Full wwPDB EM Validation Report

May 26, 2025 – 06:25 AM EDT

PDB ID	:	8EWI / pdb_00008ewi
EMDB ID	:	EMD-28646
Title	:	Structure of the human UBR5 HECT-type E3 ubiquitin ligase in a tetrameric form
Authors	:	Wang, F.; He, Q.; Lin, G.; Li, H.
Deposited on	:	2022-10-23
Resolution	:	3.50 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:

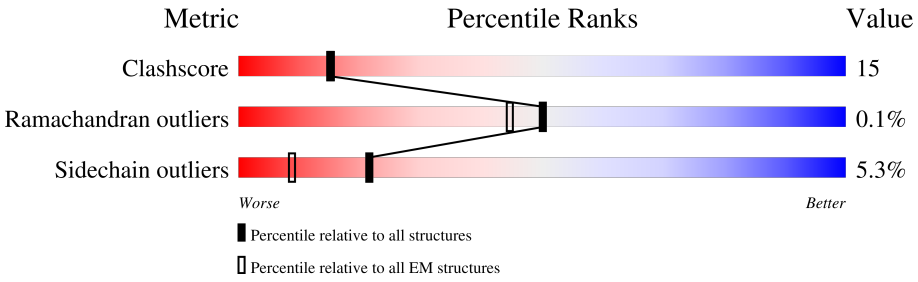
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.50 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

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	2799	9% 41% 21% • 37%
1	B	2799	10% 41% 20% • 37%
1	C	2799	11% 42% 20% • 37%
1	D	2799	11% 40% 21% • 37%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 55708 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 E3 ubiquitin-protein ligase UBR5.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1775	Total	C	N	O	S	0	0
			13924	8781	2440	2599	104		
1	B	1775	Total	C	N	O	S	0	0
			13924	8781	2440	2599	104		
1	C	1775	Total	C	N	O	S	0	0
			13924	8781	2440	2599	104		
1	D	1775	Total	C	N	O	S	0	0
			13924	8781	2440	2599	104		

- Molecule 2 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

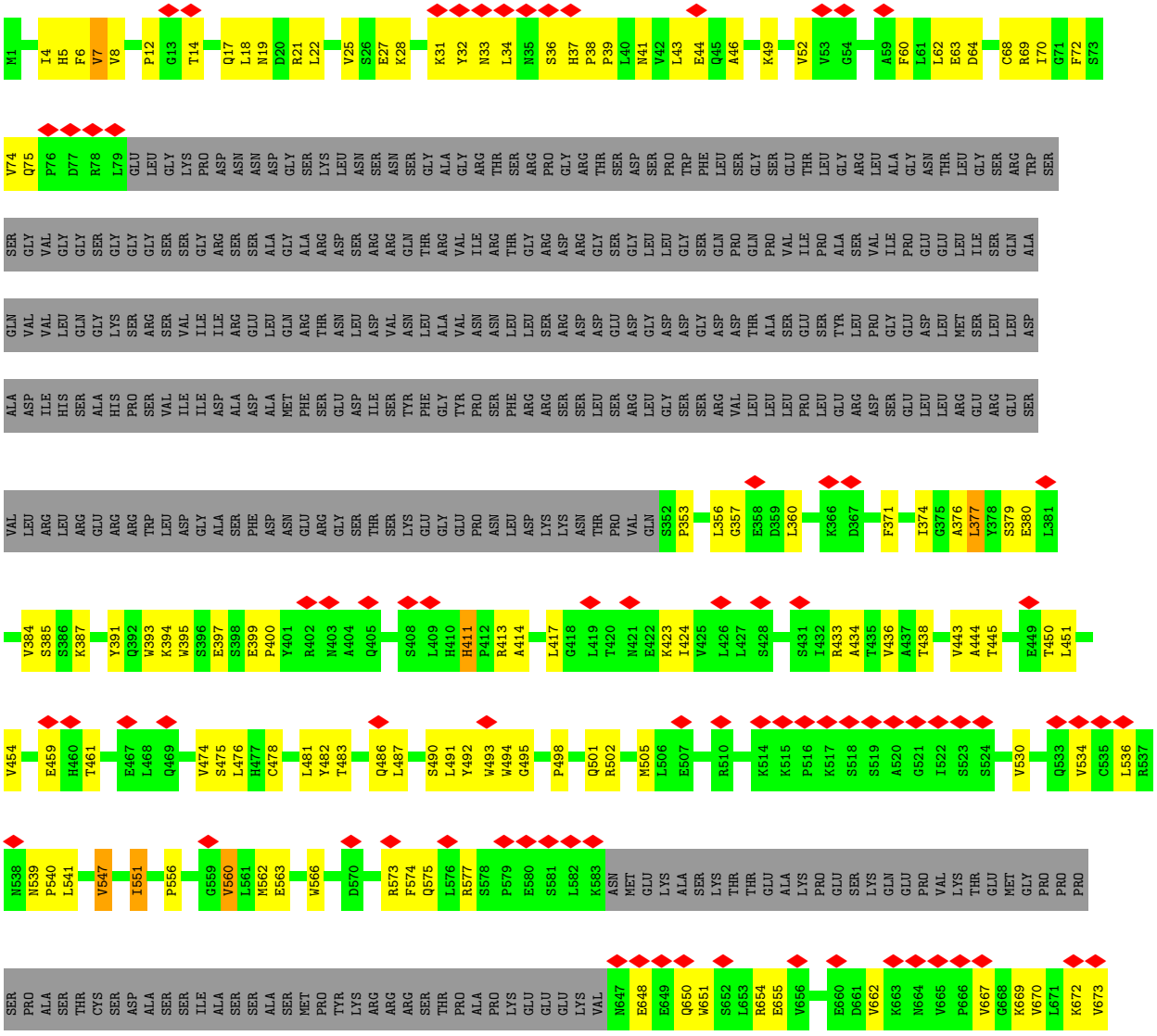
Mol	Chain	Residues	Atoms		AltConf
2	A	3	Total	Zn	0
			3	3	
2	B	3	Total	Zn	0
			3	3	
2	C	3	Total	Zn	0
			3	3	
2	D	3	Total	Zn	0
			3	3	

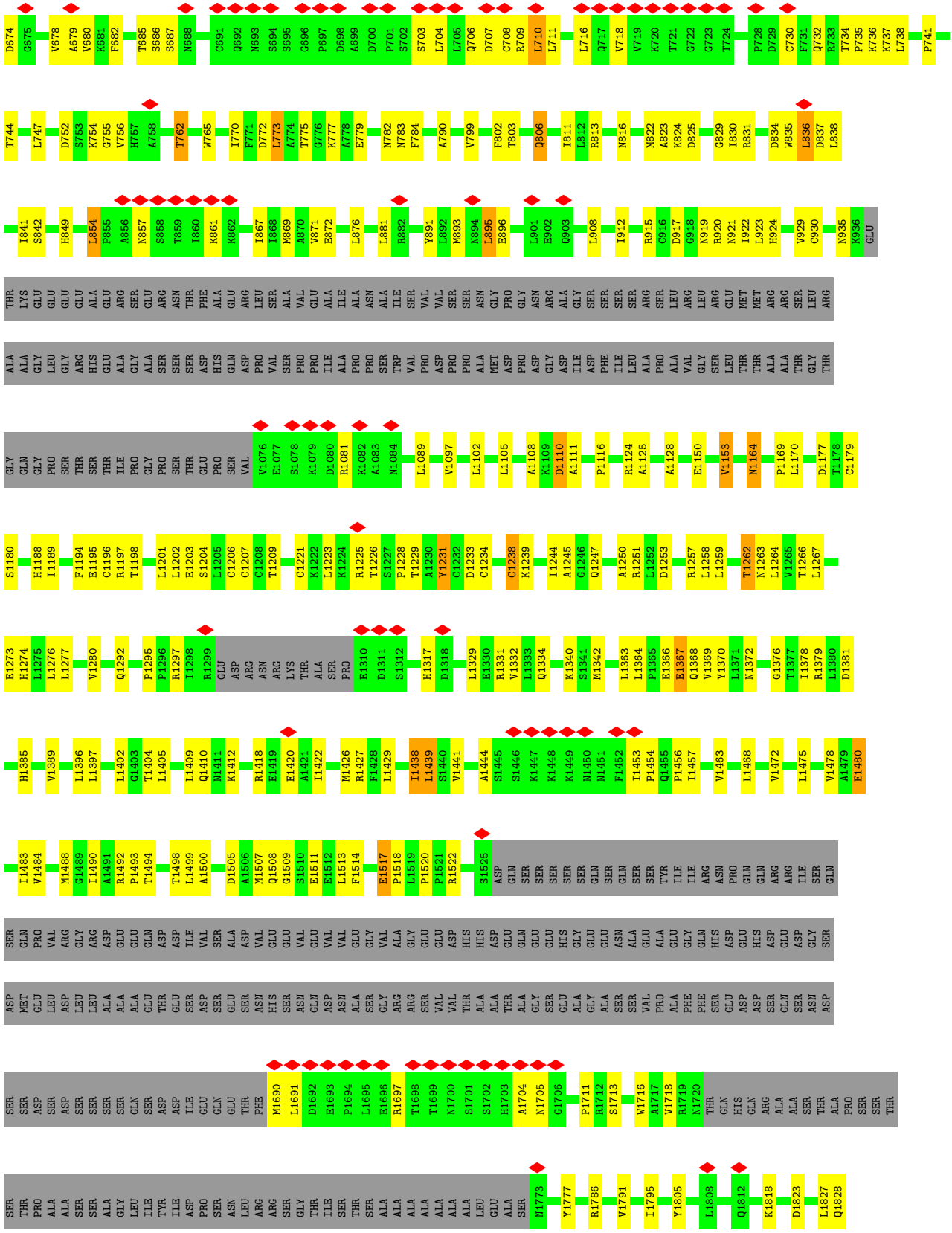
3 Residue-property plots (i)

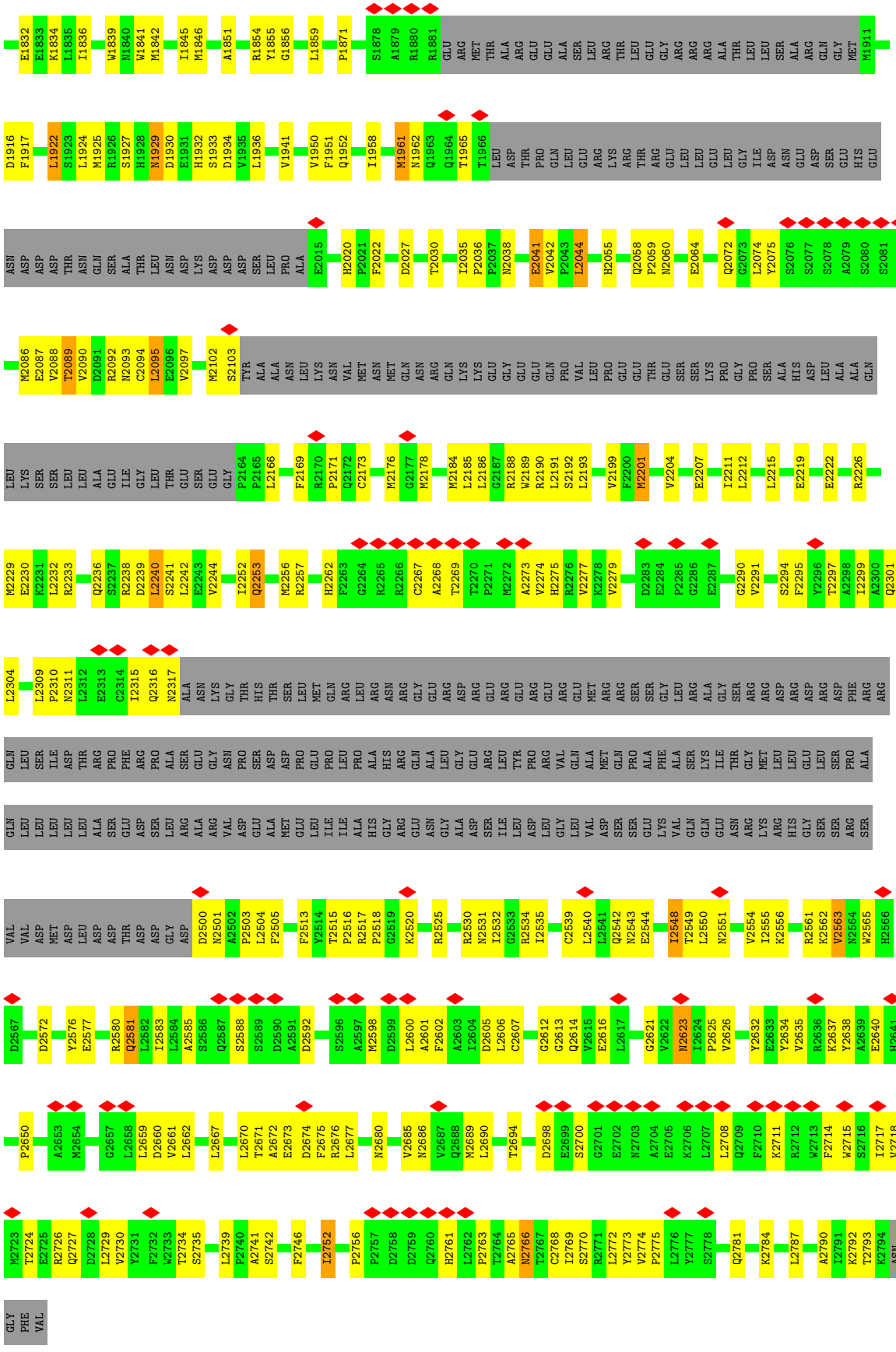
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: E3 ubiquitin-protein ligase UBR5

Chain A:

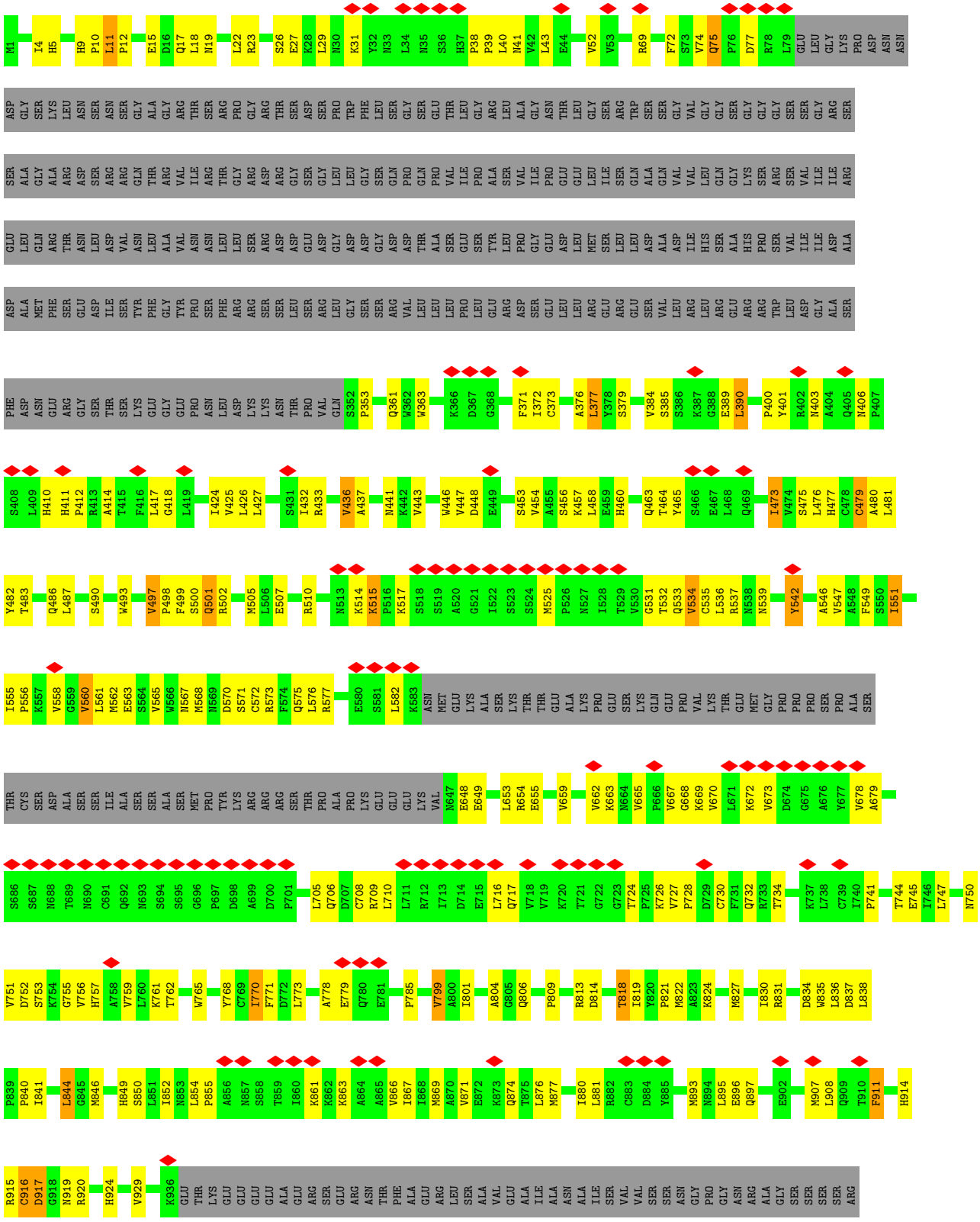


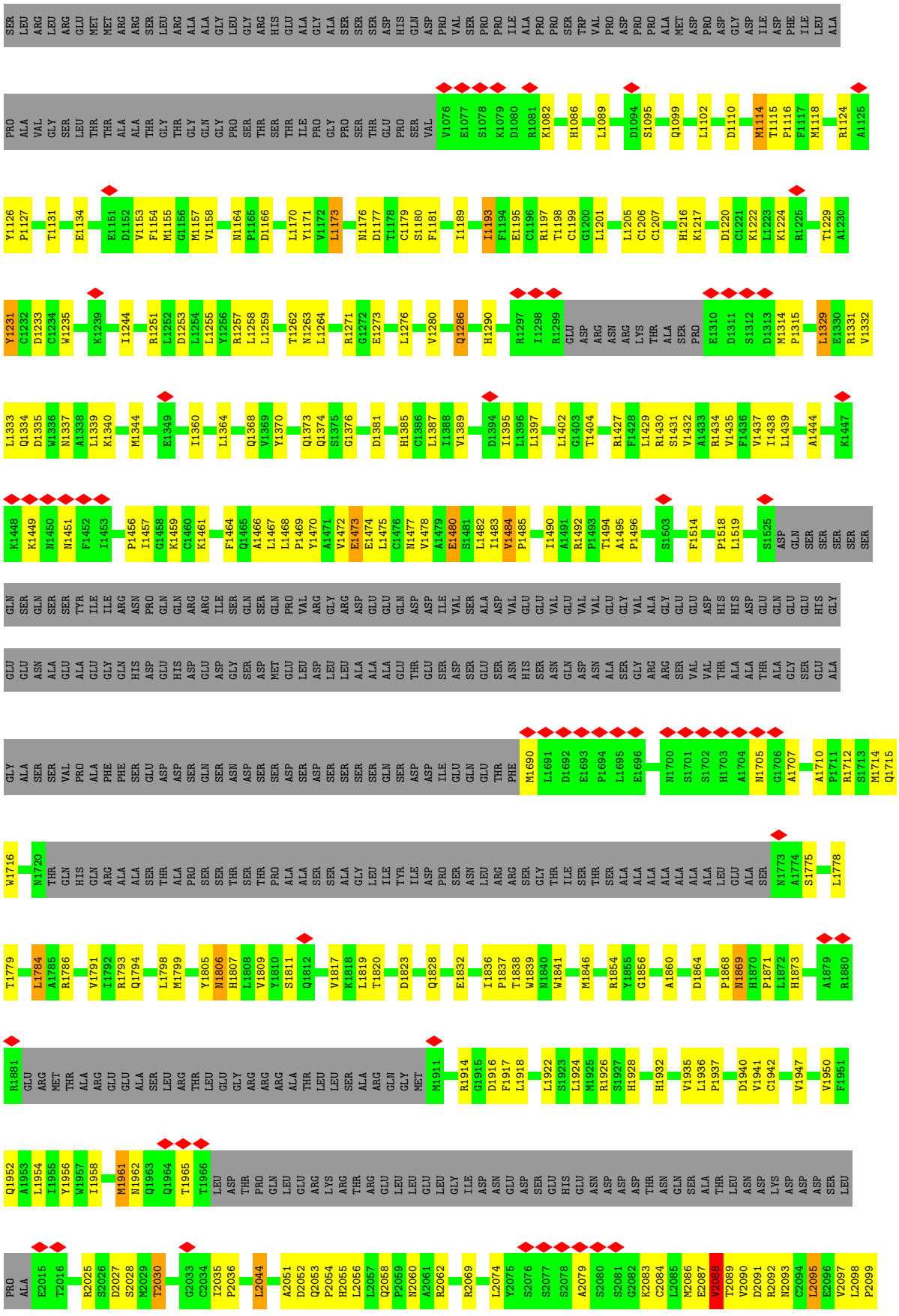

D674 G675 V678 A679 V680 K681 F682 T685 S686 S687 N688 C691 Q692 N693 S694 S695 G696 P697 D698 A699 D700 P701 S702 S703 L704 L705 Q706 D707 C708 R709 L710 L711 L716 Q717 V718 V719 K720 T721 G722 G723 T724 P728 D729 C730 F731 Q732 R733 T734 P735 K736 K737 L738 P741
T744 L747 D752 S753 K754 G755 V756 H757 A758 T762 W765 I770 F771 D772 L773 A774 T775 G776 K777 A778 E779 N782 N783 F784 A790 V799 F802 T803 Q806 I811 L812 R813 N816 M822 A823 K824 D825 G829 I830 R831 D834 W835 L836 D837 L838
I841 S842 H849 L854 P855 A856 N857 S858 T859 I860 K861 K862 I867 I868 M869 A870 V871 E872 L876 L881 R882 Y891 L892 M893 N894 L895 E896 L901 E902 Q903 L908 I912 R915 C916 D917 G918 N919 R920 N921 I922 L923 H924 V929 C930 N935 K936 GLU
THR LYS GLU GLU GLU ALA GLU ARG SER GLU ARG ASN THR PHE ALA GLU ARG LEU SER ALA VAL GLU ALA ILE ALA ASN ALA ILE SER VAL VAL SER SER ASN GLY PRO GLY ASN ARG ALA GLY SER SER SER ARG SER LEU ARG LEU ARG GLU MET MET ARG ARG SER LEU ARG
ALA ALA GLY LEU GLY ARG HIS GLU ALA GLY ALA SER SER SER ASP HIS GLN ASP PRO VAL SER PRO PRO ILE ALA PRO PRO SER TRP VAL PRO ASP PRO PRO ALA MET ASP PRO ASP GLY ASP ILE ASP PHE ILE LEU ALA PRO ALA VAL GLY SER LEU THR THR ALA ALA THR GLY THR
GLY GLN GLY PRO SER THR SER THR ILE PRO GLY PRO SER THR GLU PRO SER VAL V1076 E1077 S1078 K1079 D1080 R1081 K1082 A1083 N1084 L1089 V1097 L1102 L1105 A1108 K1109 D1110 A1111 P1116 R1124 A1125 A1128 E1150 V1153 N1164 P1169 L1170 D1177 T1178 C1179
S1180 H1188 I1189 F1194 E1195 C1196 R1197 T1198 L1201 L1202 E1203 S1204 L1205 C1206 C1207 C1208 T1209 C1221 K1222 L1223 K1224 R1225 T1226 S1227 P1228 T1229 A1230 Y1231 C1232 D1233 C1234 C1238 K1239 I1244 A1245 G1246 Q1247 A1250 R1251 L1252 D1253 R1257 L1258 L1259 T1262 N1263 L1264 V1265 T1266 L1267
E1273 H1274 L1275 L1276 L1277 V1280 Q1292 P1295 P1296 R1297 I1298 R1299 GLU ASP ARG ASN ARG LYS THR ALA SER PRO E1310 D1311 S1312 H1317 D1318 L1329 E1330 R1331 V1332 L1333 Q1334 K1340 S1341 M1342 L1363 L1364 P1365 E1366 E1367 Q1368 V1369 Y1370 L1371 N1372 G1376 T1377 I1378 R1379 L1380 D1381
H1385 V1389 L1396 L1397 L1402 G1403 T1404 L1405 L1409 Q1410 N1411 K1412 R1418 E1419 E1420 A1421 I1422 M1426 R1427 F1428 L1429 I1438 L1439 S1440 V1441 A1444 S1445 S1446 K1447 K1448 K1449 N1450 N1451 F1452 I1453 P1454 Q1455 P1456 I1457 V1463 L1468 V1472 L1475 V1478 A1479 E1480
I1483 V1484 M1488 G1489 I1490 A1491 R1492 P1493 T1494 T1498 L1499 A1500 D1505 A1506 M1507 Q1508 G1509 S1510 E1511 E1512 L1513 F1514 E1517 P1518 L1519 P1520 P1521 R1522 S1525 ASP GLN SER SER SER SER GLN SER GLN SER SER TYR ILE ILE ARG ASN PRO GLN GLN ARG ARG ILE SER GLN
SER GLN PRO VAL ARG GLY ARG ASP GLU GLU GLN ASP ASP ILE VAL SER ALA ASP VAL GLU GLU VAL GLU VAL VAL GLU GLY VAL ALA GLY GLU GLU ASP HIS HIS ASP GLU GLN GLU GLU HIS GLY GLU GLU GLU ASN ALA GLU ALA GLU GLY GLN HIS ASP GLU HIS ASP ASP GLU ASP GLY SER
ASP MET GLU LEU ASP LEU LEU ALA ALA GLU THR GLU SER ASP SER GLU SER ASN HIS SER ASN GLN ASP ASN ALA SER GLY ARG ARG SER VAL VAL THR ALA ALA THR ALA GLY SER GLU ALA GLY ALA SER SER VAL PRO ALA PHE PHE SER GLU ASP ASP SER GLN SER ASN ASP
SER SER ASP SER ASP SER SER SER SER GLN SER ILE ASP PHE GLU GLN GLU THR PHE M1690 L1691 D1692 E1693 P1694 L1696 E1696 R1697 T1698 T1699 N1700 S1701 S1702 H1703 A1704 N1705 G1706 P1711 R1712 S1713 W1716 A1717 V1718 R1719 N1720 THR GLN HIS GLN ARG ALA ALA SER THR ALA PRO SER SER THR
SER THR PRO ALA ALA SER SER ALA GLY LEU ILE TYR ILE ASP PRO SER ASN LEU ARG ARG SER GLY THR ILE SER THR SER ALA ALA ALA ALA ALA ALA LEU GLU ALA SER N1773 Y1777 R1786 V1791 I1795 Y1805 L1808 Q1812 K1818 D1823 L1827 Q1828

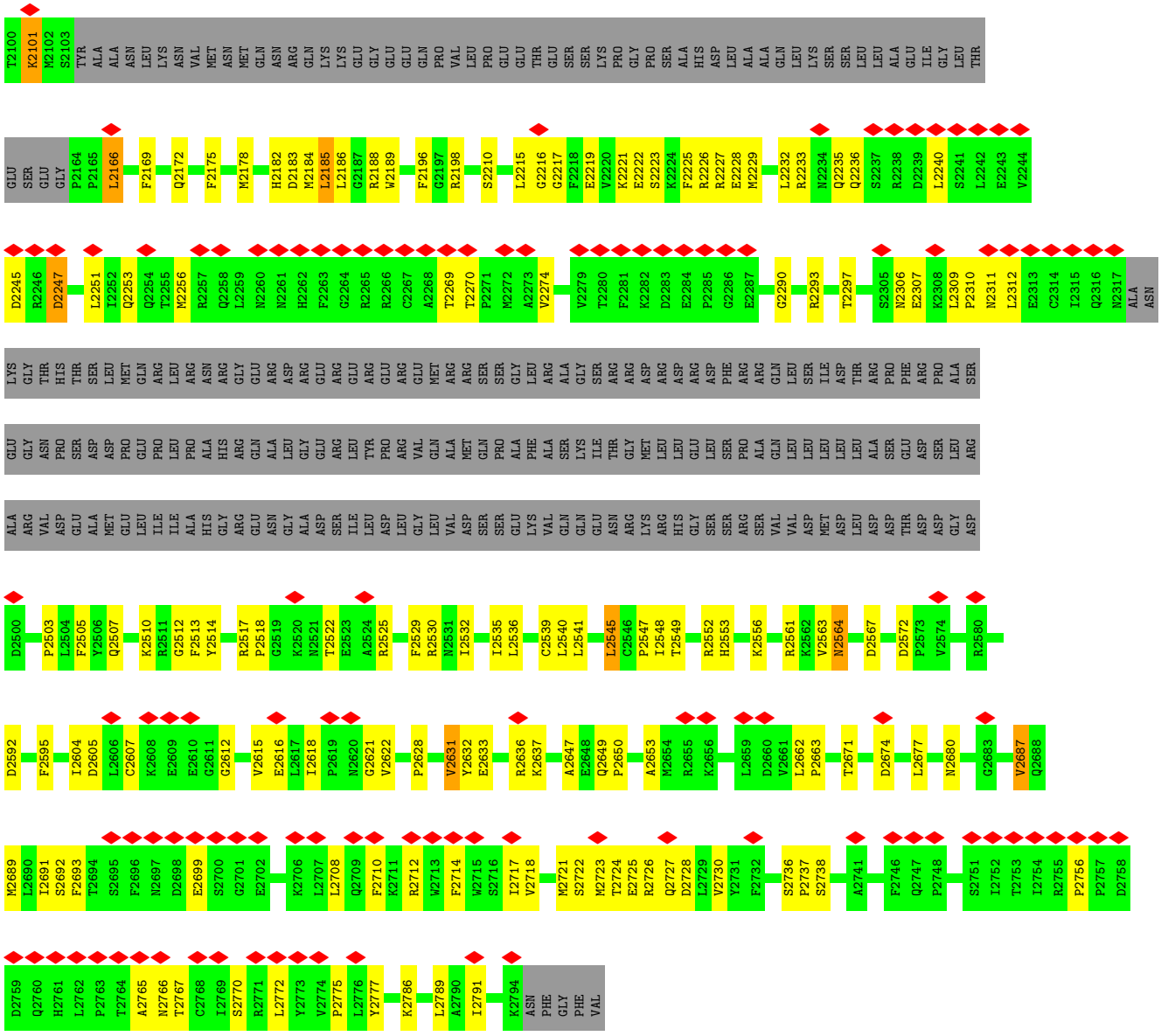

E1832 E1833 K1834 L1835 I1836 W1839 N1840 W1841 M1842 I1845 M1846 A1851 R1854 Y1855 G1856 L1859 P1871 S1878 A1879 R1880 R1881 GLU ARG MET THR ALA ARG GLU GLU ALA SER LEU ARG THR LEU GLU GLY ARG ARG ALA THR LEU LEU SER ALA ARG GLN GLY MET M1911
D1916 F1917 L1922 S1923 L1924 M1925 R1926 S1927 H1928 N1929 D1930 E1931 H1932 S1933 D1934 V1935 L1936 V1941 V1950 F1951 Q1952 I1958 M1961 N1962 Q1963 Q1964 T1965 T1966 LEU ASP THR PRO GLN LEU GLU ARG LYS ARG THR ARG GLU LEU LEU GLU LEU GLY ILE ASP ASN GLU ASP SER GLU HIS GLU
ASN ASP ASP ASP THR ASN GLN SER ALA THR LEU ASN ASP LYS ASP ASP SER LEU PRO ALA E2015 H2020 P2021 F2022 D2027 T2030 I2035 P2036 P2037 N2038 E2041 V2042 P2043 L2044 H2055 Q2058 P2059 N2060 E2064 Q2072 G2073 L2074 Y2075 S2076 S2077 S2078 A2079 S2080 S2081 G2082
M2086 E2087 V2088 T2089 V2090 D2091 R2092 N2093 C2094 L2095 E2096 V2097 M2102 S2103 TYR ALA ALA ASN LEU LYS ASN VAL MET ASN MET GLN ASN ARG GLN LYS LYS GLU GLY GLU GLU GLN PRO VAL LEU PRO GLU GLU THR GLU SER LYS PRO GLY PRO SER ALA HIS ASP LEU ALA ALA GLN
LEU LYS SER SER LEU LEU ALA GLU ILE GLY LEU THR GLU SER GLU GLY P2164 P2165 L2166 F2169 R2170 P2171 Q2172 C2173 M2176 G2177 M2178 M2184 L2185 L2186 G2187 R2188 W2189 R2190 L2191 S2192 L2193 V2199 F2200 M2201 V2204 E2207 I2211 L2212 L2215 E2219 E2222 R2226
M2229 E2230 K2231 L2232 R2233 Q2236 S2237 R2238 D2239 L2240 S2241 L2242 E2243 V2244 I2252 Q2253 M2256 R2257 H2262 F2263 G2264 R2265 R2266 C2267 A2268 T2269 T2270 P2271 M2272 A2273 V2274 H2275 R2276 V2277 K2278 V2279 D2283 E2284 P2285 G2286 E2287 G2290 V2291 S2294 F2295 Y2296 T2297 A2298 I2299 A2300 Q2301 A2302 F2303
L2304 L2309 P2310 N2311 L2312 E2313 C2314 I2315 Q2316 N2317 ALA ASN LYS GLY THR HIS THR SER LEU MET GLN ARG LEU ARG ASN ARG GLY GLU ARG ASP ARG GLU ARG GLU ARG GLU ARG GLU MET ARG ARG SER SER GLY LEU ARG ALA GLY SER ARG ARG ASP ARG ASP ARG ASP PRO ARG ARG
GLN LEU SER ILE ASP THR ARG PRO PHE ARG PRO ALA SER GLU GLY ASN PRO SER ASP ASP PRO GLU PRO LEU PRO ALA HIS ARG GLN ALA LEU GLY GLU ARG LEU GLY ALA ASP SER ILE LEU LEU ASP LEU GLY LEU VAL ASP SER SER GLU LYS VAL GLN GLN GLU ASN ARG LEU GLU SER PHE
GLN LEU LEU LEU LEU ALA SER GLU ASP SER LEU ARG ALA ARG VAL ASP GLU ALA MET GLU LEU ILE ILE ALA HIS GLY ARG GLU ASN GLY ALA ASP SER LEU GLY LEU VAL ASP SER SER GLU LYS VAL GLN GLN GLU ASN ARG LYS ARG HIS GLY SER SER ARG SER
VAL VAL ASP MET ASP LEU ASP ASP THR ASP ASP GLY ASP D2500 N2501 A2502 P2503 L2504 F2505 P2513 Y2514 T2515 P2516 R2517 P2518 G2519 K2520 R2525 R2530 N2531 I2532 G2533 R2534 I2535 C2539 L2540 L2541 Q2542 N2543 E2544 I2548 T2549 L2550 N2551 V2554 I2555 K2556 R2561 K2562 V2563 N2564 W2565 H2566
D2567 D2572 Y2576 E2577 R2580 Q2581 L2582 I2583 L2584 A2585 S2586 Q2587 S2588 S2589 D2590 A2591 D2592 S2596 A2597 M2598 D2599 L2600 A2601 F2602 A2603 I2604 D2605 L2606 C2607 G2612 G2613 Q2614 V2615 E2616 L2617 G2621 V2622 N2623 I2624 P2625 V2626 Y2632 I2633 Y2634 V2635 R2636 K2637 Y2638 A2639 E2640 H2641 A2647
P2650 A2653 M2654 G2657 L2658 L2659 D2660 V2661 L2662 L2667 L2670 T2671 A2672 E2673 D2674 F2675 R2676 L2677 N2680 V2685 N2686 V2687 Q2688 M2689 L2690 T2694 D2698 E2699 S2700 G2701 E2702 N2703 A2704 E2705 K2706 L2707 L2708 Q2709 F2710 K2711 R2712 W2713 F2714 W2715 S2716 I2717 V2718 E2719 K2720 M2721 S2722
M2723 T2724 E2725 R2726 Q2727 D2728 L2729 V2730 Y2731 F2732 W2733 T2734 S2735 L2739 P2740 A2741 S2742 F2746 I2752 P2756 P2757 D2758 D2759 Q2760 H2761 L2762 P2763 T2764 A2765 N2766 T2767 C2768 I2769 S2770 R2771 L2772 Y2773 V2774 P2775 L2776 Y2777 S2778 Q2781 K2784 L2787 A2790 I2791 K2792 T2793 K2794 ASN PHE
GLY PHE VAL

