Full wwPDB EM Validation Report ⓘ

Nov 5, 2024 – 03:13 AM JST

PDB ID	:	5ZWM
EMDB ID	:	EMD-6972
Title	:	Cryo-EM structure of the yeast pre-B complex at an average resolution of 3.4 4.6 angstrom (tri-snRNP and U2 snRNP Part)
Authors	:	Bai, R.; Wan, R.; Yan, C.; Lei, J.; Shi, Y.
Deposited on	:	2018-05-16
Resolution	:	3.40 Å(reported)

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

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

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

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

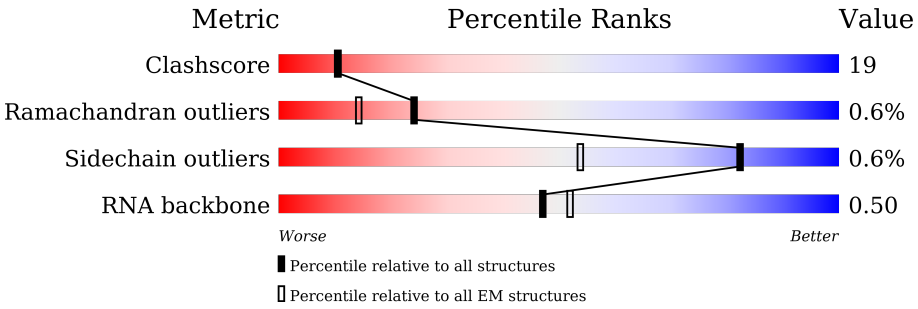
EMDB validation analysis	:	0.0.1.dev113
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance

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

The reported resolution of this entry is 3.40 Å.

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



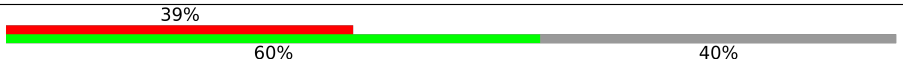
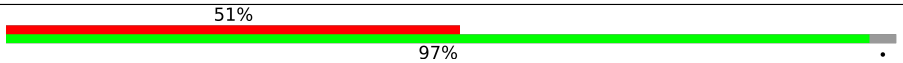
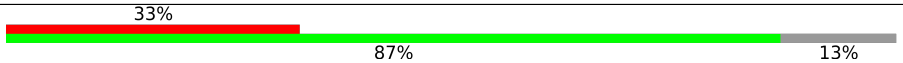
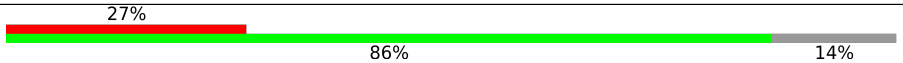
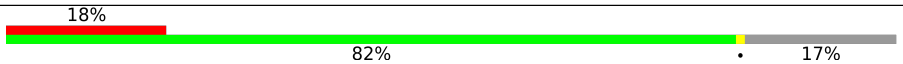
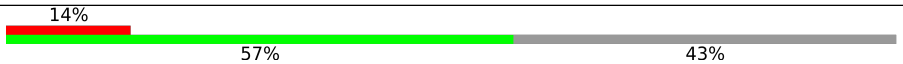
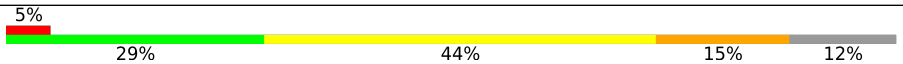
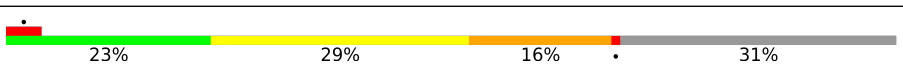
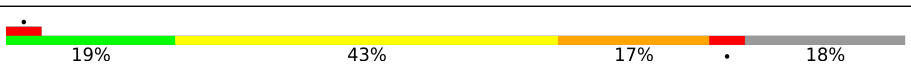
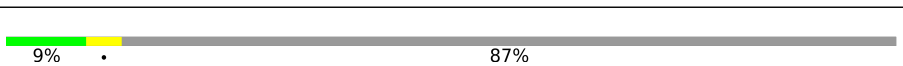
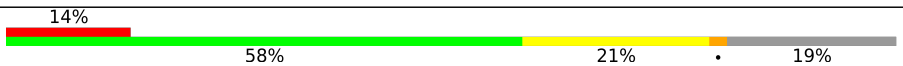
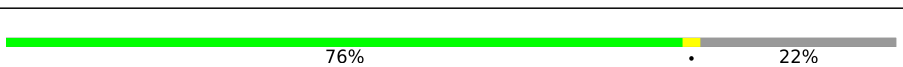
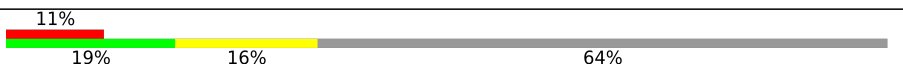
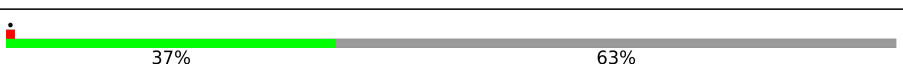
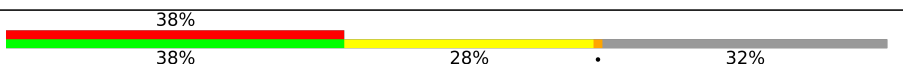
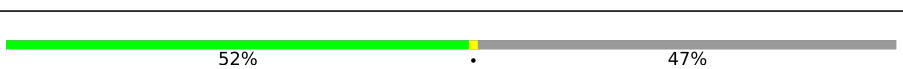
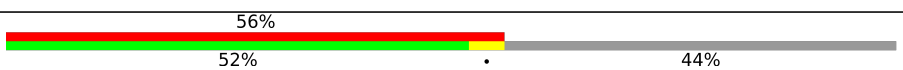
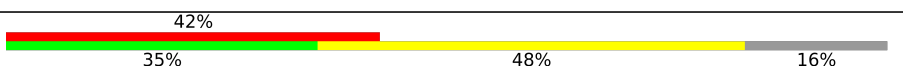
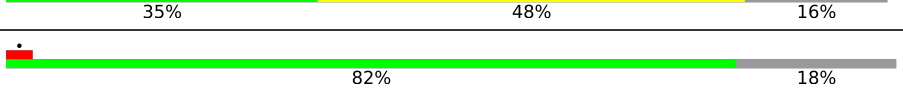
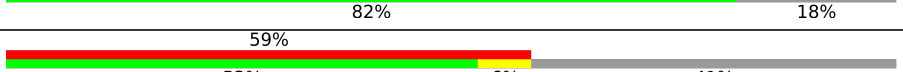
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2413	8%, 60%, 29%, 10%
2	K	465	53%, 38%, 8%
3	L	494	58%, 26%, 16%
4	N	899	65%, 16%, 19%
5	J	469	50%, 14%, 35%
6	E	143	71%, 27%
7	M	126	75%, 25%

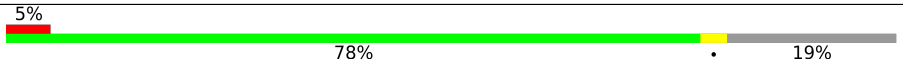
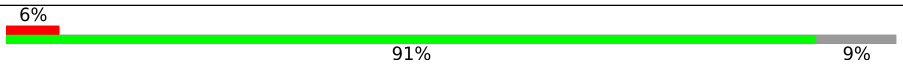
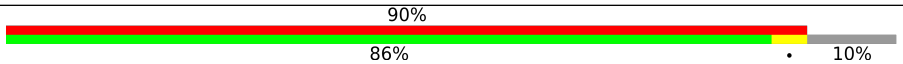
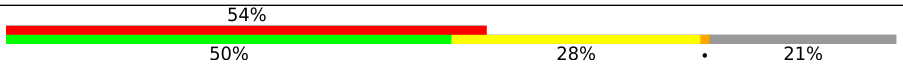
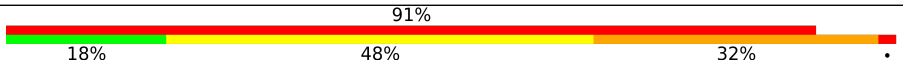
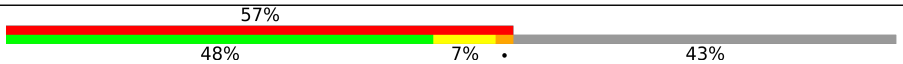
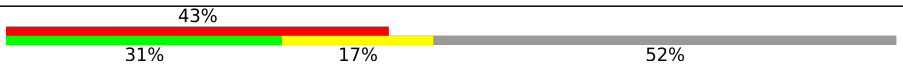
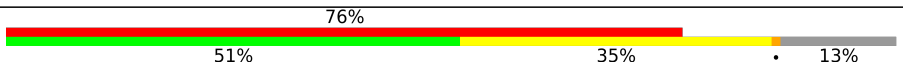
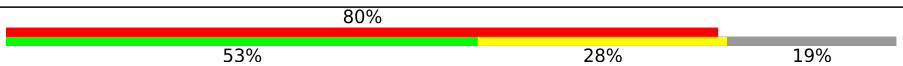
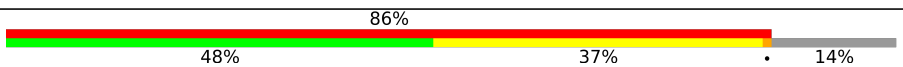
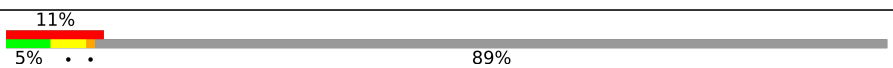
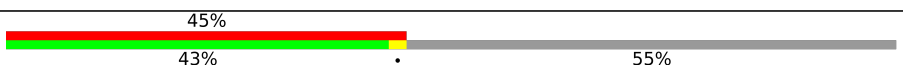
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
8	C	1008	
9	z	109	
10	q	95	
11	r	89	
12	x	86	
13	t	93	
14	y	115	
15	s	187	
16	F	112	
17	I	160	
18	B	214	
19	O	587	
20	S	101	
20	d	101	
20	l	101	
21	P	196	
21	a	196	
21	h	196	
22	Q	146	
22	b	146	
22	m	146	
23	R	110	
23	c	110	
23	n	110	
24	T	94	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
24	e	94	
24	i	94	
25	U	86	
25	f	86	
25	j	86	
26	V	77	
26	g	77	
26	k	77	
27	D	2163	
28	G	44	
29	H	1175	
30	o	238	
31	p	111	
32	1	971	
33	2	436	
34	3	1361	
35	4	213	
36	5	107	
37	6	85	
38	X	148	
39	Y	266	
40	Z	204	
41	u	530	
42	w	280	
43	v	266	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
46	ZN	5	201	-	-	X	-

2 Entry composition (i)

There are 46 unique types of molecules in this entry. The entry contains 111041 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Pre-mRNA-splicing factor 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	2177	17877	11496	3054	3263	64	0	0

- Molecule 2 is a protein called U4/U6 small nuclear ribonucleoprotein PRP4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	K	429	3375	2101	610	650	14	0	0

- Molecule 3 is a protein called Pre-mRNA-processing factor 31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	L	416	3171	2001	573	585	12	0	0

- Molecule 4 is a protein called Pre-mRNA-splicing factor 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	N	728	4897	3045	905	933	14	0	0

- Molecule 5 is a protein called U4/U6 small nuclear ribonucleoprotein PRP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	J	304	2439	1545	445	435	14	0	0

- Molecule 6 is a protein called Spliceosomal protein DIB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	E	139	1146	725	199	211	11	0	0

- Molecule 7 is a protein called 13 kDa ribonucleoprotein-associated protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	M	126	Total	C	N	O	S	0	0
			950	605	163	177	5		

- Molecule 8 is a protein called Pre-mRNA-splicing factor SNU114.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	C	843	Total	C	N	O	S	0	0
			6732	4350	1119	1235	28		

- Molecule 9 is a protein called U6 snRNA-associated Sm-like protein LSm8.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	z	65	Total	C	N	O	0	0
			260	130	65	65		

- Molecule 10 is a protein called U6 snRNA-associated Sm-like protein LSm2.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	q	92	Total	C	N	O	0	0
			368	184	92	92		

- Molecule 11 is a protein called U6 snRNA-associated Sm-like protein LSm3.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	r	77	Total	C	N	O	0	0
			308	154	77	77		

- Molecule 12 is a protein called U6 snRNA-associated Sm-like protein LSm6.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	x	74	Total	C	N	O	0	0
			296	148	74	74		

- Molecule 13 is a protein called U6 snRNA-associated Sm-like protein LSm5.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	t	77	Total	C	N	O	0	0
			308	154	77	77		

- Molecule 14 is a protein called U6 snRNA-associated Sm-like protein LSm7.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	y	66	Total 264	C 132	N 66	O 66	0	0

- Molecule 15 is a protein called U6 snRNA-associated Sm-like protein LSm4.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	s	77	Total 308	C 154	N 77	O 77	0	0

- Molecule 16 is a RNA chain called U6 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	F	99	Total 2043	C 913	N 341	O 690	P 99	0	0

- Molecule 17 is a RNA chain called U4 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	I	110	Total 2334	C 1044	N 399	O 781	P 110	0	0

- Molecule 18 is a RNA chain called U5 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	B	175	Total 3715	C 1663	N 651	O 1227	P 174	0	0

- Molecule 19 is a protein called 66 kDa U4/U6.U5 small nuclear ribonucleoprotein component.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	O	74	Total 574	C 350	N 103	O 120	S 1	0	0

- Molecule 20 is a protein called Small nuclear ribonucleoprotein Sm D3.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	d	79	Total 316	C 158	N 79	O 79		0	0
20	S	82	Total 632	C 402	N 109	O 119	S 2	0	0
20	l	81	Total 611	C 390	N 106	O 113	S 2	0	0

- Molecule 21 is a protein called Small nuclear ribonucleoprotein-associated protein B.

Mol	Chain	Residues	Atoms	AltConf	Trace
21	a	73	Total C N O 292 146 73 73	0	0
21	P	70	Total C N O S 563 360 98 102 3	0	0
21	h	78	Total C N O S 610 389 110 108 3	0	0

- Molecule 22 is a protein called Small nuclear ribonucleoprotein Sm D1.

Mol	Chain	Residues	Atoms	AltConf	Trace
22	b	77	Total C N O 308 154 77 77	0	0
22	Q	99	Total C N O S 751 475 137 137 2	0	0
22	m	82	Total C N O S 644 409 110 123 2	0	0

- Molecule 23 is a protein called Small nuclear ribonucleoprotein Sm D2.

Mol	Chain	Residues	Atoms	AltConf	Trace
23	c	90	Total C N O 360 180 90 90	0	0
23	R	92	Total C N O S 752 481 136 131 4	0	0
23	n	65	Total C N O S 528 340 102 84 2	0	0

- Molecule 24 is a protein called Small nuclear ribonucleoprotein E.

Mol	Chain	Residues	Atoms	AltConf	Trace
24	e	72	Total C N O 288 144 72 72	0	0
24	T	77	Total C N O S 602 396 95 108 3	0	0
24	i	75	Total C N O S 575 379 92 101 3	0	0

- Molecule 25 is a protein called Small nuclear ribonucleoprotein F.

Mol	Chain	Residues	Atoms	AltConf	Trace
25	f	70	Total C N O 280 140 70 70	0	0
25	U	73	Total C N O S 585 376 102 106 1	0	0
25	j	70	Total C N O S 554 355 98 100 1	0	0

- Molecule 26 is a protein called Small nuclear ribonucleoprotein G.

Mol	Chain	Residues	Atoms	AltConf	Trace
26	g	70	Total C N O 280 140 70 70	0	0
26	V	75	Total C N O S 577 363 100 112 2	0	0
26	k	69	Total C N O S 529 337 93 97 2	0	0

- Molecule 27 is a protein called Pre-mRNA-splicing helicase BRR2.

Mol	Chain	Residues	Atoms	AltConf	Trace
27	D	1699	Total C N O S 13601 8717 2266 2564 54	1	0

- Molecule 28 is a RNA chain called Pre-mRNA-BPS.

Mol	Chain	Residues	Atoms	AltConf	Trace
28	G	44	Total C N O P 928 419 161 304 44	0	0

- Molecule 29 is a RNA chain called U2 snRNA.

Mol	Chain	Residues	Atoms	AltConf	Trace
29	H	206	Total C N O P 4345 1940 722 1477 206	0	0

- Molecule 30 is a protein called U2 small nuclear ribonucleoprotein A'.

Mol	Chain	Residues	Atoms	AltConf	Trace
30	o	135	Total C N O 841 538 142 161	0	0

- Molecule 31 is a protein called U2 small nuclear ribonucleoprotein B".

Mol	Chain	Residues	Atoms				AltConf	Trace
31	p	73	Total	C	N	O	0	0
			466	304	81	81		

- Molecule 32 is a protein called U2 snRNP component HSH155.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	1	816	Total	C	N	O	S	0	0
			6472	4165	1101	1166	40		

- Molecule 33 is a protein called Cold sensitive U2 snRNA suppressor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	2	211	Total	C	N	O	S	0	0
			1726	1121	292	304	9		

- Molecule 34 is a protein called Pre-mRNA-splicing factor RSE1.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	3	1180	Total	C	N	O	S	0	0
			9380	5996	1580	1753	51		

- Molecule 35 is a protein called Protein HSH49.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	4	173	Total	C	N	O	S	0	0
			1429	930	239	258	2		

- Molecule 36 is a protein called Pre-mRNA-splicing factor RDS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	5	103	Total	C	N	O	S	0	0
			814	503	154	143	14		

- Molecule 37 is a protein called RDS3 complex subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	6	84	Total	C	N	O	S	0	0
			693	429	130	132	2		

- Molecule 38 is a protein called U2 snRNP component IST3.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	X	128	Total	C	N	O	0	0
			1051	662	181	208		

- Molecule 39 is a protein called Pre-mRNA-splicing factor CWC26.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Y	89	Total	C	N	O	S	0	0
			730	458	130	140	2		

- Molecule 40 is a protein called Pre-mRNA leakage protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Z	22	Total	C	N	O	S	0	0
			173	110	25	37	1		

- Molecule 41 is a protein called Pre-mRNA-splicing factor PRP9.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	u	461	Total	C	N	O	S	0	0
			3895	2475	675	730	15		

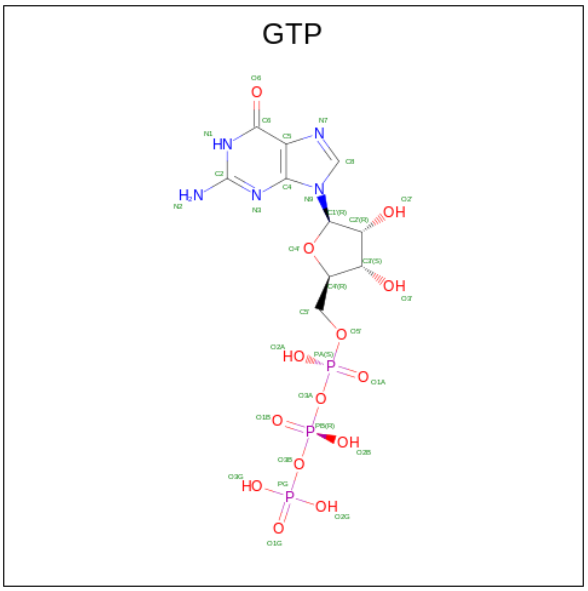
- Molecule 42 is a protein called Pre-mRNA-splicing factor PRP21.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	w	127	Total	C	N	O	S	0	0
			1084	689	193	196	6		

- Molecule 43 is a protein called Pre-mRNA-splicing factor PRP11.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	v	174	Total	C	N	O	S	0	0
			1372	862	235	269	6		

- Molecule 44 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
44	C	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 45 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
45	C	1	Total	Mg	0
			1	1	

- Molecule 46 is ZINC ION (three-letter code: ZN) (formula: Zn).

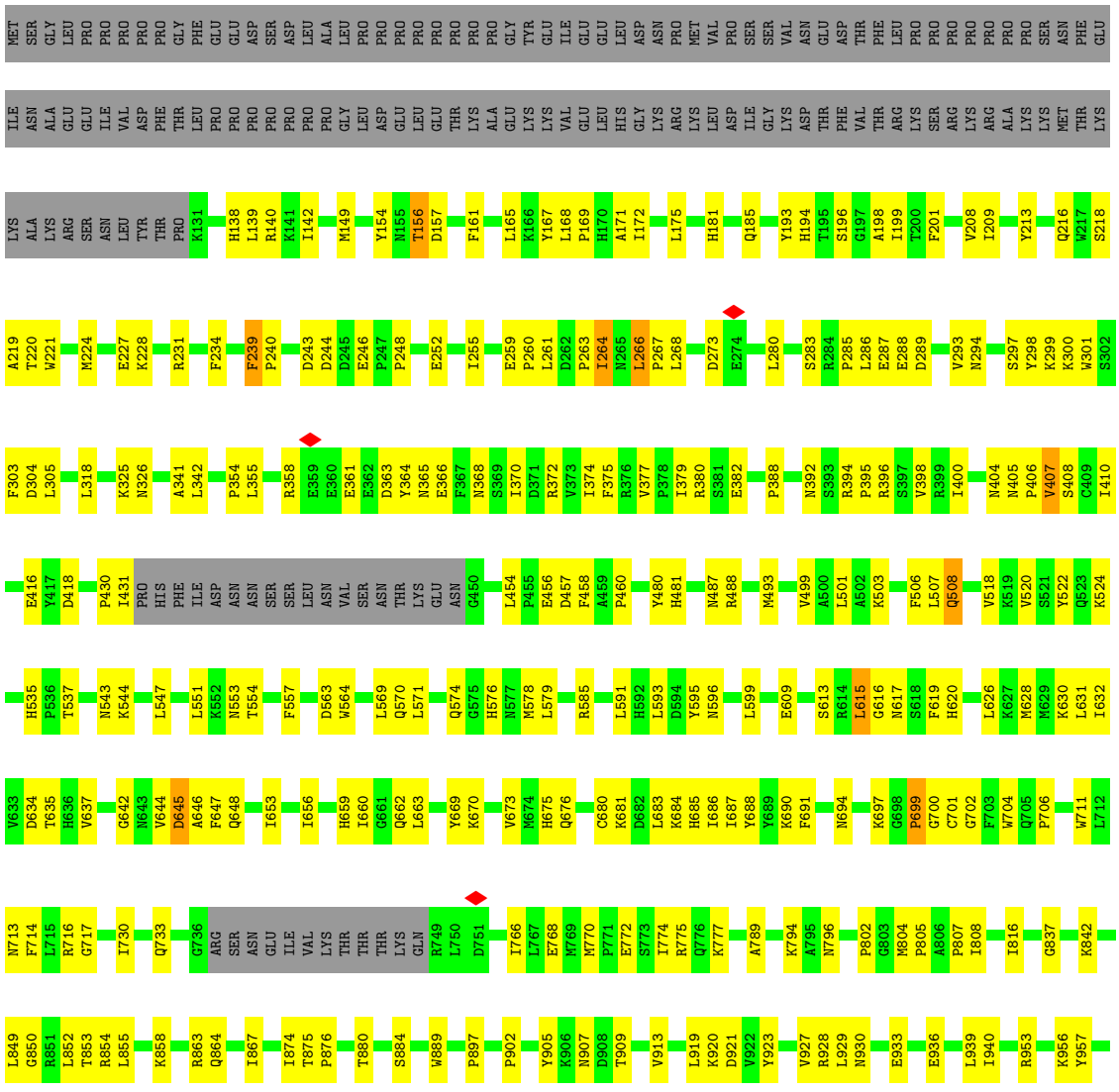
Mol	Chain	Residues	Atoms		AltConf
46	5	3	Total	Zn	0
			3	3	
46	u	2	Total	Zn	0
			2	2	
46	v	1	Total	Zn	0
			1	1	

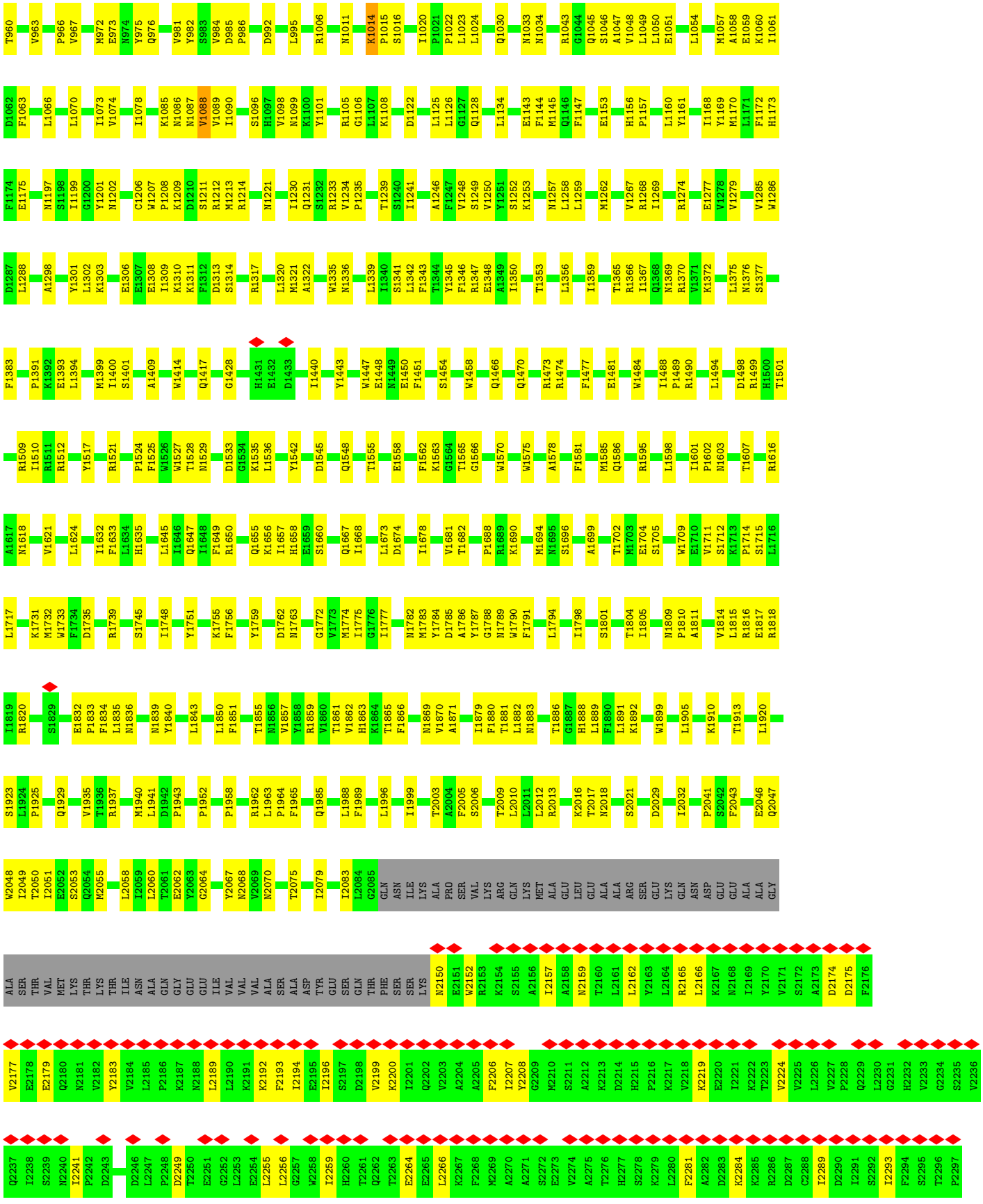
3 Residue-property plots (i)

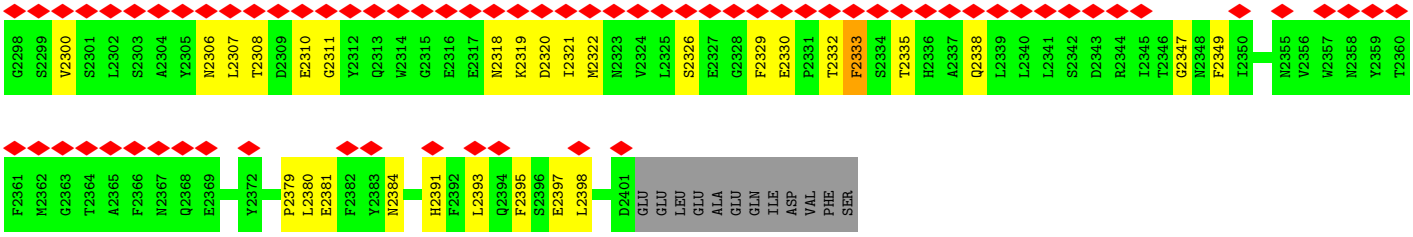
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: Pre-mRNA-splicing factor 8

Chain A:

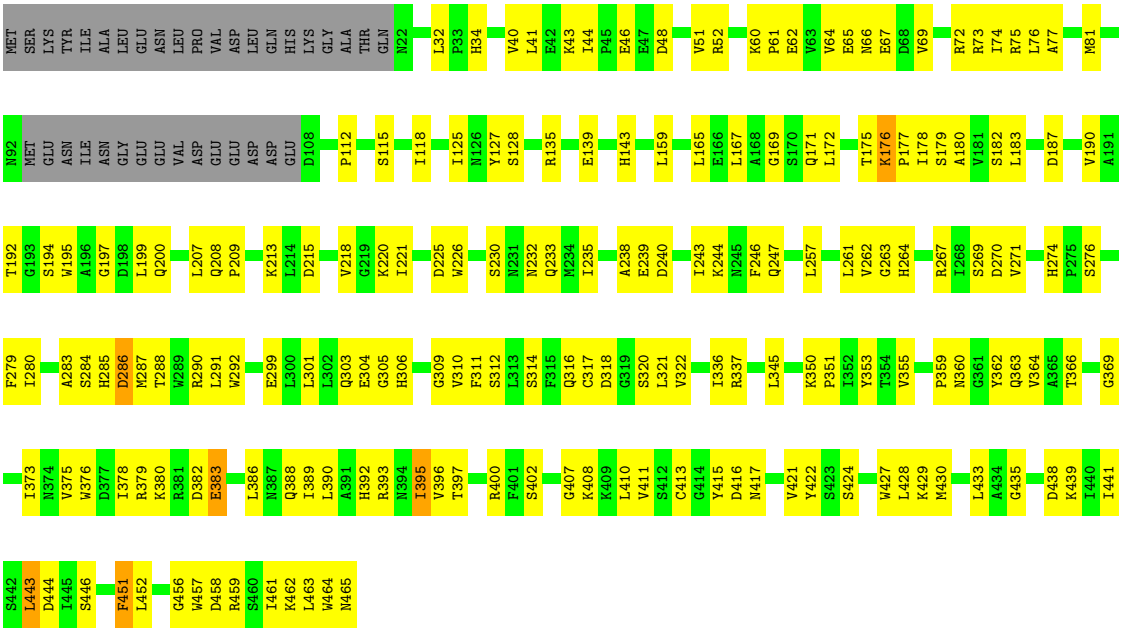



T960 V963 P966 V967 M972 E973 N974 Y975 Q976 V981 Y982 S983 V984 D985 P986 D992 L995 R1006 N1011 K1014 P1015 S1016 I1020 P1021 P1022 L1023 L1024 Q1030 N1033 N1034 R1043 G1044 Q1045 S1046 A1047 V1048 L1049 L1050 E1051 L1054 M1057 A1058 E1059 K1060 I1061
D1062 F1063 L1066 L1070 I1073 V1074 I1078 K1085 N1086 N1087 V1088 V1089 I1090 S1096 H1097 V1098 N1099 K1100 Y1101 R1105 G1106 L1107 K1108 D1122 L1125 L1126 G1127 Q1128 L1134 E1143 F1144 M1145 Q1146 F1147 E1153 H1156 P1157 L1160 Y1161 I1168 Y1169 M1170 L1171 F1172 H1173
F1174 E1175 N1197 S1198 I1199 G1200 Y1201 N1202 C1206 W1207 P1208 K1209 D1210 S1211 R1212 M1213 R1214 N1221 I1230 Q1231 S1232 R1233 V1234 P1235 T1239 S1240 I1241 A1246 F1247 V1248 S1249 V1250 Y1251 S1252 K1253 N1257 L1258 L1259 M1262 V1267 R1268 I1269 R1274 E1277 V1278 V1279 V1285 W1286
D1287 L1288 A1298 Y1301 L1302 K1303 E1306 E1307 E1308 I1309 K1310 K1311 F1312 D1313 S1314 R1317 L1320 M1321 A1322 W1335 N1336 L1339 I1340 S1341 L1342 F1343 T1344 Y1345 F1346 R1347 E1348 A1349 I1350 T1353 L1356 I1359 T1365 R1366 I1367 Q1368 N1369 R1370 V1371 K1372 L1375 N1376 S1377
F1383 P1391 K1392 E1393 L1394 M1399 I1400 S1401 A1409 W1414 Q1417 G1428 H1431 E1432 D1433 I1440 Y1443 W1447 E1448 N1449 E1450 F1451 S1454 W1458 Q1466 Q1470 R1473 R1474 F1477 E1481 W1484 I1488 P1489 R1490 L1494 D1498 R1499 H1500 T1501
R1509 I1510 R1511 R1512 Y1517 R1521 P1524 F1525 W1526 W1527 T1528 N1529 D1533 G1534 K1535 L1536 Y1542 D1545 Q1548 T1555 E1558 F1562 K1563 G1564 T1565 G1566 W1570 W1575 A1578 F1581 M1585 Q1586 R1595 L1598 I1601 P1602 N1603 T1607 R1616
A1617 N1618 V1621 L1624 I1632 F1633 L1634 H1635 L1645 I1646 Q1647 I1648 F1649 R1650 Q1655 K1656 I1657 H1658 E1659 S1660 Q1667 I1668 L1673 D1674 I1678 V1681 T1682 P1688 R1689 K1690 M1694 N1695 S1696 A1699 T1702 M1703 E1704 S1705 W1709 E1710 V1711 S1712 K1713 P1714 S1715 L1716
L1717 K1731 M1732 W1733 F1734 D1735 R1739 S1745 I1748 Y1751 K1755 F1756 Y1759 D1762 N1763 G1772 V1773 M1774 I1775 G1776 I1777 N1782 M1783 Y1784 D1785 A1786 Y1787 G1788 N1789 W1790 F1791 L1794 I1798 S1801 T1804 I1805 N1809 P1810 A1811 V1814 L1815 R1816 E1817 R1818
I1819 R1820 S1829 E1832 P1833 F1834 L1835 N1836 N1839 Y1840 L1843 L1850 F1851 T1855 N1856 V1857 Y1858 R1859 V1860 T1861 V1862 H1863 K1864 T1865 F1866 N1869 V1870 A1871 I1879 F1880 T1881 L1882 N1883 T1886 G1887 H1888 L1889 F1890 L1891 K1892 W1899 L1905 K1910 T1913 L1920
S1923 L1924 P1925 Q1929 V1935 T1936 R1937 M1940 L1941 D1942 P1943 P1952 P1958 R1962 L1963 P1964 F1965 Q1985 L1988 F1989 L1996 I1999 T2003 A2004 F2005 S2006 T2009 L2010 L2011 L2012 R2013 K2016 T2017 N2018 S2021 D2029 I2032 P2041 S2042 F2043 E2046 Q2047
W2048 I2049 T2050 I2051 E2052 S2053 Q2054 M2055 L2058 I2059 L2060 T2061 E2062 Y2063 G2064 Y2067 N2068 V2069 N2070 T2075 I2079 I2083 L2084 G2085 GLN ASN ILE LYS ALA PRO SER VAL LYS ARG GLN LYS MET ALA GLU LEU GLU ALA ALA ARG SER GLU GLN LYS ASN ASP GLU GLU ALA ALA GLY
ALA SER THR VAL MET LYS THR LYS THR ILE ASN ALA GLN GLY GLU GLU ILE VAL VAL ALA SER ALA ASP TYR GLU SER GLN THR PHE SER SER LYS N2150 E2151 W2152 R2153 K2154 S2155 A2156 I2157 A2158 N2159 T2160 L2161 L2162 Y2163 L2164 R2165 L2166 K2167 N2168 I2169 Y2170 V2171 S2172 A2173 D2174 D2175 F2176
V2177 E2178 E2179 Q2180 N2181 V2182 Y2183 V2184 L2185 P2186 K2187 N2188 L2189 L2190 K2191 K2192 F2193 I2194 E2195 I2196 S2197 D2198 V2199 K2200 I2201 Q2202 V2203 A2204 A2205 F2206 I2207 Y2208 G2209 M2210 S2211 A2212 K2213 T2276 D2214 H2215 P2216 K2217 V2218 K2219 E2220 I2221 K2222 T2223 V2224 V2225 L2226 V2227 P2228 Q2229 L2230 G2231 H2232 V2233 G2234 S2235 V2236
Q2237 I2238 S2239 N2240 I2241 P2242 D2243 D2246 L2247 P2248 D2249 T2250 E2251 G2252 L2253 E2254 L2255 L2256 G2257 W2258 I2259 H2260 T2261 Q2262 T2263 E2264 E2265 L2266 K2267 F2268 M2269 A2270 A2271 S2272 E2273 V2274 A2275 T2276 H2277 S2278 K2279 L2280 F2281 A2282 D2283 K2284 K2285 R2286 D2287 C2288 I2289 D2290 I2291 S2292 I2293 F2294 S2295 T2296 P2297



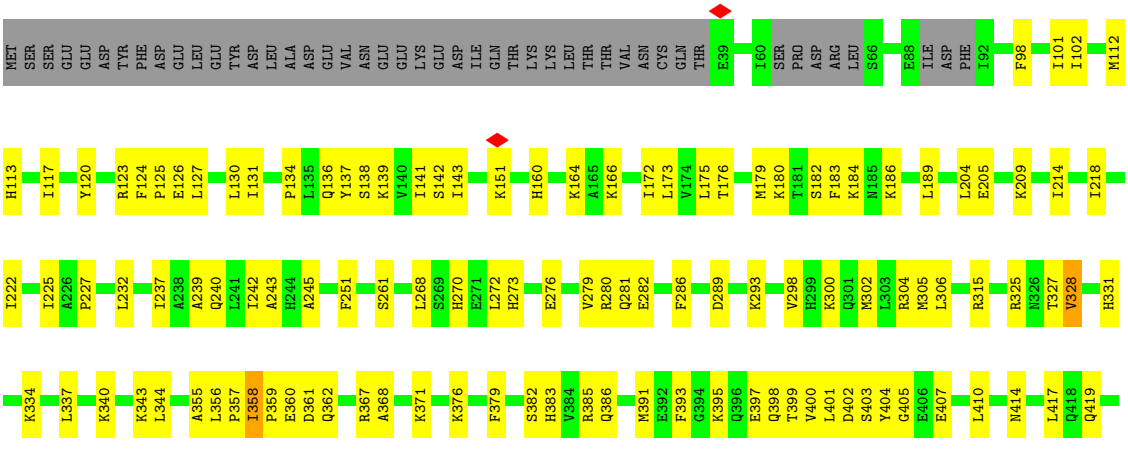
• Molecule 2: U4/U6 small nuclear ribonucleoprotein PRP4

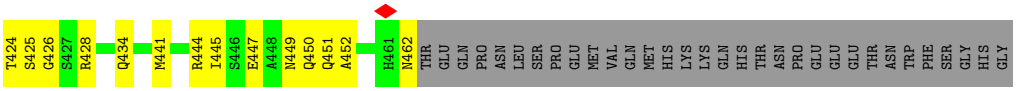
Chain K:



• Molecule 3: Pre-mRNA-processing factor 31

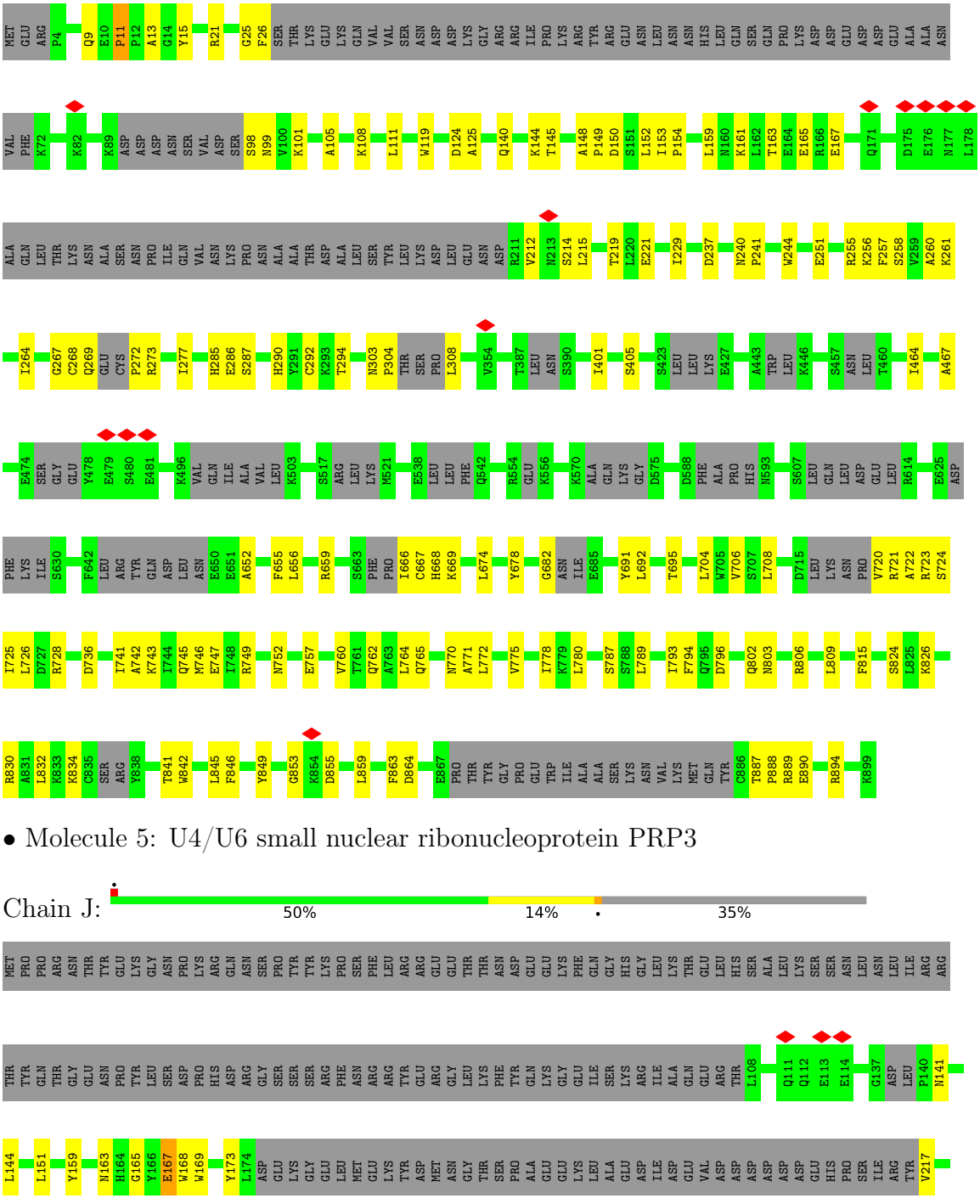
Chain L:





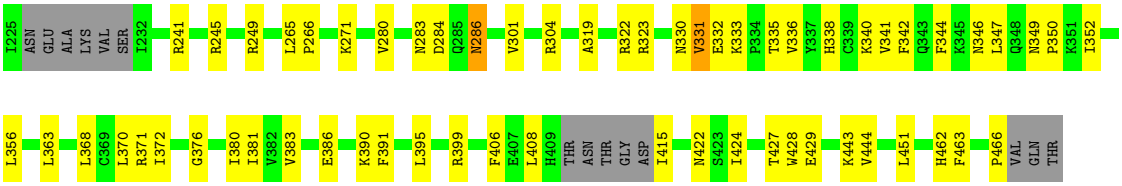
• Molecule 4: Pre-mRNA-splicing factor 6

Chain N:



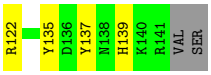
• Molecule 5: U4/U6 small nuclear ribonucleoprotein PRP3

Chain J:



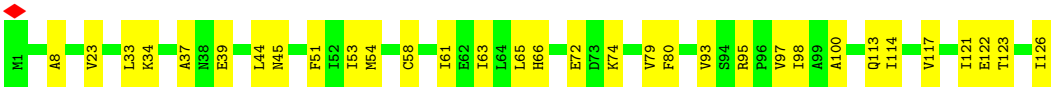
• Molecule 6: Spliceosomal protein DIB1

Chain E:



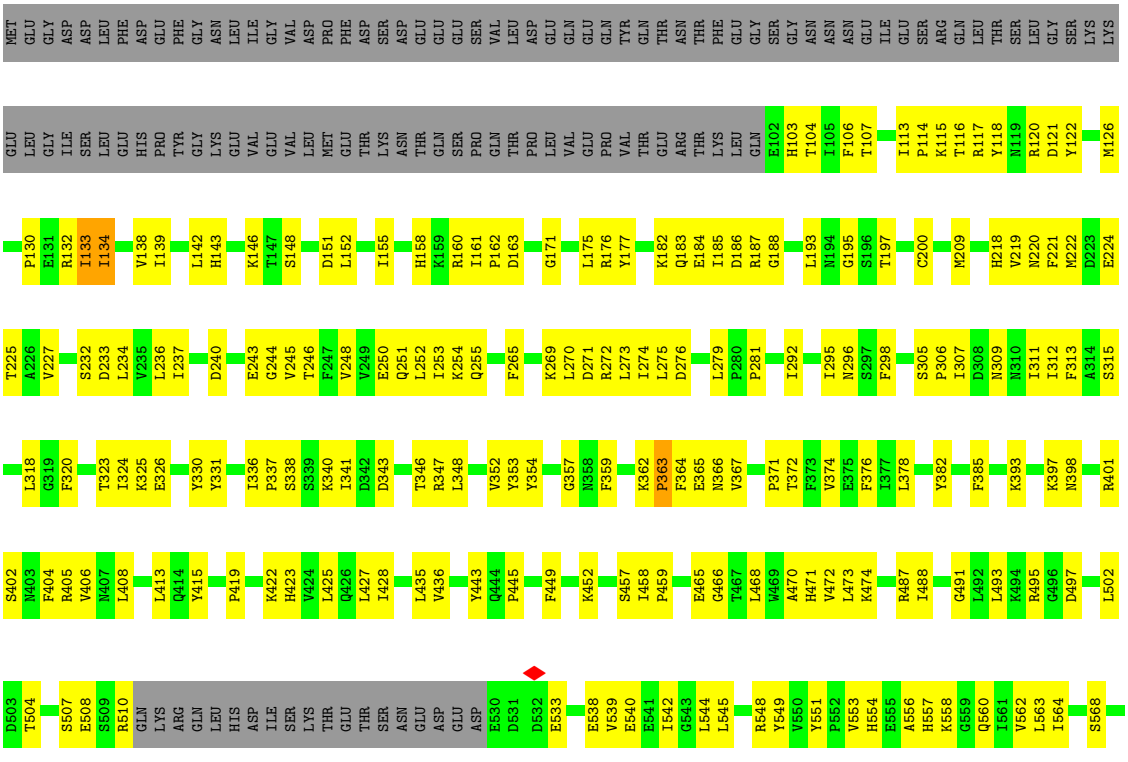
• Molecule 7: 13 kDa ribonucleoprotein-associated protein

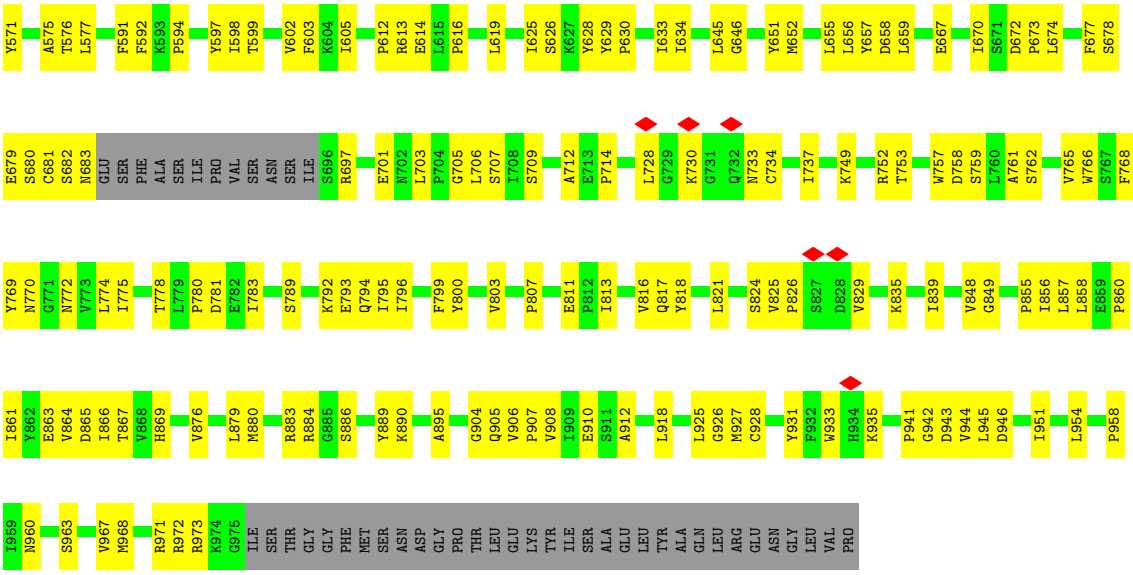
Chain M:



• Molecule 8: Pre-mRNA-splicing factor SNU114

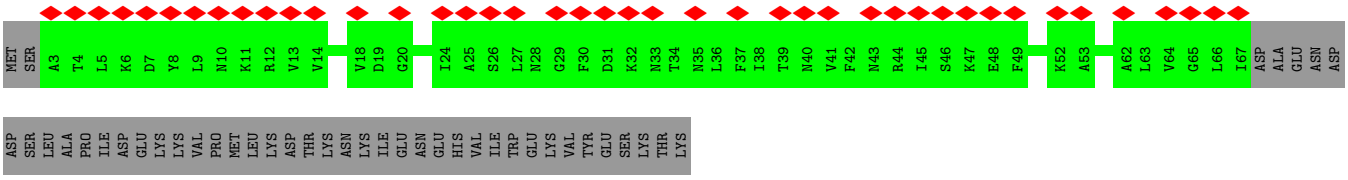
Chain C:





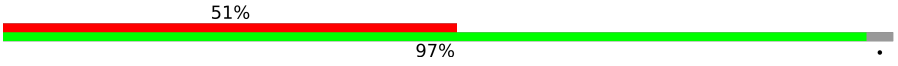
• Molecule 9: U6 snRNA-associated Sm-like protein LSm8

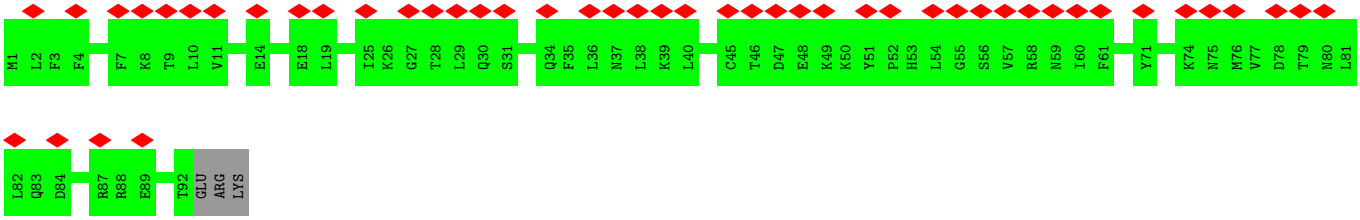
Chain z:



• Molecule 10: U6 snRNA-associated Sm-like protein LSm2

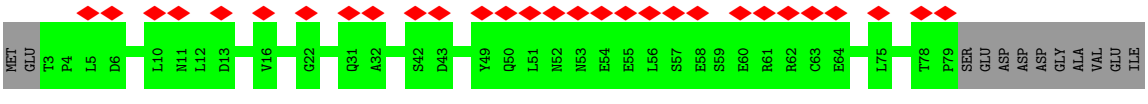
Chain q:





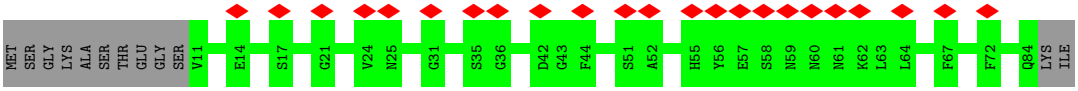
• Molecule 11: U6 snRNA-associated Sm-like protein LSm3

Chain r:

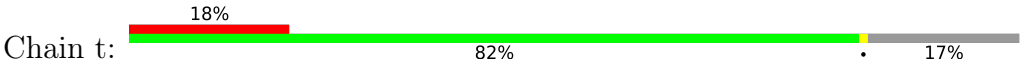


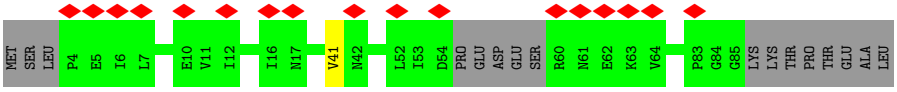
• Molecule 12: U6 snRNA-associated Sm-like protein LSm6

Chain x:

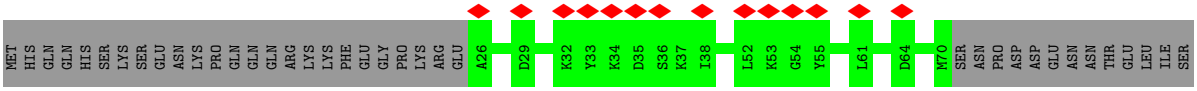


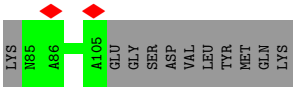
• Molecule 13: U6 snRNA-associated Sm-like protein LSm5



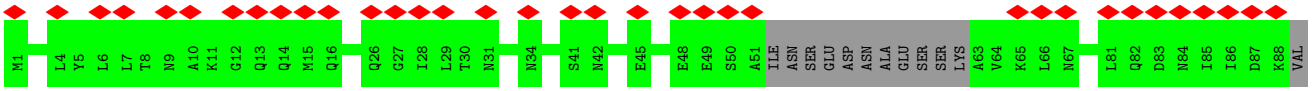


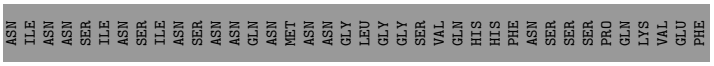
• Molecule 14: U6 snRNA-associated Sm-like protein LSm7



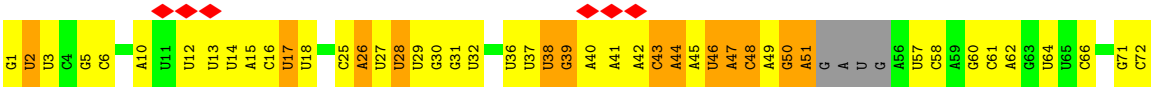


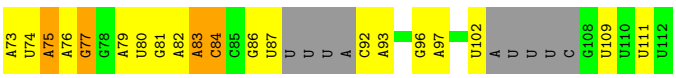
• Molecule 15: U6 snRNA-associated Sm-like protein LSm4



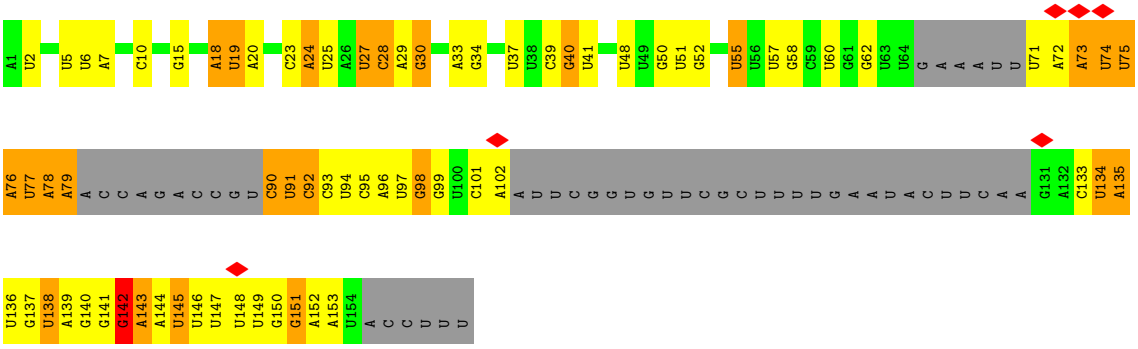


• Molecule 16: U6 snRNA



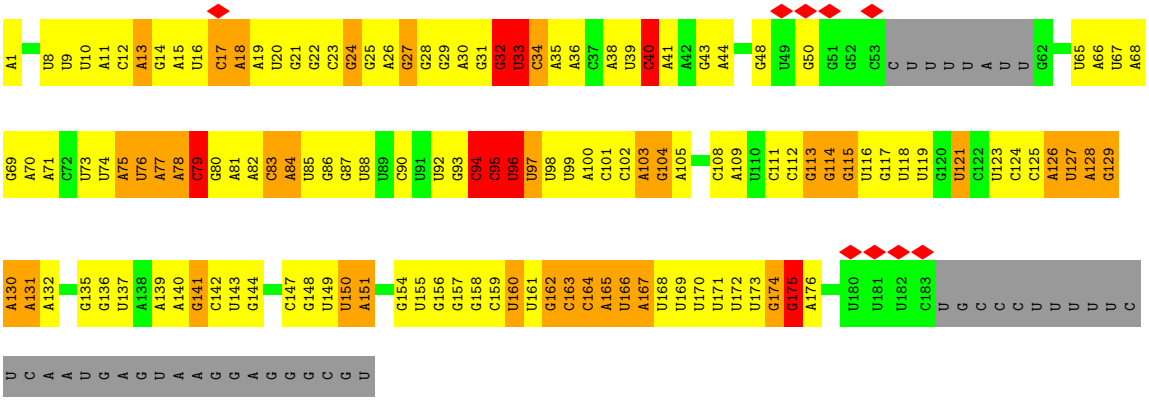


• Molecule 17: U4 snRNA



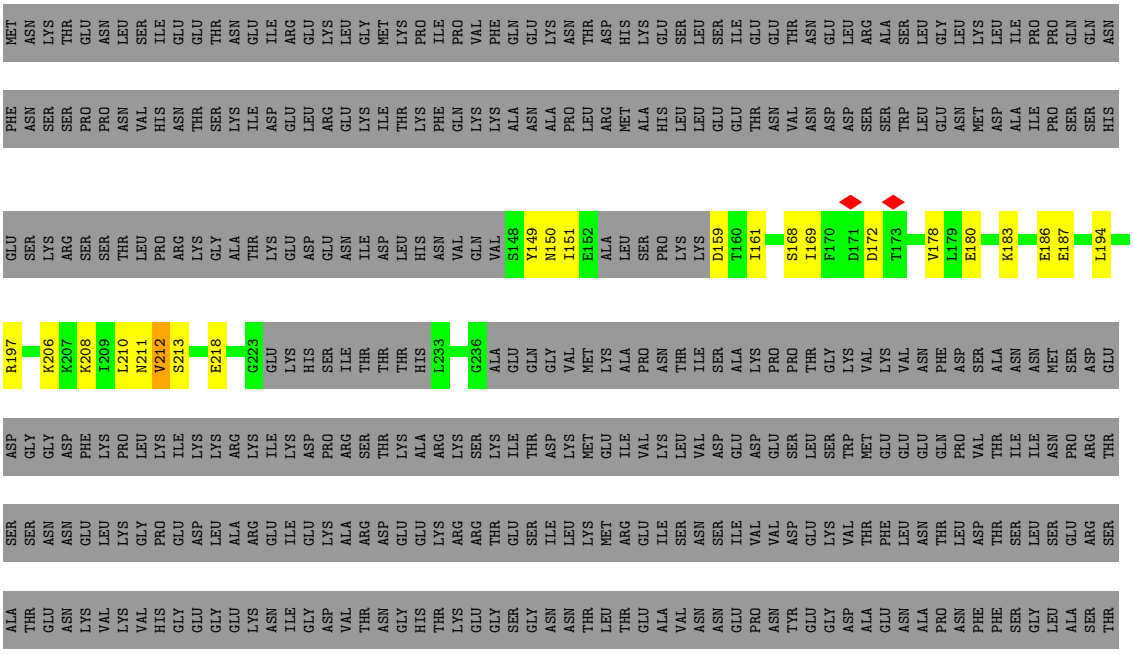
• Molecule 18: U5 snRNA

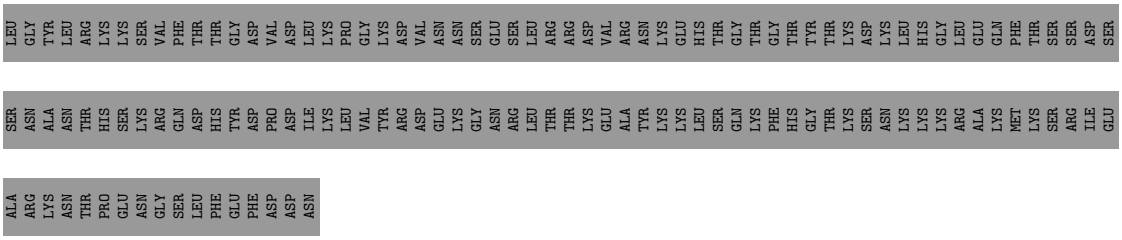
Chain B:



• Molecule 19: 66 kDa U4/U6.U5 small nuclear ribonucleoprotein component

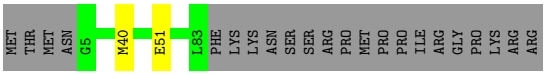
Chain O:





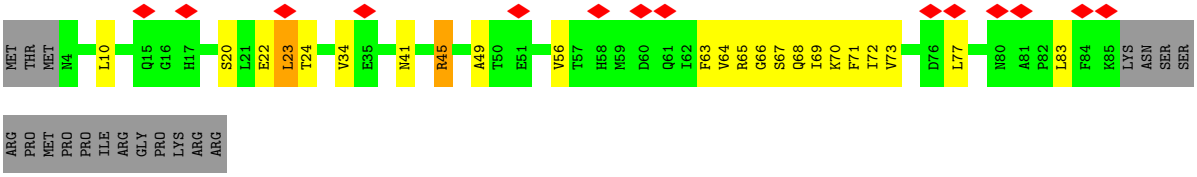
• Molecule 20: Small nuclear ribonucleoprotein Sm D3

Chain d:



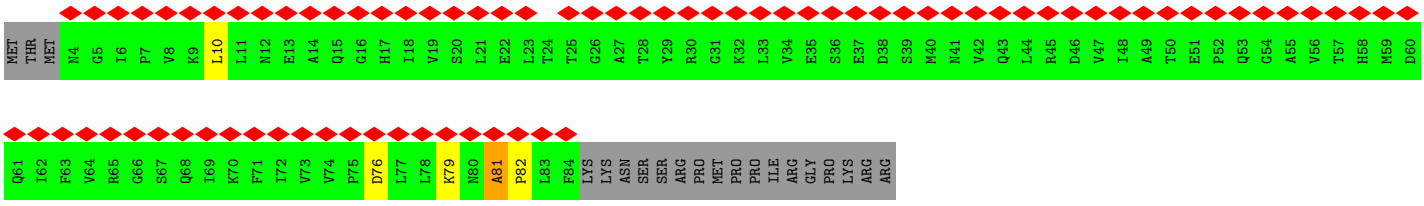
• Molecule 20: Small nuclear ribonucleoprotein Sm D3

Chain S:



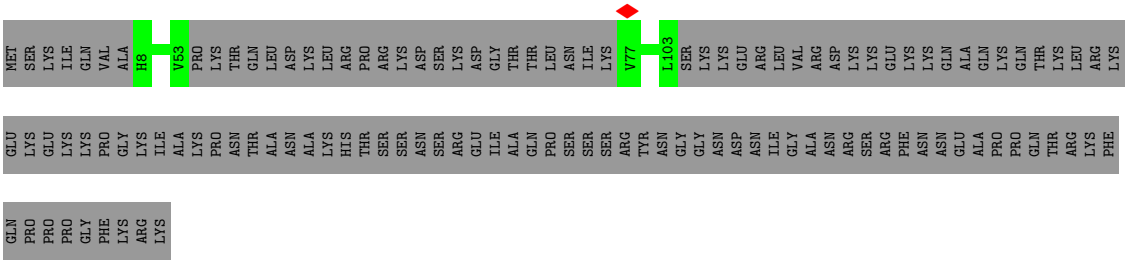
• Molecule 20: Small nuclear ribonucleoprotein Sm D3

Chain l:



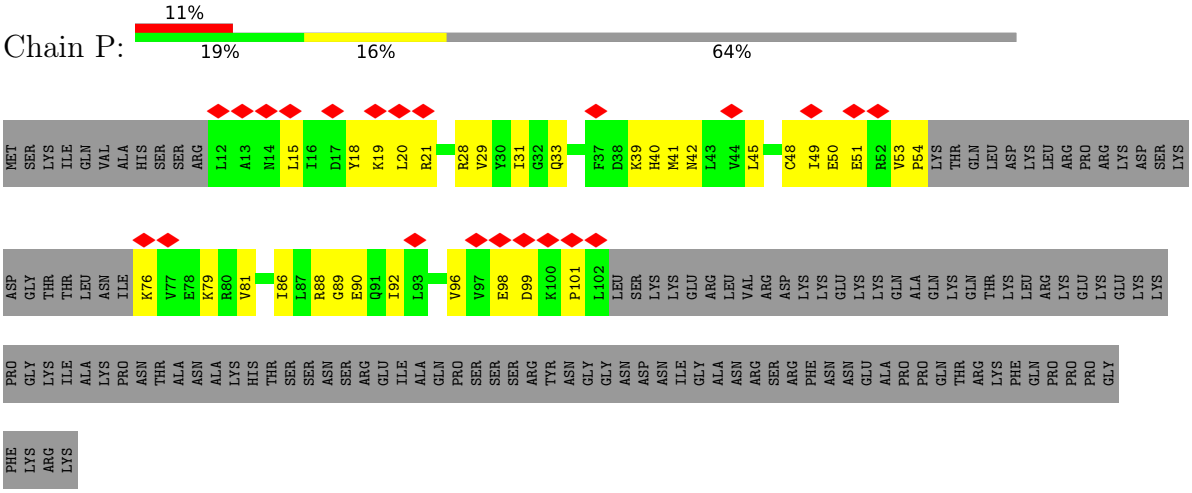
• Molecule 21: Small nuclear ribonucleoprotein-associated protein B

Chain a:



