Full wwPDB EM Validation Report ⓘ

Mar 19, 2024 – 09:29 PM JST

PDB ID	:	6JG3
EMDB ID	:	EMD-9823
Title	:	Cryo-EM structure of RyR2 (Ca2+ alone dataset)
Authors	:	Chi, X.M.; Gong, D.S.; Ren, K.; Zhou, G.W.; Huang, G.X.Y.; Lei, J.L.; Zhou, Q.; Yan, N.
Deposited on	:	2019-02-13
Resolution	:	6.10 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:

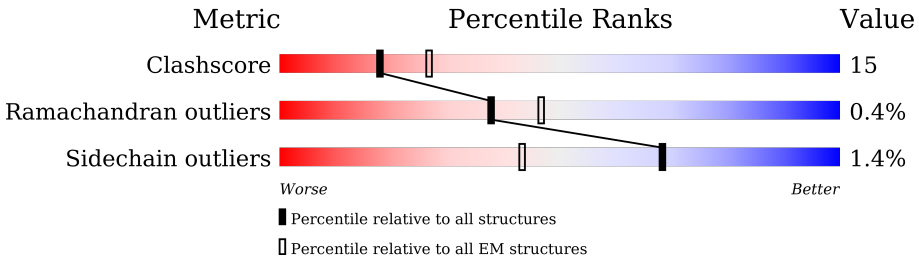
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 6.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	4968	15% 47% 22% • 30%
1	B	4968	15% 47% 22% • 30%
1	C	4968	15% 47% 22% • 30%
1	D	4968	15% 47% 22% • 30%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 106185 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 Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3477	Total	C	N	O	S	0	0
			26546	16893	4545	4951	157		
1	B	3477	Total	C	N	O	S	0	0
			26546	16893	4545	4951	157		
1	C	3477	Total	C	N	O	S	0	0
			26546	16893	4545	4951	157		
1	D	3477	Total	C	N	O	S	0	0
			26543	16890	4545	4951	157		

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

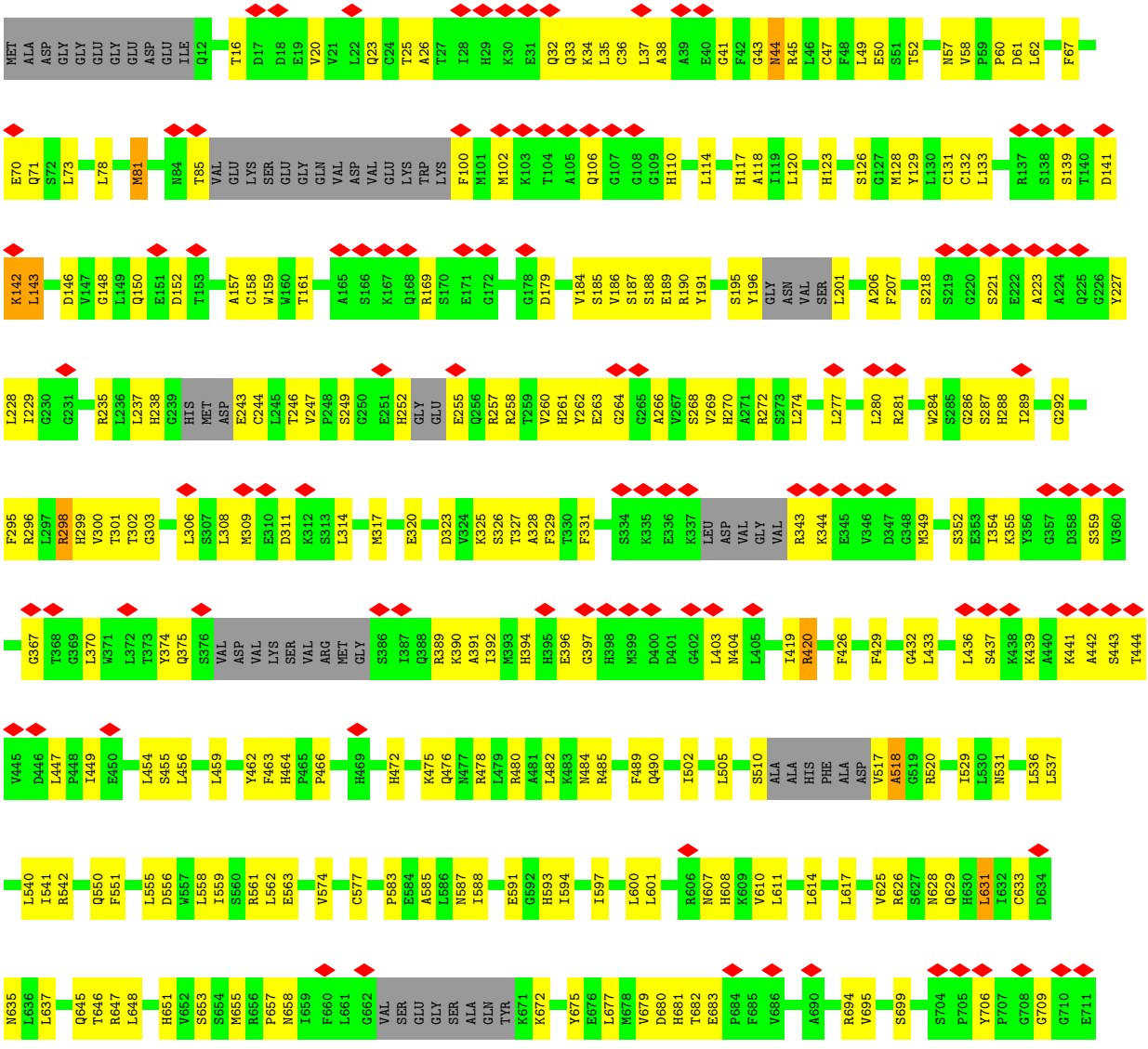
Mol	Chain	Residues	Atoms		AltConf
2	A	1	Total	Zn	0
			1	1	
2	B	1	Total	Zn	0
			1	1	
2	C	1	Total	Zn	0
			1	1	
2	D	1	Total	Zn	0
			1	1	

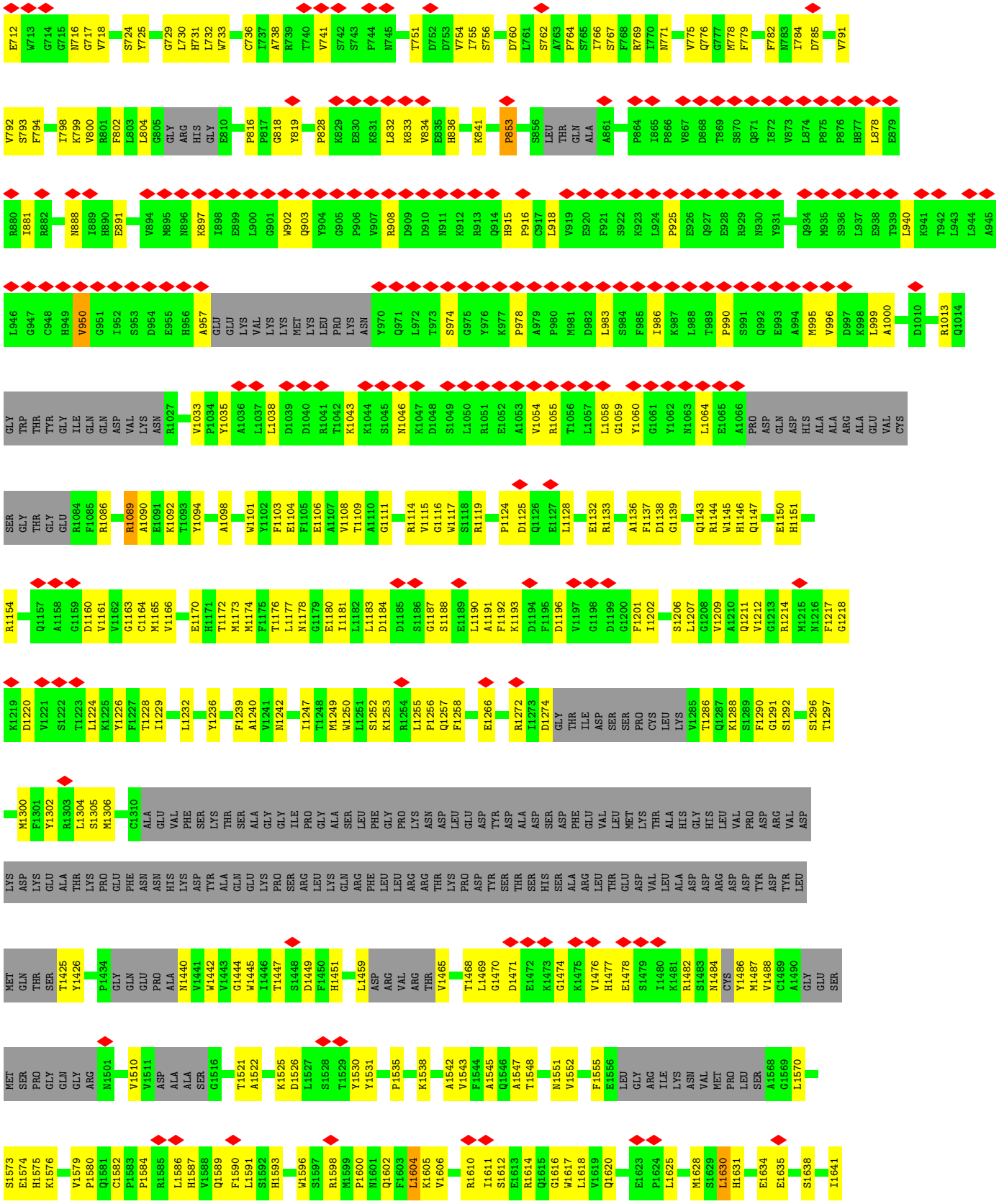
3 Residue-property plots (i)

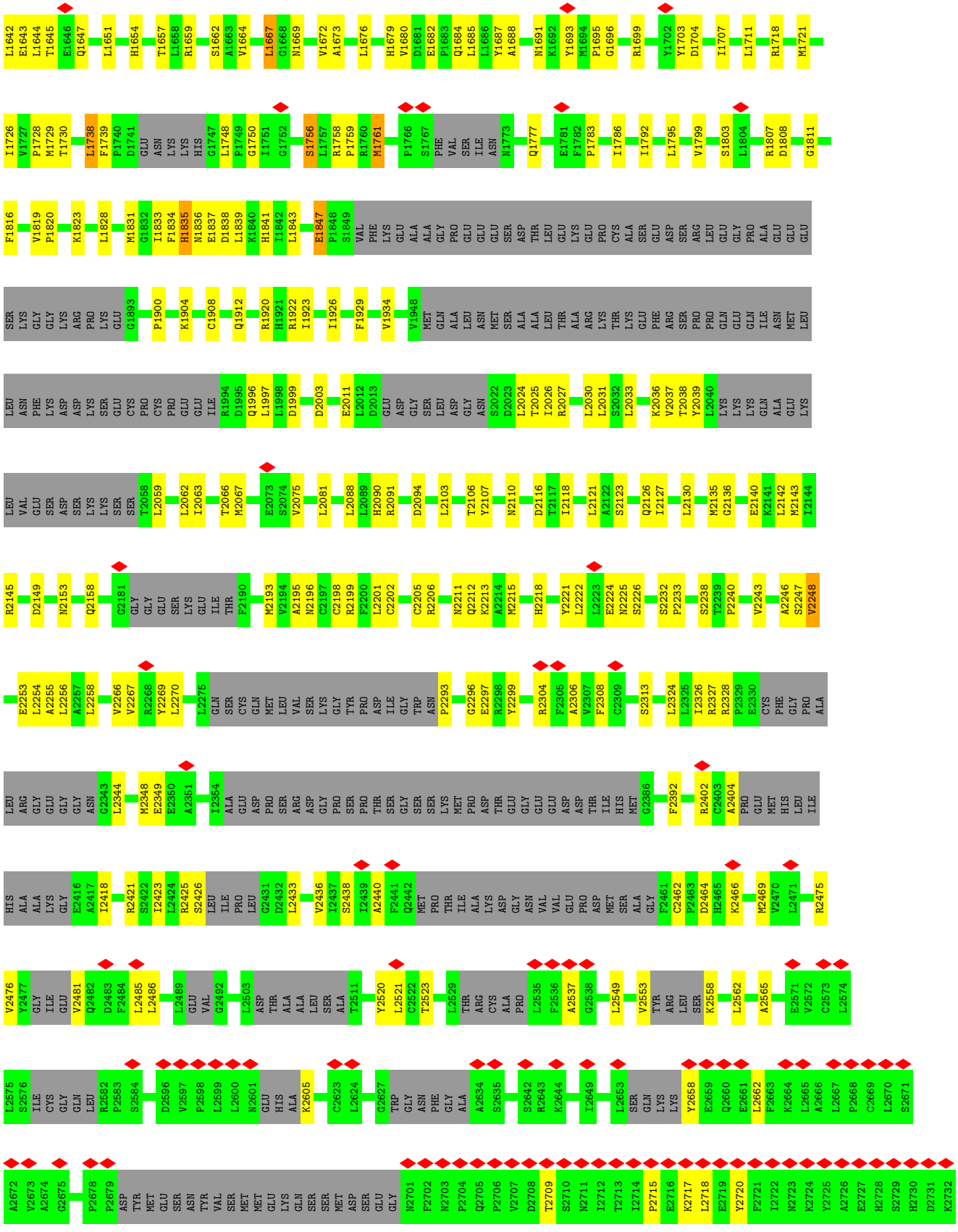
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: Ryanodine receptor 2

Chain A:




E712 W713 G714 G715 N716 G717 V718 S724 Y725 G729 L730 H731 L732 W733 C736 I737 A738 R739 T740 V741 S742 S743 P744 N745 T751 D752 D753 V754 I755 S756 D760 L761 S762 A763 P764 S765 I766 S767 F768 R769 I770 N771 V775 Q776 G777 M778 F779 F782 N783 I784 D785 V791
V792 S793 F794 T798 K799 V800 R801 F802 L803 L804 G805 GLY ARG HIS GLY E810 P816 P817 G818 Y819 P828 K829 E830 K831 L832 K833 V834 E835 H836 K841 P853 S856 LEU THR GLN ALA A861 P864 I865 P866 V867 D868 T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879
R880 I881 R882 N888 I889 H890 E891 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 G917 L918 V919 E920 P921 S922 K923 L924 P925 E926 Q927 E928 R929 N930 Y931 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L944 A945
L946 G947 C948 H949 V950 G951 I952 S953 D954 E955 H956 A957 GLU GLU LYS VAL LYS LYS MET LYS LEU PRO LYS ASN Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 L988 T989 P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999 A1000 D1010 R1013 Q1014
GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 V1033 P1034 Y1035 A1036 L1037 L1038 D1039 D1040 R1041 T1042 K1043 K1044 S1045 N1046 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 Y1062 N1063 L1064 E1065 A1066 PRO ASP GLN ASP HIS ALA ALA ARG ALA GLU VAL CYS
SER GLY THR GLY GLU R1084 F1085 R1086 R1089 A1090 E1091 K1092 T1093 Y1094 A1098 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109 A1110 G1111 R1114 V1115 G1116 W1117 S1118 R1119 P1124 D1125 Q1126 E1127 L1128 E1132 R1133 A1136 F1137 D1138 G1139 Q1143 R1144 W1145 H1146 Q1147 E1150 H1151
R1154 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 E1170 H1171 T1172 M1173 M1174 F1175 T1176 L1177 N1178 G1179 E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201 I1202 S1206 L1207 G1208 V1209 A1210 Q1211 V1212 G1213 R1214 M1215 N1216 F1217 G1218
K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 T1228 I1229 L1232 Y1236 F1239 A1240 V1241 N1242 I1247 T1248 M1249 W1250 L1251 S1252 K1253 R1254 L1255 P1256 Q1257 F1258 E1266 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU LYS V1285 T1286 Q1287 K1288 S1289 F1290 G1291 S1292 S1296 T1297
M1300 F1301 Y1302 R1303 L1304 S1305 M1306 C1310 ALA GLU GLU VAL PHE SER LYS THR SER ALA GLY GLY ILE PRO GLY GLY ALA SER LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP
LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO GLU SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU THR GLU ASP VAL LEU ALA ASP ARG ASP ASP TYR ASP TYR LEU
MET GLN THR SER T1425 Y1426 P1434 GLY GLN GLU PRO ALA N1440 V1441 W1442 V1443 G1444 W1445 I1446 T1447 S1448 D1449 F1450 H1451 L1459 ASP ARG VAL ARG THR V1465 T1468 L1469 G1470 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 S1479 I1480 K1481 R1482 S1483 N1484 CYS Y1486 M1487 V1488 C1489 A1490 GLY GLU SER
MET SER PRO GLY GLN GLY ARG N1501 V1510 V1511 ASP ALA ALA SER G1516 T1521 A1522 K1525 D1526 L1527 S1528 T1529 Y1530 Y1531 P1535 K1538 A1542 V1543 F1544 A1545 Q1546 A1547 T1548 N1551 V1552 F1555 E1556 LEU GLY ARG ILE LYS ASN VAL MET PRO LEU SER A1568 G1569 L1570
S1573 E1574 H1575 K1576 V1579 P1580 Q1581 C1582 P1583 P1584 R1585 L1586 H1587 V1588 Q1589 F1590 L1591 S1592 H1593 W1596 S1597 R1598 M1599 P1600 N1601 Q1602 F1603 L1604 K1605 V1606 R1610 I1611 S1612 E1613 R1614 Q1615 G1616 W1617 L1618 V1619 Q1620 E1623 P1624 L1625 M1628 S1629 L1630 H1631 E1634 E1635 S1638 I1641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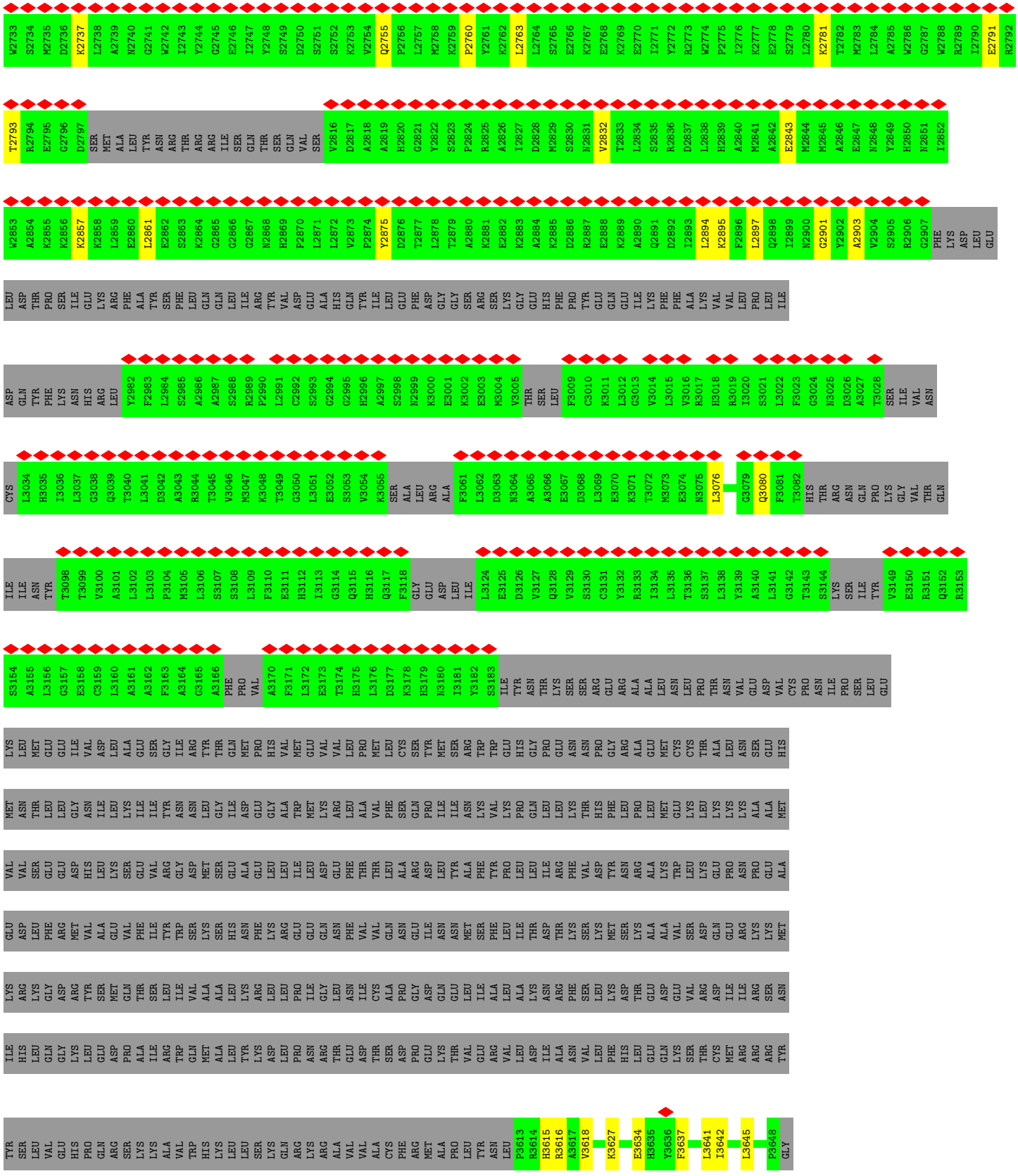
I1726 V1727 P1728 M1729 T1730 L1738 F1739 P1740 D1741 GLU ASN LYS LYS HIS G1747 L1748 P1749 G1750 I1751 G1752 S1756 L1757 R1758 P1759 R1760 M1761 P1766 S1767 PHE VAL SER ILE ASN N1773 Q1777 E1781 F1782 P1783 I1786 I1792 L1795 V1799 S1803 L1804 R1807 D1808 G1811
F1816 V1819 P1820 K1823 L1828 M1831 G1832 I1833 F1834 H1835 N1836 E1837 D1838 L1839 K1840 H1841 I1842 L1843 E1847 P1848 S1849 VAL PHE LYS GLU ALA GLY PRO GLU GLU GLU SER ASP THR LEU GLU LYS GLU PRO CYS ALA SER GLU ASP SER ARG LEU LEU GLY PRO ALA GLU GLU GLU
SER LYS GLY GLY LYS ARG PRO LYS GLU G1893 P1900 K1904 C1908 Q1912 R1920 H1921 R1922 I1923 I1926 F1929 V1934 V1948 MET GLN ALA LEU ASN MET SER ALA ALA LEU THR ALA ARG LYS THR LYS GLU PHE ARG SER PRO PRO GLN GLU GLN ILE ASN MET LEU
LEU ASN PHE LYS ASP ASP LYS LYS SER GLU CYS PRO CYS PRO GLU GLU ILE R1994 D1995 Q1996 L1997 L1998 D1999 D2003 E2011 L2012 D2013 GLU ASP GLY SER LEU ASP GLY ASN S2022 D2023 L2024 T2025 I2026 R2027 L2030 L2031 S2032 L2033 K2036 V2037 T2038 Y2039 L2040 LYS LYS LYS GLN ALA GLU GLY
LEU VAL GLU SER ASP SER LYS LYS SER SER T2058 L2059 L2062 I2063 T2066 M2067 E2073 S2074 V2075 L2081 L2088 L2089 H2090 R2091 D2094 L2103 T2106 Y2107 N2110 D2116 T2117 I2118 L2121 A2122 S2123 Q2126 I2127 L2130 M2135 G2136 E2140 K2141 L2142 M2143 I2144
R2145 D2149 N2153 Q2158 G2181 GLY GLY GLU SER LYS GLU ILE THR F2190 M2193 V2194 A2195 N2196 C2197 C2198 R2199 F2200 L2201 C2202 C2205 R2206 N2211 Q2212 K2213 A2214 M2215 H2218 Y2221 L2222 L2223 E2224 N2225 S2226 S2232 P2233 S2238 T2239 P2240 V2243 A2246 S2247 V2248
E2253 L2254 A2255 L2256 A2257 L2258 V2266 V2267 R2268 Y2269 L2270 L2275 GLN SER CYS GLN MET LEU VAL SER LYS GLY TYR PRO ASP ILE GLY TRP ASN P2293 G2296 E2297 R2298 Y2299 R2304 F2305 A2306 V2307 F2308 C2309 S2313 L2324 L2325 I2326 R2327 R2328 P2329 E2330 CYS PHE GLY PRO ALA
LEU ARG GLY GLU GLY GLY ASN G2343 L2344 M2348 E2349 E2350 A2351 I2354 ALA GLU ASP PRO SER ARG ASP GLY PRO SER PRO THR SER GLY SER SER LYS MET PRO ASP THR GLU GLY GLU GLU ASP ASP THR ILE HIS MET G2386 F2392 R2402 C2403 A2404 PRO GLU MET HIS LEU ILE
HIS ALA ALA LYS GLY E2416 A2417 I2418 R2421 S2422 I2423 L2424 R2425 S2426 LEU ILE PRO LEU G2431 D2432 L2433 V2436 I2437 S2438 I2439 A2440 F2441 Q2442 MET PRO THR ILE ALA LYS ASP GLY ASN VAL GLU PRO ASP MET SER ALA GLY F2461 C2462 P2463 D2464 H2465 K2466 M2469 V2470 L2471 R2475
V2476 Y2477 GLY ILE GLU V2481 Q2482 D2483 F2484 L2485 L2486 L2489 GLU VAL G2492 L2503 ASP THR ALA ALA LEU SER ALA T2511 Y2520 L2521 C2522 T2523 L2529 THR ARG CYS ALA PRO L2535 F2536 A2537 G2538 L2549 V2553 TYR ARG LEU SER K2558 L2562 A2565 E2571 V2572 C2573 L2574
L2575 S2576 ILE CYS GLY GLN LEU R2582 P2583 S2584 D2596 V2597 P2598 L2599 L2600 N2601 GLU HIS ALA K2605 C2623 L2624 G2627 TRP GLY ASN PHE GLY ALA A2634 S2635 S2642 R2643 K2644 I2649 L2653 SER GLN LYS LYS Y2658 E2659 Q2660 E2661 L2662 F2663 K2664 L2665 A2666 L2667 P2668 C2669 L2670 S2671
A2672 V2673 A2674 G2675 P2678 P2679 ASP TYR MET GLU SER ASN TYR VAL SER MET MET GLU LYS GLN SER SER MET ASP SER GLU GLY N2701 F2702 N2703 P2704 Q2705 P2706 V2707 D2708 T2709 S2710 N2711 I2712 T2713 I2714 P2715 E2716 K2717 L2718 E2719 Y2720 F2721 I2722 N2723 K2724 Y2725 A2726 E2727 H2728 S2729 H2730 D2731 K2732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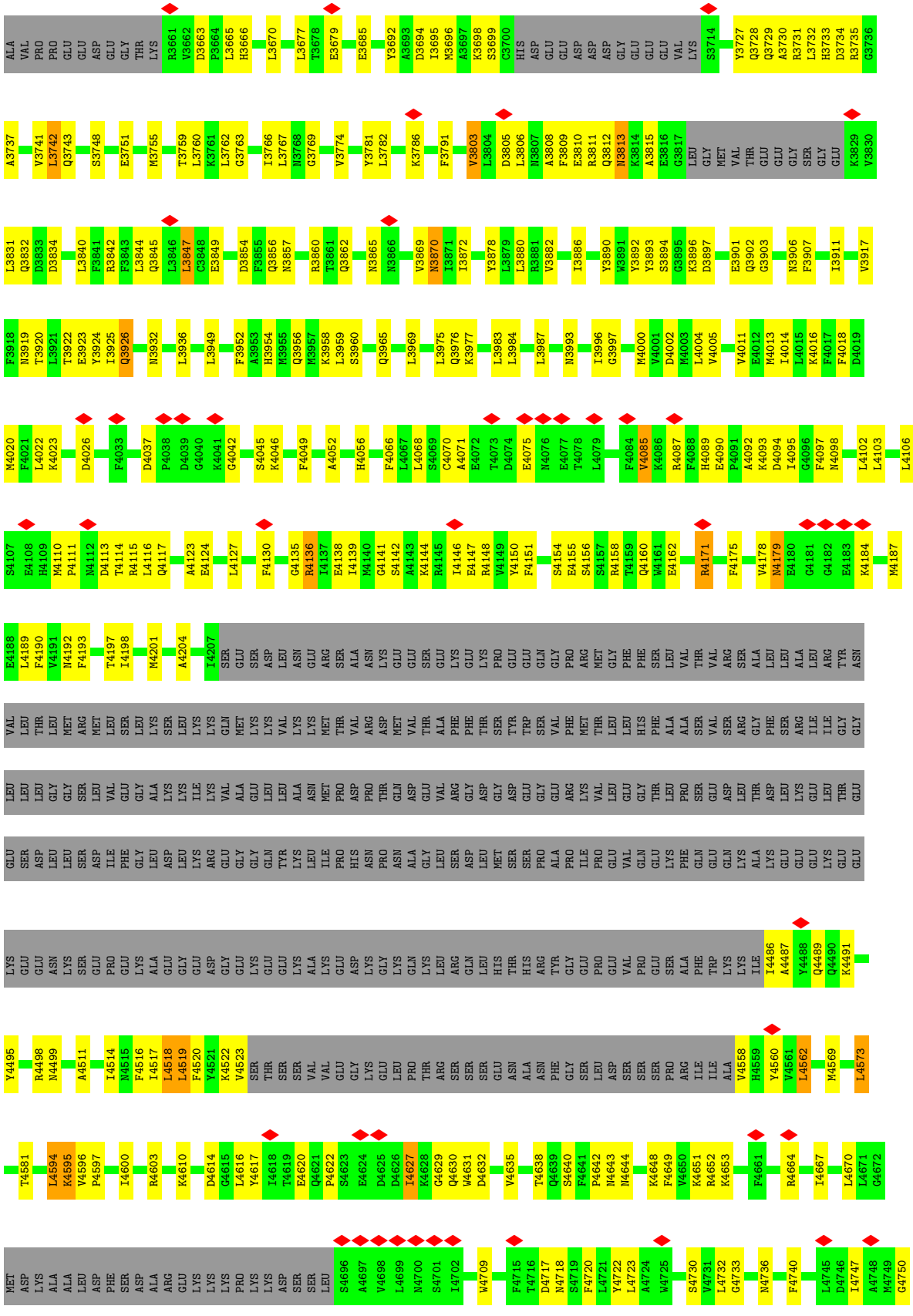
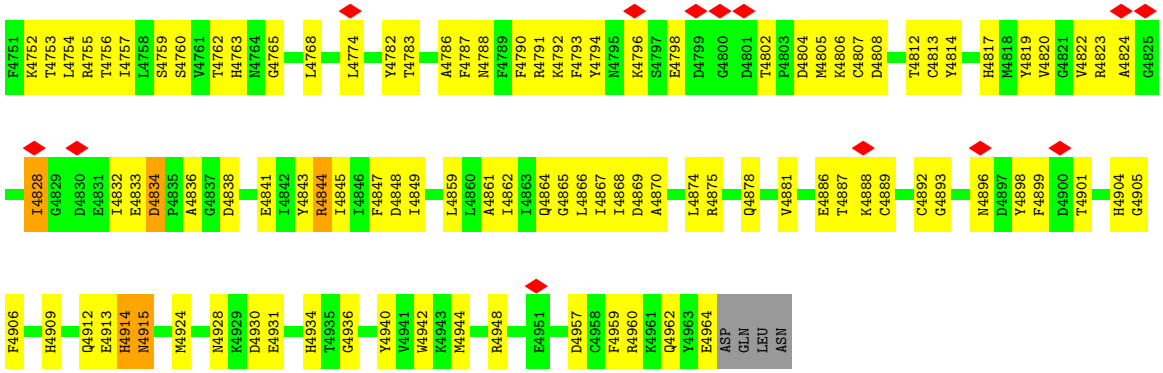
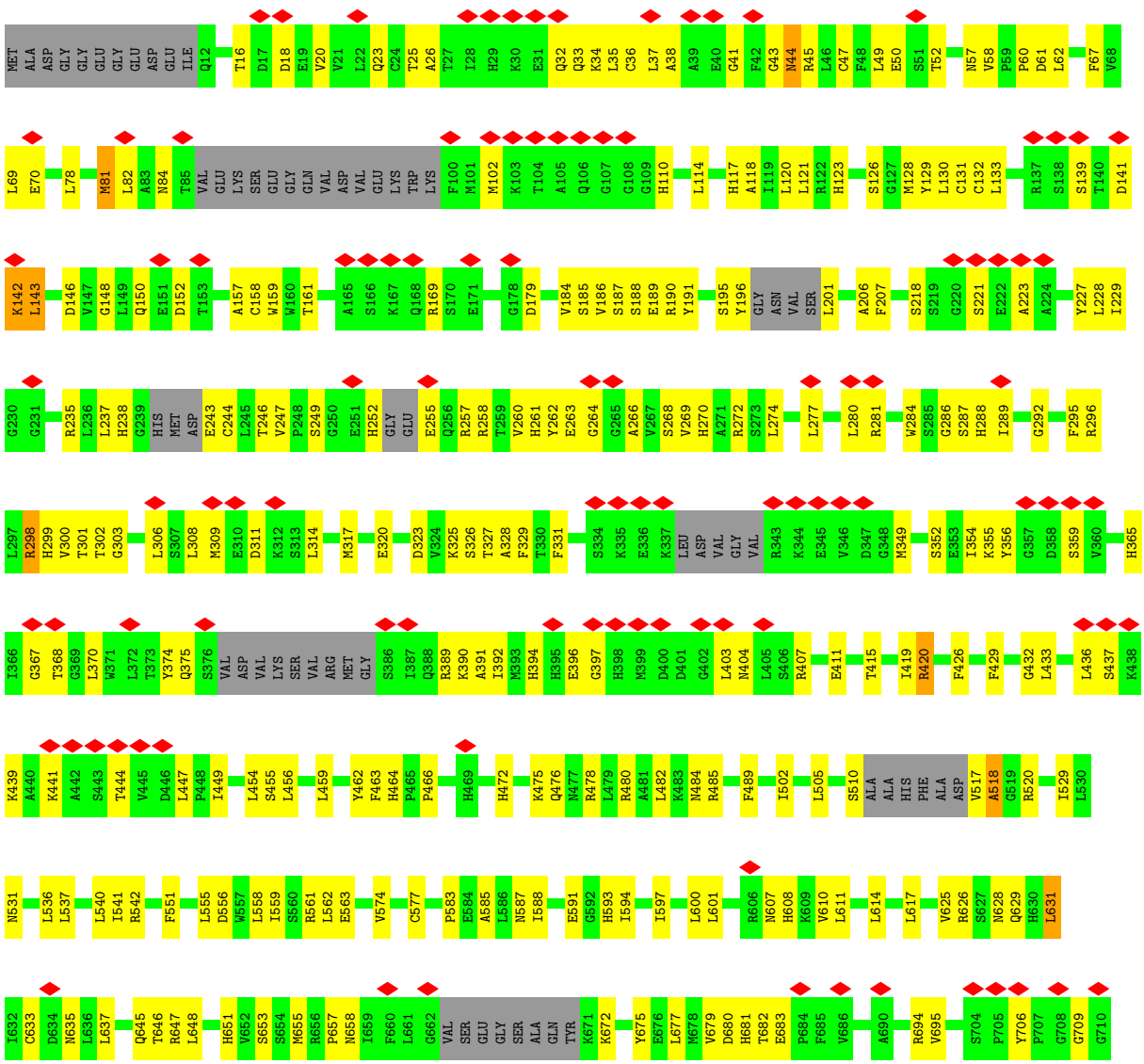
T2793 R2794 E2795 G2796 D2797 SER MET ALA LEU TYR ASN ARG THR ARG ARG ILE SER GLN THR SER GLN VAL SER V2816 D2817 A2818 A2819 H2820 G2821 Y2822 S2823 P2824 R2825 A2826 I2827 D2828 M2829 S2830 N2831 V2832 T2833 L2834 S2835 R2836 D2837 L2838 H2839 A2840 M2841 A2842 E2843 M2844 M2845 A2846 E2847 N2848 Y2849 H2850 N2851 I2852
W2853 A2854 K2855 K2856 K2857 K2858 L2859 E2860 L2861 E2862 S2863 K2864 G2865 G2866 G2867 N2868 H2869 P2870 L2871 L2872 V2873 P2874 Y2875 D2876 T2877 L2878 T2879 A2880 K2881 E2882 K2883 A2884 K2885 D2886 R2887 E2888 K2889 A2890 Q2891 D2892 I2893 L2894 K2895 F2896 L2897 Q2898 I2899 N2900 G2901 Y2902 A2903 V2904 S2905 R2906 G2907 PHE LYS ASP LEU GLU
LEU ASP THR PRO SER ILE GLU LYS ARG PHE ALA TYR SER PHE LEU GLN GLN LEU ILE ARG TYR VAL ASP GLU ALA HIS GLN TYR ILE LEU GLU PHE ASP GLY GLY SER ARG SER LYS GLY GLU HIS PHE PRO TYR GLU GLN GLU ILE LYS PHE PHE ALA LYS VAL VAL LEU PRO LEU ILE
ASP GLN TYR PHE LYS ASN HIS ARG LEU Y2982 F2983 L2984 S2985 A2986 A2987 S2988 R2989 P2990 L2991 C2992 S2993 G2994 G2995 H2996 A2997 S2998 N2999 K3000 E3001 K3002 E3003 M3004 V3005 THR SER LEU F3009 C3010 K3011 L3012 G3013 V3014 L3015 V3016 R3017 H3018 R3019 I3020 S3021 L3022 F3023 G3024 N3025 D3026 A3027 T3028 SER ILE VAL ASN
CYS L3034 H3035 I3036 L3037 G3038 Q3039 T3040 L3041 D3042 A3043 R3044 T3045 V3046 M3047 K3048 T3049 G3050 L3051 E3052 S3053 V3054 K3055 SER ALA LEU ARG ALA F3061 L3062 D3063 N3064 A3065 A3066 E3067 D3068 L3069 E3070 K3071 T3072 M3073 E3074 N3075 L3076 G3079 Q3080 F3081 T3082 HIS THR ARG ASN GLN PRO LYS GLY VAL THR GLN
ILE ILE ASN TYR T3098 T3099 V3100 A3101 L3102 L3103 P3104 M3105 L3106 S3107 S3108 L3109 F3110 E3111 H3112 I3113 G3114 Q3115 H3116 Q3117 F3118 GLY GLU ASP LEU ILE L3124 E3125 D3126 V3127 Q3128 V3129 S3130 C3131 Y3132 R3133 I3134 L3135 T3136 S3137 L3138 Y3139 A3140 L3141 G3142 T3143 S3144 LYS SER ILE TYR V3149 E3150 R3151 Q3152 R3153
S3154 A3155 L3156 G3157 E3158 C3159 L3160 A3161 A3162 F3163 A3164 G3165 A3166 PHE PRO VAL A3170 F3171 L3172 E3173 T3174 H3175 L3176 D3177 K3178 H3179 N3180 I3181 Y3182 S3183 ILE TYR ASN THR LYS SER SER ARG GLU ARG ALA ALA LEU ASN LEU PRO THR ASN VAL GLU ASP VAL CYS PRO ASN ILE PRO SER LEU GLU
LYS LEU MET GLU GLU ILE VAL ASP LEU ALA GLU SER GLY ILE ARG TYR THR GLN MET PRO HIS VAL MET GLU VAL VAL LEU PRO MET LEU CYS SER TYR MET SER ARG TRP TRP GLU HIS GLY PRO GLU ASN ASN PRO GLY ARG ALA GLU MET CYS CYS THR ALA LEU ASN SER GLU HIS
MET ASN THR LEU LEU GLY ASN ILE LEU LYS ILE ILE TYR ASN ASN LEU GLY ILE ASP GLU GLY ALA TRP MET LYS ARG LEU ALA VAL PHE SER GLN PRO ILE ILE ASN LYS VAL LYS PRO GLN LEU LEU LYS THR HIS PHE LEU PRO LEU MET GLU LYS LEU LYS LYS LYS ALA ALA MET
VAL VAL SER GLU GLU ASP HIS LEU LYS SER GLU VAL ARG GLY ASP MET SER GLU ALA GLU LEU LEU ILE LEU ASP GLU PHE THR THR LEU ALA ARG ASP LEU TYR ALA PHE TYR PRO LEU LEU ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA
GLU ASP LEU PHE ARG MET VAL ALA GLU VAL PHE ILE TYR TRP SER LYS SER HIS ASN PHE LYS ARG GLU GLN ASN PHE VAL VAL GLN ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR ASP THR LYS SER LYS MET SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET
LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN GLU LEU ILE ALA LEU ALA LYS ASN ARG PHE SER LEU LYS ASP THR GLU GLU ASP ILE ILE ARG SER ASN
ILE HIS LEU GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA LEU TYR LYS ASP LEU PRO ASN ARG THR GLU ASP THR SER ASP PRO GLU LYS THR VAL GLU ARG VAL LEU ASP ILE ALA ASN VAL LEU PHE HIS LEU GLU GLU GLN LYS SER THR CYS MET ARG ARG TYR
TYR SER LEU VAL GLU HIS PRO GLN ARG SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG LYS ARG ALA VAL VAL ALA CYS PHE ARG MET ALA PRO LEU TYR ASN LEU P3613 R3614 H3615 R3616 A3617 V3618 K3627 E3634 H3635 Y3636 F3637 L3641 I3642 L3645 P3648 GLY

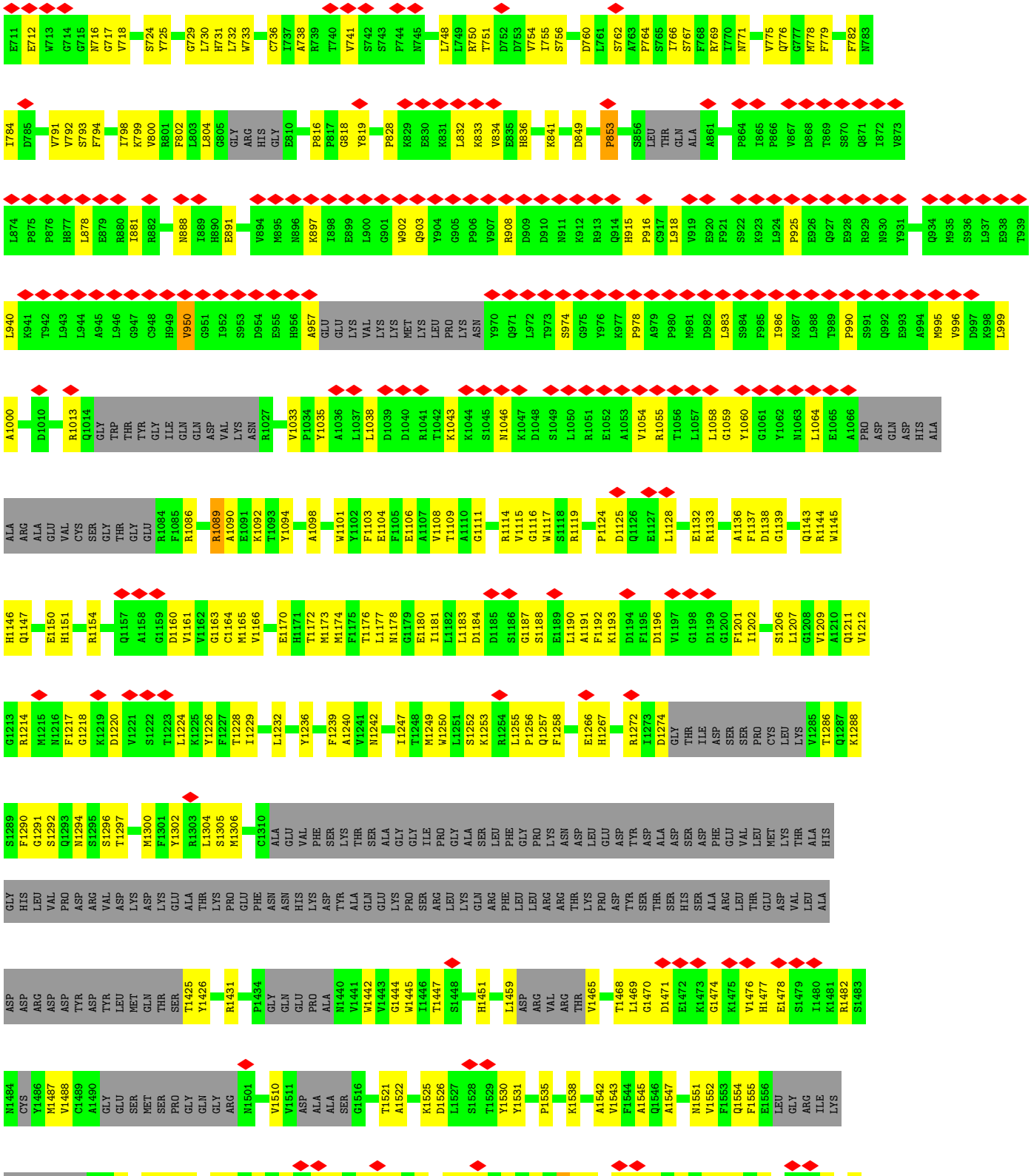




• Molecule 1: Ryanodine receptor 2

Chain B:

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L874 P875 P876 H877 L878 E879 R880 I881 R882 N888 I889 H890 E891 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 C917 L918 V919 E920 F921 S922 K923 L924 P925 E926 Q927 E928 R929 N930 Y931 Q934 M935 S936 L937 E938 T939
L940 K941 T942 L943 L944 A945 L946 G947 C948 H949 V950 G951 I952 S953 D954 E955 H956 A957 GLU GLU LYS VAL LYS LYS MET LYS LEU PRO LYS ASN Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 L988 T989 P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999
A1000 D1010 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 V1033 P1034 Y1035 A1036 L1037 L1038 D1039 D1040 R1041 T1042 K1043 K1044 S1045 N1046 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 Y1062 N1063 L1064 E1065 A1066 PRO ASP GLN ASP HIS ALA
ALA ARG ALA GLU VAL CYS SER GLY THR GLY GLU R1084 F1085 R1086 R1089 A1090 E1091 K1092 T1093 Y1094 A1098 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109 A1110 G1111 R1114 V1115 G1116 W1117 S1118 R1119 P1124 D1125 Q1126 E1127 L1128 E1132 R1133 A1136 F1137 D1138 G1139 Q1143 R1144 W1145
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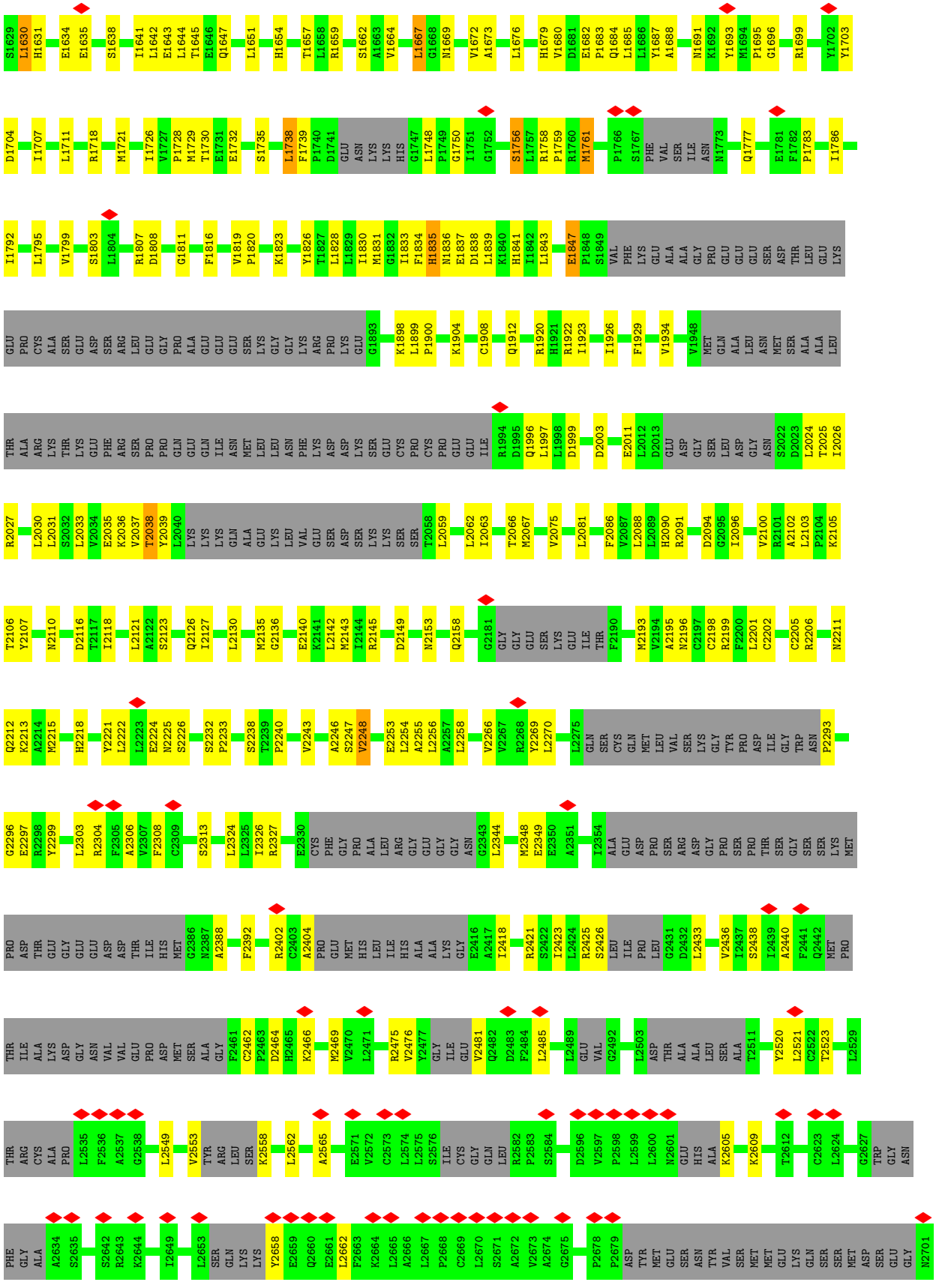
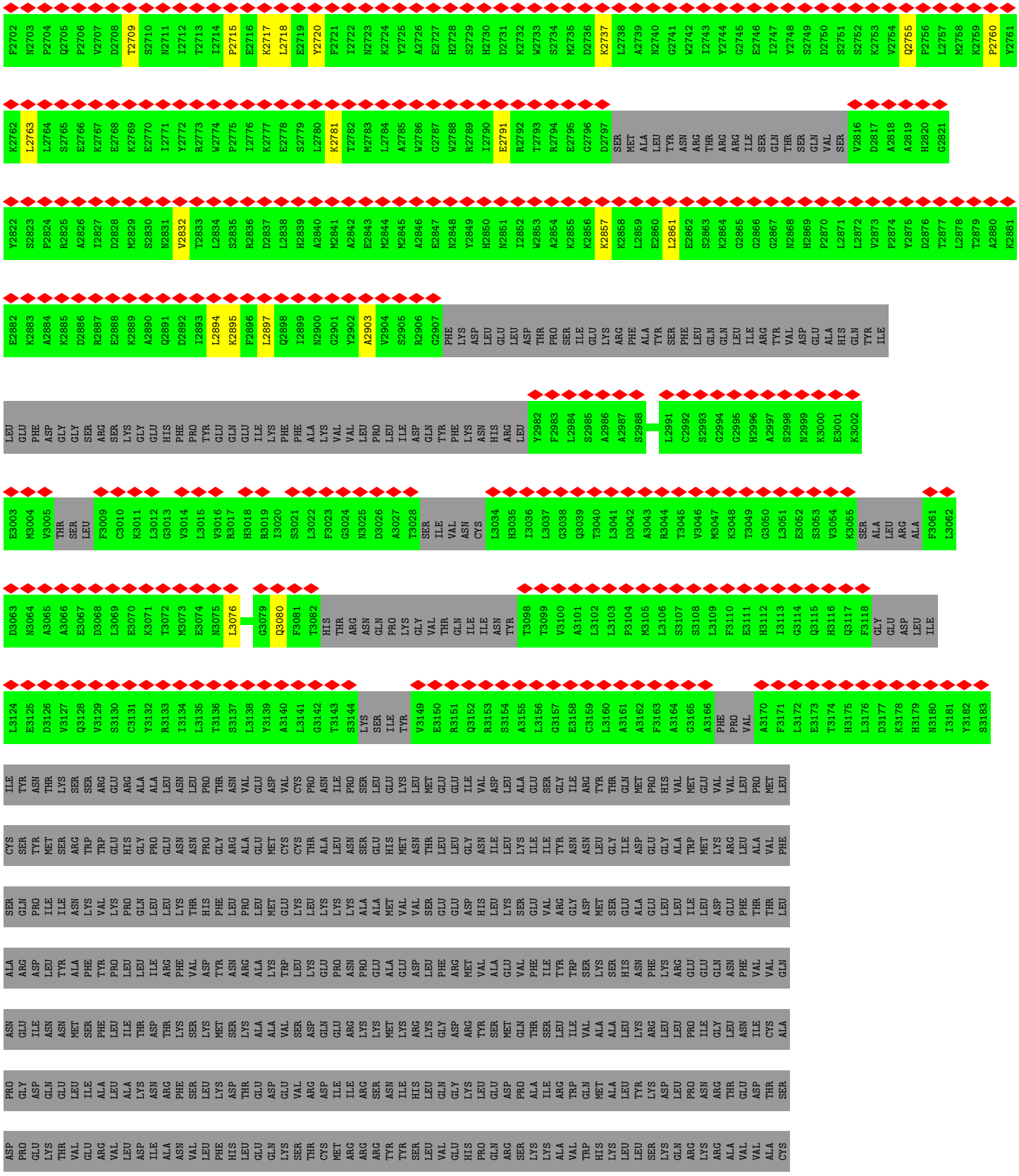
S1289 F1290 G1291 S1292 Q1293 N1294 S1295 S1296 T1297 M1300 F1301 Y1302 R1303 L1304 S1305 M1306 C1310 ALA GLU VAL PHE SER LYS THR SER ALA GLY GLY ILE PRO GLY GLY ALA SER LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR ALA HIS
GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU THR GLU ASP VAL LEU ALA
ASP ASP ARG ASP ASP TYR ASP TYR LEU MET GLN THR SER T1425 Y1426 R1431 P1434 GLY GLN GLU PRO ALA N1440 V1441 W1442 V1443 G1444 W1445 I1446 T1447 S1448 H1451 L1459 ASP ARG VAL ARG THR V1465 T1468 L1469 G1470 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 S1479 I1480 K1481 R1482 S1483
N1484 CYS Y1486 M1487 V1488 C1489 A1490 GLY GLU SER MET SER PRO GLY GLN GLY ARG N1501 V1510 V1511 ASP ALA ALA SER G1516 T1521 A1522 K1525 D1526 L1527 S1528 T1529 Y1530 Y1531 P1535 K1538 A1542 V1543 F1544 A1545 Q1546 A1547 N1551 V1552 F1553 Q1554 F1555 E1566 LEU GLY ARG ILE LYS
ASN VAL MET PRO LEU SER A1568 G1569 L1570 S1573 E1574 H1575 K1576 V1579 P1580 Q1581 C1582 P1583 P1584 R1585 L1586 H1587 V1588 Q1589 F1590 L1591 S1592 H1593 W1596 S1597 R1598 M1599 P1600 N1601 Q1602 F1603 L1604 K1605 V1606 R1610 I1611 S1612 E1613 R1614 Q1615 G1616 W1617 L1618 V1619 Q1620 E1623 P1624 L1625 M1628

