



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 28, 2014 – 09:22 PM GMT

PDB ID : 3OI5  
Title : Structure of the *Thermus thermophilus* 70S ribosome complexed with telithromycin. This file contains the 50S subunit of one 70S ribosome. The entire crystal structure contains two 70S ribosomes.  
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.  
Deposited on : 2010-08-18  
Resolution : 3.10 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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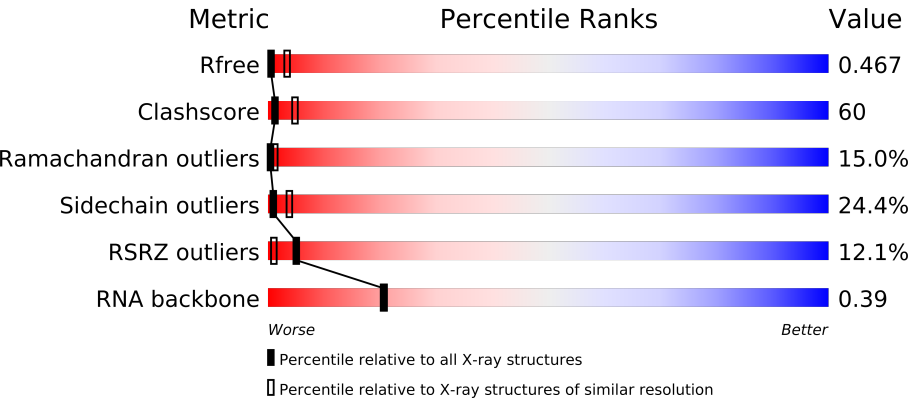
The following versions of software and data (see [references](#)) were used in the production of this report:

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 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	66092	1007 (3.18-3.02)
Clashscore	79885	1078 (3.16-3.04)
Ramachandran outliers	78287	1044 (3.16-3.04)
Sidechain outliers	78261	1044 (3.16-3.04)
RSRZ outliers	66119	1008 (3.18-3.02)
RNA backbone	1838	1047 (3.60-2.60)

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	0	85	
2	1	98	
3	2	72	
4	3	60	
5	4	71	
6	5	60	
7	6	54	
8	7	49	
9	8	65	
10	A	2787	
11	B	122	
12	D	276	

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Mol	Chain	Length	Quality of chain
13	E	206	
14	F	210	
15	G	182	
16	H	180	
17	I	148	
18	N	140	
19	O	122	
20	P	150	
21	Q	141	
22	R	118	
23	S	112	
24	T	146	
25	U	118	
26	V	101	
27	W	113	
28	X	96	
29	Y	110	
30	Z	206	

## 2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 87522 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 protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	85	Total	C	N	O	S	0	0	0
			650	401	137	111	1			

- Molecule 2 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	1	89	Total	C	N	O	0	0	1
			693	435	140	118			

- Molecule 3 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2	51	Total	C	N	O	S	0	0	1
			421	263	85	72	1			

- Molecule 4 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 5 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	4	32	Total	C	N	O	0	0	0
			157	93	32	32			

- Molecule 6 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	5	59	Total	C	N	O	S	9	0	0
			459	288	90	76	5			

- Molecule 7 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 8 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 9 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 10 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	A	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			

- Molecule 11 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	B	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 12 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	D	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 13 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	E	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 14 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	F	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 15 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	G	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 16 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	H	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			

- Molecule 17 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	I	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			

- Molecule 18 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	N	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			

- Molecule 19 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	O	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 20 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	P	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 21 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	Q	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			

- Molecule 22 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	R	117	Total	C	N	O		0	0	0
			960	599	202	159				

- Molecule 23 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	S	99	Total	C	N	O		0	0	1
			771	486	155	130				

- Molecule 24 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	T	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			

- Molecule 25 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	U	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 26 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	V	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 27 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	W	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 28 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	X	93	Total	C	N	O	0	0	1
			726	471	132	123			

- Molecule 29 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
29	Y	101	Total	C	N	O S	0	0	1
			776	500	149	123 4			

- Molecule 30 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
30	Z	177	Total	C	N	O S	0	0	1
			1404	897	253	252 2			

- Molecule 31 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
31	P	1	Total	Mg	0	0
			1	1		
31	Q	1	Total	Mg	0	0
			1	1		
31	D	2	Total	Mg	0	0
			2	2		
31	E	1	Total	Mg	0	0
			1	1		
31	B	3	Total	Mg	0	0
			3	3		
31	U	1	Total	Mg	0	0
			1	1		
31	7	1	Total	Mg	0	0
			1	1		
31	X	1	Total	Mg	0	0
			1	1		
31	A	318	Total	Mg	0	0
			318	318		
31	5	1	Total	Mg	0	0
			1	1		
31	8	1	Total	Mg	0	0
			1	1		
31	R	2	Total	Mg	0	0
			2	2		

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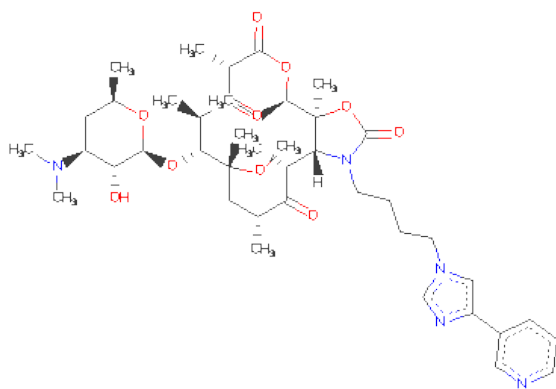
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
31	F	1	Total	Mg	0	0
			1	1		

- Molecule 32 is POTASSIUM ION (three-letter code: K) (formula: K).

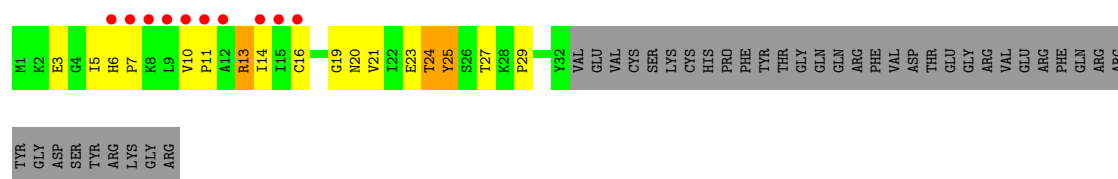
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	A	1	Total	K	0	0
			1	1		

- Molecule 33 is TELITHROMYCIN (three-letter code: TEL) (formula: C<sub>43</sub>H<sub>65</sub>N<sub>5</sub>O<sub>10</sub>).



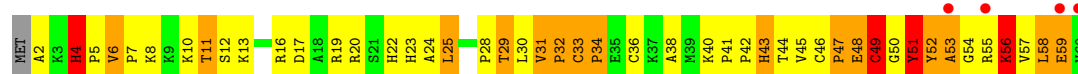
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
33	A	1	Total	C	N	O	0	0
			58	43	5	10		





• Molecule 6: 50S ribosomal protein L32

Chain 5:



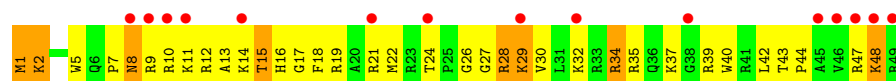
• Molecule 7: 50S ribosomal protein L33

Chain 6:



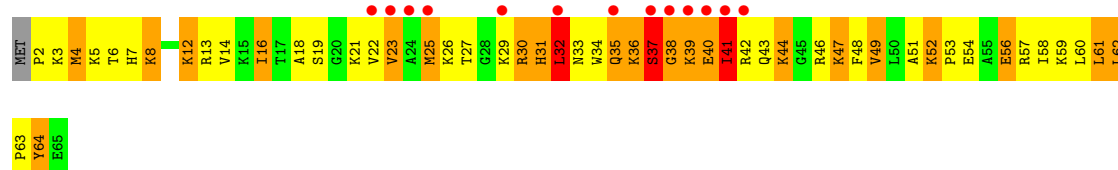
• Molecule 8: 50S ribosomal protein L34

Chain 7:



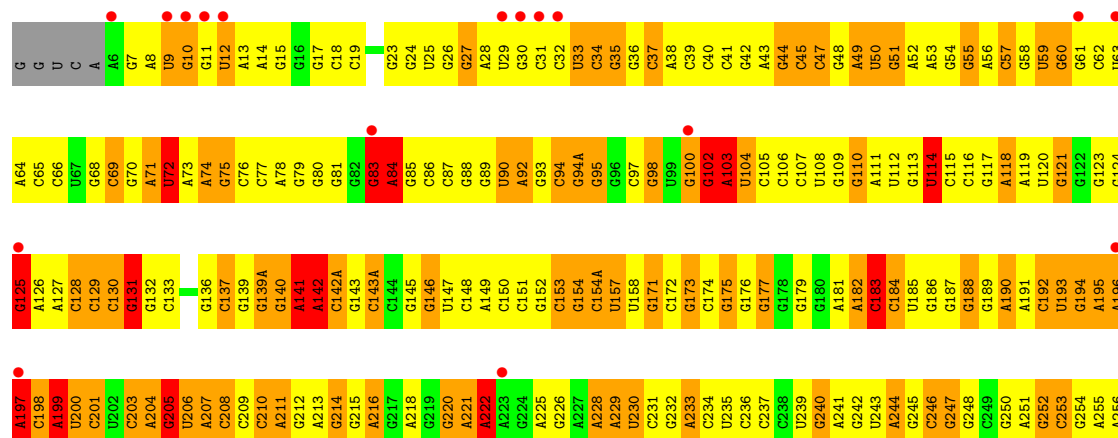
• Molecule 9: 50S ribosomal protein L35

Chain 8:



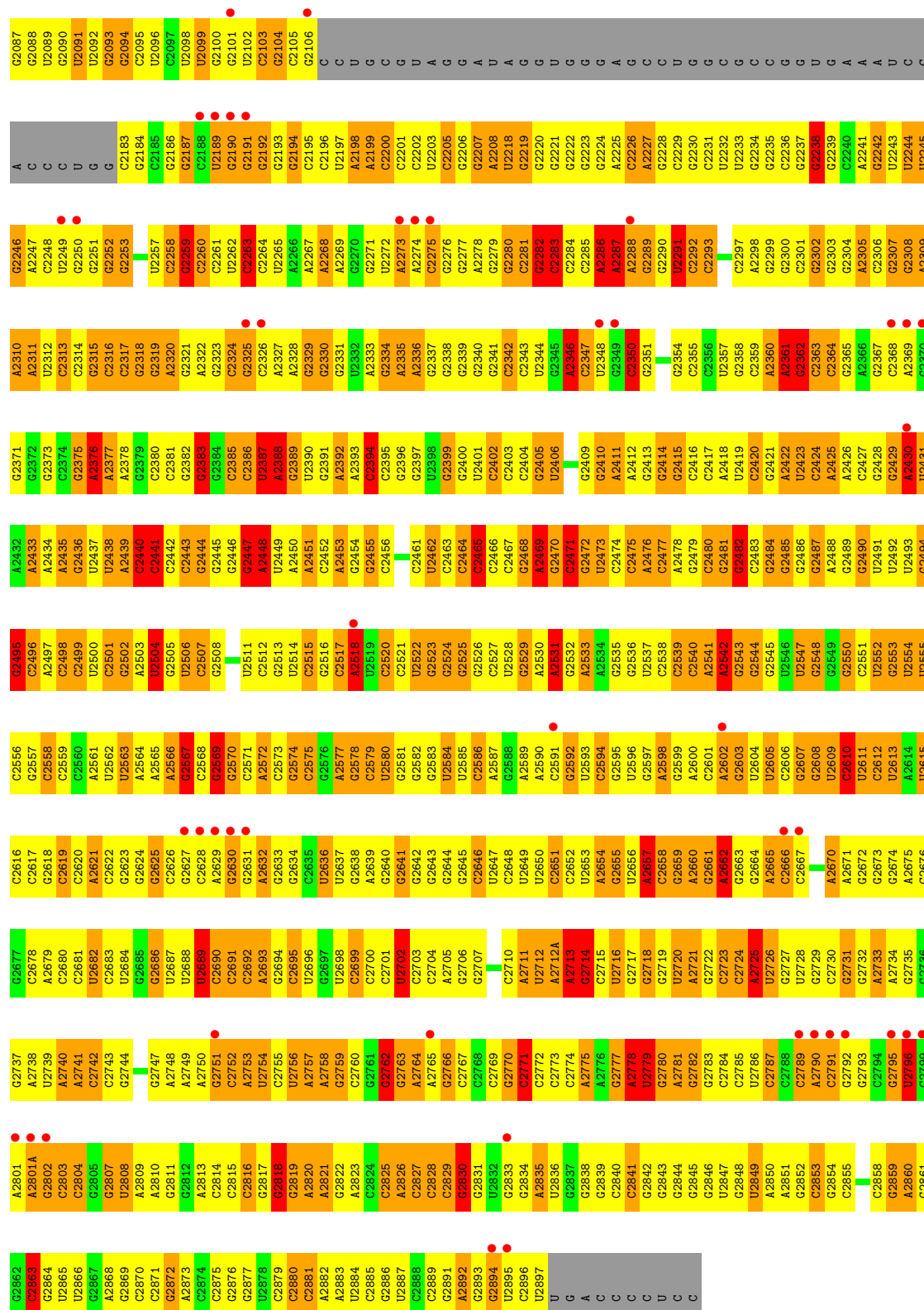
• Molecule 10: 23S ribosomal RNA

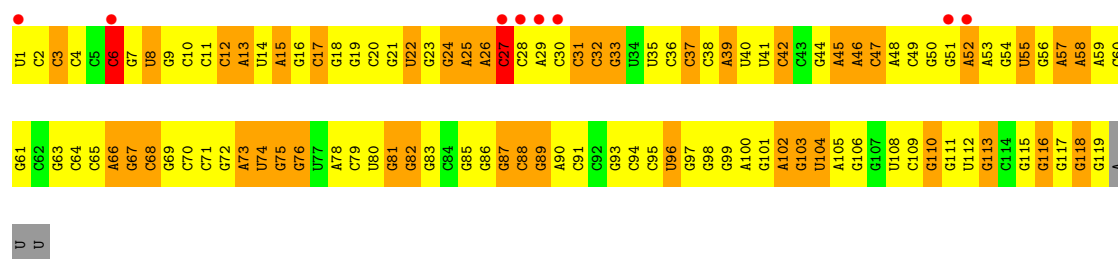
Chain A:



A1143	G1030	C971	G843	A782	A722	C658	U597	A532	A470	G407	G349	C287	A257
G1144	G1031	G972	C844	A783	G723	C659	G598	G533	A471	G408	U350	C288	G258
C1145	A1032	G973	G845	A784	U724	C660	G599	C534	A472	C409	G351	A259	G259
C1146	U1033	G974	C846	G785	G725	C661	G600	C535	G473	G410	G352	G260	G261
C1147	G1034	G975	U847	G786	G726	C662	C601	C536	G474	G411	G353	C292	G262
A1148	U1035	G976	G848	G787	A727	G663	G602	C537	U475	A412	G354	U293	A262
G1149	G1036	G977	A849	A788	G728	C664	A603	G538	G476	C413	G355	C263	C264
C1150	G1037	G978	C850	A789	G729	C665	G604	G539	A477	G414	G356	G295	C265
G1151	U1038	G979	U851	G790	C730	C666	C605	C540	A478	A415	A357	A266	A267
C1152	G1039	G980	C852	G791	C731	U667	U606	C541	A479	C416	U358	C297	C268
C1153	C1040	G981	G853	G792	C732	G668	U607	C542	A480	G417	A359	G298	G269
G1154	U1041	G982	G854	G793	G733	G669	A608	C543	G481	G418	G360	A299	U268
A1155	G1042	U922	C855	G794	A734	A670	A609	A547	A482	C419	G361	A300	U269
A1156	C1043	C923	C856	G795	A735	C671	G610	A548	A483	C420	U362	G301	
G1157	U1044	C924	C857	G796	C736	C672	C611	G549	A484	U421	G363	C302	A271A
C1158	A1045	C925	U858	G797	G737	C673	C612	G551	C485	A422	A363A	U303	C271B
U1159	G1046	A926	G859	G798	G738	G674	G613	G552	C486	A423	G363B	G304	C271C
G1160	U1047	G927	U860	G801	U740	A676	U614	G553	G489	C426	G363C	U305	C271D
C1161	A1048	G928	A861	A802	G741	A677	G614A	U554	G491	U427	U363D	U306	U271E
C1162	U1049	U930	G862	A803	G742	C678	G614B	U555	A492	U428	U363E	G307	C271F
G1163	A1050	A990	A863	A804	G743	C679	G615	U557	G493	A429	A364F	G308	C271G
C1164	G1051	C991	C864	A805	G744	G680	G616	C564	G494	G430	C364	G309	C271H
U1165	C1052	C992	C865	G806	G745	G681	G617	C565	G495	G431	C365	A310	C271I
C1166	C1053	G993	A866	C906	A746	G682	G618	U566	C496	G432	C366	A311	C271J
U1167	A106	C994	C867	U807	G747	G683	G619	A567	G497	C433	G370	U271K	
G1168	G1107	C995	U868	G808	U747	G684	G620	G561	A498	U434	A371	U271L	
C1169	U1108	A996	G869	G809	G748	A685	A621	U562	G499	C435	G372	G271M	
G1170	C1109	G997	A870	U810	C749	G686	G622	U563	U504	C436	U373	U271N	
C1171	U1110	C998	U871	U811	G750	C687	G623	C564	A501	G437	A374	C271O	
G1172	A1111	U999	A872	C812	C824	U688	C824	C565	A502	G438	C375	C318	C271P
A1174	U1112	A1000	G873	U813	A752	A689	G625	U566	A503	G440	C376	C319	C271Q
U1175	G1113	A1001	G874	C814	G753	G690	U626	A567	A504	U441	C377	A320	C271R
G1176	U1114	G1002	G875	C815	C754	C691	A627	G570	U505	U442	C378	G321	C271S
C1177	G1115	C976	C876	C816	C755	C692	G628	U571	A506	C443	G379	A322	C271T
U1178	C1116	C1004	U877	C817	G756	C693	G629	A572	G506	C444	U380	G323	C271U
C1179	G1117	C1005	A878	G818	U757	U694	G630	G573	A507	C445	G381	A324	C271V
G1180	U1106	C1006	G879	A819	C758	G695	A631	A574	G508	G446	G382	G325	C271W
C1181	C1121	C1007	G880	A820	G759	G696	A632	C574	C509	A447	U383	G326	C271X
A1182	G1122	C1008	G881	A821	G760	C697	A633	A575	C510	U448	U384	G327	U271Y
G1183	U1123	G950	C882	U822	A761	C698	C834	U576	U511	A449	C385	U328	C271Z
C1184	C1124	C951	C883	G823	U762	A699	C835	G577	A512	G450	G386	G329	G272
G1185	U1125	G1011	C884	A824	G763	G700	G636	A578	A513	C451	U387	A330	G272B
C1186	G1126	U1012	G892	C825	A764	G701	A637	G579	A514	G452	G388	A331	G272C
U1187	A1126	C1013	C893	U826	G765	G702	G638	C580	A515	C453	G389	A332	G272D
G1188	A1127	U1014	C894	U827	G766	U703	U639	C581	C516	A454	A390	G333	G272E
A1189	G1128	G1015	U895	U828	U767	G704	C840	G582	C517	C455	G391	C334	G272F
G1190	U1129	A896	C896	A829	G768	A705	C841	G583	C518	C456	C392	C335	C272G
C1191	U1130	G1017	C897	G830	G769	A706	G642	G584	U519	A457	C393	C336	C272H
G1192	G1131	C998	C898	G831	G770	G707	A643	G585	G520	G458	A394	C337	U272I
C1193	A1132	U1019	A899	G832	G771	C708	A644	A586	G521	U459	U395	G338	C272J
A1194	U1133	C961	A900	U833	C772	U709	C645	C587	G522	A460	G396	U339	G274
G1195	C1135	G962	A901	C834	U773	G710	A646	U588	C523	C461	G397	A340	G275
C1196	G1136	U963	C902	A835	A774	G711	G647	C589	U524	C462	G398	G341	C279
G1197	U1137	C964	C903	G836	G775	G712	G648	A590	U525	G463	G399	G342	C280
U1198	G1138	G1024	C965	C837	G776	G713	G649	C591	A526	U464	G400	C343	G281
G1199	U1139	G965	U905	C838	A777	G717	C650	G592	C527	G465	A401	G344	A282
C1200	C1140	C967	G906	U839	G778	A718	G651	G593	A528	A466	A402	A345	A283
U1201	U1141	G968	U907	C840	U779	C719	C652	U594	A529	G467	A346	A347	U284
C1202	A1028	U969	C908	A841	G780	C720	G656	C595	G530	G468	C285	C286	
G1203	A1142A	C970	A909	G842	A781	C721	U657	G596	C531	G469	G406		

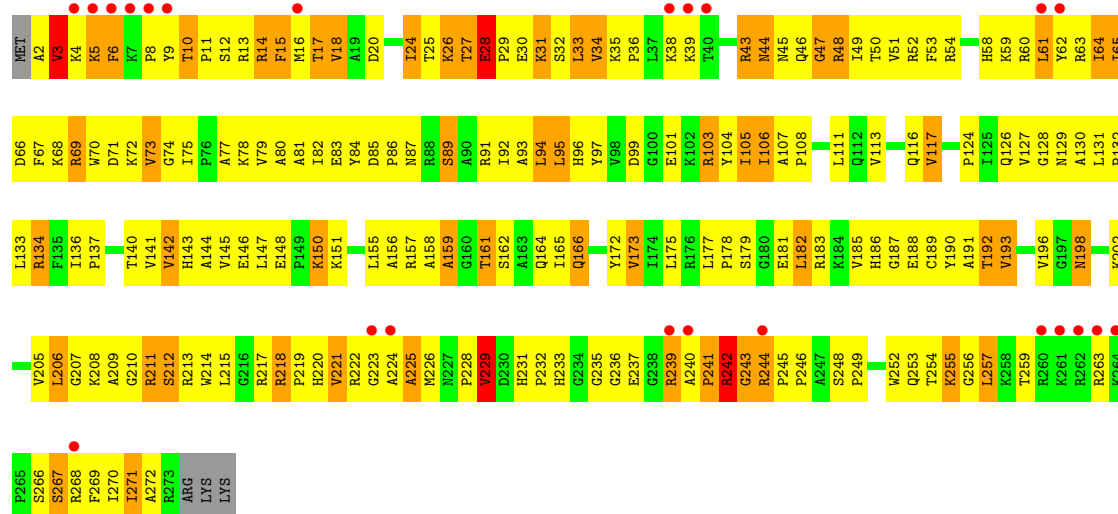
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G2029	C1967	U1834	C1774	U1698	U1576	A1507	G1446	G1387	G1326	G1266	G1206
A2030	G1968	G1835	U1775	U1699	C1577	A1508	G1447	G1388	C1327	U1267	C1207
A2031	A1969	C1836	U1776	A1700	U1578	C1509	G1448	G1389	U1328	A1268	
G2032	C1970	U1837	G1777	A1641	A1579	A1509A	A1449	U1390	U1329	A1269	A1210
A2033	A1971	G1838	U1778	G1642	A1580	A1509B	G1450	U1391	C1330	C1270	U1211
U2034	A1972	G1839	G1703	G1643	A1581	G1510	C1450A	A1392	A1331	G1271	A1212
G2035	G1973		U1779	C1644	C1582	U1512	C1451	A1393	G1332	U1272	A1213
C2036	A1974	C1843	C1780	C1645	C1584	U1513	A1452	C1333	C1333	A1273	A1214
G2037	G1975	G1844	C1782	G1646	C1584	C1513	U1453	A1394	G1334	A1274	G1215
G2038	A1976	G1845	U1706	C1647	U1514	A1586	G1455	A1395	A1335	A1275	
C2039	A1977	G1846	G1708	G1648	A1587	G1515	G1456	U1397	A1336	G1217	
C2040		A1847	U1709	G1649	C1588	C1516	A1457	C1398	G1337	A1276	
U2041	G1980	A1848	C1710	G1650	C1589	G1517	G1458	C1399	G1338	G1277	
A2042	A1981	G1849	A1787	G1651	U1590	U1518	G1459	G1400	G1339	A1278	
C2043	C1982	G1850	C1789	A1652	U1591	G1519	A1460	U1340	G1280	G1279	
C2044	G1983	U1851	U1713	G1653	C1592	G1520	G1461	A1401	U1341	G1281	
C2045	G1984	C1852	G1714	A1654	G1593		C1462	C1403	A1342	U1282	
		A1853	G1717	A1655	G1594	G1525	C1463	C1404	G1343	G1283	
G2046		A1854	G1718	G1656	G1595	G1526	C1464	U1405	G1344	A1284	
U2047	G1987	G1855	G1719	C1657	A1596	G1527	G1465	U1406	C1345	G1285	
G2048	C1988	G1856	U1720	A1597	A1597	A1528A	G1466	C1407	G1346	G1286	
G2049	G1989	G1857	G1721	U1659	C1598	G1529	C1467	C1408	G1347	A1287	
C2050	C1990	G1858	U1796	C1660	C1599	C1530	G1468	C1409	G1348	U1288	
U1991	U1991	G1859	C1797	G1661	G1600	C1531	A1469	G1410	A1349	G1289	
G1992	G1992	A1791	G1740	C1662	G1601	C1532	G1470	C1411	C1350	G1290	
U1993	U1993	G1860	A1741	C1663	U1602	C1533	A1471	U1412	C1351	G1291	
A2054	C1994	G1861	G1799	A1603	C1604	G1533	G1472	G1413	U1352	G1292	
C2055	U1995	G1862	C1742	A1664	C1605	C1543	A1473	C1414	C1353	G1293	
G2056	C1996	G1863	G1743	A1665	G1606	A1544	C1474	U1415	A1354	U1294	
A2057	G1997	U1864	C1744	G1667	G1607	A1545	G1475	C1416	G1355	G1295	
A2058	C1998	G1865	C1745	G1668	C1607	C1546	C1476	C1417	G1356	G1296	
A2059	G1999	A1866	G1746	A1669	A1608	C1547	G1477	G1418	U1357	G1297	
A2060	G2000	A1876	U1805	G1670	A1609	C1548	A1478	A1419	G1358	G1298	
G2061	A2001	G1877	G1747	U1671	C1610	C1549	G1479	U1420	A1359	G1299	
C2062	G2002	G1878	G1807	C1672	A1610	C1550	G1480	G1421	U1360	U1240	
G2063	G2003	G1879	G1748	U1673	C1611	C1551	U1481	G1422	A1301	A1241	
C2064	G2004	C1880	A1809	U1674	G1612	C1552	G1482	G1423	G1302	G1242	
C2065	A2005	C1881	A1810	G1675	A1613	A1553	G1483	G1424	G1303	G1243	
G2066	C2006	G1882	G1811	C1676	G1614	A1554	G1485	G1425	C1304	G1244	
G2067	C2007	G1883	A1812	A1677	C1615	C1555	A1486	G1426	C1305	G1245	
U2068	C2008	A1884	G1813	A1677	A1616	C1556	G1487	A1427	G1367	A1246	
G2069	G2009	A1885	G1814	G1678	C1617	C1557	G1488	C1428	G1368	G1307	
G2070	G2010	C1886	A1815	U1679	A1618	A1558	U1489	G1429	G1369	A1308	
A2071	U2011	C1887	G1816	U1680		A1559	A1490	C1430	C1370	G1309	
G2072	C2012	G1888	G1817	G1681	G1622	G1560	G1491	U1431	G1371	G1250	
C2073	A2013	A1889	U1818	C1682	G1623	G1561	G1492	C1432	U1372	C1251	
U2074	A2014	G1890	A1819	C1683	G1624	A1562	G1493	U1433	A1373	G1252	
A2015	A2015	U1891	U1820	C1684	C1625	G1563	A1494	A1434	G1374	A1253	
U2016	U2016	C1892	A1821	C1685	G1626	C1564	A1495	G1435	C1375	A1254	
U2017	U2017	G1893	G1822	C1686	G1627	C1565	U1496	U1437	G1376	G1255	
G2018	G2018	C1894	G1823	G1687	G1628	C1566	A1497	C1438	G1377	G1256	
A2019	A2019	G1895	G1824	U1688	U1629	A1567	C1498	U1439	A1378	C1257	
G2020	U1955	G1896	A1825	A1689	G1630	G1568	G1499	A1439	A1379	G1258	
C2081	C2021	G1897	G1826	A1690	C1631	A1569	C1500	G1440	G1380	G1259	
U2022	U2022	U1898	G1827	C1691	A1631A	A1570	G1501	G1441	G1381	G1260	
G2083	G2023	G1899	G1828	U1692	A1632	A1571	C1502	G1442	G1382	G1261	
C2084	G2024	A1900	A1829	G1693	G1633	A1572	U1503	G1443	C1383	A1262	
C2085	C2025	A1901	G1770	C1694	A1634	A1573	U1504	G1444	A1384	U1263	
U2086	C2026	G1902	G1831	G1695	G1635	G1573					





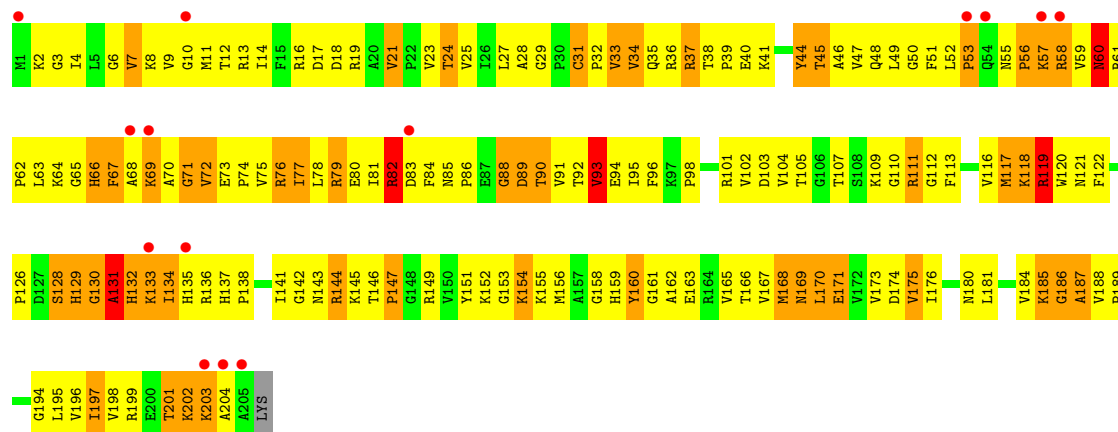
• Molecule 12: 50S ribosomal protein L2

Chain D:



• Molecule 13: 50S ribosomal protein L3

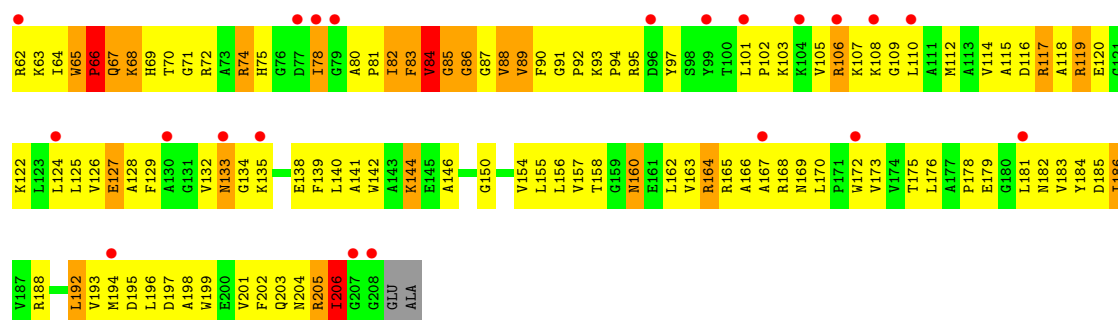
Chain E:



• Molecule 14: 50S ribosomal protein L4

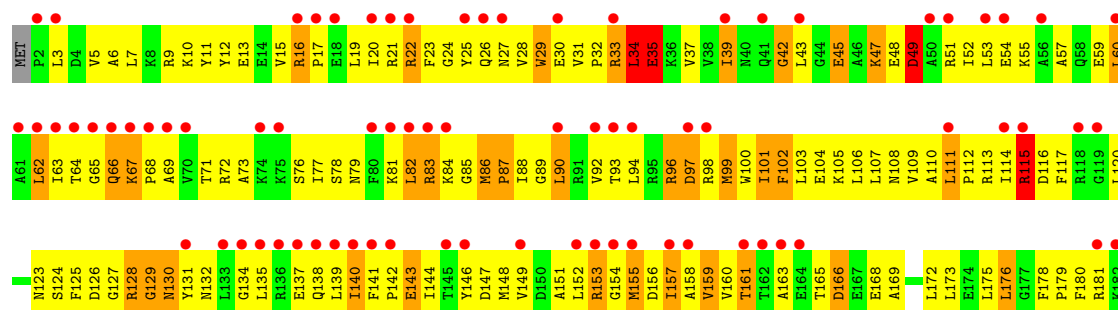
Chain F:





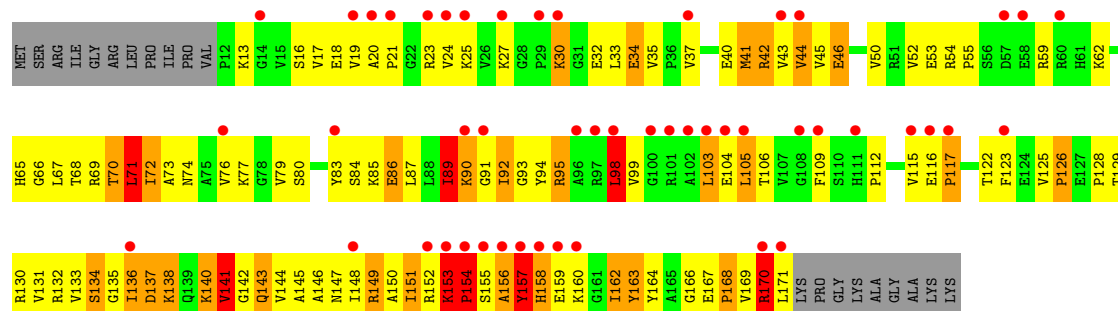
- Molecule 15: 50S ribosomal protein L5

Chain G:



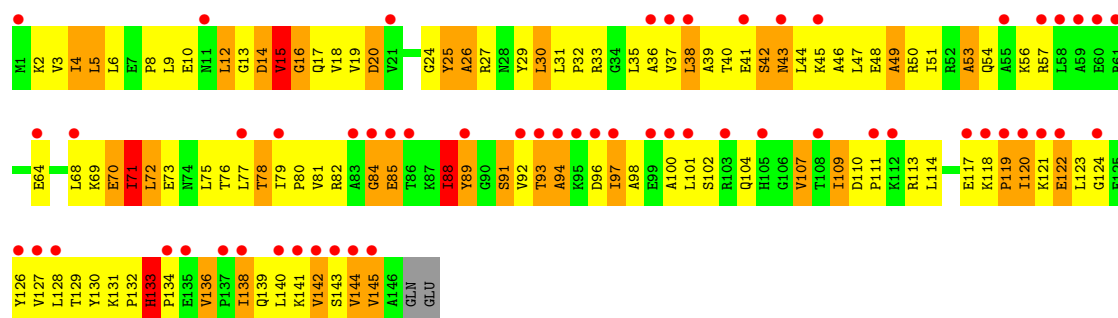
- Molecule 16: 50S ribosomal protein L6

Chain H:



- Molecule 17: 50S ribosomal protein L9

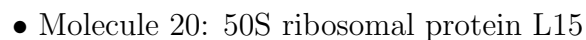
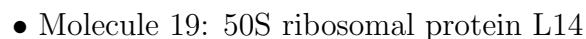
Chain I:



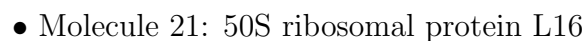
- Molecule 18: 50S ribosomal protein L13



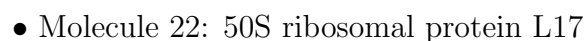
Age Group	Percentage
18-29	90%
30-49	82%
50-64	70%
65+	56%



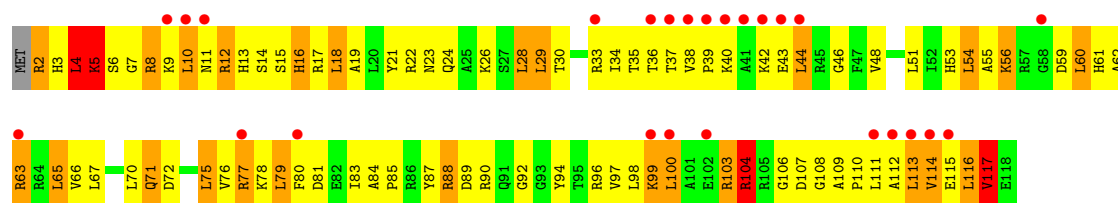
Responsibility	Percentage
Current government	45%
Previous government	35%
External factors	15%
Internal factors	5%



Age Group	Percentage
18-24	15%
25-34	35%
35-44	45%
45-54	10%
55-64	2%
65-74	2%
75-84	0%
85+	0%

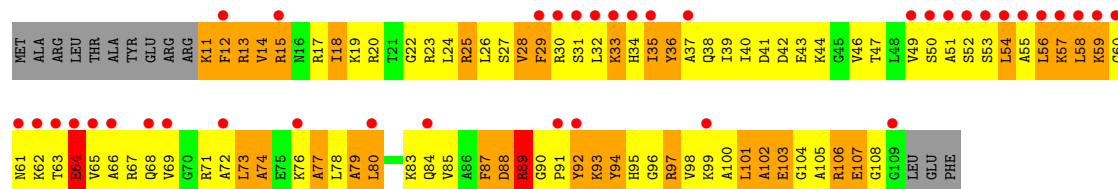


Government	Percentage
Current government	85%
Previous government	15%



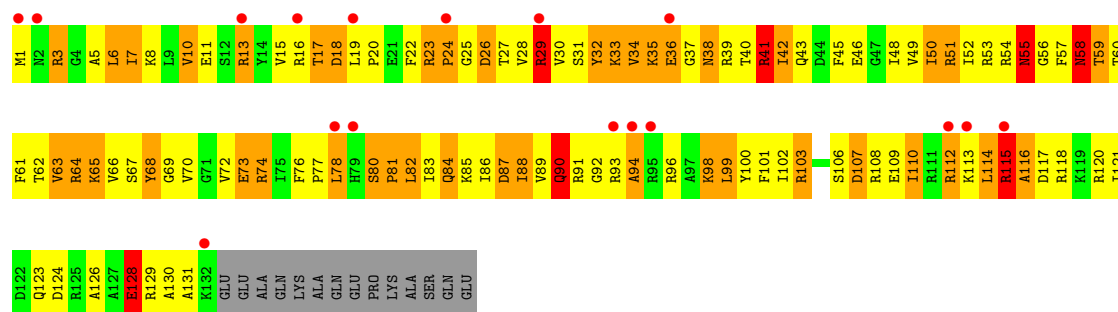
• Molecule 23: 50S ribosomal protein L18

Chain S:



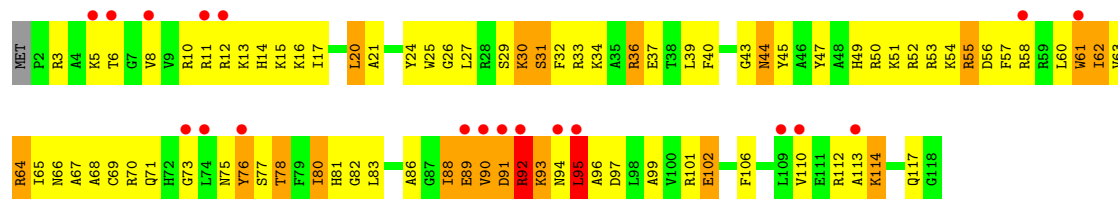
• Molecule 24: 50S ribosomal protein L19

Chain T:



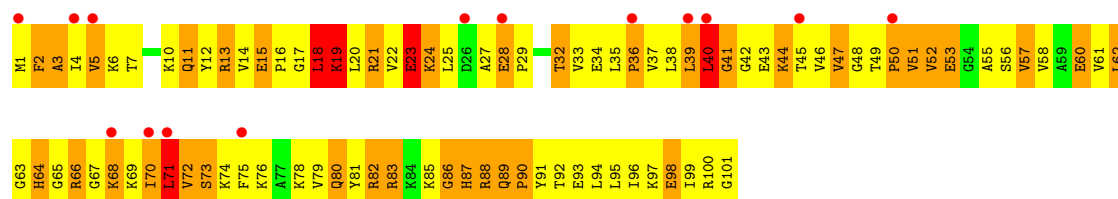
• Molecule 25: 50S ribosomal protein L20

Chain U:



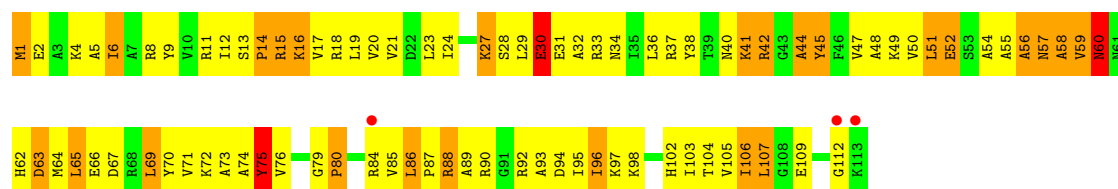
• Molecule 26: 50S ribosomal protein L21

Chain V:



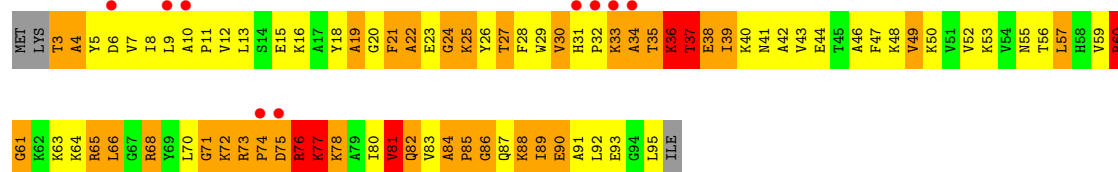
• Molecule 27: 50S ribosomal protein L22

Chain W: 



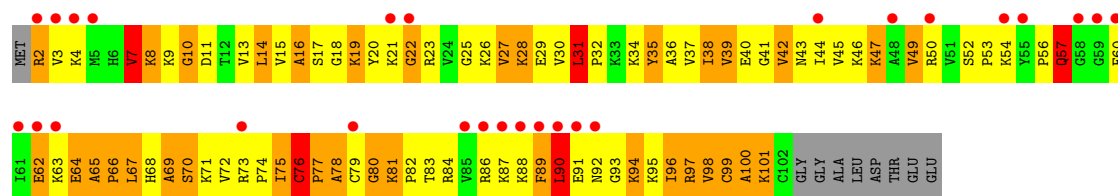
• Molecule 28: 50S ribosomal protein L23

Chain X: 



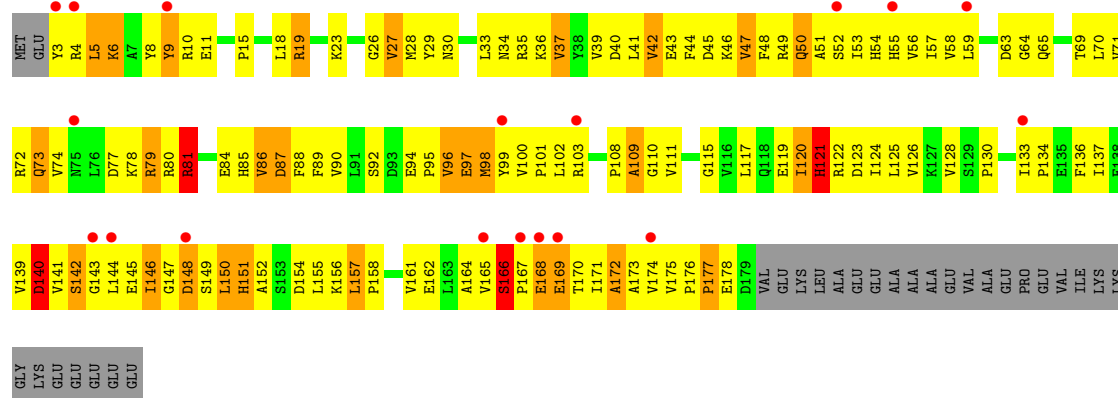
• Molecule 29: 50S ribosomal protein L24

Chain Y: 



• Molecule 30: 50S ribosomal protein L25

Chain Z: 



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	207.32Å 437.99Å 614.66Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.97 – 3.10 48.97 – 3.10	Depositor EDS
% Data completeness (in resolution range)	(Not available) (48.97-3.10) 91.4 (48.97-3.10)	Depositor EDS
$R_{merge}$	0.18	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.30 (at 3.12Å)	Xtriage
Refinement program	Phenix	Depositor
R, $R_{free}$	0.246 , 0.284 0.461 , 0.467	Depositor DCC
$R_{free}$ test set	45871 reflections (5.02%)	DCC
Wilson B-factor (Å <sup>2</sup> )	88.4	Xtriage
Anisotropy	0.168	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 62.5	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.26$	Xtriage
Outliers	0 of 914156 reflections	Xtriage
$F_o, F_c$ correlation	0.62	EDS
Total number of atoms	87522	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	92.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% 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: K, TEL, 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	0	0.54	0/658	0.73	0/878
2	1	0.61	0/700	0.92	1/931 (0.1%)
3	2	0.55	0/423	0.88	1/560 (0.2%)
4	3	0.45	0/473	0.66	0/636
5	4	0.28	0/156	0.52	0/215
6	5	0.67	0/473	1.01	3/639 (0.5%)
7	6	0.60	0/387	0.85	1/517 (0.2%)
8	7	0.61	0/427	0.81	0/563
9	8	0.61	0/516	0.94	1/681 (0.1%)
10	A	0.89	28/65745 (0.0%)	1.45	1209/102639 (1.2%)
11	B	0.63	0/2853	1.18	25/4451 (0.6%)
12	D	0.58	0/2155	0.82	2/2907 (0.1%)
13	E	0.58	0/1597	0.83	0/2155
14	F	0.53	1/1659 (0.1%)	0.74	0/2246
15	G	0.35	0/1498	0.59	1/2013 (0.0%)
16	H	0.41	0/1246	0.66	0/1684
17	I	0.43	0/1147	0.66	1/1553 (0.1%)
18	N	0.56	0/1132	0.76	0/1527
19	O	0.53	0/943	0.73	0/1269
20	P	0.56	0/1131	0.94	4/1504 (0.3%)
21	Q	0.55	0/1100	0.74	0/1470
22	R	0.57	0/974	0.80	2/1302 (0.2%)
23	S	0.43	0/779	0.72	0/1038
24	T	0.52	0/1114	0.79	0/1488
25	U	0.56	0/975	0.74	1/1297 (0.1%)
26	V	0.54	0/789	0.84	1/1054 (0.1%)
27	W	0.61	0/907	0.88	0/1216
28	X	0.63	0/740	0.90	0/995
29	Y	0.53	0/789	0.81	0/1053
30	Z	0.40	0/1436	0.61	1/1951 (0.1%)
All	All	0.80	29/94922 (0.0%)	1.31	1254/142432 (0.9%)

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	0	0	1
2	1	0	1
3	2	0	1
6	5	0	1
10	A	18	0
12	D	0	2
13	E	0	2
16	H	0	1
20	P	0	3
21	Q	0	1
22	R	0	1
24	T	0	1
26	V	0	2
28	X	0	3
All	All	18	20

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	A	1142(A)	A	N9-C4	-9.23	1.32	1.37
10	A	1694	C	C4'-C3'	-9.11	1.43	1.53
10	A	669	G	C4'-C3'	-8.53	1.43	1.53
10	A	1332	G	N9-C4	-8.29	1.31	1.38
10	A	774	A	N9-C4	-7.36	1.33	1.37
10	A	2725	A	N9-C4	-7.04	1.33	1.37
10	A	1300	U	C4'-C3'	-6.96	1.45	1.53
10	A	783	A	N9-C4	-6.91	1.33	1.37
10	A	2346	A	N3-C4	-6.47	1.30	1.34
10	A	528	A	N9-C4	-6.31	1.34	1.37
10	A	656	G	P-O5'	6.29	1.66	1.59
10	A	2589	A	N9-C4	-6.28	1.34	1.37
10	A	652	C	O3'-P	6.23	1.68	1.61
10	A	652	C	P-O5'	6.02	1.65	1.59
10	A	671	C	N1-C6	-5.89	1.33	1.37
10	A	222	A	N9-C4	-5.84	1.34	1.37
10	A	652	C	C3'-O3'	5.83	1.50	1.42
10	A	2518	A	N9-C4	-5.75	1.34	1.37
10	A	1758	G	N9-C4	-5.56	1.33	1.38
10	A	1608	A	N9-C4	-5.53	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	A	197	A	N3-C4	-5.42	1.31	1.34
14	F	65	TRP	CB-CG	-5.31	1.40	1.50
10	A	1791	A	N9-C4	-5.30	1.34	1.37
10	A	2572	A	N9-C4	-5.29	1.34	1.37
10	A	1899	G	N9-C4	-5.17	1.33	1.38
10	A	1495	A	N9-C4	5.15	1.41	1.37
10	A	1968	G	N9-C4	-5.14	1.33	1.38
10	A	272	G	N9-C4	5.09	1.42	1.38
10	A	1332	G	N3-C4	-5.09	1.31	1.35

All (1254) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1332	G	N3-C4-C5	15.46	136.33	128.60
10	A	1332	G	N3-C4-N9	-14.37	117.38	126.00
10	A	1779	U	C5-C6-N1	-13.74	115.83	122.70
10	A	679	C	N1-C2-O2	-12.95	111.13	118.90
10	A	2828	C	C6-N1-C2	12.89	125.46	120.30
10	A	679	C	N3-C2-O2	12.52	130.66	121.90
10	A	678	C	C6-N1-C2	12.16	125.16	120.30
10	A	1786	A	C5-N7-C8	-12.06	97.87	103.90
10	A	679	C	C6-N1-C2	11.68	124.97	120.30
10	A	664	C	C6-N1-C2	11.61	124.94	120.30
10	A	201	C	C6-N1-C2	11.18	124.77	120.30
10	A	1258	C	C6-N1-C2	11.01	124.70	120.30
10	A	1899	G	N3-C4-N9	-10.85	119.49	126.00
10	A	2231	C	C6-N1-C2	10.83	124.63	120.30
10	A	1142(A)	A	C2-N3-C4	-10.79	105.20	110.60
10	A	1332	G	C2-N3-C4	-10.78	106.51	111.90
10	A	2619	C	C6-N1-C2	10.73	124.59	120.30
10	A	2346	A	C2-N3-C4	-10.73	105.24	110.60
10	A	1006	C	C6-N1-C2	10.33	124.43	120.30
10	A	1322	A	C8-N9-C4	10.32	109.93	105.80
10	A	130	C	C6-N1-C2	10.19	124.37	120.30
10	A	1261	C	C6-N1-C2	10.18	124.37	120.30
10	A	1786	A	N7-C8-N9	10.15	118.88	113.80
10	A	1899	G	N3-C4-C5	9.96	133.58	128.60
10	A	1608	A	C2-N3-C4	-9.93	105.63	110.60
10	A	2042	A	C8-N9-C4	9.93	109.77	105.80
10	A	1784	A	C8-N9-C4	9.77	109.71	105.80
10	A	1999	C	C6-N1-C2	9.72	124.19	120.30
10	A	2544	G	C5-C6-O6	-9.69	122.79	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2424	C	C6-N1-C2	9.56	124.12	120.30
10	A	1786	A	N1-C6-N6	9.53	124.31	118.60
10	A	1786	A	C4-C5-N7	9.51	115.45	110.70
10	A	2763	G	C8-N9-C4	9.49	110.20	106.40
10	A	1638	C	C6-N1-C2	9.48	124.09	120.30
10	A	2044	C	C6-N1-C2	9.47	124.09	120.30
10	A	1332	G	C5-N7-C8	-9.47	99.56	104.30
10	A	774	A	C2-N3-C4	-9.35	105.93	110.60
11	B	64	C	C6-N1-C2	9.28	124.01	120.30
10	A	2827	C	C6-N1-C2	9.21	123.99	120.30
10	A	2531	A	C8-N9-C4	9.20	109.48	105.80
10	A	2827	C	C5-C6-N1	-9.18	116.41	121.00
10	A	1322	A	N7-C8-N9	-9.16	109.22	113.80
10	A	676	A	N7-C8-N9	9.11	118.36	113.80
10	A	1204	A	N1-C6-N6	9.03	124.02	118.60
10	A	2023	G	C5-C6-O6	-9.00	123.20	128.60
10	A	2575	C	C6-N1-C2	8.99	123.90	120.30
10	A	945	A	N1-C6-N6	8.97	123.98	118.60
10	A	2030	A	N1-C6-N6	8.97	123.98	118.60
10	A	676	A	C5-N7-C8	-8.90	99.45	103.90
10	A	1573	G	C8-N9-C4	8.88	109.95	106.40
10	A	97	C	C6-N1-C2	8.85	123.84	120.30
10	A	805	G	N1-C6-O6	8.82	125.19	119.90
10	A	244	A	C8-N9-C4	8.80	109.32	105.80
10	A	330	A	C2-N3-C4	-8.78	106.21	110.60
10	A	1698	A	C2-N3-C4	-8.78	106.21	110.60
10	A	2084	C	C6-N1-C2	8.74	123.79	120.30
10	A	1974	C	C6-N1-C2	8.73	123.79	120.30
10	A	148	C	C6-N1-C2	8.73	123.79	120.30
10	A	2498	C	N1-C2-O2	-8.72	113.67	118.90
10	A	786	C	C5-C6-N1	-8.72	116.64	121.00
10	A	130	C	C5-C6-N1	-8.70	116.65	121.00
10	A	991	C	C6-N1-C2	8.69	123.78	120.30
10	A	1201	C	C6-N1-C2	8.68	123.77	120.30
10	A	739	G	C8-N9-C4	8.68	109.87	106.40
10	A	1779	U	C2-N1-C1'	-8.65	107.32	117.70
10	A	2544	G	N1-C6-O6	8.65	125.09	119.90
10	A	771	G	C8-N9-C4	8.64	109.86	106.40
10	A	2713	A	N1-C6-N6	8.64	123.78	118.60
10	A	693	C	C5-C6-N1	-8.61	116.69	121.00
10	A	2542	A	N1-C6-N6	8.59	123.76	118.60
10	A	1657	C	N1-C2-O2	-8.57	113.76	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	612	C	C6-N1-C2	8.56	123.72	120.30
10	A	2742	C	C6-N1-C2	8.55	123.72	120.30
10	A	2253	G	C8-N9-C4	8.54	109.82	106.40
10	A	2033	A	C8-N9-C4	8.50	109.20	105.80
10	A	2253	G	N9-C4-C5	-8.49	102.00	105.40
10	A	840	C	C6-N1-C2	8.47	123.69	120.30
10	A	1565	C	C6-N1-C2	8.47	123.69	120.30
10	A	2518	A	C5-N7-C8	-8.44	99.68	103.90
10	A	2436	G	C5-C6-N1	-8.43	107.28	111.50
10	A	1685	C	C6-N1-C2	8.42	123.67	120.30
10	A	1126	A	C8-N9-C4	8.41	109.17	105.80
10	A	693	C	C2-N3-C4	-8.40	115.70	119.90
10	A	1786	A	C6-C5-N7	-8.38	126.43	132.30
10	A	1790	C	C6-N1-C2	8.38	123.65	120.30
10	A	1830	C	C6-N1-C2	8.37	123.65	120.30
10	A	1204	A	C6-C5-N7	-8.35	126.45	132.30
10	A	1772	G	C8-N9-C4	8.33	109.73	106.40
10	A	1899	G	C8-N9-C1'	8.32	137.82	127.00
10	A	1784	A	C2-N3-C4	-8.31	106.44	110.60
10	A	2013	A	C8-N9-C4	8.31	109.12	105.80
10	A	2662	A	O4'-C1'-N9	8.30	114.84	108.20
10	A	1266	G	C8-N9-C4	8.28	109.71	106.40
10	A	2488	A	C8-N9-C4	8.27	109.11	105.80
10	A	980	A	C8-N9-C4	8.23	109.09	105.80
10	A	817	C	C6-N1-C2	8.22	123.59	120.30
10	A	2678	C	C6-N1-C2	8.21	123.58	120.30
10	A	2502	G	C4-C5-N7	8.21	114.08	110.80
10	A	2061	G	N3-C2-N2	8.20	125.64	119.90
10	A	630	G	C8-N9-C4	8.18	109.67	106.40
10	A	580	C	N1-C2-O2	-8.18	113.99	118.90
10	A	856	C	C6-N1-C2	-8.17	117.03	120.30
10	A	1790	C	C5-C6-N1	-8.17	116.91	121.00
10	A	927	G	N1-C6-O6	8.17	124.80	119.90
10	A	2017	U	C5-C6-N1	-8.17	118.62	122.70
10	A	94(A)	G	N1-C6-O6	8.15	124.79	119.90
10	A	211	A	C8-N9-C4	8.14	109.06	105.80
10	A	1678	G	C4-C5-N7	8.14	114.06	110.80
10	A	2326	C	C6-N1-C2	-8.12	117.05	120.30
10	A	676	A	N1-C6-N6	8.12	123.47	118.60
10	A	1192	G	C8-N9-C4	8.12	109.65	106.40
11	B	104	U	C6-N1-C2	8.12	125.87	121.00
10	A	2622	C	C6-N1-C2	8.11	123.55	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	450	G	C8-N9-C4	-8.11	103.16	106.40
10	A	2841	C	C6-N1-C2	8.09	123.53	120.30
10	A	805	G	C5-C6-O6	-8.07	123.76	128.60
10	A	1021	A	C2-N3-C4	-8.05	106.58	110.60
10	A	2763	G	N7-C8-N9	-8.04	109.08	113.10
10	A	528	A	N3-C4-N9	-8.03	120.98	127.40
10	A	1614	A	N1-C6-N6	8.00	123.40	118.60
11	B	17	C	C6-N1-C2	-7.99	117.10	120.30
10	A	1899	G	C4-N9-C1'	-7.97	116.14	126.50
10	A	652	C	C6-N1-C2	-7.97	117.11	120.30
10	A	753	C	C6-N1-C2	7.94	123.48	120.30
10	A	2330	G	C8-N9-C4	7.94	109.58	106.40
10	A	512	G	C4-N9-C1'	-7.93	116.18	126.50
10	A	948	G	N3-C4-C5	7.93	132.56	128.60
10	A	2252	G	C8-N9-C4	7.93	109.57	106.40
10	A	2742	C	C5-C6-N1	-7.91	117.05	121.00
10	A	1677	A	C8-N9-C4	7.89	108.96	105.80
10	A	1653	G	N3-C4-C5	-7.86	124.67	128.60
10	A	577	G	N3-C4-C5	7.85	132.52	128.60
10	A	945	A	C2-N3-C4	-7.83	106.69	110.60
10	A	1308	A	C2-N3-C4	-7.82	106.69	110.60
10	A	1252	G	C8-N9-C4	7.81	109.52	106.40
10	A	1528	A	C8-N9-C4	-7.80	102.68	105.80
10	A	2619	C	C5-C6-N1	-7.79	117.11	121.00
10	A	2881	C	N1-C2-O2	-7.79	114.23	118.90
10	A	208	C	C6-N1-C2	7.79	123.42	120.30
10	A	1210	A	N1-C6-N6	7.78	123.27	118.60
10	A	683	C	N3-C4-C5	7.76	125.00	121.90
10	A	618	C	C6-N1-C2	7.73	123.39	120.30
10	A	2023	G	N1-C6-O6	7.73	124.54	119.90
10	A	2598	A	C8-N9-C4	7.70	108.88	105.80
10	A	2329	G	C8-N9-C4	7.69	109.48	106.40
10	A	1794	U	C5-C6-N1	-7.68	118.86	122.70
10	A	244	A	N9-C4-C5	-7.67	102.73	105.80
10	A	1241	A	C2-N3-C4	-7.67	106.77	110.60
10	A	460	A	C8-N9-C4	7.66	108.87	105.80
10	A	2828	C	C5-C6-N1	-7.66	117.17	121.00
10	A	678	C	C5-C6-N1	-7.66	117.17	121.00
10	A	2447	G	C8-N9-C4	7.65	109.46	106.40
10	A	1638	C	C5-C6-N1	-7.64	117.18	121.00
10	A	2253	G	N1-C6-O6	7.64	124.48	119.90
10	A	2061	G	N3-C4-N9	7.62	130.57	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	330	A	N9-C4-C5	-7.57	102.77	105.80
10	A	1673	U	C5-C6-N1	-7.57	118.92	122.70
10	A	2598	A	N9-C4-C5	-7.57	102.77	105.80
10	A	1573	G	N7-C8-N9	-7.56	109.32	113.10
10	A	2818	G	C8-N9-C4	7.56	109.42	106.40
10	A	2394	C	C5-C6-N1	-7.55	117.22	121.00
10	A	1617	C	C6-N1-C2	7.55	123.32	120.30
10	A	2430	A	N1-C2-N3	7.55	133.07	129.30
10	A	2232	U	C5-C6-N1	-7.54	118.93	122.70
10	A	783	A	C2-N3-C4	-7.54	106.83	110.60
10	A	786	C	C6-N1-C2	7.54	123.31	120.30
10	A	272	G	N3-C4-C5	-7.52	124.84	128.60
10	A	2293	C	C6-N1-C2	7.51	123.31	120.30
10	A	611	C	C6-N1-C2	7.50	123.30	120.30
10	A	498	G	C8-N9-C4	7.47	109.39	106.40
10	A	1280	G	C8-N9-C4	7.45	109.38	106.40
10	A	2430	A	C2-N3-C4	-7.44	106.88	110.60
10	A	1323	U	N3-C2-O2	7.44	127.41	122.20
10	A	2502	G	N1-C6-O6	7.44	124.36	119.90
10	A	1032	A	C8-N9-C4	7.44	108.78	105.80
10	A	1820	U	C5-C6-N1	-7.43	118.98	122.70
10	A	1185	C	N1-C2-O2	-7.42	114.45	118.90
10	A	566	U	C6-N1-C2	7.42	125.45	121.00
10	A	1126	A	N7-C8-N9	-7.42	110.09	113.80
10	A	2502	G	C5-C6-O6	-7.41	124.15	128.60
10	A	2731	G	N1-C6-O6	7.40	124.34	119.90
10	A	577	G	C8-N9-C4	7.40	109.36	106.40
10	A	2713	A	N9-C4-C5	-7.37	102.85	105.80
10	A	1653	G	C4-N9-C1'	7.36	136.07	126.50
10	A	678	C	N3-C4-C5	7.35	124.84	121.90
10	A	376	C	C6-N1-C2	7.35	123.24	120.30
10	A	2778	A	C2-N3-C4	-7.34	106.93	110.60
10	A	783	A	C5-N7-C8	-7.34	100.23	103.90
10	A	1350	C	N1-C2-O2	-7.32	114.51	118.90
10	A	203	C	C6-N1-C2	7.31	123.22	120.30
10	A	450	G	N9-C4-C5	7.31	108.33	105.40
10	A	528	A	C2-N3-C4	-7.31	106.94	110.60
20	P	37	GLY	N-CA-C	7.31	131.37	113.10
10	A	1557	C	C6-N1-C2	7.31	123.22	120.30
10	A	2059	A	C2-N3-C4	-7.30	106.95	110.60
10	A	1216	G	N1-C6-O6	7.29	124.27	119.90
10	A	1611	C	C6-N1-C2	7.29	123.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2081	C	C6-N1-C2	7.28	123.21	120.30
10	A	2539	C	C6-N1-C2	7.26	123.20	120.30
10	A	1790	C	C2-N3-C4	-7.25	116.27	119.90
10	A	564	C	N1-C2-O2	-7.25	114.55	118.90
10	A	2283	C	C6-N1-C2	7.25	123.20	120.30
10	A	2324	C	C6-N1-C2	7.23	123.19	120.30
10	A	1210	A	C5-N7-C8	-7.22	100.29	103.90
10	A	1784	A	N9-C4-C5	-7.21	102.91	105.80
10	A	2017	U	N1-C2-O2	-7.21	117.76	122.80
10	A	2346	A	N1-C2-N3	7.20	132.90	129.30
10	A	2346	A	C5-C6-N1	-7.20	114.10	117.70
10	A	2326	C	N3-C4-C5	-7.19	119.03	121.90
10	A	2481	G	C8-N9-C4	7.17	109.27	106.40
10	A	2522	U	C5-C6-N1	-7.17	119.11	122.70
10	A	2000	G	N3-C4-C5	7.17	132.19	128.60
10	A	2231	C	C5-C6-N1	-7.17	117.42	121.00
10	A	2376	A	N1-C6-N6	7.16	122.90	118.60
10	A	577	G	N1-C6-O6	7.15	124.19	119.90
10	A	1241	A	N1-C6-N6	7.15	122.89	118.60
10	A	201	C	C5-C6-N1	-7.14	117.43	121.00
10	A	287	C	C6-N1-C2	7.13	123.15	120.30
10	A	1698	A	N1-C6-N6	7.12	122.88	118.60
10	A	1201	C	C5-C6-N1	-7.12	117.44	121.00
10	A	1244	G	C8-N9-C4	7.12	109.25	106.40
10	A	1998	G	N3-C4-C5	7.12	132.16	128.60
10	A	131	G	C8-N9-C4	7.12	109.25	106.40
10	A	1678	G	C6-C5-N7	-7.12	126.13	130.40
10	A	739	G	N7-C8-N9	-7.11	109.54	113.10
10	A	2392	A	C2-N3-C4	-7.10	107.05	110.60
10	A	1204	A	C4-C5-N7	7.10	114.25	110.70
10	A	2329	G	N7-C8-N9	-7.10	109.55	113.10
10	A	2014	A	C8-N9-C4	7.10	108.64	105.80
10	A	2446	G	C8-N9-C4	7.09	109.24	106.40
10	A	2030	A	C5-C6-N6	-7.08	118.03	123.70
10	A	1597	A	N7-C8-N9	-7.08	110.26	113.80
10	A	2469	A	C8-N9-C4	-7.08	102.97	105.80
10	A	1671	U	C5-C4-O4	-7.07	121.66	125.90
10	A	797	C	C6-N1-C2	7.07	123.13	120.30
10	A	1758	G	N3-C4-C5	7.05	132.13	128.60
10	A	1698	A	C5-N7-C8	-7.04	100.38	103.90
10	A	512	G	C8-N9-C4	7.04	109.22	106.40
10	A	659	C	C6-N1-C2	7.04	123.11	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2387	U	C5-C6-N1	-7.02	119.19	122.70
10	A	948	G	C2-N3-C4	-7.01	108.39	111.90
10	A	786	C	N3-C4-C5	7.01	124.70	121.90
10	A	1779	U	C2-N3-C4	-6.99	122.81	127.00
10	A	562	U	C5-C4-O4	-6.99	121.71	125.90
10	A	672	C	C5-C6-N1	-6.98	117.51	121.00
10	A	1596	A	C8-N9-C4	6.97	108.59	105.80
10	A	1758	G	N3-C4-N9	-6.97	121.82	126.00
10	A	1698	A	C4-C5-N7	6.97	114.19	110.70
10	A	62	C	C6-N1-C2	6.96	123.08	120.30
10	A	2594	C	N1-C2-O2	-6.95	114.73	118.90
10	A	673	C	C5-C6-N1	-6.95	117.53	121.00
10	A	184	C	C6-N1-C2	6.94	123.08	120.30
10	A	870	A	C8-N9-C4	6.94	108.58	105.80
10	A	2042	A	N9-C4-C5	-6.94	103.03	105.80
10	A	514	A	C8-N9-C4	6.92	108.57	105.80
10	A	1403	C	C2-N1-C1'	-6.92	111.19	118.80
10	A	1570	A	C8-N9-C4	6.92	108.57	105.80
10	A	2424	C	C5-C6-N1	-6.92	117.54	121.00
10	A	84	A	C8-N9-C4	6.91	108.56	105.80
10	A	2563	U	C5-C6-N1	-6.91	119.25	122.70
10	A	130	C	C2-N3-C4	-6.90	116.45	119.90
10	A	774	A	C5-N7-C8	-6.89	100.46	103.90
10	A	1543	C	C6-N1-C1'	-6.89	112.54	120.80
10	A	1243	G	C8-N9-C4	6.88	109.15	106.40
10	A	1950	G	C5-C6-N1	-6.87	108.07	111.50
10	A	2058	A	C5-C6-N6	-6.87	118.21	123.70
10	A	1131	G	C8-N9-C4	6.86	109.14	106.40
10	A	376	C	C2-N1-C1'	-6.85	111.26	118.80
10	A	1570	A	N1-C6-N6	6.85	122.71	118.60
10	A	2488	A	N7-C8-N9	-6.85	110.38	113.80
10	A	584	C	C6-N1-C2	6.84	123.04	120.30
10	A	1902	C	N3-C4-C5	6.84	124.64	121.90
10	A	1820	U	C6-N1-C2	6.84	125.10	121.00
10	A	2501	C	C2-N1-C1'	-6.83	111.28	118.80
10	A	2040	C	C6-N1-C2	6.83	123.03	120.30
10	A	574	C	C2-N1-C1'	-6.82	111.29	118.80
10	A	2028	U	N1-C2-O2	-6.82	118.03	122.80
10	A	2383	G	C8-N9-C1'	-6.82	118.14	127.00
10	A	2058	A	N1-C6-N6	6.79	122.67	118.60
10	A	2684	U	C6-N1-C2	6.78	125.07	121.00
10	A	814	C	C6-N1-C2	6.78	123.01	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	409	C	C6-N1-C2	6.78	123.01	120.30
10	A	1332	G	C8-N9-C1'	6.78	135.81	127.00
10	A	1124	C	C6-N1-C2	6.77	123.01	120.30
10	A	2292	C	C6-N1-C2	6.77	123.01	120.30
10	A	1304	C	C6-N1-C2	6.77	123.01	120.30
10	A	2430	A	C4-C5-C6	6.76	120.38	117.00
10	A	2091	U	C5-C6-N1	-6.76	119.32	122.70
10	A	912	C	C6-N1-C2	-6.75	117.60	120.30
10	A	1384	A	N1-C6-N6	-6.75	114.55	118.60
10	A	2741	A	C8-N9-C4	6.75	108.50	105.80
10	A	2579	C	N3-C2-O2	6.74	126.62	121.90
10	A	206	U	C5-C6-N1	-6.74	119.33	122.70
10	A	2684	U	C5-C6-N1	-6.74	119.33	122.70
10	A	1005	C	C6-N1-C2	6.74	122.99	120.30
10	A	330	A	C4-C5-N7	6.73	114.06	110.70
10	A	207	A	C8-N9-C4	6.72	108.49	105.80
10	A	1204	A	C5-N7-C8	-6.72	100.54	103.90
10	A	1779	U	C4-C5-C6	6.72	123.73	119.70
10	A	1967	C	C6-N1-C2	6.71	122.99	120.30
10	A	2796	U	O4'-C1'-N1	6.71	113.57	108.20
10	A	1899	G	C2-N3-C4	-6.71	108.55	111.90
10	A	192	C	C6-N1-C2	6.71	122.98	120.30
10	A	683	C	C2-N3-C4	-6.71	116.55	119.90
10	A	676	A	C8-N9-C4	-6.69	103.12	105.80
10	A	142	A	N1-C6-N6	6.69	122.61	118.60
10	A	679	C	C2-N1-C1'	-6.69	111.44	118.80
10	A	1204	A	C2-N3-C4	-6.68	107.26	110.60
10	A	2061	G	N9-C4-C5	-6.68	102.73	105.40
10	A	611	C	C5-C6-N1	-6.68	117.66	121.00
10	A	1800	C	C6-N1-C2	6.67	122.97	120.30
10	A	2008	C	C5-C6-N1	-6.67	117.67	121.00
10	A	847	U	N3-C4-O4	-6.66	114.74	119.40
10	A	1798	U	C5-C6-N1	-6.66	119.37	122.70
10	A	1332	G	N1-C6-O6	6.66	123.89	119.90
10	A	663	G	N3-C4-N9	-6.66	122.01	126.00
10	A	2572	A	C8-N9-C4	6.65	108.46	105.80
10	A	2376	A	N9-C4-C5	-6.65	103.14	105.80
10	A	1589	C	C6-N1-C1'	6.65	128.78	120.80
10	A	676	A	C4-C5-N7	6.64	114.02	110.70
10	A	577	G	C2-N3-C4	-6.64	108.58	111.90
10	A	506	G	N1-C6-O6	6.64	123.88	119.90
10	A	1974	C	N3-C2-O2	6.63	126.54	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1021	A	N1-C6-N6	6.63	122.58	118.60
10	A	2394	C	C2-N3-C4	-6.63	116.58	119.90
10	A	1528	A	N7-C8-N9	6.63	117.12	113.80
10	A	1543	C	C5-C4-N4	-6.63	115.56	120.20
10	A	1544	A	O4'-C1'-N9	6.62	113.50	108.20
10	A	1953	A	C8-N9-C4	6.62	108.45	105.80
10	A	2555	U	N1-C2-O2	-6.62	118.16	122.80
10	A	1564	C	C6-N1-C2	6.62	122.95	120.30
10	A	586	A	C8-N9-C4	6.61	108.44	105.80
10	A	2485	G	N9-C4-C5	-6.61	102.76	105.40
10	A	1021	A	C5-N7-C8	-6.61	100.60	103.90
11	B	104	U	C5-C6-N1	-6.61	119.40	122.70
10	A	647	G	C8-N9-C4	-6.60	103.76	106.40
10	A	195	A	N1-C6-N6	6.60	122.56	118.60
10	A	811	U	C5-C4-O4	6.60	129.86	125.90
10	A	1678	G	C5-N7-C8	-6.60	101.00	104.30
10	A	1315	C	C2-N3-C4	-6.59	116.61	119.90
10	A	1328	G	N3-C4-N9	6.58	129.95	126.00
10	A	1379	A	O4'-C1'-N9	6.58	113.46	108.20
10	A	2579	C	N1-C2-O2	-6.58	114.95	118.90
10	A	803	U	N1-C2-O2	-6.56	118.21	122.80
10	A	2043	C	N3-C4-C5	6.56	124.53	121.90
10	A	2731	G	C5-C6-O6	-6.56	124.67	128.60
10	A	514	A	N7-C8-N9	-6.54	110.53	113.80
10	A	141	A	C5-N7-C8	-6.54	100.63	103.90
10	A	865	C	C6-N1-C2	6.54	122.92	120.30
10	A	1653	G	C8-N9-C1'	-6.54	118.50	127.00
10	A	2497	A	C8-N9-C4	6.54	108.42	105.80
10	A	1167	U	C6-N1-C2	6.54	124.92	121.00
10	A	1243	G	N7-C8-N9	-6.53	109.83	113.10
10	A	1597	A	C8-N9-C4	6.53	108.41	105.80
10	A	465	G	C4-C5-N7	-6.53	108.19	110.80
10	A	1332	G	C4-C5-N7	6.53	113.41	110.80
10	A	1615	C	C6-N1-C2	6.53	122.91	120.30
10	A	2000	G	C4-N9-C1'	-6.52	118.02	126.50
10	A	676	A	C2-N3-C4	-6.51	107.34	110.60
10	A	1021	A	C6-C5-N7	-6.50	127.75	132.30
10	A	1543	C	C2-N1-C1'	6.50	125.95	118.80
10	A	1934	C	C6-N1-C2	6.49	122.90	120.30
10	A	1328	G	C8-N9-C1'	-6.49	118.56	127.00
10	A	1790	C	N1-C2-O2	-6.49	115.01	118.90
10	A	2053	G	C5-C6-O6	-6.49	124.71	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2584	U	C5-C4-O4	6.48	129.79	125.90
10	A	859	G	N3-C4-N9	-6.48	122.11	126.00
10	A	210	C	N3-C4-C5	6.46	124.48	121.90
10	A	2056	G	N9-C4-C5	-6.46	102.82	105.40
10	A	803	U	C5-C6-N1	-6.46	119.47	122.70
10	A	2539	C	N3-C4-C5	6.46	124.48	121.90
10	A	1310	G	C5-C6-O6	-6.45	124.73	128.60
10	A	1762	A	C8-N9-C4	-6.45	103.22	105.80
10	A	142	A	C5-N7-C8	-6.44	100.68	103.90
10	A	2056	G	C5-C6-O6	-6.43	124.74	128.60
10	A	1397	U	N3-C2-O2	-6.43	117.70	122.20
10	A	1779	U	N3-C4-O4	-6.42	114.90	119.40
10	A	1795	C	C6-N1-C2	6.42	122.87	120.30
10	A	2496	C	C6-N1-C2	6.42	122.87	120.30
10	A	142	A	C4-C5-N7	6.42	113.91	110.70
10	A	1772	G	N7-C8-N9	-6.42	109.89	113.10
10	A	2518	A	N7-C8-N9	6.42	117.01	113.80
10	A	330	A	N3-C4-C5	6.41	131.29	126.80
10	A	1557	C	N3-C2-O2	6.41	126.39	121.90
10	A	1006	C	N3-C4-C5	6.41	124.47	121.90
10	A	2260	C	N1-C2-O2	-6.41	115.05	118.90
10	A	452	G	N1-C6-O6	-6.41	116.06	119.90
10	A	748	G	C4-N9-C1'	-6.40	118.18	126.50
10	A	2361	A	N1-C6-N6	6.39	122.44	118.60
10	A	927	G	C5-C6-O6	-6.39	124.77	128.60
10	A	673	C	C6-N1-C2	6.39	122.86	120.30
10	A	2570	G	C5-C6-N1	-6.39	108.31	111.50
10	A	1570	A	N9-C4-C5	-6.38	103.25	105.80
10	A	2420	C	C6-N1-C2	6.37	122.85	120.30
10	A	1354	A	C8-N9-C4	6.36	108.35	105.80
10	A	205	G	C5-C6-O6	-6.36	124.78	128.60
10	A	1519	G	C8-N9-C4	-6.36	103.86	106.40
7	6	11	LEU	CA-CB-CG	6.35	129.91	115.30
10	A	2006	C	N3-C4-C5	6.35	124.44	121.90
10	A	2737	G	N1-C6-O6	6.34	123.71	119.90
10	A	1379	A	N9-C1'-C2'	6.34	122.25	114.00
10	A	664	C	C5-C6-N1	-6.34	117.83	121.00
10	A	2678	C	C5-C6-N1	-6.34	117.83	121.00
10	A	1275	A	N1-C6-N6	6.33	122.40	118.60
10	A	2547	U	C5-C6-N1	-6.33	119.53	122.70
10	A	2580	U	C5-C6-N1	-6.33	119.53	122.70
10	A	2827	C	C2-N3-C4	-6.33	116.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1380	G	C2-N3-C4	-6.33	108.73	111.90
10	A	683	C	C6-N1-C2	6.33	122.83	120.30
10	A	1226	A	C8-N9-C4	6.32	108.33	105.80
10	A	832	G	C2-N3-C4	-6.32	108.74	111.90
10	A	2082	A	C8-N9-C4	6.32	108.33	105.80
10	A	2771	C	C6-N1-C2	6.32	122.83	120.30
10	A	210	C	C6-N1-C2	6.31	122.82	120.30
10	A	810	U	C5-C6-N1	-6.30	119.55	122.70
10	A	1280	G	N7-C8-N9	-6.30	109.95	113.10
10	A	1589	C	C2-N1-C1'	-6.30	111.87	118.80
10	A	2286	A	O4'-C1'-N9	6.30	113.24	108.20
10	A	1758	G	C2-N3-C4	-6.29	108.75	111.90
10	A	201	C	C2-N1-C1'	-6.29	111.88	118.80
10	A	1557	C	N1-C2-O2	-6.29	115.13	118.90
10	A	1899	G	N3-C2-N2	-6.29	115.50	119.90
10	A	2260	C	C5-C6-N1	-6.28	117.86	121.00
10	A	461	C	N1-C2-O2	-6.28	115.13	118.90
11	B	17	C	N3-C2-O2	-6.28	117.50	121.90
10	A	448	U	C5-C6-N1	-6.28	119.56	122.70
10	A	663	G	N3-C4-C5	6.28	131.74	128.60
10	A	676	A	C6-C5-N7	-6.28	127.91	132.30
10	A	1261	C	N3-C4-C5	6.28	124.41	121.90
10	A	801	G	C2-N3-C4	-6.27	108.76	111.90
10	A	2713	A	C4-C5-N7	6.27	113.84	110.70
10	A	780	G	C8-N9-C4	6.27	108.91	106.40
10	A	121	G	C8-N9-C4	6.27	108.91	106.40
10	A	1030	G	C5-C6-O6	-6.26	124.84	128.60
10	A	2569	G	N1-C6-O6	6.26	123.66	119.90
10	A	1998	G	C8-N9-C4	6.26	108.90	106.40
10	A	326	G	N1-C6-O6	6.26	123.65	119.90
10	A	2691	C	C6-N1-C2	6.26	122.80	120.30
10	A	179	G	C2-N3-C4	-6.25	108.77	111.90
10	A	1269	A	C8-N9-C4	6.25	108.30	105.80
10	A	1210	A	C4-C5-N7	6.24	113.82	110.70
10	A	2433	A	N1-C2-N3	6.24	132.42	129.30
10	A	2232	U	C2-N1-C1'	-6.24	110.21	117.70
10	A	459	U	C5-C6-N1	-6.24	119.58	122.70
10	A	1253	A	C8-N9-C4	6.24	108.30	105.80
10	A	2447	G	C3'-C2'-C1'	-6.24	96.51	101.50
10	A	1244	G	N3-C4-C5	6.24	131.72	128.60
10	A	1692	U	C5-C6-N1	-6.24	119.58	122.70
10	A	870	A	N7-C8-N9	-6.23	110.68	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	197	A	N1-C6-N6	6.23	122.34	118.60
10	A	665	C	C6-N1-C2	6.23	122.79	120.30
10	A	1897	G	C5-C6-O6	-6.23	124.86	128.60
10	A	2579	C	C6-N1-C2	6.22	122.79	120.30
10	A	103	A	C8-N9-C4	6.22	108.29	105.80
10	A	177	G	C8-N9-C4	6.21	108.89	106.40
10	A	2426	A	N1-C2-N3	6.21	132.41	129.30
10	A	183	C	C6-N1-C2	6.21	122.78	120.30
10	A	1653	G	N3-C4-N9	6.21	129.73	126.00
10	A	451	C	C2-N1-C1'	-6.21	111.97	118.80
10	A	1609	A	C3'-C2'-C1'	6.20	106.46	101.50
10	A	2350	C	C6-N1-C2	6.20	122.78	120.30
10	A	693	C	N3-C4-C5	6.20	124.38	121.90
10	A	1321	A	C8-N9-C4	6.19	108.28	105.80
10	A	1813	G	C8-N9-C4	6.19	108.88	106.40
10	A	2005	A	C8-N9-C4	6.19	108.28	105.80
10	A	2464	C	N3-C4-C5	6.19	124.38	121.90
10	A	2731	G	C6-C5-N7	-6.19	126.69	130.40
10	A	1251	C	N1-C2-O2	-6.18	115.19	118.90
10	A	1327	C	N1-C2-O2	-6.18	115.19	118.90
10	A	2689	U	C5-C6-N1	-6.18	119.61	122.70
10	A	573	G	N1-C6-O6	-6.17	116.20	119.90
10	A	2414	G	N1-C6-O6	6.17	123.60	119.90
10	A	1930	G	C8-N9-C4	6.17	108.87	106.40
10	A	2399	G	N1-C6-O6	-6.17	116.20	119.90
10	A	753	C	N1-C2-O2	-6.16	115.20	118.90
10	A	1965	C	C6-N1-C2	6.16	122.76	120.30
10	A	1277	G	C8-N9-C4	6.15	108.86	106.40
10	A	2018	G	N1-C6-O6	6.15	123.59	119.90
10	A	2079	U	C4-C5-C6	6.15	123.39	119.70
10	A	600	G	C8-N9-C4	6.15	108.86	106.40
10	A	2013	A	C2-N3-C4	-6.15	107.52	110.60
10	A	2762	G	N3-C4-C5	6.15	131.68	128.60
10	A	2818	G	C2-N3-C4	-6.15	108.83	111.90
11	B	99	G	C8-N9-C4	6.15	108.86	106.40
10	A	1258	C	C5-C6-N1	-6.14	117.93	121.00
10	A	1833	U	N3-C2-O2	6.14	126.50	122.20
10	A	2622	C	N3-C2-O2	6.14	126.20	121.90
10	A	100	G	C4-C5-N7	-6.14	108.34	110.80
10	A	1897	G	N1-C6-O6	6.13	123.58	119.90
10	A	530	G	N3-C2-N2	6.12	124.19	119.90
10	A	1652	A	C4'-C3'-C2'	6.12	108.72	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2079	U	C5-C6-N1	-6.12	119.64	122.70
10	A	2426	A	C6-N1-C2	-6.12	114.93	118.60
10	A	1974	C	N1-C2-O2	-6.12	115.23	118.90
10	A	453	C	C5-C6-N1	-6.11	117.94	121.00
20	P	53	GLY	N-CA-C	-6.11	97.82	113.10
10	A	1142(A)	A	C5-N7-C8	-6.11	100.84	103.90
10	A	1958	C	C6-N1-C2	6.11	122.74	120.30
10	A	125	G	C5-C6-O6	-6.11	124.94	128.60
10	A	141	A	C4-C5-N7	6.11	113.75	110.70
10	A	512	G	N7-C8-N9	-6.11	110.05	113.10
10	A	1608	A	N3-C4-N9	-6.11	122.52	127.40
10	A	2531	A	C2-N3-C4	-6.10	107.55	110.60
10	A	2443	C	C5-C4-N4	-6.09	115.93	120.20
10	A	2242	G	C5-C6-O6	-6.09	124.94	128.60
10	A	755	C	C6-N1-C2	6.09	122.73	120.30
10	A	1829	A	C2-N3-C4	-6.09	107.56	110.60
11	B	103	G	C4-N9-C1'	-6.09	118.58	126.50
10	A	679	C	C5-C6-N1	-6.09	117.96	121.00
10	A	2394	C	C2-N1-C1'	-6.09	112.10	118.80
10	A	1617	C	C2-N1-C1'	-6.09	112.10	118.80
10	A	376	C	C5-C6-N1	-6.08	117.96	121.00
10	A	566	U	C5-C6-N1	-6.08	119.66	122.70
10	A	1614	A	C6-C5-N7	-6.08	128.05	132.30
10	A	397	G	N3-C4-C5	6.07	131.64	128.60
10	A	729	G	N1-C2-N2	6.07	121.67	116.20
10	A	2621	A	C2-N3-C4	-6.07	107.56	110.60
10	A	2829	C	C6-N1-C2	6.07	122.73	120.30
10	A	2740	A	C8-N9-C4	6.07	108.23	105.80
10	A	1678	G	C2-N3-C4	-6.07	108.87	111.90
10	A	2383	G	N1-C2-N2	-6.07	110.74	116.20
10	A	377	C	C6-N1-C2	6.06	122.72	120.30
10	A	1891	G	C8-N9-C4	6.05	108.82	106.40
10	A	2485	G	N1-C6-O6	6.05	123.53	119.90
10	A	575	A	N1-C6-N6	6.05	122.23	118.60
10	A	97	C	C5-C6-N1	-6.05	117.98	121.00
10	A	1122	G	C8-N9-C4	6.05	108.82	106.40
10	A	2825	C	C6-N1-C2	6.05	122.72	120.30
10	A	133	C	C6-N1-C2	6.04	122.72	120.30
10	A	803	U	C2-N3-C4	-6.04	123.37	127.00
10	A	2008	C	C4-C5-C6	6.04	120.42	117.40
10	A	210	C	C5-C6-N1	-6.04	117.98	121.00
11	B	27	C	C2-N1-C1'	6.04	125.44	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1332	G	C4-N9-C1'	-6.03	118.66	126.50
10	A	2447	G	C6-N1-C2	-6.03	121.48	125.10
10	A	2446	G	N7-C8-N9	-6.03	110.08	113.10
6	5	51	TYR	CA-CB-CG	6.03	124.85	113.40
10	A	142	A	N7-C8-N9	6.03	116.81	113.80
10	A	859	G	N3-C4-C5	6.03	131.61	128.60
10	A	1779	U	C5-C4-O4	6.03	129.52	125.90
10	A	72	U	N3-C4-O4	-6.03	115.18	119.40
10	A	949	C	C6-N1-C2	6.03	122.71	120.30
10	A	2067	G	N3-C2-N2	-6.03	115.68	119.90
10	A	2438	U	C5-C6-N1	-6.03	119.69	122.70
10	A	1263	U	C5-C6-N1	-6.01	119.69	122.70
10	A	1334	G	N3-C2-N2	-6.01	115.69	119.90
10	A	2436	G	N3-C4-N9	-6.01	122.39	126.00
10	A	789	A	C8-N9-C4	6.01	108.20	105.80
20	P	59	LEU	N-CA-C	-6.01	94.78	111.00
10	A	474	G	C8-N9-C4	-6.00	104.00	106.40
10	A	1204	A	C4-N9-C1'	6.00	137.11	126.30
10	A	2056	G	C4-C5-N7	6.00	113.20	110.80
10	A	2082	A	N7-C8-N9	-6.00	110.80	113.80
10	A	985	C	C6-N1-C2	6.00	122.70	120.30
10	A	786	C	C2-N3-C4	-6.00	116.90	119.90
10	A	850	C	C6-N1-C2	6.00	122.70	120.30
10	A	1029	A	N1-C6-N6	6.00	122.20	118.60
10	A	1991	U	C5-C6-N1	-6.00	119.70	122.70
10	A	98	G	C8-N9-C4	5.99	108.80	106.40
10	A	2686	G	N1-C6-O6	5.99	123.50	119.90
10	A	2725	A	C8-N9-C4	5.99	108.20	105.80
10	A	2518	A	C4-C5-N7	5.99	113.69	110.70
10	A	1751	C	C6-N1-C2	5.98	122.69	120.30
10	A	2469	A	N7-C8-N9	5.98	116.79	113.80
10	A	1207	C	C6-N1-C2	5.98	122.69	120.30
10	A	1967	C	N3-C4-C5	5.98	124.29	121.90
10	A	142	A	C6-C5-N7	-5.98	128.12	132.30
10	A	47	C	C6-N1-C2	5.98	122.69	120.30
10	A	244	A	N1-C6-N6	5.97	122.19	118.60
10	A	791	C	C6-N1-C2	5.97	122.69	120.30
10	A	1786	A	C8-N9-C4	-5.97	103.41	105.80
10	A	2539	C	C2-N3-C4	-5.97	116.91	119.90
10	A	1142(A)	A	N1-C2-N3	5.97	132.29	129.30
10	A	1266	G	N7-C8-N9	-5.97	110.11	113.10
10	A	2287	A	C2-N3-C4	-5.97	107.61	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1257	C	C5-C6-N1	-5.97	118.02	121.00
10	A	1310	G	N1-C6-O6	5.96	123.48	119.90
10	A	1573	G	N3-C4-C5	5.96	131.58	128.60
10	A	1794	U	C6-N1-C2	5.96	124.58	121.00
25	U	95	LEU	CA-CB-CG	-5.96	101.60	115.30
10	A	796	C	C5-C6-N1	-5.95	118.02	121.00
10	A	2714	G	C6-C5-N7	-5.95	126.83	130.40
10	A	481	G	C6-C5-N7	-5.95	126.83	130.40
10	A	809	G	N3-C2-N2	-5.95	115.74	119.90
10	A	509	C	N1-C2-O2	-5.95	115.33	118.90
10	A	1971	A	C8-N9-C4	5.94	108.17	105.80
10	A	2481	G	N9-C4-C5	-5.94	103.03	105.40
10	A	1784	A	N7-C8-N9	-5.93	110.83	113.80
10	A	774	A	C5-C6-N1	-5.93	114.73	117.70
10	A	980	A	N9-C4-C5	-5.93	103.43	105.80
10	A	2731	G	C4-C5-N7	5.93	113.17	110.80
10	A	220	G	N1-C6-O6	5.93	123.46	119.90
10	A	2246	G	C5-C6-O6	-5.93	125.04	128.60
10	A	2523	G	N1-C6-O6	5.92	123.45	119.90
10	A	630	G	N7-C8-N9	-5.91	110.14	113.10
10	A	1297	C	N1-C2-O2	-5.91	115.35	118.90
10	A	2853	C	C6-N1-C2	5.91	122.67	120.30
10	A	1639	U	C5-C6-N1	-5.91	119.75	122.70
10	A	723	G	C8-N9-C4	5.91	108.76	106.40
10	A	1764	G	N3-C4-C5	5.90	131.55	128.60
10	A	506	G	C8-N9-C4	5.90	108.76	106.40
10	A	1552	G	N3-C4-C5	5.90	131.55	128.60
10	A	2465	C	N3-C4-C5	5.90	124.26	121.90
10	A	874	G	C4-N9-C1'	-5.90	118.84	126.50
10	A	375	C	C6-N1-C2	5.89	122.66	120.30
10	A	697	C	C6-N1-C2	5.89	122.66	120.30
10	A	792	G	C8-N9-C4	5.89	108.76	106.40
10	A	2531	A	N3-C4-C5	5.89	130.92	126.80
10	A	671	C	N1-C2-N3	5.89	123.32	119.20
10	A	2066	C	C6-N1-C2	5.89	122.66	120.30
10	A	528	A	N3-C4-C5	5.89	130.92	126.80
10	A	1496	A	C4-N9-C1'	5.89	136.90	126.30
10	A	2000	G	C8-N9-C4	5.89	108.75	106.40
10	A	2283	C	N3-C2-O2	5.88	126.02	121.90
10	A	1291	C	N1-C2-O2	-5.88	115.37	118.90
10	A	2439	A	N1-C6-N6	5.88	122.13	118.60
10	A	409	C	N3-C4-C5	5.87	124.25	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1811	G	N3-C4-N9	-5.87	122.48	126.00
10	A	2440	C	C2-N1-C1'	-5.87	112.34	118.80
10	A	506	G	N3-C4-C5	5.87	131.53	128.60
10	A	753	C	C2-N3-C4	-5.87	116.97	119.90
10	A	2713	A	C5-N7-C8	-5.87	100.97	103.90
10	A	2044	C	N3-C2-O2	5.87	126.01	121.90
10	A	491	G	N3-C4-C5	5.86	131.53	128.60
10	A	978	G	C8-N9-C4	5.86	108.75	106.40
10	A	771	G	N7-C8-N9	-5.86	110.17	113.10
10	A	700	G	C8-N9-C4	5.85	108.74	106.40
10	A	1968	G	C5-C6-O6	-5.85	125.09	128.60
10	A	201	C	N3-C2-O2	5.85	126.00	121.90
10	A	774	A	N7-C8-N9	5.85	116.72	113.80
10	A	2447	G	N7-C8-N9	-5.84	110.18	113.10
10	A	807	U	N1-C2-O2	-5.84	118.71	122.80
10	A	788	A	C8-N9-C4	5.84	108.14	105.80
10	A	805	G	C2-N3-C4	-5.84	108.98	111.90
10	A	1253	A	N9-C4-C5	-5.84	103.46	105.80
20	P	52	GLU	N-CA-C	5.84	126.77	111.00
10	A	1934	C	C4'-C3'-C2'	5.84	108.44	102.60
10	A	1543	C	N1-C2-N3	-5.84	115.11	119.20
10	A	2580	U	C6-N1-C2	5.84	124.50	121.00
10	A	210	C	C2-N3-C4	-5.83	116.98	119.90
10	A	1420	U	C2-N1-C1'	5.83	124.70	117.70
10	A	2017	U	N3-C2-O2	5.83	126.28	122.20
10	A	1022	G	N3-C2-N2	-5.83	115.82	119.90
10	A	2084	C	C5-C6-N1	-5.83	118.08	121.00
10	A	2841	C	N3-C2-O2	5.83	125.98	121.90
12	D	243	GLY	N-CA-C	-5.83	98.52	113.10
10	A	2644	G	C8-N9-C4	5.83	108.73	106.40
10	A	2723	C	C6-N1-C2	5.83	122.63	120.30
10	A	2282	G	C4-N9-C1'	5.83	134.08	126.50
10	A	2695	C	C6-N1-C2	5.83	122.63	120.30
10	A	1189	A	N9-C4-C5	-5.82	103.47	105.80
10	A	1202	C	C5-C6-N1	-5.82	118.09	121.00
10	A	1269	A	N1-C6-N6	5.82	122.09	118.60
10	A	2466	C	C6-N1-C2	5.82	122.63	120.30
10	A	506	G	C5-C6-O6	-5.82	125.11	128.60
10	A	2779	U	C5-C6-N1	-5.82	119.79	122.70
10	A	1496	A	N1-C6-N6	5.82	122.09	118.60
10	A	2246	G	N1-C6-O6	5.82	123.39	119.90
10	A	141	A	N1-C6-N6	5.81	122.09	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1201	C	N3-C4-C5	5.81	124.22	121.90
10	A	1207	C	N3-C2-O2	5.81	125.97	121.90
10	A	2572	A	N1-C6-N6	5.81	122.09	118.60
10	A	945	A	C5-C6-N1	-5.81	114.80	117.70
10	A	1241	A	C5-C6-N1	-5.81	114.80	117.70
10	A	2067	G	C5-C6-O6	-5.80	125.12	128.60
10	A	1496	A	N7-C8-N9	5.80	116.70	113.80
10	A	780	G	N7-C8-N9	-5.79	110.20	113.10
10	A	2033	A	C5-C6-N1	5.79	120.59	117.70
10	A	933	A	C5-N7-C8	-5.79	101.01	103.90
10	A	975(A)	G	C5-C6-O6	-5.79	125.13	128.60
10	A	83	G	N3-C2-N2	-5.79	115.85	119.90
10	A	1321	A	N7-C8-N9	-5.79	110.91	113.80
10	A	2091	U	C2-N1-C1'	-5.78	110.76	117.70
10	A	2394	C	C6-N1-C2	5.78	122.61	120.30
10	A	2436	G	C2-N3-C4	-5.78	109.01	111.90
10	A	570	G	C2-N3-C4	-5.78	109.01	111.90
10	A	1823	G	C8-N9-C4	5.78	108.71	106.40
10	A	2291	U	C6-N1-C2	5.77	124.46	121.00
10	A	1032	A	N7-C8-N9	-5.77	110.91	113.80
9	8	61	LEU	CA-CB-CG	-5.77	102.03	115.30
10	A	2282	G	N7-C8-N9	5.76	115.98	113.10
10	A	2441	C	C2-N3-C4	-5.76	117.02	119.90
10	A	2848	G	C8-N9-C4	5.76	108.70	106.40
10	A	512	G	C8-N9-C1'	5.76	134.49	127.00
10	A	527	C	N3-C4-C5	5.76	124.20	121.90
10	A	814	C	C5-C6-N1	-5.75	118.12	121.00
10	A	1608	A	N1-C2-N3	5.75	132.18	129.30
10	A	1189	A	C2-N3-C4	-5.75	107.72	110.60
10	A	2716	U	C5-C6-N1	-5.75	119.83	122.70
10	A	125	G	N1-C6-O6	5.75	123.35	119.90
10	A	528	A	N9-C4-C5	5.75	108.10	105.80
10	A	1129	A	C8-N9-C4	5.75	108.10	105.80
10	A	2544	G	C6-C5-N7	-5.74	126.95	130.40
10	A	837	C	C6-N1-C2	-5.74	118.00	120.30
10	A	1708	C	C6-N1-C2	5.74	122.60	120.30
10	A	1252	G	N7-C8-N9	-5.74	110.23	113.10
10	A	1937	A	N1-C6-N6	5.74	122.04	118.60
10	A	577	G	C5-C6-N1	-5.74	108.63	111.50
10	A	948	G	N3-C4-N9	-5.74	122.56	126.00
10	A	2033	A	N7-C8-N9	-5.73	110.93	113.80
10	A	937	U	C5-C6-N1	-5.73	119.84	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1334	G	N1-C6-O6	5.73	123.34	119.90
10	A	1902	C	N3-C4-N4	-5.72	113.99	118.00
10	A	330	A	C8-N9-C4	5.72	108.09	105.80
10	A	529	A	N7-C8-N9	5.72	116.66	113.80
10	A	783	A	C4-C5-N7	5.72	113.56	110.70
10	A	37	C	C6-N1-C2	5.72	122.59	120.30
10	A	491	G	N3-C4-N9	-5.72	122.57	126.00
10	A	1350	C	N3-C2-O2	5.72	125.90	121.90
10	A	2362	G	C8-N9-C4	5.72	108.69	106.40
10	A	375	C	C5-C6-N1	-5.71	118.14	121.00
10	A	189	G	C8-N9-C4	5.71	108.69	106.40
10	A	2052	G	C8-N9-C4	5.71	108.68	106.40
10	A	2389	G	N3-C4-N9	-5.71	122.57	126.00
10	A	1130	U	N3-C2-O2	-5.71	118.20	122.20
6	5	4	HIS	C-N-CD	5.71	140.38	128.40
10	A	1967	C	N3-C2-O2	5.70	125.89	121.90
10	A	2515	C	N1-C2-O2	-5.70	115.48	118.90
10	A	62	C	C5-C6-N1	-5.70	118.15	121.00
10	A	1204	A	N9-C4-C5	-5.69	103.52	105.80
10	A	1484	G	C4'-C3'-C2'	5.69	108.29	102.60
10	A	1323	U	N1-C2-O2	-5.69	118.82	122.80
10	A	691	C	C6-N1-C2	5.69	122.58	120.30
10	A	2569	G	C5-C6-O6	-5.69	125.19	128.60
10	A	1021	A	N1-C2-N3	5.68	132.14	129.30
10	A	2766	G	C6-C5-N7	-5.68	126.99	130.40
10	A	2061	G	C5-C6-N1	5.68	114.34	111.50
10	A	2440	C	C5-C6-N1	-5.68	118.16	121.00
10	A	2447	G	N9-C4-C5	-5.68	103.13	105.40
10	A	2841	C	N3-C4-C5	5.68	124.17	121.90
10	A	2676	C	C2-N3-C4	-5.67	117.06	119.90
10	A	656	G	N3-C4-C5	-5.67	125.76	128.60
10	A	2713	A	C2-N3-C4	-5.67	107.76	110.60
11	B	68	C	C2-N1-C1'	5.67	125.04	118.80
10	A	2495	G	C8-N9-C4	5.67	108.67	106.40
10	A	771	G	C5-C6-O6	-5.67	125.20	128.60
10	A	840	C	C5-C6-N1	-5.67	118.17	121.00
10	A	663	G	C5-C6-N1	-5.67	108.67	111.50
10	A	1784	A	N1-C6-N6	5.67	122.00	118.60
10	A	2383	G	C4-N9-C1'	5.66	133.86	126.50
10	A	1210	A	C6-C5-N7	-5.66	128.34	132.30
10	A	2485	G	C5-C6-O6	-5.66	125.20	128.60
10	A	132	G	C2-N3-C4	-5.66	109.07	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1315	C	C5-C6-N1	-5.66	118.17	121.00
10	A	1782	C	N1-C2-O2	-5.66	115.51	118.90
10	A	1612	C	C6-N1-C2	5.65	122.56	120.30
22	R	4	LEU	CB-CG-CD1	5.65	120.60	111.00
10	A	1142(A)	A	N3-C4-C5	5.65	130.75	126.80
10	A	72	U	C5-C6-N1	-5.64	119.88	122.70
10	A	507	A	C8-N9-C4	5.64	108.06	105.80
10	A	835	A	C8-N9-C4	5.64	108.06	105.80
10	A	1030	G	N1-C6-O6	5.64	123.28	119.90
10	A	2037	G	N1-C2-N3	5.63	127.28	123.90
10	A	1022	G	N9-C4-C5	5.63	107.65	105.40
10	A	1284	A	N1-C6-N6	5.63	121.98	118.60
10	A	2558	C	N3-C4-C5	5.63	124.15	121.90
11	B	101	G	C8-N9-C4	5.63	108.65	106.40
10	A	1258	C	N3-C4-C5	5.62	124.15	121.90
10	A	1708	C	C5-C6-N1	-5.62	118.19	121.00
10	A	2723	C	C5-C6-N1	-5.62	118.19	121.00
10	A	44	G	C8-N9-C4	-5.62	104.15	106.40
10	A	671	C	C2-N3-C4	-5.62	117.09	119.90
10	A	1314	C	C5-C4-N4	-5.62	116.27	120.20
10	A	1235	G	C8-N9-C4	5.62	108.65	106.40
10	A	472	A	C4'-C3'-C2'	5.62	108.22	102.60
10	A	529	A	C8-N9-C4	-5.62	103.55	105.80
10	A	246	C	C6-N1-C2	5.61	122.54	120.30
10	A	2008	C	C2-N3-C4	-5.60	117.10	119.90
10	A	2517	C	C6-N1-C2	5.60	122.54	120.30
10	A	1322	A	C2-N3-C4	-5.59	107.80	110.60
10	A	1325	G	C5-C6-O6	-5.59	125.24	128.60
10	A	2657	A	N1-C6-N6	5.59	121.96	118.60
10	A	1270	C	C5-C6-N1	-5.59	118.20	121.00
10	A	2625	G	C5-N7-C8	-5.59	101.50	104.30
10	A	339	U	C6-N1-C2	5.59	124.35	121.00
10	A	2053	G	N1-C6-O6	5.59	123.25	119.90
10	A	2692	C	C5-C6-N1	-5.59	118.20	121.00
10	A	1324	G	C5-C6-O6	-5.59	125.25	128.60
10	A	2762	G	N3-C4-N9	-5.59	122.65	126.00
10	A	2495	G	C2-N3-C4	-5.58	109.11	111.90
10	A	1204	A	C8-N9-C1'	-5.58	117.65	127.70
10	A	2567	G	C8-N9-C4	5.58	108.63	106.40
10	A	601	C	C6-N1-C2	5.58	122.53	120.30
10	A	1248	G	C8-N9-C4	5.58	108.63	106.40
10	A	859	G	C4-N9-C1'	-5.58	119.25	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1796	U	C5-C6-N1	-5.58	119.91	122.70
10	A	2329	G	C4-N9-C1'	-5.58	119.25	126.50
10	A	991	C	C5-C6-N1	-5.57	118.21	121.00
10	A	2042	A	N7-C8-N9	-5.57	111.01	113.80
10	A	1270	C	C6-N1-C2	5.57	122.53	120.30
10	A	774	A	N1-C2-N3	5.57	132.09	129.30
10	A	844	C	C6-N1-C2	5.57	122.53	120.30
10	A	1159	U	N3-C2-O2	5.57	126.10	122.20
10	A	2495	G	N3-C4-C5	5.57	131.38	128.60
10	A	382	G	N1-C6-O6	5.57	123.24	119.90
10	A	1786	A	C5-C6-N6	-5.57	119.25	123.70
10	A	2439	A	C5-N7-C8	-5.57	101.12	103.90
10	A	110	G	C8-N9-C4	5.55	108.62	106.40
10	A	201	C	N1-C2-O2	-5.55	115.57	118.90
10	A	498	G	N7-C8-N9	-5.55	110.32	113.10
10	A	517	C	N1-C2-O2	-5.55	115.57	118.90
10	A	748	G	C8-N9-C1'	5.55	134.22	127.00
10	A	2540	C	N1-C2-O2	-5.55	115.57	118.90
10	A	1673	U	N3-C2-O2	-5.55	118.32	122.20
10	A	2259	G	N3-C4-C5	5.55	131.37	128.60
11	B	103	G	N3-C4-C5	5.55	131.37	128.60
10	A	671	C	N1-C2-O2	-5.55	115.57	118.90
10	A	2766	G	C4-C5-N7	5.55	113.02	110.80
10	A	190	A	N9-C4-C5	-5.54	103.58	105.80
10	A	795	C	C6-N1-C2	5.54	122.52	120.30
10	A	529	A	C5-N7-C8	-5.54	101.13	103.90
10	A	2499	C	C6-N1-C1'	-5.54	114.15	120.80
10	A	2766	G	N1-C6-O6	5.54	123.22	119.90
10	A	1496	A	C8-N9-C4	-5.54	103.59	105.80
10	A	1497	U	N1-C2-N3	-5.53	111.58	114.90
10	A	2051	A	N1-C2-N3	5.53	132.06	129.30
10	A	2383	G	N1-C2-N3	5.53	127.22	123.90
10	A	803	U	C5-C4-O4	-5.53	122.58	125.90
10	A	1189	A	C8-N9-C4	5.53	108.01	105.80
10	A	639	U	C5-C6-N1	-5.53	119.94	122.70
10	A	805	G	C4-C5-N7	5.52	113.01	110.80
10	A	1998	G	C2-N3-C4	-5.52	109.14	111.90
10	A	1141	U	C5-C6-N1	-5.52	119.94	122.70
10	A	1891	G	N7-C8-N9	-5.52	110.34	113.10
10	A	2501	C	C6-N1-C1'	5.52	127.42	120.80
10	A	190	A	C8-N9-C4	5.52	108.01	105.80
10	A	2238	G	C8-N9-C4	-5.52	104.19	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2517	C	N3-C4-C5	5.52	124.11	121.90
10	A	937	U	C6-N1-C2	5.52	124.31	121.00
10	A	1597	A	C5-N7-C8	5.51	106.66	103.90
10	A	1019	U	N1-C2-O2	-5.51	118.94	122.80
10	A	1275	A	N9-C4-C5	-5.51	103.60	105.80
10	A	94(A)	G	N3-C2-N2	-5.51	116.05	119.90
10	A	771	G	N9-C4-C5	-5.51	103.20	105.40
10	A	805	G	C6-C5-N7	-5.51	127.10	130.40
10	A	459	U	N3-C4-O4	-5.50	115.55	119.40
10	A	1324	G	N1-C6-O6	5.50	123.20	119.90
10	A	1308	A	N1-C2-N3	5.50	132.05	129.30
10	A	1631	C	C6-N1-C2	5.50	122.50	120.30
10	A	2253	G	C6-C5-N7	-5.50	127.10	130.40
10	A	2043	C	C2-N3-C4	-5.49	117.15	119.90
10	A	1293	C	N3-C4-C5	5.49	124.10	121.90
10	A	2061	G	C8-N9-C4	5.49	108.60	106.40
10	A	2577	A	N1-C6-N6	5.49	121.89	118.60
10	A	832	G	N3-C4-C5	5.49	131.34	128.60
10	A	798	G	C2-N3-C4	-5.48	109.16	111.90
10	A	148	C	N3-C4-C5	5.48	124.09	121.90
10	A	530	G	N1-C6-O6	-5.48	116.61	119.90
10	A	1564	C	C5-C6-N1	-5.48	118.26	121.00
10	A	2007	C	N1-C2-O2	-5.48	115.61	118.90
10	A	1320	C	C4-C5-C6	5.48	120.14	117.40
10	A	246	C	C5-C6-N1	-5.47	118.26	121.00
10	A	389	G	N9-C4-C5	-5.47	103.21	105.40
10	A	1529	G	C4-N9-C1'	5.47	133.62	126.50
10	A	189	G	N1-C6-O6	5.47	123.18	119.90
10	A	565	C	C6-N1-C2	5.47	122.49	120.30
10	A	2737	G	C5-C6-O6	-5.47	125.32	128.60
10	A	2392	A	N1-C6-N6	5.47	121.88	118.60
10	A	2816	C	N1-C2-O2	-5.47	115.62	118.90
10	A	2676	C	C6-N1-C2	5.47	122.49	120.30
10	A	2392	A	C5-C6-N1	-5.47	114.97	117.70
11	B	76	G	N3-C4-C5	5.47	131.33	128.60
10	A	2693	A	C8-N9-C4	5.46	107.98	105.80
10	A	735	A	C8-N9-C4	5.46	107.98	105.80
10	A	936	C	C6-N1-C2	5.46	122.48	120.30
10	A	2363	C	N1-C2-O2	-5.46	115.62	118.90
11	B	37	C	C5-C6-N1	5.46	123.73	121.00
10	A	1161	C	N1-C2-O2	-5.46	115.63	118.90
10	A	676	A	C5-C6-N6	-5.45	119.34	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2488	A	C4-C5-C6	-5.45	114.27	117.00
10	A	272	G	N3-C4-N9	5.45	129.27	126.00
10	A	378	C	C6-N1-C2	5.45	122.48	120.30
10	A	2662	A	N9-C1'-C2'	5.45	121.08	114.00
10	A	2466	C	C5-C4-N4	-5.45	116.39	120.20
10	A	2699	C	C5-C6-N1	-5.44	118.28	121.00
10	A	2471	C	C2-N1-C1'	5.44	124.79	118.80
10	A	2388	A	C8-N9-C4	5.44	107.98	105.80
10	A	562	U	N3-C2-O2	5.44	126.01	122.20
10	A	1627	G	C5-C6-N1	-5.44	108.78	111.50
10	A	2259	G	N1-C6-O6	5.44	123.16	119.90
10	A	2608	G	C4-C5-N7	-5.44	108.62	110.80
10	A	1314	C	C6-N1-C1'	-5.43	114.28	120.80
10	A	2386	C	C5-C6-N1	-5.43	118.29	121.00
10	A	2676	C	C5-C6-N1	-5.43	118.29	121.00
10	A	574	C	C6-N1-C2	5.43	122.47	120.30
10	A	665	C	C5-C6-N1	-5.42	118.29	121.00
10	A	798	G	C8-N9-C4	5.42	108.57	106.40
10	A	1204	A	C5-C6-N1	-5.42	114.99	117.70
10	A	1293	C	C2-N3-C4	-5.42	117.19	119.90
10	A	2502	G	C5-N7-C8	-5.42	101.59	104.30
17	I	88	ILE	CG1-CB-CG2	-5.42	99.48	111.40
10	A	1767	C	C4-C5-C6	5.41	120.11	117.40
10	A	1779	U	N1-C2-N3	5.41	118.15	114.90
10	A	211	A	N7-C8-N9	-5.41	111.09	113.80
10	A	1049	C	C2-N1-C1'	5.41	124.75	118.80
10	A	1316	U	C5-C6-N1	-5.41	120.00	122.70
10	A	2081	C	N1-C2-O2	-5.41	115.65	118.90
10	A	2621	A	C8-N9-C4	5.41	107.96	105.80
10	A	100	G	C6-C5-N7	5.40	133.64	130.40
10	A	1495	A	C4-C5-N7	5.40	113.40	110.70
10	A	621	A	C5-N7-C8	-5.40	101.20	103.90
10	A	1408	C	N1-C2-O2	-5.40	115.66	118.90
10	A	618	C	C5-C6-N1	-5.39	118.30	121.00
10	A	1853	A	C8-N9-C4	5.39	107.96	105.80
10	A	528	A	C5-C6-N1	-5.39	115.00	117.70
10	A	2540	C	C5-C6-N1	-5.39	118.31	121.00
10	A	1939	U	C5-C4-O4	-5.39	122.67	125.90
10	A	1022	G	N3-C4-N9	-5.39	122.77	126.00
10	A	1830	C	N3-C2-O2	5.39	125.67	121.90
10	A	2292	C	N3-C4-C5	5.39	124.06	121.90
10	A	2363	C	C5-C6-N1	-5.39	118.31	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	98	G	N7-C8-N9	-5.38	110.41	113.10
10	A	530	G	N1-C2-N2	-5.38	111.35	116.20
10	A	1270	C	C2-N1-C1'	-5.38	112.88	118.80
10	A	1291	C	C6-N1-C2	5.38	122.45	120.30
10	A	2066	C	C5-C6-N1	-5.38	118.31	121.00
10	A	133	C	C2-N3-C4	-5.37	117.22	119.90
10	A	2613	U	N3-C2-O2	5.37	125.96	122.20
10	A	2540	C	C6-N1-C2	5.37	122.45	120.30
10	A	775	G	C2-N3-C4	-5.36	109.22	111.90
11	B	103	G	C8-N9-C4	5.36	108.54	106.40
10	A	2061	G	C4-C5-N7	5.35	112.94	110.80
10	A	2518	A	N1-C6-N6	5.35	121.81	118.60
10	A	2742	C	C2-N3-C4	-5.35	117.22	119.90
10	A	298	G	C5-C6-O6	-5.35	125.39	128.60
10	A	574	C	N3-C2-O2	5.35	125.64	121.90
10	A	1204	A	N7-C8-N9	5.35	116.47	113.80
10	A	2711	A	C8-N9-C4	5.35	107.94	105.80
11	B	37	C	C2-N1-C1'	5.35	124.68	118.80
10	A	2014	A	N1-C6-N6	5.34	121.81	118.60
10	A	2430	A	C5-C6-N1	-5.34	115.03	117.70
10	A	2605	U	C5-C4-O4	5.34	129.10	125.90
10	A	2258	C	C6-N1-C2	5.34	122.44	120.30
10	A	647	G	N7-C8-N9	5.34	115.77	113.10
10	A	1676	A	C2-N3-C4	-5.33	107.93	110.60
11	B	48	A	C8-N9-C4	5.33	107.93	105.80
10	A	729	G	C5-C6-O6	-5.33	125.40	128.60
10	A	866	A	C4-N9-C1'	5.33	135.90	126.30
10	A	975(A)	G	C4-C5-N7	5.33	112.93	110.80
10	A	783	A	N1-C6-N6	5.33	121.80	118.60
10	A	1201	C	C2-N3-C4	-5.33	117.23	119.90
10	A	1632	A	N1-C6-N6	5.33	121.80	118.60
10	A	1764	G	N3-C4-N9	-5.33	122.80	126.00
10	A	427	U	C6-N1-C2	5.33	124.20	121.00
10	A	848	G	C4-N9-C1'	5.33	133.43	126.50
10	A	1131	G	N7-C8-N9	-5.33	110.44	113.10
10	A	1228	G	C8-N9-C4	5.33	108.53	106.40
10	A	1305	C	N1-C2-O2	-5.32	115.71	118.90
10	A	650	C	N1-C2-O2	5.32	122.09	118.90
10	A	2466	C	N3-C2-O2	5.32	125.62	121.90
10	A	2775	A	C8-N9-C4	5.32	107.93	105.80
11	B	85	G	C5-C6-O6	-5.32	125.41	128.60
10	A	2036	C	N3-C4-N4	5.31	121.72	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2078	C	C6-N1-C2	5.31	122.42	120.30
10	A	2702	U	C5-C6-N1	-5.31	120.04	122.70
10	A	1252	G	C4-N9-C1'	-5.31	119.60	126.50
10	A	1779	U	C6-N1-C1'	5.31	128.63	121.20
10	A	148	C	C5-C6-N1	-5.30	118.35	121.00
10	A	1241	A	C6-C5-N7	-5.30	128.59	132.30
10	A	2006	C	C6-N1-C2	5.30	122.42	120.30
10	A	2498	C	C2-N1-C1'	-5.30	112.97	118.80
10	A	2253	G	C8-N9-C1'	-5.30	120.11	127.00
10	A	2499	C	N1-C2-O2	5.30	122.08	118.90
11	B	102	A	C8-N9-C4	5.30	107.92	105.80
10	A	1498	C	C6-N1-C2	5.30	122.42	120.30
10	A	330	A	C5-N7-C8	-5.30	101.25	103.90
10	A	975(A)	G	C8-N9-C4	5.30	108.52	106.40
10	A	1790	C	C2-N1-C1'	-5.30	112.97	118.80
10	A	190	A	N1-C6-N6	5.29	121.77	118.60
10	A	728	G	N1-C6-O6	5.29	123.07	119.90
10	A	1295	C	C6-N1-C2	5.29	122.42	120.30
10	A	1552	G	C8-N9-C4	5.29	108.52	106.40
10	A	1565	C	C5-C6-N1	-5.29	118.36	121.00
10	A	1496	A	C6-C5-N7	-5.29	128.60	132.30
10	A	2089	U	C5-C6-N1	-5.28	120.06	122.70
10	A	2531	A	N7-C8-N9	-5.28	111.16	113.80
10	A	600	G	N3-C4-C5	5.28	131.24	128.60
10	A	1221	C	C6-N1-C2	5.28	122.41	120.30
10	A	2282	G	C8-N9-C4	-5.28	104.29	106.40
10	A	2075	U	N3-C4-O4	5.27	123.09	119.40
10	A	2480	C	C6-N1-C2	5.27	122.41	120.30
10	A	2253	G	C5-C6-O6	-5.27	125.44	128.60
10	A	2436	G	N3-C2-N2	-5.27	116.21	119.90
10	A	133	C	N3-C4-C5	5.27	124.01	121.90
10	A	330	A	N1-C6-N6	5.27	121.76	118.60
10	A	2699	C	C2-N3-C4	-5.27	117.27	119.90
10	A	247	G	C8-N9-C4	5.27	108.51	106.40
10	A	1608	A	N3-C4-C5	5.27	130.49	126.80
10	A	744	G	N1-C6-O6	5.26	123.06	119.90
10	A	1519	G	N7-C8-N9	5.26	115.73	113.10
10	A	1421	G	C6-C5-N7	-5.26	127.24	130.40
10	A	2818	G	N1-C6-O6	5.26	123.06	119.90
10	A	975(A)	G	N9-C4-C5	-5.26	103.30	105.40
10	A	2363	C	C6-N1-C2	5.26	122.40	120.30
10	A	1210	A	C2-N3-C4	-5.26	107.97	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1332	G	C5-C6-N1	-5.26	108.87	111.50
10	A	2455	G	C5-C6-O6	-5.26	125.44	128.60
10	A	1495	A	N7-C8-N9	5.26	116.43	113.80
10	A	114	U	C2-N1-C1'	5.25	124.01	117.70
10	A	468	G	C8-N9-C4	5.25	108.50	106.40
10	A	199	A	C8-N9-C4	5.25	107.90	105.80
10	A	1992	G	C8-N9-C4	-5.25	104.30	106.40
10	A	416	C	C2-N1-C1'	5.25	124.58	118.80
10	A	2504	U	C6-N1-C2	5.25	124.15	121.00
10	A	459	U	C5-C4-O4	5.25	129.05	125.90
10	A	491	G	C4-N9-C1'	-5.25	119.67	126.50
10	A	1021	A	C4-C5-N7	5.25	113.32	110.70
10	A	2830	G	C5-C6-O6	-5.25	125.45	128.60
10	A	2055	C	C6-N1-C2	5.25	122.40	120.30
10	A	757	U	C5-C6-N1	-5.25	120.08	122.70
10	A	975	C	C5-C6-N1	-5.24	118.38	121.00
10	A	2455	G	N1-C6-O6	5.24	123.05	119.90
11	B	27	C	C6-N1-C2	-5.24	118.20	120.30
10	A	671	C	C4-C5-C6	5.24	120.02	117.40
10	A	848	G	C8-N9-C1'	-5.24	120.19	127.00
10	A	1379	A	O4'-C1'-C2'	5.24	112.32	107.60
10	A	2724	C	N1-C2-O2	-5.24	115.76	118.90
10	A	796	C	C6-N1-C2	5.24	122.39	120.30
11	B	37	C	C6-N1-C2	-5.24	118.21	120.30
10	A	265	A	C5-N7-C8	-5.23	101.28	103.90
10	A	1121	C	C5-C6-N1	-5.23	118.38	121.00
10	A	1249	U	N1-C2-O2	-5.23	119.14	122.80
10	A	945	A	C6-C5-N7	-5.23	128.64	132.30
10	A	2438	U	C6-N1-C2	5.23	124.14	121.00
10	A	1613	G	C8-N9-C1'	-5.23	120.20	127.00
10	A	1322	A	C5-N7-C8	5.23	106.51	103.90
10	A	2252	G	N9-C4-C5	-5.23	103.31	105.40
10	A	734	A	C8-N9-C4	5.23	107.89	105.80
10	A	2013	A	N7-C8-N9	-5.23	111.19	113.80
10	A	2059	A	C8-N9-C4	5.22	107.89	105.80
10	A	2607	G	C5-C6-N1	-5.22	108.89	111.50
10	A	2244	U	C5-C6-N1	-5.22	120.09	122.70
10	A	2431	U	C5-C6-N1	-5.22	120.09	122.70
10	A	801	G	N3-C4-C5	5.22	131.21	128.60
10	A	2066	C	C2-N3-C4	-5.22	117.29	119.90
10	A	2253	G	C4-C5-N7	5.22	112.89	110.80
10	A	441	U	C6-N1-C2	5.22	124.13	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	979	G	N1-C6-O6	5.22	123.03	119.90
10	A	2375	G	C8-N9-C4	5.22	108.49	106.40
10	A	1544	A	N9-C1'-C2'	5.22	120.78	114.00
10	A	2447	G	C5-C6-O6	-5.22	125.47	128.60
10	A	84	A	N7-C8-N9	-5.21	111.19	113.80
10	A	1555	G	C5-C6-O6	-5.21	125.47	128.60
10	A	627	A	C8-N9-C4	5.21	107.89	105.80
10	A	2010	G	N1-C6-O6	5.21	123.03	119.90
10	A	811	U	C2-N1-C1'	-5.21	111.45	117.70
10	A	2036	C	C5-C4-N4	-5.21	116.55	120.20
10	A	141	A	N7-C8-N9	5.21	116.40	113.80
10	A	582	G	N1-C6-O6	5.21	123.03	119.90
10	A	621	A	N1-C6-N6	5.21	121.72	118.60
10	A	2444	G	N3-C2-N2	-5.21	116.25	119.90
10	A	2644	G	N3-C4-C5	5.21	131.20	128.60
10	A	937	U	N3-C2-O2	5.21	125.84	122.20
10	A	1355	G	C5-C6-O6	-5.21	125.48	128.60
10	A	2028	U	N3-C2-O2	5.21	125.84	122.20
10	A	1631	C	N3-C2-O2	5.20	125.54	121.90
10	A	1678	G	N1-C2-N2	-5.20	111.52	116.20
10	A	1694	C	C2-N1-C1'	5.20	124.53	118.80
10	A	27	G	N1-C2-N2	-5.20	111.52	116.20
10	A	1304	C	N1-C2-O2	-5.20	115.78	118.90
10	A	2714	G	C8-N9-C1'	-5.20	120.24	127.00
10	A	2329	G	C6-C5-N7	5.20	133.52	130.40
10	A	1323	U	C6-N1-C2	5.20	124.12	121.00
10	A	759	G	N1-C6-O6	5.20	123.02	119.90
10	A	1291	C	N3-C4-C5	5.20	123.98	121.90
10	A	1543	C	C4-C5-C6	-5.20	114.80	117.40
10	A	1784	A	N1-C2-N3	5.20	131.90	129.30
10	A	1624	G	C4-N9-C1'	-5.19	119.75	126.50
10	A	1798	U	C6-N1-C2	5.19	124.12	121.00
10	A	2088	G	N3-C4-C5	5.19	131.20	128.60
10	A	674	G	N3-C4-C5	5.19	131.19	128.60
10	A	678	C	C2-N3-C4	-5.19	117.31	119.90
10	A	783	A	C6-C5-N7	-5.19	128.67	132.30
10	A	271(P)	C	C2-N1-C1'	5.18	124.50	118.80
10	A	2439	A	C4-C5-N7	5.18	113.29	110.70
10	A	749	C	C6-N1-C2	5.18	122.37	120.30
30	Z	110	GLY	N-CA-C	-5.18	100.15	113.10
10	A	179	G	C8-N9-C4	5.18	108.47	106.40
10	A	2330	G	N7-C8-N9	-5.18	110.51	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	481	G	N1-C6-O6	5.18	123.00	119.90
10	A	1253	A	C5-C6-N6	-5.18	119.56	123.70
10	A	1555	G	N1-C6-O6	5.18	123.01	119.90
10	A	2361	A	C5-N7-C8	-5.18	101.31	103.90
10	A	2778	A	N1-C2-N3	5.18	131.89	129.30
11	B	101	G	N9-C4-C5	-5.18	103.33	105.40
10	A	810	U	C2-N3-C4	-5.17	123.89	127.00
10	A	1984	G	N7-C8-N9	5.17	115.69	113.10
10	A	1762	A	N7-C8-N9	5.17	116.39	113.80
10	A	1968	G	C4-C5-N7	5.17	112.87	110.80
10	A	102	G	C3'-C2'-C1'	5.17	105.64	101.50
10	A	132	G	C5-C6-N1	-5.17	108.92	111.50
10	A	435	C	N1-C2-O2	5.17	122.00	118.90
10	A	2019	A	N1-C6-N6	5.17	121.70	118.60
10	A	2462	U	C6-N1-C2	5.17	124.10	121.00
10	A	1256	G	C5-C6-O6	-5.17	125.50	128.60
10	A	1698	A	N3-C4-C5	5.17	130.42	126.80
10	A	389	G	C8-N9-C4	5.17	108.47	106.40
12	D	229	VAL	CB-CA-C	-5.17	101.59	111.40
10	A	1928	A	N1-C6-N6	5.16	121.69	118.60
10	A	2443	C	C6-N1-C2	5.16	122.36	120.30
10	A	843	G	N7-C8-N9	-5.16	110.52	113.10
10	A	975	C	C5-C4-N4	5.16	123.81	120.20
10	A	1121	C	C6-N1-C2	5.16	122.36	120.30
10	A	2552	U	C2-N3-C4	-5.15	123.91	127.00
10	A	1800	C	C2-N1-C1'	-5.15	113.13	118.80
10	A	1300	U	C2-N1-C1'	5.15	123.88	117.70
10	A	2826	A	N1-C6-N6	-5.15	115.51	118.60
6	5	51	TYR	CB-CG-CD2	-5.15	117.91	121.00
10	A	788	A	N9-C4-C5	-5.15	103.74	105.80
10	A	1616	A	C2-N3-C4	-5.15	108.03	110.60
10	A	1797	C	C5-C6-N1	-5.15	118.43	121.00
10	A	577	G	N7-C8-N9	-5.14	110.53	113.10
10	A	2019	A	C8-N9-C4	5.14	107.86	105.80
10	A	678	C	N3-C2-O2	5.14	125.50	121.90
10	A	2469	A	N1-C2-N3	5.14	131.87	129.30
11	B	6	C	C6-N1-C2	5.14	122.36	120.30
10	A	1570	A	C6-N1-C2	5.14	121.68	118.60
10	A	2245	U	N3-C4-C5	-5.14	111.52	114.60
10	A	2021	C	C5-C6-N1	-5.13	118.43	121.00
10	A	2389	G	C8-N9-C1'	5.13	133.68	127.00
10	A	2448	A	C5-C6-N1	5.13	120.27	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	810	U	C6-N1-C2	5.13	124.08	121.00
10	A	827	U	N1-C2-O2	-5.13	119.21	122.80
10	A	528	A	C8-N9-C4	-5.13	103.75	105.80
10	A	2242	G	N1-C6-O6	5.13	122.98	119.90
10	A	2453	A	C8-N9-C4	5.13	107.85	105.80
11	B	104	U	N3-C4-C5	5.13	117.68	114.60
10	A	736	C	C6-N1-C2	5.13	122.35	120.30
10	A	1133	U	C5-C6-N1	-5.13	120.14	122.70
10	A	2863	C	C6-N1-C2	5.13	122.35	120.30
10	A	1314	C	C2-N1-C1'	5.12	124.44	118.80
2	1	43	TYR	N-CA-C	-5.12	97.16	111.00
10	A	788	A	N1-C2-N3	5.12	131.86	129.30
10	A	2819	G	N3-C4-N9	-5.12	122.93	126.00
10	A	979	G	N9-C4-C5	-5.12	103.35	105.40
10	A	1972	A	N1-C6-N6	5.11	121.67	118.60
10	A	2625	G	C5-C6-O6	-5.11	125.53	128.60
10	A	2829	C	C5-C6-N1	-5.11	118.44	121.00
10	A	1543	C	C5-C6-N1	5.11	123.56	121.00
10	A	2529	G	N3-C4-C5	5.11	131.15	128.60
10	A	1950	G	N1-C6-O6	5.10	122.96	119.90
10	A	500	G	N7-C8-N9	-5.10	110.55	113.10
10	A	2572	A	C2-N3-C4	-5.10	108.05	110.60
10	A	795	C	N1-C2-O2	-5.10	115.84	118.90
10	A	1570	A	N3-C4-C5	5.10	130.37	126.80
10	A	1328	G	C4-N9-C1'	5.10	133.12	126.50
10	A	1596	A	N7-C8-N9	-5.10	111.25	113.80
10	A	2283	C	N1-C2-O2	-5.10	115.84	118.90
10	A	751	A	C8-N9-C4	5.09	107.84	105.80
10	A	1252	G	N3-C4-C5	5.09	131.15	128.60
10	A	2081	C	C5-C6-N1	-5.09	118.45	121.00
10	A	2317	C	N3-C2-O2	-5.09	118.33	121.90
10	A	2777	G	C5-C6-O6	-5.09	125.55	128.60
11	B	96	U	C2-N1-C1'	-5.09	111.60	117.70
10	A	2541	A	N1-C6-N6	5.08	121.65	118.60
10	A	94(A)	G	C5-C6-O6	-5.08	125.55	128.60
10	A	208	C	N3-C2-O2	5.08	125.46	121.90
10	A	389	G	N3-C4-N9	5.08	129.05	126.00
10	A	666	G	N9-C4-C5	-5.08	103.37	105.40
10	A	1131	G	C4-N9-C1'	-5.08	119.90	126.50
10	A	206	U	C6-N1-C2	5.08	124.05	121.00
10	A	538	G	C8-N9-C4	5.08	108.43	106.40
10	A	980	A	N1-C6-N6	5.08	121.65	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	1977	A	C2-N3-C4	-5.08	108.06	110.60
10	A	253	C	N3-C2-O2	5.08	125.45	121.90
11	B	97	G	C4-N9-C1'	-5.08	119.90	126.50
10	A	1261	C	C5-C6-N1	-5.07	118.46	121.00
10	A	2059	A	N1-C6-N6	5.07	121.64	118.60
22	R	54	LEU	CA-CB-CG	-5.07	103.63	115.30
10	A	1570	A	C4-C5-N7	5.07	113.24	110.70
10	A	182	A	N1-C6-N6	5.07	121.64	118.60
10	A	668	G	C8-N9-C1'	-5.07	120.41	127.00
10	A	1122	G	N9-C4-C5	-5.07	103.37	105.40
10	A	1822	G	N3-C4-C5	5.07	131.13	128.60
10	A	2464	C	C6-N1-C1'	-5.07	114.72	120.80
10	A	2610	C	N3-C4-C5	5.07	123.93	121.90
10	A	2676	C	N3-C4-C5	5.07	123.93	121.90
10	A	198	C	N3-C4-C5	5.07	123.93	121.90
10	A	1403	C	C6-N1-C1'	5.07	126.88	120.80
10	A	1897	G	C4-C5-N7	5.07	112.83	110.80
10	A	271(P)	C	C6-N1-C2	-5.06	118.27	120.30
10	A	1232	G	N3-C4-C5	5.06	131.13	128.60
10	A	1698	A	C3'-C2'-C1'	-5.06	97.45	101.50
10	A	1976	U	N1-C2-N3	5.06	117.94	114.90
10	A	378	C	N3-C4-C5	5.06	123.92	121.90
10	A	507	A	N9-C4-C5	-5.06	103.78	105.80
10	A	1279	G	N7-C8-N9	-5.06	110.57	113.10
10	A	1663	C	C6-N1-C2	5.06	122.33	120.30
10	A	2056	G	C6-C5-N7	-5.06	127.36	130.40
10	A	1380	G	N3-C4-C5	5.06	131.13	128.60
10	A	388	G	N1-C6-O6	-5.06	116.87	119.90
10	A	1239	G	N3-C4-N9	-5.06	122.97	126.00
10	A	2291	U	C5-C6-N1	-5.06	120.17	122.70
10	A	147	U	C5-C6-N1	-5.05	120.17	122.70
15	G	34	LEU	CA-CB-CG	5.05	126.92	115.30
10	A	2544	G	C4-C5-N7	5.04	112.82	110.80
10	A	303	U	N3-C4-C5	5.04	117.62	114.60
10	A	827	U	N3-C2-O2	5.04	125.73	122.20
10	A	1948	G	N3-C2-N2	-5.04	116.37	119.90
10	A	2364	C	C6-N1-C2	5.04	122.31	120.30
3	2	55	ARG	N-CA-C	-5.04	97.40	111.00
10	A	1219	G	N3-C4-C5	5.03	131.12	128.60
10	A	783	A	C5-C6-N1	-5.03	115.18	117.70
10	A	179	G	N3-C4-C5	5.03	131.12	128.60
10	A	1210	A	N9-C4-C5	-5.03	103.79	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2485	G	C8-N9-C4	5.03	108.41	106.40
10	A	2547	U	C6-N1-C2	5.03	124.02	121.00
10	A	948	G	C5-C6-N1	-5.03	108.98	111.50
10	A	2051	A	C2-N3-C4	-5.03	108.08	110.60
10	A	2542	A	C3'-C2'-C1'	5.03	105.52	101.50
10	A	2014	A	C5-C6-N6	-5.03	119.68	123.70
10	A	141	A	C6-C5-N7	-5.03	128.78	132.30
10	A	852	G	N3-C4-N9	5.03	129.01	126.00
10	A	2498	C	C5-C6-N1	-5.03	118.49	121.00
10	A	2061	G	N1-C2-N2	-5.02	111.68	116.20
10	A	2263	C	C6-N1-C2	5.02	122.31	120.30
10	A	2451	A	C5-N7-C8	-5.02	101.39	103.90
10	A	2608	G	N9-C4-C5	5.02	107.41	105.40
10	A	381	G	C8-N9-C4	5.02	108.41	106.40
10	A	1495	A	N1-C6-N6	5.02	121.61	118.60
10	A	1495	A	C6-C5-N7	-5.02	128.79	132.30
10	A	1673	U	C2-N3-C4	-5.02	123.99	127.00
10	A	2501	C	N3-C4-C5	5.02	123.91	121.90
10	A	1106	A	C3'-C2'-C1'	5.02	105.52	101.50
10	A	2447	G	N3-C4-N9	5.02	129.01	126.00
10	A	2651	C	C6-N1-C2	5.02	122.31	120.30
10	A	2699	C	N3-C4-C5	5.02	123.91	121.90
10	A	57	C	C6-N1-C2	5.02	122.31	120.30
10	A	203	C	C2-N1-C1'	-5.02	113.28	118.80
10	A	303	U	C6-N1-C2	5.02	124.01	121.00
10	A	555	U	C2-N1-C1'	-5.02	111.68	117.70
10	A	2091	U	C6-N1-C2	5.02	124.01	121.00
10	A	2346	A	C4-C5-C6	5.02	119.51	117.00
10	A	2448	A	C8-N9-C4	5.02	107.81	105.80
10	A	460	A	N9-C4-C5	-5.02	103.79	105.80
10	A	2004	G	N3-C2-N2	-5.02	116.39	119.90
10	A	1930	G	C4-N9-C1'	-5.01	119.98	126.50
10	A	2482	G	C4-N9-C1'	5.01	133.02	126.50
10	A	2598	A	N1-C6-N6	5.01	121.61	118.60
10	A	612	C	C5-C6-N1	-5.01	118.49	121.00
10	A	693	C	C4-C5-C6	5.01	119.91	117.40
10	A	1301	A	N1-C2-N3	5.01	131.81	129.30
10	A	509	C	C2-N1-C1'	-5.01	113.29	118.80
26	V	40	LEU	N-CA-C	5.01	124.52	111.00
10	A	759	G	N3-C4-C5	5.01	131.10	128.60
10	A	1299	G	N1-C6-O6	5.01	122.90	119.90
10	A	594	U	N1-C2-O2	-5.00	119.30	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	A	2059	A	C5-C6-N1	-5.00	115.20	117.70
10	A	2644	G	C2-N3-C4	-5.00	109.40	111.90
10	A	941	A	N1-C2-N3	5.00	131.80	129.30
10	A	2431	U	C6-N1-C2	5.00	124.00	121.00
10	A	2490	G	N1-C6-O6	5.00	122.90	119.90
10	A	502	A	C6-N1-C2	-5.00	115.60	118.60
10	A	1678	G	N3-C2-N2	5.00	123.40	119.90

