



## wwPDB EM Map/Model Validation Report ⓘ

Jun 22, 2016 – 06:28 AM EDT

PDB ID : 5IMR  
EMDB ID: : EMD-6585  
Title : Structure of ribosome bound to cofactor at 5.7 angstrom resolution  
Authors : Kumar, V.; Ero, R.; Jian, G.K.; Ahmed, T.; Zhan, Y.; Bhushan, S.; Gao, Y.G.  
Deposited on : 2016-03-06  
Resolution : unknown (reported)  
Based on PDB ID : 4W2E, 5AA0

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](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/EMValidationReportHelp>

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MolProbity : 4.02b-467  
Mogul : 1.7.1 (RC1), CSD as537be (2016)  
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-20027790

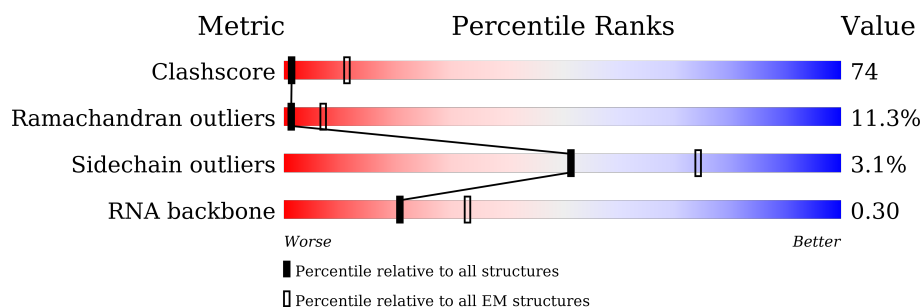
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is unknown.

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.




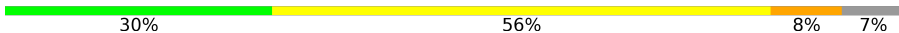
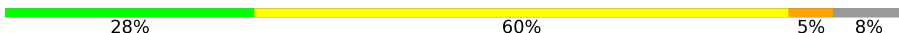

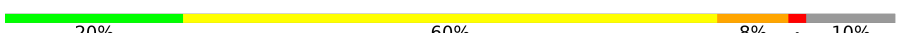
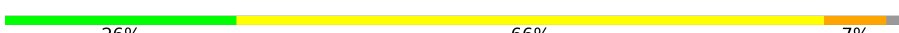
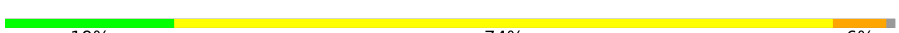




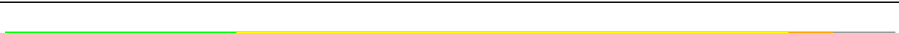













Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

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  $\geq 3$ , 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	1522	
2	F	256	
3	G	239	
4	H	209	
5	I	162	
6	J	101	
7	K	156	
8	L	138	











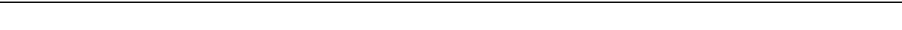

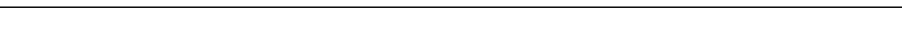
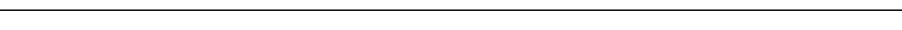
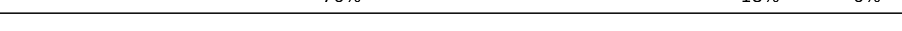








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Mol	Chain	Length	Quality of chain
9	M	128	
10	N	105	
11	O	129	
12	P	132	
13	Q	126	
14	R	61	
15	S	89	
16	T	88	
17	U	105	
18	V	88	
19	W	93	
20	X	106	
21	Y	27	
22	C	610	
23	D	2893	
24	E	123	
25	Z	229	
26	a	276	
27	b	206	
28	c	210	
29	d	182	
30	e	180	
31	f	140	
32	g	122	
33	h	150	

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Mol	Chain	Length	Quality of chain
34	i	141	 86% 10% . .
35	j	118	 92% 8% .
36	k	112	 89% 9% .
37	l	146	 70% 10% . 20%
38	m	118	 91% 8% .
39	n	101	 81% 18% .
40	o	113	 90% 6% . .
41	p	96	 91% 7% .
42	q	110	 78% 22%
43	r	206	 79% 8% 13%
44	s	85	 87% 6% 7%
45	t	67	 93% 7%
46	u	60	 92% 7% .
47	v	71	 76% 18% 6%
48	w	60	 82% 13% 5%
49	x	54	 69% 22% 9%
50	y	49	 86% 14%
51	z	65	 83% 14% . .
52	1	37	 30% 65% 5%
53	2	173	 50% 23% . 25%
54	3	147	 18% 48% 22% . 9%
55	4	77	 14% 51% 34%
56	5	76	 5% 49% 45%

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

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

## 2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 152879 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 RNA chain called 16S ribosomal RNA.

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

- Molecule 2 is a protein called 30S ribosomal protein S2.

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

- Molecule 3 is a protein called 30S ribosomal protein S3.

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

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

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

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

- Molecule 7 is a protein called 30S ribosomal protein S7.

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

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

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

- Molecule 10 is a protein called 30S ribosomal protein S10.

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

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

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

- Molecule 13 is a protein called 30S ribosomal protein S13.

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

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

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

- Molecule 17 is a protein called 30S ribosomal protein S17.

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

- Molecule 18 is a protein called 30S ribosomal protein S18.

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

- Molecule 19 is a protein called 30S ribosomal protein S19.

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

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

- Molecule 21 is a protein called 30S ribosomal protein Thx.



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

- Molecule 22 is a protein called Elongation factor 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	C	570	Total	C	N	O	S	0	0
			4461	2858	768	826	9		

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

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

- Molecule 24 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 25 is a protein called 50S ribosomal protein L1.

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

- Molecule 26 is a protein called 50S ribosomal protein L2.

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

- Molecule 27 is a protein called 50S ribosomal protein L3.

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

- Molecule 28 is a protein called 50S ribosomal protein L4.

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

- Molecule 29 is a protein called 50S ribosomal protein L5.

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

- Molecule 30 is a protein called 50S ribosomal protein L6.

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

- Molecule 31 is a protein called 50S ribosomal protein L13.

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

- Molecule 32 is a protein called 50S ribosomal protein L14.

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

- Molecule 33 is a protein called 50S ribosomal protein L15.

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

- Molecule 34 is a protein called 50S ribosomal protein L16.

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

- Molecule 35 is a protein called 50S ribosomal protein L17.

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

- Molecule 36 is a protein called 50S ribosomal protein L18.

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

- Molecule 37 is a protein called 50S ribosomal protein L19.

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

- Molecule 38 is a protein called 50S ribosomal protein L20.

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

- Molecule 39 is a protein called 50S ribosomal protein L21.

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

- Molecule 40 is a protein called 50S ribosomal protein L22.

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

- Molecule 41 is a protein called 50S ribosomal protein L23.

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

- Molecule 42 is a protein called 50S ribosomal protein L24.

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

- Molecule 43 is a protein called 50S ribosomal protein L25.

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

- Molecule 44 is a protein called 50S ribosomal protein L27.

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

- Molecule 45 is a protein called 50S ribosomal protein L29.

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

- Molecule 46 is a protein called 50S ribosomal protein L30.

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

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	1	37	Total	C	N	O	S	0	0
			307	188	68	47	4		

- Molecule 53 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	2	130	Total	C	N	O		0	0
			641	381	130	130			

- Molecule 54 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	3	134	Total	C	N	O	S	0	0
			993	632	175	181	5		

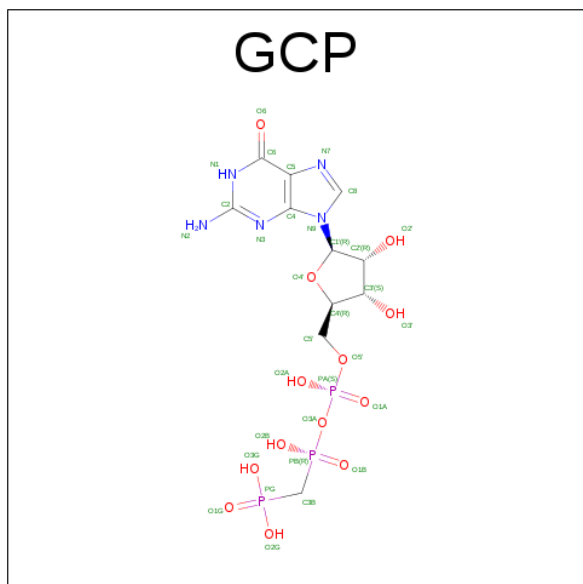
- Molecule 55 is a RNA chain called P site- tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	4	77	Total	C	N	O	P	0	0
			1640	732	297	535	76		

- Molecule 56 is a RNA chain called E site- tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	5	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

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



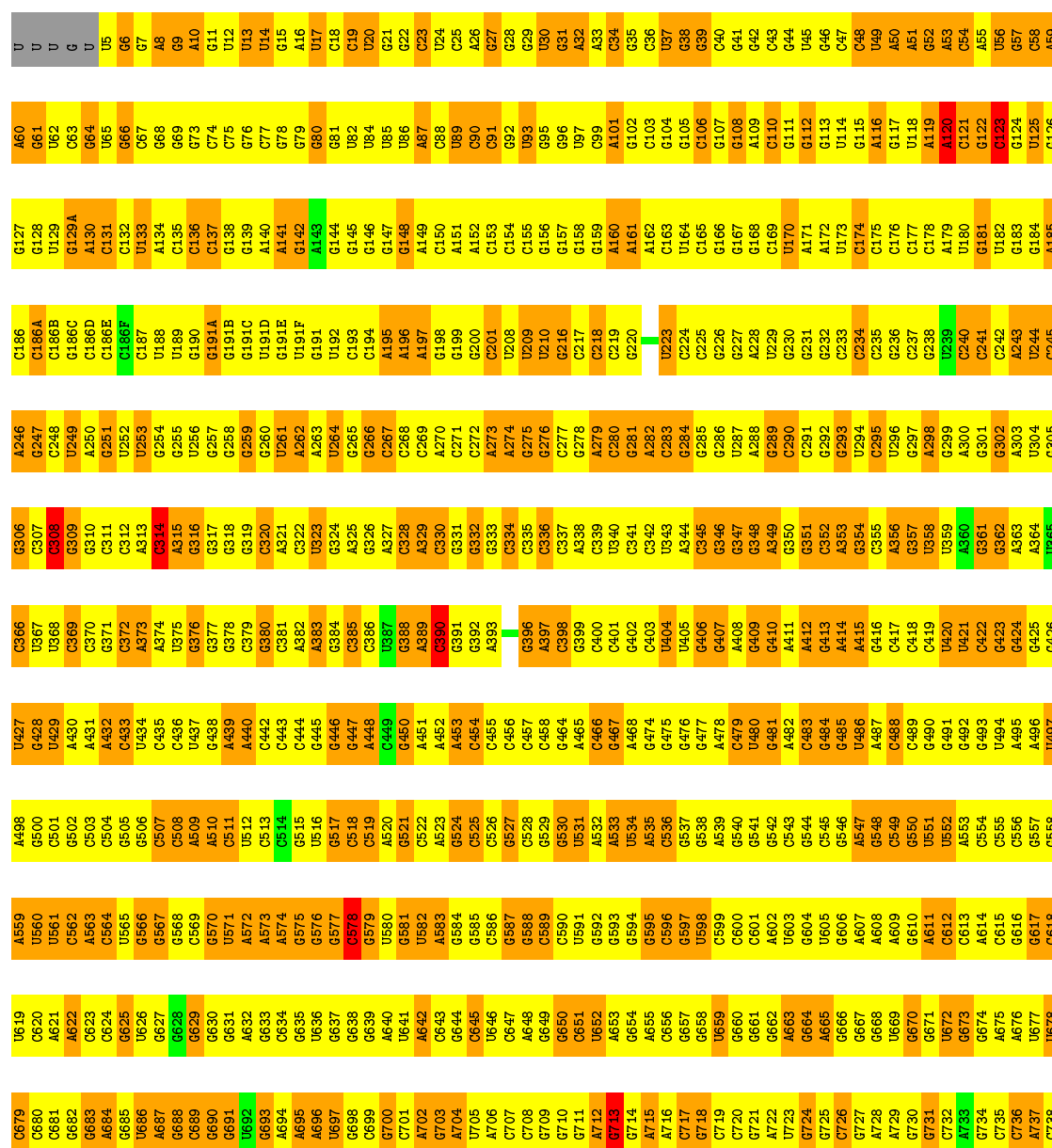
Mol	Chain	Residues	Atoms					AltConf
57	C	1	Total	C	N	O	P	0
			32	11	5	13	3	

### 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: 16S ribosomal RNA

Chain A: 



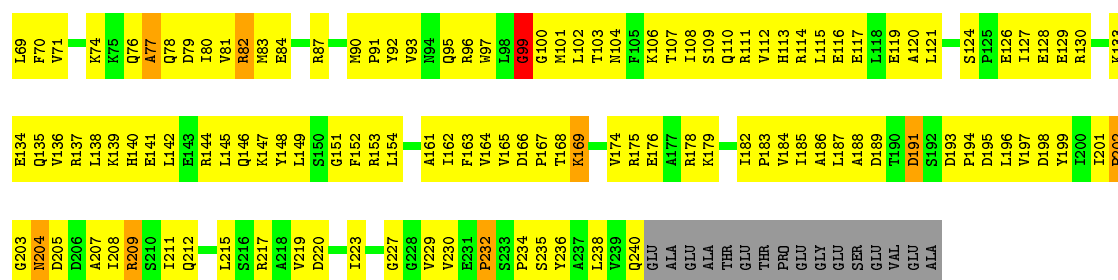
C1527	C1466	C1401	C1342	C1282	G1222	C1161	A1101	C985	G925	A865	G799	C739
U1528	G1467	C1402	G1343	G1283	C1223	C1162	A1102	A986	G926	C866	G800	U740
G1529	A1468	C1403	C1344	C1284	G1224	C1163	C1103	G987	G927	C867	U801	G741
G1469	G1469	C1404	U1345	A1285	A1225	C1164	C1043	G988	G928	C868	A802	G742
A1531	G1470	G1405	A1346	A1286	C1226	G1165	A1105	G989	G929	C869	G803	U743
U1532	G1471	G1406	G1347	A1287	A1227	G1166	A1046	G990	G930	U870	U804	G744
C1533	G1472	C1407	U1348	A1288	C1228	A1167	G1047	U991	C931	U871	C805	G745
A1534	G1473	A1408	A1349	A1289	A1229	A1169	U1048	U992	C932	A872	C806	A746
C1535	G1474	C1409	A1350	G1290	C1230	A1170	U1049	U993	G933	A873	A807	G747
U1536	G1475	G1410	U1351	G1291	U1231	G1171	A1110	A994	G934	G874	C808	G748
U1537	C1476	C1411	C1352	U1292	U1232	C1172	A1111	C995	A935	C875	C809	G749
C1538	G1477	G1412	G1353	G1293	G1233	G1173	U1052		G936	G876	C810	G750
U1539	C1478	A1413	C1354	G1294	C1234	G1174	C1113		A937	C877	C811	U751
U1540	G1479	G1414	G1355	U1295	U1235	G1175	C1114	C998	A938	G878	C812	G752
U1541	G1480	U1414	G1356	U1301	G1241	G1181	C1060	C999	G939	C879	U813	A753
U1542	G1481	G1415	G1357	C1296	C1236	A1176	A1056	U999	C940	C880	A814	C754
C	G1482	G1416	A1357	C1297	C1237	G1177	G1057	G1001	G941	G881	A815	G755
U	A1483	G1417	U1358	A1298	A1238	G1178	G1058	G1002	G942	C882	A816	G756
	C1484	A1418	C1359	A1299	A1239	A1179	C1059	G1003	U943	C883	C817	U757
	U1485	G1419	A1360	G1300	U1240	A1180	C1119	A1004	G944	U884	G818	G758
	G1486	C1420	G1361	U1302	G1242	G1181	G1120	A1005	G945	G885	A819	A759
	G1487	G1421	C1362	U1303	C1243	G1182	U1121	C1006	A946	G886	U820	G760
	G1488	G1422	A1363	C1304	C1244	A1183	A1123	C1007	G947	G887	G821	G761
	G1489	G1423	A1364	G1305	A1245	G1185	G1124	G1008	C948	G888	C822	G762
	C1490	C1424	G1365	A1306	C1246	G1186	U1125	G1009	A949	A889	G823	G763
	G1491	U1425	C1366	U1307	U1247	G1187	U1126	G1010	U950	G890	C824	G764
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• Molecule 2: 30S ribosomal protein S2

Chain F:  27% 60% 5% 9%

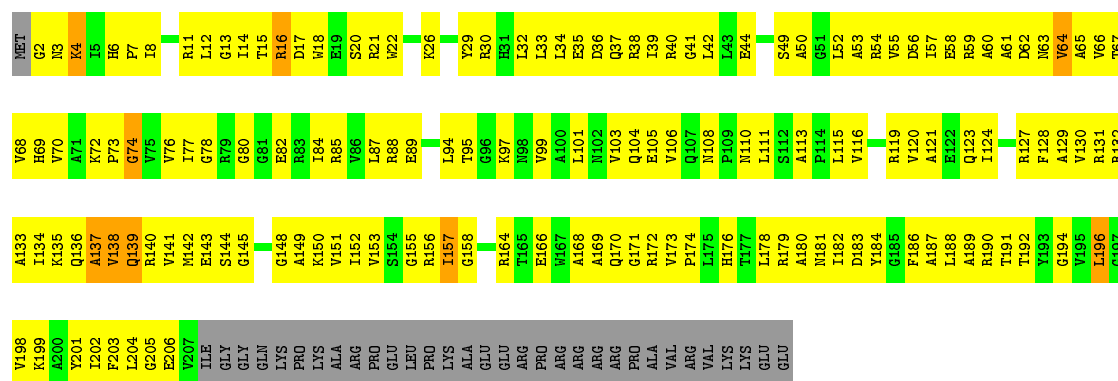
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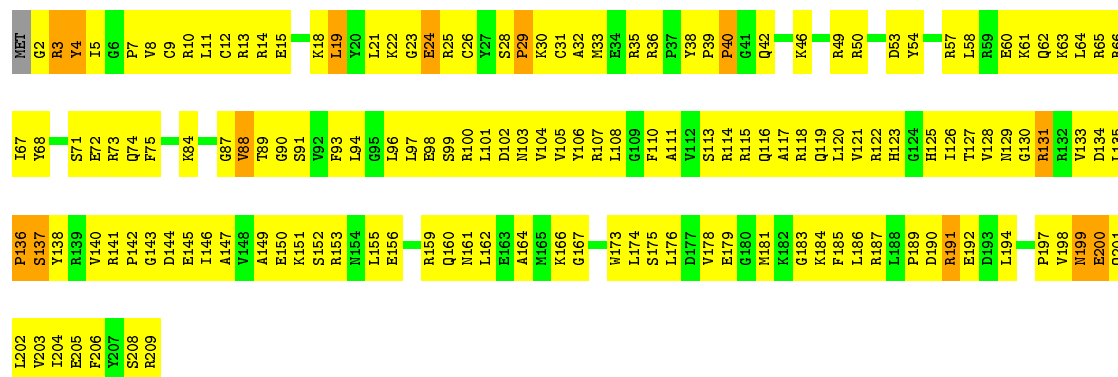
• Molecule 3: 30S ribosomal protein S3

Chain G: 24% 59% 14%



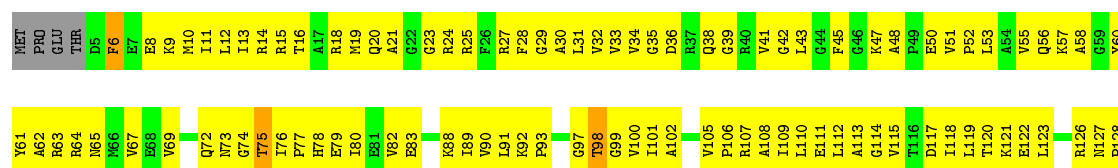
• Molecule 4: 30S ribosomal protein S4

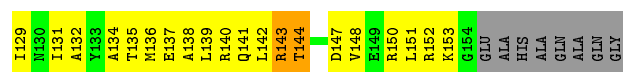
Chain H: 27% 67% 6%



• Molecule 5: 30S ribosomal protein S5

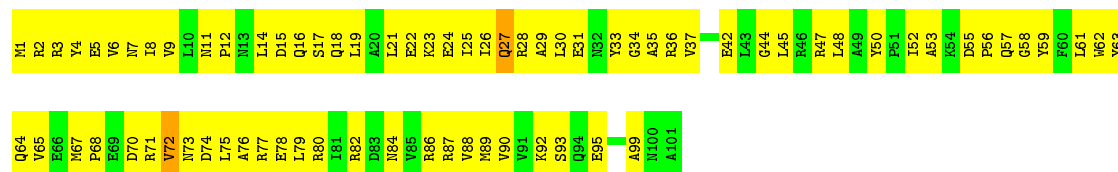
Chain I: 22% 68% 7%





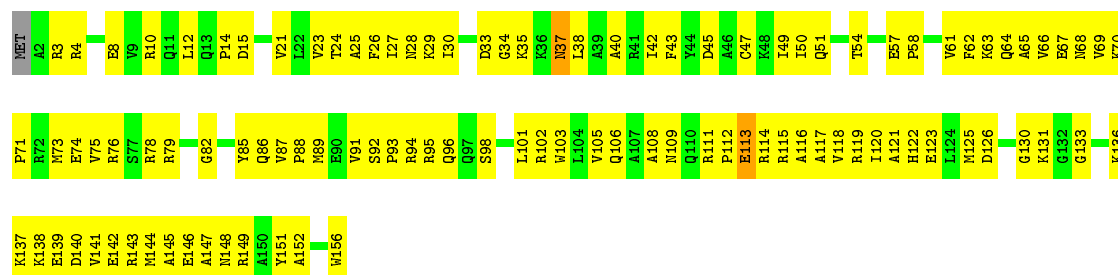
- Molecule 6: 30S ribosomal protein S6

Chain J: 26% 72%



- Molecule 7: 30S ribosomal protein S7

Chain K: 33% 65%



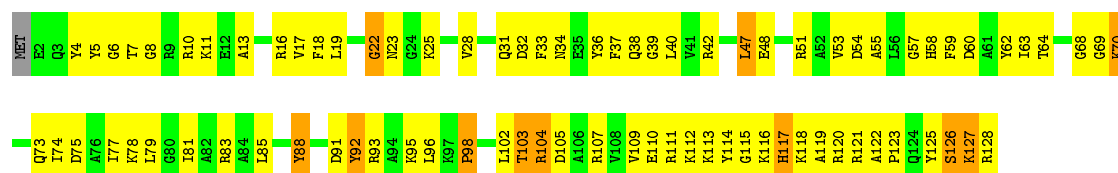
- Molecule 8: 30S ribosomal protein S8

Chain L: 21% 72% 7%



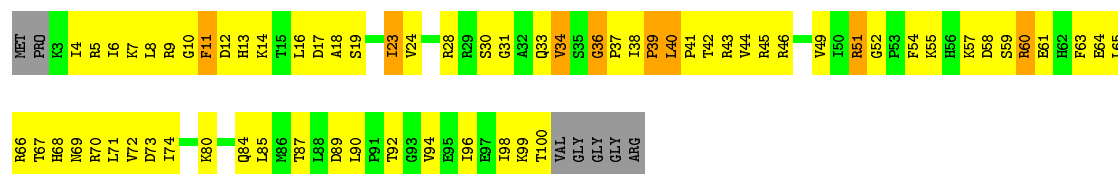
- Molecule 9: 30S ribosomal protein S9

Chain M: 35% 55% 9%



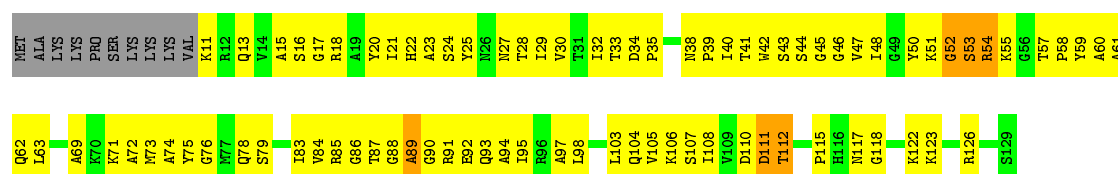
- Molecule 10: 30S ribosomal protein S10

Chain N: 

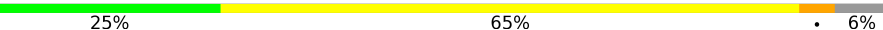


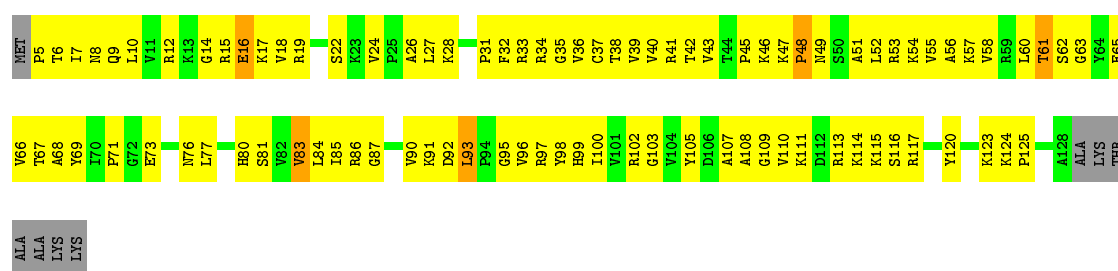
• Molecule 11: 30S ribosomal protein S11

Chain O: 

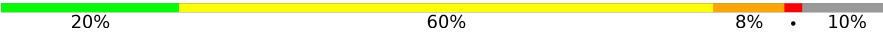


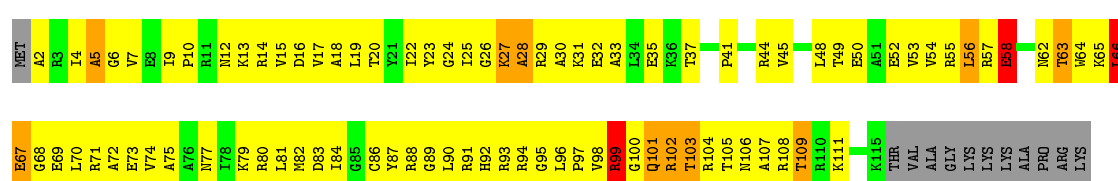
• Molecule 12: 30S ribosomal protein S12

Chain P: 



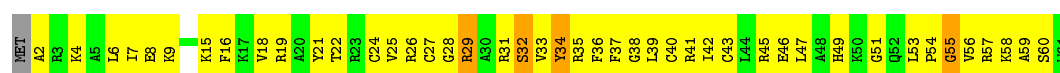
• Molecule 13: 30S ribosomal protein S13

Chain Q: 



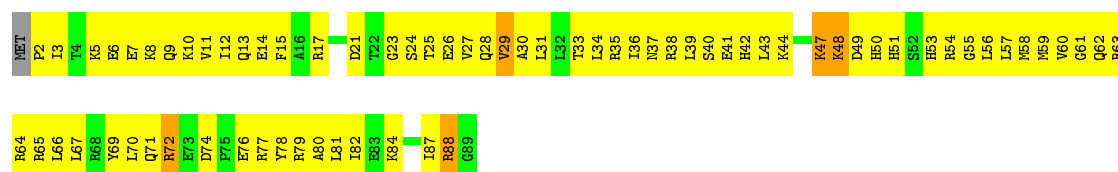
• Molecule 14: 30S ribosomal protein S14 type Z

Chain R: 



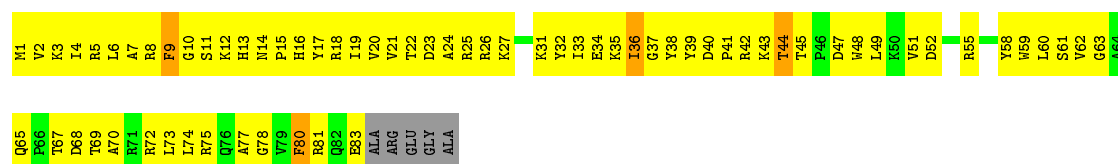
• Molecule 15: 30S ribosomal protein S15

Chain S: 



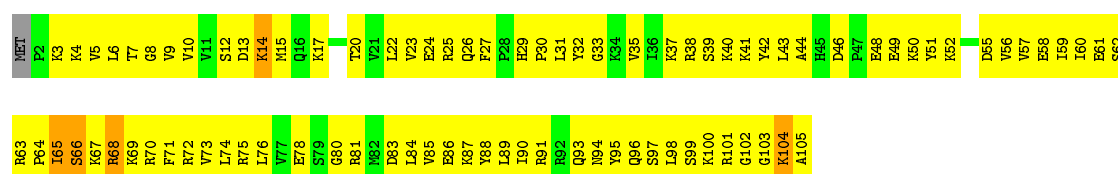
• Molecule 16: 30S ribosomal protein S16

Chain T: 17% 73% 5% 6%



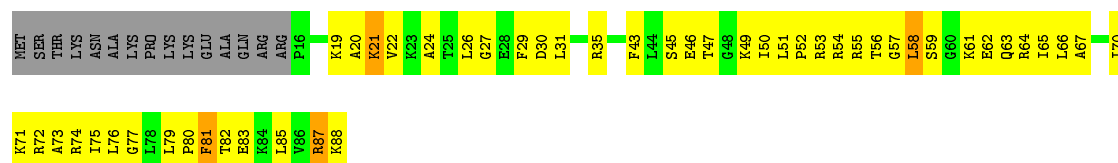
• Molecule 17: 30S ribosomal protein S17

Chain U: 16% 78% 5%



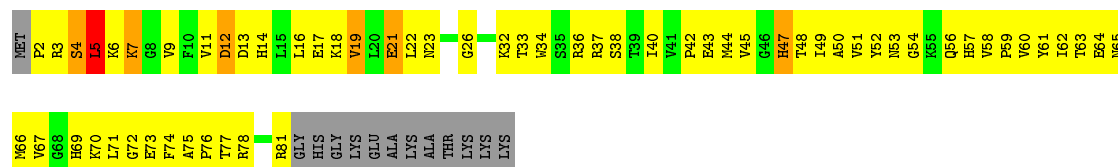
• Molecule 18: 30S ribosomal protein S18

Chain V: 27% 51% 5% 17%



• Molecule 19: 30S ribosomal protein S19

Chain W: 20% 58% 6% 14%



• Molecule 20: 30S ribosomal protein S20

Chain X: 26% 62% 5% 7%

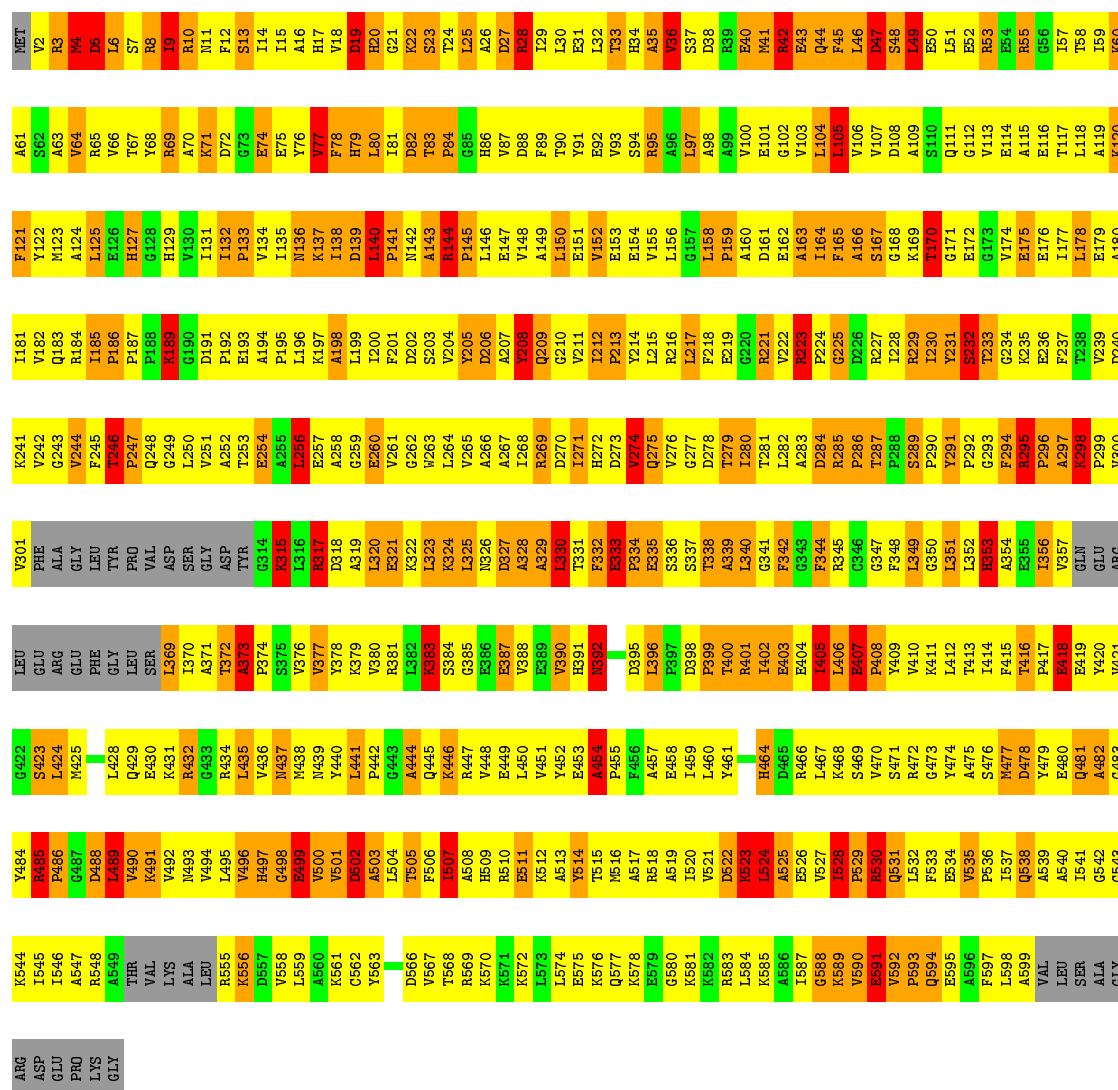




- Molecule 21: 30S ribosomal protein Thx



- Molecule 22: Elongation factor 4



- Molecule 23: 23S ribosomal RNA

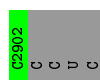





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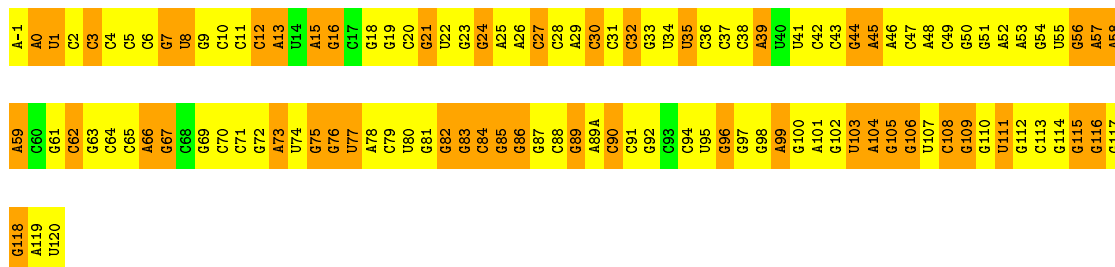
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G2846	G2782	G2722	A2662	A2602	A2542	G2482	A2422	G2362	G2302	G2242	A2172	G2110	C2050	G1990	G1930
U2847	G2783	G2723	G2663	G2603	G2543	G2483	U2423	G2363	G2303	U2243	A2173	C2111	A2051	U1991	U1931
G2848	G2784	C2724	G2664	U2604	G2544	G2484	C2424	G2364	G2304	U2244	C2174	G2112	G2052	U1992	A1932
U2849	A2785	U2605	G2665	G2605	G2545	G2485	A2425	G2365	A2305	G2245	C2175	U2113	G2053	U1993	G1933
A2850	G2786	G2606	G2666	G2606	U2546	G2486	A2426	A2366	G2306	A2246	A2176	A2114	A2054	C1994	C1934
A2851	G2787	G2607	G2667	G2607	U2547	G2487	C2427	G2367	G2307	A2247	C2177	G2115	C2055	U1995	G1935
G2852	U2788	G2608	G2668	G2608	G2548	A2488	G2428	G2368	G2308	C2248	C2178	G2116	G2056	G1996	A1936
G2853	G2789	U2609	G2669	U2609	G2549	G2489	G2429	A2369	A2309	U2249	C2179	A2117	U2057	G1997	A1937
G2854	A2790	G2610	A2670	G2610	G2550	G2490	A2430	G2370	A2310	G2250	U2180	U2118	A2058	G1998	A1938
G2855	G2791	U2611	G2672	U2611	C2551	U2491	U2431	G2371	A2311	G2251	G2181	A2119	A2059	G1999	U1939
G2856	G2792	G2612	G2673	G2612	U2552	U2492	A2432	G2372	U2312	G2252	G2182	G2120	A2060	G2000	U1940
G2857	A2793	U2613	A2674	G2613	G2553	U2493	A2433	G2373	C2313	G2253	C2183	G2121	G2061	A2001	G1941
G2858	G2794	A2614	G2675	G2614	U2554	G2494	A2434	G2374	C2314	G2254	G2184	U2122	A2062	G2002	C1942
G2859	G2795	U2615	G2676	U2615	U2555	G2495	A2435	G2375	G2315	G2255	C2185	G2123	C2063	G2003	U1943
A2860	G2796	G2616	G2677	G2616	C2556	G2496	G2436	A2376	C2316	G2256	G2186	G2124	C2064	G2004	U1944
G2861	G2797	C2617	G2678	G2617	U2557	A2497	U2437	A2377	C2317	U2257	G2187	G2125	C2065	A2005	G1945
G2862	G2798	G2618	G2679	G2618	U2558	C2498	U2438	A2378	G2318	C2258	C2188	A2126	C2066	C2006	U1946
G2863	G2800	G2619	C2680	G2619	C2559	C2499	A2439	G2379	G2319	G2259	U2189	G2127	G2067	C2007	C1947
G2864	C2801	C2620	G2681	C2620	C2560	U2500	C2440	C2380	A2320	C2260	G2190	C2128	U2068	C2008	G1948
G2865	C2802	A2621	G2682	A2621	A2561	G2501	C2441	C2381	G2321	C2261	G2191	C2129	G2069	G2009	G1949
U2866	G2803	G2622	C2683	G2622	U2562	G2502	C2442	G2382	A2322	U2262	G2192		G2070	G2010	G1950
G2867	G2804	G2623	G2684	G2623	U2563	A2503	G2443	G2383	C2323	C2263	G2193	U2132	A2071	U2011	U1951
G2868	A2805	G2624	U2685	G2624	A2564	U2504	G2444	G2384	C2324	G2264	G2194	G2133	G2072	G2012	A1952
G2869	G2806	G2625	G2686	G2625	A2565	G2505	G2445	G2385	G2325	U2265	C2195	A2134	C2073	A2013	A1953
G2870	G2807	U2626	U2687	G2626	A2566	U2506	G2446	C2386	G2326	A2266	C2196	A2135	U2074	A2014	G1954
G2871	G2808	G2627	G2688	G2627	U2567	C2507	G2447	U2387	A2327	A2267	U2197	G2136	U2075	A2015	U1955
G2872	G2811	C2628	U2689	G2628	C2568	G2508	A2448	A2388	A2328	A2268	A2198	C2137	U2076	U2016	U1956
G2873	G2812	G2629	G2690	G2629	C2569	G2509	U2449	G2389	G2329	A2269	A2199	C2138	U2077	U2017	C1957
G2874	G2813	G2630	G2691	G2630	G2570	C2510	A2450	G2390	G2330	G2270	C2205	C2139	C2078	G2018	G1958
C2875	C2814	G2631	C2692	G2631	C2571	U2511	A2451	C2391	G2331	G2271	C2206	G2140	U2079	A2019	G1959
G2876	G2815	A2632	G2693	A2632	G2572	G2512	C2452	A2392	U2332	U2272	C2207	G2141	G2080	A2020	A1960
G2877	G2816	G2633	G2694	G2633	C2573	G2513	A2453	A2393	G2333	G2273	U2208	C2142	C2081	C2021	C1961
U2878	G2817	G2634	G2695	G2634	G2574	U2514	G2454	C2394	G2334	A2274	C2209	C2143	A2082	U2022	G1962
G2879	G2818	C2635	U2696	C2635	C2575	G2515	G2455	G2395	A2335	G2275	G2210	U2144	G2083	G2023	U1963
G2880	A2819	U2636	G2697	U2636	G2576	G2516	C2456	G2396	A2336	G2276	G2211	C2145	C2084	G2024	G1964
G2881	G2820	G2637	G2698	G2637	A2577	C2517	U2457	G2397	G2337	G2277	A2212	G2146	U2085	C2025	C1965
A2882	A2821	U2638	U2699	G2638	G2578	A2518	G2458	U2398	G2338	G2278	U2213	G2147	U2086	C2026	A1966
G2883	G2822	A2639	G2700	G2639	C2579	U2519	A2459	G2399	G2339	G2279	G2215	G2148	G2087	G2027	C1967
U2884	G2823	G2640	C2701	G2640	U2580	C2520	U2460	G2400	G2340	G2280	G2216	U2150	G2088	U2028	G1968
C2885	C2824	G2641	U2702	G2641	G2581	G2521	C2461	U2401	G2341	C2281	G2217	G2151	U2089	G2029	A1969
G2886	C2825	G2642	G2703	G2642	G2582	U2522	U2462	C2402	C2342	G2282	G2218		G2090	A2030	A1970
G2887	A2826	G2643	G2704	G2643	G2583	G2523	C2463	C2403	G2343	C2283	G2219	G2152	U2091	A2031	A1971
G2888	G2827	G2644	U2705	G2644	U2584	G2524	C2464	C2404	U2344	C2284	G2224	G2153	U2092	G2032	A1972
G2889	C2828	G2645	G2706	G2645	U2585	G2525	C2465	G2405	G2345	C2285	A2225	G2155	G2093	A2033	G1973
G2890	G2829	U2646	G2707	C2646	C2586	G2526	C2466	U2406	A2346	A2286	C2226	G2156	G2094	U2034	C1974
A2891	U2830	G2647	G2708	G2647	A2587	C2527	C2467	G2407	C2347	A2287	A2227	G2157	C2095	G2035	U1975
G2892	G2831	U2648	G2709	G2648	G2588	U2528	G2468	U2408	G2348	A2288	G2228	A2158	U2096	C2036	G1976
G2893	U2832	G2649	G2710	G2649	A2589	G2529	A2469	G2409	G2349	G2289	C2229	G2159	C2097	G2037	A1977
G2894	G2833	U2650	A2711	U2650	U2590	A2530	G2470	G2410	C2350	G2290	G2230	G2160	U2098	G2038	A1978
U2895	U2834	C2651	A2531	G2651	C2591	A2531	C2471	A2411	G2351	U2291	G2231	G2161	U2099	C2039	G1979
G2896	G2835	G2652	G2592	G2652	G2592	G2532	G2472	A2412	A2352	C2292	U2232	G2162	G2100	C2040	G1980
U2897	U2836	U2653	A2533	U2653	U2593	A2533	U2473	G2413	G2353	C2293	U2233	C2163	G2101	U2041	A1981
G2898	G2837	G2654	U2534	G2654	C2594	A2534	C2474	G2414	G2354	C2294	G2234	C2164	U2102	A2042	C1982
G2899	A2838	U2655	G2595	G2655	G2595	A2535	C2475	G2415	C2355	G2295	G2235	C2165	C2103	C2043	C1983
G2900	G2839	G2656	G2596	U2656	U2596	G2536	A2476	C2416	C2356	U2296	G2236	G2166	G2104	C2044	G1984





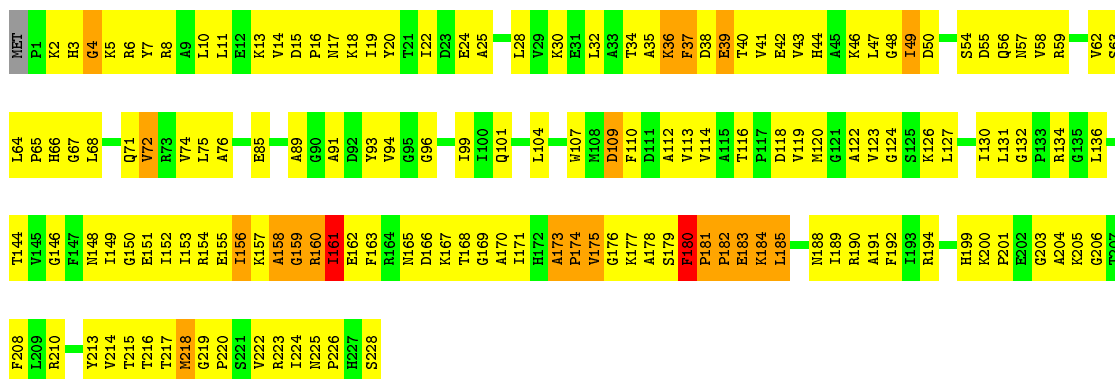
- Molecule 24: 5S ribosomal RNA

Chain E: 5% 56% 39%



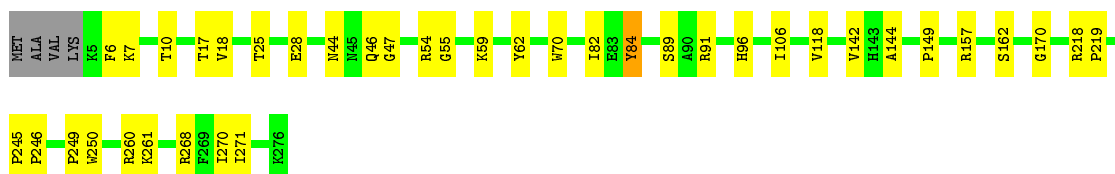
- Molecule 25: 50S ribosomal protein L1

Chain Z: 33% 57% 9%



- Molecule 26: 50S ribosomal protein L2

Chain a: 84% 14%




- Molecule 27: 50S ribosomal protein L3

Chain b: 85% 15%




- Molecule 28: 50S ribosomal protein L4

Chain c:  90% 9%




- Molecule 29: 50S ribosomal protein L5

Chain d:  86% 13%




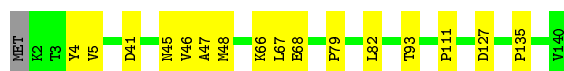
- Molecule 30: 50S ribosomal protein L6

Chain e:  82% 13%




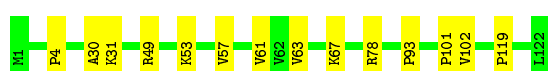
- Molecule 31: 50S ribosomal protein L13

Chain f:  88% 11%




- Molecule 32: 50S ribosomal protein L14

Chain g:  89% 11%




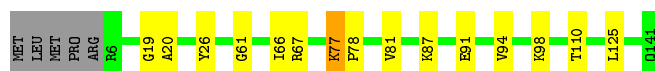
- Molecule 33: 50S ribosomal protein L15

Chain h:  83% 14%



- Molecule 34: 50S ribosomal protein L16

Chain i:  86% 10%



- Molecule 35: 50S ribosomal protein L17

Chain j:  92% 8%



- Molecule 36: 50S ribosomal protein L18

Chain k: 89% 9%



- Molecule 37: 50S ribosomal protein L19

Chain l: 70% 10% 20%



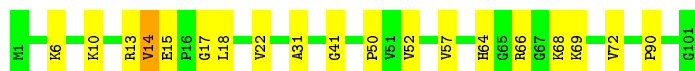
- Molecule 38: 50S ribosomal protein L20

Chain m: 91% 8%



- Molecule 39: 50S ribosomal protein L21

Chain n: 81% 18%



- Molecule 40: 50S ribosomal protein L22

Chain o: 90% 6%



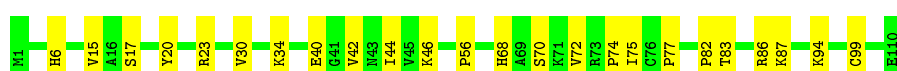
- Molecule 41: 50S ribosomal protein L23

Chain p: 91% 7%

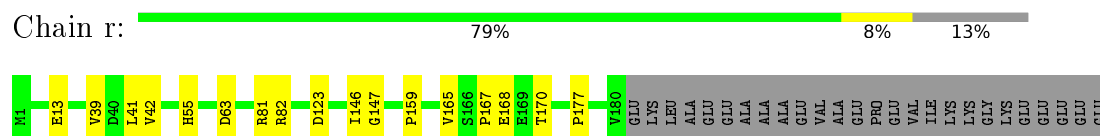


- Molecule 42: 50S ribosomal protein L24

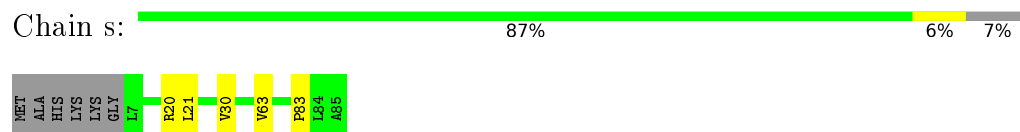
Chain q: 78% 22%



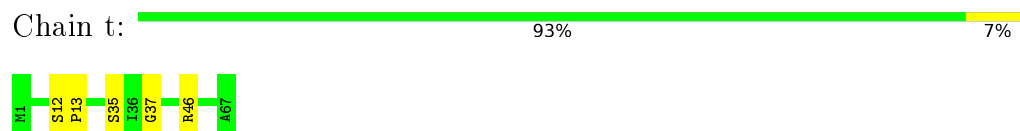
- Molecule 43: 50S ribosomal protein L25



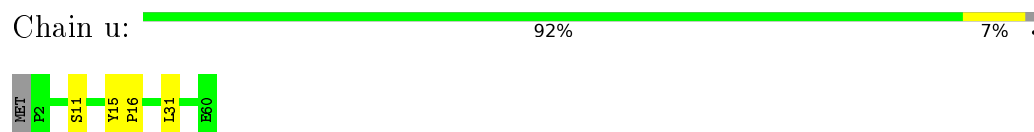
- Molecule 44: 50S ribosomal protein L27



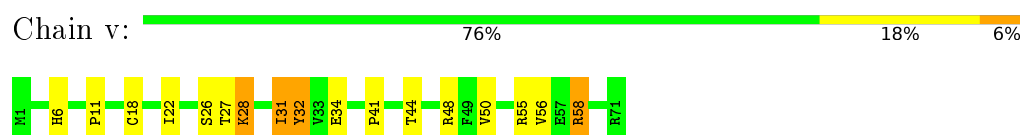
- Molecule 45: 50S ribosomal protein L29



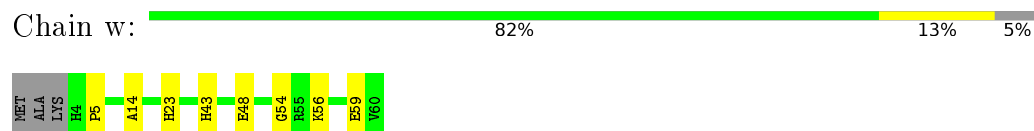
- Molecule 46: 50S ribosomal protein L30



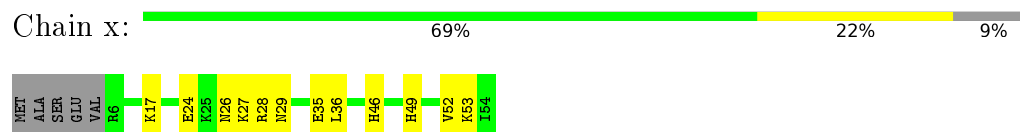
- Molecule 47: 50S ribosomal protein L31



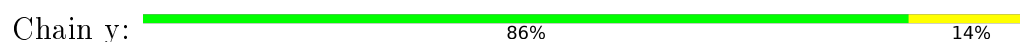
- Molecule 48: 50S ribosomal protein L32



- Molecule 49: 50S ribosomal protein L33



- Molecule 50: 50S ribosomal protein L34





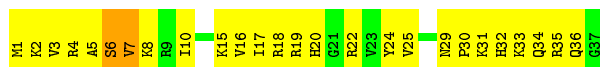
- Molecule 51: 50S ribosomal protein L35

Chain z: 83% 14% ..



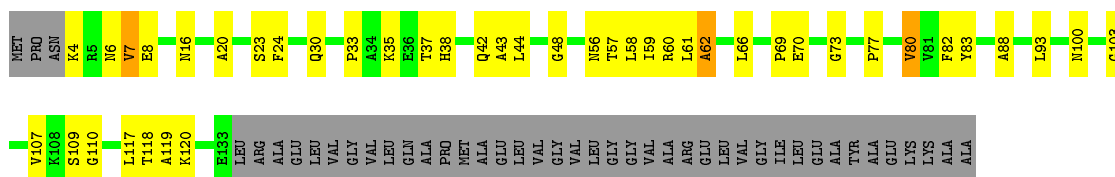
- Molecule 52: 50S ribosomal protein L36

Chain 1: 30% 65% 5%



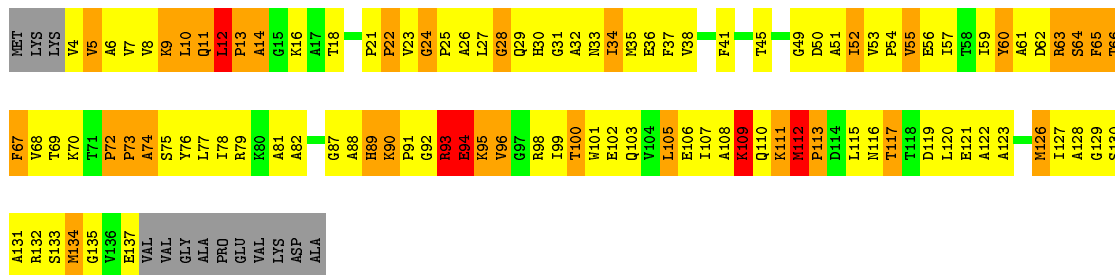
- Molecule 53: 50S ribosomal protein L10

Chain 2: 50% 23% • 25%



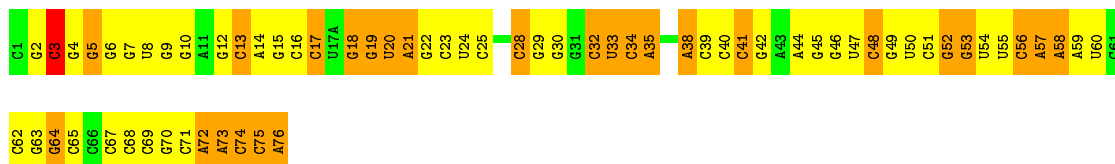
- Molecule 54: 50S ribosomal protein L11

Chain 3: 18% 48% 22% • 9%



- Molecule 55: P site- tRNA

Chain 4: 14% 51% 34% •



- Molecule 56: E site- tRNA

Chain 5:  5% 49% 45%



## 4 Experimental information

Property	Value	Source
Reconstruction method	Not provided	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images used	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	Not provided	Depositor
Microscope	Not provided	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	Not provided	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	Not provided	Depositor

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
1	A	0.78	1/36438 (0.0%)	1.10	50/56869 (0.1%)
10	N	0.34	0/807	0.67	0/1085
11	O	0.39	0/900	0.63	0/1213
12	P	0.54	0/986	0.79	0/1320
13	Q	0.35	0/924	0.67	1/1238 (0.1%)
14	R	0.42	0/501	0.69	0/664
15	S	0.56	0/745	0.78	0/992
16	T	0.53	0/716	0.75	0/963
17	U	0.48	0/870	0.71	0/1159
18	V	0.41	0/603	0.72	1/799 (0.1%)
19	W	0.39	0/661	0.67	0/890
2	F	0.44	0/1935	0.72	1/2609 (0.0%)
20	X	0.50	0/765	0.79	0/1007
21	Y	0.36	0/212	0.66	0/277
22	C	0.44	0/4545	0.57	25/6155 (0.4%)
23	D	0.97	10/69685 (0.0%)	1.24	293/108786 (0.3%)
24	E	0.82	1/2954 (0.0%)	1.09	2/4606 (0.0%)
25	Z	0.33	0/1775	0.58	2/2393 (0.1%)
26	a	0.57	1/2174 (0.0%)	0.80	1/2927 (0.0%)
27	b	0.54	0/1611	0.85	2/2171 (0.1%)
28	c	0.56	0/1660	0.78	0/2247
29	d	0.39	0/1507	0.73	2/2027 (0.1%)
3	G	0.42	0/1636	0.66	0/2205
30	e	0.47	0/1354	0.75	1/1831 (0.1%)
31	f	0.53	0/1140	0.79	2/1537 (0.1%)
32	g	0.52	0/942	0.80	0/1268
33	h	0.48	0/1123	0.85	1/1493 (0.1%)
34	i	0.55	0/1100	0.81	1/1470 (0.1%)
35	j	0.52	0/974	0.73	0/1302
36	k	0.48	0/887	0.78	0/1180
37	l	0.52	0/990	0.81	1/1325 (0.1%)
38	m	0.60	0/982	0.79	0/1306



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
39	n	0.45	0/790	0.78	0/1057
4	H	0.49	0/1733	0.71	1/2318 (0.0%)
40	o	0.52	0/886	0.71	0/1189
41	p	0.47	0/756	0.71	0/1015
42	q	0.43	0/857	0.78	0/1142
43	r	0.41	0/1467	0.70	0/1992
44	s	0.48	0/633	0.71	0/843
45	t	0.50	0/569	0.72	0/751
46	u	0.56	0/474	0.77	0/635
47	v	0.51	0/594	0.85	1/795 (0.1%)
48	w	0.56	0/459	0.76	0/621
49	x	0.49	0/433	0.87	0/576
5	I	0.49	0/1162	0.76	0/1564
50	y	0.58	0/438	0.78	0/575
51	z	0.57	0/523	0.83	0/690
52	1	0.46	0/310	0.72	0/407
53	2	0.23	0/640	0.45	0/889
54	3	0.43	0/1012	0.70	2/1373 (0.1%)
55	4	0.57	0/1832	0.96	1/2855 (0.0%)
56	5	1.93	7/1813 (0.4%)	1.02	3/2823 (0.1%)
6	J	0.40	0/856	0.63	0/1154
7	K	0.38	0/1276	0.67	0/1709
8	L	0.48	0/1136	0.77	1/1527 (0.1%)
9	M	0.38	0/1029	0.65	0/1379
All	All	0.81	20/165780 (0.0%)	1.07	395/247193 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	F	0	1
26	a	0	5
28	c	0	3
30	e	0	1
31	f	0	1
32	g	0	1
37	l	0	2
38	m	0	1
39	n	0	1
40	o	0	1

*Continued on next page...*

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Mol	Chain	#Chirality outliers	#Planarity outliers
41	p	0	1
42	q	0	1
46	u	0	1
47	v	0	1
49	x	0	1
51	z	0	1
54	3	0	2
8	L	0	1
All	All	0	26

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	5	75	C	N3-C4	39.72	1.61	1.33
56	5	75	C	N1-C6	36.95	1.59	1.37
56	5	75	C	C2-N3	36.64	1.65	1.35
56	5	75	C	C4-C5	26.84	1.64	1.43
56	5	75	C	N1-C2	25.86	1.66	1.40
56	5	75	C	C5-C6	24.77	1.54	1.34
24	E	-1	A	OP3-P	-10.77	1.48	1.61
23	D	1	G	OP3-P	-10.70	1.48	1.61
56	5	1	G	OP3-P	-10.68	1.48	1.61
23	D	1978	A	N9-C4	-6.54	1.33	1.37
23	D	2662	A	N9-C4	-5.91	1.34	1.37
26	a	250	TRP	CB-CG	-5.73	1.40	1.50
23	D	528	A	N9-C4	-5.45	1.34	1.37
23	D	515	A	N9-C4	-5.36	1.34	1.37
23	D	1681	G	N9-C4	-5.29	1.33	1.38
23	D	126	A	N9-C4	-5.26	1.34	1.37
1	A	120	A	N9-C4	-5.25	1.34	1.37
23	D	761	A	N9-C4	-5.18	1.34	1.37
23	D	699	A	N9-C4	-5.11	1.34	1.37
23	D	1206	G	N7-C5	-5.11	1.36	1.39

All (395) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	2075	U	N1-C2-O2	10.51	130.16	122.80
23	D	1498	C	C2-N1-C1'	10.33	130.16	118.80
23	D	2498	C	N1-C2-O2	9.67	124.70	118.90
23	D	2498	C	N3-C2-O2	-9.54	115.22	121.90
23	D	1937	A	N1-C6-N6	-9.37	112.98	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	576	U	N1-C2-O2	9.06	129.14	122.80
23	D	1498	C	N1-C2-O2	9.04	124.32	118.90
23	D	150	C	N1-C2-O2	9.01	124.31	118.90
23	D	453	C	N1-C2-O2	8.95	124.27	118.90
23	D	1955	U	C2-N1-C1'	8.89	128.37	117.70
23	D	2258	C	C2-N1-C1'	8.85	128.53	118.80
1	A	1328	C	N1-C2-O2	8.57	124.04	118.90
23	D	1498	C	C6-N1-C1'	-8.54	110.55	120.80
23	D	1638	C	C6-N1-C2	8.43	123.67	120.30
23	D	908	C	C2-N1-C1'	8.39	128.03	118.80
23	D	453	C	C2-N1-C1'	8.27	127.90	118.80
1	A	1113	C	C2-N1-C1'	8.08	127.69	118.80
23	D	2075	U	C2-N1-C1'	7.96	127.25	117.70
23	D	1978	A	C8-N9-C4	7.95	108.98	105.80
23	D	1258	C	C6-N1-C2	7.93	123.47	120.30
27	b	49	LEU	CA-CB-CG	7.93	133.55	115.30
23	D	2586	C	C2-N1-C1'	7.89	127.48	118.80
23	D	2499	C	N1-C2-O2	7.88	123.63	118.90
23	D	954	G	C8-N9-C4	7.86	109.55	106.40
23	D	908	C	N1-C2-O2	7.84	123.60	118.90
23	D	150	C	N3-C2-O2	-7.69	116.52	121.90
23	D	448	U	N1-C2-O2	7.67	128.17	122.80
1	A	1328	C	N3-C2-O2	-7.64	116.55	121.90
23	D	889	C	N1-C2-O2	7.40	123.34	118.90
23	D	1937	A	C6-C5-N7	7.38	137.46	132.30
23	D	2498	C	C2-N1-C1'	7.29	126.81	118.80
23	D	453	C	N3-C2-O2	-7.26	116.82	121.90
23	D	1920	C	C6-N1-C2	-7.25	117.40	120.30
23	D	2680	C	C6-N1-C2	7.21	123.18	120.30
23	D	1937	A	N9-C4-C5	7.11	108.65	105.80
23	D	138	G	N3-C4-C5	-7.08	125.06	128.60
23	D	150	C	O4'-C1'-N1	7.07	113.86	108.20
23	D	1498	C	N3-C2-O2	-7.06	116.96	121.90
2	F	100	GLY	N-CA-C	-7.05	95.46	113.10
23	D	409	C	C2-N1-C1'	6.98	126.48	118.80
1	A	808	C	C6-N1-C2	6.98	123.09	120.30
23	D	1604	C	C2-N1-C1'	6.92	126.42	118.80
23	D	1784	A	O4'-C1'-N9	6.89	113.71	108.20
23	D	1937	A	N3-C4-N9	-6.88	121.90	127.40
23	D	775	G	N3-C4-C5	-6.86	125.17	128.60
23	D	2682	U	N1-C2-O2	6.85	127.59	122.80
23	D	741	G	C8-N9-C4	-6.79	103.69	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	1493	C	O5'-P-OP2	-6.78	99.59	105.70
23	D	296	C	O4'-C1'-N1	6.75	113.60	108.20
23	D	2258	C	N1-C2-O2	6.75	122.95	118.90
23	D	1605	C	C6-N1-C2	-6.73	117.61	120.30
23	D	50	U	C5-C6-N1	6.72	126.06	122.70
23	D	208	C	C6-N1-C2	6.71	122.98	120.30
37	I	71	GLY	N-CA-C	-6.70	96.36	113.10
1	A	1320	C	C5-C6-N1	6.69	124.34	121.00
23	D	2258	C	C6-N1-C1'	-6.68	112.78	120.80
1	A	1320	C	C6-N1-C2	-6.68	117.63	120.30
23	D	749	C	C6-N1-C2	6.68	122.97	120.30
23	D	448	U	N3-C2-O2	-6.67	117.53	122.20
23	D	2682	U	N3-C2-O2	-6.67	117.53	122.20
1	A	48	C	N1-C2-O2	6.64	122.88	118.90
23	D	576	U	N3-C2-O2	-6.62	117.57	122.20
1	A	1113	C	N1-C2-O2	6.61	122.87	118.90
23	D	2075	U	N3-C2-O2	-6.60	117.58	122.20
23	D	889	C	C2-N1-C1'	6.60	126.06	118.80
1	A	308	C	N1-C2-O2	6.59	122.86	118.90
23	D	773	U	N3-C2-O2	-6.59	117.59	122.20
1	A	390	C	C6-N1-C2	6.59	122.94	120.30
23	D	1352	U	C5-C6-N1	-6.58	119.41	122.70
23	D	2605	U	N1-C2-N3	6.57	118.84	114.90
23	D	487	C	C2-N1-C1'	6.55	126.01	118.80
1	A	1320	C	C2-N1-C1'	6.55	126.00	118.80
23	D	1559	G	C2-N3-C4	6.54	115.17	111.90
23	D	1914	C	C2-N1-C1'	6.54	125.99	118.80
23	D	1681	G	N3-C4-C5	6.53	131.87	128.60
23	D	453	C	C6-N1-C1'	-6.53	112.96	120.80
23	D	2591	C	N3-C2-O2	-6.48	117.37	121.90
56	5	75	C	N1-C2-N3	-6.47	114.67	119.20
23	D	1914	C	N1-C2-O2	6.47	122.78	118.90
23	D	1955	U	C5-C6-N1	6.46	125.93	122.70
23	D	1131	G	O4'-C1'-N9	6.44	113.35	108.20
23	D	1493	C	C2-N1-C1'	6.41	125.86	118.80
23	D	573	G	C8-N9-C4	-6.40	103.84	106.40
23	D	2075	U	C2-N3-C4	6.40	130.84	127.00
1	A	308	C	N3-C2-O2	-6.38	117.43	121.90
23	D	908	C	C6-N1-C1'	-6.37	113.16	120.80
23	D	1990	C	N3-C4-C5	6.37	124.45	121.90
23	D	678	C	C6-N1-C2	6.35	122.84	120.30
23	D	1298	C	N3-C2-O2	-6.35	117.45	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	2432	A	O4'-C1'-N9	6.35	113.28	108.20
1	A	713	G	O4'-C1'-N9	6.33	113.26	108.20
56	5	75	C	N1-C2-O2	6.32	122.69	118.90
23	D	1937	A	C5-C6-N6	6.31	128.75	123.70
23	D	991	C	C6-N1-C2	6.28	122.81	120.30
23	D	2772	C	N1-C2-O2	6.25	122.65	118.90
1	A	308	C	C2-N1-C1'	6.25	125.67	118.80
23	D	2589	A	C6-N1-C2	-6.25	114.85	118.60
1	A	868	C	N3-C2-O2	-6.24	117.53	121.90
23	D	582	G	N9-C4-C5	-6.24	102.91	105.40
23	D	2308	G	N3-C4-C5	-6.23	125.48	128.60
23	D	1616	A	C8-N9-C4	6.22	108.29	105.80
23	D	2680	C	N3-C4-C5	6.22	124.39	121.90
23	D	1681	G	N3-C4-N9	-6.19	122.29	126.00
26	a	47	GLY	N-CA-C	-6.19	97.62	113.10
23	D	2772	C	N3-C2-O2	-6.19	117.57	121.90
23	D	787	U	O4'-C1'-N1	6.18	113.14	108.20
23	D	2433	A	C8-N9-C4	-6.18	103.33	105.80
23	D	1888	G	C4-N9-C1'	6.17	134.52	126.50
23	D	1626	G	O4'-C1'-N9	-6.16	103.27	108.20
23	D	319	C	C6-N1-C2	-6.16	117.84	120.30
23	D	1955	U	C6-N1-C1'	-6.15	112.60	121.20
23	D	587	C	C6-N1-C2	6.14	122.76	120.30
23	D	1947	C	N3-C2-O2	-6.14	117.60	121.90
23	D	137	C	N1-C2-O2	6.14	122.58	118.90
23	D	2834	G	C8-N9-C4	-6.13	103.95	106.40
23	D	2586	C	C6-N1-C1'	-6.12	113.45	120.80
23	D	1571	A	C2-N3-C4	6.12	113.66	110.60
23	D	1604	C	C6-N1-C2	-6.10	117.86	120.30
23	D	659	C	C6-N1-C2	6.10	122.74	120.30
23	D	1559	G	N3-C4-C5	-6.09	125.55	128.60
23	D	2075	U	C6-N1-C1'	-6.08	112.68	121.20
23	D	409	C	N1-C2-O2	6.07	122.54	118.90
23	D	2196	C	N3-C2-O2	-6.05	117.66	121.90
23	D	2607	G	C8-N9-C1'	-6.05	119.13	127.00
23	D	1778	U	N1-C2-N3	6.05	118.53	114.90
23	D	739	G	O4'-C1'-N9	6.03	113.02	108.20
23	D	1206	G	C6-C5-N7	-6.01	126.79	130.40
23	D	2605	U	O4'-C1'-N1	6.00	113.00	108.20
23	D	409	C	C6-N1-C1'	-5.99	113.61	120.80
23	D	1947	C	C2-N1-C1'	5.99	125.39	118.80
23	D	850	C	C6-N1-C2	5.99	122.69	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	838	C	C6-N1-C2	5.97	122.69	120.30
23	D	294	A	O4'-C1'-N9	5.95	112.96	108.20
23	D	1815	A	O4'-C1'-N9	5.95	112.96	108.20
23	D	1221	C	N1-C2-O2	5.94	122.47	118.90
1	A	1113	C	C6-N1-C1'	-5.93	113.69	120.80
23	D	1199	U	N1-C2-O2	5.93	126.95	122.80
23	D	2289	G	C8-N9-C4	5.92	108.77	106.40
23	D	773	U	N1-C2-O2	5.92	126.94	122.80
23	D	992	C	C6-N1-C2	5.90	122.66	120.30
23	D	2591	C	C6-N1-C2	-5.89	117.94	120.30
23	D	1785	A	N7-C8-N9	5.89	116.75	113.80
1	A	48	C	N3-C2-O2	-5.89	117.78	121.90
23	D	2447	G	C8-N9-C4	-5.89	104.05	106.40
23	D	2605	U	N3-C2-O2	-5.88	118.08	122.20
23	D	206	U	C2-N1-C1'	-5.88	110.64	117.70
23	D	889	C	N3-C2-O2	-5.88	117.79	121.90
23	D	1771	C	C2-N3-C4	-5.87	116.97	119.90
23	D	1974	C	C5-C6-N1	-5.87	118.07	121.00
23	D	2499	C	N3-C2-O2	-5.86	117.80	121.90
23	D	1656	C	C5-C6-N1	-5.86	118.07	121.00
23	D	582	G	C4-C5-N7	5.83	113.13	110.80
23	D	2433	A	O4'-C1'-N9	5.82	112.86	108.20
23	D	1807	G	N3-C4-N9	-5.82	122.51	126.00
56	5	75	C	N3-C4-C5	-5.82	119.57	121.90
23	D	1816	G	C8-N9-C4	5.81	108.72	106.40
23	D	1836	C	C5-C6-N1	-5.79	118.10	121.00
55	4	3	C	C2-N1-C1'	5.79	125.17	118.80
23	D	736	C	C6-N1-C2	5.78	122.61	120.30
23	D	2067	G	C8-N9-C4	5.78	108.71	106.40
23	D	573	G	N7-C8-N9	5.76	115.98	113.10
23	D	2787	C	C6-N1-C2	-5.76	118.00	120.30
23	D	576	U	C2-N1-C1'	5.75	124.60	117.70
23	D	1774	C	N3-C4-C5	5.75	124.20	121.90
23	D	2196	C	N1-C2-O2	5.75	122.35	118.90
23	D	2586	C	N1-C2-O2	5.75	122.35	118.90
23	D	1320	C	C5-C6-N1	-5.75	118.13	121.00
23	D	1980	G	N3-C4-N9	5.74	129.44	126.00
23	D	2308	G	N3-C4-N9	5.73	129.44	126.00
23	D	577	G	O4'-C1'-N9	5.73	112.78	108.20
23	D	1559	G	N3-C4-N9	5.72	129.43	126.00
23	D	1937	A	C8-N9-C1'	5.71	137.99	127.70
23	D	954	G	N7-C8-N9	-5.71	110.24	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1173	G	C5-C6-O6	-5.71	125.17	128.60
23	D	1667	G	C4-N9-C1'	5.71	133.92	126.50
23	D	279	C	N3-C4-N4	-5.70	114.01	118.00
23	D	1634	A	C8-N9-C4	5.70	108.08	105.80
1	A	651	C	C2-N1-C1'	5.70	125.07	118.80
23	D	1903	G	N3-C4-N9	5.70	129.42	126.00
23	D	206	U	N1-C2-O2	-5.69	118.82	122.80
1	A	295	C	C6-N1-C2	5.68	122.57	120.30
23	D	741	G	O4'-C1'-N9	5.68	112.74	108.20
23	D	540	G	N3-C4-C5	5.67	131.44	128.60
23	D	1605	C	N3-C2-O2	-5.67	117.93	121.90
1	A	821	G	C8-N9-C4	5.67	108.67	106.40
1	A	689	C	C5-C6-N1	5.66	123.83	121.00
23	D	2787	C	C2-N1-C1'	5.66	125.02	118.80
23	D	45	G	C4-N9-C1'	-5.65	119.16	126.50
23	D	2714	G	C8-N9-C4	5.64	108.66	106.40
23	D	1667	G	C8-N9-C1'	-5.63	119.67	127.00
23	D	697	C	C6-N1-C2	5.62	122.55	120.30
23	D	2787	C	N3-C2-O2	-5.61	117.97	121.90
23	D	908	C	N3-C2-O2	-5.61	117.98	121.90
23	D	1667	G	N3-C4-N9	5.59	129.35	126.00
23	D	2582	G	N3-C4-C5	-5.59	125.81	128.60
23	D	1947	C	N1-C2-O2	5.58	122.25	118.90
23	D	1937	A	C4-C5-C6	-5.58	114.21	117.00
23	D	2767	C	N1-C2-O2	5.58	122.25	118.90
23	D	729	G	C8-N9-C4	-5.58	104.17	106.40
23	D	1656	C	C6-N1-C2	5.58	122.53	120.30
23	D	1778	U	O4'-C1'-N1	5.58	112.66	108.20
23	D	730	C	C6-N1-C2	-5.57	118.07	120.30
31	f	67	LEU	CA-CB-CG	5.57	128.11	115.30
1	A	670	G	N3-C4-N9	5.54	129.32	126.00
23	D	1978	A	N7-C8-N9	-5.54	111.03	113.80
23	D	1616	A	N9-C4-C5	-5.54	103.58	105.80
23	D	2517	C	N3-C2-O2	-5.54	118.02	121.90
23	D	2782	G	N1-C6-O6	5.54	123.22	119.90
23	D	974	G	N1-C6-O6	5.54	123.22	119.90
23	D	2607	G	C4-N9-C1'	5.53	133.69	126.50
23	D	2729	G	C8-N9-C4	5.52	108.61	106.40
23	D	2572	A	P-O3'-C3'	5.52	126.33	119.70
23	D	2682	U	C2-N1-C1'	5.52	124.32	117.70
23	D	2580	U	N1-C2-O2	5.51	126.66	122.80
1	A	295	C	C5-C6-N1	-5.50	118.25	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	1351	C	C5-C6-N1	-5.49	118.25	121.00
23	D	1627	G	N3-C4-N9	-5.49	122.70	126.00
23	D	487	C	C6-N1-C1'	-5.49	114.21	120.80
23	D	741	G	N3-C4-C5	-5.49	125.86	128.60
1	A	1469	G	C8-N9-C4	5.48	108.59	106.40
23	D	576	U	C6-N1-C1'	-5.48	113.53	121.20
23	D	2027	G	O4'-C1'-N9	5.48	112.58	108.20
23	D	2785	C	N3-C4-C5	5.48	124.09	121.90
23	D	738	G	C4-N9-C1'	5.47	133.62	126.50
1	A	651	C	N1-C2-O2	5.47	122.18	118.90
23	D	238	C	N3-C2-O2	-5.47	118.07	121.90
23	D	297	C	C2-N1-C1'	5.46	124.81	118.80
23	D	1809	A	N1-C6-N6	-5.46	115.32	118.60
25	Z	173	ALA	C-N-CD	-5.46	108.58	120.60
23	D	418	G	C8-N9-C4	5.46	108.58	106.40
23	D	1627	G	N3-C4-C5	5.46	131.33	128.60
23	D	532	A	O4'-C1'-N9	5.45	112.56	108.20
23	D	448	U	C2-N1-C1'	5.45	124.24	117.70
23	D	2258	C	C5-C6-N1	5.45	123.73	121.00
23	D	1937	A	C4-N9-C1'	-5.45	116.50	126.30
33	h	43	GLY	N-CA-C	-5.43	99.52	113.10
23	D	2576	G	C4-N9-C1'	5.43	133.56	126.50
23	D	397	G	C8-N9-C4	5.42	108.57	106.40
1	A	1415	G	N3-C4-N9	-5.41	122.75	126.00
23	D	2158	A	P-O3'-C3'	5.40	126.18	119.70
1	A	1113	C	N3-C2-O2	-5.39	118.13	121.90
23	D	2586	C	N3-C2-O2	-5.39	118.13	121.90
23	D	738	G	N3-C4-N9	5.38	129.23	126.00
23	D	741	G	N7-C8-N9	5.38	115.79	113.10
23	D	777	A	N1-C2-N3	5.38	131.99	129.30
23	D	585	G	C8-N9-C4	-5.36	104.26	106.40
23	D	487	C	N1-C2-O2	5.36	122.11	118.90
23	D	787	U	C2-N1-C1'	-5.36	111.27	117.70
23	D	583	G	C4-N9-C1'	-5.36	119.54	126.50
23	D	238	C	O4'-C1'-N1	5.34	112.48	108.20
23	D	2308	G	C2-N3-C4	5.34	114.57	111.90
1	A	880	C	O4'-C1'-N1	5.33	112.46	108.20
23	D	551	G	N3-C4-N9	5.32	129.19	126.00
23	D	2662	A	C8-N9-C4	5.32	107.93	105.80
23	D	1888	G	C8-N9-C1'	-5.32	120.08	127.00
23	D	348	G	C4-N9-C1'	5.32	133.41	126.50
23	D	775	G	C8-N9-C4	-5.31	104.28	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	846	C	C6-N1-C2	5.31	122.42	120.30
23	D	814	C	C6-N1-C2	5.31	122.42	120.30
1	A	736	C	N1-C2-O2	5.30	122.08	118.90
23	D	137	C	N3-C2-O2	-5.30	118.19	121.90
23	D	584	C	N1-C2-O2	5.30	122.08	118.90
1	A	23	C	N3-C2-O2	-5.29	118.19	121.90
23	D	2633	G	C8-N9-C4	5.29	108.51	106.40
23	D	2607	G	O4'-C1'-N9	-5.28	103.97	108.20
23	D	319	C	N3-C2-O2	-5.28	118.20	121.90
23	D	779	U	N3-C2-O2	-5.28	118.50	122.20
23	D	1199	U	C2-N1-C1'	5.28	124.04	117.70
23	D	1565	C	C6-N1-C2	5.26	122.41	120.30
23	D	551	G	C8-N9-C1'	-5.26	120.16	127.00
23	D	120	U	C2-N1-C1'	5.26	124.01	117.70
23	D	1861	G	C8-N9-C4	5.25	108.50	106.40
23	D	2440	C	C6-N1-C2	5.25	122.40	120.30
23	D	1668	A	C8-N9-C4	-5.25	103.70	105.80
23	D	475	U	C2-N1-C1'	5.25	124.00	117.70
23	D	2583	G	C6-C5-N7	-5.25	127.25	130.40
31	f	82	LEU	CA-CB-CG	-5.24	103.24	115.30
23	D	2500	U	P-O3'-C3'	5.23	125.97	119.70
13	Q	56	LEU	CA-CB-CG	5.23	127.32	115.30
23	D	1836	C	C2-N1-C1'	-5.22	113.05	118.80
27	b	43	GLY	N-CA-C	-5.22	100.05	113.10
1	A	912	C	N1-C2-O2	5.21	122.03	118.90
34	i	77	LYS	C-N-CA	-5.21	100.11	122.00
1	A	882	C	N3-C2-O2	-5.21	118.25	121.90
23	D	2010	G	C8-N9-C4	5.21	108.48	106.40
1	A	123	C	C6-N1-C2	5.20	122.38	120.30
23	D	1497	U	N1-C2-O2	5.20	126.44	122.80
23	D	331	A	C8-N9-C4	5.20	107.88	105.80
23	D	2444	G	N9-C4-C5	-5.20	103.32	105.40
22	C	373	ALA	C-N-CD	5.19	139.31	128.40
1	A	1071	C	N1-C2-O2	5.19	122.02	118.90
23	D	1234	U	N3-C2-O2	-5.19	118.57	122.20
23	D	574	C	C6-N1-C2	5.19	122.38	120.30
23	D	58	G	N3-C4-N9	5.18	129.11	126.00
18	V	58	LEU	CA-CB-CG	-5.17	103.40	115.30
23	D	16	G	C8-N9-C4	5.17	108.47	106.40
23	D	2723	C	C5-C6-N1	-5.17	118.41	121.00
23	D	2767	C	C2-N1-C1'	5.17	124.49	118.80
23	D	2576	G	C6-C5-N7	-5.17	127.30	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	2428	G	C4-N9-C1'	-5.16	119.79	126.50
22	C	485	ARG	C-N-CD	5.16	139.24	128.40
23	D	58	G	C6-C5-N7	-5.16	127.31	130.40
29	d	82	LEU	CB-CG-CD2	-5.16	102.23	111.00
1	A	1419	G	N9-C4-C5	5.16	107.46	105.40
23	D	2580	U	N3-C2-O2	-5.15	118.59	122.20
23	D	787	U	C5-C6-N1	-5.15	120.12	122.70
23	D	1156	A	C5-C6-N6	-5.15	119.58	123.70
1	A	314	C	N3-C2-O2	-5.15	118.30	121.90
23	D	2498	C	C6-N1-C1'	-5.14	114.63	120.80
29	d	106	LEU	CA-CB-CG	5.14	127.12	115.30
23	D	1476	C	C6-N1-C2	-5.13	118.25	120.30
23	D	991	C	C5-C6-N1	-5.13	118.43	121.00
24	E	82	G	C8-N9-C4	5.13	108.45	106.40
23	D	502	A	N1-C2-N3	5.13	131.86	129.30
1	A	1449	C	C6-N1-C1'	-5.13	114.65	120.80
23	D	1376	C	N1-C2-O2	5.13	121.98	118.90
25	Z	181	PRO	C-N-CD	5.12	139.16	128.40
23	D	1914	C	N3-C2-O2	-5.12	118.31	121.90
23	D	45	G	N3-C4-N9	-5.12	122.93	126.00
23	D	2591	C	O4'-C1'-N1	5.12	112.29	108.20
22	C	187	PRO	C-N-CD	5.11	139.14	128.40
23	D	2767	C	N3-C2-O2	-5.11	118.32	121.90
1	A	357	G	C8-N9-C4	5.11	108.44	106.40
1	A	1140	C	N1-C2-O2	5.11	121.96	118.90
23	D	1638	C	C5-C6-N1	-5.11	118.45	121.00
23	D	738	G	N3-C4-C5	-5.10	126.05	128.60
22	C	186	PRO	C-N-CD	5.10	139.11	128.40
1	A	1449	C	C2-N1-C1'	5.10	124.41	118.80
23	D	411	G	N3-C4-N9	5.10	129.06	126.00
23	D	138	G	N3-C4-N9	5.09	129.06	126.00
1	A	1415	G	C8-N9-C1'	5.09	133.62	127.00
23	D	186	G	N3-C4-N9	5.09	129.05	126.00
23	D	1778	U	C6-N1-C1'	5.09	128.32	121.20
23	D	600	G	C8-N9-C4	5.08	108.43	106.40
4	H	19	LEU	CA-CB-CG	-5.08	103.61	115.30
23	D	1645	G	O4'-C1'-N9	5.08	112.27	108.20
23	D	2433	A	N1-C2-N3	5.08	131.84	129.30
22	C	83	THR	C-N-CD	5.08	139.07	128.40
1	A	148	G	C8-N9-C4	5.08	108.43	106.40
22	C	144	ARG	C-N-CD	5.08	139.06	128.40
22	C	158	LEU	C-N-CD	5.08	139.06	128.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	1237	A	P-O3'-C3'	5.08	125.79	119.70
1	A	689	C	C2-N1-C1'	5.07	124.38	118.80
23	D	1493	C	OP1-P-O3'	5.07	116.36	105.20
1	A	737	A	C8-N9-C4	5.07	107.83	105.80
1	A	1512	U	N3-C2-O2	-5.07	118.65	122.20
22	C	333	GLU	C-N-CD	5.07	139.05	128.40
22	C	441	LEU	C-N-CD	5.07	139.05	128.40
22	C	212	ILE	C-N-CD	5.07	139.04	128.40
1	A	578	C	N1-C2-O2	5.07	121.94	118.90
22	C	223	ARG	C-N-CD	5.06	139.03	128.40
22	C	592	VAL	C-N-CD	5.06	139.03	128.40
23	D	1771	C	N3-C2-O2	-5.06	118.36	121.90
54	3	24	GLY	C-N-CD	5.06	139.03	128.40
22	C	454	ALA	C-N-CD	5.06	139.03	128.40
23	D	1376	C	N3-C2-O2	-5.06	118.36	121.90
22	C	398	ASP	C-N-CD	5.06	139.02	128.40
23	D	2782	G	C5-C6-O6	-5.06	125.57	128.60
22	C	132	ILE	C-N-CD	5.06	139.02	128.40
22	C	416	THR	C-N-CD	5.06	139.02	128.40
22	C	298	LYS	C-N-CD	5.05	139.02	128.40
22	C	528	ILE	C-N-CD	5.05	139.01	128.40
22	C	295	ARG	C-N-CD	5.05	139.01	128.40
22	C	407	GLU	C-N-CD	5.05	139.01	128.40
54	3	12	LEU	C-N-CD	5.05	139.01	128.40
22	C	185	ILE	C-N-CD	5.05	139.00	128.40
22	C	246	THR	C-N-CD	5.05	139.00	128.40
22	C	289	SER	C-N-CD	5.05	139.00	128.40
23	D	1557	C	C5-C6-N1	-5.05	118.47	121.00
23	D	1955	U	N1-C2-O2	5.05	126.33	122.80
22	C	535	VAL	C-N-CD	5.05	139.00	128.40
23	D	715	G	N1-C6-O6	-5.05	116.87	119.90
23	D	1251	C	N3-C4-N4	-5.05	114.47	118.00
30	e	125	VAL	C-N-CD	5.05	139.00	128.40
23	D	1758	G	C6-C5-N7	-5.04	127.37	130.40
22	C	392	ASN	C-N-CD	5.04	138.99	128.40
23	D	409	C	N3-C2-O2	-5.04	118.37	121.90
47	v	28	LYS	C-N-CD	5.04	138.99	128.40
23	D	1980	G	N9-C4-C5	-5.04	103.38	105.40
23	D	1214	A	C8-N9-C4	5.03	107.81	105.80
8	L	63	LEU	CA-CB-CG	5.03	126.87	115.30
23	D	2661	G	C4-N9-C1'	5.03	133.04	126.50
23	D	215	G	P-O3'-C3'	5.03	125.74	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	D	908	C	C5-C6-N1	5.03	123.51	121.00
23	D	1351	C	C2-N3-C4	-5.03	117.39	119.90
23	D	2681	C	C6-N1-C2	-5.03	118.29	120.30
1	A	971	G	C8-N9-C4	5.02	108.41	106.40
1	A	1415	G	C4-N9-C1'	-5.02	119.97	126.50
23	D	889	C	C6-N1-C1'	-5.02	114.77	120.80
23	D	336	C	C5-C6-N1	-5.02	118.49	121.00
23	D	687	C	N3-C2-O2	-5.02	118.39	121.90
23	D	2487	G	N3-C4-N9	5.01	129.01	126.00
1	A	320	C	N3-C2-O2	-5.01	118.39	121.90
23	D	1221	C	C2-N1-C1'	5.00	124.31	118.80
24	E	106	G	C8-N9-C4	5.00	108.40	106.40

There are no chirality outliers.

All (26) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
54	3	55	VAL	Peptide
54	3	72	PRO	Peptide
2	F	99	GLY	Peptide
8	L	28	ALA	Peptide
26	a	218	ARG	Peptide
26	a	261	LYS	Peptide
26	a	46	GLN	Peptide
26	a	82	ILE	Peptide
26	a	96	HIS	Peptide
28	c	168	ARG	Peptide
28	c	38	ARG	Peptide
28	c	50	SER	Peptide
30	e	110	SER	Peptide
31	f	5	VAL	Peptide
32	g	61	VAL	Peptide
37	l	21	GLU	Peptide
37	l	71	GLY	Peptide
38	m	28	ARG	Peptide
39	n	14	VAL	Peptide
40	o	15	ARG	Peptide
41	p	93	GLU	Peptide
42	q	70	SER	Peptide
46	u	15	TYR	Peptide
47	v	58	ARG	Peptide
49	x	26	ASN	Peptide

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Mol	Chain	Res	Type	Group
51	z	62	LEU	Peptide

## 5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32554	0	16432	3234	0
2	F	1900	0	1951	189	0
3	G	1612	0	1677	179	0
4	H	1703	0	1763	200	0
5	I	1146	0	1207	149	0
6	J	843	0	857	106	0
7	K	1257	0	1296	115	0
8	L	1116	0	1177	144	0
9	M	1010	0	1037	108	0
10	N	794	0	840	87	0
11	O	885	0	904	98	0
12	P	970	0	1057	130	0
13	Q	914	0	969	194	0
14	R	492	0	529	88	0
15	S	734	0	771	106	0
16	T	700	0	720	104	0
17	U	857	0	930	116	0
18	V	597	0	668	71	0
19	W	647	0	673	104	0
20	X	763	0	861	91	0
21	Y	208	0	221	33	0
22	C	4461	0	4547	2055	0
23	D	62218	0	31357	6715	0
24	E	2641	0	1337	207	0
25	Z	1742	0	1794	264	0
26	a	2124	0	2207	0	0
27	b	1578	0	1647	0	0
28	c	1625	0	1666	0	0
29	d	1482	0	1546	0	0
30	e	1328	0	1407	0	0
31	f	1113	0	1183	0	0
32	g	932	0	994	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	h	1106	0	1183	0	0
34	i	1080	0	1127	0	0
35	j	960	0	1021	0	0
36	k	877	0	938	0	0
37	l	976	0	1033	0	0
38	m	964	0	1022	0	0
39	n	779	0	852	0	0
40	o	876	0	941	0	0
41	p	742	0	800	0	0
42	q	844	0	930	0	0
43	r	1435	0	1463	0	0
44	s	625	0	647	0	0
45	t	567	0	621	0	0
46	u	469	0	518	0	0
47	v	581	0	576	0	0
48	w	445	0	459	0	0
49	x	426	0	452	0	0
50	y	430	0	480	0	0
51	z	515	0	587	0	0
52	1	307	0	335	52	0
53	2	641	0	309	31	0
54	3	993	0	1030	295	0
55	4	1640	0	837	128	0
56	5	1623	0	821	116	0
57	C	32	0	13	17	0
All	All	152879	0	105220	14713	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 74.