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Y2822 S2823 P2824 R2825 A2826 I2827 D2828 M2829 S2830 N2831 V2832 T2833 L2834 S2835 R2836 D2837 L2838 H2839 A2840 M2841 A2842 E2843 M2844 M2845 A2846 E2847 N2848 Y2849 H2850 N2851 I2852 W2853 A2854 K2855 K2856 K2857 K2858 L2859 E2860 L2861 E2862 S2863 K2864 G2865 G2866 G2867 N2868 H2869 P2870 L2871 L2872 V2873 P2874 Y2875 D2876 T2877 L2878 T2879 A2880 K2881
E2882 K2883 A2884 K2885 D2886 R2887 E2888 K2889 A2890 Q2891 D2892 I2893 L2894 K2895 F2896 L2897 Q2898 I2899 N2900 G2901 Y2902 A2903 V2904 S2905 R2906 G2907 PHE LYS ASP LEU GLU LEU ASP THR PRO SER ILE GLU LYS ARG PHE ALA TYR SER PHE LEU GLN GLN LEU ILE ARG TYR VAL ASP GLU ALA HIS GLN TYR ILE
LEU GLU PHE ASP GLY GLY SER ARG SER LYS GLY GLU HIS PHE PRO TYR GLU GLN GLU ILE LYS PHE PHE ALA LYS VAL VAL LEU PRO LEU ILE ASP GLN TYR PHE LYS ASN HIS ARG LEU Y2982 F2983 L2984 S2985 A2986 A2987 S2988 L2991 C2992 S2993 G2994 G2995 H2996 A2997 S2998 N2999 K3000 E3001 K3002
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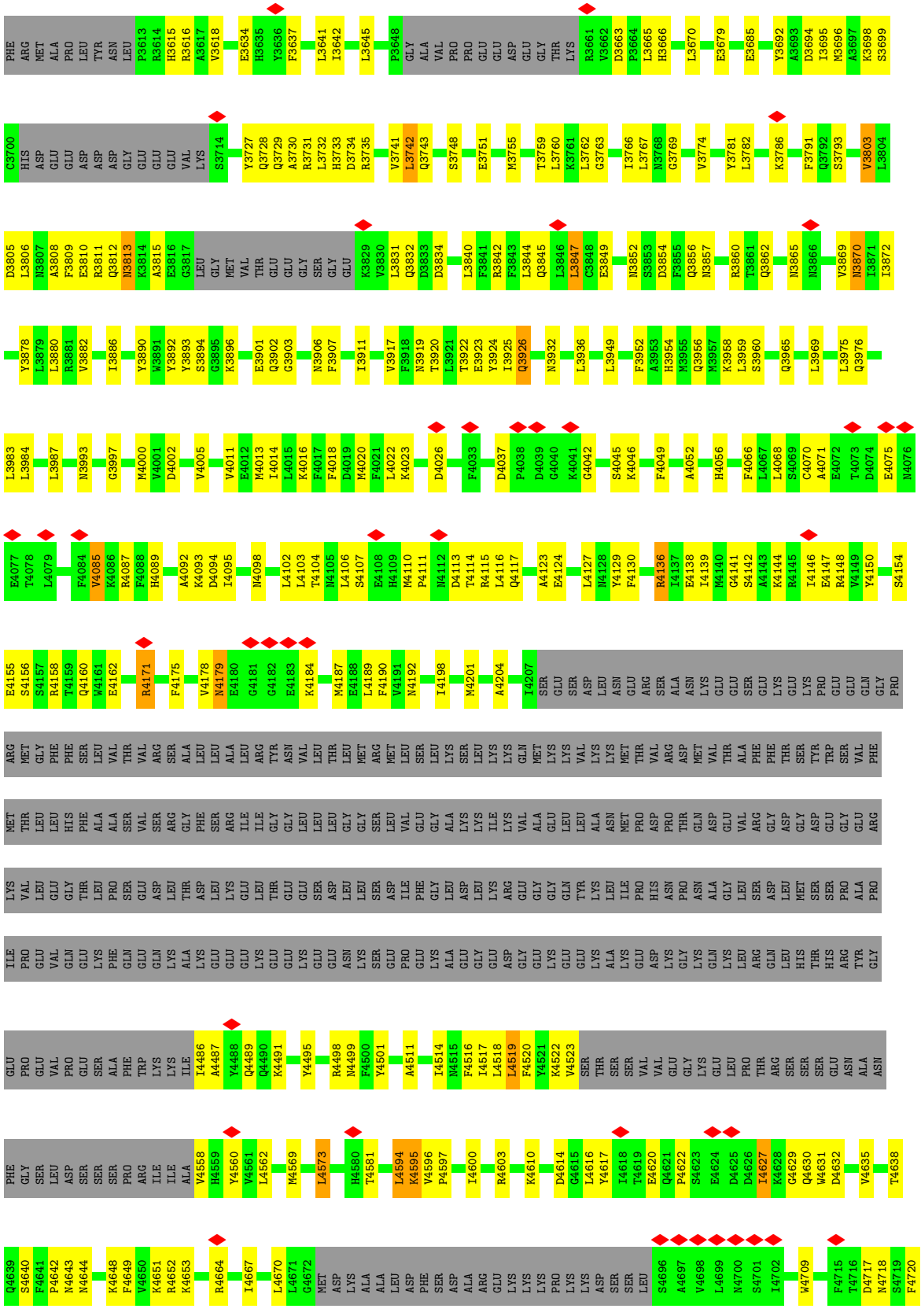
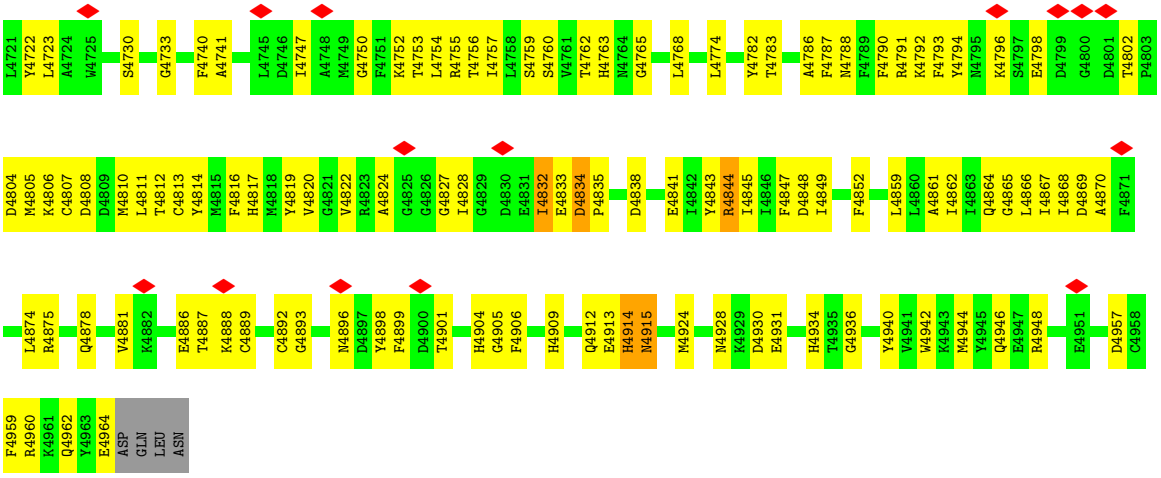
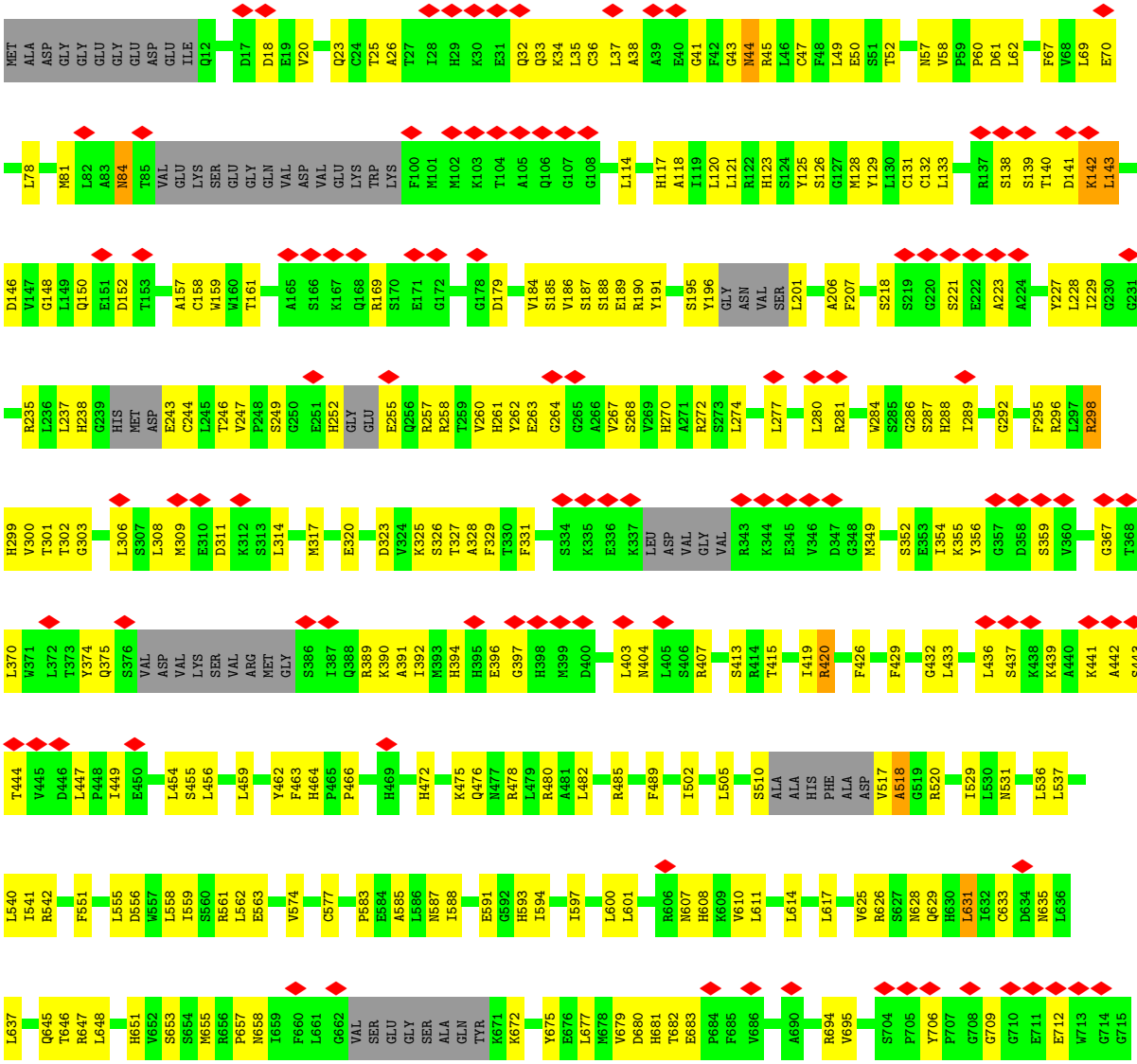
D3063 N3064 A3065 A3066 E3067 D3068 L3069 E3070 K3071 T3072 M3073 E3074 N3075 L3076 G3079 Q3080 F3081 T3082 HIS THR ARG ASN GLN PRO LYS GLY VAL THR GLN ILE ILE ASN TYR T3098 T3099 V3100 A3101 L3102 L3103 P3104 M3105 L3106 S3107 S3108 L3109 F3110 E3111 H3112 I3113 G3114 Q3115 H3116 Q3117 F3118 GLY GLU ASP LEU ILE
L3124 E3125 D3126 V3127 Q3128 V3129 S3130 C3131 Y3132 R3133 I3134 L3135 T3136 S3137 L3138 Y3139 A3140 L3141 G3142 T3143 S3144 LYS SER ILE TYR V3149 E3150 R3151 Q3152 R3153 S3154 A3155 L3156 G3157 E3158 C3159 L3160 A3161 A3162 F3163 A3164 G3165 A3166 PHE PRO VAL A3170 F3171 L3172 E3173 T3174 H3175 L3176 D3177 K3178 H3179 N3180 I3181 Y3182 S3183
ILE TYR ASN THR LYS SER SER ARG GLU ARG ALA ALA LEU ASN LEU PRO THR ASN VAL GLU ASP VAL CYS PRO ASN ILE PRO SER LEU GLU LYS LEU MET GLU GLU ILE VAL ASP LEU ALA GLU SER GLY ILE ARG TYR THR GLN MET PRO HIS VAL MET GLU VAL VAL LEU PRO MET LEU
CYS SER TYR MET SER ARG TRP TRP GLU HIS GLY PRO GLU ASN ASN ASN PRO GLY ARG ALA GLU MET CYS CYS THR ALA LEU LEU ASN SER GLU HIS MET ASN THR LEU LEU GLY ASN ILE LEU LYS ILE ILE TYR ASN ASN LEU GLY ILE ASP GLU GLY ALA TRP MET LYS ARG LEU ALA PHE
SER GLN PRO ILE ILE ASN LYS VAL LYS PRO GLN GLU LEU LEU LYS THR HIS PHE LEU PRO LEU LYS LYS LYS ALA MET VAL VAL SER GLU GLU GLU ASP HIS LEU LYS SER GLU VAL ARG GLY ASP MET SER GLU ALA GLU GLU LEU LEU ILE LEU ASP GLU PHE THR LEU
ALA ARG ASP LEU TYR ALA PHE TYR PRO LEU LEU ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA GLU ASP ARG MET VAL ALA GLU VAL PHE ILE TYR TRP SER LYS SER GLU ALA GLU GLU GLU GLN ASN PHE VAL VAL GLN
ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR ASP THR LYS SER LYS MET SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ARG THR CYS ALA
PRO GLY ASP GLN GLU LEU ALA LEU LYS ASN ARG PHE SER LEU LYS ASP THR GLU ASP GLU VAL ARG ASP ILE ILE ARG SER ASN ILE HIS LEU GLN GLY LYS LEU GLU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA ALA LEU TYR LYS ASP LEU LEU PRO PRO ASN ARG THR SER
ASP PRO GLU LYS THR VAL GLU ARG VAL LEU ASP ILE ALA ASN VAL LEU PHE HIS LEU GLU GLN LYS SER THR CYS MET ARG ARG ARG TYR TYR SER LEU VAL GLU HIS PRO GLN ARG SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG LYS ARG ALA VAL VAL ALA CYS

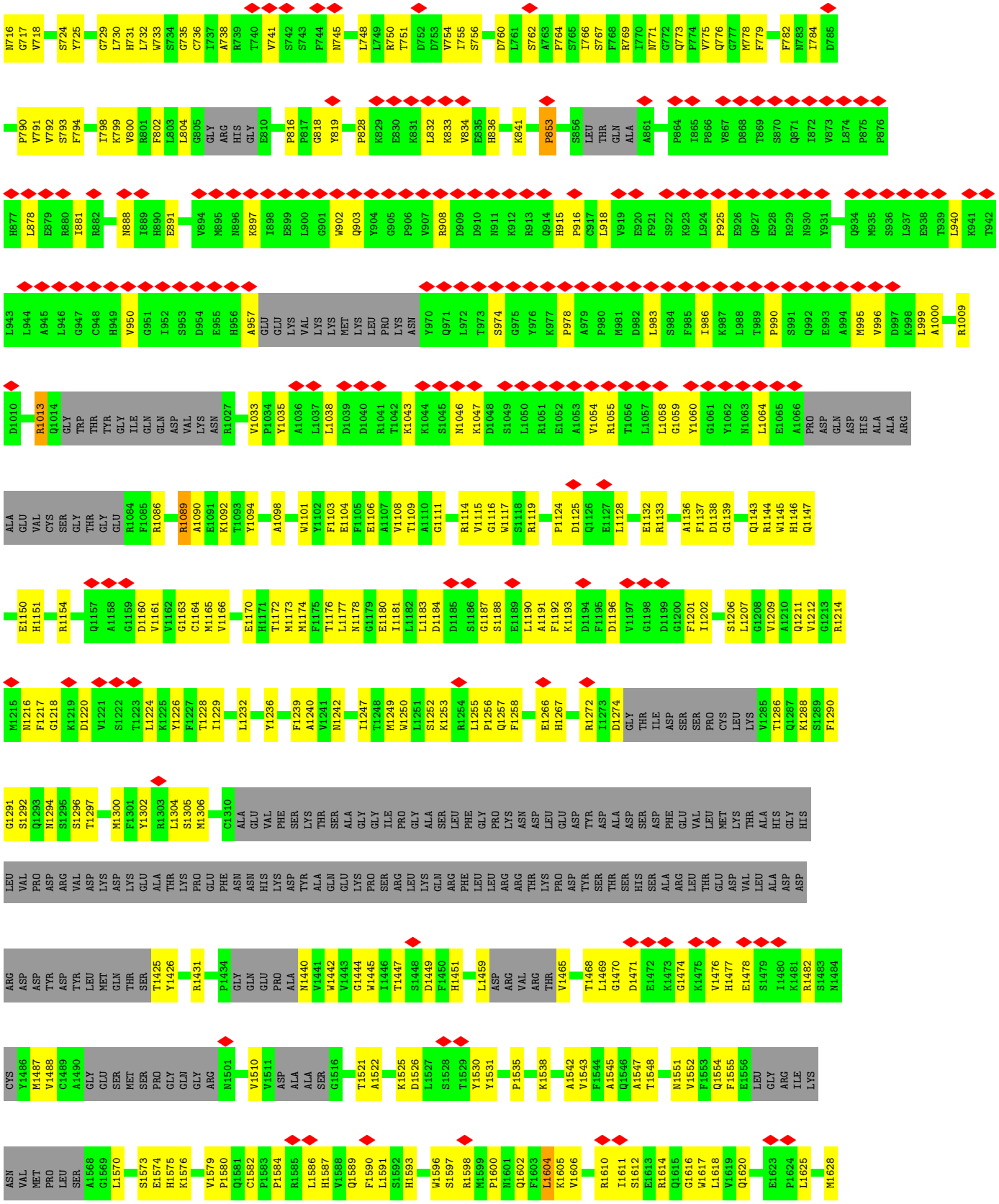


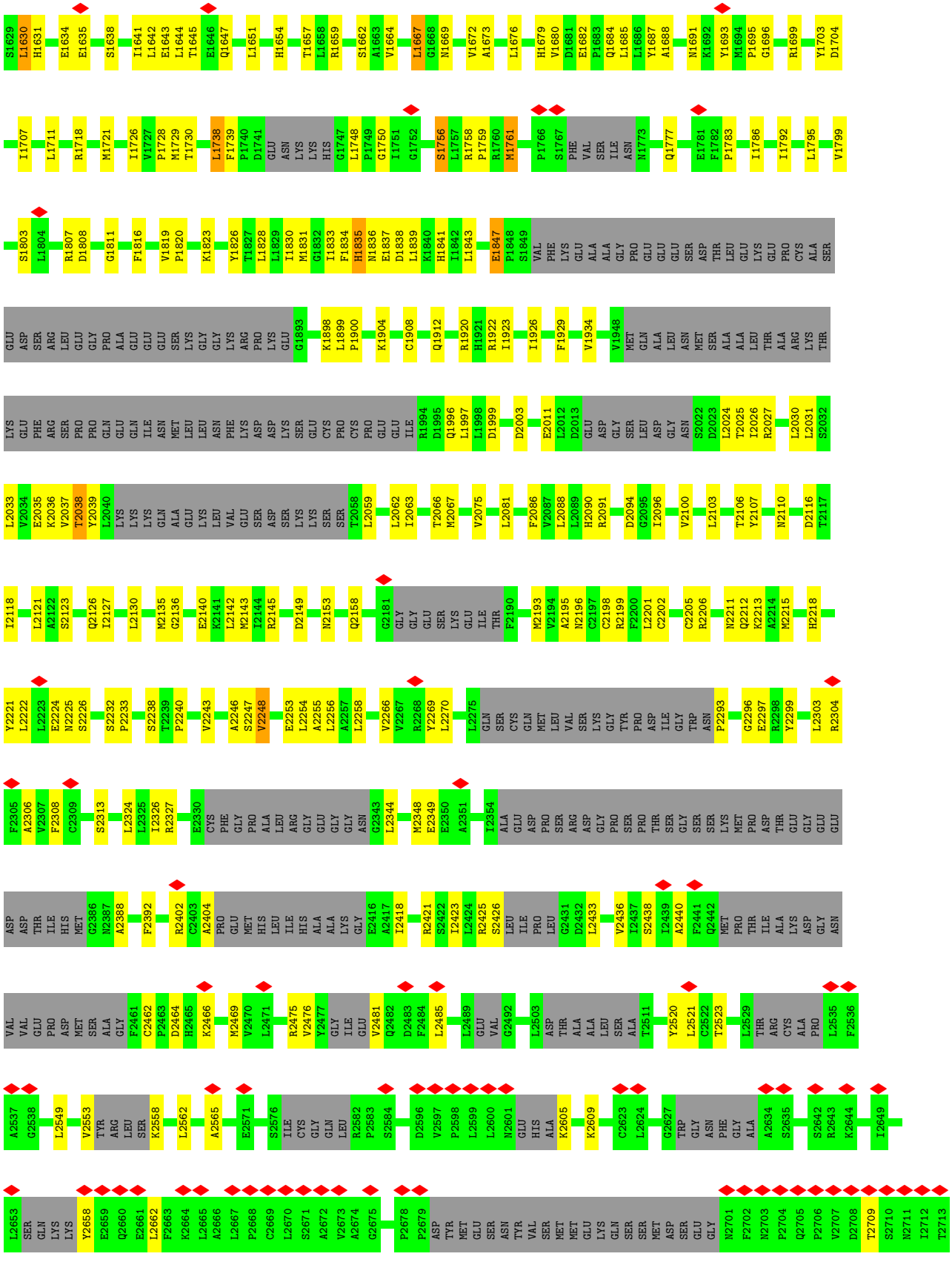


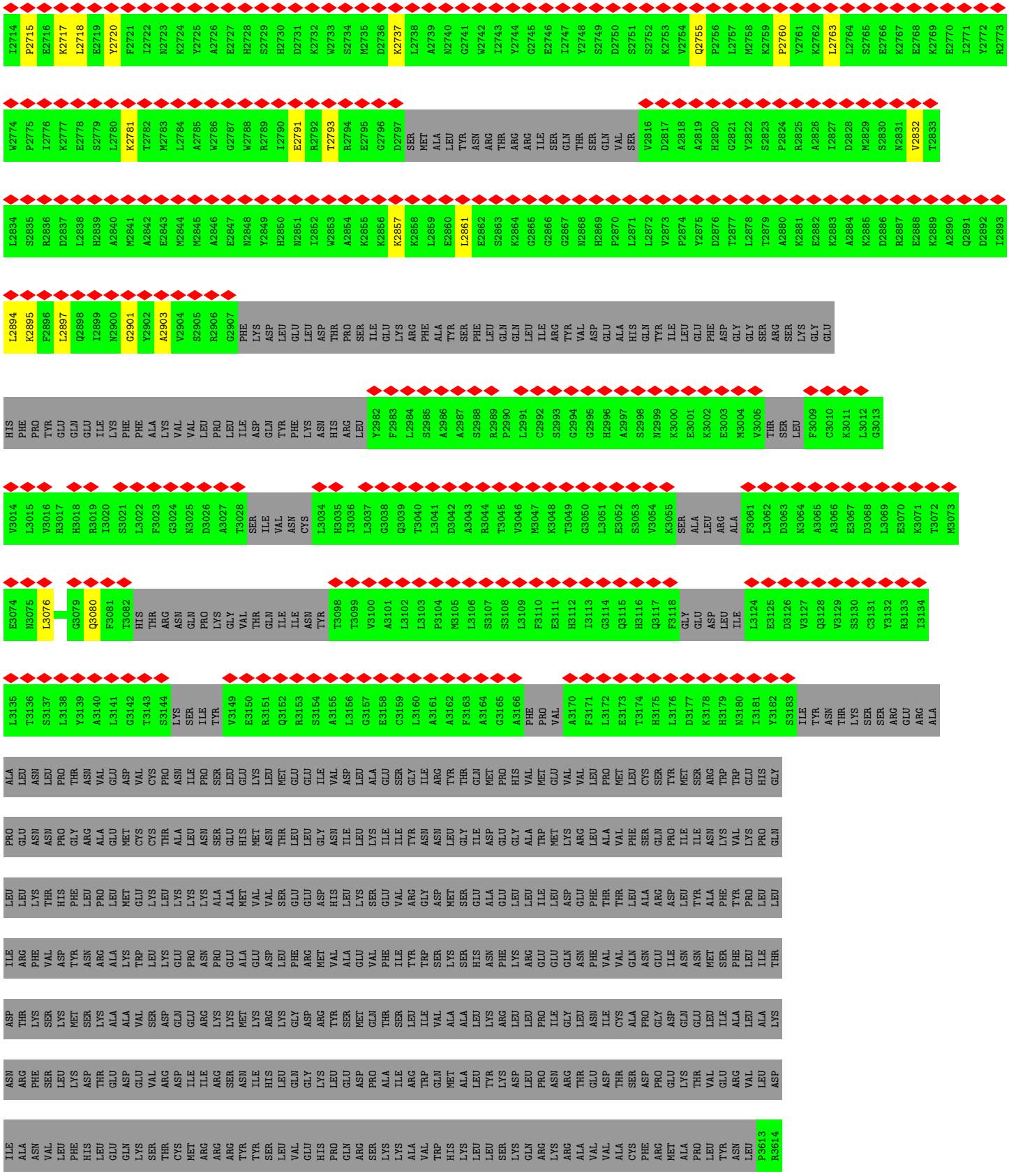
• Molecule 1: Ryanodine receptor 2

Chain C:





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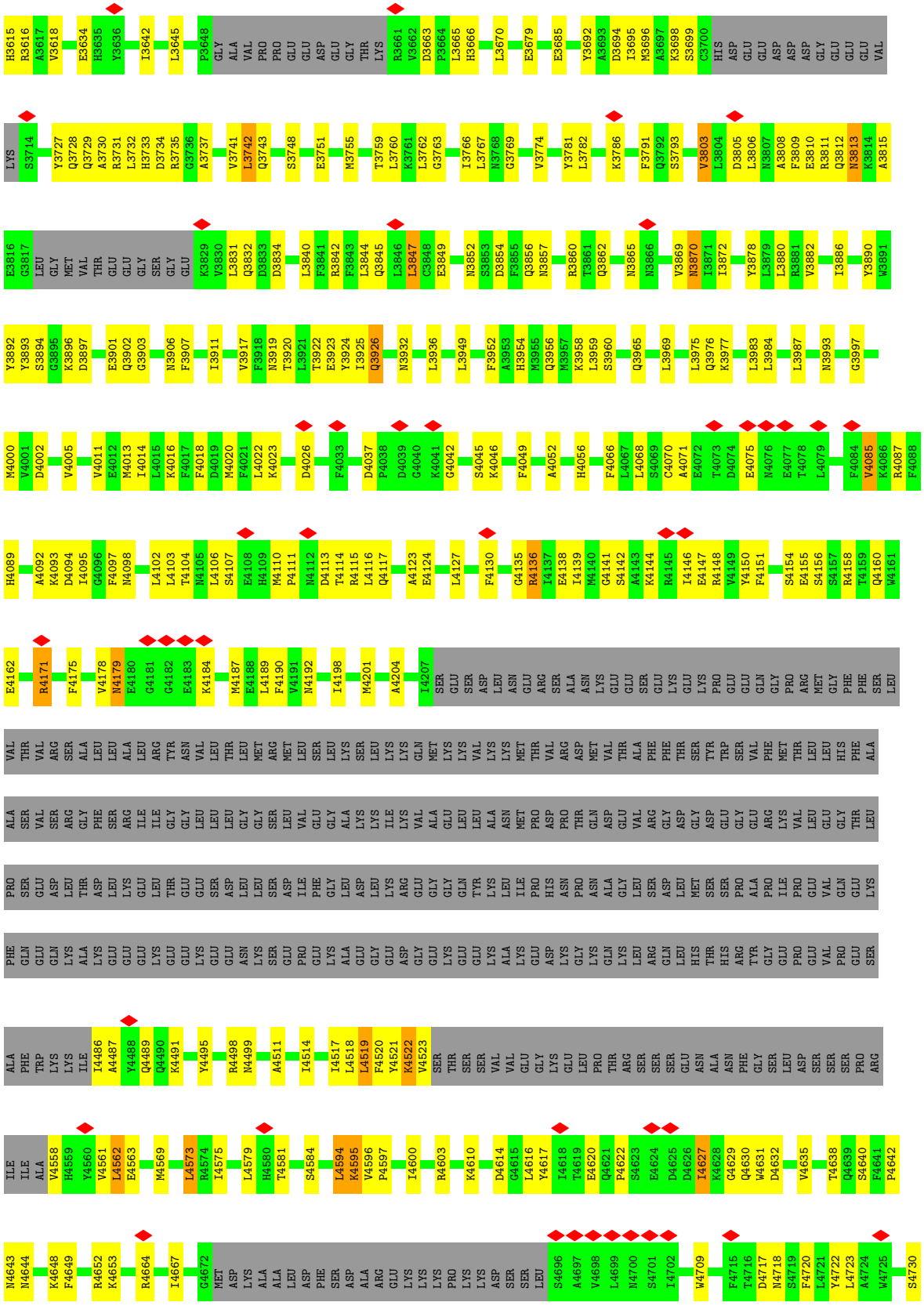
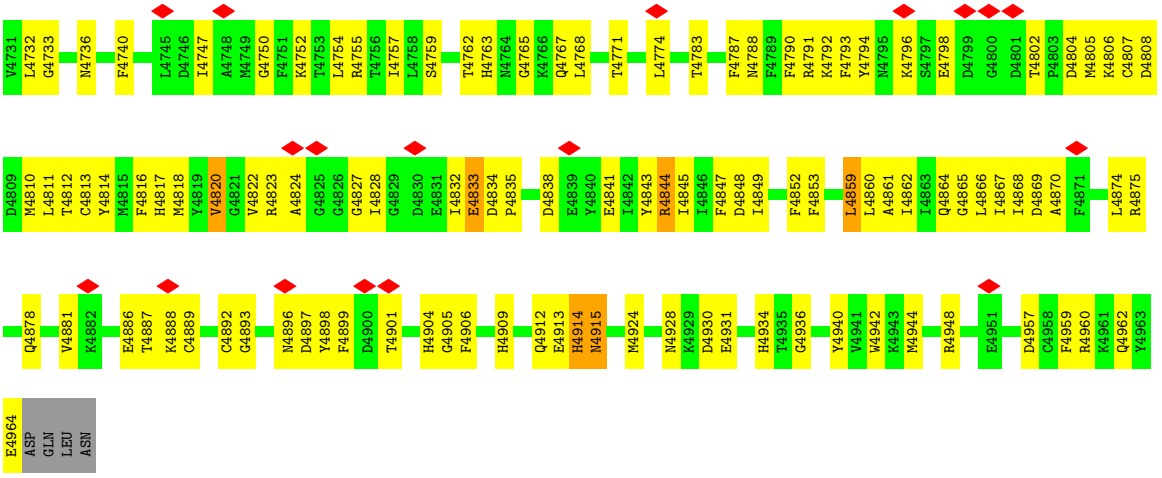
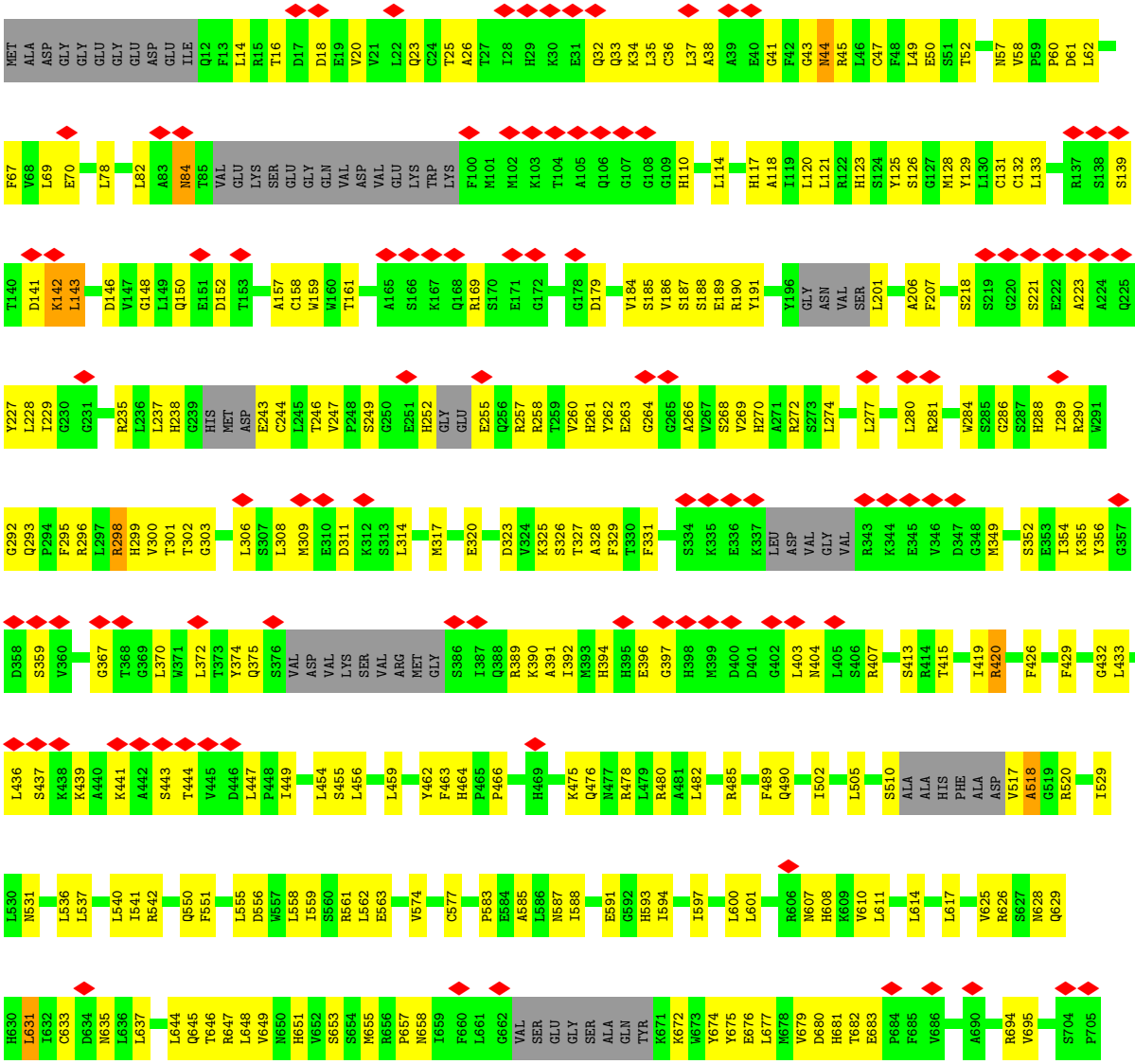
L2834 S2835 R2836 D2837 L2838 H2839 A2840 M2841 A2842 E2843 M2844 M2845 A2846 E2847 N2848 Y2849 H2850 N2851 I2852 W2853 A2854 K2855 K2856 K2857 K2858 L2859 E2860 L2861 E2862 S2863 K2864 G2865 G2866 G2867 N2868 H2869 P2870 L2871 L2872 V2873 P2874 Y2875 D2876 T2877 L2878 T2879 A2880 K2881 E2882 K2883 A2884 K2885 D2886 R2887 E2888 K2889 A2890 Q2891 D2892 I2893
L2894 K2895 F2896 L2897 Q2898 I2899 N2900 G2901 Y2902 A2903 V2904 S2905 R2906 G2907 PHE LYS ASP LEU GLU LEU ASP THR PRO SER ILE GLU LYS ARG PHE ALA TYR SER PHE LEU GLN GLN LEU LEU ILE ARG TYR VAL ASP GLU ALA HIS GLN TYR ILE LEU LEU GLU PHE ASP GLY GLY SER ARG SER LYS GLY GLU
HIS PHE PRO TYR GLU GLN GLU ILE LYS PHE PHE ALA LYS VAL VAL LEU PRO LEU ILE ASP GLN TYR PHE LYS ASN HIS ARG LEU Y2982 F2983 L2984 S2985 A2986 A2987 S2988 R2989 P2990 L2991 C2992 S2993 G2994 G2995 H2996 A2997 S2998 N2999 K3000 E3001 K3002 E3003 M3004 V3005 THR SER LEU F3009 C3010 K3011 L3012 G3013
V3014 L3015 V3016 R3017 H3018 R3019 I3020 S3021 L3022 F3023 G3024 N3025 D3026 A3027 T3028 SER ILE VAL ASN CYS L3034 H3035 I3036 L3037 G3038 Q3039 T3040 L3041 D3042 A3043 R3044 T3045 V3046 M3047 K3048 T3049 G3050 L3051 E3052 S3053 V3054 K3055 SER ALA LEU ARG ALA F3061 L3062 D3063 N3064 A3065 A3066 E3067 D3068 L3069 E3070 K3071 T3072 M3073
E3074 N3075 L3076 G3079 Q3080 F3081 T3082 HIS THR ARG ASN GLN PRO LYS GLY VAL THR GLN ILE ILE ASN TYR T3098 T3099 V3100 A3101 L3102 L3103 P3104 M3105 L3106 S3107 S3108 L3109 F3110 E3111 H3112 I3113 G3114 Q3115 H3116 Q3117 F3118 GLY GLU ASP LEU ILE L3124 E3125 D3126 V3127 Q3128 V3129 S3130 C3131 Y3132 R3133 I3134
L3135 T3136 S3137 L3138 Y3139 A3140 L3141 G3142 T3143 S3144 LYS SER ILE TYR V3149 E3150 R3151 Q3152 R3153 S3154 A3155 L3156 G3157 E3158 C3159 L3160 A3161 A3162 F3163 A3164 G3165 A3166 PHE PRO VAL A3170 F3171 L3172 E3173 T3174 H3175 L3176 D3177 K3178 H3179 N3180 I3181 Y3182 S3183 ILE TYR ASN THR LYS SER SER ARG GLU ARG ALA
ALA LEU ASN LEU PRO THR ASN VAL GLU ASP VAL CYS PRO ASN ILE PRO SER LEU GLU LYS LEU MET GLU GLU ILE VAL ASP LEU ALA GLU SER GLY ILE ARG TYR THR GLN MET PRO HIS VAL MET GLU VAL VAL LEU PRO MET LEU CYS SER TYR MET SER ARG TRP TRP GLU HIS GLY
PRO GLU ASN ASN PRO GLY ARG ALA GLU MET CYS CYS THR ALA LEU ASN SER GLU HIS MET ASN THR LEU LEU LEU GLY ASN ILE LEU LYS SER GLU VAL ARG GLY ASP MET SER GLU VAL ARG GLY ILE ASP GLU GLY ALA TRP MET LYS ARG LEU ALA VAL PHE SER GLN PRO ILE ILE ASN LYS VAL LYS PRO GLN
LEU LEU LYS THR HIS PHE LEU PRO LEU MET GLU LYS LEU LYS LYS LYS ALA MET VAL VAL SER GLU GLU GLU ASP HIS LEU LYS SER GLU VAL ARG GLY ASP MET SER GLU ALA GLU LEU LEU LEU ILE LEU ASP GLU PHE THR THR LEU ALA ARG ASP LEU TYR ALA PHE TYR PRO LEU LEU
ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA ALA MET VAL ALA GLU ASP LEU PHE ARG MET VAL ALA GLU GLU VAL PHE ILE TYR TRP SER LYS SER HIS ASN PHE LYS ARG GLU GLU GLN ASN PHE VAL VAL GLN ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR
ASP THR LYS SER LYS MET SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN GLU LEU ILE ILE ALA ALA LEU LYS
ASN ARG PHE SER LEU LYS ASP THR GLU ASP GLU VAL ARG ASP ILE HIS LEU GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA LEU TYR LYS ASP LEU PRO ASN ARG THR GLU ASP THR SER ASP PRO GLU LYS THR VAL GLU ARG VAL LEU ASP
ILE ALA ASN VAL LEU PHE HIS LEU GLU GLN LYS SER THR CYS MET ARG ARG ARG TYR TYR SER LEU VAL GLU HIS PRO GLN ARG SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG LYS ARG ALA VAL VAL ALA CYS PHE ARG MET ALA PRO LEU TYR ASN LEU P3613 R3614

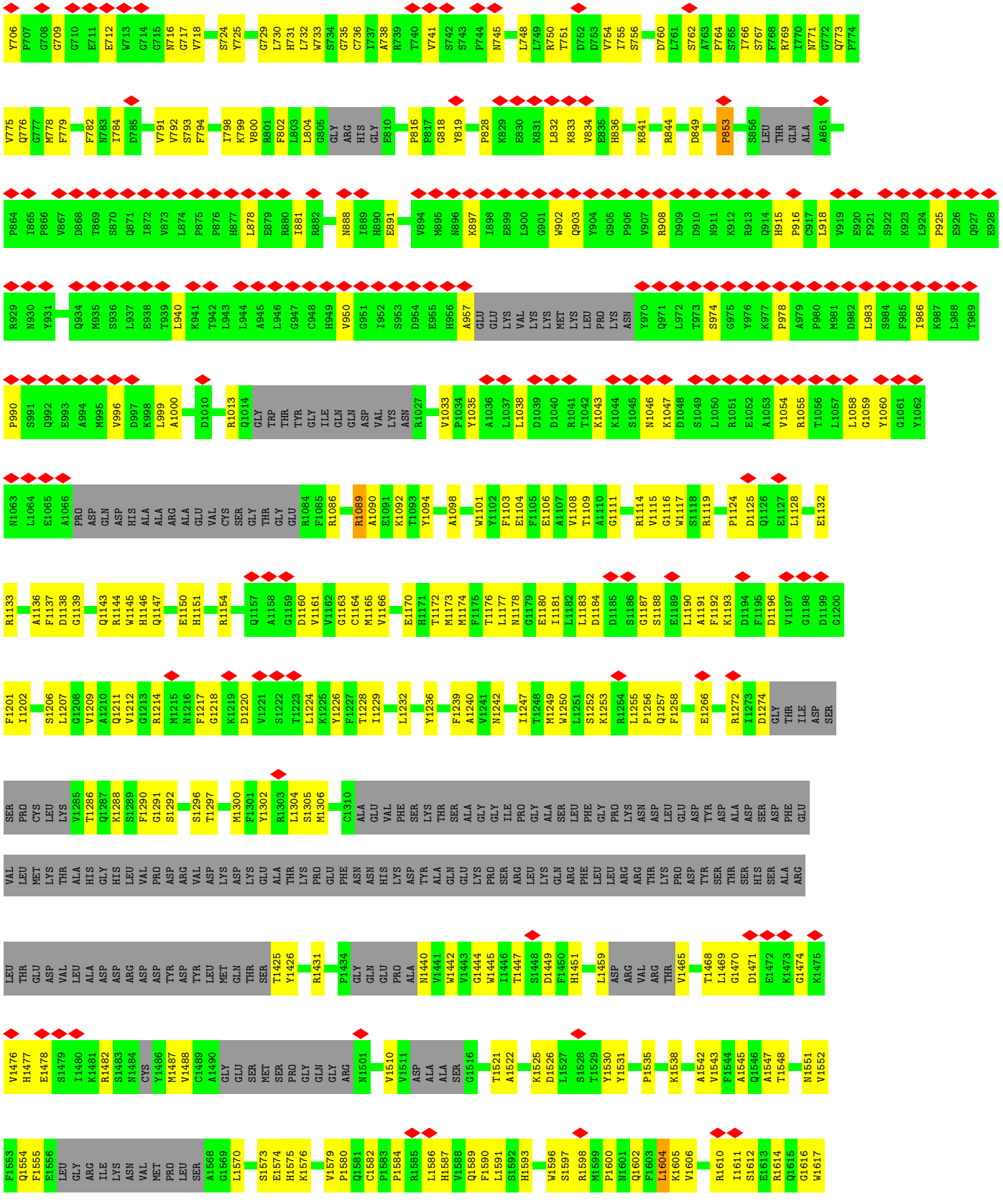




• Molecule 1: Ryanodine receptor 2

Chain D:

