	228	C
53	27	229	C
53	27	233	A
53	27	248	G
53	27	249	C
53	27	255	A
53	27	266	G
53	27	272	A
53	27	276	U
53	27	284	U
53	27	294	A
53	27	311	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A

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Mol	Chain	Res	Type
53	27	334	C
53	27	346	A
53	27	349	U
53	27	361	G
53	27	363	G
53	27	371	A
53	27	372	G
53	27	380	G
53	27	386	G
53	27	387	U
53	27	404	A
53	27	405	U
53	27	406	G
53	27	411	G
53	27	421	C
53	27	424	G
53	27	451	U
53	27	457	A
53	27	458	G
53	27	480	A
53	27	481	G
53	27	491	G
53	27	504	A
53	27	505	A
53	27	508	A
53	27	529	A
53	27	532	A
53	27	533	G
53	27	545	U
53	27	546	U
53	27	563	A
53	27	573	U
53	27	575	A
53	27	586	A
53	27	588	U
53	27	603	A
53	27	614	A
53	27	615	U
53	27	616	A
53	27	627	A
53	27	637	A
53	27	646	U

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Mol	Chain	Res	Type
53	27	654	A
53	27	655	A
53	27	669	G
53	27	686	U
53	27	687	C
53	27	694	U
53	27	695	G
53	27	711	G
53	27	730	A
53	27	734	A
53	27	747	C
53	27	752	A
53	27	757	G
53	27	764	A
53	27	775	G
53	27	776	G
53	27	782	A
53	27	784	G
53	27	805	G
53	27	812	C
53	27	819	A
53	27	822	G
53	27	827	U
53	27	828	U
53	27	830	G
53	27	845	A
53	27	846	U
53	27	847	U
53	27	858	G
53	27	859	G
53	27	860	U
53	27	878	A
53	27	883	G
53	27	888	C
53	27	893	C
53	27	896	A
53	27	902	C
53	27	907	G
53	27	910	A
53	27	915	C
53	27	932	U
53	27	941	A

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Mol	Chain	Res	Type
53	27	945	A
53	27	946	C
53	27	953	G
53	27	961	C
53	27	962	G
53	27	974	G
53	27	975	A
53	27	983	A
53	27	990	A
53	27	995	C
53	27	996	A
53	27	999	U
53	27	1012	U
53	27	1013	C
53	27	1021	A
53	27	1022	G
53	27	1033	U
53	27	1045	C
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1060	U
53	27	1061	U
53	27	1070	A
53	27	1071	G
53	27	1073	A
53	27	1083	U
53	27	1088	A
53	27	1090	A
53	27	1097	U
53	27	1111	A
53	27	1112	G
53	27	1119	U
53	27	1129	A
53	27	1131	G
53	27	1132	U
53	27	1135	C
53	27	1143	A
53	27	1157	G
53	27	1173	U
53	27	1174	U
53	27	1175	A

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Mol	Chain	Res	Type
53	27	1177	G
53	27	1180	U
53	27	1206	G
53	27	1212	G
53	27	1221	C
53	27	1238	G
53	27	1250	G
53	27	1251	C
53	27	1253	A
53	27	1256	G
53	27	1271	G
53	27	1272	A
53	27	1273	U
53	27	1294	U
53	27	1300	G
53	27	1301	A
53	27	1302	A
53	27	1305	C
53	27	1314	C
53	27	1321	A
53	27	1332	G
53	27	1345	C
53	27	1365	A
53	27	1378	A
53	27	1379	U
53	27	1383	A
53	27	1395	A
53	27	1407	G
53	27	1416	G
53	27	1419	A
53	27	1420	A
53	27	1421	G
53	27	1428	C
53	27	1452	G
53	27	1453	A
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1504	A
53	27	1508	A
53	27	1509	A
53	27	1515	A

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Mol	Chain	Res	Type
53	27	1524	G
53	27	1530	G
53	27	1534	U
53	27	1535	A
53	27	1536	C
53	27	1555	G
53	27	1560	G
53	27	1569	A
53	27	1578	U
53	27	1587	G
53	27	1608	A
53	27	1616	A
53	27	1647	U
53	27	1648	U
53	27	1660	G
53	27	1674	G
53	27	1694	C
53	27	1699	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1731	G
53	27	1735	A
53	27	1738	G
53	27	1757	A
53	27	1758	U
53	27	1763	G
53	27	1764	C
53	27	1773	A
53	27	1782	U
53	27	1791	A
53	27	1800	C
53	27	1801	A
53	27	1808	A
53	27	1816	C
53	27	1848	A
53	27	1869	G
53	27	1871	A
53	27	1896	G
53	27	1900	A
53	27	1901	A
53	27	1906	G