All (18) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
10	A	472	A	C3'
10	A	669	G	C4',C3',C1'
10	A	945	A	C1'
10	A	1300	U	C4',C3'
10	A	1379	A	C1'
10	A	1484	G	C3'
10	A	1544	A	C1'
10	A	1609	A	C2'
10	A	1652	A	C3'
10	A	1694	C	C4',C3'
10	A	1934	C	C3'
10	A	2286	A	C1'
10	A	2662	A	C1'
10	A	2796	U	C1'

All (20) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	11	ARG	Peptide
2	1	30	VAL	Peptide
3	2	54	LYS	Peptide
6	5	51	TYR	Peptide
12	D	244	ARG	Peptide
12	D	47	GLY	Peptide
13	E	131	ALA	Peptide
13	E	132	HIS	Peptide
16	H	154	PRO	Peptide
20	P	37	GLY	Peptide
20	P	51	PHE	Peptide
20	P	57	THR	Peptide
21	Q	10	ARG	Peptide

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Mol	Chain	Res	Type	Group
22	R	5	LYS	Peptide
24	T	29	ARG	Peptide
26	V	18	LEU	Peptide
26	V	87	HIS	Peptide
28	X	61	GLY	Peptide
28	X	76	ARG	Peptide
28	X	77	LYS	Peptide

## 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	0	650	0	654	95	0
2	1	693	0	764	156	0
3	2	421	0	461	136	0
4	3	468	0	523	54	0
5	4	157	0	69	8	0
6	5	459	0	480	99	0
7	6	381	0	390	95	0
8	7	419	0	467	57	0
9	8	508	0	576	151	0
10	A	58698	0	29591	4381	0
11	B	2551	0	1295	231	0
12	D	2105	0	2182	406	0
13	E	1564	0	1629	278	0
14	F	1624	0	1677	209	0
15	G	1474	0	1534	223	0
16	H	1223	0	1282	162	0
17	I	1132	0	1218	158	0
18	N	1105	0	1180	231	0
19	O	933	0	996	133	0
20	P	1114	0	1187	345	0
21	Q	1080	0	1127	195	0
22	R	960	0	1021	146	0
23	S	771	0	832	172	0
24	T	1100	0	1164	209	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	U	958	0	1015	177	0
26	V	779	0	851	258	0
27	W	896	0	953	128	0
28	X	726	0	777	199	0
29	Y	776	0	870	191	0
30	Z	1404	0	1432	196	0
31	5	1	0	0	0	0
31	7	1	0	0	0	0
31	8	1	0	0	0	0
31	A	318	0	0	0	0
31	B	3	0	0	0	0
31	D	2	0	0	0	0
31	E	1	0	0	0	0
31	F	1	0	0	0	0
31	P	1	0	0	0	0
31	Q	1	0	0	0	0
31	R	2	0	0	0	0
31	U	1	0	0	0	0
31	X	1	0	0	0	0
32	A	1	0	0	0	0
33	A	58	0	65	34	0
All	All	87522	0	58262	8614	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 60.

All (8614) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:A:3206:TEL:H11	33:A:3206:TEL:C14	1.64	1.28
10:A:1722:A:H2	10:A:1740:G:H5'	1.08	1.18
10:A:2287:A:N6	10:A:2344:U:H3	1.42	1.17
28:X:77:LYS:HG2	28:X:78:LYS:HG3	1.25	1.16
26:V:2:PHE:HB2	26:V:42:GLY:HA3	1.25	1.16
26:V:82:ARG:HH11	26:V:82:ARG:HG3	1.06	1.15
10:A:1286:A:O2'	10:A:1288:U:OP2	1.62	1.15
10:A:1899:G:H22	10:A:1902:C:N4	1.43	1.15
5:4:13:ARG:HA	15:G:101:ILE:HG13	1.25	1.14
25:U:92:ARG:HD2	26:V:11:GLN:HE21	1.05	1.13
33:A:3206:TEL:H11	33:A:3206:TEL:H142	1.26	1.13
25:U:92:ARG:HB3	26:V:11:GLN:NE2	1.64	1.13
24:T:50:ILE:HD11	24:T:102:ILE:HD11	1.22	1.12
17:I:88:ILE:HG13	17:I:121:LYS:HA	1.29	1.12