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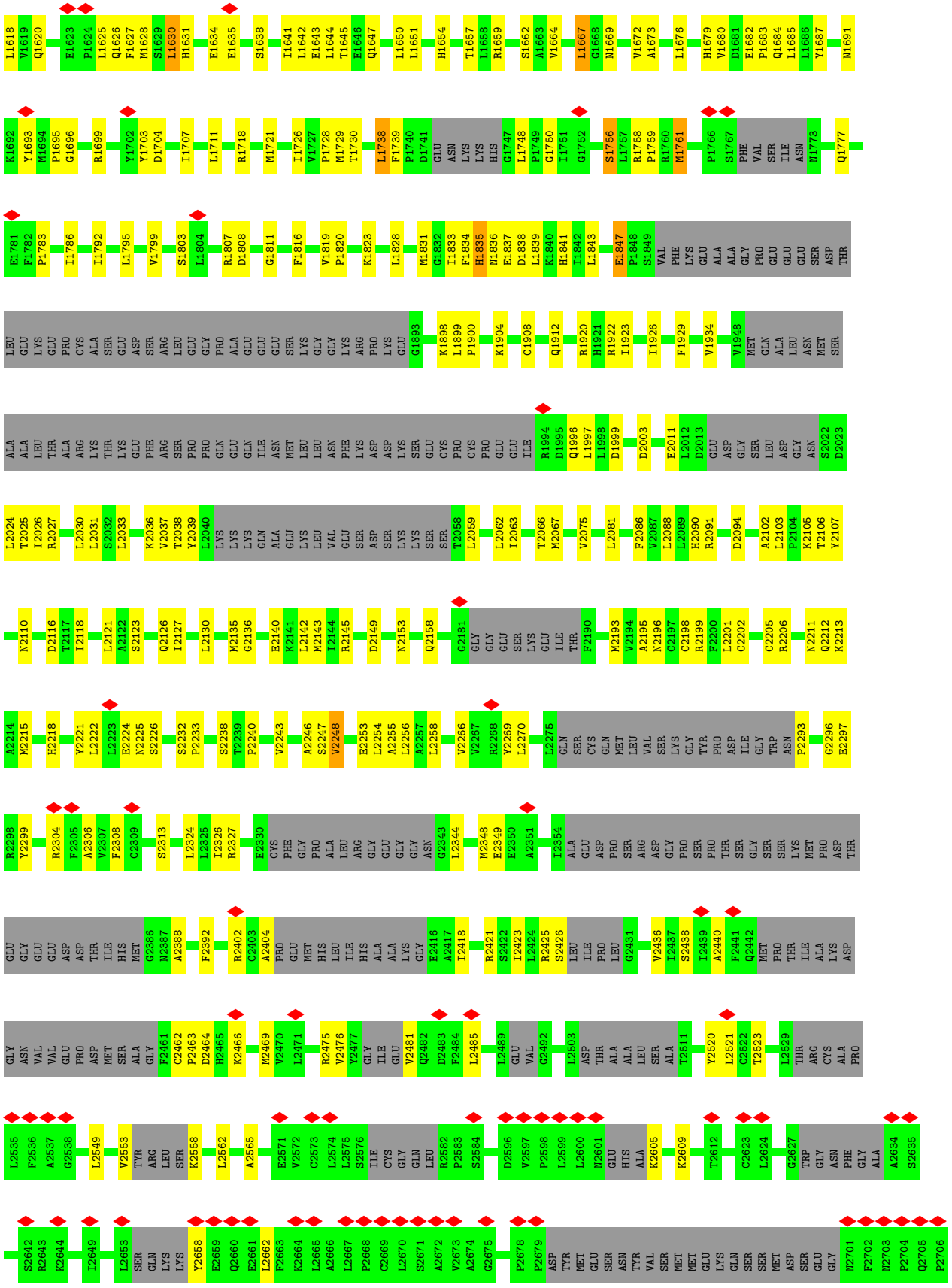
V775 Q776 G777 M778 F779 F782 N783 I784 D785 V791 V792 S793 F794 I798 K799 V800 R801 F802 L803 L804 G805 GLY ARG HIS GLY E810 P816 P817 G818 Y819 P828 K829 E830 K831 L832 K833 V834 E835 H836 K841 R844 D849 P853 S856 LEU THR GLN ALA A861
P864 I865 P866 V867 D868 T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879 R880 I881 R882 N888 I889 H890 E891 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 G917 L918 V919 E920 F921 S922 K923 L924 P925 E926 Q927 E928
R929 N930 Y931 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L944 A945 L946 G947 C948 H949 V950 G951 I952 S953 D954 E955 H956 A957 GLU GLU LYS VAL LYS LYS MET LYS LEU PRO LYS ASN Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 L988 T989
P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999 A1000 D1010 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 V1033 P1034 Y1035 A1036 L1037 L1038 D1039 D1040 R1041 T1042 K1043 K1044 S1045 N1046 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 Y1062
N1063 L1064 E1065 A1066 PRO ASP GLN ASP HIS ALA ALA ARG ALA GLU VAL CYS SER GLY THR GLY GLU R1084 F1085 R1086 R1089 A1090 E1091 K1092 T1093 Y1094 A1098 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109 A1110 G1111 R1114 V1115 G1116 W1117 S1118 R1119 P1124 D1125 Q1126 E1127 L1128 E1132
R1133 A1136 F1137 D1138 G1139 Q1143 R1144 W1145 H1146 Q1147 E1150 H1151 R1154 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 E1170 H1171 T1172 M1173 M1174 F1175 T1176 L1177 N1178 G1179 E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200
F1201 I1202 S1206 L1207 G1208 V1209 A1210 Q1211 V1212 G1213 R1214 M1215 N1216 F1217 G1218 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 I1228 I1229 L1232 Y1236 F1239 A1240 V1241 N1242 I1247 T1248 M1249 W1250 L1251 S1252 K1253 R1254 L1255 P1256 Q1257 F1258 E1266 R1272 I1273 D1274 GLY THR ILE ASP SER
SER PRO CYS LEU LYS V1285 T1286 Q1287 K1288 S1289 F1290 G1291 S1292 S1296 T1297 M1300 F1301 Y1302 R1303 L1304 S1305 M1306 C1310 ALA GLU VAL PHE SER LYS THR SER ALA GLY GLY ILE PRO GLY ALA SER LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU
VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR TYR SER THR SER HIS SER ALA ARG
LEU THR GLU ASP VAL LEU ALA ASP ASP ARG ASP ASP TYR ASP TYR LEU MET GLN THR SER T1425 Y1426 R1431 P1434 GLY GLN GLU PRO ALA N1440 V1441 W1442 V1443 G1444 W1445 I1446 T1447 S1448 D1449 F1450 H1451 L1459 ASP ARG VAL ARG THR V1465 T1468 L1469 G1470 D1471 E1472 K1473 G1474 K1475
V1476 H1477 E1478 S1479 I1480 K1481 R1482 S1483 N1484 CYS Y1486 M1487 V1488 C1489 A1490 GLY GLU SER MET SER PRO GLY GLN GLY ARG N1501 V1510 V1511 ASP ALA ALA SER G1516 T1521 A1522 K1525 D1526 L1527 S1528 T1529 Y1530 Y1531 P1535 K1538 A1542 V1543 F1544 A1545 Q1546 A1547 T1548 N1551 V1552
F1553 Q1554 F1555 E1556 LEU GLY ARG ILE LYS ASN VAL MET PRO LEU SER A1568 G1569 L1570 S1573 E1574 H1575 K1576 V1579 P1580 Q1581 C1582 P1583 P1584 R1585 L1586 H1587 V1588 Q1589 F1590 L1591 S1592 H1593 W1596 S1597 R1598 M1599 P1600 N1601 Q1602 F1603 L1604 K1605 V1606 R1610 I1611 S1612 E1613 R1614 G1615 G1616 W1617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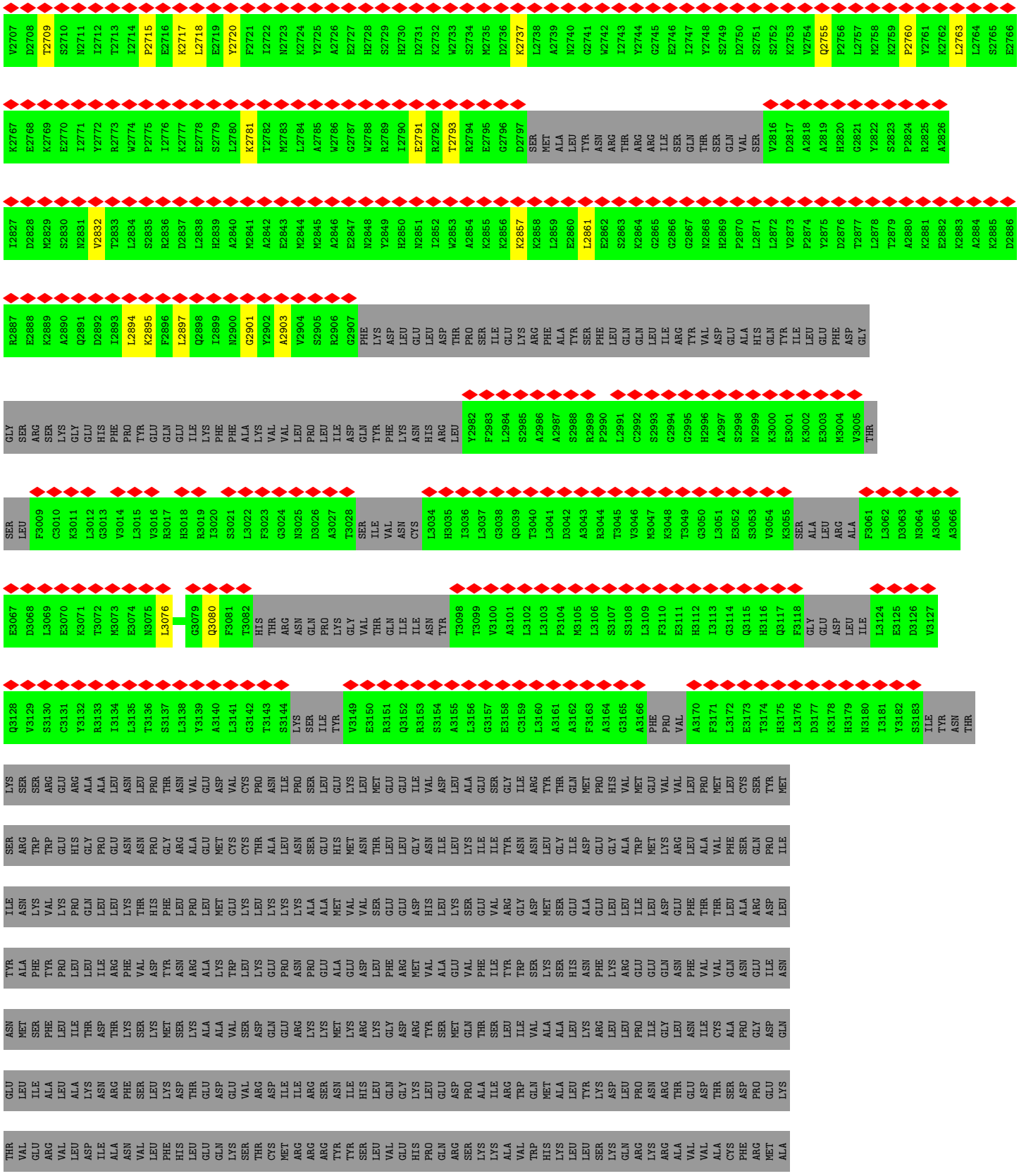
K1692 Y1693 M1694 P1695 G1696 R1699 Y1702 Y1703 D1704 I1707 L1711 R1718 M1721 I1726 V1727 P1728 M1729 T1730 L1738 F1739 P1740 D1741 GLU ASN LYS LYS HIS G1747 L1748 P1749 G1750 I1751 G1752 S1756 L1757 R1758 P1759 R1760 M1761 P1766 S1767 PHE VAL SER ILE ASN N1773 Q1777
E1781 F1782 P1783 I1786 I1792 L1795 V1799 S1803 L1804 R1807 D1808 G1811 F1816 V1819 P1820 K1823 L1828 M1831 G1832 I1833 F1834 H1835 N1836 E1837 D1838 L1839 K1840 H1841 I1842 L1843 E1847 P1848 S1849 VAL PHE LYS GLU ALA ALA GLY PRO GLU GLU GLU SER ASP THR
LEU GLU LYS GLU PRO CYS ALA SER GLU ASP SER ARG LEU GLU GLY PRO ALA GLU GLU GLU SER LYS GLY GLY LYS ARG PRO LYS GLU G1893 K1898 L1899 P1900 K1904 C1908 Q1912 R1920 H1921 R1922 I1923 I1926 F1929 V1934 V1948 MET GLN ALA LEU ASN MET SER
ALA ALA LEU THR ALA ARG LYS THR LYS GLU PHE ARG SER PRO PRO GLN GLU GLN ILE ASN MET LEU LEU LEU ASN PHE LYS ASP ASP LYS SER GLU CYS PRO CYS PRO GLU GLU ILE R1994 D1995 Q1996 L1997 L1998 D1999 D2003 E2011 L2012 D2013 GLU ASP GLY SER LEU ASP GLY ASN S2022 D2023
L2024 T2025 I2026 R2027 L2030 L2031 S2032 L2033 K2036 V2037 T2038 Y2039 L2040 LYS LYS LYS GLN ALA GLU LYS LEU LEU VAL GLU SER ASP SER LYS LYS LYS SER SER T2058 L2059 L2062 I2063 T2066 M2067 V2075 L2081 F2086 V2087 L2088 L2089 H2090 R2091 D2094 A2102 L2103 P2104 K2105 T2106 Y2107
N2110 D2116 T2117 I2118 L2121 A2122 S2123 Q2126 I2127 L2130 M2135 G2136 E2140 K2141 L2142 M2143 I2144 R2145 D2149 N2153 Q2158 G2181 GLY GLY GLU SER LYS GLU ILE THR F2190 M2193 V2194 A2195 N2196 C2197 C2198 R2199 F2200 L2201 C2202 C2205 R2206 N2211 Q2212 K2213
A2214 M2215 H2218 Y2221 L2222 L2223 E2224 N2225 S2226 S2232 P2233 S2238 T2239 P2240 V2243 A2246 S2247 V2248 E2253 L2254 A2255 L2256 A2257 L2258 V2266 V2267 R2268 Y2269 L2270 L2275 GLN SER CYS GLN MET LEU VAL SER LYS GLY TYR PRO ASP ILE GLY TRP ASN P2293 G2296 E2297
R2298 Y2299 R2304 F2305 A2306 V2307 F2308 C2309 S2313 L2324 L2325 I2326 R2327 E2330 CYS PHE GLY PRO ALA LEU ARG GLY GLU GLY GLY ASN G2343 L2344 M2348 E2349 E2350 A2351 I2354 ALA GLU ASP PRO SER ARG ASP GLY PRO SER PRO THR SER GLY SER SER LYS MET PRO ASP THR
GLU GLY GLU GLU ASP ASP THR ILE HIS MET G2386 N2387 A2388 F2392 R2402 C2403 A2404 PRO GLU MET HIS LEU ILE HIS ALA ALA LYS GLY E2416 A2417 I2418 R2421 S2422 I2423 L2424 R2425 S2426 LEU ILE PRO LEU G2431 V2436 I2437 S2438 I2439 A2440 F2441 Q2442 MET PRO THR ILE ALA LYS ASP
GLY ASN VAL VAL GLU PRO ASP MET SER ALA GLY F2461 C2462 P2463 D2464 H2465 K2466 M2469 V2470 L2471 R2475 V2476 Y2477 GLY ILE GLU V2481 Q2482 D2483 F2484 L2485 L2489 GLU VAL G2492 L2503 ASP THR ALA ALA LEU SER ALA T2511 Y2520 L2521 C2522 T2523 L2529 THR ARG CYS ALA PRO
L2535 F2536 A2537 G2538 L2549 V2553 TYR ARG LEU SER K2558 L2562 A2565 E2571 V2572 C2573 L2574 L2575 S2576 ILE CYS GLY GLN LEU R2582 P2583 S2584 D2596 V2597 P2598 L2599 L2600 N2601 GLU HIS ALA K2605 K2609 T2612 C2623 L2624 G2627 TRP GLY ASN PHE GLY ALA A2634 S2635
S2642 R2643 K2644 I2649 L2653 SER GLN LYS LYS Y2658 E2659 Q2660 E2661 L2662 F2663 K2664 L2665 A2666 L2667 P2668 C2669 L2670 S2671 A2672 V2673 A2674 G2675 P2678 P2679 ASP TYR MET GLU SER ASN TYR VAL SER MET MET GLU LYS GLN SER SER MET ASP SER GLU GLY N2701 F2702 N2703 P2704 Q2705 P2706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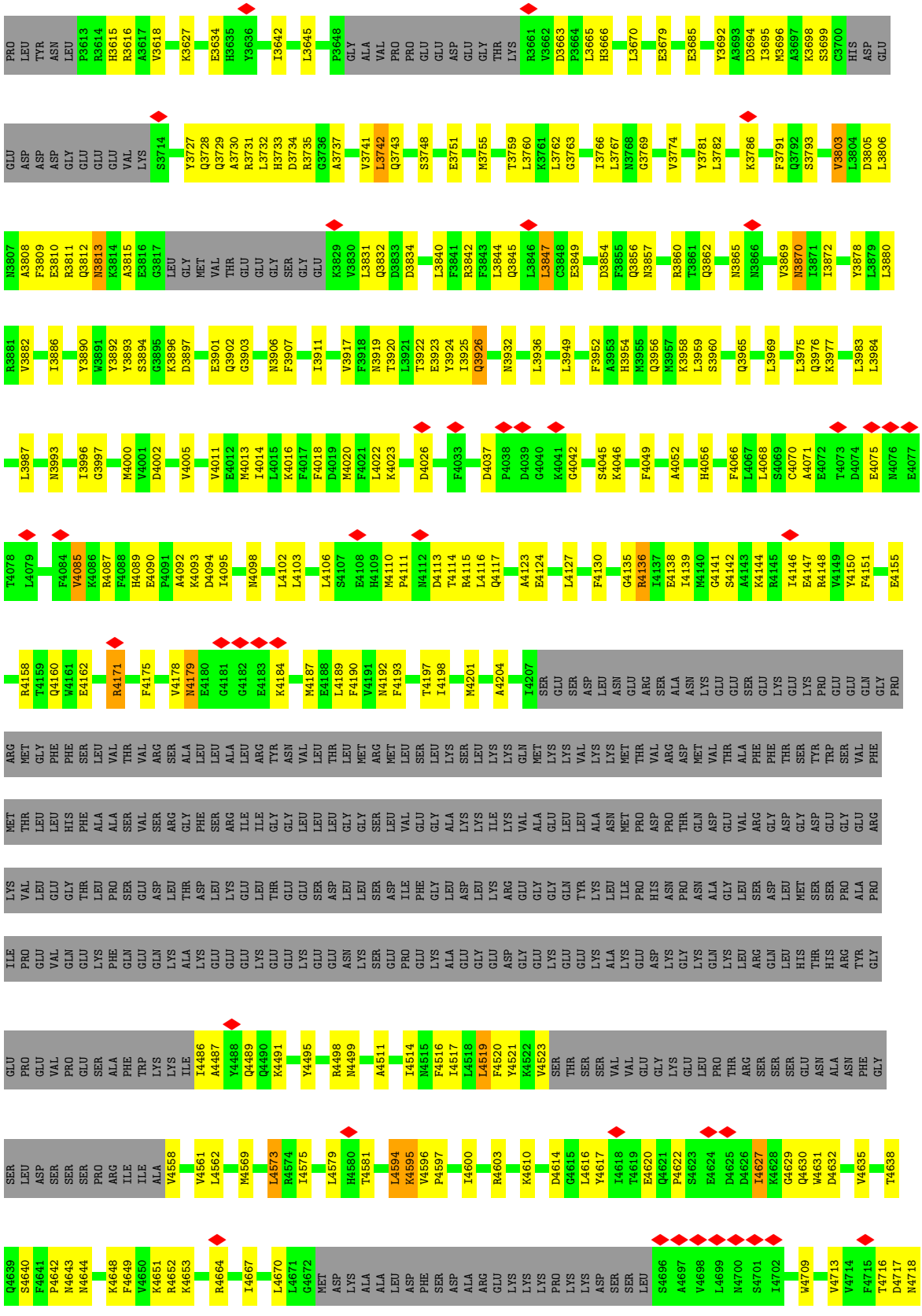
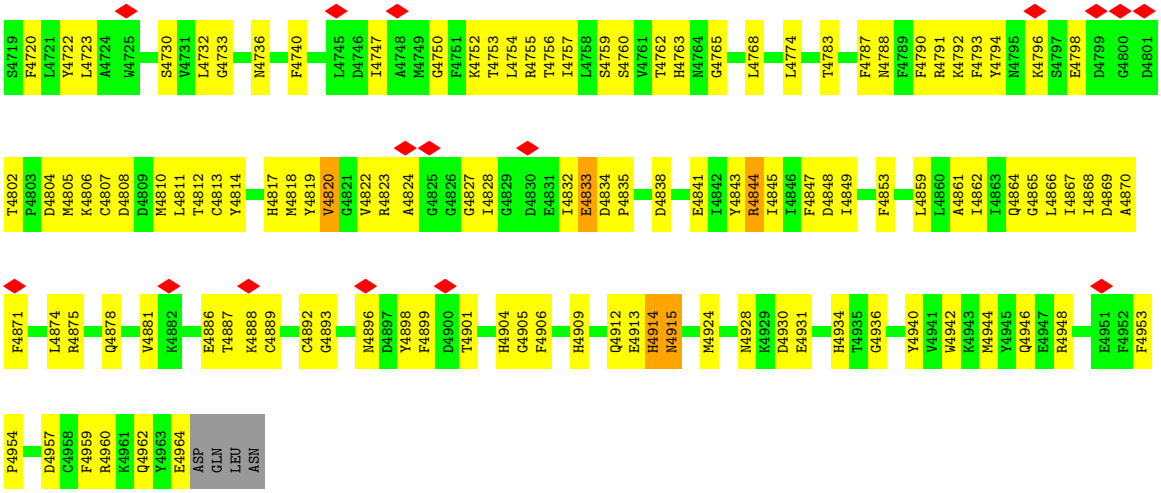
K2767 E2768 K2769 E2770 I2771 Y2772 R2773 W2774 P2775 I2776 K2777 E2778 S2779 L2780 K2781 T2782 M2783 L2784 A2785 W2786 G2787 W2788 R2789 I2790 E2791 R2792 T2793 R2794 E2795 G2796 D2797 SER MET ALA LEU TYR ASN ARG THR ARG ARG ILE SER GLN THR SER GLN VAL SER V2816 D2817 A2818 A2819 H2820 G2821 Y2822 S2823 P2824 R2825 A2826
I2827 D2828 M2829 S2830 N2831 V2832 T2833 L2834 S2835 R2836 D2837 L2838 H2839 A2840 M2841 A2842 E2843 M2844 M2845 A2846 E2847 N2848 Y2849 H2850 N2851 I2852 W2853 A2854 K2855 K2856 K2857 K2858 L2859 E2860 L2861 E2862 S2863 K2864 G2865 G2866 G2867 N2868 H2869 P2870 L2871 L2872 V2873 P2874 Y2875 D2876 T2877 L2878 T2879 A2880 K2881 E2882 K2883 A2884 K2885 D2886
R2887 E2888 K2889 A2890 Q2891 D2892 I2893 L2894 K2895 F2896 L2897 Q2898 I2899 N2900 G2901 Y2902 A2903 V2904 S2905 R2906 G2907 PHE LYS ASP LEU GLU LEU ASP THR PRO SER ILE GLU LYS ARG PHE ALA TYR SER PHE LEU GLN GLN LEU ILE ARG TYR VAL ASP GLU ALA HIS GLN TYR ILE LEU GLU PHE ASP GLY
GLY SER ARG SER LYS GLY GLU HIS PHE PRO TYR GLU GLN GLU ILE LYS PHE PHE ALA LYS VAL VAL LEU PRO LEU ILE ASP GLN TYR PHE LYS ASN HIS ARG LEU Y2982 F2983 L2984 S2985 A2986 A2987 S2988 R2989 P2990 L2991 C2992 S2993 G2994 G2995 H2996 A2997 S2998 N2999 K3000 E3001 K3002 E3003 M3004 V3005 THR
SER LEU F3009 C3010 K3011 L3012 G3013 V3014 L3015 V3016 R3017 H3018 R3019 I3020 S3021 L3022 F3023 G3024 N3025 D3026 A3027 T3028 SER ILE VAL ASN CYS L3034 H3035 I3036 L3037 G3038 Q3039 T3040 L3041 D3042 A3043 R3044 T3045 V3046 M3047 K3048 T3049 G3050 L3051 E3052 S3053 V3054 K3055 SER ALA LEU ARG ALA F3061 L3062 D3063 N3064 A3065 A3066
E3067 D3068 L3069 E3070 K3071 T3072 M3073 E3074 N3075 L3076 G3079 Q3080 F3081 T3082 HIS THR ARG ASN GLN PRO LYS GLY VAL THR GLN ILE ILE ASN TYR T3098 T3099 V3100 A3101 L3102 L3103 P3104 M3105 L3106 S3107 S3108 L3109 F3110 E3111 H3112 I3113 G3114 Q3115 H3116 Q3117 F3118 GLY GLU ASP LEU ILE L3124 E3125 D3126 V3127
Q3128 V3129 S3130 C3131 Y3132 R3133 I3134 L3135 T3136 S3137 L3138 Y3139 A3140 L3141 G3142 T3143 S3144 LYS SER ILE TYR V3149 E3150 R3151 Q3152 R3153 S3154 A3155 L3156 G3157 E3158 C3159 L3160 A3161 A3162 F3163 A3164 G3165 A3166 PHE PRO VAL A3170 F3171 L3172 E3173 T3174 H3175 L3176 D3177 K3178 H3179 N3180 I3181 Y3182 S3183 ILE TYR ASN THR
LYS SER SER ARG GLU ARG ALA ALA LEU ASN LEU PRO THR ASN VAL GLU ASP VAL CYS PRO ASN ILE PRO SER LEU GLU LYS LEU MET GLU GLU ILE VAL ASP LEU ALA GLU SER GLY ILE ARG TYR THR GLN MET PRO HIS VAL MET GLU VAL VAL LEU PRO MET LEU CYS SER TYR MET
SER ARG TRP TRP GLU HIS GLY PRO GLU ASN ASN PRO GLY ARG ALA GLU MET CYS CYS THR ALA LEU ASN SER GLU HIS MET ASN THR LEU LEU GLY ASN ILE LEU LEU LYS ILE ILE TYR ASN ASN LEU GLY ILE ASP GLU GLY ALA TRP MET LYS ARG LEU ALA VAL PHE SER GLN PRO ILE
ILE ASN LYS VAL LYS PRO GLN LEU LEU LYS THR HIS PHE LEU PRO LEU MET GLU LYS LEU LYS LYS ALA MET VAL VAL SER GLU GLU ASP HIS LEU LEU LYS SER GLU VAL ARG GLY ASP MET SER GLU ALA GLU LEU LEU ILE LEU ASP GLU PHE THR THR LEU ALA ARG ASP LEU
TYR ALA PHE TYR PRO LEU LEU ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA GLU ASP LEU PHE ARG MET VAL ALA GLU VAL PHE ILE TRP SER LYS SER HIS ASN PHE LYS ARG GLU LEU LEU PRO ILE GLY LEU ASN PHE VAL VAL GLN ASN GLU ILE
ASN MET SER PHE LEU ILE THR ASP THR LYS SER MET SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN
GLU LEU ILE ALA LEU ALA LYS ASN ARG PHE SER LEU LYS ASP THR GLU ASP GLU VAL ARG ASP ILE ILE ARG SER ASN ILE HIS LEU GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA LEU TYR LYS ASP LEU PRO ASN ARG THR GLU ASP THR SER ASP PRO GLU LYS
THR VAL GLU ARG VAL LEU ASP ILE ALA ASN VAL LEU PHE HIS LEU GLU GLN LYS SER THR CYS MET ARG ARG ARG TYR TYR SER LEU VAL GLU HIS PRO GLN ARG SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG LYS ARG ALA VAL VAL ALA CYS PHE ARG MET ALA

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T4802 P4803 D4804 M4805 K4806 C4807 D4808 D4809 M4810 L4811 T4812 C4813 Y4814 H4817 M4818 Y4819 V4820 G4821 V4822 R4823 A4824 G4825 G4826 G4827 I4828 G4829 D4830 E4831 I4832 E4833 D4834 P4835 D4838 E4841 T4842 Y4843 R4844 I4845 I4846 F4847 D4848 I4849 F4853 L4859 L4860 A4861 I4862 I4863 Q4864 G4865 L4866 I4867 I4868 D4869 A4870
F4871 L4874 R4875 Q4878 V4881 K4882 E4886 T4887 K4888 C4889 C4892 G4893 N4896 D4897 Y4898 F4899 D4900 T4901 H4904 G4905 F4906 H4909 Q4912 E4913 H4914 N4915 M4924 N4928 K4929 D4930 E4931 H4934 T4935 G4936 Y4940 V4941 W4942 K4943 M4944 Y4945 Q4946 E4947 R4948 E4951 F4952 F4953
P4954 D4957 C4958 F4959 R4960 K4961 Q4962 Y4963 E4964 ASP GLN LEU ASN

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	24250	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	48.6	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.258	Depositor
Minimum map value	-0.089	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.065	Depositor
Map size (Å)	522.6, 522.6, 522.6	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.613, 2.613, 2.613	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	0.40	0/27034	0.64	13/36550 (0.0%)
1	B	0.40	0/27034	0.64	13/36550 (0.0%)
1	C	0.40	0/27034	0.65	16/36550 (0.0%)
1	D	0.40	0/27031	0.64	17/36546 (0.0%)
All	All	0.40	0/108133	0.64	59/146196 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	37
1	B	0	37
1	C	0	37
1	D	0	37
All	All	0	148

There are no bond length outliers.

All (59) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	4820	VAL	CB-CA-C	-7.94	96.32	111.40
1	C	4833	GLU	CB-CA-C	7.71	125.81	110.40
1	D	4833	GLU	CB-CA-C	7.64	125.67	110.40
1	D	4519	LEU	CB-CA-C	-6.91	97.06	110.20
1	A	3742	LEU	CA-CB-CG	6.63	130.55	115.30
1	D	3742	LEU	CA-CB-CG	6.61	130.50	115.30
1	B	3742	LEU	CA-CB-CG	6.61	130.49	115.30
1	C	3742	LEU	CA-CB-CG	6.61	130.50	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1738	LEU	CA-CB-CG	6.30	129.79	115.30
1	C	1738	LEU	CA-CB-CG	6.28	129.75	115.30
1	D	1738	LEU	CA-CB-CG	6.28	129.75	115.30
1	B	1738	LEU	CA-CB-CG	6.26	129.71	115.30
1	A	555	LEU	CA-CB-CG	6.14	129.41	115.30
1	B	555	LEU	CA-CB-CG	6.13	129.39	115.30
1	C	555	LEU	CA-CB-CG	6.12	129.38	115.30
1	D	555	LEU	CA-CB-CG	6.12	129.38	115.30
1	C	4833	GLU	N-CA-C	-5.89	95.09	111.00
1	B	2038	THR	C-N-CA	5.83	136.28	121.70
1	A	2038	THR	C-N-CA	5.83	136.26	121.70
1	D	2038	THR	C-N-CA	5.82	136.26	121.70
1	D	4820	VAL	CB-CA-C	-5.82	100.35	111.40
1	C	2038	THR	C-N-CA	5.80	136.21	121.70
1	A	2039	TYR	N-CA-C	5.79	126.62	111.00
1	B	2039	TYR	N-CA-C	5.78	126.59	111.00
1	D	2039	TYR	N-CA-C	5.77	126.57	111.00
1	C	2039	TYR	N-CA-C	5.77	126.57	111.00
1	A	4573	LEU	CA-CB-CG	5.67	128.33	115.30
1	C	4573	LEU	CA-CB-CG	5.67	128.33	115.30
1	D	4573	LEU	CA-CB-CG	5.66	128.33	115.30
1	B	4573	LEU	CA-CB-CG	5.66	128.32	115.30
1	C	139	SER	C-N-CA	5.45	135.31	121.70
1	B	139	SER	C-N-CA	5.43	135.29	121.70
1	D	139	SER	C-N-CA	5.43	135.27	121.70
1	A	139	SER	C-N-CA	5.42	135.24	121.70
1	A	631	LEU	CA-CB-CG	5.41	127.74	115.30
1	B	631	LEU	CA-CB-CG	5.41	127.74	115.30
1	D	631	LEU	CA-CB-CG	5.41	127.73	115.30
1	C	631	LEU	CA-CB-CG	5.40	127.72	115.30
1	A	3880	LEU	CA-CB-CG	5.39	127.70	115.30
1	B	3880	LEU	CA-CB-CG	5.38	127.67	115.30
1	D	3880	LEU	CA-CB-CG	5.38	127.67	115.30
1	C	3880	LEU	CA-CB-CG	5.37	127.64	115.30
1	B	1630	LEU	CA-CB-CG	5.18	127.23	115.30
1	C	1630	LEU	CA-CB-CG	5.18	127.23	115.30
1	D	1630	LEU	CA-CB-CG	5.17	127.19	115.30
1	A	1630	LEU	CA-CB-CG	5.17	127.19	115.30
1	D	4833	GLU	N-CA-C	-5.17	97.05	111.00
1	B	2081	LEU	CA-CB-CG	5.12	127.08	115.30
1	A	2081	LEU	CA-CB-CG	5.11	127.06	115.30
1	D	2081	LEU	CA-CB-CG	5.11	127.05	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	2081	LEU	CA-CB-CG	5.10	127.03	115.30
1	C	1667	LEU	CA-CB-CG	5.06	126.94	115.30
1	D	1667	LEU	CA-CB-CG	5.04	126.91	115.30
1	B	1667	LEU	CA-CB-CG	5.04	126.89	115.30
1	A	1667	LEU	CA-CB-CG	5.03	126.87	115.30
1	D	456	LEU	CA-CB-CG	5.03	126.86	115.30
1	C	456	LEU	CA-CB-CG	5.01	126.83	115.30
1	B	456	LEU	CA-CB-CG	5.01	126.83	115.30
1	A	456	LEU	CA-CB-CG	5.01	126.81	115.30

There are no chirality outliers.

All (148) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1266	GLU	Peptide
1	A	141	ASP	Peptide
1	A	142	LYS	Peptide
1	A	1476	VAL	Peptide
1	A	1579	VAL	Peptide
1	A	1604	LEU	Peptide
1	A	1635	GLU	Peptide
1	A	1756	SER	Peptide
1	A	1777	GLN	Peptide
1	A	1835	HIS	Peptide
1	A	1847	GLU	Peptide
1	A	2075	VAL	Peptide
1	A	221	SER	Peptide
1	A	2232	SER	Peptide
1	A	2248	VAL	Peptide
1	A	2293	PRO	Peptide
1	A	2462	CYS	Peptide
1	A	3634	GLU	Peptide
1	A	3847	LEU	Peptide
1	A	3849	GLU	Peptide
1	A	3926	GLN	Peptide
1	A	4075	GLU	Peptide
1	A	4085	VAL	Peptide
1	A	4123	ALA	Peptide
1	A	4146	ILE	Peptide
1	A	4594	LEU	Peptide
1	A	4627	ILE	Peptide
1	A	4644	ASN	Peptide

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Mol	Chain	Res	Type	Group
1	A	4787	PHE	Peptide
1	A	4914	HIS	Peptide
1	A	4915	ASN	Peptide
1	A	518	ALA	Peptide
1	A	729	GLY	Peptide
1	A	775	VAL	Peptide
1	A	816	PRO	Peptide
1	A	818	GLY	Peptide
1	A	819	TYR	Peptide
1	B	1266	GLU	Peptide
1	B	141	ASP	Peptide
1	B	142	LYS	Peptide
1	B	1476	VAL	Peptide
1	B	1579	VAL	Peptide
1	B	1604	LEU	Peptide
1	B	1635	GLU	Peptide
1	B	1756	SER	Peptide
1	B	1777	GLN	Peptide
1	B	1835	HIS	Peptide
1	B	1847	GLU	Peptide
1	B	2075	VAL	Peptide
1	B	221	SER	Peptide
1	B	2232	SER	Peptide
1	B	2248	VAL	Peptide
1	B	2293	PRO	Peptide
1	B	2462	CYS	Peptide
1	B	3634	GLU	Peptide
1	B	3847	LEU	Peptide
1	B	3849	GLU	Peptide
1	B	3926	GLN	Peptide
1	B	4075	GLU	Peptide
1	B	4085	VAL	Peptide
1	B	4123	ALA	Peptide
1	B	4146	ILE	Peptide
1	B	4594	LEU	Peptide
1	B	4627	ILE	Peptide
1	B	4644	ASN	Peptide
1	B	4787	PHE	Peptide
1	B	4914	HIS	Peptide
1	B	4915	ASN	Peptide
1	B	518	ALA	Peptide
1	B	729	GLY	Peptide

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Mol	Chain	Res	Type	Group
1	B	775	VAL	Peptide
1	B	816	PRO	Peptide
1	B	818	GLY	Peptide
1	B	819	TYR	Peptide
1	C	1266	GLU	Peptide
1	C	141	ASP	Peptide
1	C	142	LYS	Peptide
1	C	1476	VAL	Peptide
1	C	1579	VAL	Peptide
1	C	1604	LEU	Peptide
1	C	1635	GLU	Peptide
1	C	1756	SER	Peptide
1	C	1777	GLN	Peptide
1	C	1835	HIS	Peptide
1	C	1847	GLU	Peptide
1	C	2075	VAL	Peptide
1	C	221	SER	Peptide
1	C	2232	SER	Peptide
1	C	2248	VAL	Peptide
1	C	2293	PRO	Peptide
1	C	2462	CYS	Peptide
1	C	3634	GLU	Peptide
1	C	3847	LEU	Peptide
1	C	3849	GLU	Peptide
1	C	3926	GLN	Peptide
1	C	4075	GLU	Peptide
1	C	4085	VAL	Peptide
1	C	4123	ALA	Peptide
1	C	4146	ILE	Peptide
1	C	4594	LEU	Peptide
1	C	4627	ILE	Peptide
1	C	4644	ASN	Peptide
1	C	4787	PHE	Peptide
1	C	4914	HIS	Peptide
1	C	4915	ASN	Peptide
1	C	518	ALA	Peptide
1	C	729	GLY	Peptide
1	C	775	VAL	Peptide
1	C	816	PRO	Peptide
1	C	818	GLY	Peptide
1	C	819	TYR	Peptide
1	D	1266	GLU	Peptide

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Mol	Chain	Res	Type	Group
1	D	141	ASP	Peptide
1	D	142	LYS	Peptide
1	D	1476	VAL	Peptide
1	D	1579	VAL	Peptide
1	D	1604	LEU	Peptide
1	D	1635	GLU	Peptide
1	D	1756	SER	Peptide
1	D	1777	GLN	Peptide
1	D	1835	HIS	Peptide
1	D	1847	GLU	Peptide
1	D	2075	VAL	Peptide
1	D	221	SER	Peptide
1	D	2232	SER	Peptide
1	D	2248	VAL	Peptide
1	D	2293	PRO	Peptide
1	D	2462	CYS	Peptide
1	D	3634	GLU	Peptide
1	D	3847	LEU	Peptide
1	D	3849	GLU	Peptide
1	D	3926	GLN	Peptide
1	D	4075	GLU	Peptide
1	D	4085	VAL	Peptide
1	D	4123	ALA	Peptide
1	D	4146	ILE	Peptide
1	D	4594	LEU	Peptide
1	D	4627	ILE	Peptide
1	D	4644	ASN	Peptide
1	D	4787	PHE	Peptide
1	D	4914	HIS	Peptide
1	D	4915	ASN	Peptide
1	D	518	ALA	Peptide
1	D	729	GLY	Peptide
1	D	775	VAL	Peptide
1	D	816	PRO	Peptide
1	D	818	GLY	Peptide
1	D	819	TYR	Peptide