• Molecule 1: E3 ubiquitin-protein ligase UBR5

Chain B:

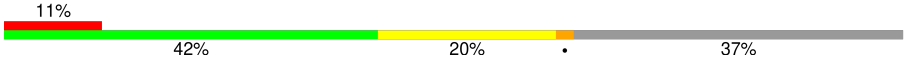


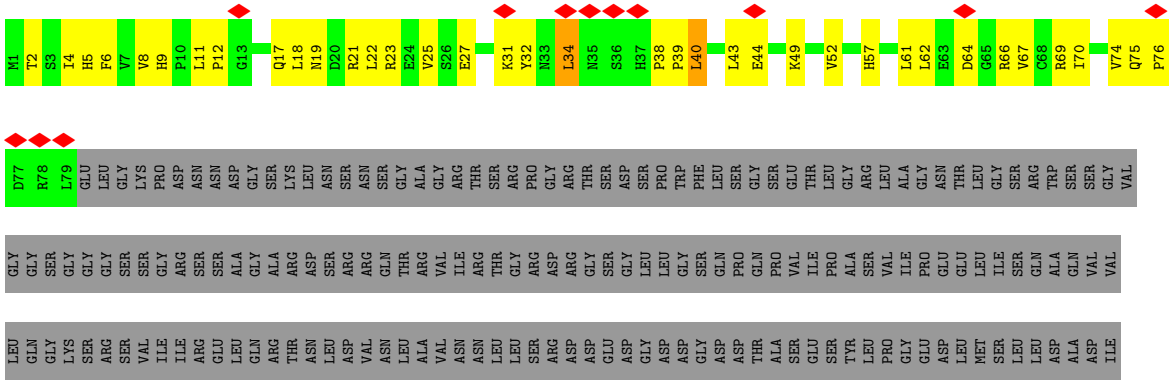


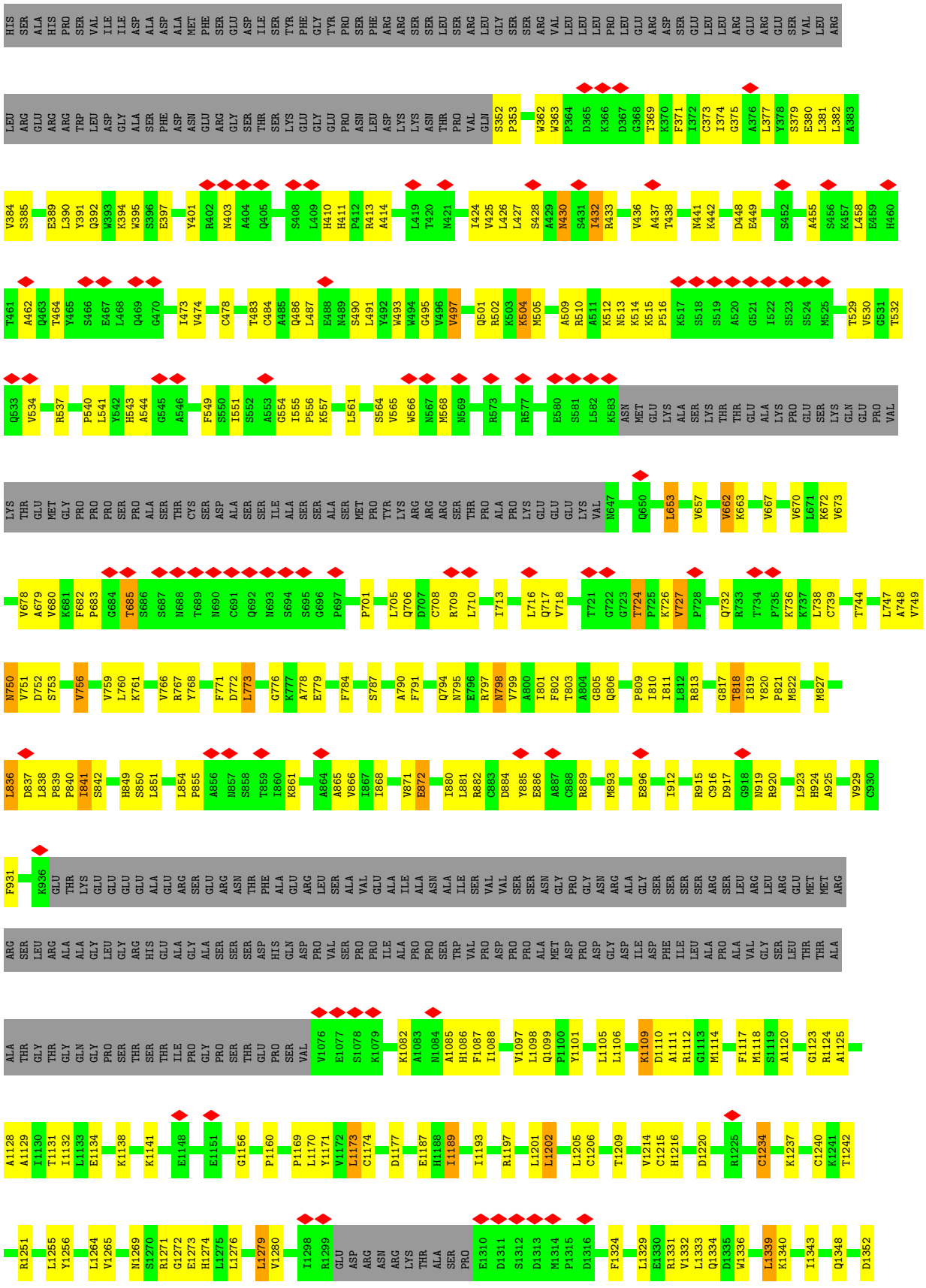


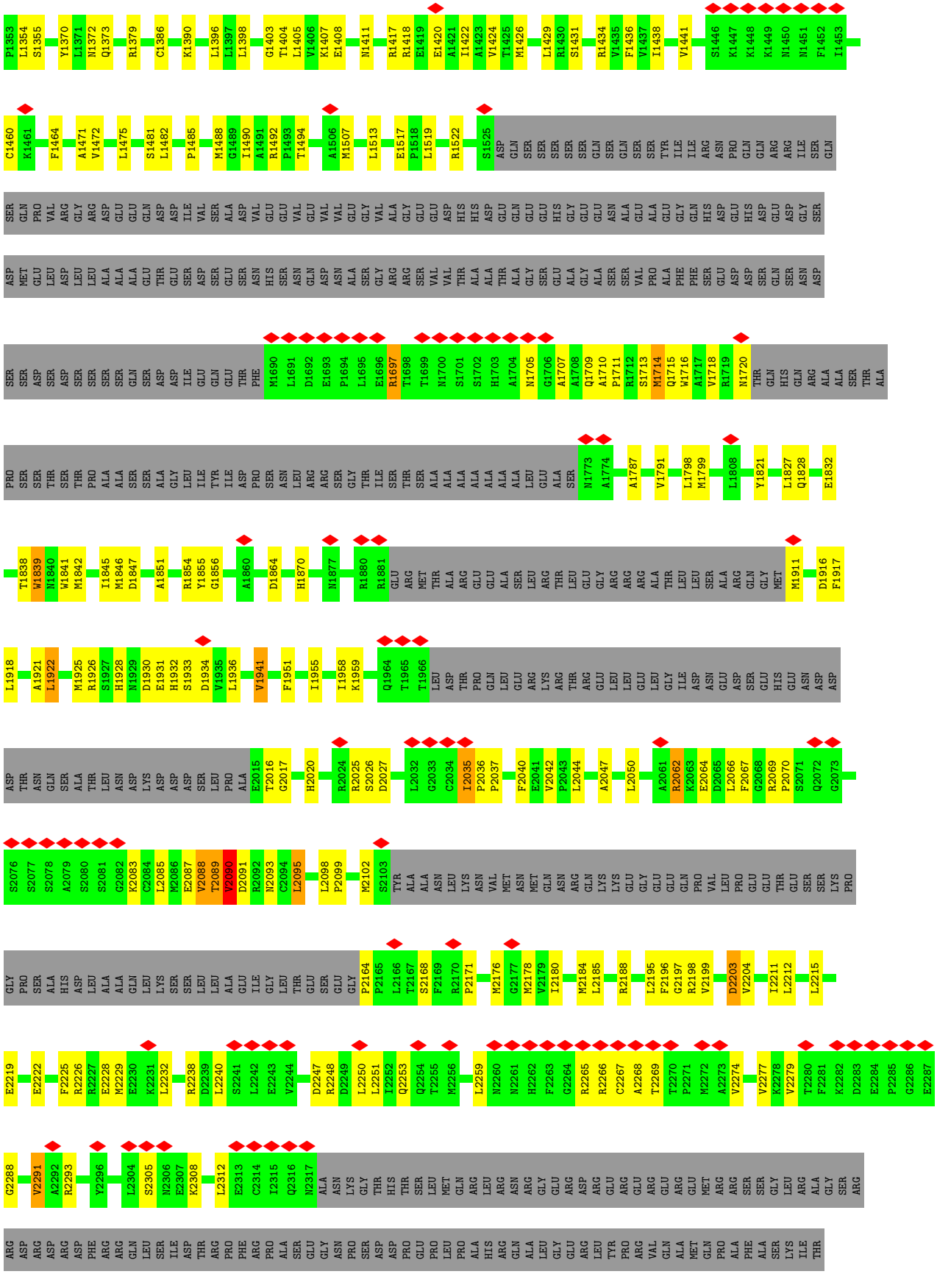
• Molecule 1: E3 ubiquitin-protein ligase UBR5

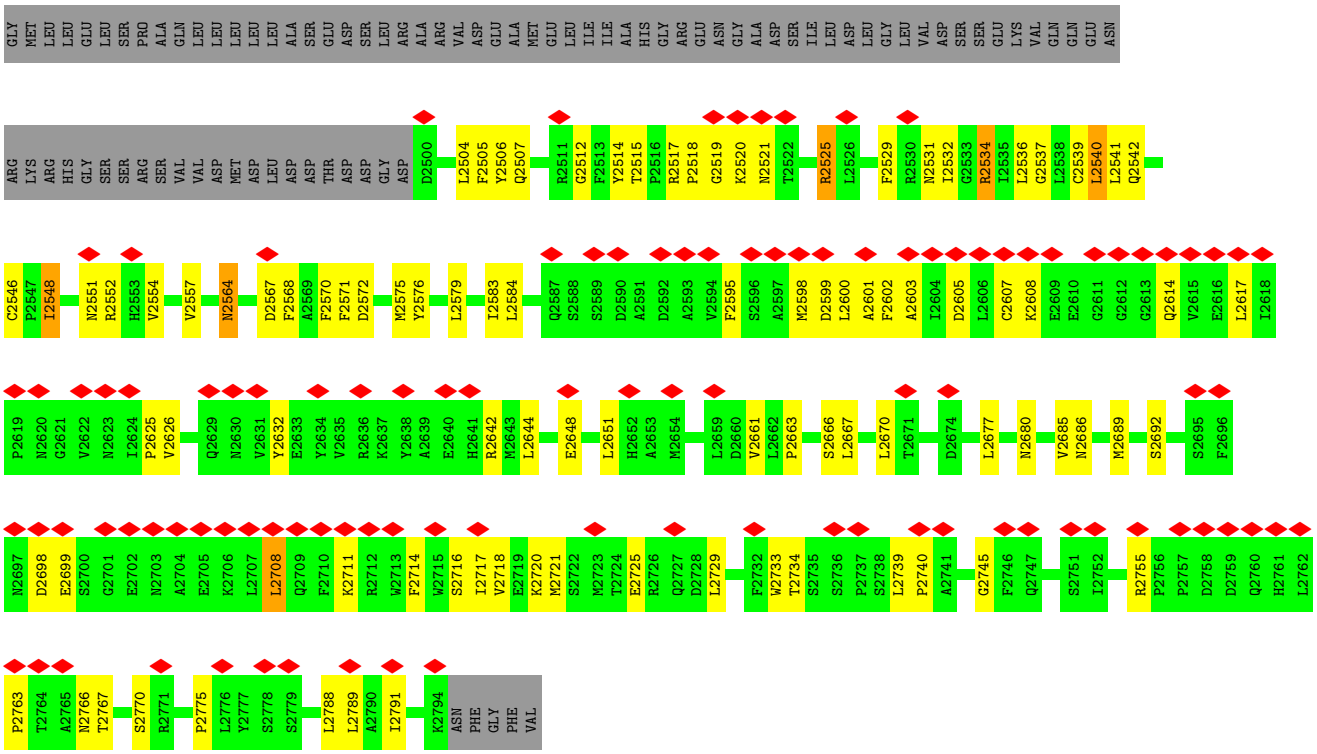
Chain C:





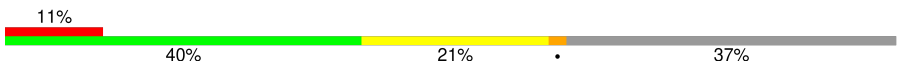


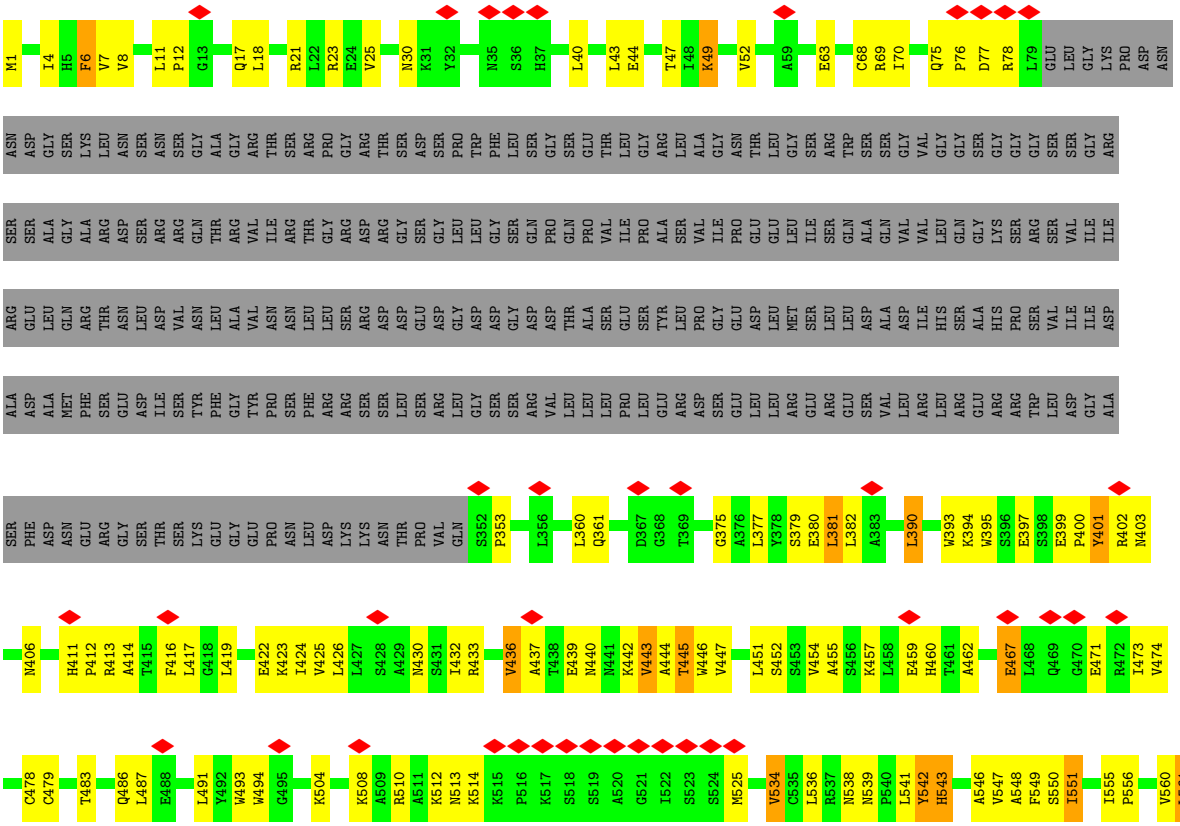

P1353 L1354 S1355 Y1370 L1371 N1372 Q1373 R1379 C1386 K1390 L1396 L1397 L1398 G1403 T1404 L1405 V1406 K1407 E1408 N1411 R1417 R1418 E1419 E1420 A1421 I1422 A1423 V1424 T1425 M1426 L1429 R1430 S1431 R1434 V1435 F1436 V1437 I1438 V1441 S1446 K1447 K1448 K1449 N1450 N1451 F1452 I1453
C1460 K1461 F1464 A1471 V1472 L1475 S1481 L1482 P1485 M1488 G1489 I1490 A1491 R1492 P1493 T1494 A1506 M1507 L1513 E1517 P1518 L1519 R1522 S1525 ASP GLN SER SER SER SER GLN SER GLN SER SER TYR ILE ILE ARG ASN PRO GLN GLN ARG ARG ILE SER GLN
SER GLN PRO VAL ARG GLY ARG ASP GLU GLU GLN ASP ASP ILE VAL SER ALA ASP VAL GLU GLU VAL VAL GLU GLY VAL ALA GLY GLU GLU ASP VAL HIS HIS ASP GLU GLN GLU GLU HIS GLY GLU GLU ASN ALA GLU ALA GLU GLY GLN HIS ASP GLU HIS ASP GLU ASP GLY SER
ASP MET GLU LEU ASP LEU LEU ALA ALA ALA GLU THR GLU SER ASP SER GLU SER ASN HIS SER ASN GLN ASP ASN ALA SER GLY ARG ARG SER VAL VAL THR ALA ALA THR ALA GLY SER GLU ALA GLY ALA SER SER VAL PRO ALA PHE PHE SER GLU ASP ASP SER GLN SER ASN ASP
SER SER ASP SER ASP SER SER SER SER GLN SER ASP ASP ILE GLU GLN GLU THR PHE M1690 L1691 D1692 E1693 P1694 L1695 E1696 R1697 T1698 T1699 N1700 S1701 S1702 H1703 A1704 N1705 G1706 A1707 A1708 Q1709 A1710 P1711 R1712 S1713 M1714 Q1715 W1716 A1717 V1718 R1719 N1720 THR GLN HIS GLN ARG ALA ALA SER THR ALA
PRO SER SER THR SER THR PRO ALA ALA SER SER ALA GLY LEU ILE TYR ILE ASP PRO SER ASN LEU ARG ARG SER GLY THR ILE SER THR SER ALA ALA ALA ALA ALA ALA LEU GLU ALA SER N1773 A1774 A1787 V1791 L1798 M1799 L1808 Y1821 L1827 Q1828 E1832
T1838 W1839 N1840 W1841 M1842 I1845 M1846 D1847 A1851 R1854 Y1855 G1856 A1860 D1864 H1870 N1877 R1880 R1881 GLU ARG MET THR ALA ARG GLU GLU ALA SER LEU ARG THR LEU GLU GLY ARG ARG ARG ALA THR LEU LEU SER ALA ARG GLN GLY MET M1911 D1916 F1917
L1918 A1921 L1922 M1925 R1926 S1927 H1928 N1929 D1930 E1931 H1932 S1933 D1934 V1935 L1936 V1941 F1951 I1955 I1958 K1959 Q1964 T1965 T1966 LEU ASP THR PRO GLN LEU GLU ARG LYS ARG THR ARG GLU LEU LEU GLU GLU LEU GLY ILE ASP ASN GLU ASP SER GLU HIS GLU ASN ASP ASP
ASP THR ASN GLN SER ALA THR LEU ASN ASP LYS ASP ASP ASP SER LEU PRO ALA E2015 T2016 G2017 H2020 R2024 R2025 S2026 D2027 L2032 G2033 C2034 I2035 P2036 P2037 F2040 E2041 V2042 P2043 L2044 A2047 L2050 A2061 R2062 K2063 E2064 D2065 L2066 F2067 G2068 R2069 P2070 S2071 Q2072 G2073
S2076 S2077 S2078 A2079 S2080 S2081 G2082 K2083 C2084 L2085 M2086 E2087 V2088 T2089 V2090 D2091 R2092 N2093 C2094 L2095 L2098 P2099 M2102 S2103 TYR ALA ALA ASN LEU LYS ASN VAL MET ASN MET GLN ASN ARG GLN LYS LYS GLU GLY GLU GLU GLN PRO VAL LEU PRO GLU GLU THR GLU SER SER LYS PRO
GLY PRO SER ALA HIS ASP LEU ALA ALA GLN LEU LYS SER SER LEU LEU ALA GLU ILE GLY LEU THR GLU SER GLU GLY P2164 P2165 L2166 T2167 S2168 F2169 R2170 P2171 M2176 G2177 M2178 V2179 I2180 M2184 L2185 R2188 L2195 F2196 G2197 R2198 V2199 D2203 V2204 I2211 L2212 L2215
E2219 E2222 F2225 R2226 R2227 E2228 M2229 E2230 K2231 L2232 R2238 D2239 L2240 S2241 L2242 E2243 V2244 D2247 R2248 D2249 L2250 L2251 T2252 Q2253 Q2254 T2255 M2256 L2259 N2260 N2261 H2262 F2263 G2264 R2265 R2266 C2267 A2268 T2269 T2270 P2271 M2272 A2273 V2274 V2277 K2278 V2279 T2280 F2281 K2282 D2283 E2284 P2285 G2286 E2287
G2288 V2291 A2292 R2293 Y2296 L2304 S2305 N2306 E2307 K2308 L2312 E2313 C2314 I2315 Q2316 N2317 ALA ASN LYS GLY THR HIS THR SER LEU MET GLN ARG LEU ARG ASN ARG GLY GLU ARG ASP ARG GLU ARG GLU ARG GLU ARG GLU ARG GLU ARG GLU ARG ARG SER SER GLY LEU ARG ALA GLY SER ARG
ARG ASP ARG ASP ASP ARG ASP PHE ARG ARG GLN LEU SER ILE ASP THR ARG PRO PHE ARG PRO ALA SER GLU GLY ASN PRO SER ASP PRO GLU PRO LEU PRO ALA HIS ARG GLN ALA LEU GLY GLU ARG LEU TYR PRO ARG VAL GLN ALA MET GLN PRO ALA PHE ALA SER LYS ILE THR

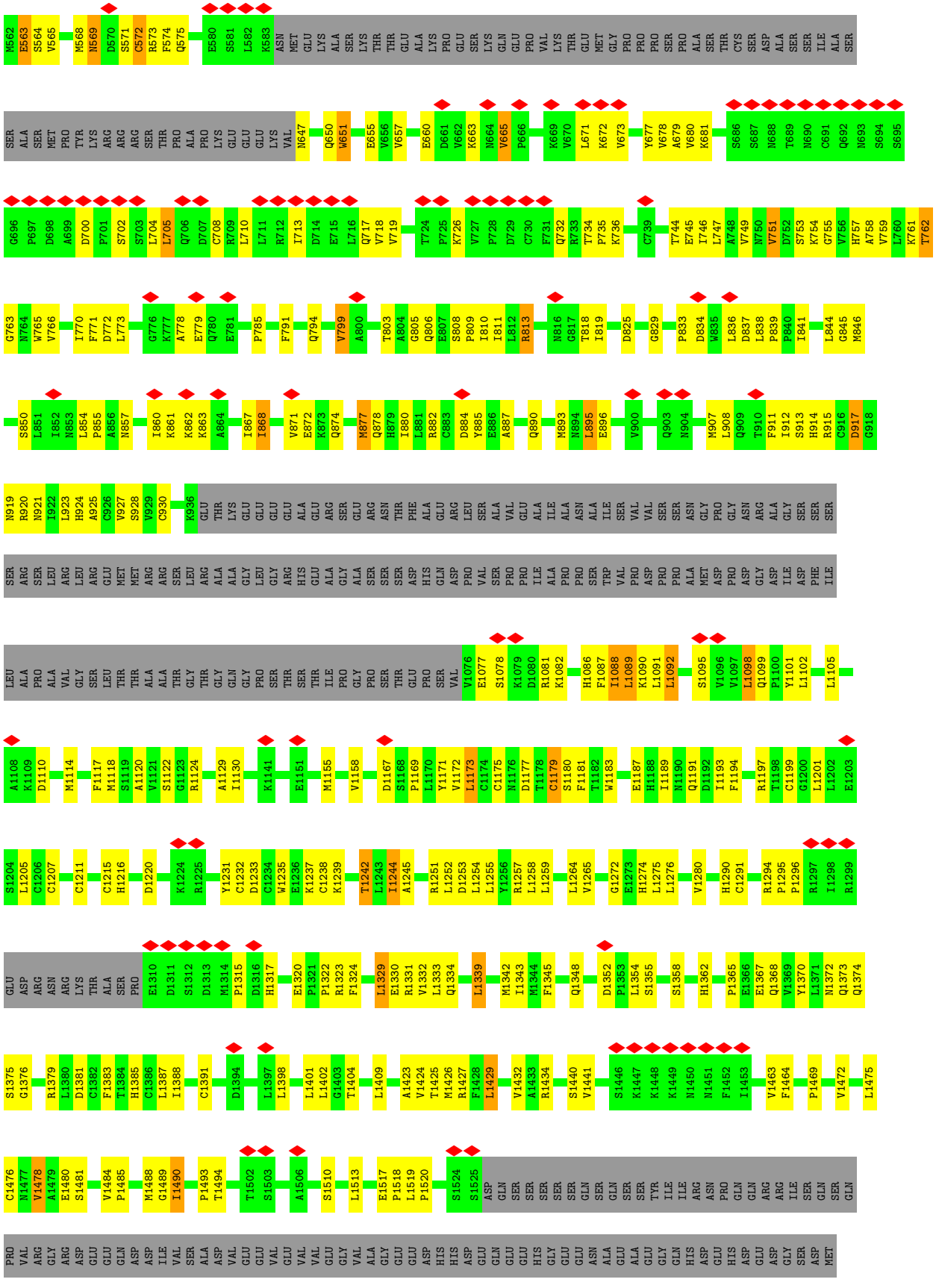


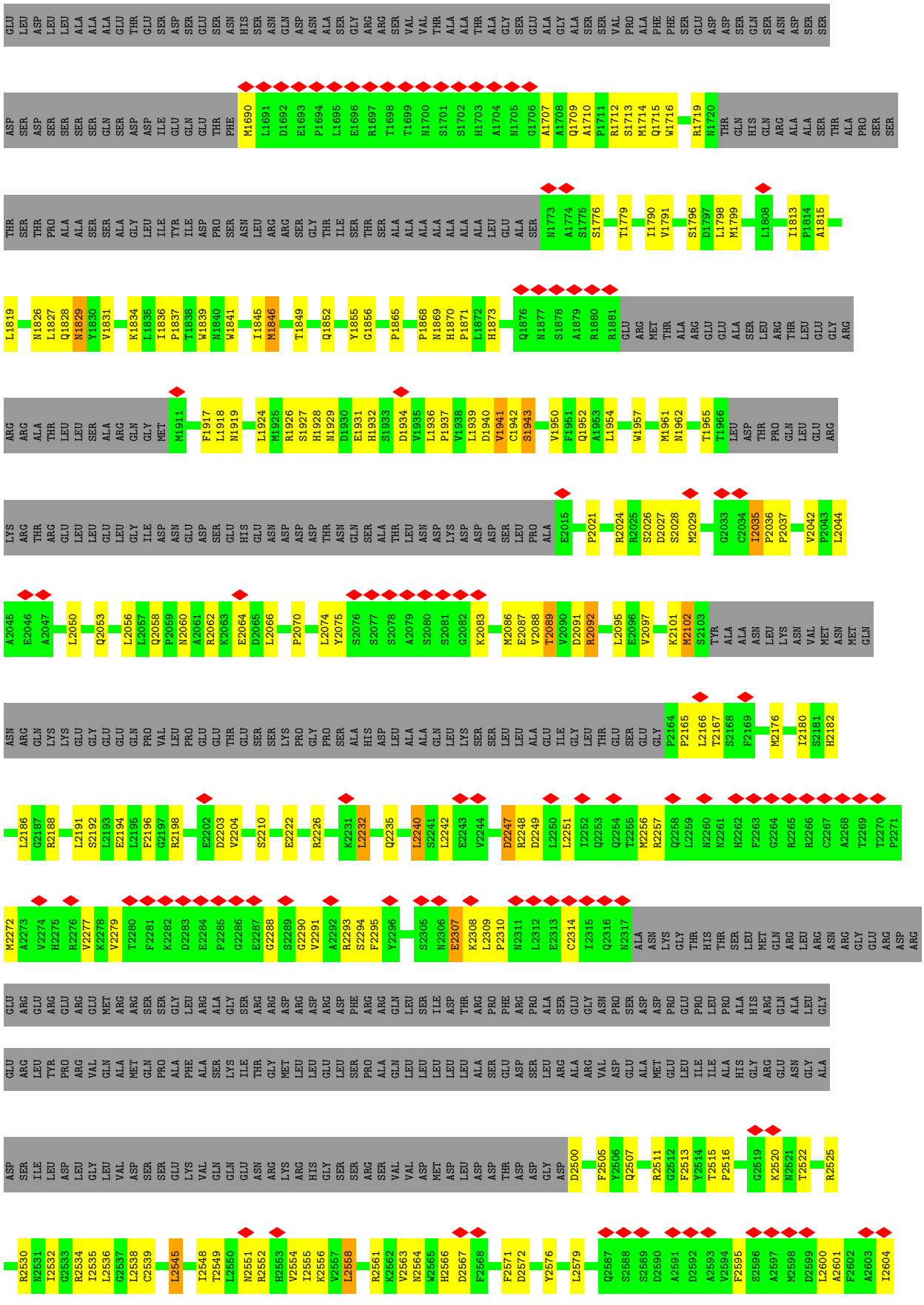
• Molecule 1: E3 ubiquitin-protein ligase UBR5