All (14713) 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)
22:C:116:GLU:HB3	22:C:120:LYS:CE	1.19	1.66
22:C:41:MET:HB3	22:C:45:PHE:CD1	1.31	1.62
23:D:1064:C:C2	54:3:91:PRO:HD3	1.30	1.62
22:C:493:ASN:HA	22:C:505:THR:CG2	1.26	1.62
22:C:25:LEU:CD2	22:C:174:VAL:HG21	1.19	1.61
22:C:239:VAL:CG2	22:C:267:ALA:HB2	1.19	1.60
22:C:492:VAL:HA	22:C:541:ILE:CG2	1.21	1.59
22:C:497:HIS:CG	22:C:535:VAL:HG11	1.16	1.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:496:VAL:HG22	22:C:537:ILE:CG2	1.20	1.59
22:C:489:LEU:HB3	22:C:507:ILE:CG2	1.19	1.57
22:C:25:LEU:HD23	22:C:174:VAL:CG2	1.16	1.56
22:C:414:ILE:HG12	22:C:477:MET:CA	1.16	1.56
23:D:2106:G:C6	23:D:2184:G:C2	1.89	1.56
22:C:97:LEU:HG	22:C:123:MET:SD	1.43	1.56
22:C:41:MET:HB3	22:C:45:PHE:CG	1.04	1.55
22:C:492:VAL:CG2	22:C:508:ALA:HB2	1.16	1.55
22:C:492:VAL:CG2	22:C:508:ALA:CB	1.85	1.54
22:C:496:VAL:CG2	22:C:537:ILE:CG2	1.80	1.54
22:C:497:HIS:HB3	22:C:535:VAL:CG1	1.36	1.54
22:C:497:HIS:CB	22:C:535:VAL:CG1	1.85	1.54
22:C:63:ALA:CB	22:C:245:PHE:HB3	1.34	1.53
19:W:11:VAL:HG13	19:W:38:SER:CB	1.38	1.53
54:3:34:ILE:HG22	54:3:63:ARG:CB	1.32	1.53
22:C:497:HIS:CG	22:C:535:VAL:CG1	1.87	1.53
22:C:492:VAL:CA	22:C:541:ILE:HG23	1.34	1.52
23:D:2106:G:C5	23:D:2184:G:N2	1.75	1.51
22:C:215:LEU:HD23	22:C:282:LEU:CD1	1.39	1.50
22:C:211:VAL:CG2	22:C:268:ILE:HD12	1.34	1.50
22:C:41:MET:CB	22:C:45:PHE:CG	1.92	1.50
13:Q:65:LYS:HD3	13:Q:73:GLU:CB	1.38	1.50
22:C:18:VAL:CG2	22:C:86:HIS:CB	1.88	1.49
22:C:18:VAL:HG22	22:C:86:HIS:CB	1.02	1.49
22:C:414:ILE:CG1	22:C:477:MET:HA	1.41	1.48
23:D:1064:C:N3	54:3:91:PRO:CD	1.73	1.47
22:C:434:ARG:NH1	22:C:453:GLU:HG2	1.27	1.47
22:C:414:ILE:CD1	22:C:477:MET:HB2	1.43	1.47
22:C:418:GLU:HA	22:C:446:LYS:CG	1.41	1.46
22:C:116:GLU:CB	22:C:120:LYS:CE	1.94	1.46
22:C:15:ILE:CD1	22:C:103:VAL:HG11	1.44	1.46
54:3:77:LEU:HG	54:3:111:LYS:CE	1.44	1.46
54:3:34:ILE:CG2	54:3:63:ARG:HB3	1.45	1.45
22:C:496:VAL:CA	22:C:537:ILE:HG23	1.45	1.45
25:Z:42:GLU:CA	25:Z:175:VAL:HG22	1.47	1.44
22:C:496:VAL:CB	22:C:537:ILE:HG23	1.41	1.44
22:C:116:GLU:CB	22:C:120:LYS:HE3	1.49	1.43
22:C:102:GLY:N	22:C:129:HIS:HB3	1.29	1.43
22:C:497:HIS:CB	22:C:535:VAL:HG11	1.45	1.43
22:C:205:TYR:CE1	22:C:323:LEU:HD21	1.52	1.42
22:C:383:LYS:NZ	22:C:401:ARG:HB3	1.35	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:42:GLU:HA	25:Z:175:VAL:CG2	1.46	1.42
22:C:435:LEU:HA	22:C:452:TYR:CE1	1.52	1.42
23:D:2807:G:C6	23:D:2892:A:N7	1.88	1.41
22:C:131:ILE:HG21	22:C:158:LEU:CD2	1.50	1.41
13:Q:65:LYS:CD	13:Q:73:GLU:HB2	1.45	1.41
22:C:198:ALA:H	22:C:280:ILE:CG1	1.09	1.41
22:C:63:ALA:HB2	22:C:245:PHE:CD1	1.55	1.39
22:C:116:GLU:CB	22:C:120:LYS:NZ	1.86	1.39
23:D:2790:A:H1'	23:D:2893:G:C5	1.55	1.39
22:C:380:VAL:HG23	22:C:391:HIS:CD2	1.58	1.39
22:C:434:ARG:NH1	22:C:453:GLU:CG	1.84	1.38
22:C:435:LEU:CA	22:C:452:TYR:CE1	2.04	1.38
22:C:14:ILE:CA	22:C:104:LEU:O	1.71	1.38
22:C:41:MET:HG2	22:C:45:PHE:CE2	1.58	1.38
23:D:1064:C:N3	54:3:91:PRO:HD3	1.33	1.37
22:C:169:LYS:HE2	57:C:701:GCP:N2	1.05	1.37
22:C:489:LEU:C	22:C:507:ILE:HG22	1.41	1.37
23:D:1064:C:N4	54:3:91:PRO:HG2	1.39	1.37
22:C:95:ARG:HB3	22:C:294:PHE:CE1	1.58	1.36
25:Z:161:ILE:HB	25:Z:192:PHE:CD1	1.60	1.35
22:C:493:ASN:CA	22:C:505:THR:HG22	1.54	1.35
22:C:496:VAL:CG2	22:C:537:ILE:HG23	1.47	1.35
22:C:6:LEU:HD11	22:C:192:PRO:CB	1.53	1.34
22:C:15:ILE:HD12	22:C:103:VAL:CG1	1.58	1.34
23:D:1064:C:C4	54:3:91:PRO:CG	2.11	1.33
22:C:20:HIS:CE1	22:C:108:ASP:CG	2.00	1.33
22:C:203:SER:OG	22:C:325:LEU:CD2	1.77	1.33
54:3:77:LEU:CG	54:3:111:LYS:HE3	1.55	1.33
22:C:102:GLY:H	22:C:129:HIS:CB	1.38	1.32
25:Z:64:LEU:CD1	25:Z:161:ILE:HG23	1.60	1.32
22:C:97:LEU:CG	22:C:123:MET:SD	2.18	1.32
54:3:77:LEU:HG	54:3:111:LYS:CD	1.59	1.31
1:A:1224:G:O2'	13:Q:102:ARG:HG3	1.16	1.31
22:C:300:VAL:HG12	22:C:464:HIS:CE1	1.65	1.31
22:C:489:LEU:CB	22:C:507:ILE:CG2	2.09	1.31
22:C:18:VAL:CG2	22:C:86:HIS:HB3	1.54	1.31
22:C:28:ARG:NH2	22:C:32:LEU:HD11	1.43	1.30
22:C:328:ALA:HB2	22:C:349:LEU:CD2	1.59	1.30
23:D:2807:G:N1	23:D:2892:A:N7	1.78	1.30
22:C:11:ASN:OD1	22:C:79:HIS:NE2	1.64	1.30
25:Z:161:ILE:HD13	25:Z:163:PHE:CE2	1.64	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:492:VAL:CA	22:C:541:ILE:CG2	1.96	1.30
22:C:335:GLU:OE2	22:C:344:PHE:CB	1.78	1.29
22:C:409:TYR:O	22:C:481:GLN:CA	1.80	1.29
25:Z:66:HIS:HD2	25:Z:159:GLY:CA	1.44	1.29
22:C:116:GLU:HB3	22:C:120:LYS:NZ	0.98	1.29
22:C:577:GLN:HA	23:D:1942:C:O2'	1.20	1.29
1:A:1224:G:C4'	13:Q:102:ARG:HG2	1.62	1.28
22:C:46:LEU:CD2	22:C:64:VAL:HG21	1.62	1.28
54:3:34:ILE:CG2	54:3:63:ARG:CB	2.01	1.28
22:C:415:PHE:CE1	22:C:447:ARG:HD3	1.68	1.28
22:C:236:GLU:OE1	22:C:267:ALA:C	1.70	1.28
22:C:532:LEU:HD13	22:C:555:ARG:N	1.47	1.28
22:C:20:HIS:ND1	22:C:108:ASP:OD2	1.63	1.28
54:3:78:ILE:HG12	54:3:111:LYS:CB	1.64	1.27
22:C:239:VAL:CG2	22:C:267:ALA:CB	2.10	1.27
25:Z:41:VAL:O	25:Z:175:VAL:HG23	1.16	1.27
25:Z:161:ILE:CD1	25:Z:163:PHE:CE2	2.18	1.26
22:C:409:TYR:O	22:C:482:ALA:N	1.68	1.26
22:C:169:LYS:CE	57:C:701:GCP:N2	1.97	1.26
1:A:1224:G:O2'	13:Q:102:ARG:CG	1.82	1.25
22:C:98:ALA:HB2	22:C:127:HIS:CE1	1.71	1.25
23:D:2790:A:C1'	23:D:2893:G:C6	2.09	1.25
22:C:205:TYR:OH	22:C:323:LEU:CG	1.83	1.25
22:C:65:ARG:HB3	22:C:76:TYR:OH	1.12	1.25
22:C:418:GLU:C	22:C:446:LYS:HD2	1.56	1.24
22:C:95:ARG:NH1	22:C:202:ASP:OD1	1.68	1.24
22:C:521:VAL:HG11	22:C:547:ALA:CB	1.68	1.24
22:C:69:ARG:CG	22:C:178:LEU:HD11	1.67	1.24
54:3:77:LEU:CG	54:3:111:LYS:CE	2.11	1.24
22:C:98:ALA:HB2	22:C:127:HIS:NE2	1.51	1.24
22:C:377:VAL:O	22:C:391:HIS:CE1	1.90	1.24
22:C:211:VAL:HB	22:C:268:ILE:CD1	1.66	1.24
22:C:98:ALA:HB2	22:C:127:HIS:CD2	1.71	1.23
54:3:77:LEU:CG	54:3:111:LYS:HD2	1.67	1.23
25:Z:66:HIS:CD2	25:Z:159:GLY:CA	2.20	1.23
23:D:2790:A:H1'	23:D:2893:G:C6	1.70	1.23
23:D:1064:C:N3	54:3:91:PRO:CG	1.98	1.22
22:C:63:ALA:CB	22:C:245:PHE:CB	2.17	1.22
22:C:377:VAL:O	22:C:391:HIS:ND1	1.69	1.22
22:C:495:LEU:HD23	22:C:538:GLN:CG	1.70	1.22
54:3:37:PHE:HB3	54:3:66:THR:CG2	1.68	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:67:THR:O	22:C:76:TYR:HB2	1.09	1.22
23:D:1064:C:C4	54:3:91:PRO:HG2	1.69	1.22
22:C:301:VAL:C	22:C:348:PHE:HA	1.60	1.21
22:C:138:ILE:HB	22:C:167:SER:OG	1.34	1.21
22:C:198:ALA:N	22:C:280:ILE:HG12	1.29	1.21
22:C:435:LEU:HA	22:C:452:TYR:CD1	1.76	1.21
22:C:489:LEU:CB	22:C:507:ILE:HG21	1.65	1.21
22:C:497:HIS:ND1	22:C:535:VAL:CG1	2.02	1.21
25:Z:161:ILE:CD1	25:Z:163:PHE:CD2	2.24	1.20
22:C:495:LEU:CD2	22:C:538:GLN:CG	2.18	1.20
22:C:11:ASN:OD1	22:C:100:VAL:HG13	1.36	1.20
22:C:14:ILE:HA	22:C:104:LEU:O	1.06	1.20
25:Z:66:HIS:CD2	25:Z:159:GLY:HA2	1.74	1.20
23:D:2630:G:OP2	23:D:2895:U:H5'	1.41	1.20
22:C:41:MET:HB3	22:C:45:PHE:CD2	1.75	1.19
1:A:1308:U:C5	13:Q:99:ARG:NE	2.09	1.19
54:3:34:ILE:HG22	54:3:63:ARG:CG	1.71	1.19
22:C:79:HIS:CE1	22:C:216:ARG:CZ	2.24	1.19
22:C:342:PHE:CD2	22:C:370:ILE:HG13	1.77	1.19
22:C:63:ALA:HB2	22:C:245:PHE:CG	1.77	1.18
54:3:78:ILE:HG23	54:3:108:ALA:CB	1.72	1.18
25:Z:155:GLU:HB3	25:Z:160:ARG:HB2	1.18	1.18
23:D:1101:U:N3	23:D:1102:C:O2	1.76	1.18
25:Z:161:ILE:HD11	25:Z:163:PHE:CD2	1.79	1.18
25:Z:155:GLU:HB2	25:Z:160:ARG:HD2	1.20	1.18
25:Z:41:VAL:O	25:Z:175:VAL:CG2	1.91	1.18
22:C:335:GLU:OE2	22:C:344:PHE:CG	1.95	1.17
54:3:77:LEU:CD2	54:3:111:LYS:CD	2.21	1.17
1:A:1236:A:H5'	1:A:1305:G:OP1	1.42	1.17
22:C:229:ARG:HG2	22:C:283:ALA:CB	1.73	1.17
22:C:18:VAL:CG2	22:C:86:HIS:HB2	1.63	1.17
22:C:493:ASN:CA	22:C:505:THR:CG2	2.18	1.17
22:C:493:ASN:N	22:C:541:ILE:HA	1.59	1.17
22:C:210:GLY:HA2	22:C:268:ILE:O	1.43	1.17
22:C:106:VAL:HG21	22:C:136:ASN:ND2	1.60	1.17
25:Z:64:LEU:CD1	25:Z:161:ILE:CG2	2.24	1.16
22:C:409:TYR:CD2	22:C:483:GLY:HA3	1.79	1.16
22:C:531:GLN:OE1	22:C:584:LEU:HD13	1.45	1.16
22:C:61:ALA:O	22:C:81:ILE:HG23	1.42	1.16
22:C:20:HIS:CE1	22:C:108:ASP:OD2	1.98	1.16
22:C:414:ILE:HG12	22:C:477:MET:CB	1.74	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:414:ILE:CD1	22:C:477:MET:CB	2.22	1.16
22:C:492:VAL:C	22:C:541:ILE:HG23	1.65	1.16
22:C:98:ALA:CB	22:C:127:HIS:CG	2.29	1.16
23:D:1096:A:N6	54:3:10:LEU:HA	1.59	1.16
22:C:34:HIS:CE1	22:C:247:PRO:HG3	1.79	1.16
22:C:300:VAL:CG1	22:C:464:HIS:CE1	2.28	1.16
22:C:98:ALA:HA	22:C:127:HIS:ND1	1.60	1.16
23:D:152:G:O6	23:D:175:G:C6	1.99	1.16
22:C:205:TYR:HE1	22:C:323:LEU:CD2	1.57	1.15
22:C:41:MET:CB	22:C:45:PHE:CD1	2.14	1.15
22:C:42:ARG:HE	22:C:53:ARG:NH1	1.44	1.15
22:C:95:ARG:HH22	22:C:202:ASP:CB	1.59	1.15
22:C:9:ILE:N	22:C:77:VAL:HB	1.60	1.15
25:Z:66:HIS:O	25:Z:158:ALA:HA	1.46	1.15
22:C:46:LEU:HD23	22:C:64:VAL:CG2	1.77	1.15
54:3:78:ILE:HG12	54:3:111:LYS:HB3	1.22	1.15
22:C:205:TYR:OH	22:C:323:LEU:HG	0.98	1.15
22:C:493:ASN:ND2	22:C:541:ILE:O	1.77	1.15
19:W:11:VAL:CG1	19:W:38:SER:CB	2.24	1.15
22:C:230:ILE:CG1	22:C:281:THR:O	1.76	1.15
22:C:495:LEU:HD23	22:C:538:GLN:HG2	1.23	1.15
22:C:28:ARG:CD	22:C:41:MET:SD	2.35	1.15
22:C:34:HIS:CE1	22:C:247:PRO:CG	2.28	1.15
22:C:495:LEU:HD22	22:C:538:GLN:HG3	1.21	1.15
22:C:28:ARG:HD3	22:C:41:MET:SD	1.85	1.15
22:C:169:LYS:CE	57:C:701:GCP:HN21	1.59	1.15
22:C:434:ARG:CZ	22:C:453:GLU:HG2	1.75	1.14
22:C:418:GLU:CA	22:C:446:LYS:HG3	1.77	1.14
23:D:1196:C:O4'	23:D:1226:G:N2	1.79	1.14
22:C:11:ASN:CB	22:C:100:VAL:CG1	2.24	1.14
22:C:532:LEU:CD1	22:C:555:ARG:N	2.09	1.14
22:C:492:VAL:HG23	22:C:508:ALA:CB	1.57	1.14
54:3:81:ALA:HB3	54:3:107:ILE:CD1	1.78	1.14
22:C:25:LEU:HD23	22:C:174:VAL:HG23	1.24	1.14
22:C:236:GLU:OE1	22:C:267:ALA:CA	1.96	1.14
22:C:335:GLU:OE2	22:C:344:PHE:HB3	1.36	1.14
23:D:1087:G:N2	23:D:1104:C:OP1	1.78	1.14
22:C:496:VAL:HA	22:C:537:ILE:CA	1.78	1.13
22:C:66:VAL:N	22:C:76:TYR:CE1	2.15	1.13
22:C:11:ASN:OD1	22:C:79:HIS:CD2	2.01	1.13
22:C:239:VAL:HG22	22:C:267:ALA:CB	1.75	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:332:PHE:CE2	22:C:344:PHE:CZ	2.25	1.13
22:C:423:SER:HB2	22:C:470:VAL:HG13	1.13	1.13
22:C:535:VAL:CG2	22:C:585:LYS:HE3	1.79	1.13
25:Z:64:LEU:HD12	25:Z:161:ILE:CG2	1.77	1.13
54:3:105:LEU:HD23	54:3:127:ILE:HD12	1.31	1.13
22:C:224:PRO:HB3	22:C:241:LYS:HB3	1.19	1.13
22:C:496:VAL:CA	22:C:537:ILE:CG2	2.24	1.13
22:C:203:SER:OG	22:C:325:LEU:HD22	0.95	1.12
22:C:492:VAL:HG13	22:C:541:ILE:HG21	1.24	1.12
22:C:300:VAL:CG1	22:C:464:HIS:HE1	1.61	1.12
19:W:11:VAL:HG13	19:W:38:SER:OG	1.45	1.12
1:A:1304:G:H5"	1:A:1305:G:OP2	1.49	1.12
22:C:330:LEU:HD22	22:C:345:ARG:O	1.50	1.12
22:C:211:VAL:CB	22:C:268:ILE:HD12	1.80	1.12
22:C:489:LEU:HD23	22:C:507:ILE:HB	1.31	1.12
22:C:14:ILE:HA	22:C:104:LEU:C	1.69	1.12
22:C:408:PRO:O	22:C:409:TYR:CD2	2.03	1.12
22:C:41:MET:HG2	22:C:45:PHE:CD2	1.84	1.12
1:A:1304:G:C5	1:A:1305:G:O6	2.02	1.12
22:C:231:TYR:CE2	22:C:279:THR:HG21	1.85	1.12
22:C:490:VAL:O	22:C:507:ILE:HG23	1.50	1.12
22:C:215:LEU:CD2	22:C:282:LEU:CD1	2.29	1.11
22:C:41:MET:CG	22:C:45:PHE:CD2	2.33	1.11
22:C:49:LEU:HD11	22:C:52:GLU:HG3	1.30	1.11
22:C:20:HIS:NE2	22:C:108:ASP:N	1.97	1.11
23:D:2807:G:O6	23:D:2892:A:C8	2.03	1.11
22:C:63:ALA:HB1	22:C:245:PHE:HB3	1.18	1.11
22:C:215:LEU:HD23	22:C:282:LEU:HD11	1.22	1.11
22:C:497:HIS:ND1	22:C:535:VAL:HG12	1.59	1.11
25:Z:30:LYS:HE3	25:Z:180:PHE:CE1	1.68	1.11
22:C:63:ALA:CA	22:C:245:PHE:HB3	1.80	1.11
22:C:230:ILE:HG13	22:C:281:THR:O	1.44	1.11
22:C:493:ASN:H	22:C:541:ILE:CA	1.62	1.11
25:Z:66:HIS:O	25:Z:158:ALA:CB	1.97	1.11
54:3:77:LEU:CD2	54:3:111:LYS:HD2	1.79	1.11
22:C:489:LEU:CA	22:C:507:ILE:HG22	1.78	1.11
22:C:67:THR:O	22:C:76:TYR:CB	1.99	1.11
22:C:379:LYS:CE	22:C:388:VAL:HG21	1.79	1.11
54:3:37:PHE:CG	54:3:66:THR:HG23	1.85	1.11
22:C:236:GLU:OE1	22:C:267:ALA:O	1.65	1.11
22:C:402:ILE:HG12	22:C:491:LYS:NZ	1.65	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:532:LEU:CB	22:C:555:ARG:N	2.14	1.11
22:C:445:GLN:HA	54:3:29:GLN:OE1	1.33	1.11
22:C:211:VAL:CG2	22:C:268:ILE:CD1	2.29	1.11
22:C:380:VAL:CG2	22:C:391:HIS:CD2	2.34	1.11
23:D:1055:G:N1	23:D:1106:G:O6	1.84	1.10
22:C:214:TYR:HA	22:C:263:TRP:HA	1.32	1.10
23:D:1096:A:H61	54:3:10:LEU:HA	0.94	1.10
22:C:106:VAL:HA	22:C:134:VAL:O	1.49	1.10
22:C:455:PRO:HG2	22:C:458:GLU:HB2	1.20	1.10
22:C:496:VAL:HA	22:C:537:ILE:HA	1.31	1.10
23:D:2106:G:C5	23:D:2184:G:C2	2.27	1.10
22:C:236:GLU:CG	22:C:267:ALA:HB1	1.81	1.10
22:C:30:LEU:CD2	22:C:66:VAL:HG11	1.81	1.10
54:3:77:LEU:CD1	54:3:111:LYS:HE3	1.82	1.10
23:D:2106:G:N1	23:D:2184:G:N3	1.99	1.10
54:3:78:ILE:HG23	54:3:108:ALA:HB1	1.10	1.10
22:C:532:LEU:CG	22:C:555:ARG:N	2.14	1.10
22:C:65:ARG:CB	22:C:76:TYR:OH	1.99	1.10
22:C:239:VAL:CG1	22:C:266:ALA:HB3	1.80	1.09
22:C:414:ILE:HD11	22:C:477:MET:HB2	1.19	1.09
22:C:496:VAL:HA	22:C:537:ILE:CB	1.77	1.09
22:C:200:ILE:HD12	22:C:277:GLY:HA3	1.16	1.09
19:W:11:VAL:HG13	19:W:38:SER:HB2	1.20	1.09
22:C:246:THR:CG2	22:C:251:VAL:HG21	1.82	1.09
25:Z:66:HIS:O	25:Z:158:ALA:CA	2.00	1.09
54:3:34:ILE:HG21	54:3:63:ARG:HB3	1.11	1.09
25:Z:62:VAL:HG12	25:Z:161:ILE:HG12	1.35	1.09
54:3:34:ILE:HG22	54:3:63:ARG:HB2	1.31	1.09
22:C:239:VAL:HG13	22:C:266:ALA:HB3	1.16	1.09
22:C:521:VAL:HG11	22:C:547:ALA:HB1	1.31	1.09
54:3:37:PHE:CB	54:3:66:THR:HG21	1.82	1.09
22:C:204:VAL:CB	22:C:212:ILE:HB	1.81	1.09
22:C:492:VAL:HG13	22:C:541:ILE:CG2	1.82	1.09
22:C:137:LYS:CA	22:C:168:GLY:H	1.64	1.09
22:C:496:VAL:HG22	22:C:537:ILE:HG22	1.30	1.09
23:D:1064:C:C2	54:3:91:PRO:CD	2.23	1.09
22:C:11:ASN:HB3	22:C:100:VAL:CG1	1.83	1.09
22:C:434:ARG:HH12	22:C:453:GLU:CG	1.52	1.09
22:C:211:VAL:CB	22:C:268:ILE:CD1	2.29	1.09
22:C:95:ARG:HH22	22:C:202:ASP:CG	1.56	1.09
23:D:645:C:H4'	23:D:646:A:H5''	1.32	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:421:VAL:HA	22:C:424:LEU:HD12	1.20	1.08
22:C:412:LEU:HB2	22:C:452:TYR:H	1.16	1.08
22:C:200:ILE:CD1	22:C:277:GLY:HA3	1.83	1.08
22:C:246:THR:HG21	22:C:251:VAL:HG21	1.27	1.08
22:C:495:LEU:CD2	22:C:538:GLN:HG3	1.77	1.08
22:C:11:ASN:CG	22:C:100:VAL:HG13	1.73	1.08
22:C:416:THR:O	22:C:447:ARG:HA	1.53	1.08
25:Z:66:HIS:HB2	25:Z:159:GLY:H	1.07	1.08
22:C:204:VAL:HB	22:C:212:ILE:CB	1.82	1.08
22:C:205:TYR:CE1	22:C:323:LEU:CD2	2.35	1.08
22:C:458:GLU:HA	22:C:461:TYR:CE2	1.89	1.08
22:C:66:VAL:HG23	22:C:76:TYR:CE1	1.89	1.08
22:C:15:ILE:O	22:C:105:LEU:CD1	2.02	1.08
25:Z:161:ILE:CB	25:Z:192:PHE:HD1	1.67	1.08
54:3:103:GLN:O	54:3:107:ILE:HD12	1.54	1.07
22:C:6:LEU:CD1	22:C:192:PRO:HB3	1.82	1.07
22:C:328:ALA:HB2	22:C:349:LEU:HD22	1.13	1.07
1:A:1306:A:N6	1:A:1331:G:H2'	1.69	1.07
22:C:211:VAL:HB	22:C:268:ILE:HD11	1.16	1.07
22:C:493:ASN:H	22:C:541:ILE:HA	0.99	1.07
22:C:89:PHE:CE1	22:C:352:LEU:HD11	1.90	1.07
23:D:1107:G:H2'	23:D:1108:U:H5'	1.36	1.07
23:D:2808:U:H2'	23:D:2810:A:C8	1.90	1.07
23:D:171:G:C2	23:D:172:C:N3	2.22	1.07
22:C:200:ILE:CG1	22:C:281:THR:HG21	1.85	1.06
23:D:1096:A:N1	54:3:11:GLN:N	2.02	1.06
22:C:239:VAL:HG21	22:C:267:ALA:HB2	1.13	1.06
22:C:215:LEU:HD23	22:C:282:LEU:HD12	1.32	1.06
22:C:98:ALA:CB	22:C:127:HIS:CD2	2.37	1.06
23:D:2645:G:H5'	23:D:2646:C:H5'	1.37	1.06
22:C:387:GLU:HG2	22:C:388:VAL:H	1.21	1.06
22:C:41:MET:CB	22:C:45:PHE:CD2	2.34	1.06
22:C:409:TYR:O	22:C:481:GLN:HA	1.47	1.06
22:C:492:VAL:HA	22:C:541:ILE:HG22	1.15	1.06
22:C:144:ARG:HG2	22:C:148:VAL:HG23	1.33	1.06
22:C:488:ASP:O	22:C:489:LEU:HD12	1.55	1.06
22:C:66:VAL:HG23	22:C:76:TYR:CD1	1.90	1.06
25:Z:42:GLU:OE1	25:Z:176:GLY:N	1.89	1.06
22:C:338:THR:HB	22:C:503:ALA:CB	1.85	1.06
23:D:241:A:H2'	23:D:242:G:H4'	1.37	1.06
22:C:414:ILE:CG1	22:C:477:MET:CA	2.13	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:18:VAL:HG22	22:C:86:HIS:CG	1.90	1.05
22:C:100:VAL:HG22	22:C:216:ARG:HH22	0.91	1.05
22:C:239:VAL:HG22	22:C:267:ALA:HB2	1.15	1.05
22:C:414:ILE:CG1	22:C:477:MET:CB	2.32	1.05
22:C:11:ASN:CB	22:C:100:VAL:HG12	1.85	1.05
22:C:239:VAL:HG13	22:C:266:ALA:CB	1.84	1.05
22:C:9:ILE:H	22:C:77:VAL:HB	1.08	1.05
13:Q:24:GLY:C	13:Q:66:LEU:HD21	1.77	1.05
22:C:211:VAL:HG23	22:C:268:ILE:HD12	1.09	1.05
22:C:489:LEU:C	22:C:507:ILE:CG2	2.26	1.05
1:A:691:G:H22	1:A:695:A:H3'	1.20	1.04
22:C:101:GLU:HA	22:C:129:HIS:ND1	1.72	1.04
22:C:204:VAL:HG11	22:C:212:ILE:HD12	1.39	1.04
13:Q:87:TYR:HB2	19:W:73:GLU:HB2	1.39	1.04
22:C:200:ILE:CG1	22:C:281:THR:CG2	2.35	1.04
22:C:14:ILE:CG1	22:C:104:LEU:HB3	1.87	1.04
54:3:78:ILE:CA	54:3:111:LYS:HG3	1.87	1.04
22:C:335:GLU:CD	22:C:344:PHE:HB3	1.76	1.04
22:C:11:ASN:HB3	22:C:100:VAL:HG12	1.35	1.04
22:C:497:HIS:HB3	22:C:535:VAL:HG13	1.07	1.04
22:C:195:PRO:O	22:C:287:THR:CG2	2.06	1.04
22:C:198:ALA:H	22:C:280:ILE:HG13	1.18	1.04
22:C:496:VAL:CG2	22:C:537:ILE:HG21	1.58	1.04
22:C:468:LYS:O	22:C:473:GLY:N	1.90	1.04
22:C:174:VAL:HG13	22:C:177:ILE:HB	1.38	1.03
22:C:20:HIS:CE1	22:C:108:ASP:CB	2.39	1.03
22:C:350:GLY:O	22:C:352:LEU:N	1.89	1.03
22:C:69:ARG:HG2	22:C:178:LEU:HD11	1.07	1.03
22:C:490:VAL:HG22	22:C:491:LYS:H	1.22	1.03
22:C:492:VAL:HG21	22:C:508:ALA:CB	1.64	1.03
22:C:11:ASN:CB	22:C:100:VAL:HG13	1.86	1.03
22:C:116:GLU:CG	22:C:120:LYS:HE3	1.89	1.03
22:C:200:ILE:HG13	22:C:281:THR:HG23	1.40	1.03
22:C:30:LEU:HD21	22:C:66:VAL:HG11	1.34	1.03
22:C:379:LYS:HG2	22:C:388:VAL:HG22	1.38	1.03
22:C:9:ILE:CA	22:C:77:VAL:HB	1.89	1.03
25:Z:30:LYS:HE3	25:Z:180:PHE:CD1	1.93	1.03
22:C:197:LYS:HE3	22:C:291:TYR:CE2	1.92	1.03
20:X:83:ARG:HA	20:X:86:ARG:HE	1.22	1.03
22:C:34:HIS:HE1	22:C:247:PRO:CG	1.68	1.02
22:C:409:TYR:C	22:C:482:ALA:H	1.62	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:97:LEU:HD11	22:C:123:MET:HB3	1.37	1.02
1:A:1224:G:H4'	13:Q:102:ARG:HG2	1.36	1.02
22:C:236:GLU:CD	22:C:267:ALA:HB1	1.80	1.02
22:C:541:ILE:HD12	22:C:546:ILE:HD12	1.41	1.02
22:C:492:VAL:HG13	22:C:541:ILE:HD13	1.40	1.02
22:C:492:VAL:CG1	22:C:541:ILE:CG2	2.38	1.02
23:D:1101:U:C4	23:D:1102:C:O2	2.11	1.02
22:C:138:ILE:CB	22:C:167:SER:OG	2.07	1.02
22:C:379:LYS:HE3	22:C:388:VAL:HG21	1.05	1.02
22:C:214:TYR:CA	22:C:263:TRP:HA	1.89	1.02
22:C:200:ILE:HG13	22:C:281:THR:CG2	1.89	1.02
23:D:1090:U:C2	23:D:1103:A:N6	2.28	1.02
25:Z:42:GLU:OE1	25:Z:175:VAL:N	1.92	1.02
22:C:412:LEU:HB2	22:C:452:TYR:N	1.73	1.01
22:C:98:ALA:CA	22:C:127:HIS:ND1	2.21	1.01
22:C:408:PRO:HA	22:C:483:GLY:O	1.59	1.01
23:D:2183:C:H2'	23:D:2184:G:C8	1.94	1.01
25:Z:30:LYS:CE	25:Z:180:PHE:CE1	2.25	1.01
22:C:34:HIS:HE1	22:C:247:PRO:CB	1.74	1.01
22:C:535:VAL:CG2	22:C:591:GLU:OE2	2.08	1.01
22:C:535:VAL:HG22	22:C:585:LYS:HE3	1.06	1.01
23:D:1557:C:H3'	23:D:1558:A:H2'	1.42	1.01
22:C:134:VAL:HA	22:C:163:ALA:HB1	1.35	1.01
22:C:489:LEU:CB	22:C:507:ILE:HG22	1.79	1.01
22:C:496:VAL:CB	22:C:537:ILE:CG2	1.95	1.01
23:D:2047:U:H2'	23:D:2048:G:H8	1.25	1.01
25:Z:66:HIS:HD2	25:Z:159:GLY:HA2	0.86	1.01
54:3:77:LEU:HG	54:3:111:LYS:HE3	1.02	1.01
22:C:69:ARG:HG2	22:C:178:LEU:CD1	1.90	1.01
23:D:2178:C:H3'	23:D:2179:C:H5''	1.41	1.01
4:H:65:ARG:HH11	23:D:2406:U:H1'	170.79	1.01
22:C:195:PRO:O	22:C:287:THR:HG21	1.48	1.00
22:C:338:THR:CB	22:C:503:ALA:HB1	1.90	1.00
22:C:409:TYR:O	22:C:481:GLN:C	1.99	1.00
25:Z:66:HIS:H	25:Z:158:ALA:HB1	1.22	1.00
22:C:216:ARG:CG	22:C:260:GLU:O	2.07	1.00
22:C:66:VAL:CG2	22:C:76:TYR:CE1	2.44	1.00
22:C:11:ASN:HA	22:C:79:HIS:HD2	1.25	1.00
23:D:2807:G:N1	23:D:2892:A:C5	2.30	1.00
1:A:1308:U:H5	13:Q:99:ARG:NE	1.52	1.00
22:C:135:ILE:HD11	22:C:165:PHE:CD1	1.96	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:216:ARG:HG3	22:C:260:GLU:O	1.61	1.00
13:Q:24:GLY:HA3	13:Q:66:LEU:CD2	1.90	1.00
22:C:25:LEU:CD2	22:C:174:VAL:CG2	1.98	1.00
1:A:1306:A:H62	1:A:1331:G:H2'	1.26	1.00
22:C:9:ILE:H	22:C:77:VAL:CB	1.73	1.00
22:C:14:ILE:HG12	22:C:104:LEU:HB3	1.02	1.00
22:C:530:ARG:HD2	22:C:593:PRO:HB3	1.43	1.00
23:D:2808:U:C4	23:D:2892:A:N6	2.30	1.00
23:D:1064:C:O2	54:3:91:PRO:HD3	1.59	1.00
1:A:1306:A:C8	1:A:1307:U:C5	2.49	1.00
22:C:11:ASN:CA	22:C:100:VAL:CG1	2.40	1.00
22:C:15:ILE:CD1	22:C:103:VAL:CG1	2.27	1.00
23:D:1229:G:H2'	23:D:1230:C:H5'	1.41	1.00
23:D:2106:G:O6	23:D:2184:G:N1	1.95	1.00
23:D:609(A):G:H1	23:D:619:G:H21	1.07	1.00
54:3:78:ILE:CG1	54:3:111:LYS:HG3	1.92	1.00
22:C:6:LEU:HD13	22:C:192:PRO:CD	1.91	1.00
23:D:2106:G:C4	23:D:2184:G:N2	2.29	1.00
54:3:77:LEU:CG	54:3:111:LYS:CD	2.22	0.99
22:C:418:GLU:HA	22:C:446:LYS:CD	1.91	0.99
22:C:41:MET:HE3	22:C:45:PHE:CB	1.92	0.99
22:C:338:THR:CB	22:C:503:ALA:CB	2.40	0.99
22:C:11:ASN:CA	22:C:100:VAL:HG12	1.90	0.99
22:C:15:ILE:CG1	22:C:103:VAL:HG11	1.91	0.99
1:A:1308:U:C6	13:Q:99:ARG:NH2	2.29	0.99
22:C:100:VAL:HG22	22:C:216:ARG:NH2	1.77	0.99
22:C:13:SER:OG	22:C:103:VAL:HG22	1.62	0.99
22:C:97:LEU:CD1	22:C:123:MET:SD	2.49	0.99
54:3:6:ALA:O	54:3:59:ILE:HD13	1.61	0.99
22:C:106:VAL:CB	22:C:136:ASN:HB2	1.82	0.99
22:C:492:VAL:CG1	22:C:541:ILE:HG21	1.92	0.99
23:D:2106:G:C6	23:D:2184:G:N3	2.30	0.99
22:C:330:LEU:CD2	22:C:345:ARG:O	2.11	0.99
54:3:78:ILE:HA	54:3:111:LYS:CG	1.92	0.99
22:C:196:LEU:HD21	22:C:221:ARG:O	1.61	0.99
22:C:342:PHE:HD2	22:C:370:ILE:N	1.60	0.99
22:C:418:GLU:CA	22:C:446:LYS:CG	2.36	0.99
23:D:1096:A:H61	54:3:10:LEU:CA	1.76	0.99
22:C:194:ALA:HB3	22:C:219:GLU:O	1.61	0.99
22:C:342:PHE:CE2	22:C:370:ILE:HG13	1.97	0.99
13:Q:24:GLY:O	13:Q:66:LEU:HD21	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1413:A:H61	1:A:1487:G:H1	1.09	0.99
25:Z:66:HIS:H	25:Z:158:ALA:CB	1.74	0.99
23:D:1062:G:N1	54:3:133:SER:O	1.94	0.98
22:C:25:LEU:CG	22:C:174:VAL:HG21	1.91	0.98
22:C:383:LYS:NZ	22:C:401:ARG:CB	2.26	0.98
22:C:41:MET:CG	22:C:45:PHE:CE2	2.46	0.98
23:D:1055:G:C2	23:D:1106:G:O6	2.16	0.98
22:C:256:LEU:H	22:C:256:LEU:HD13	1.23	0.98
54:3:81:ALA:HB3	54:3:107:ILE:HD13	1.01	0.98
22:C:445:GLN:CA	54:3:29:GLN:OE1	2.11	0.98
22:C:131:ILE:CG2	22:C:158:LEU:HD21	1.93	0.98
22:C:63:ALA:HB2	22:C:245:PHE:CB	1.87	0.98
23:D:171:G:N3	23:D:172:C:C2	2.31	0.98
22:C:530:ARG:CD	22:C:593:PRO:HB3	1.93	0.98
22:C:493:ASN:N	22:C:541:ILE:HG23	1.78	0.98
54:3:77:LEU:HD23	54:3:111:LYS:HD2	1.45	0.98
22:C:402:ILE:HG12	22:C:491:LYS:HZ1	1.25	0.98
22:C:414:ILE:HD11	22:C:477:MET:HE2	1.46	0.98
22:C:42:ARG:NE	22:C:53:ARG:HH12	1.62	0.98
22:C:455:PRO:HG2	22:C:458:GLU:CB	1.93	0.97
23:D:2629:A:H2'	23:D:2895:U:O5'	1.64	0.97
54:3:77:LEU:HD21	54:3:111:LYS:NZ	1.77	0.97
22:C:197:LYS:HE3	22:C:291:TYR:HE2	1.25	0.97
22:C:501:VAL:HG22	22:C:502:ASP:H	1.24	0.97
1:A:59:A:H3'	1:A:331:G:H22	1.25	0.97
22:C:379:LYS:HE3	22:C:388:VAL:CG2	1.94	0.97
25:Z:153:ILE:HG23	25:Z:156:ILE:HD12	1.43	0.97
1:A:1322:C:OP1	13:Q:101:GLN:O	1.82	0.97
22:C:14:ILE:HG12	22:C:104:LEU:CB	1.95	0.97
22:C:174:VAL:CG1	22:C:177:ILE:HB	1.94	0.97
22:C:6:LEU:HD13	22:C:192:PRO:HD3	1.42	0.97
22:C:301:VAL:HG22	22:C:464:HIS:CD2	2.00	0.97
22:C:35:ALA:HB1	22:C:41:MET:HG3	1.44	0.97
22:C:492:VAL:CG2	22:C:508:ALA:HB3	1.90	0.97
23:D:1225:C:H2'	23:D:1226:G:C8	1.99	0.97
22:C:215:LEU:CD2	22:C:280:ILE:O	2.11	0.97
23:D:161:U:H2'	23:D:171:G:H22	1.26	0.97
23:D:850:C:H42	23:D:928:G:H1	1.11	0.97
22:C:285:ARG:HB3	22:C:286:PRO:HD2	1.46	0.97
22:C:342:PHE:CD2	22:C:370:ILE:N	2.32	0.97
22:C:200:ILE:HD11	22:C:281:THR:HG21	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:332:PHE:CZ	22:C:344:PHE:CZ	2.52	0.97
23:D:1229:G:C2'	23:D:1230:C:H5'	1.94	0.97
1:A:782:A:H62	1:A:800:G:H21	1.11	0.97
22:C:242:VAL:HG21	22:C:256:LEU:HD12	1.47	0.97
22:C:95:ARG:CB	22:C:294:PHE:CE1	2.47	0.97
22:C:20:HIS:ND1	22:C:108:ASP:CG	2.09	0.96
23:D:1059:G:C5	54:3:126:MET:HG2	2.00	0.96
22:C:116:GLU:HB3	22:C:120:LYS:HZ1	1.29	0.96
22:C:18:VAL:HG22	22:C:86:HIS:HB2	1.27	0.96
22:C:224:PRO:HB3	22:C:241:LYS:CB	1.93	0.96
22:C:415:PHE:CE1	22:C:447:ARG:CD	2.48	0.96
54:3:81:ALA:CB	54:3:107:ILE:HD13	1.95	0.96
22:C:98:ALA:CB	22:C:127:HIS:CE1	2.47	0.96
23:D:2105:C:O2	23:D:2184:G:N1	1.97	0.96
23:D:2106:G:N7	23:D:2184:G:N2	2.13	0.96
25:Z:66:HIS:CD2	25:Z:159:GLY:HA3	1.96	0.96
23:D:1064:C:H42	54:3:91:PRO:HG2	1.21	0.96
25:Z:38:ASP:OD1	25:Z:179:SER:HA	1.64	0.96
1:A:1306:A:N6	1:A:1331:G:C2'	2.27	0.96
22:C:131:ILE:HG21	22:C:158:LEU:HD21	1.00	0.96
23:D:1064:C:C4	54:3:91:PRO:HG3	1.97	0.96
23:D:585:G:HO2'	23:D:586:A:H8	1.12	0.96
22:C:409:TYR:HD2	22:C:483:GLY:HA3	1.16	0.96
54:3:109:LYS:HA	54:3:123:ALA:HB2	1.47	0.96
22:C:131:ILE:CG2	22:C:158:LEU:CD2	2.44	0.96
25:Z:66:HIS:HB2	25:Z:159:GLY:N	1.80	0.96
22:C:113:VAL:HG13	22:C:117:THR:HG21	1.47	0.96
22:C:204:VAL:CG1	22:C:212:ILE:HD12	1.96	0.96
22:C:200:ILE:CD1	22:C:281:THR:HG21	1.95	0.96
22:C:493:ASN:HA	22:C:505:THR:HG21	1.46	0.96
22:C:495:LEU:O	22:C:537:ILE:CG2	2.14	0.96
22:C:200:ILE:HD11	22:C:281:THR:CG2	1.96	0.95
22:C:215:LEU:CD2	22:C:282:LEU:HD12	1.90	0.95
22:C:435:LEU:N	22:C:452:TYR:CE1	2.34	0.95
22:C:489:LEU:O	22:C:507:ILE:HG22	1.63	0.95
23:D:1101:U:H3	23:D:1103:A:H61	1.13	0.95
22:C:116:GLU:CA	22:C:120:LYS:HE3	1.96	0.95
22:C:14:ILE:HG23	22:C:105:LEU:N	1.80	0.95
22:C:414:ILE:CG1	22:C:477:MET:HB2	1.94	0.95
23:D:977:G:N1	23:D:986:C:N3	2.14	0.95
1:A:520:A:H62	1:A:529:G:H21	1.12	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:257:GLU:HB3	22:C:260:GLU:HG3	1.48	0.95
22:C:137:LYS:HA	22:C:168:GLY:H	1.31	0.95
22:C:263:TRP:CD1	22:C:265:VAL:HG13	2.00	0.95
54:3:32:ALA:HB1	54:3:63:ARG:NH2	1.81	0.95
22:C:11:ASN:CG	22:C:79:HIS:NE2	2.19	0.95
22:C:495:LEU:O	22:C:537:ILE:HG22	1.66	0.95
11:O:86:GLY:H	11:O:112:THR:HA	1.31	0.95
22:C:100:VAL:CG2	22:C:216:ARG:HH22	1.79	0.95
23:D:1793:C:H42	23:D:1826:G:H1	1.06	0.95
1:A:1417:G:H21	1:A:1483:A:H62	1.15	0.95
22:C:15:ILE:O	22:C:105:LEU:HD13	1.34	0.95
22:C:6:LEU:CD1	22:C:192:PRO:CB	2.41	0.95
3:G:20:SER:HG	3:G:22:TRP:HE1	0.95	0.95
54:3:37:PHE:CB	54:3:66:THR:CG2	2.42	0.95
22:C:242:VAL:HG11	22:C:262:GLY:HA3	1.45	0.94
22:C:356:ILE:HG22	22:C:357:VAL:HG23	1.46	0.94
22:C:407:GLU:HB2	22:C:408:PRO:CD	1.97	0.94
22:C:67:THR:HG23	22:C:68:TYR:H	1.32	0.94
54:3:78:ILE:CG2	54:3:108:ALA:CB	2.44	0.94
54:3:78:ILE:HG12	54:3:111:LYS:CG	1.98	0.94
56:5:9:A:OP2	56:5:13:C:N4	2.00	0.94
23:D:1857:G:N3	23:D:1885:A:N6	2.15	0.94
4:H:118:ARG:HG3	4:H:136:PRO:HG2	1.48	0.94
22:C:195:PRO:O	22:C:287:THR:CB	2.16	0.94
22:C:242:VAL:HG11	22:C:262:GLY:CA	1.97	0.94
22:C:213:PRO:O	22:C:264:LEU:HG	1.67	0.94
22:C:58:THR:OG1	57:C:701:GCP:O3G	1.85	0.94
54:3:108:ALA:O	54:3:110:GLN:N	2.00	0.94
22:C:191:ASP:OD1	22:C:219:GLU:HA	1.65	0.94
12:P:57:LYS:HA	12:P:67:THR:HA	1.48	0.94
22:C:204:VAL:HB	22:C:212:ILE:HB	0.94	0.94
22:C:63:ALA:HA	22:C:245:PHE:CB	1.98	0.94
22:C:541:ILE:HD12	22:C:546:ILE:CD1	1.96	0.94
23:D:2790:A:H1'	23:D:2893:G:N7	1.82	0.94
22:C:214:TYR:CB	22:C:263:TRP:HA	1.97	0.94
22:C:436:VAL:HG23	22:C:452:TYR:HA	1.48	0.94
22:C:435:LEU:CA	22:C:452:TYR:CD1	2.43	0.94
22:C:496:VAL:O	22:C:498:GLY:N	2.00	0.94
1:A:262:A:H4'	20:X:74:LYS:HG2	1.49	0.94
54:3:78:ILE:HA	54:3:111:LYS:HG3	1.42	0.94
22:C:140:LEU:HD12	22:C:141:PRO:HD2	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:153:GLU:HG3	22:C:159:PRO:HA	1.50	0.94
22:C:423:SER:CB	22:C:470:VAL:HG13	1.96	0.94
23:D:185:U:H2'	23:D:186:G:H8	1.32	0.94
22:C:434:ARG:HH12	22:C:453:GLU:CD	1.70	0.94
23:D:1101:U:C5	23:D:1102:C:N3	2.36	0.94
23:D:2303:G:H1	23:D:2313:C:H42	1.14	0.94
23:D:297:C:H3'	23:D:298:G:C8	2.02	0.94
22:C:98:ALA:HB1	22:C:127:HIS:CG	2.02	0.93
22:C:196:LEU:HD12	22:C:284:ASP:HB2	1.47	0.93
22:C:410:VAL:HA	22:C:481:GLN:HA	1.50	0.93
22:C:494:VAL:HA	22:C:539:ALA:HA	1.49	0.93
54:3:77:LEU:HD23	54:3:111:LYS:CD	1.94	0.93
22:C:198:ALA:C	22:C:215:LEU:HD11	1.89	0.93
22:C:28:ARG:HH22	22:C:32:LEU:CD1	1.80	0.93
22:C:28:ARG:HH22	22:C:32:LEU:HD11	0.97	0.93
23:D:2106:G:C6	23:D:2184:G:N1	2.35	0.93
19:W:4:SER:O	19:W:6:LYS:N	2.01	0.93
1:A:1225:A:OP2	13:Q:102:ARG:HB3	1.68	0.93
22:C:116:GLU:HB3	22:C:120:LYS:HZ2	1.12	0.93
22:C:535:VAL:HG21	22:C:591:GLU:CD	1.89	0.93
12:P:87:GLY:HA2	12:P:98:TYR:HA	1.48	0.93
1:A:1308:U:H3'	13:Q:99:ARG:NH2	1.82	0.93
22:C:213:PRO:HG2	22:C:264:LEU:HB2	1.49	0.93
22:C:239:VAL:HG23	22:C:267:ALA:HB2	1.50	0.93
22:C:63:ALA:CB	22:C:245:PHE:CD1	2.50	0.93
23:D:8:A:N6	23:D:2895:U:H1'	1.82	0.93
1:A:1224:G:H1'	13:Q:102:ARG:HD2	1.45	0.93
25:Z:64:LEU:HD12	25:Z:161:ILE:HG23	0.95	0.93
22:C:496:VAL:HG22	22:C:537:ILE:HG21	1.21	0.93
22:C:89:PHE:HE1	22:C:352:LEU:HD11	1.27	0.93
23:D:2452:C:H42	23:D:2504:U:H3	1.15	0.93
24:E:21:G:H1	24:E:62:C:H42	1.17	0.93
22:C:17:HIS:HA	22:C:120:LYS:HZ1	1.32	0.93
22:C:342:PHE:CE2	22:C:369:LEU:HA	2.03	0.93
23:D:1674:G:O6	23:D:1990:C:N4	2.01	0.93
22:C:379:LYS:CE	22:C:388:VAL:CG2	2.45	0.93
22:C:30:LEU:HD23	22:C:66:VAL:CG1	1.99	0.93
22:C:453:GLU:OE2	22:C:482:ALA:HB3	1.69	0.92
22:C:526:GLU:OE1	22:C:593:PRO:HG2	1.67	0.92
22:C:421:VAL:HG13	22:C:450:LEU:HD22	1.49	0.92
22:C:15:ILE:H	22:C:103:VAL:HG12	1.32	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:63:ALA:HB2	22:C:245:PHE:HD1	1.25	0.92
22:C:9:ILE:HA	22:C:77:VAL:HB	1.49	0.92
23:D:2304:G:H1	23:D:2312:U:H3	1.16	0.92
22:C:46:LEU:HD23	22:C:64:VAL:HG21	0.93	0.92
22:C:25:LEU:HD21	22:C:174:VAL:HG21	1.48	0.92
22:C:200:ILE:HD12	22:C:277:GLY:CA	2.00	0.92
22:C:63:ALA:HB2	22:C:245:PHE:HB3	1.46	0.92
1:A:1094:G:H5''	1:A:1095:U:H5'	1.48	0.92
22:C:14:ILE:C	22:C:104:LEU:O	2.07	0.92
23:D:999:U:H3'	23:D:1154:G:H1	1.34	0.92
23:D:576:U:H3'	23:D:577:G:H8	1.34	0.92
24:E:118:G:H2'	24:E:119:A:H8	1.33	0.92
17:U:46:ASP:OD2	17:U:49:GLU:N	2.01	0.92
22:C:492:VAL:HG23	22:C:508:ALA:HB2	1.12	0.92
23:D:645:C:H4'	23:D:646:A:C5'	1.99	0.92
22:C:414:ILE:HD13	22:C:477:MET:HB2	1.51	0.92
24:E:78:A:H62	24:E:98:G:H21	1.13	0.92
22:C:127:HIS:HB2	22:C:129:HIS:CE1	2.05	0.92
22:C:205:TYR:HE1	22:C:323:LEU:HD21	0.79	0.92
22:C:197:LYS:NZ	22:C:290:PRO:HA	1.84	0.92
25:Z:64:LEU:HD11	25:Z:161:ILE:CG2	2.00	0.92
1:A:783:C:H42	1:A:799:G:H1	1.15	0.92
22:C:435:LEU:N	22:C:452:TYR:CD1	2.38	0.92
23:D:270(C):C:N3	23:D:270(W):G:N2	2.17	0.92
22:C:251:VAL:HG12	22:C:252:ALA:H	1.33	0.91
22:C:60:LYS:NZ	22:C:326:ASN:ND2	2.17	0.91
23:D:821:A:H2'	23:D:946:G:H8	1.32	0.91
22:C:195:PRO:O	22:C:287:THR:OG1	1.88	0.91
22:C:414:ILE:HD11	22:C:477:MET:CE	2.00	0.91
23:D:153:C:C2	23:D:154:G:N7	2.38	0.91
22:C:20:HIS:CE1	22:C:108:ASP:HB2	2.04	0.91
22:C:116:GLU:CB	22:C:120:LYS:HZ2	1.62	0.91
22:C:530:ARG:HD2	22:C:593:PRO:CB	2.01	0.91
22:C:30:LEU:CD2	22:C:66:VAL:CG1	2.47	0.91
23:D:57:C:H42	23:D:70:G:H1	1.16	0.91
1:A:939:G:OP1	7:K:102:ARG:NH1	2.03	0.91
22:C:493:ASN:CA	22:C:541:ILE:HA	2.00	0.91
22:C:530:ARG:HH21	22:C:530:ARG:HB3	1.34	0.91
23:D:1911:U:N3	23:D:1918:A:N7	2.17	0.91
22:C:14:ILE:HG23	22:C:104:LEU:C	1.90	0.91
22:C:380:VAL:HG23	22:C:391:HIS:HD2	1.28	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:26:ASN:OD1	23:D:2346:A:N6	161.47	0.91
22:C:203:SER:HG	22:C:325:LEU:CD2	1.65	0.91
22:C:444:ALA:HB1	22:C:447:ARG:HG2	1.51	0.91
23:D:1064:C:N4	54:3:91:PRO:CG	2.25	0.91
23:D:2057:A:H2'	23:D:2058:A:H8	1.36	0.91
1:A:247:G:N2	1:A:277:C:N3	2.19	0.91
1:A:717:C:N4	1:A:734:G:N7	2.18	0.91
22:C:330:LEU:CG	22:C:345:ARG:O	2.19	0.91
22:C:299:PRO:CB	22:C:348:PHE:HD2	1.82	0.91
22:C:496:VAL:HA	22:C:537:ILE:CG2	1.92	0.91
22:C:535:VAL:HG21	22:C:591:GLU:OE2	1.71	0.91
23:D:1107:G:C2'	23:D:1108:U:H5'	2.01	0.91
23:D:173:G:C6	23:D:174:C:C2	2.59	0.91
1:A:1306:A:N7	1:A:1307:U:C4	2.39	0.91
22:C:133:PRO:O	22:C:163:ALA:HB2	1.71	0.91
22:C:577:GLN:OE1	23:D:1943:U:H5''	1.69	0.91
23:D:51:G:O2'	23:D:118:A:N6	2.04	0.91
19:W:11:VAL:CG1	19:W:38:SER:HB2	1.94	0.91
56:5:6:G:N2	56:5:67:C:N3	2.18	0.91
22:C:414:ILE:HD13	22:C:477:MET:CB	1.99	0.91
22:C:41:MET:CA	22:C:45:PHE:CD1	2.54	0.91
22:C:495:LEU:O	22:C:538:GLN:O	1.87	0.91
23:D:70:G:H5'	23:D:75:G:H22	1.35	0.91
24:E:79:C:H42	24:E:97:G:H1	1.14	0.91
12:P:35:GLY:HA2	12:P:60:LEU:HA	1.53	0.91
16:T:14:ASN:HA	16:T:42:ARG:HH22	1.31	0.91
25:Z:41:VAL:C	25:Z:175:VAL:CG2	2.39	0.91
1:A:1304:G:C5	1:A:1305:G:C6	2.59	0.90
22:C:28:ARG:NH2	22:C:32:LEU:CD1	2.33	0.90
1:A:134:A:N1	16:T:25:ARG:NH2	2.19	0.90
52:1:10:ILE:HG13	52:1:32:HIS:HD2	1.34	0.90
13:Q:63:THR:HG23	13:Q:64:TRP:H	1.32	0.90
13:Q:24:GLY:CA	13:Q:66:LEU:HD21	2.02	0.90
21:Y:7:ARG:HA	21:Y:12:LYS:HE2	1.51	0.90
22:C:291:TYR:O	22:C:293:GLY:N	2.03	0.90
22:C:373:ALA:HB3	22:C:374:PRO:HD3	1.53	0.90
25:Z:66:HIS:H	25:Z:158:ALA:CA	1.84	0.90
22:C:98:ALA:HB2	22:C:127:HIS:CG	1.99	0.90
1:A:1304:G:C5'	1:A:1305:G:OP2	2.20	0.90
23:D:69:C:H2'	23:D:70:G:H8	1.35	0.90
1:A:1135:U:O2	1:A:1140:C:N4	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:6:LEU:CD1	22:C:192:PRO:HD3	2.01	0.90
23:D:2057:A:H2'	23:D:2058:A:C8	2.07	0.90
23:D:240:G:O2'	23:D:257:A:N6	2.03	0.90
25:Z:66:HIS:C	25:Z:158:ALA:HA	1.92	0.90
1:A:1176:A:N1	1:A:1181:G:N2	2.20	0.90
1:A:681:C:H2'	1:A:682:G:H8	1.36	0.90
22:C:95:ARG:HD2	22:C:294:PHE:CZ	2.07	0.90
22:C:405:ILE:HG12	22:C:489:LEU:HB2	1.52	0.90
25:Z:68:LEU:O	25:Z:157:LYS:HA	1.72	0.90
1:A:1224:G:C2'	13:Q:102:ARG:HG2	2.01	0.90
1:A:741:G:OP1	15:S:35:ARG:NH2	2.04	0.90
22:C:121:PHE:HZ	22:C:131:ILE:HG23	1.37	0.90
22:C:497:HIS:HB3	22:C:535:VAL:HG12	1.54	0.90
23:D:2810:A:H61	23:D:2891:G:H22	1.12	0.90
23:D:861:A:H62	23:D:916:G:H21	1.16	0.90
22:C:201:PHE:HB3	22:C:214:TYR:CZ	2.07	0.90
22:C:240:ASP:H	22:C:266:ALA:CB	1.85	0.90
22:C:332:PHE:O	22:C:344:PHE:CD1	2.25	0.90
23:D:818:G:H21	23:D:1189:A:H62	1.13	0.90
54:3:34:ILE:HG22	54:3:63:ARG:CD	2.01	0.89
1:A:1085:U:O2	1:A:1094:G:N1	2.04	0.89
22:C:65:ARG:HB3	22:C:76:TYR:HH	1.32	0.89
23:D:2790:A:C1'	23:D:2893:G:C5	2.43	0.89
22:C:299:PRO:HB2	22:C:348:PHE:HD2	1.36	0.89
22:C:535:VAL:HG21	22:C:591:GLU:OE1	1.72	0.89
22:C:415:PHE:HE1	22:C:447:ARG:HD3	1.37	0.89
22:C:66:VAL:N	22:C:76:TYR:HE1	1.47	0.89
23:D:1064:C:O4'	54:3:88:ALA:O	1.89	0.89
22:C:239:VAL:HG22	22:C:267:ALA:CA	2.03	0.89
22:C:409:TYR:HD2	22:C:483:GLY:CA	1.86	0.89
23:D:171:G:N3	23:D:172:C:N3	2.21	0.89
22:C:178:LEU:HA	22:C:181:ILE:HD12	1.51	0.89
23:D:840:C:H42	23:D:938:G:H1	1.17	0.89
11:O:34:ASP:OD1	11:O:38:ASN:N	2.06	0.89
56:5:14:A:H62	56:5:15:G:H21	1.21	0.89
22:C:330:LEU:CD1	22:C:345:ARG:O	2.07	0.89
22:C:418:GLU:CA	22:C:446:LYS:HD2	2.01	0.89
23:D:2117:A:H61	23:D:2165:G:H1	1.17	0.89
23:D:2302:G:H1	23:D:2314:C:H42	1.21	0.89
23:D:2602:A:O2'	55:4:74:C:OP2	1.90	0.89
22:C:489:LEU:O	22:C:507:ILE:C	2.11	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2658:C:H42	23:D:2663:G:H1	1.20	0.89
23:D:2745:C:N3	23:D:2759:G:N2	2.21	0.89
1:A:729:A:H2'	1:A:730:G:C8	2.07	0.89
22:C:495:LEU:HD13	22:C:540:ALA:HB2	1.54	0.89
7:K:51:GLN:HE21	7:K:58:PRO:HG3	1.36	0.89
1:A:1224:G:C1'	13:Q:102:ARG:HD2	2.01	0.89
23:D:1093:G:N2	23:D:1098:A:N7	2.21	0.89
23:D:2720:U:O4	23:D:2873:A:N6	2.06	0.89
5:I:93:PRO:HA	5:I:118:ILE:HG12	1.52	0.89
22:C:79:HIS:CE1	22:C:216:ARG:NE	2.41	0.88
22:C:224:PRO:CB	22:C:241:LYS:HB3	2.02	0.88
22:C:98:ALA:CB	22:C:127:HIS:ND1	2.34	0.88
22:C:11:ASN:C	22:C:100:VAL:HG12	1.93	0.88
23:D:1170:G:N2	23:D:1179:C:N3	2.20	0.88
23:D:195:A:H2'	23:D:198:C:H41	1.37	0.88
5:I:100:VAL:HA	5:I:118:ILE:H	1.36	0.88
16:T:7:ALA:HB3	16:T:18:ARG:HB2	1.53	0.88
1:A:1304:G:N7	1:A:1305:G:O6	2.06	0.88
22:C:332:PHE:CE2	22:C:344:PHE:HZ	1.53	0.88
22:C:42:ARG:HE	22:C:53:ARG:HH12	0.94	0.88
22:C:6:LEU:CD1	22:C:192:PRO:CD	2.50	0.88
4:H:26:CYS:HA	4:H:31:CYS:HB2	1.56	0.88
22:C:532:LEU:HD22	22:C:555:ARG:N	1.87	0.88
23:D:1057:A:H2'	23:D:1058:G:H5'	1.53	0.88
1:A:563:A:O2'	12:P:15:ARG:NH1	2.06	0.88
22:C:556:LYS:NZ	23:D:1944:U:OP1	2.05	0.88
23:D:2199:A:H62	23:D:2224:G:H21	1.16	0.88
23:D:2807:G:O6	23:D:2892:A:N7	1.96	0.88
23:D:745:G:H21	23:D:750:A:H61	1.19	0.88
5:I:137:GLU:O	5:I:141:GLN:N	2.05	0.88
17:U:57:VAL:HG12	17:U:76:LEU:HA	1.53	0.88
25:Z:162:GLU:H	25:Z:192:PHE:HE1	1.21	0.88
22:C:17:HIS:HA	22:C:120:LYS:NZ	1.87	0.88
22:C:66:VAL:CG2	22:C:76:TYR:HE1	1.85	0.88
23:D:2631:G:H1	23:D:2787:C:H42	1.19	0.88
22:C:116:GLU:CA	22:C:120:LYS:CE	2.45	0.88
22:C:215:LEU:HD23	22:C:282:LEU:CG	2.04	0.88
23:D:188:G:H1	23:D:208:C:H42	1.20	0.88
54:3:37:PHE:HB3	54:3:66:THR:HG21	0.89	0.88
1:A:664:G:H22	1:A:741:G:H1	1.17	0.88
22:C:156:LEU:HG	22:C:158:LEU:HD13	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:236:GLU:OE1	22:C:267:ALA:CB	2.22	0.88
22:C:301:VAL:HB	22:C:348:PHE:O	1.74	0.88
54:3:37:PHE:CZ	54:3:63:ARG:HG2	2.09	0.88
22:C:246:THR:OG1	22:C:251:VAL:HG23	1.73	0.88
23:D:1408:C:H42	23:D:1594:G:H1	1.22	0.88
23:D:30:G:O6	23:D:510:C:N4	2.06	0.88
14:R:27:CYS:HB3	14:R:43:CYS:HB3	1.51	0.88
1:A:585:G:H1	1:A:756:C:H42	1.22	0.88
22:C:246:THR:HG21	22:C:251:VAL:CG2	2.03	0.88
1:A:1236:A:C5'	1:A:1305:G:OP1	2.20	0.87
22:C:14:ILE:CG2	22:C:105:LEU:HA	2.04	0.87
22:C:200:ILE:CD1	22:C:281:THR:CG2	2.50	0.87
23:D:1007:C:N3	23:D:1135:C:N4	2.20	0.87
23:D:173:G:N7	23:D:174:C:C5	2.41	0.87
54:3:21:PRO:HG2	54:3:22:PRO:HD3	1.57	0.87
22:C:239:VAL:HG21	22:C:267:ALA:CB	1.86	0.87
22:C:411:LYS:HG3	22:C:436:VAL:HG21	1.52	0.87
23:D:1648:C:N3	23:D:2009:G:N2	2.21	0.87
13:Q:86:CYS:HA	19:W:74:PHE:HA	1.54	0.87
22:C:419:GLU:HG3	22:C:446:LYS:NZ	1.89	0.87
22:C:530:ARG:NE	22:C:593:PRO:HB3	1.88	0.87
23:D:151:C:H42	23:D:175:G:H1	1.21	0.87
23:D:1903:G:H2'	23:D:1904:G:H8	1.37	0.87
23:D:270(H):C:O2	23:D:270(R):G:N2	2.06	0.87
13:Q:66:LEU:HD23	13:Q:67:GLU:H	1.38	0.87
17:U:24:GLU:HG3	17:U:39:SER:HA	1.55	0.87
1:A:292:G:N1	1:A:308:C:O2	2.07	0.87
1:A:933:G:H1	1:A:1384:C:H42	1.16	0.87
23:D:742:G:H2'	23:D:743:G:H8	1.38	0.87
23:D:728:G:C6	23:D:762:U:H2'	2.09	0.87
1:A:61:G:N2	1:A:106:C:N3	2.21	0.87
22:C:211:VAL:HG21	22:C:268:ILE:HD12	1.55	0.87
22:C:74:GLU:N	22:C:74:GLU:OE1	2.08	0.87
23:D:2848:G:N1	23:D:2867:G:N3	2.22	0.87
6:J:8:ILE:HB	6:J:61:LEU:HB2	1.56	0.87
56:5:7:A:N6	56:5:66:U:O2	2.05	0.87
22:C:225:GLY:N	22:C:239:VAL:O	2.08	0.87
23:D:1446:C:H42	23:D:1465:G:H1	1.16	0.87
1:A:1309:G:H2'	1:A:1310:G:C5	2.09	0.87
22:C:383:LYS:HZ2	22:C:401:ARG:HB3	1.36	0.87
22:C:492:VAL:CB	22:C:541:ILE:CG2	2.51	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:577:GLN:CA	23:D:1942:C:O2'	2.16	0.87
23:D:642:G:H21	23:D:646:A:H62	1.23	0.87
25:Z:66:HIS:N	25:Z:158:ALA:HB1	1.88	0.87
1:A:951:G:N3	1:A:970:C:O2'	2.08	0.87
22:C:144:ARG:CG	22:C:148:VAL:HG23	2.05	0.87
22:C:338:THR:OG1	22:C:503:ALA:HB1	1.74	0.87
23:D:2630:G:OP2	23:D:2895:U:C5'	2.22	0.87
19:W:5:LEU:HG	19:W:6:LYS:H	1.39	0.87
22:C:115:ALA:HB2	22:C:474:TYR:CD1	2.10	0.86
22:C:324:LYS:HA	22:C:327:ASP:HB2	1.57	0.86
22:C:342:PHE:HD2	22:C:370:ILE:H	1.18	0.86
22:C:531:GLN:HG3	22:C:532:LEU:H	1.39	0.86
23:D:1044:G:O4'	53:2:4:LYS:O	1.93	0.86
23:D:1937:A:N6	23:D:1939:U:O4	2.07	0.86
54:3:37:PHE:CG	54:3:66:THR:CG2	2.57	0.86
1:A:376:G:H2'	1:A:377:G:H8	1.39	0.86
22:C:138:ILE:HB	22:C:167:SER:HG	1.27	0.86
1:A:61:G:H1	1:A:106:C:H42	1.24	0.86
22:C:215:LEU:HB2	22:C:264:LEU:HD11	1.56	0.86
23:D:2106:G:O6	23:D:2184:G:C2	2.27	0.86
54:3:77:LEU:CD2	54:3:111:LYS:CE	2.49	0.86
54:3:77:LEU:HG	54:3:111:LYS:HD2	1.33	0.86
22:C:468:LYS:HA	22:C:473:GLY:HA2	1.56	0.86
22:C:492:VAL:HG21	22:C:508:ALA:HB2	0.86	0.86
1:A:1325:C:H4'	21:Y:17:THR:HG21	1.56	0.86
22:C:198:ALA:H	22:C:280:ILE:HG12	0.75	0.86
22:C:200:ILE:O	22:C:294:PHE:HE2	1.57	0.86
22:C:332:PHE:O	22:C:344:PHE:HD1	1.57	0.86
7:K:106:GLN:HA	7:K:109:ASN:HD22	1.39	0.86
19:W:11:VAL:O	19:W:12:ASP:HB2	1.71	0.86
25:Z:66:HIS:O	25:Z:158:ALA:HB2	1.75	0.86
1:A:507:C:H3'	1:A:508:C:H2'	1.57	0.86
22:C:30:LEU:HB3	22:C:32:LEU:HD23	1.56	0.86
22:C:531:GLN:OE1	22:C:584:LEU:CD1	2.23	0.86
22:C:97:LEU:HD13	22:C:98:ALA:N	1.91	0.86
23:D:1164:G:H1	23:D:1185:C:H42	1.22	0.86
23:D:171:G:O2'	23:D:172:C:H5''	1.74	0.86
23:D:1856:G:H1	23:D:1886:C:H42	1.21	0.86
1:A:245:C:N3	1:A:283:C:N4	2.23	0.86
1:A:455:C:N4	1:A:479:C:N3	2.22	0.86
23:D:834:C:H2'	23:D:835:A:C8	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1114:C:N3	1:A:1186:G:N2	2.23	0.86
22:C:532:LEU:CD2	22:C:555:ARG:N	2.38	0.86
3:G:21:ARG:H	3:G:58:GLU:HG2	1.38	0.86
16:T:2:VAL:HA	16:T:23:ASP:HA	1.55	0.86
22:C:229:ARG:CG	22:C:283:ALA:CB	2.52	0.86
23:D:1332:G:N1	23:D:1609:A:N7	2.24	0.86
23:D:2513:G:H1	23:D:2571:C:H42	1.20	0.86
23:D:2653:U:H3'	23:D:2654:A:H2'	1.58	0.86
23:D:2812:G:H2'	23:D:2813:A:C8	2.11	0.86
11:O:98:LEU:HB3	11:O:105:VAL:HG11	1.58	0.86
13:Q:98:VAL:O	13:Q:100:GLY:N	2.07	0.86
1:A:1163:C:N4	1:A:1173:G:O6	2.08	0.86
22:C:405:ILE:HG12	22:C:489:LEU:CB	2.05	0.86
22:C:418:GLU:H	22:C:446:LYS:HB3	1.40	0.86
22:C:198:ALA:HB1	22:C:215:LEU:HG	1.57	0.85
22:C:418:GLU:HA	22:C:446:LYS:HG3	0.87	0.85
22:C:489:LEU:HA	22:C:509:HIS:HB3	1.56	0.85
22:C:95:ARG:CZ	22:C:202:ASP:OD1	2.24	0.85
23:D:8:A:C4	23:D:2896:C:H1'	2.11	0.85
1:A:1118:C:OP1	9:M:104:ARG:NH1	2.09	0.85
22:C:434:ARG:NH1	22:C:453:GLU:CD	2.27	0.85
22:C:522:ASP:O	22:C:524:LEU:N	2.09	0.85
22:C:492:VAL:CG1	22:C:541:ILE:HD13	2.06	0.85
23:D:1069:A:H4'	23:D:1070:A:H3'	1.57	0.85
23:D:1630:G:H1	23:D:1636:C:H42	1.24	0.85
23:D:1782:C:N4	23:D:2587:A:N1	2.24	0.85
16:T:20:VAL:HG11	16:T:32:TYR:HB2	1.58	0.85
22:C:257:GLU:CB	22:C:260:GLU:HG3	2.06	0.85
22:C:409:TYR:O	22:C:481:GLN:CB	2.24	0.85
22:C:453:GLU:OE2	22:C:482:ALA:O	1.93	0.85
22:C:41:MET:HE3	22:C:45:PHE:CD2	2.10	0.85
22:C:523:LYS:C	22:C:524:LEU:HD22	1.96	0.85
23:D:519:U:H2'	23:D:520:G:H8	1.41	0.85
4:H:205:GLU:O	4:H:209:ARG:NH1	2.09	0.85
11:O:17:GLY:HA2	11:O:35:PRO:HD3	1.58	0.85
1:A:358:U:C5'	22:C:269:ARG:HH22	1.89	0.85
22:C:455:PRO:CG	22:C:458:GLU:HB2	2.06	0.85
22:C:50:GLU:OE2	22:C:53:ARG:NH1	2.08	0.85
23:D:2881:C:H2'	23:D:2882:A:H8	1.41	0.85
24:E:71:C:N3	24:E:105:G:N2	2.24	0.85
22:C:91:TYR:OH	22:C:476:SER:OG	1.94	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:16:HIS:O	2:F:19:HIS:ND1	2.09	0.85
1:A:1322:C:OP2	13:Q:91:ARG:NH1	2.09	0.85
22:C:86:HIS:HA	22:C:116:GLU:OE2	1.76	0.85
23:D:1349:A:H61	23:D:1598:C:H42	1.21	0.85
23:D:962:G:H21	23:D:2250:G:H22	1.24	0.85
23:D:2065:C:N4	23:D:2444:G:O6	2.09	0.85
22:C:328:ALA:HB2	22:C:349:LEU:HD23	1.55	0.85
22:C:41:MET:HA	22:C:45:PHE:CE1	2.12	0.85
22:C:497:HIS:CG	22:C:535:VAL:HG12	1.92	0.85
23:D:20:C:H2'	23:D:21:A:H8	1.41	0.85
23:D:574:C:H1'	23:D:2055:C:H41	1.40	0.85
22:C:299:PRO:CG	22:C:348:PHE:HD2	1.90	0.85
22:C:489:LEU:HB3	22:C:507:ILE:HG22	1.30	0.85
22:C:66:VAL:H	22:C:76:TYR:HE1	1.19	0.85
23:D:1779:U:O2'	23:D:1783:A:N6	2.09	0.85
1:A:1480:G:H2'	1:A:1481:U:H6	1.41	0.85
1:A:1405:G:N2	1:A:1496:C:N3	2.25	0.85
1:A:541:G:H2'	1:A:542:G:H8	1.42	0.85
1:A:582:U:O4	1:A:760:G:N1	2.08	0.85
22:C:431:LYS:HB2	22:C:458:GLU:OE1	1.75	0.85
55:4:30:G:H1	55:4:40:C:H42	1.23	0.85
22:C:169:LYS:HE2	57:C:701:GCP:C2	2.06	0.85
23:D:1039:G:N7	23:D:1117:G:N1	2.24	0.85
23:D:576:U:O2'	23:D:2502:G:N7	2.10	0.85
22:C:41:MET:HB3	22:C:45:PHE:CE1	2.09	0.84
22:C:490:VAL:HG12	22:C:508:ALA:O	1.76	0.84
13:Q:54:VAL:O	13:Q:58:GLU:HG2	1.77	0.84
1:A:987:G:H1	1:A:1218:C:H42	1.21	0.84
22:C:205:TYR:HH	22:C:323:LEU:HG	1.35	0.84
22:C:30:LEU:HD23	22:C:66:VAL:HG12	1.57	0.84
23:D:2303:G:N2	23:D:2313:C:N3	2.26	0.84
22:C:477:MET:HE1	22:C:479:TYR:CD2	2.12	0.84
23:D:1085:A:H5''	23:D:1106:G:N7	1.92	0.84
22:C:197:LYS:C	22:C:280:ILE:HG12	1.96	0.84
22:C:418:GLU:CA	22:C:446:LYS:CD	2.55	0.84
23:D:1064:C:O5'	54:3:88:ALA:HA	1.78	0.84
23:D:152:G:N1	23:D:175:G:C4	2.45	0.84
1:A:373:A:H61	1:A:391:G:H1'	1.43	0.84
22:C:177:ILE:O	22:C:181:ILE:HG13	1.77	0.84
22:C:535:VAL:HG22	22:C:585:LYS:CE	2.01	0.84
23:D:2052:G:H2'	23:D:2053:G:H8	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2060:A:O2'	23:D:2502:G:OP2	1.96	0.84
23:D:582:G:H2'	23:D:583:G:C8	2.12	0.84
22:C:106:VAL:CG2	22:C:136:ASN:ND2	2.40	0.84
23:D:572:A:H61	23:D:2029:G:H21	1.25	0.84
23:D:715:G:N3	23:D:716:A:N6	2.25	0.84
1:A:529:G:N1	12:P:49:ASN:OD1	2.09	0.84
16:T:4:ILE:O	16:T:67:THR:OG1	1.95	0.84
25:Z:161:ILE:HD11	25:Z:163:PHE:CE2	1.98	0.84
25:Z:40:THR:O	25:Z:216:THR:HG22	1.77	0.84
22:C:236:GLU:OE1	22:C:267:ALA:HB1	1.77	0.84
22:C:4:MET:CE	22:C:8:ARG:HG3	2.07	0.84
22:C:95:ARG:NH2	22:C:202:ASP:CB	2.40	0.84
23:D:1101:U:C4	23:D:1102:C:C2	2.65	0.84
23:D:1747:G:H2'	23:D:1748:G:H8	1.43	0.84
23:D:1801:G:N1	23:D:2206:C:O2'	2.09	0.84
23:D:662:G:H2'	23:D:663:G:H8	1.39	0.84
23:D:785:G:H2'	23:D:786:C:H6	1.41	0.84
25:Z:66:HIS:N	25:Z:158:ALA:C	2.31	0.84
22:C:139:ASP:O	22:C:143:ALA:HB3	1.77	0.84
22:C:301:VAL:HG22	22:C:464:HIS:NE2	1.93	0.84
14:R:25:VAL:HG13	14:R:26:ARG:HG3	1.60	0.84
1:A:1347:G:N2	1:A:1374:A:OP2	2.09	0.84
22:C:106:VAL:HB	22:C:136:ASN:HB2	1.57	0.84
23:D:1208:C:N3	23:D:1238:G:N1	2.26	0.84
23:D:49:A:N6	23:D:176:G:O6	2.11	0.84
1:A:1034:G:N2	1:A:1035:A:N7	2.25	0.84
22:C:6:LEU:HD11	22:C:192:PRO:HB3	0.87	0.84
23:D:1957:C:H2'	23:D:1958:C:C6	2.13	0.84
12:P:102:ARG:HH12	12:P:110:VAL:HG13	1.41	0.84
1:A:1391:U:H2'	1:A:1392:G:H8	1.42	0.83
23:D:1793:C:N3	23:D:1826:G:N2	2.24	0.83
23:D:939:G:H2'	23:D:940:G:C8	2.13	0.83
24:E:11:C:O2	24:E:15:A:N6	2.11	0.83
8:L:95:VAL:HG13	8:L:133:LEU:HD11	1.60	0.83
13:Q:65:LYS:HD3	13:Q:73:GLU:CG	2.07	0.83
19:W:11:VAL:CG1	19:W:38:SER:OG	2.24	0.83
22:C:180:ALA:HA	22:C:183:GLN:CG	2.08	0.83
22:C:328:ALA:CB	22:C:349:LEU:CD2	2.53	0.83
22:C:419:GLU:CB	22:C:446:LYS:HZ3	1.91	0.83
23:D:16:G:H2'	23:D:17:G:H8	1.43	0.83
23:D:1846:G:N2	23:D:1894:C:N3	2.26	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1255:G:OP2	10:N:45:ARG:NH2	2.11	0.83
25:Z:68:LEU:O	25:Z:157:LYS:C	2.17	0.83
54:3:112:MET:H	54:3:113:PRO:HD3	1.42	0.83
54:3:55:VAL:HA	54:3:69:THR:HA	1.60	0.83
22:C:86:HIS:CA	22:C:116:GLU:OE2	2.25	0.83
22:C:137:LYS:H	22:C:168:GLY:N	1.76	0.83
22:C:211:VAL:HG23	22:C:268:ILE:CD1	2.00	0.83
22:C:215:LEU:HD21	22:C:280:ILE:O	1.77	0.83
23:D:226:G:H2'	23:D:227:A:H8	1.43	0.83
23:D:554:U:H2'	23:D:556:G:H8	1.43	0.83
1:A:962:C:H1'	1:A:1201:A:H61	1.43	0.83
1:A:474:G:H3'	16:T:75:ARG:HH21	1.43	0.83
1:A:571:U:O4	1:A:866:C:N4	2.09	0.83
22:C:328:ALA:CB	22:C:349:LEU:HD22	2.04	0.83
23:D:2551:C:H42	23:D:2557:G:H1	1.23	0.83
23:D:642:G:N2	23:D:646:A:H62	1.76	0.83
1:A:369:C:N4	1:A:391:G:O6	2.11	0.83
22:C:206:ASP:OD2	22:C:211:VAL:HG22	1.78	0.83
22:C:198:ALA:O	22:C:215:LEU:HD21	1.78	0.83
22:C:95:ARG:HB3	22:C:294:PHE:CZ	2.13	0.83
54:3:78:ILE:CG1	54:3:111:LYS:HB3	2.07	0.83
22:C:492:VAL:HG13	22:C:541:ILE:CD1	2.08	0.83
22:C:69:ARG:CG	22:C:178:LEU:CD1	2.53	0.83
23:D:153:C:N4	23:D:154:G:O6	2.11	0.83
23:D:1859:A:N6	23:D:1883:G:O2'	2.11	0.83
23:D:2276:G:H2'	23:D:2277:G:H8	1.43	0.83
23:D:279:C:N4	23:D:359:A:N3	2.25	0.83
1:A:1454:G:H2'	1:A:1455:G:H8	1.44	0.83
22:C:453:GLU:OE2	22:C:482:ALA:C	2.17	0.83
22:C:492:VAL:CB	22:C:541:ILE:HG23	2.08	0.83
25:Z:155:GLU:CB	25:Z:160:ARG:HB2	2.07	0.83
55:4:6:G:H1	55:4:67:C:H42	1.20	0.83
1:A:1129:C:N4	1:A:1142:G:O6	2.11	0.83
22:C:198:ALA:HB1	22:C:215:LEU:CD2	2.07	0.83
22:C:92:GLU:CD	22:C:326:ASN:OD1	2.17	0.83
22:C:556:LYS:HD2	23:D:1943:U:O3'	1.77	0.83
23:D:1105:U:O2'	23:D:1107:G:OP2	1.97	0.83
23:D:2691:C:H6	23:D:2872:G:H22	1.27	0.83
1:A:1238:A:OP2	1:A:1300:G:N2	2.12	0.83
1:A:672:U:O2	1:A:735:C:N4	2.12	0.83
22:C:91:TYR:HH	22:C:476:SER:HG	1.26	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:506:PHE:C	22:C:507:ILE:HG13	1.98	0.83
23:D:1947:C:H42	23:D:1959:G:H1	1.26	0.83
23:D:226:G:H2'	23:D:227:A:C8	2.14	0.83
23:D:2521:C:N4	23:D:2544:G:O6	2.12	0.83
23:D:83:G:N1	23:D:102:G:N3	2.27	0.83
23:D:946:G:O6	23:D:972:G:N2	2.11	0.83
25:Z:62:VAL:CG1	25:Z:161:ILE:HG12	2.09	0.83
23:D:1059:G:C8	54:3:126:MET:SD	2.72	0.83
1:A:368:U:H1'	22:C:209:GLN:HE22	1.44	0.83
22:C:301:VAL:CG2	22:C:464:HIS:CD2	2.61	0.83
22:C:376:VAL:HG21	22:C:378:TYR:OH	1.78	0.83
22:C:95:ARG:NH2	22:C:202:ASP:CG	2.31	0.83
23:D:201:C:O3'	23:D:386:G:N2	2.12	0.83
1:A:1308:U:H3'	13:Q:99:ARG:HH22	1.38	0.83
1:A:1418:A:N6	1:A:1482:G:HO2'	1.77	0.82
22:C:216:ARG:HG2	22:C:260:GLU:O	1.78	0.82
23:D:2053:G:H2'	23:D:2054:A:C8	2.14	0.82
23:D:2739:U:H3	23:D:2766:G:H1	1.22	0.82
23:D:647:G:H2'	23:D:648:G:C8	2.13	0.82
1:A:1224:G:C2'	13:Q:102:ARG:CG	2.57	0.82
13:Q:66:LEU:HA	13:Q:70:LEU:HD13	1.61	0.82
1:A:445:G:N1	1:A:489:C:N3	2.26	0.82
1:A:66:G:N1	1:A:103:C:N3	2.27	0.82
22:C:198:ALA:HB1	22:C:215:LEU:CG	2.10	0.82
22:C:70:ALA:O	22:C:72:ASP:N	2.12	0.82
22:C:8:ARG:HB3	22:C:77:VAL:HG21	1.61	0.82
13:Q:24:GLY:HA3	13:Q:66:LEU:HD21	1.61	0.82
54:3:78:ILE:O	54:3:108:ALA:HB2	1.79	0.82
23:D:1728:G:H22	23:D:1731:G:H22	1.27	0.82
23:D:2090:G:H1	23:D:2229:C:H42	1.25	0.82
23:D:270(E):G:N1	23:D:270(U):C:N3	2.26	0.82
23:D:413:C:H42	23:D:2410:G:H1	1.23	0.82
23:D:847:U:OP2	23:D:929:G:N1	2.12	0.82
3:G:36:ASP:OD2	3:G:40:ARG:NH1	2.12	0.82
1:A:198:G:H2'	1:A:199:G:C8	2.14	0.82
22:C:11:ASN:HA	22:C:100:VAL:CG1	2.09	0.82
22:C:97:LEU:HD11	22:C:123:MET:CB	2.10	0.82
22:C:562:CYS:HA	23:D:2602:A:C6	2.14	0.82
24:E:21:G:N2	24:E:62:C:N3	2.27	0.82
1:A:8:A:H8	5:I:101:ILE:HG23	1.45	0.82
1:A:673:G:H2'	1:A:674:G:C8	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:106:VAL:HG21	22:C:136:ASN:CG	1.98	0.82
23:D:81:G:H1	23:D:105:C:H42	1.24	0.82
23:D:1350:C:H42	23:D:1381:G:H1	1.26	0.82
18:V:47:THR:HB	18:V:49:LYS:HG3	1.62	0.82
1:A:186(B):C:N3	1:A:191(E):G:N2	2.27	0.82
22:C:63:ALA:CA	22:C:245:PHE:CB	2.48	0.82
22:C:97:LEU:CD1	22:C:123:MET:HB3	2.09	0.82
23:D:1341:U:OP1	23:D:1602:U:N3	2.12	0.82
23:D:642:G:H21	23:D:646:A:N6	1.76	0.82
5:I:33:VAL:HG22	5:I:43:LEU:HA	1.62	0.82
25:Z:161:ILE:HD11	25:Z:163:PHE:HD2	1.43	0.82
23:D:2178:C:O2'	25:Z:210:ARG:NH2	2.13	0.82
22:C:280:ILE:HG22	22:C:282:LEU:HD12	1.61	0.82
22:C:434:ARG:NH1	22:C:453:GLU:CB	2.42	0.82
23:D:2749:A:H62	23:D:2753:A:H61	1.23	0.82
23:D:29:U:H2'	23:D:30:G:H8	1.43	0.82
23:D:531:C:C2	23:D:532:A:H1'	2.14	0.82
1:A:941:G:N2	1:A:1342:C:O2	2.11	0.82
23:D:2761:G:H2'	23:D:2762:G:H8	1.45	0.82
23:D:602:G:N2	23:D:656:G:OP2	2.11	0.82
1:A:64:G:N2	1:A:68:G:O6	2.13	0.82
22:C:440:TYR:CD1	22:C:448:VAL:HG13	2.14	0.82
23:D:1174:A:N6	23:D:1176:G:N7	2.28	0.82
23:D:85:G:N2	23:D:97:C:N3	2.28	0.82
22:C:119:ALA:HA	22:C:122:TYR:CD2	2.15	0.81
22:C:494:VAL:HA	22:C:539:ALA:CA	2.09	0.81
22:C:495:LEU:CD1	22:C:540:ALA:HB2	2.10	0.81
23:D:270(K):C:N4	23:D:270(O):U:OP1	2.13	0.81
2:F:60:ASP:OD1	2:F:64:ARG:NH1	2.12	0.81
25:Z:155:GLU:HB3	25:Z:160:ARG:CB	2.06	0.81
54:3:108:ALA:O	54:3:109:LYS:HG2	1.80	0.81
1:A:1411:C:N3	1:A:1489:G:N2	2.28	0.81
1:A:1418:A:N6	1:A:1482:G:O2'	2.12	0.81
22:C:496:VAL:N	22:C:537:ILE:HG23	1.94	0.81
22:C:79:HIS:CD2	22:C:100:VAL:HG13	2.16	0.81
9:M:10:ARG:HD3	23:D:1251:C:H5'	172.52	0.81
23:D:69:C:H2'	23:D:70:G:C8	2.15	0.81
23:D:759:G:H2'	23:D:760:G:C8	2.15	0.81
1:A:1128:C:O2	1:A:1146:A:N6	2.12	0.81
1:A:988:G:N1	1:A:1217:C:O2	2.12	0.81
1:A:986:A:N3	19:W:56:GLN:NE2	2.28	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:10:ARG:HG2	22:C:185:ILE:HG22	1.62	0.81
23:D:1949:G:H2'	23:D:1950:G:C8	2.14	0.81
23:D:2026:C:N4	23:D:2037:G:O6	2.12	0.81
25:Z:47:LEU:HD23	25:Z:171:ILE:HB	1.63	0.81
22:C:144:ARG:HG3	22:C:147:GLU:HB3	1.60	0.81
22:C:180:ALA:HA	22:C:183:GLN:HG3	1.62	0.81
22:C:198:ALA:CB	22:C:282:LEU:HD12	2.10	0.81
22:C:408:PRO:O	22:C:409:TYR:CG	2.33	0.81
23:D:1668:A:N7	23:D:1674:G:N2	2.28	0.81
23:D:2106:G:N1	23:D:2184:G:C4	2.48	0.81
23:D:2549:G:H2'	23:D:2550:G:H8	1.44	0.81
12:P:9:GLN:HG2	12:P:12:ARG:HH21	1.44	0.81
1:A:1061:G:H1	1:A:1195:C:H42	1.25	0.81
22:C:63:ALA:HA	22:C:245:PHE:HB3	1.61	0.81
22:C:242:VAL:HG22	22:C:263:TRP:O	1.80	0.81
22:C:36:VAL:O	22:C:37:SER:OG	1.99	0.81
22:C:418:GLU:C	22:C:446:LYS:CD	2.47	0.81
23:D:1030:G:O6	23:D:1125:G:N2	2.13	0.81
23:D:1425:G:H2'	23:D:1426:G:H8	1.45	0.81
23:D:1306:C:N4	23:D:1623:G:O6	2.12	0.81
23:D:2451:A:P	23:D:2497:A:H61	2.02	0.81
9:M:121:ARG:NH1	9:M:122:ALA:O	2.11	0.81
1:A:1008:C:N4	1:A:1021:G:O6	2.11	0.81
22:C:489:LEU:HD23	22:C:507:ILE:CB	2.11	0.81
22:C:530:ARG:HD2	22:C:593:PRO:HG3	1.61	0.81
23:D:108:U:H2'	23:D:109:G:C8	2.15	0.81
23:D:1478:G:N1	23:D:1515:C:N3	2.27	0.81
23:D:185:U:H2'	23:D:186:G:C8	2.16	0.81
23:D:288:C:C4	23:D:289:A:H1'	2.16	0.81
23:D:411:G:N2	23:D:2407:G:N7	2.28	0.81
23:D:662:G:H2'	23:D:663:G:C8	2.16	0.81
22:C:484:TYR:HB3	22:C:485:ARG:CZ	2.10	0.81
23:D:1043:C:O3'	23:D:1044:G:H8	1.64	0.81
23:D:2553:G:N2	23:D:2554:U:O2	2.13	0.81
23:D:2810:A:N6	23:D:2891:G:H22	1.79	0.81
23:D:494:G:H2'	23:D:495:G:H8	1.46	0.81
22:C:34:HIS:CE1	22:C:247:PRO:CB	2.62	0.81
22:C:535:VAL:HG23	22:C:591:GLU:OE2	1.78	0.81
23:D:1057:A:H5''	23:D:1060:U:O4	1.81	0.81
23:D:1443:G:H2'	23:D:1444:G:H8	1.45	0.81
7:K:57:GLU:O	7:K:61:VAL:N	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1358:G:H21	23:D:1373:A:H62	1.24	0.81
2:F:129:GLU:O	2:F:135:GLN:NE2	2.13	0.81
3:G:182:ILE:HG12	3:G:203:PHE:HA	1.63	0.81
12:P:10:LEU:O	12:P:14:GLY:N	2.14	0.81
1:A:343:U:O2	1:A:346:G:N1	2.13	0.81
1:A:690:G:H2'	1:A:691:G:C8	2.15	0.81
22:C:189:LYS:HE3	22:C:219:GLU:CG	2.10	0.81
22:C:225:GLY:HA2	22:C:239:VAL:H	1.43	0.81
23:D:153:C:N3	23:D:154:G:N7	2.28	0.81
10:N:23:ILE:HG23	10:N:85:LEU:HD11	1.62	0.81
54:3:27:LEU:O	54:3:31:GLY:N	2.14	0.81
1:A:1128:C:N4	1:A:1143:G:O6	2.14	0.81
1:A:657:G:N2	1:A:749:C:O2	2.14	0.81
22:C:28:ARG:HE	22:C:28:ARG:HA	1.44	0.81
23:D:1151:G:H2'	23:D:1152:C:H6	1.45	0.81
23:D:1728:G:N2	23:D:1730:U:O2	2.14	0.81
23:D:1769:G:H2'	23:D:1770:G:H8	1.45	0.81
23:D:1658:C:H42	23:D:2002:G:H1	1.26	0.81
13:Q:16:ASP:HB2	13:Q:30:ALA:HB1	1.61	0.81
22:C:411:LYS:CG	22:C:436:VAL:HG21	2.11	0.80
22:C:507:ILE:O	22:C:509:HIS:ND1	2.14	0.80
22:C:98:ALA:CA	22:C:127:HIS:CE1	2.64	0.80
23:D:1059:G:C6	54:3:126:MET:O	2.34	0.80
23:D:1518:C:H2'	23:D:1519:G:H5''	1.63	0.80
23:D:1444:G:N1	23:D:1547:C:N3	2.29	0.80
23:D:2522:U:O2	23:D:2544:G:N2	2.14	0.80
23:D:273(B):C:N3	23:D:363(D):G:N1	2.29	0.80
3:G:20:SER:HB2	3:G:40:ARG:HH22	1.46	0.80
16:T:7:ALA:H	16:T:18:ARG:H	1.27	0.80
1:A:1016:A:H3'	1:A:1017:G:C8	2.16	0.80
1:A:1376:U:OP2	7:K:94:ARG:NH2	2.11	0.80
23:D:2720:U:N3	23:D:2872:G:N7	2.29	0.80
23:D:271:G:O6	23:D:366:C:N4	2.13	0.80
1:A:1154:G:H2'	1:A:1155:G:H8	1.45	0.80
23:D:172:C:H3'	23:D:173:G:C8	2.17	0.80
16:T:6:LEU:HB2	16:T:17:TYR:HB3	1.60	0.80
25:Z:68:LEU:O	25:Z:157:LYS:CA	2.30	0.80
1:A:237:C:OP1	17:U:40:LYS:NZ	2.13	0.80
1:A:358:U:H2'	1:A:359:U:H6	1.46	0.80
22:C:172:GLU:O	22:C:175:GLU:HG2	1.81	0.80
22:C:246:THR:HB	22:C:247:PRO:CD	2.10	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:231:TYR:CZ	22:C:279:THR:HG21	2.15	0.80
22:C:95:ARG:CB	22:C:294:PHE:CZ	2.64	0.80
22:C:434:ARG:NH1	22:C:453:GLU:OE1	2.14	0.80
22:C:409:TYR:HB3	22:C:453:GLU:HG3	1.63	0.80
22:C:543:GLY:HA3	22:C:544:LYS:O	1.80	0.80
23:D:1527:G:H2'	23:D:1528:A:C5	2.16	0.80
22:C:86:HIS:HE2	23:D:2661:G:HO2'	1.27	0.80
23:D:554:U:H2'	23:D:556:G:C8	2.16	0.80
23:D:636:G:H4'	23:D:638:G:H4'	1.63	0.80
9:M:112:LYS:HE2	9:M:117:HIS:HA	1.63	0.80
19:W:23:ASN:ND2	19:W:43:GLU:OE2	2.14	0.80
25:Z:161:ILE:HD12	25:Z:192:PHE:CE1	2.17	0.80
1:A:1224:G:C1'	13:Q:102:ARG:HG2	2.11	0.80
1:A:450:G:H3'	1:A:481:G:H22	1.45	0.80
1:A:962:C:O2	1:A:974:A:N6	2.14	0.80
22:C:166:ALA:HA	22:C:172:GLU:HB2	1.63	0.80
22:C:415:PHE:HE1	22:C:447:ARG:CD	1.89	0.80
22:C:6:LEU:HD11	22:C:192:PRO:CA	2.11	0.80
23:D:150:C:O2'	23:D:151:C:O4'	2.00	0.80
23:D:1709:U:O2	23:D:2859:G:N2	2.14	0.80
23:D:1455:G:O6	23:D:2703:C:N4	2.15	0.80
23:D:751:A:N6	23:D:789:A:N7	2.30	0.80
24:E:31:C:O2	24:E:53:A:N6	2.15	0.80
23:D:2432:A:H1'	56:5:75:C:H1'	1.64	0.80
1:A:1224:G:N2	1:A:1362(A):C:N3	2.28	0.80
22:C:332:PHE:CE1	22:C:344:PHE:CZ	2.63	0.80
23:D:463:G:N2	23:D:466:A:OP2	2.14	0.80
23:D:533:G:N3	23:D:561:G:N2	2.30	0.80
23:D:960:A:H2'	23:D:962:G:H8	1.45	0.80
11:O:79:SER:HA	11:O:104:GLN:HB3	1.61	0.80
22:C:102:GLY:CA	22:C:129:HIS:HB3	2.11	0.80
22:C:6:LEU:HD13	22:C:192:PRO:N	1.96	0.80
22:C:493:ASN:CA	22:C:505:THR:HG21	2.07	0.80
23:D:2106:G:C2	23:D:2184:G:N3	2.49	0.80
23:D:840:C:H2'	23:D:841:A:H8	1.44	0.80
2:F:115:LEU:HD13	2:F:145:LEU:HD21	1.62	0.80
4:H:200:GLU:HG3	4:H:201:GLN:H	1.47	0.80
22:C:10:ARG:NH1	22:C:182:VAL:HG13	1.97	0.80
22:C:203:SER:HB3	22:C:325:LEU:HD13	1.62	0.80
22:C:494:VAL:CA	22:C:539:ALA:HA	2.10	0.80
22:C:95:ARG:HD2	22:C:294:PHE:HZ	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1731:G:H21	23:D:1733:G:H1	1.29	0.80
23:D:2631:G:H5''	23:D:2894:G:C5	2.17	0.80
23:D:2846:G:H1	23:D:2870:C:H42	1.29	0.80
23:D:775:G:H4'	23:D:777:A:C8	2.17	0.80
19:W:5:LEU:HG	19:W:6:LYS:N	1.96	0.80
54:3:12:LEU:HD22	54:3:23:VAL:HG22	1.64	0.80
1:A:1411:C:H42	1:A:1489:G:H1	1.28	0.80
22:C:131:ILE:CD1	22:C:158:LEU:HD21	2.12	0.80
22:C:131:ILE:HD13	22:C:158:LEU:HD21	1.62	0.80
22:C:242:VAL:HG21	22:C:256:LEU:CD1	2.11	0.80
22:C:28:ARG:HH21	22:C:32:LEU:HD21	1.47	0.80
22:C:404:GLU:C	22:C:405:ILE:HD12	2.02	0.80
22:C:41:MET:HE3	22:C:45:PHE:HB3	1.64	0.80
22:C:441:LEU:HD11	22:C:449:GLU:OE2	1.82	0.80
22:C:49:LEU:HD21	22:C:59:ILE:HD12	1.64	0.80
25:Z:42:GLU:CA	25:Z:175:VAL:CG2	2.26	0.80
1:A:265:G:H4'	17:U:66:SER:H	1.46	0.80
22:C:402:ILE:HG12	22:C:491:LYS:HZ2	1.46	0.80
22:C:35:ALA:HB1	22:C:41:MET:CG	2.11	0.80
22:C:28:ARG:HD2	22:C:41:MET:SD	2.21	0.80
22:C:530:ARG:HD2	22:C:593:PRO:CG	2.12	0.80
23:D:2369:A:H2'	23:D:2370:G:H8	1.46	0.80
25:Z:155:GLU:CB	25:Z:160:ARG:HD2	2.07	0.80
1:A:597:G:O6	1:A:643:C:N4	2.14	0.79
22:C:239:VAL:HG13	22:C:266:ALA:CA	2.12	0.79
22:C:410:VAL:HG21	22:C:479:TYR:CE1	2.17	0.79
22:C:504:LEU:O	22:C:505:THR:OG1	2.00	0.79
23:D:16:G:H2'	23:D:17:G:C8	2.17	0.79
23:D:1050:A:N1	23:D:2751:G:N1	2.30	0.79
23:D:29:U:O4	23:D:510:C:N4	2.15	0.79
1:A:260:G:H5''	20:X:80:ARG:HH22	1.46	0.79
54:3:32:ALA:CB	54:3:63:ARG:HH21	1.95	0.79
1:A:246:A:H62	1:A:281:G:H21	1.28	0.79
22:C:17:HIS:ND1	22:C:116:GLU:HB2	1.97	0.79
22:C:407:GLU:O	22:C:483:GLY:O	1.98	0.79
22:C:41:MET:HE3	22:C:45:PHE:CG	2.17	0.79
22:C:490:VAL:O	22:C:507:ILE:CG2	2.29	0.79
23:D:956:G:N2	23:D:962:G:O6	2.15	0.79
1:A:972:C:H4'	10:N:57:LYS:HD3	1.64	0.79
22:C:30:LEU:HD12	22:C:69:ARG:NH1	1.96	0.79
22:C:98:ALA:HB2	22:C:127:HIS:ND1	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1045:A:H4'	23:D:1046:A:H5'	1.63	0.79
23:D:1224:G:C2	23:D:1225:C:C2	2.71	0.79
23:D:1394:U:H4'	23:D:1603:A:H4'	1.64	0.79
23:D:2168:G:N1	23:D:2171:A:OP 2	2.15	0.79
2:F:204:ASN:ND2	2:F:207:ALA:O	2.11	0.79
5:I:31:LEU:HD12	5:I:45:PHE:HB3	1.63	0.79
1:A:1224:G:C1'	13:Q:102:ARG:CG	2.61	0.79
1:A:1415:G:H2'	1:A:1416:G:H8	1.47	0.79
1:A:641:U:O2'	1:A:642:A:N7	2.15	0.79
22:C:104:LEU:HG	22:C:132:ILE:HG21	1.65	0.79
23:D:1408:C:N3	23:D:1594:G:N2	2.30	0.79
23:D:965:C:H2'	23:D:966:G:H8	1.47	0.79
8:L:101:PRO:HB2	8:L:103:VAL:HG13	1.64	0.79
13:Q:48:LEU:HB3	13:Q:53:VAL:HG21	1.62	0.79
1:A:1025:U:H3	1:A:1036:G:H1	1.30	0.79
22:C:493:ASN:CB	22:C:505:THR:HG21	2.12	0.79
23:D:2106:G:N1	23:D:2184:G:C2	2.42	0.79
23:D:2469:A:H3'	23:D:2470:G:H8	1.47	0.79
23:D:2718:G:H2'	23:D:2719:G:C8	2.17	0.79
23:D:2739:U:O2	23:D:2766:G:N2	2.14	0.79
23:D:381:G:H2'	23:D:382:G:H8	1.47	0.79
1:A:60:A:N7	1:A:111:G:N2	2.29	0.79
1:A:1296:C:H4'	13:Q:13:LYS:HG2	1.64	0.79
1:A:1300:G:O2'	1:A:1303:C:N4	2.16	0.79
1:A:1427:U:H2'	1:A:1428:A:H8	1.48	0.79
1:A:690:G:N2	1:A:697:U:O4	2.16	0.79
1:A:929:G:H1	1:A:1388:C:H42	1.27	0.79
23:D:2471:C:H42	23:D:2479:G:H1	1.28	0.79
23:D:270(E):G:N2	23:D:270(U):C:O2	2.15	0.79
23:D:974(A):C:H42	23:D:989:G:H1	1.28	0.79
18:V:51:LEU:HD23	18:V:55:ARG:HG3	1.63	0.79
22:C:15:ILE:CG1	22:C:103:VAL:CG1	2.58	0.79
22:C:14:ILE:HG22	22:C:105:LEU:HA	1.65	0.79
22:C:140:LEU:HD21	22:C:143:ALA:HB2	1.65	0.79
22:C:30:LEU:HB3	22:C:32:LEU:CD2	2.13	0.79
22:C:435:LEU:CA	22:C:452:TYR:HE1	1.80	0.79
23:D:1042:G:N1	23:D:1113:U:O2	2.15	0.79
23:D:1073:A:N6	23:D:1074:G:O6	2.16	0.79
23:D:1903:G:H2'	23:D:1904:G:C8	2.18	0.79
23:D:270(D):C:H42	23:D:270(V):G:H1	1.30	0.79
23:D:2811:G:C6	23:D:2812:G:N7	2.51	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:476:G:N2	23:D:479:A:OP2	2.14	0.79
23:D:648:G:H2'	23:D:649:G:H5'	1.65	0.79
23:D:931:G:C8	23:D:932:G:H1'	2.18	0.79
15:S:70:LEU:HG	15:S:78:TYR:HD1	1.47	0.79
54:3:109:LYS:HG2	54:3:110:GLN:H	1.48	0.79
1:A:1055:A:N1	1:A:1205:U:O2'	2.16	0.79
1:A:10:A:H8	5:I:126:ARG:HH12	1.30	0.79
22:C:27:ASP:O	22:C:41:MET:CE	2.30	0.79
22:C:413:THR:OG1	22:C:478:ASP:O	2.00	0.79
23:D:2707:G:H2'	23:D:2708:G:H8	1.47	0.79
23:D:447:A:O2'	23:D:449:A:N1	2.16	0.79
23:D:60:G:N2	23:D:74:A:O4'	2.16	0.79
23:D:939:G:H2'	23:D:940:G:H8	1.44	0.79
10:N:41:PRO:O	10:N:69:ASN:ND2	2.15	0.79
12:P:57:LYS:HG2	12:P:67:THR:HG22	1.65	0.79
17:U:58:GLU:HG2	17:U:74:LEU:HB3	1.65	0.79
6:J:50:TYR:OH	18:V:74:ARG:O	1.99	0.79
22:C:279:THR:O	22:C:281:THR:HG23	1.82	0.79
22:C:332:PHE:HA	22:C:344:PHE:CD1	2.16	0.79
22:C:42:ARG:NE	22:C:53:ARG:NH1	2.26	0.79
23:D:1440:G:H2'	23:D:1441:G:C8	2.18	0.79
23:D:2182:G:O6	23:D:2183:C:N4	2.16	0.79
24:E:55:U:H2'	24:E:56:G:H8	1.47	0.79
19:W:16:LEU:HA	19:W:19:VAL:HG12	1.63	0.79
22:C:20:HIS:CG	22:C:108:ASP:OD1	2.36	0.79
22:C:239:VAL:HG22	22:C:267:ALA:N	1.96	0.79
23:D:1084:A:O3'	23:D:1106:G:C8	2.36	0.79
1:A:1441:G:H4'	1:A:1442:G:C8	2.18	0.78
22:C:137:LYS:N	22:C:168:GLY:N	2.30	0.78
22:C:27:ASP:O	22:C:41:MET:HE1	1.83	0.78
22:C:60:LYS:HZ1	22:C:326:ASN:ND2	1.77	0.78
22:C:495:LEU:CD2	22:C:538:GLN:HG2	1.96	0.78
23:D:1780:A:H5'	23:D:1781:C:H3'	1.66	0.78
6:J:33:TYR:HD1	6:J:71:ARG:HB3	1.48	0.78
9:M:10:ARG:NH2	9:M:75:ASP:OD2	2.16	0.78
11:O:25:TYR:OH	11:O:87:THR:OG1	2.01	0.78
54:3:77:LEU:HD21	54:3:111:LYS:HZ2	1.46	0.78
54:3:32:ALA:HB1	54:3:63:ARG:HH21	1.47	0.78
55:4:3:C:N4	55:4:4:G:O6	2.16	0.78
1:A:445:G:N2	1:A:489:C:O2	2.17	0.78
1:A:780:A:N6	1:A:801:U:OP2	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:215:LEU:HG	22:C:216:ARG:H	1.48	0.78
22:C:246:THR:OG1	22:C:251:VAL:CG2	2.31	0.78
22:C:495:LEU:N	22:C:539:ALA:HA	1.96	0.78
22:C:532:LEU:HB3	22:C:555:ARG:N	1.99	0.78
23:D:1059:G:O6	23:D:1080:C:O2	2.01	0.78
23:D:2513:G:N2	23:D:2571:C:N3	2.30	0.78
23:D:532:A:N6	23:D:561:G:N3	2.30	0.78
8:L:8:ASP:O	8:L:11:THR:OG1	2.00	0.78
1:A:1099:G:H4'	1:A:1542:U:H4'	1.65	0.78
22:C:242:VAL:HG13	22:C:263:TRP:N	1.97	0.78
22:C:215:LEU:CD2	22:C:282:LEU:HD11	2.05	0.78
22:C:330:LEU:HD11	22:C:344:PHE:O	1.83	0.78
1:A:1224:G:O4'	13:Q:102:ARG:HG2	1.82	0.78
13:Q:4:ILE:O	13:Q:6:GLY:N	2.16	0.78
25:Z:123:VAL:HG13	25:Z:127:LEU:HD12	1.66	0.78
25:Z:66:HIS:H	25:Z:158:ALA:C	1.85	0.78
25:Z:160:ARG:O	25:Z:161:ILE:HG13	1.82	0.78
1:A:148:G:H2'	1:A:149:A:H8	1.46	0.78
1:A:1516:G:N2	1:A:1519:A:OP2	2.16	0.78
1:A:159:G:N2	1:A:162:A:OP2	2.16	0.78
1:A:404:U:N3	1:A:497:U:O4	2.15	0.78
1:A:50:A:O2'	1:A:52:G:O4'	2.02	0.78
1:A:581:G:H1	1:A:758:G:H2'	1.47	0.78
1:A:775:G:N2	1:A:804:U:O4	2.17	0.78
23:D:155:C:H2'	23:D:161:U:H3'	1.66	0.78
23:D:193:U:O4	23:D:202:U:N3	2.16	0.78
23:D:2337:G:H2'	23:D:2338:G:H8	1.48	0.78
23:D:2530:A:O2'	23:D:2532:G:OP2	2.01	0.78
23:D:37:C:H2'	23:D:38:A:H8	1.48	0.78
23:D:848:G:N1	23:D:931:G:N7	2.30	0.78
8:L:29:SER:H	8:L:32:LYS:HB2	1.47	0.78
25:Z:63:SER:HA	25:Z:155:GLU:HG3	1.65	0.78
1:A:1359:C:H3'	14:R:35:ARG:HH22	1.49	0.78
22:C:20:HIS:CG	22:C:108:ASP:CG	2.57	0.78
22:C:383:LYS:HZ1	22:C:401:ARG:HB3	0.98	0.78
22:C:485:ARG:HB2	22:C:486:PRO:HD3	1.66	0.78
22:C:497:HIS:CD2	22:C:535:VAL:HG11	2.10	0.78
23:D:1106:G:OP1	23:D:1106:G:H3'	1.83	0.78
23:D:2124:G:H4'	25:Z:42:GLU:HG3	1.65	0.78
23:D:603:A:H2'	23:D:604:G:C8	2.19	0.78
13:Q:97:PRO:HG2	13:Q:103:THR:HG22	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1308:U:N3	1:A:1309:G:O6	2.17	0.78
1:A:880:C:H2'	1:A:881:G:H8	1.48	0.78
22:C:104:LEU:HD11	22:C:177:ILE:HD13	1.64	0.78
22:C:170:THR:HG23	22:C:171:GLY:H	1.48	0.78
22:C:263:TRP:HD1	22:C:265:VAL:HG13	1.48	0.78
23:D:1725:G:N2	23:D:1735:C:O2	2.17	0.78
23:D:2091:U:H3'	23:D:2092:U:H5''	1.66	0.78
1:A:1103:C:O2	2:F:111:ARG:NH2	2.15	0.78
1:A:1360:A:OP2	14:R:35:ARG:NH2	2.17	0.78
16:T:14:ASN:OD1	16:T:42:ARG:NH2	2.16	0.78
1:A:1224:G:H4'	13:Q:102:ARG:CG	2.14	0.78
1:A:1381:U:O2'	7:K:78:ARG:NH1	2.16	0.78
22:C:229:ARG:HG2	22:C:283:ALA:HB3	1.62	0.78
23:D:1797:C:H42	23:D:1822:G:H1	1.31	0.78
23:D:2549:G:H2'	23:D:2550:G:C8	2.17	0.78
2:F:113:HIS:ND1	2:F:116:GLU:OE2	2.16	0.78
7:K:64:GLN:O	7:K:68:ASN:ND2	2.16	0.78
1:A:525:C:O5'	12:P:91:LYS:NZ	2.17	0.78
14:R:54:PRO:O	14:R:56:VAL:N	2.15	0.78
25:Z:66:HIS:CB	25:Z:159:GLY:H	1.95	0.78
25:Z:184:LYS:O	25:Z:185:LEU:HD23	1.84	0.78
25:Z:68:LEU:HG	25:Z:71:GLN:HB3	1.66	0.78
1:A:61:G:O6	20:X:14:LYS:NZ	2.17	0.78
23:D:1749:A:H2'	23:D:1750:G:H8	1.48	0.78
23:D:1363:C:O3'	23:D:1809:A:N6	2.17	0.78
23:D:785:G:H2'	23:D:786:C:C6	2.18	0.78
2:F:17:PHE:HB2	2:F:41:ILE:HG23	1.63	0.78
1:A:1347:G:H5''	9:M:107:ARG:HD2	1.66	0.78
1:A:247:G:H1	1:A:277:C:H42	1.30	0.78
23:D:1833:U:N3	23:D:1834:U:O2	2.16	0.78
23:D:2458:G:O6	23:D:2490:G:O2'	1.99	0.78
22:C:111:GLN:NE2	23:D:2659:G:O6	2.17	0.78
23:D:629:G:H2'	23:D:630:G:C8	2.19	0.78
22:C:198:ALA:O	22:C:215:LEU:HD11	1.84	0.78
22:C:378:TYR:HB2	22:C:391:HIS:CE1	2.19	0.78
22:C:41:MET:C	22:C:42:ARG:HG2	2.05	0.78
22:C:592:VAL:HG13	22:C:594:GLN:NE2	1.99	0.78
55:4:4:G:N2	55:4:69:C:O2	2.15	0.77
1:A:818:G:O2'	1:A:819:A:OP1	2.01	0.77
22:C:104:LEU:HD21	22:C:134:VAL:HG11	1.65	0.77
22:C:181:ILE:HG23	22:C:185:ILE:CD1	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:299:PRO:CG	22:C:348:PHE:CD2	2.66	0.77
22:C:419:GLU:HG3	22:C:446:LYS:HZ3	1.49	0.77
23:D:259:G:H2'	23:D:260:G:H8	1.47	0.77
23:D:507:A:O2'	23:D:508:G:N2	2.15	0.77
23:D:729:G:H2'	23:D:730:C:C6	2.20	0.77
23:D:895:U:O2	23:D:897:C:N4	2.16	0.77
23:D:1096:A:C6	54:3:10:LEU:HA	2.18	0.77
54:3:93:ARG:HH11	54:3:93:ARG:HG2	1.50	0.77
1:A:894:G:H2'	1:A:895:G:H8	1.47	0.77
22:C:419:GLU:N	22:C:446:LYS:HD2	1.99	0.77
22:C:490:VAL:O	22:C:507:ILE:HA	1.83	0.77
22:C:11:ASN:HA	22:C:79:HIS:CD2	2.15	0.77
23:D:1186:G:H2'	23:D:1187:G:H8	1.49	0.77
23:D:1312:U:O4	23:D:1603:A:N6	2.16	0.77
23:D:2072:G:O6	23:D:2438:U:N3	2.16	0.77
23:D:307:G:H21	23:D:330:A:H61	1.31	0.77
23:D:566:U:O2'	23:D:809:G:OP2	2.02	0.77
17:U:75:ARG:NH1	17:U:76:LEU:O	2.18	0.77
23:D:1644:C:H2'	23:D:1645:G:H8	1.48	0.77
23:D:1658:C:N3	23:D:2002:G:N2	2.31	0.77
23:D:2836:U:H2'	23:D:2837:G:H8	1.50	0.77
23:D:2807:G:C6	23:D:2892:A:C8	2.63	0.77
23:D:2631:G:C8	23:D:2894:G:O6	2.37	0.77
23:D:875:G:N2	23:D:902:C:O2	2.16	0.77
1:A:737:A:O2'	6:J:73:ASN:ND2	2.17	0.77
54:3:78:ILE:HG12	54:3:111:LYS:HG3	1.64	0.77
22:C:236:GLU:HG3	22:C:237:PHE:H	1.48	0.77
22:C:418:GLU:N	22:C:446:LYS:HB3	1.99	0.77
23:D:1685:C:N4	23:D:1704:G:O6	2.18	0.77
23:D:2540:C:H2'	23:D:2541:A:C8	2.19	0.77
23:D:959:A:HO2'	23:D:2457:U:HO2'	1.21	0.77
14:R:47:LEU:O	14:R:51:GLY:N	2.13	0.77
22:C:543:GLY:CA	22:C:544:LYS:HB2	2.13	0.77
23:D:1057:A:N7	23:D:1060:U:N3	2.32	0.77
23:D:1648:C:H42	23:D:2009:G:H1	1.33	0.77
23:D:2106:G:O6	23:D:2184:G:C6	2.37	0.77
23:D:2607:G:N2	23:D:2608:G:O4'	2.16	0.77
23:D:629:G:H2'	23:D:630:G:H8	1.49	0.77
4:H:149:ALA:HB3	4:H:152:SER:HB3	1.65	0.77
6:J:3:ARG:HD2	6:J:64:GLN:HE21	1.50	0.77
22:C:113:VAL:HG23	22:C:152:VAL:HG22	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:204:VAL:O	22:C:205:TYR:O	2.02	0.77
22:C:215:LEU:HD21	22:C:280:ILE:HG22	1.66	0.77
22:C:231:TYR:HE2	22:C:279:THR:HG21	1.48	0.77
22:C:440:TYR:OH	54:3:25:PRO:HB3	1.83	0.77
23:D:2176:A:N7	23:D:2177:C:N4	2.32	0.77
23:D:266:G:H1	23:D:426:C:H42	1.32	0.77
23:D:679:C:N3	23:D:799:G:N2	2.32	0.77
23:D:693:C:H42	23:D:769:G:H1	1.29	0.77
8:L:69:ARG:HE	8:L:76:PRO:HA	1.47	0.77
13:Q:14:ARG:HG3	13:Q:41:PRO:HG3	1.65	0.77
16:T:19:ILE:HD12	16:T:37:GLY:HA3	1.67	0.77
25:Z:64:LEU:O	25:Z:158:ALA:O	2.03	0.77
1:A:319:G:N2	1:A:334:C:N3	2.30	0.77
22:C:15:ILE:HD12	22:C:103:VAL:HG11	0.78	0.77
22:C:17:HIS:NE2	22:C:114:GLU:OE1	2.17	0.77
22:C:198:ALA:N	22:C:280:ILE:CG1	1.84	0.77
22:C:421:VAL:CA	22:C:424:LEU:HD12	2.10	0.77
23:D:1751:C:H2'	23:D:1752:C:C6	2.19	0.77
9:M:118:LYS:O	9:M:120:ARG:NH1	2.15	0.77
55:4:4:G:N1	55:4:69:C:N3	2.33	0.77
22:C:137:LYS:CA	22:C:168:GLY:N	2.45	0.77
22:C:134:VAL:HA	22:C:163:ALA:CB	2.14	0.77
22:C:240:ASP:H	22:C:266:ALA:HB3	1.47	0.77
22:C:383:LYS:CE	22:C:401:ARG:HB3	2.13	0.77
22:C:421:VAL:CG1	22:C:450:LEU:HD22	2.15	0.77
23:D:1480:G:N7	23:D:1514:U:N3	2.33	0.77
23:D:171:G:C2	23:D:172:C:C2	2.72	0.77
23:D:2673:G:H2'	23:D:2674:G:H8	1.48	0.77
23:D:519:U:H2'	23:D:520:G:C8	2.19	0.77
2:F:60:ASP:O	2:F:64:ARG:NH1	2.17	0.77
11:O:18:ARG:HE	11:O:35:PRO:HA	1.49	0.77
54:3:7:VAL:HA	54:3:59:ILE:CD1	2.14	0.77
55:4:6:G:H2'	55:4:7:G:H8	1.49	0.77
1:A:1224:G:O2'	13:Q:102:ARG:HG2	1.78	0.77
22:C:436:VAL:HG23	22:C:452:TYR:CA	2.15	0.77
23:D:1295:C:H42	23:D:1645:G:H1	1.33	0.77
23:D:1449(A):G:O6	23:D:1462:C:N4	2.18	0.77
23:D:1662:C:H42	23:D:1998:G:H1	1.32	0.77
1:A:131:C:H2'	1:A:132:C:H6	1.50	0.77
22:C:97:LEU:HD12	22:C:123:MET:SD	2.24	0.77
22:C:231:TYR:CE2	22:C:279:THR:CG2	2.68	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:350:GLY:C	22:C:352:LEU:H	1.88	0.77
23:D:289:A:HO2'	23:D:353:G:H1	1.21	0.77
23:D:631:A:H2'	23:D:632:A:C8	2.19	0.77
24:E:55:U:H2'	24:E:56:G:C8	2.19	0.77
24:E:89:G:N2	24:E:89(A):A:N1	2.33	0.77
22:C:333:GLU:HG2	22:C:334:PRO:HD3	1.66	0.76
22:C:453:GLU:OE2	22:C:482:ALA:CB	2.33	0.76
23:D:1677:A:H2'	23:D:1678:G:C8	2.20	0.76
23:D:1771:C:H42	23:D:1980:G:H1	1.31	0.76
23:D:656:G:H2'	23:D:657:U:C6	2.20	0.76
4:H:19:LEU:HD22	4:H:21:LEU:HD12	1.68	0.76
22:C:113:VAL:CG2	22:C:152:VAL:HG22	2.15	0.76
23:D:1449(A):G:N1	23:D:1462:C:N3	2.32	0.76
23:D:1987:G:H2'	23:D:1988:C:C6	2.20	0.76
23:D:530:G:N1	23:D:2023:G:OP2	2.18	0.76
23:D:856:C:H3'	23:D:857:C:H5''	1.66	0.76
3:G:148:GLY:HA2	3:G:171:GLY:HA3	1.66	0.76
18:V:73:ALA:O	18:V:77:GLY:N	2.17	0.76
54:3:78:ILE:CG2	54:3:108:ALA:HB2	2.15	0.76
1:A:323:U:C2	1:A:324:G:H1'	2.19	0.76
1:A:827:U:H4'	8:L:19:VAL:HG21	1.65	0.76
22:C:334:PRO:O	22:C:335:GLU:HG2	1.86	0.76
22:C:523:LYS:O	22:C:525:ALA:N	2.18	0.76
23:D:1278:A:H2'	23:D:1279:G:H8	1.49	0.76
23:D:1821:A:H2'	23:D:1822:G:C8	2.19	0.76
23:D:326:G:H1	23:D:336:C:H42	1.33	0.76
16:T:23:ASP:H	16:T:33:ILE:HD12	1.51	0.76
22:C:299:PRO:HB2	22:C:348:PHE:CD2	2.19	0.76
23:D:1430:C:H42	23:D:1563:G:H1	1.31	0.76
23:D:2053:G:H2'	23:D:2054:A:H8	1.50	0.76
23:D:573:G:N2	23:D:574:C:O2'	2.16	0.76
5:I:90:VAL:HB	5:I:121:LYS:HB3	1.65	0.76
1:A:1002:G:O6	1:A:1037:C:N4	2.17	0.76
1:A:541:G:H2'	1:A:542:G:C8	2.20	0.76
1:A:546:G:OP1	4:H:73:ARG:N	2.18	0.76
1:A:678:U:O4	1:A:712:A:N6	2.18	0.76
22:C:250:LEU:HD12	22:C:263:TRP:CZ2	2.20	0.76
22:C:410:VAL:CA	22:C:481:GLN:HA	2.15	0.76
22:C:414:ILE:CB	22:C:477:MET:HA	2.13	0.76
22:C:489:LEU:HD22	22:C:507:ILE:HD13	1.68	0.76
23:D:1752:C:H42	23:D:1756:G:H1	1.32	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:685:A:H2	23:D:688:U:H3	1.33	0.76
24:E:88:C:H3'	24:E:89:G:H8	1.50	0.76
1:A:745:C:H2'	1:A:746:A:H8	1.50	0.76
22:C:198:ALA:CB	22:C:215:LEU:HD21	2.16	0.76
22:C:95:ARG:HH22	22:C:202:ASP:HB3	1.49	0.76
23:D:1171:G:O6	23:D:1179:C:N4	2.18	0.76
23:D:1259:G:H2'	23:D:1260:G:H8	1.49	0.76
23:D:1790:C:N4	23:D:1828:G:O2'	2.19	0.76
23:D:2395:C:N4	23:D:2421:G:O6	2.17	0.76
1:A:1084:G:OP1	1:A:1086:U:N3	2.19	0.76
1:A:843:U:H3	2:F:37:ASN:HA	1.49	0.76
22:C:60:LYS:NZ	22:C:326:ASN:HD22	1.84	0.76
22:C:495:LEU:HB3	22:C:538:GLN:CG	2.16	0.76
23:D:1612:C:N4	23:D:1619:G:H1	1.82	0.76
23:D:270(I):G:N1	23:D:270(Q):C:N3	2.30	0.76
23:D:468:G:H2'	23:D:469:G:O4'	1.84	0.76
1:A:1280:A:OP1	10:N:9:ARG:NH2	2.18	0.76
18:V:19:LYS:HB2	18:V:54:ARG:HH12	1.50	0.76
25:Z:75:LEU:HB3	25:Z:113:VAL:HG22	1.67	0.76
1:A:1454:G:H2'	1:A:1455:G:C8	2.19	0.76
22:C:340:LEU:O	22:C:342:PHE:N	2.18	0.76
22:C:412:LEU:HD11	22:C:428:LEU:HD22	1.68	0.76
21:Y:9:ARG:N	23:D:1309:G:OP1	156.61	0.76
23:D:1422:G:H1	23:D:1576:U:H3	1.33	0.76
23:D:1778:U:H2'	23:D:1779:U:C2	2.20	0.76
23:D:575:A:H5'	23:D:2500:U:H5''	1.66	0.76
24:E:84:C:O2	24:E:92:G:N1	2.15	0.76
3:G:17:ASP:HB2	3:G:21:ARG:HH21	1.48	0.76
10:N:38:ILE:HB	10:N:71:LEU:HB2	1.66	0.76
56:5:11:C:H42	56:5:24:G:H1	1.33	0.76
1:A:951:G:N2	1:A:970:C:O2	2.19	0.76
22:C:369:LEU:N	22:C:369:LEU:HD12	2.01	0.76
22:C:415:PHE:CD1	22:C:447:ARG:HD3	2.19	0.76
23:D:1268:A:H62	23:D:2012:G:H21	1.34	0.76
23:D:270:A:H2'	23:D:270(A):A:H4'	1.68	0.76
23:D:527:C:N4	23:D:2780:G:OP1	2.17	0.76
23:D:2881:C:H2'	23:D:2882:A:C8	2.20	0.76
23:D:709:U:H2'	23:D:710:G:H8	1.51	0.76
23:D:846:C:N3	23:D:930:U:N3	2.34	0.76
12:P:37:CYS:HA	12:P:58:VAL:HG22	1.68	0.76
16:T:26:ARG:NH2	16:T:31:LYS:O	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:663:A:O2'	18:V:61:LYS:NZ	2.19	0.76
56:5:2:C:H42	56:5:71:G:H1	1.32	0.76
1:A:994:A:H3'	1:A:995:C:C4	2.21	0.76
22:C:301:VAL:O	22:C:348:PHE:CD2	2.39	0.76
22:C:504:LEU:HD11	22:C:523:LYS:NZ	2.00	0.76
23:D:1231:G:H2'	23:D:1232:G:H8	1.51	0.76
23:D:1405:U:H3	23:D:1597:A:H61	1.33	0.76
23:D:1270:C:H42	23:D:2011:U:H3	1.31	0.76
23:D:969:U:H2'	23:D:970:C:H6	1.50	0.76
1:A:1224:G:C3'	13:Q:102:ARG:HG2	2.15	0.76
23:D:1079:C:N3	54:3:132:ARG:N	2.33	0.75
54:3:32:ALA:CB	54:3:63:ARG:NH2	2.49	0.75
54:3:9:LYS:O	54:3:9:LYS:HD2	1.86	0.75
1:A:1009:G:H1	1:A:1020:U:H3	1.33	0.75
1:A:1525:G:H2'	1:A:1526:G:H8	1.50	0.75
1:A:6:G:N7	5:I:92:LYS:NZ	2.31	0.75
1:A:769:G:H2'	1:A:770:C:H6	1.51	0.75
1:A:877:C:H2'	1:A:878:G:C8	2.21	0.75
1:A:967:C:H3'	1:A:968:A:H2'	1.66	0.75
22:C:285:ARG:HB3	22:C:286:PRO:CD	2.17	0.75
22:C:332:PHE:CA	22:C:344:PHE:CD1	2.70	0.75
23:D:1444:G:O6	23:D:1547:C:N4	2.17	0.75
23:D:2506:U:OP2	23:D:2576:G:N2	2.17	0.75
23:D:781:A:N1	23:D:1776:G:O2'	2.19	0.75
24:E:73:A:N7	24:E:104:A:N6	2.33	0.75
3:G:33:LEU:HD22	14:R:53:LEU:HD22	1.67	0.75
25:Z:56:GLN:NE2	25:Z:203:GLY:O	2.19	0.75
1:A:1304:G:C6	1:A:1305:G:O6	2.39	0.75
1:A:1251:A:HO2'	1:A:1369:C:HO2'	1.18	0.75
1:A:1449:C:N4	1:A:1455:G:O6	2.19	0.75
1:A:296:U:H3	1:A:301:G:H1	1.34	0.75
1:A:378:G:H2'	1:A:379:C:H6	1.51	0.75
1:A:404:U:O4'	4:H:122:ARG:NH1	2.19	0.75
22:C:138:ILE:CA	22:C:167:SER:OG	2.33	0.75
22:C:69:ARG:HG3	22:C:178:LEU:HD11	1.63	0.75
22:C:380:VAL:HG23	22:C:391:HIS:CG	2.20	0.75
22:C:514:TYR:CD1	22:C:517:ALA:HB3	2.21	0.75
23:D:2023:G:N2	23:D:2041:U:O2	2.18	0.75
23:D:493:G:H2'	23:D:494:G:H8	1.49	0.75
23:D:729:G:H2'	23:D:730:C:H6	1.52	0.75
5:I:80:ILE:HG13	5:I:91:LEU:HB3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:26:PHE:HA	7:K:101:LEU:HD21	1.68	0.75
1:A:269:C:H2'	1:A:270:A:C8	2.21	0.75
1:A:742:G:OP1	15:S:35:ARG:NH2	2.18	0.75
22:C:223:ARG:HB3	22:C:224:PRO:CD	2.17	0.75
23:D:46:C:N4	23:D:179:G:O6	2.19	0.75
23:D:1836:C:N4	23:D:1904:G:O6	2.20	0.75
23:D:2096:U:H2'	23:D:2097:C:C6	2.20	0.75
23:D:2810:A:H61	23:D:2891:G:N2	1.83	0.75
10:N:51:ARG:NH2	10:N:59:SER:O	2.19	0.75
1:A:658:G:H5''	15:S:8:LYS:HZ1	1.51	0.75
1:A:1526:G:H2'	1:A:1527:C:C6	2.21	0.75
22:C:495:LEU:N	22:C:538:GLN:O	2.19	0.75
23:D:1061:U:O2'	23:D:1062:G:OP2	2.02	0.75
23:D:1793:C:N4	23:D:1826:G:H1	1.83	0.75
23:D:2241:A:H2'	23:D:2242:G:C8	2.21	0.75
23:D:477:A:N6	23:D:500:G:O3'	2.19	0.75
2:F:145:LEU:HA	2:F:148:TYR:CE1	2.22	0.75
25:Z:66:HIS:CB	25:Z:159:GLY:N	2.49	0.75
1:A:1059:C:OP2	3:G:199:LYS:NZ	2.19	0.75
22:C:15:ILE:O	22:C:105:LEU:CB	2.34	0.75
22:C:215:LEU:HD22	22:C:280:ILE:O	1.85	0.75
22:C:10:ARG:O	22:C:79:HIS:CD2	2.38	0.75
23:D:1753:G:N1	23:D:1756:G:OP2	2.14	0.75
23:D:1028:A:N3	23:D:2486:G:O2'	2.19	0.75
23:D:298:G:O2'	23:D:322:A:N1	2.20	0.75
23:D:582:G:H2'	23:D:583:G:H8	1.49	0.75
23:D:848:G:N2	23:D:932:G:N3	2.34	0.75
6:J:37:VAL:HA	6:J:65:VAL:HG12	1.69	0.75
20:X:83:ARG:HA	20:X:86:ARG:NE	2.01	0.75
1:A:235:C:OP1	17:U:70:ARG:NH2	2.17	0.75
22:C:379:LYS:HG2	22:C:388:VAL:CG2	2.15	0.75
22:C:387:GLU:HG2	22:C:388:VAL:N	2.00	0.75
22:C:419:GLU:CG	22:C:446:LYS:HZ3	1.99	0.75
22:C:468:LYS:C	22:C:473:GLY:H	1.90	0.75
23:D:1064:C:N3	54:3:91:PRO:HD2	1.99	0.75
23:D:1128:A:N7	23:D:2518:A:N6	2.34	0.75
23:D:271(C):U:O2'	23:D:271:G:O4'	2.03	0.75
23:D:2748:A:N7	23:D:2749:A:N6	2.35	0.75
23:D:676:A:N6	23:D:803:U:O2	2.16	0.75
3:G:131:ARG:HG3	3:G:166:GLU:HG2	1.68	0.75
4:H:122:ARG:HA	4:H:134:ASP:HB2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:9:VAL:HG12	6:J:86:ARG:HB2	1.69	0.75
11:O:11:LYS:HG2	11:O:76:GLY:H	1.50	0.75
1:A:1224:G:H1'	13:Q:102:ARG:CD	2.16	0.75
22:C:530:ARG:HE	22:C:593:PRO:HB3	1.46	0.75
22:C:18:VAL:CG2	22:C:86:HIS:CG	2.57	0.75
23:D:1756:G:O2'	23:D:1758:G:N2	2.20	0.75
23:D:2124:G:N2	23:D:2175:C:N3	2.34	0.75
22:C:18:VAL:HG11	23:D:2661:G:H4'	1.69	0.75
23:D:2700:C:N4	23:D:2707:G:O6	2.19	0.75
23:D:2686:G:H1	23:D:2723:C:H42	1.32	0.75
23:D:2808:U:N3	23:D:2892:A:N6	2.34	0.75
23:D:327:G:H2'	23:D:328:U:H6	1.50	0.75
23:D:938:G:H2'	23:D:939:G:H8	1.52	0.75
3:G:95:THR:OG1	3:G:97:LYS:NZ	2.20	0.75
13:Q:80:ARG:NH1	19:W:65:ASN:O	2.18	0.75
1:A:1228:C:H2'	1:A:1229:A:H8	1.50	0.75
23:D:1009:A:H2'	23:D:1010:A:C4	2.22	0.75
23:D:1221:C:N4	23:D:1228:G:O6	2.18	0.75
23:D:1480:G:H21	23:D:1482:U:H5''	1.50	0.75
23:D:1852:C:O2	23:D:1890:A:N6	2.20	0.75
23:D:2135:A:OP2	23:D:2159:G:O2'	2.04	0.75
23:D:2509:G:H2'	23:D:2510:C:H6	1.50	0.75
23:D:359:A:O2'	23:D:360:G:N7	2.18	0.75
23:D:583:G:H2'	23:D:584:C:H6	1.52	0.75
23:D:666:G:H2'	23:D:667:U:C6	2.22	0.75
23:D:715:G:O6	23:D:717:G:N1	2.19	0.75
23:D:848:G:H2'	23:D:849:A:H8	1.50	0.75
1:A:969:A:OP2	10:N:55:LYS:NZ	2.20	0.75
25:Z:22:ILE:HD12	25:Z:190:ARG:HH12	1.49	0.75
54:3:34:ILE:CG2	54:3:63:ARG:CG	2.53	0.75
22:C:200:ILE:O	22:C:294:PHE:CE2	2.40	0.75
22:C:380:VAL:CG2	22:C:391:HIS:HD2	1.88	0.75
22:C:41:MET:HB2	22:C:45:PHE:CG	2.17	0.75
22:C:493:ASN:N	22:C:541:ILE:CG2	2.50	0.75
23:D:1786:A:N6	23:D:1787:A:N1	2.35	0.75
23:D:2181:G:C6	23:D:2182:G:C6	2.75	0.75
23:D:2589:A:H2'	23:D:2590:A:H8	1.51	0.75
23:D:2779:U:O2'	23:D:2781:A:OP1	2.04	0.75
23:D:637:A:N3	23:D:638:G:N2	2.32	0.75
23:D:740:U:O4	23:D:757:U:N3	2.20	0.75
2:F:15:VAL:HG11	2:F:209:ARG:HG2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:P:27:LEU:HG	12:P:28:LYS:HG3	1.68	0.75
14:R:58:LYS:NZ	14:R:59:ALA:O	2.20	0.75
22:C:411:LYS:HG2	22:C:451:VAL:HG12	1.68	0.74
22:C:434:ARG:C	22:C:452:TYR:HD1	1.89	0.74
22:C:41:MET:HA	22:C:45:PHE:CD1	2.22	0.74
23:D:1313:U:O4	23:D:1338:G:N1	2.14	0.74
23:D:2294:C:H2'	23:D:2295:C:C6	2.21	0.74
23:D:2399:G:H1	23:D:2417:C:H42	1.34	0.74
23:D:29:U:H2'	23:D:30:G:C8	2.22	0.74
11:O:92:GLU:HA	11:O:95:ILE:HD12	1.69	0.74
54:3:103:GLN:O	54:3:107:ILE:CD1	2.34	0.74
54:3:7:VAL:CA	54:3:59:ILE:HD13	2.18	0.74
1:A:309:G:H2'	1:A:310:G:H8	1.51	0.74
1:A:868:C:H3'	1:A:869:G:H8	1.52	0.74
1:A:999:U:H3	1:A:1041:A:H61	1.34	0.74
22:C:63:ALA:CB	22:C:245:PHE:CG	2.54	0.74
22:C:8:ARG:HD3	22:C:74:GLU:HB2	1.69	0.74
23:D:2235:G:H2'	23:D:2236:C:H6	1.52	0.74
23:D:2459:A:N6	23:D:2492:U:O4	2.18	0.74
23:D:685:A:H3'	23:D:686:G:H21	1.50	0.74
1:A:563:A:HO2'	12:P:15:ARG:HH11	1.33	0.74
1:A:1308:U:OP1	13:Q:98:VAL:HG23	1.87	0.74
1:A:403:C:O3'	4:H:122:ARG:NH1	2.20	0.74
1:A:583:A:H62	1:A:758:G:H21	1.36	0.74
22:C:530:ARG:HH21	22:C:530:ARG:CB	2.00	0.74
23:D:1451:C:H3'	23:D:1453:A:H4'	1.67	0.74
23:D:1539:G:N2	23:D:1541:U:O4	2.20	0.74
23:D:1300:U:O2'	23:D:1626:G:N2	2.19	0.74
23:D:187:G:H1	23:D:209:C:H42	1.34	0.74
23:D:270(Y):G:OP1	23:D:270(Z):U:O2'	2.05	0.74
23:D:852:G:H2'	23:D:853:G:H8	1.52	0.74
17:U:40:LYS:NZ	17:U:42:TYR:OH	2.17	0.74
54:3:37:PHE:CD2	54:3:66:THR:HG23	2.21	0.74
1:A:987:G:N2	1:A:1218:C:N3	2.35	0.74
1:A:1523:G:H2'	1:A:1524:C:C6	2.23	0.74
1:A:660:G:H1	1:A:745:C:H42	1.33	0.74
1:A:948:C:H2'	1:A:949:A:H8	1.52	0.74
22:C:189:LYS:O	22:C:189:LYS:HG3	1.86	0.74
22:C:251:VAL:HG12	22:C:252:ALA:N	2.02	0.74
22:C:200:ILE:HG12	22:C:281:THR:HG21	1.68	0.74
22:C:411:LYS:HG2	22:C:451:VAL:CG1	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:495:LEU:CD2	22:C:538:GLN:HE21	2.00	0.74
22:C:169:LYS:CE	57:C:701:GCP:C2	2.64	0.74
23:D:271:G:N1	23:D:366:C:N3	2.31	0.74
54:3:8:VAL:HG12	54:3:9:LYS:HE3	1.69	0.74
54:3:8:VAL:CG1	54:3:9:LYS:HE3	2.17	0.74
1:A:447:G:N2	1:A:488:C:N3	2.35	0.74
1:A:575:G:N2	1:A:880:C:O2	2.20	0.74
22:C:106:VAL:CA	22:C:134:VAL:O	2.32	0.74
22:C:492:VAL:O	22:C:505:THR:HA	1.87	0.74
23:D:815:C:H2'	23:D:816:C:C6	2.22	0.74
2:F:163:PHE:HD1	2:F:185:ILE:HG13	1.52	0.74
5:I:75:THR:OG1	5:I:76:ILE:N	2.19	0.74
16:T:58:TYR:O	16:T:61:SER:OG	2.05	0.74
22:C:590:VAL:O	22:C:592:VAL:HG23	1.87	0.74
23:D:1057:A:C8	23:D:1087:G:OP2	2.41	0.74
23:D:947:G:H2'	23:D:948:G:H8	1.52	0.74
19:W:70:LYS:HG2	19:W:72:GLY:H	1.52	0.74
54:3:6:ALA:C	54:3:59:ILE:HD13	2.07	0.74
55:4:3:C:H42	55:4:70:G:H1	1.36	0.74
1:A:1306:A:O2'	1:A:1307:U:H5'	1.87	0.74
1:A:1388:C:H2'	1:A:1389:C:C6	2.23	0.74
1:A:681:C:H2'	1:A:682:G:C8	2.21	0.74
22:C:197:LYS:HZ2	22:C:290:PRO:HA	1.49	0.74
22:C:339:ALA:HB1	22:C:598:LEU:HD11	1.70	0.74
22:C:330:LEU:HD11	22:C:344:PHE:C	2.08	0.74
22:C:414:ILE:CG2	22:C:477:MET:HA	2.16	0.74
22:C:67:THR:C	22:C:76:TYR:HB2	2.05	0.74
23:D:690:G:H2'	23:D:691:C:C6	2.22	0.74
11:O:21:ILE:HG22	11:O:30:VAL:HG13	1.70	0.74
53:2:16:ASN:O	53:2:20:ALA:N	2.20	0.74
53:2:56:ASN:H	53:2:83:TYR:HA	1.51	0.74
56:5:1:G:N1	56:5:72:C:N3	2.31	0.74
1:A:1427:U:H2'	1:A:1428:A:C8	2.22	0.74
1:A:573:A:H2'	1:A:574:A:C4	2.23	0.74
1:A:858:G:H1	1:A:869:G:H3'	1.51	0.74
22:C:106:VAL:HG21	22:C:136:ASN:HD22	1.51	0.74
22:C:20:HIS:NE2	22:C:108:ASP:CG	2.41	0.74
22:C:256:LEU:H	22:C:256:LEU:CD1	2.01	0.74
22:C:533:PHE:HE1	22:C:581:LYS:HA	1.52	0.74
22:C:69:ARG:CZ	22:C:178:LEU:HD13	2.18	0.74
23:D:2158:A:O2'	23:D:2159:G:OP2	2.06	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:26:LYS:NZ	23:D:2673:G:O2'	144.75	0.74
23:D:259:G:O2'	23:D:621:A:O2'	2.05	0.74
4:H:127:THR:N	4:H:147:ALA:O	2.20	0.74
1:A:174:C:H2'	1:A:175:C:H6	1.53	0.74
22:C:383:LYS:HZ1	22:C:401:ARG:CB	1.91	0.74
22:C:524:LEU:HD21	22:C:599:ALA:O	1.87	0.74
22:C:52:GLU:OE2	22:C:59:ILE:HG13	1.86	0.74
23:D:1140:C:O2'	23:D:1142(A):A:N1	2.21	0.74
23:D:2888:C:H2'	23:D:2889:C:H6	1.52	0.74
1:A:474:G:H5'	16:T:81:ARG:HH21	1.53	0.74
1:A:1097:C:H2'	1:A:1098:C:C6	2.23	0.74
22:C:8:ARG:HB3	22:C:77:VAL:HG11	1.70	0.74
22:C:22:LYS:NZ	22:C:83:THR:O	2.19	0.74
22:C:86:HIS:CB	22:C:116:GLU:OE2	2.36	0.74
23:D:2383:G:H2'	23:D:2384:G:C8	2.23	0.74
23:D:31:C:N3	23:D:474:G:N2	2.36	0.74
23:D:567:A:C6	23:D:568:U:H1'	2.23	0.74
1:A:257:G:H2'	1:A:258:G:H8	1.53	0.73
1:A:307:C:N3	1:A:308:C:N4	2.35	0.73
1:A:947:G:H2'	1:A:948:C:H6	1.52	0.73
22:C:20:HIS:HD2	22:C:106:VAL:O	1.71	0.73
22:C:301:VAL:CG2	22:C:464:HIS:NE2	2.51	0.73
22:C:410:VAL:CG1	22:C:479:TYR:CZ	2.60	0.73
23:D:1772:G:O2'	23:D:1774:C:OP2	2.04	0.73
23:D:2329:G:H2'	23:D:2330:G:H8	1.51	0.73
23:D:295:G:N2	23:D:343:C:O2	2.20	0.73
24:E:118:G:H2'	24:E:119:A:C8	2.19	0.73
1:A:1117:G:OP1	9:M:104:ARG:NH1	2.21	0.73
13:Q:24:GLY:O	13:Q:29:ARG:NH1	2.21	0.73
19:W:44:MET:HB3	19:W:62:ILE:HD13	1.69	0.73
54:3:78:ILE:HA	54:3:111:LYS:HG2	1.70	0.73
1:A:1117:G:N2	1:A:1180:A:O2'	2.21	0.73
1:A:398:C:H2'	1:A:399:G:H8	1.53	0.73
1:A:452:A:H2'	1:A:453:A:C8	2.23	0.73
22:C:197:LYS:CA	22:C:280:ILE:HG12	2.18	0.73
22:C:284:ASP:C	22:C:285:ARG:HG2	2.09	0.73
23:D:270(U):C:H2'	23:D:270(V):G:H8	1.51	0.73
23:D:8:A:H61	23:D:2895:U:H1'	1.50	0.73
23:D:320:A:O2'	23:D:322:A:OP2	2.05	0.73
23:D:327:G:H2'	23:D:328:U:C6	2.23	0.73
23:D:595:C:H42	23:D:662:G:H1	1.33	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:E:31:C:N4	24:E:50:G:O6	2.21	0.73
1:A:501:C:H42	1:A:544:G:H1	1.35	0.73
1:A:730:G:H21	1:A:766:A:H5"	1.54	0.73
22:C:533:PHE:CE1	22:C:581:LYS:HA	2.23	0.73
23:D:1315:C:O2'	23:D:1392:A:N3	2.19	0.73
23:D:2496:C:H3'	23:D:2497:A:C8	2.22	0.73
23:D:7:G:N2	23:D:2897:U:O2'	2.22	0.73
56:5:12:U:H3	56:5:23:A:H61	1.37	0.73
1:A:1411:C:O3'	12:P:57:LYS:NZ	2.19	0.73
22:C:378:TYR:O	22:C:391:HIS:HB3	1.88	0.73
22:C:412:LEU:HD12	22:C:452:TYR:HB2	1.70	0.73
22:C:30:LEU:HD12	22:C:69:ARG:HH11	1.53	0.73
23:D:1345:C:H42	23:D:1601:G:H1	1.36	0.73
23:D:2736:G:H2'	23:D:2737:G:H8	1.53	0.73
23:D:481:G:H1	23:D:509:C:H42	1.34	0.73
23:D:530:G:N2	23:D:2022:U:H4'	2.03	0.73
25:Z:38:ASP:OD1	25:Z:179:SER:CA	2.36	0.73
25:Z:14:VAL:HG13	25:Z:222:VAL:HG22	1.69	0.73
25:Z:40:THR:O	25:Z:216:THR:HA	1.88	0.73
1:A:1306:A:C8	1:A:1307:U:C4	2.76	0.73
1:A:258:G:H2'	1:A:259:G:H8	1.54	0.73
1:A:285:G:H2'	1:A:286:G:C8	2.24	0.73
1:A:481:G:O2'	1:A:482:A:N7	2.21	0.73
1:A:78:G:H1	1:A:91:C:H42	1.33	0.73
22:C:285:ARG:CB	22:C:286:PRO:HD2	2.18	0.73
23:D:1205:U:O2'	23:D:1206:G:N7	2.18	0.73
23:D:1547:C:H2'	23:D:1548:C:C6	2.23	0.73
23:D:1348:G:N2	23:D:1598:C:O2	2.20	0.73
23:D:1658:C:H2'	23:D:1659:U:C6	2.22	0.73
23:D:1729:A:N6	23:D:1731:G:O6	2.21	0.73
23:D:2676:C:H2'	23:D:2677:G:H8	1.54	0.73
23:D:679:C:H42	23:D:798:G:H1	1.37	0.73
23:D:80:G:H2'	23:D:81:G:H8	1.53	0.73
4:H:3:ARG:CZ	4:H:118:ARG:HD2	2.18	0.73
1:A:1133:G:H2'	1:A:1134:G:H8	1.52	0.73
1:A:1306:A:N6	1:A:1331:G:O2'	2.22	0.73
22:C:415:PHE:CE2	22:C:449:GLU:OE2	2.41	0.73
22:C:494:VAL:C	22:C:540:ALA:H	1.91	0.73
22:C:66:VAL:HG23	22:C:78:PHE:HE2	1.54	0.73
23:D:2106:G:N2	23:D:2184:G:H1'	2.02	0.73
23:D:2691:C:H42	23:D:2718:G:H1	1.36	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:969:U:H2'	23:D:970:C:C6	2.24	0.73
1:A:248:C:H2'	1:A:249:U:C6	2.24	0.73
22:C:114:GLU:O	22:C:117:THR:OG1	2.07	0.73
23:D:1206:G:O6	23:D:1240:U:N3	2.22	0.73
23:D:307:G:N1	23:D:310:A:OP2	2.20	0.73
23:D:856:C:H42	23:D:921:G:H1	1.34	0.73
8:L:85:ARG:HG2	8:L:87:SER:H	1.52	0.73
10:N:66:ARG:NH2	10:N:96:ILE:O	20.36	0.73
1:A:368:U:O2	22:C:209:GLN:NE2	2.18	0.73
22:C:434:ARG:HH12	22:C:453:GLU:HG2	1.04	0.73
22:C:492:VAL:CB	22:C:541:ILE:HG21	2.17	0.73
22:C:492:VAL:CG1	22:C:541:ILE:HG23	2.13	0.73
23:D:1223:C:H2'	23:D:1225:C:OP2	1.89	0.73
23:D:1778:U:O2'	23:D:1779:U:OP1	2.07	0.73
23:D:2731:G:H2'	23:D:2732:G:C8	2.24	0.73
15:S:49:ASP:OD2	15:S:51:HIS:ND1	2.21	0.73
1:A:111:G:H4'	16:T:27:LYS:HD3	1.71	0.73
55:4:33:U:H2'	55:4:35:A:OP2	1.89	0.73
1:A:1128:C:N3	1:A:1144:G:N2	2.37	0.73
1:A:1306:A:C2'	1:A:1307:U:H5'	2.18	0.73
1:A:1378:C:O2	7:K:76:ARG:NH2	2.21	0.73
1:A:186:C:H2'	1:A:186(A):C:H6	1.53	0.73
1:A:950:U:H2'	1:A:951:G:H8	1.54	0.73
22:C:533:PHE:CD2	22:C:585:LYS:HD3	2.24	0.73
23:D:1157:G:H2'	23:D:1158:C:H6	1.52	0.73
23:D:1196:C:N4	23:D:1250:G:O6	2.17	0.73
23:D:1769:G:H2'	23:D:1770:G:C8	2.24	0.73
23:D:2593:U:H2'	23:D:2594:C:C6	2.23	0.73
23:D:663:G:H2'	23:D:664:C:C6	2.24	0.73
23:D:691:C:O2	23:D:771:G:N2	2.22	0.73
4:H:49:ARG:NH2	23:D:834:C:OP1	143.36	0.73
56:5:4:C:O2	56:5:69:G:N2	2.20	0.73
1:A:1133:G:H2'	1:A:1134:G:C8	2.24	0.73
22:C:177:ILE:O	22:C:181:ILE:N	2.21	0.73
22:C:211:VAL:HG12	22:C:212:ILE:H	1.53	0.73
22:C:229:ARG:HG2	22:C:283:ALA:HB1	1.71	0.73
22:C:454:ALA:HB1	22:C:455:PRO:CD	2.18	0.73
22:C:509:HIS:O	22:C:512:LYS:HB2	1.87	0.73
22:C:58:THR:OG1	22:C:84:PRO:HG2	1.89	0.73
23:D:1475:G:N7	23:D:1517:G:N1	2.36	0.73
23:D:2289:G:N2	23:D:2343:C:O2	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2320:A:H1'	23:D:2333:A:C6	2.24	0.73
23:D:2746:U:H3'	23:D:2747:G:H8	1.53	0.73
23:D:301:G:H2'	23:D:302:C:C6	2.24	0.73
23:D:959:A:H2'	23:D:960:A:C8	2.24	0.73
24:E:103:U:H2'	24:E:104:A:C8	2.24	0.73
54:3:41:PHE:CE1	54:3:66:THR:HG21	2.24	0.72
1:A:1064:G:H4'	1:A:1066:C:H5'	1.70	0.72
1:A:1155:G:H3'	1:A:1156:G:H8	1.54	0.72
1:A:115:G:H1	1:A:312:C:H42	1.34	0.72
1:A:411:A:OP2	4:H:25:ARG:NH2	2.22	0.72
23:D:1238:G:H2'	23:D:1239:G:C8	2.24	0.72
23:D:1747:G:H2'	23:D:1748:G:C8	2.23	0.72
23:D:2372:G:H2'	23:D:2373:G:H8	1.53	0.72
23:D:622:G:N2	23:D:623:G:N3	2.36	0.72
23:D:587:C:C4	23:D:671:C:H1'	2.24	0.72
1:A:10:A:H8	5:I:126:ARG:NH1	1.87	0.72
1:A:10:A:O5'	5:I:126:ARG:NH1	2.22	0.72
13:Q:33:ALA:O	13:Q:37:THR:N	2.18	0.72
25:Z:160:ARG:HG3	25:Z:160:ARG:HH11	1.51	0.72
56:5:14:A:H62	56:5:15:G:N2	1.86	0.72
1:A:1414:U:H2'	1:A:1415:G:H8	1.52	0.72
1:A:186(B):C:H42	1:A:191(E):G:H1	1.36	0.72
1:A:724:G:H2'	1:A:725:G:H8	1.53	0.72
22:C:79:HIS:CD2	22:C:100:VAL:CG1	2.72	0.72
22:C:197:LYS:CE	22:C:291:TYR:CD2	2.72	0.72
22:C:298:LYS:HB3	22:C:299:PRO:CD	2.17	0.72
22:C:373:ALA:HB3	22:C:374:PRO:CD	2.19	0.72
22:C:419:GLU:CG	22:C:446:LYS:NZ	2.52	0.72
22:C:495:LEU:O	22:C:537:ILE:C	2.28	0.72
22:C:533:PHE:CG	22:C:585:LYS:HD3	2.23	0.72
22:C:61:ALA:H	22:C:83:THR:HG22	1.53	0.72
23:D:1087:G:C8	23:D:1103:A:H2	2.07	0.72
23:D:2243:U:H2'	23:D:2244:U:C2	2.24	0.72
23:D:2385:C:H2'	23:D:2386:C:C6	2.25	0.72
23:D:452:G:N2	23:D:458:G:O4'	2.22	0.72
23:D:980:A:H2'	23:D:981:A:C4	2.24	0.72
23:D:110:G:H3'	23:D:111:A:H8	1.52	0.72
23:D:173:G:C5	23:D:174:C:C6	2.77	0.72
23:D:2647:U:H3	23:D:2673:G:H1	1.37	0.72
2:F:188:ALA:O	2:F:203:GLY:N	2.22	0.72
18:V:58:LEU:HB3	18:V:62:GLU:HB2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:925:G:H1	1:A:1391:U:H3	1.34	0.72
1:A:1434:A:H3'	1:A:1435:G:H8	1.54	0.72
1:A:1405:G:H1	1:A:1496:C:H42	1.36	0.72
1:A:137:C:H42	1:A:226:G:H1	1.38	0.72
1:A:285:G:H2'	1:A:286:G:H8	1.54	0.72
1:A:451:A:OP1	1:A:481:G:N2	2.21	0.72
1:A:896:C:H2'	1:A:897:C:C6	2.23	0.72
22:C:448:VAL:HG12	22:C:449:GLU:H	1.54	0.72
23:D:1392:A:H2'	23:D:1393:A:C4	2.24	0.72
23:D:1436:G:N2	23:D:1556:C:N3	2.37	0.72
23:D:1446:C:N4	23:D:1465:G:H1	1.87	0.72
23:D:528:A:N1	23:D:2042:A:H2'	2.04	0.72
23:D:2121:G:O6	23:D:2176:A:N6	2.22	0.72
23:D:2089:U:H3	23:D:2230:G:H1	1.36	0.72
23:D:818:G:H3'	23:D:1187:G:H22	1.55	0.72
23:D:869:G:C2	23:D:870:A:H1'	2.24	0.72
23:D:972:G:C8	23:D:973:A:H3'	2.24	0.72
1:A:167:G:H2'	1:A:168:G:H8	1.52	0.72
1:A:257:G:H2'	1:A:258:G:C8	2.25	0.72
1:A:259:G:H2'	1:A:260:G:C8	2.25	0.72
1:A:378:G:O6	1:A:386:C:N4	2.23	0.72
1:A:886:G:H2'	1:A:887:G:C8	2.25	0.72
22:C:106:VAL:CG2	22:C:136:ASN:HD22	2.00	0.72
22:C:137:LYS:N	22:C:168:GLY:H	1.86	0.72
22:C:35:ALA:O	22:C:36:VAL:HG13	1.89	0.72
22:C:532:LEU:HB2	22:C:555:ARG:N	2.03	0.72
23:D:1101:U:N3	23:D:1102:C:C2	2.55	0.72
23:D:51:G:HO2'	23:D:118:A:N6	1.86	0.72
23:D:1411:C:O2	23:D:1591:G:N2	2.19	0.72
8:L:45:ILE:HG22	8:L:61:VAL:HG13	1.69	0.72
25:Z:131:LEU:HD22	25:Z:136:LEU:HD12	1.71	0.72
55:4:18:G:O2'	55:4:19:G:OP2	2.08	0.72
1:A:155:C:H2'	1:A:156:G:C8	2.24	0.72
1:A:27:G:H2'	1:A:28:G:H8	1.54	0.72
1:A:792:A:O2'	1:A:794:A:N7	2.22	0.72
1:A:859:A:OP2	1:A:869:G:N1	2.20	0.72
1:A:568:G:N2	1:A:883:C:N3	2.36	0.72
22:C:27:ASP:O	22:C:28:ARG:HD2	1.90	0.72
22:C:489:LEU:O	22:C:507:ILE:CG2	2.34	0.72
23:D:2006:C:O2'	23:D:2007:C:O5'	2.06	0.72
23:D:2329:G:H2'	23:D:2330:G:C8	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2652:C:N4	23:D:2670:A:N7	2.37	0.72
23:D:2631:G:H8	23:D:2894:G:O6	1.71	0.72
23:D:68:G:H2'	23:D:69:C:C6	2.24	0.72
10:N:30:SER:N	10:N:33:GLN:OE1	2.23	0.72
1:A:319:G:H2'	1:A:320:C:H6	1.54	0.72
22:C:197:LYS:HA	22:C:280:ILE:HG12	1.72	0.72
22:C:79:HIS:HD1	22:C:261:VAL:CG2	2.03	0.72
23:D:1101:U:C2	23:D:1102:C:C2	2.77	0.72
23:D:1149:G:H2'	23:D:1150:C:C6	2.24	0.72
23:D:1259:G:H2'	23:D:1260:G:C8	2.24	0.72
23:D:1846:G:H1	23:D:1894:C:N4	1.87	0.72
23:D:214:G:H2'	23:D:215:G:C8	2.24	0.72
23:D:2098:U:H3	23:D:2191:G:H1	1.35	0.72
23:D:2339:G:H2'	23:D:2340:G:H8	1.54	0.72
23:D:2809:A:H5''	23:D:2810:A:H5'	1.72	0.72
23:D:2851:A:N6	23:D:2866:U:O4	2.15	0.72
1:A:933:G:H1	1:A:1384:C:N4	1.88	0.72
1:A:434:U:H2'	1:A:435:C:C6	2.24	0.72
1:A:769:G:H2'	1:A:770:C:C6	2.24	0.72
1:A:879:C:OP1	12:P:8:ASN:ND2	2.23	0.72
22:C:6:LEU:HD21	22:C:192:PRO:HA	1.72	0.72
22:C:501:VAL:HG22	22:C:502:ASP:N	2.04	0.72
23:D:1128:A:H62	23:D:2518:A:H61	1.37	0.72
23:D:1935:G:H2'	23:D:1962:C:H42	1.54	0.72
23:D:2050:C:H2'	23:D:2051:A:H8	1.55	0.72
23:D:2443:C:H2'	23:D:2444:G:H8	1.55	0.72
23:D:2532:G:H2'	23:D:2533:A:C8	2.25	0.72
23:D:541:C:H42	23:D:552:G:H1	1.38	0.72
23:D:702:G:H22	23:D:729:G:H22	1.35	0.72
12:P:33:ARG:HG2	12:P:60:LEU:HD13	1.71	0.72
15:S:33:THR:O	15:S:37:ASN:ND2	2.20	0.72
54:3:112:MET:H	54:3:113:PRO:CD	2.02	0.72
1:A:745:C:H4'	1:A:836:G:H21	1.54	0.72
22:C:22:LYS:NZ	22:C:84:PRO:HA	2.04	0.72
22:C:41:MET:CB	22:C:45:PHE:CE1	2.71	0.72
22:C:524:LEU:N	22:C:524:LEU:HD13	2.02	0.72
23:D:2282:G:H1	23:D:2427:C:H42	1.38	0.72
23:D:295:G:O5'	23:D:338:G:N2	2.19	0.72
23:D:873:G:H1	23:D:904:C:H42	1.37	0.72
2:F:10:LEU:HD23	2:F:11:LEU:HG	1.70	0.72
4:H:162:LEU:O	4:H:166:LYS:HG2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2251:G:O6	55:4:76:A:N6	2.23	0.72
1:A:1048:G:N2	1:A:1209:C:N3	2.38	0.72
1:A:36:C:O2	1:A:548:G:N2	2.19	0.72
22:C:243:GLY:O	22:C:244:VAL:HB	1.90	0.72
22:C:421:VAL:HG13	22:C:450:LEU:CD2	2.19	0.72
22:C:409:TYR:O	22:C:481:GLN:HB3	1.90	0.72
23:D:1315:C:H42	23:D:1337:G:H1	1.37	0.72
23:D:2132:U:O2	23:D:2134:A:N6	2.23	0.72
23:D:270(U):C:H2'	23:D:270(V):G:C8	2.25	0.72
54:3:121:GLU:HG3	54:3:123:ALA:H	1.54	0.71
1:A:624:C:H2'	1:A:625:G:C8	2.24	0.71
1:A:701:C:H5''	1:A:702:A:H3'	1.71	0.71
22:C:376:VAL:HG21	22:C:378:TYR:CZ	2.25	0.71
23:D:1388:G:H2'	23:D:1389:G:H8	1.55	0.71
23:D:273(B):C:N4	23:D:363(D):G:O6	2.20	0.71
23:D:478:A:N7	23:D:480:A:N6	2.36	0.71
23:D:866:A:N1	23:D:913:U:O2'	2.22	0.71
1:A:1224:G:C1'	13:Q:102:ARG:CD	2.68	0.71
1:A:1249:C:H42	1:A:1288:A:H62	1.37	0.71
1:A:376:G:H2'	1:A:377:G:C8	2.24	0.71
1:A:938:A:H5''	7:K:95:ARG:HH12	1.54	0.71
22:C:299:PRO:CB	22:C:348:PHE:CD2	2.72	0.71
22:C:489:LEU:HB3	22:C:507:ILE:HG21	0.71	0.71
23:D:1015:G:H2'	23:D:1016:G:H8	1.55	0.71
23:D:1336:A:H2'	23:D:1337:G:H8	1.54	0.71
23:D:1545:A:H2'	23:D:1545(A):A:C8	2.25	0.71
23:D:2234:G:H2'	23:D:2235:G:H8	1.55	0.71
23:D:7:G:N2	23:D:2896:C:H2'	2.05	0.71
23:D:996:A:H2'	23:D:997:G:H8	1.53	0.71
1:A:22:G:H2'	1:A:23:C:H6	1.53	0.71
1:A:319:G:H1	1:A:334:C:H42	1.37	0.71
1:A:36:C:N3	1:A:548:G:N1	2.32	0.71
1:A:418:C:H2'	1:A:419:C:C6	2.25	0.71
23:D:1087:G:C4	23:D:1103:A:H2	2.08	0.71
23:D:1534:G:H21	23:D:1538:G:H22	1.38	0.71
23:D:1571:A:N3	23:D:1571:A:H2'	2.03	0.71
23:D:2091:U:H3'	23:D:2092:U:C5'	2.18	0.71
23:D:212:G:H2'	23:D:213:A:C8	2.24	0.71
23:D:2893:G:H4'	23:D:2894:G:OP1	1.89	0.71
23:D:647:G:H2'	23:D:648:G:H8	1.54	0.71
23:D:852:G:H2'	23:D:853:G:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:69:VAL:HG22	5:I:139:LEU:HB3	1.71	0.71
13:Q:93:ARG:O	13:Q:94:ARG:NH1	2.22	0.71
52:1:16:VAL:HA	52:1:25:VAL:HG22	1.72	0.71
1:A:18:C:O4'	1:A:1079:G:N2	2.24	0.71
1:A:735:C:H2'	1:A:736:C:C6	2.25	0.71
22:C:135:ILE:HD11	22:C:165:PHE:CE1	2.25	0.71
22:C:409:TYR:C	22:C:482:ALA:N	2.32	0.71
22:C:41:MET:CB	22:C:45:PHE:CB	2.67	0.71
22:C:402:ILE:CG1	22:C:491:LYS:HZ1	2.03	0.71
23:D:1055:G:C2	23:D:1106:G:C6	2.78	0.71
23:D:1859:A:H3'	23:D:1860:G:H8	1.55	0.71
23:D:2073:C:H42	23:D:2436:G:H1	1.39	0.71
23:D:417:C:H2'	23:D:418:G:C8	2.25	0.71
23:D:699:A:H62	23:D:733:G:H21	1.37	0.71
23:D:744:G:H1	23:D:753:C:H42	1.36	0.71
13:Q:24:GLY:CA	13:Q:66:LEU:CD2	2.64	0.71
6:J:7:ASN:HB3	18:V:76:LEU:HD21	1.70	0.71
1:A:1175:G:O6	1:A:1181:G:N1	2.19	0.71
1:A:1308:U:OP1	13:Q:98:VAL:N	2.23	0.71
1:A:137:C:N4	1:A:226:G:H1	1.88	0.71
1:A:1500:A:H5''	1:A:1508:G:H5'	1.71	0.71
1:A:521:G:N7	1:A:529:G:N2	2.39	0.71
22:C:20:HIS:CD2	22:C:108:ASP:OD1	2.44	0.71
23:D:1510:A:H2'	23:D:1511:A:H8	1.54	0.71
23:D:172:C:H5'	23:D:173:G:OP2	1.90	0.71
23:D:234:C:H2'	23:D:235:U:C6	2.25	0.71
23:D:2693:A:H2'	23:D:2694:G:H8	1.54	0.71
23:D:840:C:N4	23:D:938:G:H1	1.89	0.71
24:E:61:G:H2'	24:E:62:C:C6	2.25	0.71
25:Z:40:THR:HG21	25:Z:217:THR:OG1	1.89	0.71
1:A:1193:G:H2'	1:A:1194:U:H6	1.56	0.71
1:A:1413:A:N1	1:A:1487:G:N2	2.36	0.71
1:A:716:A:H1'	11:O:118:GLY:HA2	1.72	0.71
22:C:383:LYS:HZ2	22:C:401:ARG:CB	1.99	0.71
23:D:1227:A:C4	23:D:1228:G:C8	2.79	0.71
23:D:2830:G:H3'	23:D:2831:G:H8	1.55	0.71
23:D:2856:C:H2'	23:D:2857:G:C8	2.25	0.71
23:D:524:U:H2'	23:D:525:U:C6	2.26	0.71
23:D:700:G:H1	23:D:732:C:H42	1.39	0.71
23:D:804:A:H3'	23:D:806:C:H41	1.55	0.71
19:W:11:VAL:O	19:W:12:ASP:CB	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:674:G:N2	1:A:717:C:O2	2.24	0.71
1:A:835:U:H3	1:A:851:G:H1	1.38	0.71
1:A:975:A:N3	14:R:32:SER:OG	2.23	0.71
22:C:330:LEU:HD13	22:C:345:ARG:O	1.45	0.71
22:C:11:ASN:CG	22:C:79:HIS:CD2	2.60	0.71
23:D:1101:U:C2	23:D:1102:C:O2	2.43	0.71
23:D:1208:C:O2	23:D:1238:G:N2	2.23	0.71
23:D:1281:G:H2'	23:D:1282:U:H6	1.55	0.71
23:D:2409:G:H2'	23:D:2410:G:H8	1.55	0.71
23:D:410:G:O6	23:D:418:G:N1	2.24	0.71
23:D:46:C:H2'	23:D:47:C:C6	2.25	0.71
23:D:759:G:H2'	23:D:760:G:H8	1.54	0.71
23:D:960:A:H2'	23:D:962:G:C8	2.26	0.71
11:O:88:GLY:HA3	11:O:91:ARG:HE	1.55	0.71
1:A:745:C:H2'	1:A:746:A:C8	2.26	0.71
23:D:1101:U:H3	23:D:1103:A:N6	1.86	0.71
23:D:1345:C:H2'	23:D:1346:G:H8	1.53	0.71
23:D:2020:A:N6	23:D:2022:U:O2	2.23	0.71
23:D:2120:G:O2'	25:Z:167:LYS:NZ	2.24	0.71
23:D:2732:G:H8	23:D:2732:G:OP2	1.73	0.71
23:D:587:C:N3	23:D:671:C:H1'	2.05	0.71
2:F:178:ARG:NE	8:L:71:GLY:O	2.23	0.71
6:J:6:VAL:HA	6:J:90:VAL:HA	1.71	0.71
8:L:111:ILE:HG22	8:L:134:ILE:HB	1.72	0.71
1:A:1268:A:H4'	21:Y:20:LYS:HA	1.73	0.71
1:A:1204:A:H2'	1:A:1205:U:H5'	1.72	0.71
1:A:1502:A:H2'	1:A:1504:G:C8	2.26	0.71
1:A:735:C:H2'	1:A:736:C:H6	1.55	0.71
22:C:405:ILE:N	22:C:405:ILE:HD12	2.05	0.71
23:D:1063:G:H2'	54:3:87:GLY:C	2.11	0.71
23:D:1062:G:H4'	23:D:1063:G:OP1	1.88	0.71
23:D:1103:A:O2'	23:D:1104:C:OP2	2.07	0.71
23:D:1120:G:H2'	23:D:1121:C:C6	2.25	0.71
23:D:1626:G:N2	23:D:1634:A:O2'	2.22	0.71
23:D:2018:G:H2'	23:D:2019:A:C8	2.26	0.71
23:D:2052:G:H2'	23:D:2053:G:C8	2.26	0.71
23:D:713:G:N2	23:D:719:C:N3	2.38	0.71
23:D:925:C:H2'	23:D:926:A:H8	1.54	0.71
23:D:974:G:O6	23:D:974(A):C:N4	2.24	0.71
54:3:77:LEU:HD21	54:3:111:LYS:CE	2.17	0.71
1:A:1305:G:N2	1:A:1332:A:C8	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:295:C:H2'	1:A:296:U:H6	1.55	0.71
1:A:90:C:N3	1:A:91:C:N4	2.33	0.71
22:C:236:GLU:HG2	22:C:267:ALA:HB1	1.72	0.71
22:C:280:ILE:HD12	22:C:280:ILE:H	1.56	0.71
22:C:455:PRO:HG2	22:C:458:GLU:CG	2.21	0.71
22:C:79:HIS:HE1	22:C:216:ARG:NE	1.88	0.71
22:C:4:MET:HE1	22:C:8:ARG:HG3	1.71	0.71
23:D:999:U:H3'	23:D:1154:G:N1	2.06	0.71
23:D:152:G:O6	23:D:175:G:C5	2.42	0.71
23:D:1954:G:H21	23:D:2551:C:H5''	1.56	0.71
23:D:2007:C:H2'	23:D:2008:C:C6	2.26	0.71
23:D:928:G:H2'	23:D:929:G:H5'	1.73	0.71
2:F:69:LEU:H	2:F:162:ILE:HG22	1.54	0.71
1:A:954:G:H21	1:A:1227:A:H62	1.38	0.70
1:A:27:G:H2'	1:A:28:G:C8	2.26	0.70
1:A:529:G:H1	12:P:49:ASN:CG	1.95	0.70
1:A:880:C:H3'	12:P:9:GLN:NE2	2.06	0.70
22:C:164:ILE:HD12	22:C:176:GLU:HB3	1.73	0.70
22:C:493:ASN:H	22:C:541:ILE:CG2	2.02	0.70
23:D:1035:U:H3	23:D:1120:G:H1	1.36	0.70
23:D:1057:A:C8	23:D:1060:U:N3	2.58	0.70
4:H:101:LEU:HB3	4:H:137:SER:H	1.55	0.70
11:O:44:SER:HB2	11:O:47:VAL:HG23	1.71	0.70
1:A:1308:U:H5	13:Q:99:ARG:HE	0.76	0.70
54:3:37:PHE:HZ	54:3:63:ARG:HG2	1.56	0.70
22:C:135:ILE:CD1	22:C:165:PHE:CD1	2.72	0.70
22:C:495:LEU:H	22:C:539:ALA:HA	1.53	0.70
22:C:533:PHE:CD2	22:C:585:LYS:CD	2.74	0.70
23:D:138:G:H1	23:D:141(A):C:H42	1.39	0.70
23:D:1440:G:H2'	23:D:1441:G:H8	1.54	0.70
23:D:2106:G:H22	23:D:2184:G:H1'	1.56	0.70
23:D:2218:G:H2'	23:D:2219:G:C8	2.26	0.70
23:D:2550:G:H1	23:D:2558:C:H42	1.39	0.70
23:D:37:C:H2'	23:D:38:A:C8	2.25	0.70
23:D:889:C:N3	23:D:890:A:N6	2.39	0.70
24:E:37:C:N3	24:E:48:A:O2'	2.23	0.70
10:N:46:ARG:NH1	10:N:65:LEU:O	2.23	0.70
1:A:261:U:OP2	20:X:80:ARG:NH2	2.24	0.70
1:A:1224:G:C4'	13:Q:102:ARG:CG	2.56	0.70
1:A:568:G:H2'	1:A:569:C:C6	2.27	0.70
22:C:521:VAL:CG1	22:C:547:ALA:HB1	2.17	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1239:G:H2'	23:D:1240:U:H4'	1.73	0.70
23:D:1331:A:H3'	23:D:1333:C:H41	1.56	0.70
23:D:1942:C:H3'	23:D:1943:U:H2'	1.71	0.70
23:D:2291:U:H2'	23:D:2292:C:C6	2.26	0.70
23:D:2391:G:N2	23:D:2427:C:O2'	2.24	0.70
23:D:291:C:N3	23:D:349:G:N2	2.39	0.70
13:Q:54:VAL:HA	13:Q:57:ARG:HB3	1.72	0.70
1:A:1008:C:N3	1:A:1021:G:N1	2.33	0.70
1:A:21:G:H2'	1:A:22:G:C8	2.26	0.70
22:C:435:LEU:CB	22:C:452:TYR:CE1	2.43	0.70
22:C:535:VAL:CG2	22:C:585:LYS:CE	2.65	0.70
23:D:1190:G:H2'	23:D:1191:G:C8	2.27	0.70
23:D:1192:G:H2'	23:D:1193:G:H8	1.56	0.70
23:D:1627:G:H2'	23:D:1628:G:C8	2.26	0.70
23:D:849:A:N6	23:D:929:G:O2'	2.23	0.70
1:A:517:G:H22	1:A:532:A:H5'	1.56	0.70
1:A:57:G:N2	1:A:388:G:O6	2.23	0.70
22:C:137:LYS:HA	22:C:168:GLY:N	2.04	0.70
22:C:412:LEU:CB	22:C:452:TYR:H	2.01	0.70
22:C:493:ASN:O	22:C:541:ILE:HG12	1.91	0.70
23:D:1388:G:H2'	23:D:1389:G:C8	2.25	0.70
23:D:1764:G:H2'	23:D:1765:C:H6	1.56	0.70
23:D:2781:A:C5	23:D:2782:G:H1'	2.25	0.70
23:D:63:U:O2'	23:D:64:A:N7	2.25	0.70
24:E:44:G:O2'	24:E:47:C:N4	2.24	0.70
19:W:3:ARG:HG3	19:W:64:GLU:HG3	1.74	0.70
23:D:1059:G:C6	54:3:126:MET:HG2	2.25	0.70
22:C:159:PRO:O	22:C:161:ASP:N	2.23	0.70
22:C:58:THR:OG1	22:C:84:PRO:CG	2.40	0.70
23:D:1055:G:N2	23:D:1106:G:C6	2.60	0.70
23:D:1105:U:H1'	23:D:1106:G:OP1	1.92	0.70
23:D:1435:G:H2'	23:D:1436:G:C8	2.26	0.70
23:D:1792:G:H2'	23:D:1793:C:C6	2.26	0.70
23:D:838:C:H2'	23:D:839:U:C6	2.27	0.70
23:D:874:G:H1	23:D:903:C:H42	1.39	0.70
23:D:974:G:O6	23:D:989:G:N1	2.24	0.70
24:E:79:C:N4	24:E:97:G:H1	1.88	0.70
1:A:1158:C:O2'	2:F:133:LYS:NZ	2.21	0.70
1:A:509:A:H2'	1:A:510:A:C4	2.27	0.70
1:A:968:A:N1	1:A:1062:U:O2'	2.25	0.70
22:C:336:SER:OG	22:C:392:ASN:CG	2.30	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1068:G:N2	23:D:1095:A:OP2	2.24	0.70
23:D:1533:C:H3'	23:D:1534:G:H8	1.57	0.70
23:D:1681:G:O2'	23:D:1699:G:N1	2.25	0.70
23:D:2689:U:OP1	23:D:2719:G:N2	2.21	0.70
23:D:2811:G:H2'	23:D:2812:G:H5'	1.72	0.70
23:D:534:U:H2'	23:D:535:C:C6	2.27	0.70
23:D:685:A:OP2	23:D:774:A:N6	2.18	0.70
3:G:60:ALA:HB3	3:G:63:ASN:HB2	1.72	0.70
17:U:94:ASN:O	17:U:97:SER:OG	2.05	0.70
25:Z:161:ILE:CD1	25:Z:192:PHE:CE1	2.74	0.70
1:A:1301:U:OP2	1:A:1303:C:N4	2.25	0.70
1:A:580:U:H4'	15:S:58:MET:HG2	1.73	0.70
1:A:593:G:H1	1:A:646:U:H3	1.40	0.70
22:C:246:THR:CG2	22:C:251:VAL:CG2	2.66	0.70
22:C:6:LEU:CD1	22:C:192:PRO:CA	2.69	0.70
23:D:1387:C:N4	23:D:1401:G:O6	2.24	0.70
23:D:1475:G:N2	23:D:1477:A:N1	2.36	0.70
23:D:2124:G:OP1	25:Z:162:GLU:OE1	2.10	0.70
23:D:2580:U:H3'	23:D:2581:G:C8	2.27	0.70
23:D:825:C:H2'	23:D:826:U:C6	2.24	0.70
23:D:94:G:N1	23:D:95:G:N3	2.40	0.70
24:E:18:G:H2'	24:E:19:G:H8	1.54	0.70
25:Z:42:GLU:HB3	25:Z:174:PRO:HA	1.72	0.70
1:A:1240:U:OP2	7:K:116:ALA:N	2.24	0.70
22:C:198:ALA:HB1	22:C:215:LEU:HD21	1.73	0.70
22:C:379:LYS:HE2	22:C:388:VAL:CG2	2.19	0.70
22:C:517:ALA:O	22:C:521:VAL:HB	1.92	0.70
22:C:61:ALA:O	22:C:81:ILE:CG2	2.32	0.70
23:D:1064:C:H2'	23:D:1075:C:N3	2.07	0.70
23:D:1158:C:H2'	23:D:1159:U:C6	2.27	0.70
23:D:1182:A:H3'	23:D:1183:G:H2'	1.74	0.70
23:D:270(I):G:N2	23:D:270(Q):C:O2	2.18	0.70
23:D:493:G:H2'	23:D:494:G:C8	2.27	0.70
23:D:530:G:H22	23:D:2022:U:H4'	1.57	0.70
6:J:47:ARG:HA	6:J:57:GLN:HA	1.74	0.70
12:P:41:ARG:O	12:P:55:VAL:N	2.23	0.70
25:Z:161:ILE:HD12	25:Z:192:PHE:HE1	1.56	0.70
25:Z:42:GLU:N	25:Z:175:VAL:CG2	2.54	0.70
1:A:191(F):U:O2	20:X:106:ALA:N	2.25	0.70
22:C:113:VAL:HG21	22:C:152:VAL:HG13	1.72	0.70
22:C:216:ARG:HD3	22:C:259:GLY:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:436:VAL:HB	22:C:451:VAL:HG12	1.73	0.70
22:C:468:LYS:O	22:C:472:ARG:N	2.25	0.70
23:D:1116:C:N4	23:D:1117:G:O6	2.25	0.70
23:D:1227:A:C6	23:D:1228:G:C5	2.80	0.70
23:D:1425:G:H2'	23:D:1426:G:C8	2.25	0.70
23:D:1527:G:H1	23:D:1544:C:H2'	1.57	0.70
23:D:2418:A:H2'	23:D:2419:U:C6	2.26	0.70
23:D:2640:G:H2'	23:D:2641:G:H8	1.57	0.70
24:E:30:C:H42	24:E:54:G:H1	1.40	0.70
24:E:87:G:N2	24:E:89(A):A:OP2	2.25	0.70
8:L:113:SER:HB3	8:L:132:GLU:HB3	1.72	0.70
9:M:10:ARG:HH12	23:D:583:G:P	173.51	0.70
11:O:73:MET:HG2	11:O:103:LEU:HD11	1.74	0.70
12:P:34:ARG:O	12:P:61:THR:N	2.16	0.70
23:D:1043:C:OP1	53:2:4:LYS:CB	2.39	0.69
1:A:1157:A:N7	1:A:1181:G:N2	2.40	0.69
22:C:169:LYS:HE2	57:C:701:GCP:HN21	0.88	0.69
22:C:196:LEU:CD1	22:C:284:ASP:HB2	2.19	0.69
22:C:484:TYR:HB3	22:C:485:ARG:NE	2.07	0.69
22:C:492:VAL:HG13	22:C:541:ILE:CG1	2.22	0.69
23:D:1144:G:H2'	23:D:1145:C:H6	1.57	0.69
23:D:1218:C:N4	23:D:1232:G:O6	2.26	0.69
23:D:1496:A:H2'	23:D:1498:C:C5	2.27	0.69
23:D:1630:G:O6	23:D:1637:A:N6	2.24	0.69
23:D:1776:G:N2	23:D:1789:A:N3	2.39	0.69
23:D:2122:U:H3	23:D:2176:A:H61	1.40	0.69
23:D:2369:A:H2'	23:D:2370:G:C8	2.27	0.69
23:D:2742:C:H5''	52:1:35:ARG:HH12	1.56	0.69
23:D:2892:A:O2'	23:D:2893:G:H4'	1.91	0.69
23:D:628:G:H2'	23:D:629:G:C8	2.27	0.69
16:T:20:VAL:HG13	16:T:34:GLU:H	1.57	0.69
55:4:58:A:O2'	55:4:60:U:OP2	2.10	0.69
1:A:1521:G:H2'	1:A:1522:U:C6	2.28	0.69
1:A:391:G:OP1	16:T:8:ARG:NH1	2.19	0.69
1:A:551:U:O2'	12:P:86:ARG:NH1	2.25	0.69
22:C:342:PHE:HD2	22:C:370:ILE:HG13	1.51	0.69
22:C:63:ALA:HB1	22:C:245:PHE:CB	2.07	0.69
23:D:1046:A:N6	53:2:7:VAL:CB	2.55	0.69
23:D:818:G:N2	23:D:1189:A:H62	1.89	0.69
23:D:1443:G:H2'	23:D:1444:G:C8	2.25	0.69
23:D:1655:A:H2'	23:D:1656:C:H5'	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1817:G:H2'	23:D:1818:U:H6	1.58	0.69
23:D:57:C:N4	23:D:70:G:H1	1.87	0.69
23:D:599:G:H2'	23:D:600:G:H8	1.56	0.69
23:D:85:G:H2'	23:D:86:C:C6	2.27	0.69
2:F:22:LYS:HA	2:F:40:HIS:HE1	1.57	0.69
3:G:70:VAL:O	3:G:106:VAL:N	2.23	0.69
10:N:13:HIS:ND1	10:N:14:LYS:HG3	2.07	0.69
56:5:45:U:H5''	56:5:46:G:OP2	1.92	0.69
56:5:65:G:OP2	56:5:65:G:H8	1.75	0.69
1:A:1070:U:H2'	1:A:1071:C:C6	2.26	0.69
1:A:1306:A:H62	1:A:1331:G:C2'	1.96	0.69
1:A:438:G:N2	1:A:495:A:OP2	2.25	0.69
22:C:104:LEU:HG	22:C:132:ILE:CG2	2.21	0.69
22:C:229:ARG:HG2	22:C:283:ALA:HB2	1.70	0.69
22:C:70:ALA:HB2	22:C:74:GLU:OE2	1.92	0.69
23:D:1000:A:H8	23:D:1154:G:N2	1.90	0.69
23:D:1050:A:H61	23:D:2751:G:H1	1.39	0.69
23:D:8:A:C8	23:D:2896:C:O2	2.45	0.69
13:Q:24:GLY:HA3	13:Q:66:LEU:HD23	1.72	0.69
54:3:77:LEU:HD11	54:3:111:LYS:HE3	1.74	0.69
1:A:1419:G:H2'	1:A:1420:C:C6	2.27	0.69
1:A:894:G:H2'	1:A:895:G:C8	2.27	0.69
1:A:78:G:H1	1:A:91:C:N4	1.90	0.69
22:C:405:ILE:CG1	22:C:489:LEU:HB2	2.21	0.69
22:C:434:ARG:NH2	22:C:453:GLU:HG2	2.08	0.69
22:C:496:VAL:CA	22:C:537:ILE:HA	2.17	0.69
23:D:1046:A:H62	53:2:7:VAL:CB	2.04	0.69
23:D:1166:C:H2'	23:D:1167:U:C5	2.27	0.69
23:D:1469:A:H2'	23:D:1470:G:N3	2.07	0.69
23:D:2593:U:H2'	23:D:2594:C:H6	1.56	0.69
23:D:603:A:H2'	23:D:604:G:H8	1.57	0.69
2:F:188:ALA:N	2:F:201:ILE:O	2.24	0.69
1:A:1203:C:H2'	1:A:1204:A:H8	1.57	0.69
1:A:1210:C:O2'	1:A:1214:C:N4	2.25	0.69
1:A:210:U:O2'	1:A:216:G:O5'	2.09	0.69
1:A:258:G:H1	1:A:268:C:H42	1.41	0.69
1:A:309:G:H2'	1:A:310:G:C8	2.26	0.69
22:C:189:LYS:HE3	22:C:219:GLU:OE2	1.92	0.69
22:C:217:LEU:HD21	22:C:222:VAL:HG21	1.75	0.69
23:D:1031:G:O2'	52:1:36:GLN:OE1	2.11	0.69
23:D:1210:A:O2'	23:D:1211:U:OP2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:572:A:H3'	23:D:573:G:H8	1.55	0.69
4:H:128:VAL:HA	4:H:146:ILE:HG22	1.74	0.69
1:A:8:A:H5'	5:I:101:ILE:HG22	1.74	0.69
20:X:38:LYS:O	20:X:42:GLN:N	2.25	0.69
55:4:30:G:N2	55:4:40:C:N3	2.33	0.69
1:A:1306:A:H2'	1:A:1307:U:H5'	1.73	0.69
1:A:1486:G:H2'	1:A:1487:G:C8	2.27	0.69
1:A:1527:C:H2'	1:A:1528:U:C6	2.28	0.69
1:A:490:G:H2'	1:A:491:G:H8	1.56	0.69
1:A:967:C:O5'	9:M:128:ARG:NH2	2.26	0.69
22:C:414:ILE:HD13	22:C:477:MET:HB3	1.72	0.69
23:D:1087:G:C4	23:D:1103:A:C2	2.81	0.69
23:D:1351:C:H2'	23:D:1352:U:C2	2.28	0.69
23:D:521:G:H2'	23:D:522:G:C8	2.27	0.69
23:D:934:G:H2'	23:D:935:C:C6	2.27	0.69
25:Z:18:LYS:HG2	25:Z:20:TYR:H	1.57	0.69
25:Z:56:GLN:HG2	25:Z:203:GLY:HA3	1.74	0.69
1:A:1007:C:H42	1:A:1022:G:H1	1.41	0.69
22:C:165:PHE:O	22:C:167:SER:N	2.25	0.69
22:C:299:PRO:HG2	22:C:348:PHE:CD2	2.27	0.69
23:D:1069:A:O2'	23:D:1072:C:OP2	2.09	0.69
23:D:1764:G:H2'	23:D:1765:C:C6	2.28	0.69
23:D:2593:U:H3	23:D:2600:A:H61	1.40	0.69
23:D:401:A:H2'	23:D:402:A:C8	2.27	0.69
23:D:521:G:H2'	23:D:522:G:H8	1.58	0.69
23:D:609(A):G:H1	23:D:619:G:N2	1.87	0.69
23:D:633:A:O2'	23:D:2404:C:OP1	2.10	0.69
23:D:742:G:N2	23:D:755:C:N3	2.39	0.69
12:P:83:VAL:HA	12:P:105:TYR:HD2	1.58	0.69
1:A:954:G:N2	1:A:1228:C:N3	2.40	0.69
22:C:10:ARG:HG2	22:C:186:PRO:O	1.92	0.69
22:C:116:GLU:HB2	22:C:120:LYS:HZ2	1.56	0.69
22:C:405:ILE:HG12	22:C:507:ILE:HG21	1.75	0.69
23:D:153:C:C2	23:D:154:G:C8	2.80	0.69
23:D:2607:G:N1	23:D:2608:G:N3	2.41	0.69
4:H:129:ASN:HD21	4:H:145:GLU:HG2	1.58	0.69
5:I:137:GLU:HG3	5:I:141:GLN:HG2	1.75	0.69
5:I:35:GLY:HA3	5:I:112:LEU:HD22	1.75	0.69
6:J:82:ARG:HG3	6:J:84:ASN:H	1.57	0.69
1:A:227:G:H2'	1:A:228:A:H8	1.58	0.69
1:A:259:G:H1	1:A:267:C:H42	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:31:G:OP2	1:A:306:G:N1	2.25	0.69
1:A:547:A:OP2	4:H:2:GLY:N	2.25	0.69
1:A:5:U:OP2	5:I:92:LYS:NZ	2.23	0.69
22:C:197:LYS:CE	22:C:291:TYR:CE2	2.74	0.69
23:D:1296:G:OP1	23:D:2709:G:O2'	2.11	0.69
23:D:1979:C:N4	23:D:1980:G:O6	2.26	0.69
23:D:2848:G:H22	23:D:2867:G:H1'	1.56	0.69
23:D:657:U:H2'	23:D:658:C:C6	2.27	0.69
11:O:50:TYR:HD1	11:O:54:ARG:HD2	1.57	0.69
22:C:270:ASP:O	22:C:272:HIS:N	2.26	0.69
22:C:41:MET:HB2	22:C:45:PHE:HB2	1.75	0.69
23:D:1057:A:C2'	23:D:1058:G:H5'	2.23	0.69
23:D:1266:G:O2'	23:D:1267:U:OP2	2.11	0.69
23:D:1370:C:H2'	23:D:1371:G:O4'	1.92	0.69
23:D:1380:G:H2'	23:D:1381:G:C8	2.28	0.69
23:D:1467:C:N3	23:D:1524:G:N2	2.35	0.69
23:D:758:C:O2'	23:D:1784:A:N6	2.23	0.69
23:D:2235:G:H2'	23:D:2236:C:C6	2.28	0.69
23:D:2452:C:N4	23:D:2504:U:H3	1.90	0.69
23:D:777:A:H2	23:D:778:G:C4	2.10	0.69
2:F:185:ILE:HG22	2:F:199:TYR:HB2	1.73	0.69
10:N:85:LEU:HG	10:N:89:ASP:HB3	1.75	0.69
1:A:975:A:O2'	14:R:41:ARG:NH1	2.26	0.69
16:T:20:VAL:HG22	16:T:35:LYS:HA	1.75	0.69
17:U:52:LYS:N	17:U:55:ASP:OD2	2.26	0.69
1:A:1339:A:HO2'	55:4:40:C:HO2'	1.38	0.69
1:A:198:G:H1	1:A:219:C:H42	1.40	0.69
1:A:225:C:H2'	1:A:226:G:H8	1.58	0.69
1:A:808:C:OP2	15:S:48:LYS:NZ	2.23	0.69
22:C:178:LEU:HA	22:C:181:ILE:CD1	2.23	0.69
22:C:349:LEU:HD12	22:C:352:LEU:HB2	1.74	0.69
22:C:511:GLU:O	22:C:515:THR:HG23	1.93	0.69
23:D:1057:A:H3'	23:D:1060:U:O4	1.91	0.69
23:D:1643:G:H2'	23:D:1644:C:C6	2.27	0.69
23:D:2678:C:H42	23:D:2729:G:H1	1.41	0.69
23:D:451:C:H41	23:D:453:C:H3'	1.58	0.69
2:F:117:GLU:O	2:F:121:LEU:N	2.26	0.69
2:F:28:PHE:HA	2:F:194:PRO:HG2	1.75	0.69
2:F:163:PHE:HE1	2:F:201:ILE:HD13	1.58	0.69
3:G:26:LYS:HA	14:R:36:PHE:HE1	1.57	0.69
1:A:251:G:N2	1:A:252:U:O4	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:332:G:H2'	1:A:333:G:H8	1.58	0.68
1:A:660:G:H2'	1:A:661:G:H8	1.57	0.68
1:A:585:G:H1	1:A:756:C:N4	1.90	0.68
22:C:14:ILE:HG23	22:C:105:LEU:CA	2.22	0.68
22:C:18:VAL:HG21	22:C:86:HIS:HB2	1.67	0.68
23:D:1214:A:N6	23:D:1235:G:O2'	2.25	0.68
23:D:1422:G:H2'	23:D:1423:G:H8	1.58	0.68
23:D:2489:G:H2'	23:D:2490:G:C8	2.27	0.68
23:D:473:G:N2	23:D:474:G:N3	2.40	0.68
23:D:65:C:H2'	23:D:66:C:H6	1.57	0.68
3:G:152:ILE:HD11	3:G:199:LYS:HB2	1.75	0.68
17:U:27:PHE:O	17:U:35:VAL:HA	1.94	0.68
54:3:4:VAL:HG13	54:3:5:VAL:N	2.08	0.68
1:A:1308:U:O2	1:A:1330:U:N3	2.26	0.68
1:A:30:U:O4	1:A:32:A:N6	2.26	0.68
1:A:545:C:OP1	4:H:61:LYS:NZ	2.24	0.68
22:C:97:LEU:HD21	22:C:123:MET:HB3	1.74	0.68
22:C:556:LYS:HB2	23:D:1943:U:H5''	1.75	0.68
22:C:577:GLN:OE1	23:D:1943:U:C5'	2.41	0.68
22:C:9:ILE:HA	22:C:77:VAL:C	2.14	0.68
23:D:1091:G:H2'	23:D:1092:C:C2	2.28	0.68
23:D:1160:G:H2'	23:D:1161:C:C6	2.29	0.68
23:D:1201:C:H2'	23:D:1202:C:C6	2.28	0.68
23:D:1794:U:H2'	23:D:1795:C:H6	1.57	0.68
23:D:2728:U:H2'	23:D:2729:G:H8	1.58	0.68
23:D:2736:G:H2'	23:D:2737:G:C8	2.28	0.68
23:D:2631:G:H3'	23:D:2894:G:O6	1.93	0.68
7:K:37:ASN:OD1	7:K:38:LEU:N	2.23	0.68
54:3:27:LEU:O	54:3:32:ALA:N	2.24	0.68
54:3:7:VAL:HA	54:3:59:ILE:HD13	1.75	0.68
1:A:1215:G:H2'	1:A:1216:G:H8	1.58	0.68
1:A:947:G:H2'	1:A:948:C:C6	2.28	0.68
22:C:444:ALA:CB	22:C:447:ARG:HG2	2.24	0.68
22:C:490:VAL:HG22	22:C:491:LYS:N	2.03	0.68
22:C:531:GLN:HG3	22:C:532:LEU:N	2.08	0.68
22:C:95:ARG:NH2	22:C:202:ASP:HA	2.09	0.68
23:D:2047:U:H2'	23:D:2048:G:C8	2.17	0.68
23:D:2590:A:H2'	23:D:2591:C:C6	2.28	0.68
23:D:2651:C:H2'	23:D:2652:C:H5''	1.74	0.68
23:D:2737:G:H1	23:D:2767:C:H42	1.39	0.68
24:E:76:G:H2'	24:E:77:U:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:21:ARG:HG3	2:F:23:ARG:HG2	1.76	0.68
4:H:10:ARG:HG3	4:H:11:LEU:HG	1.74	0.68
5:I:13:ILE:HG23	5:I:30:ALA:HB2	1.75	0.68
5:I:76:ILE:HD12	5:I:118:ILE:HD13	1.74	0.68
1:A:17:U:H1'	1:A:1080:A:H1'	1.75	0.68
1:A:771:G:H2'	1:A:772:U:C6	2.29	0.68
22:C:153:GLU:HG3	22:C:158:LEU:O	1.93	0.68
22:C:242:VAL:CG1	22:C:263:TRP:N	2.57	0.68
22:C:495:LEU:C	22:C:537:ILE:HG23	2.14	0.68
23:D:1144:G:H2'	23:D:1145:C:C6	2.28	0.68
23:D:1348:G:H2'	23:D:1349:A:H8	1.58	0.68
23:D:1353:A:H2'	23:D:1354:A:H8	1.58	0.68
23:D:792:G:N2	23:D:2072:G:O2'	2.25	0.68
23:D:2769:C:H3'	23:D:2770:G:H8	1.58	0.68
23:D:569:U:OP2	23:D:945:A:N6	2.23	0.68
23:D:842:G:H2'	23:D:843:G:H8	1.58	0.68
23:D:972:G:H2'	23:D:973:A:H5'	1.75	0.68
11:O:22:HIS:CD2	11:O:23:ALA:H	2.11	0.68
13:Q:27:LYS:HA	13:Q:30:ALA:HB3	1.74	0.68
54:3:105:LEU:HD23	54:3:127:ILE:CD1	2.17	0.68
54:3:32:ALA:HB1	54:3:63:ARG:CZ	2.23	0.68
1:A:1004:A:O2'	1:A:1005:A:O4'	2.11	0.68
1:A:1488:G:H2'	1:A:1489:G:H8	1.58	0.68
22:C:217:LEU:HB2	22:C:258:ALA:HA	1.75	0.68
23:D:1085:A:C5'	23:D:1106:G:N7	2.55	0.68
23:D:1276:A:H2'	23:D:1277:G:H8	1.56	0.68
23:D:2302:G:N2	23:D:2314:C:N3	2.38	0.68
23:D:871:U:O2	23:D:906:G:N2	2.26	0.68
23:D:909:A:O2'	23:D:911:A:OP2	2.12	0.68
3:G:94:LEU:HD23	3:G:95:THR:HG23	1.75	0.68
7:K:94:ARG:NH1	7:K:98:SER:OG	2.26	0.68
17:U:29:HIS:CE1	17:U:31:LEU:HB3	2.27	0.68
1:A:280:C:H1'	17:U:38:ARG:HD2	1.75	0.68
1:A:782:A:H62	1:A:800:G:N2	1.90	0.68
1:A:817:C:N4	1:A:819:A:N3	2.42	0.68
22:C:225:GLY:HA2	22:C:239:VAL:N	2.09	0.68
22:C:169:LYS:HG3	57:C:701:GCP:N1	2.08	0.68
23:D:1021:A:C8	23:D:1023:U:H5''	2.28	0.68
23:D:1107:G:C3'	23:D:1108:U:H5'	2.23	0.68
23:D:1167:U:H2'	23:D:1168:G:C8	2.29	0.68
23:D:212:G:H2'	23:D:213:A:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2178:C:C3'	23:D:2179:C:H5''	2.19	0.68
23:D:569:U:OP2	23:D:2448:A:N6	2.26	0.68
23:D:2876:G:H2'	23:D:2877:G:H8	1.57	0.68
23:D:428:A:N7	23:D:429:A:N6	2.42	0.68
24:E:66:A:H61	24:E:107:U:H3'	1.56	0.68
3:G:2:GLY:N	3:G:4:LYS:HZ2	1.92	0.68
1:A:1027:C:OP2	1:A:1028:C:N4	2.26	0.68
1:A:191(F):U:H3	20:X:105:SER:HB2	1.59	0.68
22:C:418:GLU:HA	22:C:446:LYS:CB	2.23	0.68
22:C:423:SER:HB2	22:C:470:VAL:CG1	2.08	0.68
22:C:22:LYS:HZ2	22:C:84:PRO:HA	1.58	0.68
23:D:1000:A:H8	23:D:1154:G:H21	1.40	0.68
23:D:330:A:O2'	23:D:1210:A:N6	2.26	0.68
23:D:1439:A:H2'	23:D:1440:G:H5'	1.76	0.68
23:D:1679:U:H3	23:D:1764:G:H5''	1.58	0.68
23:D:1753:G:N2	23:D:1756:G:O5'	2.21	0.68
23:D:2050:C:H2'	23:D:2051:A:C8	2.29	0.68
23:D:2615:U:O2'	23:D:2616:C:O5'	2.10	0.68
2:F:103:THR:N	2:F:176:GLU:OE2	2.26	0.68
6:J:18:GLN:HA	6:J:21:LEU:HB3	1.76	0.68
6:J:55:ASP:OD2	6:J:86:ARG:NH2	2.27	0.68
11:O:25:TYR:HH	11:O:87:THR:HG1	1.41	0.68
54:3:33:ASN:HD22	54:3:62:ASP:HA	1.57	0.68
56:5:33:U:H5''	56:5:34:G:OP2	1.94	0.68
1:A:137:C:H2'	1:A:138:G:H8	1.59	0.68
22:C:80:LEU:HD23	22:C:80:LEU:O	1.94	0.68
23:D:1326:U:H2'	23:D:1327:C:H6	1.57	0.68
23:D:1845:G:H2'	23:D:1846:G:H8	1.57	0.68
23:D:2123:G:H2'	23:D:2124:G:C8	2.28	0.68
23:D:2285:C:N3	23:D:2384:G:N2	2.41	0.68
23:D:2436:G:O2'	23:D:2598:A:N1	2.26	0.68
23:D:2623:G:H2'	23:D:2624:G:H8	1.58	0.68
23:D:2853:C:H42	23:D:2864:G:H1	1.42	0.68
23:D:286:C:H42	23:D:355:G:H1	1.42	0.68
23:D:439:G:H2'	23:D:440:G:H8	1.59	0.68
23:D:484:C:N4	23:D:496:G:H1	1.92	0.68
23:D:728:G:N2	23:D:762:U:O5'	2.26	0.68
2:F:109:SER:O	2:F:113:HIS:N	2.27	0.68
9:M:109:VAL:HG11	9:M:118:LYS:HZ1	1.59	0.68
10:N:38:ILE:O	10:N:71:LEU:N	2.24	0.68
15:S:62:GLN:OE1	15:S:65:ARG:NH2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:3:13:PRO:HG2	54:3:16:LYS:NZ	2.09	0.68
1:A:1310:G:N3	1:A:1328:C:N4	2.41	0.68
1:A:318:G:H2'	1:A:319:G:C8	2.28	0.68
1:A:566:G:O2'	1:A:567:G:O5'	2.08	0.68
1:A:876:G:H2'	1:A:877:C:H6	1.58	0.68
22:C:181:ILE:HG23	22:C:185:ILE:HD11	1.74	0.68
22:C:301:VAL:C	22:C:348:PHE:CA	2.51	0.68
23:D:1562:A:H2'	23:D:1563:G:C8	2.29	0.68
23:D:2288:A:O2'	23:D:2385:C:OP1	2.08	0.68
23:D:2419:U:H2'	23:D:2420:C:H6	1.58	0.68
23:D:2848:G:N2	23:D:2867:G:H1'	2.08	0.68
23:D:308:G:H21	23:D:329:G:N2	1.90	0.68
23:D:566:U:H2'	23:D:567:A:C8	2.29	0.68
23:D:638:G:H2'	23:D:639:U:O4'	1.94	0.68
23:D:834:C:H2'	23:D:835:A:H8	1.55	0.68
2:F:71:VAL:HG21	2:F:164:VAL:HG23	1.75	0.68
1:A:540:G:N2	4:H:42:GLN:OE1	2.21	0.68
6:J:72:VAL:HG23	6:J:73:ASN:H	1.58	0.68
8:L:29:SER:O	8:L:33:GLU:N	2.27	0.68
1:A:1474:G:H2'	1:A:1475:G:H8	1.57	0.68
1:A:247:G:H2'	1:A:248:C:C6	2.29	0.68
1:A:8:A:N6	4:H:205:GLU:O	2.26	0.68
22:C:17:HIS:CG	22:C:18:VAL:H	2.11	0.68
22:C:213:PRO:CG	22:C:264:LEU:HB2	2.23	0.68
22:C:301:VAL:O	22:C:348:PHE:CG	2.47	0.68
23:D:123:G:H2'	23:D:124:G:H8	1.59	0.68
23:D:1668:A:H4'	23:D:1669:A:C8	2.29	0.68
23:D:2115:G:O3'	23:D:2166:G:N2	2.27	0.68
23:D:2532:G:H2'	23:D:2533:A:H8	1.58	0.68
23:D:2811:G:C5	23:D:2812:G:N7	2.61	0.68
23:D:596:G:H2'	23:D:597:U:C6	2.29	0.68
4:H:68:TYR:HA	4:H:114:ARG:HH12	1.56	0.68
1:A:684:A:O2'	11:O:39:PRO:HD2	1.94	0.68
1:A:1356:G:H1	1:A:1366:C:N4	1.91	0.67
1:A:450:G:H3'	1:A:481:G:N2	2.09	0.67
1:A:97:U:H2'	1:A:99:C:H6	1.59	0.67
22:C:150:LEU:O	22:C:153:GLU:HB3	1.93	0.67
22:C:181:ILE:CG2	22:C:185:ILE:HD12	2.24	0.67
22:C:492:VAL:HG23	22:C:508:ALA:HB3	1.55	0.67
23:D:1363:C:H2'	23:D:1368:G:H22	1.59	0.67
23:D:1559:G:N2	23:D:1560:G:O3'	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2125:G:N2	23:D:2172:U:OP1	2.26	0.67
23:D:2431:U:N3	23:D:2434:A:OP1	2.18	0.67
23:D:296:C:H2'	23:D:297:C:O4'	1.93	0.67
23:D:681:G:H2'	23:D:682:G:C8	2.29	0.67
23:D:681:G:H2'	23:D:682:G:H8	1.59	0.67
23:D:800:A:H1'	23:D:802:A:H5'	1.75	0.67
23:D:840:C:H2'	23:D:841:A:C8	2.28	0.67
2:F:223:ILE:O	2:F:227:GLY:N	2.27	0.67
3:G:84:ILE:HG13	3:G:87:LEU:HD12	1.76	0.67
1:A:408:A:OP2	4:H:115:ARG:NH2	2.27	0.67
4:H:9:CYS:HB2	4:H:22:LYS:HD2	1.76	0.67
5:I:10:MET:HA	5:I:32:VAL:HG22	1.76	0.67
6:J:30:LEU:O	6:J:35:ALA:N	2.25	0.67
8:L:96:GLY:N	8:L:99:GLU:OE1	2.27	0.67
1:A:1147:C:O2	9:M:16:ARG:NH2	2.26	0.67
12:P:56:ALA:O	12:P:68:ALA:N	2.27	0.67
20:X:58:LYS:O	20:X:61:SER:OG	2.06	0.67
25:Z:155:GLU:HB2	25:Z:160:ARG:CD	2.11	0.67
56:5:1:G:O6	56:5:72:C:N4	2.19	0.67
1:A:1061:G:H1	1:A:1195:C:N4	1.92	0.67
1:A:1306:A:H2'	1:A:1307:U:C5'	2.23	0.67
1:A:199:G:H2'	1:A:200:G:H8	1.60	0.67
1:A:612:C:H2'	1:A:613:C:C6	2.29	0.67
22:C:15:ILE:N	22:C:104:LEU:O	2.26	0.67
22:C:14:ILE:CG2	22:C:105:LEU:CA	2.72	0.67
22:C:15:ILE:HD12	22:C:103:VAL:CB	2.24	0.67
22:C:90:THR:O	22:C:94:SER:N	2.28	0.67
23:D:1435:G:H2'	23:D:1436:G:H8	1.58	0.67
23:D:1944:U:H1'	23:D:1955:U:O4'	1.94	0.67
23:D:2128:C:O2	25:Z:6:ARG:NH2	2.28	0.67
4:H:65:ARG:NH1	23:D:2406:U:H1'	170.91	0.67
23:D:249:C:OP2	23:D:2394:C:O2'	2.10	0.67
23:D:2894:G:N3	23:D:2894:G:H3'	2.08	0.67
23:D:764:A:H5'	23:D:765:G:OP2	1.95	0.67
23:D:768:G:H2'	23:D:769:G:C8	2.29	0.67
15:S:43:LEU:O	15:S:47:LYS:N	2.27	0.67
21:Y:18:TYR:HD2	21:Y:24:ARG:HH11	1.42	0.67
1:A:1157:A:H4'	1:A:1158:C:C5	2.29	0.67
1:A:1269:A:O2'	1:A:1325:C:O2	2.12	0.67
1:A:411:A:H1'	1:A:413:G:H1'	1.76	0.67
22:C:285:ARG:CB	22:C:286:PRO:CD	2.72	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:30:LEU:CB	22:C:32:LEU:HD23	2.24	0.67
23:D:1444:G:H3'	23:D:1445:C:H41	1.59	0.67
23:D:1687:G:O2'	23:D:1701:A:N6	2.27	0.67
23:D:173:G:C5	23:D:174:C:C5	2.82	0.67
23:D:191:A:H2'	23:D:192:C:C6	2.29	0.67
23:D:2285:C:H42	23:D:2383:G:H1	1.41	0.67
23:D:2348:U:H2'	23:D:2349:G:H5'	1.76	0.67
8:L:34:GLU:OE2	8:L:37:ARG:NH1	2.27	0.67
16:T:38:TYR:CE1	16:T:49:LEU:HA	2.28	0.67
19:W:13:ASP:HA	19:W:16:LEU:HB3	1.75	0.67
55:4:13:C:H42	55:4:22:G:H1	1.39	0.67
1:A:1290:G:H2'	1:A:1291:G:H8	1.57	0.67
1:A:456:C:H42	1:A:476:G:H1	1.39	0.67
1:A:517:G:N2	1:A:531:U:O3'	2.26	0.67
22:C:59:ILE:HG22	22:C:60:LYS:HD2	1.76	0.67
23:D:1221:C:H2'	23:D:1222:C:C6	2.30	0.67
23:D:1834:U:O4	23:D:1970:A:N6	2.26	0.67
23:D:2027:G:H2'	23:D:2028:U:C6	2.29	0.67
23:D:188:G:H1	23:D:208:C:N4	1.92	0.67
23:D:2276:G:H2'	23:D:2277:G:C8	2.29	0.67
23:D:2409:G:H2'	23:D:2410:G:C8	2.28	0.67
23:D:607:U:N3	23:D:621:A:N7	2.42	0.67
12:P:113:ARG:NH1	12:P:115:LYS:O	2.28	0.67
13:Q:27:LYS:O	13:Q:29:ARG:N	2.27	0.67
14:R:4:LYS:HA	14:R:7:ILE:HG13	1.76	0.67
15:S:70:LEU:HD21	15:S:81:LEU:HD22	1.76	0.67
19:W:40:ILE:HB	19:W:67:VAL:HA	1.76	0.67
13:Q:87:TYR:HH	19:W:77:THR:H	1.41	0.67
54:3:77:LEU:CD2	54:3:111:LYS:HD3	2.20	0.67
1:A:1153:C:H2'	1:A:1154:G:C8	2.29	0.67
1:A:1525:G:OP2	11:O:126:ARG:NH2	2.27	0.67
1:A:688:G:N2	1:A:699:C:N3	2.43	0.67
1:A:880:C:H2'	1:A:881:G:C8	2.27	0.67
22:C:105:LEU:HD23	22:C:105:LEU:O	1.95	0.67
22:C:216:ARG:O	22:C:218:PHE:CD2	2.47	0.67
22:C:373:ALA:CB	22:C:374:PRO:HD3	2.25	0.67
22:C:431:LYS:C	22:C:432:ARG:HG2	2.12	0.67
22:C:59:ILE:HG22	22:C:60:LYS:CD	2.25	0.67
22:C:169:LYS:HE3	57:C:701:GCP:HN1	1.59	0.67
23:D:123:G:H2'	23:D:124:G:C8	2.29	0.67
23:D:2104:G:C6	23:D:2186:G:C6	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2631:G:H1	23:D:2787:C:N4	1.92	0.67
23:D:2637:U:O2'	23:D:2638:G:O4'	2.12	0.67
23:D:744:G:H1	23:D:753:C:N4	1.92	0.67
23:D:74:A:N7	23:D:87:C:O2'	2.24	0.67
4:H:125:HIS:HA	4:H:149:ALA:HB2	1.77	0.67
17:U:66:SER:HB3	17:U:69:LYS:HE2	1.74	0.67
19:W:58:VAL:HG23	19:W:75:ALA:HB1	1.75	0.67
54:3:106:GLU:O	54:3:109:LYS:NZ	2.23	0.67
22:C:569:ARG:HH12	55:4:74:C:H6	1.40	0.67
1:A:491:G:H2'	1:A:492:G:H8	1.59	0.67
1:A:55:A:C4	22:C:208:TYR:HD1	2.12	0.67
22:C:200:ILE:HD11	22:C:281:THR:HG22	1.76	0.67
22:C:338:THR:HB	22:C:503:ALA:HB3	1.71	0.67
22:C:300:VAL:HG13	22:C:464:HIS:HE1	1.56	0.67
23:D:1306:C:H42	23:D:1622:G:H1	1.40	0.67
23:D:1863:G:H2'	23:D:1864:U:H6	1.60	0.67
23:D:1855:G:N1	23:D:1888:G:N7	2.41	0.67
23:D:2161:C:H2'	23:D:2162:G:H8	1.60	0.67
23:D:2092:U:N3	23:D:2226:C:OP1	2.26	0.67
23:D:2466:C:H5'	52:1:5:ALA:HB3	1.76	0.67
23:D:2603:G:H2'	23:D:2604:U:H6	1.60	0.67
23:D:2852:G:H2'	23:D:2853:C:C6	2.30	0.67
23:D:533:G:H2'	23:D:534:U:C6	2.29	0.67
23:D:783:A:H2'	23:D:784:A:H4'	1.75	0.67
1:A:942:G:H1	1:A:1341:U:H3	1.41	0.67
1:A:344:A:H3'	1:A:345:C:H5'	1.76	0.67
1:A:490:G:H2'	1:A:491:G:C8	2.30	0.67
1:A:602:A:H2'	1:A:603:U:C6	2.29	0.67
1:A:664:G:P	18:V:64:ARG:HH21	2.16	0.67
22:C:526:GLU:OE1	22:C:593:PRO:CG	2.42	0.67
23:D:1149:G:H2'	23:D:1150:C:H6	1.60	0.67
23:D:122:G:H2'	23:D:123:G:C8	2.30	0.67
23:D:1305:C:H2'	23:D:1306:C:H6	1.59	0.67
23:D:2583:G:C5	23:D:2584:U:N3	2.63	0.67
23:D:1654:A:N6	23:D:2823:A:O2'	2.27	0.67
3:G:116:VAL:HG11	3:G:141:VAL:HG11	1.76	0.67
13:Q:5:ALA:HB1	13:Q:67:GLU:OE1	1.95	0.67
1:A:1095:U:OP1	1:A:1108:G:N2	2.24	0.67
1:A:947:G:O3'	13:Q:109:THR:OG1	2.13	0.67
1:A:999:U:O4	1:A:1000:A:N6	2.27	0.67
22:C:447:ARG:HG3	22:C:447:ARG:O	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:489:LEU:CD2	22:C:507:ILE:HD13	2.25	0.67
22:C:493:ASN:CB	22:C:541:ILE:HA	2.24	0.67
22:C:67:THR:HA	22:C:76:TYR:CG	2.30	0.67
23:D:1336:A:H2'	23:D:1337:G:C8	2.30	0.67
23:D:1440:G:O6	23:D:1552:G:N1	2.28	0.67
23:D:2815:C:H2'	23:D:2816:C:C6	2.29	0.67
23:D:44:A:H61	23:D:434:U:H3	1.43	0.67
23:D:648:G:C2'	23:D:649:G:H5'	2.25	0.67
23:D:812:C:O4'	23:D:1250:G:O2'	2.09	0.67
5:I:115:VAL:HB	5:I:118:ILE:HD12	1.77	0.67
12:P:95:GLY:O	12:P:97:ARG:NH1	2.28	0.67
16:T:1:MET:O	16:T:24:ALA:N	2.28	0.67
1:A:1056:U:OP1	3:G:156:ARG:NH1	2.27	0.67
1:A:1071:C:N4	1:A:1084:G:H21	1.91	0.67
1:A:1371:G:OP1	9:M:11:LYS:NZ	2.28	0.67
1:A:774:G:H1	1:A:805:C:H42	1.41	0.67
22:C:14:ILE:CG2	22:C:104:LEU:C	2.63	0.67
22:C:214:TYR:HA	22:C:263:TRP:CA	2.18	0.67
23:D:1712:C:H2'	23:D:1716:U:C2	2.30	0.67
23:D:184:C:H2'	23:D:185:U:C6	2.29	0.67
23:D:441:U:H2'	23:D:442:G:C8	2.30	0.67
55:4:52:G:H2'	55:4:52:G:OP2	1.94	0.67
1:A:1316:G:N2	1:A:1319:A:O4'	2.28	0.67
1:A:247:G:H2'	1:A:248:C:H6	1.58	0.67
1:A:545:C:H2'	1:A:546:G:C8	2.30	0.67
1:A:719:C:OP2	1:A:720:C:N4	2.28	0.67
1:A:805:C:H2'	1:A:806:C:C6	2.30	0.67
1:A:55:A:C4	22:C:208:TYR:CD1	2.83	0.67
22:C:25:LEU:CD2	22:C:174:VAL:CB	2.72	0.67
22:C:342:PHE:CD2	22:C:370:ILE:CG1	2.69	0.67
22:C:495:LEU:HB3	22:C:538:GLN:HG2	1.75	0.67
23:D:1344:G:N2	23:D:1404:C:O2	2.28	0.67
23:D:2236:C:H3'	23:D:2237:G:H8	1.58	0.67
23:D:289:A:N1	23:D:351:G:O2'	2.24	0.67
4:H:13:ARG:HH21	4:H:40:PRO:HA	1.59	0.67
54:3:77:LEU:HD23	54:3:111:LYS:HD3	1.76	0.66
1:A:1122:U:H2'	1:A:1123:A:C8	2.30	0.66
1:A:120:A:C6	1:A:122:G:C6	2.83	0.66
1:A:147:G:H1	1:A:175:C:H42	1.42	0.66
1:A:238:G:P	17:U:25:ARG:HH12	2.18	0.66
22:C:197:LYS:NZ	22:C:290:PRO:CA	2.58	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:410:VAL:HA	22:C:481:GLN:CA	2.25	0.66
23:D:162:U:H6	23:D:162:U:O5'	1.78	0.66
23:D:1668:A:H62	23:D:1674:G:H21	1.43	0.66
23:D:2096:U:H3	23:D:2193:G:H1	1.43	0.66
23:D:2105:C:H2'	23:D:2106:G:N7	2.10	0.66
23:D:2809:A:C5'	23:D:2810:A:H5'	2.25	0.66
23:D:2850:A:H2'	23:D:2851:A:O4'	1.95	0.66
23:D:640:C:N4	23:D:647:G:H22	1.93	0.66
23:D:878:A:H62	23:D:897:C:H42	1.42	0.66
2:F:136:VAL:O	2:F:139:LYS:HG2	1.96	0.66
1:A:1125:U:C4	10:N:73:ASP:HB3	2.30	0.66
22:C:20:HIS:NE2	22:C:108:ASP:CB	2.58	0.66
22:C:10:ARG:HG2	22:C:185:ILE:CG2	2.26	0.66
22:C:224:PRO:HB3	22:C:241:LYS:CA	2.25	0.66
23:D:1043:C:O3'	23:D:1044:G:C8	2.47	0.66
23:D:585:G:H21	23:D:1254:A:N6	1.93	0.66
23:D:1409:C:H2'	23:D:1410:G:H8	1.58	0.66
23:D:1474:C:H2'	23:D:1475:G:C8	2.30	0.66
23:D:1785:A:H2'	23:D:1786:A:C5	2.30	0.66
23:D:1862:G:H1	23:D:1880:C:H42	1.41	0.66
23:D:2359:C:H2'	23:D:2360:A:O4'	1.95	0.66
23:D:2553:G:C8	23:D:2583:G:H4'	2.30	0.66
23:D:2631:G:H2'	23:D:2632:A:O4'	1.94	0.66
23:D:223:A:N9	23:D:422:A:H1'	2.10	0.66
23:D:682:G:H2'	23:D:683:C:C2	2.30	0.66
2:F:144:ARG:HG2	2:F:148:TYR:CE2	2.29	0.66
6:J:71:ARG:O	6:J:75:LEU:N	2.20	0.66
6:J:52:ILE:O	6:J:86:ARG:NH1	2.27	0.66
10:N:11:PHE:H	10:N:16:LEU:HD11	1.60	0.66
11:O:53:SER:O	11:O:55:LYS:N	2.29	0.66
54:3:81:ALA:HB2	54:3:107:ILE:CG2	2.24	0.66
22:C:446:LYS:C	54:3:29:GLN:HE21	1.99	0.66
56:5:11:C:N3	56:5:24:G:N2	2.38	0.66
1:A:928:G:H1	1:A:1389:C:H42	1.41	0.66
1:A:301:G:H2'	1:A:302:G:C8	2.30	0.66
1:A:545:C:H2'	1:A:546:G:H8	1.59	0.66
22:C:191:ASP:CG	22:C:219:GLU:HA	2.16	0.66
22:C:230:ILE:HG21	22:C:281:THR:H	1.61	0.66
22:C:217:LEU:O	22:C:259:GLY:N	2.29	0.66
23:D:1057:A:C8	23:D:1060:U:C4	2.84	0.66
23:D:1350:C:N4	23:D:1381:G:H1	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2105:C:H2'	23:D:2106:G:C8	2.30	0.66
23:D:2105:C:N4	23:D:2181:G:O6	2.27	0.66
23:D:290:G:H2'	23:D:291:C:H6	1.60	0.66
23:D:429:A:H2'	23:D:430:G:C8	2.30	0.66
23:D:581:C:H2'	23:D:582:G:C8	2.31	0.66
23:D:678:C:H2'	23:D:679:C:C6	2.30	0.66
23:D:68:G:N2	23:D:74:A:OP2	2.29	0.66
23:D:745:G:N2	23:D:750:A:H61	1.92	0.66
2:F:70:PHE:HB2	2:F:163:PHE:HD2	1.61	0.66
3:G:136:GLN:O	3:G:140:ARG:HG2	1.94	0.66
12:P:36:VAL:HG23	12:P:81:SER:H	1.61	0.66
1:A:1308:U:P	13:Q:98:VAL:H	2.18	0.66
1:A:761:G:C6	17:U:105:ALA:HB2	2.31	0.66
20:X:75:ASN:HD21	20:X:79:ARG:NH2	1.94	0.66
1:A:1308:U:C5	13:Q:99:ARG:CZ	2.78	0.66
1:A:1389:C:H2'	1:A:1390:U:O4'	1.96	0.66
1:A:1488:G:H2'	1:A:1489:G:C8	2.31	0.66
1:A:186(B):C:N4	1:A:186(C):G:O6	2.28	0.66
23:D:153:C:C4	23:D:154:G:N7	2.63	0.66
23:D:164:U:H3'	23:D:164:U:P	2.34	0.66
23:D:1802:A:H3'	23:D:1803:A:H8	1.61	0.66
23:D:1937:A:O2'	23:D:1938:A:OP1	2.13	0.66
23:D:20:C:H2'	23:D:21:A:C8	2.29	0.66
23:D:1758:G:N7	23:D:2695:C:O2'	2.28	0.66
23:D:270(Q):C:H2'	23:D:270(R):G:H8	1.60	0.66
23:D:270(S):G:H2'	23:D:270(T):G:C8	2.31	0.66
23:D:284:U:H2'	23:D:285:C:C6	2.31	0.66
23:D:79:G:H2'	23:D:80:G:H8	1.61	0.66
23:D:80:G:H2'	23:D:81:G:C8	2.30	0.66
4:H:12:CYS:SG	4:H:19:LEU:N	2.57	0.66
12:P:73:GLU:HB2	12:P:110:VAL:HG11	1.78	0.66
12:P:99:HIS:O	12:P:99:HIS:ND1	2.29	0.66
16:T:19:ILE:N	16:T:37:GLY:O	2.28	0.66
55:4:48:C:O2'	55:4:59:A:O2'	2.12	0.66
1:A:831:U:H2'	1:A:832:C:C6	2.31	0.66
22:C:14:ILE:HA	22:C:104:LEU:CA	2.25	0.66
22:C:30:LEU:HD23	22:C:32:LEU:CD2	2.24	0.66
22:C:495:LEU:HD22	22:C:538:GLN:CG	1.96	0.66
22:C:568:THR:OG1	22:C:569:ARG:N	2.29	0.66
23:D:1038:C:H3'	23:D:1039:G:N2	2.11	0.66
23:D:1047:G:H3'	23:D:1110:G:H21	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:116:C:H2'	23:D:117:G:C4	2.29	0.66
23:D:1427:A:N6	23:D:1570:A:OP1	2.28	0.66
23:D:848:G:H2'	23:D:849:A:C8	2.31	0.66
24:E:15:A:H3'	24:E:16:G:H8	1.60	0.66
2:F:161:ALA:HA	2:F:182:ILE:HG23	1.78	0.66
19:W:11:VAL:CG1	19:W:38:SER:HB3	2.25	0.66
21:Y:2:GLY:C	21:Y:10:ARG:HB2	2.16	0.66
23:D:1079:C:H42	54:3:132:ARG:HB2	1.61	0.66
1:A:536:C:H2'	1:A:537:G:H8	1.60	0.66
1:A:953:G:N7	13:Q:104:ARG:NH2	2.44	0.66
22:C:229:ARG:HA	22:C:233:THR:O	1.96	0.66
22:C:203:SER:CB	22:C:325:LEU:HD22	2.20	0.66
23:D:1141:U:O3'	23:D:1142(A):A:N6	2.29	0.66
23:D:1237:A:O2'	23:D:1238:G:O5'	2.13	0.66
23:D:1838:C:N4	23:D:1899:G:O5'	2.28	0.66
23:D:1996:C:O2'	23:D:1997:G:OP1	2.12	0.66
23:D:2265:U:H2'	23:D:2266:A:C8	2.31	0.66
23:D:2337:G:H2'	23:D:2338:G:C8	2.30	0.66
23:D:270(C):C:H2'	23:D:270(D):C:C6	2.31	0.66
2:F:112:VAL:HA	2:F:115:LEU:HB3	1.77	0.66
13:Q:28:ALA:H	13:Q:31:LYS:HD3	1.60	0.66
25:Z:166:ASP:OD1	25:Z:170:ALA:N	2.24	0.66
1:A:1124:G:H21	1:A:1126:U:H3	1.44	0.66
1:A:1308:U:C6	13:Q:99:ARG:CZ	2.78	0.66
1:A:137:C:N3	1:A:227:G:N2	2.43	0.66
1:A:1525:G:H2'	1:A:1526:G:C8	2.31	0.66
1:A:528:C:H41	12:P:48:PRO:HB2	1.61	0.66
1:A:707:C:H2'	1:A:708:C:C6	2.30	0.66
22:C:107:VAL:HG21	22:C:152:VAL:HG21	1.77	0.66
22:C:67:THR:HG23	22:C:68:TYR:N	2.10	0.66
23:D:144:C:N4	23:D:145:G:O6	2.28	0.66
23:D:2478:A:H2	23:D:2529:G:H2'	1.60	0.66
23:D:548:A:C5	23:D:549:G:H1'	2.31	0.66
23:D:569:U:P	23:D:945:A:H61	2.18	0.66
24:E:86:G:H2'	24:E:87:G:H8	1.59	0.66
2:F:15:VAL:HG23	2:F:16:HIS:HD1	1.61	0.66
17:U:91:ARG:HA	17:U:94:ASN:ND2	2.11	0.66
25:Z:57:ASN:OD1	25:Z:165:ASN:ND2	2.27	0.66
23:D:2465:C:H4'	52:1:4:ARG:HB2	1.78	0.66
54:3:4:VAL:HG13	54:3:5:VAL:H	1.60	0.66
55:4:6:G:H2'	55:4:7:G:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1059:C:H2'	1:A:1060:C:C6	2.31	0.66
1:A:1075:C:H2'	1:A:1076:C:C6	2.30	0.66
1:A:1401:G:N2	1:A:1501:C:N3	2.43	0.66
1:A:146:G:H1	1:A:176:C:H42	1.43	0.66
1:A:147:G:N2	1:A:176:C:N3	2.43	0.66
1:A:155:C:H2'	1:A:156:G:H8	1.60	0.66
1:A:368:U:H1'	22:C:209:GLN:NE2	2.10	0.66
1:A:662:G:H2'	1:A:663:A:C8	2.30	0.66
22:C:133:PRO:O	22:C:163:ALA:CB	2.44	0.66
22:C:181:ILE:O	22:C:185:ILE:HG13	1.95	0.66
22:C:205:TYR:CZ	22:C:323:LEU:HG	2.21	0.66
22:C:410:VAL:CG2	22:C:479:TYR:CE1	2.78	0.66
22:C:488:ASP:O	22:C:489:LEU:CD1	2.39	0.66
23:D:1343:G:HO2'	23:D:1384:A:H2	1.42	0.66
23:D:1515:C:O2'	23:D:1516:U:OP1	2.13	0.66
23:D:1570:A:H2'	23:D:1571:A:H8	1.59	0.66
23:D:1620:G:H2'	23:D:1621:U:C6	2.31	0.66
23:D:224:G:C2	23:D:225:A:H1'	2.31	0.66
23:D:2876:G:H2'	23:D:2877:G:C8	2.30	0.66
23:D:311:A:H1'	23:D:332:A:N3	2.11	0.66
23:D:604:G:H2'	23:D:605:C:C2	2.30	0.66
23:D:785:G:O2'	23:D:786:C:OP1	2.13	0.66
23:D:971:C:OP1	23:D:974(A):C:N4	2.29	0.66
6:J:3:ARG:HG2	6:J:93:SER:HB2	1.77	0.66
54:3:4:VAL:HG13	54:3:5:VAL:HG13	1.76	0.66
1:A:1487:G:H2'	1:A:1488:G:H8	1.61	0.66
1:A:1510:U:H3	1:A:1525:G:H1	1.41	0.66
22:C:410:VAL:HG22	22:C:481:GLN:HA	1.77	0.66
22:C:485:ARG:CB	22:C:486:PRO:HD3	2.24	0.66
22:C:493:ASN:H	22:C:541:ILE:CB	2.08	0.66
22:C:338:THR:OG1	22:C:503:ALA:CB	2.44	0.66
22:C:543:GLY:HA3	22:C:544:LYS:HB2	1.77	0.66
23:D:974:G:HO2'	23:D:1186:G:HO2'	1.43	0.66
23:D:1256:G:H2'	23:D:1257:C:C6	2.30	0.66
23:D:1997:G:H2'	23:D:1998:G:H8	1.60	0.66
23:D:2372:G:H2'	23:D:2373:G:C8	2.31	0.66
23:D:2555:U:H2'	23:D:2556:C:H5'	1.78	0.66
23:D:2626:C:H2'	23:D:2627:G:C8	2.31	0.66
23:D:2811:G:N2	23:D:2891:G:N2	2.43	0.66
23:D:69:C:O3'	23:D:75:G:N1	2.29	0.66
23:D:81:G:H1	23:D:105:C:N4	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:N:64:GLU:HB3	14:R:59:ALA:HA	1.76	0.66
11:O:58:PRO:HB3	11:O:90:GLY:HA3	1.77	0.66
25:Z:162:GLU:N	25:Z:192:PHE:HE1	1.91	0.66
56:5:24:G:H2'	56:5:25:C:C6	2.30	0.66
1:A:186(B):C:H2'	1:A:186(C):G:H8	1.59	0.66
1:A:350:G:H2'	1:A:351:G:C8	2.31	0.66
1:A:369:C:H42	1:A:392:G:H1	1.43	0.66
1:A:585:G:H2'	1:A:586:C:C6	2.31	0.66
1:A:755:G:H2'	1:A:756:C:C6	2.31	0.66
22:C:377:VAL:HG12	22:C:392:ASN:ND2	2.10	0.66
23:D:122:G:H2'	23:D:123:G:H8	1.61	0.66
23:D:1288:U:O2	23:D:1327:C:N4	2.28	0.66
23:D:144:C:H2'	23:D:145:G:C8	2.31	0.66
23:D:1628:G:H2'	23:D:1629:U:C6	2.31	0.66
23:D:1691:C:H42	23:D:1696:G:H1	1.43	0.66
23:D:17:G:H2'	23:D:18:C:C6	2.31	0.66
23:D:1918:A:O2'	23:D:1919:A:O5'	2.11	0.66
23:D:2891:G:C3'	23:D:2892:A:H5''	2.26	0.66
23:D:295:G:OP1	23:D:338:G:N1	2.29	0.66
23:D:631:A:H2'	23:D:632:A:H8	1.59	0.66
23:D:66:C:H2'	23:D:67:U:C6	2.30	0.66
3:G:183:ASP:HB2	3:G:204:LEU:HD11	1.76	0.66
4:H:46:LYS:HE2	4:H:50:ARG:CZ	19.77	0.66
5:I:100:VAL:HG21	5:I:115:VAL:HG23	1.78	0.66
6:J:5:GLU:N	6:J:93:SER:OG	2.29	0.66
15:S:50:HIS:HA	15:S:53:HIS:HB3	1.77	0.66
17:U:7:THR:HA	17:U:58:GLU:HA	1.76	0.66
1:A:1480:G:H2'	1:A:1481:U:C6	2.29	0.65
1:A:415:A:H2'	1:A:416:G:H8	1.62	0.65
1:A:538:G:H2'	1:A:539:A:H8	1.60	0.65
1:A:693:G:N7	1:A:694:A:N6	2.44	0.65
1:A:722:A:H2'	1:A:724:G:H8	1.61	0.65
1:A:903:G:H2'	1:A:904:C:H6	1.61	0.65
23:D:1068:G:N3	23:D:1069:A:N6	2.44	0.65
23:D:1387:C:H2'	23:D:1388:G:H8	1.61	0.65
23:D:1408:C:H2'	23:D:1409:C:C6	2.31	0.65
23:D:1551:C:H2'	23:D:1552:G:C8	2.32	0.65
23:D:1681:G:N2	23:D:1762:A:N7	2.43	0.65
23:D:1846:G:H1	23:D:1894:C:H42	1.43	0.65
23:D:2613:U:O2'	23:D:2614:A:O5'	2.14	0.65
23:D:709:U:H2'	23:D:710:G:C8	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:731:C:O2'	23:D:732:C:O4'	2.10	0.65
23:D:784:A:O2'	23:D:785:G:H5'	1.96	0.65
3:G:40:ARG:O	3:G:44:GLU:HG3	1.96	0.65
5:I:14:ARG:N	5:I:29:GLY:O	2.29	0.65
15:S:78:TYR:OH	15:S:88:ARG:NH2	2.29	0.65
25:Z:66:HIS:N	25:Z:158:ALA:CA	2.56	0.65
1:A:1306:A:H61	1:A:1331:G:C2'	2.08	0.65
1:A:1388:C:H2'	1:A:1389:C:H6	1.59	0.65
1:A:578:C:H2'	1:A:579:G:C8	2.31	0.65
1:A:954:G:N2	1:A:1227:A:H62	1.93	0.65
22:C:15:ILE:HG13	22:C:103:VAL:CG1	2.26	0.65
22:C:257:GLU:CD	22:C:258:ALA:H	1.98	0.65
22:C:215:LEU:HD21	22:C:280:ILE:CG2	2.26	0.65
22:C:458:GLU:HA	22:C:461:TYR:CZ	2.31	0.65
22:C:526:GLU:O	22:C:528:ILE:N	2.22	0.65
23:D:1045:A:H4'	23:D:1046:A:C5'	2.26	0.65
23:D:1304:C:H42	23:D:1624:G:H1	1.43	0.65
23:D:2003:G:H2'	23:D:2004:G:H8	1.60	0.65
23:D:2290:G:H1	23:D:2342:C:N4	1.92	0.65
23:D:2623:G:H2'	23:D:2624:G:C8	2.31	0.65
23:D:293:U:H2'	23:D:294:A:C8	2.31	0.65
23:D:381:G:H2'	23:D:382:G:C8	2.31	0.65
23:D:798:G:H2'	23:D:799:G:C8	2.32	0.65
2:F:195:ASP:O	8:L:68:ARG:NH2	2.30	0.65
6:J:61:LEU:HB3	6:J:63:TYR:HE2	1.61	0.65
9:M:10:ARG:NH1	9:M:105:ASP:OD2	2.29	0.65
19:W:51:VAL:HG21	19:W:72:GLY:HA2	1.78	0.65
54:3:81:ALA:HB2	54:3:107:ILE:HG21	1.77	0.65
1:A:1029:G:O2'	1:A:1031:G:N7	2.29	0.65
1:A:1407:C:N4	1:A:1408:A:H62	1.94	0.65
1:A:565:U:OP1	8:L:91:ARG:NH2	2.25	0.65
22:C:205:TYR:CZ	22:C:323:LEU:CG	2.79	0.65
22:C:409:TYR:HB2	22:C:453:GLU:OE2	1.94	0.65
23:D:1085:A:OP1	23:D:1106:G:H5'	1.96	0.65
23:D:1221:C:O2'	23:D:1222:C:OP1	2.15	0.65
23:D:1427:A:H1'	23:D:1428:C:C4	2.31	0.65
23:D:1510:A:H2'	23:D:1511:A:C8	2.31	0.65
23:D:1784:A:O2'	23:D:1785:A:OP1	2.15	0.65
23:D:1845:G:H1	23:D:1895:C:H42	1.44	0.65
23:D:1768:U:H3	23:D:1984:G:H1	1.44	0.65
23:D:2181:G:C5	23:D:2182:G:C6	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2531:A:H3'	23:D:2532:G:H8	1.61	0.65
23:D:2729:G:H2'	23:D:2730:C:H6	1.61	0.65
23:D:2886:G:H2'	23:D:2887:U:C6	2.31	0.65
2:F:70:PHE:HB3	2:F:163:PHE:HB3	1.78	0.65
1:A:407:G:OP1	4:H:115:ARG:NH1	2.29	0.65
1:A:1123:A:O2'	10:N:37:PRO:O	2.12	0.65
16:T:17:TYR:HB2	16:T:39:TYR:HB3	1.77	0.65
19:W:13:ASP:O	19:W:17:GLU:N	2.29	0.65
25:Z:41:VAL:C	25:Z:175:VAL:HG21	2.16	0.65
1:A:66:G:N2	1:A:103:C:O2	2.20	0.65
22:C:174:VAL:HG13	22:C:177:ILE:CB	2.19	0.65
22:C:512:LYS:HA	22:C:515:THR:CG2	2.26	0.65
22:C:597:PHE:O	22:C:598:LEU:HB2	1.97	0.65
22:C:95:ARG:CZ	22:C:202:ASP:HA	2.27	0.65
23:D:1263:U:H2'	23:D:1264:G:C4	2.31	0.65
23:D:2046:G:H2'	23:D:2047:U:C6	2.31	0.65
23:D:2176:A:C5	23:D:2177:C:N4	2.64	0.65
23:D:2064:C:O2	23:D:2501:C:N4	2.30	0.65
23:D:388:G:H2'	23:D:389:G:C8	2.31	0.65
23:D:479:A:H1'	23:D:480:A:N7	2.11	0.65
23:D:996:A:H2'	23:D:997:G:C8	2.32	0.65
6:J:52:ILE:HG22	6:J:86:ARG:HD2	1.77	0.65
12:P:43:VAL:HG21	12:P:93:LEU:HD22	1.78	0.65
20:X:61:SER:O	20:X:65:LYS:HG2	1.96	0.65
1:A:1440:C:H1'	1:A:1462:G:N2	2.11	0.65
1:A:191(D):U:H2'	1:A:191(E):G:H8	1.61	0.65
1:A:403:C:O2'	4:H:122:ARG:NH2	2.30	0.65
1:A:833:U:H3	1:A:853:G:H1	1.44	0.65
22:C:113:VAL:HG13	22:C:117:THR:CG2	2.23	0.65
22:C:60:LYS:HZ2	22:C:326:ASN:ND2	1.93	0.65
23:D:1087:G:C5	23:D:1103:A:H2	2.14	0.65
23:D:120:U:O2'	23:D:121:G:OP2	2.13	0.65
23:D:1422:G:H2'	23:D:1423:G:C8	2.31	0.65
23:D:1489:U:H3	23:D:1501:C:H42	1.42	0.65
23:D:2418:A:H2'	23:D:2419:U:H6	1.62	0.65
23:D:2874:C:H2'	23:D:2875:C:H6	1.61	0.65
23:D:2888:C:O5'	23:D:2888:C:H6	1.79	0.65
23:D:569:U:O4	23:D:2498:C:O2'	2.13	0.65
9:M:37:PHE:O	9:M:39:GLY:N	2.23	0.65
12:P:113:ARG:HH12	12:P:116:SER:HB2	1.61	0.65
1:A:1380:U:O2	1:A:1382:C:N4	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:269:ARG:CZ	22:C:269:ARG:HB2	2.25	0.65
22:C:497:HIS:CB	22:C:535:VAL:HG13	1.88	0.65
23:D:1059:G:O6	54:3:126:MET:O	2.15	0.65
23:D:1444(A):A:H62	23:D:1461:G:H5''	1.61	0.65
23:D:1491:G:N1	23:D:1492:G:N3	2.44	0.65
23:D:149:A:H2'	23:D:150:C:H5'	1.78	0.65
23:D:2056:G:H4'	23:D:2057:A:OP1	1.95	0.65
23:D:2178:C:H5''	23:D:2179:C:OP2	1.95	0.65
23:D:2637:U:H3	23:D:2781:A:H61	1.45	0.65
23:D:2733:A:H2'	23:D:2734:A:C8	2.31	0.65
23:D:597:U:H2'	23:D:598:G:H8	1.61	0.65
23:D:884:C:H4'	23:D:885:C:C5'	2.27	0.65
23:D:946:G:C2	23:D:947:G:C4	2.84	0.65
3:G:18:TRP:HZ2	14:R:57:ARG:HB3	1.60	0.65
12:P:46:LYS:HG2	12:P:47:LYS:H	1.62	0.65
19:W:40:ILE:HD13	19:W:62:ILE:HD11	1.77	0.65
19:W:37:ARG:HA	19:W:70:LYS:HG3	1.79	0.65
1:A:923:A:H5'	5:I:21:ALA:HB2	1.77	0.65
1:A:963:G:H2'	1:A:964:A:C8	2.31	0.65
22:C:135:ILE:HD13	22:C:149:ALA:HB2	1.79	0.65
22:C:236:GLU:HG3	22:C:237:PHE:N	2.12	0.65
22:C:330:LEU:HD21	22:C:344:PHE:O	1.95	0.65
22:C:495:LEU:CD2	22:C:538:GLN:NE2	2.60	0.65
22:C:489:LEU:O	22:C:508:ALA:N	2.29	0.65
23:D:1109:C:H2'	23:D:1110:G:C4'	2.27	0.65
23:D:1006:C:N3	23:D:1137:G:N2	2.45	0.65
23:D:1475:G:H21	23:D:1476:C:H5''	1.61	0.65
23:D:1711:C:H2'	23:D:1712:C:C6	2.32	0.65
23:D:2631:G:C5'	23:D:2894:G:C5	2.80	0.65
23:D:273:G:H2'	23:D:273(A):G:H8	1.61	0.65
23:D:2757:A:OP1	52:1:20:HIS:N	2.29	0.65
23:D:2887:U:O5'	23:D:2887:U:H6	1.80	0.65
23:D:38:A:H2'	23:D:39:C:C6	2.32	0.65
15:S:78:TYR:CZ	15:S:82:ILE:HD11	2.31	0.65
25:Z:32:LEU:HD13	25:Z:220:PRO:HB2	1.79	0.65
54:3:10:LEU:O	54:3:10:LEU:HD12	1.96	0.65
54:3:78:ILE:CB	54:3:111:LYS:HG3	2.26	0.65
56:5:9:A:H61	56:5:22:G:H3'	1.62	0.65
1:A:49:U:O4	1:A:362:G:N2	2.30	0.65
22:C:101:GLU:HA	22:C:129:HIS:CG	2.31	0.65
22:C:214:TYR:CG	22:C:245:PHE:HE2	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:240:ASP:N	22:C:266:ALA:HB3	2.11	0.65
23:D:1000:A:O5'	23:D:1154:G:N2	2.30	0.65
23:D:1196:C:O4'	23:D:1226:G:C2	2.49	0.65
23:D:2000:G:H2'	23:D:2001:A:H8	1.61	0.65
23:D:2285:C:O2'	23:D:2288:A:N7	2.26	0.65
23:D:646:A:H2'	23:D:647:G:C8	2.32	0.65
4:H:145:GLU:HB2	4:H:183:GLY:O	1.97	0.65
18:V:43:PHE:HB3	18:V:51:LEU:HD13	1.79	0.65
18:V:56:THR:HB	18:V:58:LEU:H	1.62	0.65
19:W:52:TYR:HA	19:W:57:HIS:HA	1.79	0.65
54:3:27:LEU:HB2	54:3:32:ALA:HB2	1.78	0.65
1:A:1081:G:OP1	5:I:16:THR:OG1	2.12	0.65
1:A:1262:C:H41	1:A:1274:G:N2	1.95	0.65
22:C:206:ASP:HA	22:C:210:GLY:O	1.97	0.65
22:C:28:ARG:HA	22:C:28:ARG:NE	2.07	0.65
22:C:413:THR:C	22:C:414:ILE:HG13	2.17	0.65
23:D:1105:U:H4'	23:D:1106:G:OP2	1.96	0.65
23:D:1630:G:H2'	23:D:1630(A):C:C6	2.32	0.65
23:D:2281:C:O2'	23:D:2282:G:O5'	2.14	0.65
23:D:326:G:H1	23:D:336:C:N4	1.95	0.65
23:D:532:A:H61	23:D:561:G:H2'	1.61	0.65
23:D:987:G:H2'	23:D:988:A:C8	2.30	0.65
16:T:43:LYS:O	16:T:45:THR:N	2.29	0.65
19:W:51:VAL:HB	19:W:75:ALA:HB3	1.79	0.65
25:Z:165:ASN:HB2	25:Z:169:GLY:HA2	1.79	0.65
25:Z:71:GLN:HE21	25:Z:176:GLY:HA2	1.61	0.65
25:Z:162:GLU:O	25:Z:192:PHE:CZ	2.50	0.65
1:A:1154:G:H2'	1:A:1155:G:C8	2.30	0.65
1:A:1162:C:H2'	1:A:1174:G:H1	1.62	0.65
1:A:1262:C:H42	1:A:1273:G:N2	1.95	0.65
1:A:1259:C:N3	1:A:1276:G:N2	2.45	0.65
1:A:1307:U:C5	1:A:1308:U:C4	2.85	0.65
1:A:1345:U:O2	1:A:1377:A:N6	2.27	0.65
1:A:358:U:H2'	1:A:359:U:C6	2.30	0.65
1:A:482:A:OP2	1:A:483:C:N4	2.26	0.65
1:A:647:C:H5'	17:U:81:ARG:HH22	1.61	0.65
1:A:755:G:H2'	1:A:756:C:H6	1.61	0.65
22:C:35:ALA:CB	22:C:41:MET:SD	2.85	0.65
22:C:405:ILE:O	22:C:406:LEU:HB3	1.95	0.65
22:C:409:TYR:CD1	22:C:454:ALA:O	2.50	0.65
22:C:58:THR:N	57:C:701:GCP:O1G	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1102:C:O2'	23:D:1103:A:N7	2.30	0.65
23:D:1387:C:H2'	23:D:1388:G:C8	2.32	0.65
23:D:1733:G:H3'	23:D:1734:C:C6	2.31	0.65
23:D:1792:G:H2'	23:D:1793:C:H6	1.61	0.65
23:D:2547:U:H2'	23:D:2548:G:H8	1.62	0.65
23:D:2877:G:H2'	23:D:2878:U:C6	2.32	0.65
23:D:324:A:N6	23:D:339:U:O2'	2.29	0.65
23:D:741:G:H2'	23:D:742:G:C8	2.32	0.65
23:D:877:U:O2'	23:D:900:A:N6	2.29	0.65
2:F:133:LYS:HB3	2:F:137:ARG:HH22	1.61	0.65
4:H:62:GLN:NE2	4:H:65:ARG:HD3	2.12	0.65
15:S:76:GLU:HA	15:S:79:ARG:NH2	2.11	0.65
23:D:1096:A:C2	54:3:11:GLN:N	2.65	0.64
55:4:75:C:OP2	55:4:75:C:H3'	1.97	0.64
1:A:303:A:OP1	12:P:17:LYS:NZ	2.28	0.64
1:A:688:G:HO2'	1:A:689:C:H6	1.46	0.64
1:A:929:G:H1	1:A:1388:C:N4	1.93	0.64
22:C:13:SER:HB2	22:C:103:VAL:HG13	1.78	0.64
22:C:205:TYR:CZ	22:C:323:LEU:CD2	2.80	0.64
22:C:215:LEU:CG	22:C:216:ARG:H	2.08	0.64
23:D:1819:A:H1'	23:D:1821:A:C8	2.31	0.64
23:D:2165:G:H2'	23:D:2166:G:C8	2.33	0.64
23:D:302:C:H42	23:D:315:G:H1	1.43	0.64
23:D:61:G:N7	23:D:62:C:N4	2.45	0.64
23:D:814:C:H2'	23:D:815:C:C6	2.32	0.64
23:D:853:G:H2'	23:D:854:G:C8	2.32	0.64
3:G:153:VAL:HG12	3:G:198:VAL:HG12	1.78	0.64
4:H:173:TRP:HB2	4:H:187:ARG:HB2	1.79	0.64
9:M:63:ILE:HG21	9:M:77:ILE:HG12	1.77	0.64
54:3:81:ALA:CB	54:3:107:ILE:CD1	2.63	0.64
1:A:1075:C:H5'	2:F:103:THR:HG21	1.79	0.64
1:A:1081:G:H2'	1:A:1082:G:H8	1.62	0.64
1:A:1395:C:H2'	1:A:1396:A:H8	1.62	0.64
1:A:1441:G:H21	1:A:1460:A:H62	1.45	0.64
1:A:404:U:H2'	1:A:405:U:C6	2.33	0.64
1:A:674:G:H2'	1:A:675:A:C8	2.31	0.64
1:A:689:C:H42	1:A:698:G:H1	1.44	0.64
22:C:480:GLU:C	22:C:481:GLN:HG3	2.18	0.64
23:D:1120:G:H2'	23:D:1121:C:H6	1.61	0.64
23:D:2104:G:C6	23:D:2186:G:N1	2.66	0.64
23:D:291:C:H42	23:D:349:G:H1	1.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:398:G:N2	23:D:399:G:N3	2.45	0.64
23:D:41:C:H2'	23:D:43:G:H8	1.62	0.64
23:D:742:G:O2'	23:D:743:G:H5'	1.97	0.64
23:D:745:G:H21	23:D:750:A:N6	1.92	0.64
3:G:29:TYR:CE2	3:G:33:LEU:HD11	2.31	0.64
5:I:92:LYS:N	5:I:119:LEU:O	2.28	0.64
5:I:153:LYS:O	8:L:64:LYS:NZ	2.28	0.64
11:O:27:ASN:OD1	11:O:28:THR:N	2.30	0.64
17:U:8:GLY:HA3	17:U:23:VAL:HB	1.79	0.64
6:J:99:ALA:HB1	18:V:31:LEU:HD13	1.80	0.64
54:3:102:GLU:O	54:3:106:GLU:HG2	1.96	0.64
53:2:43:ALA:HA	54:3:117:THR:HG21	1.78	0.64
1:A:942:G:H5'	1:A:1236:A:H61	1.62	0.64
1:A:1517:G:H2'	1:A:1518:A:O4'	1.97	0.64
1:A:258:G:N2	1:A:268:C:N3	2.44	0.64
1:A:59:A:H3'	1:A:331:G:N2	2.07	0.64
1:A:821:G:H2'	1:A:822:C:C6	2.33	0.64
1:A:895:G:H1	1:A:904:C:H42	1.43	0.64
22:C:242:VAL:HG13	22:C:263:TRP:H	1.60	0.64
22:C:242:VAL:CG2	22:C:256:LEU:HD12	2.23	0.64
22:C:492:VAL:CG1	22:C:541:ILE:CD1	2.73	0.64
22:C:18:VAL:HG21	22:C:86:HIS:CB	2.18	0.64
23:D:1137:G:C5	23:D:1138:G:H1'	2.32	0.64
23:D:261:G:H2'	23:D:262:A:H8	1.61	0.64
23:D:2657:A:H62	23:D:2664:G:H21	1.45	0.64
2:F:33:TYR:HB2	2:F:43:ASP:HB2	1.79	0.64
2:F:36:ARG:HB2	2:F:41:ILE:HD13	1.78	0.64
15:S:15:PHE:HD1	15:S:84:LYS:HE2	1.63	0.64
1:A:231:G:H2'	1:A:232:G:H8	1.62	0.64
1:A:369:C:N4	1:A:392:G:H1	1.95	0.64
1:A:55:A:N3	22:C:208:TYR:HD1	1.95	0.64
1:A:595:G:H21	1:A:596:C:N4	1.96	0.64
22:C:18:VAL:HG22	22:C:86:HIS:HB3	0.65	0.64
22:C:280:ILE:HD11	22:C:290:PRO:HB3	1.80	0.64
22:C:342:PHE:CD2	22:C:369:LEU:HA	2.33	0.64
22:C:407:GLU:HB2	22:C:408:PRO:HD3	1.75	0.64
23:D:1056:G:H5'	23:D:1057:A:H4'	1.79	0.64
23:D:1353:A:H2'	23:D:1354:A:C8	2.32	0.64
23:D:16:G:H1	23:D:524:U:H3	1.45	0.64
23:D:1845:G:H2'	23:D:1846:G:C8	2.31	0.64
23:D:239:U:HO2'	23:D:622:G:HO2'	1.41	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:413:C:N4	23:D:2410:G:H1	1.93	0.64
23:D:223:A:C4	23:D:422:A:H1'	2.32	0.64
23:D:578:A:OP1	23:D:1255:U:O2'	2.13	0.64
2:F:44:LEU:O	2:F:48:MET:N	2.29	0.64
14:R:9:LYS:NZ	14:R:21:TYR:H	1.96	0.64
17:U:5:VAL:HG22	17:U:60:ILE:HA	1.78	0.64
19:W:33:THR:HG21	19:W:51:VAL:HG22	1.80	0.64
20:X:50:GLU:HB2	20:X:99:LEU:HD12	1.80	0.64
25:Z:91:ALA:HB2	25:Z:153:ILE:HG21	1.79	0.64
1:A:1346:A:H4'	1:A:1347:G:O5'	1.96	0.64
1:A:167:G:H2'	1:A:168:G:C8	2.32	0.64
1:A:373:A:H2'	1:A:374:A:C8	2.32	0.64
1:A:580:U:H2'	1:A:581:G:H8	1.61	0.64
1:A:588:G:H2'	1:A:589:C:C6	2.32	0.64
1:A:973:G:H2'	1:A:974:A:C8	2.33	0.64
22:C:10:ARG:CG	22:C:186:PRO:O	2.45	0.64
23:D:1358:G:H21	23:D:1373:A:N6	1.95	0.64
23:D:1632:A:H2'	23:D:1633:G:C8	2.33	0.64
23:D:1680:U:N3	23:D:1764:G:OP2	2.25	0.64
23:D:1799:G:O2'	23:D:1800:C:O4'	2.12	0.64
23:D:2718:G:C6	23:D:2719:G:C6	2.86	0.64
23:D:920:G:H2'	23:D:921:G:H8	1.63	0.64
2:F:82:ARG:HH11	2:F:92:TYR:HE1	1.45	0.64
5:I:88:LYS:HB3	5:I:123:LEU:HB2	1.78	0.64
12:P:87:GLY:CA	12:P:98:TYR:HA	2.26	0.64
54:3:21:PRO:HG2	54:3:22:PRO:CD	2.27	0.64
1:A:1338:G:H22	55:4:41:C:H4'	1.63	0.64
55:4:6:G:H1	55:4:67:C:N4	1.94	0.64
1:A:1193:G:H2'	1:A:1194:U:C6	2.32	0.64
1:A:484:G:H5'	1:A:486:U:H1'	1.78	0.64
23:D:1148:A:H2'	23:D:1149:G:H8	1.63	0.64
23:D:1759:A:H2'	23:D:1760:A:H8	1.62	0.64
23:D:2658:C:N4	23:D:2663:G:H1	1.93	0.64
23:D:2693:A:H2'	23:D:2694:G:C8	2.32	0.64
23:D:2729:G:H2'	23:D:2730:C:C6	2.32	0.64
23:D:606:U:O2'	23:D:607:U:O5'	2.15	0.64
11:O:18:ARG:HE	11:O:35:PRO:CA	2.11	0.64
55:4:30:G:H1	55:4:40:C:N4	1.95	0.64
1:A:1207:G:H2'	1:A:1208:C:C6	2.33	0.64
23:D:173:G:H8	23:D:173:G:P	2.21	0.64
23:D:1861:G:H2'	23:D:1862:G:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1902:C:H2'	23:D:1903:G:O4'	1.98	0.64
23:D:2255:G:C2	23:D:2256:G:H1'	2.32	0.64
23:D:2378:A:N6	23:D:2379:G:N3	2.45	0.64
23:D:673:C:H2'	23:D:674:G:H8	1.62	0.64
11:O:106:LYS:HG2	11:O:107:SER:H	1.62	0.64
56:5:74:C:O2'	56:5:75:C:OP1	2.14	0.64
1:A:1391:U:H2'	1:A:1392:G:C8	2.28	0.64
1:A:318:G:H2'	1:A:319:G:H8	1.61	0.64
1:A:352:C:H4'	1:A:354:G:OP1	1.98	0.64
1:A:422:C:O2'	1:A:423:G:N3	2.31	0.64
1:A:505:G:H2'	1:A:506:G:C8	2.33	0.64
1:A:777:A:H2'	1:A:778:G:H8	1.62	0.64
23:D:1381:G:H2'	23:D:1382:G:C8	2.33	0.64
23:D:1446:C:H2'	23:D:1447:G:C8	2.33	0.64
23:D:1661:G:C6	23:D:2000:G:C6	2.86	0.64
23:D:1758:G:O2'	23:D:1759:A:OP1	2.13	0.64
23:D:2089:U:H2'	23:D:2090:G:H8	1.62	0.64
23:D:2194:G:O2'	23:D:2195:C:OP1	2.14	0.64
23:D:2852:G:H2'	23:D:2853:C:H6	1.63	0.64
23:D:413:C:N4	23:D:2411:A:N1	2.45	0.64
23:D:57:C:N3	23:D:70:G:N2	2.40	0.64
23:D:848:G:OP2	23:D:929:G:N2	2.25	0.64
23:D:949:C:H2'	23:D:950:G:C8	2.33	0.64
3:G:49:SER:O	3:G:72:LYS:NZ	2.24	0.64
6:J:76:ALA:O	6:J:80:ARG:N	2.28	0.64
17:U:29:HIS:HB3	17:U:33:GLY:H	1.63	0.64
17:U:3:LYS:HB3	17:U:61:GLU:HB3	1.78	0.64
21:Y:3:LYS:HE2	21:Y:10:ARG:HD3	1.80	0.64
21:Y:6:ARG:O	21:Y:12:LYS:NZ	2.30	0.64
25:Z:74:VAL:HB	25:Z:156:ILE:HD13	1.80	0.64
54:3:109:LYS:HG2	54:3:110:GLN:N	2.13	0.64
1:A:1487:G:H2'	1:A:1488:G:C8	2.33	0.64
1:A:443:C:H42	1:A:491:G:H1	1.45	0.64
1:A:587:G:H1'	1:A:755:G:N2	2.13	0.64
22:C:211:VAL:HG12	22:C:212:ILE:N	2.13	0.64
23:D:1101:U:C5	23:D:1102:C:C2	2.85	0.64
23:D:1208:C:N4	23:D:1238:G:O6	2.18	0.64
23:D:1627:G:C2	23:D:1628:G:C4	2.86	0.64
23:D:164:U:H3'	23:D:164:U:OP2	1.97	0.64
23:D:2008:C:H2'	23:D:2009:G:H8	1.62	0.64
23:D:2023:G:H2'	23:D:2024:G:H8	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2064:C:H4'	23:D:2450:A:C2	2.33	0.64
23:D:2181:G:C6	23:D:2182:G:N1	2.66	0.64
23:D:2242:G:H2'	23:D:2243:U:O4'	1.98	0.64
23:D:2442:C:H2'	23:D:2443:C:H6	1.61	0.64
23:D:270(C):C:H2'	23:D:270(D):C:H6	1.63	0.64
23:D:593:G:H2'	23:D:594:U:H6	1.63	0.64
23:D:991:C:H2'	23:D:992:C:H6	1.63	0.64
1:A:1112:C:O2'	3:G:179:ARG:NH1	2.29	0.64
7:K:15:ASP:OD1	7:K:24:THR:OG1	2.15	0.64
3:G:12:LEU:HD22	14:R:58:LYS:HB3	1.80	0.64
54:3:94:GLU:O	54:3:95:LYS:HB2	1.97	0.64
1:A:1475:G:H2'	1:A:1476:G:C8	2.33	0.64
22:C:197:LYS:HZ1	22:C:291:TYR:H	1.46	0.64
22:C:412:LEU:O	22:C:451:VAL:HA	1.97	0.64
23:D:1079:C:C5	54:3:129:GLY:HA2	2.33	0.64
23:D:811:U:O2'	23:D:1251:C:O2	2.16	0.64
23:D:1408:C:N4	23:D:1594:G:H1	1.93	0.64
23:D:1652:A:H62	23:D:1653:G:H21	1.43	0.64
23:D:1830:C:H2'	23:D:1831:G:H8	1.63	0.64
23:D:2028:U:H3'	23:D:2029:G:H8	1.61	0.64
23:D:2161:C:H2'	23:D:2162:G:C8	2.33	0.64
23:D:2638:G:C6	23:D:2775:A:C5	2.86	0.64
23:D:540:G:H2'	23:D:541:C:C6	2.33	0.64
23:D:815:C:H2'	23:D:816:C:H6	1.60	0.64
23:D:931:G:H3'	23:D:932:G:O4'	1.97	0.64
23:D:968:G:H2'	23:D:969:U:C6	2.32	0.64
1:A:9:G:H3'	5:I:126:ARG:CZ	2.27	0.64
5:I:9:LYS:N	5:I:33:VAL:O	2.31	0.64
5:I:79:GLU:O	8:L:104:ARG:NH1	2.31	0.64
8:L:15:ASN:O	8:L:19:VAL:HG23	1.98	0.64
1:A:1244:C:OP2	21:Y:9:ARG:NH1	2.31	0.64
1:A:1133:G:H1	1:A:1141:C:H42	1.46	0.63
1:A:1304:G:N1	1:A:1332:A:OP1	2.31	0.63
1:A:1354:C:H2'	1:A:1355:G:C8	2.33	0.63
1:A:408:A:H2'	1:A:409:G:O4'	1.98	0.63
1:A:689:C:N4	1:A:698:G:H1	1.96	0.63
22:C:144:ARG:HG2	22:C:148:VAL:CG2	2.19	0.63
22:C:206:ASP:HB3	22:C:210:GLY:N	2.13	0.63
22:C:419:GLU:HB2	22:C:446:LYS:NZ	2.13	0.63
22:C:4:MET:SD	22:C:8:ARG:HB2	2.38	0.63
23:D:1061:U:OP1	54:3:75:SER:OG	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1085:A:P	23:D:1106:G:C8	2.91	0.63
23:D:1290:C:H2'	23:D:1291:C:H6	1.63	0.63
23:D:1937:A:HO2'	23:D:1938:A:P	2.20	0.63
23:D:2016:U:H2'	23:D:2017:U:C6	2.32	0.63
23:D:2491:U:O2'	23:D:2570:G:OP1	2.15	0.63
23:D:2585:U:O2'	23:D:2586:C:OP2	2.15	0.63
23:D:2695:C:O2'	23:D:2696:U:O4'	2.16	0.63
23:D:630:G:O2'	23:D:640:C:O2'	2.16	0.63
23:D:762:U:H1'	23:D:763:G:C8	2.33	0.63
23:D:987:G:C6	23:D:988:A:C6	2.86	0.63
3:G:53:ALA:HB2	3:G:115:LEU:HG	1.79	0.63
1:A:15:G:H4'	5:I:24:ARG:HH22	1.63	0.63
12:P:85:ILE:HB	12:P:100:ILE:HG13	1.80	0.63
1:A:952:U:O4	13:Q:104:ARG:NH1	2.30	0.63
52:1:1:MET:HB3	52:1:33:LYS:HB2	1.80	0.63
1:A:1512:U:H3	1:A:1523:G:H1	1.46	0.63
1:A:25:C:H2'	1:A:26:A:H8	1.64	0.63
1:A:271:C:H2'	1:A:272:C:H6	1.62	0.63
1:A:916:G:H2'	1:A:917:G:C8	2.33	0.63
22:C:484:TYR:O	22:C:485:ARG:HB2	1.98	0.63
22:C:493:ASN:HB2	22:C:540:ALA:O	1.98	0.63
23:D:1203:G:H5'	23:D:1204:A:O4'	1.98	0.63
23:D:1718:G:N2	23:D:1741:C:O2	2.31	0.63
23:D:2100:G:H2'	23:D:2101:G:C8	2.33	0.63
23:D:2126:A:H4'	23:D:2127:G:OP1	1.98	0.63
23:D:2161:C:N4	23:D:2162:G:O6	2.31	0.63
23:D:2269:A:H3'	23:D:2270:G:H8	1.62	0.63
23:D:2497:A:H8	23:D:2497:A:OP2	1.81	0.63
23:D:451:C:H5	23:D:453:C:H5''	1.62	0.63
23:D:558:G:H2'	23:D:559:G:H8	1.63	0.63
23:D:618:G:H2'	23:D:618(A):C:C2	2.32	0.63
23:D:69:C:O2'	23:D:75:G:N2	2.32	0.63
3:G:16:ARG:HH12	3:G:183:ASP:HA	1.64	0.63
1:A:564:C:OP2	12:P:15:ARG:NH1	2.31	0.63
18:V:71:LYS:HA	18:V:74:ARG:HD2	1.79	0.63
19:W:2:PRO:HG2	19:W:64:GLU:HG2	1.79	0.63
25:Z:162:GLU:C	25:Z:192:PHE:HE1	2.02	0.63
55:4:69:C:H2'	55:4:70:G:C8	2.33	0.63
1:A:131:C:H2'	1:A:132:C:C6	2.31	0.63
22:C:436:VAL:HB	22:C:451:VAL:CG1	2.27	0.63
22:C:492:VAL:HG12	22:C:541:ILE:HG12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:32:LEU:HD22	22:C:66:VAL:HG12	1.80	0.63
23:D:1101:U:C6	23:D:1102:C:N3	2.66	0.63
23:D:1469:A:H2'	23:D:1470:G:C2	2.34	0.63
23:D:2079:U:H3	23:D:2241:A:H61	1.46	0.63
23:D:2633:G:H2'	23:D:2634:G:C8	2.34	0.63
23:D:2657:A:H2'	23:D:2658:C:O4'	1.98	0.63
23:D:306:U:C2	23:D:307:G:H1'	2.32	0.63
24:E:4:C:H42	24:E:116:G:H1	1.46	0.63
19:W:38:SER:HB3	19:W:71:LEU:HD12	1.79	0.63
1:A:1157:A:N1	1:A:1180:A:H2'	2.13	0.63
1:A:1531:A:C2	1:A:1532:U:H1'	2.34	0.63
1:A:298:A:H3'	1:A:299:G:H8	1.63	0.63
22:C:98:ALA:HB1	22:C:127:HIS:CD2	2.26	0.63
22:C:197:LYS:HE3	22:C:291:TYR:CD2	2.31	0.63
22:C:35:ALA:CB	22:C:41:MET:CG	2.76	0.63
22:C:455:PRO:HG3	22:C:458:GLU:CD	2.18	0.63
22:C:66:VAL:N	22:C:76:TYR:CZ	2.65	0.63
23:D:1003:G:H2'	23:D:1004:C:C6	2.33	0.63
23:D:1083:U:O2'	23:D:1085:A:N7	2.26	0.63
23:D:1296:G:H2'	23:D:1297:C:C6	2.33	0.63
23:D:1627:G:H2'	23:D:1628:G:H8	1.63	0.63
23:D:173:G:C8	23:D:174:C:C5	2.86	0.63
23:D:2543:G:H2'	23:D:2544:G:O4'	1.98	0.63
23:D:242:G:H2'	23:D:254:G:N1	2.13	0.63
23:D:576:U:H3'	23:D:577:G:C8	2.26	0.63
23:D:696:G:H2'	23:D:697:C:C6	2.33	0.63
24:E:23:G:O6	24:E:59:A:N6	2.31	0.63
1:A:1308:U:C6	13:Q:99:ARG:NE	2.65	0.63
16:T:59:TRP:O	16:T:63:GLY:N	2.32	0.63
19:W:49:ILE:O	19:W:60:VAL:N	2.28	0.63
23:D:2125:G:OP1	25:Z:71:GLN:NE2	2.31	0.63
1:A:934:C:H41	1:A:1344:C:H3'	1.63	0.63
1:A:1387:G:H2'	1:A:1388:C:C6	2.33	0.63
1:A:54:C:N4	1:A:353:A:OP1	2.31	0.63
1:A:771:G:N2	1:A:808:C:O2	2.28	0.63
22:C:28:ARG:CG	22:C:41:MET:SD	2.87	0.63
23:D:72:U:C5	23:D:112:U:H1'	2.33	0.63
23:D:1289:C:O2'	23:D:1290:C:O5'	2.16	0.63
23:D:1547:C:H2'	23:D:1548:C:H6	1.63	0.63
23:D:1752:C:N4	23:D:1756:G:H1	1.97	0.63
23:D:2339:G:H2'	23:D:2340:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:80:ILE:HG22	8:L:104:ARG:NH1	2.14	0.63
54:3:6:ALA:O	54:3:59:ILE:CD1	2.43	0.63
22:C:95:ARG:NH2	22:C:202:ASP:OD1	2.29	0.63
23:D:2741:A:H62	23:D:2763:G:H21	1.47	0.63
23:D:542:C:H2'	23:D:543:C:C6	2.33	0.63
2:F:144:ARG:HG2	2:F:148:TYR:HE2	1.61	0.63
1:A:1070:U:OP1	5:I:25:ARG:NH2	2.31	0.63
12:P:71:PRO:HB2	12:P:120:TYR:HE1	1.63	0.63
25:Z:41:VAL:HG12	25:Z:175:VAL:HG21	1.81	0.63
25:Z:161:ILE:HB	25:Z:192:PHE:HD1	0.71	0.63
55:4:32:C:OP2	55:4:32:C:H6	1.81	0.63
1:A:295:C:H2'	1:A:296:U:C6	2.34	0.63
22:C:140:LEU:HD12	22:C:141:PRO:CD	2.28	0.63
22:C:436:VAL:O	22:C:437:ASN:HB2	1.97	0.63
22:C:95:ARG:HD2	22:C:294:PHE:CE1	2.34	0.63
23:D:1085:A:P	23:D:1106:G:H8	2.22	0.63
23:D:152:G:C6	23:D:175:G:C5	2.87	0.63
23:D:1548:C:H2'	23:D:1549:C:C6	2.33	0.63
23:D:2107:C:H4'	23:D:2108:C:OP1	1.99	0.63
23:D:217:G:H3'	23:D:218:A:H8	1.63	0.63
23:D:2688:U:H5	23:D:2719:G:C5	2.16	0.63
23:D:295:G:H2'	23:D:296:C:H6	1.64	0.63
23:D:533:G:H22	23:D:559:G:H1	1.47	0.63
1:A:642:A:C2	8:L:132:GLU:HB2	2.33	0.63
12:P:90:VAL:O	12:P:92:ASP:N	2.31	0.63
1:A:835:U:H5''	18:V:61:LYS:HE2	1.80	0.63
54:3:112:MET:N	54:3:113:PRO:CD	2.59	0.63
1:A:640:A:H2'	1:A:641:U:O4'	1.98	0.63
22:C:127:HIS:HB2	22:C:129:HIS:NE2	2.14	0.63
22:C:104:LEU:CG	22:C:132:ILE:HG21	2.28	0.63
22:C:41:MET:O	22:C:42:ARG:HG2	1.98	0.63
22:C:541:ILE:HD12	22:C:546:ILE:HD13	1.80	0.63
23:D:1005:C:H3'	23:D:1006:C:C5	2.34	0.63
23:D:1797:C:H2'	23:D:1798:U:C6	2.34	0.63
23:D:2192:G:H2'	23:D:2193:G:H8	1.64	0.63
23:D:576:U:H4'	23:D:2502:G:C8	2.34	0.63
23:D:8:A:N3	23:D:2896:C:H1'	2.13	0.63
23:D:690:G:H2'	23:D:691:C:H6	1.63	0.63
3:G:33:LEU:O	3:G:37:GLN:HG2	1.99	0.63
7:K:147:ALA:O	7:K:149:ARG:N	2.30	0.63
1:A:1203:C:H5''	14:R:2:ALA:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1387:G:H2'	1:A:1388:C:H6	1.64	0.63
1:A:1412:C:H2'	1:A:1413:A:H8	1.63	0.63
1:A:1441:G:H21	1:A:1460:A:N6	1.95	0.63
1:A:301:G:H2'	1:A:302:G:H8	1.64	0.63
1:A:325:A:H2'	1:A:326:G:O4'	1.98	0.63
1:A:558:G:H3'	1:A:559:A:H2'	1.79	0.63
1:A:821:G:H2'	1:A:822:C:H6	1.63	0.63
1:A:912:C:N3	1:A:913:A:N6	2.46	0.63
22:C:506:PHE:O	22:C:507:ILE:HG13	1.99	0.63
23:D:1034:G:H4'	52:1:18:ARG:CZ	2.28	0.63
23:D:1995:U:H3'	23:D:1996:C:H5''	1.81	0.63
23:D:2290:G:H1	23:D:2342:C:H42	1.47	0.63
23:D:2370:G:H2'	23:D:2371:G:C8	2.34	0.63
23:D:2648:C:H2'	23:D:2649:U:C6	2.34	0.63
23:D:271(B):G:N2	23:D:421:U:OP1	2.32	0.63
23:D:273(F):C:O2	23:D:363(A):A:N6	2.32	0.63
23:D:2818:G:H2'	23:D:2819:G:C8	2.34	0.63
23:D:588:U:H2'	23:D:589:C:C6	2.34	0.63
24:E:62:C:H2'	24:E:63:G:C8	2.34	0.63
3:G:70:VAL:HG12	3:G:72:LYS:H	1.64	0.63
54:3:77:LEU:HD21	54:3:111:LYS:CD	2.26	0.62
1:A:1002:G:N7	1:A:1004:A:N6	2.47	0.62
1:A:1127:G:H1	1:A:1144:G:H1	1.45	0.62
1:A:1238:A:N7	1:A:1303:C:H1'	2.14	0.62
1:A:408:A:O4'	4:H:116:GLN:NE2	2.32	0.62
1:A:869:G:H4'	1:A:872:A:H1'	1.81	0.62
22:C:199:LEU:O	22:C:215:LEU:CD1	2.46	0.62
22:C:197:LYS:NZ	22:C:291:TYR:HD2	1.96	0.62
23:D:1192:G:H2'	23:D:1193:G:C8	2.34	0.62
23:D:1350:C:N3	23:D:1381:G:N2	2.40	0.62
23:D:1347:G:H1	23:D:1599:C:N4	1.97	0.62
23:D:1340:U:H2'	23:D:1602:U:C4	2.34	0.62
23:D:152:G:C6	23:D:175:G:C6	2.86	0.62
23:D:1794:U:H2'	23:D:1795:C:C6	2.34	0.62
23:D:1838:C:N4	23:D:1899:G:O4'	2.32	0.62
23:D:2630:G:N3	23:D:2630:G:H2'	2.14	0.62
24:E:116:G:H2'	24:E:117:G:H8	1.64	0.62
16:T:3:LYS:HB2	16:T:24:ALA:HB2	1.80	0.62
17:U:12:SER:N	17:U:20:THR:OG1	2.26	0.62
25:Z:191:ALA:HA	25:Z:194:ARG:HB2	1.79	0.62
53:2:24:PHE:N	53:2:117:LEU:O	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1058:G:OP1	53:2:35:LYS:HA	1.98	0.62
1:A:1409:C:H42	1:A:1491:G:H1	1.47	0.62
1:A:600:C:H2'	1:A:601:C:C6	2.33	0.62
22:C:47:ASP:O	22:C:48:SER:HB3	1.97	0.62
22:C:492:VAL:CG1	22:C:541:ILE:CG1	2.77	0.62
22:C:493:ASN:HD22	22:C:541:ILE:C	2.02	0.62
23:D:1945:G:H2'	23:D:1946:U:H6	1.64	0.62
23:D:2115:G:H21	23:D:2119:A:H8	1.45	0.62
23:D:2227:A:O2'	23:D:2228:G:OP1	2.18	0.62
23:D:2709:G:H2'	23:D:2710:C:O4'	1.99	0.62
23:D:2686:G:H1	23:D:2723:C:N4	1.97	0.62
23:D:2786:U:H2'	23:D:2787:C:C6	2.34	0.62
23:D:295:G:C4	23:D:345:A:H2	2.17	0.62
23:D:796:C:H2'	23:D:797:C:C5	2.34	0.62
23:D:876:C:N3	23:D:901:A:N6	2.42	0.62
3:G:34:LEU:HD21	3:G:38:ARG:HE	1.62	0.62
4:H:96:LEU:HA	4:H:99:SER:HB3	1.79	0.62
11:O:71:LYS:HA	11:O:74:ALA:HB3	1.79	0.62
13:Q:91:ARG:HD2	13:Q:98:VAL:HG13	1.80	0.62
54:3:72:PRO:HG2	54:3:77:LEU:HD22	1.81	0.62
1:A:1369:C:H2'	1:A:1370:G:C8	2.35	0.62
1:A:1453:G:H2'	1:A:1454:G:O4'	2.00	0.62
1:A:426:G:H2'	1:A:427:U:O4'	1.99	0.62
1:A:52:G:H2'	1:A:53:A:O4'	1.99	0.62
1:A:36:C:N4	1:A:548:G:O6	2.31	0.62
22:C:455:PRO:CG	22:C:458:GLU:CG	2.77	0.62
22:C:468:LYS:CA	22:C:473:GLY:HA2	2.27	0.62
23:D:1047:G:C6	23:D:1110:G:C6	2.87	0.62
23:D:1059:G:O6	23:D:1080:C:C2	2.52	0.62
23:D:1239:G:N3	23:D:1240:U:O2'	2.29	0.62
23:D:1290:C:H2'	23:D:1291:C:C6	2.34	0.62
23:D:1360:A:H3'	23:D:1361:G:H8	1.63	0.62
23:D:152:G:N2	23:D:175:G:H1'	2.13	0.62
23:D:1759:A:H2'	23:D:1760:A:C8	2.34	0.62
23:D:2134:A:O2'	23:D:2136:C:N3	2.30	0.62
23:D:2450:A:O3'	23:D:2497:A:N6	2.33	0.62
7:K:24:THR:O	7:K:28:ASN:ND2	2.33	0.62
11:O:18:ARG:NH2	11:O:35:PRO:O	2.32	0.62
13:Q:63:THR:HG23	13:Q:64:TRP:N	2.11	0.62
1:A:1119:C:H2'	1:A:1120:G:H8	1.64	0.62
1:A:1177:G:OP1	9:M:93:ARG:NH2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:32:A:H2'	1:A:33:A:C8	2.35	0.62
1:A:491:G:H2'	1:A:492:G:C8	2.35	0.62
1:A:500:G:H2'	1:A:501:C:C6	2.34	0.62
1:A:24:U:O2'	1:A:524:G:O2'	2.18	0.62
1:A:767:A:H2'	1:A:768:A:O4'	1.99	0.62
1:A:870:U:H4'	1:A:871:U:O5'	1.99	0.62
22:C:136:ASN:O	22:C:137:LYS:HB2	1.99	0.62
22:C:229:ARG:CG	22:C:283:ALA:HB1	2.25	0.62
22:C:410:VAL:HG22	22:C:481:GLN:CA	2.30	0.62
22:C:419:GLU:CB	22:C:446:LYS:NZ	2.62	0.62
22:C:41:MET:CA	22:C:45:PHE:CE1	2.80	0.62
22:C:435:LEU:N	22:C:452:TYR:HE1	1.88	0.62
23:D:1063:G:O6	23:D:1064:C:N4	2.32	0.62
23:D:137:C:H2'	23:D:137(A):G:H5'	1.82	0.62
23:D:1650:G:H1	23:D:2007:C:H42	1.45	0.62
23:D:1652:A:H62	23:D:1653:G:N2	1.97	0.62
23:D:1728:G:H22	23:D:1731:G:N2	1.96	0.62
23:D:2633:G:H2'	23:D:2634:G:H8	1.63	0.62
23:D:270(Q):C:H2'	23:D:270(R):G:C8	2.34	0.62
23:D:449:A:H2'	23:D:450:G:O4'	1.99	0.62
23:D:799:G:H3'	23:D:800:A:C8	2.34	0.62
23:D:848:G:H21	23:D:933:A:H1'	1.64	0.62
5:I:76:ILE:HG21	5:I:91:LEU:HD21	1.82	0.62
13:Q:65:LYS:HD2	13:Q:73:GLU:OE1	1.99	0.62
17:U:104:LYS:HG3	17:U:105:ALA:OXT	1.99	0.62
1:A:265:G:H4'	17:U:66:SER:N	2.14	0.62
25:Z:64:LEU:HD11	25:Z:161:ILE:HG21	1.80	0.62
54:3:78:ILE:CG1	54:3:111:LYS:CG	2.60	0.62
55:4:38:A:H5''	55:4:39:C:C5	2.35	0.62
55:4:52:G:HO2'	55:4:53:G:H8	1.46	0.62
56:5:14:A:O4'	56:5:22:G:N2	2.32	0.62
1:A:1502:A:H5'	1:A:1504:G:N7	2.15	0.62
1:A:498:A:H4'	1:A:500:G:H5'	1.81	0.62
1:A:498:A:N6	1:A:547:A:O4'	2.32	0.62
1:A:918:A:O2'	1:A:919:A:OP1	2.15	0.62
