Full wwPDB EM Validation Report (i)

Jun 16, 2025 – 04:31 PM EDT

PDB ID	:	9E1H / pdb_00009e1h
EMDB ID	:	EMD-47394
Title	:	Structure of RyR1 in the primed state in the presence of oxopyricid
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2024-10-21
Resolution	:	3.26 Å(reported)
Based on initial model	:	7TZC

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 (i) 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 (1)) were used in the production of this report:

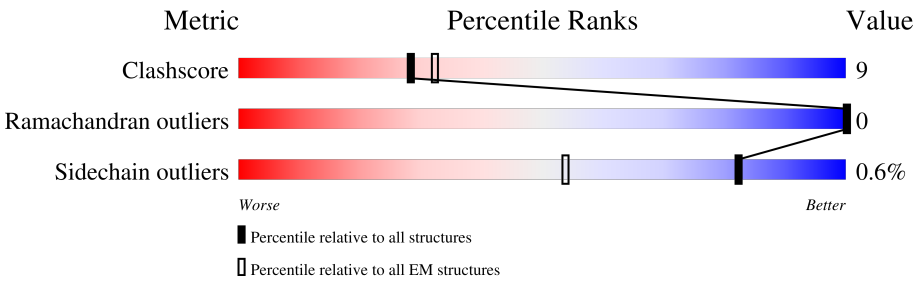
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.26 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	5037	38% 69% 18% 13%
1	B	5037	38% 69% 18% 13%
1	C	5037	38% 69% 18% 13%
1	D	5037	38% 69% 18% 13%
2	E	108	74% 67% 31% • •
2	F	108	73% 66% 31% • •
2	G	108	73% 68% 31% • •
2	H	108	75% 67% 31% • •

2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 144120 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.

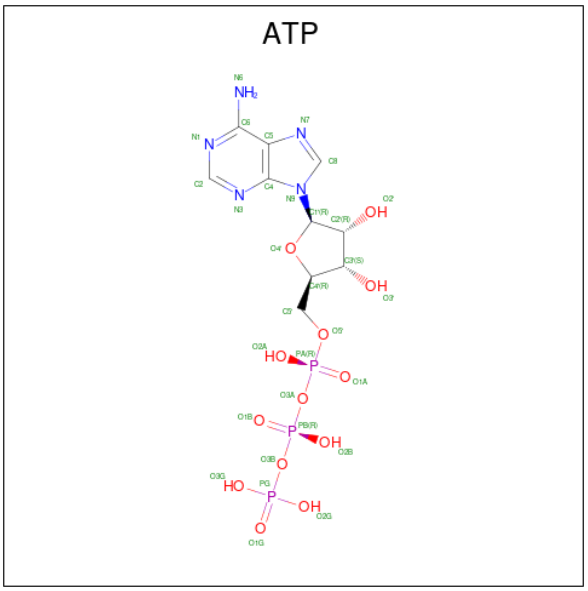
- Molecule 1 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	4404	35150	22365	6063	6485	237	9	0
1	B	4404	35150	22365	6063	6485	237	9	0
1	D	4404	35150	22365	6063	6485	237	9	0
1	C	4404	35150	22365	6063	6485	237	9	0

- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E	107	831	527	146	154	4	0	0
2	H	107	831	527	146	154	4	0	0
2	G	107	831	527	146	154	4	0	0
2	F	107	831	527	146	154	4	0	0

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	C	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 4 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
4	A	1	Total	Ca	0
			1	1	
4	B	1	Total	Ca	0
			1	1	
4	D	1	Total	Ca	0
			1	1	
4	C	1	Total	Ca	0
			1	1	

- Molecule 5 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	Zn	0
			1	1	

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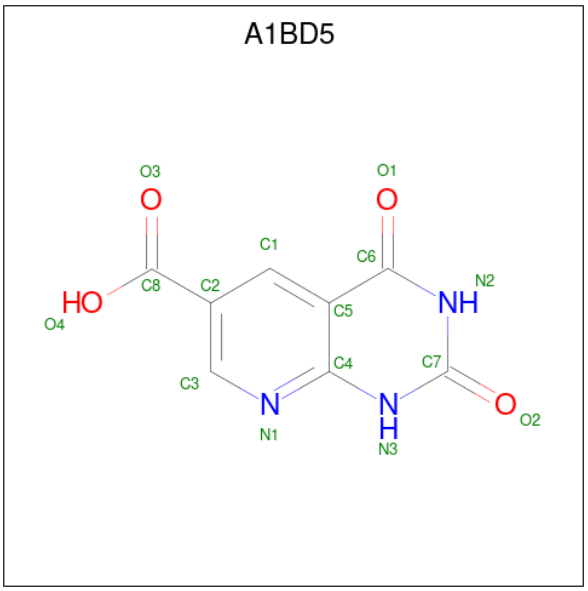
Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
5	B	1	1	1	0
5	D	1	1	1	0
5	C	1	1	1	0

- Molecule 6 is oxopyricid (CCD ID: A1BD5) (formula: $C_8H_5N_3O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
6	A	1	15	8	3	4	0
6	B	1	15	8	3	4	0
6	D	1	15	8	3	4	0
6	C	1	15	8	3	4	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
			Total	O	
7	A	1	1	1	0
7	B	1	1	1	0

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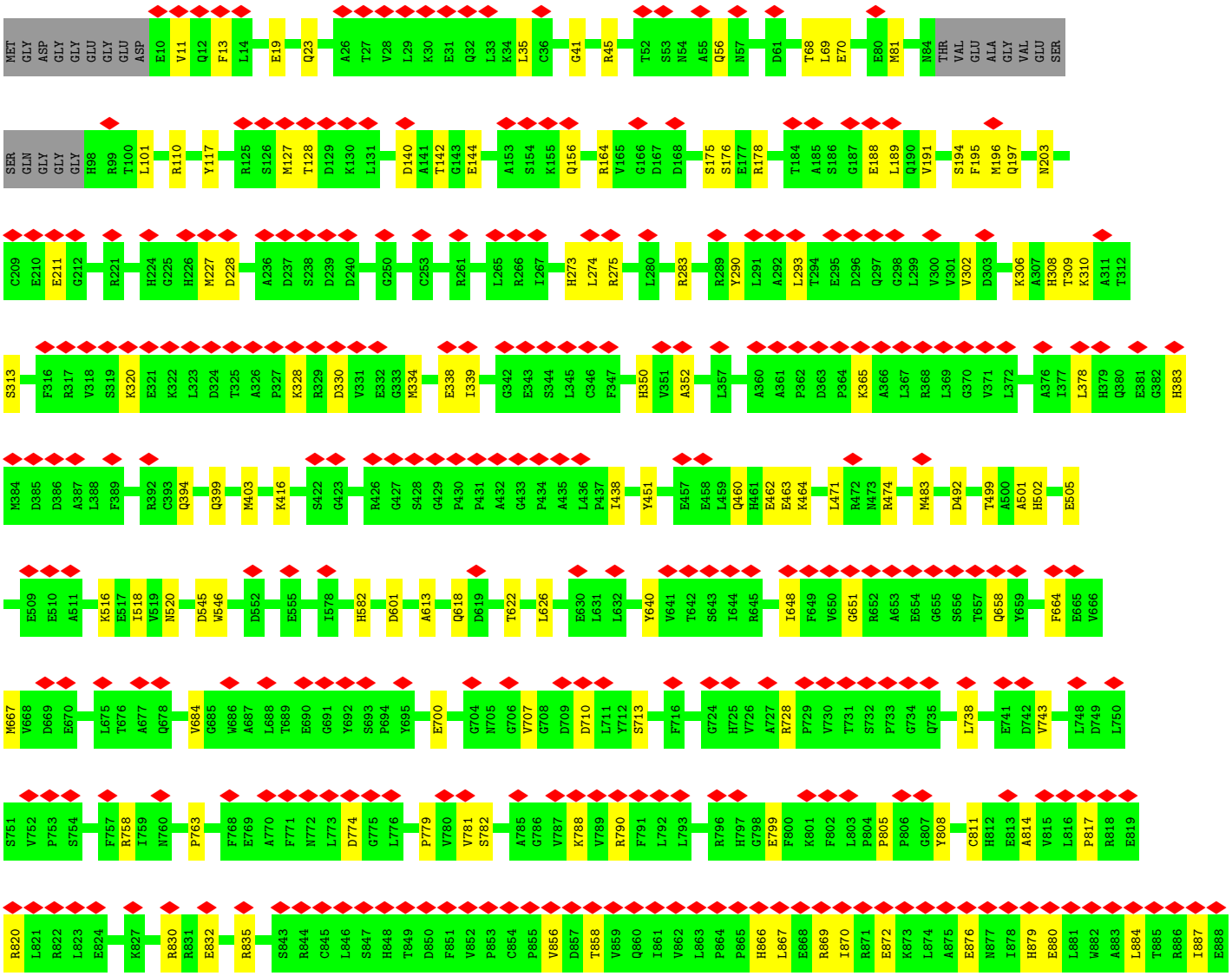
Mol	Chain	Residues	Atoms		AltConf
			Total	O	
7	D	1	1	1	0
			Total	O	
7	C	1	1	1	0

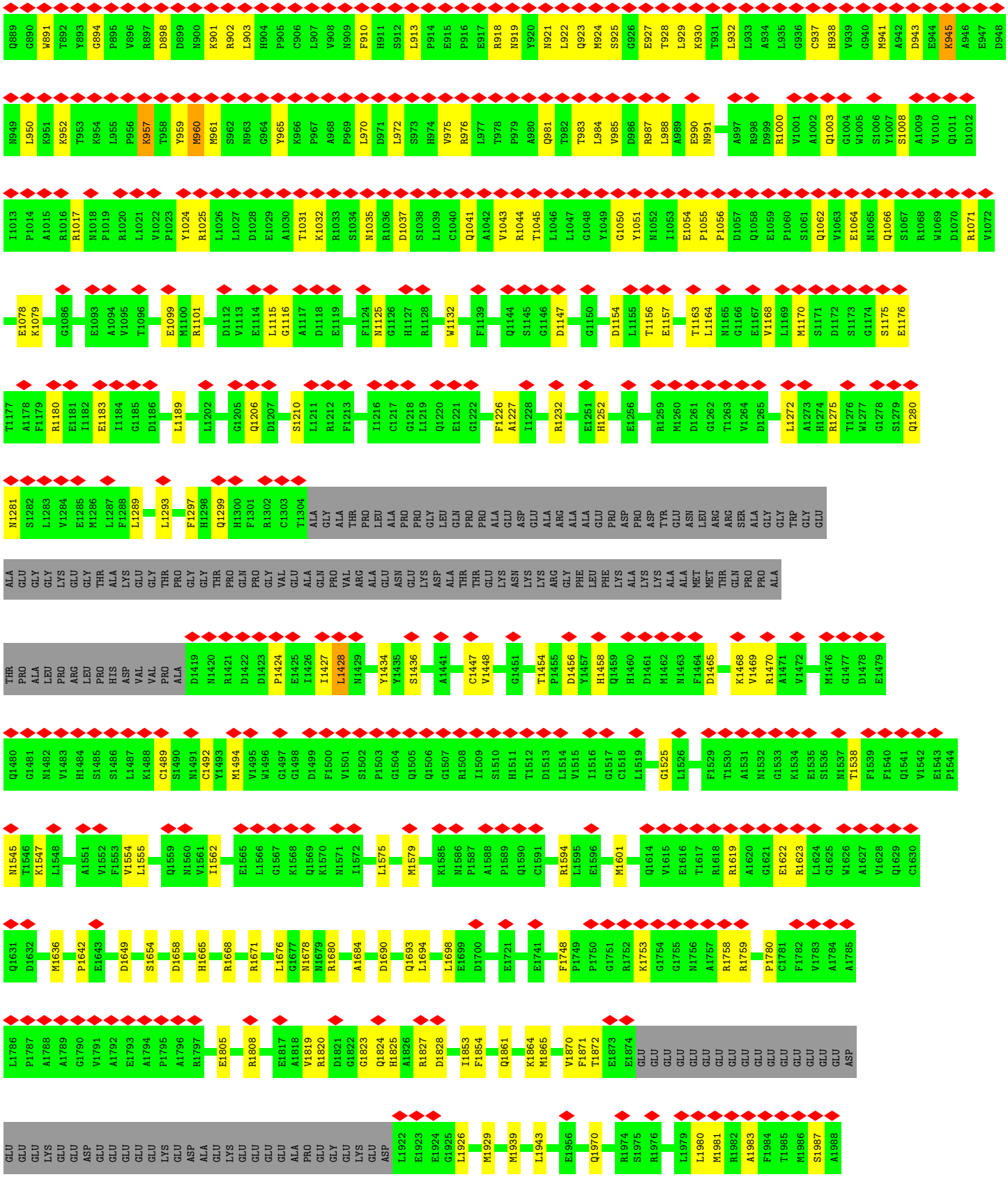
3 Residue-property plots (i)

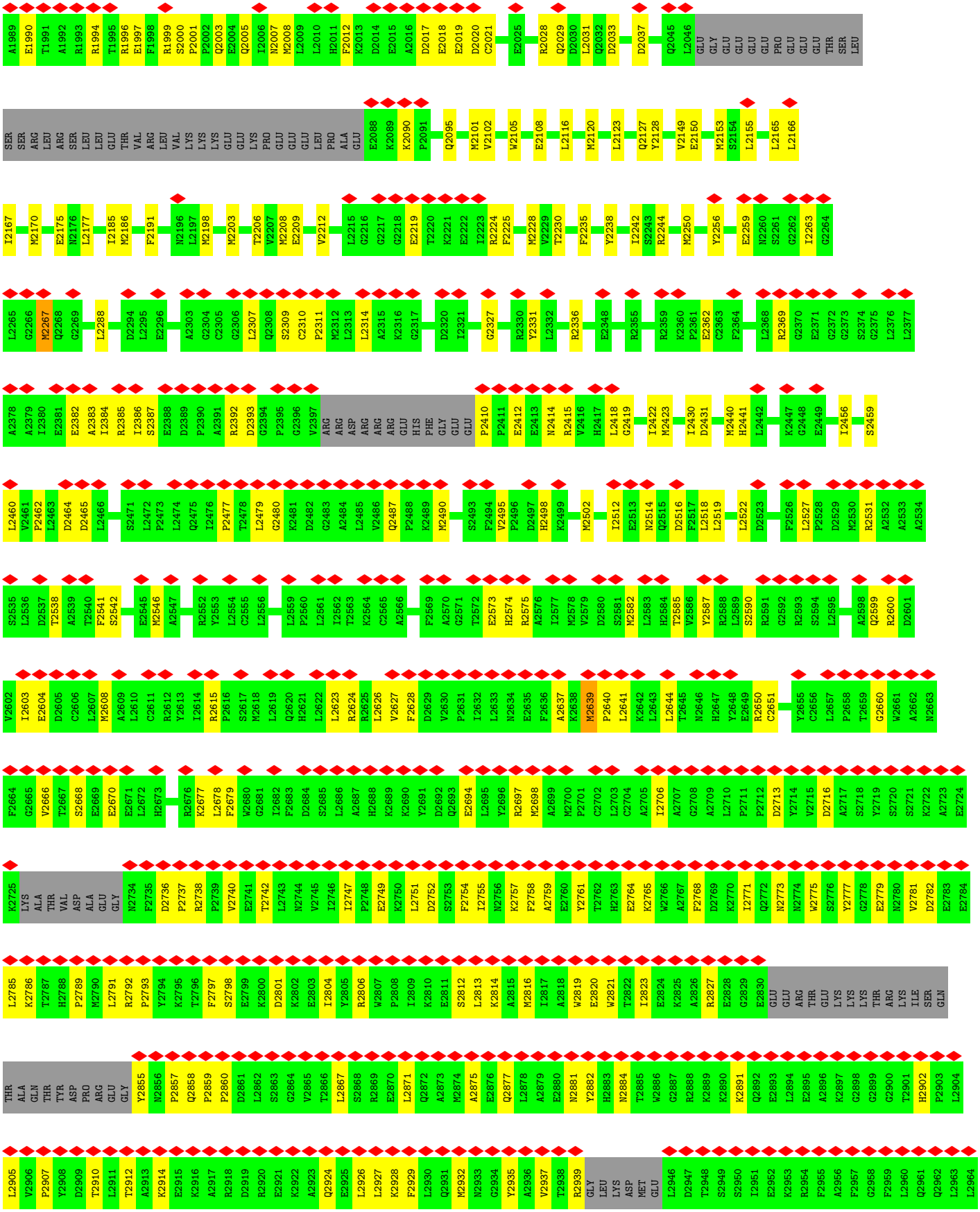
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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 1