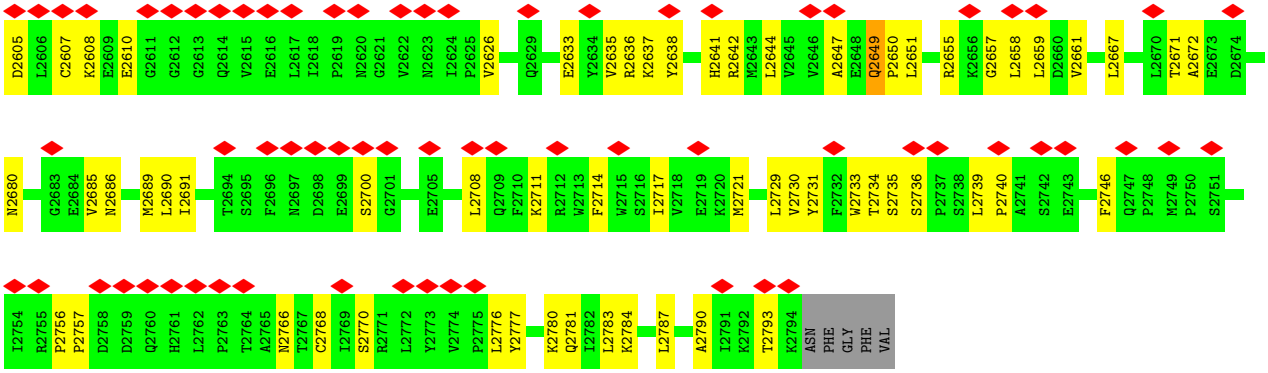
Chain D:










D2605 L2606 C2607 K2608 E2609 E2610 G2611 G2612 G2613 Q2614 V2615 E2616 L2617 I2618 P2619 N2620 G2621 V2622 N2623 I2624 P2625 V2626 Q2629 E2633 Y2634 V2635 R2636 K2637 Y2638 H2641 R2642 M2643 L2644 V2645 V2646 A2647 E2648 Q2649 P2650 L2651 R2655 K2656 G2657 L2658 L2659 D2660 V2661 L2667 L2670 T2671 A2672 E2673 D2674
N2680 G2683 E2684 V2685 N2686 M2689 L2690 I2691 T2694 S2695 F2696 N2697 D2698 E2699 S2700 G2701 E2705 L2708 Q2709 F2710 K2711 R2712 W2713 F2714 W2715 S2716 I2717 V2718 E2719 K2720 M2721 L2729 V2730 Y2731 F2732 W2733 T2734 S2735 S2736 P2737 S2738 L2739 P2740 A2741 S2742 E2743 F2746 Q2747 P2748 M2749 P2750 S2751
I2754 R2755 P2756 P2757 D2758 D2759 Q2760 H2761 L2762 P2763 T2764 A2765 N2766 T2767 C2768 I2769 S2770 R2771 L2772 Y2773 V2774 P2775 L2776 Y2777 K2780 Q2781 I2782 L2783 K2784 L2787 A2790 I2791 K2792 T2793 K2794 ASN PHE GLY PHE VAL

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	401469	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 ($e^-/Å^2$)	65	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.408	Depositor
Minimum map value	-0.002	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.038	Depositor
Recommended contour level	0.06	Depositor
Map size (Å)	364.32, 364.32, 364.32	wwPDB
Map dimensions	440, 440, 440	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.828, 0.828, 0.828	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.13	0/14211	0.28	0/19260
1	B	0.12	0/14211	0.28	0/19260
1	C	0.15	1/14211 (0.0%)	0.30	0/19260
1	D	0.13	0/14211	0.30	0/19260
All	All	0.13	1/56844 (0.0%)	0.29	0/77040

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	2090	VAL	C-O	-8.29	1.16	1.24

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	13924	0	13931	422	0
1	B	13924	0	13931	424	0
1	C	13924	0	13931	441	0
1	D	13924	0	13931	454	0
2	A	3	0	0	0	0
2	B	3	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	3	0	0	0	0
2	D	3	0	0	0	0
All	All	55708	0	55724	1632	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 15.