22:C:418:GLU:CG	22:C:419:GLU:H	2.12	0.62
23:D:1227:A:C5	23:D:1228:G:N7	2.67	0.62
23:D:1939:U:O2	23:D:2591:C:O2'	2.17	0.62
23:D:2478:A:H2'	23:D:2479:G:H5'	1.80	0.62
23:D:2686:G:H2'	23:D:2687:U:C6	2.34	0.62
23:D:308:G:H21	23:D:329:G:H21	1.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:391:G:H8	23:D:392:C:C6	2.18	0.62
23:D:593:G:H2'	23:D:594:U:C6	2.34	0.62
24:E:30:C:N4	24:E:54:G:H1	1.98	0.62
3:G:56:ASP:HB2	3:G:67:THR:HB	1.82	0.62
3:G:6:HIS:CD2	3:G:8:ILE:HG22	2.34	0.62
6:J:68:PRO:O	6:J:72:VAL:HG13	1.99	0.62
11:O:23:ALA:HB2	11:O:28:THR:HG23	1.81	0.62
12:P:42:THR:HA	12:P:54:LYS:HA	1.82	0.62
1:A:760:G:O3'	17:U:102:GLY:HA3	2.00	0.62
54:3:89:HIS:O	54:3:90:LYS:HB3	1.97	0.62
1:A:1289:A:H61	1:A:1372:U:H5'	1.62	0.62
1:A:1367:C:OP2	9:M:115:GLY:N	2.24	0.62
1:A:793:U:O2	1:A:1516:G:O2'	2.15	0.62
1:A:157:G:H1	1:A:164:U:H3	1.45	0.62
1:A:38:G:N2	1:A:397:A:O4'	2.32	0.62
1:A:684:A:H2	1:A:706:A:H61	1.46	0.62
22:C:60:LYS:NZ	22:C:326:ASN:HD21	1.96	0.62
22:C:65:ARG:HD3	22:C:244:VAL:CG1	2.29	0.62
23:D:1608:A:H2'	23:D:1611:C:H41	1.64	0.62
23:D:2069:G:H1	23:D:2442:C:N4	1.97	0.62
23:D:2761:G:H2'	23:D:2762:G:C8	2.30	0.62
23:D:2818:G:H2'	23:D:2819:G:H8	1.64	0.62
23:D:346:A:N6	23:D:348:G:O6	2.32	0.62
23:D:60:G:H2'	23:D:63:U:H5	1.64	0.62
23:D:918:A:H3'	23:D:919:G:H8	1.65	0.62
23:D:968:G:H2'	23:D:969:U:H6	1.63	0.62
24:E:91:C:H2'	24:E:92:G:H8	1.62	0.62
11:O:11:LYS:NZ	11:O:74:ALA:O	2.26	0.62
12:P:76:ASN:ND2	12:P:108:ALA:H	1.96	0.62
56:5:33:U:N3	56:5:36:A:OP2	2.31	0.62
1:A:1526:G:H2'	1:A:1527:C:H6	1.64	0.62
1:A:186(A):C:H2'	1:A:186(B):C:C6	2.34	0.62
1:A:660:G:H1	1:A:745:C:N4	1.97	0.62
22:C:164:ILE:CD1	22:C:176:GLU:CB	2.78	0.62
22:C:242:VAL:HG11	22:C:262:GLY:C	2.20	0.62
22:C:342:PHE:O	22:C:344:PHE:HD2	1.82	0.62
22:C:6:LEU:CD2	22:C:192:PRO:HA	2.28	0.62
23:D:81:G:N2	23:D:105:C:N3	2.41	0.62
23:D:1613:G:C5	23:D:1617:C:N4	2.68	0.62
23:D:1643:G:H2'	23:D:1644:C:H6	1.63	0.62
23:D:1881:C:H2'	23:D:1882:C:O4'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1930:G:N2	23:D:1969:A:OP2	2.26	0.62
23:D:2008:C:N4	23:D:2009:G:O6	2.33	0.62
23:D:2034:U:C4	23:D:2035:G:C5	2.88	0.62
23:D:2631:G:H5'	23:D:2894:G:N7	2.14	0.62
23:D:2648:C:H2'	23:D:2649:U:H6	1.64	0.62
23:D:317:G:H2'	23:D:318:C:H6	1.65	0.62
4:H:108:LEU:HB3	4:H:110:PHE:HD2	1.65	0.62
1:A:17:U:H2'	1:A:18:C:H6	1.65	0.62
1:A:369:C:H2'	1:A:370:C:C6	2.35	0.62
1:A:760:G:O2'	17:U:103:GLY:N	2.32	0.62
1:A:773:G:H1	1:A:806:C:H42	1.47	0.62
22:C:140:LEU:CD2	22:C:143:ALA:HB2	2.30	0.62
22:C:174:VAL:O	22:C:174:VAL:HG12	2.00	0.62
22:C:434:ARG:NH1	22:C:453:GLU:HB3	2.14	0.62
22:C:572:LYS:HD3	55:4:73:A:C6	2.35	0.62
23:D:1361:G:H1	23:D:1369:G:H22	1.48	0.62
23:D:1381:G:H2'	23:D:1382:G:H8	1.65	0.62
23:D:1459:G:O2'	23:D:1461:G:OP2	2.17	0.62
23:D:1422:G:H4'	23:D:1493:C:C2	2.34	0.62
23:D:1644:C:H2'	23:D:1645:G:C8	2.34	0.62
23:D:195:A:H2'	23:D:198:C:N4	2.13	0.62
23:D:2073:C:N4	23:D:2436:G:H1	1.97	0.62
23:D:214:G:H2'	23:D:215:G:H8	1.65	0.62
23:D:621:A:H3'	23:D:622:G:H8	1.63	0.62
24:E:7:G:O2'	24:E:8:U:OP1	2.16	0.62
24:E:78:A:N6	24:E:98:G:H21	1.92	0.62
13:Q:28:ALA:HB2	21:Y:7:ARG:HH22	1.64	0.62
52:1:17:ILE:N	52:1:24:TYR:O	2.31	0.62
1:A:1032(A):G:H2'	1:A:1032(B):G:C8	2.35	0.62
1:A:1126:U:O2'	1:A:1280:A:N7	2.28	0.62
1:A:1325:C:H2'	1:A:1326:C:C6	2.34	0.62
1:A:1397:C:OP2	5:I:24:ARG:NH1	2.33	0.62
1:A:1514:C:H2'	1:A:1515:C:C6	2.34	0.62
1:A:695:A:H5'	11:O:51:LYS:HZ3	1.65	0.62
22:C:103:VAL:H	22:C:132:ILE:HD12	1.64	0.62
22:C:434:ARG:C	22:C:452:TYR:CD1	2.69	0.62
22:C:493:ASN:HA	22:C:505:THR:HG22	0.63	0.62
22:C:8:ARG:CB	22:C:77:VAL:HG11	2.30	0.62
23:D:1005:C:N4	23:D:1138:G:O2'	2.33	0.62
23:D:980:A:C2	23:D:1135:C:H4'	2.35	0.62
23:D:1166:C:H2'	23:D:1167:U:H5	1.61	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1442:G:H2'	23:D:1443:G:C8	2.35	0.62
23:D:2597:G:H2'	23:D:2598:A:C8	2.35	0.62
23:D:2816:C:H2'	23:D:2817:G:H8	1.64	0.62
23:D:2847:U:H5'	23:D:2848:G:OP2	1.99	0.62
23:D:74:A:C8	23:D:87:C:H4'	2.35	0.62
23:D:809:G:H2'	23:D:810:U:C6	2.35	0.62
3:G:36:ASP:HB2	3:G:59:ARG:HH22	1.65	0.62
8:L:83:ILE:HA	8:L:137:VAL:HG22	1.82	0.62
9:M:19:LEU:HD21	9:M:59:PHE:CG	2.35	0.62
20:X:34:LYS:O	20:X:37:SER:OG	2.12	0.62
54:3:13:PRO:HG2	54:3:16:LYS:HZ1	1.64	0.62
1:A:1309:G:H2'	1:A:1310:G:C4	2.35	0.62
1:A:1329:A:OP1	13:Q:29:ARG:HB2	2.00	0.62
1:A:1469:G:H2'	1:A:1470:G:H8	1.63	0.62
1:A:65:U:N3	1:A:381:C:N3	2.47	0.62
1:A:38:G:N2	1:A:397:A:N3	2.47	0.62
1:A:620:C:H2'	1:A:621:A:O4'	2.00	0.62
1:A:708:C:H2'	1:A:709:G:H8	1.63	0.62
22:C:333:GLU:HB3	22:C:334:PRO:CD	2.30	0.62
22:C:328:ALA:CB	22:C:349:LEU:HD23	2.26	0.62
22:C:419:GLU:HB2	22:C:446:LYS:HZ3	1.64	0.62
22:C:492:VAL:HG22	22:C:508:ALA:CB	2.17	0.62
22:C:97:LEU:CG	22:C:123:MET:HB3	2.30	0.62
23:D:1057:A:H1'	23:D:1085:A:H2	1.64	0.62
23:D:1798:U:H3	23:D:1821:A:H61	1.48	0.62
23:D:227:A:C6	23:D:2407:G:H1'	2.35	0.62
23:D:2521:C:H2'	23:D:2522:U:C6	2.35	0.62
23:D:270(D):C:N3	23:D:270(V):G:N2	2.35	0.62
23:D:270(J):G:H3'	23:D:270(K):C:H5''	1.82	0.62
23:D:317:G:H2'	23:D:318:C:C6	2.34	0.62
24:E:85:G:C6	24:E:92:G:C6	2.88	0.62
17:U:10:VAL:N	17:U:55:ASP:O	2.27	0.62
20:X:51:GLU:OE1	20:X:51:GLU:N	2.27	0.62
25:Z:24:GLU:O	25:Z:28:LEU:N	2.29	0.62
25:Z:40:THR:O	25:Z:216:THR:CG2	2.48	0.62
1:A:157:G:N2	1:A:164:U:O2	2.33	0.61
1:A:225:C:H2'	1:A:226:G:C8	2.35	0.61
1:A:258:G:H1	1:A:268:C:N4	1.97	0.61
1:A:476:G:H2'	1:A:477:G:H8	1.64	0.61
1:A:67:C:H2'	1:A:68:G:C8	2.34	0.61
1:A:69:G:H2'	1:A:73:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:761:G:C5	17:U:105:ALA:HB2	2.35	0.61
23:D:1264:G:O6	23:D:1265:A:N6	2.32	0.61
23:D:1444(A):A:N6	23:D:1462:C:OP2	2.28	0.61
23:D:1465:G:H2'	23:D:1466:G:C8	2.35	0.61
23:D:2024:G:H2'	23:D:2025:C:H6	1.64	0.61
23:D:2489:G:H2'	23:D:2490:G:H8	1.63	0.61
23:D:2678:C:C2	23:D:2679:A:C8	2.88	0.61
23:D:2759:G:H2'	23:D:2760:C:H6	1.64	0.61
23:D:2638:G:C5	23:D:2775:A:C6	2.88	0.61
23:D:2845:G:H2'	23:D:2846:G:C8	2.35	0.61
23:D:2848:G:N2	23:D:2849:U:O2	2.33	0.61
23:D:374:A:H2'	23:D:375:C:H6	1.64	0.61
23:D:588:U:H2'	23:D:589:C:H6	1.65	0.61
3:G:30:ARG:NH1	14:R:35:ARG:O	2.33	0.61
18:V:52:PRO:HG2	18:V:54:ARG:HB3	1.81	0.61
22:C:116:GLU:HG2	22:C:120:LYS:HE3	1.77	0.61
22:C:409:TYR:HD1	22:C:454:ALA:C	2.03	0.61
23:D:173:G:C2	23:D:174:C:H1'	2.34	0.61
23:D:2064:C:N4	23:D:2065:C:N3	2.49	0.61
23:D:2132:U:N3	25:Z:6:ARG:HB2	2.15	0.61
23:D:2419:U:H2'	23:D:2420:C:C6	2.35	0.61
23:D:2436:G:H2'	23:D:2437:U:C6	2.35	0.61
23:D:760:G:H2'	23:D:761:A:C8	2.35	0.61
11:O:95:ILE:HG23	11:O:98:LEU:HD12	1.81	0.61
54:3:78:ILE:CG1	54:3:111:LYS:CB	2.59	0.61
1:A:1355:G:C6	1:A:1356:G:C6	2.89	0.61
1:A:1372:U:O2'	7:K:34:GLY:O	2.18	0.61
1:A:1407:C:H42	1:A:1408:A:H62	1.47	0.61
1:A:192:U:H4'	20:X:57:ARG:HH12	1.65	0.61
1:A:35:G:H2'	1:A:36:C:C6	2.35	0.61
1:A:397:A:N7	1:A:547:A:O2'	2.32	0.61
1:A:576:G:N2	1:A:759:A:OP1	2.27	0.61
22:C:169:LYS:HE3	57:C:701:GCP:N1	2.14	0.61
22:C:20:HIS:CD2	22:C:108:ASP:CG	2.74	0.61
22:C:409:TYR:HD1	22:C:454:ALA:O	1.82	0.61
22:C:490:VAL:CG1	22:C:508:ALA:O	2.48	0.61
22:C:574:LEU:HD12	22:C:574:LEU:O	2.00	0.61
23:D:1453:A:N6	23:D:1454:U:H1'	2.14	0.61
23:D:176:G:H2'	23:D:177:G:C8	2.35	0.61
23:D:2018:G:H8	23:D:2018:G:OP2	1.84	0.61
23:D:2020:A:H2'	23:D:2021:C:H5"	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2587:A:H3'	23:D:2588:G:H5'	1.81	0.61
23:D:603:A:C6	23:D:604:G:C6	2.88	0.61
23:D:827:U:H4'	23:D:828:U:N3	2.15	0.61
4:H:107:ARG:HG2	4:H:174:LEU:HD12	1.82	0.61
16:T:9:PHE:O	16:T:15:PRO:HA	2.00	0.61
25:Z:64:LEU:HB2	25:Z:160:ARG:N	2.14	0.61
25:Z:67:GLY:O	25:Z:177:LYS:HD2	2.01	0.61
1:A:1493:A:OP1	1:A:1494:G:N1	2.34	0.61
1:A:136:C:H42	1:A:227:G:H1	1.48	0.61
1:A:724:G:H2'	1:A:725:G:C8	2.34	0.61
1:A:810:C:C4	1:A:811:C:C2	2.88	0.61
22:C:236:GLU:OE1	22:C:267:ALA:HA	1.97	0.61
22:C:495:LEU:O	22:C:537:ILE:HG23	1.94	0.61
23:D:1265:A:O2'	23:D:1266:G:O5'	2.15	0.61
23:D:1304:C:N4	23:D:1624:G:H1	1.99	0.61
23:D:1533:C:H3'	23:D:1534:G:C8	2.35	0.61
23:D:1749:A:H2'	23:D:1750:G:C8	2.34	0.61
23:D:563:G:C6	23:D:2018:G:C4	2.89	0.61
23:D:2106:G:C8	23:D:2184:G:N2	2.68	0.61
23:D:2144:U:O2'	23:D:2145:C:H3'	1.99	0.61
23:D:261:G:H2'	23:D:262:A:C8	2.36	0.61
23:D:704:G:C6	23:D:726:G:C6	2.87	0.61
4:H:101:LEU:HD22	4:H:138:TYR:HB3	1.82	0.61
1:A:1187:G:O2'	9:M:111:ARG:NH1	2.33	0.61
15:S:49:ASP:CG	15:S:51:HIS:HD1	2.03	0.61
20:X:44:ALA:HB1	20:X:91:LEU:HD12	1.82	0.61
53:2:33:PRO:O	53:2:37:THR:N	2.32	0.61
54:3:77:LEU:CB	54:3:111:LYS:HD2	2.29	0.61
54:3:78:ILE:HG22	54:3:108:ALA:HB2	1.81	0.61
54:3:81:ALA:CB	54:3:107:ILE:HG21	2.31	0.61
1:A:1296:C:O3'	13:Q:13:LYS:NZ	2.32	0.61
1:A:1250:A:H61	1:A:1354:C:H1'	1.64	0.61
1:A:520:A:H62	1:A:529:G:N2	1.92	0.61
1:A:612:C:H5''	4:H:84:LYS:NZ	2.15	0.61
22:C:104:LEU:CD2	22:C:134:VAL:HG11	2.30	0.61
22:C:533:PHE:CE1	22:C:584:LEU:HD12	2.35	0.61
22:C:561:LYS:HA	22:C:563:TYR:CE2	2.35	0.61
23:D:1052:C:N4	23:D:1107:G:O6	2.32	0.61
23:D:1442:G:H2'	23:D:1443:G:H8	1.65	0.61
23:D:1496:A:H2'	23:D:1498:C:H5	1.66	0.61
23:D:1480:G:H1	23:D:1512:G:H1	1.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1812:A:H2'	23:D:1813:G:O4'	1.99	0.61
23:D:563:G:C4	23:D:2018:G:C2	2.87	0.61
23:D:2101:G:N2	23:D:2189:U:O2	2.34	0.61
23:D:2126:A:H62	23:D:2172:U:H5'	1.66	0.61
23:D:2524:G:H1	23:D:2539:C:H42	1.47	0.61
23:D:2845:G:H2'	23:D:2846:G:H8	1.65	0.61
23:D:285:C:H2'	23:D:286:C:C6	2.34	0.61
2:F:142:LEU:O	2:F:146:GLN:HG2	1.99	0.61
1:A:1076:C:H5'	2:F:175:ARG:NH1	2.16	0.61
4:H:57:ARG:HG2	4:H:202:LEU:HB3	1.82	0.61
6:J:4:TYR:HD1	6:J:92:LYS:HA	1.66	0.61
8:L:110:ALA:N	8:L:121:ASP:OD1	2.24	0.61
20:X:26:ASN:HA	20:X:29:LYS:HD2	1.81	0.61
1:A:370:C:H2'	1:A:371:G:C8	2.35	0.61
1:A:418:C:H2'	1:A:419:C:H6	1.65	0.61
1:A:93:U:H2'	1:A:95:G:H8	1.64	0.61
22:C:30:LEU:CG	22:C:32:LEU:HD23	2.30	0.61
23:D:1224:G:N2	23:D:1225:C:O2	2.33	0.61
23:D:1756:G:HO2'	23:D:1758:G:N2	1.98	0.61
23:D:1658:C:N4	23:D:2003:G:O6	2.33	0.61
23:D:2009:G:H2'	23:D:2010:G:H8	1.65	0.61
23:D:2226:C:H2'	23:D:2227:A:O4'	2.00	0.61
23:D:2309:A:OP1	23:D:2310:A:N6	2.29	0.61
23:D:2813:A:H8	23:D:2813:A:O5'	1.83	0.61
23:D:2851:A:H2'	23:D:2852:G:C8	2.35	0.61
23:D:2892:A:HO2'	23:D:2893:G:H4'	1.65	0.61
23:D:93:C:N4	23:D:94:G:O6	2.33	0.61
3:G:155:GLY:HA2	3:G:164:ARG:H	1.65	0.61
10:N:43:ARG:HB3	10:N:67:THR:HB	1.82	0.61
1:A:279:A:C6	17:U:98:LEU:HD22	2.36	0.61
25:Z:65:PRO:HA	25:Z:158:ALA:O	2.00	0.61
1:A:165:C:H2'	1:A:166:G:H8	1.65	0.61
1:A:402:G:P	4:H:74:GLN:HE21	2.23	0.61
1:A:578:C:O2'	1:A:728:A:O2'	2.14	0.61
22:C:402:ILE:CG2	22:C:491:LYS:HZ1	2.13	0.61
22:C:409:TYR:HA	22:C:454:ALA:O	2.00	0.61
22:C:338:THR:CG2	22:C:503:ALA:HB1	2.31	0.61
22:C:524:LEU:H	22:C:524:LEU:HD13	1.63	0.61
23:D:1430:C:N4	23:D:1563:G:H1	1.95	0.61
23:D:1756:G:HO2'	23:D:1758:G:H21	1.46	0.61
23:D:1829:A:H2'	23:D:1830:C:H5'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1921:G:H2'	23:D:1922:G:C8	2.35	0.61
23:D:2314:C:H2'	23:D:2315:G:H8	1.65	0.61
23:D:2631:G:H8	23:D:2894:G:C6	2.18	0.61
23:D:2691:C:O4'	23:D:2872:G:N2	2.33	0.61
23:D:481:G:O2'	23:D:482:A:O5'	2.15	0.61
23:D:78:A:H2'	23:D:79:G:C8	2.36	0.61
23:D:83:G:H2'	23:D:84:A:C8	2.35	0.61
23:D:86:C:H2'	23:D:87:C:C5	2.36	0.61
23:D:883:G:H21	23:D:893:C:H41	1.48	0.61
23:D:972:G:C6	23:D:973:A:C5	2.89	0.61
23:D:977:G:H2'	23:D:978:G:C8	2.35	0.61
1:A:674:G:OP1	6:J:87:ARG:NH2	2.33	0.61
7:K:94:ARG:O	7:K:98:SER:OG	2.11	0.61
1:A:522:C:H41	12:P:53:ARG:HH12	1.48	0.61
1:A:1202:G:H21	14:R:27:CYS:HA	1.65	0.61
54:3:110:GLN:O	54:3:110:GLN:HG2	1.99	0.61
54:3:81:ALA:H	54:3:107:ILE:HG21	1.65	0.61
1:A:759:A:C5	1:A:760:G:C5	2.89	0.61
1:A:568:G:H1	1:A:882:C:H42	1.49	0.61
22:C:137:LYS:C	22:C:167:SER:HA	2.20	0.61
22:C:115:ALA:CB	22:C:474:TYR:CD1	2.84	0.61
22:C:66:VAL:CG2	22:C:76:TYR:CD1	2.72	0.61
23:D:1245:G:H2'	23:D:1246:A:H8	1.65	0.61
23:D:1285:G:N1	23:D:1329:U:OP1	2.32	0.61
23:D:1310:G:O2'	23:D:1311:G:OP1	2.14	0.61
23:D:149:A:C6	23:D:150:C:C4	2.89	0.61
23:D:1523:U:H2'	23:D:1524:G:O4'	2.01	0.61
23:D:1636:C:H2'	23:D:1637:A:H8	1.65	0.61
23:D:1742:C:H2'	23:D:1743:G:H5''	1.82	0.61
23:D:2043:C:H2'	23:D:2044:C:C6	2.36	0.61
23:D:2051:A:C6	23:D:2614:A:C5	2.89	0.61
23:D:2061:G:H1'	23:D:2503:A:C2	2.36	0.61
23:D:209:C:H2'	23:D:210:C:C6	2.35	0.61
23:D:2695:C:H2'	23:D:2696:U:C6	2.36	0.61
23:D:38:A:H2'	23:D:39:C:H6	1.66	0.61
23:D:531:C:OP2	23:D:2035:G:O2'	2.18	0.61
23:D:79:G:H2'	23:D:80:G:C8	2.36	0.61
15:S:10:LYS:O	15:S:14:GLU:HG3	2.01	0.61
25:Z:58:VAL:HB	25:Z:199:HIS:HB3	1.82	0.61
54:3:41:PHE:CE1	54:3:66:THR:CG2	2.83	0.61
1:A:602:A:H2'	1:A:603:U:H6	1.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:726:C:O2'	1:A:741:G:N2	2.34	0.61
22:C:191:ASP:OD2	22:C:219:GLU:HB3	2.01	0.61
22:C:406:LEU:C	22:C:406:LEU:HD23	2.21	0.61
23:D:1148:A:H2'	23:D:1149:G:C8	2.36	0.61
23:D:1260:G:H2'	23:D:1261:C:H6	1.65	0.61
23:D:1422:G:C2	23:D:1423:G:C4	2.89	0.61
23:D:1686:C:H42	23:D:1702:G:H1	1.48	0.61
23:D:1704:G:H21	23:D:1705:G:H1'	1.65	0.61
23:D:1444:G:O2'	23:D:1732:A:N6	2.34	0.61
23:D:1847:A:N6	23:D:1889:A:OP1	2.34	0.61
23:D:2647:U:H2'	23:D:2648:C:C6	2.35	0.61
23:D:2628:C:O2'	23:D:2782:G:OP1	2.17	0.61
23:D:2848:G:C2	23:D:2867:G:N3	2.68	0.61
23:D:619:G:O6	23:D:620:G:N2	2.33	0.61
23:D:650:C:H42	23:D:651:G:N2	1.97	0.61
23:D:887:A:H2'	23:D:888:C:H4'	1.83	0.61
23:D:919:G:C6	23:D:920:G:C6	2.89	0.61
10:N:72:VAL:HG12	10:N:74:ILE:HG13	1.82	0.61
11:O:85:ARG:HD3	11:O:111:ASP:OD2	2.00	0.61
15:S:63:ARG:O	15:S:67:LEU:HG	2.01	0.61
20:X:12:ALA:HA	20:X:14:LYS:HD3	1.83	0.61
25:Z:161:ILE:CD1	25:Z:163:PHE:HE2	2.07	0.61
1:A:337:C:H2'	1:A:338:A:H8	1.65	0.61
1:A:590:C:OP1	8:L:29:SER:HA	2.01	0.61
1:A:916:G:H2'	1:A:917:G:H8	1.65	0.61
22:C:521:VAL:HG11	22:C:547:ALA:HB2	1.78	0.61
23:D:1057:A:H61	23:D:1086:A:H2	1.46	0.61
23:D:1887:C:N4	23:D:1888:G:O6	2.34	0.61
23:D:1986:A:H2'	23:D:1987:G:H8	1.65	0.61
23:D:2589:A:H2'	23:D:2590:A:C8	2.35	0.61
23:D:2601:C:OP1	55:4:75:C:H5"	2.00	0.61
23:D:684:G:C4	23:D:775:G:C6	2.88	0.61
23:D:809:G:C5	23:D:810:U:C4	2.89	0.61
23:D:964:C:H2'	23:D:965:C:C6	2.36	0.61
6:J:75:LEU:HA	6:J:78:GLU:HB3	1.83	0.61
7:K:145:ALA:O	7:K:147:ALA:N	2.33	0.61
15:S:56:LEU:HG	15:S:57:LEU:HD12	1.83	0.61
1:A:390:C:O3'	16:T:8:ARG:NH2	2.34	0.61
23:D:1034:G:O2'	52:1:18:ARG:NH2	2.33	0.60
53:2:57:THR:N	53:2:82:PHE:O	2.33	0.60
1:A:1289:A:H2	1:A:1371:G:H21	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:151:A:H3'	1:A:152:A:H8	1.66	0.60
1:A:658:G:H5''	15:S:8:LYS:NZ	2.16	0.60
1:A:678:U:H2'	1:A:679:C:C6	2.34	0.60
1:A:855:G:OP2	1:A:871:U:N3	2.34	0.60
1:A:878:G:OP1	8:L:88:LYS:HB3	2.01	0.60
1:A:938:A:H5''	7:K:95:ARG:NH1	2.16	0.60
22:C:98:ALA:CA	22:C:127:HIS:CG	2.80	0.60
22:C:242:VAL:CG1	22:C:262:GLY:CA	2.76	0.60
22:C:250:LEU:CD1	22:C:263:TRP:CZ2	2.83	0.60
22:C:409:TYR:HB3	22:C:453:GLU:CG	2.28	0.60
23:D:1948:G:H2'	23:D:1949:G:H8	1.65	0.60
23:D:1771:C:N4	23:D:1980:G:H1	1.99	0.60
23:D:2006:C:H2'	23:D:2007:C:C6	2.36	0.60
23:D:2122:U:O4	23:D:2123:G:N2	2.33	0.60
23:D:2260:C:H2'	23:D:2261:C:C6	2.36	0.60
23:D:2056:G:C6	23:D:2577:A:C4	2.89	0.60
23:D:595:C:N4	23:D:662:G:H1	1.98	0.60
23:D:692:C:H2'	23:D:693:C:H6	1.66	0.60
23:D:693:C:N4	23:D:769:G:H1	1.98	0.60
23:D:768:G:H2'	23:D:769:G:H8	1.64	0.60
5:I:99:GLY:C	5:I:117:ASP:HA	2.21	0.60
15:S:74:ASP:OD2	15:S:77:ARG:HB3	2.00	0.60
55:4:52:G:O2'	55:4:53:G:O5'	2.18	0.60
1:A:988:G:N2	1:A:1217:C:O2'	2.34	0.60
1:A:1233:G:OP1	9:M:121:ARG:NH2	2.28	0.60
1:A:1287:A:H61	1:A:1371:G:H4'	1.65	0.60
1:A:1302:U:O2'	1:A:1303:C:H5'	2.01	0.60
1:A:186(D):C:N3	1:A:191(D):U:N3	2.49	0.60
1:A:335:C:H2'	1:A:336:C:C6	2.36	0.60
1:A:512:U:H3	1:A:539:A:H61	1.48	0.60
1:A:677:U:H2'	1:A:678:U:C5	2.37	0.60
1:A:717:C:H4'	11:O:117:ASN:HB3	1.83	0.60
1:A:826:C:H2'	1:A:827:U:C6	2.37	0.60
22:C:8:ARG:NE	22:C:74:GLU:HA	2.16	0.60
23:D:1164:G:H1	23:D:1185:C:N4	1.94	0.60
23:D:1309:G:N2	23:D:1310:G:N3	2.49	0.60
23:D:1771:C:N4	23:D:1772:G:O6	2.35	0.60
23:D:1906:G:C4	23:D:1929:G:C6	2.88	0.60
23:D:216:A:C4	23:D:217:G:C8	2.89	0.60
23:D:2469:A:H3'	23:D:2470:G:C8	2.34	0.60
23:D:2447:G:O2'	23:D:2499:C:OP2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:483:A:H2'	23:D:484:C:O4'	2.02	0.60
23:D:585:G:OP2	23:D:585:G:H8	1.84	0.60
23:D:600:G:H1	23:D:657:U:H3	1.47	0.60
23:D:593:G:H22	23:D:664:C:N4	1.99	0.60
23:D:744:G:N2	23:D:753:C:N3	2.42	0.60
23:D:832:G:H2'	23:D:833:U:C6	2.36	0.60
24:E:61:G:H2'	24:E:62:C:H6	1.66	0.60
3:G:17:ASP:O	3:G:54:ARG:NH2	2.33	0.60
13:Q:91:ARG:CD	13:Q:98:VAL:HG13	2.31	0.60
1:A:764:C:H5''	15:S:50:HIS:CE1	2.36	0.60
25:Z:190:ARG:O	25:Z:194:ARG:N	2.34	0.60
25:Z:161:ILE:CB	25:Z:192:PHE:CD1	2.56	0.60
54:3:78:ILE:HG21	54:3:127:ILE:HG12	1.82	0.60
1:A:1206:G:H2'	1:A:1207:G:C8	2.36	0.60
1:A:183:G:H2'	1:A:184:G:H8	1.66	0.60
1:A:415:A:H2'	1:A:416:G:C8	2.36	0.60
1:A:549:C:H2'	1:A:550:G:C8	2.36	0.60
1:A:695:A:H5'	11:O:51:LYS:NZ	2.17	0.60
1:A:962:C:H1'	1:A:1201:A:N6	2.15	0.60
22:C:145:PRO:HD2	22:C:146:LEU:H	1.66	0.60
22:C:434:ARG:O	22:C:436:VAL:N	2.35	0.60
22:C:444:ALA:HB1	22:C:447:ARG:CG	2.29	0.60
22:C:63:ALA:HA	22:C:245:PHE:HB2	1.80	0.60
23:D:1062:G:N7	23:D:1076:C:N4	2.48	0.60
23:D:153:C:H2'	23:D:154:G:H8	1.66	0.60
23:D:1900:A:HO2'	23:D:1901:A:P	2.24	0.60
23:D:2260:C:H2'	23:D:2261:C:H6	1.65	0.60
23:D:2287:A:H2'	23:D:2289:G:N7	2.15	0.60
23:D:252:G:H2'	23:D:253:C:C6	2.36	0.60
23:D:2645:G:O3'	23:D:2732:G:O2'	2.20	0.60
23:D:270(S):G:H2'	23:D:270(T):G:H8	1.66	0.60
23:D:286:C:N4	23:D:355:G:H1	1.98	0.60
23:D:399:G:H2'	23:D:400:G:H5'	1.82	0.60
23:D:737:C:H42	23:D:759:G:H1	1.47	0.60
23:D:948:G:H1'	23:D:984:A:C2	2.36	0.60
7:K:117:ALA:HA	7:K:120:ILE:HD12	1.82	0.60
1:A:1376:U:P	7:K:94:ARG:HH22	2.23	0.60
10:N:6:ILE:HG22	10:N:98:ILE:HA	1.83	0.60
12:P:83:VAL:HA	12:P:105:TYR:CD2	2.37	0.60
19:W:3:ARG:NH1	19:W:45:VAL:HA	2.16	0.60
25:Z:130:ILE:O	25:Z:134:ARG:NH1	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:3:6:ALA:HB3	54:3:59:ILE:HB	1.83	0.60
1:A:812:C:O2'	1:A:813:U:O5'	2.18	0.60
1:A:823:G:H1	1:A:877:C:H42	1.49	0.60
22:C:518:ARG:O	22:C:518:ARG:HG2	2.00	0.60
22:C:9:ILE:HG22	22:C:10:ARG:H	1.66	0.60
23:D:1221:C:HO2'	23:D:1222:C:P	2.25	0.60
23:D:1468:C:N3	23:D:1469:A:N6	2.50	0.60
23:D:1492:G:N2	23:D:1499:C:N3	2.49	0.60
23:D:194:G:C2	23:D:195:A:C4	2.90	0.60
23:D:2276:G:O2'	23:D:2277:G:O5'	2.19	0.60
23:D:2294:C:H2'	23:D:2295:C:H6	1.65	0.60
23:D:2471:C:N4	23:D:2479:G:H1	1.95	0.60
23:D:2701:C:H3'	23:D:2702:U:C5'	2.30	0.60
23:D:2725:A:O2'	23:D:2726:U:O5'	2.16	0.60
23:D:2811:G:H2'	23:D:2812:G:C5'	2.29	0.60
23:D:2835:A:O2'	23:D:2836:U:OP2	2.19	0.60
23:D:413:C:N3	23:D:2410:G:N2	2.40	0.60
23:D:825:C:H42	23:D:832:G:H1	1.49	0.60
23:D:859:G:O2'	23:D:860:U:O2	2.18	0.60
23:D:943:U:H2'	23:D:944:G:N7	2.17	0.60
23:D:970:C:HO2'	23:D:984:A:HO2'	1.48	0.60
3:G:54:ARG:NE	3:G:56:ASP:OD1	2.34	0.60
4:H:7:PRO:HG2	4:H:10:ARG:HD3	1.81	0.60
5:I:14:ARG:O	5:I:29:GLY:N	2.34	0.60
5:I:76:ILE:HG22	5:I:78:HIS:H	1.66	0.60
13:Q:15:VAL:HG23	13:Q:41:PRO:HA	1.83	0.60
15:S:3:ILE:HG21	15:S:38:ARG:HH22	1.65	0.60
52:1:3:VAL:HG12	52:1:5:ALA:H	1.66	0.60
1:A:645:C:H2'	1:A:646:U:C6	2.37	0.60
22:C:252:ALA:O	22:C:253:THR:OG1	2.14	0.60
22:C:217:LEU:O	22:C:258:ALA:C	2.39	0.60
22:C:414:ILE:HG12	22:C:477:MET:HA	0.61	0.60
23:D:1058:G:H1	23:D:1081:U:H2'	1.66	0.60
23:D:1190:G:H2'	23:D:1191:G:H8	1.65	0.60
23:D:1753:G:H1	23:D:1756:G:P	2.24	0.60
23:D:2090:G:C6	23:D:2230:G:C6	2.89	0.60
23:D:2283:C:H2'	23:D:2284:C:C6	2.36	0.60
23:D:2442:C:H2'	23:D:2443:C:C6	2.37	0.60
23:D:280:C:O2'	23:D:282:A:OP2	2.20	0.60
23:D:568:U:H5'	23:D:569:U:OP2	2.02	0.60
23:D:741:G:H2'	23:D:742:G:H8	1.64	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:883:G:N2	23:D:893:C:H41	1.99	0.60
1:A:1346:A:O2'	7:K:10:ARG:NH2	2.34	0.60
8:L:74:PRO:HG2	8:L:75:ARG:HH12	1.67	0.60
9:M:4:TYR:HB2	9:M:19:LEU:O	2.02	0.60
9:M:85:LEU:HD23	9:M:96:LEU:HD13	1.84	0.60
15:S:35:ARG:NH1	15:S:59:MET:SD	2.72	0.60
18:V:59:SER:OG	18:V:62:GLU:HG2	2.01	0.60
1:A:960:U:O2'	1:A:1222:G:O2'	2.17	0.60
1:A:1251:A:O2'	1:A:1369:C:O2'	2.01	0.60
1:A:1300:G:H2'	1:A:1334:G:H1	1.67	0.60
1:A:447:G:O2'	1:A:448:A:O5'	2.19	0.60
1:A:665:A:N6	1:A:725:G:O6	2.33	0.60
1:A:972:C:H2'	1:A:973:G:H8	1.66	0.60
22:C:247:PRO:HD2	22:C:248:GLN:H	1.66	0.60
22:C:198:ALA:HB1	22:C:282:LEU:HD12	1.81	0.60
22:C:504:LEU:HD11	22:C:523:LYS:HZ1	1.64	0.60
22:C:98:ALA:HA	22:C:127:HIS:CG	2.36	0.60
23:D:1286:A:H2'	23:D:1289:C:H41	1.66	0.60
23:D:1338:G:C6	23:D:1339:G:C6	2.89	0.60
23:D:1637:A:H2'	23:D:1638:C:H6	1.67	0.60
23:D:1670:C:C4	23:D:1671:U:C2	2.89	0.60
23:D:2174:C:C2	25:Z:218:MET:HG3	2.36	0.60
23:D:792:G:C5	23:D:2440:C:C2	2.88	0.60
23:D:270(V):G:C6	23:D:270(W):G:C6	2.89	0.60
23:D:2733:A:H2'	23:D:2734:A:H8	1.65	0.60
23:D:2812:G:O2'	23:D:2813:A:H5'	2.01	0.60
23:D:2887:U:H2'	23:D:2888:C:C6	2.36	0.60
23:D:295:G:H2'	23:D:296:C:C6	2.36	0.60
23:D:697:C:H2'	23:D:698:C:C6	2.36	0.60
23:D:776:G:N2	23:D:2073:C:OP1	2.30	0.60
23:D:77:C:H42	23:D:109:G:H1	1.50	0.60
1:A:1101:A:N6	2:F:175:ARG:HH21	2.00	0.60
13:Q:66:LEU:O	13:Q:70:LEU:N	2.34	0.60
16:T:7:ALA:N	16:T:18:ARG:H	1.99	0.60
16:T:81:ARG:HG2	16:T:83:GLU:HG2	1.83	0.60
1:A:14:U:N3	1:A:17:U:OP2	2.34	0.60
1:A:543:C:H2'	1:A:544:G:C8	2.37	0.60
1:A:687:A:N6	1:A:700:G:O2'	2.34	0.60
22:C:276:VAL:HG23	22:C:325:LEU:HD12	1.83	0.60
22:C:459:ILE:HG22	22:C:459:ILE:O	2.02	0.60
22:C:301:VAL:HG22	22:C:464:HIS:CE1	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1045:A:O4'	23:D:1111:A:N6	2.34	0.60
23:D:1292:U:H2'	23:D:1293:C:C6	2.37	0.60
23:D:1344:G:H4'	23:D:1384:A:C6	2.37	0.60
23:D:1380:G:H2'	23:D:1381:G:H8	1.64	0.60
23:D:1403:C:H2'	23:D:1404:C:C2	2.37	0.60
23:D:2008:C:H2'	23:D:2009:G:C8	2.36	0.60
23:D:2190:G:H2'	23:D:2191:G:H8	1.66	0.60
23:D:2431:U:HO2'	23:D:2433:A:H2	1.48	0.60
23:D:387:U:H4'	23:D:388:G:C4	2.36	0.60
23:D:19:C:H42	23:D:521:G:H1	1.50	0.60
23:D:692:C:N3	23:D:770:G:N2	2.48	0.60
23:D:792:G:O2'	23:D:793:A:O4'	2.19	0.60
23:D:974(A):C:N4	23:D:989:G:H22	1.99	0.60
7:K:47:CYS:HA	7:K:50:ILE:HD12	1.84	0.60
10:N:99:LYS:HE2	10:N:100:THR:HG22	1.83	0.60
15:S:64:ARG:HA	15:S:67:LEU:HD12	1.84	0.60
23:D:2742:C:H5''	52:1:35:ARG:NH1	2.16	0.60
23:D:2465:C:H4'	52:1:4:ARG:HD3	1.83	0.60
54:3:21:PRO:CG	54:3:22:PRO:HD3	2.27	0.60
1:A:1246:C:H2'	1:A:1247:U:C6	2.37	0.60
1:A:1438:G:H2'	1:A:1439:C:C6	2.36	0.60
1:A:555:C:H2'	1:A:556:C:C6	2.37	0.60
1:A:642:A:N7	8:L:115:SER:HA	2.16	0.60
22:C:30:LEU:O	22:C:31:GLU:HB2	2.02	0.60
22:C:319:ALA:O	22:C:321:GLU:N	2.29	0.60
22:C:34:HIS:CE1	22:C:247:PRO:HG2	2.30	0.60
22:C:412:LEU:O	22:C:451:VAL:HG13	2.01	0.60
23:D:1151:G:H2'	23:D:1152:C:C6	2.31	0.60
23:D:1304:C:N3	23:D:1624:G:N2	2.47	0.60
23:D:1677:A:H2'	23:D:1678:G:H8	1.63	0.60
23:D:1797:C:N4	23:D:1822:G:H1	1.99	0.60
23:D:2104:G:O6	23:D:2186:G:C6	2.55	0.60
23:D:2396:G:C6	23:D:2421:G:C6	2.90	0.60
23:D:2673:G:H2'	23:D:2674:G:C8	2.35	0.60
23:D:531:C:N3	23:D:532:A:H1'	2.15	0.60
3:G:157:ILE:HD11	3:G:164:ARG:HB3	1.83	0.60
7:K:105:VAL:O	7:K:109:ASN:ND2	2.35	0.60
11:O:46:GLY:N	11:O:55:LYS:HE3	2.17	0.60
25:Z:161:ILE:HD12	25:Z:162:GLU:N	2.16	0.60
53:2:56:ASN:N	53:2:83:TYR:HA	2.16	0.60
56:5:5:G:H1	56:5:68:C:N4	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1496:C:H2'	1:A:1497:G:O4'	2.02	0.60
1:A:146:G:N2	1:A:176:C:N3	2.40	0.60
1:A:255:G:O6	1:A:266:G:N2	2.25	0.60
1:A:562:C:O2	12:P:16:GLU:HB3	2.01	0.60
1:A:777:A:C4	1:A:778:G:C8	2.90	0.60
1:A:818:G:H1'	1:A:820:U:O4	2.02	0.60
1:A:842:C:H5''	1:A:843:U:OP1	2.01	0.60
1:A:897:C:H2'	1:A:898:G:C8	2.37	0.60
1:A:920:U:H2'	1:A:921:U:C6	2.37	0.60
1:A:922:G:H3'	1:A:923:A:H8	1.66	0.60
1:A:993:G:O2'	1:A:994:A:OP1	2.18	0.60
22:C:41:MET:HB2	22:C:45:PHE:CB	2.31	0.60
23:D:1474:C:H2'	23:D:1475:G:H8	1.67	0.60
23:D:2463:C:H2'	23:D:2464:C:C6	2.37	0.60
23:D:2684:U:H2'	23:D:2685:G:C8	2.37	0.60
23:D:526:A:H5''	23:D:527:C:OP1	2.02	0.60
23:D:664:C:H1'	23:D:940:G:H4'	1.83	0.60
24:E:0:A:H4'	24:E:1:U:C5	2.37	0.60
2:F:113:HIS:HA	2:F:116:GLU:CD	2.21	0.60
2:F:165:VAL:HA	2:F:187:LEU:HB3	1.83	0.60
2:F:55:PHE:HA	2:F:58:ILE:HD12	1.83	0.60
3:G:119:ARG:HE	3:G:140:ARG:HH22	1.49	0.60
3:G:39:ILE:HD12	3:G:60:ALA:HA	11.62	0.60
4:H:11:LEU:HD13	4:H:66:ARG:HD3	1.84	0.60
1:A:921:U:O3'	5:I:20:GLN:NE2	2.34	0.60
20:X:71:THR:HG22	20:X:72:LEU:HG	1.83	0.60
54:3:53:VAL:HG22	54:3:72:PRO:HD3	1.84	0.60
55:4:52:G:O2'	55:4:53:G:H8	1.85	0.60
55:4:5:G:H2'	55:4:6:G:C8	2.36	0.60
1:A:1259:C:O2'	1:A:1283:G:N3	2.33	0.60
1:A:782:A:N6	1:A:800:G:H21	1.93	0.60
22:C:205:TYR:CZ	22:C:323:LEU:HD21	2.26	0.60
22:C:497:HIS:CB	22:C:535:VAL:HG12	2.03	0.60
22:C:520:ILE:HG23	22:C:521:VAL:N	2.17	0.60
23:D:1315:C:N4	23:D:1337:G:H1	1.99	0.60
23:D:1324:G:C6	23:D:1328:G:C6	2.89	0.60
23:D:1498:C:H3'	23:D:1499:C:C5	2.37	0.60
8:L:98:LYS:NZ	23:D:1754:C:O5'	91.74	0.60
23:D:1986:A:H2'	23:D:1987:G:C8	2.36	0.60
23:D:235:U:H2'	23:D:236:C:H6	1.67	0.60
23:D:2498:C:O2	23:D:2499:C:H5''	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2055:C:H2'	23:D:2504:U:H5''	1.84	0.60
23:D:1782:C:H42	23:D:2586:C:H42	1.49	0.60
23:D:2718:G:H2'	23:D:2719:G:H8	1.66	0.60
23:D:2853:C:N4	23:D:2864:G:H1	2.00	0.60
2:F:47:THR:O	2:F:51:LEU:HG	2.00	0.60
2:F:83:MET:O	2:F:87:ARG:HG3	2.02	0.60
5:I:78:HIS:HE1	5:I:142:LEU:HD22	1.66	0.60
5:I:39:GLY:HA2	5:I:113:ALA:HA	1.83	0.60
7:K:106:GLN:HA	7:K:109:ASN:ND2	2.15	0.60
15:S:24:SER:OG	15:S:25:THR:N	2.35	0.60
13:Q:83:ASP:OD2	19:W:65:ASN:ND2	2.35	0.60
25:Z:116:THR:HG23	25:Z:149:ILE:HB	1.84	0.60
23:D:1059:G:C5	54:3:126:MET:CG	2.81	0.59
54:3:55:VAL:HG13	54:3:68:VAL:O	2.02	0.59
1:A:1325:C:H2'	1:A:1326:C:H6	1.67	0.59
1:A:243:A:H4'	1:A:244:U:O5'	2.01	0.59
1:A:281:G:O2'	1:A:282:A:O5'	2.18	0.59
1:A:7:G:H1'	1:A:298:A:C8	2.37	0.59
1:A:316:G:H2'	1:A:317:G:H8	1.66	0.59
1:A:37:U:OP2	12:P:123:LYS:NZ	2.26	0.59
1:A:379:C:H2'	1:A:380:G:C8	2.37	0.59
1:A:582:U:H2'	1:A:583:A:H5'	1.84	0.59
1:A:835:U:O2	1:A:851:G:N2	2.28	0.59
22:C:116:GLU:HA	22:C:120:LYS:HE3	1.81	0.59
22:C:79:HIS:CE1	22:C:216:ARG:NH1	2.68	0.59
23:D:1027:A:C6	23:D:1126:A:C4	2.89	0.59
23:D:1088:A:H3'	23:D:1089:G:H5'	1.84	0.59
23:D:1160:G:H2'	23:D:1161:C:C5	2.37	0.59
23:D:1299:G:H22	23:D:1640:C:H5''	1.66	0.59
23:D:1349:A:N6	23:D:1598:C:H42	1.97	0.59
23:D:1790:C:H2'	23:D:1791:A:C2	2.37	0.59
23:D:1796:U:H2'	23:D:1797:C:H6	1.66	0.59
23:D:2127:G:N3	23:D:2162:G:N2	2.50	0.59
23:D:2421:G:H2'	56:5:76:A:N7	2.17	0.59
23:D:2493:U:H2'	23:D:2494:G:O4'	2.02	0.59
23:D:2694:G:H2'	23:D:2695:C:C6	2.37	0.59
23:D:2848:G:N2	23:D:2867:G:N3	2.49	0.59
23:D:286:C:N3	23:D:355:G:N2	2.43	0.59
23:D:498:G:H2'	23:D:499:U:C6	2.36	0.59
23:D:577:G:H2'	23:D:578:A:H8	1.67	0.59
23:D:580:C:H2'	23:D:581:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:52:LEU:HA	3:G:70:VAL:HG22	1.83	0.59
14:R:28:GLY:N	14:R:40:CYS:SG	2.74	0.59
25:Z:66:HIS:CE1	25:Z:188:ASN:HB2	2.37	0.59
25:Z:162:GLU:C	25:Z:192:PHE:CE1	2.75	0.59
1:A:1077:G:N2	1:A:1080:A:OP2	2.34	0.59
1:A:1114:C:O2'	14:R:60:SER:O	2.19	0.59
1:A:1178:G:H2'	1:A:1180:A:OP2	2.02	0.59
1:A:1442:G:N7	1:A:1446:A:C6	2.70	0.59
1:A:526:C:H2'	1:A:527:G:H4'	1.84	0.59
1:A:994:A:H3'	1:A:995:C:C5	2.37	0.59
22:C:11:ASN:HB3	22:C:101:GLU:N	2.17	0.59
22:C:200:ILE:HG21	22:C:276:VAL:O	2.02	0.59
22:C:485:ARG:HB2	22:C:486:PRO:CD	2.32	0.59
22:C:572:LYS:HD3	55:4:73:A:C5	2.37	0.59
23:D:1049:C:H2'	23:D:1050:A:O4'	2.01	0.59
23:D:1057:A:H2'	23:D:1058:G:C5'	2.30	0.59
23:D:1164:G:N2	23:D:1185:C:N3	2.42	0.59
23:D:173:G:O6	23:D:174:C:N3	2.35	0.59
23:D:1801:G:C2	23:D:2207:C:H5'	2.37	0.59
23:D:1930:G:H2'	23:D:1968:G:N1	2.17	0.59
23:D:2126:A:H2	23:D:2162:G:H21	1.50	0.59
23:D:2290:G:H2'	23:D:2291:U:C6	2.36	0.59
23:D:2454:G:H3'	23:D:2455:G:H8	1.65	0.59
23:D:247:G:N7	23:D:249:C:H1'	2.17	0.59
11:O:75:TYR:CZ	23:D:519:U:H4'	149.07	0.59
23:D:740:U:H2'	23:D:741:G:H8	1.66	0.59
12:P:16:GLU:OE1	12:P:17:LYS:N	2.36	0.59
18:V:80:PRO:HB2	18:V:83:GLU:HG2	1.83	0.59
21:Y:7:ARG:HA	21:Y:12:LYS:CE	2.28	0.59
56:5:50:U:H3	56:5:64:A:N6	2.00	0.59
1:A:1013:G:N2	1:A:1016:A:OP2	2.33	0.59
1:A:1070:U:H2'	1:A:1071:C:C5	2.38	0.59
1:A:113:G:H2'	1:A:114:U:C6	2.37	0.59
1:A:547:A:O2'	1:A:548:G:O4'	2.19	0.59
22:C:193:GLU:OE1	22:C:221:ARG:HB2	2.02	0.59
22:C:95:ARG:HB2	22:C:294:PHE:CZ	2.36	0.59
22:C:533:PHE:CG	22:C:585:LYS:CD	2.83	0.59
23:D:1056:G:C2	23:D:1102:C:N4	2.70	0.59
23:D:241:A:H1'	23:D:243:U:C2	2.37	0.59
23:D:597:U:H2'	23:D:598:G:C8	2.37	0.59
23:D:749:C:O3'	23:D:750:A:H8	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:833:U:H2'	23:D:834:C:C6	2.37	0.59
3:G:12:LEU:HD21	14:R:57:ARG:HB2	1.83	0.59
15:S:36:ILE:HD12	23:D:2355:C:H1'	141.59	0.59
16:T:38:TYR:O	16:T:49:LEU:HD13	2.01	0.59
1:A:1424:C:H2'	1:A:1425:U:C6	2.37	0.59
1:A:186(D):C:H2'	1:A:186(E):C:C6	2.38	0.59
1:A:323:U:N3	1:A:324:G:H1'	2.17	0.59
1:A:949:A:H61	1:A:1232:U:H3	1.50	0.59
22:C:63:ALA:CA	22:C:245:PHE:CG	2.85	0.59
23:D:1471:A:H3'	23:D:1472:A:O4'	2.02	0.59
23:D:1534:G:N2	23:D:1538:G:H22	2.01	0.59
23:D:530:G:N2	23:D:2023:G:OP1	2.36	0.59
23:D:2317:C:H3'	23:D:2318:G:C8	2.37	0.59
23:D:259:G:H2'	23:D:260:G:C8	2.32	0.59
23:D:28:A:H2'	23:D:29:U:H5'	1.84	0.59
23:D:696:G:H2'	23:D:697:C:H6	1.67	0.59
23:D:699:A:H62	23:D:733:G:N2	1.99	0.59
23:D:869:G:H2'	23:D:870:A:C4'	2.32	0.59
2:F:101:MET:HA	2:F:104:ASN:OD1	2.03	0.59
3:G:179:ARG:HG2	3:G:206:GLU:HG3	1.84	0.59
4:H:176:LEU:HD13	4:H:178:VAL:HG23	1.84	0.59
10:N:10:GLY:HA3	10:N:16:LEU:HD11	1.84	0.59
25:Z:74:VAL:HG22	25:Z:112:ALA:HB3	1.84	0.59
54:3:81:ALA:N	54:3:107:ILE:HG21	2.17	0.59
1:A:1401:G:H2'	1:A:1402:C:O4'	2.03	0.59
1:A:284:G:C4	1:A:285:G:C8	2.91	0.59
1:A:483:C:H2'	1:A:484:G:C8	2.38	0.59
1:A:550:G:C5	1:A:551:U:C4	2.91	0.59
1:A:552:U:O4'	12:P:86:ARG:NH1	2.35	0.59
1:A:762:C:H2'	1:A:763:G:H8	1.67	0.59
22:C:11:ASN:OD1	22:C:216:ARG:NH1	2.35	0.59
22:C:13:SER:H	22:C:103:VAL:HA	1.68	0.59
22:C:204:VAL:O	22:C:212:ILE:N	2.33	0.59
22:C:230:ILE:HG22	22:C:231:TYR:HD2	1.68	0.59
22:C:256:LEU:HD23	22:C:257:GLU:O	2.02	0.59
22:C:402:ILE:CG1	22:C:491:LYS:NZ	2.53	0.59
23:D:1060:U:O2'	54:3:133:SER:HB2	2.02	0.59
23:D:1062:G:N2	54:3:75:SER:HB2	2.17	0.59
23:D:11:G:H2'	23:D:12:U:C6	2.37	0.59
23:D:1471:A:C8	23:D:1472:A:H1'	2.38	0.59
23:D:1483:G:N1	23:D:1507:A:H1'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1731:G:N2	23:D:1733:G:H22	2.01	0.59
23:D:1905:C:H2'	23:D:1930:G:N7	2.17	0.59
23:D:1992:G:C2	23:D:1997:G:C8	2.91	0.59
23:D:2431:U:H2'	23:D:2432:A:H3'	1.85	0.59
23:D:2464:C:H2'	23:D:2465:C:C6	2.38	0.59
23:D:2680:C:H5''	23:D:2681:C:OP1	2.02	0.59
23:D:7:G:O6	23:D:2896:C:C4	2.56	0.59
23:D:635:C:H2'	23:D:636:G:C8	2.37	0.59
23:D:635:C:H2'	23:D:636:G:H8	1.68	0.59
23:D:823:G:H2'	23:D:824:A:C8	2.37	0.59
23:D:89:G:H3'	23:D:90:U:H5''	1.83	0.59
23:D:999:U:H2'	23:D:1154:G:H22	1.67	0.59
2:F:44:LEU:O	2:F:48:MET:HG2	2.03	0.59
2:F:56:ARG:O	2:F:59:GLU:HG2	2.03	0.59
1:A:404:U:P	4:H:118:ARG:HH11	2.25	0.59
6:J:26:ILE:HD11	6:J:61:LEU:HD13	1.84	0.59
8:L:95:VAL:HG22	8:L:133:LEU:HD21	1.84	0.59
13:Q:28:ALA:HA	13:Q:31:LYS:HB2	1.83	0.59
1:A:1449:C:N3	1:A:1455:G:N1	2.50	0.59
1:A:1510:U:H2'	1:A:1511:G:H8	1.66	0.59
1:A:59:A:C3'	1:A:331:G:H22	2.09	0.59
1:A:451:A:H2'	1:A:481:G:H1	1.67	0.59
1:A:500:G:H1	1:A:545:C:H42	1.51	0.59
1:A:881:G:H2'	1:A:882:C:H5'	1.84	0.59
1:A:973:G:H2'	1:A:974:A:H8	1.67	0.59
1:A:980:C:H1'	14:R:19:ARG:HG3	1.84	0.59
22:C:205:TYR:OH	22:C:323:LEU:CD2	2.51	0.59
22:C:512:LYS:HA	22:C:515:THR:OG1	2.03	0.59
23:D:1053:C:H2'	23:D:1054:A:C8	2.37	0.59
23:D:1093:G:N2	23:D:1098:A:H62	2.00	0.59
23:D:128:C:H2'	23:D:129:C:O4'	2.02	0.59
23:D:152:G:N1	23:D:175:G:C5	2.71	0.59
23:D:1628:G:H2'	23:D:1629:U:H6	1.67	0.59
23:D:2293:C:H2'	23:D:2294:C:C6	2.38	0.59
23:D:2315:G:H2'	23:D:2316:C:C2	2.37	0.59
23:D:231:C:H2'	23:D:232:G:O4'	2.02	0.59
23:D:250:G:C6	23:D:251:A:C6	2.91	0.59
23:D:2679:A:H2'	23:D:2680:C:C6	2.37	0.59
23:D:270(J):G:C2	23:D:270(K):C:H1'	2.38	0.59
23:D:669:G:H2'	23:D:669:G:N3	2.17	0.59
23:D:723:G:H2'	23:D:724:U:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:845:G:O2'	23:D:847:U:N3	2.35	0.59
11:O:11:LYS:HG3	11:O:75:TYR:HD1	1.68	0.59
1:A:104:G:OP2	20:X:18:GLN:NE2	2.36	0.59
20:X:53:LEU:HD13	20:X:103:GLY:HA3	1.84	0.59
55:4:23:C:N4	55:4:24:U:O4	2.35	0.59
1:A:248:C:H42	1:A:276:G:H1	1.50	0.59
1:A:411:A:H62	1:A:429:U:H5''	1.68	0.59
1:A:918:A:H2'	1:A:919:A:C4	2.37	0.59
22:C:118:LEU:HD12	22:C:122:TYR:OH	2.03	0.59
22:C:66:VAL:CG2	22:C:78:PHE:HE2	2.15	0.59
22:C:9:ILE:H	22:C:77:VAL:CG2	2.15	0.59
23:D:1137:G:C6	23:D:1138:G:H1'	2.37	0.59
23:D:1467:C:H2'	23:D:1468:C:C2	2.37	0.59
23:D:1492:G:H2'	23:D:1493:C:C4	2.38	0.59
23:D:1997:G:H2'	23:D:1998:G:C8	2.38	0.59
23:D:203:C:OP2	23:D:204:A:O2'	2.20	0.59
23:D:2313:C:H2'	23:D:2314:C:C6	2.36	0.59
23:D:2069:G:H1	23:D:2442:C:H42	1.50	0.59
23:D:572:A:C4	23:D:573:G:C8	2.90	0.59
23:D:763:G:C2	23:D:765:G:C4	2.91	0.59
5:I:137:GLU:HA	5:I:140:ARG:HB2	1.85	0.59
7:K:71:PRO:O	7:K:96:GLN:NE2	2.36	0.59
8:L:1:MET:HG2	8:L:2:LEU:O	2.02	0.59
17:U:26:GLN:HE21	17:U:37:LYS:HE2	1.68	0.59
13:Q:87:TYR:CE2	19:W:76:PRO:HA	2.37	0.59
55:4:19:G:N2	55:4:56:C:N3	2.35	0.59
56:5:52:G:C2	56:5:53:G:H1'	2.38	0.59
1:A:79:G:N3	1:A:80:G:H1'	2.18	0.59
22:C:333:GLU:CG	22:C:334:PRO:HD3	2.31	0.59
22:C:9:ILE:HA	22:C:77:VAL:O	2.02	0.59
23:D:1043:C:O4'	23:D:1112:G:N1	2.36	0.59
23:D:1427:A:O2'	23:D:1428:C:O5'	2.20	0.59
23:D:2069:G:H2'	23:D:2070:G:H8	1.68	0.59
23:D:2072:G:H2'	23:D:2073:C:H6	1.68	0.59
23:D:2325:G:C6	23:D:2326:C:C2	2.91	0.59
23:D:2384:G:H2'	23:D:2386:C:OP1	2.03	0.59
23:D:2428:G:H5''	23:D:2429:G:OP1	2.03	0.59
23:D:2463:C:C2	23:D:2464:C:C5	2.91	0.59
23:D:2882:A:O2'	23:D:2883:A:OP1	2.20	0.59
23:D:703:U:H2'	23:D:704:G:O4'	2.03	0.59
23:D:713:G:H21	23:D:718:A:H62	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:799:G:H8	23:D:799:G:OP2	1.85	0.59
23:D:962:G:H21	23:D:2250:G:N2	1.98	0.59
23:D:993:G:C6	23:D:1162:G:C6	2.91	0.59
4:H:60:GLU:HA	4:H:63:LYS:HZ3	1.68	0.59
8:L:7:ALA:O	8:L:11:THR:HG23	2.01	0.59
10:N:13:HIS:HA	10:N:68:HIS:HD1	1.68	0.59
11:O:18:ARG:HB3	11:O:83:ILE:HD11	1.85	0.59
16:T:55:ARG:HA	16:T:58:TYR:HB3	1.85	0.59
21:Y:12:LYS:HB3	21:Y:17:THR:O	2.03	0.59
23:D:2251:G:H1	55:4:74:C:H42	1.51	0.59
1:A:66:G:O6	1:A:103:C:N4	2.34	0.59
1:A:1121:U:H2'	1:A:1122:U:H6	1.68	0.59
1:A:1372:U:H2'	1:A:1373:G:O4'	2.02	0.59
1:A:501:C:N4	1:A:544:G:H1	2.00	0.59
1:A:69:G:H2'	1:A:73:G:C8	2.38	0.59
22:C:204:VAL:HG12	22:C:212:ILE:HD12	1.83	0.59
22:C:206:ASP:CG	22:C:211:VAL:HG22	2.24	0.59
22:C:256:LEU:HD13	22:C:256:LEU:N	2.06	0.59
22:C:493:ASN:HB3	22:C:505:THR:HG21	1.84	0.59
22:C:514:TYR:HA	22:C:517:ALA:HB2	1.85	0.59
22:C:95:ARG:NH2	22:C:202:ASP:CA	2.65	0.59
22:C:9:ILE:HA	22:C:77:VAL:CB	2.29	0.59
23:D:1206:G:H2'	23:D:1207:C:O4'	2.02	0.59
23:D:1347:G:H1	23:D:1599:C:H42	1.51	0.59
23:D:1664:A:H1'	23:D:2726:U:O4	2.03	0.59
23:D:1862:G:H2'	23:D:1863:G:H8	1.67	0.59
23:D:2266:A:H4'	23:D:2267:A:C4	2.38	0.59
23:D:2283:C:O2'	23:D:2284:C:OP1	2.19	0.59
23:D:2403:C:N3	23:D:2414:G:N2	2.50	0.59
23:D:2436:G:O2'	23:D:2437:U:OP1	2.20	0.59
23:D:2843:G:H2'	23:D:2844:G:H8	1.68	0.59
23:D:864:G:N2	23:D:865:C:N3	2.51	0.59
4:H:7:PRO:O	4:H:10:ARG:NE	2.31	0.59
4:H:88:VAL:O	4:H:91:SER:OG	2.16	0.59
7:K:45:ASP:O	7:K:49:ILE:HD12	2.03	0.59
16:T:14:ASN:HA	16:T:42:ARG:NH2	2.11	0.59
17:U:61:GLU:HA	17:U:71:PHE:CD1	2.38	0.59
25:Z:131:LEU:HD23	25:Z:134:ARG:HH11	1.68	0.59
56:5:64:A:H3'	56:5:65:G:C8	2.38	0.59
1:A:1147:C:O2'	9:M:5:TYR:OH	2.21	0.59
1:A:1307:U:H6	1:A:1307:U:O5'	1.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:515:G:C5	1:A:537:G:C6	2.89	0.59
1:A:671:G:O3'	6:J:80:ARG:NE	2.35	0.59
1:A:368:U:C1'	22:C:209:GLN:NE2	2.66	0.59
22:C:399:PRO:HD2	22:C:400:THR:H	1.67	0.59
22:C:405:ILE:HG12	22:C:489:LEU:HB3	1.82	0.59
23:D:172:C:C3'	23:D:173:G:C8	2.86	0.59
23:D:2059:A:C6	23:D:2503:A:C5	2.90	0.59
23:D:1953:A:O2'	23:D:2559:C:O2'	2.16	0.59
23:D:2578:G:C2	23:D:2579:C:C4	2.90	0.59
23:D:2819:G:H2'	23:D:2821:A:N7	2.18	0.59
23:D:304:G:H2'	23:D:305:U:C6	2.38	0.59
23:D:323:G:O2'	23:D:324:A:O5'	2.19	0.59
23:D:476:G:OP1	23:D:510:C:O2'	2.14	0.59
23:D:540:G:C2	23:D:541:C:C2	2.91	0.59
23:D:56:A:H4'	23:D:127:A:N6	2.18	0.59
23:D:66:C:H2'	23:D:67:U:H6	1.68	0.59
23:D:859:G:O2'	23:D:860:U:O5'	2.20	0.59
23:D:997:G:O2'	23:D:998:C:H5'	2.02	0.59
24:E:42:C:H2'	24:E:43:C:C6	2.38	0.59
6:J:71:ARG:HA	6:J:74:ASP:HB2	1.85	0.59
7:K:71:PRO:HG2	7:K:96:GLN:HG3	1.85	0.59
8:L:132:GLU:O	8:L:134:ILE:N	2.36	0.59
6:J:89:MET:HE2	18:V:75:ILE:HG21	1.83	0.59
25:Z:64:LEU:HB2	25:Z:159:GLY:C	2.24	0.59
1:A:1030:C:H2'	1:A:1031:G:O4'	2.02	0.58
1:A:1156:G:H21	1:A:1179:A:H2	1.50	0.58
1:A:1259:C:N4	1:A:1260:C:O2	2.36	0.58
1:A:191(F):U:N3	1:A:191:G:N7	2.50	0.58
1:A:438:G:H22	1:A:495:A:P	2.25	0.58
1:A:501:C:H2'	1:A:502:G:C8	2.38	0.58
1:A:562:C:N3	1:A:884:U:C4	2.71	0.58
22:C:79:HIS:CE1	22:C:216:ARG:NH2	2.71	0.58
22:C:243:GLY:O	22:C:244:VAL:CB	2.50	0.58
22:C:524:LEU:O	22:C:525:ALA:HB2	2.03	0.58
23:D:1322:A:N6	23:D:1333:C:O2'	2.36	0.58
23:D:1355:G:C6	23:D:1356:G:C5	2.90	0.58
23:D:1459:G:C6	23:D:1461:G:C6	2.91	0.58
23:D:1565:C:C5	23:D:1567:A:H8	2.21	0.58
23:D:1574:C:H2'	23:D:1575:C:C6	2.37	0.58
23:D:1814:G:C6	23:D:1815:A:N6	2.71	0.58
23:D:2048:G:C6	23:D:2049:G:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2132:U:O2'	23:D:2134:A:N7	2.33	0.58
23:D:2478:A:C2	23:D:2529:G:H2'	2.38	0.58
23:D:2788:C:O2'	23:D:2808:U:O2	2.20	0.58
23:D:407:G:H2'	23:D:408:G:H8	1.67	0.58
23:D:406:G:H1	23:D:421:U:H1'	1.68	0.58
23:D:622:G:N1	23:D:623:G:C4	2.70	0.58
23:D:685:A:C3'	23:D:686:G:H21	2.16	0.58
23:D:744:G:H2'	23:D:745:G:C8	2.36	0.58
23:D:795:C:H2'	23:D:796:C:C6	2.37	0.58
2:F:54:THR:O	2:F:58:ILE:HG13	2.03	0.58
3:G:6:HIS:ND1	3:G:7:PRO:HD2	2.18	0.58
4:H:22:LYS:HB3	4:H:26:CYS:HB3	1.85	0.58
4:H:68:TYR:HE2	4:H:97:LEU:HD13	1.67	0.58
55:4:18:G:O2'	55:4:57:A:N6	2.30	0.58
55:4:50:U:H2'	55:4:51:C:O4'	2.03	0.58
1:A:1054:C:H1'	1:A:1196:U:C2	2.38	0.58
1:A:943:U:H3	1:A:1340:A:H61	1.51	0.58
1:A:1379:G:H2'	1:A:1380:U:O4'	2.04	0.58
1:A:583:A:H3'	1:A:584:G:H8	1.68	0.58
1:A:97:U:H2'	1:A:99:C:C6	2.38	0.58
1:A:993:G:H2'	1:A:995:C:H41	1.67	0.58
22:C:113:VAL:HG23	22:C:152:VAL:CG2	2.32	0.58
22:C:164:ILE:CD1	22:C:176:GLU:HB3	2.30	0.58
22:C:197:LYS:CE	22:C:291:TYR:HD2	2.14	0.58
22:C:41:MET:HG2	22:C:45:PHE:CZ	2.30	0.58
22:C:65:ARG:HD2	22:C:261:VAL:HB	1.85	0.58
23:D:1053:C:N3	23:D:1054:A:N6	2.46	0.58
23:D:999:U:C3'	23:D:1154:G:H1	2.10	0.58
23:D:1157:G:H2'	23:D:1158:C:C6	2.37	0.58
23:D:1186:G:C8	23:D:1187:G:N7	2.71	0.58
23:D:1345:C:H2'	23:D:1346:G:C8	2.38	0.58
23:D:1492:G:H5'	23:D:1493:C:OP2	2.03	0.58
23:D:1567:A:O2'	23:D:1568:G:O6	2.20	0.58
23:D:1295:C:N4	23:D:1645:G:H1	2.00	0.58
23:D:1650:G:C2	23:D:1651:G:H1'	2.38	0.58
23:D:171:G:N2	23:D:172:C:O2	2.36	0.58
23:D:173:G:N7	23:D:174:C:C4	2.71	0.58
23:D:1830:C:H42	23:D:1975:G:H1	1.50	0.58
23:D:2319:G:H4'	23:D:2320:A:H8	1.69	0.58
23:D:2376:A:H2'	23:D:2377:A:O4'	2.04	0.58
23:D:2714:G:C5	23:D:2715:C:C4	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:273:G:H2'	23:D:273(A):G:C8	2.39	0.58
23:D:307:G:N2	23:D:330:A:H61	1.99	0.58
23:D:401:A:H2'	23:D:402:A:H8	1.69	0.58
23:D:467:G:H2'	23:D:468:G:O4'	2.03	0.58
23:D:487:C:N3	23:D:493:G:N1	2.51	0.58
23:D:710:G:H2'	23:D:711:G:C8	2.38	0.58
23:D:873:G:H2'	23:D:874:G:H8	1.68	0.58
24:E:88:C:H3'	24:E:89:G:C8	2.34	0.58
6:J:4:TYR:HB2	6:J:67:MET:HG2	1.85	0.58
12:P:85:ILE:HD13	12:P:100:ILE:HG13	1.84	0.58
1:A:1224:G:O4'	13:Q:102:ARG:CG	2.51	0.58
6:J:99:ALA:N	18:V:30:ASP:OD1	2.36	0.58
19:W:36:ARG:HD2	19:W:37:ARG:HH12	1.68	0.58
54:3:34:ILE:CG2	54:3:63:ARG:HB2	2.03	0.58
55:4:38:A:H5''	55:4:39:C:H5	1.67	0.58
55:4:3:C:N3	55:4:70:G:N2	2.46	0.58
1:A:1077:G:H2'	1:A:1079:G:OP2	2.02	0.58
1:A:1304:G:C4	1:A:1305:G:C6	2.91	0.58
1:A:193:C:H2'	1:A:194:C:C6	2.38	0.58
1:A:406:G:H21	4:H:119:GLN:HE22	1.50	0.58
1:A:482:A:H3'	1:A:483:C:C5	2.39	0.58
1:A:483:C:H2'	1:A:484:G:N7	2.18	0.58
1:A:571:U:H4'	1:A:819:A:H62	1.69	0.58
1:A:646:U:H2'	1:A:647:C:H6	1.68	0.58
1:A:766:A:H61	1:A:1511:G:H1'	1.68	0.58
1:A:924:C:H42	1:A:1392:G:H1	1.51	0.58
22:C:166:ALA:CA	22:C:172:GLU:HB2	2.33	0.58
22:C:180:ALA:O	22:C:184:ARG:N	2.31	0.58
22:C:453:GLU:OE2	22:C:482:ALA:CA	2.51	0.58
22:C:409:TYR:C	22:C:481:GLN:HA	2.22	0.58
23:D:1062:G:H22	54:3:75:SER:HB2	1.69	0.58
23:D:1861:G:H2'	23:D:1862:G:C8	2.37	0.58
23:D:2209:C:H1'	23:D:2215:G:H1	1.68	0.58
23:D:2264:C:H2'	23:D:2265:U:C6	2.38	0.58
23:D:2678:C:H2'	23:D:2679:A:H8	1.67	0.58
23:D:2697:G:H2'	23:D:2698:U:C6	2.38	0.58
23:D:366:C:H5''	23:D:403:U:N3	2.19	0.58
23:D:584:C:N4	23:D:585:G:O6	2.35	0.58
23:D:666:G:H2'	23:D:667:U:H6	1.66	0.58
23:D:712:G:C6	23:D:713:G:C6	2.92	0.58
23:D:748:G:C6	23:D:750:A:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:869:G:H2'	23:D:870:A:H4'	1.85	0.58
23:D:963:U:H2'	23:D:964:C:C6	2.37	0.58
4:H:13:ARG:HD2	4:H:36:ARG:HD3	1.85	0.58
1:A:876:G:P	8:L:14:ARG:HH21	2.26	0.58
9:M:105:ASP:O	9:M:107:ARG:HG3	2.02	0.58
10:N:49:VAL:HG22	14:R:41:ARG:HB2	1.85	0.58
25:Z:42:GLU:CD	25:Z:176:GLY:H	2.02	0.58
1:A:1075:C:H2'	1:A:1076:C:H6	1.69	0.58
1:A:229:U:H2'	1:A:230:G:H8	1.68	0.58
1:A:354:G:H2'	1:A:355:C:C6	2.38	0.58
1:A:410:G:N2	1:A:432:A:H62	2.01	0.58
1:A:599:C:H2'	1:A:600:C:C6	2.39	0.58
22:C:236:GLU:HG3	22:C:267:ALA:HB1	1.83	0.58
22:C:30:LEU:HD23	22:C:32:LEU:HD23	1.85	0.58
22:C:349:LEU:HD11	22:C:352:LEU:HD12	1.86	0.58
23:D:1003:G:H2'	23:D:1004:C:H6	1.67	0.58
23:D:1065:U:H2'	23:D:1066:U:H4'	1.85	0.58
23:D:1330:C:H2'	23:D:1331:A:O4'	2.02	0.58
23:D:1332:G:C5	23:D:1609:A:N6	2.71	0.58
23:D:1856:G:H2'	23:D:1857:G:O4'	2.01	0.58
23:D:1858:G:H2'	23:D:1883:G:H22	1.69	0.58
23:D:491:G:H2'	23:D:492:A:C8	2.38	0.58
1:A:421:U:O2'	3:G:190:ARG:NH2	2.37	0.58
4:H:13:ARG:NH1	4:H:36:ARG:O	2.35	0.58
6:J:76:ALA:O	6:J:80:ARG:HG3	2.04	0.58
7:K:29:LYS:HZ1	7:K:102:ARG:HE	1.51	0.58
8:L:46:LYS:H	8:L:62:TYR:HB2	1.67	0.58
8:L:67:PRO:O	8:L:76:PRO:HG3	2.04	0.58
1:A:1125:U:C5	10:N:73:ASP:HB3	2.39	0.58
1:A:241:C:H2'	1:A:242:C:H6	1.69	0.58
22:C:181:ILE:HG23	22:C:185:ILE:HD12	1.80	0.58
22:C:371:ALA:C	22:C:373:ALA:H	2.07	0.58
23:D:1072:C:O2'	23:D:1092:C:OP2	2.21	0.58
23:D:72:U:H5	23:D:112:U:H1'	1.67	0.58
23:D:1189:A:C4	23:D:1190:G:H5'	2.38	0.58
23:D:1444:G:N2	23:D:1547:C:O2	2.30	0.58
23:D:1947:C:N4	23:D:1959:G:H1	1.99	0.58
23:D:2274:A:O3'	23:D:2275:C:H3'	2.04	0.58
23:D:2737:G:H2'	23:D:2738:A:C8	2.38	0.58
23:D:281:G:O2'	23:D:282:A:O5'	2.19	0.58
23:D:2836:U:H2'	23:D:2837:G:C8	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:364:C:H2'	23:D:365:C:C5	2.38	0.58
23:D:580:C:O2'	23:D:581:C:H5'	2.04	0.58
23:D:998:C:H2'	23:D:999:U:C6	2.37	0.58
4:H:127:THR:HB	4:H:147:ALA:HB3	1.84	0.58
4:H:62:GLN:HE22	4:H:65:ARG:HD3	1.69	0.58
8:L:114:THR:HG21	8:L:129:VAL:HG13	1.85	0.58
8:L:28:ALA:HB2	8:L:59:LEU:HD11	1.85	0.58
12:P:102:ARG:HB3	12:P:109:GLY:HA2	1.85	0.58
1:A:1383:C:N4	1:A:1384:C:H41	2.00	0.58
1:A:157:G:H2'	1:A:158:G:H8	1.67	0.58
1:A:198:G:H1	1:A:219:C:N4	2.00	0.58
1:A:525:C:H2'	1:A:526:C:C6	2.37	0.58
1:A:768:A:H2'	1:A:769:G:H5'	1.85	0.58
1:A:9:G:H3'	5:I:126:ARG:NH1	2.19	0.58
22:C:98:ALA:N	22:C:127:HIS:CE1	2.72	0.58
22:C:301:VAL:HG12	22:C:347:GLY:O	2.03	0.58
22:C:569:ARG:NH2	55:4:74:C:O4'	2.35	0.58
23:D:1009:A:H2'	23:D:1010:A:N9	2.17	0.58
23:D:1080:C:C2	54:3:129:GLY:HA3	2.38	0.58
23:D:1291:C:H2'	23:D:1292:U:C6	2.39	0.58
23:D:1589:C:H2'	23:D:1590:U:C6	2.38	0.58
23:D:1668:A:C6	23:D:1674:G:N3	2.72	0.58
23:D:2303:G:H1	23:D:2313:C:N4	1.92	0.58
23:D:2463:C:H2'	23:D:2464:C:H6	1.68	0.58
23:D:2671:A:H2'	23:D:2672:G:H8	1.67	0.58
23:D:2857:G:N2	23:D:2860:A:OP2	2.32	0.58
23:D:770:G:H2'	23:D:771:G:C8	2.39	0.58
23:D:7:G:N2	23:D:2897:U:HO2'	2.00	0.58
24:E:75:G:N3	24:E:75:G:H2'	2.17	0.58
1:A:1070:U:H5'	5:I:18:ARG:NH2	2.18	0.58
8:L:44:PHE:HA	8:L:80:ILE:HD11	1.85	0.58
25:Z:10:LEU:HD11	25:Z:13:LYS:HE2	1.85	0.58
52:1:30:PRO:O	52:1:33:LYS:NZ	2.37	0.58
56:5:24:G:H8	56:5:24:G:OP2	1.85	0.58
1:A:1010:G:H2'	1:A:1011:G:H8	1.69	0.58
1:A:1063:C:H2'	1:A:1064:G:C2	2.39	0.58
1:A:1071:C:H2'	1:A:1072:G:H5'	1.85	0.58
1:A:1436:U:H2'	1:A:1437:C:C6	2.39	0.58
1:A:1533:C:OP2	1:A:1534:A:N6	2.36	0.58
1:A:251:G:C8	1:A:266:G:C8	2.91	0.58
1:A:115:G:H1	1:A:312:C:N4	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:385:C:H2'	1:A:386:C:C6	2.39	0.58
1:A:447:G:HO2'	1:A:448:A:P	2.26	0.58
1:A:594:G:H1	1:A:596:C:H41	1.51	0.58
22:C:376:VAL:CG2	22:C:378:TYR:CZ	2.87	0.58
22:C:494:VAL:HG12	22:C:538:GLN:O	2.04	0.58
22:C:545:ILE:HG22	22:C:546:ILE:N	2.19	0.58
22:C:93:VAL:HG12	22:C:93:VAL:O	2.03	0.58
23:D:1107:G:O5'	23:D:1107:G:H8	1.85	0.58
23:D:12:U:H2'	23:D:13:A:N3	2.18	0.58
23:D:173:G:C6	23:D:174:C:N3	2.71	0.58
23:D:1900:A:C2	23:D:1970:A:C5	2.91	0.58
23:D:2024:G:H1	23:D:2039:C:H42	1.52	0.58
23:D:2176:A:C5	23:D:2177:C:C4	2.92	0.58
4:H:50:ARG:NH2	23:D:251:A:OP1	149.09	0.58
23:D:49:A:C6	23:D:177:G:N1	2.71	0.58
23:D:648:G:C3'	23:D:649:G:H5'	2.34	0.58
23:D:7:G:O6	23:D:2896:C:C5	2.56	0.58
2:F:19:HIS:CD2	2:F:204:ASN:HA	2.37	0.58
2:F:87:ARG:NH2	2:F:232:PRO:O	2.36	0.58
6:J:62:TRP:CG	18:V:35:ARG:HD3	2.38	0.58
8:L:100:ILE:HG22	8:L:102:ARG:H	1.67	0.58
8:L:123:GLU:HA	8:L:126:LYS:HE3	1.84	0.58
13:Q:65:LYS:CD	13:Q:73:GLU:OE1	2.50	0.58
19:W:4:SER:O	19:W:5:LEU:HG	2.04	0.58
1:A:1057:G:H1	1:A:1203:C:H42	1.52	0.58
1:A:1239:A:C5	1:A:1298:C:H1'	2.39	0.58
1:A:1275:A:C6	1:A:1276:G:H1'	2.39	0.58
1:A:1320:C:H6	19:W:37:ARG:HH22	1.51	0.58
1:A:1374:A:H2'	1:A:1375:A:H8	1.69	0.58
1:A:158:G:H2'	1:A:159:G:H8	1.68	0.58
1:A:341:C:H2'	1:A:342:C:H6	1.67	0.58
1:A:501:C:H2'	1:A:502:G:H8	1.69	0.58
1:A:579:G:H2'	1:A:580:U:C6	2.38	0.58
1:A:579:G:C2	1:A:580:U:C2	2.92	0.58
22:C:17:HIS:HA	22:C:116:GLU:OE1	2.02	0.58
22:C:28:ARG:NH2	22:C:32:LEU:HD21	2.18	0.58
22:C:530:ARG:HH21	22:C:530:ARG:CG	2.17	0.58
22:C:577:GLN:HG3	23:D:1942:C:C5'	2.09	0.58
22:C:597:PHE:CD2	22:C:599:ALA:HB3	2.39	0.58
23:D:1067:A:N1	23:D:1074:G:N2	2.48	0.58
23:D:1102:C:H6	23:D:1102:C:O5'	1.87	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1215:G:H2'	23:D:1216:G:O4'	2.03	0.58
23:D:1620:G:C2	23:D:1621:U:C2	2.91	0.58
23:D:1691:C:N4	23:D:1696:G:H1	2.01	0.58
23:D:1696:G:O6	23:D:1697:G:N1	2.37	0.58
23:D:1767:C:H2'	23:D:1768:U:C6	2.39	0.58
23:D:2037:G:C2	23:D:2038:G:C4	2.92	0.58
23:D:2067:G:C6	23:D:2069:G:C5	2.90	0.58
23:D:2567:G:H2'	23:D:2568:C:H6	1.69	0.58
23:D:2830:G:H3'	23:D:2831:G:C8	2.39	0.58
23:D:388:G:C5	23:D:390:A:C5	2.92	0.58
23:D:406:G:N1	23:D:421:U:O2	2.37	0.58
23:D:482:A:N3	23:D:482:A:H3'	2.17	0.58
23:D:75:G:N7	23:D:76:C:N4	2.46	0.58
3:G:139:GLN:O	3:G:143:GLU:HG3	2.04	0.58
6:J:2:ARG:HD3	23:D:1655:A:H5''	119.84	0.58
7:K:10:ARG:HD3	7:K:12:LEU:HD23	1.86	0.58
12:P:83:VAL:HG22	12:P:84:LEU:H	1.67	0.58
16:T:69:THR:O	16:T:72:ARG:HG2	2.03	0.58
13:Q:94:ARG:NE	19:W:81:ARG:O	2.36	0.58
20:X:82:SER:O	20:X:86:ARG:HB3	2.03	0.58
1:A:1123:A:H3'	1:A:1124:G:H8	1.68	0.58
1:A:1130:A:N1	1:A:1131:G:C6	2.72	0.58
1:A:1215:G:H2'	1:A:1216:G:C8	2.38	0.58
1:A:1320:C:H3'	1:A:1321:C:C6	2.39	0.58
1:A:1492:A:P	12:P:46:LYS:HG3	2.44	0.58
1:A:1521:G:H2'	1:A:1522:U:H6	1.69	0.58
1:A:279:A:O2'	1:A:280:C:OP2	2.18	0.58
1:A:810:C:N4	1:A:811:C:N3	2.52	0.58
1:A:880:C:O5'	12:P:9:GLN:NE2	2.25	0.58
22:C:169:LYS:CE	57:C:701:GCP:N1	2.66	0.58
23:D:1085:A:O2'	23:D:1086:A:O4'	2.22	0.58
23:D:1332:G:C6	23:D:1609:A:N7	2.71	0.58
23:D:1361:G:C6	23:D:1362:C:C4	2.91	0.58
23:D:1399:C:H2'	23:D:1400:G:H8	1.69	0.58
23:D:1441:G:H1	23:D:1550:C:H42	1.52	0.58
23:D:1651:G:C2	23:D:2007:C:C4	2.92	0.58
23:D:2367:G:H2'	23:D:2368:C:C6	2.38	0.58
23:D:2392:A:C4	23:D:2429:G:C6	2.92	0.58
23:D:2060:A:C5	23:D:2502:G:C2	2.92	0.58
23:D:2678:C:N4	23:D:2729:G:H1	2.01	0.58
23:D:2743:C:H3'	23:D:2755:C:N4	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:11:G:O2'	23:D:2802:G:OP1	2.21	0.58
23:D:410:G:C6	23:D:418:G:N1	2.71	0.58
23:D:500:G:H21	23:D:505:A:H62	1.50	0.58
23:D:719:C:H2'	23:D:720:C:H6	1.67	0.58
23:D:856:C:N4	23:D:921:G:H1	1.99	0.58
5:I:143:ARG:O	5:I:147:ASP:HB2	2.02	0.58
5:I:79:GLU:HA	5:I:91:LEU:HD23	1.86	0.58
8:L:34:GLU:O	8:L:38:ILE:HG12	2.03	0.58
10:N:6:ILE:HG13	10:N:73:ASP:H	1.69	0.58
16:T:17:TYR:HD2	16:T:39:TYR:HD2	1.50	0.58
21:Y:5:ASP:OD2	21:Y:8:THR:OG1	2.14	0.58
23:D:1063:G:N1	54:3:91:PRO:HB3	2.19	0.58
22:C:569:ARG:NE	55:4:73:A:O3'	2.37	0.58
1:A:1006:C:N4	1:A:1023:G:O6	2.36	0.58
1:A:1312:G:H8	1:A:1312:G:O5'	1.86	0.58
1:A:1486:G:H8	1:A:1486:G:OP2	1.85	0.58
1:A:186:C:H2'	1:A:186(A):C:C6	2.36	0.58
1:A:260:G:OP1	20:X:80:ARG:NH1	2.36	0.58
1:A:573:A:OP2	1:A:573:A:H3'	2.02	0.58
1:A:69:G:H1	1:A:99:C:H42	1.51	0.58
22:C:230:ILE:O	22:C:232:SER:N	2.37	0.58
22:C:199:LEU:HA	22:C:279:THR:C	2.24	0.58
22:C:2:VAL:O	22:C:2:VAL:HG12	2.03	0.58
22:C:33:THR:O	22:C:34:HIS:HB2	2.04	0.58
22:C:406:LEU:HD12	22:C:485:ARG:O	2.02	0.58
22:C:597:PHE:HD2	22:C:599:ALA:HB3	1.69	0.58
22:C:6:LEU:CD1	22:C:192:PRO:CG	2.82	0.58
23:D:1666:G:H2'	23:D:1667:G:O4'	2.04	0.58
23:D:1730:U:O2	23:D:1731:G:N2	2.37	0.58
23:D:1748:G:H2'	23:D:1749:A:C8	2.39	0.58
23:D:2039:C:H2'	23:D:2040:C:C6	2.39	0.58
23:D:2274:A:C5	23:D:2276:G:C8	2.91	0.58
23:D:2607:G:N1	23:D:2608:G:C2	2.69	0.58
23:D:2874:C:H2'	23:D:2875:C:C6	2.39	0.58
23:D:413:C:H2'	23:D:414:C:C6	2.39	0.58
23:D:527:C:N4	23:D:2779:U:H5'	2.19	0.58
23:D:565:C:C5	23:D:566:U:C4	2.91	0.58
23:D:579:G:C6	23:D:580:C:C4	2.92	0.58
4:H:175:SER:HB2	4:H:184:LYS:HB3	1.86	0.58
12:P:76:ASN:HD22	12:P:108:ALA:H	1.52	0.58
13:Q:10:PRO:HG3	13:Q:18:ALA:HB1	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:114:VAL:HG11	25:Z:160:ARG:NH2	2.18	0.58
25:Z:180:PHE:H	25:Z:181:PRO:CD	2.16	0.58
1:A:1028(B):C:H2'	1:A:1029:G:O4'	2.03	0.57
1:A:1187:G:O3'	9:M:111:ARG:NH1	2.36	0.57
1:A:1359:C:O5'	14:R:35:ARG:NH2	2.36	0.57
1:A:216:G:H2'	1:A:217:C:C6	2.39	0.57
1:A:660:G:H2'	1:A:661:G:C8	2.37	0.57
22:C:131:ILE:HG21	22:C:158:LEU:HD22	1.73	0.57
22:C:169:LYS:HG3	57:C:701:GCP:C6	2.33	0.57
22:C:180:ALA:CA	22:C:183:GLN:HG3	2.32	0.57
22:C:283:ALA:O	22:C:284:ASP:HB2	2.04	0.57
22:C:436:VAL:CB	22:C:451:VAL:HG12	2.34	0.57
23:D:1168:G:H1	23:D:1181:C:N4	2.02	0.57
23:D:1230:C:H2'	23:D:1231:G:C8	2.39	0.57
23:D:1332:G:OP2	23:D:1333:C:N4	2.36	0.57
23:D:1354:A:H62	23:D:1377:G:N2	2.02	0.57
23:D:1984:G:H2'	23:D:1985:G:H8	1.67	0.57
23:D:270(A):A:H5'	23:D:270(B):A:OP2	2.04	0.57
23:D:2717:G:H2'	23:D:2718:G:C8	2.39	0.57
23:D:627:A:C2	23:D:628:G:H1'	2.39	0.57
24:E:116:G:H2'	24:E:117:G:C8	2.39	0.57
4:H:156:GLU:O	4:H:160:GLN:HG2	2.04	0.57
7:K:126:ASP:HB3	7:K:131:LYS:HG3	1.86	0.57
13:Q:86:CYS:O	13:Q:90:LEU:HG	2.03	0.57
19:W:2:PRO:O	19:W:3:ARG:HB2	2.04	0.57
1:A:1326:C:OP1	21:Y:12:LYS:NZ	2.37	0.57
1:A:276:G:H2'	1:A:277:C:C6	2.38	0.57
22:C:13:SER:CB	22:C:103:VAL:HG13	2.32	0.57
22:C:58:THR:HG1	57:C:701:GCP:PG	2.24	0.57
22:C:65:ARG:CA	22:C:76:TYR:OH	2.52	0.57
23:D:1023:U:O2'	23:D:1122:G:O3'	2.22	0.57
23:D:1101:U:C4	23:D:1102:C:N3	2.69	0.57
23:D:1162:G:H2'	23:D:1163:G:H8	1.67	0.57
23:D:1309:G:C2	23:D:1310:G:C4	2.92	0.57
23:D:1351:C:H2'	23:D:1352:U:N1	2.18	0.57
23:D:1480:G:N2	23:D:1482:U:H5''	2.19	0.57
23:D:1588:C:H2'	23:D:1589:C:C6	2.39	0.57
23:D:2218:G:H2'	23:D:2219:G:H8	1.66	0.57
23:D:2228:G:C6	23:D:2229:C:C4	2.91	0.57
23:D:2527:C:O3'	52:1:31:LYS:NZ	2.29	0.57
23:D:2578:G:O2'	23:D:2579:C:O4'	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:974:G:C5	23:D:1186:G:C2	2.92	0.57
24:E:62:C:H2'	24:E:63:G:H8	1.68	0.57
2:F:19:HIS:HD2	2:F:205:ASP:OD1	1.88	0.57
2:F:46:LYS:HD2	2:F:49:GLU:OE2	2.03	0.57
4:H:24:GLU:O	4:H:28:SER:N	2.36	0.57
6:J:61:LEU:HB3	6:J:63:TYR:CE2	2.39	0.57
12:P:36:VAL:O	12:P:58:VAL:HG13	2.04	0.57
13:Q:102:ARG:O	13:Q:103:THR:C	2.41	0.57
54:3:93:ARG:HH11	54:3:93:ARG:CG	2.17	0.57
55:4:69:C:H2'	55:4:70:G:H8	1.69	0.57
56:5:57:G:OP2	56:5:57:G:H8	1.86	0.57
1:A:1220:G:H1'	19:W:52:TYR:CE2	2.39	0.57
1:A:1287:A:N6	1:A:1371:G:H4'	2.19	0.57
1:A:1501:C:P	1:A:1508:G:H4'	2.45	0.57
1:A:380:G:N2	1:A:383:A:OP2	2.38	0.57
1:A:505:G:C2	1:A:506:G:C4	2.92	0.57
22:C:424:LEU:O	22:C:428:LEU:HG	2.05	0.57
23:D:1459:G:O2'	23:D:1461:G:O4'	2.21	0.57
23:D:1908:C:N3	23:D:1909:C:N4	2.51	0.57
23:D:1919:A:O2'	23:D:1921:G:OP1	2.22	0.57
23:D:1947:C:N3	23:D:1959:G:N2	2.49	0.57
23:D:2018:G:C6	23:D:2019:A:C6	2.92	0.57
23:D:201:C:H2'	23:D:202:U:O4'	2.04	0.57
23:D:2093:G:H1	23:D:2196:C:H42	1.51	0.57
23:D:2265:U:C4	23:D:2266:A:C6	2.92	0.57
23:D:2282:G:H1	23:D:2427:C:N4	2.01	0.57
23:D:2322:A:C5	23:D:2323:G:C5	2.91	0.57
23:D:253:C:H2'	23:D:254:G:O4'	2.04	0.57
23:D:2594:C:H42	23:D:2599:G:H1	1.52	0.57
23:D:2631:G:H3'	23:D:2894:G:C6	2.39	0.57
23:D:41:C:H2'	23:D:43:G:C8	2.39	0.57
23:D:46:C:H2'	23:D:47:C:H6	1.69	0.57
23:D:27:G:N2	23:D:512:G:H2'	2.19	0.57
24:E:2:C:H42	24:E:118:G:H1	1.50	0.57
1:A:409:G:OP2	4:H:25:ARG:N	2.34	0.57
4:H:13:ARG:NH1	4:H:36:ARG:HB2	2.19	0.57
8:L:33:GLU:O	8:L:36:LEU:HG	2.04	0.57
9:M:47:LEU:O	9:M:51:ARG:N	2.38	0.57
10:N:61:GLU:HB3	14:R:45:ARG:NH2	2.18	0.57
1:A:1320:C:H4'	19:W:70:LYS:HE3	1.86	0.57
56:5:10:G:N2	56:5:26:A:H1'	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:63:G:H2'	56:5:64:A:C8	2.40	0.57
1:A:1023:G:O6	1:A:1024:G:N2	2.35	0.57
1:A:1290:G:H2'	1:A:1291:G:C8	2.39	0.57
1:A:1305:G:N3	1:A:1306:A:C6	2.72	0.57
1:A:191:G:H2'	1:A:192:U:H6	1.70	0.57
1:A:739:C:H2'	1:A:740:U:C6	2.40	0.57
1:A:774:G:H1	1:A:805:C:N4	2.03	0.57
22:C:230:ILE:HG22	22:C:279:THR:OG1	2.04	0.57
22:C:414:ILE:HD11	22:C:477:MET:HE3	1.84	0.57
22:C:95:ARG:HH22	22:C:202:ASP:CA	2.17	0.57
23:D:1065:U:C4	23:D:1066:U:H1'	2.38	0.57
23:D:1455:G:H2'	23:D:1456:G:O4'	2.04	0.57
23:D:163:U:H5'	23:D:163:U:O2	2.04	0.57
23:D:1819:A:H1'	23:D:1821:A:C4	2.40	0.57
23:D:1858:G:H22	23:D:1883:G:H2'	1.69	0.57
23:D:2206:C:H2'	23:D:2207:C:C6	2.40	0.57
23:D:270(X):G:H2'	23:D:270(Y):G:O4'	2.04	0.57
23:D:26:G:N1	23:D:513:A:OP2	2.28	0.57
23:D:526:A:OP1	23:D:526:A:H3'	2.02	0.57
2:F:186:ALA:N	2:F:199:TYR:O	2.37	0.57
4:H:68:TYR:HA	4:H:114:ARG:NH1	2.20	0.57
8:L:52:ASP:CG	8:L:57:PRO:HA	2.24	0.57
1:A:1186:G:H4'	9:M:110:GLU:HG3	1.86	0.57
14:R:29:ARG:HH22	14:R:41:ARG:NH2	2.01	0.57
1:A:1014:A:N6	1:A:1015:A:N1	2.53	0.57
1:A:1139:G:HO2'	1:A:1140:C:P	2.28	0.57
1:A:1465:C:H2'	1:A:1466:C:H5'	1.86	0.57
1:A:186(A):C:O2'	20:X:89:ARG:NE	2.36	0.57
1:A:346:G:C6	1:A:347:G:H1'	2.40	0.57
1:A:384:G:H2'	1:A:385:C:C6	2.40	0.57
22:C:198:ALA:HB3	22:C:282:LEU:HD12	1.81	0.57
22:C:577:GLN:HA	23:D:1942:C:C2'	2.30	0.57
23:D:1009:A:C5	23:D:1010:A:C6	2.93	0.57
23:D:1099:G:H2'	23:D:1100:C:C6	2.39	0.57
23:D:1143:A:H2'	23:D:1144:G:C8	2.40	0.57
23:D:52:A:OP2	23:D:117:G:N1	2.37	0.57
23:D:1205:U:H1'	23:D:1240:U:C4	2.39	0.57
23:D:1393:A:OP1	23:D:1537:C:O2'	2.21	0.57
23:D:1557:C:H5"	23:D:1558:A:OP2	2.04	0.57
23:D:1957:C:H2'	23:D:1958:C:H6	1.66	0.57
23:D:1981:A:H5"	23:D:1982:C:OP2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2043:C:H2'	23:D:2044:C:C5	2.39	0.57
23:D:2271:G:H2'	23:D:2272:U:C2	2.40	0.57
23:D:411:G:O2'	23:D:2407:G:OP1	2.17	0.57
23:D:2533:A:O2'	23:D:2665:A:OP1	2.22	0.57
23:D:2056:G:C5	23:D:2577:A:C5	2.92	0.57
23:D:2581:G:O2'	23:D:2582:G:OP2	2.23	0.57
19:W:42:PRO:HG3	23:D:2815:C:H4'	181.18	0.57
23:D:523:C:H2'	23:D:524:U:C6	2.39	0.57
23:D:612:G:H1'	23:D:617:G:H22	1.69	0.57
23:D:766:C:C4	23:D:767:U:C4	2.92	0.57
23:D:878:A:H2'	23:D:879:G:H8	1.68	0.57
24:E:86:G:H2'	24:E:87:G:C8	2.39	0.57
2:F:20:GLU:O	2:F:39:ILE:HG13	2.04	0.57
4:H:206:PHE:O	4:H:209:ARG:NH2	2.38	0.57
7:K:29:LYS:NZ	7:K:102:ARG:HE	2.02	0.57
13:Q:87:TYR:OH	19:W:77:THR:N	2.29	0.57
16:T:51:VAL:HG21	16:T:77:ALA:HB2	1.85	0.57
19:W:36:ARG:O	19:W:72:GLY:N	2.37	0.57
1:A:1001:G:H2'	1:A:1002:G:C1'	2.35	0.57
1:A:1064:G:H1'	1:A:1066:C:C2	2.39	0.57
1:A:1227:A:O5'	13:Q:111:LYS:NZ	2.31	0.57
1:A:1306:A:C8	1:A:1307:U:C6	2.93	0.57
1:A:258:G:O2'	1:A:259:G:H5'	2.05	0.57
1:A:35:G:N2	1:A:549:C:N3	2.53	0.57
1:A:624:C:H2'	1:A:625:G:H8	1.67	0.57
1:A:693:G:H2'	1:A:694:A:C8	2.40	0.57
1:A:979:C:H2'	1:A:980:C:H5'	1.86	0.57
22:C:127:HIS:CB	22:C:129:HIS:CE1	2.86	0.57
22:C:12:PHE:HB3	22:C:185:ILE:HD13	1.86	0.57
22:C:417:PRO:HG3	22:C:474:TYR:HB3	1.85	0.57
22:C:489:LEU:O	22:C:507:ILE:CA	2.52	0.57
22:C:50:GLU:O	22:C:53:ARG:HB2	2.03	0.57
22:C:64:VAL:O	22:C:80:LEU:HB3	2.03	0.57
22:C:58:THR:OG1	57:C:701:GCP:PG	2.63	0.57
23:D:1077:A:H4'	23:D:1078:U:OP2	2.03	0.57
23:D:1079:C:N4	54:3:132:ARG:HB2	2.19	0.57
23:D:1418:G:N2	23:D:1580:A:N3	2.35	0.57
23:D:2106:G:C6	23:D:2184:G:C4	2.93	0.57
23:D:2252:G:C2	23:D:2253:G:C4	2.92	0.57
23:D:2607:G:H1	23:D:2608:G:N2	2.01	0.57
23:D:532:A:C6	23:D:561:G:C2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:568:U:OP1	23:D:568:U:H4'	2.04	0.57
23:D:638:G:N2	23:D:650:C:O2	2.38	0.57
23:D:821:A:H2'	23:D:946:G:C8	2.24	0.57
23:D:946:G:C6	23:D:947:G:C6	2.93	0.57
24:E:100:G:H2'	24:E:101:A:C8	2.40	0.57
24:E:6:C:H2'	24:E:7:G:C8	2.40	0.57
14:R:22:THR:HB	14:R:33:VAL:HG21	1.86	0.57
17:U:67:LYS:O	17:U:69:LYS:N	2.32	0.57
19:W:3:ARG:NH1	19:W:45:VAL:HG13	2.20	0.57
25:Z:17:ASN:N	25:Z:20:TYR:OH	2.37	0.57
25:Z:89:ALA:HB1	25:Z:154:ARG:HA	1.85	0.57
53:2:44:LEU:O	53:2:48:GLY:N	2.37	0.57
1:A:1119:C:H2'	1:A:1120:G:C8	2.39	0.57
1:A:399:G:H2'	1:A:400:C:C6	2.39	0.57
1:A:559:A:C5	1:A:561:U:C4	2.92	0.57
22:C:412:LEU:HB2	22:C:451:VAL:HA	1.87	0.57
22:C:407:GLU:O	22:C:484:TYR:HA	2.05	0.57
22:C:42:ARG:CZ	22:C:53:ARG:HH12	2.18	0.57
23:D:1002:G:H2'	23:D:1003:G:O4'	2.04	0.57
23:D:1118:C:H2'	23:D:1119:C:C2	2.40	0.57
23:D:1206:G:C6	23:D:1207:C:C2	2.92	0.57
23:D:1225:C:H6	23:D:1225:C:O5'	1.86	0.57
23:D:1402:C:H2'	23:D:1403:C:H6	1.69	0.57
23:D:1966:A:O2'	23:D:1967:C:O5'	2.19	0.57
23:D:1967:C:N4	23:D:1968:G:N3	2.50	0.57
23:D:2000:G:H2'	23:D:2001:A:C8	2.40	0.57
23:D:2063:C:H2'	23:D:2064:C:H5''	1.86	0.57
23:D:2199:A:N6	23:D:2224:G:H21	1.96	0.57
23:D:295:G:O6	23:D:344:G:N2	2.28	0.57
23:D:656:G:C5	23:D:657:U:C4	2.93	0.57
23:D:822:U:O2'	23:D:823:G:OP1	2.21	0.57
23:D:85:G:H1	23:D:97:C:H42	1.50	0.57
5:I:77:PRO:HB2	5:I:78:HIS:CD2	2.40	0.57
8:L:10:LEU:O	8:L:13:ILE:HB	2.04	0.57
1:A:564:C:O3'	8:L:91:ARG:NH1	2.38	0.57
12:P:61:THR:O	12:P:62:SER:OG	2.19	0.57
17:U:13:ASP:OD1	17:U:14:LYS:N	2.32	0.57
17:U:61:GLU:HG3	17:U:71:PHE:CE1	2.40	0.57
17:U:4:LYS:N	17:U:61:GLU:OE1	2.35	0.57
20:X:76:ALA:HA	20:X:79:ARG:HD2	1.86	0.57
25:Z:32:LEU:HD13	25:Z:220:PRO:CB	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:12:U:H3	56:5:23:A:N6	2.00	0.57
1:A:130:A:OP1	17:U:63:ARG:HD3	2.05	0.57
1:A:321:A:H2'	1:A:322:C:C6	2.40	0.57
22:C:206:ASP:HB3	22:C:210:GLY:C	2.24	0.57
22:C:231:TYR:O	22:C:233:THR:N	2.37	0.57
22:C:269:ARG:HB2	22:C:269:ARG:NH1	2.19	0.57
22:C:495:LEU:HD23	22:C:538:GLN:CD	2.23	0.57
22:C:89:PHE:HE1	22:C:352:LEU:CD1	2.10	0.57
23:D:1067:A:H2'	23:D:1068:G:C5	2.40	0.57
23:D:1176:G:H3'	23:D:1177:A:H8	1.70	0.57
23:D:1260:G:H2'	23:D:1261:C:C6	2.38	0.57
23:D:1273:U:O2'	23:D:1274:A:O3'	2.21	0.57
23:D:1930:G:H2'	23:D:1968:G:C6	2.39	0.57
23:D:2117:A:O5'	23:D:2147:G:N2	2.30	0.57
23:D:2115:G:H22	23:D:2118:U:H5''	1.70	0.57
23:D:2195:C:H2'	23:D:2196:C:H6	1.69	0.57
23:D:2287:A:H62	23:D:2344:U:H3	1.53	0.57
23:D:2283:C:H5	23:D:2389:G:H2'	1.70	0.57
23:D:2694:G:H2'	23:D:2695:C:H6	1.70	0.57
23:D:2701:C:H3'	23:D:2702:U:H5''	1.86	0.57
23:D:35:G:H2'	23:D:36:G:C8	2.40	0.57
5:I:97:GLY:O	5:I:117:ASP:HB3	2.05	0.57
6:J:15:ASP:OD2	6:J:17:SER:OG	2.22	0.57
13:Q:24:GLY:O	13:Q:66:LEU:CD2	2.47	0.57
1:A:230:G:H5'	16:T:23:ASP:OD2	2.05	0.57
17:U:87:LYS:HD3	17:U:90:ILE:HD12	1.87	0.57
1:A:1157:A:OP1	1:A:1158:C:N4	2.37	0.57
1:A:11:G:N2	1:A:23:C:N3	2.53	0.57
1:A:268:C:H2'	1:A:269:C:H6	1.70	0.57
1:A:392:G:H2'	1:A:393:A:C8	2.40	0.57
1:A:569:C:O2'	1:A:574:A:N7	2.38	0.57
1:A:614:A:C6	1:A:627:G:C5	2.92	0.57
1:A:834:C:H2'	1:A:835:U:H6	1.70	0.57
1:A:972:C:O5'	10:N:57:LYS:NZ	2.27	0.57
22:C:378:TYR:HB2	22:C:391:HIS:NE2	2.20	0.57
22:C:500:VAL:O	22:C:501:VAL:HG12	2.05	0.57
23:D:1210:A:H1'	23:D:1212:G:N2	2.20	0.57
23:D:1491:G:C6	23:D:1492:G:C4	2.93	0.57
23:D:1527:G:P	23:D:1527:G:H8	2.28	0.57
23:D:1684:C:C2	23:D:1705:G:C2	2.93	0.57
23:D:1799:G:C6	23:D:1819:A:N7	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1906:G:N2	23:D:1925:C:O2	2.38	0.57
23:D:2023:G:H2'	23:D:2024:G:C8	2.39	0.57
23:D:2070:G:H2'	23:D:2071:A:C8	2.39	0.57
23:D:215:G:H4'	23:D:216:A:O5'	2.05	0.57
23:D:2388:A:H8	23:D:2389:G:C8	2.23	0.57
23:D:251:A:C2	23:D:252:G:H1'	2.40	0.57
23:D:2574:G:C5	23:D:2575:C:N3	2.73	0.57
23:D:2708:G:H2'	23:D:2709:G:C8	2.40	0.57
23:D:607:U:C4	23:D:608:A:C6	2.92	0.57
23:D:699:A:C8	23:D:700:G:C8	2.93	0.57
23:D:845:G:HO2'	23:D:847:U:H3	1.50	0.57
23:D:936:C:H2'	23:D:937:U:C6	2.40	0.57
24:E:38:C:H42	24:E:44:G:H1	1.52	0.57
8:L:45:ILE:HA	8:L:62:TYR:O	2.05	0.57
12:P:85:ILE:HG12	12:P:98:TYR:HB3	1.86	0.57
1:A:1224:G:O4'	13:Q:102:ARG:HD2	2.04	0.57
15:S:39:LEU:HA	15:S:42:HIS:CD2	2.39	0.57
19:W:3:ARG:HG2	19:W:67:VAL:HG21	1.87	0.57
19:W:52:TYR:HB2	19:W:57:HIS:CE1	2.40	0.57
25:Z:131:LEU:HD13	25:Z:136:LEU:HB2	1.86	0.57
1:A:1156:G:O2'	1:A:1179:A:N6	2.37	0.57
1:A:137:C:N3	1:A:226:G:N2	2.48	0.57
1:A:1462:G:H2'	1:A:1463:C:H6	1.70	0.57
1:A:571:U:H3'	1:A:572:A:H5"	1.86	0.57
1:A:605:U:H2'	1:A:606:G:C8	2.40	0.57
22:C:489:LEU:O	22:C:490:VAL:HG12	2.05	0.57
22:C:89:PHE:HB3	22:C:93:VAL:HG23	1.87	0.57
23:D:1319:G:C6	23:D:1334:G:C6	2.93	0.57
23:D:1661:G:C6	23:D:1662:C:N4	2.73	0.57
23:D:1894:C:H2'	23:D:1895:C:H6	1.69	0.57
23:D:1933:G:H1	23:D:1967:C:H42	1.52	0.57
23:D:2005:A:N7	23:D:2006:C:N4	2.45	0.57
23:D:2391:G:N2	23:D:2427:C:HO2'	2.01	0.57
23:D:242:G:H2'	23:D:254:G:H1	1.69	0.57
23:D:303:U:H2'	23:D:304:G:H8	1.69	0.57
23:D:236:C:O2'	23:D:431:U:O2'	2.22	0.57
23:D:38:A:N6	23:D:442:G:O6	2.37	0.57
23:D:562:U:O2	23:D:572:A:H1'	2.05	0.57
23:D:711:G:H2'	23:D:712:G:H8	1.70	0.57
23:D:782:A:H4'	23:D:783:A:C2	2.40	0.57
9:M:28:VAL:N	9:M:31:GLN:O	2.30	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:188:ASN:HA	25:Z:191:ALA:HB3	1.87	0.57
56:5:51:U:H2'	56:5:52:G:C8	2.39	0.56
1:A:1153:C:H2'	1:A:1154:G:H8	1.70	0.56
1:A:1214:C:O2'	1:A:1215:G:OP1	2.22	0.56
1:A:363:A:H2'	1:A:364:A:O4'	2.05	0.56
1:A:553:A:H2'	1:A:554:C:C6	2.39	0.56
22:C:168:GLY:HA3	57:C:701:GCP:O6	2.04	0.56
22:C:41:MET:CE	22:C:45:PHE:CD2	2.87	0.56
23:D:1173:G:O2'	23:D:1177:A:N1	2.38	0.56
23:D:1283:G:N2	23:D:1286:A:OP2	2.38	0.56
23:D:1471:A:H5''	23:D:1472:A:C8	2.40	0.56
23:D:1789:A:H3'	23:D:1790:C:O4'	2.05	0.56
23:D:1842:G:H2'	23:D:1843:C:C6	2.40	0.56
23:D:2219:G:H3'	23:D:2224:G:H8	1.70	0.56
23:D:2283:C:C5	23:D:2389:G:H2'	2.39	0.56
23:D:2436:G:O2'	23:D:2437:U:H5'	2.05	0.56
23:D:2512:C:H42	23:D:2574:G:H1	1.51	0.56
23:D:2528:U:H3'	23:D:2530:A:C8	2.39	0.56
23:D:2588:G:H2'	23:D:2589:A:O4'	2.05	0.56
23:D:2683:C:H3'	23:D:2683:C:OP2	2.05	0.56
23:D:291:C:N4	23:D:349:G:H1	2.02	0.56
23:D:574:C:H1'	23:D:2055:C:N4	2.15	0.56
23:D:693:C:H2'	23:D:694:U:C6	2.40	0.56
13:Q:28:ALA:O	13:Q:32:GLU:N	2.37	0.56
16:T:74:LEU:O	16:T:78:GLY:N	2.38	0.56
54:3:13:PRO:O	54:3:14:ALA:HB2	2.05	0.56
22:C:440:TYR:CZ	54:3:25:PRO:HB3	2.39	0.56
54:3:8:VAL:HG12	54:3:9:LYS:N	2.20	0.56
1:A:1152:A:H2'	1:A:1153:C:C5	2.40	0.56
1:A:1312:G:H2'	1:A:1313:U:O4'	2.04	0.56
1:A:1233:G:O2'	1:A:1365:G:OP1	2.16	0.56
1:A:1463:C:H2'	1:A:1464:G:H8	1.70	0.56
1:A:236:G:C5	1:A:237:C:C4	2.94	0.56
1:A:24:U:H2'	1:A:25:C:C6	2.40	0.56
1:A:671:G:C6	1:A:672:U:C2	2.93	0.56
1:A:695:A:H2'	1:A:696:A:O4'	2.05	0.56
1:A:878:G:C5	1:A:879:C:C4	2.93	0.56
22:C:153:GLU:CG	22:C:159:PRO:HA	2.29	0.56
22:C:191:ASP:OD2	22:C:219:GLU:CB	2.53	0.56
22:C:214:TYR:CB	22:C:263:TRP:CA	2.80	0.56
22:C:201:PHE:CB	22:C:214:TYR:CZ	2.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:358:U:H5''	22:C:269:ARG:HH22	1.67	0.56
23:D:1061:U:OP2	23:D:1061:U:H6	1.89	0.56
23:D:1201:C:H2'	23:D:1202:C:H6	1.70	0.56
23:D:1309:G:O6	23:D:1605:C:N4	2.24	0.56
23:D:1435:G:C2	23:D:1436:G:C4	2.93	0.56
23:D:1445:C:O2	23:D:1466:G:N2	2.37	0.56
23:D:1499:C:C2	23:D:1500:G:H8	2.23	0.56
23:D:1534:G:H21	23:D:1538:G:H1	1.53	0.56
23:D:1631:A:H2'	23:D:1632:A:O4'	2.05	0.56
23:D:1935:G:N2	23:D:1964:G:O4'	2.38	0.56
23:D:2029:G:N1	23:D:2033:A:OP2	2.21	0.56
23:D:2682:U:H3'	23:D:2683:C:C5	2.40	0.56
23:D:2766:G:H2'	23:D:2766:G:N3	2.19	0.56
23:D:642:G:N2	23:D:646:A:N6	2.44	0.56
23:D:816:C:H2'	23:D:817:C:C2	2.41	0.56
23:D:975:G:C2	23:D:990:A:C4	2.93	0.56
2:F:189:ASP:HB2	2:F:191:ASP:OD1	2.05	0.56
2:F:46:LYS:HA	2:F:49:GLU:OE1	2.04	0.56
3:G:129:ALA:HB1	3:G:132:ARG:HB3	1.87	0.56
5:I:62:ALA:HA	5:I:65:ASN:HB3	1.86	0.56
6:J:67:MET:SD	6:J:72:VAL:HG12	2.45	0.56
1:A:950:U:O4	13:Q:106:ASN:ND2	2.38	0.56
25:Z:148:ASN:ND2	25:Z:151:GLU:OE1	2.22	0.56
25:Z:177:LYS:O	25:Z:185:LEU:HD22	2.05	0.56
56:5:7:A:C8	56:5:49:C:H1'	2.40	0.56
1:A:1067:A:N3	1:A:1068:G:H1'	2.21	0.56
1:A:112:G:C2	1:A:113:G:C8	2.93	0.56
1:A:1262:C:H42	1:A:1273:G:H22	1.51	0.56
1:A:1438:G:H2'	1:A:1439:C:H6	1.68	0.56
1:A:21:G:H2'	1:A:22:G:H8	1.67	0.56
1:A:345:C:H5''	1:A:346:G:C5	2.40	0.56
1:A:725:G:H2'	1:A:726:C:C5	2.41	0.56
1:A:878:G:H2'	1:A:879:C:C6	2.40	0.56
22:C:198:ALA:O	22:C:215:LEU:CD2	2.52	0.56
22:C:204:VAL:HG11	22:C:212:ILE:CD1	2.26	0.56
22:C:239:VAL:HG13	22:C:266:ALA:C	2.26	0.56
22:C:379:LYS:CG	22:C:388:VAL:HG22	2.26	0.56
22:C:408:PRO:CA	22:C:483:GLY:O	2.45	0.56
22:C:574:LEU:O	22:C:578:LYS:HG2	2.05	0.56
22:C:78:PHE:HD2	22:C:78:PHE:O	1.88	0.56
23:D:1076:C:O2'	54:3:92:GLY:HA3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1133:U:O2'	23:D:1136:G:OP1	2.21	0.56
23:D:1158:C:H2'	23:D:1159:U:H6	1.70	0.56
23:D:1224:G:N2	23:D:1225:C:C2	2.73	0.56
23:D:1907:G:H2'	23:D:1908:C:C6	2.40	0.56
23:D:190:A:OP2	23:D:205:G:N2	2.32	0.56
23:D:2239:G:H2'	23:D:2240:C:C6	2.40	0.56
23:D:2389:G:OP2	23:D:2389:G:H8	1.87	0.56
23:D:2781:A:H2'	23:D:2782:G:H4'	1.86	0.56
23:D:325:G:H2'	23:D:326:G:H8	1.70	0.56
23:D:439:G:H2'	23:D:440:G:C8	2.40	0.56
23:D:742:G:H2'	23:D:743:G:C8	2.28	0.56
23:D:821:A:C4	23:D:946:G:C8	2.93	0.56
7:K:25:ALA:HA	7:K:28:ASN:HD22	1.71	0.56
12:P:113:ARG:NH1	12:P:116:SER:HB2	2.19	0.56
13:Q:65:LYS:CG	13:Q:73:GLU:HB2	2.31	0.56
17:U:48:GLU:HG3	17:U:50:LYS:HE3	1.86	0.56
25:Z:76:ALA:HB3	25:Z:94:VAL:HG22	1.87	0.56
54:3:78:ILE:HG13	54:3:111:LYS:HG3	1.82	0.56
54:3:59:ILE:N	54:3:59:ILE:HD12	2.19	0.56
1:A:1160:G:H2'	1:A:1161:C:C6	2.40	0.56
1:A:1312:G:OP1	19:W:6:LYS:HB2	2.05	0.56
1:A:337:C:H2'	1:A:338:A:C8	2.40	0.56
1:A:464:G:H2'	1:A:467:G:O6	2.05	0.56
1:A:590:C:H2'	1:A:591:U:C6	2.40	0.56
1:A:737:A:H2'	1:A:738:C:C6	2.40	0.56
1:A:739:C:C4	1:A:740:U:C4	2.93	0.56
1:A:911:U:H2'	1:A:912:C:C6	2.41	0.56
23:D:1142:U:P	23:D:1142(A):A:H62	2.28	0.56
23:D:1177:A:H2'	23:D:1178:C:C6	2.40	0.56
23:D:1424:G:H2'	23:D:1425:G:C8	2.40	0.56
23:D:153:C:H2'	23:D:154:G:C8	2.40	0.56
23:D:1948:G:H1	23:D:1958:C:N4	2.04	0.56
23:D:292:C:H42	23:D:346:A:H62	1.54	0.56
23:D:293:U:H3	23:D:294:A:N6	2.03	0.56
23:D:280:C:H5	23:D:359:A:H1'	1.69	0.56
23:D:370:G:OP1	23:D:403:U:N3	2.38	0.56
23:D:498:G:H2'	23:D:499:U:H6	1.69	0.56
23:D:565:C:O2'	23:D:1252:G:O6	2.23	0.56
23:D:75:G:C8	23:D:76:C:H5	2.23	0.56
23:D:944:G:H4'	23:D:945:A:O5'	2.06	0.56
2:F:79:ASP:O	2:F:82:ARG:HB3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:106:PRO:HG3	5:I:131:ILE:HG12	1.87	0.56
5:I:98:THR:HB	5:I:117:ASP:HB2	1.87	0.56
1:A:938:A:OP2	7:K:95:ARG:NH2	2.38	0.56
8:L:29:SER:HB2	8:L:32:LYS:H	1.70	0.56
1:A:750:G:O2'	15:S:21:ASP:OD1	2.16	0.56
54:3:18:THR:HG22	54:3:21:PRO:HD2	1.86	0.56
56:5:62:C:H2'	56:5:63:G:C8	2.41	0.56
1:A:1106:G:H2'	1:A:1107:C:C6	2.40	0.56
1:A:1203:C:C2	1:A:1204:A:C8	2.93	0.56
1:A:1316:G:N1	1:A:1319:A:OP2	2.38	0.56
1:A:1356:G:H1	1:A:1366:C:H42	1.52	0.56
1:A:383:A:H3'	1:A:384:G:H8	1.71	0.56
1:A:456:C:N4	1:A:476:G:H1	2.03	0.56
1:A:838:G:H1	1:A:848:C:H42	1.52	0.56
1:A:86:U:C4	1:A:87:A:H1'	2.40	0.56
22:C:217:LEU:HD21	22:C:222:VAL:CG2	2.35	0.56
22:C:296:PRO:O	22:C:297:ALA:HB2	2.05	0.56
22:C:402:ILE:HG21	22:C:491:LYS:HZ1	1.70	0.56
22:C:556:LYS:HD2	23:D:1943:U:C3'	2.35	0.56
22:C:8:ARG:HB3	22:C:77:VAL:CG2	2.35	0.56
22:C:97:LEU:CD2	22:C:123:MET:HB3	2.35	0.56
23:D:1216:G:H2'	23:D:1217:C:C6	2.40	0.56
23:D:1203:G:N1	23:D:1241:A:O2'	2.38	0.56
23:D:15:G:C2	23:D:16:G:C8	2.93	0.56
23:D:1634:A:O2'	23:D:1635:G:OP1	2.22	0.56
23:D:1683:C:H2'	23:D:1684:C:H6	1.71	0.56
23:D:1982:C:H2'	23:D:1983:C:C6	2.40	0.56
23:D:1992:G:C5	23:D:1997:G:C6	2.94	0.56
23:D:2002:G:H2'	23:D:2003:G:C8	2.41	0.56
23:D:2109:U:O2	23:D:2181:G:N2	2.38	0.56
23:D:2199:A:H2'	23:D:2205:C:O4'	2.05	0.56
23:D:2301:C:H2'	23:D:2302:G:H8	1.71	0.56
23:D:236:C:H42	23:D:261:G:H1	1.51	0.56
23:D:2379:G:H2'	23:D:2380:C:C6	2.40	0.56
23:D:2457:U:N3	23:D:2458:G:N3	2.53	0.56
23:D:2468:G:C6	23:D:2481:G:C6	2.94	0.56
23:D:339:U:H2'	23:D:340:A:C4	2.40	0.56
23:D:650:C:N4	23:D:651:G:C2	2.73	0.56
23:D:740:U:C2	23:D:741:G:C8	2.93	0.56
23:D:807:U:H2'	23:D:808:G:O4'	2.05	0.56
23:D:938:G:H2'	23:D:939:G:C8	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:952:G:C6	23:D:966:G:C6	2.93	0.56
5:I:97:GLY:O	5:I:99:GLY:N	2.38	0.56
8:L:49:GLU:OE2	8:L:60:ARG:NE	2.38	0.56
17:U:89:LEU:O	17:U:93:GLN:HG2	2.04	0.56
54:3:106:GLU:O	54:3:109:LYS:HD3	2.05	0.56
1:A:1123:A:O3'	10:N:36:GLY:HA3	2.04	0.56
1:A:629:G:C4	1:A:630:G:C8	2.93	0.56
1:A:696:A:O2'	1:A:697:U:OP1	2.21	0.56
22:C:242:VAL:CG2	22:C:256:LEU:CD1	2.83	0.56
22:C:419:GLU:HG3	22:C:446:LYS:HZ1	1.71	0.56
22:C:448:VAL:HG12	22:C:449:GLU:N	2.21	0.56
23:D:1043:C:H4'	23:D:1044:G:N7	2.19	0.56
23:D:1180:C:O2'	23:D:1181:C:O4'	2.18	0.56
23:D:1313:U:C4	23:D:1314:C:C4	2.94	0.56
23:D:1467:C:H2'	23:D:1468:C:N1	2.21	0.56
23:D:146:G:H2'	23:D:147:U:C6	2.40	0.56
23:D:2027:G:H2'	23:D:2028:U:H6	1.70	0.56
23:D:2205:C:H42	23:D:2219:G:H1	1.52	0.56
23:D:2432:A:C6	23:D:2433:A:C5	2.93	0.56
23:D:2597:G:C6	23:D:2598:A:C6	2.93	0.56
23:D:299:A:H2'	23:D:300:A:C4	2.41	0.56
23:D:372:G:H3'	23:D:373:U:C5'	2.34	0.56
23:D:524:U:H2'	23:D:525:U:H6	1.70	0.56
23:D:595:C:C2	23:D:596:G:C8	2.94	0.56
23:D:703:U:C4	23:D:704:G:C6	2.93	0.56
23:D:791:C:C2	23:D:794:G:H1'	2.40	0.56
23:D:824:A:H2'	23:D:825:C:H6	1.70	0.56
23:D:981:A:H8	23:D:982:C:C6	2.24	0.56
24:E:100:G:H2'	24:E:101:A:H8	1.69	0.56
6:J:99:ALA:HB3	18:V:30:ASP:HA	1.86	0.56
13:Q:91:ARG:HG2	13:Q:96:LEU:HD11	1.87	0.56
19:W:43:GLU:OE2	19:W:47:HIS:NE2	2.39	0.56
25:Z:131:LEU:HD23	25:Z:134:ARG:NH1	2.19	0.56
54:3:78:ILE:N	54:3:111:LYS:HG3	2.20	0.56
55:4:19:G:H4'	55:4:20:U:OP2	2.05	0.56
1:A:1244:C:H42	1:A:1293:G:H1	1.52	0.56
1:A:1308:U:C5	13:Q:99:ARG:NH2	2.74	0.56
1:A:730:G:N2	1:A:765:G:O3'	2.39	0.56
1:A:926:G:H2'	1:A:1505:G:H21	1.70	0.56
1:A:933:G:C6	1:A:935:A:C5	2.93	0.56
1:A:937:A:H8	1:A:937:A:O5'	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:109:ALA:HB3	22:C:137:LYS:HD3	1.87	0.56
22:C:165:PHE:N	22:C:165:PHE:CD2	2.73	0.56
22:C:134:VAL:HG21	22:C:177:ILE:HD11	1.88	0.56
22:C:261:VAL:HG12	22:C:261:VAL:O	2.05	0.56
22:C:49:LEU:C	22:C:51:LEU:H	2.09	0.56
23:D:1364:G:N2	23:D:1368:G:C5	2.74	0.56
23:D:1399:C:H2'	23:D:1400:G:C8	2.40	0.56
23:D:176:G:H2'	23:D:177:G:O4'	2.05	0.56
23:D:1940:U:P	23:D:1940:U:H3'	2.46	0.56
23:D:2231:C:C4	23:D:2232:U:C4	2.94	0.56
23:D:2314:C:H2'	23:D:2315:G:C8	2.40	0.56
23:D:2291:U:H3	23:D:2341:G:H1	1.53	0.56
23:D:2070:G:H1	23:D:2441:C:H42	1.54	0.56
23:D:260:G:H2'	23:D:261:G:C8	2.40	0.56
23:D:417:C:H2'	23:D:418:G:H8	1.71	0.56
23:D:945:A:N6	23:D:2448:A:C6	2.73	0.56
24:E:106:G:H2'	24:E:107:U:C6	2.41	0.56
24:E:106:G:H2'	24:E:107:U:H6	1.70	0.56
3:G:139:GLN:NE2	3:G:143:GLU:OE2	2.36	0.56
9:M:95:LYS:O	9:M:98:PRO:HD2	2.06	0.56
12:P:9:GLN:HA	12:P:12:ARG:NE	2.21	0.56
12:P:10:LEU:HD11	12:P:15:ARG:HH21	1.70	0.56
18:V:70:ILE:O	18:V:74:ARG:HG3	2.05	0.56
1:A:1299:A:C6	1:A:1301:U:C4	2.94	0.56
1:A:1311:G:H8	1:A:1311:G:O5'	1.89	0.56
1:A:134:A:C5	1:A:135:C:N3	2.74	0.56
1:A:976:G:N2	1:A:1362(A):C:H5''	2.21	0.56
1:A:219:C:H2'	1:A:220:G:O4'	2.05	0.56
1:A:429:U:OP2	4:H:36:ARG:NH1	2.39	0.56
1:A:538:G:H2'	1:A:539:A:C8	2.41	0.56
1:A:604:G:C5	1:A:635:G:C6	2.94	0.56
22:C:15:ILE:N	22:C:103:VAL:HG12	2.12	0.56
22:C:291:TYR:H	22:C:291:TYR:HD2	1.52	0.56
22:C:345:ARG:NH2	22:C:348:PHE:CZ	2.74	0.56
22:C:438:MET:SD	22:C:440:TYR:OH	2.54	0.56
23:D:1171:G:N7	23:D:1173:G:O2'	2.37	0.56
23:D:1256:G:C2	23:D:1257:C:C2	2.93	0.56
23:D:1342:A:C8	23:D:1397:U:C2	2.94	0.56
23:D:1471:A:N6	23:D:1519:G:H1	2.03	0.56
23:D:1622:G:H2'	23:D:1623:G:C8	2.41	0.56
23:D:758:C:HO2'	23:D:1784:A:N6	2.02	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1804:C:H41	23:D:1814:G:H21	1.52	0.56
23:D:1862:G:H2'	23:D:1863:G:C8	2.41	0.56
23:D:2182:G:C6	23:D:2183:C:C4	2.94	0.56
23:D:2464:C:O2'	52:1:4:ARG:NH1	2.32	0.56
23:D:2560:C:H2'	23:D:2561:A:C8	2.40	0.56
23:D:256:A:H2'	23:D:257:A:C8	2.41	0.56
23:D:574:C:O2	23:D:2055:C:N4	2.38	0.56
23:D:60:G:H2'	23:D:63:U:C5	2.41	0.56
2:F:92:TYR:CZ	2:F:151:GLY:HA2	2.41	0.56
3:G:134:ILE:HA	3:G:137:ALA:HB3	1.88	0.56
3:G:156:ARG:HB2	3:G:196:LEU:HD22	1.88	0.56
6:J:15:ASP:OD1	6:J:15:ASP:N	2.35	0.56
12:P:38:THR:HG23	12:P:39:VAL:HG23	1.88	0.56
13:Q:81:LEU:HD13	13:Q:88:ARG:HG3	1.86	0.56
25:Z:161:ILE:HG21	25:Z:192:PHE:HA	1.87	0.56
55:4:5:G:C2	55:4:6:G:C4	2.94	0.56
1:A:1305:G:C2	1:A:1306:A:N6	2.73	0.56
1:A:1320:C:H3'	1:A:1321:C:H6	1.70	0.56
1:A:1432:G:C4	1:A:1467:G:N1	2.73	0.56
1:A:1443:G:H5'	1:A:1446:A:OP1	2.06	0.56
1:A:218:C:H2'	1:A:219:C:C6	2.41	0.56
1:A:247:G:H1	1:A:277:C:N4	2.03	0.56
1:A:479:C:H2'	1:A:480:U:N3	2.21	0.56
1:A:618:C:N4	1:A:623:C:H42	2.04	0.56
22:C:152:VAL:O	22:C:152:VAL:HG12	2.05	0.56
22:C:410:VAL:CG2	22:C:481:GLN:HA	2.35	0.56
23:D:1034:G:H3'	23:D:1035:U:C6	2.40	0.56
23:D:1087:G:N9	23:D:1103:A:H2	2.04	0.56
23:D:1196:C:N3	23:D:1250:G:N1	2.51	0.56
23:D:119:A:O2'	23:D:120:U:O5'	2.23	0.56
23:D:1268:A:H2'	23:D:1269:A:O4'	2.05	0.56
23:D:1392:A:N7	23:D:1393:A:N6	2.53	0.56
23:D:1422:G:H4'	23:D:1493:C:O2	2.06	0.56
23:D:1801:G:H1	23:D:2206:C:HO2'	1.40	0.56
23:D:223:A:C2	23:D:408:G:H1'	2.40	0.56
23:D:2349:G:C2	23:D:2369:A:C5	2.93	0.56
23:D:2383:G:C6	23:D:2384:G:C6	2.93	0.56
23:D:256:A:H2'	23:D:257:A:H8	1.69	0.56
23:D:2776:A:H4'	23:D:2777:G:H5''	1.86	0.56
23:D:288:C:H3'	23:D:289:A:H4'	1.87	0.56
23:D:440:G:H2'	23:D:441:U:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:559:G:H2'	23:D:560:C:H6	1.71	0.56
23:D:799:G:H3'	23:D:800:A:H8	1.69	0.56
23:D:839:U:H2'	23:D:840:C:C6	2.40	0.56
23:D:897:C:O2'	23:D:898:C:H5	1.89	0.56
2:F:208:ILE:HA	2:F:211:ILE:HD12	1.88	0.56
5:I:31:LEU:HD11	5:I:43:LEU:HG	1.86	0.56
11:O:123:LYS:HA	11:O:126:ARG:HB2	1.88	0.56
1:A:1224:G:O4'	13:Q:102:ARG:CD	2.54	0.56
56:5:48:C:O2'	56:5:59:U:O2'	2.20	0.56
1:A:1011:G:O6	1:A:1019:C:N4	2.38	0.56
1:A:129(A):G:H4'	1:A:130:A:C5'	2.35	0.56
1:A:1367:C:H2'	1:A:1368:G:C8	2.41	0.56
1:A:176:C:H2'	1:A:177:C:H6	1.71	0.56
1:A:231:G:H2'	1:A:232:G:C8	2.40	0.56
1:A:240:C:H2'	1:A:241:C:C6	2.41	0.56
1:A:564:C:OP1	12:P:15:ARG:HD2	2.06	0.56
1:A:739:C:H2'	1:A:740:U:O4'	2.05	0.56
1:A:876:G:O2'	1:A:877:C:H5'	2.06	0.56
1:A:932:C:H3'	7:K:3:ARG:HE	1.71	0.56
1:A:946:A:O2'	1:A:1332:A:N1	2.37	0.56
22:C:15:ILE:O	22:C:105:LEU:CG	2.54	0.56
22:C:41:MET:CE	22:C:45:PHE:CB	2.78	0.56
22:C:86:HIS:O	22:C:87:VAL:HG12	2.06	0.56
23:D:1216:G:H2'	23:D:1217:C:H6	1.71	0.56
23:D:1385:G:C6	23:D:1386:C:N4	2.73	0.56
23:D:1666:G:N2	23:D:1669:A:H61	2.04	0.56
23:D:1678:G:H2'	23:D:1679:U:H6	1.71	0.56
23:D:1813:G:O6	23:D:1814:G:N2	2.39	0.56
23:D:2006:C:HO2'	23:D:2007:C:P	2.28	0.56
23:D:2425:A:H1'	23:D:2427:C:C4	2.40	0.56
23:D:2570:G:N3	23:D:2570:G:H2'	2.21	0.56
23:D:2594:C:N4	23:D:2599:G:H1	2.03	0.56
23:D:270(K):C:H5'	23:D:270(L):U:C5	2.41	0.56
23:D:2773:C:H2'	23:D:2774:C:C6	2.40	0.56
23:D:2845:G:C2	23:D:2846:G:C4	2.94	0.56
23:D:2863:C:H2'	23:D:2864:G:C8	2.41	0.56
23:D:536:A:H2'	23:D:537:C:C6	2.41	0.56
23:D:567:A:C5	23:D:568:U:H1'	2.41	0.56
23:D:646:A:C6	23:D:647:G:C6	2.94	0.56
23:D:775:G:H4'	23:D:777:A:N9	2.21	0.56
3:G:64:VAL:HB	3:G:99:VAL:HG11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:133:GLY:O	7:K:136:LYS:HB3	2.05	0.56
10:N:10:GLY:HA2	10:N:94:VAL:HG11	1.88	0.56
12:P:5:PRO:HB3	12:P:10:LEU:HD21	1.86	0.56
12:P:117:ARG:CZ	12:P:125:PRO:HD2	2.36	0.56
20:X:43:LEU:HD23	20:X:46:GLU:OE2	2.05	0.56
25:Z:149:ILE:O	25:Z:153:ILE:HG13	2.06	0.56
1:A:1005:A:N1	1:A:1026:G:N2	2.54	0.56
1:A:1072:G:H2'	1:A:1073:U:C2	2.41	0.56
1:A:1121:U:H2'	1:A:1122:U:C6	2.41	0.56
1:A:1131:G:H2'	1:A:1132:C:O4'	2.06	0.56
1:A:1395:C:H2'	1:A:1396:A:C8	2.40	0.56
1:A:519:C:C4	1:A:520:A:C5	2.94	0.56
1:A:952:U:OP1	1:A:972:C:N4	2.36	0.56
22:C:165:PHE:C	22:C:167:SER:N	2.59	0.56
22:C:217:LEU:HB2	22:C:257:GLU:O	2.05	0.56
22:C:232:SER:O	22:C:234:GLY:N	2.35	0.56
22:C:210:GLY:CA	22:C:268:ILE:O	2.35	0.56
22:C:25:LEU:HD13	22:C:26:ALA:N	2.21	0.56
22:C:489:LEU:HA	22:C:509:HIS:CB	2.33	0.56
22:C:49:LEU:CD1	22:C:52:GLU:HG3	2.20	0.56
23:D:1161:C:H2'	23:D:1162:G:H8	1.71	0.56
23:D:1212:G:H2'	23:D:1235:G:H22	1.71	0.56
23:D:142:G:C2	23:D:143:C:C2	2.94	0.56
23:D:1458:C:H4'	23:D:1459:G:O5'	2.06	0.56
23:D:164:U:C3'	23:D:164:U:P	2.94	0.56
23:D:1728:G:N2	23:D:1731:G:H22	2.02	0.56
23:D:1786:A:C6	23:D:1787:A:C2	2.94	0.56
23:D:1945:G:H2'	23:D:1946:U:C6	2.40	0.56
23:D:2009:G:H2'	23:D:2010:G:C8	2.41	0.56
23:D:2119:A:C2	23:D:2170:A:H2'	2.41	0.56
23:D:2317:C:H3'	23:D:2318:G:H8	1.69	0.56
23:D:2412:A:H2'	23:D:2413:G:O4'	2.05	0.56
23:D:2721:A:C4	23:D:2722:G:C8	2.94	0.56
23:D:311:A:H1'	23:D:332:A:C4	2.41	0.56
23:D:533:G:H2'	23:D:534:U:H6	1.70	0.56
23:D:543:C:H2'	23:D:544:C:C6	2.40	0.56
23:D:548:A:N6	23:D:549:G:N3	2.54	0.56
23:D:59:U:H4'	23:D:73:A:C5	2.40	0.56
24:E:57:A:H3'	24:E:58:A:C8	2.41	0.56
24:E:86:G:C2	24:E:87:G:C4	2.93	0.56
12:P:34:ARG:HE	12:P:61:THR:HG21	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:T:40:ASP:O	16:T:43:LYS:HD2	2.06	0.56
54:3:5:VAL:HG23	54:3:5:VAL:O	2.05	0.55
23:D:1060:U:OP1	54:3:74:ALA:N	2.38	0.55
55:4:28:C:N4	55:4:29:G:O6	2.40	0.55
1:A:109:A:C6	1:A:326:G:C6	2.94	0.55
1:A:1518:A:H2'	1:A:1519:A:C8	2.41	0.55
1:A:23:C:H2'	1:A:24:U:C6	2.42	0.55
1:A:28:G:O6	1:A:556:C:N4	2.37	0.55
1:A:370:C:N4	1:A:371:G:O6	2.38	0.55
1:A:707:C:H2'	1:A:708:C:H6	1.71	0.55
1:A:721:G:H4'	1:A:722:A:O4'	2.06	0.55
22:C:332:PHE:CZ	22:C:344:PHE:CE2	2.94	0.55
22:C:342:PHE:CE2	22:C:369:LEU:CA	2.83	0.55
22:C:378:TYR:O	22:C:391:HIS:CB	2.54	0.55
22:C:477:MET:CE	22:C:479:TYR:CD2	2.87	0.55
23:D:1316:U:H2'	23:D:1317:A:C8	2.41	0.55
23:D:1364:G:O4'	23:D:1368:G:N2	2.39	0.55
23:D:1447:G:H1	23:D:1464:C:N4	2.04	0.55
23:D:1746:G:C2	23:D:1747:G:C4	2.94	0.55
23:D:1862:G:H1	23:D:1880:C:N4	2.03	0.55
23:D:1908:C:H2'	23:D:1909:C:C6	2.41	0.55
23:D:2196:C:H2'	23:D:2197:U:O4'	2.05	0.55
23:D:2406:U:OP2	23:D:2411:A:N6	2.38	0.55
23:D:2259:G:H4'	23:D:2428:G:OP2	2.07	0.55
23:D:2431:U:H3	23:D:2434:A:P	2.29	0.55
23:D:2606:C:HO2'	23:D:2607:G:H8	1.52	0.55
23:D:2640:G:H2'	23:D:2641:G:C8	2.40	0.55
23:D:2643:G:H2'	23:D:2644:G:C8	2.41	0.55
23:D:2811:G:C2'	23:D:2812:G:H5'	2.36	0.55
23:D:295:G:P	23:D:338:G:H22	2.28	0.55
23:D:563:G:C2	23:D:564:C:C2	2.95	0.55
23:D:571:A:C6	23:D:575:A:C5	2.93	0.55
23:D:577:G:H2'	23:D:578:A:C8	2.41	0.55
23:D:659:C:H2'	23:D:660:G:H8	1.72	0.55
23:D:679:C:N4	23:D:798:G:H1	2.00	0.55
23:D:820:A:OP1	23:D:973:A:N6	2.39	0.55
2:F:136:VAL:HA	2:F:139:LYS:HE3	1.88	0.55
2:F:35:GLU:OE2	2:F:39:ILE:N	2.39	0.55
9:M:13:ALA:HB2	9:M:68:GLY:H	1.71	0.55
1:A:1328:C:O2'	13:Q:29:ARG:NE	2.39	0.55
25:Z:162:GLU:O	25:Z:192:PHE:CE1	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:23:A:C8	56:5:23:A:OP2	2.59	0.55
1:A:1248:A:O2'	9:M:36:TYR:OH	2.18	0.55
1:A:1461:G:C2	1:A:1462:G:C8	2.93	0.55
1:A:614:A:C5	1:A:627:G:C6	2.93	0.55
1:A:910:C:C4	1:A:911:U:C4	2.94	0.55
22:C:409:TYR:CA	22:C:454:ALA:O	2.55	0.55
23:D:1355:G:C2	23:D:1356:G:C4	2.94	0.55
23:D:1375:C:H2'	23:D:1376:C:H6	1.69	0.55
23:D:1563:G:H2'	23:D:1564:C:H6	1.72	0.55
23:D:1637:A:H2'	23:D:1638:C:C6	2.41	0.55
23:D:1668:A:N7	23:D:1674:G:C2	2.74	0.55
23:D:1936:A:C5	23:D:1945:G:C6	2.94	0.55
23:D:2037:G:H2'	23:D:2038:G:C8	2.40	0.55
23:D:2312:U:H2'	23:D:2313:C:H6	1.70	0.55
23:D:2345:G:C2	23:D:2381:C:C2	2.94	0.55
23:D:2431:U:H2'	23:D:2433:A:OP2	2.06	0.55
23:D:2550:G:N2	23:D:2558:C:N3	2.51	0.55
23:D:373:U:OP1	23:D:373:U:H4'	2.06	0.55
23:D:464:U:H3'	23:D:465:G:H8	1.70	0.55
23:D:621:A:H3'	23:D:622:G:C8	2.41	0.55
23:D:740:U:O2'	23:D:741:G:O5'	2.16	0.55
23:D:780:G:H2'	23:D:782:A:N7	2.22	0.55
23:D:861:A:H2'	23:D:862:G:O4'	2.06	0.55
23:D:878:A:O2'	23:D:900:A:N1	2.31	0.55
24:E:109:G:C2	24:E:110:G:C4	2.94	0.55
24:E:15:A:O2'	24:E:16:G:OP1	2.21	0.55
2:F:93:VAL:HG21	2:F:97:TRP:HD1	1.72	0.55
2:F:97:TRP:CZ2	2:F:101:MET:HG2	2.41	0.55
3:G:68:VAL:HB	3:G:104:GLN:H	1.71	0.55
4:H:12:CYS:HB3	4:H:18:LYS:HA	1.87	0.55
12:P:102:ARG:NH1	12:P:110:VAL:HG13	2.18	0.55
13:Q:50:GLU:HA	13:Q:53:VAL:HB	1.88	0.55
19:W:32:LYS:HG3	19:W:34:TRP:CH2	2.42	0.55
23:D:1106:G:H4'	53:2:58:LEU:CB	2.37	0.55
54:3:49:GLY:HA2	54:3:53:VAL:HB	1.87	0.55
54:3:66:THR:O	54:3:67:PHE:O	2.24	0.55
55:4:55:U:H5''	55:4:56:C:OP2	2.06	0.55
56:5:6:G:OP2	56:5:6:G:H8	1.88	0.55
1:A:11:G:H2'	1:A:12:U:C6	2.41	0.55
1:A:1243:C:H42	1:A:1294:G:H1	1.54	0.55
1:A:1400:C:O2'	1:A:1401:G:OP1	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:191:G:C4	20:X:105:SER:HA	2.40	0.55
1:A:69:G:H1	1:A:99:C:N4	2.04	0.55
22:C:180:ALA:O	22:C:183:GLN:HG3	2.06	0.55
22:C:185:ILE:HG23	22:C:186:PRO:CD	2.37	0.55
22:C:2:VAL:C	22:C:4:MET:H	2.08	0.55
23:D:1061:U:H1'	23:D:1070:A:H1'	1.87	0.55
23:D:108:U:H4'	23:D:348:G:N2	2.21	0.55
23:D:1309:G:H2'	23:D:1310:G:C8	2.41	0.55
23:D:1477:A:C5	23:D:1478:G:C2	2.94	0.55
23:D:1630:G:H2'	23:D:1630(A):C:H6	1.71	0.55
23:D:1778:U:H2'	23:D:1779:U:N1	2.21	0.55
23:D:1935:G:N1	23:D:1962:C:O2	2.39	0.55
23:D:2129:C:O2'	23:D:2132:U:O4	2.24	0.55
23:D:2184:G:C6	23:D:2185:C:N4	2.74	0.55
23:D:2372:G:H1	23:D:2381:C:H42	1.54	0.55
23:D:2567:G:H2'	23:D:2568:C:C6	2.41	0.55
23:D:2668:G:H2'	23:D:2669:G:C8	2.41	0.55
23:D:2741:A:H62	23:D:2763:G:N2	2.04	0.55
23:D:347:A:C5	23:D:348:G:C8	2.94	0.55
23:D:363(D):G:H2'	23:D:363(E):U:C6	2.42	0.55
23:D:540:G:H2'	23:D:541:C:H6	1.69	0.55
23:D:635:C:O2'	23:D:639:U:OP1	2.25	0.55
23:D:796:C:H2'	23:D:797:C:C6	2.40	0.55
23:D:931:G:H8	23:D:932:G:H1'	1.69	0.55
23:D:960:A:O2'	23:D:961:C:H3'	2.05	0.55
3:G:127:ARG:NH2	3:G:192:THR:OG1	2.39	0.55
1:A:430:A:OP2	4:H:22:LYS:NZ	2.39	0.55
8:L:29:SER:HG	8:L:32:LYS:HZ3	1.51	0.55
10:N:10:GLY:O	10:N:67:THR:HG23	2.06	0.55
20:X:40:ALA:O	20:X:44:ALA:N	2.39	0.55
25:Z:8:ARG:HH11	25:Z:11:LEU:HD23	1.71	0.55
55:4:19:G:OP2	55:4:19:G:C8	2.58	0.55
1:A:1075:C:O3'	2:F:175:ARG:NH1	2.40	0.55
1:A:1065:U:OP1	1:A:1190:G:N2	2.34	0.55
1:A:1319:A:N6	1:A:1361:G:O2'	2.39	0.55
1:A:626:U:H5''	16:T:35:LYS:NZ	2.22	0.55
1:A:868:C:H3'	1:A:869:G:C8	2.37	0.55
1:A:78:G:N2	1:A:91:C:N3	2.52	0.55
22:C:142:ASN:O	22:C:143:ALA:HB2	2.06	0.55
22:C:206:ASP:C	22:C:208:TYR:H	2.08	0.55
22:C:28:ARG:HG2	22:C:41:MET:SD	2.46	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:409:TYR:CA	22:C:482:ALA:H	2.19	0.55
22:C:580:GLY:O	22:C:584:LEU:N	2.40	0.55
22:C:6:LEU:CD1	22:C:192:PRO:N	2.64	0.55
23:D:105:C:H2'	23:D:106:C:C6	2.42	0.55
23:D:1135:C:H2'	23:D:1136:G:O4'	2.06	0.55
23:D:1545:A:H2'	23:D:1545(A):A:H8	1.71	0.55
23:D:1821:A:C6	23:D:1822:G:C6	2.94	0.55
23:D:1927:A:C5	23:D:1928:A:C6	2.94	0.55
23:D:1934:C:H42	23:D:1964:G:H1	1.53	0.55
23:D:1831:G:H1	23:D:1974:C:H42	1.53	0.55
23:D:2302:G:H2'	23:D:2303:G:C8	2.42	0.55
23:D:2285:C:N4	23:D:2383:G:H1	2.03	0.55
23:D:389:G:H21	23:D:2412:A:H2	1.54	0.55
23:D:307:G:H22	23:D:310:A:P	2.29	0.55
23:D:325:G:H2'	23:D:326:G:C8	2.42	0.55
23:D:513:A:O2'	23:D:1217:C:OP1	2.23	0.55
23:D:69:C:HO2'	23:D:75:G:N2	2.03	0.55
2:F:184:VAL:HB	2:F:198:ASP:H	1.70	0.55
4:H:68:TYR:HD1	4:H:114:ARG:HH12	1.53	0.55
13:Q:52:GLU:HB3	13:Q:55:ARG:HH21	1.70	0.55
13:Q:65:LYS:CD	13:Q:73:GLU:CB	2.35	0.55
16:T:52:ASP:OD2	16:T:55:ARG:N	2.20	0.55
54:3:112:MET:N	54:3:113:PRO:HD3	2.13	0.55
1:A:717:C:O3'	11:O:117:ASN:ND2	2.38	0.55
1:A:972:C:H2'	1:A:973:G:C8	2.41	0.55
22:C:106:VAL:CB	22:C:136:ASN:CB	2.71	0.55
22:C:291:TYR:CD2	22:C:291:TYR:N	2.74	0.55
22:C:408:PRO:C	22:C:409:TYR:CD2	2.79	0.55
22:C:494:VAL:C	22:C:539:ALA:HA	2.27	0.55
23:D:1036:G:N1	23:D:1120:G:N7	2.54	0.55
23:D:1085:A:H2'	23:D:1085:A:OP2	2.05	0.55
23:D:1163:G:H2'	23:D:1164:G:H8	1.71	0.55
23:D:1326:U:O4	23:D:1648:C:O2'	2.22	0.55
23:D:1696:G:C6	23:D:1697:G:C2	2.95	0.55
23:D:1734:C:H2'	23:D:1735:C:C6	2.41	0.55
23:D:1766:U:H2'	23:D:1767:C:C6	2.42	0.55
23:D:1840:G:C6	23:D:1841:U:C4	2.94	0.55
23:D:1856:G:H1	23:D:1886:C:N4	1.97	0.55
23:D:1844:C:H42	23:D:1896:G:H1	1.54	0.55
23:D:2180:U:O5'	23:D:2180:U:H6	1.90	0.55
23:D:2182:G:C6	23:D:2183:C:N4	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:227:A:O2'	23:D:228:A:O5'	2.24	0.55
23:D:2677:G:H2'	23:D:2678:C:C6	2.41	0.55
23:D:2684:U:H2'	23:D:2685:G:H8	1.70	0.55
23:D:383:U:H2'	23:D:385:C:N4	2.21	0.55
23:D:390:A:H4'	23:D:391:G:H5'	1.89	0.55
23:D:545:G:N2	23:D:548:A:OP2	2.40	0.55
23:D:607:U:H2'	23:D:608:A:C8	2.42	0.55
23:D:921:G:C6	23:D:922:U:C4	2.95	0.55
23:D:930:U:H4'	23:D:931:G:OP1	2.06	0.55
4:H:150:GLU:H	4:H:150:GLU:CD	2.10	0.55
4:H:54:TYR:HE1	4:H:206:PHE:CE1	2.25	0.55
8:L:41:ARG:NH1	8:L:42:GLU:OE2	2.39	0.55
1:A:565:U:P	8:L:91:ARG:HH22	2.29	0.55
16:T:22:THR:HA	16:T:33:ILE:HD12	1.88	0.55
17:U:85:VAL:O	17:U:89:LEU:HG	2.06	0.55
20:X:53:LEU:O	20:X:57:ARG:HG3	2.07	0.55
56:5:6:G:N2	56:5:7:A:N7	2.54	0.55
1:A:1256:A:O3'	1:A:1257:U:H4'	2.07	0.55
1:A:1365:G:H2'	1:A:1366:C:C6	2.41	0.55
1:A:1403:C:H2'	1:A:1404:C:C4	2.40	0.55
1:A:1507:A:H61	1:A:1528:U:H3	1.54	0.55
1:A:410:G:N1	1:A:429:U:O2	2.39	0.55
1:A:479:C:H2'	1:A:480:U:C2	2.41	0.55
1:A:582:U:C4	1:A:583:A:C8	2.94	0.55
22:C:116:GLU:CG	22:C:120:LYS:CE	2.66	0.55
22:C:380:VAL:HG22	22:C:391:HIS:CD2	2.37	0.55
22:C:544:LYS:N	22:C:544:LYS:HD2	2.21	0.55
23:D:1225:C:O2'	23:D:1226:G:H5'	2.06	0.55
23:D:1264:G:C6	23:D:1265:A:N6	2.75	0.55
23:D:1440:G:C2	23:D:1441:G:C4	2.95	0.55
23:D:1608:A:O2'	23:D:1610:A:OP1	2.23	0.55
23:D:1614:A:O2'	23:D:1615:C:OP1	2.22	0.55
23:D:1910:G:H2'	23:D:1911:U:C6	2.41	0.55
23:D:2215:G:H2'	23:D:2216:G:O4'	2.07	0.55
23:D:2532:G:C2	23:D:2533:A:C4	2.94	0.55
23:D:270(H):C:H2'	23:D:270(I):G:H8	1.72	0.55
23:D:2812:G:H2'	23:D:2813:A:H8	1.66	0.55
23:D:629:G:C2	23:D:630:G:C4	2.94	0.55
23:D:937:U:C2	23:D:938:G:C8	2.95	0.55
3:G:113:ALA:N	3:G:183:ASP:OD2	2.37	0.55
55:4:5:G:H1	55:4:68:C:H42	1.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:130:A:N6	17:U:64:PRO:HG2	2.21	0.55
1:A:175:C:H2'	1:A:176:C:C6	2.42	0.55
1:A:425:G:C2	1:A:426:G:C8	2.95	0.55
1:A:43:C:H2'	1:A:44:G:H8	1.71	0.55
1:A:617:G:H2'	1:A:618:C:C6	2.41	0.55
22:C:454:ALA:HB1	22:C:455:PRO:HD3	1.88	0.55
22:C:526:GLU:OE1	22:C:593:PRO:HD2	2.07	0.55
23:D:1047:G:C6	23:D:1110:G:C5	2.95	0.55
23:D:1409:C:N4	23:D:1410:G:O6	2.40	0.55
23:D:1416:G:N2	23:D:1582:C:N3	2.55	0.55
23:D:1412:A:H61	23:D:1590:U:H3	1.54	0.55
23:D:1814:G:H2'	23:D:1815:A:C8	2.41	0.55
23:D:2114:A:H3'	23:D:2115:G:C8	2.41	0.55
23:D:2155:G:OP1	23:D:2156:G:H1'	2.07	0.55
23:D:2217:G:H2'	23:D:2218:G:C8	2.41	0.55
23:D:2337:G:N3	23:D:2338:G:C8	2.75	0.55
23:D:2457:U:H2'	23:D:2458:G:O4'	2.07	0.55
23:D:24:G:H2'	23:D:25:U:C2	2.42	0.55
23:D:2540:C:H2'	23:D:2541:A:H8	1.69	0.55
23:D:2056:G:C8	23:D:2577:A:C6	2.94	0.55
23:D:2697:G:C2	23:D:2698:U:C2	2.95	0.55
23:D:2888:C:H2'	23:D:2889:C:C6	2.37	0.55
23:D:344:G:H2'	23:D:345:A:N3	2.21	0.55
23:D:609(A):G:N2	23:D:619:G:N3	2.54	0.55
23:D:618:G:N7	23:D:618(A):C:N4	2.55	0.55
23:D:673:C:H2'	23:D:674:G:C8	2.39	0.55
23:D:736:C:H42	23:D:760:G:H1	1.55	0.55
23:D:861:A:C5	23:D:917:A:H2	2.24	0.55
2:F:133:LYS:HB3	2:F:137:ARG:NH2	2.21	0.55
4:H:23:GLY:HA2	4:H:113:SER:HB2	1.88	0.55
5:I:8:GLU:HB2	5:I:32:VAL:CG1	2.36	0.55
8:L:26:VAL:HG13	8:L:59:LEU:HD12	1.88	0.55
9:M:114:TYR:HE1	10:N:60:ARG:HG3	1.71	0.55
10:N:51:ARG:HB2	10:N:60:ARG:HA	1.89	0.55
12:P:47:LYS:HG3	12:P:48:PRO:HD3	1.88	0.55
13:Q:20:THR:HG23	13:Q:26:GLY:HA2	1.87	0.55
25:Z:54:SER:O	25:Z:57:ASN:ND2	2.38	0.55
1:A:1000:A:N6	1:A:1001:G:N7	2.55	0.55
1:A:1321:C:O5'	1:A:1322:C:H5''	2.07	0.55
1:A:477:G:C2	1:A:478:A:C5	2.95	0.55
1:A:776:G:H4'	1:A:777:A:O5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:917:G:C6	1:A:918:A:C5	2.94	0.55
22:C:113:VAL:CG2	22:C:152:VAL:CG2	2.84	0.55
22:C:116:GLU:OE1	22:C:120:LYS:NZ	2.33	0.55
22:C:162:GLU:O	22:C:163:ALA:HB2	2.07	0.55
22:C:197:LYS:NZ	22:C:291:TYR:H	2.05	0.55
22:C:4:MET:HG3	22:C:77:VAL:HG13	1.89	0.55
23:D:1236:G:O2'	23:D:1237:A:O5'	2.21	0.55
23:D:1301:A:N7	23:D:1303:G:C8	2.74	0.55
23:D:1306:C:N4	23:D:1622:G:H1	2.03	0.55
23:D:1498:C:H3'	23:D:1499:C:C6	2.42	0.55
23:D:1574:C:C4	23:D:1575:C:C4	2.95	0.55
23:D:1695:G:C5	23:D:1696:G:H1'	2.41	0.55
23:D:1707:G:O2'	23:D:1758:G:N2	2.30	0.55
23:D:1943:U:C2	23:D:1945:G:H5'	2.41	0.55
23:D:2584:U:C6	23:D:2585:U:H5''	2.42	0.55
19:W:52:TYR:HE1	23:D:2884:U:C2	170.62	0.55
23:D:359:A:H2'	23:D:359:A:N3	2.22	0.55
23:D:44:A:N6	23:D:45:G:O6	2.40	0.55
23:D:547:A:H2'	23:D:548:A:O4'	2.06	0.55
23:D:550:G:C6	23:D:551:G:C5	2.95	0.55
23:D:580:C:H2'	23:D:581:C:C6	2.41	0.55
23:D:659:C:H2'	23:D:660:G:C8	2.41	0.55
23:D:702:G:H22	23:D:729:G:N2	2.03	0.55
23:D:850:C:N3	23:D:928:G:N2	2.50	0.55
23:D:853:G:H2'	23:D:854:G:H8	1.69	0.55
23:D:943:U:H3'	23:D:944:G:C6	2.42	0.55
23:D:94:G:H1	23:D:95:G:N2	2.04	0.55
1:A:612:C:H5''	4:H:84:LYS:HZ1	1.70	0.55
17:U:86:GLU:O	17:U:90:ILE:HG13	2.07	0.55
25:Z:91:ALA:HB2	25:Z:153:ILE:CG2	2.37	0.55
25:Z:166:ASP:OD1	25:Z:169:GLY:N	2.40	0.55
25:Z:66:HIS:N	25:Z:159:GLY:N	2.54	0.55
55:4:3:C:N4	55:4:70:G:H1	2.05	0.55
56:5:2:C:N4	56:5:71:G:H1	2.03	0.55
1:A:1047:G:H1'	1:A:1215:G:H4'	1.88	0.55
1:A:1329:A:H4'	13:Q:29:ARG:NH2	2.22	0.55
1:A:298:A:H2'	1:A:299:G:O4'	2.07	0.55
1:A:319:G:H1	1:A:334:C:N4	2.03	0.55
1:A:392:G:H2'	1:A:393:A:H8	1.69	0.55
1:A:713:G:OP2	1:A:713:G:H8	1.90	0.55
1:A:919:A:H2'	1:A:920:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:175:GLU:HA	22:C:175:GLU:OE1	2.07	0.55
22:C:197:LYS:NZ	22:C:291:TYR:CD2	2.74	0.55
22:C:231:TYR:C	22:C:233:THR:H	2.09	0.55
22:C:340:LEU:HD22	22:C:595:GLU:OE1	2.07	0.55
22:C:41:MET:HB3	22:C:45:PHE:CE2	2.39	0.55
23:D:1082:U:C2	23:D:1083:U:H1'	2.42	0.55
23:D:1109:C:H2'	23:D:1110:G:O4'	2.06	0.55
23:D:1324:G:O2'	23:D:1616:A:N1	2.40	0.55
23:D:1528:A:C5	23:D:1529:A:C6	2.94	0.55
23:D:1933:G:H2'	23:D:1934:C:H6	1.72	0.55
23:D:1953:A:H5''	23:D:1954:G:OP2	2.06	0.55
23:D:2284:C:H2'	23:D:2285:C:C6	2.41	0.55
23:D:289:A:O2'	23:D:353:G:N1	2.15	0.55
23:D:456:C:H5'	23:D:457:A:OP1	2.07	0.55
23:D:701:G:N1	23:D:731:C:C4	2.74	0.55
23:D:970:C:O2'	23:D:984:A:O2'	2.23	0.55
1:A:620:C:C2	4:H:135:LEU:HD13	2.42	0.55
15:S:7:GLU:O	15:S:10:LYS:HG2	2.07	0.55
20:X:60:GLU:HA	20:X:63:ILE:HD12	1.88	0.55
25:Z:160:ARG:HG3	25:Z:160:ARG:NH1	2.21	0.55
54:3:38:VAL:HA	54:3:41:PHE:CD2	2.42	0.55
1:A:1424:C:H2'	1:A:1425:U:H6	1.72	0.55
1:A:1453:G:N2	1:A:1454:G:N7	2.54	0.55
1:A:17:U:H2'	1:A:18:C:C6	2.42	0.55
1:A:186(D):C:N4	1:A:191(D):U:O4	2.37	0.55
1:A:51:A:C5	1:A:353:A:C6	2.95	0.55
1:A:36:C:H5''	12:P:123:LYS:HA	1.88	0.55
1:A:442:C:H2'	1:A:443:C:C6	2.42	0.55
1:A:58:C:O2'	1:A:59:A:O4'	2.11	0.55
22:C:199:LEU:HD11	22:C:294:PHE:HB2	1.89	0.55
22:C:45:PHE:O	22:C:46:LEU:HB2	2.05	0.55
22:C:485:ARG:CB	22:C:486:PRO:CD	2.85	0.55
22:C:497:HIS:ND1	22:C:535:VAL:CB	2.69	0.55
23:D:1176:G:OP2	23:D:1177:A:N6	2.40	0.55
23:D:1299:G:O5'	23:D:1300:U:H5'	2.07	0.55
23:D:1349:A:H61	23:D:1598:C:N4	2.00	0.55
23:D:1750:G:H2'	23:D:1751:C:C6	2.42	0.55
23:D:1948:G:H2'	23:D:1949:G:C8	2.42	0.55
23:D:2004:G:H2'	23:D:2005:A:C8	2.42	0.55
23:D:2057:A:C6	23:D:2058:A:C6	2.95	0.55
23:D:221:A:H2'	23:D:266:G:O6	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2423:U:C2	23:D:2425:A:C5	2.95	0.55
23:D:2437:U:H2'	23:D:2438:U:C5	2.41	0.55
23:D:2509:G:H2'	23:D:2510:C:C6	2.36	0.55
23:D:2625:G:H2'	23:D:2626:C:C6	2.42	0.55
23:D:270(I):G:O6	23:D:270(Q):C:N4	2.29	0.55
23:D:2762:G:H2'	23:D:2763:G:O4'	2.06	0.55
23:D:775:G:H2'	23:D:794:G:O6	2.07	0.55
24:E:103:U:H2'	24:E:104:A:H8	1.70	0.55
3:G:187:ALA:HB3	3:G:198:VAL:H	1.72	0.55
3:G:85:ARG:NH1	3:G:89:GLU:HB2	2.22	0.55
1:A:403:C:H5'	4:H:135:LEU:HD21	1.87	0.55
4:H:153:ARG:HG2	4:H:181:MET:SD	2.47	0.55
8:L:6:ILE:O	8:L:10:LEU:HG	2.07	0.55
12:P:56:ALA:N	12:P:68:ALA:O	2.36	0.55
1:A:1229:A:P	13:Q:108:ARG:HH21	2.31	0.55
13:Q:97:PRO:HG3	13:Q:107:ALA:HA	1.88	0.55
3:G:6:HIS:CG	14:R:49:HIS:HB3	2.42	0.55
17:U:46:ASP:OD2	17:U:48:GLU:N	2.40	0.55
25:Z:162:GLU:N	25:Z:192:PHE:CE1	2.65	0.55
55:4:58:A:C8	55:4:58:A:OP2	2.60	0.54
1:A:1244:C:H2'	1:A:1245:A:C8	2.41	0.54
1:A:1266:G:H22	21:Y:23:PRO:HA	1.72	0.54
1:A:1241:G:H1	1:A:1296:C:H42	1.55	0.54
1:A:133:U:N3	1:A:230:G:C6	2.75	0.54
1:A:1415:G:C4	1:A:1416:G:C8	2.96	0.54
1:A:377:G:H2'	1:A:378:G:H8	1.72	0.54
1:A:443:C:N4	1:A:491:G:H1	2.05	0.54
1:A:537:G:H2'	1:A:538:G:H8	1.71	0.54
1:A:590:C:H2'	1:A:591:U:H6	1.72	0.54
1:A:932:C:H5''	7:K:3:ARG:HG2	1.89	0.54
1:A:959:A:H8	1:A:960:U:H4'	1.72	0.54
22:C:106:VAL:HG22	22:C:134:VAL:O	2.07	0.54
22:C:135:ILE:HG13	22:C:135:ILE:O	2.07	0.54
22:C:189:LYS:HE3	22:C:219:GLU:HG2	1.89	0.54
23:D:1139:G:O2'	23:D:1142(A):A:H2'	2.07	0.54
23:D:154:G:H2'	23:D:155:C:O4'	2.07	0.54
23:D:1934:C:N4	23:D:1964:G:H1	2.05	0.54
23:D:1932:A:C4	23:D:1969:A:N6	2.74	0.54
23:D:2016:U:H2'	23:D:2017:U:H6	1.72	0.54
23:D:2090:G:H1	23:D:2229:C:N4	2.00	0.54
23:D:2216:G:H2'	23:D:2217:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2495:G:C6	23:D:2496:C:C2	2.95	0.54
23:D:2642:G:H2'	23:D:2643:G:O4'	2.07	0.54
23:D:2650:U:H3	23:D:2670:A:H61	1.54	0.54
23:D:2711:A:C5	23:D:2714:G:H1'	2.43	0.54
23:D:527:C:H5	23:D:2779:U:H3'	1.72	0.54
23:D:344:G:C5	23:D:345:A:C5	2.95	0.54
23:D:429:A:C6	23:D:430:G:C6	2.95	0.54
23:D:497:A:C6	23:D:498:G:C6	2.95	0.54
15:S:40:SER:HB3	23:D:716:A:C2	2.42	0.54
23:D:981:A:H3'	23:D:982:C:C6	2.42	0.54
7:K:111:ARG:HG3	7:K:113:GLU:OE1	2.06	0.54
16:T:7:ALA:H	16:T:18:ARG:N	2.00	0.54
17:U:29:HIS:HB3	17:U:33:GLY:N	2.22	0.54
17:U:56:VAL:HB	17:U:78:GLU:HB3	1.89	0.54
1:A:1432:G:HO2'	1:A:1433:A:P	2.30	0.54
1:A:160:A:H2'	1:A:161:A:O4'	2.07	0.54
1:A:163:C:C4	1:A:164:U:C4	2.95	0.54
1:A:131:C:H42	1:A:231:G:H1	1.54	0.54
1:A:233:C:H2'	1:A:234:C:H6	1.73	0.54
1:A:919:A:H2'	1:A:920:U:H6	1.71	0.54
22:C:13:SER:O	22:C:103:VAL:CG1	2.55	0.54
22:C:413:THR:O	22:C:414:ILE:HG13	2.06	0.54
22:C:412:LEU:HD11	22:C:428:LEU:CD2	2.36	0.54
22:C:468:LYS:HA	22:C:473:GLY:CA	2.34	0.54
22:C:481:GLN:O	22:C:482:ALA:HB2	2.08	0.54
22:C:95:ARG:NH2	22:C:202:ASP:HB3	2.17	0.54
23:D:1025:G:O2'	23:D:1026:U:OP2	2.21	0.54
23:D:1183:G:C2	23:D:1184:G:C4	2.96	0.54
23:D:1446:C:H2'	23:D:1447:G:H8	1.70	0.54
23:D:2010:G:H2'	23:D:2011:U:C6	2.42	0.54
23:D:2677:G:C6	23:D:2731:G:C6	2.95	0.54
23:D:444:C:O2'	23:D:445:C:O4'	2.14	0.54
23:D:453:C:H2'	23:D:453:C:O2	2.07	0.54
23:D:541:C:N4	23:D:552:G:H1	2.03	0.54
23:D:737:C:N4	23:D:759:G:H1	2.04	0.54
23:D:743:G:H2'	23:D:744:G:H8	1.72	0.54
23:D:850:C:N4	23:D:928:G:H1	1.93	0.54
24:E:117:G:H2'	24:E:118:G:C8	2.41	0.54
24:E:44:G:H1'	24:E:47:C:H42	1.71	0.54
3:G:29:TYR:O	3:G:33:LEU:HG	2.08	0.54
6:J:28:ARG:HA	6:J:31:GLU:HB3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:105:VAL:HG12	7:K:109:ASN:HD21	1.72	0.54
13:Q:91:ARG:NE	13:Q:98:VAL:HG13	2.22	0.54
1:A:1419:G:H1	1:A:1481:U:H3	1.54	0.54
1:A:185:A:H2'	1:A:186:C:C6	2.43	0.54
1:A:200:G:H2'	1:A:201:C:C6	2.42	0.54
1:A:236:G:H2'	1:A:237:C:C6	2.43	0.54
1:A:345:C:H5''	1:A:346:G:C4	2.41	0.54
1:A:357:G:O2'	1:A:358:U:O5'	2.21	0.54
1:A:444:C:H42	1:A:490:G:H1	1.56	0.54
1:A:642:A:H2	8:L:132:GLU:HB2	1.70	0.54
1:A:709:G:H2'	1:A:710:G:C8	2.43	0.54
1:A:77:C:N4	1:A:78:G:O6	2.40	0.54
1:A:836:G:H2'	1:A:837:G:O4'	2.07	0.54
22:C:102:GLY:H	22:C:129:HIS:HB3	0.49	0.54
22:C:206:ASP:N	22:C:206:ASP:OD2	2.40	0.54
22:C:28:ARG:O	22:C:29:ILE:HG22	2.07	0.54
22:C:332:PHE:C	22:C:344:PHE:CD1	2.81	0.54
22:C:395:ASP:O	22:C:396:LEU:HB2	2.05	0.54
22:C:415:PHE:O	22:C:416:THR:HG23	2.06	0.54
22:C:60:LYS:HZ1	22:C:326:ASN:HD22	1.45	0.54
23:D:1298:C:C2	23:D:1299:G:C8	2.96	0.54
23:D:1314:C:N3	23:D:1338:G:N2	2.55	0.54
23:D:1650:G:H1	23:D:2007:C:N4	2.05	0.54
23:D:2226:C:C4	23:D:2227:A:C5	2.95	0.54
23:D:2262:U:H3	23:D:2278:A:H61	1.55	0.54
23:D:2467:C:H2'	23:D:2468:G:N9	2.23	0.54
23:D:2606:C:H2'	23:D:2607:G:C8	2.42	0.54
23:D:2673:G:N3	23:D:2674:G:C8	2.75	0.54
23:D:2725:A:C6	23:D:2727:G:C4	2.94	0.54
23:D:2832:U:O2'	23:D:2834:G:O4'	2.23	0.54
23:D:429:A:H2'	23:D:430:G:H8	1.72	0.54
23:D:54:G:C6	23:D:117:G:N2	2.75	0.54
23:D:592:G:N1	23:D:666:G:N7	2.55	0.54
23:D:751:A:H62	23:D:789:A:H62	1.54	0.54
23:D:939:G:C2	23:D:940:G:C4	2.95	0.54
2:F:204:ASN:ND2	2:F:211:ILE:HG13	2.21	0.54
3:G:156:ARG:O	3:G:158:GLY:N	2.38	0.54
4:H:190:ASP:O	4:H:192:GLU:N	2.40	0.54
6:J:14:LEU:HD11	6:J:18:GLN:HB3	1.90	0.54
11:O:110:ASP:OD1	11:O:111:ASP:N	2.40	0.54
15:S:79:ARG:HA	15:S:82:ILE:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:T:70:ALA:O	16:T:73:LEU:HB3	2.07	0.54
19:W:11:VAL:HG22	19:W:38:SER:OG	2.08	0.54
25:Z:75:LEU:HA	25:Z:93:TYR:HB2	1.87	0.54
53:2:58:LEU:O	53:2:62:ALA:N	2.40	0.54
56:5:1:G:H2'	56:5:2:C:C6	2.42	0.54
56:5:74:C:O2'	56:5:76:A:OP2	2.15	0.54
1:A:1240:U:O3'	1:A:1241:G:H8	1.90	0.54
1:A:1449:C:C4	1:A:1450:U:C4	2.95	0.54
1:A:257:G:C2	1:A:258:G:C4	2.95	0.54
1:A:272:C:H2'	1:A:273:A:O4'	2.06	0.54
1:A:371:G:N2	1:A:390:C:N3	2.55	0.54
1:A:428:G:O2'	1:A:429:U:OP2	2.21	0.54
1:A:42:G:C6	1:A:43:C:C4	2.96	0.54
22:C:127:HIS:N	22:C:127:HIS:CD2	2.75	0.54
22:C:301:VAL:HG21	22:C:464:HIS:CD2	2.42	0.54
22:C:328:ALA:O	22:C:329:ALA:HB2	2.06	0.54
22:C:332:PHE:CA	22:C:344:PHE:HD1	2.19	0.54
22:C:79:HIS:HE1	22:C:216:ARG:CD	2.20	0.54
23:D:1145:C:H2'	23:D:1146:C:C6	2.43	0.54
23:D:1241:A:H2'	23:D:1242:A:H5''	1.90	0.54
23:D:1401:G:H2'	23:D:1402:C:C6	2.42	0.54
23:D:186:G:H2'	23:D:187:G:C8	2.42	0.54
23:D:2083:G:H2'	23:D:2084:C:O4'	2.08	0.54
23:D:2246:G:H2'	23:D:2247:A:H8	1.72	0.54
23:D:2255:G:O6	23:D:2275:C:N4	2.39	0.54
23:D:2599:G:C5	23:D:2600:A:N7	2.76	0.54
23:D:2619:C:H2'	23:D:2620:C:C5	2.42	0.54
23:D:270(G):C:H2'	23:D:270(H):C:C6	2.42	0.54
23:D:292:C:H5''	23:D:293:U:OP2	2.07	0.54
23:D:347:A:C4	23:D:348:G:C8	2.96	0.54
23:D:451:C:C2	23:D:453:C:C4	2.95	0.54
23:D:536:A:N6	23:D:557:U:O4	2.41	0.54
23:D:566:U:C4	23:D:567:A:C6	2.96	0.54
23:D:604:G:N1	23:D:623:G:O6	2.40	0.54
23:D:795:C:H2'	23:D:796:C:H6	1.70	0.54
4:H:11:LEU:O	4:H:15:GLU:HG2	2.07	0.54
1:A:363:A:C2	12:P:31:PRO:HG2	2.42	0.54
12:P:35:GLY:CA	12:P:60:LEU:HA	2.33	0.54
16:T:16:HIS:NE2	16:T:40:ASP:OD2	2.40	0.54
17:U:44:ALA:HB1	17:U:71:PHE:O	2.06	0.54
17:U:17:LYS:HE2	17:U:46:ASP:O	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:3:6:ALA:CB	54:3:59:ILE:HB	2.36	0.54
55:4:51:C:O2'	55:4:52:G:H5'	2.07	0.54
1:A:1398:A:O2'	1:A:1399:C:OP2	2.20	0.54
1:A:644:G:N3	1:A:645:C:H5'	2.23	0.54
1:A:666:G:H2'	1:A:667:G:C8	2.42	0.54
1:A:880:C:C2	1:A:881:G:C8	2.96	0.54
1:A:942:G:C6	1:A:1342:C:C4	2.96	0.54
22:C:15:ILE:HA	22:C:22:LYS:HE3	1.89	0.54
22:C:251:VAL:CG1	22:C:252:ALA:H	2.12	0.54
22:C:496:VAL:C	22:C:537:ILE:HG13	2.26	0.54
22:C:587:ILE:O	22:C:589:LYS:N	2.38	0.54
23:D:1087:G:C8	23:D:1103:A:C2	2.93	0.54
23:D:1409:C:H2'	23:D:1410:G:C8	2.40	0.54
23:D:1515:C:HO2'	23:D:1516:U:P	2.29	0.54
23:D:1548:C:H2'	23:D:1549:C:H6	1.73	0.54
23:D:1789:A:C5	23:D:1790:C:C2	2.95	0.54
22:C:576:LYS:HE3	23:D:1941:C:O2	2.07	0.54
23:D:2033:A:C5	23:D:2036:C:C4	2.96	0.54
23:D:2368:C:O2'	23:D:2369:A:H5'	2.08	0.54
23:D:2378:A:C6	23:D:2379:G:H1'	2.43	0.54
23:D:2466:C:C2	23:D:2485:G:C2	2.95	0.54
23:D:2467:C:N4	23:D:2484:G:O6	2.40	0.54
23:D:777:A:C2	23:D:778:G:C4	2.93	0.54
23:D:840:C:N3	23:D:938:G:N2	2.41	0.54
23:D:974:G:C6	23:D:1186:G:C6	2.95	0.54
24:E:76:G:C2	24:E:77:U:C2	2.95	0.54
1:A:1076:C:H5'	2:F:175:ARG:HH11	1.71	0.54
2:F:80:ILE:HD13	2:F:211:ILE:HG22	1.88	0.54
8:L:14:ARG:HH11	8:L:83:ILE:HG23	1.71	0.54
9:M:113:LYS:NZ	9:M:116:LYS:HE3	2.23	0.54
19:W:50:ALA:HB2	19:W:59:PRO:HA	1.90	0.54
25:Z:42:GLU:CD	25:Z:176:GLY:N	2.61	0.54
52:1:8:LYS:H	52:1:34:GLN:HE22	1.55	0.54
54:3:77:LEU:CD1	54:3:111:LYS:CE	2.65	0.54
55:4:16:C:H4'	55:4:59:A:H61	1.71	0.54
22:C:569:ARG:HD3	55:4:74:C:OP2	2.08	0.54
1:A:1065:U:H3	1:A:1190:G:C4'	2.20	0.54
1:A:1232:U:H2'	1:A:1233:G:H8	1.72	0.54
1:A:1254:C:H2'	1:A:1255:G:O4'	2.08	0.54
1:A:312:C:C2	1:A:313:A:C8	2.96	0.54
1:A:349:A:H2'	1:A:350:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:478:A:H2'	1:A:479:C:C6	2.43	0.54
1:A:518:C:C2	1:A:530:G:C2	2.95	0.54
1:A:762:C:H2'	1:A:763:G:C8	2.43	0.54
22:C:17:HIS:CG	22:C:18:VAL:N	2.76	0.54
22:C:299:PRO:O	22:C:300:VAL:HB	2.06	0.54
22:C:380:VAL:O	22:C:388:VAL:HA	2.08	0.54
22:C:406:LEU:HD12	22:C:485:ARG:CA	2.38	0.54
22:C:58:THR:OG1	22:C:84:PRO:HG3	2.08	0.54
22:C:6:LEU:N	22:C:6:LEU:HD23	2.23	0.54
22:C:4:MET:HG3	22:C:77:VAL:CG1	2.37	0.54
22:C:97:LEU:C	22:C:97:LEU:HD22	2.27	0.54
23:D:1015:G:H2'	23:D:1016:G:C8	2.39	0.54
23:D:1016:G:N2	23:D:1146:C:O2	2.35	0.54
23:D:976:C:C4'	23:D:1156:A:H61	2.20	0.54
23:D:1265:A:O4'	23:D:1267:U:N3	2.40	0.54
23:D:1679:U:H2'	23:D:1680:U:C6	2.42	0.54
23:D:1790:C:H2'	23:D:1791:A:N1	2.23	0.54
23:D:1900:A:O2'	23:D:1901:A:OP2	2.22	0.54
23:D:2111:C:OP2	23:D:2111:C:H6	1.91	0.54
23:D:2122:U:H3	23:D:2176:A:N6	2.03	0.54
23:D:2249:U:N3	23:D:2253:G:OP2	2.25	0.54
23:D:2275:C:H4'	23:D:2276:G:O5'	2.06	0.54
23:D:2322:A:HO2'	23:D:2323:G:P	2.29	0.54
23:D:2630:G:O5'	23:D:2895:U:OP2	2.25	0.54
23:D:2833:G:OP1	23:D:2833:G:H8	1.89	0.54
23:D:331:A:H61	23:D:1209:G:H2'	1.73	0.54
23:D:432:A:H2'	23:D:433:C:H6	1.73	0.54
23:D:446:G:O2'	23:D:447:A:O5'	2.21	0.54
23:D:530:G:C2	23:D:2022:U:H4'	2.43	0.54
23:D:599:G:H2'	23:D:600:G:C8	2.39	0.54
23:D:684:G:N1	23:D:794:G:N1	2.55	0.54
23:D:731:C:H2'	23:D:732:C:C6	2.42	0.54
3:G:68:VAL:HB	3:G:104:GLN:N	2.22	0.54
5:I:151:LEU:O	8:L:64:LYS:NZ	2.39	0.54
8:L:84:ARG:HB3	8:L:136:GLU:HG2	1.90	0.54
11:O:89:ALA:HB2	23:D:748:G:OP2	114.11	0.54
1:A:1491:G:H5''	12:P:46:LYS:NZ	2.23	0.54
15:S:24:SER:O	15:S:28:GLN:HG2	2.07	0.54
25:Z:85:GLU:HB3	25:Z:150:GLY:HA3	1.89	0.54
25:Z:178:ALA:HA	25:Z:185:LEU:HD11	1.90	0.54
25:Z:40:THR:O	25:Z:216:THR:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:48:C:OP1	56:5:48:C:H6	1.90	0.54
1:A:1226:C:N3	13:Q:104:ARG:HD2	2.22	0.54
1:A:1478:C:H2'	1:A:1479:C:C6	2.43	0.54
1:A:199:G:N2	1:A:219:C:N3	2.56	0.54
1:A:328:C:H4'	1:A:329:A:H5'	1.89	0.54
1:A:442:C:H2'	1:A:443:C:H6	1.73	0.54
1:A:468:A:H5''	16:T:80:PHE:CE2	2.43	0.54
1:A:737:A:H2'	1:A:738:C:H6	1.72	0.54
1:A:742:G:H2'	1:A:743:U:O4'	2.07	0.54
1:A:946:A:H2'	1:A:947:G:C8	2.42	0.54
22:C:178:LEU:HD23	22:C:179:GLU:N	2.22	0.54
22:C:196:LEU:HD12	22:C:284:ASP:CB	2.30	0.54
22:C:332:PHE:C	22:C:344:PHE:HD1	2.09	0.54
23:D:1073:A:H2'	23:D:1074:G:H5'	1.89	0.54
23:D:1297:C:H2'	23:D:1298:C:H6	1.71	0.54
23:D:1935:G:H2'	23:D:1962:C:N4	2.22	0.54
23:D:2001:A:H2'	23:D:2002:G:C8	2.43	0.54
23:D:262:A:H2'	23:D:263:C:C2	2.42	0.54
23:D:2717:G:N1	23:D:2718:G:C6	2.75	0.54
23:D:280:C:C4	23:D:360:G:C6	2.96	0.54
23:D:405:U:H3'	23:D:406:G:H5'	1.89	0.54
23:D:507:A:HO2'	23:D:508:G:N2	2.06	0.54
23:D:884:C:H4'	23:D:885:C:H5'	1.89	0.54
16:T:1:MET:N	23:D:98:G:OP1	180.49	0.54
2:F:212:GLN:HG2	2:F:235:SER:HA	1.89	0.54
3:G:191:THR:OG1	3:G:194:GLY:O	2.26	0.54
4:H:121:VAL:HG22	4:H:126:ILE:HG13	1.88	0.54
4:H:31:CYS:O	4:H:33:MET:N	2.41	0.54
1:A:922:G:H4'	5:I:20:GLN:HE22	1.72	0.54
5:I:8:GLU:HB2	5:I:32:VAL:HG11	1.89	0.54
1:A:1124:G:H5'	10:N:36:GLY:HA3	1.88	0.54
15:S:3:ILE:HG23	15:S:38:ARG:HH12	1.73	0.54
1:A:44:G:OP1	16:T:12:LYS:HB2	2.08	0.54
20:X:38:LYS:HA	20:X:41:ILE:HD12	1.89	0.54
23:D:2755:C:H2'	52:1:19:ARG:CZ	2.37	0.54
54:3:52:ILE:HD12	54:3:76:TYR:HB3	1.90	0.54
55:4:28:C:H2'	55:4:29:G:C8	2.43	0.54
1:A:1104:G:H2'	1:A:1105:A:O4'	2.08	0.54
1:A:1126:U:H2'	1:A:1127:G:C8	2.43	0.54
1:A:1152:A:OP2	1:A:1152:A:H8	1.91	0.54
1:A:1237:C:H1'	1:A:1337:G:H1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:935:A:O2'	1:A:1383:C:O2	2.23	0.54
1:A:159:G:N2	1:A:161:A:O5'	2.41	0.54
1:A:198:G:C6	1:A:199:G:C6	2.96	0.54
1:A:437:U:C4	1:A:438:G:C6	2.95	0.54
1:A:536:C:H2'	1:A:537:G:C8	2.42	0.54
1:A:698:G:H2'	1:A:699:C:C6	2.43	0.54
1:A:878:G:O2'	1:A:879:C:H5'	2.08	0.54
1:A:914:A:H2'	1:A:915:A:H8	1.73	0.54
1:A:956:U:O4	1:A:957:U:N3	2.41	0.54
22:C:11:ASN:OD1	22:C:79:HIS:CE1	2.52	0.54
22:C:194:ALA:HB3	22:C:219:GLU:C	2.28	0.54
22:C:269:ARG:C	22:C:271:ILE:H	2.11	0.54
22:C:280:ILE:C	22:C:282:LEU:H	2.11	0.54
22:C:294:PHE:O	22:C:295:ARG:HB3	2.08	0.54
22:C:41:MET:HE3	22:C:45:PHE:HB2	1.87	0.54
23:D:1361:G:H22	23:D:1369:G:N2	2.05	0.54
23:D:1511:A:H2'	23:D:1512:G:C8	2.42	0.54
23:D:1578:U:H2'	23:D:1579:A:O4'	2.08	0.54
23:D:1754:C:C4	23:D:1755:A:C5	2.95	0.54
23:D:2094:G:H2'	23:D:2095:C:C6	2.43	0.54
23:D:2345:G:N3	23:D:2381:C:H2'	2.23	0.54
23:D:2465:C:C4'	52:1:4:ARG:HD3	2.38	0.54
23:D:2472:G:H21	23:D:2478:A:N6	2.06	0.54
23:D:2584:U:H6	23:D:2585:U:H5''	1.72	0.54
23:D:2583:G:H5''	23:D:2584:U:OP2	2.07	0.54
23:D:1782:C:H42	23:D:2586:C:N4	2.06	0.54
23:D:2594:C:H2'	23:D:2595:G:O4'	2.08	0.54
23:D:2643:G:C2	23:D:2644:G:C2	2.95	0.54
23:D:2668:G:O2'	23:D:2669:G:O4'	2.26	0.54
23:D:2809:A:H5''	23:D:2810:A:C5'	2.36	0.54
23:D:497:A:H3'	23:D:498:G:H8	1.73	0.54
23:D:743:G:H2'	23:D:744:G:C8	2.43	0.54
23:D:912:C:H2'	23:D:913:U:C6	2.43	0.54
9:M:19:LEU:HD21	9:M:59:PHE:HB3	1.89	0.54
9:M:69:GLY:O	9:M:73:GLN:HG3	2.08	0.54
10:N:45:ARG:HB2	10:N:65:LEU:HD22	1.90	0.54
11:O:18:ARG:HB2	11:O:35:PRO:HA	1.89	0.54
13:Q:89:GLY:HA2	13:Q:92:HIS:HB2	1.90	0.54
1:A:229:U:O2'	16:T:23:ASP:OD2	2.21	0.54
11:O:108:ILE:HB	18:V:88:LYS:HD3	1.89	0.54
21:Y:3:LYS:HD3	21:Y:10:ARG:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:167:LYS:HG3	25:Z:168:THR:HG23	1.88	0.54
25:Z:3:HIS:O	25:Z:5:LYS:N	2.40	0.54
1:A:1203:C:OP1	14:R:2:ALA:N	2.41	0.54
1:A:136:C:H2'	1:A:137:C:C6	2.43	0.54
1:A:1473:A:H2'	1:A:1474:G:H8	1.71	0.54
1:A:350:G:N1	1:A:351:G:O6	2.41	0.54
1:A:355:C:H3'	1:A:356:A:H8	1.72	0.54
1:A:521:G:O6	1:A:529:G:N1	2.41	0.54
1:A:59:A:H5''	1:A:60:A:H5''	1.90	0.54
1:A:78:G:H2'	1:A:79:G:H8	1.73	0.54
1:A:812:C:H1'	1:A:813:U:C5	2.43	0.54
1:A:968:A:C5	1:A:1062:U:H4'	2.43	0.54
1:A:994:A:H2'	1:A:994:A:N3	2.22	0.54
22:C:204:VAL:HB	22:C:212:ILE:CG2	2.38	0.54
22:C:301:VAL:CB	22:C:348:PHE:O	2.52	0.54
22:C:492:VAL:HG21	22:C:513:ALA:HA	1.90	0.54
22:C:566:ASP:OD2	22:C:569:ARG:HD2	2.08	0.54
22:C:4:MET:HE3	22:C:8:ARG:HG3	1.88	0.54
23:D:1214:A:C4	23:D:1215:G:C8	2.96	0.54
23:D:1361:G:H22	23:D:1369:G:H22	1.54	0.54
23:D:1681:G:N2	23:D:1762:A:C5	2.76	0.54
23:D:2199:A:C5	23:D:2225:A:C6	2.96	0.54
23:D:2367:G:H2'	23:D:2368:C:H6	1.72	0.54
23:D:2399:G:H1	23:D:2417:C:N4	2.03	0.54
23:D:2450:A:C5	23:D:2451:A:C8	2.95	0.54
23:D:2051:A:C4	23:D:2614:A:N6	2.76	0.54
23:D:283:A:H2	23:D:358:U:H2'	1.73	0.54
23:D:489:G:H2'	23:D:491:G:O4'	2.08	0.54
23:D:595:C:H2'	23:D:596:G:H8	1.72	0.54
23:D:742:G:H1	23:D:755:C:H42	1.54	0.54
3:G:40:ARG:HG2	3:G:57:ILE:HD12	1.90	0.54
11:O:28:THR:O	11:O:45:GLY:N	2.40	0.54
11:O:95:ILE:HA	11:O:98:LEU:HG	1.89	0.54
12:P:114:LYS:O	12:P:117:ARG:HG3	2.08	0.54
17:U:69:LYS:O	17:U:70:ARG:NH1	2.35	0.54
1:A:186(A):C:HO2'	20:X:89:ARG:NE	2.06	0.54
25:Z:155:GLU:C	25:Z:157:LYS:H	2.10	0.54
54:3:102:GLU:HA	54:3:105:LEU:HD12	1.88	0.54
23:D:1096:A:N1	54:3:10:LEU:HA	2.22	0.54
1:A:1001:G:H2'	1:A:1002:G:H1'	1.90	0.54
1:A:1005:A:H3'	1:A:1006:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1115:C:H2'	1:A:1116:C:C6	2.43	0.54
1:A:1316:G:N2	1:A:1319:A:O5'	2.38	0.54
1:A:148:G:H1	1:A:174:C:H42	1.54	0.54
1:A:434:U:H2'	1:A:435:C:H6	1.71	0.54
1:A:565:U:C4	1:A:566:G:C5	2.96	0.54
1:A:683:G:C2	1:A:708:C:C2	2.96	0.54
1:A:740:U:O2'	1:A:741:G:H5'	2.08	0.54
22:C:280:ILE:O	22:C:282:LEU:N	2.34	0.54
22:C:330:LEU:CB	22:C:345:ARG:O	2.56	0.54
22:C:477:MET:HE1	22:C:479:TYR:HD2	1.64	0.54
23:D:1005:C:H3'	23:D:1006:C:C6	2.42	0.54
23:D:1214:A:H2'	23:D:1215:G:O4'	2.08	0.54
23:D:1324:G:N2	23:D:1331:A:N3	2.56	0.54
23:D:1348:G:H2'	23:D:1349:A:C8	2.41	0.54
23:D:1361:G:N2	23:D:1369:G:H22	2.05	0.54
23:D:1455:G:C5	23:D:1456:G:C5	2.96	0.54
23:D:1473:G:H1'	23:D:1519:G:N2	2.23	0.54
23:D:1665:A:H2'	23:D:1666:G:O4'	2.07	0.54
23:D:16:G:C2	23:D:17:G:C5	2.96	0.54
23:D:1955:U:N3	23:D:2552:U:O2	2.41	0.54
23:D:1662:C:N4	23:D:1998:G:H1	2.03	0.54
23:D:2450:A:H5'	23:D:2497:A:C6	2.43	0.54
23:D:2811:G:C6	23:D:2812:G:C5	2.96	0.54
23:D:288:C:N4	23:D:354:G:O6	2.41	0.54
23:D:563:G:N3	23:D:563:G:H2'	2.22	0.54
23:D:725:G:N7	23:D:726:G:C6	2.76	0.54
23:D:738:G:N3	23:D:739:G:N3	2.56	0.54
23:D:768:G:C4	23:D:769:G:C8	2.95	0.54
23:D:991:C:H2'	23:D:992:C:C6	2.43	0.54
3:G:42:LEU:HD12	3:G:94:LEU:HD12	1.90	0.54
7:K:122:HIS:HA	7:K:125:MET:HG2	1.90	0.54
9:M:69:GLY:O	9:M:73:GLN:N	2.39	0.54
11:O:74:ALA:HA	11:O:105:VAL:HA	17.24	0.54
1:A:625:G:H5'	16:T:16:HIS:CD2	2.43	0.54
23:D:2170:A:OP1	25:Z:134:ARG:NH2	2.41	0.54
25:Z:178:ALA:HA	25:Z:185:LEU:CD1	2.38	0.54
1:A:1116:C:H42	1:A:1184:G:H1	1.56	0.53
1:A:1227:A:OP2	19:W:81:ARG:NH1	2.38	0.53
1:A:1309:G:H21	1:A:1329:A:C5'	2.21	0.53
1:A:278:G:OP2	17:U:41:LYS:NZ	2.32	0.53
1:A:409:G:C5	1:A:410:G:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:450:G:H5''	1:A:481:G:H1	1.73	0.53
1:A:50:A:H5''	1:A:51:A:H5'	1.90	0.53
1:A:614:A:C6	1:A:627:G:C6	2.96	0.53
1:A:882:C:O2'	1:A:883:C:O4'	2.22	0.53
1:A:942:G:H2'	1:A:943:U:C6	2.43	0.53
22:C:185:ILE:CG2	22:C:186:PRO:CD	2.86	0.53
22:C:244:VAL:N	22:C:263:TRP:CZ3	2.76	0.53
22:C:350:GLY:C	22:C:352:LEU:N	2.52	0.53
22:C:402:ILE:HG22	22:C:403:GLU:N	2.22	0.53
22:C:428:LEU:C	22:C:430:GLU:H	2.12	0.53
22:C:494:VAL:C	22:C:540:ALA:N	2.60	0.53
22:C:494:VAL:HG12	22:C:495:LEU:H	1.72	0.53
22:C:495:LEU:H	22:C:538:GLN:C	2.12	0.53
22:C:492:VAL:CG1	22:C:541:ILE:HG12	2.36	0.53
23:D:1289:C:H2'	23:D:1290:C:C6	2.42	0.53
23:D:1458:C:H5''	23:D:1459:G:OP1	2.07	0.53
23:D:1504:C:H2'	23:D:1505:C:C6	2.43	0.53
23:D:1806:C:C4	23:D:1807:G:C6	2.96	0.53
23:D:1880:C:O2'	23:D:1881:C:OP1	2.23	0.53
23:D:2070:G:C2	23:D:2071:A:C4	2.96	0.53
23:D:2075:U:N3	23:D:2238:G:N7	2.56	0.53
23:D:2285:C:C1'	23:D:2288:A:H62	2.21	0.53
23:D:2567:G:C2	23:D:2568:C:C4	2.96	0.53
23:D:2704:C:H2'	23:D:2705:A:O4'	2.07	0.53
23:D:2709:G:C2	23:D:2710:C:C2	2.96	0.53
23:D:295:G:H3'	23:D:338:G:N2	2.23	0.53
23:D:347:A:H2'	23:D:348:G:O4'	2.08	0.53
23:D:273(A):G:H22	23:D:363(E):U:H3	1.55	0.53
23:D:514:A:C2	23:D:515:A:C4	2.96	0.53
23:D:596:G:H2'	23:D:597:U:H6	1.72	0.53
23:D:788:A:H4'	23:D:789:A:O5'	2.07	0.53
23:D:831:G:C4	23:D:832:G:C8	2.96	0.53
4:H:143:GLY:HA2	4:H:186:LEU:HD23	1.90	0.53
4:H:173:TRP:CD1	4:H:189:PRO:HD3	2.43	0.53
4:H:208:SER:O	4:H:209:ARG:NH1	2.30	0.53
4:H:19:LEU:C	4:H:21:LEU:N	2.62	0.53
1:A:8:A:C8	5:I:101:ILE:HG23	2.34	0.53
5:I:76:ILE:HB	5:I:93:PRO:HB3	1.90	0.53
6:J:53:ALA:HB3	6:J:86:ARG:CZ	2.38	0.53
8:L:5:PRO:HB2	8:L:32:LYS:HZ1	1.73	0.53
13:Q:86:CYS:O	13:Q:90:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:S:78:TYR:O	15:S:82:ILE:HG13	2.08	0.53
15:S:7:GLU:HA	15:S:10:LYS:HE3	1.89	0.53
18:V:50:ILE:HG13	18:V:74:ARG:HH22	1.73	0.53
25:Z:153:ILE:HG23	25:Z:156:ILE:CD1	2.27	0.53
53:2:38:HIS:O	53:2:42:GLN:N	2.37	0.53
1:A:1255:G:O3'	1:A:1258:G:H1'	2.08	0.53
1:A:1297:C:O3'	1:A:1298:C:H6	1.92	0.53
1:A:947:G:H5'	1:A:1332:A:H2	1.72	0.53
1:A:1354:C:H42	1:A:1369:C:H42	1.55	0.53
1:A:1474:G:H2'	1:A:1475:G:C8	2.40	0.53
1:A:458:C:H2'	1:A:464:G:O4'	2.08	0.53
1:A:967:C:N4	1:A:968:A:N1	2.56	0.53
22:C:215:LEU:HD23	22:C:282:LEU:HG	1.86	0.53
22:C:65:ARG:HD3	22:C:244:VAL:HG13	1.90	0.53
22:C:211:VAL:CB	22:C:268:ILE:HD11	2.04	0.53
23:D:1068:G:H2'	23:D:1069:A:C8	2.43	0.53
23:D:1101:U:C6	23:D:1102:C:C2	2.97	0.53
23:D:1013:C:H42	23:D:1149:G:H1	1.55	0.53
23:D:989:G:N2	23:D:1186:G:H22	2.06	0.53
23:D:1324:G:O2'	23:D:1616:A:C6	2.59	0.53
23:D:1771:C:H2'	23:D:1772:G:C8	2.43	0.53
23:D:1910:G:C2	23:D:1911:U:C2	2.97	0.53
23:D:2179:C:H2'	23:D:2180:U:C6	2.43	0.53
23:D:2184:G:O5'	23:D:2184:G:H8	1.90	0.53
23:D:2631:G:H5''	23:D:2894:G:C8	2.43	0.53
23:D:461:C:H42	23:D:468:G:H1	1.54	0.53
23:D:477:A:O2'	23:D:478:A:O4'	2.21	0.53
23:D:612:G:H1'	23:D:617:G:N2	2.23	0.53
23:D:863:A:H61	23:D:912:C:N4	2.06	0.53
24:E:75:G:H3'	24:E:76:G:C8	2.44	0.53
12:P:9:GLN:HA	12:P:12:ARG:HE	1.73	0.53
54:3:130:SER:HA	54:3:133:SER:HB3	1.90	0.53
54:3:32:ALA:HB2	54:3:63:ARG:HH21	1.73	0.53
56:5:66:U:H2'	56:5:67:C:C5	2.43	0.53
1:A:1095:U:OP2	1:A:1108:G:N1	2.42	0.53
1:A:1157:A:H62	1:A:1177:G:H22	1.57	0.53
1:A:976:G:H22	1:A:1362:C:H2'	1.73	0.53
1:A:502:G:H2'	1:A:503:C:O4'	2.09	0.53
1:A:603:U:O2	1:A:635:G:N2	2.35	0.53
1:A:666:G:H2'	1:A:667:G:H8	1.72	0.53
1:A:725:G:H2'	1:A:726:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:832:C:H2'	1:A:833:U:O4'	2.08	0.53
1:A:940:C:H2'	1:A:941:G:H8	1.74	0.53
22:C:97:LEU:CB	22:C:123:MET:SD	2.96	0.53
22:C:137:LYS:C	22:C:139:ASP:H	2.11	0.53
22:C:185:ILE:HG23	22:C:186:PRO:HD2	1.89	0.53
1:A:55:A:C2	22:C:208:TYR:HD1	2.26	0.53
22:C:256:LEU:HB3	22:C:262:GLY:HA3	1.90	0.53
22:C:203:SER:HG	22:C:325:LEU:HD22	0.70	0.53
22:C:409:TYR:CB	22:C:454:ALA:O	2.56	0.53
22:C:592:VAL:HG13	22:C:594:GLN:HE22	1.72	0.53
23:D:1102:C:C6	23:D:1104:C:N4	2.77	0.53
23:D:1527:G:C2	23:D:1545:A:C6	2.95	0.53
23:D:1669:A:N3	23:D:1669:A:H2'	2.22	0.53
23:D:1776:G:N2	23:D:1788:C:N3	2.57	0.53
23:D:2227:A:C6	23:D:2228:G:C5	2.96	0.53
23:D:2231:C:H2'	23:D:2232:U:C6	2.43	0.53
23:D:231:C:N3	23:D:232:G:N2	2.55	0.53
23:D:2251:G:O2'	23:D:2449:U:O2	2.26	0.53
23:D:2863:C:H2'	23:D:2864:G:H8	1.72	0.53
23:D:2868:A:H2'	23:D:2869:G:O4'	2.08	0.53
23:D:2868:A:C5	23:D:2869:G:C5	2.96	0.53
23:D:707:G:H2'	23:D:708:C:C6	2.43	0.53
23:D:70:G:H5'	23:D:75:G:N2	2.16	0.53
24:E:71:C:C4	24:E:72:G:C5	2.95	0.53
2:F:49:GLU:O	2:F:53:ARG:HG2	2.08	0.53
3:G:11:ARG:NH1	3:G:178:LEU:O	2.42	0.53
5:I:137:GLU:OE1	5:I:140:ARG:NH1	2.41	0.53
11:O:15:ALA:O	11:O:78:GLN:NE2	2.42	0.53
15:S:76:GLU:HA	15:S:79:ARG:HH21	1.73	0.53
1:A:280:C:O2	17:U:38:ARG:HD2	2.09	0.53
20:X:73:HIS:CG	20:X:74:LYS:N	2.73	0.53
23:D:2464:C:HO2'	52:1:4:ARG:HH11	1.52	0.53
23:D:1031:G:O2'	52:1:6:SER:O	2.18	0.53
55:4:38:A:H5'	55:4:39:C:OP2	2.07	0.53
1:A:1329:A:O2'	13:Q:24:GLY:HA2	2.07	0.53
1:A:1347:G:H4'	1:A:1348:U:O5'	2.08	0.53
1:A:408:A:H5'	4:H:116:GLN:HG3	1.90	0.53
1:A:542:G:H2'	1:A:543:C:H6	1.74	0.53
1:A:671:G:C2	1:A:672:U:H1'	2.44	0.53
1:A:890:G:N3	1:A:906:G:C6	2.76	0.53
22:C:246:THR:HB	22:C:247:PRO:HD2	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:492:VAL:O	22:C:505:THR:CA	2.57	0.53
22:C:517:ALA:HA	22:C:521:VAL:HG23	1.89	0.53
23:D:1098:A:N3	23:D:1098:A:H2'	2.23	0.53
23:D:1106:G:P	23:D:1106:G:H3'	2.48	0.53
23:D:1213:A:OP2	23:D:1235:G:N1	2.41	0.53
23:D:1495:A:H2'	23:D:1496:A:C8	2.43	0.53
23:D:152:G:O6	23:D:175:G:N1	2.39	0.53
23:D:1626:G:N3	23:D:1626:G:H2'	2.22	0.53
23:D:174:C:O2	23:D:174:C:H2'	2.08	0.53
23:D:2003:G:H2'	23:D:2004:G:C8	2.42	0.53
23:D:2030:A:O2'	23:D:2031:A:O5'	2.24	0.53
23:D:2545:G:H2'	23:D:2546:U:O4'	2.08	0.53
23:D:2620:C:H2'	23:D:2621:A:O4'	2.07	0.53
23:D:2639:A:C4	23:D:2778:A:C6	2.97	0.53
23:D:527:C:H5''	23:D:2779:U:O4	2.07	0.53
23:D:273(A):G:N2	23:D:363(E):U:H3	2.06	0.53
23:D:452:G:C6	23:D:458:G:C6	2.97	0.53
23:D:831:G:C6	23:D:832:G:C5	2.97	0.53
2:F:92:TYR:CE1	2:F:151:GLY:HA2	2.44	0.53
12:P:24:VAL:HG12	12:P:27:LEU:H	1.73	0.53
13:Q:28:ALA:HB2	21:Y:7:ARG:HH12	1.73	0.53
1:A:1426:C:H2'	1:A:1427:U:H6	1.74	0.53
1:A:1475:G:H2'	1:A:1476:G:H8	1.71	0.53
1:A:233:C:N4	1:A:234:C:H41	2.06	0.53
1:A:908:A:H2'	1:A:909:A:C8	2.44	0.53
1:A:926:G:C6	1:A:1505:G:C6	2.97	0.53
1:A:979:C:OP2	1:A:980:C:N4	2.42	0.53
22:C:229:ARG:CG	22:C:283:ALA:HB2	2.32	0.53
22:C:298:LYS:CB	22:C:299:PRO:CD	2.86	0.53
22:C:299:PRO:HB2	22:C:348:PHE:HB3	1.89	0.53
22:C:418:GLU:OE1	22:C:419:GLU:N	2.41	0.53
22:C:529:PRO:HD2	22:C:530:ARG:H	1.73	0.53
23:D:1050:A:N1	23:D:2751:G:C6	2.75	0.53
23:D:112:U:H3'	23:D:113:G:H5''	1.89	0.53
23:D:1136:G:H3'	23:D:1137:G:H8	1.72	0.53
23:D:1186:G:C8	23:D:1187:G:C8	2.96	0.53
23:D:1315:C:C4	23:D:1316:U:C5	2.97	0.53
23:D:1850:G:H2'	23:D:1851:U:O4'	2.08	0.53
23:D:2101:G:H2'	23:D:2102:U:O4'	2.08	0.53
23:D:2266:A:N3	23:D:2272:U:H5	2.06	0.53
23:D:2298:A:H2'	23:D:2299:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2607:G:N3	23:D:2608:G:H5'	2.23	0.53
23:D:2654:A:OP1	23:D:2654:A:H8	1.91	0.53
23:D:2837:G:O6	23:D:2882:A:N6	2.41	0.53
23:D:2889:C:H2'	23:D:2889:C:O2	2.08	0.53
23:D:288:C:H3'	23:D:289:A:C5'	2.38	0.53
23:D:302:C:H2'	23:D:303:U:C6	2.42	0.53
23:D:503:A:H5'	23:D:504:U:OP1	2.08	0.53
23:D:704:G:C2	23:D:726:G:C2	2.96	0.53
4:H:98:GLU:HG2	4:H:189:PRO:HG3	1.90	0.53
4:H:53:ASP:HB3	4:H:57:ARG:NH1	2.23	0.53
13:Q:53:VAL:O	13:Q:56:LEU:HB3	2.08	0.53
15:S:51:HIS:O	15:S:54:ARG:HG2	2.08	0.53
56:5:11:C:N4	56:5:24:G:H1	2.03	0.53
1:A:1128:C:O4'	1:A:1148:U:N3	2.41	0.53
1:A:1179:A:O3'	9:M:103:THR:OG1	2.27	0.53
1:A:371:G:H1	1:A:390:C:H42	1.56	0.53
1:A:424:G:H2'	1:A:425:G:O4'	2.08	0.53
1:A:521:G:N7	12:P:49:ASN:ND2	2.50	0.53
1:A:609:A:H2'	1:A:610:G:H5'	1.89	0.53
1:A:767:A:H62	1:A:813:U:H3	1.56	0.53
1:A:885:G:C2	1:A:886:G:C8	2.96	0.53
22:C:266:ALA:O	22:C:267:ALA:HB3	2.09	0.53
22:C:215:LEU:HD21	22:C:282:LEU:HD12	1.84	0.53
22:C:414:ILE:CD1	22:C:477:MET:HE2	2.31	0.53
23:D:1087:G:C5	23:D:1103:A:C2	2.95	0.53
23:D:1103:A:H3'	23:D:1103:A:OP2	2.09	0.53
23:D:1210:A:HO2'	23:D:1211:U:P	2.30	0.53
23:D:1215:G:C4	23:D:1216:G:C8	2.96	0.53
23:D:1258:C:H2'	23:D:1259:G:H8	1.72	0.53
23:D:1303:G:C6	23:D:1304:C:C4	2.97	0.53
23:D:1320:C:H42	23:D:1331:A:H62	1.56	0.53
23:D:1682:G:H2'	23:D:1683:C:C6	2.43	0.53
23:D:1839:G:C4	23:D:1840:G:C8	2.97	0.53
23:D:1844:C:H2'	23:D:1845:G:H8	1.72	0.53
23:D:1910:G:N2	23:D:1921:G:O4'	2.41	0.53
23:D:2023:G:H4'	23:D:2617:C:O3'	2.08	0.53
23:D:2293:C:H2'	23:D:2294:C:H6	1.74	0.53
23:D:2319:G:H4'	23:D:2320:A:C8	2.44	0.53
23:D:2456:C:H2'	23:D:2457:U:C6	2.44	0.53
23:D:959:A:O2'	23:D:2457:U:O2'	2.03	0.53
23:D:2548:G:C2	23:D:2549:G:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2738:A:C5	23:D:2739:U:C4	2.97	0.53
23:D:2867:G:H5'	23:D:2868:A:OP1	2.09	0.53
23:D:338:G:H3'	23:D:338:G:OP1	2.08	0.53
23:D:349:G:H2'	23:D:350:U:C6	2.43	0.53
23:D:363(E):U:H3	23:D:363(F):A:H62	1.56	0.53
23:D:268:C:H42	23:D:424:G:H1	1.55	0.53
23:D:479:A:N6	23:D:481:G:N3	2.56	0.53
23:D:543:C:H2'	23:D:544:C:C5	2.44	0.53
23:D:533:G:N2	23:D:559:G:H1	2.06	0.53
23:D:587:C:N4	23:D:671:C:O2	2.41	0.53
23:D:607:U:C4	23:D:621:A:C5	2.96	0.53
23:D:7:G:C2	23:D:2896:C:H2'	2.43	0.53
23:D:567:A:H4'	23:D:808:G:OP2	2.08	0.53
23:D:974:G:C6	23:D:1186:G:N1	2.76	0.53
2:F:188:ALA:H	2:F:202:PRO:HA	1.74	0.53
2:F:91:PRO:HG3	2:F:154:LEU:HD22	1.90	0.53
4:H:10:ARG:O	4:H:13:ARG:HB2	2.07	0.53
18:V:74:ARG:HG2	18:V:79:LEU:HD11	1.89	0.53
1:A:1222:G:H2'	1:A:1223:C:C2	2.43	0.53
1:A:953:G:C6	1:A:1229:A:N6	2.77	0.53
1:A:1230:C:H2'	1:A:1231:G:H8	1.74	0.53
1:A:352:C:H1'	1:A:355:C:H41	1.73	0.53
1:A:564:C:H5	1:A:565:U:C4	2.26	0.53
1:A:614:A:H2'	1:A:615:C:C2	2.44	0.53
22:C:102:GLY:H	22:C:129:HIS:CG	2.17	0.53
22:C:20:HIS:NE2	22:C:108:ASP:CA	2.70	0.53
22:C:333:GLU:CB	22:C:334:PRO:CD	2.86	0.53
22:C:40:GLU:C	22:C:42:ARG:H	2.12	0.53
22:C:340:LEU:CD2	22:C:595:GLU:OE1	2.56	0.53
23:D:1102:C:H3'	23:D:1104:C:H41	1.73	0.53
23:D:1042:G:N2	23:D:1114:G:O4'	2.42	0.53
23:D:1161:C:H2'	23:D:1162:G:C8	2.44	0.53
23:D:1227:A:H2'	23:D:1228:G:O4'	2.06	0.53
23:D:1385:G:H2'	23:D:1386:C:C6	2.43	0.53
23:D:1681:G:N2	23:D:1764:G:OP2	2.42	0.53
23:D:1695:G:C6	23:D:1696:G:H1'	2.44	0.53
23:D:440:G:H2'	23:D:441:U:C6	2.43	0.53
23:D:618:G:H2'	23:D:618(A):C:N1	2.24	0.53
23:D:737:C:N3	23:D:759:G:N2	2.51	0.53
24:E:1:U:H2'	24:E:2:C:O4'	2.09	0.53
2:F:137:ARG:HA	2:F:140:HIS:HD2	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:55:ASP:HB2	6:J:86:ARG:HH22	1.74	0.53
16:T:8:ARG:HA	16:T:17:TYR:HD1	1.74	0.53
54:3:7:VAL:CA	54:3:59:ILE:CD1	2.83	0.53
56:5:10:G:C2	56:5:11:C:C2	2.96	0.53
56:5:15:G:N3	56:5:59:U:N3	2.57	0.53
1:A:1045:C:H2'	1:A:1046:A:C8	2.44	0.53
1:A:1306:A:C2'	1:A:1307:U:C5'	2.86	0.53
1:A:266:G:N2	1:A:271:C:H42	2.07	0.53
1:A:428:G:C2	1:A:430:A:C5	2.96	0.53
1:A:876:G:O5'	8:L:14:ARG:NH2	2.21	0.53
1:A:88:C:H2'	1:A:89:U:C6	2.43	0.53
1:A:912:C:H2'	1:A:913:A:C8	2.43	0.53
22:C:17:HIS:ND1	22:C:116:GLU:HG3	2.24	0.53
22:C:153:GLU:HA	22:C:158:LEU:O	2.08	0.53
22:C:373:ALA:CB	22:C:374:PRO:CD	2.85	0.53
23:D:1160:G:O2'	23:D:1161:C:O5'	2.20	0.53
23:D:1386:C:H2'	23:D:1387:C:H6	1.74	0.53
23:D:1673:U:OP1	23:D:1673:U:H4'	2.09	0.53
23:D:1709:U:H2'	23:D:1710:C:C6	2.43	0.53
23:D:1998:G:H2'	23:D:1999:C:H6	1.73	0.53
23:D:2124:G:O4'	25:Z:44:HIS:NE2	2.33	0.53
23:D:2149:G:C6	23:D:2150:U:C2	2.97	0.53
23:D:2437:U:H2'	23:D:2438:U:C6	2.44	0.53
23:D:2474:C:H2'	23:D:2475:C:H5'	1.91	0.53
23:D:2479:G:C6	23:D:2480:C:C2	2.97	0.53
23:D:252:G:C2	23:D:253:C:C2	2.96	0.53
23:D:252:G:H2'	23:D:253:C:H6	1.74	0.53
23:D:257:A:C5	23:D:258:G:C8	2.97	0.53
23:D:2669:G:H2'	23:D:2670:A:C8	2.44	0.53
23:D:2682:U:H2'	23:D:2682:U:O2	2.08	0.53
23:D:2707:G:H2'	23:D:2708:G:C8	2.37	0.53
23:D:270(S):G:C2	23:D:270(T):G:C4	2.97	0.53
23:D:2741:A:N6	23:D:2763:G:H21	2.05	0.53
23:D:527:C:C4	23:D:2779:U:H5'	2.44	0.53
23:D:529:A:H4'	23:D:530:G:OP1	2.09	0.53
23:D:569:U:H3'	23:D:570:G:C8	2.44	0.53
23:D:590:A:H2'	23:D:591:C:C6	2.43	0.53
23:D:710:G:H2'	23:D:711:G:H8	1.73	0.53
23:D:732:C:H3'	23:D:733:G:C8	2.44	0.53
24:E:70:C:N3	24:E:106:G:N2	2.57	0.53
24:E:26:A:C2	24:E:27:C:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:163:PHE:CE1	2:F:201:ILE:HD13	2.40	0.53
2:F:186:ALA:O	2:F:201:ILE:N	2.42	0.53
3:G:64:VAL:HG12	3:G:66:VAL:HG23	1.91	0.53
5:I:78:HIS:HE1	5:I:142:LEU:CD2	2.21	0.53
7:K:108:ALA:O	7:K:119:ARG:HD3	2.09	0.53
8:L:65:TYR:OH	8:L:78:GLN:OE1	2.23	0.53
9:M:53:VAL:HG22	9:M:95:LYS:HG3	1.90	0.53
11:O:23:ALA:HB3	11:O:91:ARG:HH21	1.74	0.53
11:O:84:VAL:O	11:O:111:ASP:HB3	2.09	0.53
12:P:32:PHE:CD1	12:P:86:ARG:HB3	2.44	0.53
16:T:14:ASN:CA	16:T:42:ARG:HH22	2.13	0.53
17:U:29:HIS:HE1	17:U:31:LEU:HB3	1.74	0.53
1:A:1320:C:O4'	19:W:37:ARG:NH1	2.42	0.53
20:X:83:ARG:O	20:X:86:ARG:HG2	2.08	0.53
52:1:29:ASN:HB3	52:1:32:HIS:ND1	2.23	0.53
56:5:33:U:H2'	56:5:35:A:C8	2.44	0.53
1:A:1059:C:H2'	1:A:1060:C:H6	1.74	0.53
1:A:1225:A:OP2	1:A:1226:C:N4	2.39	0.53
1:A:1316:G:N3	1:A:1318:A:H8	2.07	0.53
1:A:1410:G:H2'	1:A:1411:C:C6	2.43	0.53
1:A:1401:G:H1	1:A:1500:A:H61	1.57	0.53
1:A:451:A:N6	1:A:481:G:OP2	2.36	0.53
1:A:887:G:N2	1:A:911:U:O2	2.42	0.53
1:A:950:U:H2'	1:A:951:G:C8	2.40	0.53
22:C:17:HIS:CA	22:C:120:LYS:NZ	2.68	0.53
22:C:501:VAL:HG13	22:C:502:ASP:N	2.23	0.53
23:D:1024:G:N2	23:D:1139:G:H22	2.07	0.53
23:D:1057:A:C2'	23:D:1058:G:C5'	2.86	0.53
23:D:1101:U:H2'	23:D:1102:C:O4'	2.09	0.53
23:D:1368:G:H2'	23:D:1369:G:H5'	1.91	0.53
23:D:1630:G:C6	23:D:1637:A:N6	2.77	0.53
23:D:1697:G:O6	23:D:1698:A:N6	2.42	0.53
23:D:1801:G:N2	23:D:2207:C:H5'	2.24	0.53
23:D:2006:C:H2'	23:D:2007:C:H6	1.73	0.53
23:D:2087:G:H2'	23:D:2088:G:C8	2.44	0.53
23:D:2234:G:N3	23:D:2235:G:C8	2.77	0.53
23:D:2299:G:H2'	23:D:2300:G:H8	1.73	0.53
23:D:415:A:C6	23:D:2409:G:C6	2.96	0.53
23:D:2465:C:H2'	23:D:2466:C:C6	2.44	0.53
23:D:2466:C:H5''	23:D:2467:C:OP2	2.09	0.53
23:D:2519:U:C5	23:D:2541:A:N6	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2658:C:H2'	23:D:2659:G:O4'	2.09	0.53
22:C:86:HIS:NE2	23:D:2661:G:O2'	2.31	0.53
23:D:273:G:C4	23:D:273(A):G:C8	2.96	0.53
23:D:2807:G:N3	23:D:2807:G:H2'	2.23	0.53
23:D:2629:A:H3'	23:D:2895:U:C6	2.44	0.53
23:D:292:C:H3'	23:D:293:U:H5''	1.91	0.53
23:D:646:A:C5	23:D:647:G:C5	2.96	0.53
23:D:669:G:N2	23:D:670:A:C4	2.77	0.53
23:D:763:G:C6	23:D:765:G:C5	2.96	0.53
23:D:983:A:C5	23:D:984:A:C6	2.96	0.53
24:E:13:A:H62	24:E:70:C:H5'	1.73	0.53
2:F:91:PRO:HB3	2:F:152:PHE:HD1	1.73	0.53
3:G:108:ASN:HD21	3:G:110:ASN:HB2	1.73	0.53
1:A:407:G:H1'	4:H:119:GLN:HE22	1.74	0.53
4:H:104:VAL:HG21	4:H:140:VAL:HG21	1.90	0.53
7:K:50:ILE:O	7:K:54:THR:HG22	2.08	0.53
9:M:113:LYS:HB3	9:M:114:TYR:CD2	2.44	0.53
10:N:34:VAL:HG22	10:N:74:ILE:HG12	1.89	0.53
18:V:29:PHE:O	18:V:31:LEU:HD12	2.09	0.53
19:W:3:ARG:CZ	19:W:45:VAL:HA	2.39	0.53
1:A:259:G:O5'	20:X:83:ARG:NH1	2.42	0.53
25:Z:184:LYS:C	25:Z:185:LEU:HD23	2.29	0.53
25:Z:25:ALA:HA	25:Z:28:LEU:HB3	1.90	0.53
54:3:8:VAL:HG12	54:3:9:LYS:CE	2.38	0.53
1:A:1067:A:O2'	1:A:1094:G:OP1	2.21	0.53
1:A:1096:C:H2'	1:A:1097:C:C6	2.44	0.53
1:A:174:C:H2'	1:A:175:C:C6	2.39	0.53
1:A:46:G:H2'	1:A:366:C:C5	2.44	0.53
1:A:393:A:OP2	16:T:12:LYS:NZ	2.32	0.53
1:A:515:G:H2'	1:A:516:U:O4'	2.09	0.53
22:C:191:ASP:OD2	22:C:219:GLU:CA	2.57	0.53
22:C:538:GLN:HB2	22:C:545:ILE:CG2	2.39	0.53
23:D:1663:C:H2'	23:D:1664:A:C2	2.44	0.53
23:D:179:G:C2	23:D:180:G:C4	2.97	0.53
23:D:181:A:H2'	23:D:182:A:O4'	2.08	0.53
23:D:1925:C:H2'	23:D:1926:U:N1	2.23	0.53
23:D:1944:U:H1'	23:D:1955:U:H6	1.74	0.53
23:D:2053:G:O6	23:D:2617:C:N4	2.39	0.53
23:D:2465:C:H2'	23:D:2466:C:H6	1.73	0.53
23:D:2549:G:C2	23:D:2550:G:C5	2.97	0.53
23:D:270(C):C:H42	23:D:270(W):G:H1	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:364:C:H2'	23:D:365:C:H5	1.74	0.53
23:D:448:U:H5'	23:D:449:A:H2	1.74	0.53
23:D:582:G:O2'	23:D:583:G:O5'	2.23	0.53
23:D:657:U:H2'	23:D:658:C:H6	1.69	0.53
2:F:126:GLU:O	2:F:128:GLU:N	2.42	0.53
2:F:184:VAL:H	2:F:198:ASP:HB2	1.74	0.53
4:H:13:ARG:O	4:H:40:PRO:HD3	2.09	0.53
5:I:61:TYR:O	5:I:65:ASN:N	2.41	0.53
5:I:80:ILE:HG22	8:L:104:ARG:HH12	1.74	0.53
7:K:64:GLN:HG3	7:K:68:ASN:HD21	1.73	0.53
8:L:132:GLU:O	8:L:134:ILE:HG13	2.08	0.53
14:R:9:LYS:HZ1	14:R:21:TYR:H	1.56	0.53
1:A:1152:A:H2'	1:A:1153:C:H5	1.74	0.52
1:A:1313:U:H3	1:A:1324:A:H61	1.57	0.52
1:A:1320:C:H6	19:W:37:ARG:NH2	2.07	0.52
1:A:134:A:OP2	1:A:135:C:N4	2.39	0.52
1:A:1288:A:N6	1:A:1371:G:O2'	2.42	0.52
1:A:466:C:H5''	1:A:467:G:N7	2.24	0.52
1:A:594:G:C4	1:A:595:G:H1'	2.44	0.52
1:A:850:U:N3	1:A:851:G:N7	2.57	0.52
22:C:138:ILE:O	22:C:138:ILE:HG13	2.08	0.52
22:C:165:PHE:C	22:C:167:SER:H	2.11	0.52
22:C:205:TYR:OH	22:C:323:LEU:CD1	2.55	0.52
22:C:218:PHE:O	22:C:219:GLU:HG3	2.09	0.52
22:C:25:LEU:HD21	22:C:174:VAL:CB	2.38	0.52
23:D:1096:A:H3'	23:D:1097:U:O4'	2.09	0.52
23:D:1132:A:H2'	23:D:1133:U:C6	2.44	0.52
23:D:1199:U:C4	23:D:1200:C:C4	2.97	0.52
23:D:1365:A:C6	23:D:1366:A:C5	2.97	0.52
23:D:1477:A:H2'	23:D:1478:G:O4'	2.09	0.52
23:D:2168:G:N2	23:D:2170:A:H3'	2.24	0.52
23:D:2302:G:H1	23:D:2314:C:N4	1.99	0.52
23:D:2490:G:O2'	23:D:2491:U:OP2	2.27	0.52
23:D:2599:G:C6	23:D:2600:A:C5	2.97	0.52
23:D:2644:G:H2'	23:D:2645:G:O4'	2.09	0.52
23:D:2865:U:C4	23:D:2866:U:C4	2.98	0.52
23:D:336:C:H2'	23:D:337:C:O4'	2.09	0.52
23:D:584:C:H3'	23:D:585:G:C8	2.44	0.52
24:E:16:G:N2	24:E:69:G:H1'	2.25	0.52
24:E:96:G:C6	24:E:97:G:C4	2.97	0.52
6:J:23:LYS:HA	6:J:26:ILE:HD12	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:16:SER:HA	11:O:79:SER:HB3	1.90	0.52
14:R:9:LYS:HE2	14:R:22:THR:HA	1.92	0.52
15:S:15:PHE:CD1	15:S:84:LYS:HE2	2.43	0.52
16:T:4:ILE:HD12	16:T:4:ILE:H	1.73	0.52
20:X:22:ARG:O	20:X:25:ARG:HB2	2.09	0.52
25:Z:71:GLN:NE2	25:Z:176:GLY:HA2	2.23	0.52
53:2:103:GLY:O	53:2:110:GLY:N	2.42	0.52
1:A:129(A):G:N1	1:A:191(A):G:O4'	2.42	0.52
1:A:1308:U:O2	1:A:1330:U:C2	2.62	0.52
1:A:127:G:H1	1:A:234:C:H42	1.57	0.52
1:A:271:C:H2'	1:A:272:C:C6	2.42	0.52
1:A:452:A:C6	1:A:453:A:C6	2.97	0.52
1:A:46:G:C4	1:A:366:C:C4	2.98	0.52
1:A:544:G:H2'	1:A:545:C:C6	2.43	0.52
1:A:654:G:H3'	1:A:655:A:H8	1.74	0.52
1:A:783:C:N4	1:A:799:G:H1	1.97	0.52
1:A:864:A:H2'	1:A:865:A:C8	2.43	0.52
1:A:877:C:H2'	1:A:878:G:H8	1.72	0.52
1:A:933:G:N7	1:A:935:A:N6	2.57	0.52
22:C:106:VAL:HG21	22:C:136:ASN:CB	2.39	0.52
22:C:131:ILE:HG21	22:C:158:LEU:HD23	1.76	0.52
22:C:203:SER:HB3	22:C:325:LEU:CD1	2.34	0.52
1:A:358:U:OP1	22:C:269:ARG:NH2	2.42	0.52
22:C:115:ALA:HB2	22:C:474:TYR:CG	2.43	0.52
22:C:46:LEU:O	22:C:48:SER:N	2.42	0.52
22:C:494:VAL:HG12	22:C:495:LEU:N	2.24	0.52
22:C:532:LEU:HD13	22:C:555:ARG:CA	2.36	0.52
23:D:1142:U:H3'	23:D:1142(A):A:N7	2.24	0.52
23:D:1407:C:H2'	23:D:1408:C:H6	1.74	0.52
23:D:1410:G:H2'	23:D:1411:C:C6	2.44	0.52
23:D:1903:G:C2	23:D:1904:G:C5	2.96	0.52
23:D:2103:C:H6	23:D:2103:C:O5'	1.92	0.52
23:D:2267:A:N3	23:D:2267:A:H3'	2.24	0.52
23:D:2273:A:C8	23:D:2274:A:C8	2.97	0.52
23:D:2551:C:O2'	23:D:2552:U:O4'	2.28	0.52
23:D:2646:C:H2'	23:D:2647:U:C6	2.43	0.52
23:D:2808:U:O4	23:D:2892:A:C6	2.62	0.52
23:D:481:G:HO2'	23:D:482:A:P	2.31	0.52
23:D:754:C:O2'	23:D:755:C:O5'	2.25	0.52
4:H:203:VAL:O	4:H:206:PHE:HB3	2.08	0.52
5:I:69:VAL:HG21	5:I:139:LEU:HD13	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:P:56:ALA:HB3	12:P:69:TYR:N	2.24	0.52
13:Q:65:LYS:CE	13:Q:73:GLU:HB2	2.31	0.52
25:Z:156:ILE:O	25:Z:156:ILE:HG22	2.09	0.52
54:3:98:ARG:HH22	54:3:101:TRP:N	2.07	0.52
1:A:1190:G:P	3:G:3:ASN:HD21	2.32	0.52
1:A:1347:G:N2	1:A:1373:G:H2'	2.25	0.52
1:A:1373:G:H5''	9:M:42:ARG:HH21	1.73	0.52
1:A:1405:G:H1	1:A:1496:C:N4	2.06	0.52
1:A:1518:A:H2'	1:A:1519:A:O4'	2.09	0.52
1:A:356:A:C5	1:A:357:G:C5	2.97	0.52
1:A:402:G:C6	1:A:403:C:C4	2.97	0.52
1:A:549:C:H2'	1:A:550:G:H8	1.75	0.52
22:C:155:VAL:HG13	22:C:156:LEU:N	2.24	0.52
22:C:383:LYS:O	22:C:384:SER:OG	2.20	0.52
22:C:444:ALA:CB	22:C:447:ARG:CG	2.86	0.52
23:D:974:G:N1	23:D:1186:G:C6	2.78	0.52
23:D:1278:A:H2'	23:D:1279:G:C8	2.37	0.52
23:D:139:G:C5	23:D:140:A:C5	2.98	0.52
23:D:1473:G:H1'	23:D:1519:G:C2	2.44	0.52
23:D:1545:A:C2	23:D:1545(A):A:C4	2.97	0.52
23:D:1752:C:N3	23:D:1756:G:N2	2.49	0.52
23:D:175:G:N2	23:D:176:G:N3	2.57	0.52
23:D:1785:A:H2'	23:D:1786:A:C6	2.44	0.52
23:D:184:C:H42	23:D:212:G:H1	1.57	0.52
23:D:2119:A:H61	23:D:2168:G:H21	1.55	0.52
23:D:2292:C:H2'	23:D:2293:C:H6	1.74	0.52
23:D:2371:G:C2	23:D:2372:G:C5	2.98	0.52
23:D:2550:G:H1	23:D:2558:C:N4	2.04	0.52
23:D:308:G:C6	23:D:309:G:C4	2.97	0.52
23:D:325:G:C2	23:D:326:G:C4	2.97	0.52
23:D:295:G:C2	23:D:344:G:H1'	2.44	0.52
23:D:35:G:C2	23:D:36:G:C4	2.97	0.52
23:D:579:G:C2	23:D:580:C:C2	2.97	0.52
23:D:662:G:C2	23:D:663:G:C5	2.96	0.52
23:D:677:A:C4	23:D:678:C:C5	2.97	0.52
23:D:741:G:C6	23:D:742:G:C6	2.98	0.52
23:D:861:A:H62	23:D:916:G:N2	1.96	0.52
23:D:978:G:H1	23:D:985:C:H42	1.56	0.52
4:H:10:ARG:NH1	4:H:11:LEU:HD21	2.24	0.52
4:H:129:ASN:ND2	4:H:145:GLU:H	2.07	0.52
5:I:108:ALA:O	5:I:112:LEU:HG	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:19:C:P	5:I:127:ASN:HD22	2.31	0.52
1:A:1366:C:O3'	10:N:60:ARG:NH2	2.43	0.52
14:R:29:ARG:HH22	14:R:41:ARG:HH22	1.57	0.52
15:S:28:GLN:HB3	15:S:66:LEU:HD13	1.91	0.52
18:V:61:LYS:O	18:V:65:ILE:HG12	2.09	0.52
23:D:1059:G:N7	54:3:126:MET:CG	2.72	0.52
54:3:60:TYR:CG	54:3:61:ALA:N	2.77	0.52
56:5:16:U:H5'	56:5:17:C:OP2	2.09	0.52
1:A:1089:G:H1	1:A:1096:C:H42	1.58	0.52
1:A:1095:U:P	1:A:1108:G:H1	2.32	0.52
1:A:1128:C:H4'	9:M:16:ARG:HH12	1.74	0.52
1:A:1307:U:OP2	1:A:1308:U:H5	1.93	0.52
1:A:1310:G:C1'	1:A:1328:C:H41	2.21	0.52
1:A:1433:A:C4	1:A:1434:A:C8	2.98	0.52
1:A:1443:G:H4'	1:A:1446:A:H5'	1.91	0.52
1:A:402:G:C2	1:A:403:C:C2	2.98	0.52
1:A:43:C:H2'	1:A:44:G:C8	2.44	0.52
1:A:539:A:C4	1:A:540:G:C8	2.97	0.52
1:A:722:A:H2'	1:A:724:G:C8	2.44	0.52
1:A:823:G:H2'	1:A:824:C:H6	1.75	0.52
1:A:928:G:H1	1:A:1389:C:N4	2.05	0.52
22:C:20:HIS:CD2	22:C:108:ASP:N	2.75	0.52
22:C:280:ILE:HD12	22:C:290:PRO:HG3	1.91	0.52
22:C:332:PHE:HA	22:C:344:PHE:HD1	1.70	0.52
22:C:412:LEU:CB	22:C:451:VAL:HA	2.38	0.52
23:D:1028:A:C4	23:D:1029:A:C8	2.97	0.52
23:D:1065:U:O5'	23:D:1075:C:N4	2.42	0.52
23:D:1069:A:O2'	23:D:1071:G:OP1	2.27	0.52
23:D:108:U:H2'	23:D:109:G:H8	1.70	0.52
23:D:1227:A:C5	23:D:1228:G:C8	2.97	0.52
23:D:1358:G:C5	23:D:1371:G:C6	2.97	0.52
23:D:1413:G:H1	23:D:1589:C:H42	1.57	0.52
23:D:1678:G:H2'	23:D:1679:U:C6	2.44	0.52
23:D:1780:A:H4'	23:D:1782:C:OP1	2.10	0.52
23:D:1842:G:C6	23:D:1901:A:C6	2.97	0.52
23:D:2249:U:O2'	23:D:2275:C:N3	2.42	0.52
23:D:2512:C:N4	23:D:2574:G:H1	2.08	0.52
23:D:2677:G:H2'	23:D:2678:C:H6	1.75	0.52
23:D:2759:G:H2'	23:D:2760:C:C6	2.43	0.52
23:D:28:A:O2'	23:D:582:G:O2'	2.25	0.52
23:D:708:C:H2'	23:D:709:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:744:G:C2	23:D:745:G:C4	2.97	0.52
2:F:42:ILE:HG12	2:F:43:ASP:O	2.09	0.52
3:G:180:ALA:HB1	3:G:203:PHE:CE1	2.45	0.52
3:G:180:ALA:HB1	3:G:203:PHE:HE1	1.74	0.52
3:G:88:ARG:HH21	3:G:101:LEU:HB2	1.75	0.52
4:H:22:LYS:HD3	4:H:26:CYS:HB2	1.92	0.52
6:J:72:VAL:HG23	6:J:73:ASN:N	2.24	0.52
7:K:14:PRO:HA	7:K:21:VAL:HG12	1.90	0.52
1:A:1375:A:H4'	7:K:29:LYS:HE3	1.91	0.52
12:P:103:GLY:N	12:P:108:ALA:O	2.42	0.52
18:V:66:LEU:O	18:V:70:ILE:HG13	2.10	0.52
19:W:14:HIS:O	19:W:17:GLU:HB3	2.09	0.52
19:W:52:TYR:HB2	19:W:57:HIS:ND1	2.24	0.52
1:A:1220:G:H1'	19:W:52:TYR:HE2	1.75	0.52
25:Z:68:LEU:O	25:Z:157:LYS:O	2.27	0.52
23:D:1059:G:N7	54:3:126:MET:SD	2.81	0.52
56:5:65:G:H2'	56:5:66:U:C6	2.44	0.52
1:A:1047:G:O2'	1:A:1215:G:H4'	2.10	0.52
1:A:1273:G:C5	1:A:1274:G:C5	2.97	0.52
1:A:1293:G:H2'	1:A:1294:G:C8	2.44	0.52
1:A:246:A:H4'	1:A:247:G:OP1	2.08	0.52
1:A:333:G:H2'	1:A:334:C:H6	1.74	0.52
1:A:577:G:H2'	1:A:578:C:H6	1.75	0.52
1:A:592:G:C6	1:A:648:A:C5	2.98	0.52
1:A:764:C:H2'	1:A:765:G:C8	2.45	0.52
22:C:17:HIS:ND1	22:C:116:GLU:CB	2.69	0.52
22:C:399:PRO:CD	22:C:400:THR:H	2.23	0.52
23:D:1389:G:H2'	23:D:1390:U:C2	2.44	0.52
23:D:1453:A:C6	23:D:1454:U:H1'	2.45	0.52
23:D:1603:A:N1	23:D:1604:C:N4	2.58	0.52
23:D:173:G:C4	23:D:174:C:C6	2.97	0.52
23:D:2023:G:C2	23:D:2024:G:C4	2.98	0.52
23:D:2046:G:C6	23:D:2623:G:C5	2.97	0.52
23:D:2197:U:C5	23:D:2224:G:C6	2.97	0.52
23:D:227:A:H1'	23:D:228:A:C6	2.45	0.52
23:D:2298:A:C5	23:D:2299:G:H1'	2.44	0.52
23:D:2494:G:C2	23:D:2495:G:C4	2.98	0.52
23:D:2561:A:H2'	23:D:2562:U:O4'	2.10	0.52
23:D:2664:G:O2'	23:D:2665:A:O5'	2.26	0.52
23:D:270(D):C:N4	23:D:270(V):G:H1	2.05	0.52
23:D:279:C:N4	23:D:359:A:C4	2.76	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:314:A:C6	23:D:315:G:C6	2.98	0.52
23:D:625:G:C2	23:D:626:U:C2	2.98	0.52
23:D:841:A:H2'	23:D:842:G:C8	2.44	0.52
23:D:664:C:O2'	23:D:940:G:O3'	2.21	0.52
3:G:172:ARG:HB2	3:G:203:PHE:CE2	2.45	0.52
8:L:14:ARG:HB3	8:L:83:ILE:HG21	1.92	0.52
1:A:687:A:H5''	11:O:42:TRP:CH2	2.44	0.52
19:W:17:GLU:OE1	19:W:18:LYS:HG2	2.09	0.52
20:X:26:ASN:HB2	20:X:71:THR:HG23	1.92	0.52
1:A:1399:C:N4	1:A:1401:G:N3	2.58	0.52
1:A:1415:G:C6	1:A:1486:G:C5	2.98	0.52
1:A:179:A:H3'	1:A:180:U:C6	2.44	0.52
1:A:431:A:C5	1:A:432:A:C5	2.98	0.52
1:A:673:G:C6	1:A:734:G:C6	2.98	0.52
1:A:773:G:H1	1:A:806:C:N4	2.08	0.52
22:C:15:ILE:O	22:C:105:LEU:HB2	2.10	0.52
22:C:177:ILE:HG22	22:C:181:ILE:CG1	2.40	0.52
23:D:1069:A:N6	23:D:1096:A:OP1	2.43	0.52
23:D:1202:C:N3	23:D:1203:G:H1'	2.25	0.52
23:D:1276:A:H2'	23:D:1277:G:C8	2.42	0.52
23:D:1456:G:C6	23:D:1457:A:C5	2.97	0.52
23:D:1460:A:H5'	23:D:1461:G:OP2	2.09	0.52
23:D:1485:G:C6	23:D:1486:A:C6	2.98	0.52
23:D:1521:G:H4'	23:D:1522:G:OP2	2.09	0.52
23:D:1792:G:C2	23:D:1793:C:C4	2.96	0.52
23:D:1842:G:C5	23:D:1843:C:C4	2.98	0.52
23:D:2290:G:C2	23:D:2291:U:C4	2.96	0.52
23:D:270(X):G:C5	23:D:270(Y):G:C5	2.98	0.52
23:D:271(C):U:C4	23:D:404:C:H1'	2.44	0.52
23:D:2877:G:H2'	23:D:2878:U:H6	1.75	0.52
23:D:2834:G:C2	23:D:2879:C:C4	2.97	0.52
23:D:2896:C:O5'	23:D:2896:C:H6	1.92	0.52
23:D:598:G:C6	23:D:660:G:C6	2.97	0.52
23:D:797:C:H2'	23:D:798:G:C8	2.44	0.52
23:D:78:A:H2'	23:D:79:G:H8	1.73	0.52
23:D:878:A:H62	23:D:897:C:N4	2.06	0.52
24:E:66:A:HO2'	24:E:67:G:P	2.32	0.52
3:G:121:ALA:O	3:G:124:ILE:HB	2.09	0.52
8:L:112:LEU:HD13	8:L:131:GLY:N	2.25	0.52
11:O:11:LYS:HG2	11:O:76:GLY:N	2.19	0.52
11:O:33:THR:HG22	11:O:39:PRO:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:P:77:LEU:HD11	12:P:107:ALA:HB2	1.91	0.52
13:Q:69:GLU:O	13:Q:72:ALA:HB3	2.09	0.52
20:X:92:LEU:HD13	20:X:98:PRO:HB3	1.91	0.52
25:Z:46:LYS:HE2	25:Z:210:ARG:NE	2.24	0.52
23:D:2756:U:C5'	52:1:19:ARG:HB3	2.39	0.52
54:3:21:PRO:CG	54:3:22:PRO:CD	2.87	0.52
1:A:106:C:H2'	1:A:107:G:C8	2.44	0.52
1:A:1169:A:H2'	1:A:1170:A:C8	2.45	0.52
1:A:1239:A:H1'	1:A:1241:G:C4	2.45	0.52
1:A:1373:G:O5'	1:A:1373:G:H8	1.93	0.52
1:A:1399:C:C5	1:A:1401:G:H1'	2.44	0.52
1:A:1401:G:H1	1:A:1500:A:N6	2.08	0.52
1:A:1441:G:O2'	1:A:1442:G:N7	2.41	0.52
1:A:1468:A:C8	1:A:1469:G:C8	2.98	0.52
1:A:409:G:H3'	1:A:410:G:C8	2.44	0.52
1:A:670:G:C6	1:A:671:G:C5	2.97	0.52
1:A:757:U:O2'	1:A:879:C:O2'	2.28	0.52
1:A:994:A:O2'	1:A:995:C:OP1	2.25	0.52
22:C:14:ILE:CG2	22:C:104:LEU:O	2.58	0.52
22:C:185:ILE:CG2	22:C:186:PRO:HD2	2.40	0.52
22:C:17:HIS:CD2	22:C:18:VAL:H	2.26	0.52
22:C:28:ARG:HD2	22:C:41:MET:CE	2.40	0.52
23:D:1017:G:C2	23:D:1018:C:C2	2.98	0.52
23:D:127:A:H5'	23:D:128:C:H5''	1.92	0.52
23:D:1299:G:O6	23:D:1639:U:H3'	2.10	0.52
23:D:1322:A:H8	23:D:1323:U:C6	2.27	0.52
23:D:1468:C:H2'	23:D:1469:A:C8	2.45	0.52
23:D:1489:U:H3	23:D:1501:C:N4	2.07	0.52
23:D:2536:G:H2'	23:D:2537:U:O4'	2.08	0.52
23:D:2599:G:H2'	23:D:2600:A:O4'	2.10	0.52
23:D:272:G:C2	23:D:273:G:C8	2.98	0.52
23:D:2785:C:C4	23:D:2786:U:C4	2.98	0.52
23:D:2795:G:H21	23:D:2795:G:P	2.33	0.52
23:D:2894:G:N3	23:D:2894:G:C2'	2.73	0.52
23:D:442:G:N3	23:D:444:C:C4	2.77	0.52
23:D:725:G:N7	23:D:726:G:N1	2.57	0.52
23:D:777:A:H61	23:D:791:C:H42	1.57	0.52
23:D:77:C:H2'	23:D:78:A:H8	1.75	0.52
23:D:870:A:N3	23:D:870:A:H2'	2.24	0.52
23:D:873:G:H1	23:D:904:C:N4	2.06	0.52
4:H:152:SER:O	4:H:155:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:68:TYR:CE2	4:H:97:LEU:HB3	2.45	0.52
8:L:65:TYR:CZ	8:L:75:ARG:HD2	2.45	0.52
11:O:33:THR:HA	11:O:39:PRO:HA	1.92	0.52
13:Q:28:ALA:O	13:Q:32:GLU:HG3	2.09	0.52
13:Q:28:ALA:CA	13:Q:31:LYS:HB2	2.40	0.52
16:T:45:THR:OG1	16:T:47:ASP:O	2.19	0.52
17:U:5:VAL:HG13	17:U:59:ILE:O	2.10	0.52
19:W:33:THR:OG1	19:W:51:VAL:HG13	2.10	0.52
55:4:32:C:H3'	55:4:32:C:OP2	2.09	0.52
55:4:4:G:O2'	55:4:5:G:H5'	2.10	0.52
55:4:62:C:H2'	55:4:63:G:C8	2.44	0.52
56:5:22:G:H2'	56:5:23:A:C8	2.44	0.52
1:A:1125:U:O2'	1:A:1126:U:OP2	2.27	0.52
1:A:1413:A:C2	1:A:1414:U:H1'	2.45	0.52
1:A:1486:G:H2'	1:A:1487:G:H8	1.74	0.52
1:A:258:G:H2'	1:A:259:G:C8	2.39	0.52
1:A:251:G:C5	1:A:266:G:C5	2.98	0.52
1:A:597:G:H3'	1:A:598:U:C6	2.44	0.52
1:A:605:U:H2'	1:A:606:G:H8	1.73	0.52
1:A:677:U:H2'	1:A:678:U:C4	2.45	0.52
1:A:665:A:N7	1:A:725:G:N1	2.58	0.52
22:C:15:ILE:HD12	22:C:103:VAL:CG2	2.39	0.52
22:C:163:ALA:O	22:C:164:ILE:HB	2.10	0.52
22:C:104:LEU:HD11	22:C:177:ILE:HG21	1.91	0.52
22:C:189:LYS:CE	22:C:219:GLU:OE2	2.57	0.52
22:C:34:HIS:HE1	22:C:247:PRO:HB2	1.66	0.52
22:C:438:MET:SD	22:C:440:TYR:CE2	3.03	0.52
23:D:1147:C:H2'	23:D:1148:A:H8	1.75	0.52
23:D:1184:G:O2'	23:D:1185:C:H5'	2.10	0.52
23:D:1665:A:H61	23:D:1995:U:H3	1.57	0.52
23:D:1734:C:H2'	23:D:1735:C:N1	2.25	0.52
23:D:1781:C:O2'	23:D:1782:C:H5'	2.09	0.52
23:D:182:A:C6	23:D:183:C:C4	2.98	0.52
23:D:2104:G:N1	23:D:2186:G:C5	2.78	0.52
23:D:270(Z):U:H4'	23:D:270(Z):U:OP1	2.08	0.52
23:D:2756:U:H5'	52:1:19:ARG:HB3	1.92	0.52
23:D:2758:A:H2'	23:D:2759:G:O4'	2.09	0.52
23:D:363(F):A:H2'	23:D:364:C:C6	2.45	0.52
23:D:39:C:H2'	23:D:40:C:C6	2.43	0.52
23:D:540:G:C6	23:D:541:C:C4	2.98	0.52
23:D:627:A:H2'	23:D:628:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:77:C:N4	23:D:109:G:H1	2.07	0.52
23:D:947:G:H2'	23:D:948:G:C8	2.40	0.52
23:D:975:G:C4	23:D:990:A:C6	2.98	0.52
24:E:97:G:C6	24:E:98:G:C6	2.98	0.52
11:O:50:TYR:HB3	11:O:54:ARG:HB3	1.91	0.52
12:P:39:VAL:HG11	12:P:41:ARG:NH1	2.24	0.52
1:A:522:C:N4	12:P:53:ARG:HH12	2.07	0.52
15:S:70:LEU:HD11	15:S:81:LEU:HD13	1.92	0.52
17:U:9:VAL:O	17:U:22:LEU:N	2.40	0.52
1:A:63:C:N3	1:A:105:G:C6	2.78	0.52
1:A:107:G:OP1	1:A:325:A:N6	2.42	0.52
1:A:124:G:C5	1:A:125:U:C4	2.98	0.52
1:A:41:G:H2'	1:A:42:G:H8	1.75	0.52
1:A:484:G:H4'	1:A:485:G:O5'	2.09	0.52
1:A:771:G:H2'	1:A:772:U:H6	1.71	0.52
22:C:240:ASP:H	22:C:266:ALA:HB2	1.69	0.52
22:C:342:PHE:CD2	22:C:369:LEU:CA	2.93	0.52
22:C:440:TYR:CD1	22:C:448:VAL:CG1	2.89	0.52
22:C:457:ALA:O	22:C:460:LEU:HB2	2.10	0.52
23:D:1084:A:N7	23:D:1085:A:N6	2.57	0.52
23:D:111:A:H2'	23:D:112:U:C5	2.44	0.52
23:D:1168:G:H1	23:D:1181:C:H42	1.57	0.52
23:D:1197:G:N1	23:D:1250:G:N7	2.58	0.52
23:D:1256:G:C6	23:D:1257:C:C4	2.97	0.52
23:D:136:G:H1	23:D:143:C:H42	1.58	0.52
23:D:1476:C:C6	23:D:1477:A:H2	2.28	0.52
23:D:1562:A:C6	23:D:1563:G:C6	2.98	0.52
23:D:1686:C:H2'	23:D:1687:G:O4'	2.09	0.52
23:D:182:A:H61	23:D:215:G:H1	1.57	0.52
23:D:1889:A:O2'	23:D:2087:G:O5'	2.27	0.52
23:D:2250:G:H2'	23:D:2496:C:OP1	2.10	0.52
23:D:2638:G:N2	23:D:2775:A:H2'	2.25	0.52
23:D:2789:C:H2'	23:D:2790:A:H4'	1.91	0.52
23:D:2894:G:N3	23:D:2894:G:C3'	2.73	0.52
23:D:438:G:H2'	23:D:439:G:H8	1.73	0.52
23:D:609(A):G:N2	23:D:619:G:H1'	2.25	0.52
23:D:690:G:C4	23:D:691:C:C5	2.98	0.52
23:D:701:G:O6	23:D:731:C:N4	2.43	0.52
23:D:864:G:N2	23:D:912:C:N3	2.58	0.52
23:D:940:G:H21	23:D:1191:G:H4'	1.75	0.52
2:F:185:ILE:HA	2:F:199:TYR:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:136:GLN:HB3	3:G:140:ARG:HE	1.75	0.52
4:H:98:GLU:HA	4:H:103:ASN:ND2	2.23	0.52
10:N:4:ILE:HD11	10:N:98:ILE:HG23	1.92	0.52
12:P:68:ALA:HA	12:P:96:VAL:HG13	1.91	0.52
23:D:1033:U:H5'	52:1:16:VAL:HG11	1.92	0.52
52:1:20:HIS:C	52:1:22:ARG:H	2.14	0.52
54:3:77:LEU:CD2	54:3:111:LYS:NZ	2.58	0.52
56:5:7:A:O2'	56:5:8:U:OP1	2.23	0.52
1:A:1013:G:O2'	1:A:1014:A:H8	1.93	0.52
1:A:1047:G:H2'	1:A:1048:G:O4'	2.10	0.52
1:A:1112:C:C2	1:A:1113:C:H5	2.27	0.52
1:A:1143:G:H2'	1:A:1144:G:O4'	2.10	0.52
1:A:934:C:N4	1:A:1345:U:OP2	2.42	0.52
1:A:1405:G:N2	1:A:1495:U:O4	2.42	0.52
1:A:226:G:C6	1:A:227:G:C6	2.98	0.52
1:A:507:C:N3	1:A:524:G:N2	2.57	0.52
1:A:587:G:C2	1:A:755:G:C6	2.98	0.52
1:A:853:G:C2	1:A:854:G:C8	2.98	0.52
22:C:335:GLU:OE1	22:C:344:PHE:HB3	2.07	0.52
22:C:404:GLU:O	22:C:406:LEU:N	2.43	0.52
22:C:447:ARG:N	54:3:29:GLN:HE21	2.07	0.52
22:C:86:HIS:O	22:C:88:ASP:CG	2.48	0.52
23:D:1047:G:H8	23:D:1047:G:O5'	1.93	0.52
23:D:1167:U:H2'	23:D:1168:G:H8	1.74	0.52
23:D:818:G:C4	23:D:1187:G:N2	2.78	0.52
23:D:940:G:N2	23:D:1191:G:H4'	2.25	0.52
23:D:1229:G:C5	23:D:1230:C:C4	2.98	0.52
23:D:1276:A:C4	23:D:1277:G:C8	2.98	0.52
23:D:1308:A:H2'	23:D:1308:A:N3	2.24	0.52
23:D:1374:G:C2	23:D:1375:C:C2	2.98	0.52
23:D:1344:G:C2	23:D:1385:G:C8	2.98	0.52
23:D:1609:A:H1'	23:D:1616:A:O4'	2.10	0.52
23:D:1878:G:C2	23:D:1879:C:C2	2.97	0.52
23:D:223:A:C8	23:D:422:A:H1'	2.44	0.52
23:D:2408:U:O2'	23:D:2409:G:O5'	2.21	0.52
23:D:2533:A:C6	23:D:2534:A:H1'	2.45	0.52
23:D:2670:A:O2'	23:D:2671:A:OP1	2.26	0.52
23:D:2725:A:H8	23:D:2725:A:OP2	1.92	0.52
23:D:2043:C:C4	23:D:2777:G:C4	2.98	0.52
23:D:536:A:H2'	23:D:537:C:H6	1.75	0.52
23:D:799:G:H2'	23:D:800:A:N7	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:919:G:C2	23:D:920:G:C4	2.98	0.52
2:F:114:ARG:O	2:F:117:GLU:HG2	2.10	0.52
2:F:178:ARG:O	8:L:71:GLY:HA3	2.09	0.52
4:H:54:TYR:HE1	4:H:206:PHE:HE1	1.57	0.52
1:A:1186:G:O2'	9:M:110:GLU:OE2	2.24	0.52
10:N:51:ARG:HE	10:N:61:GLU:H	1.58	0.52
19:W:70:LYS:HG2	19:W:72:GLY:N	2.23	0.52
54:3:52:ILE:HG13	54:3:76:TYR:CD2	2.45	0.51
1:A:1120:G:C2	1:A:1154:G:C2	2.98	0.51
1:A:1254:C:C2	1:A:1255:G:C8	2.99	0.51
1:A:186(D):C:H2'	1:A:186(E):C:H6	1.73	0.51
1:A:227:G:H2'	1:A:228:A:C8	2.42	0.51
1:A:257:G:H1	1:A:269:C:H42	1.58	0.51
1:A:31:G:P	1:A:306:G:H22	2.33	0.51
1:A:682:G:C5	1:A:709:G:C6	2.98	0.51
1:A:76:G:C2	1:A:95:G:C4	2.98	0.51
1:A:962:C:N4	1:A:963:G:O6	2.43	0.51
1:A:966:G:H2'	1:A:967:C:O4'	2.09	0.51
22:C:121:PHE:CZ	22:C:131:ILE:HG23	2.29	0.51
22:C:15:ILE:O	22:C:105:LEU:HB3	2.10	0.51
23:D:1034:G:C5	23:D:1035:U:C4	2.97	0.51
23:D:1085:A:C5'	23:D:1106:G:C8	2.93	0.51
23:D:1583:A:H5'	23:D:1585:C:H5'	1.92	0.51
23:D:1978:A:C6	23:D:1979:C:C4	2.97	0.51
23:D:2075:U:N3	23:D:2238:G:O6	2.41	0.51
23:D:2298:A:C6	23:D:2321:G:C6	2.98	0.51
23:D:2373:G:N1	23:D:2381:C:C4	2.78	0.51
23:D:2466:C:N3	23:D:2485:G:C6	2.78	0.51
23:D:2622:C:H2'	23:D:2623:G:O4'	2.10	0.51
23:D:2718:G:C2	23:D:2719:G:C4	2.99	0.51
23:D:415:A:C6	23:D:416:C:C2	2.97	0.51
23:D:612:G:O2'	23:D:616:A:N7	2.43	0.51
23:D:593:G:N2	23:D:665:C:N3	2.58	0.51
23:D:686:G:H2'	23:D:686:G:N3	2.25	0.51
23:D:729:G:C2	23:D:730:C:C4	2.98	0.51
23:D:81:G:C6	23:D:82:G:C6	2.99	0.51
24:E:82:G:H1	24:E:94:C:H42	1.57	0.51
2:F:182:ILE:HG22	2:F:183:PRO:O	2.10	0.51
3:G:155:GLY:HA2	3:G:164:ARG:N	2.25	0.51
4:H:201:GLN:O	4:H:204:ILE:N	2.44	0.51
6:J:71:ARG:HD2	6:J:74:ASP:OD2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:5:ALA:HB1	13:Q:67:GLU:CD	2.30	0.51
15:S:77:ARG:HA	15:S:80:ALA:HB3	1.91	0.51
25:Z:14:VAL:HG12	25:Z:16:PRO:HD3	1.90	0.51
52:1:30:PRO:C	52:1:32:HIS:H	2.12	0.51
55:4:9:G:C6	55:4:46:G:C5	2.98	0.51
56:5:49:C:H6	56:5:49:C:OP2	1.93	0.51
1:A:1356:G:H4'	1:A:1357:A:OP1	2.10	0.51
1:A:1422:G:H2'	1:A:1423:G:H8	1.75	0.51
1:A:1452:C:H4'	1:A:1453:G:C8	2.46	0.51
1:A:173:U:H1'	1:A:197:A:C2	2.45	0.51
1:A:275:G:C4	1:A:276:G:C8	2.99	0.51
1:A:522:C:H2'	1:A:523:A:O4'	2.09	0.51
1:A:520:A:N6	1:A:529:G:H21	1.94	0.51
1:A:563:A:H2	1:A:884:U:H3	1.58	0.51
1:A:922:G:H3'	1:A:923:A:C8	2.45	0.51
1:A:938:A:H2'	1:A:939:G:O4'	2.10	0.51
22:C:16:ALA:C	22:C:120:LYS:HZ3	2.13	0.51
22:C:203:SER:OG	22:C:325:LEU:HD21	1.98	0.51
22:C:63:ALA:HB1	22:C:245:PHE:O	2.10	0.51
22:C:276:VAL:HG23	22:C:325:LEU:CD1	2.39	0.51
22:C:493:ASN:HB2	22:C:541:ILE:HA	1.91	0.51
22:C:60:LYS:HZ2	22:C:326:ASN:HD21	1.57	0.51
23:D:1085:A:O2'	23:D:1086:A:OP2	2.21	0.51
23:D:1370:C:C2	23:D:1371:G:C8	2.98	0.51
23:D:1501:C:H2'	23:D:1502:C:C6	2.46	0.51
23:D:1664:A:H3'	23:D:1664:A:C8	2.46	0.51
23:D:1773:A:C5	23:D:1829:A:C5	2.98	0.51
23:D:1836:C:H2'	23:D:1837:C:C6	2.46	0.51
23:D:1861:G:H8	23:D:1861:G:OP2	1.94	0.51
23:D:2164:C:H3'	23:D:2165:G:C8	2.46	0.51
23:D:2290:G:N2	23:D:2342:C:N3	2.46	0.51
23:D:2447:G:C6	23:D:2500:U:C2	2.98	0.51
23:D:271(C):U:HO2'	23:D:271:G:H8	1.57	0.51
23:D:2768:C:H2'	23:D:2769:C:O4'	2.11	0.51
23:D:2773:C:O2'	23:D:2774:C:O5'	2.28	0.51
23:D:2855:C:H2'	23:D:2856:C:H6	1.74	0.51
23:D:363(E):U:H2'	23:D:363(F):A:C8	2.45	0.51
23:D:381:G:C6	23:D:394:A:C5	2.98	0.51
24:E:81:G:C4	24:E:82:G:C8	2.98	0.51
3:G:12:LEU:HD23	14:R:57:ARG:HH21	1.76	0.51
3:G:68:VAL:HG13	3:G:70:VAL:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:84:ILE:HD11	3:G:101:LEU:HD22	1.92	0.51
5:I:11:ILE:HG21	5:I:105:VAL:HG22	1.92	0.51
9:M:75:ASP:O	9:M:78:LYS:HB3	2.09	0.51
13:Q:14:ARG:HA	13:Q:41:PRO:HB3	1.91	0.51
1:A:1171:G:C2	1:A:1172:C:C2	2.98	0.51
1:A:1411:C:H2'	1:A:1412:C:C6	2.45	0.51
1:A:184:G:O6	1:A:185:A:N6	2.44	0.51
1:A:195:A:H2'	1:A:196:A:C2	2.45	0.51
1:A:201:C:O2'	1:A:208:U:H2'	2.10	0.51
1:A:209:U:H4'	1:A:210:U:O5'	2.10	0.51
1:A:567:G:N2	1:A:568:G:H1'	2.26	0.51
1:A:629:G:H2'	1:A:630:G:H8	1.75	0.51
22:C:214:TYR:HB3	22:C:263:TRP:CB	2.40	0.51
22:C:86:HIS:HB2	22:C:116:GLU:OE2	2.08	0.51
23:D:1112:G:H2'	23:D:1113:U:C6	2.45	0.51
23:D:1182:A:H3'	23:D:1183:G:C2'	2.39	0.51
23:D:1306:C:C2	23:D:1307:A:C8	2.99	0.51
23:D:1467:C:H2'	23:D:1468:C:C6	2.45	0.51
23:D:1569:A:H2'	23:D:1570:A:H8	1.75	0.51
23:D:1726:G:N1	23:D:1733:G:N7	2.52	0.51
23:D:176:G:C5	23:D:177:G:C5	2.98	0.51
23:D:1804:C:N4	23:D:1813:G:C6	2.79	0.51
23:D:1839:G:C5	23:D:1927:A:H2	2.29	0.51
23:D:1935:G:O3'	23:D:1937:A:H2	1.93	0.51
23:D:2078:C:H2'	23:D:2079:U:C6	2.45	0.51
23:D:230:U:H2'	23:D:231:C:C6	2.46	0.51
23:D:2415:G:C5	23:D:2416:C:C4	2.99	0.51
23:D:2447:G:C2	23:D:2500:U:C4	2.98	0.51
23:D:2466:C:H2'	23:D:2467:C:C6	2.45	0.51
23:D:2625:G:H2'	23:D:2626:C:H6	1.75	0.51
23:D:2636:U:H2'	23:D:2637:U:C5	2.45	0.51
23:D:280:C:C2	23:D:283:A:C8	2.97	0.51
23:D:2817:G:C5	23:D:2830:G:C2	2.98	0.51
23:D:360:G:C8	23:D:361:G:C8	2.99	0.51
23:D:410:G:C6	23:D:418:G:C2	2.98	0.51
23:D:572:A:C3'	23:D:573:G:H8	2.23	0.51
23:D:669:G:C5	23:D:801:G:C6	2.98	0.51
23:D:874:G:H1	23:D:903:C:N4	2.07	0.51
24:E:63:G:H2'	24:E:64:C:C6	2.45	0.51
6:J:12:PRO:HB2	6:J:57:GLN:NE2	2.26	0.51
13:Q:90:LEU:HA	13:Q:93:ARG:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:S:31:LEU:O	15:S:34:LEU:HG	2.11	0.51
16:T:17:TYR:CD2	16:T:39:TYR:HD2	2.27	0.51
17:U:6:LEU:O	17:U:59:ILE:HG22	2.10	0.51
20:X:53:LEU:HB3	20:X:103:GLY:HA3	1.92	0.51
25:Z:131:LEU:HA	25:Z:134:ARG:HH11	1.76	0.51
1:A:1007:C:N3	1:A:1022:G:N2	2.57	0.51
1:A:1051:C:H2'	1:A:1052:U:O4'	2.09	0.51
1:A:1186:G:H2'	1:A:1187:G:C8	2.46	0.51
1:A:1255:G:H2'	1:A:1279:A:H62	1.75	0.51
1:A:191(A):G:H2'	1:A:191(B):G:H8	1.75	0.51
1:A:255:G:H2'	1:A:256:U:H6	1.76	0.51
1:A:370:C:H2'	1:A:371:G:H8	1.72	0.51
1:A:413:G:H1	4:H:36:ARG:HH12	1.56	0.51
1:A:482:A:H3'	1:A:483:C:C6	2.45	0.51
1:A:76:G:H1'	1:A:95:G:N2	2.26	0.51
22:C:151:GLU:C	22:C:153:GLU:H	2.12	0.51
22:C:213:PRO:O	22:C:264:LEU:CG	2.51	0.51
22:C:411:LYS:HG3	22:C:436:VAL:CG2	2.35	0.51
23:D:1007:C:H3'	23:D:1008:C:C6	2.46	0.51
23:D:1071:G:C8	23:D:1089:G:N7	2.79	0.51
23:D:1130:U:O2'	23:D:1131:G:OP1	2.28	0.51
23:D:1187:G:HO2'	23:D:1188:U:P	2.34	0.51
23:D:1317:A:H61	23:D:1335:U:H3	1.59	0.51
23:D:1565:C:C4	23:D:1567:A:C8	2.99	0.51
23:D:1591:G:H2'	23:D:1592:C:H6	1.74	0.51
23:D:1307:A:C6	23:D:1622:G:C6	2.99	0.51
23:D:1823:G:C4	23:D:1824:G:C8	2.98	0.51
23:D:1844:C:N4	23:D:1896:G:H1	2.08	0.51
23:D:1861:G:H1	23:D:1881:C:H42	1.56	0.51
23:D:226:G:N2	23:D:227:A:C4	2.78	0.51
23:D:2329:G:C2	23:D:2330:G:C4	2.97	0.51
23:D:2447:G:H3'	23:D:2499:C:OP1	2.11	0.51
23:D:2523:G:C2	23:D:2524:G:C4	2.98	0.51
23:D:2574:G:N7	23:D:2575:C:C4	2.78	0.51
23:D:522:G:C4	23:D:523:C:C5	2.98	0.51
23:D:559:G:H2'	23:D:560:C:O4'	2.10	0.51
23:D:584:C:H3'	23:D:585:G:H8	1.75	0.51
23:D:962:G:C2	23:D:963:U:C2	2.99	0.51
24:E:84:C:O2'	24:E:85:G:O5'	2.27	0.51
2:F:148:TYR:CD1	2:F:149:LEU:N	2.78	0.51
3:G:116:VAL:O	3:G:119:ARG:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:3:77:LEU:HD11	54:3:111:LYS:CE	2.36	0.51
54:3:54:PRO:O	54:3:70:LYS:N	2.42	0.51
1:A:1047:G:C8	1:A:1048:G:C8	2.97	0.51
1:A:1074:G:H2'	1:A:1075:C:C6	2.44	0.51
1:A:114:U:H2'	1:A:115:G:H8	1.75	0.51
1:A:1185:G:H2'	1:A:1186:G:O4'	2.10	0.51
1:A:1309:G:N2	1:A:1329:A:H8	2.08	0.51
1:A:1332:A:H2'	1:A:1333:A:O4'	2.10	0.51
1:A:1447:G:C6	1:A:1448:C:C4	2.99	0.51
1:A:345:C:H4'	1:A:346:G:O5'	2.09	0.51
1:A:371:G:H1	1:A:390:C:N4	2.07	0.51
1:A:507:C:C4	1:A:508:C:C4	2.99	0.51
1:A:540:G:H2'	1:A:541:G:H8	1.76	0.51
1:A:696:A:N6	1:A:797:C:O2'	2.43	0.51
1:A:756:C:H2'	1:A:757:U:O4'	2.10	0.51
22:C:145:PRO:CD	22:C:146:LEU:H	2.24	0.51
23:D:1007:C:P	23:D:1008:C:H3'	2.51	0.51
23:D:1104:C:H6	23:D:1104:C:H3'	1.75	0.51
23:D:1374:G:C6	23:D:1375:C:C4	2.98	0.51
23:D:1413:G:H2'	23:D:1414:G:C8	2.46	0.51
23:D:1429:G:H1'	23:D:1568:G:N3	2.26	0.51
23:D:1615:C:N4	23:D:1617:C:H1'	2.25	0.51
23:D:1615:C:N4	23:D:1617:C:O2	2.27	0.51
23:D:758:C:HO2'	23:D:1784:A:H61	1.53	0.51
23:D:1795:C:C4	23:D:1796:U:C4	2.99	0.51
23:D:1918:A:HO2'	23:D:1919:A:P	2.32	0.51
23:D:2019:A:N1	23:D:2020:A:N3	2.58	0.51
23:D:571:A:O5'	23:D:2030:A:N6	2.43	0.51
23:D:203:C:C6	23:D:204:A:C8	2.99	0.51
23:D:2132:U:OP1	23:D:2132:U:H3'	2.11	0.51
23:D:2307:G:C2	23:D:2308:G:H1'	2.45	0.51
23:D:2312:U:H2'	23:D:2313:C:C6	2.46	0.51
23:D:2389:G:H5''	23:D:2390:U:O5'	2.10	0.51
23:D:2069:G:N2	23:D:2442:C:N3	2.53	0.51
23:D:2442:C:O2'	23:D:2443:C:H5'	2.10	0.51
23:D:2691:C:H2'	23:D:2692:C:C6	2.45	0.51
23:D:27:G:C6	23:D:512:G:N1	2.78	0.51
23:D:807:U:C4	23:D:808:G:C5	2.99	0.51
23:D:977:G:N7	23:D:987:G:N1	2.59	0.51
2:F:32:ILE:HG13	2:F:34:ALA:N	2.26	0.51
7:K:70:LYS:HB3	7:K:96:GLN:HE21	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L:82:HIS:O	8:L:137:VAL:HA	2.10	0.51
9:M:8:GLY:HA3	9:M:79:LEU:HB2	1.93	0.51
13:Q:66:LEU:CD2	13:Q:67:GLU:H	2.18	0.51
16:T:19:ILE:HG22	16:T:36:ILE:HG13	1.93	0.51
25:Z:110:PHE:CE1	25:Z:113:VAL:HG23	2.46	0.51
52:1:24:TYR:CD2	52:1:35:ARG:HG2	2.45	0.51
54:3:37:PHE:CE1	54:3:63:ARG:HG2	2.45	0.51
55:4:12:G:H1	55:4:23:C:H42	1.58	0.51
1:A:946:A:C2	1:A:1236:A:H1'	2.46	0.51
1:A:1297:C:H4'	1:A:1298:C:O5'	2.10	0.51
1:A:1315:U:H3	1:A:1319:A:H8	1.59	0.51
1:A:1414:U:C2'	1:A:1415:G:H8	2.23	0.51
1:A:1508:G:H2'	1:A:1509:C:C6	2.45	0.51
1:A:1521:G:C2	1:A:1522:U:C2	2.99	0.51
1:A:192:U:C4	1:A:193:C:C4	2.98	0.51
1:A:248:C:N4	1:A:276:G:H1	2.09	0.51
1:A:672:U:OP1	6:J:80:ARG:HD2	2.11	0.51
22:C:198:ALA:CB	22:C:215:LEU:CD2	2.78	0.51
22:C:298:LYS:NZ	22:C:479:TYR:CE1	2.78	0.51
22:C:589:LYS:O	22:C:590:VAL:HB	2.10	0.51
22:C:3:ARG:O	22:C:5:ASP:N	2.43	0.51
23:D:1245:G:H2'	23:D:1246:A:C8	2.44	0.51
23:D:129:C:H2'	23:D:130:C:C6	2.46	0.51
23:D:1342:A:C5	23:D:1345:C:C4	2.98	0.51
23:D:1411:C:H42	23:D:1592:C:N4	2.09	0.51
23:D:161:U:C2'	23:D:171:G:H22	2.10	0.51
23:D:1839:G:C6	23:D:1840:G:C5	2.99	0.51
23:D:1989:G:C5	23:D:1990:C:N3	2.79	0.51
23:D:2227:A:HO2'	23:D:2228:G:P	2.33	0.51
23:D:2270:G:C2	23:D:2271:G:C4	2.99	0.51
23:D:2445:G:C2	23:D:2446:G:C5	2.99	0.51
23:D:2457:U:O2	23:D:2458:G:H1'	2.10	0.51
23:D:2697:G:N2	23:D:2710:C:N3	2.58	0.51
23:D:2722:G:C6	23:D:2723:C:C4	2.98	0.51
23:D:2840:C:C4	23:D:2841:C:C4	2.99	0.51
23:D:439:G:C4	23:D:440:G:C8	2.98	0.51
23:D:56:A:H2'	23:D:57:C:C6	2.45	0.51
23:D:833:U:H2'	23:D:834:C:H6	1.75	0.51
23:D:9:U:H2'	23:D:10:G:C8	2.45	0.51
3:G:132:ARG:O	3:G:135:LYS:HB3	2.11	0.51
1:A:921:U:O2'	5:I:19:MET:O	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1367:C:OP1	9:M:114:TYR:HA	2.11	0.51
1:A:1128:C:H4'	9:M:16:ARG:NH1	2.26	0.51
1:A:949:A:OP2	13:Q:106:ASN:HB2	2.08	0.51
1:A:765:G:OP1	15:S:50:HIS:NE2	2.44	0.51
19:W:62:ILE:HG13	19:W:66:MET:SD	2.51	0.51
25:Z:153:ILE:O	25:Z:156:ILE:HG13	2.10	0.51
54:3:74:ALA:HB1	54:3:76:TYR:H	1.76	0.51
54:3:72:PRO:HB2	54:3:74:ALA:HB2	1.93	0.51
1:A:1443:G:O2'	1:A:1446:A:H5'	2.11	0.51
1:A:1518:A:C2	1:A:1519:A:C4	2.99	0.51
1:A:341:C:H2'	1:A:342:C:C6	2.46	0.51
1:A:670:G:C4	1:A:671:G:C8	2.99	0.51
1:A:936:C:C4	1:A:937:A:C6	2.99	0.51
1:A:940:C:H2'	1:A:941:G:C8	2.46	0.51
22:C:121:PHE:HE1	22:C:131:ILE:CD1	2.24	0.51
22:C:431:LYS:CB	22:C:458:GLU:OE1	2.54	0.51
22:C:490:VAL:C	22:C:491:LYS:HD2	2.29	0.51
22:C:495:LEU:HB3	22:C:538:GLN:C	2.31	0.51
22:C:543:GLY:HA3	22:C:544:LYS:CB	2.36	0.51
23:D:1114:G:H2'	23:D:1115:G:H8	1.76	0.51
23:D:152:G:C6	23:D:175:G:C4	2.99	0.51
23:D:1804:C:N4	23:D:1813:G:O6	2.44	0.51
23:D:1821:A:H2'	23:D:1822:G:H8	1.74	0.51
23:D:1870:C:H2'	23:D:1871:A:C8	2.46	0.51
23:D:1897:G:H2'	23:D:1898:U:C6	2.46	0.51
23:D:18:C:H42	23:D:523:C:N4	2.08	0.51
23:D:1959:G:C6	23:D:1960:A:N6	2.79	0.51
23:D:195:A:N6	23:D:198:C:H3'	2.25	0.51
23:D:2230:G:H2'	23:D:2231:C:C6	2.46	0.51
23:D:223:A:OP2	23:D:223:A:H4'	2.09	0.51
23:D:2257:U:H2'	23:D:2258:C:C6	2.45	0.51
23:D:242:G:C6	23:D:254:G:N7	2.79	0.51
23:D:1051:G:H4'	23:D:2752:C:H1'	1.93	0.51
23:D:2811:G:N2	23:D:2891:G:C2	2.78	0.51
23:D:297:C:C4	23:D:298:G:C2	2.99	0.51
23:D:410:G:C5	23:D:411:G:C6	2.99	0.51
23:D:418:G:H2'	23:D:419:C:H6	1.75	0.51
23:D:422:A:C5	23:D:423:A:C5	2.99	0.51
23:D:438:G:H2'	23:D:439:G:C8	2.46	0.51
23:D:18:C:H42	23:D:523:C:H42	1.59	0.51
4:H:191:ARG:O	4:H:194:LEU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:202:LEU:HD23	4:H:205:GLU:OE1	2.11	0.51
5:I:132:ALA:O	5:I:136:MET:HG2	2.10	0.51
53:2:6:ASN:O	53:2:8:GLU:N	2.44	0.51
54:3:112:MET:HB2	54:3:122:ALA:HB2	1.92	0.51
55:4:75:C:N4	55:4:76:A:N7	2.59	0.51
56:5:10:G:H2'	56:5:11:C:C6	2.46	0.51
1:A:1093:A:H2'	1:A:1095:U:H5''	1.92	0.51
1:A:1319:A:C6	1:A:1323:G:C4	2.99	0.51
1:A:1440:C:H3'	1:A:1441:G:C8	2.46	0.51
1:A:1502:A:N1	1:A:1504:G:N2	2.59	0.51
1:A:186(B):C:H2'	1:A:186(C):G:C8	2.43	0.51
1:A:293:G:C5	1:A:294:U:C4	2.98	0.51
1:A:325:A:H2'	1:A:326:G:C8	2.46	0.51
1:A:398:C:H2'	1:A:399:G:C8	2.42	0.51
1:A:484:G:C8	1:A:486:U:N3	2.79	0.51
1:A:617:G:C2	1:A:618:C:N3	2.79	0.51
1:A:689:C:OP1	11:O:55:LYS:NZ	2.31	0.51
1:A:773:G:C6	1:A:774:G:C5	2.99	0.51
1:A:80:G:H1	1:A:89:U:H3	1.58	0.51
1:A:948:C:H3'	13:Q:106:ASN:HB3	1.93	0.51
1:A:971:G:H5''	1:A:972:C:H5''	1.93	0.51
22:C:201:PHE:HB3	22:C:214:TYR:CE1	2.46	0.51
22:C:280:ILE:H	22:C:290:PRO:HG3	1.76	0.51
22:C:335:GLU:OE2	22:C:344:PHE:CD2	2.59	0.51
22:C:538:GLN:HB2	22:C:545:ILE:HG23	1.92	0.51
23:D:1024:G:H22	23:D:1139:G:H1	1.58	0.51
23:D:1176:G:H3'	23:D:1177:A:C8	2.46	0.51
23:D:818:G:N1	23:D:1188:U:OP2	2.37	0.51
23:D:1365:A:C5	23:D:1366:A:C5	2.98	0.51
23:D:1525:G:C6	23:D:1526:G:C2	2.99	0.51
23:D:1835:G:N3	23:D:1931:U:N3	2.59	0.51
1:A:1494:G:H5'	23:D:1913:A:C8	2.46	0.51
22:C:556:LYS:CD	23:D:1943:U:O3'	2.56	0.51
23:D:197:A:H3'	23:D:198:C:C6	2.46	0.51
23:D:2048:G:C2	23:D:2049:G:C4	2.98	0.51
23:D:2234:G:H2'	23:D:2235:G:C8	2.42	0.51
23:D:2340:G:H2'	23:D:2341:G:C8	2.45	0.51
23:D:2403:C:H2'	23:D:2404:C:C6	2.46	0.51
23:D:2686:G:C2	23:D:2687:U:N3	2.79	0.51
23:D:2781:A:C4	23:D:2782:G:H1'	2.46	0.51
23:D:2630:G:H1'	23:D:2790:A:H2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:352:G:N1	23:D:353:G:C4	2.79	0.51
23:D:359:A:H2'	23:D:361:G:C6	2.46	0.51
23:D:265:A:C6	23:D:428:A:C5	2.98	0.51
23:D:576:U:O2	23:D:576:U:H2'	2.11	0.51
23:D:679:C:H2'	23:D:680:G:H8	1.75	0.51
23:D:702:G:C6	23:D:731:C:N4	2.78	0.51
23:D:894:C:N3	23:D:897:C:N4	2.58	0.51
23:D:915:C:C4	23:D:916:G:C6	2.99	0.51
23:D:974:G:C2	23:D:1186:G:C5	2.98	0.51
4:H:120:LEU:HD13	4:H:126:ILE:HD11	1.92	0.51
5:I:60:TYR:OH	5:I:64:ARG:NH2	2.43	0.51
5:I:89:ILE:HD12	5:I:121:LYS:O	2.11	0.51
1:A:280:C:C2	17:U:38:ARG:HD2	2.45	0.51
18:V:64:ARG:O	18:V:67:ALA:N	2.43	0.51
21:Y:10:ARG:HA	23:D:125:G:N2	155.09	0.51
54:3:103:GLN:HA	54:3:106:GLU:OE2	2.11	0.51
56:5:1:G:N2	56:5:72:C:O2	2.31	0.51
1:A:157:G:C6	1:A:165:C:C4	2.99	0.51
1:A:512:U:H2'	1:A:513:C:C6	2.45	0.51
1:A:714:G:N3	1:A:777:A:H1'	2.26	0.51
1:A:891:U:OP2	1:A:906:G:N1	2.38	0.51
1:A:936:C:H2'	1:A:937:A:C8	2.46	0.51
1:A:967:C:C4	1:A:968:A:C6	2.99	0.51
22:C:17:HIS:CE1	22:C:116:GLU:HG3	2.45	0.51
22:C:319:ALA:C	22:C:321:GLU:H	2.13	0.51
22:C:409:TYR:CB	22:C:453:GLU:OE2	2.59	0.51
22:C:499:GLU:C	22:C:501:VAL:H	2.14	0.51
23:D:1215:G:O2'	23:D:1216:G:H5'	2.11	0.51
23:D:126:A:H2'	23:D:127:A:O4'	2.11	0.51
23:D:11:G:C2	23:D:12:U:N3	2.78	0.51
23:D:1405:U:H3	23:D:1597:A:N6	2.05	0.51
23:D:14:A:C2	23:D:15:G:H1'	2.45	0.51
23:D:1565:C:C5	23:D:1567:A:C8	2.99	0.51
23:D:151:C:N4	23:D:175:G:H1	2.00	0.51
23:D:1776:G:C2	23:D:1789:A:N3	2.78	0.51