5.2 Too-close contacts (i)

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

the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	26546	0	25084	786	0
1	B	26546	0	25084	830	0
1	C	26546	0	25084	831	0
1	D	26543	0	25075	820	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
All	All	106185	0	100327	3072	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 (3072) 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:D:4820:VAL:O	1:D:4824:ALA:HB2	1.31	1.25
1:A:4783:THR:HG23	1:A:4817:HIS:CD2	1.75	1.21
1:B:4811:LEU:HB2	1:C:4519:LEU:CD1	1.71	1.18
1:A:4519:LEU:HD12	1:C:4811:LEU:HB2	1.28	1.16
1:B:4519:LEU:HD11	1:D:4811:LEU:HD13	1.28	1.13
1:B:4832:ILE:HD11	1:B:4844:ARG:HD3	1.20	1.12
1:C:4521:TYR:CE1	1:C:4561:VAL:CG2	2.33	1.12
1:A:4774:LEU:HD22	1:D:4754:LEU:CD2	1.79	1.12
1:B:4849:ILE:HG22	1:C:4822:VAL:CG1	1.80	1.11
1:C:4820:VAL:O	1:C:4820:VAL:CG1	1.99	1.10
1:A:4849:ILE:HG22	1:D:4822:VAL:HG11	1.22	1.09
1:A:4754:LEU:CD2	1:C:4774:LEU:HD22	1.83	1.09
1:B:4519:LEU:HB2	1:D:4814:TYR:CE2	1.88	1.08
1:A:4774:LEU:CD2	1:D:4754:LEU:HD22	1.85	1.07
1:A:81:MET:SD	1:A:102:MET:HA	1.95	1.07
1:B:4808:ASP:HB3	1:C:4523:VAL:CG2	1.84	1.07
1:B:4849:ILE:HG22	1:C:4822:VAL:HG11	1.14	1.07
1:B:4774:LEU:HD22	1:C:4754:LEU:CD2	1.84	1.06
1:A:4849:ILE:HG22	1:D:4822:VAL:CG1	1.84	1.06
1:C:4820:VAL:O	1:C:4820:VAL:HG12	1.46	1.05
1:A:4519:LEU:CD1	1:C:4811:LEU:HB2	1.86	1.05
1:B:4867:ILE:HG21	1:D:4861:ALA:HB1	1.08	1.04
1:C:4520:PHE:HB3	1:C:4562:LEU:CD2	1.87	1.04
1:C:4521:TYR:CE1	1:C:4561:VAL:HG22	1.92	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4519:LEU:CD1	1:D:4811:LEU:HD13	1.85	1.04
1:B:4849:ILE:CG2	1:C:4822:VAL:CG1	2.36	1.03
1:A:4520:PHE:HB3	1:A:4562:LEU:HD23	1.38	1.03
1:A:4754:LEU:HD22	1:C:4774:LEU:CD2	1.89	1.03
1:B:4754:LEU:HD22	1:D:4774:LEU:HD22	1.04	1.02
1:B:4808:ASP:HB3	1:C:4523:VAL:HG23	1.41	1.01
1:B:4774:LEU:CD2	1:C:4754:LEU:HD22	1.89	1.01
1:A:4867:ILE:HG21	1:C:4861:ALA:HB1	1.05	1.01
1:A:190:ARG:NH1	1:D:2423:ILE:HG23	1.75	1.00
1:B:4832:ILE:CD1	1:B:4844:ARG:HD3	1.90	1.00
1:B:4754:LEU:CD2	1:D:4774:LEU:HD22	1.91	1.00
1:B:4861:ALA:HB1	1:C:4867:ILE:HG21	1.06	1.00
1:B:4868:ILE:HG12	1:D:4865:GLY:HA2	1.42	0.99
1:A:4861:ALA:HB1	1:D:4867:ILE:HG21	1.02	0.99
1:A:4519:LEU:CD1	1:C:4811:LEU:HD13	1.94	0.98
1:A:4519:LEU:HD11	1:C:4811:LEU:HD13	1.44	0.97
1:B:4774:LEU:HD22	1:C:4754:LEU:HD22	0.98	0.97
1:C:4521:TYR:CE1	1:C:4561:VAL:HG23	1.98	0.97
1:A:190:ARG:HH12	1:D:2423:ILE:HG23	1.29	0.96
1:A:4849:ILE:CG2	1:D:4822:VAL:CG1	2.44	0.96
1:B:4811:LEU:HB2	1:C:4519:LEU:HD13	1.43	0.96
1:A:190:ARG:HH12	1:D:2423:ILE:CG2	1.77	0.96
1:A:4754:LEU:HD22	1:C:4774:LEU:HD22	0.98	0.95
1:A:4783:THR:CG2	1:A:4817:HIS:CD2	2.48	0.95
1:A:190:ARG:NH1	1:D:2423:ILE:CG2	2.29	0.95
1:B:190:ARG:NH1	1:C:2423:ILE:HG23	1.81	0.95
1:B:4754:LEU:HD22	1:D:4774:LEU:CD2	1.96	0.95
1:B:4519:LEU:CB	1:D:4814:TYR:HE2	1.80	0.94
1:B:4849:ILE:CG2	1:C:4822:VAL:HG11	1.97	0.94
1:B:4820:VAL:O	1:B:4824:ALA:HB2	1.64	0.94
1:B:4519:LEU:HD12	1:D:4811:LEU:HB2	1.50	0.94
1:C:4783:THR:HG23	1:C:4817:HIS:CD2	2.03	0.94
1:C:4521:TYR:HE1	1:C:4561:VAL:HG23	1.29	0.94
1:A:4817:HIS:ND1	1:A:4828:ILE:HD11	1.82	0.94
1:A:4861:ALA:CB	1:D:4867:ILE:HG21	1.96	0.94
1:A:2423:ILE:HG23	1:C:190:ARG:NH1	1.83	0.93
1:C:4820:VAL:O	1:C:4824:ALA:HB2	1.68	0.93
1:A:4865:GLY:HA2	1:D:4868:ILE:HG12	1.51	0.93
1:B:4519:LEU:HB2	1:D:4814:TYR:HE2	1.26	0.93
1:A:4868:ILE:HG12	1:C:4865:GLY:HA2	1.50	0.92
1:B:2423:ILE:HG23	1:D:190:ARG:NH1	1.84	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4832:ILE:HD11	1:A:4844:ARG:HD3	1.50	0.92
1:B:4865:GLY:HA2	1:C:4868:ILE:HG12	1.50	0.92
1:B:4822:VAL:HB	1:D:4849:ILE:CG2	1.99	0.91
1:B:4783:THR:HG23	1:B:4817:HIS:CD2	2.05	0.91
1:B:4868:ILE:HG12	1:D:4865:GLY:CA	2.00	0.91
1:A:4823:ARG:CB	1:C:4849:ILE:HD12	2.00	0.91
1:A:4774:LEU:HD22	1:D:4754:LEU:HD22	0.93	0.91
1:B:2423:ILE:CG2	1:D:190:ARG:HH12	1.84	0.91
1:A:4520:PHE:HB3	1:A:4562:LEU:CD2	2.00	0.91
1:A:2423:ILE:CG2	1:C:190:ARG:HH12	1.84	0.90
1:A:4861:ALA:HB1	1:D:4867:ILE:CG2	1.97	0.90
1:A:4867:ILE:HG21	1:C:4861:ALA:CB	1.99	0.90
1:B:190:ARG:HH12	1:C:2423:ILE:CG2	1.84	0.90
1:B:190:ARG:NH1	1:C:2423:ILE:CG2	2.35	0.89
1:B:2423:ILE:CG2	1:D:190:ARG:NH1	2.35	0.89
1:A:2423:ILE:HG23	1:C:190:ARG:HH12	1.37	0.88
1:B:4861:ALA:CB	1:C:4867:ILE:HG21	2.00	0.88
1:B:4523:VAL:HG23	1:D:4808:ASP:HB3	1.53	0.88
1:A:4822:VAL:CG1	1:C:4853:PHE:HB2	2.03	0.88
1:B:81:MET:SD	1:B:102:MET:HA	2.14	0.88
1:A:2423:ILE:CG2	1:C:190:ARG:NH1	2.36	0.87
1:B:4519:LEU:CD1	1:D:4811:LEU:CD1	2.52	0.86
1:B:4066:PHE:O	1:B:4070:CYS:HB2	1.76	0.86
1:D:4783:THR:HG23	1:D:4817:HIS:CD2	2.09	0.86
1:B:190:ARG:HH12	1:C:2423:ILE:HG23	1.37	0.86
1:A:4184:LYS:CB	1:D:4904:HIS:CE1	2.59	0.86
1:A:4867:ILE:CG2	1:C:4861:ALA:HB1	1.99	0.85
1:B:4861:ALA:HB1	1:C:4867:ILE:CG2	2.00	0.85
1:D:4066:PHE:O	1:D:4070:CYS:HB2	1.76	0.85
1:A:4822:VAL:HB	1:C:4849:ILE:HG22	1.58	0.85
1:B:4867:ILE:CG2	1:D:4861:ALA:HB1	2.02	0.85
1:A:4904:HIS:CE1	1:C:4184:LYS:CB	2.59	0.85
1:C:4066:PHE:O	1:C:4070:CYS:HB2	1.76	0.85
1:B:4822:VAL:HB	1:D:4849:ILE:HG22	1.56	0.85
1:A:4849:ILE:CG2	1:D:4822:VAL:HG11	2.05	0.84
1:B:4865:GLY:CA	1:C:4868:ILE:HG12	2.06	0.84
1:B:4519:LEU:CD1	1:D:4811:LEU:HB2	2.07	0.84
1:B:4833:GLU:HB3	1:B:4844:ARG:HH22	1.42	0.84
1:A:143:LEU:CB	1:D:2426:SER:HB3	2.07	0.84
1:A:4066:PHE:O	1:A:4070:CYS:HB2	1.76	0.84
1:C:4783:THR:HG23	1:C:4817:HIS:CG	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2423:ILE:HG23	1:D:190:ARG:HH12	1.40	0.83
1:A:4868:ILE:HG12	1:C:4865:GLY:CA	2.06	0.83
1:B:4184:LYS:CB	1:C:4904:HIS:CE1	2.61	0.83
1:A:4865:GLY:CA	1:D:4868:ILE:HG12	2.09	0.82
1:B:4849:ILE:HG23	1:C:4822:VAL:HG12	1.61	0.82
1:C:4520:PHE:O	1:C:4561:VAL:HG13	1.80	0.81
1:B:4822:VAL:HG13	1:D:4853:PHE:HB2	1.62	0.81
1:C:4813:CYS:SG	1:C:4817:HIS:HD2	2.03	0.81
1:A:4783:THR:HG23	1:A:4817:HIS:CG	2.16	0.81
1:A:4519:LEU:HD12	1:C:4811:LEU:CB	2.10	0.81
1:C:4521:TYR:CD1	1:C:4561:VAL:HG22	2.16	0.81
1:C:4832:ILE:HD11	1:C:4844:ARG:CD	2.10	0.81
1:A:4519:LEU:CD1	1:C:4811:LEU:CB	2.59	0.81
1:B:4819:TYR:HA	1:D:4849:ILE:HG21	1.63	0.80
1:B:4867:ILE:HG21	1:D:4861:ALA:CB	2.03	0.80
1:C:1799:VAL:O	1:C:1803:SER:HB3	1.82	0.80
1:A:1799:VAL:O	1:A:1803:SER:HB3	1.82	0.80
1:B:1799:VAL:O	1:B:1803:SER:HB3	1.82	0.80
1:D:1799:VAL:O	1:D:1803:SER:HB3	1.82	0.80
1:C:4520:PHE:HB3	1:C:4562:LEU:HD22	1.61	0.80
1:D:4820:VAL:O	1:D:4820:VAL:CG1	2.31	0.79
1:B:4832:ILE:CD1	1:B:4844:ARG:CD	2.59	0.79
1:D:4627:ILE:O	1:D:4631:TRP:HB2	1.83	0.79
1:A:4843:TYR:O	1:A:4847:PHE:HB2	1.83	0.79
1:B:4904:HIS:CE1	1:D:4184:LYS:CB	2.66	0.79
1:A:4627:ILE:O	1:A:4631:TRP:HB2	1.83	0.78
1:C:4843:TYR:O	1:C:4847:PHE:HB2	1.83	0.78
1:A:123:HIS:HD2	1:A:126:SER:H	1.30	0.78
1:B:4817:HIS:ND1	1:B:4828:ILE:HD11	1.98	0.78
1:B:143:LEU:CB	1:C:2426:SER:HB3	2.13	0.78
1:B:4627:ILE:O	1:B:4631:TRP:HB2	1.83	0.78
1:B:4843:TYR:O	1:B:4847:PHE:HB2	1.83	0.78
1:D:4843:TYR:O	1:D:4847:PHE:HB2	1.83	0.78
1:A:2426:SER:HB3	1:C:143:LEU:CB	2.14	0.78
1:D:123:HIS:HD2	1:D:126:SER:H	1.30	0.78
1:C:4018:PHE:O	1:C:4022:LEU:HB2	1.85	0.77
1:D:4561:VAL:HG22	1:D:4562:LEU:N	1.99	0.77
1:B:4018:PHE:O	1:B:4022:LEU:HB2	1.85	0.77
1:C:4627:ILE:O	1:C:4631:TRP:HB2	1.83	0.77
1:A:4018:PHE:O	1:A:4022:LEU:HB2	1.85	0.77
1:B:2426:SER:HB3	1:D:143:LEU:CB	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:123:HIS:HD2	1:B:126:SER:H	1.30	0.76
1:B:4808:ASP:HB3	1:C:4523:VAL:HG21	1.66	0.76
1:D:4018:PHE:O	1:D:4022:LEU:HB2	1.85	0.76
1:C:123:HIS:HD2	1:C:126:SER:H	1.30	0.76
1:D:4820:VAL:O	1:D:4824:ALA:CB	2.23	0.76
1:A:4519:LEU:CD1	1:C:4811:LEU:CD1	2.63	0.75
1:A:4904:HIS:NE2	1:C:4184:LYS:CB	2.49	0.75
1:B:4834:ASP:N	1:B:4834:ASP:OD1	2.19	0.75
1:A:706:TYR:HB2	1:A:709:GLY:HA3	1.69	0.75
1:B:4175:PHE:O	1:B:4179:ASN:HB2	1.86	0.75
1:C:706:TYR:HB2	1:C:709:GLY:HA3	1.69	0.75
1:C:4175:PHE:O	1:C:4179:ASN:HB2	1.86	0.74
1:B:706:TYR:HB2	1:B:709:GLY:HA3	1.69	0.74
1:B:4519:LEU:HD13	1:D:4811:LEU:CD1	2.17	0.74
1:D:4820:VAL:O	1:D:4820:VAL:HG12	1.87	0.74
1:B:4822:VAL:CB	1:D:4849:ILE:HG22	2.17	0.74
1:D:4175:PHE:O	1:D:4179:ASN:HB2	1.86	0.74
1:C:4832:ILE:HD11	1:C:4844:ARG:HD3	1.70	0.74
1:D:706:TYR:HB2	1:D:709:GLY:HA3	1.69	0.74
1:B:4811:LEU:CB	1:C:4519:LEU:HD13	2.16	0.74
1:B:2344:LEU:O	1:B:2348:MET:HB2	1.88	0.74
1:B:4820:VAL:O	1:B:4824:ALA:CB	2.34	0.74
1:C:4813:CYS:SG	1:C:4817:HIS:CD2	2.81	0.74
1:A:4175:PHE:O	1:A:4179:ASN:HB2	1.86	0.73
1:C:2344:LEU:O	1:C:2348:MET:HB2	1.88	0.73
1:A:4783:THR:CG2	1:A:4817:HIS:HD2	2.01	0.73
1:C:4517:ILE:HA	1:C:4520:PHE:HE2	1.52	0.73
1:B:4184:LYS:CB	1:C:4904:HIS:NE2	2.51	0.73
1:D:2344:LEU:O	1:D:2348:MET:HB2	1.88	0.73
1:D:4832:ILE:HD12	1:D:4848:ASP:OD2	1.88	0.73
1:A:4820:VAL:O	1:A:4824:ALA:HB2	1.90	0.72
1:C:4832:ILE:HD12	1:C:4848:ASP:OD2	1.88	0.72
1:A:4184:LYS:CB	1:D:4904:HIS:NE2	2.52	0.72
1:D:4813:CYS:SG	1:D:4817:HIS:HD2	2.12	0.72
1:C:4783:THR:CG2	1:C:4817:HIS:CD2	2.73	0.72
1:D:4783:THR:HG23	1:D:4817:HIS:CG	2.25	0.72
1:B:4849:ILE:CG2	1:C:4822:VAL:HG12	2.18	0.72
1:B:4904:HIS:NE2	1:D:4184:LYS:CB	2.53	0.72
1:A:4820:VAL:O	1:A:4824:ALA:N	2.23	0.71
1:B:776:GLN:HB3	1:B:1470:GLY:HA3	1.72	0.71
1:B:4811:LEU:HB2	1:C:4519:LEU:HD12	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2344:LEU:O	1:A:2348:MET:HB2	1.88	0.71
1:B:4517:ILE:HA	1:B:4520:PHE:CE2	2.25	0.71
1:C:4834:ASP:OD1	1:C:4834:ASP:N	2.23	0.71
1:D:776:GLN:HB3	1:D:1470:GLY:HA3	1.72	0.71
1:D:4817:HIS:ND1	1:D:4828:ILE:HD11	2.05	0.71
1:B:4808:ASP:CB	1:C:4523:VAL:CG2	2.67	0.71
1:D:4517:ILE:HA	1:D:4520:PHE:CE2	2.26	0.71
1:C:4002:ASP:HA	1:C:4115:ARG:HH22	1.56	0.70
1:D:4517:ILE:HA	1:D:4520:PHE:HE2	1.56	0.70
1:B:4832:ILE:HD11	1:B:4844:ARG:CD	2.11	0.70
1:A:4822:VAL:HB	1:C:4849:ILE:CG2	2.22	0.70
1:C:776:GLN:HB3	1:C:1470:GLY:HA3	1.72	0.70
1:B:4822:VAL:CG1	1:D:4849:ILE:HG22	2.21	0.70
1:D:4002:ASP:HA	1:D:4115:ARG:HH22	1.56	0.70
1:A:4864:GLN:HG3	1:D:4868:ILE:HD11	1.74	0.70
1:A:776:GLN:HB3	1:A:1470:GLY:HA3	1.72	0.70
1:A:4002:ASP:HA	1:A:4115:ARG:HH22	1.56	0.70
1:A:4522:LYS:HG2	1:A:4560:TYR:OH	1.92	0.70
1:B:3729:GLN:HE22	1:B:3769:GLY:H	1.40	0.70
1:B:4002:ASP:HA	1:B:4115:ARG:HH22	1.56	0.70
1:B:4519:LEU:HD12	1:D:4811:LEU:CB	2.22	0.70
1:C:4562:LEU:HG	1:C:4563:GLU:N	2.06	0.70
1:D:4561:VAL:CG2	1:D:4562:LEU:N	2.55	0.69
1:B:1124:PRO:HB2	1:B:1252:SER:HB3	1.74	0.69
1:B:4808:ASP:CB	1:C:4523:VAL:HG21	2.22	0.69
1:C:4519:LEU:HD12	1:C:4519:LEU:O	1.92	0.69
1:D:3729:GLN:HE22	1:D:3769:GLY:H	1.40	0.69
1:C:1124:PRO:HB2	1:C:1252:SER:HB3	1.75	0.69
1:A:190:ARG:NH1	1:D:2423:ILE:HG21	2.07	0.69
1:B:4519:LEU:CD1	1:D:4811:LEU:CB	2.70	0.69
1:D:4832:ILE:HD11	1:D:4844:ARG:CD	2.23	0.69
1:D:1124:PRO:HB2	1:D:1252:SER:HB3	1.74	0.69
1:A:601:LEU:HD11	1:A:607:ASN:H	1.58	0.68
1:B:2423:ILE:HG21	1:D:190:ARG:NH1	2.08	0.68
1:B:4796:LYS:H	1:B:4805:MET:HB3	1.59	0.68
1:C:694:ARG:HB2	1:C:793:SER:HB2	1.75	0.68
1:B:694:ARG:HB2	1:B:793:SER:HB2	1.75	0.68
1:A:4849:ILE:HG23	1:D:4822:VAL:HG12	1.74	0.68
1:B:4783:THR:CG2	1:B:4817:HIS:CD2	2.77	0.68
1:C:1642:LEU:HD21	1:C:1691:ASN:HB3	1.76	0.68
1:D:4796:LYS:H	1:D:4805:MET:HB3	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4868:ILE:HD11	1:C:4864:GLN:CG	2.24	0.68
1:A:1642:LEU:HD21	1:A:1691:ASN:HB3	1.76	0.68
1:A:4864:GLN:CG	1:D:4868:ILE:HD11	2.23	0.68
1:A:4832:ILE:HD11	1:A:4844:ARG:CD	2.23	0.68
1:C:3729:GLN:HE22	1:C:3769:GLY:H	1.40	0.68
1:D:1165:MET:HB2	1:D:1174:MET:HB2	1.76	0.68
1:A:694:ARG:HB2	1:A:793:SER:HB2	1.75	0.68
1:A:1124:PRO:HB2	1:A:1252:SER:HB3	1.74	0.68
1:A:1165:MET:HB2	1:A:1174:MET:HB2	1.76	0.68
1:B:601:LEU:HD11	1:B:607:ASN:H	1.58	0.68
1:C:1165:MET:HB2	1:C:1174:MET:HB2	1.76	0.68
1:B:1165:MET:HB2	1:B:1174:MET:HB2	1.76	0.68
1:A:3729:GLN:HE22	1:A:3769:GLY:H	1.40	0.68
1:C:4796:LYS:H	1:C:4805:MET:HB3	1.59	0.68
1:B:4522:LYS:HG2	1:B:4560:TYR:OH	1.93	0.67
1:D:4834:ASP:N	1:D:4834:ASP:OD1	2.27	0.67
1:B:1642:LEU:HD21	1:B:1691:ASN:HB3	1.76	0.67
1:D:601:LEU:HD11	1:D:607:ASN:H	1.58	0.67
1:D:694:ARG:HB2	1:D:793:SER:HB2	1.75	0.67
1:A:4820:VAL:O	1:A:4824:ALA:CB	2.42	0.67
1:B:4808:ASP:CG	1:C:4523:VAL:HG21	2.14	0.67
1:C:601:LEU:HD11	1:C:607:ASN:H	1.58	0.67
1:C:712:GLU:HA	1:C:1638:SER:HB2	1.77	0.67
1:D:502:ILE:O	1:D:561:ARG:NH1	2.27	0.67
1:A:4868:ILE:HD11	1:C:4864:GLN:HG3	1.76	0.67
1:C:502:ILE:O	1:C:561:ARG:NH1	2.27	0.66
1:B:3952:PHE:HB3	1:B:3976:GLN:HE21	1.61	0.66
1:D:712:GLU:HA	1:D:1638:SER:HB2	1.77	0.66
1:A:712:GLU:HA	1:A:1638:SER:HB2	1.77	0.66
1:A:4519:LEU:HD13	1:C:4811:LEU:HD13	1.75	0.66
1:A:4796:LYS:H	1:A:4805:MET:HB3	1.59	0.66
1:B:680:ASP:HB2	1:B:799:LYS:HG3	1.78	0.66
1:B:4864:GLN:CG	1:C:4868:ILE:HD11	2.25	0.66
1:C:4517:ILE:HA	1:C:4520:PHE:CE2	2.31	0.66
1:D:1642:LEU:HD21	1:D:1691:ASN:HB3	1.76	0.66
1:D:2308:PHE:HA	1:D:2313:SER:HA	1.78	0.66
1:A:4519:LEU:HD13	1:C:4811:LEU:CD1	2.25	0.66
1:B:2308:PHE:HA	1:B:2313:SER:HA	1.78	0.66
1:C:2308:PHE:HA	1:C:2313:SER:HA	1.78	0.66
1:C:3952:PHE:HB3	1:C:3976:GLN:HE21	1.61	0.66
1:A:1819:VAL:O	1:A:1823:LYS:HB2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3727:TYR:O	1:B:3731:ARG:HB2	1.96	0.66
1:D:3952:PHE:HB3	1:D:3976:GLN:HE21	1.61	0.66
1:A:3727:TYR:O	1:A:3731:ARG:HB2	1.96	0.66
1:C:1819:VAL:O	1:C:1823:LYS:HB2	1.96	0.66
1:C:3727:TYR:O	1:C:3731:ARG:HB2	1.96	0.66
1:D:3727:TYR:O	1:D:3731:ARG:HB2	1.96	0.66
1:B:1819:VAL:O	1:B:1823:LYS:HB2	1.96	0.66
1:B:4810:MET:CB	1:C:4519:LEU:HA	2.25	0.66
1:D:3924:TYR:HB3	1:D:3932:ASN:HD21	1.61	0.65
1:A:2308:PHE:HA	1:A:2313:SER:HA	1.78	0.65
1:B:712:GLU:HA	1:B:1638:SER:HB2	1.77	0.65
1:A:2791:GLU:H	1:A:2903:ALA:HB3	1.62	0.65
1:A:3924:TYR:HB3	1:A:3932:ASN:HD21	1.61	0.65
1:A:3952:PHE:HB3	1:A:3976:GLN:HE21	1.61	0.65
1:B:2791:GLU:H	1:B:2903:ALA:HB3	1.62	0.65
1:C:802:PHE:HB2	1:C:1617:TRP:HB2	1.79	0.65
1:C:3748:SER:HB2	1:C:3751:GLU:HB2	1.79	0.65
1:D:1819:VAL:O	1:D:1823:LYS:HB2	1.96	0.65
1:B:502:ILE:O	1:B:561:ARG:NH1	2.27	0.65
1:B:81:MET:SD	1:B:102:MET:CA	2.85	0.65
1:B:4523:VAL:CG2	1:D:4808:ASP:HB3	2.25	0.65
1:C:4520:PHE:HB3	1:C:4562:LEU:HD23	1.76	0.65
1:C:3924:TYR:HB3	1:C:3932:ASN:HD21	1.61	0.65
1:B:3748:SER:HB2	1:B:3751:GLU:HB2	1.78	0.65
1:B:4864:GLN:HG3	1:C:4868:ILE:HD11	1.77	0.65
1:C:680:ASP:HB2	1:C:799:LYS:HG3	1.78	0.65
1:C:1699:ARG:NH1	1:C:1816:PHE:O	2.30	0.65
1:A:1699:ARG:NH1	1:A:1816:PHE:O	2.30	0.65
1:B:190:ARG:NH1	1:C:2423:ILE:HG21	2.11	0.65
1:C:70:GLU:HB2	1:C:120:LEU:HB3	1.79	0.65
1:B:766:ILE:HB	1:B:779:PHE:HB2	1.79	0.65
1:B:3924:TYR:HB3	1:B:3932:ASN:HD21	1.61	0.65
1:B:81:MET:SD	1:B:102:MET:CB	2.86	0.64
1:C:2791:GLU:H	1:C:2903:ALA:HB3	1.62	0.64
1:D:2791:GLU:H	1:D:2903:ALA:HB3	1.62	0.64
1:A:70:GLU:HB2	1:A:120:LEU:HB3	1.79	0.64
1:A:680:ASP:HB2	1:A:799:LYS:HG3	1.78	0.64
1:D:1699:ARG:NH1	1:D:1816:PHE:O	2.30	0.64
1:B:1699:ARG:NH1	1:B:1816:PHE:O	2.30	0.64
1:C:1137:PHE:HA	1:C:1144:ARG:HA	1.80	0.64
1:A:2423:ILE:HG21	1:C:190:ARG:NH1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4874:LEU:O	1:A:4878:GLN:NE2	2.31	0.64
1:B:802:PHE:HB2	1:B:1617:TRP:HB2	1.79	0.64
1:B:1137:PHE:HA	1:B:1144:ARG:HA	1.80	0.64
1:C:756:SER:HB3	1:C:769:ARG:HB2	1.80	0.64
1:D:766:ILE:HB	1:D:779:PHE:HB2	1.79	0.64
1:C:766:ILE:HB	1:C:779:PHE:HB2	1.79	0.64
1:D:680:ASP:HB2	1:D:799:LYS:HG3	1.78	0.64
1:D:3748:SER:HB2	1:D:3751:GLU:HB2	1.78	0.64
1:B:4511:ALA:HA	1:B:4514:ILE:HD12	1.80	0.63
1:C:4569:MET:O	1:C:4573:LEU:HB2	1.98	0.63
1:D:4783:THR:CG2	1:D:4817:HIS:CD2	2.81	0.63
1:A:756:SER:HB3	1:A:769:ARG:HB2	1.80	0.63
1:B:4874:LEU:O	1:B:4878:GLN:NE2	2.31	0.63
1:C:1256:PRO:HD2	1:C:1451:HIS:HB3	1.79	0.63
1:B:70:GLU:HB2	1:B:120:LEU:HB3	1.79	0.63
1:B:4822:VAL:CG1	1:D:4849:ILE:O	2.45	0.63
1:C:4874:LEU:O	1:C:4878:GLN:NE2	2.31	0.63
1:D:802:PHE:HB2	1:D:1617:TRP:HB2	1.79	0.63
1:C:4817:HIS:ND1	1:C:4828:ILE:HD11	2.13	0.63
1:D:4649:PHE:HB3	1:D:4653:LYS:HE3	1.81	0.63
1:D:4813:CYS:SG	1:D:4817:HIS:CD2	2.91	0.63
1:A:4649:PHE:HB3	1:A:4653:LYS:HE3	1.81	0.63
1:B:1256:PRO:HD2	1:B:1451:HIS:HB3	1.79	0.63
1:B:1258:PHE:HB2	1:B:1593:HIS:HB3	1.80	0.63
1:A:1137:PHE:HA	1:A:1144:ARG:HA	1.80	0.63
1:B:756:SER:HB3	1:B:769:ARG:HB2	1.80	0.63
1:B:4517:ILE:HA	1:B:4520:PHE:HE2	1.61	0.63
1:C:4889:CYS:O	1:C:4893:GLY:N	2.32	0.63
1:D:4874:LEU:O	1:D:4878:GLN:NE2	2.31	0.63
1:C:4511:ALA:HA	1:C:4514:ILE:HD12	1.80	0.63
1:D:1258:PHE:HB2	1:D:1593:HIS:HB3	1.80	0.63
1:A:1256:PRO:HD2	1:A:1451:HIS:HB3	1.79	0.63
1:A:3748:SER:HB2	1:A:3751:GLU:HB2	1.79	0.63
1:C:4520:PHE:CB	1:C:4562:LEU:CD2	2.72	0.63
1:D:70:GLU:HB2	1:D:120:LEU:HB3	1.79	0.63
1:D:1256:PRO:HD2	1:D:1451:HIS:HB3	1.79	0.63
1:A:4569:MET:O	1:A:4573:LEU:HB2	1.98	0.63
1:D:2158:GLN:O	1:D:3616:ARG:NH1	2.31	0.63
1:D:4511:ALA:HA	1:D:4514:ILE:HD12	1.80	0.63
1:A:2116:ASP:OD1	1:A:2153:ASN:ND2	2.32	0.62
1:B:2158:GLN:O	1:B:3616:ARG:NH1	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4868:ILE:HD11	1:D:4864:GLN:CG	2.28	0.62
1:C:2158:GLN:O	1:C:3616:ARG:NH1	2.32	0.62
1:D:4569:MET:O	1:D:4573:LEU:HB2	1.98	0.62
1:A:802:PHE:HB2	1:A:1617:TRP:HB2	1.79	0.62
1:A:2158:GLN:O	1:A:3616:ARG:NH1	2.31	0.62
1:A:4519:LEU:HD12	1:A:4519:LEU:O	1.99	0.62
1:D:756:SER:HB3	1:D:769:ARG:HB2	1.80	0.62
1:D:1116:GLY:HA3	1:D:1136:ALA:HA	1.82	0.62
1:D:2116:ASP:OD1	1:D:2153:ASN:ND2	2.32	0.62
1:B:3665:LEU:HD23	1:B:3735:ARG:HD3	1.81	0.62
1:C:3665:LEU:HD23	1:C:3735:ARG:HD3	1.81	0.62
1:D:1089:ARG:HH21	1:D:1600:PRO:HG3	1.65	0.62
1:A:766:ILE:HB	1:A:779:PHE:HB2	1.79	0.62
1:B:1729:MET:HG2	1:B:2110:ASN:HA	1.81	0.62
1:B:4569:MET:O	1:B:4573:LEU:HB2	1.98	0.62
1:B:4649:PHE:HB3	1:B:4653:LYS:HE3	1.81	0.62
1:A:81:MET:SD	1:A:102:MET:CA	2.80	0.62
1:A:1258:PHE:HB2	1:A:1593:HIS:HB3	1.80	0.62
1:A:2215:MET:HA	1:A:2218:HIS:HD2	1.65	0.62
1:C:4649:PHE:HB3	1:C:4653:LYS:HE3	1.81	0.62
1:D:1425:THR:N	1:D:1510:VAL:O	2.33	0.62
1:D:3767:LEU:HD21	1:D:3774:VAL:HB	1.82	0.62
1:A:1089:ARG:HH21	1:A:1600:PRO:HG3	1.65	0.62
1:A:1116:GLY:HA3	1:A:1136:ALA:HA	1.82	0.62
1:A:4184:LYS:HA	1:D:4904:HIS:NE2	2.14	0.62
1:B:2215:MET:HA	1:B:2218:HIS:HD2	1.65	0.62
1:D:1137:PHE:HA	1:D:1144:ARG:HA	1.79	0.62
1:D:1729:MET:HG2	1:D:2110:ASN:HA	1.81	0.62
1:A:4849:ILE:HG23	1:D:4822:VAL:CG1	2.26	0.62
1:C:25:THR:HB	1:C:32:GLN:HB3	1.82	0.62
1:C:1258:PHE:HB2	1:C:1593:HIS:HB3	1.80	0.62
1:A:1425:THR:N	1:A:1510:VAL:O	2.33	0.62
1:B:25:THR:HB	1:B:32:GLN:HB3	1.82	0.62
1:C:1089:ARG:HH21	1:C:1600:PRO:HG3	1.65	0.62
1:A:4828:ILE:HG23	1:A:4828:ILE:O	2.00	0.61
1:B:1116:GLY:HA3	1:B:1136:ALA:HA	1.82	0.61
1:C:4820:VAL:O	1:C:4820:VAL:HG13	1.97	0.61
1:C:4832:ILE:HD11	1:C:4844:ARG:HD2	1.79	0.61
1:B:4519:LEU:CB	1:D:4814:TYR:CE2	2.64	0.61
1:C:1729:MET:HG2	1:C:2110:ASN:HA	1.81	0.61
1:D:3665:LEU:HD23	1:D:3735:ARG:HD3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3665:LEU:HD23	1:A:3735:ARG:HD3	1.81	0.61
1:A:4511:ALA:HA	1:A:4514:ILE:HD12	1.80	0.61
1:C:4820:VAL:O	1:C:4824:ALA:CB	2.45	0.61
1:C:4905:GLY:O	1:C:4909:HIS:HB2	2.00	0.61
1:B:1089:ARG:HH21	1:B:1600:PRO:HG3	1.65	0.61
1:B:3767:LEU:HD21	1:B:3774:VAL:HB	1.82	0.61
1:B:4822:VAL:CG1	1:D:4853:PHE:HB2	2.30	0.61
1:B:4889:CYS:O	1:B:4893:GLY:N	2.32	0.61
1:D:2215:MET:HA	1:D:2218:HIS:HD2	1.65	0.61
1:D:4517:ILE:O	1:D:4520:PHE:HD2	1.83	0.61
1:B:1425:THR:N	1:B:1510:VAL:O	2.33	0.61
1:B:4931:GLU:OE2	1:B:4942:TRP:NE1	2.34	0.61
1:C:1425:THR:N	1:C:1510:VAL:O	2.33	0.61
1:B:3903:GLY:O	1:B:3907:PHE:CB	2.49	0.61
1:B:4828:ILE:HG23	1:B:4828:ILE:O	2.01	0.61
1:D:25:THR:HB	1:D:32:GLN:HB3	1.82	0.61
1:D:3920:THR:O	1:D:3924:TYR:N	2.33	0.61
1:D:4931:GLU:OE2	1:D:4942:TRP:NE1	2.34	0.61
1:A:1272:ARG:NH1	1:A:1587:HIS:O	2.34	0.61
1:B:1272:ARG:NH1	1:B:1587:HIS:O	2.34	0.61
1:C:1116:GLY:HA3	1:C:1136:ALA:HA	1.82	0.61
1:D:4889:CYS:O	1:D:4893:GLY:N	2.32	0.61
1:A:4843:TYR:O	1:A:4847:PHE:CB	2.49	0.61
1:C:2215:MET:HA	1:C:2218:HIS:HD2	1.65	0.61
1:C:3767:LEU:HD21	1:C:3774:VAL:HB	1.82	0.61
1:D:1445:TRP:H	1:D:1487:MET:HB2	1.66	0.61
1:D:4905:GLY:O	1:D:4909:HIS:HB2	2.00	0.61
1:A:25:THR:HB	1:A:32:GLN:HB3	1.82	0.61
1:A:4905:GLY:O	1:A:4909:HIS:HB2	2.01	0.61
1:D:694:ARG:NH1	1:D:724:SER:OG	2.34	0.61
1:D:4828:ILE:O	1:D:4828:ILE:HG23	2.01	0.61
1:A:4931:GLU:OE2	1:A:4942:TRP:NE1	2.34	0.61
1:B:4783:THR:HG23	1:B:4817:HIS:CG	2.35	0.61
1:C:3903:GLY:O	1:C:3907:PHE:CB	2.49	0.61
1:C:4843:TYR:O	1:C:4847:PHE:CB	2.49	0.61
1:D:1272:ARG:NH1	1:D:1587:HIS:O	2.34	0.61
1:D:2195:ALA:HB1	1:D:2238:SER:HB2	1.82	0.61
1:A:694:ARG:NH1	1:A:724:SER:OG	2.34	0.60
1:A:1445:TRP:H	1:A:1487:MET:HB2	1.66	0.60
1:A:3903:GLY:O	1:A:3907:PHE:CB	2.49	0.60
1:B:4788:ASN:O	1:B:4791:ARG:NH2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4931:GLU:OE2	1:C:4942:TRP:NE1	2.34	0.60
1:A:3767:LEU:HD21	1:A:3774:VAL:HB	1.82	0.60
1:B:694:ARG:NH1	1:B:724:SER:OG	2.34	0.60
1:B:1302:TYR:HB2	1:B:1543:VAL:HB	1.83	0.60
1:B:4843:TYR:O	1:B:4847:PHE:CB	2.49	0.60
1:A:2248:VAL:HG11	1:A:2306:ALA:HA	1.84	0.60
1:B:4905:GLY:O	1:B:4909:HIS:HB2	2.00	0.60
1:C:1302:TYR:HB2	1:C:1543:VAL:HB	1.83	0.60
1:C:2195:ALA:HB1	1:C:2238:SER:HB2	1.82	0.60
1:D:247:VAL:O	1:D:272:ARG:NH1	2.31	0.60
1:A:308:LEU:HD21	1:A:370:LEU:HD12	1.83	0.60
1:C:308:LEU:HD21	1:C:370:LEU:HD12	1.83	0.60
1:C:2248:VAL:HG11	1:C:2306:ALA:HA	1.84	0.60
1:C:4788:ASN:O	1:C:4791:ARG:NH2	2.35	0.60
1:A:4849:ILE:CG2	1:D:4822:VAL:HG12	2.28	0.60
1:B:1146:HIS:HB2	1:B:1192:PHE:HE1	1.67	0.60
1:C:694:ARG:NH1	1:C:724:SER:OG	2.34	0.60
1:C:1272:ARG:NH2	1:C:1590:PHE:O	2.34	0.60
1:D:1146:HIS:HB2	1:D:1192:PHE:HE1	1.67	0.60
1:A:247:VAL:O	1:A:272:ARG:NH1	2.31	0.60
1:B:4810:MET:CB	1:C:4519:LEU:O	2.50	0.60
1:D:1272:ARG:NH2	1:D:1590:PHE:O	2.34	0.60
1:B:1272:ARG:NH2	1:B:1590:PHE:O	2.34	0.60
1:B:1445:TRP:H	1:B:1487:MET:HB2	1.66	0.60
1:D:4788:ASN:O	1:D:4791:ARG:NH2	2.35	0.60
1:A:1729:MET:HG2	1:A:2110:ASN:HA	1.81	0.60
1:B:2195:ALA:HB1	1:B:2238:SER:HB2	1.82	0.60
1:A:281:ARG:NH2	1:A:284:TRP:O	2.35	0.60
1:C:1146:HIS:HB2	1:C:1192:PHE:HE1	1.67	0.60
1:D:3903:GLY:O	1:D:3907:PHE:CB	2.49	0.60
1:A:1146:HIS:HB2	1:A:1192:PHE:HE1	1.67	0.60
1:A:1272:ARG:NH2	1:A:1590:PHE:O	2.34	0.60
1:A:4148:ARG:NH2	1:A:4150:TYR:OH	2.35	0.60
1:A:4889:CYS:O	1:A:4893:GLY:N	2.32	0.60
1:B:3920:THR:O	1:B:3924:TYR:N	2.33	0.60
1:B:4148:ARG:NH2	1:B:4150:TYR:OH	2.35	0.60
1:B:4517:ILE:O	1:B:4520:PHE:HD2	1.85	0.60
1:C:281:ARG:NH2	1:C:284:TRP:O	2.35	0.60
1:C:1445:TRP:H	1:C:1487:MET:HB2	1.66	0.60
1:C:4558:VAL:HG13	1:C:4558:VAL:O	2.02	0.59
1:D:1190:LEU:HD12	1:D:1193:LYS:HE2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1302:TYR:HB2	1:D:1543:VAL:HB	1.83	0.59
1:A:1086:ARG:HB2	1:A:1207:LEU:HB2	1.84	0.59
1:A:4765:GLY:HA2	1:A:4768:LEU:HB2	1.85	0.59
1:B:1447:THR:HG23	1:B:1538:LYS:HB2	1.84	0.59
1:B:1482:ARG:HB3	1:B:1531:TYR:HD1	1.68	0.59
1:B:4868:ILE:HD11	1:D:4864:GLN:HG3	1.83	0.59
1:C:1272:ARG:NH1	1:C:1587:HIS:O	2.34	0.59
1:C:2116:ASP:OD1	1:C:2153:ASN:ND2	2.32	0.59
1:C:3903:GLY:O	1:C:3907:PHE:HB3	2.03	0.59
1:D:1106:GLU:HB3	1:D:1214:ARG:HB3	1.84	0.59
1:D:1447:THR:HG23	1:D:1538:LYS:HB2	1.84	0.59
1:D:2248:VAL:HG11	1:D:2306:ALA:HA	1.84	0.59
1:D:4765:GLY:HA2	1:D:4768:LEU:HB2	1.84	0.59
1:D:4832:ILE:HG23	1:D:4833:GLU:O	2.01	0.59
1:A:2195:ALA:HB1	1:A:2238:SER:HB2	1.82	0.59
1:B:4519:LEU:HD12	1:B:4519:LEU:O	2.02	0.59
1:C:4627:ILE:O	1:C:4631:TRP:CB	2.51	0.59
1:C:4828:ILE:HG23	1:C:4828:ILE:O	2.01	0.59
1:A:502:ILE:O	1:A:561:ARG:NH1	2.27	0.59
1:A:1482:ARG:HB3	1:A:1531:TYR:HD1	1.68	0.59
1:A:3844:LEU:HA	1:A:3847:LEU:HD13	1.84	0.59
1:A:4788:ASN:O	1:A:4791:ARG:NH2	2.34	0.59
1:A:4822:VAL:O	1:A:4822:VAL:HG12	2.01	0.59
1:C:4622:PRO:O	1:C:4630:GLN:NE2	2.36	0.59
1:A:4160:GLN:NE2	1:A:4201:MET:O	2.36	0.59
1:A:4642:PRO:HG2	1:A:4648:LYS:HD3	1.85	0.59
1:A:4904:HIS:NE2	1:C:4184:LYS:HA	2.18	0.59
1:B:2248:VAL:HG11	1:B:2306:ALA:HA	1.83	0.59
1:C:3844:LEU:HA	1:C:3847:LEU:HD13	1.84	0.59
1:C:4148:ARG:NH2	1:C:4150:TYR:OH	2.35	0.59
1:D:4642:PRO:HG2	1:D:4648:LYS:HD3	1.85	0.59
1:D:4752:LYS:HG3	1:D:4755:ARG:HE	1.68	0.59
1:D:4798:GLU:H	1:D:4802:THR:HG1	1.49	0.59
1:A:4622:PRO:O	1:A:4630:GLN:NE2	2.36	0.59
1:B:3903:GLY:O	1:B:3907:PHE:HB3	2.02	0.59
1:B:4517:ILE:O	1:B:4520:PHE:CD2	2.56	0.59
1:B:4752:LYS:HG3	1:B:4755:ARG:HE	1.68	0.59
1:C:3920:THR:O	1:C:3924:TYR:N	2.33	0.59
1:A:4849:ILE:CG2	1:D:4822:VAL:HB	2.32	0.59
1:B:308:LEU:HD21	1:B:370:LEU:HD12	1.83	0.59
1:B:3663:ASP:OD2	1:B:3735:ARG:NH2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3901:GLU:OE1	1:B:3902:GLN:NE2	2.36	0.59
1:C:4642:PRO:HG2	1:C:4648:LYS:HD3	1.85	0.59
1:C:4796:LYS:NZ	1:C:4816:PHE:CD1	2.70	0.59
1:D:4622:PRO:O	1:D:4630:GLN:NE2	2.36	0.59
1:B:281:ARG:NH2	1:B:284:TRP:O	2.35	0.59
1:B:3805:ASP:OD2	1:B:3809:PHE:N	2.33	0.59
1:B:4089:HIS:O	1:B:4093:LYS:N	2.35	0.59
1:B:4642:PRO:HG2	1:B:4648:LYS:HD3	1.85	0.59
1:C:374:TYR:HA	1:C:391:ALA:HA	1.85	0.59
1:D:1086:ARG:HB2	1:D:1207:LEU:HB2	1.84	0.59
1:D:4148:ARG:NH2	1:D:4150:TYR:OH	2.35	0.59
1:D:4561:VAL:CG2	1:D:4562:LEU:H	2.14	0.59
1:A:3901:GLU:OE1	1:A:3902:GLN:NE2	2.36	0.59
1:A:4627:ILE:O	1:A:4631:TRP:CB	2.51	0.59
1:D:4832:ILE:HD11	1:D:4844:ARG:HD3	1.83	0.59
1:A:1447:THR:HG23	1:A:1538:LYS:HB2	1.84	0.59
1:A:2212:GLN:NE2	1:A:2246:ALA:O	2.36	0.59
1:A:4747:ILE:HD12	1:A:4750:GLY:HA3	1.85	0.59
1:B:247:VAL:O	1:B:272:ARG:NH1	2.31	0.59
1:B:1291:GLY:HA2	1:B:1551:ASN:H	1.68	0.59
1:B:4627:ILE:O	1:B:4631:TRP:CB	2.51	0.59
1:B:4765:GLY:HA2	1:B:4768:LEU:HB2	1.85	0.59
1:C:1106:GLU:HB3	1:C:1214:ARG:HB3	1.84	0.59
1:C:1447:THR:HG23	1:C:1538:LYS:HB2	1.84	0.59
1:C:4747:ILE:HD12	1:C:4750:GLY:HA3	1.85	0.59
1:D:1482:ARG:HB3	1:D:1531:TYR:HD1	1.68	0.59
1:D:4936:GLY:O	1:D:4940:TYR:HB2	2.03	0.59
1:A:1291:GLY:HA2	1:A:1551:ASN:H	1.68	0.58
1:A:1302:TYR:HB2	1:A:1543:VAL:HB	1.83	0.58
1:B:1086:ARG:HB2	1:B:1207:LEU:HB2	1.84	0.58
1:C:4160:GLN:NE2	1:C:4201:MET:O	2.36	0.58
1:C:4752:LYS:HG3	1:C:4755:ARG:HE	1.68	0.58
1:C:4936:GLY:O	1:C:4940:TYR:HB2	2.03	0.58
1:D:308:LEU:HD21	1:D:370:LEU:HD12	1.83	0.58
1:D:3901:GLU:OE1	1:D:3902:GLN:NE2	2.36	0.58
1:A:374:TYR:HA	1:A:391:ALA:HA	1.85	0.58
1:A:1106:GLU:HB3	1:A:1214:ARG:HB3	1.84	0.58
1:B:754:VAL:HB	1:B:771:ASN:HA	1.86	0.58
1:B:4936:GLY:O	1:B:4940:TYR:HB2	2.03	0.58
1:C:299:HIS:HD2	1:C:302:THR:H	1.51	0.58
1:C:1086:ARG:HB2	1:C:1207:LEU:HB2	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1291:GLY:HA2	1:C:1551:ASN:H	1.68	0.58
1:D:281:ARG:NH2	1:D:284:TRP:O	2.35	0.58
1:D:4843:TYR:O	1:D:4847:PHE:CB	2.49	0.58
1:B:4160:GLN:NE2	1:B:4201:MET:O	2.36	0.58
1:B:4887:THR:HA	1:B:4896:ASN:HB2	1.86	0.58
1:C:150:GLN:NE2	1:C:158:CYS:SG	2.76	0.58
1:C:754:VAL:HB	1:C:771:ASN:HA	1.85	0.58
1:C:1482:ARG:HB3	1:C:1531:TYR:HD1	1.68	0.58
1:C:2212:GLN:NE2	1:C:2246:ALA:O	2.36	0.58
1:D:4887:THR:HA	1:D:4896:ASN:HB2	1.86	0.58
1:A:754:VAL:HB	1:A:771:ASN:HA	1.85	0.58
1:B:4519:LEU:HD11	1:D:4811:LEU:CD1	2.13	0.58
1:C:3856:GLN:NE2	1:C:3923:GLU:O	2.37	0.58
1:D:150:GLN:NE2	1:D:158:CYS:SG	2.76	0.58
1:A:26:ALA:HB3	1:A:33:GLN:HB3	1.86	0.58
1:A:3663:ASP:OD2	1:A:3735:ARG:NH2	2.36	0.58
1:A:3856:GLN:NE2	1:A:3923:GLU:O	2.36	0.58
1:B:35:LEU:HD13	1:B:49:LEU:HD22	1.86	0.58
1:B:4622:PRO:O	1:B:4630:GLN:NE2	2.36	0.58
1:C:247:VAL:O	1:C:272:ARG:NH1	2.31	0.58
1:C:1288:LYS:HB2	1:C:1555:PHE:HB2	1.86	0.58
1:C:4765:GLY:HA2	1:C:4768:LEU:HB2	1.84	0.58
1:C:4887:THR:HA	1:C:4896:ASN:HB2	1.85	0.58
1:D:3663:ASP:OD2	1:D:3735:ARG:NH2	2.36	0.58
1:D:4627:ILE:O	1:D:4631:TRP:CB	2.51	0.58
1:A:299:HIS:HD2	1:A:302:THR:H	1.51	0.58
1:A:731:HIS:HE1	1:A:738:ALA:HB1	1.69	0.58
1:A:4752:LYS:HG3	1:A:4755:ARG:HE	1.68	0.58
1:A:4936:GLY:O	1:A:4940:TYR:HB2	2.03	0.58
1:B:1190:LEU:HD12	1:B:1193:LYS:HE2	1.84	0.58
1:B:3844:LEU:HA	1:B:3847:LEU:HD13	1.84	0.58
1:B:4747:ILE:HD12	1:B:4750:GLY:HA3	1.85	0.58
1:C:731:HIS:HE1	1:C:738:ALA:HB1	1.69	0.58
1:C:3901:GLU:OE1	1:C:3902:GLN:NE2	2.36	0.58
1:D:754:VAL:HB	1:D:771:ASN:HA	1.86	0.58
1:A:277:LEU:HD22	1:A:295:PHE:HB3	1.86	0.58
1:B:26:ALA:HB3	1:B:33:GLN:HB3	1.86	0.58
1:C:35:LEU:HD13	1:C:49:LEU:HD22	1.86	0.58
1:C:4616:LEU:HA	1:C:4620:GLU:HB2	1.86	0.58
1:C:4754:LEU:HA	1:C:4757:ILE:HD12	1.86	0.58
1:D:277:LEU:HD22	1:D:295:PHE:HB3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4747:ILE:HD12	1:D:4750:GLY:HA3	1.85	0.58
1:A:150:GLN:NE2	1:A:158:CYS:SG	2.76	0.58
1:A:4617:TYR:OH	1:A:4629:GLY:O	2.22	0.58
1:A:4754:LEU:HA	1:A:4757:ILE:HD12	1.86	0.58
1:D:1291:GLY:HA2	1:D:1551:ASN:H	1.68	0.58
1:D:2212:GLN:NE2	1:D:2246:ALA:O	2.36	0.58
1:A:71:GLN:NE2	1:A:106:GLN:H	2.02	0.58
1:A:3805:ASP:OD2	1:A:3809:PHE:N	2.33	0.58
1:A:3903:GLY:O	1:A:3907:PHE:HB3	2.02	0.58
1:A:4888:LYS:HB3	1:A:4893:GLY:HA2	1.86	0.58
1:B:237:LEU:HB2	1:B:404:ASN:HB3	1.86	0.58
1:B:3856:GLN:NE2	1:B:3923:GLU:O	2.36	0.58
1:B:4184:LYS:HA	1:C:4904:HIS:NE2	2.19	0.58
1:C:26:ALA:HB3	1:C:33:GLN:HB3	1.86	0.58
1:C:1482:ARG:NH1	1:C:1530:TYR:O	2.37	0.58
1:D:237:LEU:HB2	1:D:404:ASN:HB3	1.86	0.58
1:A:4887:THR:HA	1:A:4896:ASN:HB2	1.86	0.58
1:B:1106:GLU:HB3	1:B:1214:ARG:HB3	1.84	0.58
1:C:1190:LEU:HD12	1:C:1193:LYS:HE2	1.84	0.58
1:C:4617:TYR:OH	1:C:4629:GLY:O	2.22	0.58
1:D:26:ALA:HB3	1:D:33:GLN:HB3	1.86	0.58
1:D:3844:LEU:HA	1:D:3847:LEU:HD13	1.84	0.58
1:D:3856:GLN:NE2	1:D:3923:GLU:O	2.36	0.58
1:D:4160:GLN:NE2	1:D:4201:MET:O	2.36	0.58
1:D:4754:LEU:HA	1:D:4757:ILE:HD12	1.85	0.58
1:A:1190:LEU:HD12	1:A:1193:LYS:HE2	1.84	0.57
1:B:2212:GLN:NE2	1:B:2246:ALA:O	2.36	0.57
1:B:4616:LEU:HA	1:B:4620:GLU:HB2	1.86	0.57
1:C:3806:LEU:O	1:C:3810:GLU:N	2.37	0.57
1:D:374:TYR:HA	1:D:391:ALA:HA	1.85	0.57
1:D:1288:LYS:HB2	1:D:1555:PHE:HB2	1.86	0.57
1:D:1926:ILE:HD13	1:D:2037:VAL:HG11	1.86	0.57
1:B:1482:ARG:NH1	1:B:1530:TYR:O	2.37	0.57
1:B:3806:LEU:O	1:B:3810:GLU:N	2.37	0.57
1:C:237:LEU:HB2	1:C:404:ASN:HB3	1.86	0.57
1:A:4616:LEU:HA	1:A:4620:GLU:HB2	1.86	0.57
1:C:2404:ALA:HB2	1:C:2475:ARG:HE	1.69	0.57
1:C:3663:ASP:OD2	1:C:3735:ARG:NH2	2.36	0.57
1:D:608:HIS:HA	1:D:611:LEU:HD13	1.86	0.57
1:D:2404:ALA:HB2	1:D:2475:ARG:HE	1.69	0.57
1:A:2404:ALA:HB2	1:A:2475:ARG:HE	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:150:GLN:NE2	1:B:158:CYS:SG	2.76	0.57
1:B:1288:LYS:HB2	1:B:1555:PHE:HB2	1.86	0.57
1:B:2116:ASP:OD1	1:B:2153:ASN:ND2	2.32	0.57
1:B:4754:LEU:HA	1:B:4757:ILE:HD12	1.86	0.57
1:C:655:MET:HG2	1:C:836:HIS:HA	1.87	0.57
1:D:35:LEU:HD13	1:D:49:LEU:HD22	1.86	0.57
1:D:299:HIS:HD2	1:D:302:THR:H	1.51	0.57
1:D:731:HIS:HE1	1:D:738:ALA:HB1	1.69	0.57
1:A:71:GLN:NE2	1:A:106:GLN:N	2.53	0.57
1:A:237:LEU:HB2	1:A:404:ASN:HB3	1.86	0.57
1:B:585:ALA:HA	1:B:588:ILE:HD12	1.86	0.57
1:C:4520:PHE:CB	1:C:4562:LEU:HD23	2.33	0.57
1:D:4013:MET:N	1:D:4013:MET:SD	2.78	0.57
1:D:4142:SER:O	1:D:4144:LYS:NZ	2.38	0.57
1:A:235:ARG:NH2	1:A:268:SER:O	2.38	0.57
1:A:439:LYS:HD3	1:A:441:LYS:HB2	1.87	0.57
1:A:4832:ILE:HG23	1:A:4833:GLU:O	2.05	0.57
1:B:374:TYR:HA	1:B:391:ALA:HA	1.85	0.57
1:B:4013:MET:N	1:B:4013:MET:SD	2.78	0.57
1:B:4617:TYR:OH	1:B:4629:GLY:O	2.22	0.57
1:B:4835:PRO:HB3	1:B:4845:ILE:HG13	1.87	0.57
1:C:439:LYS:HD3	1:C:441:LYS:HB2	1.87	0.57
1:C:741:VAL:HG22	1:C:1469:LEU:HD23	1.87	0.57
1:D:741:VAL:HG22	1:D:1469:LEU:HD23	1.87	0.57
1:D:3903:GLY:O	1:D:3907:PHE:HB3	2.02	0.57
1:A:608:HIS:HA	1:A:611:LEU:HD13	1.86	0.57
1:A:741:VAL:HG22	1:A:1469:LEU:HD23	1.87	0.57
1:A:4814:TYR:HE2	1:D:4519:LEU:CB	2.18	0.57
1:B:4810:MET:CB	1:C:4519:LEU:CA	2.82	0.57
1:C:1926:ILE:HD13	1:C:2037:VAL:HG11	1.86	0.57
1:A:35:LEU:HD13	1:A:49:LEU:HD22	1.86	0.57
1:A:646:THR:HG23	1:A:1684:GLN:HE22	1.70	0.57
1:A:3920:THR:O	1:A:3924:TYR:N	2.33	0.57
1:B:235:ARG:NH2	1:B:268:SER:O	2.38	0.57
1:B:439:LYS:HD3	1:B:441:LYS:HB2	1.87	0.57
1:B:741:VAL:HG22	1:B:1469:LEU:HD23	1.87	0.57
1:D:1482:ARG:NH1	1:D:1530:TYR:O	2.37	0.57
1:D:4959:PHE:O	1:D:4962:GLN:NE2	2.35	0.57
1:A:4013:MET:N	1:A:4013:MET:SD	2.78	0.57
1:A:4959:PHE:O	1:A:4962:GLN:NE2	2.35	0.57
1:B:299:HIS:HD2	1:B:302:THR:H	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:731:HIS:HE1	1:B:738:ALA:HB1	1.69	0.57
1:B:1926:ILE:HD13	1:B:2037:VAL:HG11	1.86	0.57
1:C:277:LEU:HD22	1:C:295:PHE:HB3	1.86	0.57
1:C:3805:ASP:OD2	1:C:3809:PHE:N	2.34	0.57
1:A:655:MET:HG2	1:A:836:HIS:HA	1.87	0.57
1:A:677:LEU:HB2	1:A:755:ILE:HB	1.87	0.57
1:B:655:MET:HG2	1:B:836:HIS:HA	1.87	0.57
1:B:4849:ILE:HD12	1:C:4823:ARG:CB	2.34	0.57
1:C:2760:PRO:HD2	1:C:2763:LEU:HD12	1.87	0.57
1:D:4835:PRO:HB3	1:D:4845:ILE:HG13	1.87	0.57
1:A:4189:LEU:HD23	1:A:4192:ASN:HD22	1.70	0.56
1:A:4849:ILE:CG2	1:D:4822:VAL:CB	2.83	0.56
1:C:1104:GLU:HA	1:C:1163:GLY:HA2	1.86	0.56
1:C:4835:PRO:HB3	1:C:4845:ILE:HG13	1.87	0.56
1:C:4888:LYS:HB3	1:C:4893:GLY:HA2	1.86	0.56
1:D:235:ARG:NH2	1:D:268:SER:O	2.38	0.56
1:A:2760:PRO:HD2	1:A:2763:LEU:HD12	1.87	0.56
1:A:4516:PHE:O	1:A:4519:LEU:HD23	2.05	0.56
1:B:277:LEU:HD22	1:B:295:PHE:HB3	1.86	0.56
1:B:2221:TYR:O	1:B:2225:ASN:ND2	2.38	0.56
1:C:626:ARG:NH1	1:C:1667:LEU:O	2.39	0.56
1:C:1125:ASP:HA	1:C:1598:ARG:HG3	1.88	0.56
1:D:4617:TYR:OH	1:D:4629:GLY:O	2.22	0.56
1:A:1482:ARG:NH1	1:A:1530:TYR:O	2.37	0.56
1:A:2026:ILE:HG23	1:A:2030:LEU:HD12	1.87	0.56
1:A:2221:TYR:O	1:A:2225:ASN:ND2	2.38	0.56
1:B:677:LEU:HB2	1:B:755:ILE:HB	1.87	0.56
1:B:1125:ASP:HA	1:B:1598:ARG:HG3	1.87	0.56
1:B:1250:TRP:HE1	1:B:1643:GLU:HG3	1.71	0.56
1:B:2440:ALA:HA	1:B:2466:LYS:HD2	1.87	0.56
1:B:4888:LYS:HB3	1:B:4893:GLY:HA2	1.86	0.56
1:B:4904:HIS:NE2	1:D:4184:LYS:HA	2.20	0.56
1:C:235:ARG:NH2	1:C:268:SER:O	2.38	0.56
1:C:1250:TRP:HE1	1:C:1643:GLU:HG3	1.71	0.56
1:C:2026:ILE:HG23	1:C:2030:LEU:HD12	1.87	0.56
1:C:2221:TYR:O	1:C:2225:ASN:ND2	2.38	0.56
1:C:4013:MET:SD	1:C:4013:MET:N	2.78	0.56
1:C:4142:SER:O	1:C:4144:LYS:NZ	2.38	0.56
1:D:677:LEU:HB2	1:D:755:ILE:HB	1.87	0.56
1:D:3805:ASP:OD2	1:D:3809:PHE:N	2.34	0.56
1:D:4189:LEU:HD23	1:D:4192:ASN:HD22	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:585:ALA:HA	1:A:588:ILE:HD12	1.86	0.56
1:A:1926:ILE:HD13	1:A:2037:VAL:HG11	1.86	0.56
1:B:2715:PRO:HD2	1:B:2718:LEU:HD12	1.88	0.56
1:D:655:MET:HG2	1:D:836:HIS:HA	1.87	0.56
1:D:1250:TRP:HE1	1:D:1643:GLU:HG3	1.71	0.56
1:D:2221:TYR:O	1:D:2225:ASN:ND2	2.38	0.56
1:D:2440:ALA:HA	1:D:2466:LYS:HD2	1.87	0.56
1:D:4616:LEU:HA	1:D:4620:GLU:HB2	1.86	0.56
1:B:2760:PRO:HD2	1:B:2763:LEU:HD12	1.87	0.56
1:C:1098:ALA:O	1:C:1101:TRP:NE1	2.38	0.56
1:C:2440:ALA:HA	1:C:2466:LYS:HD2	1.87	0.56
1:C:4189:LEU:HD23	1:C:4192:ASN:HD22	1.70	0.56
1:D:1098:ALA:O	1:D:1101:TRP:NE1	2.38	0.56
1:D:1104:GLU:HA	1:D:1163:GLY:HA2	1.86	0.56
1:A:626:ARG:NH1	1:A:1667:LEU:O	2.39	0.56
1:B:2193:MET:HA	1:B:2196:ASN:HD22	1.70	0.56
1:B:4189:LEU:HD23	1:B:4192:ASN:HD22	1.70	0.56
1:B:4832:ILE:HD13	1:B:4844:ARG:CD	2.35	0.56
1:C:2193:MET:HA	1:C:2196:ASN:HD22	1.70	0.56
1:C:4089:HIS:O	1:C:4093:LYS:N	2.35	0.56
1:D:1125:ASP:HA	1:D:1598:ARG:HG3	1.87	0.56
1:D:3862:GLN:OE1	1:D:3865:ASN:ND2	2.39	0.56
1:A:1104:GLU:HA	1:A:1163:GLY:HA2	1.86	0.56
1:A:1144:ARG:N	1:A:1150:GLU:O	2.35	0.56
1:A:3862:GLN:OE1	1:A:3865:ASN:ND2	2.39	0.56
1:A:4819:TYR:HA	1:C:4849:ILE:HG21	1.87	0.56
1:B:185:SER:OG	1:B:186:VAL:N	2.39	0.56
1:B:608:HIS:HA	1:B:611:LEU:HD13	1.86	0.56
1:B:626:ARG:NH1	1:B:1667:LEU:O	2.39	0.56
1:B:2404:ALA:HB2	1:B:2475:ARG:HE	1.69	0.56
1:B:4519:LEU:HB3	1:D:4814:TYR:HE2	1.67	0.56
1:C:585:ALA:HA	1:C:588:ILE:HD12	1.87	0.56
1:C:986:ILE:HD12	1:C:1059:GLY:HA2	1.88	0.56
1:C:3862:GLN:OE1	1:C:3865:ASN:ND2	2.39	0.56