All (1632) 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:C:2090:VAL:CG2	1:D:1374:GLN:HE22	1.80	0.95
1:C:744:THR:HA	1:C:761:LYS:O	1.69	0.92
1:B:371:PHE:HA	1:B:385:SER:HA	1.53	0.91
1:C:2090:VAL:HG22	1:D:1374:GLN:HE22	1.37	0.89
1:C:680:VAL:O	1:C:709:ARG:HB2	1.72	0.89
1:B:799:VAL:HA	1:B:813:ARG:O	1.76	0.86
1:A:1295:PRO:HG2	1:A:1297:ARG:HE	1.44	0.83
1:C:1333:LEU:HD13	1:C:1339:LEU:HD21	1.64	0.79
1:D:414:ALA:HB1	1:D:419:LEU:HB2	1.63	0.79
1:B:1199:CYS:SG	1:B:1216:HIS:HE1	2.03	0.79
1:B:531:GLY:HA2	1:B:669:LYS:HG3	1.65	0.78
1:A:1961:MET:HG2	1:A:2173:CYS:HB2	1.66	0.78
1:B:426:LEU:HB2	1:B:437:ALA:HB3	1.65	0.78
1:C:772:ASP:HB2	1:C:779:GLU:HB2	1.65	0.77
1:C:1917:PHE:HE2	1:D:1441:VAL:HG11	1.49	0.77
1:A:1933:SER:HB3	1:B:1376:GLY:HA2	1.67	0.77
1:D:1333:LEU:HD23	1:D:1339:LEU:HD21	1.67	0.77
1:C:426:LEU:HB2	1:C:437:ALA:HB3	1.66	0.76
1:D:671:LEU:HD11	1:D:681:LYS:HG2	1.66	0.76
1:B:18:LEU:HD22	1:B:809:PRO:HB2	1.68	0.76
1:B:498:PRO:HG3	1:B:773:LEU:HB2	1.67	0.75
1:D:2649:GLN:HG2	1:D:2650:PRO:HD3	1.69	0.75
1:D:473:ILE:HG22	1:D:487:LEU:HG	1.69	0.74
1:C:841:ILE:HA	1:C:871:VAL:HA	1.70	0.73
1:C:392:GLN:HE21	1:C:411:HIS:HA	1.52	0.73
1:B:453:SER:O	1:B:457:LYS:NZ	2.22	0.73
1:B:679:ALA:HB1	1:B:708:CYS:HB2	1.69	0.73
1:C:827:MET:HB2	1:C:1197:ARG:HH12	1.53	0.73
1:C:433:ARG:HD3	1:C:478:CYS:HB2	1.70	0.73
1:C:1408:GLU:O	1:C:1418:ARG:NH2	2.22	0.73
1:C:771:PHE:HA	1:C:778:ALA:HA	1.70	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:432:ILE:HG13	1:B:551:ILE:HD12	1.71	0.72
1:B:536:LEU:HB3	1:B:665:VAL:HG11	1.72	0.72
1:D:1177:ASP:H	1:D:1251:ARG:HH22	1.35	0.72
1:C:424:ILE:HG22	1:C:438:THR:HG22	1.71	0.72
1:C:1930:ASP:OD1	1:C:2090:VAL:HG23	1.90	0.71
1:C:62:LEU:HG	1:C:64:ASP:H	1.54	0.71
1:C:2102:MET:SD	1:C:2102:MET:N	2.60	0.71
1:A:2661:VAL:HG23	1:A:2662:LEU:HG	1.70	0.71
1:C:1933:SER:HB2	1:D:1376:GLY:HA2	1.71	0.71
1:C:799:VAL:HA	1:C:813:ARG:O	1.90	0.71
1:C:2040:PHE:HB3	1:C:2584:LEU:HD11	1.72	0.71
1:D:744:THR:HG22	1:D:762:THR:HB	1.73	0.71
1:A:2517:ARG:O	1:A:2525:ARG:NH2	2.24	0.71
1:D:1199:CYS:SG	1:D:1216:HIS:HE1	2.10	0.71
1:D:755:GLY:HA2	1:D:773:LEU:HD21	1.73	0.70
1:D:841:ILE:HG12	1:D:871:VAL:HG12	1.72	0.70
1:C:2093:ASN:HB2	1:D:1484:VAL:HG21	1.73	0.70
1:D:917:ASP:OD1	1:D:917:ASP:N	2.23	0.70
1:D:1124:ARG:HH21	1:D:1245:ALA:HA	1.57	0.70
1:A:2686:ASN:H	1:A:2689:MET:HE2	1.56	0.70
1:D:2028:SER:OG	1:D:2561:ARG:NH2	2.24	0.70
1:D:446:TRP:HB2	1:D:459:GLU:HG3	1.73	0.70
1:A:824:LYS:O	1:A:831:ARG:NH1	2.25	0.70
1:C:1205:LEU:HD13	1:C:1237:LYS:HE3	1.74	0.70
1:D:678:VAL:HG13	1:D:713:ILE:HG12	1.73	0.70
1:B:535:CYS:SG	1:B:536:LEU:N	2.64	0.70
1:D:2293:ARG:HB3	1:D:2736:SER:HB2	1.72	0.70
1:B:1819:LEU:HB3	1:B:2166:LEU:HD11	1.74	0.69
1:A:14:THR:H	1:A:17:GLN:HE22	1.40	0.69
1:A:680:VAL:O	1:A:709:ARG:HB2	1.92	0.69
1:C:554:GLY:HA3	1:C:850:SER:HB3	1.74	0.69
1:D:772:ASP:OD1	1:D:773:LEU:N	2.26	0.69
1:A:929:VAL:O	1:A:1081:ARG:NH1	2.26	0.68
1:C:915:ARG:NH2	1:C:919:ASN:O	2.25	0.68
1:B:750:ASN:ND2	1:B:801:ILE:O	2.26	0.68
1:A:1454:PRO:HB2	1:A:1456:PRO:HD2	1.74	0.68
1:C:424:ILE:HA	1:C:438:THR:HA	1.74	0.68
1:A:1854:ARG:NH1	1:B:1370:TYR:OH	2.26	0.68
1:B:2293:ARG:NH2	1:B:2770:SER:OG	2.26	0.68
1:A:534:VAL:HG12	1:A:718:VAL:HA	1.74	0.68
1:A:2766:ASN:O	1:A:2770:SER:N	2.26	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:670:VAL:HA	1:C:680:VAL:HG22	1.74	0.68
1:D:451:LEU:O	1:D:455:ALA:N	2.23	0.68
1:D:510:ARG:HA	1:D:513:ASN:HB2	1.75	0.68
1:D:2288:GLY:HA3	1:D:2768:CYS:HA	1.75	0.68
1:B:1846:MET:HE1	1:B:2196:PHE:HE2	1.59	0.68
1:D:1197:ARG:HB3	1:D:1220:ASP:HB3	1.74	0.68
1:C:2090:VAL:HG21	1:D:1374:GLN:HE22	1.57	0.67
1:D:1238:CYS:SG	1:D:1239:LYS:N	2.66	0.67
1:A:1697:ARG:HE	1:B:2691:ILE:HD12	1.58	0.67
1:B:1376:GLY:O	1:B:1427:ARG:NH2	2.26	0.67
1:D:568:MET:SD	1:D:568:MET:N	2.66	0.67
1:D:1171:TYR:O	1:D:1175:CYS:HB2	1.95	0.67
1:A:672:LYS:HB3	1:A:679:ALA:HB3	1.76	0.67
1:A:424:ILE:HG13	1:A:438:THR:HG22	1.75	0.67
1:A:2763:PRO:HA	1:A:2773:TYR:O	1.95	0.67
1:A:2092:ARG:HH11	1:B:1490:ILE:HD12	1.59	0.67
1:C:2248:ARG:NH1	1:C:2305:SER:OG	2.27	0.67
1:C:756:VAL:HG13	1:C:771:PHE:HB2	1.77	0.67
1:A:1916:ASP:OD1	1:B:1492:ARG:NH1	2.27	0.66
1:A:433:ARG:NH1	1:A:481:LEU:O	2.28	0.66
1:D:1280:VAL:HG22	1:D:1329:LEU:HD11	1.77	0.66
1:C:759:VAL:HG23	1:C:801:ILE:HD11	1.76	0.66
1:D:538:ASN:O	1:D:542:TYR:N	2.28	0.66
1:D:2766:ASN:O	1:D:2770:SER:HA	1.96	0.66
1:A:710:LEU:HD22	1:C:710:LEU:HD22	1.77	0.66
1:C:2083:LYS:NZ	1:C:2184:MET:SD	2.69	0.66
1:D:1836:ILE:HG13	1:D:1837:PRO:HD3	1.78	0.66
1:B:2290:GLY:HA3	1:B:2767:THR:HB	1.78	0.66
1:C:1494:THR:HG21	1:D:1917:PHE:HB2	1.78	0.66
1:D:447:VAL:HG21	1:D:454:VAL:HG12	1.78	0.66
1:A:562:MET:SD	1:A:563:GLU:N	2.68	0.65
1:B:2044:LEU:HD21	1:B:2051:ALA:HB3	1.77	0.65
1:D:857:ASN:HB3	1:D:862:LYS:HE3	1.78	0.65
1:D:771:PHE:HA	1:D:778:ALA:HA	1.78	0.65
1:D:1839:TRP:NE1	1:D:2176:MET:SD	2.59	0.65
1:B:536:LEU:O	1:B:539:ASN:ND2	2.30	0.65
1:A:2659:LEU:HD21	1:A:2667:LEU:HD22	1.78	0.65
1:B:535:CYS:HB2	1:B:667:VAL:HG22	1.78	0.65
1:A:2685:VAL:HG21	1:A:2730:VAL:HG21	1.79	0.65
1:B:1280:VAL:HG12	1:B:1329:LEU:HD11	1.79	0.65
1:A:1189:ILE:HD12	1:A:1292:GLN:HB3	1.79	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2186:LEU:HD13	1:B:2215:LEU:HD11	1.78	0.65
1:B:2505:PHE:HB3	1:B:2514:TYR:HB3	1.78	0.65
1:B:1439:LEU:HD21	1:B:1456:PRO:HB2	1.78	0.65
1:B:1712:ARG:HA	1:B:1715:GLN:HG2	1.78	0.65
1:D:11:LEU:HD13	1:D:863:LYS:HE3	1.79	0.65
1:D:799:VAL:HA	1:D:813:ARG:O	1.96	0.65
1:B:1333:LEU:HD23	1:B:1339:LEU:HD21	1.78	0.65
1:C:1847:ASP:OD2	1:C:2188:ARG:NH2	2.30	0.65
1:D:838:LEU:HD12	1:D:839:PRO:HD2	1.77	0.65
1:C:678:VAL:HG21	1:C:716:LEU:HD11	1.77	0.64
1:C:1851:ALA:HB2	1:C:2087:GLU:HB3	1.78	0.64
1:C:2062:ARG:NH1	1:D:1713:SER:OG	2.30	0.64
1:A:854:LEU:HD12	1:A:857:ASN:HA	1.79	0.64
1:D:543:HIS:HB3	1:D:665:VAL:HG11	1.79	0.64
1:D:1826:ASN:O	1:D:1829:ASN:ND2	2.30	0.64
1:C:795:ASN:OD1	1:C:797:ARG:NH1	2.30	0.64
1:B:2549:THR:OG1	1:B:2680:ASN:ND2	2.31	0.64
1:D:401:TYR:CZ	1:D:412:PRO:HD3	2.33	0.64
1:D:1871:PRO:HG3	1:D:1936:LEU:HD11	1.79	0.64
1:B:2222:GLU:OE1	1:B:2226:ARG:NH1	2.31	0.64
1:A:28:LYS:O	1:A:33:ASN:N	2.28	0.64
1:B:2178:MET:SD	1:B:2178:MET:N	2.70	0.64
1:A:394:LYS:HB2	1:A:397:GLU:HG3	1.80	0.64
1:D:2293:ARG:NH2	1:D:2770:SER:OG	2.31	0.64
1:B:69:ARG:HE	1:B:361:GLN:HE21	1.47	0.63
1:D:30:ASN:O	1:D:882:ARG:NH1	2.30	0.63
1:A:72:PHE:HA	1:A:356:LEU:HA	1.80	0.63
1:A:2550:LEU:O	1:A:2676:ARG:NH1	2.26	0.63
1:B:2633:GLU:OE1	1:B:2636:ARG:NH2	2.29	0.63
1:C:2293:ARG:NH2	1:C:2767:THR:O	2.32	0.63
1:D:474:VAL:N	1:D:486:GLN:O	2.30	0.63
1:C:2505:PHE:HB3	1:C:2514:TYR:HB3	1.80	0.63
1:B:363:TRP:HE1	1:B:400:PRO:HB3	1.63	0.63
1:B:2028:SER:OG	1:B:2561:ARG:NH2	2.31	0.63
1:C:1379:ARG:NH1	1:C:1517:GLU:OE1	2.31	0.63
1:B:747:LEU:HD21	1:B:761:LYS:HB2	1.81	0.63
1:B:1334:GLN:HA	1:B:1404:THR:HG21	1.81	0.63
1:D:1155:MET:HA	1:D:1158:VAL:HG12	1.79	0.63
1:C:373:CYS:HB2	1:C:384:VAL:HB	1.81	0.63
1:D:2294:SER:HB3	1:D:2735:SER:HB2	1.81	0.63
1:D:2690:LEU:HG	1:D:2739:LEU:HD21	1.81	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:802:PHE:HB2	1:C:811:ILE:HB	1.80	0.62
1:C:555:ILE:O	1:C:557:LYS:NZ	2.31	0.62
1:D:426:LEU:HG	1:D:437:ALA:HB3	1.82	0.62
1:D:2686:ASN:HD21	1:D:2689:MET:HG3	1.63	0.62
1:D:2766:ASN:ND2	1:D:2768:CYS:SG	2.72	0.62
1:A:1378:ILE:HD11	1:B:1935:VAL:HG23	1.82	0.62
1:B:1166:ASP:HB3	1:B:1217:LYS:HD2	1.81	0.62
1:B:1171:TYR:OH	1:B:1271:ARG:NH2	2.32	0.62
1:C:750:ASN:ND2	1:C:801:ILE:O	2.32	0.62
1:D:1181:PHE:HB2	1:D:1232:CYS:HB3	1.82	0.62
1:D:1943:SER:O	1:D:1943:SER:OG	2.15	0.62
1:C:6:PHE:HD2	1:C:868:ILE:HD12	1.65	0.62
1:D:1440:SER:HB2	1:D:1790:ILE:HG21	1.81	0.62
1:D:1941:VAL:HG12	1:D:2196:PHE:HE1	1.64	0.62
1:D:2027:ASP:OD1	1:D:2561:ARG:NH2	2.33	0.62
1:A:2240:LEU:HD11	1:A:2277:VAL:HA	1.82	0.62
1:C:748:ALA:HB3	1:C:801:ILE:HG13	1.81	0.62
1:D:473:ILE:HA	1:D:487:LEU:HA	1.82	0.62
1:D:2549:THR:OG1	1:D:2680:ASN:ND2	2.33	0.62
1:A:708:CYS:O	1:C:672:LYS:NZ	2.33	0.61
1:A:1438:ILE:HG23	1:B:1918:LEU:HD12	1.81	0.61
1:A:2721:MET:O	1:A:2726:ARG:NH2	2.33	0.61
1:B:2027:ASP:OD1	1:B:2561:ARG:NH2	2.32	0.61
1:B:2724:THR:OG1	1:B:2725:GLU:OE1	2.15	0.61
1:C:2226:ARG:HA	1:C:2229:MET:HG2	1.81	0.61
1:A:2562:LYS:NZ	1:A:2563:VAL:O	2.33	0.61
1:C:1441:VAL:HG11	1:D:1917:PHE:HE2	1.66	0.61
1:A:2637:LYS:HA	1:A:2640:GLU:HB3	1.81	0.61
1:B:818:THR:HA	1:B:840:PRO:HA	1.82	0.61
1:B:2552:ARG:NH1	1:B:2567:ASP:OD1	2.33	0.61
1:A:1367:GLU:OE2	1:B:2069:ARG:NH1	2.34	0.61
1:C:384:VAL:HG23	1:C:427:LEU:HD12	1.81	0.61
1:D:850:SER:HA	1:D:863:LYS:HA	1.83	0.61
1:A:2635:VAL:O	1:A:2638:TYR:HB3	2.01	0.61
1:B:1461:LYS:NZ	1:B:1794:GLN:OE1	2.33	0.61
1:A:62:LEU:HG	1:A:64:ASP:H	1.66	0.61
1:A:1494:THR:HG21	1:B:1917:PHE:HB2	1.83	0.61
1:B:482:TYR:CZ	1:B:773:LEU:HD11	2.36	0.61
1:B:2616:GLU:HG3	1:B:2622:VAL:HG23	1.82	0.61
1:D:1191:GLN:HG3	1:D:1193:ILE:HD11	1.83	0.61
1:D:1385:HIS:NE2	1:D:1510:SER:OG	2.31	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:PRO:HD2	1:A:861:LYS:HD3	1.83	0.61
1:B:4:ILE:HG12	1:B:40:LEU:HD22	1.83	0.60
1:A:1331:ARG:NH1	1:A:1331:ARG:O	2.33	0.60
1:D:18:LEU:HD22	1:D:809:PRO:HB2	1.81	0.60
1:A:854:LEU:HD23	1:A:854:LEU:H	1.65	0.60
1:A:1697:ARG:HB3	1:B:2691:ILE:HG23	1.82	0.60
1:C:1718:VAL:HG13	1:D:1942:CYS:HB2	1.83	0.60
1:A:825:ASP:OD1	1:A:829:GLY:N	2.34	0.60
1:C:62:LEU:HD23	1:C:66:ARG:HB2	1.84	0.60
1:C:750:ASN:HB3	1:C:803:THR:HG22	1.82	0.60
1:D:414:ALA:HA	1:D:417:LEU:HB2	1.84	0.60
1:A:380:GLU:HB3	1:A:394:LYS:HD3	1.82	0.60
1:A:2240:LEU:HD12	1:A:2241:SER:H	1.66	0.60
1:B:706:GLN:O	1:D:672:LYS:NZ	2.35	0.60
1:C:52:VAL:HG11	1:C:375:GLY:HA2	1.83	0.60
1:A:732:GLN:NE2	1:A:734:THR:O	2.30	0.60
1:A:765:TRP:HE1	1:A:783:ASN:HD22	1.48	0.60
1:B:2087:GLU:O	1:B:2089:THR:N	2.35	0.60
1:C:1713:SER:OG	1:D:2062:ARG:NH1	2.35	0.60
1:A:1124:ARG:NH2	1:A:1177:ASP:O	2.34	0.60
1:A:1258:LEU:HD11	1:A:1264:LEU:HD12	1.82	0.60
1:B:2198:ARG:NH1	1:B:2219:GLU:OE1	2.35	0.60
1:C:795:ASN:ND2	1:C:798:ASN:OD1	2.33	0.60
1:D:1796:SER:HG	1:D:1957:TRP:CD1	2.20	0.60
1:C:544:ALA:HA	1:C:561:LEU:HG	1.83	0.60
1:A:2035:ILE:HD12	1:A:2036:PRO:HD2	1.83	0.60
1:B:744:THR:HG22	1:B:762:THR:HB	1.83	0.60
1:D:1259:LEU:HD11	1:D:1332:VAL:HG22	1.82	0.60
1:C:1928:HIS:HA	1:C:2091:ASP:HB2	1.84	0.60
1:A:930:CYS:HA	1:A:1081:ARG:HH12	1.67	0.59
1:A:1484:VAL:HG21	1:B:2093:ASN:HB2	1.83	0.59
1:A:2721:MET:HG3	1:A:2726:ARG:HH21	1.67	0.59
1:B:814:ASP:OD1	1:B:818:THR:N	2.32	0.59
1:C:2089:THR:HG23	1:D:1373:GLN:HE22	1.65	0.59
1:C:2686:ASN:HB3	1:C:2689:MET:HB2	1.84	0.59
1:D:1173:LEU:HD12	1:D:1258:LEU:HD22	1.84	0.59
1:D:2522:THR:HG23	1:D:2525:ARG:H	1.67	0.59
1:A:1929:ASN:OD1	1:B:1430:ARG:NH1	2.35	0.59
1:A:417:LEU:HG	1:A:444:ALA:HB1	1.84	0.59
1:A:2253:GLN:NE2	1:A:2311:ASN:O	2.33	0.59
1:D:809:PRO:HG2	1:D:846:MET:HE1	1.83	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:672:LYS:HE2	1:A:674:ASP:HB2	1.83	0.59
1:A:1412:LYS:HZ1	1:A:1418:ARG:HH21	1.51	0.59
1:B:475:SER:HB2	1:B:486:GLN:HE21	1.68	0.59
1:D:360:LEU:HD23	1:D:360:LEU:H	1.68	0.59
1:C:678:VAL:HG13	1:C:713:ILE:HG12	1.83	0.59
1:B:771:PHE:HA	1:B:778:ALA:HA	1.84	0.59
1:B:1495:ALA:HA	1:B:1775:SER:H	1.68	0.59
1:D:491:LEU:HD21	1:D:749:VAL:HG11	1.84	0.59
1:C:76:PRO:HG3	1:C:851:LEU:HB3	1.85	0.59
1:C:379:SER:OG	1:C:380:GLU:OE1	2.19	0.59
1:D:785:PRO:HG2	1:D:833:PRO:HD3	1.85	0.59
1:D:927:VAL:HG21	1:D:1120:ALA:HB2	1.85	0.59
1:B:1793:ARG:HG3	1:B:1956:TYR:HE2	1.68	0.58
1:D:2075:TYR:HB2	1:D:2086:MET:HE3	1.85	0.58
1:C:516:PRO:HG2	1:C:717:GLN:HB2	1.84	0.58
1:C:2062:ARG:NH2	1:C:2064:GLU:OE1	2.35	0.58
1:C:1434:ARG:HH21	1:D:1926:ARG:HA	1.67	0.58
1:B:1231:TYR:HD1	1:B:1231:TYR:H	1.50	0.58
1:B:497:VAL:O	1:B:502:ARG:NH1	2.34	0.58
1:C:1485:PRO:HG3	1:D:2092:ARG:HD2	1.85	0.58
1:C:2568:PHE:HZ	1:C:2642:ARG:HD3	1.69	0.58
1:A:1363:LEU:O	1:A:1368:GLN:NE2	2.37	0.58
1:A:1711:PRO:HD3	1:B:2198:ARG:HG2	1.86	0.58
1:B:433:ARG:HH12	1:B:458:LEU:HD13	1.69	0.58
1:B:577:ARG:HD3	1:B:582:LEU:HD21	1.84	0.58
1:B:916:CYS:SG	1:B:917:ASP:N	2.76	0.58
1:C:66:ARG:HB3	1:C:362:TRP:HZ2	1.69	0.58
1:C:2515:THR:HB	1:C:2551:ASN:HD22	1.68	0.58
1:D:2552:ARG:NH1	1:D:2567:ASP:OD1	2.37	0.58
1:A:685:THR:OG1	1:C:672:LYS:NZ	2.37	0.58
1:C:537:ARG:NE	1:C:537:ARG:O	2.35	0.58
1:A:2549:THR:OG1	1:A:2680:ASN:ND2	2.36	0.58
1:B:1331:ARG:O	1:B:1331:ARG:NH1	2.37	0.58
1:C:6:PHE:CD2	1:C:868:ILE:HD12	2.39	0.58
1:C:854:LEU:HD12	1:C:855:PRO:HD2	1.86	0.58
1:C:1930:ASP:OD1	1:C:2090:VAL:CG2	2.51	0.58
1:C:2087:GLU:O	1:C:2089:THR:N	2.36	0.58
1:C:2090:VAL:HG22	1:D:1374:GLN:NE2	2.15	0.58
1:C:2250:LEU:HA	1:C:2253:GLN:HG2	1.85	0.58
1:C:2571:PHE:HE2	1:C:2642:ARG:HB3	1.68	0.58
1:D:673:VAL:HG22	1:D:678:VAL:HG12	1.86	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2222:GLU:OE1	1:D:2226:ARG:NH1	2.37	0.58
1:B:15:GLU:OE2	1:B:824:LYS:NZ	2.37	0.58
1:B:52:VAL:HB	1:B:376:ALA:HB2	1.86	0.58
1:B:705:LEU:HA	1:D:705:LEU:HB3	1.86	0.58
1:B:850:SER:HA	1:B:863:LYS:HA	1.86	0.58
1:D:560:VAL:O	1:D:574:PHE:HA	2.04	0.58
1:B:432:ILE:HD11	1:B:556:PRO:HG3	1.85	0.57
1:C:551:ILE:HG23	1:C:556:PRO:HB3	1.85	0.57
1:D:75:GLN:HG3	1:D:78:ARG:HB2	1.86	0.57
1:D:1409:LEU:HD11	1:D:1425:THR:HG21	1.86	0.57
1:A:1273:GLU:HB2	1:A:1277:LEU:HD23	1.86	0.57
1:A:2072:GLN:HB2	1:A:2074:LEU:HD13	1.85	0.57
1:B:2536:LEU:HD11	1:B:2548:ILE:HD11	1.86	0.57
1:C:448:ASP:OD1	1:C:449:GLU:N	2.37	0.57
1:C:2766:ASN:O	1:C:2770:SER:N	2.37	0.57
1:D:1429:LEU:HA	1:D:1432:VAL:HG12	1.86	0.57
1:B:515:LYS:NZ	1:B:517:LYS:O	2.37	0.57
1:B:2306:ASN:HA	1:B:2503:PRO:HB3	1.85	0.57
1:B:2718:VAL:HA	1:B:2721:MET:HE3	1.84	0.57
1:C:1472:VAL:HG21	1:C:1827:LEU:HD21	1.86	0.57
1:D:2290:GLY:O	1:D:2735:SER:OG	2.20	0.57
1:A:32:TYR:HB3	1:A:34:LEU:HD23	1.87	0.57
1:B:741:PRO:HG2	1:B:744:THR:HG21	1.86	0.57
1:B:2052:ASP:OD2	1:B:2053:GLN:NE2	2.38	0.57
1:C:18:LEU:HD22	1:C:809:PRO:HB2	1.87	0.57
1:A:1368:GLN:O	1:A:1372:ASN:ND2	2.32	0.57
1:A:2088:VAL:HG13	1:B:1373:GLN:HG3	1.86	0.57
1:A:2503:PRO:O	1:A:2517:ARG:NE	2.28	0.57
1:B:2530:ARG:HE	1:B:2653:ALA:HB1	1.68	0.57
1:D:884:ASP:HB3	1:D:887:ALA:HB3	1.86	0.57
1:A:1179:CYS:SG	1:A:1180:SER:N	2.77	0.57
1:C:2663:PRO:O	1:C:2666:SER:OG	2.20	0.57
1:D:1265:VAL:HG23	1:D:1275:LEU:HD23	1.86	0.57
1:A:360:LEU:HD23	1:A:360:LEU:H	1.70	0.57
1:A:1828:GLN:HE22	1:A:2171:PRO:HB3	1.70	0.57
1:A:1851:ALA:HB2	1:A:2087:GLU:HB3	1.86	0.57
1:B:1154:PHE:HD1	1:B:1157:MET:HE3	1.69	0.57
1:B:2216:GLY:O	1:B:2221:LYS:NZ	2.37	0.57
1:C:1918:LEU:HB3	1:D:1513:LEU:HD22	1.85	0.57
1:D:52:VAL:HG11	1:D:375:GLY:HA2	1.87	0.57
1:D:430:ASN:ND2	1:D:478:CYS:O	2.36	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2062:ARG:NH2	1:D:2064:GLU:OE1	2.38	0.57
1:D:2248:ARG:NH2	1:D:2249:ASP:OD1	2.37	0.57
1:A:1253:ASP:O	1:A:1257:ARG:HG2	2.05	0.57
1:B:924:HIS:CD2	1:B:1116:PRO:HG3	2.40	0.57
1:C:2721:MET:HB3	1:C:2725:GLU:HB2	1.86	0.57
1:B:385:SER:OG	1:B:389:GLU:OE1	2.22	0.57
1:C:682:PHE:O	1:C:685:THR:OG1	2.21	0.57
1:C:2598:MET:HB2	1:C:2600:LEU:HD13	1.87	0.57
1:A:782:ASN:HB3	1:A:830:ILE:HG12	1.87	0.57
1:A:2226:ARG:NH1	1:A:2543:ASN:OD1	2.36	0.57
1:B:929:VAL:O	1:B:1082:LYS:NZ	2.37	0.57
1:D:536:LEU:HG	1:D:538:ASN:H	1.70	0.57
1:D:547:VAL:H	1:D:660:GLU:HB3	1.70	0.57
1:D:663:LYS:HB3	1:D:726:LYS:HB2	1.86	0.57
1:A:1238:CYS:SG	1:A:1239:LYS:N	2.77	0.56
1:C:377:LEU:O	1:C:395:TRP:NE1	2.38	0.56
1:C:2259:LEU:HD22	1:C:2534:ARG:HH21	1.70	0.56
1:C:1916:ASP:OD2	1:D:1719:ARG:NH1	2.38	0.56
1:A:1177:ASP:H	1:A:1251:ARG:HH22	1.51	0.56
1:A:2087:GLU:O	1:A:2089:THR:N	2.39	0.56
1:B:479:CYS:SG	1:B:481:LEU:N	2.78	0.56
1:C:2253:GLN:HA	1:C:2312:LEU:HD21	1.86	0.56
1:D:445:THR:HG23	1:D:460:HIS:HB2	1.86	0.56
1:D:1493:PRO:O	1:D:1719:ARG:NH2	2.38	0.56
1:D:1839:TRP:HE3	1:D:1954:LEU:HD13	1.70	0.56
1:B:1271:ARG:NH1	1:B:1273:GLU:OE2	2.38	0.56
1:B:2631:VAL:HG13	1:B:2632:TYR:HD1	1.71	0.56
1:C:473:ILE:HA	1:C:487:LEU:HD13	1.88	0.56
1:A:799:VAL:HA	1:A:813:ARG:O	2.06	0.56
1:A:1925:MET:HB3	1:B:1434:ARG:HG2	1.87	0.56
1:B:893:MET:O	1:B:896:GLU:HG3	2.06	0.56
1:C:2037:PRO:HG3	1:C:2070:PRO:HA	1.87	0.56
1:C:2240:LEU:HD23	1:C:2277:VAL:HG22	1.87	0.56
1:C:2716:SER:OG	1:C:2720:LYS:NZ	2.38	0.56
1:D:2035:ILE:HD12	1:D:2036:PRO:HD2	1.87	0.56
1:A:1124:ARG:HH21	1:A:1245:ALA:HA	1.71	0.56
1:A:2539:CYS:HA	1:A:2544:GLU:HB2	1.87	0.56
1:B:705:LEU:HD22	1:D:704:LEU:HB3	1.88	0.56
1:B:1173:LEU:HD12	1:B:1258:LEU:HD12	1.87	0.56
1:B:2545:LEU:HD13	1:B:2738:SER:HB2	1.86	0.56
1:B:2662:LEU:HD12	1:B:2663:PRO:HD2	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:568:MET:SD	1:C:568:MET:N	2.79	0.56
1:C:813:ARG:NH1	1:C:842:SER:O	2.37	0.56
1:C:2035:ILE:HD12	1:C:2036:PRO:HD2	1.88	0.56
1:C:2507:GLN:HE22	1:C:2512:GLY:H	1.52	0.56
1:D:1475:LEU:HD22	1:D:1791:VAL:HG23	1.87	0.56
1:A:2561:ARG:NH2	1:A:2670:LEU:O	2.38	0.56
1:B:753:SER:HB3	1:B:806:GLN:HB3	1.88	0.56
1:B:2035:ILE:HD12	1:B:2036:PRO:HD2	1.86	0.56
1:D:1169:PRO:HD2	1:D:1264:LEU:HD11	1.87	0.56
1:A:377:LEU:HD21	1:A:434:ALA:HB2	1.87	0.56
1:C:1709:GLN:O	1:D:2198:ARG:NH2	2.39	0.56
1:C:2274:VAL:H	1:C:2541:LEU:HD21	1.70	0.56
1:C:2517:ARG:NH1	1:C:2518:PRO:O	2.38	0.56
1:B:2240:LEU:HB2	1:B:2274:VAL:HG11	1.87	0.56
1:D:2556:LYS:HE3	1:D:2561:ARG:HE	1.71	0.56
1:A:935:ASN:OD1	1:A:1245:ALA:N	2.38	0.56
1:C:1855:TYR:OH	1:C:1933:SER:O	2.24	0.56
1:C:2198:ARG:NH2	1:C:2219:GLU:OE2	2.39	0.56
1:D:536:LEU:HG	1:D:538:ASN:N	2.20	0.56
1:B:1181:PHE:HZ	1:B:1314:MET:HE2	1.71	0.55
1:D:467:GLU:HG3	1:D:735:PRO:HB2	1.88	0.55
1:A:1917:PHE:HB2	1:B:1494:THR:HG21	1.86	0.55
1:A:2038:ASN:HD22	1:A:2041:GLU:H	1.53	0.55
1:A:2252:ILE:HB	1:A:2310:PRO:HG2	1.88	0.55
1:B:757:HIS:ND1	1:B:768:TYR:OH	2.36	0.55
1:C:380:GLU:O	1:C:395:TRP:NE1	2.39	0.55
1:C:565:VAL:HG11	1:C:653:LEU:HD23	1.87	0.55
1:C:2520:LYS:H	1:C:2525:ARG:HH12	1.54	0.55
1:D:1272:GLY:HA3	1:D:1354:LEU:HB2	1.89	0.55
1:B:1253:ASP:O	1:B:1257:ARG:HG2	2.06	0.55
1:C:1265:VAL:O	1:C:1274:HIS:NE2	2.39	0.55
1:A:1329:LEU:HD23	1:A:1397:LEU:HD13	1.88	0.55
1:A:2236:GLN:NE2	1:A:2273:ALA:O	2.39	0.55
1:B:2723:MET:SD	1:B:2723:MET:N	2.78	0.55
1:C:1082:LYS:O	1:C:1086:HIS:ND1	2.36	0.55
1:C:1411:ASN:O	1:C:1418:ARG:NH1	2.39	0.55
1:D:1352:ASP:OD1	1:D:1352:ASP:N	2.39	0.55
1:D:2037:PRO:HG3	1:D:2070:PRO:HA	1.88	0.55
1:D:2500:ASP:HB2	1:D:2520:LYS:HD2	1.88	0.55
1:A:1855:TYR:OH	1:A:1933:SER:O	2.24	0.55
1:B:750:ASN:HB2	1:B:801:ILE:HB	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:371:PHE:HA	1:C:385:SER:HA	1.88	0.55
1:C:401:TYR:HE1	1:C:403:ASN:HB2	1.72	0.55
1:A:46:ALA:HB1	1:A:62:LEU:HD13	1.89	0.55
1:A:2598:MET:HE3	1:A:2626:VAL:HG21	1.89	0.55
1:C:9:HIS:CD2	1:C:865:ALA:HB3	2.42	0.55
1:D:915:ARG:NH1	1:D:921:ASN:OD1	2.40	0.55
1:D:1799:MET:HE1	1:D:1831:VAL:HG21	1.89	0.55
1:B:1820:THR:OG1	1:B:1823:ASP:OD1	2.24	0.55
1:B:2054:PRO:HG3	1:B:2510:LYS:HG2	1.89	0.55
1:C:724:THR:HG23	1:C:727:VAL:HG22	1.88	0.55
1:D:1291:CYS:O	1:D:1294:ARG:NH2	2.39	0.55
1:D:2248:ARG:NH2	1:D:2308:LYS:O	2.39	0.55
1:A:704:LEU:HD12	1:C:701:PRO:HB2	1.88	0.55
1:A:2257:ARG:HD3	1:A:2315:ILE:HA	1.89	0.55
1:D:2708:LEU:HD13	1:D:2711:LYS:HD2	1.88	0.55
1:A:2244:VAL:HG11	1:A:2295:PHE:HE1	1.72	0.55
1:B:1952:GLN:NE2	1:B:2210:SER:OG	2.38	0.55
1:C:2536:LEU:HD21	1:C:2548:ILE:HD13	1.89	0.55
1:D:413:ARG:HH12	1:D:416:PHE:HB3	1.72	0.55
1:B:542:TYR:O	1:B:565:VAL:N	2.31	0.54
1:B:837:ASP:OD1	1:B:920:ARG:NH2	2.38	0.54
1:C:534:VAL:HG12	1:C:718:VAL:HA	1.88	0.54
1:D:2242:LEU:HD11	1:D:2279:VAL:HA	1.89	0.54
1:D:2734:THR:HG22	1:D:2770:SER:HB3	1.89	0.54
1:B:854:LEU:HD12	1:B:855:PRO:HD2	1.88	0.54
1:B:1468:LEU:O	1:B:1472:VAL:HG22	2.06	0.54
1:C:1934:ASP:HB2	1:D:1518:PRO:HB3	1.88	0.54
1:D:1690:MET:SD	1:D:1690:MET:N	2.80	0.54
1:D:2633:GLU:OE1	1:D:2636:ARG:NH2	2.30	0.54
1:A:19:ASN:ND2	1:A:822:MET:O	2.39	0.54
1:A:43:LEU:HD12	1:A:46:ALA:HB3	1.88	0.54
1:B:441:ASN:O	1:B:464:THR:OG1	2.21	0.54
1:B:1385:HIS:CE1	1:B:1389:VAL:HG11	2.43	0.54
1:C:510:ARG:HB2	1:C:541:LEU:HD11	1.88	0.54
1:C:1911:MET:SD	1:C:1911:MET:N	2.80	0.54
1:A:1170:LEU:HD13	1:A:1258:LEU:HD23	1.89	0.54
1:B:915:ARG:NH2	1:B:919:ASN:O	2.37	0.54
1:D:2637:LYS:O	1:D:2641:HIS:N	2.40	0.54
1:A:672:LYS:NZ	1:C:708:CYS:O	2.36	0.54
1:A:841:ILE:HG22	1:A:871:VAL:HG12	1.89	0.54
1:A:1690:MET:N	1:A:1690:MET:SD	2.81	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2226:ARG:NE	1:A:2742:SER:OG	2.40	0.54
1:C:1522:ARG:HD3	1:D:1865:PRO:HD3	1.90	0.54
1:A:27:GLU:O	1:A:31:LYS:N	2.34	0.54
1:B:1131:THR:O	1:B:1134:GLU:HG3	2.07	0.54
1:C:1352:ASP:OD1	1:C:1352:ASP:N	2.40	0.54
1:A:1472:VAL:HG21	1:A:1827:LEU:HD21	1.89	0.54
1:C:2180:ILE:HG23	1:C:2185:LEU:HD21	1.90	0.54
1:D:2536:LEU:HD21	1:D:2548:ILE:HB	1.90	0.54
1:A:1711:PRO:HA	1:B:2060:ASN:HD21	1.71	0.54
1:B:411:HIS:CD2	1:B:414:ALA:HB2	2.42	0.54
1:B:1839:TRP:HE3	1:B:1954:LEU:HD13	1.72	0.54
1:B:2098:LEU:HB2	1:B:2099:PRO:HD3	1.90	0.54
1:B:2553:HIS:HB3	1:B:2567:ASP:HB3	1.90	0.54
1:C:838:LEU:N	1:C:917:ASP:OD2	2.37	0.54
1:C:2521:ASN:H	1:C:2525:ARG:HH22	1.55	0.54
1:A:895:LEU:HG	1:A:908:LEU:HD21	1.90	0.54
1:A:1704:ALA:O	1:A:1705:ASN:ND2	2.41	0.54
1:C:1131:THR:O	1:C:1134:GLU:HG2	2.08	0.54
1:B:747:LEU:HB2	1:B:759:VAL:HG23	1.89	0.54
1:C:817:GLY:HA3	1:C:840:PRO:HB3	1.90	0.54
1:C:837:ASP:N	1:C:917:ASP:OD2	2.41	0.54
1:A:836:LEU:HD13	1:A:838:LEU:HD12	1.90	0.53
1:B:493:TRP:CZ2	1:B:773:LEU:HB3	2.43	0.53
1:B:2309:LEU:HD12	1:B:2310:PRO:HD2	1.90	0.53
1:C:69:ARG:HH22	1:C:395:TRP:HA	1.73	0.53
1:A:2199:VAL:HG22	1:B:1710:ALA:HB2	1.89	0.53
1:C:923:LEU:HD23	1:C:1105:LEU:HB3	1.91	0.53
1:B:572:CYS:SG	1:B:573:ARG:N	2.81	0.53
1:B:1124:ARG:NH1	1:B:1177:ASP:O	2.42	0.53
1:C:27:GLU:O	1:C:31:LYS:N	2.33	0.53
1:C:747:LEU:HD23	1:C:759:VAL:HG12	1.90	0.53
1:C:882:ARG:NH1	1:C:884:ASP:OD2	2.40	0.53
1:C:2506:TYR:CD1	1:C:2517:ARG:HB2	2.44	0.53
1:A:1396:LEU:HD23	1:A:1396:LEU:H	1.73	0.53
1:B:479:CYS:SG	1:B:806:GLN:NE2	2.68	0.53
1:B:510:ARG:NH2	1:B:539:ASN:H	2.06	0.53
1:C:1839:TRP:HZ3	1:C:1958:ILE:HD11	1.74	0.53
1:D:811:ILE:HG21	1:D:844:LEU:HD21	1.91	0.53
1:D:2515:THR:HG23	1:D:2551:ASN:HD22	1.72	0.53
1:C:760:LEU:HD11	1:C:771:PHE:HZ	1.74	0.53
1:D:803:THR:HA	1:D:846:MET:HE2	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1375:SER:HG	1:D:1427:ARG:HH22	1.51	0.53
1:D:1379:ARG:NH2	1:D:1517:GLU:OE1	2.41	0.53
1:C:747:LEU:HB3	1:C:799:VAL:HG21	1.89	0.53
1:D:504:LYS:O	1:D:508:LYS:N	2.41	0.53
1:D:549:PHE:H	1:D:657:VAL:HG12	1.74	0.53
1:D:1320:GLU:HB2	1:D:1323:ARG:HH21	1.73	0.53
1:D:2021:PRO:HA	1:D:2024:ARG:HE	1.74	0.53
1:B:476:LEU:O	1:B:477:HIS:ND1	2.42	0.53
1:B:1195:GLU:OE2	1:B:1224:LYS:NZ	2.36	0.53
1:B:2245:ASP:OD1	1:B:2245:ASP:N	2.42	0.53
1:B:2604:ILE:HD11	1:B:2615:VAL:HB	1.91	0.53
1:C:19:ASN:ND2	1:C:822:MET:O	2.42	0.53
1:D:1197:ARG:NH1	1:D:1220:ASP:OD2	2.41	0.53
1:A:1247:GLN:HG3	1:A:1250:ALA:H	1.72	0.53
1:B:1381:ASP:OD1	1:B:1434:ARG:NH1	2.42	0.53
1:D:7:VAL:HG12	1:D:867:ILE:HB	1.90	0.53
1:A:1262:THR:OG1	1:A:1263:ASN:N	2.42	0.53
1:A:2572:ASP:OD1	1:A:2572:ASP:N	2.40	0.53
1:B:1449:LYS:HD2	1:B:1451:ASN:HD21	1.73	0.53
1:C:1492:ARG:NE	1:D:1940:ASP:OD1	2.38	0.53
1:D:2102:MET:HG2	1:D:2176:MET:HE3	1.90	0.53
1:D:1201:LEU:HA	1:D:1205:LEU:HB2	1.90	0.53
1:D:2242:LEU:HD21	1:D:2279:VAL:HG22	1.91	0.53
1:A:411:HIS:HB3	1:A:414:ALA:HB2	1.90	0.52
1:A:1480:GLU:OE1	1:B:1928:HIS:NE2	2.42	0.52
1:A:2505:PHE:HD1	1:A:2516:PRO:HA	1.74	0.52
1:B:75:GLN:NE2	1:B:353:PRO:O	2.42	0.52
1:C:1110:ASP:OD1	1:C:1112:ARG:N	2.33	0.52
1:D:2087:GLU:HG2	1:D:2188:ARG:HH21	1.72	0.52
1:A:1508:GLN:OE1	1:A:1509:GLY:N	2.42	0.52
1:B:2765:ALA:HB2	1:B:2772:LEU:HD23	1.91	0.52
1:C:390:LEU:HD11	1:C:436:VAL:HG21	1.91	0.52
1:C:2564:ASN:N	1:C:2567:ASP:OD2	2.40	0.52
1:A:498:PRO:HG3	1:A:773:LEU:HB2	1.90	0.52
1:B:846:MET:HG3	1:B:867:ILE:HG12	1.91	0.52
1:B:1860:ALA:HB2	1:B:1871:PRO:HG2	1.89	0.52
1:C:1921:ALA:O	1:C:1925:MET:HG3	2.09	0.52
1:A:915:ARG:NH2	1:A:919:ASN:OD1	2.42	0.52
1:A:2734:THR:HG22	1:A:2770:SER:HB2	1.90	0.52
1:B:426:LEU:HD23	1:B:476:LEU:HD12	1.91	0.52
1:D:1082:LYS:O	1:D:1086:HIS:ND1	2.30	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2731:TYR:O	1:D:2735:SER:HA	2.10	0.52
1:A:1379:ARG:HH12	1:A:1517:GLU:HG3	1.74	0.52
1:B:1690:MET:SD	1:B:1690:MET:N	2.83	0.52
1:B:2517:ARG:O	1:B:2525:ARG:NH2	2.41	0.52
1:C:2537:GLY:HA3	1:C:2661:VAL:HG21	1.91	0.52
1:D:1099:GLN:OE1	1:D:1099:GLN:N	2.42	0.52
1:D:2248:ARG:NH1	1:D:2307:GLU:OE1	2.42	0.52
1:C:49:LYS:O	1:C:49:LYS:NZ	2.33	0.52
1:D:30:ASN:ND2	1:D:837:ASP:O	2.41	0.52
1:D:1215:CYS:SG	1:D:1242:THR:OG1	2.68	0.52
1:A:393:TRP:HB3	1:A:400:PRO:HA	1.91	0.52
1:C:893:MET:O	1:C:896:GLU:HG3	2.10	0.52
1:D:1194:PHE:O	1:D:1207:CYS:N	2.36	0.52
1:A:379:SER:HB2	1:A:450:THR:HG23	1.90	0.52
1:A:2724:THR:O	1:A:2727:GLN:HG3	2.10	0.52
1:B:2025:ARG:HB2	1:B:2030:THR:HG23	1.92	0.52
1:C:4:ILE:HB	1:C:40:LEU:HD13	1.90	0.52
1:C:363:TRP:CZ2	1:C:391:TYR:HB3	2.45	0.52
1:C:1710:ALA:HA	1:D:2198:ARG:HB3	1.91	0.52
1:C:2259:LEU:HB3	1:C:2534:ARG:HE	1.75	0.52
1:C:2598:MET:HE1	1:C:2626:VAL:HG23	1.92	0.52
1:D:753:SER:OG	1:D:754:LYS:NZ	2.38	0.52