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:35:LYS:HD2	12:D:104:TYR:CD1	1.84	1.11
16:H:85:LYS:HD2	16:H:141:VAL:HG13	1.26	1.11
10:A:784:A:H5'	10:A:785:G:OP1	1.50	1.11
29:Y:45:VAL:HG22	29:Y:62:GLU:HB2	1.29	1.11
10:A:2701:C:H3'	10:A:2702:U:C5'	1.81	1.11
2:1:12:PRO:HD2	2:1:62:VAL:HG23	1.24	1.11
9:8:62:LEU:HD13	10:A:242:G:H5''	1.22	1.11
10:A:571:A:H5'	10:A:2030:A:H62	1.00	1.11
10:A:2565:A:H5''	10:A:2566:A:OP2	1.49	1.10
26:V:62:LEU:HB3	26:V:98:GLU:HA	1.33	1.10
10:A:669:G:H4'	10:A:670:A:OP2	1.51	1.10
18:N:42:TRP:HA	18:N:48:MET:HE1	1.10	1.09
10:A:2787:C:H1'	13:E:61:ARG:HB2	1.31	1.09
4:3:8:LEU:HD13	4:3:31:LEU:HD23	1.29	1.09
10:A:1403:C:H5''	10:A:1471:A:H1'	1.30	1.09
14:F:101:LEU:HD12	14:F:102:PRO:HD2	1.33	1.09
10:A:71:A:H8	10:A:71:A:H5'	1.15	1.09
20:P:23:PRO:HB2	20:P:33:ARG:HG3	1.30	1.08
26:V:79:VAL:O	26:V:80:GLN:HB3	1.52	1.08
12:D:27:THR:HG21	12:D:83:GLU:HG2	1.25	1.08
10:A:49:A:H4'	10:A:50:U:H5'	1.32	1.08
10:A:631:A:OP1	20:P:64:LYS:HE2	1.54	1.08
18:N:65:LYS:O	18:N:69:GLN:HB2	1.53	1.08
10:A:996:A:H4'	25:U:92:ARG:NE	1.68	1.08
26:V:2:PHE:HB2	26:V:42:GLY:CA	1.83	1.08
10:A:2317:C:H2'	10:A:2318:G:H5''	1.32	1.07
10:A:229:A:H5'	10:A:230:U:H5'	1.35	1.07
10:A:1899:G:N2	10:A:1902:C:H41	1.52	1.07
10:A:2415:G:H4'	20:P:67:MET:H	1.16	1.07
14:F:24:LEU:HB3	14:F:25:PRO:HD2	1.33	1.06
20:P:16:ARG:HG3	20:P:16:ARG:HH11	1.02	1.06
25:U:83:LEU:HG	25:U:88:ILE:HG12	1.34	1.06
23:S:74:ALA:HB1	23:S:103:GLU:HG3	1.29	1.06
10:A:1210:A:H8	10:A:1210:A:H5'	1.13	1.06
10:A:1481:U:H5'	10:A:1482:G:OP2	1.56	1.06
27:W:59:VAL:HG12	27:W:60:ASN:H	1.19	1.06
7:6:10:LEU:H	7:6:10:LEU:HD22	1.21	1.05
10:A:27:G:N2	10:A:512:G:H2'	1.70	1.05
10:A:1332:G:N2	10:A:1610:A:C8	2.25	1.05
21:Q:141:GLN:HB3	30:Z:70:LEU:HD13	1.38	1.05
10:A:1826:G:H4'	12:D:242:ARG:HH21	1.22	1.05
20:P:29:LYS:HD2	20:P:29:LYS:H	1.20	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:942:G:H5'	20:P:35:HIS:HB2	1.38	1.04
12:D:25:THR:HG21	12:D:81:ALA:HB1	1.07	1.04
29:Y:28:LYS:HD3	29:Y:28:LYS:H	1.22	1.04
27:W:75:TYR:CE1	27:W:104:THR:HB	1.92	1.04
26:V:71:LEU:HD13	26:V:72:VAL:H	1.21	1.04
10:A:370:G:H4'	10:A:371:A:OP2	1.55	1.04
11:B:74:U:H2'	11:B:75:G:H5''	1.40	1.04
10:A:2275:C:O2'	21:Q:83:MET:HA	1.56	1.04
5:4:25:TYR:HA	15:G:109:VAL:HG22	1.34	1.04
6:5:16:ARG:HH11	6:5:16:ARG:HG2	1.21	1.04
10:A:285:C:H2'	10:A:286:C:H5''	1.39	1.04
10:A:2206:G:N2	10:A:2207:G:H5'	1.70	1.04
8:7:28:ARG:HG3	8:7:28:ARG:HH11	0.89	1.04
14:F:67:GLN:O	14:F:67:GLN:HG3	1.50	1.03
11:B:65:C:N4	11:B:109:C:H2'	1.73	1.03
13:E:51:PHE:HB3	13:E:76:ARG:HB3	1.41	1.03
20:P:38:GLN:HG3	20:P:39:LYS:H	1.23	1.03
30:Z:151:HIS:HB3	30:Z:170:THR:HA	1.41	1.02
29:Y:37:VAL:O	29:Y:38:ILE:HB	1.56	1.02
10:A:1278:A:OP1	22:R:36:THR:HG22	1.58	1.02
10:A:954:G:H5''	21:Q:13:GLN:HG2	1.41	1.01
14:F:66:PRO:O	14:F:67:GLN:HB3	1.60	1.01
26:V:19:LYS:HG3	26:V:20:LEU:H	1.18	1.01
30:Z:19:ARG:HH11	30:Z:19:ARG:HG2	1.25	1.01
18:N:91:LEU:HA	18:N:95:PRO:HB3	1.38	1.01
10:A:2567:G:H2'	10:A:2568:C:C6	1.95	1.01
29:Y:71:LYS:HZ2	29:Y:71:LYS:HB2	1.21	1.01
14:F:65:TRP:CZ3	14:F:75:HIS:HD2	1.78	1.01
3:2:26:ARG:CZ	3:2:29:LYS:HE2	1.88	1.01
18:N:120:LEU:HD11	18:N:122:VAL:HG23	1.38	1.01
1:0:41:ARG:HD2	1:0:41:ARG:H	1.23	1.01
10:A:1146:C:H2'	10:A:1147:C:H5'	1.42	1.01
10:A:1228:G:H2'	10:A:1229:G:H5''	1.42	1.01
10:A:2631:G:N2	13:E:61:ARG:HH12	1.58	1.00
29:Y:9:LYS:HA	29:Y:30:VAL:HG21	1.42	1.00
6:5:2:ALA:HA	10:A:2015:A:H1'	1.44	1.00
26:V:75:PHE:CE1	26:V:89:GLN:HB3	1.96	1.00
20:P:59:LEU:HA	20:P:61:ARG:NH1	1.77	1.00
10:A:1722:A:C2	10:A:1740:G:H5'	1.97	1.00
11:B:15:A:H5'	11:B:16:G:C8	1.97	1.00
9:8:25:MET:HG3	20:P:64:LYS:HB3	1.43	1.00
7:6:10:LEU:HD12	9:8:35:GLN:HE22	1.25	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2808:U:H5'	10:A:2891:G:O6	1.61	1.00
27:W:59:VAL:HG12	27:W:60:ASN:N	1.73	1.00
33:A:3206:TEL:C1	33:A:3206:TEL:H143	1.86	1.00
10:A:2801:A:H4'	10:A:2801(A):A:H5'	1.44	1.00
10:A:2701:C:C3'	10:A:2702:U:H5''	1.91	0.99
20:P:16:ARG:HD3	20:P:18:ARG:HB2	1.41	0.99
2:1:49:VAL:HG11	10:A:2091:U:O2'	1.62	0.99
13:E:93:VAL:H	13:E:95:ILE:HD12	1.26	0.99
10:A:1115:G:H2'	10:A:1116:C:H6	1.26	0.99
12:D:108:PRO:HB3	12:D:143:HIS:HE1	1.28	0.99
20:P:51:PHE:HB3	20:P:52:GLU:OE2	1.63	0.98
17:I:82:ARG:HD2	17:I:89:TYR:OH	1.60	0.98
10:A:745:G:H22	33:A:3206:TEL:H51	1.25	0.98
19:O:111:PHE:HB3	19:O:114:ILE:HG12	1.42	0.98
10:A:2781:A:H5'	10:A:2782:G:H5'	1.45	0.98
29:Y:31:LEU:HB3	29:Y:32:PRO:HA	1.43	0.98
19:O:10:VAL:HG21	19:O:16:ALA:O	1.62	0.98
21:Q:75:THR:HA	21:Q:88:GLY:HA2	1.45	0.98
10:A:1158:C:H2'	10:A:1159:U:H5'	1.46	0.98
7:6:15:GLU:OE1	7:6:18:ARG:HG3	1.64	0.98
10:A:806:C:OP2	20:P:39:LYS:HD2	1.63	0.98
12:D:30:GLU:HG3	12:D:63:ARG:NE	1.77	0.97
23:S:29:PHE:N	23:S:89:ARG:HD2	1.80	0.97
29:Y:45:VAL:CG2	29:Y:62:GLU:HB2	1.94	0.97
33:A:3206:TEL:C1	33:A:3206:TEL:C14	2.30	0.97
8:7:28:ARG:HG3	8:7:28:ARG:NH1	1.67	0.97
11:B:88:C:H2'	11:B:89:G:C8	1.99	0.97
10:A:1047:G:H21	10:A:1111:A:H62	1.04	0.97
29:Y:45:VAL:HG22	29:Y:62:GLU:CB	1.94	0.97
10:A:2394:C:OP1	20:P:63:PRO:HD2	1.62	0.97
13:E:132:HIS:CD2	13:E:135:HIS:CE1	2.53	0.97
10:A:1188:U:C2'	10:A:1189:A:H5'	1.94	0.97
10:A:925:C:H2'	10:A:926:A:H5''	1.45	0.97
2:1:41:ARG:HG3	2:1:41:ARG:HH11	1.29	0.97
10:A:996:A:O3'	25:U:92:ARG:HG3	1.65	0.96
10:A:1019:U:H3	10:A:1142(A):A:H62	0.97	0.96
10:A:2334:G:H21	23:S:18:ILE:HD11	1.30	0.96
12:D:27:THR:HG23	12:D:28:GLU:H	1.29	0.96
10:A:2327:A:H2'	10:A:2328:A:C8	2.01	0.96
9:8:25:MET:HB2	20:P:62:LEU:HD23	1.47	0.96
13:E:152:LYS:HD3	18:N:78:TYR:HB2	1.44	0.96
10:A:287:C:H42	10:A:354:G:H1	1.10	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1292:U:H2'	10:A:1293:C:C6	2.00	0.96
10:A:1779:U:H5	10:A:1784:A:N7	1.62	0.95
15:G:76:SER:HB2	15:G:83:ARG:HB3	1.48	0.95
10:A:996:A:H4'	25:U:92:ARG:HE	1.29	0.95
10:A:2701:C:H3'	10:A:2702:U:H5''	0.96	0.95
33:A:3206:TEL:H143	33:A:3206:TEL:O5	1.66	0.95
10:A:2317:C:C2'	10:A:2318:G:H5''	1.95	0.95
10:A:2729:G:H1'	13:E:187:ALA:HB2	1.48	0.95
9:8:62:LEU:HD13	10:A:242:G:C5'	1.96	0.95
18:N:56:ASN:H	18:N:125:GLY:HA3	1.29	0.95
11:B:67:G:C5	11:B:68:C:H5	1.84	0.95
13:E:36:ARG:HH21	13:E:88:GLY:HA2	1.29	0.95
3:2:56:GLN:HE21	3:2:56:GLN:HA	1.29	0.94
26:V:85:LYS:O	26:V:87:HIS:N	2.00	0.94
8:7:28:ARG:CG	8:7:28:ARG:HH11	1.79	0.94
10:A:903:C:H2'	10:A:904:C:H5''	1.45	0.94
10:A:1494:A:H4'	10:A:1495:A:OP1	1.66	0.94
10:A:1158:C:C2'	10:A:1159:U:H5'	1.97	0.94
13:E:154:LYS:HA	13:E:154:LYS:HE3	1.50	0.94
12:D:34:VAL:HG21	12:D:103:ARG:HA	1.46	0.94
10:A:860:U:H5	10:A:917:A:N7	1.65	0.94
22:R:4:LEU:HD13	22:R:4:LEU:O	1.67	0.94
10:A:1778:U:H2'	10:A:1784:A:N6	1.83	0.94
7:6:9:LEU:HD22	7:6:10:LEU:N	1.82	0.94
26:V:82:ARG:CG	26:V:82:ARG:HH11	1.80	0.94
10:A:2415:G:H4'	20:P:67:MET:N	1.82	0.94
11:B:15:A:H5'	11:B:16:G:H8	1.30	0.94
10:A:2681:C:H5	10:A:2725:A:H62	1.15	0.94
10:A:1414:G:H1	10:A:1588:C:H42	1.12	0.94
10:A:1690:A:H3'	10:A:1691:C:H6	1.33	0.94
10:A:1747(A):G:H2'	10:A:1748:G:H5''	1.50	0.94
21:Q:81:VAL:O	21:Q:82:ARG:HG2	1.68	0.93
15:G:106:LEU:HA	15:G:110:ALA:HB3	1.50	0.93
14:F:20:LEU:HD22	14:F:203:GLN:HE22	1.32	0.93
29:Y:95:LYS:HE2	29:Y:101:LYS:H	1.32	0.93
2:1:17:SER:O	2:1:44:PRO:HD2	1.67	0.93
10:A:1188:U:H2'	10:A:1189:A:H5'	1.50	0.93
26:V:72:VAL:HA	26:V:88:ARG:HH12	1.33	0.93
10:A:571:A:H5'	10:A:2030:A:N6	1.83	0.93
12:D:35:LYS:HD3	12:D:63:ARG:HB3	1.48	0.93
10:A:528:A:N1	10:A:2042:A:H2'	1.83	0.93
10:A:1146:C:C2'	10:A:1147:C:H5'	1.98	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:124:LYS:HG2	20:P:143:GLY:HA2	1.49	0.93
15:G:127:GLY:HA2	15:G:166:ASP:HB3	1.51	0.93
27:W:92:ARG:HH11	27:W:92:ARG:HG2	1.34	0.92
10:A:1568:G:H21	12:D:58:HIS:CE1	1.85	0.92
12:D:71:ASP:HB2	12:D:103:ARG:HH22	1.32	0.92
15:G:161:THR:HG23	15:G:163:ALA:H	1.35	0.92
10:A:1378:A:O2'	10:A:1379:A:H5''	1.69	0.92
10:A:71:A:C8	10:A:71:A:H5'	2.05	0.92
20:P:143:GLY:C	20:P:145:PRO:HD3	1.89	0.92
1:O:32:ARG:N	1:O:35:ASN:HD21	1.67	0.92
10:A:676:A:H2	10:A:802:A:H61	1.05	0.92
10:A:2199:A:H3'	10:A:2200:C:H6	1.33	0.92
10:A:2287:A:H62	10:A:2344:U:H3	1.00	0.92
3:2:49:LYS:HD2	3:2:53:LEU:HD22	1.50	0.92
6:5:40:LYS:HE3	6:5:49:CYS:SG	2.08	0.92
18:N:18:ALA:HB1	18:N:21:LYS:HB2	1.49	0.92
10:A:1224:C:O3'	26:V:88:ARG:HB3	1.69	0.92
25:U:93:LYS:H	25:U:93:LYS:HD3	1.34	0.92
10:A:83:G:N2	10:A:102:G:O2'	2.02	0.91
10:A:639:U:O2'	10:A:640:C:H5'	1.70	0.91
25:U:49:HIS:HA	25:U:52:ARG:HB2	1.51	0.91
10:A:1210:A:C8	10:A:1210:A:H5'	2.04	0.91
30:Z:10:ARG:HH21	30:Z:26:GLY:H	1.17	0.91
26:V:22:VAL:O	26:V:23:GLU:HB2	1.65	0.91
10:A:674:G:O2'	14:F:74:ARG:HG3	1.70	0.91
29:Y:47:LYS:HD2	29:Y:47:LYS:N	1.86	0.91
10:A:1945:G:C2'	10:A:1946:U:H5'	2.00	0.91
7:6:10:LEU:H	7:6:10:LEU:CD2	1.84	0.91
11:B:74:U:C2'	11:B:75:G:H5''	2.01	0.91
17:I:91:SER:HB2	17:I:119:PRO:HB2	1.53	0.91
10:A:1169:G:H1	10:A:1180:C:N4	1.68	0.91
20:P:58:THR:O	20:P:61:ARG:CZ	2.19	0.91
11:B:87:G:H3'	11:B:88:C:H5''	1.51	0.91
28:X:36:LYS:NZ	28:X:38:GLU:O	2.03	0.91
10:A:1902:C:O2'	12:D:244:ARG:HB2	1.70	0.91
12:D:35:LYS:NZ	12:D:104:TYR:HB2	1.86	0.91
10:A:1210:A:H8	10:A:1210:A:C5'	1.82	0.91
24:T:65:LYS:HE3	24:T:66:VAL:H	1.36	0.91
23:S:106:ARG:HG2	23:S:107:GLU:N	1.83	0.91
10:A:2567:G:H2'	10:A:2568:C:H6	1.35	0.91
10:A:1495:A:H2'	10:A:1496:A:N3	1.85	0.91
20:P:62:LEU:H	20:P:62:LEU:HD13	1.35	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:X:35:THR:HB	28:X:75:ASP:OD2	1.70	0.91
26:V:28:GLU:HB2	26:V:29:PRO:HD3	1.52	0.91
10:A:1115:G:H2'	10:A:1116:C:C6	2.05	0.91
10:A:1639:U:H2'	10:A:1640:C:H5''	1.49	0.91
3:2:56:GLN:HE21	3:2:56:GLN:CA	1.83	0.90
28:X:36:LYS:HD2	28:X:36:LYS:O	1.72	0.90
10:A:1429:G:H2'	10:A:1430:C:C6	2.06	0.90
10:A:1430:C:H2'	10:A:1431:U:C6	2.07	0.90
29:Y:75:ILE:HD11	29:Y:79:CYS:HA	1.52	0.90
26:V:82:ARG:NH1	26:V:82:ARG:HG3	1.83	0.90
13:E:117:MET:O	13:E:118:LYS:HB2	1.67	0.90
14:F:22:ALA:O	14:F:26:ALA:HB2	1.71	0.90
18:N:42:TRP:HB3	25:U:64:ARG:NH1	1.86	0.90
2:1:19:GLN:HE21	10:A:379:G:H21	1.11	0.90
10:A:1339:G:N2	10:A:1603:A:H1'	1.85	0.90
20:P:29:LYS:N	20:P:29:LYS:HD2	1.86	0.90
10:A:1019:U:HO2'	10:A:1021:A:H2	0.91	0.90
26:V:19:LYS:CG	26:V:20:LEU:H	1.84	0.90
2:1:19:GLN:HG3	2:1:44:PRO:HG3	1.51	0.90
29:Y:30:VAL:HG12	29:Y:31:LEU:H	1.36	0.90
20:P:16:ARG:HG3	20:P:16:ARG:NH1	1.74	0.90
10:A:1028:A:N6	10:A:1125:G:H2'	1.86	0.90
12:D:71:ASP:HB2	12:D:103:ARG:NH2	1.86	0.90
10:A:1509(A):A:H2'	10:A:1509(B):A:C8	2.06	0.90
20:P:121:LYS:HG2	20:P:122:PRO:HD2	1.54	0.90
20:P:118:GLY:O	20:P:119:GLU:HG2	1.70	0.90
18:N:42:TRP:HA	18:N:48:MET:CE	2.01	0.90
10:A:1678:G:N2	10:A:1989:G:H22	1.69	0.90
27:W:88:ARG:HB3	27:W:92:ARG:HB3	1.52	0.90
28:X:25:LYS:HE3	28:X:26:TYR:HE1	1.37	0.90
16:H:85:LYS:HD3	16:H:133:VAL:HB	1.53	0.90
2:1:13:ILE:HG12	2:1:14:VAL:N	1.86	0.90
10:A:2562:U:H1'	19:O:23:ARG:HH12	1.38	0.90
10:A:2523:G:H2'	10:A:2524:G:H5''	1.54	0.90
27:W:75:TYR:HE1	27:W:104:THR:HB	1.32	0.89
11:B:25:A:H2'	11:B:26:A:C8	2.07	0.89
12:D:44:ASN:HB3	12:D:49:ILE:HA	1.54	0.89
7:6:20:ASN:ND2	7:6:21:TYR:H	1.70	0.89
10:A:676:A:H8	10:A:2069:G:H21	0.92	0.89
21:Q:23:GLY:HA3	21:Q:99:PRO:O	1.72	0.89
10:A:2359:C:C2'	10:A:2360:A:H5'	2.03	0.89
10:A:1779:U:C5	10:A:1784:A:N7	2.39	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:27:THR:CG2	12:D:28:GLU:H	1.85	0.89
25:U:92:ARG:HD2	26:V:11:GLN:NE2	1.86	0.89
10:A:2830:G:H5'	10:A:2830:G:H8	1.37	0.89
3:2:33:MET:HG2	28:X:11:PRO:HD2	1.53	0.89
10:A:2468:G:H5''	21:Q:120:ILE:HD12	1.54	0.89
10:A:1771:C:HO2'	10:A:1786:A:H8	1.18	0.89
10:A:2506:U:H4'	10:A:2507:C:OP1	1.71	0.89
12:D:25:THR:HG22	12:D:82:ILE:O	1.73	0.89
10:A:1688:U:H1'	10:A:1701:A:C6	2.07	0.89
10:A:796:C:H2'	10:A:797:C:C6	2.08	0.89
2:1:78:LYS:HG2	10:A:271(R):G:H4'	1.54	0.89
4:3:8:LEU:HB2	4:3:28:LEU:HD13	1.55	0.89
10:A:1568:G:H21	12:D:58:HIS:HE1	1.16	0.89
3:2:16:LEU:N	3:2:18:PRO:HD2	1.87	0.89
26:V:19:LYS:HG3	26:V:20:LEU:N	1.88	0.88
28:X:12:VAL:HG12	28:X:27:THR:O	1.73	0.88
10:A:2829:C:H2'	10:A:2830:G:H5''	1.56	0.88
25:U:75:ASN:HB2	25:U:78:THR:OG1	1.74	0.88
10:A:579:G:H2'	10:A:580:C:C6	2.09	0.88
10:A:662:G:OP1	20:P:18:ARG:HD2	1.74	0.88
20:P:30:THR:HG22	20:P:31:ALA:H	1.37	0.88
17:I:88:ILE:HG13	17:I:121:LYS:CA	2.03	0.88
12:D:25:THR:HG23	12:D:27:THR:HB	1.53	0.88
17:I:133:HIS:HB2	17:I:134:PRO:CD	2.02	0.88
25:U:83:LEU:CG	25:U:88:ILE:HG12	2.04	0.88
10:A:2656:U:H3	10:A:2665:A:H2	1.21	0.88
12:D:80:ALA:HB3	12:D:94:LEU:HD13	1.54	0.88
29:Y:17:SER:HB3	29:Y:71:LYS:HD2	1.53	0.88
27:W:18:ARG:HG2	27:W:18:ARG:HH11	1.36	0.88
30:Z:27:VAL:HG23	30:Z:36:LYS:HA	1.54	0.88
30:Z:53:ILE:CG2	30:Z:71:VAL:HB	2.03	0.87
24:T:91:ARG:HB3	24:T:116:ALA:HA	1.53	0.87
30:Z:53:ILE:HG22	30:Z:71:VAL:HB	1.56	0.87
10:A:1411:C:H2'	10:A:1412:A:C8	2.09	0.87
12:D:244:ARG:HG2	12:D:245:PRO:HD3	1.55	0.87
10:A:2265:U:H4'	21:Q:13:GLN:HE22	1.39	0.87
29:Y:81:LYS:HG2	29:Y:96:ILE:HG22	1.55	0.87
20:P:47:ASP:HB3	20:P:48:PRO:C	1.94	0.87
28:X:82:GLN:O	28:X:85:PRO:HD2	1.74	0.87
17:I:82:ARG:HB3	17:I:89:TYR:HE1	1.39	0.87
10:A:1833:U:H2'	10:A:1834:U:H6	1.40	0.87
20:P:105:LEU:HD12	20:P:105:LEU:H	1.38	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:38:THR:HG22	13:E:40:GLU:H	1.38	0.87
10:A:2870:C:H2'	10:A:2871:C:H5'	1.54	0.87
9:8:59:LYS:HD3	20:P:50:ARG:HB3	1.57	0.87
10:A:1796:U:H2'	10:A:1797:C:C6	2.09	0.87
22:R:5:LYS:N	22:R:5:LYS:HD2	1.90	0.87
24:T:33:LYS:HB3	24:T:41:ARG:HB3	1.56	0.87
10:A:1022:G:H22	10:A:1142(A):A:H2	1.22	0.87
12:D:27:THR:HG23	12:D:28:GLU:N	1.89	0.87
9:8:31:HIS:CG	10:A:2419:U:O4	2.26	0.87
10:A:2068:U:H3	10:A:2430:A:H2	1.16	0.87
4:3:19:GLN:O	4:3:23:LEU:HD12	1.75	0.87
10:A:848:G:H2'	10:A:849:A:C8	2.10	0.87
10:A:1509(A):A:H2'	10:A:1509(B):A:H8	1.39	0.87
10:A:288:C:H42	10:A:353:G:H1	1.21	0.87
24:T:29:ARG:CB	24:T:85:LYS:HA	2.05	0.87
22:R:71:GLN:HE21	22:R:71:GLN:HA	1.39	0.87
28:X:77:LYS:CG	28:X:78:LYS:HG3	2.05	0.87
10:A:69:C:O2	10:A:69:C:H2'	1.73	0.86
10:A:61:G:H1	10:A:94:C:H42	1.23	0.86
2:1:64:ALA:O	2:1:65:SER:HB3	1.74	0.86
1:0:74:ARG:HG2	11:B:12:C:O2'	1.75	0.86
18:N:18:ALA:HB3	18:N:26:LEU:HD22	1.54	0.86
10:A:1747(A):G:C2'	10:A:1748:G:H5''	2.04	0.86
12:D:25:THR:HG21	12:D:81:ALA:CB	2.00	0.86
11:B:94:C:H2'	11:B:95:C:H6	1.40	0.86
27:W:9:TYR:H	27:W:102:HIS:CD2	1.94	0.86
10:A:743:G:C2'	10:A:744:G:H5'	2.05	0.86
10:A:2753:A:O2'	10:A:2754:U:H5'	1.75	0.86
14:F:184:TYR:CE2	14:F:188:ARG:HD2	2.10	0.86
3:2:51:ARG:O	3:2:52:ASP:HB3	1.76	0.86
10:A:2317:C:H2'	10:A:2318:G:C5'	2.05	0.86
21:Q:141:GLN:HE22	30:Z:89:PHE:HB3	1.41	0.86
30:Z:74:VAL:HG22	30:Z:86:VAL:HG12	1.54	0.86
10:A:1169:G:H1	10:A:1180:C:H42	0.86	0.86
24:T:88:ILE:HG22	24:T:89:VAL:N	1.91	0.86
12:D:77:ALA:HB2	12:D:97:TYR:CD2	2.10	0.86
16:H:106:THR:HG22	16:H:112:PRO:HB3	1.56	0.86
10:A:2324:C:H5''	10:A:2325:G:H5'	1.57	0.86
18:N:42:TRP:CA	18:N:48:MET:HE1	2.01	0.86
13:E:52:LEU:HB2	13:E:76:ARG:HB2	1.58	0.86
22:R:11:ASN:OD1	22:R:12:ARG:N	2.09	0.86
10:A:993:G:N3	26:V:91:TYR:HE1	1.72	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:795:C:O2'	10:A:796:C:H5'	1.76	0.86
3:2:26:ARG:HG3	28:X:5:TYR:O	1.76	0.85
29:Y:71:LYS:HB2	29:Y:71:LYS:NZ	1.87	0.85
10:A:954:G:H5''	21:Q:13:GLN:CG	2.06	0.85
10:A:2830:G:H5'	10:A:2830:G:C8	2.09	0.85
19:O:104:ARG:CZ	24:T:33:LYS:HD2	2.05	0.85
21:Q:24:GLY:HA3	30:Z:78:LYS:HD3	1.58	0.85
10:A:1190:G:H4'	20:P:35:HIS:HB3	1.56	0.85
10:A:1658:C:OP1	13:E:132:HIS:CE1	2.29	0.85
3:2:57:ILE:HG12	3:2:59:ARG:NH1	1.91	0.85
10:A:107:C:H2'	10:A:108:U:H6	1.41	0.85
3:2:25:VAL:HG13	3:2:26:ARG:HD3	1.57	0.85
23:S:63:THR:HA	23:S:66:ALA:HB3	1.57	0.85
10:A:1569:A:H5'	12:D:61:LEU:HD21	1.56	0.85
21:Q:140:ALA:HB3	30:Z:53:ILE:HG13	1.59	0.85
10:A:1040:C:N4	10:A:1116:C:H42	1.73	0.85
10:A:1639:U:C2'	10:A:1640:C:H5''	2.06	0.85
10:A:1434:A:H61	10:A:1558:A:N6	1.73	0.85
20:P:59:LEU:HA	20:P:61:ARG:HH11	1.40	0.85
9:8:35:GLN:HE21	9:8:36:LYS:HZ3	1.21	0.85
2:1:9:GLY:O	2:1:10:LYS:HB3	1.77	0.85
10:A:2206:G:C2	10:A:2207:G:H5'	2.11	0.85
2:1:19:GLN:OE1	2:1:44:PRO:HB3	1.76	0.85
10:A:1171:G:OP2	10:A:1171:G:H8	1.59	0.85
20:P:58:THR:O	20:P:61:ARG:NE	2.10	0.85
10:A:2523:G:C2'	10:A:2524:G:H5''	2.07	0.85
10:A:2287:A:N6	10:A:2344:U:N3	2.24	0.85
10:A:2564:A:C2	10:A:2647:U:H4'	2.10	0.85
21:Q:20:ALA:HB2	21:Q:99:PRO:HG2	1.56	0.85
17:I:72:LEU:HD13	17:I:75:LEU:HB3	1.58	0.85
13:E:38:THR:HB	13:E:41:LYS:HG3	1.59	0.85
9:8:14:VAL:HG11	9:8:22:VAL:HG13	1.59	0.85
10:A:27:G:N2	10:A:512:G:C2'	2.38	0.85
10:A:1458:C:H4'	10:A:1459:G:C4	2.11	0.85
26:V:72:VAL:C	26:V:88:ARG:HH22	1.80	0.85
24:T:55:ASN:N	24:T:59:THR:HB	1.90	0.85
33:A:3206:TEL:O18	33:A:3206:TEL:H382	1.76	0.84
10:A:774:A:H2	10:A:787:U:O2'	1.59	0.84
16:H:44:VAL:HG12	16:H:45:VAL:H	1.42	0.84
9:8:4:MET:SD	9:8:61:LEU:HD12	2.17	0.84
10:A:942:G:O2'	10:A:943:U:H5'	1.77	0.84
20:P:95:VAL:HA	20:P:99:LEU:HD23	1.59	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:O:13:ASN:HD21	19:O:97:ARG:N	1.75	0.84
10:A:1528:A:N1	10:A:1544:A:N6	2.25	0.84
10:A:1501:C:H2'	10:A:1502:C:H6	1.40	0.84
10:A:2680:C:H5'	13:E:189:PRO:HA	1.59	0.84
10:A:2199:A:H3'	10:A:2200:C:C6	2.12	0.84
14:F:185:ASP:HA	14:F:188:ARG:HD3	1.58	0.84
10:A:587:C:H4'	10:A:588:U:OP2	1.75	0.84
4:3:8:LEU:HD13	4:3:31:LEU:HA	1.58	0.84
13:E:111:ARG:HA	22:R:2:ARG:HG3	1.59	0.84
10:A:2712:U:H5'	10:A:2712:U:O2	1.77	0.84
12:D:147:LEU:HD13	12:D:155:LEU:HD11	1.57	0.84
26:V:47:VAL:HG13	26:V:48:GLY:H	1.42	0.84
14:F:89:VAL:HG12	14:F:90:PHE:N	1.91	0.84
18:N:120:LEU:CD1	18:N:122:VAL:HG23	2.07	0.84
10:A:910:A:H62	21:Q:12:GLN:HA	1.42	0.84
10:A:2723:C:H5''	22:R:2:ARG:CD	2.06	0.84
9:8:25:MET:HG3	20:P:64:LYS:CB	2.08	0.84
10:A:141:A:H8	10:A:1408:C:HO2'	1.20	0.84
10:A:911:A:C6	21:Q:9:TYR:HE2	1.94	0.84
10:A:1528(A):A:H3'	10:A:1529:G:H5''	1.59	0.84
10:A:1019:U:H3	10:A:1142(A):A:N6	1.75	0.84
14:F:101:LEU:HD12	14:F:102:PRO:CD	2.08	0.84
2:1:89:GLU:CD	2:1:89:GLU:H	1.81	0.84
11:B:75:G:H8	11:B:75:G:H5'	1.41	0.84
21:Q:8:LYS:HD2	21:Q:9:TYR:H	1.42	0.84
2:1:41:ARG:HG3	2:1:41:ARG:NH1	1.87	0.84
10:A:1024:G:H3'	10:A:1025:G:H5''	1.59	0.84
2:1:27:GLU:OE2	2:1:32:LYS:HB2	1.76	0.84
20:P:71:VAL:HG12	20:P:72:PRO:HD3	1.59	0.84
3:2:30:ARG:HD2	3:2:30:ARG:H	1.42	0.84
2:1:64:ALA:HA	2:1:67:ILE:HG13	1.60	0.84
14:F:24:LEU:HB3	14:F:25:PRO:CD	2.07	0.84
10:A:330:A:H2	10:A:1210:A:H2'	1.42	0.84
11:B:17:C:H2'	11:B:17:C:O2	1.78	0.84
10:A:2801(A):A:H4'	10:A:2802:G:H5'	1.60	0.84
12:D:131:LEU:HB2	12:D:136:ILE:HD11	1.59	0.84
18:N:13:TRP:O	18:N:135:PRO:HG2	1.78	0.84
10:A:1028:A:H61	10:A:1125:G:H2'	1.42	0.83
2:1:26:ARG:HB3	2:1:34:THR:HA	1.57	0.83
10:A:2359:C:H2'	10:A:2360:A:H5'	1.59	0.83
23:S:97:ARG:HE	23:S:97:ARG:C	1.81	0.83
10:A:1047:G:N2	10:A:1111:A:H62	1.74	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1973:G:H2'	10:A:1974:C:H6	1.42	0.83
16:H:66:GLY:HA2	16:H:69:ARG:HB2	1.59	0.83
10:A:2632:A:H1'	13:E:61:ARG:NH1	1.94	0.83
10:A:966:G:H2'	10:A:967:C:H6	1.41	0.83
15:G:92:VAL:HG22	15:G:93:THR:H	1.43	0.83
15:G:16:ARG:HA	15:G:19:LEU:HD12	1.60	0.83
10:A:1170:G:H1	10:A:1179:C:H42	1.24	0.83
9:8:34:TRP:O	9:8:35:GLN:HB2	1.75	0.83
10:A:142:A:C8	10:A:1408:C:H1'	2.13	0.83
29:Y:37:VAL:HG11	29:Y:72:VAL:HG21	1.60	0.83
10:A:2875:C:H4'	24:T:5:ALA:HB2	1.59	0.83
10:A:1459:G:C8	10:A:1461:G:H1'	2.14	0.83
12:D:35:LYS:CD	12:D:104:TYR:CD1	2.61	0.83
3:2:14:ARG:O	3:2:18:PRO:HD3	1.78	0.83
3:2:56:GLN:NE2	3:2:56:GLN:HA	1.92	0.83
10:A:1882:C:H2'	10:A:1882:C:O2	1.76	0.83
10:A:1022:G:N2	10:A:1142(A):A:C2	2.46	0.83
12:D:35:LYS:HD3	12:D:63:ARG:CB	2.08	0.83
10:A:1973:G:H2'	10:A:1974:C:C6	2.13	0.83
22:R:9:LYS:O	22:R:10:LEU:HG	1.79	0.83
10:A:38:A:H2'	10:A:39:C:C6	2.13	0.83
14:F:198:ALA:O	14:F:201:VAL:HG12	1.79	0.83
10:A:1406:U:H2'	10:A:1407:C:C6	2.13	0.83
30:Z:44:PHE:CZ	30:Z:86:VAL:HG11	2.14	0.83
28:X:70:LEU:HG	28:X:71:GLY:N	1.92	0.83
10:A:2524:G:H8	10:A:2524:G:H5'	1.44	0.83
7:6:51:GLU:HG2	7:6:52:VAL:H	1.44	0.83
12:D:65:ILE:HD11	12:D:67:PHE:CD1	2.14	0.83
10:A:1980:G:O2'	10:A:1982:C:OP2	1.96	0.83
10:A:150:C:H2'	10:A:151:C:H6	1.43	0.83
10:A:455:C:N3	10:A:473:G:H5'	1.93	0.83
10:A:1952:A:C5	19:O:22:ILE:HD11	2.14	0.83
20:P:101:VAL:HB	20:P:107:LYS:H	1.44	0.82
25:U:92:ARG:HB3	26:V:11:GLN:HE21	1.36	0.82
10:A:1499:C:O2'	10:A:1500:G:H5'	1.79	0.82
30:Z:101:PRO:O	30:Z:102:LEU:HD23	1.79	0.82
11:B:36:C:H2'	11:B:37:C:C5	2.14	0.82
11:B:67:G:C4	11:B:68:C:H5	1.97	0.82
10:A:1410:G:H1	10:A:1592:C:H42	1.25	0.82
16:H:89:ILE:HD13	16:H:90:LYS:H	1.42	0.82
3:2:26:ARG:CG	28:X:5:TYR:HB3	2.09	0.82
10:A:1388:G:O2'	10:A:1389:G:H5'	1.80	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:142:A:H1'	10:A:1408:C:O4'	1.80	0.82
15:G:47:LYS:HD3	15:G:81:LYS:HD2	1.60	0.82
10:A:171:G:H2'	10:A:172:C:O4'	1.79	0.82
19:O:65:THR:HA	19:O:82:ASN:HB3	1.60	0.82
10:A:1332:G:N2	10:A:1610:A:H8	1.74	0.82
10:A:860:U:C5	10:A:917:A:N7	2.47	0.82
10:A:343:C:H2'	10:A:344:G:H5'	1.61	0.82
11:B:37:C:H2'	11:B:37:C:O2	1.80	0.82
29:Y:31:LEU:HB3	29:Y:32:PRO:CA	2.08	0.82
21:Q:24:GLY:CA	30:Z:78:LYS:HA	2.09	0.82
21:Q:30:GLY:HA2	21:Q:107:ALA:HB2	1.62	0.82
17:I:77:LEU:HD21	17:I:101:LEU:HD13	1.62	0.82
15:G:60:LEU:O	15:G:64:THR:HG22	1.80	0.82
2:1:34:THR:HG23	10:A:388:G:OP1	1.79	0.82
9:8:32:LEU:C	9:8:34:TRP:H	1.80	0.82
10:A:142:A:H5'	10:A:142(A):C:OP2	1.80	0.82
12:D:70:TRP:CH2	12:D:150:LYS:HA	2.15	0.82
10:A:71:A:H2	28:X:31:HIS:CE1	1.97	0.82
28:X:33:LYS:C	28:X:35:THR:H	1.81	0.82
25:U:83:LEU:HB3	25:U:88:ILE:HD11	1.62	0.82
13:E:104:VAL:HG11	13:E:188:VAL:HG23	1.62	0.82
10:A:2463:C:C2'	10:A:2464:C:H5'	2.09	0.82
10:A:2580:U:C5'	13:E:131:ALA:H	1.92	0.82
10:A:1740:G:H3'	10:A:1741:A:C8	2.14	0.81
2:1:10:LYS:HD2	2:1:14:VAL:HA	1.62	0.81
10:A:2317:C:O2	10:A:2317:C:H2'	1.80	0.81
10:A:286:C:H42	10:A:355:G:H1	1.27	0.81
10:A:1887:C:H2'	10:A:1888:G:C5'	2.10	0.81
9:8:14:VAL:CG1	9:8:22:VAL:HG13	2.10	0.81
10:A:1021:A:H3'	10:A:1021:A:H8	1.45	0.81
28:X:41:ASN:HA	28:X:44:GLU:HG2	1.60	0.81
10:A:620:G:N3	10:A:620:G:H5''	1.95	0.81
12:D:25:THR:CG2	12:D:81:ALA:HB1	2.01	0.81
2:1:85:LEU:HB3	2:1:87:PRO:HG3	1.62	0.81
10:A:2523:G:H2'	10:A:2524:G:C5'	2.10	0.81
9:8:52:LYS:N	9:8:53:PRO:HD2	1.96	0.81
9:8:61:LEU:HD13	10:A:593:G:H4'	1.60	0.81
29:Y:46:LYS:C	29:Y:47:LYS:HZ3	1.83	0.81
17:I:102:SER:HA	17:I:107:VAL:O	1.80	0.81
2:1:76:ARG:HB3	2:1:78:LYS:HE3	1.61	0.81
26:V:32:THR:HG22	26:V:33:VAL:H	1.45	0.81
23:S:39:ILE:HG12	23:S:73:LEU:HD11	1.60	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:Y:39:VAL:HG12	29:Y:40:GLU:N	1.93	0.81
10:A:2870:C:C2'	10:A:2871:C:H5'	2.10	0.81
10:A:1654:A:OP1	22:R:3:HIS:HB2	1.81	0.81
20:P:146:VAL:HG13	20:P:147:LEU:H	1.43	0.81
10:A:2012:G:H4'	27:W:96:ILE:HD11	1.63	0.81
10:A:229:A:H5'	10:A:230:U:C5'	2.10	0.81
25:U:64:ARG:CZ	25:U:64:ARG:HA	2.10	0.81
12:D:108:PRO:HB3	12:D:143:HIS:CE1	2.15	0.81
28:X:70:LEU:HG	28:X:71:GLY:H	1.46	0.81
14:F:65:TRP:CZ3	14:F:75:HIS:CD2	2.68	0.81
10:A:1313:U:H2'	10:A:1610:A:C2	2.16	0.81
10:A:150:C:H2'	10:A:151:C:C6	2.16	0.81
10:A:2854:G:H2'	10:A:2855:C:H6	1.44	0.81
26:V:19:LYS:HE2	26:V:20:LEU:HD12	1.63	0.81
10:A:1902:C:H1'	12:D:244:ARG:HD3	1.60	0.81
10:A:2334:G:H21	23:S:18:ILE:CD1	1.94	0.81
10:A:1797:C:C2'	10:A:1798:U:H5'	2.11	0.81
26:V:24:LYS:HE3	26:V:68:LYS:HE3	1.63	0.81
24:T:50:ILE:HD11	24:T:102:ILE:CD1	2.09	0.81
19:O:23:ARG:HH11	19:O:23:ARG:CG	1.94	0.81
10:A:2346:A:H5''	10:A:2383:G:H1'	1.63	0.81
20:P:83:VAL:CG1	20:P:112:LEU:HD21	2.11	0.81
10:A:997:G:C2'	10:A:998:C:H5'	2.10	0.81
10:A:1820:U:H4'	10:A:1821:A:OP2	1.81	0.81
10:A:1658:C:OP1	13:E:132:HIS:ND1	2.13	0.80
12:D:17:THR:HG23	12:D:205:VAL:H	1.44	0.80
16:H:33:LEU:HD11	16:H:136:ILE:O	1.81	0.80
28:X:72:LYS:HG3	28:X:73:ARG:N	1.95	0.80
12:D:65:ILE:HD11	12:D:67:PHE:CE1	2.16	0.80
10:A:1482:G:H22	10:A:1507:A:H1'	1.47	0.80
21:Q:22:LYS:HE2	21:Q:22:LYS:HA	1.62	0.80
10:A:1786:A:H1'	10:A:1938:A:N6	1.95	0.80
10:A:2236:C:H2'	10:A:2237:G:H5'	1.61	0.80
13:E:134:ILE:H	13:E:134:ILE:HD13	1.46	0.80
33:A:3206:TEL:C57	33:A:3206:TEL:O48	2.30	0.80
2:1:86:SER:N	2:1:87:PRO:HD3	1.96	0.80
10:A:2652:C:C2'	10:A:2653:U:H5'	2.10	0.80
10:A:2206:G:H21	10:A:2207:G:H5'	1.42	0.80
26:V:52:VAL:O	26:V:53:GLU:HB3	1.79	0.80
18:N:83:LYS:HE2	18:N:85:ILE:HD11	1.64	0.80
33:A:3206:TEL:O18	33:A:3206:TEL:H332	1.82	0.80
20:P:30:THR:HG22	20:P:31:ALA:N	1.96	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:911:A:H2'	21:Q:9:TYR:OH	1.82	0.80
10:A:903:C:C2'	10:A:904:C:H5''	2.11	0.80
10:A:481:G:OP2	29:Y:47:LYS:HE2	1.81	0.80
14:F:65:TRP:HZ3	14:F:75:HIS:HD2	1.29	0.80
23:S:89:ARG:HE	23:S:89:ARG:HA	1.46	0.80
10:A:2752:C:H2'	10:A:2752:C:O2	1.78	0.80
10:A:157:U:H5''	10:A:171:G:H22	1.44	0.80
17:I:3:VAL:HG12	17:I:38:LEU:HA	1.62	0.80
9:8:62:LEU:CD1	10:A:242:G:H5''	2.09	0.80
29:Y:8:LYS:HE2	29:Y:72:VAL:HG23	1.63	0.80
24:T:118:ARG:HA	24:T:121:ILE:HB	1.64	0.80
7:6:12:GLU:HA	7:6:23:THR:HA	1.64	0.80
10:A:751:A:H5'	27:W:90:ARG:HA	1.63	0.80
10:A:2632:A:H1'	13:E:61:ARG:CZ	2.11	0.80
1:0:41:ARG:CD	1:0:41:ARG:H	1.94	0.80
15:G:85:GLY:O	15:G:87:PRO:HD2	1.80	0.80
28:X:63:LYS:HD2	28:X:70:LEU:HD13	1.63	0.80
7:6:10:LEU:HD22	7:6:10:LEU:N	1.97	0.80
10:A:2068:U:N3	10:A:2430:A:H2	1.78	0.80
15:G:111:LEU:HA	15:G:114:ILE:HG13	1.63	0.80
10:A:2829:C:C2'	10:A:2830:G:H5''	2.11	0.80
27:W:9:TYR:H	27:W:102:HIS:HD2	1.26	0.80
7:6:12:GLU:HB3	7:6:23:THR:HG22	1.63	0.80
10:A:2415:G:C4'	20:P:67:MET:H	1.94	0.80
3:2:49:LYS:HD2	3:2:53:LEU:CD2	2.12	0.80
11:B:36:C:H2'	11:B:37:C:C6	2.17	0.80
13:E:59:VAL:HG22	13:E:63:LEU:HA	1.62	0.80
10:A:743:G:H2'	10:A:744:G:H5'	1.64	0.80
20:P:112:LEU:HD22	20:P:113:LYS:N	1.97	0.80
12:D:35:LYS:HD3	12:D:63:ARG:CA	2.12	0.80
21:Q:48:GLU:O	21:Q:52:VAL:HG12	1.81	0.80
10:A:1022:G:N2	10:A:1142(A):A:H2	1.80	0.79
26:V:66:ARG:HB3	26:V:95:LEU:O	1.81	0.79
12:D:54:ARG:O	12:D:218:ARG:HG3	1.82	0.79
24:T:28:VAL:HG22	24:T:46:GLU:HA	1.64	0.79
10:A:322:A:H5'	10:A:340:A:H1'	1.65	0.79
13:E:101:ARG:HD3	13:E:169:ASN:O	1.82	0.79
33:A:3206:TEL:O18	33:A:3206:TEL:C38	2.30	0.79
10:A:2808:U:O2'	10:A:2809:A:H5'	1.81	0.79
30:Z:126:VAL:HA	30:Z:164:ALA:HB3	1.64	0.79
27:W:75:TYR:HE1	27:W:104:THR:CB	1.95	0.79
1:0:31:VAL:HB	1:0:35:ASN:ND2	1.96	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1173:G:H5'	10:A:1174:A:OP2	1.82	0.79
14:F:160:ASN:C	14:F:160:ASN:HD22	1.85	0.79
20:P:62:LEU:N	20:P:62:LEU:HD13	1.96	0.79
10:A:2415:G:O3'	20:P:66:GLY:HA3	1.83	0.79
25:U:92:ARG:CD	26:V:11:GLN:HE21	1.92	0.79
2:1:85:LEU:HB3	2:1:87:PRO:HD3	1.64	0.79
10:A:2807:G:H3'	10:A:2808:U:H5''	1.62	0.79
10:A:909:A:H2'	10:A:912:C:H5	1.47	0.79
29:Y:77:PRO:O	29:Y:99:CYS:SG	2.40	0.79
10:A:2467:C:H4'	21:Q:123:HIS:CD2	2.17	0.79
10:A:448:U:H3'	10:A:449:A:H5'	1.65	0.79
20:P:62:LEU:HD22	20:P:62:LEU:N	1.98	0.79
10:A:997:G:OP1	25:U:93:LYS:HD3	1.83	0.79
10:A:2886:G:H2'	10:A:2887:U:H6	1.47	0.79
33:A:3206:TEL:C38	33:A:3206:TEL:O29	2.30	0.79
10:A:1434:A:H61	10:A:1558:A:H62	1.28	0.79
8:7:39:ARG:NH2	10:A:468:G:N7	2.30	0.79
24:T:80:SER:HB3	24:T:81:PRO:HD3	1.64	0.79
20:P:101:VAL:HG12	20:P:106:LEU:HD23	1.63	0.79
20:P:88:LEU:HD11	20:P:95:VAL:HG21	1.62	0.79
12:D:30:GLU:HG3	12:D:63:ARG:CZ	2.13	0.79
10:A:271(P):C:H5'	17:I:45:LYS:HE3	1.62	0.79
10:A:107:C:H2'	10:A:108:U:C6	2.18	0.79
17:I:10:GLU:O	17:I:12:LEU:HD23	1.83	0.79
11:B:21:G:C5	11:B:63:G:N2	2.50	0.79
2:1:19:GLN:HE21	10:A:379:G:N2	1.79	0.79
16:H:89:ILE:HD11	16:H:129:THR:HB	1.64	0.79
10:A:184:C:H2'	10:A:185:U:C6	2.17	0.79
14:F:67:GLN:O	14:F:67:GLN:CG	2.31	0.79
10:A:847:U:H2'	10:A:848:G:H5''	1.65	0.79
26:V:61:VAL:O	26:V:62:LEU:HD23	1.82	0.79
10:A:1899:G:H21	10:A:1902:C:H5	1.28	0.79
29:Y:31:LEU:HD12	29:Y:34:LYS:H	1.48	0.79
10:A:614(C):A:H4'	10:A:615:G:OP1	1.82	0.79
10:A:676:A:H8	10:A:2069:G:N2	1.76	0.79
18:N:55:VAL:HG12	18:N:126:PRO:HA	1.63	0.79
10:A:1882:C:H5'	10:A:1883:G:OP2	1.82	0.79
10:A:2236:C:C2'	10:A:2237:G:H5'	2.13	0.79
22:R:33:ARG:HG2	22:R:115:GLU:HG2	1.63	0.79
27:W:59:VAL:CG1	27:W:60:ASN:N	2.46	0.79
24:T:33:LYS:H	24:T:33:LYS:HZ2	1.28	0.79
10:A:1887:C:H2'	10:A:1888:G:H5'	1.65	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:212:G:O2'	10:A:213:A:H5'	1.83	0.79
10:A:1712:C:H2'	10:A:1713:U:H6	1.46	0.78
10:A:951:C:C2'	10:A:952:G:H5'	2.13	0.78
13:E:117:MET:HB2	13:E:122:PHE:O	1.83	0.78
10:A:2611:U:H5'	10:A:2611:U:H6	1.48	0.78
20:P:112:LEU:HD22	20:P:113:LYS:H	1.47	0.78
12:D:25:THR:HB	12:D:82:ILE:H	1.47	0.78
10:A:49:A:C4'	10:A:50:U:H5'	2.13	0.78
10:A:2660:A:H5''	10:A:2661:G:N3	1.96	0.78
33:A:3206:TEL:H11	33:A:3206:TEL:H143	1.47	0.78
11:B:28:C:H2'	11:B:29:A:O4'	1.83	0.78
17:I:123:LEU:HD22	17:I:142:VAL:HB	1.66	0.78
12:D:2:ALA:O	12:D:3:VAL:HB	1.81	0.78
7:6:10:LEU:HD12	9:8:35:GLN:NE2	1.98	0.78
7:6:13:CYS:HB3	7:6:49:HIS:HB3	1.65	0.78
20:P:16:ARG:HG2	20:P:18:ARG:H	1.49	0.78
20:P:41:ARG:HA	20:P:41:ARG:NH2	1.98	0.78
26:V:2:PHE:HE1	26:V:13:ARG:CZ	1.97	0.78
24:T:50:ILE:CD1	24:T:102:ILE:HD11	2.09	0.78
12:D:35:LYS:HA	12:D:64:ILE:HG22	1.66	0.78
12:D:144:ALA:HB3	12:D:192:THR:HG23	1.65	0.78
24:T:29:ARG:HG3	24:T:30:VAL:HG22	1.65	0.78
24:T:109:GLU:HA	24:T:112:ARG:HG3	1.66	0.78
10:A:271(L):U:H4'	10:A:271(M):G:N7	1.99	0.78
10:A:833:U:H2'	10:A:834:C:C6	2.19	0.78
4:3:11:SER:OG	4:3:13:ILE:HG12	1.84	0.78
10:A:2818:G:O2'	10:A:2819:G:H5'	1.84	0.78
13:E:33:VAL:HG12	13:E:90:THR:H	1.47	0.78
12:D:85:ASP:HB2	12:D:92:ILE:HG13	1.65	0.78
10:A:2267:A:H5''	10:A:2268:A:C5'	2.13	0.78
17:I:101:LEU:C	17:I:109:ILE:HD11	2.03	0.78
15:G:64:THR:HG23	15:G:65:GLY:N	1.97	0.78
15:G:22:ARG:HB3	15:G:23:PHE:CE1	2.19	0.78
20:P:21:ARG:HH11	20:P:21:ARG:CG	1.97	0.78
7:6:9:LEU:HD22	7:6:10:LEU:H	1.49	0.78
7:6:15:GLU:HG2	7:6:15:GLU:O	1.83	0.78
2:1:10:LYS:HB2	2:1:14:VAL:H	1.47	0.78
12:D:172:TYR:CD1	12:D:186:HIS:HA	2.19	0.78
11:B:87:G:C3'	11:B:88:C:H5''	2.13	0.78
21:Q:24:GLY:HA3	30:Z:78:LYS:HA	1.63	0.78
24:T:106:SER:HA	24:T:110:ILE:HG13	1.66	0.78
15:G:22:ARG:HD3	15:G:22:ARG:O	1.84	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1826:G:H4'	12:D:242:ARG:NH2	1.99	0.78
11:B:25:A:H2'	11:B:26:A:H8	1.49	0.78
23:S:74:ALA:HB1	23:S:103:GLU:CG	2.13	0.78
10:A:2751:G:H3'	10:A:2752:C:H6	1.48	0.78
20:P:124:LYS:HA	20:P:143:GLY:HA3	1.66	0.78
10:A:2712:U:H1'	10:A:2712(A):A:C8	2.18	0.78
10:A:2557:G:O2'	10:A:2558:C:H5'	1.84	0.78
10:A:542:C:N4	10:A:543:C:N4	2.32	0.78
10:A:1865:G:H5'	10:A:1866:C:OP2	1.84	0.78
10:A:389:G:H22	20:P:71:VAL:HG12	1.48	0.77
20:P:66:GLY:O	20:P:67:MET:C	2.22	0.77
10:A:1405:U:H2'	10:A:1406:U:C6	2.20	0.77
10:A:1406:U:H2'	10:A:1407:C:H6	1.45	0.77
10:A:1899:G:N2	10:A:1902:C:C5	2.52	0.77
22:R:67:LEU:HD13	22:R:76:VAL:HG21	1.66	0.77
10:A:1512:U:H2'	10:A:1512:U:O2	1.83	0.77
10:A:1657:C:H5''	13:E:133:LYS:O	1.84	0.77
10:A:1662:C:H1'	10:A:2687:U:H5''	1.66	0.77
10:A:2660:A:N3	10:A:2660:A:H3'	1.98	0.77
20:P:79:ARG:NH2	20:P:109:GLY:HA2	1.97	0.77
10:A:141:A:C8	10:A:1408:C:O2'	2.35	0.77
10:A:1021:A:H3'	10:A:1021:A:C8	2.19	0.77
15:G:7:LEU:HB3	15:G:100:TRP:CE3	2.19	0.77
19:O:4:PRO:O	19:O:5:GLN:HB2	1.83	0.77
10:A:247:G:H4'	10:A:386:G:C5	2.20	0.77
15:G:15:VAL:HG12	15:G:19:LEU:HD11	1.65	0.77
15:G:10:LYS:O	15:G:15:VAL:HG23	1.84	0.77
14:F:168:ARG:HG3	14:F:175:THR:HG21	1.66	0.77
10:A:1300:U:H1'	10:A:1626:G:C2	2.19	0.77
3:2:55:ARG:HH22	28:X:3:THR:CG2	1.97	0.77
26:V:75:PHE:HE1	26:V:89:GLN:HB3	1.46	0.77
10:A:951:C:O2'	10:A:952:G:H5'	1.85	0.77
11:B:80:U:H2'	11:B:81:G:H21	1.48	0.77
10:A:1030:G:OP2	21:Q:128:LYS:HE2	1.84	0.77
10:A:669:G:C4'	10:A:670:A:OP2	2.31	0.77
10:A:806:C:C5	20:P:39:LYS:HE2	2.17	0.77
20:P:71:VAL:CG1	20:P:72:PRO:HD3	2.15	0.77
10:A:2787:C:C1'	13:E:61:ARG:HB2	2.13	0.77
26:V:13:ARG:CG	26:V:13:ARG:HH11	1.97	0.77
12:D:35:LYS:HD2	12:D:104:TYR:CE1	2.19	0.77
29:Y:42:VAL:O	29:Y:65:ALA:HB3	1.83	0.77
10:A:2471:C:O2	10:A:2471:C:H2'	1.82	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:48:PRO:O	20:P:49:ARG:C	2.22	0.77
20:P:61:ARG:HD2	20:P:61:ARG:H	1.50	0.77
3:2:49:LYS:CD	3:2:53:LEU:HD22	2.14	0.77
10:A:1396:U:H2'	10:A:1396:U:O2	1.85	0.77
18:N:25:ARG:HH11	18:N:25:ARG:HG3	1.50	0.77
26:V:60:GLU:HA	26:V:60:GLU:OE1	1.83	0.77
23:S:30:ARG:HD2	23:S:35:ILE:HB	1.66	0.77
13:E:11:MET:HB2	13:E:23:VAL:O	1.85	0.77
12:D:155:LEU:HD23	12:D:177:LEU:HD22	1.64	0.77
20:P:21:ARG:HH11	20:P:21:ARG:HG3	1.50	0.77
3:2:34:GLU:O	3:2:36:ARG:N	2.18	0.77
10:A:2186:G:H3'	10:A:2187:G:H5''	1.66	0.77
29:Y:49:VAL:HG12	29:Y:53:PRO:HB3	1.66	0.77
9:8:6:THR:HG22	9:8:63:PRO:HD3	1.66	0.77
28:X:56:THR:C	28:X:57:LEU:HD12	2.05	0.77
10:A:330:A:H2	10:A:1210:A:C2'	1.98	0.77
3:2:16:LEU:H	3:2:18:PRO:HD2	1.50	0.77
4:3:52:HIS:CE1	11:B:83:G:H5''	2.20	0.77
10:A:993:G:N3	26:V:91:TYR:CE1	2.53	0.77
26:V:69:LYS:HB3	26:V:93:GLU:OE2	1.83	0.77
24:T:41:ARG:O	24:T:43:GLN:N	2.16	0.77
10:A:2469:A:H2	10:A:2481:G:H21	1.30	0.77
15:G:139:LEU:HB3	15:G:149:VAL:HG11	1.67	0.77
12:D:267:SER:C	12:D:269:PHE:H	1.87	0.77
10:A:823:G:O2'	10:A:824:A:H5'	1.83	0.77
12:D:71:ASP:CB	12:D:103:ARG:HH22	1.96	0.77
2:1:12:PRO:HD2	2:1:62:VAL:CG2	2.12	0.77
10:A:286:C:H2'	10:A:287:C:H5'	1.67	0.77
24:T:32:TYR:HB3	24:T:81:PRO:HB2	1.67	0.77
13:E:120:TRP:CE3	13:E:155:LYS:HD3	2.19	0.77
10:A:2777:G:H5''	10:A:2778:A:H5'	1.65	0.77
12:D:91:ARG:HH11	12:D:91:ARG:HG2	1.50	0.76
29:Y:96:ILE:HD12	29:Y:99:CYS:SG	2.25	0.76
27:W:73:ALA:O	27:W:106:ILE:HD13	1.85	0.76
10:A:721:C:O2	10:A:721:C:H2'	1.84	0.76
10:A:34:C:C2'	10:A:35:G:OP1	2.33	0.76
6:5:54:GLY:O	6:5:56:LYS:NZ	2.17	0.76
2:1:71:TYR:CE1	17:I:27:ARG:HD2	2.20	0.76
10:A:1580:A:H8	10:A:1580:A:OP2	1.66	0.76
9:8:30:ARG:HH21	20:P:62:LEU:HB2	1.50	0.76
7:6:25:LYS:O	10:A:2286:A:H2	1.67	0.76
10:A:389:G:N2	20:P:71:VAL:HG12	1.99	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:536:A:H2'	10:A:537:C:C6	2.20	0.76
6:5:42:PRO:O	6:5:43:HIS:HB2	1.86	0.76
21:Q:106:VAL:HG21	21:Q:114:ALA:HB1	1.67	0.76
25:U:17:ILE:HG23	25:U:39:LEU:HD12	1.66	0.76
28:X:50:LYS:HB3	28:X:82:GLN:HB3	1.67	0.76
10:A:2544:G:H1'	10:A:2646:C:H4'	1.68	0.76
10:A:1499:C:C2'	10:A:1500:G:H5'	2.15	0.76
10:A:2335:A:O2'	10:A:2336:A:H5''	1.86	0.76
10:A:1338:G:O2'	10:A:1339:G:H5'	1.85	0.76
17:I:133:HIS:HB2	17:I:134:PRO:HD3	1.67	0.76
30:Z:130:PRO:HA	30:Z:133:ILE:HD11	1.68	0.76
16:H:155:SER:O	16:H:157:TYR:N	2.17	0.76
14:F:139:PHE:HB2	14:F:166:ALA:HB1	1.67	0.76
9:8:43:GLN:O	9:8:44:LYS:HD2	1.86	0.76
10:A:667:U:H2'	10:A:668:G:H5'	1.67	0.76
18:N:40:PRO:C	25:U:64:ARG:HH22	1.88	0.76
25:U:93:LYS:H	25:U:93:LYS:CD	1.96	0.76
22:R:116:LEU:O	22:R:117:VAL:HB	1.84	0.76
10:A:2562:U:H1'	19:O:23:ARG:NH1	2.00	0.76
10:A:2854:G:H2'	10:A:2855:C:C6	2.21	0.76
30:Z:109:ALA:HB1	30:Z:145:GLU:OE2	1.85	0.76
3:2:44:LEU:HD12	3:2:44:LEU:O	1.85	0.76
22:R:11:ASN:CG	22:R:12:ARG:H	1.88	0.76
10:A:2324:C:H5''	10:A:2325:G:C5'	2.14	0.76
13:E:134:ILE:H	13:E:134:ILE:CD1	1.98	0.76
10:A:7:G:H2'	10:A:8:A:O4'	1.84	0.76
8:7:7:PRO:HB2	10:A:1309:G:H4'	1.66	0.76
20:P:133:SER:O	20:P:137:LYS:HG2	1.86	0.76
20:P:17:LYS:O	20:P:19:VAL:N	2.19	0.76
28:X:76:ARG:O	28:X:77:LYS:HB2	1.83	0.76
23:S:71:ARG:O	23:S:74:ALA:HB3	1.86	0.76
29:Y:17:SER:CB	29:Y:71:LYS:HD2	2.15	0.76
29:Y:8:LYS:CE	29:Y:72:VAL:HG23	2.16	0.76
21:Q:141:GLN:HB3	30:Z:70:LEU:CD1	2.16	0.76
10:A:1339:G:H21	10:A:1603:A:H1'	1.47	0.76
10:A:1689:A:H62	10:A:1698:A:H2	1.33	0.76
18:N:51:PHE:CZ	18:N:119:ARG:HD3	2.21	0.76
7:6:17:LYS:C	7:6:18:ARG:HD3	2.06	0.76
9:8:35:GLN:HA	10:A:2420:C:P	2.26	0.76
28:X:55:ASN:HB2	28:X:78:LYS:HD3	1.66	0.76
18:N:133:GLN:O	18:N:135:PRO:HD3	1.86	0.76
10:A:1987:G:H2'	10:A:1988:C:H6	1.51	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1839:G:N7	10:A:1927:A:H1'	2.00	0.76
10:A:598:G:H5'	20:P:15:ARG:HD2	1.68	0.76
26:V:4:ILE:O	26:V:39:LEU:HB3	1.86	0.76
10:A:2261:C:O2'	10:A:2262:U:H5'	1.86	0.76
10:A:966:G:C4	10:A:967:C:C5	2.74	0.76
10:A:1490:A:H5'	10:A:1491:G:OP2	1.85	0.76
10:A:1515:G:O2'	10:A:1516:C:H5'	1.86	0.76
30:Z:108:PRO:HA	30:Z:142:SER:HA	1.66	0.76
10:A:2292:C:O2'	10:A:2293:C:H5'	1.86	0.76
10:A:2287:A:N3	10:A:2289:G:C8	2.54	0.76
10:A:1141:U:P	18:N:63:THR:HG21	2.25	0.76
6:5:48:GLU:O	6:5:50:GLY:N	2.19	0.76
10:A:2723:C:H5''	22:R:2:ARG:HD2	1.67	0.76
10:A:65:C:H2'	10:A:66:C:H6	1.50	0.76
10:A:142:A:H8	10:A:1595:G:H21	1.32	0.75
18:N:18:ALA:CB	18:N:26:LEU:HD22	2.16	0.75
11:B:7:G:H3'	11:B:8:U:H5''	1.68	0.75
16:H:137:ASP:O	16:H:138:LYS:HB2	1.85	0.75
18:N:65:LYS:HD3	18:N:67:LEU:HB2	1.68	0.75
11:B:57:A:C2	11:B:58:A:C8	2.74	0.75
10:A:1568:G:P	12:D:63:ARG:HH22	2.09	0.75
30:Z:69:THR:HG22	30:Z:90:VAL:HA	1.66	0.75
10:A:1603:A:H5'	10:A:1603:A:H8	1.51	0.75
10:A:154:G:H1	10:A:172:C:N4	1.84	0.75
10:A:1956:U:H2'	10:A:1957:C:H5'	1.69	0.75
10:A:196:A:O4'	20:P:46:LYS:HE2	1.87	0.75
23:S:28:VAL:HG11	23:S:97:ARG:NH1	2.01	0.75
10:A:779:U:OP1	12:D:49:ILE:HG13	1.86	0.75
10:A:2327:A:H2'	10:A:2328:A:H8	1.51	0.75
19:O:23:ARG:HG2	19:O:23:ARG:HH11	1.49	0.75
24:T:55:ASN:H	24:T:59:THR:HB	1.48	0.75
16:H:89:ILE:HD13	16:H:90:LYS:N	2.01	0.75
19:O:18:LYS:HB2	19:O:45:GLU:HG2	1.68	0.75
15:G:29:TRP:C	15:G:31:VAL:H	1.86	0.75
14:F:156:LEU:HD21	14:F:163:VAL:HG12	1.68	0.75
20:P:21:ARG:NH1	20:P:21:ARG:HG3	2.01	0.75
10:A:34:C:H3'	10:A:34:C:H6	1.51	0.75
10:A:2022:U:O2'	10:A:2617:C:H5'	1.86	0.75
16:H:30:LYS:HB2	16:H:79:VAL:O	1.86	0.75
10:A:1720:U:H2'	10:A:1721:G:O4'	1.86	0.75
18:N:4:TYR:N	18:N:4:TYR:CD1	2.54	0.75
10:A:301:G:C4	10:A:302:C:C5	2.75	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:Y:8:LYS:HB2	29:Y:28:LYS:NZ	2.01	0.75
21:Q:9:TYR:CD2	21:Q:9:TYR:O	2.40	0.75
10:A:285:C:H2'	10:A:286:C:C5'	2.17	0.75
11:B:65:C:H41	11:B:109:C:H2'	1.50	0.75
22:R:96:ARG:HH21	22:R:117:VAL:HG23	1.50	0.75
10:A:2092:U:H4'	10:A:2093:G:O5'	1.87	0.75
33:A:3206:TEL:C26	33:A:3206:TEL:O32	2.30	0.75
24:T:100:TYR:HB3	24:T:103:ARG:HE	1.50	0.75
30:Z:19:ARG:NH1	30:Z:19:ARG:HG2	1.99	0.75
1:O:23:VAL:HG21	10:A:857:C:H4'	1.68	0.75
7:6:51:GLU:HG2	7:6:52:VAL:N	2.02	0.75
15:G:165:THR:OG1	15:G:168:GLU:HG3	1.87	0.75
10:A:819:A:C4	10:A:1189:A:C2	2.75	0.75
10:A:1719:G:C2'	10:A:1720:U:H5'	2.17	0.75
10:A:997:G:H2'	10:A:998:C:H5'	1.67	0.75
10:A:1112:G:H4'	10:A:1113:U:OP2	1.85	0.75
9:8:32:LEU:HB3	9:8:35:GLN:H	1.51	0.75
10:A:1403:C:H5''	10:A:1471:A:C1'	2.14	0.75
10:A:1331:A:O2'	10:A:1332:G:H8	1.69	0.75
12:D:95:LEU:HD21	12:D:105:ILE:CG2	2.16	0.75
10:A:966:G:H2'	10:A:967:C:C6	2.20	0.75
10:A:2208:A:O2'	10:A:2218:U:OP2	2.03	0.75
15:G:82:LEU:HB3	15:G:87:PRO:HG3	1.69	0.75
33:A:3206:TEL:H232	33:A:3206:TEL:H121	1.67	0.75
18:N:3:THR:C	18:N:4:TYR:CD1	2.60	0.75
18:N:65:LYS:HA	18:N:65:LYS:CE	2.16	0.75
12:D:35:LYS:HE3	12:D:64:ILE:C	2.07	0.75
2:1:87:PRO:CD	2:1:88:LYS:H	2.00	0.75
10:A:2808:U:C2'	10:A:2809:A:H5'	2.15	0.75
13:E:34:VAL:HG22	13:E:48:GLN:HE21	1.52	0.75
12:D:133:LEU:HA	12:D:136:ILE:HD13	1.68	0.75
13:E:36:ARG:NH2	13:E:88:GLY:HA2	2.01	0.75
21:Q:38:GLU:OE1	21:Q:127:ILE:HG22	1.87	0.75
10:A:195:A:C8	10:A:197:A:OP1	2.40	0.74
28:X:33:LYS:O	28:X:35:THR:N	2.20	0.74
10:A:1503:U:H2'	10:A:1504:C:C6	2.22	0.74
13:E:93:VAL:N	13:E:95:ILE:HD12	1.99	0.74
2:1:41:ARG:NH2	10:A:205:G:O6	2.18	0.74
20:P:7:ARG:HB3	20:P:8:PRO:HD3	1.68	0.74
10:A:1685:C:O2'	10:A:1686:C:H5'	1.87	0.74
9:8:59:LYS:CD	20:P:50:ARG:HB3	2.17	0.74
27:W:92:ARG:NH1	27:W:92:ARG:HG2	2.02	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:X:72:LYS:HG2	28:X:74:PRO:HD3	1.68	0.74
10:A:354:G:O5'	10:A:354:G:H8	1.69	0.74
13:E:152:LYS:CD	18:N:78:TYR:HB2	2.17	0.74
7:6:26:ASN:HD22	7:6:32:ASN:ND2	1.85	0.74
10:A:745:G:N2	33:A:3206:TEL:H51	2.00	0.74
20:P:51:PHE:O	20:P:52:GLU:HB2	1.87	0.74
17:I:109:ILE:HD12	17:I:109:ILE:H	1.51	0.74
10:A:1531:C:H3'	10:A:1532:C:C5'	2.16	0.74
20:P:83:VAL:HG12	20:P:112:LEU:HD21	1.66	0.74
23:S:87:PHE:O	23:S:88:ASP:HB2	1.88	0.74
10:A:2807:G:H22	10:A:2892:A:N6	1.85	0.74
11:B:15:A:H1'	11:B:110:G:C8	2.22	0.74
11:B:67:G:C5	11:B:68:C:C5	2.74	0.74
19:O:1:MET:HE3	19:O:67:LYS:HG2	1.67	0.74
13:E:4:ILE:HD13	13:E:28:ALA:HB1	1.69	0.74
10:A:114:U:H5''	10:A:115:C:OP2	1.87	0.74
10:A:244:A:C2	10:A:255:A:C4	2.75	0.74
20:P:62:LEU:HD22	20:P:62:LEU:H	1.50	0.74
10:A:1741:A:H2'	10:A:1742:G:N3	2.01	0.74
13:E:75:VAL:C	13:E:77:ILE:H	1.91	0.74
10:A:2722:G:O2'	22:R:5:LYS:HB2	1.86	0.74
10:A:1963:U:H4'	10:A:1964:G:OP1	1.85	0.74
14:F:80:ALA:O	14:F:83:PHE:HB2	1.87	0.74
28:X:25:LYS:HE3	28:X:26:TYR:CE1	2.22	0.74
18:N:112:LEU:O	18:N:112:LEU:HD12	1.88	0.74
23:S:29:PHE:H	23:S:89:ARG:HD2	1.49	0.74
11:B:65:C:H42	11:B:109:C:H2'	1.53	0.74
10:A:2830:G:H8	10:A:2830:G:C5'	2.01	0.74
18:N:73:THR:O	18:N:75:TYR:N	2.20	0.74
10:A:1839:G:C8	10:A:1927:A:H1'	2.22	0.74
24:T:23:ARG:HB2	24:T:24:PRO:HD2	1.67	0.74
28:X:55:ASN:HB2	28:X:78:LYS:CD	2.16	0.74
18:N:67:LEU:HD22	18:N:88:GLU:OE2	1.88	0.74
25:U:88:ILE:O	25:U:90:VAL:N	2.18	0.74
10:A:286:C:C2'	10:A:287:C:H5'	2.17	0.74
29:Y:75:ILE:CD1	29:Y:79:CYS:HA	2.17	0.74
10:A:1653:G:H4'	10:A:1654:A:O5'	1.87	0.74
21:Q:24:GLY:HA3	30:Z:78:LYS:CD	2.17	0.74
10:A:586:A:N1	10:A:809:G:O2'	2.20	0.74
10:A:588:U:O4	10:A:670:A:H1'	1.88	0.74
10:A:667:U:C2'	10:A:668:G:H5'	2.18	0.74
20:P:62:LEU:CD1	20:P:62:LEU:H	1.94	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1047:G:H2'	10:A:1110:G:N2	2.01	0.74
10:A:271(D):G:H1	10:A:271(T):C:H42	1.33	0.74
14:F:178:PRO:HB2	14:F:201:VAL:HG11	1.69	0.74
16:H:20:ALA:HB1	16:H:21:PRO:HD2	1.68	0.74
10:A:2404:C:C2'	10:A:2405:G:H5'	2.17	0.74
23:S:59:LYS:HB2	23:S:65:VAL:CG2	2.18	0.74
12:D:30:GLU:HG3	12:D:63:ARG:HE	1.52	0.74
10:A:2387:U:H5''	10:A:2388:A:OP2	1.87	0.74
10:A:1945:G:H2'	10:A:1946:U:H5'	1.67	0.74
10:A:776:G:H4'	10:A:777:A:O5'	1.86	0.74
10:A:1490:A:C2	12:D:75:ILE:HD13	2.23	0.74
10:A:1381:G:H2'	10:A:1382:G:H5'	1.70	0.74
29:Y:14:LEU:HG	29:Y:15:VAL:N	2.03	0.74
30:Z:15:PRO:O	30:Z:19:ARG:HD2	1.88	0.74
27:W:12:ILE:HG13	27:W:42:ARG:HH11	1.51	0.74
10:A:2470:G:C6	10:A:2471:C:H5	2.05	0.74
10:A:443:A:H1'	10:A:1201:C:O4'	1.88	0.74
2:1:37:ILE:HG21	10:A:2080:G:OP1	1.88	0.74
2:1:8:SER:N	2:1:46:LEU:HD11	2.02	0.74
10:A:2683:C:O2	19:O:70:LYS:HE2	1.87	0.74
1:0:68:GLU:HB2	1:0:80:HIS:HB2	1.68	0.74
29:Y:44:ILE:HG22	29:Y:45:VAL:H	1.53	0.73
11:B:20:C:H2'	11:B:21:G:H5''	1.70	0.73
15:G:86:MET:HB2	15:G:87:PRO:CD	2.18	0.73
10:A:94:C:H5'	10:A:94(A):G:OP2	1.87	0.73
23:S:93:LYS:HG3	23:S:93:LYS:O	1.88	0.73
12:D:94:LEU:HB2	12:D:104:TYR:CD2	2.23	0.73
2:1:85:LEU:HB3	2:1:87:PRO:CG	2.18	0.73
10:A:2012:G:H4'	27:W:96:ILE:CD1	2.18	0.73
10:A:234:C:H2'	10:A:235:U:H6	1.52	0.73
1:0:72:ARG:HB2	1:0:75:LEU:HB2	1.69	0.73
23:S:41:ASP:OD2	23:S:44:LYS:HB2	1.87	0.73
10:A:2521:C:H2'	10:A:2521:C:O2	1.88	0.73
10:A:2314:C:H2'	10:A:2315:G:C8	2.23	0.73
10:A:870:A:C5'	21:Q:7:MET:HB2	2.18	0.73
10:A:528:A:N1	10:A:2043:C:O5'	2.21	0.73
10:A:378:C:C2'	10:A:379:G:H5'	2.18	0.73
10:A:378:C:H2'	10:A:379:G:H5'	1.69	0.73
10:A:1771:C:H1'	10:A:1786:A:C8	2.24	0.73
10:A:518:G:H2'	10:A:519:U:C6	2.24	0.73
24:T:30:VAL:HG21	24:T:83:ILE:CG1	2.17	0.73
10:A:2886:G:C4	10:A:2887:U:C5	2.76	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:182:LEU:O	12:D:271:ILE:HD12	1.88	0.73
12:D:246:PRO:HB2	12:D:255:LYS:HG3	1.70	0.73
10:A:197:A:H5'	10:A:197:A:H8	1.53	0.73
10:A:2396:G:O2'	10:A:2397:G:H5'	1.89	0.73
17:I:124:GLY:H	17:I:142:VAL:HG23	1.53	0.73
6:5:50:GLY:O	6:5:51:TYR:HD1	1.71	0.73
10:A:271(E):U:H2'	10:A:271(F):C:C6	2.23	0.73
13:E:128:SER:OG	13:E:129:HIS:N	2.20	0.73
10:A:71:A:H3'	10:A:71:A:OP2	1.87	0.73
20:P:144:GLU:N	20:P:145:PRO:HD3	2.04	0.73
19:O:13:ASN:HD21	19:O:97:ARG:H	1.35	0.73
10:A:1648:C:H2'	10:A:1649:G:O5'	1.88	0.73
10:A:870:A:H5''	21:Q:7:MET:HB2	1.70	0.73
10:A:2199:A:OP2	10:A:2200:C:H5	1.70	0.73
12:D:228:PRO:HD3	12:D:235:GLY:HA3	1.71	0.73
16:H:41:MET:SD	16:H:55:PRO:HB3	2.28	0.73
10:A:2492:U:H2'	10:A:2493:U:H6	1.52	0.73
19:O:122:LEU:HD13	24:T:72:VAL:HG11	1.70	0.73
26:V:79:VAL:O	26:V:80:GLN:CB	2.34	0.73
3:2:26:ARG:NE	3:2:29:LYS:HE2	2.04	0.73
25:U:90:VAL:HG12	25:U:91:ASP:H	1.52	0.73
26:V:13:ARG:HH12	26:V:15:GLU:HG2	1.54	0.73
23:S:71:ARG:HG2	23:S:101:LEU:HG	1.70	0.73
11:B:47:C:O2'	23:S:93:LYS:HG2	1.88	0.73
10:A:1291:C:O2'	10:A:1292:U:H5'	1.88	0.73
24:T:88:ILE:HG22	24:T:89:VAL:HG23	1.70	0.73
28:X:40:LYS:HG3	28:X:41:ASN:N	2.02	0.73
10:A:2273:A:O2'	10:A:2274:A:H5'	1.88	0.73
25:U:31:SER:O	25:U:33:ARG:N	2.21	0.73
20:P:40:SER:O	20:P:41:ARG:HD2	1.89	0.73
10:A:1719:G:H2'	10:A:1720:U:H5'	1.71	0.73
26:V:72:VAL:CA	26:V:88:ARG:HH22	2.00	0.73
11:B:27:C:O2	11:B:27:C:H2'	1.89	0.73
10:A:2659:G:C2'	10:A:2663:G:H22	2.02	0.73
10:A:2307:G:H21	10:A:2308:G:H5'	1.54	0.73
29:Y:39:VAL:HG12	29:Y:40:GLU:H	1.54	0.73
1:0:42:GLY:HA2	10:A:2330:G:H21	1.52	0.73
10:A:1688:U:O2	10:A:1700:A:H5''	1.88	0.73
19:O:63:VAL:HG11	19:O:85:VAL:HG23	1.71	0.73
24:T:30:VAL:HG21	24:T:83:ILE:HG12	1.69	0.73
10:A:1517:G:H5''	10:A:1517:G:H8	1.53	0.73
28:X:65:ARG:NE	28:X:65:ARG:HA	2.02	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2845:G:O2'	10:A:2846:G:H5'	1.87	0.73
16:H:141:VAL:HG12	16:H:142:GLY:N	2.04	0.73
10:A:285:C:C2'	10:A:286:C:H5''	2.18	0.73
24:T:35:LYS:O	24:T:37:GLY:N	2.22	0.73
20:P:114:ILE:HG12	20:P:130:PHE:CD1	2.23	0.73
23:S:37:ALA:HB3	23:S:51:ALA:HB3	1.70	0.73
10:A:208:C:H2'	10:A:209:C:H6	1.54	0.73
10:A:2287:A:C2	10:A:2289:G:C8	2.76	0.73
10:A:814:C:O2'	10:A:815:C:H5'	1.87	0.73
10:A:996:A:H4'	25:U:92:ARG:CZ	2.19	0.73
22:R:10:LEU:HB3	22:R:17:ARG:NE	2.04	0.73
10:A:271(L):U:H4'	10:A:271(M):G:C5	2.24	0.73
10:A:2342:C:OP2	10:A:2342:C:H6	1.71	0.73
10:A:826:U:OP1	10:A:2428:G:H3'	1.88	0.72
10:A:125:G:H4'	10:A:126:A:OP2	1.89	0.72
10:A:1204:A:H2	10:A:1241:A:N1	1.86	0.72
9:8:4:MET:HE1	10:A:593:G:O4'	1.89	0.72
1:0:74:ARG:NH2	11:B:13:A:H8	1.87	0.72
14:F:20:LEU:HD22	14:F:203:GLN:NE2	2.04	0.72
18:N:131:GLN:NE2	18:N:134:ARG:HA	2.04	0.72
10:A:2843:G:H2'	10:A:2844:G:H8	1.54	0.72
10:A:2392:A:H2	10:A:2424:C:H42	1.34	0.72
23:S:99:LYS:C	23:S:106:ARG:HH12	1.93	0.72
10:A:695:G:OP1	10:A:1380:G:H4'	1.89	0.72
10:A:1210:A:C8	10:A:1210:A:C5'	2.68	0.72
1:0:74:ARG:NH2	11:B:13:A:H5'	2.04	0.72
19:O:43:VAL:HG12	19:O:54:GLU:HA	1.70	0.72
28:X:82:GLN:HG3	28:X:85:PRO:CD	2.20	0.72
12:D:35:LYS:NZ	12:D:65:ILE:HA	2.04	0.72
12:D:35:LYS:CD	12:D:63:ARG:HB3	2.18	0.72
12:D:92:ILE:HD13	12:D:104:TYR:CD2	2.24	0.72
2:1:87:PRO:HD2	2:1:88:LYS:H	1.53	0.72
10:A:370:G:H5''	10:A:423:A:N6	2.03	0.72
30:Z:40:ASP:HB3	30:Z:43:GLU:HB2	1.69	0.72
10:A:1678:G:O5'	10:A:1678:G:H8	1.72	0.72
10:A:1420:U:O2'	10:A:1421:G:H5'	1.90	0.72
10:A:747:U:O2	10:A:2014:A:H1'	1.89	0.72
9:8:5:LYS:HE2	10:A:254:G:N7	2.05	0.72
10:A:1722:A:O2'	10:A:1739:U:H5'	1.89	0.72
3:2:33:MET:HG2	28:X:11:PRO:CD	2.20	0.72
10:A:848:G:H2'	10:A:849:A:H8	1.54	0.72
10:A:309:G:H5''	29:Y:18:GLY:HA3	1.71	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:40:GLN:NE2	1:0:43:THR:HA	2.04	0.72
10:A:528:A:H2	10:A:2043:C:H5'	1.54	0.72
11:B:68:C:H2'	11:B:68:C:O2	1.90	0.72
10:A:796:C:H2'	10:A:797:C:H6	1.52	0.72
10:A:1025:G:OP1	10:A:1025:G:H8	1.73	0.72
24:T:32:TYR:CD2	24:T:32:TYR:N	2.56	0.72
10:A:2252:G:H2'	10:A:2253:G:C8	2.25	0.72
33:A:3206:TEL:O48	33:A:3206:TEL:H572	1.89	0.72
20:P:85:LEU:HA	20:P:88:LEU:HB2	1.71	0.72
10:A:1722:A:H2	10:A:1740:G:C5'	1.98	0.72
12:D:241:PRO:C	12:D:242:ARG:HD2	2.10	0.72
10:A:769:G:O2'	10:A:770:G:H5'	1.89	0.72
2:1:85:LEU:HB3	2:1:87:PRO:CD	2.20	0.72
10:A:2312:U:C2'	10:A:2313:C:H5'	2.20	0.72
10:A:1280:G:H2'	10:A:1281:G:H5''	1.71	0.72
1:0:26:TYR:CE2	10:A:857:C:H1'	2.25	0.72
15:G:63:ILE:HG22	15:G:143:GLU:HG3	1.71	0.72
9:8:39:LYS:O	9:8:39:LYS:HE3	1.89	0.72
10:A:579:G:H2'	10:A:580:C:H6	1.52	0.72
30:Z:10:ARG:NH2	30:Z:26:GLY:H	1.88	0.72
18:N:77:GLY:O	18:N:78:TYR:HB3	1.89	0.72
12:D:8:PRO:HB3	12:D:14:ARG:HB2	1.72	0.72
29:Y:95:LYS:CE	29:Y:101:LYS:H	2.02	0.72
10:A:1029:A:OP1	21:Q:128:LYS:HE3	1.89	0.72
8:7:8:ASN:C	8:7:8:ASN:HD22	1.93	0.72
10:A:2360:A:O2'	10:A:2361:A:P	2.47	0.72
10:A:2093:G:O5'	17:I:24:GLY:HA3	1.90	0.72
10:A:1956:U:C2'	10:A:1957:C:H5'	2.19	0.72
16:H:91:GLY:O	16:H:92:ILE:HD13	1.90	0.72
10:A:1598:C:H5'	28:X:37:THR:HB	1.69	0.72
15:G:34:LEU:HD13	15:G:35:GLU:N	2.05	0.72
10:A:755:C:H2'	10:A:756:C:C6	2.25	0.72
19:O:48:PRO:HB2	19:O:49:ARG:HD3	1.72	0.72
9:8:35:GLN:HA	10:A:2420:C:OP2	1.90	0.72
10:A:833:U:H2'	10:A:834:C:H6	1.54	0.72
4:3:19:GLN:HE22	4:3:52:HIS:CE1	2.06	0.72
18:N:15:LEU:HD21	18:N:55:VAL:CG2	2.20	0.72
10:A:574:C:N3	13:E:145:LYS:HE2	2.05	0.72
6:5:40:LYS:HE2	6:5:46:CYS:HB3	1.72	0.72
18:N:78:TYR:HD1	18:N:79:PRO:CD	2.03	0.72
3:2:14:ARG:NH2	3:2:15:LYS:HB3	2.05	0.72
10:A:128:C:H2'	10:A:129:C:H6	1.53	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:60:GLU:OE1	26:V:101:GLY:HA2	1.90	0.72
12:D:91:ARG:NH1	12:D:91:ARG:HG2	2.04	0.72
10:A:864:G:C6	10:A:865:C:N4	2.58	0.72
10:A:1418:G:OP1	10:A:1588:C:O2'	2.07	0.72
29:Y:81:LYS:CG	29:Y:96:ILE:HG22	2.19	0.72
10:A:2291:U:H4'	10:A:2380:C:O2	1.90	0.72
9:8:58:ILE:O	9:8:61:LEU:HG	1.88	0.71
10:A:2443:C:O2'	10:A:2444:G:H5'	1.88	0.71
26:V:90:PRO:CD	26:V:91:TYR:H	2.03	0.71
24:T:99:LEU:HB2	24:T:101:PHE:CE1	2.25	0.71
10:A:2463:C:O2'	10:A:2464:C:H5'	1.88	0.71
18:N:51:PHE:CE2	18:N:119:ARG:HD3	2.25	0.71
10:A:1317:A:H2'	10:A:1318:C:H6	1.55	0.71
10:A:607:U:H3	10:A:621:A:H2	1.38	0.71
20:P:97:PRO:O	20:P:98:GLU:HB3	1.89	0.71
25:U:102:GLU:HG3	26:V:2:PHE:CE2	2.23	0.71
2:1:87:PRO:HB2	2:1:91:LYS:NZ	2.05	0.71
27:W:75:TYR:CD1	27:W:104:THR:HB	2.25	0.71
10:A:861:A:C2	10:A:917:A:C4	2.78	0.71
12:D:97:TYR:HB2	12:D:101:GLU:O	1.90	0.71
12:D:147:LEU:HD13	12:D:155:LEU:CD1	2.19	0.71
13:E:201:THR:HG22	13:E:202:LYS:N	2.04	0.71
10:A:1141:U:P	18:N:25:ARG:HH12	2.13	0.71
23:S:28:VAL:HG11	23:S:97:ARG:HH12	1.55	0.71
16:H:123:PHE:CZ	16:H:148:ILE:HD11	2.24	0.71
10:A:855:G:C6	10:A:856:C:N4	2.58	0.71
7:6:51:GLU:CG	7:6:52:VAL:H	2.02	0.71
24:T:23:ARG:O	24:T:25:GLY:N	2.23	0.71
28:X:35:THR:CB	28:X:75:ASP:OD2	2.38	0.71
26:V:18:LEU:HD22	26:V:19:LYS:HA	1.72	0.71
10:A:911:A:C5	21:Q:9:TYR:HE2	2.07	0.71
2:1:47:GLN:HB2	10:A:397:G:H5''	1.71	0.71
10:A:925:C:C2'	10:A:926:A:H5''	2.20	0.71
10:A:1170:G:H1	10:A:1179:C:N4	1.88	0.71
10:A:1637:A:H4'	10:A:2711:A:O2'	1.90	0.71
10:A:1662:C:O2'	10:A:1663:C:H5'	1.90	0.71
10:A:128:C:H2'	10:A:129:C:O4'	1.90	0.71
9:8:43:GLN:C	9:8:44:LYS:HD2	2.11	0.71
10:A:1005:C:O2'	18:N:28:THR:HG21	1.90	0.71
10:A:784:A:C5'	10:A:785:G:OP1	2.37	0.71
10:A:2642:G:H5''	18:N:78:TYR:CE1	2.24	0.71
15:G:124:SER:HB2	15:G:131:TYR:CE1	2.26	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:80:G:C2'	10:A:81:G:H5'	2.21	0.71
10:A:2186:G:C3'	10:A:2187:G:H5''	2.20	0.71
10:A:1488:G:C6	10:A:1489:U:N3	2.58	0.71
7:6:19:ARG:CG	7:6:20:ASN:H	2.02	0.71
10:A:71:A:C2	28:X:31:HIS:CE1	2.79	0.71
1:0:74:ARG:HH22	11:B:13:A:H5'	1.56	0.71
12:D:145:VAL:HG12	12:D:146:GLU:O	1.89	0.71
10:A:2681:C:H5	10:A:2725:A:N6	1.88	0.71
16:H:41:MET:HG3	16:H:54:ARG:HA	1.72	0.71
24:T:3:ARG:HB2	24:T:6:LEU:HB3	1.72	0.71
16:H:20:ALA:HB1	16:H:21:PRO:CD	2.20	0.71
10:A:1721:G:C2	10:A:1739:U:OP2	2.44	0.71
25:U:90:VAL:HG13	26:V:39:LEU:HG	1.73	0.71
11:B:57:A:C5	15:G:29:TRP:CD1	2.79	0.71
15:G:7:LEU:HB3	15:G:100:TRP:HE3	1.55	0.71
23:S:89:ARG:HB3	23:S:92:TYR:CB	2.20	0.71
10:A:1777:U:O2'	10:A:1778:U:H5'	1.90	0.71
30:Z:151:HIS:ND1	30:Z:151:HIS:N	2.38	0.71
29:Y:75:ILE:HD13	29:Y:76:CYS:N	2.05	0.71
2:1:37:ILE:HD11	10:A:2079:U:H4'	1.72	0.71
1:0:18:ALA:HB1	10:A:2271:G:OP1	1.91	0.71
28:X:33:LYS:C	28:X:35:THR:N	2.44	0.71
10:A:1021:A:H2'	10:A:1023:U:H5'	1.71	0.71
12:D:25:THR:O	12:D:27:THR:N	2.24	0.71
10:A:1568:G:N2	12:D:58:HIS:HE1	1.89	0.71
10:A:1578:U:H2'	10:A:1578:U:O2	1.89	0.71
10:A:1962:C:O2'	10:A:1964:G:OP2	2.08	0.71
23:S:84:GLN:HE21	23:S:105:ALA:HB1	1.56	0.71
10:A:601:C:H1'	10:A:605:C:H5''	1.73	0.71
10:A:896:A:C2	10:A:898:C:H5''	2.26	0.71
10:A:812:C:H1'	10:A:1250:G:C2	2.26	0.71
1:0:2:ALA:H	10:A:2602:A:N6	1.88	0.71
10:A:2059:A:O2'	14:F:69:HIS:HD2	1.73	0.71
10:A:2418:A:H2'	10:A:2419:U:C6	2.26	0.71
10:A:943:U:OP2	20:P:38:GLN:CD	2.29	0.71
3:2:49:LYS:O	3:2:51:ARG:O	2.09	0.71
28:X:36:LYS:NZ	28:X:39:ILE:HA	2.06	0.71
10:A:557:U:H2'	10:A:558:G:H8	1.56	0.71
10:A:2334:G:N2	23:S:18:ILE:HD11	2.03	0.71
10:A:234:C:H2'	10:A:235:U:C6	2.26	0.71
10:A:52:A:O2'	10:A:53:A:H5'	1.91	0.71
10:A:2340:G:O2'	10:A:2341:G:H5'	1.91	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:149:SER:HB2	30:Z:172:ALA:O	1.91	0.71
10:A:363(E):U:H3'	10:A:363(F):A:O4'	1.90	0.71
10:A:2444:G:OP2	14:F:68:LYS:HE2	1.90	0.71
28:X:35:THR:O	28:X:36:LYS:C	2.30	0.71
28:X:73:ARG:H	28:X:74:PRO:CD	2.03	0.71
18:N:70:LYS:HB3	18:N:87:LEU:HB2	1.72	0.71
12:D:43:ARG:HH11	12:D:44:ASN:CG	1.94	0.71
10:A:1502:C:O2	10:A:1502:C:H2'	1.88	0.71
21:Q:8:LYS:HD2	21:Q:9:TYR:N	2.04	0.71
10:A:528:A:C2	10:A:2043:C:H5'	2.26	0.71
10:A:1047:G:H21	10:A:1111:A:N6	1.86	0.71
20:P:124:LYS:HG2	20:P:143:GLY:CA	2.20	0.71
10:A:2199:A:OP2	10:A:2200:C:C5	2.43	0.71
24:T:89:VAL:HG11	24:T:91:ARG:HE	1.55	0.71
16:H:89:ILE:CD1	16:H:90:LYS:H	2.04	0.71
28:X:24:GLY:HA3	28:X:80:ILE:HG13	1.72	0.70
30:Z:39:VAL:HG21	30:Z:44:PHE:HB2	1.73	0.70
20:P:106:LEU:HD13	20:P:112:LEU:HD23	1.72	0.70
22:R:72:ASP:HB3	22:R:75:LEU:HB2	1.73	0.70
16:H:123:PHE:HZ	16:H:148:ILE:HD11	1.56	0.70
10:A:14:A:C6	10:A:526:A:C2	2.78	0.70
10:A:1045:A:H1'	10:A:1047:G:C8	2.26	0.70
10:A:151:C:O2'	10:A:152:G:H5'	1.91	0.70
10:A:2853:C:H2'	10:A:2854:G:C8	2.26	0.70
7:6:48:VAL:O	7:6:49:HIS:HB2	1.90	0.70
26:V:66:ARG:NE	26:V:94:LEU:HG	2.05	0.70
15:G:7:LEU:HB2	15:G:104:GLU:OE2	1.91	0.70
29:Y:76:CYS:SG	29:Y:77:PRO:HD2	2.32	0.70
12:D:235:GLY:O	12:D:237:GLU:HG2	1.90	0.70
30:Z:108:PRO:HB3	30:Z:141:VAL:HG22	1.71	0.70
10:A:1316:U:O2'	10:A:1317:A:H5'	1.90	0.70
10:A:587:C:C4'	10:A:588:U:OP2	2.38	0.70
10:A:61:G:H1	10:A:94:C:N4	1.89	0.70
10:A:1287:A:H5''	10:A:1288:U:OP2	1.90	0.70
10:A:2308:G:O6	10:A:2310:A:H2'	1.91	0.70
24:T:33:LYS:N	24:T:33:LYS:HZ2	1.88	0.70
25:U:34:LYS:HA	25:U:34:LYS:HE2	1.74	0.70
10:A:892:G:H1	10:A:894:C:N4	1.90	0.70
16:H:153:LYS:H	16:H:153:LYS:HD3	1.57	0.70
21:Q:41:TRP:HB3	21:Q:94:VAL:HB	1.72	0.70
25:U:92:ARG:HB3	26:V:11:GLN:HE22	1.56	0.70
15:G:15:VAL:O	15:G:19:LEU:HG	1.91	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2542:A:N3	10:A:2542:A:H5''	2.06	0.70
10:A:2564:A:OP1	10:A:2648:C:H4'	1.91	0.70
6:5:16:ARG:NH1	6:5:16:ARG:HG2	2.00	0.70
30:Z:151:HIS:HB3	30:Z:170:THR:CA	2.19	0.70
10:A:958:U:H5''	21:Q:14:ARG:HD3	1.73	0.70
10:A:1425:G:H2'	10:A:1426:G:O4'	1.92	0.70
26:V:72:VAL:C	26:V:88:ARG:NH2	2.45	0.70
10:A:2542:A:H8	10:A:2544:G:O6	1.74	0.70
10:A:2663:G:C8	10:A:2664:G:N7	2.60	0.70
14:F:3:GLU:O	14:F:24:LEU:HG	1.92	0.70
10:A:2196:C:O2'	10:A:2197:U:H5'	1.92	0.70
10:A:2688:U:H5	10:A:2720:U:OP2	1.75	0.70
10:A:1491:G:O2'	12:D:101:GLU:HB2	1.90	0.70
10:A:343:C:C2'	10:A:344:G:H5'	2.21	0.70
20:P:45:LEU:HD22	20:P:46:LYS:H	1.57	0.70
3:2:51:ARG:HE	10:A:72:U:H5'	1.57	0.70
3:2:49:LYS:NZ	3:2:53:LEU:HD22	2.07	0.70
10:A:848:G:H5'	10:A:848:G:H8	1.55	0.70
10:A:1790:C:H5''	10:A:1791:A:OP1	1.91	0.70
12:D:62:TYR:CE1	12:D:64:ILE:HA	2.27	0.70
10:A:2305:A:H5''	15:G:134:GLY:HA3	1.72	0.70
10:A:330:A:C2	10:A:1210:A:H2'	2.25	0.70
10:A:1502:C:H5'	10:A:1503:U:OP2	1.91	0.70
10:A:2496:C:OP1	21:Q:81:VAL:HG12	1.92	0.70
24:T:65:LYS:HE3	24:T:66:VAL:N	2.05	0.70
24:T:109:GLU:HB3	24:T:113:LYS:HE3	1.72	0.70
10:A:1254:A:H5'	10:A:1255:U:H5'	1.73	0.70
13:E:27:LEU:HD22	24:T:1:MET:CE	2.21	0.70
28:X:72:LYS:HG3	28:X:73:ARG:H	1.55	0.70
10:A:779:U:H5''	12:D:49:ILE:HD11	1.71	0.70
21:Q:8:LYS:CD	21:Q:9:TYR:H	2.03	0.70
10:A:1359:A:H2'	10:A:1360:A:H5'	1.72	0.70
14:F:132:VAL:O	14:F:134:GLY:N	2.25	0.70
9:8:35:GLN:HE21	9:8:36:LYS:NZ	1.89	0.70
10:A:1185:C:H5''	10:A:1186:G:OP1	1.91	0.70
2:1:34:THR:HG21	10:A:388:G:OP2	1.91	0.70
14:F:103:LYS:HA	14:F:106:ARG:HG3	1.72	0.70
20:P:38:GLN:HG3	20:P:39:LYS:N	2.04	0.70
10:A:1721:G:N1	10:A:1739:U:OP2	2.25	0.70
11:B:51:G:H5'	11:B:52:A:OP2	1.92	0.70
10:A:2646:C:OP2	10:A:2732:G:O2'	2.08	0.70
11:B:13:A:N1	11:B:69:G:O2'	2.24	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:143:HIS:HD2	12:D:144:ALA:CB	2.05	0.70
10:A:528:A:C2	10:A:2043:C:C5'	2.74	0.70
10:A:39:C:O2'	10:A:40:C:H5'	1.91	0.70
28:X:64:LYS:HE3	28:X:65:ARG:HH21	1.57	0.70
12:D:17:THR:HG23	12:D:205:VAL:HB	1.74	0.70
10:A:2821:A:C2	10:A:2822:G:C4	2.80	0.70
20:P:17:LYS:C	20:P:19:VAL:H	1.95	0.70
10:A:1429:G:H2'	10:A:1430:C:H6	1.52	0.70
12:D:95:LEU:HD21	12:D:105:ILE:HG22	1.72	0.70
10:A:1482:G:N2	10:A:1507:A:H1'	2.06	0.70
10:A:491:G:H2'	10:A:492:A:C8	2.27	0.70
23:S:34:HIS:HB3	23:S:53:SER:HB2	1.73	0.69
10:A:2652:C:H2'	10:A:2653:U:H5'	1.73	0.69
13:E:48:GLN:NE2	13:E:78:LEU:HD13	2.07	0.69
15:G:76:SER:HB3	15:G:84:LYS:H	1.57	0.69
10:A:2875:C:O2'	24:T:5:ALA:HB3	1.92	0.69
10:A:2853:C:H2'	10:A:2854:G:H8	1.57	0.69
10:A:271(A):A:H5'	10:A:271(B):C:OP2	1.91	0.69
10:A:1742:G:N7	10:A:1743:C:C2	2.60	0.69
24:T:29:ARG:HB3	24:T:85:LYS:HA	1.75	0.69
8:7:40:TRP:CD2	10:A:459:U:H5''	2.26	0.69
4:3:7:LYS:O	4:3:9:VAL:HG13	1.93	0.69
23:S:95:HIS:CG	23:S:96:GLY:H	2.08	0.69
10:A:904:C:C2'	10:A:905:U:H5'	2.22	0.69
21:Q:20:ALA:O	21:Q:22:LYS:N	2.24	0.69
3:2:14:ARG:CZ	3:2:15:LYS:H	2.05	0.69
10:A:184:C:H2'	10:A:185:U:H6	1.56	0.69
10:A:754:C:H2'	10:A:755:C:C6	2.27	0.69
27:W:5:ALA:HB2	27:W:54:ALA:HB2	1.75	0.69
28:X:53:LYS:H	28:X:80:ILE:HG22	1.57	0.69
11:B:6:C:O2'	23:S:29:PHE:HE1	1.76	0.69
2:1:94:LEU:O	2:1:95:LEU:HG	1.93	0.69
10:A:527:C:N4	10:A:2779:U:OP2	2.25	0.69
29:Y:76:CYS:CB	29:Y:77:PRO:HD2	2.22	0.69
10:A:494:G:OP1	27:W:8:ARG:NH1	2.24	0.69
10:A:2462:U:H1'	10:A:2491:U:O4	1.93	0.69
24:T:25:GLY:O	24:T:26:ASP:HB2	1.90	0.69
1:0:28:GLY:HA2	1:0:66:VAL:CG1	2.22	0.69
10:A:2599:G:OP2	12:D:236:GLY:N	2.25	0.69
10:A:1614:A:N6	27:W:88:ARG:H	1.91	0.69
10:A:1614:A:H61	27:W:88:ARG:H	1.41	0.69
10:A:1005:C:C2	10:A:1143:A:C5	2.79	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:39:LEU:O	26:V:40:LEU:HB3	1.92	0.69
10:A:2311:A:OP1	10:A:2312:U:H5	1.75	0.69
10:A:2580:U:H4'	13:E:130:GLY:HA2	1.74	0.69
2:1:16:ASN:HB3	2:1:46:LEU:HG	1.73	0.69
10:A:296:C:H2'	10:A:297:C:H6	1.58	0.69
10:A:806:C:OP2	20:P:39:LYS:CD	2.38	0.69
10:A:141:A:H8	10:A:1408:C:O2'	1.71	0.69
10:A:1141:U:OP1	18:N:25:ARG:NH1	2.25	0.69
26:V:72:VAL:HA	26:V:88:ARG:NH1	2.06	0.69
11:B:6:C:HO2'	23:S:29:PHE:HE1	1.39	0.69
10:A:2377:A:H4'	23:S:107:GLU:CG	2.23	0.69
10:A:2773:C:O2'	10:A:2774:C:H5'	1.93	0.69
10:A:2267:A:H5''	10:A:2268:A:H5'	1.74	0.69
11:B:94:C:H2'	11:B:95:C:C6	2.27	0.69
10:A:2463:C:H2'	10:A:2464:C:H5'	1.72	0.69
17:I:4:ILE:HG12	17:I:39:ALA:HB2	1.74	0.69
10:A:2611:U:H5'	10:A:2611:U:C6	2.28	0.69
21:Q:37:LEU:HB2	21:Q:128:LYS:O	1.92	0.69
21:Q:132:VAL:HG11	30:Z:81:ARG:HD2	1.73	0.69
10:A:11:G:C2'	10:A:12:U:H5'	2.22	0.69
22:R:8:ARG:NE	22:R:8:ARG:HA	2.07	0.69
10:A:191:A:O2'	10:A:192:C:H5'	1.92	0.69
20:P:35:HIS:CD2	20:P:35:HIS:O	2.46	0.69
3:2:48:HIS:NE2	10:A:75:G:O3'	2.23	0.69
18:N:65:LYS:CD	18:N:67:LEU:HB2	2.21	0.69
13:E:48:GLN:HE22	13:E:64:LYS:NZ	1.91	0.69
10:A:2316:C:H2'	10:A:2317:C:H6	1.55	0.69
13:E:52:LEU:HD13	13:E:76:ARG:HG2	1.74	0.69
13:E:93:VAL:H	13:E:95:ILE:CD1	2.04	0.69
21:Q:20:ALA:CB	21:Q:99:PRO:HG2	2.23	0.69
10:A:1410:G:H1	10:A:1592:C:N4	1.89	0.69
20:P:97:PRO:HD3	20:P:126:VAL:O	1.92	0.69
10:A:1245:G:OP1	20:P:16:ARG:HD2	1.91	0.69
20:P:56:SER:O	20:P:58:THR:N	2.26	0.69
20:P:61:ARG:CD	20:P:61:ARG:H	2.03	0.69
7:6:16:CYS:SG	7:6:48:VAL:HG13	2.33	0.69
28:X:60:ARG:HB2	28:X:73:ARG:N	2.08	0.69
26:V:14:VAL:HG12	26:V:98:GLU:HG3	1.73	0.69
15:G:5:VAL:HG21	15:G:101:ILE:HB	1.75	0.69
24:T:98:LYS:HB3	24:T:100:TYR:CE1	2.27	0.69
24:T:51:ARG:HG3	24:T:98:LYS:HE3	1.74	0.69
10:A:1803:A:O3'	12:D:259:THR:CG2	2.41	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1503:U:H2'	10:A:1504:C:C5	2.27	0.69
6:5:16:ARG:HH11	6:5:16:ARG:CG	2.04	0.69
22:R:100:LEU:HD21	22:R:113:LEU:HD13	1.74	0.69
6:5:32:PRO:O	6:5:33:CYS:HB3	1.93	0.69
6:5:47:PRO:O	6:5:48:GLU:HG3	1.91	0.69
10:A:2720:U:H2'	10:A:2720:U:O2	1.93	0.69
1:0:20:ARG:NE	10:A:2271:G:H5''	2.08	0.69
10:A:128:C:H6	10:A:128:C:H5''	1.58	0.69
10:A:1889:A:N1	10:A:2234:G:H1'	2.08	0.69
9:8:6:THR:CG2	9:8:63:PRO:HD3	2.22	0.69
10:A:1286:A:O2'	10:A:1288:U:P	2.51	0.69
11:B:58:A:H2'	11:B:58:A:N3	2.07	0.69
23:S:38:GLN:CG	23:S:47:THR:HG21	2.22	0.69
17:I:120:ILE:HD11	17:I:140:LEU:HD23	1.75	0.69
10:A:1430:C:H2'	10:A:1431:U:H6	1.58	0.69
10:A:2747:G:O6	10:A:2755:C:H5''	1.93	0.69
16:H:149:ARG:HD3	16:H:164:TYR:HE1	1.58	0.69
13:E:32:PRO:O	13:E:34:VAL:HG12	1.93	0.69
10:A:288:C:N4	10:A:353:G:H1	1.90	0.69
13:E:132:HIS:CD2	13:E:135:HIS:NE2	2.60	0.69
10:A:2869:G:H2'	10:A:2870:C:O4'	1.93	0.69
14:F:184:TYR:O	14:F:188:ARG:HG3	1.93	0.69
21:Q:27:VAL:HA	21:Q:105:GLU:OE1	1.92	0.69
10:A:753:C:H6	10:A:753:C:O5'	1.75	0.69
10:A:1037:G:H1	10:A:1118:C:N4	1.90	0.69
12:D:35:LYS:HG2	12:D:64:ILE:N	2.08	0.69
22:R:29:LEU:HB3	22:R:75:LEU:HD11	1.73	0.69
29:Y:30:VAL:HG12	29:Y:31:LEU:N	2.06	0.69
19:O:114:ILE:HD13	19:O:114:ILE:N	2.07	0.69
30:Z:73:GLN:HG2	30:Z:87:ASP:OD1	1.93	0.69
24:T:35:LYS:HG3	24:T:36:GLU:HB2	1.75	0.69
15:G:64:THR:HG23	15:G:65:GLY:H	1.57	0.69
10:A:1151:G:H5''	25:U:81:HIS:CE1	2.28	0.69
9:8:12:LYS:HE3	10:A:247:G:O6	1.93	0.68
28:X:30:VAL:HG23	28:X:76:ARG:HA	1.75	0.68
21:Q:140:ALA:H	30:Z:53:ILE:HD12	1.57	0.68
30:Z:128:VAL:HG22	30:Z:161:VAL:HG22	1.75	0.68
21:Q:39:PRO:HA	21:Q:97:VAL:O	1.93	0.68
10:A:1319:G:C6	10:A:1320:C:N4	2.61	0.68
17:I:76:THR:HG22	17:I:139:GLN:HB3	1.74	0.68
14:F:28:ILE:HD12	14:F:28:ILE:H	1.58	0.68
20:P:15:ARG:HG2	20:P:17:LYS:HD2	1.74	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:46:ASN:O	4:3:50:VAL:HG22	1.93	0.68
2:1:10:LYS:HG2	2:1:11:ARG:N	2.08	0.68
10:A:330:A:H2	10:A:1210:A:HO2'	1.39	0.68
10:A:1504:C:O2'	10:A:1505:C:H5'	1.94	0.68
10:A:1690:A:H3'	10:A:1691:C:C6	2.24	0.68
10:A:481:G:OP1	10:A:481:G:H4'	1.93	0.68
10:A:2536:G:C5	10:A:2537:U:C5	2.81	0.68
10:A:2475:C:H5''	10:A:2476:A:OP2	1.93	0.68
10:A:322:A:H5'	10:A:340:A:C1'	2.23	0.68
10:A:1843:C:H5'	12:D:253:GLN:OE1	1.93	0.68
16:H:126:PRO:CG	16:H:130:ARG:HB3	2.23	0.68
16:H:86:GLU:HB3	16:H:132:ARG:HG2	1.76	0.68
10:A:2099:U:H2'	10:A:2099:U:O2	1.90	0.68
10:A:1163:G:O2'	10:A:1164:G:H5'	1.92	0.68
10:A:106:C:H1'	29:Y:2:ARG:HE	1.58	0.68
29:Y:2:ARG:C	29:Y:4:LYS:H	1.94	0.68
29:Y:2:ARG:O	29:Y:4:LYS:N	2.25	0.68
10:A:2287:A:C2	10:A:2289:G:N9	2.61	0.68
10:A:1899:G:N2	10:A:1902:C:H5	1.90	0.68
10:A:2029:G:H2'	10:A:2031:A:OP2	1.93	0.68
10:A:1505:C:H3'	10:A:1505:C:H6	1.58	0.68
5:4:25:TYR:HA	15:G:109:VAL:CG2	2.20	0.68
10:A:2723:C:H5''	22:R:2:ARG:HD3	1.74	0.68
1:0:32:ARG:H	1:0:35:ASN:HD21	1.40	0.68
17:I:72:LEU:HD12	17:I:138:ILE:HG23	1.76	0.68
13:E:134:ILE:N	13:E:134:ILE:HD13	2.07	0.68
10:A:2476:A:C5	10:A:2477:C:C5	2.81	0.68
10:A:2068:U:C2	10:A:2430:A:H2	2.12	0.68
10:A:229:A:C5'	10:A:230:U:H5'	2.20	0.68
10:A:1778:U:H2'	10:A:1784:A:C6	2.28	0.68
10:A:476:G:H4'	10:A:502:A:N1	2.09	0.68
10:A:90:U:O2	10:A:90:U:H2'	1.93	0.68
24:T:32:TYR:CD2	24:T:81:PRO:O	2.47	0.68
10:A:613:G:N2	10:A:614(C):A:O2'	2.26	0.68
10:A:2272:U:H5''	10:A:2273:A:OP1	1.92	0.68
10:A:603:A:H4'	10:A:604:G:O5'	1.94	0.68
10:A:892:G:H3'	10:A:892:G:N3	2.07	0.68
10:A:807:U:H2'	10:A:808:G:O5'	1.93	0.68
10:A:2864:G:H2'	10:A:2865:U:O4'	1.94	0.68
10:A:972:G:OP2	10:A:974:G:H5''	1.93	0.68
10:A:1544:A:O3'	10:A:1544:A:N3	2.26	0.68
30:Z:39:VAL:CG2	30:Z:44:PHE:HB2	2.23	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2470:G:N1	10:A:2471:C:C5	2.62	0.68
2:1:42:GLN:HG2	2:1:43:TYR:H	1.59	0.68
6:5:2:ALA:N	10:A:747:U:C4	2.61	0.68
14:F:63:LYS:HZ1	14:F:67:GLN:HB2	1.58	0.68
20:P:92:GLU:HA	20:P:123:LEU:HD22	1.73	0.68
22:R:71:GLN:HA	22:R:71:GLN:NE2	2.08	0.68
13:E:201:THR:HG22	13:E:202:LYS:H	1.58	0.68
12:D:253:GLN:HB3	12:D:255:LYS:NZ	2.09	0.68
10:A:2406:U:O4	20:P:70:GLN:HB3	1.94	0.68
10:A:1388:G:C2'	10:A:1389:G:H5'	2.22	0.68
10:A:70:G:H21	10:A:71:A:H62	1.40	0.68
10:A:848:G:N3	10:A:933:A:H1'	2.09	0.68
10:A:571:A:C5'	10:A:2030:A:H62	1.93	0.68
10:A:543:C:C6	10:A:547:A:N7	2.62	0.68
23:S:42:ASP:O	23:S:43:GLU:HB2	1.94	0.68
10:A:811:U:O5'	20:P:25:SER:O	2.11	0.68
10:A:1372:U:H2'	10:A:1373:A:O4'	1.93	0.68
17:I:78:THR:HA	17:I:141:LYS:O	1.94	0.68
10:A:2391:G:O6	10:A:2425:A:H8	1.77	0.68
10:A:1543:C:OP2	10:A:1543:C:C6	2.46	0.68
7:6:48:VAL:HG22	7:6:49:HIS:N	2.09	0.68
10:A:2069:G:C2'	10:A:2070:G:H5'	2.24	0.68
11:B:38:C:H4'	23:S:95:HIS:CE1	2.29	0.68
10:A:2275:C:HO2'	21:Q:83:MET:HA	1.56	0.68
19:O:10:VAL:O	19:O:10:VAL:HG23	1.93	0.68
1:0:77:ARG:NH2	10:A:857:C:OP2	2.27	0.68
10:A:2537:U:H2'	10:A:2538:C:C6	2.29	0.68
22:R:103:ARG:HD3	22:R:108:GLY:O	1.93	0.68
10:A:922:U:H2'	10:A:923:C:C6	2.29	0.68
10:A:817:C:H2'	10:A:818:G:C8	2.29	0.68
7:6:16:CYS:O	7:6:17:LYS:HB2	1.94	0.68
7:6:10:LEU:CD1	9:8:35:GLN:HE22	2.04	0.68
20:P:107:LYS:C	20:P:109:GLY:H	1.97	0.68
26:V:71:LEU:CD1	26:V:72:VAL:H	2.02	0.68
23:S:54:LEU:HD21	23:S:59:LYS:O	1.94	0.68
10:A:1568:G:N2	12:D:58:HIS:CE1	2.61	0.68
29:Y:45:VAL:HG13	29:Y:62:GLU:OE2	1.94	0.68
6:5:33:CYS:SG	6:5:49:CYS:CB	2.82	0.68
10:A:2470:G:C2	10:A:2471:C:C6	2.82	0.68
10:A:2660:A:H5''	10:A:2661:G:H21	1.59	0.68
10:A:719:C:O2'	10:A:720:C:H5'	1.94	0.68
10:A:2593:U:H2'	10:A:2594:C:C6	2.29	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:H:116:GLU:HG2	16:H:117:PRO:HD2	1.76	0.68
10:A:836:G:H2'	10:A:837:C:C6	2.28	0.68
10:A:588:U:H2'	10:A:589:C:C6	2.29	0.68
10:A:2859:G:H3'	10:A:2859:G:C8	2.29	0.68
18:N:112:LEU:HD12	18:N:112:LEU:C	2.14	0.68
26:V:66:ARG:CD	26:V:94:LEU:HG	2.23	0.68
12:D:27:THR:CG2	12:D:28:GLU:N	2.51	0.68
10:A:2306:C:H5''	10:A:2307:G:O4'	1.94	0.68
3:2:15:LYS:O	3:2:16:LEU:CB	2.42	0.68
10:A:1473:G:H5''	10:A:1474:C:OP2	1.94	0.68
10:A:542:C:N4	10:A:543:C:H42	1.91	0.68
10:A:542:C:H2'	10:A:543:C:OP1	1.94	0.68
10:A:755:C:H2'	10:A:756:C:H6	1.57	0.68
10:A:1359:A:C8	10:A:1372:U:O4	2.46	0.68
10:A:2096:U:H3	10:A:2193:G:H1	1.40	0.68
7:6:24:GLU:OE1	7:6:24:GLU:HA	1.94	0.67
9:8:30:ARG:O	9:8:31:HIS:C	2.31	0.67
9:8:32:LEU:HG	9:8:34:TRP:HB3	1.76	0.67
10:A:198:C:H5'	10:A:2244:U:OP1	1.93	0.67
10:A:631:A:O2'	20:P:67:MET:HB3	1.94	0.67
14:F:63:LYS:NZ	14:F:67:GLN:HB2	2.07	0.67
20:P:105:LEU:HD12	20:P:105:LEU:N	2.08	0.67
18:N:25:ARG:HH11	18:N:25:ARG:CG	2.07	0.67
12:D:25:THR:O	12:D:25:THR:HG23	1.93	0.67
10:A:2631:G:N2	13:E:61:ARG:NH1	2.37	0.67
10:A:527:C:OP2	10:A:2779:U:H5	1.76	0.67
2:1:20:ARG:HB2	10:A:380:U:O3'	1.92	0.67
10:A:387:U:H4'	10:A:388:G:O5'	1.94	0.67
28:X:21:PHE:H	28:X:21:PHE:HD1	1.41	0.67
15:G:111:LEU:HD23	15:G:114:ILE:HD12	1.74	0.67
10:A:2262:U:O2'	10:A:2263:C:H5'	1.92	0.67
12:D:267:SER:C	12:D:269:PHE:N	2.43	0.67
26:V:80:GLN:O	26:V:80:GLN:OE1	2.12	0.67
28:X:36:LYS:HZ2	28:X:39:ILE:HA	1.60	0.67
29:Y:15:VAL:HG12	29:Y:16:ALA:N	2.10	0.67
21:Q:75:THR:CA	21:Q:88:GLY:HA2	2.22	0.67
13:E:152:LYS:HD3	18:N:78:TYR:CB	2.23	0.67
10:A:52:A:C2'	10:A:53:A:H5'	2.25	0.67
22:R:28:LEU:HD12	22:R:48:VAL:HG21	1.76	0.67
10:A:1190:G:H4'	20:P:35:HIS:CB	2.25	0.67
10:A:143:G:H1'	28:X:38:GLU:HG3	1.75	0.67
10:A:1000:A:H2'	10:A:1001:A:C8	2.29	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:U:90:VAL:HG22	26:V:39:LEU:HD11	1.75	0.67
29:Y:76:CYS:HB3	29:Y:77:PRO:HD2	1.75	0.67
10:A:676:A:H2	10:A:802:A:N6	1.88	0.67
25:U:91:ASP:OD2	25:U:96:ALA:HB2	1.94	0.67
10:A:693:C:O2'	10:A:694:U:H5'	1.95	0.67
12:D:94:LEU:HB2	12:D:104:TYR:CE2	2.29	0.67
10:A:875:G:H4'	30:Z:170:THR:HG21	1.74	0.67
10:A:1291:C:H2'	10:A:1292:U:C6	2.29	0.67
10:A:1582:C:O2'	10:A:1586:A:C8	2.48	0.67
10:A:792:G:H5''	10:A:793:A:H5'	1.74	0.67
16:H:66:GLY:CA	16:H:69:ARG:HB2	2.23	0.67
10:A:2476:A:C4	10:A:2477:C:C5	2.83	0.67
7:6:42:TRP:CE3	7:6:42:TRP:HA	2.29	0.67
10:A:514:A:H1'	10:A:581:C:O2'	1.94	0.67
20:P:16:ARG:CG	20:P:16:ARG:HH11	1.93	0.67
28:X:38:GLU:N	28:X:38:GLU:OE1	2.28	0.67
26:V:60:GLU:HB3	26:V:62:LEU:HD21	1.77	0.67
29:Y:37:VAL:HG22	29:Y:67:LEU:O	1.94	0.67
10:A:1412:A:H2'	10:A:1413:G:O4'	1.95	0.67
10:A:2464:C:O2'	10:A:2465:C:H5''	1.94	0.67
10:A:1205:U:H4'	10:A:1206:G:OP2	1.94	0.67
23:S:89:ARG:HB3	23:S:92:TYR:HB3	1.77	0.67
10:A:2531:A:H2	10:A:2658:C:O2	1.76	0.67
13:E:35:GLN:HB3	13:E:48:GLN:HB3	1.76	0.67
10:A:1228:G:C2'	10:A:1229:G:H5''	2.21	0.67
10:A:860:U:O2'	10:A:861:A:H5'	1.94	0.67
14:F:203:GLN:HA	14:F:206:ILE:O	1.95	0.67
3:2:14:ARG:NH1	3:2:57:ILE:HG21	2.10	0.67
20:P:85:LEU:HD22	20:P:115:LEU:O	1.95	0.67
18:N:56:ASN:N	18:N:125:GLY:HA3	2.06	0.67
18:N:15:LEU:HD22	18:N:53:VAL:O	1.95	0.67
25:U:75:ASN:HB2	25:U:78:THR:HG1	1.58	0.67
26:V:19:LYS:HE2	26:V:20:LEU:N	2.10	0.67
15:G:47:LYS:HG3	15:G:82:LEU:HD11	1.74	0.67
29:Y:95:LYS:HD3	29:Y:100:ALA:HB1	1.75	0.67
10:A:1981:A:H5''	10:A:1982:C:OP2	1.95	0.67
9:8:32:LEU:CG	9:8:35:GLN:H	2.08	0.67
10:A:2016:U:H2'	10:A:2017:U:C6	2.30	0.67
18:N:30:ILE:HG23	18:N:52:VAL:HG11	1.77	0.67
6:5:40:LYS:CE	6:5:46:CYS:HB3	2.25	0.67
6:5:50:GLY:HA3	6:5:56:LYS:HG2	1.77	0.67
10:A:1204:A:C2	10:A:1241:A:N1	2.63	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:69:ARG:NH2	12:D:128:GLY:O	2.27	0.67
10:A:2418:A:H2'	10:A:2419:U:H6	1.59	0.67
17:I:122:GLU:O	17:I:126:TYR:HE1	1.77	0.67
12:D:35:LYS:HZ1	12:D:104:TYR:HB2	1.60	0.67
10:A:2652:C:O2'	10:A:2653:U:H5'	1.93	0.67
17:I:82:ARG:HB3	17:I:89:TYR:CE1	2.26	0.67
10:A:1025:G:C4	10:A:1135:C:H1'	2.30	0.67
22:R:10:LEU:HD22	22:R:17:ARG:HD3	1.77	0.67
10:A:106:C:H1'	29:Y:2:ARG:NE	2.10	0.67
15:G:9:ARG:O	15:G:13:GLU:HG2	1.94	0.67
20:P:80:TYR:CZ	20:P:111:ARG:HG2	2.30	0.66
28:X:60:ARG:HE	28:X:74:PRO:CG	2.07	0.66
10:A:1019:U:O2'	10:A:1021:A:H2	1.71	0.66
26:V:25:LEU:HG	26:V:94:LEU:HD13	1.76	0.66
17:I:120:ILE:CD1	17:I:140:LEU:HD23	2.25	0.66
10:A:1790:C:H2'	10:A:1791:A:C5	2.30	0.66
10:A:1278:A:O2'	22:R:34:ILE:HD11	1.94	0.66
30:Z:130:PRO:HA	30:Z:133:ILE:CD1	2.24	0.66
10:A:2292:C:C2'	10:A:2293:C:H5'	2.25	0.66
9:8:4:MET:O	9:8:62:LEU:HD11	1.95	0.66
10:A:589:C:O2'	10:A:590:A:H5'	1.95	0.66
10:A:1448:G:H5'	10:A:1449:A:OP1	1.95	0.66
25:U:65:ILE:HG12	25:U:96:ALA:HB3	1.78	0.66
11:B:74:U:C3'	11:B:75:G:H5''	2.25	0.66
10:A:2781:A:H5'	10:A:2782:G:C5'	2.23	0.66
26:V:52:VAL:O	26:V:53:GLU:CB	2.43	0.66
10:A:2641:G:OP1	18:N:83:LYS:HD3	1.95	0.66
24:T:24:PRO:HA	24:T:49:VAL:O	1.95	0.66
16:H:92:ILE:HG22	16:H:93:GLY:N	2.10	0.66
27:W:6:ILE:HA	27:W:103:ILE:O	1.95	0.66
10:A:661:C:O3'	20:P:18:ARG:HG2	1.96	0.66
20:P:23:PRO:C	20:P:33:ARG:HE	1.98	0.66
18:N:47:ALA:CB	18:N:112:LEU:HD11	2.26	0.66
23:S:36:TYR:N	23:S:36:TYR:CD1	2.60	0.66
24:T:100:TYR:CD2	24:T:103:ARG:NH2	2.62	0.66
14:F:20:LEU:HD13	14:F:199:TRP:HH2	1.60	0.66
14:F:184:TYR:CD2	14:F:188:ARG:HD2	2.30	0.66
19:O:3:GLN:HB2	19:O:4:PRO:HD2	1.76	0.66
10:A:1270:C:H5''	10:A:1271:G:O5'	1.95	0.66
25:U:61:TRP:O	25:U:62:ILE:C	2.33	0.66
10:A:993:G:N2	26:V:91:TYR:OH	2.28	0.66
10:A:1797:C:O2'	10:A:1798:U:H5'	1.96	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:11:ARG:HH11	2:1:91:LYS:HZ3	1.41	0.66
22:R:96:ARG:HH21	22:R:117:VAL:CG2	2.07	0.66
10:A:39:C:H2'	10:A:40:C:C6	2.31	0.66
20:P:146:VAL:HG22	20:P:147:LEU:N	2.11	0.66
10:A:1876:A:H2'	10:A:1877:A:C8	2.30	0.66
10:A:34:C:H2'	10:A:35:G:OP1	1.94	0.66
15:G:37:VAL:HG21	15:G:103:LEU:HD11	1.78	0.66
9:8:14:VAL:HG11	9:8:22:VAL:CG1	2.26	0.66
28:X:18:TYR:HA	28:X:21:PHE:CD1	2.30	0.66
15:G:172:LEU:HG	15:G:173:LEU:HD23	1.75	0.66
12:D:58:HIS:HD2	12:D:59:LYS:N	1.94	0.66
10:A:1557:C:OP2	10:A:1558:A:O2'	2.11	0.66
10:A:2842:G:N2	10:A:2875:C:O2	2.19	0.66
10:A:153:C:H2'	10:A:154:G:C8	2.31	0.66
16:H:136:ILE:HD12	16:H:136:ILE:H	1.59	0.66
10:A:1348:G:H2'	10:A:1349:A:H5''	1.78	0.66
21:Q:69:PHE:CD1	21:Q:70:PRO:HD2	2.30	0.66
10:A:2399:G:H2'	10:A:2400:G:O4'	1.95	0.66
11:B:38:C:C5	11:B:39:A:C8	2.84	0.66
15:G:111:LEU:HD23	15:G:114:ILE:CD1	2.25	0.66
10:A:573:G:C6	10:A:2030:A:H3'	2.30	0.66
10:A:2307:G:N2	10:A:2308:G:H5'	2.10	0.66
29:Y:68:HIS:O	29:Y:70:SER:N	2.29	0.66
10:A:856:C:H5''	10:A:856:C:C6	2.30	0.66
10:A:2464:C:O2'	10:A:2465:C:C5'	2.44	0.66
10:A:2689:U:OP1	10:A:2719:G:N1	2.25	0.66
3:2:51:ARG:O	3:2:52:ASP:CB	2.44	0.66
26:V:66:ARG:HB2	26:V:95:LEU:H	1.59	0.66
26:V:66:ARG:HE	26:V:94:LEU:HG	1.60	0.66
26:V:66:ARG:HD2	26:V:67:GLY:N	2.09	0.66
15:G:15:VAL:HG12	15:G:19:LEU:CD1	2.25	0.66
2:1:87:PRO:HB2	2:1:91:LYS:HZ2	1.59	0.66
18:N:78:TYR:CE1	18:N:79:PRO:HB3	2.31	0.66
13:E:118:LYS:O	13:E:160:TYR:HE1	1.78	0.66
10:A:1639:U:H4'	10:A:2699:C:H4'	1.78	0.66
17:I:113:ARG:NH1	17:I:132:PRO:HG3	2.11	0.66
10:A:531:C:H4'	10:A:532:A:H5''	1.76	0.66
14:F:132:VAL:HG22	14:F:133:ASN:H	1.59	0.66
14:F:57:VAL:HG12	14:F:59:TYR:H	1.60	0.66
9:8:34:TRP:HZ3	9:8:41:ILE:HG23	1.61	0.66
10:A:2053:G:H1	10:A:2616:C:H42	1.43	0.66
10:A:806:C:P	20:P:39:LYS:HG3	2.36	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:33:ARG:O	20:P:34:GLY:C	2.33	0.66
3:2:29:LYS:NZ	28:X:9:LEU:HA	2.10	0.66
12:D:16:MET:HB2	12:D:207:GLY:HA3	1.78	0.66
10:A:869:G:H2'	10:A:870:A:O4'	1.96	0.66
27:W:17:VAL:O	27:W:20:VAL:HG22	1.95	0.66
12:D:3:VAL:H	12:D:20:ASP:HB2	1.59	0.66
10:A:1303:G:H1'	10:A:1641:A:N1	2.11	0.66
16:H:20:ALA:HB3	16:H:23:ARG:HB2	1.75	0.66
1:0:20:ARG:NH1	10:A:2357:U:OP1	2.28	0.66
2:1:26:ARG:HB2	2:1:34:THR:HB	1.78	0.66
2:1:26:ARG:HB3	2:1:34:THR:CA	2.26	0.66
9:8:25:MET:HB2	20:P:62:LEU:CD2	2.25	0.66
10:A:2500:U:H5''	10:A:2501:C:OP2	1.95	0.66
20:P:64:LYS:O	20:P:66:GLY:N	2.29	0.66
4:3:52:HIS:H	4:3:52:HIS:CD2	2.13	0.66
12:D:210:GLY:O	12:D:212:SER:N	2.28	0.66
2:1:11:ARG:HB3	2:1:12:PRO:HD3	1.77	0.66
10:A:2328:A:H2'	10:A:2329:G:O4'	1.96	0.66
10:A:65:C:H2'	10:A:66:C:C6	2.30	0.66
10:A:795:C:H2'	10:A:796:C:C6	2.31	0.66
10:A:2471:C:H3'	10:A:2472:G:H5''	1.77	0.66
10:A:2850:A:OP2	10:A:2866:U:H5	1.77	0.66
8:7:16:HIS:HB2	8:7:44:PRO:HG2	1.76	0.66
10:A:676:A:N1	10:A:802:A:N1	2.44	0.66
10:A:1741:A:H2'	10:A:1742:G:C2	2.31	0.66
28:X:18:TYR:HA	28:X:21:PHE:CE1	2.31	0.66
16:H:85:LYS:CD	16:H:133:VAL:HB	2.24	0.66
11:B:20:C:C2'	11:B:21:G:H5''	2.26	0.66
12:D:130:ALA:C	12:D:131:LEU:HD12	2.17	0.66
7:6:15:GLU:OE1	7:6:18:ARG:CG	2.42	0.65
15:G:173:LEU:HA	15:G:176:LEU:HB2	1.77	0.65
23:S:38:GLN:HG2	23:S:47:THR:HG21	1.78	0.65
17:I:88:ILE:CG1	17:I:121:LYS:HA	2.17	0.65
10:A:963:U:H1'	10:A:2250:G:O6	1.96	0.65
10:A:542:C:C4	10:A:543:C:N4	2.64	0.65
10:A:754:C:H2'	10:A:755:C:H6	1.60	0.65
21:Q:16:ARG:HG2	21:Q:17:LEU:N	2.11	0.65
30:Z:117:LEU:HA	30:Z:174:VAL:HA	1.77	0.65
10:A:610:G:H2'	10:A:611:C:C6	2.30	0.65
10:A:614(A):U:H4'	10:A:614(B):G:H5''	1.77	0.65
7:6:26:ASN:HD22	7:6:32:ASN:HD21	1.42	0.65
10:A:2360:A:O2'	10:A:2361:A:OP2	2.14	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1386:C:H2'	10:A:1387:C:C6	2.32	0.65
28:X:36:LYS:HZ2	28:X:39:ILE:CA	2.09	0.65
15:G:5:VAL:O	15:G:7:LEU:N	2.30	0.65
10:A:2756:U:H4'	10:A:2757:A:OP1	1.95	0.65
29:Y:18:GLY:O	29:Y:20:TYR:N	2.29	0.65
21:Q:140:ALA:O	30:Z:53:ILE:HB	1.96	0.65
24:T:55:ASN:O	24:T:57:PHE:N	2.29	0.65
10:A:2471:C:O2	10:A:2472:G:O4'	2.14	0.65
10:A:1987:G:H2'	10:A:1988:C:C6	2.31	0.65
10:A:2364:C:O2'	10:A:2365:G:H5'	1.96	0.65
18:N:14:VAL:HG12	18:N:52:VAL:HA	1.78	0.65
10:A:814:C:C5	20:P:27:HIS:CE1	2.85	0.65
25:U:83:LEU:C	25:U:88:ILE:HD11	2.16	0.65
25:U:90:VAL:O	25:U:92:ARG:N	2.29	0.65
10:A:2282:G:H4'	10:A:2283:C:O5'	1.96	0.65
10:A:1114:G:H2'	10:A:1115:G:H8	1.61	0.65
10:A:2199:A:N3	10:A:2199:A:H2'	2.10	0.65
17:I:91:SER:HB2	17:I:119:PRO:O	1.96	0.65
10:A:2699:C:H2'	10:A:2700:C:O4'	1.96	0.65
19:O:2:ILE:HD12	19:O:6:THR:HG21	1.77	0.65
10:A:1130:U:O2	10:A:2025:C:H5''	1.96	0.65
16:H:122:THR:HB	16:H:134:SER:HB2	1.78	0.65
10:A:607:U:O2	10:A:621:A:N1	2.30	0.65
26:V:6:LYS:HA	26:V:11:GLN:HA	1.79	0.65
15:G:173:LEU:HB3	15:G:178:PHE:CD1	2.31	0.65
23:S:52:SER:OG	23:S:55:ALA:HB3	1.97	0.65
10:A:1797:C:H2'	10:A:1798:U:H5'	1.78	0.65
10:A:286:C:N4	10:A:355:G:H1	1.94	0.65
10:A:528:A:C2	10:A:2043:C:H4'	2.31	0.65
29:Y:95:LYS:HD3	29:Y:100:ALA:CB	2.26	0.65
17:I:101:LEU:CG	17:I:109:ILE:HG12	2.26	0.65
16:H:52:VAL:HG11	16:H:69:ARG:HG3	1.76	0.65
21:Q:32:TYR:CE2	21:Q:133:ARG:HG2	2.31	0.65
10:A:1648:C:C2'	10:A:1649:G:O5'	2.44	0.65
17:I:54:GLN:HA	17:I:57:ARG:HH12	1.62	0.65
28:X:81:VAL:HG13	28:X:85:PRO:HB2	1.77	0.65
10:A:1330:C:O2'	10:A:1331:A:H5'	1.95	0.65
23:S:36:TYR:N	23:S:36:TYR:HD1	1.92	0.65
12:D:44:ASN:HB3	12:D:49:ILE:CA	2.25	0.65
19:O:10:VAL:HG22	19:O:17:ARG:O	1.96	0.65
6:5:55:ARG:C	6:5:56:LYS:HG3	2.17	0.65
24:T:89:VAL:O	24:T:91:ARG:HG3	1.97	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:615:G:OP1	14:F:40:GLN:NE2	2.28	0.65
10:A:2660:A:C5'	10:A:2661:G:H21	2.10	0.65
2:1:46:LEU:HD12	2:1:46:LEU:N	2.11	0.65
10:A:642:G:H21	10:A:646:A:H2	1.42	0.65
2:1:13:ILE:O	2:1:14:VAL:HB	1.94	0.65
10:A:572:A:H2'	10:A:573:G:O4'	1.96	0.65
10:A:2658:C:H2'	10:A:2658:C:O2	1.96	0.65
16:H:164:TYR:HB2	16:H:166:GLY:H	1.62	0.65
10:A:1493:C:O2	10:A:1493:C:H2'	1.97	0.65
13:E:51:PHE:O	13:E:52:LEU:HD12	1.96	0.65
21:Q:23:GLY:O	21:Q:100:GLY:HA3	1.97	0.65
9:8:52:LYS:H	9:8:53:PRO:HD2	1.62	0.65
10:A:2347:C:H2'	10:A:2348:U:C6	2.31	0.65
10:A:1340:U:H4'	10:A:1394:U:O2'	1.97	0.65
16:H:103:LEU:HD23	16:H:115:VAL:HB	1.78	0.65
10:A:1504:C:O2'	10:A:1505:C:C5'	2.44	0.65
10:A:1485:G:N2	10:A:1505:C:C5	2.65	0.65
21:Q:8:LYS:CG	21:Q:9:TYR:H	2.10	0.65
10:A:1636:C:H2'	10:A:1637:A:C8	2.32	0.65
10:A:1515:G:H2'	10:A:1516:C:H6	1.62	0.65
21:Q:29:PHE:O	21:Q:30:GLY:O	2.15	0.65
17:I:5:LEU:HD12	17:I:17:GLN:HB3	1.79	0.65
24:T:106:SER:HB2	24:T:110:ILE:HD11	1.79	0.65
12:D:69:ARG:HH12	12:D:117:VAL:CG2	2.09	0.65
10:A:1196:C:O4'	10:A:1226:A:C2	2.50	0.65
18:N:57:ALA:O	18:N:58:ASP:O	2.15	0.65
26:V:64:HIS:CG	26:V:64:HIS:O	2.49	0.65
2:1:92:LYS:C	2:1:94:LEU:N	2.47	0.65
10:A:2666:C:H6	10:A:2666:C:H5''	1.62	0.65
29:Y:27:VAL:O	29:Y:29:GLU:OE1	2.15	0.65
10:A:1114:G:O2'	10:A:1115:G:H5'	1.97	0.65
11:B:67:G:C4	11:B:68:C:C5	2.83	0.65
10:A:2762:G:C2'	10:A:2763:G:H5'	2.27	0.65
19:O:35:VAL:HA	19:O:62:VAL:HG12	1.79	0.65
10:A:2012:G:O3'	27:W:96:ILE:HG13	1.97	0.65
10:A:838:C:O2'	10:A:839:U:H5'	1.97	0.65
14:F:124:LEU:HD12	14:F:125:LEU:N	2.11	0.65
5:4:5:ILE:C	15:G:67:LYS:HG2	2.18	0.65
10:A:980:A:C6	10:A:981:A:N1	2.65	0.65
9:8:52:LYS:N	9:8:53:PRO:CD	2.59	0.65
4:3:8:LEU:CD1	4:3:31:LEU:HA	2.25	0.65
10:A:557:U:O2'	10:A:558:G:H5'	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:73:SER:HG	26:V:75:PHE:HE1	1.39	0.65
26:V:73:SER:OG	26:V:74:LYS:N	2.28	0.65
10:A:2377:A:H4'	23:S:107:GLU:HG2	1.77	0.65
23:S:13:ARG:O	23:S:15:ARG:HG3	1.97	0.65
10:A:767:U:O2'	10:A:768:G:H5'	1.97	0.65
16:H:148:ILE:O	16:H:151:ILE:HG12	1.97	0.65
30:Z:52:SER:OG	30:Z:53:ILE:N	2.30	0.65
1:O:40:GLN:HE21	1:O:43:THR:HA	1.61	0.65
14:F:21:ALA:HB3	14:F:23:ASP:OD2	1.96	0.65
29:Y:95:LYS:HE2	29:Y:101:LYS:N	2.09	0.65
17:I:109:ILE:HD12	17:I:109:ILE:N	2.12	0.65
10:A:271(P):C:C5'	17:I:45:LYS:HE3	2.27	0.65
10:A:1773:A:H2'	10:A:1774:C:C5'	2.27	0.65
10:A:2660:A:H5''	10:A:2661:G:C2	2.32	0.65
22:R:104:ARG:HD3	22:R:109:ALA:HB3	1.79	0.65
10:A:228:A:H2'	10:A:230:U:O4'	1.97	0.65
28:X:60:ARG:H	28:X:60:ARG:HD3	1.62	0.65
25:U:60:LEU:O	25:U:64:ARG:HG2	1.96	0.65
11:B:57:A:C6	15:G:29:TRP:CD1	2.85	0.65
11:B:59:A:H2'	11:B:60:C:O4'	1.96	0.65
12:D:35:LYS:HA	12:D:64:ILE:CG2	2.26	0.65
10:A:2646:C:H6	10:A:2646:C:O5'	1.80	0.65
29:Y:47:LYS:NZ	29:Y:47:LYS:HB3	2.11	0.65
10:A:2712:U:O2'	10:A:2712(A):A:OP2	2.10	0.65
10:A:1254:A:H5'	10:A:1255:U:C5'	2.27	0.65
20:P:75:ILE:N	20:P:75:ILE:HD13	2.12	0.65
7:6:25:LYS:HE2	7:6:27:LYS:NZ	2.11	0.64
2:1:34:THR:HG21	10:A:388:G:P	2.38	0.64
10:A:587:C:C5	20:P:33:ARG:HG2	2.32	0.64
10:A:1812:A:C2	10:A:1813:G:C4	2.85	0.64
10:A:574:C:N3	13:E:145:LYS:CE	2.60	0.64
1:O:53:MET:HE3	1:O:57:PHE:HA	1.79	0.64
10:A:2547:U:O2'	10:A:2548:G:H5'	1.97	0.64
10:A:1316:U:H2'	10:A:1317:A:C8	2.31	0.64
10:A:945:A:C4	10:A:2448:A:C2	2.85	0.64
10:A:1922:G:H2'	10:A:1923:U:H6	1.61	0.64
9:8:35:GLN:NE2	9:8:36:LYS:NZ	2.45	0.64
10:A:580:C:H2'	10:A:581:C:C6	2.32	0.64
10:A:671:C:H41	20:P:42:SER:HA	1.62	0.64
3:2:26:ARG:HG2	28:X:5:TYR:HB3	1.79	0.64
28:X:72:LYS:CG	28:X:73:ARG:H	2.11	0.64
26:V:24:LYS:HB2	26:V:92:THR:CG2	2.27	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:66:ARG:HE	26:V:94:LEU:CD1	2.10	0.64
10:A:870:A:C2	10:A:908:C:C2	2.86	0.64
10:A:1495:A:N3	10:A:1496:A:C2	2.65	0.64
26:V:47:VAL:HG13	26:V:48:GLY:N	2.10	0.64
19:O:19:ILE:HG22	19:O:43:VAL:HA	1.79	0.64
10:A:1037:G:H1	10:A:1118:C:H42	1.44	0.64
15:G:135:LEU:HD13	15:G:155:MET:SD	2.38	0.64
10:A:993:G:H1'	26:V:91:TYR:HD1	1.62	0.64
12:D:92:ILE:HD13	12:D:104:TYR:CE2	2.32	0.64
12:D:35:LYS:HD3	12:D:63:ARG:C	2.17	0.64
12:D:43:ARG:HB2	12:D:54:ARG:HB2	1.80	0.64
10:A:867:C:C5	10:A:868:U:C5	2.85	0.64
15:G:32:PRO:HB3	15:G:163:ALA:HB2	1.77	0.64
10:A:1952:A:C6	10:A:1953:A:N1	2.65	0.64
10:A:322:A:OP2	14:F:169:ASN:HB2	1.98	0.64
10:A:706:A:H2'	10:A:707:G:O4'	1.97	0.64
25:U:44:ASN:N	25:U:44:ASN:HD22	1.93	0.64
9:8:32:LEU:C	9:8:34:TRP:N	2.50	0.64
20:P:39:LYS:C	20:P:41:ARG:H	2.00	0.64
12:D:34:VAL:O	12:D:34:VAL:HG13	1.96	0.64
10:A:2543:G:H8	10:A:2543:G:H5'	1.62	0.64
29:Y:20:TYR:CD2	29:Y:41:GLY:HA2	2.31	0.64
10:A:1701:A:H5''	10:A:1702:G:OP2	1.98	0.64
10:A:1833:U:H2'	10:A:1834:U:C6	2.28	0.64
10:A:2025:C:H2'	10:A:2026:C:C6	2.33	0.64
10:A:2273:A:H2'	10:A:2274:A:C8	2.32	0.64
10:A:325:G:H2'	10:A:326:G:O4'	1.97	0.64
10:A:265:A:H1'	10:A:266:G:O4'	1.97	0.64
14:F:89:VAL:HG12	14:F:90:PHE:H	1.62	0.64
10:A:538:G:OP1	18:N:5:VAL:HG21	1.97	0.64
18:N:28:THR:HA	18:N:106:MET:CE	2.27	0.64
25:U:92:ARG:CZ	26:V:11:GLN:H	2.11	0.64
10:A:1288:U:C2	10:A:1327:C:O2	2.51	0.64
10:A:573:G:N1	10:A:2030:A:H3'	2.12	0.64
10:A:84:A:N1	10:A:98:G:O2'	2.29	0.64
1:0:43:THR:O	1:0:45:PHE:N	2.29	0.64
10:A:858:U:O2	10:A:2268:A:H2'	1.98	0.64
10:A:2762:G:H2'	10:A:2763:G:H5'	1.80	0.64
10:A:775:G:C4	10:A:794:G:C8	2.86	0.64
10:A:543:C:H6	10:A:547:A:N7	1.94	0.64
24:T:129:ARG:NH1	24:T:131:ALA:H	1.96	0.64
33:A:3206:TEL:C13	33:A:3206:TEL:O32	2.46	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:30:THR:CG2	20:P:31:ALA:H	2.09	0.64
28:X:52:VAL:HB	28:X:80:ILE:CG2	2.27	0.64
26:V:62:LEU:HD22	26:V:98:GLU:CB	2.28	0.64
10:A:1509(A):A:C8	10:A:1509(B):A:N7	2.65	0.64
10:A:2283:C:H2'	10:A:2284:C:H5'	1.78	0.64
6:5:46:CYS:SG	6:5:47:PRO:CD	2.86	0.64
20:P:123:LEU:O	20:P:123:LEU:HD12	1.96	0.64
10:A:2536:G:C6	10:A:2537:U:C4	2.86	0.64
10:A:1786:A:C2	10:A:2606:C:H1'	2.33	0.64
27:W:13:SER:HB3	27:W:16:LYS:HD3	1.77	0.64
10:A:1858:G:H1'	10:A:1884:A:N6	2.13	0.64
10:A:2884:U:C6	10:A:2885:C:C6	2.84	0.64
2:1:54:ALA:O	2:1:55:GLY:C	2.36	0.64
10:A:30:G:H2'	10:A:31:C:C6	2.33	0.64
10:A:1245:G:H5''	20:P:16:ARG:HH21	1.62	0.64
10:A:814:C:C5	20:P:27:HIS:NE2	2.65	0.64
12:D:105:ILE:HG13	12:D:106:ILE:O	1.97	0.64
10:A:2772:C:H2'	10:A:2773:C:C6	2.32	0.64
10:A:2811:G:N2	10:A:2891:G:H1'	2.12	0.64
10:A:2388:A:H2'	10:A:2389:G:H5'	1.78	0.64
10:A:2830:G:C8	10:A:2830:G:C5'	2.80	0.64
2:1:20:ARG:HG2	2:1:20:ARG:HH21	1.63	0.64
10:A:774:A:C2	10:A:787:U:O2'	2.41	0.64
10:A:298:G:H8	10:A:298:G:O5'	1.81	0.64
10:A:128:C:H2'	10:A:129:C:C6	2.31	0.64
13:E:27:LEU:HD22	24:T:1:MET:HE3	1.80	0.64
10:A:2880:C:H1'	22:R:92:GLY:O	1.98	0.64
27:W:95:ILE:O	27:W:95:ILE:HG13	1.98	0.64
3:2:32:LEU:HD13	3:2:37:PHE:HB3	1.78	0.64
3:2:52:ASP:H	3:2:55:ARG:HB2	1.62	0.64
10:A:1470:G:H5''	10:A:1471:A:OP1	1.98	0.64
26:V:73:SER:O	26:V:74:LYS:HB2	1.96	0.64
10:A:993:G:H5''	26:V:75:PHE:CE2	2.32	0.64
10:A:370:G:H3'	10:A:423:A:C5	2.33	0.64
10:A:2889:C:H3'	10:A:2891:G:H8	1.63	0.64
10:A:2809:A:C2	10:A:2892:A:N3	2.65	0.64
29:Y:9:LYS:HA	29:Y:30:VAL:CG2	2.25	0.64
10:A:1887:C:H2'	10:A:1888:G:H5''	1.79	0.64
10:A:2660:A:H5''	10:A:2661:G:N2	2.12	0.64
24:T:109:GLU:HA	24:T:112:ARG:CG	2.28	0.64
10:A:1198:U:H2'	10:A:1199:U:C6	2.33	0.64
20:P:101:VAL:C	20:P:103:ALA:H	2.02	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:88:LEU:C	20:P:90:ARG:H	2.02	0.64
15:G:117:PHE:HE1	15:G:120:LEU:HD23	1.62	0.64
10:A:2659:G:O2'	10:A:2663:G:N2	2.31	0.64
29:Y:35:TYR:CD2	29:Y:69:ALA:HB3	2.33	0.64
10:A:855:G:C5	10:A:856:C:N4	2.66	0.64
10:A:64:A:C2	10:A:65:C:C2	2.86	0.64
3:2:15:LYS:O	3:2:16:LEU:HB3	1.97	0.64
10:A:139(A):G:N2	28:X:44:GLU:OE1	2.30	0.64
10:A:836:G:C5	10:A:837:C:C4	2.86	0.64
10:A:946:G:O2'	10:A:947:G:H5'	1.97	0.64
27:W:92:ARG:O	27:W:93:ALA:HB3	1.98	0.64
10:A:69:C:O2	10:A:69:C:C2'	2.45	0.64
16:H:144:VAL:O	16:H:148:ILE:HG12	1.98	0.64
24:T:91:ARG:HA	24:T:117:ASP:H	1.63	0.64
24:T:33:LYS:NZ	24:T:33:LYS:N	2.46	0.64
10:A:2472:G:N1	10:A:2477:C:OP1	2.31	0.64
12:D:267:SER:HA	12:D:270:ILE:CD1	2.26	0.64
8:7:16:HIS:CB	8:7:44:PRO:HG2	2.28	0.64
9:8:32:LEU:CB	9:8:35:GLN:H	2.10	0.63
10:A:2243:U:H2'	10:A:2244:U:C6	2.34	0.63
10:A:389:G:H1	20:P:71:VAL:H	1.43	0.63
10:A:1744:C:C2'	10:A:1745:C:H5'	2.28	0.63
18:N:47:ALA:HB2	18:N:112:LEU:CD1	2.28	0.63
25:U:65:ILE:HG12	25:U:96:ALA:CB	2.28	0.63
13:E:170:LEU:N	13:E:170:LEU:HD12	2.12	0.63
22:R:4:LEU:O	22:R:6:SER:N	2.32	0.63
17:I:98:ALA:HA	17:I:109:ILE:HD13	1.80	0.63
10:A:2524:G:H1'	10:A:2740:A:N1	2.13	0.63
15:G:57:ALA:O	15:G:60:LEU:HB3	1.97	0.63
16:H:157:TYR:HE1	16:H:171:LEU:N	1.96	0.63
2:1:46:LEU:HA	10:A:396:G:O3'	1.98	0.63
1:0:48:GLY:HA3	1:0:80:HIS:ND1	2.14	0.63
10:A:1359:A:H8	10:A:1372:U:O4	1.81	0.63
10:A:1021:A:H62	10:A:1141:U:H3	1.46	0.63
26:V:71:LEU:HD22	26:V:72:VAL:HG23	1.79	0.63
11:B:37:C:O2	11:B:38:C:C2	2.51	0.63
12:D:58:HIS:CD2	12:D:59:LYS:N	2.66	0.63
12:D:35:LYS:HZ1	12:D:65:ILE:HA	1.62	0.63
10:A:2311:A:OP1	10:A:2312:U:C5	2.52	0.63
1:0:53:MET:HB2	1:0:59:LEU:HD23	1.79	0.63
10:A:2388:A:C2'	10:A:2389:G:H5'	2.27	0.63
10:A:2041:U:H2'	10:A:2042:A:C8	2.33	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:N:78:TYR:N	18:N:79:PRO:HD3	2.13	0.63
10:A:2680:C:OP2	13:E:111:ARG:NH2	2.30	0.63
29:Y:47:LYS:H	29:Y:47:LYS:HD2	1.63	0.63
10:A:2023:G:H5'	10:A:2617:C:H4'	1.80	0.63
10:A:267:C:H2'	10:A:268:C:C6	2.34	0.63
7:6:13:CYS:HA	7:6:50:ARG:O	1.98	0.63
20:P:23:PRO:CB	20:P:33:ARG:HG3	2.19	0.63
10:A:2376:A:H5''	10:A:2377:A:OP2	1.98	0.63
11:B:50:G:OP2	23:S:62:LYS:HB2	1.98	0.63
10:A:1794:U:O2'	10:A:1795:C:H5'	1.98	0.63
12:D:35:LYS:CE	12:D:104:TYR:HB2	2.28	0.63
10:A:2650:U:H2'	10:A:2651:C:C6	2.34	0.63
10:A:357:A:C2	10:A:358:U:O2	2.52	0.63
10:A:2006:C:H2'	10:A:2007:C:H6	1.62	0.63
28:X:65:ARG:CZ	28:X:66:LEU:H	2.11	0.63
24:T:109:GLU:O	24:T:112:ARG:HG3	1.98	0.63
10:A:542:C:H6	10:A:542:C:O5'	1.82	0.63
8:7:11:LYS:HE2	10:A:686:G:H5''	1.80	0.63
1:0:2:ALA:H	10:A:2602:A:H62	1.45	0.63
16:H:126:PRO:HG2	16:H:130:ARG:HB3	1.80	0.63
10:A:1386:C:H2'	10:A:1387:C:H6	1.63	0.63
3:2:41:ILE:HG21	10:A:95:G:H21	1.63	0.63
28:X:89:ILE:HA	28:X:92:LEU:HD12	1.81	0.63
4:3:43:ILE:O	4:3:47:VAL:HG23	1.97	0.63
10:A:1005:C:O2	10:A:1143:A:C6	2.52	0.63
18:N:30:ILE:O	18:N:34:LEU:HD22	1.98	0.63
26:V:28:GLU:HB2	26:V:29:PRO:CD	2.25	0.63
10:A:1771:C:C1'	10:A:1786:A:C8	2.82	0.63
10:A:271(C):C:H2'	10:A:271(D):G:C8	2.33	0.63
10:A:271(G):C:O2'	10:A:271(H):G:H5'	1.98	0.63
22:R:9:LYS:O	22:R:10:LEU:CG	2.45	0.63
17:I:5:LEU:O	17:I:6:LEU:HD23	1.99	0.63
10:A:1686:C:C2'	10:A:1687:G:H5'	2.29	0.63
10:A:221:A:H4'	10:A:222:A:O5'	1.97	0.63
27:W:64:MET:O	27:W:65:LEU:CB	2.46	0.63
10:A:727:A:C2	12:D:9:TYR:CD2	2.86	0.63
7:6:25:LYS:HE2	7:6:27:LYS:HZ1	1.63	0.63
10:A:2402:C:H5'	10:A:2403:C:OP2	1.97	0.63
10:A:634:C:H2'	10:A:635:C:C6	2.34	0.63
3:2:52:ASP:CG	10:A:72:U:H1'	2.19	0.63
10:A:1341:U:C2	28:X:77:LYS:HE2	2.34	0.63
10:A:2334:G:C2	23:S:15:ARG:NH1	2.67	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:27:C:O2	11:B:28:C:C6	2.51	0.63
10:A:2753:A:H2	10:A:2754:U:C2	2.17	0.63
2:1:48:LYS:HA	2:1:48:LYS:HE3	1.79	0.63
2:1:67:ILE:N	2:1:68:PRO:HD2	2.13	0.63
10:A:1509(B):A:H3'	10:A:1510:G:H8	1.62	0.63
13:E:98:PRO:HD3	13:E:175:VAL:CG1	2.27	0.63
10:A:1498:C:O4'	10:A:1577:C:H4'	1.99	0.63
10:A:1181:C:O2'	10:A:1182:A:H5'	1.97	0.63
24:T:61:PHE:CZ	24:T:85:LYS:HE2	2.33	0.63
12:D:267:SER:HA	12:D:270:ILE:HD11	1.79	0.63
23:S:84:GLN:HA	23:S:105:ALA:HB3	1.80	0.63
17:I:69:LYS:HE2	17:I:73:GLU:OE1	1.98	0.63
10:A:2833:G:H4'	10:A:2834:G:OP2	1.98	0.63
10:A:1341:U:H3'	10:A:1397:U:O2	1.98	0.63
10:A:71:A:C5'	10:A:71:A:H8	2.03	0.63
25:U:47:TYR:HA	25:U:50:ARG:NH2	2.13	0.63
15:G:29:TRP:CD1	15:G:29:TRP:N	2.67	0.63
10:A:1569:A:H5'	12:D:61:LEU:CD2	2.28	0.63
10:A:573:G:O2'	10:A:574:C:H3'	1.98	0.63
6:5:16:ARG:NH1	6:5:17:ASP:OD1	2.31	0.63
13:E:111:ARG:NH1	22:R:2:ARG:HH21	1.97	0.63
17:I:101:LEU:HD23	17:I:109:ILE:HG12	1.80	0.63
3:2:57:ILE:HG12	3:2:59:ARG:HH11	1.63	0.63
10:A:2641:G:OP1	18:N:75:TYR:HD2	1.81	0.63
10:A:271(J):C:C3'	10:A:271(K):U:H5''	2.29	0.63
8:7:10:ARG:HG3	10:A:125:G:C6	2.33	0.63
10:A:1670:C:O2	13:E:129:HIS:HE1	1.82	0.63
10:A:1441:G:H2'	10:A:1442:G:H8	1.62	0.63
1:0:50:ASN:O	1:0:62:LEU:HB2	1.99	0.63
2:1:25:LYS:C	2:1:26:ARG:HG3	2.19	0.63
28:X:30:VAL:HG11	28:X:39:ILE:HD12	1.81	0.63
28:X:82:GLN:C	28:X:85:PRO:HD2	2.17	0.63
26:V:21:ARG:HG2	26:V:93:GLU:OE1	1.99	0.63
12:D:35:LYS:HG2	12:D:64:ILE:HG23	1.80	0.63
10:A:2563:U:H4'	19:O:28:SER:HA	1.81	0.63
29:Y:68:HIS:CE1	29:Y:70:SER:HB3	2.34	0.63
27:W:75:TYR:CE1	27:W:104:THR:CB	2.74	0.63
10:A:1179:C:H3'	10:A:1180:C:H5''	1.80	0.63
21:Q:22:LYS:CE	21:Q:22:LYS:HA	2.25	0.63
22:R:10:LEU:HD22	22:R:17:ARG:CD	2.29	0.63
10:A:758:C:O2	10:A:1981:A:H2	1.80	0.63
10:A:1889:A:O2'	10:A:2087:G:H5'	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:4:HIS:HB3	6:5:5:PRO:HD3	1.80	0.63
10:A:2500:U:H2'	10:A:2504:U:H5	1.63	0.63
28:X:89:ILE:HA	28:X:92:LEU:HB2	1.81	0.63
4:3:8:LEU:HA	4:3:54:VAL:HG12	1.79	0.63
18:N:3:THR:C	18:N:4:TYR:CG	2.72	0.63
23:S:17:ARG:HD3	23:S:25:ARG:HE	1.62	0.63
10:A:2302:G:O6	10:A:2315:G:C6	2.52	0.63
10:A:1496:A:C8	10:A:1577:C:O2'	2.52	0.63
10:A:1495:A:H5''	10:A:1496:A:OP2	1.98	0.63
10:A:271(E):U:H6	10:A:271(E):U:O5'	1.81	0.63
17:I:5:LEU:C	17:I:6:LEU:HD23	2.19	0.63
10:A:1301:A:H2	10:A:1626:G:N3	1.97	0.63
10:A:2880:C:O2'	22:R:90:ARG:HD3	1.99	0.63
10:A:121:G:H4'	10:A:149:A:H5'	1.81	0.63
10:A:633:A:H2'	10:A:634:C:H5'	1.80	0.63
14:F:65:TRP:O	14:F:67:GLN:N	2.32	0.63
20:P:90:ARG:O	20:P:91:PHE:HB3	1.99	0.63
10:A:1388:G:H2'	10:A:1389:G:H8	1.63	0.63
23:S:26:LEU:O	23:S:88:ASP:HB3	1.98	0.63
10:A:1777:U:C2'	10:A:1778:U:H5'	2.28	0.63
20:P:29:LYS:CD	20:P:29:LYS:H	2.03	0.63
10:A:1474:C:H5''	10:A:1474:C:H6	1.64	0.63
20:P:21:ARG:O	20:P:21:ARG:HG2	1.98	0.63
8:7:8:ASN:ND2	8:7:8:ASN:C	2.50	0.63
22:R:38:VAL:HB	22:R:39:PRO:HD3	1.81	0.63
10:A:1562:A:O2'	10:A:1563:G:H5'	1.98	0.63
11:B:42:C:O4'	15:G:69:ALA:HB2	1.99	0.63
33:A:3206:TEL:H383	33:A:3206:TEL:O29	1.99	0.62
10:A:590:A:H2'	10:A:591:C:C6	2.34	0.62
24:T:99:LEU:HB2	24:T:101:PHE:HE1	1.62	0.62
10:A:768:G:O2'	10:A:1379:A:N6	2.31	0.62
16:H:85:LYS:HZ2	16:H:133:VAL:CG2	2.13	0.62
14:F:158:THR:HG23	14:F:160:ASN:H	1.64	0.62
24:T:32:TYR:CG	24:T:81:PRO:HB2	2.33	0.62
21:Q:42:ILE:HD13	21:Q:97:VAL:HB	1.81	0.62
16:H:92:ILE:HG12	16:H:160:LYS:HE3	1.80	0.62
10:A:2552:U:H2'	10:A:2554:U:OP2	1.99	0.62
10:A:2068:U:N3	10:A:2430:A:C2	2.56	0.62
10:A:515:A:H1'	10:A:581:C:H1'	1.80	0.62
10:A:729:G:OP2	12:D:13:ARG:NH1	2.31	0.62
10:A:329:G:OP2	29:Y:71:LYS:HE2	1.98	0.62
10:A:912:C:C2	10:A:913:U:C5	2.87	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:132:HIS:CG	13:E:135:HIS:NE2	2.67	0.62
10:A:1418:G:H8	10:A:1418:G:O5'	1.82	0.62
24:T:29:ARG:HD3	24:T:86:ILE:HG22	1.80	0.62
10:A:460:A:C2	10:A:470:A:C4	2.87	0.62
10:A:2480:C:N4	10:A:2481:G:C6	2.67	0.62
10:A:208:C:H2'	10:A:209:C:C6	2.34	0.62
10:A:576:U:H2'	10:A:577:G:C8	2.34	0.62
10:A:2795:G:N2	10:A:2796:U:O2'	2.33	0.62
7:6:11:LEU:HD23	7:6:25:LYS:HA	1.82	0.62
10:A:2015:A:H2'	10:A:2016:U:H5'	1.81	0.62
10:A:2245:U:H5''	10:A:2246:G:H5'	1.81	0.62
10:A:2061:G:H5''	10:A:2503:A:C2	2.34	0.62
10:A:675:A:C8	10:A:804:A:C6	2.87	0.62
20:P:50:ARG:NH2	20:P:50:ARG:HG2	2.14	0.62
10:A:1796:U:H2'	10:A:1797:C:H6	1.65	0.62
10:A:2752:C:C2	10:A:2753:A:N7	2.66	0.62
2:1:88:LYS:O	2:1:92:LYS:HB2	1.99	0.62
10:A:2655:G:O2'	10:A:2656:U:H5	1.81	0.62
6:5:40:LYS:NZ	6:5:46:CYS:H	1.95	0.62
6:5:40:LYS:CD	6:5:46:CYS:HB3	2.30	0.62
10:A:1694:C:O2'	10:A:1695:G:C4	2.52	0.62
10:A:1175:U:H4'	10:A:1176:G:H2'	1.81	0.62
18:N:128:HIS:O	18:N:130:HIS:N	2.32	0.62
10:A:1381:G:C2'	10:A:1382:G:H5'	2.29	0.62
12:D:253:GLN:HB3	12:D:255:LYS:HZ3	1.65	0.62
10:A:602:G:H8	10:A:602:G:OP2	1.81	0.62
30:Z:149:SER:HB2	30:Z:173:ALA:HA	1.80	0.62
28:X:10:ALA:O	28:X:28:PHE:HB3	1.99	0.62
10:A:2280:G:C2'	10:A:2281:C:H5'	2.28	0.62
10:A:2749:A:H4'	16:H:62:LYS:HB3	1.80	0.62
13:E:203:LYS:HG3	13:E:204:ALA:N	2.13	0.62
21:Q:34:LEU:HD11	21:Q:129:THR:HB	1.81	0.62
22:R:44:LEU:O	22:R:44:LEU:HD22	2.00	0.62
9:8:30:ARG:HH21	20:P:62:LEU:CB	2.12	0.62
10:A:2058:A:H5''	10:A:2059:A:OP2	2.00	0.62
10:A:2542:A:C8	10:A:2544:G:O6	2.51	0.62
21:Q:19:GLY:C	21:Q:21:THR:H	2.01	0.62
10:A:518:G:H4'	27:W:18:ARG:NH1	2.15	0.62
10:A:2492:U:H2'	10:A:2493:U:C6	2.34	0.62
30:Z:4:ARG:HG2	30:Z:58:VAL:HB	1.81	0.62
2:1:33:LYS:C	2:1:34:THR:HG22	2.19	0.62
11:B:31:C:C2'	11:B:53:A:H61	2.11	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2494:G:C4	10:A:2495:G:C8	2.87	0.62
6:5:40:LYS:CE	6:5:49:CYS:SG	2.87	0.62
10:A:1996:C:H4'	10:A:1997:G:OP1	1.99	0.62
16:H:92:ILE:HG22	16:H:93:GLY:H	1.65	0.62
10:A:1922:G:H2'	10:A:1923:U:C6	2.35	0.62
10:A:231:C:O2'	10:A:232:G:H5'	2.00	0.62
10:A:672:C:O2'	10:A:673:C:H5'	2.00	0.62
10:A:828:U:H3'	10:A:828:U:O2	2.00	0.62
3:2:49:LYS:CE	3:2:53:LEU:HD22	2.30	0.62
18:N:57:ALA:HB1	18:N:60:ILE:HD11	1.81	0.62
26:V:66:ARG:HD3	26:V:94:LEU:HG	1.82	0.62
10:A:2283:C:C2'	10:A:2284:C:H5'	2.30	0.62
21:Q:81:VAL:C	21:Q:82:ARG:HG2	2.17	0.62
13:E:24:THR:HG21	13:E:188:VAL:HG12	1.82	0.62
10:A:774:A:H2	10:A:787:U:HO2'	0.76	0.62
10:A:1434:A:O2'	10:A:1435:G:H5'	1.99	0.62
10:A:2469:A:H2	10:A:2481:G:N2	1.96	0.62
10:A:34:C:C6	10:A:34:C:H3'	2.35	0.62
21:Q:17:LEU:HD23	21:Q:17:LEU:N	2.14	0.62
10:A:1465:G:C4	10:A:1466:G:C8	2.88	0.62
10:A:588:U:C2	14:F:90:PHE:CE1	2.88	0.62
20:P:110:TYR:O	20:P:111:ARG:C	2.37	0.62
18:N:3:THR:HG22	18:N:4:TYR:H	1.64	0.62
23:S:34:HIS:NE2	23:S:54:LEU:HB2	2.14	0.62
23:S:26:LEU:HD22	23:S:87:PHE:CE1	2.35	0.62
12:D:54:ARG:C	12:D:218:ARG:HG3	2.19	0.62
10:A:1210:A:H5''	10:A:1212:G:O4'	2.00	0.62
10:A:2387:U:OP2	10:A:2387:U:H6	1.83	0.62
11:B:66:A:C5	11:B:109:C:C5	2.87	0.62
10:A:2094:G:H1'	10:A:2198:A:N6	2.15	0.62
15:G:47:LYS:HD3	15:G:81:LYS:CD	2.29	0.62
10:A:873:G:N2	10:A:905:U:C2	2.67	0.62
10:A:1786:A:H1'	10:A:1938:A:H62	1.62	0.62
24:T:88:ILE:CG2	24:T:89:VAL:HG23	2.30	0.62
10:A:1476:C:H2'	10:A:1477:A:H8	1.64	0.62
10:A:2390:U:O2'	10:A:2391:G:H5'	2.00	0.62
25:U:36:ARG:HD3	25:U:40:PHE:CZ	2.34	0.62
16:H:158:HIS:CE1	16:H:168:PRO:HG2	2.35	0.62
9:8:22:VAL:HB	9:8:53:PRO:CB	2.30	0.62
10:A:2061:G:N2	10:A:2063:C:C2	2.68	0.62
10:A:782:A:H5'	10:A:783:A:C2	2.35	0.62
10:A:92:A:H2'	10:A:93:G:O4'	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:G:64:THR:CG2	15:G:65:GLY:N	2.63	0.62
10:A:2098:U:H2'	10:A:2099:U:C6	2.35	0.62
15:G:94:LEU:O	15:G:99:MET:HB2	2.00	0.62
21:Q:89:ASN:O	21:Q:91:GLU:N	2.32	0.62
10:A:661:C:H4'	20:P:18:ARG:HG2	1.81	0.62
10:A:947:G:N2	10:A:971:C:C2	2.68	0.62
10:A:971:C:H2'	10:A:972:G:H5'	1.80	0.62
26:V:13:ARG:HH12	26:V:15:GLU:CG	2.12	0.62
26:V:40:LEU:O	26:V:41:GLY:O	2.18	0.62
26:V:90:PRO:HD2	26:V:91:TYR:H	1.65	0.62
10:A:370:G:C4'	10:A:371:A:OP2	2.39	0.62
29:Y:28:LYS:H	29:Y:28:LYS:CD	1.96	0.62
10:A:910:A:C8	21:Q:13:GLN:HB2	2.35	0.62
11:B:21:G:O2'	11:B:22:U:C6	2.52	0.62
10:A:1033:U:H5''	10:A:1034:G:P	2.40	0.62
28:X:23:GLU:HG3	28:X:24:GLY:H	1.64	0.62
11:B:24:G:C2	11:B:56:G:N2	2.67	0.62
29:Y:44:ILE:HG22	29:Y:45:VAL:N	2.15	0.62
2:1:10:LYS:HB2	2:1:14:VAL:N	2.14	0.62
10:A:2318:G:O2'	10:A:2319:G:P	2.58	0.62
10:A:1292:U:H2'	10:A:1293:C:H6	1.57	0.62
10:A:1786:A:C1'	10:A:1938:A:N6	2.62	0.62
10:A:1994:C:O2'	10:A:1995:U:H5'	2.00	0.62
10:A:1515:G:H2'	10:A:1516:C:C6	2.34	0.62
10:A:2580:U:H5''	13:E:131:ALA:H	1.64	0.62
9:8:18:ALA:HB3	10:A:651:G:H4'	1.82	0.62
10:A:27:G:H22	10:A:512:G:H2'	1.59	0.61
10:A:1007:C:H5''	18:N:35:ARG:HH11	1.65	0.61
13:E:55:ASN:HD21	13:E:75:VAL:HG21	1.65	0.61
21:Q:140:ALA:H	30:Z:53:ILE:CD1	2.13	0.61
10:A:966:G:C6	10:A:967:C:N4	2.68	0.61
10:A:1114:G:H2'	10:A:1115:G:C8	2.34	0.61
15:G:64:THR:CG2	15:G:65:GLY:H	2.13	0.61
10:A:514:A:H2'	10:A:515:A:C8	2.35	0.61
10:A:2358:G:H1	20:P:55:ARG:HH22	1.48	0.61
28:X:53:LYS:NZ	28:X:55:ASN:HD21	1.96	0.61
12:D:206:LEU:HD23	12:D:206:LEU:N	2.15	0.61
16:H:70:THR:O	16:H:72:ILE:N	2.34	0.61
10:A:2655:G:O2'	10:A:2656:U:C5	2.53	0.61
10:A:2335:A:C8	10:A:2337:G:C5	2.88	0.61
10:A:2636:U:H4'	13:E:80:GLU:OE1	1.99	0.61
6:5:41:PRO:HG2	6:5:44:THR:OG1	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:11:MET:HE3	13:E:186:GLY:HA2	1.81	0.61
10:A:2199:A:C5'	10:A:2200:C:OP2	2.49	0.61
10:A:1317:A:H2'	10:A:1318:C:C6	2.34	0.61
10:A:1830:C:H4'	12:D:15:PHE:CZ	2.35	0.61
8:7:47:ARG:C	8:7:48:LYS:HD3	2.21	0.61
10:A:2393:A:O2'	10:A:2394:C:H5'	2.00	0.61
10:A:646:A:H2'	10:A:647:G:H5'	1.83	0.61
10:A:671:C:O2'	10:A:672:C:H5'	2.01	0.61
10:A:942:G:C2'	10:A:943:U:H5'	2.30	0.61
20:P:50:ARG:HH21	20:P:50:ARG:HG2	1.65	0.61
28:X:35:THR:O	28:X:36:LYS:O	2.18	0.61
26:V:2:PHE:CB	26:V:42:GLY:CA	2.70	0.61
23:S:92:TYR:CD1	23:S:93:LYS:N	2.69	0.61
30:Z:5:LEU:HD13	30:Z:43:GLU:HB3	1.83	0.61
10:A:1747(A):G:H2'	10:A:1748:G:C5'	2.28	0.61
29:Y:95:LYS:NZ	29:Y:100:ALA:HB1	2.15	0.61
10:A:102:G:O2'	10:A:103:A:OP2	2.19	0.61
10:A:2536:G:C5	10:A:2537:U:C4	2.88	0.61
24:T:90:GLN:HG2	24:T:120:ARG:NH1	2.15	0.61
10:A:1550:C:H2'	10:A:1551:C:H6	1.65	0.61
9:8:47:LYS:HE2	9:8:49:VAL:HG13	1.83	0.61
10:A:828:U:H4'	10:A:831:G:N1	2.16	0.61
10:A:675:A:OP1	14:F:63:LYS:HE2	2.01	0.61
10:A:58:G:H1	10:A:69:C:H42	1.48	0.61
10:A:996:A:N6	10:A:1160:G:C6	2.68	0.61
11:B:35:U:C4	11:B:36:C:N4	2.68	0.61
15:G:20:ILE:HA	15:G:25:TYR:CD2	2.36	0.61
12:D:24:ILE:CG2	12:D:24:ILE:O	2.48	0.61
16:H:85:LYS:HZ3	16:H:145:ALA:HA	1.63	0.61
2:1:87:PRO:CD	2:1:88:LYS:N	2.62	0.61
29:Y:47:LYS:CD	29:Y:47:LYS:N	2.59	0.61
3:2:12:GLU:HA	3:2:14:ARG:HH21	1.65	0.61
26:V:43:GLU:HA	26:V:48:GLY:HA3	1.82	0.61
16:H:157:TYR:CE1	16:H:171:LEU:N	2.67	0.61
10:A:2280:G:H2'	10:A:2281:C:H5'	1.82	0.61
10:A:1550:C:O2'	10:A:1551:C:H5'	2.01	0.61
10:A:1893:C:C5	10:A:1894:C:C5	2.88	0.61
30:Z:175:VAL:HB	30:Z:176:PRO:HD2	1.81	0.61
20:P:47:ASP:HB2	20:P:51:PHE:HB2	1.81	0.61
18:N:47:ALA:HB2	18:N:112:LEU:CD2	2.30	0.61
18:N:16:ILE:O	18:N:54:VAL:HA	2.01	0.61
15:G:120:LEU:HD11	15:G:179:PRO:HD2	1.81	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:S:28:VAL:O	23:S:29:PHE:HB3	1.99	0.61
23:S:59:LYS:HB2	23:S:65:VAL:HG21	1.83	0.61
24:T:100:TYR:HD2	24:T:103:ARG:HH21	1.46	0.61
10:A:729:G:C5	12:D:208:LYS:HB2	2.36	0.61
12:D:27:THR:O	12:D:29:PRO:HD2	2.00	0.61
2:1:67:ILE:O	2:1:70:VAL:HB	2.00	0.61
21:Q:141:GLN:HE22	30:Z:89:PHE:CB	2.11	0.61
24:T:57:PHE:O	24:T:59:THR:N	2.32	0.61
10:A:1204:A:C2	10:A:1241:A:C2	2.89	0.61
6:5:11:THR:HG21	10:A:1264:G:H5'	1.82	0.61
14:F:110:LEU:HD22	14:F:202:PHE:CE1	2.36	0.61
15:G:108:ASN:O	15:G:112:PRO:HG2	1.99	0.61
6:5:2:ALA:N	10:A:2014:A:HO2'	1.97	0.61
10:A:2394:C:P	20:P:63:PRO:HD2	2.40	0.61
10:A:448:U:C3'	10:A:449:A:H5'	2.30	0.61
10:A:675:A:C6	10:A:676:A:C6	2.89	0.61
10:A:1722:A:C6	10:A:1741:A:C6	2.89	0.61
26:V:1:MET:N	26:V:44:LYS:HD2	2.15	0.61
26:V:2:PHE:HB2	26:V:42:GLY:HA2	1.79	0.61
23:S:56:LEU:HD23	23:S:57:LYS:N	2.15	0.61
12:D:218:ARG:HB3	12:D:219:PRO:HD2	1.81	0.61
10:A:2659:G:C1'	10:A:2663:G:H22	2.14	0.61
10:A:1235:G:C6	10:A:1236:G:N1	2.69	0.61
10:A:875:G:C4'	30:Z:170:THR:HG21	2.30	0.61
10:A:1278:A:O3'	22:R:34:ILE:HG13	2.00	0.61
10:A:2267:A:H5''	10:A:2268:A:H5''	1.81	0.61
10:A:2679:A:H5'	13:E:165:VAL:HG21	1.82	0.61
10:A:1688:U:H1'	10:A:1701:A:C5	2.35	0.61
19:O:115:VAL:HG13	19:O:121:VAL:HG21	1.83	0.61
14:F:185:ASP:OD1	14:F:188:ARG:NH1	2.31	0.61
8:7:48:LYS:N	8:7:48:LYS:HD3	2.15	0.61
1:0:11:ARG:O	1:0:14:ARG:NH2	2.32	0.61
10:A:195:A:H4'	10:A:251:A:O2'	2.00	0.61
20:P:111:ARG:HA	20:P:128:HIS:CD2	2.35	0.61
12:D:35:LYS:HG2	12:D:64:ILE:H	1.64	0.61
10:A:2277:G:H2'	10:A:2278:A:H5'	1.82	0.61
11:B:21:G:C6	11:B:63:G:C2	2.89	0.61
6:5:51:TYR:HB3	6:5:52:TYR:CD2	2.35	0.61
10:A:1497:U:N3	10:A:1578:U:O5'	2.33	0.61
16:H:40:GLU:O	16:H:41:MET:HB2	2.00	0.61
10:A:2252:G:H2'	10:A:2253:G:H8	1.65	0.61
10:A:2599:G:C8	12:D:236:GLY:HA2	2.36	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:56:GLN:HA	2:1:56:GLN:OE1	1.99	0.61
10:A:300:A:H2'	10:A:334:C:H1'	1.82	0.61
13:E:147:PRO:HB2	13:E:149:ARG:HG2	1.81	0.61
10:A:2596:U:C2'	10:A:2597:G:H5'	2.31	0.61
10:A:1022:G:C5	10:A:1140:C:C4	2.88	0.61
10:A:557:U:H2'	10:A:558:G:C8	2.35	0.61
10:A:935:C:O2'	10:A:936:C:H5'	2.01	0.61
18:N:91:LEU:CD2	18:N:98:VAL:HG21	2.30	0.61
10:A:1506:C:O2	10:A:1506:C:H2'	2.01	0.61
6:5:36:CYS:HB3	6:5:38:ALA:HB2	1.81	0.61
22:R:4:LEU:O	22:R:4:LEU:CD1	2.46	0.61
10:A:1748:G:H8	10:A:1748:G:H5'	1.65	0.61
10:A:794:G:H2'	10:A:795:C:C6	2.36	0.61
10:A:271(Q):G:O2'	10:A:271(R):G:C8	2.54	0.61
24:T:28:VAL:HG22	24:T:46:GLU:CA	2.31	0.61
10:A:1241:A:C2'	10:A:1242:A:O5'	2.48	0.61
14:F:59:TYR:HB3	14:F:78:ILE:HD11	1.82	0.61
27:W:56:ALA:O	27:W:57:ASN:C	2.39	0.61
3:2:41:ILE:O	3:2:42:GLY:C	2.38	0.61
11:B:31:C:H2'	11:B:53:A:H61	1.66	0.61
10:A:1378:A:H4'	10:A:1379:A:OP1	2.01	0.61
16:H:74:ASN:HB3	16:H:138:LYS:HD2	1.83	0.61
11:B:21:G:O2'	11:B:22:U:P	2.58	0.61
10:A:1580:A:C8	10:A:1580:A:OP2	2.53	0.61
10:A:1215:G:C2'	10:A:1216:G:H5'	2.30	0.61
10:A:639:U:H2'	10:A:640:C:C6	2.36	0.61
10:A:993:G:H1'	26:V:91:TYR:CD1	2.36	0.61
10:A:995:C:N3	18:N:4:TYR:CE1	2.68	0.61
18:N:20:GLY:O	18:N:61:ARG:HG3	2.00	0.61
15:G:117:PHE:CE1	15:G:120:LEU:HD23	2.35	0.61
15:G:173:LEU:HB3	15:G:178:PHE:CG	2.36	0.61
10:A:2315:G:C6	10:A:2316:C:N4	2.69	0.61
10:A:1945:G:O2'	10:A:1946:U:H5'	2.00	0.61
10:A:1312:U:C2	10:A:1603:A:C2	2.89	0.61
10:A:795:C:H2'	10:A:796:C:H6	1.65	0.61
16:H:89:ILE:CD1	16:H:89:ILE:N	2.64	0.61
10:A:2343:C:O3'	10:A:2373:G:H4'	2.01	0.61
10:A:1563:G:H2'	10:A:1564:C:H6	1.66	0.61
21:Q:63:LYS:HG2	21:Q:65:PHE:CE2	2.35	0.61
10:A:1190:G:O5'	20:P:35:HIS:HA	2.01	0.60
10:A:197:A:H5'	10:A:197:A:C8	2.35	0.60
10:A:419:C:H2'	10:A:420:C:O4'	2.00	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:G:29:TRP:C	15:G:31:VAL:N	2.53	0.60
12:D:28:GLU:HB2	12:D:29:PRO:CD	2.31	0.60
21:Q:75:THR:HG22	21:Q:88:GLY:HA3	1.82	0.60
29:Y:46:LYS:C	29:Y:47:LYS:NZ	2.54	0.60
10:A:212:G:C2'	10:A:213:A:H5'	2.31	0.60
10:A:1252:G:C2	10:A:1253:A:C2	2.89	0.60
7:6:35:GLU:HG3	7:6:35:GLU:O	2.01	0.60
10:A:607:U:N3	10:A:621:A:C2	2.61	0.60
6:5:2:ALA:N	10:A:747:U:N3	2.49	0.60
20:P:48:PRO:O	20:P:51:PHE:N	2.35	0.60
10:A:142:A:H5''	10:A:142(A):C:C5	2.36	0.60
23:S:90:GLY:C	23:S:92:TYR:H	2.04	0.60
10:A:2517:C:C6	10:A:2542:A:N1	2.69	0.60
1:0:43:THR:H	10:A:2331:G:H4'	1.65	0.60
10:A:2228:G:C6	10:A:2229:C:C4	2.89	0.60
10:A:1040:C:N4	10:A:1116:C:N4	2.46	0.60
10:A:1047:G:H2'	10:A:1110:G:C2	2.36	0.60
16:H:41:MET:CG	16:H:55:PRO:HD3	2.31	0.60
10:A:176:G:O2'	10:A:177:G:H5'	2.01	0.60
10:A:2580:U:H4'	13:E:130:GLY:CA	2.32	0.60
30:Z:128:VAL:CG2	30:Z:161:VAL:HG22	2.31	0.60
30:Z:156:LYS:O	30:Z:158:PRO:HD3	2.01	0.60
10:A:2821:A:H2'	10:A:2822:G:O4'	2.00	0.60
10:A:624:C:O2'	10:A:657:U:H5'	2.01	0.60
14:F:101:LEU:CD1	14:F:102:PRO:HD2	2.20	0.60
23:S:52:SER:CB	23:S:55:ALA:HB3	2.31	0.60
2:1:85:LEU:CB	2:1:87:PRO:HD3	2.31	0.60
2:1:87:PRO:CG	2:1:88:LYS:H	2.14	0.60
10:A:2810:A:H2'	13:E:61:ARG:NH2	2.15	0.60
21:Q:141:GLN:NE2	30:Z:72:ARG:HG2	2.17	0.60
10:A:954:G:C5	10:A:955:C:C5	2.89	0.60
12:D:175:LEU:HD12	12:D:185:VAL:HG21	1.83	0.60
10:A:1657:C:H2'	10:A:1658:C:C6	2.36	0.60
29:Y:97:ARG:HH21	29:Y:98:VAL:HB	1.67	0.60
10:A:1181:C:C2'	10:A:1182:A:H5'	2.31	0.60
10:A:1558:A:H3'	10:A:1558:A:OP2	2.01	0.60
18:N:131:GLN:NE2	18:N:135:PRO:HD3	2.17	0.60
10:A:174:C:H3'	10:A:175:G:H5''	1.84	0.60
24:T:106:SER:O	24:T:107:ASP:OD1	2.19	0.60
10:A:36:G:C5	10:A:37:C:C5	2.89	0.60
10:A:1042:G:H2'	10:A:1042:G:N3	2.16	0.60
26:V:19:LYS:CE	26:V:20:LEU:H	2.14	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:35:LYS:HE3	12:D:65:ILE:N	2.17	0.60
10:A:2659:G:H1'	10:A:2663:G:H22	1.65	0.60
10:A:309:G:C4'	29:Y:18:GLY:HA3	2.32	0.60
10:A:863:A:O2'	10:A:864:G:H5'	2.02	0.60
10:A:917:A:N1	11:B:80:U:H4'	2.16	0.60
10:A:1833:U:O2'	10:A:1969:A:N1	2.25	0.60
10:A:1204:A:N1	10:A:1241:A:H2	2.00	0.60
10:A:585:G:H2'	10:A:1251:C:H42	1.65	0.60
12:D:255:LYS:H	12:D:255:LYS:NZ	2.00	0.60
10:A:607:U:OP1	14:F:102:PRO:HA	2.01	0.60
20:P:115:LEU:HA	20:P:134:ALA:HB2	1.81	0.60
3:2:47:ASN:HA	3:2:51:ARG:HB3	1.84	0.60
10:A:1020:A:H4'	10:A:1021:A:O5'	2.02	0.60
18:N:42:TRP:CB	25:U:64:ARG:NH1	2.61	0.60
26:V:4:ILE:HD12	26:V:40:LEU:HG	1.84	0.60
30:Z:71:VAL:HG22	30:Z:88:PHE:CE2	2.36	0.60
10:A:1496:A:H5''	10:A:1497:U:OP2	2.02	0.60
10:A:1667:G:H1'	10:A:1991:U:O4	2.01	0.60
10:A:491:G:H2'	10:A:492:A:H8	1.66	0.60
10:A:1887:C:C2'	10:A:1888:G:H5'	2.30	0.60
10:A:214:G:H1'	10:A:216:A:O2'	2.01	0.60
10:A:1241:A:H2'	10:A:1242:A:O5'	2.01	0.60
10:A:1549:C:O2'	10:A:1550:C:H5'	2.01	0.60
10:A:1218:C:H2'	10:A:1219:G:H5'	1.82	0.60
14:F:9:ILE:HG23	14:F:13:SER:O	2.01	0.60
30:Z:103:ARG:HD3	30:Z:136:PHE:CE1	2.37	0.60
14:F:84:VAL:O	14:F:85:GLY:C	2.40	0.60
20:P:107:LYS:O	20:P:109:GLY:N	2.34	0.60
10:A:2752:C:N3	10:A:2753:A:N7	2.49	0.60
10:A:301:G:H1'	10:A:302:C:C6	2.36	0.60
10:A:2265:U:H4'	21:Q:13:GLN:NE2	2.13	0.60
10:A:356:G:N3	10:A:356:G:H2'	2.15	0.60
13:E:197:ILE:HD11	13:E:199:ARG:NH2	2.16	0.60
10:A:958:U:H5''	21:Q:14:ARG:CD	2.31	0.60
10:A:918:A:H5''	11:B:98:G:O2'	2.02	0.60
10:A:1773:A:H2'	10:A:1774:C:H5'	1.83	0.60
10:A:154:G:N1	10:A:172:C:N4	2.49	0.60
10:A:1937:A:C8	10:A:1939:U:H2'	2.37	0.60
10:A:921:G:H2'	10:A:922:U:C6	2.37	0.60
22:R:51:LEU:HD22	22:R:70:LEU:HD21	1.82	0.60
15:G:128:ARG:O	15:G:129:GLY:C	2.39	0.60
10:A:2065:C:H2'	10:A:2066:C:C6	2.35	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:80:TYR:HA	20:P:111:ARG:O	2.02	0.60
10:A:1751:C:O2'	10:A:1752:C:H5'	2.01	0.60
10:A:993:G:H21	26:V:91:TYR:HH	1.47	0.60
11:B:82:G:C2'	11:B:83:G:H5'	2.32	0.60
10:A:2801(A):A:C4'	10:A:2802:G:H5'	2.32	0.60
10:A:398:G:H5''	10:A:2090:G:O4'	2.00	0.60
10:A:2872:G:O2'	10:A:2873:A:H5'	2.02	0.60
10:A:271(D):G:H2'	10:A:271(E):U:O4'	2.01	0.60
10:A:1952:A:C2	19:O:22:ILE:HG13	2.36	0.60
24:T:32:TYR:CB	24:T:81:PRO:HB2	2.32	0.60
10:A:271(M):G:H2'	10:A:271(N):U:C5'	2.31	0.60
10:A:2019:A:O4'	25:U:34:LYS:HD2	2.01	0.60
10:A:760:G:H2'	10:A:761:A:O4'	2.00	0.60
10:A:643:A:O2'	10:A:644:A:H5'	2.00	0.60
14:F:83:PHE:O	14:F:85:GLY:N	2.35	0.60
11:B:37:C:O2	11:B:38:C:O2	2.18	0.60
23:S:76:LYS:O	23:S:79:ALA:HB3	2.02	0.60
2:1:85:LEU:C	2:1:87:PRO:HD3	2.22	0.60
10:A:2772:C:H2'	10:A:2773:C:H6	1.67	0.60
13:E:119:ARG:HA	13:E:160:TYR:CD1	2.36	0.60
17:I:131:LYS:HG3	17:I:132:PRO:HA	1.84	0.60
24:T:88:ILE:HG22	24:T:89:VAL:H	1.64	0.60
22:R:5:LYS:HD2	22:R:5:LYS:H	1.67	0.60
26:V:43:GLU:HA	26:V:47:VAL:O	2.02	0.60
12:D:17:THR:HG23	12:D:205:VAL:N	2.17	0.60
13:E:120:TRP:O	13:E:121:ASN:HB2	2.01	0.60
10:A:2404:C:H2'	10:A:2405:G:H5'	1.83	0.60
10:A:603:A:C4'	10:A:604:G:O5'	2.49	0.60
10:A:839:U:H2'	10:A:840:C:C6	2.37	0.60
6:5:10:LYS:HE3	10:A:1262:A:N3	2.16	0.60
10:A:1519:G:H5'	10:A:1520:G:OP2	2.01	0.60
7:6:29:ASN:O	7:6:30:THR:C	2.40	0.60
9:8:61:LEU:HD13	10:A:593:G:C4'	2.31	0.60
10:A:2058:A:N1	33:A:3206:TEL:H572	2.16	0.60
14:F:102:PRO:HB2	14:F:105:VAL:HG23	1.84	0.60
10:A:1719:G:O2'	10:A:1720:U:H5'	2.01	0.60
28:X:72:LYS:CG	28:X:73:ARG:N	2.62	0.60
4:3:46:ASN:ND2	10:A:850:C:O2'	2.34	0.60
26:V:61:VAL:HG21	26:V:100:ARG:HE	1.66	0.60
10:A:1790:C:O2'	12:D:209:ALA:HB2	2.02	0.60
10:A:1502:C:O2	10:A:1502:C:C2'	2.50	0.60
27:W:74:ALA:O	27:W:75:TYR:HB3	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:16:G:C2	11:B:17:C:C6	2.90	0.60
30:Z:152:ALA:HB1	30:Z:167:PRO:HB2	1.82	0.60
22:R:116:LEU:O	22:R:117:VAL:CB	2.49	0.60
10:A:1693:U:H4'	10:A:1694:C:OP2	2.01	0.60
10:A:1786:A:H2	10:A:2606:C:H1'	1.66	0.60
10:A:1434:A:C2'	10:A:1435:G:H5'	2.32	0.60
17:I:31:LEU:HD13	17:I:37:VAL:HA	1.83	0.60
10:A:532:A:H2'	10:A:532:A:N3	2.17	0.60
23:S:83:LYS:HG2	23:S:105:ALA:HB2	1.83	0.60
15:G:66:GLN:OE1	15:G:98:ARG:HG3	2.01	0.60
10:A:2596:U:H2'	10:A:2597:G:H5'	1.83	0.60
10:A:1861:G:C2	10:A:1862:G:C8	2.90	0.60
10:A:2287:A:C2	10:A:2346:A:H2	2.19	0.60
10:A:1744:C:H2'	10:A:1745:C:H5'	1.83	0.60
25:U:64:ARG:NH2	25:U:64:ARG:HA	2.15	0.60
25:U:83:LEU:HG	25:U:88:ILE:CG1	2.19	0.60
26:V:15:GLU:O	26:V:98:GLU:CD	2.41	0.60
26:V:15:GLU:HB3	26:V:16:PRO:HD2	1.84	0.60
12:D:25:THR:O	12:D:27:THR:HB	2.02	0.60
10:A:1508:A:OP1	10:A:1509(A):A:H2	1.84	0.60
1:O:40:GLN:HG3	1:O:42:GLY:O	2.01	0.60
10:A:1115:G:C4	10:A:1116:C:C5	2.90	0.60
10:A:1337:G:H2'	10:A:1338:G:H8	1.65	0.60
10:A:2008:C:H2'	10:A:2009:G:H8	1.66	0.60
10:A:921:G:H4'	10:A:2269:A:C5	2.37	0.60
10:A:1683:C:H2'	10:A:1684:C:C6	2.37	0.60
14:F:155:LEU:HD22	14:F:186:ILE:HA	1.83	0.60
10:A:272(E):G:C6	10:A:272(F):C:C4	2.89	0.60
18:N:24:GLY:H	18:N:27:ALA:H	1.50	0.60
10:A:1614:A:H2'	10:A:1615:C:H5'	1.82	0.59
20:P:131:SER:C	20:P:133:SER:H	2.05	0.59
10:A:1719:G:H2'	10:A:1720:U:C5'	2.32	0.59
4:3:10:LYS:HB3	4:3:53:LEU:HA	1.84	0.59
4:3:52:HIS:ND1	11:B:83:G:H5''	2.16	0.59
10:A:528:A:O2'	10:A:529:A:H5'	2.01	0.59
2:1:19:GLN:NE2	10:A:379:G:H21	1.92	0.59
10:A:1290:C:H2'	10:A:1291:C:H6	1.67	0.59
10:A:494:G:H2'	10:A:495:G:H8	1.67	0.59
2:1:37:ILE:HG21	10:A:2080:G:P	2.42	0.59
22:R:103:ARG:HB3	22:R:110:PRO:HA	1.84	0.59
10:A:2553:G:H5''	10:A:2554:U:OP2	2.02	0.59
10:A:1033:U:H5''	10:A:1034:G:OP1	2.01	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2826:A:C5	10:A:2827:C:C5	2.90	0.59
10:A:1717:G:N3	10:A:1717:G:H2'	2.17	0.59
10:A:1751:C:HO2'	10:A:2861:G:HO2'	1.32	0.59
15:G:26:GLN:N	15:G:30:GLU:OE1	2.30	0.59
23:S:66:ALA:C	23:S:69:VAL:HG12	2.23	0.59
16:H:70:THR:HG22	16:H:74:ASN:ND2	2.17	0.59
10:A:2317:C:C2'	10:A:2318:G:C5'	2.74	0.59
10:A:2303:G:H8	10:A:2303:G:O5'	1.86	0.59
17:I:133:HIS:CB	17:I:134:PRO:CD	2.78	0.59
19:O:64:ARG:HB3	19:O:79:PHE:CG	2.37	0.59
19:O:22:ILE:HG22	19:O:40:VAL:HB	1.84	0.59
10:A:185:U:H4'	10:A:218:A:H4'	1.82	0.59
30:Z:142:SER:H	30:Z:144:LEU:HD23	1.66	0.59
10:A:817:C:H2'	10:A:818:G:H8	1.67	0.59
10:A:2183:C:H2'	10:A:2184:G:C8	2.38	0.59
16:H:16:SER:HB2	16:H:27:LYS:HB2	1.84	0.59
10:A:384:U:O2'	10:A:385:C:H5'	2.02	0.59
9:8:32:LEU:O	9:8:33:ASN:CB	2.50	0.59
9:8:52:LYS:H	9:8:53:PRO:CD	2.13	0.59
10:A:833:U:H5''	20:P:48:PRO:HB3	1.84	0.59
26:V:24:LYS:HB2	26:V:92:THR:HG21	1.83	0.59
12:D:241:PRO:O	12:D:243:GLY:N	2.35	0.59
10:A:2521:C:H42	10:A:2544:G:H1	1.50	0.59
10:A:911:A:C5	21:Q:9:TYR:CE2	2.90	0.59
10:A:528:A:C2	10:A:2042:A:H2'	2.37	0.59
15:G:45:GLU:HG2	15:G:47:LYS:H	1.66	0.59
10:A:1497:U:H2'	10:A:1497:U:O2	2.02	0.59
13:E:154:LYS:HA	13:E:154:LYS:CE	2.30	0.59
27:W:20:VAL:HG23	27:W:21:VAL:N	2.16	0.59
17:I:15:VAL:HG23	17:I:16:GLY:N	2.15	0.59
10:A:2475:C:H42	10:A:2529:G:H22	1.50	0.59
21:Q:52:VAL:HA	21:Q:55:VAL:HG13	1.85	0.59
10:A:2886:G:N3	10:A:2887:U:C6	2.70	0.59
2:1:23:LYS:HA	2:1:23:LYS:NZ	2.17	0.59
10:A:817:C:O2'	10:A:839:U:H5''	2.03	0.59
10:A:1712:C:H2'	10:A:1713:U:C6	2.33	0.59
28:X:52:VAL:CG2	28:X:82:GLN:HA	2.32	0.59
18:N:125:GLY:HA2	18:N:126:PRO:O	2.01	0.59
25:U:21:ALA:HA	25:U:24:TYR:CE1	2.37	0.59
12:D:24:ILE:O	12:D:24:ILE:HG23	2.01	0.59
10:A:1509(B):A:C2'	10:A:1510:G:H8	2.16	0.59
21:Q:141:GLN:CB	30:Z:70:LEU:HD13	2.25	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:51:TYR:CD2	6:5:52:TYR:CZ	2.90	0.59
10:A:380:U:H2'	10:A:381:G:H8	1.68	0.59
10:A:797:C:H2'	10:A:798:G:H8	1.68	0.59
10:A:118:A:C8	10:A:119:A:C8	2.91	0.59
10:A:272(B):G:O2'	10:A:272(C):G:C5'	2.51	0.59
23:S:11:LYS:N	23:S:11:LYS:HD2	2.17	0.59
7:6:42:TRP:HE3	7:6:42:TRP:HA	1.66	0.59
20:P:24:GLY:N	20:P:33:ARG:HE	2.01	0.59
25:U:61:TRP:O	25:U:64:ARG:N	2.35	0.59
23:S:31:SER:HB3	23:S:34:HIS:O	2.02	0.59
24:T:100:TYR:HD2	24:T:103:ARG:NH2	2.00	0.59
17:I:88:ILE:HG13	17:I:121:LYS:C	2.21	0.59
16:H:135:GLY:HA3	16:H:141:VAL:HG23	1.85	0.59
16:H:125:VAL:HG22	16:H:131:VAL:HG22	1.84	0.59
29:Y:13:VAL:CG1	29:Y:72:VAL:HB	2.33	0.59
10:A:1040:C:H42	10:A:1116:C:H42	1.46	0.59
10:A:2577:A:H5''	10:A:2578:G:H5'	1.84	0.59
10:A:154:G:H8	10:A:154:G:O5'	1.85	0.59
10:A:2464:C:O2'	10:A:2465:C:P	2.61	0.59
2:1:37:ILE:O	2:1:37:ILE:HG23	2.02	0.59
10:A:384:U:H2'	10:A:385:C:H6	1.68	0.59
4:3:4:LEU:O	4:3:36:VAL:HA	2.02	0.59
10:A:1368:G:O2'	10:A:1369:G:H5'	2.01	0.59
10:A:1438:U:O2'	10:A:1439:A:H5'	2.03	0.59
10:A:448:U:H3'	10:A:449:A:C5'	2.31	0.59
4:3:52:HIS:N	4:3:52:HIS:CD2	2.68	0.59
12:D:241:PRO:O	12:D:242:ARG:HB2	2.03	0.59
23:S:93:LYS:O	23:S:94:TYR:C	2.41	0.59
10:A:1819:A:H4'	10:A:1820:U:O5'	2.02	0.59
10:A:764:A:H5''	12:D:210:GLY:HA3	1.84	0.59
10:A:2653:U:H3	10:A:2667:C:H42	1.48	0.59
10:A:1510:G:H2'	10:A:1511:C:C6	2.38	0.59
30:Z:53:ILE:HG22	30:Z:71:VAL:CB	2.29	0.59
10:A:1747:G:C4	10:A:1747(A):G:C8	2.90	0.59
10:A:271(E):U:H2'	10:A:271(F):C:H6	1.66	0.59
16:H:89:ILE:HD12	16:H:89:ILE:N	2.18	0.59
16:H:89:ILE:CG1	16:H:90:LYS:H	2.16	0.59
10:A:1488:G:C2	10:A:1489:U:O2	2.54	0.59
14:F:132:VAL:C	14:F:134:GLY:H	2.06	0.59
10:A:2050:C:H1'	13:E:156:MET:CE	2.32	0.59
18:N:115:ARG:HH11	18:N:115:ARG:HG3	1.66	0.59
14:F:89:VAL:CG1	14:F:90:PHE:N	2.66	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:57:THR:HB	20:P:59:LEU:N	2.17	0.59
10:A:1140:C:OP1	18:N:23:LEU:O	2.21	0.59
18:N:66:LYS:HB3	18:N:70:LYS:HB2	1.84	0.59
18:N:91:LEU:HA	18:N:95:PRO:CB	2.25	0.59
10:A:1332:G:H22	10:A:1610:A:H8	1.50	0.59
13:E:35:GLN:NE2	13:E:37:ARG:HH21	2.01	0.59
10:A:1484:G:N1	10:A:1506:C:N4	2.49	0.59
30:Z:99:TYR:HA	30:Z:125:LEU:HA	1.85	0.59
12:D:70:TRP:HZ3	12:D:146:GLU:OE2	1.86	0.59
10:A:1657:C:H2'	10:A:1658:C:H6	1.68	0.59
28:X:8:ILE:HD11	28:X:43:VAL:HA	1.84	0.59
10:A:1531:C:H3'	10:A:1532:C:H5'	1.84	0.59
10:A:1543:C:C5	10:A:1543:C:OP2	2.56	0.59
14:F:7:TYR:CD1	14:F:8:GLN:N	2.69	0.59
28:X:4:ALA:C	28:X:6:ASP:H	2.04	0.59
4:3:8:LEU:CD1	4:3:31:LEU:HD23	2.18	0.59
26:V:5:VAL:CG2	26:V:36:PRO:HB2	2.33	0.59
10:A:2377:A:H2'	10:A:2378:A:C8	2.37	0.59
11:B:45:A:H2'	11:B:46:A:H5'	1.84	0.59
15:G:11:TYR:CG	15:G:100:TRP:HH2	2.21	0.59
29:Y:45:VAL:HG13	29:Y:62:GLU:CG	2.33	0.59
10:A:2299:G:C6	10:A:2318:G:C8	2.91	0.59
30:Z:165:VAL:HG12	30:Z:166:SER:N	2.17	0.59
10:A:2041:U:H2'	10:A:2042:A:H8	1.68	0.59
10:A:743:G:O2'	10:A:744:G:H5'	2.02	0.59
29:Y:96:ILE:HB	29:Y:99:CYS:HB3	1.85	0.59
10:A:1665:A:C2'	10:A:1666:G:H5'	2.33	0.59
12:D:77:ALA:HB2	12:D:97:TYR:CG	2.38	0.59
21:Q:24:GLY:HA2	30:Z:78:LYS:HA	1.85	0.59
17:I:54:GLN:HA	17:I:57:ARG:NH1	2.17	0.59
3:2:26:ARG:CG	28:X:5:TYR:CB	2.81	0.59
10:A:1468:C:H2'	10:A:1469:A:C8	2.37	0.59
10:A:538:G:H2'	10:A:539:G:H8	1.68	0.59
18:N:91:LEU:CA	18:N:95:PRO:HB3	2.23	0.59
26:V:18:LEU:O	26:V:97:LYS:HD2	2.02	0.59
26:V:16:PRO:C	26:V:98:GLU:OE2	2.41	0.59
10:A:1899:G:N2	10:A:1902:C:N4	2.26	0.59
19:O:78:ARG:HG2	24:T:73:GLU:HG3	1.84	0.59
12:D:35:LYS:CD	12:D:104:TYR:HD1	2.15	0.59
10:A:2521:C:N4	10:A:2544:G:H1	2.01	0.59
10:A:2543:G:H2'	10:A:2544:G:C8	2.37	0.59
29:Y:37:VAL:O	29:Y:38:ILE:CB	2.38	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:N:78:TYR:CD1	18:N:79:PRO:HB3	2.38	0.59
13:E:117:MET:O	13:E:117:MET:HG2	2.02	0.59
10:A:80:G:H2'	10:A:81:G:H5'	1.85	0.59
16:H:44:VAL:O	16:H:46:GLU:OE2	2.20	0.59
10:A:116:C:H2'	10:A:117:G:O4'	2.03	0.59
10:A:1668:A:H4'	10:A:1669:A:O5'	2.02	0.59
14:F:114:VAL:HG21	14:F:202:PHE:CZ	2.38	0.59
10:A:484:C:H2'	10:A:485:C:C6	2.38	0.59
30:Z:63:ASP:O	30:Z:65:GLN:N	2.36	0.59
9:8:7:HIS:CD2	20:P:50:ARG:HD3	2.38	0.59
28:X:29:TRP:CH2	28:X:76:ARG:NH1	2.71	0.59
18:N:40:PRO:O	25:U:64:ARG:NH2	2.35	0.59
12:D:224:ALA:HB2	12:D:233:HIS:HB3	1.85	0.59
30:Z:3:TYR:CD2	30:Z:51:ALA:HB2	2.38	0.59
10:A:867:C:C6	10:A:868:U:C5	2.91	0.59
19:O:113:LYS:O	19:O:117:LEU:HB2	2.03	0.59
27:W:18:ARG:CG	27:W:18:ARG:HH11	2.08	0.59
10:A:1410:G:H2'	10:A:1411:C:C6	2.38	0.59
10:A:2461:C:H2'	10:A:2462:U:C6	2.38	0.59
24:T:106:SER:HA	24:T:110:ILE:CG1	2.31	0.59
13:E:120:TRP:CD2	13:E:155:LYS:HD3	2.37	0.59
10:A:687:C:C2	10:A:788:A:H5'	2.38	0.59
8:7:15:THR:HG22	8:7:16:HIS:CG	2.38	0.59
10:A:220:G:O2'	10:A:233:A:N3	2.35	0.59
24:T:10:VAL:HG12	24:T:11:GLU:N	2.17	0.59
14:F:53:THR:HG23	14:F:56:GLU:HB2	1.85	0.59
10:A:2835:A:C5	10:A:2879:C:C5	2.91	0.59
30:Z:100:VAL:N	30:Z:124:ILE:O	2.36	0.59
22:R:99:LYS:NZ	22:R:99:LYS:HB3	2.18	0.59
10:A:2393:A:C2'	10:A:2394:C:H5'	2.33	0.58
10:A:2396:G:HO2'	10:A:2397:G:H5'	1.67	0.58
20:P:35:HIS:O	20:P:35:HIS:HD2	1.86	0.58
9:8:58:ILE:HG22	20:P:49:ARG:HD2	1.85	0.58
10:A:1527:G:H5''	10:A:1528:A:OP1	2.03	0.58
25:U:88:ILE:O	25:U:88:ILE:HD13	2.03	0.58
26:V:36:PRO:CD	26:V:60:GLU:O	2.51	0.58
12:D:222:ARG:O	12:D:225:ALA:HB3	2.03	0.58
10:A:2757:A:C2	16:H:67:LEU:HD22	2.38	0.58
10:A:2527:C:H2'	10:A:2528:U:O4'	2.03	0.58
10:A:1509(B):A:C3'	10:A:1510:G:H8	2.16	0.58
10:A:869:G:C4	10:A:870:A:C8	2.91	0.58
10:A:288:C:C2	10:A:289:A:C8	2.91	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:6:GLY:O	13:E:195:LEU:HD12	2.02	0.58
12:D:142:VAL:HG23	12:D:193:VAL:HA	1.85	0.58
10:A:956:G:OP1	21:Q:86:GLY:N	2.30	0.58
29:Y:97:ARG:NH2	29:Y:98:VAL:HB	2.18	0.58
10:A:92:A:H2'	10:A:93:G:H8	1.68	0.58
28:X:63:LYS:HE3	28:X:70:LEU:HD22	1.84	0.58
27:W:47:VAL:HA	27:W:50:VAL:HG12	1.84	0.58
26:V:43:GLU:HA	26:V:48:GLY:CA	2.32	0.58
20:P:7:ARG:O	20:P:7:ARG:NH1	2.36	0.58
1:O:72:ARG:O	1:O:75:LEU:HB2	2.02	0.58
10:A:1465:G:N3	10:A:1545:A:H2	2.01	0.58
6:5:11:THR:CG2	10:A:1264:G:H5'	2.32	0.58
9:8:35:GLN:HE21	9:8:36:LYS:HG3	1.67	0.58
10:A:819:A:N3	10:A:1189:A:C2	2.72	0.58
10:A:2403:C:N3	10:A:2415:G:C2	2.71	0.58
10:A:250:G:C6	10:A:251:A:C6	2.92	0.58
10:A:386:G:H3'	10:A:388:G:N2	2.18	0.58
20:P:131:SER:C	20:P:133:SER:N	2.56	0.58
10:A:1021:A:C3'	10:A:1021:A:C8	2.80	0.58
25:U:83:LEU:HD12	25:U:113:ALA:HB2	1.84	0.58
25:U:95:LEU:HD22	26:V:4:ILE:HD11	1.85	0.58
10:A:1162:G:O2'	26:V:92:THR:CG2	2.51	0.58
10:A:1803:A:O3'	12:D:259:THR:HG22	2.03	0.58
10:A:1797:C:H4'	12:D:257:LEU:O	2.03	0.58
10:A:2752:C:C2	10:A:2753:A:C8	2.91	0.58
10:A:2306:C:C5	10:A:2307:G:H1'	2.38	0.58
30:Z:5:LEU:CD1	30:Z:43:GLU:HB3	2.32	0.58
11:B:73:A:H3'	11:B:74:U:H6	1.68	0.58
21:Q:7:MET:O	21:Q:10:ARG:NE	2.35	0.58
10:A:1114:G:C2'	10:A:1115:G:H5'	2.33	0.58
6:5:46:CYS:SG	6:5:47:PRO:HD2	2.42	0.58
17:I:91:SER:CB	17:I:119:PRO:HB2	2.31	0.58
24:T:61:PHE:CZ	24:T:76:PHE:HB2	2.38	0.58
10:A:2839:G:H5'	22:R:46:GLY:HA2	1.86	0.58
10:A:2842:G:H2'	10:A:2843:G:H8	1.68	0.58
10:A:2840:C:H5''	22:R:53:HIS:CD2	2.38	0.58
10:A:2641:G:OP1	18:N:75:TYR:CD2	2.55	0.58
19:O:4:PRO:O	19:O:5:GLN:CB	2.50	0.58
27:W:73:ALA:HB3	27:W:106:ILE:HD11	1.85	0.58
12:D:253:GLN:HB3	12:D:255:LYS:CE	2.32	0.58
16:H:143:GLN:HE22	16:H:147:ASN:HD21	1.49	0.58
10:A:1572:A:O5'	10:A:1572:A:H8	1.85	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:H:43:VAL:O	16:H:43:VAL:HG23	2.03	0.58
6:5:4:HIS:CD2	10:A:2056:G:H1	2.22	0.58
3:2:48:HIS:CD2	3:2:48:HIS:O	2.56	0.58
28:X:74:PRO:O	28:X:75:ASP:C	2.41	0.58
10:A:1162:G:O2'	26:V:92:THR:HG22	2.04	0.58
23:S:62:LYS:O	23:S:66:ALA:HB2	2.03	0.58
10:A:1824:G:O2'	10:A:1825:A:H5'	2.02	0.58
12:D:210:GLY:O	12:D:211:ARG:HB3	2.03	0.58
12:D:27:THR:CG2	12:D:83:GLU:HG2	2.16	0.58
16:H:85:LYS:NZ	16:H:145:ALA:HA	2.18	0.58
10:A:2565:A:C5'	10:A:2566:A:OP2	2.39	0.58
10:A:2567:G:C4	10:A:2568:C:C5	2.92	0.58
10:A:911:A:C6	21:Q:9:TYR:CE2	2.85	0.58
10:A:355:G:C2	10:A:356:G:C8	2.91	0.58
24:T:65:LYS:CE	24:T:66:VAL:H	2.10	0.58
21:Q:134:ARG:HH12	30:Z:119:GLU:CD	2.05	0.58
13:E:169:ASN:ND2	13:E:201:THR:HG21	2.18	0.58
10:A:543:C:H42	10:A:551:G:H1	1.51	0.58
15:G:94:LEU:HD11	15:G:102:PHE:CD1	2.38	0.58
10:A:2452:C:H2'	10:A:2453:A:O4'	2.03	0.58
9:8:8:LYS:HE2	10:A:243:U:OP2	2.03	0.58
20:P:98:GLU:HG3	20:P:99:LEU:N	2.17	0.58
28:X:83:VAL:O	28:X:84:ALA:HB3	2.02	0.58
10:A:1501:C:H2'	10:A:1502:C:C6	2.31	0.58
10:A:2228:G:C5	10:A:2229:C:C5	2.91	0.58
10:A:2831:G:O4'	10:A:2883:A:C2	2.56	0.58
4:3:45:GLY:HA3	10:A:851:U:O2'	2.03	0.58
10:A:479:A:H4'	10:A:480:A:OP1	2.02	0.58
3:2:12:GLU:CD	3:2:12:GLU:C	2.62	0.58
10:A:1972:A:H2'	10:A:1973:G:H8	1.68	0.58
24:T:29:ARG:HG3	24:T:30:VAL:H	1.67	0.58
28:X:40:LYS:CG	28:X:41:ASN:N	2.67	0.58
24:T:32:TYR:CD2	24:T:81:PRO:HB2	2.37	0.58
21:Q:42:ILE:HD13	21:Q:97:VAL:CG2	2.33	0.58
10:A:1164:G:H2'	10:A:1165:U:C6	2.39	0.58
14:F:57:VAL:CG1	14:F:58:ALA:N	2.67	0.58
25:U:16:LYS:O	25:U:20:LEU:HD23	2.03	0.58
10:A:2247:A:H2'	10:A:2248:C:H6	1.69	0.58
10:A:251:A:C5'	20:P:51:PHE:CZ	2.86	0.58
10:A:25:U:H2'	10:A:26:G:C8	2.38	0.58
14:F:36:VAL:O	14:F:39:TRP:HB3	2.03	0.58
28:X:57:LEU:N	28:X:57:LEU:HD12	2.19	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:559:G:H22	25:U:49:HIS:CD2	2.21	0.58
10:A:2376:A:C2	23:S:94:TYR:CG	2.92	0.58
11:B:31:C:H4'	15:G:29:TRP:CH2	2.39	0.58
23:S:88:ASP:O	23:S:92:TYR:CD2	2.56	0.58
12:D:35:LYS:HB3	12:D:63:ARG:HA	1.85	0.58
10:A:309:G:H4'	29:Y:18:GLY:HA3	1.85	0.58
29:Y:19:LYS:HB3	29:Y:20:TYR:CD1	2.38	0.58
13:E:132:HIS:CD2	13:E:135:HIS:HE1	2.16	0.58
2:1:41:ARG:HH11	2:1:41:ARG:CG	2.09	0.58
16:H:95:ARG:HB2	16:H:128:PRO:HB2	1.84	0.58
13:E:39:PRO:HD3	13:E:45:THR:OG1	2.02	0.58
21:Q:11:LYS:H	21:Q:73:PRO:HG2	1.68	0.58
9:8:51:ALA:N	9:8:53:PRO:HD2	2.19	0.58
10:A:2859:G:C3'	10:A:2859:G:C8	2.87	0.58
10:A:1528:A:C8	10:A:1528(A):A:C5	2.91	0.58
25:U:92:ARG:CB	26:V:11:GLN:HE21	2.14	0.58
19:O:78:ARG:HE	24:T:103:ARG:HH12	1.52	0.58
10:A:2275:C:H5''	10:A:2275:C:C6	2.38	0.58
2:1:20:ARG:HD3	2:1:41:ARG:HD3	1.85	0.58
21:Q:20:ALA:O	21:Q:23:GLY:N	2.36	0.58
8:7:34:ARG:HH11	8:7:34:ARG:HB3	1.68	0.58
28:X:41:ASN:HA	28:X:44:GLU:CG	2.33	0.58
10:A:1299:G:H5''	10:A:1300:U:O5'	2.04	0.58
10:A:892:G:H2'	10:A:893:C:O4'	2.04	0.58
10:A:2595:G:N2	10:A:2599:G:C4	2.71	0.58
10:A:1680:U:H2'	10:A:1681:G:O4'	2.04	0.58
10:A:607:U:C2	10:A:621:A:N1	2.71	0.58
10:A:826:U:H2'	10:A:828:U:O4'	2.04	0.58
10:A:142:A:H8	10:A:1408:C:H1'	1.63	0.58
10:A:1448:G:H21	10:A:1528(A):A:H2	1.51	0.58
10:A:71:A:C2	28:X:31:HIS:HE1	2.21	0.58
28:X:84:ALA:O	28:X:86:GLY:N	2.37	0.58
18:N:57:ALA:C	18:N:58:ASP:O	2.39	0.58
11:B:50:G:OP1	23:S:63:THR:HG23	2.02	0.58
10:A:1796:U:H4'	12:D:256:GLY:N	2.17	0.58
16:H:109:PHE:CE1	16:H:152:ARG:CZ	2.86	0.58
10:A:309:G:C5'	29:Y:18:GLY:HA3	2.34	0.58
21:Q:141:GLN:HB2	30:Z:98:MET:HB2	1.85	0.58
10:A:286:C:C4	10:A:356:G:C6	2.92	0.58
2:1:19:GLN:CG	2:1:44:PRO:HG3	2.30	0.58
10:A:2842:G:H2'	10:A:2843:G:C8	2.38	0.58
10:A:1598:C:H2'	10:A:1599:C:H6	1.69	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2100:G:C4	10:A:2190:G:N2	2.72	0.58
10:A:1847:A:H4'	10:A:1848:A:OP2	2.03	0.58
13:E:16:ARG:O	13:E:18:ASP:N	2.36	0.58
10:A:2205:C:O2	10:A:2220:G:C2	2.57	0.58
17:I:43:ASN:H	17:I:43:ASN:ND2	2.01	0.58
9:8:61:LEU:HD22	10:A:593:G:O3'	2.04	0.58
20:P:30:THR:CG2	20:P:31:ALA:N	2.67	0.58
10:A:1722:A:C6	10:A:1741:A:N1	2.71	0.58
10:A:1341:U:O4'	28:X:57:LEU:HD11	2.04	0.58
15:G:114:ILE:C	15:G:115:ARG:HG3	2.24	0.58
10:A:1799:G:H3'	10:A:1799:G:P	2.44	0.58
10:A:783:A:H2'	10:A:785:G:OP1	2.04	0.58
10:A:2807:G:H1	10:A:2892:A:H62	1.52	0.58
10:A:910:A:N7	21:Q:13:GLN:HB2	2.19	0.58
11:B:66:A:C6	11:B:109:C:C6	2.91	0.58
13:E:103:ASP:OD1	13:E:168:MET:HB3	2.03	0.58
28:X:63:LYS:O	28:X:68:ARG:HA	2.04	0.58
27:W:18:ARG:HG2	27:W:18:ARG:NH1	2.13	0.58
18:N:115:ARG:NH1	18:N:115:ARG:HG3	2.19	0.58
10:A:409:C:H42	10:A:418:G:H1	1.51	0.58
27:W:1:MET:HE2	27:W:2:GLU:H	1.68	0.58
14:F:164:ARG:HH11	14:F:164:ARG:HG2	1.67	0.58
7:6:11:LEU:O	7:6:23:THR:HA	2.04	0.58
9:8:59:LYS:HD3	20:P:50:ARG:CB	2.32	0.58
26:V:67:GLY:O	26:V:68:LYS:C	2.41	0.58
10:A:1899:G:H22	10:A:1902:C:H41	0.68	0.58
11:B:24:G:N1	11:B:56:G:N2	2.51	0.58
29:Y:28:LYS:C	29:Y:29:GLU:OE1	2.42	0.58
11:B:66:A:H61	11:B:108:U:H2'	1.69	0.58
12:D:186:HIS:CD2	12:D:187:GLY:N	2.72	0.58
18:N:78:TYR:H	18:N:79:PRO:CD	2.17	0.58
13:E:118:LYS:O	13:E:160:TYR:CE1	2.57	0.58
29:Y:81:LYS:HD3	29:Y:97:ARG:HG3	1.86	0.58
12:D:228:PRO:HD3	12:D:235:GLY:CA	2.33	0.58
24:T:88:ILE:CG2	24:T:89:VAL:N	2.63	0.58
10:A:2476:A:C2	10:A:2477:C:C6	2.91	0.58
10:A:11:G:O2'	10:A:12:U:H5'	2.04	0.58
16:H:17:VAL:HG21	16:H:50:VAL:HG21	1.86	0.58
9:8:3:LYS:HE3	10:A:242:G:O5'	2.04	0.58
10:A:646:A:H2'	10:A:647:G:C5'	2.33	0.58
10:A:1190:G:C4'	20:P:35:HIS:HB3	2.30	0.58
11:B:39:A:H5'	11:B:40:U:OP2	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:57:A:C8	15:G:27:ASN:HB3	2.39	0.58
10:A:764:A:C6	10:A:781:A:C2	2.92	0.58
10:A:2808:U:H2'	10:A:2809:A:H5'	1.84	0.58
29:Y:38:ILE:HG22	29:Y:39:VAL:N	2.18	0.58
10:A:2092:U:H5	10:A:2226:C:OP1	1.87	0.58
19:O:23:ARG:HD2	19:O:24:VAL:H	1.69	0.58
16:H:44:VAL:HG12	16:H:45:VAL:N	2.16	0.58
30:Z:150:LEU:HD13	30:Z:150:LEU:N	2.18	0.58
10:A:429:A:H2'	10:A:430:G:C8	2.39	0.58
10:A:194:G:H2'	10:A:195:A:O4'	2.04	0.57
10:A:2061:G:C2	10:A:2063:C:C4	2.92	0.57
10:A:68:G:C5	10:A:69:C:C5	2.91	0.57
28:X:84:ALA:C	28:X:86:GLY:H	2.07	0.57
25:U:88:ILE:C	25:U:90:VAL:N	2.57	0.57
26:V:36:PRO:HD2	26:V:60:GLU:O	2.04	0.57
26:V:62:LEU:HD22	26:V:98:GLU:HB2	1.86	0.57
26:V:66:ARG:HE	26:V:94:LEU:CG	2.16	0.57
10:A:2702:U:O2'	10:A:2703:C:C6	2.52	0.57
13:E:61:ARG:N	13:E:62:PRO:HD2	2.19	0.57
29:Y:8:LYS:NZ	29:Y:72:VAL:HG23	2.18	0.57
18:N:78:TYR:N	18:N:79:PRO:CD	2.67	0.57
1:O:26:TYR:HE2	10:A:857:C:H1'	1.68	0.57
3:2:14:ARG:NH1	3:2:57:ILE:CG2	2.67	0.57
24:T:57:PHE:C	24:T:59:THR:H	2.06	0.57
15:G:52:ILE:HG22	15:G:54:GLU:HG2	1.86	0.57
8:7:5:TRP:CH2	10:A:686:G:N7	2.72	0.57
10:A:2098:U:H2'	10:A:2099:U:H6	1.68	0.57
25:U:76:TYR:C	25:U:76:TYR:CD2	2.76	0.57
19:O:39:ILE:O	19:O:39:ILE:HG12	2.03	0.57
7:6:42:TRP:CE2	10:A:643:A:OP1	2.57	0.57
10:A:260:G:N2	10:A:261:G:H1'	2.19	0.57
10:A:994:C:O2	26:V:10:LYS:NZ	2.37	0.57
18:N:42:TRP:HB3	25:U:64:ARG:HH12	1.64	0.57
26:V:66:ARG:CD	26:V:67:GLY:N	2.68	0.57
23:S:38:GLN:HG2	23:S:47:THR:CG2	2.34	0.57
22:R:72:ASP:HB3	22:R:75:LEU:CB	2.34	0.57
27:W:75:TYR:HE1	27:W:104:THR:CG2	2.17	0.57
10:A:1416:G:O2'	10:A:1417:C:OP2	2.18	0.57
29:Y:96:ILE:CD1	29:Y:99:CYS:SG	2.92	0.57
18:N:75:TYR:N	18:N:75:TYR:HD1	2.02	0.57
10:A:51:G:H4'	10:A:52:A:H5'	1.85	0.57
14:F:31:HIS:CG	20:P:13:ASN:HD22	2.21	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1669:A:H5''	10:A:1670:C:OP2	2.04	0.57
10:A:280:C:H2'	10:A:281:G:O5'	2.03	0.57
13:E:49:LEU:HD23	13:E:81:ILE:HG12	1.86	0.57