1:D:1522:ALA:N	1:D:1525:LYS:O	2.39	0.56
1:A:2213:LYS:HA	1:A:2254:LEU:HD21	1.88	0.56
1:A:4822:VAL:HG13	1:C:4853:PHE:HB2	1.84	0.56
1:B:986:ILE:HD12	1:B:1059:GLY:HA2	1.88	0.56
1:B:1104:GLU:HA	1:B:1163:GLY:HA2	1.86	0.56
1:C:288:HIS:ND1	1:C:349:MET:O	2.39	0.56
1:C:677:LEU:HB2	1:C:755:ILE:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2715:PRO:HD2	1:C:2718:LEU:HD12	1.88	0.56
1:D:585:ALA:HA	1:D:588:ILE:HD12	1.87	0.56
1:D:4089:HIS:O	1:D:4093:LYS:N	2.35	0.56
1:D:4888:LYS:HB3	1:D:4893:GLY:HA2	1.86	0.56
1:B:646:THR:HG23	1:B:1684:GLN:HE22	1.70	0.56
1:B:2213:LYS:HA	1:B:2254:LEU:HD21	1.88	0.56
1:B:4822:VAL:HG11	1:D:4849:ILE:O	2.05	0.56
1:B:4957:ASP:OD1	1:B:4957:ASP:N	2.39	0.56
1:C:185:SER:OG	1:C:186:VAL:N	2.39	0.56
1:D:249:SER:O	1:D:257:ARG:NH2	2.39	0.56
1:A:1288:LYS:HB2	1:A:1555:PHE:HB2	1.86	0.56
1:A:2440:ALA:HA	1:A:2466:LYS:HD2	1.87	0.56
1:C:1522:ALA:N	1:C:1525:LYS:O	2.39	0.56
1:D:2715:PRO:HD2	1:D:2718:LEU:HD12	1.88	0.56
1:A:37:LEU:HD11	1:A:47:CYS:HB3	1.88	0.55
1:A:1783:PRO:HB3	1:A:1786:ILE:HD12	1.88	0.55
1:B:4052:ALA:O	1:B:4056:HIS:ND1	2.40	0.55
1:C:2213:LYS:HA	1:C:2254:LEU:HD21	1.88	0.55
1:D:439:LYS:HD3	1:D:441:LYS:HB2	1.87	0.55
1:D:878:LEU:HD23	1:D:881:ILE:HD13	1.89	0.55
1:D:2760:PRO:HD2	1:D:2763:LEU:HD12	1.87	0.55
1:D:4717:ASP:HB3	1:D:4720:PHE:HB3	1.88	0.55
1:A:1922:ARG:NH1	1:A:2037:VAL:O	2.39	0.55
1:A:4052:ALA:O	1:A:4056:HIS:ND1	2.40	0.55
1:A:4089:HIS:O	1:A:4093:LYS:N	2.35	0.55
1:B:878:LEU:HD23	1:B:881:ILE:HD13	1.88	0.55
1:C:37:LEU:HD11	1:C:47:CYS:HB3	1.88	0.55
1:C:878:LEU:HD23	1:C:881:ILE:HD13	1.88	0.55
1:C:3842:ARG:NH1	1:C:3845:GLN:OE1	2.40	0.55
1:D:646:THR:HG23	1:D:1684:GLN:HE22	1.70	0.55
1:D:2213:LYS:HA	1:D:2254:LEU:HD21	1.88	0.55
1:A:249:SER:O	1:A:257:ARG:NH2	2.39	0.55
1:A:4717:ASP:HB3	1:A:4720:PHE:HB3	1.88	0.55
1:B:3862:GLN:OE1	1:B:3865:ASN:ND2	2.38	0.55
1:B:3959:LEU:HD23	1:B:3965:GLN:HB3	1.89	0.55
1:B:4820:VAL:O	1:B:4824:ALA:N	2.38	0.55
1:C:4717:ASP:HB3	1:C:4720:PHE:HB3	1.88	0.55
1:D:185:SER:OG	1:D:186:VAL:N	2.39	0.55
1:D:626:ARG:NH1	1:D:1667:LEU:O	2.39	0.55
1:D:2213:LYS:HG2	1:D:2254:LEU:HD11	1.89	0.55
1:A:1125:ASP:HA	1:A:1598:ARG:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1912:GLN:O	1:A:2091:ARG:NH1	2.37	0.55
1:A:4085:VAL:O	1:A:4089:HIS:N	2.36	0.55
1:A:4487:ALA:O	1:A:4491:LYS:HB2	2.07	0.55
1:B:300:VAL:O	1:B:420:ARG:NH2	2.40	0.55
1:B:2026:ILE:HG23	1:B:2030:LEU:HD12	1.87	0.55
1:B:3926:GLN:HG3	1:B:4936:GLY:H	1.72	0.55
1:C:608:HIS:HA	1:C:611:LEU:HD13	1.86	0.55
1:C:1570:LEU:O	1:C:1573:SER:OG	2.24	0.55
1:C:3959:LEU:HD23	1:C:3965:GLN:HB3	1.89	0.55
1:C:4616:LEU:HD12	1:C:4622:PRO:HG3	1.88	0.55
1:C:4832:ILE:HG23	1:C:4833:GLU:O	2.06	0.55
1:D:37:LEU:HD11	1:D:47:CYS:HB3	1.88	0.55
1:D:228:LEU:HB3	1:D:289:ILE:HB	1.89	0.55
1:D:288:HIS:ND1	1:D:349:MET:O	2.39	0.55
1:D:1573:SER:HB3	1:D:1582:CYS:HA	1.89	0.55
1:D:1922:ARG:NH1	1:D:2037:VAL:O	2.39	0.55
1:D:4832:ILE:HD11	1:D:4844:ARG:HD2	1.88	0.55
1:D:4957:ASP:N	1:D:4957:ASP:OD1	2.39	0.55
1:A:300:VAL:O	1:A:420:ARG:NH2	2.40	0.55
1:A:1250:TRP:HE1	1:A:1643:GLU:HG3	1.71	0.55
1:A:1522:ALA:N	1:A:1525:LYS:O	2.39	0.55
1:A:1573:SER:HB3	1:A:1582:CYS:HA	1.89	0.55
1:B:249:SER:O	1:B:257:ARG:NH2	2.39	0.55
1:B:1226:TYR:HD1	1:B:1229:ILE:HD12	1.71	0.55
1:B:1645:THR:HG22	1:B:1695:PRO:HG3	1.89	0.55
1:B:1783:PRO:HB3	1:B:1786:ILE:HD12	1.88	0.55
1:B:4487:ALA:O	1:B:4491:LYS:HB2	2.07	0.55
1:C:300:VAL:O	1:C:420:ARG:NH2	2.40	0.55
1:C:2213:LYS:HG2	1:C:2254:LEU:HD11	1.89	0.55
1:D:169:ARG:NH2	1:D:179:ASP:OD1	2.39	0.55
1:A:185:SER:OG	1:A:186:VAL:N	2.39	0.55
1:B:1922:ARG:NH1	1:B:2037:VAL:O	2.39	0.55
1:C:1922:ARG:NH1	1:C:2037:VAL:O	2.39	0.55
1:C:4136:ARG:NH2	1:C:4150:TYR:OH	2.40	0.55
1:C:4487:ALA:O	1:C:4491:LYS:HB2	2.07	0.55
1:D:1645:THR:HG22	1:D:1695:PRO:HG3	1.89	0.55
1:A:228:LEU:HB3	1:A:289:ILE:HB	1.89	0.55
1:A:2255:ALA:HA	1:A:2258:LEU:HD23	1.89	0.55
1:A:2715:PRO:HD2	1:A:2718:LEU:HD12	1.88	0.55
1:A:4136:ARG:NH2	1:A:4150:TYR:OH	2.40	0.55
1:A:4184:LYS:CA	1:D:4904:HIS:NE2	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:563:GLU:HG2	1:B:600:LEU:HD13	1.89	0.55
1:C:249:SER:O	1:C:257:ARG:NH2	2.39	0.55
1:C:1573:SER:HB3	1:C:1582:CYS:HA	1.89	0.55
1:C:4957:ASP:OD1	1:C:4957:ASP:N	2.39	0.55
1:D:1226:TYR:HD1	1:D:1229:ILE:HD12	1.71	0.55
1:D:1300:MET:HB2	1:D:1545:ALA:HB3	1.89	0.55
1:D:2255:ALA:HA	1:D:2258:LEU:HD23	1.89	0.55
1:A:288:HIS:ND1	1:A:349:MET:O	2.39	0.55
1:A:878:LEU:HD23	1:A:881:ILE:HD13	1.88	0.55
1:A:1242:ASN:HB3	1:A:1807:ARG:HB2	1.89	0.55
1:B:3842:ARG:NH1	1:B:3845:GLN:OE1	2.40	0.55
1:B:4142:SER:O	1:B:4144:LYS:NZ	2.38	0.55
1:B:4833:GLU:HB3	1:B:4844:ARG:NH2	2.19	0.55
1:C:646:THR:HG23	1:C:1684:GLN:HE22	1.70	0.55
1:D:4141:GLY:N	1:D:4147:GLU:OE1	2.40	0.55
1:D:4616:LEU:HD12	1:D:4622:PRO:HG3	1.88	0.55
1:A:394:HIS:HD2	1:A:397:GLY:H	1.55	0.55
1:A:682:THR:H	1:A:751:THR:HG22	1.72	0.55
1:A:986:ILE:HD12	1:A:1059:GLY:HA2	1.88	0.55
1:A:1602:GLN:HB3	1:A:1604:LEU:HD12	1.89	0.55
1:A:4142:SER:O	1:A:4144:LYS:NZ	2.38	0.55
1:A:4178:VAL:HG11	1:A:4881:VAL:HA	1.89	0.55
1:A:4759:SER:HA	1:A:4762:THR:HG22	1.89	0.55
1:B:1573:SER:HB3	1:B:1582:CYS:HA	1.89	0.55
1:B:2213:LYS:HG2	1:B:2254:LEU:HD11	1.89	0.55
1:C:4820:VAL:C	1:C:4824:ALA:HB2	2.27	0.55
1:D:394:HIS:HD2	1:D:397:GLY:H	1.55	0.55
1:D:682:THR:H	1:D:751:THR:HG22	1.72	0.55
1:D:3842:ARG:NH1	1:D:3845:GLN:OE1	2.40	0.55
1:A:169:ARG:NH2	1:A:179:ASP:OD1	2.39	0.55
1:A:246:THR:N	1:A:261:HIS:O	2.32	0.55
1:A:2193:MET:HA	1:A:2196:ASN:HD22	1.71	0.55
1:A:3926:GLN:HG3	1:A:4936:GLY:H	1.72	0.55
1:B:228:LEU:HB3	1:B:289:ILE:HB	1.89	0.55
1:B:682:THR:H	1:B:751:THR:HG22	1.72	0.55
1:C:243:GLU:HA	1:C:264:GLY:HA2	1.89	0.55
1:C:1117:TRP:HB3	1:C:1201:PHE:HB3	1.89	0.55
1:C:1242:ASN:HB3	1:C:1807:ARG:HB2	1.89	0.55
1:C:4759:SER:HA	1:C:4762:THR:HG22	1.89	0.55
1:D:563:GLU:HG2	1:D:600:LEU:HD13	1.89	0.55
1:D:3727:TYR:O	1:D:3731:ARG:CB	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3926:GLN:HG3	1:D:4936:GLY:H	1.72	0.55
1:A:3806:LEU:O	1:A:3810:GLU:N	2.37	0.54
1:A:3925:ILE:HD11	1:A:3936:LEU:HD13	1.89	0.54
1:A:3959:LEU:HD23	1:A:3965:GLN:HB3	1.89	0.54
1:B:1522:ALA:N	1:B:1525:LYS:O	2.39	0.54
1:B:3727:TYR:O	1:B:3731:ARG:CB	2.55	0.54
1:B:4178:VAL:HG11	1:B:4881:VAL:HA	1.89	0.54
1:C:3911:ILE:HG23	1:C:3975:LEU:HD22	1.89	0.54
1:C:4052:ALA:O	1:C:4056:HIS:ND1	2.40	0.54
1:D:3911:ILE:HG23	1:D:3975:LEU:HD22	1.90	0.54
1:D:4487:ALA:O	1:D:4491:LYS:HB2	2.07	0.54
1:A:2059:LEU:HA	1:A:2062:LEU:HG	1.89	0.54
1:A:2213:LYS:HG2	1:A:2254:LEU:HD11	1.89	0.54
1:B:2255:ALA:HA	1:B:2258:LEU:HD23	1.89	0.54
1:C:2059:LEU:HA	1:C:2062:LEU:HG	1.90	0.54
1:C:3925:ILE:HD11	1:C:3936:LEU:HD13	1.89	0.54
1:D:300:VAL:O	1:D:420:ARG:NH2	2.40	0.54
1:D:1144:ARG:N	1:D:1150:GLU:O	2.35	0.54
1:D:2193:MET:HA	1:D:2196:ASN:HD22	1.70	0.54
1:D:4052:ALA:O	1:D:4056:HIS:ND1	2.40	0.54
1:A:3727:TYR:O	1:A:3731:ARG:CB	2.55	0.54
1:A:3842:ARG:NH1	1:A:3845:GLN:OE1	2.40	0.54
1:B:1300:MET:HB2	1:B:1545:ALA:HB3	1.89	0.54
1:C:682:THR:H	1:C:751:THR:HG22	1.72	0.54
1:C:1602:GLN:HB3	1:C:1604:LEU:HD12	1.89	0.54
1:C:4178:VAL:HG11	1:C:4881:VAL:HA	1.89	0.54
1:D:1602:GLN:HB3	1:D:1604:LEU:HD12	1.89	0.54
1:A:480:ARG:NH2	1:A:3679:GLU:OE2	2.41	0.54
1:A:1300:MET:HB2	1:A:1545:ALA:HB3	1.89	0.54
1:B:2059:LEU:HA	1:B:2062:LEU:HG	1.90	0.54
1:B:3696:MET:O	1:B:3699:SER:OG	2.26	0.54
1:B:4717:ASP:HB3	1:B:4720:PHE:HB3	1.88	0.54
1:C:228:LEU:HB3	1:C:289:ILE:HB	1.89	0.54
1:C:246:THR:N	1:C:261:HIS:O	2.33	0.54
1:C:1783:PRO:HB3	1:C:1786:ILE:HD12	1.88	0.54
1:C:2255:ALA:HA	1:C:2258:LEU:HD23	1.89	0.54
1:D:1132:GLU:HB3	1:D:1147:GLN:HE21	1.73	0.54
1:D:1999:ASP:O	1:D:2003:ASP:N	2.40	0.54
1:D:2026:ILE:HG23	1:D:2030:LEU:HD12	1.87	0.54
1:D:3925:ILE:HD11	1:D:3936:LEU:HD13	1.89	0.54
1:D:4178:VAL:HG11	1:D:4881:VAL:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:150:GLN:HG3	1:A:152:ASP:H	1.72	0.54
1:A:1117:TRP:HB3	1:A:1201:PHE:HB3	1.89	0.54
1:B:150:GLN:HG3	1:B:152:ASP:H	1.72	0.54
1:B:1999:ASP:O	1:B:2003:ASP:N	2.40	0.54
1:B:3729:GLN:O	1:B:3733:HIS:ND1	2.32	0.54
1:B:4136:ARG:NH2	1:B:4150:TYR:OH	2.40	0.54
1:C:1611:ILE:O	1:C:1620:GLN:N	2.38	0.54
1:C:1843:LEU:O	1:C:1847:GLU:N	2.40	0.54
1:C:1999:ASP:O	1:C:2003:ASP:N	2.40	0.54
1:A:243:GLU:HA	1:A:264:GLY:HA2	1.89	0.54
1:A:563:GLU:HG2	1:A:600:LEU:HD13	1.89	0.54
1:A:1132:GLU:HB3	1:A:1147:GLN:HE21	1.73	0.54
1:A:1645:THR:HG22	1:A:1695:PRO:HG3	1.89	0.54
1:A:3911:ILE:HG23	1:A:3975:LEU:HD22	1.89	0.54
1:A:4849:ILE:HG22	1:D:4822:VAL:CB	2.37	0.54
1:B:243:GLU:HA	1:B:264:GLY:HA2	1.89	0.54
1:B:2196:ASN:OD1	1:B:2199:ARG:NH1	2.41	0.54
1:B:4616:LEU:HD12	1:B:4622:PRO:HG3	1.88	0.54
1:C:150:GLN:HG3	1:C:152:ASP:H	1.72	0.54
1:C:563:GLU:HG2	1:C:600:LEU:HD13	1.89	0.54
1:C:4833:GLU:O	1:C:4844:ARG:NH2	2.41	0.54
1:D:243:GLU:HA	1:D:264:GLY:HA2	1.89	0.54
1:D:2304:ARG:HG3	1:D:2402:ARG:HG3	1.90	0.54
1:A:375:GLN:HE21	1:A:392:ILE:HD13	1.73	0.54
1:B:169:ARG:NH2	1:B:179:ASP:OD1	2.39	0.54
1:B:375:GLN:HE21	1:B:392:ILE:HD13	1.73	0.54
1:B:1611:ILE:O	1:B:1620:GLN:N	2.38	0.54
1:B:2304:ARG:HG3	1:B:2402:ARG:HG3	1.90	0.54
1:B:3925:ILE:HD11	1:B:3936:LEU:HD13	1.89	0.54
1:B:4849:ILE:CG2	1:C:4822:VAL:CB	2.86	0.54
1:C:1726:ILE:HD11	1:C:2121:LEU:HD11	1.90	0.54
1:D:536:LEU:HG	1:D:540:LEU:HD13	1.90	0.54
1:D:986:ILE:HD12	1:D:1059:GLY:HA2	1.88	0.54
1:A:43:GLY:H	1:A:45:ARG:HH12	1.56	0.54
1:B:288:HIS:ND1	1:B:349:MET:O	2.39	0.54
1:B:536:LEU:HG	1:B:540:LEU:HD13	1.90	0.54
1:B:1132:GLU:HB3	1:B:1147:GLN:HE21	1.73	0.54
1:B:1242:ASN:HB3	1:B:1807:ARG:HB2	1.89	0.54
1:B:3911:ILE:HG23	1:B:3975:LEU:HD22	1.89	0.54
1:C:43:GLY:H	1:C:45:ARG:HH12	1.56	0.54
1:D:1726:ILE:HD11	1:D:2121:LEU:HD11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3696:MET:O	1:D:3699:SER:OG	2.26	0.54
1:D:3806:LEU:O	1:D:3810:GLU:N	2.37	0.54
1:D:3917:VAL:O	1:D:3920:THR:OG1	2.21	0.54
1:D:3959:LEU:HD23	1:D:3965:GLN:HB3	1.89	0.54
1:A:4616:LEU:HD12	1:A:4622:PRO:HG3	1.88	0.54
1:B:1117:TRP:HB3	1:B:1201:PHE:HB3	1.89	0.54
1:B:3748:SER:O	1:B:3793:SER:OG	2.25	0.54
1:B:4959:PHE:O	1:B:4962:GLN:NE2	2.35	0.54
1:C:1226:TYR:HD1	1:C:1229:ILE:HD12	1.71	0.54
1:D:150:GLN:HG3	1:D:152:ASP:H	1.72	0.54
1:D:1228:THR:HA	1:D:1232:LEU:HD12	1.90	0.54
1:D:1242:ASN:HB3	1:D:1807:ARG:HB2	1.89	0.54
1:D:1783:PRO:HB3	1:D:1786:ILE:HD12	1.88	0.54
1:A:536:LEU:HG	1:A:540:LEU:HD13	1.90	0.54
1:A:4640:SER:O	1:A:4643:ASN:ND2	2.41	0.54
1:A:4924:MET:O	1:A:4928:ASN:N	2.36	0.54
1:B:37:LEU:HD11	1:B:47:CYS:HB3	1.88	0.54
1:B:4141:GLY:N	1:B:4147:GLU:OE1	2.40	0.54
1:B:4594:LEU:HG	1:B:4595:LYS:HG3	1.90	0.54
1:B:4822:VAL:CB	1:D:4849:ILE:CG2	2.80	0.54
1:C:1300:MET:HB2	1:C:1545:ALA:HB3	1.89	0.54
1:C:3983:LEU:O	1:C:3987:LEU:HB2	2.08	0.54
1:C:4783:THR:HG21	1:C:4817:HIS:HB2	1.90	0.54
1:C:4813:CYS:O	1:C:4817:HIS:HB2	2.08	0.54
1:D:150:GLN:NE2	1:D:152:ASP:O	2.41	0.54
1:D:480:ARG:NH2	1:D:3679:GLU:OE2	2.41	0.54
1:D:1300:MET:N	1:D:1545:ALA:O	2.40	0.54
1:D:1589:GLN:NE2	1:D:1634:GLU:OE1	2.41	0.54
1:A:1226:TYR:HD1	1:A:1229:ILE:HD12	1.71	0.53
1:A:1999:ASP:O	1:A:2003:ASP:N	2.40	0.53
1:A:4141:GLY:N	1:A:4147:GLU:OE1	2.40	0.53
1:A:4519:LEU:HB2	1:C:4814:TYR:CE2	2.43	0.53
1:B:43:GLY:H	1:B:45:ARG:HH12	1.56	0.53
1:C:1119:ARG:NH2	1:C:1196:ASP:O	2.42	0.53
1:C:4141:GLY:N	1:C:4147:GLU:OE1	2.40	0.53
1:D:2196:ASN:OD1	1:D:2199:ARG:NH1	2.41	0.53
1:D:4558:VAL:O	1:D:4558:VAL:HG13	2.07	0.53
1:A:295:PHE:N	1:A:329:PHE:O	2.40	0.53
1:A:694:ARG:NH1	1:A:716:ASN:O	2.41	0.53
1:A:2304:ARG:HG3	1:A:2402:ARG:HG3	1.90	0.53
1:B:150:GLN:NE2	1:B:152:ASP:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:394:HIS:HD2	1:B:397:GLY:H	1.55	0.53
1:B:480:ARG:NH2	1:B:3679:GLU:OE2	2.41	0.53
1:B:1098:ALA:O	1:B:1101:TRP:NE1	2.38	0.53
1:B:2832:VAL:O	1:B:2895:LYS:NZ	2.40	0.53
1:B:4085:VAL:O	1:B:4089:HIS:N	2.36	0.53
1:C:295:PHE:N	1:C:329:PHE:O	2.39	0.53
1:C:1228:THR:HA	1:C:1232:LEU:HD12	1.90	0.53
1:C:1288:LYS:H	1:C:1555:PHE:H	1.57	0.53
1:C:3696:MET:O	1:C:3699:SER:OG	2.26	0.53
1:D:694:ARG:NH1	1:D:716:ASN:O	2.41	0.53
1:D:1630:LEU:HD22	1:D:1641:ILE:HD13	1.90	0.53
1:D:2059:LEU:HA	1:D:2062:LEU:HG	1.90	0.53
1:D:4136:ARG:NH2	1:D:4150:TYR:OH	2.40	0.53
1:A:1119:ARG:NH2	1:A:1196:ASP:O	2.42	0.53
1:A:1288:LYS:H	1:A:1555:PHE:H	1.57	0.53
1:A:1589:GLN:NE2	1:A:1634:GLU:OE1	2.41	0.53
1:A:3696:MET:O	1:A:3699:SER:OG	2.26	0.53
1:B:4519:LEU:HD13	1:D:4811:LEU:HD12	1.88	0.53
1:C:1300:MET:N	1:C:1545:ALA:O	2.40	0.53
1:C:1589:GLN:NE2	1:C:1634:GLU:OE1	2.41	0.53
1:C:2304:ARG:HG3	1:C:2402:ARG:HG3	1.90	0.53
1:C:3748:SER:O	1:C:3793:SER:OG	2.25	0.53
1:D:43:GLY:H	1:D:45:ARG:HH12	1.56	0.53
1:D:375:GLN:N	1:D:390:LYS:O	2.40	0.53
1:D:1117:TRP:HB3	1:D:1201:PHE:HB3	1.89	0.53
1:D:1756:SER:O	1:D:1920:ARG:NH2	2.42	0.53
1:A:2011:GLU:O	1:A:2027:ARG:NH2	2.42	0.53
1:A:4092:ALA:HA	1:A:4095:ILE:HD12	1.90	0.53
1:A:4957:ASP:N	1:A:4957:ASP:OD1	2.39	0.53
1:B:1630:LEU:HD22	1:B:1641:ILE:HD13	1.90	0.53
1:C:150:GLN:NE2	1:C:152:ASP:O	2.41	0.53
1:C:252:HIS:HB3	1:C:255:GLU:HB2	1.90	0.53
1:C:536:LEU:HG	1:C:540:LEU:HD13	1.90	0.53
1:C:1132:GLU:HB3	1:C:1147:GLN:HE21	1.73	0.53
1:C:1143:GLN:HA	1:C:1151:HIS:HA	1.91	0.53
1:C:1645:THR:HG22	1:C:1695:PRO:HG3	1.89	0.53
1:C:1703:TYR:HD2	1:C:1820:PRO:HB2	1.74	0.53
1:C:1756:SER:O	1:C:1920:ARG:NH2	2.42	0.53
1:C:4594:LEU:HG	1:C:4595:LYS:HG3	1.90	0.53
1:D:436:LEU:HD21	1:D:444:THR:HG21	1.91	0.53
1:D:645:GLN:HB3	1:D:1631:HIS:HE1	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3729:GLN:O	1:D:3733:HIS:ND1	2.32	0.53
1:A:1761:MET:SD	1:A:1761:MET:N	2.70	0.53
1:C:694:ARG:NH1	1:C:716:ASN:O	2.41	0.53
1:C:1912:GLN:O	1:C:2091:ARG:NH1	2.37	0.53
1:C:3926:GLN:HG3	1:C:4936:GLY:H	1.72	0.53
1:D:246:THR:N	1:D:261:HIS:O	2.32	0.53
1:D:375:GLN:HE21	1:D:392:ILE:HD13	1.73	0.53
1:D:1288:LYS:H	1:D:1555:PHE:H	1.57	0.53
1:A:150:GLN:NE2	1:A:152:ASP:O	2.41	0.53
1:A:252:HIS:HB3	1:A:255:GLU:HB2	1.90	0.53
1:A:1570:LEU:O	1:A:1573:SER:OG	2.24	0.53
1:A:2196:ASN:OD1	1:A:2199:ARG:NH1	2.41	0.53
1:A:4517:ILE:C	1:A:4519:LEU:H	2.11	0.53
1:B:1602:GLN:HB3	1:B:1604:LEU:HD12	1.89	0.53
1:B:1756:SER:O	1:B:1920:ARG:NH2	2.42	0.53
1:B:3983:LEU:O	1:B:3987:LEU:HB2	2.08	0.53
1:C:375:GLN:HE21	1:C:392:ILE:HD13	1.73	0.53
1:C:394:HIS:HD2	1:C:397:GLY:H	1.55	0.53
1:C:1218:GLY:HA3	1:C:1240:ALA:H	1.73	0.53
1:C:2011:GLU:O	1:C:2027:ARG:NH2	2.42	0.53
1:D:1912:GLN:HE21	1:D:2088:LEU:HD23	1.74	0.53
1:D:4640:SER:O	1:D:4643:ASN:ND2	2.41	0.53
1:D:4722:TYR:HD2	1:D:4723:LEU:HD12	1.74	0.53
1:A:3983:LEU:O	1:A:3987:LEU:HB2	2.08	0.53
1:A:4187:MET:HA	1:A:4190:PHE:HB3	1.91	0.53
1:A:4869:ASP:HB3	1:D:4875:ARG:HH21	1.73	0.53
1:A:4930:ASP:O	1:A:4934:HIS:N	2.42	0.53
1:A:4960:ARG:NH1	1:A:4964:GLU:O	2.42	0.53
1:B:1143:GLN:HA	1:B:1151:HIS:HA	1.91	0.53
1:B:1218:GLY:HA3	1:B:1240:ALA:H	1.73	0.53
1:B:3917:VAL:O	1:B:3920:THR:OG1	2.21	0.53
1:B:4092:ALA:HA	1:B:4095:ILE:HD12	1.90	0.53
1:C:436:LEU:HD21	1:C:444:THR:HG21	1.91	0.53
1:C:1912:GLN:HE21	1:C:2088:LEU:HD23	1.74	0.53
1:C:2196:ASN:OD1	1:C:2199:ARG:NH1	2.41	0.53
1:C:3727:TYR:O	1:C:3731:ARG:CB	2.55	0.53
1:C:4722:TYR:HD2	1:C:4723:LEU:HD12	1.74	0.53
1:D:4838:ASP:HB3	1:D:4841:GLU:HB2	1.91	0.53
1:D:4960:ARG:NH1	1:D:4964:GLU:O	2.42	0.53
1:A:436:LEU:HD21	1:A:444:THR:HG21	1.91	0.53
1:A:2857:LYS:HE3	1:A:2861:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4722:TYR:HD2	1:A:4723:LEU:HD12	1.74	0.53
1:B:436:LEU:HD21	1:B:444:THR:HG21	1.91	0.53
1:B:1228:THR:HA	1:B:1232:LEU:HD12	1.90	0.53
1:B:2011:GLU:O	1:B:2027:ARG:NH2	2.42	0.53
1:C:480:ARG:NH2	1:C:3679:GLU:OE2	2.41	0.53
1:C:645:GLN:HB3	1:C:1631:HIS:HE1	1.74	0.53
1:C:4959:PHE:O	1:C:4962:GLN:NE2	2.35	0.53
1:D:681:HIS:HB2	1:D:799:LYS:HG2	1.91	0.53
1:D:4187:MET:HA	1:D:4190:PHE:HB3	1.91	0.53
1:A:49:LEU:HD12	1:A:201:LEU:HB3	1.90	0.53
1:A:238:HIS:HA	1:A:403:LEU:HD13	1.91	0.53
1:A:4774:LEU:HD13	1:D:4754:LEU:HD13	1.91	0.53
1:B:1154:ARG:HH22	1:B:1180:GLU:HB2	1.74	0.53
1:B:2224:GLU:O	1:B:2269:TYR:OH	2.27	0.53
1:B:4516:PHE:O	1:B:4520:PHE:CE2	2.62	0.53
1:B:4640:SER:O	1:B:4643:ASN:ND2	2.41	0.53
1:C:4898:TYR:O	1:C:4901:THR:OG1	2.23	0.53
1:D:49:LEU:HD12	1:D:201:LEU:HB3	1.90	0.53
1:D:252:HIS:HB3	1:D:255:GLU:HB2	1.90	0.53
1:D:957:ALA:H	1:D:1060:TYR:HA	1.74	0.53
1:D:1611:ILE:O	1:D:1620:GLN:N	2.38	0.53
1:A:645:GLN:HB3	1:A:1631:HIS:HE1	1.74	0.53
1:A:4904:HIS:NE2	1:C:4184:LYS:CA	2.72	0.53
1:B:238:HIS:HA	1:B:403:LEU:HD13	1.91	0.53
1:B:252:HIS:HB3	1:B:255:GLU:HB2	1.90	0.53
1:B:957:ALA:H	1:B:1060:TYR:HA	1.74	0.53
1:B:1119:ARG:NH2	1:B:1196:ASP:O	2.42	0.53
1:B:2857:LYS:HE3	1:B:2861:LEU:HD11	1.91	0.53
1:B:4722:TYR:HD2	1:B:4723:LEU:HD12	1.74	0.53
1:B:4759:SER:HA	1:B:4762:THR:HG22	1.89	0.53
1:C:2857:LYS:HE3	1:C:2861:LEU:HD11	1.91	0.53
1:D:2011:GLU:O	1:D:2027:ARG:NH2	2.42	0.53
1:D:4759:SER:HA	1:D:4762:THR:HG22	1.89	0.53
1:D:4807:CYS:SG	1:D:4812:THR:OG1	2.59	0.53
1:D:4930:ASP:O	1:D:4934:HIS:N	2.42	0.53
1:A:1143:GLN:HA	1:A:1151:HIS:HA	1.91	0.52
1:A:1218:GLY:HA3	1:A:1240:ALA:H	1.73	0.52
1:A:3728:GLN:O	1:A:3732:LEU:N	2.42	0.52
1:B:1288:LYS:H	1:B:1555:PHE:H	1.56	0.52
1:B:1726:ILE:HD11	1:B:2121:LEU:HD11	1.90	0.52
1:B:1912:GLN:O	1:B:2091:ARG:NH1	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3956:GLN:HA	1:B:3959:LEU:HB2	1.91	0.52
1:B:4838:ASP:HB3	1:B:4841:GLU:HB2	1.91	0.52
1:C:49:LEU:HD12	1:C:201:LEU:HB3	1.90	0.52
1:C:3956:GLN:HA	1:C:3959:LEU:HB2	1.91	0.52
1:D:1703:TYR:HD2	1:D:1820:PRO:HB2	1.74	0.52
1:D:4936:GLY:O	1:D:4940:TYR:CB	2.58	0.52
1:A:1154:ARG:HH22	1:A:1180:GLU:HB2	1.74	0.52
1:A:1611:ILE:O	1:A:1620:GLN:N	2.38	0.52
1:A:1703:TYR:HD2	1:A:1820:PRO:HB2	1.74	0.52
1:A:4594:LEU:HG	1:A:4595:LYS:HG3	1.90	0.52
1:B:49:LEU:HD12	1:B:201:LEU:HB3	1.90	0.52
1:B:1703:TYR:HD2	1:B:1820:PRO:HB2	1.74	0.52
1:C:3890:TYR:O	1:C:3894:SER:HB3	2.09	0.52
1:C:4640:SER:O	1:C:4643:ASN:ND2	2.41	0.52
1:D:123:HIS:N	1:D:128:MET:O	2.34	0.52
1:D:1143:GLN:HA	1:D:1151:HIS:HA	1.91	0.52
1:A:1726:ILE:HD11	1:A:2121:LEU:HD11	1.90	0.52
1:D:1108:VAL:HG12	1:D:1109:THR:HG23	1.92	0.52
1:D:1119:ARG:NH2	1:D:1196:ASP:O	2.42	0.52
1:D:1218:GLY:HA3	1:D:1240:ALA:H	1.73	0.52
1:D:2832:VAL:O	1:D:2895:LYS:NZ	2.40	0.52
1:D:2857:LYS:HE3	1:D:2861:LEU:HD11	1.91	0.52
1:D:4092:ALA:HA	1:D:4095:ILE:HD12	1.90	0.52
1:A:957:ALA:H	1:A:1060:TYR:HA	1.74	0.52
1:A:1257:GLN:O	1:A:1596:TRP:N	2.36	0.52
1:A:1630:LEU:HD22	1:A:1641:ILE:HD13	1.90	0.52
1:A:1756:SER:O	1:A:1920:ARG:NH2	2.42	0.52
1:B:694:ARG:NH1	1:B:716:ASN:O	2.41	0.52
1:B:1108:VAL:HG12	1:B:1109:THR:HG23	1.92	0.52
1:B:1589:GLN:NE2	1:B:1634:GLU:OE1	2.41	0.52
1:B:4960:ARG:NH1	1:B:4964:GLU:O	2.42	0.52
1:C:695:VAL:HG22	1:C:792:VAL:HG13	1.91	0.52
1:C:957:ALA:H	1:C:1060:TYR:HA	1.74	0.52
1:C:1154:ARG:HH22	1:C:1180:GLU:HB2	1.74	0.52
1:C:1292:SER:OG	1:C:1296:SER:O	2.28	0.52
1:D:238:HIS:N	1:D:243:GLU:O	2.43	0.52
1:D:725:TYR:HA	1:D:732:LEU:HA	1.92	0.52
1:D:1184:ASP:OD2	1:D:1188:SER:OG	2.27	0.52
1:D:2425:ARG:NH2	1:D:2476:VAL:O	2.43	0.52
1:D:4594:LEU:HG	1:D:4595:LYS:HG3	1.90	0.52
1:D:4924:MET:O	1:D:4928:ASN:N	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:681:HIS:HB2	1:B:799:LYS:HG2	1.91	0.52
1:B:1184:ASP:OD2	1:B:1188:SER:OG	2.27	0.52
1:C:2425:ARG:NH2	1:C:2476:VAL:O	2.43	0.52
1:C:4138:GLU:HA	1:C:4148:ARG:HA	1.91	0.52
1:C:4960:ARG:NH1	1:C:4964:GLU:O	2.42	0.52
1:D:1570:LEU:O	1:D:1573:SER:OG	2.24	0.52
1:A:2090:HIS:O	1:A:2094:ASP:N	2.43	0.52
1:A:2425:ARG:NH2	1:A:2476:VAL:O	2.43	0.52
1:B:38:ALA:HB2	1:B:50:GLU:HB2	1.92	0.52
1:D:3983:LEU:O	1:D:3987:LEU:HB2	2.08	0.52
1:D:4814:TYR:O	1:D:4818:MET:HB2	2.09	0.52
1:A:1108:VAL:HG12	1:A:1109:THR:HG23	1.92	0.52
1:A:1300:MET:N	1:A:1545:ALA:O	2.40	0.52
1:A:3956:GLN:HA	1:A:3959:LEU:HB2	1.91	0.52
1:B:725:TYR:HA	1:B:732:LEU:HA	1.92	0.52
1:B:733:TRP:HB3	1:B:736:CYS:HA	1.92	0.52
1:B:2090:HIS:O	1:B:2094:ASP:N	2.43	0.52
1:B:2425:ARG:NH2	1:B:2476:VAL:O	2.43	0.52
1:C:4092:ALA:HA	1:C:4095:ILE:HD12	1.90	0.52
1:D:3956:GLN:HA	1:D:3959:LEU:HB2	1.91	0.52
1:A:1470:GLY:HA2	1:A:1474:GLY:HA2	1.92	0.52
1:A:3919:ASN:O	1:A:3922:THR:OG1	2.27	0.52
1:A:4807:CYS:SG	1:A:4812:THR:OG1	2.59	0.52
1:A:4838:ASP:HB3	1:A:4841:GLU:HB2	1.91	0.52
1:C:38:ALA:HB2	1:C:50:GLU:HB2	1.92	0.52
1:C:681:HIS:HB2	1:C:799:LYS:HG2	1.91	0.52
1:D:238:HIS:HA	1:D:403:LEU:HD13	1.91	0.52
1:D:695:VAL:HG22	1:D:792:VAL:HG13	1.91	0.52
1:D:1154:ARG:HH22	1:D:1180:GLU:HB2	1.74	0.52
1:D:2090:HIS:O	1:D:2094:ASP:N	2.43	0.52
1:A:1912:GLN:HE21	1:A:2088:LEU:HD23	1.74	0.52
1:A:3890:TYR:O	1:A:3894:SER:HB3	2.09	0.52
1:B:1172:THR:HB	1:B:1190:LEU:HD22	1.92	0.52
1:B:3890:TYR:O	1:B:3894:SER:HB3	2.09	0.52
1:B:4187:MET:HA	1:B:4190:PHE:HB3	1.91	0.52
1:B:4936:GLY:O	1:B:4940:TYR:CB	2.58	0.52
1:C:1108:VAL:HG12	1:C:1109:THR:HG23	1.92	0.52
1:D:244:CYS:O	1:D:263:GLU:N	2.40	0.52
1:D:633:CYS:O	1:D:637:LEU:N	2.41	0.52
1:A:280:LEU:HD23	1:A:296:ARG:HH11	1.75	0.52
1:A:733:TRP:HB3	1:A:736:CYS:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1228:THR:HA	1:A:1232:LEU:HD12	1.90	0.52
1:A:3729:GLN:O	1:A:3733:HIS:ND1	2.32	0.52
1:B:695:VAL:HG22	1:B:792:VAL:HG13	1.91	0.52
1:B:1292:SER:OG	1:B:1296:SER:O	2.28	0.52
1:B:4862:ILE:O	1:B:4866:LEU:HB2	2.10	0.52
1:C:1304:LEU:HG	1:C:1591:LEU:H	1.75	0.52
1:C:2090:HIS:O	1:C:2094:ASP:N	2.43	0.52
1:C:3692:TYR:HA	1:C:3695:ILE:HD12	1.92	0.52
1:D:1459:LEU:HD13	1:D:1465:VAL:HG23	1.92	0.52
1:D:3692:TYR:HA	1:D:3695:ILE:HD12	1.92	0.52
1:D:4138:GLU:HA	1:D:4148:ARG:HA	1.91	0.52
1:A:2027:ARG:HH12	1:A:2031:LEU:HB2	1.75	0.51
1:B:280:LEU:HD23	1:B:296:ARG:HH11	1.75	0.51
1:B:1570:LEU:O	1:B:1573:SER:OG	2.24	0.51
1:B:3692:TYR:HA	1:B:3695:ILE:HD12	1.92	0.51
1:B:4930:ASP:O	1:B:4934:HIS:N	2.42	0.51
1:C:25:THR:HG22	1:C:34:LYS:HG2	1.92	0.51
1:C:238:HIS:HA	1:C:403:LEU:HD13	1.91	0.51
1:C:559:ILE:HG21	1:C:593:HIS:HD1	1.75	0.51
1:C:733:TRP:HB3	1:C:736:CYS:HA	1.92	0.51
1:C:4085:VAL:O	1:C:4089:HIS:N	2.36	0.51
1:C:4930:ASP:O	1:C:4934:HIS:N	2.42	0.51
1:D:262:TYR:HB2	1:D:389:ARG:HB3	1.92	0.51
1:A:38:ALA:HB2	1:A:50:GLU:HB2	1.92	0.51
1:A:681:HIS:HB2	1:A:799:LYS:HG2	1.91	0.51
1:A:725:TYR:HA	1:A:732:LEU:HA	1.92	0.51
1:A:1459:LEU:HD13	1:A:1465:VAL:HG23	1.92	0.51
1:A:1843:LEU:O	1:A:1847:GLU:N	2.40	0.51
1:A:3692:TYR:HA	1:A:3695:ILE:HD12	1.92	0.51
1:A:3743:GLN:NE2	1:A:3781:TYR:OH	2.35	0.51
1:A:4936:GLY:O	1:A:4940:TYR:CB	2.57	0.51
1:B:645:GLN:HB3	1:B:1631:HIS:HE1	1.74	0.51
1:B:1912:GLN:HE21	1:B:2088:LEU:HD23	1.74	0.51
1:B:4184:LYS:CA	1:C:4904:HIS:NE2	2.73	0.51
1:B:4849:ILE:CG2	1:C:4822:VAL:HB	2.40	0.51
1:D:280:LEU:HD23	1:D:296:ARG:HH11	1.75	0.51
1:A:459:LEU:HA	1:A:462:TYR:HB3	1.92	0.51
1:A:4862:ILE:O	1:A:4866:LEU:HB2	2.10	0.51
1:B:1304:LEU:HG	1:B:1591:LEU:H	1.75	0.51
1:C:280:LEU:HD23	1:C:296:ARG:HH11	1.75	0.51
1:C:1184:ASP:OD2	1:C:1188:SER:OG	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1630:LEU:HD22	1:C:1641:ILE:HD13	1.90	0.51
1:C:2297:GLU:HB3	1:C:2392:PHE:HD1	1.75	0.51
1:C:4487:ALA:O	1:C:4491:LYS:CB	2.59	0.51
1:D:38:ALA:HB2	1:D:50:GLU:HB2	1.92	0.51
1:D:4487:ALA:O	1:D:4491:LYS:CB	2.59	0.51
1:A:2224:GLU:O	1:A:2269:TYR:OH	2.27	0.51
1:A:2832:VAL:O	1:A:2895:LYS:NZ	2.40	0.51
1:B:1470:GLY:HA2	1:B:1474:GLY:HA2	1.92	0.51
1:C:1209:VAL:N	1:C:1211:GLN:OE1	2.44	0.51
1:C:3917:VAL:O	1:C:3920:THR:OG1	2.21	0.51
1:C:4187:MET:HA	1:C:4190:PHE:HB3	1.91	0.51
1:C:4838:ASP:HB3	1:C:4841:GLU:HB2	1.91	0.51
1:C:4924:MET:O	1:C:4928:ASN:N	2.36	0.51
1:D:2297:GLU:HB3	1:D:2392:PHE:HD1	1.75	0.51
1:D:4763:HIS:HE1	1:D:4870:ALA:HB1	1.76	0.51
1:B:2297:GLU:HB3	1:B:2392:PHE:HD1	1.75	0.51
1:C:725:TYR:HA	1:C:732:LEU:HA	1.92	0.51
1:C:4936:GLY:O	1:C:4940:TYR:CB	2.58	0.51
1:D:185:SER:HB3	1:D:189:GLU:H	1.76	0.51
1:D:1304:LEU:HG	1:D:1591:LEU:H	1.76	0.51
1:D:3890:TYR:O	1:D:3894:SER:HB3	2.09	0.51
1:D:4862:ILE:O	1:D:4866:LEU:HB2	2.10	0.51
1:A:559:ILE:HG21	1:A:593:HIS:HD1	1.75	0.51
1:A:1304:LEU:HG	1:A:1591:LEU:H	1.75	0.51
1:A:2297:GLU:HB3	1:A:2392:PHE:HD1	1.75	0.51
1:B:185:SER:HB3	1:B:189:GLU:H	1.76	0.51
1:B:1459:LEU:HD13	1:B:1465:VAL:HG23	1.92	0.51
1:B:1642:LEU:HD23	1:B:1693:TYR:HB2	1.93	0.51
1:B:4016:LYS:O	1:B:4020:MET:HB2	2.11	0.51
1:B:4487:ALA:O	1:B:4491:LYS:CB	2.59	0.51
1:C:2027:ARG:HH12	1:C:2031:LEU:HB2	1.75	0.51
1:C:4561:VAL:HG12	1:C:4562:LEU:N	2.25	0.51
1:C:4862:ILE:O	1:C:4866:LEU:HB2	2.10	0.51
1:D:733:TRP:HB3	1:D:736:CYS:HA	1.92	0.51
1:D:1172:THR:HB	1:D:1190:LEU:HD22	1.92	0.51
1:A:25:THR:HG22	1:A:34:LYS:HG2	1.92	0.51
1:B:1738:LEU:HG	1:B:2037:VAL:HG22	1.92	0.51
1:B:4138:GLU:HA	1:B:4148:ARG:HA	1.91	0.51
1:B:4798:GLU:H	1:B:4802:THR:HG1	1.59	0.51
1:D:295:PHE:N	1:D:329:PHE:O	2.39	0.51
1:D:1470:GLY:HA2	1:D:1474:GLY:HA2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2224:GLU:O	1:D:2269:TYR:OH	2.27	0.51
1:A:238:HIS:N	1:A:243:GLU:O	2.43	0.51
1:A:375:GLN:N	1:A:390:LYS:O	2.40	0.51
1:A:1172:THR:HB	1:A:1190:LEU:HD22	1.92	0.51
1:A:1934:VAL:HG11	1:A:3618:VAL:HA	1.93	0.51
1:B:1570:LEU:HD13	1:B:1584:PRO:HD3	1.93	0.51
1:B:4763:HIS:HE1	1:B:4870:ALA:HB1	1.76	0.51
1:C:1642:LEU:HD23	1:C:1693:TYR:HB2	1.93	0.51
1:C:2103:LEU:HA	1:C:2106:THR:HG22	1.93	0.51
1:C:3893:TYR:O	1:C:3958:LYS:NZ	2.44	0.51
1:D:2027:ARG:HH12	1:D:2031:LEU:HB2	1.75	0.51
1:A:1184:ASP:OD2	1:A:1188:SER:OG	2.27	0.51
1:A:2149:ASP:O	1:A:2153:ASN:N	2.44	0.51
1:A:4733:GLY:HA3	1:A:4740:PHE:HD1	1.76	0.51
1:A:4763:HIS:HE1	1:A:4870:ALA:HB1	1.76	0.51
1:B:2198:CYS:HA	1:B:2201:LEU:HB2	1.93	0.51
1:B:3743:GLN:NE2	1:B:3781:TYR:OH	2.35	0.51
1:C:2149:ASP:O	1:C:2153:ASN:N	2.44	0.51
1:C:2436:VAL:HG22	1:C:2469:MET:HB3	1.93	0.51
1:D:131:CYS:N	1:D:148:GLY:O	2.43	0.51
1:D:1738:LEU:HG	1:D:2037:VAL:HG22	1.92	0.51
1:D:1934:VAL:HG11	1:D:3618:VAL:HA	1.93	0.51
1:A:262:TYR:HB2	1:A:389:ARG:HB3	1.92	0.51
1:A:432:GLY:HA3	1:A:447:LEU:HD12	1.93	0.51
1:A:717:GLY:O	1:A:736:CYS:N	2.36	0.51
1:A:3897:ASP:OD1	1:A:3958:LYS:NZ	2.40	0.51
1:A:4016:LYS:O	1:A:4020:MET:HB2	2.11	0.51
1:B:459:LEU:HA	1:B:462:TYR:HB3	1.92	0.51
1:B:559:ILE:HG21	1:B:593:HIS:HD1	1.75	0.51
1:B:4124:GLU:HA	1:B:4127:LEU:HD13	1.93	0.51
1:C:169:ARG:NH2	1:C:179:ASP:OD1	2.39	0.51
1:C:1470:GLY:HA2	1:C:1474:GLY:HA2	1.92	0.51
1:C:1738:LEU:HG	1:C:2037:VAL:HG22	1.92	0.51
1:D:1642:LEU:HD23	1:D:1693:TYR:HB2	1.93	0.51
1:D:2198:CYS:HA	1:D:2201:LEU:HB2	1.93	0.51
1:A:1718:ARG:NH2	1:A:1759:PRO:O	2.44	0.50
1:A:1792:ILE:HA	1:A:1795:LEU:HD12	1.93	0.50
1:A:4138:GLU:HA	1:A:4148:ARG:HA	1.91	0.50
1:B:238:HIS:N	1:B:243:GLU:O	2.43	0.50
1:B:295:PHE:N	1:B:329:PHE:O	2.39	0.50
1:B:1934:VAL:HG11	1:B:3618:VAL:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1128:LEU:HD13	1:C:1206:SER:HB2	1.92	0.50
1:C:3803:VAL:HG22	1:C:3878:TYR:HE1	1.76	0.50
1:C:4016:LYS:O	1:C:4020:MET:HB2	2.11	0.50
1:C:4733:GLY:HA3	1:C:4740:PHE:HD1	1.76	0.50
1:D:132:CYS:H	1:D:157:ALA:HB1	1.76	0.50
1:D:1209:VAL:N	1:D:1211:GLN:OE1	2.44	0.50
1:D:3893:TYR:O	1:D:3958:LYS:NZ	2.44	0.50
1:D:4124:GLU:HA	1:D:4127:LEU:HD13	1.93	0.50
1:A:1128:LEU:HD13	1:A:1206:SER:HB2	1.92	0.50
1:A:4487:ALA:O	1:A:4491:LYS:CB	2.59	0.50
1:A:4519:LEU:HD11	1:C:4811:LEU:HB2	1.88	0.50
1:B:897:LYS:HB3	1:B:902:TRP:HB2	1.94	0.50
1:B:2103:LEU:HA	1:B:2106:THR:HG22	1.93	0.50
1:B:2436:VAL:HG22	1:B:2469:MET:HB3	1.93	0.50
1:C:299:HIS:NE2	1:C:301:THR:OG1	2.41	0.50
1:C:432:GLY:HA3	1:C:447:LEU:HD12	1.93	0.50
1:C:897:LYS:HB3	1:C:902:TRP:HB2	1.94	0.50
1:C:940:LEU:HD22	1:C:950:VAL:HG21	1.94	0.50
1:C:1934:VAL:HG11	1:C:3618:VAL:HA	1.93	0.50
1:D:672:LYS:HA	1:D:760:ASP:HA	1.94	0.50
1:D:2149:ASP:O	1:D:2153:ASN:N	2.44	0.50
1:D:2553:VAL:O	1:D:2605:LYS:N	2.44	0.50
1:A:1738:LEU:HG	1:A:2037:VAL:HG22	1.92	0.50
1:A:3893:TYR:O	1:A:3958:LYS:NZ	2.44	0.50
1:B:132:CYS:H	1:B:157:ALA:HB1	1.76	0.50
1:B:262:TYR:HB2	1:B:389:ARG:HB3	1.92	0.50
1:B:1304:LEU:HD23	1:B:1306:MET:H	1.77	0.50
1:B:4813:CYS:SG	1:B:4817:HIS:HD2	2.34	0.50
1:B:4822:VAL:HG12	1:B:4822:VAL:O	2.12	0.50
1:C:459:LEU:HA	1:C:462:TYR:HB3	1.92	0.50
1:C:1111:GLY:HA3	1:C:1211:GLN:HE21	1.77	0.50
1:C:2224:GLU:O	1:C:2269:TYR:OH	2.27	0.50
1:D:1292:SER:OG	1:D:1296:SER:O	2.28	0.50
1:D:1570:LEU:HD13	1:D:1584:PRO:HD3	1.93	0.50
1:D:2436:VAL:HG22	1:D:2469:MET:HB3	1.93	0.50
1:D:4733:GLY:HA3	1:D:4740:PHE:HD1	1.76	0.50
1:A:695:VAL:HG22	1:A:792:VAL:HG13	1.91	0.50
1:A:2436:VAL:HG22	1:A:2469:MET:HB3	1.93	0.50
1:A:3733:HIS:NE2	1:A:3734:ASP:OD1	2.45	0.50
1:B:41:GLY:H	1:B:44:ASN:HB3	1.77	0.50
1:B:940:LEU:HD22	1:B:950:VAL:HG11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1209:VAL:N	1:B:1211:GLN:OE1	2.44	0.50
1:B:1761:MET:SD	1:B:1761:MET:N	2.70	0.50
1:B:4581:THR:HA	1:B:4730:SER:HB3	1.93	0.50
1:B:4822:VAL:HG11	1:D:4849:ILE:HG22	1.93	0.50
1:C:132:CYS:H	1:C:157:ALA:HB1	1.76	0.50
1:C:672:LYS:HA	1:C:760:ASP:HA	1.94	0.50
1:C:2024:LEU:HD23	1:C:2025:THR:H	1.76	0.50
1:C:2198:CYS:HA	1:C:2201:LEU:HB2	1.93	0.50
1:C:3728:GLN:O	1:C:3732:LEU:N	2.42	0.50
1:C:3743:GLN:NE2	1:C:3781:TYR:OH	2.35	0.50
1:D:897:LYS:HB3	1:D:902:TRP:HB2	1.94	0.50
1:A:1209:VAL:N	1:A:1211:GLN:OE1	2.44	0.50
1:A:1642:LEU:HD23	1:A:1693:TYR:HB2	1.93	0.50
1:A:4522:LYS:CG	1:A:4560:TYR:OH	2.60	0.50
1:B:679:VAL:HA	1:B:800:VAL:HG12	1.94	0.50
1:B:2149:ASP:O	1:B:2153:ASN:N	2.44	0.50
1:B:3685:GLU:OE1	1:B:3755:MET:N	2.43	0.50
1:C:41:GLY:H	1:C:44:ASN:HB3	1.77	0.50
1:C:1304:LEU:HD23	1:C:1306:MET:H	1.77	0.50
1:C:1459:LEU:HD13	1:C:1465:VAL:HG23	1.92	0.50
1:C:2553:VAL:O	1:C:2605:LYS:N	2.44	0.50
1:C:3733:HIS:NE2	1:C:3734:ASP:OD1	2.45	0.50
1:D:299:HIS:NE2	1:D:301:THR:OG1	2.41	0.50
1:D:559:ILE:HG21	1:D:593:HIS:HD1	1.75	0.50
1:D:4016:LYS:O	1:D:4020:MET:HB2	2.11	0.50
1:A:832:LEU:O	1:A:1614:ARG:NH1	2.45	0.50
1:A:1111:GLY:HA3	1:A:1211:GLN:HE21	1.77	0.50
1:A:1426:TYR:HB2	1:A:1574:GLU:HB2	1.94	0.50
1:A:3803:VAL:HG22	1:A:3878:TYR:HE1	1.76	0.50
1:B:672:LYS:HA	1:B:760:ASP:HA	1.94	0.50
1:B:2024:LEU:HD23	1:B:2025:THR:H	1.76	0.50
1:B:2558:LYS:O	1:B:2562:LEU:N	2.41	0.50
1:B:3803:VAL:HG22	1:B:3878:TYR:HE1	1.76	0.50
1:B:4171:ARG:HH12	1:B:4175:PHE:HB2	1.77	0.50
1:B:4733:GLY:HA3	1:B:4740:PHE:HD1	1.76	0.50
1:B:4898:TYR:O	1:B:4901:THR:OG1	2.23	0.50
1:C:4827:GLY:HA3	1:C:4852:PHE:CB	2.42	0.50
1:D:1912:GLN:O	1:D:2091:ARG:NH1	2.37	0.50
1:D:2103:LEU:HA	1:D:2106:THR:HG22	1.93	0.50
1:D:3811:ARG:O	1:D:3815:ALA:N	2.43	0.50
1:A:1837:GLU:O	1:A:1841:HIS:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4144:LYS:N	1:A:4147:GLU:OE2	2.45	0.50
1:A:4813:CYS:SG	1:A:4817:HIS:CD2	3.05	0.50
1:A:4834:ASP:N	1:A:4834:ASP:OD1	2.27	0.50
1:A:4875:ARG:HH21	1:C:4869:ASP:HB3	1.77	0.50
1:A:4892:CYS:HB2	1:A:4914:HIS:CD2	2.47	0.50
1:B:1444:GLY:N	1:B:1542:ALA:O	2.39	0.50
1:B:2027:ARG:HH12	1:B:2031:LEU:HB2	1.75	0.50
1:C:23:GLN:HA	1:C:36:CYS:HA	1.93	0.50
1:C:1172:THR:HB	1:C:1190:LEU:HD22	1.92	0.50
1:C:1426:TYR:HB2	1:C:1574:GLU:HB2	1.94	0.50
1:C:1469:LEU:N	1:C:1477:HIS:O	2.45	0.50
1:D:1843:LEU:O	1:D:1847:GLU:N	2.40	0.50
1:A:185:SER:HB3	1:A:189:GLU:H	1.76	0.50
1:B:1300:MET:N	1:B:1545:ALA:O	2.40	0.50
1:B:3893:TYR:O	1:B:3958:LYS:NZ	2.44	0.50
1:C:426:PHE:HA	1:C:429:PHE:HB3	1.94	0.50
1:C:679:VAL:HA	1:C:800:VAL:HG12	1.94	0.50
1:D:25:THR:HG22	1:D:34:LYS:HG2	1.92	0.50
1:D:940:LEU:HD22	1:D:950:VAL:HG21	1.94	0.50
1:D:1111:GLY:HA3	1:D:1211:GLN:HE21	1.77	0.50
1:D:1469:LEU:N	1:D:1477:HIS:O	2.45	0.50
1:D:2558:LYS:O	1:D:2562:LEU:N	2.41	0.50
1:D:3741:VAL:HG13	1:D:3759:THR:HB	1.94	0.50
1:A:41:GLY:H	1:A:44:ASN:HB3	1.77	0.50
1:A:426:PHE:HA	1:A:429:PHE:HB3	1.94	0.50
1:A:2324:LEU:HD23	1:A:2327:ARG:HD2	1.94	0.50
1:A:3741:VAL:HG13	1:A:3759:THR:HB	1.94	0.50
1:B:3741:VAL:HG13	1:B:3759:THR:HB	1.94	0.50
1:C:262:TYR:HB2	1:C:389:ARG:HB3	1.92	0.50
1:C:1718:ARG:NH2	1:C:1759:PRO:O	2.44	0.50
1:C:3076:LEU:O	1:C:3080:GLN:N	2.45	0.50
1:C:3685:GLU:OE1	1:C:3755:MET:N	2.43	0.50
1:C:4581:THR:HA	1:C:4730:SER:HB3	1.93	0.50
1:D:591:GLU:HG3	1:D:635:ASN:HD21	1.77	0.50
1:D:832:LEU:O	1:D:1614:ARG:NH1	2.45	0.50
1:D:3813:ASN:OD1	1:D:3892:TYR:OH	2.30	0.50
1:D:4144:LYS:N	1:D:4147:GLU:OE2	2.45	0.50
1:A:23:GLN:HA	1:A:36:CYS:HA	1.93	0.49
1:A:2103:LEU:HA	1:A:2106:THR:HG22	1.93	0.49
1:A:4581:THR:HA	1:A:4730:SER:HB3	1.93	0.49
1:B:23:GLN:HA	1:B:36:CYS:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:244:CYS:O	1:B:263:GLU:N	2.40	0.49
1:B:832:LEU:O	1:B:1614:ARG:NH1	2.45	0.49
1:B:1792:ILE:HA	1:B:1795:LEU:HD12	1.93	0.49
1:B:4813:CYS:SG	1:B:4817:HIS:CD2	3.05	0.49
1:C:2033:LEU:HA	1:C:2036:LYS:HE3	1.94	0.49
1:C:2296:GLY:HA2	1:C:2299:TYR:HD2	1.76	0.49
1:C:3741:VAL:HG13	1:C:3759:THR:HB	1.94	0.49
1:C:3960:SER:OG	1:C:4070:CYS:SG	2.60	0.49
1:C:4832:ILE:CD1	1:C:4844:ARG:CD	2.88	0.49
1:C:4892:CYS:HB2	1:C:4914:HIS:CD2	2.47	0.49
1:D:23:GLN:HA	1:D:36:CYS:HA	1.93	0.49
1:D:432:GLY:HA3	1:D:447:LEU:HD12	1.93	0.49
1:D:459:LEU:HA	1:D:462:TYR:HB3	1.92	0.49
1:D:1792:ILE:HA	1:D:1795:LEU:HD12	1.93	0.49
1:D:2033:LEU:HA	1:D:2036:LYS:HE3	1.94	0.49
1:D:2296:GLY:HA2	1:D:2299:TYR:HD2	1.76	0.49
1:D:4155:GLU:OE2	1:D:4158:ARG:NH2	2.45	0.49
1:D:4520:PHE:HB3	1:D:4562:LEU:CD2	2.41	0.49
1:D:4581:THR:HA	1:D:4730:SER:HB3	1.93	0.49
1:A:25:THR:O	1:A:32:GLN:NE2	2.45	0.49
1:A:131:CYS:N	1:A:148:GLY:O	2.43	0.49
1:A:614:LEU:HD23	1:A:617:LEU:HD12	1.94	0.49
1:A:1304:LEU:HD23	1:A:1306:MET:H	1.77	0.49
1:A:1570:LEU:HD13	1:A:1584:PRO:HD3	1.93	0.49
1:A:2418:ILE:HA	1:A:2421:ARG:HB2	1.95	0.49
1:B:1128:LEU:HD13	1:B:1206:SER:HB2	1.92	0.49
1:B:4144:LYS:N	1:B:4147:GLU:OE2	2.45	0.49
1:B:4892:CYS:HB2	1:B:4914:HIS:CD2	2.47	0.49
1:B:4944:MET:O	1:B:4948:ARG:N	2.45	0.49
1:C:237:LEU:N	1:C:404:ASN:O	2.45	0.49
1:C:258:ARG:NH1	1:C:317:MET:SD	2.86	0.49
1:C:3813:ASN:OD1	1:C:3892:TYR:OH	2.30	0.49
1:D:41:GLY:H	1:D:44:ASN:HB3	1.77	0.49
1:D:1094:TYR:OH	1:D:1808:ASP:OD1	2.30	0.49
1:D:1304:LEU:HD23	1:D:1306:MET:H	1.77	0.49
1:D:3854:ASP:OD1	1:D:3854:ASP:N	2.46	0.49
1:D:4193:PHE:O	1:D:4197:THR:OG1	2.26	0.49
1:D:4892:CYS:HB2	1:D:4914:HIS:CD2	2.47	0.49
1:A:132:CYS:H	1:A:157:ALA:HB1	1.76	0.49
1:A:591:GLU:HG3	1:A:635:ASN:HD21	1.77	0.49
1:A:672:LYS:HA	1:A:760:ASP:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:897:LYS:HB3	1:A:902:TRP:HB2	1.94	0.49
1:A:4794:TYR:H	1:A:4806:LYS:HD3	1.77	0.49
1:A:4944:MET:O	1:A:4948:ARG:N	2.46	0.49
1:B:614:LEU:HD23	1:B:617:LEU:HD12	1.94	0.49
1:B:3919:ASN:O	1:B:3922:THR:OG1	2.27	0.49
1:B:4904:HIS:NE2	1:D:4184:LYS:CA	2.76	0.49
1:C:244:CYS:O	1:C:263:GLU:N	2.40	0.49
1:C:1570:LEU:HD13	1:C:1584:PRO:HD3	1.93	0.49
1:C:1792:ILE:HA	1:C:1795:LEU:HD12	1.93	0.49
1:C:3919:ASN:O	1:C:3922:THR:OG1	2.27	0.49
1:C:4124:GLU:HA	1:C:4127:LEU:HD13	1.93	0.49
1:D:57:ASN:HA	1:D:323:ASP:HA	1.95	0.49
1:D:4171:ARG:HH12	1:D:4175:PHE:HB2	1.77	0.49
1:D:4944:MET:O	1:D:4948:ARG:N	2.45	0.49
1:A:940:LEU:HD22	1:A:950:VAL:HG11	1.94	0.49
1:A:2296:GLY:HA2	1:A:2299:TYR:HD2	1.76	0.49
1:A:2553:VAL:O	1:A:2605:LYS:N	2.44	0.49
1:A:3076:LEU:O	1:A:3080:GLN:N	2.45	0.49
1:B:633:CYS:O	1:B:637:LEU:N	2.41	0.49
1:B:3733:HIS:NE2	1:B:3734:ASP:OD1	2.45	0.49
1:B:3742:LEU:HD11	1:B:3782:LEU:HD21	1.94	0.49
1:C:482:LEU:HA	1:C:485:ARG:HE	1.78	0.49
1:C:2418:ILE:HA	1:C:2421:ARG:HB2	1.95	0.49
1:C:4763:HIS:HE1	1:C:4870:ALA:HB1	1.76	0.49
1:D:258:ARG:NH1	1:D:317:MET:SD	2.86	0.49
1:A:3813:ASN:OD1	1:A:3892:TYR:OH	2.30	0.49
1:A:4832:ILE:CD1	1:A:4844:ARG:CD	2.89	0.49
1:B:432:GLY:HA3	1:B:447:LEU:HD12	1.93	0.49
1:B:510:SER:HA	1:B:517:VAL:HG11	1.95	0.49