23:D:1802:A:C6	23:D:1803:A:C6	2.98	0.51
23:D:528:A:N7	23:D:2042:A:C6	2.79	0.51
23:D:2248:C:H3'	23:D:2249:U:C6	2.45	0.51
23:D:27:G:O2'	23:D:28:A:O5'	2.23	0.51
23:D:308:G:N1	23:D:309:G:N3	2.59	0.51
23:D:323:G:C6	23:D:333:G:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:300:A:N3	23:D:334:C:H1'	2.26	0.51
23:D:414:C:N4	23:D:2409:G:H1	2.09	0.51
23:D:481:G:H1	23:D:509:C:N4	2.08	0.51
23:D:530:G:H8	23:D:530:G:OP1	1.94	0.51
23:D:66:C:H3'	23:D:66:C:OP2	2.11	0.51
23:D:724:U:N3	23:D:725:G:N3	2.59	0.51
23:D:7:G:H22	23:D:2896:C:H2'	1.76	0.51
23:D:955:C:H2'	23:D:956:G:C8	2.46	0.51
24:E:116:G:C2	24:E:117:G:C4	2.99	0.51
24:E:117:G:H2'	24:E:118:G:H8	1.76	0.51
2:F:101:MET:HG3	2:F:102:LEU:HD12	1.93	0.51
2:F:17:PHE:CB	2:F:41:ILE:HG23	2.38	0.51
3:G:119:ARG:O	3:G:123:GLN:HG2	2.11	0.51
4:H:100:ARG:NH2	4:H:136:PRO:O	2.43	0.51
4:H:166:LYS:HE2	4:H:179:GLU:HA	1.93	0.51
4:H:53:ASP:HB3	4:H:57:ARG:HH12	1.76	0.51
4:H:90:GLY:O	4:H:93:PHE:HB3	2.11	0.51
8:L:120:THR:O	8:L:124:ALA:N	2.29	0.51
9:M:115:GLY:O	9:M:117:HIS:N	2.41	0.51
10:N:13:HIS:HA	10:N:68:HIS:ND1	2.25	0.51
11:O:50:TYR:CD1	11:O:54:ARG:HD2	2.41	0.51
12:P:32:PHE:HD1	12:P:86:ARG:N	2.09	0.51
13:Q:22:ILE:HB	13:Q:25:ILE:HD12	1.92	0.51
13:Q:20:THR:HA	13:Q:25:ILE:HG22	1.93	0.51
14:R:27:CYS:SG	14:R:43:CYS:N	2.82	0.51
15:S:39:LEU:HD22	15:S:56:LEU:HD13	1.93	0.51
18:V:87:ARG:NH1	18:V:88:LYS:O	2.44	0.51
55:4:22:G:H2'	55:4:23:C:C6	2.45	0.51
1:A:1175:G:H3'	1:A:1176:A:H8	1.76	0.51
1:A:117:G:N1	1:A:118:U:C2	2.80	0.51
1:A:1206:G:C6	1:A:1207:G:C6	2.99	0.51
1:A:1239:A:N7	1:A:1298:C:H1'	2.25	0.51
1:A:1440:C:H3'	1:A:1441:G:H8	1.76	0.51
1:A:1517:G:C6	1:A:1518:A:C5	2.99	0.51
1:A:356:A:H2'	1:A:357:G:C8	2.46	0.51
1:A:507:C:H42	1:A:524:G:H1	1.58	0.51
1:A:747:C:OP2	1:A:748:C:N4	2.39	0.51
22:C:11:ASN:OD1	22:C:100:VAL:CG1	2.31	0.51
22:C:342:PHE:CE2	22:C:370:ILE:CG1	2.85	0.51
22:C:380:VAL:H	22:C:391:HIS:HB2	1.76	0.51
22:C:412:LEU:HG	22:C:452:TYR:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:490:VAL:HG12	22:C:508:ALA:C	2.31	0.51
23:D:1027:A:H8	23:D:1027:A:P	2.33	0.51
23:D:1090:U:N1	23:D:1103:A:N6	2.57	0.51
23:D:111:A:H2'	23:D:112:U:C6	2.46	0.51
23:D:1322:A:H61	23:D:1334:G:C4'	2.23	0.51
23:D:1436:G:N2	23:D:1556:C:C2	2.79	0.51
23:D:1439:A:H62	23:D:1552:G:H21	1.59	0.51
23:D:1649:G:C6	23:D:1650:G:C6	2.98	0.51
23:D:1717:G:H2'	23:D:1718:G:O4'	2.11	0.51
23:D:171:G:C4	23:D:172:C:C4	2.98	0.51
23:D:1858:G:C2	23:D:1883:G:C2	2.98	0.51
23:D:2164:C:H3'	23:D:2165:G:H8	1.75	0.51
23:D:2266:A:H4'	23:D:2267:A:N3	2.26	0.51
23:D:234:C:N3	23:D:235:U:N3	2.58	0.51
23:D:2372:G:N2	23:D:2381:C:N3	2.52	0.51
23:D:2422:A:H2	23:D:2424:C:C4	2.29	0.51
23:D:2764:A:C5	23:D:2766:G:C5	2.99	0.51
23:D:2631:G:N2	23:D:2787:C:N3	2.45	0.51
23:D:354:G:H2'	23:D:355:G:C8	2.46	0.51
23:D:461:C:H2'	23:D:462:C:C6	2.45	0.51
23:D:494:G:H2'	23:D:495:G:C8	2.36	0.51
23:D:60:G:C8	23:D:63:U:C4	2.99	0.51
23:D:683:C:N4	23:D:684:G:O6	2.44	0.51
23:D:947:G:H1	23:D:970:C:H42	1.59	0.51
23:D:978:G:H2'	23:D:979:G:C8	2.46	0.51
24:E:114:G:H2'	24:E:115:G:C8	2.46	0.51
2:F:15:VAL:HG23	2:F:16:HIS:ND1	2.25	0.51
2:F:51:LEU:HB3	2:F:55:PHE:CE2	2.46	0.51
3:G:73:PRO:HD3	3:G:105:GLU:OE2	2.10	0.51
1:A:612:C:OP1	4:H:84:LYS:NZ	2.44	0.51
1:A:1298:C:N4	7:K:113:GLU:O	2.43	0.51
7:K:115:ARG:HB2	7:K:118:VAL:HG23	1.93	0.51
9:M:7:THR:HB	9:M:83:ARG:HH11	1.76	0.51
10:N:40:LEU:O	10:N:69:ASN:HB2	2.11	0.51
1:A:882:C:H41	12:P:5:PRO:HD3	1.75	0.51
1:A:376:G:H4'	16:T:5:ARG:CZ	2.41	0.51
17:U:93:GLN:O	17:U:96:GLN:HB3	2.10	0.51
19:W:11:VAL:O	19:W:11:VAL:HG12	2.11	0.51
25:Z:161:ILE:HD12	25:Z:162:GLU:H	1.77	0.51
25:Z:22:ILE:HD12	25:Z:190:ARG:NH1	2.22	0.51
55:4:51:C:H2'	55:4:52:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:39:U:OP1	56:5:39:U:H4'	2.11	0.50
1:A:1127:G:HO2'	1:A:1148:U:H3	1.58	0.50
1:A:1228:C:H2'	1:A:1229:A:C8	2.38	0.50
1:A:120:A:C2	1:A:122:G:C4	3.00	0.50
1:A:139:G:H1	1:A:224:C:H42	1.58	0.50
1:A:1442:G:C2	1:A:1446:A:H5''	2.46	0.50
1:A:437:U:H2'	1:A:438:G:C8	2.46	0.50
1:A:533:A:C6	1:A:536:C:C2	2.99	0.50
1:A:667:G:H2'	1:A:668:G:C8	2.46	0.50
1:A:832:C:N4	1:A:854:G:H1	2.09	0.50
22:C:113:VAL:HG12	22:C:114:GLU:N	2.24	0.50
22:C:336:SER:OG	22:C:392:ASN:OD1	2.28	0.50
22:C:489:LEU:CD2	22:C:507:ILE:HB	2.22	0.50
23:D:1164:G:H2'	23:D:1165:U:C6	2.47	0.50
23:D:1364:G:N2	23:D:1368:G:N7	2.58	0.50
23:D:1389:G:H2'	23:D:1390:U:N1	2.26	0.50
23:D:1465:G:H2'	23:D:1466:G:H8	1.77	0.50
23:D:1470:G:N1	23:D:1520:U:O4	2.44	0.50
23:D:1519:G:H3'	23:D:1520:U:O4'	2.12	0.50
23:D:155:C:H6	23:D:155:C:O5'	1.94	0.50
23:D:1630:G:H1	23:D:1636:C:N4	2.00	0.50
23:D:1973:G:H2'	23:D:1974:C:H6	1.75	0.50
23:D:2024:G:H2'	23:D:2025:C:C6	2.45	0.50
23:D:252:G:N2	23:D:253:C:C2	2.79	0.50
23:D:2872:G:C8	23:D:2873:A:N7	2.79	0.50
23:D:382:G:H2'	23:D:383:U:H6	1.75	0.50
23:D:383:U:H2'	23:D:385:C:H41	1.75	0.50
23:D:491:G:C2	23:D:492:A:C4	2.99	0.50
23:D:556:G:H2'	23:D:557:U:C2	2.46	0.50
23:D:784:A:N7	23:D:792:G:C5	2.79	0.50
6:J:33:TYR:CD1	6:J:71:ARG:HB3	2.38	0.50
8:L:4:ASP:OD1	8:L:8:ASP:HB2	2.12	0.50
8:L:7:ALA:HA	8:L:10:LEU:HD12	1.92	0.50
8:L:82:HIS:CD2	8:L:138:TRP:CD1	2.99	0.50
9:M:6:GLY:O	9:M:17:VAL:N	2.43	0.50
9:M:85:LEU:O	9:M:88:TYR:HB3	2.11	0.50
15:S:5:LYS:O	15:S:9:GLN:HG2	2.11	0.50
20:X:75:ASN:HD21	20:X:79:ARG:HH21	1.59	0.50
56:5:3:C:H6	56:5:3:C:OP2	1.94	0.50
1:A:113:G:C2	1:A:315:A:C2	3.00	0.50
1:A:1374:A:H2'	1:A:1375:A:C8	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1493:A:H2'	23:D:1913:A:N6	2.25	0.50
1:A:275:G:H2'	1:A:276:G:C8	2.45	0.50
1:A:334:C:H2'	1:A:335:C:H6	1.76	0.50
1:A:400:C:H2'	1:A:401:C:C6	2.46	0.50
1:A:457:C:H2'	1:A:458:C:C6	2.46	0.50
1:A:476:G:H2'	1:A:477:G:C8	2.45	0.50
1:A:776:G:H5''	1:A:777:A:OP1	2.11	0.50
1:A:903:G:H2'	1:A:904:C:C6	2.45	0.50
22:C:250:LEU:H	22:C:250:LEU:CD2	2.24	0.50
1:A:358:U:H5'	22:C:269:ARG:HH22	1.74	0.50
22:C:531:GLN:CG	22:C:532:LEU:N	2.73	0.50
23:D:1469:A:C8	23:D:1470:G:N2	2.80	0.50
23:D:1487:G:C4	23:D:1488:G:C8	2.99	0.50
23:D:1527:G:C6	23:D:1544:C:C2	2.99	0.50
23:D:1814:G:C5	23:D:1815:A:C6	3.00	0.50
23:D:1837:C:N3	23:D:1903:G:N2	2.50	0.50
23:D:1972:A:C2	23:D:1973:G:C5	2.99	0.50
23:D:1784:A:H8	23:D:1981:A:H2'	1.75	0.50
23:D:2322:A:C4	23:D:2323:G:C8	2.99	0.50
23:D:241:A:H2'	23:D:242:G:C4'	2.25	0.50
23:D:240:G:C5	23:D:241:A:N1	2.79	0.50
23:D:2431:U:H1'	23:D:2433:A:H2	1.75	0.50
23:D:2511:U:H3'	23:D:2512:C:C6	2.46	0.50
23:D:2564:A:H2'	23:D:2565:A:C8	2.47	0.50
23:D:260:G:H2'	23:D:261:G:H8	1.76	0.50
23:D:2627:G:H2'	23:D:2628:C:C6	2.46	0.50
23:D:220:G:N1	23:D:427:U:H3'	2.26	0.50
23:D:638:G:C5	23:D:639:U:C2	2.99	0.50
23:D:861:A:N6	23:D:916:G:H21	1.96	0.50
23:D:941:A:C4	23:D:942:G:C8	2.99	0.50
23:D:949:C:H42	23:D:968:G:H1	1.57	0.50
23:D:962:G:H2'	23:D:963:U:H6	1.76	0.50
24:E:15:A:C5	24:E:109:G:C5	2.99	0.50
4:H:142:PRO:HA	4:H:185:PHE:CE2	2.46	0.50
7:K:111:ARG:NH2	7:K:123:GLU:OE1	2.45	0.50
13:Q:52:GLU:HG2	13:Q:55:ARG:HE	1.77	0.50
17:U:10:VAL:HB	17:U:55:ASP:N	2.27	0.50
25:Z:40:THR:C	25:Z:216:THR:HG22	2.31	0.50
25:Z:49:ILE:HB	25:Z:56:GLN:OE1	2.11	0.50
1:A:1009:G:N7	1:A:1021:G:N1	2.59	0.50
1:A:1074:G:H2'	1:A:1075:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1095:U:C4	1:A:1096:C:C4	2.99	0.50
1:A:301:G:N2	1:A:302:G:C4	2.78	0.50
1:A:292:G:C5	1:A:309:G:C6	2.99	0.50
1:A:407:G:O2'	4:H:116:GLN:HG2	2.10	0.50
1:A:456:C:C4	1:A:477:G:N1	2.79	0.50
1:A:545:C:O2'	1:A:549:C:OP1	2.28	0.50
1:A:587:G:N1	1:A:754:C:OP2	2.44	0.50
1:A:834:C:C2	1:A:853:G:C2	3.00	0.50
1:A:894:G:C4	1:A:895:G:C8	2.99	0.50
1:A:892:A:C5	1:A:907:A:C5	3.00	0.50
22:C:189:LYS:HE3	22:C:219:GLU:CD	2.31	0.50
22:C:279:THR:HA	22:C:290:PRO:HG2	1.93	0.50
22:C:301:VAL:HB	22:C:348:PHE:C	2.31	0.50
22:C:403:GLU:O	22:C:404:GLU:HB2	2.11	0.50
22:C:41:MET:CB	22:C:45:PHE:CE2	2.88	0.50
23:D:1000:A:C5	23:D:1155:A:C5	3.00	0.50
23:D:1048:A:H2'	23:D:1049:C:C6	2.46	0.50
23:D:1203:G:O6	23:D:1240:U:H3'	2.11	0.50
23:D:1398:C:H2'	23:D:1399:C:H6	1.76	0.50
23:D:752:A:H62	23:D:1781:C:H4'	1.76	0.50
23:D:1815:A:H1'	23:D:1817:G:C1'	2.41	0.50
23:D:2082:A:H62	23:D:2237:G:H21	1.59	0.50
23:D:250:G:C6	23:D:251:A:C5	2.99	0.50
23:D:2537:U:C4	23:D:2538:C:N4	2.79	0.50
23:D:2505:G:C6	23:D:2576:G:C4	3.00	0.50
23:D:2603:G:H2'	23:D:2604:U:C6	2.43	0.50
23:D:2672:G:H2'	23:D:2673:G:C8	2.46	0.50
23:D:270(Q):C:H2'	23:D:270(R):G:O4'	2.11	0.50
23:D:2872:G:O2'	23:D:2873:A:O4'	2.20	0.50
23:D:29:U:C2	23:D:30:G:N7	2.79	0.50
23:D:379:G:C6	23:D:380:U:C4	2.99	0.50
23:D:446:G:OP2	23:D:446:G:C4	2.65	0.50
23:D:499:U:H3'	23:D:500:G:C8	2.47	0.50
23:D:529:A:C6	23:D:2042:A:C5	2.99	0.50
23:D:552:G:H2'	23:D:553:U:O4'	2.12	0.50
23:D:700:G:H1	23:D:732:C:N4	2.05	0.50
23:D:705:A:C4	23:D:727:A:C2	2.99	0.50
23:D:769:G:H2'	23:D:770:G:C8	2.47	0.50
23:D:822:U:H2'	23:D:823:G:C8	2.46	0.50
23:D:867:C:H2'	23:D:868:U:H6	1.76	0.50
23:D:950:G:H2'	23:D:951:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:E:39:A:C6	24:E:44:G:C6	2.99	0.50
24:E:99:A:C6	24:E:100:G:C6	2.99	0.50
2:F:234:PRO:HB3	2:F:238:LEU:HD13	1.93	0.50
1:A:1298:C:H41	7:K:114:ARG:C	2.14	0.50
8:L:11:THR:O	8:L:15:ASN:ND2	2.44	0.50
10:N:8:LEU:O	10:N:70:ARG:HB2	2.11	0.50
12:P:26:ALA:HB2	12:P:98:TYR:CE1	2.46	0.50
12:P:58:VAL:N	12:P:66:VAL:O	2.39	0.50
1:A:1309:G:OP1	13:Q:88:ARG:NH2	2.45	0.50
19:W:53:ASN:OD1	19:W:54:GLY:N	2.45	0.50
25:Z:161:ILE:CD1	25:Z:192:PHE:CD1	2.95	0.50
1:A:1048:G:OP2	14:R:4:LYS:HB3	2.10	0.50
1:A:121:C:H41	1:A:235:C:H3'	1.75	0.50
1:A:1373:G:O2'	1:A:1374:A:O5'	2.23	0.50
1:A:1392:G:H2'	1:A:1393:U:C6	2.46	0.50
1:A:1462:G:H2'	1:A:1463:C:C6	2.46	0.50
1:A:237:C:H2'	1:A:238:G:H8	1.76	0.50
1:A:273:A:N6	1:A:274:A:C6	2.80	0.50
1:A:515:G:C6	1:A:516:U:C2	3.00	0.50
1:A:557:G:C6	1:A:558:G:C6	3.00	0.50
1:A:682:G:C6	1:A:683:G:C5	3.00	0.50
1:A:781:A:N6	1:A:802:A:N3	2.60	0.50
1:A:803:G:H2'	1:A:804:U:O4'	2.11	0.50
1:A:963:G:C6	1:A:964:A:C6	2.99	0.50
22:C:338:THR:HG21	22:C:503:ALA:HB1	1.92	0.50
22:C:406:LEU:O	22:C:406:LEU:HD23	2.12	0.50
23:D:1006:C:H2'	23:D:1007:C:C6	2.47	0.50
23:D:1107:G:C3'	23:D:1108:U:C5'	2.90	0.50
23:D:1235:G:C4	23:D:1236:G:N2	2.79	0.50
23:D:142:G:H2'	23:D:143:C:H6	1.77	0.50
23:D:1469:A:N3	23:D:1522:G:N2	2.51	0.50
23:D:1505:C:C4	23:D:1506:C:N4	2.79	0.50
23:D:1307:A:N1	23:D:1622:G:C6	2.79	0.50
23:D:1633:G:C6	23:D:1635:G:C5	3.00	0.50
23:D:1655:A:H2'	23:D:1656:C:C5'	2.41	0.50
23:D:1734:C:H6	23:D:1734:C:OP2	1.94	0.50
23:D:1746:G:H2'	23:D:1747:G:C8	2.46	0.50
23:D:1883:G:H5''	23:D:1884:A:OP1	2.10	0.50
23:D:1784:A:C6	23:D:1981:A:C2	2.99	0.50
23:D:1992:G:N2	23:D:1996:C:C2	2.78	0.50
23:D:2105:C:C5	23:D:2107:C:N4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2251:G:N2	23:D:2252:G:H1'	2.26	0.50
23:D:2499:C:H2'	23:D:2499:C:O2	2.11	0.50
23:D:2572:A:H4'	23:D:2573:C:H5''	1.94	0.50
23:D:2616:C:H2'	23:D:2617:C:C6	2.46	0.50
23:D:2644:G:H22	23:D:2771:C:N4	2.09	0.50
23:D:397:G:C4	23:D:398:G:C8	3.00	0.50
23:D:534:U:H2'	23:D:535:C:H6	1.75	0.50
23:D:910:A:C6	23:D:911:A:N6	2.80	0.50
23:D:941:A:C2	23:D:942:G:C4	3.00	0.50
23:D:971:C:C4	23:D:972:G:N2	2.80	0.50
6:J:50:TYR:CE2	18:V:77:GLY:HA2	2.47	0.50
11:O:29:ILE:HA	11:O:44:SER:HA	1.93	0.50
1:A:948:C:OP1	13:Q:108:ARG:N	2.45	0.50
17:U:83:ASP:OD1	17:U:84:LEU:N	2.45	0.50
18:V:31:LEU:HD23	18:V:66:LEU:HB3	1.93	0.50
19:W:3:ARG:NH1	19:W:63:THR:O	2.44	0.50
21:Y:6:ARG:HB2	21:Y:15:ARG:HH21	1.76	0.50
25:Z:3:HIS:HD2	25:Z:11:LEU:HD23	1.76	0.50
54:3:93:ARG:CG	54:3:93:ARG:NH1	2.75	0.50
1:A:1245:A:N1	1:A:1293:G:C6	2.80	0.50
1:A:1339:A:H3'	1:A:1340:A:O4'	2.12	0.50
1:A:137:C:OP1	16:T:65:GLN:NE2	2.44	0.50
1:A:138:G:C6	1:A:226:G:C6	3.00	0.50
1:A:1487:G:C2	1:A:1488:G:C5	2.98	0.50
1:A:173:U:H4'	1:A:197:A:H1'	1.94	0.50
1:A:139:G:H1	1:A:224:C:N4	2.10	0.50
1:A:255:G:H2'	1:A:256:U:C6	2.45	0.50
1:A:475:G:C2	1:A:476:G:C4	2.99	0.50
1:A:489:C:N4	1:A:490:G:O6	2.44	0.50
1:A:444:C:N4	1:A:490:G:H1	2.08	0.50
1:A:879:C:OP2	1:A:879:C:H6	1.95	0.50
22:C:106:VAL:HG22	22:C:134:VAL:HG22	1.93	0.50
22:C:198:ALA:O	22:C:215:LEU:CD1	2.57	0.50
22:C:317:ARG:O	22:C:318:ASP:HB3	2.11	0.50
22:C:455:PRO:CG	22:C:458:GLU:CB	2.77	0.50
22:C:495:LEU:O	22:C:538:GLN:N	2.44	0.50
23:D:1013:C:OP2	23:D:1142:U:N3	2.36	0.50
23:D:1258:C:H2'	23:D:1259:G:C8	2.46	0.50
23:D:1326:U:H2'	23:D:1327:C:C6	2.42	0.50
23:D:1565:C:N3	23:D:1567:A:H1'	2.27	0.50
23:D:1423:G:N1	23:D:1576:U:C4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:178:G:H2'	23:D:179:G:O4'	2.12	0.50
23:D:179:G:C6	23:D:180:G:C6	3.00	0.50
23:D:529:A:C6	23:D:2023:G:C5	3.00	0.50
23:D:2443:C:O2'	23:D:2444:G:O4'	2.30	0.50
23:D:2663:G:C6	23:D:2664:G:C2	3.00	0.50
23:D:27:G:N2	23:D:513:A:OP2	2.44	0.50
23:D:2851:A:C5	23:D:2852:G:C5	3.00	0.50
23:D:2842:G:C6	23:D:2876:G:C6	3.00	0.50
23:D:371:A:H4'	23:D:372:G:OP2	2.10	0.50
23:D:408:G:C2	23:D:409:C:C2	3.00	0.50
23:D:713:G:N2	23:D:718:A:H62	2.09	0.50
23:D:817:C:H2'	23:D:818:G:C8	2.46	0.50
23:D:974(A):C:N4	23:D:989:G:H1	2.05	0.50
24:E:54:G:C5	24:E:55:U:C4	2.99	0.50
24:E:6:C:C2	24:E:115:G:C2	2.99	0.50
3:G:172:ARG:HB2	3:G:203:PHE:CD2	2.46	0.50
1:A:437:U:O2'	4:H:123:HIS:ND1	2.43	0.50
4:H:26:CYS:CA	4:H:31:CYS:HB2	2.34	0.50
7:K:103:TRP:HH2	7:K:141:VAL:HG21	1.76	0.50
13:Q:66:LEU:C	13:Q:70:LEU:HB2	2.32	0.50
1:A:263:A:H5''	20:X:79:ARG:NH2	2.27	0.50
54:3:34:ILE:CG2	54:3:63:ARG:CD	2.82	0.50
1:A:116:A:N6	1:A:313:A:O2'	2.45	0.50
1:A:1171:G:H2'	1:A:1172:C:C6	2.46	0.50
1:A:1328:C:O2	1:A:1328:C:H2'	2.11	0.50
1:A:1425:U:H1'	1:A:1476:G:N2	2.27	0.50
1:A:310:G:H2'	1:A:311:C:C6	2.47	0.50
1:A:373:A:H2'	1:A:374:A:H8	1.76	0.50
1:A:399:G:H2'	1:A:400:C:H6	1.76	0.50
1:A:31:G:C6	1:A:48:C:C2	2.99	0.50
1:A:563:A:C5	1:A:567:G:C4	2.99	0.50
1:A:573:A:OP2	1:A:573:A:H8	1.95	0.50
1:A:731:G:H2'	1:A:732:C:O4'	2.11	0.50
1:A:789:U:N3	1:A:792:A:OP2	2.44	0.50
1:A:899:C:H2'	1:A:900:A:O4'	2.12	0.50
1:A:911:U:H2'	1:A:912:C:H6	1.76	0.50
1:A:989:C:O2	1:A:1216:G:N2	2.44	0.50
22:C:115:ALA:N	22:C:474:TYR:CE1	2.80	0.50
22:C:109:ALA:H	22:C:137:LYS:CD	2.24	0.50
22:C:180:ALA:HA	22:C:183:GLN:NE2	2.26	0.50
22:C:322:LYS:O	22:C:323:LEU:HG	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:496:VAL:HG21	22:C:501:VAL:CG2	2.41	0.50
22:C:517:ALA:HA	22:C:521:VAL:CG2	2.42	0.50
23:D:1057:A:N1	23:D:1086:A:N3	2.60	0.50
23:D:1057:A:C5	23:D:1087:G:OP1	2.64	0.50
23:D:1143:A:C6	23:D:1144:G:C6	3.00	0.50
23:D:1426:G:O6	23:D:1427:A:N6	2.44	0.50
23:D:1494:A:H2'	23:D:1495:A:C8	2.46	0.50
23:D:1633:G:C2	23:D:1635:G:C8	2.99	0.50
23:D:1672:C:H2'	23:D:1673:U:O4'	2.11	0.50
23:D:1831:G:C6	23:D:1832:C:C4	3.00	0.50
23:D:17:G:H2'	23:D:18:C:H6	1.75	0.50
23:D:1952:A:C5	23:D:1953:A:C6	3.00	0.50
23:D:2277:G:C2	23:D:2278:A:C8	2.99	0.50
23:D:2350:C:O2'	23:D:2351:G:OP1	2.29	0.50
23:D:411:G:H1	23:D:417:C:H42	1.60	0.50
23:D:577:G:C6	23:D:578:A:C6	3.00	0.50
23:D:609:A:C6	23:D:609(A):G:C6	3.00	0.50
23:D:6:A:H2'	23:D:7:G:H8	1.77	0.50
23:D:740:U:C2'	23:D:741:G:H8	2.23	0.50
23:D:862:G:C6	23:D:863:A:C4	3.00	0.50
23:D:884:C:H4'	23:D:885:C:O5'	2.11	0.50
23:D:92:G:H2'	23:D:93:C:O4'	2.12	0.50
23:D:998:C:H2'	23:D:999:U:H6	1.75	0.50
6:J:15:ASP:OD1	6:J:18:GLN:HB3	2.12	0.50
15:S:71:GLN:HA	15:S:78:TYR:CG	2.46	0.50
1:A:262:A:C4'	20:X:74:LYS:HG2	2.33	0.50
1:A:1090:U:H2'	1:A:1091:U:C6	2.46	0.50
1:A:1110:A:H2'	1:A:1111:A:O4'	2.12	0.50
1:A:123:C:OP1	1:A:311:C:O2'	2.22	0.50
1:A:1310:G:OP1	13:Q:88:ARG:NH2	2.37	0.50
1:A:134:A:N7	1:A:135:C:N4	2.59	0.50
1:A:139:G:H2'	1:A:140:A:C8	2.47	0.50
1:A:1503:A:N3	1:A:1503:A:H2'	2.25	0.50
1:A:144:G:N1	1:A:179:A:N7	2.59	0.50
1:A:299:G:C2	1:A:300:A:C4	3.00	0.50
1:A:585:G:C5	1:A:586:C:C4	2.99	0.50
1:A:682:G:N1	1:A:708:C:O2	2.35	0.50
1:A:726:C:H2'	1:A:727:G:O4'	2.11	0.50
1:A:803:G:C2	1:A:804:U:H1'	2.46	0.50
1:A:922:G:C5	1:A:923:A:C5	3.00	0.50
22:C:63:ALA:CB	22:C:245:PHE:HD1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:405:ILE:CD1	22:C:489:LEU:HB2	2.41	0.50
22:C:49:LEU:O	22:C:51:LEU:N	2.38	0.50
22:C:7:SER:O	22:C:8:ARG:HB2	2.11	0.50
23:D:1047:G:N7	23:D:1110:G:N1	2.59	0.50
23:D:1238:G:H4'	23:D:1238:G:OP1	2.12	0.50
23:D:1272:A:H2'	23:D:1646:C:H42	1.76	0.50
23:D:1415:U:H3	23:D:1587:A:H61	1.60	0.50
23:D:142:G:H2'	23:D:143:C:C6	2.46	0.50
23:D:1479:G:H4'	23:D:1559:G:O6	2.11	0.50
23:D:1778:U:H2'	23:D:1779:U:C6	2.47	0.50
23:D:1806:C:N4	23:D:1811:G:H1	2.09	0.50
23:D:1819:A:H1'	23:D:1821:A:N9	2.27	0.50
23:D:181:A:C6	23:D:182:A:C5	2.99	0.50
23:D:1925:C:H2'	23:D:1926:U:C2	2.46	0.50
23:D:2267:A:H5''	23:D:2268:A:H5'	1.92	0.50
23:D:2441:C:H2'	23:D:2442:C:C6	2.46	0.50
23:D:2468:G:O2'	23:D:2469:A:O5'	2.27	0.50
23:D:2680:C:H2'	23:D:2681:C:C4	2.47	0.50
23:D:433:C:H2'	23:D:434:U:C6	2.46	0.50
23:D:436:C:H2'	23:D:438:G:H8	1.76	0.50
23:D:448:U:O2	23:D:448:U:H2'	2.12	0.50
23:D:60:G:C2	23:D:68:G:N2	2.79	0.50
23:D:594:U:H3	23:D:663:G:H1	1.57	0.50
23:D:670:A:H4'	23:D:671:C:H5'	1.93	0.50
23:D:819:A:C5	23:D:1189:A:C2	2.99	0.50
23:D:861:A:C6	23:D:917:A:H2	2.30	0.50
2:F:17:PHE:HB3	2:F:42:ILE:HG22	1.91	0.50
4:H:184:LYS:HD2	4:H:185:PHE:H	1.76	0.50
8:L:96:GLY:O	8:L:99:GLU:HB2	2.12	0.50
17:U:68:ARG:O	17:U:70:ARG:HG2	2.12	0.50
25:Z:180:PHE:N	25:Z:181:PRO:CD	2.75	0.50
25:Z:40:THR:O	25:Z:216:THR:CA	2.58	0.50
23:D:2132:U:H3	25:Z:6:ARG:HB2	1.76	0.50
55:4:29:G:C2	55:4:42:G:C2	2.99	0.50
55:4:6:G:N2	55:4:67:C:N3	2.47	0.50
1:A:1232:U:C2	1:A:1233:G:C8	3.00	0.50
1:A:1321:C:C5	1:A:1322:C:H2'	2.46	0.50
1:A:196:A:O2'	1:A:197:A:OP1	2.30	0.50
1:A:230:G:C2	1:A:231:G:C4	3.00	0.50
1:A:292:G:OP2	1:A:305:G:N2	2.35	0.50
1:A:59:A:C6	1:A:354:G:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:559:A:C4	1:A:561:U:C4	3.00	0.50
1:A:597:G:H3'	1:A:598:U:H6	1.77	0.50
1:A:724:G:OP1	1:A:854:G:O2'	2.28	0.50
1:A:950:U:H3'	13:Q:102:ARG:HH22	1.76	0.50
22:C:177:ILE:HG22	22:C:181:ILE:HG13	1.94	0.50
22:C:206:ASP:O	22:C:208:TYR:N	2.41	0.50
22:C:231:TYR:OH	22:C:290:PRO:CD	2.60	0.50
23:D:1147:C:H2'	23:D:1148:A:C8	2.46	0.50
23:D:1151:G:C4	23:D:1152:C:C5	3.00	0.50
23:D:1203:G:C6	23:D:1241:A:H1'	2.46	0.50
23:D:142:G:C6	23:D:143:C:C4	3.00	0.50
23:D:151:C:H2'	23:D:152:G:H8	1.76	0.50
23:D:1586:A:O2'	23:D:1587:A:H8	1.95	0.50
23:D:1675:C:H2'	23:D:1676:A:O4'	2.11	0.50
23:D:1960:A:H2'	23:D:1961:C:C6	2.46	0.50
23:D:196:A:C8	23:D:805:G:N2	2.79	0.50
23:D:2069:G:H2'	23:D:2070:G:C8	2.47	0.50
23:D:2079:U:C2	23:D:2080:G:C8	3.00	0.50
23:D:2151:G:OP1	25:Z:4:GLY:HA3	2.11	0.50
23:D:2317:C:N4	23:D:2318:G:O6	2.45	0.50
23:D:237:C:H2'	23:D:238:C:C6	2.46	0.50
23:D:2415:G:C4	23:D:2416:C:C5	3.00	0.50
23:D:2443:C:H2'	23:D:2444:G:C8	2.41	0.50
22:C:570:LYS:NZ	23:D:2493:U:O3'	2.40	0.50
23:D:2534:A:H3'	23:D:2535:G:H5''	1.94	0.50
23:D:2843:G:C4	23:D:2844:G:C8	2.99	0.50
23:D:2858:C:N4	23:D:2859:G:O6	2.45	0.50
23:D:299:A:H2'	23:D:300:A:C8	2.47	0.50
23:D:693:C:N3	23:D:769:G:N2	2.46	0.50
23:D:705:A:N3	23:D:705:A:H2'	2.26	0.50
23:D:977:G:N2	23:D:986:C:O2	2.39	0.50
24:E:90:C:H2'	24:E:91:C:C6	2.46	0.50
4:H:194:LEU:O	4:H:197:PRO:HD3	2.12	0.50
1:A:426:G:OP1	4:H:38:TYR:OH	2.27	0.50
4:H:60:GLU:HG3	4:H:63:LYS:HZ1	1.77	0.50
4:H:98:GLU:OE1	4:H:103:ASN:ND2	2.45	0.50
1:A:590:C:H5''	8:L:30:ARG:HG3	1.93	0.50
9:M:91:ASP:C	9:M:93:ARG:H	2.16	0.50
13:Q:65:LYS:CD	13:Q:73:GLU:CG	2.83	0.50
15:S:27:VAL:O	15:S:31:LEU:HD13	2.11	0.50
1:A:617:G:O2'	16:T:44:THR:HG21	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1303:C:H2'	1:A:1304:G:O4'	2.11	0.50
1:A:1356:G:H2'	1:A:1357:A:C4	2.47	0.50
1:A:1416:G:N3	1:A:1417:G:H1'	2.27	0.50
1:A:260:G:C6	1:A:261:U:C4	3.00	0.50
1:A:340:U:H3	1:A:349:A:H61	1.59	0.50
1:A:45:U:H2'	1:A:46:G:H8	1.75	0.50
1:A:515:G:C2	1:A:516:U:H1'	2.47	0.50
1:A:612:C:H2'	1:A:613:C:H6	1.74	0.50
1:A:74:C:H2'	1:A:75:C:C6	2.47	0.50
22:C:162:GLU:OE1	22:C:184:ARG:NE	2.45	0.50
22:C:250:LEU:HD22	22:C:250:LEU:H	1.77	0.50
22:C:344:PHE:CD2	22:C:344:PHE:N	2.79	0.50
22:C:369:LEU:N	22:C:369:LEU:CD1	2.73	0.50
22:C:431:LYS:NZ	22:C:432:ARG:HD3	2.27	0.50
23:D:1017:G:C5	23:D:1018:C:C4	3.00	0.50
23:D:1021:A:N7	23:D:1023:U:H5''	2.27	0.50
23:D:1024:G:H1	23:D:1138:G:H1	1.59	0.50
23:D:1087:G:N9	23:D:1103:A:C2	2.80	0.50
23:D:1087:G:H8	23:D:1089:G:H1'	1.76	0.50
23:D:974:G:C4	23:D:1186:G:C4	3.00	0.50
23:D:1395:A:H4'	23:D:1395:A:OP1	2.12	0.50
23:D:149:A:C6	23:D:150:C:N3	2.80	0.50
23:D:1427:A:C2	23:D:1569:A:H5'	2.46	0.50
23:D:1642:G:C2	23:D:1643:G:C4	2.99	0.50
23:D:1717:G:C4	23:D:1743:G:H1'	2.46	0.50
23:D:1776:G:C2	23:D:1788:C:N3	2.80	0.50
23:D:1922:G:C6	23:D:1923:U:C2	3.00	0.50
23:D:1952:A:H2'	23:D:1953:A:N9	2.27	0.50
23:D:1982:C:H3'	23:D:1982:C:OP1	2.11	0.50
23:D:1989:G:H2'	23:D:1990:C:C6	2.47	0.50
23:D:1993:U:C2	23:D:1994:C:C6	3.00	0.50
23:D:1998:G:H2'	23:D:1999:C:C6	2.47	0.50
23:D:2007:C:O2'	23:D:2008:C:O4'	2.27	0.50
23:D:570:G:N2	23:D:2030:A:C4	2.80	0.50
23:D:2158:A:HO2'	23:D:2159:G:P	2.34	0.50
23:D:2217:G:C2	23:D:2218:G:C5	3.00	0.50
23:D:2217:G:H2'	23:D:2218:G:H8	1.75	0.50
23:D:2323:G:C6	23:D:2324:C:C4	3.00	0.50
23:D:2441:C:H2'	23:D:2442:C:H6	1.76	0.50
23:D:265:A:C5	23:D:428:A:C5	2.99	0.50
23:D:271(C):U:N3	23:D:421:U:O2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:514:A:C2	23:D:515:A:C5	3.00	0.50
23:D:595:C:H2'	23:D:596:G:C8	2.47	0.50
23:D:737:C:C2	23:D:738:G:H8	2.30	0.50
23:D:954:G:O2'	23:D:955:C:H5'	2.11	0.50
23:D:951:C:N4	23:D:966:G:H1	2.10	0.50
24:E:24:G:H1'	24:E:27:C:N4	2.26	0.50
4:H:64:LEU:HD12	4:H:67:ILE:HD11	1.94	0.50
5:I:20:GLN:N	5:I:23:GLY:O	2.42	0.50
5:I:57:LYS:HG2	5:I:61:TYR:HE2	1.76	0.50
11:O:32:ILE:O	11:O:40:ILE:N	2.30	0.50
10:N:61:GLU:HB3	14:R:45:ARG:HH21	1.77	0.50
16:T:1:MET:N	16:T:24:ALA:HB3	2.27	0.50
19:W:40:ILE:HG21	19:W:62:ILE:HD11	1.94	0.50
20:X:92:LEU:HA	20:X:96:GLY:HA3	1.93	0.50
56:5:18:G:N2	56:5:55:U:O2'	2.45	0.49
56:5:56:C:H2'	56:5:57:G:C8	2.46	0.49
1:A:1262:C:N4	1:A:1273:G:H1	2.10	0.49
1:A:1302:U:C2	13:Q:17:VAL:HG21	2.47	0.49
1:A:1309:G:C2	1:A:1329:A:H8	2.30	0.49
1:A:1309:G:H21	1:A:1329:A:H5''	1.76	0.49
1:A:1350:A:H61	1:A:1372:U:H3	1.60	0.49
1:A:298:A:H3'	1:A:299:G:C8	2.44	0.49
1:A:303:A:H2'	1:A:304:U:C6	2.47	0.49
1:A:357:G:H2'	1:A:358:U:C5	2.46	0.49
1:A:908:A:C6	1:A:909:A:C6	3.00	0.49
22:C:79:HIS:ND1	22:C:216:ARG:CZ	2.73	0.49
22:C:241:LYS:HD2	22:C:254:GLU:HA	1.92	0.49
22:C:315:LYS:O	22:C:317:ARG:N	2.39	0.49
22:C:455:PRO:O	22:C:459:ILE:HG13	2.12	0.49
22:C:490:VAL:CG2	22:C:491:LYS:H	2.05	0.49
22:C:516:MET:O	22:C:519:ALA:HB3	2.11	0.49
22:C:517:ALA:C	22:C:519:ALA:H	2.14	0.49
22:C:592:VAL:CG1	22:C:594:GLN:NE2	2.73	0.49
23:D:1305:C:H2'	23:D:1306:C:C6	2.45	0.49
23:D:1270:C:H1'	23:D:1325:G:O6	2.13	0.49
23:D:1352:U:O2'	23:D:1353:A:O5'	2.28	0.49
23:D:1450:C:O2'	23:D:1451:C:H4'	2.12	0.49
23:D:1465:G:C6	23:D:1466:G:C6	3.00	0.49
23:D:1499:C:C2	23:D:1500:G:C8	2.99	0.49
23:D:1609:A:C6	23:D:1616:A:C2	3.00	0.49
23:D:1637:A:C6	23:D:1638:C:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1667:G:H22	23:D:1991:U:H2'	1.77	0.49
23:D:176:G:H2'	23:D:177:G:H8	1.77	0.49
23:D:184:C:C2	23:D:185:U:C5	3.00	0.49
23:D:2028:U:H3'	23:D:2029:G:C8	2.44	0.49
23:D:2353:G:N1	23:D:2354:G:C4	2.80	0.49
23:D:2534:A:C2	23:D:2535:G:H1'	2.46	0.49
23:D:2688:U:C5	23:D:2719:G:C4	3.00	0.49
23:D:270(Q):C:C2	23:D:270(R):G:C8	3.00	0.49
23:D:293:U:C2	23:D:294:A:C5	3.00	0.49
23:D:341:G:H2'	23:D:342:G:O4'	2.11	0.49
23:D:529:A:C5	23:D:2042:A:C6	3.00	0.49
23:D:592:G:C2	23:D:593:G:H1'	2.47	0.49
23:D:865:C:O2'	23:D:866:A:O5'	2.26	0.49
24:E:35:U:C4	24:E:36:C:C4	3.00	0.49
3:G:16:ARG:NH1	3:G:182:ILE:O	2.44	0.49
6:J:30:LEU:O	6:J:34:GLY:N	2.45	0.49
8:L:95:VAL:HG23	8:L:130:GLY:HA3	1.93	0.49
11:O:24:SER:OG	11:O:27:ASN:N	2.45	0.49
11:O:62:GLN:HB3	11:O:93:GLN:HG3	1.92	0.49
12:P:38:THR:HG22	12:P:57:LYS:O	2.12	0.49
6:J:7:ASN:CB	18:V:76:LEU:HD21	2.40	0.49
19:W:21:GLU:HG2	19:W:22:LEU:H	1.77	0.49
20:X:57:ARG:NH2	20:X:102:GLY:HA3	2.26	0.49
1:A:1038:C:H2'	1:A:1039:C:C2	2.47	0.49
1:A:1250:A:C5	1:A:1251:A:C5	3.00	0.49
1:A:144:G:C2	1:A:145:G:C4	3.00	0.49
1:A:1415:G:C4	1:A:1486:G:C2	3.00	0.49
1:A:45:U:H2'	1:A:46:G:C8	2.47	0.49
1:A:545:C:C2	1:A:546:G:C8	3.00	0.49
1:A:554:C:H2'	1:A:555:C:C6	2.47	0.49
1:A:577:G:H8	1:A:577:G:OP1	1.95	0.49
1:A:647:C:OP1	17:U:81:ARG:NH1	2.44	0.49
1:A:775:G:C2	1:A:776:G:N7	2.80	0.49
1:A:838:G:H1	1:A:848:C:N4	2.10	0.49
22:C:14:ILE:HA	22:C:104:LEU:N	2.27	0.49
22:C:236:GLU:CD	22:C:267:ALA:CB	2.61	0.49
22:C:300:VAL:HG12	22:C:464:HIS:NE2	2.18	0.49
22:C:453:GLU:HG3	22:C:454:ALA:N	2.27	0.49
22:C:46:LEU:HD22	22:C:64:VAL:HG21	1.80	0.49
23:D:1257:C:C2	23:D:1258:C:C5	2.99	0.49
23:D:1315:C:N4	23:D:1316:U:O4	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1484:G:H2'	23:D:1485:G:O4'	2.12	0.49
23:D:1618:A:HO2'	23:D:1619:G:P	2.35	0.49
23:D:1654:A:H62	23:D:2823:A:HO2'	1.60	0.49
23:D:1670:C:H2'	23:D:1671:U:O4'	2.12	0.49
23:D:1870:C:H2'	23:D:1871:A:O4'	2.12	0.49
23:D:199:A:C6	23:D:2434:A:N1	2.80	0.49
23:D:201:C:N4	23:D:202:U:C4	2.80	0.49
23:D:2046:G:C4	23:D:2047:U:C5	3.00	0.49
23:D:2175:C:H1'	25:Z:219:GLY:O	2.12	0.49
23:D:2266:A:H4'	23:D:2267:A:C2	2.47	0.49
4:H:65:ARG:HB2	23:D:2406:U:C4	168.52	0.49
23:D:2397:G:C6	23:D:2420:C:N3	2.81	0.49
23:D:830:G:N2	23:D:2448:A:C5	2.80	0.49
23:D:2531:A:C6	23:D:2532:G:C5	3.00	0.49
23:D:2684:U:C4	23:D:2685:G:C5	2.99	0.49
23:D:2884:U:H2'	23:D:2885:C:O4'	2.12	0.49
23:D:280:C:C5	23:D:359:A:H1'	2.46	0.49
23:D:592:G:H2'	23:D:593:G:O4'	2.12	0.49
23:D:640:C:H42	23:D:647:G:N2	2.10	0.49
23:D:783:A:H8	23:D:784:A:H4'	1.76	0.49
23:D:856:C:H3'	23:D:857:C:C5'	2.40	0.49
23:D:978:G:H2'	23:D:979:G:H8	1.77	0.49
24:E:101:A:C4	24:E:102:G:C8	3.00	0.49
7:K:140:ASP:HA	7:K:143:ARG:HG2	1.93	0.49
8:L:46:LYS:HE3	8:L:64:LYS:HA	1.94	0.49
9:M:92:TYR:O	9:M:96:LEU:N	2.37	0.49
11:O:86:GLY:HA2	11:O:112:THR:HG23	1.94	0.49
1:A:551:U:O3'	12:P:86:ARG:NH1	2.45	0.49
17:U:50:LYS:O	17:U:52:LYS:NZ	2.28	0.49
52:1:2:LYS:HE3	52:1:35:ARG:HH11	1.78	0.49
54:3:112:MET:O	54:3:113:PRO:O	2.29	0.49
56:5:14:A:N6	56:5:15:G:H21	2.01	0.49
1:A:1124:G:H2'	1:A:1126:U:O4	2.12	0.49
1:A:1164:G:C5	1:A:1173:G:C6	3.00	0.49
1:A:1405:G:H2'	1:A:1406:U:C6	2.47	0.49
1:A:183:G:H2'	1:A:184:G:C8	2.46	0.49
1:A:583:A:C5	1:A:584:G:C5	3.00	0.49
1:A:949:A:H3'	1:A:950:U:C6	2.47	0.49
1:A:975:A:H4'	1:A:976:G:O5'	2.12	0.49
22:C:246:THR:CB	22:C:247:PRO:CD	2.87	0.49
22:C:250:LEU:HD22	22:C:250:LEU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:409:TYR:CD2	22:C:483:GLY:CA	2.66	0.49
22:C:434:ARG:CZ	22:C:453:GLU:CG	2.61	0.49
22:C:521:VAL:HG11	22:C:547:ALA:HB3	1.81	0.49
22:C:529:PRO:CD	22:C:530:ARG:H	2.25	0.49
22:C:89:PHE:HB3	22:C:93:VAL:CG2	2.43	0.49
23:D:1006:C:H2'	23:D:1007:C:H6	1.77	0.49
23:D:1080:C:O4'	54:3:128:ALA:HB3	2.11	0.49
23:D:1109:C:H2'	23:D:1110:G:C5'	2.43	0.49
23:D:1177:A:O2'	23:D:1178:C:O4'	2.20	0.49
23:D:1243:G:C2	23:D:1244:G:C4	3.01	0.49
23:D:1306:C:N3	23:D:1622:G:N2	2.48	0.49
23:D:1830:C:H3'	23:D:1830:C:OP2	2.12	0.49
23:D:189:G:H21	23:D:207:A:H62	1.59	0.49
23:D:2178:C:H2'	23:D:2179:C:O4'	2.12	0.49
23:D:2322:A:O2'	23:D:2323:G:OP1	2.24	0.49
23:D:2425:A:O2'	23:D:2426:A:O5'	2.29	0.49
23:D:2517:C:C5	23:D:2542:A:C5	3.00	0.49
23:D:2534:A:N6	23:D:2535:G:C5	2.80	0.49
23:D:2520:C:C4	23:D:2567:G:C4	3.00	0.49
23:D:2629:A:O2'	23:D:2894:G:H2'	2.12	0.49
23:D:2689:U:H5'	23:D:2690:C:OP1	2.12	0.49
23:D:2811:G:C2'	23:D:2812:G:C5'	2.89	0.49
23:D:2852:G:H1	23:D:2865:U:H3	1.59	0.49
23:D:2858:C:H2'	23:D:2859:G:C8	2.48	0.49
23:D:372:G:H3'	23:D:373:U:H5''	1.93	0.49
23:D:379:G:C2	23:D:396:G:C8	3.00	0.49
23:D:559:G:H2'	23:D:560:C:C6	2.47	0.49
23:D:571:A:C5	23:D:575:A:C6	3.01	0.49
24:E:77:U:H2'	24:E:78:A:H8	1.76	0.49
5:I:137:GLU:O	5:I:141:GLN:HG2	2.13	0.49
6:J:2:ARG:NH2	15:S:2:PRO:HB2	2.28	0.49
16:T:20:VAL:HG12	16:T:22:THR:HB	1.93	0.49
53:2:23:SER:H	53:2:88:ALA:HB2	1.76	0.49
54:3:4:VAL:CG1	54:3:5:VAL:N	2.76	0.49
55:4:54:U:H3'	55:4:55:U:C6	2.47	0.49
55:4:18:G:C6	55:4:58:A:C5	3.00	0.49
56:5:44:G:OP2	56:5:44:G:H8	1.95	0.49
1:A:1070:U:P	5:I:18:ARG:HH22	2.36	0.49
1:A:1250:A:H2'	1:A:1251:A:C8	2.48	0.49
1:A:1320:C:H5''	19:W:37:ARG:NE	2.27	0.49
1:A:1336:C:H4'	1:A:1337:G:C5	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1526:G:C2	1:A:1527:C:C2	3.00	0.49
1:A:289:G:N2	1:A:311:C:N3	2.61	0.49
1:A:292:G:H3'	1:A:293:G:O4'	2.13	0.49
1:A:306:G:N7	1:A:307:C:N4	2.57	0.49
1:A:616:G:H2'	1:A:617:G:C8	2.48	0.49
1:A:742:G:C6	1:A:743:U:C2	3.01	0.49
1:A:931:C:N4	1:A:932:C:H41	2.09	0.49
22:C:331:THR:O	22:C:332:PHE:HB2	2.12	0.49
22:C:379:LYS:CG	22:C:388:VAL:CG2	2.89	0.49
22:C:489:LEU:CD2	22:C:507:ILE:CB	2.88	0.49
23:D:1079:C:C4	54:3:129:GLY:HA2	2.48	0.49
23:D:117:G:C5	23:D:119:A:C6	3.00	0.49
23:D:1315:C:C4	23:D:1316:U:H5	2.31	0.49
23:D:1344:G:N1	23:D:1385:G:C5	2.80	0.49
23:D:1448:G:O2'	23:D:1449:A:H5'	2.11	0.49
23:D:1486:A:C6	23:D:1487:G:C5	3.00	0.49
23:D:1565:C:C4	23:D:1567:A:H8	2.30	0.49
23:D:1623:G:C2	23:D:1624:G:C8	3.00	0.49
23:D:1654:A:N6	23:D:2823:A:HO2'	2.10	0.49
23:D:1809:A:H8	23:D:1810:A:H1'	1.77	0.49
23:D:1965:C:C4	23:D:1966:A:C6	3.01	0.49
23:D:1996:C:HO2'	23:D:1997:G:P	2.34	0.49
23:D:2019:A:H3'	23:D:2020:A:H5''	1.93	0.49
23:D:2615:U:H2'	23:D:2616:C:C6	2.47	0.49
23:D:2633:G:C2	23:D:2634:G:C4	3.01	0.49
23:D:2642:G:O2'	23:D:2643:G:H5'	2.12	0.49
23:D:2694:G:C4	23:D:2695:C:C5	3.00	0.49
23:D:2721:A:C6	23:D:2722:G:C5	3.00	0.49
23:D:527:C:C5	23:D:2779:U:H3'	2.46	0.49
23:D:2851:A:C6	23:D:2852:G:C4	2.99	0.49
23:D:2630:G:O5'	23:D:2894:G:N2	2.45	0.49
23:D:379:G:C5	23:D:396:G:C6	3.01	0.49
23:D:428:A:C8	23:D:429:A:N7	2.80	0.49
23:D:520:G:H2'	23:D:521:G:C8	2.47	0.49
23:D:668:G:C5	23:D:670:A:C5	3.01	0.49
23:D:691:C:H2'	23:D:692:C:C6	2.47	0.49
23:D:871:U:H1'	23:D:906:G:H22	1.77	0.49
23:D:977:G:O6	23:D:986:C:N4	2.45	0.49
2:F:207:ALA:HB1	2:F:209:ARG:HB3	1.94	0.49
1:A:413:G:O6	4:H:36:ARG:NH1	2.46	0.49
5:I:6:PHE:CE2	5:I:63:ARG:HG2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:45:LEU:HD23	6:J:59:TYR:HB2	1.95	0.49
10:N:39:PRO:HA	10:N:70:ARG:HD3	1.93	0.49
15:S:63:ARG:NH1	15:S:67:LEU:HD11	2.26	0.49
19:W:48:THR:HA	19:W:61:TYR:HA	1.94	0.49
20:X:73:HIS:HA	20:X:77:ALA:HB2	1.94	0.49
25:Z:110:PHE:CE1	25:Z:136:LEU:HD22	2.48	0.49
25:Z:71:GLN:HG2	25:Z:176:GLY:HA2	1.94	0.49
25:Z:182:PRO:HG2	25:Z:183:GLU:H	1.78	0.49
52:1:24:TYR:CG	52:1:35:ARG:HG2	2.47	0.49
55:4:29:G:H1	55:4:41:C:H42	1.60	0.49
56:5:30:G:C6	56:5:31:A:C6	3.01	0.49
56:5:52:G:C6	56:5:63:G:C6	3.01	0.49
1:A:1466:C:H2'	1:A:1467:G:O4'	2.12	0.49
1:A:146:G:N2	1:A:147:G:N3	2.60	0.49
1:A:577:G:C6	1:A:578:C:C4	3.00	0.49
1:A:587:G:C2	1:A:755:G:C5	3.00	0.49
1:A:695:A:O5'	11:O:52:GLY:HA3	2.13	0.49
1:A:696:A:H3'	1:A:697:U:C5	2.47	0.49
1:A:902:G:H2'	1:A:903:G:H8	1.77	0.49
1:A:999:U:H3	1:A:1041:A:N6	2.08	0.49
22:C:406:LEU:HB2	22:C:485:ARG:O	2.13	0.49
22:C:521:VAL:C	22:C:523:LYS:H	2.16	0.49
23:D:1091:G:C2	23:D:1100:C:C4	3.01	0.49
23:D:1212:G:O2'	23:D:1213:A:H8	1.95	0.49
23:D:187:G:H1	23:D:209:C:N4	2.07	0.49
23:D:190:A:H2'	23:D:191:A:H8	1.77	0.49
23:D:195:A:H61	23:D:198:C:H3'	1.77	0.49
23:D:2072:G:H2'	23:D:2073:C:C6	2.47	0.49
23:D:2239:G:C6	23:D:2240:C:N4	2.81	0.49
23:D:2407:G:O5'	23:D:2408:U:H5	1.96	0.49
23:D:2423:U:H1'	23:D:2425:A:C8	2.47	0.49
23:D:2637:U:O2'	23:D:2638:G:O5'	2.31	0.49
23:D:576:U:C2	23:D:577:G:C8	3.01	0.49
23:D:632:A:H2	23:D:2403:C:H4'	1.78	0.49
23:D:778:G:H2'	23:D:779:U:O4'	2.13	0.49
24:E:28:C:H2'	24:E:29:A:O4'	2.12	0.49
24:E:38:C:N4	24:E:44:G:H1	2.10	0.49
3:G:131:ARG:NH2	5:I:50:GLU:OE1	2.45	0.49
3:G:38:ARG:HB3	3:G:94:LEU:HD11	1.94	0.49
5:I:152:ARG:NH1	8:L:42:GLU:O	2.43	0.49
8:L:65:TYR:CE2	8:L:75:ARG:HD2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:37:ASN:HA	9:M:40:LEU:HD21	1.95	0.49
12:P:117:ARG:NH2	12:P:124:LYS:HG3	2.28	0.49
15:S:34:LEU:O	15:S:38:ARG:HG2	2.12	0.49
17:U:7:THR:HA	17:U:57:VAL:O	2.13	0.49
25:Z:66:HIS:CG	25:Z:159:GLY:CA	2.90	0.49
1:A:1005:A:H3'	1:A:1006:C:C6	2.46	0.49
1:A:1301:U:H3'	1:A:1303:C:C5	2.47	0.49
1:A:1515:C:H2'	1:A:1516:G:C8	2.48	0.49
1:A:34:C:C2	1:A:35:G:C8	3.00	0.49
1:A:451:A:C5	1:A:481:G:C5	3.01	0.49
1:A:57:G:C2	1:A:58:C:C2	3.01	0.49
1:A:618:C:H42	1:A:623:C:N4	2.09	0.49
1:A:687:A:H2	1:A:688:G:H1'	1.78	0.49
22:C:121:PHE:HZ	22:C:131:ILE:CG2	2.17	0.49
22:C:417:PRO:O	22:C:420:TYR:HD2	1.96	0.49
22:C:406:LEU:HD12	22:C:485:ARG:HA	1.94	0.49
23:D:1029:A:H62	23:D:1125:G:N2	2.10	0.49
23:D:121:G:H2'	23:D:122:G:H8	1.77	0.49
23:D:1240:U:H5'	23:D:1241:A:OP2	2.12	0.49
23:D:1608:A:C5	23:D:1611:C:C4	3.00	0.49
23:D:1630:G:C6	23:D:1630(A):C:N4	2.80	0.49
23:D:1698:A:H1'	23:D:1700:A:H5''	1.93	0.49
23:D:1779:U:H2'	23:D:1783:A:N7	2.28	0.49
23:D:1936:A:O4'	23:D:1940:U:N3	2.46	0.49
23:D:2016:U:N3	23:D:2017:U:C4	2.80	0.49
23:D:2024:G:H1	23:D:2039:C:N4	2.10	0.49
23:D:2070:G:H2'	23:D:2071:A:H8	1.76	0.49
23:D:2436:G:H2'	23:D:2437:U:H6	1.78	0.49
23:D:2468:G:C5	23:D:2481:G:N1	2.80	0.49
23:D:2564:A:C6	23:D:2565:A:C6	3.00	0.49
23:D:783:A:H4'	23:D:2588:G:O3'	2.13	0.49
23:D:269:U:N3	23:D:270:A:N1	2.55	0.49
23:D:270(G):C:H2'	23:D:270(H):C:H6	1.76	0.49
23:D:270(Z):U:N3	23:D:271(A):C:O3'	2.45	0.49
23:D:1050:A:N6	23:D:2751:G:H1	2.09	0.49
23:D:2825:C:H2'	23:D:2826:A:O4'	2.13	0.49
23:D:283:A:C2	23:D:358:U:H2'	2.48	0.49
23:D:447:A:C4	23:D:473:G:C8	3.01	0.49
23:D:711:G:H2'	23:D:712:G:C8	2.48	0.49
23:D:794:G:C6	23:D:795:C:C4	3.01	0.49
24:E:33:G:C2	24:E:50:G:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:142:LEU:HA	2:F:145:LEU:HB3	1.94	0.49
5:I:138:ALA:O	5:I:141:GLN:HB2	2.12	0.49
12:P:93:LEU:HD11	12:P:96:VAL:CG2	2.43	0.49
15:S:61:GLY:O	15:S:64:ARG:HG2	2.13	0.49
17:U:43:LEU:HD12	17:U:69:LYS:HA	1.94	0.49
20:X:78:ALA:HA	20:X:81:LYS:HD2	1.95	0.49
54:3:8:VAL:CG1	54:3:9:LYS:CE	2.89	0.49
1:A:1089:G:C5	1:A:1090:U:C4	3.01	0.49
1:A:1124:G:N2	1:A:1126:U:H3	2.10	0.49
1:A:1175:G:C2	1:A:1176:A:H1'	2.47	0.49
1:A:1309:G:N3	1:A:1329:A:C8	2.80	0.49
1:A:136:C:N4	1:A:227:G:H1	2.11	0.49
1:A:1376:U:OP1	7:K:94:ARG:NH1	2.19	0.49
1:A:1421:G:H2'	1:A:1422:G:O4'	2.11	0.49
1:A:1443:G:H4'	1:A:1446:A:C5'	2.42	0.49
1:A:171:A:H2'	1:A:172:A:C8	2.48	0.49
1:A:320:C:H2'	1:A:321:A:C8	2.48	0.49
1:A:347:G:C6	1:A:348:G:C8	3.01	0.49
1:A:39:G:N1	1:A:403:C:O2	2.32	0.49
1:A:426:G:C2	1:A:427:U:H1'	2.48	0.49
1:A:451:A:C8	1:A:481:G:C2	3.01	0.49
1:A:774:G:O6	1:A:775:G:N1	2.45	0.49
1:A:836:G:N2	1:A:851:G:H1'	2.27	0.49
1:A:881:G:OP2	12:P:12:ARG:NH2	2.45	0.49
1:A:936:C:N4	1:A:937:A:N1	2.60	0.49
22:C:200:ILE:HG13	22:C:279:THR:O	2.12	0.49
22:C:376:VAL:HG21	22:C:378:TYR:HH	1.77	0.49
22:C:435:LEU:CD1	22:C:452:TYR:HE1	2.10	0.49
22:C:492:VAL:HG13	22:C:541:ILE:CB	2.39	0.49
23:D:108:U:O2'	23:D:109:G:O5'	2.29	0.49
23:D:1165:U:H2'	23:D:1166:C:C6	2.47	0.49
23:D:1308:A:C4	23:D:1309:G:C8	3.01	0.49
23:D:1378:A:C4	23:D:1380:G:N7	2.80	0.49
23:D:1402:C:H2'	23:D:1403:C:C6	2.47	0.49
23:D:1405:U:H2'	23:D:1406:U:C5	2.47	0.49
23:D:1439:A:C5	23:D:1553:A:C6	3.01	0.49
23:D:14:A:C6	23:D:15:G:C4	3.01	0.49
23:D:1534:G:H21	23:D:1538:G:N2	2.08	0.49
23:D:1530:G:H1	23:D:1541:U:H3	1.60	0.49
23:D:1550:C:H2'	23:D:1551:C:H6	1.78	0.49
23:D:1569:A:H2'	23:D:1570:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1631:A:C6	23:D:1632:A:C4	3.00	0.49
23:D:1668:A:C5	23:D:1674:G:N3	2.80	0.49
23:D:1764:G:C6	23:D:1989:G:C6	3.01	0.49
23:D:1855:G:H1	23:D:1887:C:H42	1.61	0.49
23:D:1995:U:C2	23:D:1996:C:H5	2.31	0.49
23:D:2018:G:C5	23:D:2019:A:C5	3.00	0.49
23:D:207:A:H2'	23:D:208:C:O4'	2.12	0.49
23:D:2259:G:C5	23:D:2260:C:C5	3.01	0.49
23:D:859:G:H21	23:D:2268:A:H2	1.61	0.49
23:D:2329:G:C2	23:D:2330:G:C5	3.00	0.49
23:D:2340:G:N1	23:D:2341:G:O6	2.46	0.49
23:D:2417:C:H2'	23:D:2418:A:C8	2.47	0.49
23:D:2432:A:C6	23:D:2433:A:C6	3.01	0.49
23:D:945:A:N1	23:D:2448:A:C4	2.80	0.49
23:D:2526:G:C5	23:D:2527:C:C4	3.01	0.49
23:D:2715:C:N3	23:D:2716:U:C4	2.81	0.49
23:D:326:G:N2	23:D:336:C:N3	2.48	0.49
23:D:465:G:C6	23:D:466:A:C5	3.01	0.49
23:D:625:G:C6	23:D:626:U:C4	2.99	0.49
23:D:646:A:H2'	23:D:647:G:H8	1.75	0.49
23:D:82:G:N2	23:D:105:C:N3	2.61	0.49
3:G:29:TYR:CZ	3:G:33:LEU:HD21	2.48	0.49
4:H:111:ALA:HB1	4:H:117:ALA:HB2	1.93	0.49
6:J:50:TYR:HE2	18:V:77:GLY:HA2	1.78	0.49
8:L:15:ASN:O	8:L:18:ARG:HB2	2.12	0.49
10:N:10:GLY:HA3	10:N:16:LEU:HD21	1.95	0.49
12:P:69:TYR:OH	12:P:71:PRO:HA	2.12	0.49
13:Q:32:GLU:HA	13:Q:35:GLU:HG2	1.94	0.49
17:U:83:ASP:O	17:U:87:LYS:HG2	2.12	0.49
20:X:30:LYS:HA	20:X:33:ILE:HD12	1.94	0.49
25:Z:214:VAL:HG23	25:Z:224:ILE:HD13	1.95	0.49
54:3:55:VAL:O	54:3:70:LYS:HG2	2.13	0.49
56:5:41:C:H2'	56:5:42:C:C6	2.48	0.49
1:A:1071:C:C2'	1:A:1072:G:H5'	2.42	0.49
1:A:1103:C:HO2'	1:A:1104:G:P	2.35	0.49
1:A:134:A:H3'	1:A:135:C:C6	2.46	0.49
1:A:218:C:H2'	1:A:219:C:H6	1.76	0.49
1:A:115:G:C2	1:A:289:G:C5	3.01	0.49
1:A:310:G:C2	1:A:311:C:N3	2.81	0.49
1:A:695:A:H2'	1:A:696:A:C8	2.48	0.49
1:A:932:C:H3'	7:K:3:ARG:NE	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:20:HIS:HE1	22:C:108:ASP:HB2	1.68	0.49
22:C:15:ILE:H	22:C:103:VAL:CG1	2.15	0.49
22:C:230:ILE:CG2	22:C:279:THR:OG1	2.60	0.49
22:C:21:GLY:C	22:C:23:SER:H	2.16	0.49
22:C:495:LEU:N	22:C:539:ALA:CA	2.73	0.49
22:C:49:LEU:HD21	22:C:59:ILE:CD1	2.41	0.49
23:D:1050:A:N1	23:D:2751:G:C2	2.81	0.49
23:D:1069:A:N1	23:D:1096:A:H5'	2.28	0.49
23:D:1087:G:C2	23:D:1104:C:OP1	2.59	0.49
23:D:122:G:H1	23:D:129:C:N4	2.11	0.49
23:D:1525:G:H2'	23:D:1526:G:N9	2.28	0.49
23:D:1564:C:H2'	23:D:1565:C:H1'	1.95	0.49
23:D:1765:C:H2'	23:D:1766:U:C6	2.47	0.49
23:D:1977:A:H2'	23:D:1978:A:O4'	2.12	0.49
23:D:2004:G:C2	23:D:2005:A:C4	3.00	0.49
23:D:2248:C:H3'	23:D:2249:U:H6	1.78	0.49
23:D:963:U:H1'	23:D:2250:G:N2	2.28	0.49
23:D:2276:G:N3	23:D:2277:G:C8	2.81	0.49
23:D:2298:A:C5	23:D:2321:G:C6	3.00	0.49
23:D:2392:A:C6	23:D:2429:G:C5	3.01	0.49
23:D:2418:A:C5	23:D:2419:U:C4	3.00	0.49
23:D:2438:U:O2'	23:D:2439:A:H5''	2.13	0.49
23:D:2545:G:C6	23:D:2546:U:C2	3.00	0.49
23:D:2646:C:N4	23:D:2732:G:C6	2.80	0.49
23:D:2805:G:H3'	23:D:2807:G:H5''	1.94	0.49
23:D:403:U:H4'	23:D:404:C:OP1	2.12	0.49
23:D:452:G:H22	23:D:458:G:H5''	1.78	0.49
23:D:48:G:O4'	23:D:178:G:N2	2.46	0.49
23:D:583:G:H2'	23:D:584:C:C6	2.41	0.49
23:D:617:G:C5	23:D:618:G:C6	3.01	0.49
23:D:637:A:H1'	23:D:638:G:N3	2.28	0.49
23:D:646:A:C6	23:D:647:G:C5	3.01	0.49
23:D:649:G:C2	23:D:650:C:C2	3.00	0.49
23:D:751:A:H62	23:D:789:A:N6	2.10	0.49
23:D:808:G:H2'	23:D:809:G:C8	2.48	0.49
23:D:827:U:C4	23:D:2430:A:C6	3.01	0.49
23:D:836:G:C5	23:D:837:C:C4	3.01	0.49
23:D:855:G:H2'	23:D:856:C:C6	2.48	0.49
23:D:974:G:N7	23:D:974(A):C:N3	2.61	0.49
24:E:9:G:C5	24:E:112:G:C6	3.01	0.49
4:H:135:LEU:O	4:H:137:SER:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:91:LEU:HA	5:I:120:THR:HA	1.93	0.49
7:K:64:GLN:HG3	7:K:68:ASN:ND2	2.27	0.49
8:L:10:LEU:HB3	8:L:83:ILE:HD11	1.95	0.49
8:L:97:VAL:HG22	8:L:98:LYS:H	1.77	0.49
9:M:102:LEU:O	9:M:102:LEU:HD12	2.13	0.49
25:Z:110:PHE:CZ	25:Z:136:LEU:HB3	2.47	0.49
23:D:2178:C:H1'	25:Z:46:LYS:NZ	2.28	0.49
56:5:59:U:H2'	56:5:60:U:O4'	2.13	0.49
1:A:101:A:C4	1:A:102:G:C8	3.00	0.49
1:A:1072:G:H2'	1:A:1073:U:C6	2.47	0.49
1:A:1104:G:C6	1:A:1105:A:C5	3.00	0.49
1:A:1188:A:H5'	14:R:58:LYS:NZ	2.27	0.49
1:A:1196:U:O2'	1:A:1197:G:OP2	2.23	0.49
1:A:1207:G:C2	1:A:1208:C:C2	3.01	0.49
1:A:1225:A:H3'	1:A:1226:C:C5	2.47	0.49
1:A:129(A):G:H4'	1:A:130:A:O5'	2.13	0.49
1:A:1436:U:H2'	1:A:1437:C:H6	1.77	0.49
1:A:1486:G:C5	1:A:1487:G:C5	3.01	0.49
1:A:259:G:H1	1:A:267:C:N4	2.08	0.49
1:A:112:G:C2	1:A:330:C:N3	2.81	0.49
1:A:505:G:C8	1:A:535:A:C4	3.01	0.49
1:A:652:U:C2	1:A:752:G:C6	3.01	0.49
22:C:213:PRO:HD2	22:C:264:LEU:HB2	1.95	0.49
22:C:446:LYS:C	54:3:29:GLN:NE2	2.65	0.49
22:C:6:LEU:HD11	22:C:192:PRO:CG	2.31	0.49
23:D:1192:G:C2	23:D:1193:G:C5	3.00	0.49
23:D:1296:G:C6	23:D:1645:G:C6	3.00	0.49
23:D:1298:C:H3'	23:D:1299:G:H8	1.77	0.49
23:D:1308:A:N6	23:D:1606:G:H21	2.11	0.49
23:D:1366:A:H2'	23:D:1367:A:C8	2.48	0.49
23:D:1380:G:O2'	23:D:1381:G:H5'	2.13	0.49
23:D:1521:G:H5'	23:D:1522:G:O4'	2.12	0.49
23:D:1651:G:H3'	23:D:1652:A:H8	1.78	0.49
23:D:1751:C:H2'	23:D:1752:C:H6	1.75	0.49
23:D:175:G:N2	23:D:176:G:C4	2.81	0.49
23:D:46:C:C4	23:D:180:G:N2	2.81	0.49
23:D:184:C:H2'	23:D:185:U:C5	2.48	0.49
23:D:2007:C:H2'	23:D:2008:C:H6	1.73	0.49
23:D:2178:C:P	25:Z:223:ARG:HH21	2.35	0.49
23:D:219:G:C5	23:D:220:G:C5	3.00	0.49
23:D:2320:A:H1'	23:D:2333:A:N1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2498:C:O2	23:D:2498:C:H2'	2.13	0.49
23:D:2545:G:C6	23:D:2546:U:N3	2.81	0.49
23:D:2851:A:H2'	23:D:2852:G:H8	1.76	0.49
23:D:462:C:H2'	23:D:463:G:H8	1.78	0.49
23:D:630:G:HO2'	23:D:640:C:HO2'	1.51	0.49
23:D:699:A:C8	23:D:700:G:N7	2.81	0.49
23:D:700:G:C2	23:D:701:G:C5	3.01	0.49
23:D:854:G:C6	23:D:855:G:C6	3.01	0.49
23:D:862:G:C6	23:D:916:G:N2	2.81	0.49
23:D:871:U:O2'	23:D:872:A:O4'	2.31	0.49
23:D:873:G:H2'	23:D:874:G:C8	2.46	0.49
5:I:79:GLU:HB2	5:I:91:LEU:O	2.13	0.49
9:M:77:ILE:O	9:M:81:ILE:HG13	2.13	0.49
13:Q:65:LYS:HD3	13:Q:73:GLU:HB2	0.57	0.49
16:T:18:ARG:NH2	16:T:35:LYS:HD2	2.28	0.49
25:Z:74:VAL:HB	25:Z:156:ILE:CD1	2.42	0.49
56:5:66:U:H2'	56:5:67:C:C4	2.47	0.49
1:A:1047:G:OP1	14:R:4:LYS:HD3	2.13	0.49
1:A:1130:A:N3	1:A:1130:A:H2'	2.28	0.49
1:A:1155:G:C4	1:A:1156:G:C8	3.00	0.49
1:A:1269:A:H1'	1:A:1326:C:H1'	1.95	0.49
1:A:1273:G:H2'	1:A:1274:G:C8	2.47	0.49
1:A:1284:C:H3'	1:A:1285:A:C8	2.47	0.49
1:A:1421:G:C6	1:A:1480:G:C5	3.01	0.49
1:A:303:A:H2'	1:A:304:U:O4'	2.13	0.49
1:A:59:A:C5	1:A:354:G:C6	3.01	0.49
1:A:399:G:C2	1:A:400:C:C2	3.01	0.49
1:A:580:U:H2'	1:A:581:G:C8	2.46	0.49
1:A:635:G:H2'	1:A:636:U:C6	2.48	0.49
1:A:654:G:H2'	1:A:655:A:O4'	2.13	0.49
1:A:780:A:H8	1:A:780:A:O5'	1.96	0.49
1:A:799:G:C2	1:A:800:G:C4	3.01	0.49
1:A:959:A:H3'	1:A:960:U:H4'	1.95	0.49
22:C:431:LYS:HD3	22:C:458:GLU:OE2	2.12	0.49
22:C:584:LEU:O	22:C:588:GLY:N	2.39	0.49
23:D:1027:A:HO2'	23:D:1028:A:H8	1.60	0.49
23:D:1135:C:C2	23:D:1136:G:C8	3.00	0.49
23:D:121:G:H4'	23:D:148:C:H2'	1.95	0.49
23:D:1708:C:H2'	23:D:1709:U:C6	2.48	0.49
23:D:1855:G:C2	23:D:1856:G:C4	3.00	0.49
23:D:1889:A:C6	23:D:1890:A:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2030:A:O2'	23:D:2031:A:P	2.71	0.49
23:D:2029:G:C2	23:D:2033:A:C5	3.01	0.49
23:D:2178:C:H6	23:D:2178:C:O5'	1.96	0.49
23:D:2227:A:C5	23:D:2228:G:C5	3.01	0.49
23:D:2309:A:P	23:D:2310:A:H62	2.36	0.49
23:D:2534:A:C5	23:D:2535:G:C8	3.01	0.49
23:D:2564:A:C5	23:D:2647:U:O2'	2.66	0.49
23:D:2877:G:C2	23:D:2878:U:C2	3.01	0.49
23:D:18:C:O2'	23:D:553:U:OP1	2.23	0.49
23:D:733:G:N7	23:D:761:A:N6	2.61	0.49
23:D:80:G:C4	23:D:81:G:C8	3.00	0.49
23:D:83:G:C5	23:D:84:A:C6	3.01	0.49
23:D:946:G:C6	23:D:947:G:C5	3.01	0.49
23:D:9:U:H3	23:D:2629:A:H62	1.60	0.49
24:E:45:A:C5	24:E:46:A:C8	3.01	0.49
24:E:78:A:C6	24:E:99:A:C8	3.00	0.49
24:E:84:C:O2'	24:E:85:G:O4'	2.31	0.49
24:E:94:C:H2'	24:E:95:U:O4'	2.13	0.49
5:I:6:PHE:HE2	5:I:63:ARG:HG2	1.78	0.49
7:K:87:VAL:HG13	7:K:152:ALA:HA	1.95	0.49
8:L:34:GLU:OE1	8:L:37:ARG:HD3	2.13	0.49
9:M:116:LYS:HA	9:M:121:ARG:C	2.33	0.49
14:R:58:LYS:HD2	14:R:59:ALA:N	2.28	0.49
1:A:998(A):C:H42	1:A:1043:C:H42	1.61	0.48
1:A:1078:U:H2'	1:A:1079:G:C8	2.48	0.48
1:A:11:G:C2	1:A:12:U:N3	2.81	0.48
1:A:121:C:O2'	1:A:122:G:O5'	2.30	0.48
1:A:1251:A:H2'	1:A:1252:A:O4'	2.13	0.48
1:A:1277:C:O2'	1:A:1282:C:H1'	2.13	0.48
1:A:1336:C:O2'	1:A:1337:G:N7	2.36	0.48
1:A:13:U:H4'	1:A:14:U:OP1	2.13	0.48
1:A:150:C:N4	1:A:171:A:N7	2.61	0.48
1:A:18:C:P	5:I:14:ARG:HH12	2.36	0.48
1:A:293:G:C6	1:A:305:G:C6	3.01	0.48
1:A:324:G:H2'	1:A:326:G:OP2	2.12	0.48
1:A:412:A:HO2'	1:A:413:G:H8	1.57	0.48
1:A:569:C:H4'	1:A:574:A:H62	1.77	0.48
1:A:645:C:H2'	1:A:646:U:O4'	2.13	0.48
1:A:675:A:H61	1:A:715:A:N6	2.11	0.48
1:A:690:G:H2'	1:A:691:G:H8	1.73	0.48
1:A:910:C:N4	1:A:911:U:O4	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:174:VAL:C	22:C:176:GLU:H	2.16	0.48
22:C:79:HIS:HE1	22:C:216:ARG:HD3	1.78	0.48
22:C:8:ARG:HH21	22:C:8:ARG:HG2	1.78	0.48
23:D:1017:G:H2'	23:D:1018:C:C6	2.48	0.48
23:D:1044:G:H8	23:D:1044:G:P	2.36	0.48
23:D:1131:G:N2	23:D:1132:A:C5	2.81	0.48
23:D:1237:A:H1'	23:D:1238:G:OP1	2.13	0.48
23:D:1246:A:C2	23:D:1247:A:C4	3.01	0.48
23:D:1266:G:H4'	23:D:1267:U:O5'	2.13	0.48
23:D:1291:C:H2'	23:D:1292:U:H6	1.75	0.48
23:D:136:G:N2	23:D:143:C:N3	2.60	0.48
23:D:1559:G:H2'	23:D:1559:G:N3	2.28	0.48
23:D:1699:G:C5	23:D:1763:G:C2	3.00	0.48
23:D:1807:G:N2	23:D:1811:G:C4	2.81	0.48
23:D:1845:G:H1	23:D:1895:C:N4	2.09	0.48
23:D:2106:G:O5'	23:D:2106:G:H8	1.96	0.48
23:D:2227:A:C4	23:D:2228:G:C8	3.01	0.48
23:D:2313:C:N3	23:D:2314:C:C4	2.81	0.48
23:D:2353:G:H1	23:D:2364:C:H42	1.59	0.48
23:D:827:U:C4	23:D:2430:A:C5	3.01	0.48
23:D:269:U:O4	23:D:270:A:N6	2.46	0.48
23:D:522:G:H2'	23:D:523:C:H6	1.78	0.48
23:D:617:G:N7	23:D:618:G:C5	2.81	0.48
23:D:83:G:O2'	23:D:84:A:O5'	2.31	0.48
24:E:12:C:H2'	24:E:13:A:H4'	1.95	0.48
24:E:81:G:H2'	24:E:82:G:C8	2.48	0.48
24:E:94:C:H2'	24:E:95:U:C6	2.48	0.48
2:F:187:LEU:HA	2:F:201:ILE:HB	1.95	0.48
5:I:53:LEU:HA	5:I:56:GLN:NE2	2.28	0.48
6:J:12:PRO:HB3	6:J:58:GLY:HA2	1.94	0.48
8:L:46:LYS:HG3	8:L:63:LEU:O	2.13	0.48
1:A:537:G:OP1	12:P:113:ARG:NH2	2.46	0.48
13:Q:71:ARG:HA	13:Q:74:VAL:HB	1.95	0.48
16:T:43:LYS:HE3	16:T:48:TRP:CD2	2.48	0.48
52:1:10:ILE:HG13	52:1:32:HIS:CD2	2.27	0.48
56:5:9:A:O2'	56:5:45:U:N3	2.46	0.48
1:A:127:G:C2	1:A:128:G:C8	3.01	0.48
1:A:185:A:O2'	20:X:81:LYS:NZ	2.37	0.48
1:A:195:A:H2'	1:A:196:A:C4	2.47	0.48
1:A:251:G:O6	1:A:271:C:N4	2.45	0.48
1:A:290:C:H2'	1:A:291:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:296:U:H3'	1:A:297:G:H8	1.79	0.48
1:A:403:C:H2'	1:A:404:U:C5	2.48	0.48
1:A:646:U:H2'	1:A:647:C:C6	2.48	0.48
1:A:666:G:C4	1:A:667:G:C8	3.01	0.48
1:A:895:G:H1	1:A:904:C:N4	2.10	0.48
1:A:943:U:H3	1:A:1340:A:N6	2.10	0.48
1:A:959:A:H8	1:A:960:U:C4'	2.26	0.48
22:C:105:LEU:C	22:C:105:LEU:HD23	2.33	0.48
22:C:109:ALA:H	22:C:137:LYS:HD2	1.77	0.48
22:C:121:PHE:CE1	22:C:131:ILE:HG12	2.48	0.48
22:C:256:LEU:HD22	22:C:256:LEU:C	2.33	0.48
22:C:79:HIS:CD2	22:C:100:VAL:HG11	2.47	0.48
23:D:1022:G:O2'	23:D:1025:G:O6	2.14	0.48
23:D:1000:A:OP2	23:D:1153:C:N4	2.46	0.48
23:D:137:C:H2'	23:D:137(A):G:C5'	2.42	0.48
23:D:1593:G:C6	23:D:1594:G:C5	3.01	0.48
23:D:1726:G:C5	23:D:1727:U:C4	3.02	0.48
23:D:1796:U:H2'	23:D:1797:C:C6	2.48	0.48
23:D:179:G:N1	23:D:180:G:C2	2.81	0.48
23:D:1658:C:N4	23:D:2002:G:H1	2.04	0.48
23:D:574:C:H1'	23:D:2055:C:C5	2.48	0.48
23:D:214:G:C2	23:D:215:G:C6	3.01	0.48
23:D:216:A:H2'	23:D:217:G:H8	1.78	0.48
23:D:2521:C:N3	23:D:2522:U:C4	2.81	0.48
23:D:2056:G:C4	23:D:2577:A:C2	3.01	0.48
23:D:273(B):C:H2'	23:D:273(C):C:C6	2.48	0.48
23:D:342:G:C2	23:D:343:C:C2	3.01	0.48
23:D:349:G:H3'	23:D:349:G:OP2	2.12	0.48
23:D:745:G:H8	23:D:745:G:OP2	1.95	0.48
23:D:769:G:H2'	23:D:770:G:H8	1.78	0.48
23:D:792:G:C2	23:D:2440:C:C4	3.00	0.48
23:D:954:G:C5	23:D:955:C:C5	3.02	0.48
2:F:138:LEU:HA	2:F:141:GLU:HB3	1.95	0.48
6:J:33:TYR:CD1	6:J:75:LEU:HG	2.48	0.48
8:L:29:SER:N	8:L:32:LYS:HE2	2.27	0.48
11:O:15:ALA:HA	11:O:78:GLN:HE22	1.79	0.48
3:G:13:GLY:HA3	14:R:57:ARG:NH1	2.28	0.48
14:R:58:LYS:HD2	14:R:59:ALA:H	1.77	0.48
54:3:109:LYS:CG	54:3:110:GLN:N	2.77	0.48
54:3:130:SER:CA	54:3:133:SER:HB3	2.43	0.48
55:4:2:G:N2	55:4:72:A:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2252:G:C2	55:4:74:C:N3	2.81	0.48
56:5:56:C:C4	56:5:57:G:C6	3.01	0.48
56:5:65:G:H2'	56:5:66:U:H6	1.77	0.48
56:5:65:G:C2	56:5:66:U:C2	3.02	0.48
1:A:1054:C:O2	1:A:1196:U:N3	2.45	0.48
1:A:1099:G:H2'	1:A:1100:C:C6	2.48	0.48
1:A:1054:C:O4'	1:A:1196:U:H2'	2.13	0.48
1:A:1252:A:C6	1:A:1253:G:C5	3.01	0.48
1:A:1353:G:C2	1:A:1354:C:C2	3.01	0.48
1:A:1377:A:H2'	1:A:1377:A:OP2	2.13	0.48
1:A:1412:C:N3	1:A:1489:G:N2	2.61	0.48
1:A:1414:U:H2'	1:A:1415:G:C8	2.42	0.48
1:A:1477:C:H2'	1:A:1478:C:C6	2.49	0.48
1:A:264:U:C4	1:A:265:G:C5	3.02	0.48
1:A:334:C:H2'	1:A:335:C:C6	2.48	0.48
1:A:402:G:OP1	4:H:74:GLN:NE2	2.45	0.48
1:A:409:G:OP2	4:H:24:GLU:N	2.46	0.48
1:A:465:A:H3'	1:A:467:G:O6	2.13	0.48
1:A:585:G:C2	1:A:586:C:C2	3.00	0.48
1:A:608:A:H2'	1:A:609:A:O4'	2.14	0.48
1:A:60:A:P	1:A:60:A:H8	2.36	0.48
1:A:616:G:C6	1:A:625:G:N1	2.81	0.48
1:A:737:A:H1'	6:J:73:ASN:OD1	2.12	0.48
1:A:819:A:H3'	1:A:819:A:OP1	2.13	0.48
1:A:936:C:H2'	1:A:937:A:O4'	2.13	0.48
22:C:69:ARG:HG3	22:C:178:LEU:HD21	1.96	0.48
22:C:430:GLU:OE2	22:C:461:TYR:CE1	2.67	0.48
22:C:411:LYS:HG2	22:C:436:VAL:HG21	1.94	0.48
22:C:59:ILE:CG2	22:C:60:LYS:HD3	2.44	0.48
23:D:1143:A:H3'	23:D:1144:G:H8	1.79	0.48
23:D:1345:C:N4	23:D:1346:G:O6	2.47	0.48
23:D:1423:G:H5'	23:D:1493:C:C4	2.48	0.48
23:D:1606:G:H8	23:D:1606:G:O5'	1.95	0.48
23:D:1625:C:C4	23:D:1626:G:C8	3.01	0.48
23:D:171:G:N2	23:D:172:C:C2	2.81	0.48
23:D:173:G:C5	23:D:174:C:C4	3.01	0.48
23:D:1975:G:C6	23:D:1976:U:N3	2.81	0.48
23:D:1667:G:C4	23:D:1991:U:C4	3.01	0.48
23:D:2012:G:H8	23:D:2012:G:P	2.36	0.48
23:D:2013:A:O2'	23:D:2014:A:H5'	2.13	0.48
23:D:2051:A:C5	23:D:2614:A:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2086:U:H2'	23:D:2087:G:C8	2.49	0.48
23:D:2333:A:H4'	23:D:2335:A:C4	2.48	0.48
23:D:255:A:C6	23:D:256:A:C5	3.01	0.48
23:D:2679:A:C5	23:D:2680:C:C4	3.01	0.48
23:D:270(E):G:H2'	23:D:270(F):U:O4'	2.14	0.48
23:D:2781:A:C3'	23:D:2782:G:H4'	2.44	0.48
23:D:281:G:HO2'	23:D:282:A:P	2.36	0.48
23:D:2839:G:C6	23:D:2840:C:C4	3.02	0.48
23:D:339:U:N3	23:D:340:A:N1	2.61	0.48
23:D:346:A:H2'	23:D:347:A:C8	2.49	0.48
23:D:449:A:H2'	23:D:450:G:C8	2.47	0.48
23:D:482:A:H8	23:D:506:G:C6	2.31	0.48
23:D:554:U:O2'	23:D:556:G:O5'	2.29	0.48
23:D:577:G:C2	23:D:578:A:C4	3.02	0.48
23:D:65:C:H2'	23:D:66:C:C6	2.45	0.48
23:D:734:A:P	23:D:758:C:H41	2.34	0.48
23:D:937:U:H2'	23:D:938:G:H8	1.79	0.48
23:D:971:C:N3	23:D:972:G:N2	2.61	0.48
24:E:65:C:H2'	24:E:108:C:H41	1.77	0.48
2:F:33:TYR:HB3	2:F:41:ILE:O	2.13	0.48
11:O:95:ILE:O	11:O:98:LEU:HB2	2.13	0.48
1:A:1455:G:H4'	20:X:28:ALA:HB1	1.94	0.48
20:X:90:GLN:O	20:X:93:GLU:HB2	2.12	0.48
23:D:1044:G:H5'	53:2:4:LYS:O	2.14	0.48
1:A:1050:G:OP2	1:A:1214:C:O2'	2.29	0.48
1:A:10:A:C6	1:A:11:G:C5	3.02	0.48
1:A:1238:A:OP1	1:A:1335:C:O2'	2.27	0.48
1:A:1310:G:H1'	1:A:1328:C:H41	1.78	0.48
1:A:1449:C:O2'	1:A:1450:U:OP1	2.28	0.48
1:A:1502:A:H2'	1:A:1504:G:N9	2.28	0.48
1:A:237:C:H2'	1:A:238:G:C8	2.48	0.48
1:A:411:A:O2'	1:A:412:A:H4'	2.13	0.48
1:A:55:A:H2'	1:A:56:U:C6	2.48	0.48
1:A:60:A:N1	1:A:107:G:O2'	2.38	0.48
1:A:706:A:H2'	1:A:707:C:C6	2.48	0.48
1:A:860:A:N6	1:A:861:G:N3	2.61	0.48
22:C:17:HIS:ND1	22:C:116:GLU:CG	2.76	0.48
22:C:273:ASP:O	22:C:274:VAL:HG23	2.13	0.48
22:C:496:VAL:C	22:C:497:HIS:CG	2.86	0.48
22:C:79:HIS:HD1	22:C:261:VAL:HG22	1.78	0.48
23:D:1138:G:H3'	23:D:1139:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1284:A:H2'	23:D:1285:G:C8	2.49	0.48
23:D:151:C:H2'	23:D:152:G:C8	2.48	0.48
23:D:1564:C:H2'	23:D:1565:C:C1'	2.44	0.48
23:D:1766:U:H2'	23:D:1767:C:C5	2.48	0.48
23:D:530:G:H22	23:D:2023:G:P	2.36	0.48
23:D:2034:U:O4	23:D:2035:G:C6	2.67	0.48
23:D:2079:U:H2'	23:D:2080:G:H8	1.78	0.48
23:D:214:G:N1	23:D:215:G:O6	2.46	0.48
23:D:21:A:H2'	23:D:22:C:H6	1.79	0.48
23:D:414:C:H42	23:D:2409:G:H1	1.62	0.48
23:D:2452:C:N4	23:D:2453:A:C4	2.81	0.48
23:D:2494:G:C4	23:D:2495:G:C8	3.02	0.48
23:D:2528:U:OP1	52:1:31:LYS:HD3	2.13	0.48
23:D:240:G:H1'	23:D:258:G:C6	2.49	0.48
23:D:2706:G:C6	23:D:2707:G:C5	3.01	0.48
23:D:2773:C:H3'	23:D:2773:C:P	2.53	0.48
23:D:2862:G:H2'	23:D:2863:C:C6	2.49	0.48
23:D:292:C:N4	23:D:293:U:O4	2.47	0.48
23:D:310:A:C6	23:D:312:G:C4	3.02	0.48
23:D:360:G:H8	23:D:361:G:C8	2.31	0.48
23:D:501:A:N1	23:D:502:A:H2	2.10	0.48
23:D:566:U:N3	23:D:567:A:C5	2.82	0.48
23:D:601:C:C4	23:D:602:G:C4	3.01	0.48
23:D:714:U:HO2'	23:D:715:G:H8	1.62	0.48
23:D:775:G:H4'	23:D:777:A:C4	2.47	0.48
23:D:788:A:H1'	23:D:789:A:OP2	2.13	0.48
23:D:776:G:C6	23:D:793:A:C5	3.01	0.48
23:D:861:A:C4	23:D:917:A:H2	2.32	0.48
23:D:870:A:C5	23:D:871:U:C4	3.01	0.48
23:D:951:C:H42	23:D:966:G:H1	1.60	0.48
24:E:50:G:H2'	24:E:51:G:H8	1.79	0.48
3:G:21:ARG:N	3:G:58:GLU:HG2	2.18	0.48
4:H:12:CYS:HA	4:H:19:LEU:HG	1.94	0.48
8:L:113:SER:C	8:L:132:GLU:H	2.16	0.48
9:M:48:GLU:O	9:M:51:ARG:HB3	2.13	0.48
12:P:111:LYS:C	12:P:113:ARG:H	2.16	0.48
1:A:974:A:H4'	14:R:31:ARG:NE	2.29	0.48
15:S:60:VAL:HA	15:S:63:ARG:HG2	1.94	0.48
25:Z:213:TYR:HA	25:Z:224:ILE:HG12	1.95	0.48
54:3:37:PHE:HA	54:3:66:THR:OG1	2.14	0.48
1:A:1004:A:H5''	1:A:1025:U:C4	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:951:G:C4	1:A:1231:G:C2	3.02	0.48
1:A:134:A:C4	1:A:135:C:N3	2.82	0.48
1:A:141:A:C4	1:A:142:G:C8	3.01	0.48
1:A:1438:G:C2	1:A:1439:C:C2	3.00	0.48
1:A:168:G:H2'	1:A:169:C:C6	2.48	0.48
1:A:379:C:N4	1:A:380:G:O6	2.46	0.48
1:A:59:A:C4	1:A:354:G:C2	3.01	0.48
1:A:655:A:H2'	1:A:656:C:C6	2.49	0.48
1:A:808:C:O2'	1:A:809:G:O4'	2.16	0.48
22:C:104:LEU:CD1	22:C:177:ILE:HG21	2.43	0.48
22:C:169:LYS:CG	57:C:701:GCP:N1	2.77	0.48
22:C:247:PRO:CD	22:C:248:GLN:H	2.24	0.48
22:C:214:TYR:HB3	22:C:263:TRP:HA	1.91	0.48
22:C:279:THR:HA	22:C:290:PRO:CG	2.43	0.48
22:C:284:ASP:O	22:C:285:ARG:HG2	2.13	0.48
22:C:43:GLU:O	22:C:44:GLN:HB2	2.13	0.48
22:C:450:LEU:HG	22:C:452:TYR:CE2	2.49	0.48
23:D:1038:C:H3'	23:D:1039:G:H21	1.77	0.48
23:D:1058:G:N1	23:D:1082:U:O4'	2.46	0.48
23:D:1500:G:H2'	23:D:1500:G:N3	2.28	0.48
23:D:1445:C:H1'	23:D:1547:C:O2	2.13	0.48
23:D:1435:G:N2	23:D:1557:C:N3	2.61	0.48
23:D:1635:G:C6	23:D:1636:C:C4	3.02	0.48
23:D:1676:A:C6	23:D:1677:A:C4	3.02	0.48
23:D:1677:A:C5	23:D:1678:G:C5	3.02	0.48
23:D:1753:G:N2	23:D:1756:G:O4'	2.47	0.48
23:D:1839:G:C5	23:D:1927:A:C2	3.01	0.48
23:D:1784:A:C8	23:D:1981:A:H2'	2.47	0.48
23:D:2003:G:C2	23:D:2004:G:C5	3.01	0.48
23:D:2033:A:O2'	23:D:2034:U:O5'	2.26	0.48
23:D:2049:G:O2'	23:D:2050:C:OP1	2.29	0.48
23:D:239:U:C4	23:D:240:G:C5	3.02	0.48
23:D:250:G:C2	23:D:251:A:C4	3.02	0.48
23:D:2693:A:C6	23:D:2717:G:C5	3.02	0.48
23:D:311:A:H1'	23:D:332:A:C2	2.49	0.48
23:D:464:U:C2	23:D:465:G:C8	3.01	0.48
23:D:475:U:C4	23:D:476:G:C6	3.01	0.48
23:D:732:C:H2'	23:D:733:G:C1'	2.44	0.48
23:D:785:G:N2	23:D:786:C:C2	2.81	0.48
23:D:827:U:O2'	23:D:828:U:OP2	2.23	0.48
23:D:831:G:C5	23:D:832:G:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:872:A:N6	23:D:906:G:C5	2.81	0.48
24:E:66:A:O2'	24:E:67:G:O5'	2.26	0.48
3:G:62:ASP:O	3:G:99:VAL:HG12	2.14	0.48
4:H:161:ASN:HA	4:H:164:ALA:HB3	1.95	0.48
4:H:94:LEU:HA	4:H:97:LEU:HD12	1.94	0.48
8:L:134:ILE:HG22	8:L:135:CYS:HB2	1.94	0.48
15:S:25:THR:O	15:S:29:VAL:HG23	2.14	0.48
6:J:62:TRP:CD1	18:V:35:ARG:HD3	2.48	0.48
54:3:4:VAL:CG1	54:3:5:VAL:H	2.26	0.48
55:4:9:G:H4'	55:4:10:G:OP2	2.13	0.48
1:A:1017:G:O5'	1:A:1017:G:H8	1.96	0.48
1:A:1198:G:H2'	1:A:1199:U:C6	2.47	0.48
1:A:1312:G:H5''	19:W:6:LYS:HD2	1.96	0.48
1:A:1518:A:H2'	1:A:1519:A:H8	1.77	0.48
1:A:264:U:P	20:X:79:ARG:NH2	2.87	0.48
1:A:464:G:C6	1:A:466:C:H5'	2.48	0.48
1:A:52:G:C2	1:A:53:A:H1'	2.49	0.48
1:A:570:G:H22	1:A:873:A:N6	2.10	0.48
1:A:608:A:C2	1:A:609:A:H1'	2.49	0.48
1:A:949:A:C4	1:A:1233:G:C2	3.02	0.48
1:A:961:U:OP1	1:A:1222:G:O2'	2.24	0.48
22:C:239:VAL:CA	22:C:266:ALA:HB3	2.44	0.48
22:C:378:TYR:O	22:C:391:HIS:CG	2.66	0.48
22:C:504:LEU:CD1	22:C:523:LYS:NZ	2.73	0.48
22:C:556:LYS:HB2	23:D:1943:U:C5'	2.43	0.48
22:C:66:VAL:CG2	22:C:78:PHE:CE2	2.95	0.48
23:D:1036:G:C6	23:D:1037:G:C6	3.02	0.48
23:D:1057:A:H1'	23:D:1085:A:C2	2.48	0.48
23:D:1203:G:H2'	23:D:1203:G:N3	2.28	0.48
23:D:1329:U:H6	23:D:1329:U:OP1	1.96	0.48
23:D:1353:A:C4	23:D:1354:A:C8	3.02	0.48
23:D:1663:C:H2'	23:D:1664:A:N3	2.29	0.48
23:D:1897:G:H2'	23:D:1898:U:H6	1.79	0.48
23:D:1960:A:C5	23:D:1961:C:C4	3.02	0.48
23:D:1970:A:H4'	23:D:1971:A:H5'	1.95	0.48
23:D:2034:U:H2'	23:D:2035:G:O4'	2.12	0.48
23:D:2178:C:H3'	23:D:2179:C:C5'	2.29	0.48
23:D:224:G:C6	23:D:225:A:C4	3.02	0.48
23:D:2287:A:C8	23:D:2289:G:C5	3.01	0.48
23:D:2587:A:C3'	23:D:2588:G:H5'	2.43	0.48
23:D:2044:C:N3	23:D:2625:G:C2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:261:G:C2	23:D:262:A:C5	3.00	0.48
23:D:2731:G:C6	23:D:2732:G:C6	3.02	0.48
23:D:2737:G:H1	23:D:2767:C:N4	2.09	0.48
23:D:2769:C:H3'	23:D:2770:G:C8	2.45	0.48
23:D:2784:C:C4	23:D:2785:C:C4	3.01	0.48
23:D:454:A:P	23:D:454:A:H8	2.37	0.48
23:D:511:U:H2'	23:D:512:G:O4'	2.14	0.48
23:D:675:A:C4	23:D:676:A:C2	3.01	0.48
23:D:726:G:O2'	23:D:727:A:O4'	2.32	0.48
23:D:866:A:C5	23:D:914:C:N3	2.82	0.48
23:D:952:G:C2	23:D:953:A:C5	3.01	0.48
23:D:975:G:H2'	23:D:976:C:H5'	1.95	0.48
24:E:110:G:C6	24:E:111:U:C4	3.02	0.48
24:E:2:C:N4	24:E:118:G:H1	2.11	0.48
2:F:71:VAL:HB	2:F:165:VAL:HG22	1.94	0.48
3:G:152:ILE:CD1	3:G:199:LYS:HB2	2.43	0.48
3:G:74:GLY:O	3:G:78:GLY:N	2.46	0.48
3:G:97:LYS:O	3:G:99:VAL:HG13	2.14	0.48
4:H:4:TYR:CG	4:H:5:ILE:N	2.81	0.48
4:H:65:ARG:HB2	23:D:2406:U:N3	169.51	0.48
6:J:22:GLU:HA	6:J:25:ILE:HD12	1.95	0.48
9:M:4:TYR:HB3	9:M:19:LEU:HB3	1.95	0.48
14:R:54:PRO:C	14:R:56:VAL:H	2.11	0.48
15:S:41:GLU:HG2	15:S:44:LYS:NZ	2.29	0.48
15:S:77:ARG:HH12	15:S:81:LEU:HD12	1.79	0.48
16:T:17:TYR:N	16:T:39:TYR:O	2.47	0.48
17:U:62:SER:HB2	17:U:70:ARG:O	2.13	0.48
20:X:16:HIS:O	20:X:20:LEU:HG	2.14	0.48
54:3:131:ALA:C	54:3:134:MET:H	2.17	0.48
56:5:24:G:C8	56:5:24:G:OP2	2.67	0.48
1:A:1033:G:H8	1:A:1034:G:C8	2.32	0.48
1:A:1298:C:N4	7:K:114:ARG:O	2.47	0.48
1:A:766:A:N6	1:A:1511:G:O2'	2.47	0.48
1:A:179:A:H2'	1:A:179:A:N3	2.29	0.48
1:A:336:C:H2'	1:A:337:C:H6	1.79	0.48
1:A:354:G:H2'	1:A:355:C:H6	1.77	0.48
1:A:36:C:H2'	1:A:37:U:O4'	2.14	0.48
1:A:504:C:H5''	1:A:505:G:OP1	2.13	0.48
1:A:50:A:H5''	1:A:51:A:H3'	1.95	0.48
1:A:593:G:C2	1:A:647:C:C2	3.01	0.48
1:A:667:G:H2'	1:A:668:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:769:G:N2	1:A:770:C:C2	2.82	0.48
22:C:490:VAL:CG1	22:C:508:ALA:HB3	2.43	0.48
22:C:71:LYS:O	22:C:72:ASP:HB2	2.13	0.48
22:C:89:PHE:O	22:C:93:VAL:N	2.31	0.48
22:C:8:ARG:HB3	22:C:77:VAL:CG1	2.41	0.48
23:D:1210:A:H1'	23:D:1212:G:C2	2.49	0.48
23:D:132:G:C5	23:D:133:C:C4	3.02	0.48
23:D:1334:G:H2'	23:D:1335:U:C6	2.49	0.48
23:D:1356:G:H1	23:D:1375:C:H42	1.62	0.48
23:D:1558:A:C2	23:D:1560:G:C8	3.02	0.48
23:D:1885:A:H2'	23:D:1886:C:O4'	2.13	0.48
23:D:2064:C:C4	23:D:2065:C:C2	3.02	0.48
23:D:2280:G:H2'	23:D:2281:C:C6	2.48	0.48
23:D:2259:G:N1	23:D:2282:G:O6	2.47	0.48
23:D:2557:G:H2'	23:D:2558:C:H6	1.78	0.48
23:D:2589:A:C4	23:D:2590:A:C8	3.02	0.48
23:D:2597:G:H2'	23:D:2598:A:H8	1.78	0.48
23:D:2671:A:H2'	23:D:2672:G:C8	2.48	0.48
23:D:2697:G:H22	23:D:2709:G:H1	1.62	0.48
23:D:2697:G:H2'	23:D:2698:U:O4'	2.14	0.48
23:D:276:A:O3'	23:D:363:G:N2	2.47	0.48
23:D:2639:A:C2	23:D:2778:A:C4	3.01	0.48
23:D:406:G:C6	23:D:407:G:C6	3.02	0.48
23:D:431:U:C4	23:D:432:A:C8	3.02	0.48
23:D:529:A:C6	23:D:2023:G:C6	3.02	0.48
23:D:67:U:O2'	23:D:68:G:OP1	2.28	0.48
23:D:725:G:H3'	23:D:726:G:C8	2.48	0.48
23:D:760:G:H2'	23:D:761:A:O4'	2.14	0.48
23:D:765:G:H2'	23:D:766:C:H6	1.78	0.48
23:D:677:A:H61	23:D:800:A:N6	2.12	0.48
23:D:949:C:H2'	23:D:950:G:H8	1.77	0.48
23:D:960:A:C4	23:D:962:G:C8	3.01	0.48
24:E:81:G:H2'	24:E:82:G:H8	1.79	0.48
2:F:116:GLU:O	2:F:120:ALA:N	2.30	0.48
2:F:234:PRO:HB2	2:F:238:LEU:HD22	1.96	0.48
3:G:138:VAL:HG22	3:G:151:VAL:HB	1.96	0.48
4:H:54:TYR:CE2	4:H:58:LEU:HD22	2.49	0.48
7:K:74:GLU:O	7:K:89:MET:HG2	2.14	0.48
8:L:103:VAL:HG23	8:L:108:GLY:HA3	1.95	0.48
9:M:74:ILE:O	9:M:77:ILE:HB	2.14	0.48
12:P:45:PRO:HD3	12:P:52:LEU:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:P:83:VAL:HG13	12:P:84:LEU:N	2.29	0.48
13:Q:52:GLU:HB3	13:Q:55:ARG:NH2	2.28	0.48
10:N:63:PHE:HB2	14:R:58:LYS:HA	1.95	0.48
14:R:6:LEU:HD22	14:R:8:GLU:OE1	2.14	0.48
11:O:84:VAL:HG11	18:V:88:LYS:NZ	2.29	0.48
25:Z:62:VAL:HG13	25:Z:64:LEU:HG	1.95	0.48
54:3:77:LEU:HD11	54:3:111:LYS:HZ2	1.77	0.48
23:D:1095:A:H61	54:3:30:HIS:HD2	1.61	0.48
1:A:1027:C:C2	1:A:1035:A:C6	3.02	0.48
1:A:105:G:H2'	1:A:106:C:C6	2.48	0.48
1:A:1112:C:H3'	1:A:1113:C:C5	2.49	0.48
1:A:116:A:C4	1:A:117:G:C8	3.02	0.48
1:A:154:C:C4	1:A:168:G:N1	2.82	0.48
1:A:40:C:H42	1:A:402:G:H1	1.61	0.48
1:A:448:A:C4	1:A:487:A:C2	3.02	0.48
1:A:686:U:C2	1:A:703:G:C4	3.02	0.48
1:A:770:C:N4	1:A:771:G:O6	2.47	0.48
1:A:779:C:H5''	11:O:122:LYS:HE2	1.95	0.48
1:A:952:U:H5''	1:A:972:C:N4	2.29	0.48
22:C:121:PHE:CE1	22:C:131:ILE:CD1	2.96	0.48
22:C:113:VAL:HG21	22:C:152:VAL:HG22	1.91	0.48
22:C:185:ILE:HG22	22:C:186:PRO:N	2.29	0.48
22:C:193:GLU:OE1	22:C:221:ARG:N	2.47	0.48
22:C:246:THR:CB	22:C:251:VAL:CG2	2.92	0.48
22:C:495:LEU:CD2	22:C:538:GLN:CD	2.79	0.48
22:C:97:LEU:HD11	22:C:123:MET:CG	2.44	0.48
23:D:1103:A:H2'	23:D:1103:A:N3	2.29	0.48
23:D:1377:G:O5'	23:D:1377:G:H8	1.97	0.48
23:D:1446:C:N3	23:D:1465:G:N2	2.49	0.48
23:D:1605:C:C2	23:D:1606:G:C4	3.01	0.48
23:D:1735:C:H2'	23:D:1741:C:C6	2.49	0.48
23:D:1837:C:N4	23:D:1903:G:H1	2.12	0.48
23:D:1937:A:N6	23:D:1939:U:C4	2.74	0.48
23:D:2243:U:H2'	23:D:2244:U:N1	2.28	0.48
23:D:2269:A:H5''	23:D:2270:G:OP2	2.13	0.48
23:D:2271:G:C4	23:D:2272:U:N3	2.81	0.48
23:D:2077:A:C8	23:D:2435:A:C4	3.02	0.48
23:D:2607:G:H2'	23:D:2608:G:H5'	1.96	0.48
23:D:2717:G:C2	23:D:2718:G:C5	3.01	0.48
23:D:448:U:H3	23:D:583:G:HO2'	1.59	0.48
23:D:43:G:H2'	23:D:44:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:475:U:H3'	23:D:476:G:C8	2.49	0.48
23:D:507:A:H5'	23:D:509:C:O2	2.14	0.48
23:D:589:C:C2	23:D:590:A:C8	3.02	0.48
23:D:717:G:C6	23:D:718:A:C4	3.02	0.48
23:D:76:C:H2'	23:D:77:C:C6	2.49	0.48
23:D:816:C:H2'	23:D:817:C:N1	2.28	0.48
23:D:920:G:H2'	23:D:921:G:C8	2.46	0.48
23:D:923:C:N3	23:D:924:C:N4	2.62	0.48
23:D:934:G:C5	23:D:935:C:C4	3.01	0.48
23:D:94:G:C2	23:D:95:G:N3	2.81	0.48
3:G:70:VAL:O	3:G:106:VAL:HG22	2.14	0.48
3:G:50:ALA:O	3:G:72:LYS:HB2	2.14	0.48
8:L:73:ASP:OD1	8:L:74:PRO:HD2	2.14	0.48
12:P:95:GLY:HA2	12:P:97:ARG:HH22	1.79	0.48
13:Q:45:VAL:HG13	13:Q:48:LEU:HD21	1.96	0.48
13:Q:53:VAL:HG13	13:Q:56:LEU:HD23	1.94	0.48
14:R:34:TYR:CE1	14:R:37:PHE:HB2	2.48	0.48
52:1:24:TYR:CD1	52:1:35:ARG:HA	2.49	0.48
54:3:95:LYS:HD2	54:3:95:LYS:HA	1.57	0.48
56:5:48:C:O2'	56:5:49:C:OP1	2.26	0.48
1:A:1077:G:N1	1:A:1081:G:C6	2.81	0.48
1:A:1303:C:N4	1:A:1304:G:C6	2.82	0.48
1:A:1342:C:H4'	9:M:125:TYR:HB2	1.96	0.48
1:A:241:C:H2'	1:A:242:C:C6	2.48	0.48
1:A:9:G:C2	1:A:26:A:C5	3.02	0.48
1:A:255:G:C2	1:A:272:C:C2	3.02	0.48
1:A:308:C:H2'	1:A:309:G:H8	1.79	0.48
1:A:416:G:C5	1:A:417:C:C4	3.02	0.48
1:A:444:C:H2'	1:A:445:G:C8	2.49	0.48
1:A:727:G:C2	1:A:731:G:C2	3.02	0.48
1:A:78:G:H2'	1:A:79:G:C8	2.48	0.48
1:A:928:G:C2	1:A:929:G:C4	3.01	0.48
22:C:514:TYR:HA	22:C:517:ALA:CB	2.43	0.48
22:C:89:PHE:O	22:C:93:VAL:HG23	2.14	0.48
23:D:1061:U:HO2'	23:D:1062:G:P	2.33	0.48
23:D:1067:A:H2'	23:D:1068:G:C6	2.49	0.48
23:D:1184:G:H2'	23:D:1185:C:C6	2.49	0.48
23:D:1197:G:C6	23:D:1250:G:C6	3.02	0.48
23:D:1249:U:O2'	23:D:1250:G:O4'	2.31	0.48
23:D:1268:A:C6	23:D:2013:A:C8	3.01	0.48
23:D:1277:G:H2'	23:D:1278:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:136:G:H1	23:D:143:C:N4	2.12	0.48
23:D:1484:G:C6	23:D:1485:G:N7	2.81	0.48
23:D:1838:C:H4'	23:D:1839:G:H5'	1.96	0.48
23:D:184:C:H2'	23:D:185:U:H6	1.78	0.48
23:D:1967:C:H3'	23:D:1968:G:H5''	1.93	0.48
23:D:2255:G:C5	23:D:2256:G:C8	3.01	0.48
23:D:2278:A:C6	23:D:2279:G:C5	3.01	0.48
23:D:2367:G:C6	23:D:2368:C:C4	3.02	0.48
23:D:250:G:H2'	23:D:251:A:C8	2.48	0.48
23:D:2519:U:O2'	23:D:2520:C:P	2.72	0.48
23:D:2531:A:H3'	23:D:2532:G:C8	2.45	0.48
23:D:2592:G:C5	23:D:2593:U:C4	3.02	0.48
23:D:2860:A:H3'	23:D:2861:G:O4'	2.13	0.48
23:D:451:C:C4	23:D:453:C:C2	3.02	0.48
23:D:457:A:H2'	23:D:458:G:H4'	1.96	0.48
23:D:567:A:N6	23:D:568:U:C2	2.82	0.48
23:D:599:G:C2	23:D:600:G:C5	3.02	0.48
23:D:90:U:H5'	23:D:91:A:OP1	2.14	0.48
23:D:939:G:C2	23:D:940:G:C5	3.02	0.48
24:E:56:G:H5''	24:E:57:A:OP1	2.14	0.48
2:F:166:ASP:OD1	2:F:168:THR:OG1	2.21	0.48
3:G:21:ARG:HD2	3:G:58:GLU:OE2	2.14	0.48
3:G:29:TYR:CE1	3:G:33:LEU:HD21	2.48	0.48
4:H:13:ARG:HD2	4:H:36:ARG:CD	2.44	0.48
8:L:6:ILE:HA	8:L:32:LYS:HD3	1.96	0.48
1:A:1372:U:OP2	9:M:69:GLY:HA3	2.14	0.48
16:T:20:VAL:CG1	16:T:34:GLU:H	2.24	0.48
16:T:43:LYS:HE3	16:T:48:TRP:CE3	2.49	0.48
17:U:12:SER:OG	17:U:14:LYS:HG3	2.14	0.48
18:V:72:ARG:HA	18:V:75:ILE:HD12	1.96	0.48
25:Z:66:HIS:CA	25:Z:158:ALA:HA	2.44	0.48
54:3:81:ALA:CB	54:3:107:ILE:CG1	2.91	0.48
54:3:111:LYS:O	54:3:112:MET:HB2	2.12	0.48
54:3:50:ASP:O	54:3:76:TYR:HE2	1.97	0.48
1:A:1064:G:H1'	1:A:1066:C:C6	2.49	0.48
1:A:1258:G:H2'	1:A:1259:C:C6	2.49	0.48
1:A:1386:G:O2'	1:A:1387:G:H5'	2.13	0.48
1:A:147:G:H22	1:A:175:C:N4	2.12	0.48
1:A:1485:U:H6	1:A:1485:U:O5'	1.97	0.48
1:A:584:G:C6	1:A:585:G:C5	3.01	0.48
1:A:65:U:H1'	1:A:200:G:O2'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:687:A:O2'	1:A:701:C:N4	2.47	0.48
1:A:834:C:H2'	1:A:835:U:C6	2.48	0.48
22:C:97:LEU:CD1	22:C:123:MET:CG	2.92	0.48
22:C:217:LEU:HG	22:C:256:LEU:HD21	1.95	0.48
22:C:455:PRO:CG	22:C:458:GLU:HG3	2.43	0.48
22:C:94:SER:O	22:C:97:LEU:N	2.41	0.48
23:D:1031:G:C6	23:D:1032:A:C5	3.02	0.48
23:D:1037:G:C6	23:D:1038:C:C4	3.02	0.48
23:D:1222:C:H2'	23:D:1223:C:H5'	1.96	0.48
23:D:1293:C:H2'	23:D:1294:U:C6	2.49	0.48
23:D:1511:A:C5	23:D:1512:G:C5	3.02	0.48
23:D:1517:G:H2'	23:D:1518:C:O4'	2.13	0.48
23:D:1305:C:N4	23:D:1624:G:O6	2.46	0.48
23:D:1625:C:N3	23:D:1626:G:C8	2.81	0.48
23:D:1815:A:C4	23:D:1817:G:C5	3.02	0.48
23:D:1667:G:C2	23:D:1991:U:C2	3.01	0.48
23:D:218:A:H2'	23:D:219:G:C8	2.49	0.48
23:D:221:A:C6	23:D:233:A:H1'	2.49	0.48
23:D:2304:G:N2	23:D:2312:U:O2	2.43	0.48
23:D:239:U:C2	23:D:240:G:C8	3.01	0.48
23:D:247:G:C5	23:D:249:C:H1'	2.49	0.48
23:D:2516:G:H22	23:D:2567:G:N2	2.11	0.48
23:D:2643:G:H1	23:D:2771:C:H42	1.61	0.48
23:D:2653:U:H2'	23:D:2654:A:C8	2.49	0.48
23:D:2689:U:O2	23:D:2713:A:C4	2.67	0.48
23:D:2718:G:C4	23:D:2719:G:N7	2.82	0.48
23:D:2779:U:H4'	23:D:2781:A:OP2	2.14	0.48
23:D:2808:U:H6	23:D:2808:U:O5'	1.95	0.48
23:D:2834:G:N3	23:D:2879:C:N4	2.62	0.48
23:D:379:G:H2'	23:D:380:U:C6	2.49	0.48
23:D:462:C:H2'	23:D:463:G:C8	2.49	0.48
23:D:61:G:C5	23:D:62:C:C4	3.01	0.48
23:D:631:A:C2	23:D:632:A:C4	3.01	0.48
23:D:649:G:N2	23:D:650:C:O2	2.47	0.48
23:D:696:G:H1	23:D:766:C:H42	1.61	0.48
23:D:919:G:H2'	23:D:920:G:C8	2.49	0.48
3:G:17:ASP:HB2	3:G:21:ARG:NH2	2.24	0.48
4:H:128:VAL:HB	4:H:131:ARG:O	2.13	0.48
4:H:201:GLN:HA	4:H:204:ILE:HD13	1.96	0.48
6:J:31:GLU:C	6:J:34:GLY:H	2.17	0.48
7:K:149:ARG:HD2	11:O:59:TYR:CE1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:N:63:PHE:CB	14:R:58:LYS:HA	2.44	0.48
11:O:84:VAL:HG13	11:O:108:ILE:HG21	1.96	0.48
11:O:32:ILE:HB	11:O:41:THR:OG1	2.14	0.48
13:Q:65:LYS:HB2	13:Q:73:GLU:OE1	2.14	0.48
1:A:1047:G:P	14:R:4:LYS:HD3	2.54	0.48
16:T:6:LEU:HD13	16:T:17:TYR:CD1	2.48	0.48
20:X:89:ARG:O	20:X:93:GLU:HG3	2.14	0.48
25:Z:114:VAL:HG11	25:Z:160:ARG:HH21	1.78	0.48
53:2:118:THR:O	53:2:120:LYS:N	2.47	0.47
55:4:48:C:H6	55:4:48:C:OP2	1.96	0.47
56:5:61:C:H2'	56:5:62:C:H6	1.79	0.47
1:A:1177:G:P	9:M:93:ARG:HH22	2.37	0.47
1:A:1275:A:H3'	1:A:1276:G:H8	1.79	0.47
1:A:147:G:H22	1:A:175:C:H42	1.60	0.47
1:A:1409:C:N4	1:A:1491:G:H1	2.10	0.47
1:A:409:G:P	4:H:24:GLU:HB3	2.53	0.47
1:A:500:G:H2'	1:A:501:C:C5	2.48	0.47
1:A:635:G:H2'	1:A:636:U:H6	1.79	0.47
1:A:722:A:C4	1:A:724:G:C8	3.01	0.47
22:C:371:ALA:O	22:C:373:ALA:N	2.41	0.47
22:C:440:TYR:CE1	22:C:448:VAL:HG11	2.48	0.47
23:D:1062:G:H22	54:3:75:SER:CB	2.26	0.47
23:D:1000:A:C6	23:D:1155:A:C4	3.02	0.47
23:D:1388:G:H1	23:D:1399:C:H42	1.61	0.47
23:D:1432:C:H2'	23:D:1433:U:C6	2.49	0.47
23:D:1487:G:H2'	23:D:1488:G:H8	1.79	0.47
23:D:172:C:C3'	23:D:173:G:H8	2.27	0.47
23:D:1802:A:C2	23:D:1803:A:C4	3.02	0.47
23:D:1952:A:H2'	23:D:1953:A:C4	2.48	0.47
23:D:2144:U:C4	23:D:2148:G:C4	3.02	0.47
23:D:2126:A:N6	23:D:2162:G:O2'	2.46	0.47
23:D:2119:A:N1	23:D:2170:A:H2'	2.29	0.47
23:D:2078:C:N4	23:D:2242:G:H1	2.12	0.47
23:D:2315:G:H2'	23:D:2316:C:N1	2.29	0.47
23:D:2513:G:H2'	23:D:2514:U:N1	2.29	0.47
23:D:259:G:C2	23:D:260:G:C5	3.01	0.47
23:D:2619:C:H2'	23:D:2620:C:C6	2.49	0.47
23:D:2701:C:H42	23:D:2706:G:H1	1.62	0.47
23:D:308:G:C2	23:D:309:G:H1'	2.49	0.47
23:D:438:G:C2	23:D:439:G:C4	3.02	0.47
23:D:54:G:C2	23:D:55:G:C4	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:551:G:C2	23:D:552:G:C4	3.02	0.47
23:D:740:U:C4	23:D:1784:A:N6	2.82	0.47
23:D:80:G:C2	23:D:81:G:C4	3.02	0.47
23:D:90:U:H1'	23:D:91:A:C8	2.49	0.47
23:D:917:A:H2'	23:D:918:A:O4'	2.13	0.47
23:D:980:A:C8	23:D:981:A:C6	3.01	0.47
24:E:33:G:H2'	24:E:34:U:C6	2.49	0.47
3:G:138:VAL:HG21	3:G:168:ALA:HB3	1.95	0.47
16:T:9:PHE:CD2	16:T:18:ARG:HD3	2.49	0.47
19:W:44:MET:HA	19:W:47:HIS:HD2	1.79	0.47
54:3:76:TYR:HD1	54:3:79:ARG:NH2	2.12	0.47
1:A:68:G:H1	1:A:101:A:H61	1.62	0.47
1:A:1090:U:H2'	1:A:1091:U:H6	1.79	0.47
1:A:1224:G:O2'	1:A:1225:A:OP1	2.27	0.47
1:A:1492:A:C6	1:A:1493:A:C4	3.01	0.47
1:A:34:C:H42	1:A:550:G:H1	1.61	0.47
1:A:357:G:H2'	1:A:358:U:H5	1.79	0.47
1:A:448:A:C8	1:A:487:A:C6	3.02	0.47
1:A:521:G:O2'	1:A:536:C:H4'	2.13	0.47
1:A:663:A:O3'	18:V:64:ARG:NH2	2.46	0.47
22:C:198:ALA:C	22:C:280:ILE:HG13	2.35	0.47
22:C:299:PRO:HD2	22:C:300:VAL:H	1.79	0.47
23:D:1096:A:C8	23:D:1097:U:H1'	2.49	0.47
23:D:1157:G:O2'	23:D:1158:C:H5'	2.13	0.47
23:D:1249:U:OP2	23:D:1249:U:H6	1.97	0.47
23:D:1286:A:C4	23:D:1289:C:C4	3.02	0.47
23:D:1456:G:N1	23:D:1457:A:C5	2.82	0.47
23:D:1467:C:H42	23:D:1524:G:H1	1.60	0.47
23:D:1752:C:H4'	23:D:2862:G:OP1	2.14	0.47
23:D:1784:A:O3'	23:D:1785:A:H8	1.97	0.47
23:D:1815:A:H1'	23:D:1817:G:N9	2.29	0.47
23:D:182:A:N6	23:D:215:G:H1	2.12	0.47
23:D:2089:U:C2	23:D:2090:G:C8	3.02	0.47
23:D:2207:C:C4	23:D:2208:U:C2	3.02	0.47
23:D:2270:G:H2'	23:D:2271:G:C8	2.49	0.47
23:D:2354:G:N1	23:D:2364:C:C4	2.82	0.47
23:D:2418:A:C6	23:D:2419:U:C4	3.02	0.47
23:D:2447:G:C6	23:D:2500:U:N3	2.82	0.47
23:D:258:G:C5	23:D:259:G:N7	2.82	0.47
23:D:270(E):G:C6	23:D:270(F):U:N3	2.82	0.47
23:D:270:A:P	23:D:270(Y):G:H21	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:280:C:C4	23:D:283:A:C4	3.02	0.47
23:D:290:G:N1	23:D:351:G:C6	2.83	0.47
23:D:500:G:H2'	23:D:502:A:OP2	2.14	0.47
23:D:607:U:C4	23:D:608:A:C5	3.03	0.47
23:D:628:G:C5	23:D:636:G:C2	3.02	0.47
23:D:706:A:C6	23:D:707:G:C4	3.02	0.47
23:D:846:C:H4'	23:D:847:U:O5'	2.13	0.47
24:E:105:G:N1	24:E:106:G:C5	2.82	0.47
24:E:6:C:H2'	24:E:7:G:H8	1.77	0.47
2:F:84:GLU:OE2	2:F:219:VAL:HG11	2.14	0.47
3:G:41:GLY:O	3:G:44:GLU:HB2	2.14	0.47
8:L:6:ILE:HD13	8:L:35:ILE:HG13	1.96	0.47
5:I:151:LEU:HD13	8:L:79:VAL:HG13	1.96	0.47
12:P:86:ARG:HE	12:P:99:HIS:CE1	2.32	0.47
16:T:58:TYR:HE2	16:T:59:TRP:CZ2	2.32	0.47
17:U:12:SER:O	17:U:20:THR:OG1	2.24	0.47
25:Z:50:ASP:N	25:Z:56:GLN:OE1	2.37	0.47
25:Z:76:ALA:N	25:Z:93:TYR:O	2.47	0.47
23:D:1079:C:O2	54:3:131:ALA:HB3	2.15	0.47
55:4:5:G:H1	55:4:68:C:N4	2.13	0.47
1:A:1139:G:O2'	1:A:1140:C:O5'	2.32	0.47
1:A:1179:A:H4'	9:M:103:THR:HG23	1.94	0.47
1:A:1195:C:C4	1:A:1197:G:C8	3.02	0.47
1:A:1247:U:O5'	1:A:1247:U:H6	1.97	0.47
1:A:1367:C:P	10:N:60:ARG:HH21	2.38	0.47
1:A:1393:U:H2'	1:A:1395:C:H41	1.78	0.47
1:A:192:U:H2'	1:A:193:C:C6	2.49	0.47
1:A:292:G:C8	1:A:293:G:H1'	2.50	0.47
1:A:427:U:C4	1:A:428:G:C6	3.03	0.47
1:A:440:A:H62	1:A:493:G:H21	1.62	0.47
1:A:518:C:H2'	1:A:530:G:N3	2.29	0.47
1:A:596:C:H2'	1:A:597:G:O4'	2.13	0.47
1:A:616:G:C6	1:A:625:G:C6	3.02	0.47
1:A:684:A:H3'	1:A:685:G:C8	2.49	0.47
22:C:237:PHE:O	22:C:239:VAL:HG23	2.14	0.47
22:C:239:VAL:HA	22:C:266:ALA:CB	2.44	0.47
22:C:495:LEU:CB	22:C:538:GLN:CG	2.90	0.47
22:C:543:GLY:HA2	22:C:544:LYS:HB2	1.93	0.47
22:C:526:GLU:OE1	22:C:593:PRO:CD	2.62	0.47
23:D:1127:A:C5	23:D:2518:A:H2	2.32	0.47
23:D:1169:G:H3'	23:D:1170:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1178:C:N4	23:D:1179:C:H41	2.12	0.47
23:D:1263:U:H2'	23:D:1264:G:C2	2.49	0.47
23:D:1522:G:C6	23:D:1523:U:C4	3.02	0.47
23:D:1759:A:C4	23:D:1760:A:N7	2.82	0.47
23:D:193:U:H2'	23:D:194:G:H8	1.80	0.47
23:D:185:U:H3	23:D:211:A:H61	1.62	0.47
23:D:2219:G:H3'	23:D:2224:G:C8	2.49	0.47
23:D:2258:C:N3	23:D:2426:A:O2'	2.39	0.47
23:D:2283:C:C2	23:D:2389:G:C2	3.01	0.47
23:D:2415:G:C6	23:D:2416:C:C4	3.02	0.47
23:D:241:A:H1'	23:D:243:U:H1'	1.97	0.47
23:D:1128:A:N7	23:D:2518:A:C6	2.83	0.47
23:D:2677:G:C5	23:D:2731:G:N1	2.82	0.47
23:D:2712:U:H2'	23:D:2712(A):A:C8	2.48	0.47
23:D:290:G:H2'	23:D:291:C:C6	2.44	0.47
23:D:310:A:C5	23:D:312:G:C5	3.02	0.47
23:D:309:G:C6	23:D:330:A:C4	3.02	0.47
23:D:295:G:C4	23:D:345:A:C2	2.99	0.47
23:D:345:A:H4'	23:D:345:A:OP1	2.15	0.47
23:D:354:G:H2'	23:D:355:G:O4'	2.14	0.47
23:D:382:G:H2'	23:D:383:U:C6	2.49	0.47
23:D:387:U:H4'	23:D:388:G:N3	2.29	0.47
23:D:406:G:C8	23:D:407:G:N7	2.82	0.47
23:D:544:C:H2'	23:D:545:G:O4'	2.14	0.47
23:D:585:G:C4	23:D:1251:C:N4	2.82	0.47
23:D:779:U:C4	23:D:780:G:C5	3.03	0.47
23:D:86:C:N3	23:D:87:C:N4	2.62	0.47
23:D:875:G:C4	23:D:876:C:N3	2.82	0.47
23:D:961:C:H4'	23:D:961:C:OP2	2.14	0.47
24:E:31:C:O2'	24:E:54:G:N2	2.46	0.47
4:H:60:GLU:HA	4:H:63:LYS:HG2	1.96	0.47
6:J:18:GLN:HG3	6:J:21:LEU:HD23	1.96	0.47
1:A:1130:A:H8	9:M:18:PHE:CZ	2.32	0.47
12:P:46:LYS:HB2	12:P:46:LYS:HE2	1.76	0.47
12:P:77:LEU:HD22	12:P:81:SER:HB3	1.96	0.47
15:S:56:LEU:O	15:S:60:VAL:HG23	2.15	0.47
16:T:21:VAL:HG11	16:T:59:TRP:CD1	2.50	0.47
18:V:22:VAL:HG11	18:V:55:ARG:CZ	2.44	0.47
13:Q:87:TYR:N	19:W:73:GLU:O	2.44	0.47
20:X:50:GLU:HG3	20:X:54:LYS:NZ	2.29	0.47
25:Z:158:ALA:O	25:Z:159:GLY:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:966:G:N3	55:4:34:C:H5''	2.29	0.47
55:4:50:U:C4	55:4:51:C:C4	3.02	0.47
1:A:1178:G:N2	1:A:1180:A:O5'	2.47	0.47
1:A:951:G:C6	1:A:1231:G:C6	3.03	0.47
1:A:1366:C:O5'	1:A:1366:C:H6	1.98	0.47
1:A:1438:G:C6	1:A:1464:G:C6	3.02	0.47
1:A:1484:C:N3	1:A:1485:U:N3	2.63	0.47
1:A:147:G:C2	1:A:148:G:C5	3.02	0.47
1:A:153:C:H42	1:A:169:C:N4	2.12	0.47
1:A:195:A:O2'	1:A:196:A:OP1	2.31	0.47
1:A:233:C:H2'	1:A:234:C:C6	2.49	0.47
1:A:263:A:H5''	20:X:75:ASN:HD21	1.79	0.47
1:A:474:G:C2	1:A:475:G:C5	3.02	0.47
1:A:475:G:H2'	1:A:476:G:C8	2.50	0.47
22:C:166:ALA:O	22:C:167:SER:HB3	2.14	0.47
22:C:196:LEU:HD22	22:C:217:LEU:HD22	1.96	0.47
22:C:201:PHE:CB	22:C:214:TYR:CE1	2.97	0.47
22:C:22:LYS:HE2	22:C:82:ASP:O	2.14	0.47
22:C:95:ARG:CD	22:C:294:PHE:CE1	2.97	0.47
23:D:1209:G:OP2	23:D:1209:G:H8	1.97	0.47
23:D:1387:C:H42	23:D:1400:G:H1	1.61	0.47
23:D:1412:A:C6	23:D:1413:G:C5	3.02	0.47
23:D:1784:A:O3'	23:D:1785:A:C8	2.67	0.47
23:D:2186:G:H2'	23:D:2187:G:C8	2.50	0.47
23:D:2377:A:C5	23:D:2378:A:C5	3.02	0.47
23:D:2417:C:C2	23:D:2418:A:C8	3.03	0.47
23:D:2499:C:O2	23:D:2500:U:H5'	2.14	0.47
23:D:194:G:H21	23:D:250:G:H22	1.62	0.47
23:D:2525:G:O6	23:D:2539:C:N4	2.48	0.47
23:D:2556:C:C4	23:D:2557:G:C5	3.03	0.47
23:D:2585:U:H4'	23:D:2586:C:O5'	2.14	0.47
23:D:2839:G:C2	23:D:2840:C:C2	3.02	0.47
23:D:2862:G:H2'	23:D:2863:C:H6	1.79	0.47
23:D:30:G:H2'	23:D:31:C:H6	1.79	0.47
23:D:836:G:C5	23:D:837:C:N4	2.83	0.47
24:E:71:C:H2'	24:E:72:G:O4'	2.15	0.47
2:F:148:TYR:HD1	2:F:149:LEU:N	2.13	0.47
2:F:69:LEU:O	2:F:162:ILE:HB	2.14	0.47
3:G:135:LYS:NZ	5:I:52:PRO:HG2	2.29	0.47
4:H:38:TYR:HB2	4:H:39:PRO:HD2	1.95	0.47
4:H:3:ARG:HG3	4:H:118:ARG:HD3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:109:ILE:HG12	5:I:135:THR:HG21	1.95	0.47
6:J:3:ARG:HG2	6:J:93:SER:CB	2.44	0.47
8:L:69:ARG:HB2	8:L:70:GLN:HG2	1.97	0.47
15:S:11:VAL:O	15:S:14:GLU:HB2	2.14	0.47
15:S:23:GLY:HA2	15:S:27:VAL:HG11	1.96	0.47
15:S:43:LEU:HA	15:S:43:LEU:HD23	1.71	0.47
20:X:38:LYS:HG2	20:X:41:ILE:HD12	1.96	0.47
25:Z:182:PRO:CG	25:Z:183:GLU:H	2.27	0.47
52:1:2:LYS:HE3	52:1:35:ARG:NH1	2.30	0.47
1:A:1066:C:C4	1:A:1067:A:C6	3.02	0.47
1:A:1166:G:N2	1:A:1169:A:H3'	2.29	0.47
1:A:1177:G:H2'	1:A:1178:G:O4'	2.13	0.47
1:A:1243:C:H3'	21:Y:9:ARG:NH2	2.30	0.47
1:A:1251:A:C6	1:A:1252:A:C6	3.02	0.47
1:A:133:U:H6	1:A:133:U:OP2	1.98	0.47
1:A:1469:G:H2'	1:A:1470:G:C8	2.46	0.47
1:A:1473:A:H2'	1:A:1474:G:C8	2.49	0.47
1:A:1500:A:H5'	1:A:1506:U:O4	2.15	0.47
1:A:437:U:H2'	1:A:438:G:O4'	2.14	0.47
1:A:659:U:H2'	1:A:660:G:C8	2.48	0.47
1:A:698:G:C2	1:A:699:C:C2	3.02	0.47
1:A:958:A:H2'	1:A:959:A:C6	2.50	0.47
22:C:13:SER:C	22:C:103:VAL:HG13	2.35	0.47
22:C:14:ILE:HG23	22:C:105:LEU:HA	1.83	0.47
22:C:15:ILE:HD12	22:C:103:VAL:HG21	1.95	0.47
22:C:170:THR:HG23	22:C:171:GLY:N	2.24	0.47
22:C:25:LEU:HG	22:C:174:VAL:HG21	1.87	0.47
22:C:164:ILE:HD13	22:C:176:GLU:CB	2.43	0.47
22:C:214:TYR:HA	22:C:264:LEU:H	1.79	0.47
22:C:492:VAL:HG22	22:C:508:ALA:HB3	1.84	0.47
22:C:49:LEU:HD12	22:C:52:GLU:H	1.78	0.47
22:C:495:LEU:HB3	22:C:538:GLN:CA	2.45	0.47
22:C:495:LEU:HD12	22:C:540:ALA:HB2	1.94	0.47
22:C:63:ALA:O	22:C:64:VAL:HB	2.13	0.47
23:D:1184:G:C5	23:D:1185:C:C5	3.02	0.47
23:D:1196:C:C1'	23:D:1226:G:N2	2.76	0.47
23:D:1455:G:C6	23:D:1456:G:C5	3.03	0.47
23:D:1530:G:N1	23:D:1542:G:C6	2.83	0.47
23:D:1814:G:C6	23:D:1815:A:C6	3.02	0.47
23:D:2395:C:N4	23:D:2396:G:N7	2.63	0.47
23:D:2413:G:C4	23:D:2414:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:203:C:OP1	23:D:253:C:H4'	2.15	0.47
23:D:2638:G:H22	23:D:2776:A:P	2.37	0.47
23:D:2781:A:C2'	23:D:2782:G:H4'	2.44	0.47
23:D:2807:G:O6	23:D:2892:A:H8	1.86	0.47
23:D:2811:G:C3'	23:D:2812:G:H5'	2.45	0.47
23:D:299:A:H2'	23:D:300:A:N9	2.30	0.47
23:D:354:G:C4	23:D:355:G:C8	3.03	0.47
23:D:379:G:C2	23:D:380:U:C2	3.02	0.47
23:D:406:G:H2'	23:D:407:G:C8	2.49	0.47
23:D:518:G:H5'	23:D:519:U:OP2	2.13	0.47
23:D:593:G:H22	23:D:664:C:H42	1.61	0.47
23:D:607:U:C4	23:D:621:A:N7	2.82	0.47
23:D:700:G:H2'	23:D:701:G:H8	1.80	0.47
23:D:736:C:H2'	23:D:737:C:H6	1.79	0.47
23:D:692:C:H42	23:D:770:G:H1	1.61	0.47
23:D:881:G:H1'	23:D:896:A:H61	1.79	0.47
23:D:866:A:C4	23:D:914:C:C2	3.03	0.47
23:D:963:U:C4	23:D:964:C:N4	2.81	0.47
24:E:10:C:H2'	24:E:11:C:C6	2.49	0.47
1:A:1101:A:H62	2:F:175:ARG:HH21	1.62	0.47
7:K:29:LYS:HZ3	7:K:102:ARG:HB2	1.80	0.47
7:K:35:LYS:NZ	7:K:38:LEU:HD13	2.29	0.47
7:K:65:ALA:O	7:K:69:VAL:HG23	2.14	0.47
7:K:92:SER:OG	7:K:93:PRO:HD2	2.15	0.47
17:U:17:LYS:HD2	17:U:49:GLU:OE2	2.14	0.47
18:V:49:LYS:O	18:V:51:LEU:HD12	2.15	0.47
56:5:67:C:H2'	56:5:68:C:O4'	2.15	0.47
1:A:1064:G:H1'	1:A:1066:C:N1	2.30	0.47
1:A:1072:G:H2'	1:A:1073:U:N1	2.29	0.47
1:A:1151:A:H5'	10:N:41:PRO:HA	1.96	0.47
1:A:1358:U:O5'	14:R:34:TYR:HA	2.15	0.47
1:A:1394:A:H4'	1:A:1395:C:OP2	2.14	0.47
1:A:1413:A:N6	1:A:1487:G:H1	1.93	0.47
1:A:1492:A:C4	1:A:1493:A:H1'	2.48	0.47
1:A:571:U:H4'	1:A:819:A:N6	2.30	0.47
1:A:616:G:C6	1:A:617:G:C6	3.03	0.47
1:A:579:G:C2	1:A:763:G:C2	3.02	0.47
1:A:775:G:H2'	1:A:776:G:H8	1.80	0.47
1:A:855:G:C6	1:A:856:C:N3	2.82	0.47
1:A:889:A:OP1	1:A:891:U:H1'	2.15	0.47
1:A:925:G:C6	1:A:1392:G:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:926:G:C4	1:A:1505:G:C2	3.02	0.47
1:A:961:U:H1'	1:A:983:A:C5	2.50	0.47
22:C:106:VAL:HG22	22:C:134:VAL:HG13	1.97	0.47
22:C:199:LEU:HA	22:C:280:ILE:N	2.29	0.47
22:C:204:VAL:C	22:C:205:TYR:O	2.53	0.47
22:C:435:LEU:HD12	22:C:452:TYR:HE1	1.78	0.47
22:C:512:LYS:HA	22:C:515:THR:HG21	1.94	0.47
22:C:566:ASP:C	22:C:568:THR:H	2.17	0.47
22:C:82:ASP:N	22:C:82:ASP:OD1	2.46	0.47
23:D:1142:U:H3'	23:D:1142(A):A:C8	2.49	0.47
23:D:749:C:H5''	23:D:1271:G:H21	1.79	0.47
23:D:1413:G:C2	23:D:1414:G:C4	3.02	0.47
23:D:1432:C:N3	23:D:1433:U:N3	2.63	0.47
23:D:1694:C:H4'	23:D:1695:G:C4	2.49	0.47
23:D:1811:G:H2'	23:D:1812:A:C8	2.50	0.47
23:D:186:G:H2'	23:D:187:G:H8	1.78	0.47
23:D:1942:C:C4	23:D:1943:U:C4	3.02	0.47
23:D:1987:G:H2'	23:D:1988:C:H6	1.76	0.47
23:D:2073:C:H2'	23:D:2074:U:H6	1.79	0.47
23:D:2154:G:O2'	23:D:2155:G:O4'	2.21	0.47
23:D:2420:C:O2'	23:D:2421:G:H5'	2.14	0.47
23:D:2077:A:C5	23:D:2435:A:C5	3.02	0.47
23:D:2591:C:C2	23:D:2592:G:C8	3.02	0.47
23:D:2642:G:C2	23:D:2643:G:C4	3.03	0.47
23:D:266:G:H1	23:D:426:C:N4	2.06	0.47
23:D:2649:U:C2	23:D:2672:G:C2	3.03	0.47
23:D:268:C:N4	23:D:424:G:H1	2.11	0.47
23:D:2690:C:O2'	23:D:2691:C:H5'	2.14	0.47
23:D:2627:G:O2'	23:D:2779:U:O2	2.32	0.47
23:D:282:A:H3'	23:D:283:A:C5'	2.36	0.47
23:D:315:G:C2	23:D:316:C:C2	3.02	0.47
23:D:356:G:C6	23:D:357:A:N6	2.82	0.47
23:D:35:G:C6	23:D:446:G:N2	2.82	0.47
23:D:627:A:C4	23:D:637:A:C6	3.02	0.47
23:D:751:A:N7	23:D:789:A:C6	2.82	0.47
23:D:825:C:C4	23:D:826:U:C4	3.02	0.47
23:D:947:G:H1	23:D:970:C:N4	2.12	0.47
2:F:114:ARG:HG3	2:F:117:GLU:OE2	2.15	0.47
3:G:78:GLY:O	3:G:80:GLY:N	2.42	0.47
6:J:70:ASP:OD1	6:J:71:ARG:N	2.47	0.47
6:J:89:MET:HE3	18:V:75:ILE:HD13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:35:LYS:HE3	7:K:38:LEU:HB2	1.96	0.47
8:L:98:LYS:C	23:D:2848:G:H5''	102.29	0.47
11:O:18:ARG:O	11:O:33:THR:OG1	2.17	0.47
11:O:41:THR:HB	11:O:71:LYS:HE2	1.97	0.47
14:R:25:VAL:H	14:R:39:LEU:HD22	1.79	0.47
16:T:9:PHE:N	16:T:16:HIS:O	2.42	0.47
17:U:75:ARG:HG2	17:U:76:LEU:N	2.29	0.47
1:A:191(F):U:N3	20:X:105:SER:HB2	2.29	0.47
21:Y:7:ARG:NH1	21:Y:21:TYR:OH	2.48	0.47
54:3:59:ILE:HG22	54:3:60:TYR:N	2.29	0.47
55:4:22:G:C2	55:4:23:C:N3	2.83	0.47
1:A:1121:U:C6	1:A:1122:U:H5	2.32	0.47
1:A:1152:A:H5'	10:N:13:HIS:HE2	1.79	0.47
1:A:1207:G:H2'	1:A:1208:C:H6	1.77	0.47
1:A:1359:C:H3'	14:R:35:ARG:NH2	2.25	0.47
1:A:1434:A:H3'	1:A:1435:G:C8	2.41	0.47
1:A:251:G:C6	1:A:266:G:C6	3.02	0.47
1:A:282:A:O2'	1:A:283:C:OP1	2.33	0.47
1:A:7:G:C4	1:A:298:A:C5	3.02	0.47
1:A:457:C:H2'	1:A:458:C:O4'	2.15	0.47
1:A:509:A:C5	1:A:510:A:N1	2.82	0.47
1:A:521:G:H2'	1:A:522:C:C6	2.50	0.47
1:A:570:G:H5''	1:A:571:U:OP2	2.15	0.47
1:A:653:A:O4'	8:L:56:LYS:HE2	2.15	0.47
1:A:884:U:H5'	1:A:885:G:OP1	2.14	0.47
1:A:900:A:C6	1:A:901:A:C5	3.03	0.47
22:C:30:LEU:CD2	22:C:32:LEU:HD23	2.44	0.47
23:D:1036:G:C6	23:D:1120:G:C5	3.02	0.47
23:D:1150:C:O2'	23:D:1151:G:H5'	2.14	0.47
23:D:1207:C:C2	23:D:1208:C:H5	2.32	0.47
23:D:1197:G:N1	23:D:1250:G:C5	2.83	0.47
23:D:1427:A:H1'	23:D:1428:C:C5	2.49	0.47
23:D:1431:U:H2'	23:D:1432:C:H6	1.79	0.47
23:D:1485:G:C6	23:D:1486:A:C5	3.03	0.47
23:D:1935:G:C2'	23:D:1962:C:H42	2.24	0.47
23:D:1941:C:O4'	23:D:1965:C:N4	2.48	0.47
23:D:1969:A:H4'	23:D:1970:A:O5'	2.14	0.47
23:D:2012:G:H8	23:D:2012:G:O5'	1.96	0.47
23:D:2027:G:H2'	23:D:2028:U:O4'	2.15	0.47
23:D:2080:G:H2'	23:D:2081:C:O4'	2.14	0.47
23:D:209:C:H2'	23:D:210:C:H6	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2396:G:C5	23:D:2421:G:C6	3.03	0.47
23:D:2489:G:C6	23:D:2490:G:C6	3.02	0.47
23:D:2818:G:N1	23:D:2829:C:C4	2.83	0.47
23:D:2863:C:C2	23:D:2864:G:C8	3.03	0.47
23:D:357:A:C5	23:D:358:U:C4	3.03	0.47
23:D:463:G:C2	23:D:467:G:C4	3.02	0.47
23:D:631:A:C6	23:D:632:A:C6	3.03	0.47
23:D:635:C:C2	23:D:636:G:C8	3.03	0.47
23:D:640:C:H42	23:D:647:G:H22	1.61	0.47
23:D:83:G:N2	23:D:102:G:N3	2.63	0.47
23:D:964:C:OP2	23:D:964:C:H3'	2.14	0.47
4:H:120:LEU:HD12	4:H:121:VAL:N	2.30	0.47
5:I:27:ARG:HH21	5:I:48:ALA:HA	1.79	0.47
8:L:52:ASP:OD1	8:L:58:TYR:N	2.25	0.47
10:N:11:PHE:CZ	14:R:55:GLY:HA3	2.50	0.47
10:N:58:ASP:O	10:N:60:ARG:HG2	2.15	0.47
13:Q:100:GLY:O	13:Q:101:GLN:HB2	2.13	0.47
1:A:948:C:H3'	13:Q:106:ASN:CB	2.45	0.47
20:X:13:LEU:HD23	20:X:17:ARG:HH12	1.80	0.47
54:3:59:ILE:O	54:3:60:TYR:HB2	2.14	0.47
54:3:77:LEU:HD21	54:3:111:LYS:HZ3	1.75	0.47
55:4:2:G:C6	55:4:3:C:C2	3.03	0.47
55:4:52:G:OP2	55:4:52:G:H8	1.97	0.47
1:A:103:C:H2'	1:A:104:G:H8	1.80	0.47
1:A:1117:G:C5	1:A:1184:G:C6	3.02	0.47
1:A:1049:U:C6	1:A:1201:A:H1'	2.50	0.47
1:A:1203:C:H6	1:A:1203:C:O5'	1.98	0.47
1:A:1234:C:C4	1:A:1235:U:C4	3.02	0.47
1:A:1268:A:H2'	1:A:1269:A:C8	2.49	0.47
1:A:1469:G:C4	1:A:1470:G:C8	3.02	0.47
1:A:169:C:H2'	1:A:170:U:C6	2.49	0.47
1:A:286:G:C6	1:A:287:U:C4	3.02	0.47
1:A:40:C:C2	1:A:41:G:C8	3.03	0.47
1:A:61:G:H2'	1:A:62:U:N1	2.30	0.47
1:A:5:U:H4'	1:A:6:G:C4	2.50	0.47
1:A:966:G:C5	1:A:967:C:C2	3.02	0.47
22:C:16:ALA:O	22:C:120:LYS:NZ	2.48	0.47
22:C:204:VAL:CG1	22:C:212:ILE:HB	2.40	0.47
22:C:342:PHE:CD2	22:C:369:LEU:C	2.88	0.47
23:D:1002:G:O6	23:D:1003:G:C6	2.68	0.47
23:D:1169:G:H3'	23:D:1170:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1447:G:N2	23:D:1464:C:N3	2.62	0.47
23:D:1769:G:C5	23:D:1984:G:C6	3.03	0.47
23:D:1792:G:N1	23:D:1827:C:C4	2.83	0.47
23:D:195:A:H5''	23:D:196:A:H4'	1.97	0.47
23:D:195:A:O5'	23:D:196:A:H4'	2.14	0.47
23:D:2064:C:N4	23:D:2065:C:C4	2.83	0.47
23:D:2246:G:C4	23:D:2247:A:C8	3.02	0.47
23:D:250:G:C5	23:D:251:A:C5	3.03	0.47
23:D:2606:C:O2'	23:D:2607:G:H8	1.98	0.47
23:D:270(I):G:C4	23:D:270(R):G:C2	3.02	0.47
23:D:2756:U:H3	23:D:2758:A:H62	1.60	0.47
23:D:2839:G:H1'	23:D:2880:C:C2	2.50	0.47
23:D:317:G:C2	23:D:318:C:C2	3.02	0.47
23:D:422:A:H3'	23:D:423:A:C8	2.50	0.47
23:D:545:G:C2	23:D:549:G:C5	3.03	0.47
23:D:601:C:N4	23:D:602:G:C5	2.83	0.47
23:D:603:A:OP1	23:D:655:A:N6	2.47	0.47
23:D:599:G:N1	23:D:659:C:C4	2.83	0.47
23:D:65:C:O2'	23:D:66:C:H5'	2.15	0.47
23:D:705:A:N6	23:D:727:A:H1'	2.30	0.47
23:D:779:U:H3'	23:D:780:G:H8	1.80	0.47
23:D:808:G:H2'	23:D:809:G:H8	1.78	0.47
23:D:822:U:H2'	23:D:823:G:H8	1.78	0.47
23:D:873:G:C2	23:D:874:G:C4	3.03	0.47
23:D:880:G:N7	23:D:881:G:O2'	2.44	0.47
23:D:880:G:C8	23:D:881:G:H4'	2.50	0.47
23:D:973:A:H4'	23:D:974:G:OP1	2.15	0.47
24:E:73:A:N7	24:E:104:A:C6	2.83	0.47
2:F:99:GLY:HA3	2:F:101:MET:HB3	1.97	0.47
1:A:429:U:H5	4:H:25:ARG:HH22	1.63	0.47
6:J:12:PRO:HB3	6:J:57:GLN:HG2	1.97	0.47
1:A:673:G:H5''	6:J:87:ARG:NE	2.29	0.47
10:N:28:ARG:NH1	10:N:33:GLN:O	2.48	0.47
13:Q:86:CYS:HB2	13:Q:88:ARG:H	1.80	0.47
20:X:25:ARG:O	20:X:29:LYS:HG3	2.15	0.47
56:5:1:G:C6	56:5:73:A:C5	3.03	0.47
1:A:101:A:C6	1:A:102:G:C5	3.03	0.47
1:A:1057:G:C4	1:A:1204:A:N1	2.83	0.47
1:A:1175:G:C5	1:A:1176:A:C5	3.03	0.47
1:A:1351:U:H2'	1:A:1352:C:O4'	2.14	0.47
1:A:1419:G:N2	1:A:1482:G:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1440:C:H1'	1:A:1462:G:H22	1.78	0.47
1:A:1484:C:C4	1:A:1485:U:C4	3.03	0.47
1:A:354:G:C2	1:A:355:C:C2	3.02	0.47
1:A:511:C:N3	1:A:512:U:C4	2.83	0.47
1:A:645:C:C4	1:A:646:U:C4	3.03	0.47
1:A:785:G:C6	1:A:798:G:C5	3.03	0.47
1:A:823:G:H2'	1:A:824:C:C6	2.50	0.47
1:A:980:C:O2	14:R:19:ARG:HA	2.15	0.47
22:C:123:MET:C	22:C:125:LEU:H	2.18	0.47
22:C:215:LEU:CD2	22:C:280:ILE:HG22	2.43	0.47
22:C:203:SER:CB	22:C:325:LEU:HD13	2.40	0.47
22:C:439:ASN:O	22:C:448:VAL:HG12	2.15	0.47
22:C:533:PHE:CD2	22:C:585:LYS:HD2	2.49	0.47
22:C:339:ALA:CB	22:C:598:LEU:HD11	2.43	0.47
22:C:11:ASN:ND2	22:C:79:HIS:NE2	2.62	0.47
23:D:1047:G:H3'	23:D:1110:G:N2	2.28	0.47
23:D:1203:G:OP1	23:D:1204:A:H8	1.97	0.47
23:D:1275:A:H62	23:D:1296:G:H4'	1.80	0.47
23:D:1280:G:H1	23:D:1290:C:H42	1.62	0.47
23:D:1444:G:H2'	23:D:1445:C:C5	2.50	0.47
23:D:1494:A:H2'	23:D:1495:A:H8	1.79	0.47
23:D:1595:G:H2'	23:D:1596:A:O4'	2.14	0.47
23:D:1676:A:H2'	23:D:1677:A:O4'	2.15	0.47
23:D:1718:G:C2	23:D:1742:C:N3	2.82	0.47
23:D:1952:A:C5	23:D:1953:A:N1	2.83	0.47
23:D:1973:G:H2'	23:D:1974:C:C6	2.49	0.47
23:D:2105:C:C2'	23:D:2106:G:C8	2.98	0.47
23:D:220:G:H1	23:D:427:U:H3'	1.80	0.47
23:D:2421:G:C4	56:5:76:A:C5	3.03	0.47
23:D:2560:C:O2'	23:D:2561:A:O4'	2.14	0.47
23:D:269:U:H5	23:D:270(Z):U:OP2	1.98	0.47
23:D:2736:G:H1	23:D:2768:C:H42	1.62	0.47
23:D:2850:A:C6	23:D:2851:A:C4	3.02	0.47
23:D:533:G:N2	23:D:560:C:N3	2.63	0.47
9:M:10:ARG:NH2	23:D:584:C:OP2	170.54	0.47
23:D:692:C:N4	23:D:770:G:H1	2.12	0.47
23:D:684:G:H2'	23:D:775:G:H1	1.79	0.47
23:D:796:C:O2'	23:D:797:C:O5'	2.31	0.47
23:D:872:A:C6	23:D:906:G:C4	3.02	0.47
23:D:886:C:O3'	23:D:887:A:H4'	2.15	0.47
23:D:926:A:H2'	23:D:928:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:E:50:G:H2'	24:E:51:G:C8	2.50	0.47
24:E:56:G:O2'	24:E:57:A:H5''	2.14	0.47
4:H:13:ARG:NH1	4:H:38:TYR:O	2.48	0.47
4:H:144:ASP:O	4:H:184:LYS:HD2	2.15	0.47
4:H:9:CYS:O	4:H:12:CYS:HB2	2.15	0.47
5:I:36:ASP:OD2	5:I:38:GLN:HB2	2.14	0.47
6:J:7:ASN:HB2	6:J:89:MET:O	2.14	0.47
7:K:87:VAL:HG22	7:K:151:TYR:HB3	1.97	0.47
8:L:69:ARG:NE	8:L:76:PRO:HA	2.24	0.47
11:O:51:LYS:H	11:O:54:ARG:HG3	1.80	0.47
15:S:50:HIS:CA	15:S:53:HIS:HB3	2.44	0.47
15:S:7:GLU:O	15:S:11:VAL:HG23	2.15	0.47
17:U:67:LYS:C	17:U:69:LYS:H	2.16	0.47
19:W:38:SER:O	19:W:71:LEU:N	2.43	0.47
20:X:16:HIS:CE1	20:X:20:LEU:HD11	2.49	0.47
25:Z:120:MET:O	25:Z:124:GLY:N	2.48	0.47
25:Z:165:ASN:HB2	25:Z:169:GLY:CA	2.44	0.47
54:3:7:VAL:N	54:3:59:ILE:HD13	2.30	0.47
1:A:1009:G:C2	1:A:1010:G:C4	3.02	0.47
1:A:1215:G:C4	1:A:1216:G:C8	3.03	0.47
1:A:1319:A:H61	1:A:1362:C:H1'	1.80	0.47
1:A:145:G:N1	1:A:177:C:O2	2.48	0.47
1:A:1482:G:O3'	1:A:1483:A:H8	1.98	0.47
1:A:243:A:C6	1:A:246:A:N7	2.83	0.47
1:A:23:C:C2	1:A:24:U:C5	3.03	0.47
1:A:31:G:N2	1:A:306:G:H1'	2.30	0.47
1:A:319:G:H2'	1:A:320:C:C6	2.43	0.47
1:A:59:A:C4	1:A:331:G:C2	3.03	0.47
1:A:373:A:C2	1:A:374:A:C5	3.02	0.47
1:A:39:G:C6	1:A:40:C:C4	3.03	0.47
1:A:518:C:H5'	1:A:530:G:H1'	1.96	0.47
1:A:563:A:N6	1:A:567:G:C2	2.82	0.47
1:A:637:G:C6	1:A:638:G:C5	3.03	0.47
1:A:665:A:C8	1:A:725:G:C2	3.03	0.47
1:A:688:G:C4	1:A:700:G:C2	3.03	0.47
1:A:714:G:H2'	1:A:715:A:O4'	2.15	0.47
1:A:790:A:C6	1:A:791:G:C5	3.02	0.47
1:A:858:G:C6	1:A:869:G:C8	3.03	0.47
1:A:759:A:H4'	1:A:881:G:H5'	1.96	0.47
1:A:80:G:N2	1:A:90:C:O2'	2.47	0.47
1:A:966:G:C2	55:4:34:C:H5''	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:198:ALA:N	22:C:280:ILE:HG13	1.95	0.47
22:C:19:ASP:O	22:C:108:ASP:OD2	2.31	0.47
22:C:217:LEU:HG	22:C:256:LEU:CD2	2.45	0.47
22:C:87:VAL:O	22:C:87:VAL:HG22	2.15	0.47
22:C:83:THR:HG21	22:C:93:VAL:HG11	1.96	0.47
23:D:1054:A:H61	23:D:1105:U:H3	1.63	0.47
23:D:1212:G:H2'	23:D:1235:G:N2	2.29	0.47
23:D:1392:A:C5	23:D:1393:A:C6	3.03	0.47
23:D:1467:C:N3	23:D:1525:G:N2	2.63	0.47
23:D:1605:C:H2'	23:D:1606:G:C8	2.50	0.47
23:D:1324:G:O2'	23:D:1616:A:N6	2.48	0.47
23:D:1743:G:H4'	23:D:1743:G:OP1	2.15	0.47
23:D:1699:G:C4	23:D:1763:G:N1	2.83	0.47
23:D:17:G:C6	23:D:18:C:C4	3.03	0.47
23:D:1835:G:N7	23:D:1836:C:C5	2.83	0.47
23:D:1949:G:C2	23:D:1958:C:N3	2.83	0.47
23:D:1952:A:C6	23:D:1953:A:N1	2.83	0.47
23:D:2037:G:C6	23:D:2038:G:C6	3.02	0.47
23:D:2053:G:C6	23:D:2054:A:N6	2.82	0.47
23:D:2249:U:C4	23:D:2252:G:H5''	2.49	0.47
23:D:2361:A:H2'	23:D:2362:G:H8	1.79	0.47
23:D:2524:G:H1	23:D:2539:C:N4	2.11	0.47
23:D:2581:G:N3	23:D:2581:G:H2'	2.29	0.47
23:D:2685:G:N1	23:D:2686:G:C5	2.83	0.47
23:D:270(D):C:H2'	23:D:270(E):G:C8	2.50	0.47
23:D:270(X):G:C6	23:D:270(Y):G:C4	3.03	0.47
23:D:273:G:O6	23:D:364:C:N4	2.47	0.47
23:D:2844:G:C4	23:D:2845:G:C8	3.03	0.47
23:D:388:G:C2	23:D:390:A:C6	3.03	0.47
23:D:428:A:C5	23:D:429:A:C5	3.02	0.47
23:D:570:G:N2	23:D:2030:A:N3	2.63	0.47
23:D:593:G:O2'	23:D:594:U:H5'	2.14	0.47
23:D:723:G:H2'	23:D:724:U:H6	1.77	0.47
23:D:870:A:H3'	23:D:871:U:C6	2.49	0.47
23:D:880:G:H2'	23:D:881:G:O3'	2.14	0.47
23:D:904:C:H2'	23:D:905:U:C6	2.50	0.47
3:G:152:ILE:CG1	3:G:199:LYS:HB2	2.45	0.47
1:A:406:G:H21	4:H:119:GLN:NE2	2.12	0.47
4:H:90:GLY:O	4:H:94:LEU:HG	2.15	0.47
5:I:111:GLU:C	5:I:114:GLY:H	2.18	0.47
8:L:112:LEU:HD13	8:L:131:GLY:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L:81:HIS:CG	8:L:82:HIS:N	2.81	0.47
17:U:13:ASP:O	17:U:15:MET:N	2.48	0.47
17:U:86:GLU:HA	17:U:89:LEU:HD12	1.96	0.47
19:W:17:GLU:O	19:W:18:LYS:HD2	2.14	0.47
25:Z:189:ILE:HG22	25:Z:190:ARG:NH1	2.30	0.47
23:D:1034:G:H4'	52:1:18:ARG:NH1	2.30	0.47
23:D:1079:C:H1'	54:3:137:GLU:HA	1.97	0.47
1:A:1033:G:H5''	1:A:1034:G:C8	2.50	0.47
1:A:1311:G:H2'	1:A:1312:G:C1'	2.45	0.47
1:A:1399:C:H4'	1:A:1400:C:O5'	2.14	0.47
1:A:146:G:H2'	1:A:147:G:C8	2.49	0.47
1:A:306:G:C5	1:A:307:C:N4	2.83	0.47
1:A:112:G:N2	1:A:330:C:N3	2.62	0.47
1:A:35:G:H2'	1:A:36:C:H6	1.79	0.47
1:A:437:U:O4	1:A:438:G:N1	2.48	0.47
1:A:537:G:N3	1:A:538:G:C8	2.83	0.47
1:A:548:G:H2'	1:A:549:C:C6	2.50	0.47
1:A:666:G:C5	1:A:741:G:C5	3.03	0.47
1:A:729:A:N1	1:A:730:G:C6	2.83	0.47
1:A:660:G:N2	1:A:745:C:N3	2.46	0.47
1:A:874:G:H2'	1:A:875:C:C5	2.49	0.47
1:A:823:G:N1	1:A:878:G:C6	2.83	0.47
1:A:934:C:H41	1:A:1344:C:C3'	2.27	0.47
22:C:11:ASN:HB3	22:C:100:VAL:CA	2.44	0.47
22:C:492:VAL:O	22:C:505:THR:CB	2.63	0.47
23:D:105:C:H2'	23:D:106:C:H6	1.79	0.47
23:D:1236:G:O2'	23:D:1237:A:H8	1.98	0.47
23:D:1649:G:N1	23:D:2009:G:C6	2.83	0.47
23:D:1668:A:N1	23:D:1674:G:H1'	2.30	0.47
23:D:2007:C:N3	23:D:2008:C:C4	2.83	0.47
23:D:2362:G:H2'	23:D:2363:C:C6	2.50	0.47
23:D:199:A:N1	23:D:2433:A:N6	2.62	0.47
23:D:2605:U:C2	23:D:2606:C:C5	3.03	0.47
23:D:2705:A:C5	23:D:2706:G:C8	3.03	0.47
23:D:2744:G:C5	23:D:2745:C:C5	3.02	0.47
23:D:2740:A:C5	23:D:2764:A:C5	3.03	0.47
23:D:2631:G:O5'	23:D:2894:G:C6	2.68	0.47
23:D:379:G:C5	23:D:380:U:C4	3.03	0.47
23:D:408:G:C2	23:D:420:C:C2	3.03	0.47
23:D:463:G:C2	23:D:467:G:C5	3.02	0.47
23:D:484:C:H42	23:D:496:G:H1	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:535:C:N4	23:D:536:A:H62	2.13	0.47
23:D:656:G:C2	23:D:657:U:C2	3.03	0.47
23:D:716:A:H2'	23:D:717:G:O4'	2.14	0.47
24:E:3:C:C2	24:E:118:G:N2	2.83	0.47
24:E:0:A:H4'	24:E:1:U:H5	1.80	0.47
24:E:24:G:H4'	24:E:25:A:N7	2.30	0.47
24:E:37:C:H2'	24:E:38:C:O4'	2.14	0.47
2:F:84:GLU:HB3	2:F:215:LEU:HD21	1.95	0.47
3:G:138:VAL:O	3:G:142:MET:HG2	2.15	0.47
4:H:127:THR:O	4:H:147:ALA:N	2.47	0.47
7:K:8:GLU:OE2	7:K:10:ARG:HA	2.15	0.47
7:K:33:ASP:O	7:K:35:LYS:HG3	2.15	0.47
7:K:42:ILE:HA	7:K:45:ASP:OD2	2.15	0.47
7:K:57:GLU:O	7:K:61:VAL:HG23	2.15	0.47
7:K:64:GLN:HE21	7:K:68:ASN:ND2	2.13	0.47
8:L:48:TYR:HA	8:L:60:ARG:HG3	1.97	0.47
1:A:1491:G:H5''	12:P:46:LYS:HZ1	1.80	0.47
1:A:1328:C:H2'	13:Q:29:ARG:HH21	1.79	0.47
3:G:18:TRP:CZ2	14:R:57:ARG:HB3	2.46	0.47
1:A:376:G:OP1	16:T:5:ARG:HB2	2.15	0.47
25:Z:3:HIS:CD2	25:Z:8:ARG:CZ	2.98	0.47
23:D:1063:G:H2'	54:3:88:ALA:N	2.30	0.46
55:4:4:G:C4	55:4:5:G:C8	3.03	0.46
55:4:67:C:H2'	55:4:68:C:C6	2.50	0.46
56:5:53:G:N2	56:5:61:C:N3	2.62	0.46
1:A:1096:C:H2'	1:A:1097:C:H6	1.80	0.46
1:A:114:U:H2'	1:A:115:G:C8	2.50	0.46
1:A:1282:C:N4	1:A:1283:G:O6	2.49	0.46
1:A:1290:G:N3	1:A:1291:G:C8	2.83	0.46
1:A:1489:G:H2'	1:A:1490:C:C6	2.51	0.46
1:A:262:A:C4	1:A:263:A:C8	3.03	0.46
1:A:405:U:H5''	1:A:406:G:O4'	2.13	0.46
1:A:468:A:H2'	1:A:474:G:O4'	2.15	0.46
1:A:516:U:H2'	1:A:517:G:C8	2.50	0.46
1:A:560:U:O4'	1:A:566:G:N2	2.48	0.46
1:A:690:G:C6	1:A:691:G:C6	3.03	0.46
1:A:718:G:H5''	1:A:719:C:OP2	2.15	0.46
1:A:761:G:H5'	17:U:101:ARG:HD2	1.97	0.46
1:A:77:C:H2'	1:A:78:G:C8	2.50	0.46
1:A:782:A:C5	1:A:801:U:C4	3.02	0.46
22:C:106:VAL:CG2	22:C:136:ASN:HB2	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:236:GLU:CG	22:C:237:PHE:H	2.24	0.46
22:C:338:THR:CB	22:C:503:ALA:HB3	2.37	0.46
22:C:356:ILE:HG22	22:C:357:VAL:N	2.30	0.46
22:C:390:VAL:O	22:C:390:VAL:HG12	2.15	0.46
22:C:442:PRO:C	22:C:444:ALA:H	2.18	0.46
22:C:55:ARG:HB3	22:C:57:ILE:HG13	1.97	0.46
22:C:67:THR:CG2	22:C:68:TYR:H	2.10	0.46
22:C:95:ARG:HB3	22:C:294:PHE:CD1	2.33	0.46
23:D:115:C:O2'	23:D:127:A:O2'	2.32	0.46
23:D:1389:G:C2	23:D:1390:U:N3	2.82	0.46
23:D:1479:G:H2'	23:D:1480:G:C8	2.50	0.46
23:D:1625:C:H2'	23:D:1626:G:O4'	2.15	0.46
23:D:1795:C:N3	23:D:1796:U:C4	2.83	0.46
23:D:1843:C:H2'	23:D:1844:C:C6	2.50	0.46
23:D:1854:A:C4	23:D:1855:G:C8	3.03	0.46
23:D:187:G:H2'	23:D:188:G:O4'	2.14	0.46
23:D:1921:G:C6	23:D:1922:G:C6	3.03	0.46
23:D:1943:U:O2	23:D:1945:G:H5'	2.15	0.46
23:D:1992:G:C6	23:D:1997:G:C4	3.03	0.46
23:D:2010:G:C6	23:D:2011:U:C4	3.03	0.46
23:D:204:A:C8	23:D:206:U:O2	2.68	0.46
23:D:2087:G:C6	23:D:2233:U:C4	3.03	0.46
23:D:2125:G:O2'	23:D:2126:A:H5''	2.15	0.46
23:D:2447:G:N1	23:D:2500:U:N3	2.63	0.46
23:D:2613:U:HO2'	23:D:2614:A:P	2.36	0.46
23:D:2630:G:C2	23:D:2789:C:N3	2.83	0.46
23:D:334:C:OP1	23:D:335:C:N4	2.37	0.46
23:D:428:A:H8	23:D:428:A:OP2	1.98	0.46
23:D:503:A:H4'	23:D:504:U:O5'	2.15	0.46
23:D:565:C:C4	23:D:576:U:C4	3.03	0.46
23:D:883:G:H1'	23:D:892:G:H22	1.79	0.46
23:D:842:G:N2	23:D:936:C:C2	2.80	0.46
3:G:35:GLU:HB2	3:G:59:ARG:NH2	2.30	0.46
4:H:72:GLU:O	4:H:75:PHE:HB3	2.15	0.46
5:I:147:ASP:O	5:I:150:ARG:HB3	2.15	0.46
7:K:70:LYS:HB3	7:K:96:GLN:NE2	2.30	0.46
17:U:7:THR:HG22	17:U:56:VAL:HG12	1.97	0.46
18:V:71:LYS:O	18:V:75:ILE:HG13	2.15	0.46
54:3:106:GLU:HG3	54:3:107:ILE:HG13	1.97	0.46
55:4:34:C:H2'	55:4:35:A:O4'	2.15	0.46
56:5:4:C:N3	56:5:69:G:N1	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1297:C:N4	7:K:115:ARG:HH21	2.13	0.46
1:A:1440:C:C5	1:A:1441:G:C5	3.03	0.46
1:A:1492:A:OP2	12:P:46:LYS:NZ	2.39	0.46
1:A:269:C:H2'	1:A:270:A:H8	1.72	0.46
1:A:316:G:C4	1:A:317:G:N7	2.83	0.46
1:A:318:G:C2	1:A:319:G:C4	3.03	0.46
1:A:427:U:H3'	1:A:428:G:C8	2.50	0.46
1:A:814:A:C6	1:A:816:A:H1'	2.51	0.46
1:A:915:A:C6	1:A:916:G:C4	3.03	0.46
1:A:986:A:H2'	1:A:987:G:O4'	2.15	0.46
22:C:164:ILE:HD12	22:C:176:GLU:CB	2.37	0.46
22:C:217:LEU:HD12	22:C:257:GLU:O	2.15	0.46
22:C:434:ARG:CZ	22:C:453:GLU:HB3	2.44	0.46
22:C:458:GLU:OE2	22:C:509:HIS:CD2	2.68	0.46
22:C:569:ARG:NH1	55:4:74:C:H5''	2.29	0.46
23:D:1227:A:N6	23:D:1228:G:C6	2.83	0.46
23:D:1303:G:C6	23:D:1304:C:N4	2.84	0.46
23:D:1558:A:H5'	23:D:1559:G:N7	2.29	0.46
23:D:1568:G:O2'	23:D:1569:A:OP2	2.30	0.46
23:D:1363:C:C3'	23:D:1809:A:H62	2.28	0.46
1:A:702:A:N1	23:D:1848:A:C5	2.83	0.46
23:D:1895:C:C2	23:D:1896:G:C8	3.04	0.46
23:D:2142:C:O2'	23:D:2143:C:O4'	2.29	0.46
23:D:2100:G:C6	23:D:2190:G:C5	3.03	0.46
23:D:2377:A:H2'	23:D:2378:A:C8	2.49	0.46
23:D:2410:G:C6	23:D:2411:A:C6	3.04	0.46
23:D:2600:A:C6	23:D:2601:C:N4	2.83	0.46
23:D:2637:U:H3	23:D:2781:A:N6	2.09	0.46
23:D:2705:A:C6	23:D:2706:G:C4	3.03	0.46
23:D:270(M):U:H4'	23:D:270(N):G:O5'	2.15	0.46
23:D:2749:A:P	23:D:2749:A:H3'	2.55	0.46
23:D:2813:A:H2'	23:D:2814:C:C6	2.49	0.46
23:D:2826:A:C5	23:D:2827:C:C5	3.03	0.46
23:D:2895:U:H2'	23:D:2896:C:C6	2.50	0.46
23:D:288:C:N4	23:D:354:G:C6	2.83	0.46
23:D:354:G:C6	23:D:355:G:C5	3.03	0.46
23:D:494:G:N3	23:D:495:G:C8	2.84	0.46
23:D:501:A:C6	23:D:502:A:C2	3.02	0.46
23:D:569:U:H3'	23:D:570:G:H8	1.78	0.46
23:D:683:C:H6	23:D:683:C:O5'	1.97	0.46
23:D:685:A:H5''	23:D:686:G:N2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:773:U:O2	23:D:773:U:H2'	2.16	0.46
23:D:992:C:O2'	23:D:993:G:O5'	2.30	0.46
24:E:44:G:N2	24:E:48:A:H1'	2.30	0.46
2:F:148:TYR:HD1	2:F:149:LEU:H	1.64	0.46
2:F:68:ILE:O	2:F:90:MET:HB3	2.14	0.46
3:G:77:ILE:HD11	3:G:103:VAL:HG21	1.97	0.46
4:H:65:ARG:NH1	23:D:2406:U:O2	170.79	0.46
4:H:4:TYR:OH	4:H:7:PRO:O	2.21	0.46
5:I:90:VAL:N	5:I:121:LYS:O	2.47	0.46
8:L:111:ILE:HB	8:L:135:CYS:HB3	1.96	0.46
10:N:7:LYS:HG2	10:N:9:ARG:H	1.80	0.46
1:A:1492:A:OP2	12:P:46:LYS:HG3	2.16	0.46
17:U:9:VAL:HG21	17:U:85:VAL:HG22	1.97	0.46
23:D:2393:A:P	25:Z:32:LEU:HD11	76.87	0.46
25:Z:55:ASP:OD1	25:Z:56:GLN:HG3	2.15	0.46
53:2:56:ASN:HA	53:2:83:TYR:HA	1.96	0.46
56:5:47:U:H4'	56:5:47:U:OP2	2.15	0.46
1:A:1038:C:H2'	1:A:1039:C:N1	2.30	0.46
1:A:103:C:H2'	1:A:104:G:C8	2.51	0.46
1:A:992:U:O2'	1:A:1043:C:N4	2.49	0.46
1:A:1068:G:N1	1:A:1108:G:H1'	2.30	0.46
1:A:9:G:C6	1:A:10:A:C5	3.04	0.46
1:A:1231:G:C5	1:A:1232:U:C4	3.04	0.46
1:A:1314:C:H2'	1:A:1315:U:C6	2.50	0.46
1:A:1359:C:OP2	14:R:35:ARG:NE	2.49	0.46
1:A:1401:G:H3'	1:A:1402:C:C6	2.51	0.46
1:A:1416:G:H2'	1:A:1417:G:O4'	2.15	0.46
1:A:1417:G:C5	1:A:1482:G:C2	3.04	0.46
1:A:32:A:H2'	1:A:33:A:H8	1.78	0.46
1:A:339:C:H2'	1:A:340:U:C6	2.51	0.46
1:A:397:A:C6	1:A:548:G:C5	3.04	0.46
1:A:408:A:C6	1:A:409:G:C5	3.03	0.46
1:A:505:G:C6	1:A:506:G:C6	3.03	0.46
1:A:553:A:C5	1:A:554:C:C4	3.03	0.46
1:A:815:A:O4'	1:A:817:C:N4	2.49	0.46
1:A:913:A:H1'	1:A:914:A:OP2	2.15	0.46
1:A:954:G:C2	1:A:1228:C:N3	2.83	0.46
1:A:966:G:O2'	9:M:128:ARG:NE	2.41	0.46
22:C:263:TRP:CD1	22:C:265:VAL:CG1	2.87	0.46
22:C:69:ARG:NE	22:C:178:LEU:HD13	2.30	0.46
23:D:1098:A:N7	23:D:1099:G:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1128:A:C6	23:D:1129:A:C6	3.03	0.46
23:D:1022:G:C6	23:D:1139:G:C5	3.03	0.46
23:D:1138:G:C6	23:D:1139:G:N1	2.84	0.46
23:D:1212:G:C6	23:D:1236:G:N1	2.83	0.46
23:D:1259:G:C2	23:D:1260:G:C5	3.03	0.46
23:D:1264:G:N7	23:D:1265:A:C5	2.84	0.46
23:D:1354:A:H2'	23:D:1355:G:O4'	2.16	0.46
23:D:136:G:H2'	23:D:137:C:H6	1.80	0.46
23:D:1388:G:C2	23:D:1389:G:C4	3.03	0.46
23:D:1410:G:C2	23:D:1593:G:C4	3.02	0.46
23:D:1429:G:N3	23:D:1429:G:H2'	2.31	0.46
23:D:1491:G:C2	23:D:1500:G:C8	3.03	0.46
23:D:153:C:C4	23:D:154:G:O6	2.69	0.46
23:D:1718:G:N1	23:D:1741:C:N3	2.60	0.46
23:D:188:G:C6	23:D:189:G:C2	3.04	0.46
23:D:1925:C:H2'	23:D:1926:U:C6	2.51	0.46
23:D:2032:G:N2	23:D:2032:G:OP1	2.47	0.46
23:D:190:A:N7	23:D:207:A:C6	2.83	0.46
23:D:2193:G:C2	23:D:2194:G:C4	3.04	0.46
23:D:2226:C:C2	23:D:2227:A:C8	3.03	0.46
23:D:2258:C:H42	23:D:2426:A:C1'	2.28	0.46
23:D:2375:G:N2	23:D:2378:A:H62	2.13	0.46
23:D:2422:A:N7	56:5:76:A:C5	2.84	0.46
23:D:2435:A:C6	23:D:2436:G:C6	3.03	0.46
23:D:2444:G:C4	23:D:2445:G:C8	3.04	0.46
23:D:2487:G:C4	23:D:2488:A:C8	3.03	0.46
23:D:2548:G:C6	23:D:2549:G:C5	3.03	0.46
23:D:2056:G:C5	23:D:2577:A:C4	3.03	0.46
23:D:2601:C:O5'	23:D:2601:C:H6	1.98	0.46
23:D:2606:C:H2'	23:D:2607:G:N7	2.30	0.46
23:D:2821:A:H2'	23:D:2822:G:O4'	2.15	0.46
23:D:315:G:C6	23:D:316:C:C4	3.04	0.46
23:D:397:G:N2	23:D:398:G:H1'	2.30	0.46
23:D:422:A:C4	23:D:423:A:N7	2.83	0.46
23:D:54:G:H2'	23:D:55:G:O4'	2.15	0.46
23:D:54:G:N1	23:D:55:G:C5	2.84	0.46
23:D:562:U:C2	23:D:572:A:H1'	2.50	0.46
23:D:59:U:H4'	23:D:73:A:C6	2.50	0.46
23:D:741:G:C6	23:D:742:G:C5	3.03	0.46
23:D:868:U:N3	23:D:869:G:N7	2.64	0.46
23:D:8:A:C2	23:D:9:U:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:915:C:C2	23:D:916:G:C4	3.03	0.46
3:G:137:ALA:O	3:G:141:VAL:HB	2.15	0.46
4:H:127:THR:OG1	4:H:149:ALA:HA	2.15	0.46
5:I:58:ALA:HA	5:I:61:TYR:HD2	1.79	0.46
15:S:40:SER:HB3	23:D:716:A:H2	1.80	0.46
17:U:66:SER:HB3	17:U:69:LYS:HB3	1.96	0.46
18:V:56:THR:OG1	18:V:57:GLY:N	2.47	0.46
25:Z:71:GLN:HG2	25:Z:176:GLY:CA	2.46	0.46
52:1:3:VAL:O	52:1:36:GLN:HA	2.14	0.46
1:A:1100:C:OP2	2:F:96:ARG:NE	2.36	0.46
1:A:1199:U:H6	1:A:1199:U:O5'	1.99	0.46
1:A:1056:U:N3	1:A:1205:U:O2	2.48	0.46
1:A:1239:A:N1	1:A:1296:C:H2'	2.30	0.46
1:A:1319:A:C5	1:A:1323:G:C5	3.03	0.46
1:A:1288:A:N1	1:A:1371:G:O2'	2.48	0.46
1:A:1453:G:H3'	1:A:1453:G:N3	2.31	0.46
1:A:1529:G:N3	1:A:1529:G:H2'	2.31	0.46
1:A:289:G:H2'	1:A:290:C:N1	2.30	0.46
1:A:477:G:H2'	1:A:478:A:C8	2.50	0.46
1:A:490:G:C2	1:A:491:G:C5	3.04	0.46
1:A:52:G:N3	1:A:53:A:H1'	2.31	0.46
1:A:585:G:C6	1:A:586:C:C4	3.03	0.46
1:A:761:G:H5'	17:U:101:ARG:HG3	1.97	0.46
1:A:783:C:N4	1:A:799:G:H22	2.14	0.46
1:A:810:C:N4	1:A:811:C:C2	2.84	0.46
1:A:81:G:N2	1:A:89:U:H1'	2.30	0.46
22:C:9:ILE:HG22	22:C:10:ARG:N	2.30	0.46
22:C:217:LEU:CD2	22:C:222:VAL:CG2	2.93	0.46
22:C:200:ILE:HD13	22:C:277:GLY:HA3	1.86	0.46
22:C:79:HIS:ND1	22:C:216:ARG:NH2	2.62	0.46
23:D:1151:G:OP2	23:D:1151:G:H3'	2.14	0.46
23:D:1155:A:C4	23:D:1157:G:C5	3.04	0.46
23:D:1200:C:C2	23:D:1201:C:C5	3.03	0.46
23:D:1479:G:H5'	23:D:1480:G:OP1	2.14	0.46
23:D:1667:G:C5	23:D:1991:U:C4	3.04	0.46
23:D:1797:C:N3	23:D:1798:U:N3	2.63	0.46
23:D:1811:G:H2'	23:D:1812:A:H8	1.80	0.46
23:D:1861:G:H1	23:D:1881:C:N4	2.14	0.46
23:D:2074:U:C4	23:D:2075:U:H5	2.34	0.46
23:D:2255:G:C6	23:D:2256:G:C4	3.04	0.46
23:D:2259:G:H2'	23:D:2260:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2283:C:HO2'	23:D:2284:C:P	2.38	0.46
23:D:2292:C:H2'	23:D:2293:C:C6	2.50	0.46
23:D:2330:G:C6	23:D:2331:G:C5	3.04	0.46
23:D:2412:A:C4	23:D:2413:G:C8	3.03	0.46
23:D:241:A:H8	23:D:243:U:C5	2.33	0.46
23:D:2466:C:H2'	23:D:2467:C:C5	2.50	0.46
23:D:2544:G:H2'	23:D:2545:G:O4'	2.16	0.46
23:D:2674:G:H2'	23:D:2675:A:C8	2.49	0.46
23:D:2758:A:H3'	23:D:2759:G:H8	1.79	0.46
23:D:2776:A:O2'	23:D:2781:A:N7	2.32	0.46
23:D:278:A:H2'	23:D:279:C:C6	2.50	0.46
23:D:2826:A:C6	23:D:2827:C:C4	3.03	0.46
23:D:2629:A:C4	23:D:2895:U:O4'	2.69	0.46
23:D:377:C:H2'	23:D:378:C:C6	2.51	0.46
23:D:511:U:C4	23:D:512:G:C4	3.04	0.46
23:D:831:G:O2'	23:D:832:G:OP1	2.30	0.46
23:D:864:G:C2	23:D:865:C:N3	2.84	0.46
23:D:963:U:C2	23:D:964:C:C5	3.02	0.46
23:D:965:C:H2'	23:D:966:G:C8	2.38	0.46
23:D:974:G:O2'	23:D:1186:G:O2'	2.17	0.46
24:E:23:G:H2'	24:E:24:G:C4	2.51	0.46
3:G:120:VAL:HA	3:G:123:GLN:HG2	1.98	0.46
5:I:76:ILE:HD13	5:I:91:LEU:HD21	1.96	0.46
6:J:37:VAL:HA	6:J:65:VAL:CG1	2.44	0.46
9:M:19:LEU:HG	9:M:60:ASP:O	2.15	0.46
12:P:61:THR:C	12:P:63:GLY:H	2.18	0.46
13:Q:84:ILE:HG13	13:Q:86:CYS:SG	2.55	0.46
13:Q:99:ARG:HA	13:Q:99:ARG:HD3	1.56	0.46
14:R:42:ILE:O	14:R:46:GLU:HG3	2.15	0.46
15:S:77:ARG:O	15:S:77:ARG:HG2	2.14	0.46
16:T:8:ARG:HA	16:T:17:TYR:CD1	2.50	0.46
19:W:21:GLU:HG2	19:W:22:LEU:N	2.31	0.46
21:Y:22:ARG:HA	21:Y:23:PRO:HD2	1.75	0.46
1:A:1204:A:H2'	1:A:1205:U:C5'	2.45	0.46
1:A:1253:G:H1	1:A:1284:C:H42	1.62	0.46
1:A:231:G:C2	1:A:232:G:C4	3.04	0.46
1:A:414:A:C4	1:A:415:A:C8	3.03	0.46
1:A:485:G:H4'	1:A:486:U:O5'	2.14	0.46
1:A:406:G:C6	1:A:495:A:C8	3.04	0.46
1:A:807:A:H2'	1:A:808:C:H6	1.80	0.46
1:A:767:A:N6	1:A:813:U:H3	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:93:U:H2'	1:A:95:G:C8	2.48	0.46
22:C:180:ALA:HA	22:C:183:GLN:CD	2.35	0.46
22:C:197:LYS:HZ1	22:C:290:PRO:CA	2.28	0.46
22:C:26:ALA:CB	22:C:80:LEU:HD21	2.46	0.46
22:C:231:TYR:OH	22:C:279:THR:HG21	2.15	0.46
22:C:29:ILE:HG23	22:C:29:ILE:O	2.16	0.46
22:C:92:GLU:OE1	22:C:326:ASN:OD1	2.34	0.46
22:C:468:LYS:O	22:C:472:ARG:CA	2.64	0.46
22:C:49:LEU:O	22:C:51:LEU:HD23	2.15	0.46
22:C:86:HIS:O	22:C:88:ASP:OD2	2.33	0.46
23:D:1088:A:OP1	23:D:1088:A:H8	1.97	0.46
23:D:1149:G:C2	23:D:1150:C:C2	3.03	0.46
23:D:1182:A:N6	23:D:1183:G:C6	2.84	0.46
23:D:1199:U:O2	23:D:1199:U:H2'	2.14	0.46
23:D:1210:A:H1'	23:D:1212:G:H21	1.79	0.46
23:D:121:G:C4	23:D:122:G:N7	2.84	0.46
9:M:10:ARG:CD	23:D:1251:C:H5'	171.92	0.46
23:D:1419:A:H8	23:D:1419:A:OP2	1.98	0.46
23:D:1442:G:N1	23:D:1550:C:C4	2.83	0.46
23:D:1565:C:C4	23:D:1567:A:H1'	2.51	0.46
23:D:190:A:C2	23:D:191:A:C5	3.04	0.46
23:D:1965:C:N3	23:D:1966:A:N6	2.64	0.46
23:D:1649:G:C6	23:D:2009:G:C6	3.04	0.46
23:D:217:G:N3	23:D:217:G:H2'	2.30	0.46
23:D:2231:C:C2	23:D:2232:U:C6	3.03	0.46
23:D:2400:G:C5	23:D:2401:U:C4	3.04	0.46
23:D:2444:G:H2'	23:D:2445:G:C8	2.50	0.46
23:D:2472:G:H21	23:D:2478:A:H62	1.63	0.46
23:D:2494:G:C6	23:D:2495:G:C5	3.04	0.46
23:D:23:G:C6	23:D:24:G:C5	3.04	0.46
23:D:2507:C:C5	23:D:2508:G:N7	2.84	0.46
22:C:55:ARG:CZ	23:D:2655:G:N2	2.78	0.46
23:D:2699:C:C4	23:D:2700:C:C4	3.04	0.46
23:D:27:G:HO2'	23:D:28:A:P	2.38	0.46
23:D:2834:G:C2	23:D:2879:C:N3	2.84	0.46
23:D:332:A:C6	23:D:335:C:C2	3.04	0.46
23:D:348:G:H3'	23:D:349:G:C8	2.50	0.46
23:D:353:G:H8	23:D:353:G:O5'	1.99	0.46
23:D:412:A:N7	23:D:2412:A:H1'	2.30	0.46
23:D:447:A:H1'	23:D:449:A:N6	2.31	0.46
23:D:605:C:H2'	23:D:606:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:606:U:HO2'	23:D:607:U:P	2.38	0.46
23:D:681:G:C4	23:D:682:G:C8	3.04	0.46
23:D:695:G:H3'	23:D:696:G:H8	1.81	0.46
23:D:68:G:O2'	23:D:69:C:O4'	2.32	0.46
23:D:779:U:H2'	23:D:780:G:O4'	2.15	0.46
23:D:911:A:OP1	23:D:912:C:H5''	2.16	0.46
23:D:950:G:C6	23:D:951:C:C4	3.04	0.46
24:E:1:U:N3	24:E:119:A:C2	2.83	0.46
5:I:83:GLU:HB2	5:I:88:LYS:NZ	2.30	0.46
5:I:9:LYS:C	5:I:32:VAL:HG13	2.35	0.46
6:J:75:LEU:O	6:J:79:LEU:N	2.49	0.46
7:K:3:ARG:HG3	7:K:4:ARG:N	2.31	0.46
9:M:37:PHE:HE1	9:M:70:LYS:HA	1.81	0.46
12:P:85:ILE:CG1	12:P:98:TYR:HB3	2.46	0.46
1:A:986:A:H1'	19:W:56:GLN:HE21	1.81	0.46
25:Z:179:SER:O	25:Z:180:PHE:HB2	2.16	0.46
1:A:1089:G:H2'	1:A:1090:U:C6	2.50	0.46
1:A:1203:C:H2'	1:A:1204:A:C8	2.43	0.46
1:A:1262:C:H41	1:A:1274:G:H21	1.62	0.46
1:A:1358:U:H5''	1:A:1359:C:C5	2.51	0.46
1:A:1369:C:H2'	1:A:1370:G:H8	1.81	0.46
1:A:13:U:O3'	1:A:14:U:H6	1.98	0.46
1:A:160:A:C2	1:A:161:A:C4	3.04	0.46
1:A:231:G:C4	1:A:232:G:C8	3.04	0.46
1:A:286:G:C5	1:A:287:U:C4	3.03	0.46
1:A:321:A:H2'	1:A:322:C:H6	1.81	0.46
1:A:350:G:C2	1:A:351:G:C5	3.04	0.46
1:A:420:U:N3	1:A:422:C:O2	2.48	0.46
1:A:44:G:H2'	1:A:45:U:O4'	2.15	0.46
1:A:523:A:N3	1:A:527:G:C2	2.83	0.46
1:A:556:C:H2'	1:A:557:G:O4'	2.15	0.46
1:A:661:G:H2'	1:A:662:G:H5'	1.98	0.46
1:A:854:G:C2	1:A:855:G:C5	3.03	0.46
1:A:570:G:C6	1:A:866:C:N4	2.84	0.46
1:A:878:G:H5'	8:L:89:PRO:HG2	1.97	0.46
22:C:134:VAL:HG13	22:C:134:VAL:O	2.15	0.46
22:C:10:ARG:HH12	22:C:182:VAL:HG13	1.75	0.46
22:C:345:ARG:NH2	22:C:348:PHE:HZ	2.14	0.46
22:C:556:LYS:HD3	22:C:558:VAL:HG23	1.97	0.46
23:D:1005:C:H3'	23:D:1006:C:H5	1.81	0.46
23:D:1044:G:C5'	53:2:4:LYS:O	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1064:C:N3	54:3:91:PRO:HG2	1.89	0.46
23:D:1256:G:H2'	23:D:1257:C:H6	1.75	0.46
23:D:1296:G:H2'	23:D:1297:C:H6	1.76	0.46
23:D:1274:A:C6	23:D:1302:A:C6	3.04	0.46
23:D:1304:C:H2'	23:D:1305:C:H5'	1.98	0.46
23:D:129:C:C4	23:D:130:C:N4	2.84	0.46
23:D:1320:C:O2'	23:D:1321:A:O5'	2.29	0.46
23:D:1382:G:C6	23:D:1383:C:N3	2.84	0.46
23:D:1545(A):A:H3'	23:D:1546:C:H6	1.80	0.46
23:D:1411:C:N4	23:D:1592:C:H42	2.14	0.46
23:D:1642:G:C6	23:D:1643:G:C5	3.04	0.46
23:D:1703:G:H2'	23:D:1704:G:H8	1.79	0.46
23:D:152:G:H22	23:D:175:G:C1'	2.29	0.46
23:D:1789:A:C6	23:D:1790:C:C2	3.03	0.46
23:D:179:G:H2'	23:D:180:G:C8	2.51	0.46
23:D:1838:C:H5''	23:D:1839:G:OP1	2.16	0.46
23:D:1649:G:C6	23:D:2009:G:N1	2.83	0.46
23:D:2018:G:P	23:D:2018:G:H3'	2.55	0.46
23:D:2060:A:C6	23:D:2502:G:C6	3.03	0.46
23:D:2253:G:C6	23:D:2254:C:C4	3.03	0.46
23:D:2458:G:C8	23:D:2490:G:C6	3.03	0.46
23:D:2471:C:H3'	23:D:2472:G:H8	1.81	0.46
23:D:2557:G:H2'	23:D:2558:C:C6	2.50	0.46
23:D:2578:G:H2'	23:D:2579:C:H6	1.80	0.46
23:D:2600:A:C4	23:D:2601:C:C5	3.03	0.46
23:D:2663:G:O6	23:D:2664:G:N1	2.49	0.46
23:D:2691:C:C4	23:D:2692:C:C4	3.02	0.46
23:D:2543:G:N2	23:D:2765:A:C4	2.84	0.46
23:D:379:G:C5	23:D:396:G:C5	3.04	0.46
23:D:482:A:C8	23:D:506:G:C6	3.04	0.46
23:D:618:G:C8	23:D:618(A):C:C4	3.03	0.46
23:D:657:U:N3	23:D:658:C:C4	2.83	0.46
23:D:856:C:N3	23:D:921:G:N2	2.57	0.46
23:D:917:A:C5	23:D:918:A:C5	3.03	0.46
24:E:51:G:H8	24:E:51:G:OP2	1.99	0.46
2:F:70:PHE:HA	2:F:163:PHE:O	2.15	0.46
2:F:47:THR:O	2:F:50:GLU:HB3	2.15	0.46
4:H:204:ILE:HD12	4:H:204:ILE:H	1.81	0.46
7:K:76:ARG:O	7:K:86:GLN:HA	2.14	0.46
8:L:75:ARG:HB3	8:L:75:ARG:CZ	2.46	0.46
9:M:32:ASP:HB2	9:M:34:ASN:HD22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:M:54:ASP:CG	9:M:55:ALA:H	2.18	0.46
11:O:30:VAL:HB	11:O:43:SER:HB3	1.97	0.46
1:A:1328:C:P	13:Q:28:ALA:HB1	2.55	0.46
13:Q:65:LYS:CD	13:Q:73:GLU:CD	2.84	0.46
17:U:26:GLN:NE2	17:U:37:LYS:HE2	2.28	0.46
17:U:38:ARG:HA	17:U:38:ARG:HD3	1.74	0.46
18:V:67:ALA:HA	18:V:70:ILE:HD12	1.97	0.46
6:J:50:TYR:CZ	18:V:81:PHE:HE2	2.33	0.46
25:Z:166:ASP:C	25:Z:169:GLY:H	2.19	0.46
1:A:1308:U:N3	1:A:1309:G:C6	2.84	0.46
1:A:186(C):G:C6	1:A:191(E):G:C2	3.04	0.46
1:A:257:G:C4	1:A:258:G:C8	3.04	0.46
1:A:321:A:C6	1:A:333:G:N1	2.84	0.46
1:A:342:C:C2	1:A:348:G:C2	3.04	0.46
1:A:475:G:H2'	1:A:476:G:H8	1.79	0.46
1:A:534:U:H4'	1:A:535:A:OP1	2.16	0.46
1:A:550:G:C2	1:A:551:U:C2	3.04	0.46
1:A:633:G:H2'	1:A:634:C:C6	2.51	0.46
1:A:649:G:C2	1:A:650:G:C4	3.03	0.46
1:A:694:A:H8	1:A:694:A:O5'	1.98	0.46
1:A:818:G:H1'	1:A:820:U:C4	2.49	0.46
1:A:832:C:H42	1:A:854:G:H1	1.63	0.46
1:A:905:U:H2'	1:A:906:G:O4'	2.16	0.46
1:A:964:A:H4'	1:A:1198:G:O3'	2.16	0.46
22:C:103:VAL:N	22:C:132:ILE:HD12	2.31	0.46
22:C:137:LYS:C	22:C:168:GLY:H	2.14	0.46
22:C:181:ILE:HG22	22:C:185:ILE:HD12	1.96	0.46
22:C:511:GLU:C	22:C:513:ALA:H	2.19	0.46
23:D:1002:G:C6	23:D:1003:G:C5	3.04	0.46
23:D:1112:G:H2'	23:D:1113:U:O4'	2.16	0.46
23:D:1153:C:C4	23:D:1154:G:C4	3.03	0.46
23:D:1303:G:H2'	23:D:1304:C:H6	1.81	0.46
23:D:1429:G:C4	23:D:1568:G:N1	2.83	0.46
23:D:1654:A:H2'	23:D:1655:A:O4'	2.16	0.46
23:D:173:G:O6	23:D:174:C:C2	2.67	0.46
23:D:1750:G:H2'	23:D:1751:C:H6	1.79	0.46
23:D:1833:U:H2'	23:D:1834:U:O4'	2.16	0.46
23:D:1835:G:H2'	23:D:1836:C:O4'	2.16	0.46
23:D:1853:A:H2'	23:D:1854:A:C8	2.51	0.46
23:D:1972:A:N1	23:D:1973:G:C6	2.83	0.46
23:D:2041:U:H2'	23:D:2042:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2079:U:H3	23:D:2241:A:N6	2.13	0.46
23:D:2113:U:H2'	23:D:2114:A:O4'	2.16	0.46
23:D:2141:G:H22	23:D:2149:G:H1	1.64	0.46
23:D:2217:G:C4	23:D:2218:G:C8	3.04	0.46
23:D:2373:G:H2'	23:D:2374:C:N1	2.30	0.46
23:D:241:A:C8	23:D:243:U:C4	3.04	0.46
23:D:2500:U:N3	23:D:2504:U:O4	2.48	0.46
23:D:2503:A:H4'	23:D:2504:U:OP1	2.16	0.46
23:D:2602:A:H4'	23:D:2603:G:O5'	2.15	0.46
23:D:270(F):U:H2'	23:D:270(G):C:C2	2.50	0.46
23:D:280:C:H2'	23:D:283:A:N7	2.31	0.46
19:W:52:TYR:CD1	23:D:2884:U:H1'	172.48	0.46
23:D:302:C:N4	23:D:315:G:H1	2.11	0.46
23:D:339:U:C2	23:D:340:A:N1	2.83	0.46
23:D:37:C:C2	23:D:38:A:C8	3.04	0.46
23:D:52:A:N1	23:D:178:G:O2'	2.41	0.46
23:D:544:C:C2	23:D:545:G:C8	3.04	0.46
23:D:572:A:H3'	23:D:573:G:C8	2.43	0.46
23:D:58:G:C6	23:D:70:G:C6	3.04	0.46
23:D:601:C:H5'	23:D:602:G:OP2	2.16	0.46
23:D:750:A:O2'	23:D:751:A:H5'	2.16	0.46
23:D:827:U:H4'	23:D:828:U:C2	2.50	0.46
23:D:971:C:H2'	23:D:972:G:C4	2.50	0.46
2:F:112:VAL:O	2:F:116:GLU:N	2.44	0.46
3:G:32:LEU:HD22	3:G:59:ARG:HD3	1.98	0.46
3:G:60:ALA:O	10:N:92:THR:OG1	2.23	0.46
4:H:104:VAL:HG11	4:H:140:VAL:HG21	1.98	0.46
4:H:133:VAL:HG12	4:H:135:LEU:H	1.81	0.46
5:I:72:GLN:O	5:I:74:GLY:N	2.49	0.46
7:K:76:ARG:HB2	7:K:89:MET:HE1	1.96	0.46
8:L:104:ARG:HB3	8:L:108:GLY:N	2.30	0.46
10:N:39:PRO:O	10:N:40:LEU:HB2	2.16	0.46
10:N:64:GLU:N	14:R:57:ARG:O	2.47	0.46
15:S:59:MET:O	15:S:62:GLN:HB3	2.16	0.46
16:T:21:VAL:HG13	16:T:36:ILE:HD11	1.98	0.46
20:X:64:ASP:O	20:X:68:LYS:HG2	2.16	0.46
25:Z:30:LYS:HE3	25:Z:180:PHE:CG	2.33	0.46
55:4:33:U:H2'	55:4:35:A:P	2.55	0.46
1:A:1127:G:N2	1:A:1145:C:O2	2.40	0.46
1:A:1234:C:H2'	1:A:1235:U:O4'	2.15	0.46
1:A:1427:U:C2	1:A:1428:A:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1498:U:O3'	1:A:1499:A:H8	1.99	0.46
1:A:1533:C:H3'	1:A:1534:A:C8	2.51	0.46
1:A:1533:C:H3'	1:A:1534:A:H8	1.81	0.46
1:A:284:G:H2'	1:A:285:G:H8	1.81	0.46
1:A:348:G:C6	1:A:349:A:C6	3.04	0.46
1:A:403:C:H5''	4:H:118:ARG:NH1	2.30	0.46
1:A:438:G:O2'	1:A:439:A:H5''	2.15	0.46
1:A:527:G:C5	1:A:528:C:C4	3.04	0.46
1:A:594:G:N2	1:A:645:C:N3	2.62	0.46
1:A:673:G:C6	1:A:674:G:C6	3.03	0.46
1:A:750:G:O2'	15:S:23:GLY:N	2.46	0.46
1:A:796:C:H2'	1:A:797:C:C6	2.51	0.46
1:A:858:G:C6	1:A:869:G:N7	2.84	0.46
22:C:338:THR:O	22:C:339:ALA:O	2.34	0.46
22:C:447:ARG:N	54:3:29:GLN:NE2	2.63	0.46
22:C:474:TYR:O	22:C:475:ALA:HB3	2.16	0.46
22:C:504:LEU:CD1	22:C:523:LYS:HZ1	2.28	0.46
23:D:1037:G:C2	23:D:1038:C:C2	3.04	0.46
23:D:1042:G:O5'	23:D:1042:G:H8	1.99	0.46
23:D:1047:G:H1'	23:D:1111:A:N6	2.29	0.46
23:D:1214:A:C5	23:D:1215:G:C8	3.03	0.46
23:D:1287:A:C4	23:D:1288:U:C5	3.04	0.46
23:D:1378:A:C4	23:D:1380:G:C8	3.04	0.46
23:D:140:A:C6	23:D:141:A:C5	3.03	0.46
23:D:1450:C:H42	23:D:1461:G:H1	1.63	0.46
23:D:1488:G:C6	23:D:1489:U:C4	3.03	0.46
23:D:1561:G:C6	23:D:1562:A:C5	3.04	0.46
23:D:1296:G:N1	23:D:1645:G:C6	2.84	0.46
23:D:1753:G:H4'	23:D:1753:G:OP1	2.15	0.46
23:D:1858:G:C6	23:D:1883:G:C6	3.03	0.46
1:A:1493:A:H2'	23:D:1913:A:H62	1.80	0.46
23:D:1937:A:N7	23:D:1939:U:C4	2.84	0.46
23:D:195:A:C5'	23:D:196:A:H4'	2.45	0.46
23:D:1975:G:H2'	23:D:1976:U:O4'	2.15	0.46
23:D:2190:G:C4	23:D:2191:G:C8	3.04	0.46
23:D:2362:G:H2'	23:D:2363:C:H6	1.79	0.46
23:D:2372:G:C2	23:D:2373:G:C5	3.04	0.46
23:D:2408:U:H2'	23:D:2409:G:C8	2.50	0.46
23:D:2524:G:C2	23:D:2525:G:C8	3.03	0.46
23:D:2657:A:C8	23:D:2665:A:N6	2.84	0.46
23:D:312:G:H5'	23:D:331:A:O2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:315:G:C6	23:D:316:C:N4	2.84	0.46
23:D:329:G:C2	23:D:477:A:C2	3.04	0.46
23:D:333:G:H2'	23:D:334:C:C6	2.51	0.46
23:D:680:G:C4	23:D:681:G:C8	3.04	0.46
23:D:783:A:O2'	23:D:2588:G:H5''	2.16	0.46
23:D:854:G:H2'	23:D:855:G:C8	2.51	0.46
23:D:871:U:O2	23:D:906:G:C2	2.68	0.46
23:D:910:A:C6	23:D:911:A:C6	3.03	0.46
23:D:959:A:C2	23:D:960:A:C4	3.04	0.46
24:E:118:G:N3	24:E:119:A:C8	2.83	0.46
7:K:42:ILE:O	7:K:45:ASP:HB2	2.16	0.46
1:A:642:A:H1'	8:L:117:GLY:HA2	1.97	0.46
8:L:46:LYS:N	8:L:62:TYR:HB2	2.29	0.46
1:A:1060:C:O4'	10:N:52:GLY:HA3	2.16	0.46
11:O:20:TYR:HA	11:O:83:ILE:HB	1.98	0.46
12:P:86:ARG:HH21	12:P:99:HIS:CE1	2.34	0.46
13:Q:63:THR:CG2	13:Q:64:TRP:H	2.11	0.46
13:Q:91:ARG:HD3	13:Q:98:VAL:HA	1.98	0.46
16:T:70:ALA:HA	16:T:73:LEU:HB3	1.98	0.46
1:A:260:G:OP2	20:X:83:ARG:NH1	2.49	0.46
20:X:91:LEU:HA	20:X:91:LEU:HD23	1.70	0.46
54:3:98:ARG:CZ	54:3:101:TRP:CE2	2.99	0.46
55:4:56:C:N4	55:4:57:A:N7	2.63	0.46
1:A:103:C:C2	1:A:104:G:C8	3.04	0.46
1:A:1095:U:H2'	1:A:1096:C:O4'	2.15	0.46
1:A:1113:C:O2	1:A:1113:C:H2'	2.16	0.46
1:A:1232:U:H2'	1:A:1233:G:C8	2.51	0.46
1:A:1306:A:N7	1:A:1307:U:N3	2.63	0.46
1:A:1355:G:C6	1:A:1368:G:N1	2.84	0.46
1:A:1417:G:H21	1:A:1483:A:N6	1.97	0.46
1:A:1474:G:C2	1:A:1475:G:C5	3.04	0.46
1:A:158:G:C4	1:A:159:G:C8	3.04	0.46
1:A:200:G:C5	1:A:201:C:C4	3.04	0.46
1:A:124:G:C5	1:A:238:G:C2	3.04	0.46
1:A:119:A:C4	1:A:240:C:C4	3.04	0.46
1:A:373:A:C5	1:A:482:A:C6	3.04	0.46
1:A:517:G:OP2	1:A:517:G:H2'	2.16	0.46
1:A:541:G:C4	1:A:542:G:C8	3.04	0.46
1:A:558:G:OP2	1:A:559:A:O2'	2.33	0.46
1:A:578:C:H2'	1:A:579:G:H8	1.77	0.46
1:A:66:G:C6	1:A:67:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:835:U:C2	1:A:852:G:C2	3.04	0.46
1:A:570:G:N1	1:A:873:A:C6	2.83	0.46
1:A:904:C:C4	1:A:905:U:C4	3.04	0.46
1:A:941:G:C6	1:A:1343:G:C6	3.03	0.46
1:A:958:A:H2'	1:A:959:A:C5	2.51	0.46
22:C:13:SER:N	22:C:103:VAL:HA	2.30	0.46
22:C:25:LEU:C	22:C:25:LEU:HD22	2.36	0.46
22:C:545:ILE:CG2	22:C:546:ILE:N	2.79	0.46
23:D:1039:G:H2'	23:D:1040:C:C6	2.50	0.46
23:D:1057:A:OP2	23:D:1087:G:N7	2.49	0.46
23:D:1093:G:H2'	23:D:1094:U:C6	2.50	0.46
23:D:1209:G:C6	23:D:1238:G:C6	3.03	0.46
23:D:1322:A:C8	23:D:1323:U:C6	3.04	0.46
23:D:1417:C:C2	23:D:1581:G:N2	2.83	0.46
23:D:1570:A:N3	23:D:1571:A:C8	2.84	0.46
23:D:1582:C:H6	23:D:1582:C:O5'	1.98	0.46
23:D:1622:G:C2	23:D:1623:G:C5	3.04	0.46
23:D:1635:G:C2	23:D:1636:C:C2	3.04	0.46
23:D:1753:G:C6	23:D:1756:G:C6	3.04	0.46
23:D:1851:U:C4	23:D:1852:C:C4	3.03	0.46
23:D:191:A:C2	23:D:192:C:C2	3.04	0.46
23:D:2415:G:H2'	23:D:2416:C:C6	2.51	0.46
23:D:2437:U:C2	23:D:2438:U:C4	3.04	0.46
23:D:2536:G:N7	23:D:2537:U:C4	2.83	0.46
23:D:2564:A:N7	23:D:2647:U:O2'	2.49	0.46
23:D:270(J):G:C6	23:D:270(K):C:C2	3.04	0.46
23:D:270(N):G:H8	23:D:270(O):U:O4'	1.99	0.46
23:D:2725:A:C6	23:D:2727:G:C5	3.03	0.46
23:D:2838:G:H2'	23:D:2839:G:H5'	1.98	0.46
23:D:2855:C:H2'	23:D:2856:C:C6	2.51	0.46
23:D:2874:C:C2	23:D:2875:C:C5	3.04	0.46
23:D:2885:C:N4	23:D:2886:G:C5	2.84	0.46
23:D:304:G:H1	23:D:313:C:H42	1.64	0.46
23:D:35:G:C2	23:D:36:G:C5	3.03	0.46
23:D:50:U:OP2	23:D:50:U:H6	1.99	0.46
23:D:563:G:C4	23:D:564:C:C5	3.04	0.46
23:D:68:G:O2'	23:D:69:C:O5'	2.33	0.46
23:D:808:G:C6	23:D:809:G:C6	3.04	0.46
23:D:820:A:C4	23:D:821:A:C8	3.04	0.46
23:D:896:A:H2'	23:D:896:A:N3	2.30	0.46
24:E:13:A:N6	24:E:70:C:H5'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L:74:PRO:O	8:L:75:ARG:HB3	2.15	0.46
10:N:14:LYS:O	10:N:18:ALA:N	2.31	0.46
11:O:92:GLU:O	11:O:95:ILE:HB	2.16	0.46
13:Q:22:ILE:HG22	13:Q:23:TYR:O	2.16	0.46
13:Q:86:CYS:SG	13:Q:88:ARG:HB3	2.55	0.46
15:S:6:GLU:N	15:S:6:GLU:OE1	2.35	0.46
17:U:6:LEU:HD11	17:U:23:VAL:HG11	1.97	0.46
17:U:29:HIS:CG	17:U:30:PRO:HD2	2.51	0.46
18:V:58:LEU:HB3	18:V:62:GLU:CB	2.45	0.46
25:Z:36:LYS:C	25:Z:37:PHE:CD2	2.90	0.46
23:D:1107:G:H5'	53:2:59:ILE:H	1.80	0.46
55:4:16:C:H4'	55:4:59:A:N6	2.31	0.46
56:5:53:G:H1	56:5:61:C:H42	1.64	0.46
56:5:7:A:N7	56:5:49:C:H1'	2.30	0.46
1:A:1053:G:N2	1:A:1058:G:O6	2.49	0.46
1:A:1272:G:C5	1:A:1273:G:C6	3.04	0.46
1:A:129:U:OP1	17:U:3:LYS:NZ	2.33	0.46
1:A:1313:U:O4	1:A:1314:C:N4	2.49	0.46
1:A:179:A:H3'	1:A:180:U:H6	1.80	0.46
1:A:328:C:O2'	1:A:329:A:OP2	2.26	0.46
1:A:334:C:HO2'	1:A:1434:A:HO2'	1.62	0.46
1:A:384:G:C2	1:A:385:C:C2	3.04	0.46
1:A:41:G:C4	1:A:42:G:C8	3.04	0.46
1:A:662:G:C2	1:A:663:A:C5	3.04	0.46
1:A:668:G:H2'	1:A:669:U:C6	2.50	0.46
1:A:727:G:C2	1:A:731:G:N3	2.84	0.46
1:A:729:A:C6	1:A:730:G:C6	3.04	0.46
1:A:805:C:H2'	1:A:806:C:H6	1.75	0.46
1:A:890:G:H1'	1:A:906:G:H1	1.81	0.46
22:C:27:ASP:O	22:C:41:MET:HE2	2.11	0.46
22:C:523:LYS:HE2	22:C:523:LYS:HB3	1.57	0.46
23:D:1036:G:N1	23:D:1037:G:C6	2.84	0.46
23:D:1407:C:C2	23:D:1408:C:C5	3.04	0.46
23:D:1416:G:H2'	23:D:1417:C:C4	2.51	0.46
23:D:1424:G:C5	23:D:1425:G:C5	3.04	0.46
23:D:1435:G:C4	23:D:1436:G:C8	3.04	0.46
23:D:1439:A:C5	23:D:1440:G:C8	3.03	0.46
23:D:1556:C:H2'	23:D:1557:C:O4'	2.16	0.46
23:D:1563:G:H2'	23:D:1564:C:C6	2.50	0.46
23:D:1652:A:N6	23:D:1653:G:N3	2.63	0.46
23:D:1856:G:C5	23:D:1857:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1878:G:C6	23:D:1879:C:C4	3.04	0.46
23:D:1885:A:C6	23:D:1886:C:C4	3.04	0.46
23:D:2070:G:H1	23:D:2441:C:N4	2.14	0.46
23:D:2127:G:H4'	23:D:2173:A:C2	2.51	0.46
23:D:2322:A:C6	23:D:2323:G:C4	3.04	0.46
23:D:2353:G:H2'	23:D:2354:G:O4'	2.15	0.46
23:D:2397:G:C5	23:D:2398:U:C5	3.04	0.46
23:D:2468:G:HO2'	23:D:2469:A:H8	1.64	0.46
23:D:2678:C:H2'	23:D:2679:A:C8	2.47	0.46
23:D:2681:C:O2'	23:D:2682:U:O5'	2.32	0.46
23:D:269:U:H5'	23:D:270(Y):G:C2	2.51	0.46
23:D:2776:A:C6	23:D:2778:A:C6	3.04	0.46
23:D:2856:C:N4	23:D:2861:G:H1	2.14	0.46
23:D:263:C:O2'	23:D:429:A:N3	2.32	0.46
23:D:706:A:H2'	23:D:707:G:O4'	2.16	0.46
23:D:722:A:H2'	23:D:723:G:O4'	2.17	0.46
23:D:738:G:H2'	23:D:738:G:N3	2.31	0.46
23:D:74:A:HO2'	23:D:75:G:P	2.38	0.46
23:D:814:C:H4'	23:D:1224:G:N2	2.31	0.46
23:D:819:A:N6	23:D:1189:A:N3	2.65	0.46
23:D:897:C:O2'	23:D:899:A:N7	2.49	0.46
23:D:946:G:H3'	23:D:947:G:H8	1.81	0.46
24:E:86:G:C4	24:E:87:G:C8	3.04	0.46
4:H:130:GLY:O	4:H:131:ARG:HG2	2.16	0.46
5:I:110:LEU:O	5:I:115:VAL:HG22	2.15	0.46
8:L:10:LEU:HA	8:L:13:ILE:HD12	1.97	0.46
9:M:102:LEU:O	9:M:104:ARG:N	2.49	0.46
13:Q:19:LEU:HD12	13:Q:25:ILE:HG21	1.98	0.46
13:Q:31:LYS:O	13:Q:35:GLU:HG2	2.15	0.46
1:A:975:A:H3'	14:R:31:ARG:HD2	1.97	0.46
1:A:975:A:O2'	14:R:32:SER:OG	2.16	0.46
15:S:55:GLY:HA2	15:S:58:MET:HE3	1.98	0.46
19:W:49:ILE:HG21	19:W:62:ILE:HD12	1.97	0.46
25:Z:42:GLU:OE2	25:Z:71:GLN:NE2	2.49	0.46
23:D:1059:G:O2'	54:3:73:PRO:O	2.27	0.45
56:5:61:C:H2'	56:5:62:C:C6	2.51	0.45
1:A:1155:G:C6	1:A:1156:G:C4	3.04	0.45
1:A:1169:A:C5	1:A:1170:A:C5	3.04	0.45
1:A:1064:G:H2'	1:A:1190:G:O2'	2.16	0.45
1:A:1191:A:C5	1:A:1192:C:C4	3.04	0.45
1:A:124:G:H2'	1:A:125:U:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1267:C:H42	1:A:1327:C:HO2'	1.64	0.45
1:A:1347:G:OP1	9:M:107:ARG:NH1	2.39	0.45
1:A:1421:G:H2'	1:A:1422:G:C8	2.50	0.45
1:A:217:C:O2'	1:A:218:C:H5'	2.16	0.45
1:A:369:C:H2'	1:A:370:C:H6	1.80	0.45
1:A:456:C:C2	1:A:477:G:C2	3.04	0.45
1:A:485:G:H1'	1:A:486:U:OP2	2.16	0.45
1:A:617:G:O3'	16:T:44:THR:OG1	2.31	0.45
1:A:651:C:C4	1:A:652:U:C4	3.04	0.45
1:A:666:G:C6	1:A:667:G:C5	3.04	0.45
1:A:759:A:H2'	1:A:760:G:C8	2.51	0.45
1:A:918:A:H2'	1:A:919:A:N9	2.30	0.45
22:C:391:HIS:ND1	22:C:392:ASN:N	2.64	0.45
22:C:577:GLN:HA	23:D:1942:C:HO2'	1.64	0.45
22:C:67:THR:O	22:C:75:GLU:O	2.32	0.45
23:D:1079:C:N3	54:3:132:ARG:HG3	2.31	0.45
23:D:1171:G:C6	23:D:1179:C:N4	2.83	0.45
23:D:1187:G:O2'	23:D:1188:U:O5'	2.32	0.45
23:D:1242:A:N3	23:D:1242:A:H2'	2.30	0.45
23:D:1252:G:C4	23:D:1253:A:C8	3.03	0.45
23:D:126:A:H2'	23:D:127:A:C1'	2.46	0.45
23:D:1317:A:H2'	23:D:1318:C:C6	2.51	0.45
23:D:1475:G:C6	23:D:1476:C:N3	2.84	0.45
23:D:1509:C:OP1	23:D:1510:A:N6	2.48	0.45
23:D:1555:G:H2'	23:D:1556:C:H6	1.81	0.45
23:D:1741:C:H2'	23:D:1742:C:C2	2.51	0.45
23:D:1863:G:H2'	23:D:1864:U:C6	2.45	0.45
23:D:1879:C:H3'	23:D:1880:C:H5''	1.98	0.45
23:D:1903:G:N3	23:D:1904:G:C8	2.84	0.45
23:D:1972:A:H2'	23:D:1973:G:C8	2.51	0.45
23:D:2014:A:C5	23:D:2015:A:N1	2.84	0.45
23:D:2181:G:N1	23:D:2182:G:N1	2.64	0.45
23:D:219:G:H2'	23:D:220:G:C8	2.51	0.45
23:D:2241:A:C2	23:D:2242:G:C2	3.04	0.45
23:D:2252:G:C6	23:D:2253:G:C5	3.05	0.45
23:D:2252:G:C6	23:D:2253:G:C6	3.04	0.45
23:D:2290:G:H2'	23:D:2291:U:C5	2.51	0.45
23:D:2476:A:C5	23:D:2477:C:C4	3.03	0.45
23:D:2551:C:C2	23:D:2552:U:C4	3.04	0.45
23:D:2559:C:H2'	23:D:2560:C:H6	1.81	0.45
23:D:2581:G:O6	23:D:2610:C:O2'	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2673:G:C2	23:D:2674:G:C8	3.04	0.45
23:D:270(V):G:H2'	23:D:270(W):G:C8	2.51	0.45
23:D:344:G:C2	23:D:345:A:C6	3.04	0.45
23:D:354:G:H2'	23:D:355:G:H8	1.81	0.45
23:D:485:C:N3	23:D:496:G:C2	2.85	0.45
23:D:536:A:C6	23:D:558:G:C6	3.04	0.45
23:D:56:A:C5	23:D:57:C:C4	3.03	0.45
23:D:666:G:H3'	23:D:666:G:P	2.56	0.45
23:D:818:G:O2'	23:D:838:C:O3'	2.33	0.45
23:D:862:G:C5	23:D:863:A:C5	3.05	0.45
23:D:881:G:C6	23:D:894:C:H1'	2.50	0.45
23:D:849:A:C6	23:D:931:G:N1	2.84	0.45
23:D:975:G:C5	23:D:990:A:C6	3.05	0.45
24:E:26:A:H3'	24:E:27:C:H5''	1.98	0.45
24:E:79:C:C4	24:E:80:U:C4	3.04	0.45
4:H:100:ARG:O	4:H:104:VAL:HG13	2.16	0.45
4:H:60:GLU:HA	4:H:63:LYS:NZ	2.31	0.45
7:K:75:VAL:HG11	7:K:86:GLN:HB3	1.97	0.45
8:L:136:GLU:OE1	8:L:136:GLU:N	2.49	0.45
14:R:24:CYS:SG	14:R:40:CYS:N	2.88	0.45
15:S:69:TYR:O	15:S:72:ARG:N	2.49	0.45
16:T:21:VAL:H	16:T:36:ILE:HD11	1.81	0.45
17:U:60:ILE:HG13	17:U:72:ARG:O	2.16	0.45
20:X:54:LYS:O	20:X:57:ARG:HB2	2.15	0.45
56:5:61:C:C2'	56:5:62:C:H5'	2.46	0.45
1:A:1308:U:C2	1:A:1309:G:C6	3.03	0.45
1:A:1520:G:C2	1:A:1521:G:C4	3.03	0.45
1:A:199:G:N2	1:A:219:C:C4	2.84	0.45
1:A:24:U:H2'	1:A:25:C:C5	2.51	0.45
1:A:278:G:H3'	17:U:95:TYR:OH	2.16	0.45
1:A:282:A:C6	1:A:283:C:C2	3.04	0.45
1:A:287:U:H2'	1:A:288:A:H8	1.81	0.45
1:A:289:G:H2'	1:A:290:C:C2	2.51	0.45
1:A:335:C:H2'	1:A:336:C:H6	1.78	0.45
1:A:445:G:H3'	1:A:446:G:H8	1.81	0.45
1:A:56:U:C4	1:A:57:G:N7	2.84	0.45
1:A:58:C:H2'	1:A:59:A:H8	1.79	0.45
1:A:605:U:C2	1:A:606:G:C8	3.05	0.45
1:A:618:C:H42	1:A:623:C:H42	1.64	0.45
1:A:585:G:N2	1:A:756:C:N3	2.51	0.45
1:A:855:G:C5	1:A:856:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:867:G:H2'	1:A:868:C:O4'	2.16	0.45
1:A:874:G:H2'	1:A:875:C:C6	2.51	0.45
22:C:135:ILE:O	22:C:165:PHE:HA	2.17	0.45
22:C:201:PHE:HB2	22:C:214:TYR:O	2.16	0.45
22:C:376:VAL:HB	22:C:378:TYR:CE1	2.51	0.45
22:C:418:GLU:CD	22:C:419:GLU:H	2.18	0.45
22:C:59:ILE:HG22	22:C:60:LYS:HD3	1.97	0.45
23:D:83:G:C2	23:D:102:G:N3	2.84	0.45
23:D:1057:A:N7	23:D:1060:U:C2	2.83	0.45
23:D:1076:C:N4	23:D:1077:A:N1	2.64	0.45
23:D:1154:G:O5'	23:D:1154:G:H8	1.98	0.45
23:D:1230:C:O2'	23:D:1231:G:H5'	2.16	0.45
23:D:1257:C:H2'	23:D:1258:C:C6	2.50	0.45
23:D:1328:G:N2	23:D:1330:C:O2	2.49	0.45
23:D:1357:U:C4	23:D:1358:G:C6	3.04	0.45
23:D:1369:G:N2	23:D:1370:C:C2	2.84	0.45
23:D:1356:G:H1	23:D:1375:C:N4	2.14	0.45
23:D:1411:C:N3	23:D:1591:G:N1	2.58	0.45
23:D:1464:C:H1'	23:D:1528:A:N3	2.32	0.45
23:D:1477:A:C6	23:D:1478:G:N1	2.84	0.45
23:D:1529:A:C8	23:D:1530:G:C8	3.04	0.45
23:D:172:C:H3'	23:D:173:G:H8	1.72	0.45
23:D:1748:G:O2'	23:D:1749:A:H5'	2.15	0.45
23:D:1776:G:H2'	23:D:1777:U:H6	1.82	0.45
23:D:1819:A:H1'	23:D:1821:A:C5	2.51	0.45
23:D:1858:G:N2	23:D:1883:G:H2'	2.30	0.45
23:D:1910:G:C6	23:D:1921:G:C5	3.04	0.45
23:D:196:A:C4	23:D:805:G:N1	2.84	0.45
23:D:570:G:H2'	23:D:2030:A:N7	2.31	0.45
23:D:2070:G:C2	23:D:2071:A:C5	3.04	0.45
23:D:2120:G:H2'	23:D:2121:G:C8	2.50	0.45
23:D:216:A:C5	23:D:432:A:C6	3.04	0.45
23:D:2097:C:N3	23:D:2193:G:C6	2.83	0.45
23:D:226:G:C2	23:D:227:A:C5	3.04	0.45
23:D:2279:G:C4	23:D:2280:G:C8	3.05	0.45
23:D:2361:A:C4	23:D:2362:G:C8	3.04	0.45
23:D:2396:G:C2	23:D:2397:G:C8	3.04	0.45
23:D:2410:G:C2	23:D:2411:A:C4	3.03	0.45
23:D:2569:G:C4	23:D:2570:G:C8	3.05	0.45
23:D:1782:C:C4	23:D:2587:A:N1	2.84	0.45
23:D:2630:G:N3	23:D:2893:G:N2	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2634:G:C6	23:D:2784:C:N4	2.84	0.45
23:D:318:C:H2'	23:D:319:C:H6	1.80	0.45
23:D:297:C:N3	23:D:342:G:C6	2.84	0.45
23:D:35:G:O2'	23:D:450:G:N2	2.49	0.45
23:D:452:G:C2	23:D:458:G:C4	3.04	0.45
23:D:465:G:C4	23:D:466:A:C8	3.05	0.45
23:D:565:C:H5	23:D:566:U:C4	2.35	0.45
23:D:596:G:N1	23:D:662:G:C6	2.85	0.45
23:D:603:A:C6	23:D:625:G:N1	2.84	0.45
23:D:896:A:N6	23:D:897:C:N3	2.63	0.45
24:E:2:C:H2'	24:E:3:C:C6	2.50	0.45
4:H:63:LYS:O	4:H:67:ILE:N	2.42	0.45
9:M:19:LEU:HD21	9:M:59:PHE:CB	2.46	0.45
9:M:25:LYS:N	9:M:60:ASP:OD1	2.49	0.45
9:M:78:LYS:HA	9:M:81:ILE:HD12	1.98	0.45
12:P:56:ALA:C	12:P:68:ALA:H	2.19	0.45
16:T:35:LYS:O	16:T:36:ILE:HG23	2.16	0.45
25:Z:118:ASP:OD1	25:Z:119:VAL:N	2.49	0.45
54:3:112:MET:CE	54:3:119:ASP:HB2	2.46	0.45
54:3:8:VAL:HG11	54:3:9:LYS:HE3	1.96	0.45
55:4:41:C:H2'	55:4:42:G:C8	2.51	0.45
1:A:1019:C:H2'	1:A:1020:U:H6	1.81	0.45
1:A:1066:C:HO2'	1:A:1067:A:C4'	2.28	0.45
1:A:1316:G:C2	1:A:1318:A:H3'	2.50	0.45
1:A:298:A:C5	1:A:299:G:C5	3.04	0.45
1:A:550:G:H2'	1:A:551:U:C6	2.51	0.45
1:A:584:G:H2'	1:A:585:G:H8	1.80	0.45
1:A:658:G:O2'	1:A:659:U:H5'	2.16	0.45
1:A:715:A:C5	1:A:716:A:C5	3.05	0.45
1:A:878:G:C6	1:A:879:C:C4	3.04	0.45
22:C:323:LEU:HA	22:C:323:LEU:HD23	1.81	0.45
22:C:407:GLU:HB2	22:C:408:PRO:HD2	1.88	0.45
22:C:435:LEU:HA	22:C:452:TYR:CZ	2.33	0.45
22:C:561:LYS:HA	22:C:563:TYR:CZ	2.51	0.45
23:D:1014:U:C2	23:D:1149:G:N2	2.85	0.45
23:D:1124:C:C4	23:D:1125:G:C2	3.04	0.45
23:D:1176:G:H2'	23:D:1177:A:H5'	1.98	0.45
23:D:1318:C:C2	23:D:1319:G:C8	3.04	0.45
23:D:1456:G:N1	23:D:1457:A:C6	2.84	0.45
23:D:1485:G:H2'	23:D:1486:A:O4'	2.16	0.45
23:D:1515:C:N3	23:D:1516:U:C4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1522:G:C5	23:D:1523:U:C4	3.04	0.45
23:D:1630:G:C4	23:D:1630(A):C:C5	3.04	0.45
23:D:1649:G:C6	23:D:1650:G:C5	3.04	0.45
6:J:11:ASN:HA	23:D:1653:G:N1	123.65	0.45
23:D:1770:G:C6	23:D:1771:C:C4	3.04	0.45
23:D:1910:G:C6	23:D:1921:G:C4	3.04	0.45
23:D:1835:G:N3	23:D:1931:U:C2	2.84	0.45
23:D:1947:C:H2'	23:D:1947:C:O2	2.17	0.45
23:D:2199:A:C8	23:D:2225:A:N6	2.85	0.45
23:D:2295:C:N3	23:D:2338:G:C6	2.84	0.45
23:D:2407:G:H3'	23:D:2408:U:C6	2.51	0.45
23:D:2428:G:H4'	23:D:2429:G:O4'	2.16	0.45
23:D:243:U:H2'	23:D:244:A:H5'	1.99	0.45
23:D:2443:C:C2	23:D:2444:G:C8	3.04	0.45
23:D:1129:A:C5	23:D:2570:G:O2'	2.69	0.45
23:D:2639:A:C8	23:D:2640:G:C8	3.04	0.45
23:D:2727:G:C6	23:D:2728:U:C4	3.04	0.45
23:D:2743:C:O5'	23:D:2755:C:N4	2.49	0.45
23:D:2808:U:H5	23:D:2808:U:OP2	1.99	0.45
23:D:2882:A:HO2'	23:D:2883:A:P	2.39	0.45
23:D:7:G:H1	23:D:2897:U:H1'	1.82	0.45
23:D:290:G:N1	23:D:351:G:N1	2.65	0.45
23:D:333:G:H2'	23:D:334:C:H6	1.80	0.45
13:Q:45:VAL:HB	23:D:483:A:O4'	195.13	0.45
23:D:644:A:O2'	23:D:645:C:OP1	2.30	0.45
23:D:595:C:N4	23:D:663:G:O6	2.48	0.45
23:D:776:G:C5	23:D:793:A:C4	3.04	0.45
23:D:833:U:C2	23:D:834:C:C5	3.05	0.45
23:D:86:C:H2'	23:D:87:C:H5	1.79	0.45
23:D:979:G:C4	23:D:982:C:N4	2.84	0.45
24:E:33:G:C5	24:E:34:U:C4	3.05	0.45
2:F:22:LYS:C	2:F:24:TRP:HD1	2.19	0.45
3:G:119:ARG:NE	3:G:140:ARG:HH22	2.13	0.45
1:A:932:C:H3'	7:K:3:ARG:HH21	1.81	0.45
9:M:13:ALA:CB	9:M:68:GLY:H	2.28	0.45
11:O:15:ALA:O	11:O:79:SER:HB3	2.16	0.45
13:Q:71:ARG:O	13:Q:75:ALA:N	2.50	0.45
19:W:9:VAL:HG12	19:W:16:LEU:HD13	1.97	0.45
20:X:38:LYS:HA	20:X:41:ILE:HB	1.97	0.45
25:Z:200:LYS:NZ	25:Z:204:ALA:HB3	2.31	0.45
54:3:18:THR:HG22	54:3:21:PRO:CD	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:4:71:C:N3	55:4:72:A:C8	2.85	0.45
55:4:72:A:H3'	55:4:73:A:C8	2.52	0.45
1:A:103:C:H2'	1:A:104:G:O4'	2.16	0.45
1:A:1155:G:C2'	1:A:1156:G:H5'	2.46	0.45
1:A:116:A:H3'	1:A:116:A:OP2	2.17	0.45
1:A:1213:A:O2'	1:A:1214:C:H3'	2.17	0.45
1:A:1238:A:N3	1:A:1238:A:H2'	2.30	0.45
1:A:1267:C:H2'	21:Y:20:LYS:HD2	1.98	0.45
1:A:1244:C:N4	1:A:1293:G:H1	2.14	0.45
1:A:1294:G:H2'	1:A:1295:G:C8	2.52	0.45
1:A:1368:G:C6	1:A:1369:C:C4	3.04	0.45
1:A:1508:G:H2'	1:A:1509:C:H6	1.82	0.45
1:A:29:G:H2'	1:A:30:U:C6	2.51	0.45
1:A:376:G:C5	1:A:389:A:C2	3.04	0.45
1:A:410:G:H21	1:A:432:A:H62	1.63	0.45
1:A:577:G:C5	1:A:578:C:C5	3.04	0.45
1:A:616:G:C6	1:A:617:G:C5	3.04	0.45
1:A:620:C:C4	1:A:621:A:C5	3.04	0.45
1:A:744:C:H2'	1:A:745:C:C6	2.51	0.45
22:C:17:HIS:HA	22:C:116:GLU:CB	2.46	0.45
22:C:440:TYR:CE1	22:C:448:VAL:CG1	2.99	0.45
22:C:421:VAL:CG1	22:C:450:LEU:CD2	2.88	0.45
22:C:97:LEU:CD1	22:C:123:MET:CB	2.85	0.45
23:D:1077:A:C4	23:D:1088:A:O2'	2.70	0.45
23:D:1132:A:C5	23:D:1133:U:C4	3.04	0.45
23:D:1162:G:H2'	23:D:1163:G:C8	2.48	0.45
23:D:120:U:H4'	23:D:121:G:O5'	2.16	0.45
23:D:1235:G:N3	23:D:1236:G:N2	2.65	0.45
23:D:1376:C:C2	23:D:1377:G:C4	3.04	0.45
23:D:1476:C:C5	23:D:1477:A:H2	2.35	0.45
23:D:1479:G:N2	23:D:1515:C:O4'	2.49	0.45
23:D:1470:G:N2	23:D:1522:G:N1	2.64	0.45
23:D:1660:C:O2'	23:D:1661:G:H5'	2.17	0.45
23:D:1686:C:N4	23:D:1702:G:H1	2.12	0.45
23:D:1776:G:H2'	23:D:1777:U:C6	2.51	0.45
23:D:1941:C:H2'	23:D:1942:C:O4'	2.16	0.45
23:D:2020:A:N7	23:D:2022:U:C4	2.85	0.45
23:D:20:C:N4	23:D:520:G:H1	2.14	0.45
23:D:2211:G:N3	23:D:2211:G:H3'	2.32	0.45
23:D:2289:G:O2'	23:D:2290:G:H5'	2.17	0.45
23:D:235:U:H3	23:D:430:G:N2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2404:C:N4	23:D:2405:G:C2	2.84	0.45
23:D:247:G:N2	23:D:252:G:C6	2.84	0.45
23:D:2730:C:H2'	23:D:2731:G:C8	2.51	0.45
23:D:2845:G:C6	23:D:2846:G:C5	3.05	0.45
23:D:284:U:C6	23:D:284:U:OP2	2.69	0.45
23:D:2886:G:C2	23:D:2887:U:N3	2.85	0.45
23:D:449:A:N7	23:D:450:G:C5	2.85	0.45
23:D:725:G:C8	23:D:726:G:C6	3.04	0.45
23:D:802:A:H2'	23:D:803:U:C6	2.52	0.45
23:D:812:C:OP1	23:D:1251:C:O2'	2.33	0.45
23:D:922:U:H2'	23:D:923:C:C6	2.52	0.45
2:F:193:ASP:OD2	2:F:196:LEU:HD21	2.16	0.45
4:H:125:HIS:O	4:H:126:ILE:HD13	2.16	0.45
1:A:10:A:C8	5:I:126:ARG:NH1	2.77	0.45
6:J:4:TYR:HE1	6:J:92:LYS:HG2	1.81	0.45
6:J:99:ALA:HB3	18:V:31:LEU:H	1.82	0.45
7:K:103:TRP:CE2	7:K:137:LYS:HD3	2.52	0.45
11:O:53:SER:OG	11:O:54:ARG:N	2.48	0.45
12:P:97:ARG:HB3	12:P:98:TYR:CE2	2.51	0.45
13:Q:71:ARG:HB3	13:Q:75:ALA:HB2	1.98	0.45
13:Q:79:LYS:HA	13:Q:82:MET:HB3	1.98	0.45
1:A:1311:G:OP1	19:W:69:HIS:CE1	2.68	0.45
25:Z:74:VAL:HG11	25:Z:114:VAL:HG22	1.98	0.45
55:4:35:A:OP2	55:4:35:A:H8	2.00	0.45
1:A:1002:G:H2'	1:A:1004:A:C2	2.52	0.45
1:A:1126:U:H2'	1:A:1127:G:O4'	2.16	0.45
1:A:1170:A:O5'	1:A:1170:A:H8	2.00	0.45
1:A:1285:A:OP2	21:Y:18:TYR:OH	2.25	0.45
1:A:1314:C:C4	1:A:1324:A:N6	2.85	0.45
1:A:1270:C:O3'	1:A:1314:C:H5''	2.16	0.45
1:A:1333:A:H3'	1:A:1334:G:H8	1.81	0.45
1:A:937:A:C2	1:A:1379:G:C6	3.04	0.45
1:A:179:A:C6	1:A:180:U:C2	3.05	0.45
1:A:27:G:C5	1:A:28:G:N7	2.85	0.45
1:A:293:G:C6	1:A:305:G:C5	3.04	0.45
1:A:333:G:O2'	1:A:334:C:H5'	2.17	0.45
1:A:424:G:H8	1:A:424:G:O5'	2.00	0.45
1:A:46:G:H3'	1:A:366:C:H41	1.82	0.45
1:A:475:G:C4	1:A:476:G:C8	3.05	0.45
1:A:501:C:N3	1:A:544:G:N2	2.57	0.45
1:A:515:G:C6	1:A:537:G:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:539:A:C6	1:A:540:G:C5	3.05	0.45
1:A:633:G:H2'	1:A:634:C:H6	1.82	0.45
1:A:779:C:N4	1:A:780:A:N1	2.64	0.45
1:A:890:G:C4	1:A:906:G:C6	3.04	0.45
1:A:90:C:H2'	1:A:91:C:C5	2.52	0.45
22:C:138:ILE:C	22:C:140:LEU:H	2.18	0.45
22:C:199:LEU:HD21	22:C:294:PHE:CD2	2.51	0.45
22:C:202:ASP:HB2	22:C:214:TYR:HE2	1.80	0.45
22:C:228:ILE:HG23	22:C:281:THR:O	2.17	0.45
22:C:229:ARG:C	22:C:230:ILE:HG13	2.36	0.45
22:C:414:ILE:HG23	22:C:477:MET:HA	1.98	0.45
22:C:510:ARG:C	22:C:512:LYS:H	2.20	0.45
22:C:22:LYS:HZ3	22:C:84:PRO:HA	1.81	0.45
23:D:1093:G:H2'	23:D:1094:U:C5	2.51	0.45
23:D:1189:A:H3'	23:D:1190:G:C5'	2.46	0.45
23:D:1239:G:C2'	23:D:1240:U:H4'	2.42	0.45
23:D:1411:C:H42	23:D:1592:C:H42	1.64	0.45
23:D:1424:G:C6	23:D:1425:G:C5	3.05	0.45
23:D:1487:G:H2'	23:D:1488:G:C8	2.51	0.45
23:D:1682:G:C4	23:D:1683:C:C5	3.05	0.45
23:D:1769:G:C6	23:D:1984:G:C5	3.04	0.45
23:D:1831:G:H1	23:D:1974:C:N4	2.15	0.45
23:D:1856:G:N2	23:D:1886:C:N3	2.49	0.45
23:D:1927:A:C4	23:D:1928:A:C2	3.04	0.45
23:D:1997:G:N3	23:D:1998:G:C8	2.85	0.45
23:D:2018:G:H2'	23:D:2019:A:C1'	2.47	0.45
23:D:2217:G:C2	23:D:2218:G:C4	3.04	0.45
23:D:225:A:H2	23:D:228:A:H61	1.64	0.45
23:D:230:U:C4	23:D:231:C:C4	3.04	0.45
23:D:2519:U:H5	23:D:2541:A:N6	2.12	0.45
23:D:2627:G:C5	23:D:2628:C:C4	3.04	0.45
23:D:29:U:C2	23:D:30:G:C8	3.05	0.45
23:D:293:U:C4	23:D:346:A:N6	2.85	0.45
23:D:415:A:H3'	23:D:416:C:H6	1.81	0.45
23:D:446:G:HO2'	23:D:447:A:P	2.40	0.45
23:D:489:G:C6	23:D:491:G:C5	3.04	0.45
23:D:499:U:H3'	23:D:500:G:H8	1.81	0.45
23:D:613:U:H5'	23:D:615:G:O2'	2.16	0.45
23:D:629:G:C6	23:D:630:G:C6	3.05	0.45
23:D:640:C:N4	23:D:647:G:N2	2.63	0.45
23:D:780:G:H8	23:D:780:G:OP2	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:796:C:N3	23:D:797:C:N4	2.63	0.45
23:D:854:G:H2'	23:D:855:G:H8	1.81	0.45
23:D:892:G:H2'	23:D:893:C:C6	2.51	0.45
23:D:904:C:C4	23:D:905:U:C4	3.04	0.45
23:D:94:G:H1	23:D:95:G:H21	1.64	0.45
23:D:977:G:C2	23:D:978:G:C4	3.04	0.45
24:E:65:C:H2'	24:E:108:C:N4	2.31	0.45
2:F:217:ARG:O	2:F:220:ASP:HB2	2.16	0.45
4:H:57:ARG:NE	4:H:205:GLU:OE1	2.39	0.45
5:I:78:HIS:CE1	8:L:104:ARG:HD2	2.51	0.45
1:A:933:G:OP2	7:K:3:ARG:HB2	2.17	0.45
1:A:707:C:H4'	11:O:20:TYR:CG	2.51	0.45
12:P:40:VAL:HG21	12:P:77:LEU:O	2.16	0.45
12:P:83:VAL:HG22	12:P:84:LEU:N	2.31	0.45
13:Q:103:THR:HB	13:Q:107:ALA:HB2	1.98	0.45
15:S:70:LEU:HG	15:S:78:TYR:CD1	2.38	0.45
16:T:42:ARG:O	16:T:44:THR:N	2.37	0.45
23:D:1059:G:N1	54:3:126:MET:O	2.50	0.45
54:3:130:SER:C	54:3:133:SER:HB3	2.36	0.45
55:4:14:A:C6	55:4:15:G:C4	3.04	0.45
1:A:1142:G:H2'	1:A:1143:G:O4'	2.16	0.45
1:A:1061:G:N2	1:A:1195:C:N3	2.50	0.45
1:A:1226:C:N3	13:Q:104:ARG:HB2	2.31	0.45
1:A:1381:U:C4	7:K:156:TRP:HZ3	2.35	0.45
1:A:1411:C:H2'	1:A:1412:C:H6	1.82	0.45
1:A:161:A:H2'	1:A:162:A:C8	2.51	0.45
1:A:191(D):U:H2'	1:A:191(E):G:C8	2.48	0.45
1:A:210:U:O2'	1:A:216:G:O4'	2.34	0.45
1:A:329:A:C2	1:A:332:G:C4	3.05	0.45
1:A:396:G:H2'	1:A:398:C:C5	2.52	0.45
1:A:458:C:H2'	1:A:464:G:C8	2.51	0.45
1:A:451:A:C6	1:A:481:G:C8	3.05	0.45
1:A:606:G:H21	1:A:631:G:H2'	1.79	0.45
1:A:675:A:C5	1:A:676:A:N7	2.85	0.45
1:A:759:A:H3'	1:A:760:G:H8	1.81	0.45
1:A:899:C:H6	1:A:899:C:OP1	1.99	0.45
22:C:236:GLU:OE2	22:C:268:ILE:HG23	2.16	0.45
23:D:1018:C:H2'	23:D:1019:U:C4	2.52	0.45
23:D:1048:A:C8	23:D:1049:C:H5	2.34	0.45
23:D:1065:U:H1'	23:D:1074:G:O6	2.17	0.45
23:D:1117:G:C6	23:D:1118:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1260:G:C4	23:D:1261:C:C5	3.05	0.45
23:D:1274:A:N1	23:D:1302:A:N1	2.64	0.45
23:D:1332:G:H5'	23:D:1333:C:OP2	2.16	0.45
23:D:1404:C:OP1	23:D:1471:A:O2'	2.25	0.45
23:D:1666:G:C6	23:D:1667:G:C4	3.04	0.45
23:D:191:A:H2'	23:D:192:C:H6	1.80	0.45
23:D:2050:C:C2	23:D:2051:A:C8	3.05	0.45
23:D:2264:C:N3	23:D:2265:U:N3	2.64	0.45
23:D:2255:G:H1	23:D:2275:C:N4	2.15	0.45
23:D:235:U:H2'	23:D:236:C:C6	2.48	0.45
23:D:2412:A:C5	23:D:2413:G:C8	3.04	0.45
23:D:2431:U:O2'	23:D:2433:A:H2	1.98	0.45
23:D:2521:C:C4	23:D:2522:U:C4	3.05	0.45
23:D:2535:G:C2	23:D:2536:G:C4	3.05	0.45
23:D:2569:G:C4	23:D:2570:G:H8	2.34	0.45
23:D:1638:C:O2'	23:D:2698:U:O2'	2.33	0.45
23:D:2543:G:C2	23:D:2765:A:C4	3.05	0.45
23:D:285:C:H42	23:D:356:G:H1	1.63	0.45
23:D:448:U:H5'	23:D:449:A:C2	2.52	0.45
23:D:569:U:C2	23:D:570:G:C8	3.04	0.45
23:D:579:G:C2	23:D:1262:A:C4	3.04	0.45
23:D:609:A:H2'	23:D:609(A):G:C8	2.51	0.45
23:D:622:G:C2	23:D:623:G:C4	3.04	0.45
23:D:643:A:H4'	23:D:644:A:OP1	2.14	0.45
23:D:652:C:H6	23:D:652:C:O5'	2.00	0.45
23:D:711:G:C2	23:D:721:C:C2	3.04	0.45
23:D:766:C:H2'	23:D:767:U:C6	2.52	0.45
23:D:7:G:C6	23:D:2896:C:C4	3.05	0.45
23:D:822:U:HO2'	23:D:823:G:P	2.39	0.45
23:D:847:U:OP2	23:D:929:G:C6	2.68	0.45
23:D:848:G:C8	23:D:849:A:N7	2.84	0.45
23:D:908:C:H2'	23:D:909:A:H5'	1.98	0.45
23:D:89:G:N1	23:D:90:U:O4	2.50	0.45
23:D:947:G:N3	23:D:948:G:C8	2.85	0.45
23:D:979:G:C2	23:D:982:C:N4	2.84	0.45
23:D:981:A:H3'	23:D:982:C:C5	2.52	0.45
24:E:97:G:C6	24:E:98:G:N1	2.85	0.45
3:G:32:LEU:HD13	3:G:59:ARG:HD2	1.98	0.45
3:G:50:ALA:C	3:G:72:LYS:HD2	2.36	0.45
4:H:106:TYR:HA	4:H:111:ALA:HB3	1.98	0.45
5:I:19:MET:SD	5:I:24:ARG:HG2	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:36:ASP:OD1	5:I:38:GLN:N	2.43	0.45
7:K:79:ARG:NH1	7:K:82:GLY:O	2.50	0.45
12:P:83:VAL:CA	12:P:105:TYR:HD2	2.26	0.45
16:T:23:ASP:N	16:T:33:ILE:HD12	2.25	0.45
25:Z:144:THR:O	25:Z:152:ILE:HD13	2.16	0.45
23:D:1064:C:C4'	54:3:88:ALA:O	2.64	0.45
55:4:5:G:N2	55:4:68:C:N3	2.57	0.45
56:5:30:G:H1	56:5:40:C:H42	1.63	0.45
1:A:1112:C:N1	1:A:1113:C:H5	2.15	0.45
1:A:1115:C:C2	1:A:1116:C:C5	3.05	0.45
1:A:128:G:H2'	1:A:129:U:O4'	2.16	0.45
1:A:1294:G:H2'	1:A:1295:G:H8	1.81	0.45
1:A:1425:U:H2'	1:A:1426:C:C6	2.52	0.45
1:A:1516:G:N2	1:A:1520:G:C4	2.84	0.45
1:A:348:G:O2'	1:A:349:A:H5'	2.17	0.45
1:A:511:C:O2'	1:A:512:U:O4'	2.34	0.45
1:A:588:G:C5	1:A:753:A:C4	3.04	0.45
1:A:773:G:C2	1:A:807:A:C5	3.04	0.45
1:A:862:C:H2'	1:A:863:U:N1	2.31	0.45
1:A:955:U:H2'	1:A:956:U:C6	2.52	0.45
22:C:214:TYR:HA	22:C:264:LEU:N	2.32	0.45
1:A:358:U:P	22:C:269:ARG:NH2	2.90	0.45
22:C:372:THR:HG22	22:C:372:THR:O	2.17	0.45
22:C:28:ARG:HD2	22:C:41:MET:HE1	1.98	0.45
22:C:466:ARG:HA	22:C:469:SER:OG	2.16	0.45
22:C:453:GLU:CD	22:C:482:ALA:O	2.54	0.45
22:C:48:SER:O	22:C:49:LEU:HD23	2.17	0.45
22:C:538:GLN:H	22:C:538:GLN:HG2	1.52	0.45
23:D:1050:A:H3'	23:D:1051:G:H8	1.82	0.45
23:D:1095:A:H1'	54:3:25:PRO:HG2	1.98	0.45
23:D:1047:G:C8	23:D:1110:G:C2	3.05	0.45
23:D:1003:G:H1	23:D:1152:C:N4	2.13	0.45
23:D:1171:G:C8	23:D:1173:G:H4'	2.52	0.45
23:D:1355:G:N1	23:D:1356:G:C4	2.85	0.45
23:D:1365:A:C6	23:D:1366:A:C6	3.05	0.45
23:D:1344:G:C2	23:D:1385:G:N7	2.84	0.45
23:D:1386:C:H2'	23:D:1387:C:C6	2.51	0.45
23:D:1440:G:N2	23:D:1441:G:N3	2.65	0.45
23:D:1653:G:H5'	23:D:1654:A:OP1	2.17	0.45
23:D:1746:G:H2'	23:D:1747:G:H8	1.80	0.45
23:D:1762:A:H2'	23:D:1763:G:C5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1839:G:C5	23:D:1840:G:N7	2.85	0.45
23:D:1905:C:O2'	23:D:1906:G:O5'	2.32	0.45
23:D:1786:A:C4'	23:D:1938:A:H61	2.30	0.45
23:D:194:G:H2'	23:D:195:A:O4'	2.16	0.45
23:D:1959:G:H8	23:D:1959:G:OP2	2.00	0.45
23:D:2001:A:C6	23:D:2002:G:C6	3.05	0.45
23:D:2285:C:H1'	23:D:2288:A:N7	2.32	0.45
23:D:245:G:C6	23:D:246:C:N4	2.85	0.45
23:D:245:G:C6	23:D:254:G:N2	2.85	0.45
23:D:2468:G:O5'	23:D:2476:A:N6	2.50	0.45
23:D:2631:G:C6	23:D:2632:A:C5	3.05	0.45
23:D:2664:G:H4'	23:D:2665:A:OP1	2.17	0.45
23:D:2856:C:H42	23:D:2861:G:H1	1.65	0.45
23:D:422:A:H3'	23:D:423:A:N7	2.32	0.45
23:D:566:U:C4	23:D:567:A:C5	3.04	0.45
23:D:569:U:C4	23:D:570:G:C5	3.04	0.45
23:D:638:G:C2	23:D:650:C:O2	2.70	0.45
23:D:675:A:H2'	23:D:676:A:N3	2.32	0.45
23:D:907:U:H2'	23:D:908:C:O4'	2.17	0.45
23:D:941:A:H3'	23:D:942:G:H8	1.81	0.45
23:D:962:G:H2'	23:D:963:U:O4'	2.17	0.45
24:E:30:C:H2'	24:E:31:C:O4'	2.17	0.45
3:G:115:LEU:HA	3:G:115:LEU:HD23	1.81	0.45
3:G:142:MET:SD	3:G:149:ALA:HB3	2.57	0.45
4:H:71:SER:O	4:H:75:PHE:N	2.49	0.45
6:J:25:ILE:HD13	6:J:82:ARG:CZ	2.46	0.45
8:L:92:ARG:HD3	8:L:92:ARG:HA	1.74	0.45
8:L:95:VAL:HB	8:L:99:GLU:HB2	1.97	0.45
13:Q:9:ILE:O	13:Q:9:ILE:HG13	2.16	0.45
14:R:9:LYS:HB2	14:R:21:TYR:OH	2.17	0.45
17:U:88:TYR:HD1	17:U:91:ARG:HH21	1.65	0.45
18:V:50:ILE:HG13	18:V:74:ARG:NH2	2.31	0.45
25:Z:15:ASP:O	25:Z:20:TYR:OH	2.26	0.45
23:D:2124:G:C4	25:Z:217:THR:HA	2.52	0.45
25:Z:96:GLY:O	25:Z:99:ILE:HG22	2.16	0.45
56:5:6:G:OP2	56:5:6:G:C8	2.68	0.45
1:A:104:G:C2	1:A:105:G:C8	3.05	0.45
1:A:1419:G:H22	1:A:1482:G:C1'	2.30	0.45
1:A:278:G:H2'	17:U:95:TYR:CE1	2.52	0.45
1:A:294:U:H2'	1:A:295:C:H6	1.82	0.45
1:A:28:G:H2'	1:A:29:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:300:A:C6	1:A:301:G:H1'	2.51	0.45
1:A:391:G:C6	1:A:392:G:C6	3.05	0.45
1:A:704:A:C5	1:A:705:U:C5	3.05	0.45
1:A:727:G:C6	1:A:731:G:C6	3.05	0.45
1:A:746:A:C5	1:A:747:C:C4	3.04	0.45
1:A:761:G:C5	1:A:762:C:C5	3.04	0.45
1:A:777:A:H2'	1:A:778:G:C8	2.48	0.45
1:A:80:G:C2	1:A:81:G:C8	3.05	0.45
1:A:888:G:C6	1:A:889:A:N6	2.85	0.45
22:C:298:LYS:HB3	22:C:299:PRO:HD2	1.94	0.45
22:C:412:LEU:HB2	22:C:451:VAL:CA	2.47	0.45
22:C:115:ALA:CA	22:C:474:TYR:CE1	3.00	0.45
22:C:495:LEU:O	22:C:496:VAL:HG22	2.17	0.45
22:C:530:ARG:NH2	22:C:530:ARG:CG	2.75	0.45
22:C:543:GLY:HA3	22:C:544:LYS:C	2.28	0.45
23:D:1079:C:N4	54:3:129:GLY:O	2.50	0.45
23:D:1079:C:H5	23:D:1080:C:C5	2.35	0.45
23:D:1136:G:H3'	23:D:1137:G:C8	2.51	0.45
23:D:1171:G:H8	23:D:1173:G:H4'	1.82	0.45
23:D:1182:A:N7	23:D:1183:G:C8	2.85	0.45
23:D:1429:G:C5	23:D:1568:G:C6	3.05	0.45
23:D:1455:G:C6	23:D:1456:G:C6	3.05	0.45
23:D:1455:G:C6	23:D:1456:G:C4	3.05	0.45
23:D:121:G:H1'	23:D:148:C:C2	2.52	0.45
23:D:1699:G:C2	23:D:1763:G:C6	3.05	0.45
23:D:1702:G:C6	23:D:1703:G:N7	2.85	0.45
23:D:175:G:O2'	23:D:176:G:O4'	2.32	0.45
23:D:1857:G:H1'	23:D:1885:A:H61	1.81	0.45
23:D:1986:A:C2	23:D:1987:G:C5	3.05	0.45
23:D:2138:C:H2'	23:D:2139:C:N1	2.32	0.45
23:D:227:A:N1	23:D:2407:G:H1'	2.32	0.45
23:D:2261:C:C2	23:D:2280:G:C2	3.04	0.45
23:D:2286:A:H5'	23:D:2287:A:OP1	2.17	0.45
23:D:2349:G:H3'	23:D:2350:C:H5''	1.98	0.45
23:D:2364:C:H2'	23:D:2365:G:C8	2.52	0.45
23:D:2454:G:N7	23:D:2455:G:N7	2.64	0.45
23:D:2457:U:N3	23:D:2458:G:C2	2.85	0.45
23:D:2544:G:C6	23:D:2545:G:C4	3.05	0.45
23:D:2592:G:H2'	23:D:2593:U:O4'	2.17	0.45
23:D:2657:A:C5	23:D:2665:A:C6	3.05	0.45
23:D:2762:G:C2	23:D:2763:G:H1'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2782:G:C5	23:D:2783:G:C5	3.05	0.45
23:D:2811:G:C4	23:D:2812:G:C8	3.04	0.45
23:D:39:C:H2'	23:D:40:C:H6	1.81	0.45
23:D:660:G:H2'	23:D:661:C:C6	2.52	0.45
23:D:707:G:C6	23:D:708:C:N3	2.85	0.45
23:D:785:G:C2	23:D:786:C:C2	3.05	0.45
23:D:751:A:C6	23:D:789:A:N7	2.85	0.45
23:D:804:A:H3'	23:D:806:C:N4	2.29	0.45
23:D:848:G:N2	23:D:933:A:H1'	2.31	0.45
23:D:976:C:H4'	23:D:1156:A:H61	1.80	0.45
23:D:978:G:H1	23:D:985:C:N4	2.15	0.45
24:E:69:G:H2'	24:E:69:G:N3	2.32	0.45
3:G:63:ASN:O	3:G:99:VAL:HB	2.16	0.45
4:H:206:PHE:HA	4:H:209:ARG:HH22	1.81	0.45
7:K:140:ASP:O	7:K:144:MET:N	2.48	0.45
8:L:30:ARG:O	8:L:33:GLU:HB3	2.16	0.45
8:L:5:PRO:HB2	8:L:32:LYS:NZ	2.32	0.45
8:L:6:ILE:HG23	8:L:7:ALA:N	2.32	0.45
9:M:116:LYS:O	9:M:121:ARG:N	2.49	0.45
9:M:6:GLY:CA	9:M:17:VAL:HB	2.47	0.45
12:P:58:VAL:HG12	12:P:60:LEU:N	2.31	0.45
18:V:26:LEU:HG	18:V:27:GLY:O	2.16	0.45
19:W:53:ASN:HB3	19:W:58:VAL:HG22	1.99	0.45
20:X:17:ARG:HA	20:X:20:LEU:HD12	1.99	0.45
23:D:2124:G:H2'	25:Z:217:THR:HA	1.98	0.45
54:3:96:VAL:HG11	54:3:99:ILE:HG13	1.98	0.45
1:A:1108:G:H5''	3:G:176:HIS:CE1	2.51	0.45
1:A:1224:G:H4'	13:Q:102:ARG:CB	2.47	0.45
1:A:1225:A:O5'	1:A:1226:C:H5	2.00	0.45
1:A:1233:G:C2	1:A:1234:C:C5	3.05	0.45
1:A:1304:G:H5''	1:A:1305:G:P	2.53	0.45
1:A:144:G:C5	1:A:179:A:N6	2.85	0.45
1:A:1468:A:H2'	1:A:1469:G:O4'	2.17	0.45
1:A:161:A:H2'	1:A:162:A:O4'	2.17	0.45
1:A:265:G:N2	1:A:267:C:H5'	2.32	0.45
1:A:340:U:H2'	1:A:341:C:C6	2.51	0.45
1:A:52:G:H1	1:A:359:U:H3	1.65	0.45
1:A:41:G:C2	1:A:402:G:C2	3.05	0.45
1:A:520:A:C6	1:A:521:G:C8	3.05	0.45
1:A:587:G:N2	1:A:755:G:C5	2.84	0.45
1:A:623:C:H2'	1:A:624:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:61:G:C5	1:A:62:U:C4	3.05	0.45
1:A:606:G:N2	1:A:631:G:H2'	2.32	0.45
1:A:715:A:H2'	1:A:716:A:O4'	2.17	0.45
1:A:745:C:H4'	1:A:836:G:N2	2.28	0.45
1:A:794:A:H2'	1:A:795:C:C2	2.52	0.45
1:A:973:G:H3'	1:A:974:A:C5'	2.47	0.45
22:C:14:ILE:CA	22:C:104:LEU:C	2.53	0.45
22:C:242:VAL:CG1	22:C:262:GLY:C	2.85	0.45
22:C:213:PRO:CD	22:C:264:LEU:HB2	2.45	0.45
22:C:493:ASN:O	22:C:494:VAL:HG22	2.16	0.45
22:C:495:LEU:CA	22:C:538:GLN:O	2.65	0.45
22:C:529:PRO:C	22:C:530:ARG:HG3	2.36	0.45
22:C:65:ARG:HH21	22:C:244:VAL:HG13	1.82	0.45
23:D:1050:A:C2'	23:D:1051:G:H5'	2.46	0.45
23:D:1108:U:H2'	23:D:1109:C:O5'	2.16	0.45
23:D:110:G:H3'	23:D:111:A:C8	2.41	0.45
23:D:1164:G:C2	23:D:1165:U:C2	3.04	0.45
23:D:1314:C:N4	23:D:1338:G:N1	2.65	0.45
23:D:1410:G:C6	23:D:1593:G:C6	3.04	0.45
23:D:1443:G:C2	23:D:1444:G:C4	3.05	0.45
23:D:1588:C:H2'	23:D:1589:C:H6	1.82	0.45
23:D:1650:G:N2	23:D:1651:G:H1'	2.31	0.45
23:D:1654:A:N3	23:D:1654:A:H2'	2.31	0.45
23:D:171:G:C4	23:D:172:C:N3	2.84	0.45
23:D:1862:G:C2	23:D:1863:G:C5	3.05	0.45
23:D:1845:G:C6	23:D:1896:G:C6	3.05	0.45
23:D:1918:A:C4	23:D:1919:A:C6	3.05	0.45
23:D:1980:G:C2	23:D:1982:C:N4	2.85	0.45
23:D:2168:G:N2	23:D:2171:A:N7	2.65	0.45
23:D:2259:G:H2'	23:D:2260:C:C6	2.52	0.45
23:D:2298:A:H62	23:D:2299:G:N2	2.15	0.45
23:D:2353:G:H1	23:D:2364:C:N4	2.13	0.45
23:D:2064:C:N4	23:D:2446:G:C6	2.83	0.45
23:D:2467:C:H2'	23:D:2468:G:C4	2.52	0.45
23:D:2585:U:C4	55:4:76:A:H3'	2.52	0.45
23:D:2735:G:N1	23:D:2736:G:C5	2.85	0.45
23:D:466:A:H5''	23:D:467:G:OP2	2.17	0.45
23:D:502:A:N7	23:D:505:A:C6	2.85	0.45
23:D:576:U:N3	23:D:577:G:N7	2.65	0.45
23:D:612:G:O2'	23:D:615:G:H2'	2.17	0.45
23:D:647:G:O5'	23:D:647:G:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:680:G:C2	23:D:681:G:C4	3.05	0.45
23:D:89:G:C3'	23:D:90:U:H5''	2.47	0.45
23:D:957:A:C2	23:D:959:A:C8	3.05	0.45
23:D:977:G:O6	23:D:987:G:C6	2.70	0.45
24:E:57:A:H3'	24:E:58:A:H8	1.81	0.45
2:F:130:ARG:O	2:F:135:GLN:NE2	2.44	0.45
3:G:187:ALA:HB3	3:G:198:VAL:N	2.32	0.45
4:H:150:GLU:C	4:H:151:LYS:HD2	2.38	0.45
6:J:23:LYS:O	6:J:26:ILE:HB	2.16	0.45
6:J:48:LEU:H	6:J:48:LEU:HG	1.60	0.45
8:L:60:ARG:NH1	8:L:62:TYR:OH	2.50	0.45
54:3:66:THR:O	54:3:67:PHE:C	2.55	0.45
54:3:77:LEU:HD11	54:3:111:LYS:NZ	2.31	0.45
55:4:75:C:C4	55:4:76:A:C8	3.04	0.45
56:5:67:C:C5	56:5:68:C:C4	3.05	0.45
1:A:1056:U:O2	1:A:1205:U:H1'	2.17	0.45
1:A:949:A:N6	1:A:1232:U:H3	2.13	0.45
1:A:1398:A:H61	5:I:20:GLN:C	2.20	0.45
1:A:323:U:C4	1:A:324:G:C4	3.05	0.45
1:A:373:A:C4	1:A:482:A:C6	3.05	0.45
1:A:564:C:O2'	8:L:91:ARG:NH1	2.49	0.45
1:A:584:G:C6	1:A:585:G:C6	3.05	0.45
1:A:615:C:H2'	1:A:616:G:H8	1.82	0.45
1:A:61:G:H2'	1:A:62:U:C6	2.52	0.45
1:A:606:G:H2'	1:A:631:G:N2	2.31	0.45
1:A:654:G:C4	1:A:753:A:C5	3.05	0.45
1:A:575:G:C6	1:A:821:G:C8	3.05	0.45
22:C:240:ASP:N	22:C:266:ALA:CB	2.66	0.45
22:C:215:LEU:CG	22:C:282:LEU:HD11	2.47	0.45
23:D:1034:G:OP1	52:1:18:ARG:HD2	2.17	0.45
23:D:1047:G:C5	23:D:1110:G:C6	3.04	0.45
23:D:1027:A:N6	23:D:1126:A:N3	2.65	0.45
23:D:1128:A:C5	23:D:1129:A:N1	2.85	0.45
23:D:1142(A):A:OP2	23:D:1142(A):A:H3'	2.17	0.45
23:D:1153:C:H3'	23:D:1154:G:C8	2.52	0.45
23:D:1164:G:C6	23:D:1165:U:C4	3.05	0.45
23:D:1236:G:C8	23:D:1236:G:H3'	2.52	0.45
23:D:126:A:N7	23:D:127:A:C5	2.85	0.45
23:D:1298:C:C2'	23:D:1299:G:H8	2.30	0.45
23:D:1286:A:C4	23:D:1329:U:O4	2.70	0.45
23:D:1401:G:C5	23:D:1402:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1524:G:C2	23:D:1525:G:C4	3.04	0.45
23:D:1600:C:O2	23:D:1601:G:H1'	2.17	0.45
23:D:1638:C:H2'	23:D:1639:U:C6	2.52	0.45
23:D:1677:A:C6	23:D:1678:G:C6	3.05	0.45
23:D:1743:G:H2'	23:D:1746:G:C8	2.51	0.45
23:D:1770:G:H2'	23:D:1771:C:O4'	2.16	0.45
23:D:196:A:O2'	23:D:2068:U:H5	2.00	0.45
23:D:2085:C:H2'	23:D:2086:U:O4'	2.16	0.45
23:D:2184:G:C2	23:D:2185:C:C4	3.05	0.45
23:D:2299:G:H2'	23:D:2300:G:C8	2.52	0.45
23:D:2287:A:H2	23:D:2346:A:N6	2.15	0.45
23:D:2077:A:C5	23:D:2435:A:C6	3.05	0.45
23:D:2468:G:HO2'	23:D:2469:A:P	2.40	0.45
23:D:2510:C:N4	23:D:2579:C:H42	2.15	0.45
23:D:2530:A:H2'	23:D:2531:A:H5''	1.99	0.45
23:D:256:A:C6	23:D:257:A:C5	3.05	0.45
23:D:270(J):G:H3'	23:D:270(K):C:C5'	2.46	0.45
23:D:270(X):G:C6	23:D:270(Y):G:C5	3.05	0.45
23:D:2727:G:C2	23:D:2728:U:C2	3.05	0.45
23:D:2859:G:C2	23:D:2860:A:C4	3.05	0.45
23:D:301:G:C2	23:D:317:G:C4	3.05	0.45
23:D:303:U:H2'	23:D:304:G:C8	2.50	0.45
23:D:363(D):G:C2	23:D:363(E):U:C4	3.05	0.45
23:D:387:U:H4'	23:D:388:G:C2	2.52	0.45
23:D:452:G:C2	23:D:458:G:N3	2.85	0.45
23:D:470:A:H2'	23:D:471:A:O4'	2.17	0.45
23:D:539:G:C2	23:D:540:G:C5	3.05	0.45
23:D:564:C:H2'	23:D:565:C:O4'	2.17	0.45
23:D:855:G:H2'	23:D:856:C:H6	1.82	0.45
23:D:950:G:C6	23:D:968:G:N1	2.85	0.45
24:E:9:G:H1'	24:E:112:G:N2	2.32	0.45
2:F:57:PHE:O	2:F:60:ASP:HB3	2.17	0.45
5:I:100:VAL:HG22	5:I:118:ILE:HB	1.99	0.45
5:I:100:VAL:CA	5:I:118:ILE:H	2.20	0.45
5:I:127:ASN:HA	5:I:128:PRO:HD3	1.87	0.45
8:L:31:PHE:O	8:L:35:ILE:HG12	2.16	0.45
9:M:18:PHE:HB2	9:M:62:TYR:O	2.17	0.45
1:A:880:C:H3'	12:P:9:GLN:HE21	1.78	0.45
16:T:51:VAL:HG22	16:T:73:LEU:HD11	1.98	0.45
18:V:59:SER:H	18:V:62:GLU:HG2	1.81	0.45
20:X:16:HIS:CE1	20:X:20:LEU:HD21	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:116:THR:HA	25:Z:146:GLY:O	2.17	0.45
25:Z:57:ASN:CG	25:Z:165:ASN:HD21	2.18	0.45
56:5:10:G:C6	56:5:11:C:C4	3.05	0.44
1:A:1079:G:H2'	1:A:1080:A:C8	2.52	0.44
1:A:1136:U:N3	1:A:1138:G:O6	2.50	0.44
1:A:1148:U:H2'	1:A:1149:C:C6	2.52	0.44
1:A:1279:A:H5''	1:A:1280:A:OP1	2.17	0.44
1:A:1359:C:O2'	1:A:1362:C:N4	2.50	0.44
1:A:1405:G:C6	1:A:1497:G:N1	2.86	0.44
1:A:160:A:C6	1:A:161:A:C5	3.05	0.44
1:A:292:G:C6	1:A:309:G:C6	3.05	0.44
1:A:422:C:H4'	1:A:423:G:C5	2.52	0.44
1:A:478:A:C6	1:A:479:C:N4	2.85	0.44
1:A:31:G:C5	1:A:48:C:C4	3.05	0.44
1:A:624:C:C2	1:A:625:G:N7	2.85	0.44
1:A:660:G:C2	1:A:661:G:C5	3.06	0.44
1:A:663:A:H5''	1:A:664:G:OP2	2.17	0.44
1:A:689:C:C4	1:A:690:G:C5	3.04	0.44
1:A:781:A:C6	1:A:801:U:O4	2.71	0.44
1:A:900:A:C4	1:A:901:A:C8	3.06	0.44
1:A:965:A:C8	1:A:969:A:C4	3.05	0.44
22:C:104:LEU:CD1	22:C:132:ILE:HG21	2.46	0.44
22:C:200:ILE:CD1	22:C:281:THR:HG22	2.39	0.44
22:C:273:ASP:C	22:C:274:VAL:CG2	2.86	0.44
22:C:228:ILE:CG2	22:C:281:THR:O	2.65	0.44
22:C:451:VAL:O	22:C:452:TYR:CG	2.71	0.44
22:C:455:PRO:HG2	22:C:458:GLU:HG3	1.95	0.44
22:C:49:LEU:CD1	22:C:51:LEU:HB2	2.47	0.44
22:C:499:GLU:O	22:C:500:VAL:HB	2.17	0.44
23:D:1174:A:H3'	23:D:1175:U:H5''	1.99	0.44
23:D:1212:G:H2'	23:D:1235:G:H1	1.81	0.44
23:D:1293:C:H2'	23:D:1294:U:C5	2.51	0.44
23:D:12:U:O2'	23:D:13:A:OP1	2.28	0.44
23:D:1439:A:H2'	23:D:1440:G:C5'	2.46	0.44
23:D:1517:G:C2	23:D:1518:C:C2	3.05	0.44
23:D:1613:G:N7	23:D:1617:C:N4	2.65	0.44
23:D:1651:G:C5	23:D:1652:A:C5	3.05	0.44
23:D:1748:G:H2'	23:D:1749:A:H8	1.82	0.44
23:D:1753:G:C6	23:D:1756:G:C5	3.04	0.44
23:D:1786:A:H2'	23:D:1787:A:O4'	2.18	0.44
23:D:1827:C:H2'	23:D:1828:G:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2078:C:C4	23:D:2079:U:C4	3.04	0.44
23:D:2351:G:N1	23:D:2365:G:C6	2.85	0.44
23:D:2444:G:C5	23:D:2445:G:N7	2.85	0.44
23:D:830:G:N1	23:D:2448:A:H2'	2.32	0.44
23:D:2476:A:H2'	23:D:2477:C:C6	2.52	0.44
23:D:2531:A:N6	23:D:2532:G:C6	2.84	0.44
23:D:2589:A:O2'	23:D:2590:A:H5'	2.17	0.44
23:D:2699:C:H2'	23:D:2700:C:O4'	2.17	0.44
23:D:270(I):G:H2'	23:D:270(J):G:O4'	2.17	0.44
23:D:2764:A:C6	23:D:2766:G:C4	3.06	0.44
23:D:2837:G:C6	23:D:2882:A:C6	3.05	0.44
23:D:2891:G:C2'	23:D:2892:A:H5''	2.46	0.44
23:D:384:U:H3'	23:D:385:C:H5	1.82	0.44
23:D:377:C:N4	23:D:398:G:C6	2.85	0.44
23:D:44:A:C5	23:D:45:G:N7	2.85	0.44
23:D:455:C:H4'	23:D:455:C:OP1	2.17	0.44
23:D:465:G:N1	23:D:466:A:C5	2.85	0.44
23:D:503:A:C5	23:D:506:G:C5	3.05	0.44
23:D:20:C:H42	23:D:520:G:H1	1.64	0.44
23:D:531:C:H5''	23:D:2035:G:O2'	2.17	0.44
23:D:54:G:N1	23:D:55:G:C4	2.86	0.44
23:D:632:A:C6	23:D:633:A:C5	3.05	0.44
23:D:769:G:C4	23:D:770:G:C8	3.04	0.44
23:D:777:A:H61	23:D:791:C:N4	2.16	0.44
23:D:800:A:C2	23:D:802:A:H8	2.35	0.44
23:D:82:G:N7	23:D:102:G:N2	2.66	0.44
23:D:846:C:C2	23:D:930:U:C4	3.06	0.44
23:D:892:G:C2	23:D:893:C:N4	2.85	0.44
23:D:983:A:H2'	23:D:984:A:N9	2.32	0.44
24:E:20:C:H2'	24:E:21:G:C8	2.52	0.44
2:F:113:HIS:HA	2:F:116:GLU:OE1	2.17	0.44
3:G:67:THR:HG22	3:G:69:HIS:CE1	2.52	0.44
8:L:95:VAL:CG2	8:L:133:LEU:HD21	2.46	0.44
10:N:42:THR:HG23	10:N:67:THR:C	2.37	0.44
12:P:99:HIS:O	12:P:99:HIS:CG	2.70	0.44
14:R:24:CYS:HB3	14:R:28:GLY:N	2.32	0.44
17:U:9:VAL:HA	17:U:56:VAL:HG22	1.99	0.44
17:U:9:VAL:HG22	17:U:10:VAL:O	2.16	0.44
18:V:19:LYS:HB2	18:V:54:ARG:NH1	2.27	0.44
23:D:2393:A:O5'	25:Z:32:LEU:HD21	77.23	0.44
54:3:33:ASN:O	54:3:34:ILE:HG22	2.12	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1072:G:OP2	1:A:1072:G:H3'	2.17	0.44
1:A:1207:G:C6	1:A:1208:C:C4	3.05	0.44
1:A:1252:A:C6	1:A:1253:G:C6	3.05	0.44
1:A:1360:A:C5	1:A:1361:G:C5	3.05	0.44
1:A:146:G:H1	1:A:176:C:N4	2.14	0.44
1:A:191(F):U:C2	1:A:191:G:N7	2.84	0.44
1:A:288:A:O2'	1:A:290:C:OP1	2.32	0.44
1:A:31:G:O4'	1:A:306:G:N2	2.49	0.44
1:A:41:G:H1	1:A:401:C:H42	1.66	0.44
1:A:451:A:H1'	1:A:452:A:C8	2.52	0.44
1:A:455:C:C4	1:A:478:A:N1	2.84	0.44
1:A:482:A:P	1:A:483:C:H41	2.37	0.44
1:A:62:U:O2'	1:A:63:C:O4'	2.34	0.44
1:A:596:C:N4	1:A:645:C:N3	2.66	0.44
1:A:783:C:H2'	1:A:784:C:C6	2.51	0.44
1:A:899:C:C4	1:A:900:A:N7	2.85	0.44
22:C:207:ALA:O	22:C:208:TYR:CD2	2.70	0.44
22:C:276:VAL:CG2	22:C:325:LEU:HD12	2.46	0.44
22:C:461:TYR:CD1	22:C:461:TYR:O	2.71	0.44
22:C:562:CYS:HA	23:D:2602:A:N1	2.30	0.44
23:D:113:G:OP1	23:D:113:G:H4'	2.16	0.44
23:D:818:G:N2	23:D:1190:G:C4	2.85	0.44
23:D:579:G:C2	23:D:1262:A:C5	3.05	0.44
23:D:131:G:C4	23:D:132:G:C8	3.05	0.44
23:D:1330:C:C2	23:D:1331:A:C8	3.05	0.44
23:D:1361:G:H1	23:D:1369:G:N2	2.13	0.44
23:D:1363:C:N3	23:D:1369:G:C5	2.85	0.44
23:D:1392:A:C5	23:D:1393:A:N6	2.85	0.44
23:D:1416:G:N2	23:D:1582:C:C2	2.84	0.44
23:D:1492:G:H2'	23:D:1493:C:N4	2.32	0.44
23:D:149:A:H2'	23:D:150:C:C5'	2.45	0.44
23:D:1527:G:N1	23:D:1544:C:H2'	2.27	0.44
23:D:155:C:C6	23:D:155:C:O5'	2.70	0.44
23:D:1725:G:C4	23:D:1726:G:C8	3.06	0.44
23:D:174:C:O2	23:D:175:G:C8	2.71	0.44
23:D:1793:C:C4	23:D:1794:U:C4	3.06	0.44
23:D:1859:A:H2'	23:D:1860:G:O4'	2.17	0.44
23:D:1933:G:H2'	23:D:1934:C:C6	2.52	0.44
23:D:2027:G:C2	23:D:2037:G:C5	3.05	0.44
23:D:2043:C:N4	23:D:2777:G:C5	2.85	0.44
23:D:2251:G:C4	23:D:2252:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:238:C:H2'	23:D:239:U:H6	1.81	0.44
23:D:2431:U:O2'	23:D:2432:A:C8	2.70	0.44
23:D:2478:A:C5	23:D:2479:G:O4'	2.71	0.44
23:D:2584:U:C5	23:D:2585:U:H3'	2.52	0.44
23:D:2631:G:N2	23:D:2788:C:C2	2.86	0.44
23:D:2682:U:C4	23:D:2683:C:C4	3.06	0.44
23:D:2711:A:C6	23:D:2714:G:H1'	2.51	0.44
23:D:2752:C:C4	23:D:2753:A:C4	3.05	0.44
23:D:2821:A:C4	23:D:2822:G:C8	3.06	0.44
23:D:2868:A:C6	23:D:2869:G:C5	3.05	0.44
23:D:290:G:C4	23:D:291:C:C5	3.05	0.44
23:D:319:C:N3	23:D:320:A:C6	2.85	0.44
23:D:265:A:C5	23:D:428:A:C6	3.05	0.44
23:D:459:U:C2	23:D:460:A:C8	3.05	0.44
23:D:536:A:C4	23:D:537:C:C5	3.06	0.44
23:D:539:G:C4	23:D:556:G:C2	3.05	0.44
23:D:562:U:O2'	23:D:563:G:H5''	2.17	0.44
23:D:4:C:H5''	23:D:5:A:OP2	2.17	0.44
23:D:599:G:H1	23:D:658:C:N4	2.15	0.44
23:D:757:U:O2'	23:D:758:C:OP1	2.27	0.44
23:D:978:G:C2	23:D:979:G:C4	3.05	0.44
24:E:21:G:C2	24:E:63:G:N1	2.85	0.44
24:E:73:A:C6	24:E:74:U:C2	3.05	0.44
2:F:68:ILE:N	2:F:90:MET:SD	2.77	0.44
3:G:16:ARG:HH22	3:G:204:LEU:HD12	1.82	0.44
7:K:26:PHE:CG	7:K:62:PHE:HE1	2.35	0.44
9:M:116:LYS:O	9:M:118:LYS:N	2.50	0.44
9:M:91:ASP:O	9:M:93:ARG:N	2.49	0.44
15:S:29:VAL:O	15:S:33:THR:OG1	2.25	0.44
16:T:4:ILE:HG12	16:T:21:VAL:HG12	2.00	0.44
17:U:29:HIS:ND1	17:U:31:LEU:N	2.59	0.44
17:U:27:PHE:HE2	17:U:38:ARG:HB3	1.82	0.44
25:Z:48:GLY:CA	25:Z:210:ARG:HG3	2.47	0.44
54:3:12:LEU:HB2	54:3:13:PRO:CD	2.47	0.44
55:4:44:A:C6	55:4:45:G:N1	2.85	0.44
56:5:57:G:OP2	56:5:57:G:C8	2.69	0.44
1:A:1079:G:C6	1:A:1080:A:C6	3.06	0.44
1:A:1096:C:C2	1:A:1097:C:C5	3.05	0.44
