



# Full wwPDB X-ray Structure Validation Report

Feb 27, 2014 – 12:59 AM GMT

PDB ID : 2AWB  
Title : Crystal structure of the bacterial ribosome from Escherichia coli at 3.5 Å resolution. This file contains the 50S subunit of the second 70S ribosome. The entire crystal structure contains two 70S ribosomes and is described in remark 400.  
Authors : Schuwirth, B.S.; Borovinskaya, M.A.; Hau, C.W.; Zhang, W.; Vila-Sanjurjo, A.; Holton, J.M.; Cate, J.H.D.  
Deposited on : 2005-08-31  
Resolution : 3.46 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

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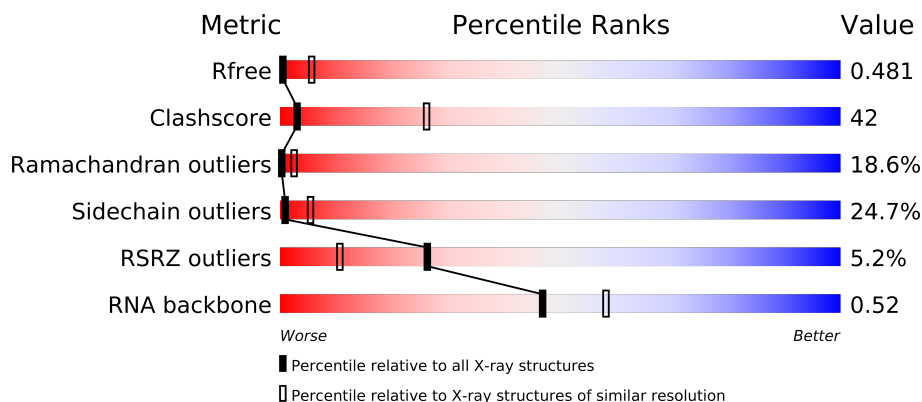
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	stable22639
Percentile statistics	:	21963
Refmac	:	5.8.0049
CCP4	:	6.3.0 (Settle)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.46 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	66092	1149 (3.62-3.30)
Clashscore	79885	1012 (3.60-3.32)
Ramachandran outliers	78287	1401 (3.62-3.30)
Sidechain outliers	78261	1401 (3.62-3.30)
RSRZ outliers	66119	1149 (3.62-3.30)
RNA backbone	1838	1004 (4.10-2.76)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	120	
2	B	2904	
3	V	94	
4	C	273	
5	D	209	
6	E	201	
7	F	178	
8	G	176	
9	H	149	
10	J	142	
11	K	123	
12	L	144	

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Mol	Chain	Length	Quality of chain
13	M	136	
14	N	127	
15	O	117	
16	P	114	
17	Q	117	
18	R	103	
19	S	110	
20	T	100	
21	U	103	
22	W	84	
23	X	63	
24	Y	58	
25	Z	70	
26	0	56	
27	1	54	
28	2	46	
29	3	64	
30	4	38	
31	I	141	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
32	MG	B	2938	-	X
32	MG	B	2952	-	X
32	MG	B	2956	-	X
32	MG	B	2969	-	X
32	MG	B	2973	-	X
32	MG	B	2980	-	X
32	MG	B	2990	-	X
32	MG	B	2998	-	X

## 2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 90313 atoms, of which 0 are hydrogen and 0 are deuterium.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 2 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 3 is a protein called 50S ribosomal protein L25.

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

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	C	267	Total	C	N	O	S	0	0	0
			2053	1271	416	359	7			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	D	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 6 is a protein called 50S ribosomal protein L4.

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

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	F	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	G	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 9 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	H	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	140	Total	C	N	O	S	0	0	0
			1112	704	210	194	4			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	127	Total	C	N	O	S	0	0	0
			1008	621	204	178	5			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			

- Molecule 16 is a protein called 50S ribosomal protein L19.

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

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	117	Total	C	N	O	S	0	0	0
			947	604	192	151				

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 19 is a protein called 50S ribosomal protein L22.

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

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	99	Total	C	N	O	S	0	0	0
			777	491	145	139	2			

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	102	Total	C	N	O			
			779	492	146	141	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	W	84	Total	C	N	O	S		
			634	391	129	113	1	0	0

- Molecule 23 is a protein called 50S ribosomal protein L29.

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

- Molecule 24 is a protein called 50S ribosomal protein L30.

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

- Molecule 25 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	Z	70	Total	C	N	O	S		
			549	339	104	100	6	0	0

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	0	56	Total	C	N	O	S		
			444	269	94	80	1	0	0

- Molecule 27 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	1	54	Total	C	N	O			
			441	284	81	76	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 31 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	I	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	B	110	Total	Mg	0	0
			110	110		
32	N	1	Total	Mg	0	0
			1	1		

- Molecule 33 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	2	2	Total	O	0	0
			2	2		
33	B	499	Total	O	0	0
			499	499		
33	C	1	Total	O	0	0
			1	1		
33	D	1	Total	O	0	0
			1	1		
33	E	2	Total	O	0	0
			2	2		

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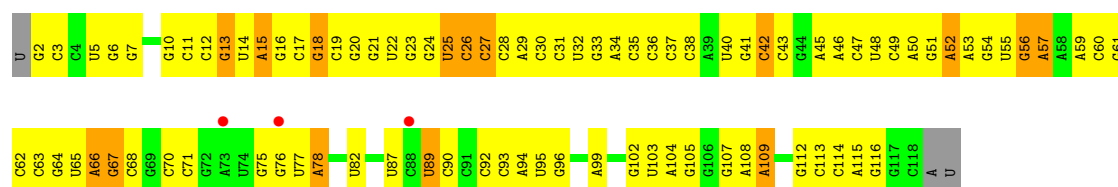
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	J	2	Total	O	0	0
			2	2		
33	L	1	Total	O	0	0
			1	1		
33	N	3	Total	O	0	0
			3	3		
33	Q	1	Total	O	0	0
			1	1		

### 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 and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). 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.

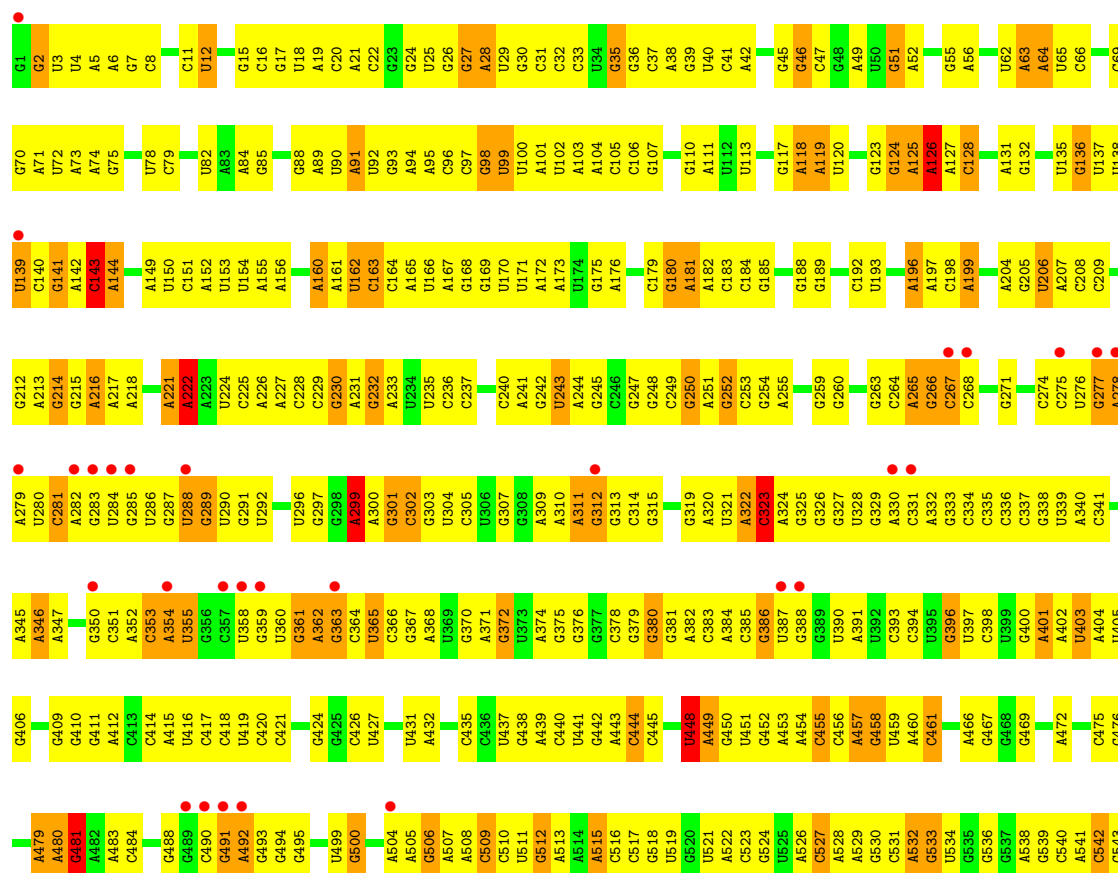
#### • Molecule 1: 5S ribosomal RNA

Chain A: 

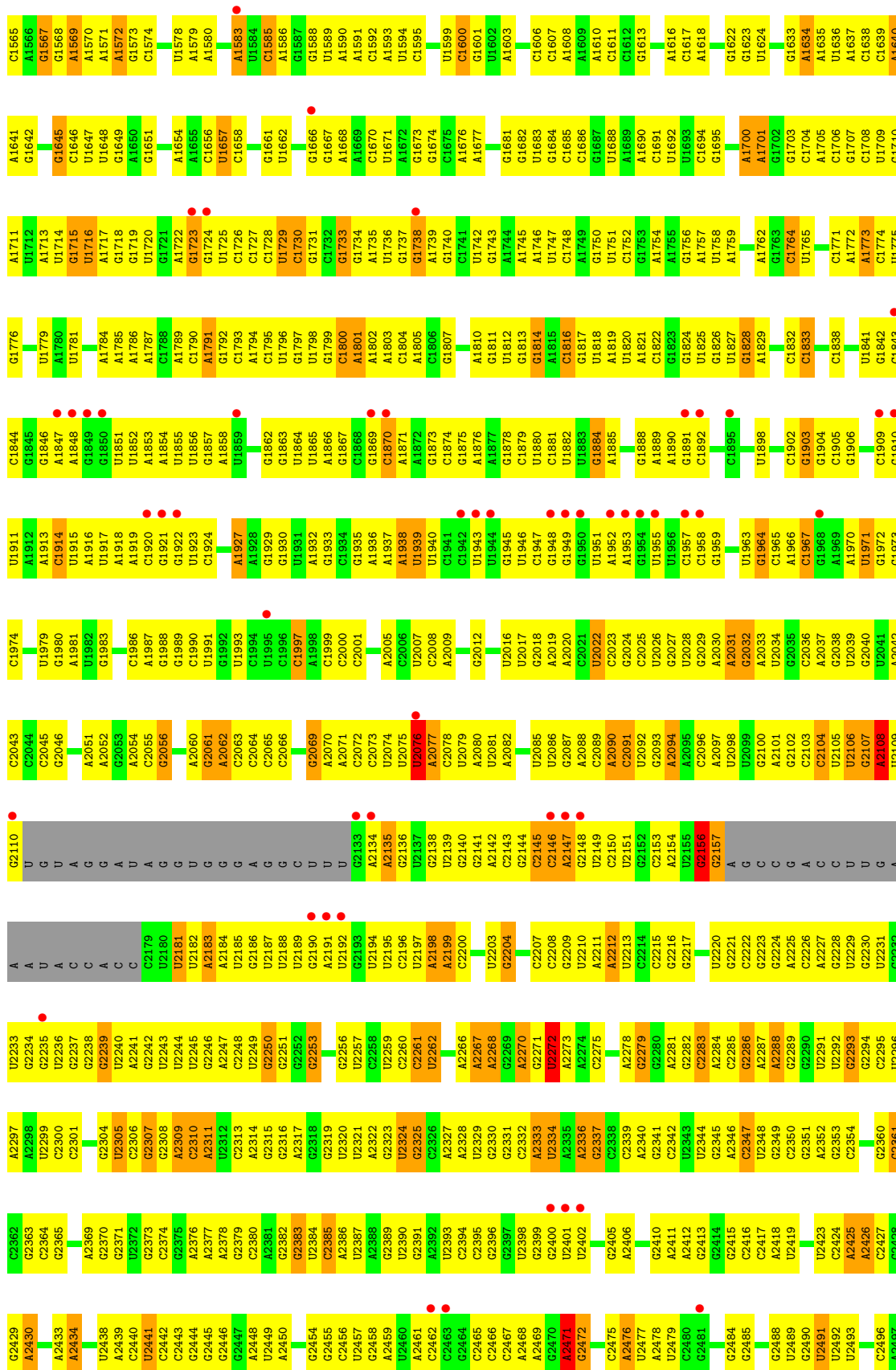


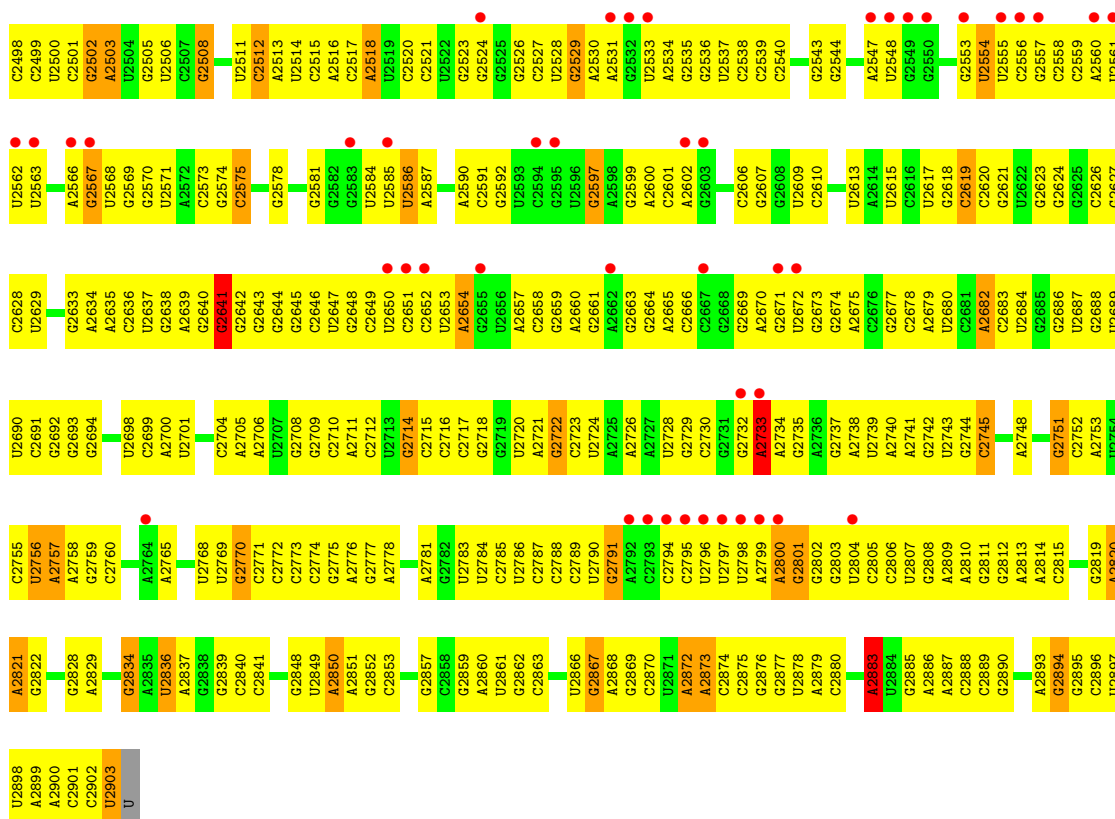
#### • Molecule 2: 23S ribosomal RNA

Chain B: 



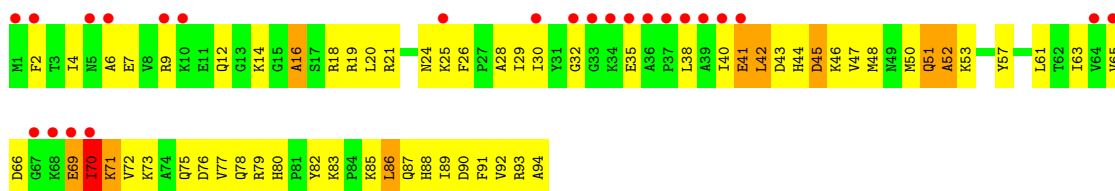
G1501	A1502	A1503	A1504	A1505	U1506	U1507	A1508	G1509	G1510	G1511	G1512	U1513	G1514	A1515	G1516	G1517	C1518	G1524	A1525	C1526	G1527	A1528	G1529	G1530	C1531	A1532	C1533	U1534	A1535	C1536	G1537	G1538	U1539	U1540	C1541	U1542	G1543	A1544	A1545	G1546	C1547	A1548	A1549	C1550	A1551	A1552	A1553	U1554	G1555	C1556	C1557	C1558	U1559	G1560	U1561	C1562	U1563	A1564				
C1437	G1388	A1438	A1439	U1440	G1441	U1442	U1443	G1444	G1445	C1446	G1447	G1448	G1449	G1450	C1451	G1452	A1453	C1454	G1455	A1456	U1457	U1458	G1459	U1460	C1461	C1462	C1463	G1464	U1465	U1466	A1467	U1468	U1469	U1470	G1471	U1472	U1473	U1474	U1475	U1476	A1477	G1478	G1479	A1480	U1481	G1482	G1483	U1484	U1485	U1486	U1487	C1488	C1489	A1490	C1493	A1494	A1495	A1496	U1497	C1498	U1499	G1500
G1299	G1300	A1301	A1302	G1303	A1304	C1305	G1309	G1310	G1311	G1312	U1313	C1314	C1315	A1316	G1317	U1318	C1319	C1320	A1321	C1322	C1323	G1324	U1325	U1326	A1327	C1328	U1329	C1330	G1331	G1332	G1333	C1334	C1335	A1336	G1341	A1342	C1345	A1346	A1347	G1348	C1349	C1350	C1351	U1352	A1353	A1354	G1355	A1359	G1360	A1361	C1362	C1363	A1364	U1365								
G1238	G1239	U1240	A1241	U1242	C1243	A1244	G1245	A1246	U1247	G1248	U1249	G1250	C1251	G1252	A1253	G1256	C1257	U1258	G1259	A1260	C1261	A1262	U1263	A1264	A1265	C1266	U1267	A1268	C1269	C1270	G1271	A1272	U1273	A1274	A1275	A1276	G1277	C1278	G1279	G1280	U1281	U1282	G1283	A1284	U1285	A1286	C1287	G1288	C1289	C1290	C1291	G1292	C1293	U1294	C1295	G1296	C1297	C1298				
G1171	C1172	U1173	U1174	A1175	U1176	G1177	C1178	G1179	U1180	U1181	G1182	U1183	U1184	G1185	U1186	G1187	U1188	A1189	G1190	G1191	G1192	G1195	C1196	U1197	U1198	U1199	C1200	U1201	G1202	U1203	A1204	A1205	G1206	G1210	C1211	G1212	A1213	A1214	G1215	G1216	U1219	G1220	C1221	U1222	G1223	U1224	G1225	A1226	G1227	G1228	C1229	A1230	G1235	U1236	A1237							
G1107	U1108	C1109	G1110	A1111	G1112	U1113	G1114	G1115	U1116	C1117	U1118	U1119	C1120	G1121	G1122	G1123	G1124	G1125	A1126	A1127	G1128	A1129	U1130	G1131	U1132	A1133	A1134	C1135	G1136	G1137	G1138	C1139	C1140	U1141	A1142	A1143	A1144	C1145	U1146	U1148	C1149	C1150	A1151	C1152	C1153	G1154	A1155		G1162	G1163	C1164	A1165	G1166	C1167	G1168	A1169	C1170					
G1025	G1026	A1027	A1028	C1029	C1030	U1033	G1034	G1042	C1043	U1046	G1047	A1050	G1051	C1052	A1057	C1076	U1077	C1078	G1079	A1080	A1081	A1082	U1083	C1084	A1085	A1086	G1087	A1088	A1089	G1091	C1092	G1093	U1097	A1098	A1099	U1010	G1011	U1012	C1013	A1014	U1015	U1018	U1019	G1099	C1100	U1101	U1102	U1105	G1106													
U958	A959	A960	C961	G962	U963	C964	C965	G966	G967	C968	G969	U970	G971	A972	A973	A974	A975	G976	A981	C982	A983	A984	C987	A988	U989	A990	C991	C992	G993	C994	A996	G997	C998	U999	A1000	A1001	C1005	C1006	C1007	A1008	A1009	A1010	U1011	U1012	C1013	A1014	U1015	U1018	U1019	G1099	C1100	A1021	U1022	G955	C957							
A	C	C998	A899	A900	C901	C902	C903	G904	A905	U906	G907	C908	A909	A910	A911	C912	U913	C914	C915	A917	A918	U919	A920	C921	C922	A925	G926	A927	A928	U929	G930	U932	A933	U934	C935	A936	C937	G938	A939	C940	A941	A942	A943	C944	A945	C946	A947	C948	G949	C950	C951	G952	U955	C957								
C835	G836	C837	C838	U839	C840	G841	U842	G843	A844	A845	U846	U847	C848	A849	U850	C851	U852	C853	C854	G855	G856	U857	C858	A859	U860	A861	A862	C863	A864	C865	A866	G869	U870	C871	C872	U873	C874	G875	A876	A877	A878	G	G	G	G	U	C	A	U	C	A	U	U									
A756	G757	C758	G759	A760	C761	G762	U763	G764	A765	U766	G767	U768	A769	G770	U771	C772	U773	G774	A775	G776	C777	G778	U779	G780	A781	A782	A783	G784	G785	A794	C795	C796	G797	U801	A802	G805	C806	U810	U811	C812	G813	C814	C817	G818	A819	G822	C823	U824	A825	U826	U827	U828	C829	G830	C831	U832	A833	C834				
C673	G674	C678	C679	C680	G681	G682	U683	G684	A685	U686	U687	U688	A689	G690	C691	C692	A699	G700	G704	A705	U709	U710	C634	C635	U636	A637	C717	A718	C719	U720	A721	A722	C723	U724	G725	G726	A727	G728	G729	A730	C737	G738	U741	A742	A743	U744	G745	U746	U747	A753	U754	U755										
U606	U607	A608	A609	C610	C611	G612	A613	A614	U615	A616	G617	G618	G619	G620	A621	G622	C623	A627	C630	A631	A632	A633	C634	C635	U636	A637	C638	C639	C640	A643	A644	U645	U646	G651	A654	A655	G656	U657	U658	A659	C660	A661	G662	G663	G664	U665	U666	U667	A668	G669	A670	C671	C672									
C544	U545	U546	A547	G548	G549	C550	G551	U552	G553	U554	G555	A556	C557	U558	G559	C560	G561	U562	A563	C564	C565	U566	U567	U568	U569	G570	U571	G572	U573	A574	A575	U576	G577	G578	G579	U580	C581	A582	G583	C584	G585	A586	C587	U588	U589	A590	U591	A592	U593	U594	C595	U596	G597	U598	A599	G600	C601	A602	A603			





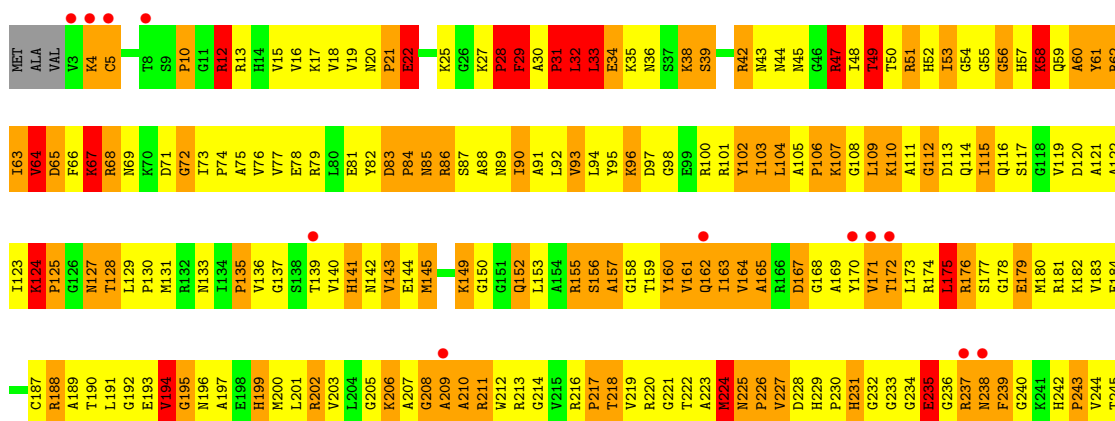
### • Molecule 3: 50S ribosomal protein L25

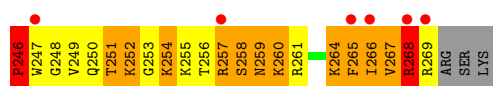
Chain V:



### • Molecule 4: 50S ribosomal protein L2

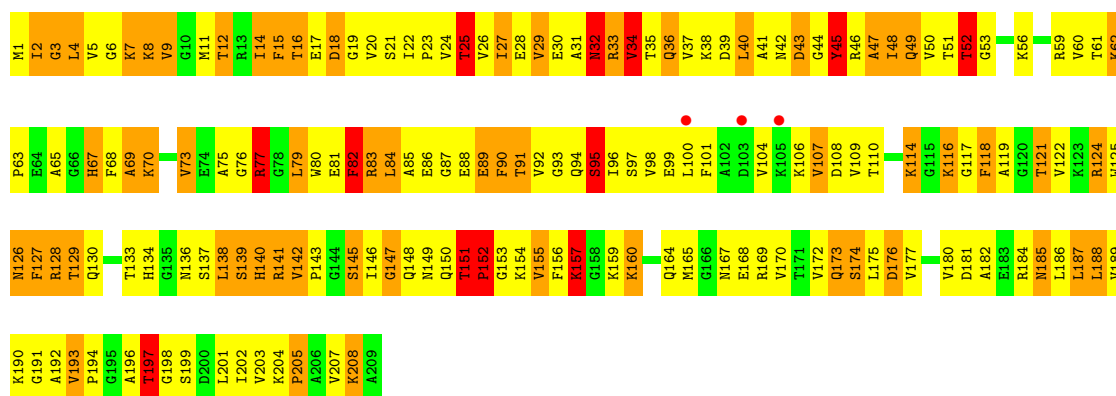
Chain C:





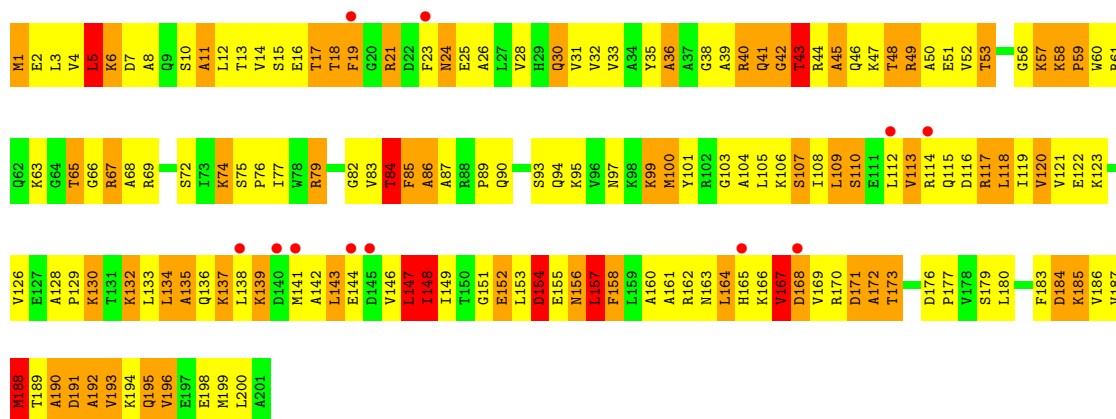
• Molecule 5: 50S ribosomal protein L3

Chain D:



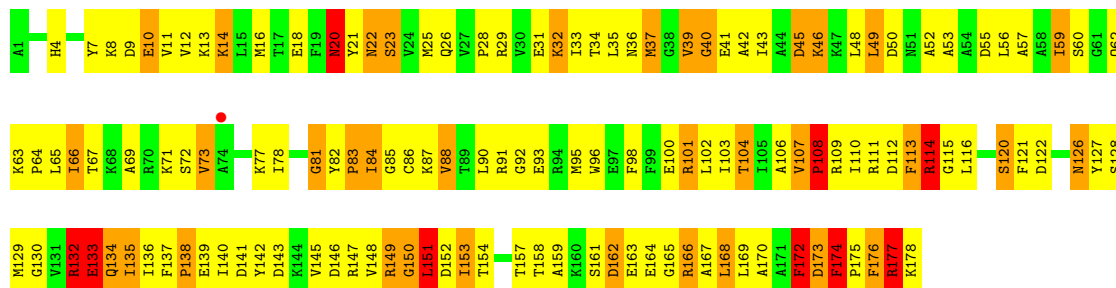
• Molecule 6: 50S ribosomal protein L4

Chain E:



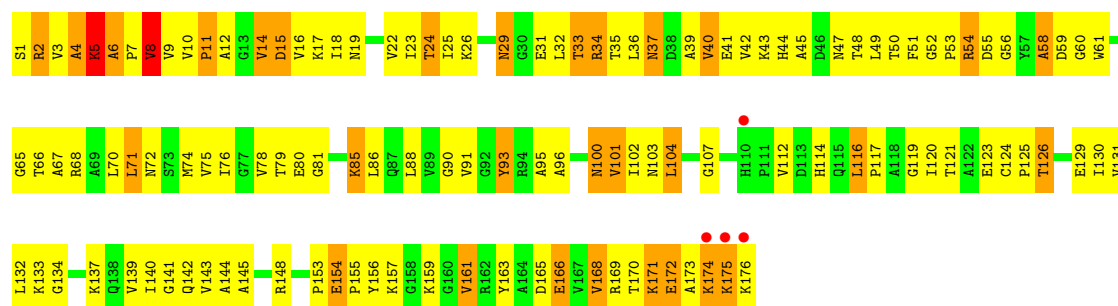
• Molecule 7: 50S ribosomal protein L5

Chain F:



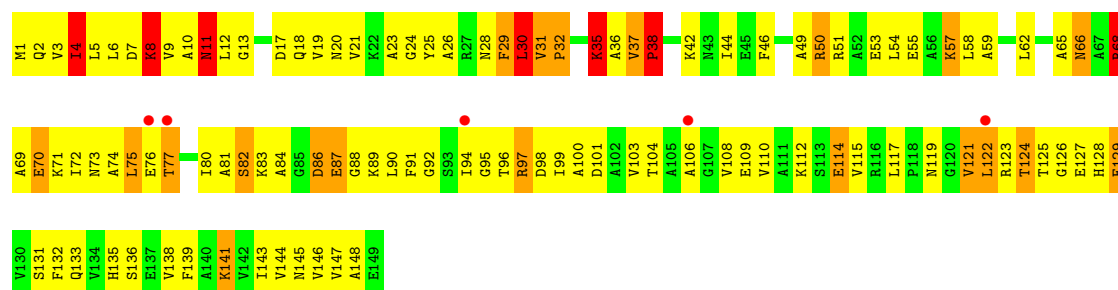
• Molecule 8: 50S ribosomal protein L6

Chain G:



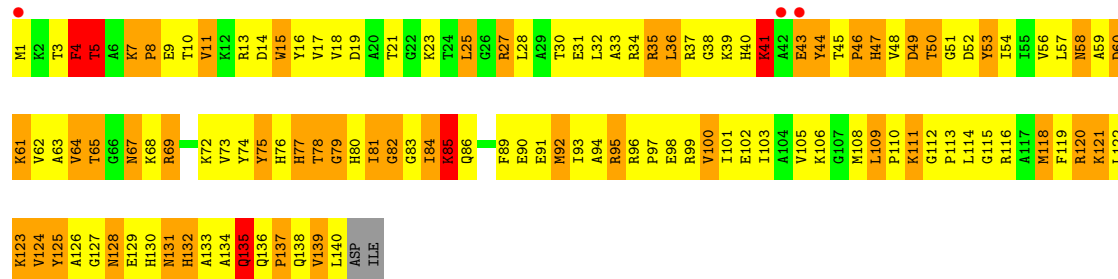
• Molecule 9: 50S ribosomal protein L9

Chain H:



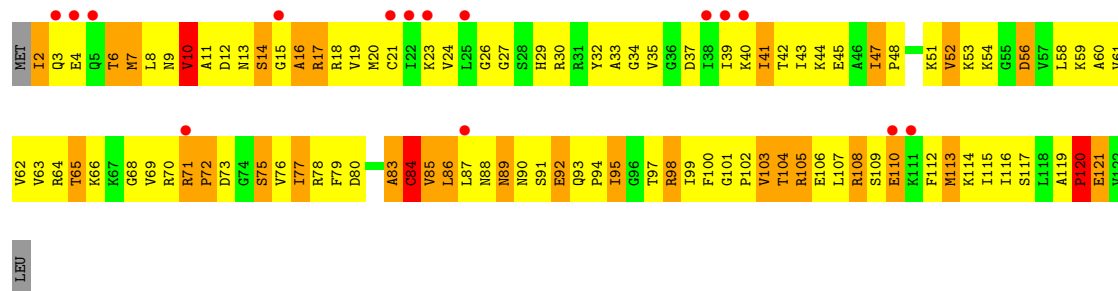
• Molecule 10: 50S ribosomal protein L13

Chain J:



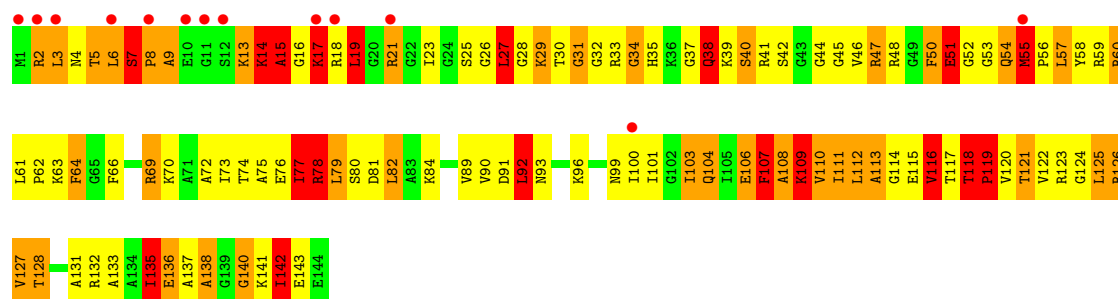
• Molecule 11: 50S ribosomal protein L14

Chain K:



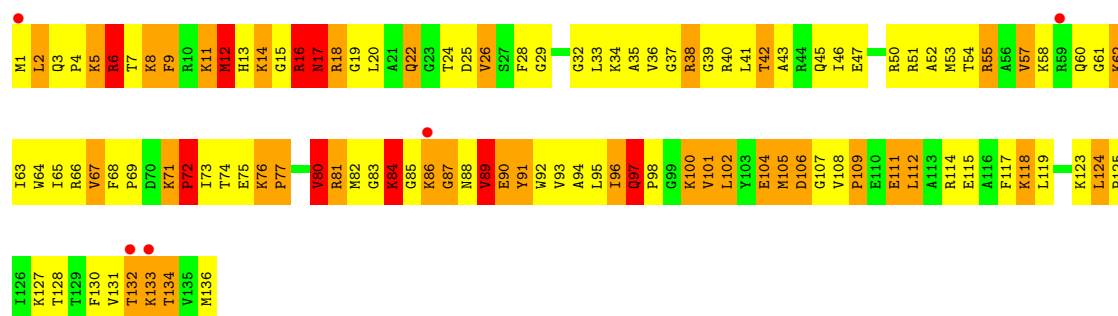
• Molecule 12: 50S ribosomal protein L15

Chain L:



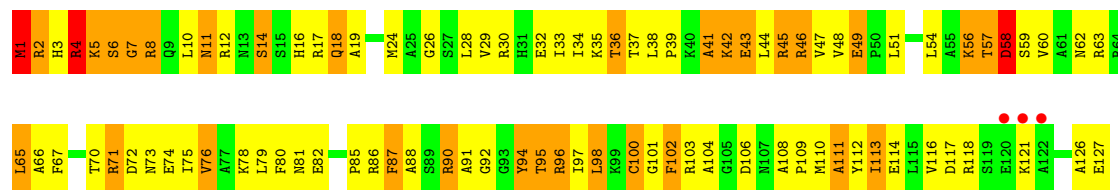
• Molecule 13: 50S ribosomal protein L16

Chain M:



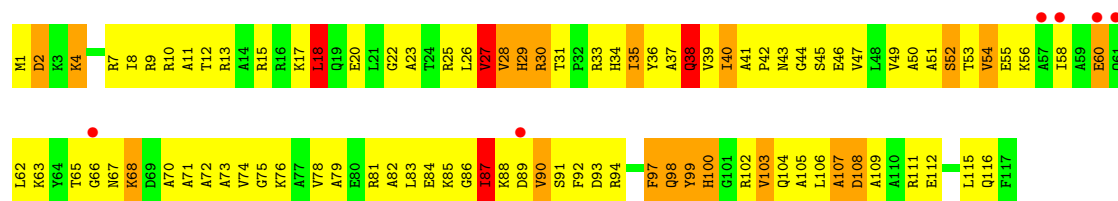
• Molecule 14: 50S ribosomal protein L17

Chain N:



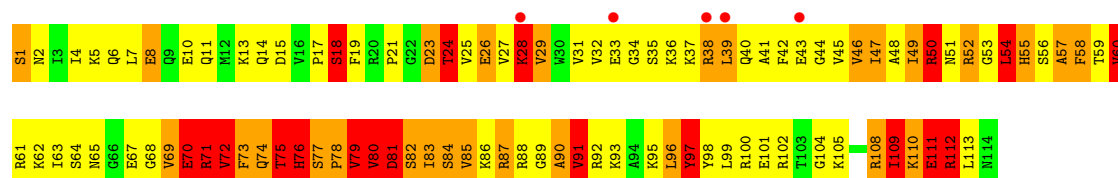
• Molecule 15: 50S ribosomal protein L18

Chain O:



• Molecule 16: 50S ribosomal protein L19

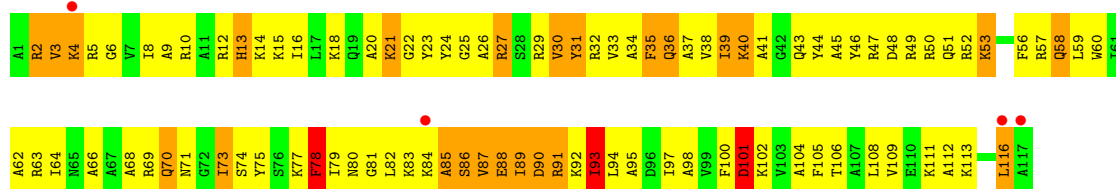
Chain P:





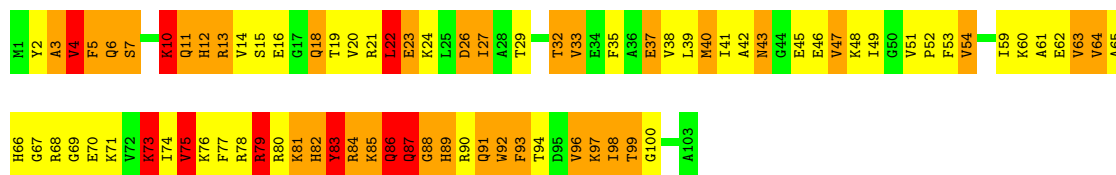
- Molecule 17: 50S ribosomal protein L20

Chain Q:



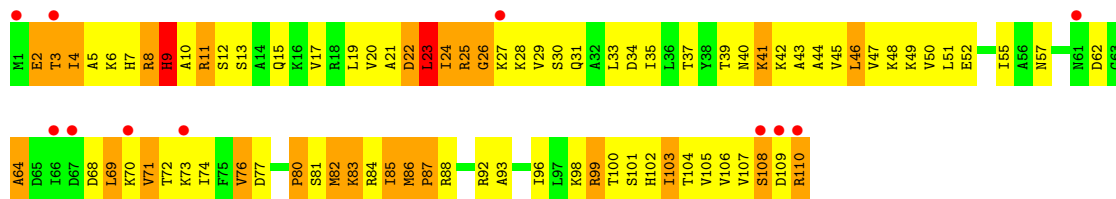
- Molecule 18: 50S ribosomal protein L21

Chain R: 



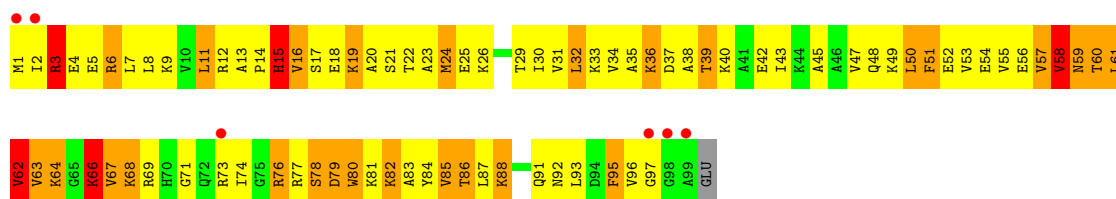
- Molecule 19: 50S ribosomal protein L22

Chain S:



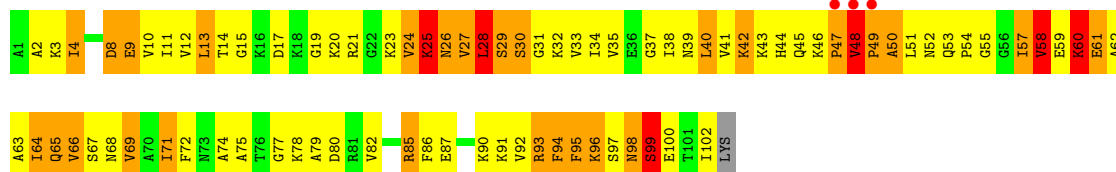
- Molecule 20: 50S ribosomal protein L23

Chain T:



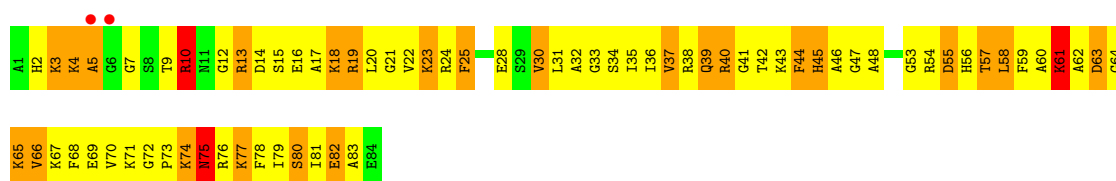
- Molecule 21: 50S ribosomal protein L24

Chain U:



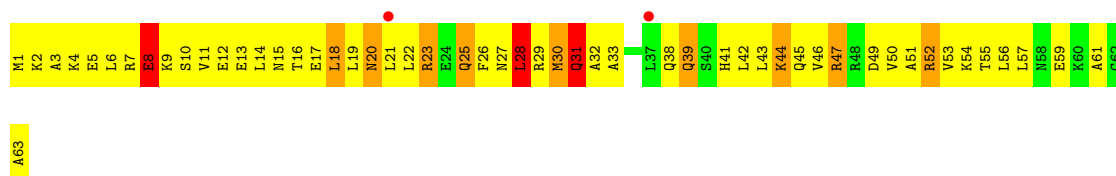
- Molecule 22: 50S ribosomal protein L27

Chain W:



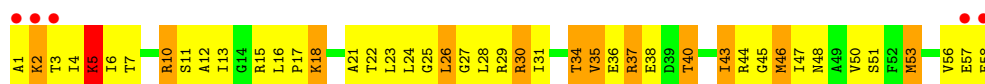
- Molecule 23: 50S ribosomal protein L29

Chain X:



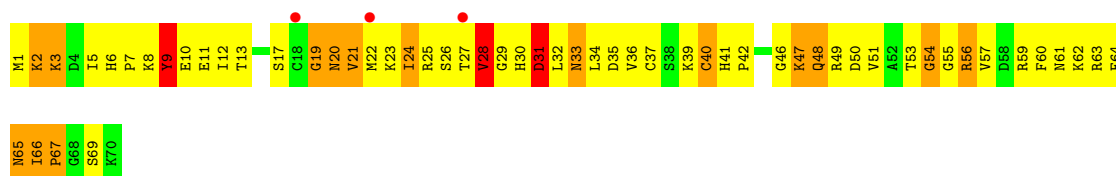
- Molecule 24: 50S ribosomal protein L30

Chain Y:



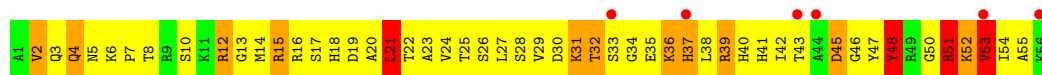
- Molecule 25: 50S ribosomal protein L31

Chain Z:



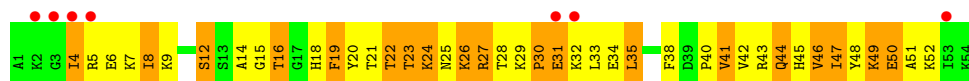
- Molecule 26: 50S ribosomal protein L32

Chain 0:



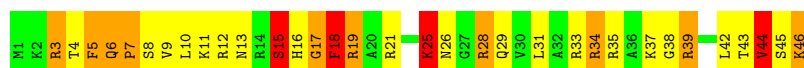
- Molecule 27: 50S ribosomal protein L33

Chain 1:



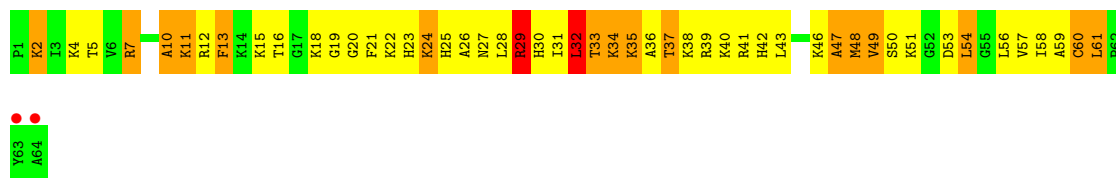
- Molecule 28: 50S ribosomal protein L34

Chain 2:



- Molecule 29: 50S ribosomal protein L35

Chain 3:



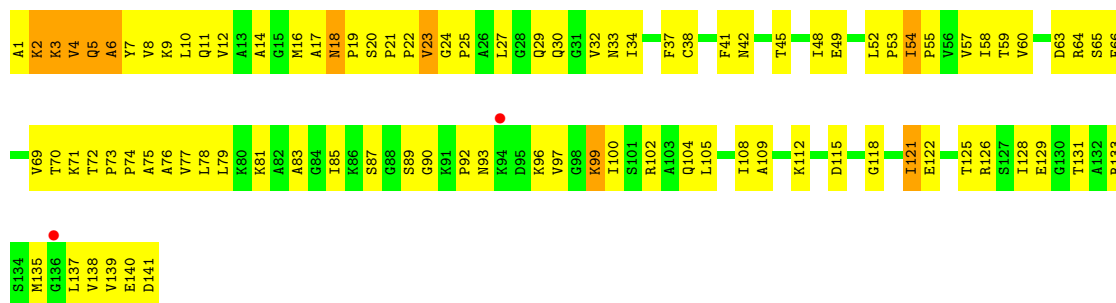
- Molecule 30: 50S ribosomal protein L36

Chain 4:



- Molecule 31: 50S ribosomal protein L11

Chain I:



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	208.85Å 379.20Å 739.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.46 163.96 – 3.46	Depositor EDS
% Data completeness (in resolution range)	91.6 (70.00-3.46) 91.6 (163.96-3.46)	Depositor EDS
$R_{merge}$	0.14	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.19 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.279 , 0.331 0.470 , 0.481	Depositor DCC
$R_{free}$ test set	34223 reflections (4.94%)	DCC
Wilson B-factor (Å <sup>2</sup> )	77.0	Xtriage
Anisotropy	0.184	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.24 , 34.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 720727 reflections	Xtriage
$F_o, F_c$ correlation	0.54	EDS
Total number of atoms	90313	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.43% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	A	0.28	0/2803	0.77	0/4371
2	B	0.34	18/68314 (0.0%)	0.79	75/106569 (0.1%)
3	V	0.25	0/766	0.46	0/1025
4	C	0.40	0/2092	0.90	8/2813 (0.3%)
5	D	0.37	0/1586	0.82	4/2134 (0.2%)
6	E	0.70	4/1571 (0.3%)	0.83	5/2113 (0.2%)
7	F	0.41	1/1444 (0.1%)	1.00	10/1937 (0.5%)
8	G	0.30	0/1343	0.67	1/1816 (0.1%)
9	H	0.34	0/1122	0.71	1/1515 (0.1%)
10	J	0.32	0/1135	0.76	3/1529 (0.2%)
11	K	0.35	0/939	0.99	4/1258 (0.3%)
12	L	0.74	1/1062 (0.1%)	1.58	25/1413 (1.8%)
13	M	0.39	0/1093	0.85	5/1460 (0.3%)
14	N	0.37	0/1021	0.80	3/1364 (0.2%)
15	O	0.31	0/910	0.64	0/1219
16	P	0.58	0/929	1.40	16/1242 (1.3%)
17	Q	0.36	0/960	0.75	0/1278
18	R	0.38	0/829	0.82	3/1107 (0.3%)
19	S	0.26	0/864	0.60	0/1156
20	T	0.45	1/784 (0.1%)	0.80	1/1048 (0.1%)
21	U	0.37	0/787	0.94	7/1051 (0.7%)
22	W	0.39	0/642	0.80	2/848 (0.2%)
23	X	0.29	0/510	0.66	0/677
24	Y	0.31	0/453	0.69	1/605 (0.2%)
25	Z	0.52	0/559	0.91	1/745 (0.1%)
26	0	0.41	0/450	0.97	3/599 (0.5%)
27	1	0.32	0/448	0.69	0/594
28	2	0.30	0/380	0.60	0/498
29	3	0.39	0/513	0.80	1/676 (0.1%)
30	4	0.32	0/303	0.77	0/397
31	I	0.60	4/1046 (0.4%)	0.76	4/1410 (0.3%)
All	All	0.36	29/97658 (0.0%)	0.81	183/146467 (0.1%)

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
1	A	0	1
2	B	1	65
4	C	0	2
16	P	0	1
18	R	0	1
25	Z	0	1
26	0	0	1
All	All	1	72

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	E	79	ARG	CD-NE	18.29	1.77	1.46
2	B	1086	A	C5-C6	-17.70	1.25	1.41
2	B	448	U	O4'-C1'	12.68	1.58	1.41
6	E	79	ARG	CG-CD	10.76	1.78	1.51
2	B	1088	A	C6-N1	-10.45	1.28	1.35
12	L	77	ILE	CA-CB	-10.07	1.31	1.54
2	B	448	U	C3'-C2'	9.55	1.63	1.52
31	I	3	LYS	CD-CE	9.37	1.74	1.51
6	E	79	ARG	NE-CZ	9.31	1.45	1.33
2	B	448	U	C4'-O4'	9.24	1.57	1.45
31	I	3	LYS	CG-CD	8.57	1.81	1.52
2	B	143	C	N1-C2	8.32	1.48	1.40
2	B	1060	U	C2-N3	7.80	1.43	1.37
2	B	448	U	C2'-C1'	7.79	1.61	1.53
2	B	1086	A	N7-C5	-7.38	1.34	1.39
2	B	1099	G	C5'-C4'	6.82	1.59	1.51
31	I	3	LYS	CA-C	6.67	1.70	1.52
20	T	1	MET	CG-SD	6.62	1.98	1.81
6	E	79	ARG	CB-CG	6.35	1.69	1.52
2	B	1098	A	C5-C4	6.23	1.43	1.38
2	B	2091	C	O3'-P	6.17	1.68	1.61
2	B	1559	U	O3'-P	5.96	1.68	1.61
2	B	1098	A	O3'-P	5.63	1.68	1.61
2	B	1098	A	C5'-C4'	5.51	1.57	1.51
31	I	3	LYS	CB-CG	5.50	1.67	1.52
7	F	39	VAL	CA-CB	5.32	1.66	1.54
2	B	1098	A	C3'-C2'	5.10	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2722	G	C4'-C3'	-5.06	1.47	1.52
2	B	1099	G	N9-C4	5.04	1.42	1.38

All (183) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2791	G	O5'-P-OP2	-27.77	77.38	110.70
2	B	2791	G	O5'-P-OP1	18.50	132.90	110.70
2	B	448	U	N1-C1'-C2'	17.52	136.78	114.00
2	B	2790	U	OP2-P-O3'	14.81	137.79	105.20
12	L	77	ILE	CB-CA-C	-12.70	86.19	111.60
2	B	1098	A	N9-C1'-C2'	12.58	130.35	114.00
12	L	77	ILE	CG1-CB-CG2	11.76	137.28	111.40
6	E	79	ARG	CD-NE-CZ	11.67	139.94	123.60
12	L	140	GLY	N-CA-C	11.01	140.62	113.10
12	L	118	THR	N-CA-C	10.94	140.53	111.00
7	F	39	VAL	CB-CA-C	-10.01	92.38	111.40
16	P	72	VAL	N-CA-C	9.76	137.36	111.00
31	I	3	LYS	CD-CE-NZ	9.73	134.08	111.70
14	N	4	ARG	NE-CZ-NH1	9.71	125.16	120.30
7	F	113	PHE	N-CA-C	-9.71	84.78	111.00
2	B	1098	A	C1'-O4'-C4'	9.18	117.24	109.90
7	F	40	GLY	N-CA-C	-8.94	90.75	113.10
21	U	28	LEU	CA-CB-CG	-8.88	94.86	115.30
12	L	77	ILE	C-N-CA	8.86	143.85	121.70
16	P	79	VAL	N-CA-C	8.77	134.68	111.00
2	B	143	C	N1-C1'-C2'	8.73	125.35	114.00
12	L	26	GLY	N-CA-C	-8.67	91.42	113.10
12	L	113	ALA	N-CA-C	-8.57	87.85	111.00
2	B	2641	G	N9-C1'-C2'	-8.53	102.61	112.00
6	E	79	ARG	NE-CZ-NH1	8.52	124.56	120.30
2	B	2272	U	N3-C4-O4	-8.48	113.47	119.40
8	G	172	GLU	N-CA-C	-8.42	88.25	111.00
2	B	1350	C	C5'-C4'-C3'	-8.36	102.63	116.00
12	L	77	ILE	N-CA-C	8.32	133.45	111.00
2	B	1098	A	C8-N9-C4	-8.30	102.48	105.80
16	P	40	GLN	N-CA-C	-8.15	88.98	111.00
2	B	1088	A	N1-C6-N6	-8.15	113.71	118.60
16	P	71	ARG	N-CA-C	8.05	132.74	111.00
2	B	944	C	C5'-C4'-C3'	-8.04	103.14	116.00
2	B	2076	U	C2'-C3'-O3'	8.03	127.16	109.50
2	B	560	C	C5'-C4'-C3'	-7.92	103.32	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	M	8	LYS	N-CA-C	-7.87	89.75	111.00
26	O	48	TYR	CA-CB-CG	-7.78	98.62	113.40
4	C	268	ARG	NE-CZ-NH1	-7.78	116.41	120.30
2	B	773	U	C5'-C4'-C3'	-7.69	103.70	116.00
18	R	87	GLN	N-CA-C	7.65	131.66	111.00
2	B	2733	A	N9-C1'-C2'	-7.64	103.59	112.00
12	L	77	ILE	CA-C-N	-7.56	100.57	117.20
2	B	2760	C	C5'-C4'-C3'	-7.54	103.94	116.00
12	L	112	LEU	CA-CB-CG	-7.51	98.02	115.30
12	L	19	LEU	N-CA-C	-7.51	90.72	111.00
2	B	380	G	C5'-C4'-C3'	-7.50	104.00	116.00
2	B	1060	U	C5-C4-O4	-7.42	121.45	125.90
2	B	1552	A	N9-C1'-C2'	-7.35	103.91	112.00
2	B	143	C	N1-C2-O2	7.26	123.26	118.90
2	B	323	C	N1-C1'-C2'	7.14	123.28	114.00
16	P	28	LYS	N-CA-C	-7.13	91.74	111.00
2	B	448	U	C2'-C3'-O3'	7.08	125.07	109.50
12	L	17	LYS	N-CA-C	7.01	129.93	111.00
10	J	5	THR	N-CA-C	-7.00	92.10	111.00
5	D	90	PHE	N-CA-C	-6.94	92.26	111.00
12	L	7	SER	N-CA-C	-6.92	92.31	111.00
12	L	79	LEU	CB-CG-CD1	-6.88	99.30	111.00
2	B	2262	U	C5'-C4'-C3'	-6.88	105.00	116.00
2	B	1086	A	C6-C5-N7	-6.86	127.50	132.30
12	L	117	THR	N-CA-C	-6.82	92.57	111.00
2	B	1086	A	C4-C5-C6	6.80	120.40	117.00
26	O	21	LEU	CA-CB-CG	-6.78	99.71	115.30
5	D	151	THR	N-CA-C	-6.77	92.72	111.00
2	B	825	A	C5'-C4'-C3'	-6.71	105.26	116.00
2	B	1439	A	N9-C1'-C2'	-6.70	104.63	112.00
29	3	11	LYS	CD-CE-NZ	-6.69	96.32	111.70
31	I	4	VAL	CB-CA-C	-6.68	98.72	111.40
6	E	147	LEU	N-CA-C	6.67	129.02	111.00
12	L	27	LEU	CA-CB-CG	-6.66	99.97	115.30
16	P	104	GLY	N-CA-C	6.66	129.75	113.10
16	P	14	GLN	N-CA-C	-6.66	93.03	111.00
2	B	955	U	C5'-C4'-C3'	-6.54	105.54	116.00
13	M	6	ARG	N-CA-C	-6.52	93.39	111.00
12	L	6	LEU	CA-CB-CG	6.46	130.15	115.30
21	U	48	VAL	N-CA-C	6.46	128.44	111.00
2	B	449	A	O5'-P-OP1	-6.45	99.89	105.70
16	P	81	ASP	N-CA-C	-6.43	93.63	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	U	49	PRO	N-CA-C	-6.43	95.39	112.10
16	P	70	GLU	N-CA-C	6.41	128.32	111.00
11	K	91	SER	N-CA-C	-6.41	93.69	111.00
2	B	745	G	C5'-C4'-C3'	-6.41	105.75	116.00
4	C	32	LEU	N-CA-C	6.41	128.30	111.00
21	U	48	VAL	C-N-CD	6.39	141.83	128.40
16	P	29	VAL	N-CA-C	-6.39	93.75	111.00
2	B	690	G	C5'-C4'-C3'	-6.37	105.81	116.00
2	B	1088	A	C5-C6-N6	6.37	128.79	123.70
14	N	1	MET	N-CA-C	-6.34	93.87	111.00
12	L	79	LEU	CA-CB-CG	6.30	129.80	115.30
4	C	238	ASN	N-CA-C	6.21	127.77	111.00
11	K	89	ASN	N-CA-C	6.15	127.61	111.00
2	B	973	A	C5'-C4'-C3'	-6.10	106.24	116.00
22	W	74	LYS	N-CA-C	6.08	127.41	111.00
2	B	2790	U	O3'-P-O5'	-6.07	92.46	104.00
16	P	82	SER	N-CA-C	6.07	127.39	111.00
31	I	3	LYS	C-N-CA	5.97	136.63	121.70
4	C	28	PRO	CA-C-N	-5.97	104.06	117.20
11	K	16	ALA	N-CA-C	5.97	127.12	111.00
16	P	78	PRO	N-CA-C	5.97	127.62	112.10
2	B	1397	U	C5'-C4'-C3'	-5.95	106.47	116.00
21	U	60	LYS	N-CA-C	-5.95	94.92	111.00
25	Z	54	GLY	N-CA-C	-5.95	98.21	113.10
2	B	1098	A	O4'-C4'-C3'	-5.90	98.10	104.00
2	B	1098	A	O4'-C1'-C2'	-5.83	99.97	105.80
14	N	126	ALA	N-CA-C	-5.83	95.26	111.00
2	B	2619	C	C5'-C4'-C3'	-5.80	106.73	116.00
7	F	39	VAL	N-CA-CB	5.79	124.25	111.50
16	P	109	ILE	N-CA-C	-5.77	95.42	111.00
2	B	544	C	C4'-C3'-O3'	5.77	124.53	113.00
4	C	28	PRO	N-CA-C	5.70	126.92	112.10
13	M	130	PHE	N-CA-C	-5.68	95.65	111.00
12	L	92	LEU	CA-CB-CG	5.66	128.32	115.30
12	L	15	ALA	N-CA-C	5.64	126.23	111.00
6	E	79	ARG	NE-CZ-NH2	-5.63	117.48	120.30
7	F	14	LYS	N-CA-C	-5.62	95.84	111.00
16	P	71	ARG	C-N-CA	5.61	135.72	121.70
2	B	1657	U	N1-C1'-C2'	-5.58	105.86	112.00
2	B	1807	G	C5'-C4'-C3'	5.58	124.92	116.00
13	M	17	ASN	N-CA-C	-5.57	95.96	111.00
20	T	3	ARG	NE-CZ-NH1	5.57	123.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1098	A	N7-C8-N9	5.57	116.58	113.80
24	Y	2	LYS	N-CA-C	-5.55	96.01	111.00
2	B	1060	U	N1-C2-O2	-5.55	118.92	122.80
2	B	401	A	C5'-C4'-C3'	5.53	124.84	116.00
16	P	50	ARG	N-CA-C	-5.53	96.08	111.00
2	B	143	C	C2-N1-C1'	5.52	124.87	118.80
2	B	126	A	N9-C1'-C2'	5.51	121.17	114.00
2	B	1363	C	C5'-C4'-C3'	-5.51	107.19	116.00
2	B	2076	U	C4'-C3'-O3'	5.50	123.99	113.00
21	U	47	PRO	N-CA-C	-5.48	97.85	112.10
2	B	700	G	C5'-C4'-C3'	-5.48	107.23	116.00
21	U	50	ALA	N-CA-C	-5.48	96.22	111.00
7	F	133	GLU	N-CA-C	5.46	125.75	111.00
2	B	2272	U	C5-C4-O4	-5.45	122.63	125.90
22	W	4	LYS	N-CA-C	5.45	125.70	111.00
4	C	202	ARG	NE-CZ-NH1	5.42	123.01	120.30
2	B	403	U	C5'-C4'-C3'	-5.42	107.33	116.00
7	F	20	ASN	N-CA-C	5.41	125.61	111.00
5	D	18	ASP	N-CA-C	-5.41	96.41	111.00
2	B	1135	C	C5'-C4'-C3'	5.40	124.64	116.00
4	C	28	PRO	C-N-CA	5.38	135.16	121.70
6	E	57	LYS	CD-CE-NZ	-5.38	99.33	111.70
7	F	39	VAL	CA-CB-CG2	5.37	118.96	110.90
13	M	133	LYS	N-CA-C	-5.36	96.53	111.00
11	K	77	ILE	N-CA-C	-5.35	96.55	111.00
5	D	95	SER	N-CA-C	-5.35	96.56	111.00
31	I	3	LYS	CB-CG-CD	5.35	125.50	111.60
2	B	1080	A	N9-C1'-C2'	-5.34	106.12	112.00
18	R	79	ARG	N-CA-C	5.30	125.32	111.00
2	B	1060	U	N3-C2-O2	5.30	125.91	122.20
12	L	92	LEU	N-CA-C	5.29	125.28	111.00
2	B	1294	U	C5'-C4'-C3'	-5.28	107.55	116.00
26	O	48	TYR	CB-CG-CD1	-5.28	117.83	121.00
2	B	299	A	N9-C1'-C2'	5.27	120.85	114.00
2	B	461	C	C5'-C4'-C3'	-5.27	107.57	116.00
2	B	2253	G	C5'-C4'-C3'	-5.26	107.58	116.00
2	B	375	G	C5'-C4'-C3'	-5.26	107.58	116.00
2	B	2471	A	C5'-C4'-C3'	-5.26	107.59	116.00
7	F	150	GLY	N-CA-C	5.23	126.17	113.10
9	H	8	LYS	N-CA-C	-5.22	96.89	111.00
2	B	126	A	C5'-C4'-C3'	5.21	124.34	116.00
2	B	143	C	N3-C2-O2	-5.21	118.25	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1098	A	C4-N9-C1'	5.20	135.65	126.30
2	B	2293	G	N9-C1'-C2'	-5.18	106.30	112.00
12	L	112	LEU	N-CA-C	-5.18	97.02	111.00
2	B	982	C	C4'-C3'-C2'	5.16	107.76	102.60
2	B	2575	C	N1-C1'-C2'	-5.16	106.33	112.00
18	R	86	GLN	N-CA-C	-5.15	97.08	111.00
10	J	4	PHE	N-CA-C	5.15	124.91	111.00
10	J	82	GLY	N-CA-C	-5.15	100.22	113.10
2	B	143	C	C5'-C4'-O4'	-5.15	102.92	109.10
12	L	112	LEU	N-CA-CB	5.14	120.69	110.40
2	B	1600	C	C5'-C4'-C3'	-5.12	107.81	116.00
2	B	2894	G	C5'-C4'-C3'	-5.12	107.81	116.00
4	C	31	PRO	N-CA-C	5.12	125.40	112.10
16	P	57	ALA	N-CA-C	-5.11	97.21	111.00
2	B	1567	G	C5'-C4'-C3'	-5.09	107.86	116.00
7	F	73	VAL	N-CA-C	5.05	124.64	111.00
2	B	2745	C	C5'-C4'-C3'	-5.04	107.94	116.00
2	B	1903	G	C5'-C4'-C3'	5.03	124.04	116.00
2	B	2236	U	C5'-C4'-C3'	-5.03	107.96	116.00
12	L	14	LYS	N-CA-C	5.01	124.54	111.00
12	L	79	LEU	N-CA-C	5.00	124.50	111.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	B	2076	U	C3'

All (72) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
26	0	48	TYR	Sidechain
1	A	78	A	Sidechain
2	B	1047	G	Sidechain
2	B	1060	U	Sidechain
2	B	1080	A	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1098	A	Sidechain
2	B	1132	U	Sidechain
2	B	1142	A	Sidechain
2	B	1215	G	Sidechain
2	B	1247	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1347	A	Sidechain
2	B	136	G	Sidechain
2	B	1377	G	Sidechain
2	B	1419	A	Sidechain
2	B	1426	G	Sidechain
2	B	1432	G	Sidechain
2	B	1439	A	Sidechain
2	B	1450	G	Sidechain
2	B	1462	C	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1645	G	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	1869	G	Sidechain
2	B	1964	G	Sidechain
2	B	2062	A	Sidechain
2	B	2090	A	Sidechain
2	B	2108	A	Sidechain
2	B	214	G	Sidechain
2	B	2156	G	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2261	C	Sidechain
2	B	2267	A	Sidechain
2	B	2272	U	Sidechain
2	B	2279	G	Sidechain
2	B	232	G	Sidechain
2	B	2471	A	Sidechain
2	B	2503	A	Sidechain
2	B	2508	G	Sidechain
2	B	2512	C	Sidechain
2	B	2575	C	Sidechain
2	B	2638	G	Sidechain
2	B	2641	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	28	A	Sidechain
2	B	2834	G	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain
2	B	2883	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	299	A	Sidechain
2	B	370	G	Sidechain
2	B	448	U	Sidechain
2	B	481	G	Sidechain
2	B	500	G	Sidechain
2	B	557	C	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	757	G	Sidechain
2	B	858	G	Sidechain
2	B	942	G	Sidechain
4	C	160	TYR	Sidechain
4	C	29	PHE	Sidechain
16	P	97	TYR	Sidechain
18	R	83	TYR	Sidechain
25	Z	9	TYR	Sidechain

## 5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2507	0	1270	97	0
2	B	60995	0	30677	2356	0
3	V	753	0	780	69	0
4	C	2053	0	2122	429	0
5	D	1565	0	1616	316	0
6	E	1552	0	1619	266	0
7	F	1420	0	1460	177	0
8	G	1323	0	1374	162	0
9	H	1111	0	1148	145	0
10	J	1112	0	1147	231	0
11	K	930	0	1000	125	0
12	L	1053	0	1129	227	0
13	M	1074	0	1157	189	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	N	1008	0	1045	133	0
15	O	900	0	935	128	0
16	P	917	0	965	206	0
17	Q	947	0	1022	161	0
18	R	816	0	839	180	0
19	S	857	0	922	111	0
20	T	777	0	840	129	0
21	U	779	0	834	134	0
22	W	634	0	656	156	0
23	X	509	0	543	90	0
24	Y	449	0	491	64	0
25	Z	549	0	552	101	0
26	0	444	0	461	80	0
27	1	441	0	485	69	0
28	2	377	0	418	66	0
29	3	504	0	574	113	0
30	4	302	0	343	80	0
31	I	1032	0	1088	214	0
32	B	110	0	0	0	0
32	N	1	0	0	0	0
33	2	2	0	0	0	0
33	B	499	0	0	7	0
33	C	1	0	0	0	0
33	D	1	0	0	0	0
33	E	2	0	0	0	0
33	J	2	0	0	1	0
33	L	1	0	0	0	0
33	N	3	0	0	0	0
33	Q	1	0	0	0	0
All	All	90313	0	59512	6243	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 42.