10:A:1836:C:C2'	10:A:1837:C:H5'	2.34	0.57
6:5:4:HIS:HD2	10:A:2056:G:H1	1.51	0.57
7:6:19:ARG:HG3	7:6:20:ASN:H	1.68	0.57
9:8:13:ARG:HD2	20:P:61:ARG:HD3	1.85	0.57
10:A:389:G:N1	20:P:71:VAL:HB	2.18	0.57
3:2:46:GLN:HG2	3:2:47:ASN:N	2.16	0.57
28:X:24:GLY:HA3	28:X:80:ILE:CG1	2.35	0.57
28:X:9:LEU:HD12	28:X:30:VAL:C	2.24	0.57
18:N:65:LYS:HE2	18:N:65:LYS:HA	1.85	0.57
25:U:90:VAL:HG12	25:U:91:ASP:N	2.18	0.57
23:S:26:LEU:HA	23:S:39:ILE:HD13	1.85	0.57
10:A:2769:C:H2'	10:A:2770:G:O5'	2.03	0.57
10:A:2313:C:O2'	10:A:2314:C:H5'	2.04	0.57
10:A:2385:C:C2'	10:A:2386:C:H5'	2.34	0.57
12:D:186:HIS:HD2	12:D:187:GLY:N	2.01	0.57
10:A:394:A:C6	10:A:395:U:C4	2.91	0.57
15:G:76:SER:CB	15:G:84:LYS:H	2.16	0.57
10:A:479:A:H1'	10:A:481:G:H5''	1.84	0.57
10:A:271(P):C:H2'	10:A:271(P):C:O2	2.04	0.57
10:A:1833:U:O2	10:A:1969:A:H2	1.86	0.57
10:A:2688:U:C5	10:A:2720:U:OP2	2.55	0.57
21:Q:27:VAL:HG21	21:Q:134:ARG:HA	1.86	0.57
10:A:1300:U:H5''	10:A:1301:A:H5''	1.86	0.57
10:A:1949:G:C2	10:A:1958:C:O2	2.57	0.57
10:A:1382:G:O2'	10:A:1383:C:H5'	2.03	0.57
10:A:1321:A:H2'	10:A:1322:A:O4'	2.04	0.57
25:U:43:GLY:HA2	26:V:76:LYS:HE3	1.87	0.57
9:8:53:PRO:HA	9:8:56:GLU:HB2	1.86	0.57
14:F:66:PRO:O	14:F:67:GLN:CB	2.40	0.57
28:X:88:LYS:O	28:X:89:ILE:HB	2.03	0.57
18:N:47:ALA:HB2	18:N:112:LEU:HD11	1.87	0.57
15:G:120:LEU:HG	15:G:179:PRO:O	2.05	0.57
15:G:24:GLY:C	15:G:25:TYR:CD2	2.78	0.57
12:D:158:ALA:O	12:D:159:ALA:CB	2.51	0.57
10:A:2792:G:H2'	10:A:2792:G:N3	2.19	0.57
10:A:287:C:N4	10:A:354:G:H1	1.91	0.57
21:Q:75:THR:HA	21:Q:88:GLY:CA	2.27	0.57
10:A:1410:G:C6	10:A:1411:C:N4	2.72	0.57
14:F:178:PRO:HG2	14:F:179:GLU:OE2	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:50:PRO:O	26:V:51:VAL:O	2.22	0.57
18:N:75:TYR:CD1	18:N:75:TYR:N	2.70	0.57
10:A:2475:C:H5''	10:A:2476:A:P	2.45	0.57
24:T:109:GLU:O	24:T:113:LYS:HG3	2.05	0.57
10:A:2598:A:P	12:D:236:GLY:HA3	2.43	0.57
10:A:807:U:C2'	10:A:808:G:O5'	2.52	0.57
10:A:1351:C:H4'	10:A:1572:A:O4'	2.04	0.57
22:R:13:HIS:HE1	22:R:15:SER:OG	1.86	0.57
10:A:1763:G:H4'	10:A:1763:G:OP1	2.04	0.57
6:5:4:HIS:O	6:5:5:PRO:C	2.38	0.57
9:8:32:LEU:HB3	9:8:35:GLN:N	2.19	0.57
10:A:2287:A:O2'	10:A:2288:A:H3'	2.04	0.57
20:P:16:ARG:HG2	20:P:17:LYS:N	2.09	0.57
10:A:58:G:C2'	10:A:59:U:O5'	2.52	0.57
10:A:691:C:O2'	10:A:692:C:H5'	2.05	0.57
11:B:21:G:C8	11:B:22:U:H1'	2.39	0.57
10:A:1771:C:C1'	10:A:1786:A:H8	2.17	0.57
10:A:1474:C:H5''	10:A:1474:C:C6	2.39	0.57
14:F:28:ILE:CD1	14:F:28:ILE:H	2.15	0.57
2:1:34:THR:CG2	10:A:388:G:P	2.92	0.57
10:A:823:G:C2'	10:A:824:A:H5'	2.34	0.57
10:A:1722:A:N6	10:A:1741:A:C2	2.73	0.57
25:U:64:ARG:CA	25:U:64:ARG:CZ	2.83	0.57
11:B:55:U:H6	11:B:55:U:OP2	1.86	0.57
12:D:158:ALA:O	12:D:159:ALA:HB2	2.05	0.57
10:A:2299:G:N1	10:A:2318:G:C8	2.73	0.57
11:B:73:A:C4	11:B:105:A:C2	2.93	0.57
17:I:25:TYR:CE1	17:I:30:LEU:HD21	2.39	0.57
13:E:93:VAL:C	13:E:95:ILE:H	2.07	0.57
10:A:1044:G:H1'	10:A:1111:A:N1	2.20	0.57
10:A:2682:U:O4'	13:E:12:THR:HA	2.04	0.57
17:I:101:LEU:HG	17:I:109:ILE:HG12	1.87	0.57
24:T:23:ARG:CB	24:T:24:PRO:HD2	2.33	0.57
10:A:207:A:H2'	10:A:208:C:O4'	2.04	0.57
16:H:153:LYS:N	16:H:153:LYS:HD3	2.14	0.57
17:I:127:VAL:HG22	17:I:139:GLN:HG3	1.85	0.57
10:A:1915:U:H2'	10:A:1916:A:H8	1.69	0.57
7:6:19:ARG:O	7:6:20:ASN:O	2.22	0.57
7:6:46:HIS:CE1	10:A:2371:G:O2'	2.58	0.57
10:A:2071:A:H2	10:A:2440:C:N4	2.03	0.57
10:A:1722:A:C4	10:A:1741:A:N6	2.72	0.57
3:2:25:VAL:HG22	3:2:26:ARG:HH11	1.70	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:49:LYS:C	3:2:53:LEU:HB3	2.24	0.57
10:A:142:A:H5''	10:A:142(A):C:H5	1.70	0.57
18:N:42:TRP:CD1	18:N:42:TRP:C	2.77	0.57
10:A:814:C:H5''	26:V:86:GLY:HA3	1.87	0.57
15:G:31:VAL:HB	15:G:33:ARG:HG2	1.84	0.57
23:S:19:LYS:HG2	23:S:19:LYS:O	2.05	0.57
11:B:8:U:O2'	23:S:40:ILE:HD13	2.05	0.57
2:1:10:LYS:CG	2:1:11:ARG:N	2.68	0.57
2:1:86:SER:N	2:1:87:PRO:CD	2.67	0.57
10:A:2666:C:H5'	10:A:2667:C:OP2	2.04	0.57
12:D:186:HIS:CD2	12:D:188:GLU:H	2.22	0.57
10:A:855:G:C5	10:A:856:C:C4	2.92	0.57
29:Y:47:LYS:HZ3	29:Y:47:LYS:HB3	1.68	0.57
14:F:160:ASN:C	14:F:160:ASN:ND2	2.57	0.57
13:E:120:TRP:CD1	13:E:155:LYS:HB3	2.39	0.57
10:A:485:C:H2'	10:A:486:C:C6	2.39	0.57
16:H:143:GLN:HE22	16:H:147:ASN:ND2	2.03	0.57
16:H:18:GLU:HB2	16:H:25:LYS:HB2	1.86	0.57
10:A:376:C:H2'	10:A:377:C:C6	2.40	0.57
3:2:26:ARG:HA	3:2:29:LYS:HE3	1.85	0.57
10:A:1526:G:C6	10:A:1527:G:C2	2.92	0.57
10:A:1141:U:OP2	18:N:63:THR:OG1	2.18	0.57
18:N:1:MET:HB3	26:V:20:LEU:HD22	1.87	0.57
10:A:330:A:H2	10:A:1210:A:O2'	1.87	0.57
21:Q:7:MET:O	21:Q:10:ARG:NH2	2.38	0.57
11:B:13:A:H2'	11:B:70:C:O2'	2.04	0.57
2:1:19:GLN:CD	2:1:44:PRO:HB3	2.24	0.57
14:F:138:GLU:O	14:F:141:ALA:HB3	2.05	0.57
10:A:2552:U:C2	10:A:2554:U:H5'	2.40	0.57
8:7:1:MET:O	8:7:2:LYS:C	2.43	0.57
6:5:28:PRO:HB3	27:W:38:TYR:O	2.05	0.57
10:A:444:C:H4'	14:F:49:ALA:HB2	1.87	0.57
10:A:2061:G:N3	10:A:2063:C:C5	2.73	0.57
10:A:580:C:H2'	10:A:581:C:H6	1.68	0.57
10:A:1011:G:OP1	25:U:75:ASN:HB3	2.04	0.57
18:N:23:LEU:HD13	18:N:98:VAL:HG12	1.87	0.57
25:U:95:LEU:HD22	26:V:4:ILE:CD1	2.35	0.57
26:V:19:LYS:HB3	26:V:96:ILE:O	2.04	0.57
10:A:1902:C:HO2'	12:D:244:ARG:HB2	1.66	0.57
23:S:89:ARG:HB3	23:S:92:TYR:HB2	1.85	0.57
10:A:1803:A:O3'	12:D:259:THR:HG21	2.05	0.57
12:D:91:ARG:O	12:D:107:ALA:HB3	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:I:29:TYR:C	17:I:32:PRO:HD2	2.24	0.57
18:N:78:TYR:HD1	18:N:79:PRO:N	2.01	0.57
10:A:1290:C:H2'	10:A:1291:C:C6	2.40	0.57
10:A:2235:G:H2'	10:A:2236:C:C6	2.40	0.57
10:A:322:A:H4'	10:A:323:G:OP2	2.05	0.57
10:A:1247:A:C4	10:A:1249:U:C5	2.93	0.57
10:A:753:C:C6	10:A:753:C:O5'	2.58	0.57
10:A:521:G:O2'	10:A:522:G:H5'	2.05	0.57
10:A:17:G:H4'	25:U:25:TRP:CH2	2.40	0.57
13:E:137:HIS:HB3	13:E:138:PRO:CD	2.35	0.57
10:A:143:G:C1'	28:X:38:GLU:HG3	2.34	0.57
10:A:1468:C:H2'	10:A:1469:A:H8	1.69	0.57
26:V:38:LEU:HG	26:V:39:LEU:H	1.69	0.57
26:V:70:ILE:HB	26:V:90:PRO:HB2	1.86	0.57
23:S:90:GLY:H	23:S:91:PRO:HD2	1.69	0.57
10:A:764:A:OP1	12:D:208:LYS:HE2	2.04	0.57
10:A:2808:U:H2'	10:A:2809:A:C5'	2.35	0.57
30:Z:9:TYR:CE2	30:Z:35:ARG:HD2	2.39	0.57
10:A:2277:G:C2'	10:A:2278:A:H5'	2.34	0.57
12:D:164:GLN:HB3	12:D:166:GLN:HE22	1.68	0.57
10:A:1657:C:OP1	13:E:136:ARG:N	2.36	0.57
29:Y:46:LYS:HB2	29:Y:47:LYS:HD2	1.87	0.57
10:A:271(U):G:C2'	10:A:271(V):G:H5'	2.35	0.57
16:H:41:MET:O	16:H:42:ARG:C	2.42	0.57
10:A:2884:U:C5	10:A:2885:C:C6	2.93	0.57
30:Z:142:SER:H	30:Z:144:LEU:CD2	2.17	0.57
10:A:586:A:C2	10:A:1254:A:C2	2.93	0.57
10:A:2019:A:C2'	10:A:2020:A:O5'	2.53	0.57
12:D:48:ARG:HG3	12:D:48:ARG:NH1	2.18	0.57
14:F:32:LEU:C	14:F:32:LEU:HD23	2.26	0.57
33:A:3206:TEL:H81	33:A:3206:TEL:C10	2.34	0.56
3:2:30:ARG:HH11	3:2:30:ARG:HG3	1.70	0.56
10:A:1000:A:C6	10:A:1001:A:C6	2.92	0.56
26:V:25:LEU:C	26:V:27:ALA:H	2.08	0.56
26:V:73:SER:OG	26:V:75:PHE:CE1	2.54	0.56
11:B:115:G:H2'	11:B:116:G:H8	1.70	0.56
23:S:89:ARG:CA	23:S:89:ARG:HE	2.12	0.56
10:A:768:G:C4	10:A:769:G:C8	2.93	0.56
10:A:2757:A:N1	16:H:67:LEU:HD22	2.20	0.56
10:A:2314:C:H2'	10:A:2315:G:H8	1.68	0.56
29:Y:68:HIS:ND1	29:Y:70:SER:HB3	2.20	0.56
13:E:98:PRO:HD3	13:E:175:VAL:HG13	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1115:G:C2'	10:A:1116:C:H6	2.11	0.56
10:A:1411:C:H2'	10:A:1412:A:H8	1.67	0.56
10:A:1665:A:H1'	19:O:1:MET:HG2	1.86	0.56
22:R:10:LEU:HD13	22:R:17:ARG:NH1	2.20	0.56
10:A:1952:A:C6	19:O:22:ILE:HD11	2.40	0.56
18:N:82:LEU:H	18:N:82:LEU:HD12	1.68	0.56
21:Q:32:TYR:CZ	21:Q:111:GLU:HB2	2.40	0.56
10:A:319:C:H2'	10:A:320:A:O4'	2.05	0.56
10:A:31:C:C4	10:A:32:C:C5	2.93	0.56
13:E:65:GLY:HA2	13:E:70:ALA:CB	2.35	0.56
10:A:1814:G:H2'	10:A:1815:A:C8	2.40	0.56
10:A:45:C:H2'	10:A:47:C:C6	2.40	0.56
10:A:55:G:O2'	10:A:127:A:N1	2.27	0.56
10:A:2612:C:H2'	10:A:2613:U:H5'	1.87	0.56
9:8:12:LYS:HG2	20:P:68:GLN:OE1	2.05	0.56
10:A:635:C:O2'	10:A:639:U:OP1	2.19	0.56
10:A:1751:C:HO2'	10:A:1752:C:H5'	1.70	0.56
10:A:1464:C:H4'	10:A:1528(A):A:H4'	1.87	0.56
25:U:83:LEU:HB3	25:U:88:ILE:CD1	2.33	0.56
25:U:61:TRP:CD2	25:U:94:ASN:HA	2.39	0.56
10:A:1791:A:H3'	10:A:1792:G:H8	1.70	0.56
30:Z:151:HIS:CB	30:Z:170:THR:HA	2.27	0.56
13:E:167:VAL:HG22	13:E:168:MET:N	2.19	0.56
10:A:856:C:H5''	10:A:856:C:H6	1.69	0.56
10:A:2870:C:H5''	22:R:65:LEU:HD21	1.87	0.56
10:A:1131:G:OP1	18:N:80:GLY:HA2	2.05	0.56
10:A:2470:G:C6	10:A:2471:C:C5	2.92	0.56
10:A:1642:G:C2'	10:A:1643:G:H5'	2.35	0.56
10:A:2078:C:C4	10:A:2079:U:C4	2.92	0.56
10:A:2074:U:H2'	10:A:2075:U:C6	2.40	0.56
10:A:565:C:H2'	10:A:566:U:O4'	2.04	0.56
10:A:236:C:H2'	10:A:237:C:H6	1.71	0.56
24:T:87:ASP:OD2	24:T:87:ASP:C	2.42	0.56
10:A:2287:A:C2	10:A:2346:A:C2	2.94	0.56
10:A:191:A:C2'	10:A:192:C:H5'	2.36	0.56
10:A:971:C:C2'	10:A:972:G:H5'	2.36	0.56
20:P:45:LEU:HD22	20:P:46:LYS:N	2.18	0.56
3:2:56:GLN:N	3:2:56:GLN:HE21	2.02	0.56
28:X:24:GLY:O	28:X:25:LYS:O	2.22	0.56
3:2:26:ARG:N	3:2:26:ARG:HD2	2.16	0.56
3:2:26:ARG:HG3	28:X:5:TYR:HB3	1.86	0.56
26:V:70:ILE:O	26:V:71:LEU:HB2	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:N:66:LYS:HB3	18:N:70:LYS:CB	2.35	0.56
25:U:47:TYR:HA	25:U:50:ARG:HH22	1.69	0.56
26:V:13:ARG:HG3	26:V:13:ARG:HH11	1.67	0.56
12:D:244:ARG:HG2	12:D:245:PRO:CD	2.32	0.56
10:A:778:G:C5	10:A:779:U:C4	2.93	0.56
10:A:1428:C:O2'	10:A:1429:G:H5'	2.05	0.56
10:A:2258:C:H4'	10:A:2259:G:OP2	2.04	0.56
10:A:910:A:N1	10:A:2277:G:H1'	2.20	0.56
11:B:21:G:C6	11:B:63:G:N2	2.74	0.56
22:R:100:LEU:HD21	22:R:113:LEU:CD1	2.34	0.56
10:A:2223:G:H2'	10:A:2224:G:H5'	1.87	0.56
13:E:197:ILE:HD11	13:E:199:ARG:CZ	2.35	0.56
13:E:47:VAL:HG21	13:E:86:PRO:HD3	1.88	0.56
6:5:50:GLY:HA3	6:5:56:LYS:CG	2.36	0.56
20:P:124:LYS:HA	20:P:143:GLY:CA	2.34	0.56
3:2:57:ILE:HD11	3:2:59:ARG:HD2	1.88	0.56
24:T:38:ASN:HD22	24:T:40:THR:H	1.52	0.56
10:A:492:A:H2'	10:A:493:G:O4'	2.05	0.56
10:A:1171:G:OP2	10:A:1171:G:C8	2.50	0.56
10:A:440:G:H2'	10:A:441:U:C6	2.41	0.56
14:F:160:ASN:ND2	14:F:163:VAL:H	2.03	0.56
10:A:720:C:H2'	10:A:721:C:H6	1.71	0.56
10:A:35:G:H2'	10:A:36:G:O4'	2.05	0.56
30:Z:171:ILE:O	30:Z:172:ALA:CB	2.53	0.56
13:E:27:LEU:HD22	24:T:1:MET:HE2	1.87	0.56
30:Z:117:LEU:HB3	30:Z:174:VAL:HG22	1.87	0.56
10:A:2363:C:O2'	10:A:2364:C:H5'	2.05	0.56
10:A:267:C:O2'	10:A:268:C:H5'	2.05	0.56
22:R:56:LYS:NZ	22:R:90:ARG:O	2.31	0.56
10:A:1547:C:O2'	10:A:1548:C:H5'	2.05	0.56
24:T:7:ILE:O	24:T:8:LYS:C	2.44	0.56
19:O:88:ASN:O	19:O:91:LEU:N	2.36	0.56
10:A:1671:U:HO2'	10:A:1673:U:H5	1.51	0.56
20:P:80:TYR:CD1	20:P:111:ARG:HB3	2.41	0.56
10:A:1719:G:C6	10:A:1720:U:C4	2.94	0.56
10:A:1153:C:H2'	10:A:1154:G:O4'	2.06	0.56
15:G:25:TYR:HD1	15:G:30:GLU:HG2	1.71	0.56
23:S:61:ASN:OD1	23:S:64:GLU:HB2	2.04	0.56
10:A:1783:A:C2	10:A:2587:A:C5	2.93	0.56
2:1:94:LEU:HD22	2:1:95:LEU:O	2.05	0.56
10:A:2656:U:N3	10:A:2665:A:C2	2.73	0.56
10:A:2304:G:H2'	10:A:2304:G:N3	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:287:C:H2'	10:A:288:C:C5'	2.36	0.56
11:B:16:G:C2	11:B:17:C:H6	2.24	0.56
2:1:19:GLN:H	2:1:44:PRO:HD3	1.71	0.56
24:T:28:VAL:CG2	24:T:46:GLU:HG3	2.35	0.56
22:R:53:HIS:CD2	22:R:94:TYR:OH	2.58	0.56
10:A:38:A:H2'	10:A:39:C:H6	1.68	0.56
15:G:88:ILE:HG23	15:G:90:LEU:H	1.69	0.56
10:A:1858:G:H1'	10:A:1884:A:H61	1.71	0.56
10:A:2025:C:H2'	10:A:2026:C:H6	1.70	0.56
10:A:1132:A:H1'	18:N:73:THR:HG21	1.86	0.56
10:A:271(J):C:H5'	10:A:271(K):U:OP2	2.05	0.56
10:A:686:G:N2	10:A:788:A:H61	2.03	0.56
10:A:1152:C:H5''	25:U:80:ILE:CG2	2.35	0.56
22:R:13:HIS:O	22:R:14:SER:C	2.44	0.56
12:D:132:PRO:HA	12:D:190:TYR:HA	1.86	0.56
5:4:19:GLY:C	5:4:21:VAL:H	2.09	0.56
13:E:9:VAL:HG22	13:E:25:VAL:HB	1.86	0.56
7:6:27:LYS:HD2	10:A:2285:C:OP2	2.03	0.56
10:A:255:A:C6	10:A:256:A:C5	2.94	0.56
10:A:637:A:O5'	20:P:116:GLY:HA2	2.05	0.56
10:A:834:C:C2'	10:A:835:A:H5'	2.35	0.56
3:2:50:ILE:O	3:2:51:ARG:CB	2.53	0.56
10:A:1323:U:OP1	27:W:98:LYS:HE3	2.03	0.56
10:A:2312:U:H2'	10:A:2313:C:H5'	1.86	0.56
13:E:7:VAL:O	13:E:7:VAL:HG22	2.05	0.56
10:A:1659:U:O2'	10:A:1660:C:H5'	2.05	0.56
10:A:1497:U:H3	10:A:1578:U:P	2.29	0.56
13:E:171:GLU:HB2	13:E:185:LYS:HG3	1.87	0.56
24:T:28:VAL:O	24:T:29:ARG:HB2	2.06	0.56
10:A:9:U:C5	10:A:2629:A:N6	2.74	0.56
10:A:1383:C:H6	10:A:1383:C:O5'	1.87	0.56
10:A:2193:G:H2'	10:A:2194:G:O4'	2.04	0.56
11:B:41:U:O4	15:G:72:ARG:HG2	2.06	0.56
4:3:30:ARG:O	4:3:33:GLN:HB3	2.06	0.56
10:A:1918:A:O2'	10:A:1920:C:N4	2.38	0.56
6:5:8:LYS:HD2	10:A:2056:G:O2'	2.05	0.56
10:A:2065:C:H2'	10:A:2066:C:H6	1.71	0.56
20:P:36:LYS:O	20:P:38:GLN:HG2	2.06	0.56
25:U:61:TRP:CE2	25:U:94:ASN:HA	2.41	0.56
11:B:37:C:C2'	11:B:37:C:O2	2.53	0.56
23:S:35:ILE:O	23:S:35:ILE:HD13	2.06	0.56
10:A:2759:G:O2'	10:A:2760:C:H5'	2.04	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2657:A:H3'	10:A:2658:C:O4'	2.05	0.56
29:Y:8:LYS:HB2	29:Y:28:LYS:HZ3	1.70	0.56
22:R:97:VAL:HG22	22:R:114:VAL:HG13	1.88	0.56
12:D:186:HIS:HD2	12:D:188:GLU:H	1.53	0.56
10:A:1638:C:H5''	10:A:2710:C:O2'	2.06	0.56
10:A:792:G:N3	10:A:2072:G:O2'	2.35	0.56
10:A:1881:C:C4	10:A:1882:C:C5	2.93	0.56
10:A:342:G:H2'	10:A:343:C:H6	1.70	0.56
27:W:86:LEU:C	27:W:86:LEU:HD12	2.25	0.56
10:A:1532:C:O5'	10:A:1532:C:C6	2.58	0.56
10:A:1420:U:O2'	10:A:1421:G:C5'	2.53	0.56
10:A:1349:A:N6	10:A:1598:C:N4	2.53	0.56
10:A:892:G:N1	10:A:894:C:N4	2.53	0.56
10:A:2205:C:C2	10:A:2220:G:C2	2.94	0.56
18:N:121:LYS:HG3	18:N:123:TYR:CE1	2.40	0.56
22:R:54:LEU:HB3	22:R:66:VAL:CG2	2.34	0.56
10:A:2227:A:H5'	12:D:263:ARG:HB3	1.87	0.56
10:A:196:A:C4	10:A:805:G:C6	2.94	0.56
10:A:669:G:C8	10:A:669:G:H5'	2.41	0.56
20:P:100:LEU:O	20:P:103:ALA:N	2.39	0.56
18:N:15:LEU:HD21	18:N:55:VAL:HG22	1.88	0.56
11:B:116:G:C2	11:B:117:G:C8	2.94	0.56
10:A:2751:G:H3'	10:A:2752:C:C6	2.37	0.56
2:1:87:PRO:HD2	2:1:88:LYS:N	2.19	0.56
10:A:2646:C:H2'	10:A:2647:U:O4'	2.06	0.56
1:0:43:THR:HG21	10:A:2336:A:H61	1.70	0.56
10:A:2263:C:O2'	10:A:2264:C:H5'	2.06	0.56
6:5:55:ARG:O	6:5:56:LYS:HG3	2.06	0.56
14:F:20:LEU:HD13	14:F:199:TRP:CH2	2.40	0.56
10:A:1652:A:C2'	10:A:1653:G:H5'	2.36	0.56
10:A:343:C:H2'	10:A:343:C:O2	2.04	0.56
10:A:1887:C:C2'	10:A:1888:G:C5'	2.82	0.56
10:A:1131:G:O6	10:A:2040:C:H1'	2.05	0.56
24:T:106:SER:O	24:T:107:ASP:CB	2.53	0.56
10:A:542:C:H42	10:A:543:C:H42	1.51	0.56
10:A:1204:A:N1	10:A:1241:A:C2	2.74	0.56
10:A:272:G:C4'	10:A:272(B):G:O5'	2.54	0.56
16:H:158:HIS:CE1	16:H:168:PRO:CG	2.88	0.56
10:A:412:A:N7	10:A:2411:A:H2	2.03	0.56
10:A:245:G:C5	10:A:246:C:C5	2.94	0.56
10:A:1018:C:O2'	10:A:1019:U:H5'	2.05	0.56
11:B:60:C:C2	11:B:61:G:C8	2.94	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:352:G:N2	10:A:355:G:OP2	2.39	0.56
10:A:2636:U:OP1	13:E:80:GLU:N	2.38	0.56
10:A:1297:C:H2'	10:A:1298:C:H6	1.71	0.56
19:O:23:ARG:HD2	19:O:24:VAL:N	2.21	0.56
3:2:12:GLU:CA	3:2:14:ARG:HH21	2.18	0.56
19:O:13:ASN:ND2	19:O:97:ARG:H	2.04	0.56
10:A:2852:G:H2'	10:A:2853:C:O4'	2.06	0.56
10:A:2884:U:H2'	10:A:2885:C:O4'	2.06	0.56
10:A:727:A:H2	12:D:9:TYR:CD2	2.24	0.56
14:F:52:LYS:HB3	14:F:56:GLU:HB3	1.86	0.56
27:W:71:VAL:HA	27:W:107:LEU:HD12	1.88	0.56
9:8:22:VAL:HB	9:8:53:PRO:HB2	1.87	0.56
10:A:2347:C:H2'	10:A:2348:U:H6	1.69	0.56
10:A:593:G:H2'	10:A:594:U:C6	2.41	0.56
28:X:25:LYS:HG3	28:X:26:TYR:CD1	2.40	0.56
28:X:82:GLN:OE1	28:X:83:VAL:HG22	2.06	0.56
10:A:1331:A:H2'	10:A:1333:C:C5	2.41	0.56
13:E:75:VAL:C	13:E:77:ILE:N	2.59	0.56
21:Q:141:GLN:NE2	30:Z:70:LEU:HB2	2.21	0.56
10:A:2203:U:O2'	12:D:151:LYS:HG2	2.05	0.56
6:5:42:PRO:HB2	6:5:43:HIS:HD2	1.71	0.56
10:A:2507:C:H5''	10:A:2573:C:N4	2.21	0.56
17:I:132:PRO:C	17:I:133:HIS:HD2	2.09	0.56
24:T:34:VAL:O	24:T:35:LYS:HB3	2.06	0.56
10:A:218:A:C2	10:A:235:U:H4'	2.41	0.56
10:A:128:C:H4'	10:A:129:C:OP1	2.05	0.56
10:A:892:G:H1	10:A:894:C:H41	1.54	0.56
16:H:126:PRO:HG3	16:H:130:ARG:HB3	1.87	0.56
15:G:94:LEU:HG	15:G:99:MET:HA	1.88	0.56
10:A:1683:C:H2'	10:A:1684:C:H6	1.71	0.56
18:N:121:LYS:HE2	18:N:123:TYR:CZ	2.41	0.56
15:G:43:LEU:CD1	15:G:153:ARG:HD2	2.36	0.56
10:A:581:C:H2'	10:A:582:G:C8	2.41	0.56
20:P:24:GLY:HA3	20:P:33:ARG:NH2	2.21	0.56
10:A:389:G:H1	20:P:71:VAL:HB	1.69	0.56
10:A:71:A:C8	10:A:71:A:C5'	2.85	0.56
28:X:73:ARG:H	28:X:74:PRO:HD3	1.69	0.56
18:N:68:GLU:HG3	18:N:88:GLU:OE1	2.05	0.56
10:A:1784:A:H4'	10:A:1785:A:C5'	2.36	0.56
10:A:1812:A:C2	10:A:1813:G:C5	2.94	0.56
10:A:2637:U:C2'	10:A:2638:G:H5'	2.35	0.56
16:H:152:ARG:H	16:H:162:ILE:HD11	1.71	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:102:VAL:HB	13:E:199:ARG:O	2.06	0.56
6:5:46:CYS:O	6:5:48:GLU:N	2.39	0.56
21:Q:18:LYS:O	21:Q:19:GLY:C	2.44	0.56
10:A:1476:C:H2'	10:A:1477:A:C8	2.41	0.56
10:A:176:G:C2'	10:A:177:G:H5'	2.36	0.56
21:Q:132:VAL:CG1	30:Z:81:ARG:HD2	2.35	0.56
24:T:25:GLY:O	24:T:26:ASP:CB	2.54	0.56
10:A:2273:A:H2'	10:A:2274:A:H8	1.70	0.56
10:A:705:A:C2	10:A:727:A:H1'	2.41	0.56
21:Q:73:PRO:HA	21:Q:93:TYR:CD2	2.41	0.56
10:A:376:C:H2'	10:A:377:C:H6	1.69	0.56
19:O:87:ILE:CG2	19:O:91:LEU:HA	2.35	0.56
14:F:127:GLU:OE1	14:F:127:GLU:HA	2.06	0.56
9:8:60:LEU:C	9:8:63:PRO:HD2	2.26	0.55
10:A:2070:G:H2'	10:A:2071:A:C8	2.41	0.55
20:P:47:ASP:HB3	20:P:48:PRO:O	2.06	0.55
26:V:79:VAL:HG23	26:V:82:ARG:HD2	1.88	0.55
10:A:1389:G:C2	10:A:1390:U:C2	2.94	0.55
10:A:73:A:H2'	10:A:74:A:OP2	2.05	0.55
10:A:1341:U:H5'	28:X:57:LEU:HG	1.87	0.55
10:A:2334:G:H8	10:A:2334:G:OP1	1.90	0.55
11:B:50:G:P	23:S:63:THR:HG23	2.46	0.55
10:A:729:G:H4'	10:A:763:G:H5'	1.87	0.55
10:A:768:G:C6	10:A:769:G:C5	2.94	0.55
10:A:1509(B):A:H2'	10:A:1510:G:C8	2.41	0.55
30:Z:71:VAL:HG22	30:Z:88:PHE:HE2	1.70	0.55
10:A:966:G:C5	10:A:967:C:C5	2.95	0.55
15:G:57:ALA:HB2	15:G:90:LEU:HD21	1.87	0.55
10:A:1374:G:C2	10:A:1375:C:C2	2.94	0.55
17:I:76:THR:HG21	17:I:141:LYS:HE3	1.88	0.55
12:D:221:VAL:HG22	12:D:226:MET:CE	2.37	0.55
6:5:4:HIS:HB3	6:5:5:PRO:CD	2.36	0.55
10:A:2069:G:H2'	10:A:2070:G:H5'	1.87	0.55
10:A:2287:A:C2	10:A:2289:G:C1'	2.89	0.55
10:A:259:G:O2'	10:A:260:G:H5'	2.06	0.55
10:A:662:G:P	20:P:18:ARG:HD2	2.46	0.55
20:P:101:VAL:HB	20:P:107:LYS:N	2.17	0.55
20:P:83:VAL:HG23	20:P:105:LEU:HD22	1.87	0.55
10:A:1459:G:H5''	10:A:1460:A:OP2	2.06	0.55
28:X:80:ILE:O	28:X:81:VAL:HB	2.04	0.55
10:A:1140:C:O3'	18:N:25:ARG:NH1	2.38	0.55
10:A:1225:G:P	26:V:88:ARG:HB3	2.46	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:815:C:H2'	10:A:816:C:H6	1.71	0.55
12:D:27:THR:O	12:D:28:GLU:HB2	2.06	0.55
2:1:60:PHE:HZ	2:1:90:ILE:HG21	1.71	0.55
17:I:29:TYR:O	17:I:32:PRO:HD2	2.06	0.55
10:A:83:G:H1	10:A:102:G:H2'	1.71	0.55
10:A:1639:U:O2'	10:A:1640:C:H5''	2.05	0.55
10:A:271(Q):G:N3	10:A:271(R):G:C8	2.74	0.55
24:T:30:VAL:HG21	24:T:83:ILE:HG13	1.86	0.55
10:A:1478:G:O2'	10:A:1558:A:H2	1.90	0.55
10:A:473:G:C2'	10:A:474:G:O5'	2.55	0.55
24:T:106:SER:HB2	24:T:110:ILE:CD1	2.35	0.55
18:N:89:LYS:O	18:N:93:THR:HG22	2.06	0.55
7:6:11:LEU:HD11	7:6:26:ASN:HD21	1.71	0.55
33:A:3206:TEL:O18	33:A:3206:TEL:C33	2.54	0.55
10:A:990:A:OP2	10:A:991:C:OP2	2.24	0.55
26:V:33:VAL:HA	26:V:63:GLY:HA2	1.88	0.55
26:V:29:PRO:O	26:V:64:HIS:NE2	2.39	0.55
26:V:66:ARG:HH11	26:V:68:LYS:H	1.54	0.55
26:V:22:VAL:HG21	26:V:96:ILE:HD12	1.88	0.55
10:A:1287:A:H2'	10:A:1287:A:N3	2.21	0.55
11:B:35:U:C4	11:B:36:C:C4	2.94	0.55
10:A:1802:A:N1	10:A:1822:G:H1'	2.22	0.55
10:A:1824:G:C2'	10:A:1825:A:H5'	2.36	0.55
2:1:48:LYS:HD3	2:1:48:LYS:C	2.25	0.55
10:A:1507:A:C2	10:A:1508:A:H1'	2.42	0.55
21:Q:81:VAL:O	21:Q:82:ARG:CG	2.48	0.55
10:A:287:C:H2'	10:A:288:C:H5''	1.87	0.55
10:A:2223:G:C2'	10:A:2224:G:H5'	2.36	0.55
10:A:1495:A:C4	10:A:1496:A:C2	2.94	0.55
10:A:271(U):G:O2'	10:A:271(V):G:H5'	2.06	0.55
27:W:16:LYS:O	27:W:19:LEU:HB2	2.06	0.55
19:O:101:PRO:HG3	24:T:67:SER:HB3	1.88	0.55
10:A:41:C:H2'	10:A:42:G:O4'	2.06	0.55
24:T:106:SER:O	24:T:107:ASP:HB3	2.07	0.55
8:7:8:ASN:HD22	8:7:9:ARG:N	2.03	0.55
10:A:1839:G:C8	10:A:1839:G:H5'	2.42	0.55
10:A:753:C:H2'	10:A:754:C:H6	1.70	0.55
10:A:2600:A:H2'	10:A:2601:C:C6	2.42	0.55
10:A:1563:G:C5	10:A:1564:C:C5	2.95	0.55
29:Y:83:THR:CG2	29:Y:94:LYS:HB3	2.36	0.55
10:A:521:G:H2'	10:A:522:G:H8	1.71	0.55
10:A:2512:C:H2'	10:A:2513:G:O4'	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1106:A:O2'	10:A:1107:G:O5'	2.24	0.55
10:A:27:G:H21	10:A:512:G:C2'	2.16	0.55
10:A:971:C:H2'	10:A:972:G:C5'	2.36	0.55
10:A:1190:G:O3'	20:P:35:HIS:HB3	2.06	0.55
3:2:26:ARG:HG2	28:X:5:TYR:CB	2.37	0.55
10:A:534:U:H2'	10:A:535:C:C6	2.42	0.55
11:B:57:A:N3	15:G:29:TRP:HB2	2.21	0.55
10:A:773:U:C5'	12:D:47:GLY:HA2	2.37	0.55
2:1:11:ARG:CB	2:1:12:PRO:HD3	2.36	0.55
30:Z:5:LEU:HD12	30:Z:47:VAL:CG2	2.36	0.55
10:A:2257:U:O2'	10:A:2258:C:H5'	2.06	0.55
10:A:952:G:C6	10:A:953:A:N7	2.74	0.55
10:A:904:C:H2'	10:A:905:U:H5'	1.88	0.55
29:Y:90:LEU:HD12	29:Y:91:GLU:CG	2.36	0.55
15:G:60:LEU:HD22	15:G:60:LEU:O	2.06	0.55
25:U:31:SER:HB3	25:U:34:LYS:HB2	1.88	0.55
21:Q:16:ARG:HG2	21:Q:17:LEU:H	1.68	0.55
2:1:32:LYS:HG2	10:A:2396:G:O2'	2.07	0.55
7:6:48:VAL:O	7:6:49:HIS:CB	2.53	0.55
14:F:68:LYS:HG2	14:F:69:HIS:CE1	2.42	0.55
10:A:2859:G:O2'	10:A:2860:A:P	2.64	0.55
26:V:90:PRO:CG	26:V:91:TYR:H	2.20	0.55
11:B:46:A:C5	11:B:47:C:C5	2.95	0.55
15:G:11:TYR:HD2	15:G:12:TYR:CE1	2.25	0.55
23:S:73:LEU:O	23:S:77:ALA:N	2.28	0.55
21:Q:141:GLN:O	30:Z:70:LEU:HD22	2.06	0.55
10:A:953:A:O2'	10:A:954:G:H5'	2.06	0.55
11:B:17:C:N3	11:B:18:G:C5	2.75	0.55
10:A:203:C:H3'	10:A:204:A:H5''	1.88	0.55
10:A:1281:G:H8	10:A:1281:G:H5''	1.72	0.55
10:A:478:A:H62	10:A:502:A:N6	2.05	0.55
10:A:2547:U:H2'	10:A:2548:G:C8	2.41	0.55
24:T:20:PRO:HD2	24:T:85:LYS:HB3	1.89	0.55
10:A:1478:G:C2'	10:A:1479:G:H5'	2.36	0.55
21:Q:41:TRP:HB3	21:Q:94:VAL:CB	2.35	0.55
10:A:2400:G:N3	10:A:2400:G:H2'	2.22	0.55
14:F:124:LEU:O	14:F:193:VAL:HA	2.07	0.55
29:Y:83:THR:HG22	29:Y:84:ARG:N	2.21	0.55
10:A:2220:G:H2'	10:A:2221:G:C8	2.41	0.55
21:Q:57:HIS:NE2	21:Q:116:GLU:HG2	2.21	0.55
10:A:1248:G:O2'	25:U:3:ARG:HA	2.06	0.55
11:B:2:C:C5	11:B:3:C:C5	2.94	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:11:GLU:CD	30:Z:11:GLU:H	2.10	0.55
6:5:8:LYS:O	10:A:2017:U:H4'	2.07	0.55
10:A:245:G:H2'	10:A:246:C:H6	1.71	0.55
10:A:647:G:H2'	10:A:648:G:O4'	2.07	0.55
20:P:105:LEU:O	20:P:106:LEU:CB	2.54	0.55
10:A:2859:G:H4'	10:A:2860:A:OP1	2.07	0.55
26:V:38:LEU:HG	26:V:39:LEU:N	2.22	0.55
26:V:66:ARG:NH1	26:V:68:LYS:H	2.04	0.55
11:B:57:A:C2	11:B:58:A:N7	2.74	0.55
12:D:63:ARG:HH11	12:D:63:ARG:HG3	1.71	0.55
10:A:2531:A:C2	10:A:2658:C:O2	2.58	0.55
10:A:2309:A:N3	10:A:2310:A:H2	2.05	0.55
10:A:870:A:H5'	21:Q:7:MET:HB2	1.87	0.55
12:D:142:VAL:HG22	12:D:192:THR:O	2.07	0.55
12:D:172:TYR:HD1	12:D:185:VAL:C	2.10	0.55
13:E:116:VAL:O	13:E:117:MET:HB3	2.05	0.55
17:I:93:THR:OG1	17:I:94:ALA:N	2.36	0.55
28:X:70:LEU:O	28:X:71:GLY:C	2.45	0.55
17:I:136:VAL:O	17:I:138:ILE:HG13	2.06	0.55
10:A:518:G:H4'	27:W:18:ARG:CZ	2.37	0.55
10:A:1990:C:H2'	10:A:1991:U:C6	2.42	0.55
10:A:2688:U:H1'	10:A:2721:A:N6	2.21	0.55
10:A:473:G:H2'	10:A:474:G:O5'	2.06	0.55
10:A:2580:U:H5'	13:E:131:ALA:H	1.72	0.55
24:T:112:ARG:O	24:T:112:ARG:HD3	2.06	0.55
10:A:1844:C:O2'	10:A:1845:G:H5'	2.06	0.55
10:A:602:G:O2'	10:A:604:G:H4'	2.07	0.55
10:A:1850:G:C5	10:A:1851:U:C5	2.94	0.55
10:A:415:A:H2'	10:A:416:C:C6	2.42	0.55
20:P:98:GLU:O	20:P:101:VAL:HG13	2.07	0.55
10:A:1528(A):A:C3'	10:A:1529:G:H5''	2.33	0.55
18:N:54:VAL:HB	18:N:122:VAL:HG22	1.88	0.55
26:V:90:PRO:CD	26:V:91:TYR:N	2.70	0.55
10:A:697:C:H2'	10:A:698:C:C6	2.41	0.55
16:H:103:LEU:HD22	16:H:123:PHE:CE2	2.42	0.55
10:A:2307:G:H3'	10:A:2307:G:N3	2.21	0.55
10:A:2262:U:C2'	10:A:2263:C:H5'	2.37	0.55
10:A:911:A:C2'	21:Q:9:TYR:OH	2.55	0.55
11:B:21:G:C8	11:B:22:U:C1'	2.89	0.55
11:B:79:C:H2'	11:B:80:U:O4'	2.06	0.55
10:A:1678:G:H21	10:A:1989:G:H22	1.55	0.55
21:Q:23:GLY:HA2	21:Q:101:ARG:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1972:A:O2'	10:A:1973:G:H5'	2.07	0.55
10:A:2843:G:C4	10:A:2844:G:C8	2.94	0.55
10:A:2556:C:H2'	10:A:2557:G:O4'	2.06	0.55
10:A:892:G:C8	10:A:893:C:C4	2.95	0.55
15:G:96:ARG:HD2	15:G:97:ASP:H	1.72	0.55
10:A:489:G:N7	27:W:49:LYS:NZ	2.54	0.55
6:5:2:ALA:HB3	10:A:747:U:C6	2.42	0.55
7:6:20:ASN:O	7:6:21:TYR:CG	2.60	0.55
10:A:2447:G:N2	10:A:2450:A:OP2	2.39	0.55
10:A:671:C:OP1	20:P:43:GLY:HA2	2.06	0.55
10:A:1257:C:O2'	14:F:84:VAL:HG23	2.06	0.55
20:P:67:MET:CE	20:P:67:MET:HA	2.37	0.55
3:2:44:LEU:O	3:2:47:ASN:ND2	2.40	0.55
28:X:53:LYS:N	28:X:80:ILE:HG22	2.21	0.55
25:U:75:ASN:HB3	25:U:77:SER:OG	2.07	0.55
26:V:40:LEU:HD13	26:V:40:LEU:C	2.27	0.55
2:1:10:LYS:O	2:1:13:ILE:HG23	2.07	0.55
1:0:43:THR:HG22	10:A:2331:G:O2'	2.06	0.55
10:A:952:G:C6	10:A:966:G:C6	2.95	0.55
22:R:24:GLN:HE22	22:R:36:THR:HG21	1.71	0.55
10:A:2713:A:H3'	10:A:2714:G:C5'	2.36	0.55
10:A:1337:G:O2'	10:A:1338:G:H5'	2.07	0.55
10:A:1663:C:HO2'	10:A:1664:A:H8	1.53	0.55
10:A:1433:U:O2'	10:A:1434:A:H5'	2.06	0.55
29:Y:49:VAL:HG12	29:Y:53:PRO:CB	2.37	0.55
10:A:34:C:C3'	10:A:34:C:C6	2.90	0.55
8:7:19:ARG:HD3	10:A:125:G:OP2	2.06	0.55
10:A:1933:G:H2'	10:A:1934:C:O5'	2.06	0.55
19:O:87:ILE:HG22	19:O:88:ASN:O	2.06	0.55
9:8:39:LYS:HG2	9:8:39:LYS:O	2.07	0.55
10:A:663:G:H2'	10:A:664:C:C6	2.42	0.55
10:A:804:A:H5''	10:A:805:G:OP1	2.07	0.55
20:P:101:VAL:C	20:P:103:ALA:N	2.58	0.55
3:2:25:VAL:HG13	3:2:26:ARG:CD	2.35	0.55
10:A:1019:U:N3	10:A:1142(A):A:N6	2.46	0.55
26:V:13:ARG:CG	26:V:13:ARG:NH1	2.64	0.55
26:V:19:LYS:HE2	26:V:20:LEU:H	1.71	0.55
10:A:1607:C:H4'	10:A:1608:A:O5'	2.06	0.55
11:B:117:G:C2	11:B:118:G:C8	2.95	0.55
15:G:30:GLU:HG2	15:G:30:GLU:O	2.07	0.55
23:S:46:VAL:CG1	23:S:47:THR:N	2.70	0.55
23:S:46:VAL:HG12	23:S:47:THR:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:Y:39:VAL:O	29:Y:40:GLU:CD	2.45	0.55
30:Z:8:TYR:O	30:Z:37:VAL:HG12	2.07	0.55
29:Y:77:PRO:O	29:Y:78:ALA:CB	2.54	0.55
10:A:1677:A:H2'	10:A:1678:G:C8	2.42	0.55
10:A:688:U:H5'	10:A:1780:A:C2	2.42	0.55
26:V:43:GLU:N	26:V:48:GLY:HA2	2.22	0.55
10:A:2474:C:H5'	10:A:2475:C:OP2	2.07	0.55
27:W:4:LYS:HG2	27:W:106:ILE:HG22	1.89	0.55
16:H:86:GLU:CB	16:H:132:ARG:HG2	2.36	0.55
10:A:2552:U:C2	10:A:2554:U:C5'	2.89	0.55
16:H:158:HIS:HE1	16:H:168:PRO:HG2	1.72	0.55
17:I:44:LEU:O	17:I:47:LEU:HB2	2.06	0.55
5:4:23:GLU:O	15:G:113:ARG:HG3	2.07	0.55
9:8:40:GLU:O	9:8:41:ILE:C	2.43	0.55
10:A:2056:G:C2	10:A:2057:A:C8	2.95	0.55
10:A:2286:A:O2'	10:A:2286:A:C8	2.59	0.55
10:A:626:U:H5''	10:A:627:A:C5'	2.36	0.55
10:A:1459:G:C8	10:A:1461:G:C1'	2.88	0.55
28:X:52:VAL:HG21	28:X:82:GLN:HA	1.89	0.55
18:N:3:THR:HG22	18:N:5:VAL:H	1.72	0.55
10:A:1327:C:H2'	10:A:1328:G:O4'	2.07	0.55
15:G:101:ILE:HD11	15:G:105:LYS:HE3	1.89	0.55
23:S:90:GLY:C	23:S:92:TYR:N	2.60	0.55
10:A:1810:A:H2'	10:A:1811:G:O4'	2.06	0.55
12:D:35:LYS:CE	12:D:65:ILE:HG22	2.37	0.55
16:H:85:LYS:HE2	16:H:141:VAL:O	2.06	0.55
2:1:87:PRO:O	2:1:91:LYS:N	2.35	0.55
10:A:2770:G:H5''	10:A:2771:C:OP2	2.07	0.55
30:Z:3:TYR:O	30:Z:57:ILE:HA	2.07	0.55
21:Q:6:ARG:O	21:Q:6:ARG:HG3	2.07	0.55
10:A:2836:U:C4	10:A:2883:A:N6	2.75	0.55
29:Y:86:ARG:HG2	29:Y:87:LYS:H	1.72	0.55
24:T:32:TYR:HD2	24:T:81:PRO:O	1.87	0.55
10:A:272(H):C:H2'	10:A:272(H):C:O2	2.06	0.55
10:A:272(B):G:H2'	10:A:272(C):G:H8	1.72	0.55
10:A:409:C:N4	10:A:418:G:H1	2.05	0.55
10:A:2518:A:H5'	10:A:2518:A:H8	1.71	0.55
7:6:37:ARG:O	7:6:48:VAL:O	2.25	0.54
10:A:948:G:O2'	10:A:949:C:H5'	2.06	0.54
10:A:1449:A:HO2'	10:A:1530:C:H5	1.55	0.54
10:A:1509(B):A:H2'	10:A:1510:G:H8	1.72	0.54
13:E:93:VAL:N	13:E:95:ILE:CD1	2.66	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:105:THR:HA	13:E:166:THR:HA	1.89	0.54
10:A:1695:G:N2	10:A:1696:G:C8	2.76	0.54
29:Y:99:CYS:O	29:Y:100:ALA:O	2.25	0.54
1:0:32:ARG:O	1:0:35:ASN:ND2	2.40	0.54
10:A:1834:U:O2	10:A:1834:U:H2'	2.07	0.54
13:E:38:THR:HG22	13:E:40:GLU:N	2.14	0.54
10:A:2236:C:H2'	10:A:2237:G:C5'	2.33	0.54
10:A:464:U:O2'	10:A:465:G:H5'	2.06	0.54
11:B:41:U:C2'	11:B:42:C:OP1	2.55	0.54
10:A:2743:C:H2'	10:A:2744:G:O4'	2.06	0.54
10:A:2034:U:O2'	10:A:2035:G:H5'	2.07	0.54
1:0:37:LEU:C	1:0:38:VAL:CG2	2.76	0.54
19:O:20:MET:HE3	19:O:44:LYS:HE3	1.88	0.54
9:8:40:GLU:OE2	9:8:44:LYS:HE3	2.07	0.54
10:A:2061:G:N2	10:A:2063:C:N1	2.56	0.54
10:A:448:U:O4	10:A:583:G:H1'	2.08	0.54
10:A:1450(A):C:H2'	10:A:1451:C:C6	2.42	0.54
10:A:74:A:H4'	10:A:75:G:O5'	2.08	0.54
28:X:3:THR:HA	28:X:6:ASP:OD2	2.07	0.54
10:A:1006:C:C2	10:A:1138:G:N2	2.74	0.54
10:A:1010:A:N3	10:A:1153:C:H1'	2.22	0.54
26:V:66:ARG:HD2	26:V:67:GLY:CA	2.36	0.54
15:G:28:VAL:HB	15:G:29:TRP:CD1	2.42	0.54
11:B:17:C:C2'	11:B:17:C:O2	2.53	0.54
30:Z:167:PRO:O	30:Z:168:GLU:HB2	2.07	0.54
10:A:2199:A:H5''	10:A:2200:C:OP2	2.06	0.54
10:A:2523:G:H2'	10:A:2524:G:H5'	1.89	0.54
24:T:45:PHE:CE1	24:T:74:ARG:HG3	2.42	0.54
19:O:13:ASN:HD22	19:O:97:ARG:HB2	1.72	0.54
10:A:154:G:C8	10:A:154:G:O5'	2.60	0.54
10:A:2464:C:N4	10:A:2487:G:C6	2.75	0.54
10:A:807:U:C2	10:A:808:G:C8	2.95	0.54
9:8:19:SER:HB3	10:A:651:G:H5'	1.89	0.54
13:E:146:THR:HA	13:E:147:PRO:C	2.28	0.54
24:T:17:THR:O	24:T:18:ASP:HB3	2.08	0.54
10:A:1632:A:C6	10:A:1633:G:C6	2.95	0.54
10:A:2897:U:H2'	10:A:2897:U:O2	2.07	0.54
7:6:39:TYR:HE1	10:A:2347:C:HO2'	1.54	0.54
9:8:62:LEU:N	9:8:63:PRO:CD	2.70	0.54
6:5:7:PRO:HG2	10:A:2016:U:O2	2.07	0.54
10:A:2396:G:C2'	10:A:2397:G:H5'	2.37	0.54
20:P:85:LEU:HD23	20:P:117:GLU:O	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:X:52:VAL:HB	28:X:80:ILE:HG21	1.88	0.54
10:A:996:A:C4'	25:U:92:ARG:HE	2.13	0.54
26:V:18:LEU:C	26:V:18:LEU:HD13	2.26	0.54
26:V:66:ARG:CG	26:V:67:GLY:N	2.70	0.54
11:B:28:C:C2	11:B:29:A:C8	2.96	0.54
15:G:5:VAL:HG11	15:G:101:ILE:HB	1.89	0.54
10:A:2376:A:N1	23:S:94:TYR:HB2	2.23	0.54
10:A:1811:G:C6	10:A:1812:A:N7	2.75	0.54
10:A:1484:G:O2'	10:A:1485:G:O4'	2.20	0.54
10:A:960:A:C8	10:A:962:G:C8	2.95	0.54
10:A:1651:G:N2	10:A:2007:C:C2	2.75	0.54
10:A:2636:U:H3	10:A:2782:G:H1	1.54	0.54
6:5:40:LYS:HE2	6:5:46:CYS:CB	2.37	0.54
10:A:478:A:N6	10:A:502:A:H62	2.05	0.54
10:A:1126:A:H4'	10:A:1127:A:O5'	2.06	0.54
10:A:1266:G:O5'	27:W:15:ARG:NH2	2.41	0.54
10:A:153:C:H2'	10:A:154:G:N7	2.23	0.54
14:F:34:TRP:HB2	20:P:10:PRO:O	2.07	0.54
17:I:57:ARG:NH1	17:I:57:ARG:HB3	2.22	0.54
14:F:126:VAL:HG13	14:F:193:VAL:HG13	1.89	0.54
24:T:129:ARG:CZ	24:T:131:ALA:H	2.20	0.54
1:0:47:PRO:HB2	1:0:51:VAL:O	2.07	0.54
10:A:2674:G:H5''	19:O:26:LYS:HE2	1.89	0.54
10:A:2300:G:O2'	10:A:2301:C:H5'	2.07	0.54
7:6:20:ASN:ND2	7:6:21:TYR:N	2.50	0.54
3:2:25:VAL:HA	3:2:28:LYS:HB2	1.89	0.54
3:2:47:ASN:ND2	3:2:48:HIS:N	2.56	0.54
10:A:1899:G:N2	10:A:1902:C:C4	2.74	0.54
15:G:16:ARG:CG	15:G:16:ARG:HH11	2.20	0.54
23:S:95:HIS:CD2	23:S:96:GLY:H	2.25	0.54
12:D:159:ALA:C	12:D:161:THR:H	2.10	0.54
12:D:35:LYS:CG	12:D:64:ILE:N	2.71	0.54
12:D:80:ALA:HB2	12:D:96:HIS:CG	2.43	0.54
10:A:2752:C:C4	10:A:2753:A:N7	2.75	0.54
16:H:164:TYR:CB	16:H:166:GLY:H	2.21	0.54
10:A:2310:A:O2'	10:A:2311:A:H5''	2.07	0.54
29:Y:64:GLU:O	29:Y:65:ALA:HB2	2.08	0.54
10:A:951:C:H2'	10:A:952:G:H5'	1.86	0.54
1:0:74:ARG:NH2	11:B:13:A:C8	2.72	0.54
11:B:18:G:C4	11:B:19:G:C8	2.96	0.54
10:A:856:C:H2'	10:A:857:C:H6	1.72	0.54
10:A:1168:G:H2'	10:A:1169:G:C8	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:18:PRO:O	3:2:19:VAL:C	2.45	0.54
10:A:1997:G:O2'	10:A:1998:G:H5'	2.07	0.54
30:Z:108:PRO:CA	30:Z:142:SER:HA	2.34	0.54
30:Z:117:LEU:CB	30:Z:174:VAL:HG22	2.38	0.54
24:T:129:ARG:HD2	24:T:130:ALA:N	2.22	0.54
10:A:521:G:H2'	10:A:522:G:C8	2.42	0.54
19:O:87:ILE:HG22	19:O:88:ASN:N	2.21	0.54
29:Y:73:ARG:HH21	29:Y:82:PRO:HD3	1.71	0.54
24:T:58:ASN:HD22	24:T:58:ASN:C	2.11	0.54
7:6:48:VAL:HG22	7:6:49:HIS:H	1.71	0.54
10:A:2415:G:O2'	10:A:2416:C:H5'	2.07	0.54
20:P:16:ARG:HG2	20:P:18:ARG:N	2.18	0.54
26:V:66:ARG:CD	26:V:67:GLY:H	2.21	0.54
10:A:1899:G:O2'	10:A:1900:A:H5''	2.07	0.54
10:A:696:G:C2	10:A:767:U:O2	2.60	0.54
10:A:1812:A:O2'	12:D:45:ASN:HB2	2.08	0.54
10:A:1499:C:H2'	10:A:1500:G:H5'	1.89	0.54
30:Z:77:ASP:HB2	30:Z:84:GLU:HG2	1.89	0.54
10:A:2197:U:H1'	10:A:2198:A:C8	2.42	0.54
12:D:70:TRP:CZ3	12:D:150:LYS:HE3	2.43	0.54
19:O:111:PHE:O	19:O:113:LYS:N	2.40	0.54
22:R:11:ASN:CG	22:R:12:ARG:N	2.60	0.54
13:E:24:THR:HG23	13:E:184:VAL:HG22	1.89	0.54
10:A:103:A:C2'	10:A:104:U:H5'	2.38	0.54
10:A:1337:G:OP2	28:X:63:LYS:HE2	2.07	0.54
19:O:61:VAL:O	19:O:63:VAL:HG13	2.06	0.54
10:A:157:U:C5'	10:A:171:G:H22	2.19	0.54
10:A:2019:A:H2'	10:A:2020:A:O5'	2.07	0.54
16:H:153:LYS:HG2	16:H:154:PRO:N	2.23	0.54
10:A:980:A:N6	10:A:981:A:N1	2.56	0.54
17:I:144:VAL:O	17:I:145:VAL:HB	2.08	0.54
8:7:13:ALA:O	8:7:17:GLY:HA3	2.07	0.54
7:6:47:THR:HG22	7:6:48:VAL:HG12	1.89	0.54
2:1:34:THR:CG2	10:A:388:G:OP1	2.54	0.54
10:A:390:A:H4'	10:A:391:G:H5'	1.90	0.54
20:P:39:LYS:C	20:P:41:ARG:N	2.61	0.54
28:X:21:PHE:HD2	28:X:90:GLU:HA	1.73	0.54
11:B:44:G:C2'	11:B:45:A:OP2	2.56	0.54
23:S:67:ARG:HD3	23:S:101:LEU:HD23	1.88	0.54
12:D:95:LEU:HD21	12:D:105:ILE:HG21	1.88	0.54
10:A:2753:A:C2	10:A:2754:U:C2	2.95	0.54
10:A:1485:G:H21	10:A:1505:C:N4	2.06	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:188:VAL:HG23	13:E:189:PRO:HD2	1.90	0.54
14:F:20:LEU:HD23	14:F:23:ASP:OD2	2.08	0.54
27:W:15:ARG:HA	27:W:18:ARG:HD2	1.89	0.54
10:A:1832:C:N4	10:A:1833:U:C4	2.75	0.54
10:A:1177:A:H5'	10:A:1178:C:O4'	2.07	0.54
26:V:43:GLU:H	26:V:48:GLY:HA2	1.72	0.54
24:T:3:ARG:HB2	24:T:6:LEU:CB	2.37	0.54
22:R:10:LEU:HD13	22:R:17:ARG:CZ	2.38	0.54
10:A:2515:C:O2	10:A:2570:G:C2	2.61	0.54
14:F:168:ARG:HG3	14:F:175:THR:CG2	2.38	0.54
20:P:10:PRO:CD	20:P:11:GLY:H	2.20	0.54
10:A:363(E):U:OP2	10:A:363(E):U:H6	1.90	0.54
22:R:87:TYR:O	22:R:88:ARG:C	2.45	0.54
10:A:251:A:H5''	20:P:51:PHE:CZ	2.42	0.54
4:3:24:LYS:HB3	10:A:849:A:H2	1.73	0.54
26:V:5:VAL:HG21	26:V:36:PRO:HB2	1.89	0.54
15:G:137:GLU:O	15:G:140:ILE:HG12	2.08	0.54
23:S:26:LEU:HG	23:S:39:ILE:HD11	1.89	0.54
23:S:52:SER:OG	23:S:56:LEU:N	2.40	0.54
10:A:1210:A:O5'	10:A:1212:G:H5'	2.07	0.54
29:Y:11:ASP:OD1	29:Y:28:LYS:HE2	2.07	0.54
29:Y:39:VAL:CG1	29:Y:40:GLU:H	2.16	0.54
22:R:34:ILE:HG22	22:R:114:VAL:HG23	1.88	0.54
10:A:205:G:O2'	10:A:206:U:P	2.65	0.54
10:A:1494:A:C4'	10:A:1495:A:OP1	2.48	0.54
10:A:792:G:C5'	10:A:793:A:H5'	2.38	0.54
3:2:14:ARG:CZ	3:2:15:LYS:HB3	2.37	0.54
22:R:53:HIS:HD2	22:R:94:TYR:OH	1.89	0.54
10:A:471:A:C2'	10:A:472:A:O5'	2.56	0.54
10:A:1446:C:H3'	10:A:1446:C:C6	2.43	0.54
10:A:300:A:OP1	29:Y:84:ARG:NH2	2.40	0.54
14:F:53:THR:C	14:F:55:GLY:H	2.11	0.54
10:A:136:G:C2'	10:A:137:C:O5'	2.56	0.54
20:P:16:ARG:CD	20:P:18:ARG:HB2	2.29	0.54
20:P:91:PHE:CZ	20:P:95:VAL:HB	2.43	0.54
10:A:533:G:C6	10:A:534:U:N3	2.75	0.54
15:G:110:ALA:O	15:G:111:LEU:HG	2.08	0.54
15:G:169:ALA:O	15:G:173:LEU:HG	2.08	0.54
23:S:99:LYS:O	23:S:101:LEU:N	2.30	0.54
10:A:2889:C:H3'	10:A:2891:G:C8	2.43	0.54
29:Y:8:LYS:HB2	29:Y:28:LYS:HZ1	1.72	0.54
13:E:51:PHE:CB	13:E:76:ARG:HB3	2.27	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:W:20:VAL:HG23	27:W:47:VAL:HG21	1.89	0.54
10:A:1473:G:C6	10:A:1474:C:C4	2.95	0.54
10:A:1517:G:C8	10:A:1517:G:H5''	2.38	0.54
15:G:22:ARG:HB3	15:G:23:PHE:CD1	2.42	0.54
15:G:39:ILE:HA	15:G:157:ILE:HB	1.90	0.54
17:I:84:GLY:O	17:I:85:GLU:HG2	2.07	0.54
10:A:700:G:H1	10:A:732:C:H42	1.54	0.54
17:I:13:GLY:O	17:I:14:ASP:C	2.44	0.54
10:A:2286:A:HO2'	10:A:2286:A:H8	1.54	0.54
33:A:3206:TEL:C23	33:A:3206:TEL:H121	2.36	0.54
10:A:673:C:H4'	14:F:82:ILE:HG12	1.89	0.54
10:A:1600:C:O2'	10:A:1601:G:H5'	2.07	0.54
28:X:82:GLN:HG3	28:X:85:PRO:HD3	1.90	0.54
10:A:1192:G:O2'	10:A:1193:G:H5'	2.07	0.54
10:A:1141:U:C5	18:N:64:GLY:HA3	2.43	0.54
26:V:24:LYS:HA	26:V:94:LEU:HD12	1.89	0.54
26:V:2:PHE:CD2	26:V:42:GLY:HA2	2.43	0.54
26:V:62:LEU:HD22	26:V:98:GLU:HG2	1.88	0.54
10:A:2376:A:C8	10:A:2377:A:C8	2.95	0.54
23:S:71:ARG:HG2	23:S:101:LEU:CG	2.38	0.54
12:D:16:MET:HG3	12:D:206:LEU:O	2.07	0.54
10:A:866:A:C2	10:A:867:C:C4	2.95	0.54
10:A:1116:C:H2'	10:A:1116:C:O2	2.07	0.54
10:A:2829:C:C3'	10:A:2830:G:H5''	2.37	0.54
10:A:740:U:H2'	10:A:741:G:C8	2.43	0.54
10:A:1281:G:C2	10:A:1290:C:C2	2.95	0.54
12:D:14:ARG:HG2	12:D:14:ARG:HH11	1.72	0.54
19:O:23:ARG:HG2	19:O:23:ARG:NH1	2.18	0.54
10:A:792:G:C4'	10:A:793:A:H5'	2.38	0.54
17:I:113:ARG:HB2	17:I:130:TYR:CZ	2.43	0.54
10:A:80:G:O2'	10:A:81:G:H5'	2.07	0.54
10:A:8:A:H2	10:A:2896:C:N3	2.05	0.54
10:A:1374:G:C6	10:A:1375:C:C4	2.96	0.54
10:A:2233:U:H2'	10:A:2234:G:C8	2.43	0.54
15:G:96:ARG:CG	15:G:97:ASP:H	2.21	0.54
15:G:3:LEU:HA	15:G:97:ASP:OD2	2.08	0.54
13:E:9:VAL:CG2	13:E:25:VAL:HB	2.37	0.54
14:F:195:ASP:HB3	14:F:197:ASP:HB3	1.90	0.54
7:6:44:ARG:O	7:6:45:LYS:HG2	2.08	0.54
10:A:1257:C:H1'	14:F:82:ILE:O	2.08	0.54
10:A:2052:G:C2	10:A:2053:G:C8	2.96	0.54
10:A:26:G:C6	10:A:27:G:N1	2.75	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:36:VAL:HG11	14:F:183:VAL:CG1	2.38	0.54
10:A:806:C:OP2	20:P:39:LYS:CG	2.56	0.54
10:A:58:G:OP1	28:X:72:LYS:HA	2.08	0.54
10:A:987:G:H2'	10:A:988:A:O4'	2.07	0.54
23:S:101:LEU:O	23:S:102:ALA:O	2.25	0.54
23:S:34:HIS:CB	23:S:53:SER:HB2	2.38	0.54
10:A:2516:G:O2'	10:A:2517:C:H5'	2.08	0.54
10:A:2307:G:H4'	10:A:2307:G:OP1	2.08	0.54
14:F:1:MET:O	14:F:2:LYS:C	2.47	0.54
14:F:3:GLU:HG3	14:F:19:GLU:HB2	1.90	0.54
12:D:172:TYR:CD1	12:D:186:HIS:CA	2.91	0.54
6:5:40:LYS:NZ	6:5:46:CYS:O	2.40	0.54
2:1:17:SER:O	2:1:44:PRO:CD	2.50	0.54
10:A:380:U:H2'	10:A:381:G:C8	2.43	0.54
10:A:393:C:C4	10:A:394:A:N7	2.76	0.54
10:A:855:G:C6	10:A:856:C:C4	2.95	0.54
15:G:127:GLY:CA	15:G:166:ASP:HB3	2.32	0.54
24:T:29:ARG:CG	24:T:85:LYS:HA	2.38	0.54
12:D:72:LYS:HE3	12:D:99:ASP:OD1	2.08	0.54
20:P:147:LEU:C	20:P:148:LEU:HD13	2.27	0.54
12:D:17:THR:HG23	12:D:205:VAL:CB	2.37	0.54
17:I:10:GLU:O	17:I:12:LEU:CD2	2.54	0.54
22:R:33:ARG:HG2	22:R:115:GLU:CG	2.35	0.54
30:Z:155:LEU:O	30:Z:157:LEU:HD23	2.08	0.54
10:A:2593:U:H2'	10:A:2594:C:H6	1.73	0.54
10:A:884:C:O2'	10:A:892:G:C8	2.46	0.54
22:R:8:ARG:HE	22:R:8:ARG:HA	1.73	0.54
14:F:115:ALA:O	14:F:118:ALA:HB3	2.07	0.54
16:H:116:GLU:HG2	16:H:117:PRO:CD	2.38	0.54
25:U:36:ARG:HD3	25:U:40:PHE:HZ	1.73	0.54
16:H:163:TYR:N	16:H:163:TYR:CD1	2.76	0.54
7:6:48:VAL:CG2	7:6:49:HIS:N	2.71	0.53
9:8:32:LEU:HD23	9:8:35:GLN:CA	2.38	0.53
9:8:5:LYS:HG2	10:A:242:G:C8	2.43	0.53
10:A:2393:A:OP1	20:P:62:LEU:HD12	2.09	0.53
20:P:97:PRO:O	20:P:98:GLU:CB	2.56	0.53
10:A:1341:U:N3	28:X:77:LYS:HE2	2.23	0.53
10:A:995:C:C2	18:N:4:TYR:CZ	2.95	0.53
18:N:34:LEU:HD21	18:N:120:LEU:HD23	1.90	0.53
10:A:814:C:H5''	26:V:86:GLY:CA	2.38	0.53
10:A:1811:G:C4	10:A:1812:A:C8	2.97	0.53
10:A:2769:C:C2'	10:A:2770:G:O5'	2.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2790:A:H2'	10:A:2791:C:C5'	2.39	0.53
13:E:48:GLN:HE22	13:E:64:LYS:HZ1	1.55	0.53
30:Z:54:HIS:HE1	30:Z:123:ASP:CG	2.11	0.53
1:0:41:ARG:HD2	1:0:41:ARG:N	2.07	0.53
10:A:2779:U:O2	10:A:2779:U:O4'	2.25	0.53
6:5:45:VAL:HG22	6:5:51:TYR:CE1	2.42	0.53
11:B:87:G:H3'	11:B:88:C:C5'	2.32	0.53
10:A:1638:C:H4'	10:A:2710:C:O2	2.08	0.53
10:A:157:U:H6	10:A:157:U:OP2	1.90	0.53
30:Z:130:PRO:HA	30:Z:133:ILE:CG1	2.37	0.53
10:A:53:A:H61	10:A:117:G:C2'	2.21	0.53
10:A:1686:C:H2'	10:A:1687:G:H5'	1.88	0.53
25:U:31:SER:C	25:U:33:ARG:H	2.10	0.53
27:W:37:ARG:HH11	27:W:37:ARG:HG3	1.73	0.53
10:A:1769:G:C5	10:A:1984:G:C6	2.96	0.53
20:P:17:LYS:C	20:P:19:VAL:N	2.61	0.53
10:A:1345:C:O2'	10:A:1346:G:H5'	2.08	0.53
10:A:1394:U:H6	10:A:1394:U:H3'	1.74	0.53
28:X:60:ARG:CB	28:X:72:LYS:H	2.21	0.53
28:X:72:LYS:CG	28:X:74:PRO:HD3	2.38	0.53
10:A:995:C:OP2	25:U:54:LYS:HE3	2.08	0.53
10:A:1900:A:N1	10:A:1970:A:C6	2.75	0.53
10:A:1803:A:H2	10:A:1822:G:N3	2.06	0.53
1:0:43:THR:N	10:A:2331:G:H4'	2.23	0.53
13:E:202:LYS:HD3	13:E:202:LYS:N	2.23	0.53
10:A:1935:G:H1'	10:A:1964:G:N2	2.22	0.53
10:A:1441:G:O2'	10:A:1442:G:H5'	2.07	0.53
10:A:2106:G:H1'	10:A:2184:G:H22	1.73	0.53
10:A:701:G:N2	10:A:732:C:C2	2.76	0.53
20:P:86:LYS:HB2	20:P:117:GLU:O	2.08	0.53
10:A:1713:U:O2'	10:A:1714:G:H5'	2.08	0.53
28:X:78:LYS:H	28:X:78:LYS:HD3	1.72	0.53
10:A:1023:U:H4'	10:A:1123:C:OP1	2.09	0.53
18:N:42:TRP:H	25:U:64:ARG:NH2	2.06	0.53
18:N:42:TRP:CG	18:N:43:THR:N	2.76	0.53
11:B:53:A:C2	11:B:54:G:H1'	2.43	0.53
10:A:1790:C:H4'	12:D:209:ALA:HB1	1.89	0.53
16:H:85:LYS:NZ	16:H:133:VAL:HG21	2.24	0.53
27:W:75:TYR:O	27:W:75:TYR:CD1	2.61	0.53
17:I:101:LEU:CD2	17:I:109:ILE:HG12	2.36	0.53
10:A:2711:A:N7	10:A:2714:G:C8	2.76	0.53
10:A:271(F):C:H42	10:A:271(R):G:H1	1.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:O:104:ARG:CZ	19:O:104:ARG:HB3	2.37	0.53
16:H:68:THR:O	16:H:69:ARG:C	2.47	0.53
16:H:89:ILE:H	16:H:89:ILE:CD1	2.20	0.53
20:P:146:VAL:HG13	20:P:147:LEU:N	2.20	0.53
10:A:2471:C:O2	10:A:2471:C:C2'	2.54	0.53
17:I:12:LEU:HD23	17:I:12:LEU:H	1.72	0.53
10:A:547:A:O2'	10:A:548:A:OP2	2.22	0.53
8:7:8:ASN:ND2	8:7:10:ARG:N	2.55	0.53
1:O:1:MET:O	1:O:2:ALA:HB3	2.09	0.53
10:A:2590:A:H2'	10:A:2591:C:C6	2.43	0.53
10:A:2075:U:C4	10:A:2238:G:C6	2.96	0.53
14:F:115:ALA:O	14:F:116:ASP:C	2.47	0.53
10:A:651:G:N3	10:A:651:G:H2'	2.22	0.53
15:G:129:GLY:O	15:G:130:ASN:ND2	2.42	0.53
18:N:90:MET:O	18:N:93:THR:O	2.26	0.53
4:3:27:GLY:HA3	4:3:35:ARG:NE	2.23	0.53
30:Z:45:ASP:O	30:Z:46:LYS:C	2.46	0.53
10:A:146:G:H5''	10:A:146:G:H8	1.72	0.53
7:6:25:LYS:CE	7:6:27:LYS:NZ	2.71	0.53
7:6:32:ASN:O	7:6:33:LYS:CB	2.56	0.53
10:A:1269:A:H2'	10:A:1270:C:C6	2.44	0.53
10:A:2063:C:O2	10:A:2450:A:N1	2.42	0.53
10:A:626:U:O2	10:A:626:U:H2'	2.08	0.53
20:P:66:GLY:O	20:P:68:GLN:HB3	2.09	0.53
25:U:83:LEU:CD1	25:U:113:ALA:HB2	2.38	0.53
26:V:25:LEU:HB2	26:V:94:LEU:HD11	1.90	0.53
23:S:95:HIS:CG	23:S:96:GLY:N	2.74	0.53
10:A:1784:A:H4'	10:A:1785:A:O5'	2.08	0.53
10:A:781:A:H5'	12:D:219:PRO:HG2	1.91	0.53
10:A:784:A:C5	12:D:229:VAL:HG21	2.43	0.53
12:D:64:ILE:O	12:D:64:ILE:HG12	2.07	0.53
16:H:70:THR:HG22	16:H:74:ASN:HD21	1.72	0.53
10:A:2320:A:N3	10:A:2320:A:H2'	2.23	0.53
10:A:910:A:C4	21:Q:13:GLN:OE1	2.61	0.53
10:A:287:C:C4	10:A:288:C:C5	2.97	0.53
11:B:15:A:H1'	11:B:110:G:N9	2.23	0.53
10:A:2197:U:C6	10:A:2224:G:C6	2.96	0.53
12:D:137:PRO:O	12:D:140:THR:HG23	2.09	0.53
10:A:394:A:C5	10:A:395:U:C4	2.96	0.53
10:A:478:A:N1	10:A:500:G:H4'	2.23	0.53
27:W:47:VAL:O	27:W:50:VAL:HG12	2.08	0.53
10:A:1886:C:H2'	10:A:1887:C:C6	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2473:U:H2'	10:A:2474:C:O4'	2.08	0.53
20:P:6:LEU:HG	20:P:8:PRO:O	2.08	0.53
10:A:1670:C:O2	13:E:129:HIS:CE1	2.60	0.53
15:G:141:PHE:C	15:G:143:GLU:H	2.11	0.53
14:F:132:VAL:HG22	14:F:133:ASN:N	2.22	0.53
10:A:1921:G:H2'	10:A:1922:G:H8	1.73	0.53
10:A:267:C:H2'	10:A:268:C:H6	1.72	0.53
10:A:2220:G:H2'	10:A:2221:G:H8	1.71	0.53
17:I:9:LEU:H	17:I:13:GLY:HA2	1.72	0.53
10:A:524:U:H2'	10:A:525:U:C6	2.44	0.53
10:A:2070:G:H2'	10:A:2071:A:H8	1.74	0.53
10:A:626:U:H5''	10:A:627:A:H5'	1.91	0.53
26:V:82:ARG:CG	26:V:82:ARG:NH1	2.52	0.53
10:A:1405:U:O2'	10:A:1406:U:H5'	2.09	0.53
28:X:23:GLU:O	28:X:25:LYS:N	2.41	0.53
15:G:172:LEU:HG	15:G:173:LEU:CD2	2.39	0.53
23:S:49:VAL:HG11	23:S:73:LEU:HD13	1.91	0.53
16:H:85:LYS:HZ3	16:H:145:ALA:CA	2.21	0.53
10:A:2517:C:C6	10:A:2542:A:C2	2.97	0.53
13:E:93:VAL:C	13:E:95:ILE:N	2.62	0.53
6:5:36:CYS:CB	6:5:49:CYS:SG	2.96	0.53
10:A:204:A:OP1	10:A:204:A:H8	1.91	0.53
29:Y:88:LYS:O	29:Y:89:PHE:CB	2.56	0.53
29:Y:46:LYS:O	29:Y:47:LYS:NZ	2.38	0.53
18:N:128:HIS:NE2	18:N:131:GLN:HB3	2.24	0.53
10:A:38:A:C2	10:A:442:G:C2	2.96	0.53
21:Q:52:VAL:HA	21:Q:55:VAL:CG1	2.38	0.53
10:A:1845:G:C2'	10:A:1846:G:H5'	2.37	0.53
30:Z:120:ILE:H	30:Z:172:ALA:HA	1.74	0.53
20:P:75:ILE:H	20:P:75:ILE:HD13	1.73	0.53
10:A:266:G:H2'	10:A:267:C:O5'	2.09	0.53
30:Z:100:VAL:HG11	30:Z:137:ILE:HG12	1.90	0.53
10:A:18:C:H2'	10:A:19:C:C6	2.44	0.53
9:8:29:LYS:HA	9:8:32:LEU:HD12	1.90	0.53
10:A:251:A:C5	10:A:252:G:H1'	2.44	0.53
10:A:623:G:H2'	10:A:624:C:C6	2.44	0.53
20:P:85:LEU:HA	20:P:88:LEU:CB	2.38	0.53
10:A:1458:C:H4'	10:A:1459:G:N3	2.23	0.53
25:U:88:ILE:O	25:U:88:ILE:CD1	2.56	0.53
12:D:39:LYS:NZ	12:D:60:ARG:HH11	2.06	0.53
10:A:370:G:H5''	10:A:423:A:C6	2.42	0.53
10:A:2786:U:N3	10:A:2787:C:C5	2.77	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:75:G:C8	11:B:75:G:H5'	2.32	0.53
13:E:52:LEU:CB	13:E:76:ARG:HB2	2.36	0.53
13:E:2:LYS:HB3	13:E:95:ILE:HG21	1.91	0.53
10:A:1040:C:O2'	10:A:1041:C:P	2.66	0.53
10:A:775:G:C5	10:A:794:G:C8	2.96	0.53
10:A:2820:A:C8	13:E:109:LYS:HE3	2.43	0.53
10:A:322:A:H3'	14:F:169:ASN:ND2	2.24	0.53
27:W:106:ILE:O	27:W:106:ILE:HG12	2.06	0.53
10:A:1316:U:H2'	10:A:1317:A:H8	1.73	0.53
10:A:2591:C:H2'	10:A:2592:G:C8	2.44	0.53
10:A:272(D):G:H1	10:A:364:C:N4	2.05	0.53
5:4:5:ILE:O	15:G:67:LYS:HG2	2.08	0.53
10:A:1836:C:O2'	10:A:1837:C:H5'	2.08	0.53
10:A:123:G:O3'	10:A:1376:C:H4'	2.08	0.53
10:A:2015:A:C2'	10:A:2016:U:H5'	2.38	0.53
10:A:2056:G:N2	10:A:2057:A:N9	2.56	0.53
10:A:2360:A:O2'	10:A:2361:A:C5'	2.56	0.53
20:P:47:ASP:HB3	20:P:48:PRO:CA	2.39	0.53
3:2:45:SER:HB3	3:2:48:HIS:HB3	1.91	0.53
3:2:49:LYS:CA	3:2:53:LEU:HB3	2.39	0.53
10:A:112:U:O4	10:A:113:G:C2	2.62	0.53
18:N:47:ALA:HB2	18:N:112:LEU:HD21	1.91	0.53
25:U:88:ILE:C	25:U:90:VAL:HG23	2.28	0.53
11:B:57:A:N3	11:B:58:A:C8	2.77	0.53
23:S:13:ARG:O	23:S:14:VAL:C	2.47	0.53
23:S:27:SER:OG	23:S:40:ILE:HD12	2.08	0.53
10:A:2807:G:H22	10:A:2892:A:H61	1.57	0.53
21:Q:141:GLN:N	30:Z:53:ILE:O	2.42	0.53
10:A:954:G:OP1	21:Q:15:GLY:N	2.40	0.53
10:A:957:A:N6	10:A:959:A:C2	2.76	0.53
11:B:109:C:H5'	11:B:110:G:O5'	2.08	0.53
11:B:110:G:N1	11:B:111:G:C5	2.77	0.53
10:A:2730:C:H4'	13:E:168:MET:O	2.08	0.53
10:A:1338:G:C2	10:A:1339:G:C4	2.97	0.53
24:T:30:VAL:CG2	24:T:83:ILE:HG12	2.38	0.53
8:7:5:TRP:CE3	8:7:5:TRP:HA	2.44	0.53
14:F:31:HIS:O	14:F:34:TRP:HB3	2.08	0.53
10:A:363(E):U:H5''	10:A:363(F):A:N3	2.23	0.53
16:H:153:LYS:CG	16:H:154:PRO:N	2.71	0.53
10:A:1358:G:H1'	10:A:1373:A:H61	1.74	0.53
10:A:435:C:C5	10:A:436:C:C5	2.97	0.53
10:A:637:A:OP1	20:P:133:SER:CB	2.56	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:448:U:H1'	14:F:84:VAL:CG1	2.39	0.53
10:A:814:C:H5	20:P:27:HIS:NE2	2.06	0.53
10:A:977:G:C6	10:A:987:G:C6	2.96	0.53
18:N:35:ARG:HB2	18:N:42:TRP:HZ3	1.73	0.53
26:V:19:LYS:HB3	26:V:97:LYS:HA	1.91	0.53
10:A:1795:C:H2'	10:A:1796:U:C6	2.44	0.53
10:A:780:G:C2	10:A:782:A:C2	2.97	0.53
16:H:85:LYS:CE	16:H:133:VAL:HB	2.37	0.53
10:A:2650:U:H2'	10:A:2651:C:H6	1.73	0.53
10:A:2785:C:H2'	10:A:2786:U:C6	2.44	0.53
10:A:2319:G:OP2	10:A:2319:G:H4'	2.07	0.53
10:A:1048:A:OP2	10:A:1110:G:N2	2.42	0.53
10:A:2547:U:C2'	10:A:2548:G:H5'	2.39	0.53
10:A:1478:G:O2'	10:A:1558:A:C2	2.62	0.53
21:Q:52:VAL:O	21:Q:56:ARG:HB2	2.08	0.53
24:T:32:TYR:HB3	24:T:81:PRO:CB	2.37	0.53
10:A:1963:U:O2	10:A:1963:U:H2'	2.09	0.53
10:A:2078:C:H2'	10:A:2079:U:C6	2.44	0.53
10:A:272(C):G:C2	10:A:366:C:O2	2.61	0.53
14:F:118:ALA:C	14:F:120:GLU:H	2.12	0.53
10:A:610:G:H2'	10:A:611:C:H6	1.73	0.53
15:G:130:ASN:OD1	15:G:160:VAL:HA	2.08	0.53
10:A:1367:A:H5'	10:A:1368:G:OP2	2.09	0.53
16:H:43:VAL:CG1	16:H:53:GLU:H	2.22	0.53
10:A:413:C:H4'	10:A:1880:C:O2'	2.09	0.53
10:A:553:G:H2'	10:A:554:U:O4'	2.09	0.53
17:I:117:GLU:HG3	17:I:118:LYS:H	1.74	0.53
10:A:232:G:H22	10:A:420:C:H5''	1.73	0.53
10:A:2415:G:O3'	20:P:66:GLY:CA	2.56	0.53
10:A:575:A:OP2	10:A:2055:C:N4	2.28	0.53
20:P:41:ARG:HA	20:P:41:ARG:HH21	1.70	0.53
26:V:79:VAL:CG2	26:V:82:ARG:HD2	2.39	0.53
10:A:1459:G:C5	10:A:1461:G:C8	2.97	0.53
10:A:1022:G:N7	18:N:66:LYS:HE2	2.24	0.53
25:U:92:ARG:HD2	26:V:11:GLN:HG3	1.91	0.53
11:B:24:G:C2	11:B:56:G:C2	2.97	0.53
15:G:107:LEU:HD23	15:G:111:LEU:HD12	1.90	0.53
10:A:2520:C:N4	10:A:2567:G:C5	2.77	0.53
16:H:87:LEU:HD13	16:H:148:ILE:HG21	1.89	0.53
10:A:2811:G:OP1	13:E:60:ASN:HB3	2.09	0.53
1:O:43:THR:CG2	10:A:2336:A:H61	2.21	0.53
21:Q:9:TYR:C	21:Q:9:TYR:CD2	2.82	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:15:A:C5'	11:B:16:G:H8	2.14	0.53
17:I:71:ILE:O	17:I:75:LEU:HB2	2.09	0.53
10:A:108:U:O2'	10:A:109:G:H5'	2.08	0.53
10:A:473:G:O2'	10:A:474:G:H5'	2.08	0.53
10:A:2235:G:H2'	10:A:2236:C:H6	1.73	0.53
17:I:15:VAL:C	17:I:17:GLN:H	2.13	0.53
30:Z:120:ILE:O	30:Z:120:ILE:HG22	2.09	0.53
10:A:363(C):G:H2'	10:A:363(D):G:O4'	2.09	0.53
10:A:707:G:C6	10:A:708:C:C4	2.97	0.53
10:A:1684:C:C2	10:A:1705:G:N2	2.77	0.53
21:Q:57:HIS:CE1	21:Q:116:GLU:HB3	2.44	0.53
19:O:7:TYR:CE1	19:O:20:MET:HB2	2.44	0.53
24:T:18:ASP:OD1	24:T:19:LEU:HG	2.09	0.53
10:A:1859:A:H8	10:A:1859:A:O5'	1.92	0.53
6:5:6:VAL:HG13	6:5:7:PRO:HD2	1.89	0.53
10:A:251:A:C5'	20:P:51:PHE:HZ	2.21	0.53
10:A:1718:G:O2'	10:A:1719:G:H5'	2.08	0.53
28:X:57:LEU:HD13	28:X:77:LYS:HB2	1.90	0.53
15:G:11:TYR:CD2	15:G:12:TYR:CE1	2.97	0.53
12:D:28:GLU:HB2	12:D:29:PRO:HD3	1.90	0.53
22:R:76:VAL:HG13	22:R:80:PHE:HD2	1.73	0.53
2:1:73:LEU:HD13	2:1:90:ILE:O	2.10	0.53
13:E:75:VAL:O	13:E:75:VAL:HG23	2.06	0.53
21:Q:9:TYR:C	21:Q:10:ARG:HG3	2.29	0.53
2:1:20:ARG:HG3	10:A:381:G:OP1	2.09	0.53
10:A:1636:C:O2'	10:A:1760:A:H1'	2.08	0.53
10:A:1689:A:N6	10:A:1698:A:H2	2.03	0.53
10:A:518:G:H2'	10:A:519:U:H6	1.72	0.53
10:A:151:C:C2'	10:A:152:G:H5'	2.39	0.53
24:T:109:GLU:CA	24:T:112:ARG:HG3	2.38	0.53
10:A:271(K):U:O2'	10:A:271(L):U:OP1	2.26	0.53
10:A:1318:C:H3'	10:A:1319:G:H5''	1.90	0.53
14:F:28:ILE:HD12	14:F:28:ILE:N	2.23	0.53
10:A:2689:U:P	10:A:2719:G:H22	2.32	0.53
10:A:1218:C:C2'	10:A:1219:G:H5'	2.38	0.53
10:A:2106:G:H1'	10:A:2184:G:N2	2.24	0.53
10:A:349:G:C2'	10:A:350:U:H5'	2.39	0.53
9:8:8:LYS:CE	10:A:243:U:OP2	2.57	0.52
10:A:819:A:OP2	10:A:1187:G:N2	2.34	0.52
10:A:1006:C:N3	10:A:1138:G:C2	2.78	0.52
10:A:1122:G:C2	10:A:1123:C:C6	2.97	0.52
18:N:15:LEU:HD13	18:N:16:ILE:N	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:21:ARG:HB3	26:V:93:GLU:HG2	1.92	0.52
26:V:62:LEU:HD22	26:V:98:GLU:CG	2.39	0.52
10:A:1783:A:C2	10:A:2587:A:C4	2.97	0.52
10:A:2308:G:H3'	10:A:2310:A:OP2	2.08	0.52
10:A:1504:C:H6	10:A:1504:C:O5'	1.92	0.52
10:A:2207:G:O2'	10:A:2208:A:H5''	2.09	0.52
10:A:1278:A:P	22:R:36:THR:HG22	2.47	0.52
10:A:478:A:C6	10:A:480:A:C6	2.97	0.52
10:A:66:C:C2	10:A:89:G:C2	2.97	0.52
10:A:1905:C:H2'	10:A:1930:G:H5'	1.91	0.52
10:A:1664:A:N6	10:A:1665:A:N6	2.57	0.52
10:A:2687:U:C4	10:A:2688:U:C5	2.97	0.52
24:T:29:ARG:HG2	24:T:85:LYS:CA	2.39	0.52
18:N:128:HIS:CD2	18:N:131:GLN:HB2	2.44	0.52
19:O:65:THR:HA	19:O:82:ASN:CB	2.34	0.52
17:I:31:LEU:CD2	17:I:38:LEU:HG	2.39	0.52
30:Z:141:VAL:HA	30:Z:144:LEU:HD23	1.89	0.52
10:A:1213:A:H1'	10:A:1238:G:N3	2.23	0.52
10:A:1675:C:H2'	10:A:1676:A:O4'	2.10	0.52
19:O:86:ILE:HD12	19:O:86:ILE:H	1.75	0.52
1:0:37:LEU:C	1:0:38:VAL:HG23	2.29	0.52
7:6:14:THR:O	7:6:49:HIS:HA	2.09	0.52
10:A:511:U:H5''	10:A:512:G:OP2	2.09	0.52
10:A:598:G:C5'	20:P:15:ARG:HD2	2.38	0.52
10:A:1461:G:N3	10:A:1462:C:C6	2.77	0.52
10:A:1528:A:O2'	10:A:1528(A):A:C8	2.60	0.52
10:A:843:G:C2	10:A:936:C:C2	2.97	0.52
18:N:17:ASP:OD2	18:N:19:GLU:HB3	2.09	0.52
18:N:35:ARG:NH2	18:N:42:TRP:HH2	2.07	0.52
18:N:56:ASN:C	18:N:57:ALA:O	2.46	0.52
18:N:87:LEU:HD21	18:N:98:VAL:HG11	1.90	0.52
10:A:994:C:OP1	25:U:53:ARG:NH2	2.43	0.52
23:S:67:ARG:C	23:S:69:VAL:N	2.61	0.52
12:D:25:THR:O	12:D:25:THR:CG2	2.57	0.52
10:A:2747:G:C2	10:A:2756:U:C5	2.98	0.52
16:H:67:LEU:O	16:H:71:LEU:HB2	2.10	0.52
2:1:65:SER:OG	2:1:66:HIS:HD2	1.92	0.52
12:D:148:GLU:HB2	12:D:151:LYS:HD2	1.92	0.52
10:A:501:A:C6	10:A:502:A:C5	2.98	0.52
10:A:64:A:O3'	28:X:68:ARG:O	2.27	0.52
10:A:1688:U:H5'	10:A:1689:A:OP1	2.09	0.52
10:A:797:C:H2'	10:A:798:G:C8	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:117:ARG:CZ	20:P:5:ASP:N	2.73	0.52
10:A:114:U:H3'	10:A:115:C:H6	1.74	0.52
10:A:2849:U:O4	24:T:23:ARG:NH2	2.42	0.52
10:A:128:C:C6	10:A:128:C:H3'	2.44	0.52
10:A:318:C:H2'	10:A:319:C:H6	1.74	0.52
10:A:320:A:H5''	10:A:321:G:OP1	2.09	0.52
12:D:48:ARG:CG	12:D:48:ARG:HH11	2.23	0.52
17:I:47:LEU:O	17:I:51:ILE:HG12	2.09	0.52
18:N:127:ASP:HB3	18:N:129:PRO:HD3	1.90	0.52
10:A:2101:G:C6	10:A:2102:U:C5	2.97	0.52
27:W:24:ILE:O	27:W:24:ILE:HD12	2.09	0.52
13:E:176:ILE:HD12	13:E:176:ILE:N	2.24	0.52
7:6:32:ASN:O	7:6:33:LYS:HB2	2.10	0.52
10:A:2415:G:H2'	10:A:2416:C:H6	1.74	0.52
3:2:49:LYS:HA	3:2:53:LEU:HB3	1.92	0.52
10:A:1528:A:C2	10:A:1544:A:N6	2.77	0.52
10:A:1019:U:O2'	10:A:1021:A:C2	2.53	0.52
18:N:47:ALA:HB1	18:N:112:LEU:HD11	1.91	0.52
11:B:38:C:C4'	23:S:95:HIS:CE1	2.92	0.52
15:G:15:VAL:HG12	15:G:19:LEU:CG	2.39	0.52
17:I:123:LEU:CD2	17:I:142:VAL:HB	2.37	0.52
12:D:44:ASN:N	12:D:44:ASN:OD1	2.41	0.52
29:Y:32:PRO:O	29:Y:35:TYR:N	2.43	0.52
10:A:1505:C:C6	10:A:1505:C:C3'	2.93	0.52
11:B:76:G:O3'	30:Z:19:ARG:NH2	2.41	0.52
10:A:14:A:N1	10:A:526:A:C2	2.77	0.52
10:A:2712:U:O2'	10:A:2712(A):A:P	2.67	0.52
10:A:1411:C:H2'	10:A:1412:A:N7	2.25	0.52
10:A:1686:C:O2'	10:A:1687:G:H5'	2.09	0.52
10:A:1487:G:C2'	10:A:1488:G:O5'	2.58	0.52
10:A:1152:C:H5''	25:U:80:ILE:HG22	1.91	0.52
21:Q:104:PHE:HE1	21:Q:125:LEU:HD11	1.74	0.52
10:A:2048:G:C6	10:A:2049:G:C5	2.96	0.52
14:F:16:GLY:O	14:F:17:ARG:HG3	2.10	0.52
10:A:2835:A:C6	10:A:2879:C:C6	2.97	0.52
7:6:13:CYS:O	7:6:21:TYR:HA	2.09	0.52
10:A:2071:A:H2'	10:A:2071:A:N3	2.23	0.52
10:A:814:C:H4'	10:A:1224:C:O2	2.09	0.52
10:A:994:C:H1'	26:V:10:LYS:NZ	2.24	0.52
18:N:120:LEU:HD11	18:N:122:VAL:CG2	2.26	0.52
25:U:49:HIS:O	25:U:53:ARG:N	2.42	0.52
17:I:120:ILE:HG23	17:I:126:TYR:CE1	2.45	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:Y:30:VAL:CG1	29:Y:31:LEU:H	2.16	0.52
10:A:2283:C:H2'	10:A:2284:C:C5'	2.39	0.52
19:O:111:PHE:O	19:O:112:MET:C	2.48	0.52
10:A:744:G:OP1	13:E:132:HIS:HB3	2.10	0.52
10:A:1629:U:H2'	10:A:1630:G:C8	2.44	0.52
27:W:12:ILE:HD13	27:W:17:VAL:HG22	1.92	0.52
27:W:44:ALA:O	27:W:45:TYR:C	2.47	0.52
10:A:1409:C:C2'	10:A:1410:G:H5'	2.40	0.52
10:A:2001:A:H2'	10:A:2002:G:C8	2.45	0.52
24:T:29:ARG:CD	24:T:86:ILE:HG22	2.39	0.52
10:A:2462:U:H2'	10:A:2463:C:O4'	2.10	0.52
10:A:2886:G:C5	10:A:2887:U:C5	2.98	0.52
1:O:1:MET:HA	10:A:2451:A:H4'	1.91	0.52
10:A:945:A:C6	10:A:2448:A:C4	2.98	0.52
2:1:54:ALA:O	2:1:56:GLN:N	2.42	0.52
13:E:70:ALA:O	13:E:73:GLU:HA	2.10	0.52
6:5:19:ARG:HA	10:A:2046:G:O5'	2.10	0.52
10:A:2395:C:H2'	10:A:2396:G:O4'	2.09	0.52
18:N:91:LEU:HD23	18:N:98:VAL:HG21	1.91	0.52
15:G:31:VAL:HG12	15:G:33:ARG:N	2.25	0.52
2:1:48:LYS:CE	2:1:48:LYS:HA	2.34	0.52
10:A:2306:C:OP2	10:A:2307:G:C8	2.62	0.52
10:A:1505:C:C5	10:A:1506:C:C6	2.97	0.52
10:A:1509(B):A:C4	10:A:1510:G:C8	2.98	0.52
10:A:2262:U:N3	10:A:2279:G:C2	2.77	0.52
10:A:909:A:H2'	10:A:912:C:C5	2.35	0.52
21:Q:75:THR:HG21	21:Q:85:LYS:HE3	1.92	0.52
10:A:790:C:O2'	10:A:791:C:H5'	2.09	0.52
24:T:30:VAL:O	24:T:82:LEU:HA	2.10	0.52
10:A:1200:C:O2'	10:A:1201:C:H5'	2.09	0.52
16:H:93:GLY:O	16:H:95:ARG:HG2	2.09	0.52
10:A:2081:C:H2'	10:A:2082:A:C8	2.44	0.52
9:8:39:LYS:O	9:8:39:LYS:CE	2.57	0.52
10:A:2064:C:H2'	10:A:2065:C:C6	2.45	0.52
10:A:2442:C:H2'	10:A:2443:C:H6	1.75	0.52
10:A:27:G:N2	10:A:512:G:O2'	2.42	0.52
10:A:587:C:OP2	20:P:33:ARG:NH2	2.40	0.52
20:P:88:LEU:C	20:P:90:ARG:N	2.62	0.52
10:A:1527:G:C5'	10:A:1528:A:OP1	2.58	0.52
10:A:1138:G:H1'	18:N:105:GLY:O	2.09	0.52
10:A:1022:G:C6	10:A:1140:C:C4	2.97	0.52
25:U:90:VAL:O	25:U:91:ASP:C	2.47	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:17:GLY:O	26:V:18:LEU:HB3	2.08	0.52
23:S:17:ARG:HA	23:S:20:ARG:HG2	1.90	0.52
10:A:2747:G:O2'	16:H:67:LEU:HD13	2.10	0.52
10:A:2544:G:H2'	10:A:2545:G:O4'	2.10	0.52
10:A:2664:G:C2'	10:A:2665:A:O5'	2.58	0.52
10:A:1212:G:C2	10:A:1236:G:C4	2.98	0.52
10:A:2262:U:C2	10:A:2279:G:N2	2.78	0.52
6:5:46:CYS:O	6:5:48:GLU:OE1	2.28	0.52
10:A:1639:U:H2'	10:A:1640:C:C5'	2.33	0.52
10:A:2762:G:H5''	10:A:2762:G:H8	1.73	0.52
10:A:786:C:C2'	10:A:787:U:H5'	2.40	0.52
10:A:1991:U:H2'	10:A:1992:G:H5''	1.92	0.52
10:A:1176:G:C4'	10:A:1177:A:OP1	2.58	0.52
8:7:5:TRP:CH2	10:A:464:U:H4'	2.44	0.52
16:H:153:LYS:HE2	16:H:154:PRO:C	2.30	0.52
30:Z:63:ASP:C	30:Z:65:GLN:N	2.63	0.52
10:A:877:U:H6	10:A:877:U:O5'	1.93	0.52
13:E:56:PRO:O	13:E:58:ARG:N	2.42	0.52
2:1:18:ILE:HD13	10:A:188:G:OP1	2.10	0.52
10:A:1854:A:C8	10:A:1855:G:C8	2.97	0.52
7:6:19:ARG:CG	7:6:20:ASN:N	2.71	0.52
10:A:2393:A:H2'	10:A:2394:C:O4'	2.10	0.52
10:A:1461:G:C2	10:A:1462:C:C6	2.98	0.52
4:3:22:ALA:O	4:3:26:LEU:HG	2.09	0.52
26:V:61:VAL:O	26:V:99:ILE:HB	2.09	0.52
10:A:1900:A:C2	10:A:1970:A:C4	2.98	0.52
12:D:35:LYS:HZ3	12:D:104:TYR:HB2	1.74	0.52
12:D:35:LYS:CG	12:D:64:ILE:H	2.23	0.52
2:1:87:PRO:CB	2:1:91:LYS:NZ	2.72	0.52
30:Z:54:HIS:O	30:Z:55:HIS:CD2	2.62	0.52
10:A:2206:G:H3'	10:A:2206:G:N3	2.25	0.52
17:I:29:TYR:HD2	17:I:30:LEU:HD23	1.75	0.52
10:A:2712:U:HO2'	10:A:2712(A):A:P	2.30	0.52
10:A:2854:G:C4	10:A:2855:C:C5	2.97	0.52
10:A:542:C:H42	10:A:543:C:N4	2.03	0.52
10:A:52:A:OP2	10:A:117:G:N1	2.37	0.52
1:0:18:ALA:HB2	10:A:2272:U:OP2	2.10	0.52
10:A:2020:A:P	25:U:27:LEU:HD23	2.50	0.52
10:A:2695:C:H2'	10:A:2696:U:C6	2.45	0.52
16:H:92:ILE:C	16:H:94:TYR:H	2.13	0.52
13:E:14:ILE:HG13	13:E:21:VAL:HG23	1.90	0.52
25:U:106:PHE:O	25:U:110:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:I:92:VAL:HG23	17:I:96:ASP:OD2	2.08	0.52
10:A:452:G:C4	10:A:458:G:C6	2.98	0.52
10:A:1764:G:N2	10:A:1765:C:C2	2.78	0.52
10:A:272(G):C:O2	10:A:272(G):C:H2'	2.09	0.52
10:A:2286:A:C5'	10:A:2287:A:O4'	2.58	0.52
10:A:2347:C:C2	10:A:2348:U:C5	2.98	0.52
10:A:241:A:O4'	10:A:243:U:C6	2.63	0.52
33:A:3206:TEL:C1	33:A:3206:TEL:H142	2.13	0.52
10:A:1344:G:H4'	10:A:1384:A:N7	2.25	0.52
28:X:60:ARG:HE	28:X:74:PRO:CD	2.23	0.52
10:A:1006:C:O2'	10:A:1007:C:H5'	2.08	0.52
18:N:46:VAL:O	18:N:47:ALA:HB3	2.10	0.52
26:V:19:LYS:CG	26:V:20:LEU:N	2.54	0.52
10:A:1286:A:C2	10:A:1289:C:C6	2.98	0.52
11:B:118:G:C2	11:B:119:G:N7	2.78	0.52
23:S:35:ILE:HD11	23:S:99:LYS:HE2	1.91	0.52
10:A:2758:A:C4	16:H:67:LEU:HD21	2.45	0.52
16:H:146:ALA:O	16:H:150:ALA:N	2.41	0.52
13:E:60:ASN:N	13:E:60:ASN:ND2	2.58	0.52
30:Z:5:LEU:HD12	30:Z:47:VAL:HG23	1.91	0.52
30:Z:30:ASN:HA	30:Z:89:PHE:HE2	1.75	0.52
11:B:13:A:O2'	11:B:14:U:H3'	2.09	0.52
10:A:1146:C:C4	10:A:1147:C:C5	2.98	0.52
10:A:1044:G:N3	10:A:1044:G:H2'	2.23	0.52
27:W:20:VAL:CG2	27:W:21:VAL:N	2.72	0.52
19:O:36:GLY:HA2	19:O:106:LEU:HD21	1.92	0.52
30:Z:128:VAL:HG11	30:Z:133:ILE:HG12	1.91	0.52
8:7:12:ARG:HG3	10:A:686:G:O6	2.10	0.52
10:A:2291:U:H5''	10:A:2380:C:H1'	1.92	0.52
10:A:2846:G:H2'	10:A:2847:U:O4'	2.09	0.52
19:O:49:ARG:HD3	19:O:49:ARG:N	2.24	0.52
10:A:2438:U:H5''	10:A:2600:A:OP1	2.10	0.52
10:A:363(D):G:C6	10:A:363(E):U:O4	2.63	0.52
10:A:2036:C:H6	10:A:2036:C:H5'	1.74	0.52
10:A:2409:G:C6	10:A:2410:G:C5	2.97	0.52
22:R:81:ASP:O	22:R:85:PRO:HG3	2.10	0.52
9:8:38:GLY:C	9:8:40:GLU:H	2.13	0.52
10:A:2065:C:H1'	10:A:2449:U:O2	2.10	0.52
10:A:2415:G:C5	10:A:2416:C:C5	2.98	0.52
9:8:31:HIS:CD2	10:A:2419:U:O4	2.62	0.52
10:A:449:A:H2'	10:A:450:G:C5'	2.40	0.52
10:A:658:C:H2'	10:A:659:C:C6	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:8:27:THR:HA	20:P:62:LEU:CD1	2.39	0.52
10:A:389:G:H1	20:P:71:VAL:CB	2.23	0.52
10:A:1717:G:C2	10:A:1718:G:C8	2.98	0.52
3:2:30:ARG:N	3:2:30:ARG:HD2	2.19	0.52
25:U:92:ARG:O	25:U:95:LEU:N	2.37	0.52
26:V:21:ARG:HA	26:V:94:LEU:O	2.10	0.52
12:D:224:ALA:O	12:D:225:ALA:HB2	2.10	0.52
15:G:16:ARG:CB	15:G:16:ARG:HH11	2.23	0.52
23:S:29:PHE:N	23:S:89:ARG:CD	2.65	0.52
24:T:50:ILE:HA	24:T:99:LEU:HD11	1.91	0.52
10:A:772:C:O2'	10:A:773:U:H5'	2.10	0.52
10:A:1825:A:O4'	12:D:254:THR:HG21	2.08	0.52
14:F:3:GLU:O	14:F:19:GLU:HA	2.09	0.52
10:A:863:A:C2	10:A:864:G:C4	2.98	0.52
10:A:1047:G:H2'	10:A:1110:G:H22	1.73	0.52
13:E:168:MET:O	13:E:170:LEU:HD12	2.09	0.52
10:A:2681:C:O2	10:A:2681:C:H2'	2.10	0.52
29:Y:95:LYS:CD	29:Y:100:ALA:HB1	2.40	0.52
10:A:2511:U:O4	10:A:2575:C:N3	2.43	0.52
24:T:34:VAL:HG13	24:T:39:ARG:HB3	1.92	0.52
24:T:121:ILE:O	24:T:124:ASP:HB2	2.10	0.52
10:A:2436:G:C6	10:A:2437:U:C4	2.97	0.52
10:A:1358:G:O2'	10:A:1359:A:H5''	2.09	0.52
24:T:90:GLN:HG2	24:T:120:ARG:HH12	1.74	0.52
15:G:43:LEU:HD12	15:G:153:ARG:HD2	1.92	0.52
10:A:1248:G:C8	25:U:3:ARG:HB2	2.45	0.52
10:A:711:G:O2'	10:A:712:G:H5'	2.10	0.52
10:A:830:G:H4'	10:A:831:G:OP2	2.10	0.52
10:A:57:C:H2'	10:A:58:G:O5'	2.10	0.52
4:3:52:HIS:CD2	4:3:53:LEU:HG	2.45	0.52
10:A:934:G:H2'	10:A:935:C:C6	2.45	0.52
18:N:28:THR:HG22	18:N:29:LYS:N	2.25	0.52
25:U:68:ALA:O	25:U:71:GLN:HB2	2.10	0.52
12:D:243:GLY:O	12:D:244:ARG:HB3	2.09	0.52
23:S:106:ARG:O	23:S:107:GLU:CB	2.58	0.52
23:S:18:ILE:HG22	23:S:19:LYS:N	2.25	0.52
23:S:88:ASP:OD2	23:S:89:ARG:N	2.42	0.52
10:A:2657:A:C2	10:A:2664:G:N2	2.76	0.52
10:A:2630:G:H1'	10:A:2894:G:H1'	1.90	0.52
10:A:1493:C:C5	10:A:2206:G:O2'	2.62	0.52
11:B:13:A:C6	11:B:70:C:H5'	2.44	0.52
13:E:91:VAL:HG13	13:E:95:ILE:CD1	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:5:50:GLY:O	6:5:51:TYR:CD1	2.58	0.52
10:A:2539:C:N3	10:A:2540:C:C5	2.78	0.52
10:A:1833:U:C4	10:A:1834:U:C5	2.98	0.52
10:A:1882:C:H3'	10:A:1883:G:H8	1.74	0.52
10:A:2469:A:O2'	21:Q:56:ARG:HG2	2.09	0.52
10:A:817:C:C2'	10:A:818:G:H8	2.23	0.52
10:A:817:C:H2'	10:A:818:G:O4'	2.10	0.52
10:A:412:A:H2'	10:A:413:C:H5'	1.92	0.52
22:R:84:ALA:N	22:R:85:PRO:HD2	2.25	0.52
9:8:29:LYS:HZ1	9:8:44:LYS:HB3	1.75	0.51
10:A:2016:U:C4	10:A:2017:U:C4	2.98	0.51
6:5:6:VAL:HG13	10:A:2016:U:H1'	1.92	0.51
33:A:3206:TEL:C10	33:A:3206:TEL:C12	2.89	0.51
33:A:3206:TEL:H123	33:A:3206:TEL:C10	2.39	0.51
10:A:665:C:H2'	10:A:666:G:H8	1.74	0.51
28:X:36:LYS:HD3	28:X:38:GLU:HB2	1.92	0.51
10:A:993:G:C5'	26:V:75:PHE:CE2	2.93	0.51
11:B:25:A:C2'	11:B:26:A:H8	2.22	0.51
15:G:11:TYR:O	15:G:16:ARG:HG2	2.10	0.51
12:D:27:THR:HG21	12:D:83:GLU:CG	2.18	0.51
11:B:75:G:H8	11:B:75:G:C5'	2.18	0.51
21:Q:81:VAL:O	21:Q:82:ARG:CZ	2.58	0.51
13:E:96:PHE:CE2	13:E:102:VAL:HG11	2.45	0.51
13:E:111:ARG:NH1	22:R:2:ARG:NH2	2.58	0.51
29:Y:95:LYS:CE	29:Y:100:ALA:HB1	2.39	0.51
17:I:98:ALA:O	17:I:102:SER:HB2	2.10	0.51
14:F:160:ASN:CG	14:F:163:VAL:HG23	2.30	0.51
10:A:1255:U:H5''	10:A:1256:G:O5'	2.10	0.51
19:O:46:ALA:O	19:O:47:ILE:HD13	2.10	0.51
10:A:272(B):G:O2'	10:A:272(C):G:H5'	2.10	0.51
10:A:2399:G:C4	10:A:2400:G:C8	2.97	0.51
16:H:158:HIS:CD2	16:H:170:ARG:HA	2.44	0.51
10:A:2690:C:OP2	22:R:14:SER:HB3	2.10	0.51
22:R:13:HIS:CE1	22:R:15:SER:OG	2.64	0.51
21:Q:57:HIS:CG	21:Q:57:HIS:O	2.63	0.51
14:F:154:VAL:HB	14:F:173:VAL:HG22	1.91	0.51
10:A:26:G:H1'	10:A:515:A:H61	1.75	0.51
10:A:661:C:O3'	20:P:18:ARG:HA	2.09	0.51
20:P:83:VAL:HG11	20:P:112:LEU:HD21	1.90	0.51
3:2:50:ILE:O	3:2:51:ARG:HB3	2.10	0.51
10:A:1404:C:O2	10:A:1404:C:H2'	2.10	0.51
10:A:142:A:H8	10:A:1595:G:N2	2.06	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:99:ILE:HG22	26:V:100:ARG:HG2	1.93	0.51
11:B:33:G:N1	11:B:50:G:C6	2.78	0.51
15:G:25:TYR:HA	15:G:30:GLU:OE2	2.11	0.51
10:A:1816:G:H8	12:D:62:TYR:CZ	2.28	0.51
10:A:1783:A:H5'	10:A:2608:G:H4'	1.91	0.51
12:D:35:LYS:CE	12:D:64:ILE:C	2.79	0.51
12:D:83:GLU:HB2	12:D:92:ILE:CD1	2.39	0.51
12:D:83:GLU:O	12:D:92:ILE:HD12	2.10	0.51
13:E:35:GLN:HB3	13:E:48:GLN:CB	2.40	0.51
29:Y:20:TYR:CD1	29:Y:20:TYR:N	2.76	0.51
21:Q:77:LYS:HE3	21:Q:82:ARG:HA	1.92	0.51
30:Z:166:SER:OG	30:Z:167:PRO:HA	2.10	0.51
2:1:40:ARG:HD3	2:1:41:ARG:N	2.25	0.51
20:P:138:LEU:C	20:P:140:ALA:N	2.61	0.51
10:A:794:G:H2'	10:A:795:C:H6	1.72	0.51
10:A:39:C:H2'	10:A:40:C:H6	1.75	0.51
7:6:51:GLU:C	7:6:52:VAL:HG23	2.31	0.51
10:A:717:G:H2'	10:A:718:A:O4'	2.10	0.51
10:A:1598:C:H2'	10:A:1599:C:C6	2.45	0.51
10:A:1373:A:C6	10:A:1374:G:C4	2.98	0.51
11:B:41:U:H2'	11:B:42:C:OP1	2.10	0.51
10:A:1914:C:C4	10:A:1915:U:C4	2.98	0.51
10:A:1106:A:O2'	10:A:1107:G:P	2.68	0.51
10:A:1764:G:C2	10:A:1765:C:C2	2.99	0.51
10:A:2623:G:H2'	10:A:2624:G:H8	1.74	0.51
10:A:1307:A:N6	10:A:1606:G:O2'	2.43	0.51
21:Q:110:THR:HB	21:Q:112:GLU:HG3	1.92	0.51
10:A:2412:A:H2'	10:A:2413:G:O4'	2.10	0.51
10:A:2415:G:C2'	10:A:2416:C:H5'	2.40	0.51
10:A:70:G:H21	10:A:71:A:N6	2.06	0.51
28:X:90:GLU:C	28:X:92:LEU:H	2.14	0.51
10:A:814:C:H5	20:P:27:HIS:CE1	2.26	0.51
10:A:816:C:O2'	10:A:932:G:O6	2.27	0.51
26:V:1:MET:H2	26:V:44:LYS:HD2	1.74	0.51
10:A:1331:A:H2'	10:A:1333:C:H5	1.73	0.51
11:B:27:C:C2'	11:B:27:C:O2	2.57	0.51
10:A:1795:C:H2'	10:A:1796:U:H6	1.76	0.51
10:A:312:G:H4'	10:A:331:A:N3	2.25	0.51
29:Y:13:VAL:HG11	29:Y:72:VAL:HB	1.91	0.51
30:Z:53:ILE:HG21	30:Z:71:VAL:HB	1.89	0.51
10:A:2496:C:OP1	21:Q:81:VAL:CG1	2.58	0.51
10:A:2724:C:OP2	22:R:2:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2573:C:OP1	10:A:2574:G:OP1	2.28	0.51
10:A:271(H):G:O2'	10:A:271(I):G:P	2.68	0.51
24:T:52:ILE:HA	24:T:61:PHE:HA	1.91	0.51
21:Q:134:ARG:C	21:Q:136:ALA:H	2.14	0.51
12:D:181:GLU:O	12:D:182:LEU:HD23	2.10	0.51
10:A:2009:G:OP1	27:W:41:LYS:HE2	2.10	0.51
10:A:2692:C:O2'	10:A:2693:A:H5'	2.11	0.51
30:Z:150:LEU:O	30:Z:171:ILE:HG12	2.10	0.51
14:F:124:LEU:HD12	14:F:125:LEU:H	1.74	0.51
25:U:44:ASN:HD22	25:U:44:ASN:H	1.57	0.51
15:G:94:LEU:HD11	15:G:102:PHE:CG	2.45	0.51
14:F:7:TYR:HD2	14:F:16:GLY:HA3	1.76	0.51
22:R:99:LYS:HZ3	22:R:99:LYS:HB3	1.76	0.51
10:A:412:A:H8	10:A:412:A:OP2	1.92	0.51
14:F:46:ARG:O	14:F:48:THR:HG23	2.10	0.51
10:A:968:G:H2'	10:A:969:U:O4'	2.10	0.51
10:A:2016:U:H2'	10:A:2017:U:H6	1.72	0.51
10:A:2071:A:H2	10:A:2440:C:H41	1.58	0.51
10:A:834:C:O2'	10:A:835:A:H5'	2.10	0.51
3:2:29:LYS:O	3:2:33:MET:SD	2.69	0.51
10:A:692:C:C2	10:A:771:G:C2	2.98	0.51
10:A:2653:U:H3	10:A:2667:C:N4	2.08	0.51
10:A:2632:A:N3	13:E:61:ARG:NH1	2.58	0.51
10:A:2297:C:N3	10:A:2320:A:C8	2.79	0.51
11:B:21:G:O2'	11:B:22:U:OP2	2.29	0.51
10:A:2092:U:H4'	10:A:2093:G:C5'	2.41	0.51
24:T:65:LYS:HG3	24:T:66:VAL:H	1.76	0.51
28:X:61:GLY:O	28:X:70:LEU:HB3	2.10	0.51
10:A:2000:G:OP2	22:R:3:HIS:CE1	2.64	0.51
16:H:52:VAL:CG1	16:H:69:ARG:HG3	2.40	0.51
10:A:2472:G:H2'	10:A:2529:G:N2	2.24	0.51
12:D:255:LYS:N	12:D:255:LYS:NZ	2.59	0.51
10:A:614:U:O5'	10:A:614:U:O2	2.28	0.51
10:A:451:C:N4	10:A:454:A:H5'	2.25	0.51
10:A:17:G:H2'	10:A:18:C:C6	2.45	0.51
17:I:117:GLU:HG3	17:I:118:LYS:N	2.25	0.51
17:I:46:ALA:O	17:I:49:ALA:HB3	2.10	0.51
7:6:9:LEU:C	7:6:9:LEU:HD13	2.30	0.51
9:8:6:THR:HG22	9:8:62:LEU:HD12	1.92	0.51
10:A:747:U:O3'	27:W:89:ALA:HB3	2.11	0.51
10:A:389:G:H22	20:P:72:PRO:HD3	1.74	0.51
10:A:1187:G:H5''	26:V:82:ARG:CZ	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:46:GLN:C	3:2:48:HIS:N	2.62	0.51
28:X:57:LEU:N	28:X:57:LEU:CD1	2.74	0.51
10:A:985:C:H2'	10:A:986:C:C6	2.45	0.51
23:S:101:LEU:HD13	23:S:102:ALA:H	1.75	0.51
12:D:211:ARG:O	12:D:215:LEU:HG	2.10	0.51
10:A:2652:C:H2'	10:A:2653:U:C5'	2.39	0.51
10:A:2319:G:C2	10:A:2320:A:N1	2.78	0.51
29:Y:34:LYS:O	29:Y:35:TYR:CB	2.58	0.51
10:A:1509(B):A:H3'	10:A:1510:G:C8	2.42	0.51
10:A:958:U:C5'	21:Q:14:ARG:HD3	2.40	0.51
6:5:55:ARG:CG	6:5:56:LYS:H	2.23	0.51
10:A:901:A:H5'	10:A:902:C:OP2	2.10	0.51
10:A:1694:C:H2'	10:A:1694:C:O2	2.10	0.51
14:F:203:GLN:O	14:F:206:ILE:C	2.48	0.51
10:A:1665:A:O2'	10:A:1666:G:H5'	2.11	0.51
10:A:1473:G:C5	10:A:1474:C:C4	2.99	0.51
10:A:721:C:H3'	10:A:722:A:H8	1.76	0.51
10:A:1579:A:H2'	10:A:1580:A:C8	2.46	0.51
21:Q:111:GLU:O	21:Q:115:MET:HB2	2.10	0.51
10:A:2241:A:O2'	10:A:2242:G:H5'	2.10	0.51
10:A:2552:U:O2	10:A:2554:U:H5'	2.09	0.51
10:A:292:C:O2'	10:A:293:U:H5'	2.10	0.51
6:5:22:HIS:HD2	10:A:2046:G:O2'	1.94	0.51
7:6:23:THR:HG21	10:A:2419:U:H4'	1.93	0.51
7:6:22:ALA:HB2	7:6:39:TYR:CE2	2.46	0.51
6:5:7:PRO:HA	10:A:2615:U:N1	2.25	0.51
10:A:637:A:OP1	20:P:133:SER:HB3	2.11	0.51
10:A:76:C:O2'	10:A:77:C:H5'	2.10	0.51
28:X:34:ALA:O	28:X:36:LYS:HG3	2.10	0.51
10:A:932:G:H4'	10:A:933:A:O5'	2.11	0.51
26:V:68:LYS:O	26:V:68:LYS:HG3	2.10	0.51
10:A:1778:U:O4	10:A:1784:A:H1'	2.11	0.51
12:D:63:ARG:HG3	12:D:63:ARG:NH1	2.26	0.51
12:D:35:LYS:NZ	12:D:64:ILE:O	2.37	0.51
10:A:2663:G:C8	10:A:2664:G:C5	2.99	0.51
10:A:2656:U:N3	10:A:2665:A:H2	1.98	0.51
10:A:2666:C:N4	16:H:109:PHE:HA	2.25	0.51
10:A:2631:G:N3	10:A:2810:A:H2	2.08	0.51
15:G:134:GLY:HA2	15:G:156:ASP:HA	1.91	0.51
10:A:864:G:O2'	10:A:865:C:H5'	2.11	0.51
10:A:867:C:C5	10:A:868:U:C4	2.98	0.51
10:A:2836:U:H6	10:A:2836:U:O5'	1.94	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:119:GLU:HA	20:P:119:GLU:OE1	2.10	0.51
6:5:25:LEU:HD12	27:W:19:LEU:HB3	1.92	0.51
10:A:78:A:H2'	10:A:79:G:C8	2.46	0.51
8:7:8:ASN:ND2	8:7:10:ARG:H	2.08	0.51
12:D:255:LYS:HZ1	12:D:255:LYS:H	1.59	0.51
10:A:1421:G:C2	10:A:1422:G:C8	2.98	0.51
10:A:269:U:H2'	10:A:269:U:O2	2.10	0.51
10:A:485:C:O2'	10:A:486:C:H5'	2.11	0.51
12:D:48:ARG:HG3	12:D:48:ARG:HH11	1.74	0.51
19:O:34:THR:HG22	19:O:37:ASP:OD2	2.11	0.51
19:O:9:GLU:HB3	19:O:83:ALA:HB2	1.91	0.51
10:A:578:A:H5''	10:A:579:G:OP2	2.11	0.51
10:A:1710:C:O2'	10:A:1711:C:H5'	2.10	0.51
10:A:1742:G:C8	10:A:1743:C:C2	2.98	0.51
10:A:1824:G:OP1	12:D:52:ARG:NH1	2.43	0.51
10:A:1791:A:N6	10:A:1828:G:O2'	2.43	0.51
2:1:11:ARG:CB	2:1:12:PRO:CD	2.89	0.51
10:A:2655:G:H2'	10:A:2655:G:N3	2.25	0.51
10:A:2297:C:O2'	10:A:2298:A:H5'	2.10	0.51
10:A:2308:G:C2	10:A:2309:A:C6	2.99	0.51
10:A:2283:C:C2	10:A:2389:G:C2	2.99	0.51
13:E:36:ARG:NH2	13:E:88:GLY:CA	2.73	0.51
10:A:499:U:H2'	10:A:500:G:O4'	2.10	0.51
10:A:78:A:C2	10:A:79:G:C5	2.98	0.51
10:A:344:G:O2'	10:A:345:A:H5'	2.11	0.51
14:F:141:ALA:O	14:F:144:LYS:HB3	2.11	0.51
30:Z:144:LEU:N	30:Z:144:LEU:HD22	2.25	0.51
10:A:463:G:C6	10:A:467:G:C6	2.99	0.51
10:A:1374:G:H2'	10:A:1375:C:C6	2.45	0.51
13:E:143:ASN:OD1	13:E:147:PRO:HD2	2.11	0.51
14:F:53:THR:C	14:F:55:GLY:N	2.64	0.51
10:A:1916:A:N3	10:A:1916:A:H2'	2.26	0.51
6:5:22:HIS:CD2	10:A:2046:G:O2'	2.63	0.51
7:6:9:LEU:HD13	7:6:9:LEU:O	2.10	0.51
9:8:35:GLN:CG	10:A:2420:C:OP1	2.59	0.51
10:A:676:A:H1'	10:A:2443:C:O4'	2.10	0.51
10:A:975(A):G:H1'	10:A:990:A:C2	2.46	0.51
14:F:36:VAL:HA	14:F:101:LEU:CD2	2.41	0.51
20:P:79:ARG:HH22	20:P:109:GLY:HA2	1.73	0.51
4:3:47:VAL:HG11	4:3:56:VAL:HG21	1.93	0.51
10:A:537:C:H5'	10:A:538:G:OP2	2.11	0.51
18:N:58:ASP:C	18:N:60:ILE:H	2.14	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:G:116:ASP:O	15:G:117:PHE:HB3	2.10	0.51
12:D:35:LYS:HE2	12:D:104:TYR:HB2	1.92	0.51
1:O:42:GLY:HA3	10:A:2331:G:O4'	2.11	0.51
13:E:6:GLY:HA2	13:E:51:PHE:CZ	2.46	0.51
10:A:1658:C:H2'	10:A:1659:U:C6	2.46	0.51
13:E:132:HIS:O	13:E:133:LYS:HG3	2.11	0.51
2:1:41:ARG:NH2	10:A:205:G:C6	2.78	0.51
15:G:125:PHE:HB3	15:G:166:ASP:HB2	1.93	0.51
10:A:1603:A:H2'	10:A:1604:C:O4'	2.11	0.51
27:W:18:ARG:CG	27:W:18:ARG:NH1	2.70	0.51
19:O:63:VAL:HG11	19:O:85:VAL:CG2	2.40	0.51
24:T:33:LYS:CB	24:T:41:ARG:HB3	2.34	0.51
10:A:1773:A:C2'	10:A:1774:C:H5'	2.41	0.51
15:G:60:LEU:HD13	15:G:60:LEU:C	2.30	0.51
10:A:2470:G:C2	10:A:2471:C:C5	2.99	0.51
15:G:139:LEU:HA	15:G:144:ILE:HG23	1.91	0.51
10:A:2437:U:H2'	10:A:2438:U:C6	2.45	0.51
16:H:130:ARG:HB2	16:H:130:ARG:CZ	2.39	0.51
10:A:836:G:H2'	10:A:837:C:H6	1.72	0.51
10:A:1035:U:H2'	10:A:1036:G:C8	2.46	0.51
30:Z:63:ASP:C	30:Z:65:GLN:H	2.13	0.51
13:E:65:GLY:O	13:E:67:PHE:N	2.44	0.51
9:8:32:LEU:HD23	9:8:35:GLN:O	2.11	0.51
7:6:27:LYS:HG3	10:A:2285:C:H5''	1.93	0.51
10:A:2053:G:H1	10:A:2616:C:N4	2.08	0.51
10:A:827:U:O2	10:A:2246:G:H4'	2.11	0.51
10:A:1468:C:C2	10:A:1525:G:C2	2.99	0.51
10:A:1341:U:O4	28:X:16:LYS:HE3	2.11	0.51
10:A:1141:U:H4'	10:A:1142(A):A:O4'	2.11	0.51
10:A:847:U:OP2	10:A:928:G:O6	2.28	0.51
18:N:18:ALA:HB3	18:N:26:LEU:CD2	2.33	0.51
18:N:30:ILE:HG21	18:N:120:LEU:HD21	1.92	0.51
11:B:57:A:H8	15:G:27:ASN:HB3	1.76	0.51
15:G:16:ARG:O	15:G:20:ILE:HG13	2.10	0.51
10:A:1570:A:H2'	10:A:1571:A:C8	2.45	0.51
10:A:690:G:H4'	10:A:780:G:OP1	2.11	0.51
14:F:3:GLU:HA	14:F:24:LEU:HB3	1.92	0.51
10:A:2259:G:C2	10:A:2282:G:N1	2.79	0.51
21:Q:82:ARG:O	21:Q:83:MET:CB	2.59	0.51
21:Q:8:LYS:CG	21:Q:9:TYR:N	2.74	0.51
10:A:92:A:H2'	10:A:93:G:C8	2.45	0.51
10:A:2741:A:H2'	10:A:2742:C:O4'	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2575:C:H2'	10:A:2578:G:O6	2.11	0.51
16:H:40:GLU:O	16:H:41:MET:CB	2.59	0.51
10:A:1882:C:O2	10:A:1882:C:C2'	2.51	0.51
10:A:541:C:H2'	10:A:542:C:C6	2.46	0.51
12:D:182:LEU:HB3	12:D:271:ILE:CD1	2.41	0.51
14:F:31:HIS:HB2	20:P:13:ASN:HB3	1.91	0.51
10:A:1198:U:O2	10:A:1249:U:H1'	2.11	0.51
2:I:37:ILE:HD12	10:A:2079:U:O2'	2.10	0.51
10:A:2599:G:H8	12:D:236:GLY:HA2	1.76	0.51
14:F:119:ARG:HB3	14:F:119:ARG:CZ	2.40	0.51
14:F:78:ILE:HD13	14:F:78:ILE:H	1.76	0.51
10:A:483:A:C8	10:A:484:C:C5	2.99	0.51
13:E:3:GLY:HA3	13:E:81:ILE:HG21	1.93	0.51
10:A:2103:C:H2'	10:A:2104:G:O4'	2.10	0.51
10:A:588:U:OP2	10:A:588:U:C6	2.64	0.51
10:A:665:C:H2'	10:A:666:G:C8	2.46	0.51
10:A:662:G:OP1	20:P:18:ARG:NH1	2.43	0.51
18:N:6:PRO:HG2	18:N:43:THR:OG1	2.10	0.51
26:V:72:VAL:O	26:V:73:SER:CB	2.58	0.51
10:A:2521:C:C2'	10:A:2521:C:O2	2.54	0.51
10:A:2774:C:H2'	10:A:2775:A:O4'	2.11	0.51
10:A:303:U:H2'	10:A:304:G:C8	2.46	0.51
11:B:65:C:H41	11:B:109:C:C2'	2.23	0.51
13:E:29:GLY:N	13:E:51:PHE:HE2	2.08	0.51
1:I:31:VAL:CB	1:I:35:ASN:ND2	2.71	0.51
17:I:101:LEU:HD23	17:I:109:ILE:HG21	1.92	0.51
10:A:271(O):C:O2	10:A:271(P):C:C5	2.64	0.51
23:S:42:ASP:C	23:S:44:LYS:H	2.14	0.51
10:A:1845:G:H2'	10:A:1846:G:C5'	2.41	0.51
10:A:2590:A:H2'	10:A:2591:C:H6	1.76	0.51
10:A:296:C:O2'	10:A:297:C:H5'	2.10	0.51
10:A:565:C:H4'	10:A:1253:A:C6	2.46	0.51
10:A:733:G:H8	10:A:733:G:O5'	1.94	0.51
16:H:24:VAL:HB	16:H:35:VAL:HB	1.93	0.51
17:I:35:LEU:O	17:I:36:ALA:HB2	2.11	0.51
10:A:1400:G:C6	10:A:1401:G:C6	2.99	0.51
9:8:29:LYS:O	9:8:32:LEU:N	2.43	0.50
9:8:34:TRP:O	9:8:35:GLN:CB	2.51	0.50
33:A:3206:TEL:O5	33:A:3206:TEL:C14	2.30	0.50
10:A:745:G:C2'	10:A:746:A:H5'	2.41	0.50
20:P:96:THR:HG22	20:P:126:VAL:HG23	1.92	0.50
10:A:1394:U:C4	10:A:1395:A:C5	2.98	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:848:G:C8	10:A:848:G:H5'	2.43	0.50
18:N:56:ASN:HA	18:N:125:GLY:N	2.26	0.50
18:N:40:PRO:CB	25:U:68:ALA:HB2	2.41	0.50
18:N:56:ASN:HA	18:N:125:GLY:H	1.75	0.50
26:V:5:VAL:HG21	26:V:36:PRO:HG2	1.92	0.50
10:A:2586:C:C5	10:A:2608:G:N2	2.79	0.50
12:D:209:ALA:C	12:D:210:GLY:O	2.49	0.50
10:A:2658:C:C2'	10:A:2658:C:O2	2.58	0.50
16:H:164:TYR:C	16:H:166:GLY:H	2.13	0.50
10:A:2808:U:C2'	10:A:2809:A:C5'	2.88	0.50
10:A:962:G:C2'	10:A:963:U:H5'	2.42	0.50
21:Q:82:ARG:O	21:Q:83:MET:HB2	2.12	0.50
1:O:74:ARG:HH22	11:B:13:A:C5'	2.24	0.50
10:A:2043:C:C2	10:A:2044:C:C5	3.00	0.50
6:5:36:CYS:HB2	6:5:49:CYS:SG	2.51	0.50
6:5:40:LYS:HZ2	6:5:46:CYS:H	1.59	0.50
10:A:1659:U:C2'	10:A:1660:C:H5'	2.41	0.50
10:A:902:C:O2'	10:A:903:C:H5'	2.11	0.50
19:O:101:PRO:HD2	24:T:70:VAL:CG2	2.41	0.50
10:A:2469:A:O2'	21:Q:56:ARG:CG	2.59	0.50
10:A:36:G:C6	10:A:37:C:C4	2.99	0.50
10:A:117:G:C6	10:A:119:A:C6	2.99	0.50
10:A:1940:U:C4	10:A:1964:G:H4'	2.46	0.50
10:A:628:G:C6	10:A:629:G:C6	2.98	0.50
16:H:83:TYR:O	16:H:84:SER:OG	2.26	0.50
10:A:975:C:H2'	10:A:975:C:O2	2.11	0.50
26:V:83:ARG:HH11	26:V:83:ARG:HG3	1.75	0.50
9:8:22:VAL:HB	9:8:53:PRO:HB3	1.94	0.50
10:A:2392:A:C2	10:A:2429:G:C2	2.99	0.50
9:8:27:THR:HA	20:P:62:LEU:HD11	1.92	0.50
10:A:142(A):C:H2'	10:A:143:G:O4'	2.10	0.50
10:A:71:A:H2	28:X:31:HIS:NE2	2.09	0.50
28:X:36:LYS:O	28:X:38:GLU:N	2.44	0.50
28:X:84:ALA:C	28:X:86:GLY:N	2.64	0.50
10:A:1159:U:H2'	10:A:1160:G:H8	1.76	0.50
10:A:997:G:O2'	10:A:998:C:H5'	2.10	0.50
25:U:83:LEU:CB	25:U:88:ILE:HD11	2.39	0.50
23:S:97:ARG:NE	23:S:97:ARG:O	2.42	0.50
10:A:1429:G:C5	10:A:1568:G:C6	2.99	0.50
10:A:764:A:H5''	12:D:210:GLY:CA	2.40	0.50
10:A:2544:G:O2'	10:A:2545:G:H5'	2.11	0.50
10:A:2563:U:O2	10:A:2565:A:H8	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2785:C:H2'	10:A:2786:U:H6	1.75	0.50
10:A:2811:G:H22	10:A:2891:G:H1'	1.75	0.50
10:A:84:A:H3'	29:Y:9:LYS:HB2	1.93	0.50
12:D:143:HIS:HD2	12:D:144:ALA:HB2	1.76	0.50
11:B:78:A:C2	11:B:100:A:C4	2.99	0.50
17:I:102:SER:N	17:I:109:ILE:HD11	2.26	0.50
10:A:2870:C:H2'	10:A:2871:C:C5'	2.34	0.50
24:T:28:VAL:HG21	24:T:46:GLU:CD	2.32	0.50
10:A:78:A:C6	10:A:109:G:C6	2.99	0.50
10:A:1558:A:H1'	10:A:1559:G:OP2	2.11	0.50
10:A:2841:C:H2'	10:A:2842:G:H8	1.76	0.50
10:A:1131:G:OP2	10:A:2515:C:H4'	2.10	0.50
10:A:271(K):U:H2'	10:A:271(M):G:N2	2.25	0.50
10:A:542:C:C2'	10:A:543:C:OP1	2.57	0.50
30:Z:130:PRO:HA	30:Z:133:ILE:HG13	1.93	0.50
10:A:1933:G:C2'	10:A:1934:C:O5'	2.59	0.50
24:T:24:PRO:HA	24:T:49:VAL:HG13	1.92	0.50
10:A:1374:G:C5	10:A:1375:C:C4	2.99	0.50
10:A:2192:G:C2'	10:A:2193:G:H5'	2.42	0.50
10:A:1562:A:H2'	10:A:1563:G:C8	2.46	0.50
13:E:13:ARG:HA	13:E:21:VAL:O	2.11	0.50
10:A:725:G:O5'	10:A:725:G:H8	1.95	0.50
14:F:51:THR:HG21	14:F:92:PRO:HD2	1.93	0.50
6:5:58:LEU:O	6:5:59:GLU:HB3	2.11	0.50
10:A:1403:C:H2'	10:A:1404:C:O5'	2.12	0.50
10:A:1469:A:H2'	10:A:1470:G:H8	1.77	0.50
4:3:11:SER:HG	4:3:13:ILE:HG12	1.75	0.50
25:U:102:GLU:HG3	26:V:2:PHE:CZ	2.46	0.50
26:V:18:LEU:HD22	26:V:19:LYS:CA	2.41	0.50
26:V:22:VAL:O	26:V:23:GLU:CB	2.49	0.50
12:D:233:HIS:N	12:D:233:HIS:CD2	2.79	0.50
23:S:52:SER:HB2	23:S:55:ALA:HB3	1.94	0.50
12:D:35:LYS:N	12:D:64:ILE:HG23	2.26	0.50
29:Y:14:LEU:O	29:Y:72:VAL:HA	2.10	0.50
10:A:1503:U:C4	10:A:1504:C:N4	2.79	0.50
1:0:10:THR:HG23	10:A:2277:G:OP2	2.10	0.50
14:F:205:ARG:O	14:F:206:ILE:HG13	2.11	0.50
10:A:2051:A:H5'	10:A:2578:G:O4'	2.10	0.50
10:A:688:U:O2	10:A:787:U:H4'	2.12	0.50
10:A:271(D):G:C2	10:A:271(E):U:C2	3.00	0.50
10:A:2600:A:H2'	10:A:2601:C:H6	1.74	0.50
10:A:363(D):G:C6	10:A:363(E):U:C4	2.99	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:28:ILE:HG12	14:F:119:ARG:HH21	1.77	0.50
10:A:1705:G:C5	10:A:1706:U:C4	2.99	0.50
10:A:561:G:O2'	25:U:45:TYR:HE2	1.94	0.50
10:A:1754:C:H2'	10:A:1755:A:O4'	2.11	0.50
10:A:1221:C:H2'	10:A:1221(A):C:H6	1.75	0.50
9:8:43:GLN:O	9:8:44:LYS:CD	2.57	0.50
10:A:2070:G:H2'	10:A:2071:A:O4'	2.11	0.50
10:A:2287:A:H2	10:A:2346:A:H2	1.57	0.50
10:A:828:U:C3'	10:A:828:U:O2	2.59	0.50
10:A:1899:G:C2'	10:A:1900:A:OP2	2.59	0.50
11:B:51:G:OP2	23:S:62:LYS:HE2	2.11	0.50
10:A:764:A:O4'	12:D:213:ARG:HG3	2.11	0.50
12:D:16:MET:CG	12:D:211:ARG:HH21	2.24	0.50
10:A:1796:U:O3'	12:D:256:GLY:HA2	2.11	0.50
10:A:2655:G:N3	10:A:2664:G:O6	2.44	0.50
10:A:1508:A:OP1	10:A:1509(A):A:C2	2.64	0.50
10:A:2625:G:H2'	10:A:2626:C:C6	2.47	0.50
13:E:167:VAL:HG22	13:E:168:MET:H	1.77	0.50
3:2:14:ARG:NE	3:2:15:LYS:H	2.09	0.50
10:A:2579:C:C4	10:A:2580:U:C5	3.00	0.50
28:X:40:LYS:CG	28:X:41:ASN:H	2.25	0.50
8:7:19:ARG:HH11	8:7:19:ARG:HG2	1.77	0.50
10:A:51:G:N3	10:A:119:A:C2	2.79	0.50
2:1:37:ILE:O	2:1:38:SER:HB2	2.11	0.50
10:A:756:C:C2'	10:A:757:U:H5'	2.41	0.50
29:Y:2:ARG:C	29:Y:4:LYS:N	2.64	0.50
10:A:1562:A:C2	10:A:1563:G:C4	3.00	0.50
10:A:1263:U:H2'	10:A:1264:G:C8	2.47	0.50
10:A:2247:A:H2'	10:A:2248:C:C6	2.47	0.50
13:E:65:GLY:C	13:E:67:PHE:H	2.15	0.50
15:G:151:ALA:HB3	15:G:153:ARG:HH12	1.76	0.50
10:A:2704:C:H2'	10:A:2705:A:O4'	2.11	0.50
10:A:827:U:H2'	10:A:2068:U:C2	2.47	0.50
10:A:258:G:C6	10:A:259:G:N7	2.79	0.50
10:A:648:G:C2'	10:A:649:G:H5'	2.42	0.50
10:A:649:G:H2'	10:A:650:C:C6	2.46	0.50
10:A:606:U:H4'	10:A:658:C:H4'	1.93	0.50
10:A:661:C:C4'	20:P:18:ARG:HG2	2.41	0.50
10:A:1450(A):C:N4	10:A:1451:C:H41	2.08	0.50
10:A:1450:G:C6	10:A:1450(A):C:C4	3.00	0.50
26:V:25:LEU:N	26:V:94:LEU:CD1	2.75	0.50
26:V:62:LEU:CB	26:V:98:GLU:HA	2.23	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1313:U:C2'	10:A:1610:A:C2	2.93	0.50
10:A:1826:G:H2'	10:A:1827:C:C6	2.47	0.50
11:B:26:A:C5	11:B:27:C:H5	2.29	0.50
10:A:729:G:O5'	12:D:208:LYS:NZ	2.41	0.50
10:A:729:G:OP2	12:D:208:LYS:NZ	2.45	0.50
10:A:2522:U:O2'	10:A:2647:U:H5''	2.10	0.50
1:0:41:ARG:HB2	10:A:2330:G:O2'	2.11	0.50
10:A:1044:G:C6	10:A:1112:G:N1	2.71	0.50
10:A:2523:G:C2'	10:A:2524:G:C5'	2.78	0.50
10:A:2574:G:C6	10:A:2575:C:N3	2.79	0.50
3:2:57:ILE:CG1	3:2:59:ARG:HH11	2.24	0.50
13:E:201:THR:CG2	13:E:202:LYS:N	2.74	0.50
10:A:2022:U:HO2'	10:A:2617:C:H5'	1.74	0.50
30:Z:149:SER:CB	30:Z:173:ALA:HA	2.41	0.50
10:A:1889:A:H1'	10:A:2087:G:O4'	2.12	0.50
13:E:70:ALA:O	13:E:73:GLU:N	2.44	0.50
10:A:508:G:C5'	10:A:509:C:OP1	2.59	0.50
30:Z:41:LEU:O	30:Z:42:VAL:C	2.50	0.50
10:A:1268:A:H2'	10:A:1269:A:O4'	2.11	0.50
10:A:2069:G:O2'	10:A:2070:G:H5'	2.11	0.50
10:A:588:U:H2'	10:A:589:C:H6	1.74	0.50
9:8:4:MET:HE1	10:A:593:G:C1'	2.41	0.50
10:A:637:A:H4'	10:A:638:G:O5'	2.12	0.50
10:A:802:A:H2'	10:A:803:U:C6	2.46	0.50
14:F:75:HIS:CE1	14:F:82:ILE:HD12	2.46	0.50
10:A:588:U:C2	14:F:90:PHE:CD1	2.98	0.50
10:A:1187:G:H5''	26:V:82:ARG:NH1	2.27	0.50
28:X:73:ARG:O	28:X:75:ASP:N	2.45	0.50
28:X:32:PRO:HA	28:X:75:ASP:HB2	1.94	0.50
26:V:35:LEU:CD2	26:V:61:VAL:HG22	2.42	0.50
15:G:110:ALA:O	15:G:114:ILE:HD11	2.12	0.50
10:A:1568:G:N3	12:D:58:HIS:CE1	2.80	0.50
16:H:140:LYS:O	16:H:141:VAL:C	2.49	0.50
1:0:40:GLN:NE2	1:0:43:THR:CA	2.73	0.50
10:A:2335:A:N7	10:A:2337:G:C5	2.80	0.50
6:5:16:ARG:HH12	6:5:17:ASP:CG	2.13	0.50
13:E:171:GLU:O	13:E:184:VAL:HA	2.11	0.50
10:A:478:A:N6	10:A:502:A:N6	2.60	0.50
10:A:2072:G:H2'	10:A:2073:C:O4'	2.12	0.50
24:T:22:PHE:CZ	24:T:85:LYS:HE3	2.46	0.50
10:A:1434:A:N6	10:A:1558:A:N6	2.52	0.50
10:A:1173:G:H3'	10:A:1174:A:C5'	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:51:VAL:HG12	26:V:52:VAL:N	2.26	0.50
12:D:2:ALA:HB3	12:D:20:ASP:HB2	1.94	0.50
24:T:106:SER:CB	24:T:110:ILE:HD11	2.42	0.50
10:A:1839:G:C8	10:A:1927:A:C1'	2.93	0.50
10:A:811:U:O2	10:A:1250:G:H3'	2.11	0.50
10:A:2086:U:H2'	10:A:2087:G:C8	2.46	0.50
14:F:126:VAL:HG11	14:F:142:TRP:CH2	2.46	0.50
14:F:9:ILE:HG12	14:F:14:PRO:C	2.32	0.50
10:A:1230:C:O5'	10:A:1230:C:H6	1.94	0.50
17:I:18:VAL:O	17:I:18:VAL:HG12	2.11	0.50
10:A:2063:C:C5	10:A:2064:C:C5	3.00	0.50
10:A:2445:G:OP1	14:F:74:ARG:NH2	2.45	0.50
20:P:23:PRO:HB2	20:P:33:ARG:CG	2.20	0.50
10:A:814:C:N3	10:A:1194:A:C2	2.80	0.50
26:V:27:ALA:HB1	26:V:64:HIS:CD2	2.47	0.50
10:A:1162:G:H1'	26:V:91:TYR:OH	2.11	0.50
12:D:231:HIS:CG	12:D:232:PRO:HD2	2.46	0.50
11:B:45:A:C2'	11:B:46:A:H5'	2.42	0.50
24:T:102:ILE:O	24:T:103:ARG:C	2.49	0.50
12:D:35:LYS:CA	12:D:64:ILE:CG2	2.90	0.50
12:D:85:ASP:HB2	12:D:92:ILE:CG1	2.39	0.50
12:D:94:LEU:C	12:D:94:LEU:HD22	2.32	0.50
22:R:63:ARG:HA	22:R:80:PHE:CE2	2.46	0.50
10:A:2637:U:O2'	10:A:2638:G:H5'	2.11	0.50
29:Y:63:LYS:O	29:Y:64:GLU:O	2.30	0.50
10:A:1505:C:C6	10:A:1505:C:H3'	2.41	0.50
30:Z:97:GLU:O	30:Z:98:MET:HB3	2.12	0.50
6:5:16:ARG:CG	6:5:16:ARG:NH1	2.70	0.50
12:D:133:LEU:HD13	12:D:173:VAL:HG11	1.92	0.50
15:G:76:SER:CB	15:G:83:ARG:HB3	2.33	0.50
11:B:80:U:H2'	11:B:81:G:N2	2.23	0.50
27:W:42:ARG:C	27:W:44:ALA:N	2.65	0.50
10:A:2485:G:H5''	21:Q:46:GLN:HE21	1.77	0.50
10:A:1625:C:H2'	10:A:1626:G:O4'	2.12	0.50
30:Z:157:LEU:HD13	30:Z:161:VAL:HG12	1.92	0.50
2:1:8:SER:HB3	10:A:1364:G:OP1	2.11	0.50
10:A:1845:G:H2'	10:A:1846:G:H5'	1.92	0.50
12:D:66:ASP:OD2	12:D:69:ARG:HG2	2.12	0.50
10:A:1545:A:H2'	10:A:1546:C:C5'	2.41	0.50
14:F:93:LYS:HB3	14:F:94:PRO:HD2	1.93	0.50
7:6:11:LEU:HD11	7:6:26:ASN:ND2	2.27	0.50
7:6:12:GLU:HB3	7:6:23:THR:CG2	2.38	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:258:G:C4	10:A:259:G:C8	3.00	0.50
20:P:41:ARG:HA	20:P:41:ARG:CZ	2.41	0.50
3:2:52:ASP:OD1	10:A:76:C:O4'	2.30	0.50
10:A:1005:C:O2'	18:N:28:THR:CG2	2.58	0.50
25:U:62:ILE:HA	25:U:65:ILE:HD12	1.92	0.50
10:A:1608:A:H1'	10:A:1610:A:OP2	2.11	0.50
23:S:74:ALA:CB	23:S:103:GLU:HG3	2.21	0.50
23:S:89:ARG:C	23:S:92:TYR:HB3	2.32	0.50
10:A:1353:A:H5''	12:D:38:LYS:NZ	2.26	0.50
12:D:32:SER:O	12:D:33:LEU:CB	2.60	0.50
10:A:2773:C:H2'	10:A:2774:C:H6	1.76	0.50
10:A:2335:A:C8	10:A:2337:G:N7	2.80	0.50
10:A:2222:G:H5''	12:D:186:HIS:CE1	2.46	0.50
10:A:856:C:H2'	10:A:857:C:C6	2.46	0.50
10:A:271(P):C:C2	10:A:271(Q):G:N7	2.79	0.50
10:A:2472:G:C6	10:A:2477:C:OP1	2.65	0.50
10:A:2476:A:N3	10:A:2477:C:C6	2.80	0.50
10:A:1949:G:H2'	10:A:1950:G:C8	2.46	0.50
19:O:46:ALA:O	19:O:47:ILE:HB	2.12	0.50
10:A:1853:A:N1	10:A:2087:G:H1'	2.27	0.50
10:A:2850:A:OP2	10:A:2866:U:C5	2.62	0.50
10:A:836:G:C5	10:A:837:C:C5	3.00	0.50
10:A:1631(A):A:C2'	10:A:1632:A:H5'	2.42	0.50
10:A:2674:G:O3'	19:O:30:ALA:HA	2.11	0.50
10:A:2813:A:C6	10:A:2814:C:C4	3.00	0.50
10:A:338:G:H2'	10:A:339:U:H6	1.76	0.50
15:G:17:PRO:O	15:G:21:ARG:HB3	2.11	0.50
26:V:45:THR:HG22	26:V:45:THR:O	2.11	0.50
10:A:2052:G:C4	10:A:2053:G:C8	3.00	0.50
10:A:2058:A:N1	33:A:3206:TEL:O48	2.30	0.50
3:2:37:PHE:CE2	3:2:40:SER:HA	2.47	0.50
10:A:1405:U:H2'	10:A:1406:U:H6	1.72	0.50
10:A:1528:A:H8	10:A:1528(A):A:C5	2.28	0.50
28:X:85:PRO:O	28:X:87:GLN:N	2.45	0.50
4:3:26:LEU:HD21	4:3:46:ASN:HB2	1.94	0.50
10:A:763:G:O2'	10:A:764:A:H3'	2.12	0.50
12:D:39:LYS:HB2	12:D:62:TYR:HB2	1.93	0.50
10:A:2892:A:N7	10:A:2893:G:C8	2.80	0.50
13:E:59:VAL:CG2	13:E:63:LEU:HA	2.37	0.50
10:A:2309:A:N3	10:A:2310:A:C2	2.79	0.50
10:A:1499:C:H2'	10:A:1500:G:C5'	2.42	0.50
11:B:66:A:C6	11:B:109:C:C5	3.00	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:874:G:N2	10:A:875:G:H1'	2.27	0.50
10:A:2803:C:H2'	10:A:2804:C:O4'	2.12	0.50
21:Q:88:GLY:O	21:Q:90:VAL:N	2.45	0.50
10:A:743:G:H2'	10:A:744:G:C5'	2.37	0.50
10:A:1293:C:H2'	10:A:1294:U:H6	1.75	0.50
22:R:12:ARG:HB3	22:R:16:HIS:HB3	1.94	0.50
10:A:1786:A:N1	10:A:2606:C:O4'	2.44	0.50
10:A:271(T):C:C2'	10:A:271(U):G:H5'	2.41	0.50
3:2:14:ARG:O	3:2:17:SER:N	2.44	0.50
17:I:133:HIS:HB2	17:I:134:PRO:HD2	1.89	0.50
27:W:36:LEU:HD12	27:W:48:ALA:HA	1.94	0.50
10:A:1434:A:N6	10:A:1558:A:H62	2.05	0.50
27:W:86:LEU:HD12	27:W:87:PRO:O	2.12	0.50
16:H:136:ILE:HG22	16:H:136:ILE:O	2.11	0.50
13:E:101:ARG:HB3	13:E:169:ASN:HD22	1.75	0.50
10:A:523:C:H4'	10:A:540:C:O2	2.12	0.50
10:A:128:C:C3'	10:A:128:C:C6	2.95	0.50
10:A:272(B):G:C2'	10:A:272(C):G:O5'	2.60	0.50
16:H:158:HIS:NE2	16:H:168:PRO:HB2	2.27	0.50
10:A:2619:C:H2'	10:A:2620:C:H6	1.76	0.50
10:A:624:C:C2'	10:A:625:G:H5'	2.42	0.49
10:A:974:G:C4	10:A:989:G:C2	2.99	0.49
20:P:112:LEU:H	20:P:128:HIS:HD2	1.58	0.49
10:A:1718:G:C2	10:A:1745:C:O2	2.64	0.49
10:A:1468:C:O2'	10:A:1469:A:H5'	2.12	0.49
28:X:21:PHE:N	28:X:21:PHE:CD1	2.77	0.49
15:G:20:ILE:HG23	15:G:25:TYR:HB2	1.93	0.49
10:A:1799:G:O2'	10:A:1800:C:OP2	2.25	0.49
10:A:1811:G:C5	10:A:1812:A:C8	3.00	0.49
2:1:70:VAL:O	2:1:73:LEU:HB2	2.12	0.49
30:Z:99:TYR:CE2	30:Z:125:LEU:HD12	2.46	0.49
10:A:868:U:C4	10:A:869:G:N7	2.79	0.49
13:E:52:LEU:HD13	13:E:76:ARG:CG	2.42	0.49
6:5:42:PRO:O	6:5:43:HIS:CB	2.56	0.49
10:A:271(G):C:O2	10:A:271(G):C:H2'	2.11	0.49
10:A:1593:G:C6	10:A:1594:G:C5	3.00	0.49
10:A:1972:A:H2'	10:A:1973:G:C8	2.46	0.49
19:O:63:VAL:HG23	19:O:64:ARG:HG3	1.93	0.49
16:H:19:VAL:HB	16:H:44:VAL:HG13	1.94	0.49
26:V:47:VAL:CG1	26:V:48:GLY:H	2.16	0.49
18:N:128:HIS:HD2	18:N:131:GLN:H	1.58	0.49
19:O:2:ILE:HD11	19:O:82:ASN:HB2	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2485:G:C2'	10:A:2486:G:H5'	2.42	0.49
28:X:40:LYS:HG3	28:X:41:ASN:H	1.74	0.49
16:H:32:GLU:O	16:H:33:LEU:HD23	2.11	0.49
10:A:2570:G:H2'	10:A:2571:C:O4'	2.12	0.49
10:A:184:C:C2	10:A:185:U:C5	2.99	0.49
24:T:48:ILE:N	24:T:48:ILE:HD12	2.27	0.49
15:G:141:PHE:O	15:G:143:GLU:N	2.45	0.49
22:R:28:LEU:HD22	22:R:28:LEU:O	2.11	0.49
10:A:2364:C:C2'	10:A:2365:G:H5'	2.41	0.49
10:A:2880:C:HO2'	22:R:90:ARG:HD3	1.77	0.49
10:A:1849:G:N1	10:A:1850:G:C5	2.80	0.49
10:A:2716:U:O2'	10:A:2717:G:H5'	2.12	0.49
10:A:2442:C:H2'	10:A:2443:C:C6	2.47	0.49
3:2:54:LYS:H	3:2:56:GLN:HG2	1.77	0.49
10:A:1388:G:H2'	10:A:1389:G:C8	2.45	0.49
10:A:1462:C:O2	10:A:1462:C:H2'	2.12	0.49
10:A:933:A:H2'	10:A:934:G:C5'	2.42	0.49
18:N:28:THR:HA	18:N:106:MET:HE2	1.94	0.49
26:V:93:GLU:HG2	26:V:94:LEU:H	1.77	0.49
10:A:2375:G:O2'	10:A:2377:A:N7	2.35	0.49
15:G:11:TYR:HD2	15:G:12:TYR:CD1	2.30	0.49
12:D:35:LYS:HG2	12:D:64:ILE:CG2	2.42	0.49
13:E:63:LEU:O	13:E:64:LYS:C	2.50	0.49
29:Y:41:GLY:O	29:Y:43:ASN:OD1	2.29	0.49
19:O:93:PRO:HD3	19:O:114:ILE:CD1	2.43	0.49
6:5:31:VAL:CG1	6:5:42:PRO:HG3	2.42	0.49
10:A:919:G:H4'	11:B:81:G:H4'	1.94	0.49
13:E:160:TYR:HD2	13:E:161:GLY:N	2.10	0.49
29:Y:81:LYS:HB3	29:Y:96:ILE:HG22	1.94	0.49
17:I:94:ALA:O	17:I:98:ALA:HB2	2.12	0.49
24:T:20:PRO:O	24:T:22:PHE:HD2	1.95	0.49
18:N:134:ARG:HG3	18:N:134:ARG:O	2.12	0.49
10:A:2485:G:H5''	21:Q:46:GLN:NE2	2.27	0.49
10:A:2477:C:C6	10:A:2481:G:O6	2.65	0.49
10:A:584:C:OP2	25:U:10:ARG:NH2	2.45	0.49
10:A:1487:G:H2'	10:A:1488:G:O5'	2.12	0.49
21:Q:34:LEU:HB3	21:Q:104:PHE:HB2	1.95	0.49
10:A:1682:G:H2'	10:A:1683:C:C6	2.47	0.49
10:A:1439:A:C2	10:A:1553:A:C4	3.00	0.49
10:A:553:G:C6	10:A:554:U:C4	2.99	0.49
10:A:1260:G:H2'	10:A:1261:C:C6	2.47	0.49
23:S:80:LEU:H	23:S:80:LEU:HD12	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:662:G:O2'	10:A:663:G:H5'	2.12	0.49
10:A:810:U:C2	20:P:31:ALA:O	2.66	0.49
20:P:89:ALA:C	20:P:91:PHE:H	2.16	0.49
3:2:56:GLN:NE2	3:2:56:GLN:CA	2.51	0.49
28:X:21:PHE:CD2	28:X:90:GLU:HA	2.46	0.49
4:3:11:SER:HB3	10:A:988:A:P	2.53	0.49
10:A:1006:C:H1'	18:N:106:MET:HB3	1.93	0.49
15:G:120:LEU:O	15:G:181:ARG:HB2	2.12	0.49
15:G:16:ARG:CA	15:G:19:LEU:HD12	2.37	0.49
23:S:88:ASP:O	23:S:92:TYR:HD2	1.96	0.49
1:0:43:THR:HG22	10:A:2331:G:O3'	2.12	0.49
10:A:2386:C:H2'	10:A:2387:U:O4'	2.11	0.49
10:A:2094:G:N3	10:A:2094:G:H2'	2.26	0.49
19:O:98:VAL:CG1	19:O:117:LEU:HB3	2.43	0.49
10:A:856:C:O2'	10:A:857:C:P	2.70	0.49
10:A:2536:G:N7	10:A:2537:U:C5	2.80	0.49
17:I:113:ARG:HB3	17:I:131:LYS:O	2.12	0.49
17:I:136:VAL:O	17:I:136:VAL:HG22	2.12	0.49
10:A:1409:C:O2'	10:A:1410:G:H5'	2.12	0.49
10:A:1831:G:H2'	10:A:1832:C:C6	2.47	0.49
19:O:13:ASN:ND2	19:O:97:ARG:N	2.55	0.49
10:A:152:G:H2'	10:A:153:C:C6	2.48	0.49
10:A:460:A:C2	10:A:470:A:C5	3.00	0.49
10:A:471:A:H2'	10:A:472:A:O5'	2.13	0.49
10:A:34:C:O2'	10:A:35:G:OP1	2.29	0.49
10:A:1419:A:O2'	10:A:1421:G:N7	2.36	0.49
10:A:272(B):G:O2'	10:A:272(C):G:O4'	2.31	0.49
10:A:296:C:H2'	10:A:297:C:C6	2.45	0.49
10:A:1399:C:O2'	10:A:1400:G:H5'	2.12	0.49
17:I:64:GLU:O	17:I:68:LEU:HB2	2.12	0.49
6:5:29:THR:O	6:5:30:LEU:HD23	2.12	0.49
19:O:69:ILE:N	19:O:69:ILE:HD12	2.27	0.49
13:E:66:HIS:CG	13:E:66:HIS:O	2.66	0.49
10:A:197:A:N6	10:A:2430:A:H2'	2.28	0.49
27:W:88:ARG:HB3	27:W:92:ARG:CB	2.35	0.49
10:A:1750:G:O2'	10:A:2860:A:N1	2.40	0.49
3:2:32:LEU:HD12	3:2:32:LEU:C	2.31	0.49
10:A:1341:U:C3'	10:A:1397:U:O2	2.60	0.49
10:A:1408:C:C2	10:A:1595:G:N2	2.80	0.49
28:X:36:LYS:NZ	28:X:38:GLU:C	2.65	0.49
10:A:1159:U:O2'	10:A:1160:G:H5'	2.13	0.49
11:B:28:C:OP1	23:S:36:TYR:OH	2.24	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:89:SER:HB2	12:D:158:ALA:O	2.12	0.49
10:A:306:U:H2'	10:A:307:G:O4'	2.11	0.49
10:A:2275:C:O2'	21:Q:83:MET:CA	2.46	0.49
6:5:51:TYR:HB3	6:5:52:TYR:CE2	2.47	0.49
10:A:915:C:C5	10:A:916:G:N7	2.80	0.49
10:A:917:A:H2'	10:A:918:A:O4'	2.12	0.49
29:Y:76:CYS:CB	29:Y:77:PRO:CD	2.90	0.49
17:I:72:LEU:HA	17:I:75:LEU:HB3	1.95	0.49
24:T:38:ASN:HD22	24:T:38:ASN:C	2.16	0.49
10:A:1887:C:C3'	10:A:1888:G:H5'	2.42	0.49
10:A:1131:G:C8	10:A:2025:C:H4'	2.47	0.49
10:A:2038:G:H2'	10:A:2039:C:O4'	2.12	0.49
12:D:182:LEU:HB3	12:D:271:ILE:HD12	1.94	0.49
10:A:466:A:O4'	10:A:683:C:H4'	2.12	0.49
20:P:5:ASP:CG	20:P:6:LEU:H	2.16	0.49
2:1:15:ALA:HA	2:1:46:LEU:HD21	1.93	0.49
14:F:118:ALA:O	14:F:120:GLU:N	2.42	0.49
10:A:1684:C:C2	10:A:1705:G:C2	3.01	0.49
17:I:84:GLY:O	17:I:85:GLU:CB	2.59	0.49
11:B:10:C:C4	11:B:11:C:C5	3.00	0.49
13:E:110:GLY:HA2	13:E:162:ALA:N	2.26	0.49
3:2:35:LEU:HD23	3:2:35:LEU:H	1.77	0.49
9:8:32:LEU:HD22	10:A:2419:U:O5'	2.12	0.49
10:A:1741:A:N3	10:A:1742:G:N2	2.60	0.49
10:A:1142(A):A:C4	10:A:1144:G:C8	3.01	0.49
11:B:82:G:H2'	11:B:83:G:H5'	1.94	0.49
18:N:32:THR:O	18:N:35:ARG:O	2.31	0.49
18:N:40:PRO:CA	25:U:64:ARG:HH22	2.26	0.49
10:A:1225:G:OP1	26:V:88:ARG:CB	2.61	0.49
11:B:117:G:N3	11:B:118:G:C8	2.80	0.49
23:S:99:LYS:O	23:S:106:ARG:NH1	2.42	0.49
24:T:50:ILE:HA	24:T:99:LEU:CD1	2.42	0.49
12:D:43:ARG:NH1	12:D:44:ASN:ND2	2.60	0.49
10:A:2649:U:C2	10:A:2672:G:N2	2.80	0.49
27:W:75:TYR:CD1	27:W:75:TYR:N	2.79	0.49
11:B:66:A:C4	11:B:109:C:C4	3.01	0.49
13:E:52:LEU:HD22	13:E:76:ARG:CD	2.43	0.49
13:E:2:LYS:HB3	13:E:95:ILE:CG2	2.41	0.49
12:D:126:GLN:C	12:D:193:VAL:HG11	2.33	0.49
10:A:2043:C:H1'	10:A:2779:U:O4	2.11	0.49
10:A:2698:U:H2'	10:A:2699:C:C6	2.47	0.49
10:A:1688:U:O2	10:A:1700:A:H8	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:271(Q):G:O2'	10:A:271(R):G:H8	1.93	0.49
10:A:2722:G:O3'	22:R:5:LYS:HG2	2.12	0.49
24:T:80:SER:CB	24:T:81:PRO:HD3	2.37	0.49
21:Q:42:ILE:HD13	21:Q:97:VAL:CB	2.42	0.49
10:A:1213:A:O2'	10:A:1214:A:H5'	2.12	0.49
20:P:10:PRO:HD2	20:P:11:GLY:H	1.78	0.49
10:A:1198:U:H2'	10:A:1199:U:H6	1.74	0.49
10:A:756:C:C4	10:A:757:U:C5	3.00	0.49
1:O:56:ASP:OD2	10:A:2364:C:H4'	2.13	0.49
10:A:1547:C:H2'	10:A:1548:C:C6	2.48	0.49
19:O:87:ILE:CG2	19:O:88:ASN:N	2.75	0.49
21:Q:54:MET:SD	21:Q:118:LEU:HD23	2.52	0.49
10:A:2584:U:O4'	10:A:2584:U:O2	2.29	0.49
10:A:2052:G:O4'	13:E:142:GLY:HA3	2.13	0.49
10:A:627:A:C5	10:A:637:A:N7	2.80	0.49
20:P:34:GLY:O	20:P:35:HIS:C	2.51	0.49
3:2:48:HIS:NE2	10:A:75:G:H4'	2.28	0.49
10:A:1450(A):C:N3	10:A:1451:C:N4	2.61	0.49
10:A:1458:C:O2	10:A:1458:C:O4'	2.30	0.49
10:A:58:G:OP1	28:X:72:LYS:HB2	2.11	0.49
26:V:2:PHE:HD2	26:V:42:GLY:HA2	1.77	0.49
10:A:696:G:O2'	10:A:697:C:H5'	2.12	0.49
2:1:10:LYS:O	2:1:13:ILE:CG2	2.61	0.49
10:A:2526:G:C6	10:A:2527:C:C4	3.00	0.49
12:D:131:LEU:HB2	12:D:136:ILE:CD1	2.38	0.49
13:E:103:ASP:OD2	13:E:168:MET:HE1	2.12	0.49
3:2:15:LYS:HA	3:2:18:PRO:CD	2.43	0.49
16:H:89:ILE:H	16:H:89:ILE:HD12	1.75	0.49
10:A:2436:G:C5	10:A:2437:U:C5	3.00	0.49
10:A:1008:C:N4	10:A:1136:G:C6	2.81	0.49
14:F:182:ASN:O	14:F:186:ILE:HG13	2.13	0.49
10:A:2518:A:H5'	10:A:2518:A:C8	2.47	0.49
14:F:41:LEU:O	14:F:44:ARG:HG2	2.12	0.49
2:1:28:GLY:C	2:1:30:VAL:N	2.65	0.49
22:R:30:THR:HG22	22:R:30:THR:O	2.11	0.49
7:6:13:CYS:HB2	7:6:22:ALA:HB3	1.94	0.49
10:A:194:G:C6	10:A:195:A:C5	3.00	0.49
10:A:1153:C:OP1	25:U:93:LYS:NZ	2.46	0.49
26:V:72:VAL:HG12	26:V:88:ARG:NH2	2.28	0.49
11:B:38:C:H2'	11:B:39:A:O4'	2.13	0.49
23:S:63:THR:CA	23:S:66:ALA:HB3	2.34	0.49
10:A:1782:C:O4'	10:A:2609:U:C2	2.66	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:778:G:C6	10:A:779:U:C4	3.00	0.49
10:A:2572:A:C8	13:E:144:ARG:HB3	2.47	0.49
30:Z:10:ARG:NH2	30:Z:26:GLY:O	2.44	0.49
12:D:108:PRO:HD2	12:D:111:LEU:HD22	1.94	0.49
10:A:2628:C:O2'	10:A:2781:A:H3'	2.12	0.49
13:E:170:LEU:N	13:E:170:LEU:CD1	2.75	0.49
10:A:1497:U:O2	10:A:1497:U:C2'	2.60	0.49
11:B:78:A:H2'	11:B:79:C:O4'	2.11	0.49
29:Y:76:CYS:HB3	29:Y:77:PRO:CD	2.43	0.49
10:A:1411:C:O5'	10:A:1411:C:H6	1.95	0.49
8:7:40:TRP:CD2	10:A:459:U:C5'	2.95	0.49
10:A:718:A:H3'	10:A:719:C:H6	1.78	0.49
10:A:1956:U:H2'	10:A:1957:C:C5'	2.42	0.49
10:A:1487:G:C2	10:A:1488:G:C4	3.00	0.49
10:A:811:U:P	20:P:25:SER:O	2.71	0.49
14:F:7:TYR:HB3	14:F:16:GLY:CA	2.43	0.49
1:0:51:VAL:HG21	1:0:79:VAL:HG12	1.94	0.49
21:Q:43:THR:OG1	21:Q:45:GLN:HG2	2.13	0.49
10:A:2392:A:H2	10:A:2424:C:N4	2.07	0.49
33:A:3206:TEL:O18	33:A:3206:TEL:O32	2.30	0.49
20:P:112:LEU:H	20:P:128:HIS:CD2	2.31	0.49
10:A:985:C:O2'	10:A:986:C:H5'	2.13	0.49
10:A:1323:U:C2'	10:A:1324:G:H5'	2.43	0.49
23:S:56:LEU:O	23:S:57:LYS:HB2	2.13	0.49
10:A:1798:U:HO2'	10:A:1802:A:HO2'	1.61	0.49
16:H:70:THR:O	16:H:71:LEU:C	2.50	0.49
10:A:2564:A:C5	10:A:2565:A:C6	3.01	0.49
30:Z:52:SER:OG	30:Z:54:HIS:HD2	1.95	0.49
10:A:953:A:C2	10:A:954:G:C8	3.01	0.49
10:A:358:U:H3'	10:A:358:U:H6	1.78	0.49
10:A:2208:A:O2'	10:A:2218:U:P	2.70	0.49
17:I:93:THR:HG22	17:I:119:PRO:HB3	1.93	0.49
10:A:2712(A):A:H5''	10:A:2713:A:OP2	2.13	0.49
10:A:271(S):G:H2'	10:A:271(T):C:O4'	2.12	0.49
2:1:23:LYS:O	2:1:37:ILE:HG22	2.13	0.49
13:E:65:GLY:HA2	13:E:70:ALA:HB2	1.95	0.49
10:A:699:A:H4'	10:A:1634:A:N7	2.27	0.49
7:6:15:GLU:CD	7:6:18:ARG:HG3	2.33	0.49
10:A:2061:G:N3	10:A:2063:C:C4	2.81	0.49
10:A:2415:G:C6	10:A:2416:C:C4	3.01	0.49
10:A:579:G:C4	10:A:580:C:C5	3.01	0.49
6:5:2:ALA:HB3	10:A:747:U:N1	2.28	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:101:VAL:HG22	20:P:102:ARG:N	2.26	0.49
10:A:251:A:OP1	20:P:50:ARG:HD2	2.12	0.49
3:2:24:LEU:O	3:2:27:GLU:HB2	2.12	0.49
10:A:1142(A):A:C5	10:A:1144:G:C5	3.00	0.49
18:N:40:PRO:C	25:U:64:ARG:NH2	2.62	0.49
10:A:557:U:O2	18:N:45:ASN:HB2	2.13	0.49
18:N:16:ILE:HG23	18:N:54:VAL:HG22	1.95	0.49
18:N:23:LEU:HD21	18:N:62:VAL:HG23	1.95	0.49
18:N:40:PRO:HB3	25:U:68:ALA:HB2	1.93	0.49
12:D:223:GLY:HA3	12:D:231:HIS:CE1	2.48	0.49
17:I:123:LEU:HD13	17:I:143:SER:O	2.13	0.49
11:B:73:A:H5'	11:B:74:U:OP2	2.12	0.49
10:A:354:G:C6	10:A:355:G:C5	3.01	0.49
10:A:1296:G:O2'	10:A:1297:C:H5'	2.13	0.49
22:R:4:LEU:C	22:R:6:SER:H	2.15	0.49
29:Y:96:ILE:CG1	29:Y:99:CYS:SG	3.00	0.49
10:A:1170:G:OP2	10:A:1170:G:H8	1.96	0.49
3:2:18:PRO:O	3:2:22:GLU:HB2	2.13	0.49
10:A:1412:A:H3'	10:A:1413:G:C8	2.48	0.49
10:A:2870:C:H5''	22:R:65:LEU:CD2	2.43	0.49
19:O:2:ILE:HG23	19:O:6:THR:CG2	2.43	0.49
10:A:340:A:H2'	10:A:341:G:H5'	1.95	0.49
29:Y:53:PRO:HB3	29:Y:57:GLN:HA	1.94	0.49
16:H:91:GLY:HA2	16:H:160:LYS:NZ	2.27	0.49
10:A:2835:A:C6	10:A:2879:C:C5	3.01	0.49
21:Q:93:TYR:N	21:Q:93:TYR:CD1	2.79	0.49
13:E:65:GLY:C	13:E:67:PHE:N	2.66	0.49
10:A:1767:C:C2'	10:A:1768:U:H5'	2.42	0.49
14:F:170:LEU:HD23	14:F:172:TRP:CZ2	2.47	0.49
10:A:1929:G:H5''	10:A:1929:G:N3	2.27	0.49
10:A:645:C:H3'	10:A:645:C:O2	2.13	0.49
10:A:1268:A:C2	10:A:2013:A:C4	3.01	0.49
9:8:30:ARG:HB2	10:A:2393:A:OP1	2.13	0.49
20:P:107:LYS:C	20:P:109:GLY:N	2.66	0.49
20:P:88:LEU:O	20:P:90:ARG:N	2.45	0.49
28:X:35:THR:O	28:X:39:ILE:HG23	2.13	0.49
10:A:1140:C:O4'	10:A:1143:A:C2	2.66	0.49
10:A:1139:G:H5'	18:N:102:ALA:CB	2.43	0.49
18:N:3:THR:HA	18:N:4:TYR:CE1	2.48	0.49
26:V:19:LYS:C	26:V:20:LEU:HG	2.34	0.49
26:V:90:PRO:CG	26:V:91:TYR:N	2.75	0.49
11:B:28:C:H2'	11:B:29:A:C8	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:28:C:C2'	11:B:29:A:O4'	2.59	0.49
10:A:1819:A:OP1	12:D:161:THR:HG21	2.13	0.49
12:D:211:ARG:HA	12:D:214:TRP:CD2	2.48	0.49
10:A:2520:C:C4	10:A:2567:G:C8	3.01	0.49
10:A:2732:G:H3'	10:A:2733:A:C5'	2.43	0.49
10:A:287:C:H2'	10:A:288:C:O4'	2.13	0.49
12:D:150:LYS:HE3	12:D:150:LYS:HA	1.95	0.49
10:A:2728:U:H2'	10:A:2729:G:C8	2.47	0.49
29:Y:75:ILE:CG1	29:Y:79:CYS:HA	2.43	0.49
10:A:2000:G:C2	10:A:2001:A:C8	3.00	0.49
19:O:35:VAL:HG11	19:O:103:ALA:HB3	1.95	0.49
16:H:19:VAL:HG21	16:H:44:VAL:HA	1.94	0.49
10:A:1131:G:H8	10:A:2025:C:H4'	1.78	0.49
24:T:109:GLU:C	24:T:113:LYS:HE3	2.34	0.49
10:A:2556:C:C2'	10:A:2557:G:H5'	2.43	0.49
15:G:55:LYS:O	15:G:59:GLU:HB2	2.12	0.49
22:R:103:ARG:HB2	22:R:109:ALA:O	2.12	0.49
10:A:129:C:H6	10:A:129:C:H5''	1.78	0.49
10:A:923:C:H2'	10:A:924:C:H6	1.78	0.49
10:A:2400:G:C6	10:A:2401:U:C4	3.01	0.49
10:A:1548:C:O2'	10:A:1549:C:H5'	2.13	0.49
10:A:1575:C:H2'	10:A:1576:U:C6	2.47	0.49
9:8:31:HIS:O	9:8:33:ASN:N	2.46	0.48
10:A:675:A:N6	10:A:676:A:N6	2.60	0.48
20:P:32:THR:HG21	20:P:37:GLY:HA2	1.94	0.48
20:P:39:LYS:HD3	20:P:39:LYS:HA	1.56	0.48
20:P:48:PRO:O	20:P:50:ARG:N	2.45	0.48
10:A:1343:G:H1	10:A:1404:C:H42	1.60	0.48
10:A:142:A:H3'	10:A:142(A):C:H5'	1.95	0.48
10:A:94:C:O2	10:A:94:C:H2'	2.12	0.48
4:3:8:LEU:HG	4:3:23:LEU:CD2	2.43	0.48
26:V:13:ARG:HG2	26:V:13:ARG:HH11	1.74	0.48
26:V:2:PHE:O	26:V:3:ALA:HB3	2.13	0.48
10:A:1799:G:H5'	10:A:1819:A:N6	2.27	0.48
12:D:67:PHE:CE1	12:D:157:ARG:NH2	2.81	0.48
10:A:372:G:O2'	10:A:373:U:P	2.71	0.48
10:A:2572:A:N7	13:E:145:LYS:HB2	2.28	0.48
13:E:61:ARG:H	13:E:62:PRO:HD2	1.76	0.48
10:A:1484:G:C6	10:A:1506:C:N4	2.80	0.48
30:Z:101:PRO:HA	30:Z:123:ASP:HB3	1.94	0.48
1:0:53:MET:HA	1:0:58:THR:O	2.13	0.48
1:0:74:ARG:HG2	11:B:12:C:HO2'	1.73	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:21:G:C6	11:B:63:G:N1	2.81	0.48
12:D:133:LEU:HD21	12:D:191:ALA:HB2	1.94	0.48
29:Y:87:LYS:HG3	29:Y:88:LYS:N	2.28	0.48
10:A:64:A:C6	10:A:65:C:C4	3.01	0.48
10:A:2740:A:C6	10:A:2764:A:C8	3.01	0.48
10:A:790:C:O2'	10:A:791:C:C5'	2.61	0.48
12:D:77:ALA:HB2	12:D:97:TYR:CE2	2.48	0.48
19:O:13:ASN:ND2	19:O:97:ARG:HB2	2.28	0.48
10:A:2486:G:H2'	10:A:2487:G:O5'	2.13	0.48
10:A:2885:C:N3	10:A:2886:G:H1'	2.28	0.48
10:A:183:C:C2'	10:A:184:C:H5'	2.42	0.48
10:A:1239:G:H2'	10:A:1240:U:O4'	2.13	0.48
10:A:1349:A:H5'	10:A:1349:A:N3	2.28	0.48
21:Q:70:PRO:HG2	21:Q:70:PRO:O	2.13	0.48
10:A:1562:A:H2'	10:A:1563:G:H8	1.78	0.48
10:A:1053:C:N4	10:A:1107:G:H22	2.10	0.48
13:E:82:ARG:HG3	13:E:83:ASP:N	2.28	0.48
20:P:149:GLU:HG3	20:P:149:GLU:O	2.12	0.48
10:A:1762:A:H8	10:A:1762:A:O5'	1.95	0.48
2:1:26:ARG:CB	2:1:34:THR:HB	2.42	0.48
10:A:1191:G:OP1	20:P:35:HIS:ND1	2.46	0.48
20:P:32:THR:O	20:P:33:ARG:HB2	2.13	0.48
10:A:1341:U:HO2'	10:A:1397:U:HO2'	1.55	0.48
28:X:89:ILE:HD12	28:X:92:LEU:HD12	1.95	0.48
3:2:29:LYS:HZ3	28:X:9:LEU:HA	1.76	0.48
25:U:92:ARG:O	25:U:92:ARG:HG2	2.11	0.48
13:E:60:ASN:OD1	13:E:62:PRO:HD2	2.12	0.48
29:Y:26:LYS:HG2	29:Y:27:VAL:H	1.78	0.48
29:Y:38:ILE:N	29:Y:66:PRO:O	2.43	0.48
10:A:1505:C:H5	10:A:1506:C:C6	2.31	0.48
10:A:2208:A:H1'	10:A:2219:G:C5	2.47	0.48
10:A:1039:G:N2	10:A:1117:G:H1'	2.28	0.48
12:D:70:TRP:C	12:D:70:TRP:CD1	2.87	0.48
12:D:70:TRP:CZ3	12:D:150:LYS:HA	2.47	0.48
10:A:1655:A:C8	10:A:1656:C:C5	3.01	0.48
10:A:1581:G:C2'	10:A:1582:C:H5'	2.43	0.48
10:A:1694:C:O2'	10:A:1695:G:C5	2.67	0.48
10:A:476:G:N2	10:A:478:A:H3'	2.28	0.48
10:A:1628:G:O2'	10:A:1629:U:H5'	2.13	0.48
10:A:1435:G:H2'	10:A:1436:G:O4'	2.13	0.48
10:A:2580:U:H5'	13:E:131:ALA:HB3	1.95	0.48
17:I:15:VAL:O	17:I:17:GLN:N	2.46	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:I:12:LEU:N	17:I:12:LEU:HD23	2.28	0.48
10:A:1204:A:H61	10:A:1240:U:H2'	1.78	0.48
10:A:1238:G:N2	10:A:1239:G:H1'	2.28	0.48
10:A:1348:G:C2'	10:A:1349:A:H5''	2.42	0.48
10:A:2826:A:C4	10:A:2827:C:C6	3.01	0.48
10:A:2050:C:H1'	13:E:156:MET:HE2	1.93	0.48
14:F:32:LEU:HD23	14:F:32:LEU:O	2.13	0.48
22:R:83:ILE:O	22:R:84:ALA:C	2.50	0.48
29:Y:52:SER:C	29:Y:54:LYS:H	2.16	0.48
12:D:5:LYS:H	12:D:5:LYS:HD2	1.78	0.48
10:A:195:A:H2'	10:A:198:C:N4	2.29	0.48
10:A:2063:C:C4	10:A:2064:C:C4	3.00	0.48
10:A:2358:G:C5	10:A:2359:C:C5	3.01	0.48
10:A:2052:G:C8	13:E:141:ILE:HD11	2.49	0.48
18:N:58:ASP:C	18:N:60:ILE:N	2.66	0.48
26:V:60:GLU:O	26:V:62:LEU:HG	2.13	0.48
26:V:66:ARG:HD2	26:V:68:LYS:N	2.29	0.48
10:A:1324:G:C2	10:A:1331:A:C2	3.00	0.48
11:B:40:U:H1'	11:B:45:A:N6	2.27	0.48
11:B:55:U:C6	11:B:55:U:OP2	2.65	0.48
23:S:38:GLN:HG3	23:S:47:THR:HG21	1.95	0.48
12:D:94:LEU:HA	12:D:104:TYR:HA	1.94	0.48
16:H:70:THR:O	16:H:73:ALA:N	2.46	0.48
10:A:2773:C:H2'	10:A:2774:C:C6	2.48	0.48
22:R:96:ARG:NH2	22:R:117:VAL:HG23	2.25	0.48
12:D:173:VAL:HG12	12:D:185:VAL:O	2.14	0.48
10:A:528:A:N1	10:A:2043:C:C5'	2.75	0.48
10:A:956:G:OP2	21:Q:14:ARG:NH2	2.46	0.48
10:A:903:C:C3'	10:A:904:C:H5''	2.43	0.48
10:A:919:G:H5'	11:B:81:G:H1'	1.96	0.48
3:2:57:ILE:O	3:2:57:ILE:HG13	2.12	0.48
17:I:130:TYR:CG	17:I:131:LYS:N	2.79	0.48
8:7:5:TRP:CD1	8:7:7:PRO:HG3	2.48	0.48
10:A:1686:C:H2'	10:A:1687:G:C5'	2.42	0.48
21:Q:17:LEU:HD21	21:Q:41:TRP:HE1	1.77	0.48
8:7:15:THR:HG22	8:7:16:HIS:CD2	2.49	0.48
2:1:53:VAL:HG13	2:1:54:ALA:N	2.28	0.48
10:A:1265:A:C8	10:A:1267:U:C2	3.02	0.48
10:A:405:U:H4'	10:A:406:G:OP2	2.13	0.48
10:A:1188:U:O2'	10:A:1189:A:H5'	2.13	0.48
10:A:259:G:N2	10:A:621:A:H8	2.12	0.48
10:A:622:G:H2'	10:A:623:G:O4'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1404:C:N3	10:A:1405:U:C5	2.82	0.48
10:A:1403:C:H2'	10:A:1404:C:O4'	2.13	0.48
23:S:94:TYR:CD1	23:S:94:TYR:C	2.84	0.48
29:Y:11:ASP:N	29:Y:27:VAL:HA	2.28	0.48
30:Z:6:LYS:HG2	30:Z:8:TYR:OH	2.13	0.48
10:A:911:A:C4	21:Q:9:TYR:OH	2.60	0.48
11:B:17:C:C2	11:B:18:G:C8	3.01	0.48
30:Z:19:ARG:NH1	30:Z:19:ARG:CG	2.71	0.48
12:D:166:GLN:CA	12:D:166:GLN:NE2	2.76	0.48
10:A:2574:G:C5	10:A:2575:C:C4	3.02	0.48
22:R:10:LEU:HD13	22:R:17:ARG:HD2	1.94	0.48
10:A:1866:C:H2'	10:A:1876:A:O4'	2.14	0.48
10:A:1301:A:C4	10:A:1303:G:N7	2.81	0.48
14:F:117:ARG:HD3	14:F:117:ARG:HA	1.57	0.48
19:O:47:ILE:HG13	19:O:48:PRO:HD2	1.95	0.48
10:A:2100:G:O6	10:A:2189:U:C4	2.67	0.48
10:A:2454:G:H2'	10:A:2455:G:H8	1.78	0.48
10:A:1465:G:C2	10:A:1466:G:C4	3.01	0.48
10:A:1914:C:C5	10:A:1915:U:C2	3.02	0.48
10:A:524:U:H4'	10:A:555:U:H4'	1.96	0.48
10:A:350:U:C2'	10:A:351:G:O5'	2.61	0.48
10:A:562:U:C4	10:A:2036:C:O4'	2.66	0.48
11:B:71:C:H2'	11:B:72:G:O4'	2.13	0.48
7:6:20:ASN:O	7:6:21:TYR:CD1	2.66	0.48
10:A:2251:G:C8	10:A:2450:A:H4'	2.49	0.48
10:A:631:A:H2	10:A:2403:C:O2	1.97	0.48
23:S:27:SER:HB2	23:S:38:GLN:HB3	1.96	0.48
10:A:1452:A:C6	10:A:2702:U:O2	2.67	0.48
10:A:303:U:H2'	10:A:304:G:H8	1.78	0.48
30:Z:10:ARG:HG3	30:Z:18:LEU:HD21	1.96	0.48
1:0:41:ARG:HD3	1:0:44:ARG:HD3	1.95	0.48
12:D:134:ARG:HG3	12:D:187:GLY:HA3	1.94	0.48
10:A:2626:C:O2'	10:A:2627:G:H5'	2.13	0.48
29:Y:96:ILE:HG13	29:Y:99:CYS:SG	2.54	0.48
24:T:89:VAL:CG1	24:T:91:ARG:HE	2.23	0.48
10:A:1992:G:C2	10:A:1997:G:C5	3.01	0.48
24:T:28:VAL:HG22	24:T:46:GLU:HG3	1.96	0.48
10:A:1436:G:O2'	10:A:1477:A:H4'	2.14	0.48
15:G:92:VAL:HG22	15:G:93:THR:N	2.21	0.48
15:G:71:THR:HB	15:G:89:GLY:H	1.78	0.48
2:1:71:TYR:HE1	17:I:27:ARG:HD2	1.73	0.48
10:A:881:G:N2	10:A:896:A:H62	2.11	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:271(A):A:N1	10:A:272(D):G:O2'	2.39	0.48
21:Q:34:LEU:HD11	21:Q:129:THR:CB	2.42	0.48
19:O:60:ALA:HB2	19:O:86:ILE:HA	1.96	0.48
10:A:2513:G:H2'	10:A:2514:U:C6	2.48	0.48
10:A:43:A:C2	10:A:44:G:C4	3.02	0.48
14:F:157:VAL:HA	14:F:176:LEU:O	2.13	0.48
9:8:35:GLN:HB3	9:8:36:LYS:HZ3	1.78	0.48
10:A:259:G:H1'	10:A:621:A:O2'	2.14	0.48
14:F:39:TRP:CZ3	14:F:106:ARG:HD2	2.49	0.48
20:P:85:LEU:HD12	20:P:120:ALA:HB2	1.96	0.48
3:2:26:ARG:NH1	3:2:29:LYS:HE2	2.27	0.48
10:A:1385:G:O2'	10:A:1396:U:C6	2.63	0.48
4:3:32:GLN:HB2	10:A:1158:C:H4'	1.95	0.48
26:V:72:VAL:HA	26:V:88:ARG:HH22	1.74	0.48
10:A:1287:A:C5	10:A:1288:U:C4	3.01	0.48
12:D:35:LYS:HZ3	12:D:104:TYR:HD1	1.61	0.48
10:A:2786:U:C2	10:A:2787:C:C5	3.01	0.48
10:A:2494:G:C5	10:A:2495:G:N7	2.81	0.48
10:A:528:A:C2	10:A:2043:C:C4'	2.96	0.48
6:5:46:CYS:SG	6:5:47:PRO:CG	3.01	0.48
13:E:24:THR:HG21	13:E:188:VAL:CG1	2.42	0.48
29:Y:80:GLY:O	29:Y:81:LYS:CB	2.61	0.48
17:I:98:ALA:CA	17:I:109:ILE:HD13	2.44	0.48
10:A:1027:A:C6	10:A:1126:A:C4	3.02	0.48
10:A:1678:G:N2	10:A:1989:G:N2	2.52	0.48
27:W:13:SER:O	27:W:16:LYS:HB2	2.13	0.48
30:Z:27:VAL:CG2	30:Z:36:LYS:HA	2.37	0.48
13:E:38:THR:HB	13:E:41:LYS:HE3	1.95	0.48
19:O:104:ARG:CB	19:O:104:ARG:CZ	2.91	0.48
19:O:107:ARG:HE	19:O:115:VAL:HG11	1.78	0.48
10:A:79:G:C4	10:A:80:G:C8	3.01	0.48
10:A:1517:G:H2'	10:A:1518:U:O4'	2.14	0.48
10:A:441:U:H2'	10:A:442:G:C8	2.48	0.48
28:X:65:ARG:CZ	28:X:66:LEU:N	2.75	0.48
16:H:89:ILE:HD11	16:H:129:THR:CB	2.40	0.48
10:A:2291:U:C5'	10:A:2380:C:O2	2.62	0.48
10:A:1848:A:O2'	10:A:1849:G:H5'	2.13	0.48
16:H:43:VAL:HG12	16:H:53:GLU:HB2	1.95	0.48
10:A:2583:G:H2'	10:A:2584:U:O2	2.14	0.48
6:5:20:ARG:HB3	6:5:23:HIS:CD2	2.48	0.48
12:D:79:VAL:O	12:D:79:VAL:HG12	2.13	0.48
15:G:132:ASN:OD1	15:G:158:ALA:HA	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:41:ILE:O	3:2:43:GLN:N	2.47	0.48
3:2:48:HIS:O	3:2:48:HIS:CG	2.66	0.48
28:X:73:ARG:O	28:X:74:PRO:C	2.51	0.48
4:3:8:LEU:HD22	4:3:9:VAL:N	2.29	0.48
10:A:848:G:O6	10:A:928:G:H2'	2.14	0.48
26:V:18:LEU:HD12	26:V:98:GLU:OE1	2.14	0.48
26:V:19:LYS:HE2	26:V:20:LEU:CD1	2.41	0.48
26:V:32:THR:HG22	26:V:33:VAL:N	2.23	0.48
12:D:16:MET:HG3	12:D:211:ARG:HH21	1.79	0.48
12:D:35:LYS:HE3	12:D:65:ILE:HG22	1.96	0.48
10:A:1567:A:H2'	12:D:86:PRO:HB3	1.96	0.48
12:D:91:ARG:HH11	12:D:91:ARG:CG	2.23	0.48
10:A:2563:U:O2	10:A:2565:A:C8	2.67	0.48
10:A:2653:U:C2'	10:A:2654:A:OP1	2.61	0.48
10:A:315:G:H2'	10:A:316:C:C6	2.49	0.48
30:Z:3:TYR:CG	30:Z:51:ALA:HB2	2.48	0.48
10:A:2830:G:O2'	10:A:2831:G:H5'	2.12	0.48
10:A:2873:A:C2	22:R:6:SER:HB2	2.49	0.48
24:T:65:LYS:HG3	24:T:66:VAL:N	2.28	0.48
10:A:1661:G:O2'	10:A:1662:C:H5'	2.13	0.48
10:A:173:G:C6	10:A:174:C:C4	3.01	0.48
10:A:754:C:C2	10:A:755:C:C5	3.01	0.48
10:A:2600:A:C6	10:A:2601:C:N4	2.82	0.48
25:U:12:ARG:HA	25:U:15:LYS:HG2	1.96	0.48
10:A:2448:A:OP1	10:A:2499:C:OP1	2.31	0.48
10:A:31:C:H2'	10:A:32:C:O4'	2.14	0.48
10:A:447:A:C5	10:A:454:A:N7	2.82	0.48
10:A:1367:A:N7	10:A:1368:G:H1'	2.29	0.48
10:A:1368:G:C2	10:A:1369:G:C8	3.01	0.48
10:A:2050:C:H1'	13:E:156:MET:HE1	1.94	0.48
10:A:2321:G:H5''	10:A:2322:A:OP2	2.13	0.48
7:6:27:LYS:HE3	10:A:2285:C:C5	2.49	0.48
10:A:563:G:H1	10:A:578:A:H61	1.62	0.48
10:A:647:G:O5'	10:A:647:G:H8	1.96	0.48
10:A:819:A:H2	10:A:943:U:O4'	1.97	0.48
20:P:110:TYR:CG	20:P:111:ARG:N	2.81	0.48
3:2:30:ARG:O	3:2:32:LEU:O	2.31	0.48
3:2:46:GLN:O	3:2:49:LYS:N	2.46	0.48
10:A:1528(A):A:N7	10:A:1529:G:C8	2.82	0.48
26:V:72:VAL:CG1	26:V:88:ARG:HH22	2.27	0.48
11:B:7:G:H4'	23:S:29:PHE:CD1	2.48	0.48
10:A:1779:U:C2	10:A:1783:A:N7	2.82	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:H:151:ILE:HB	16:H:162:ILE:HD11	1.95	0.48
11:B:15:A:O2'	11:B:110:G:C8	2.59	0.48
13:E:2:LYS:HD3	13:E:95:ILE:HG22	1.94	0.48
10:A:497:A:C5	10:A:498:G:C8	3.02	0.48
10:A:1337:G:C4	10:A:1338:G:C8	3.01	0.48
3:2:57:ILE:HD12	3:2:58:ALA:O	2.14	0.48
24:T:89:VAL:HG12	24:T:91:ARG:HG2	1.96	0.48
10:A:213:A:H2'	10:A:214:G:O4'	2.14	0.48
10:A:979:G:H3'	10:A:980:A:H5''	1.96	0.48
15:G:94:LEU:CD1	15:G:99:MET:HA	2.44	0.48
10:A:1052:C:N4	10:A:1107:G:H1	2.12	0.48
26:V:81:TYR:CD2	26:V:81:TYR:O	2.67	0.48
10:A:407:G:H2'	10:A:408:G:H8	1.78	0.48
7:6:14:THR:C	7:6:16:CYS:H	2.17	0.48
9:8:7:HIS:HD2	20:P:50:ARG:HD3	1.78	0.48
14:F:83:PHE:C	14:F:84:VAL:HG23	2.33	0.48
20:P:16:ARG:NH1	20:P:16:ARG:CG	2.57	0.48
10:A:1142(A):A:O2'	10:A:1143:A:H3'	2.14	0.48
18:N:35:ARG:CB	18:N:42:TRP:HZ3	2.27	0.48
11:B:57:A:N3	11:B:58:A:H8	2.11	0.48
15:G:11:TYR:CG	15:G:100:TRP:CH2	3.01	0.48
23:S:71:ARG:HG2	23:S:101:LEU:CD1	2.44	0.48
23:S:89:ARG:O	23:S:92:TYR:CG	2.66	0.48
23:S:98:VAL:HG22	23:S:99:LYS:N	2.29	0.48
10:A:1783:A:N1	10:A:2587:A:C4	2.82	0.48
2:1:94:LEU:HD22	2:1:95:LEU:N	2.29	0.48
10:A:2653:U:H2'	10:A:2654:A:C8	2.49	0.48
30:Z:152:ALA:CB	30:Z:167:PRO:HB2	2.44	0.48
10:A:1040:C:H42	10:A:1116:C:N4	2.10	0.48
6:5:41:PRO:O	6:5:42:PRO:C	2.52	0.48
6:5:46:CYS:SG	6:5:47:PRO:HG2	2.53	0.48
10:A:2681:C:C6	10:A:2724:C:N4	2.82	0.48
20:P:123:LEU:O	20:P:124:LYS:C	2.52	0.48
10:A:2712:U:C1'	10:A:2712(A):A:C8	2.93	0.48
24:T:29:ARG:HB2	24:T:85:LYS:HA	1.93	0.48
22:R:9:LYS:O	22:R:10:LEU:CB	2.61	0.48
10:A:470:A:O2'	10:A:471:A:H5'	2.14	0.48
10:A:455:C:N3	10:A:472:A:H2'	2.28	0.48
28:X:44:GLU:C	28:X:46:ALA:H	2.17	0.48
10:A:2469:A:C5	10:A:2482:G:C8	3.01	0.48
10:A:2886:G:H2'	10:A:2887:U:C6	2.38	0.48
10:A:548:A:O2'	10:A:549:G:OP1	2.25	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:464:U:C2'	10:A:465:G:H5'	2.44	0.48
14:F:34:TRP:CZ2	20:P:12:ALA:HB2	2.49	0.48
10:A:1363:C:H2'	10:A:1364:G:C8	2.49	0.48
10:A:1893:C:C6	10:A:1894:C:C5	3.02	0.48
25:U:70:ARG:O	25:U:70:ARG:HG2	2.13	0.48
12:D:221:VAL:HG22	12:D:226:MET:HE3	1.96	0.48
19:O:7:TYR:CZ	19:O:44:LYS:HG3	2.49	0.48
14:F:172:TRP:CE3	14:F:173:VAL:HG23	2.49	0.48
9:8:13:ARG:NH2	10:A:250:G:OP2	2.47	0.48
9:8:58:ILE:HG22	20:P:49:ARG:CD	2.44	0.48
10:A:194:G:C2'	10:A:195:A:H5'	2.44	0.48
10:A:389:G:N1	20:P:70:GLN:HG3	2.29	0.48
10:A:1344:G:H4'	10:A:1384:A:C5	2.49	0.48
4:3:50:VAL:O	4:3:51:ALA:C	2.53	0.48
10:A:1141:U:C5	18:N:64:GLY:CA	2.97	0.48
23:S:28:VAL:O	23:S:29:PHE:CB	2.61	0.48
12:D:159:ALA:N	12:D:196:VAL:HG11	2.29	0.48
12:D:53:PHE:HA	12:D:218:ARG:HB2	1.96	0.48
29:Y:15:VAL:CG1	29:Y:16:ALA:N	2.75	0.48
10:A:1504:C:HO2'	10:A:1505:C:C5'	2.24	0.48
30:Z:39:VAL:HG23	30:Z:40:ASP:O	2.13	0.48
21:Q:139:GLU:O	30:Z:99:TYR:CE2	2.66	0.48
10:A:2282:G:H5''	10:A:2283:C:O4'	2.13	0.48
10:A:1495:A:C2'	10:A:1496:A:N3	2.67	0.48
10:A:500:G:N2	10:A:502:A:H3'	2.29	0.48
10:A:90:U:O2	10:A:90:U:C2'	2.61	0.48
10:A:1411:C:C2'	10:A:1412:A:C8	2.90	0.48
19:O:35:VAL:HA	19:O:62:VAL:CG1	2.44	0.48
10:A:109:G:C4	10:A:110:G:C8	3.02	0.48
18:N:13:TRP:C	18:N:135:PRO:HG2	2.34	0.48
10:A:2472:G:H1'	10:A:2478:A:N6	2.29	0.48
10:A:211:A:O2'	10:A:212:G:H5'	2.14	0.48
14:F:138:GLU:O	14:F:139:PHE:C	2.53	0.48
10:A:2019:A:C6	10:A:2020:A:N7	2.81	0.48
12:D:117:VAL:HA	12:D:129:ASN:OD1	2.14	0.48
10:A:30:G:H2'	10:A:31:C:H6	1.79	0.48
10:A:1545:A:H2'	10:A:1546:C:H5'	1.94	0.48
10:A:1847:A:N3	10:A:1847:A:H2'	2.28	0.48
10:A:414:C:H2'	10:A:415:A:C8	2.48	0.48
10:A:350:U:H2'	10:A:351:G:O5'	2.14	0.48
10:A:1805:U:H2'	10:A:1806:C:C6	2.49	0.48
12:D:31:LYS:HZ2	12:D:31:LYS:HB2	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:225:A:H2'	10:A:226:G:H5'	1.95	0.47
10:A:2442:C:O2'	10:A:2443:C:H5'	2.13	0.47
10:A:2859:G:HO2'	10:A:2860:A:P	2.37	0.47
28:X:83:VAL:O	28:X:84:ALA:CB	2.62	0.47
4:3:13:ILE:HD13	4:3:13:ILE:N	2.28	0.47
10:A:535:C:O3'	25:U:53:ARG:NH1	2.47	0.47
25:U:68:ALA:O	25:U:71:GLN:CB	2.62	0.47
10:A:1605:C:O4'	10:A:1610:A:C6	2.67	0.47
15:G:25:TYR:O	15:G:26:GLN:HG2	2.13	0.47
23:S:33:LYS:O	23:S:34:HIS:CD2	2.67	0.47
10:A:2663:G:N7	10:A:2664:G:C6	2.81	0.47
10:A:2889:C:H2'	10:A:2891:G:O4'	2.13	0.47
10:A:2631:G:H22	13:E:61:ARG:HH12	1.54	0.47
10:A:852:G:O2'	10:A:853:G:H5'	2.14	0.47
10:A:857:C:C2	10:A:858:U:C5	3.01	0.47
10:A:1696:G:C6	10:A:1697:G:C5	3.02	0.47
10:A:501:A:C6	10:A:502:A:C6	3.02	0.47
24:T:74:ARG:HB3	24:T:76:PHE:CE1	2.50	0.47
18:N:128:HIS:CD2	18:N:131:GLN:CB	2.97	0.47
10:A:1881:C:H3'	10:A:1882:C:H6	1.79	0.47
8:7:37:LYS:HE2	10:A:469:G:O6	2.14	0.47
10:A:2854:G:C5	10:A:2855:C:C5	3.01	0.47
10:A:1132:A:OP1	18:N:82:LEU:HD23	2.14	0.47
15:G:146:TYR:HA	15:G:149:VAL:HG22	1.96	0.47
30:Z:154:ASP:C	30:Z:155:LEU:HG	2.34	0.47
10:A:686:G:H21	10:A:788:A:H61	1.59	0.47
25:U:44:ASN:N	25:U:44:ASN:ND2	2.60	0.47
13:E:143:ASN:HB2	13:E:147:PRO:HD2	1.96	0.47
10:A:1519:G:H5'	10:A:1520:G:P	2.54	0.47
10:A:877:U:C2'	10:A:878:A:H5''	2.44	0.47
10:A:346:A:H2'	10:A:347:A:O5'	2.14	0.47
21:Q:78:PRO:C	21:Q:79:LEU:HG	2.35	0.47
10:A:2670:A:H8	10:A:2670:A:H5''	1.79	0.47
14:F:122:LYS:N	14:F:122:LYS:HD3	2.28	0.47
9:8:32:LEU:HG	9:8:35:GLN:H	1.78	0.47
9:8:6:THR:CG2	10:A:243:U:OP1	2.62	0.47
10:A:2243:U:H2'	10:A:2244:U:H6	1.78	0.47
10:A:2244:U:H2'	10:A:2245:U:O4'	2.14	0.47
10:A:2500:U:H2'	10:A:2504:U:C5	2.47	0.47
10:A:626:U:C5'	10:A:627:A:H5'	2.44	0.47
10:A:822:U:C2'	10:A:823:G:H5'	2.44	0.47
20:P:50:ARG:HH21	20:P:50:ARG:CG	2.25	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:73:GLY:O	20:P:74:GLU:C	2.52	0.47
20:P:90:ARG:O	20:P:91:PHE:CB	2.60	0.47
10:A:1709:U:O2'	10:A:2859:G:H1'	2.14	0.47
3:2:54:LYS:N	3:2:56:GLN:HG2	2.30	0.47
10:A:1342:A:O2'	10:A:1344:G:OP2	2.27	0.47
10:A:1600:C:OP1	28:X:35:THR:HG21	2.14	0.47
10:A:534:U:O2'	25:U:49:HIS:CD2	2.68	0.47
10:A:1323:U:H2'	10:A:1324:G:H5'	1.96	0.47
15:G:111:LEU:HD13	15:G:120:LEU:HD21	1.96	0.47
10:A:729:G:OP1	12:D:10:THR:OG1	2.23	0.47
16:H:135:GLY:C	16:H:137:ASP:H	2.18	0.47
29:Y:13:VAL:HG21	29:Y:28:LYS:HZ2	1.79	0.47
30:Z:6:LYS:HB3	30:Z:8:TYR:CE1	2.48	0.47
11:B:15:A:H1'	11:B:110:G:C4	2.49	0.47
30:Z:84:GLU:HA	30:Z:84:GLU:OE2	2.14	0.47
10:A:2195:C:H2'	10:A:2196:C:O4'	2.14	0.47
13:E:47:VAL:HG21	13:E:84:PHE:CD1	2.48	0.47
10:A:1108:U:H2'	10:A:1109:C:H5'	1.96	0.47
15:G:45:GLU:HB2	15:G:47:LYS:CD	2.44	0.47
1:0:23:VAL:HG12	1:0:25:ARG:O	2.14	0.47
17:I:130:TYR:HB2	17:I:136:VAL:HG13	1.96	0.47
17:I:71:ILE:HG12	17:I:72:LEU:HD22	1.96	0.47
30:Z:27:VAL:O	30:Z:87:ASP:HA	2.15	0.47
10:A:2870:C:C5'	22:R:65:LEU:HD21	2.43	0.47
10:A:8:A:H2'	10:A:9:U:C5	2.49	0.47
10:A:53:A:C8	10:A:54:G:C8	3.02	0.47
10:A:601:C:O2	10:A:605:C:H4'	2.14	0.47
10:A:836:G:C8	10:A:837:C:C5	3.02	0.47
10:A:2584:U:H2'	10:A:2585:U:H6	1.77	0.47
10:A:1925:C:O2'	10:A:1926:U:H5'	2.14	0.47
26:V:81:TYR:CG	26:V:81:TYR:O	2.67	0.47
28:X:47:PHE:O	28:X:48:LYS:C	2.51	0.47
10:A:1272:A:H3'	10:A:1273:U:C5'	2.44	0.47
10:A:1257:C:H4'	14:F:83:PHE:CE2	2.49	0.47
10:A:2288:A:H4'	10:A:2289:G:OP2	2.14	0.47
10:A:259:G:H21	10:A:621:A:H8	1.61	0.47
10:A:448:U:C4	10:A:583:G:H1'	2.49	0.47
27:W:92:ARG:O	27:W:93:ALA:CB	2.62	0.47
3:2:21:LEU:CD1	3:2:50:ILE:HG22	2.44	0.47
10:A:1459:G:C4	10:A:1461:G:C8	3.03	0.47
10:A:1528(A):A:H2'	10:A:1529:G:C4'	2.44	0.47
28:X:60:ARG:HB2	28:X:72:LYS:C	2.34	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:V:13:ARG:HG2	26:V:13:ARG:NH1	2.29	0.47
12:D:224:ALA:O	12:D:225:ALA:CB	2.62	0.47
10:A:689:A:O2'	10:A:780:G:H5'	2.14	0.47
10:A:762:U:H4'	10:A:763:G:O5'	2.13	0.47
10:A:2543:G:H2'	10:A:2544:G:H8	1.79	0.47
10:A:2315:G:H3'	10:A:2316:C:C6	2.49	0.47
10:A:527:C:HO2'	10:A:2779:U:HO2'	1.61	0.47
10:A:528:A:H2	10:A:2043:C:C5'	2.19	0.47
10:A:381:G:C6	10:A:394:A:C6	3.01	0.47
10:A:1027:A:N6	10:A:1126:A:C4	2.82	0.47
24:T:30:VAL:O	24:T:30:VAL:HG23	2.14	0.47
19:O:2:ILE:HG23	19:O:6:THR:HG21	1.96	0.47
10:A:2476:A:C2	10:A:2477:C:H5''	2.49	0.47
27:W:4:LYS:HG2	27:W:106:ILE:CG2	2.43	0.47
8:7:5:TRP:HB3	10:A:1612:C:O3'	2.14	0.47
10:A:1987:G:C4	10:A:1988:C:C5	3.02	0.47
25:U:27:LEU:N	25:U:27:LEU:HD22	2.28	0.47
10:A:602:G:C8	10:A:602:G:OP2	2.65	0.47
10:A:2400:G:H5'	10:A:2401:U:OP2	2.14	0.47
10:A:1227:G:H5''	25:U:16:LYS:HZ3	1.78	0.47
10:A:1850:G:H2'	10:A:1851:U:H6	1.79	0.47
19:O:34:THR:O	19:O:37:ASP:HB2	2.13	0.47
10:A:1016:G:H2'	10:A:1017:G:O4'	2.15	0.47
10:A:1437:C:H5''	10:A:1437:C:H6	1.79	0.47
10:A:2348:U:O4	10:A:2382:G:C2	2.68	0.47
10:A:258:G:C5	10:A:259:G:N7	2.82	0.47
10:A:1384:A:N3	10:A:1405:U:H1'	2.29	0.47
28:X:30:VAL:HG12	28:X:31:HIS:H	1.78	0.47
28:X:85:PRO:O	28:X:86:GLY:C	2.53	0.47
4:3:8:LEU:O	4:3:32:GLN:N	2.47	0.47
18:N:58:ASP:O	18:N:60:ILE:N	2.47	0.47
26:V:2:PHE:O	26:V:3:ALA:CB	2.62	0.47
11:B:24:G:N2	11:B:28:C:N3	2.62	0.47
29:Y:45:VAL:CG1	29:Y:62:GLU:OE2	2.60	0.47
10:A:570:G:H2'	10:A:2030:A:C6	2.48	0.47
10:A:2665:A:H2'	10:A:2666:C:O4'	2.14	0.47
10:A:2306:C:C6	10:A:2307:G:H1'	2.48	0.47
29:Y:41:GLY:O	29:Y:42:VAL:C	2.53	0.47
10:A:1484:G:H1	10:A:1506:C:N4	2.12	0.47
10:A:1508:A:H2'	10:A:1509:C:OP1	2.13	0.47
1:0:21:LEU:HD13	1:0:41:ARG:HG3	1.96	0.47
1:0:40:GLN:HE21	1:0:43:THR:CA	2.24	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:864:G:C4	10:A:865:C:C5	3.03	0.47
10:A:204:A:O3'	10:A:205:G:H4'	2.14	0.47
13:E:11:MET:HE3	13:E:186:GLY:CA	2.42	0.47
10:A:1588:C:H2'	10:A:1588:C:O2	2.13	0.47
10:A:477:A:H2'	10:A:478:A:C8	2.48	0.47
10:A:787:U:C5	10:A:791:C:C4	3.03	0.47
24:T:35:LYS:HG3	24:T:36:GLU:N	2.29	0.47
10:A:494:G:H2'	10:A:495:G:C8	2.48	0.47
10:A:1515:G:C2'	10:A:1516:C:H5'	2.45	0.47
10:A:2592:G:H2'	10:A:2593:U:O4'	2.15	0.47
10:A:363(E):U:C3'	10:A:363(F):A:O4'	2.61	0.47
10:A:2400:G:C5	10:A:2401:U:C5	3.02	0.47
10:A:30:G:C5	10:A:31:C:C4	3.03	0.47
10:A:2003:G:H2'	10:A:2004:G:O5'	2.14	0.47
10:A:461:C:C2'	10:A:462:C:H5'	2.44	0.47
7:6:20:ASN:CG	7:6:21:TYR:N	2.67	0.47
9:8:61:LEU:HA	9:8:61:LEU:HD23	1.51	0.47
10:A:1245:G:H5''	20:P:16:ARG:NH2	2.28	0.47
7:6:27:LYS:CD	10:A:2285:C:OP2	2.61	0.47
10:A:1397:U:O2'	10:A:1398:C:P	2.73	0.47
10:A:1450:G:P	10:A:1530:C:N4	2.87	0.47
10:A:985:C:H2'	10:A:986:C:H6	1.79	0.47
25:U:62:ILE:HG22	25:U:63:VAL:N	2.29	0.47
24:T:98:LYS:HG2	24:T:100:TYR:OH	2.14	0.47
12:D:32:SER:HA	12:D:36:PRO:HD3	1.96	0.47
22:R:76:VAL:HG13	22:R:80:PHE:CD2	2.49	0.47
13:E:77:ILE:HG22	13:E:78:LEU:O	2.13	0.47
30:Z:5:LEU:HD23	30:Z:5:LEU:HA	1.60	0.47
19:O:10:VAL:HG21	19:O:16:ALA:C	2.31	0.47
10:A:1276:A:O2'	22:R:16:HIS:HE1	1.98	0.47
10:A:2467:C:H2'	10:A:2468:G:O4'	2.14	0.47
27:W:29:LEU:CD1	27:W:51:LEU:HD11	2.44	0.47
30:Z:119:GLU:C	30:Z:121:HIS:H	2.18	0.47
10:A:2579:C:H2'	10:A:2580:U:O4'	2.15	0.47
10:A:1131:G:H4'	18:N:82:LEU:HB3	1.96	0.47
21:Q:55:VAL:HG22	21:Q:56:ARG:N	2.28	0.47
10:A:2660:A:O5'	10:A:2660:A:N3	2.47	0.47
10:A:2291:U:H5''	10:A:2380:C:O2	2.13	0.47
10:A:443:A:C1'	10:A:1201:C:O4'	2.61	0.47
10:A:1320:C:H4'	10:A:1321:A:OP1	2.14	0.47
10:A:29:U:H6	10:A:29:U:O5'	1.98	0.47
15:G:129:GLY:O	15:G:130:ASN:CB	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:7:29:LYS:NZ	10:A:210:C:OP2	2.37	0.47
10:A:1622:G:C2	10:A:1623:G:C8	3.02	0.47
17:I:33:ARG:HB2	17:I:35:LEU:HG	1.95	0.47
10:A:504:U:H6	10:A:504:U:H3'	1.79	0.47
10:A:389:G:H1	20:P:71:VAL:N	2.12	0.47
10:A:588:U:OP2	10:A:588:U:H6	1.97	0.47
27:W:88:ARG:NH1	27:W:94:ASP:OD1	2.48	0.47
10:A:1461:G:H2'	10:A:1461:G:N3	2.29	0.47
10:A:1005:C:C2	10:A:1143:A:C6	3.02	0.47
23:S:94:TYR:HE1	23:S:98:VAL:HB	1.79	0.47
12:D:35:LYS:HE2	12:D:65:ILE:HG22	1.96	0.47
2:1:9:GLY:O	2:1:10:LYS:CB	2.58	0.47
11:B:17:C:O2	11:B:18:G:C8	2.68	0.47
10:A:1690:A:C8	10:A:1691:C:C6	3.02	0.47
10:A:2561:A:H2'	10:A:2562:U:O4'	2.15	0.47
10:A:1410:G:H2'	10:A:1411:C:C5	2.49	0.47
10:A:1652:A:H2'	10:A:1653:G:H5'	1.95	0.47
10:A:1175:U:C4'	10:A:1176:G:H2'	2.43	0.47
10:A:459:U:C5	10:A:469:G:N2	2.83	0.47
20:P:21:ARG:O	20:P:21:ARG:CG	2.62	0.47
10:A:2557:G:C2'	10:A:2558:C:H5'	2.44	0.47
12:D:270:ILE:C	12:D:271:ILE:HG13	2.34	0.47
21:Q:42:ILE:HD13	21:Q:97:VAL:HG21	1.96	0.47
10:A:1939:U:OP1	10:A:2604:U:O2'	2.27	0.47
10:A:272:G:O6	10:A:421:U:H2'	2.14	0.47
10:A:2075:U:H2'	10:A:2238:G:N2	2.29	0.47
10:A:2099:U:H3	10:A:2190:G:H1	1.61	0.47
10:A:1543:C:OP2	10:A:1543:C:H6	1.94	0.47
25:U:15:LYS:HG3	25:U:16:LYS:N	2.30	0.47
10:A:2498:C:O2'	10:A:2499:C:H5'	2.13	0.47
30:Z:4:ARG:CZ	30:Z:58:VAL:HG11	2.45	0.47
10:A:2248:C:H3'	10:A:2249:U:H6	1.78	0.47
15:G:151:ALA:O	15:G:153:ARG:NH1	2.48	0.47
21:Q:116:GLU:O	21:Q:117:ALA:C	2.52	0.47
10:A:2047:U:O2'	10:A:2823:A:N1	2.43	0.47
13:E:158:GLY:O	13:E:159:HIS:C	2.51	0.47
27:W:79:GLY:O	27:W:80:PRO:C	2.52	0.47
10:A:2346:A:H5''	10:A:2383:G:C1'	2.41	0.47
10:A:2415:G:C4	10:A:2416:C:C5	3.02	0.47
20:P:71:VAL:CG1	20:P:72:PRO:CD	2.90	0.47
10:A:1722:A:C5	10:A:1741:A:C6	3.03	0.47
10:A:1449:A:H5'	10:A:1450:G:OP2	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:71:A:C5	10:A:73:A:N1	2.83	0.47
28:X:21:PHE:HB3	28:X:90:GLU:HG3	1.96	0.47
3:2:26:ARG:N	3:2:26:ARG:CD	2.76	0.47
28:X:36:LYS:NZ	28:X:39:ILE:CA	2.74	0.47
28:X:38:GLU:CA	28:X:38:GLU:OE1	2.62	0.47
10:A:930:U:O4'	10:A:930:U:O2	2.32	0.47
10:A:995:C:N3	18:N:4:TYR:CZ	2.83	0.47
25:U:82:GLY:O	25:U:113:ALA:HA	2.15	0.47
12:D:244:ARG:HA	12:D:245:PRO:HA	1.67	0.47
15:G:114:ILE:HG12	15:G:140:ILE:HD12	1.97	0.47
15:G:27:ASN:O	15:G:30:GLU:HB3	2.15	0.47
23:S:20:ARG:NH1	23:S:87:PHE:C	2.67	0.47
11:B:57:A:N3	11:B:57:A:H2'	2.29	0.47
10:A:729:G:O2'	10:A:763:G:H4'	2.15	0.47
12:D:85:ASP:OD1	12:D:86:PRO:HD2	2.15	0.47
29:Y:45:VAL:HG22	29:Y:62:GLU:HB3	1.87	0.47
10:A:1455:G:C2'	10:A:1456:G:H5'	2.44	0.47
2:1:10:LYS:HG2	2:1:11:ARG:H	1.77	0.47
10:A:2731:G:C6	10:A:2732:G:O6	2.68	0.47
10:A:2734:A:H2'	10:A:2735:G:H5'	1.97	0.47
29:Y:13:VAL:HG21	29:Y:28:LYS:NZ	2.30	0.47
29:Y:8:LYS:HE2	29:Y:72:VAL:CG2	2.40	0.47
30:Z:51:ALA:O	30:Z:52:SER:HB3	2.15	0.47
30:Z:53:ILE:HG13	30:Z:53:ILE:O	2.14	0.47
1:0:40:GLN:HE22	1:0:45:PHE:H	1.63	0.47
10:A:1279:G:H5'	22:R:34:ILE:HD11	1.97	0.47
10:A:1496:A:H8	10:A:1577:C:O2'	1.98	0.47
14:F:205:ARG:C	14:F:206:ILE:HG13	2.34	0.47
24:T:36:GLU:C	24:T:38:ASN:H	2.17	0.47
10:A:2721:A:H2'	10:A:2722:G:O4'	2.13	0.47
19:O:107:ARG:HH11	24:T:35:LYS:HB2	1.79	0.47
24:T:82:LEU:HD12	24:T:82:LEU:N	2.29	0.47
10:A:1176:G:C1'	10:A:1177:A:OP1	2.63	0.47
14:F:178:PRO:HB3	14:F:198:ALA:CB	2.45	0.47
10:A:1772:G:H2'	10:A:1773:A:O3'	2.14	0.47
10:A:157:U:H5''	10:A:171:G:N2	2.22	0.47
24:T:106:SER:CA	24:T:110:ILE:HG13	2.41	0.47
12:D:255:LYS:N	12:D:255:LYS:HZ1	2.13	0.47
16:H:91:GLY:HA2	16:H:160:LYS:HZ2	1.79	0.47
10:A:128:C:O2'	10:A:129:C:P	2.72	0.47
14:F:132:VAL:C	14:F:134:GLY:N	2.66	0.47
10:A:1151:G:O3'	25:U:81:HIS:HB2	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2192:G:H2'	10:A:2193:G:H5'	1.96	0.47
15:G:37:VAL:CG2	15:G:103:LEU:HD11	2.43	0.47
10:A:945:A:C2	10:A:2448:A:C6	3.03	0.47
10:A:1446:C:C3'	10:A:1446:C:C6	2.97	0.47
10:A:1248:G:C2	25:U:3:ARG:HD2	2.50	0.47
1:0:24:LYS:HG3	1:0:36:ILE:HD11	1.97	0.47
10:A:2409:G:H2'	10:A:2410:G:O4'	2.14	0.47
2:1:28:GLY:C	2:1:30:VAL:H	2.17	0.47
10:A:426:C:C2'	10:A:427:U:H5'	2.45	0.47
10:A:620:G:H4'	10:A:621:A:OP1	2.14	0.47
3:2:37:PHE:HE2	3:2:40:SER:HA	1.80	0.47
28:X:7:VAL:HG11	28:X:39:ILE:HB	1.97	0.47
18:N:58:ASP:OD2	18:N:59:LYS:HE3	2.14	0.47
10:A:729:G:H2'	10:A:1775:U:H1'	1.97	0.47
10:A:695:G:C2	10:A:768:G:C5	3.03	0.47
10:A:573:G:O6	10:A:2030:A:H3'	2.15	0.47
10:A:567:A:N1	10:A:571:A:C8	2.82	0.47
13:E:95:ILE:HB	13:E:96:PHE:HD1	1.78	0.47
6:5:52:TYR:O	6:5:53:ALA:C	2.51	0.47
10:A:2729:G:H1'	13:E:187:ALA:CB	2.32	0.47
10:A:2682:U:C5	13:E:11:MET:HE1	2.50	0.47
10:A:1747:G:C5	10:A:1747(A):G:N7	2.83	0.47
10:A:2712:U:H1'	10:A:2712(A):A:H8	1.76	0.47
17:I:130:TYR:CB	17:I:136:VAL:HG13	2.45	0.47
19:O:77:ILE:HG13	24:T:74:ARG:HG2	1.96	0.47
10:A:2323:G:H2'	10:A:2324:C:O4'	2.15	0.47
21:Q:134:ARG:O	21:Q:136:ALA:N	2.47	0.47
10:A:2469:A:H5'	10:A:2470:G:OP2	2.15	0.47
20:P:8:PRO:C	20:P:10:PRO:HD3	2.35	0.47
10:A:1932:A:H2'	10:A:1933:G:H5'	1.97	0.47
10:A:2018:G:H2'	10:A:2019:A:C8	2.49	0.47
10:A:272(H):C:N4	10:A:363(C):G:H1	2.13	0.47
10:A:838:C:C4	10:A:839:U:C5	3.03	0.47
15:G:94:LEU:HB2	15:G:98:ARG:HB2	1.96	0.47
10:A:45:C:H2'	10:A:47:C:H6	1.80	0.47
1:0:37:LEU:O	1:0:38:VAL:HG22	2.14	0.47
13:E:112:GLY:O	13:E:159:HIS:HA	2.15	0.47
18:N:109:LYS:HG2	18:N:109:LYS:H	1.45	0.47
10:A:2059:A:H5''	14:F:71:GLY:HA2	1.95	0.47
10:A:246:C:C2'	10:A:247:G:H5'	2.45	0.47
10:A:259:G:C2	10:A:260:G:C8	3.03	0.47
10:A:259:G:C2'	10:A:260:G:H5'	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:419:C:O2'	10:A:420:C:H5'	2.14	0.47
20:P:105:LEU:H	20:P:105:LEU:CD1	2.17	0.47
3:2:32:LEU:O	3:2:33:MET:C	2.51	0.47
10:A:1450(A):C:C2	10:A:1451:C:C5	3.02	0.47
28:X:36:LYS:O	28:X:39:ILE:HG23	2.14	0.47
3:2:26:ARG:HG3	28:X:5:TYR:CB	2.45	0.47
10:A:933:A:H2'	10:A:934:G:H5'	1.95	0.47
10:A:995:C:C2	18:N:4:TYR:OH	2.56	0.47
18:N:42:TRP:CG	25:U:64:ARG:NH1	2.83	0.47
18:N:55:VAL:O	18:N:56:ASN:C	2.52	0.47
25:U:49:HIS:CA	25:U:52:ARG:HB2	2.35	0.47
25:U:90:VAL:HG22	26:V:39:LEU:CD1	2.43	0.47
12:D:242:ARG:HD2	12:D:242:ARG:N	2.30	0.47
15:G:7:LEU:HA	15:G:7:LEU:HD23	1.80	0.47
10:A:1792:G:O2'	10:A:1793:C:H5'	2.15	0.47
10:A:1799:G:O6	12:D:178:PRO:HG2	2.15	0.47
12:D:63:ARG:CZ	12:D:86:PRO:HD3	2.45	0.47
16:H:85:LYS:NZ	16:H:145:ALA:CA	2.76	0.47
2:1:90:ILE:O	2:1:94:LEU:HB2	2.15	0.47
10:A:572:A:C2	10:A:573:G:H1'	2.50	0.47
10:A:2526:G:C5	10:A:2527:C:C4	3.03	0.47
10:A:356:G:N2	10:A:357:A:N3	2.63	0.47
10:A:1655:A:H3'	10:A:1656:C:C6	2.50	0.47
15:G:81:LYS:O	15:G:83:ARG:HG3	2.15	0.47
10:A:859:G:O2'	10:A:916:G:O6	2.28	0.47
13:E:111:ARG:HD2	13:E:160:TYR:CD1	2.50	0.47
10:A:480:A:OP2	29:Y:46:LYS:HD3	2.15	0.47
10:A:271(T):C:H2'	10:A:271(U):G:H5'	1.96	0.47