1:A:1252:A:H2'	1:A:1253:G:H8	1.82	0.44
1:A:285:G:C2	1:A:286:G:C4	3.05	0.44
1:A:44:G:C2	1:A:399:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:500:G:C6	1:A:546:G:N1	2.85	0.44
1:A:621:A:C6	1:A:622:A:C5	3.05	0.44
1:A:671:G:N2	1:A:736:C:C2	2.85	0.44
1:A:809:G:C6	1:A:810:C:C2	3.06	0.44
1:A:946:A:H2	1:A:1236:A:H1'	1.82	0.44
1:A:949:A:C5	1:A:1233:G:C2	3.05	0.44
1:A:978:A:C4	1:A:1318:A:C6	3.05	0.44
22:C:10:ARG:HG3	22:C:186:PRO:O	2.17	0.44
22:C:14:ILE:CD1	22:C:25:LEU:HD12	2.47	0.44
22:C:496:VAL:O	22:C:497:HIS:CD2	2.70	0.44
22:C:498:GLY:O	22:C:499:GLU:HB2	2.17	0.44
22:C:566:ASP:C	22:C:568:THR:N	2.70	0.44
23:D:1062:G:H2'	23:D:1070:A:OP 2	2.16	0.44
23:D:1242:A:O2'	23:D:1243:G:OP1	2.27	0.44
23:D:1263:U:H2'	23:D:1264:G:N3	2.31	0.44
23:D:1266:G:N3	23:D:2012:G:C6	2.86	0.44
23:D:126:A:N6	23:D:127:A:N1	2.65	0.44
23:D:1331:A:C4	23:D:1333:C:C4	3.05	0.44
23:D:1335:U:H2'	23:D:1336:A:C8	2.53	0.44
23:D:1343:G:C6	23:D:1344:G:C6	3.06	0.44
23:D:1374:G:H2'	23:D:1375:C:H6	1.82	0.44
23:D:1424:G:C4	23:D:1425:G:C8	3.06	0.44
23:D:1442:G:C2	23:D:1443:G:C5	3.05	0.44
23:D:1459:G:C5	23:D:1461:G:C4	3.05	0.44
23:D:15:G:N1	23:D:16:G:C5	2.85	0.44
23:D:1642:G:H2'	23:D:1643:G:O4'	2.17	0.44
23:D:1806:C:H2'	23:D:1807:G:C8	2.52	0.44
23:D:1809:A:OP1	23:D:1809:A:H4'	2.17	0.44
23:D:1861:G:C2	23:D:1882:C:C2	3.06	0.44
23:D:1997:G:C6	23:D:1998:G:C6	3.05	0.44
23:D:1997:G:C4	23:D:1998:G:N7	2.85	0.44
23:D:2072:G:C6	23:D:2438:U:N3	2.80	0.44
23:D:2099:U:O2	23:D:2190:G:N2	2.46	0.44
23:D:2164:C:H2'	23:D:2165:G:O4'	2.17	0.44
23:D:2217:G:N3	23:D:2218:G:C8	2.85	0.44
23:D:2258:C:H2'	23:D:2258:C:O2	2.16	0.44
23:D:230:U:H2'	23:D:231:C:O4'	2.18	0.44
23:D:2413:G:C2	23:D:2414:G:C4	3.06	0.44
23:D:2548:G:C4	23:D:2549:G:C8	3.05	0.44
23:D:2592:G:N1	23:D:2603:G:C6	2.85	0.44
23:D:2644:G:H2'	23:D:2645:G:C1'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2668:G:C6	23:D:2669:G:O6	2.70	0.44
23:D:269:U:N3	23:D:424:G:C6	2.85	0.44
23:D:2756:U:H4'	52:1:18:ARG:O	2.16	0.44
23:D:2784:C:N4	23:D:2785:C:N4	2.66	0.44
23:D:52:A:C2	23:D:118:A:H2	2.34	0.44
23:D:695:G:H2'	23:D:696:G:C8	2.53	0.44
23:D:743:G:C6	23:D:755:C:N4	2.86	0.44
23:D:823:G:H2'	23:D:824:A:H8	1.81	0.44
23:D:848:G:H21	23:D:933:A:C1'	2.29	0.44
24:E:91:C:H2'	24:E:92:G:C8	2.47	0.44
24:E:94:C:C4	24:E:95:U:C4	3.05	0.44
2:F:175:ARG:HG2	2:F:179:LYS:HE2	2.00	0.44
3:G:189:ALA:HB3	3:G:196:LEU:H	1.81	0.44
4:H:135:LEU:HD23	4:H:135:LEU:HA	1.79	0.44
6:J:12:PRO:C	6:J:14:LEU:H	2.20	0.44
8:L:41:ARG:HG2	8:L:42:GLU:OE2	2.16	0.44
8:L:85:ARG:HG2	8:L:87:SER:N	2.24	0.44
8:L:97:VAL:HG22	8:L:98:LYS:N	2.32	0.44
9:M:121:ARG:HH12	9:M:123:PRO:HA	1.82	0.44
9:M:126:SER:OG	9:M:127:LYS:N	2.49	0.44
10:N:7:LYS:HG3	10:N:71:LEU:HD23	1.99	0.44
11:O:94:ALA:O	11:O:97:ALA:HB3	2.17	0.44
15:S:53:HIS:O	15:S:56:LEU:HB3	2.16	0.44
18:V:59:SER:O	18:V:63:GLN:HG2	2.17	0.44
54:3:98:ARG:HH12	54:3:100:THR:HA	1.83	0.44
54:3:27:LEU:HA	54:3:30:HIS:HB3	1.98	0.44
55:4:5:G:C6	55:4:6:G:C6	3.05	0.44
56:5:9:A:N6	56:5:23:A:OP2	2.51	0.44
1:A:1102:A:H2'	1:A:1103:C:N1	2.31	0.44
1:A:139:G:H2'	1:A:140:A:H8	1.83	0.44
1:A:1469:G:N3	1:A:1470:G:C8	2.85	0.44
1:A:1481:U:C2	1:A:1482:G:C8	3.06	0.44
1:A:1500:A:C6	1:A:1501:C:C4	3.06	0.44
1:A:1512:U:H2'	1:A:1513:A:C8	2.53	0.44
1:A:175:C:H4'	20:X:25:ARG:NH1	2.32	0.44
1:A:210:U:O2'	1:A:216:G:C8	2.70	0.44
1:A:380:G:N1	1:A:384:G:C6	2.85	0.44
1:A:400:C:H2'	1:A:401:C:H6	1.82	0.44
1:A:416:G:C6	1:A:417:C:N3	2.86	0.44
1:A:479:C:H2'	1:A:480:U:C4	2.52	0.44
1:A:889:A:OP1	1:A:889:A:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:917:G:C6	1:A:918:A:C6	3.06	0.44
22:C:155:VAL:HG13	22:C:156:LEU:H	1.82	0.44
22:C:138:ILE:HA	22:C:167:SER:CB	2.48	0.44
22:C:207:ALA:O	22:C:208:TYR:CG	2.70	0.44
22:C:223:ARG:HB3	22:C:224:PRO:HD3	1.94	0.44
22:C:351:LEU:HD23	22:C:351:LEU:N	2.31	0.44
22:C:420:TYR:CD1	22:C:471:SER:HA	2.53	0.44
22:C:483:GLY:O	22:C:484:TYR:CD1	2.70	0.44
23:D:1063:G:N7	23:D:1064:C:C5	2.86	0.44
23:D:1096:A:N1	54:3:10:LEU:C	2.68	0.44
23:D:1102:C:H2'	23:D:1103:A:OP2	2.17	0.44
23:D:1192:G:C2	23:D:1193:G:C4	3.05	0.44
23:D:1241:A:H2'	23:D:1242:A:C5'	2.47	0.44
23:D:1284:A:H2'	23:D:1285:G:O4'	2.17	0.44
23:D:1304:C:N4	23:D:1305:C:C5	2.86	0.44
23:D:1319:G:C4	23:D:1334:G:C2	3.05	0.44
23:D:1385:G:C6	23:D:1386:C:C4	3.06	0.44
23:D:1414:G:H2'	23:D:1415:U:O4'	2.18	0.44
23:D:1431:U:H2'	23:D:1432:C:C6	2.52	0.44
23:D:1518:C:C2'	23:D:1519:G:H5''	2.42	0.44
23:D:1532:C:N4	23:D:1540:G:O6	2.50	0.44
23:D:1417:C:N4	23:D:1581:G:H1	2.16	0.44
23:D:162:U:OP1	23:D:162:U:C6	2.70	0.44
23:D:171:G:N2	23:D:172:C:N3	2.64	0.44
23:D:1853:A:H2'	23:D:1854:A:N9	2.33	0.44
23:D:2020:A:N7	23:D:2022:U:C2	2.85	0.44
23:D:2044:C:H2'	23:D:2045:C:C6	2.52	0.44
23:D:2078:C:N3	23:D:2079:U:C4	2.85	0.44
23:D:2209:C:N4	23:D:2212:A:H5'	2.32	0.44
23:D:2256:G:N2	23:D:2275:C:H41	2.15	0.44
23:D:2320:A:H3'	23:D:2320:A:OP1	2.18	0.44
23:D:234:C:C4	23:D:235:U:C4	3.06	0.44
23:D:2388:A:H8	23:D:2389:G:N7	2.16	0.44
23:D:2399:G:C4	23:D:2400:G:C8	3.05	0.44
23:D:2391:G:C4	23:D:2424:C:N4	2.85	0.44
23:D:2435:A:C6	23:D:2436:G:C5	3.05	0.44
23:D:2070:G:N2	23:D:2441:C:N3	2.60	0.44
23:D:2445:G:H2'	23:D:2446:G:C8	2.52	0.44
23:D:2515:C:N4	23:D:2569:G:H1	2.16	0.44
23:D:2591:C:C2'	23:D:2592:G:H5'	2.46	0.44
23:D:2023:G:O2'	23:D:2618:G:OP1	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:270(W):G:C5	23:D:270(X):G:C5	3.05	0.44
23:D:2744:G:N1	23:D:2761:G:C5	2.85	0.44
23:D:2749:A:C8	23:D:2750:A:C5	3.05	0.44
23:D:2791:C:N4	23:D:2807:G:O6	2.51	0.44
23:D:2811:G:H21	23:D:2891:G:N2	2.15	0.44
23:D:290:G:OP2	23:D:290:G:C8	2.70	0.44
23:D:398:G:C2	23:D:399:G:C4	3.06	0.44
23:D:370:G:O6	23:D:422:A:H5'	2.18	0.44
23:D:454:A:H3'	23:D:454:A:OP1	2.17	0.44
23:D:576:U:C2	23:D:577:G:N7	2.86	0.44
23:D:670:A:OP2	23:D:670:A:H2'	2.17	0.44
23:D:729:G:N2	23:D:730:C:C2	2.86	0.44
23:D:740:U:H2'	23:D:741:G:C8	2.49	0.44
23:D:809:G:C6	23:D:810:U:C4	3.05	0.44
23:D:874:G:C6	23:D:875:G:C6	3.05	0.44
23:D:94:G:N2	23:D:95:G:N3	2.65	0.44
23:D:956:G:H8	23:D:956:G:O5'	2.01	0.44
23:D:977:G:N2	23:D:978:G:C4	2.86	0.44
24:E:115:G:C2	24:E:116:G:C5	3.05	0.44
24:E:76:G:H2'	24:E:77:U:O4'	2.17	0.44
3:G:143:GLU:C	3:G:145:GLY:H	2.21	0.44
6:J:1:MET:CE	6:J:68:PRO:HG3	2.47	0.44
8:L:112:LEU:HA	8:L:132:GLU:O	2.18	0.44
10:N:5:ARG:HD3	10:N:73:ASP:OD1	2.18	0.44
12:P:37:CYS:SG	12:P:81:SER:HB2	2.58	0.44
12:P:86:ARG:HG3	12:P:87:GLY:O	2.17	0.44
1:A:667:G:H4'	15:S:51:HIS:NE2	2.32	0.44
15:S:8:LYS:HD3	15:S:9:GLN:HE22	1.81	0.44
20:X:76:ALA:O	20:X:79:ARG:HB2	2.17	0.44
25:Z:178:ALA:CB	25:Z:185:LEU:HD13	2.48	0.44
25:Z:18:LYS:HG2	25:Z:19:ILE:N	2.33	0.44
25:Z:74:VAL:HA	25:Z:112:ALA:O	2.17	0.44
1:A:1066:C:O2'	1:A:1067:A:O4'	2.30	0.44
1:A:1220:G:C2	1:A:1221:G:C4	3.06	0.44
1:A:1310:G:N3	1:A:1328:C:C4	2.85	0.44
1:A:1347:G:H2'	9:M:107:ARG:HB3	1.98	0.44
1:A:1355:G:H2'	1:A:1356:G:C8	2.53	0.44
1:A:1376:U:H5'	7:K:102:ARG:HH22	1.82	0.44
1:A:1438:G:C6	1:A:1439:C:C4	3.05	0.44
1:A:363:A:C5	1:A:364:A:C5	3.05	0.44
1:A:371:G:H2'	1:A:372:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:378:G:H2'	1:A:379:C:C6	2.41	0.44
1:A:51:A:C2	1:A:116:A:H1'	2.52	0.44
1:A:540:G:C6	1:A:541:G:C5	3.06	0.44
1:A:553:A:H2'	1:A:554:C:H6	1.83	0.44
1:A:584:G:H2'	1:A:585:G:C8	2.52	0.44
1:A:689:C:N3	1:A:698:G:N2	2.57	0.44
1:A:833:U:C2	1:A:854:G:C2	3.05	0.44
1:A:837:G:C2	1:A:838:G:C4	3.06	0.44
1:A:889:A:C4	1:A:891:U:C4	3.05	0.44
1:A:902:G:C2	1:A:903:G:C4	3.05	0.44
22:C:140:LEU:CD2	22:C:143:ALA:CB	2.94	0.44
22:C:216:ARG:O	22:C:218:PHE:CE2	2.71	0.44
22:C:418:GLU:CA	22:C:446:LYS:CB	2.92	0.44
22:C:418:GLU:HG2	22:C:419:GLU:H	1.83	0.44
23:D:1006:C:C4	23:D:1137:G:N2	2.85	0.44
23:D:1034:G:H3'	23:D:1035:U:H6	1.83	0.44
23:D:1064:C:C2	23:D:1075:C:C2	3.06	0.44
23:D:1160:G:C2	23:D:1161:C:C4	3.05	0.44
23:D:1207:C:N4	23:D:1240:U:O2	2.42	0.44
23:D:1263:U:C2	23:D:1264:G:N1	2.86	0.44
23:D:126:A:C5	23:D:127:A:C2	3.06	0.44
23:D:1410:G:H2'	23:D:1411:C:H6	1.82	0.44
23:D:1476:C:N3	23:D:1517:G:C4	2.85	0.44
23:D:155:C:HO2'	23:D:161:U:H6	1.59	0.44
23:D:1568:G:HO2'	23:D:1569:A:P	2.39	0.44
23:D:1754:C:H2'	23:D:1755:A:O4'	2.18	0.44
23:D:1829:A:N3	23:D:1829:A:H2'	2.32	0.44
23:D:1878:G:H2'	23:D:1879:C:O4'	2.18	0.44
23:D:1959:G:C6	23:D:1960:A:C6	3.05	0.44
23:D:1974:C:H2'	23:D:1975:G:O4'	2.17	0.44
23:D:2051:A:H4'	23:D:2052:G:OP1	2.16	0.44
23:D:2127:G:H2'	23:D:2128:C:C6	2.52	0.44
23:D:2160:G:H2'	23:D:2161:C:N1	2.33	0.44
23:D:2193:G:C4	23:D:2194:G:C8	3.05	0.44
23:D:2226:C:N4	23:D:2227:A:C6	2.86	0.44
23:D:2342:C:H2'	23:D:2343:C:C6	2.52	0.44
23:D:2527:C:O2'	52:1:31:LYS:NZ	2.51	0.44
23:D:269:U:H5	23:D:270(Z):U:P	2.40	0.44
23:D:2747:G:C2	23:D:2754:U:N3	2.86	0.44
23:D:2785:C:H2'	23:D:2786:U:C6	2.53	0.44
23:D:2819:G:H2'	23:D:2821:A:H62	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2868:A:H2'	23:D:2869:G:C8	2.53	0.44
23:D:28:A:H1'	23:D:513:A:N1	2.32	0.44
23:D:319:C:H2'	23:D:320:A:C8	2.53	0.44
23:D:376:C:H2'	23:D:377:C:C6	2.52	0.44
23:D:220:G:N2	23:D:428:A:OP2	2.43	0.44
23:D:452:G:C6	23:D:453:C:C5	3.05	0.44
23:D:569:U:C4	23:D:570:G:C4	3.05	0.44
23:D:57:C:C2	23:D:58:G:C8	3.05	0.44
23:D:693:C:C4	23:D:694:U:C4	3.05	0.44
23:D:766:C:H2'	23:D:767:U:O4'	2.18	0.44
23:D:77:C:H2'	23:D:78:A:C8	2.52	0.44
23:D:788:A:H2'	23:D:788:A:OP2	2.18	0.44
23:D:799:G:C8	23:D:799:G:OP2	2.70	0.44
23:D:894:C:H5''	23:D:895:U:OP2	2.17	0.44
23:D:968:G:C6	23:D:969:U:C4	3.06	0.44
2:F:144:ARG:O	2:F:147:LYS:HB3	2.18	0.44
3:G:108:ASN:ND2	3:G:110:ASN:HB2	2.31	0.44
5:I:102:ALA:H	5:I:107:ARG:NH2	2.15	0.44
5:I:109:ILE:HA	5:I:112:LEU:HD12	1.99	0.44
1:A:18:C:O3'	5:I:127:ASN:ND2	2.49	0.44
5:I:33:VAL:HG13	5:I:42:GLY:C	2.37	0.44
6:J:36:ARG:O	6:J:65:VAL:HB	2.17	0.44
7:K:27:ILE:HA	7:K:30:ILE:HB	1.99	0.44
7:K:58:PRO:HA	7:K:61:VAL:HB	1.99	0.44
8:L:120:THR:O	8:L:123:GLU:HB3	2.17	0.44
8:L:6:ILE:HD11	8:L:35:ILE:HG21	1.99	0.44
13:Q:45:VAL:HA	13:Q:48:LEU:HD21	1.99	0.44
14:R:42:ILE:HG13	14:R:43:CYS:N	2.33	0.44
16:T:43:LYS:HG3	16:T:48:TRP:CG	2.53	0.44
17:U:44:ALA:HB1	17:U:71:PHE:C	2.37	0.44
25:Z:37:PHE:CD1	25:Z:38:ASP:O	2.70	0.44
1:A:1012:U:C4	1:A:1013:G:C2	3.06	0.44
1:A:1015:A:H2'	1:A:1016:A:C8	2.53	0.44
1:A:1123:A:H3'	1:A:1124:G:C8	2.51	0.44
1:A:1127:G:C6	1:A:1128:C:N4	2.86	0.44
1:A:1127:G:H2'	1:A:1128:C:H6	1.83	0.44
1:A:1316:G:N3	1:A:1318:A:C8	2.84	0.44
1:A:1367:C:P	9:M:114:TYR:HA	2.57	0.44
1:A:136:C:N3	1:A:137:C:C4	2.86	0.44
1:A:1442:G:N7	1:A:1446:A:N6	2.65	0.44
1:A:1417:G:C5	1:A:1482:G:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:308:C:O2	1:A:308:C:H2'	2.17	0.44
1:A:361:G:H3'	1:A:362:G:C8	2.53	0.44
1:A:377:G:H2'	1:A:378:G:C8	2.50	0.44
1:A:411:A:N6	1:A:429:U:O4'	2.50	0.44
1:A:447:G:H4'	1:A:448:A:H5'	2.00	0.44
1:A:55:A:H2'	1:A:56:U:H6	1.83	0.44
1:A:596:C:N4	1:A:645:C:C2	2.86	0.44
1:A:687:A:C5	1:A:704:A:C5	3.06	0.44
1:A:734:G:C6	1:A:735:C:C4	3.06	0.44
1:A:84:U:H2'	1:A:85:U:H6	1.82	0.44
1:A:885:G:C6	1:A:886:G:N7	2.86	0.44
1:A:888:G:C8	1:A:889:A:C8	3.05	0.44
1:A:981:U:H5'	1:A:983:A:OP1	2.18	0.44
1:A:994:A:N6	1:A:1213:A:H61	2.16	0.44
22:C:215:LEU:CG	22:C:216:ARG:N	2.78	0.44
22:C:320:LEU:C	22:C:322:LYS:H	2.21	0.44
22:C:417:PRO:O	22:C:420:TYR:CD2	2.70	0.44
22:C:495:LEU:C	22:C:538:GLN:O	2.55	0.44
23:D:1120:G:C4	23:D:1121:C:C5	3.05	0.44
23:D:976:C:H4'	23:D:1156:A:N6	2.33	0.44
23:D:1157:G:C4	23:D:1158:C:C5	3.05	0.44
23:D:1186:G:H2'	23:D:1187:G:C8	2.39	0.44
23:D:1236:G:HO2'	23:D:1237:A:P	2.41	0.44
23:D:1335:U:N3	23:D:1336:A:C5	2.86	0.44
23:D:1351:C:C2	23:D:1352:U:N3	2.86	0.44
23:D:1389:G:N3	23:D:1390:U:N3	2.65	0.44
23:D:1408:C:C2	23:D:1594:G:N2	2.81	0.44
23:D:1449(A):G:N2	23:D:1462:C:O2	2.34	0.44
23:D:1626:G:H4'	23:D:1626:G:OP1	2.16	0.44
23:D:1641:A:C8	23:D:1642:G:C8	3.06	0.44
23:D:1806:C:C2	23:D:1807:G:C4	3.06	0.44
23:D:1932:A:H1'	23:D:1969:A:H61	1.83	0.44
23:D:1960:A:C6	23:D:1961:C:N3	2.86	0.44
23:D:2040:C:H2'	23:D:2041:U:C6	2.53	0.44
23:D:2064:C:N4	23:D:2445:G:C6	2.86	0.44
23:D:2111:C:OP2	23:D:2111:C:C6	2.70	0.44
23:D:2297:C:C4	23:D:2333:A:N1	2.86	0.44
23:D:2375:G:N1	23:D:2379:G:C6	2.86	0.44
23:D:2445:G:N1	23:D:2446:G:C6	2.86	0.44
23:D:2450:A:N6	23:D:2451:A:N7	2.66	0.44
23:D:2540:C:N3	23:D:2541:A:C5	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2638:G:H22	23:D:2775:A:H2'	1.82	0.44
23:D:2698:U:H2'	23:D:2699:C:C6	2.52	0.44
23:D:2818:G:O2'	23:D:2819:G:H5'	2.17	0.44
23:D:2845:G:C6	23:D:2846:G:C6	3.06	0.44
23:D:296:C:H42	23:D:342:G:H1	1.64	0.44
23:D:378:C:N3	23:D:397:G:C2	2.85	0.44
23:D:220:G:N2	23:D:427:U:H3'	2.33	0.44
23:D:542:C:N3	23:D:543:C:C4	2.85	0.44
23:D:567:A:N1	23:D:568:U:H1'	2.33	0.44
23:D:695:G:C6	23:D:696:G:C6	3.05	0.44
23:D:702:G:C2	23:D:731:C:N3	2.85	0.44
23:D:720:C:H2'	23:D:721:C:C6	2.52	0.44
23:D:738:G:C4	23:D:739:G:C2	3.06	0.44
23:D:72:U:O2'	23:D:73:A:P	2.75	0.44
23:D:774:A:C5	23:D:775:G:N1	2.85	0.44
23:D:846:C:H4'	23:D:847:U:O4'	2.18	0.44
23:D:873:G:C4	23:D:874:G:C8	3.06	0.44
23:D:855:G:N1	23:D:923:C:C4	2.85	0.44
23:D:938:G:C2	23:D:939:G:N7	2.86	0.44
24:E:83:G:C2	24:E:94:C:C2	3.06	0.44
2:F:80:ILE:HG23	2:F:81:VAL:N	2.33	0.44
3:G:134:ILE:HA	3:G:137:ALA:CB	2.46	0.44
5:I:82:VAL:O	5:I:89:ILE:HG22	2.17	0.44
15:S:71:GLN:HA	15:S:78:TYR:CD2	2.53	0.44
18:V:63:GLN:O	18:V:66:LEU:HG	2.17	0.44
23:D:2421:G:H3'	56:5:76:A:H62	1.81	0.44
1:A:1072:G:H1	1:A:1103:C:N4	2.16	0.44
1:A:1175:G:C6	1:A:1176:A:C4	3.06	0.44
1:A:1228:C:O2'	1:A:1229:A:H5'	2.18	0.44
1:A:1277:C:C2	1:A:1278:U:H1'	2.52	0.44
1:A:1309:G:C8	1:A:1310:G:O6	2.71	0.44
1:A:132:C:H2'	1:A:133:U:O4'	2.18	0.44
1:A:1345:U:H6	1:A:1345:U:OP2	2.01	0.44
1:A:1433:A:C8	1:A:1468:A:C6	3.06	0.44
1:A:1522:U:O2'	1:A:1523:G:H5'	2.17	0.44
1:A:15:G:H5'	1:A:1397:C:P	2.57	0.44
1:A:19:C:H2'	1:A:20:U:H6	1.83	0.44
1:A:54:C:N4	1:A:357:G:H1	2.16	0.44
1:A:385:C:H2'	1:A:386:C:H6	1.79	0.44
1:A:492:G:H2'	1:A:493:G:H8	1.82	0.44
1:A:583:A:C6	1:A:584:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:662:G:C5	1:A:744:C:C4	3.06	0.44
1:A:785:G:C4	1:A:798:G:C2	3.05	0.44
1:A:803:G:N1	1:A:804:U:O2	2.50	0.44
1:A:928:G:H2'	1:A:929:G:C8	2.53	0.44
1:A:952:U:H2'	1:A:953:G:H8	1.82	0.44
1:A:962:C:H2'	1:A:963:G:C8	2.52	0.44
1:A:968:A:OP1	1:A:968:A:H8	1.99	0.44
22:C:217:LEU:HD11	22:C:222:VAL:HB	2.00	0.44
22:C:410:VAL:HG22	22:C:481:GLN:CG	2.48	0.44
22:C:496:VAL:HG21	22:C:501:VAL:HG21	2.00	0.44
22:C:520:ILE:CG2	22:C:521:VAL:N	2.80	0.44
22:C:67:THR:CA	22:C:76:TYR:CG	3.00	0.44
23:D:1007:C:N3	23:D:1136:G:C6	2.86	0.44
23:D:1023:U:OP2	23:D:1025:G:N1	2.51	0.44
23:D:1082:U:C4	23:D:1083:U:C2	3.05	0.44
23:D:1117:G:C2	23:D:1118:C:C2	3.06	0.44
23:D:127:A:C5'	23:D:128:C:H5''	2.47	0.44
23:D:1278:A:H61	23:D:1293:C:N4	2.15	0.44
23:D:1441:G:N2	23:D:1550:C:N3	2.57	0.44
23:D:1572:A:H3'	23:D:1573:G:C8	2.53	0.44
23:D:1731:G:H21	23:D:1733:G:H22	1.64	0.44
23:D:1747:G:C2	23:D:1748:G:C5	3.05	0.44
23:D:1799:G:C8	23:D:1819:A:N6	2.85	0.44
23:D:1823:G:C6	23:D:1824:G:C5	3.06	0.44
23:D:1838:C:C2	23:D:1899:G:N2	2.85	0.44
23:D:1922:G:H2'	23:D:1923:U:O4'	2.17	0.44
23:D:2040:C:C2	23:D:2041:U:C2	3.06	0.44
23:D:2067:G:O6	23:D:2069:G:C6	2.70	0.44
23:D:2101:G:H1	23:D:2188:C:H42	1.64	0.44
23:D:2103:C:C6	23:D:2103:C:O5'	2.70	0.44
23:D:2149:G:H2'	23:D:2150:U:O4'	2.18	0.44
23:D:2117:A:N6	23:D:2172:U:O4	2.51	0.44
23:D:2206:C:N3	23:D:2219:G:C2	2.86	0.44
23:D:2307:G:C4	23:D:2308:G:H1'	2.52	0.44
23:D:2642:G:C4	23:D:2643:G:C8	3.05	0.44
23:D:2661:G:H2'	23:D:2662:A:O4'	2.18	0.44
23:D:2854:G:C6	23:D:2855:C:C4	3.05	0.44
23:D:2894:G:N3	23:D:2894:G:H2'	2.33	0.44
23:D:352:G:C2	23:D:353:G:C4	3.06	0.44
23:D:375:C:N3	23:D:376:C:C4	2.86	0.44
23:D:411:G:C2	23:D:2407:G:N7	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:422:A:C6	23:D:423:A:C5	3.06	0.44
23:D:617:G:N7	23:D:618:G:C6	2.86	0.44
23:D:760:G:H2'	23:D:761:A:H8	1.79	0.44
23:D:778:G:C6	23:D:779:U:N3	2.85	0.44
23:D:806:C:O2'	23:D:807:U:O4'	2.34	0.44
23:D:863:A:C6	23:D:864:G:C6	3.05	0.44
23:D:928:G:H2'	23:D:929:G:C5'	2.45	0.44
23:D:953:A:C2	23:D:954:G:C8	3.05	0.44
23:D:963:U:H2'	23:D:964:C:H6	1.82	0.44
24:E:4:C:N4	24:E:116:G:H1	2.13	0.44
2:F:108:ILE:O	2:F:112:VAL:HG23	2.18	0.44
3:G:130:VAL:O	3:G:134:ILE:HD12	2.18	0.44
3:G:113:ALA:HA	3:G:202:ILE:HD12	2.00	0.44
3:G:40:ARG:CG	3:G:57:ILE:HD12	2.48	0.44
3:G:6:HIS:CG	3:G:7:PRO:HD2	2.52	0.44
4:H:101:LEU:HA	4:H:104:VAL:HG22	2.00	0.44
1:A:615:C:H5''	4:H:141:ARG:HH22	1.82	0.44
5:I:43:LEU:HD21	5:I:45:PHE:HD2	1.83	0.44
5:I:88:LYS:O	5:I:123:LEU:N	2.51	0.44
6:J:63:TYR:O	6:J:65:VAL:HG13	2.18	0.44
7:K:73:MET:SD	7:K:88:PRO:HB2	2.58	0.44
10:N:63:PHE:HB2	14:R:57:ARG:O	2.17	0.44
10:N:7:LYS:NZ	10:N:71:LEU:HD21	2.33	0.44
16:T:61:SER:OG	16:T:62:VAL:N	2.51	0.44
56:5:13:C:H1'	56:5:23:A:C2	2.53	0.44
1:A:1116:C:N4	1:A:1184:G:H1	2.16	0.44
1:A:1132:C:H2'	1:A:1133:G:C8	2.53	0.44
1:A:1402:C:C4	1:A:1403:C:C4	3.06	0.44
1:A:159:G:H2'	1:A:161:A:OP2	2.18	0.44
1:A:183:G:H21	1:A:184:G:H1'	1.83	0.44
1:A:127:G:H1	1:A:234:C:N4	2.16	0.44
1:A:301:G:C2	1:A:302:G:C4	3.06	0.44
1:A:307:C:C4	1:A:308:C:N4	2.86	0.44
1:A:316:G:H2'	1:A:317:G:C8	2.50	0.44
1:A:329:A:C5	1:A:332:G:C6	3.05	0.44
1:A:363:A:C6	1:A:364:A:C4	3.06	0.44
1:A:375:U:H2'	1:A:376:G:H5'	1.99	0.44
1:A:451:A:C4	1:A:481:G:C6	3.05	0.44
1:A:489:C:H2'	1:A:490:G:C8	2.52	0.44
1:A:547:A:O2'	1:A:548:G:O5'	2.31	0.44
1:A:64:G:H5''	1:A:65:U:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:654:G:C2	1:A:753:A:C4	3.06	0.44
1:A:75:C:H2'	1:A:76:G:O4'	2.18	0.44
1:A:858:G:H22	1:A:869:G:H2'	1.82	0.44
1:A:865:A:H2'	1:A:866:C:O4'	2.18	0.44
1:A:874:G:C4	1:A:875:C:C5	3.06	0.44
1:A:887:G:O6	1:A:888:G:N1	2.51	0.44
1:A:894:G:C6	1:A:895:G:C6	3.06	0.44
1:A:941:G:N1	1:A:1342:C:N3	2.66	0.44
22:C:301:VAL:HG22	22:C:464:HIS:CG	2.46	0.44
22:C:412:LEU:HB2	22:C:451:VAL:C	2.36	0.44
22:C:495:LEU:N	22:C:540:ALA:H	2.15	0.44
23:D:1005:C:N3	23:D:1142(A):A:O2'	2.49	0.44
23:D:1057:A:C8	23:D:1060:U:O4	2.70	0.44
23:D:1132:A:C6	23:D:1133:U:C4	3.06	0.44
23:D:1258:C:C2	23:D:1259:G:C8	3.06	0.44
23:D:1424:G:C6	23:D:1425:G:C6	3.06	0.44
23:D:1449:A:C2	23:D:1449(A):G:C4	3.06	0.44
23:D:1468:C:C2	23:D:1469:A:C5	3.06	0.44
23:D:1690:A:H2'	23:D:1691:C:H6	1.81	0.44
23:D:1699:G:O2'	23:D:1701:A:OP1	2.36	0.44
23:D:1707:G:C6	23:D:1708:C:C2	3.06	0.44
23:D:1759:A:C6	23:D:1760:A:C6	3.06	0.44
23:D:1800:C:N4	23:D:1817:G:C2	2.86	0.44
23:D:526:A:N3	23:D:2044:C:H1'	2.32	0.44
23:D:2057:A:C5	23:D:2058:A:C5	3.05	0.44
23:D:2236:C:H2'	23:D:2237:G:O4'	2.18	0.44
23:D:228:A:H3'	23:D:229:A:H4'	2.00	0.44
23:D:2327:A:C2	23:D:2328:A:C4	3.06	0.44
23:D:2478:A:C4	23:D:2529:G:C5	3.06	0.44
23:D:2570:G:C2	23:D:2571:C:C2	3.05	0.44
23:D:2621:A:C5	23:D:2622:C:C5	3.05	0.44
23:D:2682:U:H3'	23:D:2683:C:H5	1.83	0.44
23:D:2721:A:H2'	23:D:2722:G:O4'	2.18	0.44
23:D:2808:U:OP2	23:D:2808:U:C5	2.70	0.44
23:D:338:G:P	23:D:338:G:H3'	2.58	0.44
23:D:308:G:N1	23:D:501:A:C6	2.86	0.44
23:D:530:G:N1	23:D:2022:U:O5'	2.50	0.44
23:D:677:A:C6	23:D:802:A:C5	3.06	0.44
23:D:706:A:C5	23:D:707:G:C5	3.06	0.44
23:D:717:G:C2	23:D:718:A:H1'	2.52	0.44
23:D:737:C:N3	23:D:738:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:695:G:C5	23:D:768:G:C6	3.05	0.44
23:D:802:A:C5	23:D:803:U:C4	3.06	0.44
24:E:99:A:H3'	24:E:100:G:H8	1.83	0.44
4:H:19:LEU:HA	4:H:19:LEU:HD23	1.70	0.44
4:H:3:ARG:NH2	4:H:118:ARG:HH21	2.16	0.44
5:I:88:LYS:HB3	5:I:123:LEU:HD12	1.99	0.44
5:I:28:PHE:CE2	5:I:51:VAL:HG23	2.53	0.44
6:J:30:LEU:HB3	6:J:35:ALA:HB3	2.00	0.44
1:A:1147:C:H4'	9:M:5:TYR:CE2	2.52	0.44
10:N:8:LEU:HD23	10:N:8:LEU:O	2.17	0.44
12:P:34:ARG:NE	12:P:61:THR:HG21	2.33	0.44
12:P:86:ARG:HG3	12:P:87:GLY:N	2.32	0.44
19:W:53:ASN:N	19:W:56:GLN:O	2.47	0.44
20:X:30:LYS:HD2	20:X:72:LEU:HD11	2.00	0.44
25:Z:173:ALA:HB2	25:Z:192:PHE:CD2	2.52	0.44
54:3:79:ARG:NE	54:3:134:MET:SD	2.91	0.44
55:4:28:C:N3	55:4:29:G:C5	2.86	0.44
56:5:9:A:N6	56:5:22:G:H3'	2.31	0.44
1:A:106:C:H2'	1:A:107:G:H8	1.83	0.44
1:A:1106:G:C2	1:A:1107:C:C2	3.05	0.44
1:A:1225:A:N7	1:A:1226:C:N4	2.65	0.44
1:A:191(C):G:C6	1:A:191(D):U:C4	3.06	0.44
1:A:247:G:C6	1:A:278:G:N1	2.86	0.44
1:A:293:G:H3'	1:A:294:U:C6	2.53	0.44
1:A:349:A:H2'	1:A:350:G:C8	2.52	0.44
1:A:44:G:H1'	1:A:399:G:N2	2.32	0.44
1:A:409:G:OP1	4:H:24:GLU:HB3	2.17	0.44
1:A:551:U:H4'	12:P:86:ARG:HH12	1.83	0.44
1:A:660:G:N1	1:A:746:A:C6	2.86	0.44
1:A:769:G:C2	1:A:770:C:C2	3.05	0.44
1:A:781:A:O5'	1:A:1523:G:H5''	2.17	0.44
1:A:796:C:H3'	1:A:796:C:P	2.58	0.44
1:A:786:G:C6	1:A:797:C:N4	2.86	0.44
1:A:799:G:C6	1:A:800:G:C6	3.06	0.44
1:A:814:A:N7	1:A:816:A:C5	2.86	0.44
1:A:946:A:H2'	1:A:947:G:N7	2.33	0.44
22:C:206:ASP:CB	22:C:210:GLY:C	2.86	0.44
23:D:1103:A:OP2	23:D:1104:C:C5	2.70	0.44
23:D:1112:G:C6	23:D:1113:U:C2	3.06	0.44
23:D:1183:G:H4'	23:D:1184:G:O5'	2.16	0.44
23:D:1365:A:C4	23:D:1366:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1473:G:H2'	23:D:1474:C:C6	2.52	0.44
23:D:1502:C:H2'	23:D:1503:U:H6	1.82	0.44
23:D:1665:A:C6	23:D:1666:G:C4	3.06	0.44
23:D:1697:G:C6	23:D:1698:A:N6	2.86	0.44
23:D:1821:A:C5	23:D:1822:G:C5	3.06	0.44
23:D:1845:G:C6	23:D:1896:G:N1	2.86	0.44
23:D:1839:G:C6	23:D:1927:A:H2	2.36	0.44
23:D:1992:G:C5	23:D:1997:G:C5	3.06	0.44
23:D:2018:G:C5	23:D:2019:A:C6	3.06	0.44
23:D:2341:G:H2'	23:D:2342:C:C6	2.52	0.44
23:D:2353:G:N2	23:D:2364:C:N3	2.62	0.44
23:D:2425:A:O2'	23:D:2426:A:P	2.76	0.44
23:D:2432:A:N6	23:D:2433:A:N6	2.66	0.44
23:D:2437:U:H5'	23:D:2598:A:N1	2.33	0.44
23:D:2551:C:O2	23:D:2552:U:N3	2.51	0.44
23:D:2616:C:H2'	23:D:2617:C:H6	1.83	0.44
23:D:2638:G:N2	23:D:2776:A:O5'	2.51	0.44
23:D:2744:G:O2'	23:D:2745:C:H5'	2.18	0.44
23:D:284:U:OP2	23:D:284:U:H6	2.00	0.44
23:D:313:C:H2'	23:D:314:A:O4'	2.18	0.44
23:D:528:A:C6	23:D:2042:A:C4	3.06	0.44
23:D:536:A:C2	23:D:558:G:C2	3.06	0.44
23:D:584:C:N3	23:D:585:G:C6	2.86	0.44
23:D:61:G:C5	23:D:62:C:N4	2.86	0.44
23:D:744:G:C6	23:D:745:G:C6	3.06	0.44
23:D:833:U:C4	23:D:834:C:N4	2.86	0.44
23:D:842:G:H2'	23:D:843:G:C8	2.46	0.44
2:F:121:LEU:HA	2:F:124:SER:HB2	1.99	0.44
2:F:174:VAL:O	2:F:178:ARG:HG2	2.18	0.44
3:G:129:ALA:O	3:G:133:ALA:HB2	2.18	0.44
3:G:184:TYR:CE2	3:G:186:PHE:HB3	2.53	0.44
4:H:102:ASP:HB2	4:H:136:PRO:O	2.17	0.44
5:I:148:VAL:HA	5:I:151:LEU:HD12	2.00	0.44
5:I:78:HIS:HB3	8:L:105:ARG:HB2	2.00	0.44
9:M:22:GLY:HA3	9:M:60:ASP:OD2	2.17	0.44
10:N:42:THR:CG2	10:N:68:HIS:HD2	2.31	0.44
13:Q:19:LEU:HB2	13:Q:22:ILE:HD12	2.00	0.44
1:A:44:G:P	16:T:12:LYS:HB2	2.58	0.44
16:T:52:ASP:OD2	16:T:55:ARG:HG2	2.17	0.44
16:T:60:LEU:C	16:T:63:GLY:H	2.21	0.44
17:U:9:VAL:O	17:U:31:LEU:HD13	31.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:57:ARG:HH22	20:X:102:GLY:HA3	1.82	0.44
20:X:17:ARG:O	20:X:20:LEU:HB2	2.17	0.44
20:X:53:LEU:HA	20:X:56:MET:CB	2.48	0.44
25:Z:225:ASN:ND2	25:Z:228:SER:O	2.34	0.44
25:Z:64:LEU:CD1	25:Z:161:ILE:HG22	2.39	0.44
54:3:111:LYS:CB	54:3:122:ALA:HB1	2.48	0.43
55:4:6:G:N2	55:4:68:C:N3	2.65	0.43
1:A:999:U:C4	1:A:1000:A:N7	2.85	0.43
1:A:1034:G:O2'	1:A:1035:A:H5'	2.18	0.43
1:A:105:G:C5	1:A:106:C:N4	2.86	0.43
1:A:1104:G:C6	1:A:1105:A:C4	3.06	0.43
1:A:1185:G:C2	1:A:1186:G:H1'	2.53	0.43
1:A:1206:G:H2'	1:A:1207:G:O4'	2.18	0.43
1:A:1216:G:H5''	14:R:6:LEU:HD21	2.00	0.43
1:A:1387:G:C2	1:A:1388:C:C4	3.06	0.43
1:A:1449:C:C4	1:A:1455:G:N1	2.86	0.43
1:A:257:G:H1	1:A:269:C:N4	2.16	0.43
1:A:276:G:C2	1:A:277:C:C4	3.06	0.43
1:A:281:G:HO2'	1:A:282:A:P	2.41	0.43
1:A:119:A:C8	1:A:288:A:C6	3.06	0.43
1:A:292:G:O2'	1:A:608:A:N6	2.51	0.43
1:A:299:G:C6	1:A:300:A:C6	3.05	0.43
1:A:308:C:O2'	1:A:309:G:P	2.76	0.43
1:A:332:G:N3	1:A:333:G:C8	2.86	0.43
1:A:583:A:C4	1:A:584:G:C8	3.06	0.43
1:A:604:G:H2'	1:A:605:U:H6	1.83	0.43
1:A:614:A:H2'	1:A:615:C:N1	2.33	0.43
1:A:634:C:H2'	1:A:635:G:H8	1.83	0.43
1:A:667:G:OP1	1:A:732:C:O2'	2.31	0.43
1:A:757:U:C4	1:A:758:G:N1	2.86	0.43
1:A:760:G:H3'	1:A:760:G:OP2	2.17	0.43
1:A:926:G:H2'	1:A:1505:G:N2	2.33	0.43
1:A:976:G:N2	1:A:1362:C:H2'	2.33	0.43
22:C:113:VAL:CG1	22:C:114:GLU:N	2.80	0.43
22:C:246:THR:CB	22:C:251:VAL:HG21	2.45	0.43
22:C:257:GLU:CG	22:C:258:ALA:H	2.29	0.43
22:C:458:GLU:C	22:C:460:LEU:H	2.21	0.43
22:C:495:LEU:C	22:C:496:VAL:CG2	2.86	0.43
22:C:49:LEU:HD13	22:C:51:LEU:HB2	1.99	0.43
22:C:91:TYR:O	22:C:94:SER:HB2	2.17	0.43
23:D:1031:G:H3'	23:D:1032:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1036:G:C5	23:D:1120:G:C6	3.06	0.43
23:D:1131:G:C2	23:D:1132:A:N7	2.86	0.43
23:D:1013:C:P	23:D:1142:U:H3	2.41	0.43
23:D:1183:G:N2	23:D:1184:G:N3	2.65	0.43
23:D:1276:A:N3	23:D:1277:G:C8	2.86	0.43
23:D:1334:G:H2'	23:D:1335:U:H6	1.83	0.43
23:D:1409:C:O5'	23:D:1409:C:H6	2.01	0.43
23:D:1479:G:C2	23:D:1514:U:H2'	2.53	0.43
23:D:1485:G:C2	23:D:1486:A:C4	3.06	0.43
23:D:1664:A:C8	23:D:1664:A:C3'	3.01	0.43
23:D:1699:G:C4	23:D:1763:G:C6	3.06	0.43
23:D:1918:A:H2'	23:D:1919:A:H2'	2.00	0.43
23:D:2068:U:H3	23:D:2430:A:H2	1.58	0.43
23:D:2205:C:N4	23:D:2219:G:H1	2.15	0.43
23:D:2257:U:H2'	23:D:2258:C:H6	1.83	0.43
23:D:2322:A:C6	23:D:2323:G:C5	3.06	0.43
23:D:2366:A:C6	23:D:2367:G:C5	3.06	0.43
23:D:2403:C:C4	23:D:2415:G:C6	3.05	0.43
23:D:2417:C:H2'	23:D:2418:A:H8	1.82	0.43
23:D:2549:G:O2'	23:D:2550:G:H5'	2.17	0.43
23:D:259:G:N3	23:D:260:G:C8	2.86	0.43
23:D:263:C:H1'	23:D:430:G:H1'	2.00	0.43
23:D:2531:A:N6	23:D:2662:A:H61	2.16	0.43
23:D:2753:A:C6	23:D:2754:U:N3	2.85	0.43
23:D:2643:G:H1	23:D:2771:C:N4	2.16	0.43
23:D:374:A:C6	23:D:401:A:C5	3.06	0.43
23:D:503:A:H1'	23:D:505:A:C8	2.53	0.43
23:D:611:C:H2'	23:D:612:G:C8	2.53	0.43
23:D:743:G:H3'	23:D:743:G:OP2	2.18	0.43
23:D:953:A:C6	23:D:954:G:N7	2.86	0.43
24:E:116:G:C2	24:E:117:G:C5	3.06	0.43
24:E:21:G:C2	24:E:22:U:C2	3.06	0.43
24:E:86:G:C6	24:E:87:G:C6	3.06	0.43
24:E:87:G:N2	24:E:90:C:C2	2.86	0.43
2:F:107:THR:O	2:F:111:ARG:N	2.44	0.43
2:F:84:GLU:OE1	2:F:87:ARG:NH1	2.46	0.43
3:G:3:ASN:OD1	3:G:4:LYS:N	2.42	0.43
7:K:138:LYS:NZ	7:K:139:GLU:OE2	2.49	0.43
7:K:88:PRO:HG2	7:K:152:ALA:HB2	2.00	0.43
8:L:85:ARG:HG3	8:L:134:ILE:O	2.18	0.43
9:M:33:PHE:HE1	9:M:74:ILE:HG12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:78:GLN:O	11:O:103:LEU:HB3	2.18	0.43
11:O:24:SER:OG	11:O:25:TYR:N	2.50	0.43
13:Q:79:LYS:O	13:Q:83:ASP:N	2.51	0.43
14:R:43:CYS:O	14:R:46:GLU:HB2	2.18	0.43
15:S:63:ARG:HA	15:S:66:LEU:HD12	2.00	0.43
1:A:582:U:C5	17:U:104:LYS:HE3	2.53	0.43
17:U:13:ASP:CG	17:U:14:LYS:H	2.20	0.43
17:U:29:HIS:CE1	17:U:32:TYR:CD2	3.06	0.43
25:Z:36:LYS:O	25:Z:37:PHE:CG	2.70	0.43
55:4:19:G:N3	55:4:57:A:C6	2.86	0.43
56:5:5:G:N2	56:5:68:C:C2	2.86	0.43
1:A:109:A:HO2'	1:A:110:C:P	2.39	0.43
1:A:113:G:C5	1:A:114:U:C4	3.06	0.43
1:A:1248:A:H2'	1:A:1249:C:C6	2.53	0.43
1:A:134:A:H3'	1:A:135:C:C5	2.53	0.43
1:A:1426:C:H42	1:A:1474:G:H1	1.66	0.43
1:A:149:A:H2'	1:A:149:A:N3	2.32	0.43
1:A:1520:G:H2'	1:A:1521:G:O4'	2.18	0.43
1:A:192:U:C2	1:A:193:C:C6	3.07	0.43
1:A:350:G:C2	1:A:351:G:C6	3.06	0.43
1:A:361:G:N7	1:A:362:G:C5	2.86	0.43
1:A:447:G:O6	1:A:485:G:H1'	2.18	0.43
1:A:522:C:C2	1:A:523:A:C8	3.05	0.43
1:A:55:A:H2'	1:A:56:U:O4'	2.18	0.43
1:A:572:A:OP1	1:A:572:A:H4'	2.16	0.43
1:A:57:G:C5	1:A:58:C:C4	3.05	0.43
1:A:707:C:H4'	11:O:20:TYR:CD2	2.54	0.43
1:A:724:G:N3	1:A:725:G:C8	2.86	0.43
1:A:848:C:H6	1:A:848:C:O5'	2.01	0.43
1:A:861:G:H2'	1:A:862:C:H6	1.82	0.43
22:C:30:LEU:HD11	22:C:178:LEU:HD12	2.00	0.43
22:C:208:TYR:O	22:C:209:GLN:HG3	2.18	0.43
22:C:212:ILE:O	22:C:212:ILE:HG22	2.16	0.43
22:C:205:TYR:OH	22:C:322:LYS:O	2.34	0.43
22:C:485:ARG:NE	22:C:485:ARG:N	2.66	0.43
22:C:577:GLN:HG3	23:D:1942:C:H5''	1.96	0.43
22:C:67:THR:CA	22:C:76:TYR:CD1	3.00	0.43
23:D:1025:G:HO2'	23:D:1026:U:P	2.38	0.43
23:D:1064:C:O2	54:3:90:LYS:HA	2.18	0.43
23:D:1256:G:C4	23:D:1257:C:C5	3.06	0.43
23:D:1343:G:C2	23:D:1405:U:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1419:A:C5	23:D:1421:G:C5	3.07	0.43
23:D:1441:G:H1	23:D:1550:C:N4	2.16	0.43
23:D:1484:G:C6	23:D:1506:C:N3	2.86	0.43
23:D:1557:C:H2'	23:D:1558:A:C8	2.53	0.43
23:D:1557:C:C5	23:D:1558:A:C5	3.06	0.43
23:D:1625:C:C2	23:D:1626:G:H8	2.36	0.43
23:D:1626:G:H4'	23:D:1627:G:OP1	2.11	0.43
23:D:1670:C:C5	23:D:1671:U:C4	3.06	0.43
23:D:1677:A:C2	23:D:1678:G:C4	3.06	0.43
23:D:1729:A:H5''	23:D:1730:U:C6	2.53	0.43
23:D:1949:G:N1	23:D:1950:G:C2	2.86	0.43
23:D:1949:G:C2	23:D:1950:G:C4	3.06	0.43
23:D:2030:A:HO2'	23:D:2031:A:P	2.41	0.43
23:D:2246:G:C4	23:D:2426:A:C2	3.06	0.43
23:D:2328:A:H2'	23:D:2329:G:H8	1.83	0.43
23:D:233:A:C6	23:D:234:C:C2	3.06	0.43
23:D:2366:A:H3'	23:D:2367:G:H8	1.83	0.43
23:D:244:A:N6	23:D:245:G:N3	2.65	0.43
23:D:2583:G:N7	23:D:2584:U:N3	2.66	0.43
23:D:25:U:C5	23:D:26:G:C5	3.05	0.43
23:D:2639:A:H2'	23:D:2640:G:H5'	2.00	0.43
23:D:270(V):G:H3'	23:D:270(W):G:H8	1.84	0.43
23:D:2758:A:C4	23:D:2759:G:C8	3.06	0.43
23:D:2783:G:C6	23:D:2784:C:C5	3.07	0.43
23:D:374:A:C4	23:D:375:C:C6	3.06	0.43
23:D:486:C:C2	23:D:487:C:H5	2.37	0.43
23:D:532:A:N6	23:D:561:G:C2	2.86	0.43
23:D:596:G:C6	23:D:597:U:C4	3.06	0.43
23:D:62:C:O2	23:D:92:G:N1	2.50	0.43
23:D:632:A:H2'	23:D:633:A:O4'	2.18	0.43
23:D:650:C:H5''	23:D:650:C:H6	1.82	0.43
23:D:860:U:O2'	23:D:861:A:OP1	2.32	0.43
23:D:868:U:C2	23:D:869:G:C8	3.06	0.43
23:D:881:G:C6	23:D:882:G:C5	3.06	0.43
23:D:962:G:H2'	23:D:963:U:C6	2.53	0.43
3:G:128:PHE:CG	3:G:129:ALA:N	2.87	0.43
3:G:84:ILE:HA	3:G:87:LEU:HG	2.00	0.43
4:H:200:GLU:HG3	4:H:201:GLN:N	2.24	0.43
5:I:100:VAL:HG13	5:I:118:ILE:HB	2.00	0.43
8:L:29:SER:OG	8:L:32:LYS:NZ	2.23	0.43
8:L:28:ALA:CB	8:L:59:LEU:HD11	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:M:5:TYR:HE1	9:M:16:ARG:HB3	1.83	0.43
13:Q:104:ARG:HG2	13:Q:105:THR:H	1.83	0.43
15:S:3:ILE:HG12	15:S:38:ARG:NH2	2.34	0.43
18:V:46:GLU:HA	18:V:85:LEU:HD13	1.99	0.43
19:W:5:LEU:CG	19:W:6:LYS:N	2.75	0.43
23:D:1044:G:C4'	53:2:4:LYS:O	2.65	0.43
54:3:35:MET:HG3	54:3:36:GLU:H	1.82	0.43
1:A:1400:C:C2	55:4:34:C:C2	3.05	0.43
55:4:63:G:N1	55:4:64:G:O6	2.50	0.43
56:5:1:G:O2'	56:5:2:C:O5'	2.37	0.43
1:A:1085:U:O4'	1:A:1094:G:N1	2.52	0.43
1:A:1187:G:C4	1:A:1188:A:N7	2.86	0.43
1:A:1216:G:C6	1:A:1217:C:C2	3.05	0.43
1:A:121:C:HO2'	1:A:122:G:P	2.40	0.43
1:A:1355:G:C2	1:A:1356:G:C4	3.07	0.43
1:A:1362:C:H2'	1:A:1362(A):C:H5''	2.00	0.43
1:A:259:G:C6	1:A:260:G:C6	3.07	0.43
1:A:404:U:OP2	4:H:118:ARG:NH1	2.34	0.43
1:A:453:A:N6	1:A:480:U:C4	2.86	0.43
1:A:605:U:H2'	1:A:606:G:O4'	2.17	0.43
1:A:60:A:OP1	1:A:331:G:N1	2.50	0.43
1:A:671:G:N1	1:A:672:U:H1'	2.34	0.43
1:A:823:G:N2	1:A:877:C:N3	2.53	0.43
22:C:15:ILE:CB	22:C:103:VAL:HG11	2.45	0.43
22:C:174:VAL:HG12	22:C:177:ILE:HB	1.95	0.43
22:C:270:ASP:O	22:C:272:HIS:CG	2.71	0.43
22:C:48:SER:C	22:C:49:LEU:HG	2.37	0.43
22:C:496:VAL:HG12	22:C:497:HIS:NE2	2.15	0.43
23:D:1011:G:C6	23:D:1013:C:N3	2.86	0.43
23:D:1067:A:H5''	23:D:1068:G:OP2	2.18	0.43
23:D:1080:C:N4	23:D:1081:U:O4	2.52	0.43
23:D:1089:G:H5''	23:D:1090:U:OP1	2.18	0.43
23:D:1184:G:C6	23:D:1185:C:C4	3.07	0.43
23:D:1202:C:C2	23:D:1203:G:H1'	2.53	0.43
23:D:1230:C:H2'	23:D:1231:G:O4'	2.19	0.43
23:D:1248:G:C8	23:D:1248:G:OP1	2.72	0.43
23:D:1343:G:H2'	23:D:1344:G:C8	2.53	0.43
23:D:1366:A:C2	23:D:1367:A:C4	3.06	0.43
23:D:1397:U:OP2	23:D:1397:U:H6	2.01	0.43
23:D:1425:G:C2	23:D:1426:G:C4	3.06	0.43
23:D:1591:G:H2'	23:D:1592:C:C6	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1677:A:C6	23:D:1678:G:C5	3.07	0.43
23:D:1786:A:H4'	23:D:1938:A:H61	1.84	0.43
23:D:1924:C:H2'	23:D:1925:C:C6	2.53	0.43
23:D:1959:G:C5	23:D:1960:A:N7	2.87	0.43
23:D:1970:A:OP2	23:D:1970:A:H3'	2.19	0.43
23:D:2096:U:O2	23:D:2193:G:N2	2.51	0.43
23:D:2108:C:H3'	23:D:2108:C:O2	2.19	0.43
23:D:2299:G:N2	23:D:2318:G:C4	2.86	0.43
23:D:2347:C:C5	23:D:2382:G:N3	2.87	0.43
23:D:2409:G:H3'	23:D:2409:G:P	2.59	0.43
23:D:2511:U:C6	23:D:2512:C:H5	2.37	0.43
23:D:2583:G:H2'	23:D:2584:U:O2	2.17	0.43
23:D:2658:C:N4	23:D:2663:G:H22	2.16	0.43
23:D:2686:G:C2	23:D:2687:U:C2	3.06	0.43
23:D:2811:G:C3'	23:D:2812:G:C5'	2.96	0.43
23:D:2815:C:N4	23:D:2831:G:H22	2.15	0.43
23:D:283:A:N6	23:D:358:U:C4	2.87	0.43
23:D:496:G:C4	23:D:497:A:C8	3.05	0.43
23:D:551:G:H5'	23:D:552:G:OP2	2.19	0.43
23:D:563:G:H2'	23:D:564:C:C6	2.53	0.43
23:D:58:G:C2	23:D:59:U:C2	3.06	0.43
23:D:602:G:N2	23:D:656:G:C4	2.86	0.43
23:D:707:G:H2'	23:D:708:C:O4'	2.18	0.43
23:D:723:G:C2	23:D:724:U:C2	3.07	0.43
23:D:700:G:C6	23:D:733:G:N2	2.87	0.43
23:D:962:G:C6	23:D:963:U:C4	3.06	0.43
24:E:99:A:C4	24:E:100:G:C8	3.06	0.43
24:E:23:G:C4	24:E:61:G:C2	3.06	0.43
3:G:108:ASN:HD22	3:G:111:LEU:HD13	1.83	0.43
3:G:38:ARG:CB	3:G:94:LEU:HD11	2.48	0.43
3:G:56:ASP:OD2	3:G:69:HIS:NE2	2.51	0.43
4:H:101:LEU:O	4:H:105:VAL:HG23	2.18	0.43
4:H:174:LEU:HD23	4:H:174:LEU:HA	1.72	0.43
6:J:89:MET:HB3	18:V:76:LEU:HD11	1.99	0.43
14:R:54:PRO:O	14:R:56:VAL:HG23	2.17	0.43
16:T:41:PRO:O	16:T:43:LYS:HD3	2.18	0.43
20:X:21:LYS:O	20:X:24:LEU:HB2	2.18	0.43
53:2:66:LEU:O	53:2:70:GLU:N	2.51	0.43
54:3:21:PRO:N	54:3:22:PRO:HD2	2.33	0.43
55:4:3:C:H5'	55:4:4:G:OP2	2.19	0.43
56:5:42:C:H2'	56:5:43:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1009:G:H3'	1:A:1010:G:H8	1.83	0.43
1:A:1107:C:H5''	3:G:173:VAL:HB	1.99	0.43
1:A:1157:A:N6	1:A:1177:G:H22	2.17	0.43
1:A:117:G:C6	1:A:118:U:C2	3.06	0.43
1:A:1261:A:C8	1:A:1275:A:C6	3.06	0.43
1:A:1374:A:C4	1:A:1375:A:C8	3.07	0.43
1:A:185:A:C6	1:A:186:C:N4	2.86	0.43
1:A:186(A):C:N3	20:X:105:SER:OG	2.49	0.43
1:A:19:C:H2'	1:A:20:U:C6	2.53	0.43
1:A:294:U:H2'	1:A:295:C:C6	2.53	0.43
1:A:548:G:H2'	1:A:549:C:C5	2.54	0.43
1:A:649:G:C6	1:A:650:G:C5	3.07	0.43
1:A:771:G:C4	1:A:809:G:N2	2.86	0.43
1:A:830:G:C6	1:A:831:U:C4	3.06	0.43
22:C:198:ALA:HA	22:C:218:PHE:CD2	2.53	0.43
22:C:34:HIS:NE2	22:C:247:PRO:HG3	2.27	0.43
22:C:257:GLU:HB3	22:C:260:GLU:CG	2.34	0.43
23:D:1043:C:O3'	23:D:1044:G:H3'	2.18	0.43
23:D:1044:G:N1	23:D:1048:A:O2'	2.51	0.43
23:D:818:G:C2	23:D:1190:G:C5	3.07	0.43
23:D:123:G:C2	23:D:124:G:C4	3.06	0.43
23:D:1321:A:N1	23:D:1322:A:N3	2.66	0.43
23:D:1334:G:C4	23:D:1335:U:C5	3.07	0.43
23:D:1364:G:H3'	23:D:1364:G:H8	1.84	0.43
23:D:1389:G:H2'	23:D:1390:U:C6	2.53	0.43
23:D:1400:G:H2'	23:D:1401:G:H8	1.82	0.43
23:D:1543:A:H8	23:D:1544:C:H4'	1.82	0.43
23:D:1624:G:H2'	23:D:1625:C:C6	2.53	0.43
23:D:16:G:C6	23:D:525:U:N3	2.85	0.43
23:D:1815:A:H1'	23:D:1817:G:C4	2.53	0.43
23:D:1861:G:C2	23:D:1862:G:C5	3.07	0.43
23:D:2094:G:C2	23:D:2095:C:C2	3.07	0.43
23:D:2269:A:C5	23:D:2270:G:C5	3.07	0.43
23:D:23:G:C4	23:D:24:G:C8	3.07	0.43
23:D:2399:G:N1	23:D:2418:A:C6	2.86	0.43
23:D:2452:C:N4	23:D:2453:A:C2	2.87	0.43
23:D:2056:G:C8	23:D:2577:A:N6	2.86	0.43
23:D:2051:A:C4	23:D:2614:A:C6	3.05	0.43
23:D:2733:A:C6	23:D:2734:A:C5	3.06	0.43
23:D:2739:U:O2'	23:D:2740:A:H5'	2.18	0.43
23:D:2746:U:C2'	23:D:2747:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2853:C:H2'	23:D:2854:G:O4'	2.18	0.43
23:D:2882:A:N6	23:D:2883:A:H62	2.16	0.43
23:D:298:G:O3'	23:D:299:A:H8	2.01	0.43
23:D:318:C:O2'	23:D:319:C:H5'	2.19	0.43
23:D:296:C:N4	23:D:342:G:H1	2.17	0.43
23:D:363(B):G:H8	23:D:363(B):G:OP2	2.02	0.43
23:D:374:A:H2'	23:D:375:C:C6	2.50	0.43
23:D:419:C:C2	23:D:420:C:C6	3.05	0.43
23:D:44:A:C6	23:D:45:G:C6	3.07	0.43
23:D:447:A:C8	23:D:473:G:C5	3.05	0.43
23:D:496:G:H2'	23:D:497:A:O4'	2.19	0.43
23:D:551:G:C6	23:D:552:G:C6	3.05	0.43
23:D:579:G:C5	23:D:580:C:C5	3.06	0.43
23:D:740:U:HO2'	23:D:741:G:C5'	2.24	0.43
23:D:818:G:C5	23:D:1187:G:C2	3.07	0.43
23:D:974(A):C:N3	23:D:1186:G:N2	2.66	0.43
24:E:99:A:C2	24:E:100:G:C4	3.06	0.43
2:F:223:ILE:HG22	2:F:229:VAL:HG22	1.99	0.43
2:F:44:LEU:O	2:F:47:THR:HB	2.18	0.43
4:H:13:ARG:NH2	4:H:40:PRO:HA	2.31	0.43
5:I:105:VAL:HB	5:I:106:PRO:HD3	2.00	0.43
6:J:24:GLU:O	6:J:27:GLN:HB2	2.19	0.43
8:L:21:LYS:O	8:L:63:LEU:HD23	2.19	0.43
13:Q:87:TYR:CG	13:Q:90:LEU:HD12	2.52	0.43
1:A:980:C:C1'	14:R:19:ARG:HG3	2.48	0.43
19:W:51:VAL:HG21	19:W:72:GLY:O	2.18	0.43
54:3:72:PRO:HB2	54:3:74:ALA:CB	2.47	0.43
55:4:55:U:H2'	55:4:57:A:H5''	2.00	0.43
56:5:18:G:H1'	56:5:58:A:N1	2.34	0.43
56:5:55:U:C4	56:5:57:G:OP2	2.71	0.43
1:A:1014:A:N7	1:A:1015:A:C5	2.86	0.43
1:A:1275:A:C5	1:A:1276:G:H1'	2.53	0.43
1:A:1423:G:C6	1:A:1424:C:C4	3.06	0.43
1:A:302:G:N2	1:A:303:A:C4	2.87	0.43
1:A:304:U:N3	1:A:305:G:N7	2.66	0.43
1:A:350:G:H2'	1:A:351:G:H8	1.83	0.43
1:A:390:C:N4	1:A:391:G:C6	2.87	0.43
1:A:517:G:C2	1:A:531:U:H1'	2.53	0.43
1:A:859:A:C6	1:A:860:A:C4	3.06	0.43
1:A:933:G:C6	1:A:1385:G:N1	2.86	0.43
1:A:938:A:C6	1:A:939:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:949:A:C4	1:A:1233:G:N2	2.86	0.43
1:A:954:G:C6	1:A:955:U:C2	3.06	0.43
22:C:197:LYS:HZ1	22:C:291:TYR:N	2.13	0.43
22:C:239:VAL:HA	22:C:266:ALA:HB1	2.01	0.43
22:C:214:TYR:HB2	22:C:263:TRP:HA	1.93	0.43
22:C:445:GLN:O	22:C:446:LYS:HB2	2.18	0.43
22:C:559:LEU:HD21	22:C:574:LEU:HA	2.00	0.43
23:D:1109:C:N4	23:D:1110:G:N3	2.67	0.43
23:D:51:G:HO2'	23:D:118:A:H61	1.48	0.43
23:D:1227:A:C6	23:D:1228:G:C6	3.06	0.43
23:D:1219:G:C6	23:D:1231:G:N1	2.87	0.43
23:D:1244:G:O2'	23:D:1245:G:H5'	2.18	0.43
23:D:1399:C:C2	23:D:1400:G:C8	3.06	0.43
23:D:1416:G:H2'	23:D:1417:C:C5	2.54	0.43
23:D:1429:G:N7	23:D:1568:G:C6	2.86	0.43
23:D:1616:A:OP1	23:D:1616:A:C8	2.71	0.43
23:D:1707:G:N2	23:D:1752:C:C2	2.87	0.43
23:D:1733:G:H5''	23:D:1734:C:OP2	2.18	0.43
23:D:1752:C:H2'	23:D:1753:G:O4'	2.18	0.43
23:D:1363:C:H4'	23:D:1809:A:N7	2.33	0.43
23:D:1948:G:H1	23:D:1958:C:H42	1.66	0.43
23:D:2044:C:C4	23:D:2045:C:N4	2.87	0.43
23:D:2052:G:N3	23:D:2053:G:C8	2.86	0.43
23:D:2053:G:H1	23:D:2616:C:H42	1.65	0.43
23:D:2105:C:H5''	23:D:2105:C:H6	1.83	0.43
23:D:2109:U:C6	23:D:2109:U:O5'	2.71	0.43
23:D:2115:G:N1	23:D:2118:U:OP1	2.51	0.43
23:D:2141:G:N2	23:D:2150:U:O2	2.52	0.43
23:D:221:A:H1'	23:D:222:A:OP2	2.18	0.43
23:D:2225:A:H4'	23:D:2226:C:O5'	2.18	0.43
23:D:2298:A:N6	23:D:2299:G:N3	2.67	0.43
23:D:2331:G:H2'	23:D:2332:U:O4'	2.19	0.43
23:D:830:G:N2	23:D:2448:A:C4	2.86	0.43
23:D:2595:G:N3	23:D:2599:G:C2	2.86	0.43
23:D:2632:A:N6	23:D:2785:C:H42	2.16	0.43
23:D:2653:U:C4	23:D:2654:A:C6	3.07	0.43
23:D:270(I):G:C2	23:D:270(J):G:C4	3.07	0.43
23:D:2748:A:C4	23:D:2757:A:N6	2.86	0.43
23:D:2776:A:N7	23:D:2781:A:C6	2.86	0.43
23:D:292:C:H1'	23:D:349:G:N2	2.34	0.43
23:D:310:A:C6	23:D:312:G:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:415:A:N7	23:D:416:C:C4	2.87	0.43
23:D:534:U:N3	23:D:535:C:C4	2.87	0.43
23:D:561:G:H5'	23:D:562:U:OP1	2.18	0.43
23:D:717:G:H8	23:D:717:G:O5'	2.01	0.43
23:D:782:A:H4'	23:D:783:A:N1	2.34	0.43
23:D:872:A:N6	23:D:873:G:O6	2.51	0.43
23:D:881:G:H1'	23:D:896:A:N6	2.33	0.43
23:D:8:A:C2	23:D:2896:C:H1'	2.53	0.43
23:D:901:A:C6	23:D:902:C:C2	3.06	0.43
23:D:932:G:H2'	23:D:933:A:O4'	2.18	0.43
24:E:100:G:C2	24:E:101:A:C4	3.06	0.43
24:E:101:A:H2'	24:E:102:G:O4'	2.19	0.43
24:E:21:G:H1	24:E:62:C:N4	1.99	0.43
24:E:7:G:HO2'	24:E:8:U:P	2.39	0.43
2:F:112:VAL:CA	2:F:115:LEU:HB3	2.47	0.43
2:F:19:HIS:HB3	2:F:20:GLU:OE1	2.19	0.43
3:G:84:ILE:O	3:G:87:LEU:HB2	2.19	0.43
4:H:159:ARG:HE	4:H:162:LEU:HD12	1.82	0.43
5:I:117:ASP:N	5:I:117:ASP:OD1	2.50	0.43
5:I:131:ILE:O	5:I:134:ALA:HB3	2.18	0.43
10:N:64:GLU:HG2	14:R:57:ARG:O	2.18	0.43
10:N:84:GLN:O	10:N:85:LEU:HD12	2.18	0.43
16:T:70:ALA:C	16:T:73:LEU:HB3	2.38	0.43
18:V:53:ARG:NH1	18:V:58:LEU:O	2.50	0.43
56:5:51:U:H1'	56:5:64:A:N1	2.33	0.43
1:A:1058:G:C5	1:A:1059:C:C4	3.06	0.43
1:A:114:U:C2	1:A:115:G:N7	2.87	0.43
1:A:1175:G:H2'	1:A:1176:A:O4'	2.18	0.43
1:A:116:A:C6	1:A:117:G:C5	3.06	0.43
1:A:1221:G:H2'	1:A:1222:G:H5'	2.01	0.43
1:A:1421:G:C6	1:A:1480:G:C6	3.07	0.43
1:A:327:A:O2'	1:A:328:C:O4'	2.32	0.43
1:A:349:A:C2	1:A:350:G:C4	3.06	0.43
1:A:541:G:H1'	4:H:42:GLN:OE1	2.18	0.43
1:A:560:U:C4	1:A:566:G:C4	3.06	0.43
1:A:57:G:C4	1:A:58:C:C5	3.06	0.43
1:A:676:A:C5	1:A:677:U:C4	3.06	0.43
1:A:577:G:O4'	1:A:816:A:C6	2.72	0.43
1:A:837:G:N2	1:A:849:C:N3	2.65	0.43
1:A:893:C:C4	1:A:894:G:N7	2.86	0.43
1:A:896:C:OP1	17:U:100:LYS:NZ	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:927:G:O3'	1:A:1503:A:N6	2.30	0.43
1:A:954:G:N2	1:A:1228:C:C4	2.86	0.43
1:A:963:G:H2'	1:A:964:A:H8	1.81	0.43
1:A:988:G:C6	1:A:989:C:C4	3.07	0.43
22:C:296:PRO:HG2	22:C:297:ALA:H	1.84	0.43
22:C:424:LEU:O	22:C:428:LEU:N	2.38	0.43
22:C:431:LYS:HZ3	22:C:432:ARG:CG	2.31	0.43
22:C:438:MET:SD	22:C:440:TYR:HE2	2.42	0.43
22:C:417:PRO:CG	22:C:474:TYR:HB3	2.48	0.43
23:D:1036:G:C6	23:D:1120:G:N7	2.87	0.43
23:D:1057:A:C6	23:D:1087:G:OP1	2.71	0.43
23:D:1045:A:C8	23:D:1111:A:N6	2.86	0.43
23:D:1013:C:N4	23:D:1149:G:H1	2.15	0.43
23:D:1214:A:C6	23:D:1215:G:C5	3.07	0.43
23:D:122:G:C2	23:D:123:G:C5	3.06	0.43
23:D:1292:U:H2'	23:D:1293:C:H6	1.82	0.43
23:D:132:G:C4	23:D:133:C:C5	3.07	0.43
23:D:1398:C:H2'	23:D:1399:C:C6	2.53	0.43
23:D:137(A):G:N2	23:D:142:G:C4	2.87	0.43
23:D:1463:C:H2'	23:D:1464:C:C6	2.54	0.43
23:D:1470:G:C2	23:D:1520:U:O4	2.71	0.43
23:D:1779:U:C4	23:D:1785:A:N1	2.86	0.43
23:D:1977:A:C6	23:D:1978:A:C4	3.06	0.43
23:D:1985:G:C4	23:D:1986:A:C8	3.07	0.43
23:D:2008:C:C2'	23:D:2009:G:H5'	2.48	0.43
23:D:2012:G:O2'	23:D:2013:A:O5'	2.36	0.43
23:D:563:G:C5	23:D:2018:G:C2	3.07	0.43
23:D:2053:G:H1	23:D:2616:C:N4	2.17	0.43
23:D:217:G:C2	23:D:218:A:C4	3.06	0.43
23:D:242:G:H22	23:D:254:G:H3'	1.83	0.43
23:D:2458:G:C5	23:D:2490:G:C2	3.07	0.43
23:D:2517:C:C4	23:D:2542:A:C6	3.07	0.43
23:D:245:G:H22	23:D:254:G:H1'	1.84	0.43
23:D:2588:G:C5	23:D:2589:A:N7	2.86	0.43
23:D:2694:G:H1	23:D:2715:C:H42	1.66	0.43
23:D:271:G:C6	23:D:404:C:N3	2.86	0.43
23:D:2758:A:C5	23:D:2759:G:C5	3.06	0.43
23:D:2737:G:N2	23:D:2767:C:N3	2.63	0.43
23:D:2837:G:C6	23:D:2838:G:C6	3.06	0.43
23:D:2854:G:C2	23:D:2864:G:C2	3.06	0.43
23:D:492:A:C2	23:D:493:G:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:532:A:H61	23:D:561:G:C2'	2.29	0.43
23:D:565:C:C4	23:D:576:U:N3	2.84	0.43
23:D:668:G:C2	23:D:670:A:C6	3.07	0.43
23:D:952:G:C2	23:D:966:G:C5	3.06	0.43
23:D:987:G:C5	23:D:988:A:C5	3.07	0.43
2:F:145:LEU:HA	2:F:148:TYR:CZ	2.54	0.43
2:F:80:ILE:HG12	2:F:215:LEU:CD2	2.49	0.43
3:G:171:GLY:O	3:G:173:VAL:HG23	2.18	0.43
3:G:191:THR:OG1	3:G:194:GLY:N	2.51	0.43
4:H:117:ALA:O	4:H:120:LEU:HG	2.18	0.43
5:I:121:LYS:HD2	5:I:122:GLU:OE1	2.18	0.43
6:J:57:GLN:OE1	6:J:57:GLN:N	2.50	0.43
7:K:23:VAL:O	7:K:26:PHE:HB3	2.17	0.43
7:K:91:VAL:HG12	7:K:92:SER:O	2.18	0.43
1:A:948:C:C5'	13:Q:106:ASN:HB3	2.48	0.43
1:A:980:C:O2'	14:R:19:ARG:HG3	2.19	0.43
14:R:6:LEU:O	14:R:8:GLU:HG2	2.18	0.43
15:S:24:SER:O	15:S:27:VAL:HB	2.19	0.43
16:T:1:MET:H3	16:T:24:ALA:HB3	1.84	0.43
1:A:1014:A:H4'	19:W:34:TRP:CH2	2.53	0.43
20:X:26:ASN:OD1	20:X:26:ASN:N	2.51	0.43
54:3:41:PHE:O	54:3:45:THR:N	2.27	0.43
56:5:52:G:C2	56:5:63:G:C2	3.07	0.43
1:A:1154:G:N3	1:A:1155:G:C8	2.87	0.43
1:A:1252:A:C4	1:A:1253:G:C8	3.07	0.43
1:A:126:G:C2	1:A:236:G:C6	3.07	0.43
1:A:1272:G:C6	1:A:1273:G:C6	3.07	0.43
1:A:1328:C:H4'	13:Q:32:GLU:OE2	2.19	0.43
1:A:1300:G:C4	1:A:1334:G:C2	3.07	0.43
1:A:253:U:O2'	1:A:254:G:O4'	2.36	0.43
1:A:355:C:H2'	1:A:356:A:C8	2.54	0.43
1:A:413:G:H21	1:A:428:G:N2	2.15	0.43
1:A:430:A:C6	1:A:431:A:C5	3.07	0.43
1:A:508:C:O2'	1:A:509:A:OP2	2.36	0.43
1:A:540:G:C4	1:A:541:G:C8	3.06	0.43
1:A:624:C:O5'	1:A:624:C:H6	2.00	0.43
1:A:597:G:C2	1:A:644:G:C2	3.07	0.43
1:A:67:C:N4	1:A:68:G:O6	2.51	0.43
1:A:785:G:C5	1:A:798:G:C6	3.07	0.43
1:A:973:G:C2	1:A:974:A:C5	3.07	0.43
22:C:113:VAL:HG21	22:C:152:VAL:CG1	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:199:LEU:N	22:C:215:LEU:HD11	2.31	0.43
22:C:435:LEU:CB	22:C:452:TYR:HE1	1.89	0.43
22:C:455:PRO:HG3	22:C:458:GLU:CG	2.47	0.43
22:C:484:TYR:CB	22:C:485:ARG:CZ	2.91	0.43
23:D:81:G:C2	23:D:106:C:N3	2.86	0.43
23:D:1087:G:H2'	23:D:1089:G:O2'	2.18	0.43
23:D:1145:C:C4	23:D:1146:C:C4	3.06	0.43
23:D:996:A:N6	23:D:1160:G:C6	2.87	0.43
23:D:1184:G:H2'	23:D:1185:C:H6	1.83	0.43
23:D:1275:A:O2'	23:D:1276:A:O5'	2.25	0.43
23:D:1299:G:N2	23:D:1627:G:O6	2.52	0.43
23:D:1358:G:N2	23:D:1373:A:H62	2.03	0.43
23:D:1343:G:H1'	23:D:1405:U:O2	2.19	0.43
23:D:141:A:H2	23:D:1595:G:N3	2.16	0.43
23:D:1494:A:C5	23:D:1495:A:C5	3.06	0.43
23:D:1495:A:H2'	23:D:1496:A:H8	1.82	0.43
23:D:152:G:C6	23:D:175:G:C2	3.07	0.43
23:D:1531:C:H2'	23:D:1532:C:C6	2.54	0.43
23:D:1576:U:N3	23:D:1577:C:C4	2.86	0.43
23:D:1580:A:H2'	23:D:1581:G:N9	2.34	0.43
23:D:1701:A:H3'	23:D:1702:G:H8	1.83	0.43
23:D:1777:U:H2'	23:D:1778:U:O4'	2.18	0.43
23:D:1805:U:OP2	23:D:1805:U:H3'	2.18	0.43
23:D:1854:A:C5	23:D:1855:G:C8	3.07	0.43
23:D:1872:A:C5	23:D:1878:G:H1'	2.54	0.43
23:D:1899:G:O2'	23:D:1900:A:H5''	2.18	0.43
23:D:1906:G:C8	23:D:1929:G:C5	3.07	0.43
23:D:1965:C:H2'	23:D:1966:A:N7	2.33	0.43
23:D:1967:C:C5	23:D:1968:G:C4	3.06	0.43
23:D:2020:A:N7	23:D:2022:U:N3	2.66	0.43
23:D:2053:G:C2	23:D:2054:A:C5	3.06	0.43
23:D:2080:G:H2'	23:D:2081:C:C6	2.53	0.43
23:D:2162:G:H2'	23:D:2163:C:O4'	2.19	0.43
23:D:2252:G:N2	55:4:74:C:N3	2.66	0.43
23:D:226:G:N3	23:D:227:A:C8	2.87	0.43
23:D:2410:G:H3'	23:D:2411:A:H8	1.83	0.43
23:D:2466:C:O2	23:D:2484:G:N1	2.48	0.43
23:D:2477:C:H5''	23:D:2478:A:OP1	2.18	0.43
23:D:247:G:H1'	23:D:386:G:O6	2.19	0.43
23:D:2060:A:C4	23:D:2502:G:N3	2.86	0.43
23:D:2589:A:N3	23:D:2590:A:C8	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2592:G:H2'	23:D:2593:U:C6	2.54	0.43
23:D:2721:A:H2'	23:D:2722:G:C8	2.53	0.43
23:D:2741:A:O3'	52:1:2:LYS:NZ	2.45	0.43
23:D:2747:G:H3'	23:D:2747:G:OP2	2.18	0.43
23:D:2868:A:C6	23:D:2869:G:C4	3.07	0.43
23:D:289:A:C8	23:D:351:G:C2	3.07	0.43
23:D:447:A:H1'	23:D:449:A:C6	2.52	0.43
23:D:455:C:H4'	23:D:456:C:OP1	2.18	0.43
23:D:474:G:O6	23:D:510:C:N4	2.52	0.43
23:D:483:A:H2'	23:D:484:C:C6	2.53	0.43
23:D:495:G:C2	23:D:496:G:C8	3.06	0.43
23:D:503:A:HO2'	23:D:506:G:P	2.41	0.43
23:D:607:U:H2'	23:D:608:A:O4'	2.19	0.43
23:D:646:A:C2	23:D:647:G:C4	3.06	0.43
23:D:807:U:C2	23:D:808:G:C8	3.06	0.43
23:D:833:U:H2'	23:D:834:C:C5	2.53	0.43
24:E:101:A:C5	24:E:102:G:C5	3.07	0.43
24:E:119:A:H2'	24:E:119:A:N3	2.34	0.43
24:E:86:G:C6	24:E:87:G:C5	3.07	0.43
24:E:85:G:C2	24:E:92:G:C4	3.07	0.43
2:F:22:LYS:HA	2:F:40:HIS:CE1	2.46	0.43
3:G:11:ARG:HG3	3:G:16:ARG:HG2	2.00	0.43
4:H:117:ALA:O	4:H:121:VAL:HG23	2.18	0.43
5:I:6:PHE:CD2	5:I:34:VAL:HG11	2.53	0.43
5:I:99:GLY:O	5:I:101:ILE:HD12	2.19	0.43
13:Q:28:ALA:HB2	21:Y:7:ARG:NH2	2.33	0.43
19:W:3:ARG:NH2	19:W:63:THR:O	2.52	0.43
20:X:20:LEU:O	20:X:23:ARG:HG2	2.18	0.43
20:X:53:LEU:HA	20:X:56:MET:HB3	2.01	0.43
25:Z:36:LYS:O	25:Z:37:PHE:CD2	2.71	0.43
54:3:51:ALA:HB1	54:3:77:LEU:HD12	2.00	0.43
54:3:63:ARG:O	54:3:65:PHE:N	2.51	0.43
1:A:1053:G:N1	1:A:1058:G:C6	2.82	0.43
1:A:1102:A:C5	1:A:1103:C:C4	3.06	0.43
1:A:1160:G:H2'	1:A:1161:C:H6	1.82	0.43
1:A:1253:G:H2'	1:A:1254:C:H6	1.84	0.43
1:A:1099:G:C4'	1:A:1542:U:H4'	2.42	0.43
1:A:186(C):G:O6	1:A:191(E):G:N1	2.51	0.43
1:A:40:C:H2'	1:A:41:G:H8	1.83	0.43
1:A:419:C:N3	1:A:425:G:C2	2.87	0.43
1:A:451:A:C5	1:A:481:G:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:515:G:C6	1:A:537:G:C6	3.06	0.43
1:A:645:C:N3	1:A:646:U:N3	2.67	0.43
1:A:704:A:C6	1:A:705:U:C2	3.07	0.43
1:A:759:A:H3'	1:A:760:G:C8	2.53	0.43
1:A:764:C:H5''	15:S:50:HIS:CD2	2.54	0.43
1:A:920:U:O2'	1:A:921:U:O4'	2.22	0.43
22:C:138:ILE:N	22:C:167:SER:OG	2.52	0.43
22:C:211:VAL:CG1	22:C:212:ILE:H	2.28	0.43
22:C:353:HIS:O	22:C:354:ALA:HB3	2.18	0.43
23:D:1258:C:C4	23:D:1259:G:N7	2.87	0.43
23:D:1419:A:N7	23:D:1421:G:C6	2.87	0.43
23:D:1474:C:C2	23:D:1475:G:H8	2.37	0.43
23:D:1476:C:N4	23:D:1517:G:C8	2.86	0.43
23:D:1521:G:H5'	23:D:1522:G:O5'	2.18	0.43
23:D:1530:G:C2	23:D:1542:G:C2	3.07	0.43
23:D:1347:G:N2	23:D:1599:C:N3	2.64	0.43
23:D:1687:G:H2'	23:D:1688:U:C6	2.52	0.43
23:D:182:A:N1	23:D:183:C:C2	2.87	0.43
23:D:1855:G:C6	23:D:1888:G:N7	2.87	0.43
23:D:1977:A:C4	23:D:1978:A:C8	3.07	0.43
23:D:2012:G:HO2'	23:D:2013:A:P	2.41	0.43
23:D:2115:G:N2	23:D:2118:U:OP2	2.51	0.43
23:D:2124:G:H2'	25:Z:217:THR:OG1	2.19	0.43
23:D:2181:G:C2	23:D:2182:G:C2	3.06	0.43
23:D:2497:A:C8	23:D:2497:A:OP2	2.67	0.43
23:D:2549:G:N3	23:D:2550:G:C8	2.86	0.43
23:D:2632:A:H61	23:D:2785:C:H42	1.65	0.43
23:D:2644:G:C6	23:D:2645:G:C2	3.06	0.43
23:D:2693:A:C4	23:D:2694:G:C8	3.07	0.43
23:D:2842:G:H2'	23:D:2843:G:C8	2.54	0.43
23:D:2861:G:C2	23:D:2862:G:C5	3.07	0.43
23:D:342:G:H2'	23:D:343:C:C6	2.53	0.43
23:D:351:G:O2'	23:D:352:G:OP2	2.36	0.43
23:D:370:G:P	23:D:403:U:H3	2.42	0.43
23:D:429:A:C6	23:D:430:G:C5	3.07	0.43
23:D:442:G:C4	23:D:444:C:N4	2.87	0.43
23:D:24:G:H1	23:D:516:C:H42	1.67	0.43
23:D:639:U:H5'	23:D:640:C:OP1	2.18	0.43
23:D:657:U:C2	23:D:658:C:C5	3.07	0.43
23:D:681:G:C6	23:D:682:G:C5	3.06	0.43
23:D:710:G:C2	23:D:711:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:724:U:H2'	23:D:725:G:O4'	2.18	0.43
23:D:783:A:C8	23:D:784:A:H4'	2.51	0.43
24:E:90:C:N3	24:E:91:C:C4	2.87	0.43
2:F:71:VAL:HG23	2:F:164:VAL:HA	2.00	0.43
3:G:30:ARG:HA	3:G:33:LEU:HB2	2.00	0.43
5:I:41:VAL:O	5:I:67:VAL:HB	2.19	0.43
13:Q:67:GLU:HG2	13:Q:68:GLY:H	1.84	0.43
13:Q:77:ASN:O	13:Q:80:ARG:HB3	2.18	0.43
54:3:34:ILE:HG12	54:3:35:MET:H	1.83	0.43
54:3:55:VAL:HB	54:3:56:GLU:HA	2.01	0.43
1:A:1044:A:N6	1:A:1045:C:O2	2.51	0.43
1:A:1089:G:C6	1:A:1090:U:C4	3.06	0.43
1:A:1163:C:C4	1:A:1174:G:C6	3.07	0.43
1:A:1246:C:H42	1:A:1291:G:H1	1.67	0.43
1:A:1328:C:H2'	13:Q:29:ARG:NH2	2.32	0.43
1:A:1431:C:O2	1:A:1469:G:N1	2.50	0.43
1:A:232:G:O2'	1:A:262:A:N6	2.50	0.43
1:A:28:G:C4	1:A:29:G:C8	3.07	0.43
1:A:292:G:C2	1:A:309:G:C4	3.07	0.43
1:A:325:A:C6	1:A:326:G:C5	3.06	0.43
1:A:390:C:H2'	1:A:391:G:O4'	2.18	0.43
1:A:54:C:H3'	1:A:352:C:H5	1.84	0.43
1:A:562:C:H4'	1:A:563:A:O5'	2.18	0.43
1:A:579:G:C6	1:A:580:U:C4	3.06	0.43
1:A:643:C:C2	1:A:644:G:C8	3.07	0.43
1:A:66:G:N2	1:A:104:G:H1'	2.33	0.43
1:A:696:A:H3'	1:A:697:U:H5	1.83	0.43
1:A:770:C:H2'	1:A:771:G:C8	2.54	0.43
1:A:791:G:H2'	1:A:792:A:C8	2.54	0.43
1:A:917:G:C2	1:A:918:A:C4	3.06	0.43
1:A:969:A:C6	1:A:970:C:C4	3.07	0.43
22:C:106:VAL:HG13	22:C:134:VAL:O	2.19	0.43
22:C:379:LYS:CE	22:C:388:VAL:HG22	2.41	0.43
22:C:48:SER:O	22:C:49:LEU:CB	2.67	0.43
22:C:507:ILE:O	22:C:509:HIS:CE1	2.71	0.43
22:C:78:PHE:N	22:C:78:PHE:CD2	2.84	0.43
22:C:11:ASN:CA	22:C:79:HIS:CD2	2.97	0.43
23:D:1056:G:H8	23:D:1056:G:OP2	2.02	0.43
23:D:10:G:H2'	23:D:11:G:C8	2.54	0.43
23:D:1122:G:C2	23:D:1123:C:C6	3.07	0.43
23:D:1170:G:H1	23:D:1179:C:H42	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1205:U:O2'	23:D:1206:G:O6	2.36	0.43
23:D:123:G:C4	23:D:124:G:C8	3.06	0.43
23:D:123:G:H1	23:D:128:C:H42	1.66	0.43
23:D:1306:C:H2'	23:D:1307:A:H8	1.84	0.43
23:D:1355:G:C2	23:D:1377:G:N2	2.86	0.43
23:D:1449(A):G:C6	23:D:1450:C:C4	3.07	0.43
23:D:1497:U:OP2	23:D:1498:C:N4	2.51	0.43
23:D:1572:A:H3'	23:D:1573:G:H8	1.84	0.43
23:D:1624:G:H2'	23:D:1625:C:H6	1.84	0.43
23:D:1630:G:C2	23:D:1630(A):C:C2	3.07	0.43
23:D:1668:A:O2'	23:D:1669:A:O5'	2.37	0.43
23:D:1759:A:N3	23:D:1760:A:C8	2.87	0.43
23:D:1849:G:N1	23:D:1850:G:C5	2.87	0.43
23:D:1987:G:C6	23:D:1988:C:N4	2.87	0.43
23:D:2018:G:H2'	23:D:2019:A:N9	2.33	0.43
23:D:2080:G:O2'	23:D:2081:C:H5'	2.19	0.43
23:D:2105:C:C4	23:D:2107:C:N4	2.87	0.43
23:D:210:C:C2	23:D:211:A:C8	3.07	0.43
23:D:2246:G:H2'	23:D:2247:A:C8	2.53	0.43
23:D:225:A:C6	23:D:226:G:C6	3.06	0.43
23:D:2265:U:H2'	23:D:2266:A:H8	1.80	0.43
23:D:2259:G:C2	23:D:2282:G:C6	3.07	0.43
23:D:2309:A:H3'	23:D:2310:A:H8	1.84	0.43
23:D:2391:G:H2'	23:D:2424:C:H42	1.84	0.43
23:D:2398:U:C2	23:D:2399:G:C8	3.07	0.43
23:D:2070:G:C6	23:D:2442:C:N4	2.87	0.43
23:D:2468:G:O2'	23:D:2469:A:H8	2.01	0.43
23:D:2059:A:C5	23:D:2503:A:C5	3.07	0.43
23:D:2509:G:C4	23:D:2510:C:C5	3.06	0.43
23:D:255:A:H2'	23:D:256:A:O4'	2.18	0.43
23:D:2505:G:C6	23:D:2576:G:N3	2.87	0.43
23:D:2618:G:C6	23:D:2619:C:C4	3.07	0.43
23:D:2636:U:O2	23:D:2637:U:H5	2.02	0.43
23:D:2817:G:C4	23:D:2818:G:C8	3.07	0.43
23:D:287:C:C4	23:D:288:C:N4	2.87	0.43
23:D:376:C:C2	23:D:399:G:N2	2.86	0.43
23:D:407:G:C4	23:D:408:G:C8	3.07	0.43
23:D:479:A:O2'	23:D:480:A:C8	2.67	0.43
23:D:492:A:C6	23:D:493:G:C4	3.06	0.43
23:D:553:U:H2'	23:D:554:U:C6	2.54	0.43
23:D:533:G:C2	23:D:561:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:56:A:H4'	23:D:127:A:C6	2.53	0.43
23:D:582:G:C6	23:D:583:G:C6	3.07	0.43
23:D:592:G:C5	23:D:593:G:C8	3.07	0.43
23:D:610:C:C2	23:D:618:G:C2	3.06	0.43
23:D:656:G:O5'	23:D:656:G:H8	2.01	0.43
23:D:715:G:H1'	23:D:716:A:C6	2.54	0.43
23:D:725:G:C5	23:D:726:G:C2	3.06	0.43
23:D:794:G:N3	23:D:794:G:H2'	2.34	0.43
24:E:99:A:C6	24:E:100:G:C5	3.07	0.43
24:E:66:A:C5	24:E:107:U:C4	3.07	0.43
3:G:189:ALA:HB3	3:G:196:LEU:N	2.34	0.43
4:H:87:GLY:O	4:H:89:THR:N	2.52	0.43
5:I:108:ALA:HA	5:I:111:GLU:OE1	2.18	0.43
6:J:48:LEU:HD13	6:J:50:TYR:O	2.19	0.43
8:L:114:THR:HG22	8:L:130:GLY:C	2.39	0.43
8:L:50:ARG:HG2	8:L:59:LEU:HD23	2.01	0.43
11:O:48:ILE:HG21	11:O:63:LEU:HD21	2.00	0.43
14:R:21:TYR:CD1	14:R:22:THR:N	2.86	0.43
15:S:10:LYS:O	15:S:13:GLN:HB3	2.19	0.43
15:S:50:HIS:O	15:S:54:ARG:N	2.43	0.43
15:S:64:ARG:O	15:S:67:LEU:HB2	2.19	0.43
15:S:67:LEU:HA	15:S:70:LEU:HB3	2.01	0.43
17:U:7:THR:CA	17:U:58:GLU:HA	2.47	0.43
1:A:647:C:P	17:U:81:ARG:HH12	2.42	0.43
18:V:43:PHE:CD1	18:V:51:LEU:HD22	2.54	0.43
1:A:1266:G:N2	21:Y:23:PRO:HA	2.32	0.43
23:D:1080:C:N3	54:3:129:GLY:HA3	2.34	0.43
54:3:93:ARG:HG2	54:3:93:ARG:NH1	2.25	0.43
56:5:6:G:H1	56:5:67:C:H42	1.64	0.43
1:A:1176:A:C6	1:A:1177:G:C6	3.07	0.43
1:A:1053:G:C6	1:A:1199:U:C2	3.07	0.43
1:A:991:U:O4	1:A:1212:U:H2'	2.18	0.43
1:A:1228:C:H3'	13:Q:108:ARG:NH2	2.34	0.43
1:A:1346:A:H5'	1:A:1348:U:O4'	2.19	0.43
1:A:1349:A:N6	1:A:1350:A:N3	2.66	0.43
1:A:1422:G:C2	1:A:1479:C:N3	2.87	0.43
1:A:1515:C:N4	1:A:1516:G:O6	2.52	0.43
1:A:196:A:OP2	20:X:68:LYS:NZ	2.38	0.43
1:A:242:C:C4	1:A:285:G:N1	2.87	0.43
1:A:293:G:C5	1:A:305:G:C2	3.07	0.43
1:A:299:G:C6	1:A:300:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:308:C:H2'	1:A:309:G:C8	2.53	0.43
1:A:309:G:C2	1:A:310:G:C5	3.06	0.43
1:A:319:G:N1	1:A:335:C:N4	2.67	0.43
1:A:41:G:N1	1:A:42:G:C5	2.86	0.43
1:A:444:C:N3	1:A:490:G:N2	2.62	0.43
1:A:579:G:N1	1:A:763:G:C6	2.87	0.43
1:A:601:C:N3	1:A:638:G:C2	2.87	0.43
1:A:705:U:H2'	1:A:706:A:H5'	2.00	0.43
1:A:792:A:C5	1:A:794:A:N6	2.87	0.43
1:A:815:A:C5	1:A:1529:G:C6	3.07	0.43
1:A:830:G:H2'	1:A:830:G:N3	2.33	0.43
22:C:14:ILE:CB	22:C:104:LEU:O	2.60	0.43
22:C:116:GLU:CB	22:C:120:LYS:HZ1	1.95	0.43
22:C:264:LEU:HD23	22:C:264:LEU:N	2.34	0.43
22:C:279:THR:CA	22:C:290:PRO:HG3	2.48	0.43
22:C:332:PHE:CE1	22:C:344:PHE:CE2	3.06	0.43
22:C:372:THR:O	22:C:374:PRO:HD2	2.18	0.43
22:C:387:GLU:CG	22:C:388:VAL:H	2.06	0.43
22:C:493:ASN:C	22:C:494:VAL:CG2	2.87	0.43
22:C:52:GLU:OE1	22:C:58:THR:HA	2.18	0.43
22:C:576:LYS:HD2	22:C:576:LYS:HA	1.77	0.43
22:C:97:LEU:CD1	22:C:98:ALA:N	2.73	0.43
23:D:818:G:C3'	23:D:1187:G:H22	2.25	0.43
23:D:1207:C:C2	23:D:1208:C:C5	3.07	0.43
23:D:1233:C:H2'	23:D:1234:U:H6	1.84	0.43
23:D:1319:G:H2'	23:D:1320:C:C6	2.54	0.43
23:D:1354:A:N6	23:D:1377:G:H21	2.16	0.43
23:D:1483:G:C6	23:D:1484:G:N7	2.87	0.43
23:D:1560:G:C8	23:D:1561:G:C8	3.07	0.43
23:D:1351:C:H4'	23:D:1571:A:O2'	2.19	0.43
23:D:1618:A:OP2	23:D:1618:A:H8	2.02	0.43
23:D:1648:C:N3	23:D:1649:G:C8	2.87	0.43
23:D:1680:U:C4	23:D:1681:G:N2	2.87	0.43
23:D:1689:A:C5	23:D:1700:A:C6	3.07	0.43
23:D:154:G:C4	23:D:173:G:N1	2.87	0.43
23:D:1680:U:O2	23:D:1764:G:H4'	2.19	0.43
23:D:1776:G:C5	23:D:1777:U:C5	3.07	0.43
23:D:1363:C:O2'	23:D:1809:A:N7	2.48	0.43
23:D:1813:G:C5	23:D:1814:G:N3	2.86	0.43
23:D:1907:G:H2'	23:D:1908:C:H6	1.82	0.43
23:D:1914:C:C5	23:D:1915:U:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1935:G:N2	23:D:1964:G:C4	2.87	0.43
23:D:2059:A:C2	23:D:2503:A:C6	3.06	0.43
23:D:2088:G:H2'	23:D:2089:U:C6	2.54	0.43
23:D:216:A:N7	23:D:432:A:C6	2.87	0.43
23:D:2249:U:O4	23:D:2252:G:H5''	2.19	0.43
23:D:2251:G:H1	55:4:74:C:N4	2.14	0.43
23:D:2431:U:H1'	23:D:2433:A:C2	2.54	0.43
23:D:2450:A:C6	23:D:2451:A:N7	2.87	0.43
23:D:2467:C:H3'	23:D:2468:G:C8	2.54	0.43
23:D:2464:C:N4	23:D:2487:G:C6	2.87	0.43
23:D:2513:G:H2'	23:D:2514:U:C6	2.54	0.43
23:D:2525:G:C6	23:D:2539:C:N4	2.87	0.43
23:D:2562:U:H2'	23:D:2563:U:C2	2.54	0.43
23:D:2604:U:H2'	23:D:2605:U:O4'	2.18	0.43
23:D:270(I):G:C5	23:D:270(R):G:C2	3.07	0.43
23:D:2717:G:C2	23:D:2718:G:C6	3.07	0.43
23:D:2722:G:C2	23:D:2723:C:C2	3.07	0.43
23:D:2781:A:C8	23:D:2781:A:H3'	2.54	0.43
23:D:2861:G:N1	23:D:2862:G:C5	2.87	0.43
23:D:2842:G:C2	23:D:2876:G:C2	3.07	0.43
23:D:287:C:OP2	23:D:287:C:H6	2.01	0.43
23:D:341:G:N2	23:D:342:G:H1'	2.34	0.43
23:D:342:G:H2'	23:D:343:C:H6	1.84	0.43
23:D:468:G:C5	23:D:469:G:C4	3.07	0.43
23:D:498:G:C2	23:D:499:U:C2	3.07	0.43
22:C:95:ARG:HE	23:D:590:A:H5''	146.32	0.43
23:D:667:U:H2'	23:D:668:G:O4'	2.18	0.43
23:D:711:G:C2	23:D:721:C:N3	2.87	0.43
23:D:740:U:C2	23:D:1784:A:C5	3.07	0.43
23:D:841:A:H2'	23:D:842:G:H8	1.82	0.43
23:D:915:C:N3	23:D:916:G:C2	2.87	0.43
23:D:952:G:C6	23:D:953:A:N7	2.87	0.43
24:E:110:G:C2	24:E:111:U:C2	3.06	0.43
24:E:2:C:N3	24:E:118:G:N2	2.60	0.43
24:E:53:A:C5	24:E:54:G:C5	3.07	0.43
2:F:130:ARG:HB3	2:F:135:GLN:NE2	2.34	0.43
2:F:46:LYS:HA	2:F:46:LYS:HD2	1.84	0.43
3:G:203:PHE:CZ	3:G:205:GLY:HA2	2.54	0.43
3:G:32:LEU:HB3	3:G:59:ARG:NH1	2.34	0.43
5:I:97:GLY:C	5:I:117:ASP:HB3	2.40	0.43
5:I:144:THR:O	5:I:148:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:148:VAL:O	5:I:151:LEU:HB2	2.18	0.43
7:K:3:ARG:HG3	7:K:4:ARG:H	1.84	0.43
1:A:932:C:H3'	7:K:3:ARG:NH2	2.34	0.43
11:O:88:GLY:CA	11:O:91:ARG:HE	2.28	0.43
1:A:880:C:P	12:P:9:GLN:HE21	2.38	0.43
15:S:70:LEU:O	15:S:78:TYR:HB2	2.18	0.43
16:T:4:ILE:HG13	16:T:21:VAL:HA	2.01	0.43
18:V:52:PRO:HG2	18:V:54:ARG:CB	2.47	0.43
18:V:46:GLU:HB3	18:V:85:LEU:HB2	2.01	0.43
19:W:33:THR:CG2	19:W:51:VAL:HG22	2.49	0.43
21:Y:14:TRP:CZ3	21:Y:15:ARG:HD3	2.54	0.43
53:2:56:ASN:CA	53:2:83:TYR:HA	2.49	0.42
55:4:16:C:O2'	55:4:17:C:O5'	2.35	0.42
55:4:41:C:H2'	55:4:42:G:O4'	2.19	0.42
1:A:1064:G:H1	1:A:1191:A:H62	1.63	0.42
1:A:928:G:C2	1:A:1390:U:O2	2.72	0.42
1:A:163:C:H2'	1:A:164:U:O4'	2.19	0.42
1:A:408:A:C5	1:A:409:G:C8	3.06	0.42
1:A:598:U:O4	1:A:599:C:N4	2.51	0.42
1:A:668:G:C6	1:A:669:U:C4	3.07	0.42
1:A:694:A:H2'	1:A:695:A:H1'	2.01	0.42
1:A:774:G:C5	1:A:775:G:C5	3.07	0.42
1:A:865:A:C5	1:A:866:C:C2	3.07	0.42
1:A:890:G:H1'	1:A:906:G:N1	2.34	0.42
22:C:13:SER:CA	22:C:103:VAL:HA	2.49	0.42
22:C:113:VAL:HG13	22:C:117:THR:CB	2.49	0.42
22:C:106:VAL:CB	22:C:134:VAL:O	2.67	0.42
22:C:27:ASP:O	22:C:28:ARG:HB2	2.18	0.42
22:C:334:PRO:CD	22:C:335:GLU:H	2.32	0.42
22:C:41:MET:CE	22:C:45:PHE:HB2	2.49	0.42
22:C:66:VAL:N	22:C:76:TYR:OH	2.51	0.42
22:C:95:ARG:NH1	22:C:202:ASP:HA	2.34	0.42
23:D:1029:A:H2'	23:D:1030:G:O4'	2.19	0.42
23:D:1044:G:H5'	53:2:4:LYS:N	2.33	0.42
23:D:1093:G:H21	23:D:1098:A:H62	1.64	0.42
23:D:1239:G:C2	23:D:1240:U:O2'	2.70	0.42
23:D:585:G:C5	23:D:1251:C:N4	2.87	0.42
23:D:1252:G:C6	23:D:1253:A:C5	3.07	0.42
23:D:1273:U:H4'	23:D:1275:A:P	2.59	0.42
23:D:1280:G:C2	23:D:1281:G:C4	3.06	0.42
23:D:1585:C:H6	23:D:1585:C:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1586:A:O2'	23:D:1587:A:O5'	2.36	0.42
23:D:1605:C:H2'	23:D:1606:G:O4'	2.19	0.42
23:D:1886:C:H2'	23:D:1887:C:C6	2.54	0.42
23:D:2067:G:C5	23:D:2069:G:N7	2.87	0.42
23:D:2082:A:C6	23:D:2083:G:C4	3.06	0.42
23:D:2285:C:C2	23:D:2384:G:N2	2.87	0.42
23:D:229:A:O2'	23:D:230:U:OP2	2.36	0.42
23:D:241:A:H8	23:D:243:U:C6	2.37	0.42
23:D:200:U:O4	23:D:248:G:C5	2.72	0.42
23:D:2458:G:C6	23:D:2490:G:N3	2.88	0.42
23:D:2459:A:N1	23:D:2493:U:N3	2.67	0.42
23:D:2538:C:O2'	23:D:2539:C:O5'	2.36	0.42
23:D:2660:A:C2	23:D:2661:G:C4	3.06	0.42
23:D:270(S):G:C4	23:D:270(T):G:C8	3.07	0.42
23:D:270(U):C:N4	23:D:270(V):G:O6	2.52	0.42
23:D:2748:A:N7	23:D:2749:A:C6	2.86	0.42
23:D:2744:G:C6	23:D:2761:G:C5	3.06	0.42
23:D:276:A:N3	23:D:277:C:H5"	2.34	0.42
23:D:289:A:N7	23:D:351:G:N1	2.66	0.42
23:D:355:G:H2'	23:D:356:G:C8	2.54	0.42
23:D:362:U:C4	23:D:363:G:N7	2.86	0.42
23:D:384:U:H3'	23:D:385:C:C5	2.54	0.42
23:D:392:C:H2'	23:D:393:C:C6	2.54	0.42
23:D:529:A:O3'	23:D:530:G:H2'	2.19	0.42
23:D:579:G:C6	23:D:1262:A:C6	3.07	0.42
23:D:596:G:C5	23:D:597:U:C4	3.06	0.42
23:D:645:C:H4'	23:D:646:A:O5'	2.18	0.42
23:D:722:A:C6	23:D:723:G:C5	3.07	0.42
23:D:768:G:C6	23:D:769:G:C5	3.07	0.42
23:D:967:C:H2'	23:D:968:G:C8	2.54	0.42
24:E:23:G:H2'	24:E:24:G:N3	2.34	0.42
24:E:44:G:C1'	24:E:47:C:H42	2.31	0.42
2:F:134:GLU:OE2	2:F:137:ARG:NH1	2.52	0.42
2:F:217:ARG:HA	2:F:220:ASP:OD2	2.19	0.42
5:I:14:ARG:HG2	5:I:15:ARG:O	2.19	0.42
10:N:16:LEU:O	10:N:19:SER:HB2	2.18	0.42
13:Q:65:LYS:HD3	13:Q:73:GLU:CD	2.40	0.42
15:S:5:LYS:C	15:S:9:GLN:HG2	2.39	0.42
19:W:49:ILE:N	19:W:60:VAL:O	2.52	0.42
25:Z:215:THR:OG1	25:Z:216:THR:N	2.52	0.42
54:3:37:PHE:HZ	54:3:63:ARG:CG	2.29	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:50:U:H3	56:5:64:A:H61	1.65	0.42
1:A:101:A:H2'	1:A:102:G:O4'	2.19	0.42
1:A:1061:G:C2	1:A:1197:G:C2	3.07	0.42
1:A:9:G:O6	1:A:10:A:N6	2.52	0.42
1:A:1146:A:C6	1:A:1147:C:C4	3.07	0.42
1:A:1155:G:H3'	1:A:1156:G:C8	2.45	0.42
1:A:1209:C:N4	1:A:1210:C:H41	2.16	0.42
1:A:1251:A:N6	1:A:1252:A:C6	2.87	0.42
1:A:1305:G:O2'	1:A:1306:A:C8	2.70	0.42
1:A:1399:C:C4	1:A:1401:G:C4	3.07	0.42
1:A:1499:A:C4	1:A:1500:A:C8	3.07	0.42
1:A:151:A:C5	1:A:152:A:C5	3.07	0.42
1:A:181:G:OP2	1:A:181:G:H8	2.02	0.42
1:A:181:G:N3	1:A:195:A:C6	2.88	0.42
1:A:267:C:OP2	17:U:67:LYS:NZ	2.35	0.42
1:A:275:G:C2	1:A:276:G:C4	3.07	0.42
1:A:428:G:N1	1:A:430:A:C6	2.88	0.42
1:A:584:G:C4	1:A:585:G:C8	3.07	0.42
1:A:895:G:H2'	1:A:896:C:C6	2.54	0.42
1:A:938:A:N6	1:A:939:G:C6	2.87	0.42
1:A:945:G:C5	1:A:946:A:C8	3.07	0.42
22:C:299:PRO:CG	22:C:348:PHE:CE2	3.02	0.42
22:C:538:GLN:HB2	22:C:539:ALA:H	1.67	0.42
23:D:1050:A:C4	23:D:1051:G:C8	3.07	0.42
23:D:1064:C:O2	54:3:91:PRO:CD	2.45	0.42
23:D:1104:C:C3'	23:D:1104:C:C6	3.02	0.42
23:D:1205:U:H1'	23:D:1240:U:N3	2.33	0.42
23:D:1259:G:C2	23:D:1260:G:C4	3.07	0.42
23:D:131:G:C2	23:D:132:G:C8	3.07	0.42
23:D:132:G:N3	23:D:132:G:H2'	2.33	0.42
23:D:1447:G:N2	23:D:1464:C:C2	2.84	0.42
23:D:1551:C:H2'	23:D:1552:G:H8	1.82	0.42
23:D:1595:G:H5''	23:D:1596:A:OP2	2.18	0.42
23:D:1341:U:H5''	23:D:1601:G:O6	2.19	0.42
23:D:1619:G:O5'	23:D:1619:G:H8	2.01	0.42
23:D:1620:G:C5	23:D:1621:U:C4	3.07	0.42
23:D:1702:G:C6	23:D:1703:G:C8	3.08	0.42
23:D:1727:U:H3'	23:D:1729:A:OP1	2.19	0.42
23:D:1907:G:C2	23:D:1908:C:C2	3.07	0.42
23:D:1936:A:C4	23:D:1945:G:C5	3.07	0.42
23:D:2023:G:N3	23:D:2024:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2307:G:O2'	23:D:2311:A:N6	2.52	0.42
23:D:2367:G:C2	23:D:2368:C:C2	3.06	0.42
23:D:2445:G:H5'	23:D:2446:G:OP2	2.19	0.42
23:D:2450:A:H2'	23:D:2451:A:H5'	2.01	0.42
23:D:2468:G:C2	23:D:2481:G:C2	3.07	0.42
23:D:2627:G:C2	23:D:2777:G:C6	3.07	0.42
23:D:2634:G:C2	23:D:2635:C:C2	3.07	0.42
23:D:2639:A:N7	23:D:2640:G:C8	2.87	0.42
23:D:2653:U:C4	23:D:2654:A:C5	3.08	0.42
23:D:2685:G:C2	23:D:2686:G:C8	3.07	0.42
23:D:1758:G:O6	23:D:2696:U:H5'	2.19	0.42
23:D:2776:A:C8	23:D:2781:A:C5	3.07	0.42
23:D:2816:C:O5'	23:D:2816:C:H6	2.02	0.42
23:D:2836:U:C4	23:D:2883:A:N6	2.87	0.42
23:D:2851:A:H2'	23:D:2852:G:O4'	2.18	0.42
23:D:323:G:C5	23:D:333:G:C8	3.07	0.42
23:D:432:A:C5	23:D:433:C:C5	3.07	0.42
23:D:468:G:C8	23:D:469:G:C8	3.08	0.42
23:D:468:G:H3'	23:D:469:G:H8	1.83	0.42
23:D:488:G:N1	23:D:493:G:O6	2.52	0.42
23:D:54:G:C6	23:D:55:G:N7	2.86	0.42
23:D:632:A:H2'	23:D:633:A:C8	2.54	0.42
23:D:672:C:C2	23:D:673:C:C5	3.07	0.42
23:D:682:G:N2	23:D:796:C:C2	2.87	0.42
23:D:686:G:OP1	23:D:686:G:N2	2.52	0.42
23:D:690:G:C2	23:D:691:C:C2	3.07	0.42
23:D:706:A:C4	23:D:707:G:C8	3.07	0.42
23:D:738:G:C4	23:D:739:G:N2	2.87	0.42
23:D:75:G:C5	23:D:76:C:N4	2.87	0.42
23:D:820:A:H2'	23:D:821:A:H8	1.85	0.42
23:D:825:C:H2'	23:D:826:U:H6	1.76	0.42
23:D:848:G:N2	23:D:932:G:C2	2.87	0.42
23:D:878:A:C8	23:D:879:G:N7	2.86	0.42
23:D:971:C:H2'	23:D:972:G:C5	2.54	0.42
24:E:105:G:C2	24:E:106:G:C8	3.08	0.42
2:F:184:VAL:HG12	2:F:197:VAL:HG13	2.00	0.42
2:F:236:TYR:O	2:F:240:GLN:HG3	2.20	0.42
2:F:17:PHE:CA	2:F:42:ILE:HG22	2.49	0.42
5:I:47:LYS:O	5:I:57:LYS:HE2	2.19	0.42
6:J:45:LEU:HA	6:J:45:LEU:HD23	1.84	0.42
6:J:80:ARG:HA	6:J:88:VAL:HG11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:932:C:H5''	7:K:3:ARG:NE	2.34	0.42
11:O:11:LYS:HE3	11:O:75:TYR:HA	2.00	0.42
14:R:9:LYS:HD2	14:R:21:TYR:CE1	2.54	0.42
16:T:3:LYS:HG2	16:T:65:GLN:HB2	2.01	0.42
18:V:21:LYS:HZ3	18:V:24:ALA:H	1.66	0.42
19:W:3:ARG:CZ	19:W:45:VAL:HG22	2.49	0.42
25:Z:200:LYS:HD2	25:Z:208:PHE:HE1	1.85	0.42
52:1:15:LYS:O	52:1:25:VAL:HG13	2.19	0.42
54:3:53:VAL:O	54:3:69:THR:HB	2.19	0.42
54:3:34:ILE:CB	54:3:63:ARG:HB2	2.49	0.42
54:3:81:ALA:CB	54:3:107:ILE:HG12	2.50	0.42
54:3:92:GLY:O	54:3:93:ARG:HB2	2.18	0.42
1:A:1017:G:P	1:A:1017:G:H8	2.42	0.42
1:A:64:G:H22	1:A:101:A:N6	2.17	0.42
1:A:1126:U:C4	1:A:1127:G:C6	3.07	0.42
1:A:1153:C:C2	1:A:1154:G:C8	3.07	0.42
1:A:1155:G:C5	1:A:1156:G:C5	3.07	0.42
1:A:1358:U:OP1	14:R:35:ARG:N	2.52	0.42
1:A:1360:A:C6	1:A:1361:G:C2	3.08	0.42
1:A:1493:A:C4	23:D:1913:A:N6	2.87	0.42
1:A:174:C:C2	1:A:175:C:C5	3.06	0.42
1:A:302:G:C2	1:A:303:A:C4	3.07	0.42
1:A:369:C:C4	1:A:370:C:C4	3.06	0.42
1:A:488:C:H2'	1:A:489:C:H6	1.84	0.42
1:A:524:G:H2'	1:A:525:C:C6	2.54	0.42
1:A:768:A:C6	1:A:769:G:C8	3.07	0.42
1:A:918:A:O2'	1:A:919:A:O4'	2.37	0.42
22:C:121:PHE:HE1	22:C:131:ILE:HG12	1.83	0.42
22:C:137:LYS:O	22:C:139:ASP:N	2.49	0.42
22:C:17:HIS:HA	22:C:116:GLU:HB2	2.00	0.42
22:C:217:LEU:CD2	22:C:282:LEU:HD13	2.50	0.42
22:C:250:LEU:HD12	22:C:263:TRP:CE2	2.54	0.42
22:C:269:ARG:O	22:C:270:ASP:HB3	2.19	0.42
22:C:338:THR:HB	22:C:503:ALA:HB2	1.86	0.42
22:C:454:ALA:HB3	22:C:459:ILE:HD11	2.01	0.42
22:C:468:LYS:CA	22:C:473:GLY:CA	2.96	0.42
22:C:477:MET:HE2	22:C:478:ASP:N	2.35	0.42
22:C:493:ASN:HB2	22:C:540:ALA:C	2.38	0.42
22:C:495:LEU:HB3	22:C:538:GLN:CB	2.50	0.42
22:C:46:LEU:HD21	22:C:64:VAL:HG11	2.00	0.42
23:D:1085:A:O5'	23:D:1106:G:C8	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1128:A:H2'	23:D:1129:A:C4	2.54	0.42
23:D:1020:A:N3	23:D:1140:C:C4	2.88	0.42
23:D:1221:C:H2'	23:D:1222:C:H6	1.81	0.42
23:D:128:C:N4	23:D:129:C:C4	2.87	0.42
23:D:1303:G:H2'	23:D:1304:C:C6	2.53	0.42
23:D:1338:G:N1	23:D:1339:G:C2	2.87	0.42
23:D:1434:A:C4	23:D:1435:G:C8	3.07	0.42
23:D:1471:A:H5'	23:D:1472:A:C5	2.54	0.42
23:D:1603:A:C5	23:D:1604:C:C5	3.07	0.42
23:D:1637:A:C5	23:D:1638:C:C5	3.07	0.42
23:D:1658:C:N3	23:D:1659:U:C4	2.87	0.42
23:D:1765:C:H2'	23:D:1766:U:H6	1.84	0.42
23:D:1772:G:H2'	23:D:1773:A:H4'	2.00	0.42
23:D:1833:U:O2	23:D:1834:U:H1'	2.19	0.42
23:D:1834:U:O4	23:D:1900:A:N6	2.53	0.42
23:D:1842:G:C5	23:D:1901:A:C6	3.08	0.42
23:D:1927:A:C5	23:D:1928:A:N1	2.88	0.42
23:D:2083:G:H2'	23:D:2084:C:C6	2.54	0.42
23:D:2116:G:P	23:D:2166:G:H21	2.42	0.42
23:D:2178:C:C3'	23:D:2179:C:C5'	2.94	0.42
23:D:218:A:H2'	23:D:219:G:H8	1.84	0.42
23:D:2206:C:N3	23:D:2218:G:N2	2.63	0.42
23:D:220:G:H2'	23:D:427:U:O4	2.19	0.42
23:D:222:A:N6	23:D:224:G:C5	2.87	0.42
23:D:2283:C:C2	23:D:2389:G:N2	2.87	0.42
23:D:2534:A:C6	23:D:2535:G:C4	3.07	0.42
23:D:2557:G:C2	23:D:2558:C:C4	3.07	0.42
23:D:270(W):G:C6	23:D:270(X):G:C6	3.08	0.42
23:D:273(F):C:H5	23:D:274:G:C6	2.36	0.42
23:D:2787:C:H2'	23:D:2788:C:C6	2.53	0.42
23:D:2844:G:C6	23:D:2845:G:C5	3.07	0.42
23:D:2853:C:N3	23:D:2864:G:N2	2.62	0.42
23:D:2844:G:C2	23:D:2874:C:N3	2.87	0.42
23:D:2899:G:H2'	23:D:2900:A:O4'	2.19	0.42
23:D:548:A:C4	23:D:549:G:H1'	2.53	0.42
23:D:566:U:O4	23:D:567:A:C6	2.72	0.42
23:D:624:C:N4	23:D:625:G:C6	2.87	0.42
23:D:629:G:C6	23:D:630:G:C5	3.06	0.42
23:D:684:G:N3	23:D:775:G:C6	2.86	0.42
23:D:771:G:C2	23:D:772:C:C4	3.08	0.42
23:D:84:A:H8	23:D:84:A:OP2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:86:C:H2'	23:D:87:C:C6	2.54	0.42
23:D:904:C:H2'	23:D:905:U:H6	1.84	0.42
23:D:976:C:H42	23:D:987:G:H1	1.66	0.42
2:F:19:HIS:CD2	2:F:205:ASP:H	2.37	0.42
3:G:11:ARG:HD2	3:G:15:THR:HG22	2.02	0.42
3:G:140:ARG:HA	3:G:143:GLU:OE1	2.19	0.42
4:H:14:ARG:HD2	4:H:14:ARG:HA	1.65	0.42
4:H:54:TYR:CZ	4:H:58:LEU:HD22	2.53	0.42
9:M:40:LEU:C	9:M:42:ARG:N	2.72	0.42
1:A:1302:U:C5	13:Q:13:LYS:HB3	2.54	0.42
21:Y:10:ARG:HG2	23:D:125:G:N1	153.39	0.42
1:A:1325:C:OP2	21:Y:6:ARG:NH2	2.53	0.42
25:Z:122:ALA:HB1	25:Z:126:LYS:NZ	2.34	0.42
25:Z:160:ARG:CG	25:Z:160:ARG:NH1	2.81	0.42
55:4:58:A:OP2	55:4:58:A:O4'	2.37	0.42
55:4:4:G:C6	55:4:70:G:C2	3.07	0.42
56:5:6:G:H8	56:5:6:G:P	2.43	0.42
1:A:1229:A:H2'	1:A:1230:C:C6	2.54	0.42
1:A:1377:A:H4'	1:A:1378:C:C6	2.54	0.42
1:A:137:C:H2'	1:A:138:G:C8	2.47	0.42
1:A:1399:C:H1'	1:A:1400:C:OP2	2.20	0.42
1:A:1433:A:H2'	1:A:1434:A:O4'	2.19	0.42
1:A:186:C:O2'	1:A:186(A):C:H5'	2.18	0.42
1:A:259:G:C6	1:A:268:C:N4	2.88	0.42
1:A:286:G:C5	1:A:287:U:C5	3.07	0.42
1:A:392:G:C4	1:A:393:A:C8	3.07	0.42
1:A:641:U:H5''	1:A:642:A:OP1	2.20	0.42
1:A:592:G:C6	1:A:648:A:C6	3.07	0.42
1:A:664:G:H5'	18:V:64:ARG:HE	1.83	0.42
1:A:737:A:O5'	6:J:92:LYS:NZ	2.50	0.42
1:A:805:C:C2	1:A:806:C:C5	3.07	0.42
1:A:773:G:C6	1:A:807:A:N6	2.88	0.42
1:A:837:G:H2'	1:A:838:G:O4'	2.19	0.42
1:A:939:G:N2	1:A:940:C:O2	2.51	0.42
22:C:139:ASP:O	22:C:140:LEU:HG	2.20	0.42
22:C:371:ALA:C	22:C:373:ALA:N	2.72	0.42
22:C:435:LEU:CD1	22:C:452:TYR:CE1	2.81	0.42
22:C:8:ARG:HD3	22:C:74:GLU:CB	2.43	0.42
23:D:1036:G:H2'	23:D:1037:G:C8	2.54	0.42
23:D:1107:G:C8	23:D:1107:G:O5'	2.71	0.42
23:D:1149:G:N2	23:D:1150:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1230:C:O2'	23:D:1231:G:O4'	2.33	0.42
23:D:1237:A:HO2'	23:D:1238:G:P	2.42	0.42
23:D:129:C:H2'	23:D:130:C:H6	1.83	0.42
23:D:1373:A:C4	23:D:1374:G:C8	3.08	0.42
23:D:1447:G:H1	23:D:1464:C:H42	1.65	0.42
23:D:1415:U:H3	23:D:1587:A:N6	2.17	0.42
23:D:1312:U:C4	23:D:1603:A:N6	2.84	0.42
23:D:1651:G:C6	23:D:1652:A:C6	3.07	0.42
23:D:1655:A:C8	23:D:1656:C:C5	3.07	0.42
23:D:16:G:N1	23:D:17:G:C6	2.87	0.42
23:D:1750:G:C4	23:D:1751:C:C5	3.07	0.42
23:D:1842:G:H2'	23:D:1843:C:H6	1.83	0.42
23:D:1845:G:C4	23:D:1846:G:C8	3.08	0.42
23:D:17:G:C5	23:D:18:C:C4	3.07	0.42
23:D:1910:G:H2'	23:D:1911:U:H6	1.80	0.42
23:D:1914:C:C4	23:D:1915:U:C2	3.07	0.42
23:D:1830:C:N4	23:D:1975:G:H1	2.15	0.42
23:D:2112:G:C6	23:D:2113:U:C2	3.07	0.42
23:D:2241:A:OP2	23:D:2241:A:C8	2.72	0.42
23:D:2295:C:H2'	23:D:2296:U:O2	2.19	0.42
23:D:2346:A:N3	23:D:2383:G:C4	2.87	0.42
23:D:236:C:H2'	23:D:237:C:H6	1.84	0.42
23:D:2523:G:H3'	23:D:2524:G:H8	1.84	0.42
23:D:2599:G:O6	23:D:2600:A:N6	2.53	0.42
23:D:280:C:N3	23:D:360:G:C6	2.87	0.42
23:D:2881:C:C2	23:D:2882:A:C8	3.08	0.42
23:D:290:G:N1	23:D:350:U:O4	2.53	0.42
23:D:381:G:C4	23:D:382:G:C8	3.07	0.42
23:D:479:A:N7	23:D:481:G:C5	2.88	0.42
23:D:519:U:C2	23:D:520:G:N7	2.88	0.42
23:D:629:G:C4	23:D:630:G:C8	3.07	0.42
23:D:688:U:H2'	23:D:689:A:H8	1.85	0.42
23:D:709:U:C2	23:D:710:G:C8	3.06	0.42
23:D:710:G:H1	23:D:721:C:N4	2.17	0.42
23:D:749:C:N3	23:D:1618:A:C6	2.88	0.42
23:D:85:G:C6	23:D:86:C:N4	2.87	0.42
23:D:867:C:H2'	23:D:868:U:C6	2.54	0.42
23:D:91:A:H2	23:D:92:G:C8	2.38	0.42
23:D:937:U:H2'	23:D:938:G:C8	2.54	0.42
4:H:63:LYS:O	4:H:67:ILE:HG23	2.19	0.42
7:K:47:CYS:O	7:K:50:ILE:HB	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1128:C:C4'	9:M:16:ARG:HH12	2.32	0.42
11:O:22:HIS:CD2	11:O:23:ALA:N	2.83	0.42
16:T:10:GLY:HA3	16:T:14:ASN:O	2.19	0.42
25:Z:54:SER:HB3	25:Z:57:ASN:ND2	2.34	0.42
1:A:1010:G:H2'	1:A:1011:G:C8	2.53	0.42
1:A:117:G:N1	1:A:118:U:O2	2.52	0.42
1:A:1385:G:N1	1:A:1386:G:C5	2.87	0.42
1:A:1401:G:N2	1:A:1501:C:C2	2.87	0.42
1:A:1419:G:N2	1:A:1481:U:O2	2.52	0.42
1:A:15:G:C2	1:A:16:A:C8	3.08	0.42
1:A:217:C:H2'	1:A:218:C:H6	1.84	0.42
1:A:198:G:N2	1:A:219:C:N3	2.58	0.42
1:A:27:G:C5	1:A:557:G:C2	3.07	0.42
1:A:321:A:C2	1:A:333:G:C2	3.08	0.42
1:A:376:G:C4	1:A:377:G:C8	3.07	0.42
1:A:491:G:C4	1:A:492:G:C8	3.08	0.42
1:A:512:U:H3	1:A:539:A:N6	2.17	0.42
1:A:596:C:N4	1:A:645:C:C4	2.88	0.42
1:A:673:G:C4	1:A:734:G:C2	3.08	0.42
1:A:818:G:H3'	1:A:819:A:H5''	2.00	0.42
1:A:90:C:H2'	1:A:91:C:H5	1.83	0.42
22:C:189:LYS:HE3	22:C:219:GLU:HG3	1.95	0.42
22:C:231:TYR:C	22:C:233:THR:N	2.73	0.42
22:C:231:TYR:HE2	22:C:290:PRO:HD3	1.84	0.42
22:C:41:MET:CG	22:C:45:PHE:CZ	2.98	0.42
22:C:442:PRO:HB2	54:3:33:ASN:OD1	2.20	0.42
23:D:81:G:N2	23:D:106:C:C2	2.87	0.42
23:D:1362:C:H2'	23:D:1363:C:C6	2.55	0.42
23:D:1364:G:H2'	23:D:1365:A:H5'	2.02	0.42
23:D:1474:C:C2	23:D:1475:G:C8	3.07	0.42
23:D:1523:U:C4	23:D:1524:G:C5	3.07	0.42
23:D:1672:C:O2'	23:D:1673:U:OP1	2.21	0.42
23:D:1786:A:N6	23:D:1787:A:C6	2.87	0.42
23:D:1795:C:N4	23:D:1796:U:O4	2.52	0.42
23:D:1797:C:N3	23:D:1822:G:N2	2.59	0.42
23:D:1922:G:C2	23:D:1923:U:H1'	2.55	0.42
23:D:1973:G:O2'	23:D:1974:C:H5'	2.19	0.42
23:D:2007:C:C6	23:D:2007:C:OP2	2.73	0.42
23:D:532:A:H5'	23:D:2021:C:H41	1.83	0.42
23:D:2046:G:C6	23:D:2623:G:C4	3.08	0.42
23:D:2052:G:C4	23:D:2053:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2144:U:H2'	23:D:2146:C:OP1	2.19	0.42
23:D:2158:A:C5	23:D:2159:G:C5	3.08	0.42
23:D:2190:G:H2'	23:D:2191:G:C8	2.51	0.42
23:D:2320:A:P	23:D:2320:A:H8	2.43	0.42
23:D:2282:G:C2	23:D:2425:A:C5	3.07	0.42
23:D:2282:G:N2	23:D:2425:A:C5	2.87	0.42
23:D:2526:G:O6	23:D:2538:C:N4	2.53	0.42
23:D:2574:G:N7	23:D:2575:C:N4	2.67	0.42
23:D:262:A:H2'	23:D:263:C:N1	2.34	0.42
23:D:2660:A:N3	23:D:2660:A:H2'	2.35	0.42
23:D:2701:C:N4	23:D:2706:G:H1	2.17	0.42
23:D:2837:G:H2'	23:D:2838:G:C8	2.54	0.42
23:D:2839:G:C4	23:D:2880:C:C4	3.07	0.42
23:D:398:G:H2'	23:D:399:G:H1'	2.02	0.42
23:D:44:A:N6	23:D:434:U:H3	2.13	0.42
23:D:458:G:H1'	23:D:469:G:N1	2.35	0.42
23:D:481:G:H22	23:D:509:C:H42	1.66	0.42
23:D:545:G:C2	23:D:549:G:C6	3.08	0.42
23:D:793:A:O2'	23:D:794:G:O5'	2.32	0.42
23:D:800:A:O2'	23:D:801:G:P	2.78	0.42
23:D:816:C:OP1	23:D:1185:C:O2'	2.33	0.42
23:D:907:U:C2	23:D:908:C:H6	2.37	0.42
24:E:87:G:N1	24:E:90:C:C4	2.88	0.42
3:G:182:ILE:HG23	3:G:202:ILE:C	2.40	0.42
7:K:85:TYR:O	7:K:87:VAL:HG23	2.19	0.42
1:A:1367:C:P	9:M:115:GLY:H	2.37	0.42
10:N:51:ARG:NH2	10:N:61:GLU:HB2	2.34	0.42
10:N:30:SER:HB2	10:N:80:LYS:HB3	2.00	0.42
10:N:84:GLN:HG3	10:N:85:LEU:HD12	2.01	0.42
11:O:51:LYS:O	11:O:53:SER:N	2.53	0.42
15:S:50:HIS:O	15:S:53:HIS:HB3	2.19	0.42
20:X:25:ARG:HB3	20:X:26:ASN:H	1.39	0.42
20:X:56:MET:O	20:X:60:GLU:HG2	2.18	0.42
25:Z:225:ASN:HA	25:Z:226:PRO:HD2	1.82	0.42
25:Z:75:LEU:HB3	25:Z:113:VAL:HG13	2.01	0.42
25:Z:2:LYS:HB3	25:Z:8:ARG:HG2	2.02	0.42
22:C:569:ARG:NH1	55:4:74:C:H6	2.11	0.42
1:A:106:C:N4	1:A:107:G:O6	2.53	0.42
1:A:1075:C:H4'	2:F:175:ARG:NH2	2.35	0.42
1:A:1092:A:H8	1:A:1092:A:OP1	2.03	0.42
1:A:1252:A:C2	1:A:1253:G:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1313:U:H3	1:A:1324:A:N6	2.18	0.42
1:A:1401:G:C6	1:A:1402:C:N3	2.88	0.42
1:A:165:C:H2'	1:A:166:G:C8	2.49	0.42
1:A:294:U:C2	1:A:295:C:C5	3.08	0.42
1:A:318:G:C2	1:A:319:G:C5	3.07	0.42
1:A:431:A:H2'	1:A:432:A:O4'	2.19	0.42
1:A:445:G:H2'	1:A:446:G:C8	2.54	0.42
1:A:468:A:C2	1:A:474:G:H1'	2.55	0.42
1:A:475:G:C6	1:A:476:G:C5	3.07	0.42
1:A:604:G:H2'	1:A:605:U:C6	2.55	0.42
1:A:614:A:N1	1:A:626:U:C4	2.88	0.42
1:A:718:G:C4	1:A:719:C:N3	2.87	0.42
1:A:722:A:H5''	1:A:722:A:N3	2.35	0.42
1:A:736:C:C2	1:A:737:A:C8	3.08	0.42
1:A:787:A:H2'	1:A:788:U:C6	2.54	0.42
1:A:792:A:C5	1:A:794:A:C6	3.08	0.42
1:A:887:G:C6	1:A:888:G:N1	2.88	0.42
1:A:988:G:H2'	1:A:989:C:C6	2.54	0.42
22:C:109:ALA:CB	22:C:137:LYS:HD3	2.49	0.42
22:C:21:GLY:C	22:C:23:SER:N	2.73	0.42
22:C:257:GLU:HB2	22:C:260:GLU:HG3	1.98	0.42
22:C:379:LYS:CG	22:C:388:VAL:HG13	2.50	0.42
22:C:495:LEU:H	22:C:539:ALA:CA	2.29	0.42
22:C:18:VAL:HG21	22:C:86:HIS:CG	2.50	0.42
23:D:1006:C:C2	23:D:1007:C:C5	3.08	0.42
23:D:1047:G:H5''	23:D:1048:A:OP1	2.20	0.42
23:D:1186:G:O2'	23:D:1187:G:H5'	2.20	0.42
23:D:1218:C:C4	23:D:1232:G:C6	3.08	0.42
23:D:1225:C:H2'	23:D:1226:G:H8	1.72	0.42
23:D:1199:U:O4	23:D:1246:A:C6	2.72	0.42
23:D:1321:A:N3	23:D:1322:A:H1'	2.35	0.42
23:D:1326:U:H3'	23:D:1326:U:OP1	2.19	0.42
23:D:1478:G:N7	23:D:1479:G:C8	2.88	0.42
23:D:1525:G:N7	23:D:1526:G:C6	2.88	0.42
23:D:1434:A:H61	23:D:1558:A:H61	1.67	0.42
23:D:1637:A:C4	23:D:1638:C:C5	3.08	0.42
23:D:164:U:O2'	23:D:164:U:O2	2.27	0.42
23:D:1682:G:C6	23:D:1683:C:C4	3.07	0.42
23:D:1753:G:C4	23:D:1756:G:C2	3.07	0.42
23:D:1797:C:C2	23:D:1798:U:N3	2.88	0.42
23:D:1833:U:H3	23:D:1972:A:H61	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:17:G:C2	23:D:18:C:C2	3.08	0.42
23:D:1978:A:C5	23:D:1979:C:C5	3.08	0.42
23:D:570:G:H2'	23:D:2030:A:N6	2.34	0.42
23:D:2287:A:C8	23:D:2289:G:N7	2.88	0.42
23:D:2302:G:C2	23:D:2303:G:C4	3.07	0.42
23:D:2333:A:H4'	23:D:2335:A:N9	2.35	0.42
23:D:2370:G:C6	23:D:2371:G:C2	3.07	0.42
23:D:2444:G:C6	23:D:2445:G:C6	3.07	0.42
23:D:24:G:H2'	23:D:25:U:N1	2.35	0.42
23:D:2533:A:N1	23:D:2534:A:H1'	2.35	0.42
23:D:2556:C:C2	23:D:2557:G:C8	3.07	0.42
23:D:2507:C:C6	23:D:2583:G:N2	2.88	0.42
23:D:2650:U:H2'	23:D:2651:C:C6	2.55	0.42
23:D:2657:A:C5	23:D:2665:A:C5	3.08	0.42
23:D:2734:A:C6	23:D:2735:G:C4	3.08	0.42
23:D:273(E):U:C4	23:D:363(A):A:N6	2.83	0.42
23:D:2749:A:C2	23:D:2757:A:N1	2.88	0.42
23:D:2752:C:H2'	23:D:2753:A:O4'	2.20	0.42
23:D:2752:C:H3'	23:D:2753:A:H8	1.85	0.42
23:D:2808:U:H6	23:D:2808:U:P	2.43	0.42
23:D:2838:G:C6	23:D:2839:G:C8	3.07	0.42
23:D:2876:G:C4	23:D:2877:G:N7	2.87	0.42
23:D:2896:C:O5'	23:D:2896:C:C6	2.71	0.42
23:D:36:G:OP2	23:D:36:G:H8	2.02	0.42
23:D:462:C:N4	23:D:463:G:O6	2.53	0.42
23:D:462:C:C2	23:D:468:G:N2	2.87	0.42
23:D:547:A:C6	23:D:548:A:C4	3.08	0.42
23:D:601:C:C2	23:D:602:G:H1'	2.55	0.42
23:D:743:G:N2	23:D:744:G:C4	2.88	0.42
23:D:743:G:C2	23:D:744:G:C5	3.07	0.42
23:D:747:U:H4'	23:D:748:G:OP2	2.18	0.42
23:D:733:G:C5	23:D:761:A:N6	2.88	0.42
23:D:967:C:N4	23:D:968:G:O6	2.52	0.42
23:D:985:C:H2'	23:D:986:C:C6	2.54	0.42
24:E:75:G:C5	24:E:76:G:C5	3.07	0.42
3:G:184:TYR:HE2	3:G:186:PHE:HB3	1.85	0.42
6:J:4:TYR:CE1	6:J:92:LYS:HG2	2.54	0.42
6:J:73:ASN:O	6:J:77:ARG:N	2.46	0.42
7:K:10:ARG:CD	7:K:12:LEU:HD23	2.49	0.42
8:L:19:VAL:O	8:L:19:VAL:HG12	2.20	0.42
9:M:70:LYS:O	9:M:73:GLN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:2:ALA:O	13:Q:9:ILE:HG22	2.20	0.42
13:Q:49:THR:O	13:Q:53:VAL:N	2.36	0.42
1:A:664:G:H4'	18:V:64:ARG:CZ	2.50	0.42
25:Z:48:GLY:N	25:Z:210:ARG:HG3	2.34	0.42
52:1:6:SER:HB3	52:1:8:LYS:NZ	2.34	0.42
53:2:59:ILE:C	53:2:61:LEU:H	2.22	0.42
23:D:1062:G:C6	54:3:133:SER:O	2.71	0.42
22:C:446:LYS:HA	54:3:29:GLN:HG2	0.53	0.42
54:3:95:LYS:O	54:3:96:VAL:O	2.38	0.42
55:4:64:G:C2	55:4:65:C:C2	3.08	0.42
1:A:112:G:C6	1:A:330:C:N4	2.88	0.42
1:A:1197:G:H2'	1:A:1198:G:H8	1.85	0.42
1:A:1222:G:H2'	1:A:1223:C:C6	2.55	0.42
1:A:1230:C:H2'	1:A:1231:G:C8	2.53	0.42
1:A:1243:C:N4	1:A:1294:G:H1	2.17	0.42
1:A:1403:C:H5''	1:A:1404:C:OP2	2.20	0.42
1:A:1416:G:C2	1:A:1417:G:H1'	2.54	0.42
1:A:1511:G:C6	1:A:1525:G:C6	3.08	0.42
1:A:1516:G:N1	1:A:1520:G:C6	2.88	0.42
1:A:533:A:C6	1:A:536:C:N3	2.87	0.42
1:A:667:G:P	1:A:732:C:HO2'	2.40	0.42
1:A:577:G:C6	1:A:765:G:N1	2.87	0.42
1:A:786:G:C2	1:A:787:A:C4	3.07	0.42
1:A:807:A:H2'	1:A:808:C:C6	2.55	0.42
1:A:921:U:C5	1:A:922:G:C8	3.08	0.42
1:A:950:U:H5''	13:Q:102:ARG:HH12	1.84	0.42
22:C:3:ARG:O	22:C:3:ARG:HG3	2.20	0.42
22:C:412:LEU:CD1	22:C:452:TYR:HB2	2.43	0.42
23:D:1029:A:H62	23:D:1125:G:H21	1.66	0.42
23:D:1040:C:C6	23:D:1041:C:H5	2.37	0.42
23:D:1126:A:H4'	23:D:1127:A:O5'	2.20	0.42
23:D:1151:G:O2'	23:D:1152:C:O4'	2.30	0.42
23:D:1189:A:C5	23:D:1190:G:H5'	2.55	0.42
23:D:815:C:N4	23:D:1192:G:H1	2.17	0.42
23:D:1242:A:O3'	23:D:1243:G:H8	2.02	0.42
23:D:1552:G:O2'	23:D:1553:A:O4'	2.37	0.42
23:D:1572:A:P	23:D:1572:A:O4'	2.76	0.42
23:D:1424:G:C2	23:D:1574:C:C4	3.07	0.42
23:D:1712:C:H2'	23:D:1716:U:N1	2.34	0.42
23:D:1747:G:N3	23:D:1748:G:C8	2.87	0.42
23:D:1822:G:C6	23:D:1823:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1826:G:H2'	23:D:1827:C:H6	1.84	0.42
23:D:1842:G:C2	23:D:1901:A:C4	3.07	0.42
23:D:1914:C:H2'	23:D:1914:C:O2	2.19	0.42
23:D:194:G:N2	23:D:195:A:N3	2.67	0.42
23:D:1972:A:H3'	23:D:1973:G:H8	1.84	0.42
23:D:529:A:N6	23:D:2041:U:N3	2.66	0.42
23:D:2052:G:C4	23:D:2053:G:N7	2.87	0.42
23:D:211:A:C2	23:D:212:G:C4	3.07	0.42
23:D:2183:C:C4	23:D:2184:G:O6	2.73	0.42
23:D:2228:G:C5	23:D:2229:C:C5	3.07	0.42
23:D:2393:A:C5'	25:Z:32:LEU:HD21	76.31	0.42
23:D:2421:G:C2	56:5:76:A:C8	3.08	0.42
23:D:2482:G:H2'	23:D:2483:C:O4'	2.19	0.42
23:D:2516:G:C2	23:D:2517:C:C2	3.08	0.42
23:D:2534:A:C6	23:D:2535:G:C5	3.07	0.42
23:D:2569:G:C2	23:D:2570:G:C8	3.07	0.42
23:D:2509:G:N2	23:D:2579:C:N3	2.61	0.42
23:D:2641:G:C6	23:D:2774:C:N3	2.88	0.42
23:D:2673:G:C4	23:D:2674:G:C8	3.08	0.42
3:G:26:LYS:NZ	23:D:2674:G:H5'	145.16	0.42
23:D:2714:G:C6	23:D:2715:C:C4	3.08	0.42
23:D:2749:A:C4	23:D:2750:A:C6	3.08	0.42
23:D:2805:G:H5'	23:D:2807:G:OP2	2.20	0.42
23:D:2823:A:N7	23:D:2824:C:C5	2.88	0.42
23:D:310:A:O4'	23:D:330:A:N6	2.53	0.42
23:D:216:A:C8	23:D:432:A:N6	2.88	0.42
23:D:27:G:C6	23:D:512:G:C2	3.08	0.42
23:D:19:C:N4	23:D:521:G:H1	2.15	0.42
2:F:114:ARG:NH1	23:D:527:C:H2'	182.90	0.42
23:D:623:G:H5'	23:D:624:C:OP1	2.18	0.42
23:D:677:A:C5	23:D:678:C:C4	3.07	0.42
23:D:677:A:C5	23:D:678:C:C5	3.08	0.42
23:D:701:G:H2'	23:D:702:G:H8	1.84	0.42
23:D:771:G:O2'	23:D:772:C:H5'	2.20	0.42
23:D:816:C:H2'	23:D:817:C:C6	2.55	0.42
23:D:819:A:H2'	23:D:819:A:N3	2.34	0.42
23:D:889:C:O2	23:D:889:C:H3'	2.20	0.42
23:D:882:G:O6	23:D:893:C:N4	2.52	0.42
23:D:869:G:H1	23:D:908:C:H42	1.67	0.42
23:D:989:G:C5	23:D:1186:G:O6	2.73	0.42
24:E:51:G:C8	24:E:51:G:OP2	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:E:88:C:C6	24:E:89:G:C8	3.07	0.42
2:F:162:ILE:HG12	2:F:182:ILE:HG21	2.01	0.42
3:G:30:ARG:HD2	14:R:38:GLY:HA3	2.01	0.42
4:H:8:VAL:O	4:H:11:LEU:N	2.33	0.42
6:J:44:GLY:H	6:J:59:TYR:HE1	1.68	0.42
8:L:27:PRO:HD3	8:L:58:TYR:CE1	2.55	0.42
8:L:65:TYR:HA	8:L:79:VAL:HG21	2.01	0.42
12:P:5:PRO:O	12:P:9:GLN:HB2	2.20	0.42
15:S:8:LYS:O	15:S:12:ILE:HG13	2.19	0.42
16:T:44:THR:HG23	16:T:45:THR:N	2.35	0.42
20:X:74:LYS:HB3	20:X:75:ASN:H	1.70	0.42
54:3:21:PRO:N	54:3:22:PRO:CD	2.83	0.42
55:4:12:G:H1	55:4:23:C:N4	2.18	0.42
55:4:32:C:C6	55:4:32:C:OP2	2.68	0.42
56:5:38:A:H2'	56:5:39:U:O4'	2.20	0.42
56:5:42:C:H6	56:5:42:C:OP2	2.02	0.42
1:A:1005:A:H2'	1:A:1006:C:O4'	2.20	0.42
1:A:1075:C:H5''	2:F:179:LYS:NZ	2.35	0.42
1:A:1245:A:C6	1:A:1293:G:N1	2.88	0.42
1:A:1321:C:H3'	1:A:1322:C:H5''	2.01	0.42
1:A:1374:A:C6	1:A:1375:A:C5	3.08	0.42
1:A:1477:C:C2	1:A:1478:C:C5	3.08	0.42
1:A:1522:U:H2'	1:A:1523:G:C8	2.55	0.42
1:A:198:G:C6	1:A:220:G:C6	3.08	0.42
1:A:265:G:N1	1:A:267:C:O4'	2.53	0.42
1:A:28:G:C2	1:A:29:G:C4	3.07	0.42
1:A:432:A:H3'	1:A:433:C:C5	2.54	0.42
1:A:511:C:HO2'	1:A:512:U:C5'	2.33	0.42
1:A:577:G:C4	1:A:578:C:C5	3.08	0.42
1:A:597:G:C6	1:A:644:G:C6	3.08	0.42
1:A:657:G:N2	1:A:658:G:H1'	2.35	0.42
1:A:676:A:C5	1:A:677:U:C5	3.07	0.42
1:A:719:C:H1'	18:V:49:LYS:HD2	2.02	0.42
1:A:734:G:C5	1:A:735:C:C5	3.07	0.42
1:A:886:G:N2	1:A:912:C:H1'	2.35	0.42
1:A:949:A:C5	1:A:950:U:C4	3.07	0.42
22:C:231:TYR:CE2	22:C:290:PRO:HD3	2.54	0.42
22:C:330:LEU:CD1	22:C:344:PHE:O	2.62	0.42
22:C:493:ASN:HB2	22:C:541:ILE:CA	2.49	0.42
22:C:526:GLU:C	22:C:528:ILE:N	2.73	0.42
22:C:531:GLN:OE1	22:C:533:PHE:CE2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:8:ARG:CD	22:C:74:GLU:HB2	2.44	0.42
23:D:1022:G:C6	23:D:1139:G:C6	3.07	0.42
23:D:1056:G:O2'	23:D:1087:G:N1	2.48	0.42
23:D:1174:A:N3	23:D:1174:A:H3'	2.35	0.42
23:D:1171:G:H2'	23:D:1174:A:P	2.59	0.42
23:D:1244:G:N2	23:D:1245:G:H1'	2.34	0.42
23:D:1295:C:C2	23:D:1296:G:C8	3.08	0.42
23:D:1380:G:C2	23:D:1381:G:C4	3.07	0.42
23:D:1429:G:C4	23:D:1568:G:C2	3.06	0.42
23:D:1455:G:C6	23:D:2704:C:N3	2.87	0.42
23:D:1529:A:C8	23:D:1530:G:N7	2.88	0.42
23:D:1543:A:C8	23:D:1544:C:H4'	2.55	0.42
23:D:701:G:H4'	23:D:1631:A:H2	1.84	0.42
23:D:752:A:N6	23:D:1781:C:H4'	2.35	0.42
23:D:1827:C:C2	23:D:1828:G:C4	3.07	0.42
23:D:1891:G:C6	23:D:1892:C:C4	3.08	0.42
23:D:1973:G:C2	23:D:1974:C:C2	3.08	0.42
23:D:2053:G:C6	23:D:2054:A:C6	3.07	0.42
23:D:2074:U:H1'	23:D:2598:A:O2'	2.20	0.42
23:D:2111:C:N4	23:D:2118:U:C2	2.88	0.42
23:D:2119:A:N6	23:D:2170:A:C5	2.87	0.42
23:D:2178:C:C6	23:D:2178:C:O5''	2.71	0.42
23:D:2280:G:C4	23:D:2281:C:C5	3.07	0.42
23:D:2395:C:N3	56:5:76:A:H1'	2.34	0.42
23:D:2469:A:C5	23:D:2470:G:C5	3.08	0.42
23:D:2512:C:N3	23:D:2574:G:N2	2.59	0.42
23:D:2542:A:H8	23:D:2542:A:H5''	1.85	0.42
23:D:2547:U:C2	23:D:2566:A:C6	3.08	0.42
23:D:2585:U:O2'	23:D:2586:C:P	2.78	0.42
23:D:2634:G:N2	23:D:2635:C:C2	2.88	0.42
23:D:2634:G:N1	23:D:2784:C:N4	2.68	0.42
23:D:463:G:C4	23:D:467:G:C2	3.08	0.42
23:D:476:G:H2'	23:D:478:A:P	2.60	0.42
23:D:582:G:N1	23:D:1259:G:C6	2.88	0.42
23:D:712:G:H1	23:D:719:C:N4	2.17	0.42
23:D:740:U:O3'	23:D:1784:A:H5''	2.19	0.42
23:D:685:A:C6	23:D:774:A:N1	2.88	0.42
23:D:792:G:C6	23:D:2440:C:C2	3.07	0.42
23:D:883:G:H21	23:D:893:C:N4	2.16	0.42
23:D:959:A:C6	23:D:960:A:C6	3.08	0.42
24:E:29:A:H5''	24:E:30:C:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:20:GLU:HB3	2:F:21:ARG:H	1.61	0.42
3:G:85:ARG:HH12	3:G:89:GLU:HB2	1.83	0.42
4:H:60:GLU:OE2	4:H:199:ASN:HB3	2.19	0.42
8:L:98:LYS:C	8:L:100:ILE:H	2.21	0.42
10:N:24:VAL:HG21	10:N:37:PRO:HB3	2.01	0.42
11:O:57:THR:CG2	11:O:60:ALA:H	2.32	0.42
13:Q:65:LYS:HD2	13:Q:73:GLU:CD	2.40	0.42
3:G:20:SER:O	14:R:54:PRO:HG3	2.19	0.42
15:S:25:THR:OG1	15:S:26:GLU:N	2.52	0.42
17:U:9:VAL:N	17:U:22:LEU:O	2.52	0.42
19:W:2:PRO:HB2	19:W:3:ARG:H	1.73	0.42
25:Z:161:ILE:HD13	25:Z:192:PHE:CE1	2.53	0.42
25:Z:65:PRO:O	25:Z:66:HIS:CG	2.73	0.42
25:Z:72:VAL:HG22	25:Z:162:GLU:OE1	2.20	0.42
54:3:75:SER:OG	54:3:130:SER:HB2	2.19	0.42
1:A:1022:G:C4	1:A:1023:G:C8	3.08	0.42
1:A:1067:A:O2'	1:A:1068:G:O4'	2.38	0.42
1:A:1076:C:C2	1:A:1082:G:C2	3.07	0.42
1:A:1157:A:H62	1:A:1177:G:H1	1.67	0.42
1:A:951:G:C2	1:A:1231:G:C4	3.08	0.42
1:A:1305:G:H1	1:A:1332:A:P	2.43	0.42
1:A:1300:G:N1	1:A:1335:C:C2	2.88	0.42
1:A:1379:G:C6	1:A:1380:U:C2	3.07	0.42
1:A:1421:G:C5	1:A:1480:G:C2	3.07	0.42
1:A:1497:G:H2'	1:A:1498:U:O4'	2.20	0.42
1:A:229:U:H2'	1:A:230:G:C8	2.50	0.42
1:A:254:G:H22	1:A:273:A:H1'	1.85	0.42
1:A:28:G:H2'	1:A:29:G:C8	2.54	0.42
1:A:431:A:N6	1:A:432:A:C6	2.88	0.42
1:A:51:A:C6	1:A:353:A:N1	2.88	0.42
1:A:648:A:H2'	1:A:649:G:H8	1.84	0.42
1:A:670:G:N1	1:A:737:A:C6	2.88	0.42
1:A:666:G:C6	1:A:741:G:N7	2.88	0.42
1:A:78:G:N3	1:A:92:G:N2	2.68	0.42
1:A:922:G:H4'	5:I:20:GLN:NE2	2.34	0.42
1:A:924:C:C2	1:A:925:G:C8	3.08	0.42
1:A:932:C:OP1	7:K:3:ARG:HD2	2.20	0.42
1:A:951:G:OP2	13:Q:102:ARG:NH2	2.53	0.42
22:C:12:PHE:C	22:C:12:PHE:CD1	2.93	0.42
22:C:106:VAL:CG2	22:C:136:ASN:CB	2.98	0.42
22:C:177:ILE:C	22:C:181:ILE:HG13	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:252:ALA:C	22:C:253:THR:HG23	2.39	0.42
22:C:431:LYS:C	22:C:432:ARG:CG	2.86	0.42
22:C:489:LEU:CD2	22:C:507:ILE:CD1	2.95	0.42
22:C:510:ARG:C	22:C:512:LYS:N	2.73	0.42
22:C:577:GLN:HG3	23:D:1942:C:H4'	1.36	0.42
22:C:67:THR:HA	22:C:76:TYR:CB	2.50	0.42
23:D:1025:G:N3	23:D:1025:G:H2'	2.35	0.42
23:D:1101:U:H3'	23:D:1102:C:C6	2.55	0.42
23:D:1087:G:N7	23:D:1103:A:H2	2.18	0.42
23:D:815:C:N3	23:D:1193:G:C2	2.88	0.42
23:D:1401:G:C6	23:D:1402:C:C4	3.07	0.42
23:D:1434:A:N6	23:D:1558:A:H61	2.18	0.42
23:D:1608:A:C8	23:D:1611:C:N4	2.88	0.42
23:D:1754:C:N4	23:D:1755:A:C6	2.87	0.42
23:D:1944:U:H1'	23:D:1955:U:C6	2.53	0.42
23:D:2186:G:C2	23:D:2187:G:C5	3.08	0.42
23:D:2276:G:C4	23:D:2277:G:C8	3.08	0.42
23:D:2302:G:C6	23:D:2303:G:C6	3.07	0.42
23:D:23:G:C4	23:D:518:G:C2	3.07	0.42
23:D:2454:G:H3'	23:D:2455:G:C8	2.52	0.42
23:D:2464:C:H2'	23:D:2465:C:H6	1.82	0.42
23:D:2492:U:H6	23:D:2493:U:H5'	1.84	0.42
23:D:2500:U:C4	23:D:2504:U:O4	2.72	0.42
23:D:2688:U:H5	23:D:2719:G:C6	2.38	0.42
23:D:2869:G:H2'	23:D:2870:C:C6	2.54	0.42
23:D:327:G:C4	23:D:328:U:C5	3.07	0.42
23:D:493:G:C4	23:D:494:G:C8	3.08	0.42
23:D:55:G:N3	23:D:56:A:C8	2.88	0.42
23:D:61:G:H3'	23:D:62:C:C6	2.55	0.42
23:D:760:G:C2	23:D:761:A:C4	3.08	0.42
23:D:76:C:N3	23:D:111:A:C6	2.87	0.42
23:D:947:G:N2	23:D:970:C:N3	2.63	0.42
23:D:980:A:H2'	23:D:981:A:N3	2.35	0.42
24:E:18:G:H2'	24:E:19:G:C8	2.43	0.42
24:E:43:C:H42	24:E:45:A:N6	2.18	0.42
24:E:81:G:C6	24:E:82:G:C5	3.08	0.42
24:E:82:G:H1	24:E:94:C:N4	2.18	0.42
2:F:95:GLN:HG3	2:F:148:TYR:HB3	2.01	0.42
2:F:149:LEU:HD23	2:F:149:LEU:O	2.19	0.42
2:F:45:GLN:O	2:F:48:MET:HB2	2.20	0.42
2:F:50:GLU:O	2:F:54:THR:OG1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:68:ILE:O	2:F:91:PRO:HD2	2.20	0.42
2:F:74:LYS:NZ	2:F:76:GLN:HB2	2.35	0.42
2:F:77:ALA:O	2:F:79:ASP:N	2.53	0.42
2:F:82:ARG:HD2	2:F:92:TYR:CE1	2.55	0.42
3:G:16:ARG:NH2	3:G:204:LEU:HD12	2.35	0.42
3:G:26:LYS:HE2	10:N:45:ARG:HH22	1.84	0.42
4:H:46:LYS:HA	4:H:46:LYS:HD2	1.71	0.42
7:K:87:VAL:HA	7:K:151:TYR:HB3	2.02	0.42
8:L:100:ILE:HG21	8:L:125:ARG:NH2	2.35	0.42
9:M:16:ARG:HB2	9:M:64:THR:OG1	2.20	0.42
1:A:1059:C:O2'	10:N:52:GLY:HA2	2.20	0.42
12:P:65:GLU:OE1	12:P:65:GLU:N	2.53	0.42
12:P:80:HIS:O	12:P:81:SER:OG	2.26	0.42
17:U:63:ARG:O	17:U:65:ILE:HG22	2.18	0.42
17:U:51:TYR:CE2	17:U:73:VAL:HB	2.54	0.42
19:W:40:ILE:HD12	19:W:66:MET:O	2.19	0.42
25:Z:107:TRP:CH2	25:Z:109:ASP:HB2	2.55	0.42
54:3:53:VAL:HA	54:3:54:PRO:HD2	1.87	0.42
1:A:1125:U:O2'	1:A:1126:U:P	2.78	0.42
1:A:1202:G:C6	1:A:1203:C:C2	3.08	0.42
1:A:1325:C:O2'	1:A:1326:C:H5'	2.20	0.42
1:A:1267:C:N4	1:A:1327:C:O2'	2.44	0.42
1:A:166:G:C6	1:A:167:G:C6	3.08	0.42
1:A:199:G:C4	1:A:200:G:N7	2.88	0.42
1:A:223:U:C4	1:A:224:C:C4	3.08	0.42
1:A:257:G:N1	1:A:270:A:C6	2.87	0.42
1:A:289:G:N1	1:A:311:C:N4	2.68	0.42
1:A:32:A:C2	1:A:33:A:C4	3.08	0.42
1:A:407:G:H5''	1:A:408:A:OP2	2.20	0.42
1:A:453:A:H2'	1:A:454:C:C5	2.55	0.42
1:A:500:G:H1	1:A:545:C:N4	2.16	0.42
1:A:502:G:C6	1:A:544:G:N1	2.88	0.42
1:A:505:G:H2'	1:A:506:G:H8	1.84	0.42
1:A:540:G:C2	1:A:541:G:C4	3.08	0.42
1:A:560:U:C2	1:A:566:G:N3	2.87	0.42
1:A:644:G:H2'	1:A:645:C:H5'	2.02	0.42
1:A:675:A:H2'	1:A:676:A:O4'	2.20	0.42
1:A:680:C:N4	1:A:711:G:C6	2.88	0.42
1:A:715:A:C6	1:A:716:A:C4	3.08	0.42
1:A:804:U:H5''	1:A:805:C:OP2	2.20	0.42
1:A:812:C:HO2'	1:A:813:U:P	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:204:VAL:O	22:C:205:TYR:C	2.57	0.42
22:C:37:SER:O	22:C:38:ASP:CB	2.68	0.42
22:C:40:GLU:HG3	22:C:40:GLU:H	1.51	0.42
23:D:1016:G:H2'	23:D:1017:G:C8	2.54	0.42
23:D:105:C:OP2	23:D:105:C:H3'	2.20	0.42
23:D:10:G:C6	23:D:11:G:C6	3.07	0.42
23:D:1114:G:H2'	23:D:1115:G:C8	2.55	0.42
23:D:1197:G:C2	23:D:1198:U:C6	3.08	0.42
23:D:1225:C:O5'	23:D:1225:C:C6	2.70	0.42
23:D:1252:G:C5	23:D:1253:A:C5	3.08	0.42
23:D:127:A:C4'	23:D:128:C:H5''	2.49	0.42
23:D:1308:A:C4	23:D:1309:G:H8	2.36	0.42
23:D:1564:C:H2'	23:D:1565:C:O4'	2.20	0.42
23:D:1424:G:C2	23:D:1574:C:N3	2.88	0.42
23:D:1394:U:C4'	23:D:1603:A:H4'	2.44	0.42
23:D:1682:G:C2	23:D:1683:C:C2	3.08	0.42
23:D:1804:C:H3'	23:D:1805:U:C5	2.55	0.42
23:D:182:A:N1	23:D:215:G:N2	2.63	0.42
23:D:1830:C:H2'	23:D:1831:G:C8	2.50	0.42
23:D:1959:G:O2'	23:D:1960:A:O4'	2.31	0.42
23:D:2227:A:N6	23:D:2228:G:C6	2.88	0.42
23:D:223:A:O2'	23:D:224:G:OP2	2.32	0.42
23:D:2259:G:C6	23:D:2260:C:C4	3.07	0.42
23:D:2366:A:C2	23:D:2367:G:C4	3.08	0.42
23:D:2547:U:C6	23:D:2566:A:C2	3.08	0.42
23:D:2564:A:H3'	23:D:2565:A:H8	1.85	0.42
23:D:2582:G:N3	23:D:2582:G:H2'	2.33	0.42
23:D:2593:U:H3	23:D:2600:A:N6	2.13	0.42
23:D:2649:U:C2	23:D:2650:U:C6	3.08	0.42
23:D:2681:C:HO2'	23:D:2682:U:P	2.42	0.42
23:D:25:U:H5	23:D:26:G:C6	2.37	0.42
23:D:2709:G:C6	23:D:2710:C:C4	3.07	0.42
23:D:2730:C:H2'	23:D:2731:G:H8	1.85	0.42
23:D:274:G:HO2'	23:D:276:A:P	2.43	0.42
23:D:339:U:H3'	23:D:340:A:N7	2.35	0.42
23:D:406:G:C5	23:D:407:G:C6	3.08	0.42
23:D:558:G:C4	23:D:559:G:N7	2.87	0.42
23:D:575:A:O2'	23:D:576:U:O5'	2.35	0.42
23:D:672:C:H2'	23:D:673:C:C6	2.55	0.42
23:D:727:A:H2'	23:D:728:G:H5'	2.02	0.42
23:D:742:G:N3	23:D:743:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:932:G:N1	23:D:933:A:C6	2.88	0.42
24:E:98:G:H2'	24:E:99:A:H5''	2.01	0.42
2:F:115:LEU:O	2:F:119:GLU:N	2.44	0.42
2:F:9:GLU:HB2	2:F:217:ARG:NE	2.35	0.42
3:G:52:LEU:CA	3:G:70:VAL:HG22	2.50	0.42
7:K:139:GLU:HA	7:K:142:GLU:HB2	2.00	0.42
9:M:37:PHE:CG	9:M:74:ILE:HD11	2.54	0.42
10:N:44:VAL:HG22	10:N:46:ARG:NH2	2.35	0.42
13:Q:27:LYS:HB3	13:Q:31:LYS:HD3	2.01	0.42
10:N:63:PHE:HA	14:R:59:ALA:H	1.85	0.42
1:A:1216:G:OP1	14:R:6:LEU:HG	2.20	0.42
15:S:74:ASP:OD2	15:S:77:ARG:NE	2.53	0.42
16:T:44:THR:HG23	16:T:45:THR:H	1.85	0.42
1:A:1326:C:C5'	21:Y:12:LYS:HZ2	2.32	0.42
52:1:30:PRO:O	52:1:32:HIS:N	2.47	0.41
23:D:2742:C:H5''	52:1:35:ARG:HH22	1.84	0.41
54:3:32:ALA:HB1	54:3:63:ARG:NE	2.35	0.41
1:A:1087:G:H2'	1:A:1088:G:H8	1.84	0.41
1:A:1108:G:H2'	1:A:1109:C:C6	2.54	0.41
1:A:1117:G:C6	1:A:1184:G:C5	3.07	0.41
1:A:1207:G:C5	1:A:1208:C:C4	3.08	0.41
1:A:1246:C:N4	1:A:1291:G:H1	2.18	0.41
1:A:1248:A:N6	1:A:1290:G:C5	2.88	0.41
1:A:134:A:H2'	1:A:135:C:C2	2.55	0.41
1:A:1363:A:H5''	1:A:1364:U:OP1	2.20	0.41
1:A:1434:A:C6	1:A:1435:G:C5	3.08	0.41
1:A:1511:G:C5	1:A:1525:G:N1	2.88	0.41
1:A:396:G:H2'	1:A:398:C:C6	2.54	0.41
1:A:554:C:C2	1:A:555:C:C5	3.08	0.41
1:A:557:G:H2'	1:A:558:G:O4'	2.20	0.41
1:A:582:U:C2	17:U:104:LYS:HE2	2.55	0.41
1:A:585:G:H2'	1:A:586:C:H6	1.82	0.41
1:A:603:U:H3	1:A:635:G:H1	1.67	0.41
1:A:687:A:N6	1:A:700:G:HO2'	2.16	0.41
1:A:764:C:H5''	15:S:50:HIS:NE2	2.35	0.41
1:A:984:C:N3	1:A:985:C:C2	2.88	0.41
1:A:998:G:C6	1:A:998(A):C:C4	3.08	0.41
22:C:14:ILE:HD11	22:C:25:LEU:HD12	2.02	0.41
22:C:200:ILE:CG1	22:C:281:THR:HG23	2.18	0.41
22:C:575:GLU:HA	22:C:578:LYS:HB2	2.02	0.41
22:C:97:LEU:HD21	22:C:123:MET:CB	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1061:U:OP2	23:D:1061:U:C6	2.70	0.41
23:D:1152:C:H2'	23:D:1153:C:O4'	2.20	0.41
23:D:1166:C:O5'	23:D:1166:C:H6	2.03	0.41
23:D:1173:G:H2'	23:D:1174:A:C2	2.54	0.41
23:D:1202:C:N3	23:D:1244:G:C6	2.88	0.41
23:D:1270:C:H5''	23:D:1271:G:OP1	2.20	0.41
23:D:132:G:C6	23:D:133:C:C4	3.08	0.41
23:D:137(A):G:C2	23:D:141(A):C:C2	3.07	0.41
23:D:137(A):G:C2	23:D:141(A):C:N3	2.88	0.41
23:D:1432:C:C2	23:D:1433:U:C2	3.08	0.41
23:D:1499:C:O2'	23:D:1500:G:H5'	2.20	0.41
23:D:1424:G:H22	23:D:1573:G:H1	1.68	0.41
23:D:1596:A:C6	23:D:1597:A:C6	3.08	0.41
23:D:163:U:H3'	23:D:163:U:O2	2.19	0.41
23:D:179:G:C5	23:D:180:G:C5	3.07	0.41
23:D:1829:A:C2'	23:D:1830:C:H5'	2.47	0.41
23:D:1840:G:C2	23:D:1841:U:C2	3.08	0.41
23:D:1949:G:C2	23:D:1950:G:N3	2.88	0.41
23:D:1995:U:C3'	23:D:1996:C:H5''	2.47	0.41
23:D:202:U:H2'	23:D:203:C:N1	2.35	0.41
23:D:574:C:C1'	23:D:2055:C:H5	2.33	0.41
23:D:2169:A:C5	23:D:2170:A:C6	3.08	0.41
23:D:2219:G:C5	23:D:2224:G:C5	3.08	0.41
23:D:2274:A:H2'	23:D:2276:G:H5'	2.02	0.41
23:D:2279:G:C2	23:D:2280:G:C8	3.08	0.41
23:D:2431:U:C2	23:D:2433:A:OP2	2.72	0.41
23:D:2509:G:C6	23:D:2580:U:N3	2.88	0.41
23:D:2597:G:C2	23:D:2598:A:C4	3.08	0.41
23:D:2605:U:O2'	23:D:2606:C:H5'	2.20	0.41
23:D:2640:G:C2	23:D:2641:G:C5	3.08	0.41
23:D:2657:A:C4	23:D:2665:A:C6	3.08	0.41
23:D:270(B):A:O3'	23:D:270(C):C:H6	2.03	0.41
23:D:2718:G:N3	23:D:2719:G:C8	2.88	0.41
23:D:271:G:O5'	23:D:271:G:H8	2.03	0.41
23:D:323:G:N3	23:D:333:G:H1'	2.35	0.41
23:D:342:G:N2	23:D:343:C:C2	2.88	0.41
23:D:270:A:N1	23:D:370:G:H1'	2.35	0.41
23:D:543:C:H2'	23:D:544:C:H6	1.84	0.41
23:D:677:A:H61	23:D:800:A:H61	1.67	0.41
23:D:712:G:N1	23:D:720:C:C4	2.88	0.41
23:D:785:G:HO2'	23:D:786:C:P	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:860:U:HO2'	23:D:861:A:P	2.43	0.41
23:D:978:G:C4	23:D:979:G:C8	3.08	0.41
23:D:979:G:N2	23:D:985:C:C4	2.88	0.41
23:D:987:G:H2'	23:D:988:A:H8	1.81	0.41
24:E:9:G:C2	24:E:112:G:C4	3.08	0.41
24:E:23:G:H2'	24:E:24:G:C2	2.54	0.41
24:E:32:C:H1'	24:E:52:A:H62	1.85	0.41
24:E:46:A:C6	24:E:47:C:C2	3.08	0.41
24:E:82:G:C4	24:E:83:G:C8	3.08	0.41
2:F:121:LEU:HD22	2:F:126:GLU:OE2	2.20	0.41
3:G:148:GLY:HA3	3:G:172:ARG:O	2.20	0.41
5:I:33:VAL:HG13	5:I:42:GLY:O	2.20	0.41
12:P:15:ARG:O	12:P:17:LYS:N	2.53	0.41
15:S:43:LEU:O	15:S:47:LYS:HG3	2.20	0.41
15:S:44:LYS:O	15:S:47:LYS:HE3	2.20	0.41
1:A:582:U:C4'	15:S:64:ARG:HH22	2.33	0.41
16:T:21:VAL:HG21	16:T:59:TRP:CD1	2.55	0.41
20:X:39:LYS:HD3	20:X:55:ILE:HD13	2.02	0.41
21:Y:12:LYS:HA	21:Y:15:ARG:HB2	2.02	0.41
25:Z:59:ARG:N	25:Z:199:HIS:HD2	2.18	0.41
52:1:7:VAL:HG13	52:1:34:GLN:OE1	2.21	0.41
55:4:72:A:N6	55:4:73:A:N1	2.67	0.41
56:5:19:G:OP2	56:5:19:G:C8	2.73	0.41
1:A:1089:G:N2	1:A:1096:C:N3	2.63	0.41
1:A:1134:G:C2	1:A:1135:U:H1'	2.55	0.41
1:A:1161:C:N4	1:A:1181:G:C6	2.89	0.41
1:A:1270:C:C4	1:A:1271:G:C8	3.09	0.41
1:A:1309:G:N2	1:A:1329:A:H5''	2.35	0.41
1:A:1329:A:C5	1:A:1330:U:H1'	2.55	0.41
1:A:1339:A:O2'	55:4:40:C:O2'	2.19	0.41
1:A:1352:C:H5''	1:A:1353:G:OP2	2.20	0.41
1:A:976:G:H21	1:A:1362(A):C:H5''	1.83	0.41
1:A:1461:G:N1	1:A:1462:G:C5	2.88	0.41
1:A:271:C:O2'	1:A:272:C:H5'	2.21	0.41
1:A:241:C:C2	1:A:286:G:N2	2.88	0.41
1:A:293:G:C6	1:A:294:U:C4	3.07	0.41
1:A:34:C:C4	1:A:35:G:N7	2.88	0.41
1:A:406:G:C4	1:A:495:A:C5	3.08	0.41
1:A:536:C:H3'	1:A:536:C:OP2	2.20	0.41
1:A:563:A:C6	1:A:567:G:C2	3.08	0.41
1:A:664:G:OP1	18:V:64:ARG:NH2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:714:G:H1'	1:A:777:A:C8	2.54	0.41
1:A:998:G:C2	1:A:998(A):C:C2	3.07	0.41
22:C:273:ASP:O	22:C:275:GLN:N	2.53	0.41
22:C:409:TYR:HB2	22:C:453:GLU:CD	2.40	0.41
22:C:418:GLU:CA	22:C:446:LYS:HB3	2.49	0.41
22:C:300:VAL:HG11	22:C:464:HIS:CE1	2.44	0.41
22:C:501:VAL:CG2	22:C:502:ASP:H	2.05	0.41
23:D:1027:A:O2'	23:D:1028:A:H8	2.03	0.41
23:D:1071:G:C6	23:D:1072:C:N3	2.89	0.41
23:D:1093:G:N1	23:D:1099:G:C6	2.83	0.41
23:D:1147:C:C4	23:D:1148:A:N7	2.89	0.41
23:D:1196:C:C2	23:D:1197:G:C8	3.07	0.41
23:D:1266:G:O2'	23:D:1267:U:P	2.77	0.41
23:D:1268:A:C4	23:D:2013:A:C5	3.08	0.41
23:D:1281:G:C2	23:D:1290:C:N3	2.89	0.41
23:D:1331:A:C3'	23:D:1333:C:H41	2.30	0.41
23:D:137:C:O2	23:D:137(A):G:H5'	2.20	0.41
23:D:1388:G:C6	23:D:1389:G:C6	3.08	0.41
23:D:1388:G:C2	23:D:1400:G:C2	3.08	0.41
23:D:1525:G:C6	23:D:1526:G:N1	2.88	0.41
23:D:1551:C:N3	23:D:1552:G:C5	2.88	0.41
23:D:740:U:H4'	23:D:1784:A:C5'	2.50	0.41
23:D:1800:C:C4	23:D:1817:G:N1	2.89	0.41
23:D:1823:G:O2'	23:D:1824:G:H5'	2.20	0.41
23:D:1860:G:H1	23:D:1882:C:H42	1.68	0.41
23:D:18:C:O2'	23:D:554:U:OP2	2.38	0.41
23:D:1944:U:H1'	23:D:1955:U:C1'	2.49	0.41
23:D:193:U:C4	23:D:194:G:N7	2.89	0.41
23:D:2166:G:H3'	23:D:2167:U:C6	2.56	0.41
23:D:2209:C:O2	23:D:2215:G:N1	2.53	0.41
23:D:2353:G:C2	23:D:2354:G:C4	3.08	0.41
23:D:2361:A:C6	23:D:2362:G:C5	3.08	0.41
23:D:2409:G:C2	23:D:2410:G:C4	3.08	0.41
23:D:2476:A:C4	23:D:2477:C:C5	3.07	0.41
23:D:2476:A:C6	23:D:2477:C:C4	3.08	0.41
23:D:2485:G:C2	23:D:2486:G:C4	3.09	0.41
23:D:2551:C:O2	23:D:2552:U:C2	2.73	0.41
23:D:2606:C:C2'	23:D:2607:G:C8	3.03	0.41
23:D:2620:C:O5'	23:D:2620:C:H6	2.02	0.41
23:D:2643:G:C2	23:D:2644:G:N2	2.88	0.41
23:D:2674:G:C2	23:D:2675:A:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:280:C:N3	23:D:360:G:C2	2.87	0.41
23:D:2825:C:C4	23:D:2826:A:C5	3.08	0.41
23:D:8:A:C2	23:D:2896:C:C1'	3.03	0.41
23:D:8:A:C2	23:D:2896:C:O4'	2.73	0.41
23:D:301:G:C5	23:D:317:G:C6	3.08	0.41
23:D:453:C:OP1	23:D:453:C:H4'	2.21	0.41
23:D:634:C:H2'	23:D:635:C:O4'	2.20	0.41
23:D:710:G:H1	23:D:721:C:H42	1.67	0.41
23:D:715:G:O6	23:D:717:G:C6	2.73	0.41
23:D:763:G:C4	23:D:765:G:C8	3.08	0.41
23:D:821:A:H5''	23:D:822:U:O5'	2.20	0.41
23:D:823:G:C5	23:D:824:A:N7	2.87	0.41
23:D:97:C:N3	23:D:98:G:C8	2.88	0.41
2:F:97:TRP:HZ2	2:F:102:LEU:HD13	1.85	0.41
2:F:71:VAL:HB	2:F:165:VAL:H	1.85	0.41
4:H:173:TRP:CB	4:H:187:ARG:HB2	2.48	0.41
6:J:6:VAL:HG23	6:J:90:VAL:HB	2.02	0.41
7:K:29:LYS:NZ	7:K:102:ARG:HB2	2.36	0.41
7:K:40:ALA:O	7:K:43:PHE:HB3	2.19	0.41
10:N:58:ASP:O	10:N:60:ARG:NH1	2.53	0.41
13:Q:93:ARG:HB3	13:Q:94:ARG:NH1	2.35	0.41
14:R:24:CYS:HB3	14:R:28:GLY:CA	2.50	0.41
15:S:30:ALA:O	15:S:33:THR:HB	2.19	0.41
17:U:23:VAL:HG22	17:U:24:GLU:N	2.35	0.41
25:Z:161:ILE:HD13	25:Z:163:PHE:CZ	2.37	0.41
25:Z:7:TYR:O	25:Z:10:LEU:N	2.45	0.41
54:3:55:VAL:HG22	54:3:69:THR:HG22	2.03	0.41
56:5:38:A:H2'	56:5:39:U:C4'	2.51	0.41
56:5:9:A:O4'	56:5:46:G:N2	2.53	0.41
1:A:1004:A:H2'	1:A:1036:G:N1	2.35	0.41
1:A:1056:U:C2	1:A:1205:U:H1'	2.54	0.41
1:A:1066:C:O2'	1:A:1067:A:O5'	2.37	0.41
1:A:61:G:C2	1:A:107:G:C6	3.08	0.41
1:A:1163:C:P	1:A:1163:C:H6	2.43	0.41
1:A:1253:G:O2'	1:A:1254:C:H5'	2.20	0.41
1:A:136:C:C2	1:A:137:C:C4	3.08	0.41
1:A:1464:G:H2'	1:A:1465:C:C6	2.55	0.41
1:A:1416:G:C2	1:A:1485:U:O2	2.74	0.41
1:A:1499:A:C5	1:A:1500:A:C8	3.08	0.41
1:A:196:A:HO2'	1:A:197:A:P	2.43	0.41
1:A:29:G:O2'	1:A:30:U:O4'	2.15	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:46:G:H2'	1:A:366:C:H5	1.84	0.41
1:A:511:C:N4	1:A:540:G:H1	2.19	0.41
1:A:562:C:H41	1:A:884:U:H3'	1.85	0.41
1:A:667:G:C2	1:A:740:U:O2	2.74	0.41
1:A:815:A:N7	1:A:1529:G:C6	2.88	0.41
1:A:832:C:H2'	1:A:833:U:H6	1.85	0.41
1:A:872:A:O2'	1:A:873:A:P	2.78	0.41
1:A:911:U:C2	1:A:912:C:C5	3.08	0.41
1:A:919:A:C4	1:A:920:U:C5	3.09	0.41
22:C:121:PHE:CE1	22:C:131:ILE:HD13	2.55	0.41
22:C:230:ILE:HG21	22:C:281:THR:N	2.28	0.41
22:C:280:ILE:C	22:C:282:LEU:N	2.73	0.41
22:C:330:LEU:C	22:C:332:PHE:H	2.24	0.41
22:C:379:LYS:HG3	22:C:388:VAL:HG13	2.02	0.41
22:C:40:GLU:C	22:C:42:ARG:N	2.74	0.41
22:C:41:MET:CB	22:C:45:PHE:CZ	3.03	0.41
22:C:8:ARG:CD	22:C:77:VAL:HG21	2.50	0.41
23:D:1059:G:N7	23:D:1081:U:O2	2.53	0.41
23:D:1163:G:N3	23:D:1164:G:C8	2.88	0.41
23:D:1256:G:C5	23:D:1257:C:C4	3.08	0.41
23:D:1357:U:H3'	23:D:1358:G:C8	2.56	0.41
23:D:1382:G:C6	23:D:1383:C:C4	3.08	0.41
23:D:1477:A:H61	23:D:1515:C:H42	1.67	0.41
23:D:1550:C:H2'	23:D:1551:C:C6	2.55	0.41
23:D:1558:A:H5'	23:D:1559:G:C8	2.56	0.41
23:D:1656:C:H42	23:D:2004:G:H1	1.66	0.41
23:D:1680:U:C4	23:D:1681:G:C2	3.08	0.41
23:D:1717:G:C6	23:D:1743:G:C8	3.08	0.41
23:D:1749:A:C4	23:D:1750:G:C8	3.09	0.41
23:D:2002:G:P	23:D:2002:G:H8	2.43	0.41
23:D:2057:A:C6	23:D:2058:A:C5	3.08	0.41
23:D:2094:G:H1	23:D:2195:C:H42	1.68	0.41
23:D:2114:A:N6	23:D:2115:G:C2	2.88	0.41
23:D:2211:G:OP2	23:D:2211:G:N2	2.53	0.41
23:D:2093:G:C6	23:D:2225:A:C8	3.08	0.41
23:D:2231:C:H2'	23:D:2232:U:H6	1.86	0.41
23:D:2246:G:C2	23:D:2247:A:C4	3.08	0.41
23:D:2251:G:C2	23:D:2252:G:C8	3.09	0.41
23:D:2307:G:C6	23:D:2308:G:C8	3.09	0.41
23:D:2391:G:H22	23:D:2427:C:H4'	1.84	0.41
23:D:2492:U:C6	23:D:2493:U:H5'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2627:G:H8	23:D:2627:G:O5'	2.03	0.41
23:D:2874:C:C2'	23:D:2875:C:H5'	2.50	0.41
23:D:352:G:C6	23:D:353:G:C5	3.08	0.41
23:D:412:A:H2'	23:D:413:C:H5'	2.02	0.41
23:D:43:G:C6	23:D:44:A:C6	3.08	0.41
23:D:476:G:H8	23:D:476:G:O5'	2.04	0.41
23:D:477:A:C5	23:D:478:A:N1	2.88	0.41
23:D:556:G:C4	23:D:557:U:N3	2.88	0.41
23:D:603:A:C2	23:D:604:G:C4	3.08	0.41
23:D:638:G:N7	23:D:639:U:C2	2.88	0.41
23:D:671:C:N3	23:D:672:C:N4	2.67	0.41
23:D:687:C:H3'	23:D:688:U:C5	2.55	0.41
23:D:693:C:H2'	23:D:694:U:H6	1.83	0.41
23:D:777:A:N6	23:D:791:C:H42	2.18	0.41
23:D:83:G:C6	23:D:84:A:C6	3.08	0.41
23:D:862:G:C2	23:D:863:A:H1'	2.55	0.41
23:D:967:C:N3	23:D:968:G:C5	2.89	0.41
24:E:50:G:C4	24:E:51:G:C8	3.08	0.41
2:F:106:LYS:NZ	2:F:110:GLN:HE22	2.17	0.41
4:H:60:GLU:CD	4:H:199:ASN:HB3	2.41	0.41
7:K:64:GLN:HA	7:K:67:GLU:HB3	2.01	0.41
8:L:29:SER:CB	8:L:32:LYS:HZ3	2.27	0.41
10:N:63:PHE:HE2	14:R:45:ARG:HG3	1.84	0.41
17:U:29:HIS:CG	17:U:32:TYR:HD2	2.38	0.41
17:U:48:GLU:N	17:U:48:GLU:OE1	2.53	0.41
19:W:75:ALA:HA	19:W:76:PRO:HD2	1.57	0.41
20:X:59:ALA:O	20:X:63:ILE:HG13	2.20	0.41
25:Z:161:ILE:HD13	25:Z:192:PHE:CD1	2.56	0.41
25:Z:7:TYR:CZ	25:Z:11:LEU:HA	2.55	0.41
52:1:15:LYS:O	52:1:25:VAL:HA	2.20	0.41
55:4:18:G:C6	55:4:58:A:C6	3.08	0.41
1:A:1058:G:H5''	3:G:199:LYS:HE3	2.03	0.41
1:A:108:G:H22	20:X:15:ARG:NH2	2.19	0.41
1:A:1127:G:O5'	1:A:1127:G:H8	2.03	0.41
1:A:119:A:H4'	1:A:120:A:C8	2.56	0.41
1:A:1416:G:N1	1:A:1417:G:N3	2.69	0.41
1:A:1426:C:N4	1:A:1474:G:H1	2.18	0.41
1:A:1475:G:C2	1:A:1476:G:C4	3.08	0.41
1:A:1502:A:C5	1:A:1504:G:N1	2.87	0.41
1:A:1507:A:C6	1:A:1508:G:C5	3.09	0.41
1:A:166:G:C2	1:A:167:G:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:C:N4	1:A:169:C:H42	2.19	0.41
1:A:186(C):G:H22	1:A:191(D):U:H3	1.68	0.41
1:A:27:G:H2'	1:A:28:G:O4'	2.19	0.41
1:A:279:A:C2	1:A:281:G:N2	2.89	0.41
1:A:312:C:C4	1:A:313:A:C5	3.09	0.41
1:A:313:A:H2'	1:A:314:C:C6	2.55	0.41
1:A:392:G:C2	1:A:393:A:C4	3.08	0.41
1:A:409:G:C6	1:A:410:G:C4	3.08	0.41
1:A:458:C:C4	1:A:464:G:C5	3.08	0.41
1:A:558:G:C4	1:A:559:A:C2	3.08	0.41
1:A:570:G:H1'	1:A:820:U:O2	2.20	0.41
1:A:768:A:H2'	1:A:769:G:C5'	2.50	0.41
1:A:774:G:N2	1:A:805:C:N3	2.59	0.41
1:A:883:C:C2	1:A:884:U:H1'	2.54	0.41
1:A:963:G:C2	1:A:964:A:C4	3.09	0.41
1:A:984:C:N4	1:A:985:C:C4	2.88	0.41
22:C:14:ILE:HG22	22:C:105:LEU:CA	2.41	0.41
22:C:204:VAL:O	22:C:211:VAL:HG12	2.21	0.41
22:C:228:ILE:HG23	22:C:282:LEU:HA	2.01	0.41
22:C:404:GLU:CA	22:C:405:ILE:HD12	2.50	0.41
22:C:409:TYR:HD2	22:C:483:GLY:C	2.23	0.41
23:D:1057:A:H8	23:D:1060:U:O4	2.03	0.41
23:D:1099:G:C2	23:D:1100:C:C4	3.09	0.41
23:D:1179:C:C2	23:D:1180:C:C6	3.08	0.41
23:D:582:G:C6	23:D:1259:G:N1	2.88	0.41
23:D:1422:G:C6	23:D:1423:G:C6	3.08	0.41
23:D:1479:G:N7	23:D:1514:U:C4	2.88	0.41
23:D:1568:G:O2'	23:D:1569:A:P	2.78	0.41
23:D:1582:C:H4'	23:D:1587:A:H1'	2.03	0.41
23:D:1599:C:N4	23:D:1600:C:H41	2.18	0.41
23:D:1662:C:H2'	23:D:1663:C:H6	1.86	0.41
23:D:1726:G:C6	23:D:1727:U:N3	2.89	0.41
23:D:1789:A:N6	23:D:1790:C:N3	2.68	0.41
23:D:1955:U:O2'	23:D:1956:U:OP 1	2.35	0.41
23:D:1956:U:H3'	23:D:1956:U:OP 2	2.20	0.41
23:D:1969:A:H5'	23:D:1970:A:OP 1	2.20	0.41
23:D:1991:U:H6	23:D:1991:U:O5'	2.04	0.41
23:D:2003:G:O2'	23:D:2004:G:O5'	2.37	0.41
23:D:217:G:C4	23:D:218:A:C8	3.09	0.41
23:D:2195:C:H2'	23:D:2196:C:C6	2.54	0.41
23:D:2407:G:C5	23:D:2408:U:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2468:G:C6	23:D:2481:G:N1	2.89	0.41
23:D:2562:U:H2'	23:D:2563:U:N1	2.35	0.41
23:D:2581:G:O2'	23:D:2582:G:N7	2.47	0.41
23:D:262:A:C4	23:D:263:C:N3	2.88	0.41
23:D:2674:G:C4	23:D:2675:A:C8	3.08	0.41
23:D:270(W):G:H3'	23:D:270(X):G:C8	2.56	0.41
23:D:2691:C:N4	23:D:2719:G:C2	2.88	0.41
23:D:2722:G:H2'	23:D:2723:C:H6	1.86	0.41
23:D:2725:A:N6	23:D:2727:G:C4	2.88	0.41
23:D:2749:A:C8	23:D:2750:A:C4	3.08	0.41
23:D:293:U:N3	23:D:294:A:N6	2.68	0.41
23:D:406:G:C5	23:D:407:G:C5	3.08	0.41
23:D:421:U:O2'	23:D:422:A:P	2.78	0.41
23:D:423:A:H8	23:D:423:A:O5'	2.04	0.41
23:D:430:G:H5''	23:D:431:U:P	2.60	0.41
23:D:506:G:O2'	23:D:507:A:O5'	2.39	0.41
23:D:547:A:C2	23:D:548:A:H1'	2.56	0.41
23:D:584:C:N3	23:D:585:G:C5	2.87	0.41
23:D:593:G:C4	23:D:594:U:C5	3.08	0.41
23:D:58:G:H3'	23:D:59:U:H6	1.86	0.41
23:D:601:C:N4	23:D:656:G:C6	2.84	0.41
23:D:619:G:N7	23:D:620:G:C2	2.89	0.41
23:D:722:A:C2	23:D:723:G:C4	3.08	0.41
23:D:774:A:C8	23:D:775:G:C6	3.08	0.41
24:E:29:A:O2'	24:E:58:A:N1	2.54	0.41
2:F:70:PHE:CE1	2:F:81:VAL:HG13	2.56	0.41
3:G:142:MET:HE1	3:G:170:GLN:C	2.40	0.41
3:G:64:VAL:HB	3:G:99:VAL:CG1	2.50	0.41
6:J:29:ALA:HB1	6:J:78:GLU:HG2	2.02	0.41
7:K:63:LYS:HA	7:K:63:LYS:HD2	1.83	0.41
8:L:100:ILE:HG22	8:L:102:ARG:N	2.32	0.41
9:M:18:PHE:HD2	9:M:62:TYR:CE2	2.37	0.41
10:N:14:LYS:HA	10:N:17:ASP:HB2	2.03	0.41
15:S:33:THR:O	15:S:36:ILE:HG22	2.20	0.41
15:S:62:GLN:O	15:S:66:LEU:HG	2.21	0.41
18:V:45:SER:HB3	18:V:51:LEU:HG	2.02	0.41
18:V:45:SER:N	18:V:51:LEU:HD11	2.35	0.41
19:W:49:ILE:CG2	19:W:62:ILE:HD12	2.50	0.41
20:X:53:LEU:O	20:X:56:MET:HB3	2.21	0.41
21:Y:10:ARG:HG2	23:D:125:G:C2	153.05	0.41
54:3:65:PHE:HB3	54:3:67:PHE:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:3:8:VAL:HG23	54:3:59:ILE:CD1	2.51	0.41
55:4:35:A:C8	55:4:35:A:OP2	2.73	0.41
55:4:4:G:C6	55:4:70:G:N1	2.89	0.41
56:5:3:C:H2'	56:5:4:C:H6	1.84	0.41
56:5:28:G:C6	56:5:43:C:N3	2.88	0.41
1:A:1027:C:H3'	1:A:1028:C:H6	1.85	0.41
1:A:102:G:H2'	1:A:103:C:H6	1.85	0.41
1:A:1092:A:P	1:A:1092:A:H8	2.43	0.41
1:A:1135:U:H1'	1:A:1140:C:H42	1.86	0.41
1:A:141:A:C6	1:A:142:G:C5	3.08	0.41
1:A:1430:C:O2'	1:A:1431:C:H5'	2.21	0.41
1:A:237:C:H5''	17:U:25:ARG:CZ	2.51	0.41
1:A:275:G:H2'	1:A:276:G:H8	1.85	0.41
1:A:291:C:N4	1:A:309:G:H1	2.17	0.41
1:A:325:A:C6	1:A:326:G:C6	3.08	0.41
1:A:515:G:C2	1:A:537:G:C4	3.08	0.41
1:A:568:G:C5	1:A:569:C:C4	3.09	0.41
1:A:655:A:C6	1:A:656:C:C4	3.09	0.41
1:A:664:G:H5'	18:V:64:ARG:NE	2.36	0.41
1:A:671:G:O6	1:A:672:U:C2	2.73	0.41
1:A:665:A:N7	1:A:725:G:C2	2.88	0.41
1:A:581:G:C2	1:A:758:G:C4	3.08	0.41
1:A:761:G:C6	1:A:762:C:C4	3.07	0.41
1:A:778:G:C2	1:A:779:C:C2	3.08	0.41
1:A:876:G:H2'	1:A:877:C:C6	2.48	0.41
1:A:933:G:OP2	7:K:3:ARG:NE	2.52	0.41
22:C:169:LYS:O	22:C:171:GLY:N	2.53	0.41
22:C:263:TRP:CD1	22:C:263:TRP:O	2.74	0.41
22:C:301:VAL:C	22:C:348:PHE:CG	2.93	0.41
22:C:468:LYS:CB	22:C:473:GLY:HA2	2.50	0.41
22:C:497:HIS:HB2	22:C:535:VAL:HG11	1.74	0.41
22:C:590:VAL:O	22:C:592:VAL:N	2.53	0.41
23:D:1034:G:C2	23:D:1122:G:C4	3.09	0.41
23:D:1048:A:H2'	23:D:1049:C:C5	2.55	0.41
23:D:110:G:C3'	23:D:111:A:H8	2.28	0.41
23:D:1231:G:C4	23:D:1232:G:C8	3.08	0.41
23:D:1336:A:C6	23:D:1337:G:C6	3.08	0.41
23:D:1361:G:C6	23:D:1362:C:N4	2.88	0.41
23:D:1395:A:N7	23:D:1398:C:N4	2.69	0.41
23:D:1540:G:C2	23:D:1541:U:H1'	2.55	0.41
23:D:1563:G:C5	23:D:1564:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1312:U:H3	23:D:1603:A:N6	2.18	0.41
23:D:1613:G:C6	23:D:1619:G:N1	2.88	0.41
23:D:1676:A:C5	23:D:1677:A:C5	3.09	0.41
23:D:1702:G:H2'	23:D:1703:G:O4'	2.20	0.41
23:D:1909:C:O2	23:D:1922:G:N1	2.53	0.41
23:D:1930:G:HO2'	23:D:1931:U:P	2.44	0.41
23:D:197:A:C2	23:D:198:C:H1'	2.55	0.41
23:D:2001:A:C2	23:D:2002:G:C2	3.09	0.41
23:D:2010:G:C2	23:D:2011:U:C2	3.08	0.41
23:D:2055:C:H4'	23:D:2056:G:H5''	2.03	0.41
23:D:221:A:C5	23:D:266:G:N7	2.89	0.41
23:D:2092:U:O2'	23:D:2225:A:N3	2.50	0.41
23:D:2228:G:C2	23:D:2229:C:C2	3.09	0.41
23:D:2273:A:H2'	23:D:2274:A:H5'	2.01	0.41
23:D:2488:A:C4	23:D:2489:G:C8	3.08	0.41
23:D:250:G:H2'	23:D:251:A:O4'	2.21	0.41
23:D:2519:U:O2	23:D:2520:C:N4	2.54	0.41
23:D:2536:G:C6	23:D:2537:U:N3	2.88	0.41
23:D:2572:A:N3	23:D:2572:A:H2'	2.34	0.41
23:D:2631:G:O5'	23:D:2894:G:C5	2.73	0.41
23:D:2679:A:N1	23:D:2729:G:C6	2.89	0.41
23:D:2684:U:C2	23:D:2685:G:C8	3.09	0.41
23:D:270(U):C:C2	23:D:270(V):G:C8	3.09	0.41
23:D:2722:G:H2'	23:D:2723:C:C6	2.56	0.41
23:D:2776:A:C8	23:D:2781:A:C6	3.08	0.41
23:D:2830:G:C5	23:D:2831:G:C5	3.08	0.41
23:D:284:U:H2'	23:D:285:C:H6	1.80	0.41
23:D:2853:C:N3	23:D:2854:G:C5	2.89	0.41
23:D:2840:C:H42	23:D:2877:G:H1	1.68	0.41
23:D:304:G:C6	23:D:314:A:C6	3.08	0.41
23:D:289:A:C6	23:D:351:G:C4	3.09	0.41
23:D:272:G:C2	23:D:366:C:N3	2.88	0.41
23:D:411:G:C8	23:D:411:G:H3'	2.56	0.41
23:D:413:C:N3	23:D:414:C:C4	2.88	0.41
23:D:408:G:N1	23:D:420:C:N3	2.69	0.41
23:D:522:G:C5	23:D:523:C:C5	3.09	0.41
23:D:575:A:HO2'	23:D:576:U:C5'	2.34	0.41
23:D:769:G:C6	23:D:770:G:C5	3.08	0.41
23:D:875:G:H2'	23:D:876:C:C2	2.55	0.41
23:D:900:A:OP2	23:D:900:A:C8	2.73	0.41
23:D:854:G:N1	23:D:923:C:O2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:952:G:C4	23:D:966:G:C2	3.09	0.41
24:E:75:G:H3'	24:E:76:G:H8	1.83	0.41
24:E:75:G:C6	24:E:76:G:C5	3.08	0.41
2:F:102:LEU:HB2	2:F:176:GLU:CG	2.50	0.41
2:F:84:GLU:OE1	2:F:234:PRO:HD2	2.21	0.41
3:G:150:LYS:HA	3:G:169:ALA:HB2	2.01	0.41
3:G:58:GLU:HB2	3:G:65:ALA:HB2	2.02	0.41
4:H:206:PHE:C	4:H:209:ARG:HH22	2.24	0.41
5:I:109:ILE:HD13	5:I:135:THR:HB	2.03	0.41
6:J:18:GLN:HG2	6:J:22:GLU:HG3	2.02	0.41
6:J:55:ASP:CB	6:J:86:ARG:HH22	2.33	0.41
9:M:119:ALA:C	9:M:120:ARG:HG3	2.40	0.41
11:O:57:THR:HG23	11:O:60:ALA:H	1.85	0.41
20:X:28:ALA:O	20:X:31:SER:OG	2.19	0.41
25:Z:58:VAL:CB	25:Z:199:HIS:HB3	2.49	0.41
23:D:1107:G:O2'	53:2:80:VAL:HA	2.21	0.41
55:4:5:G:N2	55:4:6:G:N3	2.68	0.41
56:5:6:G:C2	56:5:7:A:N7	2.88	0.41
23:D:2422:A:N7	56:5:76:A:C4	2.89	0.41
1:A:1014:A:H2'	1:A:1015:A:O4'	2.20	0.41
1:A:1010:G:C2	1:A:1020:U:C2	3.09	0.41
1:A:1130:A:H2	1:A:1131:G:C2	2.38	0.41
1:A:1169:A:H2'	1:A:1170:A:O4'	2.20	0.41
1:A:1320:C:C4	1:A:1321:C:C2	3.09	0.41
1:A:1389:C:C4	1:A:1390:U:C2	3.08	0.41
1:A:1454:G:O5'	1:A:1454:G:H8	2.03	0.41
1:A:199:G:N2	1:A:219:C:C2	2.89	0.41
1:A:458:C:C4	1:A:464:G:C6	3.09	0.41
1:A:540:G:H2'	1:A:541:G:C8	2.53	0.41
1:A:720:C:H2'	1:A:721:G:N7	2.35	0.41
1:A:766:A:H2'	1:A:767:A:O4'	2.20	0.41
1:A:823:G:H1	1:A:877:C:N4	2.17	0.41
1:A:861:G:C5	1:A:862:C:C5	3.08	0.41
1:A:914:A:C4	1:A:915:A:C8	3.09	0.41
1:A:932:C:P	7:K:3:ARG:HD2	2.61	0.41
1:A:945:G:C6	1:A:1337:G:N3	2.89	0.41
1:A:976:G:N7	1:A:1358:U:H2'	2.36	0.41
22:C:104:LEU:O	22:C:105:LEU:CB	2.68	0.41
22:C:10:ARG:O	22:C:79:HIS:NE2	2.53	0.41
22:C:201:PHE:HB3	22:C:202:ASP:H	1.71	0.41
22:C:215:LEU:CB	22:C:264:LEU:HD11	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:372:THR:O	22:C:374:PRO:CD	2.68	0.41
22:C:410:VAL:HG21	22:C:479:TYR:CZ	2.54	0.41
22:C:423:SER:CB	22:C:470:VAL:CG1	2.82	0.41
22:C:43:GLU:HA	22:C:43:GLU:OE2	2.20	0.41
22:C:455:PRO:O	22:C:459:ILE:CD1	2.69	0.41
23:D:1099:G:C6	23:D:1100:C:N4	2.89	0.41
23:D:1102:C:O2'	23:D:1103:A:C5	2.71	0.41
23:D:1179:C:O2'	23:D:1180:C:O5'	2.37	0.41
23:D:1237:A:O2'	23:D:1238:G:P	2.79	0.41
23:D:1269:A:C6	23:D:1270:C:N4	2.89	0.41
23:D:1276:A:N6	23:D:1295:C:C4	2.88	0.41
23:D:1354:A:N6	23:D:1377:G:N2	2.67	0.41
23:D:1422:G:C2	23:D:1423:G:C5	3.08	0.41
23:D:1424:G:H2'	23:D:1425:G:H8	1.84	0.41
23:D:1467:C:C2	23:D:1468:C:N3	2.88	0.41
23:D:1608:A:C4	23:D:1611:C:C5	3.09	0.41
23:D:1641:A:N7	23:D:1642:G:C5	2.88	0.41
23:D:1655:A:OP2	23:D:1655:A:H8	2.02	0.41
23:D:1681:G:N1	23:D:1762:A:C5	2.89	0.41
23:D:154:G:H1'	23:D:173:G:H22	1.85	0.41
23:D:1831:G:C6	23:D:1975:G:N1	2.88	0.41
23:D:1855:G:H1	23:D:1887:C:N4	2.17	0.41
23:D:2034:U:N3	23:D:2035:G:C4	2.89	0.41
23:D:2141:G:H2'	23:D:2142:C:O4'	2.21	0.41
23:D:2259:G:N1	23:D:2282:G:C6	2.88	0.41
23:D:2382:G:H4'	23:D:2383:G:O5'	2.20	0.41
23:D:2403:C:C4	23:D:2415:G:C5	3.09	0.41
23:D:2391:G:N1	23:D:2427:C:H1'	2.36	0.41
23:D:2432:A:N6	23:D:2433:A:C6	2.88	0.41
23:D:945:A:N1	23:D:2448:A:C5	2.89	0.41
23:D:2523:G:C6	23:D:2524:G:C5	3.08	0.41
23:D:2527:C:H5'	52:1:33:LYS:NZ	2.35	0.41
23:D:2657:A:H2'	23:D:2658:C:C6	2.55	0.41
23:D:271:G:N2	23:D:404:C:H42	2.18	0.41
23:D:2773:C:H3'	23:D:2773:C:OP2	2.19	0.41
23:D:2843:G:H1	23:D:2874:C:N4	2.19	0.41
23:D:301:G:C6	23:D:302:C:N4	2.89	0.41
23:D:337:C:H5''	23:D:338:G:OP2	2.20	0.41
23:D:363(A):A:C2	23:D:363(B):G:C4	3.08	0.41
23:D:388:G:C6	23:D:390:A:C4	3.08	0.41
23:D:425:G:H2'	23:D:426:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:449:A:C5	23:D:450:G:C5	3.08	0.41
23:D:563:G:H22	23:D:578:A:H2	1.68	0.41
23:D:579:G:H2'	23:D:580:C:C6	2.55	0.41
23:D:660:G:H2'	23:D:661:C:H6	1.85	0.41
23:D:737:C:N3	23:D:738:G:H8	2.18	0.41
23:D:801:G:OP1	23:D:801:G:H8	2.04	0.41
23:D:822:U:O2'	23:D:823:G:P	2.79	0.41
23:D:867:C:C2	23:D:868:U:C6	3.09	0.41
23:D:878:A:H8	23:D:899:A:C2	2.38	0.41
23:D:881:G:H5'	23:D:883:G:C6	2.56	0.41
23:D:953:A:N6	23:D:965:C:H42	2.18	0.41
23:D:955:C:N4	23:D:956:G:C2	2.88	0.41
23:D:998:C:OP2	23:D:998:C:H6	2.04	0.41
24:E:75:G:C6	24:E:76:G:C4	3.08	0.41
24:E:76:G:C6	24:E:77:U:C4	3.08	0.41
2:F:112:VAL:HG13	2:F:115:LEU:HD23	2.03	0.41
2:F:115:LEU:CD2	2:F:153:ARG:HD3	2.50	0.41
2:F:163:PHE:CG	2:F:164:VAL:N	2.88	0.41
2:F:46:LYS:HA	2:F:49:GLU:CD	2.41	0.41
5:I:31:LEU:HD11	5:I:43:LEU:CG	2.50	0.41
5:I:76:ILE:HG22	5:I:78:HIS:N	2.33	0.41
8:L:93:VAL:C	8:L:133:LEU:HD12	2.41	0.41
10:N:12:ASP:OD1	10:N:13:HIS:N	2.53	0.41
14:R:43:CYS:HA	14:R:46:GLU:CD	2.41	0.41
15:S:54:ARG:O	15:S:58:MET:HG3	2.21	0.41
1:A:474:G:P	16:T:80:PHE:HD2	2.44	0.41
19:W:11:VAL:CG2	19:W:38:SER:OG	2.68	0.41
25:Z:205:LYS:HA	25:Z:205:LYS:HD2	1.88	0.41
25:Z:67:GLY:O	25:Z:177:LYS:CD	2.68	0.41
25:Z:7:TYR:O	25:Z:11:LEU:N	2.54	0.41
55:4:54:U:H3'	55:4:55:U:H6	1.86	0.41
1:A:111:G:H4'	16:T:27:LYS:CD	2.46	0.41
1:A:1189:C:H6	1:A:1189:C:O5'	2.04	0.41
1:A:1231:G:H3'	1:A:1232:U:C6	2.55	0.41
1:A:1239:A:H1'	1:A:1241:G:C2	2.55	0.41
1:A:1248:A:H4'	9:M:36:TYR:HE1	1.86	0.41
1:A:124:G:H2'	1:A:125:U:O4'	2.20	0.41
1:A:1504:G:H4'	1:A:1505:G:OP2	2.19	0.41
1:A:260:G:H2'	1:A:261:U:C6	2.56	0.41
1:A:318:G:O6	1:A:336:C:N4	2.48	0.41
1:A:465:A:H3'	1:A:467:G:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:537:G:H2'	1:A:538:G:C8	2.54	0.41
1:A:53:A:H3'	1:A:54:C:O4'	2.21	0.41
1:A:676:A:O2'	11:O:115:PRO:HB3	2.21	0.41
1:A:689:C:H4'	1:A:705:U:H1'	2.02	0.41
1:A:746:A:C5	1:A:747:C:N4	2.88	0.41
1:A:785:G:C4	1:A:786:G:C8	3.09	0.41
1:A:812:C:O2'	1:A:813:U:P	2.79	0.41
1:A:921:U:O5'	1:A:921:U:H6	2.04	0.41
1:A:962:C:H2'	1:A:963:G:H8	1.86	0.41
22:C:315:LYS:C	22:C:317:ARG:H	2.22	0.41
22:C:409:TYR:HB3	22:C:454:ALA:O	2.20	0.41
22:C:492:VAL:HG23	22:C:508:ALA:CA	2.40	0.41
22:C:49:LEU:C	22:C:51:LEU:N	2.73	0.41
22:C:590:VAL:C	22:C:592:VAL:N	2.73	0.41
22:C:9:ILE:CA	22:C:77:VAL:O	2.68	0.41
23:D:997:G:N1	23:D:1159:U:N3	2.68	0.41
23:D:1160:G:C6	23:D:1161:C:N4	2.88	0.41
23:D:1229:G:O2'	23:D:1230:C:H5'	2.20	0.41
23:D:1344:G:OP2	23:D:1344:G:H8	2.04	0.41
23:D:1407:C:C2	23:D:1408:C:H5	2.39	0.41
23:D:1423:G:H5'	23:D:1493:C:C5	2.55	0.41
23:D:1436:G:H2'	23:D:1437:C:C6	2.56	0.41
23:D:1477:A:N6	23:D:1515:C:H42	2.19	0.41
23:D:1594:G:C2	23:D:1595:G:C8	3.08	0.41
23:D:164:U:OP1	23:D:171:G:P	2.79	0.41
23:D:1656:C:H2'	23:D:1657:C:O4'	2.20	0.41
23:D:1836:C:H42	23:D:1905:C:N4	2.19	0.41
23:D:1837:C:N4	23:D:1904:G:C6	2.87	0.41
23:D:1923:U:H2'	23:D:1924:C:C6	2.55	0.41
23:D:1935:G:C2	23:D:1964:G:C2	3.08	0.41
23:D:1979:C:H2'	23:D:1980:G:C8	2.56	0.41
23:D:1667:G:N2	23:D:1991:U:H2'	2.36	0.41
23:D:1997:G:C2	23:D:1998:G:C4	3.09	0.41
23:D:1657:C:N4	23:D:2003:G:H1	2.19	0.41
23:D:2020:A:N1	23:D:2034:U:O4	2.54	0.41
23:D:2216:G:C4	23:D:2217:G:C8	3.08	0.41
23:D:2261:C:H2'	23:D:2262:U:C5	2.55	0.41
23:D:2279:G:N3	23:D:2280:G:C8	2.89	0.41
23:D:2315:G:C4	23:D:2316:C:N3	2.89	0.41
23:D:2365:G:O5'	23:D:2365:G:H8	2.04	0.41
23:D:2378:A:H8	23:D:2378:A:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2422:A:H2	23:D:2424:C:C2	2.39	0.41
23:D:245:G:C5	23:D:246:C:N4	2.89	0.41
23:D:2462:U:N3	23:D:2463:C:C4	2.89	0.41
23:D:2570:G:C6	23:D:2571:C:C4	3.08	0.41
23:D:2663:G:C6	23:D:2664:G:N1	2.88	0.41
23:D:2702:U:H2'	23:D:2703:C:C5	2.56	0.41
23:D:2706:G:C2	23:D:2707:G:C4	3.09	0.41
23:D:270(E):G:OP2	23:D:270(E):G:H8	2.04	0.41
23:D:270(W):G:C5	23:D:270(X):G:C6	3.08	0.41
23:D:2749:A:H2	23:D:2757:A:N1	2.18	0.41
23:D:290:G:C2	23:D:351:G:N1	2.88	0.41
23:D:304:G:C6	23:D:305:U:C4	3.08	0.41
23:D:406:G:N1	23:D:421:U:C2	2.89	0.41
23:D:462:C:O2	23:D:468:G:N2	2.54	0.41
23:D:461:C:N4	23:D:468:G:H1	2.19	0.41
23:D:55:G:C2	23:D:56:A:C8	3.08	0.41
23:D:601:C:N4	23:D:602:G:C6	2.88	0.41
23:D:632:A:C4	23:D:633:A:C8	3.08	0.41
23:D:681:G:C2	23:D:682:G:C4	3.08	0.41
23:D:682:G:N3	23:D:683:C:N3	2.69	0.41
23:D:738:G:C2	23:D:739:G:C4	3.08	0.41
23:D:840:C:C2	23:D:841:A:N7	2.89	0.41
23:D:842:G:C4	23:D:843:G:N7	2.88	0.41
23:D:959:A:C2	23:D:960:A:C5	3.09	0.41
23:D:974(A):C:H42	23:D:989:G:N2	2.19	0.41
24:E:99:A:H2'	24:E:100:G:C8	2.56	0.41
3:G:188:LEU:HD23	3:G:189:ALA:N	2.35	0.41
3:G:7:PRO:HB3	3:G:201:TYR:HE1	1.85	0.41
3:G:87:LEU:HB2	3:G:101:LEU:HD11	2.02	0.41
7:K:62:PHE:O	7:K:66:VAL:HG23	2.21	0.41
8:L:24:THR:HG23	8:L:61:VAL:HB	2.02	0.41
13:Q:24:GLY:HA3	13:Q:66:LEU:CG	2.49	0.41
13:Q:12:ASN:HD22	13:Q:44:ARG:NH1	2.18	0.41
14:R:34:TYR:CD1	14:R:35:ARG:N	2.89	0.41
15:S:36:ILE:HG23	15:S:37:ASN:N	2.35	0.41
16:T:20:VAL:HG21	16:T:32:TYR:HB2	2.02	0.41
17:U:29:HIS:O	17:U:33:GLY:N	2.54	0.41
20:X:50:GLU:HG3	20:X:54:LYS:HZ2	1.85	0.41
25:Z:91:ALA:HB3	25:Z:94:VAL:HG22	2.03	0.41
56:5:7:A:OP2	56:5:8:U:H5	2.02	0.41
1:A:1057:G:H1	1:A:1203:C:N4	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1069:C:C4	1:A:1070:U:C5	3.09	0.41
1:A:1332:A:P	1:A:1332:A:H8	2.43	0.41
1:A:1428:A:C6	1:A:1429:C:C4	3.08	0.41
1:A:1453:G:C2	1:A:1454:G:C5	3.09	0.41
1:A:1465:C:H2'	1:A:1466:C:C5'	2.50	0.41
1:A:1520:G:C6	1:A:1521:G:C5	3.09	0.41
1:A:163:C:N3	1:A:164:U:N3	2.69	0.41
1:A:15:G:C4	1:A:16:A:C8	3.09	0.41
1:A:284:G:C5	1:A:285:G:N7	2.88	0.41
1:A:293:G:C4	1:A:305:G:C2	3.09	0.41
1:A:418:C:C4	1:A:419:C:N4	2.89	0.41
1:A:40:C:H2'	1:A:41:G:C8	2.56	0.41
1:A:41:G:H2'	1:A:42:G:C8	2.54	0.41
1:A:42:G:C5	1:A:43:C:C5	3.08	0.41
1:A:604:G:C2	1:A:605:U:C2	3.09	0.41
1:A:65:U:N3	1:A:381:C:C4	2.89	0.41
1:A:671:G:C2	1:A:736:C:N3	2.89	0.41
1:A:696:A:N1	1:A:797:C:H1'	2.36	0.41
1:A:825:G:C4	1:A:876:G:C2	3.09	0.41
1:A:87:A:N7	1:A:88:C:C2	2.89	0.41
22:C:102:GLY:C	22:C:103:VAL:HG23	2.41	0.41
22:C:206:ASP:C	22:C:208:TYR:N	2.73	0.41
22:C:230:ILE:HG21	22:C:281:THR:HA	2.01	0.41
22:C:2:VAL:C	22:C:4:MET:N	2.74	0.41
22:C:30:LEU:C	22:C:32:LEU:H	2.23	0.41
22:C:490:VAL:HG13	22:C:491:LYS:N	2.34	0.41
22:C:517:ALA:C	22:C:519:ALA:N	2.73	0.41
22:C:535:VAL:HG23	22:C:585:LYS:NZ	2.36	0.41
23:D:1003:G:C2	23:D:1004:C:C2	3.09	0.41
23:D:1032:A:C2	23:D:1123:C:N3	2.88	0.41
23:D:1140:C:H4'	23:D:1142(A):A:C2	2.56	0.41
23:D:1171:G:H2'	23:D:1174:A:OP 2	2.20	0.41
23:D:121:G:C4	23:D:131:G:C6	3.09	0.41
23:D:135:G:C2	23:D:136:G:N7	2.89	0.41
23:D:1414:G:C2	23:D:1589:C:N3	2.89	0.41
23:D:1545(A):A:H3'	23:D:1546:C:C6	2.56	0.41
23:D:1625:C:N3	23:D:1626:G:H8	2.19	0.41
23:D:1649:G:C2	23:D:1650:G:C4	3.09	0.41
23:D:1828:G:H4'	23:D:1829:A:OP 2	2.20	0.41
23:D:1859:A:C8	23:D:1860:G:C8	3.08	0.41
23:D:1930:G:C2	23:D:1968:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1970:A:H5''	23:D:1972:A:H1'	2.03	0.41
23:D:1982:C:O2'	23:D:1983:C:O4'	2.31	0.41
23:D:2119:A:C6	23:D:2170:A:C5	3.09	0.41
23:D:2216:G:C5	23:D:2217:G:N7	2.88	0.41
23:D:2295:C:C2	23:D:2338:G:C2	3.09	0.41
23:D:2370:G:N1	23:D:2371:G:C2	2.89	0.41
23:D:2377:A:H2'	23:D:2378:A:H8	1.86	0.41
23:D:2385:C:O2'	23:D:2386:C:O5'	2.36	0.41
23:D:241:A:C2'	23:D:242:G:H4'	2.28	0.41
23:D:2435:A:H2'	23:D:2436:G:H8	1.85	0.41
23:D:2461:C:C4	23:D:2462:U:C4	3.09	0.41
23:D:2467:C:N4	23:D:2484:G:C6	2.88	0.41
23:D:2528:U:H3'	23:D:2530:A:N7	2.36	0.41
23:D:2706:G:N1	23:D:2707:G:C4	2.89	0.41
23:D:270(Z):U:C2	23:D:271(A):C:H4'	2.55	0.41
23:D:2785:C:N4	23:D:2786:U:O4	2.54	0.41
23:D:2791:C:N3	23:D:2807:G:C5	2.89	0.41
23:D:288:C:N3	23:D:289:A:H1'	2.35	0.41
23:D:286:C:C2	23:D:356:G:N2	2.89	0.41
23:D:446:G:H5'	23:D:449:A:C1'	2.51	0.41
23:D:508:G:O2'	23:D:509:C:OP2	2.38	0.41
23:D:64:A:H2'	23:D:65:C:H6	1.86	0.41
23:D:756:C:C4	23:D:757:U:C4	3.09	0.41
23:D:820:A:C6	23:D:821:A:C5	3.09	0.41
23:D:823:G:C6	23:D:835:A:N1	2.88	0.41
23:D:939:G:N2	23:D:940:G:C4	2.89	0.41
23:D:996:A:C4	23:D:997:G:C8	3.09	0.41
24:E:33:G:N1	24:E:49:C:O2	2.53	0.41
24:E:44:G:H5''	24:E:45:A:OP1	2.21	0.41
24:E:81:G:C6	24:E:96:G:C4	3.09	0.41
2:F:215:LEU:O	2:F:219:VAL:HG23	2.20	0.41
5:I:75:THR:OG1	5:I:118:ILE:HD11	2.21	0.41
5:I:129:ILE:O	5:I:132:ALA:HB3	2.21	0.41
11:O:13:GLN:HG3	11:O:76:GLY:HA3	2.02	0.41
11:O:74:ALA:O	11:O:75:TYR:HB2	4.01	0.41
14:R:25:VAL:HG12	14:R:39:LEU:HD22	2.02	0.41
1:A:624:C:H4'	16:T:10:GLY:HA2	2.03	0.41
1:A:235:C:P	17:U:70:ARG:HE	2.43	0.41
1:A:1016:A:O5'	1:A:1016:A:H8	2.04	0.41
1:A:10:A:C6	1:A:11:G:C6	3.08	0.41
1:A:1157:A:C4	1:A:1180:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1358:U:H5''	1:A:1359:C:H5	1.85	0.41
1:A:924:C:N4	1:A:1392:G:H1	2.18	0.41
1:A:1502:A:H2'	1:A:1504:G:C4	2.56	0.41
1:A:195:A:C4	1:A:196:A:N1	2.89	0.41
1:A:136:C:C4	1:A:228:A:N1	2.89	0.41
1:A:124:G:C6	1:A:238:G:C6	3.09	0.41
1:A:241:C:C2	1:A:242:C:C5	3.08	0.41
1:A:451:A:H2'	1:A:481:G:N1	2.33	0.41
1:A:498:A:C6	1:A:547:A:C4	3.09	0.41
1:A:554:C:H2'	1:A:555:C:H6	1.86	0.41
1:A:575:G:C4	1:A:881:G:N2	2.88	0.41
1:A:610:G:C5	1:A:611:A:N7	2.89	0.41
1:A:639:G:H2'	1:A:640:A:H8	1.86	0.41
1:A:658:G:C2'	1:A:659:U:H5'	2.50	0.41
1:A:923:A:C5	1:A:924:C:C4	3.09	0.41
1:A:943:U:H2'	1:A:944:G:C8	2.55	0.41
22:C:124:ALA:HA	22:C:129:HIS:CD2	2.56	0.41
22:C:230:ILE:HG22	22:C:231:TYR:CD2	2.51	0.41
22:C:2:VAL:O	22:C:3:ARG:HB3	2.20	0.41
22:C:511:GLU:C	22:C:513:ALA:N	2.73	0.41
23:D:1034:G:H4'	52:1:18:ARG:NH2	2.35	0.41
23:D:1192:G:N3	23:D:1193:G:C8	2.89	0.41
23:D:126:A:C6	23:D:127:A:C2	3.09	0.41
23:D:1280:G:H1	23:D:1290:C:N4	2.19	0.41
23:D:1711:C:N3	23:D:1748:G:C2	2.89	0.41
23:D:171:G:HO2'	23:D:172:C:H5''	1.83	0.41
23:D:1805:U:C4	23:D:1813:G:N1	2.88	0.41
23:D:1825:A:C6	23:D:1826:G:C6	3.09	0.41
23:D:1930:G:H2'	23:D:1968:G:H1	1.85	0.41
23:D:2049:G:HO2'	23:D:2050:C:P	2.42	0.41
23:D:2087:G:H2'	23:D:2088:G:H8	1.83	0.41
23:D:2109:U:H6	23:D:2109:U:O5'	2.04	0.41
23:D:2233:U:H2'	23:D:2234:G:C8	2.55	0.41
23:D:224:G:H2'	23:D:225:A:O4'	2.21	0.41
23:D:2274:A:C6	23:D:2276:G:C8	3.09	0.41
23:D:2276:G:C2	23:D:2277:G:C5	3.09	0.41
23:D:2327:A:H3'	23:D:2328:A:H8	1.86	0.41
23:D:236:C:H2'	23:D:237:C:C6	2.56	0.41
23:D:2379:G:H2'	23:D:2380:C:N1	2.34	0.41
23:D:2494:G:H2'	23:D:2495:G:H8	1.85	0.41
23:D:2496:C:H5'	23:D:2497:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2513:G:C2	23:D:2514:U:N3	2.89	0.41
23:D:2555:U:H2'	23:D:2556:C:C5'	2.50	0.41
23:D:2505:G:H2'	23:D:2576:G:H22	1.86	0.41
23:D:2051:A:C2	23:D:2614:A:N1	2.89	0.41
23:D:2707:G:C4	23:D:2708:G:C8	3.09	0.41
23:D:2738:A:H5''	23:D:2739:U:OP2	2.21	0.41
23:D:273(C):C:H2'	23:D:273(D):C:C6	2.56	0.41
23:D:2823:A:N6	23:D:2824:C:N3	2.68	0.41
23:D:2895:U:H6	23:D:2895:U:H5''	1.85	0.41
23:D:31:C:H2'	23:D:32:C:O4'	2.21	0.41
23:D:265:A:N6	23:D:428:A:C8	2.89	0.41
23:D:43:G:C5	23:D:44:A:C5	3.09	0.41
23:D:477:A:C5	23:D:478:A:C6	3.09	0.41
23:D:48:G:C2	23:D:178:G:C5	3.09	0.41
23:D:503:A:O2'	23:D:506:G:OP2	2.35	0.41
23:D:56:A:H2'	23:D:57:C:H6	1.86	0.41
23:D:592:G:C6	23:D:593:G:C4	3.09	0.41
23:D:608:A:H3'	23:D:609:A:H8	1.86	0.41
23:D:710:G:C2	23:D:722:A:C4	3.09	0.41
23:D:713:G:H8	23:D:713:G:OP2	2.02	0.41
23:D:753:C:H2'	23:D:754:C:C6	2.55	0.41
23:D:792:G:N1	23:D:2440:C:C4	2.89	0.41
23:D:870:A:C6	23:D:871:U:C2	3.09	0.41
23:D:978:G:C6	23:D:979:G:C5	3.09	0.41
23:D:987:G:C2	23:D:988:A:C4	3.08	0.41
24:E:115:G:C2	24:E:116:G:N7	2.89	0.41
4:H:101:LEU:HB2	4:H:138:TYR:HB3	2.01	0.41
4:H:191:ARG:NH2	4:H:200:GLU:HB3	2.36	0.41
6:J:4:TYR:O	6:J:65:VAL:HG22	2.20	0.41
1:A:1381:U:H1'	7:K:78:ARG:HD3	2.03	0.41
9:M:105:ASP:HB3	9:M:107:ARG:HE	1.85	0.41
11:O:69:ALA:HA	11:O:72:ALA:HB3	2.03	0.41
12:P:9:GLN:CG	12:P:12:ARG:HH21	2.24	0.41
13:Q:16:ASP:HA	13:Q:19:LEU:HG	2.03	0.41
13:Q:87:TYR:CD1	13:Q:90:LEU:HB2	2.56	0.41
15:S:41:GLU:HG2	15:S:44:LYS:HZ3	1.86	0.41
17:U:65:ILE:O	17:U:69:LYS:HE2	2.20	0.41
13:Q:87:TYR:HH	19:W:78:ARG:H	1.68	0.41
25:Z:74:VAL:CG1	25:Z:114:VAL:HG22	2.51	0.41
25:Z:34:THR:HG23	25:Z:39:GLU:HB2	2.03	0.41
25:Z:75:LEU:HA	25:Z:93:TYR:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:1:30:PRO:C	52:1:32:HIS:N	2.75	0.41
54:3:41:PHE:HE1	54:3:66:THR:HG22	1.85	0.41
55:4:2:G:H2'	55:4:3:C:O4'	2.20	0.41
56:5:3:C:C6	56:5:3:C:OP2	2.72	0.41
1:A:1006:C:N3	1:A:1023:G:N1	2.68	0.41
1:A:1063:C:H2'	1:A:1064:G:N2	2.35	0.41
1:A:1119:C:C2	1:A:1120:G:C8	3.09	0.41
1:A:1127:G:H2'	1:A:1128:C:C6	2.55	0.41
1:A:1175:G:C5	1:A:1176:A:C4	3.09	0.41
1:A:1237:C:H1'	1:A:1337:G:N1	2.36	0.41
1:A:1245:A:H2'	1:A:1246:C:C6	2.56	0.41
1:A:126:G:C2	1:A:236:G:C5	3.09	0.41
1:A:1280:A:H5'	10:N:40:LEU:HD22	2.02	0.41
1:A:1303:C:C4	1:A:1304:G:C5	3.08	0.41
1:A:939:G:N2	1:A:1343:G:N1	2.68	0.41
1:A:1410:G:C2	1:A:1491:G:C4	3.09	0.41
1:A:22:G:N2	1:A:914:A:C5	2.89	0.41
1:A:299:G:H2'	1:A:300:A:C8	2.56	0.41
1:A:342:C:C4	1:A:348:G:C6	3.09	0.41
1:A:391:G:C5	1:A:392:G:C6	3.08	0.41
1:A:412:A:O2'	1:A:413:G:C8	2.71	0.41
1:A:442:C:N4	1:A:493:G:C6	2.89	0.41
1:A:474:G:N1	1:A:475:G:C6	2.89	0.41
1:A:550:G:C6	1:A:551:U:N3	2.89	0.41
1:A:593:G:H2'	1:A:594:G:C8	2.55	0.41
1:A:722:A:N3	1:A:722:A:H3'	2.35	0.41
1:A:752:G:H8	1:A:752:G:O5'	2.03	0.41
1:A:76:G:C6	1:A:77:C:C4	3.09	0.41
1:A:799:G:N2	1:A:800:G:N3	2.69	0.41
1:A:876:G:C5	1:A:877:C:C5	3.08	0.41
1:A:890:G:H4'	1:A:891:U:H5'	2.02	0.41
1:A:902:G:C4	1:A:903:G:C8	3.09	0.41
1:A:22:G:N2	1:A:914:A:N7	2.69	0.41
1:A:981:U:N3	1:A:982:U:C4	2.89	0.41
22:C:108:ASP:O	22:C:112:GLY:HA2	2.19	0.41
22:C:169:LYS:O	22:C:170:THR:HG23	2.21	0.41
23:D:1039:G:N7	23:D:1117:G:C2	2.89	0.41
23:D:1179:C:O2'	23:D:1180:C:H6	2.04	0.41
23:D:1191:G:H2'	23:D:1192:G:O4'	2.20	0.41
23:D:1205:U:O3'	23:D:1206:G:C8	2.73	0.41
23:D:1400:G:H2'	23:D:1401:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1449(A):G:O2'	23:D:1450:C:H5'	2.21	0.41
23:D:1418:G:N2	23:D:1580:A:H1'	2.36	0.41
23:D:1628:G:C2	23:D:1629:U:C2	3.09	0.41
23:D:1657:C:N4	23:D:2004:G:C6	2.86	0.41
23:D:1668:A:N6	23:D:1674:G:N3	2.68	0.41
23:D:1710:C:H2'	23:D:1711:C:C6	2.55	0.41
23:D:1815:A:C5	23:D:1817:G:C6	3.09	0.41
23:D:1834:U:O2	23:D:1972:A:N6	2.54	0.41
23:D:1998:G:C4	23:D:1999:C:C5	3.08	0.41
23:D:2014:A:C6	23:D:2015:A:N1	2.89	0.41
23:D:2020:A:H2'	23:D:2021:C:C5'	2.49	0.41
23:D:2047:U:HO2'	23:D:2048:G:P	2.44	0.41
23:D:574:C:H1'	23:D:2055:C:H5	1.85	0.41
23:D:2085:C:O2	23:D:2234:G:N1	2.43	0.41
23:D:2126:A:N6	23:D:2172:U:H3'	2.36	0.41
23:D:2183:C:C2'	23:D:2184:G:C8	2.86	0.41
23:D:2227:A:H2'	23:D:2228:G:H8	1.86	0.41
23:D:2330:G:H1	23:D:2385:C:H42	1.69	0.41
23:D:2337:G:C2	23:D:2338:G:C8	3.09	0.41
23:D:2341:G:C2	23:D:2342:C:C2	3.08	0.41
23:D:2436:G:C4	23:D:2437:U:C5	3.09	0.41
23:D:2473:U:OP1	23:D:2475:C:N4	2.54	0.41
23:D:247:G:C6	23:D:249:C:H1'	2.56	0.41
23:D:2482:G:C2	23:D:2483:C:H1'	2.55	0.41
23:D:2487:G:H2'	23:D:2488:A:O4'	2.20	0.41
23:D:2523:G:C6	23:D:2524:G:C6	3.09	0.41
23:D:2579:C:H2'	23:D:2580:U:O4'	2.21	0.41
23:D:2586:C:O2	23:D:2586:C:H2'	2.21	0.41
23:D:273(A):G:H22	23:D:363(D):G:H22	1.68	0.41
23:D:2743:C:C2	23:D:2762:G:C2	3.08	0.41
23:D:2633:G:H1	23:D:2784:C:H42	1.69	0.41
23:D:2885:C:H2'	23:D:2886:G:O4'	2.20	0.41
23:D:359:A:O3'	23:D:360:G:C8	2.74	0.41
23:D:36:G:C2	23:D:37:C:C6	3.08	0.41
23:D:457:A:C5	23:D:459:U:C4	3.09	0.41
23:D:461:C:H2'	23:D:462:C:H6	1.86	0.41
23:D:465:G:C2	23:D:466:A:C4	3.09	0.41
23:D:470:A:H4'	23:D:470:A:OP1	2.20	0.41
23:D:531:C:O5'	23:D:532:A:C2	2.74	0.41
23:D:53:A:N7	23:D:54:G:C8	2.89	0.41
23:D:549:G:C6	23:D:550:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:56:A:C2	23:D:57:C:C2	3.08	0.41
23:D:608:A:H3'	23:D:609:A:C8	2.55	0.41
23:D:688:U:O5'	23:D:688:U:H6	2.04	0.41
23:D:693:C:N4	23:D:770:G:N1	2.69	0.41
23:D:743:G:N2	23:D:754:C:N3	2.68	0.41
23:D:820:A:C5	23:D:821:A:C5	3.09	0.41
23:D:820:A:OP2	23:D:820:A:H8	2.04	0.41
23:D:878:A:H3'	23:D:878:A:N3	2.35	0.41
23:D:8:A:C5	23:D:2896:C:O2	2.74	0.41
23:D:998:C:OP2	23:D:998:C:C6	2.74	0.41
24:E:23:G:N3	24:E:24:G:N2	2.69	0.41
24:E:58:A:H8	24:E:58:A:OP2	2.04	0.41
3:G:70:VAL:O	3:G:105:GLU:HG3	2.21	0.41
3:G:172:ARG:HD3	3:G:203:PHE:HE2	1.86	0.41
4:H:28:SER:HB3	4:H:29:PRO:HD2	2.03	0.41
5:I:52:PRO:O	5:I:55:VAL:HB	2.20	0.41
17:U:97:SER:HB2	17:U:104:LYS:HB2	2.03	0.41
18:V:70:ILE:HG22	18:V:74:ARG:NE	2.36	0.41
19:W:49:ILE:HG12	19:W:62:ILE:HB	2.02	0.41
21:Y:10:ARG:HG2	23:D:125:G:N2	153.14	0.41
25:Z:72:VAL:CG2	25:Z:162:GLU:OE1	2.69	0.41
52:1:17:ILE:HB	52:1:24:TYR:H	1.86	0.41
54:3:21:PRO:CD	54:3:22:PRO:HD2	2.50	0.41
1:A:1058:G:C6	1:A:1059:C:N3	2.88	0.41
1:A:1087:G:C2	1:A:1088:G:C4	3.09	0.41
1:A:1110:A:C5	1:A:1111:A:C5	3.09	0.41
1:A:1151:A:C2	1:A:1152:A:C4	3.08	0.41
1:A:1187:G:C6	1:A:1188:A:C6	3.09	0.41
1:A:1428:A:C6	1:A:1429:C:N4	2.89	0.41
1:A:1435:G:N3	1:A:1435:G:H2'	2.36	0.41
1:A:187:C:C4	1:A:191(A):G:C6	3.09	0.41
1:A:7:G:C2	1:A:298:A:C6	3.09	0.41
1:A:336:C:H2'	1:A:337:C:C6	2.56	0.41
1:A:414:A:C6	1:A:415:A:C5	3.08	0.41
1:A:500:G:C2	1:A:501:C:C4	3.09	0.41
1:A:591:U:H2'	1:A:592:G:H8	1.86	0.41
1:A:615:C:H2'	1:A:616:G:C8	2.56	0.41
1:A:773:G:N3	1:A:774:G:H1'	2.36	0.41
1:A:818:G:N3	1:A:820:U:O4	2.54	0.41
1:A:836:G:C6	1:A:851:G:C5	3.09	0.41
1:A:85:U:C5	1:A:86:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:907:A:C4	1:A:908:A:C8	3.09	0.41
1:A:90:C:C2	1:A:91:C:H5	2.39	0.41
1:A:938:A:C5	1:A:939:G:C5	3.09	0.41
22:C:135:ILE:CD1	22:C:165:PHE:HD1	2.30	0.41
22:C:217:LEU:O	22:C:258:ALA:HA	2.21	0.41
22:C:476:SER:HB2	22:C:477:MET:H	1.71	0.41
23:D:1000:A:C6	23:D:1155:A:C5	3.09	0.41
23:D:1022:G:O3'	23:D:1025:G:N1	2.54	0.41
23:D:1027:A:O2'	23:D:1028:A:O4'	2.39	0.41
23:D:1278:A:N3	23:D:1279:G:C8	2.90	0.41
23:D:1287:A:C5	23:D:1288:U:C5	3.09	0.41
23:D:1274:A:H2	23:D:1297:C:HO2'	1.65	0.41
23:D:1355:G:C6	23:D:1356:G:C6	3.09	0.41
23:D:1375:C:H2'	23:D:1376:C:C6	2.54	0.41
23:D:1344:G:C2	23:D:1404:C:O2	2.74	0.41
23:D:149:A:H3'	23:D:149:A:C8	2.56	0.41
23:D:1659:U:H2'	23:D:1660:C:H6	1.85	0.41
23:D:1698:A:C1'	23:D:1700:A:H5''	2.51	0.41
23:D:1778:U:C4	23:D:1785:A:N1	2.89	0.41
23:D:1778:U:HO2'	23:D:1779:U:P	2.40	0.41
23:D:1800:C:N4	23:D:1818:U:N1	2.69	0.41
23:D:1819:A:N3	23:D:1821:A:C6	2.88	0.41
23:D:1824:G:H2'	23:D:1825:A:O4'	2.20	0.41
23:D:1854:A:O5'	23:D:1854:A:H8	2.04	0.41
23:D:1864:U:H3	23:D:1878:G:H1	1.68	0.41
23:D:1941:C:C4	23:D:1942:C:C2	3.09	0.41
23:D:1947:C:N3	23:D:1948:G:C8	2.89	0.41
23:D:196:A:N1	23:D:828:U:H5''	2.36	0.41
23:D:1973:G:C6	23:D:1974:C:C4	3.08	0.41
23:D:570:G:H2'	23:D:2030:A:H62	1.86	0.41
23:D:2046:G:H2'	23:D:2047:U:C5	2.54	0.41
23:D:2162:G:C5	23:D:2163:C:C4	3.09	0.41
23:D:2267:A:H3'	23:D:2268:A:H5'	2.03	0.41
23:D:2312:U:C2	23:D:2313:C:H5	2.39	0.41
23:D:2358:G:N1	23:D:2359:C:C2	2.88	0.41
23:D:2346:A:H2	23:D:2383:G:C2	2.39	0.41
23:D:2392:A:N7	23:D:2393:A:C5	2.89	0.41
23:D:2505:G:C4	23:D:2576:G:C2	3.08	0.41
23:D:2519:U:HO2'	23:D:2520:C:H6	1.59	0.41
23:D:2524:G:H2'	23:D:2525:G:O4'	2.20	0.41
23:D:245:G:N2	23:D:254:G:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2588:G:C6	23:D:2607:G:O6	2.74	0.41
23:D:783:A:H5''	23:D:2589:A:OP1	2.20	0.41
23:D:2715:C:N4	23:D:2716:U:O4	2.54	0.41
23:D:2736:G:H1	23:D:2768:C:N4	2.19	0.41
23:D:273(A):G:C6	23:D:273(B):C:N4	2.89	0.41
23:D:273:G:C2	23:D:273(A):G:C4	3.09	0.41
23:D:2843:G:H2'	23:D:2844:G:C8	2.53	0.41
23:D:305:U:H2'	23:D:306:U:C6	2.56	0.41
23:D:315:G:C5	23:D:316:C:C4	3.09	0.41
23:D:309:G:C6	23:D:330:A:N9	2.89	0.41
23:D:418:G:H2'	23:D:419:C:C6	2.54	0.41
23:D:532:A:C6	23:D:561:G:N3	2.86	0.41
23:D:583:G:O2'	23:D:584:C:H5'	2.21	0.41
23:D:599:G:H1	23:D:658:C:H42	1.67	0.41
23:D:668:G:C6	23:D:670:A:C4	3.09	0.41
23:D:713:G:H21	23:D:718:A:N6	2.18	0.41
23:D:741:G:C5	23:D:742:G:C5	3.09	0.41
23:D:769:G:C5	23:D:770:G:N7	2.88	0.41
23:D:933:A:H2'	23:D:934:G:C8	2.56	0.41
23:D:972:G:C6	23:D:973:A:C6	3.09	0.41
4:H:145:GLU:CB	4:H:184:LYS:HA	2.51	0.41
5:I:27:ARG:HB2	5:I:48:ALA:O	2.21	0.41
6:J:16:GLN:NE2	6:J:19:LEU:HD23	2.36	0.41
6:J:16:GLN:HE22	6:J:19:LEU:HD23	1.86	0.41
6:J:95:GLU:O	6:J:95:GLU:HG2	2.21	0.41
8:L:28:ALA:HB2	8:L:59:LEU:HD21	2.02	0.41
1:A:1180:A:P	9:M:103:THR:HG1	2.44	0.41
1:A:538:G:OP1	12:P:113:ARG:HA	2.20	0.41
12:P:41:ARG:HG3	12:P:55:VAL:HB	2.03	0.41
12:P:71:PRO:HD3	12:P:99:HIS:HA	2.02	0.41
14:R:27:CYS:O	14:R:29:ARG:N	2.54	0.41
16:T:13:HIS:O	16:T:42:ARG:NH1	2.52	0.41
16:T:8:ARG:HA	16:T:16:HIS:O	2.20	0.41
19:W:47:HIS:C	19:W:62:ILE:HG22	2.41	0.41
52:1:29:ASN:OD1	52:1:31:LYS:N	2.44	0.40
23:D:1046:A:O2'	53:2:60:ARG:O	2.35	0.40
54:3:28:GLY:HA2	54:3:32:ALA:HB3	2.02	0.40
55:4:10:G:H1	55:4:25:C:H42	1.68	0.40
56:5:22:G:H2'	56:5:23:A:H8	1.86	0.40
1:A:1001:G:H2'	1:A:1002:G:O4'	2.21	0.40
1:A:1047:G:H8	1:A:1047:G:OP2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1106:G:C6	1:A:1107:C:C4	3.09	0.40
1:A:1170:A:H2'	1:A:1171:G:O4'	2.21	0.40
1:A:1438:G:N1	1:A:1464:G:C6	2.89	0.40
1:A:1488:G:C2	1:A:1489:G:C5	3.08	0.40
1:A:253:U:O2'	1:A:254:G:O5'	2.36	0.40
1:A:254:G:N2	1:A:273:A:H1'	2.36	0.40
1:A:275:G:C6	1:A:276:G:C6	3.09	0.40
1:A:54:C:H3'	1:A:352:C:C5	2.56	0.40
1:A:405:U:OP1	1:A:406:G:H4'	2.22	0.40
1:A:465:A:C8	1:A:467:G:C6	3.09	0.40
1:A:464:G:N2	1:A:474:G:C6	2.90	0.40
1:A:444:C:C2	1:A:491:G:C2	3.09	0.40
1:A:500:G:H2'	1:A:501:C:H6	1.83	0.40
1:A:520:A:C5	1:A:521:G:C8	3.09	0.40
1:A:570:G:C6	1:A:571:U:O4	2.74	0.40
1:A:668:G:H1	1:A:738:C:N4	2.19	0.40
1:A:765:G:C6	1:A:812:C:C2	3.09	0.40
1:A:830:G:C5	1:A:831:U:C4	3.09	0.40
1:A:834:C:C2	1:A:835:U:C5	3.09	0.40
1:A:830:G:C6	1:A:857:C:N4	2.89	0.40
1:A:973:G:H3'	1:A:974:A:H5''	2.02	0.40
22:C:165:PHE:O	22:C:166:ALA:C	2.60	0.40
22:C:202:ASP:CG	22:C:214:TYR:OH	2.59	0.40
22:C:242:VAL:HG13	22:C:263:TRP:O	2.22	0.40
22:C:28:ARG:O	22:C:29:ILE:CG2	2.69	0.40
22:C:446:LYS:HD3	22:C:446:LYS:HA	1.75	0.40
22:C:490:VAL:HG11	22:C:508:ALA:HB3	2.03	0.40
22:C:493:ASN:C	22:C:494:VAL:HG23	2.42	0.40
22:C:556:LYS:NZ	23:D:1944:U:P	2.92	0.40
22:C:97:LEU:CG	22:C:123:MET:CB	2.99	0.40
23:D:1059:G:H3'	23:D:1060:U:C5'	2.52	0.40
23:D:1086:A:N3	23:D:1086:A:H2'	2.37	0.40
23:D:1095:A:H61	54:3:30:HIS:CD2	2.38	0.40
23:D:121:G:H2'	23:D:122:G:C8	2.54	0.40
23:D:1197:G:C6	23:D:1250:G:C5	3.09	0.40
23:D:1322:A:N6	23:D:1334:G:O4'	2.44	0.40
23:D:1355:G:C4	23:D:1356:G:C8	3.08	0.40
23:D:1403:C:H5''	23:D:1471:A:O2'	2.21	0.40
23:D:1480:G:H21	23:D:1482:U:C5'	2.28	0.40
23:D:1484:G:N1	23:D:1485:G:C5	2.89	0.40
23:D:152:G:N2	23:D:153:C:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1582:C:H3'	23:D:1583:A:O4'	2.21	0.40
23:D:1619:G:O5'	23:D:1619:G:C8	2.74	0.40
23:D:1665:A:C6	23:D:1666:G:C5	3.09	0.40
23:D:172:C:O3'	23:D:173:G:O4'	2.38	0.40
23:D:1984:G:H2'	23:D:1985:G:C8	2.51	0.40
23:D:2026:C:C4	23:D:2027:G:N7	2.89	0.40
23:D:2037:G:C2	23:D:2038:G:C5	3.09	0.40
23:D:2088:G:H1	23:D:2231:C:H42	1.70	0.40
23:D:2142:C:H2'	23:D:2143:C:C6	2.56	0.40
23:D:2162:G:C6	23:D:2163:C:N3	2.89	0.40
23:D:2193:G:H2'	23:D:2194:G:O4'	2.21	0.40
23:D:2252:G:C4	23:D:2253:G:C8	3.10	0.40
23:D:2269:A:C6	23:D:2270:G:C5	3.09	0.40
23:D:2314:C:C4	23:D:2315:G:N7	2.89	0.40
23:D:2393:A:H2'	23:D:2394:C:O4'	2.20	0.40
23:D:2414:G:C2	23:D:2415:G:C8	3.09	0.40
23:D:250:G:C4	23:D:251:A:C8	3.09	0.40
23:D:2525:G:C4	23:D:2526:G:C8	3.09	0.40
23:D:2525:G:C6	23:D:2539:C:C4	3.09	0.40
23:D:2568:C:C4	23:D:2569:G:N7	2.90	0.40
23:D:2588:G:H2'	23:D:2589:A:C8	2.56	0.40
23:D:2603:G:C5	23:D:2604:U:C5	3.08	0.40
23:D:2588:G:N1	23:D:2607:G:O6	2.54	0.40
23:D:2682:U:N3	23:D:2683:C:N3	2.70	0.40
23:D:2711:A:H5'	23:D:2712:U:OP1	2.20	0.40
23:D:2840:C:H2'	23:D:2841:C:C6	2.56	0.40
23:D:2857:G:N2	23:D:2861:G:C4	2.90	0.40
23:D:2838:G:N2	23:D:2880:C:N3	2.67	0.40
23:D:41:C:C2	23:D:43:G:C8	3.10	0.40
23:D:464:U:H3'	23:D:465:G:C8	2.54	0.40
23:D:477:A:H61	23:D:501:A:P	2.44	0.40
23:D:520:G:C6	23:D:521:G:C6	3.09	0.40
23:D:55:G:C4	23:D:56:A:C8	3.09	0.40
23:D:568:U:OP2	23:D:2448:A:N6	2.55	0.40
23:D:581:C:C2'	23:D:582:G:C8	3.03	0.40
23:D:628:G:C4	23:D:636:G:N2	2.89	0.40
23:D:677:A:N7	23:D:678:C:N4	2.68	0.40
23:D:688:U:C2	23:D:689:A:C8	3.09	0.40
23:D:701:G:C2	23:D:702:G:C8	3.10	0.40
23:D:799:G:OP2	23:D:800:A:H2'	2.20	0.40
23:D:802:A:H3'	23:D:803:U:C5	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:870:A:H3'	23:D:871:U:C5	2.57	0.40
23:D:883:G:C4	23:D:892:G:N1	2.89	0.40
23:D:988:A:H8	23:D:988:A:O5'	2.04	0.40
2:F:112:VAL:O	2:F:115:LEU:HB3	2.21	0.40
2:F:115:LEU:HD13	2:F:145:LEU:CD2	2.42	0.40
2:F:15:VAL:HB	2:F:16:HIS:H	1.60	0.40
3:G:123:GLN:HB3	3:G:128:PHE:CE2	2.56	0.40
3:G:55:VAL:HG12	3:G:57:ILE:HG13	2.03	0.40
4:H:19:LEU:O	4:H:26:CYS:HB3	2.21	0.40
4:H:64:LEU:HA	4:H:67:ILE:HG12	2.03	0.40
6:J:48:LEU:HG	6:J:56:PRO:O	2.21	0.40
7:K:27:ILE:HD11	7:K:43:PHE:CD2	2.56	0.40
1:A:949:A:H5''	13:Q:101:GLN:HG2	2.02	0.40
1:A:1316:G:H4'	14:R:18:VAL:HG11	2.03	0.40
14:R:4:LYS:HG2	14:R:4:LYS:O	2.22	0.40
10:N:64:GLU:CG	14:R:57:ARG:HG3	2.51	0.40
18:V:58:LEU:HD23	18:V:58:LEU:HA	1.79	0.40
54:3:22:PRO:HG2	54:3:23:VAL:H	1.86	0.40
55:4:12:G:N2	55:4:23:C:N3	2.62	0.40
55:4:7:G:H8	55:4:7:G:OP2	2.04	0.40
1:A:1087:G:C4	1:A:1088:G:C8	3.10	0.40
1:A:1089:G:C2	1:A:1090:U:C2	3.09	0.40
1:A:1091:U:N3	1:A:1095:U:C4	2.90	0.40
1:A:1107:C:H2'	1:A:1108:G:C8	2.55	0.40
1:A:988:G:H22	1:A:1217:C:C2'	2.33	0.40
1:A:1255:G:H4'	1:A:1258:G:O2'	2.21	0.40
1:A:1269:A:C1'	1:A:1326:C:H1'	2.51	0.40
1:A:1369:C:O2'	1:A:1370:G:O4'	2.38	0.40
1:A:1422:G:C2	1:A:1423:G:C8	3.09	0.40
1:A:1496:C:C4	1:A:1497:G:C8	3.09	0.40
1:A:157:G:N1	1:A:165:C:C4	2.89	0.40
1:A:177:C:H2'	1:A:178:C:C6	2.56	0.40
1:A:234:C:O2'	1:A:235:C:O5'	2.38	0.40
1:A:275:G:C6	1:A:276:G:C5	3.09	0.40
1:A:333:G:C4	1:A:334:C:C5	3.09	0.40
1:A:382:A:N6	1:A:383:A:C6	2.90	0.40
1:A:419:C:C4	1:A:425:G:N1	2.89	0.40
1:A:502:G:C2	1:A:503:C:C2	3.09	0.40
1:A:680:C:N4	1:A:710:G:H1	2.20	0.40
1:A:682:G:O6	1:A:683:G:C6	2.74	0.40
1:A:68:G:C6	1:A:102:G:N1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:755:G:P	15:S:65:ARG:HD2	2.61	0.40
1:A:794:A:H2'	1:A:795:C:C6	2.56	0.40
22:C:196:LEU:HD23	22:C:196:LEU:HA	1.88	0.40
22:C:299:PRO:HG2	22:C:348:PHE:CE2	2.56	0.40
22:C:409:TYR:CB	22:C:453:GLU:CG	2.99	0.40
23:D:1098:A:H3'	23:D:1099:G:H8	1.85	0.40
23:D:1112:G:C6	23:D:1113:U:N3	2.89	0.40
23:D:1128:A:C6	23:D:1129:A:N6	2.89	0.40
23:D:1134:G:C6	23:D:1138:G:C5	3.09	0.40
23:D:1271:G:C8	23:D:1617:C:H4'	2.57	0.40
23:D:127:A:H4'	23:D:128:C:H5''	2.03	0.40
23:D:1314:C:N4	23:D:1315:C:C4	2.89	0.40
23:D:1494:A:H2'	23:D:1495:A:O4'	2.20	0.40
23:D:1504:C:C4	23:D:1505:C:N4	2.89	0.40
23:D:1647:G:OP2	23:D:1647:G:H2'	2.21	0.40
23:D:1675:C:O2	23:D:1676:A:C8	2.74	0.40
8:L:98:LYS:HZ3	23:D:1754:C:H6	93.01	0.40
23:D:1764:G:C4	23:D:1989:G:C2	3.08	0.40
23:D:1818:U:O2'	23:D:1819:A:O5'	2.27	0.40
23:D:1784:A:C5	23:D:1981:A:C2	3.10	0.40
23:D:190:A:C5	23:D:207:A:C2	3.09	0.40
23:D:2080:G:C6	23:D:2081:C:C4	3.09	0.40
23:D:2181:G:C6	23:D:2182:G:O6	2.73	0.40
23:D:2192:G:N3	23:D:2193:G:C8	2.89	0.40
23:D:222:A:C6	23:D:224:G:C4	3.10	0.40
23:D:2270:G:C6	23:D:2271:G:C6	3.09	0.40
23:D:2285:C:N3	23:D:2383:G:N2	2.59	0.40
23:D:2327:A:C5	23:D:2388:A:N1	2.89	0.40
23:D:242:G:H2'	23:D:254:G:C6	2.56	0.40
23:D:2591:C:H42	23:D:2603:G:H1	1.67	0.40
23:D:2663:G:H3'	23:D:2664:G:C8	2.56	0.40
23:D:2695:C:H2'	23:D:2696:U:H6	1.84	0.40
23:D:271:G:C6	23:D:272:G:C5	3.10	0.40
23:D:2744:G:N1	23:D:2761:G:N7	2.69	0.40
23:D:2781:A:H2'	23:D:2782:G:O2'	2.21	0.40
23:D:299:A:C5	23:D:300:A:C6	3.10	0.40
23:D:304:G:C5	23:D:305:U:C4	3.09	0.40
23:D:325:G:C4	23:D:326:G:C8	3.09	0.40
23:D:348:G:H3'	23:D:349:G:H8	1.86	0.40
23:D:38:A:C4	23:D:39:C:C5	3.09	0.40
23:D:398:G:H2'	23:D:399:G:C1'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:449:A:N7	23:D:450:G:C4	2.90	0.40
23:D:454:A:O5'	23:D:454:A:H8	2.05	0.40
23:D:577:G:C6	23:D:578:A:C5	3.10	0.40
23:D:611:C:C2	23:D:618:G:N2	2.90	0.40
23:D:593:G:N2	23:D:664:C:H42	2.20	0.40
23:D:735:A:C6	23:D:736:C:C2	3.09	0.40
23:D:759:G:C2	23:D:760:G:C5	3.10	0.40
23:D:682:G:C2	23:D:796:C:N3	2.89	0.40
23:D:799:G:OP1	23:D:800:A:H5''	2.21	0.40
23:D:831:G:C6	23:D:832:G:C6	3.08	0.40
23:D:805:G:O2'	23:D:831:G:H4'	2.21	0.40
23:D:82:G:C6	23:D:83:G:N2	2.89	0.40
23:D:862:G:C5	23:D:863:A:C4	3.10	0.40
23:D:863:A:N6	23:D:912:C:N4	2.70	0.40
23:D:952:G:N1	23:D:953:A:C5	2.89	0.40
24:E:113:C:H2'	24:E:114:G:C8	2.57	0.40
24:E:79:C:N4	24:E:98:G:N2	2.69	0.40
24:E:9:G:C2	24:E:10:C:C2	3.09	0.40
2:F:108:ILE:O	2:F:111:ARG:HB2	2.21	0.40
2:F:114:ARG:NH1	23:D:527:C:C2	181.96	0.40
2:F:149:LEU:O	2:F:152:PHE:N	2.54	0.40
3:G:82:GLU:O	3:G:85:ARG:HB3	2.21	0.40
5:I:72:GLN:OE1	5:I:77:PRO:HA	2.22	0.40
5:I:9:LYS:HG3	5:I:112:LEU:HD11	2.03	0.40
8:L:133:LEU:HA	8:L:133:LEU:HD23	1.82	0.40
9:M:6:GLY:HA3	9:M:17:VAL:HB	2.03	0.40
9:M:95:LYS:C	9:M:98:PRO:HD2	2.42	0.40
11:O:22:HIS:HD2	11:O:85:ARG:O	2.03	0.40
12:P:61:THR:C	12:P:63:GLY:N	2.74	0.40
15:S:23:GLY:HA2	15:S:27:VAL:HG21	2.03	0.40
15:S:60:VAL:O	15:S:63:ARG:HG2	2.22	0.40
25:Z:34:THR:HA	25:Z:39:GLU:OE1	2.21	0.40
25:Z:7:TYR:CD1	25:Z:10:LEU:HB3	2.57	0.40
54:3:115:LEU:HD23	54:3:116:ASN:O	2.20	0.40
54:3:8:VAL:HG23	54:3:59:ILE:HD11	2.04	0.40
55:4:21:A:C5	55:4:46:G:C6	3.10	0.40
1:A:1037:C:H2'	1:A:1038:C:O4'	2.20	0.40
1:A:993:G:C2	1:A:1046:A:C2	3.10	0.40
1:A:1074:G:OP1	5:I:60:TYR:HE2	2.03	0.40
1:A:1106:G:C5	1:A:1107:C:C4	3.10	0.40
1:A:122:G:C6	1:A:123:C:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:122:G:N2	1:A:123:C:H1'	2.37	0.40
1:A:1276:G:N2	1:A:1277:C:N3	2.68	0.40
1:A:1324:A:C6	1:A:1325:C:C4	3.09	0.40
1:A:1361:G:H2'	1:A:1362:C:C6	2.57	0.40
1:A:140:A:C2	1:A:141:A:H1'	2.57	0.40
1:A:1419:G:C5	1:A:1420:C:C4	3.09	0.40
1:A:1514:C:H2'	1:A:1515:C:H6	1.84	0.40
1:A:168:G:C2	1:A:169:C:C4	3.09	0.40
1:A:254:G:H2'	1:A:255:G:H8	1.86	0.40
1:A:456:C:N3	1:A:476:G:N2	2.63	0.40
1:A:49:U:C4	1:A:361:G:N2	2.89	0.40
1:A:548:G:O2'	1:A:549:C:O4'	2.34	0.40
1:A:553:A:H2'	1:A:554:C:O4'	2.21	0.40
1:A:563:A:O2'	1:A:564:C:P	2.79	0.40
1:A:61:G:N1	1:A:107:G:C6	2.89	0.40
1:A:646:U:H6	1:A:646:U:O5'	2.04	0.40
1:A:693:G:C5	1:A:694:A:C6	3.09	0.40
1:A:73:G:C6	1:A:74:C:C4	3.08	0.40
1:A:751:U:C4	1:A:752:G:C2	3.09	0.40
1:A:767:A:C6	1:A:768:A:C4	3.09	0.40
1:A:786:G:C6	1:A:797:C:N3	2.90	0.40
1:A:836:G:N1	1:A:851:G:C4	2.89	0.40
1:A:886:G:H2'	1:A:887:G:O4'	2.21	0.40
1:A:932:C:OP2	7:K:3:ARG:NH1	2.53	0.40
22:C:169:LYS:C	22:C:170:THR:HG22	2.41	0.40
22:C:280:ILE:CD1	22:C:280:ILE:H	2.21	0.40
22:C:37:SER:O	22:C:38:ASP:HB2	2.20	0.40
22:C:41:MET:HB3	22:C:45:PHE:CZ	2.53	0.40
23:D:1007:C:C6	23:D:1008:C:H5	2.39	0.40
23:D:1009:A:N7	23:D:1010:A:N6	2.69	0.40
23:D:1000:A:C4	23:D:1155:A:C6	3.10	0.40
23:D:1301:A:N6	23:D:1303:G:C4	2.89	0.40
23:D:1313:U:O4	23:D:1339:G:N2	2.53	0.40
23:D:1476:C:C6	23:D:1477:A:C2	3.09	0.40
23:D:172:C:O3'	23:D:173:G:H8	2.04	0.40
23:D:1802:A:H2'	23:D:1803:A:C8	2.56	0.40
23:D:1970:A:C4	23:D:1972:A:C8	3.10	0.40
23:D:1977:A:C2	23:D:1978:A:H1'	2.56	0.40
23:D:2046:G:H2'	23:D:2047:U:H6	1.81	0.40
23:D:2180:U:C5	23:D:2181:G:C6	3.10	0.40
23:D:2082:A:C4	23:D:2239:G:N2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:2253:G:C2	23:D:2254:C:C2	3.08	0.40
23:D:2285:C:H1'	23:D:2288:A:H62	1.86	0.40
23:D:22:C:H2'	23:D:23:G:O4'	2.21	0.40
23:D:2297:C:C4	23:D:2333:A:C6	3.09	0.40
23:D:2334:G:H8	23:D:2334:G:H3'	1.85	0.40
23:D:2359:C:C4	23:D:2360:A:C4	3.09	0.40
23:D:2407:G:C5	23:D:2408:U:C4	3.09	0.40
23:D:412:A:N6	23:D:2412:A:O4'	2.54	0.40
23:D:2246:G:C5	23:D:2426:A:N3	2.90	0.40
23:D:2468:G:H3'	23:D:2476:A:C2	2.56	0.40
23:D:2472:G:C2	23:D:2475:C:N3	2.89	0.40
23:D:24:G:C2	23:D:25:U:N3	2.80	0.40
23:D:2511:U:H3'	23:D:2512:C:C5	2.57	0.40
23:D:251:A:H8	23:D:251:A:OP2	2.03	0.40
23:D:2526:G:C5	23:D:2527:C:C5	3.09	0.40
23:D:2548:G:N1	23:D:2549:G:C5	2.89	0.40
23:D:2549:G:C4	23:D:2550:G:N7	2.90	0.40
23:D:2599:G:C4	23:D:2600:A:C8	3.10	0.40
23:D:2710:C:H2'	23:D:2711:A:O4'	2.21	0.40
23:D:2679:A:C6	23:D:2729:G:C6	3.10	0.40
23:D:2638:G:C6	23:D:2775:A:C6	3.10	0.40
23:D:2782:G:C6	23:D:2783:G:C5	3.09	0.40
23:D:2891:G:H2'	23:D:2892:A:H5''	2.04	0.40
23:D:431:U:O5'	23:D:431:U:H6	2.03	0.40
23:D:564:C:N4	23:D:573:G:O5'	2.54	0.40
23:D:585:G:OP2	23:D:585:G:C8	2.70	0.40
23:D:604:G:N1	23:D:623:G:C6	2.90	0.40
23:D:636:G:O2'	23:D:637:A:O4'	2.39	0.40
23:D:776:G:C2	23:D:793:A:C6	3.10	0.40
23:D:669:G:C4	23:D:801:G:C2	3.09	0.40
23:D:849:A:C5	23:D:931:G:O6	2.75	0.40
23:D:966:G:H2'	23:D:967:C:C6	2.56	0.40
23:D:972:G:C8	23:D:972:G:OP2	2.75	0.40
23:D:979:G:H5''	23:D:980:A:H5''	2.02	0.40
23:D:974(A):C:H42	23:D:989:G:H22	1.66	0.40
23:D:8:A:H2'	23:D:9:U:O4'	2.22	0.40
24:E:117:G:C4	24:E:118:G:N7	2.90	0.40
24:E:20:C:N4	24:E:64:C:H42	2.19	0.40
10:N:44:VAL:HG13	10:N:46:ARG:NH1	2.36	0.40
12:P:46:LYS:CG	12:P:47:LYS:H	2.32	0.40
13:Q:87:TYR:HA	13:Q:90:LEU:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1308:U:C3'	13:Q:99:ARG:NH2	2.70	0.40
15:S:26:GLU:O	15:S:29:VAL:HB	2.21	0.40
15:S:82:ILE:HG21	15:S:88:ARG:HE	1.85	0.40
16:T:60:LEU:HA	16:T:63:GLY:HA2	2.03	0.40
18:V:59:SER:H	18:V:62:GLU:CG	2.34	0.40
1:A:1455:G:OP1	20:X:35:THR:HG21	2.21	0.40
55:4:18:G:N2	55:4:58:A:O4'	2.55	0.40
55:4:72:A:C5	55:4:73:A:C6	3.10	0.40
1:A:1027:C:C4	1:A:1028:C:C2	3.09	0.40
1:A:1074:G:C6	1:A:1075:C:C4	3.09	0.40
1:A:120:A:C6	1:A:122:G:C5	3.09	0.40
1:A:1287:A:N1	1:A:1288:A:C6	2.89	0.40
1:A:1352:C:N3	1:A:1371:G:C6	2.89	0.40
1:A:1501:C:OP1	1:A:1508:G:O2'	2.29	0.40
1:A:1511:G:C2	1:A:1512:U:C2	3.10	0.40
1:A:161:A:C6	1:A:162:A:C5	3.10	0.40
1:A:193:C:C4	1:A:194:C:N4	2.90	0.40
1:A:265:G:C6	1:A:267:C:C6	3.09	0.40
1:A:268:C:O2'	1:A:269:C:H5'	2.21	0.40
1:A:329:A:C2	1:A:332:G:C5	3.09	0.40
1:A:390:C:C4	1:A:391:G:C5	3.09	0.40
1:A:643:C:N3	1:A:644:G:C8	2.89	0.40
1:A:671:G:H4'	6:J:80:ARG:NH2	2.36	0.40
1:A:684:A:H2	1:A:706:A:N6	2.15	0.40
1:A:725:G:C4	1:A:726:C:C5	3.10	0.40
1:A:80:G:C8	1:A:82:U:O4	2.74	0.40
1:A:823:G:C6	1:A:824:C:N4	2.90	0.40
1:A:966:G:C6	1:A:967:C:C2	3.09	0.40
22:C:169:LYS:C	22:C:170:THR:CG2	2.89	0.40
22:C:242:VAL:CG1	22:C:263:TRP:H	2.25	0.40
22:C:256:LEU:CD2	22:C:256:LEU:C	2.89	0.40
22:C:215:LEU:CD2	22:C:282:LEU:HG	2.51	0.40
22:C:330:LEU:CD2	22:C:345:ARG:C	2.86	0.40
22:C:41:MET:SD	22:C:45:PHE:CD2	3.12	0.40
22:C:492:VAL:O	22:C:505:THR:HG22	2.21	0.40
23:D:1170:G:N2	23:D:1180:C:C2	2.90	0.40
23:D:1166:C:O2	23:D:1184:G:N2	2.54	0.40
23:D:813:U:N3	23:D:1195:G:C2	2.89	0.40
23:D:1221:C:N3	23:D:1228:G:O6	2.54	0.40
23:D:1240:U:H5'	23:D:1241:A:P	2.62	0.40
23:D:579:G:N1	23:D:1262:A:C5	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:1272:A:C5	23:D:1618:A:N3	2.90	0.40
23:D:1292:U:C4	23:D:1293:C:N4	2.90	0.40
23:D:1294:U:H2'	23:D:1295:C:H6	1.87	0.40
23:D:1296:G:C6	23:D:1297:C:N4	2.90	0.40
23:D:1359:A:H62	23:D:1372:U:H3	1.70	0.40
23:D:1401:G:H2'	23:D:1402:C:O4'	2.22	0.40
23:D:1444:G:N1	23:D:1445:C:C2	2.90	0.40
23:D:1456:G:C2	23:D:1457:A:C4	3.10	0.40
23:D:149:A:N1	23:D:150:C:C4	2.89	0.40
23:D:1412:A:N6	23:D:1590:U:H3	2.20	0.40
23:D:1644:C:O2'	23:D:1645:G:O5'	2.25	0.40
23:D:1878:G:H2'	23:D:1879:C:H6	1.87	0.40
23:D:1770:G:C6	23:D:1983:C:N3	2.89	0.40
23:D:2079:U:O2'	23:D:2080:G:O5'	2.39	0.40
23:D:2105:C:O2'	23:D:2106:G:C8	2.70	0.40
23:D:21:A:H2'	23:D:22:C:C6	2.56	0.40
23:D:2306:C:H5''	23:D:2307:G:C8	2.56	0.40
23:D:2320:A:OP2	23:D:2320:A:H8	2.04	0.40
23:D:2358:G:C6	23:D:2359:C:C4	3.09	0.40
23:D:2392:A:O5'	25:Z:32:LEU:HD13	78.30	0.40
23:D:2519:U:O2'	23:D:2520:C:O5'	2.39	0.40
23:D:2559:C:H2'	23:D:2560:C:C6	2.57	0.40
23:D:2706:G:C6	23:D:2707:G:N7	2.89	0.40
23:D:270(V):G:H3'	23:D:270(W):G:C8	2.56	0.40
23:D:2712:U:H6	23:D:2712:U:O5'	2.04	0.40
23:D:2675:A:N1	23:D:2732:G:N2	2.70	0.40
23:D:2868:A:N6	23:D:2869:G:C6	2.90	0.40
23:D:288:C:H3'	23:D:289:A:C4'	2.51	0.40
23:D:319:C:H1'	23:D:333:G:H22	1.86	0.40
23:D:38:A:H61	23:D:441:U:H3	1.68	0.40
23:D:382:G:C2	23:D:393:C:N3	2.89	0.40
23:D:408:G:C6	23:D:409:C:C4	3.10	0.40
23:D:414:C:H5''	23:D:415:A:OP2	2.21	0.40
23:D:563:G:C6	23:D:2018:G:C5	3.10	0.40
23:D:609:A:N1	23:D:609(A):G:C2	2.89	0.40
23:D:618(A):C:H41	23:D:619:G:N2	2.20	0.40
23:D:628:G:N1	23:D:635:C:O2	2.46	0.40
23:D:75:G:C8	23:D:76:C:C5	3.07	0.40
23:D:776:G:H22	23:D:2073:C:P	2.43	0.40
23:D:977:G:N3	23:D:977:G:H2'	2.37	0.40
24:E:50:G:H2'	24:E:51:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:130:ARG:C	2:F:135:GLN:HE22	2.24	0.40
2:F:167:PRO:O	2:F:169:LYS:N	2.45	0.40
3:G:76:VAL:HG13	3:G:87:LEU:HD11	2.02	0.40
3:G:88:ARG:HH21	3:G:101:LEU:CB	2.34	0.40
4:H:60:GLU:OE1	4:H:202:LEU:HB2	2.22	0.40
5:I:89:ILE:HD11	5:I:120:THR:O	2.21	0.40
7:K:70:LYS:O	7:K:138:LYS:HE2	2.21	0.40
1:A:1230:C:H4'	9:M:127:LYS:NZ	2.37	0.40
9:M:85:LEU:HD11	9:M:92:TYR:CZ	2.57	0.40
9:M:85:LEU:HD23	9:M:96:LEU:HB2	2.03	0.40
1:A:707:C:OP1	11:O:85:ARG:NH1	2.54	0.40
12:P:33:ARG:CZ	12:P:62:SER:HB3	2.51	0.40
13:Q:84:ILE:HD13	19:W:66:MET:HB3	2.04	0.40
17:U:59:ILE:HD12	17:U:73:VAL:HA	2.04	0.40
25:Z:101:GLN:OE1	25:Z:104:LEU:HD12	2.22	0.40
25:Z:43:VAL:H	25:Z:175:VAL:HG13	1.86	0.40
1:A:1147:C:H4'	9:M:5:TYR:HE2	1.87	0.40
1:A:119:A:H4'	1:A:120:A:C4	2.57	0.40
1:A:119:A:H4'	1:A:120:A:N9	2.36	0.40
1:A:1410:G:N2	1:A:1490:C:C2	2.90	0.40
1:A:1474:G:C4	1:A:1475:G:C8	3.09	0.40
1:A:183:G:OP2	1:A:183:G:H8	2.03	0.40
1:A:224:C:H2'	1:A:225:C:H6	1.87	0.40
1:A:407:G:N2	1:A:436:C:C2	2.90	0.40
1:A:477:G:N1	1:A:478:A:C6	2.90	0.40
1:A:524:G:C4	1:A:525:C:C5	3.09	0.40
1:A:552:U:C4	1:A:553:A:N7	2.89	0.40
1:A:577:G:C4	1:A:578:C:C6	3.10	0.40
1:A:579:G:H2'	1:A:580:U:H6	1.86	0.40
1:A:597:G:C8	1:A:598:U:C5	3.10	0.40
1:A:658:G:C6	1:A:749:C:N3	2.89	0.40
1:A:65:U:C2	1:A:381:C:C4	3.10	0.40
1:A:66:G:N1	1:A:67:C:C2	2.89	0.40
1:A:689:C:C4	1:A:690:G:C4	3.09	0.40
1:A:720:C:N3	1:A:721:G:C5	2.90	0.40
1:A:722:A:H2'	1:A:724:G:O4'	2.22	0.40
1:A:772:U:H2'	1:A:773:G:O4'	2.22	0.40
1:A:836:G:H2'	1:A:837:G:C8	2.57	0.40
1:A:858:G:H22	1:A:870:U:P	2.45	0.40
1:A:9:G:H3'	5:I:126:ARG:NH2	2.36	0.40
22:C:137:LYS:HA	22:C:168:GLY:CA	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:C:351:LEU:HD23	22:C:351:LEU:H	1.86	0.40
22:C:66:VAL:CB	22:C:76:TYR:CD1	2.99	0.40
23:D:103:A:H2'	23:D:104:U:O4'	2.21	0.40
23:D:1101:U:N3	23:D:1103:A:N6	2.60	0.40
23:D:1265:A:O2'	23:D:1266:G:P	2.80	0.40
23:D:1293:C:C4	23:D:1294:U:O4	2.74	0.40
23:D:1360:A:C8	23:D:1361:G:C8	3.10	0.40
23:D:1374:G:H2'	23:D:1375:C:C6	2.57	0.40
23:D:1384:A:H5''	23:D:1385:G:OP2	2.21	0.40
23:D:1388:G:C6	23:D:1400:G:N1	2.90	0.40
23:D:139:G:C4	23:D:140:A:C8	3.09	0.40
23:D:1449:A:H2'	23:D:1449(A):G:O4'	2.20	0.40
23:D:1455:G:O6	23:D:1456:G:N1	2.54	0.40
23:D:1515:C:O2'	23:D:1516:U:P	2.79	0.40
23:D:1630:G:N2	23:D:1630(A):C:C2	2.90	0.40
23:D:1718:G:C2	23:D:1725:G:C8	3.08	0.40
23:D:1769:G:N3	23:D:1770:G:C8	2.89	0.40
23:D:186:G:C6	23:D:211:A:C6	3.10	0.40
23:D:1934:C:C2	23:D:1935:G:C8	3.09	0.40
23:D:1945:G:H8	23:D:1945:G:OP2	2.05	0.40
23:D:2023:G:C2	23:D:2024:G:C5	3.09	0.40
23:D:2024:G:C2	23:D:2040:C:N3	2.89	0.40
23:D:2090:G:C5	23:D:2230:G:N1	2.89	0.40
23:D:2193:G:C6	23:D:2194:G:C5	3.10	0.40
23:D:2208:U:C2	23:D:2216:G:O6	2.75	0.40
23:D:222:A:C8	23:D:271(B):G:N2	2.90	0.40
23:D:2309:A:H3'	23:D:2310:A:C8	2.56	0.40
23:D:2331:G:C2	23:D:2332:U:C2	3.10	0.40
23:D:2393:A:H5''	25:Z:32:LEU:HD21	75.47	0.40
23:D:2446:G:C2	23:D:2501:C:C5	3.10	0.40
23:D:2508:G:C5	23:D:2509:G:C8	3.10	0.40
23:D:2529:G:H5''	23:D:2530:A:H5''	2.03	0.40
23:D:2531:A:C6	23:D:2532:G:C6	3.09	0.40
23:D:2556:C:H2'	23:D:2557:G:O4'	2.22	0.40
23:D:2628:C:OP2	23:D:2628:C:H6	2.04	0.40
23:D:25:U:H3'	23:D:26:G:C8	2.55	0.40
23:D:277:C:H4'	23:D:363:G:N2	2.37	0.40
23:D:2813:A:H2'	23:D:2814:C:O4'	2.22	0.40
23:D:280:C:H4'	23:D:281:G:OP1	2.22	0.40
23:D:2789:C:O2	23:D:2893:G:N2	2.55	0.40
23:D:299:A:OP2	23:D:299:A:H3'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D:308:G:C6	23:D:501:A:N1	2.89	0.40
23:D:332:A:C4	23:D:335:C:C4	3.10	0.40
23:D:566:U:H2'	23:D:567:A:H8	1.82	0.40
23:D:627:A:C6	23:D:637:A:C5	3.09	0.40
23:D:649:G:N2	23:D:650:C:C2	2.90	0.40
23:D:775:G:H2'	23:D:794:G:C6	2.57	0.40
23:D:948:G:C6	23:D:970:C:N3	2.89	0.40
24:E:0:A:N3	24:E:0:A:H2'	2.36	0.40
24:E:15:A:C6	24:E:109:G:C2	3.10	0.40
24:E:71:C:C2	24:E:72:G:C8	3.10	0.40
24:E:76:G:H2'	24:E:77:U:H6	1.82	0.40
3:G:6:HIS:HD2	3:G:8:ILE:HG22	1.81	0.40
4:H:18:LYS:HG3	4:H:33:MET:HG2	2.03	0.40
5:I:102:ALA:N	5:I:107:ARG:NH2	2.70	0.40
5:I:41:VAL:HG12	5:I:112:LEU:HB3	2.02	0.40
6:J:33:TYR:HE1	6:J:74:ASP:CB	2.35	0.40
7:K:76:ARG:HB2	7:K:156:TRP:CZ2	2.56	0.40
8:L:121:ASP:HB3	8:L:122:ARG:H	1.47	0.40
1:A:1150:U:O3'	10:N:41:PRO:HB3	2.22	0.40
10:N:42:THR:CG2	10:N:66:ARG:HB2	2.51	0.40
11:O:13:GLN:HG3	11:O:76:GLY:O	2.21	0.40
11:O:58:PRO:O	11:O:61:ALA:HB3	2.22	0.40
1:A:1226:C:C4	13:Q:104:ARG:HB2	2.56	0.40
13:Q:66:LEU:CA	13:Q:70:LEU:HD13	2.42	0.40
15:S:63:ARG:CZ	15:S:67:LEU:HD11	2.52	0.40
17:U:62:SER:HB2	17:U:71:PHE:HA	2.02	0.40
18:V:45:SER:OG	18:V:46:GLU:N	2.49	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	F	232/256 (91%)	181 (78%)	33 (14%)	18 (8%)	1	1
3	G	204/239 (85%)	157 (77%)	33 (16%)	14 (7%)	1	1
4	H	206/209 (99%)	168 (82%)	21 (10%)	17 (8%)	1	1
5	I	148/162 (91%)	122 (82%)	19 (13%)	7 (5%)	3	3
6	J	99/101 (98%)	85 (86%)	11 (11%)	3 (3%)	5	5
7	K	153/156 (98%)	130 (85%)	16 (10%)	7 (5%)	3	3
8	L	136/138 (99%)	107 (79%)	19 (14%)	10 (7%)	1	1
9	M	125/128 (98%)	96 (77%)	14 (11%)	15 (12%)	0	0
10	N	96/105 (91%)	73 (76%)	11 (12%)	12 (12%)	0	0
11	O	117/129 (91%)	96 (82%)	15 (13%)	6 (5%)	2	2
12	P	122/132 (92%)	79 (65%)	33 (27%)	10 (8%)	1	1
13	Q	112/126 (89%)	80 (71%)	19 (17%)	13 (12%)	0	0
14	R	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	1	1
15	S	86/89 (97%)	70 (81%)	9 (10%)	7 (8%)	1	1
16	T	81/88 (92%)	65 (80%)	10 (12%)	6 (7%)	1	1
17	U	102/105 (97%)	82 (80%)	13 (13%)	7 (7%)	1	1
18	V	71/88 (81%)	57 (80%)	9 (13%)	5 (7%)	1	1
19	W	78/93 (84%)	53 (68%)	17 (22%)	8 (10%)	1	1
20	X	97/106 (92%)	85 (88%)	7 (7%)	5 (5%)	2	2
21	Y	22/27 (82%)	17 (77%)	2 (9%)	3 (14%)	0	0
22	C	562/610 (92%)	244 (43%)	187 (33%)	131 (23%)	0	0
25	Z	226/229 (99%)	180 (80%)	26 (12%)	20 (9%)	1	1
26	a	270/276 (98%)	188 (70%)	51 (19%)	31 (12%)	0	0
27	b	204/206 (99%)	147 (72%)	29 (14%)	28 (14%)	0	0
28	c	206/210 (98%)	160 (78%)	29 (14%)	17 (8%)	1	1
29	d	180/182 (99%)	119 (66%)	39 (22%)	22 (12%)	0	0
30	e	172/180 (96%)	121 (70%)	27 (16%)	24 (14%)	0	0
31	f	137/140 (98%)	106 (77%)	18 (13%)	13 (10%)	1	1
32	g	120/122 (98%)	86 (72%)	22 (18%)	12 (10%)	1	1
33	h	143/150 (95%)	98 (68%)	25 (18%)	20 (14%)	0	0
34	i	134/141 (95%)	89 (66%)	30 (22%)	15 (11%)	0	0
35	j	115/118 (98%)	93 (81%)	13 (11%)	9 (8%)	1	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	k	108/112 (96%)	78 (72%)	20 (18%)	10 (9%)	1	1
37	l	115/146 (79%)	70 (61%)	32 (28%)	13 (11%)	0	0
38	m	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	1
39	n	99/101 (98%)	59 (60%)	21 (21%)	19 (19%)	0	0
40	o	108/113 (96%)	82 (76%)	18 (17%)	8 (7%)	1	1
41	p	92/96 (96%)	74 (80%)	12 (13%)	6 (6%)	1	1
42	q	108/110 (98%)	61 (56%)	24 (22%)	23 (21%)	0	0
43	r	178/206 (86%)	128 (72%)	33 (18%)	17 (10%)	1	1
44	s	77/85 (91%)	60 (78%)	12 (16%)	5 (6%)	1	1
45	t	65/67 (97%)	58 (89%)	2 (3%)	5 (8%)	1	1
46	u	57/60 (95%)	43 (75%)	11 (19%)	3 (5%)	2	2
47	v	69/71 (97%)	39 (56%)	14 (20%)	16 (23%)	0	0
48	w	55/60 (92%)	35 (64%)	12 (22%)	8 (14%)	0	0
49	x	47/54 (87%)	21 (45%)	15 (32%)	11 (23%)	0	0
50	y	47/49 (96%)	30 (64%)	10 (21%)	7 (15%)	0	0
51	z	62/65 (95%)	38 (61%)	14 (23%)	10 (16%)	0	0
52	1	35/37 (95%)	25 (71%)	8 (23%)	2 (6%)	2	2
53	2	128/173 (74%)	95 (74%)	21 (16%)	12 (9%)	1	1
54	3	132/147 (90%)	82 (62%)	20 (15%)	30 (23%)	0	0
All	All	6511/6972 (93%)	4639 (71%)	1137 (18%)	735 (11%)	1	0