1:D:837:ASP:N	1:D:917:ASP:OD2	2.43	0.52
1:D:2780:LYS:O	1:D:2784:LYS:HG2	2.10	0.52
1:A:75:GLN:NE2	1:A:353:PRO:O	2.43	0.52
1:A:655:GLU:N	1:A:655:GLU:OE1	2.43	0.52
1:A:770:ILE:O	1:A:779:GLU:N	2.43	0.52
1:B:1114:MET:HA	1:B:1118:MET:HE3	1.92	0.52
1:C:75:GLN:OE1	1:C:75:GLN:N	2.43	0.52
1:D:571:SER:HB3	1:D:651:TRP:HE3	1.73	0.52
1:A:41:ASN:O	1:A:44:GLU:HB2	2.10	0.51
1:A:2229:MET:HE2	1:A:2232:LEU:HD21	1.93	0.51
1:B:2618:ILE:HG13	1:B:2621:GLY:HA3	1.92	0.51
1:C:2603:ALA:HB1	1:C:2614:GLN:HE21	1.76	0.51
1:D:893:MET:O	1:D:896:GLU:HG3	2.10	0.51
1:A:7:VAL:HG21	1:A:21:ARG:HB3	1.93	0.51
1:A:2086:MET:HG3	1:A:2088:VAL:HG23	1.92	0.51
1:B:2233:ARG:HB3	1:B:2541:LEU:HD11	1.91	0.51
1:C:411:HIS:O	1:C:414:ALA:N	2.35	0.51
1:C:474:VAL:N	1:C:486:GLN:O	2.43	0.51
1:C:1411:ASN:HB3	1:C:1418:ARG:HH12	1.75	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1253:ASP:OD1	1:D:1257:ARG:NH1	2.37	0.51
1:B:498:PRO:O	1:B:501:GLN:NE2	2.41	0.51
1:B:2522:THR:HG23	1:B:2525:ARG:H	1.76	0.51
1:C:2069:ARG:NH1	1:D:1367:GLU:OE2	2.44	0.51
1:C:2267:CYS:SG	1:C:2268:ALA:N	2.84	0.51
1:D:400:PRO:HG2	1:D:402:ARG:HE	1.75	0.51
1:D:1077:GLU:O	1:D:1081:ARG:N	2.39	0.51
1:C:515:LYS:HG3	1:C:516:PRO:HD3	1.92	0.51
1:D:433:ARG:HG2	1:D:447:VAL:HG12	1.93	0.51
1:D:390:LEU:HD13	1:D:411:HIS:CD2	2.46	0.51
1:D:1855:TYR:OH	1:D:1934:ASP:N	2.43	0.51
1:D:2089:THR:HB	1:D:2095:LEU:HD11	1.93	0.51
1:A:2199:VAL:HG13	1:B:1707:ALA:HA	1.91	0.51
1:B:575:GLN:NE2	1:B:648:GLU:OE1	2.43	0.51
1:C:74:VAL:H	1:C:849:HIS:HE1	1.56	0.51
1:C:493:TRP:HE1	1:C:736:LYS:HE2	1.76	0.51
1:D:424:ILE:HG23	1:D:436:VAL:HG13	1.92	0.51
1:D:2558:LEU:HD22	1:D:2658:LEU:HD13	1.92	0.51
1:A:4:ILE:O	1:A:5:HIS:ND1	2.43	0.51
1:A:1444:ALA:HA	1:A:1499:LEU:HG	1.92	0.51
1:A:2184:MET:HG3	1:A:2185:LEU:HD22	1.91	0.51
1:A:2761:HIS:HB3	1:A:2775:PRO:HG3	1.92	0.51
1:B:27:GLU:HG2	1:B:31:LYS:HD2	1.92	0.51
1:B:1193:ILE:HB	1:B:1206:CYS:HB3	1.93	0.51
1:B:1333:LEU:HA	1:B:1339:LEU:HD21	1.92	0.51
1:B:1496:PRO:HA	1:B:1779:THR:HG21	1.93	0.51
1:C:4:ILE:O	1:C:5:HIS:ND1	2.44	0.51
1:D:1841:TRP:CZ3	1:D:1950:VAL:HG21	2.46	0.51
1:A:837:ASP:OD1	1:A:920:ARG:NH2	2.44	0.51
1:A:1475:LEU:HD22	1:A:1791:VAL:HG23	1.91	0.51
1:B:414:ALA:O	1:B:418:GLY:N	2.44	0.51
1:C:2602:PHE:HD2	1:C:2617:LEU:HB2	1.75	0.51
1:D:2766:ASN:O	1:D:2770:SER:CA	2.59	0.51
1:A:49:LYS:HD3	1:A:63:GLU:HG3	1.93	0.51
1:A:1859:LEU:HG	1:B:1519:LEU:HD23	1.92	0.51
1:A:2605:ASP:HA	1:A:2614:GLN:HA	1.92	0.51
1:B:473:ILE:HA	1:B:487:LEU:HD13	1.93	0.51
1:B:822:MET:HE3	1:B:830:ILE:HD12	1.93	0.51
1:B:1220:ASP:OD1	1:B:1222:LYS:NZ	2.33	0.51
1:C:433:ARG:NE	1:C:483:THR:OG1	2.39	0.51
1:D:745:GLU:HG2	1:D:746:ILE:H	1.75	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1290:HIS:HE1	1:D:1322:PRO:HG2	1.76	0.51
1:D:2026:SER:OG	1:D:2556:LYS:NZ	2.39	0.51
1:D:2700:SER:HB3	1:D:2756:PRO:HG3	1.93	0.51
1:A:70:ILE:HD13	1:A:360:LEU:HA	1.93	0.51
1:A:2534:ARG:NH1	1:A:2660:ASP:OD2	2.44	0.51
1:A:2781:GLN:HA	1:A:2784:LYS:HZ3	1.74	0.51
1:B:549:PHE:HA	1:B:558:VAL:HA	1.93	0.51
1:B:1444:ALA:HA	1:B:1786:ARG:HH22	1.76	0.51
1:C:389:GLU:HB2	1:C:391:TYR:CE2	2.46	0.51
1:C:514:LYS:HA	1:C:537:ARG:HH12	1.75	0.51
1:C:1340:LYS:NZ	1:C:1420:GLU:OE2	2.44	0.51
1:D:1868:PRO:HA	1:D:1873:HIS:CE1	2.45	0.51
1:D:2074:LEU:HD13	1:D:2086:MET:HA	1.92	0.51
1:A:1410:GLN:OE1	1:A:1818:LYS:NZ	2.44	0.50
1:A:1916:ASP:OD2	1:B:1492:ARG:NH2	2.40	0.50
1:B:499:PHE:HB3	1:B:654:ARG:CZ	2.41	0.50
1:B:679:ALA:HA	1:B:709:ARG:O	2.11	0.50
1:C:673:VAL:HG22	1:C:678:VAL:HG12	1.93	0.50
1:D:361:GLN:OE1	1:D:361:GLN:N	2.42	0.50
1:D:930:CYS:HA	1:D:1082:LYS:HD2	1.93	0.50
1:D:2165:PRO:HB2	1:D:2167:THR:HG22	1.92	0.50
1:D:2721:MET:HE1	1:D:2729:LEU:HB2	1.93	0.50
1:A:1276:LEU:O	1:A:1280:VAL:HG23	2.11	0.50
1:A:2279:VAL:HG11	1:A:2295:PHE:HB2	1.94	0.50
1:B:390:LEU:HD13	1:B:411:HIS:CD2	2.47	0.50
1:B:500:SER:OG	1:B:654:ARG:NH2	2.42	0.50
1:C:912:ILE:HG23	1:C:1105:LEU:HD21	1.93	0.50
1:C:1201:LEU:HG	1:C:1237:LYS:HD2	1.93	0.50
1:D:379:SER:OG	1:D:380:GLU:OE1	2.17	0.50
1:D:854:LEU:HD12	1:D:855:PRO:HD2	1.92	0.50
1:A:2290:GLY:H	1:A:2768:CYS:HA	1.76	0.50
1:B:533:GLN:OE1	1:B:669:LYS:N	2.44	0.50
1:B:2607:CYS:O	1:B:2612:GLY:N	2.42	0.50
1:C:57:HIS:HD2	1:C:69:ARG:HH21	1.58	0.50
1:C:1106:LEU:HD22	1:C:1132:ILE:HD11	1.93	0.50
1:D:762:THR:HG23	1:D:765:TRP:HB3	1.92	0.50
1:D:1712:ARG:HA	1:D:1715:GLN:HG2	1.93	0.50
1:A:1225:ARG:H	1:A:1225:ARG:HD3	1.77	0.50
1:A:1716:TRP:CZ2	1:B:1856:GLY:HA3	2.45	0.50
1:B:2235:GLN:NE2	1:B:2236:GLN:OE1	2.44	0.50
1:D:2053:GLN:HB2	1:D:2056:LEU:HG	1.94	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:482:TYR:OH	1:A:755:GLY:O	2.29	0.50
1:B:2097:VAL:HG13	1:B:2101:LYS:HD2	1.92	0.50
1:C:1711:PRO:O	1:C:1715:GLN:HG2	2.11	0.50
1:C:1928:HIS:NE2	1:D:1480:GLU:OE2	2.45	0.50
1:D:2050:LEU:HD22	1:D:2066:LEU:HG	1.93	0.50
1:D:2604:ILE:HG21	1:D:2638:TYR:HE2	1.76	0.50
1:A:487:LEU:HB2	1:A:490:SER:HB2	1.94	0.50
1:B:499:PHE:CD1	1:B:654:ARG:HD2	2.47	0.50
1:C:18:LEU:HD21	1:C:811:ILE:HD11	1.93	0.50
1:C:2572:ASP:N	1:C:2572:ASP:OD1	2.43	0.50
1:D:680:VAL:O	1:D:708:CYS:HA	2.12	0.50
1:D:1276:LEU:O	1:D:1280:VAL:HG23	2.11	0.50
1:A:52:VAL:HG22	1:A:374:ILE:HD12	1.94	0.50
1:A:2238:ARG:NH2	1:A:2262:HIS:O	2.44	0.50
1:A:2607:CYS:O	1:A:2612:GLY:N	2.43	0.50
1:A:2729:LEU:HD13	1:A:2787:LEU:HD21	1.94	0.50
1:C:487:LEU:HB2	1:C:490:SER:HB2	1.93	0.50
1:C:514:LYS:HA	1:C:537:ARG:HH22	1.77	0.50
1:C:1279:LEU:HB3	1:C:1329:LEU:HD13	1.93	0.50
1:A:1164:ASN:OD1	1:A:1164:ASN:N	2.44	0.50
1:A:2075:TYR:HB2	1:A:2086:MET:HE3	1.93	0.50
1:B:844:LEU:HD13	1:B:869:MET:HG2	1.93	0.50
1:D:493:TRP:O	1:D:736:LYS:HB3	2.12	0.50
1:A:654:ARG:H	1:A:654:ARG:HD3	1.77	0.50
1:A:1197:ARG:HH22	1:A:1202:LEU:HB2	1.76	0.50
1:B:1932:HIS:HD2	1:B:1937:PRO:HG3	1.77	0.50
1:C:1926:ARG:HA	1:D:1434:ARG:HH21	1.76	0.50
1:C:2016:THR:HA	1:C:2020:HIS:CD2	2.46	0.50
1:D:2232:LEU:O	1:D:2235:GLN:NE2	2.44	0.50
1:D:2545:LEU:HD21	1:D:2740:PRO:HA	1.94	0.50
1:A:560:VAL:HG22	1:A:575:GLN:HB2	1.93	0.49
1:A:2193:LEU:HD22	1:A:2215:LEU:HD21	1.92	0.49
1:B:2532:ILE:O	1:B:2535:ILE:HG13	2.11	0.49
1:C:501:GLN:HA	1:C:504:LYS:HE2	1.94	0.49
1:C:1334:GLN:HA	1:C:1404:THR:HG21	1.94	0.49
1:C:2042:VAL:HG23	1:C:2047:ALA:HB2	1.94	0.49
1:C:2184:MET:HG3	1:C:2185:LEU:HD22	1.94	0.49
1:D:17:GLN:O	1:D:21:ARG:HG2	2.12	0.49
1:D:2563:VAL:HG11	1:D:2644:LEU:HD11	1.94	0.49
1:A:445:THR:HB	1:A:494:TRP:HH2	1.76	0.49
1:A:710:LEU:HD21	1:C:679:ALA:HB2	1.93	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1169:PRO:HD2	1:A:1264:LEU:HD13	1.94	0.49
1:A:1514:PHE:HE1	1:B:1922:LEU:HD21	1.77	0.49
1:A:1841:TRP:O	1:A:1845:ILE:HG12	2.11	0.49
1:B:1082:LYS:O	1:B:1086:HIS:ND1	2.35	0.49
1:B:1095:SER:O	1:B:1099:GLN:NE2	2.45	0.49
1:C:821:PRO:HG3	1:C:836:LEU:HD21	1.94	0.49
1:C:886:GLU:OE1	1:C:889:ARG:NH2	2.45	0.49
1:C:1202:LEU:H	1:C:1205:LEU:HB2	1.77	0.49
1:C:2178:MET:SD	1:C:2178:MET:N	2.81	0.49
1:C:2504:LEU:O	1:C:2517:ARG:N	2.45	0.49
1:A:2055:HIS:O	1:A:2058:GLN:NE2	2.32	0.49
1:A:2518:PRO:HB3	1:A:2650:PRO:HG2	1.95	0.49
1:C:401:TYR:CE1	1:C:403:ASN:HB2	2.47	0.49
1:C:1215:CYS:HB2	1:C:1216:HIS:CD2	2.48	0.49
1:C:1276:LEU:O	1:C:1280:VAL:HG23	2.12	0.49
1:C:2240:LEU:HB2	1:C:2277:VAL:HG13	1.94	0.49
1:A:1202:LEU:HG	1:A:1203:GLU:HG2	1.93	0.49
1:A:1492:ARG:NH1	1:B:1916:ASP:OD1	2.32	0.49
1:C:57:HIS:HB2	1:C:395:TRP:CE3	2.47	0.49
1:C:1842:MET:HE3	1:C:1951:PHE:HD1	1.78	0.49
1:D:818:THR:OG1	1:D:838:LEU:O	2.28	0.49
1:B:26:SER:HB3	1:B:838:LEU:HG	1.95	0.49
1:B:536:LEU:HA	1:B:717:GLN:OE1	2.11	0.49
1:C:1922:LEU:HG	1:D:1513:LEU:HD21	1.95	0.49
1:C:2274:VAL:HG23	1:C:2542:GLN:HE22	1.78	0.49
1:D:563:GLU:HG2	1:D:573:ARG:HB2	1.94	0.49
1:D:1194:PHE:N	1:D:1207:CYS:O	2.40	0.49
1:A:672:LYS:HG3	1:C:706:GLN:HA	1.94	0.49
1:B:1464:PHE:HB3	1:B:1798:LEU:HD11	1.95	0.49
1:C:502:ARG:HA	1:C:505:MET:HE3	1.94	0.49
1:C:2195:LEU:HD22	1:D:1714:MET:HE2	1.95	0.49
1:C:2546:CYS:O	1:C:2680:ASN:HA	2.12	0.49
1:D:534:VAL:HA	1:D:719:VAL:H	1.77	0.49
1:D:2579:LEU:HD12	1:D:2635:VAL:HG13	1.93	0.49
1:A:7:VAL:HG12	1:A:867:ILE:HB	1.95	0.49
1:A:1370:TYR:OH	1:B:1854:ARG:HD2	2.12	0.49
1:B:456:SER:H	1:B:457:LYS:HZ2	1.60	0.49
1:B:1799:MET:HE1	1:B:2169:PHE:HE2	1.76	0.49
1:C:4:ILE:HG13	1:C:43:LEU:HD23	1.94	0.49
1:C:1705:ASN:HA	1:C:1720:ASN:HD21	1.78	0.49
1:D:1519:LEU:HD12	1:D:1520:PRO:HD2	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2267:CYS:SG	1:A:2268:ALA:N	2.85	0.49
1:A:2689:MET:HE3	1:A:2739:LEU:HD12	1.95	0.49
1:B:1437:VAL:HG11	1:B:1482:LEU:HD11	1.94	0.49
1:B:2228:GLU:HG3	1:B:2232:LEU:HD23	1.95	0.49
1:C:540:PRO:HG3	1:C:566:TRP:CH2	2.48	0.49
1:C:2247:ASP:OD2	1:C:2250:LEU:N	2.42	0.49
1:D:1201:LEU:HD21	1:D:1237:LYS:HG2	1.95	0.49
1:D:1469:PRO:HG3	1:D:1819:LEU:HD13	1.95	0.49
1:D:2601:ALA:HA	1:D:2626:VAL:H	1.78	0.49
1:A:573:ARG:HG2	1:A:650:GLN:HG2	1.93	0.49
1:A:573:ARG:NH1	1:A:648:GLU:OE2	2.46	0.49
1:A:2201:MET:HE1	1:A:2212:LEU:HB3	1.94	0.49
1:B:2517:ARG:HD3	1:B:2518:PRO:HD2	1.95	0.49
1:C:455:ALA:HA	1:C:458:LEU:HB2	1.94	0.49
1:D:1841:TRP:O	1:D:1845:ILE:HG12	2.13	0.49
1:D:2647:ALA:HB1	1:D:2651:LEU:HD23	1.95	0.49
1:A:1364:LEU:HD22	1:B:2069:ARG:HH11	1.77	0.49
1:B:425:VAL:HG13	1:B:426:LEU:HD13	1.95	0.49
1:B:505:MET:HE2	1:B:728:PRO:HG2	1.94	0.49
1:B:2766:ASN:O	1:B:2770:SER:HA	2.12	0.49
1:C:394:LYS:HB2	1:C:397:GLU:HG3	1.95	0.49
1:D:534:VAL:HG13	1:D:718:VAL:HA	1.94	0.49
1:D:549:PHE:HZ	1:D:551:ILE:HG23	1.76	0.49
1:D:1117:PHE:HZ	1:D:1258:LEU:HD11	1.78	0.49
1:D:1331:ARG:O	1:D:1331:ARG:NH1	2.37	0.49
1:D:1348:GLN:NE2	1:D:1372:ASN:O	2.36	0.49
1:D:1375:SER:OG	1:D:1427:ARG:NH2	2.32	0.49
1:D:70:ILE:HD13	1:D:360:LEU:HA	1.93	0.48
1:D:422:GLU:N	1:D:422:GLU:OE1	2.46	0.48
1:D:846:MET:HG2	1:D:867:ILE:HG23	1.94	0.48
1:D:1087:PHE:O	1:D:1090:LYS:HG2	2.12	0.48
1:D:1122:SER:HA	1:D:1172:VAL:HG11	1.95	0.48
1:A:2677:LEU:O	1:A:2741:ALA:HB2	2.13	0.48
1:B:663:LYS:HB3	1:B:727:VAL:HG23	1.94	0.48
1:B:1914:ARG:O	1:B:1918:LEU:HD23	2.12	0.48
1:B:2592:ASP:OD1	1:B:2592:ASP:N	2.46	0.48
1:C:17:GLN:O	1:C:21:ARG:HG2	2.14	0.48
1:C:1856:GLY:HA3	1:D:1716:TRP:CZ2	2.48	0.48
1:C:1941:VAL:HG11	1:C:2195:LEU:HG	1.94	0.48
1:C:2733:TRP:CD1	1:C:2734:THR:HG23	2.47	0.48
1:D:1091:LEU:O	1:D:1095:SER:N	2.44	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1388:ILE:HG12	1:D:1398:LEU:HD11	1.95	0.48
1:A:387:LYS:O	1:A:423:LYS:HA	2.13	0.48
1:A:2304:LEU:HD21	1:A:2548:ILE:HA	1.95	0.48
1:B:510:ARG:HA	1:B:510:ARG:HH11	1.78	0.48
1:C:32:TYR:HB3	1:C:34:LEU:HD23	1.95	0.48
1:C:384:VAL:HG13	1:C:424:ILE:HG13	1.93	0.48
1:C:1396:LEU:HD23	1:C:1396:LEU:H	1.77	0.48
1:D:2309:LEU:HD12	1:D:2310:PRO:HD2	1.95	0.48
1:D:2555:ILE:HA	1:D:2558:LEU:HB2	1.95	0.48
1:A:2240:LEU:HA	1:A:2262:HIS:CE1	2.48	0.48
1:B:534:VAL:HG21	1:B:716:LEU:HD13	1.96	0.48
1:C:529:THR:O	1:C:532:THR:OG1	2.27	0.48
1:C:1870:HIS:HD2	1:D:1519:LEU:HD21	1.78	0.48
1:D:394:LYS:HB2	1:D:397:GLU:OE1	2.14	0.48
1:D:2714:PHE:O	1:D:2717:ILE:HG13	2.13	0.48
1:A:539:ASN:N	1:A:540:PRO:HD3	2.29	0.48
1:A:2102:MET:HG2	1:A:2176:MET:SD	2.53	0.48
1:B:403:ASN:ND2	1:B:406:ASN:O	2.46	0.48
1:B:510:ARG:O	1:B:510:ARG:NH1	2.46	0.48
1:B:2605:ASP:OD1	1:B:2605:ASP:N	2.44	0.48
1:C:1828:GLN:HE22	1:C:2171:PRO:HB3	1.78	0.48
1:C:2083:LYS:O	1:C:2188:ARG:NH1	2.46	0.48
1:D:493:TRP:CZ2	1:D:736:LYS:HD2	2.48	0.48
1:D:874:GLN:HG2	1:D:914:HIS:CE1	2.48	0.48
1:D:1464:PHE:HB3	1:D:1798:LEU:HD11	1.96	0.48
1:D:2607:CYS:SG	1:D:2608:LYS:N	2.87	0.48
1:A:14:THR:N	1:A:17:GLN:HE22	2.09	0.48
1:A:1839:TRP:HZ3	1:A:1958:ILE:HD11	1.78	0.48
1:B:533:GLN:HA	1:B:668:GLY:C	2.38	0.48
1:B:1429:LEU:HA	1:B:1432:VAL:HG12	1.96	0.48
1:B:2297:THR:HA	1:B:2547:PRO:HG2	1.94	0.48
1:B:2529:PHE:CD2	1:B:2650:PRO:HB3	2.49	0.48
1:C:2557:VAL:HG21	1:C:2651:LEU:HD13	1.96	0.48
1:A:1207:CYS:HB3	1:A:1234:CYS:HB2	1.95	0.48
1:A:2606:LEU:N	1:A:2613:GLY:O	2.44	0.48
1:A:2714:PHE:O	1:A:2717:ILE:HG13	2.13	0.48
1:B:732:GLN:NE2	1:B:734:THR:O	2.45	0.48
1:C:18:LEU:O	1:C:22:LEU:HG	2.13	0.48
1:C:1138:LYS:O	1:C:1141:LYS:NZ	2.46	0.48
1:C:1174:CYS:HA	1:C:1324:PHE:HE2	1.79	0.48
1:C:2279:VAL:H	1:C:2291:VAL:HG11	1.77	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1334:GLN:HA	1:D:1404:THR:HG21	1.95	0.48
1:B:510:ARG:NH2	1:B:537:ARG:O	2.38	0.48
1:B:1395:ILE:HD13	1:B:1459:LYS:HE3	1.96	0.48
1:B:2074:LEU:HD23	1:B:2086:MET:HA	1.95	0.48
1:C:747:LEU:HD12	1:C:799:VAL:HG21	1.94	0.48
1:C:1193:ILE:HG23	1:C:1206:CYS:HB2	1.96	0.48
1:C:2088:VAL:HG12	1:D:1373:GLN:CD	2.38	0.48
1:A:2020:HIS:CD2	1:A:2022:PHE:H	2.31	0.48
1:C:1711:PRO:HA	1:D:2060:ASN:HD21	1.78	0.48
1:D:1255:LEU:HD11	1:D:1324:PHE:CE1	2.49	0.48
1:D:1272:GLY:O	1:D:1379:ARG:NH1	2.47	0.48
1:D:1423:ALA:O	1:D:1426:MET:HG2	2.13	0.48
1:A:394:LYS:N	1:A:397:GLU:OE2	2.46	0.48
1:A:2277:VAL:HG23	1:A:2542:GLN:HG3	1.96	0.48
1:B:39:PRO:HG2	1:B:40:LEU:HD12	1.95	0.48
1:C:773:LEU:H	1:C:773:LEU:HD22	1.79	0.48
1:C:1352:ASP:O	1:C:1355:SER:OG	2.27	0.48
1:D:6:PHE:HA	1:D:867:ILE:O	2.14	0.48
1:D:2513:PHE:HD2	1:D:2551:ASN:HA	1.78	0.48
1:A:823:ALA:HB3	1:A:831:ARG:HB3	1.95	0.47
1:A:1856:GLY:HA2	1:A:1936:LEU:HD12	1.96	0.47
1:B:757:HIS:HB3	1:B:768:TYR:HE1	1.79	0.47
1:B:1387:LEU:HD11	1:B:1397:LEU:HB3	1.96	0.47
1:B:1469:PRO:HG3	1:B:1819:LEU:HD13	1.95	0.47
1:B:1475:LEU:HA	1:B:1478:VAL:HG12	1.95	0.47
1:B:1846:MET:HE2	1:B:1846:MET:HA	1.96	0.47
1:B:2775:PRO:HD2	1:B:2777:TYR:HE1	1.78	0.47
1:C:513:ASN:HD21	1:C:726:LYS:HA	1.79	0.47
1:C:2520:LYS:N	1:C:2525:ARG:HH12	2.10	0.47
1:D:1179:CYS:SG	1:D:1180:SER:N	2.87	0.47
1:A:69:ARG:HD2	1:A:395:TRP:CZ3	2.49	0.47
1:A:491:LEU:HB2	1:A:738:LEU:HB2	1.95	0.47
1:A:670:VAL:HG13	1:A:680:VAL:HG22	1.95	0.47
1:A:923:LEU:HD23	1:A:1105:LEU:HB3	1.97	0.47
1:A:1713:SER:OG	1:B:2062:ARG:NH1	2.47	0.47
1:A:2531:ASN:HA	1:A:2534:ARG:HG2	1.96	0.47
1:B:17:GLN:OE1	1:B:17:GLN:N	2.40	0.47
1:B:532:THR:O	1:B:670:VAL:HG23	2.14	0.47
1:B:2507:GLN:NE2	1:B:2512:GLY:H	2.12	0.47
1:C:52:VAL:HG22	1:C:374:ILE:HD12	1.95	0.47
1:C:549:PHE:CE2	1:C:657:VAL:HG11	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:739:CYS:N	1:C:776:GLY:O	2.46	0.47
1:C:818:THR:HG21	1:C:917:ASP:HB3	1.95	0.47
1:C:1114:MET:HB3	1:C:1118:MET:HB2	1.95	0.47
1:C:2733:TRP:HD1	1:C:2734:THR:HG23	1.80	0.47
1:D:4:ILE:HG21	1:D:43:LEU:HD23	1.96	0.47
1:D:895:LEU:HD11	1:D:908:LEU:HD13	1.96	0.47
1:D:1841:TRP:HZ3	1:D:1950:VAL:HG21	1.78	0.47
1:D:1927:SER:O	1:D:2091:ASP:HB3	2.13	0.47
1:A:6:PHE:CZ	1:A:356:LEU:HD11	2.49	0.47
1:A:2309:LEU:HG	1:A:2501:ASN:HA	1.97	0.47
1:B:547:VAL:O	1:B:659:VAL:HG12	2.14	0.47
1:B:717:GLN:OE1	1:B:717:GLN:N	2.47	0.47
1:B:834:ASP:OD1	1:B:834:ASP:N	2.47	0.47
1:B:1467:LEU:HD13	1:B:1817:VAL:HG21	1.96	0.47
1:C:931:PHE:CZ	1:C:1123:GLY:HA3	2.50	0.47
1:C:2718:VAL:HA	1:C:2721:MET:SD	2.54	0.47
1:D:536:LEU:O	1:D:539:ASN:HB2	2.15	0.47
1:D:561:LEU:HD22	1:D:563:GLU:H	1.79	0.47
1:D:2610:GLU:OE1	1:D:2610:GLU:N	2.43	0.47
1:A:75:GLN:OE1	1:A:75:GLN:N	2.47	0.47
1:A:813:ARG:HH12	1:A:842:SER:C	2.22	0.47
1:A:1276:LEU:HD13	1:A:1342:MET:HB2	1.96	0.47
1:A:1498:THR:OG1	1:A:1499:LEU:N	2.47	0.47
1:B:2529:PHE:HD2	1:B:2650:PRO:HB3	1.79	0.47
1:C:551:ILE:HA	1:C:556:PRO:HA	1.96	0.47
1:C:1931:GLU:OE1	1:D:1434:ARG:NH2	2.47	0.47
1:C:2044:LEU:HB2	1:C:2576:TYR:CE2	2.49	0.47
1:C:2529:PHE:HA	1:C:2532:ILE:HG22	1.95	0.47
1:D:2605:ASP:OD1	1:D:2605:ASP:N	2.43	0.47
1:A:2765:ALA:HB2	1:A:2772:LEU:HD23	1.95	0.47
1:B:401:TYR:CZ	1:B:412:PRO:HD3	2.50	0.47
1:B:1828:GLN:HB2	1:B:2169:PHE:HZ	1.80	0.47
1:B:2256:MET:HE1	1:B:2312:LEU:HG	1.96	0.47
1:C:540:PRO:HB3	1:C:564:SER:HB3	1.97	0.47
1:D:702:SER:HA	1:D:705:LEU:HD21	1.97	0.47
1:A:1177:ASP:HA	1:A:1251:ARG:HH12	1.80	0.47
1:A:2087:GLU:OE2	1:A:2188:ARG:NH1	2.47	0.47
1:A:2623:ASN:OD1	1:A:2623:ASN:N	2.42	0.47
1:A:2698:ASP:OD1	1:A:2698:ASP:N	2.48	0.47
1:B:567:ASN:HB3	1:B:570:ASP:HB3	1.97	0.47
1:B:1286:GLN:HG3	1:B:1290:HIS:CE1	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2725:GLU:OE1	1:B:2725:GLU:N	2.43	0.47
1:B:2786:LYS:HD2	1:B:2789:LEU:HD21	1.97	0.47
1:C:667:VAL:HG13	1:C:683:PRO:HD2	1.95	0.47
1:C:768:TYR:HB2	1:C:784:PHE:CZ	2.50	0.47
1:C:1234:CYS:SG	1:C:1240:CYS:HB2	2.54	0.47
1:D:1092:LEU:O	1:D:1095:SER:OG	2.31	0.47
1:D:2777:TYR:HB2	1:D:2783:LEU:HD22	1.96	0.47
1:A:762:THR:HG23	1:A:765:TRP:HB3	1.97	0.47
1:A:813:ARG:NH1	1:A:841:ILE:O	2.48	0.47
1:A:2504:LEU:HD13	1:A:2532:ILE:HD11	1.96	0.47
1:A:2530:ARG:O	1:A:2534:ARG:HG2	2.14	0.47
1:B:23:ARG:NH1	1:B:835:TRP:O	2.47	0.47
1:B:571:SER:HA	1:B:653:LEU:HB2	1.97	0.47
1:B:1126:TYR:HB2	1:B:1127:PRO:HD3	1.97	0.47
1:B:1962:ASN:O	1:B:1965:THR:OG1	2.25	0.47
1:B:2097:VAL:O	1:B:2101:LYS:HB2	2.14	0.47
1:C:1488:MET:HG3	1:D:1841:TRP:CD1	2.50	0.47
1:C:1845:ILE:HD12	1:D:1490:ILE:HD12	1.96	0.47
1:D:895:LEU:HG	1:D:907:MET:HE1	1.95	0.47
1:D:1089:LEU:HD23	1:D:1092:LEU:HD23	1.95	0.47
1:A:1839:TRP:CZ3	1:A:1958:ILE:HD11	2.50	0.47
1:C:818:THR:HG22	1:C:819:ILE:H	1.79	0.47
1:C:1097:VAL:HG13	1:C:1098:LEU:HG	1.96	0.47
1:C:1343:ILE:HG21	1:C:1424:VAL:HG13	1.97	0.47
1:C:1821:TYR:OH	1:C:2168:SER:O	2.22	0.47
1:A:1952:GLN:HE22	1:A:2207:GLU:HB2	1.79	0.47
1:A:2279:VAL:HB	1:A:2291:VAL:HG22	1.97	0.47
1:A:2766:ASN:HB2	1:A:2769:ILE:HG12	1.96	0.47
1:B:463:GLN:HB3	1:B:465:TYR:HE1	1.78	0.47
1:C:827:MET:HB2	1:C:1197:ARG:NH1	2.27	0.47
1:C:1173:LEU:O	1:C:1251:ARG:NH2	2.37	0.47
1:C:2095:LEU:HD13	1:C:2095:LEU:HA	1.67	0.47
1:A:22:LEU:O	1:A:25:VAL:HG12	2.14	0.47
1:B:372:ILE:N	1:B:384:VAL:O	2.40	0.47
1:B:487:LEU:N	1:B:490:SER:O	2.41	0.47
1:B:2217:GLY:O	1:B:2221:LYS:NZ	2.42	0.47
1:C:4:ILE:HG12	1:C:44:GLU:HG2	1.95	0.47
1:C:1201:LEU:HD21	1:C:1234:CYS:HA	1.97	0.47
1:C:1280:VAL:HG22	1:C:1329:LEU:HD21	1.95	0.47
1:D:2044:LEU:HB2	1:D:2576:TYR:CE2	2.50	0.47
1:A:38:PRO:N	1:A:39:PRO:HD2	2.30	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:475:SER:OG	1:A:486:GLN:HB3	2.15	0.46
1:A:1378:ILE:HD12	1:A:1518:PRO:HB3	1.98	0.46
1:A:1832:GLU:O	1:A:1836:ILE:HG12	2.14	0.46
1:A:2178:MET:SD	1:A:2178:MET:N	2.88	0.46
1:A:2671:THR:OG1	1:A:2674:ASP:OD2	2.32	0.46
1:B:2718:VAL:O	1:B:2721:MET:HG2	2.16	0.46
1:C:1171:TYR:OH	1:C:1271:ARG:NH2	2.32	0.46
1:D:805:GLY:O	1:D:808:SER:OG	2.33	0.46
1:D:1376:GLY:O	1:D:1427:ARG:NH1	2.49	0.46
1:D:1402:LEU:HD11	1:D:1463:VAL:HG22	1.96	0.46
1:A:371:PHE:HA	1:A:384:VAL:O	2.16	0.46
1:A:924:HIS:CE1	1:A:1110:ASP:HB3	2.49	0.46
1:B:821:PRO:HD2	1:B:835:TRP:CZ3	2.49	0.46
1:B:1841:TRP:CZ3	1:B:1950:VAL:HG11	2.50	0.46
1:B:2091:ASP:OD1	1:B:2092:ARG:N	2.48	0.46
1:B:2311:ASN:OD1	1:B:2312:LEU:N	2.47	0.46
1:C:12:PRO:HD2	1:C:861:LYS:HD3	1.97	0.46
1:C:1842:MET:SD	1:C:1951:PHE:HA	2.55	0.46
1:D:18:LEU:HD11	1:D:811:ILE:HD11	1.97	0.46
1:D:1317:HIS:O	1:D:1317:HIS:ND1	2.49	0.46
1:D:2044:LEU:HB2	1:D:2576:TYR:HE2	1.80	0.46
1:D:2279:VAL:HG21	1:D:2295:PHE:HB3	1.96	0.46
1:D:2572:ASP:OD1	1:D:2572:ASP:N	2.47	0.46
1:A:397:GLU:OE1	1:A:399:GLU:N	2.24	0.46
1:A:530:VAL:HG13	1:A:673:VAL:HB	1.96	0.46
1:B:1431:SER:HA	1:B:1434:ARG:NH1	2.31	0.46
1:B:1705:ASN:HD22	1:B:1705:ASN:H	1.63	0.46
1:C:411:HIS:O	1:C:413:ARG:N	2.47	0.46
1:D:23:ARG:HB2	1:D:836:LEU:HD22	1.96	0.46
1:D:575:GLN:OE1	1:D:647:ASN:ND2	2.49	0.46
1:D:825:ASP:OD1	1:D:829:GLY:N	2.49	0.46
1:A:482:TYR:OH	1:A:752:ASP:O	2.28	0.46
1:A:2240:LEU:HD21	1:A:2277:VAL:HG22	1.98	0.46
1:C:818:THR:HG23	1:C:839:PRO:O	2.15	0.46
1:C:2222:GLU:OE1	1:C:2226:ARG:NH1	2.48	0.46
1:D:2507:GLN:OE1	1:D:2511:ARG:HA	2.16	0.46
1:A:1385:HIS:CD2	1:A:1514:PHE:HD2	2.33	0.46
1:A:2093:ASN:HB2	1:B:1484:VAL:HG21	1.97	0.46
1:B:2054:PRO:HB2	1:B:2513:PHE:CZ	2.50	0.46
1:C:61:LEU:HD22	1:C:374:ILE:HG23	1.98	0.46
1:C:2197:GLY:HA2	1:C:2212:LEU:HB3	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2539:CYS:SG	1:C:2540:LEU:N	2.89	0.46
1:D:76:PRO:HB3	1:D:860:ILE:HD13	1.97	0.46
1:D:536:LEU:HD21	1:D:538:ASN:HB3	1.98	0.46
1:D:1388:ILE:HD11	1:D:1432:VAL:HG23	1.97	0.46
1:A:754:LYS:H	1:A:754:LYS:HD2	1.81	0.46
1:A:1195:GLU:O	1:A:1221:CYS:HA	2.16	0.46
1:A:1340:LYS:HZ1	1:A:1420:GLU:HB3	1.81	0.46
1:A:1929:ASN:O	1:A:1929:ASN:ND2	2.44	0.46
1:B:662:VAL:HA	1:B:726:LYS:HB2	1.96	0.46
1:B:1958:ILE:O	1:B:1961:MET:HG3	2.15	0.46
1:C:509:ALA:HA	1:C:512:LYS:HG2	1.96	0.46
1:C:561:LEU:H	1:C:561:LEU:HD23	1.79	0.46
1:C:2601:ALA:HA	1:C:2625:PRO:HA	1.96	0.46
1:C:2708:LEU:HD13	1:C:2711:LYS:HD2	1.97	0.46
1:D:575:GLN:HA	1:D:647:ASN:ND2	2.31	0.46
1:D:794:GLN:HE22	1:D:913:SER:HB3	1.80	0.46
1:D:2191:LEU:O	1:D:2194:GLU:HG3	2.16	0.46
1:A:36:SER:OG	1:A:44:GLU:OE2	2.22	0.46
1:A:806:GLN:N	1:A:806:GLN:OE1	2.49	0.46
1:A:2299:ILE:HG21	1:A:2535:ILE:HD13	1.97	0.46
1:A:2556:LYS:HG2	1:A:2672:ALA:HB2	1.97	0.46
1:A:2583:ILE:HG23	1:A:2632:TYR:HE1	1.81	0.46
1:B:479:CYS:SG	1:B:480:ALA:N	2.89	0.46
1:B:861:LYS:H	1:B:861:LYS:HD2	1.81	0.46
1:B:1429:LEU:HB2	1:B:1474:GLU:HG3	1.98	0.46
1:D:413:ARG:HE	1:D:459:GLU:HG2	1.81	0.46
1:D:1472:VAL:HG21	1:D:1827:LEU:HD21	1.97	0.46
1:A:5:HIS:O	1:A:869:MET:HG2	2.16	0.46
1:A:673:VAL:HG22	1:A:678:VAL:HG12	1.98	0.46
1:A:741:PRO:HB2	1:A:744:THR:HG21	1.98	0.46
1:A:1468:LEU:HD13	1:A:1805:TYR:HE2	1.79	0.46
1:D:1130:ILE:HG12	1:D:1254:LEU:HD13	1.97	0.46
1:D:2203:ASP:OD1	1:D:2204:VAL:N	2.48	0.46
1:A:540:PRO:HD2	1:A:566:TRP:CH2	2.50	0.46
1:A:2027:ASP:HA	1:A:2030:THR:HG22	1.98	0.46
1:B:1869:ASN:OD1	1:B:1869:ASN:N	2.48	0.46
1:A:1381:ASP:OD2	1:B:1926:ARG:NH2	2.47	0.46
1:A:2060:ASN:OD1	1:A:2060:ASN:N	2.48	0.46
1:B:10:PRO:HB3	1:B:861:LYS:HG2	1.97	0.46
1:B:770:ILE:O	1:B:779:GLU:N	2.49	0.46
1:C:17:GLN:OE1	1:C:17:GLN:N	2.41	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1109:LYS:HB3	1:C:1114:MET:N	2.31	0.46
1:D:1828:GLN:O	1:D:1831:VAL:HG12	2.15	0.46
1:D:2564:ASN:HD21	1:D:2566:HIS:HB2	1.80	0.46
1:D:2780:LYS:HE2	1:D:2781:GLN:HE22	1.81	0.46
1:A:790:ALA:HB3	1:A:1111:ALA:HA	1.99	0.45
1:A:1188:HIS:HB3	1:A:1229:THR:OG1	2.16	0.45
1:A:1422:ILE:O	1:A:1426:MET:HG2	2.16	0.45
1:A:2561:ARG:HG2	1:A:2562:LYS:H	1.81	0.45
1:B:1177:ASP:H	1:B:1251:ARG:NH2	2.14	0.45
1:B:1262:THR:OG1	1:B:1263:ASN:N	2.49	0.45
1:B:2723:MET:HA	1:B:2726:ARG:HD2	1.98	0.45
1:C:413:ARG:HH11	1:C:449:GLU:HA	1.81	0.45
1:C:912:ILE:HG13	1:C:1101:TYR:CD1	2.52	0.45
1:C:1098:LEU:HA	1:C:1101:TYR:CD2	2.51	0.45
1:C:1864:ASP:HB3	1:D:1520:PRO:HG2	1.97	0.45
1:C:2507:GLN:NE2	1:C:2512:GLY:H	2.13	0.45
1:C:2698:ASP:OD1	1:C:2698:ASP:N	2.46	0.45
1:D:77:ASP:OD1	1:D:77:ASP:N	2.46	0.45
1:D:766:VAL:HG11	1:D:791:PHE:CD2	2.51	0.45
1:A:1718:VAL:HG13	1:B:1942:CYS:HB3	1.98	0.45
1:B:1947:VAL:HA	1:B:1950:VAL:HG12	1.98	0.45
1:B:2699:GLU:HG3	1:B:2756:PRO:HD3	1.97	0.45
1:C:38:PRO:N	1:C:39:PRO:HD2	2.30	0.45
1:C:841:ILE:HG22	1:C:871:VAL:HG12	1.98	0.45
1:D:705:LEU:HD23	1:D:705:LEU:H	1.81	0.45
1:A:502:ARG:NH1	1:A:730:CYS:O	2.50	0.45
1:A:2095:LEU:HD13	1:A:2095:LEU:HA	1.76	0.45
1:B:74:VAL:HG12	1:B:849:HIS:CD2	2.51	0.45
1:B:414:ALA:HA	1:B:417:LEU:HB2	1.99	0.45
1:B:1807:HIS:O	1:B:1811:SER:OG	2.27	0.45
1:C:2644:LEU:O	1:C:2648:GLU:N	2.50	0.45
1:D:423:LYS:HB3	1:D:439:GLU:HB3	1.99	0.45
1:A:445:THR:O	1:A:459:GLU:HG2	2.17	0.45
1:A:1493:PRO:HD2	1:B:1940:ASP:OD2	2.16	0.45
1:B:72:PHE:HE2	1:B:866:VAL:HG21	1.81	0.45
1:B:761:LYS:HA	1:B:765:TRP:O	2.16	0.45
1:B:1714:MET:HE3	1:B:1714:MET:HB2	1.90	0.45
1:B:2689:MET:O	1:B:2692:SER:OG	2.33	0.45
1:D:563:GLU:HB3	1:D:573:ARG:HD3	1.98	0.45
1:D:1235:TRP:CD2	1:D:1315:PRO:HD3	2.52	0.45
1:D:1339:LEU:HD22	1:D:1339:LEU:HA	1.76	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2279:VAL:HB	1:D:2291:VAL:HG22	1.97	0.45
1:D:2649:GLN:CD	1:D:2649:GLN:H	2.23	0.45
1:A:816:ASN:HD21	1:A:915:ARG:HG3	1.82	0.45
1:A:834:ASP:OD2	1:A:1239:LYS:NZ	2.49	0.45
1:A:1499:LEU:HD21	1:A:1786:ARG:HH22	1.82	0.45
1:C:738:LEU:HD13	1:C:756:VAL:HG11	1.98	0.45
1:C:1711:PRO:HD3	1:D:2198:ARG:HG3	1.99	0.45
1:C:2531:ASN:O	1:C:2534:ARG:HG2	2.16	0.45
1:D:548:ALA:HB1	1:D:657:VAL:H	1.82	0.45
1:D:1333:LEU:HD22	1:D:1401:LEU:HD13	1.97	0.45
1:D:2534:ARG:HG2	1:D:2661:VAL:HG11	1.97	0.45
1:A:494:TRP:HB3	1:A:735:PRO:HA	1.99	0.45
1:B:40:LEU:HD23	1:B:43:LEU:HD23	1.99	0.45
1:B:2687:VAL:O	1:B:2691:ILE:HG12	2.16	0.45
1:C:1841:TRP:O	1:C:1845:ILE:HG12	2.16	0.45
1:D:549:PHE:CZ	1:D:551:ILE:HG23	2.50	0.45
1:D:1244:ILE:HD13	1:D:1244:ILE:HA	1.77	0.45
1:A:1438:ILE:HD12	1:B:1918:LEU:HD13	1.99	0.45
1:B:460:HIS:ND1	1:B:465:TYR:OH	2.50	0.45
1:B:535:CYS:SG	1:B:665:VAL:HB	2.56	0.45
1:B:1335:ASP:OD1	1:B:1337:ASN:N	2.49	0.45
1:C:495:GLY:O	1:C:732:GLN:HB3	2.16	0.45
1:C:929:VAL:HG23	1:C:1085:ALA:HB1	1.98	0.45
1:C:1237:LYS:HE2	1:C:1237:LYS:HB2	1.81	0.45
1:C:2247:ASP:OD1	1:C:2251:LEU:N	2.49	0.45
1:D:834:ASP:OD1	1:D:834:ASP:N	2.40	0.45
1:A:802:PHE:HB2	1:A:811:ILE:HB	1.99	0.45
1:A:935:ASN:ND2	1:A:1244:ILE:HA	2.31	0.45
1:B:1360:ILE:HD12	1:B:1368:GLN:HA	1.99	0.45
1:B:1839:TRP:CE3	1:B:1954:LEU:HD13	2.51	0.45
1:C:540:PRO:HG2	1:C:543:HIS:NE2	2.32	0.45
1:C:1370:TYR:CD1	1:D:2088:VAL:HG12	2.52	0.45
1:C:1519:LEU:HD21	1:D:1870:HIS:HD2	1.81	0.45
1:C:2740:PRO:HB3	1:C:2745:GLY:HA3	1.99	0.45
1:D:393:TRP:HB3	1:D:400:PRO:HA	1.98	0.45
1:D:510:ARG:HA	1:D:514:LYS:H	1.82	0.45
1:D:671:LEU:HB2	1:D:679:ALA:O	2.17	0.45