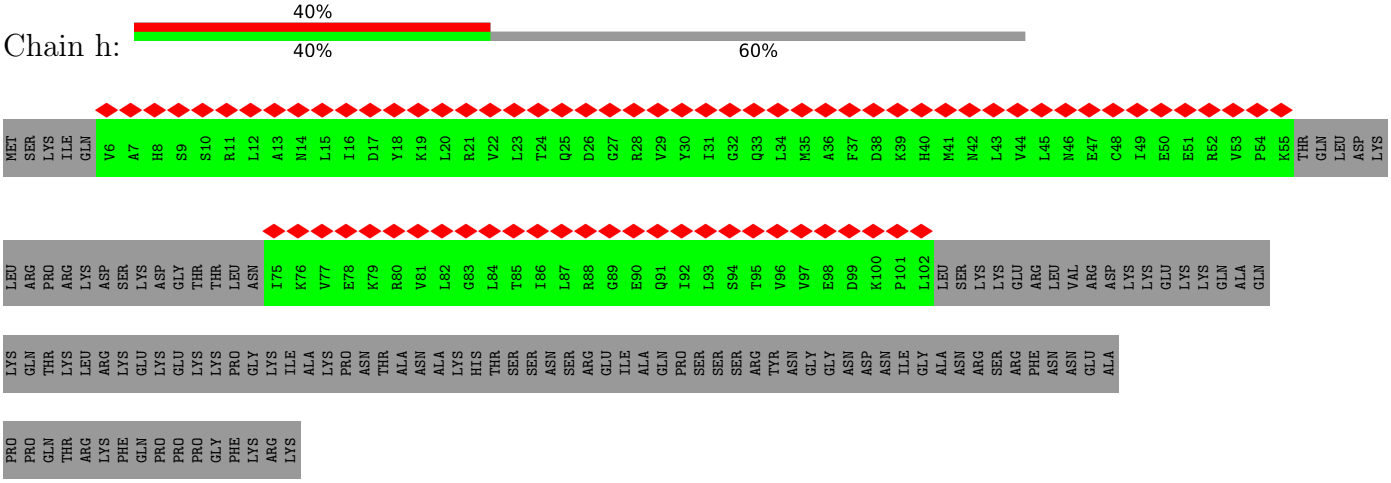
• Molecule 21: Small nuclear ribonucleoprotein-associated protein B

Chain P:



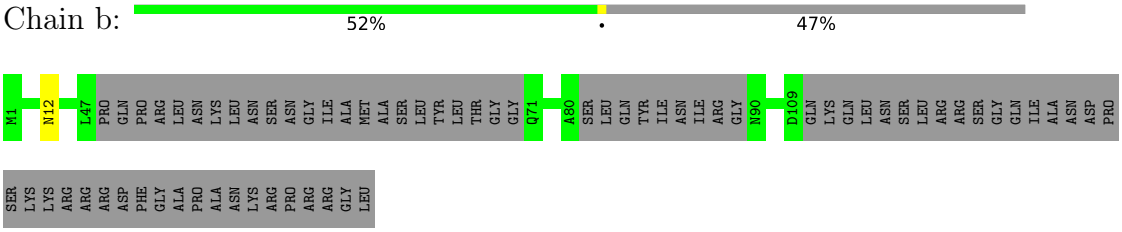
• Molecule 21: Small nuclear ribonucleoprotein-associated protein B

Chain h:



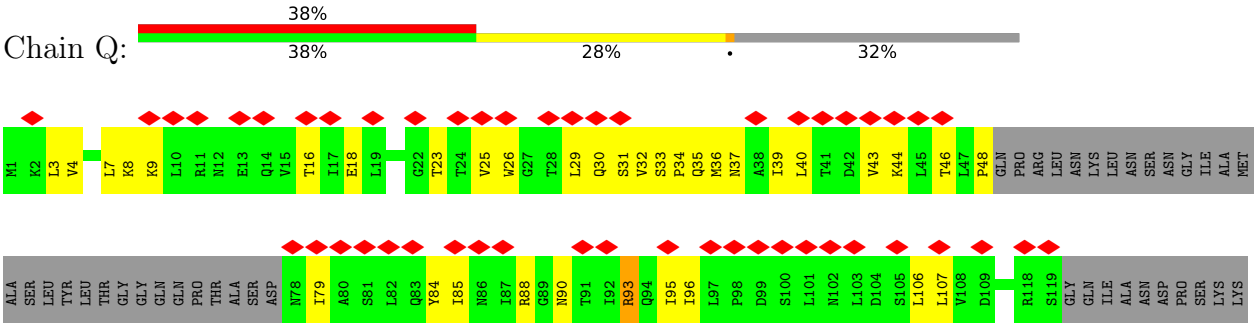
• Molecule 22: Small nuclear ribonucleoprotein Sm D1

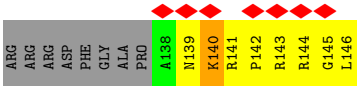
Chain b:



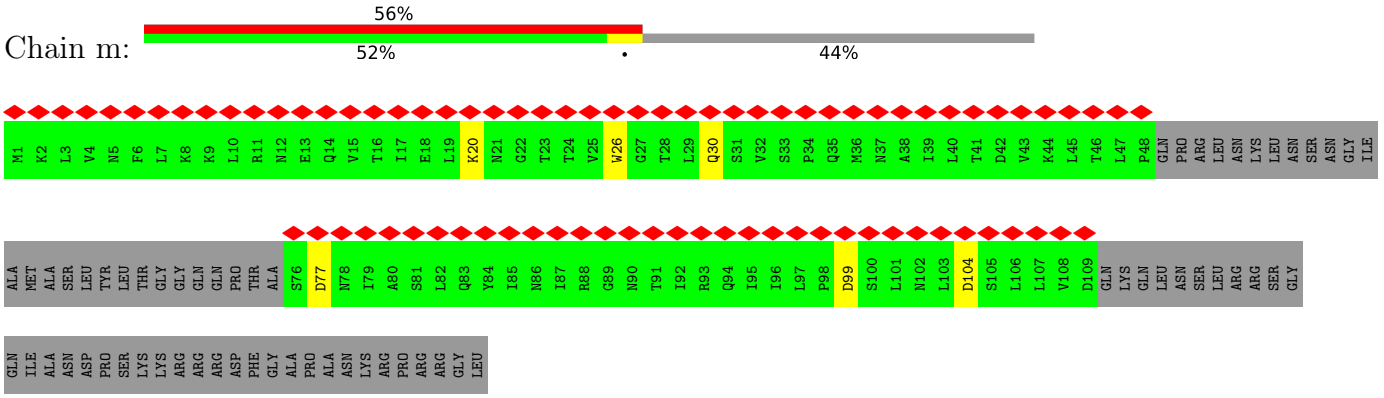
• Molecule 22: Small nuclear ribonucleoprotein Sm D1

Chain Q:

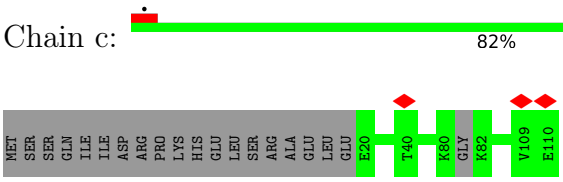




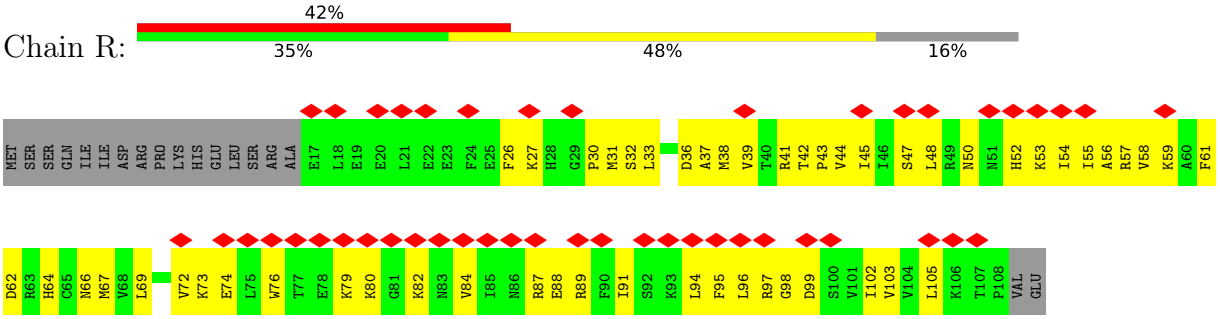
• Molecule 22: Small nuclear ribonucleoprotein Sm D1



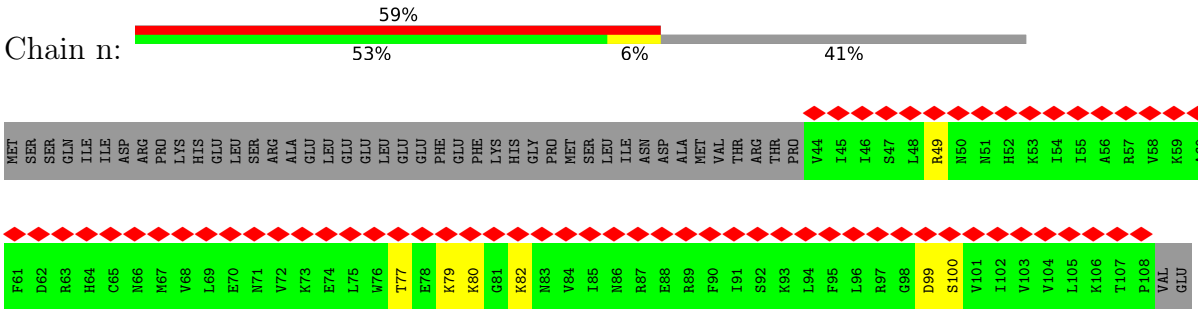
• Molecule 23: Small nuclear ribonucleoprotein Sm D2



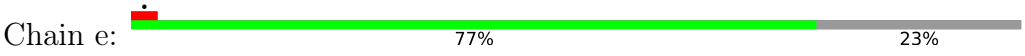
• Molecule 23: Small nuclear ribonucleoprotein Sm D2

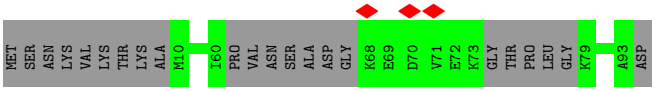


• Molecule 23: Small nuclear ribonucleoprotein Sm D2



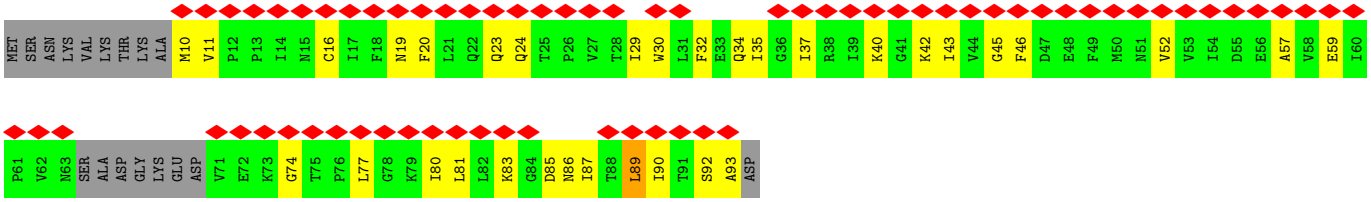
• Molecule 24: Small nuclear ribonucleoprotein E





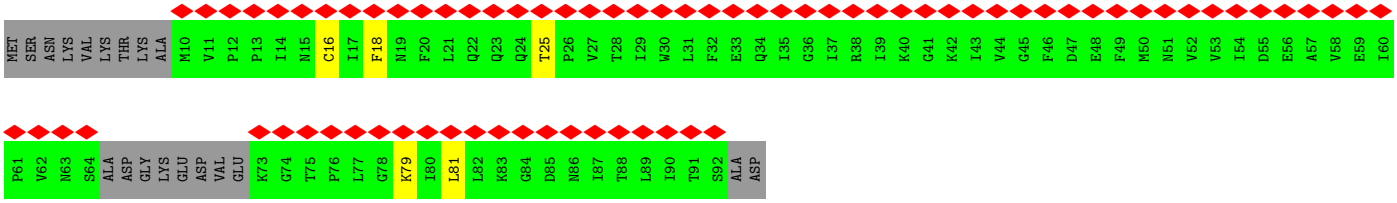
• Molecule 24: Small nuclear ribonucleoprotein E

Chain T:



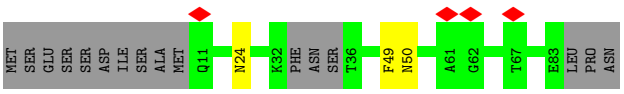
• Molecule 24: Small nuclear ribonucleoprotein E

Chain i:



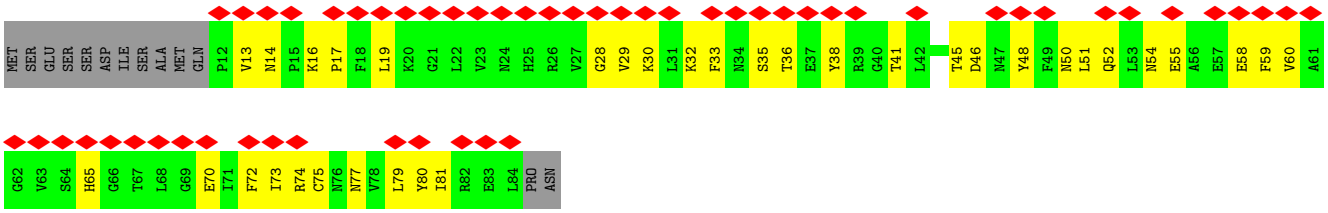
• Molecule 25: Small nuclear ribonucleoprotein F

Chain f:



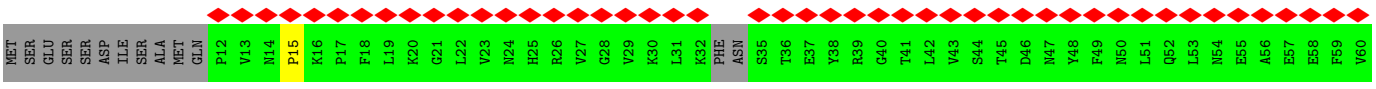
• Molecule 25: Small nuclear ribonucleoprotein F

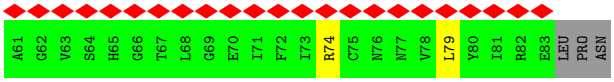
Chain U:



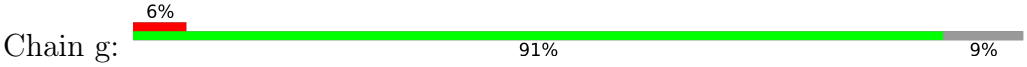
• Molecule 25: Small nuclear ribonucleoprotein F

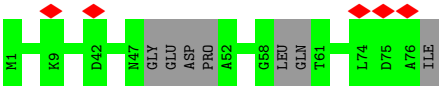
Chain j:



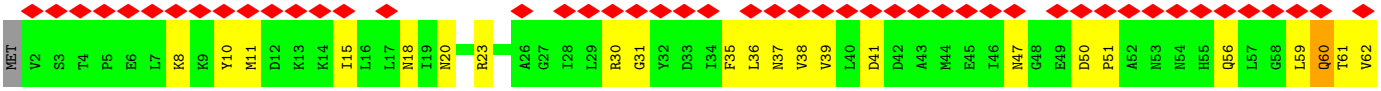


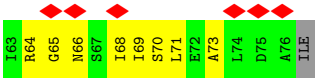
• Molecule 26: Small nuclear ribonucleoprotein G



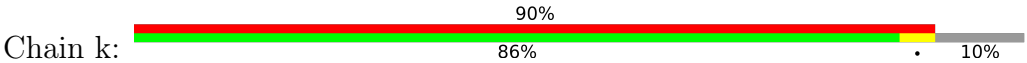


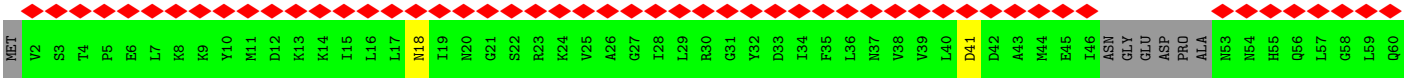
• Molecule 26: Small nuclear ribonucleoprotein G

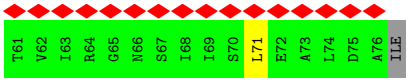




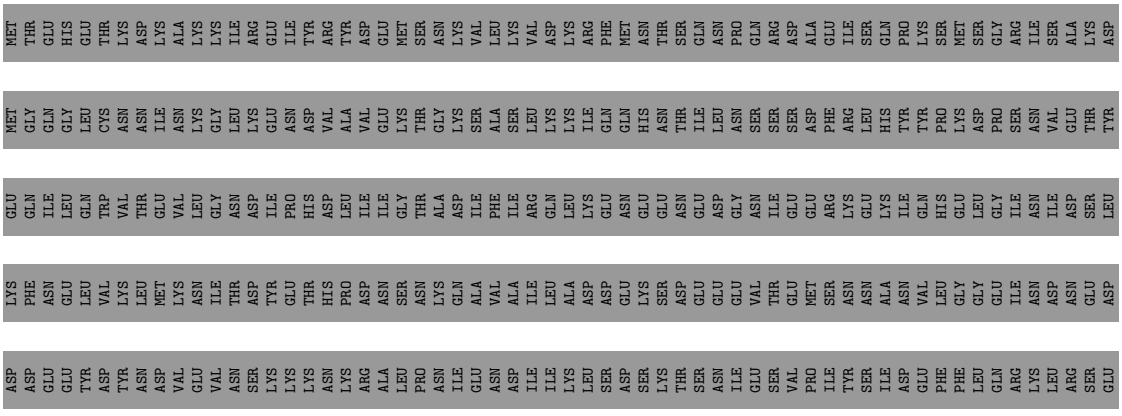
• Molecule 26: Small nuclear ribonucleoprotein G

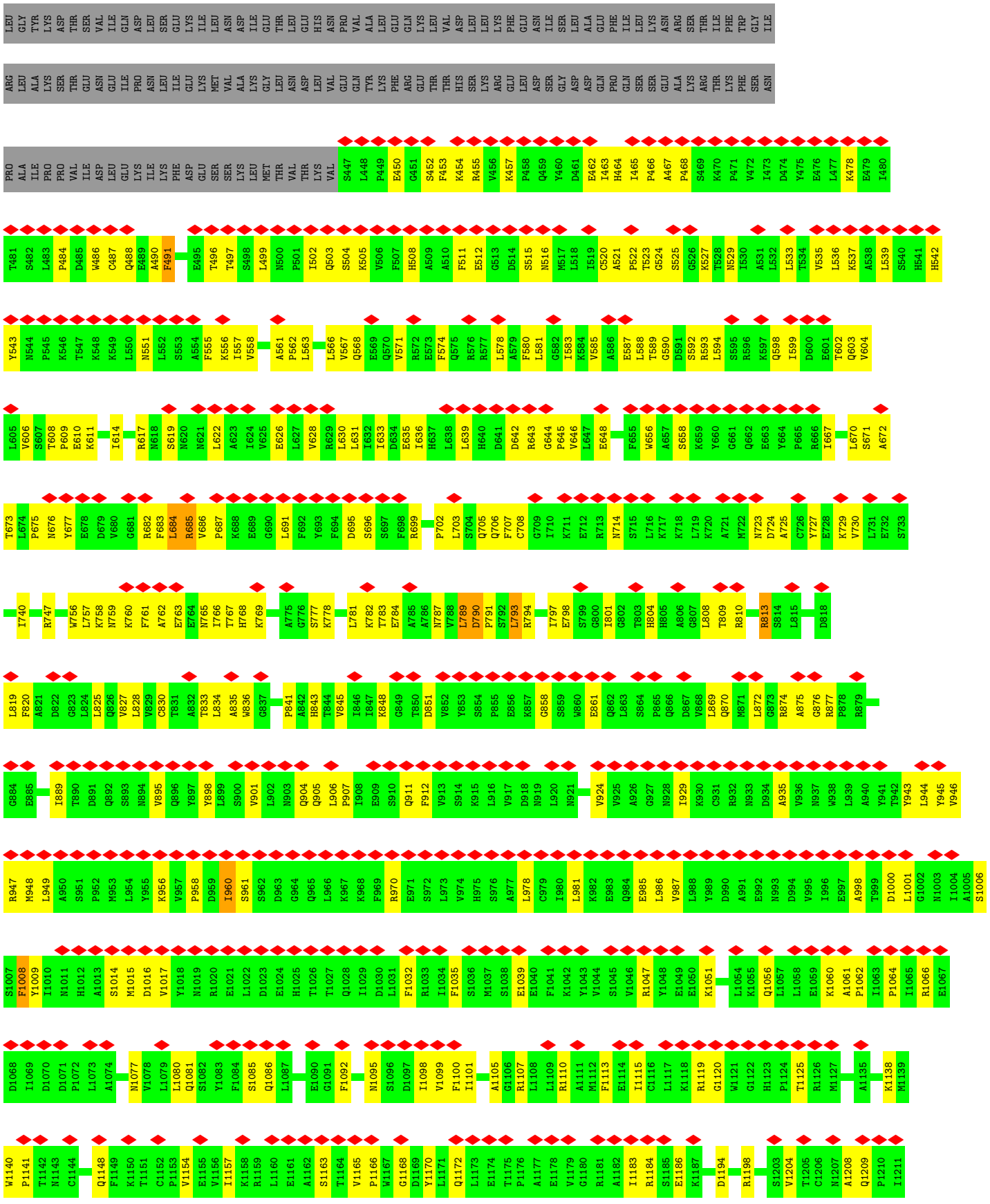


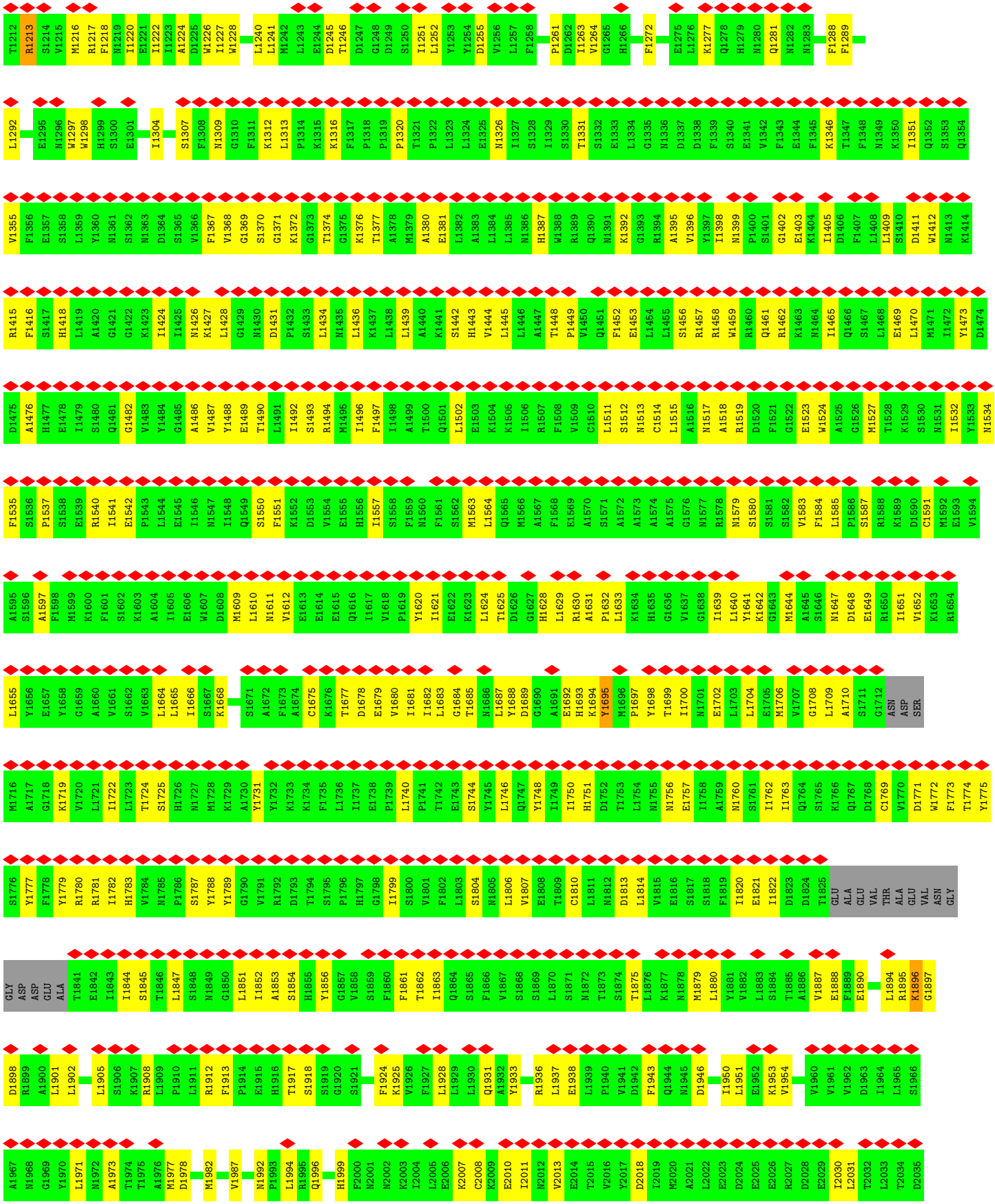




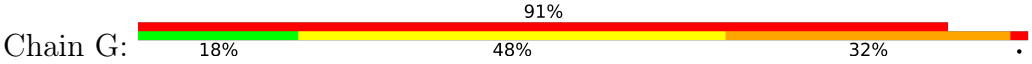
• Molecule 27: Pre-mRNA-splicing helicase BRR2

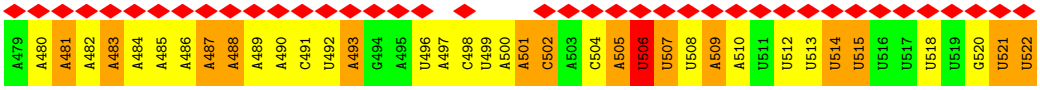



LEU GLY TYR LYS ASP THR SER VAL ILE GLN ASP LEU SER GLU LYS ILE LEU ASN ASP ILE GLU THR LEU GLU HIS ASN PRO VAL ALA LEU GLU GLN LYS LEU VAL ASP LEU LEU LYS PHE GLU ASN ILE SER LEU ALA GLU PHE ILE LEU LYS ASN ARG SER THR ILE PHE TRP GLY ILE
ARG LEU ALA LYS SER THR GLU ASN GLU ILE PRO ASN LEU ILE GLU LYS MET VAL ALA LYS GLY LEU ASN ASP LEU ASP GLU SER SER LYS LEU MET THR VAL THR LYS VAL
PRO ALA ILE PRO PRO VAL ILE ASP LEU GLU LYS ILE LYS PHE ASP GLU SER SER LYS LEU MET THR VAL THR LYS VAL
S447 L448 P449 E450 G451 S452 F453 K454 R455 V456 K457 P458 Q459 Y460 D461 E462 I463 H464 I465 P466 A467 P468 S469 K470 P471 V472 I473 D474 Y475 E476 L477 K478 E479 I480
T481 S482 L483 P484 D485 W486 C487 Q488 E489 A490 F491 E495 T496 T497 S498 L499 N500 P501 I502 Q503 S504 K505 V506 F507 H508 A509 A510 F511 E512 G513 D514 S515 N516 M517 L518 I519 C520 A521 P522 T523 G524 S525 G526 K527 T528 N529 I530 A531 L532 L533 T534 V535 L536 K537 A538 L539 S540 H541 H542
Y543 N544 P545 K546 T547 K548 K549 L550 N551 L552 S553 A554 F555 K556 I557 V558 A561 P562 L563 L566 V567 Q568 E569 Q570 V571 R572 E573 F574 Q575 R576 R577 L578 A579 F580 L581 G582 I583 K584 V585 A586 E587 L588 T589 G590 D591 S592 R593 L594 S595 R596 K597 Q598 I599 D600 E601 T602 Q603 V604
L605 V606 S607 T608 P609 E610 K611 I614 R617 N618 S619 N620 N621 L622 A623 I624 V625 E626 L627 V628 R629 L630 L631 I632 I633 D634 E635 I636 H637 L638 L639 H640 D641 D642 R643 G644 P645 V646 L647 E648 F655 W656 A657 S658 K659 Y660 G661 Q662 E663 Y664 P665 R666 I667 L670 S671 A672
T673 L674 P675 N676 Y677 E678 D679 V680 G681 R682 F683 L684 R685 V686 P687 K688 E689 G690 L691 F692 Y693 F694 D695 S696 S697 F698 R699 P702 L703 S704 Q705 Q706 F707 C708 G709 T710 K711 E712 R713 N714 S715 L716 K717 K718 L719 K720 A721 M722 N723 D724 A725 C726 Y727 E728 K729 V730 L731 E732 S733
I740 R747 W756 L757 K758 N759 K760 F761 A762 E763 E764 N765 I766 T767 H768 K769 A775 G776 S777 K778 L781 K782 T783 E784 A765 A786 N787 V788 L789 D790 P791 S792 L793 R794 I797 E798 S799 G800 I801 G802 T803 H804 H805 A806 G807 L808 T809 R810 R813 S814 L815 D818
L819 F820 A821 D822 G823 L824 L825 Q826 V827 L828 V829 C830 T831 A832 T833 L834 A835 W836 G837 P841 A842 H843 T844 V845 I846 I847 K848 G849 T850 D851 V852 Y853 S854 P855 E856 K857 G858 S859 W860 E861 Q862 L863 S864 P865 Q866 D867 V868 L869 Q870 M871 L872 G873 R874 A875 G876 R877 P878 R879
G884 E885 I889 T890 D891 Q892 S893 N894 V895 Q896 Y897 Y898 L899 S900 V901 L902 N903 Q904 Q905 L906 P907 I908 E909 S910 Q911 F912 V913 S914 K915 L916 V917 D918 N919 L920 N921 V924 V925 A926 G927 N928 I929 K930 C931 R932 N933 D934 A935 V936 N937 W938 L939 A940 Y941 T942 Y943 L944 Y945 V946
R947 M948 L949 A950 S951 P952 M953 L954 Y955 K956 V957 P958 D959 I960 S961 S962 D963 G964 Q965 L966 K967 K968 F969 R970 E971 S972 L973 V974 H975 S976 A977 L978 C979 I980 L981 K982 E983 Q984 E985 L986 V987 L988 Y989 D990 A991 E992 N993 D994 V995 I996 E997 A998 T999 D1000 L1001 G1002 N1003 I1004 A1005 S1006
S1007 F1008 Y1009 I1010 N1011 H1012 A1013 S1014 M1015 D1016 V1017 Y1018 N1019 R1020 E1021 L1022 D1023 E1024 H1025 T1026 T1027 Q1028 I1029 D1030 L1031 F1032 R1033 I1034 F1035 S1036 M1037 S1038 E1039 E1040 F1041 K1042 Y1043 V1044 S1045 V1046 R1047 Y1048 E1049 E1050 K1051 L1054 K1055 Q1056 L1057 L1058 E1059 K1060 A1061 P1062 I1063 P1064 I1065 R1066 E1067
D1068 I1069 D1070 D1071 P1072 L1073 A1074 N1077 V1078 L1079 L1080 Q1081 S1082 Y1083 F1084 S1085 Q1086 L1087 E1090 G1091 F1092 N1095 S1096 D1097 I1098 V1099 F1100 I1101 A1105 G1106 R1107 L1108 L1109 R1110 A1111 M1112 F1113 E1114 I1115 C1116 L1117 K1118 R1119 G1120 W1121 G1122 H1123 P1124 T1125 R1126 M1127 A1135 K1138 M1139
W1140 P1141 T1142 N1143 C1144 Q1148 F1149 K1150 T1151 C1152 P1153 V1154 E1155 V1156 I1157 K1158 R1159 L1160 E1161 A1162 S1163 T1164 V1165 P1166 W1167 G1168 D1169 Y1170 L1171 Q1172 L1173 E1174 T1175 P1176 A1177 E1178 V1179 G1180 R1181 A1182 I1183 R1184 S1185 E1186 K1187 D1194 R1198 S1203 V1204 T1205 C1206 N1207 A1208 Q1209 P1210 I1211

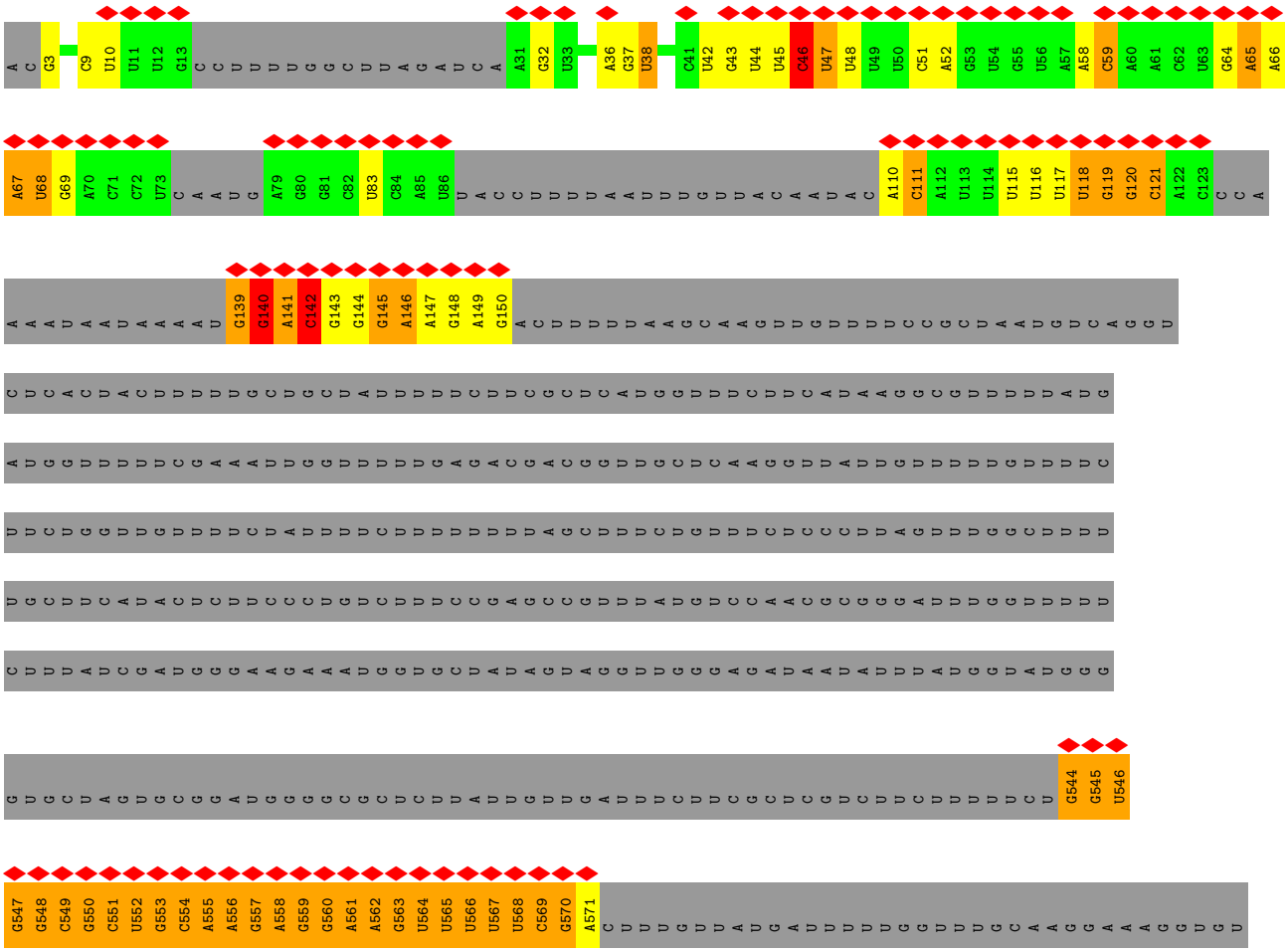

T1212 R1213 S1214 V1215 M1216 R1217 F1218 N1219 I1220 E1221 I1222 I1223 A1224 D1225 W1226 I1227 W1228 L1240 L1241 M1242 L1243 E1244 D1245 T1246 D1247 G1248 D1249 S1250 I1251 L1252 Y1253 Y1254 D1255 V1256 L1257 F1258 P1261 D1262 I1263 V1264 G1265 H1266 F1272 E1275 L1276 K1277 Q1278 H1279 N1280 Q1281 N1282 N1283 F1288 F1289
L1292 E1295 N1296 W1297 W1298 H1299 S1300 E1301 I1304 S1307 F1308 N1309 G1310 F1311 K1312 L1313 P1314 K1315 K1316 F1317 P1318 P1319 P1320 T1321 P1322 L1323 L1324 E1325 N1326 I1327 S1328 I1329 S1330 T1331 S1332 E1333 L1334 G1335 N1336 D1337 D1338 F1339 S1340 E1341 V1342 F1343 E1344 F1345 K1346 T1347 F1348 N1349 K1350 I1351 Q1352 S1353 Q1354
V1355 F1356 E1357 S1358 L1359 Y1360 N1361 S1362 N1363 D1364 S1365 V1366 F1367 V1368 G1369 S1370 G1371 K1372 G1373 T1374 G1375 K1376 T1377 A1378 M1379 A1380 E1381 L1382 A1383 L1384 L1385 N1386 H1387 W1388 R1389 Q1390 N1391 K1392 G1393 R1394 A1395 V1396 Y1397 I1398 N1399 P1400 S1401 G1402 E1403 K1404 I1405 D1406 F1407 L1408 L1409 S1410 D1411 W1412 N1413 K1414
R1415 F1416 S1417 H1418 L1419 A1420 G1421 G1422 K1423 I1424 I1425 N1426 K1427 L1428 G1429 N1430 D1431 P1432 S1433 L1434 N1435 L1436 K1437 L1438 L1439 A1440 K1441 S1442 H1443 V1444 L1445 L1446 A1447 T1448 P1449 V1450 Q1451 F1452 E1453 L1454 L1455 S1456 R1457 R1458 W1459 R1460 Q1461 R1462 K1463 N1464 I1465 Q1466 S1467 L1468 E1469 L1470 M1471 I1472 Y1473 D1474
D1475 A1476 H1477 E1478 I1479 S1480 Q1481 G1482 V1483 Y1484 G1485 A1486 V1487 Y1488 E1489 T1490 L1491 I1492 S1493 R1494 M1495 I1496 F1497 I1498 A1499 T1500 Q1501 L1502 E1503 K1504 K1505 I1506 R1507 F1508 V1509 C1510 L1511 S1512 N1513 C1514 L1515 A1516 N1517 A1518 R1519 D1520 F1521 G1522 E1523 W1524 A1525 G1526 M1527 T1528 K1529 S1530 N1531 I1532 Y1533 N1534
F1535 S1536 P1537 S1538 E1539 R1540 I1541 E1542 P1543 L1544 E1545 I1546 N1547 I1548 Q1549 S1550 F1551 K1552 D1553 V1554 E1555 H1556 I1557 S1558 F1559 N1560 F1561 S1562 M1563 L1564 Q1565 M1566 A1567 F1568 E1569 A1570 S1571 A1572 A1573 A1574 A1575 G1576 N1577 R1578 N1579 S1580 S1581 S1582 V1583 F1584 L1585 P1586 S1587 R1588 K1589 D1590 C1591 M1592 E1593 V1594
A1595 S1596 A1597 F1598 M1599 K1600 F1601 S1602 K1603 A1604 I1605 E1606 W1607 D1608 M1609 L1610 N1611 V1612 E1613 E1614 E1615 Q1616 I1617 V1618 P1619 Y1620 I1621 E1622 K1623 L1624 T1625 D1626 G1627 H1628 L1629 R1630 H1631 P1632 L1633 K1634 H1635 G1636 V1637 G1638 I1639 L1640 Y1641 K1642 G1643 M1644 A1645 S1646 N1647 D1648 E1649 R1650 I1651 V1652 K1653 R1654
L1655 Y1656 E1657 Y1658 G1659 A1660 V1661 S1662 V1663 L1664 L1665 I1666 S1667 K1668 S1671 A1672 F1673 A1674 C1675 K1676 T1677 D1678 E1679 V1680 I1681 I1682 I1683 G1684 T1685 N1686 L1687 Y1688 D1689 G1690 A1691 E1692 H1693 K1694 Y1695 M1696 P1697 Y1698 T1699 I1700 N1701 E1702 L1703 L1704 E1705 M1706 V1707 G1708 L1709 A1710 S1711 G1712 ASN ASP SER
M1716 A1717 G1718 K1719 V1720 L1721 I1722 L1723 T1724 S1725 H1726 N1727 M1728 K1729 A1730 Y1731 V1732 K1733 K1734 F1735 L1736 I1737 E1738 P1739 L1740 P1741 T1742 E1743 S1744 Y1745 L1746 Q1747 Y1748 I1749 I1750 H1751 D1752 T1753 L1754 N1755 N1756 E1757 I1758 A1759 N1760 S1761 I1762 I1763 Q1764 S1765 K1766 Q1767 D1768 C1769 V1770 D1771 W1772 F1773 T1774 Y1775
S1776 Y1777 F1778 Y1779 R1780 R1781 I1782 H1783 V1784 N1785 P1786 S1787 Y1788 Y1789 G1790 V1791 R1792 D1793 T1794 S1795 P1796 H1797 G1798 I1799 S1800 V1801 F1802 L1803 S1804 N1805 L1806 V1807 E1808 T1809 C1810 L1811 N1812 D1813 L1814 V1815 E1816 S1817 S1818 F1819 I1820 E1821 I1822 D1823 D1824 T1825 GLU ALA GLU VAL THR ALA GLU VAL ASN GLY
GLY ASP ASP GLU ALA T1841 E1842 I1843 I1844 S1845 T1846 L1847 S1848 N1849 G1850 L1851 I1852 A1853 S1854 H1855 Y1856 G1857 V1858 S1859 F1860 F1861 T1862 I1863 Q1864 S1865 F1866 V1867 S1868 S1869 L1870 S1871 N1872 T1873 S1874 T1875 L1876 K1877 N1878 M1879 L1880 Y1881 V1882 L1883 S1884 T1885 A1886 V1887 E1888 F1889 E1890 L1894 R1895 K1896 G1897
D1898 R1899 A1900 L1901 L1902 L1905 S1906 K1907 R1908 L1909 P1910 L1911 R1912 F1913 P1914 E1915 H1916 T1917 S1918 S1919 G1920 S1921 F1924 K1925 V1926 F1927 L1928 L1929 L1930 Q1931 A1932 Y1933 R1936 L1937 E1938 L1939 P1940 V1941 D1942 F1943 Q1944 N1945 D1946 I1950 L1951 E1952 K1953 V1954 V1960 V1961 V1962 D1963 I1964 L1965 S1966
A1967 N1968 G1969 Y1970 L1971 N1972 A1973 T1974 T1975 A1976 M1977 D1978 M1982 V1987 N1992 P1993 L1994 R1995 Q1996 H1999 F2000 N2001 N2002 K2003 I2004 L2005 E2006 K2007 C2008 K2009 E2010 I2011 N2012 V2013 E2014 T2015 V2016 Y2017 D2018 I2019 W2020 A2021 L2022 E2023 D2024 E2025 E2026 R2027 D2028 E2029 I2030 L2031 T2032 L2033 T2034 D2035

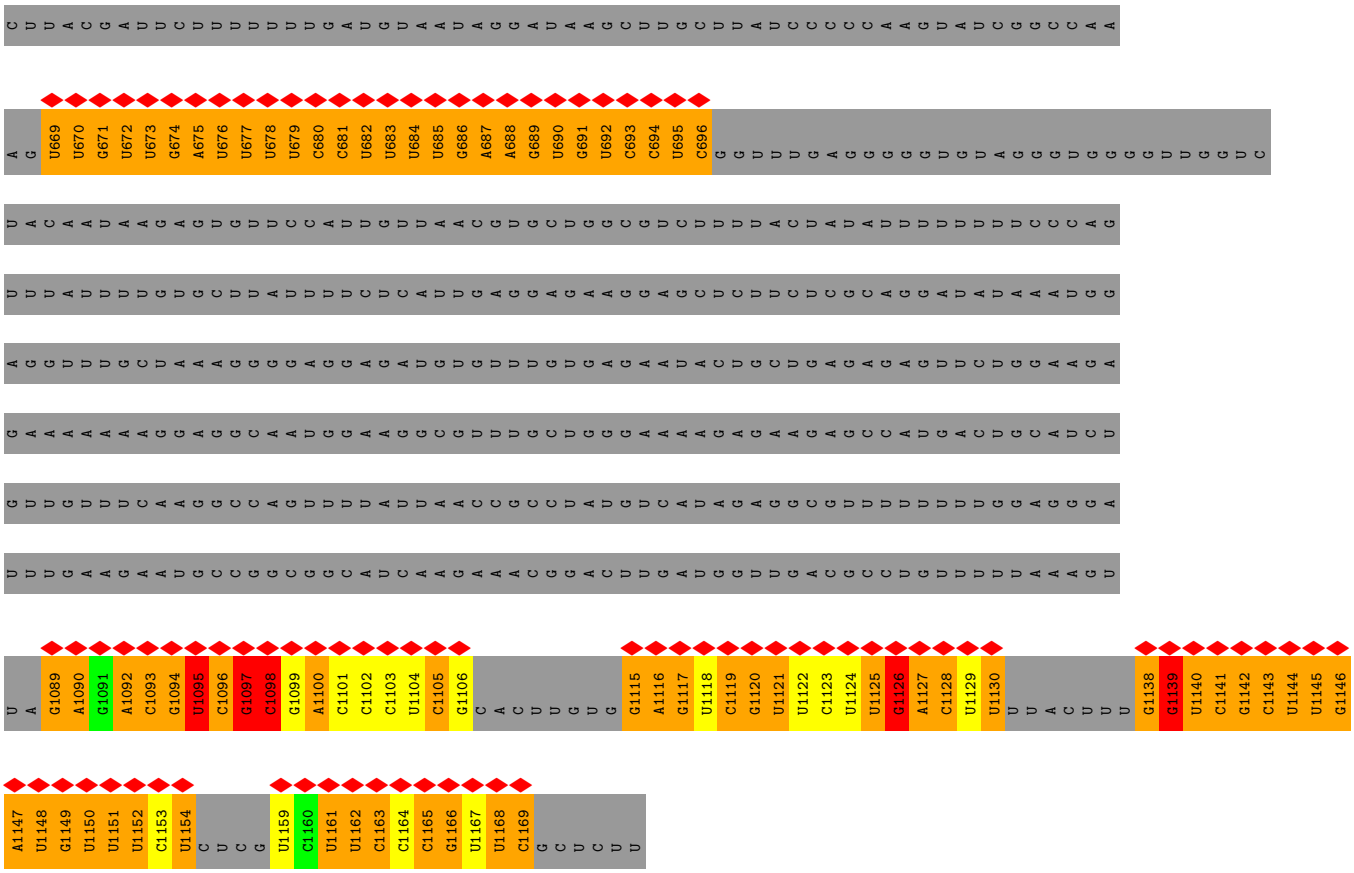
• Molecule 28: Pre-mRNA-BPS





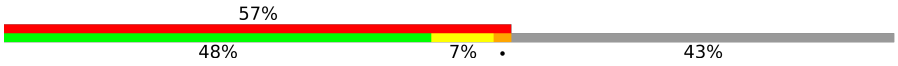
• Molecule 29: U2 snRNA

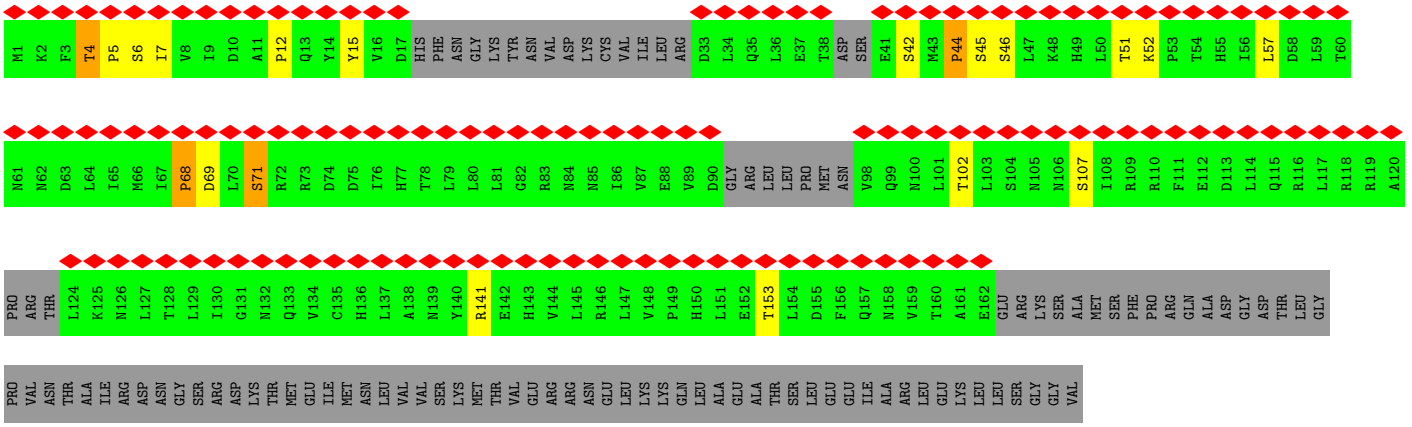




• Molecule 30: U2 small nuclear ribonucleoprotein A'

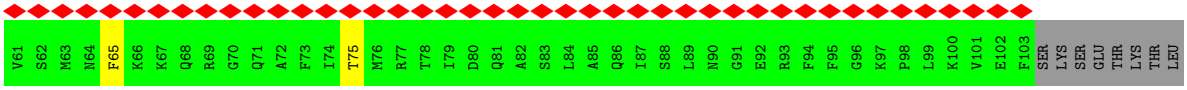
Chain o:





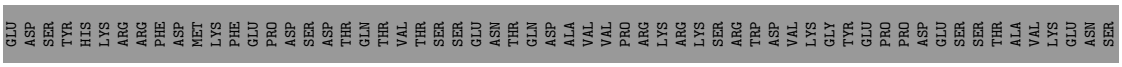
• Molecule 31: U2 small nuclear ribonucleoprotein B"

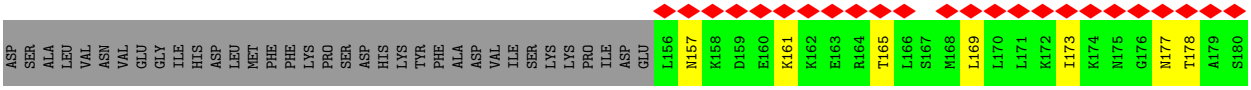
Chain p:

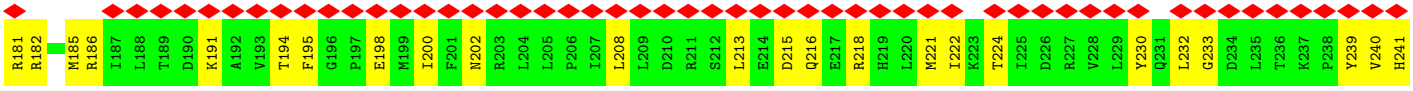


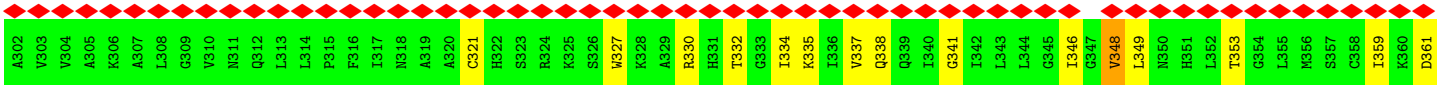
• Molecule 32: U2 snRNP component HSH155

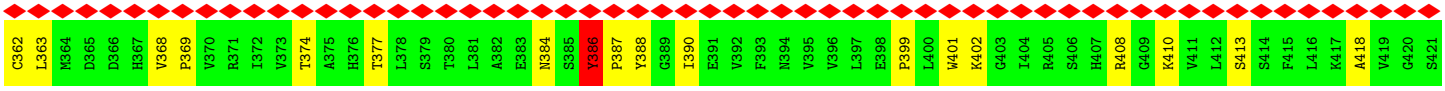
Chain 1:

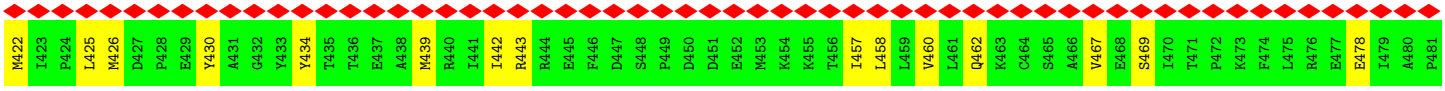


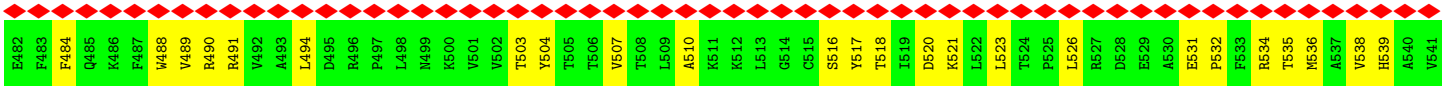


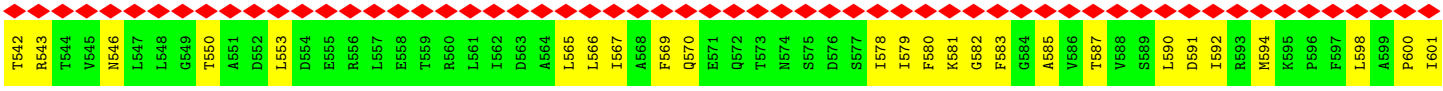


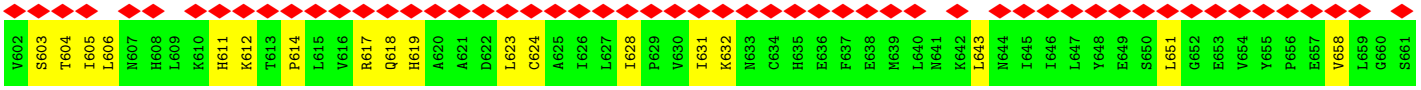


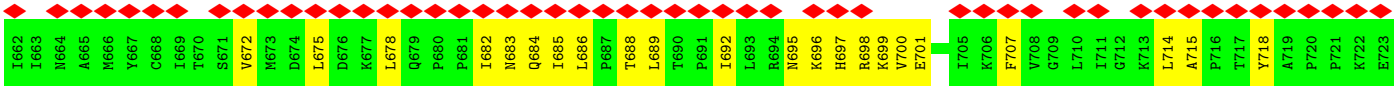


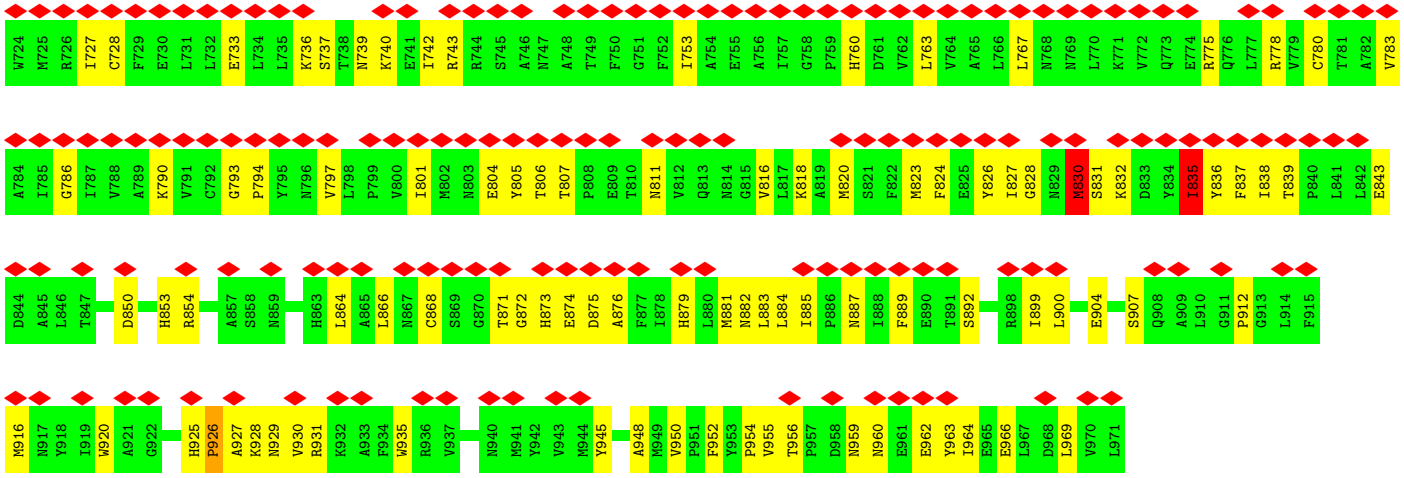






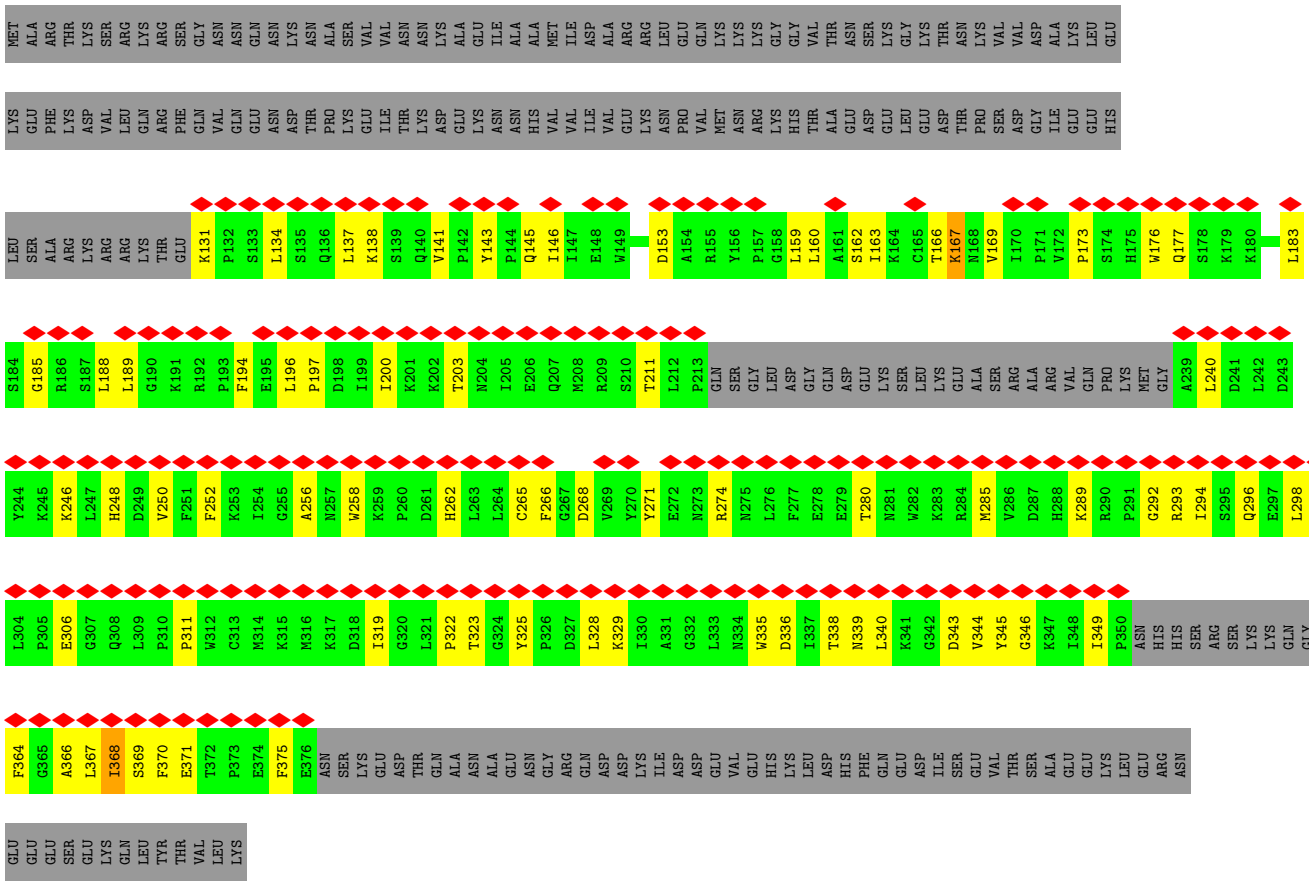






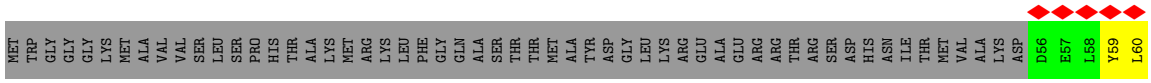
• Molecule 33: Cold sensitive U2 snRNA suppressor 1

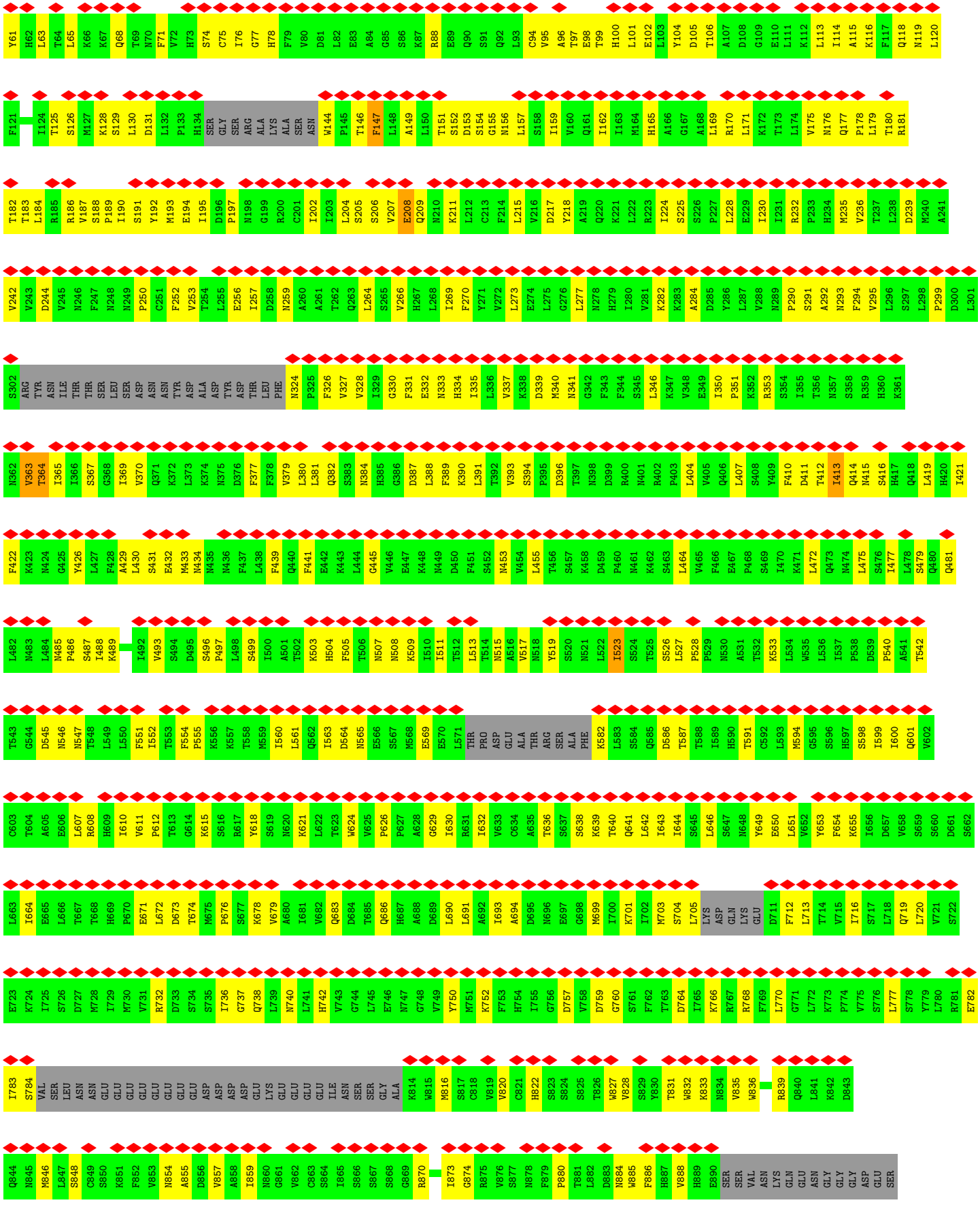
Chain 2:

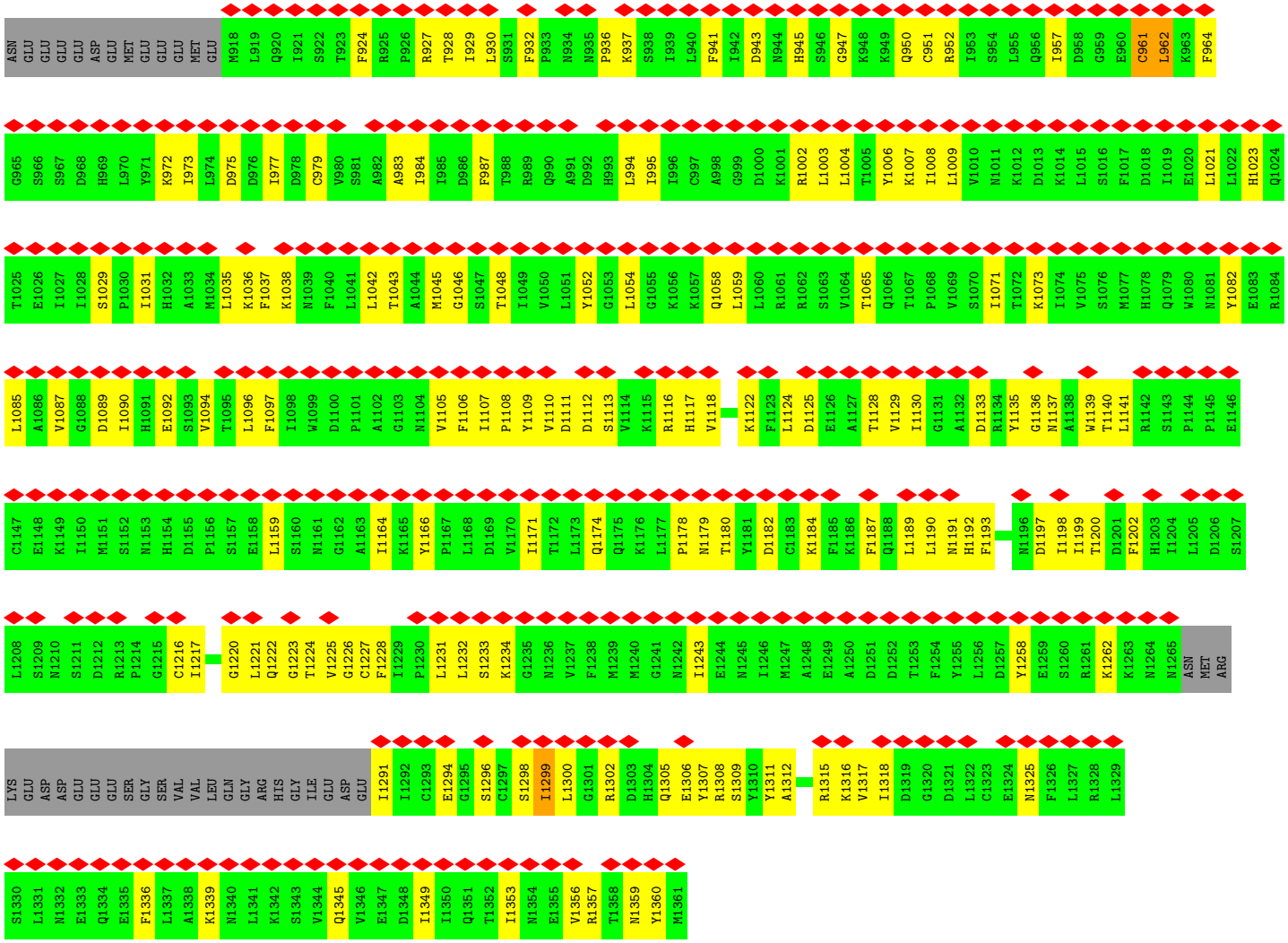


• Molecule 34: Pre-mRNA-splicing factor RSE1

Chain 3:

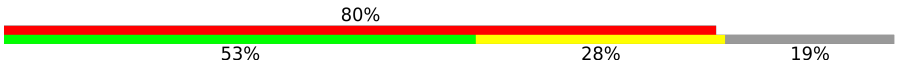


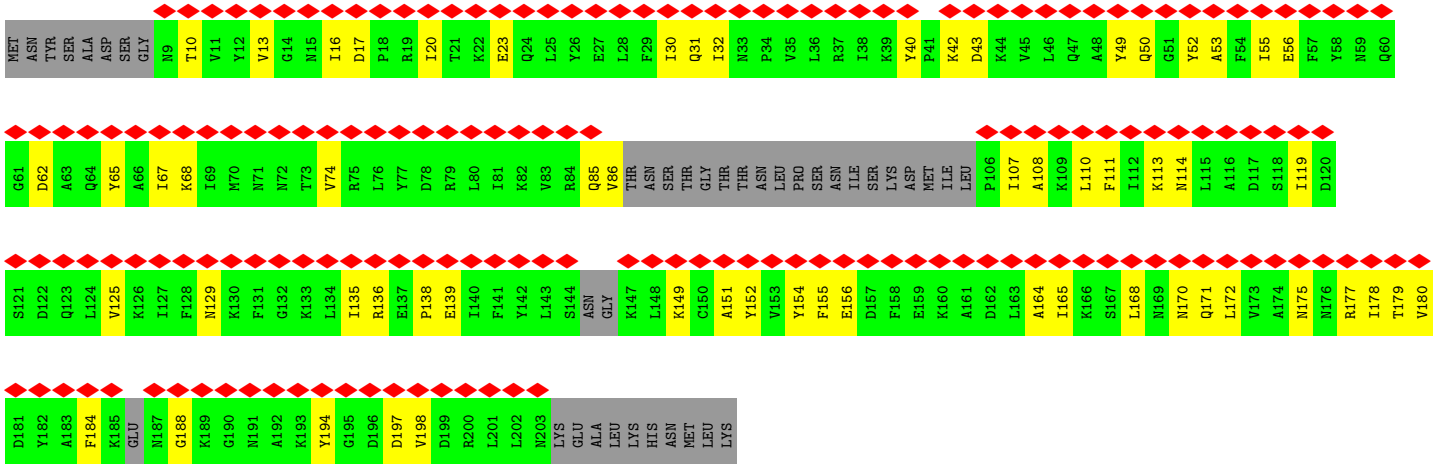

Y61 H62 L63 T64 L65 K66 K67 Q68 T69 N70 F71 V72 H73 S74 C75 I76 G77 H78 F79 V80 D81 L82 E83 A84 G85 S86 K87 R88 E89 Q90 S91 Q92 L93 C94 V95 A96 T97 E98 T99 H100 L101 E102 L103 Y104 D105 T106 A107 D108 G109 E110 L111 K112 L113 I114 A115 K116 F117 Q118 N119 L120
F121 I124 T125 S126 M127 K128 S129 L130 D131 L132 P133 H134 SER GLY SER ARG ALA LYS ALA SER ASN W144 P145 T146 F147 L148 A149 L150 T151 S152 D153 S154 G155 N156 L157 S158 I159 V160 Q161 I162 I163 M164 H165 A166 G167 A168 L169 R170 L171 K172 T173 L174 V175 N176 Q177 P178 L179 T180 R181
T182 T183 L184 R185 R186 V187 S188 P189 I190 S191 Y192 M193 E194 I195 D196 P197 N198 G199 R200 C201 I202 I203 L204 S205 S206 V207 E208 Q209 N210 K211 L212 C213 F214 L215 V216 D217 Y218 A219 Q220 K221 L222 R223 I224 S225 S226 P227 L228 E229 I230 I231 R232 P233 H234 M235 V236 T237 L238 D239 M240 A241
V242 V243 D244 V245 N246 F247 N248 N249 P250 C251 F252 V253 T254 L255 E256 I257 D258 N259 A260 A261 T262 Q263 L264 S265 V266 H267 L268 I269 F270 Y271 V272 L273 E274 L275 G276 L277 N278 H279 I280 V281 K282 K283 A284 D285 Y286 L287 V288 N289 P290 S291 A292 N293 F294 V295 L296 S297 L298 P299 D300 L301
S302 ARG TYR ASN ILE THR THR SER LEU SER ASP ASN ASN TYR ASP ALA ASP TYR ASP THR LEU PHE N324 P325 F326 V327 V328 I329 G330 F331 E332 N333 H334 I335 L336 V337 K338 D339 M340 N341 G342 F343 F344 S345 L346 K347 V348 E349 I350 P351 K352 R353 S354 I355 T356 N357 S358 R359 H360 K361
N362 V363 T364 I365 I366 S367 G368 I369 V370 Q371 K372 L373 K374 N375 D376 F377 F378 V379 L380 L381 Q382 S383 N384 H385 G386 D387 L388 F389 K390 L391 T392 V393 S394 P395 D396 T397 N398 D399 R400 N401 R402 P403 L404 V405 Q406 L407 S408 Y409 F410 D411 T412 I413 Q414 N415 S416 H417 Q418 L419 H420 I421
F422 K423 N424 G425 Y426 L427 F428 A429 L430 S431 E432 M433 N434 N435 N436 F437 L438 F439 Q440 F441 E442 K443 L444 G445 V446 E447 K448 N449 D450 F451 S452 N453 V454 L455 T456 S457 K458 D459 P460 N461 K462 S463 L464 V465 F466 E467 P468 S469 I470 K471 L472 Q473 N474 L475 S476 I477 L478 S479 Q480 Q481
L482 N483 L484 N485 P486 S487 I488 K489 I492 V493 S494 D495 S496 P497 L498 S499 I500 A501 T502 K503 H504 F505 T506 N507 N508 K509 I510 I511 T512 L513 T514 N515 A516 V517 N518 Y519 S520 N521 L522 I523 S524 T525 S526 L527 P528 P529 N530 A531 T532 K533 L534 W535 L536 I537 P538 D539 P540 A541 T542
T543 G544 D545 N546 N547 T548 L549 L550 F551 I552 T553 F554 P555 K556 K557 T558 M559 I560 L561 Q562 I563 D564 N565 E566 S567 M568 E569 E570 L571 THR PRO ASP GLU ALA THR ARG SER ALA PHE K582 L583 S584 Q585 D586 T587 T588 I589 H590 T591 C592 L593 M594 G595 S596 H597 S598 I599 I600 Q601 V602
C603 T604 A605 E606 L607 R608 H609 I610 V611 P612 T613 G614 K615 S616 R617 Y618 S619 N620 K621 L622 T623 W624 V625 P626 P627 A628 G629 I630 R631 I632 V633 C634 A635 T636 S637 S638 K639 T640 Q641 L642 I643 I644 S645 L646 S647 N648 Y649 E650 L651 V652 Y653 F654 K655 I656 D657 V658 S659 S660 D661 S662
L663 I664 E665 L666 T667 T668 H669 P670 E671 L672 D673 T674 M675 P676 S677 K678 V679 A680 I681 V682 Q683 D684 T685 Q686 H687 A688 D689 L690 L691 A692 I693 A694 D695 N696 E697 G698 M699 I700 K701 I702 M703 S704 L705 LYS ASP GLN LYS GLU D711 F712 L713 T714 V715 I716 S717 L718 Q719 L720 V721 S722
E723 K724 T725 S726 D727 M728 I729 M730 V731 R732 D733 S734 S735 T736 G737 Q738 L739 N740 L741 H742 V743 G744 L745 E746 N747 G748 V749 Y750 M751 K752 F753 H754 I755 G756 D757 V758 D759 G760 S761 F762 T763 D764 I765 K766 R767 R768 F769 L770 G771 L772 K773 P774 V775 S776 L777 S778 Y779 L780 R781 E782
I783 S784 VAL SER LEU ASN ASN GLU GLU GLU GLU GLU GLU ASP ASP ASP GLU LYS GLU GLU GLU GLU ILE ASN SER SER GLY ALA K814 W815 M816 S817 C818 V819 V820 C821 H822 S823 S824 S825 T826 W827 V828 S829 Y830 T831 W832 K833 N834 V835 W836 R839 Q840 L841 K842 D843
Q844 N845 M846 L847 S848 C849 S850 K851 F852 V853 N854 A855 D856 V857 A858 I859 N860 G861 V862 C863 S864 I865 S866 S867 S868 G869 R870 I873 G874 R875 V876 S877 N878 F879 P880 T881 L882 D883 N884 W885 F886 H887 V888 H889 E890 SER SER VAL ASN LYS GLN GLU ASN GLY GLY GLY ASP GLU SER



• Molecule 35: Protein HSH49

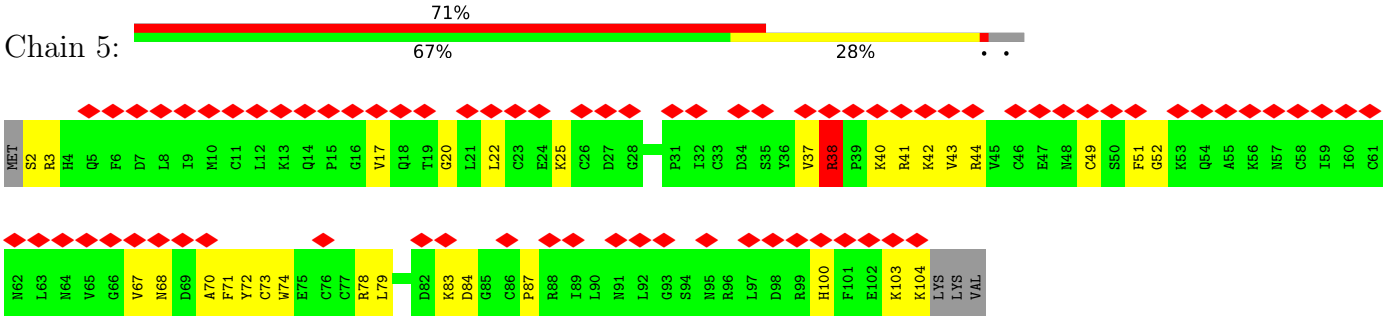
Chain 4:





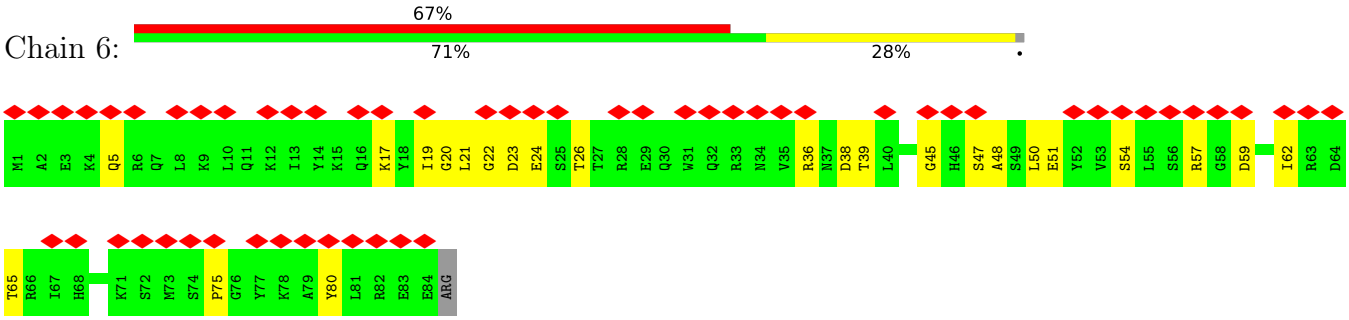
• Molecule 36: Pre-mRNA-splicing factor RDS3

Chain 5:



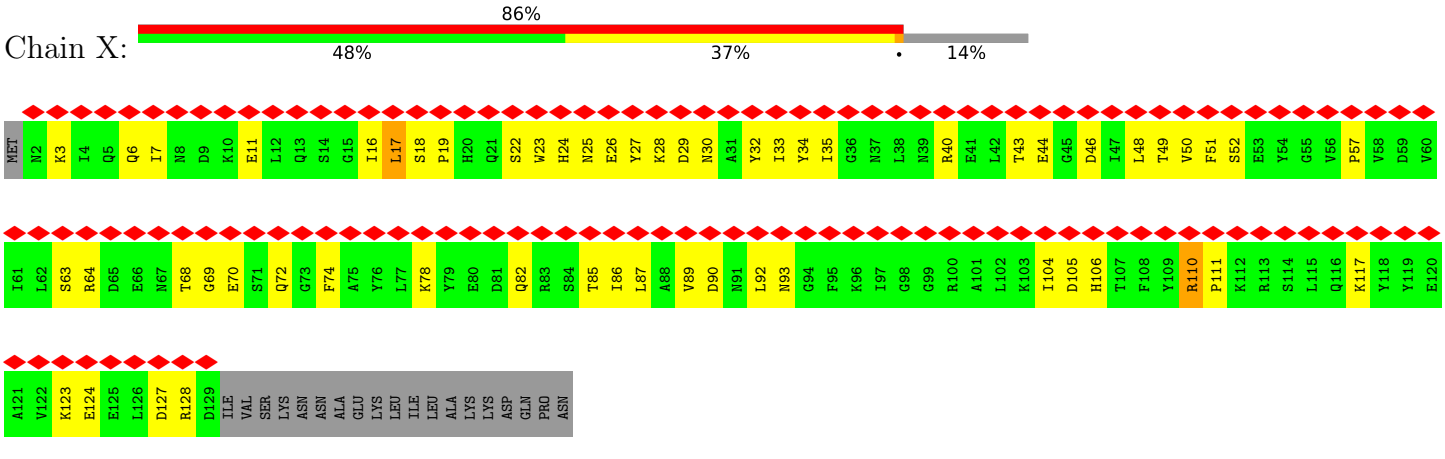
• Molecule 37: RDS3 complex subunit 10

Chain 6:



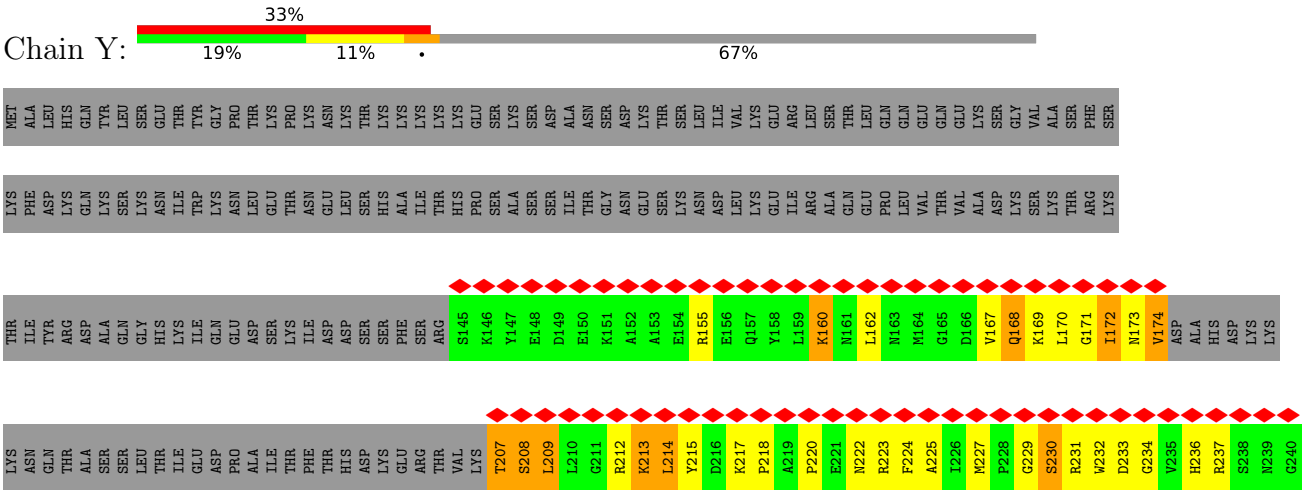
• Molecule 38: U2 snRNP component IST3

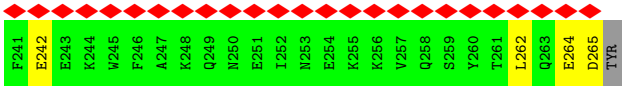
Chain X:



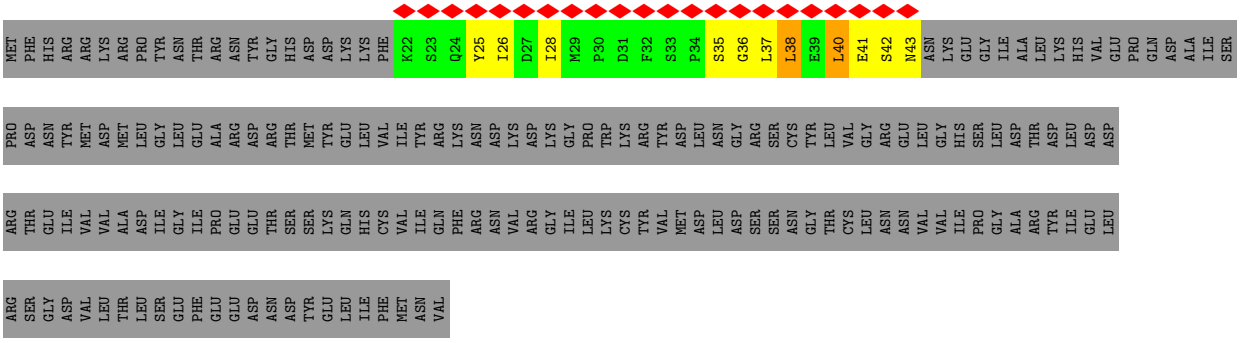
• Molecule 39: Pre-mRNA-splicing factor CWC26

Chain Y:

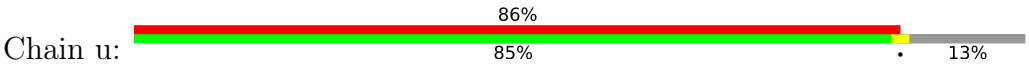


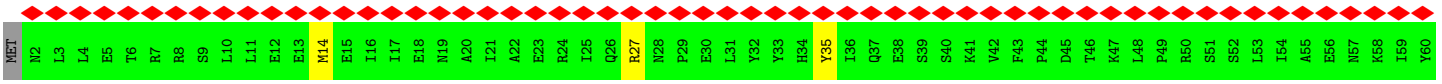


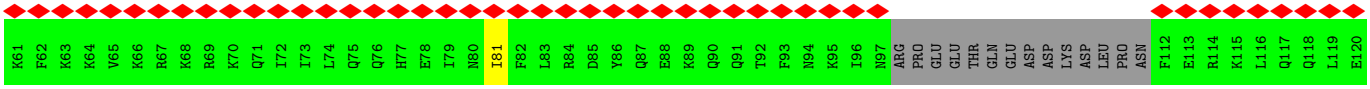
• Molecule 40: Pre-mRNA leakage protein 1

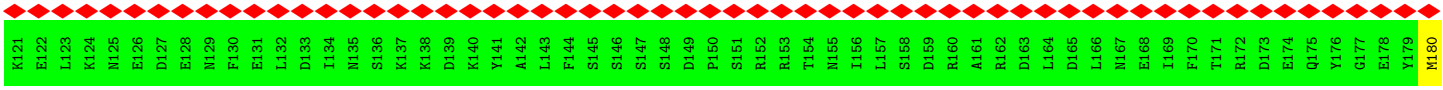


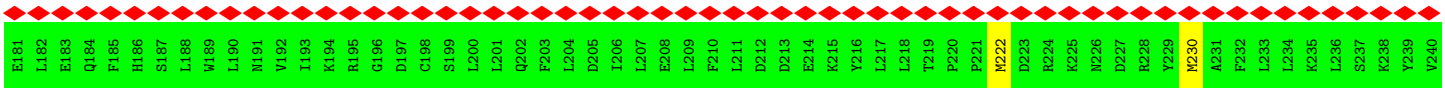
• Molecule 41: Pre-mRNA-splicing factor PRP9

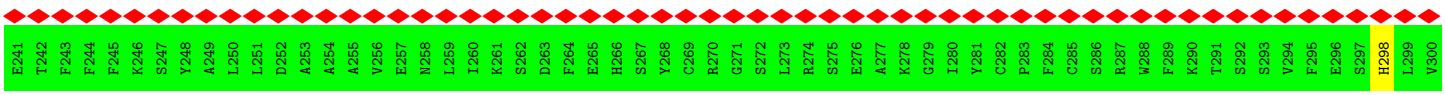


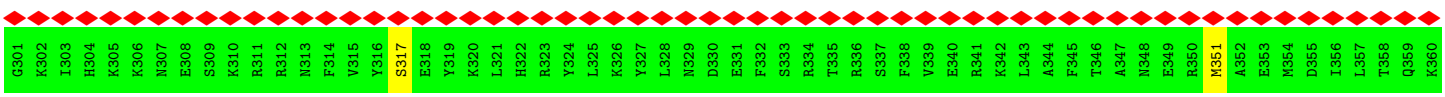


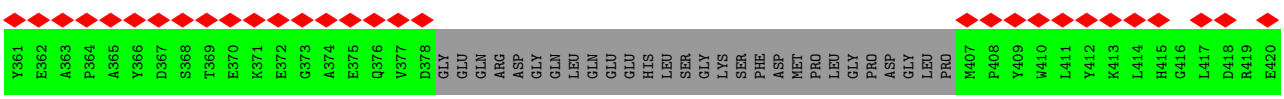


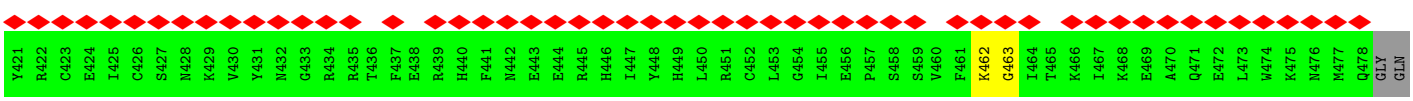


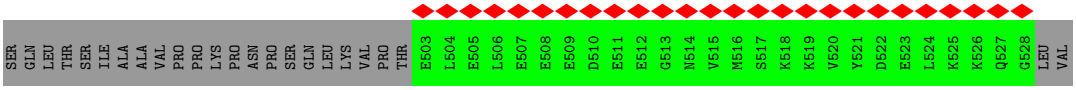




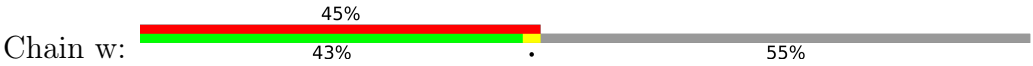


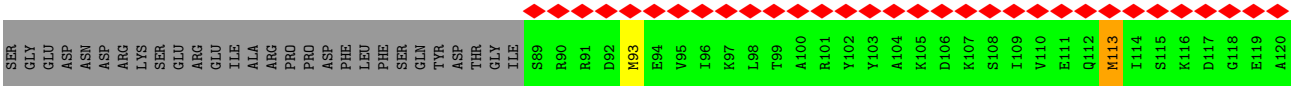


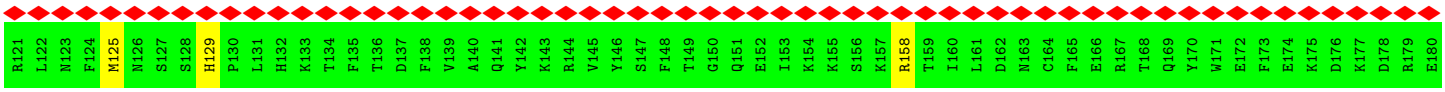


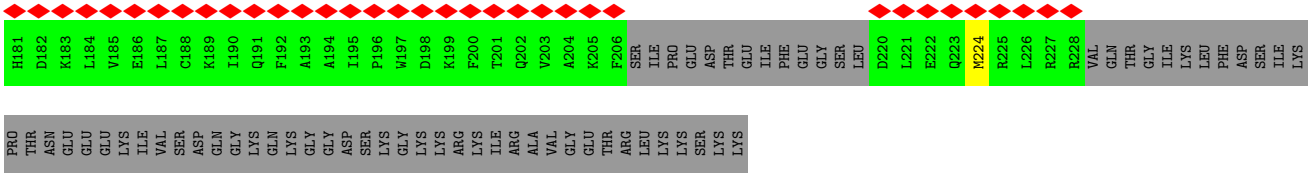


• Molecule 42: Pre-mRNA-splicing factor PRP21

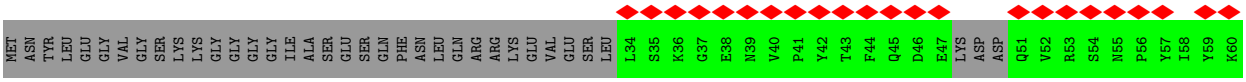


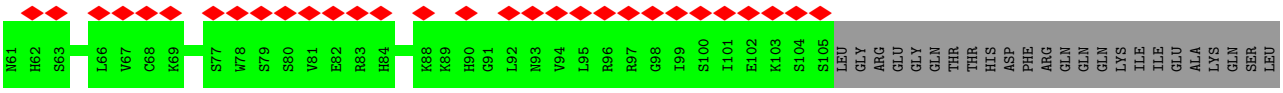


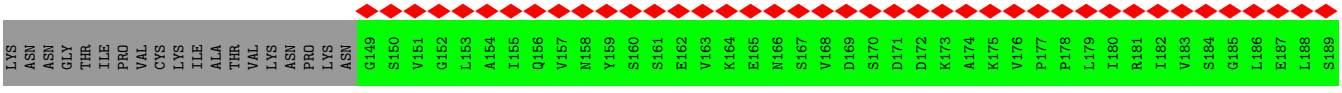


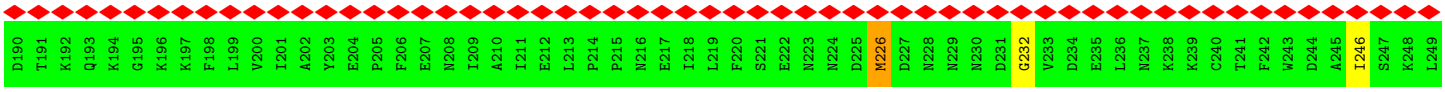


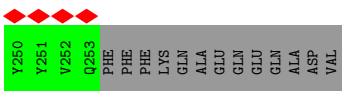
• Molecule 43: Pre-mRNA-splicing factor PRP11











4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	500657	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.386	Depositor
Minimum map value	-0.170	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.023	Depositor
Map size (Å)	535.2, 535.2, 535.2	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.338, 1.338, 1.338	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.33	2/18332 (0.0%)	0.51	1/24851 (0.0%)
2	K	0.33	0/3431	0.59	0/4631
3	L	0.31	0/3219	0.48	0/4332
4	N	0.28	0/4937	0.47	0/6704
5	J	0.30	0/2485	0.46	0/3333
6	E	0.34	0/1167	0.50	0/1571
7	M	0.31	0/963	0.51	0/1310
8	C	0.32	0/6874	0.52	0/9305
9	z	0.49	0/259	0.70	0/322
10	q	0.49	0/367	0.65	0/457
11	r	0.59	0/307	0.75	0/382
12	x	0.48	0/295	0.68	0/367
13	t	0.50	0/306	0.71	0/379
14	y	0.49	0/262	0.71	0/324
15	s	0.47	0/306	0.68	0/379
16	F	0.38	0/2277	0.90	0/3534
17	I	0.53	4/2604 (0.2%)	0.99	10/4046 (0.2%)
18	B	0.36	1/4151 (0.0%)	0.97	18/6462 (0.3%)
19	O	0.25	0/573	0.42	0/763
20	S	0.41	0/641	0.65	2/868 (0.2%)
20	d	0.29	0/315	0.46	0/392
20	l	0.45	1/620 (0.2%)	0.68	1/841 (0.1%)
21	P	0.41	0/567	0.61	0/762
21	a	0.28	0/290	0.46	0/359
21	h	0.37	0/615	0.61	0/829
22	Q	0.39	0/756	0.69	1/1023 (0.1%)
22	b	0.27	0/305	0.47	0/376
22	m	0.42	0/649	0.61	0/880
23	R	0.38	0/764	0.57	0/1026
23	c	0.25	0/358	0.45	0/444
23	n	0.41	0/535	0.57	0/717
24	T	0.38	0/612	0.59	1/830 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
24	e	0.29	0/285	0.43	0/351
24	i	0.43	0/585	0.62	0/795
25	U	0.39	0/597	0.62	0/807
25	f	0.30	0/278	0.45	0/344
25	j	0.44	0/564	0.66	2/761 (0.3%)
26	V	0.41	0/582	0.67	1/785 (0.1%)
26	g	0.25	0/277	0.46	0/341
26	k	0.37	0/532	0.60	0/715
27	D	0.40	1/13899 (0.0%)	0.62	6/18845 (0.0%)
28	G	0.26	0/1038	0.87	3/1611 (0.2%)
29	H	1.10	61/4835 (1.3%)	1.70	185/7502 (2.5%)
30	o	1.03	9/839 (1.1%)	1.65	11/1127 (1.0%)
31	p	0.81	3/467 (0.6%)	1.35	2/623 (0.3%)
32	1	0.28	0/6600	0.48	1/8962 (0.0%)
33	2	0.26	0/1775	0.45	0/2402
34	3	0.30	0/9564	0.57	1/12963 (0.0%)
35	4	0.26	0/1453	0.43	0/1954
36	5	0.28	0/827	0.46	0/1105
37	6	0.28	0/702	0.44	0/939
38	X	0.49	0/1071	0.65	0/1445
39	Y	0.52	0/743	0.70	0/994
40	Z	0.51	0/176	0.59	0/237
41	u	0.35	5/3972 (0.1%)	0.41	0/5322
42	w	0.45	4/1105 (0.4%)	0.37	0/1475
43	v	0.29	1/1396 (0.1%)	0.41	0/1881
All	All	0.42	92/114304 (0.1%)	0.71	246/157085 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
2	K	0	2
3	L	0	1
4	N	0	2
8	C	0	2
27	D	0	4
32	1	0	4
34	3	0	1
41	u	0	2
All	All	0	19

All (92) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	H	1161	U	O3'-P	-15.59	1.42	1.61
29	H	1092	A	O3'-P	-14.82	1.43	1.61
29	H	1116	A	O3'-P	-11.52	1.47	1.61
29	H	1163	C	O5'-C5'	9.10	1.59	1.44
29	H	1116	A	C3'-O3'	-8.99	1.29	1.42
29	H	1127	A	O3'-P	-8.68	1.50	1.61
29	H	1167	U	O3'-P	8.59	1.71	1.61
1	A	266	LEU	C-N	8.15	1.49	1.34
29	H	1164	C	O3'-P	-8.13	1.51	1.61
17	I	142	G	N7-C5	-7.95	1.34	1.39
29	H	1162	U	P-O5'	7.58	1.67	1.59
29	H	1163	C	P-O5'	7.54	1.67	1.59
30	o	46	SER	CB-OG	7.47	1.51	1.42
29	H	1117	G	P-O5'	7.21	1.67	1.59
30	o	45	SER	CB-OG	7.17	1.51	1.42
31	p	33	SER	CB-OG	7.11	1.51	1.42
30	o	69	ASP	CA-CB	-7.06	1.38	1.53
29	H	1154	U	C1'-N1	7.04	1.59	1.48
29	H	1128	C	C5'-C4'	-7.02	1.43	1.51
29	H	1096	C	O3'-P	7.00	1.69	1.61
30	o	6	SER	CB-OG	6.96	1.51	1.42
18	B	175	G	C1'-N9	-6.96	1.37	1.46
29	H	546	U	C1'-N1	6.93	1.59	1.48
29	H	1140	U	C1'-N1	6.91	1.59	1.48
29	H	564	U	C1'-N1	6.88	1.59	1.48
29	H	684	U	C1'-N1	6.86	1.59	1.48
29	H	679	U	C1'-N1	6.85	1.59	1.48
29	H	673	U	C1'-N1	6.84	1.59	1.48
29	H	566	U	C1'-N1	6.83	1.58	1.48
29	H	682	U	C1'-N1	6.82	1.58	1.48
29	H	685	U	C1'-N1	6.82	1.58	1.48
29	H	669	U	C1'-N1	6.81	1.58	1.48
29	H	567	U	C1'-N1	6.81	1.58	1.48
29	H	552	U	C1'-N1	6.81	1.58	1.48
29	H	678	U	C1'-N1	6.81	1.58	1.48
29	H	565	U	C1'-N1	6.80	1.58	1.48
29	H	672	U	C1'-N1	6.78	1.58	1.48
29	H	568	U	C1'-N1	6.78	1.58	1.48
29	H	676	U	C1'-N1	6.76	1.58	1.48
29	H	1095	U	O3'-P	6.51	1.69	1.61
29	H	1169	C	C1'-N1	6.51	1.58	1.48
29	H	696	C	C1'-N1	6.37	1.58	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	H	693	C	C1'-N1	6.34	1.58	1.48
29	H	554	C	C1'-N1	6.30	1.58	1.48
29	H	694	C	C1'-N1	6.30	1.58	1.48
29	H	1117	G	C5'-C4'	6.29	1.58	1.51
29	H	680	C	C1'-N1	6.29	1.58	1.48
29	H	549	C	C1'-N1	6.29	1.58	1.48
29	H	551	C	C1'-N1	6.27	1.58	1.48
29	H	681	C	C1'-N1	6.27	1.58	1.48
29	H	1168	U	C5'-C4'	-6.25	1.43	1.51
29	H	569	C	C1'-N1	6.24	1.58	1.48
29	H	1162	U	O3'-P	6.19	1.68	1.61
29	H	1162	U	O5'-C5'	6.09	1.54	1.44
17	I	142	G	C2-N2	-6.06	1.28	1.34
41	u	180	MET	CG-SD	6.00	1.96	1.81
17	I	73	A	C1'-N9	-5.99	1.38	1.46
29	H	1165	C	O5'-C5'	5.98	1.54	1.44
29	H	1151	U	O5'-C5'	-5.90	1.33	1.42
29	H	1163	C	O3'-P	5.87	1.68	1.61
29	H	1097	G	O3'-P	5.81	1.68	1.61
29	H	1162	U	C2-N3	5.79	1.41	1.37
30	o	42	SER	CB-OG	5.79	1.49	1.42
30	o	102	THR	CB-OG1	5.79	1.54	1.43
29	H	690	U	C1'-N1	5.75	1.57	1.48
29	H	1161	U	C3'-O3'	-5.74	1.34	1.42
29	H	695	U	C1'-N1	5.74	1.57	1.48
29	H	1162	U	C3'-C2'	-5.73	1.46	1.52
29	H	692	U	C1'-N1	5.71	1.57	1.48
29	H	683	U	C1'-N1	5.70	1.57	1.48
42	w	113	MET	CG-SD	5.70	1.96	1.81
29	H	121	C	C1'-N1	5.67	1.57	1.48
29	H	677	U	C1'-N1	5.62	1.57	1.48
29	H	670	U	C1'-N1	5.62	1.57	1.48
17	I	74	U	C1'-N1	5.59	1.57	1.48
30	o	15	TYR	CB-CG	-5.58	1.43	1.51
41	u	14	MET	CG-SD	5.55	1.95	1.81
43	v	226	MET	CG-SD	5.55	1.95	1.81
30	o	51	THR	CB-OG1	5.52	1.54	1.43
42	w	224	MET	CG-SD	5.51	1.95	1.81
42	w	93	MET	CG-SD	5.46	1.95	1.81
41	u	230	MET	CG-SD	5.45	1.95	1.81
41	u	351	MET	CG-SD	5.42	1.95	1.81
42	w	125	MET	CG-SD	5.40	1.95	1.81

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1014	LYS	C-N	-5.29	1.24	1.34
29	H	147	A	O3'-P	-5.22	1.54	1.61
31	p	75	THR	CB-OG1	5.20	1.53	1.43
41	u	222	MET	CG-SD	5.18	1.94	1.81
20	l	82	PRO	N-CD	5.16	1.55	1.47
30	o	153	THR	CB-OG1	5.09	1.53	1.43
31	p	65	PHE	CB-CG	-5.06	1.42	1.51
27	D	1695	TYR	CE1-CZ	-5.06	1.31	1.38

All (246) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	1162	U	C5'-C4'-O4'	14.85	126.92	109.10
29	H	1093	C	P-O5'-C5'	14.77	144.53	120.90
29	H	1147	A	C5'-C4'-C3'	-14.16	93.34	116.00
29	H	1092	A	C2'-C3'-O3'	14.09	140.49	109.50
29	H	1098	C	N1-C1'-C2'	-13.36	96.64	114.00
29	H	1151	U	C4'-C3'-O3'	-12.56	83.02	109.40
27	D	1213	ARG	NE-CZ-NH2	-12.13	114.23	120.30
18	B	96	U	O5'-P-OP1	-11.67	95.20	105.70
29	H	1151	U	P-O5'-C5'	11.65	139.54	120.90
29	H	1117	G	C5'-C4'-O4'	11.48	122.87	109.10
29	H	1117	G	C5'-C4'-C3'	-10.91	98.54	116.00
29	H	1163	C	C5'-C4'-O4'	10.55	121.77	109.10
29	H	1126	G	N9-C1'-C2'	-10.00	101.00	112.00
17	I	142	G	N1-C6-O6	-9.88	113.97	119.90
29	H	1139	G	N9-C1'-C2'	-9.75	101.27	112.00
29	H	1163	C	C5'-C4'-C3'	-9.72	100.44	116.00
29	H	1147	A	P-O5'-C5'	9.62	136.28	120.90
29	H	1162	U	C5'-C4'-C3'	-9.16	101.34	116.00
29	H	1168	U	C4'-C3'-O3'	-9.00	90.50	109.40
29	H	142	C	N1-C1'-C2'	-8.82	102.30	112.00
30	o	44	PRO	N-CA-CB	8.81	113.87	103.30
17	I	142	G	C5-C6-O6	8.75	133.85	128.60
29	H	1152	U	P-O5'-C5'	8.71	134.83	120.90
29	H	1151	U	O4'-C1'-N1	8.60	115.08	108.20
29	H	1092	A	P-O5'-C5'	8.56	134.60	120.90
29	H	1148	U	C4'-C3'-O3'	-8.53	91.50	109.40
29	H	148	G	C5'-C4'-C3'	-8.27	102.76	116.00
29	H	1165	C	C5'-C4'-C3'	-8.26	102.78	116.00
17	I	142	G	N1-C2-N3	8.21	128.83	123.90
29	H	1151	U	C5'-C4'-O4'	8.05	118.77	109.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	1168	U	P-O5'-C5'	-7.95	108.19	120.90
29	H	1167	U	C2'-C3'-O3'	7.88	126.85	109.50
29	H	1092	A	C4'-C3'-O3'	-7.86	92.90	109.40
17	I	71	U	C2-N1-C1'	7.82	127.09	117.70
29	H	1165	C	C5'-C4'-O4'	7.82	118.48	109.10
29	H	1147	A	C4'-C3'-O3'	7.75	128.51	113.00
29	H	1161	U	C5'-C4'-C3'	-7.75	103.60	116.00
29	H	1093	C	C5'-C4'-C3'	-7.73	103.63	116.00
29	H	1169	C	P-O5'-C5'	-7.65	108.67	120.90
18	B	33	U	P-O3'-C3'	7.63	128.86	119.70
29	H	1097	G	C3'-C2'-O2'	7.62	135.38	113.30
29	H	1165	C	C4'-C3'-O3'	7.56	128.12	113.00
18	B	40	C	C2-N3-C4	-7.45	116.18	119.90
29	H	1115	G	O5'-P-OP1	-7.29	99.14	105.70
29	H	1168	U	C2'-C3'-O3'	7.29	125.53	109.50
30	o	5	PRO	N-CA-CB	7.25	112.00	103.30
29	H	1089	G	C4'-C3'-O3'	7.24	127.49	113.00
30	o	42	SER	N-CA-CB	-7.24	99.64	110.50
29	H	1128	C	C5'-C4'-O4'	7.24	117.79	109.10
29	H	547	G	OP2-P-O3'	7.24	121.13	105.20
29	H	551	C	OP2-P-O3'	7.24	121.13	105.20
29	H	546	U	OP2-P-O3'	7.24	121.12	105.20
29	H	545	G	OP2-P-O3'	7.24	121.12	105.20
29	H	681	C	OP2-P-O3'	7.24	121.12	105.20
29	H	552	U	OP2-P-O3'	7.23	121.11	105.20
29	H	557	G	OP2-P-O3'	7.23	121.11	105.20
29	H	561	A	OP2-P-O3'	7.23	121.11	105.20
29	H	671	G	OP2-P-O3'	7.23	121.10	105.20
29	H	556	A	OP2-P-O3'	7.22	121.09	105.20
29	H	564	U	OP2-P-O3'	7.22	121.09	105.20
29	H	567	U	OP2-P-O3'	7.22	121.09	105.20
29	H	670	U	OP2-P-O3'	7.22	121.09	105.20
29	H	695	U	OP2-P-O3'	7.22	121.09	105.20
29	H	569	C	OP2-P-O3'	7.22	121.09	105.20
29	H	687	A	OP2-P-O3'	7.22	121.08	105.20
29	H	691	G	OP2-P-O3'	7.22	121.08	105.20
29	H	562	A	OP2-P-O3'	7.22	121.08	105.20
29	H	544	G	OP2-P-O3'	7.22	121.08	105.20
29	H	566	U	OP2-P-O3'	7.22	121.08	105.20
29	H	669	U	OP2-P-O3'	7.22	121.08	105.20
29	H	550	G	OP2-P-O3'	7.21	121.07	105.20
29	H	684	U	OP2-P-O3'	7.21	121.07	105.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	560	G	OP2-P-O3'	7.21	121.07	105.20
29	H	568	U	OP2-P-O3'	7.21	121.07	105.20
29	H	553	G	OP2-P-O3'	7.21	121.06	105.20
29	H	554	C	OP2-P-O3'	7.21	121.07	105.20
29	H	570	G	OP2-P-O3'	7.21	121.06	105.20
29	H	694	C	OP2-P-O3'	7.21	121.07	105.20
29	H	555	A	OP2-P-O3'	7.21	121.06	105.20
29	H	673	U	OP2-P-O3'	7.21	121.06	105.20
29	H	682	U	OP2-P-O3'	7.21	121.06	105.20
29	H	677	U	OP2-P-O3'	7.21	121.06	105.20
29	H	692	U	OP2-P-O3'	7.21	121.06	105.20
29	H	549	C	OP2-P-O3'	7.21	121.05	105.20
29	H	565	U	OP2-P-O3'	7.20	121.04	105.20
29	H	683	U	OP2-P-O3'	7.20	121.04	105.20
29	H	685	U	OP2-P-O3'	7.20	121.04	105.20
29	H	686	G	OP2-P-O3'	7.20	121.04	105.20
29	H	548	G	OP2-P-O3'	7.20	121.04	105.20
29	H	672	U	OP2-P-O3'	7.20	121.03	105.20
29	H	559	G	OP2-P-O3'	7.20	121.03	105.20
17	I	71	U	N1-C2-O2	7.19	127.83	122.80
29	H	680	C	OP2-P-O3'	7.19	121.02	105.20
29	H	693	C	OP2-P-O3'	7.19	121.02	105.20
29	H	689	G	OP2-P-O3'	7.19	121.02	105.20
29	H	558	A	OP2-P-O3'	7.19	121.01	105.20
29	H	674	G	OP2-P-O3'	7.19	121.01	105.20
29	H	676	U	OP2-P-O3'	7.19	121.01	105.20
29	H	679	U	OP2-P-O3'	7.19	121.01	105.20
29	H	690	U	OP2-P-O3'	7.19	121.01	105.20
29	H	563	G	OP2-P-O3'	7.19	121.01	105.20
29	H	678	U	OP2-P-O3'	7.18	121.01	105.20
29	H	675	A	OP2-P-O3'	7.18	121.00	105.20
29	H	1159	U	O5'-P-OP1	-7.18	99.24	105.70
29	H	688	A	OP2-P-O3'	7.18	120.99	105.20
29	H	1089	G	O5'-P-OP1	-7.13	99.28	105.70
29	H	1159	U	O5'-P-OP2	-7.12	99.30	105.70
29	H	139	G	O5'-P-OP2	-7.11	99.30	105.70
29	H	139	G	O5'-P-OP1	-7.09	99.32	105.70
29	H	1089	G	O5'-P-OP2	-7.08	99.33	105.70
29	H	1115	G	C4'-C3'-O3'	7.05	127.10	113.00
28	G	506	U	C2-N1-C1'	7.01	126.12	117.70
29	H	1115	G	O5'-P-OP2	-7.00	99.40	105.70
29	H	674	G	O3'-P-O5'	-6.82	91.04	104.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	558	A	O3'-P-O5'	-6.81	91.06	104.00
29	H	570	G	O3'-P-O5'	-6.81	91.06	104.00
29	H	683	U	O3'-P-O5'	-6.81	91.06	104.00
29	H	559	G	O3'-P-O5'	-6.80	91.08	104.00
29	H	567	U	O3'-P-O5'	-6.80	91.09	104.00
29	H	547	G	O3'-P-O5'	-6.79	91.09	104.00
29	H	679	U	O3'-P-O5'	-6.79	91.09	104.00
29	H	688	A	O3'-P-O5'	-6.79	91.10	104.00
29	H	545	G	O3'-P-O5'	-6.79	91.10	104.00
29	H	565	U	O3'-P-O5'	-6.79	91.10	104.00
29	H	686	G	O3'-P-O5'	-6.79	91.10	104.00
29	H	671	G	O3'-P-O5'	-6.79	91.10	104.00
29	H	684	U	O3'-P-O5'	-6.79	91.10	104.00
29	H	552	U	O3'-P-O5'	-6.79	91.11	104.00
29	H	563	G	O3'-P-O5'	-6.78	91.11	104.00
29	H	681	C	O3'-P-O5'	-6.78	91.11	104.00
29	H	693	C	O3'-P-O5'	-6.78	91.11	104.00
29	H	554	C	O3'-P-O5'	-6.78	91.12	104.00
29	H	560	G	O3'-P-O5'	-6.78	91.12	104.00
29	H	678	U	O3'-P-O5'	-6.78	91.12	104.00
29	H	676	U	O3'-P-O5'	-6.78	91.12	104.00
29	H	569	C	O3'-P-O5'	-6.78	91.12	104.00
29	H	675	A	O3'-P-O5'	-6.78	91.12	104.00
29	H	682	U	O3'-P-O5'	-6.78	91.13	104.00
29	H	548	G	O3'-P-O5'	-6.77	91.13	104.00
29	H	551	C	O3'-P-O5'	-6.77	91.13	104.00
29	H	553	G	O3'-P-O5'	-6.77	91.13	104.00
29	H	670	U	O3'-P-O5'	-6.77	91.13	104.00
29	H	550	G	O3'-P-O5'	-6.77	91.14	104.00
29	H	556	A	O3'-P-O5'	-6.77	91.14	104.00
29	H	672	U	O3'-P-O5'	-6.77	91.14	104.00
29	H	677	U	O3'-P-O5'	-6.77	91.14	104.00
29	H	692	U	O3'-P-O5'	-6.77	91.14	104.00
29	H	546	U	O3'-P-O5'	-6.77	91.14	104.00
29	H	564	U	O3'-P-O5'	-6.76	91.15	104.00
29	H	557	G	O3'-P-O5'	-6.76	91.15	104.00
29	H	561	A	O3'-P-O5'	-6.76	91.15	104.00
29	H	669	U	O3'-P-O5'	-6.76	91.15	104.00
29	H	691	G	O3'-P-O5'	-6.76	91.15	104.00
29	H	544	G	O3'-P-O5'	-6.76	91.15	104.00
29	H	566	U	O3'-P-O5'	-6.76	91.16	104.00
29	H	673	U	O3'-P-O5'	-6.76	91.16	104.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	562	A	O3'-P-O5'	-6.76	91.16	104.00
29	H	685	U	O3'-P-O5'	-6.76	91.16	104.00
29	H	694	C	O3'-P-O5'	-6.76	91.16	104.00
29	H	549	C	O3'-P-O5'	-6.75	91.17	104.00
29	H	689	G	O3'-P-O5'	-6.75	91.17	104.00
29	H	690	U	O3'-P-O5'	-6.75	91.17	104.00
29	H	695	U	O3'-P-O5'	-6.75	91.17	104.00
29	H	568	U	O3'-P-O5'	-6.75	91.18	104.00
18	B	114	G	N1-C6-O6	-6.75	115.85	119.90
29	H	680	C	O3'-P-O5'	-6.75	91.18	104.00
29	H	555	A	O3'-P-O5'	-6.74	91.19	104.00
29	H	687	A	O3'-P-O5'	-6.74	91.20	104.00
30	o	12	PRO	N-CA-CB	6.74	111.39	103.30
29	H	1096	C	C1'-C2'-O2'	-6.69	90.53	110.60
29	H	1129	U	C5'-C4'-O4'	6.66	117.09	109.10
22	Q	93	ARG	CG-CD-NE	-6.62	97.89	111.80
20	S	45	ARG	NE-CZ-NH1	-6.60	117.00	120.30
17	I	142	G	C6-N1-C2	-6.55	121.17	125.10
18	B	40	C	N1-C2-N3	6.52	123.76	119.20
29	H	140	G	N9-C1'-C2'	-6.50	104.86	112.00
29	H	148	G	C5'-C4'-O4'	6.49	116.89	109.10
30	o	57	LEU	N-CA-CB	6.35	123.10	110.40
30	o	4	THR	N-CA-CB	-6.32	98.30	110.30
29	H	1092	A	N9-C1'-C2'	6.29	122.18	114.00
17	I	71	U	N3-C2-O2	-6.27	117.81	122.20
18	B	79	C	C2-N1-C1'	6.25	125.68	118.80
18	B	96	U	C2-N1-C1'	6.22	125.17	117.70
29	H	1096	C	C4'-C3'-O3'	6.14	125.27	113.00
29	H	1152	U	C5'-C4'-C3'	-6.10	106.24	116.00
27	D	1213	ARG	NE-CZ-NH1	6.08	123.34	120.30
30	o	141	ARG	CD-NE-CZ	6.03	132.05	123.60
28	G	506	U	N1-C2-O2	6.03	127.02	122.80
29	H	1167	U	P-O3'-C3'	-6.03	112.47	119.70
28	G	506	U	N3-C2-O2	-6.01	117.99	122.20
29	H	1151	U	O3'-P-O5'	-5.99	92.61	104.00
34	3	962	LEU	CA-CB-CG	5.95	128.98	115.30
29	H	1162	U	C4'-C3'-O3'	5.93	124.87	113.00
18	B	115	G	N1-C2-N3	5.93	127.46	123.90
30	o	7	ILE	CA-CB-CG1	5.92	122.25	111.00
29	H	1167	U	C5'-C4'-O4'	-5.92	102.00	109.10
18	B	40	C	C6-N1-C1'	5.91	127.90	120.80
18	B	115	G	N3-C4-N9	-5.87	122.48	126.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	H	1148	U	C5'-C4'-O4'	5.86	116.13	109.10
26	V	50	ASP	C-N-CD	5.81	140.60	128.40
29	H	1115	G	P-O3'-C3'	5.80	126.66	119.70
18	B	32	G	OP2-P-O3'	5.76	117.87	105.20
29	H	1162	U	C2'-C3'-O3'	-5.74	96.88	109.50
30	o	68	PRO	N-CA-CB	5.70	110.14	103.30
24	T	89	LEU	CA-CB-CG	5.63	128.25	115.30
17	I	142	G	C8-N9-C4	-5.61	104.15	106.40
29	H	1162	U	P-O3'-C3'	5.60	126.42	119.70
29	H	1167	U	C5'-C4'-C3'	5.58	124.93	116.00
17	I	71	U	C6-N1-C1'	-5.58	113.39	121.20
25	j	74	ARG	NE-CZ-NH1	5.55	123.08	120.30
29	H	1097	G	C2'-C3'-O3'	-5.55	97.30	109.50
18	B	115	G	N3-C2-N2	-5.53	116.03	119.90
29	H	46	C	OP2-P-O3'	5.49	117.28	105.20
29	H	1162	U	C4'-C3'-C2'	5.48	108.08	102.60
29	H	1105	C	C4'-C3'-O3'	-5.47	97.90	109.40
27	D	789	LEU	CA-CB-CG	5.46	127.86	115.30
29	H	1168	U	C4'-C3'-C2'	-5.46	97.14	102.60
18	B	79	C	C2-N3-C4	5.46	122.63	119.90
20	S	23	LEU	CA-CB-CG	5.42	127.76	115.30
29	H	1151	U	N1-C1'-C2'	5.41	121.03	114.00
18	B	40	C	C2-N1-C1'	-5.40	112.86	118.80
29	H	1168	U	O3'-P-O5'	-5.36	93.81	104.00
29	H	1152	U	O4'-C4'-C3'	5.28	110.33	106.10
17	I	90	C	C2-N3-C4	5.26	122.53	119.90
1	A	615	LEU	CA-CB-CG	5.26	127.40	115.30
30	o	71	SER	N-CA-CB	-5.26	102.61	110.50
29	H	46	C	P-O3'-C3'	5.22	125.96	119.70
27	D	813	ARG	CG-CD-NE	5.21	122.74	111.80
18	B	79	C	C5-C6-N1	5.20	123.60	121.00
20	l	81	ALA	C-N-CD	5.20	139.31	128.40
32	1	321	CYS	CA-CB-SG	5.18	123.32	114.00
18	B	95	C	OP1-P-O3'	5.16	116.54	105.20
18	B	94	C	P-O3'-C3'	5.15	125.88	119.70
29	H	1148	U	P-O5'-C5'	5.14	129.13	120.90
29	H	1163	C	C4'-C3'-O3'	5.14	123.27	113.00
27	D	793	LEU	CA-CB-CG	5.12	127.07	115.30
29	H	1161	U	C5'-C4'-O4'	5.11	115.24	109.10
30	o	107	SER	N-CA-CB	-5.11	102.83	110.50
18	B	115	G	N9-C4-C5	5.11	107.44	105.40
31	p	33	SER	N-CA-CB	5.10	118.16	110.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	D	1894	LEU	CA-CB-CG	5.10	127.03	115.30
25	j	74	ARG	NE-CZ-NH2	-5.10	117.75	120.30
29	H	1169	C	O5'-C5'-C4'	-5.06	102.09	111.70
29	H	1147	A	O5'-C5'-C4'	5.05	121.29	111.70
31	p	46	VAL	CA-CB-CG2	5.05	118.47	110.90
29	H	146	A	C5'-C4'-C3'	-5.03	107.95	116.00

There are no chirality outliers.

All (19) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
32	1	386	TYR	Peptide
32	1	830	MET	Peptide
32	1	835	ILE	Peptide
32	1	926	PRO	Peptide
34	3	208	GLU	Peptide
1	A	239	PHE	Peptide
8	C	363	PRO	Peptide
8	C	770	ASN	Peptide
27	D	1369	GLY	Peptide
27	D	684	LEU	Peptide
27	D	685	ARG	Peptide
27	D	790	ASP	Peptide
2	K	208	GLN	Peptide
2	K	383	GLU	Peptide
3	L	397	GLU	Peptide
4	N	11	PRO	Peptide
4	N	802	GLN	Peptide
41	u	462	LYS	Peptide
41	u	463	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	17877	0	17800	639	0
2	K	3375	0	3343	176	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	L	3171	0	3140	127	0
4	N	4897	0	3994	115	0
5	J	2439	0	2341	62	0
6	E	1146	0	1133	29	0
7	M	950	0	1004	24	0
8	C	6732	0	6904	274	0
9	z	260	0	72	0	0
10	q	368	0	99	0	0
11	r	308	0	80	0	0
12	x	296	0	83	0	0
13	t	308	0	85	0	0
14	y	264	0	76	0	0
15	s	308	0	85	0	0
16	F	2043	0	1033	49	0
17	I	2334	0	1173	108	0
18	B	3715	0	1878	150	0
19	O	574	0	552	31	0
20	S	632	0	653	26	0
20	d	316	0	86	0	0
20	l	611	0	627	0	0
21	P	563	0	600	40	0
21	a	292	0	78	0	0
21	h	610	0	640	0	0
22	Q	751	0	776	65	0
22	b	308	0	78	0	0
22	m	644	0	686	0	0
23	R	752	0	786	50	0
23	c	360	0	89	0	0
23	n	528	0	573	0	0
24	T	602	0	631	37	0
24	e	288	0	74	0	0
24	i	575	0	597	0	0
25	U	585	0	587	39	0
25	f	280	0	77	0	0
25	j	554	0	556	0	0
26	V	577	0	595	37	0
26	g	280	0	79	0	0
26	k	529	0	557	0	0
27	D	13601	0	13596	641	0
28	G	928	0	468	48	0
29	H	4345	0	2199	249	0
30	o	841	0	614	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	p	466	0	373	0	0
32	1	6472	0	6702	243	0
33	2	1726	0	1734	62	0
34	3	9380	0	9482	399	0
35	4	1429	0	1458	44	0
36	5	814	0	811	30	0
37	6	693	0	705	25	0
38	X	1051	0	1015	100	0
39	Y	730	0	710	52	0
40	Z	173	0	165	7	0
41	u	3895	0	3824	0	0
42	w	1084	0	1081	0	0
43	v	1372	0	1345	0	0
44	C	32	0	12	6	0
45	C	1	0	0	0	0
46	5	3	0	0	3	0
46	u	2	0	0	0	0
46	v	1	0	0	0	0
All	All	111041	0	100594	3508	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 19.