Chain A:




Q889 G890 W891 T892 Y893 G894 P895 V896 R897 D898 D899 N900 K901 R902 L903 H904 P905 C906 L907 V908 N909 F910 H911 S912 L913 P914 E915 P916 E917 R918 N919 Y920 N921 L922 Q923 M924 S925 G926 E927 T928 L929 K930 T931 L932 L933 A934 L935 G936 C937 H938 V939 G940 M941 A942 D943 E944 K945 A946 E947 D948
N949 L950 K951 K952 T953 K954 L955 P956 K957 T958 Y959 M960 M961 S962 N963 G964 Y965 K966 P967 A968 P969 L970 D971 L972 S973 H974 V975 R976 L977 T978 P979 A980 Q981 T982 T983 L984 V985 D986 R987 L988 A989 E990 N991 A997 R998 D999 R1000 V1001 A1002 Q1003 G1004 W1005 S1006 Y1007 S1008 A1009 V1010 Q1011 D1012
I1013 P1014 A1015 R1016 R1017 N1018 P1019 R1020 L1021 V1022 P1023 Y1024 R1025 L1026 L1027 D1028 E1029 A1030 T1031 K1032 R1033 S1034 N1035 R1036 D1037 S1038 L1039 C1040 Q1041 A1042 V1043 R1044 T1045 L1046 L1047 G1048 Y1049 G1050 Y1051 N1052 I1053 E1054 P1055 P1056 D1057 Q1058 E1059 P1060 S1061 Q1062 V1063 E1064 N1065 Q1066 S1067 R1068 W1069 D1070 R1071 V1072
E1078 K1079 G1086 E1093 A1094 V1095 T1096 E1099 M1100 R1101 D1112 V1113 E1114 L1115 G1116 A1117 D1118 E1119 F1124 N1125 G1126 H1127 R1128 W1132 F1139 Q1144 S1145 G1146 D1147 G1150 D1154 L1155 T1156 E1157 T1163 L1164 N1165 G1166 E1167 V1168 L1169 M1170 S1171 D1172 S1173 G1174 S1175 E1176
T1177 A1178 F1179 R1180 E1181 I1182 E1183 I1184 G1185 D1186 L1189 L1202 G1205 Q1206 D1207 S1210 L1211 R1212 F1213 T1216 C1217 G1218 L1219 Q1220 E1221 G1222 F1226 A1227 I1228 R1232 E1251 H1252 E1256 R1259 M1260 D1261 G1262 T1263 V1264 D1265 L1272 A1273 H1274 R1275 T1276 W1277 G1278 S1279 Q1280
N1281 S1282 L1283 V1284 E1285 M1286 L1287 F1288 L1289 L1293 F1297 H1298 Q1299 H1300 F1301 R1302 C1303 T1304 ALA GLY ALA THR PRO LEU ALA PRO PRO GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY GLY TRP GLY GLU
ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY THR PRO GLY GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA
THR PRO ALA LEU PRO ARG LEU PRO HIS ASP VAL VAL PRO ALA D1419 N1420 R1421 D1422 D1423 P1424 E1425 I1426 I1427 L1428 N1429 Y1434 Y1435 S1436 A1441 C1447 V1448 G1451 T1454 P1455 D1456 Y1457 H1458 Q1459 H1460 D1461 M1462 N1463 F1464 D1465 K1468 V1469 R1470 A1471 V1472 M1476 G1477 D1478 E1479
Q1480 G1481 N1482 V1483 H1484 S1485 S1486 L1487 K1488 C1489 S1490 N1491 C1492 Y1493 M1494 V1495 W1496 G1497 G1498 D1499 F1500 V1501 S1502 P1503 G1504 Q1505 Q1506 G1507 R1508 I1509 S1510 H1511 T1512 D1513 L1514 V1515 I1516 G1517 C1518 L1519 G1525 L1526 F1529 T1530 A1531 N1532 G1533 K1534 E1535 S1536 N1537 T1538 F1539 F1540 Q1541 V1542 E1543 P1544
N1545 T1546 K1547 L1548 A1551 V1552 F1553 V1554 L1555 Q1559 N1560 V1561 I1562 E1565 L1566 G1567 K1568 Q1569 K1570 N1571 I1572 L1575 M1579 K1585 N1586 P1587 A1588 P1589 Q1590 C1591 R1594 L1595 E1596 M1601 Q1614 V1615 E1616 T1617 R1618 R1619 A1620 G1621 E1622 R1623 L1624 G1625 W1626 A1627 V1628 Q1629 C1630
Q1631 D1632 M1636 P1642 E1643 D1649 S1654 D1658 H1665 R1668 R1671 L1676 G1677 N1678 N1679 R1680 A1684 D1690 Q1693 L1694 L1698 E1699 D1700 E1721 E1741 F1748 P1749 P1750 G1751 R1752 K1753 G1754 G1755 N1756 A1757 R1758 R1759 P1780 C1781 F1782 V1783 A1784 A1785
L1786 P1787 A1788 A1789 G1790 V1791 A1792 E1793 A1794 P1795 A1796 R1797 E1805 R1808 E1817 A1818 V1819 R1820 D1821 G1822 G1823 Q1824 H1825 A1826 R1827 D1828 I1853 F1854 Q1861 K1864 M1865 V1870 F1871 T1872 E1873 E1874 GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU ASP
GLU GLU GLU LYS GLU GLU ASP GLU GLU GLU LYS GLU ASP ALA GLU LYS GLU GLU GLU GLU ALA PRO GLU GLY GLU LYS GLU ASP L1922 E1923 E1924 G1925 L1926 M1929 M1939 L1943 E1956 Q1970 R1974 S1975 R1976 L1979 L1980 M1981 R1982 A1983 F1984 T1985 M1986 S1987 A1988


A1989 E1990 T1991 A1992 R1993 R1994 T1995 R1996 E1997 F1998 R1999 S2000 P2001 P2002 Q2003 E2004 Q2005 I2006 N2007 M2008 L2009 L2010 H2011 F2012 K2013 D2014 E2015 A2016 D2017 E2018 E2019 D2020 C2021 E2025 R2028 Q2029 D2030 L2031 Q2032 D2033 D2037 Q2045 L2046 GLU GLY GLU GLU GLU GLU PRO GLU GLU GLU THR SER LEU
SER SER ARG LEU ARG SER LEU LEU GLU THR VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS PRO GLU GLU GLU GLU LEU PRO ALA GLU E2088 K2089 K2090 P2091 Q2095 M2101 V2102 W2105 E2108 L2116 M2120 L2123 Q2127 Y2128 V2149 E2150 M2153 S2154 L2155 L2165 L2166
I2167 M2170 E2175 N2176 L2177 I2185 M2186 F2191 N2196 L2197 M2198 M2203 T2206 V2207 M2208 E2209 V2212 L2215 G2216 G2217 G2218 E2219 T2220 K2221 E2222 I2223 R2224 F2225 M2228 V2229 T2230 F2235 Y2238 I2242 S2243 R2244 M2250 Y2256 E2259 N2260 S2261 G2262 I2263 G2264
L2265 G2266 M2267 Q2268 G2269 L2288 D2294 L2295 E2296 A2303 G2304 C2305 G2306 L2307 Q2308 S2309 C2310 P2311 M2312 L2313 L2314 A2315 K2316 G2317 D2320 I2321 G2327 R2330 Y2331 L2332 R2336 E2348 R2355 R2359 K2360 P2361 E2362 C2363 F2364 L2368 R2369 G2370 E2371 G2372 G2373 S2374 G2375 L2376 L2377
A2378 A2379 I2380 E2381 E2382 A2383 I2384 R2385 I2386 S2387 E2388 D2389 P2390 A2391 R2392 D2393 G2394 P2395 G2396 V2397 ARG ARG ASP ARG ARG ARG GLU HIS PHE GLY GLU GLU P2410 P2411 E2412 E2413 N2414 R2415 V2416 H2417 L2418 G2419 I2422 M2423 I2430 D2431 M2440 H2441 L2442 K2447 G2448 E2449 I2456 S2459
L2460 V2461 P2462 L2463 D2464 D2465 L2466 S2471 L2472 P2473 L2474 Q2475 I2476 P2477 T2478 L2479 G2480 K2481 D2482 G2483 A2484 L2485 V2486 Q2487 P2488 K2489 M2490 S2493 F2494 V2495 P2496 D2497 H2498 K2499 M2502 I2512 E2513 N2514 Q2515 D2516 F2517 L2518 L2519 L2522 D2523 F2526 L2527 P2528 D2529 M2530 R2531 A2532 A2533 A2534
S2535 L2536 D2537 T2538 A2539 T2540 F2541 S2542 E2545 M2546 A2547 R2552 Y2553 L2554 C2555 L2556 L2559 P2560 L2561 I2562 T2563 K2564 C2565 A2566 F2569 A2570 G2571 T2572 E2573 H2574 R2575 A2576 I2577 M2578 V2579 D2580 S2581 M2582 L2583 H2584 T2585 V2586 Y2587 R2588 L2589 S2590 R2591 G2592 R2593 S2594 L2595 A2598 Q2599 R2600 D2601
V2602 I2603 E2604 D2605 C2606 L2607 M2608 A2609 L2610 C2611 R2612 Y2613 I2614 R2615 P2616 S2617 M2618 L2619 Q2620 H2621 L2622 L2623 R2624 R2625 L2626 V2627 F2628 D2629 V2630 P2631 I2632 L2633 N2634 E2635 F2636 A2637 K2638 M2639 P2640 L2641 K2642 L2643 L2644 T2645 N2646 H2647 Y2648 E2649 R2650 C2651 Y2655 C2656 L2657 P2658 T2659 G2660 W2661 A2662 N2663
F2664 G2665 V2666 T2667 S2668 E2669 E2670 E2671 L2672 H2673 R2676 K2677 L2678 F2679 W2680 G2681 I2682 F2683 D2684 S2685 L2686 A2687 H2688 K2689 K2690 Y2691 D2692 Q2693 E2694 L2695 Y2696 R2697 M2698 A2699 M2700 P2701 C2702 L2703 C2704 A2705 I2706 A2707 G2708 A2709 L2710 P2711 P2712 D2713 Y2714 V2715 D2716 A2717 S2718 Y2719 S2720 S2721 K2722 A2723 E2724
K2725 LYS ALA THR VAL ASP ALA GLU GLY N2734 F2735 D2736 P2737 R2738 P2739 V2740 E2741 T2742 L2743 N2744 V2745 I2746 I2747 P2748 E2749 K2750 L2751 D2752 S2753 F2754 I2755 N2756 K2757 F2758 A2759 E2760 Y2761 T2762 H2763 E2764 K2765 W2766 A2767 F2768 D2769 K2770 I2771 Q2772 N2773 N2774 W2775 S2776 Y2777 G2778 E2779 N2780 V2781 D2782 E2783 E2784
L2785 K2786 T2787 H2788 P2789 M2790 L2791 R2792 P2793 Y2794 K2795 T2796 F2797 S2798 E2799 K2800 D2801 K2802 E2803 I2804 Y2805 R2806 W2807 P2808 I2809 K2810 E2811 S2812 L2813 K2814 A2815 M2816 I2817 A2818 W2819 E2820 W2821 T2822 I2823 E2824 K2825 A2826 R2827 E2828 G2829 E2830 GLU GLU ARG THR GLU LYS LYS LYS THR ARG LYS ILE SER GLN
THR ALA GLN THR TYR ASP PRO ARG GLU GLY Y2855 N2856 P2857 Q2858 P2859 P2860 D2861 L2862 S2863 G2864 V2865 T2866 L2867 S2868 R2869 E2870 L2871 Q2872 A2873 M2874 A2875 E2876 Q2877 L2878 A2879 E2880 N2881 Y2882 H2883 N2884 T2885 W2886 G2887 R2888 K2889 K2890 K2891 Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904
L2905 V2906 P2907 Y2908 D2909 T2910 L2911 T2912 A2913 K2914 E2915 K2916 A2917 R2918 D2919 R2920 E2921 K2922 A2923 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932 N2933 G2934 Y2935 A2936 V2937 T2938 R2939 GLY LEU LYS ASP MET GLU L2946 D2947 T2948 S2949 S2950 I2951 E2952 E2953 R2954 F2955 A2956 F2957 G2958 F2959 L2960 Q2961 Q2962 L2963 L2964

R2965 W2966 M2967 D2968 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 A2979 V2980 V2981 S2982 S2983 G2984 R2985 V2986 E2987 K2988 S2989 P2990 H2991 E2992 Q2993 E2994 I2995 K2996 F2997 F2998 A2999 K3000 I3001 L3002 L3003 P3004 L3005 I3006 N3007 Q3008 Y3009 F3010 T3011 M3012 H3013 C3014 L3015 Y3016 F3017 L3018 S3019 T3020 P3021 A3022 K3023 V3024

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P3085 E3086 I3087 V3088 K3089 A3090 G3091 L3092 R3093 S3094 F3095 F3096 E3097 S3098 A3099 S3100 E3101 D3102 I3103 E3104 K3105 M3106 V3107 E3108 N3109 L3110 R3111 L3112 G3113 K3114 V3115 S3116 GLN ALA ARG THR GLN VAL K3123 G3124 V3125 G3126 Q3127 N3128 L3129 T3130 Y3131 T3132 T3133 V3134 A3135 L3136 L3137 P3138 V3139 L3140 T3141 T3142 L3143 F3144

Q3145 H3146 I3147 A3148 Q3149 H3150 Q3151 F3152 G3153 D3154 D3155 V3156 I3157 L3158 D3159 D3160 V3161 Q3162 V3163 S3164 C3165 Y3166 R3167 T3168 L3169 C3170 S3171 I3172 Y3173 S3174 L3175 G3176 T3177 T3178 K3179 N3180 T3181 Y3182 V3183 E3184 K3185 L3186 R3187 P3188 A3189 L3190 G3191 E3192 C3193 L3194 A3195 R3196 L3197 A3198 A3199 A3200 M3201 P3202 V3203 A3204