1:D:2086:MET:HG3	1:D:2088:VAL:HG22	1.99	0.45
1:D:2757:PRO:HB3	1:D:2776:LEU:O	2.17	0.45
1:A:547:VAL:HG21	1:A:577:ARG:HE	1.82	0.45
1:A:924:HIS:CD2	1:A:1116:PRO:HG3	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2219:GLU:O	1:A:2222:GLU:HG3	2.16	0.45
1:B:546:ALA:HB3	1:B:561:LEU:HB3	1.98	0.45
1:B:1793:ARG:HG3	1:B:1956:TYR:CE2	2.51	0.45
1:B:1806:ASN:OD1	1:B:1806:ASN:N	2.49	0.45
1:C:1429:LEU:HD13	1:C:1471:ALA:HA	1.99	0.45
1:A:772:ASP:HB2	1:A:779:GLU:HB2	1.99	0.45
1:B:673:VAL:HG22	1:B:678:VAL:HG12	1.99	0.45
1:B:1402:LEU:HD22	1:B:1467:LEU:HD23	1.98	0.45
1:B:2083:LYS:O	1:B:2188:ARG:NH1	2.50	0.45
1:C:2025:ARG:NH1	1:C:2067:PHE:O	2.48	0.45
1:D:536:LEU:HB3	1:D:539:ASN:CG	2.42	0.45
1:D:542:TYR:HE2	1:D:546:ALA:H	1.64	0.45
1:D:1098:LEU:HA	1:D:1101:TYR:HD2	1.81	0.45
1:D:2790:ALA:O	1:D:2793:THR:OG1	2.33	0.45
1:A:424:ILE:HA	1:A:438:THR:HA	1.99	0.44
1:A:935:ASN:HD21	1:A:1244:ILE:HA	1.83	0.44
1:A:1507:MET:O	1:A:1511:GLU:HG2	2.16	0.44
1:A:2500:ASP:HB2	1:A:2520:LYS:HD2	1.97	0.44
1:B:22:LEU:HB3	1:B:836:LEU:HD13	1.97	0.44
1:C:2504:LEU:HB3	1:C:2529:PHE:HE1	1.82	0.44
1:C:2583:ILE:HG23	1:C:2632:TYR:CE1	2.51	0.44
1:D:549:PHE:CE1	1:D:556:PRO:HB2	2.52	0.44
1:D:1201:LEU:HD22	1:D:1205:LEU:HB3	1.99	0.44
1:D:2029:MET:HE1	1:D:2566:HIS:HB2	1.99	0.44
1:A:1514:PHE:CE1	1:B:1922:LEU:HD11	2.53	0.44
1:A:2189:TRP:HB3	1:A:2192:SER:OG	2.16	0.44
1:A:2555:ILE:HD11	1:A:2675:PHE:HB3	1.99	0.44
1:B:417:LEU:HD11	1:B:446:TRP:HB3	2.00	0.44
1:B:447:VAL:HG21	1:B:454:VAL:HG13	1.99	0.44
1:B:841:ILE:HA	1:B:871:VAL:HG12	1.98	0.44
1:B:1197:ARG:NH2	1:B:1198:THR:OG1	2.50	0.44
1:B:1473:GLU:O	1:B:1477:ASN:ND2	2.51	0.44
1:B:1475:LEU:HD22	1:B:1791:VAL:HG23	1.99	0.44
1:C:1464:PHE:HB3	1:C:1798:LEU:HD11	1.99	0.44
1:C:1697:ARG:HB3	1:D:2691:ILE:HG23	1.98	0.44
1:C:2085:LEU:O	1:C:2188:ARG:NH1	2.47	0.44
1:C:2568:PHE:CZ	1:C:2642:ARG:HD3	2.50	0.44
1:A:2752:ILE:HG12	1:A:2772:LEU:HB2	2.00	0.44
1:B:482:TYR:OH	1:B:752:ASP:O	2.21	0.44
1:B:2671:THR:HG23	1:B:2674:ASP:H	1.82	0.44
1:C:924:HIS:ND1	1:C:1110:ASP:HB3	2.32	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:411:HIS:CD2	1:D:414:ALA:HB2	2.51	0.44
1:A:37:HIS:HB3	1:A:39:PRO:HD2	2.00	0.44
1:A:1334:GLN:HA	1:A:1404:THR:HG21	2.00	0.44
1:A:1961:MET:HG3	1:A:2171:PRO:HB2	2.00	0.44
1:A:2044:LEU:HB2	1:A:2576:TYR:CD2	2.53	0.44
1:A:2094:CYS:HA	1:A:2097:VAL:HG12	1.99	0.44
1:A:2577:GLU:OE1	1:A:2580:ARG:NH1	2.50	0.44
1:A:2763:PRO:HG3	1:A:2775:PRO:HD2	1.98	0.44
1:B:38:PRO:HA	1:B:41:ASN:ND2	2.32	0.44
1:C:497:VAL:HG23	1:C:502:ARG:HG2	2.00	0.44
1:C:747:LEU:HD21	1:C:761:LYS:HB2	2.00	0.44
1:D:452:SER:HA	1:D:455:ALA:HB3	2.00	0.44
1:D:1078:SER:O	1:D:1082:LYS:HG2	2.17	0.44
1:D:1342:MET:HB3	1:D:1342:MET:HE2	1.77	0.44
1:D:1962:ASN:ND2	1:D:2180:ILE:O	2.48	0.44
1:A:1150:GLU:HA	1:A:1153:VAL:HG12	1.99	0.44
1:A:1922:LEU:HD11	1:B:1514:PHE:CE1	2.53	0.44
1:A:1934:ASP:HB2	1:B:1518:PRO:HB3	2.00	0.44
1:B:576:LEU:HD21	1:B:649:GLU:HB3	2.00	0.44
1:C:1408:GLU:OE1	1:C:1417:ARG:NH1	2.50	0.44
1:C:2598:MET:HG3	1:C:2599:ASP:N	2.32	0.44
1:D:12:PRO:HG3	1:D:861:LYS:HG2	2.00	0.44
1:D:397:GLU:HG2	1:D:399:GLU:H	1.81	0.44
1:D:423:LYS:HB2	1:D:423:LYS:HE3	1.76	0.44
1:D:747:LEU:HB2	1:D:759:VAL:HB	2.00	0.44
1:D:1252:LEU:HA	1:D:1255:LEU:HD12	1.99	0.44
1:D:2232:LEU:HG	1:D:2235:GLN:HE22	1.82	0.44
1:A:703:SER:O	1:A:707:ASP:HB2	2.17	0.44
1:A:876:LEU:HB2	1:A:891:TYR:CE2	2.53	0.44
1:A:2513:PHE:HD2	1:A:2551:ASN:HA	1.82	0.44
1:B:379:SER:OG	1:B:448:ASP:OD1	2.24	0.44
1:B:2727:GLN:HB3	1:B:2737:PRO:HB3	1.98	0.44
1:B:2728:ASP:HB3	1:B:2791:ILE:HB	1.99	0.44
1:C:66:ARG:HB3	1:C:362:TRP:CZ2	2.49	0.44
1:C:1124:ARG:NH2	1:C:1177:ASP:O	2.49	0.44
1:C:2595:PHE:HA	1:C:2598:MET:HG2	1.98	0.44
1:D:1952:GLN:CD	1:D:2210:SER:HA	2.43	0.44
1:A:1777:TYR:HB2	1:B:1778:LEU:HD23	2.00	0.44
1:B:11:LEU:N	1:B:12:PRO:HD2	2.33	0.44
1:B:482:TYR:OH	1:B:755:GLY:O	2.36	0.44
1:B:874:GLN:NE2	1:B:877:MET:SD	2.91	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2053:GLN:HB3	1:B:2055:HIS:CE1	2.52	0.44
1:B:2730:VAL:HG12	1:B:2736:SER:O	2.17	0.44
1:C:2248:ARG:NH2	1:C:2308:LYS:O	2.51	0.44
1:D:49:LYS:HB2	1:D:63:GLU:HG3	2.00	0.44
1:D:890:GLN:HA	1:D:893:MET:HG2	1.98	0.44
1:D:1331:ARG:HA	1:D:1331:ARG:HD2	1.82	0.44
1:D:1365:PRO:O	1:D:1368:GLN:HG2	2.17	0.44
1:D:1929:ASN:O	1:D:1931:GLU:HG3	2.18	0.44
1:D:2256:MET:SD	1:D:2257:ARG:N	2.90	0.44
1:A:1206:CYS:N	1:A:1233:ASP:OD1	2.49	0.44
1:A:1231:TYR:HD1	1:A:1231:TYR:H	1.65	0.44
1:A:1962:ASN:O	1:A:1965:THR:OG1	2.22	0.44
1:A:2602:PHE:CE2	1:A:2634:TYR:HB2	2.53	0.44
1:D:1:MET:HE2	1:D:47:THR:HG22	2.00	0.44
1:D:861:LYS:H	1:D:861:LYS:HD2	1.83	0.44
1:A:1125:ALA:HB1	1:A:1128:ALA:HB3	2.00	0.44
1:A:1856:GLY:HA3	1:B:1716:TRP:CZ2	2.53	0.44
1:B:532:THR:HG22	1:B:534:VAL:HG13	1.99	0.44
1:B:1868:PRO:HA	1:B:1873:HIS:CE1	2.53	0.44
1:B:2247:ASP:OD1	1:B:2251:LEU:N	2.50	0.44
1:C:2017:GLY:HA2	1:C:2632:TYR:HD2	1.83	0.44
1:D:915:ARG:NH1	1:D:919:ASN:OD1	2.51	0.44
1:D:2083:LYS:HG3	1:D:2188:ARG:NH1	2.33	0.44
1:A:1370:TYR:HE1	1:B:2088:VAL:HA	1.83	0.43
1:A:2316:GLN:HG2	1:A:2317:ASN:H	1.83	0.43
1:B:1373:GLN:OE1	1:B:1374:GLN:NE2	2.50	0.43
1:B:1868:PRO:HA	1:B:1873:HIS:ND1	2.32	0.43
1:D:885:TYR:HA	1:D:1088:ILE:HD11	2.00	0.43
1:D:1387:LEU:HA	1:D:1391:CYS:SG	2.58	0.43
1:D:1813:ILE:HG22	1:D:1815:ALA:H	1.83	0.43
1:D:2240:LEU:HD23	1:D:2277:VAL:HG22	2.00	0.43
1:A:835:TRP:CD1	1:A:835:TRP:H	2.35	0.43
1:A:1439:LEU:HB3	1:A:1457:ILE:HD11	2.00	0.43
1:A:1499:LEU:HD12	1:A:1499:LEU:HA	1.89	0.43
1:B:804:ALA:HB2	1:B:846:MET:HE3	2.00	0.43
1:B:1805:TYR:HE1	1:B:1809:VAL:HG11	1.83	0.43
1:B:1836:ILE:HG23	1:B:1837:PRO:HD3	1.99	0.43
1:C:817:GLY:O	1:C:841:ILE:N	2.42	0.43
1:C:925:ALA:O	1:C:929:VAL:HG22	2.17	0.43
1:C:1272:GLY:HA3	1:C:1354:LEU:HB2	2.00	0.43
1:D:390:LEU:HB3	1:D:411:HIS:HB2	1.99	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1343:ILE:HG21	1:D:1424:VAL:HG13	2.00	0.43
1:A:747:LEU:HB3	1:A:799:VAL:HB	2.01	0.43
1:A:1194:PHE:CE1	1:A:1223:LEU:HB2	2.54	0.43
1:A:2690:LEU:O	1:A:2694:THR:OG1	2.31	0.43
1:B:75:GLN:HB2	1:B:77:ASP:OD1	2.18	0.43
1:B:1124:ARG:NH2	1:B:1176:ASN:O	2.52	0.43
1:B:1784:LEU:HD12	1:B:1784:LEU:HA	1.87	0.43
1:B:2183:ASP:OD1	1:B:2184:MET:N	2.51	0.43
1:C:381:LEU:HG	1:C:382:LEU:N	2.34	0.43
1:C:917:ASP:N	1:C:917:ASP:OD1	2.50	0.43
1:C:2763:PRO:HG3	1:C:2775:PRO:HD3	2.00	0.43
1:D:443:VAL:HG21	1:D:494:TRP:HZ2	1.82	0.43
1:D:471:GLU:HB2	1:D:487:LEU:HD23	2.00	0.43
1:D:844:LEU:HD12	1:D:845:GLY:N	2.33	0.43
1:D:1961:MET:O	1:D:1965:THR:HG23	2.18	0.43
1:D:2272:MET:SD	1:D:2272:MET:N	2.84	0.43
1:D:2571:PHE:CE2	1:D:2642:ARG:HD3	2.53	0.43
1:A:478:CYS:HA	1:A:483:THR:HA	2.00	0.43
1:A:1834:LYS:HD3	1:A:1834:LYS:HA	1.92	0.43
1:A:2515:THR:HG22	1:A:2551:ASN:HB2	2.00	0.43
1:C:662:VAL:HB	1:C:663:LYS:HD3	1.99	0.43
1:C:1120:ALA:HA	1:C:1125:ALA:HB3	1.99	0.43
1:C:2721:MET:HE1	1:C:2729:LEU:HB2	1.99	0.43
1:D:877:MET:O	1:D:880:ILE:HG13	2.19	0.43
1:A:52:VAL:HB	1:A:376:ALA:HB2	2.00	0.43
1:A:682:PHE:HD2	1:A:709:ARG:HG3	1.83	0.43
1:A:922:ILE:HG13	1:A:923:LEU:HD22	2.01	0.43
1:A:2616:GLU:OE1	1:A:2621:GLY:N	2.42	0.43
1:B:497:VAL:HG12	1:B:498:PRO:HD2	2.01	0.43
1:B:741:PRO:O	1:B:744:THR:OG1	2.31	0.43
1:B:2633:GLU:O	1:B:2637:LYS:HG2	2.18	0.43
1:C:76:PRO:HB3	1:C:851:LEU:HD22	2.00	0.43
1:C:1411:ASN:HB3	1:C:1418:ARG:NH1	2.34	0.43
1:D:21:ARG:O	1:D:25:VAL:HG23	2.18	0.43
1:D:924:HIS:CD2	1:D:1110:ASP:HB3	2.53	0.43
1:D:1846:MET:HE1	1:D:2192:SER:HB3	2.01	0.43
1:D:1937:PRO:HB2	1:D:1939:LEU:HD22	2.00	0.43
1:A:68:CYS:SG	1:A:69:ARG:N	2.91	0.43
1:A:492:TYR:CD1	1:A:737:LYS:HA	2.53	0.43
1:A:775:THR:O	1:A:777:LYS:NZ	2.52	0.43
1:A:908:LEU:HA	1:A:908:LEU:HD23	1.73	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:38:PRO:N	1:B:39:PRO:HD2	2.33	0.43
1:B:2221:LYS:HD2	1:B:2674:ASP:OD2	2.19	0.43
1:B:2595:PHE:CG	1:B:2628:PRO:HG3	2.54	0.43
1:C:491:LEU:HB2	1:C:738:LEU:HB2	2.00	0.43
1:C:827:MET:HE2	1:C:1197:ARG:CZ	2.49	0.43
1:C:1787:ALA:O	1:C:1791:VAL:HG23	2.19	0.43
1:D:838:LEU:HD21	1:D:841:ILE:HD11	2.01	0.43
1:A:1110:ASP:OD1	1:A:1111:ALA:N	2.52	0.43
1:A:2256:MET:HE3	1:A:2303:PHE:HZ	1.83	0.43
1:B:377:LEU:HD21	1:B:432:ILE:O	2.19	0.43
1:B:479:CYS:HB3	1:B:751:VAL:CG1	2.48	0.43
1:B:2714:PHE:O	1:B:2717:ILE:HG13	2.18	0.43
1:C:1438:ILE:HD12	1:D:1918:LEU:HD22	2.01	0.43
1:D:541:LEU:O	1:D:565:VAL:N	2.52	0.43
1:D:749:VAL:HG12	1:D:758:ALA:HA	2.01	0.43
1:B:895:LEU:HD11	1:B:908:LEU:HD13	1.99	0.43
1:C:23:ARG:NH1	1:C:27:GLU:OE2	2.52	0.43
1:C:790:ALA:HB1	1:C:919:ASN:HB2	2.00	0.43
1:C:2199:VAL:HG13	1:D:1707:ALA:HA	2.00	0.43
1:C:2607:CYS:SG	1:C:2608:LYS:N	2.92	0.43
1:C:2766:ASN:O	1:C:2770:SER:CA	2.67	0.43
1:D:561:LEU:HD21	1:D:572:CYS:SG	2.59	0.43
1:D:819:ILE:HD12	1:D:819:ILE:HA	1.88	0.43
1:D:1485:PRO:O	1:D:1489:GLY:N	2.49	0.43
1:D:2074:LEU:HB3	1:D:2086:MET:HB3	2.00	0.43
1:A:1340:LYS:NZ	1:A:1420:GLU:HB3	2.34	0.43
1:A:1691:LEU:HB2	1:B:2712:ARG:HH12	1.84	0.43
1:A:1854:ARG:HE	1:A:2191:LEU:HD13	1.83	0.43
1:A:1924:LEU:HD13	1:B:1485:PRO:HG3	2.00	0.43
1:A:2708:LEU:HA	1:A:2711:LYS:HG2	2.00	0.43
1:B:401:TYR:HD2	1:B:410:HIS:HD2	1.67	0.43
1:B:1155:MET:HA	1:B:1158:VAL:HG12	2.01	0.43
1:B:2182:HIS:O	1:B:2186:LEU:HG	2.18	0.43
1:C:2714:PHE:O	1:C:2717:ILE:HG13	2.18	0.43
1:D:920:ARG:HB3	1:D:924:HIS:HB3	2.01	0.43
1:D:1962:ASN:O	1:D:1965:THR:OG1	2.22	0.43
1:D:2655:ARG:CZ	1:D:2659:LEU:HD11	2.49	0.43
1:A:2239:ASP:OD1	1:A:2275:HIS:HB3	2.19	0.43
1:A:2297:THR:HG22	1:A:2301:GLN:OE1	2.19	0.43
1:B:15:GLU:H	1:B:15:GLU:CD	2.26	0.43
1:B:655:GLU:N	1:B:655:GLU:OE1	2.52	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1197:ARG:HE	1:B:1220:ASP:HB3	1.84	0.43
1:B:1940:ASP:OD1	1:B:1940:ASP:N	2.52	0.43
1:B:2552:ARG:NH1	1:B:2556:LYS:HG3	2.34	0.43
1:B:2721:MET:HB2	1:B:2725:GLU:HG3	2.01	0.43
1:C:1917:PHE:HB2	1:D:1494:THR:HG21	2.00	0.43
1:C:2203:ASP:OD1	1:C:2204:VAL:HG23	2.19	0.43
1:D:479:CYS:HB3	1:D:751:VAL:HG12	2.00	0.43
1:D:761:LYS:NZ	1:D:763:GLY:O	2.41	0.43
1:D:1839:TRP:CE3	1:D:1954:LEU:HD13	2.52	0.43
1:D:2182:HIS:O	1:D:2186:LEU:HG	2.19	0.43
1:A:451:LEU:O	1:A:454:VAL:HG22	2.19	0.42
1:A:1366:GLU:O	1:A:1369:VAL:HG12	2.18	0.42
1:A:1520:PRO:HG2	1:B:1864:ASP:HB3	2.01	0.42
1:A:2252:ILE:O	1:A:2256:MET:HG2	2.19	0.42
1:B:876:LEU:HD23	1:B:911:PHE:CE1	2.54	0.42
1:B:2253:GLN:HE21	1:B:2310:PRO:HB2	1.84	0.42
1:C:509:ALA:O	1:C:513:ASN:N	2.43	0.42
1:C:2219:GLU:O	1:C:2222:GLU:HG3	2.18	0.42
1:D:403:ASN:HB3	1:D:406:ASN:O	2.19	0.42
1:D:569:ASN:N	1:D:569:ASN:OD1	2.52	0.42
1:D:2558:LEU:HD23	1:D:2655:ARG:HA	2.00	0.42
1:A:70:ILE:HD11	1:A:357:GLY:HA3	2.00	0.42
1:A:711:LEU:HD13	1:A:716:LEU:HD11	2.01	0.42
1:A:1226:THR:O	1:A:1228:PRO:HD3	2.19	0.42
1:B:2253:GLN:HA	1:B:2256:MET:HE2	1.99	0.42
1:C:1481:SER:HB2	1:D:1928:HIS:ND1	2.34	0.42
1:C:2552:ARG:HD3	1:C:2570:PHE:CG	2.54	0.42
1:C:2575:MET:HE3	1:C:2579:LEU:HD22	2.01	0.42
1:D:565:VAL:HA	1:D:572:CYS:SG	2.59	0.42
1:D:655:GLU:N	1:D:655:GLU:OE1	2.52	0.42
1:D:770:ILE:O	1:D:779:GLU:HG3	2.19	0.42
1:D:1117:PHE:CE1	1:D:1129:ALA:HB1	2.54	0.42
1:D:1714:MET:HA	1:D:1716:TRP:CD1	2.55	0.42
1:D:1852:GLN:HE22	1:D:1939:LEU:HB3	1.83	0.42
1:A:687:SER:HB3	1:A:706:GLN:HB3	2.01	0.42
1:B:560:VAL:HG13	1:B:575:GLN:HB3	2.01	0.42
1:B:705:LEU:HD21	1:D:671:LEU:HD13	2.00	0.42
1:B:1871:PRO:HG3	1:B:1936:LEU:HD21	1.99	0.42
1:B:2223:SER:O	1:B:2227:ARG:HG2	2.19	0.42
1:B:2710:PHE:HE1	1:B:2777:TYR:HB2	1.85	0.42
1:B:2766:ASN:O	1:B:2770:SER:CA	2.68	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2050:LEU:HD13	1:C:2066:LEU:HD11	2.02	0.42
1:D:510:ARG:HB3	1:D:514:LYS:HB3	2.02	0.42
1:D:549:PHE:CG	1:D:550:SER:N	2.87	0.42
1:D:1180:SER:HA	1:D:1183:TRP:HE1	1.85	0.42
1:A:443:VAL:HG12	1:A:476:LEU:HD11	2.02	0.42
1:A:1475:LEU:HA	1:A:1478:VAL:HG12	2.02	0.42
1:A:2230:GLU:HA	1:A:2233:ARG:HG2	2.00	0.42
1:B:22:LEU:HD13	1:B:819:ILE:HG12	2.02	0.42
1:B:1402:LEU:HD13	1:B:1466:ALA:HB3	2.01	0.42
1:C:1125:ALA:HB1	1:C:1128:ALA:HB3	2.02	0.42
1:C:1269:ASN:HD21	1:C:1273:GLU:HG3	1.83	0.42
1:C:1707:ALA:HB1	1:C:1718:VAL:HG12	2.01	0.42
1:C:1955:ILE:HD13	1:C:1958:ILE:HD12	2.01	0.42
1:B:562:MET:N	1:B:562:MET:SD	2.92	0.42
1:C:1170:LEU:HD12	1:C:1170:LEU:HA	1.82	0.42
1:C:1475:LEU:HD22	1:C:1791:VAL:HG13	2.02	0.42
1:C:2519:GLY:H	1:C:2525:ARG:CZ	2.32	0.42
1:C:2554:VAL:HA	1:C:2557:VAL:HG22	2.02	0.42
1:D:1102:LEU:HD23	1:D:1105:LEU:HD12	2.01	0.42
1:D:2083:LYS:HG3	1:D:2188:ARG:HH11	1.84	0.42
1:A:686:SER:HA	1:A:707:ASP:CG	2.44	0.42
1:A:1197:ARG:NH2	1:A:1202:LEU:HB2	2.35	0.42
1:A:1791:VAL:O	1:A:1795:ILE:HG23	2.20	0.42
1:A:2671:THR:OG1	1:A:2673:GLU:OE2	2.26	0.42
1:A:2763:PRO:HB3	1:A:2774:VAL:HG12	2.01	0.42
1:B:1115:THR:OG1	1:B:1118:MET:HG3	2.20	0.42
1:B:1170:LEU:HB2	1:B:1264:LEU:HD23	2.02	0.42
1:C:352:SER:HA	1:C:353:PRO:HD3	1.85	0.42
1:C:726:LYS:O	1:C:727:VAL:HB	2.18	0.42
1:C:752:ASP:HB3	1:C:803:THR:HG21	2.02	0.42
1:D:2595:PHE:CD1	1:D:2600:LEU:HB2	2.55	0.42
1:D:2671:THR:OG1	1:D:2672:ALA:N	2.53	0.42
1:A:385:SER:HB3	1:A:391:TYR:HE2	1.84	0.42
1:A:492:TYR:HD1	1:A:737:LYS:HA	1.85	0.42
1:A:2102:MET:SD	1:A:2103:SER:N	2.92	0.42
1:A:2534:ARG:HH11	1:A:2660:ASP:HB2	1.85	0.42
1:A:2686:ASN:N	1:A:2689:MET:HE2	2.30	0.42
1:B:497:VAL:HG23	1:B:730:CYS:O	2.19	0.42
1:C:442:LYS:HB3	1:C:462:ALA:HB1	2.00	0.42
1:C:1117:PHE:CE1	1:C:1129:ALA:HB1	2.55	0.42
1:C:1177:ASP:H	1:C:1251:ARG:HH22	1.67	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1331:ARG:O	1:C:1331:ARG:NH1	2.53	0.42
1:C:1941:VAL:HG21	1:C:2195:LEU:HD23	2.00	0.42
1:D:1488:MET:HE3	1:D:1488:MET:HB2	1.98	0.42
1:D:2532:ILE:O	1:D:2535:ILE:HG12	2.19	0.42
1:A:551:ILE:HA	1:A:556:PRO:HA	2.01	0.42
1:A:667:VAL:O	1:A:669:LYS:NZ	2.39	0.42
1:A:1402:LEU:HD11	1:A:1463:VAL:HA	2.01	0.42
1:A:1500:ALA:HB1	1:A:1505:ASP:HB3	2.01	0.42
1:A:1828:GLN:HB2	1:A:2169:PHE:HZ	1.84	0.42
1:A:2294:SER:OG	1:A:2735:SER:HB2	2.19	0.42
1:A:2715:TRP:HA	1:A:2718:VAL:HG22	2.01	0.42
1:B:568:MET:HE3	1:B:568:MET:HB3	1.82	0.42
1:B:804:ALA:HB2	1:B:846:MET:HG2	2.02	0.42
1:C:432:ILE:HG21	1:C:551:ILE:HD12	2.00	0.42
1:C:501:GLN:HA	1:C:504:LYS:HG2	2.00	0.42
1:C:1925:MET:HE1	1:D:1434:ARG:HA	2.00	0.42
1:D:380:GLU:HA	1:D:394:LYS:HA	2.01	0.42
1:D:1362:HIS:CD2	1:D:1362:HIS:H	2.36	0.42
1:D:2784:LYS:O	1:D:2787:LEU:HG	2.20	0.42
1:A:536:LEU:HD23	1:A:716:LEU:HG	2.01	0.42
1:A:881:LEU:HA	1:A:929:VAL:HG11	2.02	0.42
1:A:893:MET:O	1:A:896:GLU:HG3	2.19	0.42
1:A:1266:THR:HA	1:A:1274:HIS:HE1	1.85	0.42
1:A:1927:SER:OG	1:A:2090:VAL:HG13	2.19	0.42
1:A:2792:LYS:HB3	1:A:2792:LYS:HE3	1.83	0.42
1:B:1235:TRP:CE3	1:B:1315:PRO:HD3	2.54	0.42
1:B:1259:LEU:HD11	1:B:1332:VAL:HG22	2.01	0.42
1:B:1470:TYR:HA	1:B:1473:GLU:HG3	2.02	0.42
1:C:427:LEU:HD23	1:C:428:SER:N	2.34	0.42
1:C:885:TYR:CZ	1:C:1087:PHE:HB3	2.55	0.42
1:C:1917:PHE:CE2	1:D:1441:VAL:HG11	2.41	0.42
1:C:2605:ASP:OD1	1:C:2605:ASP:N	2.45	0.42
1:A:679:ALA:HB2	1:C:710:LEU:HD11	2.02	0.42
1:A:1102:LEU:HA	1:A:1105:LEU:HB2	2.01	0.42
1:A:1367:GLU:OE1	1:A:1367:GLU:N	2.53	0.42
1:A:1842:MET:SD	1:A:1951:PHE:HA	2.60	0.42
1:A:2064:GLU:HG2	1:A:2190:ARG:HH12	1.85	0.42
1:A:2766:ASN:HD21	1:A:2773:TYR:HE2	1.66	0.42
1:B:745:GLU:N	1:B:745:GLU:OE1	2.53	0.42
1:B:1124:ARG:NH1	1:B:1244:ILE:O	2.53	0.42
1:B:2572:ASP:OD1	1:B:2572:ASP:N	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1348:GLN:NE2	1:C:1372:ASN:O	2.53	0.42
1:C:1386:CYS:HA	1:C:1390:LYS:HG2	2.02	0.42
1:C:2229:MET:HA	1:C:2232:LEU:HG	2.01	0.42
1:D:377:LEU:HD11	1:D:382:LEU:HD11	2.00	0.42
1:D:457:LYS:HE2	1:D:457:LYS:HB3	1.87	0.42
1:D:1476:CYS:SG	1:D:1831:VAL:HG23	2.60	0.42
1:D:1846:MET:HA	1:D:1849:THR:HG22	2.01	0.42
1:A:69:ARG:NH1	1:A:395:TRP:HA	2.35	0.41
1:A:1201:LEU:HD21	1:A:1234:CYS:HA	2.02	0.41
1:A:2763:PRO:CA	1:A:2773:TYR:O	2.68	0.41
1:B:2232:LEU:O	1:B:2235:GLN:NE2	2.38	0.41
1:C:74:VAL:HG12	1:C:849:HIS:ND1	2.34	0.41
1:C:1513:LEU:HD21	1:D:1919:ASN:HA	2.02	0.41
1:D:11:LEU:N	1:D:12:PRO:HD2	2.34	0.41
1:D:1709:GLN:OE1	1:D:1709:GLN:N	2.47	0.41
1:A:2580:ARG:NH1	1:A:2581:GLN:OE1	2.52	0.41
1:A:2726:ARG:O	1:A:2730:VAL:HG23	2.20	0.41
1:B:710:LEU:HD11	1:D:679:ALA:HB2	2.01	0.41
1:B:1364:LEU:O	1:B:1368:GLN:HG3	2.20	0.41
1:B:2552:ARG:HH11	1:B:2556:LYS:HG3	1.85	0.41
1:C:2:THR:OG1	1:C:871:VAL:O	2.24	0.41
1:C:22:LEU:O	1:C:25:VAL:HG12	2.19	0.41
1:C:441:ASN:ND2	1:C:441:ASN:O	2.53	0.41
1:C:750:ASN:OD1	1:C:803:THR:N	2.52	0.41
1:C:840:PRO:O	1:C:872:GLU:N	2.41	0.41
1:C:1716:TRP:CZ2	1:D:1856:GLY:HA3	2.54	0.41
1:C:2788:LEU:HD13	1:C:2791:ILE:HD11	2.01	0.41
1:D:1776:SER:O	1:D:1779:THR:HG22	2.20	0.41
1:D:2097:VAL:HB	1:D:2101:LYS:HE3	2.00	0.41
1:A:493:TRP:CD1	1:A:736:LYS:HB3	2.54	0.41
1:B:463:GLN:HB3	1:B:465:TYR:CE1	2.55	0.41
1:B:846:MET:HA	1:B:866:VAL:O	2.21	0.41
1:B:916:CYS:HG	1:B:920:ARG:HE	1.63	0.41
1:C:1336:TRP:CD1	1:C:1408:GLU:HG3	2.54	0.41
1:C:2265:ARG:HD3	1:C:2266:ARG:H	1.85	0.41
1:D:381:LEU:HB2	1:D:395:TRP:CH2	2.55	0.41
1:D:440:ASN:HB3	1:D:442:LYS:HE2	2.02	0.41
1:D:2554:VAL:HG13	1:D:2651:LEU:HD11	2.01	0.41
1:A:908:LEU:O	1:A:912:ILE:HG12	2.19	0.41
1:A:1871:PRO:HB3	1:B:1716:TRP:CD1	2.55	0.41
1:B:1164:ASN:OD1	1:B:1164:ASN:N	2.52	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2058:GLN:OE1	1:B:2060:ASN:N	2.39	0.41
1:C:381:LEU:HG	1:C:382:LEU:H	1.86	0.41
1:D:2730:VAL:HA	1:D:2733:TRP:HB2	2.03	0.41
1:A:2600:LEU:O	1:A:2626:VAL:N	2.54	0.41
1:B:1099:GLN:OE1	1:B:1099:GLN:N	2.54	0.41
1:B:1438:ILE:HD13	1:B:1438:ILE:HA	1.90	0.41
1:B:2556:LYS:HD3	1:B:2556:LYS:HA	1.90	0.41
1:C:502:ARG:NH1	1:C:657:VAL:HA	2.36	0.41
1:C:784:PHE:HD2	1:C:820:TYR:CZ	2.38	0.41
1:C:1156:GLY:HA2	1:C:1160:PRO:HA	2.02	0.41
1:C:1714:MET:HE2	1:C:1716:TRP:HE1	1.86	0.41
1:C:1716:TRP:CE3	1:D:1936:LEU:HD13	2.55	0.41
1:C:1936:LEU:HD12	1:C:1936:LEU:HA	1.94	0.41
1:D:432:ILE:HD12	1:D:451:LEU:HD11	2.02	0.41
1:D:542:TYR:HB3	1:D:564:SER:HA	2.03	0.41
1:D:543:HIS:CB	1:D:665:VAL:HG11	2.48	0.41
1:D:1102:LEU:HD23	1:D:1102:LEU:HA	1.91	0.41
1:D:1834:LYS:HA	1:D:1834:LYS:HD3	1.76	0.41
1:A:1259:LEU:HD21	1:A:1332:VAL:HG22	2.02	0.41
1:B:752:ASP:CG	1:B:757:HIS:HE2	2.28	0.41
1:B:1340:LYS:O	1:B:1344:MET:HB2	2.20	0.41
1:C:1169:PRO:HD2	1:C:1264:LEU:HD13	2.01	0.41
1:C:1339:LEU:HA	1:C:1339:LEU:HD22	1.86	0.41
1:C:1403:GLY:O	1:C:1407:LYS:HG2	2.21	0.41
1:C:1821:TYR:CE1	1:C:2164:PRO:HB2	2.55	0.41
1:C:1941:VAL:HG13	1:C:2196:PHE:HE1	1.86	0.41
1:D:68:CYS:SG	1:D:69:ARG:N	2.94	0.41
1:A:495:GLY:O	1:A:732:GLN:HB3	2.20	0.41
1:B:907:MET:HE2	1:B:907:MET:HB2	1.97	0.41
1:B:1179:CYS:SG	1:B:1180:SER:N	2.93	0.41
1:C:441:ASN:O	1:C:464:THR:OG1	2.39	0.41
1:C:1187:GLU:H	1:C:1187:GLU:HG3	1.71	0.41
1:C:1710:ALA:HB3	1:C:1715:GLN:CD	2.46	0.41
1:D:757:HIS:NE2	1:D:810:ILE:HG13	2.36	0.41
1:A:2087:GLU:OE2	1:A:2188:ARG:HG2	2.21	0.41
1:B:896:GLU:OE2	1:B:897:GLN:NE2	2.53	0.41
1:B:1201:LEU:HD22	1:B:1205:LEU:HB3	2.03	0.41
1:C:8:VAL:HG12	1:C:866:VAL:HG22	2.01	0.41
1:C:851:LEU:HD12	1:C:851:LEU:H	1.85	0.41
1:C:917:ASP:O	1:C:920:ARG:HG3	2.20	0.41
1:C:1170:LEU:HD11	1:C:1255:LEU:HD12	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2238:ARG:HD3	1:C:2238:ARG:HA	1.89	0.41
1:D:1114:MET:HB3	1:D:1118:MET:HB2	2.03	0.41
1:D:1478:VAL:O	1:D:1481:SER:OG	2.23	0.41
1:D:2247:ASP:OD1	1:D:2251:LEU:N	2.54	0.41
1:D:2257:ARG:NH2	1:D:2314:CYS:SG	2.94	0.41
1:A:63:GLU:OE1	1:A:63:GLU:N	2.54	0.41
1:A:813:ARG:NH1	1:A:842:SER:O	2.41	0.41
1:A:917:ASP:OD1	1:A:917:ASP:N	2.54	0.41
1:A:921:ASN:ND2	1:A:1108:ALA:HB3	2.36	0.41
1:A:1089:LEU:HD13	1:A:1089:LEU:HA	1.91	0.41
1:A:1203:GLU:O	1:A:1204:SER:OG	2.33	0.41
1:A:1317:HIS:O	1:A:1317:HIS:ND1	2.52	0.41
1:A:1376:GLY:O	1:A:1427:ARG:NH2	2.44	0.41
1:A:1484:VAL:HG13	1:A:1488:MET:HE2	2.03	0.41
1:A:1492:ARG:HG3	1:B:1940:ASP:OD2	2.21	0.41
1:A:2186:LEU:HD22	1:A:2193:LEU:HD11	2.03	0.41
1:A:2257:ARG:HA	1:A:2257:ARG:NH1	2.36	0.41
1:A:2601:ALA:HA	1:A:2625:PRO:HA	2.03	0.41
1:B:5:HIS:CE1	1:B:29:LEU:HD13	2.56	0.41
1:B:514:LYS:O	1:B:515:LYS:HG2	2.21	0.41
1:B:710:LEU:HD22	1:D:710:LEU:HD13	2.02	0.41
1:B:1431:SER:HA	1:B:1434:ARG:CZ	2.50	0.41
1:B:1480:GLU:HA	1:B:1483:ILE:HG22	2.03	0.41
1:B:2185:LEU:HD12	1:B:2189:TRP:CZ3	2.56	0.41
1:B:2689:MET:HE2	1:B:2689:MET:HB3	1.95	0.41
1:C:880:ILE:HA	1:C:1088:ILE:HD13	2.02	0.41
1:C:1189:ILE:HD13	1:C:1189:ILE:HA	1.82	0.41
1:C:1329:LEU:HA	1:C:1332:VAL:HG12	2.02	0.41
1:C:1404:THR:O	1:C:1408:GLU:HG2	2.21	0.41
1:C:2519:GLY:H	1:C:2525:ARG:NH2	2.17	0.41
1:C:2564:ASN:ND2	1:C:2567:ASP:OD1	2.53	0.41
1:D:40:LEU:O	1:D:44:GLU:HG2	2.20	0.41
1:D:413:ARG:O	1:D:417:LEU:HG	2.21	0.41
1:D:1819:LEU:O	1:D:2166:LEU:HD11	2.20	0.41
1:A:433:ARG:HH12	1:A:495:GLY:CA	2.33	0.41
1:A:1930:ASP:CG	1:B:1373:GLN:HE22	2.29	0.41
1:A:2585:ALA:O	1:A:2588:SER:OG	2.30	0.41
1:B:2564:ASN:N	1:B:2567:ASP:OD2	2.44	0.41
1:C:49:LYS:HD2	1:C:49:LYS:HA	1.81	0.41
1:C:401:TYR:CE1	1:C:410:HIS:HA	2.56	0.41
1:C:530:VAL:HG22	1:C:673:VAL:HB	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:751:VAL:O	1:C:805:GLY:HA2	2.20	0.41
1:C:2099:PRO:O	1:C:2176:MET:HE3	2.20	0.41
1:D:1927:SER:C	1:D:2091:ASP:HB3	2.46	0.41
1:A:69:ARG:HD2	1:A:395:TRP:CE3	2.57	0.40
1:A:490:SER:HB3	1:A:492:TYR:CZ	2.56	0.40
1:B:424:ILE:HG23	1:B:436:VAL:HG13	2.03	0.40
1:B:515:LYS:O	1:B:517:LYS:HD3	2.21	0.40
1:B:852:ILE:H	1:B:852:ILE:HG13	1.64	0.40
1:B:2185:LEU:HD13	1:B:2185:LEU:HA	1.84	0.40
1:B:2269:THR:OG1	1:B:2270:THR:N	2.54	0.40
1:C:377:LEU:HA	1:C:430:ASN:O	2.21	0.40
1:C:753:SER:HB3	1:C:806:GLN:HA	2.02	0.40
1:C:766:VAL:HG11	1:C:791:PHE:CD2	2.56	0.40
1:C:1187:GLU:OE1	1:C:1189:ILE:HG12	2.20	0.40
1:C:2699:GLU:OE2	1:C:2755:ARG:NE	2.50	0.40
1:D:732:GLN:NE2	1:D:734:THR:O	2.53	0.40
1:D:1355:SER:HB3	1:D:1358:SER:HB2	2.03	0.40
1:D:1480:GLU:O	1:D:1484:VAL:HG23	2.21	0.40
1:D:2505:PHE:HD1	1:D:2516:PRO:HA	1.85	0.40
1:A:411:HIS:O	1:A:413:ARG:N	2.53	0.40
1:A:474:VAL:HB	1:A:486:GLN:O	2.21	0.40
1:A:2504:LEU:HA	1:A:2525:ARG:NH2	2.36	0.40
1:A:2790:ALA:O	1:A:2793:THR:OG1	2.33	0.40
1:B:19:ASN:ND2	1:B:822:MET:O	2.50	0.40
1:B:672:LYS:HB3	1:B:679:ALA:HB3	2.03	0.40
1:B:1102:LEU:HD23	1:B:1102:LEU:HA	1.89	0.40
1:B:1235:TRP:CZ2	1:B:1314:MET:HG3	2.56	0.40
1:B:2225:PHE:O	1:B:2229:MET:HG2	2.21	0.40
1:C:2026:SER:OG	1:C:2027:ASP:N	2.54	0.40
1:C:2199:VAL:HG22	1:D:1710:ALA:HB2	2.03	0.40
1:C:2667:LEU:HA	1:C:2670:LEU:HD12	2.03	0.40
1:D:75:GLN:NE2	1:D:353:PRO:O	2.45	0.40
1:D:494:TRP:HB3	1:D:735:PRO:HA	2.02	0.40
1:D:923:LEU:HD22	1:D:1092:LEU:HD21	2.04	0.40
1:D:1345:PHE:CE1	1:D:1352:ASP:HB3	2.56	0.40
1:D:1345:PHE:CZ	1:D:1352:ASP:HB3	2.56	0.40
1:D:2757:PRO:HD3	1:D:2776:LEU:HB3	2.02	0.40
1:A:502:ARG:O	1:A:505:MET:HG3	2.21	0.40
1:A:1961:MET:O	1:A:1965:THR:HG23	2.22	0.40
1:A:2059:PRO:HA	1:A:2677:LEU:HD21	2.03	0.40
1:A:2647:ALA:C	1:A:2650:PRO:HD2	2.46	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:373:CYS:SG	1:B:427:LEU:HB3	2.62	0.40
1:B:517:LYS:HB2	1:B:517:LYS:HE2	1.83	0.40
1:B:827:MET:HB2	1:B:1197:ARG:NH1	2.36	0.40
1:B:924:HIS:ND1	1:B:1110:ASP:HB3	2.37	0.40
1:B:2095:LEU:HD12	1:B:2095:LEU:HA	1.82	0.40
1:C:787:SER:OG	1:C:1111:ALA:O	2.33	0.40
1:C:1197:ARG:HH21	1:C:1220:ASP:CG	2.30	0.40
1:C:1202:LEU:N	1:C:1205:LEU:HB2	2.36	0.40
1:C:1422:ILE:O	1:C:1426:MET:HG2	2.22	0.40
1:C:2225:PHE:O	1:C:2228:GLU:HG3	2.22	0.40
1:D:444:ALA:HB2	1:D:462:ALA:HB2	2.04	0.40
1:D:1233:ASP:OD1	1:D:1233:ASP:N	2.44	0.40
1:D:2530:ARG:NH2	1:D:2657:GLY:HA2	2.37	0.40
1:A:1196:CYS:SG	1:A:1198:THR:OG1	2.76	0.40
1:A:2256:MET:SD	1:A:2531:ASN:ND2	2.81	0.40
1:A:2700:SER:HB3	1:A:2756:PRO:HA	2.03	0.40
1:B:433:ARG:HD2	1:B:483:THR:OG1	2.22	0.40
1:B:2079:ALA:HB1	1:B:2084:CYS:HB3	2.02	0.40
1:B:2647:ALA:C	1:B:2650:PRO:HD2	2.46	0.40
1:C:11:LEU:HA	1:C:11:LEU:HD23	1.83	0.40
1:C:1240:CYS:SG	1:C:1242:THR:OG1	2.76	0.40
1:C:1436:PHE:HB2	1:C:1460:CYS:SG	2.62	0.40
1:C:1854:ARG:NH1	1:D:1370:TYR:OH	2.46	0.40
1:C:2288:GLY:O	1:C:2291:VAL:HG12	2.21	0.40
1:C:2677:LEU:HA	1:C:2677:LEU:HD12	1.84	0.40
1:D:925:ALA:HA	1:D:928:SER:HB3	2.03	0.40
1:D:1295:PRO:HA	1:D:1296:PRO:HD3	1.88	0.40
1:A:433:ARG:NH1	1:A:482:TYR:HA	2.37	0.40
1:A:562:MET:H	1:A:562:MET:HG3	1.62	0.40
1:A:574:PHE:HD2	1:A:651:TRP:HB2	1.87	0.40
1:A:1483:ILE:HD12	1:A:1483:ILE:HA	1.93	0.40
1:A:1841:TRP:HZ3	1:A:1950:VAL:HG21	1.86	0.40
1:A:2240:LEU:HD23	1:A:2274:VAL:HG11	2.03	0.40
1:B:785:PRO:HG3	1:B:831:ARG:O	2.21	0.40
1:B:1432:VAL:HA	1:B:1435:VAL:HG12	2.03	0.40
1:B:1846:MET:HE1	1:B:2196:PHE:CE2	2.48	0.40
1:C:752:ASP:HA	1:C:805:GLY:HA2	2.04	0.40
1:C:872:GLU:N	1:C:872:GLU:OE1	2.54	0.40
1:C:2228:GLU:O	1:C:2232:LEU:HG	2.21	0.40
1:C:2685:VAL:HG13	1:C:2739:LEU:HD12	2.03	0.40
1:D:6:PHE:HD1	1:D:868:ILE:HG22	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:483:THR:O	1:D:493:TRP:HA	2.21	0.40
1:D:1280:VAL:HG21	1:D:1383:PHE:CD1	2.56	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	1753/2799 (63%)	1658 (95%)	94 (5%)	1 (0%)	48	79
1	B	1753/2799 (63%)	1654 (94%)	97 (6%)	2 (0%)	48	79
1	C	1753/2799 (63%)	1658 (95%)	93 (5%)	2 (0%)	48	79
1	D	1753/2799 (63%)	1635 (93%)	117 (7%)	1 (0%)	48	79
All	All	7012/11196 (63%)	6605 (94%)	401 (6%)	6 (0%)	50	79