All (6243) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:3:LYS:CE	31:I:3:LYS:CD	1.74	1.64
6:E:79:ARG:CG	6:E:79:ARG:CD	1.78	1.57
31:I:3:LYS:CG	31:I:3:LYS:CD	1.81	1.56
6:E:79:ARG:NE	6:E:79:ARG:CD	1.77	1.47
2:B:1098:A:H3'	31:I:3:LYS:CA	1.73	1.17
2:B:1081:U:H5'	31:I:126:ARG:HH12	1.01	1.17

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:46:LEU:HA	19:S:49:LYS:HB2	1.21	1.16
2:B:1099:G:O5'	31:I:3:LYS:HA	1.44	1.15
30:4:26:ILE:HG13	30:4:35:GLN:H	1.11	1.11
2:B:323:C:H1'	6:E:164:LEU:HB3	1.23	1.11
2:B:1099:G:P	31:I:3:LYS:HA	1.90	1.10
4:C:124:LYS:HB2	4:C:125:PRO:HD3	1.22	1.09
2:B:587:C:H3'	12:L:29:LYS:HD2	1.32	1.09
12:L:7:SER:HB2	12:L:8:PRO:HD3	1.34	1.08
2:B:1099:G:O4'	31:I:3:LYS:C	1.93	1.07
27:1:46:VAL:HG13	27:1:47:ILE:HG13	1.28	1.07
17:Q:97:ILE:HD12	18:R:13:ARG:HE	1.20	1.07
2:B:1098:A:H3'	31:I:3:LYS:HA	1.35	1.06
2:B:1099:G:O5'	31:I:3:LYS:CA	2.03	1.06
2:B:1099:G:H8	31:I:3:LYS:CA	1.69	1.05
16:P:25:VAL:HG13	16:P:88:ARG:H	1.13	1.05
2:B:1081:U:H5'	31:I:126:ARG:NH1	1.70	1.05
12:L:90:VAL:HG12	12:L:122:VAL:HG21	1.32	1.05
13:M:5:LYS:HB2	13:M:69:PRO:HG2	1.37	1.05
10:J:68:LYS:HD2	10:J:72:LYS:HB3	1.37	1.04
9:H:3:VAL:HG22	9:H:21:VAL:HG11	1.36	1.04
29:3:12:ARG:HG2	29:3:24:LYS:H	1.17	1.03
27:1:29:LYS:HB2	27:1:30:PRO:HD3	1.38	1.03
14:N:45:ARG:HH22	14:N:113:ILE:HG23	1.19	1.03
10:J:34:ARG:HD3	10:J:39:LYS:HD3	1.36	1.03
24:Y:4:ILE:HA	24:Y:36:GLU:HG2	1.39	1.02
15:O:56:LYS:HE2	15:O:81:ARG:HE	1.22	1.02
2:B:1099:G:H5'	31:I:4:VAL:HB	1.42	1.01
4:C:230:PRO:HG2	4:C:245:THR:H	1.23	1.01
2:B:1098:A:H2'	31:I:3:LYS:C	1.80	1.01
16:P:47:ILE:HG22	16:P:48:ALA:H	1.23	1.00
2:B:1025:G:H1'	2:B:1135:C:H5'	1.43	1.00
10:J:15:TRP:HB2	10:J:139:VAL:HA	1.41	1.00
5:D:31:ALA:HA	5:D:51:THR:HA	1.37	1.00
2:B:458:G:H5''	28:2:39:ARG:HB2	1.43	0.99
9:H:125:THR:HA	9:H:146:VAL:HB	1.44	0.99
27:1:47:ILE:HG22	27:1:48:TYR:H	1.28	0.99
18:R:63:VAL:HG22	18:R:64:VAL:H	1.28	0.98
22:W:38:ARG:HH21	22:W:40:ARG:HD3	1.25	0.98
4:C:127:ASN:HD22	4:C:128:THR:H	1.11	0.98
4:C:22:GLU:HB2	4:C:202:ARG:HG3	1.41	0.98
10:J:124:VAL:HG23	10:J:125:TYR:H	1.27	0.98
2:B:947:A:HO2'	2:B:984:A:H2	1.10	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:35:ARG:HH12	10:J:40:HIS:H	0.98	0.98
21:U:42:LYS:H	21:U:57:ILE:HD12	1.26	0.97
2:B:1654:A:H4'	14:N:1:MET:HG2	1.43	0.97
5:D:109:VAL:HG11	5:D:193:VAL:HG12	1.44	0.97
2:B:64:A:H5'	20:T:76:ARG:HH11	1.29	0.97
2:B:2405:G:H5'	12:L:70:LYS:HG3	1.47	0.97
4:C:10:PRO:HB2	4:C:202:ARG:HH12	1.28	0.96
2:B:631:A:HO2'	12:L:66:PHE:HD1	1.08	0.96
2:B:1099:G:C8	31:I:3:LYS:N	2.33	0.96
6:E:148:ILE:HA	6:E:185:LYS:HB3	1.46	0.96
10:J:40:HIS:HB2	17:Q:69:ARG:HH22	1.26	0.96
16:P:76:HIS:CD2	16:P:76:HIS:H	1.77	0.95
4:C:48:ILE:HG22	4:C:49:THR:H	1.29	0.95
9:H:114:GLU:HB3	9:H:133:GLN:HE21	1.31	0.95
2:B:45:G:H5''	2:B:46:G:H5'	1.45	0.95
25:Z:33:ASN:HB3	25:Z:46:GLY:HA2	1.47	0.94
2:B:1098:A:H2'	31:I:4:VAL:N	1.82	0.94
30:4:30:GLU:HB3	30:4:33:HIS:HB2	1.47	0.94
20:T:14:PRO:HA	20:T:32:LEU:HA	1.48	0.94
19:S:29:VAL:HG22	19:S:71:VAL:HG23	1.49	0.94
11:K:78:ARG:HH22	16:P:62:LYS:HZ2	1.10	0.94
16:P:27:VAL:HA	16:P:86:LYS:HE2	1.48	0.94
21:U:9:GLU:HB2	21:U:71:ILE:HB	1.49	0.94
2:B:1450:G:H21	2:B:1452:G:H1	1.15	0.94
12:L:135:ILE:HG22	12:L:138:ALA:HB3	1.50	0.94
2:B:1081:U:C5'	31:I:126:ARG:HH12	1.81	0.94
2:B:161:A:H3'	2:B:162:U:H5''	1.49	0.94
2:B:2333:A:H4'	2:B:2334:U:H5''	1.47	0.94
10:J:73:VAL:HG22	10:J:74:TYR:H	1.33	0.94
7:F:64:PRO:HA	7:F:88:VAL:HG22	1.47	0.94
2:B:1099:G:C8	31:I:3:LYS:HB2	2.03	0.93
16:P:50:ARG:HH12	16:P:62:LYS:HB2	1.32	0.93
2:B:2377:A:H61	15:O:13:ARG:NH2	1.66	0.93
2:B:1099:G:P	31:I:4:VAL:H	1.91	0.93
7:F:135:ILE:HD11	7:F:138:PRO:HA	1.50	0.93
29:3:49:VAL:HG22	29:3:50:SER:H	1.33	0.93
7:F:32:LYS:HB3	7:F:91:ARG:HB3	1.49	0.93
2:B:1024:G:H3'	2:B:1025:G:H5''	1.50	0.93
2:B:1098:A:C2'	31:I:3:LYS:C	2.37	0.93
18:R:6:GLN:HB3	18:R:41:ILE:HD13	1.48	0.93
4:C:139:THR:HA	4:C:193:GLU:CD	1.89	0.93
16:P:47:ILE:HG23	16:P:63:ILE:HG23	1.51	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:58:ASN:O	10:J:126:ALA:HA	1.69	0.93
17:Q:73:ILE:HG13	17:Q:74:SER:H	1.30	0.92
4:C:15:VAL:HG13	4:C:16:VAL:HG23	1.50	0.92
2:B:1060:U:N3	2:B:1088:A:N7	2.18	0.92
2:B:250:G:H5'	29:3:7:ARG:HG2	1.51	0.92
3:V:25:LYS:HE2	3:V:41:GLU:HB2	1.50	0.92
2:B:1099:G:C5'	31:I:4:VAL:N	2.33	0.92
2:B:2304:G:H4'	7:F:129:MET:HA	1.49	0.92
16:P:90:ALA:HB3	16:P:112:ARG:H	1.32	0.91
5:D:24:VAL:HG11	5:D:193:VAL:HG11	1.51	0.91
2:B:1099:G:H5'	31:I:4:VAL:CB	1.99	0.91
7:F:136:ILE:O	7:F:138:PRO:HD3	1.69	0.91
18:R:22:LEU:HD12	18:R:24:LYS:H	1.35	0.91
7:F:106:ALA:HB1	7:F:136:ILE:HG23	1.51	0.91
10:J:64:VAL:HG12	10:J:65:THR:H	1.34	0.91
16:P:76:HIS:HD2	16:P:76:HIS:H	1.17	0.91
10:J:40:HIS:HA	17:Q:69:ARG:HH12	1.36	0.90
11:K:64:ARG:H	11:K:83:ALA:HB3	1.36	0.90
2:B:1825:U:H5'	4:C:244:VAL:CG2	2.01	0.90
20:T:48:GLN:HA	20:T:53:VAL:HG22	1.51	0.90
4:C:243:PRO:HA	4:C:249:VAL:HG23	1.53	0.90
25:Z:3:LYS:HG2	25:Z:48:GLN:HB2	1.54	0.90
2:B:1099:G:H8	31:I:3:LYS:CB	1.83	0.90
4:C:109:LEU:HD21	4:C:115:ILE:HD11	1.50	0.90
2:B:2377:A:H61	15:O:13:ARG:HH21	1.14	0.90
3:V:9:ARG:HG2	3:V:41:GLU:HG2	1.50	0.89
2:B:1283:G:H22	2:B:1286:A:H5'	1.36	0.89
6:E:169:VAL:HG13	6:E:170:ARG:H	1.36	0.89
4:C:107:LYS:HB2	4:C:194:VAL:HG21	1.55	0.89
16:P:32:VAL:HA	16:P:42:PHE:HB3	1.54	0.89
6:E:3:LEU:HD22	6:E:119:ILE:HD11	1.52	0.89
14:N:37:THR:HG22	14:N:39:PRO:HD2	1.55	0.89
7:F:7:TYR:HA	7:F:11:VAL:HB	1.55	0.89
7:F:36:ASN:HA	7:F:86:CYS:HB2	1.54	0.89
21:U:33:VAL:HB	21:U:65:GLN:HA	1.53	0.89
7:F:140:ILE:HG21	7:F:145:VAL:HG22	1.55	0.89
31:I:105:LEU:HD11	31:I:139:VAL:HG21	1.54	0.89
12:L:39:LYS:HZ2	12:L:39:LYS:HA	1.37	0.89
16:P:25:VAL:CG1	16:P:88:ARG:H	1.87	0.88
15:O:53:THR:O	15:O:54:VAL:HB	1.70	0.88
12:L:19:LEU:H	12:L:19:LEU:HD22	1.36	0.88
28:2:25:LYS:H	28:2:25:LYS:HD2	1.38	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:41:LYS:HD2	10:J:44:TYR:HB3	1.55	0.88
6:E:191:ASP:HA	6:E:194:LYS:HE3	1.55	0.88
7:F:128:SER:HB3	7:F:154:THR:HG23	1.52	0.88
4:C:124:LYS:HB2	4:C:125:PRO:CD	2.02	0.88
10:J:35:ARG:NH1	10:J:40:HIS:H	1.70	0.88
4:C:32:LEU:HB3	4:C:61:TYR:HE1	1.38	0.88
9:H:31:VAL:HB	9:H:32:PRO:HD3	1.55	0.88
10:J:102:GLU:HG3	10:J:124:VAL:HG12	1.53	0.88
31:I:27:LEU:H	31:I:27:LEU:HD23	1.38	0.88
29:3:12:ARG:NE	29:3:23:HIS:HB2	1.89	0.88
18:R:65:ALA:HB3	18:R:100:GLY:H	1.35	0.88
26:0:12:ARG:HH21	26:0:16:ARG:HG3	1.38	0.88
31:I:11:GLN:HG2	31:I:55:PRO:HB3	1.56	0.88
4:C:28:PRO:HG2	4:C:79:ARG:HH21	1.38	0.88
22:W:60:ALA:HB3	22:W:80:SER:HA	1.54	0.88
13:M:33:LEU:HD11	13:M:124:LEU:HD22	1.55	0.87
2:B:784:G:H5''	4:C:225:ASN:HD21	1.38	0.87
10:J:84:ILE:HD12	10:J:85:LYS:H	1.36	0.87
18:R:69:GLY:HA2	18:R:97:LYS:H	1.39	0.87
2:B:2527:C:H5''	30:4:34:LYS:HG3	1.54	0.87
11:K:43:ILE:HG12	11:K:52:VAL:HG13	1.54	0.87
2:B:1064:C:H4'	31:I:90:GLY:HA2	1.56	0.87
27:1:49:LYS:HZ2	27:1:49:LYS:H	1.22	0.87
16:P:36:LYS:HG2	16:P:37:LYS:H	1.38	0.87
13:M:5:LYS:HZ1	13:M:8:LYS:HB2	1.37	0.87
9:H:31:VAL:HA	9:H:36:ALA:HA	1.55	0.87
2:B:2305:U:H5''	7:F:130:GLY:HA3	1.55	0.87
7:F:56:LEU:HA	7:F:59:ILE:HG22	1.57	0.87
16:P:31:VAL:HG13	16:P:81:ASP:HB3	1.57	0.87
2:B:972:A:H3'	2:B:973:A:H5''	1.53	0.87
25:Z:54:GLY:H	25:Z:57:VAL:HG23	1.40	0.87
2:B:2502:G:H5'	2:B:2503:A:H5''	1.57	0.86
10:J:35:ARG:HH12	10:J:40:HIS:N	1.72	0.86
31:I:25:PRO:O	31:I:29:GLN:HG3	1.75	0.86
25:Z:59:ARG:HB3	25:Z:63:ARG:HB2	1.56	0.86
7:F:39:VAL:HA	7:F:84:ILE:HB	1.57	0.86
12:L:7:SER:CB	12:L:8:PRO:HD3	2.03	0.86
4:C:220:ARG:CZ	4:C:220:ARG:HA	2.05	0.86
7:F:116:LEU:HD22	7:F:129:MET:HE3	1.58	0.86
2:B:654:A:H2'	2:B:655:A:H5''	1.57	0.86
2:B:1060:U:H5	31:I:131:THR:HG22	1.38	0.86
22:W:46:ALA:HB2	22:W:77:LYS:HD3	1.58	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:66:VAL:HG22	21:U:67:SER:H	1.39	0.86
2:B:27:G:H22	2:B:512:G:H2'	1.39	0.86
31:I:27:LEU:HD12	31:I:32:VAL:HG11	1.56	0.85
2:B:1080:A:H2'	2:B:1081:U:H6	1.40	0.85
22:W:20:LEU:HD11	22:W:31:LEU:HB2	1.56	0.85
18:R:4:VAL:HG12	18:R:43:ASN:HB3	1.58	0.85
2:B:448:U:H3'	6:E:79:ARG:HE	1.41	0.85
4:C:12:ARG:HB2	4:C:20:ASN:HA	1.55	0.85
26:O:53:VAL:HG13	26:O:54:ILE:HG13	1.57	0.85
24:Y:6:ILE:HG13	24:Y:35:VAL:H	1.38	0.85
22:W:42:THR:HB	22:W:75:ASN:HB3	1.58	0.85
2:B:1064:C:C4'	31:I:90:GLY:HA2	2.05	0.85
16:P:25:VAL:HG11	16:P:87:ARG:HA	1.56	0.85
2:B:858:G:N3	2:B:2268:A:H2'	1.92	0.85
22:W:35:ILE:HD12	22:W:35:ILE:H	1.42	0.85
19:S:21:ALA:HB1	19:S:74:ILE:HD12	1.57	0.85
30:4:23:ILE:HD12	30:4:24:ARG:H	1.41	0.85
14:N:3:HIS:HB3	14:N:4:ARG:CZ	2.06	0.85
8:G:171:LYS:HD3	8:G:174:LYS:HD3	1.56	0.85
5:D:17:GLU:HG3	16:P:80:VAL:HG12	1.58	0.85
5:D:122:VAL:HA	5:D:128:ARG:HG3	1.57	0.85
15:O:38:GLN:HA	15:O:50:ALA:HB3	1.57	0.85
6:E:149:ILE:HD11	6:E:187:VAL:H	1.41	0.85
15:O:66:GLY:H	15:O:70:ALA:HB2	1.40	0.85
3:V:72:VAL:HG12	3:V:93:ARG:HA	1.58	0.85
2:B:1098:A:H3'	31:I:3:LYS:C	1.96	0.84
15:O:58:ILE:HG13	15:O:60:GLU:H	1.40	0.84
4:C:21:PRO:N	4:C:202:ARG:HD2	1.92	0.84
2:B:2597:G:H5''	4:C:239:PHE:HB2	1.58	0.84
10:J:81:ILE:HG13	10:J:82:GLY:N	1.91	0.84
8:G:8:VAL:HB	8:G:49:LEU:HD12	1.57	0.84
26:O:26:SER:HB2	26:O:38:LEU:HD21	1.59	0.84
13:M:29:GLY:H	13:M:102:LEU:HD12	1.39	0.84
2:B:1198:U:H4'	17:Q:8:ILE:HD11	1.60	0.84
2:B:1639:C:H2'	2:B:1640:A:H5''	1.56	0.84
2:B:2484:G:H1'	13:M:119:LEU:HD12	1.60	0.84
13:M:33:LEU:HB3	13:M:101:VAL:HG21	1.57	0.84
22:W:42:THR:HG23	22:W:66:VAL:H	1.40	0.84
2:B:1060:U:C2	2:B:1088:A:N7	2.46	0.84
13:M:11:LYS:O	13:M:12:MET:HB2	1.77	0.84
2:B:1098:A:C2'	31:I:4:VAL:N	2.41	0.83
30:4:26:ILE:HG13	30:4:35:GLN:N	1.93	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:197:THR:HG23	5:D:198:GLY:H	1.43	0.83
13:M:15:GLY:O	13:M:16:ARG:HG3	1.79	0.83
9:H:86:ASP:HB2	9:H:89:LYS:HD3	1.59	0.83
12:L:27:LEU:HG	12:L:28:GLY:N	1.92	0.83
18:R:47:VAL:HG12	18:R:49:ILE:HG12	1.61	0.83
20:T:66:LYS:H	20:T:76:ARG:HH21	1.26	0.83
2:B:1309:G:H4'	28:2:7:PRO:HB2	1.59	0.83
2:B:1098:A:P	31:I:3:LYS:HG2	2.18	0.83
4:C:171:VAL:HB	4:C:182:LYS:HB3	1.61	0.83
2:B:996:A:H5''	17:Q:93:ILE:HG21	1.57	0.83
23:X:18:LEU:H	23:X:18:LEU:HD22	1.42	0.83
5:D:29:VAL:HG22	5:D:30:GLU:H	1.42	0.83
20:T:76:ARG:HG2	20:T:77:ARG:O	1.78	0.83
2:B:2886:A:N7	26:0:27:LEU:HG	1.92	0.83
30:4:3:VAL:HG12	30:4:4:ARG:H	1.42	0.83
31:I:72:THR:HG21	31:I:112:LYS:HA	1.61	0.83
2:B:2867:G:H2'	2:B:2867:G:N3	1.93	0.83
9:H:121:VAL:HG23	9:H:122:LEU:HD23	1.59	0.83
2:B:2377:A:N6	15:O:13:ARG:HH21	1.77	0.82
20:T:66:LYS:N	20:T:76:ARG:HH21	1.77	0.82
2:B:2091:C:H3'	2:B:2092:U:H5''	1.60	0.82
31:I:105:LEU:HD13	31:I:129:GLU:HG2	1.61	0.82
10:J:84:ILE:CD1	10:J:85:LYS:H	1.92	0.82
11:K:19:VAL:HG12	11:K:43:ILE:HA	1.60	0.82
8:G:171:LYS:HD2	8:G:172:GLU:O	1.77	0.82
17:Q:97:ILE:HD12	18:R:13:ARG:NE	1.94	0.82
4:C:68:ARG:NH2	4:C:127:ASN:HA	1.93	0.82
2:B:1083:U:H1'	2:B:1086:A:H61	1.44	0.82
25:Z:24:ILE:HD13	25:Z:24:ILE:H	1.43	0.82
2:B:2143:C:H2'	2:B:2144:G:O4'	1.80	0.82
16:P:47:ILE:HG22	16:P:48:ALA:N	1.95	0.82
16:P:50:ARG:HH11	16:P:50:ARG:HB2	1.45	0.82
21:U:27:VAL:HG12	21:U:33:VAL:HG13	1.60	0.82
9:H:2:GLN:HB2	9:H:19:VAL:HA	1.59	0.82
8:G:41:GLU:HG3	8:G:54:ARG:HH21	1.45	0.82
2:B:1099:G:C8	31:I:3:LYS:CB	2.60	0.82
2:B:589:U:H4'	6:E:87:ALA:HB2	1.62	0.81
9:H:94:ILE:HG22	9:H:122:LEU:HG	1.62	0.81
12:L:78:ARG:HB3	12:L:78:ARG:HH11	1.43	0.81
2:B:1098:A:C3'	31:I:3:LYS:C	2.48	0.81
10:J:135:GLN:NE2	10:J:138:GLN:H	1.78	0.81
6:E:142:ALA:H	6:E:185:LYS:HZ1	1.23	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:547:A:H2'	2:B:547:A:N3	1.94	0.81
2:B:1099:G:C8	31:I:3:LYS:CA	2.60	0.81
30:4:34:LYS:HE2	30:4:36:ARG:HH22	1.44	0.81
17:Q:85:ALA:HB3	17:Q:88:GLU:HG3	1.60	0.81
22:W:43:LYS:O	22:W:44:PHE:HB2	1.79	0.81
2:B:28:A:H61	2:B:512:G:H1'	1.44	0.81
2:B:1199:U:H2'	2:B:1200:C:C6	2.15	0.81
2:B:2574:G:H21	5:D:147:GLY:CA	1.92	0.81
6:E:112:LEU:HD12	6:E:115:GLN:HE21	1.45	0.81
2:B:1060:U:C5	31:I:131:THR:HG22	2.16	0.81
11:K:2:ILE:HD13	11:K:6:THR:HG21	1.61	0.81
10:J:133:ALA:HA	10:J:136:GLN:HB2	1.61	0.81
18:R:66:HIS:HA	18:R:98:ILE:HA	1.63	0.81
12:L:124:GLY:H	12:L:142:ILE:HA	1.43	0.81
10:J:81:ILE:HG23	10:J:82:GLY:H	1.46	0.81
2:B:1199:U:H2'	2:B:1200:C:H6	1.45	0.81
17:Q:39:ILE:HG13	17:Q:40:LYS:N	1.96	0.81
2:B:2046:G:H5'	26:0:15:ARG:HD2	1.61	0.81
2:B:365:U:H2'	2:B:366:C:C6	2.16	0.81
10:J:98:GLU:HB3	10:J:124:VAL:HB	1.62	0.81
17:Q:39:ILE:HG13	17:Q:40:LYS:H	1.45	0.80
7:F:107:VAL:N	7:F:108:PRO:CD	2.40	0.80
7:F:53:ALA:HB1	7:F:64:PRO:HG2	1.63	0.80
2:B:142:A:H2'	2:B:143:C:C6	2.16	0.80
3:V:63:ILE:H	3:V:70:ILE:HD11	1.44	0.80
2:B:1098:A:C3'	31:I:4:VAL:N	2.44	0.80
5:D:15:PHE:HA	16:P:79:VAL:HG11	1.64	0.80
5:D:48:ILE:HA	5:D:80:TRP:HB3	1.63	0.80
6:E:149:ILE:HG12	6:E:186:VAL:HA	1.62	0.80
22:W:56:HIS:HA	22:W:77:LYS:HE2	1.60	0.80
31:I:45:THR:HA	31:I:48:ILE:HG22	1.61	0.80
1:A:38:C:H4'	15:O:100:HIS:NE2	1.96	0.80
2:B:2880:C:H1'	14:N:92:GLY:O	1.80	0.80
4:C:124:LYS:CB	4:C:125:PRO:HD3	2.10	0.80
16:P:50:ARG:HB2	16:P:50:ARG:NH1	1.97	0.80
26:0:41:HIS:CG	26:0:42:ILE:H	1.99	0.80
13:M:41:LEU:HB3	13:M:93:VAL:HB	1.64	0.80
31:I:72:THR:HG22	31:I:115:ASP:OD2	1.81	0.80
5:D:130:GLN:HB3	5:D:140:HIS:HA	1.64	0.80
5:D:121:THR:HG21	5:D:143:PRO:HD3	1.63	0.80
4:C:50:THR:HG22	4:C:51:ARG:HG3	1.64	0.80
25:Z:1:MET:HA	25:Z:9:TYR:CE1	2.17	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:919:U:H2'	2:B:920:A:C8	2.17	0.80
19:S:64:ALA:H	19:S:110:ARG:NH2	1.80	0.80
6:E:152:GLU:HB2	6:E:158:PHE:HE1	1.45	0.80
12:L:63:LYS:HB2	29:3:26:ALA:HB2	1.64	0.79
26:0:27:LEU:HD22	26:0:27:LEU:H	1.46	0.79
16:P:90:ALA:H	16:P:112:ARG:NH2	1.81	0.79
18:R:76:LYS:HD2	18:R:90:ARG:HB3	1.64	0.79
22:W:23:LYS:HD3	22:W:24:ARG:HD2	1.64	0.79
4:C:21:PRO:HD2	4:C:202:ARG:NH1	1.98	0.79
17:Q:47:ARG:HH12	17:Q:50:ARG:HG3	1.46	0.79
2:B:2346:A:H3'	2:B:2347:C:H5''	1.64	0.79
2:B:2526:G:H21	30:4:2:LYS:HD2	1.47	0.79
4:C:75:ALA:HB1	4:C:93:VAL:HG13	1.65	0.79
12:L:6:LEU:HG	12:L:8:PRO:O	1.82	0.79
2:B:929:U:H4'	24:Y:2:LYS:HE3	1.62	0.79
10:J:81:ILE:HG23	10:J:82:GLY:N	1.97	0.79
5:D:204:LYS:HB3	5:D:205:PRO:HD2	1.65	0.79
25:Z:30:HIS:HB2	25:Z:48:GLN:HG2	1.64	0.79
23:X:43:LEU:HB3	23:X:45:GLN:HE22	1.48	0.79
2:B:1099:G:H8	31:I:3:LYS:N	1.73	0.79
4:C:229:HIS:ND1	4:C:230:PRO:HD2	1.98	0.79
2:B:2314:A:H1'	7:F:154:THR:HG21	1.64	0.79
11:K:108:ARG:HA	11:K:116:ILE:HD13	1.64	0.79
2:B:2795:C:H2'	2:B:2796:U:O4'	1.83	0.79
5:D:37:VAL:HG13	5:D:42:ASN:HB3	1.63	0.79
16:P:25:VAL:HG12	16:P:27:VAL:H	1.47	0.79
10:J:81:ILE:HG13	10:J:82:GLY:H	1.48	0.79
5:D:37:VAL:HB	5:D:46:ARG:HB2	1.64	0.79
28:2:35:ARG:NH2	28:2:43:THR:H	1.81	0.79
23:X:28:LEU:HD13	23:X:42:LEU:HD21	1.63	0.79
4:C:68:ARG:HH21	4:C:190:THR:HG23	1.47	0.78
2:B:2722:G:O2'	14:N:4:ARG:HD2	1.83	0.78
13:M:133:LYS:HD2	13:M:134:THR:H	1.46	0.78
12:L:55:MET:HB3	12:L:56:PRO:HD3	1.65	0.78
20:T:55:VAL:HG22	20:T:56:GLU:H	1.48	0.78
2:B:1818:U:H2'	4:C:152:GLN:O	1.84	0.78
5:D:73:VAL:HB	5:D:91:THR:HB	1.63	0.78
15:O:100:HIS:O	15:O:104:GLN:HB3	1.83	0.78
14:N:2:ARG:NH2	14:N:4:ARG:HD3	1.98	0.78
16:P:52:ARG:HG3	16:P:52:ARG:HH11	1.48	0.78
31:I:5:GLN:HB3	31:I:30:GLN:OE1	1.82	0.78
15:O:29:HIS:HB2	15:O:36:TYR:HB2	1.65	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:13:LYS:HA	7:F:16:MET:HB2	1.64	0.78
19:S:6:LYS:HA	19:S:104:THR:HA	1.64	0.78
2:B:1080:A:H2'	2:B:1081:U:C6	2.17	0.78
10:J:60:ASP:HB3	10:J:126:ALA:HB1	1.66	0.78
28:2:16:HIS:NE2	28:2:44:VAL:HA	1.99	0.78
2:B:11:C:H2'	2:B:12:U:H5'	1.66	0.78
8:G:41:GLU:HB2	8:G:52:GLY:HA3	1.65	0.78
11:K:66:LYS:HG3	11:K:80:ASP:HA	1.65	0.78
24:Y:6:ILE:HA	24:Y:56:VAL:HG12	1.65	0.78
2:B:534:U:H5'	17:Q:41:ALA:HA	1.65	0.78
14:N:102:PHE:HD1	19:S:40:ASN:HD21	1.31	0.78
16:P:25:VAL:HG13	16:P:88:ARG:N	1.97	0.78
4:C:251:THR:O	4:C:252:LYS:HB2	1.83	0.78
2:B:2081:U:H4'	25:Z:23:LYS:HD3	1.66	0.78
4:C:175:LEU:HD11	4:C:181:ARG:HG2	1.65	0.78
9:H:11:ASN:HD22	9:H:20:ASN:HD22	1.29	0.78
7:F:28:PRO:HB2	7:F:168:LEU:HD12	1.66	0.78
20:T:34:VAL:HG21	20:T:43:ILE:HD11	1.65	0.78
2:B:85:G:H5'	21:U:28:LEU:HB3	1.65	0.78
29:3:12:ARG:HG2	29:3:24:LYS:N	1.96	0.77
29:3:49:VAL:HG13	29:3:51:LYS:H	1.49	0.77
2:B:578:G:N2	17:Q:32:ARG:HH21	1.81	0.77
2:B:536:G:C5'	17:Q:52:ARG:HH22	1.97	0.77
27:1:32:LYS:HG2	27:1:52:LYS:HE2	1.66	0.77
30:4:16:ILE:HG23	30:4:18:LYS:H	1.49	0.77
6:E:48:THR:C	6:E:49:ARG:HG2	2.04	0.77
25:Z:28:VAL:HG23	25:Z:29:GLY:H	1.48	0.77
21:U:29:SER:O	21:U:30:SER:HB3	1.85	0.77
4:C:72:GLY:O	4:C:73:ILE:HG13	1.83	0.77
2:B:1275:A:H3'	2:B:1275:A:N3	1.99	0.77
4:C:66:PHE:O	4:C:68:ARG:N	2.16	0.77
16:P:29:VAL:HG21	16:P:61:ARG:HH22	1.46	0.77
2:B:635:C:H3'	12:L:126:ARG:HH21	1.49	0.77
21:U:12:VAL:HG11	21:U:17:ASP:HB3	1.67	0.77
5:D:96:ILE:HG22	5:D:98:VAL:H	1.48	0.77
18:R:47:VAL:HG22	18:R:48:LYS:H	1.48	0.77
2:B:1098:A:H2'	31:I:3:LYS:O	1.82	0.77
16:P:64:SER:HB2	16:P:71:ARG:HD2	1.66	0.77
2:B:7:G:H5'	10:J:134:ALA:O	1.85	0.77
8:G:171:LYS:HZ3	8:G:174:LYS:H	1.33	0.77
5:D:125:TRP:HB2	5:D:160:LYS:HG2	1.67	0.77
2:B:360:U:H2'	2:B:361:G:O4'	1.83	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:856:G:H4'	22:W:23:LYS:HD2	1.67	0.77
2:B:2331:G:H4'	22:W:69:GLU:HB2	1.67	0.77
12:L:108:ALA:HB3	12:L:125:LEU:HB2	1.67	0.77
2:B:1149:G:H2'	2:B:1150:C:C6	2.20	0.77
9:H:26:ALA:C	9:H:28:ASN:H	1.88	0.76
17:Q:53:LYS:HE2	17:Q:53:LYS:H	1.50	0.76
2:B:2755:C:H2'	30:4:19:ARG:HH21	1.49	0.76
2:B:2821:A:OP2	14:N:2:ARG:HD2	1.84	0.76
2:B:928:A:H1'	24:Y:1:ALA:HA	1.66	0.76
20:T:24:MET:HE2	20:T:30:ILE:HA	1.66	0.76
20:T:55:VAL:HG21	20:T:85:VAL:HB	1.67	0.76
3:V:7:GLU:HA	3:V:65:VAL:HG23	1.65	0.76
24:Y:18:LYS:H	24:Y:18:LYS:HD2	1.49	0.76
25:Z:62:LYS:C	25:Z:65:ASN:HD21	1.87	0.76
2:B:635:C:H3'	12:L:126:ARG:NH2	2.00	0.76
28:2:18:PHE:HA	28:2:21:ARG:HB2	1.66	0.76
2:B:899:A:H3'	2:B:900:A:H8	1.49	0.76
2:B:2756:U:H1'	2:B:2757:A:H5''	1.67	0.76
18:R:65:ALA:HB3	18:R:99:THR:HG23	1.68	0.76
6:E:4:VAL:HG13	6:E:5:LEU:H	1.50	0.76
2:B:137:U:H2'	2:B:138:U:O4'	1.85	0.76
1:A:26:C:H2'	1:A:27:C:C6	2.19	0.76
5:D:170:VAL:HB	5:D:194:PRO:HG2	1.67	0.76
9:H:37:VAL:H	9:H:38:PRO:HD2	1.51	0.76
24:Y:4:ILE:HG12	24:Y:5:LYS:HG3	1.68	0.76
18:R:76:LYS:HA	18:R:91:GLN:H	1.50	0.76
20:T:67:VAL:HG12	20:T:68:LYS:H	1.50	0.76
16:P:55:HIS:C	16:P:57:ALA:H	1.88	0.76
31:I:21:PRO:HB2	31:I:22:PRO:HD3	1.66	0.76
21:U:59:GLU:HG3	21:U:62:ALA:HB2	1.66	0.76
5:D:125:TRP:HD1	5:D:127:PHE:HB2	1.49	0.76
7:F:140:ILE:H	7:F:140:ILE:HD12	1.49	0.76
12:L:78:ARG:HB3	12:L:78:ARG:NH1	2.01	0.76
10:J:73:VAL:HG22	10:J:74:TYR:N	2.00	0.76
9:H:10:ALA:O	9:H:11:ASN:HB3	1.86	0.76
24:Y:2:LYS:HB2	24:Y:37:ARG:HB2	1.67	0.76
6:E:48:THR:HG23	6:E:85:PHE:N	2.00	0.76
18:R:6:GLN:NE2	18:R:41:ILE:HB	2.00	0.76
2:B:1799:G:N7	4:C:178:GLY:HA3	2.01	0.75
22:W:66:VAL:HG13	22:W:67:LYS:H	1.50	0.75
20:T:31:VAL:HG13	20:T:32:LEU:H	1.50	0.75
10:J:81:ILE:O	10:J:84:ILE:HG13	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:175:LYS:HG2	8:G:176:LYS:H	1.50	0.75
8:G:120:ILE:HG12	8:G:134:GLY:HA3	1.66	0.75
4:C:128:THR:HG22	4:C:188:ARG:HB2	1.68	0.75
2:B:162:U:H4'	2:B:163:C:OP1	1.87	0.75
31:I:42:ASN:HA	31:I:45:THR:OG1	1.87	0.75
17:Q:69:ARG:HB3	17:Q:69:ARG:HH11	1.51	0.75
11:K:71:ARG:HB3	11:K:72:PRO:CD	2.16	0.75
31:I:20:SER:HB3	31:I:21:PRO:HD3	1.67	0.75
1:A:30:C:H2'	1:A:31:C:H5'	1.68	0.75
2:B:1021:A:H61	2:B:1142:A:N6	1.85	0.75
19:S:2:GLU:HB2	19:S:108:SER:HA	1.69	0.75
14:N:8:ARG:HD2	14:N:46:ARG:NE	2.01	0.75
14:N:38:LEU:HB3	14:N:39:PRO:HD3	1.67	0.75
2:B:458:G:H5''	28:2:39:ARG:CB	2.17	0.75
6:E:116:ASP:HB3	6:E:185:LYS:HA	1.68	0.75
2:B:1064:C:H4'	31:I:90:GLY:CA	2.17	0.75
2:B:1098:A:H3'	31:I:3:LYS:CB	2.16	0.75
16:P:50:ARG:NH1	16:P:62:LYS:HB2	2.01	0.75
2:B:1063:G:H1'	31:I:92:PRO:HG2	1.69	0.75
11:K:78:ARG:HH22	16:P:62:LYS:NZ	1.85	0.75
11:K:108:ARG:NH2	16:P:36:LYS:H	1.84	0.75
12:L:74:THR:HB	12:L:109:LYS:HE3	1.68	0.75
7:F:69:ALA:HB3	7:F:81:GLY:H	1.52	0.75
16:P:86:LYS:HE3	16:P:88:ARG:HB2	1.68	0.74
27:1:9:LYS:HA	27:1:24:LYS:HG2	1.69	0.74
16:P:32:VAL:HB	16:P:80:VAL:O	1.88	0.74
12:L:62:PRO:HB3	29:3:12:ARG:HD3	1.69	0.74
2:B:458:G:N2	2:B:469:G:H2'	2.02	0.74
12:L:19:LEU:HD13	12:L:19:LEU:N	2.02	0.74
27:1:31:GLU:HG2	27:1:32:LYS:HG3	1.67	0.74
10:J:19:ASP:HB3	10:J:21:THR:HG23	1.67	0.74
4:C:212:TRP:HZ3	4:C:217:PRO:HD3	1.50	0.74
2:B:1283:G:N2	2:B:1286:A:H5'	2.01	0.74
15:O:28:VAL:HG22	15:O:106:LEU:HD13	1.66	0.74
1:A:48:U:H2'	1:A:49:C:C6	2.23	0.74
9:H:37:VAL:O	9:H:38:PRO:C	2.23	0.74
4:C:22:GLU:CB	4:C:202:ARG:HG3	2.18	0.74
7:F:133:GLU:HG3	7:F:147:ARG:HG2	1.70	0.74
2:B:1099:G:H5'	31:I:4:VAL:N	2.01	0.74
30:4:26:ILE:HG23	30:4:27:CYS:H	1.52	0.74
4:C:131:MET:HG3	4:C:187:CYS:SG	2.27	0.74
4:C:243:PRO:HB3	4:C:248:GLY:HA2	1.69	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:59:ARG:HA	25:Z:62:LYS:HB2	1.70	0.74
2:B:136:G:H2'	2:B:137:U:C6	2.22	0.74
5:D:8:LYS:HG3	16:P:5:LYS:NZ	2.02	0.74
4:C:141:HIS:HB3	4:C:190:THR:HB	1.70	0.74
6:E:83:VAL:O	6:E:84:THR:HG22	1.88	0.74
4:C:144:GLU:HG2	4:C:150:GLY:HA2	1.70	0.74
19:S:23:LEU:HD13	19:S:25:ARG:HH22	1.52	0.74
1:A:104:A:H2'	1:A:105:G:O4'	1.88	0.74
7:F:31:GLU:HG3	7:F:158:THR:HG22	1.69	0.74
3:V:63:ILE:N	3:V:70:ILE:HD11	2.03	0.74
14:N:85:PRO:HA	14:N:88:ALA:HB2	1.69	0.74
13:M:5:LYS:HZ1	13:M:8:LYS:CB	2.01	0.74
2:B:2088:A:H2'	2:B:2089:C:C6	2.23	0.74
28:2:35:ARG:HH21	28:2:42:LEU:HD12	1.50	0.74
2:B:125:A:H4'	28:2:13:ASN:ND2	2.03	0.74
2:B:1099:G:O5'	31:I:4:VAL:N	2.20	0.73
22:W:42:THR:HB	22:W:75:ASN:CB	2.16	0.73
2:B:2751:G:H5'	8:G:3:VAL:HG21	1.70	0.73
2:B:918:A:H2'	2:B:919:U:H5'	1.68	0.73
6:E:1:MET:HG3	6:E:18:THR:OG1	1.88	0.73
23:X:44:LYS:HG3	23:X:47:ARG:HB2	1.69	0.73
24:Y:15:ARG:NE	24:Y:15:ARG:HA	2.03	0.73
9:H:3:VAL:HB	9:H:37:VAL:HG11	1.68	0.73
2:B:1006:C:H5''	10:J:34:ARG:NE	2.02	0.73
2:B:2498:C:O2'	2:B:2499:C:H5'	1.87	0.73
2:B:1820:U:H3	4:C:197:ALA:HB1	1.52	0.73
22:W:42:THR:HG23	22:W:66:VAL:N	2.03	0.73
2:B:2895:G:H2'	2:B:2896:C:C6	2.24	0.73
2:B:2674:G:H4'	11:K:30:ARG:HD3	1.70	0.73
30:4:24:ARG:HE	30:4:37:GLN:CA	2.01	0.73
4:C:161:VAL:HG12	4:C:173:LEU:HD22	1.70	0.73
18:R:18:GLN:HB3	18:R:99:THR:HA	1.71	0.73
4:C:48:ILE:HG22	4:C:49:THR:N	2.03	0.73
21:U:71:ILE:HG21	21:U:102:ILE:HD12	1.69	0.73
31:I:108:ILE:HG22	31:I:128:ILE:HD13	1.71	0.73
31:I:73:PRO:HG2	31:I:78:LEU:HD21	1.68	0.73
27:1:49:LYS:HZ2	27:1:49:LYS:N	1.86	0.73
23:X:30:MET:H	23:X:30:MET:HE2	1.54	0.73
18:R:73:LYS:H	18:R:73:LYS:HD2	1.51	0.73
16:P:111:GLU:HB2	16:P:112:ARG:HE	1.54	0.73
25:Z:21:VAL:HG22	25:Z:23:LYS:H	1.54	0.73
14:N:30:ARG:NH1	14:N:74:GLU:HG2	2.01	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:17:C:H2'	1:A:18:G:O4'	1.89	0.73
23:X:4:LYS:HG3	23:X:7:ARG:HE	1.51	0.73
19:S:74:ILE:HG22	19:S:105:VAL:HG23	1.70	0.73
6:E:31:VAL:HG21	6:E:104:ALA:HB2	1.71	0.73
26:O:32:THR:HG21	26:O:41:HIS:NE2	2.03	0.73
2:B:1469:A:H2'	2:B:1470:A:C8	2.23	0.73
14:N:32:GLU:HG3	14:N:33:ILE:H	1.54	0.73
8:G:11:PRO:HD2	8:G:14:VAL:HG21	1.70	0.73
6:E:126:VAL:HG11	6:E:132:LYS:NZ	2.04	0.73
1:A:47:C:OP1	15:O:1:MET:HA	1.89	0.73
14:N:45:ARG:NH2	14:N:113:ILE:HD12	2.03	0.72
25:Z:5:ILE:HG13	25:Z:51:VAL:HG13	1.69	0.72
19:S:85:ILE:HD11	19:S:93:ALA:HB1	1.70	0.72
2:B:1324:G:H1'	2:B:1616:A:N6	2.04	0.72
27:1:46:VAL:HG22	27:1:47:ILE:H	1.53	0.72
17:Q:91:ARG:HA	17:Q:94:LEU:HD21	1.71	0.72
15:O:50:ALA:HB1	15:O:78:VAL:HG13	1.69	0.72
10:J:15:TRP:CB	10:J:139:VAL:HA	2.19	0.72
4:C:224:MET:HA	4:C:233:GLY:H	1.54	0.72
2:B:2511:U:H5''	5:D:129:THR:HG23	1.71	0.72
7:F:102:LEU:HG	7:F:107:VAL:HG23	1.69	0.72
5:D:42:ASN:O	5:D:43:ASP:HB2	1.89	0.72
10:J:112:GLY:O	10:J:116:ARG:HB2	1.88	0.72
17:Q:70:GLN:HG2	17:Q:71:ASN:N	2.05	0.72
12:L:115:GLU:O	12:L:116:VAL:HG22	1.89	0.72
5:D:30:GLU:HG2	5:D:94:GLN:NE2	2.05	0.72
2:B:2257:U:H5'	22:W:5:ALA:HB2	1.69	0.72
2:B:179:C:H5''	28:2:28:ARG:NH1	2.05	0.72
10:J:37:ARG:HH21	10:J:46:PRO:HB3	1.53	0.72
5:D:156:PHE:HB3	10:J:81:ILE:HG21	1.70	0.72
11:K:104:THR:HG22	11:K:105:ARG:HD3	1.71	0.72
2:B:28:A:N6	2:B:512:G:H1'	2.04	0.72
4:C:42:ARG:HE	4:C:43:ASN:H	1.36	0.72
1:A:32:U:H1'	1:A:52:A:N7	2.04	0.72
2:B:179:C:H5''	28:2:28:ARG:HH12	1.54	0.72
2:B:1857:G:H2'	2:B:1884:G:H22	1.55	0.72
2:B:1099:G:C5'	31:I:4:VAL:H	2.03	0.72
5:D:36:GLN:HG2	5:D:88:GLU:HA	1.70	0.72
3:V:21:ARG:HE	3:V:87:GLN:HA	1.54	0.72
2:B:1639:C:C2'	2:B:1640:A:H5''	2.18	0.72
14:N:86:ARG:HH22	14:N:116:VAL:HG12	1.54	0.72
5:D:31:ALA:HB3	5:D:95:SER:HB3	1.72	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:2:GLN:HA	9:H:21:VAL:HG13	1.72	0.72
2:B:2405:G:C5'	12:L:70:LYS:HG3	2.19	0.72
2:B:630:G:H1	12:L:69:ARG:HH12	1.37	0.72
27:1:7:LYS:HG2	27:1:26:LYS:HB3	1.71	0.72
6:E:106:LYS:HG3	6:E:107:SER:N	2.05	0.72
30:4:15:LYS:NZ	30:4:22:VAL:HG12	2.05	0.72
22:W:81:ILE:HG23	22:W:83:ALA:H	1.54	0.72
8:G:8:VAL:HG23	8:G:49:LEU:H	1.52	0.72
2:B:2633:G:H1'	5:D:62:LYS:HG3	1.71	0.72
2:B:2393:U:H4'	12:L:62:PRO:O	1.90	0.71
15:O:74:VAL:O	15:O:78:VAL:HG23	1.89	0.71
22:W:38:ARG:NH2	22:W:40:ARG:HD3	2.02	0.71
19:S:3:THR:HG21	19:S:107:VAL:HG22	1.69	0.71
2:B:1309:G:C4'	28:2:7:PRO:HB2	2.19	0.71
2:B:1252:G:H21	17:Q:32:ARG:NE	1.88	0.71
3:V:30:ILE:HG12	3:V:91:PHE:HB2	1.70	0.71
2:B:1903:G:H5''	4:C:239:PHE:CE2	2.25	0.71
2:B:1437:C:H2'	2:B:1438:U:C6	2.25	0.71
17:Q:98:ALA:HA	17:Q:105:PHE:CD1	2.24	0.71
10:J:89:PHE:HD1	10:J:92:MET:HG3	1.53	0.71
18:R:63:VAL:HG22	18:R:64:VAL:N	2.03	0.71
6:E:115:GLN:CD	6:E:184:ASP:HB2	2.10	0.71
2:B:2088:A:H2'	2:B:2089:C:H6	1.55	0.71
13:M:77:PRO:HD3	13:M:86:LYS:HD3	1.71	0.71
7:F:137:PHE:O	7:F:139:GLU:HG2	1.90	0.71
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.71
17:Q:47:ARG:O	17:Q:51:GLN:HG3	1.90	0.71
31:I:41:PHE:O	31:I:45:THR:HG23	1.91	0.71
2:B:414:C:H2'	2:B:415:A:C8	2.25	0.71
13:M:26:VAL:HG21	13:M:66:ARG:HG3	1.72	0.71
2:B:1099:G:O4'	31:I:3:LYS:O	2.07	0.71
4:C:103:ILE:HG22	4:C:104:LEU:H	1.53	0.71
17:Q:48:ASP:HA	17:Q:51:GLN:NE2	2.05	0.71
7:F:107:VAL:N	7:F:108:PRO:HD2	2.05	0.71
18:R:64:VAL:HG22	18:R:65:ALA:H	1.55	0.71
20:T:21:SER:H	20:T:24:MET:HE3	1.53	0.71
3:V:70:ILE:HD12	3:V:71:LYS:H	1.55	0.71
20:T:47:VAL:HG22	20:T:53:VAL:HG21	1.72	0.71
2:B:365:U:H2'	2:B:366:C:H6	1.55	0.71
27:1:8:ILE:HB	27:1:27:ARG:NH1	2.05	0.71
19:S:84:ARG:HH21	19:S:98:LYS:NZ	1.87	0.71
8:G:153:PRO:HA	8:G:159:LYS:O	1.91	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:71:LYS:O	13:M:73:ILE:HG12	1.90	0.71
23:X:26:PHE:HA	23:X:29:ARG:HD2	1.73	0.71
8:G:3:VAL:HG22	8:G:4:ALA:N	2.06	0.71
17:Q:87:VAL:HB	18:R:54:VAL:HG11	1.71	0.71
2:B:1080:A:H4'	31:I:126:ARG:HD3	1.71	0.71
6:E:138:LEU:O	6:E:143:LEU:HD21	1.91	0.71
2:B:1440:U:H2'	2:B:1441:G:H8	1.55	0.71
16:P:13:LYS:HD2	16:P:77:SER:HB2	1.73	0.71
31:I:5:GLN:O	31:I:6:ALA:HB3	1.90	0.71
6:E:164:LEU:HD13	6:E:165:HIS:N	2.05	0.71
14:N:45:ARG:HH21	14:N:97:ILE:HG12	1.56	0.71
2:B:1082:U:N3	2:B:1086:A:C6	2.59	0.71
2:B:718:A:H2'	2:B:719:C:H5'	1.72	0.71
10:J:41:LYS:HZ2	17:Q:63:ARG:HD2	1.54	0.70
26:O:15:ARG:HB3	26:O:15:ARG:CZ	2.21	0.70
28:2:43:THR:O	28:2:44:VAL:HG13	1.90	0.70
2:B:743:A:O2'	2:B:744:U:H5'	1.91	0.70
2:B:1099:G:O5'	31:I:3:LYS:N	2.23	0.70
2:B:2291:U:H2'	2:B:2292:U:C6	2.26	0.70
15:O:10:ARG:HD2	15:O:94:ARG:HD2	1.72	0.70
14:N:8:ARG:HD2	14:N:46:ARG:HE	1.54	0.70
2:B:2012:G:OP1	19:S:98:LYS:HD3	1.91	0.70
1:A:61:G:H2'	1:A:62:C:H6	1.55	0.70
2:B:1098:A:OP2	31:I:3:LYS:HG2	1.91	0.70
15:O:73:ALA:HA	15:O:76:LYS:HZ2	1.56	0.70
19:S:28:LYS:HB3	19:S:31:GLN:HB2	1.74	0.70
7:F:35:LEU:HB3	7:F:151:LEU:HD11	1.72	0.70
12:L:79:LEU:HD11	12:L:112:LEU:HD23	1.73	0.70
2:B:532:A:N1	2:B:2020:A:H1'	2.06	0.70
2:B:1486:U:H2'	2:B:1487:U:C6	2.27	0.70
2:B:2684:U:H4'	11:K:76:VAL:HG21	1.73	0.70
5:D:34:VAL:HG12	5:D:91:THR:HG23	1.73	0.70
14:N:4:ARG:H	14:N:4:ARG:NE	1.89	0.70
10:J:96:ARG:HD2	10:J:99:ARG:HH21	1.56	0.70
20:T:66:LYS:HA	20:T:76:ARG:O	1.90	0.70
2:B:2311:A:N3	7:F:39:VAL:HG23	2.07	0.70
10:J:18:VAL:O	10:J:56:VAL:HA	1.91	0.70
2:B:2196:C:O2'	2:B:2197:U:H5'	1.91	0.70
2:B:2305:U:H3	7:F:149:ARG:HB3	1.56	0.70
18:R:68:ARG:HB2	18:R:97:LYS:HG3	1.74	0.70
2:B:2144:G:O2'	2:B:2145:C:H5'	1.90	0.70
12:L:34:GLY:HA3	18:R:85:LYS:HD3	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:X:4:LYS:O	23:X:7:ARG:HG2	1.91	0.70
2:B:775:G:H4'	2:B:776:G:H5'	1.73	0.70
4:C:143:VAL:HG11	4:C:173:LEU:HD11	1.74	0.70
5:D:116:LYS:HB2	5:D:165:MET:HG3	1.73	0.70
12:L:124:GLY:N	12:L:142:ILE:HA	2.05	0.70
15:O:25:ARG:HH21	15:O:94:ARG:NH1	1.90	0.70
10:J:50:THR:H	10:J:118:MET:HE1	1.56	0.70
6:E:147:LEU:HB3	6:E:167:VAL:HG13	1.71	0.70
31:I:32:VAL:HG22	31:I:60:VAL:HG21	1.73	0.70
2:B:876:C:C2	2:B:877:A:H1'	2.27	0.70
5:D:33:ARG:HB2	5:D:33:ARG:HH11	1.56	0.70
15:O:40:ILE:H	15:O:40:ILE:HD13	1.55	0.70
17:Q:73:ILE:HG23	17:Q:74:SER:N	2.05	0.70
30:4:3:VAL:HG12	30:4:4:ARG:N	2.06	0.70
8:G:40:VAL:HG22	8:G:51:PHE:CE2	2.27	0.70
28:2:45:SER:HB3	28:2:46:LYS:HE3	1.72	0.70
21:U:26:ASN:O	21:U:28:LEU:HD23	1.90	0.70
12:L:90:VAL:H	12:L:122:VAL:HG22	1.57	0.70
6:E:148:ILE:O	6:E:148:ILE:HG13	1.92	0.70
8:G:156:TYR:HA	8:G:171:LYS:HG2	1.73	0.70
2:B:2574:G:H21	5:D:147:GLY:HA2	1.56	0.70
21:U:11:ILE:HG22	21:U:12:VAL:H	1.55	0.70
1:A:57:A:H4'	7:F:26:GLN:NE2	2.07	0.70
23:X:1:MET:HB2	23:X:6:LEU:HA	1.73	0.70
31:I:1:ALA:H3	31:I:3:LYS:HE2	1.56	0.70
16:P:47:ILE:CG2	16:P:48:ALA:H	2.02	0.70
2:B:1141:U:H4'	2:B:1142:A:O4'	1.91	0.70
6:E:137:LYS:HA	6:E:137:LYS:NZ	2.07	0.70
28:2:25:LYS:N	28:2:25:LYS:HD2	2.05	0.69
14:N:8:ARG:NH1	14:N:46:ARG:HG3	2.07	0.69
18:R:42:ALA:HB1	18:R:53:PHE:CD1	2.27	0.69
2:B:742:A:H2'	2:B:743:A:H8	1.56	0.69
2:B:2471:A:O2'	2:B:2472:G:H8	1.74	0.69
2:B:1799:G:H4'	2:B:1800:C:O5'	1.92	0.69
11:K:71:ARG:CB	11:K:72:PRO:HD2	2.22	0.69
2:B:1825:U:H5'	4:C:244:VAL:HG22	1.73	0.69
21:U:71:ILE:HD12	21:U:102:ILE:HD12	1.74	0.69
5:D:122:VAL:HA	5:D:128:ARG:CG	2.21	0.69
6:E:14:VAL:HG11	6:E:16:GLU:OE1	1.91	0.69
2:B:704:G:H1'	2:B:727:A:N6	2.07	0.69
8:G:53:PRO:HG2	8:G:61:TRP:CZ3	2.27	0.69
12:L:79:LEU:HD23	12:L:110:VAL:HB	1.75	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:11:ILE:HB	21:U:69:VAL:HG23	1.74	0.69
5:D:189:VAL:HG12	5:D:190:LYS:H	1.57	0.69
2:B:1105:U:H2'	2:B:1106:G:H8	1.57	0.69
4:C:210:ALA:HA	4:C:213:ARG:HD2	1.74	0.69
10:J:135:GLN:HE22	10:J:137:PRO:HB2	1.57	0.69
31:I:55:PRO:HD3	31:I:74:PRO:HD3	1.75	0.69
2:B:1225:G:OP1	18:R:90:ARG:HD2	1.91	0.69
2:B:1262:A:H2	26:O:6:LYS:HD2	1.57	0.69
17:Q:89:ILE:HD12	17:Q:89:ILE:H	1.56	0.69
2:B:922:C:H1'	22:W:22:VAL:HG21	1.74	0.69
8:G:171:LYS:HZ2	8:G:173:ALA:HA	1.57	0.69
12:L:78:ARG:O	12:L:81:ASP:HB2	1.92	0.69
2:B:936:A:H2'	2:B:937:C:C6	2.28	0.69
4:C:174:ARG:HG3	4:C:180:MET:HG3	1.74	0.69
5:D:89:GLU:HB3	5:D:92:VAL:O	1.93	0.69
6:E:4:VAL:HA	6:E:14:VAL:HG22	1.74	0.69
11:K:110:GLU:HA	11:K:113:MET:HG2	1.73	0.69
5:D:140:HIS:O	5:D:141:ARG:HG2	1.92	0.69
12:L:109:LYS:NZ	12:L:109:LYS:HB2	2.08	0.69
31:I:9:LYS:HG2	31:I:57:VAL:HG22	1.74	0.69
2:B:2185:U:H2'	2:B:2186:G:O4'	1.93	0.69
2:B:2898:U:O2'	10:J:137:PRO:HB3	1.91	0.69
10:J:41:LYS:HG2	17:Q:63:ARG:NH1	2.08	0.69
22:W:42:THR:H	22:W:65:LYS:HA	1.57	0.69
6:E:190:ALA:HB3	6:E:193:VAL:HG22	1.73	0.69
19:S:25:ARG:HD2	19:S:26:GLY:N	2.08	0.69
20:T:15:HIS:O	20:T:16:VAL:HB	1.93	0.69
7:F:56:LEU:HD13	7:F:88:VAL:HG21	1.75	0.69
2:B:2620:C:OP1	5:D:157:LYS:HB2	1.92	0.69
2:B:2511:U:H5''	5:D:129:THR:CG2	2.22	0.69
21:U:95:PHE:HD2	21:U:99:SER:HB3	1.56	0.69
2:B:1174:U:H1'	2:B:1176:U:C4	2.28	0.69
17:Q:29:ARG:HA	17:Q:29:ARG:HH11	1.56	0.69
2:B:1028:A:H2'	2:B:1029:A:C8	2.28	0.69
9:H:8:LYS:HE2	9:H:9:VAL:H	1.57	0.69
22:W:44:PHE:HB3	22:W:77:LYS:CB	2.23	0.69
2:B:65:U:H2'	2:B:66:C:H6	1.58	0.69
2:B:1368:G:H5''	28:2:25:LYS:HE3	1.75	0.69
13:M:53:MET:O	13:M:112:LEU:HD21	1.93	0.69
8:G:39:ALA:HB1	8:G:54:ARG:HB2	1.74	0.69
2:B:1118:C:H2'	2:B:1119:U:H6	1.58	0.69
4:C:156:SER:O	4:C:195:GLY:HA3	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:66:VAL:HG22	22:W:67:LYS:N	2.08	0.69
2:B:946:C:H2'	2:B:947:A:H8	1.58	0.69
18:R:22:LEU:HD12	18:R:23:GLU:H	1.58	0.69
2:B:2025:C:H2'	2:B:2026:U:C6	2.28	0.69
26:O:36:LYS:HB2	26:O:41:HIS:HA	1.74	0.69
2:B:125:A:H4'	28:2:13:ASN:HD21	1.54	0.69
4:C:193:GLU:O	4:C:194:VAL:HG13	1.93	0.68
22:W:39:GLN:HG2	22:W:66:VAL:O	1.93	0.68
22:W:67:LYS:HG2	22:W:71:LYS:HB2	1.74	0.68
22:W:44:PHE:HB3	22:W:77:LYS:HB3	1.75	0.68
5:D:62:LYS:HG2	5:D:63:PRO:HD3	1.75	0.68
5:D:22:ILE:O	5:D:22:ILE:HG13	1.93	0.68
9:H:129:GLU:HA	9:H:143:ILE:HA	1.75	0.68
13:M:20:LEU:HD13	13:M:38:ARG:HG3	1.75	0.68
2:B:1201:U:H2'	2:B:1202:G:H8	1.58	0.68
31:I:1:ALA:N	31:I:3:LYS:HE2	2.08	0.68
10:J:97:PRO:O	10:J:100:VAL:HG12	1.93	0.68
2:B:2680:U:H5'	5:D:194:PRO:HA	1.73	0.68
2:B:2615:U:H1'	26:O:3:GLN:HG3	1.74	0.68
8:G:95:ALA:HB1	8:G:130:ILE:HD11	1.75	0.68
24:Y:26:LEU:HD12	24:Y:28:LEU:HD22	1.74	0.68
17:Q:102:LYS:O	17:Q:106:THR:HG22	1.92	0.68
2:B:570:G:H2'	2:B:2030:A:N7	2.08	0.68
4:C:179:GLU:OE2	4:C:266:ILE:HA	1.93	0.68
16:P:80:VAL:O	16:P:80:VAL:HG13	1.92	0.68
2:B:1285:A:H2'	2:B:1286:A:H5''	1.73	0.68
2:B:1797:G:O3'	4:C:253:GLY:HA2	1.91	0.68
2:B:1485:U:H2'	2:B:1486:U:C6	2.28	0.68
12:L:62:PRO:HB3	29:3:12:ARG:CD	2.24	0.68
18:R:47:VAL:CG1	18:R:49:ILE:HG12	2.22	0.68
15:O:15:ARG:NH1	22:W:76:ARG:HD2	2.07	0.68
21:U:27:VAL:HA	21:U:33:VAL:HG22	1.76	0.68
2:B:135:U:H2'	2:B:136:G:C8	2.27	0.68
27:1:24:LYS:HB2	27:1:24:LYS:HZ3	1.58	0.68
14:N:86:ARG:NE	14:N:117:ASP:HA	2.08	0.68
2:B:2395:C:H2'	2:B:2396:G:O4'	1.93	0.68
30:4:26:ILE:CG1	30:4:35:GLN:H	2.00	0.68
2:B:2755:C:H2'	30:4:19:ARG:NH2	2.09	0.68
24:Y:2:LYS:HB3	24:Y:6:ILE:HD13	1.75	0.68
24:Y:4:ILE:HG23	24:Y:5:LYS:HD3	1.74	0.68
4:C:216:ARG:HB3	4:C:217:PRO:CD	2.23	0.68
19:S:3:THR:OG1	19:S:57:ASN:HB2	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:78:ARG:NE	12:L:113:ALA:HB1	2.08	0.68
18:R:78:ARG:HD3	18:R:88:GLY:O	1.94	0.68
28:2:13:ASN:HA	28:2:16:HIS:O	1.92	0.68
6:E:103:GLY:O	6:E:106:LYS:HG2	1.92	0.68
16:P:90:ALA:H	16:P:112:ARG:HH21	1.41	0.68
12:L:58:TYR:HE1	29:3:51:LYS:HG2	1.58	0.68
10:J:135:GLN:HE21	10:J:138:GLN:H	1.41	0.68
9:H:122:LEU:HD13	9:H:146:VAL:HG22	1.74	0.68
2:B:1368:G:H5'	28:2:25:LYS:HG2	1.74	0.68
23:X:25:GLN:O	23:X:29:ARG:HG3	1.93	0.68
2:B:536:G:H5''	17:Q:52:ARG:HH22	1.58	0.68
2:B:1406:U:H2'	2:B:1407:G:H8	1.58	0.68
19:S:46:LEU:CA	19:S:49:LYS:HB2	2.13	0.68
6:E:136:GLN:O	6:E:139:LYS:HG2	1.94	0.68
28:2:12:ARG:HG2	28:2:46:LYS:HA	1.75	0.68
14:N:86:ARG:NH2	14:N:116:VAL:HG12	2.09	0.68
2:B:304:U:H2'	2:B:305:C:C6	2.29	0.68
2:B:864:G:O2'	2:B:865:C:H5'	1.94	0.68
2:B:160:A:N6	2:B:167:A:H1'	2.09	0.68
12:L:39:LYS:CA	12:L:39:LYS:HZ2	2.06	0.68
12:L:3:LEU:HD23	12:L:4:ASN:H	1.59	0.68
8:G:71:LEU:HA	8:G:74:MET:SD	2.34	0.68
9:H:115:VAL:HG22	9:H:117:LEU:H	1.59	0.68
4:C:224:MET:O	4:C:225:ASN:HB2	1.92	0.68
26:0:41:HIS:CD2	26:0:46:GLY:HA2	2.29	0.68
8:G:17:LYS:NZ	8:G:19:ASN:HB2	2.09	0.68
2:B:992:C:H4'	17:Q:46:TYR:OH	1.94	0.68
18:R:73:LYS:HD2	18:R:73:LYS:N	2.08	0.68
2:B:1856:U:H2'	2:B:1857:G:O4'	1.94	0.68
24:Y:26:LEU:HB2	24:Y:28:LEU:HD13	1.74	0.68
29:3:33:THR:C	29:3:34:LYS:HD2	2.15	0.68
20:T:62:VAL:HG23	20:T:63:VAL:H	1.59	0.68
2:B:1098:A:C4'	31:I:3:LYS:HB3	2.22	0.67
16:P:90:ALA:HB3	16:P:112:ARG:N	2.08	0.67
24:Y:2:LYS:CB	24:Y:37:ARG:HB2	2.24	0.67
13:M:38:ARG:HD2	13:M:39:GLY:N	2.09	0.67
2:B:1508:A:H5''	2:B:1509:A:N7	2.09	0.67
8:G:15:ASP:HB2	8:G:26:LYS:HE3	1.76	0.67
2:B:483:A:H2'	2:B:484:C:H5'	1.76	0.67
2:B:2769:U:H2'	2:B:2770:G:H8	1.58	0.67
2:B:448:U:H6	6:E:79:ARG:HG3	1.58	0.67
6:E:164:LEU:HD22	6:E:164:LEU:O	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1387:A:H2'	2:B:1388:G:H8	1.58	0.67
2:B:1178:C:H2'	2:B:1179:G:C8	2.29	0.67
2:B:2393:U:H5'	12:L:61:LEU:O	1.95	0.67
2:B:590:A:H2'	2:B:591:U:C6	2.28	0.67
6:E:143:LEU:N	6:E:143:LEU:HD22	2.08	0.67
2:B:165:A:H2'	2:B:166:U:H6	1.59	0.67
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.67
2:B:1197:G:H2'	2:B:1198:U:H6	1.59	0.67
2:B:742:A:H2'	2:B:743:A:C8	2.28	0.67
2:B:2157:G:H2'	2:B:2157:G:N3	2.09	0.67
2:B:1820:U:H3	4:C:197:ALA:CB	2.07	0.67
5:D:77:ARG:NH1	5:D:77:ARG:HB2	2.08	0.67
5:D:70:LYS:H	5:D:92:VAL:HG11	1.59	0.67
10:J:35:ARG:HB3	10:J:54:ILE:HD11	1.77	0.67
3:V:9:ARG:HH12	3:V:12:GLN:HA	1.58	0.67
31:I:27:LEU:HB2	31:I:32:VAL:HG21	1.74	0.67
21:U:38:ILE:HD13	21:U:64:ILE:HG13	1.75	0.67
2:B:1099:G:OP1	31:I:4:VAL:HG12	1.94	0.67
19:S:46:LEU:HD23	19:S:49:LYS:HD2	1.75	0.67
23:X:4:LYS:HD2	23:X:7:ARG:HH21	1.60	0.67
8:G:29:ASN:HB2	8:G:78:VAL:O	1.95	0.67
2:B:1801:A:N6	4:C:259:ASN:HD21	1.93	0.67
2:B:1190:G:OP1	12:L:39:LYS:N	2.28	0.67
8:G:36:LEU:HD12	8:G:36:LEU:H	1.59	0.67
24:Y:2:LYS:H	24:Y:37:ARG:HB3	1.60	0.67
15:O:25:ARG:HH21	15:O:94:ARG:HH12	1.43	0.67
6:E:47:LYS:HA	6:E:49:ARG:HE	1.58	0.67
7:F:98:PHE:HA	7:F:101:ARG:HG2	1.75	0.67
14:N:11:ASN:HB3	14:N:12:ARG:HD2	1.77	0.67
22:W:13:ARG:NE	22:W:13:ARG:H	1.93	0.67
13:M:16:ARG:HH22	13:M:72:PRO:HG2	1.59	0.67
19:S:17:VAL:O	19:S:20:VAL:HG12	1.95	0.67
2:B:974:G:H1'	2:B:975:A:C8	2.30	0.67
26:O:27:LEU:HD22	26:O:27:LEU:N	2.09	0.67
31:I:41:PHE:CE2	31:I:45:THR:HG21	2.30	0.67
28:2:46:LYS:H	28:2:46:LYS:HE3	1.57	0.67
3:V:48:MET:HE1	3:V:85:LYS:HA	1.77	0.67
4:C:58:LYS:O	4:C:58:LYS:HG3	1.95	0.67
18:R:42:ALA:HB1	18:R:53:PHE:CG	2.30	0.67
5:D:32:ASN:HB3	5:D:91:THR:HA	1.77	0.67
15:O:15:ARG:HD2	15:O:18:LEU:HD12	1.77	0.67
6:E:120:VAL:HG12	6:E:121:VAL:H	1.60	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1813:G:N3	4:C:50:THR:HG21	2.10	0.67
2:B:2039:U:H2'	2:B:2040:G:H8	1.60	0.67
11:K:24:VAL:HG13	11:K:33:ALA:HB2	1.75	0.67
2:B:1241:A:H2'	2:B:1242:U:H5'	1.77	0.67
2:B:1098:A:C4	31:I:3:LYS:O	2.48	0.67
30:4:22:VAL:HG13	30:4:37:GLN:HB3	1.77	0.67
30:4:2:LYS:HG2	30:4:38:GLY:HA3	1.76	0.67
27:1:40:PRO:HD2	27:1:44:GLN:O	1.95	0.67
5:D:175:LEU:HD21	5:D:192:ALA:HB3	1.77	0.67
18:R:4:VAL:O	18:R:41:ILE:HG12	1.95	0.67
21:U:42:LYS:N	21:U:57:ILE:HD12	2.04	0.67
11:K:15:GLY:HA3	11:K:52:VAL:HG12	1.77	0.67
2:B:630:G:H1	12:L:69:ARG:NH1	1.92	0.67
2:B:2008:C:H2'	2:B:2009:A:H8	1.60	0.67
12:L:90:VAL:H	12:L:122:VAL:CG2	2.08	0.66
12:L:62:PRO:HB3	29:3:12:ARG:NE	2.10	0.66
2:B:64:A:H2'	2:B:65:U:C6	2.30	0.66
2:B:1459:G:O2'	2:B:1460:U:H5'	1.95	0.66
2:B:1203:U:H3'	2:B:1204:A:H5''	1.76	0.66
2:B:2238:G:H2'	2:B:2238:G:N3	2.10	0.66
14:N:34:ILE:HG22	14:N:35:LYS:H	1.59	0.66
4:C:76:VAL:HG13	4:C:112:GLY:HA2	1.77	0.66
12:L:118:THR:CG2	12:L:137:ALA:HB3	2.25	0.66
2:B:1083:U:H1'	2:B:1086:A:N6	2.10	0.66
26:0:32:THR:HG21	26:0:41:HIS:CE1	2.30	0.66
12:L:109:LYS:CG	12:L:126:ARG:HD3	2.25	0.66
12:L:82:LEU:HD21	12:L:110:VAL:HG12	1.77	0.66
23:X:28:LEU:HD22	23:X:42:LEU:HG	1.76	0.66
19:S:84:ARG:HH21	19:S:98:LYS:HZ3	1.43	0.66
2:B:615:U:O4	6:E:36:ALA:HB2	1.96	0.66
25:Z:25:ARG:HG3	25:Z:26:SER:H	1.60	0.66
27:1:16:THR:HG22	27:1:47:ILE:HD12	1.77	0.66
27:1:47:ILE:HG22	27:1:48:TYR:N	2.07	0.66
14:N:2:ARG:HH21	14:N:4:ARG:HD3	1.59	0.66
13:M:5:LYS:HG3	13:M:68:PHE:CE1	2.30	0.66
14:N:41:ALA:HB1	14:N:113:ILE:HD11	1.77	0.66
18:R:41:ILE:HG23	18:R:43:ASN:HB2	1.77	0.66
2:B:950:G:H2'	2:B:951:C:C6	2.30	0.66
22:W:47:GLY:HA2	22:W:71:LYS:O	1.94	0.66
11:K:21:CYS:HA	11:K:41:ILE:HD12	1.77	0.66
21:U:13:LEU:H	21:U:13:LEU:HD12	1.59	0.66
5:D:125:TRP:CB	5:D:160:LYS:HG2	2.24	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:40:MET:O	18:R:40:MET:HG2	1.95	0.66
2:B:1531:C:H2'	2:B:1532:A:C8	2.31	0.66
11:K:51:LYS:O	11:K:52:VAL:HG23	1.95	0.66
12:L:78:ARG:HH22	12:L:80:SER:HB2	1.61	0.66
2:B:1447:C:H2'	2:B:1448:G:H8	1.61	0.66
4:C:63:ILE:HD12	4:C:83:ASP:OD1	1.95	0.66
2:B:2873:A:H1'	14:N:5:LYS:O	1.96	0.66
9:H:122:LEU:HA	9:H:146:VAL:HG21	1.76	0.66
4:C:225:ASN:O	4:C:227:VAL:N	2.28	0.66
2:B:1594:U:H2'	2:B:1595:C:C6	2.30	0.66
2:B:594:U:H2'	2:B:595:C:C6	2.30	0.66
29:3:21:PHE:HB2	29:3:48:MET:HG2	1.77	0.66
2:B:1354:A:H2'	2:B:1355:G:O4'	1.96	0.66
2:B:2859:G:H2'	2:B:2860:A:C8	2.30	0.66
2:B:643:A:N6	2:B:2370:G:H1'	2.11	0.66
2:B:1373:A:H2'	2:B:1374:G:O4'	1.95	0.66
5:D:129:THR:HA	5:D:140:HIS:CE1	2.31	0.66
21:U:28:LEU:C	21:U:28:LEU:HD12	2.16	0.66
2:B:526:A:N6	2:B:2626:C:H4'	2.10	0.66
2:B:2064:C:H2'	2:B:2065:C:C6	2.30	0.66
2:B:1794:A:H2'	2:B:1795:C:C6	2.30	0.66
4:C:179:GLU:CD	4:C:266:ILE:HA	2.15	0.66
13:M:3:GLN:HG3	13:M:6:ARG:NH1	2.10	0.66
10:J:98:GLU:HG3	10:J:126:ALA:HB2	1.77	0.66
10:J:81:ILE:CG1	10:J:82:GLY:H	2.08	0.66
18:R:40:MET:HG3	18:R:54:VAL:HG13	1.75	0.66
2:B:1098:A:O2'	31:I:4:VAL:C	2.34	0.66
11:K:8:LEU:HB3	11:K:83:ALA:O	1.95	0.66
2:B:536:G:H5'	17:Q:52:ARG:HH22	1.61	0.66
2:B:794:A:H2'	2:B:795:C:C6	2.31	0.66
29:3:2:LYS:HB2	29:3:2:LYS:NZ	2.11	0.66
2:B:1098:A:H2'	31:I:4:VAL:CA	2.26	0.66
4:C:137:GLY:C	4:C:139:THR:H	1.96	0.66
16:P:18:SER:HB2	16:P:87:ARG:CZ	2.26	0.66
16:P:46:VAL:C	16:P:47:ILE:HG12	2.15	0.66
24:Y:2:LYS:HD2	24:Y:35:VAL:HB	1.77	0.66
6:E:147:LEU:HB3	6:E:167:VAL:HG22	1.78	0.66
19:S:64:ALA:H	19:S:110:ARG:HH21	1.41	0.66
31:I:27:LEU:H	31:I:27:LEU:CD2	2.09	0.66
13:M:33:LEU:HB3	13:M:101:VAL:CG2	2.26	0.66
2:B:143:C:H6	2:B:143:C:O5'	1.78	0.66
2:B:522:A:H2'	2:B:523:C:C6	2.31	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:350:G:H2'	2:B:351:C:O4'	1.96	0.66
2:B:1727:C:H2'	2:B:1728:C:C6	2.30	0.66
2:B:784:G:O2'	2:B:785:G:H5''	1.95	0.66
31:I:45:THR:CA	31:I:48:ILE:HG22	2.26	0.66
2:B:1440:U:H2'	2:B:1441:G:C8	2.30	0.66
4:C:32:LEU:HB3	4:C:61:TYR:CE1	2.27	0.65
16:P:63:ILE:O	16:P:72:VAL:HA	1.96	0.65
14:N:98:LEU:HD11	14:N:114:GLU:HG2	1.76	0.65
6:E:142:ALA:H	6:E:185:LYS:NZ	1.93	0.65
4:C:28:PRO:HG2	4:C:79:ARG:NH2	2.11	0.65
2:B:2784:U:H2'	2:B:2785:C:C6	2.31	0.65
21:U:69:VAL:HG11	21:U:77:GLY:HA2	1.79	0.65
12:L:103:ILE:HB	12:L:104:GLN:NE2	2.11	0.65
2:B:2328:A:H2'	2:B:2329:U:C6	2.30	0.65
27:1:19:PHE:HD1	27:1:20:TYR:H	1.44	0.65
17:Q:111:LYS:NZ	18:R:52:PRO:HA	2.10	0.65
16:P:89:GLY:HA2	16:P:112:ARG:HH22	1.60	0.65
14:N:97:ILE:HA	14:N:113:ILE:HD13	1.78	0.65
10:J:40:HIS:HA	17:Q:69:ARG:NH1	2.09	0.65
17:Q:69:ARG:NH1	17:Q:69:ARG:HB3	2.10	0.65
31:I:85:ILE:HD13	31:I:137:LEU:HD21	1.78	0.65
9:H:115:VAL:HB	9:H:132:PHE:HD1	1.61	0.65
2:B:1866:A:H2'	2:B:1867:G:O4'	1.95	0.65
5:D:33:ARG:HB3	5:D:89:GLU:HB2	1.78	0.65
5:D:89:GLU:HG2	5:D:93:GLY:O	1.96	0.65
10:J:96:ARG:HG3	10:J:98:GLU:OE1	1.95	0.65
4:C:205:GLY:C	4:C:206:LYS:HG2	2.15	0.65
12:L:78:ARG:CZ	12:L:113:ALA:HB1	2.26	0.65
5:D:56:LYS:HD3	5:D:59:ARG:HB2	1.79	0.65
2:B:235:U:H2'	2:B:236:C:C6	2.31	0.65
20:T:17:SER:H	20:T:20:ALA:CB	2.09	0.65
2:B:320:A:H4'	2:B:322:A:N7	2.11	0.65
5:D:5:VAL:HB	5:D:27:ILE:O	1.95	0.65
4:C:20:ASN:HB2	4:C:202:ARG:HD3	1.78	0.65
5:D:37:VAL:HG13	5:D:42:ASN:CB	2.25	0.65
2:B:1118:C:H2'	2:B:1119:U:C6	2.32	0.65
2:B:773:U:H5'	2:B:774:G:OP2	1.95	0.65
2:B:616:A:H3'	2:B:617:G:H8	1.62	0.65
2:B:1381:G:C2'	2:B:1382:G:H5'	2.27	0.65
2:B:448:U:C5'	6:E:79:ARG:HH21	2.09	0.65
6:E:153:LEU:HD13	6:E:154:ASP:N	2.11	0.65
25:Z:48:GLN:NE2	25:Z:49:ARG:H	1.94	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2642:G:OP1	10:J:84:ILE:HG12	1.97	0.65
26:0:41:HIS:HB3	26:0:46:GLY:CA	2.26	0.65
8:G:41:GLU:CG	8:G:54:ARG:HH21	2.09	0.65
2:B:117:G:H5'	2:B:126:A:H8	1.60	0.65
2:B:1794:A:H2'	2:B:1795:C:H6	1.62	0.65
2:B:1838:C:N4	2:B:1898:U:H2'	2.11	0.65
5:D:4:LEU:HD23	5:D:77:ARG:HD3	1.78	0.65
17:Q:24:TYR:O	17:Q:27:ARG:HB2	1.97	0.65
3:V:63:ILE:H	3:V:70:ILE:CD1	2.09	0.65
14:N:70:THR:OG1	14:N:75:ILE:HD11	1.96	0.65
30:4:26:ILE:O	30:4:27:CYS:HB2	1.96	0.65
10:J:73:VAL:HG11	10:J:75:TYR:CZ	2.31	0.65
9:H:4:ILE:HD13	9:H:4:ILE:H	1.62	0.65
12:L:58:TYR:HA	12:L:62:PRO:HG2	1.77	0.65
6:E:48:THR:HG23	6:E:85:PHE:H	1.60	0.65
1:A:76:G:H2'	1:A:77:U:H6	1.60	0.65
2:B:1386:C:H2'	2:B:1387:A:C8	2.31	0.65
2:B:2243:U:H2'	2:B:2244:U:C6	2.31	0.65
30:4:30:GLU:CB	30:4:33:HIS:HB2	2.23	0.65
2:B:1006:C:H5''	10:J:34:ARG:HE	1.61	0.65
2:B:455:C:N3	2:B:472:A:H2'	2.12	0.65
4:C:19:VAL:HB	4:C:205:GLY:HA2	1.78	0.65
20:T:53:VAL:HG12	20:T:93:LEU:HD21	1.79	0.65
13:M:114:ARG:O	13:M:117:PHE:HD1	1.80	0.65
12:L:77:ILE:HD13	12:L:110:VAL:C	2.17	0.65
2:B:1224:U:O3'	18:R:90:ARG:HB2	1.97	0.65
12:L:33:ARG:HB3	18:R:85:LYS:NZ	2.11	0.65
2:B:2784:U:H2'	2:B:2785:C:H6	1.60	0.65
2:B:1484:U:H2'	2:B:1485:U:C6	2.32	0.65
2:B:993:G:H21	18:R:93:PHE:HZ	1.45	0.65
4:C:259:ASN:O	4:C:261:ARG:HG3	1.97	0.65
2:B:2102:G:H2'	2:B:2103:C:O4'	1.97	0.65
2:B:283:G:H2'	2:B:284:U:C6	2.32	0.65
17:Q:97:ILE:HG23	18:R:13:ARG:NH2	2.11	0.65
2:B:1022:G:H8	10:J:68:LYS:HE3	1.62	0.65
29:3:7:ARG:HH11	29:3:7:ARG:HA	1.61	0.65
20:T:77:ARG:HG2	20:T:78:SER:H	1.60	0.65
6:E:109:LEU:HB2	6:E:117:ARG:HE	1.62	0.65
20:T:45:ALA:HA	20:T:48:GLN:HG2	1.78	0.65
26:0:31:LYS:NZ	26:0:31:LYS:HB2	2.11	0.65
12:L:109:LYS:HG2	12:L:126:ARG:HH11	1.61	0.65
12:L:109:LYS:HZ3	12:L:109:LYS:HB2	1.62	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:102:ILE:HD11	8:G:130:ILE:HD12	1.79	0.65
30:4:26:ILE:HD13	30:4:27:CYS:C	2.18	0.64
2:B:2537:U:H2'	2:B:2538:C:C6	2.32	0.64
2:B:907:G:O2'	2:B:908:C:H5'	1.96	0.64
18:R:39:LEU:H	18:R:61:ALA:HB1	1.62	0.64
6:E:108:ILE:HG13	6:E:109:LEU:H	1.62	0.64
4:C:49:THR:O	4:C:50:THR:HB	1.96	0.64
12:L:109:LYS:HG3	12:L:126:ARG:HB3	1.78	0.64
2:B:352:A:H3'	2:B:353:C:H6	1.62	0.64
2:B:1826:G:OP2	4:C:221:GLY:HA2	1.97	0.64
2:B:279:A:H2'	2:B:280:U:O4'	1.96	0.64
29:3:12:ARG:HE	29:3:23:HIS:HB2	1.60	0.64
6:E:149:ILE:HD11	6:E:188:MET:N	2.11	0.64
1:A:61:G:H2'	1:A:62:C:C6	2.31	0.64
21:U:98:ASN:O	21:U:99:SER:HB2	1.95	0.64
2:B:608:A:H2'	2:B:609:A:C8	2.32	0.64
13:M:2:LEU:HD13	13:M:47:GLU:HB3	1.80	0.64
25:Z:47:LYS:HB2	25:Z:51:VAL:CG1	2.27	0.64
31:I:11:GLN:HA	31:I:55:PRO:HA	1.79	0.64
2:B:813:U:H2'	2:B:814:C:C6	2.32	0.64
2:B:242:G:N2	2:B:254:G:H2'	2.12	0.64
2:B:1695:G:O2'	4:C:15:VAL:HG23	1.98	0.64
23:X:31:GLN:O	23:X:32:ALA:HB3	1.97	0.64
13:M:15:GLY:C	13:M:16:ARG:HG3	2.18	0.64
6:E:109:LEU:HG	6:E:117:ARG:HG3	1.78	0.64
7:F:132:ARG:NH1	7:F:147:ARG:HD3	2.12	0.64
2:B:2039:U:H2'	2:B:2040:G:C8	2.32	0.64
11:K:108:ARG:HH22	16:P:36:LYS:H	1.45	0.64
21:U:4:ILE:HG21	21:U:25:LYS:HB3	1.79	0.64
20:T:17:SER:H	20:T:20:ALA:HB3	1.61	0.64
4:C:61:TYR:CE1	4:C:63:ILE:HD11	2.33	0.64
11:K:71:ARG:HB3	11:K:72:PRO:HD2	1.78	0.64
12:L:132:ARG:HH22	12:L:140:GLY:HA3	1.63	0.64
2:B:589:U:H2'	2:B:590:A:C8	2.31	0.64
2:B:704:G:H1'	2:B:727:A:H61	1.62	0.64
2:B:704:G:O2'	2:B:726:G:N2	2.28	0.64
4:C:27:LYS:N	4:C:28:PRO:CD	2.60	0.64
2:B:2037:A:H2'	2:B:2038:G:C8	2.32	0.64
12:L:110:VAL:HG22	12:L:127:VAL:HA	1.78	0.64
7:F:107:VAL:HG12	7:F:108:PRO:HD3	1.79	0.64
2:B:796:C:H2'	2:B:797:G:H8	1.62	0.64
9:H:68:ARG:HD3	9:H:71:LYS:HE2	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:374:A:N6	2:B:400:G:H1'	2.12	0.64
27:1:45:HIS:O	27:1:46:VAL:HG12	1.96	0.64
12:L:90:VAL:HG22	12:L:92:LEU:HD22	1.79	0.64
2:B:396:G:H5'	25:Z:11:GLU:HG3	1.80	0.64
7:F:132:ARG:HD3	7:F:133:GLU:N	2.12	0.64
11:K:8:LEU:N	11:K:8:LEU:HD12	2.12	0.64
8:G:9:VAL:HG23	8:G:11:PRO:HD3	1.79	0.64
23:X:51:ALA:O	23:X:53:VAL:N	2.31	0.64
2:B:1151:A:H2'	2:B:1152:C:C6	2.32	0.64
2:B:1590:A:H2'	2:B:1591:A:C8	2.33	0.64
2:B:321:U:OP2	6:E:130:LYS:HG3	1.98	0.64
2:B:2526:G:N2	30:4:2:LYS:HD2	2.13	0.64
4:C:170:TYR:O	4:C:171:VAL:HG13	1.98	0.64
25:Z:55:GLY:HA2	25:Z:59:ARG:HD2	1.80	0.64
2:B:2645:G:H3'	2:B:2646:C:H5'	1.79	0.64
4:C:124:LYS:CB	4:C:125:PRO:CD	2.75	0.64
2:B:1819:A:OP1	4:C:153:LEU:HB2	1.98	0.64
16:P:52:ARG:O	16:P:60:VAL:HG21	1.96	0.64
2:B:163:C:H2'	2:B:164:C:O4'	1.98	0.64
5:D:60:VAL:O	5:D:63:PRO:HD2	1.97	0.64
20:T:38:ALA:HB1	20:T:43:ILE:HD11	1.79	0.64
20:T:68:LYS:HB2	20:T:68:LYS:NZ	2.11	0.64
2:B:2339:C:H2'	2:B:2340:A:C8	2.32	0.64
2:B:2339:C:H2'	2:B:2340:A:H8	1.62	0.64
2:B:1219:U:OP2	17:Q:18:LYS:HE2	1.98	0.64
19:S:9:HIS:O	19:S:10:ALA:HB3	1.98	0.64
4:C:127:ASN:HD22	4:C:128:THR:N	1.89	0.64
5:D:107:VAL:HA	5:D:205:PRO:O	1.98	0.64
24:Y:2:LYS:H	24:Y:37:ARG:CB	2.10	0.64
2:B:2199:A:O3'	25:Z:34:LEU:HD22	1.97	0.64
25:Z:49:ARG:C	25:Z:51:VAL:H	2.01	0.64
7:F:29:ARG:HD2	7:F:158:THR:HG21	1.80	0.64
12:L:75:ALA:HB3	12:L:108:ALA:HA	1.80	0.64
25:Z:53:THR:HA	25:Z:56:ARG:HG2	1.78	0.64
15:O:109:ALA:O	15:O:112:GLU:HB2	1.98	0.63
15:O:39:VAL:HG12	15:O:50:ALA:HB2	1.79	0.63
2:B:632:A:H2'	2:B:633:A:C8	2.33	0.63
9:H:72:ILE:HG12	9:H:108:VAL:HG21	1.81	0.63
2:B:1179:G:H2'	2:B:1180:U:C6	2.33	0.63
2:B:1229:C:H2'	2:B:1230:A:C8	2.33	0.63
19:S:82:MET:HG3	19:S:83:LYS:N	2.13	0.63
2:B:345:A:H1'	2:B:346:A:C2	2.33	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:990:A:N6	2:B:1186:G:H1'	2.13	0.63
2:B:181:A:H1'	2:B:435:C:H5'	1.80	0.63
16:P:52:ARG:HG3	16:P:52:ARG:NH1	2.09	0.63
12:L:63:LYS:HB2	29:3:26:ALA:CB	2.29	0.63
2:B:2415:G:H4'	12:L:66:PHE:HB2	1.81	0.63
18:R:74:ILE:O	18:R:75:VAL:HG13	1.98	0.63
5:D:8:LYS:HZ3	16:P:5:LYS:HG3	1.64	0.63
11:K:94:PRO:HG3	11:K:114:LYS:HB3	1.80	0.63
4:C:136:VAL:HA	4:C:165:ALA:HA	1.80	0.63
2:B:1654:A:H4'	14:N:1:MET:N	2.12	0.63
24:Y:3:THR:HA	24:Y:37:ARG:O	1.99	0.63
15:O:73:ALA:HA	15:O:76:LYS:NZ	2.12	0.63
6:E:47:LYS:HD2	6:E:52:VAL:HG23	1.80	0.63
3:V:4:ILE:O	3:V:63:ILE:HA	1.98	0.63
2:B:2783:U:H2'	2:B:2784:U:C6	2.33	0.63
2:B:1410:G:H2'	2:B:1411:U:C6	2.32	0.63
2:B:479:A:N3	2:B:481:G:H5''	2.13	0.63
24:Y:43:ILE:HA	24:Y:46:MET:HB2	1.80	0.63
2:B:453:A:H4'	2:B:472:A:N6	2.14	0.63
2:B:966:G:H5'	2:B:2272:U:O2	1.98	0.63
2:B:1450:G:N2	2:B:1452:G:H1	1.93	0.63
17:Q:48:ASP:HA	17:Q:51:GLN:HE21	1.60	0.63
6:E:134:LEU:HD22	6:E:134:LEU:H	1.63	0.63
2:B:1495:A:H2'	2:B:1496:A:C8	2.33	0.63
2:B:1098:A:O5'	31:I:3:LYS:HG2	1.98	0.63
2:B:1098:A:H3'	31:I:3:LYS:HB3	1.79	0.63
2:B:587:C:C3'	12:L:29:LYS:HD2	2.20	0.63
18:R:49:ILE:HG13	18:R:51:VAL:HG23	1.80	0.63
22:W:36:ILE:HD12	22:W:37:VAL:H	1.64	0.63
6:E:149:ILE:HD11	6:E:188:MET:H	1.63	0.63
23:X:25:GLN:HG2	23:X:26:PHE:N	2.12	0.63
14:N:87:PHE:HB2	14:N:94:TYR:CE2	2.33	0.63
2:B:717:C:H3'	2:B:718:A:H5''	1.80	0.63
2:B:2054:A:H2'	26:0:4:GLN:HE22	1.63	0.63
9:H:62:LEU:O	9:H:66:ASN:HB2	1.98	0.63
2:B:289:G:H2'	2:B:290:U:C6	2.33	0.63
30:4:24:ARG:HB2	30:4:36:ARG:HA	1.80	0.63
13:M:16:ARG:HE	13:M:18:ARG:HH12	1.44	0.63
2:B:2360:G:H1'	12:L:61:LEU:HD11	1.80	0.63
10:J:64:VAL:HG12	10:J:65:THR:N	2.12	0.63
31:I:105:LEU:CD1	31:I:129:GLU:HG2	2.28	0.63
31:I:105:LEU:HD11	31:I:139:VAL:CG2	2.28	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:54:ILE:HD11	31:I:71:LYS:O	1.98	0.63
8:G:171:LYS:NZ	8:G:173:ALA:HA	2.14	0.63
15:O:66:GLY:N	15:O:70:ALA:HB2	2.13	0.63
2:B:2574:G:H21	5:D:147:GLY:HA3	1.62	0.63
5:D:186:LEU:HD11	16:P:5:LYS:HD3	1.80	0.63
2:B:2471:A:HO2'	2:B:2472:G:H8	1.42	0.63
2:B:1406:U:H2'	2:B:1407:G:C8	2.33	0.63
2:B:1178:C:H2'	2:B:1179:G:H8	1.62	0.63
2:B:1590:A:H2'	2:B:1591:A:H8	1.64	0.63
29:3:12:ARG:O	29:3:13:PHE:HB2	1.98	0.63
18:R:18:GLN:CD	18:R:18:GLN:H	2.02	0.63
2:B:856:G:C4'	22:W:23:LYS:HD2	2.28	0.63
15:O:15:ARG:HH12	22:W:74:LYS:HG2	1.62	0.63
4:C:225:ASN:H	4:C:226:PRO:HD3	1.64	0.63
2:B:138:U:H2'	2:B:140:C:O4'	1.97	0.63
27:1:4:ILE:HA	27:1:27:ARG:NH1	2.13	0.63
2:B:401:A:H2'	2:B:402:A:C8	2.34	0.63
2:B:2376:A:H1'	15:O:111:ARG:HH22	1.63	0.63
18:R:46:GLU:HG3	18:R:51:VAL:HG21	1.81	0.63
2:B:2405:G:H1'	2:B:2412:A:N6	2.14	0.63
25:Z:59:ARG:O	25:Z:60:PHE:HB3	1.98	0.63
2:B:2887:A:N9	26:O:27:LEU:HD21	2.13	0.63
8:G:40:VAL:HG22	8:G:51:PHE:HE2	1.64	0.63
5:D:60:VAL:HG23	5:D:63:PRO:HD2	1.80	0.63
19:S:40:ASN:O	19:S:41:LYS:HB3	1.99	0.63
9:H:76:GLU:O	9:H:77:THR:HG23	1.98	0.63
2:B:2500:U:H5'	2:B:2501:C:OP2	1.99	0.63
5:D:3:GLY:C	5:D:4:LEU:HD13	2.19	0.63
12:L:58:TYR:HB3	29:3:13:PHE:CE1	2.34	0.63
15:O:25:ARG:HE	15:O:94:ARG:HH12	1.47	0.63
10:J:49:ASP:HA	10:J:114:LEU:HD11	1.81	0.63
18:R:63:VAL:CG2	18:R:64:VAL:H	2.04	0.63
4:C:10:PRO:HB2	4:C:202:ARG:NH1	2.08	0.63
19:S:3:THR:CG2	19:S:4:ILE:N	2.62	0.63
9:H:124:THR:HG23	9:H:128:HIS:HE1	1.63	0.63
2:B:1309:G:H5'	28:2:8:SER:H	1.63	0.63
20:T:34:VAL:HG22	20:T:35:ALA:N	2.13	0.63
31:I:63:ASP:O	31:I:64:ARG:HB2	1.97	0.63
2:B:443:A:H5''	2:B:444:C:OP1	1.98	0.63
14:N:24:MET:HG2	14:N:44:LEU:HD13	1.81	0.63
2:B:1098:A:C3'	31:I:3:LYS:HB3	2.28	0.62
4:C:141:HIS:CB	4:C:190:THR:HB	2.28	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:52:THR:OG1	5:D:75:ALA:HB1	1.98	0.62
29:3:11:LYS:O	29:3:12:ARG:HB2	1.98	0.62
6:E:161:ALA:O	6:E:169:VAL:HB	1.99	0.62
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.62
2:B:974:G:H1'	2:B:975:A:H8	1.63	0.62
18:R:67:GLY:H	18:R:98:ILE:HA	1.61	0.62
5:D:129:THR:HG23	5:D:130:GLN:H	1.64	0.62
12:L:25:SER:C	12:L:27:LEU:H	2.02	0.62
16:P:8:GLU:HA	16:P:11:GLN:HG2	1.81	0.62
6:E:39:ALA:O	6:E:41:GLN:HG2	1.99	0.62
2:B:2800:A:H2'	2:B:2801:G:O4'	1.99	0.62
2:B:2461:A:H2'	2:B:2462:C:C6	2.34	0.62
19:S:7:HIS:HD2	19:S:10:ALA:HB2	1.63	0.62
2:B:250:G:OP2	29:3:7:ARG:NE	2.31	0.62
24:Y:38:GLU:O	24:Y:43:ILE:HG21	1.99	0.62
4:C:16:VAL:HG12	4:C:16:VAL:O	1.99	0.62
2:B:1791:A:C5'	4:C:211:ARG:HE	2.11	0.62
28:2:12:ARG:CG	28:2:46:LYS:HA	2.29	0.62
2:B:401:A:H2'	2:B:402:A:H8	1.64	0.62
4:C:107:LYS:HG2	4:C:194:VAL:HG11	1.80	0.62
9:H:4:ILE:HG12	9:H:37:VAL:HG22	1.81	0.62
9:H:114:GLU:HB3	9:H:133:GLN:NE2	2.10	0.62
7:F:7:TYR:CA	7:F:11:VAL:HB	2.28	0.62
12:L:109:LYS:HG2	12:L:126:ARG:NH1	2.14	0.62
13:M:131:VAL:HG22	13:M:133:LYS:H	1.65	0.62
2:B:2012:G:H4'	19:S:96:ILE:HD11	1.80	0.62
4:C:128:THR:HA	4:C:189:ALA:O	2.00	0.62
2:B:588:U:H5'	12:L:29:LYS:HZ2	1.63	0.62
5:D:27:ILE:HG12	5:D:185:ASN:O	1.98	0.62
15:O:27:VAL:HG13	15:O:40:ILE:HD11	1.81	0.62
10:J:7:LYS:NZ	10:J:45:THR:HG21	2.14	0.62
6:E:108:ILE:HG22	6:E:180:LEU:HD13	1.82	0.62
25:Z:30:HIS:CE1	25:Z:49:ARG:HH12	2.17	0.62
2:B:2228:G:N2	25:Z:32:LEU:HD11	2.15	0.62
13:M:119:LEU:HD22	13:M:119:LEU:H	1.64	0.62
28:2:17:GLY:O	28:2:19:ARG:N	2.27	0.62
2:B:2147:A:N3	2:B:2147:A:H2'	2.14	0.62
21:U:51:LEU:HG	21:U:53:GLN:H	1.64	0.62
4:C:139:THR:HA	4:C:193:GLU:OE1	2.00	0.62
5:D:48:ILE:HA	5:D:79:LEU:O	1.99	0.62
10:J:25:LEU:HG	10:J:64:VAL:H	1.64	0.62
19:S:68:ASP:HB2	19:S:69:LEU:HD22	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:24:VAL:HG12	21:U:26:ASN:OD1	1.99	0.62
2:B:1484:U:H2'	2:B:1485:U:H6	1.64	0.62
2:B:564:C:O2'	2:B:565:C:H5'	2.00	0.62
2:B:1818:U:H5''	4:C:155:ARG:CG	2.29	0.62
3:V:9:ARG:HH22	3:V:16:ALA:HB1	1.65	0.62
2:B:1790:C:P	4:C:219:VAL:HB	2.40	0.62
2:B:543:G:H2'	2:B:544:C:H4'	1.82	0.62
2:B:2814:A:H2'	2:B:2815:C:H6	1.65	0.62
16:P:32:VAL:HA	16:P:42:PHE:CB	2.29	0.62
13:M:71:LYS:O	13:M:73:ILE:N	2.32	0.62
13:M:28:PHE:HB2	13:M:102:LEU:HG	1.81	0.62
1:A:52:A:H2'	1:A:53:A:H8	1.65	0.62