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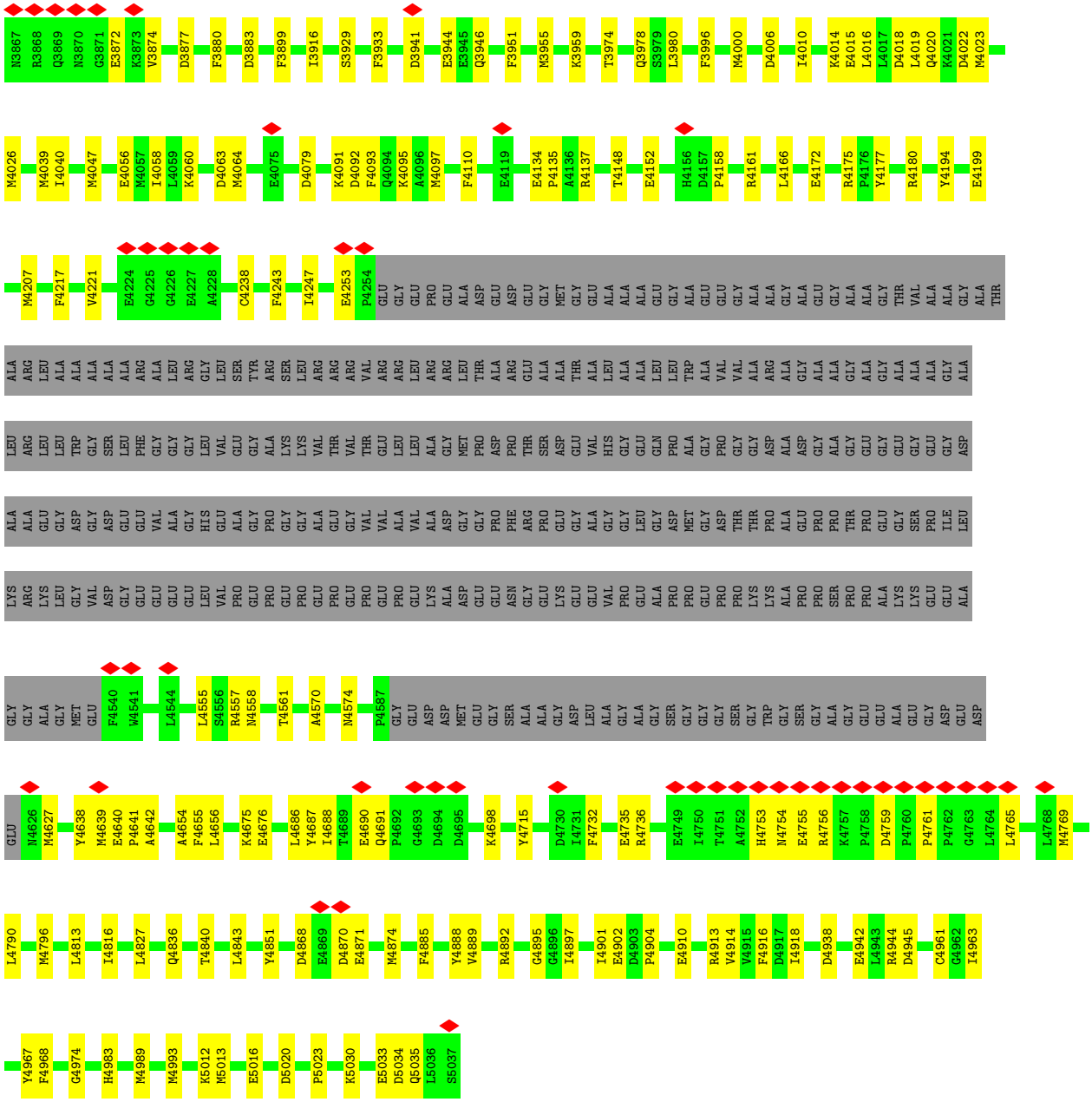
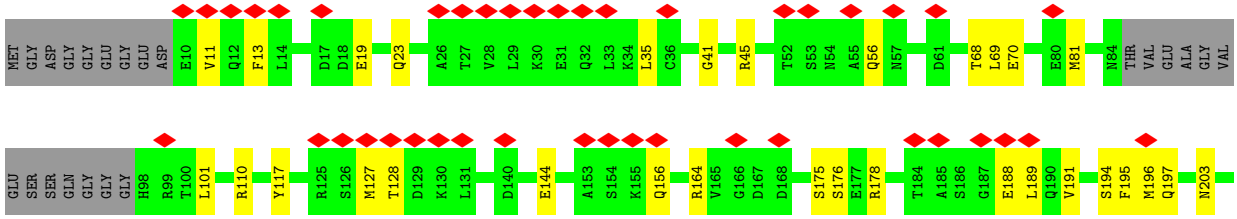
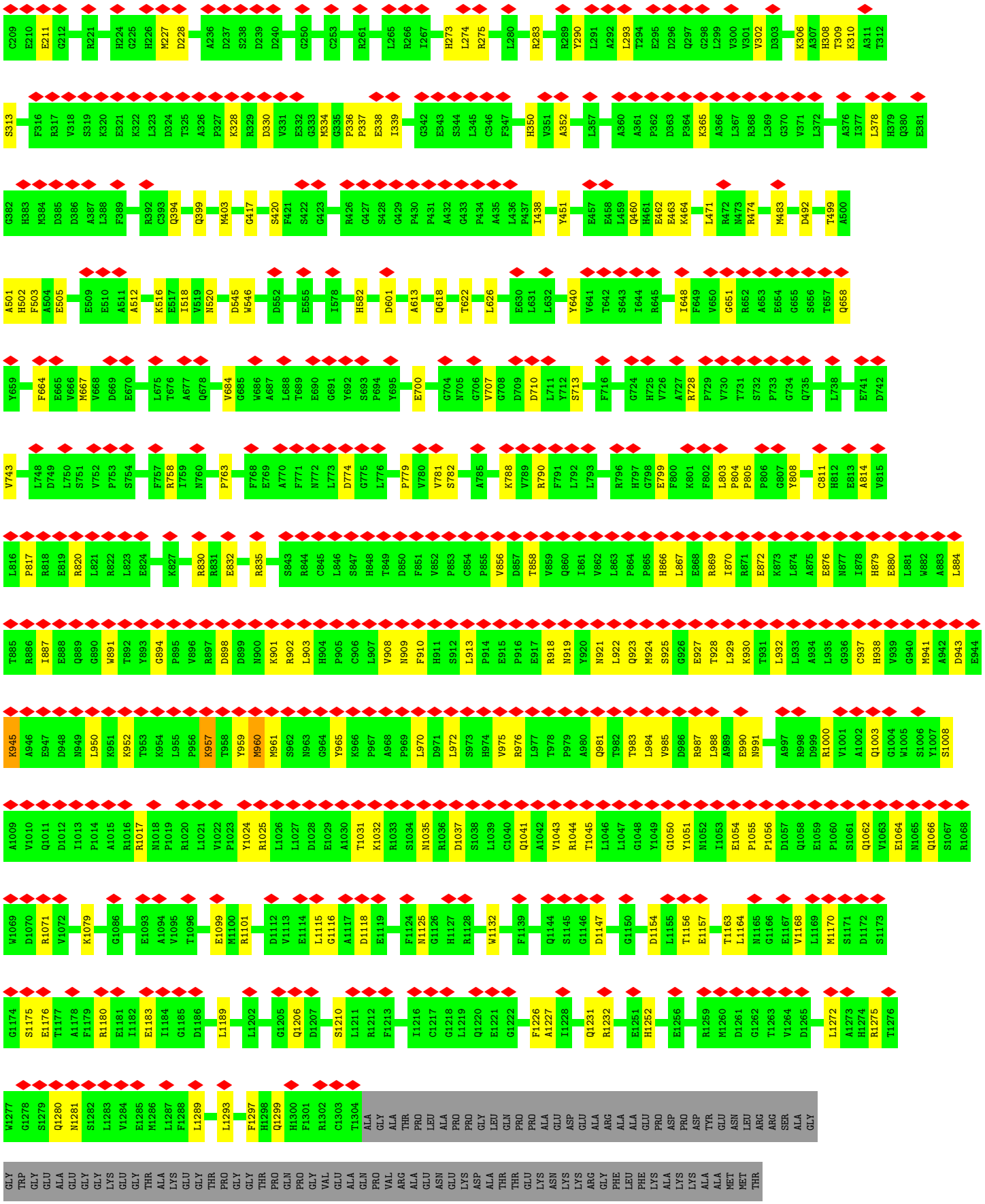


- Molecule 1: Ryanodine receptor 1

Chain B:

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GLY TRP GLY GLU ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY THR PRO GLY GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS PRO LYS ALA ALA MET MET THR

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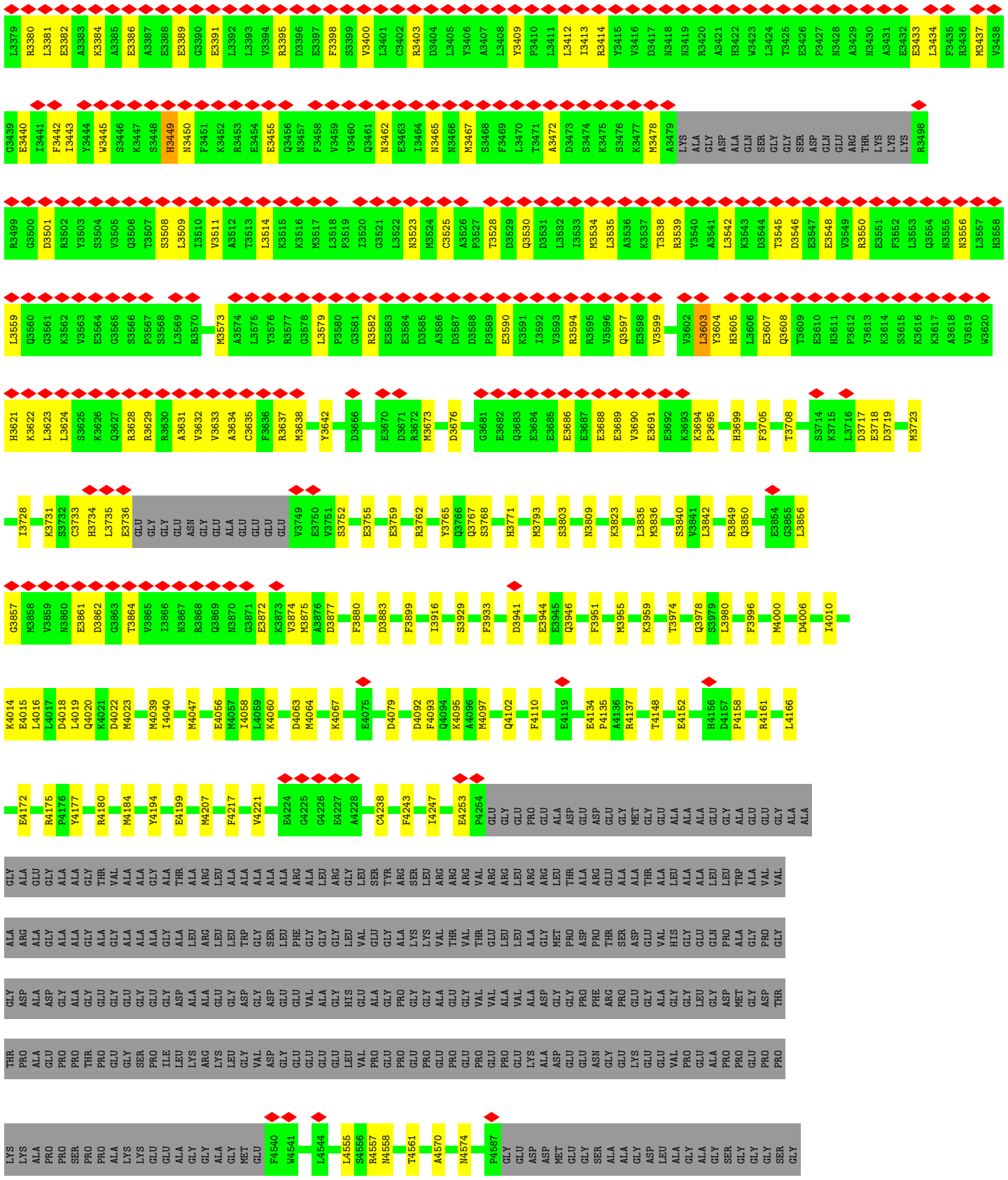
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E4172 R4175 P4176 Y4177 R4180 M4184 Y4194 E4199 M4207 F4217 V4221 E4224 G4225 G4226 E4227 A4228 C4238 F4243 I4247 E4253 P4254 GLU GLY GLU PRO GLU ALA ASP GLU ASP GLU GLY MET GLY GLU ALA ALA ALA GLU GLY ALA GLU GLU GLY ALA ALA
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THR PRO ALA GLU PRO PRO THR PRO GLU GLY SER PRO ILE LEU LYS ARG LYS LEU GLY VAL ASP GLY GLU GLU GLU GLU LEU VAL PRO GLU PRO GLU PRO GLU PRO GLU PRO GLU PRO GLU PRO GLU GLU GLU GLU ASN GLY GLU LYS ALA ASP GLU GLU GLU PRO GLU PRO PRO
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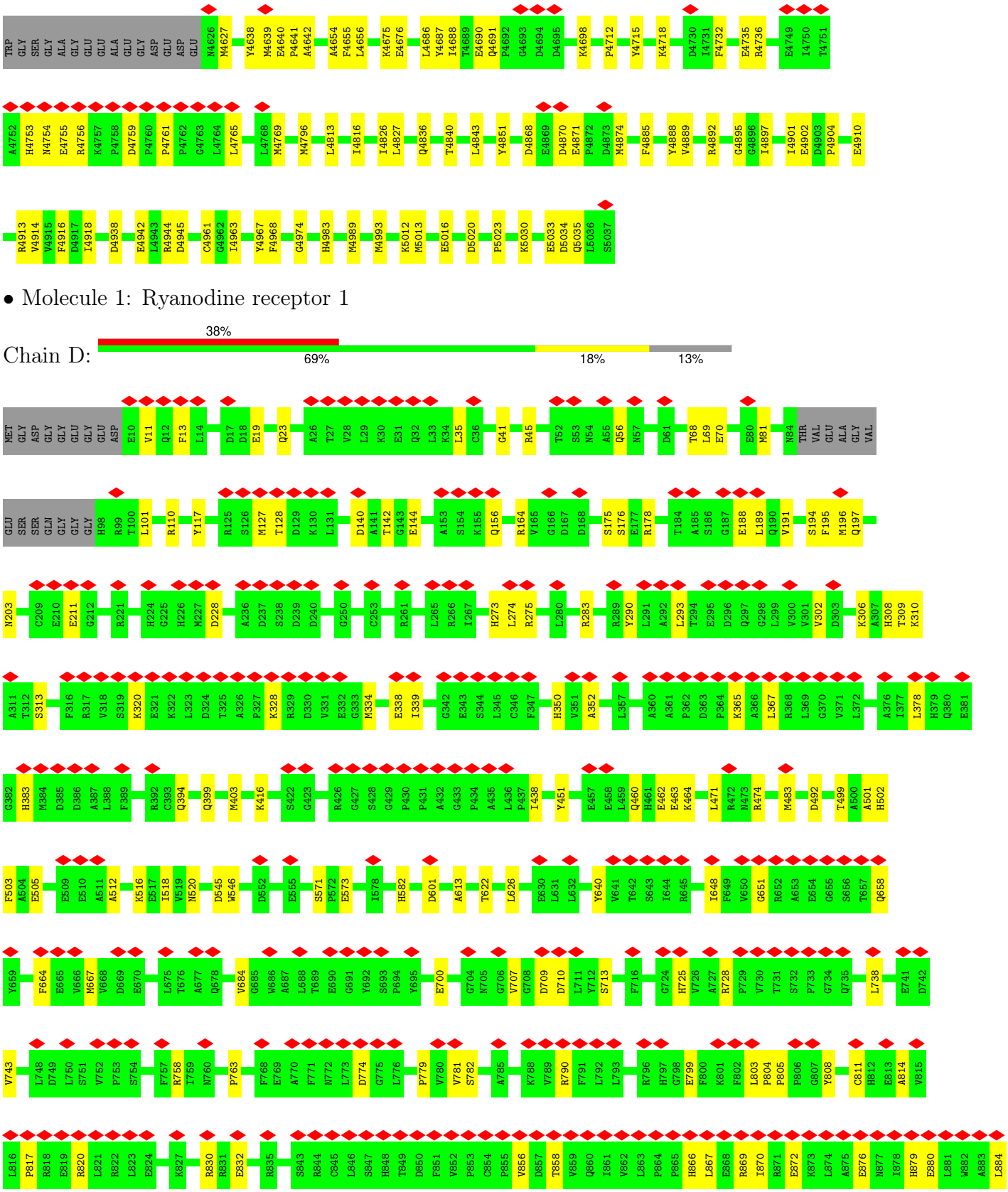
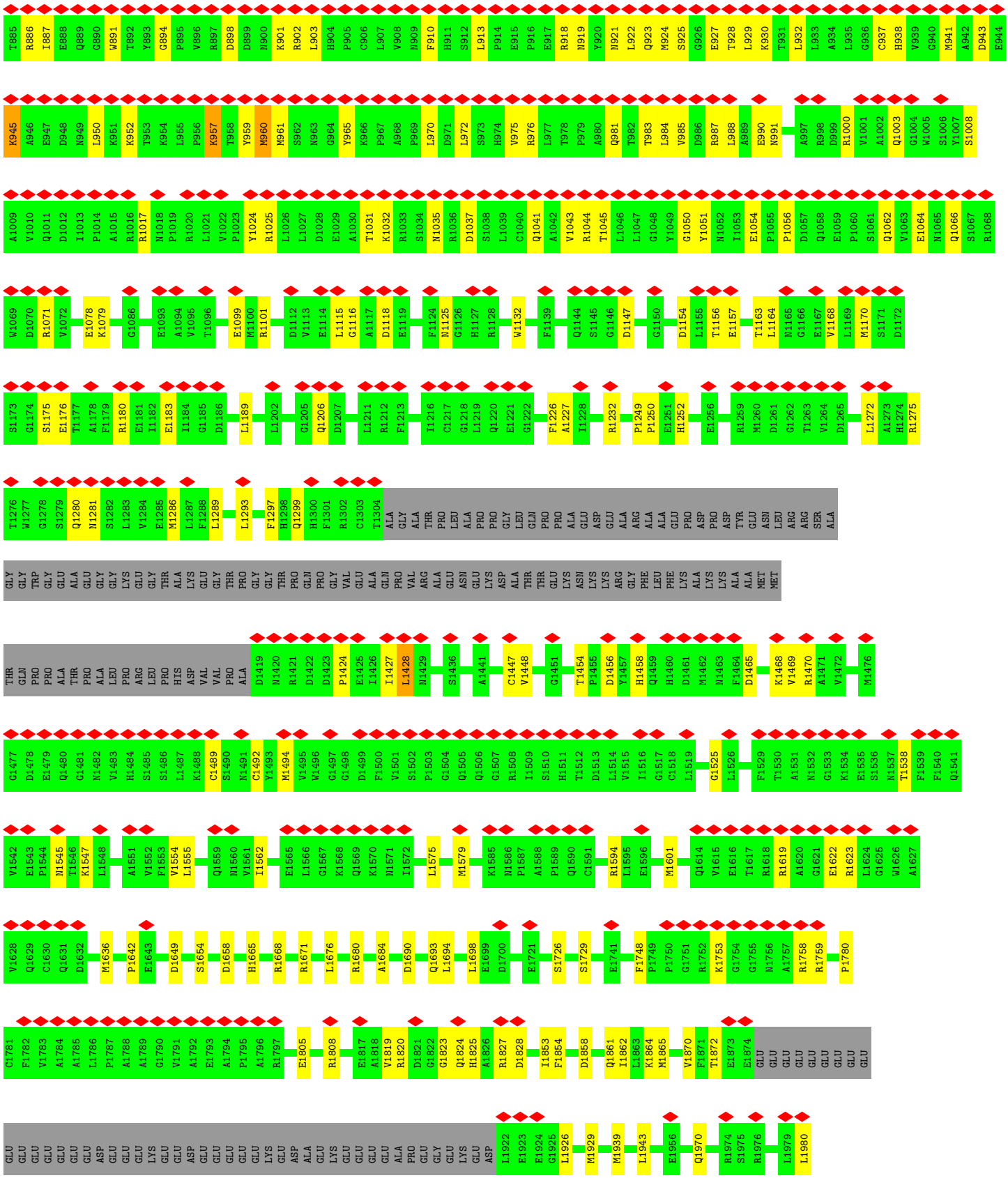