1:B:1144:ARG:N	1:B:1150:GLU:O	2.35	0.49
1:B:2553:VAL:O	1:B:2605:LYS:N	2.44	0.49
1:B:3813:ASN:OD1	1:B:3892:TYR:OH	2.30	0.49
1:C:296:ARG:HA	1:C:328:ALA:HA	1.94	0.49
1:C:717:GLY:O	1:C:736:CYS:N	2.37	0.49
1:C:832:LEU:O	1:C:1614:ARG:NH1	2.45	0.49
1:C:3742:LEU:HD11	1:C:3782:LEU:HD21	1.94	0.49
1:C:4144:LYS:N	1:C:4147:GLU:OE2	2.44	0.49
1:C:4154:SER:OG	1:C:4156:SER:OG	2.30	0.49
1:D:237:LEU:N	1:D:404:ASN:O	2.45	0.49
1:D:1837:GLU:O	1:D:1841:HIS:N	2.45	0.49
1:A:118:ALA:HB1	1:A:159:TRP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:258:ARG:NH1	1:A:317:MET:SD	2.86	0.49
1:A:2024:LEU:HD23	1:A:2025:THR:H	1.77	0.49
1:A:3917:VAL:O	1:A:3920:THR:OG1	2.21	0.49
1:B:57:ASN:HA	1:B:323:ASP:HA	1.95	0.49
1:B:258:ARG:NH1	1:B:317:MET:SD	2.86	0.49
1:B:1704:ASP:HA	1:B:1707:ILE:HD12	1.95	0.49
1:B:2324:LEU:HD23	1:B:2327:ARG:HD2	1.94	0.49
1:C:185:SER:HB3	1:C:189:GLU:H	1.76	0.49
1:C:228:LEU:HD12	1:C:354:ILE:HB	1.95	0.49
1:C:375:GLN:N	1:C:390:LYS:O	2.40	0.49
1:C:4155:GLU:OE2	1:C:4158:ARG:NH2	2.45	0.49
1:D:426:PHE:HA	1:D:429:PHE:HB3	1.94	0.49
1:D:510:SER:HA	1:D:517:VAL:HG11	1.95	0.49
1:D:674:TYR:OH	1:D:676:GLU:OE2	2.25	0.49
1:D:1128:LEU:HD13	1:D:1206:SER:HB2	1.92	0.49
1:D:1426:TYR:HB2	1:D:1574:GLU:HB2	1.94	0.49
1:D:3803:VAL:HG22	1:D:3878:TYR:HE1	1.76	0.49
1:A:1094:TYR:OH	1:A:1808:ASP:OD1	2.30	0.49
1:A:2198:CYS:HA	1:A:2201:LEU:HB2	1.93	0.49
1:A:4124:GLU:HA	1:A:4127:LEU:HD13	1.93	0.49
1:B:25:THR:O	1:B:32:GLN:NE2	2.45	0.49
1:B:25:THR:HG22	1:B:34:LYS:HG2	1.92	0.49
1:B:2296:GLY:HA2	1:B:2299:TYR:HD2	1.76	0.49
1:B:4869:ASP:HB3	1:C:4875:ARG:HH21	1.77	0.49
1:C:614:LEU:HD23	1:C:617:LEU:HD12	1.94	0.49
1:C:996:VAL:HA	1:C:999:LEU:HD12	1.95	0.49
1:C:3897:ASP:OD1	1:C:3958:LYS:NZ	2.40	0.49
1:D:25:THR:O	1:D:32:GLN:NE2	2.45	0.49
1:D:1761:MET:SD	1:D:1761:MET:N	2.70	0.49
1:D:3685:GLU:OE1	1:D:3755:MET:N	2.43	0.49
1:A:1521:THR:HA	1:A:1526:ASP:HA	1.95	0.49
1:A:2243:VAL:O	1:A:2247:SER:N	2.46	0.49
1:A:3854:ASP:N	1:A:3854:ASP:OD1	2.46	0.49
1:B:228:LEU:HD12	1:B:354:ILE:HB	1.95	0.49
1:B:4103:LEU:HD23	1:B:4106:LEU:HD12	1.95	0.49
1:C:510:SER:HA	1:C:517:VAL:HG11	1.95	0.49
1:C:591:GLU:HG3	1:C:635:ASN:HD21	1.77	0.49
1:C:1094:TYR:OH	1:C:1808:ASP:OD1	2.30	0.49
1:D:296:ARG:HA	1:D:328:ALA:HA	1.94	0.49
1:D:1521:THR:HA	1:D:1526:ASP:HA	1.95	0.49
1:D:3733:HIS:NE2	1:D:3734:ASP:OD1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:633:CYS:O	1:A:637:LEU:N	2.41	0.49
1:A:679:VAL:HA	1:A:800:VAL:HG12	1.94	0.49
1:A:4103:LEU:HD23	1:A:4106:LEU:HD12	1.95	0.49
1:B:426:PHE:HA	1:B:429:PHE:HB3	1.94	0.49
1:B:482:LEU:HA	1:B:485:ARG:HE	1.78	0.49
1:B:558:LEU:O	1:B:562:LEU:HB2	2.13	0.49
1:B:591:GLU:HG3	1:B:635:ASN:HD21	1.77	0.49
1:B:1843:LEU:O	1:B:1847:GLU:N	2.40	0.49
1:B:2027:ARG:HH22	1:B:2031:LEU:HD22	1.78	0.49
1:B:4155:GLU:OE2	1:B:4158:ARG:NH2	2.45	0.49
1:C:4807:CYS:SG	1:C:4812:THR:OG1	2.59	0.49
1:C:4944:MET:O	1:C:4948:ARG:N	2.45	0.49
1:D:2024:LEU:HD23	1:D:2025:THR:H	1.77	0.49
1:D:2196:ASN:HA	1:D:2199:ARG:HD2	1.95	0.49
1:D:2324:LEU:HD23	1:D:2327:ARG:HD2	1.94	0.49
1:D:2418:ILE:HA	1:D:2421:ARG:HB2	1.95	0.49
1:D:3076:LEU:O	1:D:3080:GLN:N	2.45	0.49
1:D:4085:VAL:O	1:D:4089:HIS:N	2.36	0.49
1:D:4198:ILE:HG12	1:D:4924:MET:HG2	1.95	0.49
1:D:4912:GLN:O	1:D:4915:ASN:ND2	2.46	0.49
1:A:57:ASN:HA	1:A:323:ASP:HA	1.95	0.49
1:A:1469:LEU:N	1:A:1477:HIS:O	2.45	0.49
1:A:4519:LEU:HD11	1:C:4811:LEU:CD1	2.26	0.49
1:B:476:GLN:NE2	1:B:3679:GLU:OE1	2.39	0.49
1:B:891:GLU:HB2	1:B:978:PRO:HG3	1.95	0.49
1:B:1111:GLY:HA3	1:B:1211:GLN:HE21	1.77	0.49
1:B:1469:LEU:N	1:B:1477:HIS:O	2.45	0.49
1:B:3076:LEU:O	1:B:3080:GLN:N	2.45	0.49
1:B:4794:TYR:H	1:B:4806:LYS:HD3	1.77	0.49
1:B:4912:GLN:O	1:B:4915:ASN:ND2	2.46	0.49
1:C:57:ASN:HA	1:C:323:ASP:HA	1.95	0.49
1:C:558:LEU:O	1:C:562:LEU:HB2	2.13	0.49
1:C:1521:THR:HA	1:C:1526:ASP:HA	1.95	0.49
1:C:1996:GLN:HA	1:C:1997:LEU:HD23	1.95	0.49
1:D:306:LEU:HD11	1:D:314:LEU:HG	1.95	0.49
1:D:717:GLY:O	1:D:736:CYS:N	2.36	0.49
1:D:2027:ARG:HH22	1:D:2031:LEU:HD22	1.78	0.49
1:A:296:ARG:HA	1:A:328:ALA:HA	1.94	0.48
1:A:996:VAL:HA	1:A:999:LEU:HD12	1.95	0.48
1:A:3685:GLU:OE1	1:A:3755:MET:N	2.43	0.48
1:B:375:GLN:N	1:B:390:LYS:O	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1426:TYR:HB2	1:B:1574:GLU:HB2	1.94	0.48
1:B:2418:ILE:HA	1:B:2421:ARG:HB2	1.95	0.48
1:B:4807:CYS:SG	1:B:4812:THR:OG1	2.59	0.48
1:C:306:LEU:HD11	1:C:314:LEU:HG	1.95	0.48
1:C:4783:THR:CG2	1:C:4817:HIS:CB	2.91	0.48
1:C:4912:GLN:O	1:C:4915:ASN:ND2	2.46	0.48
1:D:558:LEU:O	1:D:562:LEU:HB2	2.13	0.48
1:D:2463:PRO:O	1:D:2520:TYR:OH	2.26	0.48
1:D:4103:LEU:HD23	1:D:4106:LEU:HD12	1.95	0.48
1:A:143:LEU:CB	1:D:2426:SER:CB	2.85	0.48
1:A:482:LEU:HA	1:A:485:ARG:HE	1.78	0.48
1:A:510:SER:HA	1:A:517:VAL:HG11	1.95	0.48
1:A:2558:LYS:O	1:A:2562:LEU:N	2.41	0.48
1:A:4198:ILE:HG12	1:A:4924:MET:HG2	1.95	0.48
1:B:296:ARG:HA	1:B:328:ALA:HA	1.94	0.48
1:B:1094:TYR:OH	1:B:1808:ASP:OD1	2.30	0.48
1:C:633:CYS:O	1:C:637:LEU:N	2.41	0.48
1:C:891:GLU:HB2	1:C:978:PRO:HG3	1.95	0.48
1:C:2243:VAL:O	1:C:2247:SER:N	2.46	0.48
1:D:118:ALA:HB1	1:D:159:TRP:HB3	1.94	0.48
1:D:2243:VAL:O	1:D:2247:SER:N	2.46	0.48
1:A:1117:TRP:HE1	1:A:1164:CYS:HB3	1.79	0.48
1:A:2481:VAL:O	1:A:2485:LEU:N	2.46	0.48
1:A:4912:GLN:O	1:A:4915:ASN:ND2	2.46	0.48
1:B:1521:THR:HA	1:B:1526:ASP:HA	1.95	0.48
1:B:1628:MET:HG3	1:B:1641:ILE:HG13	1.95	0.48
1:B:1696:GLY:H	1:B:1811:GLY:HA2	1.78	0.48
1:B:2033:LEU:HA	1:B:2036:LYS:HE3	1.94	0.48
1:B:2243:VAL:O	1:B:2247:SER:N	2.46	0.48
1:B:3854:ASP:OD1	1:B:3854:ASP:N	2.46	0.48
1:C:594:ILE:HA	1:C:597:ILE:HD12	1.95	0.48
1:C:4804:ASP:OD1	1:C:4804:ASP:N	2.46	0.48
1:D:679:VAL:HA	1:D:800:VAL:HG12	1.94	0.48
1:D:1166:VAL:HA	1:D:1173:MET:HG3	1.96	0.48
1:D:1257:GLN:O	1:D:1596:TRP:N	2.36	0.48
1:D:1704:ASP:HA	1:D:1707:ILE:HD12	1.94	0.48
1:A:306:LEU:HD11	1:A:314:LEU:HG	1.95	0.48
1:A:1098:ALA:O	1:A:1101:TRP:NE1	2.38	0.48
1:A:1696:GLY:H	1:A:1811:GLY:HA2	1.78	0.48
1:A:1996:GLN:HA	1:A:1997:LEU:HD23	1.95	0.48
1:C:2135:MET:HA	1:C:2136:GLY:HA3	1.65	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2324:LEU:HD23	1:C:2327:ARG:HD2	1.94	0.48
1:C:2481:VAL:O	1:C:2485:LEU:N	2.46	0.48
1:C:3854:ASP:N	1:C:3854:ASP:OD1	2.46	0.48
1:C:4103:LEU:HD23	1:C:4106:LEU:HD12	1.95	0.48
1:C:4794:TYR:H	1:C:4806:LYS:HD3	1.77	0.48
1:D:614:LEU:HD23	1:D:617:LEU:HD12	1.94	0.48
1:D:891:GLU:HB2	1:D:978:PRO:HG3	1.95	0.48
1:D:1119:ARG:HB2	1:D:1133:ARG:HD3	1.96	0.48
1:A:228:LEU:HD12	1:A:354:ILE:HB	1.95	0.48
1:A:558:LEU:O	1:A:562:LEU:HB2	2.13	0.48
1:A:2549:LEU:O	1:A:2553:VAL:N	2.46	0.48
1:B:118:ALA:HB1	1:B:159:TRP:HB3	1.94	0.48
1:B:131:CYS:N	1:B:148:GLY:O	2.43	0.48
1:B:306:LEU:HD11	1:B:314:LEU:HG	1.95	0.48
1:B:583:PRO:O	1:B:587:ASN:ND2	2.46	0.48
1:B:594:ILE:HA	1:B:597:ILE:HD12	1.95	0.48
1:B:1718:ARG:NH2	1:B:1759:PRO:O	2.44	0.48
1:B:4924:MET:O	1:B:4928:ASN:N	2.36	0.48
1:C:129:TYR:O	1:C:150:GLN:N	2.44	0.48
1:C:897:LYS:HD3	1:C:918:LEU:HD21	1.96	0.48
1:C:2549:LEU:O	1:C:2553:VAL:N	2.46	0.48
1:D:129:TYR:O	1:D:150:GLN:N	2.44	0.48
1:D:583:PRO:O	1:D:587:ASN:ND2	2.46	0.48
1:D:4794:TYR:H	1:D:4806:LYS:HD3	1.77	0.48
1:A:583:PRO:O	1:A:587:ASN:ND2	2.46	0.48
1:A:897:LYS:HD3	1:A:918:LEU:HD21	1.96	0.48
1:A:2033:LEU:HA	1:A:2036:LYS:HE3	1.94	0.48
1:A:4798:GLU:H	1:A:4802:THR:HG1	1.56	0.48
1:B:355:LYS:O	1:B:359:SER:OG	2.32	0.48
1:B:1837:GLU:O	1:B:1841:HIS:N	2.45	0.48
1:C:25:THR:O	1:C:32:GLN:NE2	2.45	0.48
1:C:1117:TRP:HE1	1:C:1164:CYS:HB3	1.79	0.48
1:C:1166:VAL:HA	1:C:1173:MET:HG3	1.96	0.48
1:C:1696:GLY:H	1:C:1811:GLY:HA2	1.78	0.48
1:C:2027:ARG:HH22	1:C:2031:LEU:HD22	1.78	0.48
1:C:2196:ASN:HA	1:C:2199:ARG:HD2	1.95	0.48
1:C:2832:VAL:O	1:C:2895:LYS:NZ	2.40	0.48
1:C:4171:ARG:HH12	1:C:4175:PHE:HB2	1.77	0.48
1:D:355:LYS:O	1:D:359:SER:OG	2.32	0.48
1:D:897:LYS:HD3	1:D:918:LEU:HD21	1.96	0.48
1:D:4804:ASP:OD1	1:D:4804:ASP:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1119:ARG:HB2	1:A:1133:ARG:HD3	1.96	0.48
1:A:1704:ASP:HA	1:A:1707:ILE:HD12	1.94	0.48
1:A:2196:ASN:HA	1:A:2199:ARG:HD2	1.95	0.48
1:A:3742:LEU:HD11	1:A:3782:LEU:HD21	1.94	0.48
1:B:129:TYR:O	1:B:150:GLN:N	2.44	0.48
1:B:4822:VAL:HG12	1:D:4849:ILE:O	2.14	0.48
1:C:463:PHE:HE1	1:C:485:ARG:HB3	1.79	0.48
1:C:1628:MET:HG3	1:C:1641:ILE:HG13	1.95	0.48
1:D:133:LEU:HB2	1:D:146:ASP:HB2	1.96	0.48
1:D:228:LEU:HD12	1:D:354:ILE:HB	1.95	0.48
1:D:1718:ARG:NH2	1:D:1759:PRO:O	2.44	0.48
1:A:129:TYR:O	1:A:150:GLN:N	2.44	0.48
1:A:463:PHE:HE1	1:A:485:ARG:HB3	1.79	0.48
1:A:891:GLU:HB2	1:A:978:PRO:HG3	1.95	0.48
1:A:2027:ARG:HH22	1:A:2031:LEU:HD22	1.78	0.48
1:A:4898:TYR:O	1:A:4901:THR:OG1	2.23	0.48
1:B:261:HIS:HA	1:B:390:LYS:HA	1.96	0.48
1:B:1154:ARG:NH2	1:B:1180:GLU:OE1	2.47	0.48
1:B:1160:ASP:OD1	1:B:1178:ASN:ND2	2.47	0.48
1:B:4154:SER:OG	1:B:4156:SER:OG	2.30	0.48
1:C:1154:ARG:NH2	1:C:1180:GLU:OE1	2.47	0.48
1:C:1704:ASP:HA	1:C:1707:ILE:HD12	1.94	0.48
1:C:4198:ILE:HG12	1:C:4924:MET:HG2	1.95	0.48
1:D:1256:PRO:O	1:D:1451:HIS:ND1	2.37	0.48
1:D:1799:VAL:O	1:D:1803:SER:CB	2.59	0.48
1:A:133:LEU:HB2	1:A:146:ASP:HB2	1.96	0.48
1:A:237:LEU:N	1:A:404:ASN:O	2.45	0.48
1:A:355:LYS:O	1:A:359:SER:OG	2.32	0.48
1:A:1444:GLY:N	1:A:1542:ALA:O	2.39	0.48
1:B:246:THR:N	1:B:261:HIS:O	2.32	0.48
1:B:897:LYS:HD3	1:B:918:LEU:HD21	1.96	0.48
1:B:1996:GLN:HA	1:B:1997:LEU:HD23	1.95	0.48
1:C:238:HIS:N	1:C:243:GLU:O	2.43	0.48
1:C:4783:THR:HG23	1:C:4817:HIS:CB	2.43	0.48
1:D:541:ILE:HG12	1:D:551:PHE:CE2	2.49	0.48
1:D:3742:LEU:HD11	1:D:3782:LEU:HD21	1.94	0.48
1:A:541:ILE:HG12	1:A:551:PHE:CE2	2.49	0.48
1:A:1154:ARG:NH2	1:A:1180:GLU:OE1	2.47	0.48
1:A:4849:ILE:HG21	1:D:4819:TYR:HA	1.96	0.48
1:B:133:LEU:HB2	1:B:146:ASP:HB2	1.96	0.48
1:B:717:GLY:O	1:B:736:CYS:N	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1605:LYS:HD3	1:B:1606:VAL:HG23	1.95	0.48
1:B:4733:GLY:HA3	1:B:4740:PHE:CD1	2.49	0.48
1:C:3762:LEU:O	1:C:3766:ILE:N	2.42	0.48
1:C:4045:SER:O	1:C:4049:PHE:N	2.44	0.48
1:D:261:HIS:HA	1:D:390:LYS:HA	1.96	0.48
1:D:1605:LYS:HD3	1:D:1606:VAL:HG23	1.95	0.48
1:A:1292:SER:OG	1:A:1296:SER:O	2.28	0.47
1:A:2658:TYR:O	1:A:2662:LEU:N	2.47	0.47
1:A:3834:ASP:N	1:A:3834:ASP:OD1	2.47	0.47
1:B:20:VAL:O	1:B:67:PHE:N	2.45	0.47
1:B:4558:VAL:O	1:B:4558:VAL:HG13	2.14	0.47
1:C:133:LEU:HB2	1:C:146:ASP:HB2	1.96	0.47
1:C:1644:LEU:HG	1:C:1647:GLN:HB2	1.96	0.47
1:C:4733:GLY:HA3	1:C:4740:PHE:CD1	2.49	0.47
1:D:1160:ASP:OD1	1:D:1178:ASN:ND2	2.47	0.47
1:D:4898:TYR:O	1:D:4901:THR:OG1	2.23	0.47
1:A:677:LEU:HD11	1:A:792:VAL:HG21	1.96	0.47
1:A:1628:MET:HG3	1:A:1641:ILE:HG13	1.95	0.47
1:B:1166:VAL:HA	1:B:1173:MET:HG3	1.96	0.47
1:C:84:ASN:O	1:C:84:ASN:ND2	2.47	0.47
1:C:118:ALA:HB1	1:C:159:TRP:HB3	1.94	0.47
1:C:1444:GLY:N	1:C:1542:ALA:O	2.40	0.47
1:C:1669:ASN:O	1:C:1673:ALA:N	2.43	0.47
1:D:996:VAL:HA	1:D:999:LEU:HD12	1.95	0.47
1:D:1644:LEU:HG	1:D:1647:GLN:HB2	1.96	0.47
1:D:2549:LEU:O	1:D:2553:VAL:N	2.46	0.47
1:A:4018:PHE:O	1:A:4022:LEU:CB	2.61	0.47
1:C:583:PRO:O	1:C:587:ASN:ND2	2.46	0.47
1:C:1160:ASP:OD1	1:C:1178:ASN:ND2	2.47	0.47
1:D:482:LEU:HA	1:D:485:ARG:HE	1.78	0.47
1:D:833:LYS:HG2	1:D:1614:ARG:HH22	1.80	0.47
1:D:1154:ARG:NH2	1:D:1180:GLU:OE1	2.47	0.47
1:D:1738:LEU:HD13	1:D:1739:PHE:HB3	1.96	0.47
1:A:466:PRO:HB2	1:A:475:LYS:HG3	1.96	0.47
1:A:908:ARG:HA	1:A:916:PRO:HD3	1.97	0.47
1:A:1272:ARG:HD2	1:A:1586:LEU:HB3	1.97	0.47
1:A:1605:LYS:HD3	1:A:1606:VAL:HG23	1.95	0.47
1:A:4733:GLY:HA3	1:A:4740:PHE:CD1	2.49	0.47
1:B:1738:LEU:HD13	1:B:1739:PHE:HB3	1.96	0.47
1:B:2549:LEU:O	1:B:2553:VAL:N	2.46	0.47
1:B:4198:ILE:HG12	1:B:4924:MET:HG2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1605:LYS:HD3	1:C:1606:VAL:HG23	1.95	0.47
1:C:2520:TYR:HA	1:C:2523:THR:HB	1.96	0.47
1:C:2658:TYR:O	1:C:2662:LEU:N	2.47	0.47
1:C:4018:PHE:O	1:C:4022:LEU:CB	2.61	0.47
1:D:20:VAL:O	1:D:67:PHE:N	2.45	0.47
1:D:594:ILE:HA	1:D:597:ILE:HD12	1.95	0.47
1:D:677:LEU:HD11	1:D:792:VAL:HG21	1.96	0.47
1:D:1117:TRP:HE1	1:D:1164:CYS:HB3	1.79	0.47
1:D:1696:GLY:H	1:D:1811:GLY:HA2	1.78	0.47
1:D:1996:GLN:HA	1:D:1997:LEU:HD23	1.95	0.47
1:D:4113:ASP:HB2	1:D:4116:LEU:HB3	1.96	0.47
1:A:261:HIS:HA	1:A:390:LYS:HA	1.96	0.47
1:A:464:HIS:O	1:A:478:ARG:NH2	2.48	0.47
1:A:4155:GLU:OE2	1:A:4158:ARG:NH2	2.45	0.47
1:B:58:VAL:HG22	1:B:320:GLU:HA	1.97	0.47
1:B:143:LEU:CB	1:C:2426:SER:CB	2.89	0.47
1:B:464:HIS:O	1:B:478:ARG:NH2	2.48	0.47
1:B:908:ARG:HA	1:B:916:PRO:HD3	1.97	0.47
1:B:996:VAL:HA	1:B:999:LEU:HD12	1.95	0.47
1:B:2196:ASN:HA	1:B:2199:ARG:HD2	1.95	0.47
1:B:2520:TYR:HA	1:B:2523:THR:HB	1.97	0.47
1:C:833:LYS:HG2	1:C:1614:ARG:HH22	1.80	0.47
1:C:1144:ARG:N	1:C:1150:GLU:O	2.35	0.47
1:C:1173:MET:O	1:C:1191:ALA:N	2.48	0.47
1:D:908:ARG:HA	1:D:916:PRO:HD3	1.97	0.47
1:D:3919:ASN:O	1:D:3922:THR:OG1	2.27	0.47
1:D:3922:THR:O	1:D:3926:GLN:N	2.43	0.47
1:A:443:SER:HA	1:A:444:THR:HA	1.52	0.47
1:A:2464:ASP:OD1	1:A:2464:ASP:N	2.47	0.47
1:A:4171:ARG:HH12	1:A:4175:PHE:HB2	1.77	0.47
1:A:4808:ASP:HB3	1:D:4523:VAL:HG23	1.96	0.47
1:B:1119:ARG:HB2	1:B:1133:ARG:HD3	1.95	0.47
1:B:2464:ASP:OD1	1:B:2464:ASP:N	2.47	0.47
1:B:4519:LEU:HD12	1:D:4811:LEU:CA	2.45	0.47
1:B:4632:ASP:HA	1:B:4709:TRP:HE1	1.80	0.47
1:C:58:VAL:HG22	1:C:320:GLU:HA	1.97	0.47
1:C:355:LYS:O	1:C:359:SER:OG	2.32	0.47
1:C:4767:GLN:O	1:C:4771:THR:OG1	2.23	0.47
1:D:1610:ARG:NH1	1:D:1612:SER:OG	2.48	0.47
1:D:4635:VAL:O	1:D:4638:THR:OG1	2.30	0.47
1:A:419:ILE:HG12	1:A:489:PHE:HE1	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1166:VAL:HA	1:A:1173:MET:HG3	1.96	0.47
1:A:1173:MET:O	1:A:1191:ALA:N	2.48	0.47
1:A:2222:LEU:O	1:A:2226:SER:N	2.37	0.47
1:B:463:PHE:HE1	1:B:485:ARG:HB3	1.79	0.47
1:B:541:ILE:HG12	1:B:551:PHE:CE2	2.49	0.47
1:B:903:GLN:HG3	1:B:974:SER:HB2	1.97	0.47
1:B:1109:THR:OG1	1:B:1212:VAL:N	2.48	0.47
1:B:1117:TRP:HE1	1:B:1164:CYS:HB3	1.79	0.47
1:B:1252:SER:HB2	1:B:1598:ARG:HB2	1.97	0.47
1:B:1644:LEU:HG	1:B:1647:GLN:HB2	1.96	0.47
1:C:464:HIS:O	1:C:478:ARG:NH2	2.48	0.47
1:C:466:PRO:HB2	1:C:475:LYS:HG3	1.96	0.47
1:C:903:GLN:HG3	1:C:974:SER:HB2	1.97	0.47
1:C:1033:VAL:HG23	1:C:1038:LEU:HB3	1.97	0.47
1:C:1106:GLU:HA	1:C:1161:VAL:HG22	1.97	0.47
1:C:1761:MET:SD	1:C:1761:MET:N	2.70	0.47
1:C:4113:ASP:HB2	1:C:4116:LEU:HB3	1.96	0.47
1:D:308:LEU:HA	1:D:314:LEU:HA	1.97	0.47
1:D:464:HIS:O	1:D:478:ARG:NH2	2.48	0.47
1:D:764:PRO:HG3	1:D:782:PHE:H	1.80	0.47
1:D:3728:GLN:O	1:D:3732:LEU:N	2.42	0.47
1:D:4733:GLY:HA3	1:D:4740:PHE:CD1	2.49	0.47
1:A:594:ILE:HA	1:A:597:ILE:HD12	1.95	0.47
1:A:1115:VAL:O	1:A:1137:PHE:N	2.48	0.47
1:A:1610:ARG:NH1	1:A:1612:SER:OG	2.48	0.47
1:A:1644:LEU:HG	1:A:1647:GLN:HB2	1.96	0.47
1:A:4113:ASP:HB2	1:A:4116:LEU:HB3	1.96	0.47
1:B:466:PRO:HB2	1:B:475:LYS:HG3	1.96	0.47
1:B:3728:GLN:O	1:B:3732:LEU:N	2.42	0.47
1:B:4804:ASP:N	1:B:4804:ASP:OD1	2.46	0.47
1:C:261:HIS:HA	1:C:390:LYS:HA	1.96	0.47
1:C:419:ILE:HG12	1:C:489:PHE:HE1	1.80	0.47
1:C:677:LEU:HD11	1:C:792:VAL:HG21	1.96	0.47
1:C:1119:ARG:HB2	1:C:1133:ARG:HD3	1.96	0.47
1:C:1272:ARG:HD2	1:C:1586:LEU:HB3	1.97	0.47
1:C:1576:LYS:NZ	1:C:1589:GLN:OE1	2.48	0.47
1:D:463:PHE:HE1	1:D:485:ARG:HB3	1.79	0.47
1:D:1109:THR:OG1	1:D:1212:VAL:N	2.48	0.47
1:D:1628:MET:HG3	1:D:1641:ILE:HG13	1.95	0.47
1:D:2520:TYR:HA	1:D:2523:THR:HB	1.97	0.47
1:A:1106:GLU:HA	1:A:1161:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1576:LYS:NZ	1:A:1589:GLN:OE1	2.48	0.47
1:A:1738:LEU:HD13	1:A:1739:PHE:HB3	1.96	0.47
1:B:123:HIS:N	1:B:128:MET:O	2.34	0.47
1:B:647:ARG:HH11	1:B:1684:GLN:HB2	1.80	0.47
1:B:3834:ASP:OD1	1:B:3834:ASP:N	2.47	0.47
1:C:908:ARG:HA	1:C:916:PRO:HD3	1.97	0.47
1:D:629:GLN:HB3	1:D:1664:VAL:HG13	1.97	0.47
1:D:1252:SER:HB2	1:D:1598:ARG:HB2	1.97	0.47
1:D:3993:ASN:HD21	1:D:4111:PRO:HD2	1.80	0.47
1:A:308:LEU:HA	1:A:314:LEU:HA	1.97	0.47
1:A:1033:VAL:HG23	1:A:1038:LEU:HB3	1.97	0.47
1:A:1160:ASP:OD1	1:A:1178:ASN:ND2	2.47	0.47
1:A:1669:ASN:O	1:A:1673:ALA:N	2.43	0.47
1:A:3960:SER:OG	1:A:4070:CYS:SG	2.60	0.47
1:A:4558:VAL:HG13	1:A:4558:VAL:O	2.15	0.47
1:B:651:HIS:N	1:B:1625:LEU:O	2.45	0.47
1:B:677:LEU:HD11	1:B:792:VAL:HG21	1.96	0.47
1:B:1173:MET:O	1:B:1191:ALA:N	2.48	0.47
1:B:1576:LYS:NZ	1:B:1589:GLN:OE1	2.48	0.47
1:C:718:VAL:HG12	1:C:736:CYS:HB2	1.97	0.47
1:D:466:PRO:HB2	1:D:475:LYS:HG3	1.96	0.47
1:D:3743:GLN:NE2	1:D:3781:TYR:OH	2.35	0.47
1:A:903:GLN:HG3	1:A:974:SER:HB2	1.97	0.46
1:A:1109:THR:OG1	1:A:1212:VAL:N	2.48	0.46
1:A:4045:SER:O	1:A:4049:PHE:N	2.44	0.46
1:A:4517:ILE:HA	1:A:4520:PHE:CE2	2.50	0.46
1:C:131:CYS:N	1:C:148:GLY:O	2.43	0.46
1:C:541:ILE:HG12	1:C:551:PHE:CE2	2.49	0.46
1:C:1000:ALA:HB1	1:C:1046:ASN:HB3	1.97	0.46
1:C:1610:ARG:NH1	1:C:1612:SER:OG	2.48	0.46
1:C:2086:PHE:O	1:C:3692:TYR:OH	2.25	0.46
1:C:2558:LYS:O	1:C:2562:LEU:N	2.41	0.46
1:C:3729:GLN:O	1:C:3733:HIS:ND1	2.32	0.46
1:C:4522:LYS:HD2	1:C:4522:LYS:HA	1.47	0.46
1:D:419:ILE:HG12	1:D:489:PHE:HE1	1.80	0.46
1:D:1000:ALA:HB1	1:D:1046:ASN:HB3	1.97	0.46
1:D:1576:LYS:NZ	1:D:1589:GLN:OE1	2.48	0.46
1:D:3834:ASP:N	1:D:3834:ASP:OD1	2.47	0.46
1:A:123:HIS:N	1:A:128:MET:O	2.34	0.46
1:A:833:LYS:HG2	1:A:1614:ARG:HH22	1.80	0.46
1:A:2486:LEU:HD13	1:A:2537:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1000:ALA:HB1	1:B:1046:ASN:HB3	1.97	0.46
1:B:4518:LEU:HG	1:B:4741:ALA:HB2	1.97	0.46
1:B:4849:ILE:HG22	1:C:4822:VAL:CB	2.43	0.46
1:C:1799:VAL:O	1:C:1803:SER:CB	2.59	0.46
1:D:476:GLN:NE2	1:D:3679:GLU:OE1	2.39	0.46
1:D:903:GLN:HG3	1:D:974:SER:HB2	1.97	0.46
1:D:1115:VAL:O	1:D:1137:PHE:N	2.48	0.46
1:A:58:VAL:HG22	1:A:320:GLU:HA	1.97	0.46
1:A:629:GLN:HB3	1:A:1664:VAL:HG13	1.97	0.46
1:A:764:PRO:HG3	1:A:782:PHE:H	1.80	0.46
1:A:1000:ALA:HB1	1:A:1046:ASN:HB3	1.98	0.46
1:A:4011:VAL:HA	1:A:4014:ILE:HG12	1.98	0.46
1:A:4632:ASP:HA	1:A:4709:TRP:HE1	1.80	0.46
1:A:4754:LEU:HD13	1:C:4774:LEU:HD13	1.97	0.46
1:A:4906:PHE:HA	1:A:4909:HIS:HB3	1.98	0.46
1:B:629:GLN:HB3	1:B:1664:VAL:HG13	1.97	0.46
1:B:718:VAL:HG12	1:B:736:CYS:HB2	1.97	0.46
1:B:4113:ASP:HB2	1:B:4116:LEU:HB3	1.96	0.46
1:C:1837:GLU:O	1:C:1841:HIS:N	2.45	0.46
1:D:433:LEU:O	1:D:437:SER:HB3	2.16	0.46
1:D:718:VAL:HG12	1:D:736:CYS:HB2	1.97	0.46
1:D:1444:GLY:N	1:D:1542:ALA:O	2.39	0.46
1:D:4158:ARG:O	1:D:4162:GLU:N	2.48	0.46
1:A:433:LEU:O	1:A:437:SER:HB3	2.16	0.46
1:A:2520:TYR:HA	1:A:2523:THR:HB	1.96	0.46
1:B:542:ARG:NE	1:B:577:CYS:SG	2.89	0.46
1:B:1257:GLN:O	1:B:1596:TRP:N	2.36	0.46
1:B:1610:ARG:NH1	1:B:1612:SER:OG	2.48	0.46
1:C:308:LEU:HA	1:C:314:LEU:HA	1.97	0.46
1:C:542:ARG:NE	1:C:577:CYS:SG	2.89	0.46
1:C:1109:THR:OG1	1:C:1212:VAL:N	2.48	0.46
1:C:2464:ASP:N	1:C:2464:ASP:OD1	2.47	0.46
1:C:4632:ASP:HA	1:C:4709:TRP:HE1	1.80	0.46
1:D:2481:VAL:O	1:D:2485:LEU:N	2.46	0.46
1:D:3960:SER:OG	1:D:4070:CYS:SG	2.60	0.46
1:D:4632:ASP:HA	1:D:4709:TRP:HE1	1.80	0.46
1:A:718:VAL:HG12	1:A:736:CYS:HB2	1.97	0.46
1:B:308:LEU:HA	1:B:314:LEU:HA	1.97	0.46
1:B:1272:ARG:HD2	1:B:1586:LEU:HB3	1.97	0.46
1:B:1836:ASN:HA	1:B:1839:LEU:HD12	1.98	0.46
1:B:2266:VAL:O	1:B:2270:LEU:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2426:SER:CB	1:D:143:LEU:CB	2.90	0.46
1:C:762:SER:H	1:C:784:ILE:HD11	1.80	0.46
1:C:1115:VAL:O	1:C:1137:PHE:N	2.48	0.46
1:C:1252:SER:HB2	1:C:1598:ARG:HB2	1.97	0.46
1:D:1033:VAL:HG23	1:D:1038:LEU:HB3	1.97	0.46
1:D:1828:LEU:HD12	1:D:1831:MET:HB2	1.97	0.46
1:D:2464:ASP:OD1	1:D:2464:ASP:N	2.47	0.46
1:D:3748:SER:O	1:D:3793:SER:OG	2.25	0.46
1:D:4045:SER:O	1:D:4049:PHE:N	2.44	0.46
1:D:4906:PHE:HA	1:D:4909:HIS:HB3	1.98	0.46
1:A:244:CYS:O	1:A:263:GLU:N	2.39	0.46
1:A:3993:ASN:HD21	1:A:4111:PRO:HD2	1.80	0.46
1:A:4523:VAL:HG23	1:C:4808:ASP:HB3	1.98	0.46
1:A:4635:VAL:O	1:A:4638:THR:OG1	2.30	0.46
1:B:1115:VAL:O	1:B:1137:PHE:N	2.48	0.46
1:B:1828:LEU:HD12	1:B:1831:MET:HB2	1.97	0.46
1:B:3786:LYS:HD2	1:B:3865:ASN:HA	1.97	0.46
1:B:3922:THR:O	1:B:3926:GLN:N	2.43	0.46
1:B:3993:ASN:HD21	1:B:4111:PRO:HD2	1.80	0.46
1:B:4519:LEU:C	1:D:4810:MET:CB	2.84	0.46
1:B:4827:GLY:HA3	1:B:4852:PHE:CB	2.45	0.46
1:B:4845:ILE:O	1:B:4849:ILE:HG12	2.16	0.46
1:C:433:LEU:O	1:C:437:SER:HB3	2.16	0.46
1:C:647:ARG:HH11	1:C:1684:GLN:HB2	1.80	0.46
1:D:2135:MET:HA	1:D:2136:GLY:HA3	1.65	0.46
1:D:3831:LEU:HA	1:D:3832:GLN:HA	1.71	0.46
1:A:1468:THR:HA	1:A:1478:GLU:HA	1.98	0.46
1:A:4905:GLY:O	1:A:4909:HIS:CB	2.63	0.46
1:B:4906:PHE:HA	1:B:4909:HIS:HB3	1.98	0.46
1:C:443:SER:HA	1:C:444:THR:HA	1.52	0.46
1:C:629:GLN:HB3	1:C:1664:VAL:HG13	1.97	0.46
1:C:4906:PHE:HA	1:C:4909:HIS:HB3	1.98	0.46
1:D:58:VAL:HG22	1:D:320:GLU:HA	1.97	0.46
1:D:1173:MET:O	1:D:1191:ALA:N	2.48	0.46
1:D:2266:VAL:O	1:D:2270:LEU:N	2.48	0.46
1:A:260:VAL:O	1:A:391:ALA:N	2.47	0.46
1:A:270:HIS:HB3	1:A:272:ARG:HG2	1.97	0.46
1:A:1176:THR:HG22	1:A:1181:ILE:HA	1.98	0.46
1:A:2135:MET:HA	1:A:2136:GLY:HA3	1.65	0.46
1:A:4804:ASP:OD1	1:A:4804:ASP:N	2.46	0.46
1:B:229:ILE:HA	1:B:288:HIS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:299:HIS:NE2	1:B:301:THR:OG1	2.41	0.46
1:B:419:ILE:HG12	1:B:489:PHE:HE1	1.80	0.46
1:B:833:LYS:HG2	1:B:1614:ARG:HH22	1.80	0.46
1:B:1183:LEU:HB3	1:B:1187:GLY:HA2	1.97	0.46
1:C:229:ILE:HA	1:C:288:HIS:HA	1.98	0.46
1:C:1217:PHE:HB3	1:C:1247:ILE:HD12	1.98	0.46
1:C:1836:ASN:HA	1:C:1839:LEU:HD12	1.98	0.46
1:C:3834:ASP:OD1	1:C:3834:ASP:N	2.47	0.46
1:D:1119:ARG:HH11	1:D:1133:ARG:HG2	1.81	0.46
1:D:4011:VAL:HA	1:D:4014:ILE:HG12	1.97	0.46
1:A:299:HIS:NE2	1:A:301:THR:OG1	2.41	0.46
1:A:1217:PHE:HB3	1:A:1247:ILE:HD12	1.98	0.46
1:A:1305:SER:HB2	1:A:1591:LEU:HD12	1.98	0.46
1:A:3786:LYS:HD2	1:A:3865:ASN:HA	1.97	0.46
1:A:4813:CYS:SG	1:A:4817:HIS:HD2	2.39	0.46
1:A:4845:ILE:O	1:A:4849:ILE:HG12	2.16	0.46
1:B:762:SER:H	1:B:784:ILE:HD11	1.80	0.46
1:B:764:PRO:HG3	1:B:782:PHE:H	1.80	0.46
1:B:1176:THR:HG22	1:B:1181:ILE:HA	1.98	0.46
1:B:4037:ASP:OD2	1:B:4042:GLY:N	2.49	0.46
1:B:4160:GLN:HB3	1:B:4201:MET:HB3	1.98	0.46
1:B:4522:LYS:HB3	1:B:4560:TYR:CZ	2.51	0.46
1:C:121:LEU:HD23	1:C:121:LEU:HA	1.81	0.46
1:C:1738:LEU:HD13	1:C:1739:PHE:HB3	1.96	0.46
1:C:2222:LEU:O	1:C:2226:SER:N	2.37	0.46
1:C:4905:GLY:O	1:C:4909:HIS:CB	2.63	0.46
1:D:4905:GLY:O	1:D:4909:HIS:CB	2.63	0.46
1:A:695:VAL:HG13	1:A:792:VAL:HG22	1.98	0.46
1:A:4486:ILE:N	1:A:4489:GLN:OE1	2.49	0.46
1:B:270:HIS:HB3	1:B:272:ARG:HG2	1.97	0.46
1:B:1033:VAL:HG23	1:B:1038:LEU:HB3	1.97	0.46
1:B:1106:GLU:HA	1:B:1161:VAL:HG22	1.97	0.46
1:B:4774:LEU:HD13	1:C:4754:LEU:HD13	1.98	0.46
1:C:260:VAL:O	1:C:391:ALA:N	2.47	0.46
1:C:1828:LEU:HD12	1:C:1831:MET:HB2	1.97	0.46
1:C:3922:THR:O	1:C:3926:GLN:N	2.43	0.46
1:D:1305:SER:HB2	1:D:1591:LEU:HD12	1.98	0.46
1:D:1468:THR:HA	1:D:1478:GLU:HA	1.98	0.46
1:D:3786:LYS:HD2	1:D:3865:ASN:HA	1.97	0.46
1:D:4160:GLN:HB3	1:D:4201:MET:HB3	1.98	0.46
1:A:699:SER:OG	1:A:785:ASP:O	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1252:SER:HB2	1:A:1598:ARG:HB2	1.97	0.45
1:C:764:PRO:HG3	1:C:782:PHE:H	1.80	0.45
1:C:1305:SER:HB2	1:C:1591:LEU:HD12	1.98	0.45
1:C:4521:TYR:CD1	1:C:4561:VAL:CG2	2.85	0.45
1:D:695:VAL:HG13	1:D:792:VAL:HG22	1.98	0.45
1:D:1183:LEU:HB3	1:D:1187:GLY:HA2	1.97	0.45
1:D:1836:ASN:HA	1:D:1839:LEU:HD12	1.98	0.45
1:D:2063:ILE:O	1:D:2066:THR:OG1	2.31	0.45
1:A:476:GLN:NE2	1:A:3679:GLU:OE1	2.39	0.45
1:A:762:SER:H	1:A:784:ILE:HD11	1.81	0.45
1:A:1828:LEU:HD12	1:A:1831:MET:HB2	1.97	0.45
1:A:4037:ASP:OD2	1:A:4042:GLY:N	2.49	0.45
1:A:4158:ARG:O	1:A:4162:GLU:N	2.48	0.45
1:B:1669:ASN:O	1:B:1673:ALA:N	2.43	0.45
1:B:4600:ILE:HD12	1:B:4603:ARG:HB3	1.99	0.45
1:B:4635:VAL:O	1:B:4638:THR:OG1	2.30	0.45
1:B:4905:GLY:O	1:B:4909:HIS:CB	2.63	0.45
1:D:647:ARG:HH11	1:D:1684:GLN:HB2	1.80	0.45
1:D:762:SER:H	1:D:784:ILE:HD11	1.80	0.45
1:D:4597:PRO:HA	1:D:4600:ILE:HG22	1.98	0.45
1:A:85:THR:C	1:A:100:PHE:N	2.69	0.45
1:A:802:PHE:N	1:A:1616:GLY:O	2.50	0.45
1:B:433:LEU:O	1:B:437:SER:HB3	2.16	0.45
1:B:3949:LEU:HD23	1:B:3952:PHE:HD2	1.82	0.45
1:C:133:LEU:N	1:C:146:ASP:O	2.46	0.45
1:C:1124:PRO:HG3	1:C:1600:PRO:HD3	1.98	0.45
1:C:1748:LEU:HD13	1:C:1750:GLY:H	1.81	0.45
1:C:2266:VAL:O	1:C:2270:LEU:N	2.48	0.45
1:C:4600:ILE:HD12	1:C:4603:ARG:HB3	1.99	0.45
1:D:121:LEU:HD23	1:D:121:LEU:HA	1.81	0.45
1:D:1106:GLU:HA	1:D:1161:VAL:HG22	1.97	0.45
1:D:3762:LEU:O	1:D:3766:ILE:N	2.42	0.45
1:D:3984:LEU:HG	1:D:4102:LEU:HD12	1.98	0.45
1:D:4037:ASP:OD2	1:D:4042:GLY:N	2.49	0.45
1:A:1119:ARG:HH11	1:A:1133:ARG:HG2	1.81	0.45
1:B:1748:LEU:HD13	1:B:1750:GLY:H	1.81	0.45
1:B:4486:ILE:N	1:B:4489:GLN:OE1	2.49	0.45
1:C:476:GLN:NE2	1:C:3679:GLU:OE1	2.39	0.45
1:C:1176:THR:HG22	1:C:1181:ILE:HA	1.98	0.45
1:C:3993:ASN:HD21	1:C:4111:PRO:HD2	1.80	0.45
1:C:4486:ILE:N	1:C:4489:GLN:OE1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:542:ARG:NE	1:D:577:CYS:SG	2.89	0.45
1:D:1124:PRO:HG3	1:D:1600:PRO:HD3	1.98	0.45
1:D:4171:ARG:NH1	1:D:4175:PHE:HB2	2.32	0.45
1:D:4486:ILE:N	1:D:4489:GLN:OE1	2.49	0.45
1:D:4845:ILE:O	1:D:4849:ILE:HG12	2.16	0.45
1:A:647:ARG:HH11	1:A:1684:GLN:HB2	1.80	0.45
1:A:1183:LEU:HB3	1:A:1187:GLY:HA2	1.97	0.45
1:A:3984:LEU:HG	1:A:4102:LEU:HD12	1.98	0.45
1:A:4139:ILE:HD12	1:A:4147:GLU:HB2	1.99	0.45
1:A:4171:ARG:NH1	1:A:4175:PHE:HB2	2.32	0.45
1:B:274:LEU:H	1:B:299:HIS:CE1	2.35	0.45
1:B:1468:THR:HA	1:B:1478:GLU:HA	1.98	0.45
1:B:4810:MET:CB	1:C:4519:LEU:C	2.84	0.45
1:B:4816:PHE:O	1:B:4820:VAL:HG23	2.16	0.45
1:C:517:VAL:HB	1:C:520:ARG:HG2	1.99	0.45
1:C:3811:ARG:O	1:C:3815:ALA:N	2.43	0.45
1:C:3984:LEU:HG	1:C:4102:LEU:HD12	1.98	0.45
1:C:4717:ASP:OD1	1:C:4718:ASN:N	2.50	0.45
1:D:61:ASP:OD1	1:D:62:LEU:N	2.50	0.45
1:D:229:ILE:HA	1:D:288:HIS:HA	1.98	0.45
1:D:802:PHE:N	1:D:1616:GLY:O	2.50	0.45
1:D:1176:THR:HG22	1:D:1181:ILE:HA	1.98	0.45
1:D:1659:ARG:O	1:D:1662:SER:OG	2.30	0.45
1:D:1676:LEU:HA	1:D:1679:HIS:HB2	1.99	0.45
1:D:1748:LEU:HD13	1:D:1750:GLY:H	1.81	0.45
1:D:2123:SER:O	1:D:2126:GLN:NE2	2.50	0.45
1:D:4018:PHE:O	1:D:4022:LEU:CB	2.61	0.45
1:D:4717:ASP:OD1	1:D:4718:ASN:N	2.50	0.45
1:A:20:VAL:O	1:A:67:PHE:N	2.45	0.45
1:A:4594:LEU:O	1:A:4596:VAL:N	2.50	0.45
1:B:1676:LEU:HA	1:B:1679:HIS:HB2	1.99	0.45
1:B:1732:GLU:O	1:B:1735:SER:OG	2.30	0.45
1:B:4597:PRO:HA	1:B:4600:ILE:HG22	1.99	0.45
1:C:653:SER:OG	1:C:794:PHE:O	2.33	0.45
1:C:1183:LEU:HB3	1:C:1187:GLY:HA2	1.97	0.45
1:C:2123:SER:O	1:C:2126:GLN:NE2	2.50	0.45
1:C:3786:LYS:HD2	1:C:3865:ASN:HA	1.98	0.45
1:D:443:SER:HA	1:D:444:THR:HA	1.52	0.45
1:D:1086:ARG:O	1:D:1206:SER:OG	2.30	0.45
1:D:3763:GLY:HA2	1:D:3766:ILE:HD12	1.98	0.45
1:D:3890:TYR:HE1	1:D:3954:HIS:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1659:ARG:O	1:A:1662:SER:OG	2.30	0.45
1:A:1748:LEU:HD13	1:A:1750:GLY:H	1.81	0.45
1:A:2349:GLU:OE2	1:A:2438:SER:OG	2.35	0.45
1:B:1106:GLU:N	1:B:1214:ARG:O	2.50	0.45
1:B:1305:SER:HB2	1:B:1591:LEU:HD12	1.98	0.45
1:B:4018:PHE:O	1:B:4022:LEU:CB	2.61	0.45
1:C:270:HIS:HB3	1:C:272:ARG:HG2	1.97	0.45
1:C:1256:PRO:O	1:C:1451:HIS:ND1	2.37	0.45
1:C:2313:SER:OG	1:C:2475:ARG:NH2	2.50	0.45
1:C:3949:LEU:HD23	1:C:3952:PHE:HD2	1.82	0.45
1:C:4037:ASP:OD2	1:C:4042:GLY:N	2.49	0.45
1:C:4845:ILE:O	1:C:4849:ILE:HG12	2.16	0.45
1:D:1106:GLU:N	1:D:1214:ARG:O	2.50	0.45
1:D:1272:ARG:HD2	1:D:1586:LEU:HB3	1.97	0.45
1:D:3870:ASN:HD21	1:D:3872:ILE:HD12	1.82	0.45
1:A:1836:ASN:HA	1:A:1839:LEU:HD12	1.98	0.45
1:A:2313:SER:OG	1:A:2475:ARG:NH2	2.50	0.45
1:A:3763:GLY:HA2	1:A:3766:ILE:HD12	1.98	0.45
1:B:1119:ARG:HH11	1:B:1133:ARG:HG2	1.81	0.45
1:B:2313:SER:OG	1:B:2475:ARG:NH2	2.50	0.45
1:B:3763:GLY:HA2	1:B:3766:ILE:HD12	1.98	0.45
1:B:4171:ARG:NH1	1:B:4175:PHE:HB2	2.32	0.45
1:B:4811:LEU:HB2	1:C:4519:LEU:HD11	1.86	0.45
1:C:394:HIS:CD2	1:C:396:GLU:H	2.35	0.45
1:C:4594:LEU:O	1:C:4596:VAL:N	2.50	0.45
1:D:274:LEU:H	1:D:299:HIS:CE1	2.35	0.45
1:D:1114:ARG:NH1	1:D:1128:LEU:O	2.50	0.45
1:A:1676:LEU:HA	1:A:1679:HIS:HB2	1.99	0.45
1:A:2123:SER:O	1:A:2126:GLN:NE2	2.50	0.45
1:A:2793:THR:OG1	1:A:2901:GLY:O	2.33	0.45
1:A:4717:ASP:OD1	1:A:4718:ASN:N	2.50	0.45
1:B:517:VAL:HB	1:B:520:ARG:HG2	1.99	0.45
1:B:1217:PHE:HB3	1:B:1247:ILE:HD12	1.98	0.45
1:B:2110:ASN:HB3	1:B:3615:HIS:HB3	1.99	0.45
1:B:2123:SER:O	1:B:2126:GLN:NE2	2.50	0.45
1:B:4594:LEU:O	1:B:4596:VAL:N	2.50	0.45
1:B:4717:ASP:OD1	1:B:4718:ASN:N	2.50	0.45
1:C:1106:GLU:N	1:C:1214:ARG:O	2.50	0.45
1:C:1468:THR:HA	1:C:1478:GLU:HA	1.98	0.45
1:C:3763:GLY:HA2	1:C:3766:ILE:HD12	1.98	0.45
1:C:3903:GLY:O	1:C:3907:PHE:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4158:ARG:O	1:C:4162:GLU:N	2.48	0.45
1:C:4160:GLN:HB3	1:C:4201:MET:HB3	1.98	0.45
1:D:1217:PHE:HB3	1:D:1247:ILE:HD12	1.98	0.45
1:A:61:ASP:OD1	1:A:62:LEU:N	2.50	0.45
1:A:517:VAL:HB	1:A:520:ARG:HG2	1.99	0.45
1:A:542:ARG:NE	1:A:577:CYS:SG	2.89	0.45
1:A:2222:LEU:HD11	1:A:2240:PRO:HB2	2.00	0.45
1:A:3806:LEU:HD21	1:A:3892:TYR:HB2	1.99	0.45
1:A:3831:LEU:HA	1:A:3832:GLN:HA	1.71	0.45
1:A:4160:GLN:HB3	1:A:4201:MET:HB3	1.98	0.45
1:A:4600:ILE:HD12	1:A:4603:ARG:HB3	1.99	0.45
1:B:237:LEU:N	1:B:404:ASN:O	2.45	0.45
1:B:2326:ILE:HG22	1:D:207:PHE:CB	2.47	0.45
1:C:61:ASP:OD1	1:C:62:LEU:N	2.50	0.45
1:C:274:LEU:H	1:C:299:HIS:CE1	2.35	0.45
1:C:1119:ARG:HH11	1:C:1133:ARG:HG2	1.81	0.45
1:D:270:HIS:HB3	1:D:272:ARG:HG2	1.97	0.45
1:D:2110:ASN:HB3	1:D:3615:HIS:HB3	1.99	0.45
1:D:2136:GLY:O	1:D:2140:GLU:N	2.49	0.45
1:D:4600:ILE:HD12	1:D:4603:ARG:HB3	1.99	0.45
1:D:4783:THR:HG21	1:D:4817:HIS:HB2	1.97	0.45
1:A:133:LEU:N	1:A:146:ASP:O	2.46	0.44
1:A:207:PHE:CB	1:D:2326:ILE:HG22	2.47	0.44
1:A:4849:ILE:HD12	1:D:4823:ARG:CB	2.46	0.44
1:B:1114:ARG:NH1	1:B:1128:LEU:O	2.50	0.44
1:B:1669:ASN:HB3	1:B:1672:VAL:HB	1.99	0.44
1:B:4886:GLU:O	1:B:4896:ASN:ND2	2.50	0.44
1:C:459:LEU:O	1:C:463:PHE:N	2.35	0.44
1:C:802:PHE:N	1:C:1616:GLY:O	2.50	0.44
1:C:1669:ASN:HB3	1:C:1672:VAL:HB	1.99	0.44
1:C:2110:ASN:HB3	1:C:3615:HIS:HB3	1.99	0.44
1:C:2349:GLU:OE2	1:C:2438:SER:OG	2.35	0.44
1:C:4814:TYR:O	1:C:4818:MET:HB2	2.16	0.44
1:A:1124:PRO:HG3	1:A:1600:PRO:HD3	1.98	0.44
1:A:1274:ASP:HA	1:A:1286:THR:H	1.82	0.44
1:A:2266:VAL:O	1:A:2270:LEU:N	2.48	0.44
1:A:3890:TYR:HE1	1:A:3954:HIS:HB2	1.82	0.44
1:B:81:MET:SD	1:B:102:MET:HB3	2.57	0.44
1:B:3984:LEU:HG	1:B:4102:LEU:HD12	1.98	0.44
1:C:4171:ARG:NH1	1:C:4175:PHE:HB2	2.32	0.44
1:D:4046:LYS:HG3	1:D:4068:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:229:ILE:HA	1:A:288:HIS:HA	1.98	0.44
1:A:1106:GLU:N	1:A:1214:ARG:O	2.50	0.44
1:A:4886:GLU:O	1:A:4896:ASN:ND2	2.50	0.44
1:B:695:VAL:HG13	1:B:792:VAL:HG22	1.98	0.44
1:B:802:PHE:N	1:B:1616:GLY:O	2.50	0.44
1:B:1124:PRO:HG3	1:B:1600:PRO:HD3	1.98	0.44
1:B:1274:ASP:HA	1:B:1286:THR:H	1.82	0.44
1:B:3642:ILE:HD13	1:B:3645:LEU:HD12	2.00	0.44
1:B:3808:ALA:HA	1:B:3811:ARG:HD3	2.00	0.44
1:B:3890:TYR:HE1	1:B:3954:HIS:HB2	1.82	0.44
1:B:4139:ILE:HD12	1:B:4147:GLU:HB2	1.99	0.44
1:B:4158:ARG:O	1:B:4162:GLU:N	2.48	0.44
1:C:1055:ARG:HA	1:C:1058:LEU:HB2	2.00	0.44
1:C:2253:GLU:HA	1:C:2256:LEU:HD12	2.00	0.44
1:C:3806:LEU:HD21	1:C:3892:TYR:HB2	1.99	0.44
1:C:4011:VAL:HA	1:C:4014:ILE:HG12	1.97	0.44
1:C:4139:ILE:HD12	1:C:4147:GLU:HB2	1.99	0.44
1:D:1220:ASP:O	1:D:1224:LEU:N	2.51	0.44
1:D:1669:ASN:HB3	1:D:1672:VAL:HB	1.99	0.44
1:A:190:ARG:HH12	1:D:2423:ILE:HG21	1.67	0.44
1:A:1669:ASN:HB3	1:A:1672:VAL:HB	1.99	0.44
1:A:1799:VAL:O	1:A:1803:SER:CB	2.59	0.44
1:A:3870:ASN:HD21	1:A:3872:ILE:HD12	1.82	0.44
1:A:4154:SER:OG	1:A:4156:SER:OG	2.30	0.44
1:B:274:LEU:HD23	1:B:274:LEU:HA	1.88	0.44
1:B:541:ILE:HG12	1:B:551:PHE:HE2	1.83	0.44
1:B:3811:ARG:O	1:B:3815:ALA:N	2.43	0.44
1:B:3870:ASN:HD21	1:B:3872:ILE:HD12	1.82	0.44
1:B:4045:SER:O	1:B:4049:PHE:N	2.44	0.44
1:C:1114:ARG:NH1	1:C:1128:LEU:O	2.50	0.44
1:C:3808:ALA:HA	1:C:3811:ARG:HD3	2.00	0.44
1:C:3890:TYR:HE1	1:C:3954:HIS:HB2	1.82	0.44
1:C:4886:GLU:O	1:C:4896:ASN:ND2	2.50	0.44
1:D:394:HIS:CD2	1:D:396:GLU:H	2.35	0.44
1:D:1055:ARG:HA	1:D:1058:LEU:HB2	2.00	0.44
1:D:1900:PRO:O	1:D:1904:LYS:NZ	2.44	0.44
1:D:2253:GLU:HA	1:D:2256:LEU:HD12	2.00	0.44
1:A:2253:GLU:HA	1:A:2256:LEU:HD12	2.00	0.44
1:A:4046:LYS:HG3	1:A:4068:LEU:HD22	2.00	0.44
1:A:4834:ASP:O	1:A:4836:ALA:N	2.51	0.44
1:B:299:HIS:CD2	1:B:302:THR:H	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:394:HIS:CD2	1:B:396:GLU:H	2.35	0.44
1:B:1835:HIS:O	1:B:1838:ASP:N	2.47	0.44
1:B:3983:LEU:HD23	1:B:4102:LEU:HD11	2.00	0.44
1:C:4597:PRO:HA	1:C:4600:ILE:HG22	1.99	0.44
1:D:1297:THR:HA	1:D:1547:ALA:HB3	2.00	0.44
1:D:2313:SER:OG	1:D:2475:ARG:NH2	2.50	0.44
1:D:3642:ILE:HD13	1:D:3645:LEU:HD12	2.00	0.44
1:D:3911:ILE:HD12	1:D:3975:LEU:HD22	1.99	0.44
1:D:4517:ILE:O	1:D:4520:PHE:CD2	2.67	0.44
1:D:4594:LEU:O	1:D:4596:VAL:N	2.50	0.44
1:D:4820:VAL:O	1:D:4820:VAL:HG13	2.17	0.44
1:A:394:HIS:CD2	1:A:396:GLU:H	2.35	0.44
1:A:4597:PRO:HA	1:A:4600:ILE:HG22	1.98	0.44
1:A:4814:TYR:CE2	1:D:4519:LEU:CB	3.00	0.44
1:B:43:GLY:HA2	1:B:454:LEU:HG	2.00	0.44
1:B:655:MET:HE2	1:B:655:MET:HB3	1.87	0.44
1:B:675:TYR:HB2	1:B:804:LEU:HD21	1.99	0.44
1:B:1055:ARG:HA	1:B:1058:LEU:HB2	2.00	0.44
1:B:1799:VAL:O	1:B:1803:SER:CB	2.59	0.44
1:B:2481:VAL:O	1:B:2485:LEU:N	2.46	0.44
1:B:4011:VAL:HA	1:B:4014:ILE:HG12	1.97	0.44
1:B:4848:ASP:OD1	1:B:4849:ILE:N	2.51	0.44
1:C:541:ILE:HG12	1:C:551:PHE:HE2	1.83	0.44
1:C:648:LEU:HD23	1:C:1684:GLN:HA	2.00	0.44
1:C:695:VAL:HG13	1:C:792:VAL:HG22	1.98	0.44
1:C:1160:ASP:HA	1:C:1178:ASN:HD21	1.83	0.44
1:C:3831:LEU:HA	1:C:3832:GLN:HA	1.71	0.44
1:C:3852:ASN:O	1:C:3856:GLN:N	2.39	0.44
1:C:3977:LYS:HE2	1:C:3977:LYS:HB3	1.88	0.44
1:C:4046:LYS:HG3	1:C:4068:LEU:HD22	2.00	0.44
1:D:114:LEU:HB2	1:D:117:HIS:CE1	2.53	0.44
1:D:648:LEU:HD23	1:D:1684:GLN:HA	2.00	0.44
1:D:2222:LEU:HD11	1:D:2240:PRO:HB2	2.00	0.44
1:A:436:LEU:HD22	1:A:518:ALA:HA	2.00	0.44
1:A:1055:ARG:HA	1:A:1058:LEU:HB2	2.00	0.44
1:A:3892:TYR:CZ	1:A:3896:LYS:HE3	2.53	0.44
1:B:61:ASP:OD1	1:B:62:LEU:N	2.50	0.44
1:B:2253:GLU:HA	1:B:2256:LEU:HD12	2.00	0.44
1:B:3806:LEU:HD21	1:B:3892:TYR:HB2	1.99	0.44
1:C:114:LEU:HB2	1:C:117:HIS:CE1	2.53	0.44
1:C:123:HIS:N	1:C:128:MET:O	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1676:LEU:HA	1:C:1679:HIS:HB2	1.99	0.44
1:C:3892:TYR:CZ	1:C:3896:LYS:HE3	2.53	0.44
1:D:43:GLY:HA2	1:D:454:LEU:HG	2.00	0.44
1:D:4820:VAL:HG11	1:D:4828:ILE:HG13	2.00	0.44
1:D:4886:GLU:O	1:D:4896:ASN:ND2	2.50	0.44
1:A:114:LEU:HB2	1:A:117:HIS:CE1	2.53	0.44
1:A:161:THR:N	1:A:184:VAL:O	2.50	0.44
1:A:274:LEU:H	1:A:299:HIS:CE1	2.35	0.44
1:A:1089:ARG:O	1:A:1250:TRP:N	2.40	0.44
1:A:2136:GLY:O	1:A:2140:GLU:N	2.49	0.44
1:A:2486:LEU:HD13	1:A:2537:ALA:HB3	2.00	0.44
1:A:3959:LEU:HD13	1:A:3969:LEU:HA	2.00	0.44
1:B:3831:LEU:HA	1:B:3832:GLN:HA	1.71	0.44
1:B:4519:LEU:O	1:D:4810:MET:CB	2.66	0.44
1:C:43:GLY:HA2	1:C:454:LEU:HG	2.00	0.44
1:C:1900:PRO:O	1:C:1904:LYS:NZ	2.44	0.44
1:C:3760:LEU:HD22	1:C:3840:LEU:HA	2.00	0.44
1:C:3993:ASN:HD22	1:C:4110:MET:HG3	1.83	0.44
1:D:299:HIS:CD2	1:D:302:THR:H	2.34	0.44
1:D:541:ILE:HG12	1:D:551:PHE:HE2	1.83	0.44
1:D:675:TYR:HB2	1:D:804:LEU:HD21	1.99	0.44
1:D:1274:ASP:HA	1:D:1286:THR:H	1.82	0.44
1:D:3760:LEU:HD22	1:D:3840:LEU:HA	2.00	0.44
1:D:3949:LEU:HD23	1:D:3952:PHE:HD2	1.82	0.44
1:D:4848:ASP:OD1	1:D:4849:ILE:N	2.51	0.44
1:A:43:GLY:HA2	1:A:454:LEU:HG	2.00	0.44
1:A:675:TYR:HB2	1:A:804:LEU:HD21	1.99	0.44
1:B:121:LEU:HD23	1:B:121:LEU:HA	1.81	0.44