5:D:11:MET:HG3	5:D:12:THR:H	1.65	0.62
9:H:95:GLY:O	9:H:99:ILE:HG12	2.00	0.62
2:B:2071:A:H2'	2:B:2072:C:C6	2.35	0.62
2:B:2250:G:C6	13:M:81:ARG:HG2	2.34	0.62
4:C:95:TYR:HE2	4:C:101:ARG:HG3	1.64	0.62
5:D:31:ALA:HA	5:D:51:THR:CA	2.21	0.62
1:A:5:U:H2'	1:A:6:G:C8	2.35	0.62
6:E:42:GLY:HA2	6:E:89:PRO:HB3	1.81	0.62
6:E:133:LEU:HD22	6:E:136:GLN:HG3	1.81	0.62
25:Z:59:ARG:C	25:Z:61:ASN:H	2.03	0.62
23:X:18:LEU:O	23:X:22:LEU:HB2	2.00	0.62
2:B:2789:C:H2'	2:B:2893:A:N7	2.14	0.62
2:B:2147:A:H4'	2:B:2148:G:H8	1.64	0.62
2:B:2813:A:H2'	2:B:2814:A:C8	2.35	0.62
2:B:2704:C:H2'	2:B:2705:A:O4'	1.99	0.62
15:O:51:ALA:O	15:O:52:SER:HB3	1.98	0.62
16:P:91:VAL:HG12	16:P:93:LYS:H	1.64	0.62
18:R:64:VAL:HG22	18:R:100:GLY:HA2	1.81	0.62
6:E:183:PHE:C	6:E:185:LYS:H	2.02	0.62
4:C:226:PRO:HG3	4:C:232:GLY:O	2.00	0.62
2:B:1515:A:H2'	2:B:1516:G:O4'	1.99	0.62
2:B:460:A:H2'	2:B:461:C:O4'	2.00	0.62
2:B:1181:U:H2'	2:B:1182:G:C8	2.35	0.62
2:B:2722:G:H2'	2:B:2723:C:C6	2.35	0.62
5:D:50:VAL:HG11	5:D:75:ALA:HB3	1.81	0.62
5:D:77:ARG:HH21	5:D:79:LEU:HB2	1.65	0.62
18:R:92:TRP:O	18:R:93:PHE:HB2	2.00	0.62
25:Z:1:MET:HA	25:Z:9:TYR:CZ	2.34	0.62
2:B:633:A:O5'	2:B:633:A:H8	1.82	0.62
2:B:1201:U:H2'	2:B:1202:G:C8	2.34	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:93:G:H2'	2:B:94:A:O4'	1.99	0.62
2:B:1412:U:H2'	2:B:1413:A:C8	2.35	0.62
2:B:388:G:N7	2:B:390:U:H2'	2.15	0.62
2:B:69:C:H2'	2:B:70:G:H8	1.64	0.62
2:B:139:U:P	2:B:139:U:H3'	2.40	0.62
27:1:29:LYS:HB2	27:1:30:PRO:CD	2.24	0.61
2:B:2405:G:H1'	2:B:2412:A:H61	1.64	0.61
2:B:873:C:H2'	2:B:874:G:H8	1.65	0.61
2:B:1199:U:O2'	17:Q:2:ARG:HB2	2.00	0.61
2:B:1437:C:H2'	2:B:1438:U:H6	1.65	0.61
2:B:2295:C:O2'	2:B:2296:U:H5'	1.99	0.61
2:B:2834:G:H1'	2:B:2883:A:N6	2.15	0.61
4:C:178:GLY:C	4:C:179:GLU:HG2	2.19	0.61
2:B:2636:C:P	5:D:80:TRP:HE1	2.22	0.61
9:H:26:ALA:C	9:H:28:ASN:N	2.53	0.61
10:J:131:ASN:C	10:J:133:ALA:H	2.02	0.61
9:H:122:LEU:HD13	9:H:146:VAL:HG13	1.82	0.61
18:R:5:PHE:HB3	18:R:12:HIS:CE1	2.35	0.61
2:B:1460:U:H5''	2:B:1461:C:C6	2.35	0.61
11:K:64:ARG:HD2	11:K:102:PRO:O	2.00	0.61
26:0:42:ILE:HG23	26:0:42:ILE:O	2.00	0.61
12:L:79:LEU:H	12:L:113:ALA:CB	2.13	0.61
28:2:35:ARG:HH22	28:2:44:VAL:HG22	1.64	0.61
21:U:10:VAL:HG11	21:U:25:LYS:HE3	1.80	0.61
5:D:11:MET:O	5:D:22:ILE:HD12	2.00	0.61
29:3:42:HIS:O	29:3:43:LEU:HD12	2.00	0.61
9:H:66:ASN:HA	9:H:138:VAL:HG22	1.81	0.61
2:B:2309:A:H3'	2:B:2310:C:H5''	1.82	0.61
2:B:307:G:N2	2:B:309:A:H3'	2.14	0.61
12:L:58:TYR:HA	12:L:62:PRO:CG	2.30	0.61
17:Q:63:ARG:HB2	17:Q:95:ALA:HB1	1.82	0.61
20:T:60:THR:HA	20:T:82:LYS:O	1.99	0.61
2:B:165:A:H2'	2:B:166:U:C6	2.35	0.61
27:1:49:LYS:NZ	27:1:49:LYS:H	1.95	0.61
26:0:27:LEU:H	26:0:27:LEU:CD2	2.13	0.61
2:B:899:A:H3'	2:B:900:A:C8	2.34	0.61
8:G:91:VAL:H	8:G:159:LYS:HZ1	1.47	0.61
2:B:2147:A:H4'	2:B:2148:G:C8	2.36	0.61
2:B:962:G:N2	13:M:81:ARG:HD3	2.14	0.61
2:B:845:A:C2	2:B:847:U:H1'	2.35	0.61
2:B:925:A:O2'	2:B:926:G:H5'	2.01	0.61
16:P:49:ILE:O	16:P:50:ARG:HD3	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:3:51:LYS:NZ	29:3:51:LYS:HA	2.16	0.61
10:J:124:VAL:HG23	10:J:125:TYR:N	2.07	0.61
7:F:55:ASP:O	7:F:59:ILE:HB	2.01	0.61
7:F:140:ILE:HG22	7:F:142:TYR:H	1.65	0.61
11:K:119:ALA:O	11:K:120:PRO:C	2.37	0.61
25:Z:37:CYS:SG	25:Z:39:LYS:HB2	2.41	0.61
2:B:1442:U:H2'	2:B:1443:U:C6	2.35	0.61
14:N:28:LEU:HA	14:N:34:ILE:HD11	1.80	0.61
7:F:9:ASP:O	7:F:10:GLU:HB2	2.00	0.61
11:K:35:VAL:HG21	11:K:69:VAL:HG22	1.83	0.61
2:B:2557:G:H2'	2:B:2558:C:C6	2.35	0.61
2:B:664:G:H2'	2:B:665:U:H6	1.65	0.61
2:B:1259:G:H2'	2:B:1260:A:H8	1.65	0.61
5:D:69:ALA:HB2	5:D:90:PHE:HB2	1.82	0.61
2:B:1188:U:H4'	18:R:84:ARG:HD3	1.83	0.61
25:Z:59:ARG:CB	25:Z:63:ARG:HB2	2.29	0.61
5:D:128:ARG:N	5:D:128:ARG:HD3	2.15	0.61
2:B:1405:U:H2'	2:B:1406:U:C6	2.36	0.61
31:I:121:ILE:HD13	31:I:121:ILE:H	1.65	0.61
13:M:41:LEU:CB	13:M:93:VAL:HB	2.30	0.61
9:H:125:THR:HA	9:H:146:VAL:CB	2.26	0.61
2:B:2271:G:O2'	2:B:2272:U:H5'	2.00	0.61
2:B:2198:A:H4'	2:B:2199:A:OP1	2.01	0.61
13:M:53:MET:HA	13:M:112:LEU:HD21	1.82	0.61
18:R:85:LYS:O	18:R:86:GLN:HG3	2.00	0.61
21:U:28:LEU:HD21	21:U:32:LYS:N	2.16	0.61
2:B:2309:A:H5'	2:B:2310:C:OP2	1.99	0.61
2:B:2562:U:H1'	11:K:23:LYS:HE2	1.82	0.61
13:M:60:GLN:HE21	13:M:61:GLY:H	1.49	0.61
2:B:2820:A:C5	5:D:197:THR:HB	2.36	0.61
16:P:27:VAL:HG13	16:P:29:VAL:HG23	1.82	0.61
29:3:12:ARG:CG	29:3:24:LYS:H	2.04	0.61
22:W:19:ARG:HB3	22:W:35:ILE:HG13	1.82	0.61
21:U:43:LYS:HG2	21:U:57:ILE:HB	1.81	0.61
2:B:65:U:H2'	2:B:66:C:C6	2.35	0.61
19:S:3:THR:O	19:S:4:ILE:O	2.18	0.61
4:C:110:LYS:HE3	4:C:110:LYS:HA	1.83	0.61
5:D:152:PRO:HB2	5:D:154:LYS:HE2	1.83	0.61
8:G:70:LEU:O	8:G:74:MET:HG3	2.01	0.61
12:L:125:LEU:O	12:L:127:VAL:HG13	2.00	0.61
2:B:1113:U:H5''	8:G:2:ARG:NE	2.16	0.61
29:3:32:LEU:HD13	29:3:33:THR:H	1.65	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:184:C:H2'	2:B:185:G:H8	1.66	0.61
2:B:2591:C:H2'	2:B:2592:G:C8	2.35	0.61
2:B:651:G:OP1	29:3:18:LYS:HG2	1.99	0.61
16:P:89:GLY:HA2	16:P:112:ARG:NH2	2.15	0.61
22:W:44:PHE:HD2	22:W:77:LYS:HB3	1.64	0.61
6:E:149:ILE:HD13	6:E:186:VAL:HG13	1.83	0.61
31:I:32:VAL:HG22	31:I:60:VAL:CG2	2.30	0.61
18:R:67:GLY:H	18:R:98:ILE:CA	2.14	0.61
26:0:51:ARG:HG3	26:0:55:ALA:HB2	1.83	0.61
2:B:969:G:H2'	2:B:970:U:C6	2.35	0.61
30:4:10:LEU:HB2	30:4:25:VAL:CG2	2.31	0.61
6:E:164:LEU:C	6:E:164:LEU:HD22	2.20	0.61
16:P:23:ASP:O	16:P:25:VAL:N	2.34	0.61
14:N:42:LYS:HE3	14:N:45:ARG:HG3	1.83	0.61
2:B:850:U:H2'	2:B:851:C:C6	2.36	0.61
4:C:20:ASN:HB2	4:C:202:ARG:CD	2.30	0.61
2:B:639:U:H2'	2:B:640:C:C6	2.36	0.61
2:B:414:C:H2'	2:B:415:A:H8	1.65	0.61
2:B:479:A:O2'	2:B:481:G:H5'	2.00	0.61
31:I:5:GLN:O	31:I:6:ALA:CB	2.49	0.61
2:B:930:G:H1'	24:Y:24:LEU:HD12	1.83	0.61
4:C:243:PRO:CA	4:C:249:VAL:HG23	2.29	0.61
19:S:64:ALA:HB1	19:S:69:LEU:HD21	1.83	0.61
2:B:704:G:HO2'	2:B:726:G:H22	1.48	0.61
4:C:27:LYS:HG2	4:C:81:GLU:CA	2.31	0.61
2:B:1013:C:H2'	2:B:1014:A:H8	1.66	0.61
2:B:448:U:O4	2:B:583:G:H1'	2.01	0.60
10:J:40:HIS:HB2	17:Q:69:ARG:NH2	2.08	0.60
2:B:920:A:H2'	2:B:921:C:C6	2.36	0.60
2:B:950:G:H2'	2:B:951:C:H6	1.66	0.60
22:W:38:ARG:HE	22:W:40:ARG:HA	1.65	0.60
6:E:136:GLN:HA	6:E:139:LYS:HG2	1.82	0.60
6:E:14:VAL:HG12	6:E:15:SER:H	1.66	0.60
12:L:126:ARG:O	12:L:127:VAL:HG22	2.01	0.60
2:B:878:A:H2'	2:B:878:A:N3	2.15	0.60
2:B:79:C:O2'	2:B:346:A:H1'	2.01	0.60
11:K:93:GLN:HG2	11:K:94:PRO:HD2	1.83	0.60
2:B:289:G:H2'	2:B:290:U:H6	1.65	0.60
2:B:438:G:H2'	2:B:439:A:H8	1.65	0.60
2:B:1099:G:P	31:I:4:VAL:N	2.71	0.60
19:S:46:LEU:O	19:S:50:VAL:HG13	2.01	0.60
4:C:136:VAL:CA	4:C:165:ALA:HA	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:11:ASN:HD22	9:H:20:ASN:ND2	1.97	0.60
24:Y:3:THR:O	24:Y:36:GLU:HA	2.02	0.60
10:J:124:VAL:CG2	10:J:125:TYR:H	2.09	0.60
18:R:3:ALA:HB1	18:R:12:HIS:HB3	1.81	0.60
31:I:85:ILE:CD1	31:I:137:LEU:HD21	2.31	0.60
21:U:33:VAL:HG23	21:U:65:GLN:HE21	1.66	0.60
18:R:81:LYS:O	18:R:83:TYR:N	2.33	0.60
5:D:146:ILE:HG12	5:D:155:VAL:HG13	1.83	0.60
2:B:361:G:O2'	2:B:362:A:H5'	2.01	0.60
2:B:936:A:H2'	2:B:937:C:H6	1.66	0.60
2:B:1299:G:H4'	2:B:1301:A:H1'	1.83	0.60
23:X:17:GLU:HA	23:X:21:LEU:HB2	1.82	0.60
9:H:131:SER:HB2	9:H:141:LYS:HG3	1.83	0.60
2:B:1854:A:H62	2:B:1888:G:H8	1.50	0.60
17:Q:9:ALA:O	17:Q:12:ARG:HB3	2.01	0.60
2:B:383:C:N4	2:B:385:C:H2'	2.16	0.60
13:M:41:LEU:HD22	13:M:95:LEU:HD13	1.83	0.60
29:3:7:ARG:NH1	29:3:10:ALA:HB3	2.17	0.60
2:B:1162:G:O2'	2:B:1163:G:H5'	2.01	0.60
2:B:947:A:H2'	2:B:948:C:C6	2.37	0.60
3:V:16:ALA:N	3:V:19:ARG:HH21	1.98	0.60
18:R:66:HIS:HA	18:R:98:ILE:HD13	1.83	0.60
2:B:1857:G:H1'	2:B:1885:A:N6	2.16	0.60
16:P:13:LYS:HG3	16:P:78:PRO:HG3	1.83	0.60
11:K:35:VAL:HA	11:K:62:VAL:O	2.01	0.60
6:E:23:PHE:C	6:E:110:SER:HB2	2.21	0.60
2:B:2204:G:O5'	4:C:149:LYS:HE3	2.01	0.60
9:H:6:LEU:HD12	9:H:36:ALA:H	1.67	0.60
19:S:31:GLN:O	19:S:35:ILE:HG13	2.01	0.60
2:B:598:U:H2'	2:B:599:A:H8	1.66	0.60
9:H:89:LYS:HA	9:H:123:ARG:O	2.00	0.60
14:N:102:PHE:CZ	14:N:104:ALA:HB2	2.35	0.60
27:1:8:ILE:HG21	27:1:27:ARG:HD3	1.83	0.60
2:B:906:U:H4'	13:M:26:VAL:CG1	2.31	0.60
2:B:352:A:H3'	2:B:353:C:C6	2.37	0.60
2:B:1568:G:OP1	4:C:61:TYR:HB2	2.00	0.60
4:C:245:THR:O	4:C:247:TRP:N	2.35	0.60
2:B:1902:C:H4'	4:C:240:GLY:O	2.01	0.60
14:N:108:ALA:HB1	14:N:109:PRO:HD2	1.83	0.60
2:B:1252:G:C2	17:Q:32:ARG:HG3	2.36	0.60
2:B:283:G:H2'	2:B:284:U:H6	1.66	0.60
7:F:167:ALA:HA	7:F:170:ALA:HB3	1.82	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:297:G:H5''	21:U:92:VAL:HG11	1.83	0.60
2:B:380:G:O2'	25:Z:13:THR:HB	2.01	0.60
2:B:1429:G:H2'	2:B:1430:G:H8	1.66	0.60
2:B:19:A:OP1	17:Q:22:GLY:HA2	1.99	0.60
18:R:60:LYS:O	18:R:60:LYS:HD3	2.02	0.60
30:4:16:ILE:O	30:4:17:VAL:HG12	2.02	0.60
10:J:74:TYR:O	10:J:75:TYR:HB2	2.00	0.60
9:H:26:ALA:HB3	9:H:31:VAL:HG23	1.83	0.60
10:J:120:ARG:HB3	10:J:121:LYS:HZ1	1.66	0.60
2:B:1007:C:H5''	10:J:37:ARG:HH12	1.66	0.60
22:W:42:THR:H	22:W:65:LYS:HG2	1.66	0.60
7:F:35:LEU:HD23	7:F:153:ILE:HG12	1.83	0.60
11:K:33:ALA:HB2	11:K:39:ILE:HD11	1.84	0.60
2:B:1485:U:H2'	2:B:1486:U:H6	1.66	0.60
9:H:108:VAL:HG12	9:H:110:VAL:HB	1.82	0.60
2:B:1203:U:H3'	2:B:1204:A:C5'	2.31	0.60
14:N:26:GLY:HA2	14:N:75:ILE:HD13	1.83	0.60
29:3:46:LYS:HD2	29:3:47:ALA:H	1.66	0.60
2:B:833:A:H2'	2:B:834:G:C8	2.36	0.60
4:C:127:ASN:ND2	4:C:128:THR:H	1.93	0.60
16:P:28:LYS:HD3	16:P:44:GLY:H	1.67	0.60
16:P:52:ARG:HH11	16:P:52:ARG:CG	2.15	0.60
9:H:90:LEU:HD22	9:H:122:LEU:HB3	1.83	0.60
31:I:71:LYS:HB3	31:I:115:ASP:OD2	2.00	0.60
21:U:13:LEU:HD21	21:U:69:VAL:HG13	1.82	0.60
24:Y:50:VAL:HG12	24:Y:53:MET:HG2	1.83	0.60
2:B:1439:A:C6	2:B:1552:A:N7	2.70	0.60
2:B:2600:A:O2'	2:B:2601:C:H5'	2.02	0.60
2:B:1098:A:N3	31:I:3:LYS:O	2.35	0.60
2:B:448:U:H5''	6:E:79:ARG:HH21	1.65	0.60
2:B:2741:A:H2'	2:B:2742:G:O4'	2.02	0.60
2:B:2774:C:H2'	2:B:2775:G:O4'	2.01	0.60
2:B:849:A:H2'	2:B:850:U:C6	2.35	0.60
10:J:100:VAL:HG22	10:J:101:ILE:H	1.67	0.60
6:E:6:LYS:HZ2	6:E:8:ALA:HB2	1.66	0.60
11:K:43:ILE:HD12	11:K:43:ILE:H	1.67	0.60
2:B:2886:A:C8	26:0:27:LEU:HG	2.37	0.60
2:B:898:C:O2'	2:B:899:A:H5''	2.01	0.60
1:A:50:A:OP1	15:O:68:LYS:HB2	2.02	0.60
2:B:1548:A:H2'	2:B:1549:A:C8	2.37	0.60
7:F:21:TYR:HB3	7:F:26:GLN:OE1	2.01	0.60
2:B:594:U:H2'	2:B:595:C:H6	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:189:G:H2'	2:B:205:G:N2	2.17	0.60
7:F:173:ASP:CG	7:F:174:PHE:H	2.05	0.60
15:O:86:GLY:O	15:O:87:ILE:HD13	2.01	0.60
7:F:67:THR:OG1	7:F:85:GLY:HA3	2.02	0.60
12:L:132:ARG:NH2	12:L:140:GLY:HA3	2.17	0.60
12:L:89:VAL:HA	12:L:122:VAL:HG22	1.84	0.60
14:N:96:ARG:O	14:N:113:ILE:HA	2.02	0.60
24:Y:18:LYS:O	24:Y:22:THR:HG23	2.02	0.60
6:E:139:LYS:HA	6:E:143:LEU:CD2	2.32	0.60
7:F:40:GLY:H	7:F:84:ILE:CG2	2.15	0.60
26:O:41:HIS:NE2	26:O:42:ILE:HG22	2.17	0.60
2:B:1997:C:P	5:D:140:HIS:HE2	2.25	0.60
23:X:50:VAL:O	23:X:54:LYS:HB2	2.02	0.60
18:R:89:HIS:O	18:R:90:ARG:HG3	2.02	0.60
13:M:131:VAL:HG22	13:M:132:THR:H	1.66	0.60
23:X:7:ARG:NH1	23:X:7:ARG:HB3	2.16	0.60
2:B:179:C:H2'	2:B:180:G:O4'	2.01	0.60
31:I:7:TYR:CZ	31:I:57:VAL:HG11	2.36	0.60
2:B:1176:U:H2'	2:B:1177:G:C8	2.36	0.60
2:B:2156:G:H2'	2:B:2157:G:H4'	1.84	0.60
2:B:337:C:H2'	2:B:338:G:O4'	2.01	0.60
14:N:66:ALA:O	14:N:70:THR:HG22	2.01	0.60
2:B:1454:C:H5'	14:N:63:ARG:HD2	1.82	0.60
2:B:2281:A:H62	22:W:3:LYS:HD2	1.66	0.60
11:K:47:ILE:HG22	11:K:48:PRO:HD2	1.83	0.60
15:O:53:THR:O	15:O:54:VAL:CB	2.47	0.60
2:B:2336:A:H1'	2:B:2337:G:OP1	2.00	0.60
20:T:55:VAL:HG23	20:T:87:LEU:N	2.17	0.60
16:P:36:LYS:HG2	16:P:37:LYS:N	2.14	0.60
16:P:4:ILE:HG22	16:P:4:ILE:O	2.01	0.60
2:B:324:A:H2'	2:B:325:G:O4'	2.02	0.60
2:B:139:U:H3'	2:B:139:U:OP2	2.02	0.60
2:B:1327:A:H2'	2:B:1328:A:O4'	2.02	0.60
29:3:4:LYS:HE3	29:3:61:LEU:H	1.65	0.60
2:B:2292:U:H2'	2:B:2293:G:H8	1.67	0.59
15:O:25:ARG:CG	15:O:94:ARG:HH22	2.15	0.59
18:R:4:VAL:HG12	18:R:43:ASN:CB	2.32	0.59
2:B:1824:G:O2'	4:C:244:VAL:HG21	2.02	0.59
2:B:2032:G:N2	5:D:150:GLN:HB3	2.17	0.59
5:D:150:GLN:O	5:D:152:PRO:HD3	2.02	0.59
2:B:1082:U:O4	2:B:1086:A:C2	2.54	0.59
2:B:659:G:H21	6:E:30:GLN:NE2	2.00	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:672:C:O2'	2:B:673:C:H5'	2.02	0.59
2:B:1951:U:H2'	2:B:1953:A:OP2	2.01	0.59
2:B:1874:C:H2'	2:B:1875:G:O4'	2.01	0.59
24:Y:45:GLY:HA2	24:Y:48:ASN:ND2	2.17	0.59
2:B:2307:G:H2'	2:B:2307:G:N3	2.17	0.59
19:S:46:LEU:O	19:S:50:VAL:HG22	2.01	0.59
5:D:116:LYS:CB	5:D:165:MET:HG3	2.31	0.59
16:P:54:LEU:HD13	16:P:55:HIS:H	1.67	0.59
16:P:59:THR:HG23	16:P:76:HIS:NE2	2.16	0.59
12:L:120:VAL:HG12	12:L:122:VAL:HG23	1.82	0.59
12:L:58:TYR:CE1	29:3:51:LYS:HG2	2.36	0.59
14:N:97:ILE:HG23	14:N:113:ILE:HD11	1.84	0.59
2:B:2898:U:H2'	2:B:2899:A:H8	1.66	0.59
10:J:105:VAL:HG11	10:J:122:LEU:HD11	1.83	0.59
2:B:455:C:H42	2:B:472:A:H2'	1.67	0.59
22:W:56:HIS:CD2	22:W:57:THR:H	2.20	0.59
2:B:1229:C:H2'	2:B:1230:A:H8	1.66	0.59
7:F:173:ASP:CG	7:F:174:PHE:N	2.55	0.59
2:B:1676:A:H2'	2:B:1677:A:O4'	2.01	0.59
2:B:171:U:H2'	2:B:172:A:C8	2.37	0.59
2:B:541:A:H2'	2:B:542:C:H5"	1.84	0.59
5:D:49:GLN:HG2	5:D:49:GLN:O	2.02	0.59
16:P:64:SER:HB2	16:P:71:ARG:CD	2.30	0.59
12:L:62:PRO:HA	29:3:12:ARG:NH1	2.17	0.59
14:N:45:ARG:NH2	14:N:113:ILE:HG23	2.04	0.59
2:B:6:A:H4'	10:J:133:ALA:O	2.02	0.59
19:S:23:LEU:HB2	26:0:21:LEU:HD13	1.83	0.59
7:F:35:LEU:HD11	7:F:60:SER:HB3	1.83	0.59
1:A:75:G:H5"	3:V:12:GLN:OE1	2.02	0.59
25:Z:54:GLY:N	25:Z:57:VAL:HG23	2.14	0.59
2:B:2639:A:H2'	2:B:2640:G:O4'	2.02	0.59
2:B:30:G:H2'	2:B:31:C:C6	2.36	0.59
2:B:580:U:H2'	2:B:581:C:C6	2.36	0.59
4:C:33:LEU:HD22	4:C:34:GLU:HG3	1.83	0.59
4:C:34:GLU:OE2	4:C:35:LYS:HG3	2.03	0.59
5:D:117:GLY:HA3	14:N:1:MET:HA	1.82	0.59
5:D:35:THR:HB	5:D:48:ILE:HG13	1.84	0.59
10:J:41:LYS:CD	10:J:44:TYR:HB3	2.31	0.59
18:R:63:VAL:HG13	18:R:64:VAL:N	2.17	0.59
21:U:41:VAL:HA	21:U:57:ILE:HD12	1.84	0.59
6:E:115:GLN:NE2	6:E:184:ASP:HB2	2.17	0.59
2:B:2091:C:H1'	25:Z:32:LEU:HG	1.83	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:23:LEU:C	19:S:24:ILE:HD13	2.23	0.59
31:I:100:ILE:O	31:I:139:VAL:HA	2.01	0.59
2:B:2037:A:H2'	2:B:2038:G:H8	1.68	0.59
21:U:17:ASP:OD2	21:U:20:LYS:HB2	2.01	0.59
2:B:1469:A:H2'	2:B:1470:A:H8	1.67	0.59
2:B:1550:C:H2'	2:B:1551:A:H8	1.66	0.59
1:A:57:A:H4'	7:F:26:GLN:HE21	1.67	0.59
2:B:2286:G:H5'	2:B:2286:G:C8	2.37	0.59
2:B:2391:G:OP2	29:3:32:LEU:HG	2.03	0.59
19:S:81:SER:HB2	19:S:99:ARG:H	1.68	0.59
2:B:224:U:O4	2:B:420:C:H5'	2.02	0.59
5:D:48:ILE:HG22	5:D:49:GLN:N	2.18	0.59
16:P:47:ILE:HG23	16:P:63:ILE:CG2	2.30	0.59
16:P:49:ILE:C	16:P:50:ARG:HD3	2.22	0.59
4:C:21:PRO:HD2	4:C:202:ARG:HH11	1.68	0.59
2:B:2415:G:H2'	2:B:2416:C:C6	2.37	0.59
6:E:135:ALA:O	6:E:139:LYS:HB3	2.03	0.59
2:B:2230:G:H2'	2:B:2231:U:C6	2.38	0.59
20:T:21:SER:H	20:T:24:MET:CE	2.15	0.59
7:F:132:ARG:HH12	7:F:147:ARG:HD3	1.66	0.59
4:C:224:MET:CA	4:C:233:GLY:H	2.15	0.59
5:D:150:GLN:HG3	5:D:150:GLN:O	2.03	0.59
11:K:11:ALA:HB1	11:K:100:PHE:O	2.02	0.59
31:I:45:THR:HA	31:I:48:ILE:CG2	2.30	0.59
5:D:8:LYS:O	5:D:9:VAL:HG22	2.03	0.59
2:B:1470:A:H3'	2:B:1471:G:H8	1.65	0.59
2:B:1262:A:C2	26:0:6:LYS:HD2	2.38	0.59
8:G:125:PRO:HG2	8:G:129:GLU:HB3	1.83	0.59
2:B:1381:G:H2'	2:B:1382:G:H5'	1.82	0.59
2:B:172:A:H2'	2:B:173:A:C8	2.38	0.59
2:B:1019:U:O2'	2:B:1020:A:H5'	2.02	0.59
2:B:2547:A:H2'	2:B:2548:U:C6	2.38	0.59
2:B:155:A:H2'	2:B:156:A:H8	1.68	0.59
2:B:2669:G:H2'	2:B:2670:A:H8	1.67	0.59
4:C:137:GLY:C	4:C:139:THR:N	2.55	0.59
2:B:588:U:H5'	12:L:29:LYS:NZ	2.17	0.59
10:J:13:ARG:HG2	10:J:53:TYR:HE1	1.67	0.59
2:B:782:A:O2'	4:C:223:ALA:HB1	2.02	0.59
25:Z:65:ASN:ND2	25:Z:65:ASN:H	1.99	0.59
26:0:52:LYS:O	26:0:53:VAL:HG12	2.03	0.59
11:K:24:VAL:HA	11:K:39:ILE:CD1	2.32	0.59
5:D:46:ARG:HA	5:D:82:PHE:HA	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2256:G:O2'	22:W:5:ALA:HB1	2.03	0.59
2:B:1690:A:H2'	2:B:1691:C:O4'	2.03	0.59
2:B:660:C:H2'	2:B:661:A:C8	2.38	0.59
2:B:2852:G:H2'	2:B:2853:C:C6	2.38	0.59
2:B:553:G:C2'	2:B:554:U:H5'	2.32	0.59
27:1:16:THR:CG2	27:1:47:ILE:HD12	2.33	0.59
5:D:204:LYS:HE2	5:D:204:LYS:HA	1.85	0.59
13:M:73:ILE:HG21	13:M:90:GLU:OE2	2.03	0.59
22:W:67:LYS:HD2	22:W:70:VAL:N	2.17	0.59
31:I:23:VAL:HG12	31:I:27:LEU:HD21	1.83	0.59
4:C:79:ARG:HD2	4:C:110:LYS:HE2	1.84	0.59
11:K:24:VAL:HA	11:K:39:ILE:HD12	1.84	0.59
2:B:141:G:H5'	2:B:142:A:OP2	2.02	0.59
2:B:358:U:H2'	2:B:359:G:C8	2.37	0.59
2:B:374:A:H61	2:B:400:G:H1'	1.66	0.59
2:B:2722:G:H2'	2:B:2723:C:H6	1.67	0.59
5:D:172:VAL:HG21	5:D:192:ALA:HB1	1.85	0.59
5:D:33:ARG:O	5:D:34:VAL:HG22	2.02	0.59
16:P:59:THR:HG23	16:P:76:HIS:CD2	2.37	0.59
13:M:2:LEU:HD12	13:M:2:LEU:H	1.68	0.59
10:J:105:VAL:HG11	10:J:122:LEU:CD1	2.33	0.59
6:E:53:THR:HB	6:E:74:LYS:HE2	1.85	0.59
2:B:921:C:H2'	2:B:922:C:H6	1.67	0.59
6:E:189:THR:C	6:E:191:ASP:H	2.06	0.59
12:L:19:LEU:N	12:L:19:LEU:HD22	2.14	0.59
2:B:1082:U:C4	2:B:1086:A:N1	2.70	0.59
5:D:122:VAL:HG21	5:D:141:ARG:HD3	1.85	0.59
2:B:1387:A:H5'	2:B:1469:A:H1'	1.84	0.59
2:B:2769:U:H2'	2:B:2770:G:C8	2.38	0.59
2:B:2591:C:H2'	2:B:2592:G:H8	1.66	0.59
2:B:1932:A:H2'	2:B:1933:G:O4'	2.02	0.59
2:B:2804:U:H2'	2:B:2805:C:H6	1.66	0.59
2:B:1535:A:H3'	2:B:1536:C:C6	2.38	0.59
2:B:997:G:H5'	17:Q:92:LYS:HG3	1.85	0.59
17:Q:57:ARG:HH21	17:Q:92:LYS:HZ3	1.51	0.59
5:D:31:ALA:HB3	5:D:95:SER:CB	2.32	0.59
11:K:71:ARG:O	11:K:72:PRO:C	2.40	0.59
2:B:1813:G:H1'	4:C:45:ASN:HB3	1.85	0.59
2:B:1548:A:H2'	2:B:1549:A:H8	1.66	0.59
5:D:14:ILE:HG23	5:D:19:GLY:CA	2.33	0.59
2:B:2008:C:H2'	2:B:2009:A:C8	2.38	0.59
2:B:1319:C:O2'	2:B:1320:C:H5'	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1099:G:OP2	31:I:2:LYS:O	2.21	0.59
4:C:140:VAL:HA	4:C:191:LEU:HA	1.84	0.59
4:C:153:LEU:C	4:C:155:ARG:H	2.05	0.59
2:B:1818:U:H5''	4:C:155:ARG:HG2	1.85	0.59
4:C:179:GLU:OE1	4:C:267:VAL:HG23	2.02	0.59
13:M:72:PRO:O	13:M:73:ILE:HD13	2.03	0.59
2:B:2900:A:H2'	2:B:2901:C:C6	2.38	0.59
10:J:59:ALA:C	10:J:61:LYS:H	2.07	0.59
17:Q:90:ASP:OD1	18:R:10:LYS:HG2	2.03	0.59
20:T:48:GLN:CA	20:T:53:VAL:HG22	2.31	0.59
7:F:151:LEU:HG	7:F:153:ILE:HG13	1.83	0.59
11:K:15:GLY:HA3	11:K:52:VAL:CG1	2.32	0.59
2:B:287:G:H2'	2:B:288:U:C6	2.37	0.59
10:J:100:VAL:HG13	10:J:101:ILE:HG12	1.85	0.58
2:B:1853:A:N1	2:B:2087:G:H1'	2.18	0.58
25:Z:33:ASN:O	25:Z:34:LEU:HD23	2.03	0.58
2:B:301:G:H3'	2:B:335:C:OP2	2.02	0.58
31:I:20:SER:O	31:I:25:PRO:HD2	2.03	0.58
25:Z:39:LYS:HD3	25:Z:61:ASN:ND2	2.18	0.58
2:B:27:G:H22	2:B:512:G:C2'	2.14	0.58
2:B:2785:C:H2'	2:B:2786:U:C6	2.38	0.58
2:B:2074:U:H2'	2:B:2075:U:C6	2.38	0.58
2:B:1779:U:H5	2:B:1784:A:N7	2.00	0.58
2:B:1099:G:O4'	31:I:3:LYS:CA	2.50	0.58
29:3:49:VAL:HG22	29:3:50:SER:N	2.13	0.58
10:J:25:LEU:HB3	10:J:62:VAL:CG1	2.33	0.58
2:B:2089:C:H2'	2:B:2090:A:O4'	2.03	0.58
20:T:24:MET:CE	20:T:30:ILE:HA	2.32	0.58
7:F:56:LEU:HA	7:F:59:ILE:CG2	2.30	0.58
7:F:39:VAL:HG12	7:F:40:GLY:N	2.18	0.58
2:B:1113:U:OP1	8:G:2:ARG:HG2	2.03	0.58
23:X:1:MET:HB2	23:X:6:LEU:HG	1.85	0.58
29:3:32:LEU:CD1	29:3:33:THR:H	2.15	0.58
2:B:2814:A:H2'	2:B:2815:C:C6	2.38	0.58
2:B:2722:G:O2'	14:N:4:ARG:CD	2.49	0.58
16:P:69:VAL:HG13	16:P:70:GLU:H	1.67	0.58
7:F:140:ILE:HG21	7:F:145:VAL:CG2	2.32	0.58
13:M:101:VAL:HG12	13:M:102:LEU:N	2.18	0.58
11:K:63:VAL:HG11	11:K:103:VAL:HG12	1.85	0.58
23:X:26:PHE:HA	23:X:29:ARG:CD	2.33	0.58
5:D:151:THR:O	5:D:153:GLY:N	2.36	0.58
2:B:1150:C:O2'	2:B:1151:A:H5'	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1857:G:H2'	2:B:1884:G:N2	2.19	0.58
2:B:596:U:H2'	2:B:597:G:C8	2.37	0.58
2:B:987:C:H2'	2:B:988:A:O4'	2.03	0.58
23:X:2:LYS:HB2	23:X:5:GLU:HG3	1.85	0.58
1:A:35:C:H2'	1:A:36:C:O4'	2.02	0.58
4:C:172:THR:HG22	4:C:173:LEU:N	2.17	0.58
9:H:26:ALA:HB2	9:H:30:LEU:HG	1.86	0.58
13:M:117:PHE:HB2	13:M:124:LEU:HD11	1.85	0.58
4:C:226:PRO:HG3	4:C:232:GLY:C	2.23	0.58
7:F:40:GLY:H	7:F:84:ILE:HG21	1.69	0.58
9:H:86:ASP:C	9:H:88:GLY:H	2.05	0.58
12:L:108:ALA:HB3	12:L:125:LEU:CB	2.32	0.58
17:Q:39:ILE:HA	17:Q:43:GLN:HB3	1.84	0.58
22:W:48:ALA:HA	22:W:54:ARG:H	1.67	0.58
2:B:2213:U:O2	2:B:2213:U:H2'	2.04	0.58
12:L:4:ASN:O	12:L:6:LEU:HD22	2.03	0.58
5:D:204:LYS:HB3	5:D:205:PRO:CD	2.32	0.58
2:B:910:A:N7	13:M:16:ARG:HG2	2.19	0.58
2:B:1022:G:C8	10:J:68:LYS:HE3	2.38	0.58
9:H:19:VAL:HG22	9:H:20:ASN:N	2.19	0.58
2:B:2292:U:H2'	2:B:2293:G:C8	2.39	0.58
10:J:69:ARG:HH11	10:J:69:ARG:HG3	1.69	0.58
2:B:2354:C:H4'	22:W:30:VAL:HG13	1.85	0.58
2:B:2386:A:H4'	22:W:38:ARG:HB2	1.86	0.58
13:M:29:GLY:N	13:M:102:LEU:HD12	2.14	0.58
26:O:45:ASP:HA	26:O:55:ALA:HA	1.83	0.58
8:G:10:VAL:HG13	8:G:14:VAL:CG1	2.33	0.58
25:Z:24:ILE:CD1	25:Z:24:ILE:H	2.08	0.58
5:D:145:SER:HA	5:D:159:LYS:HZ3	1.68	0.58
2:B:1593:A:H2'	2:B:1594:U:C6	2.38	0.58
17:Q:92:LYS:C	17:Q:93:ILE:HG23	2.24	0.58
2:B:871:U:H4'	13:M:68:PHE:CE1	2.39	0.58
2:B:1025:G:H1'	2:B:1135:C:C5'	2.28	0.58
18:R:3:ALA:HB2	18:R:14:VAL:O	2.04	0.58
2:B:857:G:C2'	2:B:858:G:H5'	2.33	0.58
4:C:20:ASN:C	4:C:202:ARG:HD2	2.23	0.58
2:B:873:C:H2'	2:B:874:G:C8	2.38	0.58
4:C:227:VAL:HG13	4:C:228:ASP:OD1	2.04	0.58
2:B:1082:U:C4	2:B:1086:A:C2	2.92	0.58
8:G:36:LEU:CB	8:G:40:VAL:HG21	2.33	0.58
8:G:42:VAL:HA	8:G:50:THR:O	2.04	0.58
12:L:109:LYS:HA	12:L:127:VAL:H	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:109:LYS:HG2	12:L:126:ARG:HD3	1.85	0.58
2:B:136:G:C2	20:T:3:ARG:NH2	2.71	0.58
2:B:2786:U:O2'	5:D:65:ALA:HB3	2.03	0.58
21:U:82:VAL:HG21	21:U:95:PHE:O	2.02	0.58
2:B:962:G:O2'	2:B:963:U:H5'	2.04	0.58
2:B:228:C:H4'	2:B:229:C:H5''	1.85	0.58
2:B:2836:U:H2'	2:B:2837:A:H8	1.68	0.58
30:4:11:CYS:SG	30:4:25:VAL:HG23	2.43	0.58
17:Q:108:LEU:HA	17:Q:111:LYS:HD2	1.86	0.58
5:D:5:VAL:CG2	5:D:28:GLU:HA	2.34	0.58
4:C:42:ARG:NE	4:C:44:ASN:HB2	2.19	0.58
20:T:56:GLU:O	20:T:57:VAL:HG22	2.03	0.58
5:D:156:PHE:CB	10:J:81:ILE:HG21	2.33	0.58
2:B:2887:A:C8	26:O:27:LEU:HD21	2.39	0.58
2:B:532:A:N3	2:B:532:A:H2'	2.17	0.58
5:D:60:VAL:HG23	5:D:63:PRO:CD	2.34	0.58
2:B:1552:A:H2'	2:B:1553:A:H5'	1.85	0.58
2:B:1176:U:H6	2:B:1176:U:O5'	1.87	0.58
2:B:288:U:H2'	2:B:289:G:C8	2.39	0.58
4:C:38:LYS:HG3	4:C:39:SER:N	2.19	0.58
2:B:90:U:H3'	2:B:91:A:H5''	1.84	0.58
2:B:1973:G:H2'	2:B:1974:C:C6	2.37	0.58
2:B:2902:C:O2'	2:B:2903:U:H4'	2.03	0.58
2:B:1570:A:H2'	2:B:1571:A:C8	2.39	0.58
2:B:811:U:OP2	12:L:31:GLY:HA2	2.04	0.58
2:B:2688:G:H1'	2:B:2721:A:N6	2.18	0.58
22:W:44:PHE:CD2	22:W:77:LYS:HB3	2.38	0.58
25:Z:49:ARG:C	25:Z:51:VAL:N	2.57	0.58
31:I:73:PRO:CG	31:I:78:LEU:HD21	2.34	0.58
31:I:17:ALA:C	31:I:19:PRO:HD3	2.24	0.58
12:L:81:ASP:HA	12:L:84:LYS:HD2	1.85	0.58
2:B:2785:C:H2'	2:B:2786:U:H6	1.68	0.58
2:B:1151:A:H2'	2:B:1152:C:H6	1.67	0.58
2:B:1175:A:H2'	2:B:1176:U:H5'	1.86	0.58
2:B:324:A:N6	2:B:339:U:H5'	2.19	0.58
2:B:322:A:H1'	2:B:339:U:O2	2.04	0.58
2:B:69:C:H2'	2:B:70:G:C8	2.38	0.58
2:B:310:A:H5''	21:U:14:THR:CG2	2.33	0.58
3:V:2:PHE:HB2	3:V:61:LEU:HD22	1.86	0.58
12:L:53:GLY:HA3	29:3:54:LEU:HD21	1.86	0.58
4:C:128:THR:HA	4:C:190:THR:HA	1.86	0.58
1:A:5:U:H2'	1:A:6:G:H8	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:6:GLN:HE21	18:R:41:ILE:HB	1.67	0.58
22:W:31:LEU:O	22:W:66:VAL:HB	2.04	0.58
2:B:2415:G:H2'	2:B:2416:C:H6	1.68	0.58
8:G:17:LYS:HZ1	8:G:19:ASN:HB2	1.65	0.58
2:B:2886:A:C5	26:0:27:LEU:HG	2.38	0.58
2:B:1197:G:H2'	2:B:1198:U:C6	2.39	0.58
8:G:66:THR:O	8:G:70:LEU:HD13	2.04	0.58
2:B:1666:G:H4'	11:K:6:THR:HG23	1.85	0.58
17:Q:50:ARG:NH1	17:Q:53:LYS:HE3	2.19	0.58
13:M:133:LYS:HD2	13:M:134:THR:N	2.18	0.58
27:1:27:ARG:H	27:1:27:ARG:NE	2.01	0.58
1:A:25:U:O4	1:A:54:G:H3'	2.03	0.58
2:B:962:G:H21	2:B:2250:G:H1	1.52	0.58
31:I:53:PRO:CG	31:I:77:VAL:HG11	2.33	0.58
30:4:14:CYS:SG	30:4:27:CYS:N	2.77	0.58
4:C:172:THR:HG22	4:C:173:LEU:H	1.69	0.58
5:D:173:GLN:HG3	5:D:208:LYS:HB3	1.85	0.58
2:B:1654:A:C4'	14:N:1:MET:H1	2.17	0.58
2:B:1802:A:H2'	2:B:1803:A:C8	2.39	0.58
10:J:36:LEU:HA	10:J:51:GLY:O	2.03	0.58
6:E:115:GLN:HB3	6:E:117:ARG:HD3	1.86	0.58
31:I:108:ILE:CG2	31:I:128:ILE:HD13	2.34	0.58
2:B:972:A:C3'	2:B:973:A:H5''	2.27	0.58
10:J:76:HIS:HB2	10:J:86:GLN:CG	2.33	0.58
11:K:104:THR:HG22	11:K:105:ARG:H	1.68	0.58
26:0:41:HIS:CG	26:0:42:ILE:N	2.67	0.58
8:G:171:LYS:NZ	8:G:174:LYS:H	2.02	0.58
4:C:234:GLY:HA3	4:C:237:ARG:HH12	1.67	0.58
2:B:1486:U:H2'	2:B:1487:U:H6	1.68	0.58
2:B:2103:C:H2'	2:B:2104:C:O4'	2.03	0.58
2:B:438:G:H2'	2:B:439:A:C8	2.39	0.58
2:B:955:U:H5'	2:B:956:G:OP2	2.04	0.58
31:I:2:LYS:O	31:I:3:LYS:HG3	2.04	0.57
2:B:2849:U:H4'	2:B:2850:A:H5'	1.85	0.57
16:P:25:VAL:HG11	16:P:87:ARG:CA	2.33	0.57
15:O:109:ALA:HA	15:O:112:GLU:OE2	2.04	0.57
10:J:98:GLU:O	10:J:102:GLU:HG2	2.04	0.57
11:K:64:ARG:N	11:K:83:ALA:HB3	2.14	0.57
31:I:24:GLY:HA2	31:I:34:ILE:HD12	1.85	0.57
26:0:12:ARG:HH21	26:0:16:ARG:CG	2.14	0.57
2:B:72:U:H1'	23:X:51:ALA:HB2	1.86	0.57
7:F:107:VAL:H	7:F:108:PRO:CD	2.16	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:26:C:H3'	1:A:26:C:OP1	2.03	0.57
21:U:46:LYS:HD3	21:U:53:GLN:HG3	1.85	0.57
2:B:2813:A:H2'	2:B:2814:A:H8	1.69	0.57
6:E:21:ARG:NH1	6:E:21:ARG:HB3	2.18	0.57
7:F:165:GLY:O	7:F:167:ALA:N	2.36	0.57
8:G:85:LYS:HB3	8:G:131:VAL:HA	1.85	0.57
12:L:51:GLU:HG2	12:L:52:GLY:N	2.18	0.57
2:B:1722:A:N6	2:B:1738:G:H1'	2.18	0.57
27:1:14:ALA:HB1	27:1:48:TYR:CZ	2.39	0.57
13:M:14:LYS:HB3	13:M:72:PRO:HG3	1.85	0.57
13:M:71:LYS:HA	13:M:71:LYS:HZ2	1.68	0.57
2:B:6:A:H2'	2:B:7:G:C8	2.40	0.57
22:W:30:VAL:HG12	22:W:31:LEU:H	1.69	0.57
2:B:945:A:H3'	2:B:946:C:H5''	1.85	0.57
25:Z:1:MET:O	25:Z:2:LYS:HG3	2.03	0.57
2:B:2469:A:H5'	13:M:55:ARG:NE	2.19	0.57
2:B:19:A:H2'	2:B:20:C:C6	2.39	0.57
13:M:36:VAL:HG12	13:M:125:PRO:HD3	1.86	0.57
2:B:2204:G:H4'	4:C:149:LYS:HG3	1.85	0.57
16:P:26:GLU:HA	16:P:47:ILE:H	1.70	0.57
9:H:30:LEU:O	9:H:35:LYS:HD3	2.04	0.57
18:R:82:HIS:O	18:R:84:ARG:N	2.38	0.57
10:J:81:ILE:C	10:J:83:GLY:N	2.55	0.57
2:B:2502:G:H5'	2:B:2503:A:C5'	2.31	0.57
7:F:100:GLU:C	7:F:102:LEU:H	2.08	0.57
15:O:30:ARG:NH1	15:O:97:PHE:HB2	2.19	0.57
6:E:129:PRO:O	6:E:130:LYS:HB2	2.04	0.57
21:U:44:HIS:O	21:U:46:LYS:HD2	2.04	0.57
2:B:213:A:O2'	2:B:214:G:H5'	2.05	0.57
2:B:264:C:H2'	2:B:265:A:H5''	1.85	0.57
2:B:2578:G:O2'	5:D:138:LEU:HD13	2.04	0.57
6:E:10:SER:C	6:E:12:LEU:H	2.05	0.57
2:B:657:U:H2'	2:B:658:U:C6	2.39	0.57
17:Q:57:ARG:HH21	17:Q:92:LYS:NZ	2.03	0.57
2:B:2000:C:O2'	2:B:2001:C:H5'	2.04	0.57
16:P:71:ARG:NH2	16:P:102:ARG:HA	2.20	0.57
9:H:6:LEU:HB2	9:H:35:LYS:HB3	1.86	0.57
14:N:45:ARG:HH22	14:N:113:ILE:CG2	2.07	0.57
2:B:1164:C:H2'	2:B:1165:A:C8	2.40	0.57
10:J:41:LYS:NZ	10:J:45:THR:HA	2.19	0.57
22:W:19:ARG:CZ	22:W:19:ARG:HB2	2.34	0.57
22:W:39:GLN:CD	22:W:66:VAL:HA	2.25	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:23:LEU:HB3	26:0:21:LEU:HD22	1.86	0.57
18:R:69:GLY:H	18:R:97:LYS:HB2	1.69	0.57
2:B:2646:C:H2'	2:B:2647:U:O4'	2.04	0.57
29:3:4:LYS:HE3	29:3:61:LEU:HB2	1.86	0.57
2:B:1042:G:H2'	2:B:1043:C:C6	2.40	0.57
31:I:102:ARG:HG3	31:I:141:ASP:CB	2.34	0.57
3:V:77:VAL:HG13	3:V:89:ILE:HD11	1.85	0.57
2:B:2872:A:O2'	2:B:2873:A:H5''	2.05	0.57
10:J:73:VAL:CG2	10:J:74:TYR:H	2.13	0.57
14:N:42:LYS:HE3	14:N:42:LYS:O	2.05	0.57
24:Y:2:LYS:HA	24:Y:43:ILE:HG13	1.86	0.57
15:O:27:VAL:HG22	15:O:38:GLN:O	2.05	0.57
17:Q:73:ILE:HG13	17:Q:74:SER:N	2.10	0.57
9:H:94:ILE:HG23	9:H:98:ASP:CB	2.34	0.57
18:R:2:TYR:HB2	18:R:45:GLU:OE1	2.04	0.57
18:R:6:GLN:HG2	18:R:7:SER:N	2.19	0.57
2:B:64:A:H2'	2:B:65:U:H6	1.69	0.57
2:B:396:G:OP1	25:Z:8:LYS:HD2	2.04	0.57
31:I:72:THR:CG2	31:I:112:LYS:HD2	2.34	0.57
9:H:87:GLU:HB2	9:H:89:LYS:NZ	2.19	0.57
23:X:23:ARG:HA	23:X:26:PHE:CD1	2.40	0.57
12:L:78:ARG:HA	12:L:113:ALA:HB2	1.86	0.57
1:A:51:G:H2'	1:A:52:A:H5''	1.86	0.57
2:B:1105:U:H2'	2:B:1106:G:C8	2.38	0.57
29:3:4:LYS:HD2	29:3:60:CYS:H	1.69	0.57
2:B:2888:C:H2'	2:B:2889:C:C6	2.40	0.57
1:A:22:U:H2'	1:A:23:G:C8	2.40	0.57
2:B:2686:G:H2'	2:B:2687:U:C6	2.39	0.57
30:4:23:ILE:CD1	30:4:24:ARG:H	2.16	0.57
30:4:26:ILE:HG23	30:4:27:CYS:N	2.19	0.57
4:C:139:THR:HA	4:C:193:GLU:OE2	2.03	0.57
2:B:2399:G:H1'	27:1:20:TYR:OH	2.04	0.57
10:J:44:TYR:HD1	10:J:45:THR:H	1.50	0.57
2:B:455:C:N4	2:B:472:A:H2'	2.20	0.57
2:B:2091:C:H3'	2:B:2092:U:C5'	2.33	0.57
2:B:495:G:H4'	19:S:3:THR:O	2.05	0.57
11:K:43:ILE:HD13	11:K:56:ASP:HB3	1.87	0.57
2:B:634:C:H2'	2:B:635:C:C6	2.40	0.57
2:B:1225:G:H5''	18:R:90:ARG:HG3	1.87	0.57
25:Z:20:ASN:O	25:Z:21:VAL:HB	2.04	0.57
2:B:1172:C:H2'	2:B:1173:U:O4'	2.04	0.57
29:3:4:LYS:HG3	29:3:61:LEU:HB2	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:770:G:O2'	2:B:771:G:H5'	2.05	0.57
7:F:162:ASP:HB3	7:F:166:ARG:HH21	1.69	0.57
2:B:259:G:O2'	2:B:260:G:H5'	2.05	0.57
17:Q:116:LEU:H	17:Q:116:LEU:HD22	1.70	0.57
4:C:163:ILE:HG12	4:C:173:LEU:HD23	1.86	0.57
9:H:6:LEU:HD12	9:H:36:ALA:N	2.20	0.57
9:H:3:VAL:CG2	9:H:37:VAL:HG21	2.34	0.57
24:Y:6:ILE:CG1	24:Y:35:VAL:H	2.13	0.57
15:O:108:ASP:O	15:O:112:GLU:HG3	2.04	0.57
4:C:247:TRP:HZ2	4:C:254:LYS:HZ3	1.52	0.57
6:E:5:LEU:HA	6:E:11:ALA:O	2.05	0.57
31:I:79:LEU:HD11	31:I:131:THR:OG1	2.04	0.57
11:K:64:ARG:O	11:K:65:THR:HG23	2.04	0.57
5:D:62:LYS:H	5:D:62:LYS:HZ2	1.52	0.57
9:H:127:GLU:HA	9:H:144:VAL:O	2.04	0.57
2:B:1098:A:O3'	31:I:4:VAL:N	2.36	0.57
2:B:2729:G:H2'	2:B:2730:C:C6	2.40	0.57
29:3:24:LYS:NZ	29:3:24:LYS:HB3	2.20	0.57
4:C:22:GLU:N	4:C:202:ARG:NE	2.52	0.57
4:C:208:GLY:HA2	4:C:212:TRP:CB	2.34	0.57
7:F:7:TYR:OH	7:F:29:ARG:HG2	2.04	0.57
2:B:1064:C:O4'	31:I:90:GLY:HA2	2.04	0.57
11:K:113:MET:SD	11:K:116:ILE:HD11	2.45	0.57
2:B:1656:C:OP1	5:D:141:ARG:HD2	2.04	0.57
17:Q:52:ARG:HH21	17:Q:56:PHE:HE2	1.52	0.57
5:D:14:ILE:HG23	5:D:19:GLY:HA3	1.86	0.57
2:B:863:A:H2'	2:B:864:G:C8	2.40	0.57
2:B:2135:A:H61	2:B:2156:G:C2'	2.18	0.57
9:H:65:ALA:HA	9:H:68:ARG:HB2	1.87	0.57
2:B:1301:A:O2'	2:B:1302:A:H2'	2.04	0.57
2:B:1759:A:H4'	2:B:2715:C:O4'	2.05	0.57
2:B:2220:U:H2'	2:B:2221:G:H8	1.70	0.57
2:B:1346:G:O2'	2:B:1347:A:H5'	2.05	0.57
3:V:26:PHE:CE2	3:V:44:HIS:HA	2.39	0.57
3:V:26:PHE:HE2	3:V:44:HIS:HA	1.70	0.57
22:W:21:GLY:HA2	22:W:25:PHE:CE1	2.40	0.57
2:B:1099:G:O5'	31:I:3:LYS:C	2.42	0.57
19:S:46:LEU:HA	19:S:49:LYS:CB	2.15	0.57
4:C:107:LYS:CB	4:C:194:VAL:HG21	2.32	0.57
27:1:20:TYR:O	27:1:21:THR:HB	2.05	0.57
22:W:24:ARG:HG3	22:W:57:THR:O	2.05	0.57
2:B:784:G:H5"	4:C:225:ASN:ND2	2.16	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:84:ILE:HD12	10:J:85:LYS:N	2.15	0.57
2:B:2528:U:O2'	2:B:2529:G:H3'	2.05	0.57
12:L:108:ALA:C	12:L:109:LYS:HD3	2.25	0.57
12:L:126:ARG:O	12:L:127:VAL:O	2.23	0.57
5:D:46:ARG:H	5:D:82:PHE:HA	1.70	0.57
5:D:153:GLY:C	5:D:155:VAL:H	2.08	0.57
2:B:1583:A:H4'	2:B:1585:C:C4	2.40	0.57
4:C:56:GLY:HA3	4:C:214:GLY:H	1.70	0.57
2:B:151:C:H2'	2:B:152:A:C8	2.40	0.57
2:B:1098:A:O4'	31:I:3:LYS:HB3	2.04	0.57
19:S:7:HIS:CD2	19:S:10:ALA:HB2	2.40	0.57
2:B:1820:U:H5	4:C:176:ARG:NH2	2.02	0.57
11:K:70:ARG:HB3	11:K:76:VAL:HG13	1.86	0.57
13:M:4:PRO:HD3	13:M:47:GLU:OE2	2.04	0.57
10:J:98:GLU:HG3	10:J:126:ALA:CB	2.34	0.57
6:E:42:GLY:O	6:E:43:THR:HG23	2.05	0.57
22:W:19:ARG:HB2	22:W:19:ARG:NH1	2.19	0.57
31:I:54:ILE:HD13	31:I:55:PRO:N	2.20	0.57
2:B:1131:G:OP1	10:J:83:GLY:HA2	2.04	0.57
7:F:83:PRO:C	7:F:84:ILE:HG13	2.24	0.57
2:B:2679:A:O2'	2:B:2680:U:H5'	2.05	0.57
6:E:134:LEU:HD22	6:E:134:LEU:N	2.20	0.57
2:B:1447:C:H2'	2:B:1448:G:C8	2.40	0.57
2:B:18:U:H2'	2:B:19:A:C8	2.40	0.57
2:B:1534:U:H2'	2:B:1536:C:C4	2.40	0.57
4:C:123:ILE:HG12	4:C:135:PRO:CD	2.35	0.57
5:D:114:LYS:HB2	5:D:114:LYS:NZ	2.20	0.57
2:B:1100:C:H2'	2:B:1101:U:H6	1.70	0.56
2:B:2867:G:C2'	2:B:2867:G:N3	2.67	0.56
5:D:118:PHE:HA	5:D:164:GLN:HG2	1.87	0.56
5:D:27:ILE:HD13	5:D:28:GLU:N	2.20	0.56
16:P:28:LYS:NZ	16:P:44:GLY:N	2.52	0.56
14:N:45:ARG:HE	14:N:97:ILE:HD11	1.69	0.56
6:E:49:ARG:HG3	6:E:52:VAL:HG22	1.87	0.56
9:H:82:SER:O	9:H:83:LYS:HD2	2.04	0.56
19:S:4:ILE:HG12	19:S:106:VAL:HG12	1.85	0.56
4:C:234:GLY:HA3	4:C:237:ARG:NH1	2.20	0.56
2:B:534:U:H5'	17:Q:41:ALA:CA	2.35	0.56
2:B:2784:U:H4'	5:D:42:ASN:H	1.69	0.56
5:D:125:TRP:CD1	5:D:127:PHE:HB2	2.35	0.56
6:E:126:VAL:HG11	6:E:132:LYS:HZ2	1.70	0.56
2:B:299:A:H2	2:B:319:G:N3	2.03	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:278:A:O2'	2:B:279:A:H5'	2.04	0.56
2:B:796:C:H2'	2:B:797:G:C8	2.39	0.56
13:M:127:LYS:HD3	13:M:128:THR:H	1.70	0.56
2:B:2150:C:H2'	2:B:2151:U:C6	2.39	0.56
2:B:1537:G:N3	2:B:1537:G:H3'	2.20	0.56
30:4:6:SER:HA	30:4:23:ILE:HD13	1.86	0.56
4:C:33:LEU:HD22	4:C:34:GLU:N	2.20	0.56
5:D:18:ASP:C	5:D:20:VAL:H	2.07	0.56
16:P:55:HIS:C	16:P:57:ALA:N	2.58	0.56
13:M:43:ALA:H	13:M:91:TYR:HB2	1.70	0.56
9:H:6:LEU:HB2	9:H:35:LYS:CB	2.35	0.56
2:B:1803:A:O2'	4:C:254:LYS:HD3	2.04	0.56
10:J:102:GLU:CG	10:J:124:VAL:HG12	2.30	0.56
18:R:38:VAL:HA	18:R:61:ALA:HB3	1.87	0.56
2:B:2386:A:H2'	2:B:2387:U:C6	2.40	0.56
22:W:67:LYS:HG2	22:W:71:LYS:CA	2.35	0.56
18:R:22:LEU:HD12	18:R:24:LYS:N	2.15	0.56
21:U:66:VAL:HG13	21:U:67:SER:N	2.19	0.56
2:B:2650:U:H2'	2:B:2651:C:C6	2.40	0.56
2:B:2556:C:H2'	2:B:2557:G:O4'	2.05	0.56
13:M:24:THR:O	13:M:98:PRO:HA	2.04	0.56
2:B:1709:U:H2'	2:B:1710:G:H8	1.69	0.56
2:B:1714:U:H3'	2:B:1715:G:C5'	2.35	0.56
2:B:723:C:H2'	2:B:724:U:C6	2.41	0.56
28:2:26:ASN:O	28:2:29:GLN:HB2	2.05	0.56
2:B:2527:C:H4'	30:4:34:LYS:O	2.05	0.56
5:D:34:VAL:HA	5:D:90:PHE:HA	1.86	0.56
11:K:66:LYS:HA	11:K:79:PHE:O	2.06	0.56
12:L:90:VAL:HG13	12:L:122:VAL:HG11	1.87	0.56
6:E:2:GLU:HA	6:E:16:GLU:HB3	1.85	0.56
9:H:133:GLN:HB3	9:H:139:PHE:HB3	1.86	0.56
20:T:53:VAL:HB	20:T:93:LEU:HD11	1.87	0.56
21:U:79:ALA:O	21:U:96:LYS:HB3	2.05	0.56
31:I:79:LEU:HD12	31:I:135:MET:SD	2.46	0.56
2:B:1368:G:C5'	28:2:25:LYS:HG2	2.34	0.56
18:R:97:LYS:O	18:R:98:ILE:HB	2.06	0.56
8:G:6:ALA:H	8:G:7:PRO:CD	2.18	0.56
2:B:2143:C:H3'	2:B:2144:G:H8	1.70	0.56
2:B:1275:A:N7	14:N:16:HIS:ND1	2.53	0.56
6:E:126:VAL:HG11	6:E:132:LYS:HZ3	1.70	0.56
2:B:1553:A:O2'	2:B:1554:U:H2'	2.05	0.56
2:B:286:U:H2'	2:B:287:G:H8	1.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:121:ILE:HD13	31:I:121:ILE:N	2.20	0.56
7:F:172:PHE:HD1	7:F:172:PHE:H	1.49	0.56
2:B:2804:U:H2'	2:B:2805:C:C6	2.39	0.56
31:I:102:ARG:HG3	31:I:141:ASP:HB2	1.87	0.56
2:B:2283:C:H5''	2:B:2389:G:O2'	2.05	0.56
6:E:67:ARG:N	6:E:67:ARG:HD2	2.20	0.56
4:C:163:ILE:HG22	4:C:164:VAL:H	1.71	0.56
4:C:173:LEU:HD12	4:C:183:VAL:HG11	1.87	0.56
4:C:179:GLU:HG3	4:C:266:ILE:HG22	1.85	0.56
27:1:15:GLY:HA3	27:1:47:ILE:CG2	2.36	0.56
16:P:52:ARG:HB3	16:P:60:VAL:HG11	1.85	0.56
24:Y:6:ILE:HG12	24:Y:35:VAL:O	2.06	0.56
10:J:132:HIS:HB3	10:J:136:GLN:OE1	2.04	0.56
10:J:40:HIS:CA	17:Q:69:ARG:HH12	2.14	0.56
22:W:73:PRO:HB2	22:W:74:LYS:HD2	1.87	0.56
25:Z:47:LYS:HG2	25:Z:48:GLN:O	2.05	0.56
2:B:493:G:H2'	2:B:494:G:O4'	2.05	0.56
4:C:225:ASN:N	4:C:226:PRO:HD3	2.19	0.56
26:O:41:HIS:CE1	26:O:42:ILE:HG22	2.41	0.56
26:O:36:LYS:HE3	26:O:48:TYR:HE1	1.71	0.56
12:L:79:LEU:H	12:L:113:ALA:HB2	1.69	0.56
2:B:90:U:H3'	2:B:91:A:C5'	2.35	0.56
2:B:1700:A:H2'	2:B:1701:A:H5'	1.86	0.56
5:D:4:LEU:HD22	5:D:4:LEU:N	2.19	0.56
15:O:56:LYS:CE	15:O:81:ARG:HE	2.08	0.56
2:B:2898:U:H2'	2:B:2899:A:C8	2.40	0.56
2:B:6:A:H2'	2:B:7:G:H8	1.70	0.56
15:O:18:LEU:HD22	22:W:76:ARG:HH21	1.69	0.56
4:C:53:ILE:HD13	4:C:218:THR:CG2	2.35	0.56
2:B:1188:U:H4'	18:R:84:ARG:CD	2.36	0.56
28:2:46:LYS:H	28:2:46:LYS:CE	2.17	0.56
27:1:7:LYS:HB3	27:1:24:LYS:HZ1	1.71	0.56
21:U:10:VAL:O	21:U:21:ARG:HA	2.06	0.56
2:B:876:C:H3'	2:B:877:A:O4'	2.06	0.56
2:B:1709:U:H2'	2:B:1710:G:C8	2.41	0.56
2:B:1847:A:H4'	2:B:1848:A:C8	2.41	0.56
7:F:115:GLY:HA3	7:F:177:ARG:HB2	1.87	0.56
2:B:1742:U:H2'	2:B:1743:G:C8	2.41	0.56
1:A:112:G:O2'	1:A:113:C:H5'	2.05	0.56
2:B:1100:C:OP2	31:I:2:LYS:HB3	2.05	0.56
22:W:81:ILE:HG12	22:W:82:GLU:H	1.71	0.56
4:C:12:ARG:HH11	4:C:18:VAL:HB	1.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:135:ILE:O	7:F:136:ILE:HB	2.05	0.56
7:F:41:GLU:OE1	7:F:49:LEU:HG	2.05	0.56
2:B:663:G:OP1	12:L:27:LEU:HD22	2.06	0.56
2:B:544:C:H2'	2:B:545:U:C4	2.41	0.56
7:F:107:VAL:H	7:F:108:PRO:HD2	1.70	0.56
27:1:31:GLU:HG2	27:1:32:LYS:N	2.20	0.56
5:D:146:ILE:HD12	5:D:146:ILE:H	1.71	0.56
6:E:126:VAL:HG22	6:E:128:ALA:H	1.70	0.56
2:B:2615:U:C1'	26:0:3:GLN:HG3	2.35	0.56
2:B:1945:G:H2'	2:B:1946:U:C6	2.41	0.56
2:B:2617:U:C2'	2:B:2618:G:H5'	2.36	0.56
2:B:1464:G:H2'	2:B:1465:G:H8	1.69	0.56
2:B:2139:U:O2'	2:B:2140:G:H5'	2.05	0.56
4:C:191:LEU:O	4:C:191:LEU:HG	2.05	0.56
13:M:71:LYS:HE3	13:M:91:TYR:HB3	1.87	0.56
2:B:250:G:C5'	29:3:7:ARG:HG2	2.31	0.56
15:O:49:VAL:HG22	15:O:50:ALA:N	2.20	0.56
2:B:3:U:H2'	2:B:4:U:C6	2.41	0.56
19:S:33:LEU:HD22	19:S:51:LEU:HD23	1.87	0.56
1:A:76:G:H2'	1:A:77:U:C6	2.41	0.56
4:C:28:PRO:HB2	4:C:79:ARG:NE	2.21	0.56
2:B:144:A:H1'	20:T:3:ARG:HA	1.87	0.56
1:A:54:G:H21	7:F:25:MET:HG2	1.70	0.56
2:B:319:G:H2'	2:B:320:A:O4'	2.06	0.56
2:B:1019:U:H2'	2:B:1020:A:C8	2.39	0.56
23:X:11:VAL:HG12	23:X:13:GLU:H	1.70	0.56
2:B:1332:G:H2'	2:B:1332:G:N3	2.21	0.56
2:B:1505:A:H2'	2:B:1506:U:C6	2.41	0.56
17:Q:30:VAL:HG12	17:Q:31:TYR:N	2.20	0.56
2:B:281:C:H2'	2:B:282:A:C8	2.41	0.56
2:B:2526:G:H2'	2:B:2527:C:C6	2.41	0.56
17:Q:97:ILE:HG23	18:R:13:ARG:CZ	2.36	0.56
16:P:73:PHE:CD2	16:P:75:THR:HG23	2.41	0.56
2:B:857:G:O2'	2:B:858:G:H5'	2.06	0.56
3:V:9:ARG:NH1	3:V:12:GLN:HA	2.21	0.56
2:B:2484:G:O2'	2:B:2485:G:H5'	2.05	0.56
5:D:60:VAL:HB	5:D:62:LYS:HZ3	1.71	0.56
6:E:31:VAL:HG21	6:E:104:ALA:CB	2.35	0.56
23:X:15:ASN:HA	23:X:17:GLU:OE2	2.05	0.56
2:B:417:C:H2'	2:B:418:C:C6	2.41	0.56
31:I:37:PHE:CE1	31:I:58:ILE:HD11	2.40	0.56
2:B:620:G:H5'	2:B:620:G:N3	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:4:26:ILE:O	30:4:27:CYS:CB	2.53	0.56
16:P:76:HIS:CD2	16:P:76:HIS:N	2.55	0.56
13:M:16:ARG:HE	13:M:18:ARG:NH1	2.04	0.56
13:M:90:GLU:HG3	13:M:91:TYR:N	2.17	0.56
14:N:45:ARG:HH21	14:N:113:ILE:HD12	1.69	0.56
6:E:169:VAL:HG13	6:E:170:ARG:N	2.13	0.56
20:T:21:SER:N	20:T:24:MET:HE3	2.20	0.56
2:B:1083:U:C2	2:B:1086:A:N1	2.74	0.56
17:Q:39:ILE:CG1	17:Q:40:LYS:N	2.67	0.56
19:S:103:ILE:O	19:S:104:THR:HB	2.06	0.56
29:3:33:THR:HG23	29:3:36:ALA:HB3	1.86	0.56
2:B:19:A:H2'	2:B:20:C:H6	1.71	0.56
1:A:21:G:H2'	1:A:22:U:O4'	2.06	0.56
17:Q:26:ALA:O	17:Q:30:VAL:HG23	2.06	0.56
23:X:55:THR:O	23:X:56:LEU:HB2	2.05	0.56
2:B:1579:A:H2'	2:B:1580:A:C8	2.41	0.56
2:B:2045:C:H5''	26:0:14:MET:HE3	1.88	0.56
25:Z:41:HIS:CG	25:Z:42:PRO:HD2	2.40	0.56
19:S:7:HIS:CD2	19:S:46:LEU:HD13	2.41	0.56
4:C:167:ASP:HB3	4:C:172:THR:OG1	2.06	0.56
2:B:1654:A:H4'	14:N:1:MET:H1	1.69	0.56
12:L:63:LYS:H	29:3:12:ARG:HD3	1.71	0.56
2:B:2365:G:H4'	22:W:65:LYS:HD2	1.88	0.56
6:E:149:ILE:CD1	6:E:187:VAL:H	2.15	0.56
4:C:51:ARG:HH12	4:C:54:GLY:HA3	1.71	0.56
4:C:258:SER:N	4:C:261:ARG:NH1	2.54	0.56
19:S:42:LYS:HG2	19:S:45:VAL:HG13	1.88	0.56
11:K:12:ASP:HA	11:K:99:ILE:HA	1.88	0.56
8:G:39:ALA:HB1	8:G:54:ARG:H	1.71	0.56
17:Q:39:ILE:O	17:Q:43:GLN:HB3	2.06	0.56
2:B:2789:C:H3'	2:B:2893:A:H62	1.71	0.56
14:N:10:LEU:HG	14:N:11:ASN:N	2.21	0.56
21:U:23:LYS:O	21:U:25:LYS:N	2.39	0.56
2:B:1179:G:H2'	2:B:1180:U:H6	1.68	0.56
2:B:2064:C:H2'	2:B:2065:C:H6	1.70	0.56
2:B:2800:A:N3	2:B:2801:G:H1'	2.21	0.56
2:B:2539:C:O2'	2:B:2540:C:H5'	2.06	0.56
2:B:644:A:O2'	2:B:645:C:H2'	2.06	0.56
8:G:93:TYR:H	8:G:93:TYR:HD1	1.54	0.56
4:C:75:ALA:HA	4:C:94:LEU:O	2.06	0.55
5:D:89:GLU:HG2	5:D:93:GLY:HA3	1.87	0.55
9:H:8:LYS:HA	9:H:13:GLY:O	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:37:ARG:NH1	10:J:110:PRO:HG3	2.21	0.55
18:R:3:ALA:O	18:R:4:VAL:HG13	2.06	0.55
21:U:96:LYS:HD3	21:U:97:SER:N	2.20	0.55
18:R:85:LYS:C	18:R:86:GLN:HG3	2.27	0.55
8:G:124:CYS:HB3	8:G:130:ILE:HD13	1.88	0.55
16:P:38:ARG:HH11	16:P:39:LEU:H	1.54	0.55
30:4:26:ILE:CG1	30:4:35:GLN:HG2	2.36	0.55
5:D:89:GLU:CG	5:D:93:GLY:HA3	2.36	0.55
16:P:61:ARG:NH2	16:P:63:ILE:HD11	2.21	0.55
9:H:3:VAL:HB	9:H:37:VAL:CG1	2.36	0.55
10:J:118:MET:O	10:J:121:LYS:HD2	2.07	0.55
6:E:45:ALA:O	6:E:46:GLN:HB3	2.06	0.55
6:E:192:ALA:HB1	6:E:199:MET:HB2	1.86	0.55
3:V:30:ILE:HG12	3:V:91:PHE:CB	2.36	0.55
2:B:1441:G:H2'	2:B:1442:U:C6	2.42	0.55
2:B:2286:G:O6	27:1:23:THR:HG22	2.06	0.55
2:B:2072:C:O2'	2:B:2073:C:H5'	2.07	0.55
2:B:2688:G:H1'	2:B:2721:A:H61	1.70	0.55
2:B:1316:U:O2'	2:B:1317:G:H5'	2.06	0.55
2:B:1878:G:H2'	2:B:1879:C:C6	2.41	0.55
2:B:753:A:H2'	2:B:754:U:H6	1.70	0.55
2:B:828:U:H4'	2:B:831:G:N1	2.21	0.55
2:B:4:U:H2'	2:B:5:A:C8	2.41	0.55
10:J:93:ILE:HG22	10:J:93:ILE:O	2.04	0.55
18:R:3:ALA:HB1	18:R:12:HIS:CB	2.37	0.55
6:E:192:ALA:O	6:E:195:GLN:HG3	2.05	0.55
2:B:1656:C:H5''	5:D:141:ARG:HB3	1.88	0.55
2:B:1309:G:H4'	28:2:7:PRO:CB	2.32	0.55
2:B:1252:G:N3	17:Q:32:ARG:HG3	2.21	0.55
2:B:1550:C:H2'	2:B:1551:A:C8	2.41	0.55
5:D:21:SER:C	5:D:23:PRO:HD3	2.27	0.55
2:B:935:C:O2'	2:B:936:A:H5'	2.07	0.55
31:I:63:ASP:OD1	31:I:65:SER:HB2	2.06	0.55
2:B:170:U:H2'	2:B:171:U:C6	2.41	0.55
2:B:1935:G:H1'	2:B:1964:G:N2	2.22	0.55
2:B:2078:C:O2'	2:B:2079:U:H5'	2.06	0.55
7:F:175:PRO:O	7:F:176:PHE:HB2	2.07	0.55
2:B:1061:U:O4'	2:B:1070:A:H1'	2.05	0.55
2:B:2849:U:N3	2:B:2867:G:H1'	2.22	0.55
16:P:18:SER:HB2	16:P:87:ARG:NH2	2.22	0.55
13:M:42:THR:HG22	13:M:45:GLN:NE2	2.22	0.55
9:H:1:MET:HG3	9:H:21:VAL:CG2	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:25:ARG:HG2	15:O:94:ARG:HH22	1.72	0.55
2:B:2899:A:H2'	2:B:2900:A:C8	2.42	0.55
4:C:212:TRP:CZ3	4:C:217:PRO:HD3	2.38	0.55
2:B:634:C:H2'	2:B:635:C:H6	1.71	0.55
2:B:2361:G:OP1	29:3:25:HIS:HA	2.07	0.55
2:B:660:C:H2'	2:B:661:A:H8	1.71	0.55
2:B:431:U:O2'	2:B:432:A:H5'	2.06	0.55
2:B:2294:G:P	15:O:9:ARG:HH11	2.29	0.55
2:B:378:C:O2'	2:B:379:G:H5'	2.06	0.55
2:B:196:A:N3	2:B:196:A:H2'	2.20	0.55
30:4:15:LYS:C	30:4:17:VAL:H	2.10	0.55
30:4:24:ARG:CB	30:4:36:ARG:HA	2.37	0.55
2:B:2873:A:N3	14:N:6:SER:HA	2.21	0.55
16:P:51:ASN:C	16:P:60:VAL:HG11	2.27	0.55
14:N:33:ILE:CG2	14:N:112:TYR:HB3	2.37	0.55
24:Y:1:ALA:O	24:Y:43:ILE:HB	2.07	0.55
15:O:106:LEU:O	15:O:109:ALA:HB3	2.07	0.55
2:B:2090:A:H2'	25:Z:49:ARG:CZ	2.35	0.55
2:B:2305:U:H1'	7:F:132:ARG:HG2	1.88	0.55
21:U:33:VAL:CB	21:U:65:GLN:HA	2.32	0.55
8:G:36:LEU:HB2	8:G:40:VAL:HG11	1.89	0.55
2:B:545:U:H3'	2:B:546:U:C5'	2.36	0.55
2:B:143:C:N3	20:T:3:ARG:NH1	2.54	0.55
2:B:878:A:H1'	2:B:899:A:H62	1.72	0.55
21:U:95:PHE:CD2	21:U:99:SER:HB3	2.40	0.55
2:B:2369:A:O2'	2:B:2370:G:H5'	2.06	0.55
2:B:2097:A:H2'	2:B:2098:U:C6	2.41	0.55
2:B:667:U:H2'	2:B:668:A:O4'	2.07	0.55
2:B:2233:U:H2'	2:B:2234:G:C8	2.42	0.55
4:C:144:GLU:HB2	4:C:187:CYS:HB2	1.89	0.55
4:C:65:ASP:OD2	4:C:101:ARG:HD3	2.07	0.55
16:P:27:VAL:HG22	16:P:28:LYS:C	2.26	0.55
16:P:86:LYS:CE	16:P:88:ARG:HB2	2.37	0.55
16:P:93:LYS:HD3	16:P:96:LEU:HA	1.88	0.55
10:J:15:TRP:CE3	10:J:138:GLN:HB2	2.42	0.55
22:W:20:LEU:CD1	22:W:31:LEU:HB2	2.32	0.55
6:E:4:VAL:HA	6:E:14:VAL:HG13	1.87	0.55
6:E:163:ASN:HB2	6:E:167:VAL:O	2.07	0.55
7:F:7:TYR:HA	7:F:11:VAL:CB	2.34	0.55
23:X:22:LEU:HD11	23:X:47:ARG:CZ	2.37	0.55
5:D:181:ASP:CG	5:D:184:ARG:HB3	2.27	0.55
2:B:2895:G:H2'	2:B:2896:C:H6	1.66	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:906:U:H4'	13:M:26:VAL:HG12	1.88	0.55
21:U:82:VAL:HB	21:U:94:PHE:HB3	1.89	0.55
2:B:299:A:N6	2:B:322:A:H1'	2.21	0.55
6:E:130:LYS:NZ	6:E:130:LYS:HB2	2.21	0.55
9:H:126:GLY:O	9:H:145:ASN:HA	2.06	0.55
20:T:54:GLU:HB3	20:T:91:GLN:OE1	2.06	0.55
10:J:94:ALA:HB1	10:J:95:ARG:HH21	1.70	0.55
2:B:2839:G:H4'	14:N:49:GLU:HG2	1.87	0.55
2:B:2771:C:H2'	2:B:2772:C:C6	2.41	0.55
5:D:5:VAL:HG22	5:D:51:THR:O	2.06	0.55
13:M:40:ARG:HA	13:M:92:TRP:NE1	2.20	0.55
9:H:122:LEU:HA	9:H:146:VAL:CG2	2.36	0.55
2:B:499:U:H2'	2:B:500:G:O4'	2.07	0.55
20:T:86:THR:O	20:T:87:LEU:HB2	2.06	0.55
19:S:20:VAL:O	19:S:24:ILE:HG13	2.06	0.55
19:S:3:THR:HG22	19:S:4:ILE:N	2.22	0.55
11:K:63:VAL:CG1	11:K:103:VAL:HG12	2.37	0.55
2:B:1789:A:OP1	4:C:219:VAL:HG12	2.05	0.55
17:Q:2:ARG:HB3	17:Q:4:LYS:HZ1	1.72	0.55
2:B:1250:G:H4'	17:Q:5:ARG:HD3	1.88	0.55
8:G:34:ARG:NH1	8:G:70:LEU:HG	2.21	0.55
27:1:7:LYS:HB3	27:1:24:LYS:NZ	2.22	0.55
15:O:30:ARG:O	15:O:31:THR:HB	2.06	0.55
1:A:49:C:H2'	1:A:50:A:C8	2.42	0.55
2:B:1387:A:H2'	2:B:1388:G:C8	2.39	0.55
2:B:21:A:H2'	2:B:22:C:C6	2.42	0.55
2:B:2836:U:H2'	2:B:2837:A:C8	2.42	0.55
25:Z:41:HIS:ND1	25:Z:42:PRO:HD2	2.21	0.55
2:B:1939:U:H6	2:B:1939:U:H5'	1.72	0.55
16:P:52:ARG:HB3	16:P:60:VAL:CG1	2.36	0.55
12:L:62:PRO:HB3	29:3:12:ARG:CZ	2.36	0.55
12:L:63:LYS:HG3	12:L:64:PHE:H	1.72	0.55
10:J:90:GLU:HG3	10:J:93:ILE:HD12	1.88	0.55
3:V:21:ARG:HH21	3:V:88:HIS:N	2.05	0.55
2:B:753:A:H2'	2:B:754:U:C6	2.42	0.55
2:B:1117:C:H1'	13:M:136:MET:HE1	1.89	0.55
2:B:2533:U:H2'	2:B:2534:A:O4'	2.07	0.55
2:B:106:C:H2'	2:B:107:G:H8	1.71	0.55
2:B:818:G:H3'	2:B:1187:G:H22	1.71	0.55
2:B:527:C:O2	2:B:527:C:O4'	2.23	0.55
4:C:137:GLY:O	4:C:140:VAL:HG13	2.07	0.55
4:C:86:ARG:C	4:C:155:ARG:HH12	2.10	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2820:A:C6	5:D:197:THR:HB	2.42	0.55
5:D:4:LEU:HB3	5:D:202:ILE:HA	1.88	0.55
11:K:78:ARG:HG2	16:P:72:VAL:HG21	1.89	0.55
20:T:15:HIS:HB3	20:T:31:VAL:HG11	1.87	0.55
26:O:32:THR:HG21	26:O:41:HIS:CD2	2.41	0.55
18:R:76:LYS:HB3	18:R:90:ARG:CB	2.37	0.55
16:P:7:LEU:HA	16:P:10:GLU:CD	2.27	0.55
8:G:3:VAL:CG2	8:G:4:ALA:N	2.69	0.55
31:I:7:TYR:CE1	31:I:57:VAL:HG11	2.41	0.55
2:B:155:A:H2'	2:B:156:A:C8	2.42	0.55
2:B:2803:G:H2'	2:B:2804:U:C6	2.41	0.55
1:A:10:G:H2'	1:A:11:C:O4'	2.06	0.55
2:B:2093:G:O2'	2:B:2094:A:H5'	2.07	0.55
3:V:76:ASP:H	3:V:90:ASP:HB2	1.71	0.55
15:O:27:VAL:HG23	15:O:28:VAL:H	1.70	0.55
2:B:2386:A:C4'	22:W:38:ARG:HB2	2.37	0.55
22:W:38:ARG:HG3	22:W:39:GLN:N	2.21	0.55
11:K:11:ALA:O	11:K:99:ILE:HG23	2.07	0.55
2:B:2466:C:O2	13:M:118:LYS:HD3	2.07	0.55
18:R:76:LYS:HB3	18:R:90:ARG:HG2	1.88	0.55
5:D:146:ILE:N	5:D:146:ILE:HD12	2.22	0.55
1:A:59:A:H2'	1:A:60:C:O4'	2.07	0.55
23:X:1:MET:H3	23:X:6:LEU:HD23	1.72	0.55
2:B:1429:G:H2'	2:B:1430:G:C8	2.42	0.55
12:L:37:GLY:O	12:L:38:GLN:HG3	2.06	0.55
2:B:823:C:O2'	2:B:824:U:H5'	2.07	0.55
30:4:24:ARG:HE	30:4:37:GLN:N	2.03	0.54
10:J:7:LYS:HE3	10:J:47:HIS:HD2	1.72	0.54
22:W:67:LYS:HG2	22:W:71:LYS:CB	2.37	0.54
22:W:69:GLU:HG3	22:W:70:VAL:H	1.72	0.54
5:D:24:VAL:HG13	5:D:193:VAL:HG21	1.87	0.54
20:T:49:LYS:O	20:T:50:LEU:HG	2.07	0.54
19:S:23:LEU:CB	26:O:21:LEU:HD22	2.38	0.54
7:F:4:HIS:O	7:F:7:TYR:HB3	2.06	0.54
17:Q:50:ARG:HH12	17:Q:53:LYS:HE3	1.72	0.54
6:E:99:LYS:HZ3	6:E:99:LYS:C	2.11	0.54
2:B:170:U:H2'	2:B:171:U:H6	1.72	0.54
2:B:1771:C:H2'	2:B:1772:A:C8	2.42	0.54
2:B:2809:A:H2'	2:B:2810:A:C8	2.41	0.54
2:B:225:C:H2'	2:B:226:A:O4'	2.06	0.54
2:B:1804:C:O2'	2:B:1805:A:H5'	2.07	0.54
9:H:50:ARG:HG3	9:H:51:ARG:N	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1099:G:C4'	31:I:3:LYS:C	2.75	0.54
4:C:171:VAL:HG23	4:C:182:LYS:NZ	2.21	0.54
12:L:8:PRO:O	12:L:9:ALA:HB2	2.07	0.54
9:H:3:VAL:HG22	9:H:21:VAL:CG1	2.26	0.54
10:J:96:ARG:CD	10:J:99:ARG:HH21	2.19	0.54
22:W:82:GLU:HG3	22:W:83:ALA:N	2.23	0.54
6:E:151:GLY:HA2	6:E:169:VAL:O	2.08	0.54
19:S:22:ASP:C	19:S:24:ILE:H	2.10	0.54
19:S:29:VAL:O	19:S:33:LEU:HD23	2.08	0.54
26:O:29:VAL:HG21	26:O:34:GLY:H	1.73	0.54
2:B:543:G:C5	2:B:544:C:H1'	2.42	0.54
5:D:37:VAL:HG11	5:D:46:ARG:HD3	1.89	0.54
28:2:18:PHE:CE2	28:2:44:VAL:HB	2.42	0.54
21:U:23:LYS:O	21:U:25:LYS:HD2	2.07	0.54
21:U:25:LYS:NZ	21:U:25:LYS:HA	2.23	0.54
2:B:1551:A:H3'	2:B:1552:A:H5''	1.89	0.54
23:X:1:MET:HB2	23:X:6:LEU:CA	2.38	0.54
2:B:963:U:H2'	2:B:964:C:C6	2.42	0.54
2:B:1506:U:H2'	2:B:1507:C:C6	2.43	0.54
2:B:326:G:O2'	2:B:327:G:H5'	2.07	0.54
8:G:163:TYR:HB2	8:G:166:GLU:HG3	1.88	0.54
2:B:175:G:H2'	2:B:176:A:C8	2.42	0.54
5:D:50:VAL:CG1	5:D:75:ALA:HB3	2.37	0.54
9:H:121:VAL:O	9:H:122:LEU:HB2	2.07	0.54
6:E:116:ASP:CB	6:E:185:LYS:HA	2.37	0.54
2:B:2466:C:OP1	30:4:5:ALA:HB3	2.07	0.54
5:D:37:VAL:HG12	5:D:44:GLY:O	2.07	0.54
6:E:134:LEU:H	6:E:134:LEU:HD13	1.71	0.54
2:B:285:G:H2'	2:B:286:U:O4'	2.07	0.54
2:B:264:C:C2'	2:B:265:A:H5''	2.37	0.54
2:B:721:A:H2'	2:B:722:A:H8	1.73	0.54
2:B:2246:G:H2'	2:B:2247:A:C8	2.42	0.54
21:U:86:PHE:O	21:U:87:GLU:C	2.46	0.54
2:B:1716:U:H2'	2:B:1717:A:C8	2.42	0.54
12:L:119:PRO:HD3	12:L:137:ALA:O	2.08	0.54
10:J:37:ARG:CZ	10:J:110:PRO:HG3	2.37	0.54
10:J:40:HIS:O	17:Q:66:ALA:HB1	2.08	0.54
22:W:42:THR:HG21	22:W:66:VAL:HG13	1.90	0.54
22:W:42:THR:N	22:W:65:LYS:HA	2.20	0.54
4:C:12:ARG:HB2	4:C:20:ASN:CA	2.33	0.54
4:C:53:ILE:HG12	4:C:218:THR:HA	1.89	0.54
2:B:2229:U:H2'	2:B:2230:G:C8	2.42	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1341:G:H5'	20:T:61:LEU:HD21	1.88	0.54
21:U:78:LYS:HD2	21:U:96:LYS:HG3	1.88	0.54
2:B:1060:U:OP1	31:I:75:ALA:HB3	2.06	0.54
2:B:598:U:H2'	2:B:599:A:C8	2.43	0.54
4:C:77:VAL:HB	4:C:110:LYS:O	2.06	0.54
23:X:51:ALA:O	23:X:53:VAL:HG12	2.07	0.54
7:F:108:PRO:HB3	7:F:113:PHE:CE2	2.42	0.54
21:U:60:LYS:HE3	21:U:61:GLU:N	2.22	0.54
27:1:26:LYS:HE2	27:1:28:THR:HB	1.89	0.54
27:1:8:ILE:HD13	27:1:9:LYS:N	2.22	0.54
1:A:25:U:H4'	1:A:27:C:OP1	2.08	0.54
2:B:566:U:O2'	2:B:567:U:H5'	2.07	0.54
29:3:4:LYS:CE	29:3:61:LEU:H	2.21	0.54
2:B:2294:G:OP1	15:O:9:ARG:HD3	2.07	0.54
14:N:73:ASN:O	14:N:76:VAL:HG12	2.07	0.54
2:B:686:U:H5''	28:2:11:LYS:HE3	1.89	0.54
18:R:26:ASP:O	18:R:27:ILE:HB	2.06	0.54
11:K:87:LEU:HD22	11:K:92:GLU:O	2.07	0.54
13:M:88:ASN:O	13:M:89:VAL:HG12	2.06	0.54
20:T:64:LYS:HA	20:T:79:ASP:HA	1.87	0.54
2:B:2820:A:OP1	14:N:5:LYS:N	2.33	0.54
5:D:69:ALA:CB	5:D:90:PHE:HB2	2.38	0.54
16:P:49:ILE:HA	16:P:62:LYS:O	2.07	0.54
12:L:123:ARG:HB3	12:L:141:LYS:HB2	1.89	0.54
2:B:1802:A:H4'	4:C:255:LYS:HE2	1.90	0.54
2:B:7:G:H2'	2:B:8:C:C6	2.43	0.54
6:E:139:LYS:HA	6:E:143:LEU:HD23	1.90	0.54
6:E:148:ILE:CA	6:E:185:LYS:HB3	2.27	0.54
25:Z:11:GLU:O	25:Z:27:THR:HG22	2.08	0.54
2:B:25:U:H5''	19:S:80:PRO:HD3	1.89	0.54
2:B:2786:U:O2	5:D:62:LYS:HB3	2.07	0.54
2:B:899:A:H2'	2:B:900:A:O4'	2.08	0.54
2:B:351:C:H2'	2:B:352:A:H8	1.72	0.54
2:B:2590:A:H2'	2:B:2591:C:C6	2.43	0.54
2:B:2213:U:O2	2:B:2213:U:C2'	2.55	0.54
2:B:2363:G:OP2	29:3:39:ARG:HD2	2.07	0.54
2:B:2734:A:H2'	2:B:2735:G:H5'	1.89	0.54
19:S:27:LYS:HA	19:S:70:LYS:HG2	1.90	0.54
16:P:25:VAL:O	16:P:27:VAL:N	2.40	0.54
16:P:67:GLU:O	16:P:69:VAL:N	2.40	0.54
10:J:61:LYS:HA	10:J:61:LYS:HE3	1.88	0.54
22:W:44:PHE:HB3	22:W:77:LYS:C	2.27	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:105:LEU:O	6:E:108:ILE:HG23	2.08	0.54
6:E:109:LEU:HD23	6:E:117:ARG:NE	2.23	0.54
25:Z:3:LYS:NZ	25:Z:29:GLY:HA3	2.22	0.54
21:U:8:ASP:O	21:U:10:VAL:HG13	2.07	0.54
2:B:479:A:H4'	2:B:479:A:OP1	2.08	0.54
2:B:104:A:H2'	2:B:105:C:H6	1.72	0.54
27:1:42:VAL:O	27:1:43:ARG:HB2	2.08	0.54
7:F:157:THR:HG22	7:F:159:ALA:H	1.73	0.54
5:D:35:THR:HB	5:D:48:ILE:HB	1.89	0.54
14:N:2:ARG:HH21	14:N:4:ARG:HB3	1.72	0.54
2:B:871:U:H2'	2:B:872:U:H6	1.71	0.54
13:M:16:ARG:NH2	13:M:72:PRO:HG2	2.22	0.54
24:Y:7:THR:HG22	24:Y:34:THR:HB	1.89	0.54
2:B:2239:G:OP1	4:C:246:PRO:HG3	2.08	0.54
18:R:65:ALA:CB	18:R:99:THR:HG23	2.36	0.54
22:W:23:LYS:HG2	22:W:57:THR:HA	1.88	0.54
22:W:75:ASN:C	22:W:77:LYS:H	2.11	0.54
25:Z:47:LYS:HB2	25:Z:51:VAL:HG12	1.88	0.54
2:B:1060:U:O2	2:B:1088:A:C8	2.61	0.54
12:L:18:ARG:C	12:L:19:LEU:HD13	2.27	0.54
31:I:18:ASN:HB2	31:I:38:CYS:SG	2.47	0.54
2:B:1198:U:H2'	2:B:1199:U:C6	2.43	0.54
30:4:3:VAL:CG1	30:4:4:ARG:H	2.18	0.54
5:D:37:VAL:HG21	5:D:46:ARG:NH1	2.23	0.54
27:1:22:THR:HG21	29:3:34:LYS:NZ	2.23	0.54
29:3:21:PHE:H	29:3:48:MET:HB2	1.72	0.54
2:B:20:C:H2'	2:B:21:A:H8	1.73	0.54
1:A:63:C:H2'	1:A:64:G:H8	1.73	0.54
1:A:66:A:O2'	1:A:67:G:H5''	2.07	0.54
9:H:75:LEU:H	9:H:75:LEU:HD23	1.71	0.54
2:B:2538:C:O2	30:4:2:LYS:HE3	2.07	0.54
2:B:1820:U:O2	4:C:200:MET:HB2	2.06	0.54
13:M:5:LYS:HE3	13:M:6:ARG:H	1.72	0.54
24:Y:37:ARG:HA	24:Y:37:ARG:NE	2.22	0.54
2:B:2085:U:O2'	2:B:2086:U:H5'	2.08	0.54
8:G:53:PRO:HG2	8:G:61:TRP:HZ3	1.72	0.54
18:R:74:ILE:HG13	18:R:76:LYS:HG2	1.90	0.54
23:X:43:LEU:CB	23:X:45:GLN:HE22	2.20	0.54
2:B:1152:C:O2'	2:B:1153:C:H5'	2.08	0.54
2:B:2680:U:C5'	5:D:194:PRO:HA	2.38	0.54
5:D:8:LYS:HG3	16:P:5:LYS:HZ1	1.71	0.54
8:G:125:PRO:CG	8:G:129:GLU:HB3	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:346:A:C8	2:B:347:A:H1'	2.42	0.54
2:B:18:U:H2'	2:B:19:A:H8	1.73	0.54
11:K:17:ARG:HB2	11:K:45:GLU:CB	2.38	0.54
3:V:44:HIS:C	3:V:46:LYS:H	2.11	0.54
18:R:27:ILE:HG12	18:R:33:VAL:HG11	1.90	0.54
4:C:122:ALA:O	4:C:124:LYS:HG2	2.08	0.54
4:C:63:ILE:O	4:C:64:VAL:HG13	2.08	0.54
10:J:100:VAL:O	10:J:101:ILE:HB	2.08	0.54
2:B:38:A:N3	6:E:43:THR:HG22	2.23	0.54
6:E:53:THR:HG21	6:E:74:LYS:HB3	1.90	0.54
9:H:94:ILE:HG23	9:H:98:ASP:HB2	1.90	0.54
6:E:188:MET:SD	6:E:190:ALA:HB2	2.47	0.54
6:E:189:THR:HG23	6:E:194:LYS:CG	2.38	0.54
2:B:2197:U:O2'	2:B:2198:A:H2'	2.07	0.54
31:I:76:ALA:HA	31:I:135:MET:SD	2.48	0.54
2:B:813:U:H2'	2:B:814:C:H6	1.70	0.54
2:B:144:A:C6	20:T:3:ARG:NH1	2.75	0.54
18:R:76:LYS:HB3	18:R:90:ARG:CG	2.38	0.54
23:X:4:LYS:CG	23:X:7:ARG:HE	2.20	0.54
2:B:1515:A:H5'	2:B:1557:C:H5'	1.89	0.54
27:1:22:THR:HG21	29:3:34:LYS:HZ1	1.73	0.54
2:B:1736:U:H2'	2:B:1737:G:O4'	2.08	0.54
13:M:127:LYS:CD	13:M:128:THR:H	2.21	0.54
2:B:1688:U:O2	2:B:1700:A:H5'	2.07	0.54
2:B:2153:C:H2'	2:B:2154:A:H8	1.72	0.54
2:B:1244:A:O2'	2:B:1245:G:H5'	2.07	0.54
2:B:1098:A:C5'	31:I:3:LYS:HB3	2.37	0.54
19:S:8:ARG:O	19:S:9:HIS:HB2	2.06	0.54
4:C:160:TYR:CE2	4:C:193:GLU:HG2	2.43	0.54
16:P:25:VAL:O	16:P:25:VAL:HG12	2.07	0.54
16:P:45:VAL:HG12	16:P:46:VAL:O	2.08	0.54
16:P:26:GLU:HA	16:P:47:ILE:N	2.23	0.54
16:P:51:ASN:OD1	16:P:52:ARG:N	2.41	0.54
16:P:61:ARG:O	16:P:63:ILE:HG13	2.07	0.54
16:P:27:VAL:HG21	16:P:84:SER:O	2.08	0.54
2:B:1164:C:H2'	2:B:1165:A:H8	1.72	0.54
15:O:18:LEU:HD13	22:W:76:ARG:HE	1.73	0.54
7:F:56:LEU:HD11	7:F:86:CYS:HB3	1.90	0.54
19:S:15:GLN:HE22	26:O:12:ARG:HH12	1.56	0.54
4:C:27:LYS:HG2	4:C:81:GLU:HA	1.90	0.54
10:J:76:HIS:HB2	10:J:86:GLN:HG3	1.90	0.54
12:L:110:VAL:HG13	12:L:127:VAL:HG12	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:25:LYS:HZ3	21:U:25:LYS:HA	1.73	0.54
2:B:862:G:H2'	2:B:863:A:O4'	2.08	0.54
2:B:70:G:H3'	2:B:113:U:H4'	1.90	0.54
7:F:103:ILE:CG2	7:F:173:ASP:HA	2.38	0.54
2:B:596:U:H2'	2:B:597:G:H8	1.73	0.54
2:B:2617:U:H2'	2:B:2618:G:H5'	1.90	0.54
9:H:147:VAL:HG12	9:H:148:ALA:N	2.23	0.54
11:K:84:CYS:O	11:K:85:VAL:HB	2.08	0.54
2:B:1911:U:H2'	2:B:1918:A:N1	2.22	0.54
31:I:3:LYS:HE2	31:I:3:LYS:CD	2.18	0.53
4:C:103:ILE:HG22	4:C:104:LEU:N	2.21	0.53