• Molecule 1: Ryanodine receptor 1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GLY GLY TRP GLY GLU ALA GLU GLY GLY LYS GLY THR ALA LYS GLU GLY THR PRO GLY GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET
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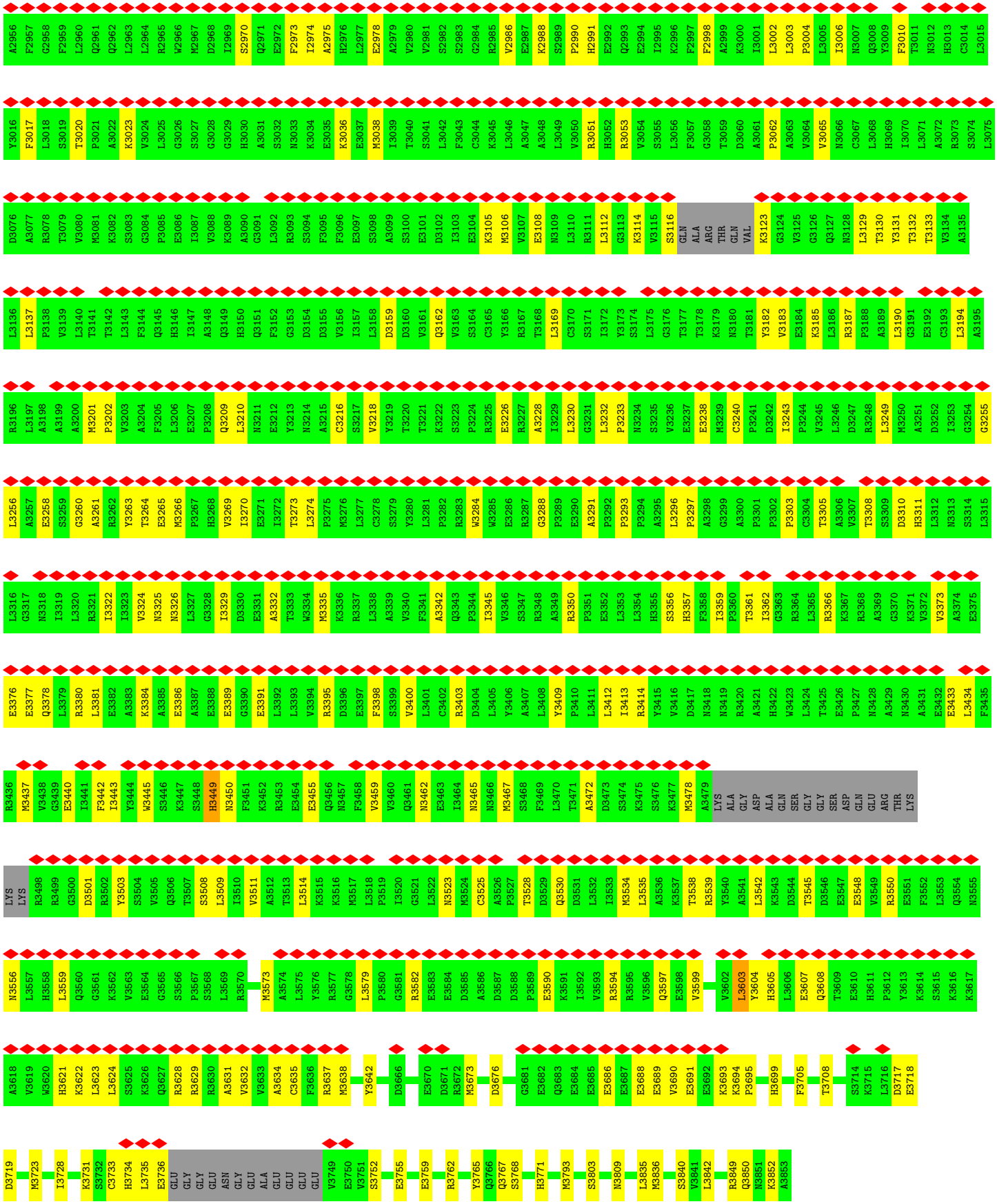
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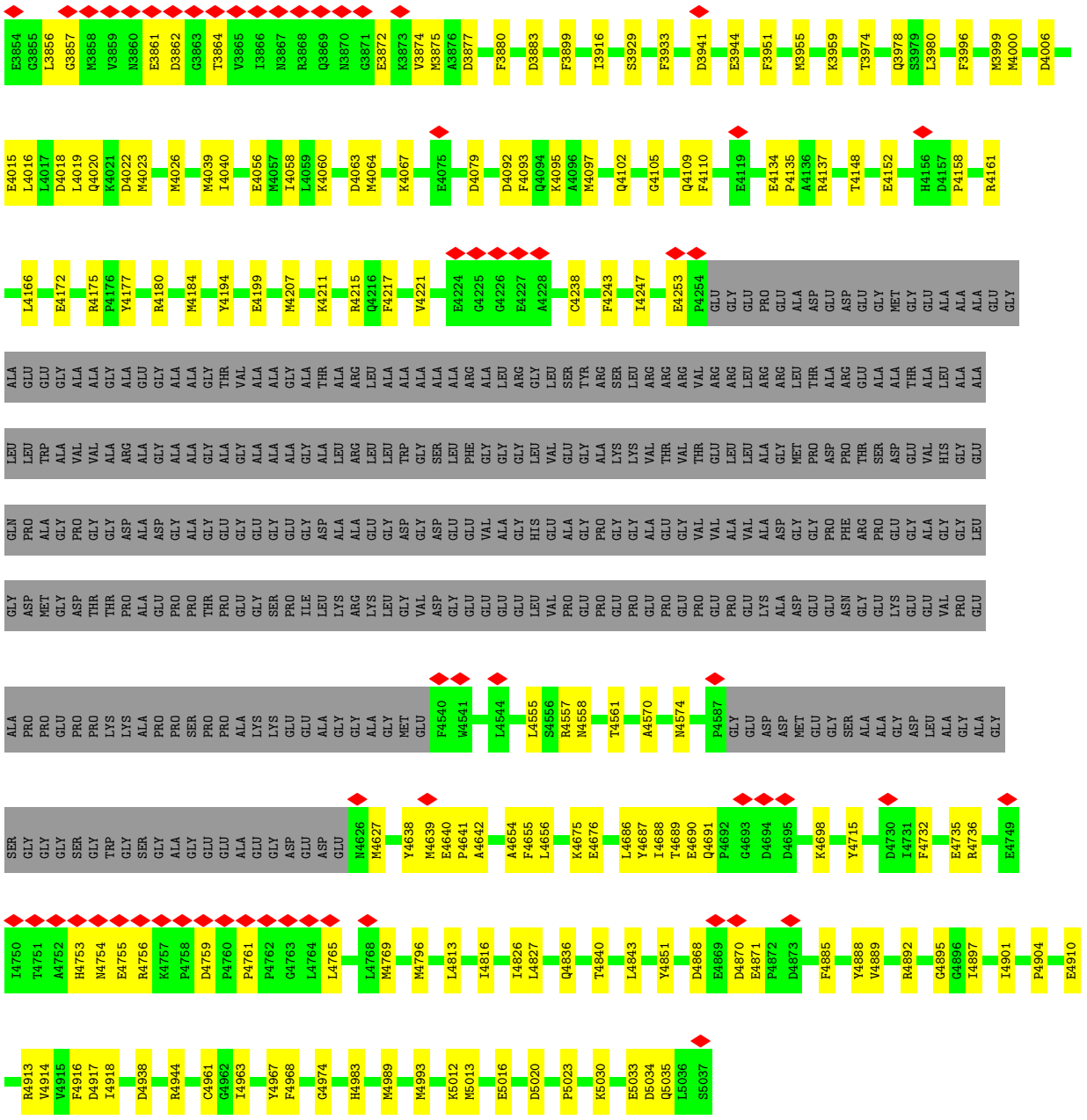

• Molecule 1: Ryanodine receptor 1

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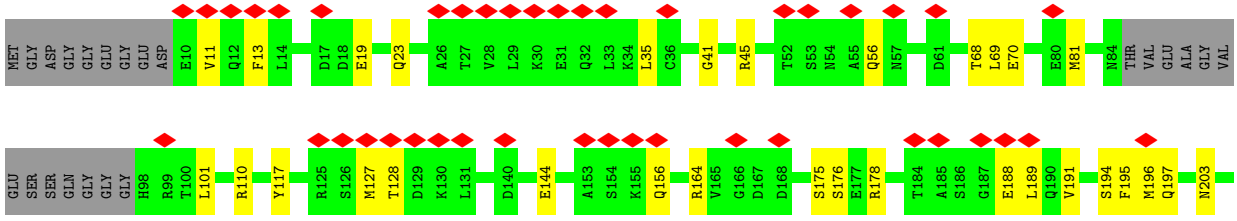