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	727	VAL
1	B	515	LYS
1	B	2088	VAL
1	D	542	TYR
1	A	662	VAL
1	C	2088	VAL

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	1561/2419 (64%)	1480 (95%)	81 (5%)	19	47
1	B	1561/2419 (64%)	1479 (95%)	82 (5%)	19	46
1	C	1561/2419 (64%)	1483 (95%)	78 (5%)	20	49
1	D	1561/2419 (64%)	1474 (94%)	87 (6%)	17	45
All	All	6244/9676 (64%)	5916 (95%)	328 (5%)	21	46

All (328) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	7	VAL
1	A	8	VAL
1	A	18	LEU
1	A	60	PHE
1	A	74	VAL
1	A	377	LEU
1	A	411	HIS
1	A	436	VAL
1	A	461	THR
1	A	501	GLN
1	A	541	LEU
1	A	547	VAL
1	A	551	ILE
1	A	560	VAL
1	A	710	LEU
1	A	756	VAL
1	A	762	THR
1	A	773	LEU
1	A	784	PHE
1	A	803	THR
1	A	806	GLN
1	A	836	LEU
1	A	849	HIS
1	A	854	LEU
1	A	872	GLU
1	A	895	LEU
1	A	1097	VAL
1	A	1110	ASP
1	A	1153	VAL
1	A	1164	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1209	THR
1	A	1231	TYR
1	A	1238	CYS
1	A	1262	THR
1	A	1267	LEU
1	A	1367	GLU
1	A	1389	VAL
1	A	1405	LEU
1	A	1409	LEU
1	A	1429	LEU
1	A	1438	ILE
1	A	1439	LEU
1	A	1441	VAL
1	A	1453	ILE
1	A	1480	GLU
1	A	1490	ILE
1	A	1513	LEU
1	A	1517	GLU
1	A	1522	ARG
1	A	1823	ASP
1	A	1846	MET
1	A	1922	LEU
1	A	1929	ASN
1	A	1932	HIS
1	A	1941	VAL
1	A	1961	MET
1	A	2041	GLU
1	A	2042	VAL
1	A	2044	LEU
1	A	2089	THR
1	A	2095	LEU
1	A	2166	LEU
1	A	2201	MET
1	A	2204	VAL
1	A	2211	ILE
1	A	2240	LEU
1	A	2242	LEU
1	A	2253	GLN
1	A	2269	THR
1	A	2540	LEU
1	A	2548	ILE
1	A	2554	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	2563	VAL
1	A	2565	TRP
1	A	2581	GLN
1	A	2592	ASP
1	A	2623	ASN
1	A	2721	MET
1	A	2746	PHE
1	A	2752	ILE
1	A	2766	ASN
1	B	9	HIS
1	B	11	LEU
1	B	75	GLN
1	B	377	LEU
1	B	390	LEU
1	B	436	VAL
1	B	443	VAL
1	B	473	ILE
1	B	479	CYS
1	B	497	VAL
1	B	501	GLN
1	B	507	GLU
1	B	525	MET
1	B	534	VAL
1	B	542	TYR
1	B	551	ILE
1	B	555	ILE
1	B	560	VAL
1	B	563	GLU
1	B	724	THR
1	B	756	VAL
1	B	770	ILE
1	B	799	VAL
1	B	818	THR
1	B	844	LEU
1	B	880	ILE
1	B	881	LEU
1	B	911	PHE
1	B	914	HIS
1	B	916	CYS
1	B	917	ASP
1	B	1089	LEU
1	B	1114	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	1153	VAL
1	B	1173	LEU
1	B	1189	ILE
1	B	1193	ILE
1	B	1207	CYS
1	B	1229	THR
1	B	1231	TYR
1	B	1233	ASP
1	B	1255	LEU
1	B	1276	LEU
1	B	1286	GLN
1	B	1329	LEU
1	B	1457	ILE
1	B	1473	GLU
1	B	1480	GLU
1	B	1484	VAL
1	B	1784	LEU
1	B	1806	ASN
1	B	1832	GLU
1	B	1838	THR
1	B	1869	ASN
1	B	1924	LEU
1	B	1941	VAL
1	B	1961	MET
1	B	2030	THR
1	B	2044	LEU
1	B	2056	LEU
1	B	2088	VAL
1	B	2090	VAL
1	B	2095	LEU
1	B	2101	LYS
1	B	2166	LEU
1	B	2172	GLN
1	B	2175	PHE
1	B	2185	LEU
1	B	2247	ASP
1	B	2307	GLU
1	B	2539	CYS
1	B	2540	LEU
1	B	2545	LEU
1	B	2563	VAL
1	B	2564	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	2631	VAL
1	B	2649	GLN
1	B	2677	LEU
1	B	2687	VAL
1	B	2693	PHE
1	B	2708	LEU
1	B	2722	SER
1	C	34	LEU
1	C	40	LEU
1	C	67	VAL
1	C	70	ILE
1	C	369	THR
1	C	425	VAL
1	C	430	ASN
1	C	432	ILE
1	C	484	CYS
1	C	497	VAL
1	C	504	LYS
1	C	653	LEU
1	C	662	VAL
1	C	685	THR
1	C	705	LEU
1	C	724	THR
1	C	749	VAL
1	C	750	ASN
1	C	756	VAL
1	C	767	ARG
1	C	773	LEU
1	C	794	GLN
1	C	798	ASN
1	C	810	ILE
1	C	818	THR
1	C	836	LEU
1	C	841	ILE
1	C	872	GLU
1	C	881	LEU
1	C	916	CYS
1	C	1099	GLN
1	C	1109	LYS
1	C	1173	LEU
1	C	1189	ILE
1	C	1202	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	1209	THR
1	C	1214	VAL
1	C	1234	CYS
1	C	1256	TYR
1	C	1279	LEU
1	C	1339	LEU
1	C	1373	GLN
1	C	1398	LEU
1	C	1405	LEU
1	C	1431	SER
1	C	1482	LEU
1	C	1490	ILE
1	C	1507	MET
1	C	1697	ARG
1	C	1714	MET
1	C	1799	MET
1	C	1832	GLU
1	C	1838	THR
1	C	1839	TRP
1	C	1846	MET
1	C	1922	LEU
1	C	1932	HIS
1	C	1941	VAL
1	C	1959	LYS
1	C	2035	ILE
1	C	2062	ARG
1	C	2089	THR
1	C	2090	VAL
1	C	2095	LEU
1	C	2098	LEU
1	C	2203	ASP
1	C	2211	ILE
1	C	2215	LEU
1	C	2269	THR
1	C	2291	VAL
1	C	2525	ARG
1	C	2534	ARG
1	C	2540	LEU
1	C	2548	ILE
1	C	2564	ASN
1	C	2692	SER
1	C	2708	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	2789	LEU
1	D	6	PHE
1	D	8	VAL
1	D	49	LYS
1	D	381	LEU
1	D	390	LEU
1	D	401	TYR
1	D	425	VAL
1	D	436	VAL
1	D	443	VAL
1	D	445	THR
1	D	467	GLU
1	D	512	LYS
1	D	525	MET
1	D	534	VAL
1	D	543	HIS
1	D	551	ILE
1	D	555	ILE
1	D	561	LEU
1	D	563	GLU
1	D	569	ASN
1	D	572	CYS
1	D	650	GLN
1	D	651	TRP
1	D	665	VAL
1	D	677	TYR
1	D	700	ASP
1	D	705	LEU
1	D	717	GLN
1	D	751	VAL
1	D	762	THR
1	D	799	VAL
1	D	806	GLN
1	D	813	ARG
1	D	868	ILE
1	D	872	GLU
1	D	877	MET
1	D	878	GLN
1	D	895	LEU
1	D	911	PHE
1	D	912	ILE
1	D	917	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	1088	ILE
1	D	1089	LEU
1	D	1092	LEU
1	D	1098	LEU
1	D	1167	ASP
1	D	1173	LEU
1	D	1179	CYS
1	D	1187	GLU
1	D	1189	ILE
1	D	1211	CYS
1	D	1231	TYR
1	D	1242	THR
1	D	1244	ILE
1	D	1274	HIS
1	D	1329	LEU
1	D	1330	GLU
1	D	1339	LEU
1	D	1381	ASP
1	D	1429	LEU
1	D	1478	VAL
1	D	1490	ILE
1	D	1829	ASN
1	D	1846	MET
1	D	1869	ASN
1	D	1924	LEU
1	D	1932	HIS
1	D	1941	VAL
1	D	1943	SER
1	D	2035	ILE
1	D	2042	VAL
1	D	2058	GLN
1	D	2089	THR
1	D	2092	ARG
1	D	2102	MET
1	D	2232	LEU
1	D	2240	LEU
1	D	2247	ASP
1	D	2307	GLU
1	D	2538	LEU
1	D	2539	CYS
1	D	2545	LEU
1	D	2558	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	2649	GLN
1	D	2667	LEU
1	D	2685	VAL
1	D	2746	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (109) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	56	ASN
1	A	392	GLN
1	A	421	ASN
1	A	469	GLN
1	A	477	HIS
1	A	501	GLN
1	A	782	ASN
1	A	783	ASN
1	A	798	ASN
1	A	816	ASN
1	A	914	HIS
1	A	924	HIS
1	A	1263	ASN
1	A	1411	ASN
1	A	1451	ASN
1	A	1794	GLN
1	A	1952	GLN
1	A	2038	ASN
1	A	2072	GLN
1	A	2182	HIS
1	A	2260	ASN
1	A	2262	HIS
1	A	2527	ASN
1	A	2553	HIS
1	A	2680	ASN
1	B	9	HIS
1	B	75	GLN
1	B	361	GLN
1	B	410	HIS
1	B	411	HIS
1	B	486	GLN
1	B	575	GLN
1	B	780	GLN
1	B	782	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	806	GLN
1	B	849	HIS
1	B	874	GLN
1	B	878	GLN
1	B	879	HIS
1	B	924	HIS
1	B	1281	GLN
1	B	1286	GLN
1	B	1362	HIS
1	B	1368	GLN
1	B	1451	ASN
1	B	1508	GLN
1	B	1705	ASN
1	B	1773	ASN
1	B	1807	HIS
1	B	1963	GLN
1	B	2019	ASN
1	B	2060	ASN
1	B	2093	ASN
1	B	2253	GLN
1	B	2527	ASN
1	B	2566	HIS
1	B	2587	GLN
1	B	2629	GLN
1	B	2680	ASN
1	C	50	GLN
1	C	392	GLN
1	C	421	ASN
1	C	430	ASN
1	C	441	ASN
1	C	469	GLN
1	C	501	GLN
1	C	513	ASN
1	C	539	ASN
1	C	664	ASN
1	C	782	ASN
1	C	794	GLN
1	C	849	HIS
1	C	1176	ASN
1	C	1373	GLN
1	C	1385	HIS
1	C	1773	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	1822	GLN
1	C	1932	HIS
1	C	2093	ASN
1	C	2172	GLN
1	C	2253	GLN
1	C	2564	ASN
1	C	2614	GLN
1	D	41	ASN
1	D	392	GLN
1	D	411	HIS
1	D	647	ASN
1	D	794	GLN
1	D	874	GLN
1	D	914	HIS
1	D	1084	ASN
1	D	1137	GLN
1	D	1274	HIS
1	D	1281	GLN
1	D	1350	ASN
1	D	1368	GLN
1	D	1372	ASN
1	D	1374	GLN
1	D	1508	GLN
1	D	1794	GLN
1	D	1852	GLN
1	D	1919	ASN
1	D	2301	GLN
1	D	2551	ASN
1	D	2566	HIS
1	D	2587	GLN
1	D	2629	GLN
1	D	2641	HIS
1	D	2680	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 12 ligands modelled in this entry, 12 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

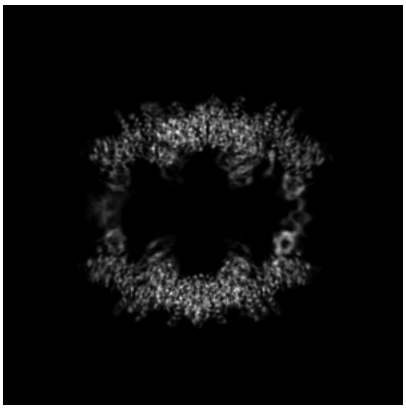
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-28646. These allow visual inspection of the internal detail of the map and identification of artifacts.