All (735) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	F	191	ASP
2	F	209	ARG
3	G	64	VAL
4	H	30	LYS
4	H	191	ARG
5	I	98	THR
5	I	143	ARG
6	J	42	GLU
7	K	113	GLU
7	K	146	GLU
8	L	77	GLU

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Mol	Chain	Res	Type
8	L	121	ASP
9	M	38	GLN
9	M	98	PRO
9	M	103	THR
9	M	126	SER
10	N	39	PRO
11	O	53	SER
12	P	18	VAL
13	Q	5	ALA
13	Q	99	ARG
16	T	36	ILE
16	T	44	THR
16	T	80	PHE
17	U	104	LYS
18	V	81	PHE
19	W	4	SER
19	W	5	LEU
19	W	12	ASP
19	W	21	GLU
20	X	14	LYS
20	X	24	LEU
20	X	25	ARG
20	X	73	HIS
21	Y	9	ARG
22	C	4	MET
22	C	9	ILE
22	C	36	VAL
22	C	49	LEU
22	C	69	ARG
22	C	71	LYS
22	C	138	ILE
22	C	160	ALA
22	C	205	TYR
22	C	208	TYR
22	C	246	THR
22	C	271	ILE
22	C	284	ASP
22	C	296	PRO
22	C	297	ALA
22	C	315	LYS
22	C	323	LEU
22	C	329	ALA