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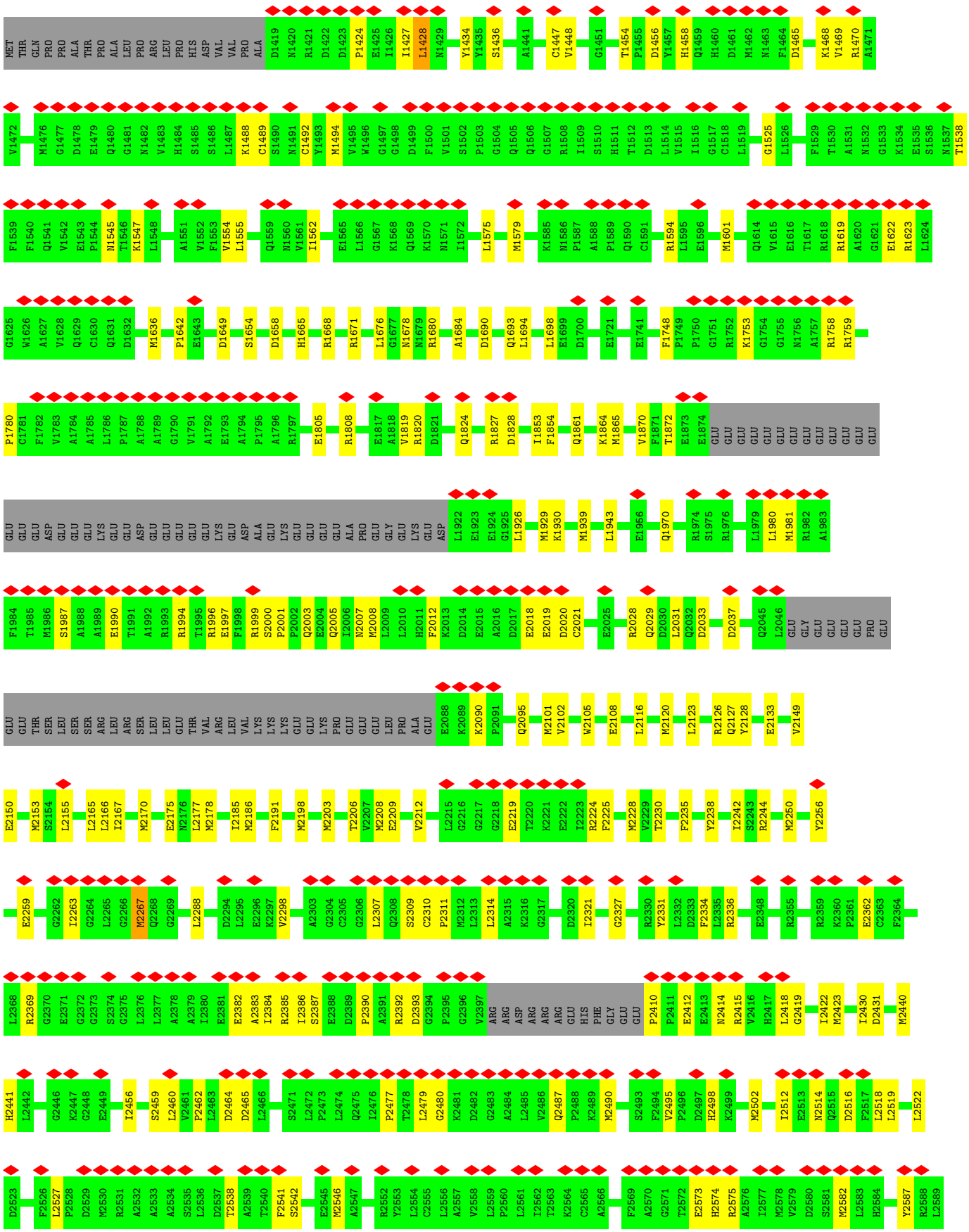
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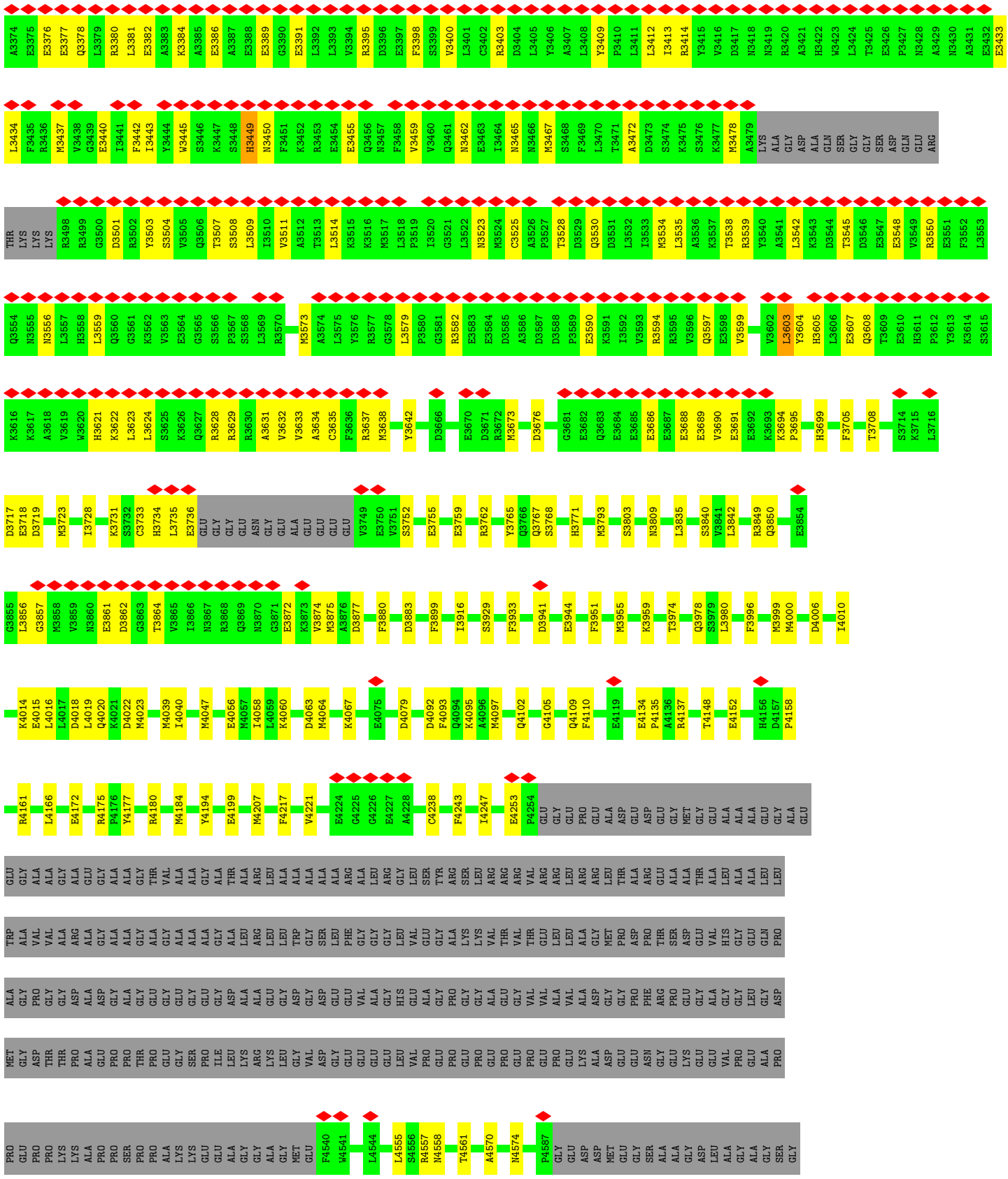
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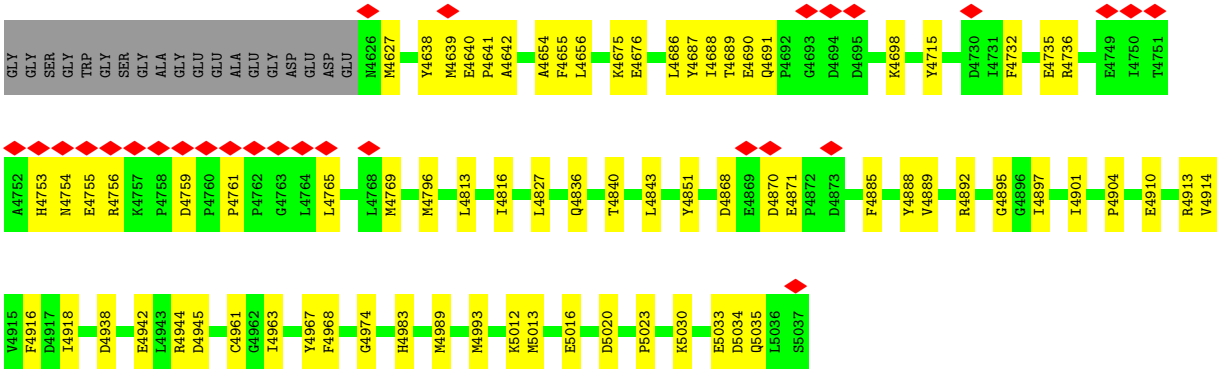
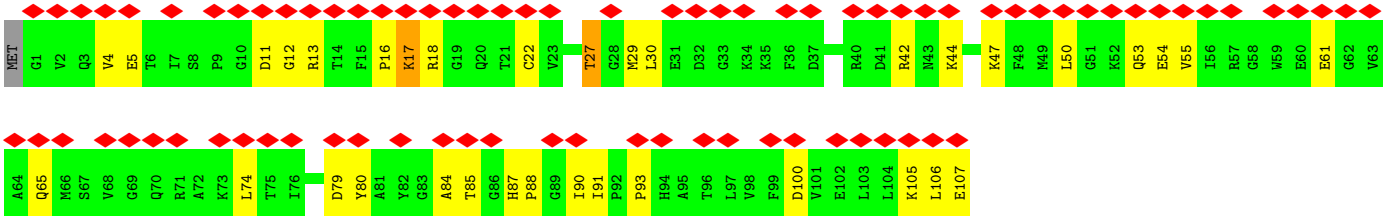
K3616 K3617 A3618 V3619 W3620 H3621 K3622 L3623 L3624 S3625 K3626 Q3627 R3628 R3629 R3630 A3631 V3632 V3633 A3634 C3635 F3636 R3637 M3638 Y3642 D3666 E3670 D3671 R3672 M3673 D3676 G3681 E3682 Q3683 E3684 E3685 E3686 E3687 E3688 E3689 V3690 E3691 E3692 K3693 K3694 P3695 H3699 F3705 T3708 S3714 K3715 L3716
D3717 E3718 D3719 M3723 I3728 K3731 S3732 C3733 H3734 L3735 E3736 GLU GLY GLY GLU ASN GLY GLU ALA GLU GLU GLU GLU V3749 E3750 V3751 S3752 E3755 E3759 R3762 Y3765 Q3766 Q3767 S3768 H3771 M3793 S3803 N3809 L3835 S3840 V3841 L3842 R3849 Q3850 E3854
G3855 L3856 G3857 M3858 V3859 N3860 E3861 D3862 G3863 T3864 V3865 I3866 N3867 R3868 Q3869 N3870 G3871 E3872 K3873 V3874 M3875 A3876 D3877 F3880 D3883 F3899 I3916 S3929 F3933 D3941 E3944 F3951 M3955 K3959 T3974 Q3978 S3979 L3980 F3996 M3999 M4000 D4006 I4010
K4014 E4015 L4016 L4017 D4018 L4019 Q4020 K4021 D4022 M4023 M4039 I4040 M4047 E4056 M4057 I4058 L4059 K4060 D4063 M4064 K4067 E4075 D4079 D4092 F4093 Q4094 K4095 A4096 M4097 Q4102 G4105 Q4109 F4110 E4119 E4134 P4135 A4136 R4137 T4148 E4152 H4156 D4157 P4158
R4161 L4166 E4172 R4175 P4176 Y4177 R4180 M4184 Y4194 E4199 M4207 F4217 V4221 E4224 G4225 G4226 E4227 A4228 C4238 F4243 I4247 E4253 P4254 GLU GLY GLU PRO GLU ALA ASP GLU ASP GLU GLY MET GLY GLU ALA ALA ALA GLU GLY ALA GLU
GLU GLY ALA ALA GLY ALA GLU GLY ALA ALA GLY GLY THR VAL ALA ALA ALA THR ALA ARG LEU ALA ALA TRP ALA ALA ARG ALA LEU ARG GLY LEU SER TYR ARG SER LEU ARG ARG ARG VAL ARG ARG LEU ARG ARG LEU THR ALA ARG GLU ALA ALA THR ALA LEU ALA ALA LEU LEU
TRP ALA VAL VAL ALA ARG ALA GLY ALA ALA GLY GLY ALA GLY LEU LEU GLY ALA LEU LEU GLY ALA LEU LEU TRP GLY SER LEU PHE GLY GLY GLY LEU VAL GLU GLY ALA LYS LYS VAL THR VAL THR GLU LEU LEU ALA GLY MET PRO ASP PRO THR SER ASP GLU VAL HIS GLY GLU GLN PRO
ALA GLY PRO GLY GLY ASP ALA ASP GLY ALA GLY GLU GLY GLY ASP ALA ALA GLU GLY GLU GLU GLU VAL ALA GLY HIS GLU ALA GLY PRO GLY GLY ALA GLU GLU GLU GLY ALA ALA GLU GLY VAL ALA ALA VAL ALA ASP GLY GLY PRO PHE ARG PRO GLU GLY ALA GLY GLU GLU ALA GLY LEU GLY ASP
MET GLY ASP THR THR PRO ALA GLU PRO PRO THR PRO GLU GLU GLY SER PRO ILE LEU LYS ARG LYS LEU LEU GLY VAL ASP GLY GLU GLU VAL PRO GLU PRO GLU PRO GLU PRO GLU PRO GLU VAL ALA VAL ALA ASP ASP GLY GLU GLU ASN GLY GLU GLU LYS GLU GLU VAL HIS GLY GLU ALA GLU GLU VAL PRO GLU ALA PRO
PRO GLU PRO PRO LYS LYS ALA PRO PRO SER PRO PRO ALA LYS LYS GLU GLU ALA GLY ALA GLY MET GLU F4540 W4541 L4544 L4555 S4556 R4557 N4558 T4561 A4570 N4574 P4587 GLY GLU ASP ASP MET GLU GLY SER ALA ALA GLY ASP LEU ALA GLY ALA GLY SER GLY



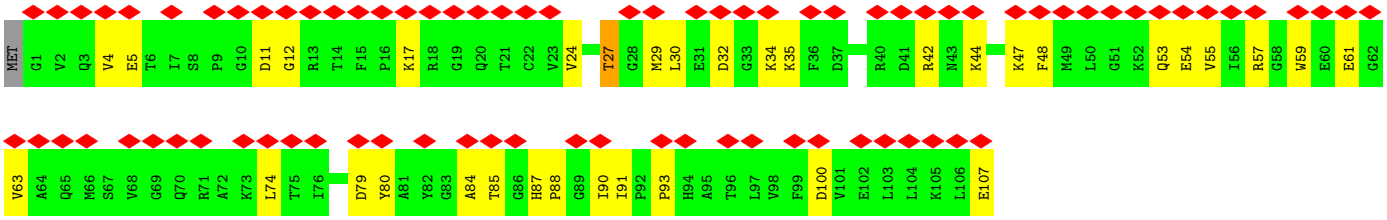
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

Chain E:



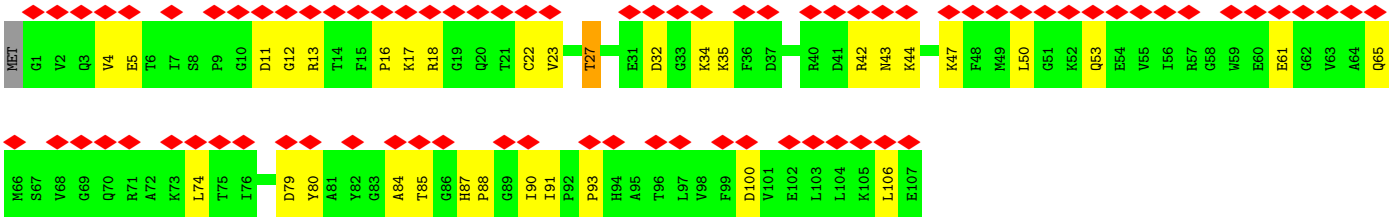
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

Chain H:



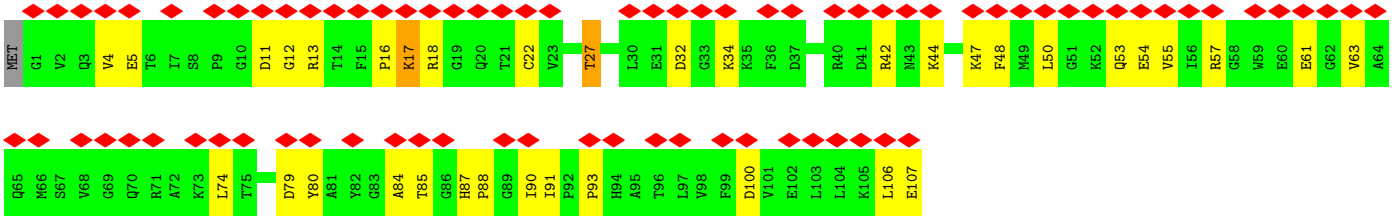
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

Chain G:



• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

Chain F:


MET G1 V2 Q3 V4 E5 T6 I7 S8 P9 G10 D11 G12 R13 T14 F15 P16 K17 R18 G19 Q20 T21 C22 V23 T27 L30 E31 D32 G33 K34 K35 F36 D37 R40 D41 R42 N43 K44 K47 F48 M49 L50 G51 K52 Q53 E54 V55 I56 R57 G58 W59 E60 E61 G62 V63 A64
Q65 M66 S67 V68 G69 Q70 R71 A72 K73 L74 T75 D79 Y80 A81 Y82 G83 A84 T85 G86 H87 P88 G89 I90 I91 P92 P93 H94 A95 T96 L97 V98 F99 D100 V101 E102 L103 L104 K105 L106 E107

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	14467	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.395	Depositor
Minimum map value	-0.215	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.019	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	423.424, 423.424, 423.424	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.827, 0.827, 0.827	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: A1BD5, CA, ATP, 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	0.25	0/35977	0.35	2/48726 (0.0%)
1	B	0.25	0/35977	0.35	2/48726 (0.0%)
1	C	0.25	0/35977	0.35	2/48726 (0.0%)
1	D	0.25	0/35977	0.35	2/48726 (0.0%)
2	E	0.23	0/850	0.42	0/1146
2	F	0.23	0/850	0.46	0/1146
2	G	0.23	0/850	0.41	0/1146
2	H	0.23	0/850	0.41	0/1146
All	All	0.25	0/147308	0.36	8/199488 (0.0%)

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	2639	MET	CB-CG-SD	5.15	128.16	112.70
1	C	2639	MET	CB-CG-SD	5.14	128.12	112.70
1	A	2639	MET	CB-CG-SD	5.14	128.11	112.70
1	B	2639	MET	CB-CG-SD	5.13	128.09	112.70
1	A	3603	LEU	CA-CB-CG	5.01	133.84	116.30
1	B	3603	LEU	CA-CB-CG	5.01	133.82	116.30
1	D	3603	LEU	CA-CB-CG	5.01	133.82	116.30
1	C	3603	LEU	CA-CB-CG	5.00	133.81	116.30

There are no chirality outliers.