17:Q:92:LYS:C	17:Q:94:LEU:H	2.11	0.53
2:B:249:C:O2'	29:3:7:ARG:NE	2.42	0.53
18:R:6:GLN:O	18:R:7:SER:HB3	2.07	0.53
7:F:31:GLU:O	7:F:95:MET:HE1	2.07	0.53
2:B:336:C:H5''	21:U:3:LYS:NZ	2.23	0.53
8:G:10:VAL:HG23	8:G:47:ASN:O	2.07	0.53
23:X:22:LEU:HD22	23:X:25:GLN:OE1	2.08	0.53
2:B:533:G:H2'	2:B:534:U:C6	2.43	0.53
28:2:43:THR:C	28:2:44:VAL:HG22	2.29	0.53
27:1:9:LYS:HG3	27:1:24:LYS:HG2	1.89	0.53
2:B:586:A:H5'	6:E:84:THR:HG21	1.89	0.53
2:B:1113:U:H5''	8:G:2:ARG:CD	2.38	0.53
14:N:54:LEU:HD22	14:N:66:ALA:HB2	1.90	0.53
2:B:2103:C:H3'	2:B:2104:C:O2	2.08	0.53
2:B:288:U:O2'	2:B:289:G:H5'	2.07	0.53
13:M:97:GLN:N	13:M:98:PRO:CD	2.71	0.53
4:C:235:GLU:HG3	4:C:236:GLY:H	1.72	0.53
2:B:168:G:H2'	2:B:169:G:H8	1.73	0.53
2:B:2666:C:O4'	2:B:2666:C:O2	2.25	0.53
4:C:107:LYS:HD2	4:C:196:ASN:ND2	2.24	0.53
4:C:32:LEU:HD13	4:C:36:ASN:ND2	2.23	0.53
13:M:6:ARG:O	13:M:7:THR:C	2.43	0.53
10:J:73:VAL:HG11	10:J:75:TYR:CE1	2.43	0.53
9:H:2:GLN:CB	9:H:19:VAL:HA	2.34	0.53
2:B:64:A:O3'	20:T:76:ARG:HG3	2.07	0.53
6:E:109:LEU:HD21	6:E:113:VAL:O	2.07	0.53
4:C:216:ARG:HB3	4:C:217:PRO:HD2	1.89	0.53
4:C:244:VAL:HG23	4:C:249:VAL:CG2	2.38	0.53
18:R:69:GLY:HA2	18:R:97:LYS:N	2.16	0.53
2:B:1442:U:H2'	2:B:1443:U:H6	1.73	0.53
2:B:1534:U:H2'	2:B:1536:C:N3	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:686:U:H1'	28:2:5:PHE:O	2.08	0.53
2:B:836:G:H2'	2:B:837:C:C6	2.43	0.53
4:C:92:LEU:O	4:C:93:VAL:HB	2.07	0.53
14:N:45:ARG:HH21	14:N:97:ILE:CG1	2.20	0.53
6:E:46:GLN:NE2	6:E:87:ALA:N	2.56	0.53
6:E:48:THR:OG1	6:E:86:ALA:HB3	2.08	0.53
20:T:14:PRO:CA	20:T:32:LEU:HD23	2.38	0.53
20:T:53:VAL:CG1	20:T:93:LEU:HD21	2.39	0.53
2:B:726:G:H5''	2:B:1432:G:O2'	2.08	0.53
8:G:18:ILE:HG13	8:G:18:ILE:O	2.08	0.53
2:B:2678:C:H2'	2:B:2679:A:C8	2.43	0.53
15:O:30:ARG:HG2	15:O:31:THR:H	1.73	0.53
14:N:30:ARG:HH12	14:N:74:GLU:HG2	1.72	0.53
2:B:1551:A:C3'	2:B:1552:A:H5''	2.38	0.53
2:B:1515:A:H4'	2:B:1556:C:O2'	2.09	0.53
2:B:521:U:H2'	2:B:522:A:C8	2.43	0.53
23:X:16:THR:HG23	23:X:21:LEU:HD12	1.89	0.53
11:K:7:MET:HA	11:K:7:MET:HE3	1.90	0.53
2:B:488:G:H1'	2:B:492:A:N6	2.24	0.53
5:D:7:LYS:HB3	5:D:201:LEU:HD22	1.89	0.53
5:D:50:VAL:HG13	5:D:77:ARG:O	2.08	0.53
16:P:18:SER:HA	16:P:87:ARG:HH22	1.74	0.53
13:M:40:ARG:HG2	13:M:92:TRP:CZ2	2.44	0.53
24:Y:40:THR:HG23	24:Y:43:ILE:HG22	1.91	0.53
20:T:76:ARG:HD3	20:T:76:ARG:N	2.23	0.53
31:I:23:VAL:HG12	31:I:24:GLY:N	2.24	0.53
2:B:1197:G:O2'	2:B:1198:U:H5'	2.08	0.53
25:Z:24:ILE:N	25:Z:24:ILE:HD13	2.18	0.53
2:B:1153:C:O2'	2:B:1154:G:H5'	2.08	0.53
3:V:6:ALA:O	3:V:65:VAL:HA	2.08	0.53
8:G:124:CYS:HA	8:G:129:GLU:O	2.09	0.53
2:B:664:G:H2'	2:B:665:U:C6	2.42	0.53
2:B:1429:G:O2'	2:B:1430:G:H5'	2.07	0.53
2:B:1464:G:H2'	2:B:1465:G:C8	2.44	0.53
2:B:2516:A:O2'	2:B:2517:C:H5'	2.07	0.53
2:B:1168:G:O2'	2:B:1169:A:H5'	2.09	0.53
13:M:62:LYS:H	13:M:104:GLU:HB2	1.72	0.53
2:B:2215:C:O2'	2:B:2216:G:H5'	2.09	0.53
15:O:62:LEU:H	15:O:62:LEU:HD12	1.73	0.53
4:C:68:ARG:HB2	4:C:128:THR:OG1	2.08	0.53
4:C:169:ALA:O	4:C:170:TYR:HB2	2.08	0.53
5:D:116:LYS:HB2	5:D:165:MET:HB2	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:48:ILE:CG2	4:C:49:THR:H	2.11	0.53
9:H:114:GLU:CB	9:H:133:GLN:HG3	2.39	0.53
2:B:1395:A:H4'	2:B:1397:U:C5	2.44	0.53
19:S:72:THR:HG23	19:S:106:VAL:HG23	1.89	0.53
31:I:89:SER:HA	31:I:97:VAL:HG11	1.91	0.53
4:C:237:ARG:HD2	4:C:239:PHE:CE1	2.43	0.53
2:B:2465:C:O2'	2:B:2466:C:H5'	2.09	0.53
2:B:2484:G:N2	13:M:118:LYS:HG2	2.23	0.53
31:I:12:VAL:HG13	31:I:41:PHE:CE2	2.44	0.53
2:B:1225:G:P	18:R:90:ARG:HB2	2.48	0.53
2:B:2080:A:H2'	2:B:2081:U:C6	2.44	0.53
2:B:1645:G:H5''	2:B:1646:C:H5'	1.91	0.53
5:D:153:GLY:O	5:D:155:VAL:HG23	2.08	0.53
2:B:1439:A:C5	2:B:1552:A:N6	2.76	0.53
18:R:40:MET:O	18:R:54:VAL:HG22	2.08	0.53
4:C:56:GLY:HA3	4:C:214:GLY:N	2.23	0.53
2:B:51:G:O2'	2:B:118:A:N6	2.41	0.53
2:B:1684:G:H2'	2:B:1685:C:C6	2.44	0.53
5:D:33:ARG:HG2	5:D:36:GLN:HG3	1.91	0.53
12:L:124:GLY:H	12:L:142:ILE:CA	2.17	0.53
10:J:43:GLU:C	17:Q:63:ARG:HH12	2.12	0.53
2:B:162:U:H5	2:B:165:A:N1	2.07	0.53
9:H:124:THR:HG23	9:H:128:HIS:CE1	2.43	0.53
17:Q:50:ARG:HA	17:Q:50:ARG:CZ	2.39	0.53
2:B:364:C:H2'	2:B:365:U:C5	2.44	0.53
19:S:41:LYS:O	19:S:41:LYS:HG3	2.07	0.53
9:H:108:VAL:C	9:H:110:VAL:H	2.11	0.53
2:B:2103:C:H3'	2:B:2104:C:C2	2.43	0.53
2:B:2250:G:H21	2:B:2496:C:H4'	1.73	0.53
13:M:60:GLN:NE2	13:M:61:GLY:H	2.06	0.53
2:B:1681:G:H2'	2:B:1757:A:N1	2.23	0.53
2:B:2063:C:O2	2:B:2450:A:N1	2.42	0.53
2:B:2191:A:H2'	2:B:2192:U:C6	2.44	0.53
30:4:19:ARG:HB3	30:4:19:ARG:HH11	1.74	0.53
30:4:9:LYS:O	30:4:25:VAL:HA	2.08	0.53
4:C:168:GLY:C	4:C:170:TYR:H	2.11	0.53
4:C:171:VAL:HA	4:C:183:VAL:O	2.08	0.53
2:B:997:G:H2'	2:B:997:G:N3	2.24	0.53
13:M:5:LYS:O	13:M:6:ARG:HB2	2.08	0.53
14:N:33:ILE:HG12	14:N:114:GLU:HB3	1.91	0.53
15:O:25:ARG:NH2	15:O:94:ARG:HH12	2.05	0.53
10:J:13:ARG:HG2	10:J:53:TYR:CE1	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:18:ARG:NH2	12:L:21:ARG:HD3	2.23	0.53
2:B:2027:G:O2'	2:B:2028:U:H5'	2.08	0.53
11:K:77:ILE:HD11	11:K:105:ARG:NH1	2.23	0.53
8:G:36:LEU:HB2	8:G:40:VAL:HG21	1.90	0.53
2:B:96:C:H4'	23:X:41:HIS:CE1	2.44	0.53
2:B:2052:A:H5'	5:D:146:ILE:O	2.08	0.53
5:D:23:PRO:HA	5:D:189:VAL:O	2.08	0.53
22:W:9:THR:OG1	22:W:10:ARG:N	2.41	0.53
2:B:1219:U:H2'	2:B:1220:G:C8	2.43	0.53
2:B:845:A:N1	2:B:847:U:H1'	2.23	0.53
2:B:2852:G:H2'	2:B:2853:C:H6	1.74	0.53
2:B:1116:G:H21	13:M:136:MET:HE1	1.72	0.53
8:G:58:ALA:C	8:G:60:GLY:H	2.11	0.53
8:G:142:GLN:HG3	8:G:143:VAL:N	2.22	0.53
4:C:142:ASN:HA	4:C:153:LEU:CD2	2.39	0.53
4:C:155:ARG:NH2	4:C:155:ARG:HG2	2.23	0.53
5:D:7:LYS:HA	5:D:26:VAL:HA	1.91	0.53
9:H:4:ILE:HD13	9:H:37:VAL:HG13	1.90	0.53
6:E:169:VAL:HG22	6:E:170:ARG:N	2.24	0.53
6:E:2:GLU:O	6:E:3:LEU:HB2	2.09	0.53
2:B:1825:U:H5'	4:C:244:VAL:HG21	1.89	0.53
20:T:61:LEU:HB2	20:T:82:LYS:HB3	1.91	0.53
19:S:71:VAL:HA	19:S:107:VAL:HG12	1.91	0.53
7:F:98:PHE:HA	7:F:101:ARG:HE	1.74	0.53
2:B:2893:A:H5''	2:B:2894:G:H5'	1.90	0.53
14:N:29:VAL:HG21	14:N:75:ILE:HB	1.91	0.53
2:B:565:C:O2'	2:B:566:U:H5'	2.08	0.53
13:M:81:ARG:HG3	13:M:82:MET:N	2.23	0.53
2:B:2234:G:O2'	2:B:2235:G:H5'	2.09	0.53
2:B:2840:C:H2'	2:B:2841:C:H6	1.72	0.53
2:B:1681:G:N3	2:B:1762:A:H2'	2.24	0.53
1:A:33:G:O2'	1:A:34:A:H5'	2.09	0.53
2:B:1810:A:H2'	2:B:1811:G:O4'	2.08	0.53
13:M:51:ARG:HH11	13:M:51:ARG:HG2	1.73	0.53
2:B:1099:G:H5'	31:I:4:VAL:CA	2.39	0.53
4:C:61:TYR:CZ	4:C:63:ILE:HD11	2.43	0.53
16:P:23:ASP:O	16:P:25:VAL:HG23	2.09	0.53
12:L:90:VAL:N	12:L:122:VAL:HG22	2.23	0.53
4:C:231:HIS:ND1	4:C:242:HIS:HA	2.24	0.53
2:B:453:A:H4'	2:B:472:A:H61	1.72	0.53
2:B:589:U:H2'	2:B:590:A:H8	1.74	0.53
6:E:152:GLU:O	6:E:153:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:258:SER:H	4:C:261:ARG:NH1	2.06	0.53
12:L:17:LYS:HG3	12:L:18:ARG:N	2.24	0.53
4:C:224:MET:CB	4:C:233:GLY:H	2.22	0.53
18:R:32:THR:CB	18:R:66:HIS:HB3	2.39	0.53
13:M:9:PHE:CD2	13:M:11:LYS:HG2	2.44	0.53
2:B:364:C:H2'	2:B:365:U:C6	2.42	0.53
14:N:103:ARG:O	14:N:104:ALA:HB3	2.09	0.53
1:A:51:G:C2'	1:A:52:A:H5''	2.39	0.53
2:B:340:A:H2'	2:B:341:C:O4'	2.09	0.53
23:X:31:GLN:HA	23:X:31:GLN:HE21	1.74	0.53
2:B:1013:C:H2'	2:B:1014:A:C8	2.44	0.53
4:C:38:LYS:HG3	4:C:39:SER:H	1.74	0.53
23:X:52:ARG:O	23:X:56:LEU:HD12	2.09	0.53
2:B:1915:U:H2'	2:B:1916:A:O4'	2.08	0.53
2:B:2869:G:H2'	2:B:2870:C:C6	2.44	0.53
2:B:1528:A:H2'	2:B:1529:G:O4'	2.09	0.53
2:B:729:G:H2'	2:B:1775:U:H1'	1.91	0.53
2:B:1270:C:H5''	2:B:1271:G:O5'	2.09	0.53
31:I:10:LEU:HD12	31:I:10:LEU:O	2.09	0.53
4:C:145:MET:HG2	4:C:152:GLN:HG2	1.91	0.53
4:C:136:VAL:HA	4:C:165:ALA:CB	2.39	0.53
4:C:163:ILE:HG12	4:C:173:LEU:CD2	2.38	0.53
5:D:77:ARG:HB2	5:D:77:ARG:CZ	2.38	0.53
5:D:79:LEU:HG	5:D:80:TRP:H	1.74	0.53
13:M:71:LYS:HA	13:M:71:LYS:NZ	2.23	0.53
6:E:46:GLN:HG3	6:E:49:ARG:NH2	2.23	0.53
2:B:920:A:H2'	2:B:921:C:H6	1.74	0.53
6:E:144:GLU:HA	6:E:166:LYS:HE2	1.90	0.53
6:E:149:ILE:HD12	6:E:152:GLU:OE2	2.09	0.53
31:I:83:ALA:HB3	31:I:85:ILE:HG12	1.91	0.53
18:R:78:ARG:HH21	18:R:90:ARG:HH21	1.57	0.53
2:B:2787:C:O2'	2:B:2788:C:H5'	2.09	0.53
2:B:125:A:H4'	2:B:126:A:OP2	2.08	0.53
2:B:1509:A:H5'	2:B:1510:G:H5'	1.90	0.53
23:X:16:THR:OG1	23:X:19:LEU:HB3	2.09	0.53
2:B:1061:U:H4'	2:B:1070:A:O3'	2.09	0.53
2:B:1771:C:H2'	2:B:1772:A:H8	1.73	0.53
14:N:67:PHE:O	14:N:71:ARG:HA	2.09	0.53
31:I:99:LYS:H	31:I:99:LYS:HD3	1.72	0.53
2:B:1923:U:H2'	2:B:1924:C:C6	2.44	0.53
4:C:268:ARG:O	4:C:269:ARG:HB2	2.08	0.52
11:K:70:ARG:O	11:K:71:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:4:U:H2'	2:B:5:A:H8	1.73	0.52
2:B:1801:A:H5'	2:B:2203:U:O2'	2.08	0.52
21:U:96:LYS:O	21:U:97:SER:HB3	2.08	0.52
3:V:9:ARG:HE	3:V:20:LEU:HD11	1.74	0.52
23:X:30:MET:CE	23:X:30:MET:H	2.22	0.52
2:B:1488:C:O2'	2:B:1489:C:H5'	2.09	0.52
2:B:1219:U:H2'	2:B:1220:G:H8	1.74	0.52
21:U:51:LEU:C	21:U:53:GLN:H	2.12	0.52
2:B:2669:G:H2'	2:B:2670:A:C8	2.44	0.52
2:B:131:A:H2'	2:B:132:G:H8	1.75	0.52
2:B:2443:C:O2'	2:B:2444:G:H5'	2.09	0.52
2:B:611:C:H2'	2:B:612:G:O4'	2.10	0.52
30:4:15:LYS:HZ3	30:4:22:VAL:HG12	1.74	0.52
5:D:34:VAL:HG11	5:D:50:VAL:HG23	1.90	0.52
16:P:25:VAL:O	16:P:47:ILE:HG13	2.09	0.52
10:J:4:PHE:HB2	10:J:5:THR:O	2.08	0.52
10:J:7:LYS:HD2	10:J:45:THR:OG1	2.09	0.52
18:R:6:GLN:N	18:R:6:GLN:HE21	2.07	0.52
2:B:2266:A:H4'	2:B:2267:A:C2	2.45	0.52
15:O:18:LEU:HD13	22:W:76:ARG:NE	2.25	0.52
11:K:53:LYS:O	11:K:56:ASP:HB2	2.09	0.52
8:G:14:VAL:HG12	8:G:16:VAL:HG23	1.92	0.52
23:X:44:LYS:HE3	23:X:47:ARG:HB2	1.91	0.52
20:T:34:VAL:HG22	20:T:35:ALA:H	1.73	0.52
21:U:60:LYS:HE3	21:U:61:GLU:H	1.74	0.52
2:B:359:G:H2'	2:B:360:U:H5'	1.89	0.52
1:A:47:C:H5'	15:O:97:PHE:CZ	2.43	0.52
29:3:37:THR:HA	29:3:40:LYS:HD3	1.91	0.52
2:B:300:A:H2'	2:B:334:C:O2'	2.09	0.52
2:B:2101:A:O2'	2:B:2102:G:H5'	2.09	0.52
2:B:204:A:H4'	2:B:205:G:OP1	2.08	0.52
2:B:2281:A:N6	22:W:3:LYS:HE3	2.24	0.52
2:B:553:G:O2'	2:B:554:U:H5'	2.09	0.52
2:B:988:A:OP1	24:Y:10:ARG:HB3	2.09	0.52
9:H:54:LEU:HA	9:H:57:LYS:HD2	1.92	0.52
7:F:18:GLU:C	7:F:20:ASN:H	2.12	0.52
2:B:1545:A:H2'	2:B:1546:G:O4'	2.09	0.52
16:P:108:ARG:H	16:P:108:ARG:HD3	1.73	0.52
19:S:48:LYS:O	19:S:52:GLU:HG3	2.08	0.52
2:B:587:C:H4'	2:B:588:U:C6	2.44	0.52
5:D:172:VAL:HB	5:D:175:LEU:HD11	1.91	0.52
15:O:25:ARG:HE	15:O:94:ARG:HH22	1.58	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:64:VAL:HG21	10:J:90:GLU:OE1	2.08	0.52
19:S:25:ARG:HD2	19:S:26:GLY:H	1.73	0.52
2:B:1450:G:N2	2:B:1452:G:N1	2.56	0.52
11:K:86:LEU:HB2	11:K:95:ILE:HG23	1.91	0.52
11:K:107:LEU:HG	11:K:115:ILE:HG21	1.89	0.52
23:X:25:GLN:NE2	23:X:29:ARG:HH21	2.08	0.52
12:L:109:LYS:HE2	12:L:126:ARG:NH1	2.24	0.52
21:U:59:GLU:HG2	21:U:60:LYS:N	2.24	0.52
2:B:2285:C:C5	27:1:7:LYS:HE3	2.44	0.52
6:E:76:PRO:HA	6:E:82:GLY:O	2.10	0.52
29:3:2:LYS:HB2	29:3:2:LYS:HZ2	1.72	0.52
2:B:1259:G:H2'	2:B:1260:A:C8	2.44	0.52
2:B:189:G:H1	2:B:205:G:HO2'	1.56	0.52
2:B:1737:G:H5'	2:B:1738:G:OP2	2.09	0.52
2:B:2839:G:H2'	2:B:2840:C:C6	2.43	0.52
22:W:28:GLU:N	22:W:61:LYS:HB2	2.25	0.52
2:B:575:A:O2'	2:B:576:U:H5'	2.09	0.52
2:B:1641:A:H2'	2:B:1642:G:O4'	2.09	0.52
30:4:34:LYS:HE3	30:4:36:ARG:HH12	1.74	0.52
6:E:164:LEU:HD13	6:E:164:LEU:C	2.30	0.52
4:C:94:LEU:HD12	4:C:95:TYR:N	2.24	0.52
27:1:47:ILE:O	27:1:48:TYR:HB2	2.10	0.52
12:L:90:VAL:CG1	12:L:122:VAL:HG11	2.39	0.52
2:B:851:C:H2'	2:B:852:U:H6	1.75	0.52
10:J:41:LYS:HG2	17:Q:63:ARG:CZ	2.39	0.52
9:H:82:SER:C	9:H:83:LYS:HD2	2.30	0.52
2:B:860:U:O2'	2:B:2267:A:H4'	2.09	0.52
22:W:38:ARG:HE	22:W:40:ARG:CA	2.22	0.52
21:U:57:ILE:HD13	21:U:58:VAL:N	2.24	0.52
21:U:41:VAL:HG23	21:U:57:ILE:HG23	1.91	0.52
2:B:2086:U:H2'	2:B:2087:G:C8	2.44	0.52
25:Z:47:LYS:HB2	25:Z:51:VAL:HG11	1.90	0.52
7:F:59:ILE:HD13	7:F:59:ILE:O	2.10	0.52
2:B:2032:G:H21	5:D:150:GLN:HB3	1.74	0.52
11:K:98:ARG:HB3	11:K:98:ARG:NH1	2.23	0.52
7:F:39:VAL:HG13	7:F:84:ILE:HG12	1.91	0.52
26:0:36:LYS:CB	26:0:41:HIS:HA	2.40	0.52
8:G:67:ALA:O	8:G:71:LEU:HG	2.09	0.52
12:L:107:PHE:CE2	12:L:126:ARG:HB2	2.44	0.52
2:B:363:G:H2'	2:B:364:C:C6	2.45	0.52
2:B:2794:C:H2'	2:B:2795:C:C6	2.44	0.52
2:B:1000:A:H2'	2:B:1001:A:C8	2.45	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:877:A:N6	2:B:898:C:H2'	2.24	0.52
2:B:2471:A:O2'	2:B:2472:G:O5'	2.28	0.52
2:B:299:A:H2'	2:B:300:A:C8	2.44	0.52
6:E:21:ARG:HB3	6:E:21:ARG:HH11	1.74	0.52
2:B:90:U:H2'	2:B:91:A:C2	2.44	0.52
16:P:6:GLN:N	16:P:6:GLN:OE1	2.35	0.52
1:A:13:G:H2'	1:A:14:U:H5''	1.92	0.52
1:A:43:C:H4'	7:F:62:GLN:HE21	1.75	0.52
2:B:1292:G:H2'	2:B:1293:C:C6	2.44	0.52
4:C:201:LEU:HD23	4:C:201:LEU:O	2.10	0.52
5:D:6:GLY:HA2	5:D:199:SER:O	2.09	0.52
5:D:79:LEU:CG	5:D:80:TRP:H	2.23	0.52
2:B:2331:G:H2'	2:B:2332:C:C6	2.45	0.52
22:W:55:ASP:CG	22:W:56:HIS:H	2.13	0.52
6:E:141:MET:HG3	6:E:185:LYS:HE3	1.90	0.52
7:F:133:GLU:HG2	7:F:149:ARG:O	2.08	0.52
7:F:37:MET:HB2	7:F:86:CYS:SG	2.49	0.52
3:V:9:ARG:NE	3:V:20:LEU:HD11	2.25	0.52
2:B:26:G:OP2	19:S:80:PRO:HG3	2.10	0.52
15:O:104:GLN:O	15:O:107:ALA:HB3	2.09	0.52
2:B:1517:G:O2'	2:B:1518:C:H5'	2.08	0.52
8:G:145:ALA:HA	8:G:148:ARG:HG2	1.92	0.52
2:B:1487:U:H2'	2:B:1488:C:H6	1.75	0.52
2:B:2471:A:O2'	2:B:2472:G:C8	2.55	0.52
2:B:2860:A:O5'	2:B:2860:A:H8	1.92	0.52
2:B:1374:G:H2'	2:B:1375:U:C6	2.45	0.52
2:B:2645:G:H4'	2:B:2732:G:H2'	1.92	0.52
2:B:1854:A:N6	2:B:1888:G:H1'	2.25	0.52
7:F:172:PHE:N	7:F:172:PHE:CD1	2.75	0.52
22:W:54:ARG:HD2	22:W:54:ARG:N	2.24	0.52
3:V:43:ASP:O	3:V:47:VAL:HG23	2.10	0.52
2:B:721:A:H2'	2:B:722:A:C8	2.45	0.52
2:B:1264:A:H5'	26:O:7:PRO:HG3	1.92	0.52
2:B:1474:U:H2'	2:B:1475:G:H5'	1.91	0.52
2:B:1821:A:H5'	4:C:155:ARG:HH21	1.72	0.52
2:B:2849:U:H4'	2:B:2850:A:C5'	2.39	0.52
2:B:250:G:H4'	12:L:60:ARG:HE	1.74	0.52
1:A:7:G:H4'	15:O:29:HIS:NE2	2.25	0.52
10:J:19:ASP:CB	10:J:21:THR:HG23	2.39	0.52
10:J:58:ASN:C	10:J:60:ASP:H	2.13	0.52
6:E:138:LEU:HD22	6:E:187:VAL:HG11	1.92	0.52
7:F:147:ARG:O	7:F:147:ARG:HD2	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:O:41:HIS:HB3	26:O:46:GLY:HA3	1.90	0.52
2:B:1657:U:OP2	5:D:141:ARG:HG3	2.09	0.52
27:1:27:ARG:HE	27:1:27:ARG:H	1.56	0.52
2:B:2751:G:H5'	8:G:3:VAL:CG2	2.38	0.52
21:U:49:PRO:HG2	21:U:50:ALA:H	1.75	0.52
2:B:1816:C:C5	4:C:62:ARG:HD2	2.45	0.52
2:B:2729:G:H2'	2:B:2730:C:H6	1.75	0.52
10:J:21:THR:HG22	10:J:58:ASN:OD1	2.10	0.52
2:B:64:A:H4'	20:T:76:ARG:HD2	1.92	0.52
2:B:64:A:H5''	20:T:76:ARG:HG3	1.92	0.52
6:E:112:LEU:O	6:E:114:ARG:N	2.42	0.52
12:L:35:HIS:CE1	18:R:84:ARG:HB3	2.45	0.52
2:B:2641:G:OP1	10:J:78:THR:HG22	2.10	0.52
2:B:1082:U:C2	2:B:1086:A:C6	2.97	0.52
8:G:17:LYS:O	8:G:23:ILE:HA	2.09	0.52
19:S:76:VAL:HG12	19:S:103:ILE:HA	1.91	0.52
13:M:81:ARG:HG3	13:M:82:MET:HG2	1.92	0.52
2:B:230:G:H2'	2:B:231:A:C8	2.45	0.52
2:B:197:A:H4'	2:B:2069:G:OP2	2.10	0.52
2:B:1633:G:O2'	2:B:1634:A:H5''	2.09	0.52
2:B:1819:A:OP1	4:C:155:ARG:HB3	2.10	0.52
4:C:163:ILE:HG22	4:C:164:VAL:N	2.25	0.52
4:C:32:LEU:HD13	4:C:36:ASN:HD21	1.75	0.52
16:P:52:ARG:N	16:P:60:VAL:HG11	2.25	0.52
9:H:3:VAL:CB	9:H:37:VAL:HG11	2.38	0.52
9:H:3:VAL:HB	9:H:37:VAL:HG21	1.90	0.52
15:O:72:ALA:HA	15:O:109:ALA:HB2	1.91	0.52
10:J:44:TYR:OH	10:J:49:ASP:O	2.28	0.52
10:J:69:ARG:HA	10:J:90:GLU:OE1	2.10	0.52
18:R:64:VAL:CG2	18:R:100:GLY:HA2	2.40	0.52
4:C:51:ARG:HD3	4:C:51:ARG:O	2.10	0.52
4:C:29:PHE:CE1	4:C:81:GLU:HG3	2.45	0.52
2:B:27:G:H1'	2:B:513:A:N6	2.25	0.52
23:X:18:LEU:HA	23:X:22:LEU:HD12	1.92	0.52
20:T:34:VAL:HG21	20:T:43:ILE:CD1	2.35	0.52
2:B:2440:C:H5'	33:B:3241:HOH:O	2.10	0.52
2:B:1821:A:H2'	2:B:1822:C:C6	2.45	0.52
11:K:80:ASP:OD1	16:P:70:GLU:HB3	2.10	0.52
12:L:123:ARG:HB2	12:L:142:ILE:HA	1.92	0.52
13:M:18:ARG:H	13:M:18:ARG:HD3	1.75	0.52
15:O:13:ARG:O	15:O:17:LYS:HB2	2.10	0.52
2:B:2377:A:C2	15:O:92:PHE:HE1	2.28	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:458:G:H22	2:B:469:G:H2'	1.72	0.52
6:E:47:LYS:HD2	6:E:52:VAL:CG2	2.39	0.52
25:Z:48:GLN:NE2	25:Z:49:ARG:HB3	2.24	0.52
19:S:20:VAL:HB	19:S:43:ALA:HB1	1.90	0.52
2:B:1082:U:H2'	2:B:1083:U:O4'	2.10	0.52
26:O:41:HIS:CD2	26:O:42:ILE:HG22	2.44	0.52
8:G:148:ARG:HH21	8:G:153:PRO:HD2	1.74	0.52
9:H:99:ILE:HG13	9:H:100:ALA:N	2.24	0.52
2:B:2626:C:O2'	2:B:2627:G:H5'	2.10	0.52
13:M:37:GLY:H	13:M:97:GLN:HG3	1.74	0.52
1:A:14:U:H4'	1:A:70:C:O2	2.09	0.52
11:K:34:GLY:O	11:K:37:ASP:HB2	2.10	0.52
28:2:3:ARG:HE	28:2:4:THR:H	1.56	0.52
12:L:44:GLY:HA2	12:L:47:ARG:HH21	1.75	0.52
2:B:41:C:O2'	2:B:42:A:H5'	2.10	0.52
2:B:55:G:H2'	2:B:56:A:H8	1.74	0.52
2:B:2740:A:H2'	2:B:2741:A:C8	2.45	0.52
4:C:140:VAL:HG11	4:C:163:ILE:CD1	2.39	0.52
4:C:87:SER:O	4:C:157:ALA:HB2	2.10	0.52
2:B:2360:G:O2'	12:L:61:LEU:HD11	2.10	0.52
1:A:115:A:H2'	1:A:116:G:O4'	2.10	0.52
4:C:208:GLY:HA2	4:C:212:TRP:HB2	1.91	0.52
5:D:56:LYS:HD3	5:D:59:ARG:HD3	1.92	0.52
2:B:2678:C:H2'	2:B:2679:A:H8	1.75	0.52
16:P:7:LEU:HA	16:P:10:GLU:CG	2.40	0.52
2:B:1175:A:C2'	2:B:1176:U:H5'	2.39	0.52
2:B:1412:U:H2'	2:B:1413:A:H8	1.73	0.52
2:B:968:C:O2'	2:B:969:G:H5'	2.10	0.52
9:H:75:LEU:N	9:H:75:LEU:HD23	2.25	0.52
2:B:1139:G:O2'	2:B:1140:C:H5'	2.10	0.52
2:B:1724:G:H2'	2:B:1725:U:H6	1.75	0.52
2:B:1904:G:H1'	2:B:1927:A:N1	2.25	0.52
30:4:32:LYS:O	30:4:34:LYS:HG2	2.11	0.51
14:N:2:ARG:HG2	14:N:3:HIS:N	2.24	0.51
11:K:76:VAL:HB	16:P:74:GLN:HE21	1.75	0.51
12:L:90:VAL:O	12:L:90:VAL:HG13	2.10	0.51
15:O:26:LEU:O	15:O:27:VAL:HG13	2.09	0.51
15:O:38:GLN:HG3	15:O:40:ILE:HD13	1.92	0.51
2:B:455:C:C4	2:B:472:A:H2'	2.45	0.51
7:F:65:LEU:O	7:F:66:ILE:HB	2.10	0.51
4:C:27:LYS:HB3	4:C:81:GLU:HA	1.92	0.51
2:B:1791:A:H5'	4:C:207:ALA:HA	1.91	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1657:U:OP1	5:D:141:ARG:HB2	2.09	0.51
2:B:1844:C:H5'	4:C:251:THR:HB	1.92	0.51
2:B:1591:A:H2'	2:B:1592:C:C6	2.45	0.51
2:B:1571:A:H2'	2:B:1572:A:C8	2.45	0.51
2:B:1948:G:O2'	2:B:1949:G:H5'	2.10	0.51
2:B:16:C:O3'	26:O:10:SER:HA	2.09	0.51
15:O:7:ARG:O	15:O:11:ALA:HB2	2.08	0.51
2:B:1751:U:H2'	2:B:1752:C:C6	2.46	0.51
30:4:25:VAL:O	30:4:35:GLN:HB2	2.10	0.51
2:B:2821:A:H2'	2:B:2822:G:C8	2.45	0.51
5:D:174:SER:HB2	5:D:208:LYS:HD3	1.92	0.51
13:M:71:LYS:HZ1	13:M:91:TYR:HB3	1.75	0.51
9:H:3:VAL:O	9:H:18:GLN:HA	2.10	0.51
12:L:63:LYS:HG3	12:L:64:PHE:N	2.25	0.51
10:J:123:LYS:N	10:J:123:LYS:HD2	2.25	0.51
2:B:396:G:H2'	2:B:397:U:H6	1.75	0.51
2:B:2025:C:H2'	2:B:2026:U:H6	1.75	0.51
23:X:47:ARG:HA	23:X:50:VAL:HG23	1.91	0.51
8:G:36:LEU:HD21	8:G:71:LEU:HD21	1.92	0.51
5:D:42:ASN:O	5:D:43:ASP:CB	2.58	0.51
5:D:14:ILE:HD12	16:P:78:PRO:HG2	1.91	0.51
5:D:11:MET:O	5:D:23:PRO:HD2	2.10	0.51
8:G:102:ILE:O	8:G:102:ILE:HG23	2.11	0.51
2:B:1405:U:H2'	2:B:1406:U:H6	1.75	0.51
2:B:2259:U:O2'	2:B:2260:C:H5'	2.10	0.51
2:B:1592:C:H2'	2:B:1593:A:H8	1.75	0.51
2:B:417:C:H2'	2:B:418:C:H6	1.74	0.51
2:B:1785:A:H2'	2:B:1787:A:N7	2.26	0.51
24:Y:10:ARG:O	24:Y:11:SER:HB3	2.11	0.51
2:B:91:A:H1'	2:B:92:U:C6	2.45	0.51
5:D:138:LEU:CD1	5:D:142:VAL:HB	2.40	0.51
2:B:222:A:N6	2:B:232:G:H1'	2.25	0.51
2:B:110:G:O2'	2:B:111:A:H5'	2.09	0.51
2:B:1400:U:H2'	2:B:1401:G:C8	2.45	0.51
2:B:1692:U:H2'	2:B:1694:C:C5	2.45	0.51
2:B:1754:A:OP1	16:P:95:LYS:HB2	2.11	0.51
5:D:99:GLU:HA	5:D:99:GLU:OE1	2.10	0.51
30:4:34:LYS:HE2	30:4:36:ARG:NH2	2.21	0.51
4:C:155:ARG:O	4:C:155:ARG:HD3	2.11	0.51
2:B:2683:C:H2'	2:B:2684:U:C6	2.46	0.51
5:D:197:THR:HG23	5:D:198:GLY:N	2.21	0.51
15:O:36:TYR:O	15:O:37:ALA:HB2	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:100:VAL:HG22	10:J:101:ILE:N	2.26	0.51
10:J:36:LEU:HD13	10:J:54:ILE:HD12	1.92	0.51
10:J:7:LYS:HD2	10:J:45:THR:CB	2.40	0.51
6:E:148:ILE:HA	6:E:185:LYS:O	2.11	0.51
4:C:243:PRO:HA	4:C:249:VAL:CG2	2.33	0.51
4:C:257:ARG:N	4:C:261:ARG:CZ	2.74	0.51
20:T:47:VAL:HG13	20:T:48:GLN:N	2.26	0.51
31:I:125:THR:O	31:I:129:GLU:HG3	2.10	0.51
25:Z:21:VAL:O	25:Z:22:MET:HG2	2.10	0.51
6:E:132:LYS:H	6:E:134:LEU:HD11	1.74	0.51
2:B:1441:G:H2'	2:B:1442:U:H6	1.74	0.51
13:M:54:THR:O	13:M:55:ARG:C	2.48	0.51
11:K:16:ALA:H	11:K:47:ILE:CG1	2.24	0.51
15:O:4:LYS:O	15:O:7:ARG:HG2	2.11	0.51
2:B:2665:A:C2'	2:B:2666:C:H5'	2.40	0.51
13:M:62:LYS:HB2	13:M:104:GLU:CD	2.31	0.51
2:B:1599:U:H2'	2:B:1600:C:C6	2.45	0.51
3:V:82:TYR:HE1	3:V:83:LYS:HE3	1.75	0.51
2:B:441:U:H2'	2:B:442:G:C8	2.44	0.51
8:G:72:ASN:O	8:G:76:ILE:HG13	2.09	0.51
30:4:13:ASN:N	30:4:13:ASN:ND2	2.58	0.51
2:B:582:A:H2'	2:B:583:G:H8	1.75	0.51
4:C:131:MET:HE1	4:C:173:LEU:HD11	1.91	0.51
16:P:80:VAL:O	16:P:80:VAL:CG1	2.58	0.51
17:Q:63:ARG:O	17:Q:66:ALA:HB3	2.10	0.51
6:E:192:ALA:HB1	6:E:199:MET:CG	2.40	0.51
19:S:24:ILE:HG23	19:S:35:ILE:HG21	1.92	0.51
11:K:43:ILE:HD12	11:K:43:ILE:N	2.25	0.51
4:C:237:ARG:HD2	4:C:239:PHE:HE1	1.75	0.51
2:B:1196:C:H2'	2:B:1197:G:H8	1.75	0.51
2:B:2184:A:H2'	2:B:2185:U:C5	2.45	0.51
2:B:2250:G:N7	13:M:82:MET:SD	2.83	0.51
2:B:967:U:H2'	2:B:968:C:C6	2.45	0.51
15:O:86:GLY:C	15:O:88:LYS:H	2.12	0.51
2:B:212:G:H2'	2:B:213:A:C8	2.46	0.51
10:J:94:ALA:CB	10:J:95:ARG:HH21	2.24	0.51
2:B:2654:A:N1	2:B:2665:A:H5''	2.26	0.51
2:B:2216:G:H2'	2:B:2217:G:C8	2.45	0.51
2:B:1099:G:N7	31:I:3:LYS:HD3	2.24	0.51
2:B:488:G:H1'	2:B:492:A:H62	1.76	0.51
2:B:2537:U:H2'	2:B:2538:C:H6	1.76	0.51
4:C:171:VAL:HG23	4:C:182:LYS:HZ3	1.76	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:25:ARG:O	15:O:26:LEU:HD12	2.10	0.51
22:W:24:ARG:HB3	22:W:59:PHE:CD2	2.46	0.51
6:E:189:THR:CG2	6:E:194:LYS:HD3	2.40	0.51
6:E:188:MET:CE	6:E:190:ALA:HB2	2.41	0.51
2:B:2090:A:H2'	25:Z:49:ARG:NH2	2.25	0.51
20:T:31:VAL:O	20:T:32:LEU:HB2	2.09	0.51
4:C:27:LYS:HG2	4:C:81:GLU:N	2.24	0.51
7:F:45:ASP:O	7:F:46:LYS:HG3	2.09	0.51
26:O:36:LYS:HB2	26:O:41:HIS:ND1	2.24	0.51
2:B:1656:C:H2'	2:B:1657:U:H6	1.76	0.51
21:U:28:LEU:HD13	21:U:31:GLY:N	2.25	0.51
21:U:38:ILE:HG13	21:U:62:ALA:HB1	1.93	0.51
13:M:52:ALA:O	13:M:55:ARG:HB2	2.09	0.51
2:B:286:U:H2'	2:B:287:G:C8	2.46	0.51
2:B:17:G:H2'	2:B:18:U:C6	2.46	0.51
7:F:162:ASP:O	7:F:166:ARG:HG3	2.10	0.51
2:B:2247:A:H2'	2:B:2248:C:H6	1.75	0.51
1:A:65:U:O2'	1:A:66:A:H5'	2.10	0.51
29:3:15:LYS:HD3	29:3:19:GLY:HA2	1.93	0.51
28:2:33:ARG:NE	28:2:33:ARG:HA	2.26	0.51
2:B:215:G:H4'	2:B:216:A:OP1	2.10	0.51
15:O:35:ILE:CG1	15:O:106:LEU:HD12	2.40	0.51
10:J:136:GLN:N	10:J:137:PRO:CD	2.74	0.51
10:J:49:ASP:O	10:J:50:THR:CB	2.58	0.51
6:E:115:GLN:HG2	6:E:184:ASP:O	2.10	0.51
22:W:60:ALA:HB3	22:W:80:SER:CA	2.34	0.51
8:G:10:VAL:HG21	8:G:44:HIS:NE2	2.26	0.51
12:L:25:SER:C	12:L:27:LEU:N	2.63	0.51
18:R:86:GLN:HE21	18:R:87:GLN:NE2	2.09	0.51
12:L:55:MET:CB	12:L:56:PRO:HD3	2.38	0.51
14:N:86:ARG:CZ	14:N:117:ASP:HA	2.41	0.51
17:Q:87:VAL:CB	18:R:54:VAL:HG11	2.39	0.51
8:G:29:ASN:CB	8:G:78:VAL:HA	2.41	0.51
2:B:20:C:O2'	2:B:21:A:H5'	2.10	0.51
11:K:18:ARG:HB2	11:K:45:GLU:CG	2.41	0.51
17:Q:116:LEU:N	17:Q:116:LEU:HD22	2.25	0.51
11:K:61:VAL:CG1	11:K:87:LEU:HD11	2.41	0.51
2:B:2153:C:H2'	2:B:2154:A:C8	2.45	0.51
2:B:2439:A:C8	2:B:2586:U:H4'	2.46	0.51
2:B:2862:G:H2'	2:B:2863:C:C6	2.45	0.51
3:V:53:LYS:NZ	3:V:53:LYS:HB3	2.26	0.51
2:B:448:U:H5	2:B:583:G:N2	2.08	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:155:ARG:O	4:C:157:ALA:N	2.43	0.51
2:B:1817:G:H5''	4:C:86:ARG:NH1	2.25	0.51
5:D:15:PHE:HA	16:P:79:VAL:CG1	2.38	0.51
10:J:45:THR:O	10:J:47:HIS:N	2.42	0.51
10:J:7:LYS:HG3	10:J:48:VAL:CG2	2.41	0.51
2:B:2412:A:H2'	2:B:2413:G:O4'	2.09	0.51
6:E:187:VAL:HG23	6:E:188:MET:H	1.75	0.51
4:C:29:PHE:HE1	4:C:81:GLU:HG3	1.75	0.51
7:F:40:GLY:C	7:F:41:GLU:HG3	2.30	0.51
9:H:86:ASP:OD2	9:H:89:LYS:HB2	2.11	0.51
4:C:251:THR:O	4:C:252:LYS:CB	2.56	0.51
27:1:27:ARG:HB2	27:1:31:GLU:HB3	1.93	0.51
21:U:8:ASP:O	21:U:10:VAL:N	2.44	0.51
2:B:832:U:H2'	2:B:833:A:C8	2.46	0.51
14:N:63:ARG:HA	14:N:80:PHE:CZ	2.45	0.51
2:B:416:U:H2'	2:B:417:C:C6	2.45	0.51
2:B:811:U:H3'	12:L:32:GLY:O	2.11	0.51
2:B:1583:A:H4'	2:B:1585:C:N3	2.26	0.51
2:B:765:C:H2'	2:B:766:U:C6	2.46	0.51
2:B:1227:G:OP2	17:Q:15:LYS:HE2	2.11	0.51
2:B:2563:U:H5''	11:K:27:GLY:H	1.76	0.51
2:B:1444:G:H2'	2:B:1445:G:C8	2.45	0.51
7:F:78:ILE:HG23	7:F:82:TYR:HD1	1.75	0.51
2:B:1099:G:OP2	31:I:3:LYS:HA	2.11	0.51
24:Y:37:ARG:HA	24:Y:37:ARG:CZ	2.41	0.51
10:J:98:GLU:H	10:J:98:GLU:CD	2.14	0.51
2:B:946:C:H2'	2:B:947:A:C8	2.41	0.51
6:E:1:MET:HG3	6:E:18:THR:HG1	1.74	0.51
20:T:55:VAL:HG22	20:T:56:GLU:N	2.23	0.51
2:B:1790:C:O2'	4:C:207:ALA:HB2	2.11	0.51
23:X:44:LYS:HG3	23:X:47:ARG:CB	2.40	0.51
12:L:108:ALA:O	12:L:109:LYS:HB2	2.11	0.51
11:K:20:MET:HG2	11:K:21:CYS:O	2.11	0.51
2:B:138:U:H2'	2:B:140:C:C6	2.46	0.51
1:A:48:U:H2'	1:A:49:C:H6	1.74	0.51
8:G:148:ARG:HA	8:G:161:VAL:CG1	2.41	0.51
2:B:2472:G:H2'	2:B:2475:C:H42	1.76	0.51
2:B:310:A:H5''	21:U:14:THR:HG21	1.91	0.51
7:F:120:SER:HB3	7:F:127:TYR:CE1	2.45	0.51
2:B:152:A:H2'	2:B:153:U:C6	2.46	0.51
16:P:83:ILE:HG12	16:P:85:VAL:HG23	1.92	0.51
2:B:2379:G:H2'	2:B:2380:C:C6	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:156:SER:O	4:C:158:GLY:N	2.43	0.51
12:L:118:THR:O	12:L:120:VAL:HG23	2.11	0.51
12:L:142:ILE:O	12:L:142:ILE:HD13	2.11	0.51
2:B:871:U:H2'	2:B:872:U:C6	2.46	0.51
2:B:1021:A:H61	2:B:1142:A:H61	1.59	0.51
9:H:19:VAL:HG22	9:H:20:ASN:H	1.75	0.51
10:J:23:LYS:O	10:J:25:LEU:HD13	2.10	0.51
17:Q:69:ARG:CB	17:Q:69:ARG:HH11	2.22	0.51
22:W:42:THR:HG22	22:W:67:LYS:O	2.10	0.51
13:M:100:LYS:O	13:M:101:VAL:HG23	2.11	0.51
13:M:33:LEU:CD1	13:M:124:LEU:HD22	2.34	0.51
12:L:107:PHE:HE2	12:L:126:ARG:HB2	1.76	0.51
12:L:77:ILE:HD13	12:L:110:VAL:CA	2.41	0.51
12:L:77:ILE:H	12:L:77:ILE:HD12	1.76	0.51
18:R:80:ARG:HB3	18:R:86:GLN:O	2.11	0.51
2:B:2783:U:H2'	2:B:2784:U:H6	1.76	0.51
2:B:585:G:H2'	2:B:1251:C:H42	1.76	0.51
2:B:2257:U:H5'	22:W:5:ALA:CB	2.40	0.51
2:B:718:A:H3'	2:B:719:C:H6	1.76	0.51
29:3:33:THR:HG23	29:3:36:ALA:CB	2.41	0.51
2:B:794:A:H2'	2:B:795:C:H6	1.71	0.51
11:K:16:ALA:H	11:K:47:ILE:HG13	1.75	0.51
2:B:2299:U:H2'	2:B:2300:C:H6	1.76	0.51
2:B:1287:A:O2'	2:B:1288:G:H5'	2.10	0.51
4:C:136:VAL:C	4:C:165:ALA:HA	2.32	0.51
2:B:1022:G:N2	2:B:1142:A:N1	2.59	0.51
2:B:851:C:H2'	2:B:852:U:C6	2.46	0.51
22:W:57:THR:HG22	22:W:77:LYS:HG2	1.93	0.51
22:W:76:ARG:C	22:W:78:PHE:H	2.14	0.51
3:V:21:ARG:NH2	3:V:87:GLN:HB3	2.26	0.51
12:L:19:LEU:O	12:L:21:ARG:HG2	2.09	0.51
2:B:863:A:H2'	2:B:864:G:H8	1.76	0.51
2:B:2649:C:H2'	2:B:2650:U:H6	1.76	0.51
2:B:1328:A:H2'	2:B:1330:C:C4	2.46	0.51
12:L:41:ARG:HA	12:L:41:ARG:CZ	2.41	0.51
2:B:1213:A:N6	2:B:1236:G:H1'	2.26	0.51
2:B:331:C:O2'	2:B:332:A:H5'	2.11	0.51
13:M:83:GLY:O	13:M:84:LYS:HB2	2.10	0.51
2:B:277:G:H2'	2:B:277:G:N3	2.26	0.51
4:C:182:LYS:HG3	4:C:264:LYS:NZ	2.26	0.50
2:B:2683:C:OP1	16:P:55:HIS:CG	2.64	0.50
5:D:17:GLU:HG3	16:P:80:VAL:CG1	2.36	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:5:LYS:HE3	13:M:6:ARG:N	2.26	0.50
24:Y:6:ILE:O	24:Y:34:THR:HA	2.11	0.50
15:O:40:ILE:HD13	15:O:40:ILE:N	2.25	0.50
10:J:121:LYS:HE3	10:J:121:LYS:N	2.26	0.50
10:J:41:LYS:HZ3	10:J:44:TYR:C	2.15	0.50
6:E:115:GLN:HG3	6:E:184:ASP:OD2	2.10	0.50
12:L:18:ARG:HG3	12:L:18:ARG:HH11	1.76	0.50
10:J:77:HIS:N	10:J:85:LYS:HE3	2.25	0.50
13:M:133:LYS:CD	13:M:134:THR:H	2.21	0.50
14:N:72:ASP:OD1	14:N:74:GLU:HB3	2.11	0.50
17:Q:25:GLY:O	17:Q:29:ARG:HG2	2.11	0.50
11:K:35:VAL:HG21	11:K:69:VAL:CG2	2.41	0.50
7:F:172:PHE:O	7:F:173:ASP:C	2.49	0.50
2:B:2306:C:H3'	2:B:2307:G:H5''	1.91	0.50
2:B:30:G:H2'	2:B:31:C:H6	1.76	0.50
19:S:81:SER:HB3	19:S:99:ARG:HA	1.93	0.50
2:B:419:U:H2'	2:B:420:C:C6	2.46	0.50
2:B:1939:U:O2	2:B:1967:C:H4'	2.11	0.50
2:B:1400:U:H2'	2:B:1401:G:H8	1.77	0.50
2:B:441:U:H2'	2:B:442:G:H8	1.77	0.50
6:E:176:ASP:HB3	6:E:179:SER:OG	2.11	0.50
12:L:99:ASN:C	12:L:100:ILE:HG13	2.31	0.50
2:B:1274:A:N3	2:B:1297:C:H1'	2.26	0.50
5:D:5:VAL:HG21	5:D:28:GLU:HA	1.92	0.50
16:P:47:ILE:CG2	16:P:63:ILE:HG23	2.34	0.50
12:L:61:LEU:N	12:L:62:PRO:CD	2.73	0.50
2:B:458:G:H2'	2:B:469:G:O6	2.11	0.50
18:R:10:LYS:HD3	18:R:41:ILE:HD11	1.93	0.50
22:W:33:GLY:O	22:W:66:VAL:HG23	2.11	0.50
4:C:53:ILE:HD13	4:C:218:THR:HG23	1.92	0.50
2:B:2313:C:H2'	2:B:2314:A:H8	1.75	0.50
11:K:13:ASN:HD21	11:K:98:ARG:HG2	1.76	0.50
8:G:171:LYS:HZ3	8:G:174:LYS:N	2.05	0.50
8:G:17:LYS:HZ2	8:G:18:ILE:C	2.14	0.50
17:Q:3:VAL:O	17:Q:4:LYS:HG2	2.11	0.50
20:T:2:ILE:HG12	20:T:3:ARG:N	2.26	0.50
2:B:1251:C:O2'	2:B:1252:G:H3'	2.11	0.50
29:3:40:LYS:O	29:3:43:LEU:HD13	2.11	0.50
4:C:123:ILE:HG12	4:C:135:PRO:HD2	1.93	0.50
2:B:1317:G:H2'	2:B:1318:U:O4'	2.11	0.50
2:B:197:A:N6	2:B:2430:A:H2'	2.26	0.50
2:B:943:A:P	12:L:40:SER:HA	2.51	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1573:G:H2'	2:B:1574:C:H5'	1.92	0.50
2:B:1820:U:H5	4:C:176:ARG:HH21	1.58	0.50
4:C:76:VAL:O	4:C:93:VAL:HA	2.11	0.50
13:M:2:LEU:HB2	13:M:47:GLU:HG2	1.92	0.50
14:N:42:LYS:HZ2	14:N:45:ARG:HD2	1.77	0.50
22:W:67:LYS:HE3	22:W:71:LYS:H	1.77	0.50
4:C:244:VAL:HG23	4:C:249:VAL:HG21	1.93	0.50
25:Z:11:GLU:H	25:Z:27:THR:CG2	2.25	0.50
2:B:2314:A:H2'	2:B:2315:G:H8	1.77	0.50
1:A:75:G:N1	1:A:102:G:N2	2.60	0.50
11:K:110:GLU:HA	11:K:113:MET:HE3	1.94	0.50
2:B:1083:U:H2'	2:B:1085:A:OP2	2.11	0.50
2:B:636:G:OP2	12:L:126:ARG:NH2	2.44	0.50
12:L:108:ALA:O	12:L:109:LYS:HD3	2.12	0.50
28:2:34:ARG:HD2	28:2:43:THR:OG1	2.12	0.50
5:D:14:ILE:HD12	16:P:78:PRO:CG	2.41	0.50
12:L:54:GLN:HB2	12:L:57:LEU:HD23	1.94	0.50
2:B:1138:G:H2'	2:B:1139:G:O4'	2.12	0.50
2:B:1287:A:H3'	2:B:1288:G:N2	2.26	0.50
2:B:1143:A:N6	10:J:27:ARG:HA	2.26	0.50
2:B:291:G:O2'	2:B:292:U:H5'	2.11	0.50
2:B:99:U:O4'	2:B:99:U:O2	2.27	0.50
30:4:26:ILE:HB	30:4:35:GLN:HB2	1.92	0.50
5:D:116:LYS:HB2	5:D:165:MET:CG	2.39	0.50
5:D:32:ASN:HD22	5:D:94:GLN:HA	1.77	0.50
16:P:25:VAL:C	16:P:27:VAL:H	2.14	0.50
12:L:124:GLY:H	12:L:142:ILE:HB	1.76	0.50
14:N:97:ILE:HG23	14:N:113:ILE:CD1	2.41	0.50
10:J:25:LEU:HD13	10:J:25:LEU:N	2.26	0.50
2:B:919:U:O5'	2:B:919:U:H6	1.95	0.50
21:U:9:GLU:HB2	21:U:71:ILE:CB	2.33	0.50
31:I:72:THR:HG23	31:I:112:LYS:HD2	1.93	0.50
10:J:78:THR:OG1	10:J:79:GLY:N	2.44	0.50
5:D:157:LYS:NZ	10:J:80:HIS:HA	2.26	0.50
26:0:42:ILE:O	26:0:46:GLY:N	2.45	0.50
8:G:175:LYS:HG2	8:G:176:LYS:N	2.23	0.50
2:B:2511:U:H2'	2:B:2512:C:O4'	2.11	0.50
23:X:27:ASN:C	23:X:29:ARG:H	2.15	0.50
2:B:359:G:C2'	2:B:360:U:H5'	2.41	0.50
8:G:102:ILE:HG22	8:G:114:HIS:O	2.12	0.50
9:H:115:VAL:HB	9:H:132:PHE:CD1	2.44	0.50
2:B:345:A:H1'	2:B:346:A:H2	1.74	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2140:G:H2'	2:B:2141:G:O4'	2.11	0.50
16:P:92:ARG:HD3	16:P:110:LYS:O	2.12	0.50
2:B:2657:A:H2'	2:B:2658:C:O4'	2.12	0.50
13:M:107:GLY:O	13:M:109:PRO:HD2	2.12	0.50
9:H:46:PHE:O	9:H:49:ALA:HB3	2.11	0.50
30:4:30:GLU:O	30:4:32:LYS:N	2.45	0.50
4:C:115:ILE:O	4:C:116:GLN:HG3	2.12	0.50
2:B:2636:C:H2'	2:B:2637:U:C6	2.46	0.50
5:D:15:PHE:O	5:D:16:THR:HG22	2.12	0.50
5:D:173:GLN:HG3	5:D:208:LYS:CB	2.42	0.50
16:P:52:ARG:CB	16:P:60:VAL:HG11	2.42	0.50
16:P:86:LYS:NZ	16:P:88:ARG:HD3	2.26	0.50
13:M:93:VAL:O	13:M:94:ALA:HB3	2.12	0.50
4:C:50:THR:C	4:C:51:ARG:HG3	2.32	0.50
4:C:43:ASN:OD1	4:C:51:ARG:HD3	2.12	0.50
26:0:41:HIS:HB3	26:0:47:TYR:H	1.77	0.50
2:B:2885:G:O6	26:0:30:ASP:HB3	2.12	0.50
11:K:41:ILE:HG23	11:K:42:THR:N	2.27	0.50
12:L:34:GLY:HA3	18:R:85:LYS:CD	2.41	0.50
21:U:94:PHE:CD2	21:U:100:GLU:HG2	2.47	0.50
2:B:2800:A:H2'	2:B:2801:G:C1'	2.42	0.50
2:B:437:U:O2'	2:B:438:G:H5'	2.11	0.50
2:B:1444:G:H2'	2:B:1445:G:H8	1.75	0.50
2:B:1889:A:H2'	2:B:1890:A:C8	2.47	0.50
2:B:1334:G:O2'	2:B:1335:C:H5'	2.12	0.50
2:B:274:C:H2'	2:B:275:C:O4'	2.12	0.50
2:B:1560:G:H2'	2:B:1561:C:C6	2.47	0.50
27:1:46:VAL:HG22	27:1:47:ILE:N	2.22	0.50
9:H:35:LYS:HB2	9:H:35:LYS:NZ	2.27	0.50
2:B:1006:C:H4'	10:J:34:ARG:HG3	1.93	0.50
15:O:35:ILE:O	15:O:35:ILE:HG13	2.10	0.50
2:B:2386:A:H4'	22:W:38:ARG:HD3	1.93	0.50
6:E:123:LYS:NZ	6:E:158:PHE:HA	2.27	0.50
25:Z:3:LYS:HZ3	25:Z:29:GLY:HA3	1.76	0.50
20:T:31:VAL:HG23	20:T:83:ALA:O	2.11	0.50
4:C:28:PRO:HB2	4:C:79:ARG:HE	1.76	0.50
13:M:50:ARG:HH21	13:M:101:VAL:HG22	1.74	0.50
11:K:99:ILE:CD1	11:K:115:ILE:HG13	2.41	0.50
26:0:26:SER:HB2	26:0:38:LEU:CD2	2.35	0.50
12:L:110:VAL:HG23	12:L:131:ALA:CB	2.41	0.50
2:B:547:A:H62	2:B:548:G:H21	1.59	0.50
7:F:98:PHE:HB2	7:F:101:ARG:HE	1.77	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:87:PHE:CD1	14:N:90:ARG:HB2	2.46	0.50
2:B:521:U:H2'	2:B:522:A:H8	1.75	0.50
9:H:135:HIS:HB3	9:H:138:VAL:HB	1.92	0.50
2:B:1300:G:H4'	2:B:1301:A:O5'	2.11	0.50
2:B:171:U:H2'	2:B:172:A:H8	1.75	0.50
2:B:153:U:H2'	2:B:154:U:C6	2.46	0.50
2:B:466:A:H2'	2:B:467:G:H5'	1.93	0.50
2:B:528:A:C2	2:B:2042:A:H2'	2.47	0.50
2:B:2698:U:H2'	2:B:2699:C:C6	2.47	0.50
2:B:2207:C:H2'	2:B:2208:C:H6	1.77	0.50
2:B:1739:A:H2'	2:B:1740:G:C8	2.47	0.50
14:N:3:HIS:HB3	14:N:4:ARG:NH1	2.26	0.50
9:H:3:VAL:CG1	9:H:37:VAL:HG11	2.42	0.50
2:B:1024:G:C3'	2:B:1025:G:H5''	2.30	0.50
10:J:131:ASN:C	10:J:133:ALA:N	2.65	0.50
6:E:15:SER:O	6:E:17:THR:HG22	2.12	0.50
7:F:56:LEU:HD13	7:F:88:VAL:CG2	2.40	0.50
8:G:37:ASN:N	8:G:40:VAL:HG21	2.26	0.50
2:B:96:C:OP1	23:X:41:HIS:HB2	2.12	0.50
2:B:11:C:H2'	2:B:12:U:C5'	2.39	0.50
2:B:241:A:O3'	2:B:242:G:H4'	2.12	0.50
23:X:12:GLU:HG2	23:X:12:GLU:O	2.11	0.50
13:M:62:LYS:H	13:M:104:GLU:CB	2.25	0.50
2:B:1599:U:H2'	2:B:1600:C:H6	1.76	0.50
6:E:28:VAL:O	6:E:32:VAL:HG23	2.12	0.50
2:B:1979:U:O2'	2:B:1980:G:H5'	2.11	0.50
2:B:1480:C:H2'	2:B:1481:U:C6	2.47	0.50
2:B:581:C:H2'	2:B:582:A:C8	2.47	0.50
4:C:164:VAL:O	4:C:165:ALA:HB3	2.12	0.50
2:B:2730:C:H4'	5:D:174:SER:O	2.11	0.50
5:D:173:GLN:HE21	5:D:208:LYS:HB2	1.77	0.50
2:B:1654:A:C4'	14:N:1:MET:N	2.73	0.50
16:P:112:ARG:HE	16:P:112:ARG:H	1.60	0.50
24:Y:1:ALA:CB	24:Y:37:ARG:HB3	2.42	0.50
18:R:4:VAL:C	18:R:41:ILE:HG21	2.32	0.50
6:E:4:VAL:HA	6:E:14:VAL:CG2	2.40	0.50
18:R:11:GLN:C	18:R:21:ARG:HH22	2.15	0.50
7:F:113:PHE:O	7:F:114:ARG:HD3	2.12	0.50
5:D:1:MET:HB2	5:D:81:GLU:OE1	2.12	0.50
28:2:13:ASN:OD1	28:2:17:GLY:HA3	2.12	0.50
5:D:148:GLN:N	5:D:148:GLN:CD	2.65	0.50
14:N:110:MET:O	14:N:111:ALA:HB3	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:51:LEU:CG	21:U:53:GLN:HB3	2.42	0.50
23:X:17:GLU:HA	23:X:21:LEU:CB	2.42	0.50
7:F:103:ILE:HG21	7:F:173:ASP:HA	1.93	0.50
2:B:2734:A:C2'	2:B:2735:G:H5'	2.42	0.50
15:O:90:VAL:HG22	15:O:116:GLN:OE1	2.11	0.50
31:I:4:VAL:HG22	31:I:5:GLN:N	2.27	0.50
30:4:14:CYS:HA	30:4:27:CYS:HA	1.93	0.50
4:C:156:SER:O	4:C:194:VAL:O	2.30	0.50
5:D:202:ILE:CG2	5:D:204:LYS:HE3	2.41	0.50
5:D:48:ILE:CA	5:D:80:TRP:HB3	2.39	0.50
5:D:96:ILE:HG22	5:D:97:SER:H	1.76	0.50
16:P:25:VAL:HG22	16:P:89:GLY:O	2.12	0.50
13:M:95:LEU:H	13:M:95:LEU:HD23	1.76	0.50
6:E:154:ASP:OD2	6:E:156:ASN:HB3	2.12	0.50
6:E:15:SER:HB3	6:E:196:VAL:HG22	1.94	0.50
19:S:2:GLU:HB2	19:S:108:SER:CA	2.40	0.50
13:M:35:ALA:HA	13:M:124:LEU:HB3	1.93	0.50
31:I:89:SER:OG	31:I:92:PRO:HA	2.12	0.50
12:L:77:ILE:HG12	12:L:109:LYS:C	2.31	0.50
2:B:532:A:H5'	17:Q:27:ARG:NH2	2.26	0.50
28:2:35:ARG:HH22	28:2:43:THR:H	1.58	0.50
14:N:101:GLY:O	14:N:102:PHE:HB3	2.12	0.50
21:U:39:ASN:CB	21:U:59:GLU:HB2	2.42	0.50
2:B:1439:A:N7	2:B:1440:U:C6	2.80	0.50
2:B:1547:C:H2'	2:B:1548:A:H8	1.75	0.50
20:T:62:VAL:O	20:T:63:VAL:HB	2.11	0.50
2:B:2261:C:H3'	22:W:13:ARG:HD3	1.94	0.50
19:S:27:LYS:N	19:S:70:LYS:O	2.45	0.50
2:B:729:G:H4'	2:B:763:G:H5'	1.92	0.50
15:O:41:ALA:HB3	15:O:46:GLU:HA	1.93	0.50
23:X:46:VAL:O	23:X:49:ASP:HB3	2.11	0.50
2:B:1184:U:O2'	2:B:1185:G:H5'	2.12	0.50
2:B:2491:U:H5''	2:B:2570:G:C5'	2.42	0.50
16:P:52:ARG:HA	16:P:98:TYR:OH	2.11	0.49
16:P:52:ARG:HG2	16:P:53:GLY:N	2.27	0.49
16:P:59:THR:HA	16:P:76:HIS:HA	1.94	0.49
9:H:1:MET:C	9:H:21:VAL:HG22	2.33	0.49
21:U:42:LYS:H	21:U:57:ILE:CD1	2.11	0.49
2:B:64:A:H5'	20:T:76:ARG:NH1	2.11	0.49
2:B:1812:U:H2'	2:B:1813:G:H8	1.77	0.49
20:T:14:PRO:HA	20:T:32:LEU:HD23	1.94	0.49
19:S:42:LYS:O	19:S:45:VAL:HG13	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:33:ILE:HG22	7:F:34:THR:O	2.12	0.49
31:I:108:ILE:HG22	31:I:128:ILE:CD1	2.41	0.49
18:R:69:GLY:CA	18:R:97:LYS:H	2.19	0.49
31:I:92:PRO:O	31:I:93:ASN:HB2	2.12	0.49
2:B:2531:A:OP1	8:G:176:LYS:HA	2.11	0.49
2:B:2512:C:H2'	2:B:2513:A:O4'	2.11	0.49
5:D:153:GLY:C	5:D:155:VAL:N	2.64	0.49
27:1:22:THR:O	27:1:23:THR:C	2.49	0.49
2:B:181:A:H2'	2:B:182:A:C8	2.47	0.49
9:H:135:HIS:CG	9:H:136:SER:N	2.79	0.49
25:Z:36:VAL:HG12	25:Z:42:PRO:HB3	1.94	0.49
1:A:43:C:C4'	7:F:62:GLN:HE21	2.25	0.49
2:B:1750:G:H2'	2:B:1751:U:C6	2.47	0.49
2:B:311:A:H1'	2:B:332:A:O4'	2.12	0.49
2:B:1211:C:H4'	2:B:1212:G:OP2	2.12	0.49
2:B:1215:G:O2'	2:B:1216:G:H5'	2.12	0.49
1:A:78:A:H4'	13:M:22:GLN:CD	2.32	0.49
2:B:1541:C:H2'	2:B:1542:U:C6	2.47	0.49
2:B:910:A:H62	13:M:15:GLY:HA3	1.78	0.49
13:M:40:ARG:NH1	13:M:40:ARG:HG3	2.26	0.49
18:R:92:TRP:CE3	18:R:93:PHE:N	2.80	0.49
2:B:2900:A:H2'	2:B:2901:C:H6	1.76	0.49
10:J:51:GLY:N	10:J:118:MET:HE2	2.26	0.49
10:J:49:ASP:O	10:J:50:THR:HB	2.12	0.49
2:B:458:G:O2'	2:B:469:G:N1	2.44	0.49
6:E:47:LYS:C	6:E:49:ARG:HG2	2.32	0.49
18:R:4:VAL:HA	18:R:43:ASN:CG	2.32	0.49
22:W:47:GLY:HA2	22:W:71:LYS:C	2.31	0.49
6:E:199:MET:HG3	6:E:200:LEU:H	1.77	0.49
21:U:27:VAL:CB	21:U:33:VAL:HG22	2.42	0.49
31:I:52:LEU:HD22	31:I:81:LYS:HD3	1.93	0.49
2:B:2032:G:N3	5:D:150:GLN:HG2	2.27	0.49
11:K:63:VAL:HG22	11:K:107:LEU:HD21	1.94	0.49
26:0:32:THR:OG1	26:0:33:SER:N	2.43	0.49
23:X:41:HIS:CE1	23:X:43:LEU:HB2	2.48	0.49
20:T:38:ALA:O	20:T:42:GLU:HB3	2.13	0.49
27:1:24:LYS:CB	27:1:24:LYS:HZ3	2.23	0.49
12:L:115:GLU:C	12:L:116:VAL:HG13	2.32	0.49
2:B:2076:U:O2	2:B:2076:U:O4'	2.29	0.49
2:B:2461:A:H2'	2:B:2462:C:H6	1.76	0.49
2:B:2250:G:N2	2:B:2496:C:H4'	2.27	0.49
2:B:651:G:H5'	29:3:18:LYS:HE3	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:127:LYS:HD3	13:M:128:THR:N	2.25	0.49
23:X:55:THR:C	23:X:57:LEU:H	2.14	0.49
2:B:2840:C:H2'	2:B:2841:C:C6	2.47	0.49
2:B:943:A:OP1	12:L:41:ARG:HG2	2.12	0.49
2:B:685:A:H1'	2:B:688:U:O4	2.12	0.49
2:B:1311:G:H21	2:B:1603:A:H62	1.60	0.49
2:B:2712:C:H3'	2:B:2714:G:H5''	1.94	0.49
2:B:866:A:H61	2:B:913:U:C1'	2.24	0.49
25:Z:66:ILE:HB	25:Z:67:PRO:HD3	1.94	0.49
2:B:1100:C:H41	31:I:1:ALA:H1	1.60	0.49
2:B:1098:A:C2'	31:I:3:LYS:O	2.53	0.49
5:D:172:VAL:O	5:D:173:GLN:HB3	2.12	0.49
16:P:54:LEU:HD22	16:P:55:HIS:N	2.28	0.49
9:H:4:ILE:CD1	9:H:37:VAL:HG13	2.42	0.49
2:B:2393:U:O2'	2:B:2394:C:H5'	2.12	0.49
12:L:64:PHE:CZ	29:3:7:ARG:NH2	2.80	0.49
24:Y:7:THR:HA	24:Y:34:THR:HB	1.93	0.49
15:O:25:ARG:HB3	15:O:94:ARG:HH22	1.77	0.49
10:J:25:LEU:HD11	10:J:63:ALA:H	1.77	0.49
20:T:47:VAL:HG22	20:T:53:VAL:HG11	1.94	0.49
20:T:53:VAL:HB	20:T:87:LEU:HD21	1.93	0.49
1:A:94:A:OP1	3:V:19:ARG:HD3	2.10	0.49
5:D:154:LYS:C	5:D:156:PHE:H	2.16	0.49
5:D:154:LYS:O	5:D:156:PHE:N	2.45	0.49
2:B:2879:A:H4'	2:B:2880:C:OP1	2.11	0.49
5:D:1:MET:HB2	5:D:81:GLU:CD	2.33	0.49
17:Q:32:ARG:NH1	17:Q:33:VAL:HG22	2.27	0.49
14:N:10:LEU:HG	14:N:11:ASN:H	1.76	0.49
9:H:72:ILE:O	9:H:72:ILE:HG22	2.12	0.49
2:B:2278:A:H62	22:W:10:ARG:C	2.16	0.49
21:U:46:LYS:HD3	21:U:53:GLN:HA	1.94	0.49
2:B:2888:C:H2'	2:B:2889:C:H6	1.76	0.49
13:M:24:THR:HG22	13:M:25:ASP:N	2.27	0.49
2:B:506:G:H4'	2:B:509:C:O2	2.12	0.49
9:H:109:GLU:O	9:H:109:GLU:HG3	2.12	0.49
8:G:168:VAL:HG13	8:G:168:VAL:O	2.12	0.49
12:L:118:THR:HG23	12:L:137:ALA:O	2.12	0.49
10:J:120:ARG:N	10:J:121:LYS:HZ2	2.10	0.49
10:J:47:HIS:ND1	10:J:47:HIS:O	2.46	0.49
22:W:45:HIS:HB2	22:W:66:VAL:HG11	1.93	0.49
6:E:116:ASP:O	6:E:117:ARG:HD2	2.13	0.49
25:Z:1:MET:HA	25:Z:9:TYR:CD1	2.46	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:50:ARG:NE	13:M:53:MET:HE2	2.27	0.49
25:Z:54:GLY:O	25:Z:57:VAL:HB	2.12	0.49
5:D:59:ARG:HE	5:D:63:PRO:CB	2.25	0.49
2:B:1857:G:HO2'	2:B:1858:A:H8	1.57	0.49
2:B:483:A:H2'	2:B:484:C:C5'	2.42	0.49
2:B:643:A:H61	2:B:2370:G:H1'	1.77	0.49
2:B:609:A:H2'	2:B:610:C:O4'	2.13	0.49
2:B:288:U:H2'	2:B:289:G:H8	1.77	0.49
2:B:1313:U:H4'	2:B:1332:G:H4'	1.94	0.49
2:B:679:C:O2'	2:B:680:C:H5'	2.12	0.49
2:B:1661:G:O2'	2:B:1662:U:H5'	2.13	0.49
2:B:737:C:O2'	2:B:738:G:H5'	2.11	0.49
2:B:2728:U:H5'	11:K:70:ARG:NH2	2.27	0.49
12:L:141:LYS:O	12:L:142:ILE:HD13	2.11	0.49
14:N:112:TYR:O	14:N:113:ILE:HB	2.13	0.49
2:B:853:C:H2'	2:B:854:C:H6	1.78	0.49
10:J:102:GLU:O	10:J:105:VAL:HG12	2.12	0.49
22:W:18:LYS:HE3	22:W:20:LEU:HD23	1.95	0.49
22:W:43:LYS:O	22:W:44:PHE:CB	2.55	0.49
4:C:205:GLY:O	4:C:206:LYS:HG2	2.12	0.49
19:S:64:ALA:HA	19:S:110:ARG:HE	1.77	0.49
2:B:160:A:H2'	2:B:161:A:C8	2.48	0.49
2:B:372:G:N7	25:Z:57:VAL:HG21	2.27	0.49
2:B:1057:A:C8	2:B:1086:A:C8	3.00	0.49
5:D:81:GLU:O	5:D:82:PHE:HB2	2.13	0.49
8:G:29:ASN:HB2	8:G:78:VAL:HA	1.93	0.49
2:B:2732:G:H3'	2:B:2733:A:H5'	1.94	0.49
31:I:121:ILE:CD1	31:I:121:ILE:H	2.25	0.49
16:P:38:ARG:HD2	16:P:39:LEU:N	2.27	0.49
14:N:73:ASN:HA	14:N:76:VAL:CG1	2.42	0.49
2:B:1682:G:H2'	2:B:1683:U:C6	2.47	0.49
2:B:765:C:H2'	2:B:766:U:H6	1.77	0.49
6:E:176:ASP:OD1	6:E:177:PRO:HD2	2.12	0.49
2:B:1564:C:O2'	2:B:1565:C:H5'	2.12	0.49
2:B:2455:G:H2'	2:B:2456:C:C6	2.47	0.49
2:B:1359:A:H2'	2:B:1360:G:O4'	2.13	0.49
2:B:1360:G:H2'	2:B:1361:G:H5'	1.94	0.49
7:F:110:ILE:HG22	7:F:111:ARG:N	2.27	0.49
2:B:1477:A:H2'	2:B:1478:G:O4'	2.13	0.49
5:D:116:LYS:O	14:N:2:ARG:HB3	2.12	0.49
5:D:96:ILE:HG22	5:D:97:SER:N	2.27	0.49
13:M:71:LYS:NZ	13:M:91:TYR:HB3	2.28	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:229:HIS:CE1	4:C:231:HIS:HE2	2.31	0.49
10:J:38:GLY:O	10:J:41:LYS:HD3	2.13	0.49
6:E:85:PHE:O	6:E:86:ALA:HB2	2.13	0.49
18:R:4:VAL:HG11	18:R:46:GLU:OE2	2.12	0.49
2:B:2364:C:H2'	2:B:2365:G:O4'	2.12	0.49
15:O:18:LEU:HD22	22:W:76:ARG:NH2	2.27	0.49
20:T:92:ASN:O	20:T:93:LEU:HD12	2.11	0.49
7:F:133:GLU:O	7:F:134:GLN:HB2	2.13	0.49
2:B:973:A:H1'	2:B:1188:U:C6	2.47	0.49
5:D:139:SER:O	5:D:141:ARG:N	2.46	0.49
17:Q:4:LYS:O	17:Q:5:ARG:C	2.50	0.49
2:B:533:G:N3	17:Q:40:LYS:HG2	2.27	0.49
7:F:98:PHE:CB	7:F:101:ARG:HE	2.26	0.49
24:Y:15:ARG:HD2	24:Y:53:MET:SD	2.53	0.49
17:Q:29:ARG:CA	17:Q:29:ARG:HH11	2.25	0.49
2:B:1531:C:H2'	2:B:1532:A:H8	1.78	0.49
1:A:63:C:H2'	1:A:64:G:C8	2.48	0.49
17:Q:109:VAL:O	17:Q:113:LYS:HB2	2.12	0.49
2:B:2776:A:H4'	2:B:2777:G:O5'	2.13	0.49
2:B:581:C:H2'	2:B:582:A:H8	1.77	0.49
2:B:582:A:H2'	2:B:583:G:C8	2.48	0.49
4:C:104:LEU:HD13	4:C:156:SER:HB3	1.94	0.49
16:P:25:VAL:O	16:P:47:ILE:HB	2.13	0.49
16:P:70:GLU:CD	16:P:71:ARG:HE	2.14	0.49
24:Y:2:LYS:CE	24:Y:27:GLY:H	2.25	0.49
2:B:2293:G:OP1	15:O:13:ARG:NH2	2.46	0.49
2:B:921:C:H2'	2:B:922:C:C6	2.47	0.49
6:E:153:LEU:HG	6:E:173:THR:HB	1.94	0.49
5:D:157:LYS:HZ2	10:J:80:HIS:HA	1.77	0.49
31:I:19:PRO:HB2	31:I:22:PRO:HD2	1.93	0.49
12:L:33:ARG:HB3	18:R:85:LYS:HZ3	1.78	0.49
2:B:2256:G:H2'	2:B:2257:U:H6	1.77	0.49
2:B:969:G:OP1	24:Y:17:PRO:HG3	2.13	0.49
2:B:1722:A:H61	2:B:1738:G:H1'	1.77	0.49
31:I:37:PHE:CZ	31:I:58:ILE:HD11	2.47	0.49
2:B:2586:U:H2'	2:B:2587:A:C8	2.47	0.49
2:B:2207:C:H2'	2:B:2208:C:C6	2.46	0.49
24:Y:30:ARG:N	24:Y:30:ARG:HD2	2.28	0.49
2:B:1081:U:C5'	31:I:126:ARG:NH1	2.54	0.49
19:S:7:HIS:NE2	19:S:46:LEU:HD13	2.28	0.49
5:D:117:GLY:O	5:D:164:GLN:HA	2.13	0.49
13:M:40:ARG:HG3	13:M:40:ARG:HH11	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:37:VAL:HG12	9:H:38:PRO:N	2.28	0.49
2:B:2360:G:O2'	12:L:61:LEU:HD21	2.12	0.49
10:J:99:ARG:O	10:J:103:ILE:HG12	2.12	0.49
10:J:15:TRP:HB2	10:J:139:VAL:CA	2.27	0.49
9:H:94:ILE:CG2	9:H:122:LEU:HG	2.39	0.49
6:E:187:VAL:HG23	6:E:188:MET:N	2.28	0.49
2:B:1060:U:H5	31:I:131:THR:CG2	2.19	0.49
2:B:335:C:O2'	2:B:336:C:H5'	2.13	0.49
4:C:222:THR:HG21	4:C:238:ASN:ND2	2.27	0.49
2:B:2748:A:H1'	8:G:66:THR:OG1	2.13	0.49
17:Q:36:GLN:O	17:Q:39:ILE:HG23	2.13	0.49
2:B:95:A:O2'	23:X:43:LEU:HD23	2.12	0.49
21:U:34:ILE:HG21	21:U:61:GLU:HA	1.94	0.49
2:B:898:C:C2'	2:B:899:A:H5''	2.43	0.49
2:B:2752:C:H2'	2:B:2753:A:O4'	2.13	0.49
2:B:526:A:N6	2:B:2626:C:C4'	2.75	0.49
2:B:2834:G:H1'	2:B:2883:A:H61	1.76	0.49
2:B:383:C:H41	2:B:385:C:H2'	1.76	0.49
2:B:1878:G:H2'	2:B:1879:C:H6	1.76	0.49
2:B:2776:A:H4'	2:B:2777:G:C5'	2.43	0.49
2:B:572:A:H5''	2:B:573:U:OP2	2.13	0.49
2:B:2758:A:C2'	2:B:2759:G:H5'	2.43	0.49
4:C:30:ALA:N	4:C:31:PRO:HD3	2.27	0.49
12:L:91:ASP:O	12:L:93:ASN:N	2.46	0.49
2:B:2518:A:H2'	2:B:2518:A:N3	2.27	0.49
5:D:29:VAL:HG22	5:D:30:GLU:N	2.21	0.49
5:D:32:ASN:O	5:D:34:VAL:HG13	2.13	0.49
13:M:71:LYS:CE	13:M:91:TYR:HB3	2.42	0.49
29:3:51:LYS:HZ2	29:3:51:LYS:HA	1.78	0.49
2:B:1163:G:HO2'	18:R:92:TRP:HH2	1.60	0.49
10:J:4:PHE:CD1	10:J:5:THR:N	2.81	0.49
5:D:156:PHE:CA	10:J:81:ILE:HG21	2.43	0.49
10:J:81:ILE:CG2	10:J:82:GLY:N	2.65	0.49
27:1:49:LYS:NZ	27:1:50:GLU:N	2.61	0.49
7:F:41:GLU:O	7:F:45:ASP:OD2	2.31	0.49
2:B:1791:A:H5''	4:C:211:ARG:HE	1.77	0.49
8:G:10:VAL:O	8:G:10:VAL:HG12	2.13	0.49
20:T:12:ARG:HG2	20:T:13:ALA:H	1.78	0.49
3:V:30:ILE:HB	3:V:38:LEU:HB3	1.94	0.49
13:M:54:THR:O	13:M:57:VAL:N	2.44	0.49
9:H:104:THR:HA	9:H:108:VAL:H	1.77	0.49
2:B:968:C:H2'	2:B:969:G:H8	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:9:ASN:O	11:K:10:VAL:HG13	2.13	0.49
9:H:81:ALA:HA	9:H:147:VAL:O	2.13	0.49
2:B:208:C:H2'	2:B:209:C:H6	1.78	0.49
2:B:1983:G:H4'	2:B:2606:C:H4'	1.95	0.49
2:B:2241:A:H2'	2:B:2242:G:C8	2.48	0.49
7:F:71:LYS:HE2	7:F:72:SER:O	2.13	0.49
2:B:1909:C:H2'	2:B:1910:G:H8	1.76	0.49
13:M:90:GLU:CG	13:M:91:TYR:N	2.76	0.49
15:O:105:ALA:HA	15:O:108:ASP:OD1	2.13	0.49
15:O:25:ARG:HE	15:O:94:ARG:NH1	2.11	0.49
22:W:56:HIS:CD2	22:W:58:LEU:H	2.30	0.49
6:E:146:VAL:HG11	6:E:184:ASP:OD1	2.13	0.49
4:C:208:GLY:HA2	4:C:212:TRP:HB3	1.95	0.49
25:Z:27:THR:OG1	25:Z:28:VAL:N	2.46	0.49
31:I:72:THR:HG23	31:I:112:LYS:NZ	2.28	0.49
10:J:80:HIS:O	10:J:81:ILE:C	2.51	0.49
11:K:105:ARG:O	11:K:108:ARG:HB3	2.12	0.49
2:B:136:G:C2	20:T:3:ARG:CZ	2.96	0.49
2:B:144:A:C2	20:T:3:ARG:CZ	2.96	0.49
5:D:46:ARG:N	5:D:82:PHE:HA	2.28	0.49
7:F:28:PRO:HB2	7:F:168:LEU:CD1	2.41	0.49
4:C:72:GLY:C	4:C:73:ILE:HG13	2.33	0.49
2:B:1547:C:H2'	2:B:1548:A:C8	2.47	0.49
2:B:1549:A:H2'	2:B:1550:C:C6	2.48	0.49
23:X:17:GLU:H	23:X:17:GLU:CD	2.15	0.49
2:B:1723:G:N7	2:B:1737:G:N2	2.60	0.49
2:B:2077:A:O2'	2:B:2078:C:H5'	2.12	0.49
2:B:2839:G:H2'	2:B:2840:C:H6	1.76	0.49
2:B:1424:G:H2'	2:B:1425:G:O4'	2.13	0.49
2:B:491:G:H2'	2:B:492:A:O4'	2.13	0.48
4:C:82:TYR:CD2	4:C:84:PRO:HD3	2.47	0.48
27:I:19:PHE:CD2	27:I:41:VAL:HG22	2.48	0.48
5:D:90:PHE:H	5:D:92:VAL:HG22	1.78	0.48
16:P:90:ALA:N	16:P:112:ARG:NH2	2.58	0.48
16:P:93:LYS:HB3	16:P:96:LEU:HG	1.94	0.48
2:B:848:C:H2'	2:B:849:A:H8	1.78	0.48
15:O:35:ILE:HG12	15:O:106:LEU:HD12	1.95	0.48
1:A:114:C:O2'	15:O:49:VAL:HG23	2.12	0.48
15:O:56:LYS:HE2	15:O:81:ARG:NE	2.07	0.48
6:E:49:ARG:HG3	6:E:52:VAL:CG2	2.43	0.48
4:C:15:VAL:O	4:C:15:VAL:HG22	2.13	0.48
13:M:50:ARG:HE	13:M:53:MET:HE2	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:41:GLU:O	7:F:42:ALA:C	2.51	0.48
7:F:39:VAL:HG13	7:F:84:ILE:CG1	2.43	0.48
2:B:2530:A:H5'	8:G:176:LYS:O	2.13	0.48
2:B:1309:G:H5''	28:2:9:VAL:HG13	1.95	0.48
31:I:45:THR:O	31:I:48:ILE:HG22	2.12	0.48
18:R:86:GLN:O	18:R:87:GLN:HB2	2.11	0.48
8:G:91:VAL:N	8:G:159:LYS:HZ1	2.10	0.48
6:E:137:LYS:HA	6:E:137:LYS:HZ2	1.76	0.48
2:B:2425:A:H5'	2:B:2427:C:O4'	2.13	0.48
2:B:2250:G:H21	2:B:2496:C:C4'	2.25	0.48
23:X:12:GLU:O	23:X:15:ASN:HB3	2.13	0.48
11:K:10:VAL:HG21	11:K:16:ALA:HB1	1.93	0.48
2:B:723:C:H2'	2:B:724:U:H6	1.77	0.48
2:B:1269:A:H2'	2:B:1270:C:C6	2.48	0.48
2:B:699:A:H2'	2:B:700:G:O4'	2.13	0.48
2:B:32:C:O2'	2:B:33:C:H5'	2.13	0.48
19:S:49:LYS:O	19:S:52:GLU:HB2	2.13	0.48
16:P:47:ILE:HD13	16:P:63:ILE:HG21	1.95	0.48
10:J:125:TYR:OH	10:J:134:ALA:HB2	2.13	0.48
17:Q:68:ALA:CB	17:Q:73:ILE:HG21	2.43	0.48
18:R:6:GLN:OE1	18:R:38:VAL:HG22	2.13	0.48
2:B:1133:A:H2	2:B:2038:G:H21	1.61	0.48
2:B:2597:G:H5''	4:C:239:PHE:CB	2.38	0.48
26:O:30:ASP:O	26:O:31:LYS:HB2	2.12	0.48
2:B:632:A:H5''	12:L:69:ARG:HD3	1.95	0.48
2:B:2756:U:H4'	2:B:2757:A:OP1	2.12	0.48
2:B:2756:U:C1'	2:B:2757:A:H5''	2.42	0.48
14:N:86:ARG:HD3	14:N:94:TYR:OH	2.14	0.48
6:E:99:LYS:O	6:E:99:LYS:HD2	2.12	0.48
3:V:29:ILE:O	3:V:91:PHE:HB2	2.14	0.48
2:B:1107:G:O2'	2:B:1108:U:H5'	2.13	0.48
2:B:351:C:H2'	2:B:352:A:C8	2.48	0.48
2:B:346:A:N7	2:B:347:A:H1'	2.27	0.48
2:B:2241:A:O2'	2:B:2242:G:H5'	2.12	0.48
2:B:1027:A:H2	2:B:2488:G:H4'	1.78	0.48
2:B:247:G:H4'	2:B:386:G:C4	2.49	0.48
2:B:1986:C:O2'	2:B:1987:A:H5'	2.13	0.48
3:V:73:LYS:HB2	3:V:92:VAL:HG13	1.95	0.48
14:N:57:THR:O	14:N:59:SER:N	2.46	0.48
2:B:1426:G:OP2	2:B:1426:G:H8	1.95	0.48
30:4:36:ARG:HD2	30:4:37:GLN:O	2.14	0.48
2:B:869:G:H2'	2:B:870:U:O4'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:5:LYS:HG3	13:M:68:PHE:HE1	1.74	0.48
10:J:10:THR:O	10:J:11:VAL:HB	2.14	0.48
10:J:25:LEU:HD12	10:J:62:VAL:CA	2.43	0.48
10:J:5:THR:HG21	10:J:7:LYS:NZ	2.28	0.48
2:B:801:G:N7	6:E:51:GLU:OE1	2.46	0.48
15:O:15:ARG:CD	15:O:18:LEU:HD12	2.43	0.48
6:E:14:VAL:HG12	6:E:15:SER:N	2.28	0.48
2:B:1824:G:OP1	4:C:52:HIS:CE1	2.66	0.48
7:F:34:THR:HG22	7:F:35:LEU:N	2.29	0.48
13:M:117:PHE:HB2	13:M:124:LEU:CD1	2.42	0.48
18:R:67:GLY:H	18:R:98:ILE:N	2.11	0.48
18:R:69:GLY:H	18:R:97:LYS:CB	2.25	0.48
18:R:69:GLY:H	18:R:97:LYS:CG	2.27	0.48
12:L:74:THR:O	12:L:75:ALA:C	2.52	0.48
18:R:77:PHE:O	18:R:78:ARG:HG2	2.13	0.48
1:A:52:A:H2'	1:A:53:A:C8	2.45	0.48
5:D:180:VAL:HA	5:D:187:LEU:HA	1.95	0.48
2:B:1439:A:N7	2:B:1440:U:N1	2.60	0.48
31:I:59:THR:O	31:I:59:THR:HG23	2.12	0.48
2:B:1722:A:H2'	2:B:1723:G:C8	2.48	0.48
3:V:44:HIS:O	3:V:46:LYS:N	2.46	0.48
9:H:69:ALA:O	9:H:73:ASN:N	2.47	0.48
2:B:302:C:H2'	2:B:303:G:H8	1.77	0.48
8:G:100:ASN:HA	8:G:116:LEU:HD11	1.96	0.48
19:S:9:HIS:HA	19:S:100:THR:OG1	2.13	0.48
30:4:26:ILE:HB	30:4:35:GLN:CB	2.43	0.48
4:C:84:PRO:C	4:C:86:ARG:H	2.15	0.48
12:L:2:ARG:NH1	12:L:6:LEU:HD13	2.28	0.48
17:Q:111:LYS:HZ2	18:R:52:PRO:HA	1.75	0.48
16:P:26:GLU:O	16:P:27:VAL:C	2.51	0.48
2:B:870:U:O2'	2:B:871:U:H5'	2.14	0.48
2:B:2082:A:N6	2:B:2237:G:H1'	2.28	0.48
10:J:64:VAL:CG1	10:J:65:THR:H	2.17	0.48
18:R:18:GLN:CB	18:R:99:THR:HA	2.40	0.48
2:B:372:G:C8	25:Z:57:VAL:HG21	2.48	0.48
4:C:207:ALA:HA	4:C:211:ARG:HB3	1.95	0.48
11:K:2:ILE:N	11:K:33:ALA:HB3	2.27	0.48
7:F:108:PRO:HB3	7:F:113:PHE:CZ	2.48	0.48
2:B:144:A:N9	20:T:3:ARG:HD3	2.28	0.48
2:B:2787:C:H4'	5:D:61:THR:OG1	2.12	0.48
16:P:7:LEU:O	16:P:11:GLN:HG2	2.13	0.48
2:B:845:A:C6	2:B:847:U:H1'	2.47	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:18:ARG:HB2	11:K:45:GLU:HG3	1.95	0.48
1:A:35:C:O2'	1:A:36:C:H5'	2.13	0.48
2:B:682:G:H5'	28:2:26:ASN:ND2	2.28	0.48
2:B:1957:C:H2'	2:B:1958:C:H6	1.78	0.48
7:F:50:ASP:C	7:F:52:ALA:N	2.65	0.48
8:G:103:ASN:HA	8:G:112:VAL:O	2.12	0.48
4:C:136:VAL:HA	4:C:165:ALA:CA	2.43	0.48
4:C:142:ASN:HA	4:C:153:LEU:HD21	1.96	0.48
4:C:90:ILE:O	4:C:91:ALA:HB3	2.13	0.48
5:D:15:PHE:CA	16:P:79:VAL:HG11	2.40	0.48
2:B:850:U:H2'	2:B:851:C:H6	1.78	0.48
10:J:58:ASN:O	10:J:60:ASP:N	2.42	0.48
6:E:116:ASP:CG	6:E:185:LYS:HE2	2.33	0.48
7:F:66:ILE:HG22	7:F:66:ILE:O	2.12	0.48
18:R:11:GLN:N	18:R:21:ARG:NH2	2.61	0.48
7:F:7:TYR:O	7:F:12:VAL:HG23	2.13	0.48
2:B:972:A:OP1	2:B:974:G:H5'	2.12	0.48
10:J:81:ILE:HG13	10:J:83:GLY:H	1.78	0.48
8:G:36:LEU:HD22	8:G:40:VAL:HG11	1.96	0.48
2:B:547:A:N3	2:B:547:A:C2'	2.72	0.48
21:U:69:VAL:CG1	21:U:77:GLY:HA2	2.41	0.48
7:F:121:PHE:CE1	7:F:166:ARG:HG2	2.49	0.48
13:M:34:LYS:HG3	13:M:98:PRO:O	2.12	0.48
17:Q:30:VAL:O	17:Q:31:TYR:HB2	2.14	0.48
2:B:827:U:H5'	2:B:828:U:O5'	2.13	0.48
31:I:99:LYS:HD3	31:I:99:LYS:N	2.28	0.48
2:B:467:G:OP1	28:2:33:ARG:HB3	2.13	0.48
2:B:1560:G:H2'	2:B:1561:C:H6	1.79	0.48
31:I:1:ALA:C	31:I:2:LYS:HD2	2.33	0.48
2:B:2821:A:H5''	5:D:167:ASN:HD21	1.79	0.48
12:L:122:VAL:HG12	12:L:123:ARG:N	2.28	0.48
12:L:90:VAL:O	12:L:122:VAL:HG11	2.14	0.48
18:R:6:GLN:N	18:R:6:GLN:NE2	2.62	0.48
2:B:2336:A:HO2'	2:B:2337:G:P	2.36	0.48
2:B:918:A:H2'	2:B:919:U:C5'	2.40	0.48
2:B:2305:U:N3	7:F:149:ARG:HB3	2.26	0.48
3:V:21:ARG:CZ	3:V:87:GLN:HB3	2.44	0.48
2:B:1438:U:N3	2:B:1552:A:N6	2.61	0.48
2:B:905:A:O2'	2:B:906:U:H5'	2.14	0.48
2:B:1176:U:H2'	2:B:1177:G:O4'	2.14	0.48
2:B:2327:A:H2'	2:B:2328:A:C8	2.49	0.48
2:B:2811:G:O2'	2:B:2812:G:H5'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1916:A:H2'	2:B:1917:U:O4'	2.14	0.48
1:A:12:C:H4'	1:A:15:A:N6	2.29	0.48
4:C:71:ASP:HA	4:C:117:SER:OG	2.13	0.48
2:B:1729:U:C5	2:B:1730:C:H1'	2.49	0.48
2:B:1747:U:H2'	2:B:1748:C:C6	2.49	0.48
4:C:193:GLU:C	4:C:194:VAL:HG22	2.34	0.48
12:L:3:LEU:HD23	12:L:4:ASN:N	2.27	0.48
2:B:2636:C:H5'	5:D:80:TRP:HZ2	1.79	0.48
16:P:96:LEU:N	16:P:96:LEU:HD12	2.29	0.48
12:L:140:GLY:O	12:L:142:ILE:N	2.47	0.48
10:J:130:HIS:O	10:J:131:ASN:C	2.52	0.48
10:J:41:LYS:O	17:Q:63:ARG:NH2	2.46	0.48
4:C:20:ASN:CB	4:C:202:ARG:HD3	2.43	0.48
26:O:12:ARG:HG3	26:O:13:GLY:N	2.24	0.48
17:Q:44:TYR:O	17:Q:48:ASP:N	2.44	0.48
17:Q:47:ARG:NH1	17:Q:47:ARG:HA	2.29	0.48
2:B:659:G:C5'	6:E:95:LYS:HD3	2.44	0.48
2:B:741:U:H2'	2:B:742:A:C8	2.48	0.48
2:B:938:G:O2'	2:B:939:G:H5'	2.13	0.48
2:B:321:U:OP2	6:E:130:LYS:HA	2.14	0.48
2:B:1351:C:O2'	2:B:1571:A:H1'	2.14	0.48
2:B:1529:G:H2'	2:B:1530:G:C8	2.49	0.48
2:B:866:A:N1	2:B:913:U:H4'	2.29	0.48
2:B:1047:G:H1'	2:B:1110:G:N2	2.28	0.48
2:B:1099:G:C5'	31:I:3:LYS:C	2.82	0.48
2:B:1999:C:O2'	2:B:2000:C:H5'	2.14	0.48
2:B:2771:C:H2'	2:B:2772:C:H6	1.78	0.48
5:D:17:GLU:OE1	11:K:73:ASP:HB3	2.12	0.48
5:D:7:LYS:O	5:D:198:GLY:HA2	2.14	0.48
14:N:4:ARG:CD	14:N:4:ARG:N	2.77	0.48
16:P:29:VAL:HG22	16:P:84:SER:HB2	1.95	0.48
16:P:47:ILE:HG23	16:P:63:ILE:HG12	1.95	0.48
12:L:120:VAL:HG12	12:L:122:VAL:CG2	2.42	0.48
29:3:7:ARG:HH11	29:3:7:ARG:CA	2.26	0.48
2:B:458:G:C5'	28:2:39:ARG:HB2	2.30	0.48
6:E:49:ARG:C	6:E:51:GLU:H	2.16	0.48
18:R:5:PHE:HB2	18:R:37:GLU:OE1	2.14	0.48
4:C:216:ARG:O	4:C:218:THR:N	2.46	0.48
2:B:396:G:H2'	2:B:397:U:C6	2.48	0.48
20:T:30:ILE:O	20:T:85:VAL:HG22	2.14	0.48
12:L:17:LYS:HG3	12:L:18:ARG:H	1.79	0.48
2:B:28:A:O2'	2:B:29:U:H5'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:143:C:O2	20:T:3:ARG:HD2	2.14	0.48
28:2:16:HIS:CE1	28:2:44:VAL:HA	2.49	0.48
2:B:354:A:H2'	2:B:355:U:C6	2.48	0.48
2:B:2243:U:O2	2:B:2434:A:C2	2.67	0.48
2:B:2665:A:O2'	2:B:2666:C:H5'	2.13	0.48
2:B:2444:G:P	6:E:63:LYS:HZ3	2.37	0.48
2:B:1561:C:H2'	2:B:1562:U:C6	2.48	0.48
2:B:2240:U:O2'	2:B:2241:A:H5'	2.12	0.48
2:B:1957:C:H2'	2:B:1958:C:C6	2.48	0.48
2:B:1312:U:H5'	33:B:3352:HOH:O	2.13	0.48
2:B:2181:U:H2'	2:B:2182:U:C6	2.48	0.48