All (3508) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2310:GLU:CB	1:A:2333:PHE:CZ	1.85	1.52
1:A:2398:LEU:HD13	27:D:1060:LYS:CD	1.36	1.51
1:A:2310:GLU:CB	1:A:2333:PHE:HZ	1.19	1.44
1:A:2398:LEU:HD13	27:D:1060:LYS:CE	1.48	1.42
1:A:2310:GLU:HB2	1:A:2333:PHE:CZ	0.89	1.41
32:1:494:LEU:HD13	38:X:7:ILE:CG2	1.49	1.41
1:A:2398:LEU:CD1	27:D:1060:LYS:HD2	1.53	1.38
1:A:2310:GLU:HB2	1:A:2333:PHE:CE1	1.58	1.38
1:A:2152:TRP:CH2	27:D:1061:ALA:O	1.83	1.31
39:Y:207:THR:O	39:Y:214:LEU:CD1	1.79	1.28
38:X:63:SER:CB	38:X:74:PHE:CE1	2.16	1.27
1:A:2395:PHE:CD1	27:D:1062:PRO:HD3	1.72	1.23
1:A:2398:LEU:CG	27:D:1060:LYS:HD2	1.72	1.17
29:H:1099:G:O2'	29:H:1100:A:H5'	1.42	1.16
32:1:494:LEU:HD13	38:X:7:ILE:HG21	1.18	1.15

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:539:LEU:O	27:D:543:TYR:HB3	1.44	1.14
32:1:494:LEU:HD11	38:X:23:TRP:CD1	1.83	1.13
32:1:494:LEU:CD1	38:X:7:ILE:HG21	1.79	1.12
1:A:547:LEU:O	1:A:551:LEU:HB2	1.51	1.08
27:D:804:HIS:CE1	27:D:813:ARG:HG3	1.89	1.07
1:A:2398:LEU:CD1	27:D:1060:LYS:CE	2.33	1.06
17:I:99:G:H4'	27:D:1186:GLU:HB3	1.31	1.06
8:C:867:THR:O	8:C:926:GLY:HA2	1.55	1.06
32:1:494:LEU:CD1	38:X:7:ILE:CG2	2.34	1.05
38:X:63:SER:HB2	38:X:74:PHE:CE1	1.84	1.05
17:I:75:U:C5	27:D:1100:PHE:HE1	1.73	1.05
1:A:1667:GLN:NE2	19:O:211:ASN:OD1	1.90	1.04
2:K:446:SER:OG	2:K:451:PHE:CE1	2.11	1.03
24:T:59:GLU:HG3	24:T:77:LEU:HD11	1.40	1.03
1:A:2183:TYR:HE2	1:A:2289:ILE:HG12	1.20	1.03
18:B:162:G:H3'	18:B:163:C:H4'	1.41	1.03
1:A:2398:LEU:HD13	27:D:1060:LYS:HD2	1.03	1.02
19:O:206:LYS:HD3	27:D:1051:LYS:HE3	1.39	1.02
39:Y:207:THR:O	39:Y:214:LEU:HD13	0.85	1.02
1:A:2395:PHE:CD1	27:D:1061:ALA:HA	1.95	1.01
24:T:83:LYS:NZ	25:U:75:CYS:O	1.93	1.01
29:H:110:A:H4'	29:H:111:C:C5'	1.89	1.01
17:I:91:U:O2	17:I:142:G:N2	1.95	1.00
27:D:757:LEU:O	27:D:761:PHE:HB3	1.62	0.99
1:A:2398:LEU:HD22	27:D:1060:LYS:HB2	1.41	0.99
1:A:2395:PHE:CE1	27:D:1061:ALA:HA	1.96	0.99
29:H:110:A:C4'	29:H:111:C:H5'	1.91	0.99
21:P:88:ARG:NH2	20:S:66:GLY:O	1.97	0.98
1:A:2395:PHE:CG	27:D:1062:PRO:HD3	1.97	0.98
1:A:1674:ASP:OD2	1:A:2200:LYS:HD3	1.62	0.97
1:A:2067:TYR:CB	19:O:194:LEU:HD22	1.94	0.97
1:A:2398:LEU:CD1	27:D:1060:LYS:NZ	2.28	0.96
1:A:2311:GLY:N	1:A:2333:PHE:HE1	1.64	0.96
32:1:494:LEU:HD13	38:X:7:ILE:HG23	1.44	0.96
2:K:187:ASP:HB3	2:K:451:PHE:HZ	1.28	0.95
29:H:1099:G:C2'	29:H:1100:A:H5'	1.97	0.95
27:D:556:LYS:NZ	27:D:602:THR:O	1.98	0.95
36:5:49:CYS:HG	46:5:201:ZN:ZN	0.64	0.95
1:A:2152:TRP:HH2	27:D:1061:ALA:O	1.32	0.95
27:D:527:LYS:HE3	27:D:670:LEU:HB3	1.46	0.95
1:A:1962:ARG:HD3	19:O:186:GLU:OE2	1.66	0.94