There are no planarity outliers.

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	35150	0	34797	644	0
1	B	35150	0	34797	646	0
1	C	35150	0	34797	643	0
1	D	35150	0	34797	650	0
2	E	831	0	831	32	0
2	F	831	0	831	32	0
2	G	831	0	831	27	0
2	H	831	0	831	22	0
3	A	31	0	12	0	0
3	B	31	0	12	0	0
3	C	31	0	12	0	0
3	D	31	0	12	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
6	A	15	0	0	0	0
6	B	15	0	0	0	0
6	C	15	0	0	0	0
6	D	15	0	0	0	0
7	A	1	0	0	0	0
7	B	1	0	0	0	0
7	C	1	0	0	0	0
7	D	1	0	0	0	0
All	All	144120	0	142560	2658	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 9.

All (2658) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2765:LYS:HZ3	1:A:2857:PRO:HB2	1.38	0.85
1:B:2765:LYS:HZ2	1:B:2860:PRO:HA	1.41	0.85
2:F:18:ARG:HH21	2:F:50:LEU:HD22	1.43	0.83
1:D:3539:ARG:HH12	1:D:3542:LEU:HD22	1.43	0.83
2:E:61:GLU:OE2	2:E:61:GLU:N	2.12	0.82
1:A:3539:ARG:HH12	1:A:3542:LEU:HD22	1.43	0.82
1:C:2765:LYS:HZ3	1:C:2857:PRO:HB2	1.43	0.82
1:B:3539:ARG:HH12	1:B:3542:LEU:HD22	1.43	0.82
2:G:18:ARG:HH21	2:G:50:LEU:HD22	1.44	0.81
2:E:18:ARG:HH21	2:E:50:LEU:HD22	1.43	0.81
1:C:3539:ARG:HH12	1:C:3542:LEU:HD22	1.43	0.80
2:H:61:GLU:OE1	2:H:61:GLU:N	2.14	0.79
2:F:61:GLU:OE1	2:F:61:GLU:N	2.12	0.79
2:F:90:ILE:HG22	2:F:91:ILE:HG13	1.63	0.79
1:D:2765:LYS:HZ3	1:D:2857:PRO:HB2	1.47	0.78
2:G:61:GLU:OE1	2:G:61:GLU:N	2.11	0.77
1:A:1280:GLN:O	1:A:1281:ASN:ND2	2.20	0.75
1:D:1280:GLN:O	1:D:1281:ASN:ND2	2.20	0.75
1:B:1280:GLN:O	1:B:1281:ASN:ND2	2.20	0.75
1:C:1280:GLN:O	1:C:1281:ASN:ND2	2.20	0.74
1:A:127:MET:H	1:A:127:MET:HE3	1.53	0.73
1:C:127:MET:HE3	1:C:127:MET:H	1.53	0.73
1:A:1684:ALA:HA	2:E:90:ILE:HD11	1.70	0.73
1:A:1996:ARG:HH21	1:A:1999:ARG:HE	1.37	0.73
1:B:1996:ARG:HH21	1:B:1999:ARG:HE	1.37	0.73
1:B:127:MET:HE3	1:B:127:MET:H	1.53	0.73
1:C:891:TRP:HA	1:C:902:ARG:HB3	1.71	0.73
1:D:891:TRP:HA	1:D:902:ARG:HB3	1.71	0.72
1:D:1601:MET:HA	1:D:1601:MET:HE3	1.71	0.72
1:C:1601:MET:HA	1:C:1601:MET:HE3	1.71	0.72
1:D:127:MET:H	1:D:127:MET:HE3	1.53	0.72
1:B:891:TRP:HA	1:B:902:ARG:HB3	1.71	0.72
1:A:891:TRP:HA	1:A:902:ARG:HB3	1.71	0.72
1:A:1601:MET:HA	1:A:1601:MET:HE3	1.71	0.72
1:B:1601:MET:HA	1:B:1601:MET:HE3	1.71	0.72
1:D:1996:ARG:HH21	1:D:1999:ARG:HE	1.37	0.71
1:C:3442:PHE:HE1	1:C:3511:VAL:HG12	1.56	0.71
1:D:3442:PHE:HE1	1:D:3511:VAL:HG12	1.56	0.71
1:C:1996:ARG:HH21	1:C:1999:ARG:HE	1.37	0.71
1:B:3442:PHE:HE1	1:B:3511:VAL:HG12	1.56	0.71
1:C:972:LEU:HD13	1:C:1044:ARG:HB3	1.73	0.71
1:B:972:LEU:HD13	1:B:1044:ARG:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4938:ASP:OD1	1:D:4944:ARG:NH1	2.23	0.70
1:B:1636:MET:HE1	1:B:1649:ASP:HA	1.74	0.70
1:A:972:LEU:HD13	1:A:1044:ARG:HB3	1.73	0.70
1:A:3442:PHE:HE1	1:A:3511:VAL:HG12	1.56	0.70
1:A:1636:MET:HE1	1:A:1649:ASP:HA	1.74	0.70
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.74	0.70
2:H:90:ILE:HD11	1:D:1684:ALA:HA	1.74	0.70
1:A:1170:MET:HA	1:A:1170:MET:HE3	1.75	0.69
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.74	0.69
1:C:1170:MET:HA	1:C:1170:MET:HE3	1.75	0.69
1:C:1636:MET:HE1	1:C:1649:ASP:HA	1.74	0.69
1:B:2165:LEU:HD11	1:B:2177:LEU:HD23	1.74	0.69
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.74	0.69
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.74	0.69
1:D:972:LEU:HD13	1:D:1044:ARG:HB3	1.73	0.69
1:D:1636:MET:HE1	1:D:1649:ASP:HA	1.73	0.69
1:D:2165:LEU:HD11	1:D:2177:LEU:HD23	1.74	0.69
1:D:3114:LYS:HD3	1:D:3116:SER:H	1.57	0.69
1:C:23:GLN:NE2	1:C:203:ASN:OD1	2.26	0.69
2:F:90:ILE:HD11	1:B:1684:ALA:HA	1.75	0.68
1:B:1170:MET:HA	1:B:1170:MET:HE3	1.75	0.68
1:D:1170:MET:HA	1:D:1170:MET:HE3	1.75	0.68
1:C:2230:THR:HB	1:C:2267:MET:HE3	1.76	0.68
1:A:23:GLN:NE2	1:A:203:ASN:OD1	2.26	0.68
1:C:3114:LYS:HD3	1:C:3116:SER:H	1.57	0.68
1:A:1066:GLN:HB2	1:A:1071:ARG:HE	1.58	0.68
1:B:4944:ARG:NH1	1:C:4938:ASP:OD1	2.26	0.68
1:C:3359:ILE:HG23	1:C:3437:MET:HE1	1.75	0.68
1:B:2230:THR:HB	1:B:2267:MET:HE3	1.76	0.68
1:C:4967:TYR:OH	1:C:5033:GLU:OE2	2.12	0.68
1:A:2230:THR:HB	1:A:2267:MET:HE3	1.75	0.68
1:D:2230:THR:HB	1:D:2267:MET:HE3	1.76	0.68
2:G:87:HIS:HB3	2:G:90:ILE:HB	1.75	0.68
1:B:23:GLN:NE2	1:B:203:ASN:OD1	2.26	0.68
1:D:1066:GLN:HB2	1:D:1071:ARG:HE	1.58	0.68
1:D:925:SER:O	1:D:928:THR:OG1	2.12	0.68
1:B:1066:GLN:HB2	1:B:1071:ARG:HE	1.58	0.68
1:D:23:GLN:NE2	1:D:203:ASN:OD1	2.26	0.68
1:C:2165:LEU:HD11	1:C:2177:LEU:HD23	1.74	0.68
1:A:3114:LYS:HD3	1:A:3116:SER:H	1.57	0.67
1:A:3359:ILE:HG23	1:A:3437:MET:HE1	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:925:SER:O	1:B:928:THR:OG1	2.12	0.67
1:B:3114:LYS:HD3	1:B:3116:SER:H	1.57	0.67
1:D:2754:PHE:HE2	1:D:2813:LEU:HD11	1.59	0.67
1:D:3359:ILE:HG23	1:D:3437:MET:HE1	1.75	0.67
1:D:4938:ASP:OD1	1:C:4944:ARG:NH1	2.26	0.67
1:A:925:SER:O	1:A:928:THR:OG1	2.12	0.67
1:C:925:SER:O	1:C:928:THR:OG1	2.12	0.67
1:A:2165:LEU:HD11	1:A:2177:LEU:HD23	1.74	0.67
1:A:4967:TYR:OH	1:A:5033:GLU:OE2	2.12	0.67
1:C:2754:PHE:HE2	1:C:2813:LEU:HD11	1.60	0.67
1:B:3359:ILE:HG23	1:B:3437:MET:HE1	1.75	0.67
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.77	0.67
2:G:90:ILE:HD11	1:C:1684:ALA:HA	1.76	0.67
1:C:1066:GLN:HB2	1:C:1071:ARG:HE	1.58	0.67
1:A:2742:THR:HG21	1:A:2814:LYS:HB3	1.76	0.67
1:B:2737:PRO:HD2	1:B:2891:LYS:HD3	1.76	0.67
1:B:2754:PHE:HE2	1:B:2813:LEU:HD11	1.59	0.67
1:D:1980:LEU:HD11	1:D:1994:ARG:HB3	1.77	0.67
1:C:2737:PRO:HD2	1:C:2891:LYS:HD3	1.76	0.67
1:C:3594:ARG:NH2	1:C:3597:GLN:OE1	2.28	0.67
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.77	0.67
1:B:4967:TYR:OH	1:B:5033:GLU:OE2	2.12	0.67
1:C:1980:LEU:HD11	1:C:1994:ARG:HB3	1.77	0.67
1:B:2742:THR:HG21	1:B:2814:LYS:HB3	1.76	0.66
1:A:3594:ARG:NH2	1:A:3597:GLN:OE1	2.28	0.66
1:D:2737:PRO:HD2	1:D:2891:LYS:HD3	1.76	0.66
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.77	0.66
1:D:3335:MET:SD	1:D:3403:ARG:NH1	2.69	0.66
1:C:2902:HIS:HB3	1:C:2905:LEU:HG	1.78	0.66
1:A:2737:PRO:HD2	1:A:2891:LYS:HD3	1.76	0.66
1:D:1232:ARG:NH2	1:D:1828:ASP:O	2.29	0.66
1:D:2902:HIS:HB3	1:D:2905:LEU:HG	1.78	0.66
1:D:4627:MET:HE3	1:D:4627:MET:H	1.59	0.66
1:D:957:LYS:HA	1:D:960:MET:HE2	1.78	0.66
1:D:1099:GLU:OE2	1:D:1125:ASN:ND2	2.29	0.66
1:D:2765:LYS:HZ2	1:D:2860:PRO:HA	1.60	0.66
1:D:4967:TYR:OH	1:D:5033:GLU:OE2	2.12	0.66
1:C:858:THR:HB	1:C:930:LYS:HD2	1.77	0.66
1:A:858:THR:HB	1:A:930:LYS:HD2	1.77	0.66
1:A:2754:PHE:HE2	1:A:2813:LEU:HD11	1.60	0.66
1:B:858:THR:HB	1:B:930:LYS:HD2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:943:ASP:HB2	1:C:1050:GLY:HA3	1.77	0.66
1:A:4627:MET:H	1:A:4627:MET:HE3	1.59	0.66
2:G:18:ARG:HG2	2:G:18:ARG:HH11	1.61	0.66
1:C:830:ARG:NH2	1:C:832:GLU:OE2	2.29	0.66
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.14	0.65
1:A:3335:MET:SD	1:A:3403:ARG:NH1	2.69	0.65
2:E:18:ARG:HG2	2:E:18:ARG:HH11	1.61	0.65
1:B:3335:MET:SD	1:B:3403:ARG:NH1	2.69	0.65
1:B:3594:ARG:NH2	1:B:3597:GLN:OE1	2.28	0.65
1:B:4627:MET:HE3	1:B:4627:MET:H	1.59	0.65
1:D:3594:ARG:NH2	1:D:3597:GLN:OE1	2.28	0.65
1:A:876:GLU:HG2	1:A:918:ARG:HD3	1.78	0.65
1:B:4654:ALA:C	1:B:4796:MET:HE1	2.22	0.65
1:A:957:LYS:HA	1:A:960:MET:HE2	1.78	0.65
1:A:1980:LEU:HD11	1:A:1994:ARG:HB3	1.77	0.65
1:A:2902:HIS:HB3	1:A:2905:LEU:HG	1.78	0.65
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.77	0.65
1:B:987:ARG:HH12	1:B:1056:PRO:HD2	1.61	0.65
1:D:830:ARG:NH2	1:D:832:GLU:OE2	2.29	0.65
1:D:858:THR:HB	1:D:930:LYS:HD2	1.77	0.65
1:C:3599:VAL:O	1:C:3603:LEU:HD12	1.97	0.65
1:C:4654:ALA:C	1:C:4796:MET:HE1	2.22	0.65
1:A:830:ARG:NH2	1:A:832:GLU:OE2	2.30	0.65
1:D:943:ASP:HB2	1:D:1050:GLY:HA3	1.77	0.65
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.14	0.65
1:C:2742:THR:HG21	1:C:2814:LYS:HB3	1.76	0.65
2:F:5:GLU:OE1	2:F:5:GLU:N	2.29	0.65
1:B:1980:LEU:HD11	1:B:1994:ARG:HB3	1.77	0.65
1:B:2902:HIS:HB3	1:B:2905:LEU:HG	1.78	0.65
1:C:957:LYS:HA	1:C:960:MET:HE2	1.78	0.65
1:C:2170:MET:HE1	1:C:2228:MET:HG2	1.78	0.65
1:C:2779:GLU:HG3	1:C:2792:ARG:HG2	1.78	0.65
1:A:2170:MET:HE1	1:A:2228:MET:HG2	1.78	0.65
1:A:2191:PHE:HA	1:A:2198:MET:HE2	1.79	0.65
1:A:3594:ARG:CZ	1:A:3594:ARG:HA	2.27	0.65
1:B:830:ARG:NH2	1:B:832:GLU:OE2	2.30	0.65
1:B:943:ASP:HB2	1:B:1050:GLY:HA3	1.77	0.65
1:D:2191:PHE:HA	1:D:2198:MET:HE2	1.79	0.65
1:D:2742:THR:HG21	1:D:2814:LYS:HB3	1.76	0.65
1:D:2779:GLU:HG3	1:D:2792:ARG:HG2	1.78	0.65
1:C:1099:GLU:OE2	1:C:1125:ASN:ND2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1232:ARG:NH2	1:C:1828:ASP:O	2.29	0.65
1:C:3335:MET:SD	1:C:3403:ARG:NH1	2.69	0.65
1:B:2191:PHE:HA	1:B:2198:MET:HE2	1.79	0.65
1:B:3599:VAL:O	1:B:3603:LEU:HD12	1.97	0.65
1:C:4627:MET:HE3	1:C:4627:MET:H	1.59	0.65
1:A:4654:ALA:C	1:A:4796:MET:HE1	2.22	0.65
1:D:3599:VAL:O	1:D:3603:LEU:HD12	1.97	0.65
1:C:987:ARG:HH12	1:C:1056:PRO:HD2	1.61	0.65
1:A:4944:ARG:NH1	1:B:4938:ASP:OD1	2.29	0.65
2:E:5:GLU:N	2:E:5:GLU:OE2	2.30	0.65
1:B:957:LYS:HA	1:B:960:MET:HE2	1.78	0.65