3:2:12:GLU:HA	3:2:14:ARG:NH2	2.28	0.47
10:A:1591:G:C2'	10:A:1592:C:H5'	2.45	0.47
10:A:1992:G:O5'	10:A:1992:G:C8	2.68	0.47
24:T:22:PHE:CE2	24:T:85:LYS:HE3	2.50	0.47
10:A:1515:G:H4'	10:A:1556:C:O2'	2.14	0.47
15:G:22:ARG:HD2	15:G:23:PHE:CZ	2.50	0.47
10:A:1242:A:N1	20:P:8:PRO:HG3	2.30	0.47
10:A:1686:C:N4	10:A:1687:G:C6	2.83	0.47
10:A:1845:G:O2'	10:A:1846:G:H5'	2.14	0.47
27:W:41:LYS:HD2	27:W:41:LYS:HA	1.63	0.47
25:U:27:LEU:N	25:U:27:LEU:CD2	2.78	0.47
10:A:1465:G:C6	10:A:1466:G:C5	3.03	0.47
10:A:564:C:H2'	10:A:565:C:O4'	2.15	0.47
10:A:483:A:H3'	10:A:484:C:C6	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:699:A:H2'	10:A:700:G:O4'	2.15	0.47
10:A:725:G:C6	10:A:726:G:N1	2.82	0.47
10:A:1925:C:C2'	10:A:1926:U:H5'	2.45	0.47
10:A:1808:U:H2'	10:A:1809:A:O4'	2.15	0.47
10:A:1049:C:H2'	10:A:1049:C:O2	2.14	0.47
9:8:29:LYS:NZ	9:8:44:LYS:HB3	2.29	0.47
10:A:2360:A:O2'	10:A:2361:A:O5'	2.33	0.47
20:P:26:GLY:HA2	20:P:30:THR:HG21	1.97	0.47
20:P:47:ASP:OD1	20:P:49:ARG:HB2	2.14	0.47
20:P:91:PHE:HZ	20:P:95:VAL:HB	1.80	0.47
28:X:82:GLN:HB3	28:X:85:PRO:HG2	1.96	0.47
26:V:36:PRO:HD3	26:V:60:GLU:O	2.14	0.47
26:V:66:ARG:HE	26:V:94:LEU:HD11	1.80	0.47
11:B:117:G:H4'	23:S:55:ALA:HB1	1.97	0.47
23:S:57:LYS:HG2	23:S:58:LEU:H	1.80	0.47
23:S:95:HIS:C	23:S:97:ARG:N	2.67	0.47
23:S:95:HIS:O	23:S:97:ARG:O	2.33	0.47
10:A:697:C:C2	10:A:698:C:C5	3.03	0.47
12:D:30:GLU:HG3	12:D:63:ARG:NH2	2.30	0.47
10:A:2811:G:OP1	13:E:60:ASN:CB	2.63	0.47
10:A:2297:C:N3	10:A:2320:A:H8	2.13	0.47
1:0:57:PHE:HE2	10:A:2386:C:O4'	1.97	0.47
10:A:869:G:N2	10:A:870:A:H1'	2.30	0.47
10:A:356:G:C2	10:A:357:A:C4	3.03	0.47
10:A:1493:C:O2	10:A:1493:C:C2'	2.63	0.47
10:A:2802:G:O2'	10:A:2803:C:H5'	2.15	0.47
13:E:92:THR:N	13:E:95:ILE:HD11	2.30	0.47
10:A:873:G:H1	10:A:904:C:H42	1.63	0.47
10:A:1999:C:H5''	10:A:2723:C:O2'	2.15	0.47
10:A:271(D):G:O5'	10:A:271(D):G:H8	1.98	0.47
21:Q:24:GLY:N	30:Z:78:LYS:HD2	2.29	0.47
22:R:10:LEU:HD22	22:R:21:TYR:OH	2.15	0.47
10:A:1303:G:H1'	10:A:1641:A:C2	2.50	0.47
10:A:2290:G:H2'	10:A:2291:U:O4'	2.15	0.47
14:F:31:HIS:HB2	20:P:13:ASN:HD22	1.80	0.47
25:U:14:HIS:O	25:U:15:LYS:C	2.54	0.47
10:A:577:G:O5'	10:A:577:G:H8	1.98	0.47
22:R:59:ASP:O	22:R:62:ALA:HB3	2.15	0.47
10:A:553:G:C5	10:A:554:U:C5	3.03	0.47
21:Q:26:TYR:O	21:Q:67:ARG:NH1	2.38	0.47
10:A:197:A:H61	10:A:2431:U:H5'	1.80	0.46
10:A:225:A:C2'	10:A:226:G:H5'	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2287:A:C4	10:A:2289:G:N7	2.83	0.46
10:A:387:U:C4'	10:A:388:G:O5'	2.61	0.46
14:F:36:VAL:HG11	14:F:183:VAL:HG13	1.97	0.46
10:A:1018:C:C2'	10:A:1019:U:H5'	2.45	0.46
10:A:1827:C:OP2	12:D:222:ARG:HD2	2.14	0.46
10:A:2030:A:H4'	10:A:2031:A:OP1	2.14	0.46
10:A:327:G:C2	10:A:336:C:C2	3.03	0.46
10:A:953:A:C2'	10:A:954:G:H5'	2.46	0.46
22:R:34:ILE:HG23	22:R:35:THR:N	2.30	0.46
10:A:13:A:C2	10:A:14:A:N6	2.83	0.46
13:E:116:VAL:O	13:E:117:MET:CB	2.63	0.46
13:E:160:TYR:CD2	13:E:161:GLY:N	2.84	0.46
29:Y:46:LYS:HB3	29:Y:47:LYS:HE2	1.98	0.46
24:T:54:ARG:HA	24:T:59:THR:HB	1.97	0.46
22:R:21:TYR:OH	22:R:43:GLU:HG2	2.15	0.46
21:Q:29:PHE:N	21:Q:29:PHE:CD1	2.83	0.46
16:H:23:ARG:HD3	16:H:34:GLU:OE1	2.15	0.46
2:1:46:LEU:HD12	2:1:46:LEU:H	1.80	0.46
12:D:239:ARG:O	12:D:240:ALA:HB2	2.15	0.46
10:A:1354:A:C8	10:A:1355:G:C8	3.03	0.46
22:R:54:LEU:HA	22:R:54:LEU:HD12	1.47	0.46
10:A:1632:A:C5	10:A:1633:G:C6	3.02	0.46
15:G:39:ILE:HA	15:G:157:ILE:HA	1.97	0.46
10:A:452:G:C2	10:A:458:G:C5	3.03	0.46
10:A:2367:G:O5'	10:A:2367:G:H8	1.98	0.46
10:A:1190:G:H5''	10:A:1190:G:H8	1.80	0.46
10:A:2443:C:H2'	10:A:2444:G:H8	1.80	0.46
10:A:250:G:C5	10:A:251:A:C5	3.03	0.46
6:5:7:PRO:HA	10:A:2615:U:C2	2.50	0.46
33:A:3206:TEL:H573	33:A:3206:TEL:O48	2.13	0.46
10:A:646:A:N3	10:A:646:A:H5'	2.30	0.46
20:P:110:TYR:CE2	20:P:111:ARG:HD3	2.49	0.46
20:P:26:GLY:HA2	20:P:30:THR:CG2	2.44	0.46
10:A:1313:U:H3'	10:A:1314:C:H5'	1.98	0.46
12:D:61:LEU:O	12:D:63:ARG:NH1	2.47	0.46
12:D:83:GLU:OE1	12:D:104:TYR:CE2	2.68	0.46
21:Q:141:GLN:CD	30:Z:70:LEU:HB2	2.35	0.46
30:Z:33:LEU:HD11	30:Z:35:ARG:HG3	1.97	0.46
10:A:960:A:H5''	10:A:961:C:OP2	2.15	0.46
13:E:96:PHE:O	13:E:175:VAL:HG11	2.14	0.46
10:A:2818:G:C2'	10:A:2819:G:H5'	2.45	0.46
18:N:78:TYR:CD1	18:N:79:PRO:CB	2.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1495:A:H2'	10:A:1496:A:C2	2.48	0.46
10:A:1696:G:H2'	10:A:1697:G:H5'	1.97	0.46
29:Y:76:CYS:O	29:Y:78:ALA:N	2.48	0.46
20:P:122:PRO:HB3	20:P:141:ALA:O	2.15	0.46
10:A:2199:A:OP2	10:A:2200:C:N4	2.44	0.46
10:A:2468:G:C5'	21:Q:120:ILE:HD12	2.36	0.46
12:D:235:GLY:C	12:D:237:GLU:HG2	2.36	0.46
30:Z:36:LYS:H	30:Z:36:LYS:HG3	1.53	0.46
10:A:1412:A:H2'	10:A:1413:G:C8	2.50	0.46
19:O:105:GLU:HA	19:O:108:GLU:HG3	1.96	0.46
10:A:1173:G:H3'	10:A:1174:A:H5'	1.97	0.46
30:Z:130:PRO:O	30:Z:133:ILE:HG13	2.14	0.46
10:A:10:G:N1	10:A:2629:A:C8	2.83	0.46
10:A:1215:G:H2'	10:A:1216:G:H5'	1.95	0.46
10:A:2692:C:H1'	10:A:2847:U:O2'	2.15	0.46
10:A:363(E):U:OP2	10:A:363(E):U:C6	2.68	0.46
10:A:1862:G:O2'	10:A:1863:G:H5'	2.15	0.46
12:D:220:HIS:HD2	12:D:221:VAL:N	2.13	0.46
10:A:350:U:H2'	10:A:351:G:O4'	2.15	0.46
10:A:2489:G:C6	10:A:2490:G:N1	2.83	0.46
9:8:29:LYS:NZ	9:8:44:LYS:CB	2.78	0.46
10:A:2052:G:N3	10:A:2053:G:C8	2.83	0.46
10:A:250:G:H2'	10:A:251:A:C8	2.50	0.46
10:A:828:U:C5	10:A:829:A:N6	2.84	0.46
10:A:142:A:C8	10:A:1595:G:N2	2.67	0.46
10:A:1450(A):C:C4	10:A:1451:C:N4	2.81	0.46
28:X:60:ARG:CD	28:X:74:PRO:HD2	2.45	0.46
10:A:557:U:C2'	10:A:558:G:O5'	2.63	0.46
10:A:557:U:H2'	10:A:558:G:O5'	2.15	0.46
18:N:43:THR:O	18:N:46:VAL:HG12	2.14	0.46
10:A:1826:G:H2'	10:A:1827:C:H6	1.80	0.46
12:D:32:SER:HA	12:D:35:LYS:O	2.15	0.46
12:D:24:ILE:HD11	12:D:84:TYR:H	1.80	0.46
29:Y:45:VAL:HG13	29:Y:62:GLU:HG2	1.96	0.46
10:A:371:A:O3'	10:A:372:G:H4'	2.15	0.46
10:A:2318:G:HO2'	10:A:2319:G:P	2.38	0.46
10:A:304:G:C2'	10:A:305:U:H5'	2.45	0.46
29:Y:15:VAL:HG12	29:Y:16:ALA:H	1.80	0.46
12:D:145:VAL:HG11	12:D:175:LEU:HD11	1.97	0.46
10:A:740:U:H2'	10:A:741:G:H8	1.80	0.46
19:O:104:ARG:NH1	19:O:104:ARG:HB2	2.31	0.46
10:A:2470:G:C2	10:A:2471:C:H6	2.33	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2469:A:N7	10:A:2482:G:C8	2.83	0.46
24:T:26:ASP:HA	24:T:48:ILE:HA	1.96	0.46
10:A:2248:C:H3'	10:A:2249:U:C6	2.50	0.46
10:A:349:G:O2'	10:A:350:U:H5'	2.16	0.46
26:V:55:ALA:C	26:V:57:VAL:H	2.19	0.46
12:D:6:PHE:N	12:D:6:PHE:CD1	2.83	0.46
10:A:2059:A:O2'	14:F:69:HIS:CD2	2.61	0.46
10:A:2417:C:H6	10:A:2417:C:O5'	1.98	0.46
10:A:824:A:H1'	10:A:2358:G:N7	2.31	0.46
10:A:972:G:C6	10:A:973:A:C6	3.03	0.46
20:P:81:GLN:HG2	20:P:106:LEU:HA	1.95	0.46
3:2:55:ARG:C	3:2:56:GLN:HE21	2.19	0.46
10:A:71:A:H4'	10:A:72:U:H5''	1.98	0.46
28:X:60:ARG:CG	28:X:72:LYS:H	2.28	0.46
10:A:1155:A:C4	10:A:1157:G:C8	3.04	0.46
18:N:23:LEU:CD2	18:N:62:VAL:HG23	2.46	0.46
10:A:1141:U:O5'	18:N:63:THR:HG21	2.14	0.46
23:S:93:LYS:O	23:S:93:LYS:CG	2.59	0.46
2:1:85:LEU:HD23	2:1:85:LEU:HA	1.59	0.46
10:A:2297:C:C2'	10:A:2298:A:H5'	2.45	0.46
10:A:1499:C:C2'	10:A:1500:G:C5'	2.90	0.46
30:Z:30:ASN:HB3	30:Z:90:VAL:O	2.15	0.46
1:0:74:ARG:NH2	11:B:13:A:OP2	2.45	0.46
10:A:1281:G:H2'	10:A:1282:U:O4'	2.16	0.46
12:D:8:PRO:HB3	12:D:14:ARG:CB	2.43	0.46
29:Y:97:ARG:O	29:Y:97:ARG:HG3	2.15	0.46
27:W:12:ILE:HG23	27:W:17:VAL:CG2	2.46	0.46
10:A:1665:A:H4'	19:O:67:LYS:HB2	1.97	0.46
19:O:79:PHE:HE2	19:O:101:PRO:HG2	1.81	0.46
10:A:81:G:HO2'	10:A:295:G:HO2'	1.62	0.46
12:D:177:LEU:HD11	12:D:183:ARG:HD2	1.96	0.46
16:H:54:ARG:HB3	16:H:65:HIS:HB2	1.97	0.46
10:A:2343:C:H4'	10:A:2373:G:O3'	2.16	0.46
10:A:2290:G:C2	10:A:2343:C:O2	2.68	0.46
10:A:530:G:N1	10:A:2022:U:OP1	2.48	0.46
10:A:1895:C:H2'	10:A:1896:G:O4'	2.15	0.46
10:A:1419:A:C3'	10:A:1420:U:H5''	2.45	0.46
1:0:39:ARG:HH21	10:A:2355:C:H1'	1.80	0.46
15:G:94:LEU:HD12	15:G:98:ARG:C	2.36	0.46
10:A:484:C:H2'	10:A:485:C:H6	1.81	0.46
10:A:1221:C:H2'	10:A:1221(A):C:C6	2.51	0.46
7:6:24:GLU:HB3	7:6:25:LYS:H	1.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:101:VAL:O	20:P:103:ALA:N	2.49	0.46
20:P:111:ARG:HA	20:P:128:HIS:CG	2.49	0.46
20:P:80:TYR:CE1	20:P:111:ARG:HB3	2.51	0.46
10:A:943:U:OP2	20:P:38:GLN:OE1	2.33	0.46
24:T:51:ARG:HD3	24:T:62:THR:HG23	1.96	0.46
10:A:1569:A:H2'	10:A:1570:A:O4'	2.15	0.46
10:A:1820:U:H5''	10:A:1821:A:C8	2.50	0.46
12:D:24:ILE:HD11	12:D:83:GLU:HA	1.98	0.46
16:H:85:LYS:HE2	16:H:145:ALA:HB2	1.98	0.46
10:A:49:A:H4'	10:A:50:U:C5'	2.23	0.46
10:A:2282:G:H5'	10:A:2389:G:H1'	1.98	0.46
10:A:866:A:H2	10:A:867:C:C4	2.33	0.46
10:A:962:G:O2'	10:A:963:U:H5'	2.16	0.46
17:I:25:TYR:CD1	17:I:30:LEU:HD11	2.51	0.46
10:A:2093:G:O2'	17:I:25:TYR:HD2	1.98	0.46
12:D:164:GLN:O	12:D:175:LEU:HA	2.16	0.46
12:D:193:VAL:O	12:D:193:VAL:HG12	2.15	0.46
10:A:90:U:H1'	10:A:92:A:H5''	1.98	0.46
21:Q:19:GLY:C	21:Q:21:THR:N	2.66	0.46
10:A:1475:G:C2	10:A:1517:G:N3	2.83	0.46
24:T:92:GLY:C	24:T:94:ALA:H	2.19	0.46
14:F:128:ALA:O	14:F:129:PHE:CG	2.69	0.46
10:A:2291:U:H2'	10:A:2292:C:C6	2.51	0.46
29:Y:2:ARG:N	29:Y:4:LYS:HG2	2.31	0.46
10:A:2193:G:C6	10:A:2194:G:C5	3.04	0.46
10:A:1223:G:C6	10:A:1227:G:C6	3.04	0.46
10:A:1564:C:O2'	10:A:1565:C:H5'	2.16	0.46
10:A:1466:G:H2'	10:A:1466:G:N3	2.30	0.46
14:F:109:GLY:O	14:F:110:LEU:C	2.54	0.46
10:A:272(E):G:C5	10:A:272(F):C:C5	3.04	0.46
19:O:90:GLN:O	19:O:91:LEU:HB2	2.16	0.46
4:3:17:LYS:N	10:A:969:U:OP1	2.49	0.46
10:A:1759:A:H4'	10:A:2715:C:O4'	2.15	0.46
25:U:114:LYS:O	25:U:117:GLN:N	2.49	0.46
9:8:12:LYS:HG2	20:P:68:GLN:NE2	2.30	0.46
10:A:2055:C:H5'	10:A:2056:G:O5'	2.16	0.46
6:5:8:LYS:HE2	10:A:2055:C:OP1	2.15	0.46
10:A:2415:G:H4'	20:P:66:GLY:CA	2.45	0.46
33:A:3206:TEL:H48	33:A:3206:TEL:H572	1.81	0.46
10:A:627:A:C6	10:A:637:A:C8	3.03	0.46
10:A:943:U:O2'	10:A:944:G:H5'	2.15	0.46
10:A:821:A:H2'	10:A:946:G:H5''	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1341:U:C2'	10:A:1397:U:O2	2.63	0.46
10:A:1459:G:O5'	10:A:1459:G:N3	2.49	0.46
10:A:73:A:C2'	10:A:74:A:OP2	2.62	0.46
10:A:1012:U:OP1	25:U:75:ASN:OD1	2.34	0.46
26:V:7:THR:N	26:V:10:LYS:O	2.40	0.46
23:S:94:TYR:CD1	23:S:95:HIS:N	2.84	0.46
2:1:11:ARG:HA	2:1:11:ARG:HD2	1.74	0.46
10:A:2662:A:H4'	10:A:2663:G:O4'	2.16	0.46
10:A:2733:A:H2'	10:A:2734:A:O4'	2.16	0.46
13:E:34:VAL:HG22	13:E:48:GLN:NE2	2.27	0.46
10:A:49:A:H4'	10:A:50:U:OP2	2.15	0.46
10:A:302:C:O2'	10:A:303:U:H5'	2.16	0.46
10:A:2275:C:H6	10:A:2275:C:C5'	2.28	0.46
10:A:2328:A:H2'	10:A:2329:G:C8	2.50	0.46
10:A:959:A:C6	10:A:960:A:N1	2.84	0.46
10:A:1280:G:C6	10:A:1281:G:C5	3.04	0.46
21:Q:21:THR:O	21:Q:22:LYS:HD2	2.16	0.46
19:O:35:VAL:CG1	19:O:105:GLU:HB2	2.46	0.46
18:N:131:GLN:CD	18:N:134:ARG:HA	2.36	0.46
15:G:71:THR:HB	15:G:89:GLY:CA	2.45	0.46
27:W:73:ALA:HB3	27:W:106:ILE:CD1	2.46	0.46
8:7:5:TRP:CZ3	10:A:464:U:H4'	2.51	0.46
10:A:128:C:O2'	10:A:129:C:OP1	2.33	0.46
10:A:2422:A:O2'	10:A:2423:U:O5'	2.31	0.46
10:A:817:C:C4	10:A:818:G:C5	3.03	0.46
10:A:29:U:H2'	10:A:30:G:C8	2.51	0.46
10:A:1671:U:H2'	10:A:1673:U:OP2	2.15	0.46
10:A:1879:C:H2'	10:A:1880:C:O4'	2.15	0.46
27:W:24:ILE:O	27:W:27:LYS:HG3	2.16	0.46
19:O:71:ARG:HB3	19:O:72:PRO:HD2	1.97	0.46
10:A:400:G:H8	10:A:400:G:O5'	1.99	0.46
10:A:130:C:H2'	10:A:131:G:H5''	1.98	0.46
10:A:2346:A:C2	10:A:2383:G:C2	3.03	0.46
7:6:45:LYS:CB	10:A:2371:G:H4'	2.46	0.46
10:A:588:U:O2'	10:A:589:C:H5'	2.16	0.46
3:2:45:SER:HA	3:2:47:ASN:ND2	2.30	0.46
28:X:18:TYR:O	28:X:20:GLY:N	2.48	0.46
28:X:9:LEU:HD12	28:X:30:VAL:O	2.16	0.46
10:A:1142(A):A:N7	10:A:1144:G:C6	2.83	0.46
10:A:849:A:H3'	10:A:850:C:H6	1.80	0.46
18:N:47:ALA:CB	18:N:112:LEU:CD1	2.89	0.46
18:N:26:LEU:HD11	18:N:30:ILE:HD11	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1902:C:H4'	12:D:244:ARG:HA	1.98	0.46
10:A:1826:G:C4'	12:D:242:ARG:HH21	2.09	0.46
15:G:114:ILE:HG22	15:G:115:ARG:HG3	1.98	0.46
11:B:30:C:OP2	23:S:32:LEU:HD11	2.16	0.46
10:A:2750:A:H4'	10:A:2751:G:OP2	2.15	0.46
10:A:2752:C:C2'	10:A:2752:C:O2	2.51	0.46
30:Z:39:VAL:HG23	30:Z:44:PHE:HB2	1.98	0.46
10:A:2282:G:OP1	10:A:2283:C:H1'	2.15	0.46
11:B:19:G:C6	11:B:20:C:C4	3.04	0.46
13:E:36:ARG:NH1	13:E:85:ASN:ND2	2.63	0.46
29:Y:46:LYS:CB	29:Y:47:LYS:HD2	2.46	0.46
10:A:1629:U:O2	10:A:2698:U:H5''	2.15	0.46
10:A:1630:G:H2'	10:A:1631:C:C6	2.51	0.46
10:A:1992:G:O2'	10:A:1993:U:OP2	2.27	0.46
10:A:174:C:C3'	10:A:175:G:H5''	2.45	0.46
10:A:1686:C:C4	10:A:1687:G:C5	3.04	0.46
10:A:1843:C:O2'	10:A:1844:C:H5'	2.16	0.46
10:A:2074:U:H4'	10:A:2598:A:O4'	2.16	0.46
10:A:2595:G:N1	10:A:2599:G:C6	2.83	0.46
27:W:55:ALA:O	27:W:58:ALA:HB3	2.15	0.46
10:A:482:A:H5''	10:A:483:A:OP1	2.15	0.46
10:A:18:C:H2'	10:A:19:C:H6	1.81	0.46
10:A:1053:C:N4	10:A:1107:G:N2	2.64	0.46
14:F:150:GLY:HA2	14:F:172:TRP:CE3	2.50	0.46
10:A:1307:A:N3	10:A:1307:A:H2'	2.30	0.46
10:A:2582:G:C2	10:A:2583:G:C8	3.04	0.46
10:A:1805:U:H2'	10:A:1806:C:H6	1.81	0.46
12:D:4:LYS:HB2	12:D:18:VAL:HG12	1.98	0.46
7:6:25:LYS:CE	7:6:27:LYS:HZ3	2.27	0.46
10:A:2053:G:N2	10:A:2054:A:C4	2.83	0.46
10:A:990:A:N6	10:A:1186:G:H1'	2.31	0.46
10:A:1719:G:C2'	10:A:1720:U:C5'	2.91	0.46
18:N:15:LEU:C	18:N:15:LEU:HD13	2.35	0.46
26:V:86:GLY:O	26:V:87:HIS:CG	2.69	0.46
15:G:5:VAL:HG21	15:G:101:ILE:CB	2.44	0.46
24:T:50:ILE:O	24:T:99:LEU:HD12	2.15	0.46
10:A:768:G:O2'	10:A:769:G:H5'	2.16	0.46
14:F:2:LYS:O	14:F:25:PRO:HG2	2.15	0.46
10:A:1235:G:C2	10:A:1236:G:N2	2.84	0.46
10:A:2206:G:N2	10:A:2207:G:C5'	2.62	0.46
22:R:35:THR:HA	22:R:112:ALA:O	2.16	0.46
10:A:1278:A:H5''	22:R:36:THR:HG23	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:143:HIS:CD2	12:D:144:ALA:N	2.84	0.46
10:A:2636:U:OP1	13:E:80:GLU:HG3	2.16	0.46
24:T:28:VAL:O	24:T:29:ARG:CB	2.62	0.46
14:F:129:PHE:CD2	14:F:163:VAL:HG21	2.51	0.46
10:A:2886:G:C2	10:A:2887:U:C5	3.03	0.46
22:R:33:ARG:CG	22:R:115:GLU:HG2	2.38	0.46
10:A:2555:U:C5	10:A:2556:C:C6	3.04	0.46
10:A:1308:A:N6	10:A:1309:G:C2	2.84	0.46
10:A:2271:G:C6	10:A:2272:U:C4	3.04	0.46
21:Q:16:ARG:CG	21:Q:17:LEU:N	2.79	0.46
14:F:57:VAL:HG12	14:F:58:ALA:N	2.31	0.46
1:O:60:PHE:CZ	10:A:2365:G:H4'	2.50	0.46
10:A:2032:G:H21	13:E:146:THR:HG23	1.81	0.46
13:E:72:VAL:O	13:E:73:GLU:C	2.54	0.46
21:Q:116:GLU:O	21:Q:119:ARG:N	2.48	0.46
1:O:36:ILE:HG12	1:O:37:LEU:N	2.31	0.46
8:7:26:GLY:O	8:7:30:VAL:HG23	2.15	0.46
1:O:84:LEU:HD12	1:O:84:LEU:N	2.31	0.46
16:H:77:LYS:HA	16:H:80:SER:HB3	1.97	0.46
10:A:2063:C:C5	10:A:2064:C:C4	3.04	0.46
10:A:244:A:H4'	20:P:74:GLU:HB2	1.98	0.46
10:A:1245:G:O3'	20:P:16:ARG:NH2	2.49	0.46
10:A:1000:A:C5	10:A:1155:A:C5	3.03	0.46
26:V:72:VAL:HG12	26:V:88:ARG:HH22	1.80	0.46
11:B:25:A:C2'	11:B:26:A:C8	2.92	0.46
15:G:31:VAL:C	15:G:33:ARG:H	2.18	0.46
23:S:89:ARG:NE	23:S:89:ARG:HA	2.25	0.46
10:A:1798:U:H5''	12:D:259:THR:HB	1.98	0.46
16:H:85:LYS:NZ	16:H:133:VAL:CG2	2.77	0.46
2:1:91:LYS:O	2:1:92:LYS:HD2	2.16	0.46
10:A:336:C:HO2'	29:Y:35:TYR:HH	1.61	0.46
10:A:1486:A:N6	10:A:1504:C:H42	2.13	0.46
21:Q:140:ALA:CB	30:Z:99:TYR:HB2	2.45	0.46
10:A:864:G:N2	10:A:913:U:C2	2.84	0.46
10:A:863:A:H2	10:A:914:C:H41	1.64	0.46
22:R:116:LEU:HA	22:R:116:LEU:HD23	1.61	0.46
10:A:1045:A:H3'	10:A:1045:A:N3	2.31	0.46
10:A:104:U:C5	10:A:105:C:C4	3.03	0.46
10:A:2711:A:N6	10:A:2714:G:C5	2.84	0.46
10:A:2714:G:OP1	10:A:2714:G:H8	1.99	0.46
27:W:36:LEU:CD1	27:W:48:ALA:HA	2.45	0.46
10:A:107:C:C2	10:A:108:U:C5	3.04	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:459:U:H2'	10:A:460:A:C8	2.51	0.46
17:I:6:LEU:N	17:I:6:LEU:HD23	2.31	0.46
10:A:543:C:HO2'	10:A:543:C:H6	1.64	0.46
10:A:547:A:N3	10:A:547:A:H2'	2.30	0.46
25:U:39:LEU:HD23	25:U:39:LEU:HA	1.71	0.46
10:A:2291:U:H5''	10:A:2380:C:C2'	2.46	0.46
14:F:31:HIS:CB	20:P:13:ASN:HD22	2.29	0.46
13:E:4:ILE:HD13	13:E:28:ALA:CB	2.44	0.46
1:O:48:GLY:HA3	1:O:80:HIS:CE1	2.51	0.46
10:A:2590:A:C2	10:A:2605:U:C2	3.04	0.46
10:A:1356:G:C6	10:A:1357:U:N3	2.84	0.46
8:7:15:THR:HG22	8:7:16:HIS:CE1	2.50	0.46
10:A:1442:G:C2	10:A:1443:G:C4	3.03	0.46
19:O:86:ILE:O	19:O:87:ILE:HD13	2.15	0.46
2:1:18:ILE:HD12	2:1:18:ILE:N	2.31	0.46
19:O:56:ASP:O	19:O:58:VAL:HG13	2.16	0.46
10:A:239:U:H2'	10:A:240:G:O4'	2.16	0.46
9:8:35:GLN:CB	10:A:2420:C:OP1	2.64	0.46
10:A:245:G:C4	10:A:246:C:C6	3.03	0.46
10:A:255:A:C4	10:A:256:A:C8	3.04	0.46
10:A:832:G:H2'	10:A:833:U:C6	2.51	0.46
10:A:1750:G:O2'	10:A:1751:C:H5'	2.16	0.46
10:A:1528:A:H8	10:A:1528(A):A:C8	2.34	0.46
10:A:1006:C:O2'	18:N:106:MET:O	2.32	0.46
18:N:30:ILE:HG21	18:N:120:LEU:CD2	2.46	0.46
18:N:35:ARG:HE	18:N:35:ARG:HB3	1.39	0.46
15:G:11:TYR:CG	15:G:11:TYR:O	2.69	0.46
10:A:1790:C:H2'	10:A:1791:A:C4	2.51	0.46
10:A:685:A:H1'	10:A:689:A:N6	2.31	0.46
12:D:159:ALA:HA	12:D:196:VAL:HG12	1.98	0.46
12:D:214:TRP:N	12:D:214:TRP:CD1	2.83	0.46
10:A:573:G:O6	10:A:2029:G:H2'	2.15	0.46
30:Z:125:LEU:HD23	30:Z:126:VAL:N	2.31	0.46
1:O:45:PHE:O	1:O:59:LEU:HD11	2.16	0.46
13:E:95:ILE:HD12	13:E:95:ILE:H	1.81	0.46
13:E:132:HIS:HA	13:E:135:HIS:CE1	2.51	0.46
20:P:121:LYS:O	20:P:123:LEU:HG	2.16	0.46
27:W:14:PRO:O	27:W:17:VAL:N	2.49	0.46
10:A:1590:U:H2'	10:A:1591:G:O4'	2.15	0.46
10:A:1516:C:H2'	10:A:1517:G:H5''	1.98	0.46
10:A:2843:G:O2'	10:A:2844:G:H5'	2.16	0.46
10:A:154:G:N3	10:A:154(A):C:N3	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:33:LEU:O	14:F:37:VAL:HG23	2.15	0.46
10:A:271(L):U:H5''	10:A:271(M):G:C5	2.50	0.46
10:A:271(L):U:H5''	10:A:271(M):G:C4	2.51	0.46
10:A:465:G:C2	10:A:466:A:C2	3.04	0.46
10:A:2492:U:C2	10:A:2493:U:C5	3.04	0.46
10:A:603:A:H1'	10:A:604:G:O4'	2.16	0.46
10:A:2603:G:C5	10:A:2604:U:C5	3.04	0.46
10:A:817:C:C2'	10:A:818:G:C8	2.98	0.46
1:0:50:ASN:C	1:0:62:LEU:HB2	2.37	0.46
10:A:2552:U:H2'	10:A:2554:U:H5''	1.98	0.46
10:A:1446:C:C4	10:A:1447:G:N7	2.85	0.46
10:A:1849:G:C2	10:A:1850:G:C8	3.04	0.46
10:A:1913:A:H4'	10:A:1914:C:H5''	1.98	0.46
13:E:69:LYS:C	13:E:71:GLY:H	2.19	0.46
13:E:69:LYS:C	13:E:71:GLY:N	2.69	0.46
21:Q:54:MET:O	21:Q:57:HIS:N	2.48	0.46
22:R:87:TYR:O	22:R:89:ASP:N	2.49	0.46
14:F:46:ARG:HH11	14:F:46:ARG:CB	2.29	0.46
10:A:561:G:O2'	25:U:45:TYR:CE2	2.64	0.46
10:A:2359:C:O2'	10:A:2360:A:H5'	2.16	0.45
10:A:2360:A:O2'	10:A:2361:A:H5''	2.15	0.45
10:A:514:A:C2	10:A:515:A:C4	3.04	0.45
10:A:516:C:H2'	10:A:517:C:C6	2.51	0.45
10:A:1386:C:OP2	10:A:1396:U:H5	1.98	0.45
10:A:1288:U:H4'	10:A:1289:C:OP2	2.16	0.45
23:S:95:HIS:O	23:S:97:ARG:N	2.49	0.45
10:A:567:A:N1	10:A:571:A:H8	2.14	0.45
10:A:2784:C:H2'	10:A:2785:C:H6	1.81	0.45
10:A:2808:U:HO2'	10:A:2809:A:H5'	1.80	0.45
10:A:866:A:O2'	10:A:867:C:H5'	2.16	0.45
13:E:195:LEU:HG	13:E:196:VAL:N	2.31	0.45
10:A:1651:G:OP1	22:R:40:LYS:HG3	2.15	0.45
15:G:82:LEU:CB	15:G:87:PRO:HG3	2.41	0.45
13:E:23:VAL:HA	13:E:184:VAL:O	2.16	0.45
10:A:86:C:H4'	10:A:104:U:H1'	1.98	0.45
10:A:2711:A:C8	10:A:2714:G:H1'	2.51	0.45
10:A:1411:C:C2'	10:A:1412:A:H8	2.28	0.45
10:A:1661:G:C6	10:A:2000:G:C6	3.04	0.45
22:R:26:LYS:HE2	22:R:71:GLN:H	1.82	0.45
10:A:456:C:C4	28:X:66:LEU:HD22	2.52	0.45
10:A:185:U:H2'	10:A:186:G:C8	2.50	0.45
10:A:186:G:O2'	10:A:187:G:H5'	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1641:A:H2'	10:A:1642:G:O4'	2.16	0.45
10:A:54:G:N2	10:A:126:A:C2	2.83	0.45
10:A:1839:G:C8	10:A:1839:G:C5'	2.99	0.45
10:A:2340:G:HO2'	10:A:2341:G:H5'	1.79	0.45
10:A:1315:C:H2'	10:A:1316:U:H6	1.81	0.45
10:A:1921:G:O2'	10:A:1922:G:H5'	2.16	0.45
10:A:266:G:C2'	10:A:267:C:O5'	2.64	0.45
10:A:1561:G:O2'	10:A:1562:A:H5'	2.16	0.45
15:G:96:ARG:CD	15:G:97:ASP:H	2.29	0.45
10:A:2835:A:N6	10:A:2879:C:C6	2.84	0.45
25:U:66:ASN:HA	25:U:76:TYR:HB2	1.97	0.45
13:E:70:ALA:O	13:E:71:GLY:C	2.54	0.45
17:I:92:VAL:HG23	17:I:96:ASP:CB	2.45	0.45
10:A:704:G:N3	10:A:726:G:C2	2.84	0.45
6:5:2:ALA:HA	10:A:2015:A:C1'	2.30	0.45
10:A:1271:G:C2	10:A:1617:C:H4'	2.51	0.45
10:A:2067:G:O2'	10:A:2069:G:H5'	2.16	0.45
10:A:2418:A:C5	10:A:2419:U:C5	3.05	0.45
9:8:35:GLN:OE1	10:A:2421:G:OP2	2.35	0.45
10:A:2615:U:O2'	10:A:2616:C:H5'	2.16	0.45
14:F:39:TRP:O	14:F:42:ALA:HB3	2.16	0.45
28:X:50:LYS:HE2	28:X:82:GLN:HB2	1.98	0.45
26:V:64:HIS:O	26:V:66:ARG:N	2.50	0.45
11:B:45:A:N3	11:B:45:A:H2'	2.31	0.45
15:G:117:PHE:HZ	15:G:179:PRO:HG2	1.82	0.45
23:S:34:HIS:CD2	23:S:54:LEU:HB2	2.51	0.45
23:S:28:VAL:C	23:S:89:ARG:HD2	2.35	0.45
12:D:215:LEU:HD13	12:D:217:ARG:HH21	1.80	0.45
13:E:144:ARG:HB3	13:E:145:LYS:H	1.29	0.45
13:E:32:PRO:HD2	13:E:50:GLY:H	1.82	0.45
29:Y:31:LEU:HB2	29:Y:36:ALA:H	1.82	0.45
1:0:40:GLN:NE2	1:0:43:THR:C	2.69	0.45
10:A:870:A:N3	10:A:870:A:H2'	2.32	0.45
10:A:959:A:N1	10:A:960:A:C2	2.84	0.45
22:R:96:ARG:HD2	22:R:98:LEU:HD11	1.98	0.45
12:D:143:HIS:HD2	12:D:144:ALA:HB3	1.81	0.45
10:A:1747(A):G:C3'	10:A:1748:G:H5''	2.42	0.45
10:A:1603:A:H5'	10:A:1603:A:C8	2.41	0.45
10:A:518:G:C4	10:A:519:U:C5	3.04	0.45
24:T:67:SER:O	24:T:69:GLY:N	2.48	0.45
10:A:1556:C:H2'	10:A:1557:C:C6	2.52	0.45
21:Q:32:TYR:HB2	21:Q:106:VAL:HG23	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:7:10:ARG:O	8:7:14:LYS:HB2	2.17	0.45
10:A:1213:A:C8	10:A:1237:A:C6	3.05	0.45
20:P:7:ARG:HD2	20:P:7:ARG:HA	1.59	0.45
10:A:892:G:C6	10:A:894:C:C4	3.04	0.45
10:A:2865:U:C4	10:A:2866:U:C4	3.04	0.45
10:A:1227:G:H5''	25:U:16:LYS:NZ	2.30	0.45
14:F:8:GLN:HA	14:F:8:GLN:OE1	2.16	0.45
13:E:181:LEU:HD13	13:E:181:LEU:HA	1.63	0.45
10:A:280:C:C2'	10:A:281:G:O5'	2.63	0.45
21:Q:118:LEU:HA	21:Q:118:LEU:HD23	1.63	0.45
10:A:271(W):G:C2'	10:A:271(X):G:H5'	2.45	0.45
10:A:192:C:H2'	10:A:193:U:O5'	2.16	0.45
3:2:30:ARG:O	3:2:31:GLU:C	2.55	0.45
28:X:90:GLU:C	28:X:92:LEU:N	2.69	0.45
18:N:19:GLU:O	18:N:59:LYS:O	2.34	0.45
15:G:5:VAL:HG21	15:G:101:ILE:CG2	2.46	0.45
23:S:67:ARG:C	23:S:69:VAL:H	2.18	0.45
2:1:87:PRO:HD2	2:1:88:LYS:HG3	1.98	0.45
10:A:2029:G:C4	10:A:2031:A:OP2	2.69	0.45
10:A:2311:A:H4'	15:G:77:ILE:HD11	1.99	0.45
10:A:310:A:C2	10:A:330:A:C4	3.04	0.45
29:Y:13:VAL:HG13	29:Y:72:VAL:HB	1.97	0.45
10:A:288:C:H2'	10:A:289:A:O5'	2.16	0.45
10:A:2816:C:O2	10:A:2883:A:O2'	2.33	0.45
10:A:851:U:C2	10:A:927:G:C2	3.04	0.45
22:R:4:LEU:C	22:R:6:SER:N	2.70	0.45
24:T:89:VAL:HG12	24:T:91:ARG:CG	2.46	0.45
19:O:107:ARG:HH11	24:T:35:LYS:CB	2.29	0.45
24:T:28:VAL:HG21	24:T:46:GLU:CG	2.46	0.45
24:T:60:THR:HG22	24:T:77:PRO:HA	1.98	0.45
24:T:76:PHE:HA	24:T:77:PRO:HD2	1.76	0.45
10:A:110:G:N2	10:A:111:A:H1'	2.31	0.45
18:N:71:ILE:HG22	18:N:73:THR:H	1.81	0.45
18:N:83:LYS:CE	18:N:85:ILE:HD11	2.42	0.45
12:D:267:SER:O	12:D:268:ARG:HB2	2.16	0.45
10:A:1373:A:N6	10:A:1374:G:C2	2.84	0.45
10:A:838:C:C2'	10:A:839:U:H5'	2.46	0.45
15:G:96:ARG:O	15:G:98:ARG:N	2.50	0.45
18:N:24:GLY:HA2	18:N:27:ALA:HB3	1.98	0.45
10:A:416:C:H5'	10:A:417:C:OP2	2.16	0.45
1:0:37:LEU:O	1:0:38:VAL:CG2	2.64	0.45
17:I:84:GLY:O	17:I:85:GLU:CG	2.65	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2639:A:C2'	10:A:2640:G:H5'	2.46	0.45
10:A:2361:A:H2'	10:A:2362:G:O4'	2.16	0.45
10:A:2428:G:H5''	10:A:2429:G:O5'	2.16	0.45
10:A:448:U:C3'	10:A:449:A:C5'	2.93	0.45
10:A:627:A:N1	10:A:636:G:O2'	2.42	0.45
10:A:636:G:H4'	10:A:638:G:O3'	2.17	0.45
10:A:663:G:C6	10:A:664:C:C4	3.05	0.45
20:P:62:LEU:N	20:P:62:LEU:CD1	2.63	0.45
3:2:49:LYS:O	3:2:53:LEU:HB3	2.17	0.45
28:X:18:TYR:O	28:X:19:ALA:C	2.54	0.45
28:X:72:LYS:O	28:X:73:ARG:HB3	2.16	0.45
10:A:1002:G:C2	10:A:1003:G:H1'	2.51	0.45
10:A:1141:U:OP2	18:N:63:THR:CG2	2.64	0.45
10:A:998:C:H2'	10:A:999:U:O4'	2.17	0.45
18:N:103:VAL:HG11	18:N:120:LEU:HD23	1.99	0.45
25:U:102:GLU:HG3	26:V:2:PHE:HE2	1.79	0.45
25:U:91:ASP:CG	25:U:96:ALA:HB2	2.36	0.45
10:A:1900:A:N1	10:A:1970:A:C5	2.85	0.45
24:T:51:ARG:HB2	24:T:98:LYS:HG3	1.98	0.45
12:D:28:GLU:CB	12:D:29:PRO:CD	2.94	0.45
12:D:24:ILE:CD1	12:D:83:GLU:HA	2.47	0.45
2:1:92:LYS:C	2:1:94:LEU:H	2.17	0.45
10:A:2810:A:C2'	13:E:61:ARG:NH2	2.79	0.45
13:E:55:ASN:ND2	13:E:75:VAL:HG21	2.30	0.45
13:E:77:ILE:CG2	13:E:79:ARG:HE	2.29	0.45
10:A:2298:A:N6	10:A:2318:G:H1'	2.32	0.45
10:A:1480:G:N2	10:A:1512:U:C2	2.84	0.45
10:A:286:C:C3'	10:A:287:C:H5'	2.46	0.45
10:A:2195:C:C2	10:A:2196:C:C6	3.04	0.45
19:O:111:PHE:HB3	19:O:114:ILE:CG1	2.31	0.45
10:A:1655:A:H3'	10:A:1656:C:H6	1.80	0.45
10:A:1294:U:C2'	10:A:1295:C:H5'	2.45	0.45
10:A:1274:A:N3	10:A:1297:C:H1'	2.32	0.45
29:Y:81:LYS:CB	29:Y:96:ILE:HG22	2.46	0.45
1:0:29:GLN:O	1:0:31:VAL:HG13	2.17	0.45
10:A:476:G:N1	10:A:479:A:OP2	2.49	0.45
13:E:38:THR:CB	13:E:41:LYS:HE3	2.46	0.45
8:7:40:TRP:CE3	10:A:459:U:H5''	2.51	0.45
10:A:470:A:H2'	10:A:471:A:C8	2.51	0.45
10:A:1247:A:C5	10:A:1249:U:C5	3.04	0.45
2:1:46:LEU:CD1	2:1:46:LEU:H	2.23	0.45
10:A:1363:C:H2'	10:A:1364:G:H8	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1354:A:H2'	10:A:1355:G:O4'	2.16	0.45
10:A:1356:G:H2'	10:A:1357:U:O4'	2.16	0.45
10:A:447:A:C5	10:A:454:A:C5	3.05	0.45
22:R:51:LEU:CD2	22:R:70:LEU:HD21	2.46	0.45
10:A:1439:A:C2	10:A:1553:A:C5	3.04	0.45
10:A:1814:G:H2'	10:A:1815:A:N7	2.31	0.45
10:A:123:G:C2'	10:A:124:G:H5'	2.46	0.45
10:A:1805:U:C2	10:A:1806:C:C5	3.05	0.45
10:A:260:G:C2	10:A:261:G:H1'	2.51	0.45
14:F:84:VAL:O	14:F:86:GLY:N	2.50	0.45
9:8:25:MET:C	20:P:62:LEU:HD21	2.37	0.45
28:X:18:TYR:C	28:X:20:GLY:N	2.70	0.45
28:X:82:GLN:HG3	28:X:85:PRO:HD2	1.93	0.45
10:A:1224:C:H2'	10:A:1225:G:O4'	2.17	0.45
18:N:34:LEU:HD13	18:N:34:LEU:HA	1.72	0.45
18:N:35:ARG:HB2	18:N:42:TRP:CZ3	2.51	0.45
26:V:94:LEU:HD23	26:V:94:LEU:C	2.37	0.45
11:B:40:U:N3	11:B:44:G:OP2	2.46	0.45
11:B:57:A:OP2	11:B:58:A:OP2	2.34	0.45
15:G:15:VAL:HG22	15:G:175:LEU:O	2.16	0.45
10:A:2520:C:C6	10:A:2567:G:H1'	2.52	0.45
10:A:2648:C:H2'	10:A:2649:U:H6	1.82	0.45
10:A:2659:G:N3	10:A:2663:G:N1	2.60	0.45
13:E:34:VAL:CG2	13:E:34:VAL:O	2.64	0.45
11:B:73:A:N3	11:B:73:A:H2'	2.30	0.45
6:5:51:TYR:HB2	6:5:54:GLY:HA3	1.98	0.45
10:A:742:G:H2'	10:A:743:G:C8	2.52	0.45
13:E:170:LEU:HD21	13:E:187:ALA:O	2.17	0.45
17:I:94:ALA:O	17:I:98:ALA:CB	2.65	0.45
10:A:1170:G:OP2	10:A:1170:G:C8	2.69	0.45
10:A:1773:A:C5	10:A:1829:A:H1'	2.51	0.45
20:P:146:VAL:O	20:P:147:LEU:O	2.34	0.45
10:A:2886:G:N3	10:A:2887:U:C5	2.85	0.45
10:A:1301:A:H2'	10:A:1301:A:N3	2.31	0.45
29:Y:49:VAL:HG12	29:Y:53:PRO:HG3	1.98	0.45
20:P:10:PRO:CD	20:P:11:GLY:N	2.78	0.45
20:P:8:PRO:O	20:P:9:ASN:C	2.54	0.45
10:A:1669:A:OP2	10:A:1670:C:OP2	2.34	0.45
10:A:272(H):C:C6	10:A:272(H):C:OP2	2.70	0.45
10:A:980:A:C6	10:A:981:A:C2	3.05	0.45
10:A:708:C:H42	10:A:723:G:H1	1.63	0.45
11:B:42:C:C6	15:G:69:ALA:HB2	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2748:A:C6	10:A:2749:A:C5	3.04	0.45
10:A:760:G:C2'	10:A:761:A:H5'	2.47	0.45
10:A:236:C:H2'	10:A:237:C:C6	2.51	0.45
10:A:2584:U:C2'	10:A:2585:U:H5'	2.46	0.45
14:F:107:LYS:O	14:F:108:LYS:C	2.54	0.45
28:X:93:GLU:HG3	28:X:93:GLU:O	2.17	0.45
10:A:1187:G:H8	10:A:1187:G:O5'	1.99	0.45
10:A:2059:A:H5''	10:A:2060:A:OP2	2.16	0.45
10:A:256:A:C2	10:A:257:A:C4	3.05	0.45
10:A:26:G:N1	10:A:27:G:N2	2.65	0.45
10:A:28:A:O2'	10:A:583:G:H5'	2.16	0.45
10:A:672:C:H2'	10:A:673:C:C6	2.52	0.45
10:A:140:G:N3	10:A:142:A:N1	2.65	0.45
28:X:78:LYS:O	28:X:78:LYS:HE2	2.16	0.45
26:V:28:GLU:CB	26:V:29:PRO:HD3	2.33	0.45
26:V:85:LYS:C	26:V:87:HIS:H	2.13	0.45
26:V:93:GLU:O	26:V:94:LEU:HB2	2.16	0.45
11:B:45:A:C2	11:B:46:A:O4'	2.69	0.45
11:B:46:A:C4	11:B:47:C:C6	3.04	0.45
12:D:159:ALA:C	12:D:161:THR:N	2.70	0.45
22:R:77:ARG:O	22:R:78:LYS:C	2.55	0.45
10:A:2532:G:C6	10:A:2533:A:C6	3.04	0.45
10:A:2659:G:H1'	10:A:2663:G:N2	2.30	0.45
10:A:2633:G:H5'	10:A:2811:G:O2'	2.17	0.45
10:A:2894:G:H2'	10:A:2894:G:N3	2.30	0.45
10:A:2308:G:N2	10:A:2309:A:C6	2.85	0.45
30:Z:5:LEU:HD22	30:Z:6:LYS:H	1.82	0.45
30:Z:98:MET:HE3	30:Z:99:TYR:O	2.16	0.45
1:0:40:GLN:NE2	1:0:45:PHE:H	2.15	0.45
30:Z:151:HIS:CD2	30:Z:170:THR:HG22	2.52	0.45
10:A:2090:G:C6	10:A:2091:U:C4	3.03	0.45
2:1:47:GLN:HG3	10:A:398:G:OP1	2.16	0.45
10:A:1577:C:H2'	10:A:1578:U:C1'	2.47	0.45
10:A:1691:C:H2'	10:A:1691:C:O2	2.16	0.45
1:0:34:GLY:O	1:0:35:ASN:C	2.55	0.45
10:A:2524:G:C8	10:A:2524:G:H5'	2.36	0.45
10:A:776:G:C8	10:A:793:A:N3	2.85	0.45
17:I:113:ARG:HB2	17:I:130:TYR:CE1	2.50	0.45
10:A:1412:A:C8	10:A:1412:A:O5'	2.70	0.45
10:A:1593:G:C6	10:A:1594:G:C6	3.05	0.45
10:A:1995:U:C2	10:A:1996:C:C5	3.05	0.45
27:W:8:ARG:HB3	27:W:9:TYR:CD1	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:73:VAL:O	12:D:75:ILE:N	2.50	0.45
15:G:60:LEU:HD12	15:G:68:PRO:HD3	1.97	0.45
10:A:612:C:H2'	10:A:613:G:O4'	2.16	0.45
10:A:1300:U:H3'	10:A:1301:A:C5'	2.46	0.45
10:A:1949:G:C2	10:A:1958:C:C2	3.04	0.45
12:D:255:LYS:H	12:D:255:LYS:CE	2.30	0.45
10:A:2599:G:N7	12:D:236:GLY:O	2.50	0.45
22:R:8:ARG:NE	22:R:8:ARG:CA	2.79	0.45
15:G:94:LEU:HD12	15:G:99:MET:N	2.31	0.45
10:A:2596:U:H2'	10:A:2597:G:C5'	2.47	0.45
10:A:1042:G:H3'	10:A:1043:C:O4'	2.17	0.45
10:A:483:A:H2'	10:A:484:C:H5'	1.97	0.45
12:D:221:VAL:HG22	12:D:226:MET:HE2	1.99	0.45
10:A:338:G:H2'	10:A:339:U:C6	2.51	0.45
21:Q:78:PRO:O	21:Q:79:LEU:CB	2.64	0.45
10:A:1444:G:H2'	10:A:1445(A):C:C5	2.51	0.45
9:8:32:LEU:O	9:8:33:ASN:HB2	2.16	0.45
10:A:2056:G:H2'	10:A:2056:G:N3	2.32	0.45
10:A:828:U:C2'	10:A:828:U:O2	2.65	0.45
3:2:41:ILE:HG12	10:A:94(A):G:N2	2.32	0.45
18:N:55:VAL:CG1	18:N:126:PRO:HA	2.40	0.45
26:V:32:THR:HB	26:V:64:HIS:CE1	2.52	0.45
26:V:25:LEU:CG	26:V:94:LEU:HD13	2.46	0.45
12:D:222:ARG:O	12:D:223:GLY:C	2.53	0.45
23:S:102:ALA:O	23:S:104:GLY:N	2.49	0.45
23:S:89:ARG:CB	23:S:92:TYR:HB3	2.44	0.45
10:A:1568:G:OP1	12:D:63:ARG:NH2	2.50	0.45
10:A:778:G:C5	10:A:779:U:C5	3.05	0.45
12:D:35:LYS:CE	12:D:104:TYR:CD1	2.99	0.45
10:A:2809:A:O2'	10:A:2810:A:H5'	2.17	0.45
13:E:31:CYS:HA	13:E:32:PRO:HD3	1.61	0.45
13:E:48:GLN:HE22	13:E:64:LYS:HZ2	1.59	0.45
10:A:301:G:C6	10:A:317:G:C6	3.04	0.45
10:A:335:C:H2'	10:A:336:C:H6	1.81	0.45
10:A:1500:G:C5	10:A:1501:C:C4	3.04	0.45
30:Z:89:PHE:CE1	30:Z:96:VAL:HG21	2.52	0.45
30:Z:98:MET:O	30:Z:125:LEU:HA	2.17	0.45
10:A:910:A:C2'	10:A:2264:C:O2'	2.65	0.45
10:A:963:U:O2'	10:A:964:C:H5'	2.16	0.45
10:A:357:A:C2	10:A:358:U:C2	3.03	0.45
10:A:358:U:C5	10:A:359:A:N7	2.85	0.45
11:B:13:A:O2'	11:B:15:A:O5'	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:O:98:VAL:HG12	19:O:117:LEU:HB3	1.99	0.45
18:N:78:TYR:HD1	18:N:79:PRO:CG	2.30	0.45
10:A:902:C:H2'	10:A:903:C:C6	2.52	0.45
20:P:143:GLY:CA	20:P:145:PRO:HD3	2.45	0.45
10:A:2303:G:H4'	15:G:124:SER:O	2.16	0.45
10:A:1412:A:O5'	10:A:1412:A:H8	1.99	0.45
10:A:1991:U:C2'	10:A:1992:G:H5''	2.47	0.45
10:A:79:G:C5	10:A:80:G:N7	2.85	0.45
10:A:2839:G:H5'	22:R:46:GLY:CA	2.47	0.45
10:A:175:G:C2	10:A:176:G:C4	3.05	0.45
10:A:1952:A:N3	19:O:22:ILE:HG13	2.32	0.45
19:O:2:ILE:HD11	19:O:82:ASN:CB	2.46	0.45
26:V:51:VAL:CG1	26:V:52:VAL:N	2.78	0.45
21:Q:42:ILE:CD1	21:Q:97:VAL:HB	2.45	0.45
24:T:24:PRO:CA	24:T:49:VAL:HG13	2.46	0.45
10:A:2078:C:H2'	10:A:2079:U:H6	1.81	0.45
10:A:2693:A:H2'	10:A:2694:G:H8	1.82	0.45
10:A:2619:C:H4'	13:E:151:TYR:O	2.17	0.45
10:A:2581:G:H4'	10:A:2582:G:C8	2.52	0.45
28:X:47:PHE:O	28:X:49:VAL:HG22	2.16	0.45
10:A:2789:C:OP1	10:A:2789:C:H4'	2.16	0.45
7:6:13:CYS:SG	7:6:22:ALA:HB3	2.57	0.45
10:A:245:G:C4	10:A:246:C:C5	3.05	0.45
10:A:659:C:H1'	14:F:102:PRO:CD	2.47	0.45
10:A:822:U:O2'	10:A:823:G:H5'	2.17	0.45
20:P:105:LEU:O	20:P:106:LEU:HB2	2.17	0.45
20:P:84:ASN:HA	20:P:115:LEU:HD12	1.98	0.45
3:2:21:LEU:HD13	3:2:50:ILE:HG22	1.99	0.45
10:A:1394:U:H3'	10:A:1394:U:C6	2.52	0.45
10:A:143:G:H2'	10:A:143(A):C:C6	2.52	0.45
10:A:58:G:H1	10:A:69:C:N4	2.15	0.45
25:U:101:ARG:O	25:U:102:GLU:C	2.55	0.45
17:I:140:LEU:HG	17:I:142:VAL:HG22	1.99	0.45
10:A:1380:G:N2	10:A:1570:A:C2	2.84	0.45
12:D:44:ASN:HB3	12:D:49:ILE:N	2.32	0.45
10:A:570:G:H2'	10:A:2030:A:C5	2.52	0.45
10:A:2784:C:H2'	10:A:2785:C:C6	2.51	0.45
13:E:61:ARG:N	13:E:62:PRO:CD	2.79	0.45
29:Y:42:VAL:HG23	29:Y:67:LEU:HD13	1.99	0.45
30:Z:50:GLN:O	30:Z:51:ALA:C	2.54	0.45
10:A:912:C:N3	10:A:913:U:C5	2.85	0.45
10:A:856:C:H3'	10:A:857:C:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2680:C:N4	10:A:2681:C:H42	2.15	0.45
10:A:496:G:C2	10:A:497:A:H1'	2.52	0.45
10:A:501:A:N6	10:A:502:A:C6	2.84	0.45
29:Y:47:LYS:HA	29:Y:60:PHE:CZ	2.52	0.45
10:A:271(F):C:O2'	10:A:271(G):C:H5'	2.17	0.45
27:W:20:VAL:CG2	27:W:47:VAL:HG21	2.47	0.45
15:G:88:ILE:CG2	15:G:89:GLY:N	2.79	0.45
10:A:1856:G:C2	10:A:1887:C:N3	2.85	0.45
18:N:72:TYR:O	18:N:73:THR:C	2.54	0.45
10:A:2380:C:C2'	10:A:2381:C:H5'	2.47	0.45
10:A:1668:A:O4'	10:A:1669:A:C2	2.70	0.45
10:A:836:G:C4	10:A:837:C:C5	3.05	0.45
10:A:221:A:C4	10:A:266:G:N7	2.84	0.45
10:A:269:U:C2'	10:A:269:U:O2	2.64	0.45
14:F:7:TYR:HB3	14:F:16:GLY:C	2.38	0.45
10:A:414:C:H2'	10:A:415:A:H8	1.82	0.45
10:A:2081:C:H2'	10:A:2082:A:H8	1.81	0.45
10:A:2584:U:O5'	10:A:2584:U:O2	2.35	0.45
10:A:1014:U:H2'	10:A:1015:G:O4'	2.16	0.45
9:8:34:TRP:CZ3	9:8:41:ILE:HG23	2.48	0.45
9:8:26:LYS:CB	9:8:44:LYS:HG3	2.47	0.45
10:A:2360:A:HO2'	10:A:2361:A:P	2.26	0.45
10:A:2615:U:H2'	10:A:2616:C:H6	1.80	0.45
10:A:821:A:H5''	10:A:822:U:O5'	2.16	0.45
3:2:32:LEU:HD13	3:2:32:LEU:HA	1.84	0.45
10:A:1404:C:H4'	10:A:1404:C:OP1	2.17	0.45
10:A:1022:G:C5	10:A:1140:C:N4	2.85	0.45
26:V:23:GLU:O	26:V:24:LYS:C	2.55	0.45
15:G:7:LEU:HB3	15:G:100:TRP:CZ3	2.51	0.45
10:A:1789:A:H2'	10:A:1790:C:O4'	2.17	0.45
10:A:1820:U:C4'	10:A:1821:A:OP2	2.55	0.45
13:E:55:ASN:O	13:E:57:LYS:N	2.50	0.45
10:A:2298:A:H2'	10:A:2299:G:O4'	2.17	0.45
21:Q:10:ARG:CZ	21:Q:10:ARG:HB2	2.47	0.45
13:E:7:VAL:HA	13:E:194:GLY:O	2.17	0.45
10:A:958:U:OP2	21:Q:14:ARG:NH1	2.50	0.45
10:A:1275:A:N3	10:A:1276:A:H1'	2.32	0.45
10:A:2681:C:C5	10:A:2725:A:N6	2.67	0.45
17:I:77:LEU:HD23	17:I:77:LEU:HA	1.62	0.45
10:A:80:G:N2	10:A:81:G:H1'	2.32	0.45
10:A:1773:A:N7	10:A:1829:A:H1'	2.32	0.45
10:A:2469:A:C2	10:A:2470:G:C5	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:298:G:H5''	10:A:299:A:OP1	2.17	0.45
10:A:2660:A:N3	10:A:2660:A:C3'	2.75	0.45
10:A:2019:A:O5'	10:A:2019:A:H8	2.00	0.45
10:A:602:G:N2	10:A:656:G:C5	2.85	0.45
10:A:11:G:H2'	10:A:12:U:O4'	2.16	0.45
10:A:1163:G:C2'	10:A:1164:G:H5'	2.46	0.45
10:A:817:C:C2	10:A:818:G:C8	3.04	0.45
10:A:2748:A:N6	10:A:2749:A:C6	2.85	0.45
9:8:18:ALA:HB2	10:A:628:G:O3'	2.17	0.45
30:Z:100:VAL:HG21	30:Z:134:PRO:HG2	1.99	0.45
10:A:409:C:O2'	10:A:410:G:H5'	2.16	0.45
21:Q:112:GLU:HG2	21:Q:112:GLU:H	1.44	0.45
10:A:2338:G:O2'	10:A:2339:G:H5'	2.16	0.45
10:A:437:G:H2'	10:A:438:G:O4'	2.17	0.45
22:R:111:LEU:HA	22:R:111:LEU:HD23	1.77	0.45
10:A:593:G:C2	10:A:665:C:C2	3.05	0.45
10:A:672:C:H2'	10:A:673:C:H6	1.81	0.45
14:F:95:ARG:HG3	14:F:97:TYR:CE2	2.51	0.45
20:P:85:LEU:HD12	20:P:120:ALA:CB	2.47	0.45
10:A:1709:U:H2'	10:A:1710:C:C6	2.52	0.45
28:X:53:LYS:HZ2	28:X:55:ASN:HD21	1.62	0.45
15:G:15:VAL:HG12	15:G:19:LEU:HG	1.99	0.45
23:S:28:VAL:HG12	23:S:29:PHE:N	2.32	0.45
23:S:62:LYS:O	23:S:66:ALA:CB	2.63	0.45
10:A:1811:G:C5	10:A:1812:A:N7	2.85	0.45
10:A:690:G:N2	10:A:773:U:C2	2.85	0.45
12:D:30:GLU:CG	12:D:63:ARG:HE	2.25	0.45
2:1:85:LEU:C	2:1:87:PRO:CD	2.84	0.45
16:H:149:ARG:HD3	16:H:164:TYR:CE1	2.46	0.45
10:A:2318:G:C2'	10:A:2319:G:OP1	2.63	0.45
27:W:74:ALA:HA	27:W:104:THR:O	2.17	0.45
10:A:911:A:O4'	10:A:2264:C:H4'	2.16	0.45
21:Q:6:ARG:O	21:Q:7:MET:HG2	2.17	0.45
11:B:65:C:N4	11:B:109:C:C2'	2.62	0.45
22:R:37:THR:OG1	22:R:40:LYS:HG3	2.17	0.45
19:O:104:ARG:NH2	24:T:33:LYS:HD2	2.30	0.45
8:7:34:ARG:HB2	8:7:42:LEU:HD22	1.99	0.45
8:7:34:ARG:NH1	8:7:39:ARG:HG3	2.31	0.45
21:Q:30:GLY:O	21:Q:134:ARG:HD3	2.17	0.45
15:G:89:GLY:O	15:G:90:LEU:O	2.35	0.45
17:I:19:VAL:HG22	17:I:20:ASP:N	2.31	0.45
13:E:169:ASN:H	13:E:201:THR:HG23	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2292:C:HO2'	10:A:2293:C:H5'	1.82	0.45
16:H:153:LYS:N	16:H:153:LYS:CD	2.80	0.45
20:P:75:ILE:N	20:P:75:ILE:CD1	2.78	0.45
10:A:451:C:H41	10:A:454:A:H5'	1.81	0.45
24:T:7:ILE:O	24:T:11:GLU:OE1	2.35	0.45
10:A:1623:G:C2	10:A:1624:G:C8	3.05	0.45
10:A:444:C:H2'	10:A:445:C:H6	1.82	0.45
10:A:414:C:H4'	10:A:1879:C:O2	2.17	0.45
17:I:41:GLU:O	17:I:42:SER:C	2.54	0.45
17:I:8:PRO:C	17:I:9:LEU:HD23	2.37	0.45
10:A:1149:G:H2'	10:A:1150:C:C6	2.52	0.45
27:W:62:HIS:O	27:W:63:ASP:C	2.55	0.45
14:F:62:ARG:HH21	14:F:64:ILE:HA	1.82	0.45
9:8:54:GLU:O	9:8:58:ILE:HG12	2.16	0.44
10:A:2415:G:H2'	10:A:2416:C:C6	2.52	0.44
10:A:672:C:C2'	10:A:673:C:H5'	2.47	0.44
20:P:71:VAL:HG13	20:P:72:PRO:HD3	1.96	0.44
10:A:58:G:H5''	28:X:72:LYS:HB2	1.99	0.44
10:A:842:G:H2'	10:A:843:G:O4'	2.17	0.44
15:G:16:ARG:NH1	15:G:16:ARG:HG3	2.32	0.44
23:S:73:LEU:O	23:S:77:ALA:CB	2.65	0.44
24:T:50:ILE:HD13	24:T:64:ARG:HB3	1.97	0.44
10:A:698:C:O2'	10:A:734:A:N6	2.50	0.44
10:A:693:C:C2	10:A:770:G:C2	3.06	0.44
10:A:2751:G:N3	10:A:2751:G:H2'	2.32	0.44
10:A:2759:G:C2'	10:A:2760:C:H5'	2.48	0.44
10:A:573:G:H1	10:A:2030:A:H3'	1.83	0.44
10:A:2530:A:C2'	10:A:2531:A:H5''	2.46	0.44
10:A:2631:G:H22	13:E:61:ARG:NH1	2.11	0.44
10:A:49:A:C4'	10:A:50:U:OP2	2.64	0.44
29:Y:25:GLY:HA3	29:Y:39:VAL:HG13	2.00	0.44
10:A:950:G:C5	10:A:951:C:C4	3.06	0.44
10:A:2093:G:H2'	10:A:2094:G:H8	1.82	0.44
17:I:25:TYR:O	17:I:26:ALA:C	2.56	0.44
10:A:1115:G:N3	10:A:1116:C:C5	2.86	0.44
10:A:2817:G:C2	10:A:2830:G:C4	3.05	0.44
15:G:73:ALA:HB3	15:G:85:GLY:C	2.36	0.44
20:P:118:GLY:O	20:P:119:GLU:CG	2.53	0.44
24:T:55:ASN:HB3	24:T:57:PHE:O	2.17	0.44
10:A:2842:G:O2'	10:A:2843:G:H5'	2.17	0.44
24:T:5:ALA:O	24:T:6:LEU:C	2.56	0.44
24:T:107:ASP:H	24:T:110:ILE:HG13	1.81	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1642:G:O2'	10:A:1643:G:H5'	2.16	0.44
10:A:1203:G:H4'	20:P:7:ARG:HG2	1.98	0.44
10:A:2080:G:N2	10:A:2241:A:C4	2.85	0.44
10:A:2085:C:O2'	10:A:2086:U:H5'	2.18	0.44
13:E:9:VAL:CG2	13:E:10:GLY:N	2.80	0.44
10:A:426:C:C2	10:A:427:U:C6	3.05	0.44
27:W:31:GLU:O	27:W:32:ALA:C	2.55	0.44
21:Q:62:GLY:O	30:Z:178:GLU:HG2	2.16	0.44
20:P:77:ARG:HE	20:P:77:ARG:HB3	1.64	0.44
9:8:53:PRO:O	9:8:54:GLU:C	2.54	0.44
2:1:33:LYS:HB3	10:A:2395:C:O2'	2.16	0.44
9:8:41:ILE:HG21	10:A:2419:U:OP1	2.16	0.44
10:A:663:G:OP1	20:P:20:GLY:HA2	2.17	0.44
10:A:745:G:H2'	10:A:746:A:H5'	1.99	0.44
10:A:58:G:O2'	10:A:59:U:O5'	2.33	0.44
10:A:846:C:C4	10:A:930:U:C4	3.05	0.44
18:N:31:ALA:O	18:N:34:LEU:N	2.50	0.44
18:N:31:ALA:O	18:N:32:THR:C	2.55	0.44
10:A:814:C:H5	20:P:27:HIS:CD2	2.35	0.44
10:A:1331:A:HO2'	10:A:1332:G:H8	1.64	0.44
10:A:1799:G:N7	12:D:179:SER:OG	2.50	0.44
10:A:2030:A:H8	10:A:2030:A:H5''	1.81	0.44
10:A:2532:G:N2	10:A:2663:G:O2'	2.45	0.44
10:A:2809:A:C2'	10:A:2810:A:H5'	2.48	0.44
10:A:910:A:C6	10:A:911:A:C6	3.06	0.44
11:B:17:C:N3	11:B:18:G:C8	2.85	0.44
10:A:2224:G:H4'	10:A:2226:C:C2	2.52	0.44
10:A:2740:A:C6	10:A:2741:A:C6	3.05	0.44
3:2:59:ARG:HD2	3:2:59:ARG:HA	1.58	0.44
10:A:1171:G:N7	10:A:1173:G:H1'	2.31	0.44
7:6:51:GLU:CG	7:6:52:VAL:N	2.68	0.44
10:A:470:A:H2'	10:A:471:A:O4'	2.17	0.44
12:D:17:THR:CG2	12:D:205:VAL:HB	2.46	0.44
10:A:299:A:C2	10:A:322:A:C4	3.04	0.44
10:A:2886:G:C4	10:A:2887:U:C6	3.05	0.44
10:A:2845:G:C2'	10:A:2846:G:H5'	2.48	0.44
10:A:1374:G:C6	10:A:1375:C:N3	2.85	0.44
10:A:2718:G:C5	10:A:2719:G:C8	3.05	0.44
10:A:1836:C:H2'	10:A:1837:C:H6	1.82	0.44
10:A:433:C:C4	10:A:434:U:O4	2.71	0.44
10:A:1575:C:H2'	10:A:1576:U:H6	1.83	0.44
12:D:31:LYS:HA	12:D:31:LYS:HZ1	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:503:A:C5	10:A:506:G:C6	3.05	0.44
10:A:1907:G:O2'	10:A:1908:C:H5'	2.18	0.44
2:1:33:LYS:HE3	2:1:33:LYS:HB2	1.75	0.44
7:6:25:LYS:O	10:A:2286:A:C2	2.58	0.44
7:6:46:HIS:HA	7:6:47:THR:HA	1.99	0.44
10:A:831:G:C2	10:A:832:G:H1'	2.52	0.44
20:P:50:ARG:O	20:P:57:THR:HG23	2.17	0.44
10:A:1721:G:H5'	10:A:1722:A:OP2	2.17	0.44
10:A:1138:G:H5''	10:A:1139:G:OP2	2.17	0.44
26:V:72:VAL:O	26:V:73:SER:OG	2.35	0.44
10:A:1788:C:C2'	10:A:1789:A:H5'	2.47	0.44
12:D:206:LEU:CD2	12:D:206:LEU:N	2.78	0.44
12:D:33:LEU:HB3	12:D:34:VAL:H	1.62	0.44
12:D:83:GLU:HB2	12:D:92:ILE:HD11	1.98	0.44
10:A:2783:G:H2'	10:A:2784:C:C6	2.53	0.44
10:A:2893:G:H5'	10:A:2894:G:OP1	2.17	0.44
13:E:61:ARG:C	13:E:63:LEU:H	2.21	0.44
10:A:1512:U:C2'	10:A:1512:U:O2	2.56	0.44
30:Z:3:TYR:CE2	30:Z:51:ALA:HB2	2.52	0.44
10:A:2330:G:H2'	10:A:2331:G:O4'	2.17	0.44
10:A:953:A:N1	10:A:964:C:O2	2.50	0.44
30:Z:166:SER:CB	30:Z:167:PRO:CA	2.96	0.44
10:A:527:C:OP2	10:A:2779:U:C5	2.65	0.44
6:5:31:VAL:HG23	6:5:32:PRO:N	2.32	0.44
18:N:78:TYR:HD1	18:N:79:PRO:HD3	1.82	0.44
10:A:904:C:C5'	10:A:904:C:H6	2.31	0.44
13:E:8:LYS:NZ	13:E:188:VAL:O	2.47	0.44
29:Y:95:LYS:HG2	29:Y:101:LYS:N	2.32	0.44
10:A:497:A:C6	10:A:498:G:C5	3.05	0.44
24:T:29:ARG:NE	24:T:86:ILE:HG22	2.32	0.44
10:A:1176:G:H1'	10:A:1177:A:OP1	2.18	0.44
19:O:13:ASN:ND2	19:O:97:ARG:CB	2.80	0.44
15:G:60:LEU:CD1	15:G:64:THR:HG21	2.46	0.44
21:Q:52:VAL:O	21:Q:55:VAL:HG13	2.18	0.44
12:D:182:LEU:HD22	12:D:182:LEU:HA	1.57	0.44
30:Z:139:VAL:C	30:Z:141:VAL:H	2.21	0.44
1:0:82:ARG:HA	1:0:83:PRO:HD2	1.82	0.44
25:U:33:ARG:O	25:U:37:GLU:HG3	2.17	0.44
1:0:66:VAL:HG12	1:0:67:VAL:N	2.32	0.44
27:W:57:ASN:O	27:W:58:ALA:C	2.55	0.44
10:A:1862:G:N2	10:A:1863:G:C4	2.86	0.44
13:E:3:GLY:HA2	13:E:198:VAL:O	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:167:ALA:HB1	14:F:173:VAL:HG11	1.98	0.44
10:A:879:G:O5'	10:A:879:G:H8	2.00	0.44
9:8:62:LEU:C	9:8:64:TYR:H	2.20	0.44
10:A:232:G:N2	10:A:420:C:H5''	2.32	0.44
9:8:61:LEU:HD13	10:A:593:G:O2'	2.18	0.44
3:2:32:LEU:HA	3:2:37:PHE:HB2	1.99	0.44
10:A:1406:U:C2'	10:A:1407:C:O5'	2.65	0.44
28:X:60:ARG:HE	28:X:74:PRO:HG3	1.79	0.44
25:U:61:TRP:CZ3	25:U:94:ASN:HB2	2.51	0.44
10:A:1330:C:C2'	10:A:1331:A:H5'	2.46	0.44
11:B:32:C:C2	11:B:51:G:C2	3.05	0.44
15:G:105:LYS:HZ2	15:G:105:LYS:HB2	1.83	0.44
15:G:114:ILE:CG1	15:G:140:ILE:HD12	2.48	0.44
10:A:1800:C:O2	10:A:1802:A:C8	2.70	0.44
10:A:1803:A:C2'	10:A:1804:C:H5'	2.46	0.44
10:A:769:G:C2'	10:A:770:G:H5'	2.47	0.44
10:A:780:G:H21	10:A:783:A:H62	1.64	0.44
10:A:1813:G:H4'	12:D:44:ASN:O	2.17	0.44
12:D:35:LYS:CD	12:D:64:ILE:N	2.81	0.44
22:R:60:LEU:O	22:R:63:ARG:HB3	2.18	0.44
2:1:11:ARG:HG2	2:1:61:ARG:O	2.17	0.44
10:A:2785:C:H2'	10:A:2786:U:O4'	2.17	0.44
10:A:316:C:H2'	10:A:317:G:O5'	2.18	0.44
21:Q:140:ALA:C	30:Z:53:ILE:HB	2.38	0.44
10:A:2206:G:N3	10:A:2207:G:H5'	2.31	0.44
13:E:96:PHE:CD1	13:E:96:PHE:N	2.85	0.44
12:D:186:HIS:CD2	12:D:187:GLY:H	2.35	0.44
15:G:47:LYS:HE2	15:G:81:LYS:HB2	2.00	0.44
10:A:1024:G:C3'	10:A:1025:G:H5''	2.40	0.44
15:G:42:GLY:HA2	15:G:89:GLY:HA2	1.98	0.44
24:T:93:ARG:O	24:T:94:ALA:O	2.35	0.44
26:V:49:THR:HG22	26:V:51:VAL:HG23	2.00	0.44
14:F:158:THR:HG21	14:F:160:ASN:HB3	1.99	0.44
12:D:3:VAL:HG12	12:D:3:VAL:O	2.16	0.44
10:A:271(N):U:OP1	10:A:271(N):U:H6	2.01	0.44
10:A:1301:A:O2'	10:A:1303:G:N7	2.43	0.44
10:A:1935:G:H1	10:A:1962:C:H2'	1.80	0.44
15:G:138:GLN:O	15:G:141:PHE:HD2	2.00	0.44
16:H:92:ILE:C	16:H:94:TYR:N	2.71	0.44
10:A:1355:G:C6	10:A:1356:G:C5	3.06	0.44
8:7:15:THR:CG2	8:7:16:HIS:CE1	3.00	0.44
30:Z:146:ILE:HG22	30:Z:174:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2620:C:H1'	13:E:156:MET:HB2	1.99	0.44
13:E:110:GLY:HA3	13:E:162:ALA:HB2	2.00	0.44
7:6:42:TRP:CZ2	10:A:643:A:OP1	2.70	0.44
10:A:199:A:C6	10:A:2434:A:C6	3.05	0.44
10:A:253:C:C2'	10:A:254:G:H5'	2.48	0.44
10:A:642:G:N2	10:A:646:A:H2	2.14	0.44
10:A:663:G:H2'	10:A:664:C:H6	1.82	0.44
14:F:39:TRP:HB2	14:F:101:LEU:HD22	1.99	0.44
20:P:81:GLN:HB3	20:P:106:LEU:HD12	1.99	0.44
10:A:2859:G:H8	10:A:2859:G:H3'	1.79	0.44
3:2:30:ARG:CD	3:2:30:ARG:H	2.12	0.44
3:2:28:LYS:HG3	3:2:37:PHE:CE1	2.52	0.44
3:2:49:LYS:NZ	3:2:53:LEU:CD2	2.76	0.44
28:X:16:LYS:O	28:X:19:ALA:HB3	2.18	0.44
4:3:31:LEU:HA	4:3:31:LEU:HD23	1.80	0.44
10:A:1144:G:C6	10:A:1145:C:N4	2.85	0.44
10:A:1156:A:H4'	10:A:1157:G:OP2	2.18	0.44
18:N:2:LYS:O	18:N:4:TYR:CE1	2.71	0.44
10:A:1827:C:O2'	10:A:1970:A:H1'	2.18	0.44
12:D:53:PHE:O	12:D:218:ARG:N	2.47	0.44
2:1:10:LYS:CB	2:1:14:VAL:H	2.26	0.44
10:A:2771:C:H2'	10:A:2772:C:H6	1.82	0.44
10:A:327:G:N2	10:A:336:C:C2	2.85	0.44
29:Y:11:ASP:H	29:Y:27:VAL:HA	1.83	0.44
11:B:105:A:O4'	30:Z:29:TYR:HE1	2.00	0.44
10:A:953:A:N3	10:A:954:G:C8	2.85	0.44
10:A:960:A:C2	10:A:2495:G:O2'	2.70	0.44
2:1:47:GLN:C	2:1:47:GLN:OE1	2.56	0.44
12:D:166:GLN:HA	12:D:166:GLN:NE2	2.33	0.44
10:A:526:A:O2'	10:A:2043:C:H2'	2.17	0.44
6:5:36:CYS:HG	6:5:49:CYS:H	1.64	0.44
4:3:45:GLY:HA3	10:A:852:G:H5'	1.99	0.44
10:A:479:A:HO2'	10:A:481:G:H8	1.61	0.44
22:R:17:ARG:HG2	22:R:21:TYR:CE1	2.53	0.44
24:T:109:GLU:O	24:T:110:ILE:C	2.55	0.44
10:A:718:A:H3'	10:A:719:C:C6	2.53	0.44
10:A:1199:U:H2'	10:A:1200:C:C6	2.52	0.44
10:A:1349:A:N6	10:A:1598:C:H42	2.14	0.44
23:S:83:LYS:HE2	23:S:84:GLN:HE22	1.83	0.44
10:A:384:U:H2'	10:A:385:C:C6	2.52	0.44
10:A:55:G:O2'	10:A:56:A:H5'	2.17	0.44
10:A:1671:U:O2'	10:A:1673:U:H5	2.01	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:G:152:LEU:O	15:G:153:ARG:HB2	2.17	0.44
10:A:339:U:H6	10:A:339:U:O5'	2.00	0.44
30:Z:92:SER:HB2	30:Z:94:GLU:H	1.82	0.44
22:R:55:ALA:HB2	22:R:79:LEU:HD11	2.00	0.44
2:1:83:GLU:O	2:1:83:GLU:HG3	2.17	0.44
2:1:25:LYS:C	2:1:26:ARG:CG	2.84	0.44
9:8:22:VAL:O	9:8:49:VAL:HG23	2.17	0.44
10:A:513:A:N1	10:A:514:A:C5	2.85	0.44
10:A:581:C:H2'	10:A:582:G:H8	1.82	0.44
14:F:65:TRP:HZ3	14:F:75:HIS:CD2	2.19	0.44
20:P:14:LYS:O	20:P:15:ARG:CB	2.65	0.44
20:P:90:ARG:NH1	20:P:90:ARG:O	2.46	0.44
10:A:1714:G:N2	10:A:1717:G:C4	2.86	0.44
28:X:36:LYS:C	28:X:38:GLU:N	2.71	0.44
18:N:42:TRP:CD1	25:U:64:ARG:NH1	2.86	0.44
18:N:46:VAL:HG13	18:N:48:MET:HG3	2.00	0.44
18:N:65:LYS:O	18:N:69:GLN:CB	2.44	0.44
18:N:65:LYS:HD2	18:N:67:LEU:HB2	1.98	0.44
10:A:1324:G:C4	10:A:1328:G:O6	2.70	0.44
10:A:1286:A:C6	10:A:1329:U:C2	3.05	0.44
15:G:16:ARG:NH1	15:G:16:ARG:CG	2.79	0.44
10:A:2334:G:N3	23:S:15:ARG:NH1	2.65	0.44
23:S:87:PHE:HZ	23:S:97:ARG:HH22	1.64	0.44
10:A:1799:G:H5'	10:A:1819:A:H61	1.83	0.44
12:D:215:LEU:CD1	12:D:217:ARG:HH21	2.31	0.44
2:1:87:PRO:C	2:1:91:LYS:HD2	2.37	0.44
10:A:572:A:N3	10:A:573:G:H1'	2.32	0.44
29:Y:31:LEU:CB	29:Y:32:PRO:HA	2.31	0.44
30:Z:44:PHE:HE2	30:Z:88:PHE:CZ	2.35	0.44
30:Z:54:HIS:O	30:Z:55:HIS:CG	2.70	0.44
10:A:2261:C:O5'	10:A:2261:C:H6	2.01	0.44
10:A:864:G:C5	10:A:865:C:C5	3.06	0.44
13:E:36:ARG:HH11	13:E:85:ASN:ND2	2.15	0.44
10:A:919:G:H5'	11:B:81:G:C1'	2.47	0.44
22:R:10:LEU:HD22	22:R:17:ARG:HD2	2.00	0.44
15:G:71:THR:HB	15:G:89:GLY:N	2.32	0.44
10:A:2476:A:C6	10:A:2477:C:C4	3.05	0.44
10:A:340:A:C2'	10:A:341:G:H5'	2.47	0.44
12:D:3:VAL:N	12:D:20:ASP:HB2	2.31	0.44
10:A:2556:C:H2'	10:A:2557:G:C5'	2.48	0.44
30:Z:157:LEU:HA	30:Z:158:PRO:HD2	1.89	0.44
10:A:118:A:H3'	10:A:119:A:H5''	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:T:26:ASP:OD2	24:T:26:ASP:C	2.56	0.44
10:A:1675:C:N3	13:E:128:SER:OG	2.49	0.44
10:A:884:C:H3'	10:A:884:C:H6	1.82	0.44
10:A:2827:C:H2'	10:A:2828:C:C6	2.53	0.44
10:A:384:U:C5	10:A:385:C:C5	3.06	0.44
10:A:210:C:H4'	10:A:1367:A:H1'	1.98	0.44
10:A:1854:A:H2'	10:A:1855:G:O4'	2.17	0.44
14:F:46:ARG:HB2	14:F:46:ARG:NH1	2.32	0.44
10:A:738:G:H1'	10:A:759:G:N2	2.33	0.44
9:8:37:SER:HB2	9:8:38:GLY:H	1.47	0.44
10:A:579:G:C8	10:A:2017:U:C4	3.06	0.44
14:F:65:TRP:O	14:F:66:PRO:C	2.56	0.44
10:A:71:A:N7	10:A:73:A:C2	2.85	0.44
3:2:52:ASP:OD1	10:A:72:U:O2	2.35	0.44
28:X:35:THR:O	28:X:39:ILE:CG2	2.66	0.44
4:3:8:LEU:HD22	4:3:8:LEU:C	2.38	0.44
10:A:534:U:C4	10:A:535:C:N4	2.86	0.44
25:U:88:ILE:CA	25:U:90:VAL:HG23	2.48	0.44
11:B:29:A:H2'	11:B:30:C:C6	2.53	0.44
11:B:58:A:H5''	11:B:59:A:OP2	2.18	0.44
10:A:1795:C:O2'	10:A:1796:U:H5'	2.18	0.44
10:A:778:G:H2'	10:A:779:U:C6	2.53	0.44
10:A:1484:G:O2'	10:A:1485:G:C4'	2.66	0.44
10:A:2260:C:O2'	10:A:2261:C:H5'	2.18	0.44
10:A:957:A:C6	10:A:959:A:C4	3.05	0.44
21:Q:9:TYR:HD2	21:Q:9:TYR:O	1.93	0.44
21:Q:8:LYS:CD	21:Q:9:TYR:N	2.73	0.44
11:B:21:G:O2'	11:B:22:U:O5'	2.35	0.44
10:A:2006:C:O5'	10:A:2006:C:H6	2.00	0.44
10:A:2779:U:C2	10:A:2781:A:C2	3.06	0.44
10:A:2815:C:H2'	10:A:2816:C:C6	2.53	0.44
10:A:1297:C:H2'	10:A:1298:C:C6	2.51	0.44
15:G:73:ALA:HB3	15:G:85:GLY:O	2.18	0.44
10:A:1415:U:H2'	10:A:1416:G:H4'	2.00	0.44
20:P:140:ALA:O	20:P:141:ALA:HB2	2.17	0.44
10:A:1993:U:C5	10:A:1994:C:C5	3.05	0.44
19:O:103:ALA:O	19:O:106:LEU:HB2	2.17	0.44
10:A:343:C:O2	10:A:343:C:C2'	2.66	0.44
21:Q:134:ARG:HB3	21:Q:135:ASP:H	1.50	0.44
17:I:19:VAL:HG22	17:I:20:ASP:H	1.82	0.44
10:A:1303:G:N2	10:A:1304:C:C2	2.85	0.44
15:G:59:GLU:OE2	15:G:144:ILE:HD11	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:108:PRO:HA	30:Z:142:SER:O	2.18	0.44
8:7:19:ARG:HG2	8:7:19:ARG:NH1	2.32	0.44
10:A:2008:C:H2'	10:A:2009:G:C8	2.50	0.44
10:A:2271:G:O5'	10:A:2271:G:H8	2.00	0.44
10:A:753:C:H2'	10:A:754:C:C6	2.52	0.44
10:A:2850:A:H2'	10:A:2851:A:O4'	2.18	0.44
10:A:1223:G:N2	10:A:1226:A:OP2	2.49	0.44
10:A:1921:G:C4	10:A:1922:G:C8	3.05	0.44
10:A:706:A:C2'	10:A:707:G:H5'	2.48	0.44
10:A:384:U:C6	10:A:385:C:H5	2.35	0.44
30:Z:100:VAL:CG1	30:Z:137:ILE:HG12	2.48	0.44
14:F:127:GLU:OE1	14:F:127:GLU:CA	2.65	0.44
10:A:2674:G:H2'	10:A:2675:A:O4'	2.18	0.44
10:A:608:A:C6	10:A:609:A:C6	3.06	0.44
30:Z:115:GLY:HA2	30:Z:177:PRO:HD3	2.00	0.44
14:F:70:THR:HB	14:F:72:ARG:H	1.83	0.44
12:D:248:SER:HB2	12:D:249:PRO:HD2	1.99	0.44
30:Z:140:ASP:OD2	30:Z:140:ASP:N	2.46	0.44
9:8:32:LEU:HB3	9:8:34:TRP:N	2.32	0.44
9:8:6:THR:HG21	10:A:243:U:OP1	2.18	0.44
10:A:388:G:C6	10:A:390:A:C2	3.06	0.44
26:V:80:GLN:C	26:V:80:GLN:OE1	2.56	0.44
27:W:92:ARG:CG	27:W:92:ARG:NH1	2.74	0.44
10:A:1405:U:C2	10:A:1406:U:C5	3.06	0.44
28:X:80:ILE:HG23	28:X:81:VAL:N	2.32	0.44
18:N:3:THR:HG22	18:N:4:TYR:N	2.30	0.44
25:U:91:ASP:OD1	25:U:96:ALA:HB2	2.18	0.44
26:V:73:SER:O	26:V:74:LYS:CB	2.65	0.44
12:D:242:ARG:CB	12:D:244:ARG:H	2.31	0.44
23:S:90:GLY:N	23:S:91:PRO:HD2	2.30	0.44
10:A:1429:G:C4	10:A:1430:C:C5	3.05	0.44
10:A:1778:U:C2'	10:A:1784:A:N6	2.69	0.44
10:A:2521:C:H5''	10:A:2522:U:OP2	2.18	0.44
10:A:2784:C:O2'	10:A:2785:C:H5'	2.17	0.44
10:A:909:A:C4	10:A:912:C:C5	3.06	0.44
10:A:2007:C:H2'	10:A:2007:C:O2	2.18	0.44
22:R:100:LEU:CD2	22:R:113:LEU:HD13	2.44	0.44
22:R:96:ARG:O	22:R:114:VAL:HA	2.18	0.44
22:R:36:THR:HB	22:R:37:THR:H	1.70	0.44
10:A:2223:G:H2'	10:A:2224:G:C5'	2.48	0.44
10:A:1048:A:OP2	10:A:1109:C:N4	2.51	0.44
10:A:856:C:H4'	10:A:857:C:OP1	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1515:G:C4	10:A:1516:C:C5	3.05	0.44
24:T:54:ARG:HA	24:T:59:THR:CB	2.48	0.44
10:A:2840:C:O2'	10:A:2841:C:H5'	2.18	0.44
28:X:8:ILE:CD1	28:X:43:VAL:HA	2.47	0.44
24:T:109:GLU:HB3	24:T:113:LYS:CE	2.45	0.44
13:E:120:TRP:CG	13:E:155:LYS:HB3	2.53	0.44
21:Q:32:TYR:HA	21:Q:132:VAL:O	2.18	0.44
10:A:9:U:C6	10:A:2629:A:N6	2.86	0.44
8:7:8:ASN:ND2	8:7:11:LYS:H	2.16	0.44
10:A:1839:G:H8	10:A:1839:G:C5'	2.31	0.44
25:U:10:ARG:O	25:U:11:ARG:C	2.56	0.44
10:A:892:G:N3	10:A:892:G:C3'	2.79	0.44
10:A:1356:G:C6	10:A:1357:U:C4	3.06	0.44
10:A:921:G:H2'	10:A:922:U:H6	1.79	0.44
1:0:39:ARG:NH2	10:A:2363:C:O2	2.47	0.44
10:A:268:C:H2'	10:A:269:U:O4'	2.18	0.44
10:A:2076:U:C5	10:A:2596:U:C2	3.06	0.44
10:A:2670:A:C2'	10:A:2671:A:H5'	2.47	0.44
10:A:2489:G:C5	10:A:2490:G:C6	3.05	0.44
4:3:39:ASP:CG	4:3:39:ASP:O	2.56	0.44
9:8:22:VAL:HG12	9:8:22:VAL:O	2.17	0.44
9:8:35:GLN:NE2	9:8:36:LYS:HG3	2.33	0.44
10:A:575:A:H4'	10:A:2500:U:H4'	2.00	0.44
10:A:745:G:C3'	10:A:746:A:H5'	2.48	0.44
14:F:83:PHE:O	14:F:84:VAL:C	2.53	0.44
4:3:10:LYS:HG3	4:3:11:SER:N	2.33	0.44
26:V:11:GLN:C	26:V:12:TYR:CD2	2.91	0.44
26:V:16:PRO:HA	26:V:98:GLU:OE2	2.18	0.44
23:S:78:LEU:O	23:S:79:ALA:C	2.56	0.44
17:I:121:LYS:O	17:I:122:GLU:HB2	2.18	0.44
12:D:105:ILE:HD12	12:D:106:ILE:H	1.82	0.44
12:D:25:THR:O	12:D:27:THR:CB	2.65	0.44
12:D:35:LYS:HA	12:D:36:PRO:HA	1.55	0.44
12:D:43:ARG:NH1	12:D:44:ASN:CG	2.67	0.44
12:D:91:ARG:O	12:D:107:ALA:CB	2.66	0.44
10:A:2530:A:C3'	10:A:2531:A:H5''	2.48	0.44
29:Y:26:LYS:HE2	29:Y:27:VAL:HG23	1.99	0.44
10:A:2275:C:C5'	10:A:2275:C:C6	3.00	0.44
10:A:2207:G:N3	10:A:2207:G:H2'	2.32	0.44
11:B:17:C:N4	11:B:109:C:O2	2.47	0.44
10:A:526:A:O2'	10:A:2043:C:C2'	2.66	0.44
6:5:46:CYS:CB	6:5:47:PRO:HD2	2.45	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2816:C:C2	10:A:2831:G:C2	3.06	0.44
10:A:1044:G:O2'	10:A:1047:G:H1'	2.18	0.44
10:A:856:C:C3'	10:A:857:C:H6	2.31	0.44
29:Y:86:ARG:HD2	29:Y:88:LYS:HD2	1.99	0.44
10:A:1338:G:N2	10:A:1339:G:C4	2.85	0.44
10:A:2523:G:N2	10:A:2764:A:N3	2.64	0.44
10:A:2507:C:C2	10:A:2508:G:C8	3.06	0.44
10:A:786:C:O2'	10:A:787:U:H5'	2.17	0.44
24:T:61:PHE:CE2	24:T:76:PHE:HB2	2.53	0.44
10:A:2475:C:H2'	10:A:2477:C:OP2	2.17	0.44
10:A:721:C:O2	10:A:721:C:C2'	2.54	0.44
10:A:721:C:H5'	10:A:722:A:OP2	2.18	0.44
10:A:683:C:C2	10:A:684:G:C8	3.05	0.44
25:U:31:SER:C	25:U:33:ARG:N	2.71	0.44
10:A:812:C:H1'	10:A:1250:G:N2	2.32	0.44
16:H:86:GLU:HA	16:H:132:ARG:HA	2.00	0.44
14:F:57:VAL:HG11	14:F:59:TYR:CD1	2.53	0.44
10:A:1262:A:C5	10:A:1263:U:C5	3.06	0.44
27:W:52:GLU:O	27:W:55:ALA:HB3	2.17	0.44
25:U:66:ASN:HD21	25:U:70:ARG:HH21	1.66	0.44
10:A:375:C:H2'	10:A:376:C:C6	2.53	0.44
22:R:59:ASP:OD1	22:R:61:HIS:HB3	2.17	0.44
11:B:1:U:H5'	11:B:2:C:OP2	2.17	0.44
10:A:292:C:C2	10:A:349:G:C2	3.06	0.44
10:A:2705:A:H2'	10:A:2706:G:O4'	2.18	0.44
10:A:2895:U:H6	10:A:2895:U:H3'	1.83	0.44
23:S:12:PHE:O	23:S:12:PHE:CD1	2.70	0.44
2:1:26:ARG:CB	2:1:34:THR:HA	2.38	0.43
9:8:26:LYS:HB3	9:8:44:LYS:HG3	1.99	0.43
10:A:2243:U:O2'	10:A:2244:U:H5'	2.18	0.43
10:A:648:G:O4'	10:A:2351:G:H5''	2.18	0.43
10:A:2427:C:H5''	10:A:2428:G:OP1	2.18	0.43
10:A:2503:A:H4'	10:A:2504:U:OP1	2.17	0.43
10:A:824:A:C2'	10:A:825:C:H5'	2.48	0.43
20:P:98:GLU:HA	20:P:101:VAL:CG1	2.47	0.43
10:A:1718:G:H1	10:A:1744:C:H42	1.66	0.43
3:2:30:ARG:HA	3:2:33:MET:SD	2.58	0.43
10:A:1344:G:OP1	10:A:1345:C:H5	2.00	0.43
28:X:11:PRO:HB2	28:X:13:LEU:HD21	1.99	0.43
4:3:26:LEU:HD11	4:3:47:VAL:N	2.33	0.43
26:V:66:ARG:HD3	26:V:94:LEU:HA	1.98	0.43
11:B:23:G:C2	11:B:24:G:O6	2.71	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1779:U:C5	10:A:1783:A:C8	3.05	0.43
10:A:1793:C:H2'	10:A:1794:U:C6	2.53	0.43
10:A:691:C:H4'	12:D:43:ARG:HG2	2.00	0.43
2:1:60:PHE:CE2	2:1:91:LYS:HE2	2.53	0.43
16:H:105:LEU:N	16:H:105:LEU:HD13	2.33	0.43
10:A:2791:C:H4'	10:A:2792:G:O5'	2.17	0.43
29:Y:40:GLU:HA	29:Y:40:GLU:OE2	2.18	0.43
10:A:2094:G:H1'	10:A:2198:A:H61	1.81	0.43
12:D:108:PRO:HD2	12:D:111:LEU:CD2	2.48	0.43
6:5:46:CYS:SG	6:5:47:PRO:N	2.91	0.43
10:A:1659:U:H2'	10:A:1660:C:C5'	2.48	0.43
13:E:104:VAL:HG11	13:E:188:VAL:CG2	2.41	0.43
29:Y:88:LYS:NZ	29:Y:95:LYS:HE3	2.32	0.43
17:I:101:LEU:HB3	17:I:109:ILE:HG12	2.00	0.43
10:A:776:G:C5	10:A:793:A:C4	3.06	0.43
27:W:50:VAL:HG22	27:W:105:VAL:HG23	1.99	0.43
27:W:51:LEU:HD23	27:W:105:VAL:HG11	2.00	0.43
19:O:107:ARG:HH12	24:T:35:LYS:HE2	1.82	0.43
24:T:29:ARG:HD2	24:T:29:ARG:HA	1.78	0.43
10:A:154:G:C2	10:A:154(A):C:N3	2.86	0.43
10:A:1884:A:C4	10:A:1885:A:C8	3.06	0.43
17:I:10:GLU:C	17:I:12:LEU:H	2.20	0.43
10:A:551:G:C4	10:A:552:G:C8	3.05	0.43
10:A:2023:G:H4'	10:A:2617:C:O3'	2.18	0.43
10:A:1649:G:C6	10:A:2009:G:C6	3.06	0.43
10:A:190:A:C8	10:A:207:A:C6	3.06	0.43
10:A:811:U:O2'	10:A:1250:G:H2'	2.18	0.43
10:A:2602:A:H4'	10:A:2603:G:O5'	2.17	0.43
12:D:69:ARG:HH12	12:D:117:VAL:HG23	1.79	0.43
13:E:203:LYS:HE3	13:E:204:ALA:HB2	2.00	0.43
10:A:1252:G:O2'	10:A:1253:A:C8	2.69	0.43
10:A:2048:G:C5	10:A:2049:G:C8	3.06	0.43
10:A:1914:C:O2	10:A:1914:C:O4'	2.36	0.43
8:7:1:MET:HE2	8:7:1:MET:HB2	1.78	0.43
14:F:192:LEU:HD13	14:F:194:MET:HE3	2.00	0.43
18:N:104:LYS:HB2	18:N:104:LYS:HE3	1.87	0.43
10:A:196:A:H2'	10:A:196:A:N3	2.31	0.43
10:A:2287:A:C4	10:A:2289:G:C8	3.05	0.43
20:P:23:PRO:HB3	20:P:34:GLY:H	1.82	0.43
20:P:85:LEU:HB2	20:P:120:ALA:HB2	2.00	0.43
10:A:1525:G:H2'	10:A:1526:G:O4'	2.17	0.43
10:A:57:C:C2'	10:A:58:G:O5'	2.66	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:68:G:C6	10:A:69:C:C4	3.06	0.43
10:A:996:A:C6	10:A:1160:G:C6	3.06	0.43
18:N:22:THR:HA	18:N:61:ARG:O	2.18	0.43
26:V:18:LEU:O	26:V:19:LYS:CB	2.66	0.43
26:V:4:ILE:O	26:V:39:LEU:CB	2.61	0.43
11:B:39:A:C2	11:B:44:G:N3	2.86	0.43
15:G:11:TYR:HD1	15:G:176:LEU:HD21	1.83	0.43
15:G:173:LEU:HD13	15:G:178:PHE:CE2	2.54	0.43
17:I:81:VAL:HG11	17:I:123:LEU:HD21	2.00	0.43
10:A:1798:U:O2'	10:A:1802:A:O2'	2.34	0.43
12:D:65:ILE:CD1	12:D:67:PHE:CE1	2.96	0.43
10:A:2747:G:C6	10:A:2754:U:C5	3.07	0.43
10:A:2807:G:N2	10:A:2892:A:N6	2.62	0.43
30:Z:50:GLN:HB3	30:Z:51:ALA:H	1.66	0.43
11:B:17:C:O2	11:B:18:G:O4'	2.35	0.43
21:Q:85:LYS:O	21:Q:86:GLY:C	2.56	0.43
6:5:55:ARG:HG3	6:5:56:LYS:H	1.82	0.43
10:A:741:G:O2'	10:A:742:G:H5'	2.19	0.43
10:A:2679:A:H4'	13:E:165:VAL:HG11	1.99	0.43
10:A:1417:C:C2'	10:A:1418:G:H5'	2.48	0.43
10:A:1699:G:H4'	10:A:1700:A:OP2	2.17	0.43
27:W:48:ALA:O	27:W:51:LEU:HB3	2.18	0.43
24:T:29:ARG:HG2	24:T:85:LYS:HA	1.98	0.43
10:A:1477:A:C6	10:A:1515:G:C6	3.05	0.43
10:A:2875:C:C4'	24:T:5:ALA:HB2	2.41	0.43
10:A:1774:C:O5'	10:A:1774:C:H6	2.01	0.43
30:Z:119:GLU:OE2	30:Z:122:ARG:HB2	2.18	0.43
10:A:1884:A:C2	10:A:1885:A:C4	3.05	0.43
30:Z:156:LYS:O	30:Z:158:PRO:CD	2.66	0.43
10:A:2023:G:C2	10:A:2024:G:C8	3.06	0.43
20:P:7:ARG:HB3	20:P:8:PRO:CD	2.42	0.43
10:A:1932:A:C2'	10:A:1933:G:H5'	2.48	0.43
10:A:272:G:O4'	10:A:272(B):G:O5'	2.36	0.43
10:A:980:A:C4	10:A:1136:G:O4'	2.71	0.43
27:W:24:ILE:C	27:W:24:ILE:HD12	2.38	0.43
9:8:16:ILE:HD12	9:8:57:ARG:HD2	2.00	0.43
10:A:2243:U:O2	10:A:2434:A:C2	2.71	0.43
10:A:2394:C:P	20:P:63:PRO:CD	3.06	0.43
10:A:256:A:O2'	10:A:257:A:H5'	2.18	0.43
10:A:28:A:N6	10:A:512:G:H1'	2.33	0.43
10:A:970:C:H2'	10:A:971:C:C6	2.53	0.43
10:A:972:G:P	10:A:974:G:H5''	2.59	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:8:59:LYS:HD2	20:P:50:ARG:HB3	1.99	0.43
10:A:389:G:C2	20:P:71:VAL:HG12	2.53	0.43
20:P:84:ASN:OD1	20:P:116:GLY:HA3	2.19	0.43
3:2:26:ARG:HA	3:2:26:ARG:HD2	1.68	0.43
3:2:48:HIS:HE2	10:A:75:G:C3'	2.29	0.43
10:A:1022:G:N1	10:A:1140:C:C2	2.87	0.43
26:V:75:PHE:CD1	26:V:89:GLN:HB3	2.48	0.43
11:B:35:U:H2'	11:B:36:C:O4'	2.18	0.43
15:G:106:LEU:HA	15:G:110:ALA:CB	2.35	0.43
23:S:39:ILE:HD13	23:S:39:ILE:HA	1.75	0.43
10:A:1799:G:H4'	10:A:1800:C:O5'	2.19	0.43
12:D:51:VAL:HG12	12:D:54:ARG:HG2	2.01	0.43
12:D:94:LEU:HD22	12:D:95:LEU:N	2.33	0.43
10:A:2528:U:H2'	10:A:2530:A:O5'	2.18	0.43
10:A:2649:U:O2'	10:A:2650:U:H5'	2.18	0.43
10:A:2631:G:N3	10:A:2810:A:C2	2.86	0.43
29:Y:7:VAL:HB	29:Y:8:LYS:NZ	2.33	0.43
21:Q:140:ALA:CB	30:Z:53:ILE:HG13	2.40	0.43
10:A:910:A:H2'	10:A:2264:C:O2'	2.18	0.43
10:A:867:C:C4	10:A:868:U:C4	3.06	0.43
10:A:904:C:C5'	10:A:904:C:C6	3.01	0.43
29:Y:79:CYS:O	29:Y:80:GLY:C	2.56	0.43
10:A:83:G:N1	10:A:102:G:H2'	2.33	0.43
3:2:14:ARG:HG2	3:2:15:LYS:N	2.33	0.43
27:W:47:VAL:O	27:W:50:VAL:CG1	2.66	0.43
24:T:67:SER:N	24:T:70:VAL:O	2.40	0.43
10:A:1247:A:C2	10:A:1249:U:C6	3.07	0.43
10:A:1844:C:H2'	10:A:1845:G:H8	1.83	0.43
10:A:128:C:H2'	10:A:129:C:H5''	2.00	0.43
10:A:1151:G:H4'	25:U:81:HIS:CG	2.53	0.43
10:A:707:G:C5	10:A:708:C:C5	3.05	0.43
2:1:56:GLN:H	2:1:58:ILE:CD1	2.31	0.43
15:G:96:ARG:HD2	15:G:97:ASP:OD1	2.18	0.43
7:6:28:ARG:HA	7:6:32:ASN:HB3	2.00	0.43
9:8:12:LYS:HG2	20:P:68:GLN:HE22	1.82	0.43
10:A:1188:U:C3'	10:A:1189:A:H5'	2.46	0.43
10:A:2368:C:H2'	10:A:2369:A:H8	1.84	0.43
9:8:2:PRO:HA	10:A:591:C:H1'	2.00	0.43
10:A:593:G:H2'	10:A:594:U:H6	1.81	0.43
10:A:670:A:H4'	10:A:671:C:OP1	2.18	0.43
20:P:94:GLU:O	20:P:96:THR:HG23	2.19	0.43
10:A:69:C:O2	10:A:73:A:O2'	2.32	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:X:4:ALA:C	28:X:6:ASP:N	2.68	0.43
10:A:1001:A:H2'	10:A:1002:G:O4'	2.17	0.43
25:U:93:LYS:N	25:U:93:LYS:HD3	2.15	0.43
26:V:73:SER:N	26:V:88:ARG:HH22	2.16	0.43
15:G:114:ILE:HA	15:G:140:ILE:HD12	1.99	0.43
10:A:1816:G:C8	12:D:62:TYR:CZ	3.05	0.43
2:1:73:LEU:HD21	2:1:94:LEU:HG	2.00	0.43
10:A:2311:A:C4'	15:G:77:ILE:HD11	2.48	0.43
10:A:1510:G:N2	10:A:1511:C:C2	2.86	0.43
10:A:2282:G:H5'	10:A:2389:G:C1'	2.48	0.43
10:A:860:U:H1'	10:A:2268:A:H5'	2.00	0.43
10:A:1636:C:H2'	10:A:1637:A:H8	1.80	0.43
10:A:92:A:O2'	10:A:93:G:H5'	2.18	0.43
10:A:2547:U:O2	19:O:23:ARG:NH2	2.51	0.43
10:A:795:C:C2'	10:A:796:C:H5'	2.48	0.43
17:I:133:HIS:CD2	17:I:133:HIS:N	2.87	0.43
24:T:40:THR:O	24:T:41:ARG:HB2	2.17	0.43
10:A:1490:A:N3	10:A:1490:A:H2'	2.34	0.43
10:A:1557:C:P	10:A:1558:A:HO2'	2.39	0.43
10:A:2841:C:H2'	10:A:2842:G:C8	2.52	0.43
19:O:22:ILE:HD12	19:O:22:ILE:HA	1.40	0.43
27:W:86:LEU:HB2	27:W:96:ILE:HG22	1.99	0.43
10:A:721:C:H5'	10:A:722:A:P	2.59	0.43
21:Q:33:GLY:O	21:Q:132:VAL:HG23	2.18	0.43
10:A:1214:A:H2'	10:A:1215:G:O4'	2.18	0.43
10:A:2342:C:OP2	10:A:2342:C:C6	2.61	0.43
10:A:2364:C:H2'	10:A:2365:G:O4'	2.18	0.43
15:G:135:LEU:O	15:G:154:GLY:HA3	2.18	0.43
27:W:107:LEU:HD12	27:W:107:LEU:HA	1.61	0.43
10:A:136:G:H2'	10:A:137:C:O5'	2.18	0.43
10:A:123:G:H2'	10:A:124:G:H5'	1.99	0.43
22:R:18:LEU:O	22:R:19:ALA:C	2.55	0.43
15:G:48:GLU:O	15:G:49:ASP:CB	2.66	0.43
10:A:939:G:C5	10:A:940:G:N7	2.86	0.43
7:6:20:ASN:CG	7:6:21:TYR:H	2.16	0.43
9:8:30:ARG:HB3	10:A:2393:A:OP2	2.19	0.43
10:A:2417:C:C4	10:A:2418:A:N7	2.86	0.43
10:A:2431:U:O2	10:A:2433:A:C8	2.71	0.43
10:A:563:G:H1	10:A:578:A:N6	2.15	0.43
10:A:747:U:H5'	27:W:90:ARG:NH1	2.34	0.43
20:P:16:ARG:NH1	20:P:18:ARG:HG3	2.33	0.43
20:P:91:PHE:CE2	20:P:95:VAL:HG12	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:61:G:N2	10:A:94:C:N3	2.59	0.43
28:X:39:ILE:HA	28:X:42:ALA:HB3	2.00	0.43
10:A:1012:U:O4	18:N:25:ARG:HA	2.17	0.43
10:A:846:C:H4'	10:A:847:U:O5'	2.18	0.43
23:S:77:ALA:O	23:S:78:LEU:C	2.57	0.43
10:A:2663:G:H2'	10:A:2664:G:C8	2.53	0.43
10:A:329:G:H4'	10:A:330:A:OP2	2.19	0.43
30:Z:28:MET:HA	30:Z:88:PHE:O	2.18	0.43
10:A:1115:G:C2	10:A:1116:C:C4	3.05	0.43
15:G:32:PRO:CB	15:G:163:ALA:HB2	2.47	0.43
10:A:86:C:O2'	10:A:87:C:H5'	2.18	0.43
10:A:1946:U:C2'	10:A:1947:C:O5'	2.66	0.43
10:A:1629:U:H2'	10:A:1630:G:O4'	2.18	0.43
10:A:1786:A:N9	10:A:1938:A:N6	2.67	0.43
10:A:2073:C:O3'	12:D:228:PRO:HB3	2.19	0.43
27:W:13:SER:O	27:W:14:PRO:C	2.56	0.43
10:A:1473:G:C5	10:A:1474:C:C5	3.07	0.43
10:A:1475:G:C2	10:A:1517:G:C4	3.06	0.43
10:A:1173:G:H2'	10:A:1175:U:C5	2.54	0.43
10:A:2580:U:H2'	10:A:2580:U:O2	2.17	0.43
24:T:124:ASP:C	24:T:126:ALA:N	2.72	0.43
21:Q:42:ILE:HD12	21:Q:42:ILE:N	2.33	0.43
10:A:2078:C:C2	10:A:2079:U:C6	3.07	0.43
1:O:82:ARG:HG3	1:O:82:ARG:O	2.18	0.43
10:A:1670:C:C2	13:E:129:HIS:HE1	2.36	0.43
14:F:119:ARG:O	14:F:119:ARG:HG2	2.19	0.43
10:A:614:U:O4'	10:A:614:U:O2	2.36	0.43
27:W:64:MET:HE3	27:W:109:GLU:HG3	2.01	0.43
10:A:1441:G:N3	10:A:1442:G:C8	2.86	0.43
10:A:1033:U:C5'	10:A:1034:G:OP1	2.66	0.43
10:A:485:C:H2'	10:A:486:C:H6	1.80	0.43
10:A:181:A:H2	10:A:434:U:O4'	2.02	0.43
10:A:2623:G:H4'	10:A:2825:C:O2	2.18	0.43
10:A:272(J):C:C2'	10:A:274:G:OP1	2.67	0.43
7:6:44:ARG:HB3	7:6:45:LYS:H	1.63	0.43
9:8:41:ILE:HD12	9:8:42:ARG:N	2.34	0.43
9:8:61:LEU:C	9:8:63:PRO:HD2	2.39	0.43
10:A:2418:A:C5	10:A:2419:U:C4	3.06	0.43
10:A:510:C:H2'	10:A:511:U:O4'	2.18	0.43
10:A:1710:C:H4'	10:A:2858:C:O2	2.19	0.43
28:X:25:LYS:NZ	28:X:90:GLU:HB2	2.34	0.43
18:N:91:LEU:HD21	18:N:98:VAL:HG21	1.98	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:B:24:G:N2	11:B:56:G:H22	2.17	0.43
10:A:2586:C:O2'	10:A:2587:A:H5'	2.18	0.43
12:D:159:ALA:HB1	12:D:198:ASN:O	2.18	0.43
12:D:27:THR:O	12:D:28:GLU:CB	2.67	0.43
2:1:10:LYS:HB2	2:1:14:VAL:CA	2.48	0.43
2:1:48:LYS:O	2:1:62:VAL:O	2.35	0.43
10:A:422:A:H8	10:A:422:A:O5'	2.01	0.43
10:A:2638:G:C4	10:A:2775:A:C2	3.06	0.43
10:A:2645:G:H3'	10:A:2646:C:C5'	2.47	0.43
29:Y:9:LYS:O	29:Y:10:GLY:C	2.56	0.43
10:A:2275:C:H6	10:A:2275:C:H5''	1.82	0.43
10:A:2283:C:H2'	10:A:2284:C:O4'	2.18	0.43
11:B:110:G:C6	11:B:111:G:N7	2.86	0.43
10:A:1278:A:H2'	10:A:1279:G:H8	1.84	0.43
10:A:2197:U:C5	10:A:2224:G:C6	3.07	0.43
13:E:2:LYS:HA	13:E:84:PHE:CE2	2.53	0.43
10:A:2636:U:H4'	13:E:80:GLU:CD	2.39	0.43
13:E:24:THR:HG23	13:E:184:VAL:CG2	2.48	0.43
10:A:64:A:OP1	28:X:70:LEU:HD12	2.18	0.43
10:A:1833:U:C5	10:A:1834:U:C5	3.06	0.43
26:V:47:VAL:HG22	26:V:48:GLY:N	2.33	0.43
10:A:1882:C:C2	10:A:1883:G:C8	3.06	0.43
10:A:154(A):C:C2	10:A:154(A):C:OP2	2.71	0.43
8:7:40:TRP:CZ3	10:A:459:U:H4'	2.53	0.43
10:A:2465:C:C2	10:A:2486:G:C2	3.06	0.43
10:A:2469:A:C6	10:A:2470:G:C4	3.07	0.43
10:A:543:C:N4	10:A:551:G:N1	2.66	0.43
30:Z:108:PRO:HA	30:Z:142:SER:CA	2.44	0.43
10:A:1206:G:C6	10:A:1207:C:C4	3.05	0.43
10:A:1649:G:N1	10:A:2009:G:C6	2.86	0.43
22:R:103:ARG:O	22:R:104:ARG:C	2.57	0.43
10:A:1422:G:C4	10:A:1423:G:C8	3.06	0.43
10:A:1315:C:H2'	10:A:1316:U:C6	2.53	0.43
12:D:124:PRO:HG2	12:D:129:ASN:ND2	2.34	0.43
10:A:263:C:H2'	10:A:264:C:O4'	2.19	0.43
10:A:1465:G:N1	10:A:1466:G:C5	2.87	0.43
10:A:1248:G:C5	25:U:3:ARG:HB2	2.53	0.43
17:I:92:VAL:HG23	17:I:96:ASP:HB2	2.01	0.43
28:X:93:GLU:O	28:X:95:LEU:N	2.52	0.43
10:A:939:G:C4	10:A:940:G:C8	3.07	0.43
25:U:5:LYS:O	25:U:6:THR:C	2.57	0.43
7:6:15:GLU:OE2	7:6:41:PRO:HG3	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:195:A:H61	10:A:198:C:H3'	1.84	0.43
10:A:449:A:H2'	10:A:450:G:H5'	2.00	0.43
14:F:97:TYR:N	14:F:97:TYR:CD2	2.86	0.43
10:A:1722:A:C5	10:A:1741:A:N1	2.86	0.43
3:2:29:LYS:C	3:2:33:MET:SD	2.97	0.43
3:2:45:SER:HB3	3:2:48:HIS:CB	2.48	0.43
10:A:1449:A:N6	10:A:1450:G:C4	2.87	0.43
28:X:35:THR:HB	28:X:75:ASP:CG	2.37	0.43
10:A:999:U:H5''	10:A:1154:G:O6	2.19	0.43
26:V:70:ILE:HG13	26:V:71:LEU:N	2.34	0.43
25:U:50:ARG:CZ	26:V:75:PHE:CE2	3.02	0.43
26:V:96:ILE:HG22	26:V:97:LYS:N	2.34	0.43
23:S:13:ARG:O	23:S:15:ARG:N	2.51	0.43
23:S:26:LEU:HG	23:S:39:ILE:CD1	2.48	0.43
12:D:53:PHE:HB3	12:D:218:ARG:O	2.18	0.43
10:A:2786:U:H2'	10:A:2786:U:O2	2.18	0.43
11:B:73:A:C8	11:B:104:U:O4	2.72	0.43
11:B:75:G:N3	30:Z:85:HIS:CE1	2.87	0.43
10:A:864:G:H2'	10:A:865:C:C6	2.53	0.43
10:A:966:G:C6	10:A:967:C:C4	3.07	0.43
10:A:354:G:C8	10:A:354:G:O5'	2.60	0.43
10:A:2092:U:C5	10:A:2226:C:OP1	2.68	0.43
10:A:380:U:C2	10:A:381:G:C8	3.05	0.43
10:A:1690:A:C8	10:A:1691:C:C5	3.07	0.43
29:Y:88:LYS:HB3	29:Y:90:LEU:HG	2.00	0.43
22:R:5:LYS:N	22:R:5:LYS:CD	2.70	0.43
24:T:33:LYS:HD3	24:T:33:LYS:HA	1.24	0.43
24:T:28:VAL:CG2	24:T:46:GLU:CG	2.96	0.43
8:7:40:TRP:CG	10:A:459:U:H5''	2.54	0.43
18:N:82:LEU:O	18:N:83:LYS:C	2.57	0.43
10:A:2472:G:C5	10:A:2475:C:C4	3.06	0.43
10:A:1876:A:C2	10:A:1877:A:C5	3.07	0.43
21:Q:106:VAL:CG2	21:Q:114:ALA:HB1	2.44	0.43
14:F:140:LEU:O	14:F:141:ALA:C	2.57	0.43
16:H:92:ILE:CG2	16:H:93:GLY:H	2.29	0.43
27:W:103:ILE:H	27:W:103:ILE:HD12	1.84	0.43
10:A:2489:G:C6	10:A:2490:G:C6	3.06	0.43
19:O:71:ARG:O	19:O:74:GLY:N	2.49	0.43
22:R:55:ALA:HB2	22:R:79:LEU:CD1	2.49	0.43
10:A:2738:A:C2	10:A:2739:U:H1'	2.53	0.43
17:I:79:ILE:HA	17:I:80:PRO:HD3	1.77	0.43
10:A:2441:C:H4'	10:A:2441:C:OP1	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:6:12:GLU:HB2	7:6:21:TYR:HD2	1.83	0.43
9:8:36:LYS:HB2	9:8:36:LYS:HE2	1.83	0.43
10:A:244:A:H2'	10:A:245:G:O4'	2.19	0.43
33:A:3206:TEL:H582	33:A:3206:TEL:H541	1.61	0.43
10:A:974:G:N2	10:A:989:G:H1'	2.33	0.43
3:2:27:GLU:O	3:2:28:LYS:C	2.57	0.43
10:A:1341:U:OP2	10:A:1394:U:O2'	2.23	0.43
10:A:59:U:O2'	10:A:73:A:H2'	2.17	0.43
28:X:72:LYS:O	28:X:73:ARG:CB	2.66	0.43
10:A:1000:A:N6	10:A:1155:A:C8	2.87	0.43
10:A:1022:G:C6	10:A:1141:U:C5	3.07	0.43
18:N:55:VAL:HG12	18:N:126:PRO:CA	2.40	0.43
10:A:2333:A:C2'	10:A:2334:G:OP2	2.67	0.43
17:I:88:ILE:HG23	17:I:88:ILE:HD13	1.72	0.43
16:H:149:ARG:O	16:H:152:ARG:O	2.37	0.43
10:A:2495:G:C6	10:A:2496:C:C4	3.07	0.43
12:D:133:LEU:HD21	12:D:191:ALA:CB	2.49	0.43
10:A:2627:G:O2'	10:A:2781:A:N1	2.33	0.43
10:A:1047:G:C2'	10:A:1110:G:H22	2.31	0.43
10:A:1291:C:H2'	10:A:1292:U:H6	1.79	0.43
10:A:915:C:C5	10:A:916:G:C5	3.06	0.43
29:Y:80:GLY:O	29:Y:81:LYS:HB3	2.19	0.43
1:0:32:ARG:H	1:0:35:ASN:ND2	2.12	0.43
10:A:498:G:C6	10:A:499:U:C4	3.06	0.43
29:Y:46:LYS:O	29:Y:60:PHE:CE2	2.72	0.43
10:A:775:G:C2	10:A:777:A:N6	2.87	0.43
27:W:14:PRO:O	27:W:15:ARG:C	2.57	0.43
10:A:1831:G:H2'	10:A:1832:C:H6	1.84	0.43
24:T:30:VAL:HG22	24:T:84:GLN:O	2.18	0.43
10:A:1772:G:N1	10:A:1980:G:C6	2.87	0.43
12:D:17:THR:CG2	12:D:205:VAL:H	2.24	0.43
18:N:85:ILE:HA	18:N:86:PRO:HD2	1.83	0.43
10:A:2478:A:H2'	10:A:2479:G:O4'	2.18	0.43
10:A:183:C:H2'	10:A:184:C:H5'	2.00	0.43
10:A:1321:A:C6	10:A:1322:A:C5	3.07	0.43
10:A:2591:C:OP2	12:D:239:ARG:HB2	2.18	0.43
10:A:2838:G:OP1	22:R:8:ARG:HD2	2.18	0.43
25:U:20:LEU:CD2	25:U:20:LEU:N	2.81	0.43
18:N:121:LYS:HE3	18:N:121:LYS:HA	2.00	0.43
10:A:413:C:HO2'	10:A:1880:C:HO2'	1.64	0.43
10:A:1769:G:C6	10:A:1984:G:C6	3.07	0.43
16:H:35:VAL:O	16:H:37:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1186:G:H2'	10:A:1187:G:O4'	2.19	0.43
10:A:2013:A:N6	10:A:2014:A:C6	2.87	0.43
10:A:597:U:H2'	10:A:598:G:C8	2.53	0.43
10:A:70:G:H2'	10:A:113:G:O2'	2.18	0.43
28:X:27:THR:OG1	28:X:77:LYS:HA	2.19	0.43
28:X:89:ILE:CG2	28:X:89:ILE:O	2.66	0.43
10:A:1192:G:C2'	10:A:1193:G:H5'	2.48	0.43
18:N:37:LYS:CD	25:U:63:VAL:HG13	2.48	0.43
25:U:47:TYR:CE2	25:U:51:LYS:HE2	2.54	0.43
26:V:62:LEU:HA	26:V:99:ILE:HG12	1.99	0.43
10:A:1328:G:H2'	10:A:1330:C:C5	2.53	0.43
27:W:84:ARG:HG2	27:W:98:LYS:HE3	2.01	0.43
23:S:97:ARG:HH21	23:S:98:VAL:HA	1.83	0.43
10:A:1819:A:H3'	12:D:178:PRO:HB2	2.00	0.43
29:Y:44:ILE:CG2	29:Y:45:VAL:H	2.28	0.43
2:1:87:PRO:CG	2:1:88:LYS:N	2.78	0.43
16:H:164:TYR:CD1	16:H:164:TYR:N	2.87	0.43
13:E:77:ILE:HG21	13:E:79:ARG:HE	1.84	0.43
10:A:962:G:C6	10:A:963:U:C4	3.06	0.43
10:A:527:C:O2	10:A:527:C:O4'	2.33	0.43
10:A:1656:C:O2'	10:A:1657:C:H5'	2.19	0.43
10:A:1695:G:C8	12:D:8:PRO:HG2	2.54	0.43
29:Y:97:ARG:O	29:Y:98:VAL:C	2.57	0.43
20:P:93:GLY:O	20:P:123:LEU:HB2	2.19	0.43
10:A:2199:A:C8	10:A:2200:C:C5	3.07	0.43
10:A:89:G:OP1	10:A:90:U:O2	2.37	0.43
24:T:30:VAL:HG21	24:T:84:GLN:H	1.84	0.43
10:A:40:C:H2'	10:A:41:C:C6	2.54	0.43
10:A:2463:C:C2'	10:A:2464:C:C5'	2.91	0.43
24:T:113:LYS:C	24:T:114:LEU:HD23	2.40	0.43
10:A:1670:C:OP2	10:A:2550:G:OP1	2.36	0.43
10:A:2009:G:H1'	22:R:107:ASP:O	2.19	0.43
10:A:896:A:N3	10:A:898:C:H5''	2.32	0.43
10:A:921:G:C6	10:A:922:U:C4	3.06	0.43
10:A:1682:G:C5	10:A:1683:C:C4	3.06	0.43
15:G:43:LEU:HD22	15:G:43:LEU:N	2.34	0.43
19:O:55:GLY:O	19:O:56:ASP:C	2.57	0.43
10:A:641:C:O2'	10:A:2350:C:OP1	2.25	0.43
29:Y:21:LYS:HD2	29:Y:22:GLY:N	2.34	0.43
7:6:26:ASN:ND2	7:6:32:ASN:ND2	2.62	0.43
10:A:192:C:C2'	10:A:193:U:O5'	2.67	0.43
10:A:635:C:C2'	10:A:636:G:H5'	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:P:30:THR:O	20:P:32:THR:N	2.52	0.43
20:P:38:GLN:CG	20:P:39:LYS:N	2.75	0.43
10:A:1341:U:H2'	10:A:1397:U:O2	2.19	0.43
10:A:1469:A:H2'	10:A:1470:G:C8	2.53	0.43
11:B:82:G:O2'	11:B:83:G:H5'	2.19	0.43
18:N:40:PRO:HA	25:U:64:ARG:HH22	1.82	0.43
25:U:61:TRP:O	25:U:63:VAL:N	2.51	0.43
23:S:31:SER:O	23:S:32:LEU:HG	2.19	0.43
12:D:43:ARG:HD2	12:D:44:ASN:OD1	2.19	0.43
12:D:44:ASN:HB2	12:D:45:ASN:H	1.74	0.43
10:A:2317:C:C3'	10:A:2318:G:C5'	2.97	0.43
29:Y:26:LYS:O	29:Y:28:LYS:N	2.51	0.43
10:A:85:G:OP1	29:Y:30:VAL:HG21	2.19	0.43
10:A:866:A:C6	10:A:914:C:C5	3.06	0.43
10:A:913:U:H4'	10:A:914:C:OP1	2.18	0.43
11:B:18:G:C6	11:B:19:G:C5	3.07	0.43
30:Z:19:ARG:HA	30:Z:23:LYS:O	2.17	0.43
12:D:166:GLN:CA	12:D:166:GLN:HE21	2.31	0.43
10:A:1047:G:C2	10:A:1111:A:N6	2.87	0.43
10:A:2642:G:H4'	18:N:78:TYR:OH	2.19	0.43
24:T:41:ARG:O	24:T:42:ILE:C	2.57	0.43
10:A:455:C:H3'	10:A:456:C:H5''	2.00	0.43
17:I:3:VAL:HA	17:I:39:ALA:H	1.84	0.43
10:A:1215:G:O2'	10:A:1216:G:H5'	2.19	0.43
19:O:43:VAL:HG21	19:O:52:VAL:CG1	2.49	0.43
15:G:62:LEU:O	15:G:143:GLU:HB2	2.19	0.43
23:S:84:GLN:NE2	23:S:105:ALA:HB1	2.31	0.43
17:I:139:GLN:NE2	17:I:141:LYS:HE2	2.34	0.43
10:A:280:C:H42	10:A:360:G:H1	1.66	0.43
10:A:461:C:O2'	10:A:462:C:H5'	2.19	0.43
10:A:2881:C:O2'	10:A:2882:A:H5'	2.19	0.43
9:8:26:LYS:HE2	9:8:47:LYS:HG2	2.00	0.42
10:A:2014:A:H2'	10:A:2015:A:C4	2.54	0.42
10:A:390:A:C6	20:P:71:VAL:HG21	2.53	0.42
10:A:620:G:H8	10:A:622:G:O6	2.01	0.42
14:F:101:LEU:O	14:F:106:ARG:NH1	2.42	0.42
10:A:1385:G:H4'	10:A:1386:C:OP1	2.18	0.42
28:X:52:VAL:HG23	28:X:82:GLN:HA	2.01	0.42
28:X:26:TYR:OH	28:X:89:ILE:HB	2.19	0.42
10:A:1002:G:H2'	10:A:1003:G:O4'	2.18	0.42
10:A:814:C:C2'	10:A:815:C:H5'	2.47	0.42
26:V:4:ILE:HG13	26:V:40:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2334:G:C4	23:S:15:ARG:NH1	2.87	0.42
10:A:2609:U:H4'	10:A:2609:U:OP1	2.18	0.42
10:A:2531:A:H2'	10:A:2531:A:N3	2.34	0.42
10:A:1281:G:C2	10:A:1290:C:N3	2.87	0.42
10:A:2303:G:O3'	15:G:124:SER:HA	2.19	0.42
17:I:110:ASP:OD2	17:I:113:ARG:HG3	2.18	0.42
17:I:113:ARG:CB	17:I:130:TYR:CZ	3.02	0.42
10:A:1652:A:C3'	10:A:1653:G:H5'	2.49	0.42
10:A:493:G:H2'	10:A:494:G:O4'	2.19	0.42
10:A:109:G:C5	10:A:110:G:C8	3.07	0.42
30:Z:95:PRO:HA	30:Z:128:VAL:O	2.19	0.42
10:A:48:G:O2'	10:A:118:A:N1	2.51	0.42
10:A:2694:G:C6	10:A:2695:C:C4	3.07	0.42
10:A:893:C:H6	10:A:894:C:C6	2.37	0.42
10:A:1357:U:H2'	10:A:1358:G:O4'	2.19	0.42
10:A:2100:G:N3	10:A:2100:G:H2'	2.33	0.42
13:E:73:GLU:HA	13:E:74:PRO:HD2	1.87	0.42
10:A:2674:G:H5''	19:O:26:LYS:CE	2.49	0.42
17:I:144:VAL:O	17:I:145:VAL:CB	2.67	0.42
17:I:84:GLY:O	17:I:85:GLU:HB2	2.19	0.42
30:Z:48:PHE:O	30:Z:49:ARG:C	2.56	0.42
10:A:2623:G:H2'	10:A:2624:G:C8	2.54	0.42
10:A:2639:A:H2'	10:A:2640:G:H5'	2.00	0.42
27:W:30:GLU:O	27:W:31:GLU:C	2.56	0.42
10:A:503:A:C6	10:A:505:A:C6	3.07	0.42
10:A:2077:A:H1'	10:A:2435:A:O4'	2.19	0.42
17:I:53:ALA:HA	17:I:56:LYS:HG2	2.01	0.42
9:8:4:MET:HE2	9:8:4:MET:HB2	1.38	0.42
10:A:241:A:H5'	10:A:243:U:O4'	2.19	0.42
10:A:24:G:H2'	10:A:25:U:O4'	2.18	0.42
10:A:587:C:N4	10:A:671:C:C2	2.87	0.42
10:A:941:A:H2'	10:A:942:G:C8	2.54	0.42
20:P:84:ASN:H	20:P:84:ASN:HD22	1.67	0.42
3:2:47:ASN:C	3:2:49:LYS:H	2.22	0.42
3:2:49:LYS:O	3:2:50:ILE:C	2.57	0.42
3:2:54:LYS:C	3:2:56:GLN:H	2.17	0.42
10:A:1343:G:H1	10:A:1404:C:N4	2.16	0.42
10:A:71:A:H4'	10:A:72:U:C5'	2.48	0.42
18:N:28:THR:CA	18:N:106:MET:CE	2.95	0.42
18:N:87:LEU:O	18:N:88:GLU:C	2.57	0.42
26:V:1:MET:H1	26:V:44:LYS:HD2	1.84	0.42
15:G:137:GLU:HB2	15:G:140:ILE:HD13	2.00	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:S:67:ARG:CD	23:S:101:LEU:HD23	2.48	0.42
16:H:71:LEU:HA	16:H:71:LEU:HD12	1.90	0.42
10:A:1480:G:C6	10:A:1481:U:N3	2.87	0.42
10:A:2282:G:H4'	10:A:2389:G:O2'	2.19	0.42
11:B:21:G:O6	11:B:63:G:C2	2.72	0.42
13:E:52:LEU:O	13:E:53:PRO:O	2.38	0.42
10:A:1655:A:H1'	13:E:113:PHE:CD2	2.54	0.42
2:1:41:ARG:NH2	10:A:205:G:H1	2.18	0.42
10:A:1296:G:C2	10:A:1645:G:C4	3.08	0.42
10:A:860:U:C2'	10:A:861:A:H5'	2.49	0.42
11:B:95:C:C2	11:B:96:U:C6	3.07	0.42
10:A:1696:G:C2'	10:A:1697:G:H5'	2.49	0.42
10:A:2536:G:H2'	10:A:2537:U:O4'	2.19	0.42
10:A:1688:U:H1'	10:A:1701:A:N6	2.32	0.42
10:A:271(H):G:O2'	10:A:271(I):G:OP2	2.32	0.42
10:A:271(H):G:C6	10:A:271(Q):G:N1	2.87	0.42
3:2:12:GLU:C	3:2:14:ARG:HH21	2.23	0.42
24:T:115:ARG:O	24:T:116:ALA:HB2	2.19	0.42
10:A:1968:G:O3'	10:A:1969:A:C4'	2.67	0.42
24:T:35:LYS:HD2	24:T:41:ARG:HG3	2.01	0.42
19:O:77:ILE:O	19:O:77:ILE:HG23	2.19	0.42
10:A:1474:C:H3'	10:A:1475:G:H8	1.84	0.42
16:H:41:MET:HG3	16:H:55:PRO:HD3	2.00	0.42
10:A:154:G:C2	10:A:154(A):C:N4	2.86	0.42
14:F:158:THR:CG2	14:F:160:ASN:HB3	2.48	0.42
10:A:271(K):U:O2	17:I:50:ARG:NH1	2.53	0.42
15:G:139:LEU:HD23	15:G:149:VAL:HG21	2.00	0.42
10:A:1309:G:H2'	10:A:1310:G:O4'	2.19	0.42
10:A:2080:G:C2	10:A:2241:A:C4	3.06	0.42
10:A:2191:G:HO2'	10:A:2192:G:P	2.41	0.42
10:A:945:A:C5	10:A:2448:A:N3	2.87	0.42
10:A:1442:G:N2	10:A:1443:G:C4	2.87	0.42
10:A:1704:G:C2'	10:A:1705:G:H5'	2.50	0.42
19:O:86:ILE:HD12	19:O:86:ILE:N	2.35	0.42
10:A:2034:U:H6	10:A:2034:U:C5'	2.32	0.42
4:3:17:LYS:HG2	10:A:969:U:OP1	2.19	0.42
10:A:251:A:H5'	20:P:51:PHE:HZ	1.84	0.42
33:A:3206:TEL:H7	33:A:3206:TEL:H233	1.68	0.42
10:A:1245:G:C5'	20:P:16:ARG:HH21	2.30	0.42
20:P:22:GLY:HA2	20:P:23:PRO:HD3	1.88	0.42
20:P:84:ASN:HB3	20:P:86:LYS:HB3	2.00	0.42
3:2:29:LYS:O	3:2:32:LEU:HB3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:U:88:ILE:HD12	25:U:88:ILE:N	2.34	0.42
10:A:2586:C:O5'	10:A:2586:C:H6	2.02	0.42
2:1:66:HIS:CE1	10:A:372:G:H5'	2.54	0.42
10:A:422:A:H2'	10:A:423:A:O4'	2.19	0.42
10:A:2520:C:H2'	10:A:2521:C:H6	1.84	0.42
10:A:309:G:N3	10:A:329:G:O2'	2.50	0.42
27:W:74:ALA:O	27:W:75:TYR:CB	2.68	0.42
10:A:2387:U:C5'	10:A:2388:A:OP2	2.64	0.42
10:A:1116:C:C2'	10:A:1117:G:H5'	2.48	0.42
10:A:1112:G:N2	10:A:1113:U:O2	2.51	0.42
10:A:1282:U:H2'	10:A:1283:G:O4'	2.19	0.42
10:A:856:C:C2'	10:A:857:C:H6	2.31	0.42
13:E:104:VAL:O	13:E:166:THR:HA	2.20	0.42
10:A:478:A:C2	10:A:480:A:C4	3.08	0.42
10:A:2713:A:C3'	10:A:2714:G:C5'	2.97	0.42
10:A:2686:G:H3'	10:A:2687:U:H6	1.84	0.42
10:A:2820:A:H2'	10:A:2820:A:N3	2.34	0.42
24:T:31:SER:HB2	24:T:33:LYS:HZ1	1.84	0.42
10:A:1174:A:OP1	10:A:1175:U:OP1	2.37	0.42
10:A:171:G:H2'	10:A:172:C:C1'	2.49	0.42
16:H:89:ILE:CG1	16:H:90:LYS:N	2.82	0.42
17:I:2:LYS:O	17:I:39:ALA:N	2.51	0.42
19:O:73:ASP:OD1	24:T:32:TYR:CE1	2.72	0.42
8:7:14:LYS:HA	8:7:14:LYS:HD2	1.79	0.42
20:P:10:PRO:O	20:P:11:GLY:O	2.38	0.42
10:A:114:U:H3'	10:A:115:C:C6	2.53	0.42
10:A:1934:C:H2'	10:A:1935:G:O4'	2.19	0.42
10:A:584:C:N4	10:A:585:G:C6	2.87	0.42
2:1:37:ILE:CG2	10:A:2080:G:O5'	2.67	0.42
1:0:49:LYS:HG3	1:0:80:HIS:ND1	2.34	0.42
10:A:601:C:H2'	10:A:602:G:O4'	2.19	0.42
10:A:1034:G:H2'	10:A:1035:U:O4'	2.20	0.42
22:R:99:LYS:NZ	22:R:99:LYS:CB	2.82	0.42
12:D:48:ARG:O	12:D:50:THR:HG23	2.19	0.42
25:U:26:GLY:O	25:U:30:LYS:HG2	2.19	0.42
10:A:253:C:H2'	10:A:254:G:O4'	2.19	0.42
20:P:39:LYS:O	20:P:41:ARG:N	2.52	0.42
20:P:83:VAL:HG12	20:P:112:LEU:CD2	2.41	0.42
10:A:1741:A:H2'	10:A:1742:G:C4	2.54	0.42
3:2:46:GLN:O	3:2:48:HIS:N	2.52	0.42
10:A:1342:A:HO2'	10:A:1344:G:P	2.42	0.42
10:A:1388:G:H4'	10:A:1525:G:O2'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1528:A:C8	10:A:1528(A):A:C4	3.07	0.42
10:A:1528:A:H8	10:A:1528(A):A:C4	2.37	0.42
10:A:1157:G:C4	10:A:1158:C:C5	3.08	0.42
10:A:815:C:H2'	10:A:816:C:C6	2.54	0.42
18:N:25:ARG:NH1	18:N:25:ARG:CG	2.72	0.42
25:U:61:TRP:CH2	25:U:94:ASN:HB2	2.55	0.42
10:A:2377:A:H4'	23:S:107:GLU:HB3	2.02	0.42
15:G:178:PHE:HB3	15:G:180:PHE:CE1	2.54	0.42
15:G:178:PHE:HD1	15:G:178:PHE:H	1.67	0.42
12:D:83:GLU:OE1	12:D:104:TYR:HE2	2.02	0.42
12:D:93:ALA:HB2	12:D:107:ALA:HB2	2.01	0.42
22:R:76:VAL:O	22:R:77:ARG:C	2.57	0.42
10:A:2649:U:H2'	10:A:2650:U:C6	2.54	0.42
10:A:2315:G:C2	10:A:2316:C:N3	2.88	0.42
29:Y:18:GLY:O	29:Y:19:LYS:C	2.57	0.42
29:Y:42:VAL:CG2	29:Y:67:LEU:HD13	2.50	0.42
29:Y:7:VAL:HB	29:Y:8:LYS:HD2	2.02	0.42
10:A:954:G:C6	10:A:955:C:C4	3.08	0.42
30:Z:151:HIS:HB3	30:Z:169:GLU:O	2.19	0.42
30:Z:165:VAL:HG12	30:Z:166:SER:OG	2.19	0.42
10:A:2202:C:O2	12:D:151:LYS:NZ	2.43	0.42
10:A:859:G:O3'	10:A:860:U:O2	2.37	0.42
10:A:1635:G:O2'	10:A:1636:C:H5'	2.19	0.42
10:A:38:A:C5	10:A:39:C:C4	3.08	0.42
10:A:2484:G:C2	10:A:2485:G:C8	3.07	0.42
10:A:2555:U:C5	10:A:2556:C:C2	3.07	0.42
10:A:541:C:H6	10:A:541:C:O5'	2.02	0.42
30:Z:143:GLY:O	30:Z:144:LEU:HD13	2.19	0.42
10:A:2617:C:H2'	10:A:2618:G:O4'	2.19	0.42
10:A:221:A:N1	10:A:265:A:O2'	2.45	0.42
13:E:181:LEU:HG	24:T:11:GLU:OE2	2.20	0.42
6:5:22:HIS:NE2	10:A:2046:G:H1'	2.34	0.42
10:A:2584:U:H2'	10:A:2585:U:H5'	1.99	0.42
10:A:2321:G:N3	10:A:2321:G:H2'	2.34	0.42
25:U:30:LYS:HD3	25:U:30:LYS:HA	1.82	0.42
14:F:88:VAL:HG13	14:F:91:GLY:H	1.84	0.42
2:1:33:LYS:O	2:1:34:THR:HG22	2.19	0.42
10:A:2056:G:OP2	10:A:2057:A:OP2	2.38	0.42
10:A:2418:A:C4	10:A:2419:U:C5	3.07	0.42
10:A:200:U:O2	10:A:386:G:N2	2.52	0.42
10:A:594:U:N3	10:A:595:C:C4	2.88	0.42
10:A:947:G:C2	10:A:971:C:C2	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:46:GLN:C	3:2:48:HIS:H	2.23	0.42
28:X:60:ARG:HB2	28:X:73:ARG:CA	2.49	0.42
28:X:85:PRO:O	28:X:87:GLN:HG2	2.19	0.42
4:3:8:LEU:HB2	4:3:28:LEU:CD1	2.37	0.42
15:G:7:LEU:HD12	15:G:100:TRP:O	2.19	0.42
23:S:53:SER:HB3	23:S:54:LEU:H	1.57	0.42
11:B:51:G:P	23:S:61:ASN:HD22	2.42	0.42
12:D:35:LYS:CE	12:D:65:ILE:HA	2.49	0.42
10:A:2516:G:C5	10:A:2517:C:C4	3.07	0.42
30:Z:6:LYS:HG2	30:Z:8:TYR:CZ	2.54	0.42
12:D:130:ALA:HA	12:D:192:THR:HA	2.01	0.42
10:A:14:A:C2	10:A:526:A:H2	2.38	0.42
10:A:2636:U:P	13:E:80:GLU:HG3	2.60	0.42
6:5:56:LYS:HB2	6:5:57:VAL:H	1.55	0.42
10:A:918:A:C5	10:A:919:G:H1'	2.55	0.42
20:P:144:GLU:N	20:P:145:PRO:CD	2.72	0.42
27:W:50:VAL:HG13	27:W:105:VAL:HG21	2.01	0.42
10:A:1515:G:C6	10:A:1516:C:C4	3.07	0.42
10:A:2843:G:C5	10:A:2844:G:N7	2.87	0.42
10:A:38:A:C6	10:A:39:C:N4	2.88	0.42
26:V:50:PRO:HG2	26:V:51:VAL:H	1.85	0.42
10:A:2476:A:C4	10:A:2477:C:C6	3.07	0.42
30:Z:143:GLY:N	30:Z:144:LEU:HD22	2.33	0.42
10:A:466:A:H1'	10:A:683:C:O4'	2.19	0.42
1:0:68:GLU:OE1	1:0:82:ARG:HB3	2.19	0.42
10:A:272(D):G:H1	10:A:364:C:H42	1.65	0.42
10:A:817:C:C3'	10:A:818:G:H8	2.32	0.42
13:E:14:ILE:HG13	13:E:21:VAL:CG2	2.49	0.42
10:A:47:C:O5'	10:A:47:C:H6	2.01	0.42
29:Y:73:ARG:NH2	29:Y:82:PRO:HD3	2.35	0.42
14:F:46:ARG:CB	14:F:46:ARG:NH1	2.82	0.42
14:F:41:LEU:HD23	14:F:41:LEU:N	2.34	0.42
6:5:2:ALA:N	10:A:2015:A:N3	2.67	0.42
9:8:4:MET:SD	9:8:61:LEU:CD1	2.99	0.42
10:A:2418:A:C6	10:A:2419:U:C4	3.08	0.42
10:A:2068:U:O2	10:A:2430:A:H2	2.03	0.42
10:A:515:A:H1'	10:A:581:C:C1'	2.47	0.42
10:A:661:C:H2'	10:A:662:G:C8	2.55	0.42
20:P:51:PHE:O	20:P:52:GLU:CB	2.64	0.42
10:A:1464:C:O2'	10:A:1528:A:H1'	2.20	0.42
28:X:27:THR:HB	28:X:77:LYS:HG2	2.00	0.42
4:3:52:HIS:N	4:3:52:HIS:HD2	2.16	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1022:G:C6	10:A:1140:C:N3	2.88	0.42
20:P:27:HIS:CD2	20:P:28:GLY:N	2.87	0.42
26:V:90:PRO:HG2	26:V:91:TYR:H	1.84	0.42
11:B:25:A:C4	11:B:26:A:C8	3.08	0.42
23:S:73:LEU:O	23:S:74:ALA:C	2.58	0.42
2:1:10:LYS:HB2	2:1:14:VAL:C	2.40	0.42
10:A:2305:A:H4'	10:A:2305:A:OP1	2.19	0.42
10:A:304:G:C5	10:A:305:U:C5	3.07	0.42
30:Z:28:MET:CE	30:Z:59:LEU:HD12	2.49	0.42
10:A:867:C:O2	10:A:913:U:H5'	2.20	0.42
21:Q:8:LYS:HG3	21:Q:9:TYR:H	1.83	0.42
11:B:111:G:H2'	11:B:112:U:H6	1.84	0.42
10:A:2815:C:H2'	10:A:2816:C:O4'	2.19	0.42
2:1:20:ARG:HG2	2:1:20:ARG:NH2	2.34	0.42
10:A:860:U:C1'	10:A:2268:A:H5'	2.49	0.42
10:A:860:U:O2	10:A:860:U:O4'	2.37	0.42
10:A:862:G:H5'	11:B:79:C:H4'	2.01	0.42
10:A:1581:G:H2'	10:A:1582:C:H5'	2.00	0.42
17:I:100:ALA:O	17:I:104:GLN:HB2	2.20	0.42
24:T:65:LYS:CG	24:T:66:VAL:H	2.33	0.42
10:A:1629:U:O2	10:A:2698:U:C5'	2.67	0.42
10:A:1635:G:H8	10:A:1635:G:H5'	1.84	0.42
10:A:2710:C:H2'	10:A:2711:A:O4'	2.20	0.42
10:A:66:C:C2	10:A:89:G:N2	2.88	0.42
17:I:132:PRO:C	17:I:133:HIS:CD2	2.92	0.42
16:H:52:VAL:HG13	16:H:65:HIS:NE2	2.34	0.42
8:7:35:ARG:HG3	8:7:42:LEU:HD11	2.02	0.42
26:V:49:THR:HA	26:V:50:PRO:HD3	1.84	0.42
10:A:2037:G:C6	10:A:2038:G:C6	3.08	0.42
10:A:2887:U:H2'	10:A:2887:U:O2	2.19	0.42
10:A:2610:C:H4'	10:A:2611:U:OP2	2.20	0.42
16:H:20:ALA:CB	16:H:21:PRO:CD	2.92	0.42
13:E:126:PRO:HB2	13:E:128:SER:O	2.20	0.42
10:A:812:C:H5''	10:A:1250:G:O2'	2.20	0.42
21:Q:16:ARG:CG	21:Q:17:LEU:H	2.31	0.42
10:A:272(B):G:H2'	10:A:272(C):G:O5'	2.20	0.42
14:F:28:ILE:HG21	14:F:116:ASP:HB2	2.02	0.42
16:H:86:GLU:OE2	16:H:132:ARG:HD3	2.19	0.42
17:I:33:ARG:C	17:I:35:LEU:H	2.22	0.42
10:A:407:G:H2'	10:A:408:G:C8	2.55	0.42
26:V:56:SER:O	26:V:58:VAL:HG23	2.19	0.42
18:N:97:ARG:O	18:N:100:GLU:N	2.53	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:D:11:PRO:O	12:D:12:SER:CB	2.68	0.42
21:Q:60:ARG:O	21:Q:60:ARG:HG2	2.20	0.42
9:8:52:LYS:O	9:8:52:LYS:HG3	2.19	0.42
10:A:2070:G:C4	10:A:2071:A:C8	3.08	0.42
10:A:2442:C:C2	10:A:2443:C:C5	3.08	0.42
10:A:2615:U:H2'	10:A:2616:C:C6	2.55	0.42
10:A:825:C:H2'	10:A:826:U:O5'	2.20	0.42
10:A:1711:C:O2'	10:A:1712:C:H5'	2.19	0.42
4:3:46:ASN:O	4:3:49:LYS:N	2.53	0.42
10:A:1009:A:C5	10:A:1010:A:C6	3.08	0.42
25:U:92:ARG:NH2	26:V:10:LYS:HG2	2.35	0.42
11:B:116:G:N3	11:B:117:G:C8	2.87	0.42
11:B:118:G:N2	11:B:119:G:N7	2.68	0.42
11:B:33:G:C6	11:B:50:G:C6	3.07	0.42
23:S:69:VAL:O	23:S:72:ALA:HB3	2.19	0.42
12:D:58:HIS:CD2	12:D:59:LYS:H	2.38	0.42
10:A:372:G:O2'	10:A:373:U:OP2	2.36	0.42
10:A:2544:G:H1'	10:A:2646:C:C4'	2.43	0.42
16:H:123:PHE:CE2	16:H:148:ILE:HD11	2.55	0.42
10:A:330:A:HO2'	10:A:331:A:H8	1.62	0.42
10:A:911:A:O5'	10:A:912:C:H5''	2.19	0.42
10:A:866:A:C6	10:A:914:C:C6	3.08	0.42
13:E:7:VAL:HG12	13:E:51:PHE:HE1	1.84	0.42
30:Z:19:ARG:NH1	30:Z:84:GLU:OE2	2.52	0.42
29:Y:76:CYS:O	29:Y:77:PRO:C	2.56	0.42
10:A:475:U:C4	10:A:481:G:O6	2.72	0.42
10:A:1169:G:H3'	10:A:1169:G:C8	2.55	0.42
24:T:38:ASN:C	24:T:38:ASN:ND2	2.73	0.42
24:T:82:LEU:O	24:T:83:ILE:C	2.57	0.42
10:A:1881:C:H5'	10:A:1882:C:P	2.60	0.42
22:R:9:LYS:HG3	22:R:43:GLU:OE2	2.19	0.42
10:A:2486:G:C2'	10:A:2487:G:O5'	2.68	0.42
10:A:2474:C:H5''	10:A:2475:C:H5	1.85	0.42
3:2:34:GLU:CD	3:2:34:GLU:O	2.58	0.42
10:A:48:G:H4'	10:A:52:A:O4'	2.19	0.42
14:F:30:PRO:HB2	14:F:31:HIS:H	1.74	0.42
10:A:2849:U:H4'	10:A:2868:A:C2	2.54	0.42
10:A:128:C:C2'	10:A:129:C:H5''	2.49	0.42
14:F:110:LEU:HD22	14:F:202:PHE:HE1	1.84	0.42
10:A:507:A:O4'	10:A:509:C:C2	2.72	0.42
10:A:735:A:H3'	10:A:736:C:H6	1.85	0.42
7:6:32:ASN:O	7:6:33:LYS:CG	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:8:14:VAL:HG13	9:8:23:VAL:O	2.20	0.42
10:A:2358:G:C4	10:A:2359:C:C6	3.08	0.42
10:A:244:A:C2	10:A:255:A:C5	3.08	0.42
10:A:388:G:N7	10:A:390:A:C4	2.88	0.42
20:P:14:LYS:O	20:P:15:ARG:HG3	2.20	0.42
10:A:977:G:C6	10:A:987:G:C5	3.07	0.42
18:N:63:THR:O	18:N:64:GLY:O	2.38	0.42
18:N:37:LYS:HD3	25:U:63:VAL:HG13	2.01	0.42
18:N:42:TRP:HD1	25:U:64:ARG:NE	2.17	0.42
10:A:1326:U:O2'	10:A:1327:C:H5'	2.20	0.42
11:B:45:A:C2	11:B:46:A:C1'	3.03	0.42
10:A:1803:A:C8	10:A:1804:C:C5	3.07	0.42
10:A:1811:G:H2'	10:A:1812:A:O4'	2.20	0.42
2:1:87:PRO:HD2	2:1:89:GLU:OE2	2.20	0.42
10:A:2772:C:C2	10:A:2773:C:C5	3.07	0.42
10:A:2633:G:H2'	10:A:2634:G:O4'	2.20	0.42
10:A:2892:A:N6	10:A:2893:G:C2	2.88	0.42
10:A:2317:C:O2	10:A:2318:G:O4'	2.38	0.42
10:A:2262:U:C4	10:A:2279:G:N1	2.88	0.42
13:E:92:THR:O	13:E:93:VAL:HB	2.19	0.42
10:A:1115:G:C2'	10:A:1116:C:C6	2.91	0.42
17:I:93:THR:HB	17:I:119:PRO:HB3	2.01	0.42
19:O:23:ARG:CG	19:O:23:ARG:NH1	2.64	0.42
10:A:271(H):G:N1	10:A:271(Q):G:C6	2.87	0.42
27:W:45:TYR:O	27:W:48:ALA:HB3	2.19	0.42
10:A:2863:C:OP1	24:T:93:ARG:NH1	2.52	0.42
24:T:92:GLY:C	24:T:94:ALA:N	2.73	0.42
18:N:82:LEU:N	18:N:82:LEU:HD12	2.32	0.42
17:I:31:LEU:HD12	17:I:31:LEU:HA	1.71	0.42
12:D:266:SER:O	12:D:267:SER:CB	2.67	0.42
10:A:687:C:O2	10:A:788:A:H5'	2.19	0.42
10:A:2191:G:C2'	10:A:2192:G:O5'	2.68	0.42
21:Q:69:PHE:CG	21:Q:70:PRO:HD2	2.55	0.42
19:O:88:ASN:O	19:O:91:LEU:HA	2.20	0.42
15:G:43:LEU:HD13	15:G:153:ARG:HD2	2.02	0.42
11:B:3:C:H5''	11:B:4:C:OP2	2.18	0.42
30:Z:45:ASP:OD1	30:Z:49:ARG:HG2	2.20	0.42
10:A:1925:C:C6	10:A:1925:C:H3'	2.55	0.42
21:Q:25:ASP:HB3	21:Q:102:VAL:HG23	2.01	0.42
10:A:1909:C:H5'	10:A:1910:G:OP2	2.19	0.42
10:A:589:C:H2'	10:A:590:A:C8	2.55	0.42
10:A:633:A:N3	10:A:2403:C:H4'	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:F:84:VAL:HB	14:F:85:GLY:H	1.40	0.42
10:A:557:U:O2'	10:A:558:G:C5'	2.67	0.42
10:A:535:C:C2	10:A:559:G:C2	3.07	0.42
10:A:999:U:O2'	10:A:1000:A:H5'	2.20	0.42
25:U:68:ALA:CB	25:U:99:ALA:HB1	2.50	0.42
11:B:59:A:C4	11:B:60:C:C6	3.08	0.42
10:A:1804:C:H6	10:A:1804:C:O5'	2.03	0.42
22:R:60:LEU:HG	22:R:60:LEU:O	2.20	0.42
10:A:2517:C:C2	10:A:2542:A:N6	2.87	0.42
30:Z:26:GLY:HA2	30:Z:85:HIS:CD2	2.54	0.42
1:O:43:THR:C	1:O:45:PHE:N	2.73	0.42
11:B:15:A:H2'	11:B:16:G:OP1	2.19	0.42
12:D:136:ILE:CG2	12:D:140:THR:OG1	2.67	0.42
12:D:148:GLU:C	12:D:189:CYS:SG	2.98	0.42
6:5:31:VAL:HG23	6:5:32:PRO:CD	2.49	0.42
10:A:2830:G:N3	10:A:2883:A:H2	2.17	0.42
13:E:132:HIS:CG	13:E:135:HIS:CE1	3.04	0.42
10:A:861:A:H2'	10:A:862:G:O4'	2.20	0.42
10:A:475:U:C5	10:A:481:G:O6	2.73	0.42
10:A:1180:C:C4	10:A:1181:C:C4	3.08	0.42
10:A:1027:A:C6	10:A:1126:A:C5	3.08	0.42
10:A:1688:U:C2	10:A:1700:A:H5''	2.54	0.42
17:I:130:TYR:O	17:I:131:LYS:HB2	2.19	0.42
10:A:1266:G:O4'	27:W:15:ARG:NH2	2.51	0.42
27:W:29:LEU:HD11	27:W:51:LEU:HD11	2.00	0.42
10:A:2686:G:H3'	10:A:2687:U:C6	2.55	0.42
24:T:83:ILE:HG13	24:T:84:GLN:HG2	2.02	0.42
12:D:75:ILE:HG21	12:D:99:ASP:HB2	2.01	0.42
10:A:151:C:C2	10:A:176:G:N2	2.88	0.42
10:A:1858:G:H8	10:A:1858:G:OP2	2.01	0.42
14:F:37:VAL:HA	14:F:40:GLN:HG3	2.01	0.42
27:W:73:ALA:C	27:W:106:ILE:HD13	2.39	0.42
16:H:155:SER:C	16:H:157:TYR:N	2.73	0.42
10:A:118:A:H3'	10:A:119:A:C5'	2.49	0.42
10:A:53:A:H2'	10:A:54:G:O4'	2.20	0.42
10:A:1963:U:H3'	10:A:1963:U:P	2.60	0.42
12:D:246:PRO:HG2	12:D:255:LYS:HG2	2.00	0.42
27:W:64:MET:O	27:W:65:LEU:HB2	2.20	0.42
10:A:1465:G:C6	10:A:1466:G:N7	2.88	0.42
21:Q:63:LYS:HD2	30:Z:175:VAL:HG21	2.01	0.42
10:A:384:U:C5	10:A:385:C:H5	2.37	0.42
13:E:67:PHE:HD2	13:E:68:ALA:N	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:E:46:ALA:HA	13:E:82:ARG:O	2.20	0.42
9:8:32:LEU:CD2	9:8:35:GLN:O	2.67	0.42
9:8:39:LYS:CG	9:8:42:ARG:NH1	2.83	0.42
10:A:1257:C:H5'	14:F:75:HIS:CE1	2.54	0.42
10:A:193:U:C2'	10:A:194:G:H5'	2.49	0.42
9:8:35:GLN:HG2	10:A:2420:C:OP1	2.20	0.42
10:A:942:G:H2'	10:A:943:U:C5'	2.50	0.42
14:F:45:ARG:HD3	14:F:97:TYR:CD1	2.54	0.42
10:A:1386:C:OP2	10:A:1396:U:C5	2.72	0.42
10:A:60:G:C2	10:A:74:A:C5	3.08	0.42
28:X:78:LYS:H	28:X:78:LYS:CD	2.31	0.42
10:A:1021:A:N6	10:A:1141:U:H3	2.15	0.42
10:A:850:C:H2'	10:A:850:C:O2	2.20	0.42
26:V:2:PHE:HE1	26:V:13:ARG:NE	2.16	0.42
10:A:1289:C:O2	10:A:1289:C:H2'	2.19	0.42
17:I:88:ILE:HD11	17:I:122:GLU:N	2.34	0.42
10:A:1429:G:N3	10:A:1568:G:C2	2.88	0.42
10:A:692:C:O2'	10:A:693:C:H5'	2.20	0.42
12:D:89:SER:CB	12:D:158:ALA:O	2.68	0.42
10:A:2564:A:C6	10:A:2565:A:N1	2.88	0.42
10:A:2319:G:N3	10:A:2320:A:C2	2.88	0.42
30:Z:53:ILE:HG12	30:Z:53:ILE:H	1.59	0.42
1:0:53:MET:HB2	1:0:59:LEU:CD2	2.46	0.42
11:B:69:G:C5	11:B:70:C:C5	3.08	0.42
10:A:2203:U:H1'	12:D:151:LYS:CE	2.50	0.42
12:D:70:TRP:CE3	12:D:150:LYS:HE3	2.55	0.42
13:E:167:VAL:C	13:E:168:MET:HG2	2.37	0.42
10:A:862:G:O5'	10:A:862:G:H8	2.03	0.42
11:B:93:G:N2	11:B:94:C:C2	2.87	0.42
10:A:2681:C:O2	10:A:2681:C:C2'	2.67	0.42
10:A:1692:U:O2'	10:A:1693:U:H2'	2.20	0.42
15:G:124:SER:O	15:G:125:PHE:C	2.58	0.42
27:W:47:VAL:CA	27:W:50:VAL:HG12	2.50	0.42
10:A:1990:C:H2'	10:A:1991:U:O4'	2.19	0.42
10:A:1995:U:N3	10:A:1996:C:C4	2.88	0.42
24:T:27:THR:OG1	24:T:28:VAL:N	2.51	0.42
10:A:1478:G:O2'	10:A:1479:G:H5'	2.19	0.42
27:W:96:ILE:HG21	27:W:96:ILE:HD13	1.75	0.42
24:T:112:ARG:C	24:T:112:ARG:HD3	2.41	0.42
10:A:2556:C:H2'	10:A:2557:G:H5'	2.02	0.42
30:Z:128:VAL:CG1	30:Z:133:ILE:HG12	2.49	0.42
8:7:5:TRP:CH2	10:A:686:G:C5	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:892:G:C5	10:A:893:C:C5	3.08	0.42
10:A:1374:G:H2'	10:A:1375:C:O4'	2.18	0.42
10:A:11:G:H2'	10:A:12:U:H5'	2.00	0.42
10:A:2085:C:H2'	10:A:2086:U:O4'	2.20	0.42
29:Y:2:ARG:N	29:Y:4:LYS:HE2	2.35	0.42
10:A:2391:G:O2'	10:A:2422:A:N7	2.53	0.42
18:N:121:LYS:HG3	18:N:123:TYR:CZ	2.55	0.42
19:O:27:GLY:H	19:O:30:ALA:HB2	1.85	0.42
10:A:124:G:OP1	10:A:1376:C:O2'	2.24	0.42
22:R:18:LEU:O	22:R:22:ARG:HG3	2.19	0.42
8:7:21:ARG:O	8:7:27:GLY:HA3	2.20	0.42
7:6:42:TRP:HZ2	10:A:642:G:O3'	2.03	0.41
9:8:29:LYS:O	9:8:30:ARG:C	2.58	0.41
10:A:638:G:C6	10:A:639:U:C4	3.08	0.41
10:A:676:A:C2	10:A:802:A:N6	2.72	0.41
10:A:947:G:H2'	10:A:948:G:C8	2.55	0.41
10:A:1190:G:C5'	20:P:35:HIS:HA	2.50	0.41
20:P:97:PRO:HD3	20:P:126:VAL:C	2.39	0.41
4:3:10:LYS:NZ	4:3:15:TYR:OH	2.42	0.41
25:U:51:LYS:O	25:U:52:ARG:C	2.58	0.41
26:V:27:ALA:CB	26:V:64:HIS:CD2	3.03	0.41
23:S:19:LYS:CG	23:S:19:LYS:O	2.68	0.41
10:A:1820:U:O2'	12:D:159:ALA:HB3	2.20	0.41
12:D:159:ALA:O	12:D:161:THR:N	2.53	0.41
10:A:1452:A:O2'	10:A:1453:U:H2'	2.19	0.41
22:R:63:ARG:HA	22:R:80:PHE:CZ	2.55	0.41
10:A:2305:A:H2'	10:A:2306:C:O4'	2.19	0.41
10:A:2313:C:H3'	10:A:2313:C:H6	1.84	0.41
10:A:2305:A:H5'	15:G:156:ASP:HB3	2.02	0.41
21:Q:139:GLU:O	30:Z:99:TYR:CD2	2.73	0.41
21:Q:141:GLN:OXT	30:Z:54:HIS:HA	2.19	0.41
11:B:110:G:C4	11:B:111:G:C8	3.08	0.41
11:B:13:A:N6	11:B:70:C:H5'	2.34	0.41
30:Z:166:SER:OG	30:Z:168:GLU:N	2.53	0.41
12:D:136:ILE:N	12:D:136:ILE:HD12	2.35	0.41
12:D:146:GLU:HB2	12:D:189:CYS:HB3	2.02	0.41
12:D:164:GLN:CB	12:D:166:GLN:HE22	2.32	0.41
6:5:48:GLU:O	6:5:49:CYS:C	2.59	0.41
18:N:78:TYR:CD1	18:N:79:PRO:HD3	2.55	0.41
10:A:2820:A:O4'	22:R:5:LYS:HG3	2.19	0.41
16:H:89:ILE:HD12	16:H:129:THR:O	2.19	0.41
28:X:40:LYS:O	28:X:43:VAL:N	2.53	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2027:G:N2	10:A:2037:G:C4	2.88	0.41
14:F:129:PHE:CE2	14:F:163:VAL:HG21	2.55	0.41
10:A:2884:U:C5	10:A:2885:C:C5	3.08	0.41
27:W:72:LYS:HB3	27:W:106:ILE:HG12	2.02	0.41
14:F:31:HIS:O	14:F:34:TRP:N	2.53	0.41
10:A:2078:C:H2'	10:A:2079:U:O4'	2.20	0.41
1:O:71:ASP:C	1:O:72:ARG:HG2	2.39	0.41
10:A:2601:C:H2'	10:A:2603:G:C8	2.55	0.41
30:Z:148:ASP:HB2	30:Z:149:SER:H	1.69	0.41
10:A:321:G:H5'	14:F:134:GLY:O	2.20	0.41
10:A:817:C:H3'	10:A:818:G:H8	1.85	0.41
10:A:2689:U:OP1	10:A:2719:G:N2	2.50	0.41
15:G:98:ARG:N	15:G:98:ARG:HD3	2.35	0.41
10:A:733:G:O6	10:A:761:A:C8	2.73	0.41
10:A:429:A:C5	10:A:430:G:C6	3.08	0.41
30:Z:115:GLY:CA	30:Z:177:PRO:HD3	2.50	0.41
11:B:9:G:N2	11:B:113:G:C4	2.88	0.41
25:U:55:ARG:HG2	25:U:55:ARG:H	1.55	0.41
9:8:2:PRO:O	9:8:3:LYS:C	2.59	0.41
14:F:36:VAL:HG11	14:F:183:VAL:HG11	2.01	0.41
20:P:111:ARG:HG3	20:P:128:HIS:CG	2.55	0.41
20:P:30:THR:O	20:P:31:ALA:C	2.57	0.41
20:P:84:ASN:C	20:P:86:LYS:N	2.74	0.41
10:A:68:G:C4	10:A:69:C:C6	3.09	0.41
10:A:1005:C:OP2	10:A:1011:G:H2'	2.19	0.41
15:G:11:TYR:HA	15:G:15:VAL:HB	2.02	0.41
23:S:63:THR:HA	23:S:66:ALA:CB	2.40	0.41
10:A:693:C:H2'	10:A:694:U:O5'	2.20	0.41
10:A:695:G:OP1	10:A:1380:G:C4'	2.65	0.41
10:A:764:A:N1	10:A:1789:A:O2'	2.49	0.41
12:D:157:ARG:HA	12:D:196:VAL:HG21	2.02	0.41
12:D:35:LYS:HG2	12:D:64:ILE:CA	2.51	0.41
12:D:93:ALA:HB3	12:D:105:ILE:HG23	2.02	0.41
10:A:2773:C:C2	10:A:2774:C:C5	3.08	0.41
16:H:149:ARG:HA	16:H:162:ILE:HD12	2.01	0.41
10:A:1210:A:C4'	10:A:1211:U:OP2	2.67	0.41
10:A:85:G:C5	10:A:98:G:C2	3.08	0.41
29:Y:28:LYS:N	29:Y:28:LYS:CD	2.71	0.41
29:Y:68:HIS:N	29:Y:71:LYS:HZ3	2.17	0.41
10:A:1509:C:H4'	10:A:1509:C:OP1	2.20	0.41
10:A:1511:C:H2'	10:A:1512:U:C6	2.55	0.41
10:A:863:A:H2	10:A:914:C:N4	2.17	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:74:ARG:HH22	11:B:13:A:H8	1.64	0.41
12:D:70:TRP:CD2	12:D:150:LYS:HE2	2.55	0.41
10:A:2679:A:H2'	10:A:2680:C:O4'	2.20	0.41
13:E:11:MET:O	13:E:12:THR:HG23	2.20	0.41
10:A:2687:U:C4	10:A:2688:U:C4	3.09	0.41
19:O:107:ARG:HH12	24:T:35:LYS:CE	2.33	0.41
24:T:45:PHE:CE2	24:T:63:VAL:CG2	3.03	0.41
24:T:77:PRO:O	24:T:78:LEU:CB	2.68	0.41
26:V:46:VAL:O	26:V:47:VAL:HB	2.20	0.41
8:7:34:ARG:NH1	8:7:39:ARG:CG	2.83	0.41
10:A:470:A:C2'	10:A:471:A:H5'	2.50	0.41
15:G:54:GLU:O	15:G:57:ALA:HB3	2.19	0.41
10:A:2569:G:C2	10:A:2570:G:C8	3.09	0.41
17:I:4:ILE:O	17:I:5:LEU:C	2.58	0.41
17:I:4:ILE:O	17:I:6:LEU:HD23	2.20	0.41
10:A:322:A:H3'	14:F:169:ASN:HD21	1.83	0.41
10:A:185:U:H2'	10:A:186:G:O4'	2.19	0.41
10:A:1579:A:C6	10:A:1580:A:C6	3.08	0.41
8:7:9:ARG:NH1	10:A:1309:G:H3'	2.36	0.41
10:A:2074:U:N3	10:A:2075:U:C4	2.88	0.41
10:A:2718:G:C6	10:A:2719:G:C5	3.08	0.41
10:A:1446:C:C2	10:A:1466:G:C2	3.08	0.41
10:A:1252:G:O6	25:U:36:ARG:HD2	2.20	0.41
25:U:36:ARG:NH1	25:U:36:ARG:HG3	2.35	0.41
15:G:96:ARG:CG	15:G:97:ASP:N	2.82	0.41
22:R:61:HIS:O	22:R:62:ALA:C	2.59	0.41
10:A:508:G:H5''	10:A:509:C:OP1	2.20	0.41
21:Q:44:ALA:O	21:Q:45:GLN:C	2.58	0.41
10:A:1272:A:H3'	10:A:1273:U:H5''	2.02	0.41
1:O:70:GLN:O	1:O:78:TYR:N	2.49	0.41
6:5:12:SER:O	6:5:13:LYS:C	2.58	0.41
10:A:199:A:C8	10:A:2433:A:C6	3.09	0.41
10:A:231:C:C2'	10:A:232:G:H5'	2.50	0.41
10:A:971:C:OP1	10:A:974:G:C8	2.73	0.41
10:A:1387:C:C2	10:A:1388:G:C8	3.07	0.41
28:X:31:HIS:ND1	28:X:32:PRO:HD2	2.35	0.41
10:A:1155:A:C5	10:A:1157:G:C5	3.08	0.41
25:U:101:ARG:C	25:U:102:GLU:HG2	2.41	0.41
26:V:23:GLU:OE2	26:V:91:TYR:OH	2.22	0.41
10:A:1313:U:H2'	10:A:1610:A:N1	2.34	0.41
15:G:120:LEU:HG	15:G:179:PRO:HG2	2.02	0.41
23:S:17:ARG:C	23:S:19:LYS:N	2.74	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1803:A:H2'	10:A:1804:C:H5'	2.02	0.41
10:A:783:A:H4'	10:A:1779:U:O2	2.21	0.41
12:D:32:SER:OG	12:D:33:LEU:N	2.54	0.41
29:Y:8:LYS:HE3	29:Y:74:PRO:HD3	2.01	0.41
10:A:1506:C:O2	10:A:1506:C:C2'	2.68	0.41
17:I:25:TYR:HD1	17:I:30:LEU:HD11	1.85	0.41
12:D:108:PRO:HG2	12:D:111:LEU:HB2	2.02	0.41
12:D:133:LEU:O	12:D:134:ARG:C	2.58	0.41
6:5:55:ARG:C	6:5:56:LYS:CG	2.83	0.41
10:A:904:C:O2'	10:A:905:U:H5'	2.19	0.41
1:0:31:VAL:HB	1:0:35:ASN:HD22	1.79	0.41
10:A:2199:A:H5'	10:A:2200:C:OP2	2.21	0.41
29:Y:47:LYS:NZ	29:Y:47:LYS:CB	2.81	0.41
2:1:78:LYS:HE2	10:A:271(R):G:H5''	2.02	0.41
10:A:2722:G:H5''	10:A:2820:A:N7	2.35	0.41
19:O:101:PRO:HD2	24:T:70:VAL:HG23	2.02	0.41
10:A:109:G:H2'	10:A:110:G:O4'	2.19	0.41
16:H:41:MET:HG2	16:H:55:PRO:HD3	2.00	0.41
10:A:758:C:O2	10:A:758:C:H2'	2.18	0.41
15:G:144:ILE:O	15:G:144:ILE:HG23	2.20	0.41
10:A:721:C:C2	10:A:722:A:C8	3.07	0.41
10:A:466:A:N3	10:A:683:C:H1'	2.35	0.41
10:A:632:A:O2'	10:A:2404:C:H5'	2.20	0.41
1:0:46:LYS:NZ	1:0:75:LEU:O	2.45	0.41
22:R:104:ARG:NH1	22:R:107:ASP:OD1	2.53	0.41
10:A:1165:U:H2'	10:A:1166:C:C6	2.56	0.41
10:A:838:C:H2'	10:A:839:U:O4'	2.20	0.41
2:1:53:VAL:HG12	2:1:58:ILE:HB	2.03	0.41
10:A:447:A:C6	10:A:454:A:C5	3.08	0.41
17:I:69:LYS:O	17:I:69:LYS:HG2	2.21	0.41
10:A:272(E):G:C5	10:A:272(F):C:C4	3.08	0.41
10:A:2102:U:O2	10:A:2102:U:O4'	2.38	0.41
10:A:2046:G:H2'	10:A:2046:G:N3	2.35	0.41
10:A:346:A:C2'	10:A:347:A:O5'	2.68	0.41
10:A:271(W):G:H8	10:A:271(W):G:O5'	2.04	0.41
2:1:39:LYS:HE3	10:A:201:C:OP1	2.20	0.41
10:A:2056:G:N2	10:A:2057:A:C1'	2.84	0.41
10:A:2287:A:C2	10:A:2289:G:H1'	2.55	0.41
10:A:2286:A:H5''	10:A:2287:A:P	2.60	0.41
10:A:590:A:C6	10:A:668:G:N1	2.88	0.41
10:A:806:C:OP1	10:A:831:G:H5''	2.20	0.41
20:P:45:LEU:HA	20:P:45:LEU:HD23	1.75	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1139:G:H5'	18:N:102:ALA:HB1	2.02	0.41
10:A:1141:U:P	18:N:63:THR:CG2	3.05	0.41
10:A:814:C:N4	10:A:1193:G:H1	2.17	0.41
10:A:558:G:P	18:N:111:PRO:HG2	2.60	0.41
18:N:5:VAL:HA	18:N:6:PRO:HD3	1.80	0.41
25:U:90:VAL:CG1	25:U:91:ASP:H	2.20	0.41
11:B:118:G:N3	11:B:118:G:H2'	2.35	0.41
11:B:29:A:H2'	11:B:30:C:O4'	2.19	0.41
15:G:16:ARG:HB3	15:G:16:ARG:HH11	1.85	0.41
10:A:1353:A:O4'	10:A:1569:A:H2	2.02	0.41
29:Y:45:VAL:HG13	29:Y:62:GLU:CD	2.40	0.41
10:A:2701:C:C3'	10:A:2702:U:C5'	2.69	0.41
14:F:3:GLU:O	14:F:19:GLU:CA	2.69	0.41
10:A:2260:C:H2'	10:A:2261:C:C6	2.56	0.41
10:A:1278:A:H2'	10:A:1279:G:C8	2.56	0.41
10:A:2222:G:O2'	12:D:148:GLU:HG2	2.20	0.41
19:O:17:ARG:HD3	19:O:17:ARG:HA	1.93	0.41
10:A:903:C:H2'	10:A:904:C:H6	1.85	0.41
10:A:904:C:H6	10:A:904:C:H5''	1.85	0.41
13:E:11:MET:HB3	13:E:24:THR:HB	2.02	0.41
10:A:1693:U:H1'	12:D:14:ARG:NH2	2.35	0.41
17:I:93:THR:CB	17:I:119:PRO:HB3	2.51	0.41
10:A:776:G:C8	10:A:793:A:C2	3.08	0.41
3:2:12:GLU:O	3:2:14:ARG:NH2	2.51	0.41
10:A:1666:G:C2'	10:A:1667:G:H5'	2.50	0.41
10:A:1982:C:O5'	10:A:1982:C:H6	2.03	0.41
10:A:2485:G:O2'	10:A:2486:G:H5'	2.21	0.41
10:A:2012:G:H8	10:A:2012:G:O5'	2.02	0.41
30:Z:108:PRO:O	30:Z:109:ALA:C	2.58	0.41
10:A:1247:A:C5	10:A:1249:U:C4	3.08	0.41
1:0:75:LEU:HA	1:0:75:LEU:HD23	1.71	0.41
10:A:1423:G:H2'	10:A:1424:G:H8	1.86	0.41
22:R:84:ALA:HB3	22:R:85:PRO:CD	2.50	0.41
10:A:1149:G:H2'	10:A:1150:C:H6	1.85	0.41
10:A:2276:G:OP2	21:Q:84:GLY:N	2.50	0.41
21:Q:80:GLU:OE2	21:Q:80:GLU:HA	2.20	0.41
10:A:401:A:C6	10:A:402:A:C6	3.07	0.41
19:O:119:PRO:HB2	24:T:68:TYR:CD1	2.55	0.41
9:8:35:GLN:HE21	9:8:35:GLN:HB3	1.56	0.41
9:8:52:LYS:N	9:8:54:GLU:HG2	2.36	0.41
33:A:3206:TEL:H13	33:A:3206:TEL:H7	1.60	0.41
10:A:640:C:H6	10:A:640:C:O5'	2.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:671:C:H2'	10:A:672:C:C6	2.55	0.41
10:A:823:G:C6	10:A:835:A:C6	3.08	0.41
10:A:942:G:C2'	10:A:943:U:C5'	2.96	0.41
10:A:1005:C:H2'	10:A:1006:C:C6	2.54	0.41
10:A:994:C:H1'	26:V:10:LYS:HZ2	1.84	0.41
18:N:21:LYS:O	18:N:61:ARG:N	2.50	0.41
25:U:83:LEU:CD2	25:U:88:ILE:HG12	2.51	0.41
26:V:72:VAL:HA	26:V:88:ARG:NH2	2.34	0.41
26:V:89:GLN:HB2	26:V:89:GLN:HE21	1.60	0.41
26:V:98:GLU:O	26:V:99:ILE:HD13	2.21	0.41
10:A:1784:A:H4'	10:A:1785:A:H5''	2.02	0.41
10:A:696:G:N2	10:A:697:C:C2	2.89	0.41
10:A:764:A:C4	10:A:781:A:N1	2.89	0.41
16:H:73:ALA:O	16:H:76:VAL:HB	2.20	0.41
2:1:89:GLU:CD	2:1:89:GLU:N	2.58	0.41
10:A:2029:G:C3'	10:A:2030:A:H5'	2.50	0.41
10:A:2031:A:H8	10:A:2031:A:OP1	2.03	0.41
27:W:75:TYR:HD1	27:W:75:TYR:N	2.16	0.41
10:A:2328:A:C2'	10:A:2329:G:O4'	2.68	0.41
10:A:911:A:N9	21:Q:9:TYR:OH	2.47	0.41
11:B:19:G:C6	11:B:20:C:N4	2.89	0.41
11:B:21:G:N3	11:B:21:G:H2'	2.34	0.41
12:D:131:LEU:N	12:D:131:LEU:HD12	2.35	0.41
6:5:33:CYS:HA	6:5:34:PRO:HD2	1.81	0.41
10:A:1295:C:H2'	10:A:1296:G:H8	1.86	0.41
21:Q:35:VAL:HG23	21:Q:100:GLY:C	2.40	0.41
10:A:1700:A:H2'	10:A:1701:A:O5'	2.20	0.41
10:A:794:G:C4	10:A:795:C:C5	3.09	0.41
10:A:797:C:C2	10:A:798:G:C8	3.08	0.41
17:I:70:GLU:O	17:I:71:ILE:HG22	2.21	0.41
27:W:19:LEU:HD12	27:W:19:LEU:HA	1.75	0.41
24:T:124:ASP:C	24:T:126:ALA:H	2.23	0.41
10:A:2476:A:H2	10:A:2477:C:H5''	1.85	0.41
10:A:271(N):U:OP1	10:A:271(N):U:C6	2.73	0.41
8:7:5:TRP:CZ3	10:A:464:U:C4'	3.04	0.41
10:A:2021:C:H4'	10:A:2022:U:OP2	2.19	0.41
10:A:1204:A:N6	10:A:1240:U:H2'	2.35	0.41
10:A:2550:G:C5	10:A:2551:C:C5	3.08	0.41
10:A:296:C:C2	10:A:297:C:C5	3.07	0.41
25:U:12:ARG:O	25:U:13:LYS:C	2.57	0.41
10:A:708:C:O2	10:A:708:C:H2'	2.21	0.41
2:1:54:ALA:O	2:1:56:GLN:CA	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:4:LEU:HA	4:3:4:LEU:HD23	1.88	0.41
27:W:34:ASN:O	27:W:37:ARG:HB3	2.21	0.41
10:A:1767:C:O2'	10:A:1768:U:H5'	2.19	0.41
14:F:88:VAL:HG11	14:F:91:GLY:HA3	2.02	0.41
10:A:876:C:O5'	10:A:876:C:H6	2.03	0.41
7:6:24:GLU:OE1	7:6:24:GLU:CA	2.59	0.41
10:A:225:A:O2'	10:A:257:A:H4'	2.20	0.41
9:8:27:THR:HG1	10:A:2361:A:P	2.43	0.41
10:A:832:G:C4	10:A:833:U:C5	3.08	0.41
10:A:25:U:H5''	27:W:80:PRO:HD3	2.03	0.41
10:A:1722:A:N1	10:A:1740:G:H2'	2.36	0.41
10:A:2859:G:O2'	10:A:2860:A:O5'	2.37	0.41
10:A:1159:U:H2'	10:A:1160:G:C8	2.54	0.41
16:H:85:LYS:HZ3	16:H:145:ALA:CB	2.34	0.41
10:A:1453:U:OP1	22:R:77:ARG:NH1	2.52	0.41
16:H:98:LEU:HD13	16:H:125:VAL:HG23	2.02	0.41
10:A:2315:G:H5''	10:A:2316:C:P	2.60	0.41
10:A:330:A:O2'	10:A:331:A:H8	2.04	0.41
10:A:1510:G:C4	10:A:1511:C:C5	3.09	0.41
10:A:2196:C:C2'	10:A:2197:U:H5'	2.49	0.41
10:A:2780:G:O2'	10:A:2781:A:OP1	2.33	0.41
6:5:51:TYR:CB	6:5:52:TYR:O	2.68	0.41
10:A:1275:A:N1	10:A:1295:C:O2'	2.47	0.41
17:I:77:LEU:HD22	17:I:104:GLN:OE1	2.19	0.41
17:I:93:THR:CG2	17:I:119:PRO:HB3	2.51	0.41
27:W:28:SER:O	27:W:29:LEU:C	2.59	0.41
10:A:78:A:C6	10:A:109:G:N1	2.89	0.41
18:N:128:HIS:O	18:N:130:HIS:HB3	2.19	0.41
21:Q:134:ARG:C	21:Q:136:ALA:N	2.74	0.41
13:E:169:ASN:HA	13:E:169:ASN:HD22	1.64	0.41
21:Q:32:TYR:HE2	21:Q:133:ARG:HG2	1.83	0.41
16:H:156:ALA:O	16:H:157:TYR:C	2.59	0.41
10:A:2291:U:H5''	10:A:2380:C:C1'	2.51	0.41
23:S:84:GLN:HE21	23:S:105:ALA:CB	2.30	0.41
10:A:836:G:C6	10:A:837:C:C4	3.09	0.41
27:W:64:MET:HE2	27:W:69:LEU:HD23	2.02	0.41
10:A:1563:G:C4	10:A:1564:C:C5	3.08	0.41
17:I:41:GLU:O	17:I:44:LEU:HB3	2.20	0.41
10:A:2046:G:C6	10:A:2047:U:C4	3.08	0.41
25:U:69:CYS:HA	25:U:106:PHE:HE2	1.86	0.41
10:A:703:U:C2'	10:A:704:G:H5'	2.51	0.41
10:A:2584:U:H6	10:A:2585:U:C5	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1891:G:C6	10:A:1892:C:C4	3.08	0.41
17:I:128:LEU:HB3	17:I:129:THR:H	1.57	0.41
9:8:31:HIS:O	9:8:32:LEU:C	2.59	0.41
10:A:2287:A:H2	10:A:2346:A:C2	2.36	0.41
10:A:230:U:O2'	10:A:231:C:H5'	2.21	0.41
10:A:240:G:H2'	10:A:241:A:C8	2.56	0.41
9:8:2:PRO:N	10:A:591:C:O2	2.53	0.41
10:A:663:G:C5	10:A:664:C:C4	3.09	0.41
10:A:821:A:C2'	10:A:946:G:H5''	2.51	0.41
27:W:89:ALA:O	27:W:92:ARG:HB2	2.20	0.41
3:2:45:SER:HA	3:2:47:ASN:HD21	1.85	0.41
10:A:1394:U:C6	10:A:1394:U:C3'	3.04	0.41
10:A:1407:C:N3	10:A:1596:A:C2	2.88	0.41
28:X:21:PHE:N	28:X:21:PHE:HD1	2.13	0.41
25:U:57:PHE:CD2	25:U:60:LEU:HD12	2.55	0.41
25:U:92:ARG:CB	26:V:11:GLN:NE2	2.57	0.41
26:V:2:PHE:CB	26:V:42:GLY:HA2	2.43	0.41
26:V:60:GLU:OE2	26:V:100:ARG:O	2.38	0.41
15:G:115:ARG:HB2	15:G:116:ASP:H	1.71	0.41
15:G:15:VAL:CG1	15:G:19:LEU:HD11	2.45	0.41
23:S:90:GLY:O	23:S:92:TYR:N	2.47	0.41
10:A:1568:G:H5'	12:D:60:ARG:HA	2.02	0.41
10:A:768:G:C5	10:A:769:G:N7	2.88	0.41
22:R:75:LEU:O	22:R:76:VAL:C	2.58	0.41
10:A:2029:G:H2'	10:A:2030:A:H5'	2.01	0.41
10:A:2526:G:C6	10:A:2527:C:N3	2.88	0.41
10:A:1212:G:N2	10:A:1236:G:O2'	2.42	0.41
10:A:2264:C:C2	10:A:2277:G:C2	3.09	0.41
10:A:2386:C:C6	10:A:2386:C:H3'	2.56	0.41
10:A:2385:C:H2'	10:A:2386:C:H5'	2.02	0.41
10:A:1493:C:H5	10:A:2206:G:O2'	2.00	0.41
11:B:110:G:C5	11:B:111:G:N7	2.89	0.41
1:0:31:VAL:O	1:0:64:ASP:HA	2.20	0.41
29:Y:47:LYS:HZ3	29:Y:47:LYS:CB	2.32	0.41
10:A:271(C):C:N3	10:A:271(V):G:C2	2.88	0.41
10:A:1412:A:H3'	10:A:1413:G:H8	1.83	0.41
10:A:1833:U:C2	10:A:1834:U:C6	3.08	0.41
10:A:1661:G:H2'	10:A:1662:C:C6	2.56	0.41
21:Q:24:GLY:HA3	30:Z:78:LYS:HD2	2.01	0.41
10:A:468:G:C6	10:A:469:G:C4	3.09	0.41
10:A:1131:G:C2	10:A:1132:A:C4	3.09	0.41
20:P:5:ASP:CG	20:P:6:LEU:HD23	2.41	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2009:G:H4'	27:W:40:ASN:O	2.21	0.41
10:A:2341:G:H2'	10:A:2342:C:O4'	2.21	0.41
10:A:1152:C:H5''	25:U:80:ILE:HG21	2.02	0.41
10:A:264:C:O2'	10:A:265:A:H2'	2.21	0.41
24:T:128:GLU:OE1	24:T:129:ARG:N	2.54	0.41
10:A:32:C:C2'	10:A:33:U:H5'	2.50	0.41
15:G:94:LEU:HD23	15:G:94:LEU:H	1.85	0.41
15:G:94:LEU:CG	15:G:99:MET:HA	2.51	0.41
10:A:1850:G:C4	10:A:1851:U:C6	3.09	0.41
10:A:2596:U:O5'	10:A:2596:U:H6	2.04	0.41
10:A:1911:U:H2'	10:A:1918:A:N1	2.35	0.41
22:R:62:ALA:O	22:R:66:VAL:HG23	2.21	0.41
19:O:7:TYR:C	19:O:8:LEU:HD22	2.41	0.41
10:A:181:A:H1'	10:A:435:C:H5'	2.01	0.41
10:A:877:U:H2'	10:A:878:A:H5''	2.02	0.41
4:3:17:LYS:HA	4:3:17:LYS:HD3	1.78	0.41
10:A:2715:C:H2'	10:A:2716:U:C6	2.56	0.41
10:A:1259:G:O2'	10:A:1260:G:H5'	2.21	0.41
12:D:248:SER:HB3	12:D:252:TRP:CZ3	2.56	0.41
10:A:401:A:N6	10:A:402:A:C6	2.89	0.41
15:G:51:ARG:HB3	15:G:53:LEU:HD23	2.02	0.41
7:6:25:LYS:HE3	7:6:25:LYS:HB2	1.81	0.41
10:A:644:A:C2	10:A:2369:A:H1'	2.55	0.41
10:A:513:A:C2	10:A:514:A:C5	3.08	0.41
10:A:832:G:C6	10:A:833:U:O4	2.73	0.41
14:F:81:PRO:CB	14:F:89:VAL:HG23	2.50	0.41
20:P:30:THR:O	20:P:33:ARG:N	2.23	0.41
10:A:833:U:H1'	20:P:55:ARG:HH11	1.86	0.41
10:A:1000:A:C6	10:A:1155:A:C8	3.09	0.41
18:N:37:LYS:O	25:U:67:ALA:HB2	2.21	0.41
26:V:21:ARG:HG2	26:V:93:GLU:CG	2.51	0.41
26:V:73:SER:HB2	26:V:75:PHE:CZ	2.56	0.41
10:A:1332:G:N1	10:A:1609:A:O2'	2.53	0.41
11:B:58:A:C5'	11:B:59:A:OP2	2.68	0.41
23:S:14:VAL:O	23:S:15:ARG:C	2.59	0.41
10:A:1782:C:H2'	10:A:2608:G:O2'	2.20	0.41
10:A:1791:A:H3'	10:A:1792:G:C8	2.52	0.41
10:A:1824:G:H2'	10:A:1825:A:H5'	2.02	0.41
10:A:694:U:H2'	10:A:695:G:O5'	2.21	0.41
10:A:1796:U:H4'	12:D:256:GLY:CA	2.51	0.41
10:A:2261:C:H5'	10:A:2388:A:H4'	2.02	0.41
10:A:2260:C:H2'	10:A:2261:C:H6	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2494:G:H2'	10:A:2495:G:H8	1.84	0.41
10:A:870:A:OP1	21:Q:7:MET:CE	2.68	0.41
21:Q:9:TYR:O	21:Q:10:ARG:HG3	2.21	0.41
10:A:2830:G:C2'	10:A:2831:G:H5'	2.50	0.41
10:A:915:C:C4	10:A:916:G:C5	3.09	0.41
13:E:116:VAL:HG21	13:E:122:PHE:CD2	2.56	0.41
10:A:1337:G:C5	10:A:1338:G:N7	2.89	0.41
10:A:88:G:N2	10:A:89:G:C4	2.89	0.41
10:A:2762:G:C5'	10:A:2762:G:C8	3.03	0.41
10:A:795:C:C2	10:A:796:C:C5	3.09	0.41
10:A:1930:G:N2	10:A:1968:G:H2'	2.36	0.41
26:V:43:GLU:CA	26:V:48:GLY:CA	2.99	0.41
15:G:71:THR:HB	15:G:89:GLY:C	2.41	0.41
10:A:2464:C:N3	10:A:2487:G:C2	2.89	0.41
14:F:126:VAL:HG11	14:F:142:TRP:HH2	1.85	0.41
10:A:707:G:H2'	10:A:708:C:O4'	2.20	0.41
10:A:1682:G:C2	10:A:1683:C:C2	3.08	0.41
10:A:2619:C:H2'	10:A:2620:C:C6	2.55	0.41
24:T:8:LYS:O	24:T:11:GLU:HB2	2.20	0.41
10:A:2046:G:C4	10:A:2047:U:C5	3.09	0.41
4:3:17:LYS:O	4:3:18:ASP:C	2.59	0.41
12:D:31:LYS:HA	12:D:31:LYS:NZ	2.35	0.41
26:V:57:VAL:O	26:V:57:VAL:HG12	2.21	0.41
8:7:18:PHE:CE2	8:7:22:MET:HG3	2.55	0.41
6:5:7:PRO:HA	10:A:2615:U:C6	2.55	0.41
10:A:2068:U:C2	10:A:2430:A:C2	3.01	0.41
10:A:257:A:H2'	10:A:258:G:O4'	2.21	0.41
10:A:621:A:H2'	10:A:622:G:C5'	2.51	0.41
10:A:667:U:C3'	10:A:668:G:H5'	2.50	0.41
9:8:8:LYS:O	9:8:12:LYS:HB2	2.21	0.41
9:8:8:LYS:HA	9:8:8:LYS:HD2	1.97	0.41
10:A:749:C:H4'	10:A:1271:G:N3	2.35	0.41
10:A:2346:A:O4'	10:A:2383:G:C8	2.74	0.41
9:8:25:MET:CB	20:P:62:LEU:CD2	2.98	0.41
20:P:98:GLU:CA	20:P:101:VAL:CG1	2.99	0.41
10:A:1711:C:H2'	10:A:1712:C:C6	2.56	0.41
10:A:1397:U:HO2'	10:A:1398:C:P	2.44	0.41
10:A:1405:U:N3	10:A:1406:U:C4	2.89	0.41
10:A:72:U:C4	10:A:112:U:H4'	2.56	0.41
3:2:54:LYS:CA	3:2:56:GLN:H	2.34	0.41
10:A:1408:C:C2	10:A:1595:G:C2	3.09	0.41
10:A:1526:G:O6	10:A:1527:G:C2	2.74	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:X:60:ARG:N	28:X:60:ARG:HD3	2.28	0.41
10:A:1021:A:O2'	10:A:1123:C:H5''	2.20	0.41
18:N:62:VAL:CG2	18:N:66:LYS:HG3	2.51	0.41
26:V:1:MET:HB3	26:V:2:PHE:H	1.74	0.41
10:A:1142(A):A:C8	10:A:1144:G:C5	3.09	0.41
20:P:27:HIS:CD2	20:P:27:HIS:C	2.94	0.41
25:U:82:GLY:O	25:U:86:ALA:HB2	2.21	0.41
26:V:15:GLU:CB	26:V:16:PRO:HD2	2.49	0.41
10:A:2333:A:H2'	10:A:2334:G:OP2	2.21	0.41
11:B:6:C:O2'	23:S:29:PHE:CE1	2.54	0.41
11:B:49:C:H2'	11:B:50:G:H8	1.86	0.41
23:S:106:ARG:O	23:S:107:GLU:HB2	2.21	0.41
23:S:53:SER:O	23:S:56:LEU:N	2.54	0.41
23:S:58:LEU:HD21	23:S:68:GLN:OE1	2.21	0.41
10:A:1568:G:OP2	12:D:63:ARG:NH2	2.54	0.41
10:A:778:G:H2'	10:A:779:U:O4'	2.21	0.41
10:A:729:G:P	12:D:208:LYS:NZ	2.94	0.41
2:1:66:HIS:O	2:1:67:ILE:C	2.59	0.41
2:1:88:LYS:O	2:1:92:LYS:N	2.54	0.41
10:A:2652:C:C2'	10:A:2653:U:C5'	2.91	0.41
10:A:2304:G:H22	10:A:2312:U:H3	1.69	0.41
14:F:24:LEU:CB	14:F:25:PRO:HD2	2.25	0.41
29:Y:26:LYS:O	29:Y:27:VAL:C	2.58	0.41
29:Y:9:LYS:O	29:Y:28:LYS:HE3	2.20	0.41
29:Y:11:ASP:OD1	29:Y:11:ASP:C	2.59	0.41
10:A:1485:G:C2'	10:A:1486:A:H5'	2.51	0.41
30:Z:56:VAL:O	30:Z:57:ILE:HD13	2.20	0.41
11:B:73:A:N1	30:Z:34:ASN:ND2	2.68	0.41
13:E:52:LEU:HD22	13:E:76:ARG:HD2	2.01	0.41
13:E:7:VAL:HG12	13:E:51:PHE:CE1	2.56	0.41
22:R:97:VAL:HA	22:R:113:LEU:O	2.21	0.41
13:E:95:ILE:HG22	13:E:96:PHE:CD1	2.56	0.41
12:D:70:TRP:CZ3	12:D:146:GLU:OE2	2.71	0.41
6:5:55:ARG:HA	6:5:55:ARG:HD3	1.84	0.41
10:A:2818:G:H1'	10:A:2836:U:O2'	2.21	0.41
11:B:81:G:O6	11:B:96:U:O2	2.38	0.41
13:E:122:PHE:CD1	13:E:122:PHE:N	2.88	0.41
10:A:1587:A:H2'	10:A:1588:C:O4'	2.21	0.41
29:Y:75:ILE:HD13	29:Y:76:CYS:H	1.83	0.41
10:A:479:A:C2	10:A:480:A:C5	3.09	0.41
10:A:1337:G:H2'	10:A:1338:G:C8	2.51	0.41
10:A:2541:A:H4'	10:A:2764:A:N1	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2467:C:O2'	10:A:2468:G:H5'	2.21	0.41
27:W:17:VAL:O	27:W:18:ARG:C	2.58	0.41
10:A:1973:G:O2'	10:A:1974:C:H5'	2.21	0.41
19:O:104:ARG:C	19:O:106:LEU:N	2.73	0.41
19:O:106:LEU:HD23	19:O:106:LEU:HA	1.37	0.41
24:T:28:VAL:HG21	24:T:46:GLU:HG3	2.03	0.41
10:A:1558:A:H4'	10:A:1559:G:O5'	2.20	0.41
19:O:2:ILE:HG23	19:O:6:THR:HB	2.03	0.41
20:P:147:LEU:HB2	20:P:148:LEU:H	1.49	0.41
10:A:2026:C:O2	10:A:2026:C:H2'	2.20	0.41
17:I:31:LEU:HD21	17:I:38:LEU:HG	2.03	0.41
17:I:3:VAL:HG12	17:I:38:LEU:CA	2.43	0.41
3:2:34:GLU:O	3:2:34:GLU:CG	2.68	0.41
14:F:135:LYS:O	14:F:138:GLU:HB2	2.21	0.41
10:A:7:G:H1	10:A:2896:C:H42	1.67	0.41
10:A:2550:G:C6	10:A:2551:C:C4	3.08	0.41
10:A:2019:A:C4'	25:U:34:LYS:HD2	2.51	0.41
10:A:1420:U:H2'	10:A:1420:U:H6	1.49	0.41
21:Q:17:LEU:CD2	21:Q:17:LEU:N	2.80	0.41
25:U:80:ILE:HG22	25:U:81:HIS:N	2.35	0.41
10:A:2422:A:H4'	10:A:2423:U:OP1	2.21	0.41
10:A:921:G:C5	10:A:922:U:C4	3.09	0.41
10:A:836:G:C5	10:A:837:C:N4	2.89	0.41
10:A:628:G:H2'	10:A:629:G:C8	2.55	0.41
10:A:384:U:C6	10:A:385:C:C5	3.09	0.41
10:A:1366:A:C6	10:A:1367:A:C4	3.07	0.41
10:A:2452:C:N4	10:A:2453:A:C6	2.89	0.41
19:O:20:MET:HE3	19:O:44:LYS:CE	2.50	0.41
10:A:554:U:O2'	10:A:555:U:H5'	2.20	0.41
4:3:14:GLY:O	10:A:969:U:H4'	2.21	0.41
11:B:9:G:C2	11:B:113:G:C5	3.09	0.41
8:7:18:PHE:CD2	8:7:18:PHE:C	2.93	0.41
10:A:730:C:OP2	10:A:731:C:OP2	2.39	0.41
10:A:1942:C:C4	10:A:1943:U:C4	3.09	0.41
27:W:23:LEU:HA	27:W:23:LEU:HD12	1.61	0.41
10:A:1817:G:C6	10:A:1818:U:C4	3.08	0.41
18:N:117:PHE:C	18:N:117:PHE:CD2	2.94	0.41
9:8:58:ILE:O	9:8:61:LEU:CG	2.64	0.41
10:A:449:A:C5	10:A:450:G:C8	3.08	0.41
10:A:449:A:H2'	10:A:450:G:O5'	2.20	0.41
10:A:28:A:H61	10:A:512:G:H1'	1.84	0.41
10:A:660:G:C6	10:A:661:C:C4	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:806:C:OP2	20:P:39:LYS:HG3	2.21	0.41
20:P:110:TYR:CE2	20:P:111:ARG:CD	3.04	0.41
3:2:32:LEU:HD12	3:2:33:MET:O	2.20	0.41
10:A:143:G:H2'	10:A:143(A):C:H6	1.85	0.41
10:A:536:A:H2'	10:A:537:C:H6	1.83	0.41
10:A:533:G:H5'	25:U:24:TYR:CE2	2.56	0.41
17:I:88:ILE:HD12	17:I:88:ILE:HG21	1.76	0.41
10:A:1794:U:H2'	10:A:1795:C:C6	2.56	0.41
16:H:85:LYS:CE	16:H:141:VAL:O	2.69	0.41
10:A:2663:G:N7	10:A:2664:G:C5	2.88	0.41
13:E:34:VAL:O	13:E:34:VAL:HG23	2.20	0.41
10:A:2801(A):A:C3'	10:A:2802:G:H5'	2.50	0.41
2:1:47:GLN:HG2	10:A:2230:G:H1'	2.02	0.41
10:A:2726:U:HO2'	10:A:2727:G:C5'	2.34	0.41
11:B:95:C:C2	11:B:96:U:C5	3.09	0.41
10:A:2680:C:H4'	13:E:188:VAL:O	2.21	0.41
10:A:1693:U:OP2	10:A:1694:C:H5	2.04	0.41
10:A:1677:A:H2'	10:A:1678:G:O5'	2.20	0.41
10:A:2538:C:H2'	10:A:2539:C:H6	1.84	0.41
10:A:2762:G:C5'	10:A:2762:G:H8	2.34	0.41
10:A:2575:C:H6	10:A:2575:C:O5'	2.04	0.41
10:A:2870:C:C5	10:A:2871:C:C5	3.09	0.41
19:O:115:VAL:HG12	19:O:116:SER:N	2.36	0.41
10:A:540:C:H2'	10:A:541:C:C6	2.56	0.41
19:O:49:ARG:N	19:O:49:ARG:CD	2.84	0.41
10:A:884:C:H3'	10:A:884:C:C6	2.56	0.41
10:A:1563:G:C4	10:A:1564:C:C6	3.09	0.41
10:A:1369:G:H2'	10:A:1370:C:O4'	2.21	0.41
10:A:1553:A:C6	10:A:1555:G:C4	3.08	0.41
10:A:489:G:C5	10:A:1284:A:C2	3.09	0.41
10:A:1632:A:C6	10:A:1633:G:N1	2.89	0.41
10:A:1400:G:H2'	10:A:1401:G:C8	2.55	0.41
10:A:1260:G:C6	10:A:1261:C:C4	3.09	0.41
10:A:1260:G:H2'	10:A:1261:C:O4'	2.20	0.41
10:A:1926:U:C2	10:A:1929:G:C2	3.09	0.41
10:A:939:G:C6	10:A:940:G:C5	3.09	0.41
17:I:79:ILE:HA	17:I:79:ILE:HD13	1.81	0.41
16:H:99:VAL:HG12	16:H:99:VAL:O	2.20	0.41
7:6:9:LEU:HD13	7:6:11:LEU:HD22	2.03	0.40
7:6:27:LYS:O	7:6:29:ASN:N	2.54	0.40
9:8:12:LYS:HG2	20:P:68:GLN:CD	2.42	0.40
10:A:1245:G:OP1	20:P:16:ARG:CD	2.65	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:191:A:H2'	10:A:192:C:C6	2.56	0.40
7:6:27:LYS:HG3	10:A:2285:C:OP2	2.21	0.40
10:A:580:C:C2	10:A:581:C:C5	3.09	0.40
10:A:648:G:H2'	10:A:649:G:H5'	2.03	0.40
14:F:42:ALA:O	14:F:43:LYS:C	2.60	0.40
20:P:61:ARG:CD	20:P:61:ARG:N	2.75	0.40
10:A:751:A:C5'	27:W:90:ARG:HA	2.42	0.40
28:X:77:LYS:CD	28:X:78:LYS:HG3	2.51	0.40
10:A:987:G:O2'	10:A:1000:A:N3	2.43	0.40
10:A:1826:G:H2'	10:A:1827:C:O4'	2.20	0.40
10:A:1793:C:H2'	10:A:1794:U:H6	1.85	0.40
10:A:781:A:C2'	10:A:782:A:OP2	2.69	0.40
10:A:2790:A:O2'	10:A:2893:G:C2	2.73	0.40
10:A:2632:A:N3	13:E:61:ARG:CD	2.85	0.40
10:A:2304:G:N2	10:A:2312:U:H3	2.18	0.40
14:F:5:ALA:HB2	14:F:24:LEU:HD11	2.03	0.40
30:Z:29:TYR:HA	30:Z:33:LEU:O	2.21	0.40
10:A:869:G:C2	10:A:870:A:H1'	2.56	0.40
30:Z:166:SER:HB2	30:Z:167:PRO:C	2.40	0.40
22:R:34:ILE:HD12	22:R:34:ILE:HA	1.86	0.40
6:5:48:GLU:HB2	6:5:49:CYS:H	1.54	0.40
10:A:856:C:O2'	10:A:857:C:OP1	2.37	0.40
10:A:1169:G:N2	10:A:1181:C:C2	2.90	0.40
10:A:1475:G:C2	10:A:1517:G:C2	3.09	0.40
17:I:31:LEU:HD22	17:I:38:LEU:HG	2.03	0.40
10:A:2472:G:C2	10:A:2477:C:OP1	2.75	0.40
10:A:2380:C:H2'	10:A:2381:C:H5'	2.03	0.40
15:G:62:LEU:HD22	15:G:143:GLU:O	2.21	0.40
27:W:64:MET:O	27:W:65:LEU:HB3	2.18	0.40
14:F:53:THR:O	14:F:55:GLY:N	2.54	0.40
13:E:56:PRO:C	13:E:58:ARG:N	2.75	0.40
29:Y:52:SER:O	29:Y:54:LYS:N	2.53	0.40
10:A:272(J):C:H2'	10:A:274:G:OP1	2.21	0.40
10:A:1817:G:H2'	10:A:1817:G:N3	2.37	0.40
6:5:2:ALA:N	10:A:747:U:C2	2.90	0.40
7:6:13:CYS:HB2	7:6:22:ALA:CB	2.51	0.40
9:8:38:GLY:O	9:8:39:LYS:HB3	2.21	0.40
10:A:419:C:H6	10:A:419:C:O5'	2.04	0.40
14:F:38:ARG:HD2	20:P:16:ARG:HH22	1.85	0.40
20:P:98:GLU:CA	20:P:101:VAL:HG13	2.51	0.40
10:A:1709:U:O4'	10:A:2860:A:H1'	2.20	0.40
3:2:47:ASN:ND2	3:2:48:HIS:H	2.17	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:N:30:ILE:CG2	18:N:120:LEU:CD2	3.00	0.40
26:V:27:ALA:O	26:V:29:PRO:O	2.39	0.40
12:D:231:HIS:ND1	12:D:232:PRO:HD2	2.35	0.40
11:B:51:G:C5'	11:B:52:A:OP2	2.63	0.40
11:B:55:U:N3	11:B:56:G:N7	2.69	0.40
11:B:6:C:H4'	11:B:28:C:H5'	2.03	0.40
29:Y:44:ILE:CG2	29:Y:45:VAL:N	2.84	0.40
22:R:67:LEU:HD13	22:R:76:VAL:CG2	2.43	0.40
10:A:2521:C:N3	10:A:2544:G:N2	2.61	0.40
10:A:2733:A:O2'	10:A:2734:A:H5'	2.21	0.40
16:H:87:LEU:N	16:H:131:VAL:O	2.40	0.40
16:H:152:ARG:HB2	16:H:162:ILE:HG12	2.02	0.40
10:A:2807:G:C3'	10:A:2808:U:H5''	2.43	0.40
10:A:49:A:H2'	10:A:49:A:N3	2.36	0.40
10:A:2306:C:P	10:A:2307:G:C8	3.15	0.40
10:A:2316:C:C6	10:A:2317:C:H5	2.38	0.40
10:A:2385:C:O2'	10:A:2386:C:H5'	2.21	0.40
10:A:869:G:C6	10:A:870:A:C5	3.09	0.40
10:A:953:A:C2	10:A:954:G:C4	3.10	0.40
13:E:96:PHE:HE2	13:E:102:VAL:HG11	1.87	0.40
19:O:111:PHE:C	19:O:113:LYS:N	2.74	0.40
6:5:43:HIS:CE1	10:A:2816:C:H1'	2.55	0.40
11:B:94:C:C2	11:B:95:C:C5	3.09	0.40
29:Y:96:ILE:HG12	29:Y:96:ILE:H	1.37	0.40
10:A:2536:G:C8	10:A:2537:U:C5	3.09	0.40
10:A:271(C):C:H3'	10:A:271(C):C:C6	2.57	0.40
27:W:47:VAL:HA	27:W:50:VAL:CG1	2.51	0.40
10:A:1904:G:H2'	10:A:1905:C:O4'	2.21	0.40
10:A:2580:U:H5'	13:E:131:ALA:CB	2.52	0.40
8:7:5:TRP:HE3	8:7:5:TRP:HA	1.85	0.40
10:A:464:U:C5	10:A:788:A:C4	3.09	0.40
10:A:1232:G:H2'	10:A:1233:C:C6	2.55	0.40
10:A:2694:G:O2'	10:A:2695:C:H5'	2.21	0.40
10:A:2821:A:H2'	10:A:2822:G:C8	2.56	0.40
10:A:2455:G:C6	10:A:2456:C:N4	2.89	0.40
10:A:705:A:C4	10:A:727:A:H1'	2.56	0.40
16:H:167:GLU:HA	16:H:168:PRO:HD3	1.97	0.40
15:G:94:LEU:HD11	15:G:102:PHE:CB	2.52	0.40
16:H:27:LYS:HB3	16:H:27:LYS:HE2	1.89	0.40
10:A:2413:G:N2	10:A:2414:G:H1'	2.36	0.40
25:U:29:SER:O	25:U:30:LYS:HD3	2.21	0.40
18:N:96:GLU:O	18:N:100:GLU:HG3	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2083:G:C6	10:A:2084:C:C4	3.08	0.40
10:A:679:C:H2'	10:A:680:G:C8	2.55	0.40
10:A:25:U:C4	10:A:26:G:C6	3.10	0.40
10:A:595:C:H2'	10:A:596:G:O4'	2.21	0.40
10:A:624:C:H2'	10:A:625:G:H5'	2.03	0.40
10:A:646:A:C2'	10:A:647:G:H5'	2.50	0.40
20:P:99:LEU:HD12	20:P:102:ARG:NH1	2.36	0.40
10:A:1461:G:C4	10:A:1462:C:C5	3.09	0.40
28:X:53:LYS:CE	28:X:55:ASN:HD21	2.33	0.40
10:A:536:A:H2'	10:A:537:C:O4'	2.21	0.40
10:A:986:C:O5'	10:A:986:C:H6	2.04	0.40
18:N:17:ASP:OD2	18:N:17:ASP:C	2.59	0.40
25:U:50:ARG:CZ	26:V:75:PHE:CD2	3.04	0.40
26:V:19:LYS:O	26:V:20:LEU:HG	2.21	0.40
10:A:1288:U:C2	10:A:1327:C:C2	3.09	0.40
10:A:763:G:N3	10:A:765:G:H1'	2.36	0.40
10:A:2750:A:H8	10:A:2750:A:OP1	2.04	0.40
10:A:2651:C:O2'	10:A:2652:C:H5'	2.21	0.40
16:H:103:LEU:HD21	16:H:105:LEU:HD11	2.02	0.40
16:H:150:ALA:O	16:H:151:ILE:C	2.59	0.40
16:H:164:TYR:N	16:H:164:TYR:HD1	2.18	0.40
10:A:329:G:OP2	29:Y:71:LYS:CE	2.66	0.40
10:A:85:G:OP1	29:Y:9:LYS:CB	2.69	0.40
21:Q:6:ARG:O	21:Q:6:ARG:CG	2.69	0.40
11:B:111:G:O2'	11:B:112:U:H5'	2.20	0.40
10:A:1650:G:H2'	10:A:1651:G:O4'	2.21	0.40
10:A:2223:G:H2'	10:A:2224:G:O4'	2.21	0.40
10:A:14:A:C2	10:A:526:A:C2	3.09	0.40
10:A:2830:G:C8	10:A:2830:G:C4'	3.04	0.40
11:B:86:G:H2'	11:B:87:G:O4'	2.22	0.40
10:A:901:A:H2'	10:A:901:A:N3	2.35	0.40
10:A:861:A:C2	10:A:917:A:N3	2.90	0.40
15:G:131:TYR:O	15:G:159:VAL:HG13	2.21	0.40
2:1:78:LYS:CG	10:A:271(R):G:H4'	2.40	0.40
19:O:63:VAL:HG12	19:O:106:LEU:HD11	2.04	0.40
19:O:35:VAL:HG11	19:O:105:GLU:HB2	2.03	0.40
24:T:28:VAL:O	24:T:86:ILE:O	2.39	0.40
10:A:2839:G:C5	10:A:2840:C:C4	3.09	0.40
10:A:456:C:C6	28:X:66:LEU:HD21	2.56	0.40
17:I:15:VAL:CG2	17:I:16:GLY:N	2.83	0.40
13:E:4:ILE:CD1	13:E:28:ALA:HB1	2.46	0.40
10:A:2849:U:H6	10:A:2849:U:H2'	1.59	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:1843:C:H2'	10:A:1844:C:C6	2.57	0.40
10:A:128:C:C5'	10:A:128:C:H6	2.30	0.40
10:A:1318:C:C3'	10:A:1319:G:H5''	2.51	0.40
10:A:1356:G:C5	10:A:1357:U:C4	3.09	0.40
22:R:28:LEU:CD1	22:R:48:VAL:HG21	2.48	0.40
10:A:2796:U:O4'	10:A:2796:U:O2	2.39	0.40
10:A:1893:C:H2'	10:A:1894:C:O4'	2.21	0.40
14:F:181:LEU:HD11	14:F:186:ILE:HD11	2.02	0.40
16:H:43:VAL:HG11	16:H:53:GLU:H	1.87	0.40
29:Y:92:ASN:ND2	29:Y:93:GLY:H	2.19	0.40
18:N:108:PRO:O	18:N:113:GLY:HA3	2.21	0.40
10:A:2415:G:C5	10:A:2416:C:C4	3.09	0.40
10:A:2396:G:C2	10:A:2421:G:C2	3.10	0.40
10:A:26:G:H1'	10:A:515:A:N6	2.36	0.40
33:A:3206:TEL:H30	33:A:3206:TEL:H242	1.80	0.40
10:A:196:A:O2'	10:A:805:G:O6	2.29	0.40
10:A:71:A:H4'	10:A:72:U:O5'	2.22	0.40
28:X:21:PHE:O	28:X:22:ALA:C	2.59	0.40
10:A:1006:C:C2	10:A:1138:G:C2	3.09	0.40
10:A:814:C:H42	10:A:1193:G:H1	1.70	0.40
4:3:49:LYS:HE2	10:A:850:C:O3'	2.22	0.40
25:U:92:ARG:O	25:U:93:LYS:C	2.59	0.40
11:B:55:U:C4	11:B:56:G:N7	2.89	0.40
15:G:25:TYR:HB3	15:G:30:GLU:CD	2.42	0.40
24:T:51:ARG:HG3	24:T:98:LYS:HG3	2.03	0.40
12:D:62:TYR:HE1	12:D:64:ILE:HA	1.82	0.40
10:A:2758:A:C2'	10:A:2759:G:H5'	2.51	0.40
10:A:2731:G:N1	10:A:2732:G:C6	2.90	0.40
16:H:164:TYR:C	16:H:166:GLY:N	2.75	0.40
13:E:37:ARG:HD3	13:E:44:TYR:CZ	2.56	0.40
14:F:24:LEU:O	14:F:25:PRO:C	2.56	0.40
10:A:1234:U:H2'	10:A:1235:G:O4'	2.21	0.40
1:0:8:GLY:O	1:0:10:THR:N	2.54	0.40
13:E:52:LEU:O	13:E:53:PRO:C	2.59	0.40
30:Z:151:HIS:O	30:Z:152:ALA:HB3	2.20	0.40
10:A:2091:U:OP2	10:A:2092:U:O2'	2.34	0.40
10:A:1047:G:H3'	10:A:1110:G:H1	1.86	0.40
2:1:20:ARG:NH2	2:1:20:ARG:CG	2.85	0.40
10:A:2727:G:C4	10:A:2728:U:C5	3.09	0.40
10:A:2729:G:N3	13:E:187:ALA:HB2	2.37	0.40
13:E:188:VAL:CG2	13:E:189:PRO:HD2	2.52	0.40
17:I:94:ALA:HB1	17:I:111:PRO:HA	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2740:A:H2'	10:A:2741:A:C8	2.56	0.40
27:W:36:LEU:HD13	27:W:48:ALA:N	2.36	0.40
27:W:47:VAL:O	27:W:48:ALA:C	2.59	0.40
8:7:42:LEU:HA	8:7:42:LEU:HD23	1.72	0.40
10:A:2580:U:O2	10:A:2580:U:C2'	2.67	0.40
10:A:551:G:N1	10:A:552:G:C5	2.90	0.40
10:A:1310:G:H1'	10:A:1611:C:H5'	2.02	0.40
21:Q:42:ILE:HD11	21:Q:127:ILE:HD11	2.03	0.40
10:A:1204:A:C8	10:A:1206:G:C6	3.09	0.40
25:U:27:LEU:HD13	25:U:27:LEU:HA	1.85	0.40
10:A:30:G:O2'	10:A:31:C:H5'	2.21	0.40
10:A:1548:C:H2'	10:A:1549:C:H6	1.86	0.40
13:E:16:ARG:HG3	13:E:21:VAL:HG21	2.02	0.40
10:A:412:A:C8	10:A:413:C:C5	3.09	0.40
12:D:220:HIS:CD2	12:D:221:VAL:N	2.90	0.40
10:A:1272:A:C3'	10:A:1273:U:H5''	2.51	0.40
10:A:1334:G:C6	10:A:1335:U:C4	3.10	0.40
12:D:78:LYS:HB2	12:D:78:LYS:HE3	1.83	0.40
10:A:2392:A:C4	10:A:2429:G:C6	3.10	0.40
10:A:516:C:O5'	10:A:516:C:H6	2.05	0.40
14:F:38:ARG:HH11	20:P:16:ARG:HH22	1.68	0.40
14:F:42:ALA:O	14:F:45:ARG:HB3	2.22	0.40
14:F:81:PRO:HB3	14:F:87:GLY:O	2.22	0.40
3:2:55:ARG:HH22	28:X:3:THR:HG22	1.83	0.40
10:A:1459:G:C8	10:A:1461:G:N9	2.90	0.40
3:2:32:LEU:HD21	10:A:61:G:O2'	2.22	0.40
4:3:38:GLU:O	4:3:43:ILE:HG13	2.22	0.40
4:3:47:VAL:CG1	4:3:56:VAL:HG21	2.51	0.40
10:A:1018:C:O2	10:A:1018:C:H2'	2.20	0.40
10:A:1142:U:H5''	10:A:1142(A):A:H5''	2.03	0.40
10:A:534:U:O2'	25:U:49:HIS:HD2	2.04	0.40
10:A:842:G:N2	10:A:937:U:C2	2.89	0.40
11:B:82:G:H2'	11:B:83:G:C5'	2.51	0.40
18:N:3:THR:CA	18:N:4:TYR:CD1	3.04	0.40
18:N:42:TRP:CD1	18:N:43:THR:N	2.89	0.40
10:A:1899:G:O2'	10:A:1900:A:OP2	2.39	0.40
15:G:105:LYS:O	15:G:110:ALA:HB2	2.21	0.40
23:S:58:LEU:HD12	23:S:59:LYS:HG3	2.03	0.40
10:A:2607:G:C6	10:A:2608:G:C6	3.09	0.40
10:A:695:G:C4	10:A:696:G:C8	3.09	0.40
12:D:213:ARG:HD2	12:D:213:ARG:HA	1.70	0.40
22:R:67:LEU:HA	22:R:67:LEU:HD12	1.82	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:A:2658:C:H5'	10:A:2659:G:OP2	2.20	0.40
10:A:2312:U:O2'	10:A:2313:C:H5'	2.20	0.40
10:A:310:A:C4	10:A:312:G:C8	3.09	0.40
29:Y:42:VAL:HB	29:Y:65:ALA:O	2.21	0.40
29:Y:7:VAL:HG11	29:Y:8:LYS:HZ2	1.86	0.40
30:Z:44:PHE:CE2	30:Z:86:VAL:HG11	2.55	0.40
5:4:24:THR:O	5:4:25:TYR:O	2.39	0.40
13:E:6:GLY:HA2	13:E:51:PHE:CE1	2.57	0.40
6:5:36:CYS:CB	6:5:38:ALA:HB2	2.51	0.40
10:A:851:U:O2	10:A:927:G:C2	2.75	0.40
10:A:1294:U:O2'	22:R:23:ASN:ND2	2.54	0.40
19:O:23:ARG:HD3	19:O:23:ARG:HA	1.59	0.40
10:A:2525:G:C2	10:A:2539:C:C2	3.09	0.40
10:A:271(E):U:O5'	10:A:271(E):U:C6	2.69	0.40
10:A:271(H):G:N2	10:A:271(I):G:H1'	2.36	0.40
19:O:108:GLU:HG2	19:O:108:GLU:H	1.48	0.40
22:R:43:GLU:HA	22:R:43:GLU:OE2	2.20	0.40
10:A:1885:A:C5'	10:A:1886:C:OP2	2.70	0.40
17:I:5:LEU:HD21	17:I:19:VAL:CG1	2.51	0.40
17:I:5:LEU:HD21	17:I:19:VAL:HG11	2.02	0.40
13:E:169:ASN:CG	13:E:201:THR:HG21	2.41	0.40
10:A:1254:A:C8	10:A:1256:G:C8	3.09	0.40
10:A:1254:A:H5'	10:A:1255:U:O5'	2.21	0.40
10:A:272(D):G:C2	10:A:365:C:N3	2.89	0.40
10:A:614:U:H2'	10:A:614(A):U:O4'	2.22	0.40
10:A:1921:G:H2'	10:A:1922:G:C8	2.54	0.40
10:A:1446:C:N3	10:A:1466:G:C2	2.90	0.40
10:A:1465:G:C2	10:A:1466:G:N9	2.90	0.40
10:A:43:A:H2'	10:A:44:G:C8	2.57	0.40
10:A:1907:G:C2	10:A:1924:C:C2	3.09	0.40
18:N:74:ARG:NH2	18:N:101:HIS:HB3	2.36	0.40
10:A:882:G:O5'	10:A:882:G:H8	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	
1	0	83/85 (98%)	62 (75%)	14 (17%)	7 (8%)	1	9
2	1	87/98 (89%)	44 (51%)	26 (30%)	17 (20%)	0	0
3	2	49/72 (68%)	26 (53%)	13 (26%)	10 (20%)	0	0
4	3	58/60 (97%)	44 (76%)	13 (22%)	1 (2%)	14	54
5	4	30/71 (42%)	6 (20%)	11 (37%)	13 (43%)	0	0
6	5	57/60 (95%)	36 (63%)	8 (14%)	13 (23%)	0	0
7	6	41/54 (76%)	18 (44%)	11 (27%)	12 (29%)	0	0
8	7	47/49 (96%)	45 (96%)	1 (2%)	1 (2%)	11	48
9	8	62/65 (95%)	38 (61%)	13 (21%)	11 (18%)	0	0
12	D	270/276 (98%)	202 (75%)	52 (19%)	16 (6%)	2	17
13	E	203/206 (98%)	136 (67%)	39 (19%)	28 (14%)	0	2
14	F	206/210 (98%)	137 (66%)	45 (22%)	24 (12%)	1	4
15	G	177/182 (97%)	109 (62%)	47 (27%)	21 (12%)	1	4
16	H	158/180 (88%)	97 (61%)	37 (23%)	24 (15%)	0	1
17	I	144/148 (97%)	83 (58%)	38 (26%)	23 (16%)	0	1
18	N	137/140 (98%)	97 (71%)	25 (18%)	15 (11%)	1	5
19	O	120/122 (98%)	98 (82%)	17 (14%)	5 (4%)	4	27
20	P	144/150 (96%)	72 (50%)	29 (20%)	43 (30%)	0	0
21	Q	134/141 (95%)	91 (68%)	29 (22%)	14 (10%)	1	5
22	R	115/118 (98%)	71 (62%)	34 (30%)	10 (9%)	1	9
23	S	97/112 (87%)	41 (42%)	29 (30%)	27 (28%)	0	0
24	T	130/146 (89%)	80 (62%)	26 (20%)	24 (18%)	0	0
25	U	115/118 (98%)	82 (71%)	24 (21%)	9 (8%)	1	11
26	V	97/101 (96%)	47 (48%)	25 (26%)	25 (26%)	0	0
27	W	111/113 (98%)	78 (70%)	15 (14%)	18 (16%)	0	0
28	X	91/96 (95%)	45 (50%)	21 (23%)	25 (28%)	0	0
29	Y	99/110 (90%)	41 (41%)	27 (27%)	31 (31%)	0	0
30	Z	175/206 (85%)	116 (66%)	41 (23%)	18 (10%)	1	6
All	All	3237/3489 (93%)	2042 (63%)	710 (22%)	485 (15%)	0	1