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:G:520:G:C6	38:X:34:TYR:CE2	2.56	0.94
1:A:2152:TRP:CZ2	27:D:1061:ALA:O	2.21	0.94
27:D:912:PHE:HB3	27:D:944:LEU:HD23	1.47	0.94
27:D:869:LEU:HD13	27:D:904:GLN:HE21	1.32	0.93
24:T:87:ILE:O	26:V:64:ARG:NE	2.02	0.93
32:1:494:LEU:HB2	38:X:7:ILE:HG12	1.50	0.93
17:I:150:G:OP2	25:U:74:ARG:NH2	2.00	0.93
17:I:91:U:H3	17:I:142:G:H1	0.94	0.93
29:H:1165:C:H2'	29:H:1166:G:H8	1.32	0.93
1:A:2311:GLY:N	1:A:2333:PHE:CE1	2.36	0.93
1:A:2310:GLU:CG	1:A:2333:PHE:HZ	1.81	0.93
32:1:494:LEU:CD1	38:X:23:TRP:CD1	2.51	0.93
39:Y:208:SER:HB2	39:Y:212:ARG:O	1.68	0.93
18:B:175:G:N2	18:B:176:A:N6	2.16	0.92
16:F:102:U:H3	29:H:3:G:H1	1.17	0.92
18:B:175:G:N2	18:B:176:A:H62	1.65	0.92
22:Q:144:ARG:NH1	22:Q:145:GLY:O	2.03	0.92
32:1:490:ARG:NH2	38:X:25:ASN:HB3	1.86	0.91
21:P:88:ARG:NH1	20:S:67:SER:O	2.02	0.91
17:I:78:A:C2	27:D:1110:ARG:NE	2.38	0.91
27:D:781:LEU:HD21	27:D:798:GLU:HA	1.52	0.91
27:D:1086:GLN:NE2	27:D:1138:LYS:O	2.03	0.91
18:B:32:G:H1	18:B:121:U:H3	1.16	0.91
1:A:2398:LEU:HD12	27:D:1060:LYS:NZ	1.84	0.90
18:B:22:G:H1	18:B:149:U:H3	0.95	0.90
29:H:1165:C:H2'	29:H:1166:G:C8	2.06	0.90
16:F:30:G:H1	18:B:96:U:H3	1.15	0.90
29:H:110:A:H4'	29:H:111:C:H5'	0.95	0.90
2:K:446:SER:OG	2:K:451:PHE:CZ	2.24	0.90
2:K:232:ASN:HB3	2:K:247:GLN:HE22	1.34	0.90
2:K:395:ILE:HG22	2:K:396:VAL:H	1.35	0.90
27:D:1387:HIS:HB2	27:D:1470:LEU:HD13	1.52	0.90
1:A:2398:LEU:HB2	27:D:1060:LYS:CD	2.02	0.90
18:B:1:A:H61	18:B:164:C:H42	1.11	0.89
17:I:72:A:OP2	27:D:1047:ARG:NH1	2.05	0.89
18:B:114:G:H2'	18:B:115:G:C8	2.08	0.89
39:Y:213:LYS:HB3	39:Y:230:SER:OG	1.72	0.89
1:A:1861:THR:HG22	19:O:161:ILE:HG12	1.55	0.88
1:A:2398:LEU:CD1	27:D:1060:LYS:CD	2.22	0.88
22:Q:35:GLN:OE1	22:Q:37:ASN:ND2	2.06	0.88
1:A:609:GLU:O	1:A:613:SER:HB2	1.73	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2310:GLU:CB	1:A:2333:PHE:CE1	2.32	0.88
17:I:145:U:H3	26:V:35:PHE:HB3	1.39	0.88
27:D:1687:LEU:HB2	27:D:1698:TYR:HE1	1.36	0.88
17:I:75:U:C5	27:D:1100:PHE:CE1	2.62	0.87
17:I:146:U:H5"	17:I:147:U:H5'	1.56	0.87
8:C:542:ILE:O	8:C:553:VAL:HB	1.72	0.87
27:D:1085:SER:HG	27:D:1140:TRP:HE1	1.17	0.87
1:A:2398:LEU:CB	27:D:1060:LYS:HD2	2.04	0.87
27:D:2049:PRO:HB2	27:D:2051:VAL:HG13	1.55	0.87
1:A:1087:ASN:HD21	3:L:272:LEU:HG	1.40	0.86
27:D:804:HIS:HE1	27:D:813:ARG:HG3	1.38	0.86
22:Q:36:MET:SD	23:R:97:ARG:NH1	2.48	0.86
1:A:617:ASN:ND2	18:B:99:U:O2'	2.09	0.86
1:A:2310:GLU:C	1:A:2333:PHE:HE1	1.80	0.86
1:A:716:ARG:HE	18:B:112:C:H1'	1.42	0.85
27:D:636:ILE:HG22	27:D:671:SER:HB2	1.58	0.85
1:A:2183:TYR:CE2	1:A:2289:ILE:HG12	2.11	0.85
39:Y:207:THR:C	39:Y:214:LEU:HD13	1.94	0.85
39:Y:214:LEU:HD21	39:Y:227:MET:HB2	1.58	0.85
1:A:976:GLN:HE22	1:A:1310:LYS:HB3	1.41	0.85
1:A:1565:THR:O	1:A:1820:ARG:NH2	2.10	0.85
27:D:1524:TRP:HD1	27:D:1780:ARG:CZ	1.89	0.85
27:D:1524:TRP:HB2	27:D:1780:ARG:HG3	1.58	0.85
27:D:1609:MET:HG2	27:D:1611:ASN:H	1.42	0.85
29:H:1099:G:O2'	29:H:1100:A:C5'	2.24	0.85
32:1:390:ILE:HD12	32:1:426:MET:HA	1.59	0.85
1:A:1088:VAL:HG12	1:A:1089:VAL:H	1.42	0.84
2:K:167:LEU:O	4:N:728:ARG:NH2	2.10	0.84
34:3:393:VAL:HA	34:3:404:LEU:O	1.76	0.84
27:D:1213:ARG:HH22	27:D:1316:LYS:CG	1.90	0.84
1:A:2067:TYR:O	19:O:194:LEU:HD21	1.78	0.84
38:X:63:SER:HB3	38:X:74:PHE:CE1	2.11	0.84
38:X:48:LEU:O	39:Y:231:ARG:NH1	2.11	0.84
1:A:1862:VAL:O	19:O:159:ASP:N	2.10	0.83
27:D:784:GLU:HG3	27:D:819:LEU:HD21	1.58	0.83
38:X:63:SER:OG	38:X:74:PHE:CZ	2.31	0.83
4:N:746:MET:HG2	4:N:749:ARG:HH12	1.44	0.83
8:C:603:PHE:HB3	8:C:646:GLY:O	1.78	0.83
27:D:1216:MET:HG3	27:D:1218:PHE:HE1	1.42	0.83
17:I:97:U:H3	17:I:135:A:H61	1.22	0.83
1:A:1575:TRP:HB2	3:L:391:MET:HB3	1.60	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:8:U:H3	18:B:157:G:H1	1.27	0.83
32:1:494:LEU:CB	38:X:7:ILE:HG12	2.09	0.83
34:3:363:VAL:HG12	34:3:364:THR:H	1.42	0.82
1:A:2152:TRP:CZ3	27:D:1064:PRO:HG3	2.14	0.82
34:3:130:LEU:HB3	34:3:195:ILE:HD13	1.61	0.82
3:L:120:TYR:HE2	3:L:141:ILE:HG12	1.45	0.82
18:B:166:U:O2'	18:B:167:A:OP1	1.97	0.82
2:K:169:GLY:HA2	4:N:724:SER:HB3	1.59	0.82
17:I:145:U:H1'	26:V:66:ASN:HB2	1.62	0.82
28:G:520:G:N1	38:X:34:TYR:CD2	2.48	0.82
32:1:830:MET:O	32:1:832:LYS:N	2.11	0.82
38:X:63:SER:HB2	38:X:74:PHE:HE1	1.38	0.82
1:A:165:LEU:HD22	1:A:730:ILE:HD11	1.62	0.82
32:1:494:LEU:HB3	38:X:7:ILE:HG23	1.61	0.81
1:A:547:LEU:O	1:A:551:LEU:CB	2.27	0.81
2:K:410:LEU:HB2	2:K:422:TYR:HB2	1.62	0.81
18:B:175:G:H21	18:B:176:A:H62	1.23	0.81
27:D:462:GLU:OE1	27:D:729:LYS:NZ	2.13	0.81
27:D:2134:THR:O	27:D:2138:HIS:NE2	2.13	0.81
34:3:105:ASP:HB2	34:3:114:ILE:HD11	1.61	0.81
27:D:1213:ARG:HH22	27:D:1316:LYS:HG2	1.43	0.81
17:I:134:U:H2'	17:I:135:A:H8	1.46	0.81
27:D:589:THR:HA	27:D:611:LYS:HG2	1.62	0.81
25:U:19:LEU:HD21	25:U:45:THR:HG21	1.63	0.81
34:3:71:PHE:HA	34:3:97:THR:HG22	1.63	0.81
38:X:63:SER:OG	38:X:74:PHE:CE1	2.32	0.81
1:A:1910:LYS:HD2	19:O:169:ILE:HG12	1.63	0.81
8:C:133:ILE:HA	8:C:209:MET:O	1.79	0.80
1:A:2398:LEU:HD13	27:D:1060:LYS:HE3	1.61	0.80
27:D:2103:LEU:HD11	27:D:2140:LEU:HB3	1.64	0.80
29:H:1149:G:H5"	29:H:1149:G:C8	2.16	0.80
17:I:142:G:N2	21:P:39:LYS:NZ	2.29	0.80
27:D:563:LEU:HD21	27:D:836:TRP:CD1	2.16	0.80
1:A:287:GLU:HG2	1:A:288:GLU:H	1.46	0.80
1:A:690:LYS:O	1:A:694:ASN:ND2	2.15	0.80
27:D:1277:LYS:O	27:D:1281:GLN:HB2	1.81	0.80
27:D:766:ILE:O	27:D:769:LYS:NZ	2.14	0.80
23:R:74:GLU:OE2	23:R:89:ARG:NE	2.15	0.80
34:3:157:LEU:O	34:3:176:ASN:HA	1.81	0.80
2:K:177:PRO:HB3	2:K:457:TRP:HA	1.64	0.80
8:C:133:ILE:HG22	8:C:209:MET:HB3	1.62	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1688:TYR:HD1	27:D:1695:TYR:CD1	2.00	0.79
1:A:880:THR:O	3:L:180:LYS:NZ	2.16	0.79
1:A:1851:PHE:O	1:A:1881:THR:HA	1.83	0.79
2:K:135:ARG:NH2	5:J:167:GLU:OE2	2.15	0.79
18:B:162:G:H3'	18:B:163:C:C4'	2.12	0.79
32:1:294:ARG:HB3	32:1:332:THR:HG21	1.64	0.79
24:T:30:TRP:HB3	26:V:23:ARG:HH12	1.47	0.79
17:I:98:G:H1	17:I:134:U:H3	1.31	0.79
3:L:327:THR:HG22	3:L:328:VAL:H	1.47	0.79
1:A:2398:LEU:HD12	27:D:1060:LYS:HZ1	1.45	0.79
22:Q:3:LEU:HD23	23:R:95:PHE:HE1	1.48	0.79
1:A:2398:LEU:CD2	27:D:1060:LYS:HD2	2.13	0.78
18:B:126:A:H5'	18:B:127:U:OP2	1.83	0.78
27:D:1887:VAL:HG21	22:Q:140:LYS:HD2	1.65	0.78
2:K:452:LEU:HB3	2:K:464:TRP:HB2	1.64	0.78
27:D:1557:ILE:HA	27:D:1695:TYR:HE2	1.46	0.78
8:C:706:LEU:HA	8:C:824:SER:O	1.82	0.78
34:3:365:ILE:HG21	34:3:381:LEU:HG	1.63	0.78
8:C:315:SER:OG	44:C:1500:GTP:O6	2.00	0.78
1:A:1014:LYS:O	1:A:1016:SER:N	2.15	0.78
34:3:364:THR:OG1	34:3:384:ASN:ND2	2.16	0.78
18:B:158:G:N2	18:B:160:U:O4	2.17	0.78
1:A:789:ALA:HB1	1:A:816:ILE:HD11	1.64	0.77
27:D:1895:ARG:O	27:D:1897:GLY:N	2.16	0.77
3:L:376:LYS:NZ	17:I:55:U:O2'	2.17	0.77
27:D:1515:LEU:HB2	27:D:1518:ALA:HB2	1.65	0.77
32:1:222:ILE:HG23	32:1:265:ILE:HD11	1.65	0.77
25:U:32:LYS:HA	25:U:79:LEU:HD12	1.66	0.77
1:A:2398:LEU:HB2	27:D:1060:LYS:HD3	1.62	0.77
34:3:118:GLN:HE22	34:3:171:LEU:HB3	1.49	0.77
27:D:677:TYR:HD2	27:D:691:LEU:HD21	1.47	0.77
21:P:88:ARG:HG2	21:P:90:GLU:H	1.47	0.77
32:1:490:ARG:HH22	38:X:25:ASN:HD22	1.33	0.77
8:C:605:ILE:HG13	8:C:652:MET:HE1	1.66	0.77
2:K:230:SER:HB2	2:K:232:ASN:HD22	1.50	0.77
1:A:2249:ASP:OD1	27:D:1309:ASN:ND2	2.18	0.76
27:D:1777:TYR:OH	27:D:1781:ARG:NH1	2.17	0.76
32:1:386:TYR:CD2	32:1:387:PRO:HD3	2.20	0.76
1:A:2398:LEU:HD22	27:D:1060:LYS:CB	2.15	0.76
4:N:21:ARG:NH2	6:E:74:TYR:OH	2.17	0.76
27:D:1772:TRP:HZ3	27:D:1773:PHE:CE1	2.02	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:446:SER:OG	2:K:451:PHE:CD1	2.38	0.76
4:N:743:LYS:O	4:N:747:GLU:HB2	1.85	0.76
17:I:76:A:N7	27:D:1107:ARG:NH2	2.33	0.76
18:B:1:A:H61	18:B:164:C:N4	1.82	0.76
18:B:32:G:H4'	18:B:33:U:OP2	1.83	0.76
27:D:708:CYS:SG	27:D:889:ILE:HA	2.25	0.76
24:T:37:ILE:HD11	24:T:59:GLU:HB3	1.66	0.76
39:Y:209:LEU:O	39:Y:209:LEU:HD12	1.85	0.76
17:I:78:A:C2	27:D:1110:ARG:NH2	2.54	0.76
27:D:841:PRO:HG2	27:D:877:ARG:HG2	1.68	0.76
28:G:520:G:C2	38:X:34:TYR:CG	2.74	0.76
1:A:261:LEU:HD22	1:A:642:GLY:HA2	1.67	0.75
17:I:142:G:N2	21:P:39:LYS:HZ3	1.82	0.75
1:A:687:ILE:HD11	1:A:706:PRO:HG2	1.67	0.75
32:1:835:ILE:O	32:1:837:PHE:N	2.19	0.75
1:A:796:ASN:HD21	1:A:858:LYS:HG2	1.51	0.75
1:A:181:HIS:HA	1:A:704:TRP:HZ2	1.51	0.75
32:1:348:VAL:HG13	32:1:349:LEU:H	1.52	0.75
34:3:639:LYS:HB3	34:3:686:GLN:HA	1.66	0.75
2:K:438:ASP:OD2	4:N:762:GLN:NE2	2.20	0.75
27:D:1620:TYR:HD2	27:D:1655:LEU:HD21	1.50	0.75
32:1:490:ARG:HH22	38:X:25:ASN:HB3	1.51	0.75
2:K:187:ASP:HB3	2:K:451:PHE:CZ	2.19	0.75
17:I:78:A:C2	27:D:1110:ARG:CZ	2.69	0.75
34:3:783:ILE:HG13	34:3:784:SER:H	1.51	0.75
1:A:2157:ILE:HG23	27:D:1066:ARG:HG2	1.67	0.75
8:C:769:TYR:HE1	8:C:774:LEU:HB2	1.52	0.75
1:A:1252:SER:O	1:A:1274:ARG:NH1	2.20	0.75
1:A:1320:LEU:HD21	1:A:1367:ILE:HG12	1.67	0.75
18:B:29:G:H2'	18:B:30:A:H8	1.52	0.75
27:D:515:SER:HB2	27:D:687:PRO:HG3	1.68	0.75
26:V:64:ARG:HH11	26:V:66:ASN:HB3	1.49	0.75
18:B:48:G:H1	18:B:67:U:H3	1.32	0.74
32:1:566:LEU:HD21	32:1:601:ILE:HG12	1.69	0.74
8:C:493:LEU:HB2	8:C:556:ALA:HB3	1.67	0.74
39:Y:214:LEU:HD21	39:Y:227:MET:CB	2.17	0.74
27:D:1524:TRP:HD1	27:D:1780:ARG:NE	1.85	0.74
27:D:761:PHE:HE2	27:D:769:LYS:HD3	1.53	0.74
26:V:56:GLN:NE2	26:V:60:GLN:O	2.20	0.74
29:H:142:C:H2'	29:H:143:G:H8	1.52	0.74
34:3:239:ASP:OD2	34:3:295:VAL:N	2.20	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1962:ARG:HD3	19:O:186:GLU:CD	2.07	0.74
1:A:2398:LEU:HD21	27:D:1056:GLN:O	1.88	0.74
27:D:1688:TYR:HD1	27:D:1695:TYR:HD1	1.34	0.74
3:L:112:MET:HB2	3:L:204:LEU:HD21	1.69	0.74
17:I:79:A:H61	27:D:593:ARG:HG3	1.50	0.74
34:3:179:LEU:HD23	34:3:189:PRO:HG2	1.69	0.74
1:A:1674:ASP:OD2	1:A:2200:LYS:CD	2.35	0.74
1:A:1458:TRP:HZ2	1:A:1489:PRO:HB2	1.53	0.74
1:A:1673:LEU:HD12	1:A:2150:ASN:OD1	1.86	0.74
2:K:159:LEU:HD22	2:K:430:MET:HG3	1.68	0.74
17:I:134:U:H2'	17:I:135:A:C8	2.23	0.74
29:H:1138:G:P	29:H:1138:G:O4'	2.45	0.74
8:C:951:ILE:HG12	8:C:958:PRO:HD3	1.70	0.73
40:Z:36:GLY:O	40:Z:40:LEU:HB2	1.87	0.73
1:A:923:TYR:OH	1:A:936:GLU:OE1	2.04	0.73
34:3:384:ASN:O	34:3:415:ASN:ND2	2.18	0.73
37:6:57:ARG:NH1	37:6:59:ASP:OD2	2.20	0.73
1:A:1309:ILE:HG12	1:A:1356:LEU:HD12	1.70	0.73
27:D:516:ASN:HD22	27:D:685:ARG:HB3	1.53	0.73
8:C:884:ARG:HB2	8:C:910:GLU:HG3	1.70	0.73
32:1:790:LYS:HD2	32:1:826:TYR:HB3	1.70	0.73
34:3:822:HIS:ND1	34:3:846:MET:O	2.21	0.73
3:L:401:LEU:H	4:N:214:SER:HB3	1.54	0.73
28:G:513:U:OP2	32:1:259:ARG:NH1	2.21	0.73
27:D:539:LEU:O	27:D:543:TYR:CB	2.31	0.73
1:A:1964:PRO:HA	1:A:2016:LYS:HE3	1.71	0.73
32:1:198:GLU:O	32:1:202:ASN:HB2	1.88	0.73
8:C:765:VAL:HA	8:C:775:ILE:HG12	1.69	0.73
24:T:20:PHE:HE1	24:T:92:SER:HB2	1.52	0.73
32:1:542:THR:HG22	32:1:582:GLY:HA3	1.68	0.73
34:3:186:ARG:NH2	37:6:38:ASP:OD1	2.22	0.73
2:K:321:LEU:HD11	5:J:169:TRP:HE1	1.52	0.73
18:B:162:G:O3'	18:B:164:C:OP1	2.07	0.73
29:H:140:G:H1	29:H:1168:U:H3	1.37	0.73
34:3:927:ARG:HG3	34:3:928:THR:HG23	1.69	0.73
1:A:1943:PRO:HD3	19:O:169:ILE:CD1	2.19	0.72
17:I:76:A:OP2	27:D:590:GLY:HA3	1.89	0.72
27:D:511:PHE:CE1	27:D:537:LYS:HB2	2.23	0.72
32:1:581:LYS:O	32:1:585:ALA:N	2.20	0.72
27:D:1680:VAL:HG23	27:D:1710:ALA:HB2	1.72	0.72
32:1:778:ARG:NH1	32:1:811:ASN:OD1	2.22	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:397:THR:OG1	2:K:413:CYS:O	2.07	0.72
32:1:213:LEU:HD13	32:1:218:ARG:HB2	1.69	0.72
8:C:160:ARG:NH1	8:C:161:ILE:O	2.23	0.72
27:D:523:THR:HG23	27:D:527:LYS:HD3	1.70	0.72
34:3:157:LEU:HD12	34:3:204:LEU:HD11	1.72	0.72
34:3:732:ARG:NH1	34:3:757:ASP:OD1	2.22	0.72
27:D:1392:LYS:HD2	27:D:1469:GLU:OE1	1.90	0.72
27:D:1822:ILE:HG12	27:D:1844:ILE:HG12	1.70	0.72
29:H:119:G:H4'	29:H:119:G:OP1	1.90	0.72
27:D:535:VAL:HG13	27:D:557:ILE:HD13	1.72	0.72
32:1:686:LEU:HD21	32:1:727:ILE:HD11	1.72	0.72
34:3:396:ASP:HB2	34:3:404:LEU:HG	1.72	0.72
34:3:1096:LEU:HD13	34:3:1187:PHE:HZ	1.54	0.72
1:A:2067:TYR:O	19:O:194:LEU:CD2	2.38	0.71
8:C:219:VAL:HG21	8:C:931:TYR:HB3	1.70	0.71
29:H:142:C:H2'	29:H:143:G:C8	2.24	0.71
32:1:443:ARG:NH1	32:1:478:GLU:OE2	2.23	0.71
34:3:250:PRO:HG2	34:3:273:LEU:HB3	1.71	0.71
32:1:490:ARG:HH22	38:X:25:ASN:ND2	1.87	0.71
4:N:803:ASN:OD1	4:N:834:LYS:NZ	2.23	0.71
18:B:163:C:H4'	18:B:164:C:OP1	1.88	0.71
27:D:589:THR:HG21	27:D:608:THR:HG23	1.71	0.71
34:3:102:GLU:OE2	34:3:116:LYS:NZ	2.23	0.71
34:3:641:GLN:HE21	34:3:653:TYR:HE1	1.38	0.71
27:D:1396:VAL:HG13	27:D:1445:LEU:HD11	1.73	0.71
34:3:65:LEU:HB2	34:3:1225:VAL:HG23	1.71	0.71
1:A:975:TYR:HB2	1:A:1314:SER:HB3	1.70	0.71
1:A:1015:PRO:HB2	1:A:1510:ILE:HG12	1.72	0.71
1:A:1020:ILE:HG22	1:A:1022:PRO:HD2	1.72	0.71
34:3:369:ILE:HD13	34:3:421:ILE:HD11	1.72	0.71
1:A:244:ASP:OD1	1:A:596:ASN:ND2	2.22	0.71
5:J:340:LYS:NZ	5:J:429:GLU:OE1	2.22	0.71
21:P:88:ARG:HH12	20:S:67:SER:C	1.93	0.71
1:A:2398:LEU:HB2	27:D:1060:LYS:HD2	1.67	0.71
17:I:91:U:O2'	17:I:92:C:OP1	2.08	0.71
8:C:968:MET:HB3	8:C:972:ARG:HH12	1.54	0.71
27:D:1367:PHE:HD2	27:D:1532:ILE:HG23	1.53	0.71
32:1:805:TYR:HB2	32:1:816:VAL:HG11	1.73	0.71
34:3:153:ASP:OD2	34:3:1302:ARG:NH1	2.24	0.71
1:A:1201:TYR:OH	1:A:1248:VAL:O	2.08	0.70
1:A:341:ALA:HA	1:A:355:LEU:HD23	1.72	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:44:ILE:HG12	2:K:76:LEU:HD13	1.73	0.70
27:D:454:LYS:HG3	27:D:463:ILE:HG22	1.73	0.70
27:D:2051:VAL:HG12	27:D:2077:ARG:HA	1.71	0.70
29:H:1093:C:H2'	29:H:1094:G:O4'	1.90	0.70
32:1:835:ILE:HG12	32:1:864:LEU:HD11	1.73	0.70
1:A:956:LYS:O	1:A:960:THR:OG1	2.04	0.70
1:A:2398:LEU:CD1	27:D:1060:LYS:HZ1	2.01	0.70
2:K:411:VAL:HG11	2:K:452:LEU:HD11	1.73	0.70
17:I:97:U:H2'	17:I:98:G:C8	2.26	0.70
34:3:291:SER:OG	37:6:80:TYR:OH	2.09	0.70
34:3:886:PHE:HE2	34:3:1225:VAL:HG21	1.56	0.70
1:A:2395:PHE:HD1	27:D:1060:LYS:O	1.74	0.70
18:B:29:G:H2'	18:B:30:A:C8	2.26	0.70
32:1:618:GLN:HG3	32:1:658:VAL:HG22	1.73	0.70
3:L:441:MET:SD	3:L:444:ARG:NH2	2.64	0.70
34:3:611:VAL:HG21	34:3:621:LYS:HE2	1.74	0.70
18:B:147:C:H2'	18:B:148:G:H8	1.54	0.70
39:Y:215:TYR:CE2	39:Y:232:TRP:CE3	2.79	0.70
1:A:2152:TRP:CE3	27:D:1064:PRO:HG3	2.26	0.70
8:C:232:SER:OG	8:C:234:LEU:O	2.08	0.70
32:1:489:VAL:HG11	38:X:26:GLU:HG2	1.74	0.70
18:B:74:U:O2'	18:B:77:A:OP2	2.07	0.70
27:D:1456:SER:HA	27:D:1465:ILE:HD13	1.73	0.70
27:D:1629:LEU:HD13	27:D:1639:ILE:HB	1.73	0.70
27:D:639:LEU:HA	27:D:644:GLY:HA3	1.74	0.70
29:H:1149:G:H5"	29:H:1149:G:H8	1.56	0.70
34:3:638:SER:HB3	34:3:641:GLN:HB3	1.74	0.70
38:X:63:SER:CB	38:X:74:PHE:CD1	2.75	0.70
1:A:864:GLN:NE2	1:A:1099:ASN:OD1	2.24	0.70
8:C:857:LEU:HD22	8:C:967:VAL:HG23	1.71	0.70
34:3:104:TYR:OH	34:3:481:GLN:NE2	2.25	0.70
2:K:171:GLN:HG2	2:K:172:LEU:H	1.57	0.69
17:I:145:U:N3	26:V:35:PHE:HB3	2.05	0.69
27:D:626:GLU:OE2	27:D:658:SER:OG	2.06	0.69
27:D:1101:ILE:O	27:D:1105:ALA:HB2	1.92	0.69
27:D:1517:ASN:HB3	27:D:1781:ARG:HH12	1.55	0.69
38:X:46:ASP:OD1	40:Z:38:LEU:HD22	1.92	0.69
1:A:1347:ARG:NH1	1:A:1450:GLU:OE2	2.26	0.69
18:B:116:U:H2'	18:B:117:G:H8	1.56	0.69
34:3:181:ARG:NH1	36:5:84:ASP:OD1	2.25	0.69
39:Y:215:TYR:CE2	39:Y:232:TRP:HE3	2.09	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:1198:ILE:HG13	37:6:48:ALA:HB1	1.72	0.69
1:A:1624:LEU:HD22	1:A:1633:PHE:HB3	1.74	0.69
27:D:450:GLU:O	27:D:466:PRO:HD2	1.93	0.69
27:D:667:ILE:HG21	27:D:684:LEU:HD11	1.73	0.69
38:X:57:PRO:HG2	39:Y:231:ARG:HH21	1.58	0.69
24:T:40:LYS:O	24:T:57:ALA:HA	1.93	0.69
1:A:1952:PRO:HB2	3:L:426:GLY:H	1.58	0.69
2:K:400:ARG:NH2	2:K:444:ASP:OD1	2.25	0.69
5:J:159:TYR:O	5:J:163:ASN:ND2	2.26	0.69
8:C:126:MET:SD	8:C:132:ARG:NH1	2.66	0.69
16:F:30:G:N2	18:B:96:U:O2	2.22	0.69
29:H:557:G:H1	29:H:683:U:H3	1.41	0.69
35:4:17:ASP:HB3	35:4:20:ILE:HG12	1.74	0.69
6:E:95:PHE:HB3	6:E:137:TYR:CE2	2.28	0.69
8:C:397:LYS:HE3	8:C:413:LEU:HD11	1.74	0.69
27:D:578:LEU:HB3	27:D:583:ILE:HD12	1.74	0.69
23:R:72:VAL:HB	23:R:91:ILE:O	1.93	0.69
1:A:2152:TRP:CZ3	27:D:1062:PRO:O	2.46	0.69
2:K:395:ILE:HD11	7:M:123:THR:HA	1.75	0.69
39:Y:170:LEU:O	39:Y:172:ILE:HG12	1.92	0.68
1:A:1733:TRP:CE2	1:A:1772:GLY:HA3	2.29	0.68
17:I:150:G:C8	23:R:99:ASP:HB3	2.29	0.68
27:D:589:THR:OG1	27:D:608:THR:OG1	2.06	0.68
3:L:124:PHE:CE2	3:L:127:LEU:HB2	2.28	0.68
3:L:261:SER:OG	3:L:281:GLN:OE1	2.10	0.68
8:C:393:LYS:HB3	8:C:413:LEU:HD22	1.75	0.68
27:D:765:ASN:HB3	27:D:768:HIS:HD2	1.57	0.68
21:P:39:LYS:HE3	22:Q:35:GLN:HE21	1.59	0.68
20:S:65:ARG:HE	20:S:67:SER:HB3	1.58	0.68
17:I:77:U:C2	27:D:1107:ARG:HA	2.29	0.68
29:H:545:G:H1	29:H:695:U:H3	1.41	0.68
29:H:118:U:H4'	29:H:119:G:OP1	1.92	0.68
32:1:458:LEU:O	32:1:462:GLN:HB2	1.93	0.68
1:A:216:GLN:NE2	1:A:280:LEU:O	2.24	0.68
8:C:398:ASN:OD1	8:C:401:ARG:NH2	2.26	0.68
18:B:27:G:C2	18:B:131:A:N3	2.61	0.68
32:1:489:VAL:HG13	38:X:26:GLU:CD	2.14	0.68
22:Q:7:LEU:HB3	22:Q:32:VAL:HG11	1.76	0.68
33:2:371:GLU:H	34:3:1234:LYS:HB3	1.56	0.68
1:A:1197:ASN:ND2	1:A:1221:ASN:OD1	2.26	0.68
8:C:867:THR:O	8:C:926:GLY:CA	2.38	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:R:33:LEU:HD12	25:U:72:PHE:HB2	1.75	0.68
24:T:30:TRP:HB3	26:V:23:ARG:NH1	2.09	0.68
34:3:594:MET:O	34:3:598:SER:OG	2.11	0.68
37:6:54:SER:HA	37:6:65:THR:HG21	1.76	0.68
34:3:704:SER:OG	34:3:712:PHE:O	2.10	0.68
1:A:956:LYS:HD3	3:L:452:ALA:HA	1.74	0.68
27:D:1213:ARG:NH2	27:D:1316:LYS:HG2	2.08	0.68
29:H:550:G:H1	29:H:690:U:H3	1.41	0.68
34:3:126:SER:HB2	34:3:151:THR:HG22	1.75	0.68
34:3:630:ILE:HG21	34:3:646:LEU:HB2	1.76	0.68
34:3:1124:LEU:HB2	34:3:1130:ILE:HD12	1.76	0.68
8:C:269:LYS:HG2	44:C:1500:GTP:C5	2.28	0.67
8:C:445:PRO:O	8:C:449:PHE:HB3	1.94	0.67
27:D:1640:LEU:HD23	27:D:1666:ILE:HG12	1.76	0.67
29:H:563:G:H1	29:H:677:U:H3	1.41	0.67
1:A:2380:LEU:HB3	1:A:2384:ASN:HD22	1.59	0.67
2:K:369:GLY:HA2	2:K:395:ILE:HG23	1.76	0.67
17:I:141:G:C2'	17:I:142:G:H5'	2.25	0.67
29:H:1092:A:H3'	29:H:1093:C:H6	1.58	0.67
1:A:963:VAL:HG21	3:L:280:ARG:HH12	1.59	0.67
1:A:1286:TRP:NE1	1:A:1348:GLU:OE1	2.27	0.67
8:C:307:ILE:HA	8:C:324:ILE:HD11	1.76	0.67
27:D:1890:GLU:HB3	22:Q:143:ARG:HE	1.59	0.67
24:T:24:GLN:HB3	24:T:42:LYS:HD2	1.75	0.67
1:A:1063:PHE:HE1	1:A:1086:ASN:HD22	1.40	0.67
8:C:633:ILE:HB	8:C:645:LEU:HB2	1.77	0.67
16:F:28:U:H3	18:B:98:U:H3	1.42	0.67
18:B:147:C:H2'	18:B:148:G:C8	2.29	0.67
29:H:1149:G:H2'	29:H:1150:U:H6	1.58	0.67
40:Z:40:LEU:O	40:Z:43:ASN:O	2.12	0.67
5:J:395:LEU:HA	5:J:399:ARG:HD3	1.77	0.67
8:C:598:ILE:HG23	8:C:933:TRP:CZ2	2.29	0.67
18:B:40:C:O2	18:B:115:G:N2	2.27	0.67
29:H:566:U:H3	29:H:674:G:H1	1.40	0.67
32:1:494:LEU:CD1	38:X:7:ILE:HG23	2.14	0.67
33:2:176:TRP:O	33:2:177:GLN:HG2	1.93	0.67
34:3:369:ILE:HD11	34:3:380:LEU:HB2	1.77	0.67
1:A:1943:PRO:HD3	19:O:169:ILE:HD11	1.77	0.67
2:K:446:SER:CB	2:K:451:PHE:CE1	2.76	0.67
27:D:556:LYS:HB2	27:D:628:VAL:HA	1.77	0.67
27:D:1756:ASN:HA	27:D:1854:SER:OG	1.94	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:570:G:H1	29:H:670:U:H3	1.41	0.67
33:2:293:ARG:HG2	33:2:344:VAL:HG22	1.76	0.67
34:3:211:LYS:HD2	34:3:230:ILE:HD11	1.76	0.67
1:A:2018:ASN:HD22	1:A:2058:LEU:HD22	1.58	0.67
2:K:439:LYS:NZ	7:M:122:GLU:OE1	2.23	0.67
3:L:424:THR:HG22	3:L:425:SER:H	1.59	0.67
17:I:75:U:H5	27:D:1100:PHE:CE1	2.12	0.67
27:D:677:TYR:CD2	27:D:691:LEU:HD21	2.30	0.67
27:D:1971:LEU:HA	27:D:2111:LEU:HB2	1.77	0.67
8:C:865:ASP:HB2	8:C:931:TYR:HE2	1.60	0.66
2:K:292:TRP:CD1	2:K:299:GLU:HA	2.30	0.66
27:D:1890:GLU:O	22:Q:143:ARG:NE	2.28	0.66
34:3:363:VAL:O	34:3:364:THR:HG23	1.95	0.66
34:3:886:PHE:CE2	34:3:1225:VAL:HG21	2.30	0.66
36:5:73:CYS:SG	46:5:203:ZN:ZN	1.84	0.66
1:A:967:VAL:HG23	1:A:1088:VAL:HG11	1.77	0.66
17:I:143:A:C6	25:U:48:TYR:HD2	2.13	0.66
27:D:2077:ARG:NH1	27:D:2119:LEU:O	2.28	0.66
29:H:548:G:H1	29:H:692:U:H3	1.41	0.66
34:3:153:ASP:OD1	34:3:154:SER:N	2.28	0.66
37:6:50:LEU:HD21	37:6:62:ILE:HG23	1.77	0.66
4:N:304:PRO:O	4:N:308:LEU:N	2.28	0.66
34:3:380:LEU:HD23	34:3:388:LEU:HD21	1.76	0.66
1:A:1490:ARG:NH1	1:A:1535:LYS:O	2.27	0.66
8:C:274:ILE:HD13	8:C:385:PHE:HD2	1.60	0.66
8:C:354:TYR:HA	8:C:359:PHE:HA	1.76	0.66
18:B:127:U:H1'	18:B:128:A:C8	2.31	0.66
27:D:542:HIS:CD2	27:D:555:PHE:HB3	2.31	0.66
27:D:757:LEU:O	27:D:761:PHE:CB	2.41	0.66
23:R:102:ILE:HG22	23:R:103:VAL:HG23	1.77	0.66
35:4:184:PHE:HA	35:4:188:GLY:HA2	1.77	0.66
38:X:63:SER:HB3	38:X:74:PHE:CD1	2.30	0.66
1:A:920:LYS:HD3	1:A:940:ILE:HG21	1.78	0.66
2:K:171:GLN:HA	4:N:723:ARG:HH21	1.58	0.66
8:C:942:GLY:HA3	8:C:963:SER:H	1.61	0.66
19:O:149:TYR:HD2	19:O:178:VAL:HG12	1.60	0.66
27:D:1077:ASN:O	27:D:1081:GLN:HG3	1.96	0.66
27:D:1620:TYR:CD2	27:D:1655:LEU:HD21	2.30	0.66
27:D:2137:LYS:HB2	27:D:2159:GLU:OE2	1.94	0.66
1:A:928:ARG:NH1	1:A:1586:GLN:OE1	2.29	0.66
22:Q:107:LEU:HD11	23:R:59:LYS:HG3	1.77	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1:198:GLU:O	32:1:202:ASN:CB	2.43	0.66
32:1:386:TYR:O	32:1:388:TYR:N	2.29	0.66
33:2:146:ILE:HD11	34:3:1178:PRO:HG2	1.78	0.66
1:A:1050:LEU:HD23	1:A:1248:VAL:HG22	1.77	0.66
28:G:522:U:H3	39:Y:155:ARG:NH2	1.94	0.66
27:D:1493:SER:HA	27:D:1524:TRP:HH2	1.60	0.66
34:3:493:VAL:HA	34:3:937:LYS:HG2	1.77	0.66
1:A:1756:PHE:HD1	1:A:1774:MET:HG2	1.60	0.66
34:3:77:GLY:HA3	34:3:146:THR:HG21	1.77	0.66
1:A:2259:ILE:HD11	1:A:2293:ILE:HD11	1.77	0.65
27:D:571:VAL:HG21	27:D:587:GLU:HG2	1.78	0.65
32:1:491:ARG:NH1	38:X:27:TYR:OH	2.29	0.65
32:1:695:ASN:HD22	32:1:700:VAL:HG11	1.60	0.65
32:1:966:GLU:HA	32:1:969:LEU:HD13	1.78	0.65
34:3:527:LEU:HD12	34:3:528:PRO:HD2	1.78	0.65
1:A:2310:GLU:C	1:A:2333:PHE:CE1	2.67	0.65
32:1:678:LEU:HD12	32:1:682:ILE:HD11	1.78	0.65
32:1:489:VAL:CG1	38:X:26:GLU:HG2	2.26	0.65
28:G:520:G:N2	38:X:34:TYR:CG	2.65	0.65
33:2:336:ASP:OD2	33:2:338:THR:OG1	2.14	0.65
16:F:92:C:H2'	16:F:93:A:H8	1.61	0.65
21:P:21:ARG:HH11	21:P:29:VAL:HG11	1.62	0.65
21:P:21:ARG:NH1	21:P:51:GLU:OE2	2.30	0.65
22:Q:26:TRP:CE3	22:Q:44:LYS:HG2	2.31	0.65
33:2:323:THR:OG1	35:4:62:ASP:OD1	2.14	0.65
18:B:50:G:H1	18:B:65:U:H3	1.45	0.65
29:H:1115:G:H1	29:H:1130:U:H3	1.43	0.65
32:1:337:VAL:HG11	32:1:359:ILE:HD11	1.79	0.65
32:1:494:LEU:CB	38:X:7:ILE:HG23	2.26	0.65
1:A:404:ASN:ND2	8:C:142:LEU:HD13	2.11	0.65
1:A:2018:ASN:HB3	1:A:2021:SER:OG	1.97	0.65
1:A:2067:TYR:CB	19:O:194:LEU:CD2	2.73	0.65
18:B:95:C:H1'	18:B:96:U:H4'	1.79	0.65
19:O:194:LEU:HD13	19:O:197:ARG:NH1	2.12	0.65
32:1:507:VAL:HG21	32:1:543:ARG:HD2	1.77	0.65
1:A:394:ARG:HB2	8:C:667:GLU:OE2	1.97	0.65
1:A:2398:LEU:CB	27:D:1060:LYS:CD	2.69	0.65
27:D:1585:LEU:HD21	27:D:1683:LEU:HD23	1.79	0.65
33:2:200:ILE:O	33:2:203:THR:OG1	2.12	0.65
8:C:222:MET:O	8:C:225:THR:OG1	2.13	0.65
18:B:1:A:N6	18:B:164:C:H42	1.90	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1704:GLU:HG2	1:A:1731:LYS:HD3	1.77	0.64
1:A:1832:GLU:OE1	3:L:428:ARG:NH1	2.26	0.64
2:K:415:TYR:CD1	2:K:439:LYS:HB3	2.32	0.64
8:C:318:LEU:HA	8:C:422:LYS:HG2	1.80	0.64
8:C:860:PRO:HG2	8:C:908:VAL:HG11	1.79	0.64
27:D:1487:VAL:O	27:D:1490:THR:OG1	2.13	0.64
27:D:1489:GLU:OE2	27:D:1744:SER:OG	2.11	0.64
28:G:520:G:N1	38:X:34:TYR:CE2	2.65	0.64
8:C:510:ARG:NH2	8:C:533:GLU:OE1	2.30	0.64
17:I:151:G:H4'	17:I:152:A:O4'	1.97	0.64
18:B:36:A:H61	18:B:118:U:H3	1.45	0.64
23:R:54:ILE:HG23	23:R:72:VAL:HG13	1.78	0.64
29:H:1098:C:H2'	29:H:1099:G:H8	1.63	0.64
32:1:651:LEU:HD21	32:1:692:ILE:HD11	1.79	0.64
32:1:881:MET:HG2	32:1:885:ILE:HD11	1.77	0.64
34:3:994:LEU:HB3	34:3:1006:TYR:HB2	1.79	0.64
39:Y:171:GLY:C	39:Y:172:ILE:HG12	2.16	0.64
1:A:1400:ILE:HG22	1:A:1401:SER:H	1.63	0.64
1:A:1563:LYS:O	1:A:1782:ASN:ND2	2.30	0.64
1:A:2310:GLU:OE1	1:A:2333:PHE:CZ	2.49	0.64
7:M:113:GLN:HE21	16:F:77:G:H4'	1.62	0.64
8:C:705:GLY:HA3	8:C:826:PRO:HG3	1.79	0.64
27:D:453:PHE:HE2	27:D:455:ARG:HE	1.45	0.64
27:D:1216:MET:HG3	27:D:1218:PHE:CE1	2.30	0.64
3:L:136:GLN:NE2	3:L:166:LYS:O	2.31	0.64
8:C:539:VAL:HG13	8:C:564:ILE:HG23	1.79	0.64
8:C:780:PRO:HA	8:C:783:ILE:HB	1.78	0.64
27:D:747:ARG:NH1	27:D:1047:ARG:HG3	2.12	0.64
27:D:804:HIS:CD2	27:D:834:LEU:HD11	2.33	0.64
1:A:140:ARG:HH21	1:A:252:GLU:HB2	1.61	0.64
1:A:1805:ILE:HG23	1:A:1809:ASN:HD21	1.62	0.64
18:B:95:C:H4'	18:B:96:U:OP1	1.96	0.64
18:B:162:G:C3'	18:B:163:C:H4'	2.22	0.64
29:H:1138:G:O2'	29:H:1139:G:C8	2.50	0.64
27:D:1688:TYR:HD2	27:D:1895:ARG:HA	1.63	0.64
21:P:86:ILE:HG22	20:S:72:ILE:HG22	1.77	0.64
29:H:37:G:OP1	32:1:186:ARG:NH2	2.31	0.64
29:H:1097:G:C2	29:H:1146:G:C4	2.86	0.64
1:A:1624:LEU:HD21	1:A:1635:HIS:CE1	2.32	0.64
3:L:98:PHE:HA	3:L:101:ILE:HG22	1.80	0.64
3:L:124:PHE:HB2	3:L:183:PHE:HD1	1.63	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1524:TRP:CD1	27:D:1780:ARG:CZ	2.79	0.64
24:T:85:ASP:OD2	25:U:32:LYS:NZ	2.27	0.64
29:H:1099:G:H2'	29:H:1100:A:H5'	1.80	0.64
29:H:1138:G:O2'	29:H:1139:G:H8	1.79	0.64
2:K:179:SER:H	2:K:194:SER:HA	1.63	0.64
3:L:298:VAL:HG12	3:L:302:MET:HG2	1.80	0.64
27:D:677:TYR:HB2	27:D:691:LEU:HD11	1.78	0.64
29:H:1120:G:H2'	29:H:1121:U:H6	1.62	0.64
32:1:494:LEU:HD11	38:X:23:TRP:CG	2.31	0.64
33:2:145:GLN:HE21	34:3:1178:PRO:HG3	1.62	0.64
34:3:130:LEU:HD23	34:3:149:ALA:HB2	1.77	0.64
1:A:243:ASP:HB3	1:A:246:GLU:HB2	1.79	0.64
1:A:1258:LEU:HD22	1:A:1269:ILE:HD12	1.79	0.64
3:L:120:TYR:HD1	3:L:123:ARG:HB3	1.61	0.64
3:L:227:PRO:HG3	3:L:325:ARG:HB3	1.80	0.64
21:P:39:LYS:HE3	22:Q:35:GLN:NE2	2.13	0.64
33:2:336:ASP:HB3	33:2:339:ASN:HD22	1.62	0.64
34:3:156:ASN:HD22	34:3:178:PRO:HA	1.63	0.64
8:C:182:LYS:NZ	8:C:186:ASP:OD2	2.24	0.64
8:C:236:LEU:HD21	8:C:435:LEU:HD11	1.80	0.64
1:A:1365:THR:O	1:A:1369:ASN:ND2	2.31	0.63
2:K:316:GLN:OE1	2:K:320:SER:OG	2.17	0.63
3:L:328:VAL:HA	3:L:331:HIS:HD2	1.62	0.63
5:J:344:PHE:CE1	5:J:347:LEU:HB2	2.33	0.63
27:D:1700:ILE:O	27:D:1704:LEU:HG	1.98	0.63
34:3:1036:LYS:NZ	34:3:1082:TYR:OH	2.31	0.63
1:A:1267:VAL:HG22	1:A:1302:LEU:HD23	1.81	0.63
34:3:884:ASN:OD1	34:3:885:TRP:N	2.23	0.63
35:4:114:ASN:ND2	35:4:177:ARG:O	2.32	0.63
1:A:976:GLN:NE2	1:A:1310:LYS:HB3	2.12	0.63
8:C:757:TRP:HD1	8:C:762:SER:HB3	1.64	0.63
27:D:610:GLU:HG2	27:D:643:ARG:NH2	2.14	0.63
1:A:681:LYS:O	1:A:684:LYS:HB3	1.99	0.63
8:C:445:PRO:O	8:C:449:PHE:CB	2.47	0.63
18:B:27:G:H8	18:B:27:G:OP2	1.81	0.63
27:D:1372:LYS:HD3	27:D:1708:GLY:HA3	1.80	0.63
1:A:408:SER:HB3	1:A:410:ILE:HD12	1.80	0.63
8:C:405:ARG:HH22	18:B:1:A:H8	1.47	0.63
27:D:1688:TYR:CD1	27:D:1695:TYR:CD1	2.85	0.63
27:D:1917:THR:HG22	27:D:1918:SER:H	1.64	0.63
32:1:945:TYR:HB3	32:1:948:ALA:HB3	1.81	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:4:43:ASP:HB2	35:4:50:GLN:HE21	1.63	0.63
1:A:1632:ILE:HG21	1:A:1645:LEU:HD13	1.81	0.63
8:C:603:PHE:CB	8:C:646:GLY:O	2.46	0.63
17:I:141:G:O2'	17:I:142:G:H5'	1.99	0.63
27:D:520:CYS:HB3	27:D:673:THR:HA	1.78	0.63
27:D:568:GLN:HA	27:D:587:GLU:OE2	1.99	0.63
34:3:128:LYS:NZ	34:3:193:MET:O	2.32	0.63
1:A:456:GLU:HG3	8:C:357:GLY:HA3	1.80	0.63
1:A:992:ASP:OD2	1:A:1085:LYS:NZ	2.30	0.63
1:A:1058:ALA:HB3	1:A:1105:ARG:HH21	1.63	0.63
3:L:357:PRO:O	3:L:358:ILE:HG13	1.99	0.63
28:G:520:G:C2	38:X:34:TYR:CD1	2.86	0.63
32:1:510:ALA:HA	32:1:518:THR:HG21	1.80	0.63
17:I:142:G:H5"	17:I:143:A:OP2	1.99	0.63
22:Q:44:LYS:HB2	22:Q:79:ILE:HG21	1.81	0.63
32:1:484:PHE:HA	32:1:488:TRP:HD1	1.64	0.63
34:3:961:CYS:O	34:3:962:LEU:HD12	1.99	0.63
1:A:1790:TRP:HZ3	1:A:1798:ILE:HD12	1.63	0.62
8:C:274:ILE:HD12	8:C:382:TYR:CD1	2.34	0.62
32:1:542:THR:O	32:1:546:ASN:ND2	2.31	0.62
1:A:1481:GLU:HA	1:A:1484:TRP:NE1	2.14	0.62
34:3:97:THR:OG1	34:3:97:THR:O	2.17	0.62
1:A:656:ILE:O	1:A:660:ILE:HG13	2.00	0.62
8:C:652:MET:HG3	8:C:655:LEU:HD12	1.80	0.62
27:D:1668:LYS:HE3	27:D:1702:GLU:HG3	1.80	0.62
22:Q:3:LEU:HD13	23:R:62:ASP:HB2	1.81	0.62
32:1:334:ILE:HD11	32:1:362:CYS:HB3	1.80	0.62
1:A:1073:ILE:HG23	1:A:1074:VAL:HG23	1.79	0.62
1:A:1208:PRO:O	1:A:1212:ARG:HG3	1.98	0.62
1:A:1376:ASN:OD1	1:A:1377:SER:N	2.32	0.62
1:A:2398:LEU:HD22	27:D:1060:LYS:HD2	1.81	0.62
16:F:43:C:O2'	16:F:44:A:O5'	2.14	0.62
32:1:494:LEU:HD12	38:X:7:ILE:HG21	1.77	0.62
1:A:1172:PHE:HZ	1:A:1230:ILE:HD11	1.64	0.62
34:3:394:SER:HB3	34:3:404:LEU:HB2	1.80	0.62
34:3:1124:LEU:HB3	34:3:1128:THR:HG23	1.82	0.62
36:5:49:CYS:SG	46:5:201:ZN:ZN	1.78	0.62
3:L:401:LEU:N	4:N:214:SER:HB3	2.15	0.62
8:C:130:PRO:HB3	8:C:558:LYS:NZ	2.15	0.62
8:C:703:LEU:O	8:C:705:GLY:N	2.33	0.62
38:X:72:GLN:HA	38:X:72:GLN:OE1	1.98	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:175:LEU:O	3:L:179:MET:HB2	2.00	0.62
27:D:781:LEU:HD21	27:D:798:GLU:HG2	1.80	0.62
27:D:1541:ILE:HD12	27:D:1542:GLU:HG2	1.82	0.62
27:D:1996:GLN:NE2	27:D:2150:LEU:H	1.97	0.62
24:T:35:ILE:HA	26:V:23:ARG:HH21	1.64	0.62
32:1:494:LEU:HB3	38:X:7:ILE:CG2	2.29	0.62
34:3:629:GLY:O	34:3:630:ILE:HG13	1.99	0.62
34:3:987:PHE:CD2	34:3:1054:LEU:HB2	2.34	0.62
4:N:849:TYR:O	4:N:853:GLY:N	2.20	0.62
27:D:1148:GLN:HE22	27:D:1297:TRP:HA	1.64	0.62
1:A:2189:LEU:HD13	1:A:2224:VAL:HG23	1.81	0.62
27:D:1772:TRP:CZ3	27:D:1773:PHE:CE1	2.86	0.62
29:H:1098:C:O5'	29:H:1098:C:H6	1.82	0.62
33:2:167:LYS:NZ	34:3:1111:ASP:OD2	2.21	0.62
34:3:253:VAL:HG21	34:3:327:VAL:HG11	1.82	0.62
37:6:23:ASP:OD1	37:6:24:GLU:N	2.29	0.62
1:A:1014:LYS:HE2	1:A:1024:LEU:HD13	1.82	0.62
3:L:239:ALA:O	3:L:243:ALA:HB2	2.00	0.62
24:T:90:ILE:HB	26:V:62:VAL:HG13	1.81	0.62
29:H:143:G:H2'	29:H:144:G:H8	1.65	0.62
34:3:379:VAL:O	34:3:390:LYS:HA	1.99	0.62
34:3:699:MET:HA	34:3:719:GLN:O	1.99	0.62
1:A:1145:MET:SD	1:A:1160:LEU:HD22	2.40	0.61
1:A:2349:PHE:CD2	1:A:2379:PRO:HG3	2.35	0.61
1:A:2395:PHE:CD1	27:D:1062:PRO:CD	2.67	0.61
2:K:392:HIS:HD2	2:K:396:VAL:HG22	1.65	0.61
8:C:220:ASN:HB3	8:C:651:TYR:HB2	1.80	0.61
1:A:1501:THR:HG21	4:N:163:THR:HG21	1.82	0.61
8:C:468:LEU:HD11	8:C:493:LEU:HD23	1.81	0.61
16:F:74:U:H2'	16:F:75:A:C8	2.35	0.61
26:V:30:ARG:HE	26:V:41:ASP:HB3	1.65	0.61
32:1:531:GLU:OE1	32:1:534:ARG:NH2	2.33	0.61
32:1:763:LEU:HD11	32:1:797:VAL:HG22	1.81	0.61
3:L:222:ILE:HA	3:L:225:ILE:HG12	1.82	0.61
27:D:1731:TYR:OH	22:Q:146:LEU:O	2.15	0.61
27:D:1925:LYS:NZ	27:D:1946:ASP:OD2	2.25	0.61
1:A:304:ASP:OD1	1:A:305:LEU:N	2.32	0.61
27:D:1220:ILE:HD11	27:D:1272:PHE:HE2	1.65	0.61
32:1:820:MET:HA	32:1:823:MET:HG2	1.81	0.61
34:3:768:ARG:NH2	34:3:1359:ASN:O	2.32	0.61
2:K:179:SER:HA	2:K:441:ILE:HG21	1.83	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:271:ASP:O	8:C:275:LEU:HB2	1.99	0.61
27:D:1370:SER:OG	27:D:1535:PHE:HB2	2.00	0.61
34:3:128:LYS:NZ	34:3:194:GLU:OE1	2.29	0.61
34:3:154:SER:HB3	34:3:1302:ARG:HD2	1.83	0.61
2:K:395:ILE:HG22	2:K:396:VAL:N	2.12	0.61
4:N:261:LYS:HB3	4:N:285:HIS:CD2	2.35	0.61
5:J:443:LYS:HG2	5:J:444:VAL:H	1.65	0.61
27:D:571:VAL:HG21	27:D:587:GLU:CG	2.31	0.61
21:P:49:ILE:HG22	21:P:81:VAL:HA	1.82	0.61
29:H:1161:U:O2'	29:H:1162:U:H5'	2.01	0.61
32:1:739:ASN:OD1	32:1:740:LYS:N	2.32	0.61
2:K:286:ASP:O	2:K:287:MET:HG2	1.99	0.61
18:B:136:G:O2'	18:B:137:U:O4'	2.19	0.61
27:D:1367:PHE:HE2	27:D:1518:ALA:HB1	1.64	0.61
27:D:1550:SER:C	27:D:1551:PHE:HD1	2.03	0.61
34:3:638:SER:HA	34:3:683:GLN:HA	1.83	0.61
34:3:642:LEU:HD21	34:3:644:ILE:HG23	1.81	0.61
8:C:598:ILE:HG22	8:C:599:THR:HG23	1.82	0.61
18:B:19:A:N6	18:B:151:A:N1	2.47	0.61
27:D:960:ILE:HG23	27:D:961:SER:H	1.65	0.61
29:H:1149:G:H2'	29:H:1150:U:C6	2.34	0.61
34:3:205:SER:HB2	34:3:211:LYS:HG2	1.82	0.61
38:X:78:LYS:NZ	39:Y:162:LEU:O	2.34	0.61
1:A:406:PRO:HG2	44:C:1500:GTP:O2'	2.01	0.61
1:A:609:GLU:O	1:A:613:SER:CB	2.47	0.61
1:A:2157:ILE:CG2	27:D:1066:ARG:HG2	2.31	0.61
4:N:101:LYS:O	4:N:105:ALA:HB2	2.00	0.61
7:M:93:VAL:HG12	7:M:95:ARG:H	1.64	0.61
8:C:176:ARG:NH1	8:C:184:GLU:O	2.34	0.61
8:C:415:TYR:HB3	8:C:419:PRO:HG2	1.83	0.61
22:Q:7:LEU:HD11	23:R:95:PHE:CE2	2.36	0.61
32:1:494:LEU:HB3	38:X:7:ILE:CG1	2.31	0.61
1:A:768:GLU:OE1	4:N:108:LYS:NZ	2.34	0.60
1:A:1313:ASP:OD1	1:A:1359:ILE:HG21	2.01	0.60
2:K:292:TRP:HE1	2:K:299:GLU:HG3	1.66	0.60
2:K:312:SER:HB2	2:K:353:TYR:O	2.01	0.60
17:I:146:U:O4'	20:S:67:SER:HB2	2.01	0.60
28:G:520:G:C5	38:X:34:TYR:CZ	2.88	0.60
29:H:1126:G:HO2'	29:H:1127:A:H8	1.50	0.60
34:3:640:THR:OG1	34:3:686:GLN:O	2.20	0.60
34:3:1216:CYS:SG	34:3:1228:PHE:HB2	2.41	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:51:PHE:HE2	7:M:114:ILE:HG23	1.66	0.60
8:C:504:THR:O	8:C:507:SER:OG	2.15	0.60
8:C:918:LEU:HD23	8:C:928:CYS:HB2	1.83	0.60
27:D:1524:TRP:CD1	27:D:1780:ARG:NE	2.69	0.60
27:D:1688:TYR:CZ	27:D:1896:LYS:HE2	2.36	0.60
34:3:994:LEU:HB2	34:3:1008:ILE:HD11	1.83	0.60
1:A:1161:TYR:HD1	1:A:1170:MET:HG2	1.67	0.60
2:K:261:LEU:HB3	2:K:292:TRP:CZ3	2.37	0.60
29:H:1139:G:H2'	29:H:1140:U:C6	2.36	0.60
32:1:516:SER:O	32:1:520:ASP:HB2	2.01	0.60
32:1:767:LEU:HD22	32:1:804:GLU:HG2	1.82	0.60
1:A:683:LEU:HD13	1:A:706:PRO:HB2	1.82	0.60
16:F:2:U:H2'	16:F:3:U:C6	2.36	0.60
17:I:77:U:H1'	27:D:1107:ARG:HG3	1.84	0.60
28:G:514:U:H4'	28:G:515:U:H5'	1.83	0.60
32:1:177:ASN:OD1	32:1:178:THR:N	2.34	0.60
34:3:493:VAL:O	34:3:499:SER:OG	2.13	0.60
34:3:1037:PHE:HB2	34:3:1042:LEU:HB2	1.82	0.60
6:E:42:MET:HE1	6:E:107:VAL:H	1.65	0.60
18:B:27:G:OP1	18:B:141:G:O5'	2.19	0.60
18:B:27:G:N2	18:B:131:A:N3	2.48	0.60
34:3:184:LEU:HD21	37:6:45:GLY:HA3	1.83	0.60
34:3:379:VAL:HG22	34:3:391:LEU:HB2	1.83	0.60
39:Y:173:ASN:O	39:Y:174:VAL:HG12	2.02	0.60
1:A:1147:PHE:CD2	1:A:1153:GLU:HG2	2.37	0.60
1:A:1682:THR:OG1	1:A:1702:THR:OG1	2.20	0.60
1:A:2310:GLU:CA	1:A:2333:PHE:CE1	2.85	0.60
5:J:167:GLU:HB3	5:J:169:TRP:HE3	1.66	0.60
8:C:737:ILE:HG12	8:C:768:PHE:HB3	1.83	0.60
17:I:62:G:OP1	27:D:714:ASN:HB3	2.02	0.60
27:D:1409:LEU:HD22	27:D:1427:LYS:HB2	1.84	0.60
27:D:2104:GLY:HA2	27:D:2112:TYR:HD2	1.66	0.60
34:3:335:ILE:HD12	34:3:407:LEU:HD11	1.83	0.60
34:3:547:ASN:HA	34:3:563:ILE:O	2.00	0.60
1:A:1213:MET:HG2	1:A:1259:LEU:HD12	1.82	0.60
1:A:1777:ILE:HG12	1:A:1784:TYR:HB3	1.82	0.60
1:A:1910:LYS:CD	19:O:169:ILE:HG12	2.30	0.60
2:K:65:GLU:HG3	2:K:66:ASN:H	1.66	0.60
8:C:116:THR:OG1	8:C:120:ARG:NH1	2.34	0.60
27:D:707:PHE:HD2	27:D:895:VAL:HG13	1.67	0.60
1:A:902:PRO:HG2	1:A:905:TYR:HB2	1.82	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1154:VAL:O	27:D:1157:ILE:HG13	2.02	0.60
27:D:1772:TRP:HZ3	27:D:1773:PHE:CZ	2.20	0.60
27:D:2013:VAL:HG13	27:D:2018:ASP:HB2	1.83	0.60
1:A:431:ILE:HA	8:C:895:ALA:HB1	1.84	0.60
1:A:982:TYR:HB2	1:A:1106:GLY:HA3	1.82	0.60
1:A:2310:GLU:CG	1:A:2333:PHE:CZ	2.66	0.60
7:M:34:LYS:HB3	7:M:39:GLU:HG2	1.83	0.60
27:D:683:PHE:HA	27:D:946:VAL:HG21	1.83	0.60
32:1:494:LEU:CB	38:X:7:ILE:CG1	2.78	0.60
34:3:854:ASN:OD1	34:3:855:ALA:N	2.35	0.60
1:A:976:GLN:HE22	1:A:1310:LYS:CB	2.13	0.59
2:K:135:ARG:NH1	2:K:360:ASN:O	2.33	0.59
4:N:842:TRP:HA	4:N:845:LEU:HD12	1.82	0.59
16:F:36:U:H3	16:F:45:A:H61	1.50	0.59
17:I:96:A:H2'	17:I:97:U:O4'	2.02	0.59
27:D:490:ALA:C	27:D:491:PHE:HD1	2.05	0.59
27:D:781:LEU:CD2	27:D:798:GLU:HA	2.29	0.59
27:D:2008:CYS:SG	27:D:2013:VAL:HB	2.42	0.59
25:U:28:GLY:HA2	25:U:38:TYR:O	2.02	0.59
29:H:1149:G:H8	29:H:1149:G:C5'	2.15	0.59
34:3:236:VAL:HG13	34:3:257:ILE:HG23	1.84	0.59
5:J:346:ASN:O	5:J:422:ASN:ND2	2.35	0.59
34:3:412:THR:O	34:3:413:ILE:HG23	2.03	0.59
34:3:831:THR:HA	34:3:836:TRP:HA	1.83	0.59
34:3:924:PHE:CD2	34:3:952:ARG:HD2	2.37	0.59
38:X:90:ASP:OD2	39:Y:223:ARG:NH2	2.35	0.59
1:A:161:PHE:O	1:A:165:LEU:HB2	2.02	0.59
1:A:430:PRO:O	1:A:431:ILE:HG22	2.03	0.59
2:K:355:VAL:HG22	2:K:366:THR:HG22	1.84	0.59
3:L:225:ILE:O	3:L:325:ARG:NH1	2.35	0.59
20:S:65:ARG:NH1	26:V:65:GLY:O	2.35	0.59
1:A:675:HIS:NE2	18:B:102:C:OP1	2.36	0.59
2:K:165:LEU:HD22	2:K:465:ASN:HB3	1.83	0.59
27:D:1428:LEU:HD11	27:D:1445:LEU:HB2	1.85	0.59
27:D:1779:TYR:CE1	27:D:1783:HIS:HE1	2.21	0.59
33:2:296:GLN:NE2	33:2:306:GLU:OE2	2.35	0.59
38:X:48:LEU:O	39:Y:231:ARG:CZ	2.49	0.59
38:X:89:VAL:HG22	38:X:104:ILE:HG22	1.85	0.59
1:A:794:LYS:HB3	1:A:854:ARG:NH1	2.16	0.59
2:K:285:HIS:O	2:K:309:GLY:HA2	2.03	0.59
4:N:241:PRO:HB3	4:N:277:ILE:HD11	1.84	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:90:C:N3	22:Q:34:PRO:HD2	2.17	0.59
27:D:563:LEU:HD11	27:D:836:TRP:CE2	2.38	0.59
29:H:1149:G:C8	29:H:1149:G:C5'	2.85	0.59
29:H:1152:U:H2'	29:H:1153:C:C6	2.38	0.59
34:3:433:MET:O	34:3:485:ASN:HB3	2.02	0.59
34:3:1090:ILE:O	34:3:1117:HIS:HA	2.01	0.59
1:A:1202:ASN:ND2	1:A:1246:ALA:O	2.34	0.59
1:A:1308:GLU:HG2	1:A:1311:LYS:HD2	1.84	0.59
2:K:66:ASN:ND2	16:F:74:U:O2	2.35	0.59
8:C:803:VAL:HG13	8:C:813:ILE:HB	1.84	0.59
28:G:521:U:OP2	32:1:408:ARG:NH2	2.34	0.59
28:G:522:U:H3	39:Y:155:ARG:CZ	2.16	0.59
38:X:11:GLU:HG2	38:X:16:ILE:HG21	1.84	0.59
1:A:1414:TRP:CD1	1:A:1555:THR:HG22	2.37	0.59
1:A:2310:GLU:CA	1:A:2333:PHE:CZ	2.82	0.59
4:N:809:LEU:HD12	4:N:841:THR:HG22	1.85	0.59
27:D:568:GLN:NE2	27:D:587:GLU:OE1	2.36	0.59
32:1:696:LYS:HG2	32:1:697:HIS:H	1.68	0.59
38:X:123:LYS:O	38:X:127:ASP:N	2.34	0.59
1:A:897:PRO:O	1:A:1006:ARG:NH1	2.36	0.59
5:J:265:LEU:HD12	5:J:266:PRO:HD2	1.85	0.59
19:O:183:LYS:O	19:O:187:GLU:HB2	2.02	0.59
32:1:698:ARG:HE	32:1:739:ASN:HD22	1.51	0.59
34:3:1199:ILE:HA	34:3:1220:GLY:HA2	1.84	0.59
8:C:968:MET:HB3	8:C:972:ARG:NH1	2.18	0.59
18:B:161:U:H2'	18:B:162:G:C8	2.38	0.59
29:H:1140:U:C2	29:H:1141:C:C5	2.91	0.59
29:H:1146:G:O2'	29:H:1147:A:O5'	2.15	0.59
32:1:327:TRP:HZ2	32:1:369:PRO:HG2	1.68	0.59
34:3:599:ILE:HB	34:3:610:ILE:HB	1.85	0.59
1:A:1755:LYS:HE3	1:A:1759:TYR:CE2	2.38	0.59
18:B:43:G:H2'	18:B:44:A:C8	2.38	0.59
27:D:765:ASN:CB	27:D:768:HIS:HD2	2.16	0.59
23:R:27:LYS:O	23:R:32:SER:OG	2.20	0.59
34:3:180:THR:O	36:5:83:LYS:HB3	2.03	0.59
34:3:736:ILE:HG23	34:3:738:GLN:H	1.68	0.59
1:A:1674:ASP:OD2	1:A:2200:LYS:NZ	2.33	0.58
27:D:1372:LYS:HA	27:D:1376:LYS:NZ	2.18	0.58
21:P:18:TYR:HD1	21:P:101:PRO:HG3	1.67	0.58
32:1:442:ILE:HG23	32:1:457:ILE:HG23	1.83	0.58
32:1:632:LYS:HD2	32:1:672:VAL:HG13	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:208:GLU:HG3	34:3:209:GLN:H	1.67	0.58
38:X:40:ARG:NH1	38:X:72:GLN:O	2.36	0.58
1:A:867:ILE:HD13	1:A:1101:TYR:CG	2.38	0.58
1:A:927:VAL:HG13	3:L:385:ARG:HD2	1.83	0.58
27:D:1779:TYR:CE1	27:D:1783:HIS:CE1	2.91	0.58
27:D:1781:ARG:HG3	27:D:1789:TYR:HE2	1.66	0.58
33:2:292:GLY:N	35:4:31:GLN:OE1	2.30	0.58
34:3:382:GLN:NE2	34:3:416:SER:OG	2.36	0.58
1:A:365:ASN:OD1	1:A:366:GLU:N	2.36	0.58
1:A:1207:TRP:HB3	1:A:1211:SER:OG	2.03	0.58
1:A:1391:PRO:HD2	1:A:1394:LEU:HD12	1.85	0.58
4:N:401:ILE:O	4:N:405:SER:N	2.34	0.58
8:C:597:TYR:CE1	8:C:630:PRO:HB2	2.38	0.58
8:C:794:GLN:HG2	8:C:835:LYS:HG2	1.84	0.58
18:B:67:U:H2'	18:B:68:A:H8	1.68	0.58
32:1:538:VAL:O	32:1:542:THR:HG23	2.03	0.58
1:A:551:LEU:HG	1:A:557:PHE:HE2	1.69	0.58
8:C:348:LEU:HD12	8:C:372:THR:HG22	1.84	0.58
27:D:789:LEU:O	27:D:794:ARG:NE	2.32	0.58
34:3:232:ARG:HE	34:3:235:MET:HG3	1.68	0.58
34:3:387:ASP:HA	34:3:412:THR:HG22	1.84	0.58
34:3:1191:ASN:ND2	34:3:1316:LYS:HB2	2.18	0.58
2:K:197:GLY:HA2	2:K:221:ILE:HG13	1.85	0.58
6:E:137:TYR:O	6:E:139:HIS:N	2.37	0.58
8:C:706:LEU:HD23	8:C:825:VAL:HA	1.85	0.58
27:D:645:PRO:HA	27:D:648:GLU:OE2	2.03	0.58
27:D:1367:PHE:CE2	27:D:1518:ALA:HB1	2.39	0.58
23:R:72:VAL:HG21	23:R:94:LEU:HB3	1.85	0.58
1:A:325:LYS:HB2	1:A:405:ASN:HD22	1.68	0.58
2:K:171:GLN:NE2	2:K:209:PRO:O	2.36	0.58
8:C:138:VAL:HG12	8:C:146:LYS:HG2	1.85	0.58
18:B:32:G:O2'	18:B:34:C:H5"	2.03	0.58
27:D:1898:ASP:O	27:D:1902:LEU:HG	2.03	0.58
24:T:59:GLU:OE2	25:U:30:LYS:NZ	2.20	0.58
34:3:328:VAL:HG22	34:3:337:VAL:HG12	1.86	0.58
34:3:515:ASN:HB2	34:3:886:PHE:HE1	1.68	0.58
1:A:874:ILE:O	1:A:875:THR:OG1	2.21	0.58
1:A:956:LYS:NZ	3:L:451:GLN:HG3	2.19	0.58
27:D:794:ARG:O	27:D:798:GLU:HG3	2.04	0.58
27:D:1748:TYR:CE2	22:Q:142:PRO:HD2	2.39	0.58
26:V:8:LYS:HA	26:V:11:MET:HG2	1.86	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:1116:ARG:HH22	34:3:1141:LEU:HD21	1.69	0.58
36:5:74:TRP:HZ2	36:5:78:ARG:HH21	1.50	0.58
1:A:377:VAL:HG12	1:A:379:ILE:H	1.68	0.58
5:J:319:ALA:O	5:J:323:ARG:HG2	2.03	0.58
16:F:38:U:O2'	16:F:39:G:OP2	2.20	0.58
27:D:2053:LEU:HD21	27:D:2142:ILE:HG22	1.86	0.58
25:U:46:ASP:OD1	25:U:50:ASN:N	2.33	0.58
1:A:2159:ASN:HA	1:A:2162:LEU:HD13	1.86	0.58
27:D:978:LEU:HD23	27:D:981:LEU:HD12	1.86	0.58
27:D:1700:ILE:HD11	27:D:1740:LEU:HD13	1.84	0.58
22:Q:3:LEU:HD23	23:R:95:PHE:CE1	2.35	0.58
32:1:601:ILE:O	32:1:604:THR:OG1	2.16	0.58
34:3:766:LYS:HD3	34:3:836:TRP:CE2	2.38	0.58
2:K:175:THR:O	2:K:176:LYS:HG2	2.04	0.57
4:N:286:GLU:HG3	4:N:287:SER:H	1.68	0.57
4:N:760:VAL:O	4:N:764:LEU:CB	2.52	0.57
18:B:77:A:H4'	18:B:78:A:OP1	2.03	0.57
27:D:1488:TYR:O	27:D:1492:ILE:HG12	2.03	0.57
34:3:1222:GLN:HE22	37:6:48:ALA:HB2	1.68	0.57
1:A:585:ARG:HD3	1:A:733:GLN:HG2	1.86	0.57
1:A:1253:LYS:O	1:A:1274:ARG:NH2	2.36	0.57
1:A:1694:MET:O	1:A:1759:TYR:OH	2.22	0.57
8:C:869:HIS:HD2	8:C:925:LEU:HB3	1.69	0.57
17:I:149:U:O4	23:R:66:ASN:ND2	2.32	0.57
27:D:848:LYS:HA	27:D:889:ILE:HB	1.86	0.57
27:D:1246:THR:O	27:D:1289:PHE:HE2	1.87	0.57
27:D:1434:LEU:HB2	27:D:2096:LEU:HG	1.84	0.57
29:H:1141:C:H2'	29:H:1142:G:H8	1.68	0.57
32:1:257:MET:HG3	36:5:100:HIS:ND1	2.18	0.57
34:3:367:SER:HB2	34:3:382:GLN:HG2	1.84	0.57
1:A:181:HIS:HA	1:A:704:TRP:CZ2	2.36	0.57
1:A:194:HIS:HB3	1:A:198:ALA:H	1.68	0.57
3:L:184:LYS:HE2	3:L:186:LYS:HB2	1.86	0.57
3:L:462:ASN:HA	4:N:830:ARG:HD2	1.87	0.57
8:C:625:ILE:HD11	8:C:659:LEU:HD13	1.86	0.57
32:1:882:ASN:ND2	33:2:268:ASP:O	2.37	0.57
34:3:432:GLU:O	34:3:485:ASN:ND2	2.37	0.57
35:4:136:ARG:HB2	35:4:154:TYR:HD2	1.69	0.57
1:A:1704:GLU:HA	1:A:1731:LYS:HG2	1.86	0.57
2:K:285:HIS:C	2:K:287:MET:H	2.06	0.57
8:C:709:SER:O	8:C:821:LEU:N	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:752:ARG:HA	8:C:757:TRP:H	1.70	0.57
28:G:505:A:H1'	28:G:506:U:H6	1.68	0.57
29:H:1097:G:H1'	29:H:1146:G:N2	2.20	0.57
34:3:189:PRO:HA	34:3:206:SER:HB3	1.86	0.57
34:3:783:ILE:HG13	34:3:784:SER:N	2.18	0.57
1:A:662:GLN:NE2	16:F:1:G:N3	2.52	0.57
8:C:562:VAL:HG23	8:C:564:ILE:HD11	1.86	0.57
27:D:1216:MET:CG	27:D:1218:PHE:HE1	2.14	0.57
27:D:1396:VAL:HG11	27:D:1452:PHE:CE2	2.38	0.57
29:H:36:A:N7	32:1:182:ARG:NH2	2.52	0.57
34:3:365:ILE:HD13	34:3:381:LEU:HG	1.87	0.57
1:A:2064:GLY:O	1:A:2068:ASN:N	2.37	0.57
18:B:10:U:H2'	18:B:11:A:N7	2.20	0.57
27:D:505:LYS:HA	27:D:508:HIS:NE2	2.19	0.57
27:D:1217:ARG:NH2	27:D:1788:TYR:OH	2.37	0.57
27:D:2102:VAL:O	27:D:2142:ILE:HA	2.03	0.57
21:P:21:ARG:NH1	21:P:29:VAL:HG11	2.19	0.57
25:U:74:ARG:HB3	25:U:77:ASN:HD22	1.70	0.57
33:2:183:LEU:HD22	33:2:188:LEU:HD11	1.87	0.57
40:Z:37:LEU:O	40:Z:41:GLU:HG2	2.05	0.57
1:A:1277:GLU:O	1:A:1279:VAL:HG23	2.05	0.57
2:K:451:PHE:CD1	2:K:451:PHE:N	2.73	0.57
8:C:143:HIS:HA	44:C:1500:GTP:O3B	2.04	0.57
8:C:245:VAL:HG11	8:C:295:ILE:HG22	1.86	0.57
34:3:159:ILE:HD12	34:3:224:ILE:HD11	1.87	0.57
34:3:390:LYS:HD2	34:3:410:PHE:CZ	2.39	0.57
27:D:648:GLU:OE1	27:D:943:TYR:HB3	2.04	0.57
27:D:801:ILE:HG22	27:D:827:VAL:HB	1.86	0.57
22:Q:43:VAL:HG11	22:Q:85:ILE:HD12	1.87	0.57
20:S:68:GLN:HG3	26:V:69:ILE:HA	1.86	0.57
24:T:10:MET:HG3	26:V:30:ARG:O	2.04	0.57
33:2:265:CYS:SG	33:2:266:PHE:N	2.78	0.57
35:4:139:GLU:O	35:4:151:ALA:HA	2.04	0.57
2:K:32:LEU:HD23	2:K:34:HIS:H	1.70	0.57
27:D:1415:ARG:HA	27:D:1418:HIS:CE1	2.40	0.57
22:Q:30:GLN:HE22	22:Q:84:TYR:HE1	1.53	0.57
1:A:1865:THR:HG22	1:A:1866:PHE:H	1.69	0.57
4:N:285:HIS:ND1	4:N:285:HIS:O	2.38	0.57
8:C:240:ASP:HB2	8:C:243:GLU:HB3	1.87	0.57
8:C:472:VAL:HB	8:C:575:ALA:HB3	1.87	0.57
8:C:883:ARG:NH2	8:C:912:ALA:O	2.36	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1008:PHE:N	27:D:1008:PHE:HD1	2.02	0.57
27:D:1370:SER:HB2	27:D:1514:CYS:SG	2.45	0.57
27:D:1513:ASN:OD1	27:D:1514:CYS:N	2.31	0.57
29:H:677:U:H2'	29:H:678:U:H6	1.70	0.57
29:H:678:U:H2'	29:H:679:U:H6	1.70	0.57
32:1:256:PRO:HA	32:1:259:ARG:HD2	1.86	0.57
34:3:190:ILE:O	34:3:191:SER:OG	2.20	0.57
34:3:269:ILE:HD11	34:3:282:LYS:HG3	1.86	0.57
34:3:540:PRO:HB2	34:3:612:PRO:HG3	1.86	0.57
1:A:1836:ASN:H	1:A:1839:ASN:HB3	1.70	0.56
8:C:701:GLU:HB2	8:C:706:LEU:HB2	1.87	0.56
16:F:72:C:H2'	16:F:73:A:H8	1.70	0.56
27:D:1101:ILE:O	27:D:1105:ALA:CB	2.53	0.56
29:H:669:U:H2'	29:H:670:U:H6	1.70	0.56
29:H:671:G:H2'	29:H:672:U:H6	1.70	0.56
29:H:689:G:H2'	29:H:690:U:H6	1.71	0.56
32:1:675:LEU:HD11	32:1:714:LEU:HB3	1.86	0.56
32:1:874:GLU:HB3	34:3:1315:ARG:HH22	1.70	0.56
33:2:329:LYS:HG3	33:2:349:ILE:HD12	1.86	0.56
34:3:162:ILE:HG22	34:3:171:LEU:HD12	1.87	0.56
34:3:600:ILE:HD13	34:3:642:LEU:HD13	1.86	0.56
1:A:358:ARG:NE	1:A:361:GLU:OE2	2.34	0.56
1:A:1231:GLN:NE2	1:A:1241:ILE:O	2.35	0.56
1:A:1668:ILE:HD13	1:A:1801:SER:HB2	1.85	0.56
1:A:1883:ASN:ND2	1:A:1886:THR:OG1	2.35	0.56
3:L:367:ARG:NH1	17:I:58:G:N7	2.53	0.56
21:P:40:HIS:O	21:P:89:GLY:HA3	2.05	0.56
25:U:16:LYS:HB2	25:U:17:PRO:HD3	1.87	0.56
29:H:682:U:H2'	29:H:683:U:H6	1.70	0.56
34:3:147:PHE:CD1	34:3:147:PHE:N	2.73	0.56
1:A:535:HIS:HE2	18:B:105:A:P	2.28	0.56
1:A:1498:ASP:HB2	4:N:159:LEU:HD12	1.86	0.56
1:A:1512:ARG:NH1	1:A:1529:ASN:OD1	2.38	0.56
1:A:2310:GLU:CD	1:A:2333:PHE:HZ	2.08	0.56
2:K:410:LEU:O	2:K:421:VAL:HA	2.04	0.56
2:K:439:LYS:HB2	2:K:457:TRP:CD1	2.39	0.56
3:L:400:VAL:HG21	4:N:154:PRO:HG2	1.85	0.56
5:J:330:ASN:OD1	5:J:331:VAL:HG23	2.04	0.56
8:C:106:PHE:HE2	8:C:554:HIS:CE1	2.23	0.56
8:C:133:ILE:CA	8:C:209:MET:O	2.52	0.56
27:D:1688:TYR:CD1	27:D:1695:TYR:CE1	2.93	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:565:U:H2'	29:H:566:U:H6	1.70	0.56
29:H:672:U:H2'	29:H:673:U:H6	1.70	0.56
29:H:684:U:H2'	29:H:685:U:H6	1.70	0.56
29:H:691:G:H2'	29:H:692:U:H6	1.71	0.56
29:H:694:C:H2'	29:H:695:U:H6	1.70	0.56
32:1:598:LEU:HD11	32:1:631:ILE:HG12	1.87	0.56
36:5:22:LEU:HG	36:5:70:ALA:HB2	1.87	0.56
39:Y:229:GLY:O	39:Y:231:ARG:N	2.38	0.56
1:A:579:LEU:HD22	1:A:619:PHE:CE1	2.40	0.56
1:A:1711:VAL:HG13	1:A:1789:ASN:HB3	1.86	0.56
2:K:192:THR:O	2:K:199:LEU:HA	2.05	0.56
2:K:230:SER:OG	2:K:233:GLN:OE1	2.22	0.56
18:B:114:G:H2'	18:B:115:G:H8	1.68	0.56
18:B:149:U:H2'	18:B:150:U:O4'	2.06	0.56
27:D:562:PRO:HG3	27:D:635:GLU:OE1	2.05	0.56
27:D:790:ASP:OD1	27:D:794:ARG:NH2	2.38	0.56
29:H:680:C:H2'	29:H:681:C:H6	1.71	0.56
29:H:683:U:H2'	29:H:684:U:H6	1.71	0.56
29:H:693:C:H2'	29:H:694:C:H6	1.71	0.56
29:H:693:C:C2	29:H:694:C:C5	2.93	0.56
34:3:1122:LYS:NZ	34:3:1202:PHE:O	2.38	0.56
1:A:1810:PRO:O	1:A:1814:VAL:HG23	2.05	0.56
3:L:359:PRO:HB3	6:E:118:GLU:HG2	1.88	0.56
5:J:363:LEU:HD11	5:J:391:PHE:HD2	1.70	0.56
8:C:884:ARG:HB3	8:C:907:PRO:HG2	1.85	0.56
27:D:1008:PHE:N	27:D:1008:PHE:CD1	2.72	0.56
29:H:143:G:H2'	29:H:144:G:C8	2.41	0.56
29:H:568:U:H2'	29:H:569:C:H6	1.71	0.56
34:3:207:VAL:HB	34:3:236:VAL:HG23	1.88	0.56
34:3:517:VAL:HG21	34:3:828:VAL:HG21	1.87	0.56
1:A:1060:LYS:HA	1:A:1101:TYR:CE2	2.41	0.56
1:A:1335:TRP:CD1	1:A:1367:ILE:HD12	2.41	0.56
1:A:1473:ARG:HH11	1:A:1474:ARG:H	1.52	0.56
4:N:144:LYS:NZ	17:I:55:U:O5'	2.39	0.56
4:N:668:HIS:CE1	4:N:669:LYS:HG3	2.41	0.56
27:D:1213:ARG:HE	27:D:1281:GLN:NE2	2.03	0.56
27:D:1779:TYR:O	27:D:1782:ILE:HG22	2.06	0.56
27:D:2058:ASN:ND2	27:D:2070:LYS:O	2.38	0.56
20:S:23:LEU:HD21	26:V:69:ILE:HG23	1.87	0.56
29:H:551:C:H2'	29:H:552:U:H6	1.70	0.56
29:H:694:C:C2	29:H:695:U:C5	2.94	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1739:ARG:NH2	1:A:1745:SER:OG	2.39	0.56
1:A:2177:VAL:HG12	1:A:2179:GLU:H	1.70	0.56
2:K:314:SER:OG	2:K:355:VAL:O	2.23	0.56
2:K:441:ILE:H	2:K:456:GLY:HA2	1.71	0.56
27:D:478:LYS:HB2	27:D:504:SER:HB2	1.88	0.56
27:D:901:VAL:HA	27:D:906:LEU:HD13	1.87	0.56
27:D:1771:ASP:O	27:D:1774:THR:OG1	2.18	0.56
29:H:681:C:H2'	29:H:682:U:H6	1.70	0.56
34:3:187:VAL:HG23	34:3:209:GLN:HG2	1.86	0.56
3:L:123:ARG:NH1	3:L:184:LYS:O	2.39	0.56
17:I:77:U:H2'	17:I:78:A:C8	2.41	0.56
18:B:14:G:C2	18:B:15:A:C8	2.93	0.56
27:D:1125:THR:HG21	27:D:1251:ILE:HD11	1.87	0.56
28:G:509:A:H2	32:1:503:THR:HG21	1.71	0.56
29:H:681:C:C2	29:H:682:U:C5	2.94	0.56
29:H:695:U:C2	29:H:696:C:C5	2.94	0.56
29:H:695:U:H2'	29:H:696:C:H6	1.71	0.56
29:H:1126:G:O2'	29:H:1127:A:C5'	2.54	0.56
33:2:194:PHE:HE2	33:2:196:LEU:HD23	1.71	0.56
34:3:545:ASP:OD1	34:3:546:ASN:N	2.37	0.56
38:X:27:TYR:HD2	38:X:30:ASN:HD22	1.54	0.56
3:L:124:PHE:CD1	3:L:183:PHE:HB2	2.41	0.56
8:C:626:SER:HB2	8:C:634:ILE:HD13	1.88	0.56
17:I:5:U:H2'	17:I:6:U:H6	1.71	0.56
27:D:617:ARG:HH12	27:D:1009:TYR:HD1	1.53	0.56
29:H:551:C:C2	29:H:552:U:C5	2.94	0.56
29:H:676:U:H2'	29:H:677:U:H6	1.70	0.56
29:H:684:U:C2	29:H:685:U:C5	2.94	0.56
29:H:1139:G:C5	29:H:1140:U:C5	2.94	0.56
34:3:699:MET:HB3	34:3:720:LEU:HD23	1.88	0.56
35:4:40:TYR:HD1	35:4:53:ALA:HB2	1.71	0.56
1:A:520:VAL:O	1:A:524:LYS:HG2	2.06	0.56
1:A:551:LEU:HG	1:A:557:PHE:CE2	2.41	0.56
1:A:1899:TRP:HE3	1:A:1905:LEU:HD22	1.71	0.56
4:N:237:ASP:OD2	4:N:240:ASN:ND2	2.35	0.56
4:N:832:LEU:HD21	4:N:845:LEU:HD11	1.87	0.56
7:M:79:VAL:HG13	7:M:121:ILE:HG23	1.87	0.56
27:D:1497:PHE:HD1	27:D:1775:TYR:CD2	2.24	0.56
27:D:1740:LEU:HD11	22:Q:146:LEU:HD12	1.88	0.56
27:D:1996:GLN:HE22	27:D:2150:LEU:N	2.03	0.56
29:H:565:U:C2	29:H:566:U:C5	2.94	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:680:C:C2	29:H:681:C:C5	2.94	0.56
29:H:1126:G:O2'	29:H:1127:A:O5'	2.24	0.56
29:H:1139:G:C4	29:H:1140:U:C5	2.94	0.56
29:H:1139:G:HO2'	29:H:1140:U:H6	1.53	0.56
27:D:898:TYR:HA	27:D:901:VAL:HG22	1.88	0.55
27:D:1579:ASN:OD1	27:D:1678:ASP:HB3	2.06	0.55
29:H:567:U:H2'	29:H:568:U:H6	1.70	0.55
29:H:567:U:C2	29:H:568:U:C5	2.94	0.55
29:H:682:U:C2	29:H:683:U:C5	2.94	0.55
29:H:692:U:H2'	29:H:693:C:H6	1.71	0.55
1:A:1125:LEU:HD22	1:A:1230:ILE:HG23	1.88	0.55
2:K:389:ILE:HD11	2:K:427:TRP:HB3	1.86	0.55
3:L:402:ASP:OD1	3:L:403:SER:N	2.40	0.55
16:F:2:U:H2'	16:F:3:U:H6	1.70	0.55
27:D:1165:VAL:HG11	27:D:1170:TYR:CE1	2.40	0.55
27:D:1213:ARG:HH22	27:D:1316:LYS:HG3	1.71	0.55
27:D:1902:LEU:HD22	27:D:1928:LEU:HD12	1.87	0.55
29:H:672:U:C2	29:H:673:U:C5	2.94	0.55
29:H:692:U:C2	29:H:693:C:C5	2.94	0.55
29:H:1125:U:O2'	29:H:1126:G:C8	2.57	0.55
32:1:494:LEU:CG	38:X:7:ILE:HG23	2.36	0.55
34:3:975:ASP:O	34:3:977:ILE:HD12	2.07	0.55
34:3:1097:PHE:HE1	34:3:1108:PRO:HB3	1.70	0.55
2:K:316:GLN:HG2	2:K:318:ASP:H	1.70	0.55
2:K:458:ASP:OD2	2:K:462:LYS:NZ	2.39	0.55
3:L:160:HIS:O	3:L:164:LYS:HB3	2.06	0.55
17:I:147:U:H3	21:P:42:ASN:HD21	1.54	0.55
18:B:116:U:H2'	18:B:117:G:C8	2.39	0.55
29:H:545:G:H2'	29:H:546:U:H6	1.70	0.55
29:H:553:G:C4	29:H:554:C:C5	2.94	0.55
29:H:564:U:H2'	29:H:565:U:H6	1.70	0.55
29:H:1098:C:H2'	29:H:1099:G:C8	2.41	0.55
1:A:363:ASP:O	1:A:368:ASN:ND2	2.39	0.55
2:K:177:PRO:O	2:K:194:SER:OG	2.15	0.55
4:N:695:THR:HG22	4:N:704:LEU:HB3	1.89	0.55
5:J:301:VAL:HG22	5:J:304:ARG:HH21	1.70	0.55
17:I:73:A:H3'	27:D:833:THR:HG22	1.88	0.55
27:D:809:THR:HA	27:D:1092:PHE:CD1	2.41	0.55
27:D:1208:ALA:O	27:D:1209:GLN:HG3	2.06	0.55
29:H:545:G:C4	29:H:546:U:C5	2.95	0.55
29:H:564:U:C2	29:H:565:U:C5	2.94	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:679:U:C2	29:H:680:C:C5	2.94	0.55
29:H:683:U:C2	29:H:684:U:C5	2.95	0.55
34:3:351:PRO:HD3	34:3:407:LEU:HD13	1.89	0.55
34:3:839:ARG:HG3	34:3:880:PRO:HG2	1.87	0.55
35:4:119:ILE:O	35:4:149:LYS:NZ	2.38	0.55
1:A:2308:THR:OG1	1:A:2333:PHE:CE2	2.60	0.55
2:K:167:LEU:HA	2:K:464:TRP:HA	1.89	0.55
2:K:395:ILE:CG2	2:K:396:VAL:H	2.12	0.55
2:K:413:CYS:SG	2:K:443:LEU:HD13	2.47	0.55
27:D:1458:ARG:HH22	27:D:1462:ARG:NH1	2.03	0.55
27:D:1781:ARG:HG3	27:D:1789:TYR:CE2	2.40	0.55
29:H:691:G:C4	29:H:692:U:C5	2.95	0.55
1:A:342:LEU:HD22	1:A:392:ASN:ND2	2.21	0.55
4:N:720:VAL:HG12	4:N:722:ALA:H	1.72	0.55
8:C:889:TYR:CD2	8:C:890:LYS:HG2	2.41	0.55
29:H:548:G:C4	29:H:549:C:C5	2.94	0.55
29:H:550:G:H2'	29:H:551:C:H6	1.71	0.55
29:H:566:U:C2	29:H:567:U:C5	2.94	0.55
29:H:675:A:H2'	29:H:676:U:H6	1.70	0.55
1:A:884:SER:HB3	3:L:180:LYS:HZ3	1.72	0.55
1:A:1303:LYS:HG3	1:A:1353:THR:HG22	1.89	0.55
2:K:239:GLU:HA	2:K:267:ARG:HB2	1.89	0.55
8:C:185:ILE:HG21	18:B:75:A:OP2	2.07	0.55
26:V:64:ARG:NH1	26:V:66:ASN:HB3	2.21	0.55
29:H:553:G:H2'	29:H:554:C:H6	1.71	0.55
29:H:563:G:H2'	29:H:564:U:H6	1.70	0.55
29:H:568:U:C2	29:H:569:C:C5	2.94	0.55
29:H:671:G:C4	29:H:672:U:C5	2.95	0.55
29:H:676:U:C2	29:H:677:U:C5	2.94	0.55
32:1:386:TYR:CG	32:1:387:PRO:HD3	2.42	0.55
32:1:916:MET:HB3	32:1:920:TRP:NE1	2.21	0.55
34:3:182:THR:O	34:3:183:THR:HG23	2.06	0.55
1:A:963:VAL:HG21	3:L:280:ARG:NH1	2.20	0.55
1:A:1393:GLU:HG2	3:L:395:LYS:O	2.06	0.55
2:K:115:SER:HA	2:K:118:ILE:HD12	1.89	0.55
4:N:105:ALA:HA	4:N:108:LYS:HG2	1.89	0.55
8:C:292:ILE:O	8:C:296:ASN:ND2	2.38	0.55
27:D:535:VAL:HG13	27:D:557:ILE:CD1	2.37	0.55
27:D:766:ILE:HG23	27:D:767:THR:HG23	1.89	0.55
27:D:1628:HIS:O	27:D:1632:PRO:HD2	2.06	0.55
32:1:864:LEU:O	32:1:868:CYS:HB2	2.07	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:416:SER:HA	34:3:431:SER:HA	1.89	0.55
34:3:432:GLU:HB2	37:6:62:ILE:HD12	1.88	0.55
34:3:650:GLU:HA	34:3:671:GLU:HA	1.87	0.55
39:Y:264:GLU:HG3	39:Y:265:ASP:H	1.72	0.55
1:A:1586:GLN:HE21	1:A:1595:ARG:HD2	1.72	0.55
3:L:218:ILE:O	3:L:222:ILE:HB	2.07	0.55
8:C:133:ILE:O	8:C:134:ILE:HG23	2.07	0.55
8:C:158:HIS:CE1	8:C:549:TYR:HE2	2.25	0.55
27:D:516:ASN:HD22	27:D:685:ARG:CB	2.18	0.55
27:D:1431:ASP:HB2	27:D:1434:LEU:HB3	1.89	0.55
27:D:1583:VAL:HG22	27:D:1681:ILE:HB	1.89	0.55
27:D:1609:MET:SD	27:D:1611:ASN:ND2	2.79	0.55
29:H:566:U:H2'	29:H:567:U:H6	1.70	0.55
32:1:252:ILE:HD13	32:1:296:VAL:HG22	1.89	0.55
32:1:490:ARG:HH22	38:X:25:ASN:CB	2.19	0.55
34:3:770:LEU:HB2	34:3:827:TRP:NE1	2.22	0.55
34:3:957:ILE:HG22	34:3:962:LEU:HD11	1.89	0.55
1:A:794:LYS:HB3	1:A:854:ARG:HH12	1.70	0.55
1:A:1509:ARG:NH2	1:A:1533:ASP:OD1	2.40	0.55
1:A:1714:PRO:HB2	1:A:1787:TYR:CE2	2.42	0.55
1:A:1790:TRP:CZ3	1:A:1798:ILE:HD12	2.42	0.55
1:A:1889:LEU:HD12	1:A:1989:PHE:HB2	1.89	0.55
27:D:1220:ILE:HG22	27:D:1222:ILE:HG13	1.88	0.55
27:D:1245:ASP:HA	27:D:1288:PHE:HD1	1.71	0.55
27:D:1779:TYR:CZ	27:D:1783:HIS:CE1	2.95	0.55
29:H:679:U:H2'	29:H:680:C:H6	1.70	0.55
32:1:824:PHE:HZ	32:1:838:ILE:HD13	1.72	0.55
33:2:329:LYS:HB3	33:2:335:TRP:HB2	1.88	0.55
34:3:1096:LEU:HD13	34:3:1187:PHE:CZ	2.39	0.55
34:3:1117:HIS:O	34:3:1133:ASP:HA	2.07	0.55
34:3:1243:ILE:HG21	34:3:1353:ILE:HD11	1.87	0.55
38:X:63:SER:HB2	38:X:74:PHE:CD1	2.40	0.55
1:A:2189:LEU:HD21	1:A:2347:GLY:C	2.28	0.54
3:L:268:LEU:HD13	3:L:270:HIS:CE1	2.41	0.54
8:C:656:LEU:HD13	8:C:670:ILE:HD13	1.89	0.54
18:B:114:G:N2	18:B:115:G:C2	2.75	0.54
27:D:465:ILE:HB	27:D:705:GLN:HB2	1.89	0.54
27:D:1489:GLU:OE2	27:D:1746:LEU:HG	2.06	0.54
20:S:49:ALA:O	20:S:56:VAL:HA	2.07	0.54
29:H:669:U:C2	29:H:670:U:C5	2.94	0.54
29:H:689:G:C4	29:H:690:U:C5	2.95	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1458:TRP:CZ2	1:A:1489:PRO:HB2	2.40	0.54
8:C:273:LEU:HD11	8:C:279:LEU:HD22	1.88	0.54
27:D:639:LEU:HD23	27:D:943:TYR:CD2	2.42	0.54
27:D:1194:ASP:HB3	27:D:1198:ARG:HH12	1.72	0.54
27:D:2138:HIS:O	27:D:2159:GLU:HG3	2.08	0.54
24:T:43:ILE:HD12	24:T:52:VAL:HG11	1.90	0.54
28:G:513:U:O3'	32:1:299:ARG:NH2	2.40	0.54
29:H:675:A:C4	29:H:676:U:C5	2.95	0.54
29:H:678:U:C2	29:H:679:U:C5	2.94	0.54
34:3:125:THR:HG22	34:3:191:SER:HA	1.89	0.54
39:Y:213:LYS:HB3	39:Y:230:SER:CB	2.38	0.54
1:A:570:GLN:O	1:A:574:GLN:HG2	2.08	0.54
1:A:1458:TRP:HE1	1:A:1489:PRO:HD2	1.71	0.54
1:A:2157:ILE:CG1	27:D:1064:PRO:HB2	2.37	0.54
1:A:2398:LEU:HD22	27:D:1060:LYS:CG	2.38	0.54
2:K:125:ILE:HG12	2:K:337:ARG:HD3	1.90	0.54
27:D:642:ASP:O	27:D:645:PRO:HG2	2.06	0.54
27:D:1368:VAL:HB	27:D:1511:LEU:HD23	1.90	0.54
29:H:548:G:H2'	29:H:549:C:H6	1.71	0.54
29:H:550:G:C4	29:H:551:C:C5	2.94	0.54
29:H:677:U:C2	29:H:678:U:C5	2.95	0.54
29:H:1097:G:C5	29:H:1146:G:C6	2.96	0.54
34:3:165:HIS:HB3	34:3:170:ARG:HD3	1.89	0.54
27:D:1757:GLU:HB3	27:D:1763:ILE:HD12	1.90	0.54
29:H:563:G:C4	29:H:564:U:C5	2.95	0.54
2:K:139:GLU:OE1	2:K:379:ARG:NH2	2.35	0.54
3:L:279:VAL:HG21	3:L:286:PHE:CE1	2.43	0.54
3:L:417:LEU:HD21	4:N:229:ILE:HD12	1.90	0.54
27:D:614:ILE:HD11	27:D:1009:TYR:CG	2.42	0.54
24:T:30:TRP:CE2	24:T:89:LEU:HD22	2.42	0.54
34:3:381:LEU:O	34:3:389:PHE:HB2	2.08	0.54
27:D:789:LEU:HD11	27:D:797:ILE:HG13	1.88	0.54
27:D:1624:LEU:HD12	27:D:1630:ARG:HD2	1.88	0.54
23:R:80:LYS:HE3	23:R:82:LYS:HG3	1.90	0.54
34:3:96:ALA:HB2	34:3:101:LEU:HD13	1.90	0.54
1:A:1268:ARG:HD3	1:A:1301:TYR:HD2	1.73	0.54
2:K:317:CYS:SG	2:K:359:PRO:HA	2.48	0.54
3:L:113:HIS:CD2	3:L:134:PRO:HA	2.42	0.54
27:D:1489:GLU:CD	27:D:1746:LEU:HG	2.28	0.54
27:D:1629:LEU:HD23	27:D:1648:ASP:OD2	2.08	0.54
29:H:67:A:O2'	29:H:68:U:OP2	2.25	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:1127:A:O2'	29:H:1128:C:H5'	2.08	0.54
29:H:1148:U:H2'	29:H:1149:G:C8	2.43	0.54
32:1:605:ILE:HG21	32:1:624:CYS:SG	2.47	0.54
34:3:632:ILE:HA	34:3:646:LEU:HA	1.88	0.54
34:3:839:ARG:NH1	34:3:1357:ARG:O	2.41	0.54
1:A:579:LEU:HD11	1:A:626:LEU:HD12	1.90	0.54
1:A:2189:LEU:HD22	1:A:2349:PHE:CE1	2.42	0.54
3:L:175:LEU:O	3:L:179:MET:CB	2.55	0.54
3:L:371:LYS:HD3	17:I:18:A:H61	1.72	0.54
3:L:398:GLN:OE1	3:L:414:ASN:ND2	2.34	0.54
4:N:140:GLN:NE2	17:I:19:U:O2	2.41	0.54
4:N:286:GLU:HB2	4:N:292:CYS:SG	2.47	0.54
8:C:769:TYR:CE1	8:C:774:LEU:HB2	2.37	0.54
17:I:18:A:H5"	17:I:19:U:O5'	2.08	0.54
27:D:491:PHE:HE1	27:D:533:LEU:HD21	1.73	0.54
27:D:516:ASN:O	27:D:687:PRO:HD2	2.08	0.54
27:D:793:LEU:HD13	27:D:808:LEU:HD13	1.88	0.54
28:G:520:G:H4'	38:X:74:PHE:CE2	2.43	0.54
29:H:46:C:H4'	29:H:47:U:H5"	1.89	0.54
34:3:76:ILE:HD11	34:3:422:PHE:CE1	2.43	0.54
34:3:1223:GLY:O	34:3:1224:THR:OG1	2.24	0.54
1:A:2041:PRO:HG2	1:A:2043:PHE:CE2	2.43	0.54
18:B:111:C:H2'	18:B:112:C:C6	2.43	0.54
27:D:455:ARG:HB2	27:D:462:GLU:HG3	1.90	0.54
27:D:706:GLN:C	27:D:707:PHE:HD1	2.10	0.54
27:D:1814:LEU:HB3	27:D:1820:ILE:HG12	1.90	0.54
24:T:59:GLU:O	24:T:74:GLY:HA2	2.08	0.54
1:A:480:TYR:CE2	8:C:275:LEU:HD23	2.43	0.54
1:A:933:GLU:OE1	1:A:933:GLU:N	2.38	0.54
1:A:1696:SER:HA	1:A:1759:TYR:HE1	1.73	0.54
1:A:1732:MET:HG3	1:A:1791:PHE:HE2	1.72	0.54
2:K:220:LYS:HB3	2:K:239:GLU:HB3	1.90	0.54
3:L:125:PRO:HD2	3:L:182:SER:HB2	1.89	0.54
4:N:708:LEU:HD22	4:N:725:ILE:HG21	1.90	0.54
5:J:406:PHE:HE1	5:J:408:LEU:HB2	1.73	0.54
17:I:6:U:H2'	17:I:7:A:H8	1.71	0.54
18:B:127:U:O2'	18:B:128:A:N7	2.23	0.54
34:3:208:GLU:H	34:3:236:VAL:HA	1.72	0.54
2:K:207:LEU:HD11	2:K:463:LEU:HB2	1.88	0.53
5:J:341:VAL:HG22	5:J:381:ILE:HG12	1.91	0.53
8:C:161:ILE:HD12	8:C:162:PRO:HD2	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:338:SER:O	8:C:341:ILE:HG12	2.08	0.53
27:D:1748:TYR:HB3	22:Q:140:LYS:N	2.23	0.53
33:2:248:HIS:CE1	33:2:375:PHE:HB2	2.43	0.53
33:2:367:LEU:HB2	33:2:370:PHE:HE1	1.71	0.53
34:3:764:ASP:OD2	34:3:766:LYS:HE2	2.08	0.53
38:X:64:ARG:NH2	38:X:69:GLY:O	2.41	0.53
1:A:2189:LEU:HD22	1:A:2349:PHE:HE1	1.73	0.53
8:C:347:ARG:O	8:C:352:VAL:HG11	2.08	0.53
18:B:130:A:H4'	18:B:131:A:O5'	2.08	0.53
19:O:151:ILE:HB	19:O:180:GLU:HG2	1.90	0.53
27:D:614:ILE:HD11	27:D:1009:TYR:CD1	2.43	0.53
27:D:945:TYR:CE2	27:D:949:LEU:HD11	2.43	0.53
27:D:1312:LYS:N	27:D:1787:SER:OG	2.39	0.53
23:R:56:ALA:HB2	23:R:72:VAL:HA	1.90	0.53
20:S:34:VAL:CG2	20:S:45:ARG:HG3	2.39	0.53
34:3:943:ASP:HB2	34:3:952:ARG:HG2	1.91	0.53
1:A:1888:HIS:HE1	1:A:1988:LEU:HD22	1.74	0.53
1:A:2165:ARG:HB3	1:A:2300:VAL:HG13	1.89	0.53
2:K:270:ASP:OD1	2:K:271:VAL:N	2.40	0.53
3:L:102:ILE:HD11	3:L:214:ILE:HG21	1.89	0.53
3:L:139:LYS:O	3:L:142:SER:OG	2.17	0.53
18:B:128:A:H2'	18:B:129:G:H2'	1.90	0.53
22:Q:7:LEU:HD11	23:R:95:PHE:CZ	2.44	0.53
32:1:689:LEU:HA	32:1:692:ILE:HD12	1.89	0.53
34:3:299:PRO:HD2	34:3:377:PHE:CE1	2.44	0.53
34:3:547:ASN:ND2	34:3:564:ASP:HB2	2.24	0.53
34:3:655:LYS:HE2	34:3:664:ILE:HD11	1.89	0.53
1:A:1350:ILE:HG23	1:A:1356:LEU:HD22	1.90	0.53
1:A:2310:GLU:CD	1:A:2333:PHE:CZ	2.82	0.53
8:C:292:ILE:HG12	8:C:311:ILE:HD13	1.91	0.53
8:C:855:PRO:O	8:C:944:VAL:HG11	2.09	0.53
18:B:84:A:H2'	18:B:85:U:H6	1.73	0.53
18:B:111:C:H2'	18:B:112:C:H6	1.73	0.53
34:3:712:PHE:CE2	34:3:713:LEU:HD23	2.43	0.53
1:A:259:GLU:HG3	1:A:260:PRO:HD2	1.89	0.53
1:A:1156:HIS:ND1	1:A:1157:PRO:HD2	2.24	0.53
2:K:176:LYS:HZ2	7:M:72:GLU:HB2	1.74	0.53
8:C:474:LYS:NZ	8:C:628:TYR:O	2.40	0.53
16:F:74:U:H2'	16:F:75:A:H8	1.72	0.53
27:D:563:LEU:HD11	27:D:836:TRP:NE1	2.24	0.53
27:D:1380:ALA:HB2	27:D:1511:LEU:HD11	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1:904:GLU:O	32:1:907:SER:OG	2.22	0.53
33:2:162:SER:O	33:2:166:THR:OG1	2.24	0.53
34:3:211:LYS:HB2	34:3:230:ILE:HG13	1.91	0.53
34:3:441:PHE:HB3	34:3:475:LEU:HD23	1.88	0.53
36:5:41:ARG:HH12	36:5:83:LYS:NZ	2.05	0.53
1:A:1257:ASN:OD1	1:A:1268:ARG:NH2	2.41	0.53
1:A:1943:PRO:HD3	19:O:169:ILE:HD12	1.91	0.53
1:A:2070:ASN:HB3	27:D:858:GLY:O	2.08	0.53
1:A:2183:TYR:CD1	1:A:2219:LYS:HB2	2.44	0.53
3:L:434:GLN:HA	4:N:149:PRO:HB3	1.90	0.53
4:N:757:GLU:HG2	4:N:780:LEU:HD11	1.90	0.53
27:D:759:ASN:O	27:D:763:GLU:HG3	2.09	0.53
27:D:1213:ARG:NH2	27:D:1316:LYS:CG	2.67	0.53
27:D:1476:ALA:HB3	27:D:1512:SER:HB2	1.91	0.53
33:2:366:ALA:O	34:3:1232:LEU:HD22	2.09	0.53
39:Y:214:LEU:N	39:Y:230:SER:OG	2.42	0.53
1:A:620:HIS:HB3	1:A:669:TYR:CE2	2.44	0.53
1:A:1834:PHE:CD1	1:A:1958:PRO:HG2	2.43	0.53
2:K:171:GLN:HG2	2:K:172:LEU:N	2.22	0.53
5:J:370:LEU:HD13	5:J:451:LEU:HG	1.89	0.53
8:C:163:ASP:OD2	8:C:548:ARG:NH1	2.41	0.53
27:D:1436:LEU:HD22	27:D:1462:ARG:CZ	2.37	0.53
1:A:1674:ASP:OD2	1:A:2200:LYS:CE	2.56	0.53
17:I:72:A:OP2	27:D:1047:ARG:CZ	2.56	0.53
27:D:924:VAL:HG12	27:D:998:ALA:HB2	1.90	0.53
27:D:1679:GLU:HG2	27:D:1719:LYS:HB3	1.91	0.53
32:1:536:MET:HA	32:1:539:HIS:HD2	1.74	0.53
34:3:65:LEU:HD11	34:3:1227:CYS:SG	2.48	0.53
34:3:612:PRO:HA	34:3:618:TYR:HD1	1.74	0.53
38:X:35:ILE:HD13	38:X:51:PHE:CE2	2.43	0.53
1:A:1268:ARG:CG	1:A:1301:TYR:HB2	2.39	0.53
4:N:742:ALA:O	4:N:746:MET:HB2	2.09	0.53
27:D:567:VAL:HG13	27:D:606:VAL:HG12	1.89	0.53
27:D:781:LEU:HD21	27:D:798:GLU:CA	2.33	0.53
27:D:1457:ARG:NH1	27:D:1854:SER:O	2.42	0.53
24:T:20:PHE:CE1	24:T:92:SER:HB2	2.40	0.53
29:H:1089:G:H2'	29:H:1090:A:O5'	2.09	0.53
32:1:361:ASP:OD1	32:1:362:CYS:N	2.42	0.53
32:1:614:PRO:HA	32:1:617:ARG:HE	1.74	0.53
34:3:1023:HIS:HB3	34:3:1058:GLN:HA	1.91	0.53
1:A:297:SER:HB3	18:B:32:G:OP1	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1804:THR:HG21	19:O:218:GLU:OE1	2.10	0.53
1:A:2046:GLU:HA	1:A:2049:ILE:HD12	1.91	0.53
1:A:2208:TYR:HE1	1:A:2255:LEU:HD13	1.74	0.53
2:K:376:TRP:CH2	2:K:386:LEU:HD23	2.44	0.53
2:K:390:LEU:HD13	5:J:428:TRP:CD1	2.43	0.53
2:K:459:ARG:NH2	7:M:72:GLU:O	2.42	0.53
3:L:239:ALA:O	3:L:243:ALA:CB	2.57	0.53
5:J:372:ILE:O	5:J:376:GLY:HA3	2.08	0.53
8:C:274:ILE:HD12	8:C:382:TYR:HD1	1.73	0.53
27:D:1399:ASN:O	27:D:1405:ILE:HD11	2.09	0.53
22:Q:95:ILE:HG23	23:R:95:PHE:HB3	1.90	0.53
32:1:580:PHE:HZ	32:1:619:HIS:HD1	1.57	0.53
39:Y:208:SER:HA	39:Y:214:LEU:CD1	2.39	0.53
1:A:1335:TRP:CZ2	1:A:1339:LEU:HD13	2.44	0.52
8:C:880:MET:HB3	8:C:886:SER:HA	1.91	0.52
32:1:208:LEU:HD21	32:1:221:MET:HB2	1.91	0.52
1:A:701:CYS:SG	1:A:702:GLY:N	2.81	0.52
1:A:1633:PHE:HZ	1:A:1694:MET:HG3	1.74	0.52
4:N:760:VAL:O	4:N:764:LEU:HB2	2.08	0.52
8:C:682:SER:HA	8:C:714:PRO:HG3	1.92	0.52
17:I:140:G:H2'	17:I:141:G:O4'	2.09	0.52
27:D:781:LEU:HD11	27:D:798:GLU:HA	1.90	0.52
27:D:1898:ASP:HA	27:D:1943:PHE:CZ	2.45	0.52
26:V:30:ARG:HE	26:V:41:ASP:CB	2.21	0.52
32:1:569:PHE:HD1	32:1:579:ILE:HG21	1.72	0.52
34:3:257:ILE:HD11	34:3:264:LEU:HD11	1.91	0.52
34:3:1112:ASP:OD1	34:3:1113:SER:N	2.41	0.52
1:A:394:ARG:HE	1:A:396:ARG:HH12	1.57	0.52
1:A:1775:ILE:HG12	1:A:1786:ALA:HB2	1.91	0.52
2:K:288:THR:HA	2:K:303:GLN:O	2.09	0.52
4:N:746:MET:HG2	4:N:749:ARG:NH1	2.20	0.52
8:C:458:ILE:HG23	8:C:459:PRO:HD2	1.91	0.52
17:I:143:A:N7	25:U:48:TYR:HE2	2.08	0.52
27:D:1783:HIS:CE1	27:D:1799:ILE:HG21	2.44	0.52
23:R:37:ALA:HA	23:R:42:THR:HG22	1.92	0.52
28:G:498:C:H2'	28:G:499:U:H6	1.75	0.52
36:5:67:VAL:HG23	36:5:68:ASN:H	1.74	0.52
1:A:1490:ARG:NH1	1:A:1536:LEU:HA	2.25	0.52
1:A:2174:ASP:OD1	1:A:2175:ASP:N	2.42	0.52
4:N:849:TYR:CD1	4:N:855:ASP:HB2	2.45	0.52
28:G:500:A:OP1	32:1:818:LYS:NZ	2.28	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:G:520:G:C2	38:X:34:TYR:CD2	2.95	0.52
32:1:532:PRO:O	32:1:535:THR:OG1	2.26	0.52
36:5:42:LYS:HG2	36:5:71:PHE:HE1	1.75	0.52
1:A:921:ASP:HB3	3:L:403:SER:HB2	1.91	0.52
1:A:1161:TYR:CD1	1:A:1170:MET:HG2	2.44	0.52
3:L:379:PHE:CZ	4:N:144:LYS:HD3	2.43	0.52
4:N:269:GLN:O	4:N:272:PRO:HG3	2.10	0.52
4:N:691:TYR:HB3	4:N:708:LEU:HD12	1.90	0.52
18:B:75:A:O2'	18:B:76:U:H3'	2.09	0.52
27:D:645:PRO:HG3	27:D:911:GLN:O	2.10	0.52
27:D:851:ASP:HA	27:D:861:GLU:O	2.10	0.52
27:D:2077:ARG:HH12	27:D:2081:PRO:HG3	1.73	0.52
34:3:1178:PRO:O	34:3:1182:ASP:HB2	2.10	0.52
1:A:1562:PHE:O	1:A:1565:THR:OG1	2.17	0.52
6:E:98:GLY:HA3	16:F:30:G:H4'	1.92	0.52
8:C:942:GLY:HA2	8:C:960:ASN:O	2.09	0.52
27:D:1763:ILE:HG21	27:D:1769:CYS:HB3	1.91	0.52
23:R:26:PHE:CE1	23:R:31:MET:HB3	2.45	0.52
20:S:10:LEU:HB2	20:S:83:LEU:HD11	1.90	0.52
25:U:14:ASN:HB2	25:U:17:PRO:HD2	1.92	0.52
32:1:338:GLN:HG3	32:1:377:THR:HG22	1.91	0.52
1:A:1817:GLU:HA	1:A:1820:ARG:HG2	1.91	0.52
3:L:120:TYR:CE2	3:L:141:ILE:HG12	2.34	0.52
3:L:343:LYS:HD3	17:I:27:U:O2'	2.09	0.52
8:C:933:TRP:C	8:C:935:LYS:H	2.13	0.52
32:1:410:LYS:O	32:1:413:SER:OG	2.27	0.52
34:3:104:TYR:HD1	34:3:113:LEU:HA	1.75	0.52
34:3:691:LEU:HB3	34:3:703:MET:HB2	1.92	0.52
1:A:185:GLN:HG2	1:A:263:PRO:HD3	1.91	0.52
3:L:98:PHE:O	3:L:102:ILE:HG12	2.09	0.52
8:C:616:PRO:O	8:C:619:LEU:HB2	2.10	0.52
16:F:17:U:H2'	16:F:18:U:C6	2.44	0.52
17:I:6:U:H2'	17:I:7:A:C8	2.44	0.52
17:I:91:U:H2'	17:I:92:C:C6	2.45	0.52
18:B:27:G:N3	18:B:131:A:N3	2.58	0.52
27:D:656:TRP:HH2	27:D:929:ILE:HG13	1.73	0.52
27:D:1557:ILE:HA	27:D:1695:TYR:CE2	2.36	0.52
27:D:1924:PHE:CZ	27:D:1928:LEU:HD11	2.45	0.52
27:D:1933:TYR:HE1	27:D:2090:LYS:O	1.93	0.52
34:3:332:GLU:HG2	34:3:333:ASN:N	2.24	0.52
34:3:511:ILE:HG23	34:3:888:VAL:HG13	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:1006:TYR:HD1	34:3:1021:LEU:HA	1.73	0.52
34:3:1159:LEU:HD23	34:3:1164:ILE:HD13	1.92	0.52
1:A:1320:LEU:HD22	1:A:1370:ARG:HD2	1.92	0.52
1:A:1494:LEU:O	1:A:1499:ARG:NH2	2.43	0.52
2:K:172:LEU:HD23	4:N:752:ASN:HD22	1.75	0.52
2:K:213:LYS:NZ	2:K:215:ASP:OD1	2.41	0.52
4:N:256:LYS:HG2	4:N:257:PHE:H	1.75	0.52
16:F:96:G:H2'	16:F:97:A:H8	1.75	0.52
17:I:75:U:O2	27:D:643:ARG:NH1	2.42	0.52
18:B:164:C:O2	18:B:164:C:H2'	2.09	0.52
27:D:765:ASN:CB	27:D:768:HIS:CD2	2.93	0.52
27:D:1513:ASN:ND2	27:D:1704:LEU:HD13	2.25	0.52
27:D:1938:GLU:OE1	27:D:1938:GLU:N	2.40	0.52
34:3:125:THR:H	34:3:152:SER:HA	1.75	0.52
36:5:40:LYS:HG3	36:5:41:ARG:HG3	1.91	0.52
4:N:212:VAL:HG12	4:N:215:LEU:HD23	1.92	0.52
18:B:127:U:H1'	18:B:128:A:N7	2.25	0.52
27:D:1426:ASN:HD22	27:D:1442:SER:HB2	1.73	0.52
24:T:35:ILE:HG22	26:V:23:ARG:HE	1.74	0.52
26:V:10:TYR:CE2	26:V:71:LEU:HD11	2.45	0.52
34:3:294:PHE:HZ	34:3:381:LEU:HD11	1.74	0.52
34:3:983:ALA:O	34:3:995:ILE:HB	2.10	0.52
8:C:423:HIS:O	8:C:427:LEU:HB2	2.09	0.51
8:C:616:PRO:HA	8:C:619:LEU:HD12	1.92	0.51
8:C:869:HIS:NE2	8:C:925:LEU:HD22	2.24	0.51
19:O:210:LEU:HB3	19:O:212:VAL:HG13	1.92	0.51
27:D:804:HIS:HE1	27:D:813:ARG:CG	2.18	0.51
27:D:1387:HIS:CE1	27:D:1392:LYS:HB3	2.46	0.51
23:R:50:ASN:ND2	23:R:52:HIS:CD2	2.78	0.51
23:R:50:ASN:ND2	23:R:52:HIS:HD2	2.09	0.51
29:H:1097:G:C2	29:H:1146:G:C5	2.98	0.51
32:1:244:LEU:O	32:1:248:ALA:CB	2.58	0.51
32:1:580:PHE:CZ	32:1:619:HIS:HA	2.46	0.51
34:3:486:PRO:HG2	34:3:505:PHE:HB2	1.91	0.51
1:A:1488:ILE:HB	1:A:1489:PRO:HD3	1.93	0.51
1:A:1850:LEU:HD23	1:A:1883:ASN:HB3	1.92	0.51
3:L:359:PRO:O	6:E:122:ARG:NH2	2.43	0.51
5:J:283:ASN:OD1	5:J:284:ASP:N	2.43	0.51
8:C:697:ARG:HH21	8:C:849:GLY:HA2	1.75	0.51
16:F:10:A:H61	16:F:16:C:H42	1.57	0.51
18:B:16:U:O2'	18:B:18:A:N7	2.43	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1115:ILE:O	27:D:1119:ARG:HG2	2.11	0.51
27:D:1853:ALA:HB1	27:D:1863:ILE:HG13	1.93	0.51
29:H:139:G:H2'	29:H:140:G:O5'	2.09	0.51
29:H:1140:U:H2'	29:H:1141:C:H6	1.75	0.51
32:1:927:ALA:O	32:1:929:ASN:N	2.43	0.51
34:3:607:LEU:HB2	34:3:624:TRP:HB3	1.92	0.51
39:Y:224:PHE:O	39:Y:225:ALA:HB3	2.11	0.51
1:A:1045:GLN:HG2	1:A:1175:GLU:HG2	1.92	0.51
1:A:1855:THR:HA	1:A:1937:ARG:NH2	2.25	0.51
2:K:46:GLU:HB2	2:K:73:ARG:NH1	2.26	0.51
2:K:177:PRO:HB2	2:K:195:TRP:NE1	2.25	0.51
3:L:358:ILE:HG22	3:L:360:GLU:H	1.74	0.51
8:C:269:LYS:HG2	44:C:1500:GTP:C4	2.46	0.51
27:D:1751:HIS:HA	27:D:1810:CYS:SG	2.50	0.51
29:H:1139:G:HO2'	29:H:1140:U:C5'	2.24	0.51
32:1:539:HIS:ND1	32:1:578:ILE:HG12	2.25	0.51
33:2:131:LYS:NZ	33:2:153:ASP:OD1	2.44	0.51
34:3:102:GLU:HG2	34:3:116:LYS:HG2	1.92	0.51
34:3:294:PHE:HE2	34:3:365:ILE:HB	1.76	0.51
1:A:165:LEU:HG	1:A:578:MET:SD	2.50	0.51
1:A:1051:GLU:O	1:A:1246:ALA:HA	2.09	0.51
1:A:1578:ALA:HB1	1:A:1602:PRO:HB3	1.92	0.51
8:C:883:ARG:NH2	8:C:910:GLU:O	2.41	0.51
8:C:889:TYR:H	8:C:904:GLY:HA2	1.76	0.51
16:F:61:C:H2'	16:F:62:A:O4'	2.10	0.51
18:B:114:G:N2	18:B:115:G:N3	2.58	0.51
27:D:505:LYS:HA	27:D:508:HIS:CD2	2.45	0.51
27:D:724:ASP:HA	27:D:760:LYS:NZ	2.25	0.51
27:D:1936:ARG:HD3	27:D:2090:LYS:HE3	1.92	0.51
22:Q:141:ARG:HB2	22:Q:142:PRO:HD3	1.92	0.51
32:1:539:HIS:O	32:1:542:THR:OG1	2.23	0.51
34:3:217:ASP:OD1	34:3:218:TYR:N	2.43	0.51
34:3:242:VAL:HG22	34:3:252:PHE:HB2	1.92	0.51
1:A:849:LEU:HD12	1:A:973:GLU:HB3	1.91	0.51
2:K:287:MET:HA	2:K:310:VAL:HG23	1.92	0.51
4:N:789:LEU:HD11	7:M:45:ASN:HB3	1.91	0.51
8:C:176:ARG:HH22	8:C:188:GLY:HA2	1.75	0.51
8:C:253:ILE:HD11	8:C:298:PHE:HB2	1.93	0.51
8:C:470:ALA:HB3	8:C:577:LEU:HD22	1.93	0.51
27:D:648:GLU:OE2	27:D:912:PHE:HD1	1.93	0.51
27:D:1395:ALA:HB3	27:D:1444:VAL:HG22	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1563:MET:HE1	27:D:1684:GLY:HA2	1.92	0.51
26:V:56:GLN:HG3	26:V:61:THR:HB	1.93	0.51
33:2:325:TYR:HB3	33:2:328:LEU:HB2	1.92	0.51
1:A:1585:MET:HB3	1:A:1598:LEU:HD13	1.92	0.51
5:J:381:ILE:HD13	5:J:463:PHE:HD2	1.75	0.51
8:C:701:GLU:HG2	8:C:703:LEU:H	1.75	0.51
27:D:1217:ARG:C	27:D:1218:PHE:HD1	2.14	0.51
32:1:955:VAL:HA	32:1:959:ASN:HD22	1.75	0.51
34:3:59:TYR:CE1	34:3:1316:LYS:HD2	2.46	0.51
34:3:105:ASP:OD1	34:3:106:THR:N	2.41	0.51
34:3:292:ALA:HA	34:3:331:PHE:CD1	2.45	0.51
34:3:1073:LYS:HD2	34:3:1090:ILE:HD11	1.92	0.51
34:3:1298:SER:C	34:3:1300:LEU:H	2.14	0.51
35:4:164:ALA:O	35:4:168:LEU:HB2	2.11	0.51
38:X:49:THR:HG23	39:Y:233:ASP:HB2	1.92	0.51
1:A:287:GLU:HG2	1:A:288:GLU:N	2.22	0.51
1:A:1835:LEU:HD21	1:A:1843:LEU:HD21	1.93	0.51
8:C:326:GLU:HG2	8:C:330:TYR:HE2	1.75	0.51
18:B:27:G:OP1	18:B:141:G:C5'	2.58	0.51
27:D:683:PHE:CD1	27:D:943:TYR:HA	2.46	0.51
27:D:1032:PHE:HB3	27:D:1077:ASN:HB2	1.92	0.51
27:D:1890:GLU:HB3	22:Q:143:ARG:NE	2.26	0.51
27:D:1913:PHE:HE2	27:D:1917:THR:HB	1.76	0.51
28:G:487:A:H2'	28:G:488:A:H5'	1.92	0.51
32:1:579:ILE:O	32:1:583:PHE:N	2.38	0.51
33:2:329:LYS:O	33:2:346:GLY:HA2	2.10	0.51
38:X:105:ASP:OD1	38:X:106:HIS:N	2.43	0.51
2:K:64:VAL:HG12	2:K:65:GLU:H	1.76	0.51
2:K:177:PRO:HB2	2:K:195:TRP:CD1	2.44	0.51
3:L:356:LEU:HD13	6:E:52:ARG:HB3	1.91	0.51
4:N:148:ALA:HB1	4:N:152:LEU:HD12	1.92	0.51
8:C:270:LEU:HD11	8:C:313:PHE:HB3	1.93	0.51
8:C:326:GLU:HG2	8:C:330:TYR:CE2	2.45	0.51
16:F:79:A:H2'	16:F:80:U:C6	2.46	0.51
27:D:1213:ARG:HE	27:D:1281:GLN:HE21	1.58	0.51
27:D:1748:TYR:CE2	22:Q:142:PRO:CD	2.94	0.51
27:D:2071:ILE:O	27:D:2127:GLU:HA	2.11	0.51
27:D:2071:ILE:HG22	27:D:2128:LEU:HB2	1.92	0.51
29:H:1139:G:H2'	29:H:1140:U:H6	1.76	0.51
32:1:363:LEU:HA	32:1:374:THR:HG21	1.93	0.51
32:1:399:PRO:HA	32:1:402:LYS:HG2	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2:203:THR:HG22	33:2:250:VAL:HG21	1.91	0.51
34:3:293:ASN:HD22	34:3:364:THR:HB	1.76	0.51
1:A:1791:PHE:H	1:A:1794:LEU:HD12	1.76	0.51
1:A:2207:ILE:HD12	1:A:2256:LEU:HB2	1.93	0.51
8:C:542:ILE:HA	8:C:563:LEU:O	2.11	0.51
8:C:680:SER:HB2	8:C:858:LEU:HD11	1.92	0.51
27:D:536:LEU:HD21	27:D:578:LEU:CD2	2.41	0.51
27:D:1457:ARG:O	27:D:1760:ASN:ND2	2.44	0.51
27:D:1687:LEU:HB2	27:D:1698:TYR:CE1	2.29	0.51
27:D:1750:ILE:HD13	27:D:1806:LEU:HG	1.93	0.51
27:D:1996:GLN:HE22	27:D:2150:LEU:H	1.59	0.51
32:1:685:ILE:O	32:1:688:THR:OG1	2.25	0.51
32:1:689:LEU:HD21	32:1:707:PHE:CD2	2.45	0.51
32:1:887:ASN:HB3	32:1:899:ILE:HD13	1.92	0.51
34:3:410:PHE:HE1	34:3:445:GLY:HA3	1.76	0.51
34:3:496:SER:HB3	34:3:497:PRO:HD3	1.92	0.51
34:3:1048:THR:OG1	34:3:1065:THR:O	2.26	0.51
1:A:2183:TYR:HE1	1:A:2219:LYS:HG3	1.76	0.51
3:L:315:ARG:HD3	7:M:66:HIS:CE1	2.46	0.51
8:C:353:TYR:HD1	8:C:371:PRO:HA	1.74	0.51
27:D:789:LEU:HB2	27:D:794:ARG:HG2	1.93	0.51
27:D:1424:ILE:H	27:D:1443:HIS:CD2	2.29	0.51
20:S:10:LEU:HD12	20:S:83:LEU:HD12	1.93	0.51
32:1:264:GLU:HA	32:1:267:THR:HG22	1.93	0.51
32:1:418:ALA:O	32:1:422:MET:HG2	2.11	0.51
34:3:332:GLU:HG2	34:3:333:ASN:H	1.76	0.51
35:4:67:ILE:HD13	35:4:85:GLN:HB3	1.92	0.51
1:A:487:ASN:OD1	1:A:488:ARG:HG3	2.11	0.50
2:K:218:VAL:HG21	2:K:238:ALA:HB3	1.92	0.50
3:L:355:ALA:HB2	6:E:54:ARG:NH1	2.27	0.50
5:J:338:HIS:O	5:J:383:VAL:HA	2.11	0.50
8:C:115:LYS:O	8:C:116:THR:OG1	2.24	0.50
8:C:121:ASP:OD1	8:C:122:TYR:N	2.44	0.50
18:B:94:C:H5'	18:B:95:C:OP2	2.11	0.50
27:D:682:ARG:NH2	27:D:946:VAL:HG13	2.26	0.50
29:H:1120:G:H2'	29:H:1121:U:C6	2.45	0.50
32:1:832:LYS:HB2	32:1:871:THR:HG21	1.93	0.50
34:3:1002:ARG:NH2	34:3:1004:LEU:HD11	2.26	0.50
34:3:1166:TYR:CZ	34:3:1184:LYS:HE3	2.46	0.50
35:4:170:ASN:ND2	35:4:179:THR:HG22	2.25	0.50
1:A:138:HIS:O	1:A:142:ILE:HG12	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:301:TRP:HD1	1:A:493:MET:SD	2.34	0.50
1:A:1647:GLN:O	1:A:1650:ARG:NH1	2.44	0.50
1:A:1840:TYR:HH	1:A:2005:PHE:HE2	1.60	0.50
1:A:2051:ILE:O	1:A:2055:MET:HG2	2.11	0.50
2:K:177:PRO:HB2	2:K:195:TRP:HE1	1.75	0.50
5:J:245:ARG:O	5:J:249:ARG:HG2	2.11	0.50
8:C:281:PRO:HG3	8:C:382:TYR:CD2	2.46	0.50
18:B:123:U:H2'	18:B:124:C:C6	2.46	0.50
27:D:639:LEU:HD23	27:D:943:TYR:CE2	2.46	0.50
27:D:810:ARG:HH11	27:D:813:ARG:HE	1.57	0.50
28:G:520:G:N2	38:X:34:TYR:CB	2.73	0.50
32:1:288:ASN:OD1	32:1:289:GLU:N	2.43	0.50
37:6:22:GLY:HA2	37:6:26:THR:HG21	1.94	0.50
1:A:1888:HIS:CE1	1:A:1988:LEU:HD22	2.46	0.50
3:L:399:THR:HB	3:L:407:GLU:HB3	1.93	0.50
27:D:1493:SER:HA	27:D:1524:TRP:CH2	2.43	0.50
27:D:1861:PHE:CD2	22:Q:140:LYS:HD3	2.46	0.50
21:P:86:ILE:O	20:S:71:PHE:HB2	2.12	0.50
22:Q:139:ASN:O	22:Q:140:LYS:HB3	2.10	0.50
23:R:76:TRP:NE1	23:R:87:ARG:HB2	2.27	0.50
24:T:59:GLU:O	24:T:74:GLY:CA	2.59	0.50
33:2:159:LEU:O	33:2:162:SER:OG	2.29	0.50
34:3:63:LEU:HB2	34:3:1227:CYS:SG	2.51	0.50
1:A:863:ARG:HH12	1:A:1059:GLU:HB3	1.76	0.50
2:K:60:LYS:HB3	2:K:61:PRO:HD2	1.94	0.50
27:D:2073:ILE:HD11	27:D:2142:ILE:HD13	1.92	0.50
29:H:64:G:H2'	29:H:65:A:C8	2.46	0.50
32:1:739:ASN:HB3	32:1:742:ILE:HD12	1.94	0.50
34:3:936:PRO:O	34:3:937:LYS:HD2	2.12	0.50
34:3:994:LEU:HD22	34:3:1006:TYR:HD2	1.77	0.50
34:3:1087:VAL:O	34:3:1094:VAL:HA	2.12	0.50
1:A:175:LEU:HD22	1:A:571:LEU:HD23	1.93	0.50
1:A:905:TYR:CE2	1:A:907:ASN:HB2	2.47	0.50
2:K:69:VAL:HB	5:J:322:ARG:NH1	2.26	0.50
2:K:243:ILE:HB	2:K:261:LEU:HB2	1.93	0.50
4:N:678:TYR:O	4:N:682:GLY:N	2.26	0.50
4:N:706:VAL:HA	4:N:746:MET:HE1	1.93	0.50
6:E:85:PHE:HD1	6:E:90:HIS:HA	1.76	0.50
17:I:151:G:N7	25:U:32:LYS:HD3	2.27	0.50
18:B:166:U:O2'	18:B:167:A:P	2.70	0.50
27:D:1387:HIS:CB	27:D:1470:LEU:HD13	2.32	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:U:41:THR:HG23	25:U:55:GLU:OE2	2.12	0.50
28:G:505:A:H1'	28:G:506:U:C6	2.46	0.50
34:3:432:GLU:OE1	37:6:62:ILE:HB	2.11	0.50
36:5:51:PHE:HD1	36:5:52:GLY:H	1.59	0.50
1:A:169:PRO:HA	1:A:172:ILE:HD12	1.93	0.50
1:A:1011:ASN:ND2	1:A:1143:GLU:O	2.45	0.50
1:A:1512:ARG:HD2	1:A:1529:ASN:OD1	2.12	0.50
1:A:1863:HIS:HA	19:O:159:ASP:N	2.26	0.50
2:K:283:ALA:HB1	2:K:310:VAL:HG12	1.93	0.50
3:L:361:ASP:OD1	3:L:362:GLN:N	2.45	0.50
6:E:97:THR:HG23	6:E:99:ASN:H	1.77	0.50
17:I:92:C:H2'	17:I:93:C:H6	1.75	0.50
27:D:453:PHE:CE2	27:D:455:ARG:HG3	2.46	0.50
27:D:1168:GLY:O	27:D:1172:GLN:HG3	2.11	0.50
27:D:1913:PHE:CE2	27:D:1917:THR:HB	2.47	0.50
24:T:40:LYS:NZ	24:T:93:ALA:HB3	2.26	0.50
29:H:44:U:C2	29:H:45:U:C5	3.00	0.50
29:H:145:G:H2'	29:H:146:A:H8	1.77	0.50
32:1:580:PHE:HZ	32:1:619:HIS:HA	1.76	0.50
33:2:367:LEU:O	33:2:368:ILE:HG22	2.12	0.50
34:3:766:LYS:HD3	34:3:836:TRP:CZ2	2.47	0.50
34:3:1097:PHE:HB3	34:3:1106:PHE:HB3	1.93	0.50
1:A:2206:PHE:HE2	1:A:2241:ILE:HA	1.76	0.50
8:C:130:PRO:HB3	8:C:558:LYS:HZ2	1.75	0.50
27:D:1252:LEU:HD11	27:D:1288:PHE:CE1	2.46	0.50
26:V:20:ASN:ND2	26:V:69:ILE:HD11	2.27	0.50
28:G:492:U:H2'	28:G:493:A:C8	2.47	0.50
32:1:252:ILE:HD11	32:1:296:VAL:HA	1.93	0.50
34:3:493:VAL:HG13	34:3:499:SER:OG	2.11	0.50
34:3:503:LYS:HD3	34:3:941:PHE:CD1	2.46	0.50
4:N:161:LYS:O	4:N:165:GLU:CB	2.60	0.50
8:C:789:SER:HA	8:C:792:LYS:HG2	1.92	0.50
27:D:464:HIS:CE1	27:D:706:GLN:NE2	2.80	0.50
27:D:985:GLU:HG3	27:D:1001:LEU:HD22	1.93	0.50
27:D:1320:PRO:HB2	27:D:1534:ASN:O	2.12	0.50
21:P:19:LYS:HD2	21:P:99:ASP:HB2	1.93	0.50
32:1:927:ALA:C	32:1:929:ASN:H	2.14	0.50
34:3:630:ILE:HD13	34:3:646:LEU:HD13	1.94	0.50
1:A:1156:HIS:CG	1:A:1157:PRO:HD2	2.47	0.50
1:A:1400:ILE:HG22	1:A:1401:SER:N	2.25	0.50
1:A:1705:SER:HB3	1:A:1709:TRP:NE1	2.27	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2255:LEU:HD11	1:A:2281:PHE:HE1	1.77	0.50
2:K:178:ILE:HD13	2:K:461:ILE:HG13	1.94	0.50
4:N:251:GLU:OE2	4:N:255:ARG:HB3	2.12	0.50
4:N:890:GLU:O	4:N:894:ARG:HG2	2.12	0.50
27:D:1209:GLN:NE2	27:D:1788:TYR:O	2.45	0.50
27:D:1387:HIS:CE1	27:D:1470:LEU:HB2	2.47	0.50
27:D:1624:LEU:O	27:D:1624:LEU:HD23	2.12	0.50
27:D:1629:LEU:HD23	27:D:1648:ASP:CG	2.32	0.50
28:G:491:C:H2'	28:G:492:U:C6	2.47	0.50
34:3:643:ILE:HG21	34:3:691:LEU:HD11	1.94	0.50
39:Y:170:LEU:HD22	39:Y:170:LEU:N	2.27	0.50
1:A:837:GLY:O	1:A:1317:ARG:NH1	2.30	0.49
5:J:335:THR:HG23	5:J:336:VAL:HG22	1.94	0.49
8:C:104:THR:O	8:C:107:THR:OG1	2.20	0.49
18:B:113:G:C2	18:B:114:G:C8	3.00	0.49
27:D:1461:GLN:OE1	27:D:1461:GLN:N	2.44	0.49
29:H:142:C:O2'	29:H:143:G:O4'	2.29	0.49
32:1:743:ARG:HD2	32:1:780:CYS:SG	2.52	0.49
33:2:294:ILE:HG23	33:2:298:LEU:HD23	1.93	0.49
34:3:215:LEU:HB3	34:3:225:SER:HB3	1.94	0.49
34:3:673:ASP:OD1	34:3:674:THR:N	2.45	0.49
1:A:653:ILE:HA	1:A:656:ILE:HD12	1.95	0.49
1:A:1285:VAL:HG22	1:A:1301:TYR:CE1	2.47	0.49
1:A:1447:TRP:HB3	1:A:1451:PHE:CE2	2.47	0.49
1:A:1578:ALA:HA	1:A:1581:PHE:HB3	1.94	0.49
1:A:1751:TYR:O	1:A:1755:LYS:HG2	2.11	0.49
1:A:2075:THR:O	1:A:2079:ILE:HD12	2.12	0.49
5:J:331:VAL:HG12	5:J:333:LYS:N	2.27	0.49
27:D:656:TRP:CH2	27:D:929:ILE:HG13	2.47	0.49
27:D:1035:PHE:CD2	27:D:1080:LEU:HD22	2.47	0.49
34:3:106:THR:HG21	34:3:422:PHE:CE2	2.47	0.49
34:3:339:ASP:OD1	34:3:340:MET:N	2.45	0.49
35:4:165:ILE:HG12	35:4:180:VAL:HG12	1.94	0.49
1:A:285:PRO:HD2	1:A:298:TYR:OH	2.12	0.49
1:A:1070:LEU:HA	1:A:1073:ILE:HG22	1.94	0.49
1:A:1089:VAL:HG22	1:A:1098:VAL:HG22	1.94	0.49
1:A:1882:LEU:HB3	1:A:1889:LEU:HD23	1.93	0.49
1:A:2381:GLU:HB3	1:A:2384:ASN:HB2	1.94	0.49
2:K:233:GLN:HA	2:K:246:PHE:O	2.13	0.49
27:D:467:ALA:HB1	27:D:702:PRO:HB2	1.95	0.49
27:D:747:ARG:HH12	27:D:1047:ARG:HG3	1.77	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1584:PHE:HZ	27:D:1709:LEU:HD22	1.77	0.49
24:T:43:ILE:HG23	24:T:52:VAL:HG13	1.94	0.49
32:1:931:ARG:NE	37:6:24:GLU:OE2	2.44	0.49
34:3:59:TYR:HE1	34:3:1316:LYS:HD2	1.76	0.49
34:3:353:ARG:NH2	34:3:387:ASP:OD1	2.44	0.49
34:3:712:PHE:HE2	34:3:713:LEU:HD23	1.76	0.49
34:3:1192:HIS:CE1	34:3:1312:ALA:HB3	2.47	0.49
1:A:1286:TRP:HA	1:A:1448:GLU:OE2	2.12	0.49
1:A:1586:GLN:HG2	1:A:1595:ARG:HH11	1.77	0.49
1:A:2157:ILE:HG13	27:D:1064:PRO:HB2	1.94	0.49
1:A:2306:ASN:HB2	1:A:2335:THR:OG1	2.12	0.49
2:K:225:ASP:OD1	2:K:226:TRP:N	2.45	0.49
2:K:285:HIS:O	2:K:287:MET:N	2.45	0.49
3:L:398:GLN:NE2	3:L:419:GLN:HG3	2.28	0.49
4:N:846:PHE:HE1	4:N:859:LEU:HD23	1.77	0.49
8:C:183:GLN:HE21	8:C:657:TYR:HD2	1.60	0.49
16:F:38:U:H4'	16:F:39:G:O5'	2.12	0.49
27:D:820:PHE:CD2	27:D:828:LEU:HD22	2.48	0.49
27:D:2007:LYS:HB3	27:D:2030:ILE:HD12	1.93	0.49
28:G:520:G:C6	38:X:34:TYR:CZ	3.00	0.49
29:H:1151:U:H2'	29:H:1152:U:C6	2.46	0.49
32:1:517:TYR:OH	32:1:521:LYS:NZ	2.42	0.49
32:1:872:GLY:HA2	34:3:1315:ARG:HG3	1.95	0.49
33:2:299:ARG:NH2	33:2:343:ASP:O	2.40	0.49
34:3:379:VAL:CG2	34:3:391:LEU:HB2	2.41	0.49
36:5:20:GLY:H	36:5:43:VAL:HG23	1.77	0.49
1:A:1717:LEU:HG	1:A:1786:ALA:HB3	1.93	0.49
1:A:1739:ARG:HD2	1:A:1751:TYR:CE2	2.47	0.49
1:A:2177:VAL:H	1:A:2338:GLN:HE22	1.58	0.49
3:L:273:HIS:ND1	3:L:273:HIS:O	2.45	0.49
4:N:161:LYS:O	4:N:165:GLU:HB2	2.11	0.49
8:C:343:ASP:O	8:C:346:THR:OG1	2.28	0.49
8:C:544:LEU:HG	8:C:553:VAL:HG21	1.94	0.49
8:C:864:VAL:HG12	8:C:866:ILE:HG13	1.95	0.49
17:I:78:A:H2	27:D:1110:ARG:NH2	2.08	0.49
27:D:835:ALA:HA	27:D:874:ARG:HD3	1.94	0.49
27:D:1431:ASP:OD2	27:D:2095:LYS:HD2	2.13	0.49
21:P:96:VAL:HG12	22:Q:85:ILE:HG12	1.95	0.49
22:Q:96:ILE:HG13	23:R:94:LEU:HD13	1.94	0.49
29:H:1089:G:C2'	29:H:1090:A:O5'	2.60	0.49
32:1:925:HIS:CG	32:1:926:PRO:HD2	2.48	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:98:GLU:OE2	37:6:47:SER:OG	2.27	0.49
1:A:1400:ILE:HG21	1:A:1440:ILE:HD11	1.94	0.49
1:A:1709:TRP:HB3	1:A:1791:PHE:CE1	2.47	0.49
2:K:77:ALA:O	2:K:81:MET:HG2	2.13	0.49
3:L:127:LEU:HD11	3:L:131:ILE:HD12	1.93	0.49
6:E:53:VAL:HG12	6:E:57:ALA:HB3	1.93	0.49
17:I:150:G:N2	17:I:152:A:H5'	2.28	0.49
27:D:588:LEU:HD11	27:D:599:ILE:HD11	1.94	0.49
27:D:1095:ASN:O	27:D:1099:VAL:HG23	2.12	0.49
27:D:1852:ILE:O	27:D:1856:TYR:HD2	1.96	0.49
29:H:1097:G:C2	29:H:1098:C:C4	3.00	0.49
32:1:715:ALA:HB1	32:1:718:TYR:CD2	2.47	0.49
32:1:827:ILE:HG13	32:1:827:ILE:O	2.12	0.49
34:3:266:VAL:HG12	34:3:290:PRO:HA	1.94	0.49
34:3:455:LEU:HD11	34:3:464:LEU:HB3	1.93	0.49
34:3:636:THR:HB	34:3:679:VAL:HG23	1.93	0.49
1:A:139:LEU:HD13	1:A:193:TYR:CG	2.48	0.49
1:A:388:PRO:HB2	1:A:398:VAL:HG11	1.94	0.49
1:A:1578:ALA:CB	1:A:1602:PRO:HB3	2.43	0.49
2:K:435:GLY:N	2:K:464:TRP:HH2	2.11	0.49
2:K:438:ASP:HB3	2:K:457:TRP:HB2	1.95	0.49
6:E:38:GLN:HA	6:E:106:ILE:HD11	1.93	0.49
8:C:775:ILE:HD12	8:C:817:GLN:HE21	1.76	0.49
18:B:8:U:O4	18:B:157:G:O6	2.31	0.49
18:B:74:U:H3'	18:B:75:A:H5"	1.94	0.49
27:D:1524:TRP:CD1	27:D:1780:ARG:NH2	2.80	0.49
27:D:2051:VAL:CG1	27:D:2077:ARG:HG2	2.43	0.49
26:V:65:GLY:HA2	26:V:68:ILE:HD12	1.95	0.49
32:1:600:PRO:O	32:1:603:SER:OG	2.19	0.49
34:3:324:ASN:OD1	34:3:341:ASN:ND2	2.43	0.49
1:A:286:LEU:HD21	1:A:289:ASP:HB2	1.93	0.49
1:A:852:LEU:HD23	1:A:855:LEU:HD12	1.94	0.49
1:A:1481:GLU:HA	1:A:1484:TRP:HE1	1.75	0.49
4:N:13:ALA:HB3	4:N:15:TYR:CE2	2.47	0.49
4:N:772:LEU:O	4:N:775:VAL:N	2.46	0.49
5:J:349:ASN:HB3	5:J:352:ILE:HD12	1.95	0.49
17:I:101:C:H2'	17:I:102:A:H8	1.77	0.49
17:I:151:G:H21	17:I:152:A:N6	2.10	0.49
18:B:78:A:H3'	18:B:78:A:OP2	2.13	0.49
19:O:150:ASN:OD1	19:O:151:ILE:N	2.45	0.49
21:P:29:VAL:HB	21:P:51:GLU:HG3	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:U:51:LEU:HB2	25:U:73:ILE:HB	1.94	0.49
28:G:481:A:H5'	35:4:52:TYR:CD2	2.48	0.49
32:1:494:LEU:CD1	38:X:23:TRP:CG	2.93	0.49
32:1:583:PHE:O	32:1:587:THR:HG23	2.12	0.49
33:2:262:HIS:HB2	33:2:280:THR:HG22	1.95	0.49
38:X:19:PRO:HA	38:X:22:SER:OG	2.13	0.49
1:A:481:HIS:NE2	8:C:276:ASP:OD1	2.46	0.49
7:M:44:LEU:O	7:M:74:LYS:NZ	2.43	0.49
8:C:967:VAL:O	8:C:971:ARG:HG2	2.13	0.49
17:I:91:U:C2	17:I:142:G:N2	2.78	0.49
27:D:1740:LEU:HD11	22:Q:146:LEU:CD1	2.42	0.49
27:D:1950:ILE:O	27:D:1954:VAL:HG13	2.12	0.49
32:1:733:GLU:HG2	32:1:736:LYS:HZ1	1.78	0.49
1:A:395:PRO:HB2	1:A:398:VAL:HG21	1.95	0.49
1:A:2183:TYR:HE2	1:A:2289:ILE:CG1	2.08	0.49
2:K:382:ASP:OD1	2:K:383:GLU:N	2.46	0.49
8:C:353:TYR:CD1	8:C:371:PRO:HA	2.48	0.49
18:B:10:U:O2	18:B:156:G:N1	2.46	0.49
27:D:945:TYR:O	27:D:949:LEU:HG	2.13	0.49
27:D:1016:ASP:OD1	27:D:1017:VAL:N	2.46	0.49
27:D:1095:ASN:O	27:D:1098:ILE:HG22	2.12	0.49
22:Q:4:VAL:HG11	22:Q:34:PRO:HA	1.95	0.49
34:3:118:GLN:HE21	34:3:1299:ILE:HD13	1.78	0.49
1:A:255:ILE:HD11	1:A:637:VAL:HG13	1.94	0.48
1:A:503:LYS:HA	1:A:506:PHE:CE2	2.47	0.48
1:A:688:TYR:HA	1:A:691:PHE:CE2	2.47	0.48
1:A:884:SER:HB3	3:L:180:LYS:NZ	2.27	0.48
1:A:1952:PRO:HB2	3:L:426:GLY:N	2.26	0.48
4:N:9:GLN:HB3	4:N:11:PRO:HD3	1.95	0.48
4:N:464:ILE:O	4:N:467:ALA:HB3	2.14	0.48
8:C:793:GLU:HA	8:C:796:ILE:HG22	1.95	0.48
27:D:1228:TRP:CE2	27:D:1261:PRO:HG3	2.48	0.48
27:D:1241:LEU:HA	27:D:1292:LEU:HD23	1.95	0.48
23:R:47:SER:OG	23:R:103:VAL:HB	2.12	0.48
25:U:60:VAL:HG12	25:U:65:HIS:HB2	1.95	0.48
26:V:47:ASN:HD21	26:V:51:PRO:HB2	1.78	0.48
29:H:1099:G:HO2'	29:H:1100:A:H5'	1.66	0.48
32:1:341:GLY:O	32:1:384:ASN:ND2	2.46	0.48
32:1:950:VAL:HG13	37:6:39:THR:HG22	1.95	0.48
34:3:607:LEU:HD13	34:3:624:TRP:HD1	1.78	0.48
39:Y:167:VAL:O	39:Y:171:GLY:N	2.45	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:209:ILE:HG21	1:A:303:PHE:HE2	1.78	0.48
1:A:219:ALA:HB1	1:A:266:LEU:HD13	1.94	0.48
1:A:1525:PHE:HD2	3:L:405:GLY:HA3	1.78	0.48
2:K:73:ARG:O	2:K:76:LEU:HB2	2.13	0.48
8:C:406:VAL:HG11	8:C:427:LEU:HD21	1.95	0.48
27:D:1320:PRO:HB2	27:D:1535:PHE:HA	1.94	0.48
25:U:33:PHE:C	25:U:35:SER:H	2.16	0.48
32:1:161:LYS:O	32:1:165:THR:HG23	2.12	0.48
32:1:491:ARG:HD2	38:X:27:TYR:OH	2.13	0.48
32:1:960:ASN:HD21	32:1:963:TYR:HA	1.78	0.48
34:3:1133:ASP:OD2	34:3:1137:ASN:HB2	2.13	0.48
1:A:220:THR:O	1:A:224:MET:HG2	2.12	0.48
1:A:400:ILE:HB	8:C:186:ASP:HB3	1.95	0.48
1:A:972:MET:HG2	1:A:981:VAL:HG21	1.95	0.48
1:A:1033:ASN:HD21	1:A:1298:ALA:HB3	1.78	0.48
1:A:1087:ASN:ND2	3:L:272:LEU:HG	2.19	0.48
1:A:1963:LEU:HD13	1:A:1965:PHE:HE2	1.77	0.48
2:K:378:ILE:HG22	5:J:168:TRP:HE1	1.78	0.48
3:L:280:ARG:NH2	17:I:37:U:OP2	2.46	0.48
4:N:721:ARG:O	4:N:725:ILE:HD12	2.12	0.48
8:C:856:ILE:HA	8:C:944:VAL:HG11	1.94	0.48
16:F:47:A:H3'	16:F:48:C:H5'	1.94	0.48
18:B:86:G:H2'	18:B:87:G:H8	1.76	0.48
27:D:1908:ARG:HD3	23:R:39:VAL:HG23	1.95	0.48
22:Q:88:ARG:NH1	22:Q:90:ASN:HB3	2.28	0.48
32:1:494:LEU:CB	38:X:7:ILE:CG2	2.89	0.48
32:1:801:ILE:HG22	32:1:816:VAL:HG13	1.95	0.48
39:Y:217:LYS:HB3	39:Y:218:PRO:HD2	1.95	0.48
1:A:645:ASP:OD1	1:A:646:ALA:N	2.46	0.48
1:A:842:LYS:HE2	1:A:1322:ALA:HA	1.94	0.48
1:A:1090:ILE:O	1:A:1096:SER:HA	2.13	0.48
1:A:1211:SER:HA	1:A:1257:ASN:ND2	2.28	0.48
1:A:2152:TRP:HZ3	27:D:1064:PRO:HG3	1.75	0.48
4:N:655:PHE:O	4:N:659:ARG:CB	2.62	0.48
7:M:33:LEU:HD11	7:M:100:ALA:HB1	1.95	0.48
8:C:143:HIS:HA	44:C:1500:GTP:PB	2.54	0.48
8:C:362:LYS:CG	8:C:363:PRO:HD2	2.43	0.48
8:C:652:MET:HA	8:C:655:LEU:HD12	1.96	0.48
8:C:678:SER:HB2	8:C:858:LEU:HB2	1.94	0.48
17:I:136:U:O2'	27:D:1194:ASP:OD2	2.26	0.48
27:D:675:PRO:HG3	27:D:905:GLN:C	2.34	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1459:TRP:NE1	27:D:1762:ILE:HD11	2.28	0.48
21:P:50:GLU:O	21:P:79:LYS:HA	2.14	0.48
33:2:367:LEU:C	33:2:369:SER:H	2.16	0.48
1:A:299:LYS:HA	1:A:493:MET:HG3	1.95	0.48
1:A:930:ASN:HB3	1:A:933:GLU:OE1	2.14	0.48
1:A:995:LEU:HD11	1:A:1078:ILE:HG23	1.95	0.48
1:A:2166:LEU:HD11	1:A:2194:ILE:HG13	1.95	0.48
1:A:2395:PHE:CG	27:D:1062:PRO:CD	2.82	0.48
3:L:282:GLU:HG3	3:L:286:PHE:CD2	2.49	0.48
8:C:707:SER:HB3	8:C:824:SER:HB3	1.96	0.48
18:B:76:U:O2'	18:B:78:A:OP1	2.30	0.48
18:B:143:U:H2'	18:B:144:G:H8	1.78	0.48
27:D:828:LEU:HG	27:D:830:CYS:SG	2.53	0.48
27:D:1804:SER:HA	27:D:1807:VAL:HG22	1.96	0.48
22:Q:29:LEU:HD23	22:Q:40:LEU:HG	1.94	0.48
28:G:504:C:OP1	36:5:25:LYS:NZ	2.21	0.48
29:H:1116:A:O2'	29:H:1117:G:H5'	2.13	0.48
32:1:327:TRP:HD1	32:1:330:ARG:HH21	1.61	0.48
32:1:830:MET:O	32:1:832:LYS:HG2	2.13	0.48
34:3:74:SER:OG	34:3:95:VAL:HG22	2.13	0.48
34:3:586:ASP:OD1	34:3:587:THR:N	2.47	0.48
34:3:1136:GLY:HA2	34:3:1197:ASP:O	2.14	0.48
35:4:136:ARG:HB2	35:4:154:TYR:CD2	2.49	0.48
1:A:772:GLU:HA	1:A:775:ARG:HB2	1.96	0.48
1:A:1964:PRO:HB3	1:A:2013:ARG:HD2	1.95	0.48
2:K:195:TRP:CZ3	2:K:220:LYS:HE3	2.49	0.48
4:N:212:VAL:HG13	4:N:215:LEU:H	1.78	0.48
27:D:2011:ILE:HD12	27:D:2030:ILE:HD11	1.96	0.48
22:Q:31:SER:HB2	22:Q:39:ILE:HD11	1.95	0.48
23:R:38:MET:SD	23:R:61:PHE:HE2	2.36	0.48
28:G:499:U:H2'	28:G:500:A:C8	2.49	0.48
29:H:45:U:H2'	29:H:46:C:C6	2.49	0.48
33:2:322:PRO:HA	35:4:65:TYR:CE2	2.49	0.48
34:3:414:GLN:NE2	34:3:434:ASN:O	2.47	0.48
34:3:533:LYS:HA	34:3:848:SER:OG	2.14	0.48
34:3:1043:THR:HG21	34:3:1052:TYR:HE2	1.79	0.48
35:4:110:LEU:HD12	35:4:155:PHE:HE2	1.77	0.48
37:6:50:LEU:CD2	37:6:62:ILE:HG23	2.43	0.48
1:A:1169:TYR:OH	1:A:1262:MET:HA	2.14	0.48
1:A:1414:TRP:HB2	1:A:1558:GLU:HG3	1.94	0.48
1:A:1748:ILE:HG22	1:A:1785:ASP:HB2	1.94	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:205:GLU:O	3:L:209:LYS:HG2	2.13	0.48
4:N:787:SER:O	17:I:40:G:O2'	2.31	0.48
8:C:152:LEU:O	8:C:155:ILE:HG13	2.13	0.48
8:C:227:VAL:HG11	8:C:474:LYS:HB2	1.94	0.48
27:D:1688:TYR:CD2	27:D:1895:ARG:HA	2.44	0.48
27:D:1847:LEU:O	27:D:1851:LEU:HD13	2.13	0.48
23:R:79:LYS:HD3	23:R:84:VAL:HG22	1.95	0.48
32:1:401:TRP:CZ2	32:1:434:TYR:HD1	2.31	0.48
32:1:550:THR:HG23	32:1:553:LEU:HD22	1.96	0.48
33:2:134:LEU:HD13	33:2:138:LYS:HE2	1.96	0.48
34:3:1037:PHE:CE2	34:3:1038:LYS:HG2	2.49	0.48
35:4:108:ALA:HA	35:4:194:TYR:OH	2.14	0.48
1:A:717:GLY:HA3	18:B:84:A:O2'	2.14	0.48
2:K:200:GLN:HB3	2:K:213:LYS:HG3	1.96	0.48
2:K:267:ARG:HG3	2:K:285:HIS:CD2	2.49	0.48
3:L:120:TYR:CD1	3:L:123:ARG:HB3	2.46	0.48
3:L:367:ARG:NH2	17:I:57:U:C4	2.81	0.48
4:N:261:LYS:HE2	4:N:285:HIS:HA	1.94	0.48
8:C:250:GLU:HG2	8:C:298:PHE:CE2	2.48	0.48
8:C:766:TRP:CZ2	8:C:792:LYS:HB3	2.49	0.48
27:D:836:TRP:HE3	27:D:870:GLN:HE22	1.62	0.48
27:D:1515:LEU:O	27:D:1534:ASN:ND2	2.44	0.48
27:D:1682:ILE:HD12	27:D:1722:ILE:HG12	1.95	0.48
27:D:2103:LEU:HD13	27:D:2142:ILE:HG13	1.96	0.48
34:3:71:PHE:O	34:3:430:LEU:HD21	2.13	0.48
1:A:644:VAL:O	1:A:645:ASP:HB2	2.14	0.48
1:A:1447:TRP:HB3	1:A:1451:PHE:HE2	1.78	0.48
1:A:1673:LEU:HD21	1:A:1681:VAL:HG23	1.96	0.48
4:N:726:LEU:HD21	4:N:746:MET:HE1	1.96	0.48
8:C:237:ILE:HD12	8:C:265:PHE:HE1	1.78	0.48
8:C:769:TYR:N	8:C:772:ASN:O	2.45	0.48
21:P:15:LEU:HB3	21:P:20:LEU:HD11	1.95	0.48
22:Q:8:LYS:HE3	22:Q:34:PRO:HG3	1.96	0.48
29:H:42:U:C2	29:H:43:G:C8	3.02	0.48
29:H:1093:C:C2	29:H:1094:G:C8	3.02	0.48
29:H:1162:U:O2'	29:H:1163:C:H5'	2.14	0.48
29:H:1166:G:H8	29:H:1166:G:O5'	1.96	0.48
32:1:606:LEU:HD21	32:1:643:LEU:HD23	1.96	0.48
32:1:928:LYS:HD2	37:6:24:GLU:OE2	2.14	0.48
34:3:551:PHE:HD2	34:3:591:THR:HG21	1.79	0.48
34:3:1193:PHE:CE1	34:3:1308:ARG:HD2	2.49	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:543:ASN:OD1	1:A:544:LYS:N	2.47	0.48
1:A:635:THR:HG21	1:A:656:ILE:HD11	1.96	0.48
1:A:966:PRO:HA	1:A:1088:VAL:HG12	1.95	0.48
4:N:692:LEU:HD23	4:N:708:LEU:HD11	1.96	0.48
8:C:292:ILE:HD13	8:C:306:PRO:HD3	1.95	0.48
27:D:1032:PHE:HE2	27:D:1081:GLN:HG2	1.79	0.48
27:D:1255:ASP:N	27:D:1255:ASP:OD1	2.47	0.48
21:P:53:VAL:HB	21:P:54:PRO:HD3	1.96	0.48
29:H:1097:G:H2'	29:H:1098:C:H5	1.78	0.48
34:3:60:LEU:HB2	34:3:1317:VAL:HG22	1.94	0.48
1:A:863:ARG:NH1	1:A:1059:GLU:HB3	2.29	0.47
2:K:290:ARG:HA	2:K:301:LEU:O	2.13	0.47
5:J:342:PHE:HB2	5:J:380:ILE:HB	1.95	0.47
17:I:143:A:C5	25:U:48:TYR:HD2	2.31	0.47
27:D:542:HIS:O	27:D:551:ASN:HB3	2.14	0.47
27:D:1621:ILE:HD12	27:D:1630:ARG:HG3	1.96	0.47
21:P:28:ARG:HD3	21:P:50:GLU:OE2	2.14	0.47
29:H:142:C:C2'	29:H:143:G:H8	2.23	0.47
29:H:679:U:H2'	29:H:680:C:C6	2.49	0.47
32:1:954:PRO:O	32:1:959:ASN:ND2	2.47	0.47
34:3:294:PHE:CE2	34:3:330:GLY:HA3	2.49	0.47
1:A:460:PRO:HG3	8:C:376:PHE:CD1	2.49	0.47
1:A:691:PHE:CZ	1:A:701:CYS:HB2	2.49	0.47
1:A:1451:PHE:O	1:A:1454:SER:N	2.45	0.47
1:A:1649:PHE:CE1	1:A:1815:LEU:HD21	2.49	0.47
6:E:53:VAL:HG13	6:E:56:PHE:CZ	2.49	0.47
8:C:835:LYS:HB3	8:C:839:ILE:HD12	1.95	0.47
8:C:879:LEU:O	8:C:883:ARG:HG2	2.14	0.47
27:D:843:HIS:HA	27:D:876:GLY:HA2	1.96	0.47
27:D:1987:VAL:HG23	27:D:2150:LEU:HD22	1.95	0.47
24:T:46:PHE:O	25:U:14:ASN:ND2	2.47	0.47
29:H:1094:G:C6	29:H:1149:G:C6	3.03	0.47
34:3:208:GLU:HG3	34:3:209:GLN:N	2.29	0.47
34:3:380:LEU:HB3	34:3:388:LEU:HD11	1.96	0.47
38:X:49:THR:CG2	39:Y:233:ASP:HB2	2.45	0.47
1:A:1268:ARG:HG2	1:A:1301:TYR:HB2	1.95	0.47
1:A:2398:LEU:HD12	27:D:1060:LYS:HZ2	1.72	0.47
2:K:446:SER:OG	2:K:451:PHE:CE2	2.60	0.47
17:I:143:A:C5	25:U:48:TYR:CD2	3.02	0.47
27:D:585:VAL:HG22	27:D:604:VAL:HB	1.97	0.47
24:T:85:ASP:OD1	24:T:86:ASN:N	2.48	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:U:58:GLU:C	25:U:59:PHE:HD1	2.17	0.47
34:3:94:CYS:SG	34:3:101:LEU:HD11	2.54	0.47
34:3:211:LYS:NZ	34:3:256:GLU:OE2	2.38	0.47
34:3:750:TYR:HE1	34:3:777:LEU:HD21	1.79	0.47
34:3:1107:ILE:HD12	34:3:1108:PRO:HD2	1.96	0.47
35:4:138:PRO:HA	35:4:152:TYR:O	2.14	0.47
1:A:713:ASN:HB3	18:B:84:A:H5'	1.96	0.47
1:A:796:ASN:OD1	1:A:858:LYS:HE2	2.14	0.47
2:K:428:LEU:HD11	5:J:466:PRO:HD2	1.96	0.47
18:B:67:U:H2'	18:B:68:A:C8	2.47	0.47
21:P:76:LYS:HD3	21:P:79:LYS:HD3	1.96	0.47
24:T:90:ILE:HB	26:V:62:VAL:CG1	2.44	0.47
32:1:850:ASP:OD1	32:1:853:HIS:HD2	1.98	0.47
33:2:363:TYR:HA	34:3:1125:ASP:OD2	2.14	0.47
34:3:503:LYS:HG2	34:3:929:ILE:HD11	1.97	0.47
1:A:228:LYS:HD2	1:A:701:CYS:H	1.77	0.47
1:A:374:ILE:HD12	8:C:674:LEU:HD22	1.97	0.47
1:A:1863:HIS:HB2	1:A:1871:ALA:HB3	1.95	0.47
3:L:113:HIS:HD2	3:L:134:PRO:HA	1.80	0.47
8:C:835:LYS:O	8:C:839:ILE:HB	2.15	0.47
17:I:141:G:H2'	17:I:142:G:H5'	1.97	0.47
27:D:587:GLU:O	27:D:594:LEU:HG	2.15	0.47
27:D:1252:LEU:HD11	27:D:1288:PHE:CD1	2.49	0.47
29:H:1143:C:H4'	29:H:1144:U:H2'	1.96	0.47
32:1:169:LEU:O	32:1:173:ILE:HD12	2.13	0.47
32:1:935:TRP:CE3	37:6:22:GLY:HA3	2.49	0.47
38:X:33:ILE:HG22	38:X:85:THR:HG23	1.95	0.47
1:A:984:VAL:HG12	1:A:985:ASP:N	2.30	0.47
1:A:1169:TYR:CZ	1:A:1262:MET:HG2	2.50	0.47
1:A:1616:ARG:HH21	1:A:1618:ASN:HD22	1.63	0.47
1:A:2017:THR:HB	1:A:2062:GLU:OE1	2.13	0.47
1:A:2177:VAL:N	1:A:2338:GLN:HE22	2.12	0.47
2:K:353:TYR:CE1	7:M:126:ILE:HG12	2.48	0.47
2:K:362:TYR:HB2	2:K:379:ARG:HG3	1.95	0.47
16:F:50:G:H4'	16:F:51:A:OP2	2.15	0.47
17:I:138:U:H5	27:D:1227:ILE:HG12	1.79	0.47
18:B:32:G:HO2'	18:B:34:C:H6	1.59	0.47
27:D:491:PHE:N	27:D:491:PHE:CD1	2.82	0.47
27:D:574:PHE:HB2	27:D:585:VAL:HG11	1.97	0.47
27:D:1685:THR:O	27:D:1697:PRO:HA	2.15	0.47
27:D:1724:THR:HG22	27:D:1725:SER:N	2.30	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:2051:VAL:HG12	27:D:2077:ARG:HG2	1.97	0.47
22:Q:23:THR:HA	22:Q:48:PRO:HD3	1.96	0.47
26:V:31:GLY:H	26:V:39:VAL:HB	1.78	0.47
28:G:506:U:O2	28:G:507:U:H5"	2.14	0.47
38:X:52:SER:HB3	39:Y:231:ARG:CZ	2.44	0.47
1:A:364:TYR:CE2	1:A:1209:LYS:HB3	2.50	0.47
1:A:676:GLN:HG2	1:A:714:PHE:HB2	1.96	0.47
1:A:688:TYR:HD1	1:A:691:PHE:CZ	2.32	0.47
1:A:876:PRO:HB3	3:L:172:ILE:HG22	1.95	0.47
1:A:1054:LEU:O	1:A:1239:THR:HB	2.14	0.47
1:A:1126:LEU:HD11	1:A:1161:TYR:CD2	2.50	0.47
1:A:1286:TRP:CZ2	1:A:1302:LEU:HD11	2.50	0.47
1:A:1562:PHE:CZ	1:A:1570:TRP:HB3	2.50	0.47
1:A:1777:ILE:HG12	1:A:1784:TYR:CB	2.45	0.47
1:A:2398:LEU:HD22	27:D:1060:LYS:CD	2.43	0.47
2:K:244:LYS:HE3	2:K:257:LEU:HD22	1.96	0.47
3:L:137:TYR:O	3:L:141:ILE:HG13	2.15	0.47
3:L:222:ILE:HD11	3:L:242:ILE:HD12	1.97	0.47
3:L:410:LEU:O	3:L:410:LEU:HD12	2.15	0.47
5:J:335:THR:HG23	5:J:336:VAL:H	1.79	0.47
6:E:9:LEU:HD13	6:E:15:VAL:HA	1.97	0.47
8:C:116:THR:HG22	8:C:118:TYR:H	1.80	0.47
8:C:233:ASP:OD1	8:C:487:ARG:NH2	2.47	0.47
8:C:423:HIS:O	8:C:427:LEU:CB	2.63	0.47
17:I:137:G:H5"	27:D:1198:ARG:NH2	2.29	0.47
18:B:166:U:H4'	18:B:167:A:OP1	2.14	0.47
27:D:686:VAL:HG12	27:D:687:PRO:O	2.14	0.47
27:D:781:LEU:HD23	27:D:781:LEU:C	2.35	0.47
27:D:1640:LEU:HB2	27:D:1664:LEU:HD11	1.97	0.47
23:R:53:LYS:O	23:R:74:GLU:HA	2.15	0.47
24:T:24:GLN:CB	24:T:42:LYS:HD2	2.44	0.47
28:G:501:A:C6	32:1:783:VAL:HG11	2.49	0.47
29:H:565:U:H2'	29:H:566:U:C6	2.50	0.47
29:H:566:U:H2'	29:H:567:U:C6	2.50	0.47
29:H:689:G:H2'	29:H:690:U:C6	2.50	0.47
32:1:611:HIS:CD2	32:1:612:LYS:H	2.31	0.47
32:1:683:ASN:OD1	32:1:684:GLN:N	2.46	0.47
33:2:311:PRO:HG2	35:4:74:VAL:HG22	1.96	0.47
33:2:322:PRO:HB3	35:4:32:ILE:O	2.14	0.47
34:3:832:TRP:HB3	34:3:835:VAL:HG23	1.97	0.47
34:3:1003:LEU:HD23	34:3:1059:LEU:HD11	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:1193:PHE:CZ	34:3:1308:ARG:HD2	2.49	0.47
2:K:171:GLN:O	2:K:172:LEU:HD12	2.15	0.47
7:M:61:ILE:O	7:M:65:LEU:HG	2.15	0.47
8:C:132:ARG:O	8:C:133:ILE:HG12	2.14	0.47
27:D:635:GLU:N	27:D:670:LEU:O	2.47	0.47
29:H:139:G:C2'	29:H:140:G:O5'	2.62	0.47
29:H:551:C:H2'	29:H:552:U:C6	2.50	0.47
29:H:678:U:H2'	29:H:679:U:C6	2.50	0.47
29:H:693:C:H2'	29:H:694:C:C6	2.50	0.47
29:H:1140:U:H2'	29:H:1141:C:C6	2.50	0.47
34:3:337:VAL:HG22	34:3:346:LEU:HB2	1.97	0.47
1:A:227:GLU:OE2	1:A:231:ARG:NH1	2.28	0.47
1:A:325:LYS:HB2	1:A:405:ASN:ND2	2.28	0.47
1:A:2032:ILE:HD13	1:A:2043:PHE:CE1	2.50	0.47
1:A:2393:LEU:O	1:A:2397:GLU:CB	2.63	0.47
4:N:887:THR:HB	4:N:890:GLU:HB3	1.96	0.47
8:C:943:ASP:OD2	8:C:946:ASP:HB2	2.15	0.47
16:F:29:U:H2'	16:F:30:G:C8	2.50	0.47
17:I:151:G:HO2'	24:T:32:PHE:HE2	1.60	0.47
22:Q:34:PRO:C	22:Q:36:MET:H	2.17	0.47
28:G:514:U:C4'	28:G:515:U:H5'	2.45	0.47
29:H:671:G:H2'	29:H:672:U:C6	2.50	0.47
29:H:682:U:H2'	29:H:683:U:C6	2.50	0.47
29:H:695:U:H2'	29:H:696:C:C6	2.50	0.47
29:H:1097:G:C6	29:H:1146:G:C6	3.02	0.47
32:1:258:VAL:HA	32:1:261:THR:HG22	1.97	0.47
32:1:963:TYR:CG	32:1:964:ILE:N	2.83	0.47
35:4:108:ALA:HB3	35:4:155:PHE:O	2.15	0.47
1:A:2395:PHE:CD1	27:D:1061:ALA:CA	2.84	0.47
2:K:388:GLN:HE21	5:J:462:HIS:CE1	2.32	0.47
2:K:408:LYS:O	2:K:424:SER:HB3	2.15	0.47
2:K:443:LEU:HG	2:K:444:ASP:N	2.30	0.47
5:J:280:VAL:O	5:J:286:ASN:ND2	2.48	0.47
8:C:148:SER:O	8:C:151:ASP:HB3	2.15	0.47
8:C:465:GLU:CD	8:C:466:GLY:H	2.19	0.47
8:C:697:ARG:HG3	8:C:709:SER:HA	1.97	0.47
17:I:150:G:O2'	17:I:152:A:OP1	2.32	0.47
18:B:21:G:H2'	18:B:22:G:C8	2.50	0.47
24:T:11:VAL:O	26:V:31:GLY:HA3	2.15	0.47
33:2:185:GLY:O	33:2:189:LEU:HG	2.14	0.47
34:3:259:ASN:O	37:6:75:PRO:HD3	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:300:LYS:H	1:A:493:MET:HG2	1.80	0.46
1:A:1213:MET:HE1	1:A:1250:VAL:HB	1.97	0.46
1:A:1313:ASP:OD1	1:A:1359:ILE:HD13	2.15	0.46
1:A:1498:ASP:HB2	4:N:159:LEU:HB2	1.96	0.46
1:A:1527:TRP:CE3	1:A:1528:THR:HG23	2.49	0.46
1:A:2395:PHE:CD1	27:D:1060:LYS:O	2.63	0.46
4:N:13:ALA:HB3	4:N:15:TYR:CD2	2.50	0.46
4:N:652:ALA:O	4:N:656:LEU:CB	2.63	0.46
16:F:5:G:H2'	16:F:6:C:C6	2.49	0.46
17:I:5:U:H2'	17:I:6:U:C6	2.50	0.46
17:I:150:G:H2'	17:I:151:G:H5"	1.97	0.46
27:D:783:THR:O	27:D:787:ASN:ND2	2.48	0.46
27:D:1372:LYS:CD	27:D:1708:GLY:HA3	2.45	0.46
20:S:23:LEU:HD23	20:S:24:THR:H	1.80	0.46
32:1:823:MET:O	32:1:827:ILE:HG12	2.15	0.46
34:3:370:VAL:HG23	34:3:379:VAL:HG12	1.98	0.46
34:3:964:PHE:CZ	34:3:972:LYS:HD3	2.50	0.46
1:A:364:TYR:CB	1:A:1214:ARG:HG2	2.45	0.46
1:A:1889:LEU:HB2	1:A:1989:PHE:HB2	1.97	0.46
2:K:366:THR:O	2:K:373:ILE:HA	2.16	0.46
5:J:406:PHE:CE1	5:J:408:LEU:HB2	2.50	0.46
6:E:53:VAL:CG1	6:E:57:ALA:HB3	2.46	0.46
8:C:139:ILE:HD12	8:C:252:LEU:HD22	1.96	0.46
27:D:699:ARG:HH21	27:D:875:ALA:HB3	1.81	0.46
27:D:1213:ARG:HG3	27:D:1313:LEU:HB3	1.96	0.46
27:D:1629:LEU:HD21	27:D:1652:VAL:CG2	2.45	0.46
22:Q:43:VAL:CG1	22:Q:85:ILE:HD12	2.44	0.46
29:H:677:U:H2'	29:H:678:U:C6	2.50	0.46
32:1:523:LEU:HD23	32:1:526:LEU:HD12	1.97	0.46
34:3:411:ASP:OD2	34:3:472:LEU:HG	2.14	0.46
34:3:952:ARG:HA	34:3:972:LYS:O	2.14	0.46
34:3:1306:GLU:HG3	36:5:78:ARG:NH1	2.30	0.46
39:Y:160:LYS:HB2	39:Y:160:LYS:NZ	2.30	0.46
3:L:232:LEU:HD23	3:L:334:LYS:HG3	1.97	0.46
8:C:197:THR:HG23	8:C:545:LEU:HD12	1.97	0.46
8:C:468:LEU:HA	8:C:491:GLY:HA3	1.97	0.46
8:C:576:THR:HG21	8:C:591:PHE:HB3	1.96	0.46
32:1:232:LEU:HD12	32:1:233:GLY:N	2.30	0.46
38:X:124:GLU:O	38:X:128:ARG:HG2	2.16	0.46
1:A:1545:ASP:HA	1:A:1548:GLN:HG2	1.97	0.46
2:K:180:ALA:O	2:K:192:THR:HA	2.14	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:N:219:THR:HG22	4:N:221:GLU:HG2	1.97	0.46
6:E:85:PHE:CD1	6:E:90:HIS:HA	2.50	0.46
16:F:83:A:H1'	16:F:84:C:H5'	1.97	0.46
27:D:986:LEU:HD21	27:D:1015:MET:HG2	1.97	0.46
20:S:23:LEU:HD23	20:S:24:THR:N	2.30	0.46
33:2:252:PHE:O	33:2:256:ALA:HB2	2.15	0.46
34:3:88:ARG:HH12	34:3:144:TRP:N	2.14	0.46
34:3:1046:GLY:O	34:3:1073:LYS:HA	2.16	0.46
34:3:1171:ILE:O	34:3:1174:GLN:N	2.48	0.46
36:5:41:ARG:HH12	36:5:83:LYS:HZ2	1.62	0.46
1:A:774:ILE:HG23	1:A:777:LYS:HD3	1.97	0.46
2:K:290:ARG:HB3	2:K:292:TRP:NE1	2.29	0.46
18:B:114:G:C2	18:B:115:G:C4	3.03	0.46
27:D:633:ILE:HG21	27:D:636:ILE:HD13	1.98	0.46
27:D:1351:ILE:HB	27:D:1374:THR:HG21	1.97	0.46
27:D:1459:TRP:HE1	27:D:1762:ILE:HD11	1.81	0.46
27:D:1902:LEU:HB3	27:D:1928:LEU:HD12	1.98	0.46
28:G:490:A:H2'	28:G:491:C:C6	2.51	0.46
29:H:120:G:H4'	29:H:121:C:O4'	2.15	0.46
29:H:680:C:H2'	29:H:681:C:C6	2.49	0.46
29:H:690:U:H2'	29:H:691:G:H8	1.81	0.46
32:1:565:LEU:O	32:1:569:PHE:CB	2.63	0.46
32:1:624:CYS:O	32:1:628:ILE:HG12	2.15	0.46
32:1:935:TRP:CZ3	37:6:22:GLY:HA3	2.51	0.46
33:2:163:ILE:O	33:2:169:VAL:HG21	2.14	0.46
34:3:186:ARG:HB2	34:3:207:VAL:HG23	1.97	0.46
34:3:678:LYS:H	34:3:694:ALA:HB3	1.80	0.46
34:3:1116:ARG:HH12	34:3:1189:LEU:HD13	1.79	0.46
1:A:354:PRO:O	1:A:355:LEU:HB3	2.16	0.46
1:A:1014:LYS:HD3	1:A:1144:PHE:CE1	2.51	0.46
3:L:131:ILE:HD11	3:L:175:LEU:HD11	1.98	0.46
5:J:408:LEU:O	5:J:415:ILE:N	2.48	0.46
17:I:90:C:N3	22:Q:34:PRO:CD	2.78	0.46
27:D:496:THR:O	27:D:497:THR:OG1	2.30	0.46
27:D:809:THR:HA	27:D:1092:PHE:CG	2.50	0.46
27:D:1194:ASP:HB3	27:D:1198:ARG:NH1	2.30	0.46
27:D:1496:ILE:HD12	27:D:1524:TRP:CZ3	2.50	0.46
21:P:33:GLN:O	21:P:45:LEU:HA	2.16	0.46
22:Q:18:GLU:O	22:Q:93:ARG:HB3	2.15	0.46
28:G:488:A:H2'	28:G:489:A:H8	1.80	0.46
29:H:544:G:H2'	29:H:545:G:H8	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:559:G:H2'	29:H:560:G:H8	1.81	0.46
29:H:567:U:H2'	29:H:568:U:C6	2.50	0.46
29:H:669:U:H2'	29:H:670:U:C6	2.49	0.46
29:H:691:G:H2'	29:H:692:U:C6	2.50	0.46
34:3:68:GLN:HE21	34:3:1222:GLN:HG2	1.79	0.46
34:3:1118:VAL:HG12	34:3:1139:TRP:HZ2	1.81	0.46
34:3:1124:LEU:HB2	34:3:1130:ILE:CD1	2.45	0.46
38:X:32:TYR:CE1	38:X:78:LYS:HD3	2.50	0.46
1:A:563:ASP:OD1	1:A:564:TRP:N	2.49	0.46
1:A:928:ARG:NH2	4:N:145:THR:OG1	2.44	0.46
1:A:2319:LYS:HG3	1:A:2320:ASP:H	1.79	0.46
7:M:51:PHE:CE1	7:M:53:ILE:HD11	2.51	0.46
8:C:292:ILE:HA	8:C:295:ILE:HG12	1.97	0.46
8:C:331:TYR:CE1	8:C:404:PHE:HD1	2.34	0.46
16:F:15:A:H2'	16:F:16:C:H6	1.81	0.46
27:D:1631:ALA:HB3	27:D:1632:PRO:HD3	1.98	0.46
29:H:562:A:H2'	29:H:563:G:H8	1.81	0.46
29:H:688:A:H2'	29:H:689:G:H8	1.81	0.46
29:H:1152:U:H2'	29:H:1153:C:H6	1.80	0.46
32:1:327:TRP:CZ2	32:1:369:PRO:HG2	2.49	0.46
32:1:565:LEU:O	32:1:569:PHE:HB2	2.16	0.46
32:1:806:THR:HB	33:2:211:THR:HG21	1.98	0.46
33:2:271:TYR:CZ	33:2:274:ARG:HB2	2.51	0.46
34:3:71:PHE:HD1	34:3:97:THR:CG2	2.28	0.46
1:A:318:LEU:HD23	1:A:501:LEU:HD23	1.98	0.46
1:A:616:GLY:O	1:A:619:PHE:HB3	2.15	0.46
2:K:322:VAL:HB	2:K:336:ILE:HD11	1.98	0.46
4:N:778:ILE:HG23	4:N:794:PHE:HE1	1.81	0.46
8:C:605:ILE:HD11	8:C:673:PRO:HA	1.98	0.46
28:G:481:A:H61	35:4:86:VAL:HB	1.80	0.46
32:1:195:PHE:HB2	32:1:200:ILE:HD11	1.98	0.46
32:1:286:ILE:HG23	32:1:332:THR:OG1	2.16	0.46
32:1:439:MET:HA	32:1:442:ILE:HD12	1.98	0.46
32:1:698:ARG:HG3	32:1:699:LYS:N	2.31	0.46
34:3:78:HIS:O	34:3:146:THR:HG22	2.16	0.46
38:X:82:GLN:HB3	39:Y:168:GLN:NE2	2.31	0.46
39:Y:223:ARG:HG3	39:Y:242:GLU:OE2	2.16	0.46
2:K:64:VAL:HG12	2:K:65:GLU:N	2.31	0.46
2:K:395:ILE:HD11	7:M:123:THR:HG23	1.98	0.46
8:C:272:ARG:HG3	8:C:276:ASP:OD2	2.16	0.46
8:C:471:HIS:HB2	8:C:592:PHE:CE2	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:772:ASN:ND2	8:C:816:VAL:H	2.14	0.46
19:O:212:VAL:HG23	19:O:213:SER:H	1.80	0.46
27:D:1217:ARG:HH12	22:Q:146:LEU:HD23	1.80	0.46
27:D:1564:LEU:HD21	27:D:1597:ALA:HB1	1.98	0.46
27:D:1587:SER:HB3	27:D:1895:ARG:CZ	2.45	0.46
26:V:15:ILE:HG22	26:V:73:ALA:HA	1.97	0.46
29:H:1139:G:C6	29:H:1140:U:C4	3.04	0.46
32:1:484:PHE:HA	32:1:488:TRP:CD1	2.48	0.46
34:3:732:ARG:NH2	34:3:737:GLY:O	2.49	0.46
39:Y:209:LEU:HD12	39:Y:209:LEU:C	2.36	0.46
1:A:248:PRO:HD3	1:A:595:TYR:CE1	2.50	0.46
1:A:460:PRO:HD3	8:C:354:TYR:OH	2.16	0.46
1:A:1711:VAL:HG12	1:A:1712:SER:N	2.30	0.46
1:A:1762:ASP:OD1	1:A:1763:ASN:N	2.49	0.46
2:K:291:LEU:HB3	2:K:301:LEU:HB3	1.97	0.46
3:L:289:ASP:HB3	3:L:293:LYS:HE3	1.98	0.46
8:C:315:SER:HB3	8:C:320:PHE:CE2	2.51	0.46
8:C:474:LYS:HZ3	8:C:630:PRO:HD3	1.81	0.46
16:F:26:A:H2'	16:F:27:U:H6	1.80	0.46
17:I:99:G:H4'	27:D:1186:GLU:CB	2.23	0.46
27:D:1999:HIS:ND1	27:D:1999:HIS:O	2.49	0.46
27:D:2055:TYR:CE2	27:D:2158:PHE:CD2	3.04	0.46
22:Q:46:THR:OG1	22:Q:79:ILE:HG12	2.16	0.46
29:H:545:G:H2'	29:H:546:U:C6	2.50	0.46
29:H:553:G:H2'	29:H:554:C:C6	2.50	0.46
29:H:673:U:H2'	29:H:674:G:H8	1.81	0.46
29:H:1165:C:C2	29:H:1166:G:N7	2.83	0.46
32:1:430:TYR:HB3	32:1:434:TYR:CE2	2.50	0.46
34:3:156:ASN:ND2	34:3:178:PRO:HA	2.29	0.46
34:3:369:ILE:HG23	34:3:419:LEU:HB2	1.98	0.46
1:A:171:ALA:HB2	1:A:201:PHE:CD1	2.51	0.45
1:A:867:ILE:HD13	1:A:1101:TYR:CD1	2.51	0.45
1:A:1050:LEU:CD2	1:A:1248:VAL:HG22	2.44	0.45
1:A:1733:TRP:CZ2	1:A:1772:GLY:HA3	2.51	0.45
2:K:393:ARG:HB2	5:J:429:GLU:HG2	1.98	0.45
7:M:113:GLN:NE2	16:F:77:G:H4'	2.29	0.45
8:C:331:TYR:OH	8:C:428:ILE:O	2.34	0.45
8:C:613:ARG:NH1	8:C:614:GLU:OE2	2.49	0.45
16:F:15:A:H2'	16:F:16:C:C6	2.51	0.45
16:F:92:C:H2'	16:F:93:A:C8	2.45	0.45
17:I:78:A:N1	27:D:1110:ARG:NE	2.64	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:22:G:O6	18:B:149:U:O4	2.34	0.45
18:B:75:A:N6	18:B:77:A:N1	2.65	0.45
18:B:135:G:N1	18:B:136:G:N2	2.64	0.45
27:D:929:ILE:HD13	27:D:935:ALA:HA	1.99	0.45
27:D:1371:GLY:O	27:D:1376:LYS:NZ	2.40	0.45
27:D:1888:GLU:HB3	27:D:1953:LYS:HG2	1.97	0.45
28:G:502:C:OP2	32:1:775:ARG:NH1	2.31	0.45
29:H:555:A:H2'	29:H:556:A:H8	1.82	0.45
29:H:1126:G:O2'	29:H:1127:A:H8	1.97	0.45
32:1:760:HIS:HB3	33:2:240:LEU:HD12	1.97	0.45
32:1:866:LEU:HD21	36:5:79:LEU:HD21	1.98	0.45
34:3:1097:PHE:CE1	34:3:1108:PRO:HB3	2.48	0.45
34:3:1356:VAL:HA	34:3:1360:TYR:CD2	2.51	0.45
39:Y:208:SER:CB	39:Y:214:LEU:HD12	2.45	0.45
1:A:2199:VAL:HG23	1:A:2200:LYS:HG3	1.98	0.45
8:C:866:ILE:HG23	8:C:918:LEU:HD21	1.98	0.45
27:D:610:GLU:OE2	27:D:646:VAL:HG21	2.17	0.45
27:D:765:ASN:HB2	27:D:768:HIS:CD2	2.51	0.45
27:D:1482:GLY:HA3	22:Q:143:ARG:O	2.15	0.45
27:D:1677:THR:O	27:D:1710:ALA:HA	2.15	0.45
27:D:1722:ILE:HG22	27:D:1724:THR:OG1	2.16	0.45
27:D:1757:GLU:CB	27:D:1763:ILE:HD12	2.46	0.45
27:D:1772:TRP:CZ3	27:D:1773:PHE:CZ	3.03	0.45
23:R:66:ASN:OD1	23:R:98:GLY:N	2.50	0.45
20:S:22:GLU:HG2	20:S:70:LYS:HD2	1.97	0.45
29:H:548:G:H2'	29:H:549:C:C6	2.50	0.45
29:H:564:U:H2'	29:H:565:U:C6	2.50	0.45
29:H:570:G:H2'	29:H:571:A:H8	1.82	0.45
29:H:670:U:H2'	29:H:671:G:H8	1.81	0.45
29:H:685:U:H2'	29:H:686:G:H8	1.81	0.45
32:1:221:MET:O	32:1:224:THR:OG1	2.24	0.45
32:1:843:GLU:OE1	32:1:879:HIS:NE2	2.49	0.45
34:3:153:ASP:O	34:3:154:SER:OG	2.21	0.45
34:3:333:ASN:O	34:3:350:ILE:HG22	2.17	0.45
38:X:11:GLU:HG2	38:X:16:ILE:CG2	2.46	0.45
1:A:2162:LEU:HD23	1:A:2194:ILE:O	2.16	0.45
4:N:771:ALA:HB3	4:N:806:ARG:HH21	1.81	0.45
5:J:443:LYS:HG2	5:J:444:VAL:N	2.30	0.45
6:E:112:GLU:HG2	6:E:135:TYR:CE2	2.51	0.45
8:C:869:HIS:CD2	8:C:925:LEU:HB3	2.51	0.45
18:B:94:C:H3'	18:B:95:C:H4'	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1165:VAL:HG13	27:D:1166:PRO:HD2	1.98	0.45
27:D:1625:THR:OG1	27:D:1648:ASP:HB2	2.17	0.45
27:D:2011:ILE:CD1	27:D:2030:ILE:HD11	2.46	0.45
21:P:21:ARG:HB2	21:P:98:GLU:OE1	2.16	0.45
20:S:20:SER:OG	20:S:73:VAL:HB	2.16	0.45
29:H:554:C:H2'	29:H:555:A:H8	1.82	0.45
29:H:672:U:H2'	29:H:673:U:C6	2.50	0.45
29:H:694:C:H2'	29:H:695:U:C6	2.50	0.45
32:1:489:VAL:CG1	38:X:26:GLU:CG	2.94	0.45
34:3:294:PHE:CE2	34:3:365:ILE:HB	2.51	0.45
34:3:932:PHE:HA	34:3:984:ILE:HD11	1.98	0.45
34:3:977:ILE:HG12	34:3:1004:LEU:HD22	1.99	0.45
1:A:620:HIS:HB3	1:A:669:TYR:CD2	2.51	0.45
1:A:1014:LYS:HD2	1:A:1014:LYS:HA	1.58	0.45
1:A:1049:LEU:HB2	1:A:1249:SER:OG	2.16	0.45
1:A:1105:ARG:HD2	1:A:1517:TYR:CE1	2.51	0.45
1:A:1169:TYR:CE2	1:A:1262:MET:HG2	2.52	0.45
4:N:144:LYS:O	4:N:145:THR:OG1	2.30	0.45
8:C:251:GLN:HE22	8:C:254:LYS:HD3	1.81	0.45
8:C:605:ILE:HG13	8:C:652:MET:CE	2.42	0.45
8:C:769:TYR:HA	8:C:800:TYR:HE1	1.80	0.45
16:F:16:C:O2'	16:F:17:U:O5'	2.35	0.45
23:R:38:MET:HG3	23:R:39:VAL:N	2.30	0.45
29:H:568:U:H2'	29:H:569:C:C6	2.50	0.45
29:H:683:U:H2'	29:H:684:U:C6	2.50	0.45
29:H:692:U:H2'	29:H:693:C:C6	2.50	0.45
32:1:591:ASP:OD1	32:1:592:ILE:HD12	2.17	0.45
33:2:166:THR:HG22	33:2:167:LYS:H	1.82	0.45
1:A:234:PHE:HD2	1:A:699:PRO:HB2	1.81	0.45
1:A:454:LEU:HD11	8:C:340:LYS:HG3	1.98	0.45
1:A:537:THR:HG21	18:B:84:A:H62	1.82	0.45
1:A:939:LEU:HD21	3:L:441:MET:HE2	1.98	0.45
1:A:1317:ARG:HE	1:A:1366:ARG:NH1	2.15	0.45
18:B:75:A:N6	18:B:77:A:C6	2.85	0.45
27:D:1436:LEU:HD22	27:D:1462:ARG:NH2	2.31	0.45
27:D:1453:GLU:OE2	27:D:1494:ARG:NH2	2.42	0.45
21:P:28:ARG:NH1	20:S:22:GLU:OE2	2.48	0.45
22:Q:4:VAL:HG12	22:Q:8:LYS:HZ2	1.80	0.45
26:V:47:ASN:OD1	26:V:51:PRO:HD2	2.17	0.45
26:V:59:LEU:O	26:V:60:GLN:HG2	2.16	0.45
28:G:520:G:C4	38:X:34:TYR:CZ	3.03	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:1139:G:H2'	29:H:1140:U:C5	2.51	0.45
32:1:835:ILE:O	32:1:838:ILE:N	2.32	0.45
34:3:641:GLN:NE2	34:3:705:LEU:HD23	2.31	0.45
34:3:1198:ILE:O	34:3:1221:LEU:N	2.50	0.45
35:4:171:GLN:O	35:4:178:ILE:HG12	2.17	0.45
1:A:221:TRP:CB	1:A:318:LEU:HD11	2.46	0.45
1:A:283:SER:O	1:A:285:PRO:HD3	2.17	0.45
1:A:2183:TYR:CE1	1:A:2219:LYS:HG3	2.51	0.45
1:A:2189:LEU:HD11	1:A:2347:GLY:HA3	1.99	0.45
4:N:256:LYS:HG2	4:N:257:PHE:N	2.32	0.45
4:N:760:VAL:O	4:N:764:LEU:HB3	2.16	0.45
8:C:183:GLN:HE21	8:C:657:TYR:HB3	1.80	0.45
27:D:766:ILE:HD12	27:D:769:LYS:HZ1	1.81	0.45
27:D:1880:LEU:HD21	27:D:1931:GLN:HE21	1.81	0.45
27:D:2101:LEU:O	27:D:2114:ILE:HA	2.16	0.45
24:T:80:ILE:HG23	25:U:80:TYR:HB2	1.98	0.45
32:1:590:LEU:HD11	32:1:594:MET:HE1	1.97	0.45
34:3:487:SER:O	34:3:1200:THR:HG21	2.16	0.45
34:3:600:ILE:HG13	34:3:608:ARG:O	2.16	0.45
34:3:1302:ARG:NH2	34:3:1307:TYR:HA	2.32	0.45
35:4:13:VAL:HG21	35:4:55:ILE:HD12	1.98	0.45
37:6:47:SER:O	37:6:51:GLU:HG2	2.17	0.45
38:X:89:VAL:HG21	38:X:106:HIS:CD2	2.51	0.45
1:A:140:ARG:NH2	1:A:252:GLU:HB2	2.29	0.45
1:A:364:TYR:HB2	1:A:1214:ARG:HG2	1.99	0.45
1:A:518:VAL:HG12	1:A:685:HIS:HB3	1.99	0.45
1:A:660:ILE:HD12	1:A:711:TRP:CE2	2.52	0.45
1:A:1047:ALA:HA	1:A:1172:PHE:O	2.17	0.45
1:A:1667:GLN:CD	19:O:211:ASN:OD1	2.52	0.45
1:A:2003:THR:HA	1:A:2006:SER:OG	2.16	0.45
4:N:124:ASP:OD1	4:N:125:ALA:N	2.48	0.45
8:C:193:LEU:HD23	8:C:224:GLU:HB3	1.98	0.45
16:F:96:G:H2'	16:F:97:A:C8	2.51	0.45
18:B:73:U:H2'	18:B:74:U:C6	2.51	0.45
27:D:452:SER:HB2	27:D:466:PRO:HG3	1.99	0.45
27:D:766:ILE:HD12	27:D:769:LYS:NZ	2.31	0.45
27:D:1933:TYR:OH	27:D:2091:TYR:HB2	2.16	0.45
22:Q:107:LEU:HD12	23:R:59:LYS:HE3	1.99	0.45
29:H:546:U:H2'	29:H:547:G:H8	1.81	0.45
29:H:549:C:H2'	29:H:550:G:H8	1.81	0.45
29:H:681:C:H2'	29:H:682:U:C6	2.50	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1:835:ILE:HG23	32:1:864:LEU:HD21	1.99	0.45
1:A:796:ASN:ND2	1:A:858:LYS:HG2	2.26	0.45
1:A:1575:TRP:N	3:L:391:MET:O	2.28	0.45
1:A:2192:LYS:HE3	1:A:2379:PRO:HG2	1.97	0.45
4:N:277:ILE:H	4:N:277:ILE:HD12	1.82	0.45
4:N:815:PHE:HB2	4:N:824:SER:HB3	1.99	0.45
8:C:452:LYS:HZ2	8:C:487:ARG:HH12	1.65	0.45
8:C:778:THR:OG1	8:C:780:PRO:HD2	2.16	0.45
17:I:33:A:H2'	17:I:34:G:O4'	2.17	0.45
18:B:65:U:H2'	18:B:66:A:H8	1.81	0.45
18:B:83:C:H4'	18:B:84:A:OP1	2.16	0.45
18:B:164:C:OP2	18:B:165:A:OP1	2.34	0.45
27:D:820:PHE:HB2	27:D:825:LEU:HD12	1.99	0.45
27:D:1163:SER:HB2	27:D:1184:ARG:HH22	1.82	0.45
22:Q:9:LYS:HD3	22:Q:106:LEU:HD22	1.99	0.45
22:Q:16:THR:HA	22:Q:25:VAL:O	2.16	0.45
29:H:563:G:H2'	29:H:564:U:C6	2.50	0.45
29:H:569:C:H2'	29:H:570:G:H8	1.81	0.45
29:H:674:G:H2'	29:H:675:A:H8	1.81	0.45
32:1:346:ILE:O	32:1:349:LEU:HG	2.16	0.45
32:1:462:GLN:HE21	32:1:504:TYR:HE2	1.63	0.45
39:Y:167:VAL:O	39:Y:171:GLY:HA2	2.17	0.45
39:Y:213:LYS:C	39:Y:230:SER:OG	2.55	0.45
39:Y:220:PRO:HG3	39:Y:236:HIS:CE1	2.51	0.45
1:A:218:SER:HA	1:A:318:LEU:HD13	1.99	0.45
1:A:700:GLY:O	1:A:701:CYS:HB3	2.17	0.45
1:A:939:LEU:HD11	3:L:441:MET:HE2	1.97	0.45
1:A:984:VAL:HG12	1:A:985:ASP:H	1.82	0.45
1:A:1126:LEU:HD13	1:A:1134:LEU:HD12	1.98	0.45
1:A:1345:TYR:HD2	1:A:1346:PHE:CE1	2.34	0.45
1:A:1699:ALA:HB1	1:A:1733:TRP:HB2	1.98	0.45
1:A:1715:SER:O	1:A:1787:TYR:HA	2.16	0.45
1:A:1962:ARG:CD	19:O:186:GLU:CD	2.82	0.45
2:K:128:SER:CB	2:K:337:ARG:HH21	2.29	0.45
2:K:373:ILE:HB	2:K:389:ILE:HB	1.99	0.45
5:J:347:LEU:HD23	5:J:371:ARG:NH2	2.31	0.45
8:C:171:GLY:HA3	8:C:422:LYS:NZ	2.32	0.45
8:C:866:ILE:HA	8:C:927:MET:O	2.16	0.45
8:C:876:VAL:HA	8:C:879:LEU:HD12	1.99	0.45
18:B:10:U:H1'	18:B:156:G:H22	1.82	0.45
27:D:508:HIS:O	27:D:512:GLU:HG3	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1014:SER:OG	27:D:1039:GLU:HB3	2.16	0.45
22:Q:44:LYS:HB2	22:Q:79:ILE:CG2	2.46	0.45
29:H:558:A:H2'	29:H:559:G:H8	1.81	0.45
29:H:675:A:H2'	29:H:676:U:C6	2.50	0.45
34:3:162:ILE:HG22	34:3:171:LEU:CD1	2.46	0.45
34:3:582:LYS:N	34:3:601:GLN:OE1	2.50	0.45
1:A:416:GLU:HG2	1:A:418:ASP:H	1.82	0.45
1:A:535:HIS:NE2	18:B:105:A:OP1	2.43	0.45
1:A:1098:VAL:HG23	3:L:276:GLU:OE1	2.17	0.45
1:A:1833:PRO:HD3	3:L:383:HIS:CE1	2.52	0.45
1:A:2310:GLU:OE1	1:A:2333:PHE:HZ	1.94	0.45
1:A:2398:LEU:CD2	27:D:1060:LYS:HB2	2.28	0.45
3:L:124:PHE:CD2	3:L:127:LEU:HB2	2.51	0.45
4:N:244:TRP:CE3	4:N:267:GLY:HA3	2.52	0.45
4:N:762:GLN:O	4:N:765:GLN:HG2	2.17	0.45
6:E:95:PHE:HB3	6:E:137:TYR:HE2	1.80	0.45
6:E:103:LEU:HD11	6:E:105:PHE:CE2	2.52	0.45
8:C:681:CYS:HA	8:C:855:PRO:HA	1.99	0.45
8:C:856:ILE:HA	8:C:944:VAL:CG1	2.47	0.45
17:I:143:A:N7	25:U:48:TYR:CE2	2.85	0.45
18:B:93:G:H5'	18:B:94:C:OP2	2.17	0.45
27:D:1403:GLU:HG2	27:D:1642:LYS:NZ	2.32	0.45
27:D:1411:ASP:O	27:D:1415:ARG:HG2	2.17	0.45
27:D:2063:LEU:HD13	27:D:2160:ILE:HB	1.99	0.45
23:R:48:LEU:HD11	23:R:54:ILE:HD12	1.98	0.45
23:R:67:MET:HE2	23:R:69:LEU:HD21	1.98	0.45
29:H:547:G:H2'	29:H:548:G:H8	1.81	0.45
29:H:550:G:H2'	29:H:551:C:C6	2.50	0.45
29:H:556:A:H2'	29:H:557:G:H8	1.81	0.45
29:H:1150:U:C6	29:H:1150:U:OP2	2.70	0.45
34:3:119:ASN:HB2	34:3:1325:ASN:HD21	1.82	0.45
34:3:854:ASN:HB3	34:3:857:VAL:H	1.82	0.45
34:3:1294:GLU:HG3	36:5:41:ARG:HG2	1.98	0.45
38:X:16:ILE:CG2	38:X:17:LEU:N	2.80	0.45
38:X:57:PRO:HG2	39:Y:231:ARG:NH2	2.27	0.45
1:A:1088:VAL:HG12	1:A:1089:VAL:N	2.22	0.44
1:A:1657:ILE:HG12	1:A:1811:ALA:HB1	1.99	0.44
3:L:447:GLU:O	3:L:450:GLN:HG2	2.17	0.44
4:N:241:PRO:HA	4:N:244:TRP:HD1	1.81	0.44
5:J:249:ARG:HD3	17:I:10:C:OP1	2.17	0.44
7:M:54:MET:HB2	7:M:80:PHE:CD1	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:402:SER:O	8:C:405:ARG:NH1	2.50	0.44
18:B:79:C:N4	18:B:114:G:O6	2.50	0.44
18:B:162:G:OP1	18:B:163:C:C6	2.70	0.44
18:B:166:U:C6	18:B:166:U:OP1	2.70	0.44
27:D:981:LEU:HD23	27:D:986:LEU:HD12	1.99	0.44
27:D:1000:ASP:N	27:D:1000:ASP:OD1	2.50	0.44
21:P:39:LYS:HD2	21:P:39:LYS:HA	1.48	0.44
23:R:44:VAL:O	23:R:55:ILE:HD12	2.17	0.44
24:T:29:ILE:HD11	24:T:87:ILE:HA	1.98	0.44
29:H:676:U:H2'	29:H:677:U:C6	2.50	0.44
32:1:244:LEU:O	32:1:248:ALA:HB2	2.18	0.44
34:3:508:ASN:ND2	34:3:924:PHE:O	2.48	0.44
34:3:528:PRO:HG2	34:3:554:PHE:CZ	2.51	0.44
1:A:208:VAL:HB	1:A:213:TYR:HB2	1.99	0.44
1:A:209:ILE:HG21	1:A:303:PHE:CE2	2.53	0.44
1:A:1774:MET:O	1:A:1786:ALA:HA	2.16	0.44
1:A:1794:LEU:O	1:A:1798:ILE:N	2.36	0.44
1:A:2010:LEU:HD21	1:A:2083:ILE:HD13	1.98	0.44
1:A:2395:PHE:HD1	27:D:1060:LYS:C	2.20	0.44
2:K:393:ARG:O	2:K:416:ASP:HB2	2.16	0.44
3:L:343:LYS:NZ	17:I:28:C:OP1	2.50	0.44
8:C:861:ILE:HG23	8:C:906:VAL:O	2.17	0.44
17:I:76:A:C8	27:D:1107:ARG:CZ	3.00	0.44
27:D:491:PHE:HD1	27:D:491:PHE:N	2.16	0.44
27:D:529:ASN:O	27:D:533:LEU:HG	2.17	0.44
27:D:676:ASN:HD22	27:D:907:PRO:HB3	1.82	0.44
27:D:1218:PHE:N	27:D:1218:PHE:CD1	2.85	0.44
27:D:1610:LEU:HD23	27:D:1612:VAL:HB	1.99	0.44
24:T:34:GLN:O	26:V:23:ARG:NH2	2.51	0.44
28:G:489:A:H2'	28:G:490:A:C8	2.52	0.44
32:1:567:ILE:O	32:1:570:GLN:HG2	2.17	0.44
34:3:61:TYR:CE2	34:3:63:LEU:HD11	2.52	0.44
34:3:177:GLN:HE22	36:5:44:ARG:HD3	1.83	0.44
34:3:523:ILE:HD11	34:3:873:ILE:HG13	1.98	0.44
34:3:564:ASP:OD1	34:3:565:ASN:N	2.48	0.44
1:A:326:ASN:ND2	1:A:407:VAL:HG22	2.32	0.44
1:A:802:PRO:O	1:A:804:MET:HG2	2.17	0.44
1:A:1336:ASN:HD21	1:A:1399:MET:HA	1.82	0.44
1:A:1859:ARG:NH2	19:O:161:ILE:HD13	2.32	0.44
1:A:2241:ILE:HD12	1:A:2284:LYS:HD3	1.98	0.44
1:A:2398:LEU:CD1	27:D:1060:LYS:HZ2	2.26	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:182:SER:HA	2:K:444:ASP:OD2	2.18	0.44
2:K:220:LYS:O	2:K:239:GLU:N	2.51	0.44
2:K:393:ARG:NH1	5:J:427:THR:O	2.50	0.44
3:L:120:TYR:OH	3:L:141:ILE:HG23	2.18	0.44
3:L:143:ILE:HD11	3:L:164:LYS:HD2	1.99	0.44
4:N:286:GLU:CG	4:N:287:SER:H	2.30	0.44
8:C:507:SER:HB2	8:C:591:PHE:HB2	2.00	0.44
8:C:697:ARG:HH22	8:C:848:VAL:HG12	1.83	0.44
18:B:97:U:H2'	18:B:98:U:H6	1.82	0.44
27:D:602:THR:HG22	27:D:603:GLN:N	2.33	0.44
27:D:1120:GLY:HA2	27:D:1251:ILE:HB	1.98	0.44
27:D:1537:PRO:O	27:D:1540:ARG:NH1	2.50	0.44
23:R:30:PRO:HA	25:U:52:GLN:HB2	1.99	0.44
29:H:51:C:H2'	29:H:52:A:H8	1.83	0.44
29:H:149:A:H2'	29:H:150:G:H8	1.82	0.44
29:H:557:G:H2'	29:H:558:A:H8	1.82	0.44
29:H:560:G:H2'	29:H:561:A:H8	1.82	0.44
29:H:561:A:H2'	29:H:562:A:H8	1.81	0.44
29:H:687:A:H2'	29:H:688:A:H8	1.82	0.44
34:3:1085:LEU:HB2	34:3:1097:PHE:HB2	1.99	0.44
1:A:372:ARG:O	8:C:973:ARG:NH2	2.50	0.44
1:A:553:ASN:OD1	1:A:554:THR:N	2.47	0.44
1:A:632:ILE:O	1:A:635:THR:OG1	2.26	0.44
1:A:1393:GLU:HG3	3:L:391:MET:SD	2.57	0.44
4:N:290:HIS:O	4:N:294:THR:HG23	2.18	0.44
8:C:318:LEU:HB3	8:C:425:LEU:HD12	1.98	0.44
8:C:508:GLU:OE2	8:C:594:PRO:HG2	2.18	0.44
18:B:10:U:H1'	18:B:156:G:N2	2.33	0.44
19:O:194:LEU:HD13	19:O:197:ARG:HH11	1.78	0.44
27:D:499:LEU:HD23	27:D:503:GLN:HB3	2.00	0.44
27:D:644:GLY:N	27:D:645:PRO:HD2	2.33	0.44
27:D:845:VAL:HG21	27:D:874:ARG:O	2.16	0.44
27:D:1377:THR:O	27:D:1381:GLU:HG3	2.17	0.44
21:P:89:GLY:O	21:P:92:ILE:HG22	2.17	0.44
34:3:75:CYS:SG	34:3:94:CYS:HB3	2.57	0.44
34:3:704:SER:HB3	34:3:716:ILE:HD11	2.00	0.44
38:X:110:ARG:HE	38:X:110:ARG:HB3	1.61	0.44
1:A:342:LEU:HD22	1:A:392:ASN:HD21	1.83	0.44
1:A:2318:ASN:HB3	1:A:2322:MET:HG3	1.99	0.44
3:L:113:HIS:CE1	3:L:117:ILE:HD11	2.52	0.44
8:C:218:HIS:HB3	8:C:221:PHE:HD2	1.83	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:251:GLN:NE2	8:C:254:LYS:HD3	2.32	0.44
18:B:17:C:O2'	18:B:18:A:OP2	2.29	0.44
27:D:536:LEU:HD23	27:D:536:LEU:HA	1.69	0.44
27:D:617:ARG:HD3	27:D:1006:SER:OG	2.18	0.44
27:D:723:ASN:HB3	27:D:756:TRP:NE1	2.33	0.44
27:D:1541:ILE:H	27:D:1541:ILE:HG13	1.65	0.44
28:G:506:U:P	32:1:698:ARG:HD3	2.58	0.44
29:H:141:A:H2'	29:H:142:C:C6	2.52	0.44
32:1:489:VAL:HG13	38:X:26:GLU:CG	2.48	0.44
32:1:531:GLU:HA	32:1:534:ARG:HE	1.82	0.44
34:3:75:CYS:HB2	34:3:129:SER:OG	2.18	0.44
34:3:175:VAL:HG11	34:3:224:ILE:HD12	1.99	0.44
1:A:591:LEU:HB3	1:A:599:LEU:HD11	2.00	0.44
1:A:953:ARG:HG2	1:A:957:TYR:CE2	2.52	0.44
1:A:1414:TRP:CB	1:A:1558:GLU:HG3	2.48	0.44
1:A:1490:ARG:HA	1:A:1490:ARG:HD3	1.83	0.44
2:K:304:GLU:HG2	2:K:305:GLY:H	1.83	0.44
8:C:683:ASN:ND2	8:C:712:ALA:O	2.39	0.44
17:I:23:C:H2'	17:I:24:A:C8	2.53	0.44
27:D:1751:HIS:NE2	27:D:1813:ASP:OD2	2.50	0.44
27:D:2054:THR:OG1	27:D:2074:GLN:HB3	2.16	0.44
28:G:488:A:H2'	28:G:489:A:C8	2.52	0.44
32:1:198:GLU:HG2	32:1:239:TYR:OH	2.18	0.44
32:1:728:CYS:SG	32:1:753:ILE:HG21	2.57	0.44
34:3:477:ILE:O	34:3:479:SER:N	2.50	0.44
1:A:670:LYS:O	1:A:673:VAL:HG12	2.18	0.44
1:A:1317:ARG:HE	1:A:1366:ARG:HH12	1.65	0.44
1:A:1440:ILE:O	1:A:1443:TYR:N	2.45	0.44
1:A:1477:PHE:O	1:A:1481:GLU:N	2.51	0.44
1:A:1603:ASN:O	1:A:1607:THR:HG23	2.17	0.44
1:A:2349:PHE:CE2	1:A:2379:PRO:HG3	2.52	0.44
2:K:433:LEU:HB3	2:K:464:TRP:CZ3	2.52	0.44
8:C:385:PHE:HE1	8:C:425:LEU:HD11	1.83	0.44
8:C:497:ASP:O	8:C:538:GLU:HA	2.18	0.44
18:B:84:A:H2'	18:B:85:U:C6	2.51	0.44
27:D:758:LYS:O	27:D:762:ALA:HB3	2.18	0.44
27:D:1163:SER:HB3	27:D:1184:ARG:HH12	1.83	0.44
27:D:1912:ARG:HA	27:D:1912:ARG:HD2	1.67	0.44
28:G:514:U:H4'	28:G:515:U:OP2	2.18	0.44
29:H:9:C:H2'	29:H:10:U:H6	1.83	0.44
32:1:442:ILE:HD11	32:1:460:VAL:CG1	2.48	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1:873:HIS:O	32:1:875:ASP:N	2.46	0.44
32:1:889:PHE:CE2	33:2:176:TRP:HB3	2.53	0.44
32:1:962:GLU:HG3	37:6:36:ARG:HD2	1.99	0.44
35:4:171:GLN:HA	35:4:177:ARG:HH11	1.83	0.44
1:A:770:MET:HG2	4:N:119:TRP:CZ3	2.53	0.44
1:A:889:TRP:HA	1:A:1128:GLN:HE22	1.83	0.44
1:A:1678:ILE:HG23	1:A:1704:GLU:O	2.17	0.44
2:K:48:ASP:OD1	2:K:69:VAL:HG21	2.18	0.44
2:K:167:LEU:HD23	2:K:435:GLY:HA3	1.99	0.44
2:K:345:LEU:HD13	2:K:376:TRP:CG	2.53	0.44
5:J:368:LEU:HD13	5:J:370:LEU:HG	1.99	0.44
6:E:43:ASP:O	6:E:47:SER:HB3	2.18	0.44
8:C:312:ILE:HG12	8:C:323:THR:HG22	1.99	0.44
8:C:336:ILE:HB	8:C:337:PRO:HD2	2.00	0.44
16:F:43:C:O2'	16:F:44:A:H8	2.00	0.44
16:F:79:A:H2'	16:F:80:U:H6	1.82	0.44
17:I:76:A:OP1	27:D:608:THR:OG1	2.27	0.44
27:D:1008:PHE:HE2	27:D:1110:ARG:HG3	1.83	0.44
27:D:1473:TYR:CE2	27:D:1492:ILE:HD12	2.52	0.44
27:D:1763:ILE:HD13	27:D:1769:CYS:HA	2.00	0.44
27:D:2007:LYS:O	27:D:2010:GLU:HB3	2.18	0.44
29:H:1099:G:H2'	29:H:1100:A:H8	1.83	0.44
34:3:1258:TYR:CZ	34:3:1262:LYS:HD2	2.53	0.44
1:A:628:MET:SD	1:A:660:ILE:HD13	2.58	0.44
1:A:1023:LEU:HD13	1:A:1451:PHE:CE1	2.53	0.44
1:A:1655:GLN:NE2	1:A:1688:PRO:O	2.50	0.44
1:A:1857:VAL:HG21	1:A:1913:THR:HG21	1.99	0.44
2:K:41:LEU:HD11	2:K:74:ILE:HG12	2.00	0.44
2:K:345:LEU:HD22	2:K:376:TRP:CE3	2.52	0.44
3:L:382:SER:O	3:L:386:GLN:HG3	2.18	0.44
4:N:98:SER:OG	4:N:99:ASN:N	2.48	0.44
8:C:246:THR:HG23	8:C:248:VAL:HG12	1.99	0.44
8:C:799:PHE:HZ	8:C:818:TYR:HD2	1.66	0.44
18:B:43:G:H2'	18:B:44:A:H8	1.81	0.44
27:D:1263:ILE:HD11	27:D:1693:HIS:O	2.18	0.44
27:D:1431:ASP:OD2	27:D:2096:LEU:N	2.37	0.44
22:Q:26:TRP:HE3	22:Q:44:LYS:HG2	1.82	0.44
24:T:10:MET:HA	26:V:30:ARG:C	2.38	0.44
24:T:45:GLY:HA3	25:U:13:VAL:O	2.18	0.44
29:H:684:U:H2'	29:H:685:U:C6	2.50	0.44
29:H:1146:G:HO2'	29:H:1147:A:P	2.37	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:3:331:PHE:HD2	34:3:334:HIS:NE2	2.15	0.44
34:3:387:ASP:HA	34:3:412:THR:CG2	2.48	0.44
1:A:850:GLY:O	1:A:854:ARG:HG2	2.19	0.43
1:A:909:THR:HG21	4:N:167:GLU:HB3	1.99	0.43
1:A:2398:LEU:HA	27:D:1060:LYS:HZ2	1.82	0.43
2:K:52:ARG:HG3	2:K:62:GLU:HG3	2.00	0.43
3:L:237:ILE:O	3:L:240:GLN:N	2.51	0.43
18:B:14:G:N3	18:B:14:G:H2'	2.33	0.43
18:B:34:C:OP1	18:B:34:C:H4'	2.18	0.43
27:D:578:LEU:HD23	27:D:578:LEU:HA	1.71	0.43
27:D:1220:ILE:HD13	27:D:1241:LEU:HD11	2.00	0.43
27:D:1224:ALA:HB1	27:D:1226:TRP:CZ3	2.53	0.43
27:D:1459:TRP:CZ3	27:D:1502:LEU:HD11	2.53	0.43
27:D:1887:VAL:HG21	22:Q:140:LYS:CD	2.43	0.43
27:D:1897:GLY:O	27:D:1901:LEU:HB2	2.18	0.43
22:Q:30:GLN:NE2	22:Q:84:TYR:HE1	2.16	0.43
20:S:64:VAL:HG23	26:V:70:SER:HB2	2.00	0.43
24:T:81:LEU:HB3	25:U:81:ILE:HG22	1.99	0.43
28:G:483:A:N1	35:4:10:THR:HG21	2.32	0.43
28:G:489:A:H2'	28:G:490:A:H8	1.82	0.43
29:H:68:U:H2'	29:H:69:G:H8	1.82	0.43
34:3:1071:ILE:HG12	34:3:1089:ASP:OD2	2.18	0.43
38:X:33:ILE:CG2	38:X:85:THR:HG23	2.48	0.43
38:X:46:ASP:OD2	40:Z:35:SER:OG	2.34	0.43
38:X:51:PHE:CE1	38:X:92:LEU:HD23	2.53	0.43
38:X:87:LEU:HD21	39:Y:222:ASN:HD21	1.82	0.43
1:A:807:PRO:HB2	4:N:111:LEU:HD23	2.00	0.43
1:A:1169:TYR:CE2	1:A:1262:MET:HE3	2.52	0.43
1:A:1791:PHE:HD2	1:A:1794:LEU:HD11	1.82	0.43
1:A:2029:ASP:HB2	1:A:2032:ILE:HD12	2.00	0.43
3:L:445:ILE:O	3:L:449:ASN:ND2	2.51	0.43
4:N:251:GLU:OE1	4:N:260:ALA:HB2	2.17	0.43
18:B:16:U:H2'	18:B:17:C:O4'	2.18	0.43
27:D:457:LYS:HE3	27:D:462:GLU:OE2	2.17	0.43
29:H:552:U:H2'	29:H:553:G:H8	1.81	0.43
32:1:157:ASN:O	32:1:161:LYS:HG3	2.18	0.43
33:2:141:VAL:HG12	33:2:143:TYR:H	1.83	0.43
34:3:180:THR:HG21	34:3:188:SER:HB2	2.00	0.43
34:3:365:ILE:HG23	34:3:382:GLN:O	2.18	0.43
34:3:770:LEU:HD12	34:3:770:LEU:O	2.18	0.43
39:Y:232:TRP:CZ3	39:Y:234:GLY:HA2	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:364:VAL:O	2:K:375:VAL:HA	2.19	0.43
5:J:335:THR:HG23	5:J:336:VAL:N	2.33	0.43
8:C:495:ARG:HG3	8:C:540:GLU:O	2.19	0.43
8:C:677:PHE:HB2	8:C:811:GLU:OE1	2.18	0.43
17:I:51:U:H2'	17:I:52:G:H8	1.83	0.43
18:B:10:U:H2'	18:B:11:A:C8	2.53	0.43
18:B:159:C:O2'	18:B:161:U:OP2	2.19	0.43
27:D:683:PHE:CA	27:D:946:VAL:HG21	2.48	0.43
27:D:707:PHE:CD2	27:D:895:VAL:HG13	2.50	0.43
27:D:1396:VAL:HG12	27:D:1398:ILE:HG13	2.00	0.43
27:D:1917:THR:HG22	27:D:1918:SER:N	2.32	0.43
27:D:1951:LEU:HA	27:D:1954:VAL:HG22	1.99	0.43
32:1:181:ARG:O	32:1:185:MET:HG2	2.19	0.43
32:1:241:HIS:O	32:1:245:VAL:HG23	2.18	0.43
32:1:786:GLY:HA2	32:1:823:MET:HB3	2.00	0.43
34:3:434:ASN:HD21	34:3:504:HIS:CE1	2.36	0.43
1:A:1206:CYS:SG	1:A:1306:GLU:HG3	2.58	0.43
1:A:1935:VAL:HG11	1:A:1940:MET:HB2	2.00	0.43
1:A:1962:ARG:HG3	1:A:2013:ARG:HH12	1.83	0.43
2:K:40:VAL:O	2:K:43:LYS:HG2	2.18	0.43
5:J:163:ASN:C	5:J:165:GLY:H	2.22	0.43
8:C:240:ASP:O	8:C:244:GLY:N	2.45	0.43
18:B:10:U:O2	18:B:11:A:N6	2.51	0.43
18:B:118:U:H2'	18:B:119:U:C6	2.53	0.43
27:D:521:ALA:O	27:D:672:ALA:HA	2.17	0.43
27:D:703:LEU:HD21	27:D:872:LEU:HD23	2.00	0.43
27:D:758:LYS:O	27:D:762:ALA:CB	2.67	0.43
27:D:1204:VAL:O	27:D:1304:ILE:HG21	2.18	0.43
27:D:1621:ILE:HG21	27:D:1633:LEU:HD22	2.01	0.43
27:D:1675:CYS:O	27:D:1677:THR:HG23	2.18	0.43
25:U:33:PHE:N	25:U:33:PHE:CD1	2.86	0.43
29:H:1094:G:H2'	29:H:1095:U:C6	2.54	0.43
32:1:279:LEU:O	32:1:283:ARG:HG3	2.18	0.43
32:1:292:TYR:O	32:1:296:VAL:HG23	2.18	0.43
32:1:698:ARG:HG3	32:1:699:LYS:H	1.82	0.43
32:1:881:MET:O	32:1:884:LEU:N	2.50	0.43
34:3:192:TYR:HB2	34:3:205:SER:OG	2.18	0.43
34:3:542:THR:OG1	34:3:547:ASN:HB2	2.18	0.43
34:3:551:PHE:CD1	34:3:560:ILE:HG12	2.54	0.43
39:Y:222:ASN:OD1	39:Y:223:ARG:N	2.51	0.43
1:A:1343:PHE:HD1	1:A:1350:ILE:HD13	1.82	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:218:VAL:HG23	2:K:240:ASP:CG	2.39	0.43
3:L:113:HIS:O	3:L:117:ILE:HD12	2.18	0.43
4:N:803:ASN:O	4:N:834:LYS:NZ	2.45	0.43
8:C:227:VAL:HG13	8:C:473:LEU:HB3	1.99	0.43
8:C:471:HIS:HB2	8:C:592:PHE:CZ	2.54	0.43
8:C:504:THR:HB	8:C:594:PRO:HG3	2.01	0.43
8:C:672:ASP:OD1	8:C:673:PRO:HD2	2.18	0.43
18:B:175:G:H4'	18:B:176:A:O4'	2.18	0.43
27:D:1392:LYS:HB3	27:D:1469:GLU:OE1	2.19	0.43
27:D:1519:ARG:O	27:D:1523:GLU:HG3	2.18	0.43
27:D:1633:LEU:CD1	27:D:1652:VAL:HG22	2.48	0.43
27:D:1694:LYS:HG2	27:D:1695:TYR:N	2.33	0.43
27:D:1992:ASN:HD21	27:D:1994:LEU:HB2	1.82	0.43
26:V:18:ASN:O	26:V:69:ILE:HB	2.19	0.43
29:H:1138:G:C6	29:H:1139:G:O6	2.71	0.43
32:1:191:LYS:HE3	32:1:194:THR:HG21	2.00	0.43
32:1:793:GLY:HA2	32:1:794:PRO:HD3	1.88	0.43
1:A:1063:PHE:O	1:A:1066:LEU:N	2.51	0.43
1:A:2006:SER:O	1:A:2009:THR:OG1	2.35	0.43
1:A:2050:THR:O	1:A:2053:SER:OG	2.31	0.43
4:N:826:LYS:O	4:N:830:ARG:HB2	2.19	0.43
8:C:103:HIS:O	8:C:107:THR:HG23	2.19	0.43
8:C:861:ILE:HG21	8:C:905:GLN:HB3	1.99	0.43
18:B:9:U:H2'	18:B:10:U:O4'	2.19	0.43
18:B:13:A:C2	18:B:14:G:H1'	2.53	0.43
18:B:175:G:C2	18:B:176:A:N6	2.84	0.43
27:D:468:PRO:HD2	27:D:702:PRO:HB2	2.01	0.43
27:D:682:ARG:CZ	27:D:946:VAL:HG13	2.49	0.43
27:D:1402:GLY:HA2	27:D:1405:ILE:HD12	2.00	0.43
27:D:1497:PHE:HD1	27:D:1775:TYR:CE2	2.36	0.43
27:D:2077:ARG:NH1	27:D:2081:PRO:HG3	2.34	0.43
20:S:34:VAL:HG23	20:S:45:ARG:HG3	2.01	0.43
29:H:1094:G:H2'	29:H:1095:U:H6	1.83	0.43
33:2:364:PHE:CE2	34:3:1124:LEU:HD11	2.54	0.43
34:3:519:TYR:CE1	34:3:874:GLY:HA3	2.53	0.43
34:3:945:HIS:CE1	34:3:947:GLY:HA3	2.54	0.43
34:3:1125:ASP:HB3	34:3:1128:THR:HG22	2.00	0.43
38:X:24:HIS:HB3	38:X:86:ILE:HG12	2.00	0.43
1:A:936:GLU:HG2	1:A:986:PRO:HB3	2.00	0.43
3:L:123:ARG:HD3	3:L:189:LEU:HD11	2.00	0.43
3:L:302:MET:O	3:L:306:LEU:N	2.41	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:31:PHE:O	6:E:80:MET:HA	2.18	0.43
7:M:37:ALA:HB2	7:M:98:ILE:HD11	2.00	0.43
7:M:58:CYS:SG	7:M:63:ILE:HD11	2.59	0.43
8:C:679:GLU:OE1	8:C:807:PRO:HD2	2.17	0.43
8:C:884:ARG:NH2	8:C:941:PRO:HD2	2.34	0.43
27:D:539:LEU:HG	27:D:555:PHE:CZ	2.54	0.43
27:D:1584:PHE:CD2	27:D:1706:MET:HG2	2.54	0.43
27:D:1668:LYS:HD3	27:D:1687:LEU:HD13	2.01	0.43
27:D:2143:TRP:HB3	27:D:2145:VAL:HG23	2.01	0.43
29:H:142:C:C2'	29:H:143:G:C8	3.00	0.43
33:2:367:LEU:O	33:2:369:SER:N	2.50	0.43
34:3:693:ILE:HG23	34:3:701:LYS:HB2	2.01	0.43
35:4:172:LEU:HD21	35:4:175:ASN:HA	2.01	0.43
38:X:117:LYS:HG2	40:Z:25:TYR:HB3	2.01	0.43
39:Y:167:VAL:HG11	39:Y:209:LEU:HD23	2.00	0.43
1:A:1014:LYS:HE2	1:A:1024:LEU:CD1	2.47	0.43
3:L:367:ARG:NH2	17:I:58:G:O6	2.52	0.43
5:J:331:VAL:HG12	5:J:332:GLU:N	2.33	0.43
8:C:863:GLU:HB3	8:C:931:TYR:CE1	2.54	0.43
17:I:143:A:C6	25:U:48:TYR:CD2	3.01	0.43
27:D:617:ARG:NH1	27:D:1009:TYR:HD1	2.16	0.43
27:D:1557:ILE:CA	27:D:1695:TYR:HE2	2.24	0.43
27:D:1748:TYR:HE2	22:Q:142:PRO:CD	2.32	0.43
29:H:43:G:C4	29:H:44:U:C5	3.06	0.43
38:X:28:LYS:HA	38:X:82:GLN:HE22	1.82	0.43
38:X:50:VAL:HG12	39:Y:237:ARG:CD	2.49	0.43
1:A:569:LEU:HD21	1:A:637:VAL:HG21	2.00	0.43
1:A:681:LYS:NZ	16:F:1:G:O6	2.41	0.43
1:A:1575:TRP:NE1	3:L:393:PHE:HD1	2.17	0.43
1:A:2333:PHE:HD2	1:A:2333:PHE:HA	1.72	0.43
2:K:69:VAL:HG22	2:K:72:ARG:HH12	1.84	0.43
8:C:374:VAL:HG22	8:C:378:LEU:HD12	2.00	0.43
8:C:488:ILE:CD1	8:C:556:ALA:HB1	2.49	0.43
8:C:869:HIS:CD2	8:C:925:LEU:HD13	2.54	0.43
16:F:1:G:C2	16:F:2:U:C5	3.06	0.43
17:I:77:U:C2	17:I:78:A:N7	2.87	0.43
17:I:148:U:O4	21:P:41:MET:HG3	2.19	0.43
18:B:174:G:C2	18:B:176:A:H4'	2.54	0.43
27:D:804:HIS:CG	27:D:834:LEU:HD11	2.54	0.43
27:D:1224:ALA:HB3	27:D:1264:VAL:HA	2.00	0.43
27:D:1355:VAL:HG11	27:D:1368:VAL:HG13	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1458:ARG:HB3	27:D:1461:GLN:HB2	2.01	0.43
27:D:1550:SER:HA	27:D:1724:THR:O	2.18	0.43
21:P:88:ARG:HH22	20:S:69:ILE:H	1.66	0.43
29:H:1098:C:HO2'	29:H:1099:G:C5'	2.31	0.43
29:H:1148:U:H2'	29:H:1149:G:H8	1.83	0.43
32:1:534:ARG:O	32:1:538:VAL:HG23	2.18	0.43
32:1:925:HIS:ND1	32:1:926:PRO:HD2	2.34	0.43
33:2:173:PRO:O	33:2:176:TRP:HD1	2.00	0.43
34:3:61:TYR:HB2	34:3:1231:LEU:HD11	2.00	0.43
34:3:770:LEU:HB2	34:3:827:TRP:CD1	2.54	0.43
34:3:1109:TYR:CD1	34:3:1110:VAL:HG23	2.54	0.43
34:3:1299:ILE:O	34:3:1300:LEU:HD12	2.19	0.43
38:X:35:ILE:O	38:X:74:PHE:HA	2.18	0.43
1:A:880:THR:HG23	3:L:180:LYS:HE3	2.00	0.43
1:A:1834:PHE:CE1	1:A:1958:PRO:HG2	2.54	0.43
3:L:300:LYS:NZ	3:L:304:ARG:HH22	2.17	0.43
4:N:25:GLY:O	4:N:26:PHE:HB2	2.18	0.43
4:N:264:ILE:O	4:N:268:CYS:HB2	2.19	0.43
18:B:23:C:N4	18:B:24:G:O6	2.52	0.43
18:B:154:G:H2'	18:B:155:U:C6	2.54	0.43
27:D:1688:TYR:CD1	27:D:1695:TYR:HD1	2.23	0.43
27:D:1689:ASP:N	27:D:1689:ASP:OD1	2.52	0.43
25:U:50:ASN:HB3	25:U:72:PHE:CE1	2.54	0.43
29:H:52:A:N6	29:H:64:G:O6	2.52	0.43
32:1:698:ARG:O	32:1:701:GLU:N	2.52	0.43
32:1:839:THR:HG21	32:1:876:ALA:HB1	2.00	0.43
32:1:912:PRO:HG2	32:1:952:PHE:HE2	1.84	0.43
33:2:319:ILE:HD13	35:4:68:LYS:HE2	2.00	0.43
34:3:649:TYR:O	34:3:672:LEU:N	2.51	0.43
34:3:950:GLN:HE21	34:3:973:ILE:CG2	2.32	0.43
35:4:111:PHE:HE2	35:4:113:LYS:HE3	1.84	0.43
36:5:103:LYS:HG3	36:5:104:LYS:H	1.84	0.43
38:X:19:PRO:O	38:X:25:ASN:HB2	2.19	0.43
1:A:1400:ILE:HG23	1:A:1542:TYR:CZ	2.54	0.42
1:A:1865:THR:HG22	1:A:1866:PHE:N	2.33	0.42
1:A:1880:PHE:HD1	1:A:1891:LEU:HD21	1.84	0.42
1:A:1920:LEU:O	1:A:1923:SER:OG	2.27	0.42
2:K:382:ASP:CG	2:K:383:GLU:H	2.22	0.42
2:K:402:SER:OG	2:K:407:GLY:HA2	2.19	0.42
2:K:415:TYR:HB3	2:K:439:LYS:HD3	2.00	0.42
2:K:416:ASP:O	2:K:417:ASN:HB2	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:B:124:C:H2'	18:B:125:C:O4'	2.18	0.42
23:R:58:VAL:HA	23:R:69:LEU:HD23	2.01	0.42
29:H:1153:C:H2'	29:H:1154:U:H6	1.84	0.42
34:3:930:LEU:HD13	34:3:984:ILE:HG23	2.01	0.42
39:Y:223:ARG:CG	39:Y:242:GLU:OE2	2.67	0.42
1:A:2041:PRO:HG2	1:A:2043:PHE:CZ	2.54	0.42
2:K:143:HIS:HA	5:J:151:LEU:HD13	2.01	0.42
3:L:245:ALA:HB3	3:L:251:PHE:HB2	2.01	0.42
3:L:447:GLU:O	3:L:451:GLN:HG2	2.19	0.42
4:N:864:ASP:CG	4:N:889:ARG:HH21	2.22	0.42
8:C:457:SER:O	8:C:458:ILE:HB	2.19	0.42
17:I:92:C:H1'	21:P:39:LYS:HD3	2.01	0.42
27:D:558:VAL:HB	27:D:631:LEU:HD12	2.01	0.42
27:D:766:ILE:CD1	27:D:769:LYS:HZ1	2.32	0.42
27:D:1700:ILE:CD1	27:D:1740:LEU:HD13	2.49	0.42
32:1:550:THR:HG21	32:1:590:LEU:HD23	2.01	0.42
34:3:60:LEU:HD12	34:3:1317:VAL:HG22	2.01	0.42
1:A:400:ILE:HG23	8:C:187:ARG:HE	1.85	0.42
1:A:850:GLY:HA2	1:A:853:THR:HG22	2.01	0.42
1:A:1342:LEU:HD21	1:A:1356:LEU:HD21	2.01	0.42
1:A:1566:GLY:HA3	1:A:1816:ARG:HD3	2.02	0.42
1:A:1633:PHE:CZ	1:A:1694:MET:HG3	2.54	0.42
2:K:390:LEU:HD13	5:J:428:TRP:HD1	1.82	0.42
17:I:92:C:C1'	21:P:39:LYS:HD3	2.50	0.42
18:B:22:G:N2	18:B:149:U:O2	2.34	0.42
18:B:26:A:N6	18:B:141:G:H8	2.16	0.42
23:R:73:LYS:HE3	23:R:88:GLU:HG3	2.01	0.42
20:S:24:THR:HA	20:S:70:LYS:HE3	2.00	0.42
32:1:213:LEU:HD12	32:1:213:LEU:O	2.19	0.42
32:1:240:VAL:HG13	32:1:269:LEU:HD21	2.01	0.42
32:1:353:THR:HG23	34:3:277:LEU:HD21	2.01	0.42
32:1:916:MET:HB3	32:1:920:TRP:HE1	1.82	0.42
32:1:956:THR:H	32:1:959:ASN:HB3	1.84	0.42
34:3:61:TYR:HB2	34:3:1231:LEU:CD1	2.49	0.42
34:3:228:LEU:HD12	34:3:273:LEU:HD11	2.01	0.42
34:3:1305:GLN:O	34:3:1309:SER:CB	2.67	0.42
39:Y:170:LEU:N	39:Y:170:LEU:CD2	2.82	0.42
39:Y:215:TYR:CE2	39:Y:232:TRP:CZ3	3.08	0.42
1:A:299:LYS:HA	1:A:493:MET:CG	2.49	0.42
1:A:1030:GLN:HG3	1:A:1034:ASN:ND2	2.34	0.42
1:A:2043:PHE:HB2	1:A:2048:TRP:CD1	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:127:TYR:CE2	2:K:276:SER:HB2	2.54	0.42
2:K:262:VAL:HG12	2:K:263:GLY:N	2.34	0.42
4:N:770:ASN:ND2	4:N:772:LEU:HB2	2.34	0.42
17:I:145:U:O4	26:V:37:ASN:ND2	2.47	0.42
19:O:149:TYR:CD2	19:O:178:VAL:HG12	2.47	0.42
27:D:561:ALA:HB1	27:D:566:LEU:HD22	2.01	0.42
27:D:1095:ASN:HA	27:D:1098:ILE:HG22	2.01	0.42
27:D:1875:THR:O	27:D:1879:MET:HG3	2.20	0.42
27:D:2095:LYS:NZ	27:D:2147:ASP:OD2	2.46	0.42
23:R:41:ARG:O	23:R:57:ARG:HD2	2.20	0.42
20:S:41:ASN:HB3	20:S:63:PHE:CZ	2.55	0.42
34:3:927:ARG:HG2	34:3:979:CYS:SG	2.60	0.42
1:A:149:MET:HG2	1:A:154:TYR:CZ	2.54	0.42
1:A:919:LEU:HD21	1:A:1108:LYS:HE3	2.01	0.42
1:A:1656:LYS:O	1:A:1660:SER:HB2	2.20	0.42
1:A:1714:PRO:HA	1:A:1788:GLY:O	2.20	0.42
1:A:2060:LEU:HD21	1:A:2079:ILE:HG23	2.01	0.42
1:A:2395:PHE:HB2	27:D:1062:PRO:HG3	2.01	0.42
2:K:451:PHE:N	2:K:451:PHE:HD1	2.15	0.42
5:J:167:GLU:HB3	5:J:169:TRP:CE3	2.51	0.42
5:J:301:VAL:HG22	5:J:304:ARG:NH2	2.32	0.42
8:C:116:THR:HG22	8:C:117:ARG:N	2.35	0.42
18:B:166:U:C6	18:B:166:U:C3'	3.02	0.42
19:O:168:SER:O	19:O:172:ASP:CB	2.67	0.42
27:D:580:PHE:CE2	27:D:581:LEU:HG	2.54	0.42
27:D:907:PRO:HG2	27:D:947:ARG:NH2	2.34	0.42
27:D:2030:ILE:HG22	27:D:2031:LEU:HD12	2.02	0.42
27:D:2137:LYS:HE3	27:D:2159:GLU:OE2	2.20	0.42
22:Q:33:SER:HB3	22:Q:37:ASN:HB2	2.02	0.42
29:H:38:U:H4'	32:1:892:SER:OG	2.20	0.42
34:3:154:SER:HB3	34:3:1302:ARG:CD	2.48	0.42
34:3:155:GLY:O	34:3:179:LEU:N	2.44	0.42
34:3:419:LEU:HD23	34:3:429:ALA:HA	2.01	0.42
34:3:455:LEU:HD11	34:3:464:LEU:CB	2.49	0.42
1:A:805:PRO:HG2	1:A:808:ILE:HD12	2.00	0.42
1:A:1345:TYR:CD2	1:A:1346:PHE:CE1	3.07	0.42
1:A:1466:GLN:O	1:A:1470:GLN:HB2	2.20	0.42
4:N:257:PHE:CD2	4:N:258:SER:N	2.88	0.42
4:N:770:ASN:HD21	4:N:772:LEU:HB2	1.83	0.42
8:C:219:VAL:HA	8:C:222:MET:HG2	2.00	0.42
27:D:695:ASP:OD1	27:D:696:SER:N	2.45	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:956:LYS:O	27:D:958:PRO:HD3	2.20	0.42
27:D:1113:PHE:HZ	27:D:1240:LEU:HD13	1.84	0.42
27:D:1381:GLU:HG2	27:D:1416:PHE:CZ	2.54	0.42
27:D:1938:GLU:HG2	27:D:1938:GLU:O	2.20	0.42
28:G:496:U:H2'	28:G:497:A:H8	1.83	0.42
32:1:605:ILE:HD11	32:1:623:LEU:HD22	2.01	0.42
33:2:285:MET:HE2	35:4:23:GLU:HG3	2.00	0.42
34:3:542:THR:HB	34:3:545:ASP:HB3	2.01	0.42
34:3:642:LEU:HD22	34:3:654:PHE:HD2	1.84	0.42
34:3:738:GLN:NE2	34:3:740:ASN:OD1	2.53	0.42
39:Y:231:ARG:HG3	39:Y:231:ARG:HH11	1.85	0.42
1:A:680:CYS:HG	1:A:711:TRP:HE1	1.65	0.42
1:A:939:LEU:HD21	3:L:445:ILE:HD11	2.01	0.42
1:A:1199:ILE:HD11	8:C:612:PRO:HG2	2.01	0.42
1:A:1308:GLU:OE1	1:A:1346:PHE:HZ	2.03	0.42
1:A:1699:ALA:HA	1:A:1735:ASP:OD1	2.19	0.42
1:A:1964:PRO:O	1:A:2012:LEU:HB3	2.20	0.42
2:K:395:ILE:HD12	2:K:415:TYR:CD2	2.55	0.42
6:E:109:ASP:OD1	6:E:110:LYS:N	2.52	0.42
8:C:568:SER:HA	8:C:571:TYR:CE2	2.55	0.42
19:O:206:LYS:HB2	19:O:208:LYS:NZ	2.34	0.42
27:D:524:GLY:O	27:D:525:SER:HB3	2.19	0.42
27:D:557:ILE:HD12	27:D:604:VAL:HG22	2.00	0.42
27:D:708:CYS:SG	27:D:889:ILE:HG12	2.60	0.42
27:D:981:LEU:HB3	27:D:987:VAL:HG22	2.01	0.42
27:D:1412:TRP:CE2	27:D:1416:PHE:HE2	2.38	0.42
29:H:1097:G:C4	29:H:1146:G:C2	3.07	0.42
34:3:486:PRO:HG2	34:3:505:PHE:CB	2.50	0.42
34:3:542:THR:HG22	34:3:615:LYS:NZ	2.35	0.42
34:3:1065:THR:HG22	34:3:1105:VAL:HA	2.01	0.42
35:4:108:ALA:O	35:4:154:TYR:HA	2.19	0.42
35:4:125:VAL:HG12	35:4:129:ASN:HD21	1.84	0.42
1:A:1122:ASP:OD1	1:A:1161:TYR:OH	2.29	0.42
1:A:2152:TRP:CZ3	27:D:1064:PRO:CG	2.95	0.42
2:K:261:LEU:HD13	2:K:292:TRP:HE3	1.84	0.42
8:C:251:GLN:HG2	8:C:933:TRP:CE2	2.55	0.42
16:F:46:U:C4	16:F:47:A:C2	3.07	0.42
17:I:142:G:N2	21:P:39:LYS:CE	2.82	0.42
18:B:118:U:H2'	18:B:119:U:H6	1.84	0.42
27:D:830:CYS:SG	27:D:834:LEU:HD22	2.59	0.42
27:D:929:ILE:CD1	27:D:935:ALA:HA	2.50	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1415:ARG:HA	27:D:1418:HIS:HE1	1.83	0.42
27:D:2059:ASN:OD1	27:D:2059:ASN:N	2.53	0.42
28:G:520:G:N2	38:X:34:TYR:HB2	2.34	0.42
29:H:1098:C:O5'	29:H:1098:C:C6	2.69	0.42
32:1:368:VAL:N	32:1:369:PRO:HD2	2.35	0.42
32:1:889:PHE:CZ	32:1:930:VAL:HG22	2.54	0.42
32:1:955:VAL:HG12	32:1:963:TYR:HD1	1.83	0.42
34:3:61:TYR:HD1	34:3:1318:ILE:HD11	1.83	0.42
34:3:337:VAL:CG2	34:3:346:LEU:HB2	2.50	0.42
34:3:421:ILE:HG22	34:3:422:PHE:O	2.20	0.42
34:3:561:LEU:HG	34:3:569:GLU:O	2.20	0.42
34:3:929:ILE:HG12	34:3:941:PHE:CD1	2.55	0.42
1:A:1814:VAL:CG1	1:A:1818:ARG:HE	2.32	0.42
1:A:1892:LYS:HD2	1:A:1985:GLN:O	2.20	0.42
3:L:368:ALA:O	16:F:60:G:C8	2.73	0.42
6:E:86:TYR:CE2	6:E:87:HIS:HD2	2.38	0.42
7:M:23:VAL:HG21	7:M:117:VAL:HG21	2.01	0.42
8:C:200:CYS:HB3	8:C:436:VAL:HG21	2.02	0.42
8:C:251:GLN:HE21	8:C:255:GLN:HE21	1.67	0.42
8:C:305:SER:OG	8:C:307:ILE:HG22	2.20	0.42
17:I:135:A:C6	17:I:136:U:C4	3.07	0.42
27:D:1183:ILE:O	27:D:1183:ILE:HG22	2.19	0.42
27:D:1587:SER:HB3	27:D:1895:ARG:NE	2.35	0.42
27:D:1699:THR:HG22	22:Q:144:ARG:HD2	2.01	0.42
27:D:1781:ARG:HG2	27:D:1789:TYR:OH	2.20	0.42
27:D:1978:ASP:O	27:D:1982:MET:HG3	2.20	0.42
25:U:30:LYS:HE2	25:U:80:TYR:CE2	2.55	0.42
32:1:387:PRO:HA	32:1:425:LEU:HB3	2.02	0.42
32:1:900:LEU:O	32:1:904:GLU:HG2	2.20	0.42
33:2:340:LEU:HD13	33:2:345:TYR:HA	2.02	0.42
34:3:1043:THR:HG21	34:3:1052:TYR:CE2	2.55	0.42
34:3:1345:GLN:O	34:3:1349:ILE:HG12	2.20	0.42
38:X:89:VAL:O	38:X:93:ASN:HB2	2.20	0.42
1:A:617:ASN:HD21	18:B:99:U:HO2'	1.65	0.42
1:A:630:LYS:NZ	1:A:634:ASP:OD2	2.43	0.42
1:A:1033:ASN:HD22	1:A:1288:LEU:HB3	1.85	0.42
1:A:1057:MET:O	1:A:1061:ILE:HG13	2.19	0.42
1:A:1925:PRO:O	1:A:1929:GLN:HG3	2.19	0.42
1:A:1941:LEU:HD23	1:A:1941:LEU:HA	1.91	0.42
2:K:65:GLU:OE1	5:J:241:ARG:NH2	2.53	0.42
2:K:112:PRO:HA	5:J:217:VAL:N	2.34	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:232:ASN:O	2:K:247:GLN:NE2	2.53	0.42
2:K:390:LEU:HB2	5:J:428:TRP:CD1	2.55	0.42
4:N:150:ASP:O	4:N:153:ILE:HG12	2.19	0.42
5:J:342:PHE:HB3	5:J:424:ILE:HD11	2.01	0.42
8:C:234:LEU:HD23	8:C:443:TYR:HB2	2.00	0.42
16:F:5:G:H2'	16:F:6:C:H6	1.85	0.42
17:I:91:U:O2	21:P:39:LYS:NZ	2.37	0.42
17:I:135:A:C4	17:I:136:U:C5	3.08	0.42
17:I:152:A:H2'	17:I:153:A:C8	2.54	0.42
18:B:150:U:H4'	18:B:151:A:OP1	2.19	0.42
27:D:486:TRP:NE1	27:D:487:CYS:SG	2.90	0.42
27:D:589:THR:HB	27:D:608:THR:H	1.85	0.42
27:D:730:VAL:HG22	27:D:740:ILE:HD13	2.01	0.42
27:D:912:PHE:CD2	27:D:944:LEU:HD23	2.55	0.42
27:D:1412:TRP:CD1	27:D:1416:PHE:CE2	3.07	0.42
23:R:55:ILE:HG23	23:R:73:LYS:HB3	2.01	0.42
29:H:51:C:H2'	29:H:52:A:C8	2.55	0.42
32:1:290:ASP:OD1	32:1:291:GLU:N	2.53	0.42
34:3:493:VAL:HG23	34:3:937:LYS:HB3	2.02	0.42
34:3:1116:ARG:NH2	34:3:1141:LEU:HD21	2.35	0.42
34:3:1190:LEU:O	34:3:1315:ARG:HD3	2.19	0.42
34:3:1217:ILE:HA	34:3:1226:GLY:O	2.19	0.42
38:X:43:THR:OG1	38:X:44:GLU:OE1	2.38	0.42
40:Z:26:ILE:HG22	40:Z:28:ILE:H	1.84	0.42
1:A:266:LEU:HG	1:A:267:PRO:HD2	2.02	0.41
1:A:1372:LYS:HE2	1:A:1383:PHE:CB	2.50	0.41
2:K:350:LYS:HB3	2:K:351:PRO:HD2	2.01	0.41
3:L:138:SER:HA	3:L:141:ILE:HD12	2.01	0.41
3:L:173:LEU:O	3:L:176:THR:OG1	2.26	0.41
3:L:204:LEU:HD23	3:L:204:LEU:HA	1.82	0.41
5:J:346:ASN:N	5:J:422:ASN:OD1	2.46	0.41
5:J:386:GLU:HG2	5:J:390:LYS:HE2	2.01	0.41
8:C:120:ARG:NH2	8:C:549:TYR:OH	2.53	0.41
8:C:408:LEU:HD21	8:C:427:LEU:HD22	2.01	0.41
8:C:749:LYS:O	8:C:753:THR:OG1	2.25	0.41
27:D:484:PRO:O	27:D:488:GLN:HG3	2.20	0.41
27:D:945:TYR:CE1	27:D:970:ARG:HD3	2.55	0.41
27:D:1183:ILE:O	27:D:1184:ARG:HG2	2.20	0.41
21:P:39:LYS:CE	22:Q:35:GLN:NE2	2.83	0.41
28:G:509:A:O3'	32:1:543:ARG:NH2	2.53	0.41
28:G:520:G:C4	38:X:34:TYR:CE1	3.07	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:68:U:H2'	29:H:69:G:C8	2.54	0.41
32:1:807:THR:HG22	33:2:211:THR:HG23	2.02	0.41
34:3:188:SER:O	34:3:190:ILE:N	2.49	0.41
34:3:197:PRO:HG2	34:3:244:ASP:HB3	2.02	0.41
34:3:411:ASP:OD1	34:3:472:LEU:HA	2.19	0.41
34:3:1073:LYS:HD2	34:3:1090:ILE:CD1	2.48	0.41
35:4:197:ASP:OD1	35:4:198:VAL:N	2.53	0.41
4:N:741:ILE:O	4:N:745:GLN:HB3	2.20	0.41
7:M:97:VAL:HG22	17:I:30:G:H2'	2.02	0.41
8:C:195:GLY:C	8:C:545:LEU:HD13	2.39	0.41
8:C:557:HIS:O	8:C:560:GLN:HG2	2.20	0.41
17:I:149:U:C2	23:R:64:HIS:HB3	2.55	0.41
18:B:87:G:H2'	18:B:88:U:H6	1.85	0.41
27:D:1493:SER:CA	27:D:1524:TRP:HH2	2.28	0.41
21:P:18:TYR:CD1	21:P:101:PRO:HG3	2.53	0.41
21:P:31:ILE:O	21:P:48:CYS:HA	2.20	0.41
23:R:76:TRP:CZ3	23:R:89:ARG:HG2	2.56	0.41
25:U:36:THR:HG21	25:U:38:TYR:CZ	2.55	0.41
32:1:689:LEU:HD21	32:1:707:PHE:HD2	1.85	0.41
32:1:925:HIS:HA	33:2:160:LEU:HD11	2.02	0.41
1:A:644:VAL:HG12	1:A:648:GLN:HB2	2.03	0.41
1:A:939:LEU:HD23	1:A:939:LEU:HA	1.81	0.41
1:A:1341:SER:HB3	1:A:1524:PRO:HB2	2.02	0.41
5:J:271:LYS:HD3	16:F:62:A:H5"	2.02	0.41
18:B:103:A:O2'	18:B:104:G:O5'	2.30	0.41
18:B:114:G:C2	18:B:115:G:C5	3.08	0.41
27:D:648:GLU:CD	27:D:912:PHE:CD1	2.94	0.41
27:D:1141:PRO:HG3	27:D:1298:TRP:CZ3	2.55	0.41
27:D:1486:ALA:HA	27:D:1489:GLU:HG2	2.02	0.41
27:D:1933:TYR:CE1	27:D:2090:LYS:O	2.73	0.41
23:R:36:ASP:HA	23:R:39:VAL:HG12	2.02	0.41
29:H:1139:G:C2'	29:H:1140:U:H6	2.34	0.41
29:H:1146:G:H2'	29:H:1147:A:H8	1.84	0.41
29:H:1149:G:C4	29:H:1150:U:C5	3.08	0.41
32:1:828:GLY:HA3	36:5:38:ARG:NH2	2.36	0.41
33:2:246:LYS:O	33:2:250:VAL:HG23	2.21	0.41
34:3:118:GLN:HB2	34:3:1325:ASN:OD1	2.20	0.41
34:3:224:ILE:O	36:5:17:VAL:HG11	2.20	0.41
34:3:327:VAL:O	34:3:337:VAL:HA	2.21	0.41
34:3:759:ASP:OD1	34:3:760:GLY:N	2.53	0.41
34:3:1308:ARG:HD3	34:3:1308:ARG:HA	1.87	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:168:LEU:HA	1:A:199:ILE:HD11	2.03	0.41
1:A:268:LEU:HD13	1:A:273:ASP:HB2	2.01	0.41
1:A:297:SER:HB2	18:B:32:G:H5'	2.03	0.41
1:A:659:HIS:O	1:A:662:GLN:N	2.54	0.41
1:A:1144:PHE:CD2	1:A:1145:MET:HG2	2.56	0.41
1:A:1375:LEU:CD2	1:A:1607:THR:HG22	2.50	0.41
1:A:1477:PHE:O	1:A:1481:GLU:HG3	2.21	0.41
1:A:2152:TRP:HZ3	27:D:1064:PRO:CG	2.32	0.41
1:A:2307:LEU:HD11	1:A:2311:GLY:HA3	2.02	0.41
2:K:167:LEU:HD13	4:N:724:SER:HB2	2.01	0.41
2:K:235:ILE:HA	2:K:244:LYS:O	2.20	0.41
2:K:264:HIS:CE1	2:K:290:ARG:HH11	2.38	0.41
2:K:269:SER:OG	2:K:311:PHE:HA	2.20	0.41
2:K:279:PHE:HB3	2:K:291:LEU:HD11	2.02	0.41
4:N:144:LYS:HE3	17:I:19:U:OP1	2.20	0.41
4:N:863:PHE:CE2	4:N:888:PRO:HB2	2.55	0.41
5:J:350:PRO:HB2	16:F:83:A:N7	2.35	0.41
8:C:113:ILE:HD13	8:C:551:TYR:HD1	1.85	0.41
8:C:274:ILE:HD13	8:C:385:PHE:CD2	2.48	0.41
8:C:385:PHE:CE1	8:C:425:LEU:HD11	2.55	0.41
18:B:69:G:H2'	18:B:70:A:C8	2.55	0.41
18:B:70:A:H2'	18:B:71:A:C8	2.56	0.41
27:D:1312:LYS:H	27:D:1787:SER:HG	1.65	0.41
27:D:1439:LEU:HD21	27:D:1465:ILE:HG13	2.01	0.41
25:U:54:ASN:OD1	25:U:55:GLU:N	2.51	0.41
33:2:293:ARG:O	35:4:31:GLN:NE2	2.53	0.41
34:3:326:PHE:CD1	34:3:339:ASP:HA	2.55	0.41
34:3:453:ASN:HA	34:3:464:LEU:HD11	2.03	0.41
34:3:488:ILE:HG22	34:3:489:LYS:HG2	2.02	0.41
34:3:526:SER:HA	34:3:870:ARG:HG3	2.02	0.41
1:A:1814:VAL:HG12	1:A:1818:ARG:HE	1.85	0.41
1:A:2032:ILE:HG22	1:A:2041:PRO:HB2	2.02	0.41
2:K:306:HIS:CD2	2:K:310:VAL:HG22	2.55	0.41
2:K:337:ARG:HD2	5:J:173:TYR:CE2	2.55	0.41
8:C:309:ASN:HD21	8:C:325:LYS:HG3	1.85	0.41
8:C:502:LEU:HB3	8:C:576:THR:OG1	2.20	0.41
8:C:758:ASP:HB3	8:C:761:ALA:HB3	2.02	0.41
27:D:593:ARG:O	27:D:593:ARG:HG2	2.20	0.41
27:D:1668:LYS:CE	27:D:1702:GLU:HG3	2.47	0.41
27:D:1862:THR:OG1	27:D:1887:VAL:HG12	2.20	0.41
27:D:1905:LEU:HD11	27:D:1937:LEU:HD13	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:R:76:TRP:HZ3	23:R:89:ARG:HG2	1.85	0.41
29:H:58:A:H2'	29:H:59:C:O4'	2.19	0.41
32:1:230:TYR:HE2	37:6:5:GLN:HG3	1.85	0.41
32:1:430:TYR:HB3	32:1:434:TYR:HE2	1.85	0.41
33:2:134:LEU:HA	33:2:137:LEU:HB3	2.02	0.41
34:3:157:LEU:HD11	34:3:202:ILE:HG21	2.01	0.41
34:3:180:THR:HG21	34:3:188:SER:CB	2.51	0.41
34:3:676:PRO:CB	34:3:693:ILE:HD11	2.50	0.41
34:3:1089:ASP:HB2	34:3:1092:GLU:O	2.20	0.41
34:3:1291:ILE:HA	34:3:1296:SER:HB2	2.03	0.41
36:5:72:TYR:OH	36:5:87:PRO:HG3	2.20	0.41
1:A:370:ILE:HB	1:A:375:PHE:HZ	1.85	0.41
1:A:375:PHE:CE2	8:C:954:LEU:HD23	2.56	0.41
1:A:1409:ALA:HB1	1:A:1428:GLY:HA3	2.03	0.41
1:A:1658:HIS:HE1	1:A:1690:LYS:NZ	2.19	0.41
2:K:51:VAL:HG13	2:K:76:LEU:HD11	2.01	0.41
3:L:358:ILE:CG2	3:L:360:GLU:H	2.33	0.41
4:N:273:ARG:O	4:N:303:ASN:ND2	2.47	0.41
4:N:666:ILE:HG22	4:N:667:CYS:N	2.36	0.41
4:N:674:LEU:O	4:N:678:TYR:HD2	2.03	0.41
6:E:105:PHE:CE2	6:E:137:TYR:CZ	3.09	0.41
8:C:366:ASN:OD1	8:C:367:VAL:HG23	2.20	0.41
8:C:778:THR:HG23	8:C:781:ASP:H	1.85	0.41
18:B:27:G:OP1	18:B:141:G:H5"	2.19	0.41
27:D:453:PHE:HE2	27:D:455:ARG:NE	2.14	0.41
27:D:587:GLU:O	27:D:592:SER:HB3	2.21	0.41
22:Q:4:VAL:HG11	22:Q:34:PRO:O	2.21	0.41
22:Q:4:VAL:CG1	22:Q:34:PRO:HA	2.50	0.41
25:U:59:PHE:N	25:U:59:PHE:CD1	2.88	0.41
29:H:1097:G:N1	29:H:1146:G:C5	2.88	0.41
29:H:1143:C:H4'	29:H:1144:U:H3'	2.01	0.41
32:1:843:GLU:OE1	32:1:883:LEU:HD11	2.21	0.41
33:2:248:HIS:ND1	33:2:375:PHE:HB2	2.35	0.41
34:3:187:VAL:HG21	37:6:17:LYS:O	2.20	0.41
34:3:333:ASN:OD1	34:3:334:HIS:ND1	2.44	0.41
34:3:951:CYS:SG	34:3:952:ARG:N	2.93	0.41
35:4:43:ASP:HB2	35:4:50:GLN:NE2	2.32	0.41
36:5:67:VAL:HG23	36:5:68:ASN:N	2.35	0.41
38:X:27:TYR:O	38:X:29:ASP:N	2.48	0.41
1:A:929:LEU:HG	4:N:148:ALA:HB2	2.03	0.41
1:A:1317:ARG:O	1:A:1321:MET:HG2	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:350:LYS:HB3	2:K:351:PRO:CD	2.49	0.41
2:K:390:LEU:HD22	5:J:428:TRP:NE1	2.35	0.41
3:L:328:VAL:HA	3:L:331:HIS:CD2	2.48	0.41
5:J:352:ILE:O	5:J:356:LEU:HG	2.20	0.41
8:C:175:LEU:HD23	8:C:176:ARG:N	2.35	0.41
8:C:629:TYR:OH	8:C:658:ASP:OD2	2.37	0.41
8:C:733:ASN:OD1	8:C:734:CYS:N	2.54	0.41
18:B:163:C:P	18:B:164:C:OP1	2.79	0.41
27:D:491:PHE:CE1	27:D:533:LEU:HD21	2.54	0.41
27:D:727:TYR:CD2	27:D:760:LYS:HE2	2.55	0.41
27:D:1821:GLU:CG	27:D:1845:SER:HB2	2.51	0.41
22:Q:26:TRP:O	22:Q:43:VAL:HA	2.21	0.41
29:H:142:C:HO2'	29:H:143:G:H8	1.66	0.41
32:1:874:GLU:HB3	34:3:1315:ARG:NH2	2.35	0.41
34:3:527:LEU:HD21	34:3:552:ILE:HG21	2.03	0.41
35:4:42:LYS:HB2	35:4:49:TYR:CE1	2.56	0.41
1:A:576:HIS:HE1	1:A:593:LEU:O	2.04	0.41
1:A:631:LEU:HD21	1:A:663:LEU:HD13	2.03	0.41
1:A:766:ILE:O	1:A:770:MET:HG3	2.20	0.41
1:A:1521:ARG:HD3	3:L:404:TYR:CE2	2.55	0.41
1:A:2152:TRP:HZ3	27:D:1064:PRO:CD	2.33	0.41
1:A:2326:SER:O	1:A:2329:PHE:HB3	2.21	0.41
2:K:422:TYR:HD1	2:K:429:LYS:HA	1.85	0.41
3:L:398:GLN:CD	3:L:419:GLN:HG3	2.41	0.41
18:B:30:A:H2'	18:B:31:G:H8	1.86	0.41
18:B:38:A:N1	18:B:117:G:C6	2.88	0.41
27:D:912:PHE:CB	27:D:944:LEU:HD23	2.33	0.41
27:D:1583:VAL:HB	27:D:1665:LEU:HD23	2.03	0.41
27:D:1640:LEU:CD1	27:D:1649:GLU:HG3	2.51	0.41
27:D:1890:GLU:C	22:Q:143:ARG:HE	2.23	0.41
23:R:80:LYS:HE3	23:R:82:LYS:CG	2.50	0.41
25:U:29:VAL:HG22	25:U:81:ILE:HG13	2.02	0.41
25:U:45:THR:HG23	25:U:50:ASN:O	2.20	0.41
32:1:173:ILE:HG12	32:1:185:MET:SD	2.61	0.41
34:3:97:THR:OG1	34:3:100:HIS:HB3	2.21	0.41
34:3:426:TYR:HA	34:3:439:PHE:O	2.20	0.41
34:3:690:LEU:HA	34:3:703:MET:O	2.21	0.41
38:X:3:LYS:O	38:X:7:ILE:HD12	2.21	0.41
38:X:68:THR:HG23	38:X:70:GLU:HG2	2.03	0.41
1:A:167:TYR:CD1	1:A:547:LEU:HD21	2.56	0.41
1:A:380:ARG:HB3	1:A:382:GLU:OE1	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:408:SER:HA	8:C:272:ARG:NH2	2.36	0.41
1:A:522:TYR:CE1	1:A:686:ILE:HD12	2.55	0.41
1:A:1043:ARG:O	1:A:1045:GLN:HG3	2.21	0.41
1:A:1048:VAL:HA	1:A:1249:SER:O	2.20	0.41
1:A:1417:GLN:HB2	1:A:1783:MET:CE	2.51	0.41
1:A:2193:PHE:HA	1:A:2196:ILE:HG12	2.03	0.41
1:A:2249:ASP:OD1	27:D:1307:SER:OG	2.34	0.41
1:A:2319:LYS:HG3	1:A:2320:ASP:N	2.36	0.41
2:K:235:ILE:HD13	2:K:280:ILE:HG21	2.03	0.41
2:K:235:ILE:CD1	2:K:280:ILE:HD13	2.51	0.41
2:K:390:LEU:HD12	2:K:390:LEU:O	2.21	0.41
3:L:359:PRO:HD3	6:E:56:PHE:CD2	2.56	0.41
5:J:163:ASN:HB3	5:J:167:GLU:O	2.20	0.41
5:J:271:LYS:HE3	5:J:304:ARG:HH11	1.85	0.41
8:C:161:ILE:HG12	8:C:177:TYR:OH	2.21	0.41
8:C:365:GLU:HG3	8:C:366:ASN:H	1.86	0.41
8:C:625:ILE:HG23	8:C:629:TYR:HD2	1.85	0.41
8:C:728:LEU:HD12	8:C:730:LYS:HE3	2.02	0.41
8:C:752:ARG:HD3	8:C:759:SER:HA	2.01	0.41
8:C:884:ARG:CB	8:C:910:GLU:HG3	2.44	0.41
16:F:47:A:C3'	16:F:48:C:H5'	2.50	0.41
18:B:26:A:O4'	18:B:131:A:H5'	2.21	0.41
18:B:150:U:HO2'	18:B:151:A:P	2.44	0.41
27:D:594:LEU:HD22	27:D:598:GLN:OE1	2.21	0.41
27:D:707:PHE:N	27:D:707:PHE:CD1	2.89	0.41
27:D:778:LYS:O	27:D:782:LYS:HG2	2.21	0.41
27:D:944:LEU:O	27:D:948:MET:HG2	2.20	0.41
27:D:1647:ASN:O	27:D:1651:ILE:HG12	2.21	0.41
27:D:1861:PHE:CB	22:Q:140:LYS:HZ3	2.34	0.41
27:D:1898:ASP:HA	27:D:1943:PHE:HZ	1.86	0.41
27:D:1973:ALA:O	27:D:1977:MET:HG3	2.21	0.41
27:D:2139:ASN:ND2	27:D:2159:GLU:OE1	2.53	0.41
23:R:45:ILE:HG23	23:R:105:LEU:HB3	2.02	0.41
23:R:48:LEU:HD21	23:R:96:LEU:HD21	2.02	0.41
23:R:105:LEU:HD12	25:U:70:GLU:O	2.21	0.41
20:S:77:LEU:HD23	20:S:77:LEU:O	2.20	0.41
28:G:522:U:H5	38:X:111:PRO:O	2.04	0.41
29:H:548:G:C6	29:H:549:C:N4	2.89	0.41
29:H:1118:U:H2'	29:H:1119:C:H6	1.86	0.41
29:H:1139:G:O2'	29:H:1140:U:O5'	2.33	0.41
29:H:1144:U:O2	29:H:1144:U:C2'	2.69	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:1:198:GLU:O	32:1:202:ASN:HB3	2.20	0.41
32:1:467:VAL:HG12	32:1:469:SER:H	1.86	0.41
34:3:380:LEU:HA	34:3:389:PHE:O	2.21	0.41
34:3:390:LYS:O	34:3:407:LEU:HA	2.20	0.41
34:3:626:PRO:HB3	34:3:630:ILE:HB	2.02	0.41
34:3:643:ILE:HG23	34:3:651:LEU:HD21	2.02	0.41
34:3:643:ILE:HD11	34:3:653:TYR:HD1	1.85	0.41
34:3:693:ILE:CG2	34:3:701:LYS:HB2	2.51	0.41
34:3:832:TRP:CG	34:3:833:LYS:N	2.89	0.41
34:3:1129:VAL:O	34:3:1140:THR:HA	2.20	0.41
34:3:1135:TYR:HB3	34:3:1311:TYR:CE2	2.56	0.41
34:3:1189:LEU:HD21	34:3:1192:HIS:HB2	2.03	0.41
35:4:10:THR:HA	35:4:56:GLU:HA	2.03	0.41
36:5:41:ARG:NH1	36:5:83:LYS:HZ2	2.18	0.41
38:X:32:TYR:OH	39:Y:162:LEU:HD11	2.20	0.41
39:Y:208:SER:HB3	39:Y:212:ARG:N	2.36	0.41
1:A:293:VAL:HG22	1:A:294:ASN:N	2.36	0.41
1:A:499:VAL:HG12	1:A:501:LEU:HD12	2.02	0.41
1:A:507:LEU:O	1:A:508:GLN:HB2	2.21	0.41
1:A:615:LEU:HD21	1:A:619:PHE:CE2	2.56	0.41
1:A:1996:LEU:HA	1:A:1999:ILE:O	2.21	0.41
2:K:274:HIS:HD2	2:K:276:SER:HB3	1.86	0.41
4:N:771:ALA:O	4:N:775:VAL:HG23	2.21	0.41
8:C:133:ILE:HG13	8:C:134:ILE:N	2.36	0.41
18:B:24:G:H2'	18:B:25:G:C8	2.56	0.41
18:B:65:U:H2'	18:B:66:A:C8	2.57	0.41
27:D:777:SER:O	27:D:781:LEU:HB2	2.21	0.41
27:D:1699:THR:HG22	22:Q:144:ARG:CZ	2.50	0.41
24:T:86:ASN:HD21	25:U:79:LEU:HA	1.86	0.41
29:H:1092:A:H3'	29:H:1093:C:C6	2.47	0.41
32:1:297:THR:HA	32:1:300:ALA:HB3	2.03	0.41
32:1:348:VAL:HG13	32:1:349:LEU:N	2.29	0.41
34:3:76:ILE:HD11	34:3:422:PHE:CD1	2.56	0.41
34:3:242:VAL:HG22	34:3:252:PHE:CB	2.51	0.41
34:3:270:PHE:HD2	34:3:284:ALA:HB3	1.85	0.41
34:3:555:PRO:O	34:3:587:THR:HB	2.21	0.41
34:3:612:PRO:HA	34:3:618:TYR:CD1	2.54	0.41
34:3:1007:LYS:HE3	34:3:1009:LEU:HD21	2.03	0.41
1:A:194:HIS:CE1	1:A:196:SER:HG	2.38	0.40
1:A:1054:LEU:HD21	1:A:1168:ILE:HD11	2.03	0.40
1:A:1234:VAL:HG12	1:A:1235:PRO:O	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2043:PHE:HB3	1:A:2047:GLN:HB2	2.02	0.40
2:K:67:GLU:OE1	2:K:75:ARG:NE	2.45	0.40
2:K:183:LEU:HD23	2:K:190:VAL:HG22	2.02	0.40
4:N:793:ILE:HA	4:N:796:ASP:HB3	2.02	0.40
5:J:141:ASN:HD22	5:J:144:LEU:HG	1.85	0.40
8:C:795:ILE:O	8:C:799:PHE:HB2	2.21	0.40
18:B:117:G:H2'	18:B:118:U:C6	2.56	0.40
18:B:148:G:H2'	18:B:149:U:C6	2.56	0.40
27:D:1326:ASN:OD1	27:D:1326:ASN:N	2.54	0.40
27:D:1651:ILE:O	27:D:1655:LEU:HG	2.21	0.40
27:D:2104:GLY:HA2	27:D:2112:TYR:CD2	2.53	0.40
24:T:16:CYS:HA	24:T:19:ASN:ND2	2.36	0.40
28:G:499:U:H2'	28:G:500:A:H8	1.85	0.40
29:H:43:G:H2'	29:H:44:U:C6	2.56	0.40
32:1:335:LYS:O	32:1:338:GLN:HB2	2.21	0.40
34:3:542:THR:HG21	34:3:547:ASN:OD1	2.21	0.40
34:3:742:HIS:HE2	34:3:752:LYS:HE2	1.85	0.40
34:3:1179:ASN:OD1	34:3:1180:THR:N	2.54	0.40
36:5:37:VAL:C	36:5:38:ARG:HG2	2.42	0.40
36:5:43:VAL:HA	36:5:72:TYR:CE2	2.56	0.40
1:A:457:ASP:OD1	1:A:458:PHE:N	2.54	0.40
1:A:697:LYS:HA	1:A:697:LYS:HD2	1.90	0.40
1:A:1125:LEU:O	1:A:1233:ARG:NH1	2.54	0.40
1:A:1601:ILE:N	1:A:1602:PRO:HD2	2.36	0.40
1:A:1673:LEU:HA	1:A:1678:ILE:HB	2.02	0.40
1:A:1879:ILE:HG12	1:A:1913:THR:HG22	2.03	0.40
1:A:2395:PHE:HE1	27:D:1061:ALA:HA	1.74	0.40
3:L:340:LYS:O	3:L:344:LEU:HG	2.21	0.40
8:C:104:THR:O	8:C:107:THR:N	2.55	0.40
8:C:114:PRO:HB2	8:C:160:ARG:O	2.20	0.40
8:C:362:LYS:HG3	8:C:363:PRO:HD2	2.03	0.40
8:C:405:ARG:NH2	18:B:1:A:C8	2.86	0.40
8:C:869:HIS:CD2	8:C:925:LEU:HD22	2.56	0.40
8:C:945:LEU:HD12	8:C:945:LEU:O	2.22	0.40
16:F:80:U:H2'	16:F:81:G:H8	1.86	0.40
17:I:94:U:C4	17:I:95:C:C4	3.09	0.40
17:I:133:C:H2'	17:I:134:U:C6	2.56	0.40
27:D:502:ILE:HD11	27:D:522:PRO:HD2	2.02	0.40
27:D:610:GLU:OE1	27:D:1009:TYR:CE2	2.73	0.40
27:D:1092:PHE:CD1	27:D:1095:ASN:HB3	2.56	0.40
27:D:1331:THR:HG23	27:D:1346:LYS:O	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:1367:PHE:HB2	27:D:1527:MET:SD	2.62	0.40
27:D:1689:ASP:OD1	27:D:1692:GLU:HB3	2.21	0.40
27:D:1853:ALA:CB	27:D:1863:ILE:HG13	2.52	0.40
21:P:88:ARG:HG2	21:P:90:GLU:N	2.24	0.40
32:1:854:ARG:NH1	33:2:183:LEU:HD12	2.35	0.40
34:3:131:ASP:OD1	34:3:146:THR:OG1	2.34	0.40
34:3:270:PHE:CD2	34:3:284:ALA:HB3	2.56	0.40
34:3:820:VAL:HG12	34:3:828:VAL:HG12	2.03	0.40
34:3:1336:PHE:O	34:3:1339:LYS:HG2	2.21	0.40
1:A:156:THR:OG1	1:A:157:ASP:N	2.54	0.40
1:A:913:VAL:HG21	4:N:163:THR:HG22	2.03	0.40
1:A:1087:ASN:HA	1:A:1099:ASN:O	2.22	0.40
1:A:2177:VAL:HB	1:A:2338:GLN:HE22	1.87	0.40
1:A:2264:GLU:HG2	1:A:2266:LEU:HG	2.03	0.40
2:K:51:VAL:HG13	2:K:76:LEU:CD1	2.51	0.40
2:K:269:SER:H	2:K:284:SER:HA	1.85	0.40
3:L:172:ILE:O	3:L:176:THR:HG23	2.21	0.40
3:L:305:MET:HG2	3:L:337:LEU:CD2	2.52	0.40
4:N:832:LEU:HD11	4:N:845:LEU:HD11	2.03	0.40
17:I:96:A:C6	17:I:137:G:C6	3.09	0.40
18:B:85:U:C2	18:B:86:G:C8	3.09	0.40
27:D:619:SER:O	27:D:622:LEU:HG	2.21	0.40
27:D:1245:ASP:HA	27:D:1288:PHE:CD1	2.55	0.40
27:D:1387:HIS:CE1	27:D:1392:LYS:CB	3.04	0.40
27:D:1448:THR:HB	27:D:1449:PRO:HD2	2.02	0.40
27:D:1497:PHE:CE2	27:D:1762:ILE:HG21	2.55	0.40
22:Q:139:ASN:O	22:Q:140:LYS:CB	2.69	0.40
23:R:43:PRO:HA	23:R:56:ALA:O	2.22	0.40
34:3:118:GLN:HE21	34:3:1299:ILE:CD1	2.33	0.40
34:3:507:ASN:ND2	34:3:509:LYS:HE2	2.36	0.40
35:4:135:ILE:HB	35:4:156:GLU:HG2	2.04	0.40
1:A:264:ILE:HD12	1:A:647:PHE:CE1	2.57	0.40
1:A:2152:TRP:CD1	1:A:2391:HIS:CD2	3.09	0.40
2:K:362:TYR:CD1	2:K:363:GLN:HG3	2.56	0.40
2:K:380:LYS:O	2:K:382:ASP:N	2.53	0.40
3:L:441:MET:CE	3:L:444:ARG:HH21	2.34	0.40
6:E:63:ASP:HB2	6:E:66:GLU:HB2	2.01	0.40
7:M:8:ALA:HA	7:M:80:PHE:CE2	2.56	0.40
16:F:61:C:C2	16:F:62:A:C8	3.09	0.40
17:I:24:A:C2	17:I:50:G:C2	3.09	0.40
17:I:91:U:O2'	17:I:92:C:P	2.79	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D:502:ILE:CD1	27:D:522:PRO:HD2	2.51	0.40
27:D:557:ILE:HG23	27:D:630:LEU:HD23	2.04	0.40
27:D:725:ALA:O	27:D:729:LYS:HG2	2.21	0.40
27:D:1486:ALA:HB1	27:D:1746:LEU:HD23	2.03	0.40
27:D:1585:LEU:CD1	27:D:1591:CYS:HA	2.52	0.40
27:D:1641:TYR:CZ	27:D:1644:MET:HG2	2.57	0.40
27:D:1895:ARG:O	27:D:1895:ARG:HG3	2.21	0.40
27:D:2086:VAL:HB	27:D:2095:LYS:HB3	2.03	0.40
24:T:19:ASN:O	24:T:23:GLN:HG3	2.22	0.40
29:H:43:G:H2'	29:H:44:U:H6	1.87	0.40
29:H:1145:U:O2	29:H:1145:U:C2'	2.69	0.40
32:1:215:ASP:OD1	32:1:216:GLN:N	2.53	0.40
32:1:737:SER:O	32:1:743:ARG:NH1	2.54	0.40
33:2:289:LYS:HB3	35:4:30:ILE:HD13	2.02	0.40
34:3:71:PHE:CD2	34:3:95:VAL:HG11	2.57	0.40
34:3:99:THR:O	34:3:120:LEU:HD12	2.21	0.40
34:3:115:ALA:HB2	34:3:169:LEU:HD12	2.02	0.40
34:3:513:LEU:HD21	34:3:886:PHE:CD2	2.56	0.40
34:3:782:GLU:O	34:3:816:MET:N	2.54	0.40
34:3:1029:SER:OG	34:3:1045:MET:HA	2.20	0.40
35:4:107:ILE:HD13	35:4:154:TYR:HB3	2.03	0.40
35:4:110:LEU:O	35:4:152:TYR:HA	2.22	0.40
36:5:2:SER:OG	36:5:3:ARG:N	2.54	0.40
37:6:20:GLY:O	37:6:21:LEU:HD12	2.22	0.40
1:A:1046:SER:O	1:A:1173:HIS:HD2	2.04	0.40
3:L:126:GLU:O	3:L:130:LEU:HG	2.21	0.40
4:N:15:TYR:OH	6:E:13:TRP:CD1	2.69	0.40
6:E:87:HIS:C	6:E:89:LYS:H	2.24	0.40
8:C:473:LEU:HD23	8:C:473:LEU:HA	1.95	0.40
8:C:775:ILE:HD12	8:C:817:GLN:NE2	2.37	0.40
16:F:26:A:H2'	16:F:27:U:C6	2.56	0.40
16:F:42:A:O2'	16:F:43:C:H5'	2.21	0.40
27:D:464:HIS:CE1	27:D:706:GLN:HE21	2.40	0.40
27:D:562:PRO:HA	27:D:609:PRO:CD	2.51	0.40
27:D:781:LEU:HD21	27:D:798:GLU:CG	2.49	0.40
27:D:1580:SER:H	27:D:1678:ASP:HB2	1.85	0.40
27:D:1688:TYR:CE1	27:D:1896:LYS:HE2	2.57	0.40
20:S:34:VAL:HG22	20:S:45:ARG:HD2	2.02	0.40
26:V:8:LYS:HD2	26:V:11:MET:HG3	2.02	0.40
26:V:36:LEU:O	26:V:38:VAL:HG23	2.21	0.40
29:H:145:G:O2'	29:H:146:A:H5'	2.22	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:H:1161:U:H2'	29:H:1162:U:H6	1.86	0.40
29:H:1168:U:H2'	29:H:1169:C:C6	2.56	0.40
33:2:197:PRO:HB3	33:2:258:TRP:CH2	2.56	0.40
33:2:364:PHE:CD2	34:3:1124:LEU:HD21	2.57	0.40
34:3:1035:LEU:HD11	34:3:1042:LEU:HD23	2.03	0.40
34:3:1299:ILE:C	34:3:1300:LEU:HD12	2.42	0.40
35:4:13:VAL:HG12	35:4:16:ILE:HD11	2.03	0.40
36:5:37:VAL:O	36:5:38:ARG:HG2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	2169/2413 (90%)	2040 (94%)	115 (5%)	14 (1%)	22 50
2	K	425/465 (91%)	388 (91%)	34 (8%)	3 (1%)	19 47
3	L	410/494 (83%)	392 (96%)	15 (4%)	3 (1%)	19 47
4	N	678/899 (75%)	626 (92%)	51 (8%)	1 (0%)	48 78
5	J	294/469 (63%)	281 (96%)	10 (3%)	3 (1%)	13 39
6	E	137/143 (96%)	128 (93%)	9 (7%)	0	100 100
7	M	124/126 (98%)	122 (98%)	2 (2%)	0	100 100
8	C	837/1008 (83%)	779 (93%)	53 (6%)	5 (1%)	22 50
9	z	63/109 (58%)	61 (97%)	2 (3%)	0	100 100
10	q	90/95 (95%)	83 (92%)	7 (8%)	0	100 100
11	r	75/89 (84%)	70 (93%)	5 (7%)	0	100 100
12	x	72/86 (84%)	70 (97%)	2 (3%)	0	100 100
13	t	73/93 (78%)	69 (94%)	3 (4%)	1 (1%)	9 31