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Mol	Chain	Res	Type
22	C	339	ALA
22	C	341	GLY
22	C	351	LEU
22	C	373	ALA
22	C	435	LEU
22	C	437	ASN
22	C	485	ARG
22	C	489	LEU
22	C	490	VAL
22	C	497	HIS
22	C	502	ASP
22	C	523	LYS
22	C	524	LEU
22	C	525	ALA
25	Z	180	PHE
25	Z	182	PRO
25	Z	201	PRO
26	a	44	ASN
26	a	70	TRP
26	a	106	ILE
26	a	157	ARG
26	a	249	PRO
27	b	38	THR
27	b	53	PRO
27	b	56	PRO
27	b	74	PRO
27	b	180	ASN
27	b	205	ALA
28	c	14	PRO
28	c	132	VAL
29	d	25	TYR
29	d	57	ALA
29	d	78	SER
29	d	106	LEU
29	d	112	PRO
29	d	114	ILE
29	d	122	PRO
29	d	181	ARG
30	e	8	PRO
30	e	130	ARG
30	e	156	ALA
30	e	157	TYR

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Mol	Chain	Res	Type
31	f	41	ASP
31	f	46	VAL
31	f	66	LYS
31	f	79	PRO
32	g	31	LYS
32	g	53	LYS
32	g	63	VAL
32	g	67	LYS
32	g	102	VAL
33	h	7	ARG
33	h	13	ASN
33	h	16	ARG
33	h	63	PRO
33	h	107	LYS
33	h	136	GLU
34	i	66	ILE
34	i	77	LYS
35	j	18	LEU
35	j	101	ALA
36	k	86	ALA
37	l	5	ALA
37	l	20	PRO
37	l	28	VAL
37	l	59	THR
37	l	100	TYR
38	m	62	ILE
38	m	67	ALA
39	n	15	GLU
39	n	22	VAL
39	n	31	ALA
39	n	50	PRO
39	n	52	VAL
41	p	33	LYS
41	p	89	ILE
42	q	30	VAL
42	q	44	ILE
42	q	46	LYS
42	q	56	PRO
42	q	72	VAL
43	r	63	ASP
43	r	159	PRO
45	t	13	PRO