All (485) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	44	ARG
2	1	11	ARG
2	1	14	VAL
2	1	48	LYS
2	1	65	SER
2	1	81	LYS
2	1	94	LEU
2	1	95	LEU
3	2	16	LEU
3	2	35	LEU
3	2	49	LYS
5	4	6	HIS
5	4	7	PRO
5	4	10	VAL
5	4	11	PRO
5	4	25	TYR
5	4	27	THR
5	4	29	PRO
6	5	4	HIS
6	5	47	PRO
6	5	49	CYS
6	5	56	LYS
7	6	16	CYS
7	6	20	ASN
7	6	28	ARG
7	6	29	ASN
7	6	31	PRO
7	6	33	LYS
7	6	51	GLU
9	8	32	LEU
9	8	35	GLN
9	8	37	SER
9	8	52	LYS
12	D	3	VAL
12	D	26	LYS
12	D	28	GLU
12	D	156	ALA
12	D	159	ALA
12	D	225	ALA
12	D	239	ARG
12	D	267	SER
13	E	53	PRO
13	E	66	HIS

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Mol	Chain	Res	Type
13	E	71	GLY
13	E	77	ILE
13	E	82	ARG
13	E	89	ASP
13	E	93	VAL
13	E	118	LYS
13	E	131	ALA
14	F	14	PRO
14	F	133	ASN
15	G	6	ALA
15	G	47	LYS
15	G	79	ASN
15	G	82	LEU
15	G	86	MET
15	G	87	PRO
15	G	90	LEU
15	G	96	ARG
16	H	13	LYS
16	H	41	MET
16	H	44	VAL
16	H	70	THR
16	H	71	LEU
16	H	138	LYS
16	H	153	LYS
16	H	154	PRO
16	H	156	ALA
16	H	170	ARG
17	I	89	TYR
17	I	91	SER
17	I	133	HIS
17	I	145	VAL
18	N	58	ASP
18	N	67	LEU
18	N	74	ARG
18	N	78	TYR
18	N	79	PRO
18	N	83	LYS
18	N	129	PRO
19	O	47	ILE
19	O	48	PRO
20	P	11	GLY
20	P	14	LYS