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	y	62/115 (54%)	62 (100%)	0	0	100	100
15	s	73/187 (39%)	72 (99%)	1 (1%)	0	100	100
19	O	68/587 (12%)	64 (94%)	3 (4%)	1 (2%)	8	30
20	S	80/101 (79%)	77 (96%)	3 (4%)	0	100	100
20	d	77/101 (76%)	69 (90%)	6 (8%)	2 (3%)	4	22
20	l	79/101 (78%)	70 (89%)	8 (10%)	1 (1%)	10	33
21	P	66/196 (34%)	62 (94%)	4 (6%)	0	100	100
21	a	69/196 (35%)	63 (91%)	6 (9%)	0	100	100
21	h	74/196 (38%)	67 (90%)	7 (10%)	0	100	100
22	Q	93/146 (64%)	89 (96%)	3 (3%)	1 (1%)	12	37
22	b	71/146 (49%)	66 (93%)	4 (6%)	1 (1%)	9	31
22	m	78/146 (53%)	74 (95%)	4 (5%)	0	100	100
23	R	90/110 (82%)	89 (99%)	1 (1%)	0	100	100
23	c	86/110 (78%)	83 (96%)	3 (4%)	0	100	100
23	n	63/110 (57%)	60 (95%)	3 (5%)	0	100	100
24	T	73/94 (78%)	72 (99%)	1 (1%)	0	100	100
24	e	66/94 (70%)	62 (94%)	4 (6%)	0	100	100
24	i	71/94 (76%)	65 (92%)	6 (8%)	0	100	100
25	U	71/86 (83%)	68 (96%)	3 (4%)	0	100	100
25	f	66/86 (77%)	59 (89%)	4 (6%)	3 (4%)	2	13
25	j	66/86 (77%)	61 (92%)	4 (6%)	1 (2%)	8	30
26	V	73/77 (95%)	66 (90%)	6 (8%)	1 (1%)	9	31
26	g	64/77 (83%)	58 (91%)	6 (9%)	0	100	100
26	k	65/77 (84%)	64 (98%)	1 (2%)	0	100	100
27	D	1694/2163 (78%)	1631 (96%)	60 (4%)	3 (0%)	44	72
30	o	125/238 (52%)	111 (89%)	12 (10%)	2 (2%)	8	29
31	p	69/111 (62%)	67 (97%)	2 (3%)	0	100	100
32	1	814/971 (84%)	762 (94%)	46 (6%)	6 (1%)	19	47
33	2	205/436 (47%)	192 (94%)	11 (5%)	2 (1%)	13	39
34	3	1164/1361 (86%)	1046 (90%)	109 (9%)	9 (1%)	16	44
35	4	165/213 (78%)	164 (99%)	1 (1%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
36	5	101/107 (94%)	87 (86%)	13 (13%)	1 (1%)	13 39
37	6	82/85 (96%)	78 (95%)	3 (4%)	1 (1%)	11 35
38	X	126/148 (85%)	117 (93%)	7 (6%)	2 (2%)	8 29
39	Y	85/266 (32%)	80 (94%)	3 (4%)	2 (2%)	5 23
40	Z	20/204 (10%)	14 (70%)	6 (30%)	0	100 100
41	u	453/530 (86%)	415 (92%)	38 (8%)	0	100 100
42	w	123/280 (44%)	112 (91%)	11 (9%)	0	100 100
43	v	168/266 (63%)	142 (84%)	25 (15%)	1 (1%)	22 50
All	All	12585/17187 (73%)	11769 (94%)	746 (6%)	70 (1%)	24 50