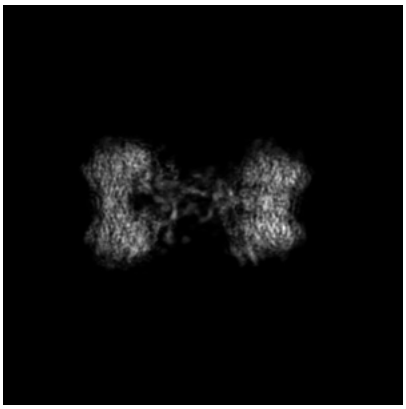
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

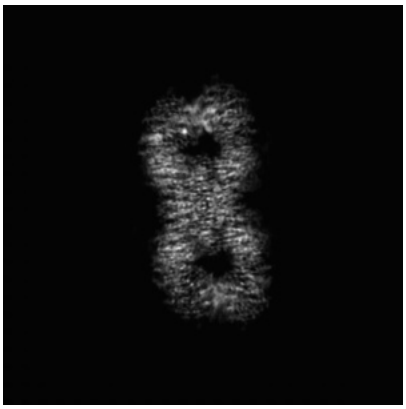
6.1.1 Primary map



X

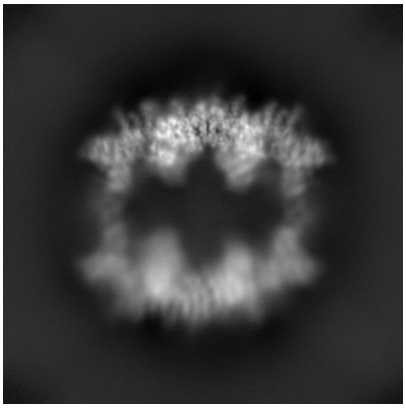


Y

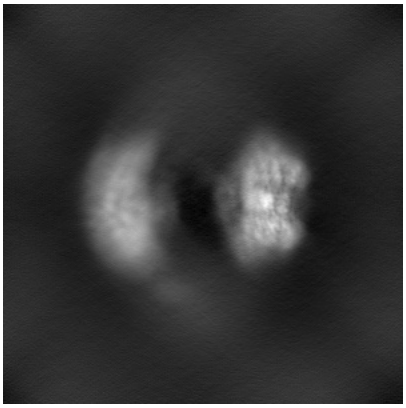


Z

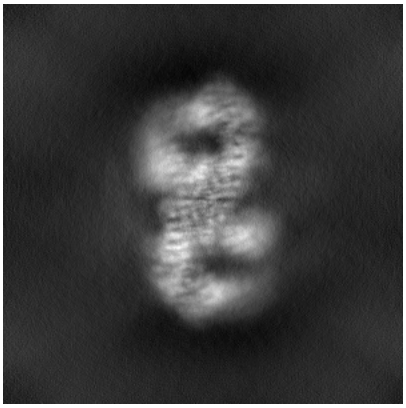
6.1.2 Raw map



X



Y



Z

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

6.2 Central slices (i)

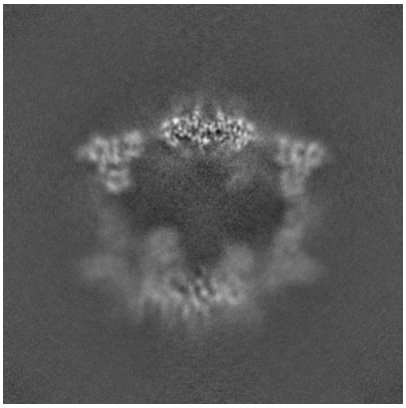
6.2.1 Primary map

X Index: 220

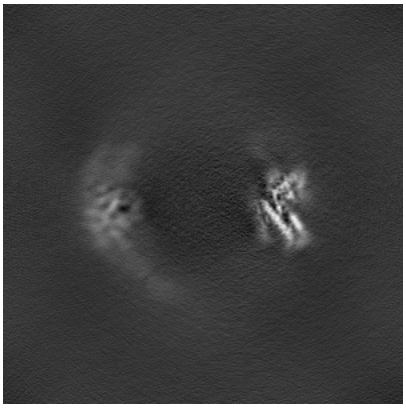
Y Index: 220

Z Index: 220

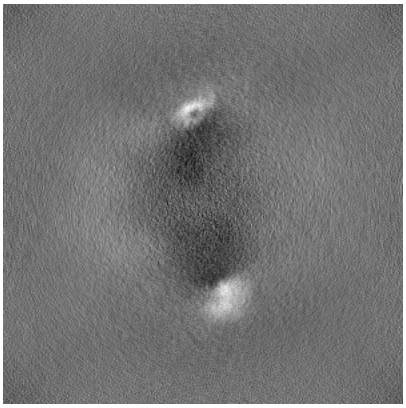
6.2.2 Raw map



X Index: 220



Y Index: 220



Z Index: 220

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

6.3 Largest variance slices (i)

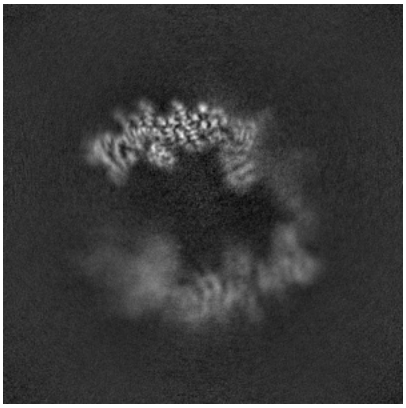
6.3.1 Primary map

X Index: 195

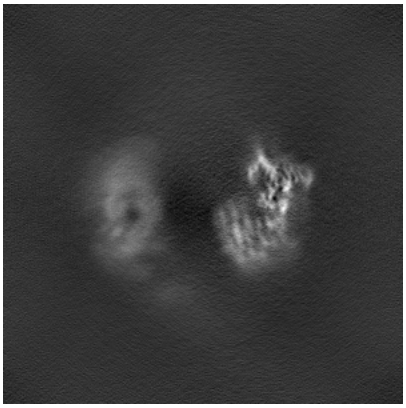
Y Index: 257

Z Index: 297

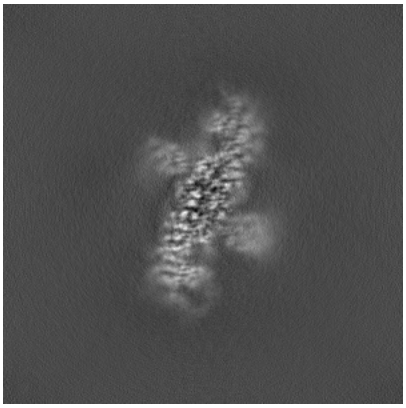
6.3.2 Raw map



X Index: 196



Y Index: 262

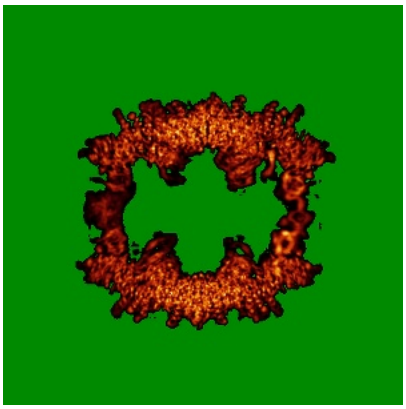


Z Index: 297

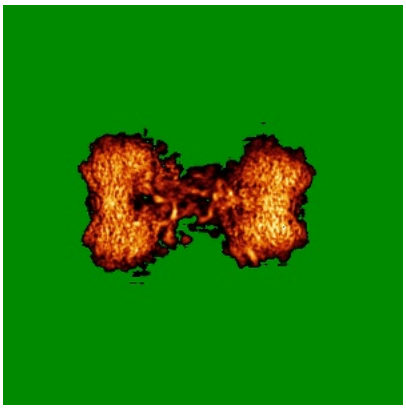
The images above show the largest variance slices of the map in three orthogonal directions.

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

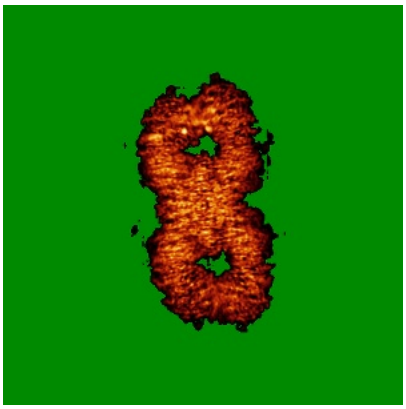
6.4.1 Primary map



X

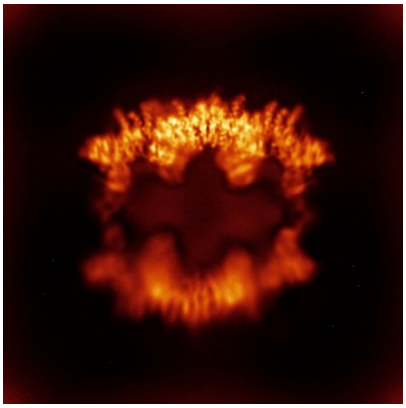


Y

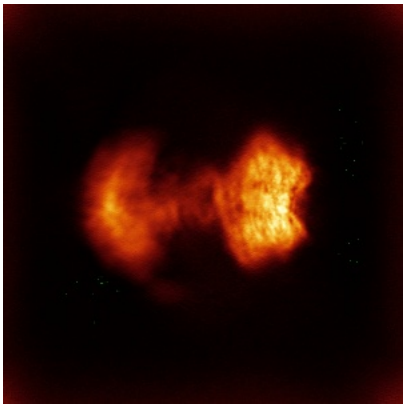


Z

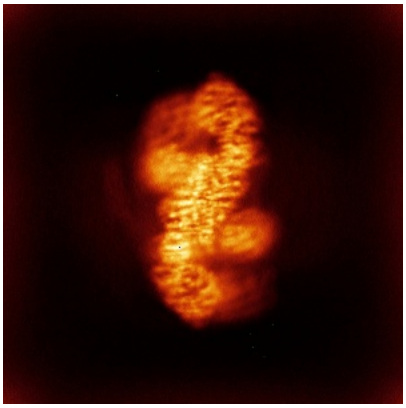
6.4.2 Raw map



X



Y

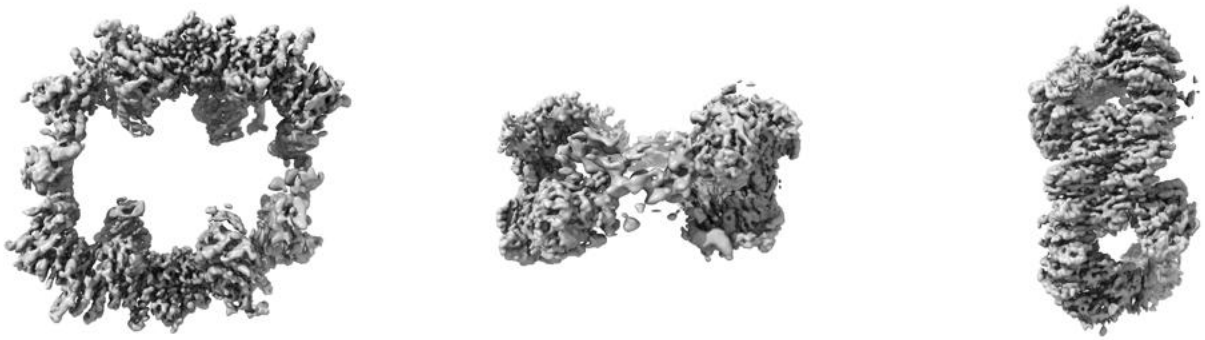


Z

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 0.06. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

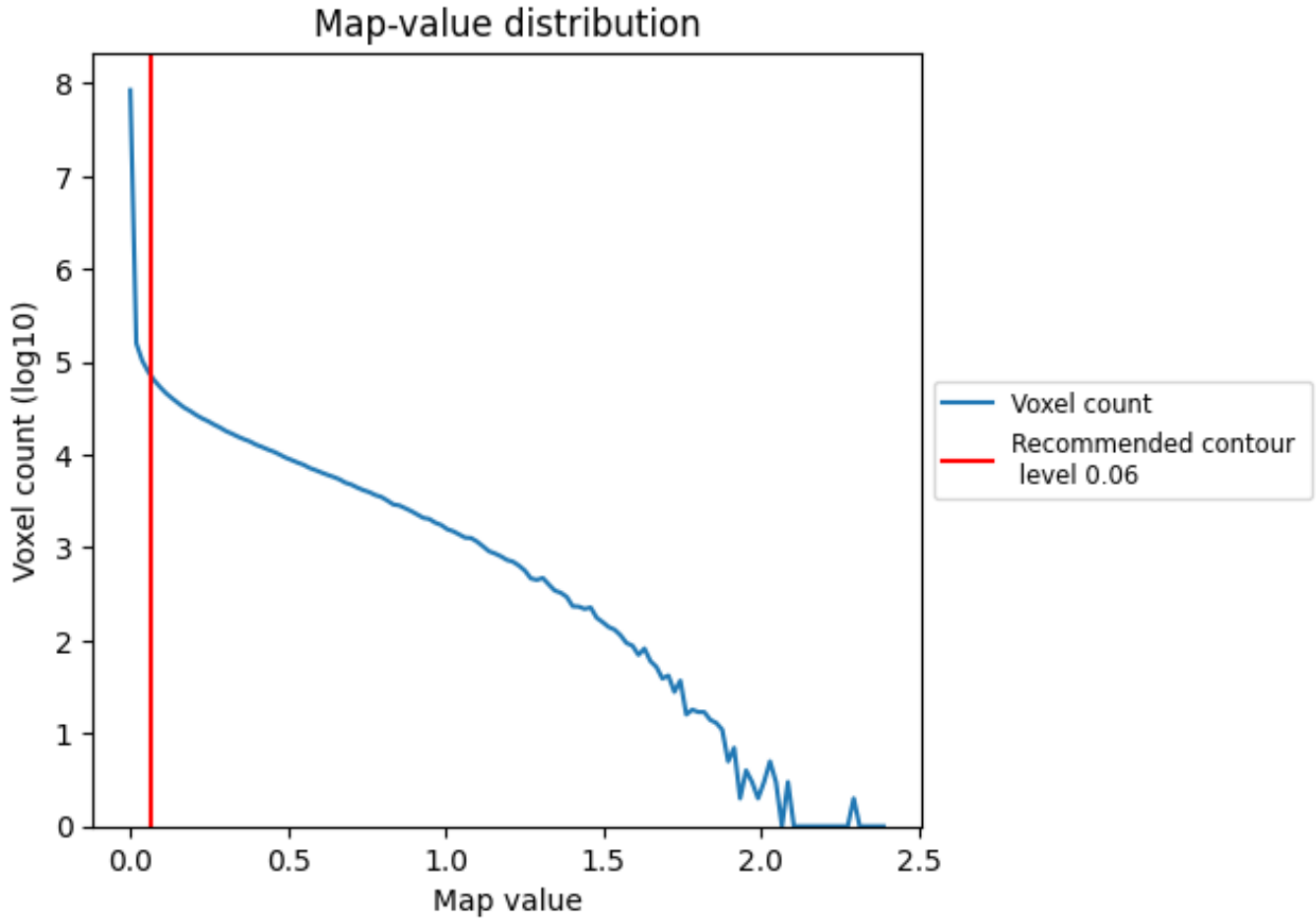
6.6 Mask visualisation (i)

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

7 Map analysis

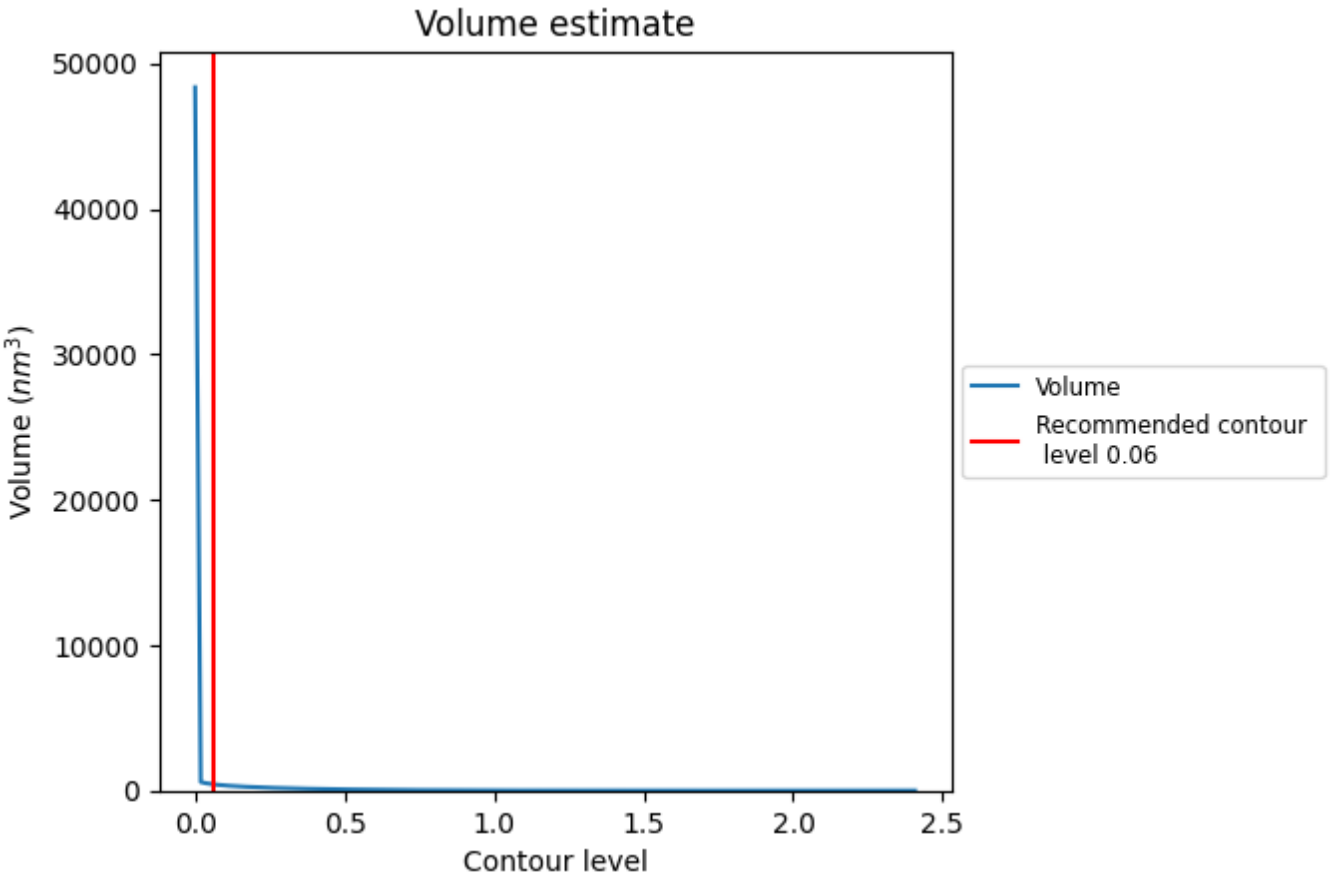
This section contains the results of statistical analysis of the map.

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.

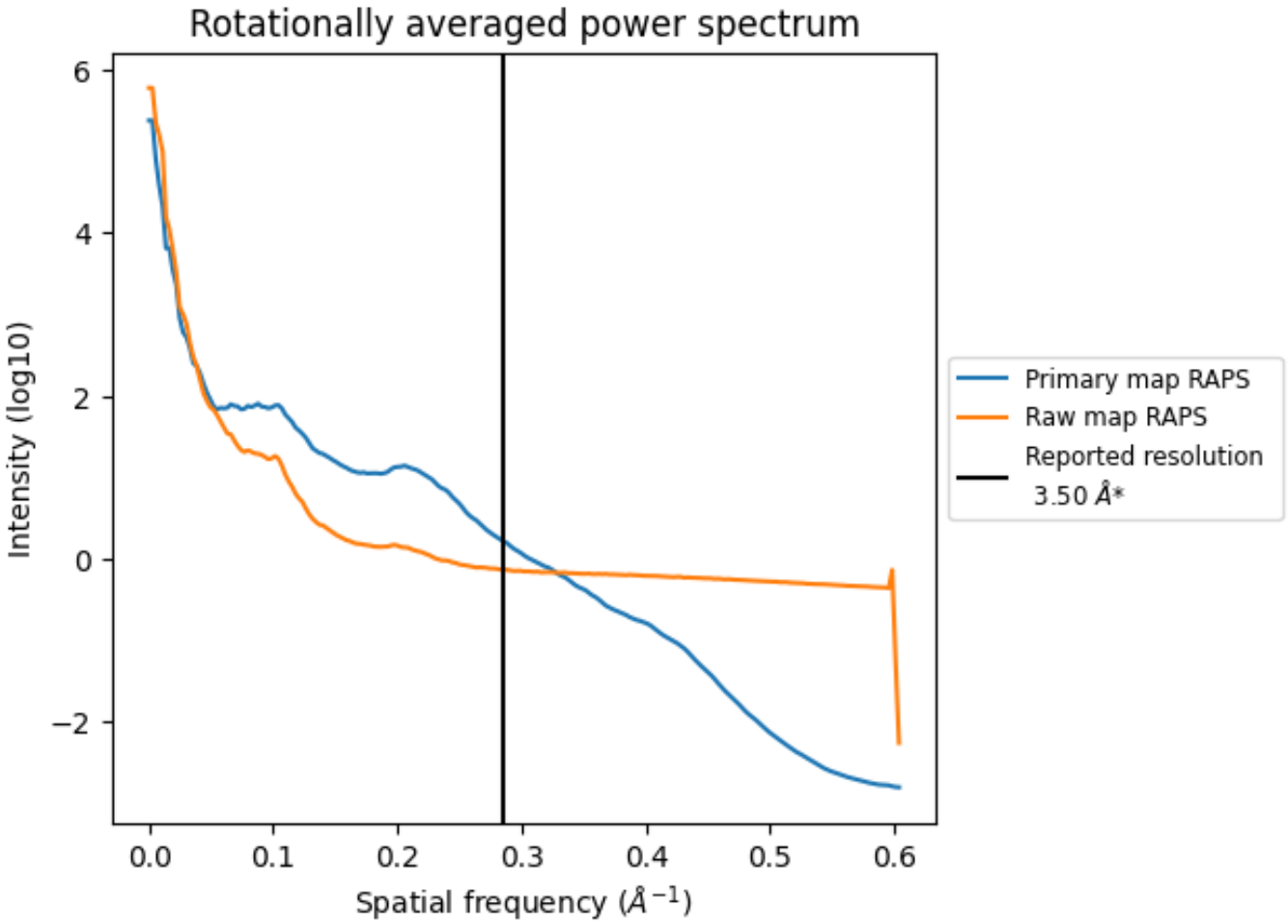
7.2 Volume estimate



The volume at the recommended contour level is 429 nm^3; this corresponds to an approximate mass of 388 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)

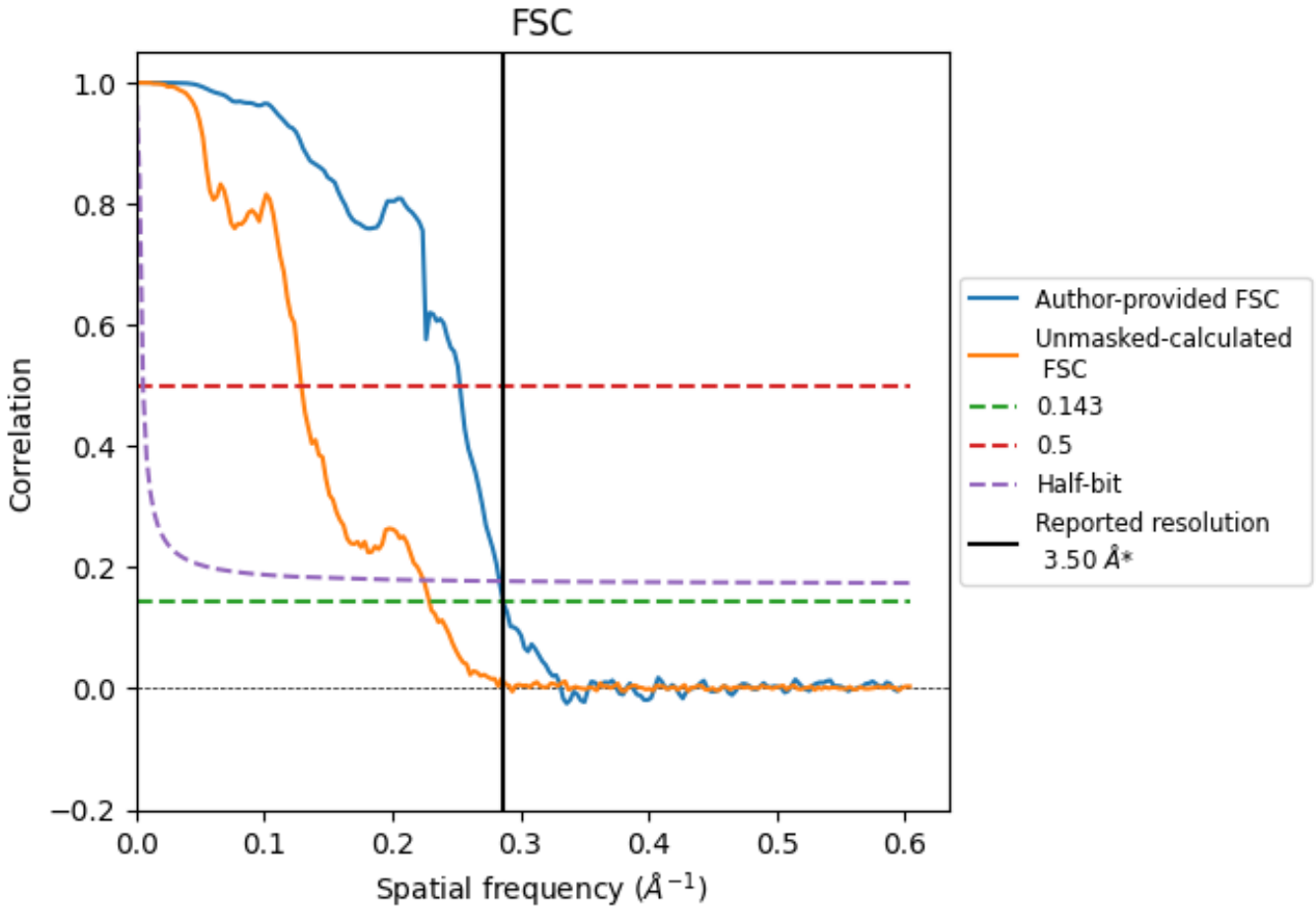


*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

8.2 Resolution estimates (i)

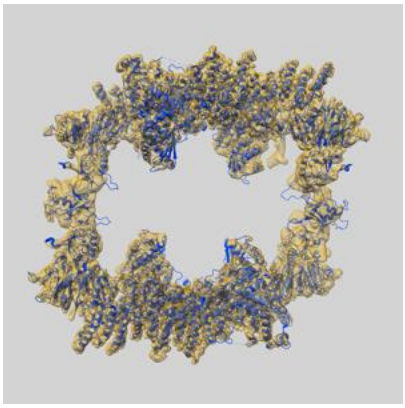
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.50	-	-
Author-provided FSC curve	3.49	3.96	3.53
Unmasked-calculated*	4.37	7.75	4.46

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.37 differs from the reported value 3.5 by more than 10 %

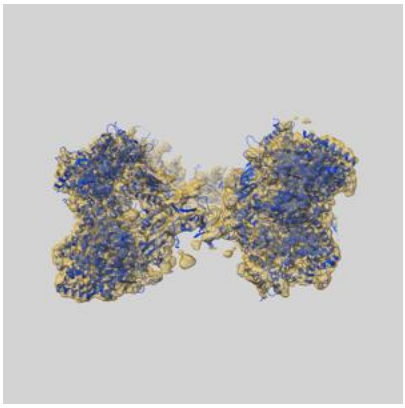
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-28646 and PDB model 8EWI. Per-residue inclusion information can be found in section 3 on page 4.

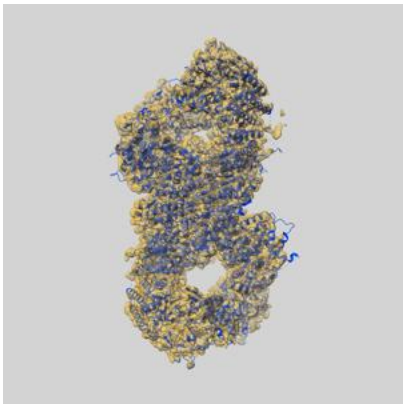
9.1 Map-model overlay



X



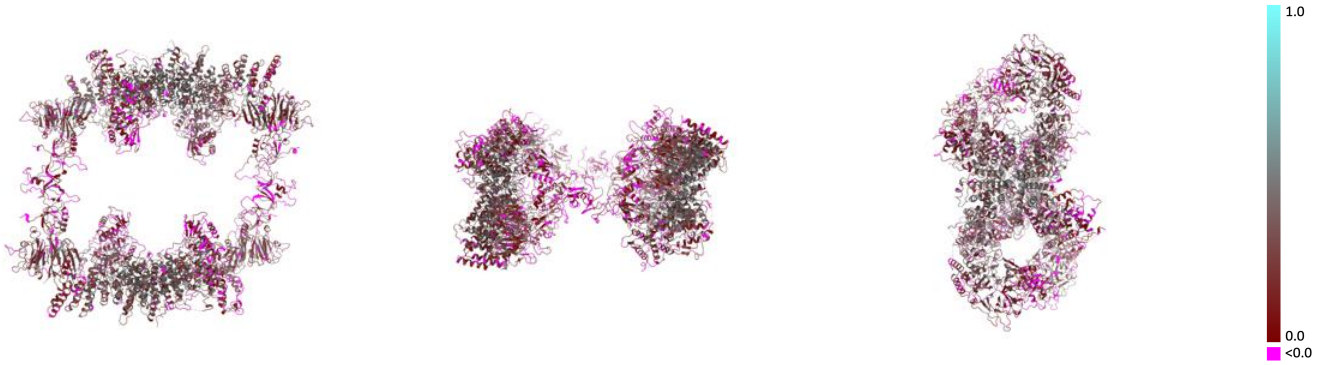
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.06 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.

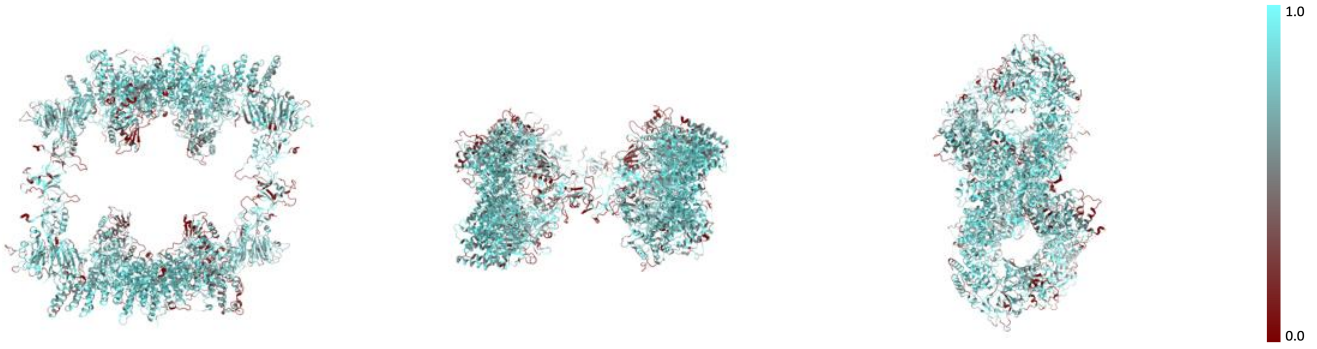
9.2 Q-score mapped to coordinate model (i)



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.

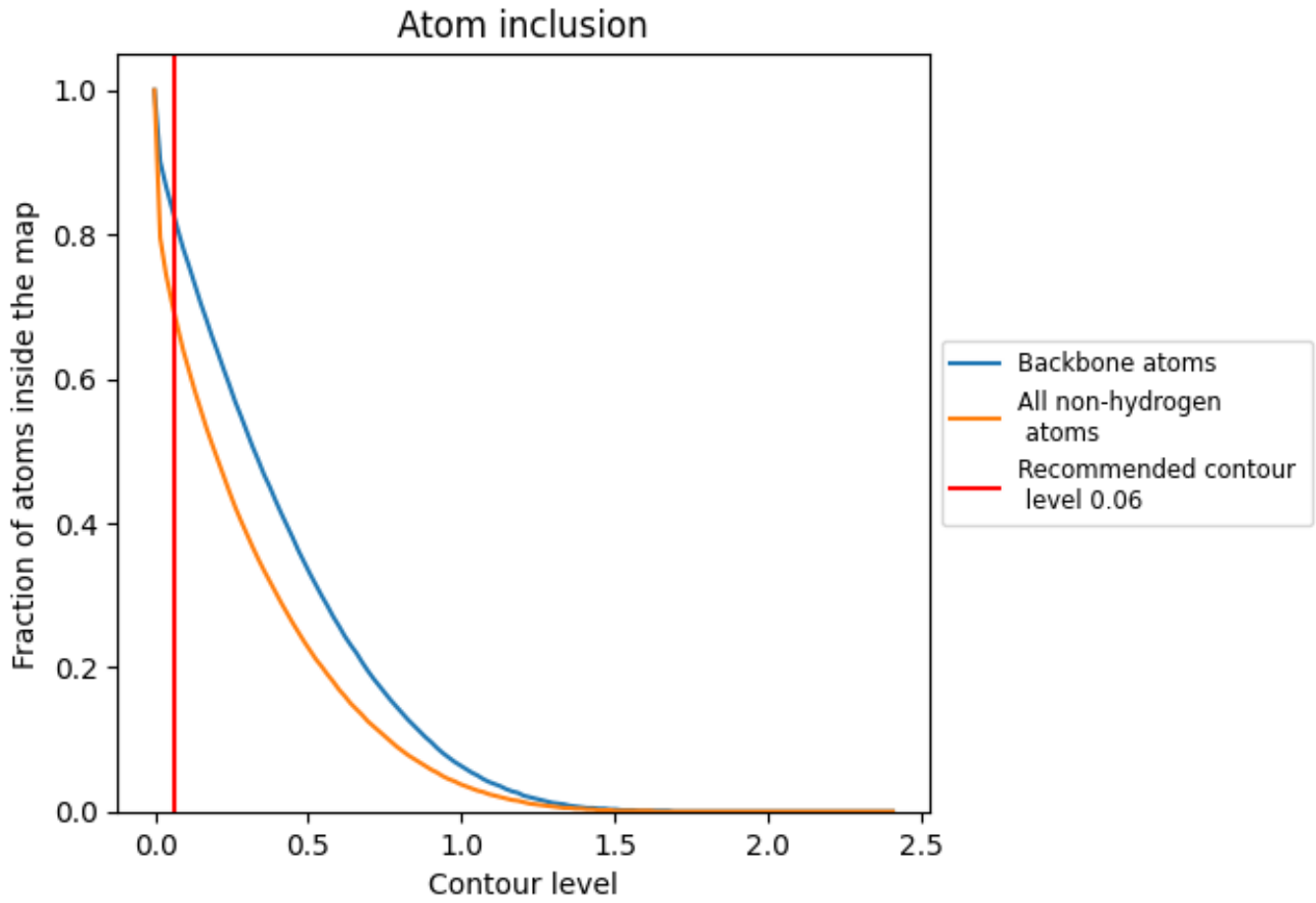
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.06).

9.4 Atom inclusion (i)



At the recommended contour level, 83% of all backbone atoms, 70% 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 (0.06) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6960	0.2480
A	0.7200	0.2670
B	0.6930	0.2540
C	0.6820	0.2390
D	0.6870	0.2330