1:B:2222:LEU:HD11	1:B:2240:PRO:HB2	2.00	0.44
1:B:3960:SER:OG	1:B:4070:CYS:SG	2.60	0.44
1:C:281:ARG:NH2	1:C:287:SER:OG	2.44	0.44
1:C:675:TYR:HB2	1:C:804:LEU:HD21	1.99	0.44
1:D:517:VAL:HB	1:D:520:ARG:HG2	1.99	0.44
1:D:2793:THR:OG1	1:D:2901:GLY:O	2.33	0.44
1:D:4139:ILE:HD12	1:D:4147:GLU:HB2	1.99	0.44
1:D:4757:ILE:O	1:D:4760:SER:OG	2.30	0.44
1:A:541:ILE:HG12	1:A:551:PHE:HE2	1.83	0.43
1:A:1996:GLN:HA	1:A:1997:LEU:HA	1.82	0.43
1:A:3762:LEU:O	1:A:3766:ILE:N	2.42	0.43
1:A:3911:ILE:HD12	1:A:3975:LEU:HD22	1.99	0.43
1:A:3949:LEU:HD23	1:A:3952:PHE:HD2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:114:LEU:HB2	1:B:117:HIS:CE1	2.53	0.43
1:B:556:ASP:N	1:B:556:ASP:OD1	2.51	0.43
1:B:2024:LEU:H	1:B:2027:ARG:HB3	1.83	0.43
1:B:4023:LYS:HA	1:B:4026:ASP:HB2	1.99	0.43
1:B:4627:ILE:HA	1:B:4630:GLN:HB2	2.00	0.43
1:C:2222:LEU:HD11	1:C:2240:PRO:HB2	2.00	0.43
1:C:3959:LEU:HD13	1:C:3969:LEU:HA	2.00	0.43
1:C:4023:LYS:HA	1:C:4026:ASP:HB2	1.99	0.43
1:D:325:LYS:HB2	1:D:367:GLY:HA3	2.00	0.43
1:D:3808:ALA:HA	1:D:3811:ARG:HD3	2.00	0.43
1:D:4023:LYS:HA	1:D:4026:ASP:HB2	1.99	0.43
1:A:3760:LEU:HD22	1:A:3840:LEU:HA	2.00	0.43
1:A:4023:LYS:HA	1:A:4026:ASP:HB2	1.99	0.43
1:A:4757:ILE:O	1:A:4760:SER:OG	2.29	0.43
1:B:82:LEU:HD23	1:B:82:LEU:C	2.37	0.43
1:B:648:LEU:HD23	1:B:1684:GLN:HA	2.00	0.43
1:B:853:PRO:HD3	1:B:1086:ARG:HG2	2.00	0.43
1:B:1718:ARG:NH2	1:B:1758:ARG:O	2.52	0.43
1:B:3760:LEU:HD22	1:B:3840:LEU:HA	2.00	0.43
1:B:4046:LYS:HG3	1:B:4068:LEU:HD22	2.00	0.43
1:C:436:LEU:HD22	1:C:518:ALA:HA	2.00	0.43
1:C:1297:THR:HA	1:C:1547:ALA:HB3	2.00	0.43
1:C:3983:LEU:HD23	1:C:4102:LEU:HD11	2.00	0.43
1:D:853:PRO:HD3	1:D:1086:ARG:HG2	2.00	0.43
1:D:3892:TYR:CZ	1:D:3896:LYS:HE3	2.53	0.43
1:A:853:PRO:HD3	1:A:1086:ARG:HG2	2.00	0.43
1:A:1288:LYS:HE3	1:A:1555:PHE:HD2	1.83	0.43
1:A:3808:ALA:HA	1:A:3811:ARG:HD3	2.00	0.43
1:A:4848:ASP:OD1	1:A:4849:ILE:N	2.51	0.43
1:B:325:LYS:HB2	1:B:367:GLY:HA3	2.01	0.43
1:B:3730:ALA:HA	1:B:3733:HIS:CE1	2.53	0.43
1:B:4783:THR:HG21	1:B:4814:TYR:HA	2.01	0.43
1:C:853:PRO:HD3	1:C:1086:ARG:HG2	2.00	0.43
1:C:1274:ASP:HA	1:C:1286:THR:H	1.82	0.43
1:C:3870:ASN:HD21	1:C:3872:ILE:HD12	1.82	0.43
1:C:3911:ILE:HD12	1:C:3975:LEU:HD22	1.99	0.43
1:C:4783:THR:HG21	1:C:4814:TYR:HA	2.01	0.43
1:D:133:LEU:N	1:D:146:ASP:O	2.46	0.43
1:D:1738:LEU:HD22	1:D:1739:PHE:H	1.84	0.43
1:D:1996:GLN:HA	1:D:1997:LEU:HA	1.82	0.43
1:D:2024:LEU:H	1:D:2027:ARG:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3730:ALA:HA	1:D:3733:HIS:CE1	2.53	0.43
1:D:3959:LEU:HD13	1:D:3969:LEU:HA	2.00	0.43
1:A:888:ASN:HB3	1:A:983:LEU:HD21	2.00	0.43
1:A:1160:ASP:HA	1:A:1178:ASN:HD21	1.83	0.43
1:A:2843:GLU:OE2	1:A:2875:TYR:OH	2.24	0.43
1:A:3791:PHE:HB3	1:A:3869:VAL:HG11	2.01	0.43
1:B:1220:ASP:O	1:B:1224:LEU:N	2.51	0.43
1:B:1471:ASP:H	1:B:1474:GLY:H	1.66	0.43
1:B:2349:GLU:OE2	1:B:2438:SER:OG	2.35	0.43
1:B:3892:TYR:CZ	1:B:3896:LYS:HE3	2.53	0.43
1:B:3997:GLY:HA2	1:B:4000:MET:SD	2.59	0.43
1:C:1165:MET:HB3	1:C:1236:TYR:CZ	2.54	0.43
1:C:3642:ILE:HD13	1:C:3645:LEU:HD12	2.00	0.43
1:C:3791:PHE:HB3	1:C:3869:VAL:HG11	2.01	0.43
1:C:4783:THR:CG2	1:C:4817:HIS:CG	2.93	0.43
1:C:4899:PHE:O	1:C:4906:PHE:N	2.52	0.43
1:D:651:HIS:N	1:D:1625:LEU:O	2.45	0.43
1:D:888:ASN:HB3	1:D:983:LEU:HD21	2.00	0.43
1:D:1253:LYS:HB3	1:D:1255:LEU:H	1.84	0.43
1:D:2894:LEU:HD23	1:D:2897:LEU:HD12	2.00	0.43
1:A:1220:ASP:O	1:A:1224:LEU:N	2.51	0.43
1:A:4899:PHE:O	1:A:4906:PHE:N	2.52	0.43
1:B:292:GLY:N	1:B:331:PHE:O	2.52	0.43
1:B:1297:THR:HA	1:B:1547:ALA:HB3	2.00	0.43
1:B:3903:GLY:O	1:B:3907:PHE:HB2	2.17	0.43
1:B:3959:LEU:HD13	1:B:3969:LEU:HA	2.00	0.43
1:B:4522:LYS:HA	1:B:4522:LYS:HD2	1.87	0.43
1:B:4899:PHE:O	1:B:4906:PHE:N	2.52	0.43
1:C:161:THR:N	1:C:184:VAL:O	2.50	0.43
1:C:2024:LEU:H	1:C:2027:ARG:HB3	1.83	0.43
1:C:2063:ILE:O	1:C:2066:THR:OG1	2.31	0.43
1:C:3730:ALA:HA	1:C:3733:HIS:CE1	2.53	0.43
1:C:3997:GLY:HA2	1:C:4000:MET:SD	2.59	0.43
1:D:1718:ARG:NH2	1:D:1758:ARG:O	2.52	0.43
1:D:3806:LEU:HD21	1:D:3892:TYR:HB2	1.99	0.43
1:D:4627:ILE:HA	1:D:4630:GLN:HB2	2.00	0.43
1:A:292:GLY:N	1:A:331:PHE:O	2.52	0.43
1:A:648:LEU:HD23	1:A:1684:GLN:HA	2.00	0.43
1:A:651:HIS:N	1:A:1625:LEU:O	2.45	0.43
1:A:653:SER:OG	1:A:794:PHE:O	2.33	0.43
1:A:794:PHE:HB2	1:A:798:ILE:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:MET:HB3	1:A:1575:HIS:CE1	2.54	0.43
1:A:1718:ARG:NH2	1:A:1758:ARG:O	2.52	0.43
1:A:2063:ILE:O	1:A:2066:THR:OG1	2.31	0.43
1:A:2202:CYS:O	1:A:2205:CYS:N	2.52	0.43
1:A:3642:ILE:HD13	1:A:3645:LEU:HD12	2.00	0.43
1:B:794:PHE:HB2	1:B:798:ILE:HD12	2.01	0.43
1:B:1256:PRO:O	1:B:1451:HIS:ND1	2.37	0.43
1:B:1738:LEU:HD22	1:B:1739:PHE:H	1.84	0.43
1:B:3791:PHE:HB3	1:B:3869:VAL:HG11	2.01	0.43
1:C:1092:LYS:HG2	1:C:1202:ILE:HD13	2.00	0.43
1:D:3791:PHE:HB3	1:D:3869:VAL:HG11	2.01	0.43
1:D:4783:THR:HG21	1:D:4814:TYR:HA	2.00	0.43
1:A:1738:LEU:HD22	1:A:1739:PHE:H	1.84	0.43
1:A:2110:ASN:HB3	1:A:3615:HIS:HB3	1.99	0.43
1:A:3993:ASN:HD22	1:A:4110:MET:HA	1.83	0.43
1:A:3993:ASN:HD22	1:A:4110:MET:HG3	1.83	0.43
1:A:4094:ASP:O	1:A:4098:ASN:ND2	2.52	0.43
1:A:4189:LEU:HA	1:A:4192:ASN:HD22	1.84	0.43
1:B:1165:MET:HB3	1:B:1236:TYR:CZ	2.54	0.43
1:B:4824:ALA:HB1	1:B:4827:GLY:O	2.18	0.43
1:C:20:VAL:O	1:C:67:PHE:N	2.45	0.43
1:C:218:SER:HB3	1:C:286:GLY:HA3	2.01	0.43
1:C:1220:ASP:O	1:C:1224:LEU:N	2.51	0.43
1:C:1738:LEU:HD22	1:C:1739:PHE:H	1.83	0.43
1:C:4561:VAL:CG1	1:C:4562:LEU:N	2.81	0.43
1:D:655:MET:HE2	1:D:655:MET:HB3	1.88	0.43
1:D:4664:ARG:CZ	1:D:4667:ILE:HG13	2.49	0.43
1:A:2024:LEU:H	1:A:2027:ARG:HB3	1.83	0.43
1:A:3730:ALA:HA	1:A:3733:HIS:CE1	2.53	0.43
1:B:433:LEU:O	1:B:437:SER:CB	2.67	0.43
1:B:995:MET:HE3	1:B:1064:LEU:HD22	2.00	0.43
1:B:1160:ASP:HA	1:B:1178:ASN:HD21	1.83	0.43
1:B:1306:MET:HB3	1:B:1575:HIS:CE1	2.54	0.43
1:B:1920:ARG:HA	1:B:1923:ILE:HD12	2.01	0.43
1:B:2658:TYR:O	1:B:2662:LEU:N	2.47	0.43
1:B:2894:LEU:HD23	1:B:2897:LEU:HD12	2.00	0.43
1:B:3911:ILE:HD12	1:B:3975:LEU:HD22	1.99	0.43
1:B:3993:ASN:HD22	1:B:4110:MET:HG3	1.83	0.43
1:B:4664:ARG:CZ	1:B:4667:ILE:HG13	2.49	0.43
1:B:4783:THR:CG2	1:B:4817:HIS:HD2	2.30	0.43
1:C:888:ASN:HB3	1:C:983:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1898:LYS:NZ	1:C:1899:LEU:O	2.51	0.43
1:C:3857:ASN:OD1	1:C:3860:ARG:NH2	2.52	0.43
1:C:4104:THR:O	1:C:4107:SER:OG	2.28	0.43
1:C:4581:THR:O	1:C:4584:SER:OG	2.29	0.43
1:C:4848:ASP:OD1	1:C:4849:ILE:N	2.51	0.43
1:D:649:VAL:O	1:D:1627:PHE:N	2.31	0.43
1:D:716:ASN:ND2	1:D:791:VAL:O	2.52	0.43
1:D:4899:PHE:O	1:D:4906:PHE:N	2.52	0.43
1:A:309:MET:HG2	1:A:311:ASP:H	1.84	0.43
1:A:1297:THR:HA	1:A:1547:ALA:HB3	2.00	0.43
1:A:1487:MET:SD	1:A:1531:TYR:HB2	2.59	0.43
1:A:1654:HIS:O	1:A:1657:THR:OG1	2.26	0.43
1:B:1654:HIS:O	1:B:1657:THR:OG1	2.26	0.43
1:C:309:MET:HG2	1:C:311:ASP:H	1.84	0.43
1:C:1726:ILE:HG22	1:C:2107:TYR:HB3	2.01	0.43
1:C:2894:LEU:HD23	1:C:2897:LEU:HD12	2.00	0.43
1:D:260:VAL:O	1:D:391:ALA:N	2.47	0.43
1:D:3993:ASN:HD22	1:D:4110:MET:HG3	1.83	0.43
1:D:4093:LYS:HG2	1:D:4130:PHE:CZ	2.54	0.43
1:A:1092:LYS:HG2	1:A:1202:ILE:HD13	2.00	0.43
1:B:1253:LYS:HB3	1:B:1255:LEU:H	1.84	0.43
1:B:4093:LYS:HG2	1:B:4130:PHE:CZ	2.54	0.43
1:B:4909:HIS:O	1:B:4913:GLU:HB2	2.19	0.43
1:C:292:GLY:N	1:C:331:PHE:O	2.52	0.43
1:C:433:LEU:O	1:C:437:SER:CB	2.67	0.43
1:C:995:MET:HE3	1:C:1064:LEU:HD22	2.01	0.43
1:C:1288:LYS:HE3	1:C:1555:PHE:HD2	1.83	0.43
1:C:1680:VAL:HG22	1:C:1685:LEU:HD11	2.01	0.43
1:C:4664:ARG:CZ	1:C:4667:ILE:HG13	2.49	0.43
1:D:187:SER:OG	1:D:188:SER:N	2.52	0.43
1:D:238:HIS:HB3	1:D:243:GLU:HB3	2.01	0.43
1:D:1165:MET:HB3	1:D:1236:TYR:CZ	2.54	0.43
1:D:1306:MET:HB3	1:D:1575:HIS:CE1	2.54	0.43
1:D:1487:MET:SD	1:D:1531:TYR:HB2	2.59	0.43
1:D:2605:LYS:O	1:D:2609:LYS:N	2.49	0.43
1:A:238:HIS:HB3	1:A:243:GLU:HB3	2.01	0.42
1:A:433:LEU:O	1:A:437:SER:CB	2.67	0.42
1:A:601:LEU:HB2	1:A:610:VAL:HG11	2.01	0.42
1:A:1090:ALA:HA	1:A:1249:MET:HA	2.01	0.42
1:A:1165:MET:HB3	1:A:1236:TYR:CZ	2.54	0.42
1:A:2894:LEU:HD23	1:A:2897:LEU:HD12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4519:LEU:HB2	1:C:4814:TYR:HE2	1.80	0.42
1:A:4664:ARG:CZ	1:A:4667:ILE:HG13	2.49	0.42
1:A:4670:LEU:HD13	1:A:4670:LEU:HA	1.83	0.42
1:A:4783:THR:HG21	1:A:4814:TYR:HA	2.00	0.42
1:B:436:LEU:HD22	1:B:518:ALA:HA	2.00	0.42
1:B:716:ASN:ND2	1:B:791:VAL:O	2.52	0.42
1:B:1092:LYS:HG2	1:B:1202:ILE:HD13	2.00	0.42
1:B:2136:GLY:O	1:B:2140:GLU:N	2.49	0.42
1:C:794:PHE:HB2	1:C:798:ILE:HD12	2.01	0.42
1:C:1035:TYR:CZ	1:C:1043:LYS:HG2	2.54	0.42
1:C:1718:ARG:NH2	1:C:1758:ARG:O	2.52	0.42
1:D:794:PHE:HB2	1:D:798:ILE:HD12	2.01	0.42
1:D:2349:GLU:OE2	1:D:2438:SER:OG	2.35	0.42
1:D:3903:GLY:O	1:D:3907:PHE:HB2	2.17	0.42
1:D:3983:LEU:HD23	1:D:4102:LEU:HD11	2.00	0.42
1:D:4561:VAL:HG22	1:D:4562:LEU:O	2.19	0.42
1:D:4713:VAL:O	1:D:4716:THR:OG1	2.26	0.42
1:A:325:LYS:HB2	1:A:367:GLY:HA3	2.01	0.42
1:A:556:ASP:N	1:A:556:ASP:OD1	2.51	0.42
1:A:1726:ILE:HG22	1:A:2107:TYR:HB3	2.01	0.42
1:A:3996:ILE:HG12	1:A:4000:MET:HE3	2.01	0.42
1:A:4005:VAL:HG21	1:A:4115:ARG:HB3	2.01	0.42
1:B:235:ARG:HE	1:B:274:LEU:HD21	1.84	0.42
1:B:260:VAL:O	1:B:391:ALA:N	2.47	0.42
1:B:411:GLU:H	1:B:411:GLU:HG3	1.62	0.42
1:B:1442:TRP:HD1	1:B:1488:VAL:HG13	1.84	0.42
1:B:2737:LYS:HD2	1:B:2755:GLN:HE22	1.84	0.42
1:C:235:ARG:HE	1:C:274:LEU:HD21	1.84	0.42
1:C:325:LYS:HB2	1:C:367:GLY:HA3	2.01	0.42
1:C:1138:ASP:HB2	1:C:1145:TRP:HE1	1.85	0.42
1:C:1835:HIS:O	1:C:1838:ASP:N	2.47	0.42
1:C:4093:LYS:HG2	1:C:4130:PHE:CZ	2.53	0.42
1:C:4798:GLU:H	1:C:4802:THR:HG1	1.62	0.42
1:D:292:GLY:N	1:D:331:PHE:O	2.52	0.42
1:D:1035:TYR:CZ	1:D:1043:LYS:HG2	2.54	0.42
1:D:1090:ALA:HA	1:D:1249:MET:HA	2.01	0.42
1:D:1288:LYS:HE3	1:D:1555:PHE:HD2	1.83	0.42
1:D:1471:ASP:H	1:D:1474:GLY:H	1.66	0.42
1:D:1835:HIS:O	1:D:1838:ASP:N	2.47	0.42
1:D:4094:ASP:O	1:D:4098:ASN:ND2	2.52	0.42
1:D:4135:GLY:N	1:D:4151:PHE:O	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:897:LYS:HE2	1:A:915:HIS:CG	2.54	0.42
1:A:1138:ASP:HB2	1:A:1145:TRP:HE1	1.85	0.42
1:A:1929:PHE:CZ	1:A:2030:LEU:HB3	2.55	0.42
1:B:799:LYS:HZ1	1:B:1618:LEU:HD13	1.83	0.42
1:B:888:ASN:HB3	1:B:983:LEU:HD21	2.00	0.42
1:B:1288:LYS:HE3	1:B:1555:PHE:HD2	1.83	0.42
1:B:1487:MET:SD	1:B:1531:TYR:HB2	2.59	0.42
1:B:3857:ASN:OD1	1:B:3860:ARG:NH2	2.52	0.42
1:B:4104:THR:O	1:B:4107:SER:OG	2.28	0.42
1:B:4113:ASP:O	1:B:4117:GLN:N	2.47	0.42
1:C:238:HIS:HB3	1:C:243:GLU:HB3	2.01	0.42
1:C:1154:ARG:HE	1:C:1177:LEU:HD23	1.84	0.42
1:C:1253:LYS:HB3	1:C:1255:LEU:H	1.84	0.42
1:C:1442:TRP:HD1	1:C:1488:VAL:HG13	1.85	0.42
1:C:4627:ILE:HA	1:C:4630:GLN:HB2	2.00	0.42
1:D:1160:ASP:HA	1:D:1178:ASN:HD21	1.83	0.42
1:D:1442:TRP:HD1	1:D:1488:VAL:HG13	1.84	0.42
1:D:1628:MET:HB2	1:D:1687:TYR:HE2	1.84	0.42
1:A:73:LEU:O	1:A:117:HIS:CG	2.73	0.42
1:A:995:MET:HE3	1:A:1064:LEU:HD22	2.01	0.42
1:A:1256:PRO:O	1:A:1451:HIS:ND1	2.37	0.42
1:A:1442:TRP:HD1	1:A:1488:VAL:HG13	1.84	0.42
1:A:2717:LYS:HA	1:A:2720:TYR:HD2	1.85	0.42
1:A:3983:LEU:HD23	1:A:4102:LEU:HD11	2.00	0.42
1:A:4093:LYS:HG2	1:A:4130:PHE:CZ	2.53	0.42
1:A:4627:ILE:HA	1:A:4630:GLN:HB2	2.00	0.42
1:B:281:ARG:NH2	1:B:287:SER:OG	2.44	0.42
1:B:1929:PHE:CZ	1:B:2030:LEU:HB3	2.55	0.42
1:B:2202:CYS:O	1:B:2205:CYS:N	2.52	0.42
1:B:4094:ASP:O	1:B:4098:ASN:ND2	2.52	0.42
1:C:138:SER:O	1:C:140:THR:OG1	2.26	0.42
1:C:191:TYR:N	1:C:206:ALA:O	2.52	0.42
1:C:601:LEU:HB2	1:C:610:VAL:HG11	2.01	0.42
1:C:716:ASN:ND2	1:C:791:VAL:O	2.52	0.42
1:C:897:LYS:HE2	1:C:915:HIS:CG	2.54	0.42
1:C:2202:CYS:O	1:C:2205:CYS:N	2.52	0.42
1:C:4635:VAL:O	1:C:4638:THR:OG1	2.30	0.42
1:D:14:LEU:HD23	1:D:14:LEU:HA	1.89	0.42
1:D:745:ASN:ND2	1:D:773:GLN:OE1	2.38	0.42
1:D:2222:LEU:O	1:D:2226:SER:N	2.37	0.42
1:D:2658:TYR:O	1:D:2662:LEU:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3993:ASN:HD22	1:D:4110:MET:HA	1.84	0.42
1:D:4953:PHE:HA	1:D:4954:PRO:HD3	1.86	0.42
1:A:71:GLN:HE22	1:A:106:GLN:H	1.65	0.42
1:A:716:ASN:ND2	1:A:791:VAL:O	2.52	0.42
1:A:1664:VAL:HG12	1:A:1672:VAL:HG11	2.01	0.42
1:A:1920:ARG:HA	1:A:1923:ILE:HD12	2.01	0.42
1:B:218:SER:HB3	1:B:286:GLY:HA3	2.01	0.42
1:B:1154:ARG:HE	1:B:1177:LEU:HD23	1.85	0.42
1:C:1471:ASP:H	1:C:1474:GLY:H	1.66	0.42
1:C:1487:MET:SD	1:C:1531:TYR:HB2	2.59	0.42
1:C:1929:PHE:CZ	1:C:2030:LEU:HB3	2.55	0.42
1:D:84:ASN:ND2	1:D:84:ASN:O	2.52	0.42
1:D:1718:ARG:HA	1:D:1721:MET:HB2	2.02	0.42
1:D:2202:CYS:O	1:D:2205:CYS:N	2.52	0.42
1:D:3857:ASN:OD1	1:D:3860:ARG:NH2	2.52	0.42
1:D:3897:ASP:OD1	1:D:3958:LYS:NZ	2.40	0.42
1:A:218:SER:HB3	1:A:286:GLY:HA3	2.01	0.42
1:A:799:LYS:HZ1	1:A:1618:LEU:HD13	1.84	0.42
1:A:1035:TYR:CZ	1:A:1043:LYS:HG2	2.55	0.42
1:A:3766:ILE:HG22	1:A:3767:LEU:HG	2.02	0.42
1:A:3857:ASN:OD1	1:A:3860:ARG:NH2	2.52	0.42
1:A:4790:PHE:HA	1:A:4793:PHE:HE2	1.85	0.42
1:B:207:PHE:CB	1:C:2326:ILE:HG22	2.50	0.42
1:B:244:CYS:N	1:B:263:GLU:O	2.41	0.42
1:B:537:LEU:HD23	1:B:574:VAL:HG21	2.02	0.42
1:B:653:SER:OG	1:B:794:PHE:O	2.33	0.42
1:B:1035:TYR:CZ	1:B:1043:LYS:HG2	2.54	0.42
1:B:2063:ILE:O	1:B:2066:THR:OG1	2.31	0.42
1:B:4757:ILE:O	1:B:4760:SER:OG	2.30	0.42
1:C:1257:GLN:O	1:C:1596:TRP:N	2.36	0.42
1:C:1728:PRO:HB2	1:C:1730:THR:HG23	2.02	0.42
1:C:2793:THR:OG1	1:C:2901:GLY:O	2.33	0.42
1:C:3993:ASN:HD22	1:C:4110:MET:HA	1.84	0.42
1:C:4790:PHE:HA	1:C:4793:PHE:HE2	1.85	0.42
1:D:537:LEU:HD23	1:D:574:VAL:HG21	2.02	0.42
1:D:556:ASP:N	1:D:556:ASP:OD1	2.51	0.42
1:D:799:LYS:HZ1	1:D:1618:LEU:HD13	1.84	0.42
1:D:3997:GLY:HA2	1:D:4000:MET:SD	2.59	0.42
1:D:4832:ILE:CD1	1:D:4848:ASP:OD2	2.65	0.42
1:A:235:ARG:HE	1:A:274:LEU:HD21	1.84	0.42
1:A:1628:MET:HB2	1:A:1687:TYR:HE2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1651:LEU:HD11	1:A:1695:PRO:HG2	2.02	0.42
1:A:3983:LEU:HD12	1:A:3983:LEU:HA	1.82	0.42
1:A:4833:GLU:HG2	1:A:4834:ASP:OD1	2.20	0.42
1:A:4865:GLY:HA3	1:D:4871:PHE:CD2	2.54	0.42
1:B:601:LEU:HB2	1:B:610:VAL:HG11	2.01	0.42
1:B:1680:VAL:HG22	1:B:1685:LEU:HD11	2.01	0.42
1:B:1728:PRO:HB2	1:B:1730:THR:HG23	2.02	0.42
1:B:2142:LEU:HD23	1:B:2145:ARG:HD2	2.02	0.42
1:B:3993:ASN:HD22	1:B:4110:MET:HA	1.84	0.42
1:C:657:PRO:HA	1:C:834:VAL:HA	2.02	0.42
1:C:1654:HIS:O	1:C:1657:THR:OG1	2.26	0.42
1:C:4094:ASP:O	1:C:4098:ASN:ND2	2.52	0.42
1:D:43:GLY:HA3	1:D:455:SER:HB2	2.02	0.42
1:D:1651:LEU:HD11	1:D:1695:PRO:HG2	2.02	0.42
1:D:1664:VAL:HG12	1:D:1672:VAL:HG11	2.01	0.42
1:D:1920:ARG:HA	1:D:1923:ILE:HD12	2.01	0.42
1:D:4747:ILE:HD12	1:D:4747:ILE:HA	1.95	0.42
1:D:4909:HIS:O	1:D:4913:GLU:HB2	2.19	0.42
1:A:657:PRO:HA	1:A:834:VAL:HA	2.02	0.42
1:A:1253:LYS:HB3	1:A:1255:LEU:H	1.84	0.42
1:A:1471:ASP:H	1:A:1474:GLY:H	1.66	0.42
1:A:2142:LEU:HD23	1:A:2145:ARG:HD2	2.02	0.42
1:A:3811:ARG:O	1:A:3815:ALA:N	2.43	0.42
1:A:3997:GLY:HA2	1:A:4000:MET:SD	2.59	0.42
1:B:1090:ALA:HA	1:B:1249:MET:HA	2.01	0.42
1:B:1898:LYS:NZ	1:B:1899:LEU:O	2.51	0.42
1:B:2102:ALA:HA	1:B:2105:LYS:HZ1	1.85	0.42
1:B:2717:LYS:HA	1:B:2720:TYR:HD2	1.85	0.42
1:B:4189:LEU:HA	1:B:4192:ASN:HD22	1.84	0.42
1:C:43:GLY:HA3	1:C:455:SER:HB2	2.01	0.42
1:C:1256:PRO:HB3	1:C:1597:SER:HA	2.02	0.42
1:C:1306:MET:HB3	1:C:1575:HIS:CE1	2.54	0.42
1:C:1651:LEU:HD11	1:C:1695:PRO:HG2	2.02	0.42
1:C:1659:ARG:O	1:C:1662:SER:OG	2.30	0.42
1:C:1838:ASP:HA	1:C:1841:HIS:HB3	2.02	0.42
1:C:3694:ASP:O	1:C:3698:LYS:HG2	2.20	0.42
1:D:218:SER:HB3	1:D:286:GLY:HA3	2.01	0.42
1:D:436:LEU:HD22	1:D:518:ALA:HA	2.00	0.42
1:D:897:LYS:HE2	1:D:915:HIS:CG	2.54	0.42
1:D:2737:LYS:HD2	1:D:2755:GLN:HE22	1.84	0.42
1:A:187:SER:OG	1:A:188:SER:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:298:ARG:HE	1:A:303:GLY:HA2	1.85	0.42
1:A:767:SER:HA	1:A:778:MET:HE2	2.00	0.42
1:A:1170:GLU:O	1:A:1172:THR:N	2.52	0.42
1:A:1680:VAL:HG22	1:A:1685:LEU:HD11	2.01	0.42
1:A:1728:PRO:HB2	1:A:1730:THR:HG23	2.02	0.42
1:A:4909:HIS:O	1:A:4913:GLU:HB2	2.19	0.42
1:B:238:HIS:HB3	1:B:243:GLU:HB3	2.01	0.42
1:B:1726:ILE:HG22	1:B:2107:TYR:HB3	2.01	0.42
1:B:1900:PRO:O	1:B:1904:LYS:NZ	2.44	0.42
1:B:2086:PHE:O	1:B:3692:TYR:OH	2.25	0.42
1:B:4833:GLU:O	1:B:4844:ARG:NH2	2.52	0.42
1:C:2521:LEU:HD22	1:C:2565:ALA:HB2	2.02	0.42
1:C:3766:ILE:HG22	1:C:3767:LEU:HG	2.02	0.42
1:C:4909:HIS:O	1:C:4913:GLU:HB2	2.19	0.42
1:D:161:THR:N	1:D:184:VAL:O	2.50	0.42
1:D:433:LEU:O	1:D:437:SER:CB	2.67	0.42
1:D:653:SER:OG	1:D:794:PHE:O	2.33	0.42
1:D:767:SER:HA	1:D:778:MET:HE2	2.02	0.42
1:D:1089:ARG:O	1:D:1250:TRP:N	2.40	0.42
1:D:1626:GLN:O	1:D:1687:TYR:OH	2.31	0.42
1:D:2709:THR:HB	1:D:2781:LYS:HB3	2.02	0.42
1:D:4189:LEU:HA	1:D:4192:ASN:HD22	1.84	0.42
1:D:4670:LEU:HA	1:D:4670:LEU:HD13	1.83	0.42
1:A:1696:GLY:HA2	1:A:1699:ARG:HB3	2.02	0.42
1:A:2126:GLN:O	1:A:2130:LEU:HB2	2.20	0.42
1:A:2127:ILE:HD11	1:A:2143:MET:HG3	2.02	0.42
1:A:3812:GLN:HA	1:A:3815:ALA:HB3	2.02	0.42
1:A:3922:THR:O	1:A:3926:GLN:N	2.43	0.42
1:A:4782:TYR:O	1:A:4786:ALA:N	2.35	0.42
1:B:187:SER:OG	1:B:188:SER:N	2.52	0.42
1:B:356:TYR:CD1	1:B:407:ARG:HB3	2.55	0.42
1:B:1838:ASP:HA	1:B:1841:HIS:HB3	2.02	0.42
1:B:1929:PHE:HZ	1:B:2030:LEU:HB3	1.85	0.42
1:B:2035:GLU:O	1:B:2038:THR:OG1	2.37	0.42
1:B:4790:PHE:HA	1:B:4793:PHE:HE2	1.85	0.42
1:C:326:SER:OG	1:C:327:THR:N	2.53	0.42
1:C:1089:ARG:O	1:C:1250:TRP:N	2.40	0.42
1:C:2142:LEU:HD23	1:C:2145:ARG:HD2	2.02	0.42
1:C:2737:LYS:HD2	1:C:2755:GLN:HE22	1.84	0.42
1:C:4189:LEU:HA	1:C:4192:ASN:HD22	1.84	0.42
1:D:235:ARG:HE	1:D:274:LEU:HD21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1726:ILE:HG22	1:D:2107:TYR:HB3	2.01	0.42
1:D:2717:LYS:HA	1:D:2720:TYR:HD2	1.85	0.42
1:D:3812:GLN:HA	1:D:3815:ALA:HB3	2.02	0.42
1:D:4790:PHE:HA	1:D:4793:PHE:HE2	1.85	0.42
1:A:43:GLY:HA3	1:A:455:SER:HB2	2.02	0.41
1:A:343:ARG:HB3	1:A:344:LYS:H	1.68	0.41
1:A:1114:ARG:NH1	1:A:1128:LEU:O	2.50	0.41
1:A:3637:PHE:O	1:A:3641:LEU:N	2.51	0.41
1:A:3903:GLY:O	1:A:3907:PHE:HB2	2.17	0.41
1:B:52:THR:HA	1:B:60:PRO:HG3	2.02	0.41
1:B:161:THR:N	1:B:184:VAL:O	2.50	0.41
1:B:190:ARG:HH11	1:C:2423:ILE:HG23	1.79	0.41
1:B:748:LEU:HB2	1:B:750:ARG:HG3	2.02	0.41
1:B:897:LYS:HE2	1:B:915:HIS:CG	2.54	0.41
1:B:1696:GLY:HA2	1:B:1699:ARG:HB3	2.02	0.41
1:B:2521:LEU:HD22	1:B:2565:ALA:HB2	2.02	0.41
1:C:537:LEU:HD23	1:C:574:VAL:HG21	2.02	0.41
1:C:556:ASP:N	1:C:556:ASP:OD1	2.51	0.41
1:C:1090:ALA:HA	1:C:1249:MET:HA	2.01	0.41
1:C:2605:LYS:O	1:C:2609:LYS:N	2.49	0.41
1:C:3666:HIS:HE1	1:C:3670:LEU:HD12	1.85	0.41
1:C:4135:GLY:N	1:C:4151:PHE:O	2.48	0.41
1:D:1092:LYS:HG2	1:D:1202:ILE:HD13	2.00	0.41
1:D:1680:VAL:HG22	1:D:1685:LEU:HD11	2.01	0.41
1:D:1728:PRO:HB2	1:D:1730:THR:HG23	2.02	0.41
1:D:2142:LEU:HD23	1:D:2145:ARG:HD2	2.02	0.41
1:A:281:ARG:NH2	1:A:287:SER:OG	2.44	0.41
1:A:433:LEU:HD21	1:A:505:LEU:HG	2.02	0.41
1:A:1654:HIS:HA	1:A:1657:THR:HG23	2.02	0.41
1:A:1838:ASP:HA	1:A:1841:HIS:HB3	2.02	0.41
1:A:2521:LEU:HD22	1:A:2565:ALA:HB2	2.01	0.41
1:B:223:ALA:HB2	1:B:349:MET:HG3	2.03	0.41
1:B:415:THR:HG21	1:B:485:ARG:HG2	2.02	0.41
1:B:849:ASP:OD2	1:B:1214:ARG:NE	2.53	0.41
1:B:1833:ILE:HG22	1:B:1834:PHE:H	1.85	0.41
1:B:2709:THR:HB	1:B:2781:LYS:HB3	2.02	0.41
1:C:52:THR:HA	1:C:60:PRO:HG3	2.02	0.41
1:C:681:HIS:ND1	1:C:683:GLU:OE2	2.53	0.41
1:C:799:LYS:HZ1	1:C:1618:LEU:HD13	1.86	0.41
1:C:1696:GLY:HA2	1:C:1699:ARG:HB3	2.02	0.41
1:C:1718:ARG:HA	1:C:1721:MET:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:298:ARG:HE	1:D:303:GLY:HA2	1.85	0.41
1:D:309:MET:HG2	1:D:311:ASP:H	1.84	0.41
1:D:1137:PHE:CE2	1:D:1139:GLY:HA2	2.56	0.41
1:D:1154:ARG:HE	1:D:1177:LEU:HD23	1.84	0.41
1:D:1170:GLU:O	1:D:1172:THR:N	2.52	0.41
1:D:1929:PHE:HZ	1:D:2030:LEU:HB3	1.85	0.41
1:D:3996:ILE:HG12	1:D:4000:MET:HE3	2.01	0.41
1:A:223:ALA:HB2	1:A:349:MET:HG3	2.03	0.41
1:A:1137:PHE:CE2	1:A:1139:GLY:HA2	2.56	0.41
1:A:4193:PHE:O	1:A:4197:THR:OG1	2.26	0.41
1:A:4519:LEU:HD12	1:C:4811:LEU:CA	2.50	0.41
1:A:4732:LEU:O	1:A:4736:ASN:N	2.52	0.41
1:B:309:MET:HG2	1:B:311:ASP:H	1.84	0.41
1:B:326:SER:OG	1:B:327:THR:N	2.53	0.41
1:B:681:HIS:ND1	1:B:683:GLU:OE2	2.53	0.41
1:B:767:SER:HA	1:B:778:MET:HE2	2.02	0.41
1:B:1256:PRO:HB3	1:B:1597:SER:HA	2.02	0.41
1:B:1664:VAL:HG12	1:B:1672:VAL:HG11	2.01	0.41
1:B:2196:ASN:HA	1:B:2199:ARG:HH11	1.86	0.41
1:B:2433:LEU:HA	1:B:2436:VAL:HB	2.02	0.41
1:B:3694:ASP:O	1:B:3698:LYS:HG2	2.20	0.41
1:B:4632:ASP:OD1	1:B:4632:ASP:N	2.53	0.41
1:C:472:HIS:O	1:C:476:GLN:HG2	2.21	0.41
1:C:4495:TYR:HA	1:C:4498:ARG:HG2	2.03	0.41
1:D:1138:ASP:HB2	1:D:1145:TRP:HE1	1.85	0.41
1:D:1833:ILE:HG22	1:D:1834:PHE:H	1.85	0.41
1:D:4005:VAL:HG21	1:D:4115:ARG:HB3	2.01	0.41
1:D:4732:LEU:O	1:D:4736:ASN:N	2.52	0.41
1:A:449:ILE:HG23	1:A:529:ILE:HD11	2.02	0.41
1:A:1835:HIS:O	1:A:1838:ASP:N	2.47	0.41
1:A:3694:ASP:O	1:A:3698:LYS:HG2	2.20	0.41
1:B:591:GLU:HA	1:B:631:LEU:HD21	2.03	0.41
1:B:1431:ARG:HB3	1:B:1554:GLN:HB2	2.03	0.41
1:B:1628:MET:HB2	1:B:1687:TYR:HE2	1.84	0.41
1:B:1651:LEU:HD11	1:B:1695:PRO:HG2	2.02	0.41
1:B:1654:HIS:HA	1:B:1657:THR:HG23	2.02	0.41
1:B:3766:ILE:HG22	1:B:3767:LEU:HG	2.01	0.41
1:B:4754:LEU:HD13	1:D:4774:LEU:HD13	2.02	0.41
1:C:298:ARG:HE	1:C:303:GLY:HA2	1.85	0.41
1:C:449:ILE:HG23	1:C:529:ILE:HD11	2.02	0.41
1:C:1654:HIS:HA	1:C:1657:THR:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:591:GLU:HA	1:D:631:LEU:HD21	2.03	0.41
1:D:1828:LEU:HD12	1:D:1828:LEU:HA	1.91	0.41
1:D:3694:ASP:O	1:D:3698:LYS:HG2	2.20	0.41
1:A:472:HIS:O	1:A:476:GLN:HG2	2.21	0.41
1:A:559:ILE:HD13	1:A:593:HIS:HB3	2.02	0.41
1:A:681:HIS:ND1	1:A:683:GLU:OE2	2.53	0.41
1:A:1154:ARG:HE	1:A:1177:LEU:HD23	1.85	0.41
1:B:43:GLY:HA3	1:B:455:SER:HB2	2.01	0.41
1:B:246:THR:HG1	1:B:272:ARG:NH1	2.19	0.41
1:B:1138:ASP:HB2	1:B:1145:TRP:HE1	1.85	0.41
1:B:1170:GLU:O	1:B:1172:THR:N	2.52	0.41
1:B:3882:VAL:O	1:B:3886:ILE:HG12	2.20	0.41
1:B:4495:TYR:HA	1:B:4498:ARG:HG2	2.03	0.41
1:B:4782:TYR:O	1:B:4786:ALA:N	2.35	0.41
1:C:1920:ARG:HA	1:C:1923:ILE:HD12	2.01	0.41
1:C:2126:GLN:O	1:C:2130:LEU:HB2	2.20	0.41
1:C:2709:THR:HB	1:C:2781:LYS:HB3	2.01	0.41
1:C:2717:LYS:HA	1:C:2720:TYR:HD2	1.85	0.41
1:C:3666:HIS:CE1	1:C:3670:LEU:HD12	2.56	0.41
1:C:4114:THR:HA	1:C:4117:GLN:HB2	2.02	0.41
1:D:125:TYR:OH	1:D:413:SER:O	2.38	0.41
1:D:326:SER:OG	1:D:327:THR:N	2.53	0.41
1:D:356:TYR:CD1	1:D:407:ARG:HB3	2.55	0.41
1:D:748:LEU:HB2	1:D:750:ARG:HG3	2.02	0.41
1:D:2196:ASN:HA	1:D:2199:ARG:HH11	1.86	0.41
1:D:2521:LEU:HD22	1:D:2565:ALA:HB2	2.01	0.41
1:D:3627:LYS:HE2	1:D:3627:LYS:HB3	1.84	0.41
1:A:191:TYR:N	1:A:206:ALA:O	2.52	0.41
1:A:223:ALA:HB3	1:A:288:HIS:CE1	2.56	0.41
1:A:326:SER:OG	1:A:327:THR:N	2.53	0.41
1:A:2196:ASN:HA	1:A:2199:ARG:HH11	1.86	0.41
1:A:2709:THR:HB	1:A:2781:LYS:HB3	2.01	0.41
1:A:2737:LYS:HD2	1:A:2755:GLN:HE22	1.84	0.41
1:A:4495:TYR:HA	1:A:4498:ARG:HG2	2.03	0.41
1:B:277:LEU:HD23	1:B:277:LEU:HA	1.93	0.41
1:B:1090:ALA:HA	1:B:1249:MET:HG2	2.03	0.41
1:B:1290:PHE:HB2	1:B:1552:VAL:HG12	2.02	0.41
1:B:2063:ILE:O	1:B:2067:MET:HG2	2.21	0.41
1:B:3637:PHE:O	1:B:3641:LEU:N	2.51	0.41
1:B:3666:HIS:CE1	1:B:3670:LEU:HD12	2.56	0.41
1:B:4005:VAL:HG21	1:B:4115:ARG:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4114:THR:HA	1:B:4117:GLN:HB2	2.02	0.41
1:C:244:CYS:N	1:C:263:GLU:O	2.41	0.41
1:C:299:HIS:CD2	1:C:302:THR:H	2.34	0.41
1:C:356:TYR:CD1	1:C:407:ARG:HB3	2.55	0.41
1:C:1137:PHE:CE2	1:C:1139:GLY:HA2	2.55	0.41
1:C:1628:MET:HB2	1:C:1687:TYR:HE2	1.84	0.41
1:C:1664:VAL:HG12	1:C:1672:VAL:HG11	2.01	0.41
1:C:2388:ALA:O	1:C:2392:PHE:HB2	2.21	0.41
1:C:4005:VAL:HG21	1:C:4115:ARG:HB3	2.01	0.41
1:C:4160:GLN:HE22	1:C:4204:ALA:HB3	1.86	0.41
1:C:4610:LYS:O	1:C:4614:ASP:HB2	2.21	0.41
1:D:277:LEU:HD23	1:D:277:LEU:HA	1.93	0.41
1:D:490:GLN:NE2	1:D:550:GLN:HG3	2.36	0.41
1:D:681:HIS:ND1	1:D:683:GLU:OE2	2.53	0.41
1:D:1103:PHE:HB3	1:D:1239:PHE:CE2	2.56	0.41
1:D:1838:ASP:HA	1:D:1841:HIS:HB3	2.02	0.41
1:D:2063:ILE:O	1:D:2067:MET:HG2	2.21	0.41
1:D:2127:ILE:HD11	1:D:2143:MET:HG3	2.02	0.41
1:D:3666:HIS:HE1	1:D:3670:LEU:HD12	1.85	0.41
1:D:3766:ILE:HG22	1:D:3767:LEU:HG	2.01	0.41
1:D:4753:THR:O	1:D:4756:THR:OG1	2.26	0.41
1:A:441:LYS:HA	1:A:442:ALA:HA	1.84	0.41
1:A:1103:PHE:HB3	1:A:1239:PHE:CE2	2.56	0.41
1:A:3677:LEU:HD23	1:A:3677:LEU:HA	1.83	0.41
1:A:3733:HIS:HA	1:A:3737:ALA:HB3	2.02	0.41
1:A:4114:THR:HA	1:A:4117:GLN:HB2	2.02	0.41
1:A:4610:LYS:O	1:A:4614:ASP:HB2	2.21	0.41
1:B:266:ALA:HB1	1:B:269:VAL:HB	2.03	0.41
1:B:449:ILE:HG23	1:B:529:ILE:HD11	2.02	0.41
1:B:1659:ARG:O	1:B:1662:SER:OG	2.30	0.41
1:B:1718:ARG:HA	1:B:1721:MET:HB2	2.02	0.41
1:B:2135:MET:HA	1:B:2136:GLY:HA3	1.65	0.41
1:B:2388:ALA:O	1:B:2392:PHE:HB2	2.21	0.41
1:B:3666:HIS:HE1	1:B:3670:LEU:HD12	1.85	0.41
1:B:4517:ILE:HA	1:B:4520:PHE:CD2	2.55	0.41
1:B:4600:ILE:HD12	1:B:4600:ILE:HA	1.96	0.41
1:B:4753:THR:O	1:B:4756:THR:OG1	2.26	0.41
1:C:223:ALA:HB3	1:C:288:HIS:CE1	2.56	0.41
1:C:227:TYR:CD2	1:C:352:SER:HB2	2.56	0.41
1:C:274:LEU:HD23	1:C:274:LEU:HA	1.88	0.41
1:C:2433:LEU:HA	1:C:2436:VAL:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:223:ALA:HB2	1:D:349:MET:HG3	2.03	0.41
1:D:227:TYR:CD2	1:D:352:SER:HB2	2.56	0.41
1:D:657:PRO:HA	1:D:834:VAL:HA	2.02	0.41
1:D:1092:LYS:H	1:D:1250:TRP:HZ3	1.68	0.41
1:D:1669:ASN:O	1:D:1673:ALA:N	2.43	0.41
1:D:1696:GLY:HA2	1:D:1699:ARG:HB3	2.02	0.41
1:D:2388:ALA:O	1:D:2392:PHE:HB2	2.21	0.41
1:D:3882:VAL:O	1:D:3886:ILE:HG12	2.20	0.41
1:D:4520:PHE:HB2	1:D:4561:VAL:HG23	2.03	0.41
1:D:4768:LEU:HG	1:D:4866:LEU:HD23	2.02	0.41
1:A:52:THR:HA	1:A:60:PRO:HG3	2.02	0.41
1:A:227:TYR:CD2	1:A:352:SER:HB2	2.56	0.41
1:A:490:GLN:NE2	1:A:550:GLN:HG3	2.36	0.41
1:A:1440:ASN:HB2	1:A:1548:THR:HG21	2.03	0.41
1:A:1900:PRO:O	1:A:1904:LYS:NZ	2.44	0.41
1:A:1929:PHE:HZ	1:A:2030:LEU:HB3	1.85	0.41
1:A:3627:LYS:HE2	1:A:3627:LYS:HB3	1.84	0.41
1:A:3977:LYS:HE2	1:A:3977:LYS:HB3	1.88	0.41
1:A:4753:THR:O	1:A:4756:THR:OG1	2.26	0.41
1:B:227:TYR:CD2	1:B:352:SER:HB2	2.56	0.41
1:B:601:LEU:HD13	1:B:610:VAL:HG21	2.03	0.41
1:B:1137:PHE:CE2	1:B:1139:GLY:HA2	2.55	0.41
1:B:3762:LEU:O	1:B:3766:ILE:N	2.42	0.41
1:B:3852:ASN:O	1:B:3856:GLN:N	2.39	0.41
1:C:187:SER:OG	1:C:188:SER:N	2.52	0.41
1:C:591:GLU:HA	1:C:631:LEU:HD21	2.03	0.41
1:C:767:SER:HA	1:C:778:MET:HE2	2.02	0.41
1:C:4768:LEU:HG	1:C:4866:LEU:HD23	2.03	0.41
1:D:601:LEU:HB2	1:D:610:VAL:HG11	2.01	0.41
1:D:849:ASP:OD2	1:D:1214:ARG:NE	2.53	0.41
1:D:1819:VAL:O	1:D:1823:LYS:CB	2.66	0.41
1:D:1929:PHE:CZ	1:D:2030:LEU:HB3	2.55	0.41
1:D:2102:ALA:HA	1:D:2105:LYS:HZ1	1.86	0.41
1:D:4495:TYR:HA	1:D:4498:ARG:HG2	2.03	0.41
1:A:266:ALA:HB1	1:A:269:VAL:HB	2.03	0.41
1:A:299:HIS:CD2	1:A:302:THR:H	2.34	0.41
1:A:537:LEU:HD23	1:A:574:VAL:HG21	2.02	0.41
1:A:1718:ARG:HA	1:A:1721:MET:HB2	2.02	0.41
1:A:2426:SER:CB	1:C:143:LEU:CB	2.91	0.41
1:A:3666:HIS:HE1	1:A:3670:LEU:HD12	1.85	0.41
1:A:3882:VAL:O	1:A:3886:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4004:LEU:HD13	1:A:4004:LEU:HA	1.88	0.41
1:A:4747:ILE:HD12	1:A:4747:ILE:HA	1.95	0.41
1:B:16:THR:N	1:B:110:HIS:O	2.54	0.41
1:B:298:ARG:HE	1:B:303:GLY:HA2	1.85	0.41
1:B:559:ILE:HD13	1:B:593:HIS:HB3	2.02	0.41
1:B:647:ARG:HH12	1:B:1683:PRO:HG2	1.86	0.41
1:B:657:PRO:HA	1:B:834:VAL:HA	2.02	0.41
1:B:1103:PHE:HB3	1:B:1239:PHE:CE2	2.56	0.41
1:B:1267:HIS:HB3	1:B:1294:ASN:HD21	1.86	0.41
1:B:2096:ILE:O	1:B:2100:VAL:N	2.53	0.41
1:B:3812:GLN:HA	1:B:3815:ALA:HB3	2.02	0.41
1:B:4610:LYS:O	1:B:4614:ASP:HB2	2.21	0.41
1:C:120:LEU:HB2	1:C:159:TRP:CH2	2.56	0.41
1:C:125:TYR:OH	1:C:413:SER:O	2.38	0.41
1:C:223:ALA:HB2	1:C:349:MET:HG3	2.03	0.41
1:C:415:THR:HG21	1:C:485:ARG:HG2	2.02	0.41
1:C:717:GLY:O	1:C:735:GLY:N	2.54	0.41
1:C:832:LEU:HD12	1:C:1617:TRP:CG	2.56	0.41
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.45	0.41
1:C:1043:LYS:O	1:C:1047:LYS:HB2	2.21	0.41
1:C:1103:PHE:HB3	1:C:1239:PHE:CE2	2.56	0.41
1:C:1267:HIS:HB3	1:C:1294:ASN:HD21	1.86	0.41
1:C:1440:ASN:HB2	1:C:1548:THR:HG21	2.03	0.41
1:C:1929:PHE:HZ	1:C:2030:LEU:HB3	1.85	0.41
1:C:2035:GLU:O	1:C:2038:THR:OG1	2.37	0.41
1:C:2127:ILE:HD11	1:C:2143:MET:HG3	2.02	0.41
1:C:3733:HIS:HA	1:C:3737:ALA:HB3	2.02	0.41
1:C:3812:GLN:HA	1:C:3815:ALA:HB3	2.02	0.41
1:C:4575:ILE:O	1:C:4579:LEU:HB2	2.21	0.41
1:D:52:THR:HA	1:D:60:PRO:HG3	2.02	0.41
1:D:120:LEU:HB2	1:D:159:TRP:CH2	2.56	0.41
1:D:274:LEU:HD23	1:D:274:LEU:HA	1.88	0.41
1:D:433:LEU:HD21	1:D:505:LEU:HG	2.02	0.41
1:D:449:ILE:HG23	1:D:529:ILE:HD11	2.02	0.41
1:D:559:ILE:HD13	1:D:593:HIS:HB3	2.02	0.41
1:D:4160:GLN:HE22	1:D:4204:ALA:HB3	1.86	0.41
1:D:4610:LYS:O	1:D:4614:ASP:HB2	2.21	0.41
1:A:1484:ASN:H	1:A:1486:TYR:HA	1.86	0.41
1:A:4135:GLY:N	1:A:4151:PHE:O	2.48	0.41
1:B:120:LEU:HB2	1:B:159:TRP:CH2	2.56	0.41
1:B:472:HIS:O	1:B:476:GLN:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4942:TRP:O	1:B:4946:GLN:HG2	2.21	0.41
1:C:748:LEU:HB2	1:C:750:ARG:HG3	2.02	0.41
1:C:2096:ILE:O	1:C:2100:VAL:N	2.53	0.41
1:C:3882:VAL:O	1:C:3886:ILE:HG12	2.20	0.41
1:D:266:ALA:HB1	1:D:269:VAL:HB	2.03	0.41
1:D:647:ARG:HH12	1:D:1683:PRO:HG2	1.86	0.41
1:D:1043:LYS:O	1:D:1047:LYS:HB2	2.21	0.41
1:D:1431:ARG:HB3	1:D:1554:GLN:HB2	2.03	0.41
1:D:4942:TRP:O	1:D:4946:GLN:HG2	2.21	0.41
1:A:16:THR:N	1:A:110:HIS:O	2.54	0.40
1:A:1250:TRP:CD1	1:A:1602:GLN:HA	2.57	0.40
1:A:2267:VAL:HG21	1:A:2328:ARG:HH21	1.87	0.40
1:A:3831:LEU:HA	1:A:3831:LEU:HD23	1.92	0.40
1:A:4090:GLU:HA	1:A:4093:LYS:HB3	2.03	0.40
1:A:4160:GLN:HE22	1:A:4204:ALA:HB3	1.86	0.40
1:B:18:ASP:HB2	1:B:69:LEU:HD12	2.02	0.40
1:B:832:LEU:HD12	1:B:1617:TRP:CG	2.56	0.40
1:B:1092:LYS:H	1:B:1250:TRP:HZ3	1.68	0.40
1:B:1826:TYR:CZ	1:B:1830:ILE:HD11	2.56	0.40
1:B:2126:GLN:O	1:B:2130:LEU:HB2	2.20	0.40
1:B:2605:LYS:O	1:B:2609:LYS:N	2.49	0.40
1:C:433:LEU:HD21	1:C:505:LEU:HG	2.02	0.40
1:C:556:ASP:HA	1:C:559:ILE:HD12	2.03	0.40
1:C:1431:ARG:HB3	1:C:1554:GLN:HB2	2.03	0.40
1:C:1449:ASP:N	1:C:1449:ASP:OD1	2.55	0.40
1:C:1833:ILE:HG22	1:C:1834:PHE:H	1.85	0.40
1:C:2136:GLY:O	1:C:2140:GLU:N	2.49	0.40
1:D:1290:PHE:HB2	1:D:1552:VAL:HG12	2.02	0.40
1:D:1440:ASN:HB2	1:D:1548:THR:HG21	2.03	0.40
1:D:4090:GLU:HA	1:D:4093:LYS:HB3	2.03	0.40
1:D:4824:ALA:HB1	1:D:4827:GLY:O	2.20	0.40
1:A:556:ASP:HA	1:A:559:ILE:HD12	2.03	0.40
1:A:1290:PHE:HB2	1:A:1552:VAL:HG12	2.02	0.40
1:A:1711:LEU:HD22	1:A:1828:LEU:HD13	2.03	0.40
1:A:1833:ILE:HG22	1:A:1834:PHE:H	1.85	0.40
1:A:2063:ILE:O	1:A:2067:MET:HG2	2.21	0.40
1:A:2326:ILE:HG22	1:C:207:PHE:CB	2.51	0.40
1:A:4097:PHE:HB2	1:A:4130:PHE:CE1	2.57	0.40
1:A:4651:LYS:HZ1	1:A:4670:LEU:C	2.25	0.40
1:B:1685:LEU:HA	1:B:1688:ALA:HB3	2.04	0.40
1:B:2222:LEU:O	1:B:2226:SER:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4875:ARG:HH21	1:D:4869:ASP:HB3	1.85	0.40
1:C:18:ASP:HB2	1:C:69:LEU:HD12	2.02	0.40
1:C:195:SER:OG	1:C:196:TYR:N	2.55	0.40
1:C:441:LYS:HA	1:C:442:ALA:HA	1.84	0.40
1:C:1711:LEU:HD22	1:C:1828:LEU:HD13	2.03	0.40
1:C:2196:ASN:HA	1:C:2199:ARG:HH11	1.86	0.40
1:C:2266:VAL:HG11	1:C:2303:LEU:HD11	2.04	0.40
1:D:18:ASP:HB2	1:D:69:LEU:HD12	2.02	0.40
1:D:415:THR:HG21	1:D:485:ARG:HG2	2.02	0.40
1:D:717:GLY:O	1:D:735:GLY:N	2.54	0.40
1:D:1090:ALA:HA	1:D:1249:MET:HG2	2.03	0.40
1:D:1654:HIS:HA	1:D:1657:THR:HG23	2.02	0.40
1:D:1711:LEU:HD22	1:D:1828:LEU:HD13	2.03	0.40
1:A:1685:LEU:HA	1:A:1688:ALA:HB3	2.03	0.40
1:A:2433:LEU:HA	1:A:2436:VAL:HB	2.02	0.40
1:B:433:LEU:HD21	1:B:505:LEU:HG	2.02	0.40
1:B:556:ASP:HA	1:B:559:ILE:HD12	2.03	0.40
1:B:782:PHE:HE1	1:B:1465:VAL:HG13	1.86	0.40
1:B:1250:TRP:CD1	1:B:1602:GLN:HA	2.57	0.40
1:B:1711:LEU:HD22	1:B:1828:LEU:HD13	2.03	0.40
1:B:2127:ILE:HD11	1:B:2143:MET:HG3	2.02	0.40
1:B:3666:HIS:HB2	1:B:3735:ARG:HG2	2.04	0.40
1:B:4022:LEU:HD21	1:B:4129:TYR:CE2	2.57	0.40
1:B:4160:GLN:HE22	1:B:4204:ALA:HB3	1.86	0.40
1:B:4651:LYS:HZ1	1:B:4670:LEU:C	2.24	0.40
1:B:4768:LEU:HG	1:B:4866:LEU:HD23	2.03	0.40
1:C:263:GLU:HB3	1:C:267:VAL:HG11	2.04	0.40
1:C:651:HIS:N	1:C:1625:LEU:O	2.45	0.40
1:C:1090:ALA:HA	1:C:1249:MET:HG2	2.03	0.40
1:C:1685:LEU:HA	1:C:1688:ALA:HB3	2.04	0.40
1:C:1819:VAL:O	1:C:1823:LYS:CB	2.66	0.40
1:C:4097:PHE:HB2	1:C:4130:PHE:CE1	2.57	0.40
1:C:4897:ASP:OD1	1:C:4897:ASP:N	2.55	0.40
1:D:16:THR:N	1:D:110:HIS:O	2.54	0.40
1:D:191:TYR:N	1:D:206:ALA:O	2.52	0.40
1:D:844:ARG:HH22	1:D:1212:VAL:HG11	1.86	0.40
1:D:1256:PRO:HB3	1:D:1597:SER:HA	2.02	0.40
1:D:1898:LYS:NZ	1:D:1899:LEU:O	2.51	0.40
1:D:3977:LYS:HE2	1:D:3977:LYS:HB3	1.88	0.40
1:A:195:SER:OG	1:A:196:TYR:N	2.55	0.40
1:A:591:GLU:HA	1:A:631:LEU:HD21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4768:LEU:HG	1:A:4866:LEU:HD23	2.03	0.40
1:B:365:HIS:HD2	1:B:368:THR:HG23	1.87	0.40
1:B:1819:VAL:O	1:B:1823:LYS:CB	2.66	0.40
1:B:2266:VAL:HG11	1:B:2303:LEU:HD11	2.04	0.40
1:B:4822:VAL:CG1	1:D:4849:ILE:CG2	2.96	0.40
1:C:228:LEU:HA	1:C:228:LEU:HD23	1.85	0.40
1:C:246:THR:HG1	1:C:272:ARG:NH1	2.20	0.40
1:C:559:ILE:HD13	1:C:593:HIS:HB3	2.02	0.40
1:C:745:ASN:ND2	1:C:773:GLN:OE1	2.38	0.40
1:C:782:PHE:HE1	1:C:1465:VAL:HG13	1.86	0.40
1:C:1170:GLU:O	1:C:1172:THR:N	2.52	0.40
1:C:1290:PHE:HB2	1:C:1552:VAL:HG12	2.02	0.40
1:C:1828:LEU:HD12	1:C:1828:LEU:HA	1.91	0.40
1:C:3907:PHE:O	1:C:3911:ILE:HG12	2.21	0.40
1:C:4732:LEU:O	1:C:4736:ASN:N	2.51	0.40
1:C:4859:LEU:HD23	1:C:4860:LEU:HG	2.04	0.40
1:D:223:ALA:HB3	1:D:288:HIS:CE1	2.56	0.40
1:D:372:LEU:HD11	1:D:391:ALA:HB1	2.04	0.40
1:D:601:LEU:HD13	1:D:610:VAL:HG21	2.03	0.40
1:D:644:LEU:HD11	1:D:1650:LEU:HD11	2.03	0.40
1:D:2126:GLN:O	1:D:2130:LEU:HB2	2.20	0.40
1:D:3666:HIS:HB2	1:D:3735:ARG:HG2	2.04	0.40
1:D:3666:HIS:CE1	1:D:3670:LEU:HD12	2.56	0.40
1:D:3733:HIS:HA	1:D:3737:ALA:HB3	2.02	0.40
1:D:3831:LEU:HA	1:D:3831:LEU:HD23	1.92	0.40
1:D:4516:PHE:O	1:D:4520:PHE:CE2	2.74	0.40
1:D:4575:ILE:O	1:D:4579:LEU:HB2	2.21	0.40
1:A:480:ARG:HG2	1:A:484:ASN:HD21	1.87	0.40
1:A:1449:ASP:OD1	1:A:1449:ASP:N	2.55	0.40
1:A:3907:PHE:O	1:A:3911:ILE:HG12	2.21	0.40
1:A:4519:LEU:HA	1:C:4810:MET:CB	2.52	0.40
1:B:130:LEU:HA	1:B:130:LEU:HD12	1.89	0.40
1:B:190:ARG:HH12	1:C:2423:ILE:HG21	1.72	0.40
1:B:191:TYR:N	1:B:206:ALA:O	2.52	0.40
1:B:195:SER:OG	1:B:196:TYR:N	2.54	0.40
1:B:223:ALA:HB3	1:B:288:HIS:CE1	2.56	0.40
1:B:228:LEU:HD23	1:B:228:LEU:HA	1.85	0.40
1:B:480:ARG:HG2	1:B:484:ASN:HD21	1.87	0.40
1:B:2027:ARG:NH1	1:B:2031:LEU:HB2	2.37	0.40
1:B:3983:LEU:HD12	1:B:3983:LEU:HA	1.82	0.40
1:B:4501:TYR:HD1	1:B:4501:TYR:HA	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:129:TYR:N	1:C:150:GLN:O	2.39	0.40
1:C:675:TYR:CE1	1:C:790:PRO:HB3	2.57	0.40
1:C:1214:ARG:HD3	1:C:1216:ASN:HD21	1.87	0.40
1:C:1447:THR:OG1	1:C:1538:LYS:O	2.28	0.40
1:C:1826:TYR:CZ	1:C:1830:ILE:HD11	2.57	0.40
1:C:2063:ILE:O	1:C:2067:MET:HG2	2.21	0.40
1:D:129:TYR:N	1:D:150:GLN:O	2.39	0.40
1:D:290:ARG:H	1:D:293:GLN:NE2	2.20	0.40
1:D:1250:TRP:CD1	1:D:1602:GLN:HA	2.57	0.40
1:D:1449:ASP:N	1:D:1449:ASP:OD1	2.55	0.40
1:D:2086:PHE:O	1:D:3692:TYR:OH	2.25	0.40
1:D:3767:LEU:HD23	1:D:3767:LEU:HA	1.86	0.40
1:D:4114:THR:HA	1:D:4117:GLN:HB2	2.02	0.40
1:D:4651:LYS:HZ1	1:D:4670:LEU:C	2.24	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	3355/4968 (68%)	2934 (88%)	408 (12%)	13 (0%)	34	72
1	B	3355/4968 (68%)	2936 (88%)	407 (12%)	12 (0%)	34	72
1	C	3355/4968 (68%)	2934 (88%)	408 (12%)	13 (0%)	34	72
1	D	3355/4968 (68%)	2938 (88%)	405 (12%)	12 (0%)	34	72
All	All	13420/19872 (68%)	11742 (88%)	1628 (12%)	50 (0%)	38	72