All (70) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	240	PRO
2	K	395	ILE
3	L	328	VAL
8	C	364	PHE
8	C	602	VAL
30	o	68	PRO
32	1	831	SER
32	1	836	TYR
33	2	368	ILE
34	3	363	VAL
34	3	413	ILE
34	3	1299	ILE
38	X	17	LEU
1	A	156	THR
1	A	1088	VAL
5	J	167	GLU
8	C	133	ILE
8	C	134	ILE
20	d	40	MET
22	b	12	ASN
25	f	24	ASN
25	f	49	PHE
22	Q	140	LYS
32	1	830	MET
32	1	835	ILE
39	Y	172	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
39	Y	230	SER
5	J	331	VAL
27	D	791	PRO
27	D	1896	LYS
26	V	60	GLN
34	3	364	THR
1	A	508	GLN
1	A	1621	VAL
1	A	1869	ASN
1	A	2321	ILE
3	L	151	LYS
4	N	736	ASP
5	J	286	ASN
19	O	212	VAL
27	D	960	ILE
34	3	961	CYS
34	3	1233	SER
37	6	19	ILE
1	A	239	PHE
1	A	645	ASP
25	f	50	ASN
20	l	81	ALA
33	2	167	LYS
38	X	18	SER
43	v	232	GLY
2	K	286	ASP
20	d	51	GLU
36	5	38	ARG
1	A	1870	VAL
25	j	15	PRO
30	o	52	LYS
32	1	348	VAL
8	C	829	VAL
34	3	859	ILE
1	A	407	VAL
13	t	41	VAL
1	A	699	PRO
1	A	2330	GLU
2	K	176	LYS
3	L	358	ILE
32	1	386	TYR
34	3	523	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
34	3	1031	ILE
1	A	264	ILE