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Mol	Chain	Res	Type
45	t	35	SER
46	u	11	SER
46	u	16	PRO
47	v	6	HIS
47	v	11	PRO
47	v	26	SER
47	v	31	ILE
47	v	34	GLU
47	v	44	THR
47	v	58	ARG
48	w	23	HIS
49	x	24	GLU
49	x	36	LEU
49	x	52	VAL
50	y	7	PRO
51	z	6	THR
51	z	36	LYS
51	z	55	ALA
51	z	61	LEU
53	2	7	VAL
53	2	69	PRO
53	2	77	PRO
53	2	80	VAL
53	2	93	LEU
53	2	107	VAL
54	3	22	PRO
54	3	26	ALA
54	3	34	ILE
54	3	67	PHE
54	3	109	LYS
54	3	112	MET
54	3	113	PRO
2	F	24	TRP
2	F	33	TYR
2	F	77	ALA
2	F	127	ILE
2	F	169	LYS
2	F	202	PRO
3	G	16	ARG
3	G	61	ALA
3	G	74	GLY
3	G	139	GLN

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Mol	Chain	Res	Type
3	G	181	ASN
3	G	196	LEU
4	H	24	GLU
4	H	29	PRO
4	H	32	ALA
4	H	137	SER
4	H	199	ASN
5	I	6	PHE
5	I	73	ASN
5	I	75	THR
5	I	144	THR
7	K	37	ASN
7	K	112	PRO
7	K	130	GLY
7	K	148	ASN
8	L	44	PHE
8	L	78	GLN
8	L	97	VAL
8	L	133	LEU
9	M	47	LEU
9	M	58	HIS
9	M	92	TYR
9	M	127	LYS
10	N	11	PHE
10	N	36	GLY
10	N	51	ARG
10	N	54	PHE
10	N	60	ARG
11	O	52	GLY
11	O	54	ARG
12	P	6	THR
12	P	7	ILE
12	P	48	PRO
12	P	51	ALA
12	P	83	VAL
13	Q	7	VAL
13	Q	58	GLU
13	Q	63	THR
13	Q	103	THR
13	Q	109	THR
14	R	15	LYS
14	R	29	ARG

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Mol	Chain	Res	Type
14	R	55	GLY
15	S	48	LYS
15	S	72	ARG
15	S	88	ARG
17	U	14	LYS
17	U	66	SER
18	V	21	LYS
18	V	87	ARG
19	W	47	HIS
20	X	74	LYS
21	Y	11	GLY
22	C	5	ASP
22	C	28	ARG
22	C	45	PHE
22	C	47	ASP
22	C	79	HIS
22	C	80	LEU
22	C	105	LEU
22	C	163	ALA
22	C	166	ALA
22	C	178	LEU
22	C	209	GLN
22	C	217	LEU
22	C	231	TYR
22	C	232	SER
22	C	244	VAL
22	C	260	GLU
22	C	320	LEU
22	C	333	GLU
22	C	334	PRO
22	C	356	ILE
22	C	372	THR
22	C	383	LYS
22	C	405	ILE
22	C	407	GLU
22	C	444	ALA
22	C	500	VAL
22	C	501	VAL
22	C	567	VAL
22	C	588	GLY
22	C	590	VAL
25	Z	156	ILE

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Mol	Chain	Res	Type
25	Z	159	GLY
25	Z	160	ARG
25	Z	161	ILE
25	Z	174	PRO
25	Z	206	GLY
25	Z	218	MET
26	a	10	THR
26	a	17	THR
26	a	54	ARG
26	a	59	LYS
26	a	89	SER
26	a	144	ALA
26	a	149	PRO
26	a	162	SER
26	a	170	GLY
26	a	245	PRO
26	a	260	ARG
27	b	37	ARG
27	b	57	LYS
27	b	75	VAL
27	b	83	ASP
27	b	117	MET
27	b	119	ARG
27	b	145	LYS
27	b	184	VAL
28	c	58	ALA
28	c	68	LYS
28	c	89	VAL
28	c	97	TYR
28	c	126	VAL
29	d	49	ASP
29	d	115	ARG
29	d	128	ARG
30	e	57	ASP
30	e	118	PRO
30	e	152	ARG
30	e	155	SER
31	f	45	ASN
31	f	68	GLU
31	f	127	ASP
31	f	135	PRO
32	g	30	ALA

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Mol	Chain	Res	Type
32	g	49	ARG
33	h	23	PRO
33	h	25	SER
33	h	30	THR
33	h	41	ARG
33	h	59	LEU
34	i	67	ARG
34	i	78	PRO
34	i	87	LYS
36	k	32	LEU
36	k	64	GLU
36	k	95	HIS
37	l	18	ASP
37	l	27	THR
37	l	39	ARG
38	m	54	LYS
38	m	77	SER
38	m	93	LYS
39	n	6	LYS
39	n	13	ARG
39	n	14	VAL
39	n	18	LEU
39	n	57	VAL
39	n	64	HIS
39	n	68	LYS
39	n	69	LYS
39	n	90	PRO
40	o	41	LYS
41	p	44	GLU
41	p	48	LYS
41	p	53	LYS
42	q	17	SER
42	q	20	TYR
42	q	23	ARG
42	q	68	HIS
42	q	75	ILE
42	q	77	PRO
42	q	82	PRO
42	q	87	LYS
42	q	99	CYS
43	r	42	VAL
43	r	82	ARG

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Mol	Chain	Res	Type
45	t	46	ARG
47	v	22	ILE
47	v	32	TYR
47	v	56	VAL
48	w	14	ALA
48	w	56	LYS
49	x	17	LYS
49	x	35	GLU
49	x	49	HIS
50	y	39	ARG
51	z	45	GLY
51	z	62	LEU
53	2	30	GLN
54	3	14	ALA
54	3	28	GLY
54	3	82	ALA
54	3	94	GLU
54	3	96	VAL
54	3	100	THR
54	3	134	MET
2	F	15	VAL
2	F	16	HIS
2	F	78	GLN
2	F	82	ARG
2	F	204	ASN
2	F	232	PRO
3	G	137	ALA
3	G	174	PRO
4	H	4	TYR
4	H	88	VAL
4	H	131	ARG
4	H	136	PRO
5	I	12	LEU
7	K	121	ALA
8	L	22	GLU
8	L	132	GLU
9	M	23	ASN
9	M	57	GLY
9	M	88	TYR
10	N	34	VAL
11	O	111	ASP
12	P	22	SER

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Mol	Chain	Res	Type
13	Q	28	ALA
13	Q	66	LEU
13	Q	67	GLU
14	R	32	SER
14	R	34	TYR
15	S	17	ARG
15	S	47	LYS
16	T	11	SER
17	U	99	SER
19	W	7	LYS
22	C	19	ASP
22	C	42	ARG
22	C	48	SER
22	C	84	PRO
22	C	140	LEU
22	C	170	THR
22	C	189	LYS
22	C	198	ALA
22	C	254	GLU
22	C	278	ASP
22	C	285	ARG
22	C	317	ARG
22	C	328	ALA
22	C	330	LEU
22	C	335	GLU
22	C	387	GLU
22	C	399	PRO
22	C	408	PRO
22	C	418	GLU
22	C	429	GLN
22	C	496	VAL
22	C	498	GLY
22	C	503	ALA
22	C	529	PRO
25	Z	35	ALA
25	Z	37	PHE
25	Z	109	ASP
26	a	6	PHE
26	a	55	GLY
26	a	84	TYR
26	a	91	ARG
26	a	246	PRO

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Mol	Chain	Res	Type
27	b	16	ARG
27	b	17	ASP
27	b	32	PRO
27	b	54	GLN
27	b	114	ALA
27	b	122	PHE
27	b	124	GLY
27	b	173	VAL
27	b	202	LYS
28	c	12	LEU
28	c	62	ARG
28	c	168	ARG
29	d	64	THR
29	d	132	ASN
29	d	135	LEU
29	d	177	GLY
30	e	12	PRO
30	e	21	PRO
30	e	47	GLU
30	e	48	GLY
30	e	56	SER
31	f	4	TYR
31	f	48	MET
31	f	93	THR
31	f	111	PRO
32	g	4	PRO
32	g	93	PRO
33	h	36	LYS
33	h	42	SER
33	h	64	LYS
34	i	20	ALA
34	i	26	TYR
34	i	61	GLY
34	i	81	VAL
34	i	91	GLU
34	i	98	LYS
35	j	4	LEU
35	j	20	LEU
35	j	61	HIS
35	j	89	ASP
36	k	55	ALA
36	k	82	ILE

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Mol	Chain	Res	Type
37	l	80	SER
38	m	24	TYR
38	m	64	ARG
38	m	87	GLY
39	n	66	ARG
40	o	9	TYR
40	o	15	ARG
42	q	34	LYS
42	q	94	LYS
43	r	41	LEU
43	r	146	ILE
43	r	165	VAL
43	r	170	THR
43	r	177	PRO
44	s	21	LEU
44	s	83	PRO
45	t	37	GLY
47	v	41	PRO
47	v	48	ARG
47	v	50	VAL
49	x	46	HIS
50	y	11	LYS
51	z	13	ARG
51	z	38	GLY
53	2	62	ALA
54	3	10	LEU
54	3	13	PRO
54	3	24	GLY
54	3	64	SER
54	3	73	PRO
54	3	74	ALA
54	3	117	THR
54	3	126	MET
2	F	61	LEU
3	G	4	LYS
3	G	144	SER
3	G	157	ILE
4	H	40	PRO
4	H	200	GLU
9	M	117	HIS
12	P	16	GLU
13	Q	27	LYS

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Mol	Chain	Res	Type
15	S	87	ILE
16	T	9	PHE
16	T	68	ASP
18	V	82	THR
22	C	6	LEU
22	C	35	ALA
22	C	143	ALA
22	C	145	PRO
22	C	159	PRO
22	C	164	ILE
22	C	167	SER
22	C	247	PRO
22	C	256	LEU
22	C	292	PRO
22	C	298	LYS
22	C	396	LEU
22	C	488	ASP
22	C	499	GLU
22	C	522	ASP
22	C	530	ARG
22	C	556	LYS
22	C	591	GLU
25	Z	39	GLU
25	Z	72	VAL
26	a	62	TYR
26	a	118	VAL
26	a	219	PRO
26	a	271	ILE
27	b	147	PRO
28	c	54	ARG
28	c	72	ARG
29	d	65	GLY
29	d	86	MET
29	d	124	SER
29	d	151	ALA
29	d	178	PHE
30	e	41	MET
30	e	110	SER
32	g	101	PRO
33	h	18	ARG
33	h	96	THR
35	j	8	ARG

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Mol	Chain	Res	Type
35	j	107	ASP
36	k	36	TYR
36	k	61	ASN
36	k	88	ASP
37	l	61	PHE
37	l	110	ILE
38	m	94	ASN
39	n	10	LYS
40	o	64	MET
40	o	73	ALA
40	o	89	ALA
41	p	63	LYS
42	q	40	GLU
42	q	42	VAL
42	q	74	PRO
42	q	83	THR
42	q	86	ARG
43	r	13	GLU
43	r	55	HIS
43	r	168	GLU
44	s	20	ARG
46	u	31	LEU
47	v	18	CYS
47	v	27	THR
47	v	55	ARG
48	w	43	HIS
48	w	48	GLU
48	w	59	GLU
49	x	29	ASN
49	x	53	LYS
50	y	2	LYS
50	y	4	THR
50	y	15	THR
52	1	6	SER
53	2	109	SER
53	2	119	ALA
54	3	57	ILE
54	3	93	ARG
2	F	29	ALA
4	H	3	ARG
4	H	35	ARG
4	H	198	VAL

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Mol	Chain	Res	Type
9	M	104	ARG
10	N	23	ILE
10	N	87	THR
10	N	90	LEU
12	P	61	THR
13	Q	101	GLN
17	U	68	ARG
22	C	46	LEU
22	C	64	VAL
22	C	286	PRO
22	C	505	THR
22	C	507	ILE
22	C	542	GLY
25	Z	49	ILE
25	Z	132	GLY
26	a	7	LYS
26	a	268	ARG
26	a	270	ILE
27	b	168	MET
28	c	36	VAL
28	c	69	HIS
29	d	164	GLU
30	e	30	LYS
30	e	131	VAL
30	e	154	PRO
31	f	47	ALA
33	h	84	ASN
33	h	91	PHE
33	h	92	GLU
33	h	138	LEU
34	i	110	THR
36	k	102	ALA
37	l	99	LEU
39	n	41	GLY
39	n	72	VAL
40	o	63	ASP
40	o	75	TYR
42	q	6	HIS
43	r	81	ARG
43	r	123	ASP
48	w	5	PRO
49	x	28	ARG

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Mol	Chain	Res	Type
50	y	41	ARG
51	z	4	MET
51	z	14	VAL
52	1	7	VAL
54	3	60	TYR
54	3	90	LYS
54	3	95	LYS
2	F	99	GLY
2	F	230	VAL
3	G	14	ILE
6	J	27	GLN
9	M	70	LYS
10	N	31	GLY
11	O	89	ALA
12	P	19	ARG
14	R	16	PHE
17	U	65	ILE
17	U	80	GLY
18	V	20	ALA
19	W	19	VAL
21	Y	7	ARG
22	C	33	THR
22	C	44	GLN
22	C	137	LYS
22	C	353	HIS
22	C	482	ALA
25	Z	36	LYS
25	Z	158	ALA
27	b	91	VAL
28	c	16	GLY
29	d	126	ASP
30	e	125	VAL
30	e	160	LYS
30	e	168	PRO
30	e	174	GLY
32	g	78	ARG
44	s	30	VAL
49	x	27	LYS
6	J	72	VAL
15	S	29	VAL
22	C	141	PRO
22	C	152	VAL

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Mol	Chain	Res	Type
22	C	213	PRO
22	C	536	PRO
26	a	142	VAL
27	b	126	PRO
30	e	107	VAL
35	j	73	VAL
39	n	17	GLY
42	q	15	VAL
54	3	5	VAL
54	3	52	ILE
22	C	274	VAL
22	C	486	PRO
22	C	593	PRO
32	g	119	PRO
34	i	94	VAL
43	r	147	GLY
53	2	73	GLY
54	3	135	GLY
9	M	22	GLY
22	C	133	PRO
22	C	385	GLY
22	C	527	VAL
25	Z	4	GLY
26	a	28	GLU
34	i	19	GLY
43	r	39	VAL
43	r	167	PRO
3	G	138	VAL
4	H	167	GLY
8	L	75	ARG
8	L	134	ILE
10	N	40	LEU
22	C	77	VAL
22	C	225	GLY
22	C	249	GLY
22	C	390	VAL
22	C	402	ILE
22	C	454	ALA
26	a	18	VAL
27	b	116	VAL
28	c	84	VAL
30	e	126	PRO

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Mol	Chain	Res	Type
34	i	125	LEU
45	t	12	SER
48	w	54	GLY
11	O	112	THR
13	Q	95	GLY
19	W	26	GLY
28	c	30	PRO
37	l	56	GLY
44	s	63	VAL
53	2	100	ASN

### 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	
2	F	202/220 (92%)	202 (100%)	0	100	100
3	G	160/188 (85%)	160 (100%)	0	100	100
4	H	180/181 (99%)	180 (100%)	0	100	100
5	I	115/123 (94%)	115 (100%)	0	100	100
6	J	90/90 (100%)	90 (100%)	0	100	100
7	K	126/127 (99%)	126 (100%)	0	100	100
8	L	119/119 (100%)	119 (100%)	0	100	100
9	M	98/99 (99%)	98 (100%)	0	100	100
10	N	88/92 (96%)	88 (100%)	0	100	100
11	O	90/99 (91%)	90 (100%)	0	100	100
12	P	104/109 (95%)	103 (99%)	1 (1%)	82	82
13	Q	92/101 (91%)	87 (95%)	5 (5%)	27	27
14	R	49/50 (98%)	49 (100%)	0	100	100
15	S	79/80 (99%)	79 (100%)	0	100	100
16	T	72/74 (97%)	72 (100%)	0	100	100
17	U	96/97 (99%)	96 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	V	64/77 (83%)	64 (100%)	0	100	100
19	W	71/80 (89%)	69 (97%)	2 (3%)	51	51
20	X	76/82 (93%)	76 (100%)	0	100	100
21	Y	19/22 (86%)	19 (100%)	0	100	100
22	C	473/505 (94%)	347 (73%)	126 (27%)	0	0
25	Z	180/181 (99%)	174 (97%)	6 (3%)	45	45
26	a	215/218 (99%)	213 (99%)	2 (1%)	84	84
27	b	166/166 (100%)	165 (99%)	1 (1%)	90	90
28	c	164/166 (99%)	164 (100%)	0	100	100
29	d	156/156 (100%)	153 (98%)	3 (2%)	65	65
30	e	143/148 (97%)	141 (99%)	2 (1%)	74	74
31	f	118/119 (99%)	118 (100%)	0	100	100
32	g	100/100 (100%)	99 (99%)	1 (1%)	82	82
33	h	111/116 (96%)	111 (100%)	0	100	100
34	i	106/111 (96%)	106 (100%)	0	100	100
35	j	100/101 (99%)	100 (100%)	0	100	100
36	k	87/88 (99%)	87 (100%)	0	100	100
37	l	105/127 (83%)	105 (100%)	0	100	100
38	m	93/94 (99%)	93 (100%)	0	100	100
39	n	82/82 (100%)	82 (100%)	0	100	100
40	o	90/92 (98%)	90 (100%)	0	100	100
41	p	76/78 (97%)	76 (100%)	0	100	100
42	q	91/91 (100%)	91 (100%)	0	100	100
43	r	159/179 (89%)	159 (100%)	0	100	100
44	s	63/67 (94%)	63 (100%)	0	100	100
45	t	62/62 (100%)	62 (100%)	0	100	100
46	u	51/52 (98%)	51 (100%)	0	100	100
47	v	63/63 (100%)	60 (95%)	3 (5%)	31	31
48	w	50/52 (96%)	50 (100%)	0	100	100
49	x	48/52 (92%)	48 (100%)	0	100	100
50	y	42/42 (100%)	42 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	z	54/55 (98%)	54 (100%)	0	100	100
52	1	34/34 (100%)	34 (100%)	0	100	100
54	3	101/111 (91%)	86 (85%)	15 (15%)	4	4
All	All	5373/5618 (96%)	5206 (97%)	167 (3%)	51	47

All (167) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	P	93	LEU
13	Q	58	GLU
13	Q	62	ASN
13	Q	66	LEU
13	Q	99	ARG
13	Q	102	ARG
19	W	5	LEU
19	W	7	LYS
22	C	3	ARG
22	C	4	MET
22	C	5	ASP
22	C	8	ARG
22	C	9	ILE
22	C	10	ARG
22	C	13	SER
22	C	19	ASP
22	C	20	HIS
22	C	22	LYS
22	C	23	SER
22	C	24	THR
22	C	25	LEU
22	C	27	ASP
22	C	28	ARG
22	C	36	VAL
22	C	40	GLU
22	C	41	MET
22	C	42	ARG
22	C	43	GLU
22	C	47	ASP
22	C	49	LEU
22	C	53	ARG
22	C	55	ARG
22	C	60	LYS

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Mol	Chain	Res	Type
22	C	74	GLU
22	C	77	VAL
22	C	78	PHE
22	C	82	ASP
22	C	95	ARG
22	C	97	LEU
22	C	104	LEU
22	C	105	LEU
22	C	120	LYS
22	C	121	PHE
22	C	125	LEU
22	C	127	HIS
22	C	136	ASN
22	C	139	ASP
22	C	140	LEU
22	C	144	ARG
22	C	150	LEU
22	C	154	GLU
22	C	165	PHE
22	C	170	THR
22	C	175	GLU
22	C	189	LYS
22	C	206	ASP
22	C	208	TYR
22	C	221	ARG
22	C	223	ARG
22	C	227	ARG
22	C	229	ARG
22	C	230	ILE
22	C	232	SER
22	C	233	THR
22	C	235	LYS
22	C	246	THR
22	C	256	LEU
22	C	269	ARG
22	C	274	VAL
22	C	275	GLN
22	C	279	THR
22	C	280	ILE
22	C	287	THR
22	C	289	SER
22	C	291	TYR

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Mol	Chain	Res	Type
22	C	294	PHE
22	C	295	ARG
22	C	315	LYS
22	C	317	ARG
22	C	321	GLU
22	C	324	LYS
22	C	325	LEU
22	C	327	ASP
22	C	330	LEU
22	C	332	PHE
22	C	337	SER
22	C	338	THR
22	C	340	LEU
22	C	342	PHE
22	C	344	PHE
22	C	349	LEU
22	C	353	HIS
22	C	369	LEU
22	C	377	VAL
22	C	381	ARG
22	C	383	LYS
22	C	392	ASN
22	C	400	THR
22	C	401	ARG
22	C	403	GLU
22	C	405	ILE
22	C	406	LEU
22	C	407	GLU
22	C	418	GLU
22	C	423	SER
22	C	424	LEU
22	C	425	MET
22	C	432	ARG
22	C	446	LYS
22	C	464	HIS
22	C	467	LEU
22	C	477	MET
22	C	478	ASP
22	C	481	GLN
22	C	485	ARG
22	C	489	LEU
22	C	491	LYS

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Mol	Chain	Res	Type
22	C	499	GLU
22	C	502	ASP
22	C	507	ILE
22	C	511	GLU
22	C	514	TYR
22	C	523	LYS
22	C	524	LEU
22	C	528	ILE
22	C	530	ARG
22	C	531	GLN
22	C	534	GLU
22	C	538	GLN
22	C	548	ARG
22	C	583	ARG
22	C	589	LYS
22	C	591	GLU
22	C	594	GLN
25	Z	161	ILE
25	Z	175	VAL
25	Z	180	PHE
25	Z	183	GLU
25	Z	184	LYS
25	Z	185	LEU
26	a	25	THR
26	a	84	TYR
27	b	5	LEU
29	d	25	TYR
29	d	33	ARG
29	d	34	LEU
30	e	127	GLU
30	e	129	THR
32	g	57	VAL
47	v	28	LYS
47	v	31	ILE
47	v	32	TYR
54	3	9	LYS
54	3	11	GLN
54	3	12	LEU
54	3	63	ARG
54	3	64	SER
54	3	65	PHE
54	3	66	THR

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Mol	Chain	Res	Type
54	3	89	HIS
54	3	93	ARG
54	3	94	GLU
54	3	105	LEU
54	3	109	LYS
54	3	111	LYS
54	3	112	MET
54	3	120	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (111) such sidechains are listed below:

Mol	Chain	Res	Type
2	F	40	HIS
2	F	110	GLN
2	F	140	HIS
3	G	28	GLN
3	G	63	ASN
3	G	108	ASN
3	G	123	GLN
3	G	176	HIS
4	H	62	GLN
4	H	74	GLN
4	H	116	GLN
4	H	129	ASN
5	I	65	ASN
5	I	78	HIS
5	I	130	ASN
6	J	64	GLN
7	K	28	ASN
7	K	68	ASN
7	K	96	GLN
7	K	109	ASN
7	K	122	HIS
8	L	15	ASN
8	L	81	HIS
8	L	82	HIS
9	M	23	ASN
9	M	34	ASN
10	N	68	HIS
11	O	22	HIS
11	O	38	ASN
11	O	116	HIS

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Mol	Chain	Res	Type
11	O	117	ASN
12	P	76	ASN
13	Q	92	HIS
15	S	9	GLN
15	S	53	HIS
17	U	26	GLN
19	W	23	ASN
19	W	56	GLN
20	X	75	ASN
22	C	34	HIS
22	C	44	GLN
22	C	136	ASN
22	C	142	ASN
22	C	183	GLN
22	C	209	GLN
22	C	326	ASN
22	C	391	HIS
22	C	392	ASN
22	C	464	HIS
22	C	497	HIS
22	C	538	GLN
22	C	594	GLN
25	Z	3	HIS
25	Z	27	HIS
25	Z	66	HIS
25	Z	71	GLN
25	Z	172	HIS
26	a	44	ASN
26	a	115	GLN
26	a	116	GLN
26	a	129	ASN
27	b	66	HIS
27	b	129	HIS
27	b	159	HIS
28	c	75	HIS
28	c	133	ASN
28	c	204	ASN
29	d	26	GLN
30	e	158	HIS
31	f	8	GLN
31	f	38	HIS
31	f	94	HIS

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Mol	Chain	Res	Type
31	f	101	HIS
33	h	9	ASN
33	h	84	ASN
34	i	12	GLN
34	i	46	GLN
35	j	61	HIS
37	l	79	HIS
37	l	84	GLN
38	m	14	HIS
38	m	66	ASN
38	m	94	ASN
38	m	117	GLN
40	o	34	ASN
40	o	61	ASN
41	p	31	HIS
42	q	6	HIS
42	q	68	HIS
43	r	32	HIS
43	r	54	HIS
43	r	75	ASN
44	s	29	GLN
44	s	35	ASN
45	t	60	ASN
46	u	19	GLN
46	u	32	GLN
46	u	46	ASN
47	v	20	ASN
47	v	47	GLN
48	w	22	HIS
48	w	23	HIS
49	x	46	HIS
50	y	36	GLN
51	z	7	HIS
52	1	34	GLN
52	1	36	GLN
54	3	29	GLN
54	3	30	HIS
54	3	42	ASN
54	3	116	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1514/1522 (99%)	640 (42%)	80 (5%)
23	D	2888/2893 (99%)	1464 (50%)	169 (5%)
24	E	122/123 (99%)	47 (38%)	4 (3%)
55	4	76/77 (98%)	30 (39%)	0
56	5	75/76 (98%)	36 (48%)	4 (5%)
All	All	4675/4691 (99%)	2217 (47%)	257 (5%)

All (2217) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	10	A
1	A	14	U
1	A	17	U
1	A	19	C
1	A	20	U
1	A	27	G
1	A	31	G
1	A	32	A
1	A	34	C
1	A	37	U
1	A	38	G
1	A	39	G
1	A	47	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	52	G
1	A	53	A
1	A	54	C
1	A	56	U
1	A	57	G
1	A	58	C
1	A	59	A
1	A	61	G
1	A	64	G
1	A	66	G
1	A	80	G
1	A	87	A
1	A	89	U
1	A	90	C

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Mol	Chain	Res	Type
1	A	91	C
1	A	93	U
1	A	96	G
1	A	101	A
1	A	106	C
1	A	108	G
1	A	110	C
1	A	112	G
1	A	116	A
1	A	119	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	123	C
1	A	125	U
1	A	129(A)	G
1	A	130	A
1	A	131	C
1	A	133	U
1	A	136	C
1	A	137	C
1	A	141	A
1	A	142	G
1	A	160	A
1	A	161	A
1	A	170	U
1	A	174	C
1	A	181	G
1	A	182	U
1	A	185	A
1	A	186(A)	C
1	A	188	U
1	A	189	U
1	A	190	G
1	A	191(A)	G
1	A	195	A
1	A	196	A
1	A	197	A
1	A	201	C
1	A	209	U
1	A	210	U
1	A	216	G

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Mol	Chain	Res	Type
1	A	218	C
1	A	223	U
1	A	234	C
1	A	240	C
1	A	241	C
1	A	243	A
1	A	244	U
1	A	245	C
1	A	247	G
1	A	249	U
1	A	250	A
1	A	251	G
1	A	253	U
1	A	259	G
1	A	261	U
1	A	262	A
1	A	264	U
1	A	266	G
1	A	267	C
1	A	273	A
1	A	274	A
1	A	275	G
1	A	276	G
1	A	280	C
1	A	281	G
1	A	282	A
1	A	283	C
1	A	284	G
1	A	289	G
1	A	290	C
1	A	293	G
1	A	298	A
1	A	302	G
1	A	306	G
1	A	308	C
1	A	309	G
1	A	314	C
1	A	315	A
1	A	316	G
1	A	323	U
1	A	328	C
1	A	329	A

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Mol	Chain	Res	Type
1	A	330	C
1	A	332	G
1	A	334	C
1	A	336	C
1	A	345	C
1	A	346	G
1	A	347	G
1	A	348	G
1	A	349	A
1	A	351	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	356	A
1	A	358	U
1	A	361	G
1	A	362	G
1	A	366	C
1	A	367	U
1	A	369	C
1	A	373	A
1	A	376	G
1	A	380	G
1	A	383	A
1	A	385	C
1	A	388	G
1	A	389	A
1	A	390	C
1	A	396	G
1	A	397	A
1	A	398	C
1	A	404	U
1	A	406	G
1	A	407	G
1	A	409	G
1	A	410	G
1	A	412	A
1	A	413	G
1	A	414	A
1	A	415	A
1	A	420	U
1	A	421	U

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Mol	Chain	Res	Type
1	A	422	C
1	A	423	G
1	A	424	G
1	A	427	U
1	A	429	U
1	A	432	A
1	A	433	C
1	A	439	A
1	A	440	A
1	A	446	G
1	A	448	A
1	A	450	G
1	A	453	A
1	A	454	C
1	A	466	C
1	A	467	G
1	A	479	C
1	A	480	U
1	A	481	G
1	A	483	C
1	A	485	G
1	A	486	U
1	A	488	C
1	A	494	U
1	A	496	A
1	A	497	U
1	A	507	C
1	A	508	C
1	A	509	A
1	A	510	A
1	A	511	C
1	A	517	G
1	A	518	C
1	A	519	C
1	A	521	G
1	A	524	G
1	A	525	C
1	A	527	G
1	A	530	G
1	A	531	U
1	A	533	A
1	A	534	U

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Mol	Chain	Res	Type
1	A	535	A
1	A	536	C
1	A	548	G
1	A	549	C
1	A	550	G
1	A	551	U
1	A	552	U
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	563	A
1	A	564	C
1	A	567	G
1	A	570	G
1	A	571	U
1	A	572	A
1	A	573	A
1	A	574	A
1	A	575	G
1	A	576	G
1	A	577	G
1	A	578	C
1	A	579	G
1	A	581	G
1	A	582	U
1	A	583	A
1	A	587	G
1	A	588	G
1	A	589	C
1	A	595	G
1	A	596	C
1	A	597	G
1	A	598	U
1	A	607	A
1	A	611	A
1	A	612	C
1	A	617	G
1	A	618	C
1	A	619	U
1	A	622	A
1	A	625	G

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Mol	Chain	Res	Type
1	A	629	G
1	A	632	A
1	A	642	A
1	A	645	C
1	A	650	G
1	A	652	U
1	A	659	U
1	A	663	A
1	A	664	G
1	A	665	A
1	A	672	U
1	A	673	G
1	A	678	U
1	A	679	C
1	A	683	G
1	A	684	A
1	A	686	U
1	A	687	A
1	A	688	G
1	A	690	G
1	A	691	G
1	A	693	G
1	A	695	A
1	A	697	U
1	A	700	G
1	A	702	A
1	A	703	G
1	A	704	A
1	A	712	A
1	A	713	G
1	A	715	A
1	A	717	C
1	A	718	G
1	A	723	U
1	A	724	G
1	A	726	C
1	A	731	G
1	A	744	C
1	A	748	C
1	A	749	C
1	A	755	G
1	A	760	G

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Mol	Chain	Res	Type
1	A	766	A
1	A	769	G
1	A	771	G
1	A	774	G
1	A	775	G
1	A	776	G
1	A	777	A
1	A	780	A
1	A	781	A
1	A	782	A
1	A	785	G
1	A	789	U
1	A	792	A
1	A	793	U
1	A	794	A
1	A	796	C
1	A	799	G
1	A	803	G
1	A	805	C
1	A	810	C
1	A	811	C
1	A	812	C
1	A	813	U
1	A	814	A
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	828	A
1	A	829	G
1	A	831	U
1	A	832	C
1	A	837	G
1	A	841	U
1	A	842	C
1	A	843	U
1	A	848	C
1	A	849	C
1	A	850	U
1	A	855	G

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Mol	Chain	Res	Type
1	A	856	C
1	A	857	C
1	A	858	G
1	A	866	C
1	A	867	G
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	875	C
1	A	877	C
1	A	878	G
1	A	879	C
1	A	880	C
1	A	883	C
1	A	884	U
1	A	885	G
1	A	890	G
1	A	891	U
1	A	898	G
1	A	900	A
1	A	901	A
1	A	902	G
1	A	907	A
1	A	913	A
1	A	914	A
1	A	917	G
1	A	919	A
1	A	922	G
1	A	926	G
1	A	927	G
1	A	932	C
1	A	934	C
1	A	936	C
1	A	938	A
1	A	939	G
1	A	945	G
1	A	947	G
1	A	950	U
1	A	954	G
1	A	955	U
1	A	958	A

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Mol	Chain	Res	Type
1	A	960	U
1	A	961	U
1	A	965	A
1	A	966	G
1	A	969	A
1	A	971	G
1	A	972	C
1	A	973	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	979	C
1	A	980	C
1	A	981	U
1	A	984	C
1	A	985	C
1	A	986	A
1	A	991	U
1	A	992	U
1	A	993	G
1	A	994	A
1	A	995	C
1	A	999	U
1	A	1001	G
1	A	1002	G
1	A	1004	A
1	A	1005	A
1	A	1009	G
1	A	1013	G
1	A	1014	A
1	A	1015	A
1	A	1024	G
1	A	1026	G
1	A	1027	C
1	A	1028(A)	C
1	A	1032(A)	G
1	A	1034	G
1	A	1035	A
1	A	1037	C
1	A	1040	U
1	A	1042	G

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Mol	Chain	Res	Type
1	A	1045	C
1	A	1046	A
1	A	1047	G
1	A	1049	U
1	A	1050	G
1	A	1054	C
1	A	1055	A
1	A	1056	U
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1068	G
1	A	1071	C
1	A	1072	G
1	A	1081	G
1	A	1084	G
1	A	1087	G
1	A	1089	G
1	A	1092	A
1	A	1093	A
1	A	1095	U
1	A	1100	C
1	A	1101	A
1	A	1102	A
1	A	1104	G
1	A	1113	C
1	A	1116	C
1	A	1117	G
1	A	1118	C
1	A	1125	U
1	A	1126	U
1	A	1129	C
1	A	1131	G
1	A	1133	G
1	A	1134	G
1	A	1136	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1142	G
1	A	1147	C

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Mol	Chain	Res	Type
1	A	1152	A
1	A	1153	C
1	A	1154	G
1	A	1156	G
1	A	1157	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1163	C
1	A	1164	G
1	A	1174	G
1	A	1175	G
1	A	1182	G
1	A	1183	A
1	A	1184	G
1	A	1187	G
1	A	1188	A
1	A	1189	C
1	A	1191	A
1	A	1192	C
1	A	1196	U
1	A	1197	G
1	A	1198	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1203	C
1	A	1205	U
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1218	C
1	A	1222	G
1	A	1224	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1229	A
1	A	1232	U
1	A	1238	A
1	A	1239	A
1	A	1240	U

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Mol	Chain	Res	Type
1	A	1241	G
1	A	1242	C
1	A	1244	C
1	A	1248	A
1	A	1249	C
1	A	1250	A
1	A	1251	A
1	A	1254	C
1	A	1256	A
1	A	1257	U
1	A	1258	G
1	A	1260	C
1	A	1261	A
1	A	1264	C
1	A	1266	G
1	A	1267	C
1	A	1268	A
1	A	1269	A
1	A	1270	C
1	A	1271	G
1	A	1275	A
1	A	1278	U
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1284	C
1	A	1286	A
1	A	1287	A
1	A	1290	G
1	A	1292	U
1	A	1298	C
1	A	1299	A
1	A	1301	U
1	A	1302	U
1	A	1305	G
1	A	1306	A
1	A	1310	G
1	A	1312	G
1	A	1314	C
1	A	1318	A
1	A	1319	A

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Mol	Chain	Res	Type
1	A	1320	C
1	A	1321	C
1	A	1322	C
1	A	1323	G
1	A	1327	C
1	A	1328	C
1	A	1329	A
1	A	1330	U
1	A	1331	G
1	A	1334	G
1	A	1335	C
1	A	1337	G
1	A	1340	A
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1353	G
1	A	1357	A
1	A	1361	G
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1367	C
1	A	1374	A
1	A	1375	A
1	A	1377	A
1	A	1378	C
1	A	1379	G
1	A	1380	U
1	A	1381	U
1	A	1382	C
1	A	1387	G
1	A	1394	A
1	A	1395	C
1	A	1397	C
1	A	1398	A
1	A	1399	C
1	A	1400	C
1	A	1401	G
1	A	1403	C
1	A	1404	C

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Mol	Chain	Res	Type
1	A	1410	G
1	A	1414	U
1	A	1415	G
1	A	1417	G
1	A	1419	G
1	A	1421	G
1	A	1422	G
1	A	1429	C
1	A	1433	A
1	A	1434	A
1	A	1435	G
1	A	1440	C
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1448	C
1	A	1450	U
1	A	1451	A
1	A	1452	C
1	A	1453	G
1	A	1454	G
1	A	1455	G
1	A	1459	C
1	A	1465	C
1	A	1466	C
1	A	1467	G
1	A	1476	G
1	A	1483	A
1	A	1484	C
1	A	1486	G
1	A	1490	C
1	A	1492	A
1	A	1493	A
1	A	1494	G
1	A	1495	U
1	A	1497	G
1	A	1498	U
1	A	1499	A
1	A	1501	C
1	A	1503	A
1	A	1504	G
1	A	1505	G

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Mol	Chain	Res	Type
1	A	1506	U
1	A	1507	A
1	A	1508	G
1	A	1516	G
1	A	1517	G
1	A	1520	G
1	A	1523	G
1	A	1527	C
1	A	1528	U
1	A	1529	G
1	A	1530	G
1	A	1531	A
1	A	1532	U
1	A	1533	C
1	A	1534	A
1	A	1535	C
1	A	1537	U
1	A	1539	C
1	A	1540	U
23	D	4	C
23	D	5	A
23	D	13	A
23	D	15	G
23	D	25	U
23	D	26	G
23	D	28	A
23	D	29	U
23	D	30	G
23	D	33	U
23	D	34	C
23	D	35	G
23	D	36	G
23	D	45	G
23	D	49	A
23	D	50	U
23	D	51	G
23	D	52	A
23	D	53	A
23	D	55	G
23	D	60	G
23	D	61	G
23	D	64	A

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Mol	Chain	Res	Type
23	D	66	C
23	D	68	G
23	D	69	C
23	D	71	A
23	D	72	U
23	D	73	A
23	D	74	A
23	D	75	G
23	D	76	C
23	D	77	C
23	D	82	G
23	D	83	G
23	D	84	A
23	D	85	G
23	D	86	C
23	D	87	C
23	D	88	G
23	D	90	U
23	D	91	A
23	D	92	G
23	D	94	G
23	D	95	G
23	D	96	G
23	D	98	G
23	D	101	G
23	D	102	G
23	D	103	A
23	D	105	C
23	D	109	G
23	D	110	G
23	D	111	A
23	D	112	U
23	D	113	G
23	D	115	C
23	D	119	A
23	D	120	U
23	D	121	G
23	D	122	G
23	D	125	G
23	D	127	A
23	D	128	C
23	D	130	C

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Mol	Chain	Res	Type
23	D	131	G
23	D	136	G
23	D	137(A)	G
23	D	139	G
23	D	140	A
23	D	141(A)	C
23	D	147	U
23	D	149	A
23	D	150	C
23	D	154	G
23	D	155	C
23	D	161	U
23	D	163	U
23	D	164	U
23	D	171	G
23	D	172	C
23	D	173	G
23	D	174	C
23	D	175	G
23	D	178	G
23	D	179	G
23	D	181	A
23	D	184	C
23	D	185	U
23	D	191	A
23	D	196	A
23	D	197	A
23	D	198	C
23	D	199	A
23	D	200	U
23	D	205	G
23	D	206	U
23	D	214	G
23	D	216	A
23	D	217	G
23	D	218	A
23	D	221	A
23	D	222	A
23	D	223	A
23	D	224	G
23	D	226	G
23	D	227	A

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Mol	Chain	Res	Type
23	D	228	A
23	D	229	A
23	D	230	U
23	D	232	G
23	D	233	A
23	D	241	A
23	D	242	G
23	D	243	U
23	D	244	A
23	D	245	G
23	D	246	C
23	D	247	G
23	D	248	G
23	D	249	C
23	D	250	G
23	D	251	A
23	D	252	G
23	D	264	C
23	D	266	G
23	D	268	C
23	D	270(A)	A
23	D	270(B)	A
23	D	270(C)	C
23	D	270(E)	G
23	D	270(K)	C
23	D	270(L)	U
23	D	270(M)	U
23	D	270(N)	G
23	D	270(O)	U
23	D	270(S)	G
23	D	270(Z)	U
23	D	271(A)	C
23	D	271(B)	G
23	D	271(C)	U
23	D	271	G
23	D	272	G
23	D	273(B)	C
23	D	273(E)	U
23	D	273(F)	C
23	D	274	G
23	D	275	G
23	D	276	A

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Mol	Chain	Res	Type
23	D	277	C
23	D	279	C
23	D	280	C
23	D	281	G
23	D	282	A
23	D	283	A
23	D	284	U
23	D	287	C
23	D	289	A
23	D	290	G
23	D	293	U
23	D	294	A
23	D	296	C
23	D	298	G
23	D	299	A
23	D	301	G
23	D	302	C
23	D	305	U
23	D	307	G
23	D	308	G
23	D	310	A
23	D	312	G
23	D	316	C
23	D	321	G
23	D	323	G
23	D	324	A
23	D	325	G
23	D	328	U
23	D	329	G
23	D	330	A
23	D	331	A
23	D	332	A
23	D	333	G
23	D	338	G
23	D	339	U
23	D	340	A
23	D	341	G
23	D	342	G
23	D	344	G
23	D	345	A
23	D	346	A
23	D	347	A

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Mol	Chain	Res	Type
23	D	349	G
23	D	350	U
23	D	351	G
23	D	356	G
23	D	360	G
23	D	361	G
23	D	362	U
23	D	363(A)	A
23	D	363(F)	A
23	D	365	C
23	D	366	C
23	D	370	G
23	D	371	A
23	D	372	G
23	D	373	U
23	D	374	A
23	D	380	U
23	D	385	C
23	D	386	G
23	D	388	G
23	D	389	G
23	D	390	A
23	D	391	G
23	D	392	C
23	D	393	C
23	D	395	U
23	D	396	G
23	D	399	G
23	D	400	G
23	D	403	U
23	D	404	C
23	D	405	U
23	D	410	G
23	D	411	G
23	D	412	A
23	D	413	C
23	D	415	A
23	D	416	C
23	D	422	A
23	D	423	A
23	D	424	G
23	D	427	U

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Mol	Chain	Res	Type
23	D	428	A
23	D	429	A
23	D	431	U
23	D	435	C
23	D	436	C
23	D	443	A
23	D	444	C
23	D	446	G
23	D	447	A
23	D	448	U
23	D	449	A
23	D	451	C
23	D	452	G
23	D	453	C
23	D	455	C
23	D	456	C
23	D	457	A
23	D	458	G
23	D	459	U
23	D	464	U
23	D	467	G
23	D	470	A
23	D	471	A
23	D	473	G
23	D	475	U
23	D	476	G
23	D	477	A
23	D	478	A
23	D	480	A
23	D	481	G
23	D	482	A
23	D	483	A
23	D	492	A
23	D	493	G
23	D	503	A
23	D	504	U
23	D	505	A
23	D	506	G
23	D	507	A
23	D	508	G
23	D	509	C
23	D	510	C

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Mol	Chain	Res	Type
23	D	511	U
23	D	512	G
23	D	517	C
23	D	519	U
23	D	520	G
23	D	521	G
23	D	522	G
23	D	523	C
23	D	527	C
23	D	528	A
23	D	530	G
23	D	531	C
23	D	532	A
23	D	533	G
23	D	541	C
23	D	547	A
23	D	549	G
23	D	551	G
23	D	554	U
23	D	556	G
23	D	557	U
23	D	558	G
23	D	559	G
23	D	560	C
23	D	561	G
23	D	562	U
23	D	563	G
23	D	564	C
23	D	565	C
23	D	566	U
23	D	567	A
23	D	568	U
23	D	569	U
23	D	572	A
23	D	573	G
23	D	574	C
23	D	575	A
23	D	577	G
23	D	581	C
23	D	583	G
23	D	585	G
23	D	587	C

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Mol	Chain	Res	Type
23	D	588	U
23	D	594	U
23	D	598	G
23	D	601	C
23	D	602	G
23	D	603	A
23	D	604	G
23	D	607	U
23	D	608	A
23	D	609	A
23	D	612	G
23	D	613	U
23	D	614	U
23	D	615	G
23	D	616	A
23	D	617	G
23	D	619	G
23	D	620	G
23	D	621	A
23	D	624	C
23	D	625	G
23	D	627	A
23	D	628	G
23	D	637	A
23	D	639	U
23	D	640	C
23	D	642	G
23	D	644	A
23	D	645	C
23	D	648	G
23	D	649	G
23	D	651	G
23	D	653	A
23	D	654	A
23	D	655	A
23	D	656	G
23	D	660	G
23	D	666	G
23	D	667	U
23	D	669	G
23	D	670	A
23	D	671	C

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Mol	Chain	Res	Type
23	D	672	C
23	D	675	A
23	D	677	A
23	D	679	C
23	D	682	G
23	D	684	G
23	D	685	A
23	D	686	G
23	D	687	C
23	D	690	G
23	D	692	C
23	D	698	C
23	D	699	A
23	D	705	A
23	D	713	G
23	D	714	U
23	D	715	G
23	D	716	A
23	D	725	G
23	D	726	G
23	D	727	A
23	D	728	G
23	D	729	G
23	D	730	C
23	D	731	C
23	D	733	G
23	D	734	A
23	D	739	G
23	D	741	G
23	D	743	G
23	D	745	G
23	D	746	A
23	D	747	U
23	D	748	G
23	D	749	C
23	D	750	A
23	D	751	A
23	D	752	A
23	D	753	C
23	D	755	C
23	D	758	C
23	D	759	G

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Mol	Chain	Res	Type
23	D	762	U
23	D	763	G
23	D	764	A
23	D	769	G
23	D	771	G
23	D	772	C
23	D	774	A
23	D	775	G
23	D	776	G
23	D	777	A
23	D	778	G
23	D	780	G
23	D	781	A
23	D	782	A
23	D	783	A
23	D	784	A
23	D	785	G
23	D	786	C
23	D	788	A
23	D	789	A
23	D	790	C
23	D	791	C
23	D	792	G
23	D	793	A
23	D	794	G
23	D	796	C
23	D	797	C
23	D	799	G
23	D	800	A
23	D	801	G
23	D	802	A
23	D	803	U
23	D	804	A
23	D	805	G
23	D	806	C
23	D	811	U
23	D	812	C
23	D	819	A
23	D	820	A
23	D	822	U
23	D	823	G
23	D	824	A

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Mol	Chain	Res	Type
23	D	827	U
23	D	828	U
23	D	830	G
23	D	831	G
23	D	832	G
23	D	833	U
23	D	834	C
23	D	842	G
23	D	846	C
23	D	847	U
23	D	848	G
23	D	850	C
23	D	855	G
23	D	857	C
23	D	858	U
23	D	859	G
23	D	860	U
23	D	861	A
23	D	863	A
23	D	865	C
23	D	866	A
23	D	867	C
23	D	870	A
23	D	872	A
23	D	878	A
23	D	880	G
23	D	881	G
23	D	884	C
23	D	885	C
23	D	886	C
23	D	887	A
23	D	888	C
23	D	889	C
23	D	890	A
23	D	892	G
23	D	893	C
23	D	894	C
23	D	895	U
23	D	896	A
23	D	897	C
23	D	898	C
23	D	899	A

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Mol	Chain	Res	Type
23	D	900	A
23	D	901	A
23	D	907	U
23	D	908	C
23	D	909	A
23	D	910	A
23	D	913	U
23	D	914	C
23	D	915	C
23	D	917	A
23	D	918	A
23	D	919	G
23	D	923	C
23	D	924	C
23	D	929	G
23	D	930	U
23	D	931	G
23	D	932	G
23	D	933	A
23	D	939	G
23	D	941	A
23	D	942	G
23	D	943	U
23	D	944	G
23	D	945	A
23	D	946	G
23	D	947	G
23	D	949	C
23	D	953	A
23	D	958	U
23	D	959	A
23	D	960	A
23	D	961	C
23	D	962	G
23	D	964	C
23	D	967	C
23	D	972	G
23	D	973	A
23	D	974	G
23	D	974(A)	C
23	D	976	C
23	D	978	G

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Mol	Chain	Res	Type
23	D	979	G
23	D	980	A
23	D	982	C
23	D	983	A
23	D	985	C
23	D	989	G
23	D	990	A
23	D	991	C
23	D	993	G
23	D	994	C
23	D	995	C
23	D	996	A
23	D	997	G
23	D	998	C
23	D	999	U
23	D	1006	C
23	D	1008	C
23	D	1011	G
23	D	1013	C
23	D	1015	G
23	D	1017	G
23	D	1019	U
23	D	1020	A
23	D	1021	A
23	D	1022	G
23	D	1023	U
23	D	1024	G
23	D	1026	U
23	D	1032	A
23	D	1033	U
23	D	1034	G
23	D	1035	U
23	D	1041	C
23	D	1042	G
23	D	1043	C
23	D	1044	G
23	D	1045	A
23	D	1046	A
23	D	1047	G
23	D	1048	A
23	D	1049	C
23	D	1051	G

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Mol	Chain	Res	Type
23	D	1052	C
23	D	1054	A
23	D	1056	G
23	D	1057	A
23	D	1058	G
23	D	1059	G
23	D	1060	U
23	D	1061	U
23	D	1062	G
23	D	1063	G
23	D	1064	C
23	D	1065	U
23	D	1066	U
23	D	1068	G
23	D	1070	A
23	D	1073	A
23	D	1074	G
23	D	1075	C
23	D	1076	C
23	D	1077	A
23	D	1078	U
23	D	1079	C
23	D	1083	U
23	D	1084	A
23	D	1085	A
23	D	1086	A
23	D	1088	A
23	D	1090	U
23	D	1093	G
23	D	1094	U
23	D	1095	A
23	D	1099	G
23	D	1101	U
23	D	1102	C
23	D	1103	A
23	D	1104	C
23	D	1105	U
23	D	1106	G
23	D	1107	G
23	D	1108	U
23	D	1109	C
23	D	1110	G

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Mol	Chain	Res	Type
23	D	1111	A
23	D	1112	G
23	D	1117	G
23	D	1126	A
23	D	1129	A
23	D	1130	U
23	D	1131	G
23	D	1134	G
23	D	1135	C
23	D	1138	G
23	D	1140	C
23	D	1141	U
23	D	1142	U
23	D	1142(A)	A
23	D	1147	C
23	D	1151	G
23	D	1155	A
23	D	1156	A
23	D	1157	G
23	D	1158	C
23	D	1160	G
23	D	1161	C
23	D	1167	U
23	D	1169	G
23	D	1171	G
23	D	1173	G
23	D	1174	A
23	D	1175	U
23	D	1176	G
23	D	1177	A
23	D	1180	C
23	D	1182	A
23	D	1183	G
23	D	1184	G
23	D	1185	C
23	D	1188	U
23	D	1190	G
23	D	1195	G
23	D	1197	G
23	D	1199	U
23	D	1200	C
23	D	1203	G

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Mol	Chain	Res	Type
23	D	1204	A
23	D	1205	U
23	D	1206	G
23	D	1208	C
23	D	1209	G
23	D	1211	U
23	D	1212	G
23	D	1213	A
23	D	1214	A
23	D	1216	G
23	D	1219	G
23	D	1220	A
23	D	1221	C
23	D	1222	C
23	D	1223	C
23	D	1224	G
23	D	1225	C
23	D	1227	A
23	D	1230	C
23	D	1235	G
23	D	1236	G
23	D	1237	A
23	D	1238	G
23	D	1240	U
23	D	1241	A
23	D	1242	A
23	D	1243	G
23	D	1244	G
23	D	1248	G
23	D	1249	U
23	D	1251	C
23	D	1252	G
23	D	1253	A
23	D	1254	A
23	D	1255	U
23	D	1256	G
23	D	1264	G
23	D	1265	A
23	D	1266	G
23	D	1267	U
23	D	1268	A
23	D	1271	G

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Mol	Chain	Res	Type
23	D	1272	A
23	D	1273	U
23	D	1274	A
23	D	1275	A
23	D	1285	G
23	D	1286	A
23	D	1287	A
23	D	1288	U
23	D	1289	C
23	D	1290	C
23	D	1294	U
23	D	1299	G
23	D	1300	U
23	D	1301	A
23	D	1303	G
23	D	1309	G
23	D	1310	G
23	D	1311	G
23	D	1312	U
23	D	1318	C
23	D	1321	A
23	D	1322	A
23	D	1323	U
23	D	1324	G
23	D	1325	G
23	D	1326	U
23	D	1328	G
23	D	1329	U
23	D	1330	C
23	D	1332	G
23	D	1333	C
23	D	1335	U
23	D	1340	U
23	D	1341	U
23	D	1342	A
23	D	1343	G
23	D	1344	G
23	D	1345	C
23	D	1359	A
23	D	1360	A
23	D	1364	G
23	D	1365	A

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Mol	Chain	Res	Type
23	D	1366	A
23	D	1368	G
23	D	1378	A
23	D	1379	A
23	D	1380	G
23	D	1381	G
23	D	1384	A
23	D	1385	G
23	D	1391	U
23	D	1392	A
23	D	1393	A
23	D	1394	U
23	D	1395	A
23	D	1397	U
23	D	1398	C
23	D	1412	A
23	D	1415	U
23	D	1416	G
23	D	1417	C
23	D	1419	A
23	D	1420	U
23	D	1422	G
23	D	1425	G
23	D	1427	A
23	D	1428	C
23	D	1429	G
23	D	1430	C
23	D	1437	C
23	D	1438	U
23	D	1440	G
23	D	1444	G
23	D	1444(A)	A
23	D	1446	C
23	D	1449	A
23	D	1451	C
23	D	1453	A
23	D	1454	U
23	D	1455	G
23	D	1459	G
23	D	1460	A
23	D	1461	G
23	D	1467	C

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Mol	Chain	Res	Type
23	D	1470	G
23	D	1471	A
23	D	1472	A
23	D	1475	G
23	D	1476	C
23	D	1477	A
23	D	1478	G
23	D	1479	G
23	D	1480	G
23	D	1482	U
23	D	1483	G
23	D	1485	G
23	D	1488	G
23	D	1489	U
23	D	1490	A
23	D	1491	G
23	D	1492	G
23	D	1493	C
23	D	1494	A
23	D	1496	A
23	D	1497	U
23	D	1498	C
23	D	1499	C
23	D	1505	C
23	D	1507	A
23	D	1508	A
23	D	1509	C
23	D	1510	A
23	D	1512	G
23	D	1513	C
23	D	1514	U
23	D	1515	C
23	D	1516	U
23	D	1519	G
23	D	1520	U
23	D	1521	G
23	D	1522	G
23	D	1527	G
23	D	1528	A
23	D	1529	A
23	D	1530	G
23	D	1534	G

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Mol	Chain	Res	Type
23	D	1537	C
23	D	1538	G
23	D	1540	G
23	D	1543	A
23	D	1544	C
23	D	1545	A
23	D	1547	C
23	D	1552	G
23	D	1553	A
23	D	1558	A
23	D	1560	G
23	D	1565	C
23	D	1566	A
23	D	1567	A
23	D	1568	G
23	D	1569	A
23	D	1570	A
23	D	1571	A
23	D	1572	A
23	D	1573	G
23	D	1577	C
23	D	1578	U
23	D	1579	A
23	D	1580	A
23	D	1581	G
23	D	1583	A
23	D	1587	A
23	D	1589	C
23	D	1590	U
23	D	1591	G
23	D	1595	G
23	D	1596	A
23	D	1597	A
23	D	1600	C
23	D	1601	G
23	D	1602	U
23	D	1603	A
23	D	1604	C
23	D	1605	C
23	D	1606	G
23	D	1607	C
23	D	1608	A

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Mol	Chain	Res	Type
23	D	1609	A
23	D	1610	A
23	D	1611	C
23	D	1612	C
23	D	1613	G
23	D	1614	A
23	D	1615	C
23	D	1617	C
23	D	1618	A
23	D	1619	G
23	D	1623	G
23	D	1624	G
23	D	1626	G
23	D	1627	G
23	D	1631	A
23	D	1633	G
23	D	1634	A
23	D	1635	G
23	D	1637	A
23	D	1640	C
23	D	1645	G
23	D	1646	C
23	D	1647	G
23	D	1648	C
23	D	1649	G
23	D	1651	G
23	D	1652	A
23	D	1653	G
23	D	1654	A
23	D	1655	A
23	D	1656	C
23	D	1662	C
23	D	1664	A
23	D	1667	G
23	D	1668	A
23	D	1669	A
23	D	1672	C
23	D	1673	U
23	D	1674	G
23	D	1675	C
23	D	1682	G
23	D	1683	C

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Mol	Chain	Res	Type
23	D	1695	G
23	D	1696	G
23	D	1697	G
23	D	1698	A
23	D	1699	G
23	D	1700	A
23	D	1701	A
23	D	1703	G
23	D	1707	G
23	D	1709	U
23	D	1718	G
23	D	1725	G
23	D	1727	U
23	D	1728	G
23	D	1729	A
23	D	1730	U
23	D	1731	G
23	D	1732	A
23	D	1733	G
23	D	1734	C
23	D	1743	G
23	D	1746	G
23	D	1749	A
23	D	1753	G
23	D	1754	C
23	D	1756	G
23	D	1757	U
23	D	1758	G
23	D	1759	A
23	D	1761	C
23	D	1762	A
23	D	1763	G
23	D	1764	G
23	D	1767	C
23	D	1773	A
23	D	1775	U
23	D	1776	G
23	D	1779	U
23	D	1780	A
23	D	1781	C
23	D	1782	C
23	D	1783	A

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Mol	Chain	Res	Type
23	D	1784	A
23	D	1785	A
23	D	1786	A
23	D	1787	A
23	D	1789	A
23	D	1790	C
23	D	1791	A
23	D	1799	G
23	D	1801	G
23	D	1805	U
23	D	1808	U
23	D	1809	A
23	D	1810	A
23	D	1811	G
23	D	1815	A
23	D	1816	G
23	D	1817	G
23	D	1819	A
23	D	1820	U
23	D	1822	G
23	D	1825	A
23	D	1827	C
23	D	1829	A
23	D	1830	C
23	D	1834	U
23	D	1835	G
23	D	1838	C
23	D	1839	G
23	D	1840	G
23	D	1842	G
23	D	1847	A
23	D	1848	A
23	D	1852	C
23	D	1853	A
23	D	1855	G
23	D	1858	G
23	D	1861	G
23	D	1880	C
23	D	1881	C
23	D	1884	A
23	D	1885	A
23	D	1886	C

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Mol	Chain	Res	Type
23	D	1899	G
23	D	1901	A
23	D	1906	G
23	D	1912	A
23	D	1913	A
23	D	1914	C
23	D	1915	U
23	D	1918	A
23	D	1919	A
23	D	1920	C
23	D	1921	G
23	D	1924	C
23	D	1927	A
23	D	1929	G
23	D	1931	U
23	D	1935	G
23	D	1937	A
23	D	1938	A
23	D	1939	U
23	D	1940	U
23	D	1941	C
23	D	1942	C
23	D	1944	U
23	D	1945	G
23	D	1951	U
23	D	1954	G
23	D	1955	U
23	D	1956	U
23	D	1959	G
23	D	1962	C
23	D	1963	U
23	D	1964	G
23	D	1966	A
23	D	1967	C
23	D	1968	G
23	D	1970	A
23	D	1971	A
23	D	1972	A
23	D	1982	C
23	D	1984	G
23	D	1990	C
23	D	1992	G

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Mol	Chain	Res	Type
23	D	1993	U
23	D	1996	C
23	D	1997	G
23	D	2003	G
23	D	2007	C
23	D	2009	G
23	D	2013	A
23	D	2014	A
23	D	2017	U
23	D	2018	G
23	D	2019	A
23	D	2020	A
23	D	2021	C
23	D	2022	U
23	D	2030	A
23	D	2031	A
23	D	2032	G
23	D	2033	A
23	D	2034	U
23	D	2036	C
23	D	2037	G
23	D	2041	U
23	D	2043	C
23	D	2044	C
23	D	2046	G
23	D	2048	G
23	D	2049	G
23	D	2050	C
23	D	2051	A
23	D	2052	G
23	D	2055	C
23	D	2056	G
23	D	2057	A
23	D	2060	A
23	D	2061	G
23	D	2062	A
23	D	2063	C
23	D	2064	C
23	D	2065	C
23	D	2068	U
23	D	2069	G
23	D	2070	G

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Mol	Chain	Res	Type
23	D	2075	U
23	D	2076	U
23	D	2077	A
23	D	2081	C
23	D	2083	G
23	D	2086	U
23	D	2087	G
23	D	2092	U
23	D	2093	G
23	D	2095	C
23	D	2107	C
23	D	2108	C
23	D	2109	U
23	D	2111	C
23	D	2112	G
23	D	2114	A
23	D	2116	G
23	D	2118	U
23	D	2119	A
23	D	2120	G
23	D	2121	G
23	D	2123	G
23	D	2127	G
23	D	2128	C
23	D	2134	A
23	D	2135	A
23	D	2136	C
23	D	2144	U
23	D	2145	C
23	D	2147	G
23	D	2148	G
23	D	2154	G
23	D	2155	G
23	D	2156	G
23	D	2157	G
23	D	2158	A
23	D	2159	G
23	D	2171	A
23	D	2172	U
23	D	2173	A
23	D	2174	C
23	D	2175	C

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Mol	Chain	Res	Type
23	D	2176	A
23	D	2177	C
23	D	2178	C
23	D	2179	C
23	D	2183	C
23	D	2184	G
23	D	2187	G
23	D	2189	U
23	D	2194	G
23	D	2195	C
23	D	2198	A
23	D	2208	U
23	D	2209	C
23	D	2210	G
23	D	2212	A
23	D	2213	U
23	D	2215	G
23	D	2218	G
23	D	2225	A
23	D	2226	C
23	D	2228	G
23	D	2231	C
23	D	2236	C
23	D	2238	G
23	D	2240	C
23	D	2241	A
23	D	2243	U
23	D	2245	U
23	D	2247	A
23	D	2250	G
23	D	2251	G
23	D	2256	G
23	D	2258	C
23	D	2259	G
23	D	2266	A
23	D	2267	A
23	D	2270	G
23	D	2272	U
23	D	2273	A
23	D	2274	A
23	D	2276	G
23	D	2277	G

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Mol	Chain	Res	Type
23	D	2278	A
23	D	2281	C
23	D	2282	G
23	D	2283	C
23	D	2284	C
23	D	2286	A
23	D	2287	A
23	D	2288	A
23	D	2289	G
23	D	2290	G
23	D	2296	U
23	D	2297	C
23	D	2299	G
23	D	2305	A
23	D	2307	G
23	D	2308	G
23	D	2312	U
23	D	2316	C
23	D	2318	G
23	D	2319	G
23	D	2320	A
23	D	2322	A
23	D	2323	G
23	D	2325	G
23	D	2326	C
23	D	2327	A
23	D	2333	A
23	D	2335	A
23	D	2336	A
23	D	2337	G
23	D	2339	G
23	D	2345	G
23	D	2347	C
23	D	2348	U
23	D	2349	G
23	D	2350	C
23	D	2351	G
23	D	2354	G
23	D	2356	C
23	D	2357	U
23	D	2364	C
23	D	2369	A

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Mol	Chain	Res	Type
23	D	2375	G
23	D	2377	A
23	D	2379	G
23	D	2383	G
23	D	2385	C
23	D	2386	C
23	D	2388	A
23	D	2389	G
23	D	2390	U
23	D	2392	A
23	D	2393	A
23	D	2396	G
23	D	2402	C
23	D	2405	G
23	D	2406	U
23	D	2408	U
23	D	2409	G
23	D	2416	C
23	D	2417	C
23	D	2423	U
23	D	2424	C
23	D	2425	A
23	D	2426	A
23	D	2427	C
23	D	2428	G
23	D	2429	G
23	D	2430	A
23	D	2431	U
23	D	2432	A
23	D	2434	A
23	D	2437	U
23	D	2441	C
23	D	2443	C
23	D	2445	G
23	D	2446	G
23	D	2447	G
23	D	2448	A
23	D	2449	U
23	D	2453	A
23	D	2454	G
23	D	2458	G
23	D	2461	C

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Mol	Chain	Res	Type
23	D	2462	U
23	D	2465	C
23	D	2466	C
23	D	2469	A
23	D	2470	G
23	D	2473	U
23	D	2474	C
23	D	2476	A
23	D	2477	C
23	D	2478	A
23	D	2479	G
23	D	2480	C
23	D	2481	G
23	D	2487	G
23	D	2488	A
23	D	2491	U
23	D	2492	U
23	D	2493	U
23	D	2496	C
23	D	2497	A
23	D	2498	C
23	D	2499	C
23	D	2500	U
23	D	2501	C
23	D	2502	G
23	D	2503	A
23	D	2504	U
23	D	2505	G
23	D	2506	U
23	D	2508	G
23	D	2509	G
23	D	2511	U
23	D	2512	C
23	D	2517	C
23	D	2518	A
23	D	2519	U
23	D	2520	C
23	D	2524	G
23	D	2525	G
23	D	2529	G
23	D	2530	A
23	D	2531	A

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Mol	Chain	Res	Type
23	D	2532	G
23	D	2534	A
23	D	2535	G
23	D	2540	C
23	D	2542	A
23	D	2543	G
23	D	2544	G
23	D	2551	C
23	D	2554	U
23	D	2555	U
23	D	2556	C
23	D	2560	C
23	D	2562	U
23	D	2566	A
23	D	2567	G
23	D	2571	C
23	D	2572	A
23	D	2573	C
23	D	2574	G
23	D	2576	G
23	D	2577	A
23	D	2578	G
23	D	2581	G
23	D	2582	G
23	D	2584	U
23	D	2585	U
23	D	2586	C
23	D	2588	G
23	D	2592	G
23	D	2596	U
23	D	2599	G
23	D	2600	A
23	D	2601	C
23	D	2602	A
23	D	2603	G
23	D	2606	C
23	D	2607	G
23	D	2608	G
23	D	2609	U
23	D	2610	C
23	D	2611	U
23	D	2613	U

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Mol	Chain	Res	Type
23	D	2614	A
23	D	2615	U
23	D	2616	C
23	D	2623	G
23	D	2625	G
23	D	2626	C
23	D	2628	C
23	D	2629	A
23	D	2630	G
23	D	2631	G
23	D	2632	A
23	D	2636	U
23	D	2637	U
23	D	2638	G
23	D	2640	G
23	D	2643	G
23	D	2645	G
23	D	2653	U
23	D	2655	G
23	D	2656	U
23	D	2657	A
23	D	2661	G
23	D	2664	G
23	D	2665	A
23	D	2668	G
23	D	2670	A
23	D	2671	A
23	D	2678	C
23	D	2681	C
23	D	2682	U
23	D	2683	C
23	D	2684	U
23	D	2687	U
23	D	2688	U
23	D	2689	U
23	D	2690	C
23	D	2691	C
23	D	2692	C
23	D	2701	C
23	D	2702	U
23	D	2706	G
23	D	2707	G

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Mol	Chain	Res	Type
23	D	2710	C
23	D	2711	A
23	D	2712	U
23	D	2712(A)	A
23	D	2713	A
23	D	2714	G
23	D	2715	C
23	D	2716	U
23	D	2718	G
23	D	2724	C
23	D	2725	A
23	D	2726	U
23	D	2727	G
23	D	2732	G
23	D	2733	A
23	D	2739	U
23	D	2747	G
23	D	2748	A
23	D	2749	A
23	D	2750	A
23	D	2751	G
23	D	2752	C
23	D	2755	C
23	D	2756	U
23	D	2758	A
23	D	2759	G
23	D	2764	A
23	D	2765	A
23	D	2766	G
23	D	2767	C
23	D	2769	C
23	D	2772	C
23	D	2773	C
23	D	2774	C
23	D	2775	A
23	D	2778	A
23	D	2779	U
23	D	2781	A
23	D	2782	G
23	D	2784	C
23	D	2787	C
23	D	2788	C

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Mol	Chain	Res	Type
23	D	2789	C
23	D	2790	A
23	D	2791	C
23	D	2792	G
23	D	2795	G
23	D	2798	C
23	D	2799	A
23	D	2801	A
23	D	2803	C
23	D	2804	C
23	D	2805	G
23	D	2807	G
23	D	2808	U
23	D	2809	A
23	D	2810	A
23	D	2811	G
23	D	2812	G
23	D	2815	C
23	D	2817	G
23	D	2819	G
23	D	2820	A
23	D	2823	A
23	D	2824	C
23	D	2831	G
23	D	2832	U
23	D	2833	G
23	D	2834	G
23	D	2835	A
23	D	2836	U
23	D	2838	G
23	D	2840	C
23	D	2847	U
23	D	2848	G
23	D	2849	U
23	D	2850	A
23	D	2856	C
23	D	2861	G
23	D	2867	G
23	D	2868	A
23	D	2870	C
23	D	2872	G
23	D	2875	C

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Mol	Chain	Res	Type
23	D	2879	C
23	D	2880	C
23	D	2883	A
23	D	2889	C
23	D	2891	G
23	D	2892	A
23	D	2893	G
23	D	2894	G
23	D	2895	U
23	D	2896	C
23	D	2897	U
23	D	2898	U
23	D	2899	G
24	E	0	A
24	E	1	U
24	E	3	C
24	E	5	C
24	E	7	G
24	E	8	U
24	E	12	C
24	E	13	A
24	E	15	A
24	E	16	G
24	E	21	G
24	E	24	G
24	E	27	C
24	E	30	C
24	E	32	C
24	E	35	U
24	E	39	A
24	E	41	U
24	E	44	G
24	E	45	A
24	E	57	A
24	E	58	A
24	E	59	A
24	E	62	C
24	E	66	A
24	E	67	G
24	E	73	A
24	E	75	G
24	E	76	G

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Mol	Chain	Res	Type
24	E	77	U
24	E	83	G
24	E	85	G
24	E	86	G
24	E	89	G
24	E	90	C
24	E	96	G
24	E	99	A
24	E	103	U
24	E	104	A
24	E	105	G
24	E	108	C
24	E	109	G
24	E	111	U
24	E	115	G
24	E	116	G
24	E	118	G
24	E	120	U
55	4	3	C
55	4	5	G
55	4	8	U
55	4	13	C
55	4	17	C
55	4	18	G
55	4	19	G
55	4	20	U
55	4	21	A
55	4	28	C
55	4	32	C
55	4	33	U
55	4	34	C
55	4	35	A
55	4	38	A
55	4	41	C
55	4	47	U
55	4	48	C
55	4	49	G
55	4	52	G
55	4	53	G
55	4	56	C
55	4	57	A
55	4	58	A

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Mol	Chain	Res	Type
55	4	64	G
55	4	72	A
55	4	73	A
55	4	74	C
55	4	75	C
55	4	76	A
56	5	3	C
56	5	4	C
56	5	8	U
56	5	9	A
56	5	14	A
56	5	15	G
56	5	16	U
56	5	17	C
56	5	18	G
56	5	19	G
56	5	20	U
56	5	21	A
56	5	22	G
56	5	23	A
56	5	24	G
56	5	27	G
56	5	34	G
56	5	37	A
56	5	39	U
56	5	40	C
56	5	41	C
56	5	42	C
56	5	47	U
56	5	48	C
56	5	50	U
56	5	52	G
56	5	53	G
56	5	57	G
56	5	59	U
56	5	62	C
56	5	65	G
56	5	71	G
56	5	72	C
56	5	74	C
56	5	75	C
56	5	76	A

All (257) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	8	A
1	A	13	U
1	A	30	U
1	A	51	A
1	A	60	A
1	A	121	C
1	A	129(A)	G
1	A	195	A
1	A	196	A
1	A	209	U
1	A	210	U
1	A	243	A
1	A	244	U
1	A	246	A
1	A	250	A
1	A	279	A
1	A	281	G
1	A	308	C
1	A	328	C
1	A	372	C
1	A	413	G
1	A	428	G
1	A	447	G
1	A	484	G
1	A	485	G
1	A	518	C
1	A	534	U
1	A	547	A
1	A	559	A
1	A	566	G
1	A	571	U
1	A	575	G
1	A	686	U
1	A	696	A
1	A	703	G
1	A	723	U
1	A	776	G
1	A	812	C
1	A	841	U
1	A	843	U
1	A	870	U
1	A	872	A

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Mol	Chain	Res	Type
1	A	882	C
1	A	890	G
1	A	913	A
1	A	918	A
1	A	975	A
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1004	A
1	A	1036	G
1	A	1101	A
1	A	1103	C
1	A	1125	U
1	A	1139	G
1	A	1182	G
1	A	1196	U
1	A	1214	C
1	A	1224	G
1	A	1226	C
1	A	1240	U
1	A	1285	A
1	A	1300	G
1	A	1301	U
1	A	1304	G
1	A	1346	A
1	A	1347	G
1	A	1356	G
1	A	1363	A
1	A	1373	G
1	A	1380	U
1	A	1394	A
1	A	1397	C
1	A	1399	C
1	A	1400	C
1	A	1432	G
1	A	1443	G
1	A	1449	C
1	A	1483	A
23	D	12	U
23	D	27	G
23	D	49	A
23	D	67	U

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Mol	Chain	Res	Type
23	D	72	U
23	D	74	A
23	D	90	U
23	D	119	A
23	D	120	U
23	D	148	C
23	D	177	G
23	D	205	G
23	D	215	G
23	D	221	A
23	D	227	A
23	D	246	C
23	D	267	C
23	D	270(B)	A
23	D	270(L)	U
23	D	281	G
23	D	311	A
23	D	323	G
23	D	350	U
23	D	371	A
23	D	389	G
23	D	421	U
23	D	434	U
23	D	442	G
23	D	446	G
23	D	455	C
23	D	470	A
23	D	481	G
23	D	503	A
23	D	506	G
23	D	529	A
23	D	559	G
23	D	574	C
23	D	587	C
23	D	606	U
23	D	616	A
23	D	643	A
23	D	644	A
23	D	686	G
23	D	747	U
23	D	752	A
23	D	757	U

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Mol	Chain	Res	Type
23	D	776	G
23	D	785	G
23	D	788	A
23	D	793	A
23	D	822	U
23	D	831	G
23	D	859	G
23	D	860	U
23	D	865	C
23	D	884	C
23	D	886	C
23	D	930	U
23	D	943	U
23	D	944	G
23	D	945	A
23	D	958	U
23	D	960	A
23	D	973	A
23	D	1062	G
23	D	1077	A
23	D	1103	A
23	D	1105	U
23	D	1183	G
23	D	1187	G
23	D	1204	A
23	D	1210	A
23	D	1221	C
23	D	1236	G
23	D	1237	A
23	D	1240	U
23	D	1241	A
23	D	1242	A
23	D	1265	A
23	D	1266	G
23	D	1289	C
23	D	1310	G
23	D	1340	U
23	D	1426	G
23	D	1427	A
23	D	1458	C
23	D	1489	U
23	D	1492	G

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Mol	Chain	Res	Type
23	D	1498	C
23	D	1515	C
23	D	1521	G
23	D	1568	G
23	D	1586	A
23	D	1614	A
23	D	1618	A
23	D	1626	G
23	D	1634	A
23	D	1650	G
23	D	1672	C
23	D	1673	U
23	D	1681	G
23	D	1758	G
23	D	1778	U
23	D	1819	A
23	D	1828	G
23	D	1854	A
23	D	1880	C
23	D	1900	A
23	D	1905	C
23	D	1918	A
23	D	1920	C
23	D	1930	G
23	D	1937	A
23	D	1938	A
23	D	1943	U
23	D	1966	A
23	D	1969	A
23	D	1991	U
23	D	1996	C
23	D	2006	C
23	D	2020	A
23	D	2030	A
23	D	2033	A
23	D	2047	U
23	D	2049	G
23	D	2056	G
23	D	2111	C
23	D	2126	A
23	D	2157	G
23	D	2158	A

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Mol	Chain	Res	Type
23	D	2194	G
23	D	2225	A
23	D	2227	A
23	D	2242	G
23	D	2275	C
23	D	2276	G
23	D	2281	C
23	D	2283	C
23	D	2311	A
23	D	2319	G
23	D	2322	A
23	D	2350	C
23	D	2382	G
23	D	2423	U
23	D	2425	A
23	D	2427	C
23	D	2436	G
23	D	2468	G
23	D	2500	U
23	D	2519	U
23	D	2572	A
23	D	2576	G
23	D	2581	G
23	D	2585	U
23	D	2602	A
23	D	2610	C
23	D	2612	C
23	D	2660	A
23	D	2664	G
23	D	2670	A
23	D	2681	C
23	D	2705	A
23	D	2712(A)	A
23	D	2725	A
23	D	2749	A
23	D	2754	U
23	D	2773	C
23	D	2777	G
23	D	2882	A
24	E	7	G
24	E	56	G
24	E	66	A

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Mol	Chain	Res	Type
24	E	84	C
56	5	15	G
56	5	38	A
56	5	58	A
56	5	74	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](#)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
57	GCP	C	701	22	29,34,34	3.49	11 (37%)	31,54,54	1.46	4 (12%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	GCP	C	701	22	-	0/18/38/38	0/3/3/3

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	C	701	GCP	C3'-C4'	-8.99	1.28	1.53
57	C	701	GCP	C4-N9	-8.71	1.36	1.47
57	C	701	GCP	C5-C6	-7.54	1.39	1.53
57	C	701	GCP	O4'-C1'	-4.18	1.31	1.42
57	C	701	GCP	C8-N9	-3.98	1.34	1.47
57	C	701	GCP	PG-C3B	-3.23	1.76	1.80
57	C	701	GCP	O2'-C2'	-3.09	1.35	1.43
57	C	701	GCP	C2-N1	-2.23	1.34	1.44
57	C	701	GCP	PB-O2B	-2.07	1.51	1.56
57	C	701	GCP	O3'-C3'	2.58	1.49	1.43
57	C	701	GCP	O4'-C4'	7.50	1.62	1.45

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	C	701	GCP	O6-C6-N1	-2.87	119.03	122.80
57	C	701	GCP	C3'-C2'-C1'	2.51	106.49	101.44
57	C	701	GCP	C4-C5-N7	3.52	108.16	102.67
57	C	701	GCP	C8-N9-C4	3.90	109.23	104.78

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 17 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	C	701	GCP	17	0

## 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.