2:B:1278:C:O2'	2:B:1279:G:H5'	2.14	0.48
2:B:2400:G:O2'	2:B:2401:U:H5'	2.13	0.48
19:S:10:ALA:O	19:S:11:ARG:HB3	2.14	0.48
2:B:1817:G:H5''	4:C:86:ARG:HH11	1.78	0.48
5:D:174:SER:C	5:D:175:LEU:HD12	2.34	0.48
16:P:54:LEU:HD22	16:P:55:HIS:H	1.78	0.48
12:L:62:PRO:HA	29:3:12:ARG:HH11	1.78	0.48
10:J:61:LYS:O	10:J:62:VAL:HG13	2.13	0.48
28:2:39:ARG:HH11	28:2:39:ARG:HG3	1.79	0.48
18:R:64:VAL:HG13	18:R:65:ALA:N	2.29	0.48
22:W:72:GLY:C	22:W:74:LYS:H	2.17	0.48
2:B:2229:U:H2'	2:B:2230:G:H8	1.79	0.48
7:F:141:ASP:O	7:F:142:TYR:HB3	2.14	0.48
31:I:85:ILE:HD12	31:I:87:SER:O	2.14	0.48
11:K:105:ARG:HD3	11:K:105:ARG:H	1.77	0.48
2:B:1196:C:H2'	2:B:1197:G:C8	2.48	0.48
28:2:7:PRO:O	28:2:8:SER:HB3	2.13	0.48
2:B:633:A:H2'	2:B:634:C:H5'	1.95	0.48
23:X:28:LEU:HB3	23:X:42:LEU:HG	1.95	0.48
2:B:2052:A:OP1	5:D:145:SER:HB3	2.13	0.48
15:O:67:ASN:HD22	15:O:68:LYS:N	2.12	0.48
5:D:8:LYS:NZ	16:P:5:LYS:HG3	2.27	0.48
2:B:1221:C:O2'	2:B:1222:U:H5'	2.13	0.48
21:U:46:LYS:HA	21:U:47:PRO:HD3	1.63	0.48
2:B:2250:G:C5	13:M:81:ARG:HG2	2.48	0.48
15:O:86:GLY:O	15:O:88:LYS:N	2.46	0.48
2:B:722:A:H2'	2:B:723:C:O4'	2.13	0.48
9:H:50:ARG:HD3	9:H:54:LEU:HD12	1.95	0.48
2:B:2299:U:H2'	2:B:2300:C:C6	2.49	0.48
2:B:2712:C:H2'	2:B:2714:G:O3'	2.13	0.48
4:C:78:GLU:CD	4:C:100:ARG:HH21	2.17	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:106:LYS:C	10:J:108:MET:H	2.16	0.48
2:B:244:A:H2'	2:B:245:G:O4'	2.14	0.48
4:C:84:PRO:O	4:C:86:ARG:N	2.44	0.48
2:B:2398:U:H2'	2:B:2399:G:C8	2.48	0.48
17:Q:78:PHE:HE1	17:Q:82:LEU:HD13	1.78	0.48
9:H:24:GLY:O	9:H:26:ALA:N	2.47	0.48
24:Y:4:ILE:HG12	24:Y:5:LYS:CG	2.41	0.48
15:O:26:LEU:HD22	15:O:93:ASP:HA	1.95	0.48
18:R:6:GLN:CG	18:R:7:SER:N	2.77	0.48
22:W:33:GLY:C	22:W:66:VAL:HG23	2.35	0.48
6:E:120:VAL:O	6:E:189:THR:HG21	2.14	0.48
20:T:31:VAL:HG13	20:T:32:LEU:N	2.25	0.48
8:G:174:LYS:O	8:G:175:LYS:HB2	2.14	0.48
8:G:51:PHE:CE1	8:G:53:PRO:HG3	2.48	0.48
2:B:561:G:H1'	17:Q:40:LYS:HE2	1.96	0.48
18:R:76:LYS:O	18:R:77:PHE:HB2	2.14	0.48
28:2:13:ASN:C	28:2:15:SER:H	2.17	0.48
7:F:23:SER:C	7:F:25:MET:H	2.17	0.48
2:B:2382:G:H1'	29:3:38:LYS:NZ	2.29	0.48
2:B:2645:G:H3'	2:B:2646:C:C5'	2.44	0.48
31:I:121:ILE:HD11	31:I:122:GLU:OE2	2.13	0.48
12:L:51:GLU:HG3	29:3:58:ILE:HG22	1.96	0.48
2:B:1938:A:O2'	2:B:1939:U:H5''	2.14	0.48
2:B:106:C:H2'	2:B:107:G:C8	2.49	0.48
2:B:1771:C:O2'	2:B:1772:A:H5'	2.14	0.48
2:B:230:G:H2'	2:B:231:A:H8	1.79	0.48
2:B:1210:G:H4'	2:B:1211:C:OP2	2.14	0.48
2:B:2708:G:O2'	2:B:2709:G:H5'	2.13	0.48
2:B:2352:A:H2'	2:B:2353:G:O4'	2.13	0.48
2:B:2005:A:H5''	33:B:3165:HOH:O	2.13	0.48
2:B:1091:G:O2'	2:B:1092:C:H5'	2.14	0.48
2:B:1289:C:H2'	2:B:1290:C:C6	2.49	0.48
19:S:39:THR:HG23	19:S:39:THR:O	2.13	0.48
30:4:24:ARG:HE	30:4:37:GLN:CB	2.27	0.47
4:C:162:GLN:HE22	4:C:174:ARG:NH1	2.11	0.47
2:B:2728:U:H2'	2:B:2729:G:H8	1.79	0.47
2:B:908:C:O2'	2:B:909:A:H5'	2.14	0.47
2:B:930:G:H5'	2:B:931:U:P	2.54	0.47
15:O:17:LYS:O	15:O:20:GLU:HG2	2.14	0.47
18:R:47:VAL:HG13	18:R:48:LYS:N	2.28	0.47
15:O:15:ARG:NH1	22:W:74:LYS:HE3	2.28	0.47
6:E:183:PHE:C	6:E:185:LYS:N	2.68	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:31:ASP:HB3	25:Z:32:LEU:H	1.48	0.47
2:B:2641:G:O2'	2:B:2642:G:H5'	2.14	0.47
2:B:2024:G:H5''	5:D:154:LYS:HZ2	1.78	0.47
11:K:43:ILE:HG12	11:K:52:VAL:CG1	2.36	0.47
31:I:21:PRO:CB	31:I:22:PRO:HD3	2.42	0.47
2:B:2751:G:O2'	2:B:2752:C:H5'	2.13	0.47
9:H:110:VAL:HG23	9:H:132:PHE:CE2	2.49	0.47
2:B:615:U:C4	6:E:36:ALA:HB2	2.48	0.47
29:3:54:LEU:HA	29:3:57:VAL:HG12	1.96	0.47
2:B:1714:U:H3'	2:B:1715:G:H5'	1.96	0.47
2:B:2019:A:O3'	17:Q:26:ALA:HB3	2.14	0.47
2:B:2491:U:H5''	2:B:2570:G:H5''	1.94	0.47
2:B:2344:U:H4'	2:B:2345:G:OP1	2.13	0.47
2:B:2543:G:H8	2:B:2543:G:H5'	1.79	0.47
2:B:802:A:H4'	33:B:3103:HOH:O	2.14	0.47
2:B:1100:C:H2'	2:B:1101:U:C6	2.49	0.47
31:I:5:GLN:CB	31:I:30:GLN:OE1	2.57	0.47
2:B:1098:A:O5'	31:I:3:LYS:HB3	2.14	0.47
4:C:67:LYS:HG2	4:C:149:LYS:O	2.14	0.47
4:C:155:ARG:HG2	4:C:155:ARG:HH21	1.79	0.47
4:C:171:VAL:HB	4:C:182:LYS:CB	2.39	0.47
5:D:116:LYS:N	5:D:116:LYS:HD2	2.29	0.47
2:B:2773:C:H5''	5:D:169:ARG:HB2	1.95	0.47
15:O:26:LEU:O	15:O:40:ILE:HD11	2.13	0.47
10:J:25:LEU:HD12	10:J:62:VAL:CB	2.45	0.47
18:R:5:PHE:HB3	18:R:12:HIS:NE2	2.29	0.47
19:S:71:VAL:HG22	19:S:107:VAL:HG12	1.94	0.47
10:J:77:HIS:HA	10:J:85:LYS:HA	1.96	0.47
2:B:1971:U:O2	4:C:237:ARG:HB2	2.14	0.47
17:Q:49:ARG:NH1	17:Q:52:ARG:NH1	2.62	0.47
18:R:80:ARG:HD2	18:R:85:LYS:CB	2.45	0.47
2:B:1842:G:H2'	2:B:1843:C:C6	2.49	0.47
6:E:137:LYS:HA	6:E:137:LYS:HZ3	1.78	0.47
2:B:934:U:H2'	2:B:935:C:C6	2.49	0.47
2:B:1594:U:H2'	2:B:1595:C:H6	1.79	0.47
2:B:2628:C:O2'	2:B:2781:A:H2'	2.14	0.47
2:B:184:C:H2'	2:B:185:G:C8	2.47	0.47
15:O:45:SER:O	15:O:47:VAL:N	2.47	0.47
23:X:55:THR:O	23:X:57:LEU:N	2.44	0.47
25:Z:36:VAL:O	25:Z:36:VAL:HG23	2.14	0.47
2:B:2839:G:O2'	14:N:49:GLU:HG2	2.14	0.47
2:B:2443:C:H2'	2:B:2444:G:C8	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:30:ALA:N	4:C:31:PRO:CD	2.77	0.47
2:B:1958:C:O2'	2:B:1959:G:H5'	2.15	0.47
2:B:2543:G:H2'	2:B:2544:G:O4'	2.14	0.47
2:B:1637:A:H2'	2:B:1638:C:C6	2.49	0.47
2:B:1745:A:H2'	2:B:1746:A:C8	2.49	0.47
31:I:4:VAL:O	31:I:4:VAL:HG13	2.14	0.47
2:B:1081:U:C4'	31:I:126:ARG:HH12	2.25	0.47
2:B:2526:G:H21	30:4:1:MET:HG2	1.80	0.47
5:D:33:ARG:CB	5:D:89:GLU:HB2	2.44	0.47
13:M:68:PHE:HA	13:M:69:PRO:HD2	1.79	0.47
29:3:7:ARG:HH12	29:3:10:ALA:HB3	1.76	0.47
4:C:231:HIS:ND1	4:C:242:HIS:ND1	2.62	0.47
18:R:2:TYR:HD2	18:R:46:GLU:O	1.98	0.47
22:W:58:LEU:HD11	22:W:82:GLU:HB3	1.96	0.47
5:D:24:VAL:CG1	5:D:193:VAL:HG21	2.44	0.47
2:B:493:G:O2'	2:B:494:G:H5'	2.14	0.47
31:I:23:VAL:HG12	31:I:24:GLY:H	1.79	0.47
8:G:6:ALA:HB3	8:G:7:PRO:HD3	1.96	0.47
2:B:1050:A:H2'	2:B:1051:G:O4'	2.15	0.47
2:B:2751:G:OP2	8:G:3:VAL:HB	2.14	0.47
24:Y:23:LEU:HD21	24:Y:50:VAL:HG11	1.96	0.47
2:B:1973:G:H2'	2:B:1974:C:H6	1.79	0.47
13:M:32:GLY:O	13:M:127:LYS:HB3	2.15	0.47
2:B:1708:C:H2'	2:B:1709:U:H6	1.79	0.47
7:F:177:ARG:O	7:F:178:LYS:HB2	2.15	0.47
2:B:175:G:H2'	2:B:176:A:H8	1.78	0.47
2:B:51:G:H1'	2:B:118:A:H61	1.79	0.47
12:L:14:LYS:HE2	12:L:15:ALA:N	2.29	0.47
2:B:2441:U:O2'	2:B:2442:C:H5'	2.14	0.47
2:B:511:U:H4'	2:B:1235:G:H4'	1.97	0.47
5:D:83:ARG:O	5:D:84:LEU:HB2	2.12	0.47
20:T:19:LYS:O	20:T:22:THR:HG22	2.14	0.47
2:B:1191:G:O2'	2:B:1192:G:H5'	2.14	0.47
2:B:1098:A:HO2'	31:I:4:VAL:C	2.16	0.47
16:P:64:SER:HB2	16:P:71:ARG:HH11	1.78	0.47
2:B:853:C:H2'	2:B:854:C:C6	2.50	0.47
10:J:41:LYS:HE2	10:J:46:PRO:HD3	1.95	0.47
18:R:18:GLN:N	18:R:18:GLN:CD	2.68	0.47
2:B:2271:G:C2'	2:B:2272:U:H5'	2.44	0.47
2:B:2087:G:H2'	2:B:2088:A:C8	2.49	0.47
4:C:257:ARG:C	4:C:261:ARG:HD2	2.35	0.47
2:B:1432:G:O2'	2:B:1433:A:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:16:VAL:O	4:C:17:LYS:HD2	2.14	0.47
1:A:102:G:H2'	1:A:103:U:C6	2.50	0.47
7:F:7:TYR:O	7:F:11:VAL:HB	2.14	0.47
2:B:2597:G:C5'	4:C:239:PHE:HB2	2.37	0.47
8:G:8:VAL:HG21	8:G:49:LEU:HB2	1.97	0.47
13:M:118:LYS:HB2	13:M:118:LYS:NZ	2.30	0.47
8:G:71:LEU:O	8:G:74:MET:HB2	2.14	0.47
17:Q:40:LYS:O	17:Q:44:TYR:HB3	2.15	0.47
20:T:34:VAL:O	20:T:81:LYS:HB3	2.14	0.47
2:B:2860:A:H2'	2:B:2861:U:O4'	2.15	0.47
3:V:77:VAL:HG13	3:V:89:ILE:CD1	2.44	0.47
2:B:1315:C:H2'	2:B:1316:U:C6	2.50	0.47
16:P:108:ARG:N	16:P:108:ARG:HD3	2.29	0.47
2:B:518:G:H2'	2:B:519:U:C6	2.50	0.47
2:B:1719:G:O2'	2:B:1720:U:H5'	2.14	0.47
2:B:581:C:O2'	2:B:582:A:H5'	2.14	0.47
2:B:2526:G:H2'	2:B:2527:C:H6	1.76	0.47
4:C:155:ARG:HE	4:C:157:ALA:CB	2.27	0.47
29:3:12:ARG:O	29:3:13:PHE:CB	2.63	0.47
4:C:10:PRO:O	4:C:202:ARG:NH1	2.47	0.47
20:T:15:HIS:O	20:T:16:VAL:CB	2.61	0.47
20:T:55:VAL:HG23	20:T:87:LEU:H	1.79	0.47
20:T:55:VAL:CG2	20:T:86:THR:H	2.27	0.47
2:B:705:A:N6	2:B:726:G:O2'	2.48	0.47
13:M:64:TRP:HB2	13:M:102:LEU:HB2	1.96	0.47
7:F:39:VAL:HG12	7:F:84:ILE:HG21	1.96	0.47
21:U:34:ILE:HG22	21:U:62:ALA:O	2.13	0.47
16:P:7:LEU:HD23	16:P:7:LEU:C	2.35	0.47
14:N:47:VAL:O	14:N:51:LEU:HG	2.15	0.47
2:B:1692:U:H2'	2:B:1694:C:C4	2.50	0.47
2:B:1739:A:H2'	2:B:1740:G:O4'	2.14	0.47
2:B:2671:G:H2'	2:B:2672:U:C6	2.49	0.47
16:P:60:VAL:HB	16:P:61:ARG:H	1.30	0.47
12:L:63:LYS:O	29:3:11:LYS:HB2	2.15	0.47
24:Y:18:LYS:O	24:Y:21:ALA:HB3	2.14	0.47
2:B:37:C:O2'	2:B:38:A:H5'	2.15	0.47
6:E:53:THR:HB	6:E:74:LYS:HZ3	1.79	0.47
6:E:120:VAL:HG12	6:E:121:VAL:N	2.29	0.47
31:I:79:LEU:HB3	31:I:137:LEU:HD12	1.96	0.47
8:G:10:VAL:HG13	8:G:14:VAL:HG12	1.95	0.47
17:Q:50:ARG:NH2	17:Q:53:LYS:HE3	2.29	0.47
28:2:12:ARG:HH21	28:2:16:HIS:HB2	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:7:TYR:HA	31:I:59:THR:HA	1.95	0.47
2:B:322:A:H5'	2:B:340:A:O4'	2.14	0.47
11:K:112:PHE:O	11:K:114:LYS:N	2.45	0.47
9:H:135:HIS:HD2	9:H:138:VAL:HG23	1.80	0.47
3:V:57:TYR:HE2	3:V:77:VAL:HG21	1.79	0.47
2:B:15:G:O2'	2:B:16:C:H5'	2.14	0.47
2:B:2700:A:H2'	2:B:2701:U:H6	1.80	0.47
2:B:123:G:H2'	2:B:124:G:C8	2.49	0.47
2:B:1513:U:O2'	2:B:1514:G:H5'	2.15	0.47
26:O:25:THR:HG23	26:O:25:THR:O	2.15	0.47
2:B:62:U:H3'	2:B:63:A:C8	2.50	0.47
2:B:1098:A:O5'	31:I:3:LYS:CG	2.61	0.47
2:B:2742:G:O2'	2:B:2743:U:H5'	2.15	0.47
2:B:1818:U:C3'	4:C:155:ARG:HB2	2.44	0.47
17:Q:86:SER:C	17:Q:88:GLU:H	2.18	0.47
16:P:29:VAL:HG23	16:P:47:ILE:HD11	1.96	0.47
13:M:41:LEU:CD2	13:M:46:ILE:HD11	2.44	0.47
9:H:36:ALA:O	9:H:37:VAL:HG23	2.15	0.47
14:N:42:LYS:NZ	14:N:45:ARG:HD2	2.30	0.47
24:Y:1:ALA:HB1	24:Y:37:ARG:HB3	1.97	0.47
9:H:90:LEU:HD22	9:H:122:LEU:O	2.15	0.47
9:H:122:LEU:HD22	9:H:146:VAL:HG22	1.97	0.47
18:R:5:PHE:HD2	18:R:12:HIS:CE1	2.33	0.47
2:B:2270:A:H4'	22:W:18:LYS:HD2	1.96	0.47
2:B:1773:A:N6	4:C:206:LYS:HE2	2.29	0.47
6:E:192:ALA:HB1	6:E:199:MET:CB	2.45	0.47
6:E:158:PHE:HE2	6:E:161:ALA:HB3	1.80	0.47
6:E:163:ASN:H	6:E:168:ASP:HA	1.80	0.47
4:C:53:ILE:CG1	4:C:218:THR:HA	2.45	0.47
2:B:46:G:H2'	2:B:47:C:C6	2.49	0.47
31:I:49:GLU:CB	31:I:52:LEU:HD12	2.44	0.47
10:J:76:HIS:O	10:J:77:HIS:O	2.33	0.47
18:R:32:THR:HG22	18:R:66:HIS:HB3	1.96	0.47
2:B:1791:A:C4'	4:C:207:ALA:H	2.28	0.47
2:B:1789:A:H5'	4:C:220:ARG:NH2	2.29	0.47
8:G:18:ILE:HA	8:G:22:VAL:O	2.14	0.47
23:X:22:LEU:HD11	23:X:47:ARG:NH2	2.30	0.47
7:F:96:TRP:O	7:F:100:GLU:HG3	2.14	0.47
28:2:18:PHE:CD2	28:2:18:PHE:N	2.82	0.47
2:B:1842:G:H2'	2:B:1843:C:H6	1.80	0.47
2:B:1438:U:H5'	2:B:1516:G:O2'	2.14	0.47
8:G:90:GLY:HA3	8:G:159:LYS:HG2	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:579:G:H4'	2:B:2017:U:H2'	1.97	0.47
2:B:2286:G:H1	27:1:23:THR:HG21	1.80	0.47
3:V:48:MET:SD	3:V:86:LEU:HD12	2.54	0.47
2:B:279:A:H3'	2:B:280:U:H6	1.79	0.47
2:B:1494:A:H2'	2:B:1495:A:C8	2.50	0.47
13:M:81:ARG:CG	13:M:82:MET:HG2	2.45	0.47
2:B:18:U:H5''	17:Q:23:TYR:O	2.15	0.47
7:F:103:ILE:HD12	7:F:104:THR:N	2.30	0.47
8:G:123:GLU:HG2	8:G:131:VAL:HG13	1.96	0.47
1:A:23:G:N2	1:A:24:G:H1	2.13	0.47
2:B:153:U:H6	2:B:153:U:O5'	1.98	0.47
13:M:104:GLU:HB3	13:M:105:MET:H	1.55	0.47
16:P:92:ARG:HB2	16:P:110:LYS:O	2.15	0.47
2:B:1729:U:H2'	2:B:1730:C:H4'	1.96	0.47
2:B:1745:A:H2'	2:B:1746:A:H8	1.80	0.47
20:T:19:LYS:HD2	20:T:19:LYS:HA	1.54	0.47
2:B:314:C:H2'	2:B:315:G:H8	1.80	0.47
2:B:2643:G:H2'	2:B:2644:G:O4'	2.15	0.47
2:B:2659:G:N2	2:B:2661:G:H5''	2.29	0.47
2:B:2249:U:H4'	2:B:2275:C:C5	2.50	0.47
17:Q:59:LEU:O	17:Q:62:ALA:HB3	2.15	0.47
2:B:562:U:C4	2:B:2036:C:O4'	2.68	0.47
15:O:115:LEU:N	15:O:115:LEU:HD12	2.29	0.47
2:B:448:U:H2'	6:E:79:ARG:CG	2.45	0.47
4:C:161:VAL:HG12	4:C:161:VAL:O	2.15	0.47
5:D:4:LEU:HD22	5:D:4:LEU:H	1.78	0.47
16:P:79:VAL:HB	16:P:80:VAL:H	1.57	0.47
2:B:852:U:O2'	2:B:853:C:H5'	2.14	0.47
10:J:19:ASP:HB3	10:J:21:THR:CG2	2.43	0.47
9:H:125:THR:CA	9:H:146:VAL:HB	2.30	0.47
2:B:2199:A:H5''	2:B:2200:C:OP2	2.14	0.47
19:S:45:VAL:O	19:S:47:VAL:HG23	2.15	0.47
7:F:34:THR:O	7:F:35:LEU:HD23	2.14	0.47
31:I:109:ALA:HA	31:I:128:ILE:CD1	2.45	0.47
31:I:27:LEU:HD23	31:I:27:LEU:N	2.17	0.47
18:R:67:GLY:H	18:R:98:ILE:H	1.62	0.47
25:Z:55:GLY:HA2	25:Z:59:ARG:HB2	1.96	0.47
21:U:66:VAL:HG22	21:U:67:SER:N	2.17	0.47
2:B:639:U:H2'	2:B:640:C:H6	1.79	0.47
2:B:2634:A:H2'	2:B:2635:A:C8	2.50	0.47
2:B:2896:C:H2'	2:B:2897:U:H6	1.80	0.47
2:B:2673:G:H2'	2:B:2674:G:C8	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:209:ALA:O	4:C:213:ARG:NH1	2.47	0.47
2:B:1409:U:O2'	2:B:1410:G:H5'	2.14	0.47
2:B:2391:G:P	29:3:32:LEU:HG	2.55	0.47
2:B:1241:A:N3	2:B:1241:A:O4'	2.48	0.47
2:B:2648:G:H2'	2:B:2649:C:C6	2.49	0.47
14:N:44:LEU:HD12	14:N:47:VAL:CG2	2.44	0.47
22:W:48:ALA:HA	22:W:54:ARG:N	2.30	0.47
12:L:51:GLU:HG3	29:3:58:ILE:CG2	2.45	0.47
2:B:1537:G:H2'	2:B:1538:G:C4'	2.45	0.47
2:B:2617:U:O2'	2:B:2618:G:H5'	2.15	0.47
8:G:93:TYR:N	8:G:93:TYR:CD1	2.83	0.47
1:A:13:G:H4'	1:A:15:A:H2'	1.96	0.47
2:B:689:A:H2'	2:B:690:G:C8	2.50	0.47
26:0:24:VAL:HG12	26:0:24:VAL:O	2.14	0.47
4:C:160:TYR:CD2	4:C:193:GLU:HG2	2.50	0.47
2:B:2874:C:H2'	2:B:2875:C:C6	2.50	0.47
16:P:47:ILE:CG2	16:P:49:ILE:HG13	2.45	0.47
10:J:128:ASN:O	10:J:130:HIS:N	2.48	0.47
18:R:46:GLU:HB3	18:R:47:VAL:H	1.58	0.47
21:U:27:VAL:CA	21:U:33:VAL:HG22	2.44	0.47
8:G:40:VAL:HG13	8:G:51:PHE:CE2	2.50	0.47
12:L:81:ASP:HA	12:L:84:LYS:CD	2.45	0.47
2:B:543:G:C6	2:B:544:C:H1'	2.49	0.47
17:Q:47:ARG:C	17:Q:51:GLN:HE21	2.18	0.47
21:U:28:LEU:HD12	21:U:29:SER:N	2.30	0.47
27:1:26:LYS:HD3	27:1:28:THR:H	1.80	0.47
5:D:159:LYS:HB3	5:D:160:LYS:H	1.62	0.47
2:B:876:C:H5'	2:B:877:A:OP2	2.15	0.47
9:H:129:GLU:HG3	9:H:129:GLU:H	1.49	0.47
2:B:570:G:O2'	2:B:571:U:H5'	2.15	0.47
6:E:21:ARG:NH1	6:E:25:GLU:HB2	2.29	0.47
2:B:1430:G:H2'	2:B:1431:A:H8	1.80	0.47
2:B:2281:A:H62	22:W:3:LYS:CD	2.28	0.47
22:W:3:LYS:HA	22:W:3:LYS:NZ	2.30	0.47
2:B:263:G:H2'	2:B:264:C:O4'	2.15	0.47
2:B:2207:C:O2'	2:B:2208:C:H5'	2.15	0.47
2:B:757:G:H2'	2:B:758:C:H5'	1.97	0.47
2:B:2553:G:H2'	2:B:2554:U:C4'	2.45	0.47
2:B:1352:U:O2'	2:B:1353:A:H5'	2.15	0.47
13:M:108:VAL:HB	13:M:111:GLU:HB2	1.95	0.47
2:B:448:U:H5	2:B:583:G:C2	2.33	0.47
2:B:2683:C:H2'	2:B:2684:U:H6	1.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:71:LYS:HZ2	13:M:91:TYR:HA	1.80	0.47
22:W:42:THR:HB	22:W:75:ASN:ND2	2.29	0.47
22:W:56:HIS:CG	22:W:57:THR:H	2.33	0.47
26:O:28:SER:HB3	26:O:34:GLY:O	2.14	0.47
2:B:812:C:H2'	2:B:813:U:H6	1.79	0.47
2:B:534:U:C5'	17:Q:41:ALA:HA	2.42	0.47
2:B:2896:C:H2'	2:B:2897:U:C6	2.49	0.47
29:3:38:LYS:HG3	29:3:41:ARG:HH21	1.80	0.47
2:B:2803:G:H2'	2:B:2804:U:H6	1.78	0.47
9:H:54:LEU:O	9:H:58:LEU:HD23	2.15	0.47
2:B:1563:U:H2'	2:B:1564:C:C6	2.50	0.47
2:B:1936:A:H2	2:B:1943:U:C5	2.33	0.47
2:B:2567:G:H2'	2:B:2568:U:C6	2.50	0.47
2:B:2188:U:H2'	2:B:2189:U:O4'	2.14	0.47
2:B:622:G:H2'	2:B:623:C:C6	2.50	0.47
2:B:1919:A:H2'	2:B:1920:C:H5'	1.95	0.47
2:B:825:A:H2'	2:B:826:U:O4'	2.15	0.47
30:4:15:LYS:C	30:4:17:VAL:N	2.68	0.46
30:4:2:LYS:HA	30:4:36:ARG:O	2.15	0.46
2:B:1205:A:N7	6:E:164:LEU:HD21	2.29	0.46
4:C:164:VAL:HB	4:C:167:ASP:OD1	2.15	0.46
4:C:172:THR:O	4:C:182:LYS:HA	2.15	0.46
5:D:35:THR:HB	5:D:48:ILE:CG1	2.45	0.46
2:B:850:U:O2'	24:Y:22:THR:HG22	2.15	0.46
2:B:452:G:OP1	6:E:53:THR:O	2.34	0.46
6:E:85:PHE:O	6:E:86:ALA:CB	2.63	0.46
18:R:4:VAL:N	18:R:12:HIS:HB3	2.30	0.46
22:W:67:LYS:HG2	22:W:71:LYS:N	2.31	0.46
2:B:398:C:OP1	25:Z:49:ARG:NH1	2.48	0.46
13:M:53:MET:HE3	13:M:63:ILE:HD12	1.96	0.46
26:O:50:GLY:O	26:O:51:ARG:C	2.53	0.46
2:B:2599:G:N7	4:C:234:GLY:HA2	2.31	0.46
2:B:532:A:H4'	2:B:533:G:C8	2.50	0.46
5:D:46:ARG:CA	5:D:82:PHE:HA	2.45	0.46
5:D:37:VAL:CB	5:D:46:ARG:HB2	2.41	0.46
21:U:11:ILE:HG22	21:U:19:GLY:HA2	1.96	0.46
5:D:8:LYS:HG3	16:P:5:LYS:HZ2	1.79	0.46
2:B:2673:G:H2'	2:B:2674:G:H8	1.80	0.46
5:D:22:ILE:O	5:D:22:ILE:CG1	2.63	0.46
17:Q:13:HIS:HB2	17:Q:31:TYR:CE2	2.50	0.46
2:B:327:G:H2'	2:B:328:U:O4'	2.14	0.46
1:A:92:C:O2'	1:A:93:C:H5'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:409:G:O2'	2:B:410:G:H5'	2.15	0.46
2:B:2262:U:O4	22:W:12:GLY:HA2	2.15	0.46
19:S:11:ARG:HG3	19:S:11:ARG:HH11	1.81	0.46
4:C:172:THR:O	4:C:173:LEU:HB2	2.15	0.46
12:L:3:LEU:HD22	12:L:4:ASN:OD1	2.15	0.46
2:B:2773:C:O2'	2:B:2774:C:H5'	2.14	0.46
16:P:23:ASP:H	16:P:93:LYS:HE2	1.79	0.46
2:B:1163:G:O2'	2:B:1164:C:H5'	2.15	0.46
18:R:4:VAL:HB	18:R:41:ILE:HG21	1.96	0.46
5:D:193:VAL:O	5:D:193:VAL:HG23	2.15	0.46
6:E:143:LEU:H	6:E:143:LEU:HD22	1.77	0.46
6:E:172:ALA:O	6:E:173:THR:HB	2.14	0.46
4:C:54:GLY:H	4:C:216:ARG:HG3	1.80	0.46
2:B:1365:A:OP2	25:Z:9:TYR:HE2	1.97	0.46
31:I:100:ILE:CG2	31:I:104:GLN:HB2	2.45	0.46
23:X:22:LEU:HD22	23:X:25:GLN:CD	2.35	0.46
8:G:61:TRP:HA	8:G:61:TRP:CE3	2.49	0.46
14:N:7:GLY:O	14:N:8:ARG:HB2	2.14	0.46
6:E:24:ASN:N	6:E:110:SER:HB2	2.30	0.46
2:B:1430:G:H2'	2:B:1431:A:C8	2.50	0.46
2:B:810:U:C2	12:L:37:GLY:HA2	2.51	0.46
2:B:2247:A:H2'	2:B:2248:C:C6	2.50	0.46
2:B:2216:G:H2'	2:B:2217:G:H8	1.80	0.46
2:B:2443:C:H2'	2:B:2444:G:H8	1.80	0.46
2:B:2862:G:H2'	2:B:2863:C:H6	1.80	0.46
2:B:2718:G:OP1	16:P:100:ARG:HG3	2.15	0.46
2:B:2828:G:O2'	2:B:2829:A:H5'	2.15	0.46
21:U:35:VAL:HG13	21:U:37:GLY:H	1.81	0.46
30:4:24:ARG:HH21	30:4:37:GLN:HB2	1.81	0.46
2:B:2398:U:H2'	2:B:2399:G:H8	1.80	0.46
5:D:4:LEU:CD1	5:D:79:LEU:HD22	2.45	0.46
16:P:25:VAL:CG1	16:P:88:ARG:N	2.66	0.46
16:P:61:ARG:HH22	16:P:63:ILE:HD11	1.80	0.46
15:O:25:ARG:CB	15:O:94:ARG:HH22	2.28	0.46
17:Q:68:ALA:HB1	17:Q:73:ILE:HG21	1.97	0.46
2:B:37:C:H1'	6:E:45:ALA:HB2	1.97	0.46
18:R:3:ALA:HB1	18:R:12:HIS:CD2	2.50	0.46
1:A:75:G:H1	1:A:102:G:N2	2.12	0.46
4:C:220:ARG:NE	4:C:220:ARG:HA	2.29	0.46
19:S:21:ALA:HB1	19:S:74:ILE:CD1	2.38	0.46
20:T:11:LEU:HA	20:T:34:VAL:HA	1.98	0.46
6:E:99:LYS:O	6:E:103:GLY:N	2.44	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:G:88:LEU:HG	8:G:161:VAL:HB	1.96	0.46
17:Q:87:VAL:HB	18:R:54:VAL:CG1	2.43	0.46
17:Q:87:VAL:HB	18:R:54:VAL:HG21	1.96	0.46
2:B:2186:G:H2'	2:B:2187:U:O4'	2.16	0.46
29:3:21:PHE:HE1	29:3:56:LEU:HB3	1.81	0.46
11:K:4:GLU:OE2	11:K:23:LYS:HD2	2.16	0.46
2:B:90:U:OP2	2:B:91:A:H3'	2.16	0.46
17:Q:34:ALA:O	17:Q:37:ALA:HB3	2.15	0.46
2:B:1076:C:O2'	2:B:1077:A:H5'	2.16	0.46
4:C:107:LYS:HE3	4:C:108:GLY:H	1.79	0.46
17:Q:94:LEU:HA	17:Q:97:ILE:HG12	1.98	0.46
5:D:110:THR:HB	5:D:202:ILE:HB	1.97	0.46
16:P:29:VAL:HG13	16:P:84:SER:HB2	1.96	0.46
10:J:15:TRP:CD2	10:J:138:GLN:HB2	2.49	0.46
18:R:39:LEU:H	18:R:61:ALA:CB	2.26	0.46
6:E:17:THR:OG1	6:E:18:THR:N	2.48	0.46
4:C:50:THR:O	4:C:51:ARG:C	2.52	0.46
4:C:53:ILE:HG21	4:C:218:THR:CA	2.44	0.46
2:B:704:G:HO2'	2:B:726:G:N2	2.12	0.46
2:B:2061:G:H5''	2:B:2503:A:N1	2.30	0.46
8:G:19:ASN:HB3	8:G:22:VAL:HB	1.97	0.46
9:H:84:ALA:HA	9:H:89:LYS:O	2.15	0.46
12:L:110:VAL:HG23	12:L:131:ALA:HB1	1.97	0.46
2:B:1666:G:C2'	2:B:1667:G:H5'	2.46	0.46
13:M:20:LEU:HD13	13:M:38:ARG:CG	2.44	0.46
14:N:48:VAL:HA	14:N:51:LEU:HD12	1.97	0.46
2:B:2799:A:H4'	2:B:2800:A:C8	2.51	0.46
21:U:46:LYS:HG2	21:U:52:ASN:O	2.14	0.46
2:B:2561:U:O2'	11:K:23:LYS:HG2	2.15	0.46
29:3:4:LYS:HD3	29:3:59:ALA:HA	1.97	0.46
2:B:1946:U:H2'	2:B:1947:C:C6	2.50	0.46
2:B:1684:G:H2'	2:B:1685:C:H6	1.80	0.46
22:W:28:GLU:HA	22:W:28:GLU:OE1	2.16	0.46
2:B:506:G:H1'	2:B:507:A:C8	2.50	0.46
2:B:409:G:H2'	2:B:410:G:C8	2.51	0.46
12:L:101:ILE:HG22	12:L:101:ILE:O	2.15	0.46
4:C:32:LEU:HD12	4:C:33:LEU:O	2.15	0.46
4:C:83:ASP:OD2	4:C:86:ARG:NE	2.49	0.46
17:Q:88:GLU:HA	18:R:53:PHE:HB3	1.96	0.46
5:D:204:LYS:CB	5:D:205:PRO:HD2	2.43	0.46
2:B:1651:G:H4'	14:N:39:PRO:HG2	1.97	0.46
14:N:38:LEU:O	14:N:41:ALA:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:34:ARG:CD	10:J:39:LYS:HD3	2.26	0.46
15:O:55:GLU:O	15:O:56:LYS:C	2.54	0.46
6:E:147:LEU:HB2	6:E:183:PHE:CD1	2.51	0.46
7:F:92:GLY:O	7:F:95:MET:HG2	2.16	0.46
7:F:100:GLU:O	7:F:102:LEU:N	2.49	0.46
7:F:98:PHE:HA	7:F:101:ARG:NE	2.29	0.46
2:B:136:G:H2'	2:B:137:U:H6	1.76	0.46
2:B:999:U:O2'	2:B:1000:A:H5'	2.15	0.46
8:G:148:ARG:HA	8:G:161:VAL:HG13	1.98	0.46
2:B:1028:A:N6	2:B:1125:G:H2'	2.30	0.46
8:G:75:VAL:O	8:G:79:THR:HG22	2.16	0.46
2:B:2261:C:N4	22:W:10:ARG:NH2	2.64	0.46
2:B:1846:G:H2'	2:B:1847:A:O4'	2.15	0.46
16:P:38:ARG:HH11	16:P:39:LEU:N	2.13	0.46
16:P:1:SER:O	16:P:2:ASN:C	2.54	0.46
2:B:976:G:H4'	2:B:1156:A:N7	2.30	0.46
2:B:491:G:C2	2:B:492:A:H1'	2.51	0.46
16:P:86:LYS:HZ2	16:P:88:ARG:HD3	1.81	0.46
12:L:122:VAL:CG1	12:L:123:ARG:N	2.79	0.46
13:M:92:TRP:HD1	13:M:93:VAL:N	2.14	0.46
12:L:59:ARG:O	12:L:60:ARG:HD2	2.16	0.46
2:B:2291:U:H2'	2:B:2292:U:H6	1.77	0.46
10:J:130:HIS:O	10:J:132:HIS:N	2.49	0.46
10:J:62:VAL:HG11	10:J:101:ILE:HD11	1.98	0.46
25:Z:48:GLN:HE21	25:Z:49:ARG:H	1.63	0.46
31:I:72:THR:OG1	31:I:73:PRO:HD2	2.15	0.46
26:O:27:LEU:O	26:O:38:LEU:HD22	2.16	0.46
2:B:663:G:OP1	12:L:27:LEU:HD13	2.16	0.46
8:G:36:LEU:HB3	8:G:40:VAL:HG21	1.97	0.46
2:B:144:A:C2	20:T:3:ARG:NH2	2.84	0.46
21:U:4:ILE:HG13	21:U:25:LYS:HG2	1.97	0.46
2:B:358:U:H2'	2:B:359:G:H8	1.78	0.46
14:N:8:ARG:HA	14:N:43:GLU:OE2	2.16	0.46
8:G:4:ALA:O	8:G:5:LYS:HB2	2.15	0.46
2:B:2259:U:O4'	2:B:2427:C:H2'	2.15	0.46
2:B:1300:G:H5'	2:B:1301:A:N3	2.30	0.46
2:B:1018:U:O2'	2:B:1019:U:H5'	2.15	0.46
2:B:1351:C:H4'	2:B:1572:A:O4'	2.16	0.46
7:F:50:ASP:C	7:F:52:ALA:H	2.18	0.46
2:B:2383:G:N7	29:3:35:LYS:HD3	2.31	0.46
4:C:64:VAL:HB	4:C:65:ASP:H	1.32	0.46
2:B:587:C:O5'	2:B:587:C:H6	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:88:GLU:HB3	18:R:53:PHE:HD1	1.81	0.46
2:B:2636:C:O5'	5:D:80:TRP:NE1	2.39	0.46
13:M:2:LEU:O	13:M:3:GLN:HG2	2.16	0.46
15:O:25:ARG:NE	15:O:94:ARG:HH12	2.11	0.46
2:B:2899:A:H2'	2:B:2900:A:H8	1.79	0.46
22:W:73:PRO:C	22:W:74:LYS:HD2	2.36	0.46
6:E:115:GLN:HG2	6:E:116:ASP:H	1.81	0.46
20:T:48:GLN:HG3	20:T:49:LYS:N	2.30	0.46
21:U:9:GLU:OE1	21:U:71:ILE:HG13	2.16	0.46
7:F:135:ILE:O	7:F:137:PHE:N	2.45	0.46
2:B:1433:A:H2'	2:B:1434:A:O4'	2.15	0.46
11:K:120:PRO:O	11:K:121:GLU:HB2	2.16	0.46
7:F:100:GLU:C	7:F:102:LEU:N	2.68	0.46
2:B:1275:A:C3'	2:B:1275:A:N3	2.75	0.46
21:U:11:ILE:HB	21:U:69:VAL:CG2	2.44	0.46
20:T:68:LYS:HZ2	20:T:68:LYS:HB2	1.81	0.46
2:B:1108:U:H2'	2:B:1109:C:H6	1.81	0.46
2:B:2382:G:H1'	29:3:38:LYS:CE	2.46	0.46
23:X:31:GLN:CA	23:X:31:GLN:HE21	2.28	0.46
23:X:31:GLN:O	23:X:32:ALA:CB	2.62	0.46
2:B:962:G:H21	13:M:81:ARG:HD3	1.81	0.46
11:K:17:ARG:HB2	11:K:45:GLU:HB2	1.97	0.46
29:3:4:LYS:CG	29:3:61:LEU:HB2	2.45	0.46
2:B:538:A:N6	2:B:555:G:O2'	2.49	0.46
3:V:28:ALA:HB1	3:V:89:ILE:O	2.16	0.46
2:B:2653:U:H5	2:B:2654:A:HO2'	1.64	0.46
14:N:56:LYS:HD3	14:N:57:THR:OG1	2.15	0.46
2:B:780:G:H21	2:B:783:A:H62	1.63	0.46
2:B:580:U:O2'	2:B:581:C:H5'	2.16	0.46
2:B:1205:A:N7	6:E:164:LEU:HD11	2.31	0.46
4:C:104:LEU:O	4:C:106:PRO:HD3	2.16	0.46
4:C:107:LYS:HG2	4:C:194:VAL:CG1	2.46	0.46
2:B:2722:G:O2'	14:N:4:ARG:CZ	2.64	0.46
5:D:33:ARG:CZ	5:D:86:GLU:HG2	2.46	0.46
5:D:90:PHE:H	5:D:92:VAL:CG2	2.28	0.46
11:K:70:ARG:HA	11:K:75:SER:O	2.15	0.46
16:P:87:ARG:HG2	16:P:87:ARG:HH11	1.80	0.46
12:L:90:VAL:HG22	12:L:92:LEU:HD13	1.97	0.46
13:M:43:ALA:HB3	13:M:91:TYR:CG	2.51	0.46
15:O:102:ARG:O	15:O:105:ALA:HB3	2.15	0.46
4:C:229:HIS:CE1	4:C:231:HIS:NE2	2.83	0.46
22:W:56:HIS:HA	22:W:77:LYS:CE	2.39	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:43:LYS:HZ2	21:U:43:LYS:CB	2.29	0.46
6:E:17:THR:HG23	6:E:18:THR:N	2.31	0.46
31:I:109:ALA:CA	31:I:128:ILE:HD12	2.46	0.46
21:U:3:LYS:H	21:U:27:VAL:HG21	1.81	0.46
31:I:78:LEU:HD23	31:I:81:LYS:HE2	1.98	0.46
2:B:1062:G:H2'	2:B:1063:G:H8	1.81	0.46
27:1:50:GLU:HG2	27:1:51:ALA:N	2.31	0.46
11:K:13:ASN:ND2	11:K:98:ARG:HG2	2.30	0.46
19:S:21:ALA:O	19:S:74:ILE:HD11	2.16	0.46
8:G:16:VAL:HG12	8:G:17:LYS:N	2.31	0.46
2:B:877:A:H2	2:B:900:A:N7	2.13	0.46
7:F:69:ALA:HB3	7:F:81:GLY:N	2.26	0.46
2:B:1381:G:O2'	2:B:1382:G:H5'	2.16	0.46
2:B:439:A:O2'	2:B:440:C:H5'	2.16	0.46
2:B:297:G:H5''	21:U:92:VAL:CG1	2.44	0.46
2:B:1947:C:O2'	2:B:1948:G:H5'	2.16	0.46
15:O:9:ARG:O	15:O:12:THR:HG22	2.15	0.46
2:B:2839:G:H4'	14:N:49:GLU:CG	2.45	0.46
2:B:131:A:H2'	2:B:132:G:C8	2.50	0.46
22:W:28:GLU:H	22:W:61:LYS:HB2	1.81	0.46
2:B:2208:C:H2'	2:B:2209:G:C8	2.51	0.46
2:B:1278:C:H2'	2:B:1279:G:H8	1.81	0.46
2:B:622:G:H2'	2:B:623:C:H6	1.81	0.46
2:B:1322:A:C2'	2:B:1323:C:H5'	2.46	0.46
19:S:9:HIS:O	19:S:10:ALA:CB	2.63	0.46
4:C:192:GLY:O	4:C:194:VAL:HG22	2.15	0.46
2:B:587:C:H5''	12:L:29:LYS:NZ	2.30	0.46
17:Q:60:TRP:CZ3	17:Q:93:ILE:HG22	2.51	0.46
5:D:18:ASP:C	5:D:20:VAL:N	2.69	0.46
2:B:931:U:H3	2:B:1166:G:N2	2.14	0.46
15:O:26:LEU:HD13	15:O:92:PHE:O	2.16	0.46
10:J:62:VAL:O	10:J:69:ARG:NH2	2.49	0.46
4:C:22:GLU:CD	4:C:202:ARG:HE	2.19	0.46
2:B:1341:G:H1'	20:T:59:ASN:HB3	1.97	0.46
19:S:42:LYS:HE2	19:S:45:VAL:HG11	1.98	0.46
31:I:129:GLU:O	31:I:133:ARG:HG3	2.16	0.46
22:W:60:ALA:CB	22:W:80:SER:HA	2.37	0.46
2:B:1131:G:N7	2:B:2025:C:H4'	2.31	0.46
11:K:6:THR:O	11:K:20:MET:HG3	2.16	0.46
11:K:2:ILE:HA	11:K:33:ALA:H	1.81	0.46
28:2:21:ARG:HG3	28:2:31:LEU:HD11	1.98	0.46
2:B:361:G:H2'	2:B:362:A:H8	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:68:LYS:HG3	20:T:74:ILE:O	2.15	0.46
8:G:90:GLY:CA	8:G:159:LYS:HG2	2.46	0.46
8:G:96:ALA:O	8:G:102:ILE:HG13	2.15	0.46
9:H:99:ILE:O	9:H:103:VAL:HG12	2.16	0.46
29:3:28:LEU:HD13	29:3:33:THR:HG21	1.98	0.46
29:3:33:THR:CG2	29:3:40:LYS:HD2	2.45	0.46
14:N:29:VAL:HG11	14:N:79:LEU:HD21	1.98	0.46
21:U:51:LEU:HG	21:U:53:GLN:HB3	1.98	0.46
2:B:1533:C:O2'	2:B:1534:U:H5'	2.15	0.46
1:A:67:G:O2'	1:A:68:C:H5'	2.16	0.46
2:B:2563:U:H4'	11:K:27:GLY:HA2	1.97	0.46
4:C:4:LYS:HG3	4:C:5:CYS:SG	2.56	0.46
2:B:312:G:H2'	2:B:313:G:H8	1.81	0.46
20:T:88:LYS:H	20:T:88:LYS:HG3	1.49	0.46
5:D:124:ARG:HB3	5:D:124:ARG:HH11	1.80	0.46
2:B:1099:G:C5'	31:I:4:VAL:HB	2.29	0.46
2:B:1818:U:OP1	4:C:155:ARG:HG2	2.16	0.46
4:C:33:LEU:HD22	4:C:34:GLU:H	1.80	0.46
12:L:4:ASN:O	12:L:5:THR:HG22	2.15	0.46
9:H:4:ILE:O	9:H:5:LEU:HD22	2.16	0.46
10:J:122:LEU:O	10:J:123:LYS:HB2	2.16	0.46
2:B:856:G:H21	22:W:22:VAL:HG11	1.80	0.46
4:C:47:ARG:HB3	4:C:48:ILE:H	1.53	0.46
2:B:2090:A:C2'	25:Z:49:ARG:CZ	2.94	0.46
3:V:78:GLN:NE2	3:V:88:HIS:HB3	2.30	0.46
12:L:19:LEU:O	12:L:21:ARG:N	2.45	0.46
10:J:81:ILE:CG1	10:J:82:GLY:N	2.60	0.46
11:K:11:ALA:O	11:K:100:PHE:N	2.46	0.46
5:D:129:THR:O	5:D:140:HIS:HA	2.16	0.46
2:B:126:A:O5'	28:2:18:PHE:HE1	1.99	0.46
13:M:86:LYS:HE3	13:M:87:GLY:N	2.31	0.46
13:M:57:VAL:O	13:M:58:LYS:HG2	2.16	0.46
29:3:36:ALA:O	29:3:38:LYS:N	2.47	0.46
2:B:844:A:C2	2:B:845:A:N1	2.84	0.46
2:B:2306:C:H3'	2:B:2307:G:C5'	2.44	0.46
12:L:57:LEU:HB3	29:3:54:LEU:HD22	1.97	0.46
7:F:177:ARG:NH2	7:F:178:LYS:HA	2.31	0.46
2:B:1917:U:C2'	2:B:1918:A:H5'	2.46	0.46
2:B:2568:U:H2'	2:B:2569:G:O4'	2.16	0.46
2:B:957:C:O2'	2:B:958:U:H5"	2.16	0.46
4:C:89:ASN:HB2	4:C:105:ALA:HB3	1.97	0.46
6:E:58:LYS:HA	6:E:59:PRO:HD3	1.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:817:C:O2'	2:B:839:U:H5''	2.15	0.46
7:F:148:VAL:O	7:F:148:VAL:HG12	2.15	0.46
9:H:80:ILE:N	9:H:80:ILE:HD12	2.30	0.46
4:C:95:TYR:CE2	4:C:101:ARG:HG3	2.48	0.45
12:L:89:VAL:HG21	12:L:123:ARG:CZ	2.46	0.45
29:3:49:VAL:HG13	29:3:50:SER:N	2.32	0.45
29:3:7:ARG:O	29:3:7:ARG:NH1	2.48	0.45
2:B:1165:A:H2'	2:B:1166:G:H8	1.81	0.45
2:B:848:C:H2'	2:B:849:A:C8	2.51	0.45
2:B:2270:A:H4'	22:W:18:LYS:CB	2.46	0.45
6:E:153:LEU:HG	6:E:172:ALA:O	2.17	0.45
7:F:36:ASN:HD22	7:F:87:LYS:H	1.63	0.45
7:F:135:ILE:HD11	7:F:139:GLU:H	1.81	0.45
31:I:23:VAL:CG1	31:I:27:LEU:HD21	2.45	0.45
31:I:54:ILE:HD11	31:I:71:LYS:C	2.36	0.45
26:0:36:LYS:HG2	26:0:37:HIS:O	2.16	0.45
2:B:1903:G:H5''	4:C:239:PHE:CD2	2.51	0.45
5:D:81:GLU:HG3	5:D:82:PHE:N	2.30	0.45
21:U:24:VAL:HB	21:U:34:ILE:O	2.16	0.45
2:B:1173:U:H2'	2:B:1174:U:C6	2.51	0.45
2:B:2348:U:O2'	2:B:2349:G:H5'	2.16	0.45
14:N:35:LYS:HD2	14:N:110:MET:HB3	1.97	0.45
2:B:279:A:C2	2:B:280:U:H1'	2.51	0.45
9:H:135:HIS:HB3	9:H:138:VAL:CG2	2.46	0.45
2:B:2800:A:C4	2:B:2801:G:H1'	2.51	0.45
2:B:2801:G:H2'	2:B:2802:G:C8	2.51	0.45
2:B:771:G:O2'	2:B:772:C:H5'	2.16	0.45
2:B:1313:U:O2	2:B:1313:U:H2'	2.14	0.45
2:B:40:U:H2'	2:B:41:C:C6	2.51	0.45
2:B:1272:A:N7	2:B:1618:A:H1'	2.31	0.45
2:B:1526:C:H2'	2:B:1527:G:O4'	2.15	0.45
2:B:1295:C:H2'	2:B:1296:G:C8	2.50	0.45
2:B:1820:U:O2'	4:C:157:ALA:HB3	2.16	0.45
2:B:1821:A:C5'	4:C:155:ARG:HH21	2.28	0.45
2:B:1820:U:H4'	2:B:1821:A:OP2	2.16	0.45
4:C:68:ARG:HD2	4:C:127:ASN:HD21	1.79	0.45
16:P:25:VAL:HG12	16:P:27:VAL:N	2.23	0.45
13:M:15:GLY:O	13:M:16:ARG:O	2.33	0.45
24:Y:21:ALA:O	24:Y:24:LEU:HB2	2.16	0.45
24:Y:43:ILE:HD11	24:Y:47:ILE:HD11	1.97	0.45
10:J:58:ASN:OD1	10:J:128:ASN:HA	2.17	0.45
10:J:133:ALA:C	10:J:135:GLN:N	2.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:6:GLN:H	18:R:6:GLN:NE2	2.14	0.45
2:B:2092:U:H5	2:B:2226:C:OP2	1.99	0.45
2:B:2090:A:N3	25:Z:49:ARG:NH2	2.64	0.45
20:T:31:VAL:HG22	20:T:32:LEU:N	2.30	0.45
21:U:78:LYS:HA	21:U:96:LYS:HG2	1.98	0.45
31:I:54:ILE:HG23	31:I:54:ILE:O	2.16	0.45
2:B:2028:U:H2'	2:B:2029:G:C8	2.52	0.45
11:K:99:ILE:HD13	11:K:115:ILE:HG13	1.97	0.45
7:F:39:VAL:HG12	7:F:40:GLY:H	1.81	0.45
26:O:47:TYR:HB3	26:O:52:LYS:N	2.32	0.45
2:B:662:G:H4'	12:L:25:SER:OG	2.17	0.45
2:B:2751:G:N2	8:G:2:ARG:HD2	2.31	0.45
2:B:1616:A:H4'	2:B:1617:C:OP2	2.17	0.45
23:X:1:MET:HG3	23:X:6:LEU:HA	1.98	0.45
2:B:2425:A:H5''	2:B:2426:A:H3'	1.98	0.45
2:B:552:U:O2'	2:B:553:G:H5'	2.17	0.45
2:B:2220:U:H2'	2:B:2221:G:C8	2.50	0.45
2:B:151:C:H2'	2:B:152:A:H8	1.78	0.45
2:B:1315:C:H2'	2:B:1316:U:H6	1.81	0.45
2:B:822:G:H2'	2:B:823:C:H6	1.80	0.45
1:A:66:A:O2'	1:A:67:G:H8	1.99	0.45
2:B:208:C:H2'	2:B:209:C:C6	2.52	0.45
2:B:302:C:H2'	2:B:303:G:C8	2.50	0.45
2:B:1525:A:H2'	2:B:1526:C:C6	2.51	0.45
2:B:1764:C:H2'	2:B:1765:U:C6	2.51	0.45
2:B:2877:G:H2'	2:B:2878:U:C6	2.52	0.45
8:G:137:LYS:O	8:G:140:ILE:HB	2.16	0.45
2:B:1128:G:N7	2:B:2490:G:H5'	2.31	0.45
2:B:2623:G:O2'	2:B:2624:G:H5'	2.16	0.45
2:B:2284:A:O2'	2:B:2288:A:N6	2.48	0.45
4:C:87:SER:N	4:C:155:ARG:HH12	2.14	0.45
9:H:5:LEU:HD11	9:H:9:VAL:HG22	1.98	0.45
14:N:96:ARG:CZ	14:N:98:LEU:HD21	2.46	0.45
10:J:50:THR:N	10:J:118:MET:HE1	2.27	0.45
22:W:30:VAL:HG12	22:W:31:LEU:N	2.31	0.45
2:B:2228:G:OP1	4:C:257:ARG:HB2	2.16	0.45
25:Z:33:ASN:C	25:Z:34:LEU:HD23	2.36	0.45
12:L:21:ARG:H	12:L:21:ARG:HG2	1.62	0.45
2:B:2467:C:O4'	13:M:118:LYS:HD2	2.17	0.45
8:G:39:ALA:HA	8:G:54:ARG:HD2	1.97	0.45
12:L:79:LEU:HG	12:L:111:ILE:O	2.15	0.45
2:B:2051:A:H4'	5:D:145:SER:HB2	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1149:G:H2'	2:B:1150:C:H6	1.73	0.45
1:A:32:U:H4'	1:A:52:A:N6	2.31	0.45
16:P:4:ILE:HA	16:P:7:LEU:HD13	1.98	0.45
2:B:1051:G:H2'	2:B:1052:C:H6	1.82	0.45
2:B:346:A:H2'	2:B:347:A:O4'	2.17	0.45
2:B:2720:U:H2'	2:B:2721:A:C8	2.51	0.45
2:B:1735:A:H2'	2:B:1736:U:C6	2.52	0.45
3:V:26:PHE:CE1	3:V:42:LEU:HD12	2.51	0.45
4:C:235:GLU:CG	4:C:236:GLY:H	2.29	0.45
16:P:33:GLU:OE1	16:P:35:SER:N	2.49	0.45
2:B:1022:G:N2	2:B:1142:A:C2	2.84	0.45
4:C:42:ARG:CZ	4:C:44:ASN:HB2	2.46	0.45
2:B:1188:U:O2'	2:B:1189:A:H5'	2.16	0.45
2:B:2597:G:OP1	4:C:239:PHE:CG	2.69	0.45
8:G:11:PRO:CD	8:G:14:VAL:HG21	2.44	0.45
8:G:36:LEU:HD23	8:G:67:ALA:HB1	1.99	0.45
5:D:61:THR:HG23	5:D:62:LYS:HD3	1.99	0.45
2:B:2581:G:H2'	2:B:2581:G:N3	2.32	0.45
23:X:1:MET:CB	23:X:6:LEU:HA	2.43	0.45
2:B:2260:C:O2'	2:B:2261:C:H5'	2.17	0.45
2:B:1413:A:H2'	2:B:1414:C:C6	2.51	0.45
2:B:969:G:H2'	2:B:970:U:H6	1.78	0.45
2:B:656:G:H2'	2:B:657:U:C6	2.51	0.45
2:B:1585:C:H2'	2:B:1586:A:O4'	2.16	0.45
10:J:95:ARG:NE	10:J:95:ARG:N	2.64	0.45
1:A:64:G:H2'	1:A:65:U:C6	2.51	0.45
2:B:1561:C:H2'	2:B:1562:U:H6	1.80	0.45
2:B:1511:G:H2'	2:B:1512:C:H6	1.82	0.45
30:4:10:LEU:HB2	30:4:25:VAL:HG21	1.98	0.45
2:B:1821:A:H5'	4:C:155:ARG:NH2	2.32	0.45
2:B:1820:U:N3	4:C:197:ALA:HB1	2.27	0.45
5:D:117:GLY:HA3	14:N:1:MET:CA	2.46	0.45
2:B:910:A:C8	13:M:16:ARG:HB3	2.52	0.45
9:H:12:LEU:HD22	9:H:19:VAL:CG1	2.47	0.45
12:L:63:LYS:H	29:3:12:ARG:CD	2.29	0.45
29:3:7:ARG:HH12	29:3:11:LYS:HG2	1.81	0.45
14:N:41:ALA:HB1	14:N:113:ILE:CD1	2.44	0.45
10:J:45:THR:HG22	10:J:47:HIS:H	1.81	0.45
4:C:243:PRO:CB	4:C:248:GLY:HA2	2.44	0.45
25:Z:32:LEU:N	25:Z:32:LEU:HD22	2.31	0.45
13:M:33:LEU:HD21	13:M:124:LEU:HB2	1.98	0.45
8:G:171:LYS:HD3	8:G:174:LYS:CD	2.38	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:V:32:GLY:O	3:V:93:ARG:HB3	2.17	0.45
2:B:534:U:H5'	17:Q:41:ALA:CB	2.47	0.45
2:B:1487:U:H2'	2:B:1488:C:C6	2.51	0.45
2:B:2329:U:H2'	2:B:2330:G:C8	2.51	0.45
21:U:48:VAL:HG13	21:U:51:LEU:HA	1.99	0.45
4:C:38:LYS:O	4:C:60:ALA:HA	2.16	0.45
3:V:2:PHE:HB3	3:V:50:MET:SD	2.57	0.45
6:E:10:SER:C	6:E:12:LEU:N	2.70	0.45
2:B:2045:C:H5''	26:O:14:MET:SD	2.57	0.45
1:A:13:G:C2'	1:A:14:U:H5''	2.46	0.45
2:B:1637:A:H2'	2:B:1638:C:H6	1.82	0.45
16:P:58:PHE:CD2	16:P:58:PHE:N	2.85	0.45
21:U:91:LYS:HD3	21:U:93:ARG:HE	1.81	0.45
2:B:960:A:C4'	2:B:2457:U:H4'	2.47	0.45
2:B:2034:U:H5''	33:B:3132:HOH:O	2.15	0.45
13:M:5:LYS:HD2	13:M:8:LYS:NZ	2.31	0.45
2:B:1005:C:H2'	2:B:1006:C:H6	1.81	0.45
6:E:46:GLN:NE2	6:E:48:THR:HB	2.32	0.45
2:B:2387:U:O2'	22:W:37:VAL:HG11	2.17	0.45
6:E:136:GLN:HA	6:E:139:LYS:CG	2.46	0.45
6:E:190:ALA:HB3	6:E:193:VAL:CG2	2.44	0.45
6:E:4:VAL:HG13	6:E:5:LEU:N	2.25	0.45
19:S:2:GLU:CB	19:S:108:SER:HA	2.44	0.45
19:S:43:ALA:C	19:S:45:VAL:H	2.19	0.45
19:S:72:THR:HG23	19:S:73:LYS:H	1.81	0.45
2:B:1459:G:C2'	2:B:1460:U:H5'	2.47	0.45
31:I:79:LEU:HD23	31:I:108:ILE:CD1	2.46	0.45
12:L:18:ARG:HH22	12:L:21:ARG:HD3	1.81	0.45
2:B:873:C:H4'	13:M:64:TRP:CZ3	2.52	0.45
26:O:42:ILE:HG21	26:O:45:ASP:OD2	2.17	0.45
19:S:74:ILE:CG2	19:S:105:VAL:HG23	2.42	0.45
8:G:23:ILE:O	8:G:23:ILE:HG13	2.17	0.45
2:B:1666:G:O2'	2:B:1667:G:H5'	2.15	0.45
2:B:1275:A:H2	2:B:1645:G:H21	1.59	0.45
3:V:29:ILE:HG13	3:V:30:ILE:N	2.32	0.45
9:H:108:VAL:CG1	9:H:110:VAL:HB	2.47	0.45
2:B:235:U:H2'	2:B:236:C:H6	1.78	0.45
2:B:2022:U:O2'	2:B:2617:U:H5'	2.15	0.45
25:Z:36:VAL:HA	25:Z:42:PRO:HA	1.98	0.45
2:B:2570:G:O2'	2:B:2571:U:H5'	2.17	0.45
2:B:1027:A:N3	2:B:2488:G:H5''	2.32	0.45
2:B:1851:U:H2'	2:B:1852:U:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:100:CYS:SG	26:O:43:THR:HG21	2.57	0.45
2:B:82:U:H5''	2:B:296:U:H5''	1.97	0.45
2:B:1774:C:O2	2:B:1774:C:H2'	2.16	0.45
2:B:1914:C:OP2	2:B:1914:C:H3'	2.17	0.45
2:B:1098:A:C2'	31:I:4:VAL:CA	2.91	0.45
30:4:32:LYS:HE3	30:4:33:HIS:ND1	2.32	0.45
5:D:118:PHE:CA	5:D:164:GLN:HG2	2.46	0.45
16:P:28:LYS:HZ2	16:P:44:GLY:N	2.13	0.45
24:Y:2:LYS:HB2	24:Y:36:GLU:O	2.16	0.45
10:J:53:TYR:HA	10:J:121:LYS:HB3	1.99	0.45
22:W:57:THR:O	22:W:59:PHE:N	2.50	0.45
6:E:141:MET:HB3	6:E:185:LYS:HZ1	1.82	0.45
2:B:1824:G:H2'	2:B:1825:U:H6	1.82	0.45
20:T:87:LEU:HD13	20:T:93:LEU:HD13	1.99	0.45
19:S:68:ASP:C	19:S:69:LEU:HD22	2.37	0.45
18:R:11:GLN:CA	18:R:21:ARG:HH22	2.29	0.45
26:O:40:HIS:ND1	26:O:41:HIS:O	2.44	0.45
5:D:122:VAL:CA	5:D:128:ARG:HG3	2.38	0.45
5:D:60:VAL:HG23	5:D:63:PRO:HG2	1.99	0.45
28:2:12:ARG:HH21	28:2:16:HIS:CB	2.30	0.45
21:U:28:LEU:C	21:U:28:LEU:CD1	2.85	0.45
16:P:5:LYS:C	16:P:7:LEU:N	2.70	0.45
24:Y:45:GLY:HA2	24:Y:48:ASN:HD22	1.81	0.45
2:B:956:G:N2	2:B:959:A:H3'	2.32	0.45
7:F:166:ARG:O	7:F:169:LEU:N	2.50	0.45
2:B:1476:U:HO2'	2:B:1477:A:H8	1.61	0.45
4:C:175:LEU:HG	4:C:175:LEU:H	1.45	0.45
5:D:33:ARG:NH1	5:D:33:ARG:HB2	2.29	0.45
1:A:6:G:O2'	1:A:7:G:H5'	2.16	0.45
15:O:72:ALA:O	15:O:76:LYS:HG3	2.17	0.45
15:O:92:PHE:CG	15:O:93:ASP:N	2.84	0.45
10:J:135:GLN:HA	10:J:135:GLN:OE1	2.16	0.45
18:R:14:VAL:HG21	18:R:19:THR:HG23	1.99	0.45
22:W:31:LEU:O	22:W:32:ALA:HB3	2.17	0.45
2:B:948:C:H2'	2:B:949:G:H8	1.81	0.45
6:E:116:ASP:OD1	6:E:118:LEU:HD21	2.16	0.45
6:E:139:LYS:HA	6:E:143:LEU:HD21	1.98	0.45
25:Z:33:ASN:HB3	25:Z:46:GLY:CA	2.33	0.45
19:S:29:VAL:HG21	19:S:69:LEU:C	2.37	0.45
18:R:11:GLN:HB3	18:R:21:ARG:NH2	2.32	0.45
13:M:53:MET:HA	13:M:112:LEU:CD2	2.46	0.45
2:B:1902:C:H2'	2:B:1903:G:H5'	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:77:ILE:N	12:L:77:ILE:HD12	2.31	0.45
2:B:544:C:O2'	2:B:545:U:O4'	2.35	0.45
21:U:15:GLY:C	21:U:17:ASP:H	2.20	0.45
8:G:119:GLY:C	8:G:120:ILE:HG13	2.37	0.45
23:X:7:ARG:C	23:X:8:GLU:HG3	2.35	0.45
19:S:84:ARG:HB3	19:S:96:ILE:CG2	2.46	0.45
13:M:57:VAL:HG12	13:M:58:LYS:N	2.32	0.45
2:B:2733:A:C8	2:B:2733:A:H3'	2.51	0.45
21:U:48:VAL:O	21:U:49:PRO:C	2.50	0.45
13:M:80:VAL:HG12	13:M:81:ARG:H	1.82	0.45
3:V:24:ASN:HB3	3:V:45:ASP:OD1	2.17	0.45
1:A:113:C:O2'	15:O:47:VAL:HA	2.16	0.45
25:Z:36:VAL:HG12	25:Z:42:PRO:CB	2.47	0.45
2:B:105:C:H2'	2:B:106:C:C6	2.52	0.45
1:A:14:U:O2'	1:A:107:G:H1'	2.16	0.45
2:B:1120:G:H2'	2:B:1121:C:C6	2.52	0.45
2:B:149:A:H2'	2:B:150:U:C6	2.51	0.45
17:Q:10:ARG:O	17:Q:14:LYS:HB2	2.17	0.45
2:B:24:G:H1'	19:S:77:ASP:HB3	1.98	0.45
16:P:71:ARG:HB3	16:P:72:VAL:HG13	1.99	0.45
13:M:5:LYS:C	13:M:6:ARG:O	2.48	0.45
2:B:1005:C:H2'	2:B:1006:C:C6	2.52	0.45
15:O:71:ALA:O	15:O:74:VAL:HG22	2.17	0.45
10:J:35:ARG:CZ	10:J:40:HIS:H	2.28	0.45
10:J:69:ARG:NH1	10:J:69:ARG:HG3	2.31	0.45
17:Q:69:ARG:HA	17:Q:73:ILE:HG22	1.98	0.45
22:W:35:ILE:HB	22:W:67:LYS:NZ	2.31	0.45
22:W:64:GLY:O	22:W:65:LYS:HB2	2.17	0.45
22:W:44:PHE:HB3	22:W:77:LYS:O	2.16	0.45
21:U:43:LYS:HG2	21:U:57:ILE:CG2	2.47	0.45
6:E:166:LYS:HB3	6:E:167:VAL:H	1.39	0.45
9:H:114:GLU:HB2	9:H:133:GLN:O	2.17	0.45
4:C:258:SER:OG	4:C:261:ARG:NH1	2.50	0.45
25:Z:30:HIS:HB2	25:Z:48:GLN:HE21	1.81	0.45
2:B:2313:C:H2'	2:B:2314:A:C8	2.52	0.45
2:B:728:G:O3'	4:C:16:VAL:HG11	2.17	0.45
2:B:973:A:H1'	2:B:1188:U:C5	2.52	0.45
2:B:2038:G:H2'	2:B:2039:U:O4'	2.17	0.45
2:B:981:A:N1	2:B:2027:G:O2'	2.39	0.45
31:I:17:ALA:O	31:I:18:ASN:CB	2.64	0.45
25:Z:61:ASN:C	25:Z:63:ARG:H	2.20	0.45
3:V:93:ARG:HG2	3:V:94:ALA:H	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1198:U:H2'	2:B:1199:U:H6	1.82	0.45
2:B:72:U:O2'	2:B:73:A:H5'	2.17	0.45
31:I:45:THR:C	31:I:48:ILE:HG22	2.37	0.45
2:B:1113:U:H5''	8:G:2:ARG:HD3	1.99	0.45
2:B:776:G:H4'	2:B:777:G:C5'	2.47	0.45
2:B:2468:A:H2'	2:B:2476:A:C6	2.52	0.45
2:B:1029:A:H3'	2:B:1030:C:H6	1.81	0.45
29:3:33:THR:O	29:3:34:LYS:HD2	2.17	0.45
3:V:48:MET:HA	3:V:51:GLN:HG3	1.99	0.45
9:H:66:ASN:HA	9:H:138:VAL:CG2	2.47	0.45
2:B:554:U:H2'	2:B:555:G:O4'	2.17	0.45
2:B:327:G:O2'	2:B:328:U:H5'	2.17	0.45
11:K:7:MET:CE	11:K:7:MET:HA	2.46	0.45
8:G:117:PRO:HB2	8:G:139:VAL:HG11	1.97	0.45
2:B:1541:C:O2'	2:B:1542:U:H5'	2.17	0.45
2:B:2454:G:O2'	2:B:2455:G:H5'	2.17	0.45
10:J:28:LEU:O	10:J:28:LEU:HD22	2.17	0.45
2:B:1099:G:H5'	31:I:4:VAL:CG1	2.47	0.45
2:B:1818:U:HO2'	2:B:1819:A:P	2.39	0.45
5:D:172:VAL:CG1	5:D:175:LEU:HD11	2.47	0.45
16:P:55:HIS:O	16:P:57:ALA:N	2.50	0.45
2:B:2849:U:O4	16:P:96:LEU:HD21	2.17	0.45
12:L:140:GLY:O	12:L:141:LYS:HB2	2.16	0.45
13:M:5:LYS:HZ1	13:M:8:LYS:CG	2.30	0.45
24:Y:2:LYS:CA	24:Y:43:ILE:HG13	2.47	0.45
10:J:23:LYS:HE3	10:J:63:ALA:CB	2.47	0.45
2:B:480:A:H4'	21:U:40:LEU:HD13	1.99	0.45
6:E:172:ALA:O	6:E:173:THR:CB	2.64	0.45
4:C:259:ASN:HB3	4:C:260:LYS:H	1.55	0.45
2:B:2230:G:N3	25:Z:30:HIS:NE2	2.65	0.45
20:T:82:LYS:HG3	20:T:83:ALA:H	1.82	0.45
7:F:130:GLY:HA2	7:F:152:ASP:O	2.17	0.45
11:K:101:GLY:O	11:K:119:ALA:HB1	2.17	0.45
11:K:12:ASP:CG	11:K:13:ASN:N	2.71	0.45
8:G:12:ALA:C	8:G:14:VAL:H	2.19	0.45
2:B:633:A:H2'	2:B:634:C:C5'	2.46	0.45
2:B:1266:G:OP1	26:O:15:ARG:NH2	2.45	0.45
17:Q:45:ALA:O	17:Q:46:TYR:C	2.55	0.45
2:B:2080:A:O2'	25:Z:21:VAL:HG21	2.16	0.45
2:B:1252:G:N2	17:Q:32:ARG:NE	2.62	0.45
2:B:1515:A:H5'	2:B:1557:C:C5'	2.47	0.45
2:B:198:C:H5'	2:B:2244:U:OP1	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:H:68:ARG:HB3	9:H:68:ARG:HH11	1.81	0.45
2:B:2675:A:N1	2:B:2732:G:O6	2.49	0.45
29:3:22:LYS:HA	29:3:46:LYS:O	2.17	0.45
2:B:1042:G:H2'	2:B:1043:C:H6	1.80	0.45
2:B:1683:U:O2'	2:B:1684:G:H5'	2.16	0.45
2:B:621:A:H2'	2:B:622:G:O4'	2.16	0.45
29:3:16:THR:HG23	29:3:20:GLY:O	2.17	0.45
2:B:2477:U:H4'	2:B:2479:U:O4	2.16	0.45
2:B:492:A:H2	19:S:46:LEU:HD22	1.82	0.44
4:C:104:LEU:HD13	4:C:156:SER:CB	2.47	0.44
2:B:669:G:O2'	2:B:670:A:H5'	2.17	0.44
17:Q:83:LYS:C	17:Q:85:ALA:H	2.21	0.44
17:Q:91:ARG:H	17:Q:91:ARG:HD2	1.83	0.44
2:B:2820:A:HO2'	2:B:2821:A:P	2.40	0.44
2:B:2874:C:P	14:N:5:LYS:HD3	2.57	0.44
5:D:15:PHE:C	5:D:17:GLU:H	2.19	0.44
13:M:40:ARG:HA	13:M:92:TRP:HE1	1.83	0.44
2:B:929:U:O2	24:Y:25:GLY:HA2	2.17	0.44
22:W:38:ARG:HB3	22:W:68:PHE:CZ	2.52	0.44
4:C:20:ASN:OD1	4:C:202:ARG:HB3	2.17	0.44
2:B:65:U:OP1	20:T:76:ARG:HB3	2.16	0.44
2:B:764:A:H5''	4:C:208:GLY:HA3	1.98	0.44
19:S:72:THR:HG23	19:S:73:LYS:N	2.32	0.44
31:I:138:VAL:HG12	31:I:139:VAL:N	2.31	0.44
2:B:1188:U:H5''	18:R:84:ARG:HG2	1.99	0.44
2:B:2597:G:OP1	4:C:239:PHE:CD2	2.70	0.44
23:X:44:LYS:CE	23:X:47:ARG:HB2	2.47	0.44
28:2:12:ARG:NH2	28:2:16:HIS:HB2	2.31	0.44
28:2:18:PHE:CD2	28:2:44:VAL:HB	2.52	0.44
8:G:91:VAL:HG12	8:G:159:LYS:HZ1	1.81	0.44
21:U:82:VAL:HB	21:U:94:PHE:CD1	2.52	0.44
8:G:75:VAL:O	8:G:78:VAL:HG12	2.17	0.44
2:B:2328:A:H2'	2:B:2329:U:H6	1.77	0.44
2:B:279:A:H3'	2:B:280:U:C6	2.52	0.44
21:U:48:VAL:HG13	21:U:51:LEU:N	2.32	0.44
1:A:14:U:H3'	1:A:15:A:C5'	2.47	0.44
3:V:80:HIS:HD2	3:V:83:LYS:H	1.65	0.44
2:B:912:C:O2'	2:B:913:U:H5'	2.18	0.44
2:B:84:A:OP2	21:U:91:LYS:HD2	2.16	0.44
10:J:109:LEU:HD22	10:J:115:GLY:O	2.17	0.44
2:B:2108:A:N3	2:B:2108:A:H2'	2.31	0.44
1:A:2:G:H2'	1:A:3:C:C6	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:91:ALA:O	4:C:102:TYR:HD2	1.99	0.44
4:C:124:LYS:HE2	4:C:125:PRO:HD2	1.99	0.44
17:Q:111:LYS:HE2	18:R:52:PRO:HG3	2.00	0.44
29:3:24:LYS:HB3	29:3:24:LYS:HZ2	1.82	0.44
10:J:7:LYS:CE	10:J:45:THR:HG21	2.47	0.44
10:J:58:ASN:O	10:J:59:ALA:HB3	2.18	0.44
6:E:48:THR:CG2	6:E:85:PHE:N	2.77	0.44
18:R:37:GLU:HG2	18:R:63:VAL:N	2.32	0.44
6:E:14:VAL:HG12	6:E:16:GLU:H	1.82	0.44
2:B:1824:G:O2'	4:C:244:VAL:CG2	2.65	0.44
7:F:86:CYS:O	7:F:88:VAL:HG23	2.17	0.44
2:B:2038:G:H2'	2:B:2039:U:C6	2.53	0.44
2:B:2025:C:P	5:D:154:LYS:HZ1	2.40	0.44
11:K:107:LEU:C	11:K:109:SER:H	2.19	0.44
8:G:171:LYS:CD	8:G:174:LYS:HD3	2.37	0.44
13:M:9:PHE:CE2	13:M:11:LYS:HG2	2.52	0.44
8:G:36:LEU:HD13	8:G:40:VAL:HG11	1.99	0.44
23:X:4:LYS:HG3	23:X:7:ARG:NE	2.27	0.44
19:S:87:PRO:O	19:S:88:ARG:CB	2.65	0.44
17:Q:87:VAL:O	18:R:54:VAL:HG21	2.17	0.44
2:B:2686:G:H2'	2:B:2687:U:H6	1.82	0.44
2:B:2221:G:H2'	2:B:2222:C:C6	2.52	0.44
3:V:43:ASP:OD2	3:V:46:LYS:HB2	2.18	0.44
2:B:1708:C:H2'	2:B:1709:U:C6	2.53	0.44
2:B:1685:C:H2'	2:B:1686:C:H6	1.82	0.44
2:B:1724:G:H2'	2:B:1725:U:C6	2.52	0.44
2:B:1399:C:H2'	2:B:1400:U:C6	2.52	0.44
2:B:758:C:O2	2:B:1981:A:H2	2.00	0.44
2:B:2520:C:C6	2:B:2567:G:H1'	2.52	0.44
13:M:123:LYS:NZ	13:M:123:LYS:HB3	2.32	0.44
17:Q:58:GLN:HB2	17:Q:58:GLN:HE21	1.54	0.44
31:I:96:LYS:O	31:I:96:LYS:HG3	2.17	0.44
16:P:32:VAL:H	16:P:81:ASP:HA	1.82	0.44
12:L:58:TYR:HB3	29:3:13:PHE:HE1	1.80	0.44
2:B:1007:C:H5''	10:J:37:ARG:NH1	2.30	0.44
10:J:32:LEU:O	10:J:36:LEU:HD13	2.17	0.44
10:J:5:THR:HG21	10:J:7:LYS:HZ2	1.81	0.44
15:O:18:LEU:HD13	22:W:76:ARG:NH2	2.32	0.44
6:E:149:ILE:HD11	6:E:187:VAL:N	2.21	0.44
6:E:151:GLY:O	6:E:171:ASP:HA	2.18	0.44
7:F:36:ASN:O	7:F:151:LEU:HA	2.17	0.44
7:F:37:MET:N	7:F:86:CYS:SG	2.90	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Z:59:ARG:C	25:Z:61:ASN:N	2.70	0.44
2:B:1828:G:O6	4:C:219:VAL:HG11	2.17	0.44
19:S:5:ALA:HB3	19:S:105:VAL:HG13	1.99	0.44
12:L:77:ILE:HG12	12:L:108:ALA:O	2.17	0.44
2:B:1441:G:O2'	2:B:1442:U:H5'	2.18	0.44
2:B:743:A:C2'	2:B:744:U:H5'	2.46	0.44
24:Y:26:LEU:CB	24:Y:28:LEU:HD13	2.45	0.44
9:H:70:GLU:C	9:H:72:ILE:H	2.20	0.44
2:B:438:G:O2'	2:B:439:A:H5'	2.17	0.44
2:B:1454:C:H1'	14:N:60:VAL:HG13	2.00	0.44
2:B:420:C:H2'	2:B:421:C:H6	1.82	0.44
12:L:54:GLN:HG2	12:L:57:LEU:HD23	1.99	0.44
2:B:1847:A:H4'	2:B:1848:A:H8	1.82	0.44
17:Q:13:HIS:O	17:Q:16:ILE:HG12	2.17	0.44
31:I:10:LEU:C	31:I:10:LEU:HD12	2.38	0.44
2:B:2717:C:O2'	16:P:95:LYS:HE3	2.16	0.44
2:B:1092:C:O2'	2:B:1093:G:H5'	2.18	0.44
2:B:1588:G:H2'	2:B:1589:U:C6	2.53	0.44
17:Q:35:PHE:O	17:Q:38:VAL:HG22	2.17	0.44
2:B:1097:U:C5	2:B:1098:A:C8	3.05	0.44
2:B:1821:A:C5'	4:C:155:ARG:NH2	2.81	0.44
17:Q:82:LEU:O	17:Q:88:GLU:HB2	2.17	0.44
2:B:2722:G:C2'	14:N:4:ARG:HD2	2.47	0.44
16:P:32:VAL:N	16:P:81:ASP:HA	2.31	0.44
10:J:44:TYR:HE2	10:J:50:THR:HB	1.82	0.44
6:E:46:GLN:OE1	6:E:86:ALA:HB3	2.18	0.44
2:B:2266:A:O4'	2:B:2272:U:O4	2.35	0.44
21:U:72:PHE:CE2	21:U:74:ALA:HB3	2.52	0.44
12:L:69:ARG:H	12:L:69:ARG:HG2	1.34	0.44
18:R:78:ARG:O	18:R:79:ARG:HB2	2.17	0.44
2:B:125:A:C4'	28:2:13:ASN:ND2	2.78	0.44
27:1:8:ILE:HD13	27:1:9:LYS:C	2.38	0.44
3:V:7:GLU:C	3:V:40:ILE:HG22	2.37	0.44
6:E:30:GLN:O	6:E:31:VAL:C	2.55	0.44
8:G:91:VAL:HG12	8:G:159:LYS:NZ	2.32	0.44
2:B:1203:U:O5'	2:B:1203:U:H6	2.00	0.44
2:B:353:C:H3'	2:B:354:A:H8	1.82	0.44
2:B:400:G:O5'	2:B:400:G:H8	2.00	0.44
2:B:2340:A:H2'	2:B:2341:G:H8	1.82	0.44
21:U:48:VAL:HG13	21:U:51:LEU:CA	2.48	0.44
2:B:515:A:H2	2:B:1260:A:N3	2.15	0.44
7:F:163:GLU:HG2	7:F:166:ARG:CZ	2.48	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1463:C:H2'	2:B:1464:G:C8	2.53	0.44
13:M:62:LYS:HD2	13:M:62:LYS:HA	1.68	0.44
1:A:40:U:O2	1:A:43:C:H5''	2.17	0.44
2:B:1862:G:O2'	2:B:1863:G:H5'	2.18	0.44
4:C:116:GLN:C	4:C:127:ASN:HB3	2.38	0.44
27:1:47:ILE:CG2	27:1:48:TYR:H	2.11	0.44
17:Q:100:PHE:HD2	18:R:13:ARG:HH22	1.65	0.44
5:D:35:THR:HB	5:D:48:ILE:CB	2.48	0.44
16:P:25:VAL:O	16:P:27:VAL:HG12	2.17	0.44
13:M:71:LYS:HZ1	13:M:92:TRP:H	1.63	0.44
9:H:8:LYS:HE2	9:H:9:VAL:N	2.29	0.44
10:J:135:GLN:HE21	10:J:138:GLN:N	2.13	0.44
6:E:46:GLN:HB2	6:E:87:ALA:O	2.17	0.44
2:B:922:C:O2	22:W:22:VAL:HG21	2.17	0.44
2:B:952:G:C6	2:B:966:G:C6	3.06	0.44
25:Z:48:GLN:HB3	25:Z:51:VAL:HB	2.00	0.44
2:B:2091:C:C5'	25:Z:49:ARG:HE	2.31	0.44
2:B:1394:U:O2'	2:B:1395:A:H5'	2.17	0.44
26:O:53:VAL:CG1	26:O:54:ILE:N	2.81	0.44
23:X:51:ALA:HA	23:X:54:LYS:HB3	1.99	0.44
12:L:113:ALA:HB3	12:L:114:GLY:H	1.63	0.44
2:B:2574:G:N2	5:D:147:GLY:HA3	2.30	0.44
28:2:35:ARG:NH2	28:2:44:VAL:HG22	2.31	0.44
14:N:101:GLY:HA2	14:N:109:PRO:HA	2.00	0.44
20:T:38:ALA:O	20:T:39:THR:OG1	2.33	0.44
14:N:11:ASN:HB3	14:N:12:ARG:CD	2.46	0.44
2:B:1439:A:N1	2:B:1552:A:N7	2.66	0.44
2:B:1439:A:N7	2:B:1440:U:C2	2.86	0.44
2:B:1826:G:H2'	2:B:1827:U:H6	1.82	0.44
2:B:2559:C:O2'	2:B:2560:A:H5'	2.17	0.44
2:B:384:A:H2'	2:B:385:C:H5'	1.99	0.44
15:O:83:LEU:CA	15:O:87:ILE:HD12	2.47	0.44
2:B:2617:U:H2'	2:B:2618:G:C5'	2.47	0.44
23:X:59:GLU:HA	23:X:63:ALA:OXT	2.18	0.44
2:B:818:G:N1	2:B:1187:G:H2'	2.32	0.44
2:B:1541:C:H2'	2:B:1542:U:O4'	2.16	0.44
7:F:71:LYS:HD3	7:F:71:LYS:O	2.18	0.44
2:B:1248:G:P	6:E:44:ARG:HH22	2.40	0.44
9:H:97:ARG:H	9:H:97:ARG:HG2	1.39	0.44
30:4:11:CYS:HB2	30:4:14:CYS:SG	2.58	0.44
5:D:34:VAL:CG1	5:D:91:THR:HG23	2.44	0.44
12:L:58:TYR:HB3	29:3:13:PHE:CZ	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2237:G:O2'	2:B:2239:G:N7	2.50	0.44
2:B:452:G:N2	2:B:458:G:H1'	2.33	0.44
6:E:53:THR:H	6:E:74:LYS:CE	2.31	0.44
22:W:65:LYS:HB2	22:W:65:LYS:NZ	2.33	0.44
2:B:1813:G:N3	4:C:50:THR:CG2	2.77	0.44
20:T:53:VAL:HA	20:T:93:LEU:HG	1.99	0.44
7:F:150:GLY:O	7:F:151:LEU:HB2	2.17	0.44
18:R:22:LEU:CD1	18:R:23:GLU:H	2.29	0.44
21:U:2:ALA:HA	21:U:27:VAL:HG23	1.99	0.44
4:C:110:LYS:HB3	4:C:111:ALA:H	1.40	0.44
2:B:1789:A:H5'	4:C:220:ARG:HH21	1.82	0.44
8:G:10:VAL:N	8:G:11:PRO:HD3	2.33	0.44
13:M:9:PHE:HD1	13:M:9:PHE:N	2.15	0.44
5:D:59:ARG:HD2	5:D:60:VAL:H	1.82	0.44
3:V:52:ALA:HA	13:M:134:THR:OG1	2.18	0.44
2:B:2677:G:H2'	2:B:2678:C:C6	2.52	0.44
16:P:7:LEU:HA	16:P:10:GLU:HG2	2.00	0.44
2:B:2256:G:H2'	2:B:2257:U:C6	2.53	0.44
2:B:2278:A:H62	22:W:10:ARG:HB2	1.82	0.44
2:B:443:A:H3'	6:E:40:ARG:HG2	2.00	0.44
2:B:2591:C:O2'	2:B:2592:G:H5'	2.17	0.44
2:B:1347:A:H2'	2:B:1348:C:O4'	2.17	0.44
2:B:2093:G:OP2	9:H:23:ALA:HB3	2.17	0.44
2:B:822:G:H2'	2:B:823:C:C6	2.53	0.44
1:A:70:C:H2'	1:A:71:C:H6	1.83	0.44
2:B:1562:U:H2'	2:B:1563:U:C6	2.52	0.44
2:B:2659:G:C2	2:B:2661:G:H5''	2.53	0.44
6:E:68:ALA:O	6:E:69:ARG:C	2.55	0.44
1:A:41:G:H5'	1:A:42:C:H5'	2.00	0.44
26:0:39:ARG:HD3	26:0:39:ARG:HA	1.72	0.44
30:4:18:LYS:O	30:4:19:ARG:CB	2.65	0.44
4:C:181:ARG:HG3	4:C:181:ARG:O	2.18	0.44
12:L:2:ARG:NH2	12:L:6:LEU:HD13	2.33	0.44
27:1:35:LEU:HA	27:1:48:TYR:O	2.18	0.44
16:P:111:GLU:C	16:P:113:LEU:H	2.21	0.44
12:L:120:VAL:O	12:L:122:VAL:N	2.50	0.44
21:U:40:LEU:O	21:U:58:VAL:HA	2.18	0.44
6:E:122:GLU:HG3	6:E:123:LYS:H	1.82	0.44
6:E:199:MET:HG3	6:E:200:LEU:N	2.33	0.44
2:B:1824:G:H2'	2:B:1825:U:C6	2.53	0.44
7:F:135:ILE:HD12	7:F:140:ILE:O	2.17	0.44
11:K:103:VAL:HG23	11:K:104:THR:N	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:129:THR:CG2	5:D:130:GLN:H	2.26	0.44
2:B:2887:A:O4'	26:0:27:LEU:HD11	2.18	0.44
12:L:109:LYS:HG3	12:L:126:ARG:HD3	1.99	0.44
17:Q:50:ARG:CZ	17:Q:53:LYS:HE3	2.48	0.44
5:D:1:MET:O	5:D:2:ILE:HB	2.17	0.44
2:B:126:A:O5'	28:2:18:PHE:CE1	2.71	0.44
3:V:29:ILE:HG13	3:V:30:ILE:H	1.81	0.44
2:B:2259:U:C1'	2:B:2427:C:H2'	2.47	0.44
2:B:1240:U:O2'	2:B:1241:A:H5''	2.17	0.44
2:B:418:C:H2'	2:B:419:U:C6	2.53	0.44
2:B:420:C:H2'	2:B:421:C:C6	2.53	0.44
2:B:2191:A:H2'	2:B:2192:U:H6	1.82	0.44
2:B:2776:A:H4'	2:B:2777:G:H5''	1.99	0.44
2:B:314:C:H2'	2:B:315:G:C8	2.53	0.44
2:B:2489:U:O2'	2:B:2490:G:H5'	2.18	0.44
2:B:1870:C:H3'	2:B:1871:A:C8	2.53	0.44
2:B:1881:C:H2'	2:B:1882:U:O4'	2.18	0.44
6:E:75:SER:OG	6:E:77:ILE:HG22	2.18	0.44
2:B:2663:G:H2'	2:B:2664:G:C8	2.52	0.44
2:B:2320:U:O2	2:B:2320:U:O4'	2.35	0.44
2:B:448:U:H2'	6:E:79:ARG:HG3	1.98	0.44
2:B:2526:G:N2	30:4:1:MET:HG2	2.33	0.44
4:C:91:ALA:HB3	4:C:103:ILE:HB	2.00	0.44
11:K:72:PRO:HB2	11:K:73:ASP:H	1.62	0.44
16:P:111:GLU:H	16:P:111:GLU:HG3	1.45	0.44
12:L:89:VAL:HG21	12:L:123:ARG:NH1	2.33	0.44
13:M:71:LYS:O	13:M:72:PRO:C	2.55	0.44
9:H:2:GLN:HB2	9:H:19:VAL:CA	2.40	0.44
4:C:50:THR:HG22	4:C:51:ARG:CG	2.42	0.44
20:T:85:VAL:HG23	20:T:86:THR:N	2.33	0.44
19:S:107:VAL:C	19:S:109:ASP:H	2.22	0.44
19:S:68:ASP:HB3	19:S:110:ARG:HD2	1.99	0.44
27:1:49:LYS:HZ2	27:1:49:LYS:CA	2.30	0.44
2:B:1789:A:H2'	2:B:1790:C:C6	2.53	0.44
5:D:140:HIS:O	5:D:141:ARG:CG	2.62	0.44
8:G:24:THR:HG23	8:G:33:THR:HG23	2.00	0.44
26:0:31:LYS:HZ3	26:0:31:LYS:HB2	1.80	0.44
2:B:136:G:N1	20:T:3:ARG:NH2	2.65	0.44
18:R:80:ARG:O	18:R:80:ARG:HG3	2.18	0.44
2:B:2633:G:H2'	2:B:2634:A:O4'	2.16	0.44
2:B:2018:G:H1'	17:Q:32:ARG:NH2	2.31	0.44
16:P:5:LYS:C	16:P:7:LEU:H	2.21	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:5:LYS:HA	16:P:5:LYS:HD2	1.65	0.44
2:B:1050:A:O2'	2:B:2752:C:H1'	2.18	0.44
2:B:1106:G:H2'	2:B:1107:G:H8	1.83	0.44
2:B:2157:G:N3	2:B:2157:G:C2'	2.78	0.44
22:W:13:ARG:CZ	22:W:13:ARG:H	2.31	0.44
2:B:2370:G:H2'	2:B:2371:G:O4'	2.18	0.44
2:B:401:A:O2'	2:B:402:A:H5'	2.18	0.44
2:B:2812:G:H2'	2:B:2813:A:O4'	2.18	0.44
3:V:53:LYS:HB3	3:V:53:LYS:HZ2	1.82	0.44
21:U:90:LYS:O	21:U:91:LYS:HB2	2.18	0.44
2:B:2806:C:H2'	2:B:2807:U:O4'	2.17	0.44
2:B:1010:A:H4'	17:Q:75:TYR:CD2	2.53	0.44
4:C:153:LEU:C	4:C:155:ARG:N	2.71	0.44
4:C:153:LEU:O	4:C:153:LEU:HG	2.17	0.44
4:C:159:THR:O	4:C:160:TYR:HD2	2.00	0.44
2:B:2772:C:H2'	2:B:2773:C:H6	1.82	0.44
11:K:70:ARG:HD3	11:K:76:VAL:HG22	2.00	0.44
2:B:852:U:H2'	2:B:853:C:C6	2.53	0.44
18:R:35:PHE:HB3	18:R:64:VAL:HG12	2.00	0.44
2:B:2386:A:H2'	2:B:2387:U:H6	1.83	0.44
22:W:43:LYS:O	22:W:78:PHE:HA	2.18	0.44
6:E:189:THR:HG23	6:E:194:LYS:HD3	2.00	0.44
2:B:1341:G:H2'	2:B:1397:U:HO2'	1.83	0.44
2:B:164:C:H2'	2:B:165:A:H5'	2.00	0.44
7:F:140:ILE:H	7:F:140:ILE:CD1	2.21	0.44
7:F:116:LEU:HD13	7:F:129:MET:HE1	2.00	0.44
25:Z:39:LYS:NZ	25:Z:61:ASN:HD21	2.15	0.44
2:B:2599:G:C8	4:C:234:GLY:HA2	2.53	0.44
8:G:23:ILE:O	8:G:33:THR:HA	2.18	0.44
2:B:1666:G:O3'	11:K:6:THR:HG23	2.18	0.44
3:V:63:ILE:HD12	3:V:63:ILE:N	2.33	0.44
3:V:70:ILE:HD12	3:V:71:LYS:N	2.28	0.44
31:I:16:MET:N	31:I:42:ASN:OD1	2.51	0.44
21:U:64:ILE:O	21:U:64:ILE:HG22	2.18	0.44
2:B:900:A:H2'	2:B:901:C:H6	1.82	0.44
17:Q:102:LYS:HD2	17:Q:102:LYS:HA	1.88	0.44
2:B:1593:A:H2'	2:B:1594:U:H6	1.83	0.44
2:B:523:C:H4'	2:B:540:C:O2	2.18	0.44
2:B:1826:G:H2'	2:B:1827:U:C6	2.53	0.44
2:B:1854:A:H2'	2:B:1855:U:O4'	2.18	0.44
2:B:538:A:H2'	2:B:539:G:O4'	2.18	0.44
2:B:1291:C:O2'	2:B:1292:G:H5'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:207:A:H2'	2:B:208:C:O4'	2.17	0.44
2:B:756:A:H2'	2:B:757:G:O4'	2.18	0.44
14:N:78:LYS:HG3	14:N:82:GLU:HG3	1.99	0.44
4:C:96:LYS:HG2	4:C:96:LYS:H	1.37	0.44
2:B:1606:C:H5''	2:B:1607:C:OP1	2.17	0.44
15:O:98:GLN:NE2	15:O:99:TYR:H	2.16	0.44
1:A:55:U:H2'	1:A:56:G:C8	2.53	0.44
19:S:11:ARG:HG3	19:S:11:ARG:NH1	2.33	0.43
16:P:111:GLU:HB2	16:P:112:ARG:NE	2.28	0.43
13:M:5:LYS:O	13:M:6:ARG:CB	2.62	0.43
10:J:72:LYS:O	10:J:72:LYS:HG3	2.17	0.43
29:3:12:ARG:CG	29:3:23:HIS:HB2	2.48	0.43
10:J:25:LEU:HD12	10:J:62:VAL:HA	1.98	0.43
6:E:53:THR:CB	6:E:74:LYS:HE2	2.47	0.43
18:R:37:GLU:HB3	18:R:63:VAL:HA	1.99	0.43
22:W:76:ARG:HB3	22:W:76:ARG:NH1	2.33	0.43
2:B:948:C:O2'	2:B:949:G:H5'	2.18	0.43
19:S:72:THR:HG21	19:S:108:SER:OG	2.18	0.43
7:F:116:LEU:CD2	7:F:129:MET:HE3	2.37	0.43
12:L:35:HIS:CG	12:L:35:HIS:O	2.71	0.43
5:D:156:PHE:HA	10:J:81:ILE:HG21	2.00	0.43
10:J:82:GLY:O	10:J:83:GLY:C	2.56	0.43
27:1:34:GLU:HB3	27:1:50:GLU:HB3	2.00	0.43
5:D:62:LYS:HD3	5:D:62:LYS:H	1.82	0.43
21:U:28:LEU:HB2	21:U:29:SER:H	1.47	0.43
9:H:103:VAL:HG22	9:H:108:VAL:HB	2.00	0.43
8:G:25:ILE:CD1	8:G:75:VAL:HG22	2.48	0.43
2:B:1259:G:O2'	2:B:1260:A:H5'	2.18	0.43
29:3:4:LYS:CD	29:3:59:ALA:HA	2.48	0.43
2:B:231:A:H3'	2:B:232:G:H8	1.83	0.43
2:B:1295:C:H2'	2:B:1296:G:H8	1.83	0.43
14:N:17:ARG:C	14:N:19:ALA:H	2.21	0.43
12:L:133:ALA:HA	12:L:136:GLU:OE2	2.18	0.43
2:B:1819:A:OP1	4:C:159:THR:HG21	2.18	0.43
2:B:2819:G:H2'	2:B:2821:A:N7	2.32	0.43
5:D:34:VAL:HA	5:D:90:PHE:CA	2.49	0.43
15:O:26:LEU:HB2	15:O:94:ARG:H	1.83	0.43
2:B:1025:G:OP1	2:B:1025:G:H8	2.00	0.43
10:J:102:GLU:HB3	10:J:119:PHE:CZ	2.52	0.43
18:R:49:ILE:O	18:R:49:ILE:HG13	2.17	0.43
6:E:6:LYS:CB	6:E:11:ALA:HA	2.48	0.43
2:B:2228:G:H2'	2:B:2229:U:C6	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1189:A:H2'	2:B:1190:G:O4'	2.18	0.43
4:C:222:THR:OG1	4:C:223:ALA:N	2.51	0.43
8:G:155:PRO:O	8:G:171:LYS:N	2.51	0.43
13:M:9:PHE:N	13:M:9:PHE:CD1	2.85	0.43
2:B:546:U:O2	2:B:546:U:H5'	2.18	0.43
5:D:40:LEU:O	5:D:41:ALA:HB3	2.18	0.43
20:T:36:LYS:O	20:T:38:ALA:N	2.49	0.43
15:O:30:ARG:CZ	15:O:97:PHE:HD2	2.30	0.43
2:B:2468:A:H4'	13:M:55:ARG:HH21	1.83	0.43
2:B:483:A:OP2	2:B:484:C:H5	2.01	0.43
2:B:2259:U:C2'	2:B:2260:C:H5'	2.48	0.43
2:B:2590:A:H2'	2:B:2591:C:H6	1.83	0.43