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Mol	Chain	Res	Type
20	P	15	ARG
20	P	18	ARG
20	P	31	ALA
20	P	40	SER
20	P	42	SER
20	P	47	ASP
20	P	49	ARG
20	P	52	GLU
20	P	56	SER
20	P	57	THR
20	P	58	THR
20	P	101	VAL
20	P	106	LEU
20	P	107	LYS
20	P	108	LYS
20	P	111	ARG
20	P	119	GLU
20	P	146	VAL
20	P	147	LEU
21	Q	8	LYS
21	Q	21	THR
21	Q	25	ASP
21	Q	83	MET
21	Q	135	ASP
22	R	5	LYS
22	R	10	LEU
22	R	117	VAL
23	S	14	VAL
23	S	33	LYS
23	S	57	LYS
23	S	59	LYS
23	S	74	ALA
23	S	87	PHE
23	S	100	ALA
23	S	102	ALA
23	S	103	GLU
24	T	13	ARG
24	T	18	ASP
24	T	24	PRO
24	T	26	ASP
24	T	35	LYS
24	T	36	GLU

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Mol	Chain	Res	Type
24	T	41	ARG
24	T	42	ILE
24	T	58	ASN
24	T	80	SER
24	T	88	ILE
24	T	94	ALA
24	T	107	ASP
25	U	32	PHE
25	U	61	TRP
25	U	62	ILE
25	U	91	ASP
26	V	3	ALA
26	V	19	LYS
26	V	23	GLU
26	V	28	GLU
26	V	40	LEU
26	V	41	GLY
26	V	47	VAL
26	V	51	VAL
26	V	57	VAL
26	V	73	SER
26	V	86	GLY
26	V	90	PRO
27	W	59	VAL
28	X	24	GLY
28	X	25	LYS
28	X	34	ALA
28	X	60	ARG
28	X	73	ARG
28	X	77	LYS
28	X	84	ALA
28	X	88	LYS
28	X	89	ILE
29	Y	3	VAL
29	Y	7	VAL
29	Y	19	LYS
29	Y	27	VAL
29	Y	31	LEU
29	Y	35	TYR
29	Y	56	PRO
29	Y	57	GLN
29	Y	64	GLU