All (50) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	143	LEU

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Mol	Chain	Res	Type
1	B	143	LEU
1	C	143	LEU
1	D	143	LEU
1	A	142	LYS
1	A	730	LEU
1	B	142	LYS
1	B	730	LEU
1	C	142	LYS
1	C	730	LEU
1	D	142	LYS
1	D	730	LEU
1	A	4518	LEU
1	A	4595	LYS
1	B	4595	LYS
1	C	4595	LYS
1	D	4595	LYS
1	A	853	PRO
1	A	1580	PRO
1	B	853	PRO
1	B	1580	PRO
1	C	853	PRO
1	C	1580	PRO
1	D	853	PRO
1	D	1580	PRO
1	A	828	PRO
1	A	2233	PRO
1	A	4071	ALA
1	B	828	PRO
1	B	2233	PRO
1	B	4071	ALA
1	C	828	PRO
1	C	2233	PRO
1	C	4071	ALA
1	C	4519	LEU
1	D	828	PRO
1	D	2233	PRO
1	D	4071	ALA
1	A	1535	PRO
1	B	1535	PRO
1	C	1535	PRO
1	D	1535	PRO
1	B	1682	GLU

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Mol	Chain	Res	Type
1	A	1682	GLU
1	C	1682	GLU
1	D	1682	GLU
1	A	3803	VAL
1	B	3803	VAL
1	C	3803	VAL
1	D	3803	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	2678/4355 (62%)	2640 (99%)	38 (1%)	67	80
1	B	2678/4355 (62%)	2640 (99%)	38 (1%)	67	80
1	C	2677/4355 (62%)	2641 (99%)	36 (1%)	69	82
1	D	2676/4355 (61%)	2642 (99%)	34 (1%)	69	82
All	All	10709/17420 (62%)	10563 (99%)	146 (1%)	68	80

All (146) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	44	ASN
1	A	78	LEU
1	A	81	MET
1	A	298	ARG
1	A	420	ARG
1	A	531	ASN
1	A	625	VAL
1	A	628	ASN
1	A	658	ASN
1	A	841	LYS
1	A	925	PRO
1	A	950	VAL
1	A	990	PRO
1	A	1013	ARG

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Mol	Chain	Res	Type
1	A	1054	VAL
1	A	1089	ARG
1	A	1761	MET
1	A	1908	CYS
1	A	2118	ILE
1	A	2206	ARG
1	A	2211	ASN
1	A	3813	ASN
1	A	3870	ASN
1	A	3906	ASN
1	A	4087	ARG
1	A	4136	ARG
1	A	4171	ARG
1	A	4179	ASN
1	A	4499	ASN
1	A	4518	LEU
1	A	4519	LEU
1	A	4562	LEU
1	A	4652	ARG
1	A	4792	LYS
1	A	4828	ILE
1	A	4834	ASP
1	A	4844	ARG
1	A	4859	LEU
1	B	44	ASN
1	B	78	LEU
1	B	81	MET
1	B	84	ASN
1	B	298	ARG
1	B	420	ARG
1	B	531	ASN
1	B	625	VAL
1	B	628	ASN
1	B	658	ASN
1	B	841	LYS
1	B	925	PRO
1	B	950	VAL
1	B	990	PRO
1	B	1013	ARG
1	B	1054	VAL
1	B	1089	ARG
1	B	1761	MET

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Mol	Chain	Res	Type
1	B	1908	CYS
1	B	2118	ILE
1	B	2206	ARG
1	B	2211	ASN
1	B	3813	ASN
1	B	3870	ASN
1	B	3906	ASN
1	B	4087	ARG
1	B	4136	ARG
1	B	4171	ARG
1	B	4179	ASN
1	B	4499	ASN
1	B	4519	LEU
1	B	4562	LEU
1	B	4652	ARG
1	B	4792	LYS
1	B	4832	ILE
1	B	4834	ASP
1	B	4844	ARG
1	B	4859	LEU
1	C	44	ASN
1	C	78	LEU
1	C	81	MET
1	C	84	ASN
1	C	298	ARG
1	C	420	ARG
1	C	531	ASN
1	C	625	VAL
1	C	628	ASN
1	C	658	ASN
1	C	841	LYS
1	C	925	PRO
1	C	990	PRO
1	C	1013	ARG
1	C	1054	VAL
1	C	1089	ARG
1	C	1761	MET
1	C	1908	CYS
1	C	2118	ILE
1	C	2206	ARG
1	C	2211	ASN
1	C	3813	ASN

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Mol	Chain	Res	Type
1	C	3870	ASN
1	C	3906	ASN
1	C	4087	ARG
1	C	4136	ARG
1	C	4171	ARG
1	C	4179	ASN
1	C	4499	ASN
1	C	4518	LEU
1	C	4522	LYS
1	C	4562	LEU
1	C	4652	ARG
1	C	4792	LYS
1	C	4844	ARG
1	C	4859	LEU
1	D	44	ASN
1	D	78	LEU
1	D	82	LEU
1	D	84	ASN
1	D	298	ARG
1	D	420	ARG
1	D	531	ASN
1	D	625	VAL
1	D	628	ASN
1	D	658	ASN
1	D	841	LYS
1	D	925	PRO
1	D	990	PRO
1	D	1013	ARG
1	D	1054	VAL
1	D	1089	ARG
1	D	1761	MET
1	D	1908	CYS
1	D	2118	ILE
1	D	2206	ARG
1	D	2211	ASN
1	D	3813	ASN
1	D	3870	ASN
1	D	3906	ASN
1	D	4087	ARG
1	D	4136	ARG
1	D	4171	ARG
1	D	4179	ASN

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Mol	Chain	Res	Type
1	D	4499	ASN
1	D	4521	TYR
1	D	4652	ARG
1	D	4792	LYS
1	D	4844	ARG
1	D	4859	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (230) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	23	GLN
1	A	44	ASN
1	A	71	GLN
1	A	84	ASN
1	A	123	HIS
1	A	150	GLN
1	A	293	GLN
1	A	375	GLN
1	A	394	HIS
1	A	484	ASN
1	A	490	GLN
1	A	531	ASN
1	A	587	ASN
1	A	604	HIS
1	A	608	HIS
1	A	628	ASN
1	A	635	ASN
1	A	658	ASN
1	A	781	ASN
1	A	888	ASN
1	A	1147	GLN
1	A	1257	GLN
1	A	1267	HIS
1	A	1294	ASN
1	A	1631	HIS
1	A	1656	HIS
1	A	1684	GLN
1	A	1710	HIS
1	A	1946	ASN
1	A	2211	ASN
1	A	2218	HIS
1	A	3666	HIS

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Mol	Chain	Res	Type
1	A	3667	GLN
1	A	3729	GLN
1	A	3743	GLN
1	A	3799	GLN
1	A	3813	ASN
1	A	3870	ASN
1	A	3904	GLN
1	A	3916	GLN
1	A	3919	ASN
1	A	3926	GLN
1	A	3932	ASN
1	A	3954	HIS
1	A	3956	GLN
1	A	3965	GLN
1	A	3976	GLN
1	A	3993	ASN
1	A	4098	ASN
1	A	4128	ASN
1	A	4160	GLN
1	A	4179	ASN
1	A	4192	ASN
1	A	4817	HIS
1	A	4878	GLN
1	A	4918	ASN
1	B	23	GLN
1	B	44	ASN
1	B	84	ASN
1	B	117	HIS
1	B	123	HIS
1	B	150	GLN
1	B	293	GLN
1	B	375	GLN
1	B	394	HIS
1	B	484	ASN
1	B	490	GLN
1	B	531	ASN
1	B	587	ASN
1	B	604	HIS
1	B	608	HIS
1	B	628	ASN
1	B	635	ASN
1	B	658	ASN

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Mol	Chain	Res	Type
1	B	781	ASN
1	B	888	ASN
1	B	1147	GLN
1	B	1257	GLN
1	B	1267	HIS
1	B	1294	ASN
1	B	1631	HIS
1	B	1656	HIS
1	B	1684	GLN
1	B	1710	HIS
1	B	1946	ASN
1	B	2211	ASN
1	B	2212	GLN
1	B	2218	HIS
1	B	3666	HIS
1	B	3667	GLN
1	B	3729	GLN
1	B	3743	GLN
1	B	3799	GLN
1	B	3813	ASN
1	B	3870	ASN
1	B	3904	GLN
1	B	3916	GLN
1	B	3919	ASN
1	B	3926	GLN
1	B	3932	ASN
1	B	3954	HIS
1	B	3956	GLN
1	B	3965	GLN
1	B	3976	GLN
1	B	3990	ASN
1	B	3993	ASN
1	B	4098	ASN
1	B	4128	ASN
1	B	4160	GLN
1	B	4179	ASN
1	B	4192	ASN
1	B	4817	HIS
1	B	4878	GLN
1	B	4918	ASN
1	C	23	GLN
1	C	44	ASN

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Mol	Chain	Res	Type
1	C	84	ASN
1	C	117	HIS
1	C	123	HIS
1	C	150	GLN
1	C	293	GLN
1	C	375	GLN
1	C	394	HIS
1	C	484	ASN
1	C	490	GLN
1	C	531	ASN
1	C	587	ASN
1	C	604	HIS
1	C	608	HIS
1	C	628	ASN
1	C	635	ASN
1	C	658	ASN
1	C	781	ASN
1	C	888	ASN
1	C	1147	GLN
1	C	1257	GLN
1	C	1267	HIS
1	C	1294	ASN
1	C	1631	HIS
1	C	1656	HIS
1	C	1684	GLN
1	C	1710	HIS
1	C	1946	ASN
1	C	2211	ASN
1	C	2212	GLN
1	C	2218	HIS
1	C	3666	HIS
1	C	3667	GLN
1	C	3729	GLN
1	C	3743	GLN
1	C	3799	GLN
1	C	3813	ASN
1	C	3870	ASN
1	C	3904	GLN
1	C	3916	GLN
1	C	3919	ASN
1	C	3926	GLN
1	C	3932	ASN

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Mol	Chain	Res	Type
1	C	3954	HIS
1	C	3956	GLN
1	C	3965	GLN
1	C	3976	GLN
1	C	3990	ASN
1	C	3993	ASN
1	C	4098	ASN
1	C	4128	ASN
1	C	4160	GLN
1	C	4179	ASN
1	C	4192	ASN
1	C	4817	HIS
1	C	4878	GLN
1	C	4918	ASN
1	D	23	GLN
1	D	44	ASN
1	D	84	ASN
1	D	117	HIS
1	D	123	HIS
1	D	150	GLN
1	D	293	GLN
1	D	375	GLN
1	D	394	HIS
1	D	484	ASN
1	D	490	GLN
1	D	531	ASN
1	D	587	ASN
1	D	604	HIS
1	D	608	HIS
1	D	628	ASN
1	D	635	ASN
1	D	658	ASN
1	D	781	ASN
1	D	888	ASN
1	D	1147	GLN
1	D	1257	GLN
1	D	1267	HIS
1	D	1294	ASN
1	D	1631	HIS
1	D	1656	HIS
1	D	1684	GLN
1	D	1710	HIS

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Mol	Chain	Res	Type
1	D	1946	ASN
1	D	2211	ASN
1	D	2212	GLN
1	D	2218	HIS
1	D	3666	HIS
1	D	3667	GLN
1	D	3729	GLN
1	D	3743	GLN
1	D	3799	GLN
1	D	3813	ASN
1	D	3870	ASN
1	D	3904	GLN
1	D	3916	GLN
1	D	3919	ASN
1	D	3926	GLN
1	D	3932	ASN
1	D	3954	HIS
1	D	3956	GLN
1	D	3965	GLN
1	D	3976	GLN
1	D	3990	ASN
1	D	3993	ASN
1	D	4098	ASN
1	D	4128	ASN
1	D	4160	GLN
1	D	4179	ASN
1	D	4192	ASN
1	D	4817	HIS
1	D	4878	GLN
1	D	4918	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 4 ligands modelled in this entry, 4 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.

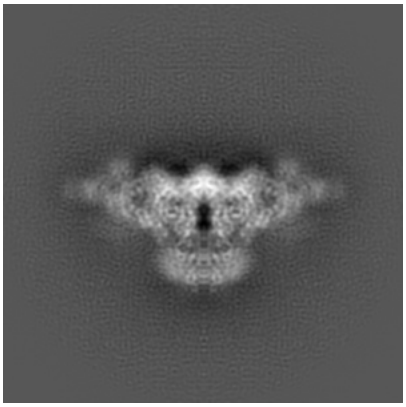
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-9823. These allow visual inspection of the internal detail of the map and identification of artifacts.

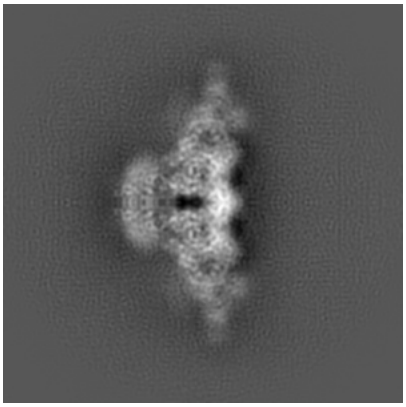
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

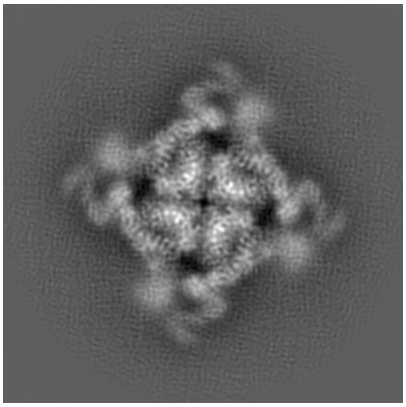
6.1.1 Primary map



X



Y

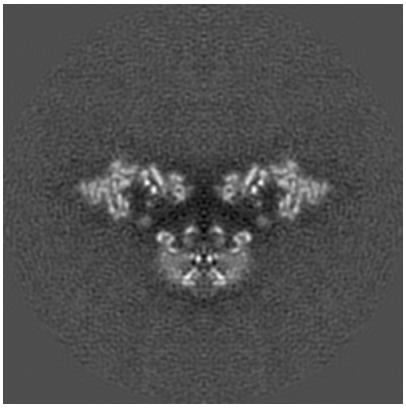


Z

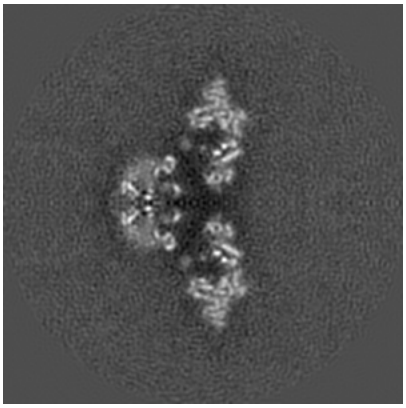
The images above show the map projected in three orthogonal directions.

6.2 Central slices

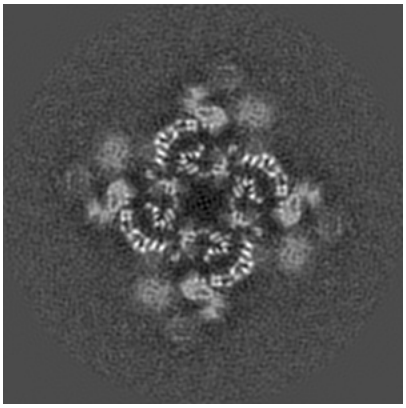
6.2.1 Primary map



X Index: 100



Y Index: 100

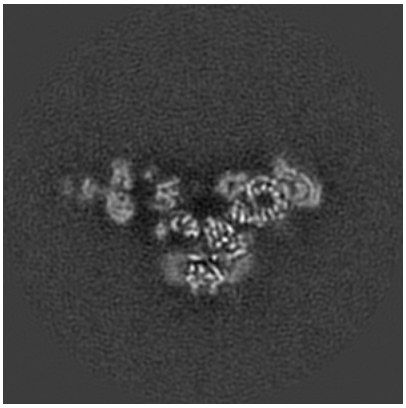


Z Index: 100

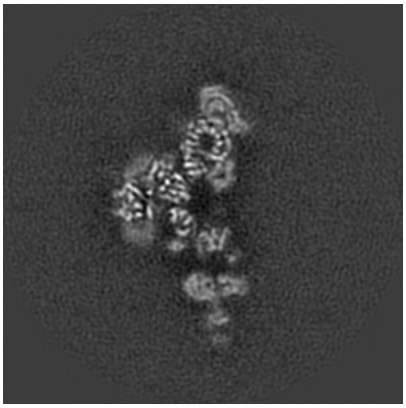
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

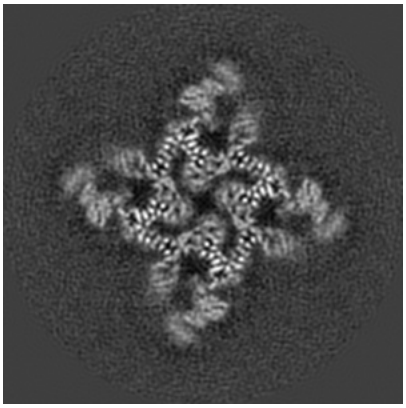
6.3.1 Primary map



X Index: 95



Y Index: 105

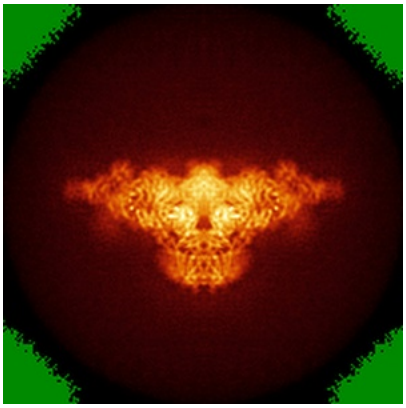


Z Index: 107

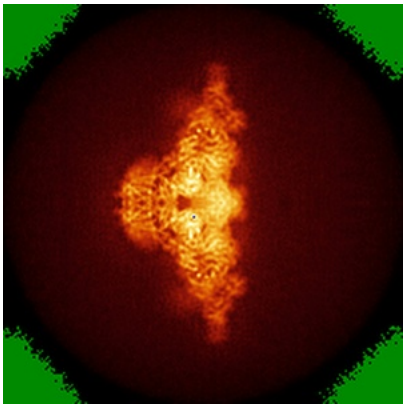
The images above show the largest variance slices of the map in three orthogonal directions.

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

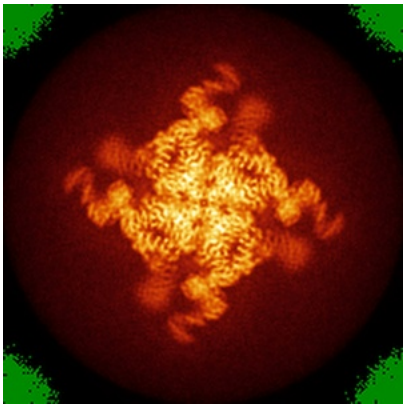
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.065. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

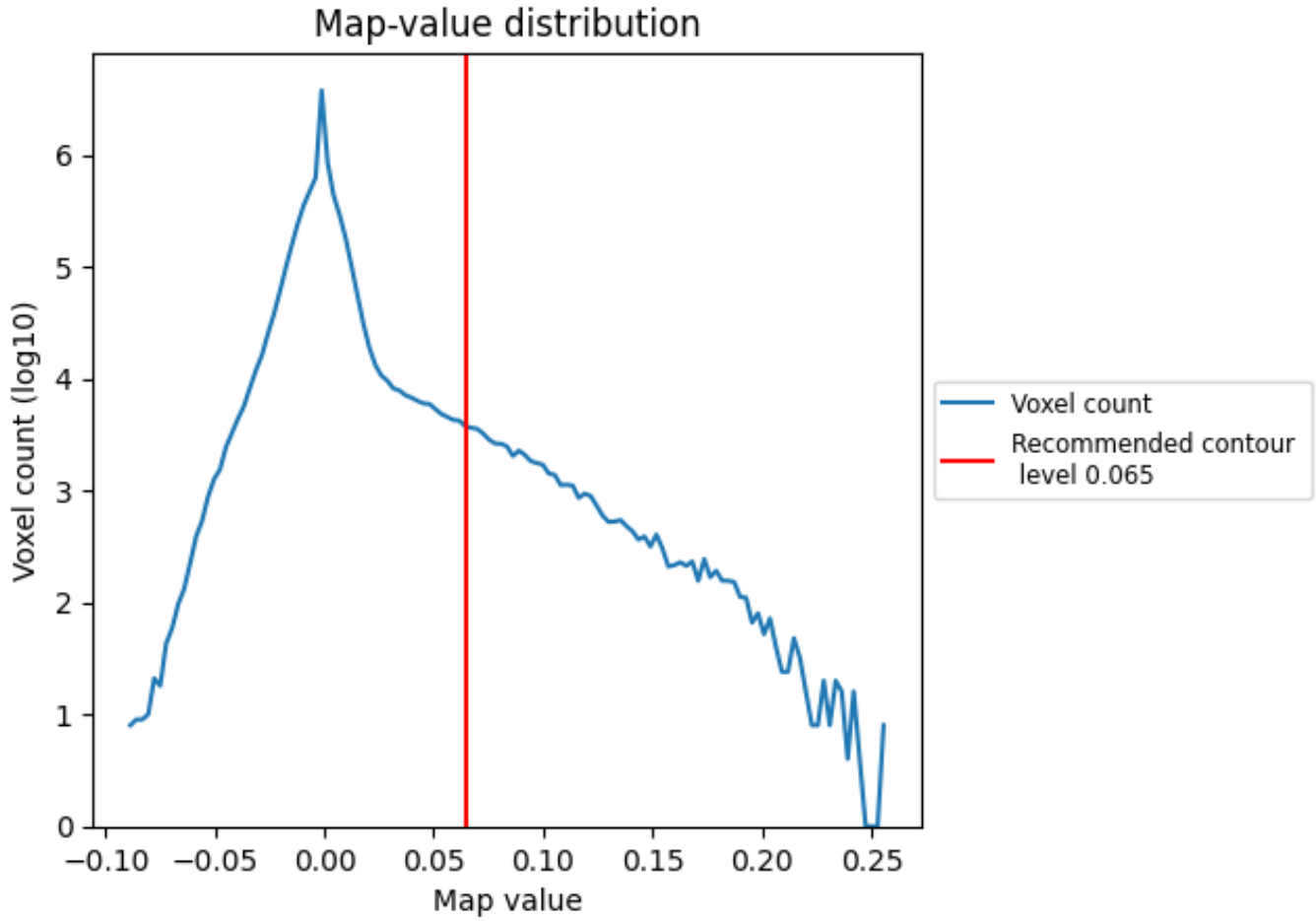
6.6 Mask visualisation (i)

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

7 Map analysis

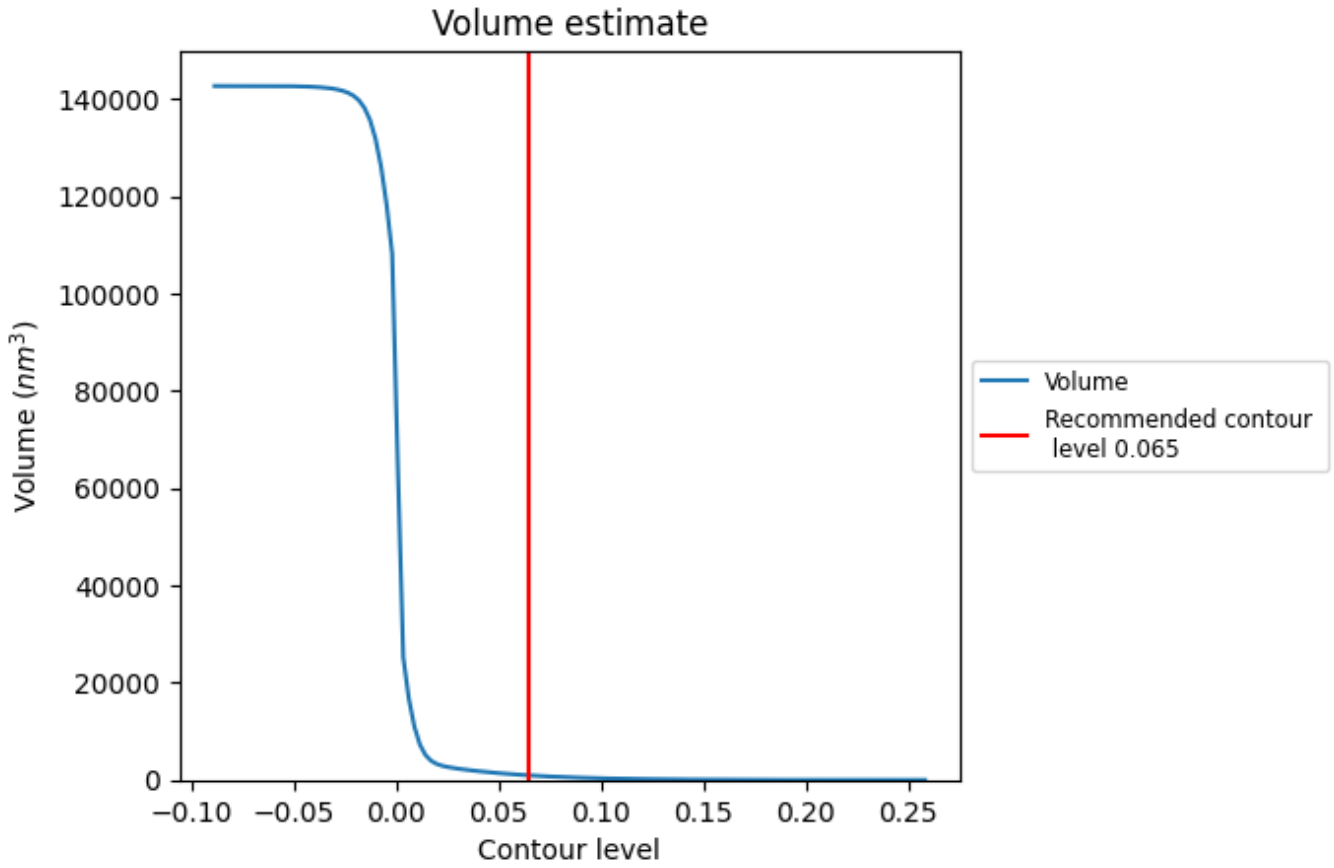
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

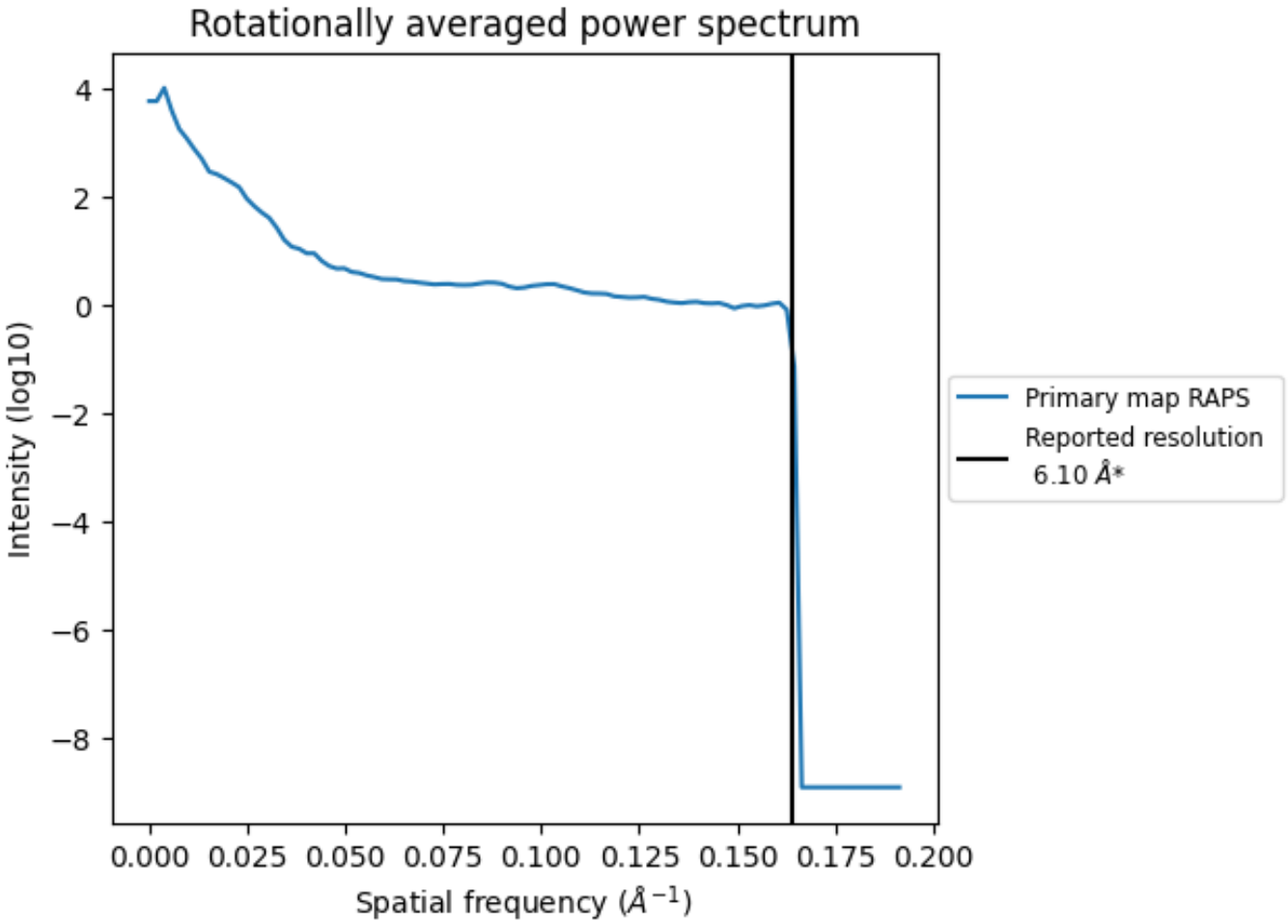
7.2 Volume estimate



The volume at the recommended contour level is 947 nm^3; this corresponds to an approximate mass of 855 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)

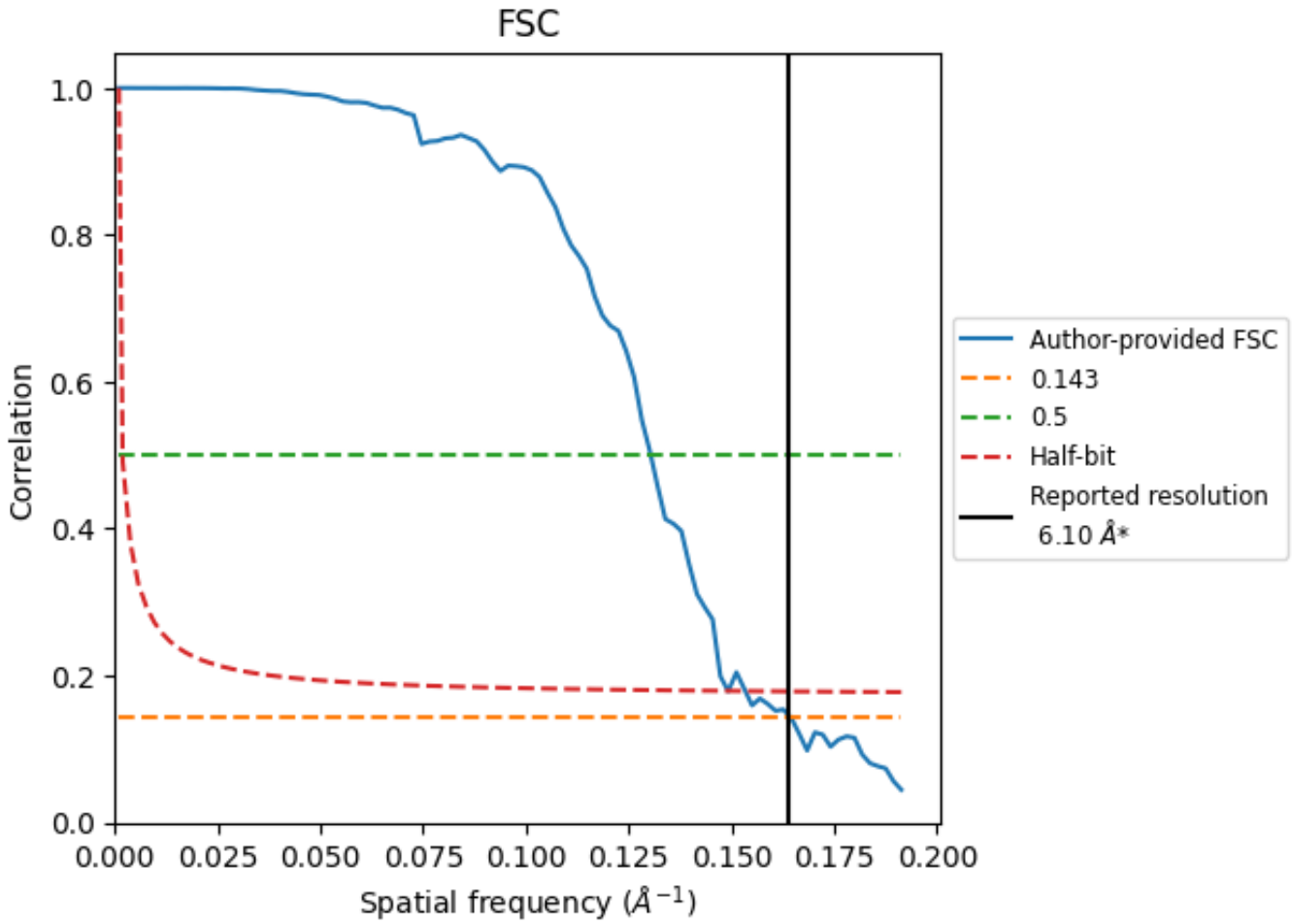


*Reported resolution corresponds to spatial frequency of 0.164 Å^{-1}

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 0.164 Å^{-1}

8.2 Resolution estimates (i)

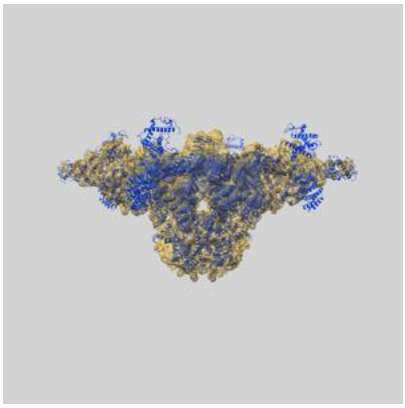
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.10	-	-
Author-provided FSC curve	6.09	7.67	6.70
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

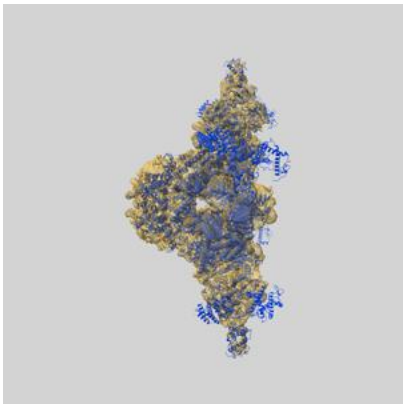
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-9823 and PDB model 6JG3. Per-residue inclusion information can be found in section 3 on page 4.

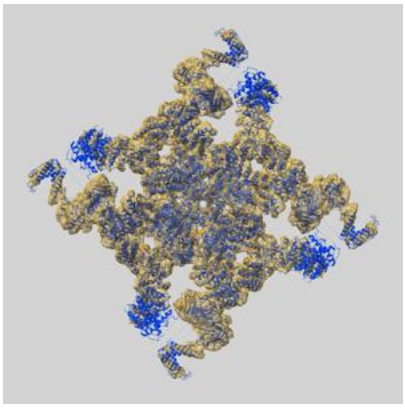
9.1 Map-model overlay



X



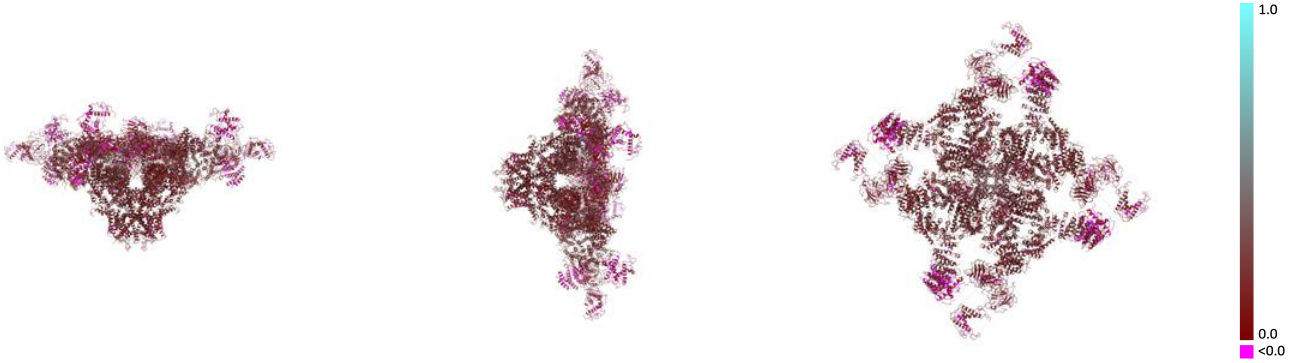
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.065 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.

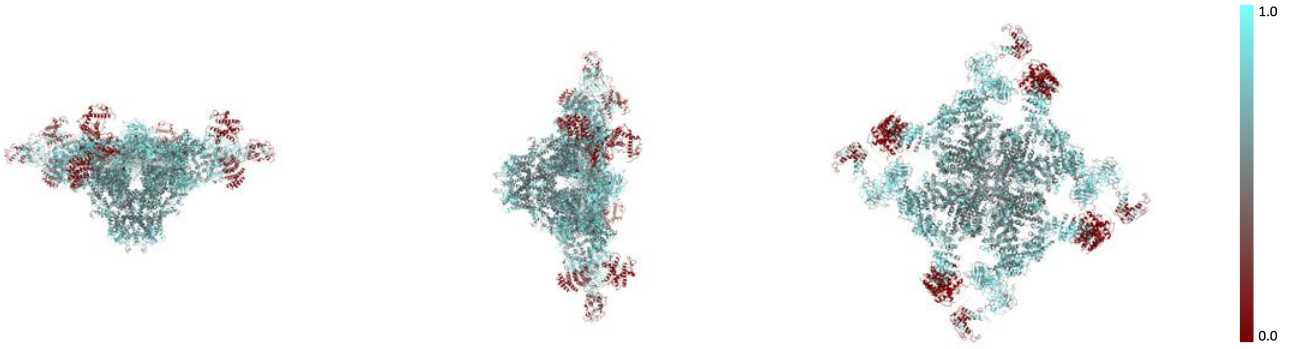
9.2 Q-score mapped to coordinate model (i)



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.

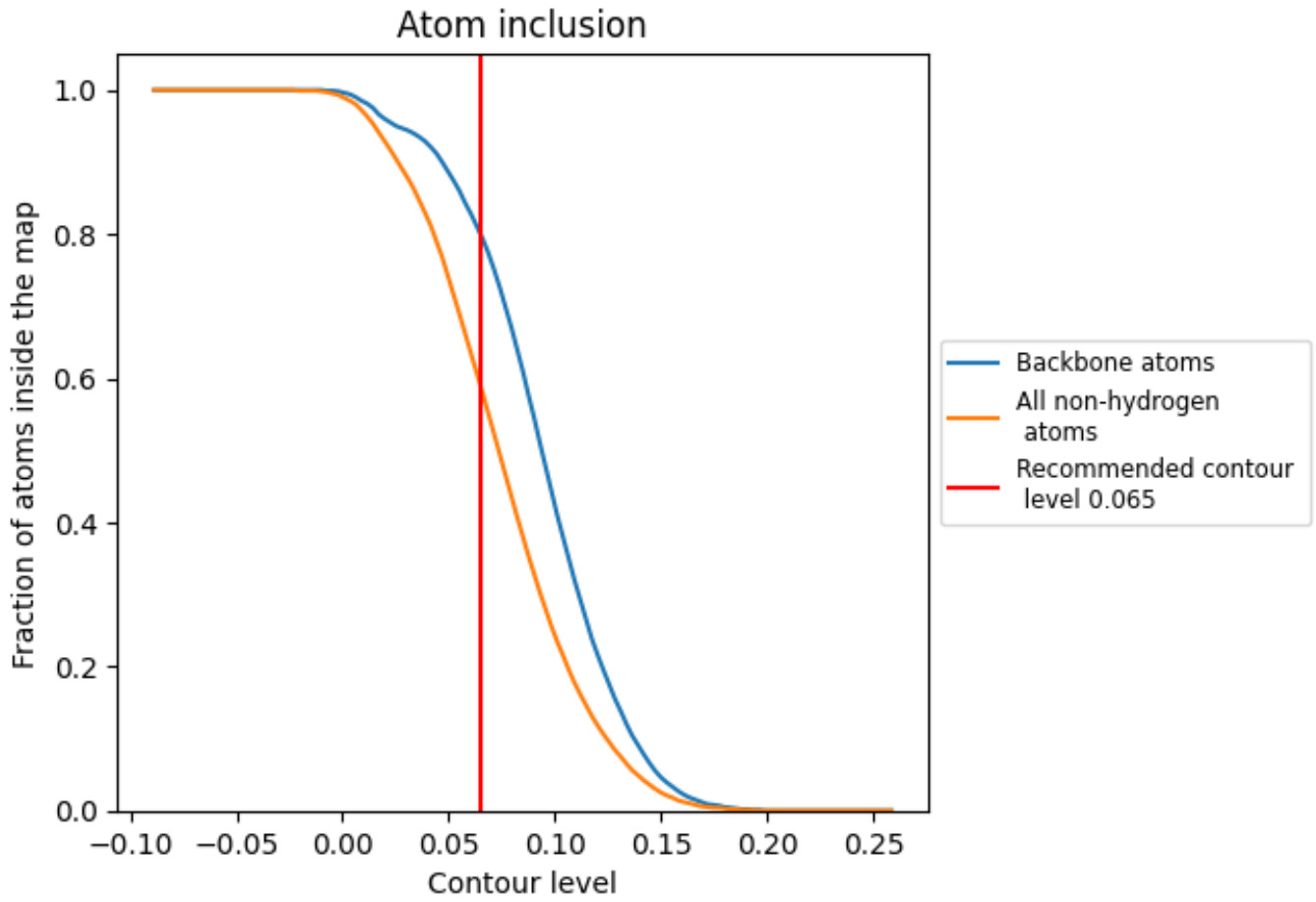
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.065).

9.4 Atom inclusion (i)



At the recommended contour level, 80% of all backbone atoms, 59% 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 (0.065) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5900	0.1840
A	0.5900	0.1830
B	0.5900	0.1850
C	0.5900	0.1840
D	0.5900	0.1840