2:B:1922:G:H2'	2:B:1923:U:O4'	2.17	0.43
2:B:1213:A:H62	2:B:1236:G:H1'	1.83	0.43
2:B:1671:U:H2'	2:B:1673:G:OP2	2.19	0.43
2:B:188:G:OP1	25:Z:12:ILE:HG12	2.18	0.43
2:B:35:G:H2'	2:B:36:G:O4'	2.18	0.43
4:C:168:GLY:O	4:C:169:ALA:HB3	2.17	0.43
2:B:996:A:H2'	2:B:997:G:H8	1.84	0.43
17:Q:79:ILE:HD12	17:Q:91:ARG:HG3	2.00	0.43
2:B:1999:C:H5''	2:B:2723:C:O2'	2.17	0.43
16:P:27:VAL:HG22	16:P:28:LYS:O	2.18	0.43
6:E:51:GLU:N	6:E:74:LYS:HZ1	2.16	0.43
18:R:39:LEU:O	18:R:41:ILE:N	2.50	0.43
2:B:2270:A:H5''	2:B:2271:G:OP2	2.19	0.43
22:W:42:THR:H	22:W:65:LYS:CG	2.30	0.43
4:C:19:VAL:HG12	4:C:20:ASN:N	2.33	0.43
6:E:112:LEU:HD11	12:L:13:LYS:NZ	2.33	0.43
6:E:14:VAL:HG11	6:E:16:GLU:CD	2.38	0.43
6:E:195:GLN:HE21	6:E:199:MET:HA	1.82	0.43
2:B:2090:A:O2'	25:Z:49:ARG:CZ	2.66	0.43
1:A:94:A:O2'	1:A:95:U:H5'	2.17	0.43
3:V:16:ALA:CA	3:V:19:ARG:HH21	2.31	0.43
2:B:1082:U:N3	2:B:1086:A:C2	2.87	0.43
26:O:47:TYR:CD2	26:O:51:ARG:HA	2.53	0.43
23:X:18:LEU:HD12	23:X:47:ARG:NH2	2.33	0.43
2:B:390:U:H1'	2:B:391:A:C8	2.53	0.43
2:B:834:G:O2'	2:B:835:C:H5'	2.17	0.43
5:D:138:LEU:HD11	5:D:142:VAL:HB	1.99	0.43
2:B:1348:C:H2'	2:B:1349:C:H5'	1.99	0.43
1:A:107:G:O2'	1:A:108:A:H5'	2.18	0.43
2:B:275:C:H2'	2:B:276:U:O4'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:89:ASP:O	15:O:90:VAL:HB	2.18	0.43
1:A:87:U:N3	1:A:89:U:OP1	2.52	0.43
2:B:2693:G:O2'	2:B:2694:G:H5'	2.18	0.43
13:M:17:ASN:N	13:M:17:ASN:HD22	2.17	0.43
4:C:140:VAL:O	4:C:193:GLU:HG3	2.19	0.43
2:B:1654:A:C4'	14:N:1:MET:HG2	2.32	0.43
13:M:4:PRO:HD3	13:M:47:GLU:CG	2.48	0.43
15:O:35:ILE:O	15:O:36:TYR:HB2	2.18	0.43
22:W:67:LYS:HG2	22:W:71:LYS:C	2.39	0.43
4:C:12:ARG:HG3	4:C:21:PRO:HD3	2.00	0.43
2:B:480:A:H2	2:B:499:U:O2	2.01	0.43
2:B:2415:G:H4'	12:L:66:PHE:CB	2.47	0.43
6:E:192:ALA:O	6:E:194:LYS:N	2.51	0.43
2:B:704:G:HO2'	2:B:705:A:P	2.40	0.43
18:R:11:GLN:HB3	18:R:21:ARG:NH1	2.32	0.43
21:U:27:VAL:HB	21:U:33:VAL:HG22	1.99	0.43
2:B:1064:C:H2'	2:B:1065:U:O4'	2.17	0.43
8:G:10:VAL:HA	8:G:14:VAL:HG11	1.99	0.43
23:X:18:LEU:HA	23:X:22:LEU:HB2	2.01	0.43
11:K:39:ILE:N	11:K:60:ALA:O	2.51	0.43
2:B:138:U:O2'	2:B:140:C:H5'	2.18	0.43
20:T:34:VAL:CG2	20:T:35:ALA:N	2.79	0.43
21:U:29:SER:O	21:U:30:SER:CB	2.58	0.43
6:E:76:PRO:HB3	6:E:84:THR:HB	2.01	0.43
8:G:5:LYS:O	8:G:68:ARG:HD2	2.18	0.43
2:B:1386:C:H2'	2:B:1387:A:H8	1.81	0.43
2:B:743:A:OP1	5:D:134:HIS:NE2	2.51	0.43
2:B:217:A:H3'	2:B:218:A:H8	1.82	0.43
2:B:90:U:O5'	2:B:91:A:H5''	2.18	0.43
2:B:2223:G:O2'	2:B:2224:G:H5'	2.19	0.43
2:B:576:U:H2'	2:B:577:G:C8	2.52	0.43
7:F:57:ALA:HA	7:F:62:GLN:O	2.19	0.43
14:N:106:ASP:OD1	14:N:106:ASP:C	2.56	0.43
4:C:172:THR:CG2	4:C:173:LEU:H	2.29	0.43
5:D:110:THR:HG21	5:D:169:ARG:HH21	1.84	0.43
5:D:32:ASN:HB2	5:D:91:THR:HG22	2.00	0.43
16:P:50:ARG:HG3	16:P:99:LEU:H	1.84	0.43
13:M:5:LYS:HE2	13:M:8:LYS:HD2	2.00	0.43
2:B:250:G:OP2	29:3:7:ARG:CZ	2.66	0.43
14:N:45:ARG:CZ	14:N:95:THR:HB	2.48	0.43
10:J:110:PRO:O	10:J:111:LYS:HB2	2.18	0.43
10:J:67:ASN:C	10:J:69:ARG:H	2.22	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:E:46:GLN:HG3	6:E:49:ARG:CZ	2.49	0.43
18:R:35:PHE:O	18:R:63:VAL:HG23	2.18	0.43
2:B:2270:A:H3'	2:B:2271:G:H8	1.83	0.43
6:E:198:GLU:HB3	6:E:199:MET:H	1.55	0.43
2:B:2230:G:H2'	2:B:2231:U:H6	1.82	0.43
20:T:92:ASN:C	20:T:93:LEU:HD12	2.37	0.43
2:B:2619:C:H2'	2:B:2620:C:C6	2.53	0.43
23:X:23:ARG:O	23:X:26:PHE:HB2	2.19	0.43
2:B:545:U:H3'	2:B:546:U:H5''	2.01	0.43
11:K:2:ILE:HD12	11:K:2:ILE:N	2.32	0.43
3:V:69:GLU:O	3:V:70:ILE:HG23	2.18	0.43
5:D:41:ALA:C	5:D:43:ASP:H	2.22	0.43
21:U:39:ASN:HB3	21:U:59:GLU:HB2	2.01	0.43
5:D:146:ILE:CD1	5:D:155:VAL:HG13	2.47	0.43
7:F:23:SER:C	7:F:25:MET:N	2.71	0.43
23:X:7:ARG:HB3	23:X:7:ARG:HH11	1.82	0.43
2:B:934:U:H2'	2:B:935:C:H6	1.84	0.43
2:B:324:A:H61	2:B:338:G:C2'	2.31	0.43
2:B:324:A:C6	2:B:339:U:H5'	2.54	0.43
2:B:2732:G:H5'	2:B:2733:A:O4'	2.18	0.43
9:H:135:HIS:CD2	9:H:138:VAL:HG23	2.54	0.43
2:B:285:G:H2'	2:B:286:U:C6	2.53	0.43
15:O:86:GLY:C	15:O:88:LYS:N	2.72	0.43
2:B:2889:C:H2'	2:B:2890:G:C8	2.53	0.43
21:U:85:ARG:O	21:U:87:GLU:HG3	2.19	0.43
2:B:1511:G:H2'	2:B:1512:C:C6	2.54	0.43
2:B:2508:G:O3'	2:B:2555:U:H5'	2.18	0.43
2:B:2373:G:O2'	2:B:2374:C:H5'	2.19	0.43
2:B:1281:G:H2'	2:B:1282:U:O4'	2.18	0.43
4:C:143:VAL:O	4:C:152:GLN:HB2	2.19	0.43
4:C:196:ASN:HB2	4:C:199:HIS:CE1	2.54	0.43
16:P:51:ASN:HB2	16:P:60:VAL:HB	2.01	0.43
12:L:90:VAL:C	12:L:92:LEU:H	2.22	0.43
10:J:5:THR:HG23	10:J:7:LYS:HD3	2.00	0.43
2:B:454:A:C3'	2:B:455:C:H5'	2.48	0.43
6:E:149:ILE:HG13	6:E:149:ILE:O	2.18	0.43
6:E:6:LYS:CG	6:E:7:ASP:H	2.32	0.43
20:T:40:LYS:HB3	20:T:58:VAL:CG2	2.48	0.43
20:T:58:VAL:HG12	20:T:59:ASN:H	1.83	0.43
2:B:512:G:H4'	2:B:512:G:OP1	2.18	0.43
26:O:36:LYS:HE3	26:O:48:TYR:CE1	2.51	0.43
20:T:3:ARG:HG2	20:T:3:ARG:H	1.62	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:81:GLU:CG	5:D:82:PHE:N	2.81	0.43
13:M:133:LYS:HD2	13:M:134:THR:O	2.18	0.43
17:Q:70:GLN:HG2	17:Q:71:ASN:H	1.80	0.43
2:B:1552:A:C2'	2:B:1553:A:H5'	2.48	0.43
2:B:2016:U:H2'	2:B:2017:U:C6	2.54	0.43
2:B:2065:C:H1'	2:B:2449:U:O2	2.19	0.43
2:B:2070:A:H2'	2:B:2071:A:C8	2.53	0.43
4:C:56:GLY:CA	4:C:214:GLY:H	2.30	0.43
13:M:127:LYS:CG	13:M:128:THR:H	2.31	0.43
2:B:1946:U:H2'	2:B:1947:C:H6	1.83	0.43
2:B:231:A:H3'	2:B:232:G:C8	2.54	0.43
2:B:573:U:N3	2:B:2031:A:OP1	2.45	0.43
2:B:1607:C:N4	2:B:1622:G:OP2	2.51	0.43
2:B:1864:U:O2'	2:B:1865:U:H5'	2.17	0.43
2:B:713:G:O2'	2:B:714:U:H5'	2.19	0.43
30:4:26:ILE:CD1	30:4:34:LYS:HA	2.48	0.43
2:B:588:U:O4	2:B:670:A:H1'	2.18	0.43
12:L:2:ARG:HH22	12:L:6:LEU:CD1	2.32	0.43
5:D:52:THR:HB	5:D:53:GLY:H	1.58	0.43
16:P:111:GLU:O	16:P:113:LEU:N	2.51	0.43
12:L:118:THR:O	12:L:119:PRO:C	2.57	0.43
2:B:929:U:H1'	24:Y:24:LEU:O	2.18	0.43
1:A:116:G:H4'	15:O:54:VAL:HG13	2.01	0.43
10:J:17:VAL:CG2	10:J:139:VAL:HB	2.49	0.43
22:W:24:ARG:HE	22:W:58:LEU:HB2	1.82	0.43
22:W:66:VAL:HG13	22:W:67:LYS:N	2.28	0.43
22:W:72:GLY:C	22:W:74:LYS:N	2.70	0.43
4:C:22:GLU:HA	4:C:202:ARG:HH21	1.83	0.43
21:U:57:ILE:HD13	21:U:58:VAL:O	2.19	0.43
6:E:147:LEU:HD22	6:E:167:VAL:HG22	2.00	0.43
2:B:1814:G:H5'	4:C:51:ARG:HG2	2.00	0.43
19:S:29:VAL:CG2	19:S:71:VAL:HG23	2.33	0.43
1:A:76:G:O2'	1:A:77:U:H5'	2.18	0.43
31:I:32:VAL:HG12	31:I:33:ASN:N	2.34	0.43
13:M:50:ARG:O	13:M:53:MET:HG3	2.18	0.43
26:O:29:VAL:HG22	26:O:32:THR:HG23	2.00	0.43
9:H:87:GLU:HB2	9:H:89:LYS:HZ3	1.82	0.43
18:R:87:GLN:O	18:R:89:HIS:N	2.52	0.43
2:B:1796:U:O3'	4:C:251:THR:HA	2.18	0.43
2:B:2751:G:OP2	8:G:2:ARG:HG3	2.18	0.43
5:D:22:ILE:HG23	5:D:191:GLY:N	2.33	0.43
4:C:209:ALA:O	4:C:210:ALA:HB2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:95:PHE:HB2	21:U:99:SER:O	2.18	0.43
2:B:1408:G:O2'	2:B:1409:U:H5'	2.19	0.43
2:B:2349:G:OP2	29:3:41:ARG:HD3	2.18	0.43
14:N:54:LEU:HD11	14:N:65:LEU:HB3	2.01	0.43
2:B:1534:U:O2'	2:B:1535:A:H8	2.01	0.43
2:B:828:U:H2'	2:B:829:A:C8	2.53	0.43
2:B:1911:U:H2'	2:B:1918:A:C2	2.54	0.43
1:A:15:A:H1'	1:A:109:A:C5	2.54	0.43
2:B:2438:U:O2'	2:B:2439:A:H5''	2.19	0.43
2:B:1322:A:H2'	2:B:1323:C:H5'	1.99	0.43
2:B:841:G:O2'	2:B:842:U:H5'	2.18	0.43
2:B:97:C:H2'	2:B:98:G:O4'	2.18	0.43
2:B:1068:G:C6	2:B:1069:A:N6	2.87	0.43
2:B:1008:A:N6	2:B:1136:G:C6	2.87	0.43
4:C:194:VAL:HB	4:C:195:GLY:H	1.59	0.43
2:B:850:U:O5'	2:B:850:U:H6	2.01	0.43
24:Y:47:ILE:O	24:Y:51:SER:N	2.52	0.43
10:J:25:LEU:HD11	10:J:63:ALA:N	2.33	0.43
18:R:18:GLN:HA	18:R:99:THR:HA	2.01	0.43
22:W:67:LYS:HD3	22:W:68:PHE:H	1.84	0.43
4:C:45:ASN:ND2	4:C:50:THR:OG1	2.52	0.43
9:H:114:GLU:HB3	9:H:133:GLN:HG3	2.00	0.43
4:C:16:VAL:O	4:C:17:LYS:HB2	2.19	0.43
3:V:21:ARG:NH2	3:V:88:HIS:H	2.17	0.43
12:L:39:LYS:N	12:L:39:LYS:HZ2	2.16	0.43
4:C:224:MET:HG3	4:C:233:GLY:N	2.33	0.43
25:Z:59:ARG:HB2	25:Z:60:PHE:H	1.59	0.43
20:T:8:LEU:HD21	23:X:26:PHE:CZ	2.54	0.43
23:X:18:LEU:HD12	23:X:47:ARG:HH22	1.82	0.43
14:N:117:ASP:CG	14:N:118:ARG:N	2.72	0.43
5:D:176:ASP:OD2	5:D:190:LYS:HD2	2.18	0.43
5:D:21:SER:O	5:D:23:PRO:HD3	2.19	0.43
2:B:2065:C:H2'	2:B:2066:C:H6	1.83	0.43
2:B:459:U:O2'	2:B:460:A:H5'	2.19	0.43
2:B:819:A:OP2	2:B:1187:G:N2	2.51	0.43
2:B:2373:G:H2'	2:B:2374:C:C6	2.53	0.43
2:B:1864:U:OP1	2:B:2411:A:H5'	2.17	0.43
2:B:1623:G:O2'	2:B:1624:U:H5'	2.18	0.43
2:B:902:C:O2'	2:B:903:C:H5'	2.19	0.43
10:J:9:GLU:HG2	10:J:9:GLU:O	2.17	0.43
30:4:15:LYS:HZ2	30:4:22:VAL:HG12	1.83	0.43
30:4:6:SER:OG	30:4:23:ILE:HG21	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2728:U:H2'	2:B:2729:G:C8	2.54	0.43
16:P:109:ILE:O	16:P:111:GLU:N	2.51	0.43
16:P:31:VAL:HG13	16:P:81:ASP:CB	2.37	0.43
9:H:4:ILE:HA	9:H:17:ASP:O	2.19	0.43
12:L:58:TYR:HD2	12:L:62:PRO:HG3	1.84	0.43
2:B:2385:C:H2'	2:B:2386:A:C8	2.53	0.43
21:U:42:LYS:O	21:U:57:ILE:HG13	2.18	0.43
6:E:109:LEU:CB	6:E:117:ARG:HE	2.31	0.43
4:C:49:THR:HB	4:C:50:THR:H	1.45	0.43
25:Z:11:GLU:N	25:Z:27:THR:HG22	2.33	0.43
25:Z:48:GLN:NE2	25:Z:49:ARG:N	2.65	0.43
25:Z:5:ILE:O	25:Z:51:VAL:HG13	2.18	0.43
25:Z:3:LYS:O	25:Z:7:PRO:HA	2.19	0.43
2:B:1341:G:H2'	2:B:1397:U:O2'	2.19	0.43
19:S:28:LYS:O	19:S:29:VAL:HB	2.19	0.43
31:I:109:ALA:HB2	31:I:125:THR:HA	2.00	0.43
2:B:2025:C:P	5:D:154:LYS:NZ	2.92	0.43
23:X:28:LEU:HD13	23:X:42:LEU:CD2	2.43	0.43
23:X:28:LEU:HD22	23:X:42:LEU:CG	2.47	0.43
4:C:251:THR:HB	4:C:252:LYS:H	1.45	0.43
20:T:67:VAL:HG12	20:T:68:LYS:N	2.28	0.43
1:A:30:C:OP1	15:O:1:MET:HE1	2.19	0.43
23:X:8:GLU:HB2	23:X:9:LYS:H	1.58	0.43
2:B:2647:U:O2'	2:B:2648:G:H5'	2.19	0.43
2:B:2072:C:H2'	2:B:2073:C:H6	1.84	0.43
2:B:1945:G:H2'	2:B:1946:U:H6	1.84	0.43
13:M:74:THR:HA	13:M:88:ASN:HA	2.01	0.43
2:B:1245:G:H4'	6:E:33:VAL:CG2	2.49	0.43
13:M:108:VAL:HG12	13:M:111:GLU:OE1	2.19	0.43
19:S:77:ASP:O	19:S:101:SER:HB2	2.18	0.43
2:B:2107:G:H2'	2:B:2108:A:H8	1.84	0.43
19:S:34:ASP:HA	19:S:37:THR:HG22	2.00	0.43
5:D:16:THR:HG22	5:D:18:ASP:OD2	2.19	0.43
10:J:25:LEU:HB3	10:J:62:VAL:HG12	2.00	0.43
6:E:142:ALA:O	6:E:185:LYS:HG2	2.19	0.43
20:T:59:ASN:OD1	20:T:84:TYR:HB2	2.19	0.43
12:L:19:LEU:C	12:L:21:ARG:H	2.22	0.43
8:G:172:GLU:O	8:G:173:ALA:C	2.57	0.43
2:B:2885:G:H2'	2:B:2886:A:O4'	2.18	0.43
12:L:111:ILE:HA	12:L:128:THR:HG21	2.01	0.43
25:Z:21:VAL:HG22	25:Z:22:MET:N	2.34	0.43
13:M:75:GLU:O	13:M:86:LYS:HB3	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:I:63:ASP:OD1	31:I:63:ASP:O	2.37	0.43
3:V:57:TYR:CE2	3:V:77:VAL:HG21	2.54	0.43
2:B:1694:C:OP1	4:C:13:ARG:NH2	2.52	0.43
2:B:687:C:H2'	2:B:688:U:O4'	2.19	0.43
20:T:23:ALA:HA	20:T:26:LYS:HD2	2.00	0.43
2:B:1304:A:O2'	2:B:1305:C:H5'	2.19	0.43
30:4:28:SER:O	30:4:29:ALA:HB3	2.19	0.43
19:S:8:ARG:HA	19:S:102:HIS:ND1	2.34	0.42
2:B:1205:A:H1'	2:B:1206:G:P	2.59	0.42
4:C:175:LEU:HD12	4:C:178:GLY:O	2.19	0.42
2:B:2683:C:O2'	2:B:2684:U:H5'	2.19	0.42
5:D:47:ALA:H	5:D:80:TRP:HB2	1.84	0.42
16:P:61:ARG:O	16:P:62:LYS:C	2.56	0.42
13:M:71:LYS:NZ	13:M:92:TRP:H	2.17	0.42
10:J:41:LYS:HZ1	10:J:45:THR:HA	1.82	0.42
10:J:7:LYS:N	10:J:8:PRO:CD	2.81	0.42
2:B:38:A:C2	6:E:43:THR:HG22	2.54	0.42
2:B:858:G:H21	2:B:2268:A:H3'	1.84	0.42
22:W:81:ILE:HG12	22:W:82:GLU:N	2.33	0.42
6:E:152:GLU:HA	6:E:188:MET:HE2	2.01	0.42
20:T:58:VAL:CG1	20:T:59:ASN:H	2.32	0.42
4:C:225:ASN:N	4:C:226:PRO:CD	2.82	0.42
4:C:224:MET:HG3	4:C:233:GLY:H	1.84	0.42
2:B:1133:A:N6	2:B:2025:C:O2'	2.52	0.42
11:K:13:ASN:HB2	11:K:14:SER:H	1.56	0.42
25:Z:59:ARG:O	25:Z:61:ASN:N	2.44	0.42
2:B:1198:U:C2	2:B:1199:U:C5	3.07	0.42
2:B:144:A:O2'	20:T:4:GLU:HB2	2.19	0.42
5:D:38:LYS:H	5:D:42:ASN:HB2	1.84	0.42
9:H:103:VAL:O	9:H:106:ALA:HB3	2.19	0.42
8:G:29:ASN:OD1	8:G:81:GLY:HA2	2.19	0.42
2:B:20:C:H2'	2:B:21:A:C8	2.53	0.42
2:B:1784:A:H4'	2:B:1785:A:O5'	2.19	0.42
1:A:23:G:C2	1:A:24:G:N1	2.88	0.42
2:B:1710:G:H2'	2:B:1711:A:H8	1.84	0.42
26:0:10:SER:O	26:0:14:MET:HB2	2.19	0.42
2:B:2523:G:O2'	2:B:2524:G:H5'	2.19	0.42
8:G:169:ARG:HB2	8:G:170:THR:H	1.73	0.42
2:B:2478:A:O2'	2:B:2536:G:N2	2.51	0.42
2:B:1733:G:H2'	2:B:1734:G:C8	2.54	0.42
2:B:557:C:O3'	10:J:113:PRO:HB2	2.19	0.42
20:T:6:ARG:HG2	20:T:9:LYS:O	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:4:22:VAL:CG1	30:4:37:GLN:HB3	2.48	0.42
4:C:155:ARG:C	4:C:157:ALA:H	2.22	0.42
4:C:177:SER:C	4:C:179:GLU:H	2.22	0.42
4:C:171:VAL:HG12	4:C:183:VAL:C	2.38	0.42
17:Q:78:PHE:CD1	17:Q:78:PHE:C	2.93	0.42
5:D:4:LEU:HD23	5:D:77:ARG:CD	2.48	0.42
11:K:70:ARG:CB	11:K:76:VAL:HG22	2.49	0.42
2:B:2:G:H2'	2:B:3:U:C6	2.53	0.42
18:R:65:ALA:H	18:R:100:GLY:HA2	1.84	0.42
22:W:38:ARG:HB3	22:W:68:PHE:CE1	2.54	0.42
2:B:1773:A:H62	4:C:206:LYS:HE2	1.83	0.42
2:B:1813:G:H21	4:C:50:THR:HG23	1.83	0.42
20:T:53:VAL:HG12	20:T:93:LEU:CD2	2.48	0.42
20:T:58:VAL:HG13	20:T:85:VAL:H	1.84	0.42
7:F:65:LEU:CD2	7:F:87:LYS:HD2	2.48	0.42
2:B:1368:G:OP1	28:2:25:LYS:HG3	2.19	0.42
18:R:69:GLY:HA2	18:R:96:VAL:HA	1.99	0.42
2:B:1199:U:H4'	17:Q:4:LYS:HZ1	1.84	0.42
9:H:86:ASP:C	9:H:88:GLY:N	2.71	0.42
28:2:6:GLN:HB3	28:2:7:PRO:HD2	2.01	0.42
23:X:27:ASN:O	23:X:29:ARG:N	2.47	0.42
12:L:33:ARG:O	12:L:34:GLY:C	2.57	0.42
2:B:2795:C:O5'	2:B:2795:C:H6	2.02	0.42
2:B:2788:C:H2'	2:B:2789:C:C6	2.53	0.42
5:D:62:LYS:H	5:D:62:LYS:CD	2.32	0.42
5:D:1:MET:N	5:D:81:GLU:HB2	2.34	0.42
27:1:4:ILE:HG23	27:1:4:ILE:O	2.19	0.42
2:B:999:U:H5''	2:B:1154:G:O6	2.18	0.42
16:P:8:GLU:H	16:P:8:GLU:HG2	1.52	0.42
6:E:132:LYS:HG3	6:E:134:LEU:CD1	2.50	0.42
23:X:3:ALA:O	23:X:6:LEU:HD12	2.18	0.42
2:B:2017:U:O2	26:0:6:LYS:HG3	2.20	0.42
2:B:1029:A:H2'	2:B:1030:C:O4'	2.19	0.42
9:H:70:GLU:O	9:H:74:ALA:N	2.45	0.42
27:1:22:THR:CB	29:3:34:LYS:HZ2	2.32	0.42
2:B:962:G:O2'	2:B:2250:G:N2	2.52	0.42
11:K:10:VAL:HG21	11:K:17:ARG:N	2.34	0.42
2:B:419:U:H2'	2:B:420:C:H6	1.85	0.42
7:F:163:GLU:HA	7:F:166:ARG:CD	2.49	0.42
2:B:153:U:H2'	2:B:154:U:O4'	2.19	0.42
2:B:1143:A:H61	10:J:27:ARG:HA	1.84	0.42
2:B:2606:C:O2'	2:B:2607:G:H5'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:903:C:H2'	2:B:904:G:C8	2.53	0.42
2:B:1456:G:O2'	2:B:1457:U:H5'	2.18	0.42
14:N:58:ASP:O	14:N:62:ASN:HB2	2.17	0.42
8:G:157:LYS:HD2	8:G:157:LYS:HA	1.84	0.42
9:H:42:LYS:HE2	9:H:42:LYS:C	2.39	0.42
2:B:1079:C:C4	2:B:1080:A:N7	2.87	0.42
2:B:2755:C:O5'	2:B:2755:C:H6	2.02	0.42
5:D:48:ILE:CG2	5:D:49:GLN:N	2.82	0.42
18:R:92:TRP:CD1	18:R:92:TRP:N	2.84	0.42
15:O:75:GLY:HA3	15:O:109:ALA:HB3	2.00	0.42
10:J:18:VAL:HG23	10:J:54:ILE:HG23	2.01	0.42
6:E:105:LEU:O	6:E:108:ILE:HG12	2.19	0.42
6:E:6:LYS:HB3	6:E:11:ALA:HA	2.01	0.42
6:E:189:THR:HG23	6:E:194:LYS:HG3	2.01	0.42
2:B:779:U:P	4:C:49:THR:HG1	2.40	0.42
4:C:258:SER:N	4:C:261:ARG:HH11	2.16	0.42
21:U:78:LYS:HD2	21:U:96:LYS:CG	2.49	0.42
12:L:77:ILE:HD11	12:L:111:ILE:HG23	2.01	0.42
2:B:544:C:O5'	2:B:545:U:OP1	2.37	0.42
7:F:107:VAL:HG12	7:F:108:PRO:CD	2.48	0.42
2:B:1843:C:H2'	2:B:1844:C:H6	1.84	0.42
2:B:1051:G:H2'	2:B:1052:C:C6	2.54	0.42
19:S:86:MET:HG3	19:S:87:PRO:HD2	2.02	0.42
2:B:2244:U:H2'	2:B:2245:U:C6	2.54	0.42
2:B:242:G:H22	2:B:254:G:H2'	1.84	0.42
2:B:182:A:H2'	2:B:183:C:C6	2.53	0.42
7:F:121:PHE:HB2	7:F:162:ASP:OD2	2.19	0.42
2:B:2222:C:O2'	2:B:2223:G:H5'	2.19	0.42
17:Q:30:VAL:CG1	17:Q:31:TYR:N	2.79	0.42
17:Q:26:ALA:CA	17:Q:30:VAL:HG23	2.49	0.42
2:B:2233:U:H2'	2:B:2234:G:H8	1.82	0.42
2:B:118:A:OP2	2:B:119:A:H2'	2.19	0.42
16:P:1:SER:O	16:P:6:GLN:OE1	2.38	0.42
2:B:2660:A:H2'	2:B:2661:G:O4'	2.19	0.42
6:E:59:PRO:HB2	6:E:60:TRP:CD1	2.54	0.42
2:B:2692:G:O2'	2:B:2693:G:H5'	2.19	0.42
2:B:267:C:H2'	2:B:268:C:H6	1.83	0.42
2:B:1372:U:O2'	2:B:2212:A:C8	2.70	0.42
4:C:188:ARG:HE	4:C:188:ARG:HB3	1.63	0.42
4:C:265:PHE:O	4:C:266:ILE:HG12	2.20	0.42
16:P:47:ILE:HD13	16:P:63:ILE:CG2	2.49	0.42
13:M:69:PRO:N	13:M:93:VAL:HG22	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:63:LYS:CB	29:3:26:ALA:HB2	2.40	0.42
1:A:114:C:H2'	1:A:115:A:C8	2.54	0.42
10:J:10:THR:HB	10:J:43:GLU:OE2	2.20	0.42
6:E:53:THR:HB	6:E:74:LYS:CE	2.49	0.42
22:W:77:LYS:C	22:W:79:ILE:N	2.71	0.42
21:U:43:LYS:HZ2	21:U:43:LYS:HB2	1.84	0.42
9:H:114:GLU:HB2	9:H:133:GLN:HG3	2.00	0.42
14:N:10:LEU:O	14:N:11:ASN:ND2	2.53	0.42
2:B:1261:C:C2'	2:B:1262:A:O5'	2.67	0.42
29:3:34:LYS:HE3	29:3:34:LYS:HB3	1.80	0.42
22:W:10:ARG:HB3	22:W:10:ARG:CZ	2.49	0.42
2:B:242:G:O2'	2:B:243:U:P	2.78	0.42
2:B:185:G:H4'	2:B:218:A:H4'	2.00	0.42
2:B:226:A:H1'	2:B:230:G:N2	2.34	0.42
2:B:1529:G:H2'	2:B:1530:G:H8	1.84	0.42
2:B:39:G:H2'	2:B:40:U:C6	2.55	0.42
2:B:2182:U:H2'	2:B:2183:A:C8	2.54	0.42
20:T:19:LYS:NZ	20:T:22:THR:HG23	2.34	0.42
2:B:1112:G:H4'	8:G:1:SER:O	2.18	0.42
2:B:915:C:H3'	2:B:916:G:H8	1.84	0.42
4:C:267:VAL:HG11	4:C:269:ARG:NH2	2.35	0.42
27:1:15:GLY:HA3	27:1:47:ILE:HG22	2.01	0.42
2:B:2821:A:H2'	2:B:2822:G:H8	1.84	0.42
29:3:49:VAL:CG1	29:3:51:LYS:HB2	2.49	0.42
14:N:97:ILE:HA	14:N:113:ILE:CD1	2.48	0.42
24:Y:2:LYS:HG3	24:Y:37:ARG:HG3	2.01	0.42
15:O:39:VAL:O	15:O:39:VAL:HG13	2.19	0.42
22:W:44:PHE:CG	22:W:44:PHE:O	2.72	0.42
20:T:76:ARG:C	20:T:76:ARG:CD	2.87	0.42
7:F:146:ASP:O	7:F:147:ARG:C	2.57	0.42
8:G:171:LYS:CE	8:G:173:ALA:HA	2.50	0.42
8:G:174:LYS:HB3	8:G:175:LYS:H	1.50	0.42
2:B:545:U:H2'	2:B:547:A:OP1	2.20	0.42
2:B:2893:A:H4'	2:B:2894:G:O5'	2.18	0.42
2:B:78:U:OP1	23:X:7:ARG:NH2	2.52	0.42
23:X:8:GLU:OE2	23:X:9:LYS:N	2.53	0.42
21:U:82:VAL:HB	21:U:94:PHE:CB	2.50	0.42
29:3:48:MET:HA	29:3:48:MET:CE	2.47	0.42
21:U:45:GLN:NE2	21:U:47:PRO:HG3	2.34	0.42
2:B:963:U:H2'	2:B:964:C:H6	1.83	0.42
2:B:1313:U:O2	2:B:1313:U:C2'	2.67	0.42
12:L:30:THR:HG21	12:L:38:GLN:NE2	2.35	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:61:VAL:HG13	11:K:87:LEU:HD11	2.01	0.42
2:B:729:G:H4'	2:B:763:G:C5'	2.49	0.42
2:B:942:G:H2'	2:B:943:A:H8	1.84	0.42
2:B:1636:U:O2'	2:B:1637:A:H5'	2.18	0.42
4:C:74:PRO:HD2	4:C:96:LYS:HG3	2.01	0.42
25:Z:17:SER:O	25:Z:19:GLY:N	2.45	0.42
2:B:2323:G:C2'	2:B:2324:U:H5'	2.49	0.42
2:B:1099:G:O4'	31:I:3:LYS:N	2.52	0.42
2:B:2526:G:H21	30:4:1:MET:CG	2.32	0.42
27:1:14:ALA:HB1	27:1:48:TYR:CE2	2.55	0.42
17:Q:92:LYS:O	17:Q:93:ILE:HG23	2.20	0.42
5:D:116:LYS:O	14:N:2:ARG:N	2.52	0.42
2:B:852:U:H2'	2:B:853:C:H6	1.83	0.42
10:J:15:TRP:O	10:J:16:TYR:C	2.58	0.42
10:J:44:TYR:CD1	10:J:45:THR:N	2.77	0.42
10:J:57:LEU:HG	10:J:128:ASN:HA	2.01	0.42
17:Q:64:ILE:HG13	17:Q:95:ALA:HB2	2.01	0.42
28:2:38:GLY:C	28:2:39:ARG:HD2	2.40	0.42
21:U:43:LYS:HG2	21:U:57:ILE:CB	2.49	0.42
6:E:6:LYS:HG2	6:E:119:ILE:O	2.19	0.42
4:C:260:LYS:C	4:C:261:ARG:HG3	2.40	0.42
25:Z:31:ASP:C	25:Z:32:LEU:HD22	2.40	0.42
25:Z:8:LYS:O	25:Z:9:TYR:HB2	2.20	0.42
19:S:22:ASP:O	19:S:25:ARG:HG3	2.19	0.42
21:U:72:PHE:CD2	21:U:74:ALA:HB3	2.53	0.42
2:B:1461:C:H2'	2:B:1462:C:C6	2.55	0.42
7:F:106:ALA:O	7:F:136:ILE:HG23	2.19	0.42
4:C:224:MET:HA	4:C:233:GLY:N	2.29	0.42
31:I:90:GLY:C	31:I:92:PRO:HD3	2.40	0.42
2:B:1064:C:C1'	31:I:90:GLY:HA2	2.50	0.42
31:I:17:ALA:O	31:I:18:ASN:HB3	2.19	0.42
7:F:39:VAL:CA	7:F:84:ILE:HB	2.38	0.42
26:0:29:VAL:HB	26:0:34:GLY:HA2	2.02	0.42
17:Q:48:ASP:O	17:Q:51:GLN:HB2	2.19	0.42
1:A:46:A:H4'	15:O:1:MET:HB2	2.01	0.42
8:G:65:GLY:HA2	8:G:68:ARG:HH21	1.84	0.42
8:G:88:LEU:HD21	8:G:104:LEU:HD11	2.02	0.42
2:B:2016:U:H1'	26:0:2:VAL:HG11	2.01	0.42
2:B:2007:U:H2'	2:B:2008:C:C6	2.55	0.42
2:B:1446:C:O2'	2:B:1447:C:H5'	2.19	0.42
31:I:63:ASP:O	31:I:64:ARG:CB	2.66	0.42
21:U:46:LYS:HE2	21:U:52:ASN:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:212:G:H2'	2:B:213:A:H8	1.84	0.42
31:I:102:ARG:HG3	31:I:141:ASP:HA	2.02	0.42
1:A:22:U:H2'	1:A:23:G:H8	1.85	0.42
15:O:8:ILE:O	15:O:11:ALA:HB3	2.19	0.42
8:G:139:VAL:O	8:G:143:VAL:HG12	2.20	0.42
2:B:1864:U:OP1	2:B:2410:G:O2'	2.32	0.42
25:Z:17:SER:C	25:Z:19:GLY:H	2.21	0.42
2:B:1012:U:O4	10:J:30:THR:HG21	2.20	0.42
2:B:2417:C:O2'	2:B:2418:A:H5'	2.18	0.42
4:C:173:LEU:HA	4:C:173:LEU:HD23	1.81	0.42
4:C:75:ALA:HB1	4:C:93:VAL:CG1	2.44	0.42
2:B:2723:C:H2'	2:B:2724:U:O4'	2.19	0.42
5:D:118:PHE:HD2	5:D:119:ALA:N	2.17	0.42
16:P:29:VAL:HA	16:P:84:SER:HA	2.00	0.42
16:P:46:VAL:HB	16:P:65:ASN:OD1	2.18	0.42
13:M:73:ILE:CG2	13:M:90:GLU:HG2	2.49	0.42
2:B:1021:A:O2'	2:B:1123:C:H5"	2.20	0.42
1:A:116:G:H4'	15:O:54:VAL:CG1	2.49	0.42
10:J:14:ASP:HB3	10:J:16:TYR:HD1	1.84	0.42
18:R:6:GLN:CG	18:R:7:SER:H	2.30	0.42
2:B:2267:A:H3'	2:B:2267:A:N3	2.34	0.42
6:E:122:GLU:CG	6:E:123:LYS:H	2.32	0.42
6:E:156:ASN:OD1	6:E:157:LEU:HD23	2.18	0.42
4:C:52:HIS:O	4:C:53:ILE:HB	2.19	0.42
2:B:2228:G:H21	25:Z:32:LEU:HD11	1.84	0.42
20:T:61:LEU:HB2	20:T:82:LYS:CB	2.49	0.42
1:A:103:U:O2'	1:A:104:A:H5'	2.20	0.42
1:A:75:G:H2'	1:A:76:G:O4'	2.19	0.42
13:M:53:MET:CA	13:M:112:LEU:HD21	2.48	0.42
6:E:83:VAL:HG23	6:E:84:THR:N	2.34	0.42
13:M:54:THR:O	13:M:57:VAL:HG23	2.19	0.42
14:N:63:ARG:HA	14:N:80:PHE:CE1	2.54	0.42
29:3:4:LYS:HZ1	29:3:60:CYS:HB3	1.84	0.42
12:L:51:GLU:CG	12:L:52:GLY:N	2.81	0.42
3:V:45:ASP:O	3:V:46:LYS:HD2	2.19	0.42
2:B:1710:G:H2'	2:B:1711:A:C8	2.54	0.42
2:B:2141:G:H2'	2:B:2142:A:C8	2.55	0.42
2:B:1506:U:H2'	2:B:1507:C:H6	1.85	0.42
8:G:163:TYR:C	8:G:165:ASP:H	2.22	0.42
2:B:1717:A:H2'	2:B:1718:G:O4'	2.19	0.42
2:B:51:G:O2'	2:B:119:A:N6	2.52	0.42
2:B:510:C:O2'	2:B:1236:G:H5'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1987:A:H2'	2:B:1988:G:C8	2.54	0.42
2:B:2520:C:O2'	2:B:2521:C:H5'	2.20	0.42
2:B:601:C:H2'	2:B:602:A:H8	1.85	0.42
2:B:1704:C:H2'	2:B:1705:A:C8	2.55	0.42
2:B:252:G:H2'	2:B:253:C:H6	1.84	0.42
2:B:2316:G:O2'	2:B:2317:A:H5'	2.20	0.42
9:H:55:GLU:O	9:H:59:ALA:HB2	2.20	0.42
2:B:2251:G:OP2	2:B:2251:G:H8	2.03	0.42
12:L:76:GLU:OE1	12:L:76:GLU:HA	2.20	0.42
5:D:116:LYS:HB2	5:D:165:MET:CB	2.49	0.42
5:D:6:GLY:C	5:D:26:VAL:HG23	2.40	0.42
10:J:32:LEU:O	10:J:36:LEU:HD22	2.19	0.42
10:J:90:GLU:C	10:J:92:MET:N	2.72	0.42
18:R:15:SER:HB2	18:R:16:GLU:H	1.68	0.42
2:B:2384:U:H5''	2:B:2386:A:OP1	2.19	0.42
4:C:53:ILE:CD1	4:C:218:THR:HA	2.50	0.42
4:C:257:ARG:HA	4:C:261:ARG:NE	2.35	0.42
25:Z:2:LYS:O	25:Z:7:PRO:HA	2.19	0.42
20:T:40:LYS:HE3	20:T:59:ASN:O	2.20	0.42
7:F:60:SER:OG	7:F:88:VAL:HG11	2.19	0.42
31:I:131:THR:O	31:I:135:MET:HG3	2.20	0.42
2:B:2529:G:H5'	8:G:175:LYS:HB3	2.01	0.42
17:Q:2:ARG:NE	17:Q:4:LYS:HE3	2.34	0.42
12:L:126:ARG:O	12:L:127:VAL:CG2	2.67	0.42
5:D:60:VAL:HB	5:D:62:LYS:NZ	2.34	0.42
2:B:126:A:OP2	28:2:13:ASN:ND2	2.52	0.42
27:1:24:LYS:C	27:1:24:LYS:HZ3	2.23	0.42
2:B:2012:G:C5'	19:S:96:ILE:HD11	2.50	0.42
9:H:127:GLU:HB2	9:H:143:ILE:CG2	2.49	0.42
13:M:38:ARG:C	13:M:38:ARG:HD2	2.39	0.42
8:G:125:PRO:HD2	8:G:129:GLU:O	2.19	0.42
9:H:70:GLU:H	9:H:70:GLU:HG3	1.59	0.42
29:3:38:LYS:H	29:3:38:LYS:HD2	1.85	0.42
2:B:1204:A:N1	2:B:1241:A:N1	2.67	0.42
2:B:2007:U:H2'	2:B:2008:C:H6	1.85	0.42
8:G:131:VAL:HG13	8:G:131:VAL:O	2.19	0.42
23:X:55:THR:HG22	23:X:56:LEU:H	1.84	0.42
9:H:50:ARG:HD3	9:H:54:LEU:CD1	2.50	0.42
2:B:1915:U:H2'	2:B:1916:A:C8	2.54	0.42
2:B:2869:G:H2'	2:B:2870:C:H6	1.83	0.42
2:B:1921:G:O2'	2:B:1922:G:H5'	2.20	0.42
2:B:1544:A:H2'	2:B:1545:A:C8	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1936:A:N6	2:B:1963:U:N3	2.63	0.42
2:B:2479:U:O5'	2:B:2479:U:H6	2.03	0.42
2:B:268:C:O2	2:B:268:C:H2'	2.19	0.42
2:B:2324:U:H3'	2:B:2325:G:C5'	2.49	0.42
2:B:1276:A:O2'	2:B:1277:G:H5'	2.19	0.42
6:E:19:PHE:O	6:E:19:PHE:HD1	2.03	0.42
2:B:1079:C:C2	2:B:1080:A:C8	3.08	0.42
30:4:26:ILE:HD13	30:4:27:CYS:N	2.34	0.42
4:C:140:VAL:HG11	4:C:163:ILE:HG13	2.01	0.42
16:P:98:TYR:CD1	16:P:98:TYR:N	2.88	0.42
12:L:124:GLY:H	12:L:142:ILE:CB	2.32	0.42
2:B:1142:A:C4	2:B:1144:A:C8	3.08	0.42
24:Y:36:GLU:O	24:Y:37:ARG:CB	2.67	0.42
15:O:25:ARG:HE	15:O:94:ARG:NH2	2.18	0.42
2:B:2082:A:H61	2:B:2237:G:H1'	1.85	0.42
18:R:5:PHE:HD1	18:R:37:GLU:OE2	2.02	0.42
22:W:68:PHE:CE1	22:W:69:GLU:HG2	2.54	0.42
4:C:20:ASN:CB	4:C:202:ARG:CD	2.96	0.42
6:E:154:ASP:OD1	6:E:158:PHE:HB2	2.20	0.42
6:E:193:VAL:HA	6:E:198:GLU:C	2.40	0.42
7:F:35:LEU:O	7:F:152:ASP:HB2	2.20	0.42
17:Q:3:VAL:O	17:Q:4:LYS:C	2.58	0.42
18:R:78:ARG:HA	18:R:88:GLY:O	2.20	0.42
20:T:38:ALA:O	20:T:39:THR:O	2.37	0.42
21:U:59:GLU:HG3	21:U:62:ALA:CB	2.43	0.42
2:B:1275:A:N7	14:N:16:HIS:CG	2.88	0.42
3:V:65:VAL:O	3:V:66:ASP:HB3	2.19	0.42
15:O:31:THR:C	15:O:33:ARG:H	2.22	0.42
2:B:1516:G:O2'	2:B:1517:G:H5'	2.20	0.42
5:D:25:THR:HA	5:D:188:LEU:HD12	2.01	0.42
2:B:570:G:C2'	2:B:571:U:H5'	2.50	0.42
2:B:2395:C:H6	2:B:2395:C:O5'	2.02	0.42
2:B:2649:C:H2'	2:B:2650:U:C6	2.55	0.42
2:B:2651:C:O2'	2:B:2652:C:H5'	2.20	0.42
2:B:2813:A:O2'	2:B:2814:A:H5'	2.19	0.42
2:B:2389:G:H5''	2:B:2390:U:O4'	2.20	0.42
11:K:87:LEU:O	11:K:88:ASN:C	2.58	0.42
2:B:2868:A:H2'	2:B:2869:G:C8	2.55	0.42
2:B:2379:G:H2'	2:B:2380:C:H6	1.84	0.42
13:M:106:ASP:O	13:M:109:PRO:HD3	2.19	0.42
15:O:90:VAL:HG12	15:O:91:SER:N	2.35	0.42
2:B:957:C:H5	13:M:76:LYS:NZ	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:6:ARG:O	20:T:7:LEU:C	2.56	0.42
2:B:88:G:O2'	2:B:89:A:H5'	2.20	0.42
2:B:1310:G:H1'	2:B:1611:C:H5'	2.01	0.42
2:B:2419:U:O4	29:3:29:ARG:CZ	2.67	0.42
6:E:61:ARG:NH1	6:E:65:THR:HG23	2.34	0.42
2:B:559:G:H2'	2:B:560:C:O4'	2.20	0.42
4:C:130:PRO:HA	4:C:188:ARG:HA	2.01	0.42
5:D:5:VAL:HG12	5:D:6:GLY:N	2.34	0.42
5:D:94:GLN:HG2	5:D:95:SER:O	2.19	0.42
16:P:72:VAL:HB	16:P:73:PHE:H	1.65	0.42
29:3:12:ARG:CD	29:3:23:HIS:HB2	2.50	0.42
29:3:7:ARG:HD2	29:3:7:ARG:HA	1.84	0.42
1:A:115:A:H4'	15:O:55:GLU:OE2	2.20	0.42
10:J:11:VAL:O	10:J:11:VAL:HG22	2.19	0.42
6:E:169:VAL:O	6:E:170:ARG:HB2	2.19	0.42
6:E:142:ALA:C	6:E:185:LYS:HZ2	2.22	0.42
25:Z:27:THR:O	25:Z:28:VAL:HG13	2.20	0.42
20:T:32:LEU:O	20:T:83:ALA:HB3	2.19	0.42
1:A:75:G:H21	3:V:88:HIS:CD2	2.38	0.42
5:D:157:LYS:HD2	10:J:80:HIS:HA	2.01	0.42
18:R:67:GLY:N	18:R:98:ILE:HA	2.32	0.42
8:G:50:THR:HG22	8:G:51:PHE:O	2.20	0.42
27:1:8:ILE:CG2	27:1:27:ARG:HD3	2.50	0.42
21:U:13:LEU:HD11	21:U:68:ASN:HA	2.00	0.42
5:D:148:GLN:HB3	5:D:151:THR:HG23	2.01	0.42
2:B:2768:U:H2'	2:B:2769:U:O4'	2.20	0.42
2:B:2627:G:O2'	2:B:2781:A:N1	2.46	0.42
8:G:93:TYR:N	8:G:93:TYR:HD1	2.16	0.42
2:B:2294:G:OP2	15:O:9:ARG:HD2	2.19	0.42
15:O:9:ARG:C	15:O:11:ALA:N	2.73	0.42
1:A:92:C:H2'	1:A:93:C:H6	1.83	0.42
2:B:2514:U:H2'	2:B:2515:C:C6	2.55	0.42
15:O:79:ALA:O	15:O:82:ALA:HB3	2.20	0.42
2:B:1147:A:O2'	2:B:1148:U:H5'	2.19	0.42
8:G:55:ASP:CG	8:G:56:GLY:N	2.74	0.42
21:U:54:PRO:HD2	21:U:55:GLY:H	1.83	0.42
2:B:381:G:O2'	2:B:382:A:H5'	2.20	0.42
23:X:39:GLN:H	23:X:39:GLN:HG2	1.64	0.42
2:B:448:U:H3'	6:E:79:ARG:NE	2.22	0.41
2:B:1033:U:C4	30:4:16:ILE:HD11	2.54	0.41
4:C:176:ARG:HB3	4:C:177:SER:H	1.66	0.41
17:Q:94:LEU:HA	17:Q:97:ILE:CG1	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:2:ARG:C	14:N:3:HIS:HD2	2.23	0.41
10:J:59:ALA:C	10:J:61:LYS:N	2.71	0.41
22:W:24:ARG:NE	22:W:58:LEU:HB2	2.35	0.41
4:C:20:ASN:CG	4:C:202:ARG:HD3	2.40	0.41
20:T:77:ARG:HG2	20:T:78:SER:N	2.32	0.41
6:E:169:VAL:HG22	6:E:171:ASP:H	1.85	0.41
20:T:87:LEU:HD22	20:T:93:LEU:HD11	2.02	0.41
13:M:67:VAL:HG23	13:M:100:LYS:HG2	2.02	0.41
2:B:2028:U:H2'	2:B:2029:G:O4'	2.19	0.41
10:J:85:LYS:C	10:J:85:LYS:HE2	2.40	0.41
11:K:109:SER:C	11:K:113:MET:HE2	2.40	0.41
2:B:545:U:C6	2:B:546:U:H4'	2.54	0.41
2:B:2893:A:H4'	2:B:2894:G:C5'	2.50	0.41
2:B:2798:U:H1'	2:B:2800:A:N6	2.35	0.41
1:A:66:A:HO2'	1:A:67:G:H8	1.59	0.41
2:B:1979:U:C2'	2:B:1980:G:H5'	2.50	0.41
17:Q:20:ALA:O	17:Q:21:LYS:C	2.58	0.41
17:Q:101:ASP:HB3	17:Q:104:ALA:HB3	2.02	0.41
2:B:600:G:H1'	6:E:100:MET:SD	2.60	0.41
30:4:14:CYS:CA	30:4:27:CYS:HA	2.49	0.41
4:C:107:LYS:HD2	4:C:107:LYS:HA	1.87	0.41
12:L:2:ARG:HH12	12:L:6:LEU:HD13	1.82	0.41
5:D:34:VAL:HG11	5:D:50:VAL:CG2	2.49	0.41
5:D:4:LEU:HD12	5:D:79:LEU:HD22	2.02	0.41
13:M:42:THR:OG1	13:M:91:TYR:HB2	2.20	0.41
9:H:29:PHE:HB3	9:H:30:LEU:H	1.58	0.41
2:B:5:A:H2'	2:B:6:A:C8	2.56	0.41
6:E:189:THR:HG23	6:E:194:LYS:HB2	2.02	0.41
2:B:2226:C:H2'	2:B:2227:A:O4'	2.19	0.41
25:Z:34:LEU:H	25:Z:47:LYS:HZ2	1.68	0.41
21:U:72:PHE:CZ	21:U:78:LYS:HE2	2.55	0.41
7:F:29:ARG:HB2	7:F:158:THR:CG2	2.50	0.41
4:C:79:ARG:HD2	4:C:110:LYS:CE	2.49	0.41
18:R:20:VAL:HA	18:R:96:VAL:O	2.20	0.41
2:B:654:A:H2'	2:B:655:A:C5'	2.41	0.41
12:L:111:ILE:HA	12:L:128:THR:CG2	2.50	0.41
2:B:1485:U:O2'	2:B:1486:U:H5'	2.20	0.41
2:B:567:U:H2'	2:B:568:U:O4'	2.20	0.41
2:B:21:A:H2'	2:B:22:C:H6	1.81	0.41
2:B:673:C:O2'	2:B:674:G:H5'	2.19	0.41
2:B:2539:C:C2'	2:B:2540:C:H5'	2.50	0.41
2:B:753:A:O2'	2:B:754:U:H5'	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2653:U:H2'	2:B:2654:A:C8	2.55	0.41
8:G:58:ALA:O	8:G:60:GLY:N	2.53	0.41
31:I:99:LYS:HB2	31:I:140:GLU:OE1	2.19	0.41
2:B:2443:C:OP1	6:E:63:LYS:HG3	2.20	0.41
2:B:1750:G:O2'	2:B:1751:U:H5'	2.19	0.41
13:M:107:GLY:C	13:M:109:PRO:HD2	2.40	0.41
2:B:2553:G:H2'	2:B:2554:U:H4'	2.01	0.41
29:3:29:ARG:O	29:3:31:ILE:N	2.53	0.41
2:B:1668:A:N3	2:B:1670:C:C4	2.88	0.41
2:B:2745:C:O2'	8:G:141:GLY:HA3	2.19	0.41
2:B:2492:U:O2'	2:B:2493:U:H5'	2.20	0.41
4:C:161:VAL:O	4:C:162:GLN:C	2.58	0.41
4:C:66:PHE:HB3	4:C:67:LYS:H	1.67	0.41
10:J:72:LYS:HE3	10:J:74:TYR:CE1	2.55	0.41
2:B:4:U:O2'	2:B:5:A:H5'	2.19	0.41
10:J:25:LEU:CG	10:J:64:VAL:H	2.31	0.41
2:B:453:A:N3	2:B:457:A:O2'	2.49	0.41
9:H:125:THR:HG22	9:H:146:VAL:HG12	2.02	0.41
15:O:18:LEU:HD13	22:W:76:ARG:HH21	1.85	0.41
2:B:764:A:H5''	4:C:208:GLY:CA	2.50	0.41
25:Z:6:HIS:HB3	25:Z:51:VAL:HG22	2.01	0.41
7:F:132:ARG:HB3	7:F:133:GLU:H	1.65	0.41
2:B:1434:A:H4'	2:B:1434:A:OP1	2.20	0.41
31:I:54:ILE:C	31:I:54:ILE:HD13	2.40	0.41
13:M:33:LEU:H	13:M:101:VAL:HB	1.85	0.41
15:O:58:ILE:C	15:O:60:GLU:H	2.23	0.41
23:X:44:LYS:HG3	23:X:47:ARG:HG3	2.02	0.41
8:G:39:ALA:CB	8:G:54:ARG:HB2	2.44	0.41
5:D:59:ARG:CZ	5:D:63:PRO:HG2	2.50	0.41
5:D:146:ILE:HG21	5:D:155:VAL:HA	2.02	0.41
5:D:146:ILE:CG1	5:D:155:VAL:HG13	2.50	0.41
1:A:60:C:H2'	1:A:61:G:H8	1.85	0.41
2:B:1601:G:OP1	20:T:62:VAL:HG21	2.20	0.41
2:B:2076:U:OP2	2:B:2238:G:N2	2.51	0.41
2:B:523:C:O2'	2:B:524:G:H5'	2.20	0.41
2:B:2733:A:C3'	2:B:2733:A:C8	3.04	0.41
16:P:38:ARG:NH1	16:P:39:LEU:HA	2.36	0.41
29:3:39:ARG:HA	29:3:39:ARG:HD3	1.76	0.41
2:B:2716:C:O2'	2:B:2717:C:H5'	2.20	0.41
16:P:92:ARG:HG2	16:P:110:LYS:N	2.35	0.41
2:B:1541:C:H2'	2:B:1542:U:H6	1.86	0.41
2:B:1278:C:H2'	2:B:1279:G:C8	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1764:C:H2'	2:B:1765:U:H6	1.85	0.41
2:B:2691:C:H2'	2:B:2692:G:H8	1.86	0.41
2:B:2445:G:O2'	2:B:2446:G:H5'	2.20	0.41
2:B:1989:G:H2'	2:B:1990:C:O4'	2.21	0.41
2:B:367:G:H2'	2:B:368:A:O4'	2.19	0.41
2:B:1832:C:H2'	2:B:1833:C:O5'	2.19	0.41
2:B:1396:U:O4'	2:B:1396:U:O2	2.34	0.41
2:B:2056:G:N3	2:B:2056:G:H2'	2.34	0.41
31:I:8:VAL:CG1	31:I:30:GLN:HG3	2.50	0.41
4:C:130:PRO:HA	4:C:187:CYS:O	2.20	0.41
4:C:63:ILE:HG21	4:C:90:ILE:CD1	2.50	0.41
4:C:94:LEU:HD11	4:C:98:GLY:HA2	2.02	0.41
17:Q:82:LEU:HB2	17:Q:112:ALA:HB2	2.02	0.41
17:Q:82:LEU:HD21	17:Q:91:ARG:HB3	2.02	0.41
17:Q:94:LEU:O	17:Q:98:ALA:N	2.50	0.41
2:B:2682:A:O2'	2:B:2683:C:H5'	2.20	0.41
9:H:29:PHE:O	9:H:31:VAL:N	2.53	0.41
10:J:14:ASP:H	10:J:53:TYR:HD1	1.68	0.41
22:W:42:THR:HB	22:W:75:ASN:CG	2.41	0.41
22:W:42:THR:N	22:W:65:LYS:HG2	2.31	0.41
6:E:147:LEU:HB3	6:E:167:VAL:CG1	2.44	0.41
2:B:2199:A:OP2	2:B:2200:C:H5	2.02	0.41
20:T:49:LYS:O	20:T:51:PHE:N	2.44	0.41
2:B:494:G:O2'	2:B:495:G:H5'	2.21	0.41
2:B:162:U:O2'	2:B:163:C:H5'	2.20	0.41
2:B:727:A:O2'	2:B:728:G:H5'	2.19	0.41
21:U:33:VAL:HG23	21:U:65:GLN:NE2	2.34	0.41
2:B:1064:C:O2'	2:B:1065:U:H5'	2.20	0.41
31:I:89:SER:HA	31:I:97:VAL:CG1	2.50	0.41
2:B:1789:A:H2'	2:B:1790:C:H6	1.85	0.41
2:B:27:G:H1'	2:B:513:A:H61	1.85	0.41
2:B:2886:A:C2	2:B:2887:A:N7	2.89	0.41
13:M:9:PHE:HD1	13:M:9:PHE:H	1.68	0.41
2:B:2787:C:H2'	2:B:2788:C:C6	2.55	0.41
23:X:28:LEU:CB	23:X:42:LEU:HG	2.51	0.41
2:B:1797:G:H5'	4:C:251:THR:O	2.21	0.41
27:1:32:LYS:CG	27:1:52:LYS:HE2	2.44	0.41
5:D:184:ARG:HD2	16:P:4:ILE:CG2	2.49	0.41
2:B:2581:G:OP1	5:D:134:HIS:CD2	2.73	0.41
2:B:937:C:H2'	2:B:938:G:H8	1.85	0.41
2:B:2278:A:N6	22:W:10:ARG:HB2	2.35	0.41
12:L:103:ILE:HG13	12:L:106:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:324:A:N6	2:B:338:G:H2'	2.36	0.41
2:B:1952:A:N3	2:B:2560:A:O2'	2.46	0.41
2:B:1330:C:H2'	2:B:1331:G:H8	1.86	0.41
12:L:45:GLY:C	12:L:47:ARG:N	2.73	0.41
2:B:1213:A:C6	2:B:1237:A:H1'	2.55	0.41
3:V:92:VAL:O	3:V:92:VAL:HG13	2.21	0.41
5:D:84:LEU:HD12	5:D:84:LEU:HA	1.91	0.41
2:B:1238:G:O2'	2:B:1239:G:H5'	2.21	0.41
5:D:67:HIS:O	5:D:68:PHE:HB2	2.20	0.41
31:I:2:LYS:O	31:I:3:LYS:CG	2.69	0.41
30:4:24:ARG:HE	30:4:37:GLN:HA	1.82	0.41
4:C:143:VAL:HG12	4:C:144:GLU:H	1.84	0.41
4:C:61:TYR:CD2	4:C:84:PRO:HD2	2.55	0.41
16:P:23:ASP:HB3	16:P:24:THR:H	1.33	0.41
11:K:78:ARG:HH12	16:P:62:LYS:HZ3	1.68	0.41
15:O:35:ILE:HG21	15:O:71:ALA:HA	2.03	0.41
10:J:120:ARG:C	10:J:122:LEU:H	2.23	0.41
6:E:47:LYS:HA	6:E:49:ARG:NE	2.32	0.41
18:R:65:ALA:N	18:R:100:GLY:HA2	2.35	0.41
6:E:161:ALA:HB1	6:E:168:ASP:O	2.21	0.41
6:E:189:THR:C	6:E:191:ASP:N	2.72	0.41
25:Z:27:THR:HG23	25:Z:28:VAL:N	2.36	0.41
7:F:36:ASN:ND2	7:F:87:LYS:H	2.19	0.41
31:I:79:LEU:HD23	31:I:108:ILE:HD12	2.03	0.41
31:I:60:VAL:HG22	31:I:66:PHE:HB3	2.02	0.41
10:J:81:ILE:CG2	10:J:82:GLY:H	2.11	0.41
2:B:1791:A:N6	2:B:1828:G:H1'	2.35	0.41
2:B:630:G:N1	12:L:69:ARG:NH1	2.62	0.41
2:B:136:G:N1	20:T:3:ARG:CZ	2.84	0.41
27:1:6:GLU:O	27:1:27:ARG:NH2	2.54	0.41
27:1:4:ILE:C	27:1:5:ARG:HG3	2.39	0.41
5:D:159:LYS:O	5:D:160:LYS:HB2	2.19	0.41
2:B:360:U:H2'	2:B:361:G:C1'	2.51	0.41
20:T:68:LYS:HB2	20:T:68:LYS:HZ3	1.85	0.41
2:B:659:G:H4'	6:E:95:LYS:HD3	2.03	0.41
2:B:299:A:N7	2:B:322:A:C2	2.88	0.41
2:B:964:C:O2'	2:B:2273:A:H1'	2.19	0.41
2:B:1014:A:H2'	2:B:1015:U:C6	2.56	0.41
23:X:15:ASN:CG	23:X:15:ASN:O	2.59	0.41
4:C:59:GLN:HB2	4:C:60:ALA:H	1.43	0.41
2:B:1736:U:H2'	2:B:1737:G:C8	2.55	0.41
2:B:606:U:H4'	2:B:658:U:H4'	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:26:ALA:HA	17:Q:30:VAL:HG23	2.02	0.41
3:V:75:GLN:HB3	3:V:90:ASP:HB3	2.01	0.41
2:B:1268:A:H2'	2:B:1269:A:O4'	2.20	0.41
10:J:28:LEU:HD13	10:J:28:LEU:C	2.41	0.41
12:L:143:GLU:O	12:L:143:GLU:HG2	2.20	0.41
31:I:3:LYS:HE3	31:I:3:LYS:CD	2.18	0.41
2:B:490:C:H3'	2:B:491:G:H5''	2.01	0.41
2:B:587:C:H5''	12:L:29:LYS:HZ2	1.85	0.41
17:Q:81:GLY:O	17:Q:85:ALA:HB2	2.20	0.41
16:P:70:GLU:C	16:P:71:ARG:HG2	2.40	0.41
13:M:14:LYS:HB2	13:M:72:PRO:HA	2.02	0.41
13:M:41:LEU:HG	13:M:46:ILE:HD11	2.03	0.41
1:A:7:G:H5''	15:O:29:HIS:CE1	2.56	0.41
10:J:25:LEU:HG	10:J:64:VAL:N	2.31	0.41
10:J:33:ALA:O	10:J:36:LEU:HB2	2.20	0.41
2:B:2331:G:H21	2:B:2336:A:H8	1.66	0.41
22:W:42:THR:H	22:W:65:LYS:CA	2.29	0.41
22:W:74:LYS:HB3	22:W:75:ASN:H	1.34	0.41
26:O:16:ARG:C	26:O:18:HIS:H	2.24	0.41
4:C:222:THR:C	4:C:224:MET:N	2.73	0.41
2:B:1790:C:H2'	2:B:1791:A:C8	2.56	0.41
23:X:44:LYS:HG3	23:X:47:ARG:CG	2.50	0.41
8:G:39:ALA:O	8:G:40:VAL:C	2.59	0.41
2:B:994:C:OP2	17:Q:50:ARG:NE	2.45	0.41
2:B:136:G:H8	2:B:136:G:P	2.44	0.41
5:D:181:ASP:OD1	5:D:184:ARG:HB3	2.19	0.41
3:V:30:ILE:HD12	3:V:38:LEU:HD23	2.03	0.41
29:3:28:LEU:HD21	29:3:33:THR:OG1	2.20	0.41
2:B:1592:C:H2'	2:B:1593:A:C8	2.55	0.41
2:B:2341:G:H2'	2:B:2342:C:C6	2.56	0.41
2:B:2054:A:H2'	26:O:4:GLN:NE2	2.33	0.41
2:B:2376:A:N3	15:O:111:ARG:NH2	2.68	0.41
6:E:39:ALA:O	6:E:40:ARG:C	2.58	0.41
2:B:307:G:N1	2:B:310:A:OP2	2.52	0.41
2:B:1014:A:O2'	2:B:1015:U:H5'	2.20	0.41
2:B:2361:G:H5''	29:3:27:ASN:HB2	2.02	0.41
2:B:105:C:H2'	2:B:106:C:H6	1.84	0.41
2:B:699:A:H4'	2:B:1634:A:N7	2.35	0.41
2:B:1278:C:OP1	14:N:36:THR:HG23	2.20	0.41
14:N:14:SER:HA	14:N:17:ARG:HH22	1.85	0.41
2:B:1126:A:H4'	2:B:1127:A:O5'	2.21	0.41
2:B:2105:U:H2'	2:B:2106:U:H6	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:N:18:GLN:HB2	14:N:18:GLN:HE21	1.50	0.41
2:B:2742:G:H5''	30:4:38:GLY:HA2	2.03	0.41
4:C:162:GLN:HE22	4:C:174:ARG:HH12	1.69	0.41
17:Q:98:ALA:HA	17:Q:105:PHE:CG	2.55	0.41
2:B:2850:A:H2'	2:B:2851:A:H8	1.85	0.41
33:B:3289:HOH:O	14:N:3:HIS:HB2	2.20	0.41
10:J:73:VAL:HG11	10:J:75:TYR:CE2	2.56	0.41
24:Y:6:ILE:HG22	24:Y:56:VAL:HG11	2.03	0.41
4:C:229:HIS:ND1	4:C:230:PRO:CD	2.78	0.41
2:B:453:A:H5''	33:B:3314:HOH:O	2.20	0.41
18:R:41:ILE:O	18:R:43:ASN:N	2.53	0.41
6:E:116:ASP:C	6:E:117:ARG:HD2	2.40	0.41
6:E:143:LEU:HD13	6:E:185:LYS:HZ2	1.85	0.41
2:B:2091:C:H5'	25:Z:49:ARG:CD	2.51	0.41
2:B:2199:A:H3'	2:B:2200:C:H6	1.86	0.41
7:F:135:ILE:HG23	7:F:136:ILE:H	1.86	0.41
1:A:45:A:O4'	7:F:91:ARG:CZ	2.68	0.41
2:B:2144:G:C2	2:B:2146:C:H5'	2.56	0.41
2:B:533:G:N3	17:Q:40:LYS:CG	2.84	0.41
7:F:96:TRP:C	7:F:98:PHE:N	2.74	0.41
2:B:140:C:H4'	2:B:141:G:C2	2.55	0.41
2:B:2787:C:H5'	5:D:65:ALA:CB	2.51	0.41
27:1:27:ARG:HE	27:1:27:ARG:N	2.18	0.41
14:N:12:ARG:CD	14:N:16:HIS:HD2	2.34	0.41
2:B:998:C:H2'	2:B:999:U:O4'	2.20	0.41
19:S:84:ARG:C	19:S:96:ILE:HG22	2.41	0.41
5:D:14:ILE:HD12	16:P:78:PRO:HB2	2.03	0.41
8:G:126:THR:HG23	8:G:129:GLU:H	1.84	0.41
23:X:2:LYS:HD3	23:X:2:LYS:N	2.36	0.41
7:F:121:PHE:CE2	7:F:127:TYR:HB2	2.56	0.41
2:B:2715:C:O5'	2:B:2715:C:H6	2.04	0.41
5:D:114:LYS:HB2	5:D:114:LYS:HZ2	1.84	0.41
2:B:1710:G:O2'	2:B:1711:A:H5'	2.21	0.41
2:B:619:G:H2'	2:B:620:G:H5''	2.03	0.41
19:S:27:LYS:HA	19:S:70:LYS:CG	2.50	0.41
13:M:62:LYS:HB2	13:M:104:GLU:OE1	2.19	0.41
2:B:688:U:O2'	2:B:689:A:H5'	2.20	0.41
5:D:100:LEU:HD13	5:D:100:LEU:O	2.21	0.41
31:I:8:VAL:HG11	31:I:30:GLN:HG3	2.02	0.41
2:B:1799:G:N2	2:B:1818:U:O2'	2.54	0.41
4:C:173:LEU:HD12	4:C:183:VAL:CG1	2.51	0.41
2:B:2849:U:O4	2:B:2867:G:C8	2.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:116:LYS:O	14:N:1:MET:C	2.59	0.41
16:P:50:ARG:CG	16:P:99:LEU:H	2.34	0.41
9:H:30:LEU:HD12	9:H:30:LEU:O	2.21	0.41
4:C:245:THR:O	4:C:246:PRO:C	2.59	0.41
6:E:193:VAL:C	6:E:195:GLN:N	2.73	0.41
2:B:2313:C:O2'	7:F:34:THR:HG21	2.21	0.41
31:I:18:ASN:N	31:I:19:PRO:CD	2.84	0.41
4:C:220:ARG:HA	4:C:220:ARG:NH1	2.32	0.41
2:B:26:G:H2'	2:B:27:G:C1'	2.50	0.41
8:G:44:HIS:HB2	8:G:49:LEU:HD23	2.03	0.41
13:M:119:LEU:HD22	13:M:119:LEU:N	2.32	0.41
11:K:39:ILE:O	11:K:60:ALA:N	2.50	0.41
11:K:20:MET:HB2	11:K:44:LYS:HE2	2.02	0.41
17:Q:52:ARG:O	17:Q:53:LYS:C	2.59	0.41
17:Q:50:ARG:HH22	17:Q:53:LYS:HE3	1.85	0.41
2:B:363:G:H2'	2:B:364:C:H6	1.86	0.41
5:D:81:GLU:O	5:D:82:PHE:CB	2.68	0.41
28:2:17:GLY:C	28:2:18:PHE:CG	2.93	0.41
21:U:10:VAL:O	21:U:11:ILE:HD13	2.20	0.41
2:B:1556:C:H2'	2:B:1557:C:C6	2.56	0.41
13:M:19:GLY:C	13:M:20:LEU:HD12	2.41	0.41
2:B:1727:C:H2'	2:B:1728:C:H6	1.81	0.41
2:B:608:A:H2'	2:B:609:A:H8	1.85	0.41
24:Y:10:ARG:HA	24:Y:31:ILE:HD12	2.03	0.41
2:B:836:G:H2'	2:B:837:C:H6	1.84	0.41
2:B:1682:G:C4	2:B:1757:A:H1'	2.56	0.41
2:B:2700:A:H2	14:N:71:ARG:NH2	2.18	0.41
28:2:3:ARG:HH21	28:2:4:THR:HG23	1.86	0.41
2:B:2300:C:H2'	2:B:2301:C:C6	2.56	0.41
2:B:1987:A:H2'	2:B:1988:G:H8	1.84	0.41
20:T:19:LYS:HE3	20:T:23:ALA:HB2	2.02	0.41
2:B:1880:U:H2'	2:B:1881:C:C6	2.55	0.41
2:B:557:C:H2'	2:B:558:U:H6	1.84	0.41
2:B:1704:C:O2'	2:B:1705:A:H5'	2.20	0.41
2:B:251:A:H2'	2:B:252:G:O4'	2.21	0.41
2:B:127:A:H5''	2:B:128:C:O4'	2.21	0.41
1:A:82:U:O3'	24:Y:16:LEU:HD11	2.20	0.41
2:B:2710:C:H2'	2:B:2711:A:H8	1.86	0.41
2:B:1428:C:H2'	2:B:1569:A:OP2	2.20	0.41
30:4:7:VAL:O	30:4:8:LYS:HB2	2.21	0.41
2:B:393:C:O2'	2:B:394:C:H5'	2.21	0.41
2:B:683:U:H6	2:B:683:U:O5'	2.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:4:11:CYS:HB3	30:4:27:CYS:SG	2.61	0.41
30:4:16:ILE:HG23	30:4:18:LYS:N	2.28	0.41
30:4:26:ILE:CB	30:4:35:GLN:HG2	2.50	0.41
2:B:1817:G:OP1	4:C:62:ARG:NH2	2.54	0.41
4:C:104:LEU:HD23	4:C:104:LEU:HA	1.79	0.41
4:C:155:ARG:NE	4:C:157:ALA:HB3	2.36	0.41
12:L:2:ARG:NH1	12:L:2:ARG:HG3	2.35	0.41
27:1:40:PRO:O	27:1:41:VAL:C	2.59	0.41
5:D:116:LYS:O	14:N:1:MET:HB2	2.21	0.41
2:B:2683:C:OP1	16:P:55:HIS:CD2	2.73	0.41
5:D:95:SER:C	5:D:96:ILE:HG13	2.41	0.41
16:P:54:LEU:CD1	16:P:55:HIS:H	2.33	0.41
12:L:90:VAL:C	12:L:92:LEU:N	2.74	0.41
2:B:909:A:H5''	13:M:18:ARG:NH2	2.35	0.41
12:L:61:LEU:HB3	12:L:62:PRO:HD3	2.03	0.41
12:L:62:PRO:CB	29:3:12:ARG:HD3	2.42	0.41
24:Y:7:THR:CA	24:Y:34:THR:HB	2.51	0.41
18:R:2:TYR:HD1	18:R:15:SER:OG	2.04	0.41
6:E:109:LEU:N	6:E:117:ARG:HH21	2.19	0.41
6:E:153:LEU:CB	6:E:173:THR:HB	2.51	0.41
20:T:84:TYR:O	20:T:85:VAL:C	2.59	0.41
19:S:73:LYS:HD3	19:S:73:LYS:HA	1.91	0.41
21:U:71:ILE:CG1	21:U:72:PHE:N	2.84	0.41
7:F:56:LEU:CD1	7:F:86:CYS:HB3	2.51	0.41
2:B:598:U:H5'	12:L:21:ARG:HB2	2.03	0.41
4:C:28:PRO:CB	4:C:79:ARG:HE	2.34	0.41
4:C:27:LYS:N	4:C:28:PRO:HD3	2.34	0.41
7:F:41:GLU:H	7:F:45:ASP:HB3	1.86	0.41
2:B:27:G:O5'	2:B:27:G:H8	2.04	0.41
2:B:1250:G:C5'	17:Q:5:ARG:HD3	2.50	0.41
2:B:144:A:C5	20:T:3:ARG:NH1	2.89	0.41
17:Q:46:TYR:CD2	18:R:89:HIS:NE2	2.89	0.41
5:D:59:ARG:NH2	5:D:63:PRO:HG2	2.35	0.41
5:D:146:ILE:H	5:D:146:ILE:CD1	2.34	0.41
2:B:877:A:C6	2:B:898:C:H2'	2.56	0.41
1:A:37:C:N3	1:A:48:U:O2'	2.52	0.41
5:D:180:VAL:HG23	5:D:181:ASP:H	1.85	0.41
19:S:87:PRO:O	19:S:93:ALA:HA	2.21	0.41
16:P:77:SER:HB2	16:P:78:PRO:HD3	2.03	0.41
2:B:742:A:O2'	2:B:743:A:H5'	2.21	0.41
5:D:177:VAL:HG23	5:D:188:LEU:O	2.21	0.41
24:Y:26:LEU:C	24:Y:28:LEU:H	2.24	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1407:G:H2'	2:B:1408:G:H8	1.85	0.41
9:H:104:THR:HA	9:H:108:VAL:O	2.20	0.41
2:B:2261:C:OP2	22:W:13:ARG:HB2	2.21	0.41
14:N:28:LEU:HA	14:N:34:ILE:CD1	2.50	0.41
2:B:593:U:H2'	2:B:594:U:C6	2.56	0.41
2:B:1726:C:H2'	2:B:1727:C:C6	2.56	0.41
2:B:236:C:H2'	2:B:237:C:H6	1.86	0.41
9:H:135:HIS:H	9:H:138:VAL:HB	1.85	0.41
11:K:69:VAL:HG11	11:K:106:GLU:CD	2.41	0.41
29:3:25:HIS:CE1	29:3:46:LYS:HB2	2.55	0.41
2:B:1945:G:C4	2:B:1946:U:C5	3.09	0.41
23:X:56:LEU:O	23:X:59:GLU:HB2	2.21	0.41
2:B:1716:U:H2'	2:B:1717:A:H8	1.83	0.41
20:T:79:ASP:O	20:T:80:TRP:HB2	2.20	0.41
2:B:678:C:O2'	2:B:679:C:H5'	2.20	0.41
2:B:709:U:H2'	2:B:710:U:C6	2.54	0.41
8:G:31:GLU:O	8:G:32:LEU:HD23	2.21	0.41
28:2:37:LYS:HD3	28:2:37:LYS:C	2.42	0.41
20:T:33:LYS:HD2	20:T:33:LYS:O	2.21	0.41
4:C:103:ILE:CG2	4:C:104:LEU:N	2.83	0.41
17:Q:88:GLU:CD	18:R:53:PHE:HB2	2.41	0.41
11:K:70:ARG:CD	11:K:76:VAL:HG22	2.51	0.41
14:N:33:ILE:HG12	14:N:114:GLU:CB	2.51	0.41
2:B:1802:A:O3'	4:C:255:LYS:HD2	2.21	0.41
18:R:47:VAL:HG22	18:R:48:LYS:N	2.25	0.41
4:C:22:GLU:H	4:C:202:ARG:CZ	2.34	0.41
2:B:2026:U:C2	2:B:2027:G:C8	3.08	0.41
18:R:32:THR:HB	18:R:66:HIS:HB3	2.03	0.41
11:K:99:ILE:O	11:K:119:ALA:HB2	2.20	0.41
7:F:102:LEU:O	7:F:107:VAL:HB	2.20	0.41
17:Q:46:TYR:HB2	18:R:78:ARG:O	2.22	0.41
5:D:59:ARG:HE	5:D:63:PRO:HB2	1.85	0.41
8:G:120:ILE:HG23	8:G:133:LYS:C	2.41	0.41
22:W:5:ALA:C	22:W:7:GLY:H	2.25	0.41
2:B:1446:C:H2'	2:B:1447:C:C6	2.56	0.41
2:B:2650:U:H2'	2:B:2651:C:H6	1.83	0.41
6:E:21:ARG:HH12	6:E:23:PHE:HB3	1.86	0.41
11:K:16:ALA:O	11:K:17:ARG:O	2.38	0.41
11:K:47:ILE:O	11:K:48:PRO:C	2.59	0.41
29:3:60:CYS:O	29:3:61:LEU:C	2.59	0.41
2:B:1779:U:C5	2:B:1784:A:N7	2.86	0.41
2:B:1537:G:H2'	2:B:1538:G:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:104:A:H2'	2:B:105:C:C6	2.54	0.41
2:B:2246:G:H2'	2:B:2247:A:H8	1.81	0.41
2:B:2700:A:H2'	2:B:2701:U:C6	2.56	0.41
2:B:2300:C:H2'	2:B:2301:C:H6	1.85	0.41
2:B:941:A:H2'	2:B:942:G:C8	2.56	0.41
2:B:1561:C:O2'	2:B:1562:U:H5'	2.21	0.41
2:B:678:C:H2'	2:B:679:C:H6	1.86	0.41
2:B:1114:C:H2'	2:B:1115:G:O4'	2.21	0.41
2:B:1498:C:H2'	2:B:1499:C:C6	2.56	0.41
2:B:1403:A:H2'	2:B:1404:C:C6	2.56	0.41
2:B:1965:C:H5''	2:B:1966:A:H2'	2.03	0.41
2:B:1792:G:O2'	2:B:1793:C:H5'	2.21	0.41
2:B:516:C:O2'	2:B:517:C:H5'	2.21	0.41
2:B:1539:U:H2'	2:B:1540:G:C8	2.56	0.41
31:I:70:THR:CG2	31:I:70:THR:O	2.68	0.41
30:4:1:MET:HG3	30:4:2:LYS:CD	2.51	0.40
2:B:1205:A:C1'	2:B:1206:G:P	3.09	0.40
4:C:162:GLN:NE2	4:C:174:ARG:NH1	2.69	0.40
2:B:2636:C:H5'	5:D:80:TRP:CZ2	2.56	0.40
5:D:89:GLU:HG2	5:D:93:GLY:CA	2.51	0.40
16:P:28:LYS:HZ2	16:P:44:GLY:H	1.69	0.40
13:M:5:LYS:O	13:M:6:ARG:C	2.57	0.40
29:3:12:ARG:HB3	29:3:23:HIS:CB	2.51	0.40
2:B:3:U:H2'	2:B:4:U:H6	1.83	0.40
2:B:452:G:C2	2:B:458:G:C4	3.09	0.40
4:C:19:VAL:HG23	4:C:206:LYS:NZ	2.36	0.40
5:D:24:VAL:HG21	5:D:193:VAL:CG1	2.51	0.40
19:S:51:LEU:HD12	19:S:51:LEU:HA	1.84	0.40
7:F:135:ILE:HD11	7:F:138:PRO:CA	2.36	0.40
4:C:225:ASN:O	4:C:227:VAL:HG12	2.21	0.40
11:K:52:VAL:HG21	11:K:86:LEU:HD13	2.01	0.40
2:B:1791:A:O5'	4:C:211:ARG:NE	2.52	0.40
8:G:7:PRO:C	8:G:8:VAL:HG22	2.40	0.40
18:R:74:ILE:C	18:R:75:VAL:HG22	2.40	0.40
2:B:2784:U:O2'	2:B:2785:C:H5'	2.21	0.40
2:B:1797:G:H2'	2:B:1798:U:H6	1.85	0.40
21:U:13:LEU:HD11	21:U:69:VAL:H	1.85	0.40
2:B:877:A:N3	2:B:877:A:H2'	2.36	0.40
2:B:899:A:C2	2:B:900:A:H1'	2.56	0.40
2:B:900:A:H2'	2:B:901:C:C6	2.55	0.40
8:G:3:VAL:O	8:G:4:ALA:HB2	2.20	0.40
2:B:1439:A:C6	2:B:1552:A:C5	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2184:A:H2'	2:B:2185:U:C6	2.56	0.40
2:B:265:A:O2'	2:B:266:G:H4'	2.20	0.40
2:B:153:U:H2'	2:B:154:U:H6	1.84	0.40
7:F:177:ARG:CZ	7:F:178:LYS:HA	2.51	0.40
2:B:1917:U:O2'	2:B:1918:A:H5'	2.21	0.40
2:B:1427:A:H4'	2:B:1428:C:O4'	2.20	0.40
20:T:95:PHE:HD1	20:T:97:GLY:N	2.19	0.40
2:B:1501:G:O2'	2:B:1502:A:H5'	2.20	0.40
2:B:2458:G:H8	2:B:2459:A:H62	1.68	0.40
29:3:5:THR:HG23	29:3:5:THR:O	2.21	0.40
4:C:172:THR:O	4:C:181:ARG:O	2.39	0.40
4:C:87:SER:O	4:C:155:ARG:NH1	2.54	0.40
2:B:997:G:OP1	17:Q:92:LYS:HB3	2.20	0.40
5:D:107:VAL:HG23	5:D:175:LEU:O	2.20	0.40
5:D:4:LEU:HD22	5:D:51:THR:HB	2.02	0.40
16:P:42:PHE:O	16:P:43:GLU:HG2	2.21	0.40
2:B:1021:A:N6	2:B:1142:A:N6	2.63	0.40
2:B:927:A:H2'	2:B:928:A:C8	2.56	0.40
10:J:120:ARG:HB3	10:J:121:LYS:NZ	2.34	0.40
22:W:41:GLY:HA2	22:W:65:LYS:HB3	2.02	0.40
18:R:81:LYS:O	18:R:82:HIS:C	2.59	0.40
13:M:33:LEU:HD12	13:M:101:VAL:HG21	2.03	0.40
5:D:150:GLN:O	5:D:152:PRO:CD	2.68	0.40
2:B:26:G:H2'	2:B:27:G:N9	2.36	0.40
2:B:2529:G:C4'	8:G:175:LYS:HD3	2.52	0.40
5:D:122:VAL:HA	5:D:128:ARG:CD	2.51	0.40
13:M:119:LEU:CD2	13:M:119:LEU:H	2.32	0.40
8:G:36:LEU:HD22	8:G:40:VAL:CG1	2.51	0.40
12:L:84:LYS:HG2	12:L:84:LYS:O	2.22	0.40
2:B:2472:G:O6	2:B:2476:A:H4'	2.22	0.40
31:I:59:THR:CG2	31:I:59:THR:O	2.69	0.40
21:U:99:SER:O	21:U:100:GLU:HG2	2.21	0.40
29:3:28:LEU:CD1	29:3:33:THR:HG21	2.50	0.40
2:B:2135:A:C2	2:B:2136:G:C8	3.09	0.40
2:B:240:C:N4	2:B:241:A:C6	2.90	0.40
2:B:2645:G:H4'	2:B:2646:C:OP2	2.22	0.40
2:B:1220:G:H2'	2:B:1221:C:C6	2.56	0.40
13:M:81:ARG:HH11	13:M:81:ARG:HB2	1.87	0.40
2:B:664:G:O2'	2:B:665:U:H5'	2.21	0.40
12:L:50:PHE:O	12:L:51:GLU:C	2.59	0.40
2:B:1708:C:O2'	2:B:1709:U:H5'	2.22	0.40
2:B:2876:G:H5''	16:P:2:ASN:HA	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:F:62:GLN:HB3	7:F:63:LYS:H	1.68	0.40
2:B:2758:A:O2'	2:B:2759:G:H5'	2.21	0.40
2:B:426:C:H2'	2:B:427:U:C6	2.56	0.40
2:B:2194:U:O2'	2:B:2195:U:H5'	2.20	0.40
17:Q:77:LYS:O	17:Q:80:ASN:HB3	2.20	0.40
2:B:192:C:C2'	2:B:193:U:H5'	2.51	0.40
2:B:192:C:H2'	2:B:193:U:H5'	2.04	0.40
4:C:125:PRO:HA	4:C:192:GLY:HA2	2.02	0.40
27:1:44:GLN:HB2	27:1:44:GLN:HE21	1.66	0.40
17:Q:97:ILE:CD1	18:R:13:ARG:HH21	2.34	0.40
18:R:52:PRO:O	18:R:53:PHE:C	2.59	0.40
5:D:164:GLN:HG3	5:D:164:GLN:H	1.65	0.40
5:D:196:ALA:O	5:D:197:THR:C	2.60	0.40
5:D:29:VAL:CG2	5:D:30:GLU:H	2.24	0.40
12:L:123:ARG:CB	12:L:142:ILE:H	2.33	0.40
2:B:671:C:HO2'	6:E:85:PHE:HZ	1.64	0.40
9:H:83:LYS:O	9:H:90:LEU:HA	2.22	0.40
2:B:951:C:O2'	2:B:952:G:H5'	2.21	0.40
22:W:43:LYS:HB3	22:W:78:PHE:HB2	2.03	0.40
22:W:59:PHE:CD1	22:W:59:PHE:N	2.87	0.40
4:C:19:VAL:CG1	4:C:20:ASN:N	2.85	0.40
4:C:44:ASN:HA	4:C:48:ILE:O	2.22	0.40
2:B:396:G:O2'	2:B:397:U:H5'	2.21	0.40
20:T:21:SER:HA	20:T:24:MET:SD	2.61	0.40
19:S:24:ILE:HD12	19:S:35:ILE:HG21	2.03	0.40
21:U:71:ILE:HG12	21:U:72:PHE:N	2.37	0.40
18:R:21:ARG:O	18:R:22:LEU:O	2.40	0.40
18:R:96:VAL:HG13	18:R:98:ILE:HG12	2.03	0.40
2:B:1790:C:OP2	4:C:219:VAL:HB	2.21	0.40
2:B:812:C:H5''	2:B:1250:G:O2'	2.21	0.40
2:B:2484:G:H21	13:M:118:LYS:HG2	1.86	0.40
2:B:1309:G:C5'	28:2:7:PRO:HB2	2.50	0.40
2:B:125:A:OP2	28:2:19:ARG:NE	2.53	0.40
3:V:52:ALA:O	13:M:133:LYS:HG2	2.21	0.40
2:B:1841:U:C2	2:B:1842:G:C8	3.10	0.40
20:T:11:LEU:HB2	20:T:12:ARG:H	1.55	0.40
7:F:26:GLN:O	7:F:26:GLN:HG2	2.20	0.40
5:D:23:PRO:HB3	5:D:188:LEU:HG	2.04	0.40
29:3:56:LEU:C	29:3:56:LEU:HD12	2.42	0.40
2:B:523:C:H2'	2:B:524:G:H8	1.87	0.40
2:B:338:G:N3	2:B:338:G:H2'	2.36	0.40
2:B:616:A:H3'	2:B:617:G:C8	2.50	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2648:G:H2'	2:B:2649:C:H6	1.85	0.40
2:B:79:C:O2'	2:B:346:A:C8	2.74	0.40
2:B:444:C:H2'	2:B:445:C:C6	2.56	0.40
21:U:46:LYS:CB	21:U:53:GLN:HB2	2.51	0.40
2:B:2705:A:H2'	2:B:2706:A:O4'	2.21	0.40
2:B:2558:C:O2'	2:B:2559:C:H5'	2.22	0.40
31:I:102:ARG:HG3	31:I:141:ASP:CA	2.51	0.40
2:B:2653:U:H3'	2:B:2654:A:H2'	2.03	0.40
31:I:140:GLU:O	31:I:140:GLU:HG2	2.22	0.40
2:B:1292:G:H2'	2:B:1293:C:H6	1.84	0.40
12:L:47:ARG:HE	12:L:47:ARG:HB3	1.56	0.40
2:B:1027:A:C2	2:B:2488:G:H5''	2.56	0.40
16:P:56:SER:HA	16:P:58:PHE:HE2	1.87	0.40
8:G:141:GLY:O	8:G:144:ALA:HB3	2.22	0.40
2:B:1396:U:H5'	2:B:1396:U:O2	2.21	0.40
6:E:38:GLY:CA	6:E:93:SER:HB3	2.51	0.40
2:B:1145:C:O2'	2:B:1146:C:H5'	2.21	0.40
2:B:1891:G:H2'	2:B:1892:C:H6	1.86	0.40
1:A:19:C:O2'	1:A:20:G:H5'	2.21	0.40
2:B:2737:G:H2'	2:B:2738:A:O4'	2.21	0.40
2:B:199:A:N6	2:B:2433:A:H2'	2.37	0.40
2:B:1658:C:OP1	5:D:136:ASN:ND2	2.54	0.40
7:F:126:ASN:N	7:F:126:ASN:OD1	2.54	0.40
30:4:18:LYS:O	30:4:19:ARG:HG3	2.22	0.40
30:4:30:GLU:CG	30:4:33:HIS:HB2	2.52	0.40
11:K:68:GLY:HA2	11:K:78:ARG:HA	2.02	0.40
16:P:47:ILE:HG21	16:P:49:ILE:HG13	2.04	0.40
9:H:12:LEU:C	9:H:12:LEU:HD23	2.42	0.40
24:Y:1:ALA:C	24:Y:43:ILE:HB	2.42	0.40
15:O:92:PHE:CE2	15:O:94:ARG:HA	2.57	0.40
2:B:856:G:H2'	2:B:857:G:C8	2.56	0.40
22:W:47:GLY:HA2	22:W:71:LYS:HB3	2.04	0.40
22:W:67:LYS:CD	22:W:71:LYS:H	2.35	0.40
22:W:81:ILE:HG23	22:W:83:ALA:N	2.28	0.40
2:B:631:A:O2'	12:L:66:PHE:HB3	2.21	0.40
4:C:53:ILE:HG23	4:C:216:ARG:HB2	2.03	0.40
2:B:1789:A:C5'	4:C:220:ARG:HH21	2.34	0.40
11:K:39:ILE:CG2	11:K:40:LYS:N	2.84	0.40
2:B:992:C:O2'	18:R:91:GLN:HG2	2.21	0.40
28:2:12:ARG:HA	28:2:12:ARG:HD2	1.84	0.40
1:A:53:A:O2'	1:A:54:G:H5'	2.20	0.40
6:E:132:LYS:H	6:E:134:LEU:CD1	2.34	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1439:A:C8	2:B:1440:U:C6	3.10	0.40
7:F:21:TYR:O	7:F:22:ASN:HB2	2.21	0.40
2:B:476:G:H22	2:B:479:A:C5'	2.33	0.40
2:B:565:C:H4'	2:B:1253:A:C6	2.56	0.40
2:B:205:G:O2'	2:B:206:U:P	2.79	0.40
13:M:97:GLN:N	13:M:98:PRO:HD3	2.36	0.40
2:B:222:A:H61	2:B:232:G:H1'	1.85	0.40
7:F:157:THR:C	7:F:159:ALA:H	2.25	0.40
2:B:1904:G:O2'	2:B:1905:C:H5'	2.21	0.40
2:B:1183:U:O2'	2:B:1184:U:H5'	2.22	0.40
2:B:1747:U:H2'	2:B:1748:C:H6	1.87	0.40
26:O:23:ALA:C	26:O:25:THR:H	2.24	0.40
1:A:92:C:H2'	1:A:93:C:C6	2.57	0.40
2:B:1120:G:H2'	2:B:1121:C:H6	1.86	0.40
2:B:2105:U:H2'	2:B:2106:U:C6	2.57	0.40
15:O:43:ASN:OD1	15:O:44:GLY:N	2.54	0.40
13:M:96:ILE:HD12	13:M:96:ILE:N	2.36	0.40
31:I:69:VAL:O	31:I:69:VAL:HG23	2.22	0.40
27:1:40:PRO:HD2	27:1:45:HIS:HA	2.02	0.40
16:P:62:LYS:HD3	16:P:74:GLN:OE1	2.22	0.40
16:P:74:GLN:O	16:P:76:HIS:N	2.55	0.40
2:B:2377:A:H2'	2:B:2378:A:C8	2.56	0.40
10:J:111:LYS:HE3	33:J:426:HOH:O	2.20	0.40
2:B:589:U:H4'	6:E:87:ALA:CB	2.44	0.40
22:W:30:VAL:CG1	22:W:31:LEU:H	2.31	0.40
6:E:101:TYR:O	6:E:105:LEU:HD22	2.21	0.40
6:E:118:LEU:O	6:E:119:ILE:HD13	2.21	0.40
7:F:151:LEU:HG	7:F:153:ILE:CD1	2.52	0.40
7:F:136:ILE:HG22	7:F:137:PHE:N	2.37	0.40
2:B:725:G:H2'	2:B:726:G:C1'	2.52	0.40
4:C:16:VAL:CG1	4:C:16:VAL:O	2.69	0.40
18:R:21:ARG:HB3	18:R:22:LEU:H	1.79	0.40
27:1:49:LYS:HZ2	27:1:50:GLU:N	2.20	0.40
21:U:66:VAL:CG2	21:U:67:SER:H	2.17	0.40
9:H:88:GLY:O	9:H:124:THR:HA	2.21	0.40
12:L:27:LEU:HG	12:L:28:GLY:O	2.21	0.40
2:B:635:C:O2'	2:B:639:U:H5''	2.20	0.40
2:B:544:C:O2'	2:B:545:U:O5'	2.39	0.40
2:B:143:C:C2	20:T:3:ARG:NH1	2.89	0.40
2:B:1226:A:P	18:R:78:ARG:HH22	2.44	0.40
2:B:2347:C:OP1	2:B:2347:C:H4'	2.21	0.40
2:B:2633:G:H1'	5:D:62:LYS:CG	2.45	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:45:TYR:HB3	5:D:46:ARG:H	1.73	0.40
27:1:24:LYS:HD3	27:1:24:LYS:O	2.22	0.40
14:N:11:ASN:HA	14:N:11:ASN:HD22	1.68	0.40
14:N:8:ARG:HD3	14:N:43:GLU:OE2	2.20	0.40
23:X:9:LYS:HG2	23:X:10:SER:H	1.85	0.40
2:B:2257:U:C5'	22:W:5:ALA:HB2	2.46	0.40
19:S:84:ARG:NH2	19:S:96:ILE:HD13	2.36	0.40
8:G:154:GLU:OE2	8:G:159:LYS:HB2	2.22	0.40
2:B:2279:G:O6	22:W:10:ARG:NH2	2.55	0.40
2:B:2147:A:N3	2:B:2147:A:C2'	2.84	0.40
21:U:49:PRO:CG	21:U:50:ALA:H	2.34	0.40
2:B:2306:C:OP2	2:B:2307:G:H8	2.04	0.40
2:B:222:A:N1	2:B:233:A:H5''	2.37	0.40
2:B:1916:A:H2'	2:B:1917:U:C6	2.57	0.40
7:F:78:ILE:CG2	7:F:82:TYR:HD1	2.35	0.40
2:B:2758:A:H2'	2:B:2759:G:H5'	2.03	0.40
16:P:34:GLY:O	16:P:35:SER:HB3	2.20	0.40
31:I:70:THR:HG23	31:I:70:THR:O	2.22	0.40
2:B:691:C:O2'	2:B:692:C:H5'	2.21	0.40
2:B:2350:C:O2'	2:B:2351:G:H5'	2.21	0.40
2:B:2584:U:H6	2:B:2584:U:O5'	2.05	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. 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	
3	V	92/94 (98%)	59 (64%)	27 (29%)	6 (6%)	2	27
4	C	265/273 (97%)	97 (37%)	93 (35%)	75 (28%)	0	0
5	D	207/209 (99%)	96 (46%)	67 (32%)	44 (21%)	0	2
6	E	199/201 (99%)	87 (44%)	63 (32%)	49 (25%)	0	1
7	F	176/178 (99%)	91 (52%)	53 (30%)	32 (18%)	0	3
8	G	174/176 (99%)	117 (67%)	39 (22%)	18 (10%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	H	147/149 (99%)	84 (57%)	44 (30%)	19 (13%)	0	8
10	J	138/142 (97%)	70 (51%)	36 (26%)	32 (23%)	0	1
11	K	119/123 (97%)	72 (60%)	25 (21%)	22 (18%)	0	2
12	L	142/144 (99%)	66 (46%)	37 (26%)	39 (28%)	0	0
13	M	134/136 (98%)	79 (59%)	31 (23%)	24 (18%)	0	3
14	N	125/127 (98%)	82 (66%)	32 (26%)	11 (9%)	1	17
15	O	115/117 (98%)	63 (55%)	33 (29%)	19 (16%)	0	4
16	P	112/114 (98%)	42 (38%)	38 (34%)	32 (29%)	0	0
17	Q	115/117 (98%)	79 (69%)	22 (19%)	14 (12%)	1	9
18	R	101/103 (98%)	42 (42%)	31 (31%)	28 (28%)	0	0
19	S	108/110 (98%)	67 (62%)	20 (18%)	21 (19%)	0	2
20	T	97/100 (97%)	42 (43%)	32 (33%)	23 (24%)	0	1
21	U	100/103 (97%)	46 (46%)	41 (41%)	13 (13%)	0	8
22	W	82/84 (98%)	31 (38%)	30 (37%)	21 (26%)	0	1
23	X	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0	8
24	Y	56/58 (97%)	35 (62%)	17 (30%)	4 (7%)	2	24
25	Z	68/70 (97%)	37 (54%)	22 (32%)	9 (13%)	0	7
26	0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	4
27	1	52/54 (96%)	21 (40%)	22 (42%)	9 (17%)	0	3
28	2	44/46 (96%)	24 (54%)	12 (27%)	8 (18%)	0	3
29	3	62/64 (97%)	35 (56%)	17 (27%)	10 (16%)	0	4
30	4	36/38 (95%)	13 (36%)	11 (31%)	12 (33%)	0	0
31	I	139/141 (99%)	123 (88%)	11 (8%)	5 (4%)	5	48
All	All	3320/3390 (98%)	1768 (53%)	936 (28%)	616 (19%)	0	2