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Mol	Chain	Res	Type
29	Y	66	PRO
29	Y	69	ALA
29	Y	76	CYS
29	Y	78	ALA
29	Y	81	LYS
29	Y	100	ALA
30	Z	168	GLU
30	Z	172	ALA
1	0	5	LYS
1	0	83	PRO
2	1	10	LYS
2	1	33	LYS
2	1	49	VAL
2	1	55	GLY
2	1	87	PRO
3	2	42	GLY
3	2	47	ASN
3	2	52	ASP
5	4	13	ARG
5	4	24	THR
6	5	24	ALA
6	5	48	GLU
6	5	52	TYR
6	5	53	ALA
7	6	15	GLU
7	6	41	PRO
7	6	49	HIS
9	8	31	HIS
9	8	41	ILE
9	8	64	TYR
12	D	33	LEU
12	D	74	GLY
13	E	17	ASP
13	E	57	LYS
13	E	88	GLY
13	E	186	GLY
14	F	5	ALA
14	F	66	PRO
14	F	84	VAL
14	F	85	GLY
14	F	89	VAL
14	F	119	ARG

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Mol	Chain	Res	Type
15	G	49	ASP
15	G	111	LEU
15	G	153	ARG
16	H	90	LYS
16	H	92	ILE
16	H	98	LEU
16	H	126	PRO
16	H	136	ILE
16	H	141	VAL
16	H	151	ILE
16	H	157	TYR
17	I	15	VAL
17	I	16	GLY
17	I	42	SER
17	I	78	THR
17	I	85	GLU
17	I	94	ALA
17	I	97	ILE
17	I	120	ILE
17	I	122	GLU
18	N	57	ALA
18	N	64	GLY
18	N	127	ASP
19	O	56	ASP
19	O	112	MET
20	P	25	SER
20	P	34	GLY
20	P	35	HIS
20	P	39	LYS
20	P	65	ARG
20	P	67	MET
20	P	90	ARG
20	P	141	ALA
21	Q	30	GLY
21	Q	90	VAL
22	R	7	GLY
23	S	85	VAL
23	S	107	GLU
24	T	55	ASN
24	T	56	GLY
24	T	68	TYR
24	T	115	ARG

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Mol	Chain	Res	Type
25	U	89	GLU
25	U	92	ARG
26	V	18	LEU
26	V	44	LYS
26	V	53	GLU
26	V	71	LEU
26	V	72	VAL
27	W	30	GLU
27	W	44	ALA
27	W	56	ALA
27	W	60	ASN
28	X	19	ALA
28	X	36	LYS
28	X	59	VAL
28	X	68	ARG
28	X	71	GLY
28	X	72	LYS
28	X	74	PRO
28	X	75	ASP
28	X	81	VAL
28	X	86	GLY
29	Y	10	GLY
29	Y	38	ILE
29	Y	77	PRO
29	Y	80	GLY
29	Y	98	VAL
30	Z	64	GLY
30	Z	81	ARG
30	Z	111	VAL
30	Z	121	HIS
30	Z	142	SER
30	Z	147	GLY
1	0	9	SER
1	0	13	GLY
2	1	38	SER
2	1	83	GLU
3	2	32	LEU
5	4	14	ILE
5	4	20	ASN
6	5	43	HIS
9	8	30	ARG
9	8	36	LYS

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Mol	Chain	Res	Type
12	D	241	PRO
13	E	187	ALA
13	E	201	THR
14	F	2	LYS
14	F	11	VAL
14	F	20	LEU
14	F	24	LEU
14	F	42	ALA
14	F	47	GLY
15	G	42	GLY
15	G	97	ASP
15	G	130	ASN
15	G	148	MET
16	H	72	ILE
16	H	117	PRO
17	I	5	LEU
18	N	135	PRO
19	O	5	GLN
20	P	89	ALA
20	P	91	PHE
20	P	102	ARG
21	Q	19	GLY
22	R	4	LEU
22	R	12	ARG
22	R	77	ARG
22	R	88	ARG
22	R	106	GLY
23	S	24	LEU
23	S	77	ALA
23	S	89	ARG
23	S	94	TYR
24	T	81	PRO
24	T	90	GLN
26	V	65	GLY
26	V	68	LYS
27	W	42	ARG
27	W	45	TYR
27	W	57	ASN
27	W	58	ALA
27	W	63	ASP
27	W	65	LEU
27	W	67	ASP

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Mol	Chain	Res	Type
28	X	37	THR
29	Y	16	ALA
29	Y	39	VAL
29	Y	42	VAL
29	Y	65	ALA
29	Y	89	PHE
30	Z	50	GLN
30	Z	79	ARG
30	Z	80	ARG
30	Z	166	SER
1	0	15	ASP
3	2	51	ARG
5	4	16	CYS
7	6	23	THR
12	D	134	ARG
12	D	272	ALA
13	E	58	ARG
13	E	119	ARG
13	E	129	HIS
13	E	173	VAL
14	F	31	HIS
14	F	54	ARG
14	F	127	GLU
14	F	146	ALA
14	F	206	ILE
15	G	99	MET
15	G	115	ARG
15	G	142	PRO
16	H	89	ILE
17	I	14	ASP
17	I	25	TYR
17	I	30	LEU
18	N	63	THR
20	P	8	PRO
20	P	37	GLY
20	P	100	LEU
20	P	104	GLY
21	Q	11	LYS
21	Q	13	GLN
21	Q	82	ARG
21	Q	89	ASN
22	R	104	ARG

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Mol	Chain	Res	Type
23	S	23	ARG
23	S	29	PHE
23	S	56	LEU
23	S	64	GLU
24	T	110	ILE
24	T	116	ALA
25	U	73	GLY
26	V	24	LYS
26	V	52	VAL
26	V	70	ILE
27	W	6	ILE
27	W	66	GLU
27	W	75	TYR
28	X	85	PRO
28	X	90	GLU
28	X	91	ALA
29	Y	50	ARG
29	Y	67	LEU
29	Y	70	SER
29	Y	101	LYS
30	Z	120	ILE
30	Z	140	ASP
2	1	28	GLY
3	2	40	SER
6	5	59	GLU
7	6	52	VAL
8	7	2	LYS
12	D	242	ARG
13	E	56	PRO
13	E	60	ASN
13	E	90	THR
13	E	94	GLU
13	E	153	GLY
14	F	10	PRO
14	F	30	PRO
14	F	144	LYS
15	G	35	GLU
16	H	140	LYS
17	I	26	ALA
17	I	49	ALA
17	I	53	ALA
17	I	71	ILE

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Mol	Chain	Res	Type
18	N	73	THR
20	P	9	ASN
20	P	38	GLN
20	P	115	LEU
20	P	123	LEU
21	Q	7	MET
23	S	15	ARG
23	S	58	LEU
23	S	79	ALA
23	S	88	ASP
24	T	103	ARG
24	T	128	GLU
25	U	58	ARG
26	V	36	PRO
26	V	50	PRO
28	X	4	ALA
28	X	22	ALA
29	Y	22	GLY
29	Y	90	LEU
1	0	55	ARG
2	1	86	SER
3	2	50	ILE
5	4	3	GLU
6	5	32	PRO
6	5	33	CYS
9	8	25	MET
13	E	130	GLY
13	E	174	ASP
15	G	128	ARG
16	H	42	ARG
16	H	168	PRO
20	P	144	GLU
23	S	28	VAL
25	U	90	VAL
26	V	39	LEU
27	W	14	PRO
30	Z	109	ALA
6	5	34	PRO
13	E	72	VAL
14	F	25	PRO
17	I	84	GLY
17	I	119	PRO

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Mol	Chain	Res	Type
18	N	80	GLY
20	P	53	GLY
21	Q	15	GLY
27	W	80	PRO
27	W	112	GLY
30	Z	177	PRO
2	1	36	GLY
4	3	13	ILE
9	8	38	GLY
12	D	34	VAL
15	G	129	GLY
18	N	128	HIS
20	P	10	PRO
23	S	60	GLY
23	S	108	GLY
30	Z	47	VAL
30	Z	146	ILE
12	D	127	VAL
14	F	86	GLY
23	S	22	GLY
24	T	7	ILE
13	E	147	PRO

### 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	
1	0	61/67 (91%)	48 (79%)	13 (21%)	1	7
2	1	73/83 (88%)	53 (73%)	20 (27%)	0	1
3	2	46/67 (69%)	28 (61%)	18 (39%)	0	0
4	3	51/52 (98%)	42 (82%)	9 (18%)	3	10
6	5	51/52 (98%)	41 (80%)	10 (20%)	2	8
7	6	43/52 (83%)	28 (65%)	15 (35%)	0	0
8	7	41/42 (98%)	31 (76%)	10 (24%)	1	4
9	8	53/55 (96%)	35 (66%)	18 (34%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	D	213/218 (98%)	157 (74%)	56 (26%)	1	2
13	E	165/166 (99%)	126 (76%)	39 (24%)	1	5
14	F	165/166 (99%)	132 (80%)	33 (20%)	2	8
15	G	155/156 (99%)	126 (81%)	29 (19%)	2	9
16	H	132/148 (89%)	107 (81%)	25 (19%)	2	9
17	I	122/124 (98%)	100 (82%)	22 (18%)	2	10
18	N	117/119 (98%)	81 (69%)	36 (31%)	0	1
19	O	100/100 (100%)	80 (80%)	20 (20%)	2	8
20	P	112/116 (97%)	67 (60%)	45 (40%)	0	0
21	Q	106/111 (96%)	82 (77%)	24 (23%)	1	5
22	R	100/101 (99%)	76 (76%)	24 (24%)	1	4
23	S	77/88 (88%)	59 (77%)	18 (23%)	1	5
24	T	116/127 (91%)	77 (66%)	39 (34%)	0	0
25	U	92/94 (98%)	71 (77%)	21 (23%)	1	5
26	V	82/82 (100%)	57 (70%)	25 (30%)	0	1
27	W	91/92 (99%)	69 (76%)	22 (24%)	1	4
28	X	74/78 (95%)	54 (73%)	20 (27%)	1	2
29	Y	84/91 (92%)	66 (79%)	18 (21%)	1	7
30	Z	155/179 (87%)	131 (84%)	24 (16%)	4	14
All	All	2677/2826 (95%)	2024 (76%)	653 (24%)	1	4

All (653) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	10	THR
1	0	12	ASN
1	0	14	ARG
1	0	31	VAL
1	0	35	ASN
1	0	36	ILE
1	0	41	ARG
1	0	46	LYS
1	0	55	ARG
1	0	64	ASP
1	0	70	GLN

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Mol	Chain	Res	Type
1	0	72	ARG
1	0	84	LEU
2	1	13	ILE
2	1	14	VAL
2	1	23	LYS
2	1	26	ARG
2	1	33	LYS
2	1	34	THR
2	1	37	ILE
2	1	46	LEU
2	1	47	GLN
2	1	48	LYS
2	1	53	VAL
2	1	56	GLN
2	1	57	GLU
2	1	59	THR
2	1	69	LYS
2	1	72	GLU
2	1	74	VAL
2	1	75	GLU
2	1	90	ILE
2	1	94	LEU
3	2	12	GLU
3	2	14	ARG
3	2	22	GLU
3	2	24	LEU
3	2	26	ARG
3	2	30	ARG
3	2	32	LEU
3	2	33	MET
3	2	36	ARG
3	2	44	LEU
3	2	46	GLN
3	2	47	ASN
3	2	49	LYS
3	2	50	ILE
3	2	51	ARG
3	2	56	GLN
3	2	57	ILE
3	2	59	ARG
4	3	8	LEU
4	3	10	LYS

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Mol	Chain	Res	Type
4	3	24	LYS
4	3	31	LEU
4	3	40	THR
4	3	50	VAL
4	3	52	HIS
4	3	54	VAL
4	3	55	ARG
6	5	4	HIS
6	5	6	VAL
6	5	11	THR
6	5	25	LEU
6	5	29	THR
6	5	31	VAL
6	5	49	CYS
6	5	51	TYR
6	5	56	LYS
6	5	58	LEU
7	6	9	LEU
7	6	10	LEU
7	6	11	LEU
7	6	12	GLU
7	6	18	ARG
7	6	19	ARG
7	6	28	ARG
7	6	33	LYS
7	6	37	ARG
7	6	42	TRP
7	6	43	CYS
7	6	44	ARG
7	6	46	HIS
7	6	48	VAL
7	6	51	GLU
8	7	1	MET
8	7	8	ASN
8	7	15	THR
8	7	24	THR
8	7	28	ARG
8	7	29	LYS
8	7	32	LYS
8	7	34	ARG
8	7	43	THR
8	7	48	LYS

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Mol	Chain	Res	Type
9	8	4	MET
9	8	8	LYS
9	8	12	LYS
9	8	16	ILE
9	8	21	LYS
9	8	23	VAL
9	8	32	LEU
9	8	37	SER
9	8	39	LYS
9	8	40	GLU
9	8	41	ILE
9	8	44	LYS
9	8	46	ARG
9	8	47	LYS
9	8	48	PHE
9	8	49	VAL
9	8	56	GLU
9	8	62	LEU
12	D	3	VAL
12	D	5	LYS
12	D	6	PHE
12	D	10	THR
12	D	14	ARG
12	D	15	PHE
12	D	17	THR
12	D	18	VAL
12	D	24	ILE
12	D	26	LYS
12	D	27	THR
12	D	28	GLU
12	D	31	LYS
12	D	43	ARG
12	D	44	ASN
12	D	46	GLN
12	D	48	ARG
12	D	61	LEU
12	D	64	ILE
12	D	65	ILE
12	D	68	LYS
12	D	69	ARG
12	D	73	VAL
12	D	87	ASN

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Mol	Chain	Res	Type
12	D	89	SER
12	D	94	LEU
12	D	95	LEU
12	D	103	ARG
12	D	105	ILE
12	D	106	ILE
12	D	113	VAL
12	D	116	GLN
12	D	117	VAL
12	D	141	VAL
12	D	142	VAL
12	D	150	LYS
12	D	161	THR
12	D	162	SER
12	D	165	ILE
12	D	166	GLN
12	D	173	VAL
12	D	182	LEU
12	D	192	THR
12	D	193	VAL
12	D	198	ASN
12	D	202	LYS
12	D	206	LEU
12	D	211	ARG
12	D	212	SER
12	D	218	ARG
12	D	221	VAL
12	D	229	VAL
12	D	242	ARG
12	D	255	LYS
12	D	257	LEU
12	D	271	ILE
13	E	7	VAL
13	E	19	ARG
13	E	21	VAL
13	E	24	THR
13	E	31	CYS
13	E	33	VAL
13	E	34	VAL
13	E	37	ARG
13	E	44	TYR
13	E	45	THR

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Mol	Chain	Res	Type
13	E	60	ASN
13	E	67	PHE
13	E	69	LYS
13	E	76	ARG
13	E	79	ARG
13	E	82	ARG
13	E	89	ASP
13	E	93	VAL
13	E	107	THR
13	E	111	ARG
13	E	117	MET
13	E	119	ARG
13	E	128	SER
13	E	133	LYS
13	E	134	ILE
13	E	144	ARG
13	E	154	LYS
13	E	160	TYR
13	E	163	GLU
13	E	168	MET
13	E	169	ASN
13	E	170	LEU
13	E	171	GLU
13	E	175	VAL
13	E	180	ASN
13	E	185	LYS
13	E	197	ILE
13	E	202	LYS
13	E	203	LYS
14	F	15	SER
14	F	20	LEU
14	F	23	ASP
14	F	28	ILE
14	F	33	LEU
14	F	37	VAL
14	F	38	ARG
14	F	40	GLN
14	F	46	ARG
14	F	53	THR
14	F	56	GLU
14	F	66	PRO
14	F	67	GLN

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Mol	Chain	Res	Type
14	F	68	LYS
14	F	74	ARG
14	F	78	ILE
14	F	82	ILE
14	F	83	PHE
14	F	84	VAL
14	F	88	VAL
14	F	106	ARG
14	F	112	MET
14	F	117	ARG
14	F	160	ASN
14	F	162	LEU
14	F	164	ARG
14	F	165	ARG
14	F	186	ILE
14	F	192	LEU
14	F	196	LEU
14	F	204	ASN
14	F	205	ARG
14	F	206	ILE
15	G	16	ARG
15	G	22	ARG
15	G	29	TRP
15	G	33	ARG
15	G	34	LEU
15	G	35	GLU
15	G	39	ILE
15	G	45	GLU
15	G	49	ASP
15	G	60	LEU
15	G	62	LEU
15	G	66	GLN
15	G	67	LYS
15	G	78	SER
15	G	83	ARG
15	G	101	ILE
15	G	102	PHE
15	G	115	ARG
15	G	123	ASN
15	G	126	ASP
15	G	140	ILE
15	G	143	GLU

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Mol	Chain	Res	Type
15	G	147	ASP
15	G	155	MET
15	G	157	ILE
15	G	159	VAL
15	G	161	THR
15	G	166	ASP
15	G	176	LEU
16	H	30	LYS
16	H	34	GLU
16	H	46	GLU
16	H	59	ARG
16	H	71	LEU
16	H	86	GLU
16	H	89	ILE
16	H	95	ARG
16	H	98	LEU
16	H	103	LEU
16	H	104	GLU
16	H	105	LEU
16	H	134	SER
16	H	137	ASP
16	H	141	VAL
16	H	143	GLN
16	H	149	ARG
16	H	153	LYS
16	H	157	TYR
16	H	158	HIS
16	H	159	GLU
16	H	162	ILE
16	H	163	TYR
16	H	169	VAL
16	H	170	ARG
17	I	4	ILE
17	I	12	LEU
17	I	15	VAL
17	I	20	ASP
17	I	38	LEU
17	I	40	THR
17	I	43	ASN
17	I	48	GLU
17	I	70	GLU
17	I	71	ILE

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Mol	Chain	Res	Type
17	I	72	LEU
17	I	88	ILE
17	I	93	THR
17	I	97	ILE
17	I	107	VAL
17	I	109	ILE
17	I	114	LEU
17	I	133	HIS
17	I	136	VAL
17	I	138	ILE
17	I	142	VAL
17	I	144	VAL
18	N	2	LYS
18	N	4	TYR
18	N	8	GLN
18	N	9	VAL
18	N	10	GLU
18	N	14	VAL
18	N	16	ILE
18	N	17	ASP
18	N	19	GLU
18	N	25	ARG
18	N	33	LEU
18	N	34	LEU
18	N	35	ARG
18	N	42	TRP
18	N	43	THR
18	N	48	MET
18	N	55	VAL
18	N	56	ASN
18	N	60	ILE
18	N	62	VAL
18	N	63	THR
18	N	65	LYS
18	N	67	LEU
18	N	75	TYR
18	N	78	TYR
18	N	82	LEU
18	N	83	LYS
18	N	87	LEU
18	N	94	HIS
18	N	96	GLU

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Mol	Chain	Res	Type
18	N	99	LEU
18	N	106	MET
18	N	112	LEU
18	N	120	LEU
18	N	121	LYS
18	N	130	HIS
19	O	22	ILE
19	O	23	ARG
19	O	24	VAL
19	O	26	LYS
19	O	28	SER
19	O	32	TYR
19	O	35	VAL
19	O	39	ILE
19	O	47	ILE
19	O	49	ARG
19	O	65	THR
19	O	77	ILE
19	O	78	ARG
19	O	80	ASP
19	O	82	ASN
19	O	98	VAL
19	O	108	GLU
19	O	112	MET
19	O	114	ILE
19	O	117	LEU
20	P	9	ASN
20	P	13	ASN
20	P	16	ARG
20	P	18	ARG
20	P	19	VAL
20	P	21	ARG
20	P	29	LYS
20	P	32	THR
20	P	33	ARG
20	P	39	LYS
20	P	40	SER
20	P	45	LEU
20	P	47	ASP
20	P	50	ARG
20	P	51	PHE
20	P	52	GLU

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Mol	Chain	Res	Type
20	P	57	THR
20	P	59	LEU
20	P	61	ARG
20	P	62	LEU
20	P	64	LYS
20	P	65	ARG
20	P	67	MET
20	P	75	ILE
20	P	77	ARG
20	P	81	GLN
20	P	85	LEU
20	P	90	ARG
20	P	95	VAL
20	P	98	GLU
20	P	100	LEU
20	P	101	VAL
20	P	105	LEU
20	P	111	ARG
20	P	112	LEU
20	P	114	ILE
20	P	115	LEU
20	P	121	LYS
20	P	125	VAL
20	P	131	SER
20	P	135	LEU
20	P	138	LEU
20	P	144	GLU
20	P	147	LEU
20	P	148	LEU
21	Q	9	TYR
21	Q	13	GLN
21	Q	17	LEU
21	Q	22	LYS
21	Q	27	VAL
21	Q	38	GLU
21	Q	43	THR
21	Q	45	GLN
21	Q	54	MET
21	Q	55	VAL
21	Q	58	PHE
21	Q	63	LYS
21	Q	79	LEU

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Mol	Chain	Res	Type
21	Q	80	GLU
21	Q	83	MET
21	Q	89	ASN
21	Q	103	MET
21	Q	106	VAL
21	Q	109	VAL
21	Q	110	THR
21	Q	111	GLU
21	Q	115	MET
21	Q	127	ILE
21	Q	132	VAL
22	R	2	ARG
22	R	5	LYS
22	R	8	ARG
22	R	16	HIS
22	R	18	LEU
22	R	28	LEU
22	R	29	LEU
22	R	42	LYS
22	R	44	LEU
22	R	56	LYS
22	R	60	LEU
22	R	63	ARG
22	R	65	LEU
22	R	71	GLN
22	R	75	LEU
22	R	79	LEU
22	R	99	LYS
22	R	100	LEU
22	R	103	ARG
22	R	104	ARG
22	R	113	LEU
22	R	114	VAL
22	R	116	LEU
22	R	117	VAL
23	S	11	LYS
23	S	12	PHE
23	S	13	ARG
23	S	18	ILE
23	S	25	ARG
23	S	35	ILE
23	S	36	TYR

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Mol	Chain	Res	Type
23	S	50	SER
23	S	54	LEU
23	S	64	GLU
23	S	73	LEU
23	S	80	LEU
23	S	89	ARG
23	S	92	TYR
23	S	93	LYS
23	S	97	ARG
23	S	101	LEU
23	S	106	ARG
24	T	3	ARG
24	T	6	LEU
24	T	10	VAL
24	T	13	ARG
24	T	15	VAL
24	T	16	ARG
24	T	17	THR
24	T	23	ARG
24	T	29	ARG
24	T	32	TYR
24	T	33	LYS
24	T	34	VAL
24	T	38	ASN
24	T	41	ARG
24	T	50	ILE
24	T	51	ARG
24	T	53	ARG
24	T	55	ASN
24	T	58	ASN
24	T	59	THR
24	T	63	VAL
24	T	64	ARG
24	T	65	LYS
24	T	73	GLU
24	T	74	ARG
24	T	78	LEU
24	T	82	LEU
24	T	84	GLN
24	T	87	ASP
24	T	90	GLN
24	T	96	ARG

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Mol	Chain	Res	Type
24	T	98	LYS
24	T	99	LEU
24	T	108	ARG
24	T	112	ARG
24	T	114	LEU
24	T	115	ARG
24	T	123	GLN
24	T	128	GLU
25	U	8	VAL
25	U	20	LEU
25	U	30	LYS
25	U	31	SER
25	U	36	ARG
25	U	44	ASN
25	U	55	ARG
25	U	56	ASP
25	U	64	ARG
25	U	76	TYR
25	U	78	THR
25	U	80	ILE
25	U	88	ILE
25	U	89	GLU
25	U	92	ARG
25	U	93	LYS
25	U	95	LEU
25	U	97	ASP
25	U	102	GLU
25	U	112	ARG
25	U	114	LYS
26	V	2	PHE
26	V	5	VAL
26	V	11	GLN
26	V	13	ARG
26	V	15	GLU
26	V	18	LEU
26	V	19	LYS
26	V	21	ARG
26	V	23	GLU
26	V	32	THR
26	V	34	GLU
26	V	37	VAL
26	V	40	LEU

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Mol	Chain	Res	Type
26	V	60	GLU
26	V	62	LEU
26	V	64	HIS
26	V	66	ARG
26	V	71	LEU
26	V	78	LYS
26	V	80	GLN
26	V	82	ARG
26	V	83	ARG
26	V	88	ARG
26	V	89	GLN
26	V	98	GLU
27	W	1	MET
27	W	11	ARG
27	W	15	ARG
27	W	16	LYS
27	W	27	LYS
27	W	30	GLU
27	W	33	ARG
27	W	41	LYS
27	W	51	LEU
27	W	52	GLU
27	W	60	ASN
27	W	69	LEU
27	W	70	TYR
27	W	75	TYR
27	W	76	VAL
27	W	85	VAL
27	W	86	LEU
27	W	88	ARG
27	W	96	ILE
27	W	97	LYS
27	W	106	ILE
27	W	107	LEU
28	X	3	THR
28	X	15	GLU
28	X	21	PHE
28	X	27	THR
28	X	30	VAL
28	X	33	LYS
28	X	35	THR
28	X	36	LYS

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Mol	Chain	Res	Type
28	X	37	THR
28	X	38	GLU
28	X	39	ILE
28	X	49	VAL
28	X	57	LEU
28	X	60	ARG
28	X	65	ARG
28	X	66	LEU
28	X	76	ARG
28	X	78	LYS
28	X	81	VAL
28	X	82	GLN
29	Y	2	ARG
29	Y	7	VAL
29	Y	8	LYS
29	Y	14	LEU
29	Y	23	ARG
29	Y	28	LYS
29	Y	31	LEU
29	Y	47	LYS
29	Y	49	VAL
29	Y	57	GLN
29	Y	62	GLU
29	Y	75	ILE
29	Y	76	CYS
29	Y	90	LEU
29	Y	94	LYS
29	Y	96	ILE
29	Y	97	ARG
29	Y	99	CYS
30	Z	5	LEU
30	Z	6	LYS
30	Z	9	TYR
30	Z	19	ARG
30	Z	27	VAL
30	Z	37	VAL
30	Z	42	VAL
30	Z	73	GLN
30	Z	79	ARG
30	Z	81	ARG
30	Z	86	VAL
30	Z	87	ASP

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Mol	Chain	Res	Type
30	Z	96	VAL
30	Z	97	GLU
30	Z	98	MET
30	Z	121	HIS
30	Z	140	ASP
30	Z	148	ASP
30	Z	150	LEU
30	Z	151	HIS
30	Z	157	LEU
30	Z	162	GLU
30	Z	166	SER
30	Z	169	GLU

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

Mol	Chain	Res	Type
1	0	35	ASN
1	0	40	GLN
2	1	19	GLN
2	1	66	HIS
3	2	47	ASN
3	2	56	GLN
4	3	19	GLN
4	3	46	ASN
4	3	52	HIS
6	5	4	HIS
6	5	22	HIS
6	5	23	HIS
6	5	43	HIS
7	6	20	ASN
7	6	26	ASN
7	6	46	HIS
8	7	8	ASN
9	8	33	ASN
9	8	35	GLN
12	D	58	HIS
12	D	96	HIS
12	D	126	GLN
12	D	143	HIS
12	D	166	GLN
12	D	186	HIS
12	D	198	ASN

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Mol	Chain	Res	Type
13	E	35	GLN
13	E	48	GLN
13	E	54	GLN
13	E	85	ASN
13	E	129	HIS
13	E	132	HIS
13	E	159	HIS
13	E	169	ASN
13	E	192	ASN
14	F	69	HIS
14	F	75	HIS
14	F	160	ASN
14	F	169	ASN
15	G	40	ASN
16	H	147	ASN
17	I	28	ASN
17	I	43	ASN
17	I	133	HIS
17	I	139	GLN
18	N	56	ASN
18	N	94	HIS
18	N	131	GLN
19	O	3	GLN
19	O	5	GLN
19	O	13	ASN
20	P	13	ASN
20	P	81	GLN
20	P	128	HIS
21	Q	12	GLN
21	Q	13	GLN
21	Q	45	GLN
21	Q	123	HIS
21	Q	141	GLN
22	R	13	HIS
22	R	16	HIS
22	R	23	ASN
22	R	24	GLN
22	R	31	HIS
22	R	53	HIS
22	R	61	HIS
22	R	71	GLN
23	S	34	HIS

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Mol	Chain	Res	Type
23	S	84	GLN
24	T	38	ASN
24	T	58	ASN
24	T	90	GLN
25	U	49	HIS
26	V	11	GLN
27	W	34	ASN
27	W	57	ASN
27	W	61	ASN
27	W	102	HIS
27	W	111	HIS
28	X	31	HIS
28	X	55	ASN
30	Z	54	HIS
30	Z	55	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	A	2723/2787 (97%)	827 (30%)	75 (2%)
11	B	118/122 (96%)	42 (35%)	0
All	All	2841/2909 (97%)	869 (30%)	75 (2%)

All (869) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
10	A	9	U
10	A	10	G
10	A	12	U
10	A	15	G
10	A	23	G
10	A	33	U
10	A	34	C
10	A	35	G
10	A	45	C
10	A	50	U
10	A	51	G
10	A	55	G
10	A	59	U
10	A	60	G
10	A	63	U

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Mol	Chain	Res	Type
10	A	69	C
10	A	71	A
10	A	72	U
10	A	74	A
10	A	75	G
10	A	83	G
10	A	84	A
10	A	90	U
10	A	92	A
10	A	94	C
10	A	95	G
10	A	100	G
10	A	102	G
10	A	103	A
10	A	104	U
10	A	114	U
10	A	118	A
10	A	120	U
10	A	125	G
10	A	129	C
10	A	131	G
10	A	137	C
10	A	139	G
10	A	139(A)	G
10	A	140	G
10	A	141	A
10	A	142	A
10	A	142(A)	C
10	A	143(A)	C
10	A	145	G
10	A	146	G
10	A	153	C
10	A	154	G
10	A	154(A)	C
10	A	157	U
10	A	158	U
10	A	171	G
10	A	173	G
10	A	175	G
10	A	182	A
10	A	183	C
10	A	188	G

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Mol	Chain	Res	Type
10	A	193	U
10	A	194	G
10	A	196	A
10	A	197	A
10	A	199	A
10	A	200	U
10	A	204	A
10	A	205	G
10	A	214	G
10	A	215	G
10	A	216	A
10	A	221	A
10	A	222	A
10	A	228	A
10	A	229	A
10	A	230	U
10	A	233	A
10	A	240	G
10	A	248	G
10	A	252	G
10	A	266	G
10	A	271(A)	A
10	A	271(I)	G
10	A	271(K)	U
10	A	271(L)	U
10	A	271(M)	G
10	A	271(N)	U
10	A	271(O)	C
10	A	271(P)	C
10	A	271(R)	G
10	A	271(T)	C
10	A	271(W)	G
10	A	271(Y)	U
10	A	272	G
10	A	272(B)	G
10	A	272(G)	C
10	A	272(H)	C
10	A	272(J)	C
10	A	274	G
10	A	275	G
10	A	279	C
10	A	281	G

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Mol	Chain	Res	Type
10	A	286	C
10	A	287	C
10	A	288	C
10	A	289	A
10	A	299	A
10	A	306	U
10	A	311	A
10	A	324	A
10	A	327	G
10	A	329	G
10	A	330	A
10	A	332	A
10	A	338	G
10	A	343	C
10	A	346	A
10	A	347	A
10	A	348	G
10	A	351	G
10	A	352	G
10	A	356	G
10	A	358	U
10	A	362	U
10	A	363	G
10	A	363(B)	G
10	A	363(C)	G
10	A	363(D)	G
10	A	363(E)	U
10	A	363(F)	A
10	A	370	G
10	A	371	A
10	A	372	G
10	A	384	U
10	A	386	G
10	A	388	G
10	A	389	G
10	A	405	U
10	A	406	G
10	A	411	G
10	A	416	C
10	A	428	A
10	A	442	G
10	A	444	C

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Mol	Chain	Res	Type
10	A	446	G
10	A	448	U
10	A	449	A
10	A	454	A
10	A	455	C
10	A	456	C
10	A	457	A
10	A	467	G
10	A	470	A
10	A	472	A
10	A	473	G
10	A	474	G
10	A	475	U
10	A	479	A
10	A	481	G
10	A	501	A
10	A	505	A
10	A	508	G
10	A	509	C
10	A	512	G
10	A	513	A
10	A	518	G
10	A	528	A
10	A	530	G
10	A	531	C
10	A	532	A
10	A	533	G
10	A	537	C
10	A	542	C
10	A	543	C
10	A	547	A
10	A	548	A
10	A	549	G
10	A	563	G
10	A	571	A
10	A	573	G
10	A	575	A
10	A	586	A
10	A	588	U
10	A	602	G
10	A	603	A
10	A	604	G

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Mol	Chain	Res	Type
10	A	605	C
10	A	607	U
10	A	614(A)	U
10	A	614(B)	G
10	A	615	G
10	A	620	G
10	A	622	G
10	A	623	G
10	A	627	A
10	A	637	A
10	A	645	C
10	A	646	A
10	A	647	G
10	A	651	G
10	A	652	C
10	A	656	G
10	A	657	U
10	A	663	G
10	A	668	G
10	A	669	G
10	A	670	A
10	A	671	C
10	A	676	A
10	A	686	G
10	A	708	C
10	A	709	U
10	A	717	G
10	A	722	A
10	A	726	G
10	A	730	C
10	A	738	G
10	A	745	G
10	A	746	A
10	A	747	U
10	A	753	C
10	A	759	G
10	A	762	U
10	A	764	A
10	A	765	G
10	A	774	A
10	A	775	G
10	A	776	G

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Mol	Chain	Res	Type
10	A	782	A
10	A	784	A
10	A	785	G
10	A	787	U
10	A	790	C
10	A	791	C
10	A	792	G
10	A	805	G
10	A	807	U
10	A	808	G
10	A	812	C
10	A	819	A
10	A	822	U
10	A	823	G
10	A	826	U
10	A	827	U
10	A	828	U
10	A	830	G
10	A	831	G
10	A	846	C
10	A	847	U
10	A	848	G
10	A	856	C
10	A	857	C
10	A	858	U
10	A	859	G
10	A	866	A
10	A	867	C
10	A	871	U
10	A	872	A
10	A	878	A
10	A	883	G
10	A	892	G
10	A	896	A
10	A	897	C
10	A	898	C
10	A	899	A
10	A	901	A
10	A	904	C
10	A	905	U
10	A	906	G
10	A	907	U

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Mol	Chain	Res	Type
10	A	910	A
10	A	917	A
10	A	919	G
10	A	926	A
10	A	932	G
10	A	941	A
10	A	946	G
10	A	952	G
10	A	958	U
10	A	959	A
10	A	961	C
10	A	974	G
10	A	975	C
10	A	975(A)	G
10	A	983	A
10	A	990	A
10	A	991	C
10	A	996	A
10	A	998	C
10	A	1004	C
10	A	1005	C
10	A	1006	C
10	A	1010	A
10	A	1011	G
10	A	1012	U
10	A	1013	C
10	A	1015	G
10	A	1016	G
10	A	1020	A
10	A	1022	G
10	A	1023	U
10	A	1025	G
10	A	1026	U
10	A	1032	A
10	A	1033	U
10	A	1041	C
10	A	1042	G
10	A	1043	C
10	A	1044	G
10	A	1045	A
10	A	1047	G
10	A	1048	A

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Mol	Chain	Res	Type
10	A	1050	A
10	A	1106	A
10	A	1107	G
10	A	1110	G
10	A	1111	A
10	A	1112	G
10	A	1113	U
10	A	1114	G
10	A	1115	G
10	A	1116	C
10	A	1126	A
10	A	1130	U
10	A	1135	C
10	A	1136	G
10	A	1139	G
10	A	1142	U
10	A	1143	A
10	A	1144	G
10	A	1147	C
10	A	1156	A
10	A	1159	U
10	A	1169	G
10	A	1170	G
10	A	1171	G
10	A	1174	A
10	A	1175	U
10	A	1176	G
10	A	1177	A
10	A	1178	C
10	A	1179	C
10	A	1180	C
10	A	1189	A
10	A	1194	A
10	A	1195	G
10	A	1204	A
10	A	1205	U
10	A	1206	G
10	A	1210	A
10	A	1211	U
10	A	1213	A
10	A	1217	C
10	A	1218	C

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Mol	Chain	Res	Type
10	A	1220	A
10	A	1221	C
10	A	1229	G
10	A	1236	G
10	A	1242	A
10	A	1244	G
10	A	1249	U
10	A	1251	C
10	A	1253	A
10	A	1254	A
10	A	1255	U
10	A	1256	G
10	A	1269	A
10	A	1271	G
10	A	1272	A
10	A	1273	U
10	A	1276	A
10	A	1281	G
10	A	1287	A
10	A	1288	U
10	A	1300	U
10	A	1301	A
10	A	1302	A
10	A	1307	A
10	A	1308	A
10	A	1314	C
10	A	1318	C
10	A	1319	G
10	A	1332	G
10	A	1345	C
10	A	1347	G
10	A	1349	A
10	A	1352	U
10	A	1359	A
10	A	1360	A
10	A	1365	A
10	A	1366	A
10	A	1368	G
10	A	1379	A
10	A	1380	G
10	A	1384	A
10	A	1385	G

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Mol	Chain	Res	Type
10	A	1386	C
10	A	1389	G
10	A	1390	U
10	A	1391	U
10	A	1392	A
10	A	1395	A
10	A	1397	U
10	A	1398	C
10	A	1404	C
10	A	1407	C
10	A	1411	C
10	A	1416	G
10	A	1417	C
10	A	1420	U
10	A	1421	G
10	A	1427	A
10	A	1428	C
10	A	1437	C
10	A	1444	G
10	A	1445	A
10	A	1445(A)	C
10	A	1448	G
10	A	1449	A
10	A	1450	G
10	A	1452	A
10	A	1455	G
10	A	1459	G
10	A	1460	A
10	A	1461	G
10	A	1467	C
10	A	1471	A
10	A	1472	A
10	A	1473	G
10	A	1474	C
10	A	1475	G
10	A	1476	C
10	A	1477	A
10	A	1479	G
10	A	1480	G
10	A	1481	U
10	A	1482	G
10	A	1484	G

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Mol	Chain	Res	Type
10	A	1485	G
10	A	1486	A
10	A	1488	G
10	A	1490	A
10	A	1491	G
10	A	1492	G
10	A	1493	C
10	A	1494	A
10	A	1495	A
10	A	1496	A
10	A	1497	U
10	A	1498	C
10	A	1501	C
10	A	1502	C
10	A	1505	C
10	A	1507	A
10	A	1508	A
10	A	1509	C
10	A	1509(A)	A
10	A	1512	U
10	A	1513	C
10	A	1515	G
10	A	1517	G
10	A	1519	G
10	A	1520	G
10	A	1528	A
10	A	1528(A)	A
10	A	1529	G
10	A	1530	C
10	A	1531	C
10	A	1532	C
10	A	1533	G
10	A	1543	C
10	A	1544	A
10	A	1545	A
10	A	1546	C
10	A	1554	A
10	A	1558	A
10	A	1559	G
10	A	1566	A
10	A	1569	A
10	A	1578	U

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Mol	Chain	Res	Type
10	A	1579	A
10	A	1580	A
10	A	1584	C
10	A	1586	A
10	A	1587	A
10	A	1588	C
10	A	1589	C
10	A	1591	G
10	A	1592	C
10	A	1593	G
10	A	1598	C
10	A	1600	C
10	A	1603	A
10	A	1608	A
10	A	1609	A
10	A	1610	A
10	A	1613	G
10	A	1617	C
10	A	1618	A
10	A	1632	A
10	A	1634	A
10	A	1635	G
10	A	1640	C
10	A	1647	G
10	A	1648	C
10	A	1652	A
10	A	1653	G
10	A	1654	A
10	A	1668	A
10	A	1670	C
10	A	1674	G
10	A	1675	C
10	A	1678	G
10	A	1679	U
10	A	1694	C
10	A	1695	G
10	A	1696	G
10	A	1700	A
10	A	1701	A
10	A	1702	G
10	A	1717	G
10	A	1718	G

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Mol	Chain	Res	Type
10	A	1722	A
10	A	1739	U
10	A	1740	G
10	A	1741	A
10	A	1742	G
10	A	1744	C
10	A	1745(A)	C
10	A	1746	G
10	A	1748	G
10	A	1749	A
10	A	1756	G
10	A	1758	G
10	A	1763	G
10	A	1764	G
10	A	1773	A
10	A	1778	U
10	A	1781	C
10	A	1791	A
10	A	1798	U
10	A	1799	G
10	A	1800	C
10	A	1801	G
10	A	1816	G
10	A	1820	U
10	A	1821	A
10	A	1828	G
10	A	1829	A
10	A	1835	G
10	A	1836	C
10	A	1837	C
10	A	1838	C
10	A	1847	A
10	A	1858	G
10	A	1865	G
10	A	1866	C
10	A	1877	A
10	A	1878	G
10	A	1879	C
10	A	1881	C
10	A	1882	C
10	A	1884	A
10	A	1888	G

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Mol	Chain	Res	Type
10	A	1900	A
10	A	1905	C
10	A	1906	G
10	A	1913	A
10	A	1914	C
10	A	1916	A
10	A	1929	G
10	A	1930	G
10	A	1934	C
10	A	1935	G
10	A	1936	A
10	A	1937	A
10	A	1938	A
10	A	1946	U
10	A	1947	C
10	A	1955	U
10	A	1962	C
10	A	1963	U
10	A	1964	G
10	A	1967	C
10	A	1969	A
10	A	1970	A
10	A	1971	A
10	A	1972	A
10	A	1982	C
10	A	1991	U
10	A	1993	U
10	A	1997	G
10	A	2020	A
10	A	2023	G
10	A	2027	G
10	A	2028	U
10	A	2030	A
10	A	2031	A
10	A	2032	G
10	A	2033	A
10	A	2034	U
10	A	2035	G
10	A	2036	C
10	A	2043	C
10	A	2049	G
10	A	2055	C

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Mol	Chain	Res	Type
10	A	2056	G
10	A	2060	A
10	A	2061	G
10	A	2062	A
10	A	2069	G
10	A	2071	A
10	A	2093	G
10	A	2094	G
10	A	2095	C
10	A	2099	U
10	A	2103	C
10	A	2104	G
10	A	2105	C
10	A	2187	G
10	A	2189	U
10	A	2190	G
10	A	2191	G
10	A	2192	G
10	A	2194	G
10	A	2198	A
10	A	2199	A
10	A	2200	C
10	A	2201	C
10	A	2205	C
10	A	2207	G
10	A	2208	A
10	A	2218	U
10	A	2219	G
10	A	2225	A
10	A	2226	C
10	A	2227	A
10	A	2238	G
10	A	2239	G
10	A	2259	G
10	A	2263	C
10	A	2268	A
10	A	2273	A
10	A	2275	C
10	A	2280	G
10	A	2281	C
10	A	2283	C
10	A	2286	A

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Mol	Chain	Res	Type
10	A	2287	A
10	A	2289	G
10	A	2291	U
10	A	2302	G
10	A	2305	A
10	A	2307	G
10	A	2308	G
10	A	2309	A
10	A	2310	A
10	A	2311	A
10	A	2313	C
10	A	2315	G
10	A	2316	C
10	A	2318	G
10	A	2319	G
10	A	2320	A
10	A	2325	G
10	A	2334	G
10	A	2335	A
10	A	2336	A
10	A	2342	C
10	A	2346	A
10	A	2347	C
10	A	2350	C
10	A	2354	G
10	A	2360	A
10	A	2361	A
10	A	2362	G
10	A	2376	A
10	A	2377	A
10	A	2383	G
10	A	2385	C
10	A	2387	U
10	A	2388	A
10	A	2394	C
10	A	2402	C
10	A	2405	G
10	A	2406	U
10	A	2410	G
10	A	2411	A
10	A	2415	G
10	A	2422	A

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Mol	Chain	Res	Type
10	A	2423	U
10	A	2425	A
10	A	2429	G
10	A	2430	A
10	A	2435	A
10	A	2439	A
10	A	2440	C
10	A	2441	C
10	A	2447	G
10	A	2448	A
10	A	2465	C
10	A	2468	G
10	A	2469	A
10	A	2470	G
10	A	2471	C
10	A	2472	G
10	A	2473	U
10	A	2475	C
10	A	2476	A
10	A	2477	C
10	A	2482	G
10	A	2483	C
10	A	2484	G
10	A	2487	G
10	A	2494	G
10	A	2495	G
10	A	2502	G
10	A	2504	U
10	A	2505	G
10	A	2506	U
10	A	2507	C
10	A	2518	A
10	A	2520	C
10	A	2524	G
10	A	2525	G
10	A	2531	A
10	A	2533	A
10	A	2535	G
10	A	2542	A
10	A	2543	G
10	A	2548	G
10	A	2550	G

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Mol	Chain	Res	Type
10	A	2553	G
10	A	2554	U
10	A	2559	C
10	A	2566	A
10	A	2567	G
10	A	2569	G
10	A	2574	G
10	A	2578	G
10	A	2586	C
10	A	2592	G
10	A	2602	A
10	A	2603	G
10	A	2609	U
10	A	2610	C
10	A	2611	U
10	A	2612	C
10	A	2615	U
10	A	2621	A
10	A	2630	G
10	A	2632	A
10	A	2636	U
10	A	2641	G
10	A	2643	G
10	A	2646	C
10	A	2654	A
10	A	2655	G
10	A	2657	A
10	A	2658	C
10	A	2659	G
10	A	2660	A
10	A	2661	G
10	A	2662	A
10	A	2665	A
10	A	2666	C
10	A	2670	A
10	A	2673	G
10	A	2682	U
10	A	2689	U
10	A	2690	C
10	A	2691	C
10	A	2702	U
10	A	2707	G

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Mol	Chain	Res	Type
10	A	2712	U
10	A	2712(A)	A
10	A	2713	A
10	A	2714	G
10	A	2718	G
10	A	2720	U
10	A	2721	A
10	A	2725	A
10	A	2726	U
10	A	2733	A
10	A	2751	G
10	A	2752	C
10	A	2753	A
10	A	2754	U
10	A	2757	A
10	A	2758	A
10	A	2759	G
10	A	2762	G
10	A	2764	A
10	A	2765	A
10	A	2766	G
10	A	2767	C
10	A	2770	G
10	A	2771	C
10	A	2778	A
10	A	2779	U
10	A	2780	G
10	A	2781	A
10	A	2782	G
10	A	2787	C
10	A	2789	C
10	A	2790	A
10	A	2791	C
10	A	2793	G
10	A	2795	G
10	A	2801(A)	A
10	A	2802	G
10	A	2803	C
10	A	2804	C
10	A	2807	G
10	A	2808	U
10	A	2818	G

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Mol	Chain	Res	Type
10	A	2820	A
10	A	2821	A
10	A	2830	G
10	A	2835	A
10	A	2849	U
10	A	2859	G
10	A	2860	A
10	A	2863	C
10	A	2872	G
10	A	2876	G
10	A	2877	G
10	A	2880	C
10	A	2892	A
10	A	2894	G
11	B	3	C
11	B	6	C
11	B	8	U
11	B	12	C
11	B	13	A
11	B	15	A
11	B	22	U
11	B	24	G
11	B	25	A
11	B	26	A
11	B	27	C
11	B	31	C
11	B	32	C
11	B	33	G
11	B	39	A
11	B	42	C
11	B	45	A
11	B	46	A
11	B	47	C
11	B	52	A
11	B	55	U
11	B	57	A
11	B	58	A
11	B	66	A
11	B	67	G
11	B	73	A
11	B	74	U
11	B	75	G

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Mol	Chain	Res	Type
11	B	81	G
11	B	82	G
11	B	87	G
11	B	88	C
11	B	89	G
11	B	90	A
11	B	91	C
11	B	102	A
11	B	103	G
11	B	106	G
11	B	110	G
11	B	113	G
11	B	116	G
11	B	118	G

All (75) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
10	A	34	C
10	A	49	A
10	A	71	A
10	A	102	G
10	A	128	C
10	A	221	A
10	A	272	G
10	A	370	G
10	A	387	U
10	A	472	A
10	A	474	G
10	A	587	C
10	A	603	A
10	A	669	G
10	A	685	A
10	A	746	A
10	A	752	A
10	A	774	A
10	A	790	C
10	A	856	C
10	A	858	U
10	A	974	G
10	A	1106	A
10	A	1112	G

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Mol	Chain	Res	Type
10	A	1176	G
10	A	1210	A
10	A	1275	A
10	A	1286	A
10	A	1300	U
10	A	1378	A
10	A	1379	A
10	A	1384	A
10	A	1397	U
10	A	1420	U
10	A	1427	A
10	A	1459	G
10	A	1474	C
10	A	1484	G
10	A	1494	A
10	A	1533	G
10	A	1544	A
10	A	1558	A
10	A	1608	A
10	A	1652	A
10	A	1653	G
10	A	1694	C
10	A	1799	G
10	A	1819	A
10	A	1876	A
10	A	1934	C
10	A	1963	U
10	A	1992	G
10	A	2030	A
10	A	2034	U
10	A	2191	G
10	A	2208	A
10	A	2225	A
10	A	2282	G
10	A	2288	A
10	A	2318	G
10	A	2405	G
10	A	2406	U
10	A	2422	A
10	A	2439	A
10	A	2447	G
10	A	2542	A

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Mol	Chain	Res	Type
10	A	2610	C
10	A	2611	U
10	A	2657	A
10	A	2662	A
10	A	2689	U
10	A	2751	G
10	A	2756	U
10	A	2796	U
10	A	2859	G

## 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 336 ligands modelled in this entry, 335 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
33	TEL	A	3206	-	62,62,62	1.79	9 (14%)	92,92,92	3.04	30 (32%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	TEL	A	3206	-	1/1/19/19	0/73/108/108	0/3/5/5



All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	A	3206	TEL	C43-C40	-6.79	1.37	1.48
33	A	3206	TEL	C37-N31	-4.58	1.29	1.36
33	A	3206	TEL	O5-C2	-4.47	1.40	1.47
33	A	3206	TEL	C36-N31	-3.88	1.32	1.37
33	A	3206	TEL	O32-C28	-3.76	1.36	1.44
33	A	3206	TEL	C36-C40	-3.17	1.32	1.37
33	A	3206	TEL	C40-N41	-3.14	1.32	1.38
33	A	3206	TEL	C28-C34	-2.93	1.47	1.55
33	A	3206	TEL	C2-C3	-2.64	1.50	1.55

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	A	3206	TEL	C8-C4-C2	-16.53	92.52	115.53
33	A	3206	TEL	O9-C15-C21	9.87	121.11	110.84
33	A	3206	TEL	C2-O5-C10	-9.22	102.95	108.91
33	A	3206	TEL	C28-C34-C30	-6.74	99.95	113.72
33	A	3206	TEL	O20-C15-C21	-5.11	117.88	124.86
33	A	3206	TEL	C2-C3-C7	-4.98	107.06	117.61
33	A	3206	TEL	O5-C2-C4	4.97	114.76	105.02
33	A	3206	TEL	O39-C34-C30	-4.42	102.97	110.31
33	A	3206	TEL	C38-O32-C28	-4.41	107.58	117.67
33	A	3206	TEL	C28-C24-C19	-4.06	109.00	115.89
33	A	3206	TEL	C22-C27-N31	-3.72	100.82	111.70
33	A	3206	TEL	C24-C19-C13	-3.44	106.95	113.12
33	A	3206	TEL	O45-C42-C44	-3.31	103.53	110.31
33	A	3206	TEL	O9-C4-C2	3.05	112.53	105.36
33	A	3206	TEL	C56-N52-C47	2.83	121.93	116.85
33	A	3206	TEL	C36-N31-C37	2.79	110.06	107.14
33	A	3206	TEL	C55-C50-C54	-2.77	108.82	113.38
33	A	3206	TEL	O5-C2-C3	-2.65	100.36	103.28
33	A	3206	TEL	C35-C30-C34	-2.62	109.28	112.78
33	A	3206	TEL	C3-N6-C10	-2.51	107.68	111.55
33	A	3206	TEL	C11-N6-C3	2.46	127.88	122.92
33	A	3206	TEL	O45-C50-C54	2.42	112.99	109.05
33	A	3206	TEL	O16-C10-N6	-2.39	124.40	128.03
33	A	3206	TEL	C43-C40-N41	2.39	124.81	120.11
33	A	3206	TEL	C25-C21-C26	-2.35	106.59	111.28
33	A	3206	TEL	C58-N53-C49	-2.30	106.56	113.11
33	A	3206	TEL	C36-C40-C43	-2.26	126.31	129.39
33	A	3206	TEL	C54-C49-N53	-2.18	109.25	115.65
33	A	3206	TEL	C25-C21-C15	-2.06	106.12	110.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	A	3206	TEL	N41-C37-N31	-2.02	107.86	112.29

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
33	A	3206	TEL	C21

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	0	85/85 (100%)	0.97	8 (9%) 9 2	62, 82, 179, 199	0
2	1	89/98 (90%)	1.27	23 (25%) 1 0	57, 88, 162, 191	0
3	2	51/72 (70%)	0.66	7 (13%) 4 1	68, 110, 167, 192	0
4	3	60/60 (100%)	1.10	11 (18%) 2 0	54, 79, 145, 186	0
5	4	32/71 (45%)	1.55	10 (31%) 1 0	139, 180, 199, 201	0
6	5	58/60 (96%)	0.46	4 (6%) 17 3	42, 69, 186, 197	0
7	6	45/54 (83%)	2.00	22 (48%) 1 0	57, 102, 169, 189	0
8	7	49/49 (100%)	1.58	15 (30%) 1 0	45, 54, 132, 180	0
9	8	64/65 (98%)	1.09	13 (20%) 1 0	55, 79, 140, 168	0
10	A	2725/2787 (97%)	0.26	163 (5%) 21 3	44, 71, 181, 203	0
11	B	119/122 (97%)	0.37	8 (6%) 17 3	64, 127, 194, 203	0
12	D	272/276 (98%)	0.58	23 (8%) 11 2	47, 73, 128, 175	0
13	E	205/206 (99%)	0.50	14 (6%) 17 3	46, 78, 169, 195	0
14	F	208/210 (99%)	0.76	29 (13%) 4 1	44, 89, 182, 199	0
15	G	181/182 (99%)	2.31	76 (41%) 1 0	119, 188, 200, 203	0
16	H	160/180 (88%)	1.45	49 (30%) 1 0	87, 142, 186, 195	0
17	I	146/148 (98%)	1.79	58 (39%) 1 0	76, 180, 198, 201	0
18	N	139/140 (99%)	0.57	7 (5%) 28 4	56, 90, 155, 190	0
19	O	122/122 (100%)	0.40	6 (4%) 28 4	54, 84, 136, 173	0
20	P	146/150 (97%)	1.30	38 (26%) 1 0	42, 109, 168, 198	0
21	Q	136/141 (96%)	0.76	16 (11%) 5 1	59, 90, 160, 191	0
22	R	117/118 (99%)	0.91	25 (21%) 1 0	47, 68, 136, 182	0
23	S	99/112 (88%)	2.02	38 (38%) 1 0	83, 136, 192, 198	0
24	T	132/146 (90%)	0.69	17 (12%) 4 1	65, 107, 179, 195	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	U	117/118 (99%)	1.14	19 (16%) 2 1	48, 76, 145, 194	0
26	V	101/101 (100%)	0.71	14 (13%) 4 1	49, 120, 186, 197	0
27	W	113/113 (100%)	0.15	3 (2%) 52 8	43, 62, 130, 191	0
28	X	93/96 (96%)	0.53	9 (9%) 8 2	57, 84, 153, 186	0
29	Y	101/110 (91%)	1.69	27 (26%) 1 0	68, 121, 195, 199	0
30	Z	177/206 (85%)	0.70	18 (10%) 7 2	80, 133, 185, 196	0
All	All	6142/6398 (95%)	0.66	770 (12%) 5 1	42, 82, 190, 203	0

All (770) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
15	G	63	ILE	16.2
10	A	2802	G	16.0
10	A	1051	G	15.6
15	G	138	GLN	13.2
15	G	137	GLU	12.2
29	Y	59	GLY	12.0
15	G	64	THR	11.8
17	I	118	LYS	10.9
10	A	11	G	10.9
15	G	2	PRO	10.7
1	0	2	ALA	10.6
13	E	205	ALA	9.6
10	A	2191	G	9.5
10	A	362	U	9.4
23	S	59	LYS	9.2
17	I	58	LEU	9.2
29	Y	91	GLU	9.1
1	0	4	LYS	9.0
23	S	109	GLY	9.0
29	Y	92	ASN	8.6
10	A	2796	U	8.5
10	A	10	G	8.4
10	A	2629	A	8.3
10	A	12	U	8.2
16	H	158	HIS	8.2
13	E	204	ALA	8.1
17	I	120	ILE	8.0
23	S	62	LYS	7.8
10	A	1052	C	7.8

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Mol	Chain	Res	Type	RSRZ
10	A	645	C	7.7
13	E	54	GLN	7.7
23	S	34	HIS	7.6
15	G	66	GLN	7.4
15	G	65	GLY	7.4
5	4	9	LEU	7.4
7	6	13	CYS	7.3
15	G	21	ARG	7.3
15	G	62	LEU	7.2
16	H	156	ALA	7.2
1	0	7	LEU	7.2
10	A	2799	C	7.2
23	S	54	LEU	7.1
15	G	152	LEU	7.0
18	N	1	MET	7.0
20	P	85	LEU	6.9
29	Y	88	LYS	6.9
5	4	11	PRO	6.9
29	Y	48	ALA	6.9
1	0	6	GLY	6.9
29	Y	63	LYS	6.8
16	H	83	TYR	6.8
15	G	153	ARG	6.8
10	A	1049	C	6.7
15	G	142	PRO	6.7
15	G	26	GLN	6.6
15	G	136	ARG	6.6
7	6	47	THR	6.5
23	S	33	LYS	6.5
15	G	140	ILE	6.4
16	H	96	ALA	6.4
10	A	2801	A	6.3
21	Q	91	GLU	6.3
25	U	89	GLU	6.2
15	G	93	THR	6.2
23	S	50	SER	6.2
15	G	118	ARG	6.2
10	A	1113	U	6.1
1	0	1	MET	6.1
17	I	122	GLU	6.1
17	I	119	PRO	6.1
23	S	60	GLY	6.1

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Mol	Chain	Res	Type	RSRZ
29	Y	2	ARG	6.1
16	H	157	TYR	6.0
23	S	32	LEU	6.0
16	H	171	LEU	6.0
29	Y	62	GLU	5.9
23	S	65	VAL	5.9
17	I	61	ARG	5.8
3	2	43	GLN	5.8
10	A	6	A	5.7
15	G	22	ARG	5.7
17	I	121	LYS	5.7
17	I	60	GLU	5.7
10	A	2190	G	5.7
10	A	30	G	5.6
15	G	39	ILE	5.6
23	S	30	ARG	5.6
11	B	52	A	5.6
15	G	139	LEU	5.5
29	Y	87	LYS	5.5
1	0	3	HIS	5.5
15	G	134	GLY	5.4
10	A	1050	A	5.4
6	5	59	GLU	5.4
20	P	108	LYS	5.3
15	G	30	GLU	5.3
29	Y	86	ARG	5.3
15	G	25	TYR	5.3
16	H	104	GLU	5.3
23	S	31	SER	5.2
17	I	68	LEU	5.2
17	I	127	VAL	5.2
7	6	22	ALA	5.2
15	G	69	ALA	5.2
23	S	58	LEU	5.2
26	V	28	GLU	5.1
15	G	51	ARG	5.1
15	G	68	PRO	5.1
15	G	67	LYS	5.0
10	A	897	C	5.0
10	A	31	C	5.0
10	A	2188	C	5.0
21	Q	92	GLY	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	A	2628	C	4.9
16	H	159	GLU	4.9
16	H	105	LEU	4.9
28	X	31	HIS	4.9
17	I	95	LYS	4.9
21	Q	74	TYR	4.9
17	I	86	THR	4.9
20	P	109	GLY	4.9
10	A	1907	G	4.8
12	D	5	LYS	4.8
5	4	10	VAL	4.8
29	Y	4	LYS	4.8
10	A	331	A	4.8
24	T	132	LYS	4.8
20	P	118	GLY	4.8
10	A	1919	A	4.7
5	4	14	ILE	4.7
10	A	2895	U	4.7
29	Y	61	ILE	4.7
14	F	208	GLY	4.7
10	A	361	G	4.7
10	A	272(H)	C	4.6
23	S	61	ASN	4.6
5	4	8	LYS	4.6
10	A	2666	C	4.6
15	G	43	LEU	4.6
29	Y	58	GLY	4.6
13	E	203	LYS	4.6
25	U	90	VAL	4.6
15	G	146	TYR	4.6
22	R	100	LEU	4.6
10	A	100	G	4.5
20	P	124	LYS	4.5
7	6	39	TYR	4.5
7	6	42	TRP	4.5
20	P	15	ARG	4.5
20	P	117	GLU	4.5
10	A	1046	A	4.5
10	A	1017	G	4.5
10	A	878	A	4.5
17	I	145	VAL	4.5
11	B	1	U	4.5

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Mol	Chain	Res	Type	RSRZ
10	A	646	A	4.4
29	Y	79	CYS	4.4
17	I	142	VAL	4.4
4	3	19	GLN	4.4
2	1	40	ARG	4.4
23	S	35	ILE	4.4
17	I	64	GLU	4.4
29	Y	22	GLY	4.4
12	D	261	LYS	4.4
10	A	1939	U	4.4
14	F	11	VAL	4.4
10	A	407	G	4.3
17	I	143	SER	4.3
10	A	652	C	4.3
10	A	932	G	4.3
17	I	93	THR	4.3
2	1	26	ARG	4.3
16	H	25	LYS	4.3
9	8	25	MET	4.3
10	A	2189	U	4.3
10	A	2274	A	4.3
10	A	32	C	4.3
15	G	27	ASN	4.3
15	G	157	ILE	4.2
16	H	160	LYS	4.2
20	P	139	LYS	4.2
20	P	120	ALA	4.2
8	7	32	LYS	4.2
8	7	46	VAL	4.2
17	I	144	VAL	4.2
15	G	155	MET	4.1
29	Y	90	LEU	4.1
22	R	43	GLU	4.1
27	W	113	LYS	4.1
10	A	271(K)	U	4.1
17	I	59	ALA	4.1
25	U	73	GLY	4.1
15	G	94	LEU	4.1
15	G	135	LEU	4.0
2	1	11	ARG	4.0
24	T	36	GLU	4.0
2	1	20	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
16	H	30	LYS	4.0
10	A	1112	G	4.0
21	Q	141	GLN	4.0
10	A	283	A	4.0
20	P	107	LYS	4.0
17	I	85	GLU	4.0
2	1	39	LYS	4.0
16	H	98	LEU	4.0
7	6	20	ASN	4.0
10	A	1106	A	3.9
24	T	29	ARG	3.9
10	A	2106	G	3.9
20	P	123	LEU	3.9
17	I	134	PRO	3.9
17	I	128	LEU	3.9
15	G	80	PHE	3.8
10	A	1520	G	3.8
16	H	29	PRO	3.8
15	G	131	TYR	3.8
10	A	1236	G	3.8
10	A	405	U	3.8
10	A	1909	C	3.8
15	G	145	THR	3.8
23	S	99	LYS	3.8
10	A	1470	G	3.8
16	H	44	VAL	3.8
10	A	1958	C	3.8
2	1	27	GLU	3.8
16	H	97	ARG	3.8
12	D	268	ARG	3.7
10	A	2250	G	3.7
26	V	50	PRO	3.7
10	A	2894	G	3.7
15	G	56	ALA	3.7
10	A	2275	C	3.7
24	T	2	ASN	3.7
11	B	30	C	3.7
20	P	94	GLU	3.7
25	U	91	ASP	3.7
10	A	1494	A	3.7
20	P	135	LEU	3.7
10	A	272(G)	C	3.7

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Mol	Chain	Res	Type	RSRZ
10	A	2789	C	3.7
23	S	12	PHE	3.7
23	S	55	ALA	3.6
10	A	1938	A	3.6
15	G	16	ARG	3.6
29	Y	60	PHE	3.6
10	A	2591	C	3.6
15	G	141	PHE	3.6
7	6	21	TYR	3.6
10	A	2751	G	3.6
15	G	81	LYS	3.6
29	Y	89	PHE	3.6
10	A	1881	C	3.6
24	T	95	ARG	3.6
20	P	52	GLU	3.6
17	I	92	VAL	3.6
17	I	94	ALA	3.6
10	A	196	A	3.6
2	1	22	GLY	3.6
15	G	17	PRO	3.6
15	G	70	VAL	3.6
22	R	39	PRO	3.6
9	8	23	VAL	3.6
16	H	100	GLY	3.6
12	D	262	ARG	3.6
4	3	29	ARG	3.5
16	H	155	SER	3.5
10	A	1216	G	3.5
16	H	123	PHE	3.5
8	7	9	ARG	3.5
21	Q	24	GLY	3.5
16	H	108	GLY	3.5
24	T	93	ARG	3.5
10	A	2069	G	3.5
17	I	37	VAL	3.5
25	U	95	LEU	3.5
29	Y	3	VAL	3.5
3	2	50	ILE	3.5
22	R	111	LEU	3.5
1	0	5	LYS	3.5
15	G	18	GLU	3.5
15	G	97	ASP	3.5

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Mol	Chain	Res	Type	RSRZ
10	A	2101	G	3.5
30	Z	144	LEU	3.5
10	A	899	A	3.5
25	U	5	LYS	3.4
17	I	41	GLU	3.4
17	I	126	TYR	3.4
10	A	1174	A	3.4
14	F	99	TYR	3.4
22	R	112	ALA	3.4
23	S	66	ALA	3.4
11	B	27	C	3.4
12	D	263	ARG	3.4
10	A	2795	G	3.4
17	I	1	MET	3.4
23	S	57	LYS	3.4
10	A	1237	A	3.4
10	A	2801(A)	A	3.4
14	F	77	ASP	3.4
2	1	19	GLN	3.4
22	R	115	GLU	3.4
7	6	12	GLU	3.3
10	A	1207	C	3.3
10	A	2833	G	3.3
6	5	60	VAL	3.3
15	G	82	LEU	3.3
20	P	6	LEU	3.3
15	G	60	LEU	3.3
17	I	100	ALA	3.3
5	4	6	HIS	3.3
13	E	1	MET	3.3
10	A	879	G	3.3
16	H	103	LEU	3.3
15	G	92	VAL	3.3
15	G	20	ILE	3.3
10	A	2249	U	3.3
20	P	5	ASP	3.3
26	V	75	PHE	3.3
10	A	1505	C	3.3
29	Y	5	MET	3.3
2	1	25	LYS	3.2
10	A	1044	G	3.2
8	7	47	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
10	A	1471	A	3.2
29	Y	54	LYS	3.2
9	8	40	GLU	3.2
21	Q	82	ARG	3.2
23	S	68	GLN	3.2
15	G	61	ALA	3.2
17	I	135	GLU	3.2
8	7	45	ALA	3.2
17	I	105	HIS	3.2
10	A	2791	C	3.2
29	Y	50	ARG	3.2
12	D	224	ALA	3.2
30	Z	148	ASP	3.2
20	P	54	GLY	3.2
7	6	40	CYS	3.2
10	A	644	A	3.2
10	A	1110	G	3.2
18	N	129	PRO	3.2
4	3	20	LYS	3.2
14	F	181	LEU	3.2
10	A	1906	G	3.1
10	A	1964	G	3.1
14	F	96	ASP	3.1
17	I	38	LEU	3.1
5	4	15	ILE	3.1
15	G	164	GLU	3.1
30	Z	3	TYR	3.1
3	2	33	MET	3.1
10	A	1215	G	3.1
22	R	41	ALA	3.1
22	R	99	LYS	3.1
14	F	106	ARG	3.1
16	H	154	PRO	3.1
21	Q	14	ARG	3.1
12	D	4	LYS	3.1
30	Z	4	ARG	3.1
13	E	135	HIS	3.1
7	6	37	ARG	3.1
10	A	900	A	3.1
15	G	181	ARG	3.1
22	R	42	LYS	3.1
14	F	172	TRP	3.1

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Mol	Chain	Res	Type	RSRZ
10	A	2326	C	3.1
30	Z	9	TYR	3.1
30	Z	52	SER	3.1
5	4	12	ALA	3.1
10	A	83	G	3.1
16	H	170	ARG	3.1
10	A	223	A	3.0
10	A	267	C	3.0
10	A	1275	A	3.0
18	N	130	HIS	3.0
23	S	64	GLU	3.0
17	I	21	VAL	3.0
16	H	58	GLU	3.0
14	F	10	PRO	3.0
24	T	112	ARG	3.0
26	V	36	PRO	3.0
8	7	48	LYS	3.0
15	G	162	THR	3.0
19	O	69	ILE	3.0
28	X	32	PRO	3.0
22	R	38	VAL	3.0
14	F	78	ILE	3.0
24	T	113	LYS	3.0
10	A	701	G	3.0
14	F	130	ALA	3.0
25	U	74	LEU	3.0
26	V	71	LEU	3.0
9	8	38	GLY	3.0
22	R	113	LEU	3.0
10	A	9	U	3.0
10	A	446	G	3.0
13	E	58	ARG	2.9
30	Z	55	HIS	2.9
2	1	53	VAL	2.9
2	1	21	ARG	2.9
11	B	28	C	2.9
22	R	40	LYS	2.9
14	F	108	LYS	2.9
20	P	121	LYS	2.9
25	U	94	ASN	2.9
15	G	154	GLY	2.9
10	A	2630	G	2.9

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Mol	Chain	Res	Type	RSRZ
21	Q	75	THR	2.9
27	W	112	GLY	2.9
4	3	23	LEU	2.9
14	F	12	LEU	2.9
15	G	111	LEU	2.9
9	8	24	ALA	2.9
15	G	161	THR	2.9
20	P	86	LYS	2.9
2	1	81	LYS	2.9
10	A	281	G	2.9
30	Z	169	GLU	2.9
26	V	39	LEU	2.9
30	Z	165	VAL	2.9
16	H	24	VAL	2.9
20	P	88	LEU	2.9
10	A	2068	U	2.9
20	P	76	LYS	2.9
15	G	163	ALA	2.9
10	A	1745	C	2.9
20	P	144	GLU	2.9
17	I	111	PRO	2.9
21	Q	76	LYS	2.9
28	X	34	ALA	2.9
10	A	1532	C	2.9
2	1	71	TYR	2.9
7	6	16	CYS	2.8
7	6	41	PRO	2.8
7	6	46	HIS	2.8
12	D	39	LYS	2.8
29	Y	85	VAL	2.8
10	A	1042	G	2.8
17	I	96	ASP	2.8
23	S	91	PRO	2.8
17	I	55	ALA	2.8
17	I	99	GLU	2.8
2	1	52	ARG	2.8
17	I	138	ILE	2.8
21	Q	11	LYS	2.8
16	H	57	ASP	2.8
8	7	14	LYS	2.8
7	6	43	CYS	2.8
24	T	1	MET	2.8

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Mol	Chain	Res	Type	RSRZ
10	A	2369	A	2.8
19	O	105	GLU	2.8
10	A	1177	A	2.8
15	G	53	LEU	2.8
13	E	68	ALA	2.8
23	S	52	SER	2.8
23	S	56	LEU	2.8
26	V	70	ILE	2.8
12	D	7	LYS	2.8
15	G	74	LYS	2.8
29	Y	73	ARG	2.8
10	A	1544	A	2.8
10	A	1041	C	2.8
21	Q	19	GLY	2.8
4	3	26	LEU	2.8
10	A	363(F)	A	2.8
10	A	1111	A	2.8
21	Q	12	GLN	2.8
29	Y	21	LYS	2.8
10	A	2370	G	2.8
16	H	60	ARG	2.8
23	S	69	VAL	2.7
17	I	89	TYR	2.7
16	H	101	ARG	2.7
23	S	37	ALA	2.7
7	6	50	ARG	2.7
3	2	42	GLY	2.7
17	I	43	ASN	2.7
10	A	2348	U	2.7
20	P	46	LYS	2.7
6	5	55	ARG	2.7
23	S	15	ARG	2.7
16	H	153	LYS	2.7
21	Q	139	GLU	2.7
25	U	113	ALA	2.7
22	R	36	THR	2.7
10	A	1912	A	2.7
5	4	7	PRO	2.7
8	7	49	ARG	2.7
10	A	2273	A	2.7
22	R	80	PHE	2.7
25	U	8	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
4	3	1	MET	2.7
10	A	1048	A	2.7
2	1	58	ILE	2.7
15	G	90	LEU	2.7
16	H	19	VAL	2.7
10	A	1745(A)	C	2.7
23	S	92	TYR	2.7
2	1	24	ALA	2.7
14	F	58	ALA	2.7
21	Q	83	MET	2.7
12	D	40	THR	2.7
2	1	38	SER	2.7
7	6	49	HIS	2.7
14	F	167	ALA	2.7
16	H	23	ARG	2.6
10	A	2430	A	2.6
12	D	260	ARG	2.6
4	3	49	LYS	2.6
22	R	10	LEU	2.6
10	A	2631	G	2.6
14	F	39	TRP	2.6
7	6	38	LYS	2.6
9	8	35	GLN	2.6
9	8	37	SER	2.6
13	E	133	LYS	2.6
25	U	76	TYR	2.6
10	A	360	G	2.6
22	R	33	ARG	2.6
25	U	58	ARG	2.6
9	8	41	ILE	2.6
16	H	117	PRO	2.6
20	P	21	ARG	2.6
22	R	9	LYS	2.6
10	A	1127	A	2.6
9	8	39	LYS	2.6
10	A	2349	G	2.6
22	R	11	ASN	2.6
15	G	115	ARG	2.6
18	N	118	LYS	2.6
18	N	96	GLU	2.6
10	A	1519	G	2.6
17	I	101	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
17	I	103	ARG	2.6
20	P	61	ARG	2.6
4	3	22	ALA	2.6
24	T	79	HIS	2.6
29	Y	44	ILE	2.6
12	D	8	PRO	2.6
24	T	94	ALA	2.6
7	6	44	ARG	2.5
10	A	29	U	2.6
10	A	63	U	2.6
30	Z	143	GLY	2.5
14	F	124	LEU	2.5
11	B	51	G	2.5
3	2	32	LEU	2.5
28	X	33	LYS	2.5
10	A	1420	U	2.5
15	G	75	LYS	2.5
10	A	1109	C	2.5
17	I	97	ILE	2.5
16	H	102	ALA	2.5
23	S	72	ALA	2.5
25	U	11	ARG	2.5
10	A	2792	G	2.5
10	A	271(C)	C	2.5
24	T	78	LEU	2.5
21	Q	62	GLY	2.5
29	Y	55	TYR	2.5
30	Z	75	ASN	2.5
16	H	152	ARG	2.5
17	I	79	ILE	2.5
12	D	61	LEU	2.5
20	P	35	HIS	2.5
22	R	37	THR	2.5
8	7	11	LYS	2.5
18	N	26	LEU	2.5
12	D	240	ALA	2.5
18	N	89	LYS	2.5
12	D	223	GLY	2.5
19	O	74	GLY	2.5
25	U	92	ARG	2.5
20	P	36	LYS	2.5
23	S	51	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
27	W	84	ARG	2.4
2	1	51	VAL	2.4
3	2	35	LEU	2.4
11	B	29	A	2.4
24	T	115	ARG	2.4
17	I	11	ASN	2.4
17	I	36	ALA	2.4
20	P	93	GLY	2.4
10	A	880	G	2.4
15	G	84	LYS	2.4
2	1	23	LYS	2.4
12	D	264	LYS	2.4
20	P	136	GLU	2.4
10	A	406	G	2.4
22	R	63	ARG	2.4
10	A	2325	G	2.4
17	I	77	LEU	2.4
10	A	827	U	2.4
8	7	8	ASN	2.4
15	G	158	ALA	2.4
9	8	42	ARG	2.4
10	A	1880	C	2.4
10	A	2368	C	2.4
15	G	133	LEU	2.4
22	R	44	LEU	2.4
17	I	83	ALA	2.4
13	E	57	LYS	2.4
10	A	892	G	2.4
23	S	53	SER	2.4
9	8	29	LYS	2.4
10	A	1646	C	2.4
10	A	61	G	2.4
26	V	4	ILE	2.4
26	V	26	ASP	2.4
16	H	21	PRO	2.4
10	A	2602	A	2.4
26	V	68	LYS	2.3
10	A	1043	C	2.3
14	F	7	TYR	2.3
20	P	75	ILE	2.3
13	E	10	GLY	2.3
17	I	117	GLU	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	X	74	PRO	2.3
10	A	413	C	2.3
15	G	182	LYS	2.3
23	S	76	LYS	2.3
4	3	50	VAL	2.3
10	A	1018	C	2.3
19	O	48	PRO	2.3
24	T	16	ARG	2.3
10	A	330	A	2.3
15	G	114	ILE	2.3
14	F	110	LEU	2.3
15	G	3	LEU	2.3
14	F	62	ARG	2.3
17	I	108	THR	2.3
14	F	101	LEU	2.3
20	P	110	TYR	2.3
13	E	53	PRO	2.3
17	I	84	GLY	2.3
24	T	24	PRO	2.3
15	G	149	VAL	2.3
16	H	111	HIS	2.3
12	D	16	MET	2.3
30	Z	59	LEU	2.3
14	F	79	GLY	2.3
23	S	29	PHE	2.3
10	A	1032	A	2.3
12	D	9	TYR	2.3
16	H	136	ILE	2.3
17	I	112	LYS	2.2
10	A	829	A	2.2
16	H	37	VAL	2.2
17	I	140	LEU	2.2
20	P	147	LEU	2.2
26	V	45	THR	2.2
5	4	16	CYS	2.2
22	R	102	GLU	2.2
7	6	11	LEU	2.2
8	7	29	LYS	2.2
10	A	1801	G	2.2
15	G	98	ARG	2.2
17	I	45	LYS	2.2
19	O	45	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
7	6	52	VAL	2.2
30	Z	99	TYR	2.2
12	D	6	PHE	2.2
2	1	50	ARG	2.2
9	8	32	LEU	2.2
15	G	41	GLN	2.2
28	X	6	ASP	2.2
10	A	2288	A	2.2
12	D	244	ARG	2.2
30	Z	168	GLU	2.2
16	H	148	ILE	2.2
21	Q	21	THR	2.2
23	S	84	GLN	2.2
12	D	38	LYS	2.2
13	E	69	LYS	2.2
2	1	70	VAL	2.2
14	F	194	MET	2.2
14	F	207	GLY	2.2
16	H	76	VAL	2.2
20	P	51	PHE	2.2
30	Z	174	VAL	2.2
10	A	1910	G	2.2
10	A	1010	A	2.2
10	A	2765	A	2.2
9	8	22	VAL	2.2
16	H	20	ALA	2.2
24	T	19	LEU	2.2
7	6	23	THR	2.2
10	A	1547	C	2.2
10	A	2667	C	2.2
20	P	74	GLU	2.2
15	G	50	ALA	2.2
12	D	239	ARG	2.2
25	U	12	ARG	2.2
3	2	37	PHE	2.2
10	A	2067	G	2.2
26	V	1	MET	2.2
14	F	133	ASN	2.2
17	I	124	GLY	2.2
20	P	116	GLY	2.2
16	H	27	LYS	2.2
23	S	49	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
30	Z	133	ILE	2.2
8	7	38	GLY	2.1
23	S	63	THR	2.1
14	F	14	PRO	2.1
25	U	61	TRP	2.1
10	A	1504	C	2.1
15	G	119	GLY	2.1
16	H	115	VAL	2.1
25	U	110	VAL	2.1
26	V	5	VAL	2.1
10	A	1497	U	2.1
10	A	125	G	2.1
10	A	2518	A	2.1
10	A	923	C	2.1
7	6	53	LYS	2.1
16	H	116	GLU	2.1
14	F	17	ARG	2.1
20	P	7	ARG	2.1
2	1	75	GLU	2.1
16	H	90	LYS	2.1
11	B	6	C	2.1
10	A	1415	U	2.1
17	I	137	PRO	2.1
10	A	2790	A	2.1
25	U	6	THR	2.1
14	F	135	LYS	2.1
1	0	85	ALA	2.1
10	A	1026	U	2.1
25	U	109	LEU	2.1
10	A	2627	G	2.1
10	A	1486	A	2.1
14	F	104	LYS	2.1
22	R	77	ARG	2.1
24	T	13	ARG	2.1
22	R	58	GLY	2.1
28	X	75	ASP	2.1
17	I	57	ARG	2.1
16	H	43	VAL	2.1
2	1	60	PHE	2.1
22	R	114	VAL	2.1
8	7	24	THR	2.1
10	A	1184	G	2.1

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Mol	Chain	Res	Type	RSRZ
15	G	33	ARG	2.1
16	H	109	PHE	2.1
26	V	40	LEU	2.1
10	A	271(L)	U	2.1
28	X	10	ALA	2.1
4	3	16	PRO	2.1
8	7	21	ARG	2.1
16	H	91	GLY	2.1
13	E	83	ASP	2.1
10	A	197	A	2.0
20	P	14	LYS	2.0
20	P	33	ARG	2.0
4	3	52	HIS	2.0
17	I	141	LYS	2.0
19	O	112	MET	2.0
23	S	80	LEU	2.0
28	X	9	LEU	2.0
30	Z	167	PRO	2.0
10	A	933	A	2.0
16	H	14	GLY	2.0
12	D	62	TYR	2.0
6	5	53	ALA	2.0
15	G	83	ARG	2.0
10	A	1387	C	2.0
8	7	10	ARG	2.0
30	Z	103	ARG	2.0
15	G	54	GLU	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
31	MG	A	3155	1/1	0.45	-	64,64,64,64	0
31	MG	A	2964	1/1	0.41	-	42,42,42,42	0
31	MG	A	3110	1/1	0.25	-	68,68,68,68	0
31	MG	A	2909	1/1	0.55	-	41,41,41,41	0
31	MG	A	3202	1/1	0.40	-	75,75,75,75	0
31	MG	A	3014	1/1	0.55	-	46,46,46,46	0
31	MG	A	3149	1/1	0.82	-	73,73,73,73	0
31	MG	A	276	1/1	0.13	-	38,38,38,38	0
31	MG	A	278	1/1	0.47	-	55,55,55,55	0
31	MG	A	3183	1/1	0.57	-	93,93,93,93	0
31	MG	A	3043	1/1	0.52	-	46,46,46,46	0
31	MG	A	3181	1/1	0.23	-	65,65,65,65	0
31	MG	A	3123	1/1	0.21	-	57,57,57,57	0
31	MG	A	3052	1/1	0.49	-	51,51,51,51	0
31	MG	A	3013	1/1	0.65	-	60,60,60,60	0
31	MG	A	155	1/1	0.93	-	80,80,80,80	0
31	MG	A	2940	1/1	0.24	-	63,63,63,63	0
31	MG	A	3186	1/1	0.80	-	58,58,58,58	0
31	MG	A	3112	1/1	0.20	-	72,72,72,72	0
31	MG	A	3085	1/1	0.14	-	62,62,62,62	0
31	MG	A	3073	1/1	0.99	-	80,80,80,80	0
31	MG	A	3094	1/1	0.13	-	48,48,48,48	0
31	MG	A	3045	1/1	0.30	-	69,69,69,69	0
31	MG	A	3051	1/1	0.32	-	61,61,61,61	0
31	MG	A	2981	1/1	0.19	-	50,50,50,50	0
31	MG	A	3140	1/1	0.40	-	62,62,62,62	0
31	MG	5	105	1/1	0.17	-	51,51,51,51	0
31	MG	A	3131	1/1	0.23	-	48,48,48,48	0
31	MG	A	3037	1/1	0.38	-	31,31,31,31	0
31	MG	A	2921	1/1	0.49	-	76,76,76,76	0
31	MG	A	2938	1/1	0.39	-	61,61,61,61	0
31	MG	B	175	1/1	0.17	-	80,80,80,80	0
31	MG	A	3156	1/1	0.60	-	92,92,92,92	0
31	MG	A	101	1/1	0.16	-	57,57,57,57	0
31	MG	A	2941	1/1	0.26	-	51,51,51,51	0
31	MG	U	263	1/1	0.66	-	75,75,75,75	0
31	MG	A	3082	1/1	0.73	-	71,71,71,71	0
31	MG	A	2978	1/1	0.16	-	42,42,42,42	0
31	MG	A	160	1/1	0.57	-	66,66,66,66	0
31	MG	A	2972	1/1	0.61	-	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	169	1/1	0.27	-	77,77,77,77	0
31	MG	A	3003	1/1	0.20	-	38,38,38,38	0
31	MG	R	141	1/1	0.43	-	45,45,45,45	0
31	MG	A	3190	1/1	0.15	-	67,67,67,67	0
31	MG	A	2934	1/1	0.26	-	43,43,43,43	0
31	MG	A	3109	1/1	0.51	-	49,49,49,49	0
31	MG	A	3107	1/1	0.49	-	55,55,55,55	0
31	MG	A	3124	1/1	0.34	-	73,73,73,73	0
31	MG	A	3141	1/1	0.41	-	91,91,91,91	0
31	MG	A	2926	1/1	0.34	-	42,42,42,42	0
31	MG	A	3044	1/1	0.43	-	65,65,65,65	0
31	MG	A	2983	1/1	0.44	-	46,46,46,46	0
31	MG	A	2966	1/1	0.28	-	50,50,50,50	0
31	MG	A	3004	1/1	0.19	-	56,56,56,56	0
31	MG	A	3064	1/1	0.19	-	35,35,35,35	0
31	MG	A	2956	1/1	0.30	-	39,39,39,39	0
31	MG	A	3034	1/1	0.31	-	83,83,83,83	0
31	MG	A	3099	1/1	0.65	-	58,58,58,58	0
31	MG	A	3115	1/1	0.50	-	81,81,81,81	0
31	MG	A	3195	1/1	0.14	-	76,76,76,76	0
31	MG	A	3143	1/1	0.12	-	51,51,51,51	0
31	MG	A	2950	1/1	0.21	-	43,43,43,43	0
31	MG	A	2948	1/1	0.30	-	55,55,55,55	0
31	MG	A	3093	1/1	0.45	-	55,55,55,55	0
31	MG	D	278	1/1	0.52	-	38,38,38,38	0
31	MG	A	2935	1/1	0.32	-	68,68,68,68	0
31	MG	A	2930	1/1	0.12	-	39,39,39,39	0
31	MG	A	3067	1/1	0.33	-	48,48,48,48	0
31	MG	A	3103	1/1	0.20	-	44,44,44,44	0
31	MG	A	3189	1/1	0.44	-	57,57,57,57	0
31	MG	A	3025	1/1	0.80	-	64,64,64,64	0
31	MG	A	2987	1/1	0.56	-	58,58,58,58	0
31	MG	A	3118	1/1	0.11	-	57,57,57,57	0
31	MG	A	91	1/1	0.46	-	44,44,44,44	0
31	MG	A	2998	1/1	0.69	-	49,49,49,49	0
31	MG	A	3165	1/1	0.17	-	55,55,55,55	0
31	MG	A	2974	1/1	0.46	-	80,80,80,80	0
31	MG	A	2937	1/1	0.15	-	66,66,66,66	0
31	MG	A	3203	1/1	0.38	-	60,60,60,60	0
31	MG	A	3192	1/1	0.57	-	63,63,63,63	0
31	MG	A	3007	1/1	0.46	-	58,58,58,58	0
31	MG	A	3166	1/1	0.17	-	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	3133	1/1	0.09	-	94,94,94,94	0
31	MG	A	3065	1/1	0.55	-	68,68,68,68	0
31	MG	A	3128	1/1	0.10	-	80,80,80,80	0
31	MG	A	3020	1/1	0.37	-	65,65,65,65	0
31	MG	A	3053	1/1	0.60	-	66,66,66,66	0
31	MG	A	3197	1/1	0.48	-	86,86,86,86	0
31	MG	A	3011	1/1	0.14	-	42,42,42,42	0
31	MG	A	2996	1/1	0.39	-	53,53,53,53	0
31	MG	A	3040	1/1	0.27	-	49,49,49,49	0
31	MG	B	211	1/1	0.35	-	47,47,47,47	0
31	MG	A	3170	1/1	0.40	-	70,70,70,70	0
31	MG	A	3138	1/1	0.89	-	72,72,72,72	0
31	MG	A	3012	1/1	0.29	-	56,56,56,56	0
31	MG	A	2913	1/1	0.43	-	40,40,40,40	0
31	MG	A	3173	1/1	0.33	-	64,64,64,64	0
31	MG	A	3134	1/1	0.46	-	69,69,69,69	0
31	MG	A	2932	1/1	0.48	-	61,61,61,61	0
31	MG	A	2962	1/1	0.43	-	51,51,51,51	0
31	MG	A	2945	1/1	0.83	-	68,68,68,68	0
31	MG	F	211	1/1	0.84	-	83,83,83,83	0
31	MG	A	2929	1/1	0.18	-	38,38,38,38	0
31	MG	A	3057	1/1	0.32	-	45,45,45,45	0
31	MG	A	3174	1/1	0.46	-	32,32,32,32	0
31	MG	A	2991	1/1	0.34	-	62,62,62,62	0
31	MG	A	170	1/1	0.41	-	50,50,50,50	0
31	MG	A	3179	1/1	0.42	-	60,60,60,60	0
31	MG	A	3150	1/1	0.30	-	87,87,87,87	0
31	MG	A	2943	1/1	0.29	-	54,54,54,54	0
31	MG	A	3154	1/1	0.62	-	72,72,72,72	0
31	MG	A	3120	1/1	0.64	-	69,69,69,69	0
31	MG	A	3049	1/1	0.22	-	59,59,59,59	0
31	MG	A	2922	1/1	0.35	-	40,40,40,40	0
31	MG	A	3153	1/1	1.16	-	57,57,57,57	0
31	MG	A	3015	1/1	0.32	-	56,56,56,56	0
33	TEL	A	3206	58/58	0.34	-	110,110,110,110	0
31	MG	A	3023	1/1	0.23	-	56,56,56,56	0
31	MG	A	2916	1/1	0.18	-	52,52,52,52	0
31	MG	A	3021	1/1	0.16	-	59,59,59,59	0
31	MG	A	3016	1/1	0.30	-	76,76,76,76	0
31	MG	A	3130	1/1	0.13	-	47,47,47,47	0
31	MG	A	165	1/1	0.52	-	39,39,39,39	0
31	MG	A	3160	1/1	0.13	-	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	3108	1/1	0.23	-	53,53,53,53	0
31	MG	A	3074	1/1	0.16	-	96,96,96,96	0
31	MG	A	3072	1/1	0.67	-	54,54,54,54	0
31	MG	A	2924	1/1	0.20	-	55,55,55,55	0
31	MG	A	2954	1/1	0.54	-	51,51,51,51	0
31	MG	A	3000	1/1	0.26	-	56,56,56,56	0
31	MG	A	3146	1/1	0.17	-	77,77,77,77	0
31	MG	A	3162	1/1	1.03	-	87,87,87,87	0
31	MG	A	3193	1/1	0.81	-	65,65,65,65	0
31	MG	A	3102	1/1	0.19	-	71,71,71,71	0
31	MG	A	3042	1/1	0.49	-	48,48,48,48	0
31	MG	A	2989	1/1	0.32	-	43,43,43,43	0
31	MG	A	2942	1/1	0.29	-	41,41,41,41	0
31	MG	A	3122	1/1	0.90	-	56,56,56,56	0
31	MG	A	3050	1/1	0.45	-	35,35,35,35	0
31	MG	A	2925	1/1	0.42	-	34,34,34,34	0
31	MG	A	3077	1/1	0.51	-	53,53,53,53	0
31	MG	A	3159	1/1	1.47	-	80,80,80,80	0
31	MG	A	3172	1/1	0.75	-	63,63,63,63	0
31	MG	A	2910	1/1	0.82	-	61,61,61,61	0
31	MG	A	2982	1/1	0.12	-	56,56,56,56	0
31	MG	A	2986	1/1	0.43	-	59,59,59,59	0
31	MG	A	3152	1/1	0.51	-	55,55,55,55	0
31	MG	A	164	1/1	0.40	-	71,71,71,71	0
31	MG	A	3182	1/1	0.15	-	104,104,104,104	0
31	MG	A	2999	1/1	0.36	-	75,75,75,75	0
31	MG	A	3002	1/1	0.28	-	51,51,51,51	0
31	MG	A	3070	1/1	0.69	-	56,56,56,56	0
31	MG	A	3062	1/1	0.34	-	59,59,59,59	0
31	MG	A	3001	1/1	0.20	-	42,42,42,42	0
31	MG	A	2912	1/1	0.18	-	69,69,69,69	0
31	MG	A	3080	1/1	0.73	-	49,49,49,49	0
31	MG	A	2936	1/1	0.25	-	36,36,36,36	0
31	MG	A	3126	1/1	0.40	-	76,76,76,76	0
31	MG	A	3200	1/1	2.06	-	54,54,54,54	0
31	MG	A	3098	1/1	0.29	-	43,43,43,43	0
31	MG	A	3145	1/1	1.07	-	91,91,91,91	0
31	MG	A	2952	1/1	0.47	-	51,51,51,51	0
31	MG	A	2919	1/1	0.53	-	29,29,29,29	0
31	MG	A	3198	1/1	0.59	-	53,53,53,53	0
31	MG	A	3142	1/1	0.90	-	55,55,55,55	0
31	MG	A	168	1/1	0.85	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	3148	1/1	0.75	-	60,60,60,60	0
31	MG	A	3187	1/1	0.77	-	67,67,67,67	0
31	MG	A	3058	1/1	0.32	-	64,64,64,64	0
31	MG	A	2928	1/1	0.35	-	42,42,42,42	0
31	MG	A	3033	1/1	0.06	-	48,48,48,48	0
31	MG	A	3039	1/1	0.40	-	74,74,74,74	0
31	MG	B	174	1/1	0.39	-	59,59,59,59	0
31	MG	A	2993	1/1	0.43	-	53,53,53,53	0
31	MG	A	3031	1/1	0.12	-	40,40,40,40	0
31	MG	A	2946	1/1	1.06	-	69,69,69,69	0
31	MG	A	3180	1/1	0.11	-	50,50,50,50	0
31	MG	A	2931	1/1	0.38	-	54,54,54,54	0
31	MG	A	3018	1/1	0.28	-	75,75,75,75	0
31	MG	A	2977	1/1	0.51	-	85,85,85,85	0
31	MG	A	2990	1/1	0.22	-	27,27,27,27	0
31	MG	A	3078	1/1	0.54	-	81,81,81,81	0
31	MG	A	3029	1/1	0.24	-	54,54,54,54	0
31	MG	A	3164	1/1	1.09	-	83,83,83,83	0
31	MG	X	244	1/1	0.26	-	76,76,76,76	0
31	MG	A	3026	1/1	0.21	-	61,61,61,61	0
31	MG	A	3116	1/1	0.46	-	73,73,73,73	0
31	MG	A	3204	1/1	0.17	-	83,83,83,83	0
31	MG	A	3111	1/1	0.60	-	62,62,62,62	0
31	MG	A	3017	1/1	0.31	-	75,75,75,75	0
31	MG	A	3136	1/1	0.09	-	70,70,70,70	0
31	MG	A	3191	1/1	0.20	-	80,80,80,80	0
31	MG	A	3009	1/1	0.30	-	74,74,74,74	0
31	MG	A	163	1/1	0.67	-	72,72,72,72	0
31	MG	A	3106	1/1	0.55	-	78,78,78,78	0
31	MG	A	3063	1/1	0.23	-	48,48,48,48	0
31	MG	A	2908	1/1	0.49	-	66,66,66,66	0
31	MG	A	2958	1/1	0.29	-	44,44,44,44	0
31	MG	A	2997	1/1	0.21	-	61,61,61,61	0
31	MG	A	3030	1/1	0.36	-	57,57,57,57	0
31	MG	A	3022	1/1	0.43	-	72,72,72,72	0
31	MG	A	3032	1/1	0.41	-	62,62,62,62	0
31	MG	A	2994	1/1	0.34	-	53,53,53,53	0
31	MG	A	3028	1/1	0.42	-	63,63,63,63	0
31	MG	A	3087	1/1	0.35	-	59,59,59,59	0
31	MG	A	2971	1/1	0.72	-	70,70,70,70	0
31	MG	A	3151	1/1	0.41	-	61,61,61,61	0
31	MG	A	3194	1/1	0.58	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	2911	1/1	0.33	-	39,39,39,39	0
31	MG	A	3104	1/1	0.29	-	33,33,33,33	0
31	MG	A	3095	1/1	0.33	-	64,64,64,64	0
31	MG	D	277	1/1	0.41	-	56,56,56,56	0
31	MG	A	3184	1/1	0.30	-	46,46,46,46	0
31	MG	A	2980	1/1	0.34	-	56,56,56,56	0
31	MG	A	3158	1/1	0.65	-	78,78,78,78	0
31	MG	A	2973	1/1	0.81	-	57,57,57,57	0
31	MG	A	3096	1/1	1.60	-	74,74,74,74	0
31	MG	A	3055	1/1	0.76	-	53,53,53,53	0
31	MG	E	207	1/1	0.15	-	34,34,34,34	0
31	MG	A	3008	1/1	0.37	-	85,85,85,85	0
31	MG	A	46	1/1	0.24	-	49,49,49,49	0
31	MG	A	161	1/1	0.36	-	59,59,59,59	0
31	MG	A	3119	1/1	0.29	-	78,78,78,78	0
31	MG	A	3048	1/1	0.29	-	57,57,57,57	0
31	MG	A	3079	1/1	0.13	-	45,45,45,45	0
31	MG	A	2939	1/1	0.37	-	51,51,51,51	0
31	MG	A	273	1/1	0.65	-	70,70,70,70	0
31	MG	A	3175	1/1	0.12	-	71,71,71,71	0
31	MG	A	3083	1/1	0.49	-	54,54,54,54	0
31	MG	A	3036	1/1	0.37	-	72,72,72,72	0
31	MG	A	2975	1/1	0.24	-	54,54,54,54	0
31	MG	A	3090	1/1	0.27	-	47,47,47,47	0
31	MG	A	3127	1/1	0.52	-	56,56,56,56	0
31	MG	A	3060	1/1	0.44	-	76,76,76,76	0
31	MG	A	3139	1/1	0.39	-	69,69,69,69	0
31	MG	A	3147	1/1	0.40	-	72,72,72,72	0
31	MG	A	3010	1/1	0.26	-	50,50,50,50	0
31	MG	A	167	1/1	0.56	-	72,72,72,72	0
31	MG	A	277	1/1	0.43	-	55,55,55,55	0
31	MG	A	3178	1/1	0.83	-	60,60,60,60	0
31	MG	A	3144	1/1	0.48	-	61,61,61,61	0
31	MG	A	2984	1/1	0.52	-	62,62,62,62	0
31	MG	A	2918	1/1	0.28	-	43,43,43,43	0
31	MG	A	2988	1/1	0.20	-	50,50,50,50	0
31	MG	A	2963	1/1	0.18	-	60,60,60,60	0
31	MG	A	3185	1/1	0.17	-	64,64,64,64	0
31	MG	A	3100	1/1	0.36	-	49,49,49,49	0
31	MG	A	3056	1/1	0.23	-	55,55,55,55	0
31	MG	A	138	1/1	1.33	-	81,81,81,81	0
31	MG	A	3069	1/1	0.21	-	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
31	MG	A	3038	1/1	0.47	-	61,61,61,61	0
31	MG	A	3091	1/1	0.24	-	46,46,46,46	0
31	MG	A	2933	1/1	0.20	-	32,32,32,32	0
31	MG	A	3041	1/1	0.26	-	35,35,35,35	0
31	MG	A	3088	1/1	0.32	-	53,53,53,53	0
31	MG	A	3076	1/1	0.47	-	58,58,58,58	0
31	MG	A	3168	1/1	0.13	-	59,59,59,59	0
31	MG	A	3161	1/1	0.73	-	72,72,72,72	0
31	MG	A	2923	1/1	0.38	-	54,54,54,54	0
31	MG	A	3092	1/1	0.58	-	73,73,73,73	0
31	MG	A	3114	1/1	0.37	-	47,47,47,47	0
31	MG	A	3167	1/1	0.81	-	87,87,87,87	0
31	MG	A	3089	1/1	0.60	-	74,74,74,74	0
31	MG	A	3086	1/1	0.12	-	41,41,41,41	0
31	MG	A	2951	1/1	0.24	-	39,39,39,39	0
31	MG	A	3117	1/1	1.08	-	79,79,79,79	0
31	MG	R	207	1/1	0.33	-	50,50,50,50	0
31	MG	A	3071	1/1	0.61	-	62,62,62,62	0
31	MG	A	3177	1/1	0.97	-	88,88,88,88	0
31	MG	A	2965	1/1	0.16	-	55,55,55,55	0
31	MG	A	3035	1/1	0.62	-	66,66,66,66	0
31	MG	A	2961	1/1	0.40	-	38,38,38,38	0
31	MG	A	3046	1/1	0.23	-	43,43,43,43	0
31	MG	7	293	1/1	1.15	-	58,58,58,58	0
31	MG	A	2995	1/1	0.12	-	54,54,54,54	0
31	MG	A	3075	1/1	0.95	-	65,65,65,65	0
31	MG	A	2979	1/1	0.57	-	55,55,55,55	0
31	MG	A	3132	1/1	0.53	-	84,84,84,84	0
31	MG	A	3059	1/1	0.42	-	49,49,49,49	0
31	MG	A	2960	1/1	0.33	-	47,47,47,47	0
31	MG	A	3005	1/1	0.25	-	59,59,59,59	0
31	MG	A	2927	1/1	0.40	-	74,74,74,74	0
31	MG	A	3084	1/1	0.65	-	56,56,56,56	0
31	MG	A	3157	1/1	0.40	-	67,67,67,67	0
31	MG	A	3024	1/1	0.34	-	84,84,84,84	0
31	MG	A	2967	1/1	0.13	-	40,40,40,40	0
31	MG	P	261	1/1	0.23	-	42,42,42,42	0
31	MG	A	159	1/1	0.16	-	80,80,80,80	0
31	MG	A	3019	1/1	0.22	-	58,58,58,58	0
31	MG	A	3196	1/1	0.15	-	54,54,54,54	0
31	MG	A	3113	1/1	0.12	-	62,62,62,62	0
31	MG	8	179	1/1	0.69	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
31	MG	A	3081	1/1	0.15	-	48,48,48,48	0
31	MG	A	2959	1/1	0.39	-	90,90,90,90	0
31	MG	A	2957	1/1	0.39	-	53,53,53,53	0
31	MG	A	3047	1/1	0.40	-	65,65,65,65	0
31	MG	A	2920	1/1	0.59	-	77,77,77,77	0
31	MG	A	3137	1/1	0.40	-	61,61,61,61	0
31	MG	A	2968	1/1	0.67	-	76,76,76,76	0
32	K	A	3205	1/1	0.17	-	82,82,82,82	0
31	MG	A	2949	1/1	0.24	-	48,48,48,48	0
31	MG	A	3188	1/1	0.63	-	64,64,64,64	0
31	MG	A	3121	1/1	0.28	-	42,42,42,42	0
31	MG	A	2985	1/1	0.40	-	39,39,39,39	0
31	MG	A	2955	1/1	0.43	-	54,54,54,54	0
31	MG	A	3068	1/1	0.17	-	52,52,52,52	0
31	MG	A	3163	1/1	0.63	-	66,66,66,66	0
31	MG	A	3201	1/1	0.24	-	69,69,69,69	0
31	MG	A	162	1/1	0.98	-	44,44,44,44	0
31	MG	A	2969	1/1	0.72	-	72,72,72,72	0
31	MG	A	2917	1/1	0.36	-	45,45,45,45	0
31	MG	A	2970	1/1	0.24	-	46,46,46,46	0
31	MG	A	3027	1/1	0.28	-	67,67,67,67	0
31	MG	A	3171	1/1	0.54	-	70,70,70,70	0
31	MG	A	3105	1/1	0.24	-	61,61,61,61	0
31	MG	A	2914	1/1	0.53	-	40,40,40,40	0
31	MG	A	2953	1/1	0.19	-	28,28,28,28	0
31	MG	A	3101	1/1	0.41	-	62,62,62,62	0
31	MG	A	3176	1/1	0.22	-	74,74,74,74	0
31	MG	A	3006	1/1	0.56	-	54,54,54,54	0
31	MG	A	2976	1/1	0.21	-	52,52,52,52	0
31	MG	A	2992	1/1	0.23	-	61,61,61,61	0
31	MG	A	2915	1/1	0.25	-	50,50,50,50	0
31	MG	A	3135	1/1	0.53	-	44,44,44,44	0
31	MG	A	3169	1/1	0.44	-	57,57,57,57	0
31	MG	A	3061	1/1	0.18	-	73,73,73,73	0
31	MG	A	3125	1/1	0.21	-	48,48,48,48	0
31	MG	A	3129	1/1	0.14	-	65,65,65,65	0
31	MG	A	3066	1/1	0.65	-	41,41,41,41	0
31	MG	A	3199	1/1	0.86	-	64,64,64,64	0
31	MG	A	2944	1/1	0.18	-	39,39,39,39	0
31	MG	Q	194	1/1	0.75	-	63,63,63,63	0
31	MG	A	166	1/1	0.32	-	51,51,51,51	0
31	MG	A	3054	1/1	0.42	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
31	MG	A	2947	1/1	0.29	-	36,36,36,36	0
31	MG	A	3097	1/1	0.26	-	53,53,53,53	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.