1:B:3594:ARG:CZ	1:B:3594:ARG:HA	2.27	0.65
1:D:4654:ALA:C	1:D:4796:MET:HE1	2.21	0.65
1:A:987:ARG:HH12	1:A:1056:PRO:HD2	1.61	0.64
1:A:2779:GLU:HG3	1:A:2792:ARG:HG2	1.79	0.64
1:D:987:ARG:HH12	1:D:1056:PRO:HD2	1.60	0.64
2:H:5:GLU:N	2:H:5:GLU:OE2	2.30	0.64
1:D:876:GLU:HG2	1:D:918:ARG:HD3	1.78	0.64
1:C:3594:ARG:HA	1:C:3594:ARG:CZ	2.27	0.64
2:G:5:GLU:N	2:G:5:GLU:OE2	2.30	0.64
2:F:18:ARG:HG2	2:F:18:ARG:HH11	1.61	0.64
1:B:2170:MET:HE1	1:B:2228:MET:HG2	1.78	0.64
1:B:3414:ARG:HE	1:B:3472:ALA:HB3	1.62	0.64
1:B:4676:GLU:OE2	1:B:4698:LYS:NZ	2.31	0.64
1:C:2191:PHE:HA	1:C:2198:MET:HE2	1.79	0.64
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.71	0.64
1:A:943:ASP:HB2	1:A:1050:GLY:HA3	1.77	0.64
1:A:4676:GLU:OE2	1:A:4698:LYS:NZ	2.31	0.64
1:C:876:GLU:HG2	1:C:918:ARG:HD3	1.78	0.64
1:A:943:ASP:OD2	1:A:945:LYS:NZ	2.31	0.64
1:B:876:GLU:HG2	1:B:918:ARG:HD3	1.78	0.64
1:B:2779:GLU:HG3	1:B:2792:ARG:HG2	1.78	0.64
1:D:3594:ARG:CZ	1:D:3594:ARG:HA	2.27	0.64
1:A:3599:VAL:O	1:A:3603:LEU:HD12	1.97	0.64
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.14	0.64
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.79	0.64
1:D:2170:MET:HE1	1:D:2228:MET:HG2	1.78	0.64
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.71	0.64
1:A:3329:ILE:HD11	1:A:3332:ALA:HB2	1.80	0.64
1:B:2624:ARG:HD3	1:B:2910:THR:HB	1.80	0.64
1:D:1981:MET:HA	1:D:1981:MET:HE3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3959:LYS:NZ	1:D:4022:ASP:OD2	2.31	0.64
1:C:943:ASP:OD2	1:C:945:LYS:NZ	2.31	0.64
1:C:1454:THR:OG1	1:C:1456:ASP:OD1	2.14	0.64
1:C:3414:ARG:HE	1:C:3472:ALA:HB3	1.62	0.64
1:A:1232:ARG:NH2	1:A:1828:ASP:O	2.29	0.63
1:B:1232:ARG:NH2	1:B:1828:ASP:O	2.29	0.63
1:B:2777:TYR:HB3	1:B:2791:LEU:HD23	1.80	0.63
1:D:2624:ARG:HD3	1:D:2910:THR:HB	1.80	0.63
1:D:4676:GLU:OE2	1:D:4698:LYS:NZ	2.31	0.63
1:B:943:ASP:OD2	1:B:945:LYS:NZ	2.31	0.63
1:D:460:GLN:N	1:D:463:GLU:OE2	2.31	0.63
1:A:394:GLN:OE1	1:A:394:GLN:N	2.32	0.63
1:A:460:GLN:N	1:A:463:GLU:OE2	2.31	0.63
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.79	0.63
1:C:4676:GLU:OE2	1:C:4698:LYS:NZ	2.31	0.63
1:D:3414:ARG:HE	1:D:3472:ALA:HB3	1.62	0.63
1:B:56:GLN:O	1:B:309:THR:OG1	2.16	0.63
1:B:394:GLN:OE1	1:B:394:GLN:N	2.32	0.63
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.71	0.63
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.71	0.63
1:C:2153:MET:HA	1:C:2153:MET:HE3	1.81	0.63
1:B:1099:GLU:OE2	1:B:1125:ASN:ND2	2.29	0.63
1:B:2153:MET:HA	1:B:2153:MET:HE3	1.81	0.63
1:D:3329:ILE:HD11	1:D:3332:ALA:HB2	1.79	0.63
1:C:56:GLN:O	1:C:309:THR:OG1	2.16	0.63
1:A:1099:GLU:OE2	1:A:1125:ASN:ND2	2.29	0.63
2:F:27:THR:HG23	2:F:100:ASP:HB3	1.81	0.63
1:D:2153:MET:HE3	1:D:2153:MET:HA	1.81	0.63
1:A:2155:LEU:HD11	1:A:2198:MET:HE1	1.81	0.63
1:A:3959:LYS:NZ	1:A:4022:ASP:OD2	2.31	0.63
1:A:5034:ASP:OD1	1:A:5035:GLN:N	2.32	0.63
2:G:27:THR:HG23	2:G:100:ASP:HB3	1.81	0.63
1:B:1981:MET:HA	1:B:1981:MET:HE3	1.80	0.63
1:D:56:GLN:O	1:D:309:THR:OG1	2.16	0.63
1:D:2777:TYR:HB3	1:D:2791:LEU:HD23	1.80	0.63
1:C:2155:LEU:HD11	1:C:2198:MET:HE1	1.81	0.63
1:A:2153:MET:HA	1:A:2153:MET:HE3	1.81	0.62
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.79	0.62
1:A:2777:TYR:HB3	1:A:2791:LEU:HD23	1.80	0.62
1:B:2650:ARG:NH1	1:B:2651:CYS:SG	2.72	0.62
1:D:5034:ASP:OD1	1:D:5035:GLN:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:5034:ASP:OD1	1:C:5035:GLN:N	2.32	0.62
1:B:2970:SER:HA	1:B:2973:PHE:CE2	2.34	0.62
1:D:2155:LEU:HD11	1:D:2198:MET:HE1	1.81	0.62
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.79	0.62
1:A:2624:ARG:HD3	1:A:2910:THR:HB	1.80	0.62
1:A:2650:ARG:NH1	1:A:2651:CYS:SG	2.73	0.62
1:A:3020:THR:HG23	1:A:3023:LYS:H	1.64	0.62
1:A:3414:ARG:HE	1:A:3472:ALA:HB3	1.62	0.62
1:B:2155:LEU:HD11	1:B:2198:MET:HE1	1.81	0.62
1:D:483:MET:HE2	1:D:483:MET:N	2.14	0.62
1:D:2309:SER:HB2	1:D:2314:LEU:HD21	1.81	0.62
1:D:2650:ARG:NH1	1:D:2651:CYS:SG	2.72	0.62
1:D:876:GLU:OE2	1:D:918:ARG:NH1	2.32	0.62
1:C:188:GLU:OE2	1:C:188:GLU:N	2.33	0.62
1:C:2970:SER:HA	1:C:2973:PHE:CE2	2.34	0.62
1:C:3329:ILE:HD11	1:C:3332:ALA:HB2	1.79	0.62
1:A:188:GLU:N	1:A:188:GLU:OE2	2.33	0.62
1:D:943:ASP:OD2	1:D:945:LYS:NZ	2.31	0.62
1:C:460:GLN:N	1:C:463:GLU:OE2	2.31	0.62
1:A:1981:MET:HA	1:A:1981:MET:HE3	1.80	0.62
1:B:483:MET:HE2	1:B:483:MET:N	2.14	0.62
1:B:3329:ILE:HD11	1:B:3332:ALA:HB2	1.79	0.62
1:A:919:ASN:HA	1:A:922:LEU:HD23	1.82	0.62
1:A:2309:SER:HB2	1:A:2314:LEU:HD21	1.81	0.62
1:B:3020:THR:HG23	1:B:3023:LYS:H	1.64	0.62
1:C:483:MET:N	1:C:483:MET:HE2	2.14	0.62
1:B:876:GLU:OE2	1:B:918:ARG:NH1	2.32	0.62
1:C:1981:MET:HA	1:C:1981:MET:HE3	1.80	0.62
1:C:2777:TYR:HB3	1:C:2791:LEU:HD23	1.80	0.62
1:A:483:MET:HE2	1:A:483:MET:N	2.14	0.62
1:D:3020:THR:HG23	1:D:3023:LYS:H	1.64	0.62
1:C:799:GLU:OE1	1:C:1623:ARG:NH2	2.33	0.62
1:C:2288:LEU:O	1:C:3849:ARG:NH1	2.31	0.62
1:C:2650:ARG:NH1	1:C:2651:CYS:SG	2.73	0.62
1:A:2970:SER:HA	1:A:2973:PHE:CE2	2.34	0.61
1:B:176:SER:OG	1:B:178:ARG:NH1	2.30	0.61
1:D:394:GLN:OE1	1:D:394:GLN:N	2.32	0.61
1:A:876:GLU:OE2	1:A:918:ARG:NH1	2.32	0.61
1:C:3020:THR:HG23	1:C:3023:LYS:H	1.64	0.61
1:A:56:GLN:O	1:A:309:THR:OG1	2.16	0.61
1:A:4836:GLN:O	1:A:4840:THR:HG23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1427:ILE:HG23	1:C:1428:LEU:HD22	1.83	0.61
1:A:799:GLU:OE1	1:A:1623:ARG:NH2	2.33	0.61
2:F:47:LYS:NZ	2:F:107:GLU:OE2	2.32	0.61
1:B:799:GLU:OE1	1:B:1623:ARG:NH2	2.33	0.61
1:B:1427:ILE:HG23	1:B:1428:LEU:HD22	1.82	0.61
1:B:1808:ARG:HD3	1:B:1853:ILE:HG22	1.83	0.61
1:B:4836:GLN:O	1:B:4840:THR:HG23	2.01	0.61
1:B:5034:ASP:OD1	1:B:5035:GLN:N	2.32	0.61
1:C:876:GLU:OE2	1:C:918:ARG:NH1	2.32	0.61
1:C:1808:ARG:HD3	1:C:1853:ILE:HG22	1.83	0.61
1:B:3623:LEU:HD12	1:B:3624:LEU:N	2.16	0.61
1:D:176:SER:OG	1:D:178:ARG:NH1	2.30	0.61
1:D:4172:GLU:OE1	1:D:4175:ARG:NH1	2.34	0.61
1:A:4172:GLU:OE1	1:A:4175:ARG:NH1	2.34	0.61
1:B:3959:LYS:NZ	1:B:4022:ASP:OD2	2.31	0.61
1:C:176:SER:OG	1:C:178:ARG:NH1	2.30	0.61
1:C:990:GLU:OE2	1:C:1025:ARG:NH2	2.34	0.61
1:C:2309:SER:HB2	1:C:2314:LEU:HD21	1.81	0.61
1:B:1062:GLN:NE2	1:B:1064:GLU:OE1	2.30	0.61
1:C:2624:ARG:HD3	1:C:2910:THR:HB	1.80	0.61
1:A:1808:ARG:HD3	1:A:1853:ILE:HG22	1.83	0.61
1:A:2288:LEU:O	1:A:3849:ARG:NH1	2.31	0.61
1:B:919:ASN:HA	1:B:922:LEU:HD23	1.82	0.61
1:D:799:GLU:OE1	1:D:1623:ARG:NH2	2.33	0.61
1:D:1808:ARG:HD3	1:D:1853:ILE:HG22	1.83	0.61
1:D:2970:SER:HA	1:D:2973:PHE:CE2	2.34	0.61
1:C:3623:LEU:HD12	1:C:3624:LEU:N	2.16	0.61
1:C:4172:GLU:OE1	1:C:4175:ARG:NH1	2.34	0.61
1:A:990:GLU:OE2	1:A:1025:ARG:NH2	2.34	0.61
1:A:3623:LEU:HD12	1:A:3624:LEU:N	2.16	0.61
1:C:394:GLN:N	1:C:394:GLN:OE1	2.32	0.61
1:B:4172:GLU:OE1	1:B:4175:ARG:NH1	2.34	0.61
2:G:90:ILE:HG22	2:G:91:ILE:HG13	1.82	0.60
1:B:188:GLU:N	1:B:188:GLU:OE2	2.33	0.60
1:B:3400:VAL:HG23	1:B:3403:ARG:HH21	1.67	0.60
1:D:990:GLU:OE2	1:D:1025:ARG:NH2	2.34	0.60
1:D:4836:GLN:O	1:D:4840:THR:HG23	2.01	0.60
1:B:2309:SER:HB2	1:B:2314:LEU:HD21	1.81	0.60
1:D:188:GLU:N	1:D:188:GLU:OE2	2.33	0.60
1:D:1427:ILE:HG23	1:D:1428:LEU:HD22	1.82	0.60
1:C:919:ASN:HA	1:C:922:LEU:HD23	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:87:HIS:HB3	2:H:90:ILE:HB	1.83	0.60
1:B:399:GLN:O	1:B:403:MET:HG2	2.02	0.60
1:D:3623:LEU:HD12	1:D:3624:LEU:N	2.16	0.60
1:D:4687:TYR:O	1:D:4691:GLN:NE2	2.34	0.60
1:C:399:GLN:O	1:C:403:MET:HG2	2.01	0.60
1:D:399:GLN:O	1:D:403:MET:HG2	2.02	0.60
1:C:4836:GLN:O	1:C:4840:THR:HG23	2.01	0.60
2:E:42:ARG:HE	2:E:44:LYS:HE3	1.65	0.60
1:C:156:GLN:OE1	1:C:156:GLN:N	2.34	0.60
1:B:4687:TYR:O	1:B:4691:GLN:NE2	2.35	0.60
1:D:156:GLN:OE1	1:D:156:GLN:N	2.34	0.60
1:A:3951:PHE:O	1:A:3955:MET:HG3	2.02	0.60
1:A:4687:TYR:O	1:A:4691:GLN:NE2	2.34	0.60
1:C:3400:VAL:HG23	1:C:3403:ARG:HH21	1.67	0.60
1:C:3951:PHE:O	1:C:3955:MET:HG3	2.02	0.60
1:C:4687:TYR:O	1:C:4691:GLN:NE2	2.34	0.60
1:A:1062:GLN:NE2	1:A:1064:GLU:OE1	2.30	0.60
1:A:3840:SER:OG	1:A:3877:ASP:OD1	2.19	0.60
1:C:2108:GLU:O	1:C:3694:LYS:NZ	2.35	0.60
1:A:1427:ILE:HG23	1:A:1428:LEU:HD22	1.83	0.60
1:B:990:GLU:OE2	1:B:1025:ARG:NH2	2.34	0.60
1:D:3951:PHE:O	1:D:3955:MET:HG3	2.02	0.60
1:C:302:VAL:HB	1:C:306:LYS:HE3	1.84	0.60
1:C:3959:LYS:NZ	1:C:4022:ASP:OD2	2.31	0.60
1:A:2191:PHE:HD1	1:A:2198:MET:HE3	1.67	0.59
2:H:27:THR:HG23	2:H:100:ASP:HB3	1.83	0.59
1:C:3504:SER:HG	1:C:3507:THR:HG1	1.45	0.59
1:A:3400:VAL:HG23	1:A:3403:ARG:HH21	1.67	0.59
1:C:1619:ARG:NH2	1:C:1622:GLU:OE1	2.35	0.59
1:D:919:ASN:HA	1:D:922:LEU:HD23	1.82	0.59
1:D:1619:ARG:NH2	1:D:1622:GLU:OE1	2.35	0.59
1:C:2191:PHE:HD1	1:C:2198:MET:HE3	1.67	0.59
1:C:2765:LYS:HZ2	1:C:2860:PRO:HA	1.66	0.59
1:B:2018:GLU:OE1	1:B:2028:ARG:NH1	2.36	0.59
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.85	0.59
1:C:2018:GLU:OE1	1:C:2028:ARG:NH1	2.36	0.59
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.85	0.59
1:B:302:VAL:HB	1:B:306:LYS:HE3	1.84	0.59
1:D:545:ASP:OD1	1:D:582:HIS:NE2	2.32	0.59