All (616) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	C	21	PRO
4	C	22	GLU
4	C	28	PRO
4	C	29	PHE
4	C	31	PRO
4	C	47	ARG

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Mol	Chain	Res	Type
4	C	49	THR
4	C	63	ILE
4	C	64	VAL
4	C	67	LYS
4	C	97	ASP
4	C	106	PRO
4	C	113	ASP
4	C	124	LYS
4	C	125	PRO
4	C	135	PRO
4	C	149	LYS
4	C	157	ALA
4	C	163	ILE
4	C	176	ARG
4	C	194	VAL
4	C	226	PRO
4	C	227	VAL
4	C	246	PRO
4	C	266	ILE
5	D	2	ILE
5	D	9	VAL
5	D	34	VAL
5	D	39	ASP
5	D	43	ASP
5	D	73	VAL
5	D	82	PHE
5	D	84	LEU
5	D	85	ALA
5	D	89	GLU
5	D	129	THR
5	D	145	SER
5	D	152	PRO
5	D	155	VAL
5	D	157	LYS
5	D	160	LYS
5	D	168	GLU
5	D	193	VAL
5	D	197	THR
5	D	205	PRO
6	E	17	THR
6	E	35	TYR
6	E	59	PRO

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Mol	Chain	Res	Type
6	E	86	ALA
6	E	90	GLN
6	E	147	LEU
7	F	20	ASN
7	F	46	LYS
7	F	66	ILE
7	F	73	VAL
7	F	83	PRO
7	F	104	THR
7	F	132	ARG
7	F	172	PHE
7	F	173	ASP
7	F	174	PHE
7	F	176	PHE
8	G	4	ALA
8	G	8	VAL
8	G	101	VAL
8	G	175	LYS
9	H	11	ASN
9	H	38	PRO
9	H	91	PHE
10	J	4	PHE
10	J	8	PRO
10	J	11	VAL
10	J	44	TYR
10	J	64	VAL
10	J	124	VAL
10	J	129	GLU
10	J	131	ASN
11	K	17	ARG
11	K	29	HIS
11	K	71	ARG
11	K	72	PRO
11	K	120	PRO
12	L	7	SER
12	L	8	PRO
12	L	9	ALA
12	L	14	LYS
12	L	15	ALA
12	L	17	LYS
12	L	40	SER
12	L	54	GLN