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	1964/2182 (90%)	1962 (100%)	2 (0%)	92 97
2	K	373/410 (91%)	371 (100%)	2 (0%)	86 91
3	L	327/445 (74%)	327 (100%)	0	100 100
4	N	361/813 (44%)	361 (100%)	0	100 100
5	J	248/436 (57%)	248 (100%)	0	100 100
6	E	129/132 (98%)	129 (100%)	0	100 100
7	M	104/104 (100%)	104 (100%)	0	100 100
8	C	757/910 (83%)	757 (100%)	0	100 100
19	O	60/534 (11%)	60 (100%)	0	100 100
20	S	71/89 (80%)	71 (100%)	0	100 100
20	l	67/89 (75%)	64 (96%)	3 (4%)	23 50
21	P	64/176 (36%)	64 (100%)	0	100 100
21	h	67/176 (38%)	67 (100%)	0	100 100
22	Q	81/129 (63%)	81 (100%)	0	100 100
22	m	77/129 (60%)	71 (92%)	6 (8%)	10 33
23	R	85/103 (82%)	85 (100%)	0	100 100
23	n	59/103 (57%)	52 (88%)	7 (12%)	4 16
24	T	69/83 (83%)	69 (100%)	0	100 100
24	i	65/83 (78%)	60 (92%)	5 (8%)	10 33
25	U	65/77 (84%)	65 (100%)	0	100 100
25	j	61/77 (79%)	60 (98%)	1 (2%)	58 75
26	V	64/66 (97%)	64 (100%)	0	100 100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
26	k	58/66 (88%)	55 (95%)	3 (5%)	19 45
27	D	1524/1955 (78%)	1522 (100%)	2 (0%)	92 97
30	o	46/219 (21%)	43 (94%)	3 (6%)	14 39
31	p	23/100 (23%)	22 (96%)	1 (4%)	25 50
32	1	724/867 (84%)	724 (100%)	0	100 100
33	2	190/392 (48%)	190 (100%)	0	100 100
34	3	1088/1244 (88%)	1087 (100%)	1 (0%)	92 97
35	4	154/189 (82%)	154 (100%)	0	100 100
36	5	93/97 (96%)	92 (99%)	1 (1%)	70 81
37	6	76/77 (99%)	76 (100%)	0	100 100
38	X	114/132 (86%)	112 (98%)	2 (2%)	54 73
39	Y	77/240 (32%)	67 (87%)	10 (13%)	3 13
40	Z	21/186 (11%)	18 (86%)	3 (14%)	2 10
41	u	425/492 (86%)	420 (99%)	5 (1%)	67 80
42	w	118/259 (46%)	115 (98%)	3 (2%)	42 65
43	v	156/236 (66%)	154 (99%)	2 (1%)	65 78
All	All	10105/14097 (72%)	10043 (99%)	62 (1%)	82 90

All (62) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2332	THR
1	A	2333	PHE
2	K	443	LEU
2	K	451	PHE
27	D	491	PHE
27	D	1008	PHE
24	i	16	CYS
24	i	18	PHE
24	i	25	THR
24	i	79	LYS
24	i	81	LEU
25	j	79	LEU
26	k	18	ASN
26	k	41	ASP
26	k	71	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
20	l	10	LEU
20	l	76	ASP
20	l	79	LYS
22	m	20	LYS
22	m	26	TRP
22	m	30	GLN
22	m	77	ASP
22	m	99	ASP
22	m	104	ASP
23	n	49	ARG
23	n	77	THR
23	n	79	LYS
23	n	80	LYS
23	n	82	LYS
23	n	99	ASP
23	n	100	SER
30	o	4	THR
30	o	44	PRO
30	o	71	SER
31	p	38	LYS
34	3	147	PHE
36	5	38	ARG
38	X	6	GLN
38	X	110	ARG
39	Y	160	LYS
39	Y	168	GLN
39	Y	169	LYS
39	Y	174	VAL
39	Y	207	THR
39	Y	208	SER
39	Y	209	LEU
39	Y	213	LYS
39	Y	214	LEU
39	Y	262	LEU
40	Z	38	LEU
40	Z	40	LEU
40	Z	42	SER
41	u	27	ARG
41	u	35	TYR
41	u	81	ILE
41	u	298	HIS
41	u	317	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
42	w	113	MET
42	w	129	HIS
42	w	158	ARG
43	v	226	MET
43	v	246	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (141) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	326	ASN
1	A	392	ASN
1	A	429	ASN
1	A	617	ASN
1	A	692	ASN
1	A	848	ASN
1	A	864	GLN
1	A	868	GLN
1	A	976	GLN
1	A	997	GLN
1	A	1033	ASN
1	A	1045	GLN
1	A	1087	ASN
1	A	1097	HIS
1	A	1099	ASN
1	A	1369	ASN
1	A	1532	HIS
1	A	1603	ASN
1	A	1618	ASN
1	A	1635	HIS
1	A	1809	ASN
1	A	1839	ASN
1	A	1947	HIS
1	A	2018	ASN
1	A	2306	ASN
1	A	2338	GLN
2	K	232	ASN
2	K	247	GLN
2	K	374	ASN
2	K	450	HIS
3	L	113	HIS
3	L	160	HIS
3	L	185	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	L	201	ASN
3	L	331	HIS
4	N	213	ASN
4	N	770	ASN
5	J	141	ASN
5	J	276	ASN
5	J	409	HIS
6	E	14	HIS
6	E	87	HIS
8	C	158	HIS
8	C	183	GLN
8	C	251	GLN
8	C	554	HIS
8	C	721	GLN
8	C	776	ASN
8	C	817	GLN
8	C	869	HIS
8	C	929	GLN
27	D	516	ASN
27	D	568	GLN
27	D	621	ASN
27	D	676	ASN
27	D	706	GLN
27	D	739	GLN
27	D	768	HIS
27	D	804	HIS
27	D	894	ASN
27	D	904	GLN
27	D	921	ASN
27	D	1103	GLN
27	D	1148	GLN
27	D	1281	GLN
27	D	1349	ASN
27	D	1418	HIS
27	D	1443	HIS
27	D	1611	ASN
27	D	1726	HIS
27	D	1931	GLN
27	D	1968	ASN
27	D	1996	GLN
27	D	2069	GLN
27	D	2139	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	P	33	GLN
22	Q	30	GLN
23	R	52	HIS
20	S	4	ASN
25	U	76	ASN
25	U	77	ASN
26	V	54	ASN
24	i	34	GLN
24	i	86	ASN
25	j	52	GLN
26	k	66	ASN
20	l	41	ASN
22	m	30	GLN
22	m	102	ASN
23	n	71	ASN
32	1	175	ASN
32	1	311	ASN
32	1	367	HIS
32	1	407	HIS
32	1	539	HIS
32	1	695	ASN
32	1	803	ASN
32	1	853	HIS
32	1	887	ASN
32	1	925	HIS
33	2	145	GLN
33	2	204	ASN
33	2	262	HIS
33	2	273	ASN
33	2	339	ASN
34	3	156	ASN
34	3	177	GLN
34	3	209	GLN
34	3	248	ASN
34	3	259	ASN
34	3	382	GLN
34	3	481	GLN
34	3	507	ASN
34	3	590	HIS
34	3	609	HIS
34	3	641	GLN
34	3	669	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
34	3	719	GLN
34	3	738	GLN
34	3	920	GLN
34	3	945	HIS
34	3	950	GLN
34	3	1154	HIS
34	3	1192	HIS
34	3	1203	HIS
34	3	1359	ASN
35	4	50	GLN
35	4	170	ASN
35	4	187	ASN
36	5	14	GLN
38	X	25	ASN
38	X	106	HIS
39	Y	168	GLN
39	Y	173	ASN
39	Y	236	HIS
39	Y	239	ASN
41	u	34	HIS
41	u	91	GLN
41	u	167	ASN
41	u	202	GLN
43	v	93	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
16	F	95/112 (84%)	38 (40%)	1 (1%)
17	I	106/160 (66%)	31 (29%)	6 (5%)
18	B	173/214 (80%)	64 (36%)	13 (7%)
28	G	43/44 (97%)	22 (51%)	2 (4%)
29	H	196/1175 (16%)	52 (26%)	23 (11%)
All	All	613/1705 (35%)	207 (33%)	45 (7%)

All (207) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
16	F	2	U
16	F	12	U
16	F	13	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	F	14	U
16	F	17	U
16	F	25	C
16	F	26	A
16	F	28	U
16	F	31	G
16	F	32	U
16	F	37	U
16	F	38	U
16	F	39	G
16	F	40	A
16	F	41	A
16	F	43	C
16	F	44	A
16	F	46	U
16	F	47	A
16	F	48	C
16	F	49	A
16	F	50	G
16	F	51	A
16	F	57	U
16	F	58	C
16	F	64	U
16	F	66	C
16	F	71	G
16	F	75	A
16	F	76	A
16	F	77	G
16	F	82	A
16	F	83	A
16	F	84	C
16	F	86	G
16	F	87	U
16	F	109	U
16	F	111	U
17	I	2	U
17	I	15	G
17	I	19	U
17	I	20	A
17	I	25	U
17	I	27	U
17	I	28	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	I	29	A
17	I	30	G
17	I	39	C
17	I	40	G
17	I	41	U
17	I	48	U
17	I	55	U
17	I	60	U
17	I	74	U
17	I	75	U
17	I	76	A
17	I	77	U
17	I	78	A
17	I	79	A
17	I	92	C
17	I	98	G
17	I	134	U
17	I	135	A
17	I	138	U
17	I	139	A
17	I	143	A
17	I	144	A
17	I	145	U
17	I	151	G
18	B	12	C
18	B	13	A
18	B	18	A
18	B	20	U
18	B	24	G
18	B	27	G
18	B	28	G
18	B	32	G
18	B	33	U
18	B	34	C
18	B	35	A
18	B	39	U
18	B	40	C
18	B	41	A
18	B	75	A
18	B	76	U
18	B	77	A
18	B	78	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
18	B	79	C
18	B	80	G
18	B	81	A
18	B	82	A
18	B	83	C
18	B	84	A
18	B	90	C
18	B	92	U
18	B	94	C
18	B	95	C
18	B	96	U
18	B	97	U
18	B	100	A
18	B	101	C
18	B	103	A
18	B	104	G
18	B	108	C
18	B	109	A
18	B	113	G
18	B	121	U
18	B	126	A
18	B	127	U
18	B	128	A
18	B	129	G
18	B	131	A
18	B	132	A
18	B	139	A
18	B	140	A
18	B	141	G
18	B	142	C
18	B	151	A
18	B	160	U
18	B	162	G
18	B	163	C
18	B	164	C
18	B	165	A
18	B	166	U
18	B	167	A
18	B	168	U
18	B	169	U
18	B	170	U
18	B	171	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
18	B	172	U
18	B	173	U
18	B	174	G
18	B	175	G
28	G	481	A
28	G	482	A
28	G	483	A
28	G	484	A
28	G	485	A
28	G	486	A
28	G	487	A
28	G	488	A
28	G	493	A
28	G	501	A
28	G	502	C
28	G	505	A
28	G	506	U
28	G	507	U
28	G	508	U
28	G	509	A
28	G	510	A
28	G	512	U
28	G	515	U
28	G	518	U
28	G	521	U
28	G	522	U
29	H	32	G
29	H	38	U
29	H	47	U
29	H	48	U
29	H	59	C
29	H	65	A
29	H	66	A
29	H	67	A
29	H	68	U
29	H	83	U
29	H	111	C
29	H	115	U
29	H	116	U
29	H	117	U
29	H	118	U
29	H	119	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
29	H	120	G
29	H	140	G
29	H	141	A
29	H	142	C
29	H	145	G
29	H	1090	A
29	H	1094	G
29	H	1095	U
29	H	1096	C
29	H	1097	G
29	H	1098	C
29	H	1100	A
29	H	1101	C
29	H	1102	C
29	H	1103	C
29	H	1104	U
29	H	1105	C
29	H	1106	G
29	H	1119	C
29	H	1120	G
29	H	1121	U
29	H	1122	U
29	H	1123	C
29	H	1124	U
29	H	1125	U
29	H	1126	G
29	H	1130	U
29	H	1139	G
29	H	1141	C
29	H	1142	G
29	H	1143	C
29	H	1144	U
29	H	1145	U
29	H	1146	G
29	H	1150	U
29	H	1166	G

All (45) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
16	F	50	G
17	I	18	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	I	19	U
17	I	24	A
17	I	91	U
17	I	134	U
17	I	142	G
18	B	17	C
18	B	32	G
18	B	33	U
18	B	77	A
18	B	83	C
18	B	94	C
18	B	95	C
18	B	128	A
18	B	130	A
18	B	150	U
18	B	166	U
18	B	168	U
18	B	172	U
28	G	480	A
28	G	514	U
29	H	46	C
29	H	66	A
29	H	117	U
29	H	1095	U
29	H	1096	C
29	H	1097	G
29	H	1100	A
29	H	1101	C
29	H	1102	C
29	H	1105	C
29	H	1119	C
29	H	1120	G
29	H	1121	U
29	H	1122	U
29	H	1123	C
29	H	1124	U
29	H	1125	U
29	H	1138	G
29	H	1141	C
29	H	1142	G
29	H	1144	U
29	H	1145	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
29	H	1149	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 8 ligands modelled in this entry, 7 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	$\#\|Z\| > 2$
44	GTP	C	1500	45	26,34,34	0.94	1 (3%)	32,54,54	1.61	4 (12%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
44	GTP	C	1500	45	-	4/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	C	1500	GTP	C6-N1	-2.42	1.34	1.37

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	C	1500	GTP	PB-O3B-PG	-4.54	117.24	132.83
44	C	1500	GTP	PA-O3A-PB	-4.03	119.00	132.83
44	C	1500	GTP	C3'-C2'-C1'	3.35	106.02	100.98
44	C	1500	GTP	C8-N7-C5	2.49	107.74	102.99

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
44	C	1500	GTP	O4'-C4'-C5'-O5'
44	C	1500	GTP	C3'-C4'-C5'-O5'
44	C	1500	GTP	PB-O3A-PA-O2A
44	C	1500	GTP	PB-O3A-PA-O1A

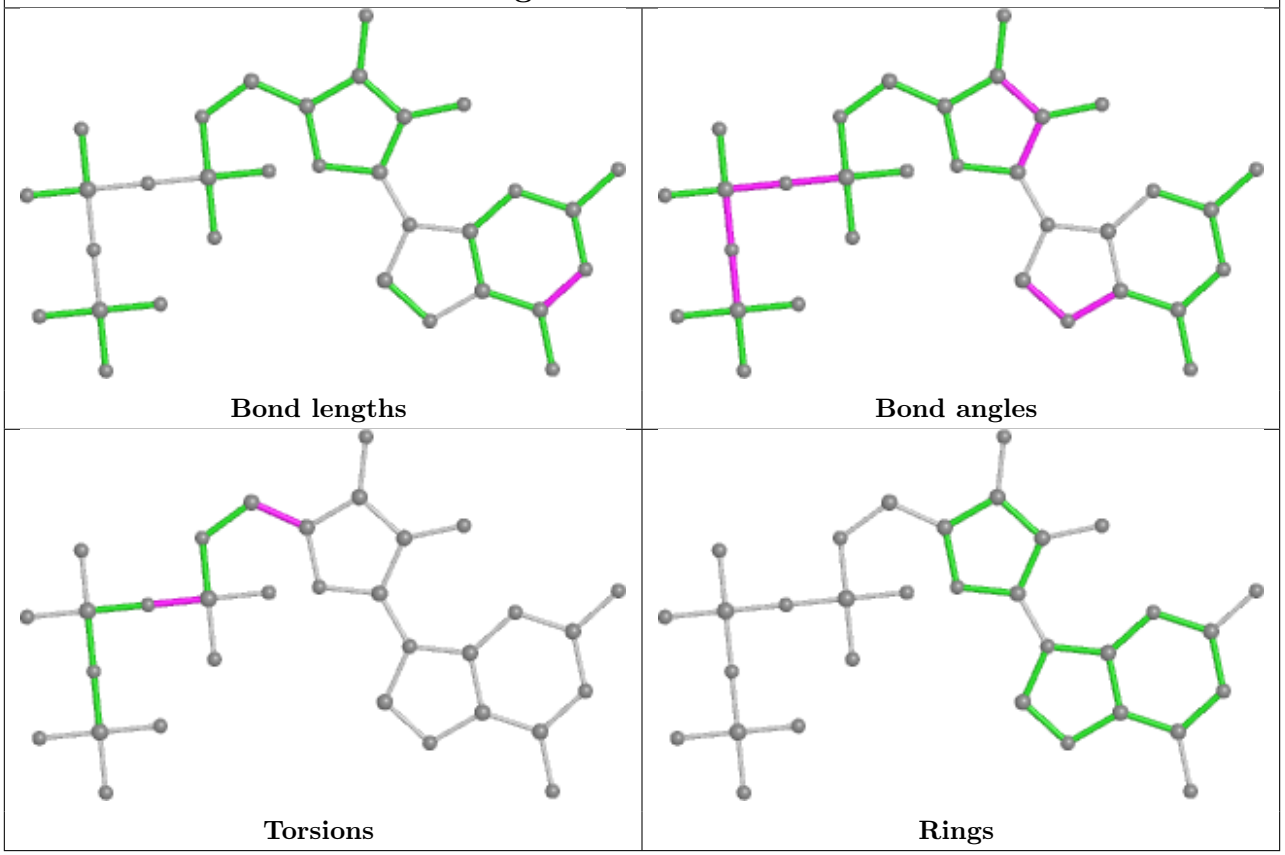
There are no ring outliers.

1 monomer is involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
44	C	1500	GTP	6	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GTP C 1500



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

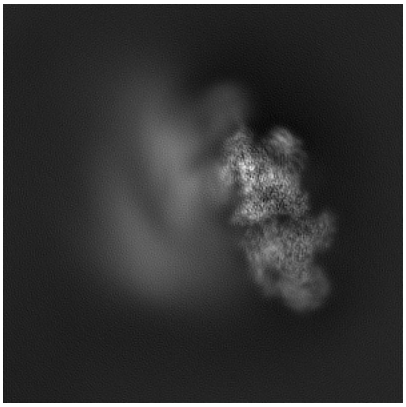
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6972. These allow visual inspection of the internal detail of the map and identification of artifacts.

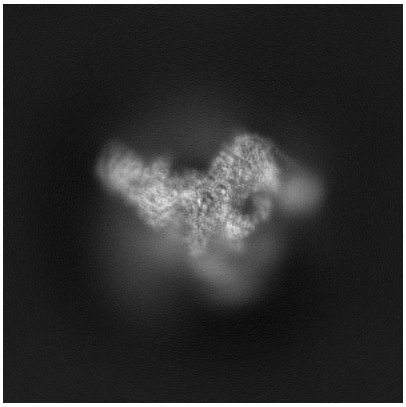
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

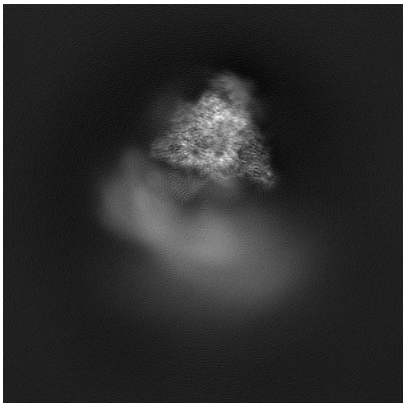
6.1.1 Primary map



X



Y

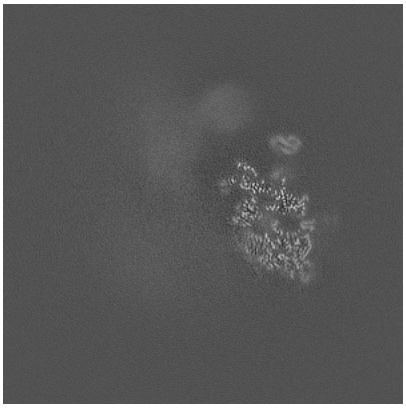


Z

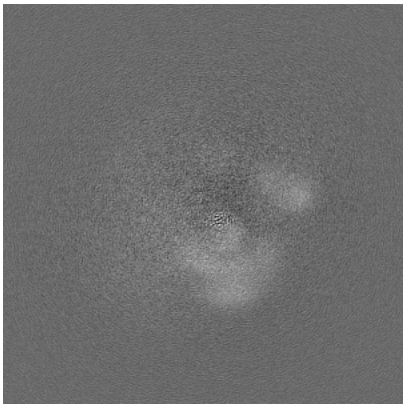
The images above show the map projected in three orthogonal directions.

6.2 Central slices

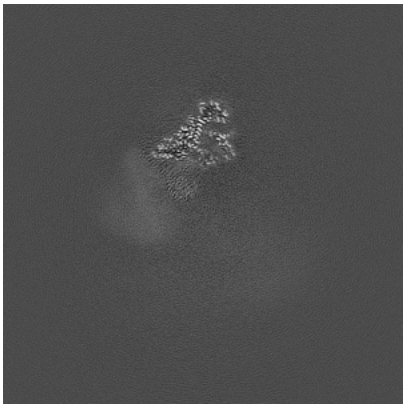
6.2.1 Primary map



X Index: 200



Y Index: 200

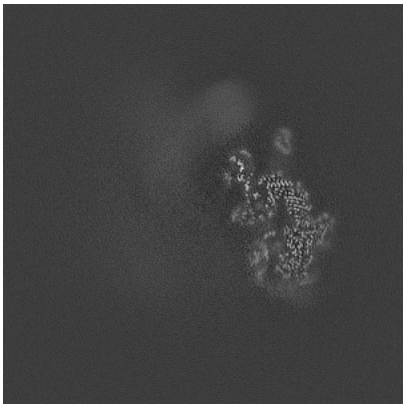


Z Index: 200

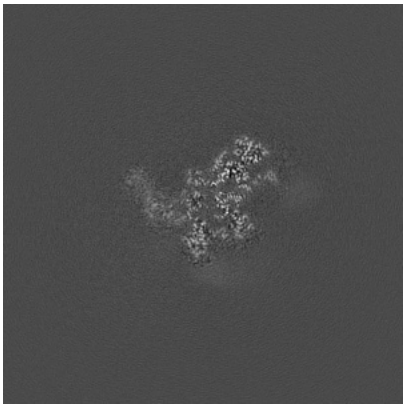
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

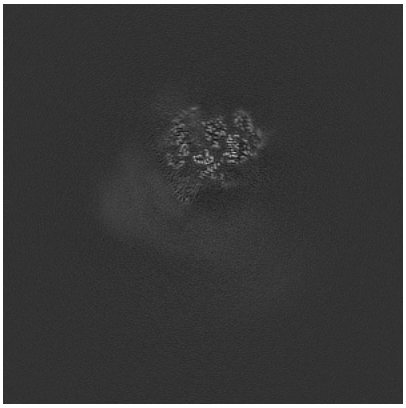
6.3.1 Primary map



X Index: 212



Y Index: 247

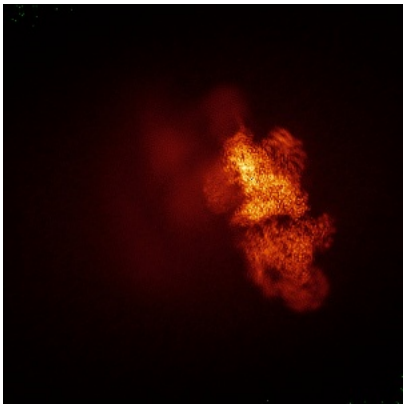


Z Index: 224

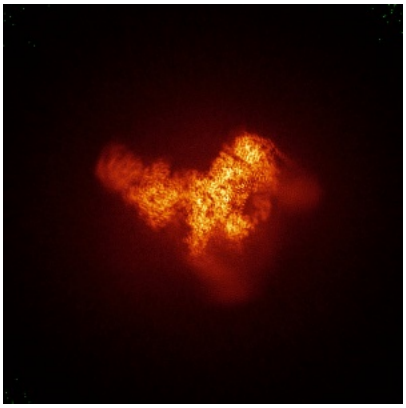
The images above show the largest variance slices of the map in three orthogonal directions.

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

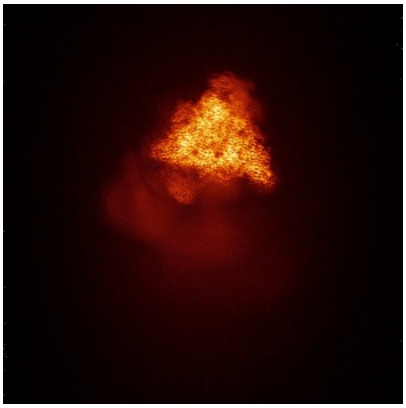
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.023. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

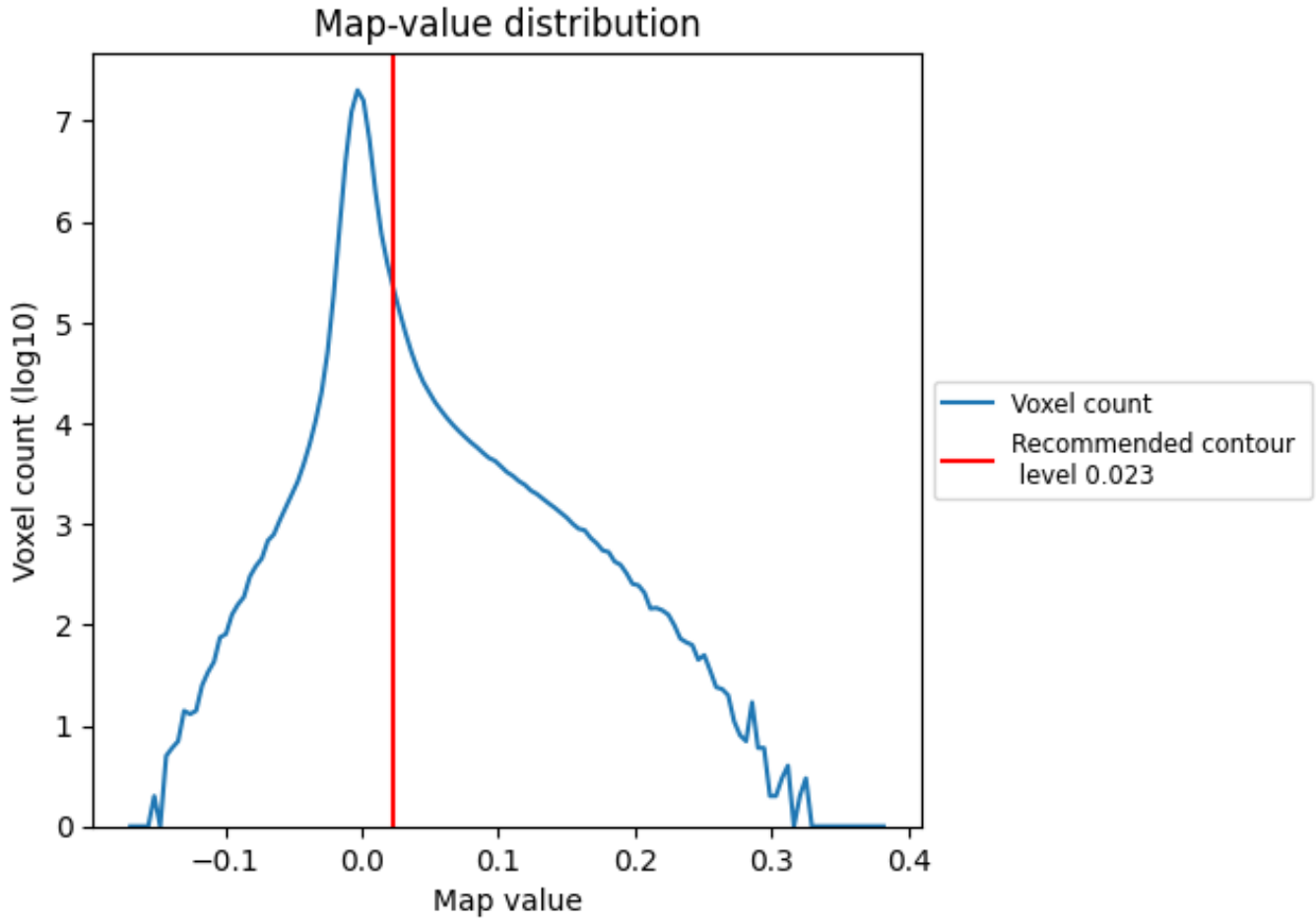
6.6 Mask visualisation (i)

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

7 Map analysis

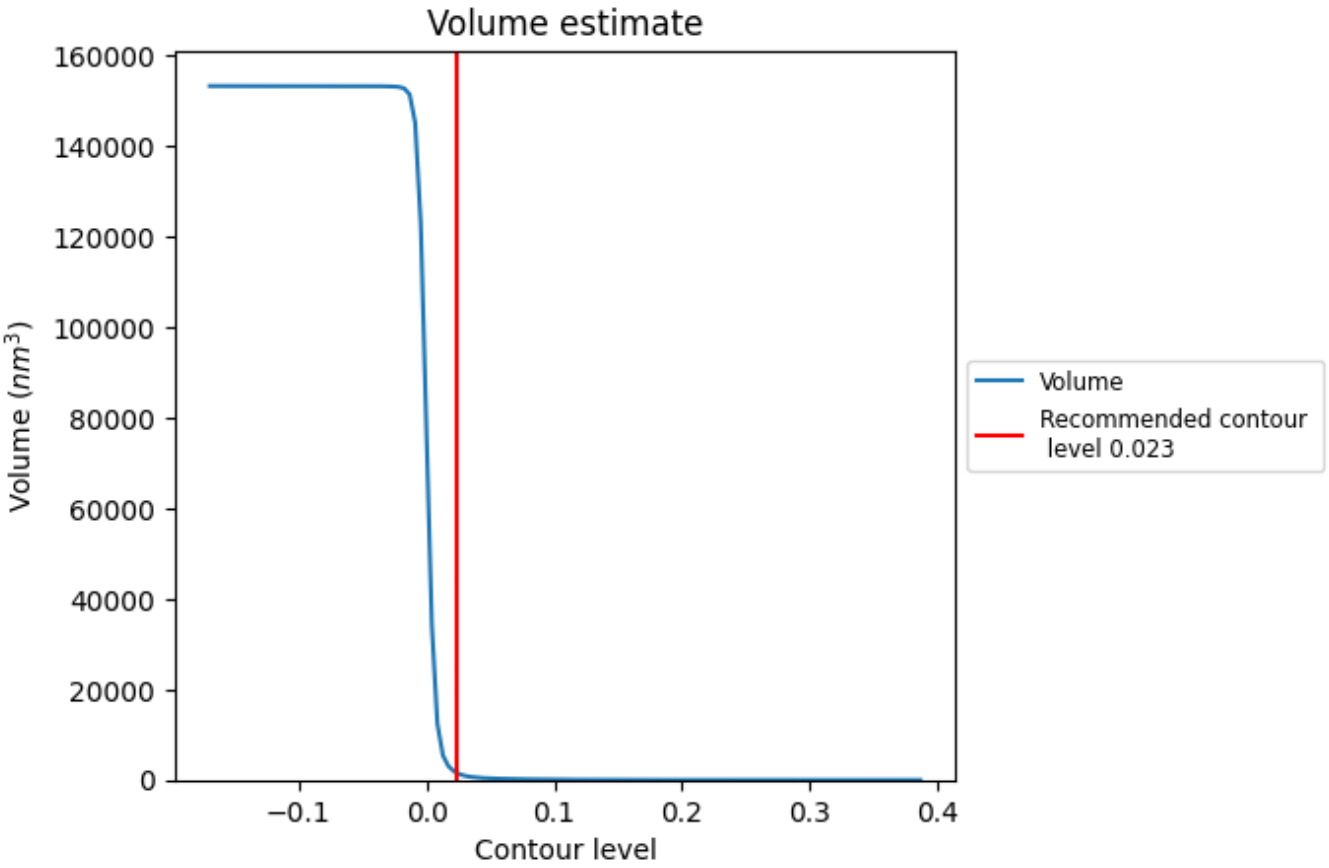
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

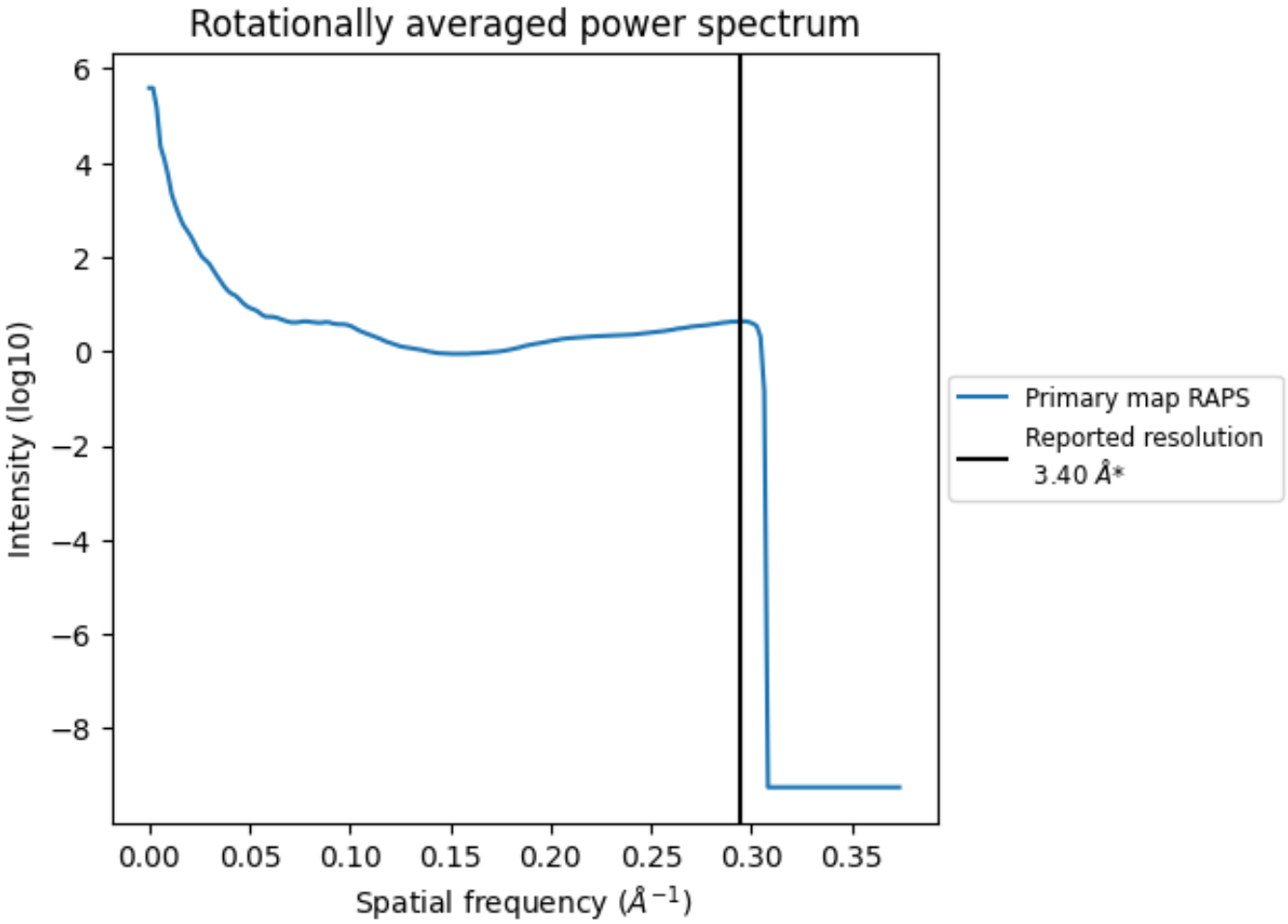
7.2 Volume estimate



The volume at the recommended contour level is 1701 nm^3; this corresponds to an approximate mass of 1536 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.294 Å^{-1}

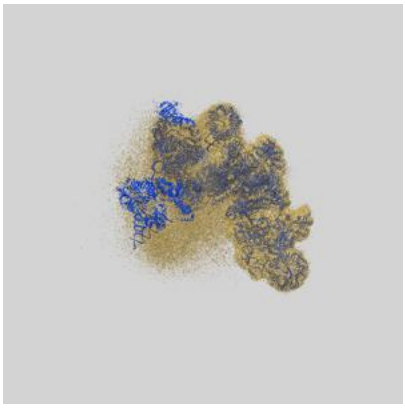
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

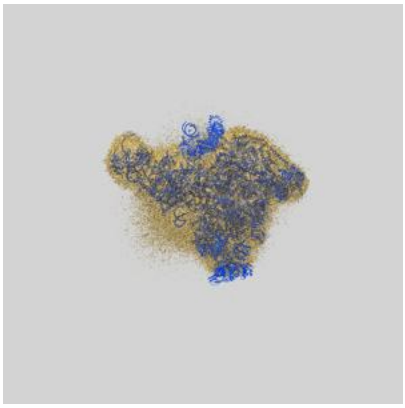
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6972 and PDB model 5ZWM. Per-residue inclusion information can be found in section 3 on page 14.

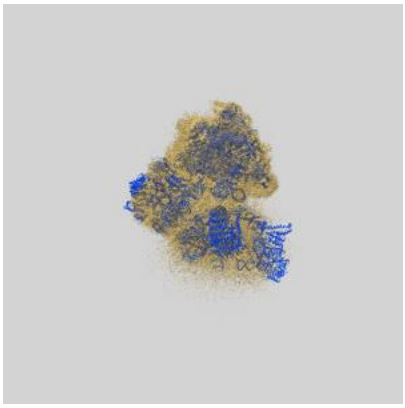
9.1 Map-model overlay



X



Y



Z

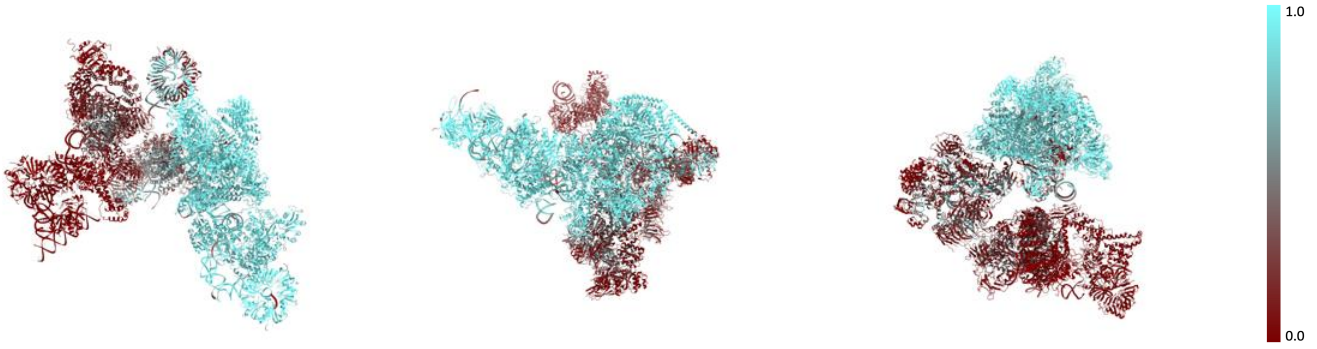
The images above show the 3D surface view of the map at the recommended contour level 0.023 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)

X Y Z

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

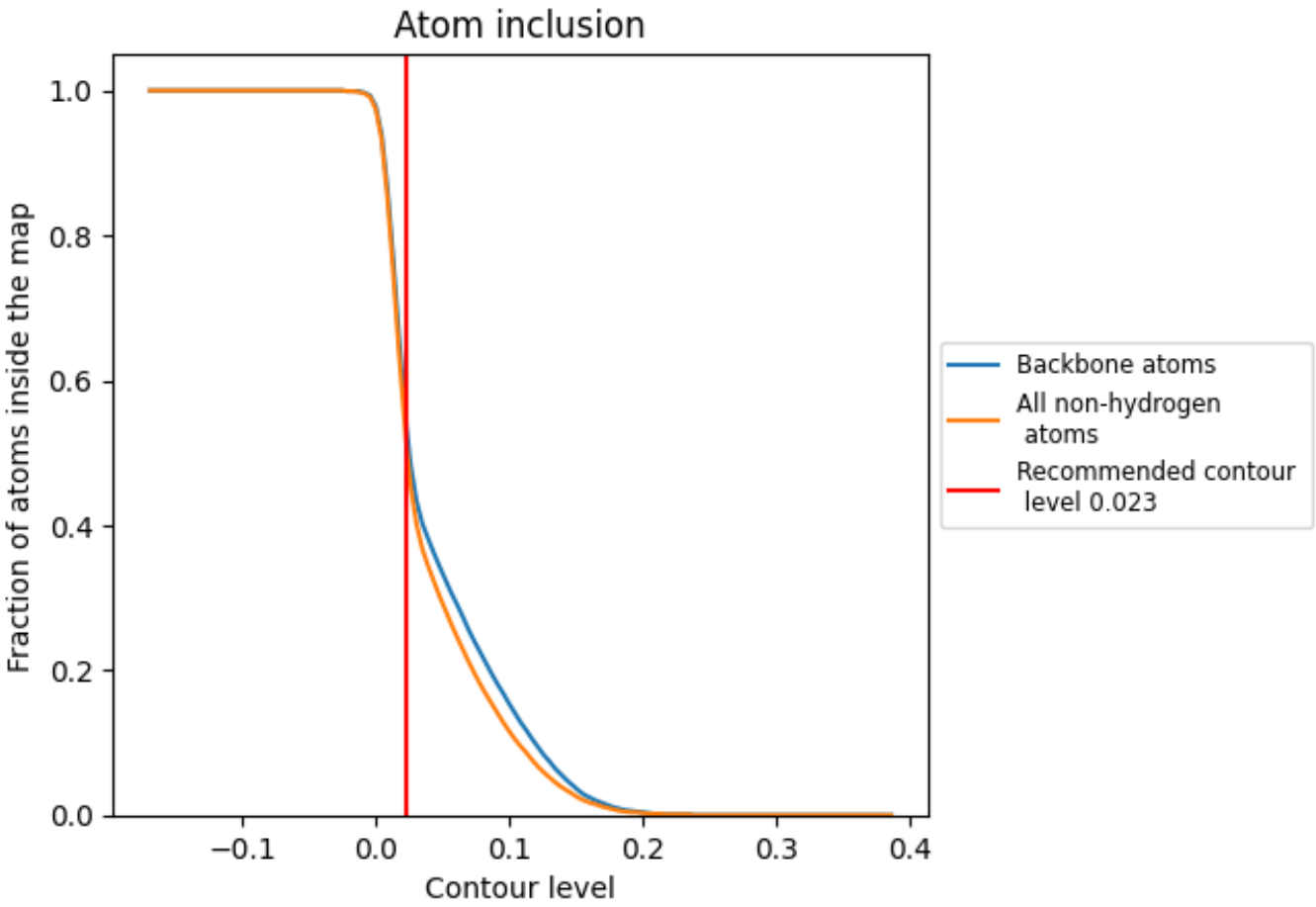
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.023).

9.4 Atom inclusion (i)



At the recommended contour level, 53% of all backbone atoms, 50% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.023) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5050	0.1620
1	0.1700	0.0010
2	0.1600	0.0170
3	0.1710	0.0070
4	0.0560	-0.0180
5	0.2770	0.0070
6	0.3170	-0.0020
A	0.8430	0.3780
B	0.8820	0.1520
C	0.9060	0.3540
D	0.2770	-0.0020
E	0.9180	0.4420
F	0.8230	0.2670
G	0.2000	-0.0050
H	0.0740	0.0020
I	0.8240	0.3140
J	0.9240	0.4150
K	0.9220	0.4350
L	0.9290	0.4290
M	0.9550	0.5200
N	0.9200	0.3230
O	0.7580	0.2720
P	0.5390	-0.0080
Q	0.3850	-0.0020
R	0.4290	-0.0110
S	0.5940	0.0110
T	0.1550	-0.0060
U	0.2720	-0.0290
V	0.2620	0.0160
X	0.0050	0.0070
Y	0.0010	-0.0100
Z	0.0060	-0.0350
a	0.9490	0.2050
b	0.9380	0.1490
c	0.9310	0.0690

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
d	0.9810	0.2910
e	0.9510	0.0850
f	0.9210	0.1000
g	0.8570	0.0540
h	0.0070	0.0250
i	0.0020	0.0280
j	0.0040	-0.0190
k	0.0040	-0.0070
l	0.0150	0.0050
m	0.0080	0.0080
n	0.0020	0.0010
o	0.0080	0.0140
p	0.0060	0.0150
q	0.4430	0.0150
r	0.5030	0.0150
s	0.4160	0.0280
t	0.6400	0.0210
u	0.0320	-0.0030
v	0.0980	-0.0010
w	0.0060	-0.0230
x	0.5510	0.0480
y	0.6170	0.0200
z	0.2920	-0.0110