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Mol	Chain	Res	Type
53	27	1907	G
53	27	1913	A
53	27	1929	G
53	27	1930	G
53	27	1931	U
53	27	1937	A
53	27	1955	U
53	27	1967	C
53	27	1970	A
53	27	1971	U
53	27	1972	G
53	27	1982	U
53	27	1991	U
53	27	1993	U
53	27	1997	C
53	27	2022	U
53	27	2023	C
53	27	2031	A
53	27	2033	A
53	27	2036	C
53	27	2043	C
53	27	2052	A
53	27	2055	C
53	27	2056	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2093	G
53	27	2108	A
53	27	2110	G
53	27	2111	U
53	27	2112	G
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2125	G
53	27	2131	U
53	27	2132	U
53	27	2133	G

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Mol	Chain	Res	Type
53	27	2136	G
53	27	2143	C
53	27	2145	C
53	27	2149	U
53	27	2157	G
53	27	2166	U
53	27	2167	U
53	27	2170	A
53	27	2171	A
53	27	2172	U
53	27	2173	A
53	27	2182	U
53	27	2189	U
53	27	2198	A
53	27	2204	G
53	27	2211	A
53	27	2213	U
53	27	2225	A
53	27	2238	G
53	27	2239	G
53	27	2243	U
53	27	2250	G
53	27	2269	G
53	27	2279	G
53	27	2283	C
53	27	2287	A
53	27	2297	A
53	27	2305	U
53	27	2309	A
53	27	2311	A
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2335	A
53	27	2347	C
53	27	2350	C
53	27	2357	G
53	27	2361	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2392	A

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Mol	Chain	Res	Type
53	27	2402	U
53	27	2406	A
53	27	2423	U
53	27	2427	C
53	27	2428	G
53	27	2429	G
53	27	2430	A
53	27	2435	A
53	27	2436	G
53	27	2441	U
53	27	2445	G
53	27	2448	A
53	27	2476	A
53	27	2484	G
53	27	2487	G
53	27	2498	C
53	27	2502	G
53	27	2503	A
53	27	2504	U
53	27	2505	G
53	27	2506	U
53	27	2518	A
53	27	2520	C
53	27	2529	G
53	27	2547	A
53	27	2554	U
53	27	2566	A
53	27	2567	G
53	27	2572	A
53	27	2582	G
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2609	U
53	27	2613	U
53	27	2621	G
53	27	2629	U
53	27	2630	G
53	27	2646	C
53	27	2655	G
53	27	2689	U
53	27	2690	U

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Mol	Chain	Res	Type
53	27	2713	U
53	27	2714	G
53	27	2744	G
53	27	2748	A
53	27	2757	A
53	27	2762	C
53	27	2764	A
53	27	2765	A
53	27	2778	A
53	27	2779	U
53	27	2791	G
53	27	2794	C
53	27	2797	U
53	27	2798	U
53	27	2799	A
53	27	2800	A
53	27	2801	G
53	27	2808	G
53	27	2809	A
53	27	2818	U
53	27	2820	A
53	27	2821	A
53	27	2833	U
53	27	2848	G
53	27	2849	U
53	27	2867	G
53	27	2868	A
53	27	2873	A
53	27	2879	A
53	27	2880	C
53	27	2883	A
54	28	4	C
54	28	13	G
54	28	35	C
54	28	44	G
54	28	45	A
54	28	67	G
54	28	89	U
54	28	108	A
54	28	109	A
55	29	6	G
55	29	8	A

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Mol	Chain	Res	Type
55	29	12	A
55	29	22	A
56	30	8	U
56	30	9	A
56	30	10	G
56	30	14	A
56	30	15	G
56	30	17	C
56	30	18	G
56	30	19	G
56	30	20	U
56	30	21	A
56	30	42	C
56	30	46	G
56	30	48	C
56	30	52	G
56	30	55	U
56	30	56	C
56	30	59	U
56	30	61	C
56	30	63	G
56	30	75	C
57	31	9	G
57	31	19	G
57	31	20	U
57	31	47	U
57	31	48	C
57	31	76	A
58	32	8	U
58	32	9	G
58	32	10	G
58	32	12	G
58	32	13	C
58	32	14	A
58	32	16	C
58	32	17	C
58	32	17(A)	U
58	32	18	G
58	32	19	G
58	32	21	A
58	32	22	G
58	32	34	C

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Mol	Chain	Res	Type
58	32	35	A
58	32	45	G
58	32	48	C
58	32	59	A
58	32	64	G
58	32	70	G
58	32	75	C
58	32	76	A

All (33) RNA pucker outliers are listed below:

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

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Mol	Chain	Res	Type
54	28	88	C
56	30	15	G
58	32	16	C

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.