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Mol	Chain	Res	Type
12	L	72	ALA
12	L	77	ILE
12	L	82	LEU
12	L	92	LEU
12	L	103	ILE
12	L	111	ILE
12	L	119	PRO
12	L	121	THR
12	L	126	ARG
12	L	138	ALA
13	M	16	ARG
13	M	65	ILE
13	M	72	PRO
13	M	80	VAL
13	M	84	LYS
13	M	86	LYS
13	M	101	VAL
13	M	106	ASP
13	M	109	PRO
14	N	5	LYS
14	N	58	ASP
14	N	91	ALA
15	O	27	VAL
15	O	54	VAL
15	O	90	VAL
16	P	23	ASP
16	P	24	THR
16	P	39	LEU
16	P	55	HIS
16	P	60	VAL
16	P	72	VAL
16	P	75	THR
16	P	76	HIS
16	P	77	SER
16	P	90	ALA
16	P	110	LYS
16	P	111	GLU
17	Q	30	VAL
17	Q	73	ILE
17	Q	89	ILE
17	Q	93	ILE
18	R	5	PHE

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Mol	Chain	Res	Type
18	R	22	LEU
18	R	27	ILE
18	R	33	VAL
18	R	64	VAL
18	R	73	LYS
18	R	75	VAL
18	R	82	HIS
18	R	83	TYR
18	R	89	HIS
18	R	93	PHE
18	R	97	LYS
19	S	4	ILE
19	S	12	SER
19	S	41	LYS
19	S	103	ILE
20	T	57	VAL
20	T	62	VAL
20	T	95	PHE
21	U	63	ALA
21	U	66	VAL
21	U	75	ALA
21	U	99	SER
22	W	5	ALA
22	W	10	ARG
22	W	17	ALA
22	W	30	VAL
22	W	34	SER
22	W	44	PHE
22	W	45	HIS
22	W	57	THR
22	W	66	VAL
24	Y	37	ARG
25	Z	3	LYS
25	Z	10	GLU
25	Z	21	VAL
25	Z	28	VAL
26	0	31	LYS
26	0	35	GLU
26	0	45	ASP
27	1	12	SER
27	1	23	THR
27	1	46	VAL

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Mol	Chain	Res	Type
28	2	18	PHE
28	2	44	VAL
30	4	3	VAL
30	4	19	ARG
30	4	24	ARG
30	4	26	ILE
31	I	18	ASN
3	V	14	LYS
3	V	45	ASP
3	V	70	ILE
4	C	12	ARG
4	C	39	SER
4	C	53	ILE
4	C	58	LYS
4	C	65	ASP
4	C	72	GLY
4	C	88	ALA
4	C	90	ILE
4	C	93	VAL
4	C	103	ILE
4	C	115	ILE
4	C	156	SER
4	C	172	THR
4	C	208	GLY
4	C	210	ALA
4	C	252	LYS
4	C	257	ARG
4	C	259	ASN
5	D	45	TYR
5	D	69	ALA
5	D	77	ARG
5	D	140	HIS
5	D	141	ARG
5	D	147	GLY
6	E	5	LEU
6	E	13	THR
6	E	41	GLN
6	E	42	GLY
6	E	43	THR
6	E	56	GLY
6	E	66	GLY
6	E	67	ARG

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Mol	Chain	Res	Type
6	E	72	SER
6	E	84	THR
6	E	85	PHE
6	E	135	ALA
6	E	148	ILE
6	E	156	ASN
6	E	162	ARG
6	E	192	ALA
7	F	10	GLU
7	F	22	ASN
7	F	101	ARG
7	F	122	ASP
7	F	166	ARG
8	G	2	ARG
8	G	5	LYS
8	G	59	ASP
8	G	168	VAL
8	G	174	LYS
9	H	25	TYR
9	H	29	PHE
9	H	30	LEU
9	H	121	VAL
10	J	43	GLU
10	J	65	THR
10	J	77	HIS
10	J	78	THR
10	J	81	ILE
10	J	128	ASN
10	J	135	GLN
11	K	3	GLN
11	K	52	VAL
11	K	84	CYS
11	K	85	VAL
11	K	86	LEU
11	K	97	THR
11	K	110	GLU
12	L	16	GLY
12	L	27	LEU
12	L	34	GLY
12	L	38	GLN
12	L	51	GLU
12	L	78	ARG

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Mol	Chain	Res	Type
12	L	108	ALA
12	L	116	VAL
12	L	127	VAL
12	L	142	ILE
13	M	55	ARG
13	M	89	VAL
13	M	102	LEU
13	M	132	THR
14	N	7	GLY
15	O	22	GLY
15	O	84	GLU
15	O	87	ILE
16	P	19	PHE
16	P	26	GLU
16	P	41	ALA
16	P	49	ILE
16	P	68	GLY
16	P	82	SER
16	P	97	TYR
16	P	105	LYS
17	Q	6	GLY
17	Q	21	LYS
17	Q	31	TYR
17	Q	87	VAL
17	Q	88	GLU
18	R	3	ALA
18	R	4	VAL
18	R	10	LYS
18	R	11	GLN
18	R	87	GLN
18	R	98	ILE
19	S	2	GLU
19	S	9	HIS
19	S	26	GLY
19	S	44	ALA
19	S	64	ALA
19	S	69	LEU
19	S	108	SER
20	T	63	VAL
20	T	71	GLY
20	T	78	SER
20	T	85	VAL

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Mol	Chain	Res	Type
21	U	24	VAL
21	U	58	VAL
21	U	64	ILE
22	W	4	LYS
22	W	58	LEU
22	W	62	ALA
22	W	63	ASP
22	W	75	ASN
22	W	77	LYS
22	W	80	SER
23	X	33	ALA
23	X	61	ALA
25	Z	31	ASP
25	Z	40	CYS
26	0	20	ALA
26	0	36	LYS
27	1	4	ILE
27	1	16	THR
27	1	30	PRO
27	1	38	PHE
27	1	47	ILE
28	2	5	PHE
28	2	7	PRO
28	2	17	GLY
29	3	29	ARG
30	4	10	LEU
30	4	27	CYS
30	4	31	PRO
4	C	4	LYS
4	C	109	LEU
4	C	112	GLY
4	C	121	ALA
4	C	152	GLN
4	C	165	ALA
4	C	175	LEU
4	C	209	ALA
4	C	224	MET
4	C	239	PHE
4	C	243	PRO
5	D	25	THR
5	D	29	VAL
5	D	47	ALA

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Mol	Chain	Res	Type
5	D	174	SER
5	D	182	ALA
5	D	187	LEU
6	E	26	ALA
6	E	36	ALA
6	E	48	THR
6	E	65	THR
6	E	110	SER
6	E	139	LYS
6	E	154	ASP
6	E	157	LEU
6	E	168	ASP
6	E	188	MET
6	E	195	GLN
7	F	43	ILE
7	F	49	LEU
7	F	108	PRO
7	F	109	ARG
7	F	114	ARG
7	F	151	LEU
8	G	6	ALA
8	G	34	ARG
8	G	45	ALA
8	G	58	ALA
9	H	32	PRO
9	H	37	VAL
9	H	66	ASN
9	H	82	SER
10	J	46	PRO
10	J	53	TYR
10	J	58	ASN
10	J	60	ASP
10	J	125	TYR
10	J	127	GLY
11	K	54	LYS
11	K	83	ALA
11	K	89	ASN
12	L	5	THR
12	L	13	LYS
12	L	55	MET
12	L	57	LEU
12	L	107	PHE

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Mol	Chain	Res	Type
13	M	12	MET
13	M	85	GLY
13	M	104	GLU
15	O	18	LEU
15	O	23	ALA
15	O	34	HIS
15	O	52	SER
15	O	63	LYS
15	O	100	HIS
16	P	17	PRO
16	P	91	VAL
16	P	112	ARG
17	Q	86	SER
18	R	29	THR
18	R	40	MET
19	S	8	ARG
19	S	92	ARG
20	T	15	HIS
20	T	16	VAL
20	T	32	LEU
20	T	36	LYS
20	T	37	ASP
20	T	39	THR
20	T	52	GLU
20	T	60	THR
21	U	30	SER
21	U	93	ARG
22	W	23	LYS
23	X	8	GLU
23	X	28	LEU
23	X	31	GLN
24	Y	5	LYS
24	Y	12	ALA
25	Z	2	LYS
25	Z	35	ASP
26	0	17	SER
26	0	51	ARG
29	3	10	ALA
29	3	30	HIS
29	3	47	ALA
30	4	8	LYS
30	4	28	SER

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Mol	Chain	Res	Type
31	I	23	VAL
3	V	16	ALA
3	V	71	LYS
4	C	25	LYS
4	C	32	LEU
4	C	33	LEU
4	C	56	GLY
4	C	60	ALA
4	C	68	ARG
4	C	85	ASN
4	C	161	VAL
4	C	184	GLU
4	C	199	HIS
4	C	225	ASN
4	C	235	GLU
4	C	258	SER
4	C	260	LYS
4	C	265	PHE
5	D	3	GLY
5	D	32	ASN
5	D	52	THR
5	D	126	ASN
5	D	173	GLN
6	E	18	THR
6	E	30	GLN
6	E	45	ALA
6	E	50	ALA
6	E	160	ALA
7	F	138	PRO
8	G	11	PRO
8	G	107	GLY
9	H	86	ASP
9	H	87	GLU
9	H	92	GLY
10	J	50	THR
10	J	67	ASN
10	J	75	TYR
10	J	85	LYS
10	J	123	LYS
10	J	137	PRO
11	K	113	MET
11	K	121	GLU

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Mol	Chain	Res	Type
12	L	109	LYS
14	N	100	CYS
14	N	113	ILE
15	O	2	ASP
15	O	28	VAL
15	O	38	GLN
15	O	42	PRO
16	P	79	VAL
16	P	96	LEU
17	Q	85	ALA
17	Q	101	ASP
18	R	81	LYS
18	R	88	GLY
19	S	46	LEU
19	S	80	PRO
19	S	87	PRO
19	S	99	ARG
20	T	79	ASP
20	T	80	TRP
20	T	86	THR
21	U	9	GLU
21	U	25	LYS
21	U	48	VAL
22	W	55	ASP
25	Z	19	GLY
26	0	39	ARG
27	1	50	GLU
28	2	25	LYS
29	3	32	LEU
29	3	33	THR
29	3	37	THR
31	I	6	ALA
3	V	52	ALA
4	C	114	GLN
5	D	48	ILE
5	D	95	SER
5	D	149	ASN
5	D	203	VAL
6	E	6	LYS
6	E	11	ALA
6	E	57	LYS
6	E	58	LYS

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Mol	Chain	Res	Type
6	E	113	VAL
6	E	130	LYS
6	E	172	ALA
6	E	190	ALA
6	E	193	VAL
7	F	8	LYS
7	F	88	VAL
7	F	134	GLN
7	F	149	ARG
7	F	153	ILE
7	F	177	ARG
8	G	40	VAL
9	H	35	LYS
9	H	68	ARG
9	H	114	GLU
10	J	41	LYS
10	J	79	GLY
10	J	111	LYS
11	K	14	SER
12	L	23	ILE
12	L	118	THR
13	M	17	ASN
13	M	71	LYS
13	M	77	PRO
14	N	11	ASN
14	N	111	ALA
15	O	107	ALA
16	P	18	SER
16	P	71	ARG
16	P	85	VAL
17	Q	78	PHE
18	R	59	ILE
18	R	71	LYS
18	R	79	ARG
19	S	22	ASP
19	S	23	LEU
21	U	28	LEU
22	W	53	GLY
22	W	61	LYS
22	W	65	LYS
23	X	20	ASN
23	X	38	GLN

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Mol	Chain	Res	Type
23	X	52	ARG
28	2	15	SER
29	3	13	PHE
29	3	60	CYS
30	4	11	CYS
30	4	17	VAL
31	I	14	ALA
5	D	76	GLY
5	D	87	GLY
5	D	207	VAL
7	F	84	ILE
7	F	120	SER
8	G	166	GLU
9	H	31	VAL
11	K	10	VAL
11	K	108	ARG
13	M	13	HIS
13	M	111	GLU
14	N	8	ARG
14	N	41	ALA
14	N	102	PHE
15	O	85	LYS
16	P	54	LEU
16	P	80	VAL
19	S	13	SER
20	T	59	ASN
20	T	66	LYS
20	T	67	VAL
24	Y	30	ARG
29	3	49	VAL
4	C	55	GLY
4	C	83	ASP
4	C	164	VAL
11	K	103	VAL
15	O	103	VAL
18	R	63	VAL
20	T	58	VAL
28	2	6	GLN
6	E	120	VAL
8	G	14	VAL
10	J	139	VAL
16	P	21	PRO

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Mol	Chain	Res	Type
17	Q	3	VAL
19	S	71	VAL
4	C	195	GLY
6	E	167	VAL
7	F	81	GLY
10	J	100	VAL
11	K	26	GLY
12	L	31	GLY
12	L	110	VAL
12	L	135	ILE
13	M	57	VAL
18	R	47	VAL
18	R	54	VAL
20	T	96	VAL
31	I	118	GLY
4	C	217	PRO
9	H	4	ILE
13	M	87	GLY
13	M	97	GLN
16	P	69	VAL
26	0	53	VAL
30	4	23	ILE

### 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 X-ray entries followed by that with respect to entries of similar resolution. 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
3	V	78/78 (100%)	69 (88%)	9 (12%)	8 38
4	C	213/218 (98%)	150 (70%)	63 (30%)	0 3
5	D	164/164 (100%)	113 (69%)	51 (31%)	0 3
6	E	165/165 (100%)	127 (77%)	38 (23%)	1 7
7	F	149/149 (100%)	122 (82%)	27 (18%)	2 14
8	G	137/137 (100%)	111 (81%)	26 (19%)	2 12
9	H	114/114 (100%)	90 (79%)	24 (21%)	1 9
10	J	114/116 (98%)	85 (75%)	29 (25%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	K	102/104 (98%)	81 (79%)	21 (21%)	2	9
12	L	103/103 (100%)	68 (66%)	35 (34%)	0	2
13	M	109/109 (100%)	75 (69%)	34 (31%)	0	3
14	N	103/103 (100%)	76 (74%)	27 (26%)	1	4
15	O	87/87 (100%)	69 (79%)	18 (21%)	2	9
16	P	99/99 (100%)	67 (68%)	32 (32%)	0	2
17	Q	89/89 (100%)	71 (80%)	18 (20%)	2	10
18	R	84/84 (100%)	58 (69%)	26 (31%)	0	3
19	S	93/93 (100%)	77 (83%)	16 (17%)	3	17
20	T	83/84 (99%)	60 (72%)	23 (28%)	0	4
21	U	83/84 (99%)	60 (72%)	23 (28%)	0	4
22	W	62/62 (100%)	45 (73%)	17 (27%)	0	4
23	X	55/55 (100%)	43 (78%)	12 (22%)	1	8
24	Y	48/48 (100%)	33 (69%)	15 (31%)	0	3
25	Z	62/62 (100%)	46 (74%)	16 (26%)	1	4
26	0	47/47 (100%)	33 (70%)	14 (30%)	0	3
27	1	48/48 (100%)	33 (69%)	15 (31%)	0	3
28	2	38/38 (100%)	27 (71%)	11 (29%)	0	3
29	3	51/51 (100%)	40 (78%)	11 (22%)	1	8
30	4	34/34 (100%)	17 (50%)	17 (50%)	0	0
31	I	109/109 (100%)	104 (95%)	5 (5%)	37	81
All	All	2723/2734 (100%)	2050 (75%)	673 (25%)	1	5

All (673) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	V	18	ARG
3	V	35	GLU
3	V	41	GLU
3	V	42	LEU
3	V	51	GLN
3	V	69	GLU
3	V	70	ILE
3	V	79	ARG
3	V	86	LEU

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Mol	Chain	Res	Type
4	C	5	CYS
4	C	10	PRO
4	C	12	ARG
4	C	22	GLU
4	C	28	PRO
4	C	29	PHE
4	C	32	LEU
4	C	33	LEU
4	C	34	GLU
4	C	38	LYS
4	C	42	ARG
4	C	47	ARG
4	C	49	THR
4	C	51	ARG
4	C	57	HIS
4	C	58	LYS
4	C	61	TYR
4	C	62	ARG
4	C	64	VAL
4	C	67	LYS
4	C	69	ASN
4	C	84	PRO
4	C	85	ASN
4	C	86	ARG
4	C	96	LYS
4	C	102	TYR
4	C	104	LEU
4	C	107	LYS
4	C	110	LYS
4	C	119	VAL
4	C	120	ASP
4	C	124	LYS
4	C	127	ASN
4	C	128	THR
4	C	129	LEU
4	C	133	ASN
4	C	141	HIS
4	C	143	VAL
4	C	145	MET
4	C	155	ARG
4	C	162	GLN
4	C	167	ASP

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Mol	Chain	Res	Type
4	C	171	VAL
4	C	175	LEU
4	C	179	GLU
4	C	188	ARG
4	C	194	VAL
4	C	203	VAL
4	C	206	LYS
4	C	211	ARG
4	C	218	THR
4	C	224	MET
4	C	231	HIS
4	C	235	GLU
4	C	237	ARG
4	C	246	PRO
4	C	250	GLN
4	C	251	THR
4	C	254	LYS
4	C	256	THR
4	C	264	LYS
4	C	267	VAL
4	C	268	ARG
5	D	4	LEU
5	D	7	LYS
5	D	8	LYS
5	D	12	THR
5	D	14	ILE
5	D	15	PHE
5	D	16	THR
5	D	25	THR
5	D	27	ILE
5	D	32	ASN
5	D	33	ARG
5	D	34	VAL
5	D	36	GLN
5	D	40	LEU
5	D	45	TYR
5	D	49	GLN
5	D	52	THR
5	D	62	LYS
5	D	67	HIS
5	D	70	LYS
5	D	77	ARG

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Mol	Chain	Res	Type
5	D	79	LEU
5	D	82	PHE
5	D	83	ARG
5	D	91	THR
5	D	101	PHE
5	D	104	VAL
5	D	106	LYS
5	D	107	VAL
5	D	108	ASP
5	D	114	LYS
5	D	116	LYS
5	D	118	PHE
5	D	121	THR
5	D	124	ARG
5	D	126	ASN
5	D	127	PHE
5	D	128	ARG
5	D	133	THR
5	D	137	SER
5	D	138	LEU
5	D	139	SER
5	D	142	VAL
5	D	151	THR
5	D	152	PRO
5	D	157	LYS
5	D	176	ASP
5	D	185	ASN
5	D	188	LEU
5	D	197	THR
5	D	208	LYS
6	E	1	MET
6	E	5	LEU
6	E	19	PHE
6	E	21	ARG
6	E	24	ASN
6	E	40	ARG
6	E	43	THR
6	E	49	ARG
6	E	53	THR
6	E	74	LYS
6	E	84	THR
6	E	94	GLN

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Mol	Chain	Res	Type
6	E	97	ASN
6	E	99	LYS
6	E	100	MET
6	E	107	SER
6	E	109	LEU
6	E	117	ARG
6	E	118	LEU
6	E	132	LYS
6	E	134	LEU
6	E	137	LYS
6	E	143	LEU
6	E	148	ILE
6	E	152	GLU
6	E	154	ASP
6	E	155	GLU
6	E	157	LEU
6	E	158	PHE
6	E	164	LEU
6	E	167	VAL
6	E	171	ASP
6	E	173	THR
6	E	184	ASP
6	E	185	LYS
6	E	188	MET
6	E	191	ASP
6	E	196	VAL
7	F	14	LYS
7	F	23	SER
7	F	32	LYS
7	F	37	MET
7	F	45	ASP
7	F	48	LEU
7	F	59	ILE
7	F	77	LYS
7	F	90	LEU
7	F	93	GLU
7	F	107	VAL
7	F	108	PRO
7	F	112	ASP
7	F	114	ARG
7	F	126	ASN
7	F	132	ARG

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Mol	Chain	Res	Type
7	F	133	GLU
7	F	135	ILE
7	F	143	ASP
7	F	151	LEU
7	F	161	SER
7	F	162	ASP
7	F	164	GLU
7	F	168	LEU
7	F	172	PHE
7	F	174	PHE
7	F	177	ARG
8	G	5	LYS
8	G	8	VAL
8	G	15	ASP
8	G	24	THR
8	G	29	ASN
8	G	33	THR
8	G	35	THR
8	G	37	ASN
8	G	43	LYS
8	G	48	THR
8	G	54	ARG
8	G	71	LEU
8	G	80	GLU
8	G	85	LYS
8	G	86	LEU
8	G	93	TYR
8	G	100	ASN
8	G	101	VAL
8	G	104	LEU
8	G	116	LEU
8	G	121	THR
8	G	126	THR
8	G	132	LEU
8	G	154	GLU
8	G	161	VAL
8	G	171	LYS
9	H	4	ILE
9	H	7	ASP
9	H	8	LYS
9	H	11	ASN
9	H	30	LEU

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Mol	Chain	Res	Type
9	H	35	LYS
9	H	38	PRO
9	H	44	ILE
9	H	50	ARG
9	H	53	GLU
9	H	57	LYS
9	H	68	ARG
9	H	70	GLU
9	H	75	LEU
9	H	77	THR
9	H	96	THR
9	H	97	ARG
9	H	101	ASP
9	H	112	LYS
9	H	119	ASN
9	H	122	LEU
9	H	124	THR
9	H	129	GLU
9	H	141	LYS
10	J	1	MET
10	J	3	THR
10	J	4	PHE
10	J	5	THR
10	J	7	LYS
10	J	15	TRP
10	J	25	LEU
10	J	27	ARG
10	J	31	GLU
10	J	35	ARG
10	J	36	LEU
10	J	41	LYS
10	J	47	HIS
10	J	49	ASP
10	J	52	ASP
10	J	61	LYS
10	J	69	ARG
10	J	84	ILE
10	J	85	LYS
10	J	91	GLU
10	J	92	MET
10	J	95	ARG
10	J	109	LEU

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Mol	Chain	Res	Type
10	J	118	MET
10	J	120	ARG
10	J	121	LYS
10	J	132	HIS
10	J	135	GLN
10	J	140	LEU
11	K	2	ILE
11	K	6	THR
11	K	7	MET
11	K	10	VAL
11	K	32	TYR
11	K	41	ILE
11	K	47	ILE
11	K	56	ASP
11	K	58	LEU
11	K	59	LYS
11	K	65	THR
11	K	75	SER
11	K	84	CYS
11	K	90	ASN
11	K	92	GLU
11	K	95	ILE
11	K	98	ARG
11	K	104	THR
11	K	105	ARG
11	K	117	SER
11	K	120	PRO
12	L	2	ARG
12	L	3	LEU
12	L	14	LYS
12	L	19	LEU
12	L	21	ARG
12	L	27	LEU
12	L	29	LYS
12	L	38	GLN
12	L	42	SER
12	L	46	VAL
12	L	47	ARG
12	L	48	ARG
12	L	50	PHE
12	L	51	GLU
12	L	55	MET

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Mol	Chain	Res	Type
12	L	60	ARG
12	L	64	PHE
12	L	69	ARG
12	L	73	ILE
12	L	77	ILE
12	L	78	ARG
12	L	92	LEU
12	L	96	LYS
12	L	104	GLN
12	L	106	GLU
12	L	107	PHE
12	L	109	LYS
12	L	116	VAL
12	L	119	PRO
12	L	121	THR
12	L	125	LEU
12	L	128	THR
12	L	135	ILE
12	L	136	GLU
12	L	142	ILE
13	M	1	MET
13	M	2	LEU
13	M	5	LYS
13	M	6	ARG
13	M	9	PHE
13	M	11	LYS
13	M	12	MET
13	M	14	LYS
13	M	16	ARG
13	M	17	ASN
13	M	18	ARG
13	M	22	GLN
13	M	26	VAL
13	M	38	ARG
13	M	42	THR
13	M	62	LYS
13	M	67	VAL
13	M	72	PRO
13	M	76	LYS
13	M	80	VAL
13	M	81	ARG
13	M	84	LYS

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Mol	Chain	Res	Type
13	M	89	VAL
13	M	90	GLU
13	M	91	TYR
13	M	96	ILE
13	M	97	GLN
13	M	100	LYS
13	M	105	MET
13	M	112	LEU
13	M	115	GLU
13	M	118	LYS
13	M	124	LEU
13	M	134	THR
14	N	1	MET
14	N	2	ARG
14	N	4	ARG
14	N	6	SER
14	N	14	SER
14	N	18	GLN
14	N	36	THR
14	N	42	LYS
14	N	43	GLU
14	N	45	ARG
14	N	46	ARG
14	N	49	GLU
14	N	56	LYS
14	N	57	THR
14	N	58	ASP
14	N	65	LEU
14	N	71	ARG
14	N	76	VAL
14	N	81	ASN
14	N	87	PHE
14	N	90	ARG
14	N	94	TYR
14	N	95	THR
14	N	96	ARG
14	N	98	LEU
14	N	121	LYS
14	N	127	GLU
15	O	2	ASP
15	O	4	LYS
15	O	18	LEU

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Mol	Chain	Res	Type
15	O	27	VAL
15	O	29	HIS
15	O	30	ARG
15	O	35	ILE
15	O	38	GLN
15	O	40	ILE
15	O	60	GLU
15	O	65	THR
15	O	68	LYS
15	O	87	ILE
15	O	97	PHE
15	O	98	GLN
15	O	99	TYR
15	O	103	VAL
15	O	108	ASP
16	P	1	SER
16	P	8	GLU
16	P	15	ASP
16	P	18	SER
16	P	24	THR
16	P	28	LYS
16	P	38	ARG
16	P	46	VAL
16	P	47	ILE
16	P	50	ARG
16	P	52	ARG
16	P	54	LEU
16	P	58	PHE
16	P	60	VAL
16	P	70	GLU
16	P	73	PHE
16	P	74	GLN
16	P	75	THR
16	P	76	HIS
16	P	79	VAL
16	P	80	VAL
16	P	81	ASP
16	P	83	ILE
16	P	84	SER
16	P	87	ARG
16	P	91	VAL
16	P	97	TYR

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Mol	Chain	Res	Type
16	P	101	GLU
16	P	108	ARG
16	P	109	ILE
16	P	111	GLU
16	P	112	ARG
17	Q	2	ARG
17	Q	4	LYS
17	Q	13	HIS
17	Q	27	ARG
17	Q	35	PHE
17	Q	36	GLN
17	Q	39	ILE
17	Q	40	LYS
17	Q	53	LYS
17	Q	58	GLN
17	Q	70	GLN
17	Q	78	PHE
17	Q	84	LYS
17	Q	90	ASP
17	Q	91	ARG
17	Q	93	ILE
17	Q	101	ASP
17	Q	116	LEU
18	R	4	VAL
18	R	6	GLN
18	R	7	SER
18	R	10	LYS
18	R	12	HIS
18	R	13	ARG
18	R	18	GLN
18	R	22	LEU
18	R	23	GLU
18	R	26	ASP
18	R	32	THR
18	R	37	GLU
18	R	43	ASN
18	R	62	GLU
18	R	70	GLU
18	R	73	LYS
18	R	75	VAL
18	R	79	ARG
18	R	84	ARG

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Mol	Chain	Res	Type
18	R	85	LYS
18	R	86	GLN
18	R	91	GLN
18	R	92	TRP
18	R	94	THR
18	R	96	VAL
18	R	99	THR
19	S	3	THR
19	S	9	HIS
19	S	11	ARG
19	S	19	LEU
19	S	23	LEU
19	S	24	ILE
19	S	25	ARG
19	S	30	SER
19	S	55	ILE
19	S	62	ASP
19	S	76	VAL
19	S	82	MET
19	S	83	LYS
19	S	85	ILE
19	S	86	MET
19	S	110	ARG
20	T	3	ARG
20	T	5	GLU
20	T	6	ARG
20	T	11	LEU
20	T	15	HIS
20	T	18	GLU
20	T	19	LYS
20	T	24	MET
20	T	25	GLU
20	T	29	THR
20	T	50	LEU
20	T	51	PHE
20	T	58	VAL
20	T	61	LEU
20	T	62	VAL
20	T	64	LYS
20	T	66	LYS
20	T	68	LYS
20	T	69	ARG

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Mol	Chain	Res	Type
20	T	73	ARG
20	T	76	ARG
20	T	82	LYS
20	T	88	LYS
21	U	4	ILE
21	U	8	ASP
21	U	13	LEU
21	U	25	LYS
21	U	26	ASN
21	U	27	VAL
21	U	29	SER
21	U	40	LEU
21	U	42	LYS
21	U	57	ILE
21	U	58	VAL
21	U	60	LYS
21	U	61	GLU
21	U	65	GLN
21	U	69	VAL
21	U	71	ILE
21	U	80	ASP
21	U	85	ARG
21	U	94	PHE
21	U	95	PHE
21	U	96	LYS
21	U	98	ASN
21	U	99	SER
22	W	2	HIS
22	W	3	LYS
22	W	10	ARG
22	W	13	ARG
22	W	14	ASP
22	W	15	SER
22	W	16	GLU
22	W	18	LYS
22	W	19	ARG
22	W	25	PHE
22	W	37	VAL
22	W	39	GLN
22	W	40	ARG
22	W	61	LYS
22	W	63	ASP

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Mol	Chain	Res	Type
22	W	75	ASN
22	W	82	GLU
23	X	8	GLU
23	X	14	LEU
23	X	18	LEU
23	X	20	ASN
23	X	23	ARG
23	X	25	GLN
23	X	28	LEU
23	X	30	MET
23	X	31	GLN
23	X	39	GLN
23	X	44	LYS
23	X	47	ARG
24	Y	5	LYS
24	Y	10	ARG
24	Y	13	ILE
24	Y	18	LYS
24	Y	26	LEU
24	Y	29	ARG
24	Y	34	THR
24	Y	35	VAL
24	Y	40	THR
24	Y	43	ILE
24	Y	44	ARG
24	Y	46	MET
24	Y	53	MET
24	Y	57	GLU
24	Y	58	GLU
25	Z	9	TYR
25	Z	20	ASN
25	Z	24	ILE
25	Z	28	VAL
25	Z	31	ASP
25	Z	33	ASN
25	Z	40	CYS
25	Z	47	LYS
25	Z	48	GLN
25	Z	50	ASP
25	Z	56	ARG
25	Z	64	PHE
25	Z	65	ASN

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Mol	Chain	Res	Type
25	Z	66	ILE
25	Z	67	PRO
25	Z	69	SER
26	0	2	VAL
26	0	4	GLN
26	0	5	ASN
26	0	8	THR
26	0	12	ARG
26	0	15	ARG
26	0	19	ASP
26	0	21	LEU
26	0	22	THR
26	0	32	THR
26	0	37	HIS
26	0	51	ARG
26	0	52	LYS
26	0	53	VAL
27	1	8	ILE
27	1	12	SER
27	1	18	HIS
27	1	19	PHE
27	1	22	THR
27	1	24	LYS
27	1	25	ASN
27	1	26	LYS
27	1	27	ARG
27	1	31	GLU
27	1	33	LEU
27	1	35	LEU
27	1	41	VAL
27	1	44	GLN
27	1	49	LYS
28	2	3	ARG
28	2	10	LEU
28	2	15	SER
28	2	18	PHE
28	2	19	ARG
28	2	25	LYS
28	2	28	ARG
28	2	34	ARG
28	2	39	ARG
28	2	44	VAL

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Mol	Chain	Res	Type
28	2	46	LYS
29	3	2	LYS
29	3	7	ARG
29	3	24	LYS
29	3	29	ARG
29	3	32	LEU
29	3	34	LYS
29	3	35	LYS
29	3	48	MET
29	3	53	ASP
29	3	54	LEU
29	3	61	LEU
30	4	2	LYS
30	4	8	LYS
30	4	9	LYS
30	4	11	CYS
30	4	13	ASN
30	4	17	VAL
30	4	19	ARG
30	4	20	ASP
30	4	23	ILE
30	4	24	ARG
30	4	25	VAL
30	4	26	ILE
30	4	27	CYS
30	4	30	GLU
30	4	32	LYS
30	4	35	GLN
30	4	36	ARG
31	I	2	LYS
31	I	5	GLN
31	I	54	ILE
31	I	99	LYS
31	I	121	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
3	V	78	GLN
3	V	87	GLN
4	C	45	ASN
4	C	52	HIS

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Mol	Chain	Res	Type
4	C	59	GLN
4	C	127	ASN
4	C	133	ASN
4	C	141	HIS
4	C	162	GLN
4	C	196	ASN
4	C	199	HIS
4	C	225	ASN
4	C	238	ASN
4	C	259	ASN
5	D	32	ASN
5	D	36	GLN
5	D	94	GLN
5	D	164	GLN
5	D	173	GLN
6	E	24	ASN
6	E	30	GLN
6	E	94	GLN
6	E	195	GLN
7	F	36	ASN
8	G	29	ASN
8	G	63	GLN
8	G	72	ASN
8	G	87	GLN
9	H	20	ASN
9	H	128	HIS
9	H	133	GLN
10	J	135	GLN
11	K	13	ASN
12	L	104	GLN
13	M	17	ASN
13	M	22	GLN
13	M	45	GLN
13	M	60	GLN
13	M	97	GLN
14	N	9	GLN
14	N	11	ASN
14	N	18	GLN
14	N	73	ASN
14	N	81	ASN
14	N	107	ASN
15	O	34	HIS

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Mol	Chain	Res	Type
15	O	67	ASN
15	O	98	GLN
15	O	100	HIS
15	O	104	GLN
16	P	9	GLN
16	P	11	GLN
16	P	55	HIS
17	Q	19	GLN
17	Q	43	GLN
17	Q	51	GLN
17	Q	58	GLN
17	Q	80	ASN
18	R	6	GLN
18	R	12	HIS
18	R	43	ASN
18	R	86	GLN
19	S	7	HIS
19	S	15	GLN
19	S	40	ASN
19	S	57	ASN
20	T	48	GLN
21	U	52	ASN
21	U	53	GLN
21	U	65	GLN
22	W	39	GLN
22	W	56	HIS
23	X	31	GLN
23	X	45	GLN
24	Y	48	ASN
25	Z	48	GLN
25	Z	65	ASN
26	0	4	GLN
27	1	44	GLN
27	1	45	HIS
28	2	29	GLN
30	4	13	ASN
31	I	33	ASN

### 5.3.3 RNA ⓘ

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	20 (17%)	1 (0%)
2	B	2837/2904 (97%)	482 (16%)	22 (0%)
All	All	2953/3024 (97%)	502 (16%)	23 (0%)

All (502) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	13	G
1	A	15	A
1	A	16	G
1	A	18	G
1	A	25	U
1	A	26	C
1	A	27	C
1	A	28	C
1	A	29	A
1	A	42	C
1	A	52	A
1	A	56	G
1	A	57	A
1	A	66	A
1	A	67	G
1	A	89	U
1	A	90	C
1	A	96	G
1	A	99	A
1	A	109	A
2	B	2	G
2	B	12	U
2	B	27	G
2	B	35	G
2	B	46	G
2	B	49	A
2	B	51	G
2	B	52	A
2	B	63	A
2	B	64	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	91	A

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Mol	Chain	Res	Type
2	B	98	G
2	B	99	U
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	118	A
2	B	119	A
2	B	120	U
2	B	124	G
2	B	125	A
2	B	126	A
2	B	128	C
2	B	139	U
2	B	141	G
2	B	144	A
2	B	160	A
2	B	162	U
2	B	163	C
2	B	180	G
2	B	181	A
2	B	196	A
2	B	206	U
2	B	216	A
2	B	221	A
2	B	222	A
2	B	227	A
2	B	230	G
2	B	243	U
2	B	248	G
2	B	250	G
2	B	252	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	267	C
2	B	271	G
2	B	277	G
2	B	278	A
2	B	281	C
2	B	288	U
2	B	289	G

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Mol	Chain	Res	Type
2	B	299	A
2	B	301	G
2	B	302	C
2	B	311	A
2	B	312	G
2	B	322	A
2	B	323	C
2	B	329	G
2	B	330	A
2	B	333	G
2	B	346	A
2	B	353	C
2	B	354	A
2	B	355	U
2	B	361	G
2	B	362	A
2	B	363	G
2	B	365	U
2	B	371	A
2	B	372	G
2	B	376	G
2	B	386	G
2	B	387	U
2	B	396	G
2	B	403	U
2	B	404	A
2	B	405	U
2	B	406	G
2	B	411	G
2	B	412	A
2	B	424	G
2	B	444	C
2	B	448	U
2	B	449	A
2	B	450	G
2	B	451	U
2	B	455	C
2	B	456	C
2	B	457	A
2	B	458	G
2	B	475	C
2	B	479	A

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Mol	Chain	Res	Type
2	B	480	A
2	B	481	G
2	B	491	G
2	B	492	A
2	B	504	A
2	B	505	A
2	B	506	G
2	B	508	A
2	B	509	C
2	B	512	G
2	B	515	A
2	B	527	C
2	B	529	A
2	B	530	G
2	B	531	C
2	B	532	A
2	B	533	G
2	B	542	C
2	B	544	C
2	B	545	U
2	B	546	U
2	B	547	A
2	B	548	G
2	B	549	G
2	B	550	C
2	B	554	U
2	B	563	A
2	B	572	A
2	B	573	U
2	B	575	A
2	B	588	U
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	616	A
2	B	627	A
2	B	632	A
2	B	637	A
2	B	640	C
2	B	645	C
2	B	646	U

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Mol	Chain	Res	Type
2	B	654	A
2	B	655	A
2	B	671	C
2	B	686	U
2	B	704	G
2	B	718	A
2	B	719	C
2	B	727	A
2	B	730	A
2	B	747	U
2	B	757	G
2	B	765	C
2	B	775	G
2	B	782	A
2	B	784	G
2	B	785	G
2	B	805	G
2	B	806	C
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	844	A
2	B	846	U
2	B	847	U
2	B	859	G
2	B	869	G
2	B	873	C
2	B	877	A
2	B	899	A
2	B	910	A
2	B	912	C
2	B	919	U
2	B	931	U
2	B	932	U
2	B	933	A
2	B	941	A
2	B	946	C
2	B	955	U
2	B	961	C
2	B	973	A
2	B	974	G

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Mol	Chain	Res	Type
2	B	982	C
2	B	983	A
2	B	989	G
2	B	990	A
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1025	G
2	B	1033	U
2	B	1034	G
2	B	1046	A
2	B	1047	G
2	B	1062	G
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1098	A
2	B	1099	G
2	B	1111	A
2	B	1112	G
2	B	1116	G
2	B	1130	U
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1136	G
2	B	1171	G
2	B	1174	U
2	B	1176	U
2	B	1179	G
2	B	1195	G
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1212	G
2	B	1225	G
2	B	1237	A
2	B	1238	G
2	B	1241	A

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Mol	Chain	Res	Type
2	B	1242	U
2	B	1247	A
2	B	1248	G
2	B	1249	U
2	B	1251	C
2	B	1252	G
2	B	1253	A
2	B	1256	G
2	B	1258	U
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1301	A
2	B	1302	A
2	B	1312	U
2	B	1325	U
2	B	1330	C
2	B	1337	G
2	B	1341	G
2	B	1342	A
2	B	1345	C
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1379	U
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1419	A
2	B	1420	A
2	B	1427	A
2	B	1428	C
2	B	1434	A
2	B	1450	G
2	B	1451	C
2	B	1453	A
2	B	1454	C

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Mol	Chain	Res	Type
2	B	1455	G
2	B	1459	G
2	B	1460	U
2	B	1461	C
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1494	A
2	B	1504	A
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1524	G
2	B	1532	A
2	B	1535	A
2	B	1537	G
2	B	1538	G
2	B	1540	G
2	B	1552	A
2	B	1558	C
2	B	1559	U
2	B	1567	G
2	B	1569	A
2	B	1578	U
2	B	1583	A
2	B	1585	C
2	B	1608	A
2	B	1610	A
2	B	1613	G
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1649	G
2	B	1674	G
2	B	1700	A
2	B	1701	A
2	B	1703	G

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Mol	Chain	Res	Type
2	B	1706	C
2	B	1707	G
2	B	1713	A
2	B	1715	G
2	B	1716	U
2	B	1723	G
2	B	1729	U
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1758	U
2	B	1764	C
2	B	1773	A
2	B	1776	G
2	B	1781	U
2	B	1786	A
2	B	1791	A
2	B	1800	C
2	B	1801	A
2	B	1816	C
2	B	1829	A
2	B	1833	C
2	B	1870	C
2	B	1873	G
2	B	1876	A
2	B	1884	G
2	B	1906	G
2	B	1913	A
2	B	1914	C
2	B	1927	A
2	B	1929	G
2	B	1930	G
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1955	U
2	B	1967	C
2	B	1970	A
2	B	1971	U

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Mol	Chain	Res	Type
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2032	G
2	B	2033	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2076	U
2	B	2077	A
2	B	2094	A
2	B	2096	C
2	B	2100	G
2	B	2104	C
2	B	2106	U
2	B	2107	G
2	B	2108	A
2	B	2109	U
2	B	2110	G
2	B	2134	A
2	B	2135	A
2	B	2138	G
2	B	2145	C
2	B	2146	C
2	B	2147	A
2	B	2149	U
2	B	2156	G
2	B	2157	G
2	B	2181	U
2	B	2183	A
2	B	2190	G
2	B	2199	A
2	B	2204	G
2	B	2210	U

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Mol	Chain	Res	Type
2	B	2211	A
2	B	2212	A
2	B	2225	A
2	B	2239	G
2	B	2250	G
2	B	2253	G
2	B	2268	A
2	B	2270	A
2	B	2283	C
2	B	2287	A
2	B	2288	A
2	B	2289	G
2	B	2297	A
2	B	2305	U
2	B	2307	G
2	B	2308	G
2	B	2309	A
2	B	2310	C
2	B	2311	A
2	B	2319	G
2	B	2321	U
2	B	2322	A
2	B	2325	G
2	B	2333	A
2	B	2334	U
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2361	G
2	B	2383	G
2	B	2385	C
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2424	C
2	B	2426	A
2	B	2429	G
2	B	2430	A
2	B	2434	A
2	B	2441	U
2	B	2448	A
2	B	2472	G

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Mol	Chain	Res	Type
2	B	2476	A
2	B	2491	U
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G
2	B	2535	G
2	B	2554	U
2	B	2566	A
2	B	2567	G
2	B	2573	C
2	B	2585	U
2	B	2586	U
2	B	2597	G
2	B	2602	A
2	B	2609	U
2	B	2610	C
2	B	2613	U
2	B	2621	G
2	B	2629	U
2	B	2654	A
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2726	A
2	B	2739	U
2	B	2744	G
2	B	2751	G
2	B	2757	A
2	B	2765	A
2	B	2778	A
2	B	2791	G
2	B	2797	U
2	B	2800	A
2	B	2801	G
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2836	U
2	B	2850	A

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Mol	Chain	Res	Type
2	B	2866	U
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2903	U

All (23) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	25	U
2	B	63	A
2	B	125	A
2	B	143	C
2	B	162	U
2	B	199	A
2	B	301	G
2	B	544	C
2	B	670	A
2	B	982	C
2	B	1133	A
2	B	1205	A
2	B	1210	G
2	B	1211	C
2	B	1301	A
2	B	2076	U
2	B	2198	A
2	B	2282	G
2	B	2286	G
2	B	2324	U
2	B	2336	A
2	B	2425	A
2	B	2756	U

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 111 ligands modelled in this entry, 111 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	117/120 (97%)	0.13	3 (2%) 53 23	27, 62, 113, 180	0
2	B	2841/2904 (97%)	0.18	164 (5%) 22 9	5, 39, 133, 180	0
3	V	94/94 (100%)	1.28	24 (25%) 1 2	17, 71, 119, 130	0
4	C	267/273 (97%)	0.37	18 (6%) 17 8	5, 46, 139, 180	0
5	D	209/209 (100%)	0.10	3 (1%) 72 37	5, 60, 139, 180	0
6	E	201/201 (100%)	0.21	11 (5%) 24 10	5, 76, 164, 180	0
7	F	178/178 (100%)	-0.25	1 (0%) 86 58	29, 89, 138, 180	0
8	G	176/176 (100%)	-0.01	4 (2%) 57 26	20, 86, 154, 172	0
9	H	149/149 (100%)	0.12	5 (3%) 43 18	31, 100, 153, 180	0
10	J	140/142 (98%)	0.05	3 (2%) 60 28	14, 61, 136, 162	0
11	K	121/123 (98%)	0.95	15 (12%) 5 3	5, 37, 84, 143	0
12	L	144/144 (100%)	0.45	13 (9%) 10 6	7, 74, 150, 179	0
13	M	136/136 (100%)	0.26	5 (3%) 39 16	10, 66, 152, 180	0
14	N	127/127 (100%)	-0.04	3 (2%) 56 25	5, 45, 143, 180	0
15	O	117/117 (100%)	0.16	6 (5%) 27 11	20, 77, 150, 169	0
16	P	114/114 (100%)	0.06	5 (4%) 33 13	8, 69, 148, 180	0
17	Q	117/117 (100%)	0.12	4 (3%) 43 18	11, 57, 127, 180	0
18	R	103/103 (100%)	0.06	0 100 100	26, 92, 154, 180	0
19	S	110/110 (100%)	0.64	11 (10%) 8 5	5, 45, 137, 175	0
20	T	99/100 (99%)	0.33	6 (6%) 21 9	16, 84, 160, 180	0
21	U	102/103 (99%)	0.11	3 (2%) 49 22	11, 103, 161, 180	0
22	W	84/84 (100%)	0.25	2 (2%) 56 25	20, 81, 149, 180	0
23	X	63/63 (100%)	0.21	2 (3%) 45 19	47, 96, 162, 171	0
24	Y	58/58 (100%)	0.26	5 (8%) 11 6	5, 60, 129, 177	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	Z	70/70 (100%)	0.21	3 (4%) 34 14	16, 59, 132, 180	0
26	0	56/56 (100%)	0.55	6 (10%) 6 4	12, 61, 148, 180	0
27	1	54/54 (100%)	0.68	7 (12%) 4 3	22, 77, 153, 173	0
28	2	46/46 (100%)	0.06	0 100 100	13, 48, 112, 129	0
29	3	64/64 (100%)	0.24	2 (3%) 47 21	8, 55, 125, 169	0
30	4	38/38 (100%)	0.00	0 100 100	20, 80, 168, 180	0
31	I	141/141 (100%)	-0.14	2 (1%) 72 37	84, 157, 180, 180	0
All	All	6336/6414 (98%)	0.20	336 (5%) 26 10	5, 55, 151, 180	0

All (336) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	1533	C	14.4
2	B	1459	G	10.1
2	B	1532	A	9.1
2	B	1535	A	8.5
2	B	1536	C	7.9
12	L	1	MET	7.3
2	B	645	C	6.7
2	B	1847	A	6.5
2	B	284	U	6.3
2	B	1540	G	6.2
2	B	1530	G	6.0
2	B	1460	U	6.0
12	L	2	ARG	6.0
26	0	56	LYS	5.9
15	O	61	GLN	5.9
3	V	36	ALA	5.9
3	V	64	VAL	5.8
2	B	1458	U	5.8
19	S	110	ARG	5.7
27	1	2	LYS	5.7
20	T	98	GLY	5.7
2	B	2547	A	5.7
4	C	269	ARG	5.6
2	B	357	C	5.5
2	B	1534	U	5.5
2	B	1539	U	5.4
2	B	278	A	5.4
10	J	1	MET	5.3

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Mol	Chain	Res	Type	RSRZ
4	C	268	ARG	5.2
2	B	1531	C	5.1
2	B	2799	A	5.0
6	E	145	ASP	5.0
3	V	69	GLU	5.0
20	T	99	ALA	5.0
20	T	2	ILE	4.9
3	V	35	GLU	4.9
2	B	1537	G	4.8
6	E	144	GLU	4.7
24	Y	1	ALA	4.6
14	N	122	ALA	4.6
2	B	1541	C	4.6
3	V	33	GLY	4.6
2	B	359	G	4.5
23	X	37	LEU	4.4
2	B	2191	A	4.4
11	K	110	GLU	4.4
22	W	6	GLY	4.3
11	K	111	LYS	4.3
27	1	4	ILE	4.3
2	B	2566	A	4.3
2	B	277	G	4.3
3	V	32	GLY	4.3
2	B	1870	C	4.2
6	E	141	MET	4.2
27	1	3	GLY	4.2
4	C	257	ARG	4.2
21	U	49	PRO	4.1
2	B	2798	U	4.1
26	0	43	THR	4.1
2	B	1506	U	4.1
2	B	1848	A	4.1
3	V	34	LYS	4.0
13	M	132	THR	4.0
2	B	2147	A	3.9
10	J	43	GLU	3.9
3	V	68	LYS	3.9
2	B	2561	U	3.9
21	U	47	PRO	3.9
2	B	1490	A	3.8
2	B	275	C	3.8

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Mol	Chain	Res	Type	RSRZ
2	B	1948	G	3.8
12	L	8	PRO	3.8
11	K	4	GLU	3.8
21	U	48	VAL	3.7
3	V	5	ASN	3.7
19	S	70	LYS	3.7
2	B	331	C	3.6
2	B	1451	C	3.6
2	B	2793	C	3.6
3	V	9	ARG	3.6
4	C	171	VAL	3.6
2	B	2602	A	3.5
3	V	40	ILE	3.5
19	S	27	LYS	3.5
4	C	139	THR	3.5
19	S	66	ILE	3.5
5	D	103	ASP	3.5
3	V	70	ILE	3.5
2	B	1542	U	3.5
2	B	2651	C	3.5
2	B	285	G	3.4
19	S	108	SER	3.4
27	1	5	ARG	3.4
4	C	3	VAL	3.4
2	B	139	U	3.4
9	H	94	ILE	3.4
4	C	4	LYS	3.4
15	O	60	GLU	3.4
12	L	11	GLY	3.4
6	E	140	ASP	3.3
2	B	1850	G	3.3
2	B	279	A	3.3
19	S	1	MET	3.3
12	L	6	LEU	3.3
13	M	59	ARG	3.3
2	B	2662	A	3.3
2	B	2672	U	3.3
2	B	1281	G	3.3
2	B	2794	C	3.3
17	Q	117	ALA	3.2
29	3	64	ALA	3.2
2	B	2560	A	3.2

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Mol	Chain	Res	Type	RSRZ
2	B	546	U	3.2
2	B	2655	G	3.2
2	B	2548	U	3.2
2	B	1955	U	3.2
2	B	2732	G	3.2
2	B	504	A	3.1
2	B	1921	G	3.1
19	S	67	ASP	3.1
2	B	2795	C	3.1
4	C	237	ARG	3.1
3	V	39	ALA	3.1
3	V	10	LYS	3.1
11	K	23	LYS	3.1
3	V	1	MET	3.0
15	O	57	ALA	3.0
2	B	2110	G	3.0
13	M	133	LYS	3.0
12	L	10	GLU	3.0
8	G	176	LYS	3.0
11	K	5	GLN	3.0
13	M	1	MET	2.9
2	B	491	G	2.9
2	B	2192	U	2.9
2	B	1449	G	2.9
2	B	1869	G	2.9
24	Y	57	GLU	2.9
2	B	1892	C	2.9
2	B	1724	G	2.9
2	B	2556	C	2.9
22	W	5	ALA	2.9
2	B	1909	C	2.9
12	L	12	SER	2.9
2	B	1922	G	2.9
2	B	2567	G	2.9
27	1	53	ILE	2.9
2	B	354	A	2.9
2	B	1210	G	2.9
2	B	1944	U	2.8
9	H	76	GLU	2.8
6	E	23	PHE	2.8
19	S	3	THR	2.8
2	B	267	C	2.8

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Mol	Chain	Res	Type	RSRZ
2	B	1504	A	2.8
2	B	1283	G	2.8
11	K	22	ILE	2.8
2	B	2549	G	2.8
3	V	25	LYS	2.8
16	P	39	LEU	2.8
2	B	2146	C	2.8
2	B	2463	C	2.8
1	A	76	G	2.8
2	B	1465	G	2.8
24	Y	3	THR	2.8
31	I	94	LYS	2.8
2	B	2585	U	2.7
2	B	1461	C	2.7
4	C	5	CYS	2.7
2	B	2796	U	2.7
2	B	1952	A	2.7
2	B	1450	G	2.7
2	B	1891	G	2.7
8	G	174	LYS	2.7
2	B	1895	C	2.7
4	C	265	PHE	2.7
2	B	283	G	2.7
2	B	1241	A	2.7
2	B	1505	A	2.7
2	B	2563	U	2.7
5	D	105	LYS	2.7
2	B	2667	C	2.7
25	Z	18	CYS	2.7
3	V	30	ILE	2.7
2	B	1738	G	2.6
2	B	1949	G	2.6
27	1	32	LYS	2.6
2	B	2402	U	2.6
2	B	2594	C	2.6
2	B	2532	G	2.6
12	L	55	MET	2.6
2	B	1583	A	2.6
2	B	2650	U	2.6
4	C	238	ASN	2.6
29	3	63	TYR	2.6
2	B	1507	C	2.6

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Mol	Chain	Res	Type	RSRZ
11	K	39	ILE	2.6
26	0	37	HIS	2.6
26	0	53	VAL	2.6
9	H	122	LEU	2.6
2	B	1950	G	2.6
2	B	898	C	2.6
2	B	2190	G	2.6
2	B	358	U	2.6
2	B	2524	G	2.6
2	B	2553	G	2.6
13	M	86	LYS	2.6
2	B	2764	A	2.6
3	V	2	PHE	2.6
2	B	2792	A	2.5
2	B	1910	G	2.5
2	B	490	C	2.5
4	C	170	TYR	2.5
2	B	363	G	2.5
2	B	1464	G	2.5
9	H	106	ALA	2.5
2	B	2562	U	2.5
2	B	2531	A	2.5
12	L	100	ILE	2.5
12	L	17	LYS	2.5
15	O	89	ASP	2.5
2	B	1958	C	2.5
2	B	282	A	2.5
2	B	1538	G	2.5
6	E	19	PHE	2.5
3	V	67	GLY	2.5
5	D	100	LEU	2.5
16	P	33	GLU	2.4
3	V	38	LEU	2.4
19	S	61	ASN	2.4
6	E	138	LEU	2.4
2	B	388	G	2.4
2	B	1447	C	2.4
2	B	2148	G	2.4
2	B	1280	G	2.4
19	S	109	ASP	2.4
2	B	2134	A	2.4
2	B	1859	U	2.4

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Mol	Chain	Res	Type	RSRZ
6	E	114	ARG	2.4
17	Q	84	LYS	2.4
2	B	387	U	2.4
2	B	2671	G	2.4
14	N	120	GLU	2.4
2	B	1968	G	2.4
11	K	87	LEU	2.4
2	B	1849	G	2.4
26	O	33	SER	2.4
4	C	266	ILE	2.3
24	Y	2	LYS	2.3
4	C	209	ALA	2.3
12	L	3	LEU	2.3
2	B	1528	A	2.3
2	B	1954	G	2.3
15	O	66	GLY	2.3
20	T	97	GLY	2.3
12	L	21	ARG	2.3
2	B	2400	G	2.3
2	B	2557	G	2.3
9	H	77	THR	2.3
2	B	1953	A	2.3
6	E	165	HIS	2.3
2	B	312	G	2.3
2	B	2652	C	2.3
3	V	65	VAL	2.3
1	A	88	C	2.3
2	B	2133	G	2.3
3	V	37	PRO	2.3
23	X	21	LEU	2.3
2	B	2733	A	2.3
2	B	2800	A	2.3
2	B	1843	C	2.3
3	V	41	GLU	2.3
2	B	2235	G	2.2
25	Z	22	MET	2.2
11	K	21	CYS	2.2
2	B	1920	C	2.2
2	B	492	A	2.2
8	G	175	LYS	2.2
2	B	268	C	2.2
2	B	1723	G	2.2

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Mol	Chain	Res	Type	RSRZ
2	B	2595	G	2.2
2	B	2076	U	2.2
2	B	2550	G	2.2
11	K	71	ARG	2.2
4	C	247	TRP	2.2
7	F	74	ALA	2.2
1	A	73	A	2.2
2	B	489	G	2.2
2	B	2533	U	2.2
11	K	3	GLN	2.2
16	P	43	GLU	2.2
25	Z	27	THR	2.2
2	B	1943	U	2.2
2	B	2804	U	2.2
12	L	18	ARG	2.2
11	K	38	ILE	2.2
2	B	2583	G	2.2
11	K	25	LEU	2.2
16	P	38	ARG	2.2
6	E	112	LEU	2.1
11	K	40	LYS	2.1
2	B	2555	U	2.1
2	B	2481	G	2.1
10	J	42	ALA	2.1
2	B	1957	C	2.1
2	B	1666	G	2.1
14	N	121	LYS	2.1
8	G	110	HIS	2.1
2	B	1942	C	2.1
17	Q	4	LYS	2.1
2	B	2401	U	2.1
27	1	31	GLU	2.1
20	T	1	MET	2.1
6	E	168	ASP	2.1
4	C	8	THR	2.1
2	B	1995	U	2.1
2	B	2797	U	2.1
16	P	28	LYS	2.1
11	K	15	GLY	2.0
2	B	288	U	2.0
15	O	58	ILE	2.0
4	C	172	THR	2.0

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Mol	Chain	Res	Type	RSRZ
20	T	73	ARG	2.0
2	B	2603	G	2.0
2	B	1457	U	2.0
2	B	2462	C	2.0
24	Y	58	GLU	2.0
19	S	73	LYS	2.0
2	B	330	A	2.0
31	I	136	GLY	2.0
2	B	1	G	2.0
2	B	350	G	2.0
26	O	44	ALA	2.0
4	C	162	GLN	2.0
17	Q	116	LEU	2.0
3	V	6	ALA	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
32	MG	B	2969	1/1	0.27	19.15	47,47,47,47	1
32	MG	B	2998	1/1	0.33	14.72	5,5,5,5	1
32	MG	B	2938	1/1	0.23	4.32	66,66,66,66	0
32	MG	B	2956	1/1	0.30	3.62	60,60,60,60	0
32	MG	B	2980	1/1	0.52	3.62	17,17,17,17	0
32	MG	B	2990	1/1	0.23	3.35	69,69,69,69	0
32	MG	B	2952	1/1	0.46	2.99	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	2973	1/1	0.27	2.23	44,44,44,44	0
32	MG	B	2993	1/1	0.32	1.89	65,65,65,65	0
32	MG	B	2963	1/1	0.20	1.31	127,127,127,127	0
32	MG	B	2976	1/1	0.20	1.11	30,30,30,30	0
32	MG	B	2939	1/1	0.23	0.46	30,30,30,30	0
32	MG	B	3007	1/1	0.22	-0.06	50,50,50,50	0
32	MG	B	2916	1/1	0.16	-0.21	6,6,6,6	0
32	MG	B	2974	1/1	0.16	-0.35	46,46,46,46	0
32	MG	B	3013	1/1	0.16	-0.42	24,24,24,24	0
32	MG	B	2949	1/1	0.15	-0.57	61,61,61,61	0
32	MG	B	2950	1/1	0.15	-0.65	33,33,33,33	0
32	MG	B	2933	1/1	0.15	-0.70	41,41,41,41	0
32	MG	B	2940	1/1	0.21	-0.76	16,16,16,16	0
32	MG	B	2972	1/1	0.16	-0.80	14,14,14,14	0
32	MG	B	2999	1/1	0.23	-0.83	55,55,55,55	0
32	MG	B	2928	1/1	0.13	-0.95	36,36,36,36	0
32	MG	B	2964	1/1	0.15	-0.97	77,77,77,77	0
32	MG	B	2959	1/1	0.15	-1.05	19,19,19,19	0
32	MG	B	2924	1/1	0.14	-1.13	20,20,20,20	0
32	MG	B	2941	1/1	0.14	-1.14	13,13,13,13	0
32	MG	B	2914	1/1	0.11	-1.24	12,12,12,12	0
32	MG	B	2915	1/1	0.17	-1.24	8,8,8,8	0
32	MG	B	3005	1/1	0.12	-1.27	27,27,27,27	0
32	MG	B	2913	1/1	0.18	-1.32	7,7,7,7	0
32	MG	B	2918	1/1	0.14	-1.42	5,5,5,5	0
32	MG	B	2907	1/1	0.09	-1.54	14,14,14,14	0
32	MG	B	2986	1/1	0.14	-1.55	73,73,73,73	0
32	MG	B	2970	1/1	0.14	-1.56	5,5,5,5	0
32	MG	B	2997	1/1	0.15	-1.57	10,10,10,10	0
32	MG	B	2948	1/1	0.12	-1.61	7,7,7,7	0
32	MG	B	2987	1/1	0.11	-1.76	27,27,27,27	0
32	MG	B	2995	1/1	0.12	-1.79	96,96,96,96	0
32	MG	B	2961	1/1	0.04	-1.82	28,28,28,28	0
32	MG	B	2981	1/1	0.15	-1.83	57,57,57,57	0
32	MG	B	2954	1/1	0.12	-1.84	74,74,74,74	0
32	MG	B	2968	1/1	0.14	-1.88	28,28,28,28	0
32	MG	B	3001	1/1	0.14	-1.92	15,15,15,15	0
32	MG	B	2905	1/1	0.12	-1.96	7,7,7,7	0
32	MG	B	2992	1/1	0.12	-2.00	35,35,35,35	0
32	MG	B	2967	1/1	0.05	-2.22	13,13,13,13	0
32	MG	B	2935	1/1	0.13	-2.29	18,18,18,18	0
32	MG	B	2955	1/1	0.08	-2.40	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	2908	1/1	0.12	-2.47	19,19,19,19	0
32	MG	B	2906	1/1	0.10	-2.50	37,37,37,37	0
32	MG	B	2922	1/1	0.09	-2.55	29,29,29,29	0
32	MG	B	2983	1/1	0.10	-2.67	5,5,5,5	0
32	MG	B	3014	1/1	0.10	-2.68	54,54,54,54	0
32	MG	N	128	1/1	0.09	-2.69	49,49,49,49	0
32	MG	B	2978	1/1	0.12	-2.69	25,25,25,25	0
32	MG	B	2910	1/1	0.20	-2.74	5,5,5,5	0
32	MG	B	2944	1/1	0.12	-2.77	5,5,5,5	0
32	MG	B	2960	1/1	0.11	-2.78	11,11,11,11	0
32	MG	B	3006	1/1	0.12	-2.88	26,26,26,26	0
32	MG	B	2977	1/1	0.10	-3.05	16,16,16,16	0
32	MG	B	2979	1/1	0.06	-3.05	5,5,5,5	0
32	MG	B	2947	1/1	0.10	-3.16	9,9,9,9	0
32	MG	B	2923	1/1	0.08	-3.23	5,5,5,5	0
32	MG	B	2994	1/1	0.13	-3.40	28,28,28,28	0
32	MG	B	2982	1/1	0.08	-3.45	18,18,18,18	0
32	MG	B	2946	1/1	0.09	-3.45	27,27,27,27	0
32	MG	B	3011	1/1	0.08	-3.47	19,19,19,19	0
32	MG	B	3000	1/1	0.09	-3.48	20,20,20,20	0
32	MG	B	2996	1/1	0.08	-3.53	23,23,23,23	0
32	MG	B	2966	1/1	0.09	-3.57	43,43,43,43	0
32	MG	B	2975	1/1	0.10	-3.58	39,39,39,39	0
32	MG	B	3010	1/1	0.10	-3.60	21,21,21,21	0
32	MG	B	2919	1/1	0.10	-3.64	49,49,49,49	0
32	MG	B	3009	1/1	0.16	-3.68	23,23,23,23	0
32	MG	B	2931	1/1	0.06	-3.77	10,10,10,10	0
32	MG	B	2971	1/1	0.08	-3.81	17,17,17,17	0
32	MG	B	2929	1/1	0.05	-3.82	21,21,21,21	0
32	MG	B	2989	1/1	0.07	-3.92	17,17,17,17	0
32	MG	B	2934	1/1	0.10	-3.99	23,23,23,23	0
32	MG	B	3002	1/1	0.07	-4.01	18,18,18,18	0
32	MG	B	2942	1/1	0.05	-4.07	16,16,16,16	0
32	MG	B	2985	1/1	0.07	-4.17	25,25,25,25	0
32	MG	B	2984	1/1	0.14	-4.22	12,12,12,12	0
32	MG	B	2909	1/1	0.04	-4.38	9,9,9,9	0
32	MG	B	2957	1/1	0.12	-4.41	27,27,27,27	0
32	MG	B	2937	1/1	0.19	-4.45	11,11,11,11	0
32	MG	B	2988	1/1	0.07	-4.60	8,8,8,8	0
32	MG	B	3003	1/1	0.05	-4.79	9,9,9,9	0
32	MG	B	3012	1/1	0.07	-4.86	5,5,5,5	0
32	MG	B	2925	1/1	0.11	-4.87	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	B	2965	1/1	0.12	-4.87	78,78,78,78	0
32	MG	B	2932	1/1	0.10	-5.30	28,28,28,28	0
32	MG	B	2951	1/1	0.10	-5.35	17,17,17,17	0
32	MG	B	2920	1/1	0.10	-5.48	23,23,23,23	0
32	MG	B	2917	1/1	0.12	-5.49	34,34,34,34	0
32	MG	B	2921	1/1	0.08	-5.61	5,5,5,5	0
32	MG	B	2991	1/1	0.05	-5.92	6,6,6,6	0
32	MG	B	3008	1/1	0.05	-6.21	50,50,50,50	0
32	MG	B	2911	1/1	0.06	-6.50	12,12,12,12	0
32	MG	B	2945	1/1	0.09	-6.77	18,18,18,18	0
32	MG	B	2936	1/1	0.10	-6.80	46,46,46,46	0
32	MG	B	2930	1/1	0.10	-7.49	18,18,18,18	0
32	MG	B	2926	1/1	0.05	-7.98	15,15,15,15	0
32	MG	B	2912	1/1	0.09	-8.01	24,24,24,24	0
32	MG	B	2953	1/1	0.04	-8.72	5,5,5,5	0
32	MG	B	2943	1/1	0.06	-9.09	19,19,19,19	0
32	MG	B	2958	1/1	0.07	-9.61	15,15,15,15	0
32	MG	B	2962	1/1	0.10	-10.52	30,30,30,30	1
32	MG	B	3004	1/1	0.07	-10.60	11,11,11,11	0
32	MG	B	2927	1/1	0.07	-13.41	34,34,34,34	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.