1:D:4064:MET:HE1	1:D:4110:PHE:HD2	1.67	0.59
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3840:SER:OG	1:C:3877:ASP:OD1	2.19	0.59
1:A:1619:ARG:NH2	1:A:1622:GLU:OE1	2.35	0.59
1:A:2108:GLU:O	1:A:3694:LYS:NZ	2.35	0.59
1:A:2128:TYR:OH	1:A:3676:ASP:OD2	2.20	0.59
1:A:2175:GLU:HG3	1:A:2228:MET:HB3	1.85	0.59
1:B:1870:VAL:HA	1:B:2090:LYS:HZ3	1.68	0.59
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.85	0.59
1:B:4064:MET:HE1	1:B:4110:PHE:HD2	1.67	0.59
1:D:2018:GLU:OE1	1:D:2028:ARG:NH1	2.36	0.59
1:D:2175:GLU:HG3	1:D:2228:MET:HB3	1.85	0.59
1:D:3840:SER:OG	1:D:3877:ASP:OD1	2.19	0.59
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.85	0.59
1:B:460:GLN:N	1:B:463:GLU:OE2	2.30	0.59
1:B:3951:PHE:O	1:B:3955:MET:HG3	2.02	0.59
1:D:3400:VAL:HG23	1:D:3403:ARG:HH21	1.67	0.59
1:C:970:LEU:HD23	1:C:1045:THR:HG23	1.85	0.59
1:C:1870:VAL:HA	1:C:2090:LYS:HZ3	1.68	0.59
1:D:3296:LEU:HG	1:D:3297:PRO:HD3	1.85	0.59
1:D:3530:GLN:N	1:D:3530:GLN:OE1	2.36	0.59
1:A:302:VAL:HB	1:A:306:LYS:HE3	1.84	0.59
2:E:27:THR:HG23	2:E:100:ASP:HB3	1.83	0.59
2:E:87:HIS:HB3	2:E:90:ILE:HB	1.84	0.59
1:B:970:LEU:HD23	1:B:1045:THR:HG23	1.85	0.59
1:C:4064:MET:HE1	1:C:4110:PHE:HD2	1.67	0.59
1:A:399:GLN:O	1:A:403:MET:HG2	2.02	0.58
1:A:4064:MET:HE1	1:A:4110:PHE:HD2	1.67	0.58
1:B:2191:PHE:HD1	1:B:2198:MET:HE3	1.67	0.58
1:B:2288:LEU:O	1:B:3849:ARG:NH1	2.31	0.58
1:B:5012:LYS:NZ	1:B:5016:GLU:OE2	2.33	0.58
1:C:545:ASP:OD1	1:C:582:HIS:NE2	2.32	0.58
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.18	0.58
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.18	0.58
1:A:2018:GLU:OE1	1:A:2028:ARG:NH1	2.36	0.58
1:B:1619:ARG:NH2	1:B:1622:GLU:OE1	2.36	0.58
1:D:1062:GLN:NE2	1:D:1064:GLU:OE1	2.30	0.58
1:A:3530:GLN:N	1:A:3530:GLN:OE1	2.36	0.58
1:D:2191:PHE:HD1	1:D:2198:MET:HE3	1.67	0.58
1:B:2456:ILE:O	1:B:2459:SER:OG	2.17	0.58
1:D:302:VAL:HB	1:D:306:LYS:HE3	1.84	0.58
1:D:2128:TYR:OH	1:D:3676:ASP:OD2	2.20	0.58
1:B:3530:GLN:OE1	1:B:3530:GLN:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3530:GLN:OE1	1:C:3530:GLN:N	2.36	0.58
1:D:127:MET:HE3	1:D:127:MET:N	2.19	0.58
1:A:156:GLN:OE1	1:A:156:GLN:N	2.34	0.58
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.85	0.58
1:B:156:GLN:N	1:B:156:GLN:OE1	2.34	0.58
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.85	0.58
1:B:197:GLN:OE1	1:B:197:GLN:N	2.30	0.58
1:C:211:GLU:CD	1:C:211:GLU:H	2.12	0.58
1:C:1062:GLN:NE2	1:C:1064:GLU:OE1	2.30	0.58
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.18	0.58
1:A:3296:LEU:HG	1:A:3297:PRO:HD3	1.85	0.58
1:B:2128:TYR:OH	1:B:3676:ASP:OD2	2.20	0.58
1:C:3017:PHE:O	1:C:3036:LYS:NZ	2.37	0.58
1:B:1031:THR:O	1:B:1035:ASN:ND2	2.36	0.57
1:B:3270:ILE:HA	1:B:3274:LEU:HD12	1.86	0.57
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.21	0.57
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.85	0.57
1:B:211:GLU:H	1:B:211:GLU:CD	2.12	0.57
1:B:3296:LEU:HG	1:B:3297:PRO:HD3	1.85	0.57
1:D:970:LEU:HD23	1:D:1045:THR:HG23	1.85	0.57
1:C:3296:LEU:HG	1:C:3297:PRO:HD3	1.85	0.57
1:A:176:SER:OG	1:A:178:ARG:NH1	2.30	0.57
1:A:211:GLU:CD	1:A:211:GLU:H	2.12	0.57
1:B:127:MET:HE3	1:B:127:MET:N	2.19	0.57
1:D:3270:ILE:HA	1:D:3274:LEU:HD12	1.86	0.57
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.18	0.57
1:C:127:MET:HE3	1:C:127:MET:N	2.19	0.57
1:C:309:THR:O	1:C:313:SER:OG	2.18	0.57
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.32	0.57
1:A:2410:PRO:HB3	1:A:2415:ARG:HB3	1.86	0.57
1:B:2410:PRO:HB3	1:B:2415:ARG:HB3	1.86	0.57
1:B:2456:ILE:O	1:B:2460:LEU:HD22	2.05	0.57
1:D:2456:ILE:O	1:D:2460:LEU:HD22	2.05	0.57
1:C:2456:ILE:O	1:C:2460:LEU:HD22	2.05	0.57
1:A:970:LEU:HD23	1:A:1045:THR:HG23	1.85	0.57
1:A:3550:ARG:HG2	1:A:3594:ARG:NH1	2.20	0.57
1:B:3017:PHE:O	1:B:3036:LYS:NZ	2.37	0.57
1:C:2175:GLU:HG3	1:C:2228:MET:HB3	1.85	0.57
1:D:1031:THR:O	1:D:1035:ASN:ND2	2.36	0.57
1:D:2108:GLU:O	1:D:3694:LYS:NZ	2.35	0.57
1:C:3550:ARG:HG2	1:C:3594:ARG:NH1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3017:PHE:O	1:A:3036:LYS:NZ	2.37	0.57
1:D:197:GLN:OE1	1:D:197:GLN:N	2.30	0.57
1:A:2881:ASN:HA	1:A:2884:ASN:ND2	2.20	0.57
1:B:1147:ASP:HB3	1:B:1164:LEU:HD11	1.87	0.57
1:B:3442:PHE:CE1	1:B:3511:VAL:HG12	2.39	0.57
1:D:1870:VAL:HA	1:D:2090:LYS:HZ3	1.68	0.57
1:D:2116:LEU:O	1:D:2120:MET:HG2	2.05	0.57
1:D:2410:PRO:HB3	1:D:2415:ARG:HB3	1.86	0.57
1:C:2410:PRO:HB3	1:C:2415:ARG:HB3	1.86	0.57
1:C:2881:ASN:HA	1:C:2884:ASN:ND2	2.20	0.57
1:A:2679:PHE:HB2	1:A:2706:ILE:HG21	1.87	0.57
1:D:211:GLU:CD	1:D:211:GLU:H	2.12	0.57
1:D:1987:SER:HB2	1:D:1994:ARG:HH22	1.70	0.57
1:D:2679:PHE:HB2	1:D:2706:ILE:HG21	1.87	0.57
1:D:3752:SER:OG	1:D:3755:GLU:OE1	2.23	0.57
1:A:1147:ASP:HB3	1:A:1164:LEU:HD11	1.87	0.56
1:B:2175:GLU:HG3	1:B:2228:MET:HB3	1.85	0.56
1:B:3550:ARG:HG2	1:B:3594:ARG:NH1	2.20	0.56
1:C:2116:LEU:O	1:C:2120:MET:HG2	2.05	0.56
1:C:2128:TYR:OH	1:C:3676:ASP:OD2	2.20	0.56
1:C:4555:LEU:HD21	1:C:4656:LEU:HD22	1.87	0.56
1:A:2875:ALA:HB2	1:A:2927:LEU:HD22	1.88	0.56
1:A:4137:ARG:NH2	1:A:4199:GLU:OE2	2.38	0.56
1:B:984:LEU:O	1:B:988:LEU:HG	2.05	0.56
1:B:2108:GLU:O	1:B:3694:LYS:NZ	2.35	0.56
1:B:2679:PHE:HB2	1:B:2706:ILE:HG21	1.87	0.56
1:B:2881:ASN:HA	1:B:2884:ASN:ND2	2.20	0.56
1:D:3017:PHE:O	1:D:3036:LYS:NZ	2.37	0.56
1:C:3752:SER:OG	1:C:3755:GLU:OE1	2.23	0.56
1:C:3850:GLN:NE2	1:C:3872:GLU:OE1	2.32	0.56
1:B:545:ASP:OD1	1:B:582:HIS:NE2	2.32	0.56
1:B:856:VAL:H	1:B:991:ASN:ND2	2.03	0.56
1:D:984:LEU:O	1:D:988:LEU:HG	2.05	0.56
1:D:2875:ALA:HB2	1:D:2927:LEU:HD22	1.87	0.56
1:D:2881:ASN:HA	1:D:2884:ASN:ND2	2.20	0.56
1:D:4006:ASP:N	1:D:4006:ASP:OD1	2.38	0.56
1:D:5012:LYS:NZ	1:D:5016:GLU:OE2	2.33	0.56
1:C:856:VAL:H	1:C:991:ASN:ND2	2.03	0.56
1:C:3270:ILE:HA	1:C:3274:LEU:HD12	1.86	0.56
1:C:4006:ASP:N	1:C:4006:ASP:OD1	2.38	0.56
1:A:516:LYS:O	1:A:520:ASN:ND2	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:984:LEU:O	1:A:988:LEU:HG	2.05	0.56
1:A:3752:SER:OG	1:A:3755:GLU:OE1	2.23	0.56
1:C:2679:PHE:HB2	1:C:2706:ILE:HG21	1.87	0.56
1:C:3366:ARG:NH1	1:C:3440:GLU:OE1	2.34	0.56
1:A:2116:LEU:O	1:A:2120:MET:HG2	2.05	0.56
1:A:3270:ILE:HA	1:A:3274:LEU:HD12	1.86	0.56
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.39	0.56
1:A:4639:MET:HA	1:A:4642:ALA:HB3	1.87	0.56
1:B:2765:LYS:HZ3	1:B:2857:PRO:HB2	1.70	0.56
1:B:4152:GLU:OE1	1:B:4194:TYR:OH	2.23	0.56
1:D:4137:ARG:NH2	1:D:4199:GLU:OE2	2.38	0.56
1:C:1999:ARG:HG2	1:C:3635:CYS:HB3	1.88	0.56
1:A:1987:SER:HB2	1:A:1994:ARG:HH22	1.70	0.56
1:B:2116:LEU:O	1:B:2120:MET:HG2	2.05	0.56
1:B:2875:ALA:HB2	1:B:2927:LEU:HD22	1.87	0.56
1:B:3752:SER:OG	1:B:3755:GLU:OE1	2.23	0.56
1:B:4006:ASP:OD1	1:B:4006:ASP:N	2.38	0.56
1:D:19:GLU:HG2	1:D:68:THR:HG22	1.88	0.56
1:D:856:VAL:H	1:D:991:ASN:ND2	2.03	0.56
1:D:3550:ARG:HG2	1:D:3594:ARG:NH1	2.20	0.56
1:C:983:THR:O	1:C:987:ARG:HG3	2.06	0.56
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.88	0.56
1:B:1990:GLU:OE1	1:B:1994:ARG:NH2	2.39	0.56
1:B:2867:LEU:HB2	1:B:2928:LYS:HZ3	1.71	0.56
1:B:4989:MET:O	1:B:4993:MET:HG3	2.06	0.56
1:C:1031:THR:O	1:C:1035:ASN:ND2	2.36	0.56
1:C:4639:MET:HA	1:C:4642:ALA:HB3	1.87	0.56
1:A:2456:ILE:O	1:A:2460:LEU:HD22	2.05	0.56
1:A:4060:LYS:O	1:A:4064:MET:HG3	2.06	0.56
1:A:4989:MET:O	1:A:4993:MET:HG3	2.06	0.56
1:B:1987:SER:HB2	1:B:1994:ARG:HH22	1.70	0.56
1:B:3768:SER:HA	1:B:3771:HIS:CD2	2.41	0.56
1:D:1990:GLU:OE1	1:D:1994:ARG:NH2	2.39	0.56
1:C:1272:LEU:HD22	1:C:1289:LEU:HD11	1.87	0.56
1:A:462:GLU:OE2	1:A:462:GLU:N	2.27	0.56
1:A:5012:LYS:NZ	1:A:5016:GLU:OE2	2.33	0.56
1:D:2867:LEU:HB2	1:D:2928:LYS:HZ3	1.71	0.56
1:D:3413:ILE:HD12	1:D:3509:LEU:HD23	1.88	0.56
1:D:3768:SER:HA	1:D:3771:HIS:CD2	2.41	0.56
1:C:1987:SER:HB2	1:C:1994:ARG:HH22	1.70	0.56
1:C:4137:ARG:NH2	1:C:4199:GLU:OE2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:5012:LYS:NZ	1:C:5016:GLU:OE2	2.33	0.56
1:A:872:GLU:HA	1:A:922:LEU:HD11	1.88	0.55
1:A:1990:GLU:OE1	1:A:1994:ARG:NH2	2.39	0.55
1:B:950:LEU:HD13	1:B:970:LEU:HD11	1.88	0.55
1:B:4137:ARG:NH2	1:B:4199:GLU:OE2	2.38	0.55
1:B:4639:MET:HA	1:B:4642:ALA:HB3	1.87	0.55
1:C:4989:MET:O	1:C:4993:MET:HG3	2.06	0.55
1:A:950:LEU:HD13	1:A:970:LEU:HD11	1.88	0.55
1:A:985:VAL:HG22	1:A:1043:VAL:HG21	1.89	0.55
1:B:4555:LEU:HD21	1:B:4656:LEU:HD22	1.87	0.55
1:C:1147:ASP:HB3	1:C:1164:LEU:HD11	1.87	0.55
1:C:4207:MET:HE2	1:C:4207:MET:HA	1.89	0.55
1:C:4686:LEU:HD12	1:C:4690:GLU:HG3	1.89	0.55
1:A:127:MET:HE3	1:A:127:MET:N	2.19	0.55
1:A:1999:ARG:HG2	1:A:3635:CYS:HB3	1.88	0.55
2:G:18:ARG:HG2	2:G:18:ARG:NH1	2.21	0.55
1:B:2751:LEU:HD13	1:B:2823:ILE:HD13	1.87	0.55
1:B:3840:SER:OG	1:B:3877:ASP:OD1	2.19	0.55
1:D:1272:LEU:HD22	1:D:1289:LEU:HD11	1.87	0.55
1:C:1990:GLU:OE1	1:C:1994:ARG:NH2	2.39	0.55
1:C:2875:ALA:HB2	1:C:2927:LEU:HD22	1.87	0.55
1:A:983:THR:O	1:A:987:ARG:HG3	2.06	0.55
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.88	0.55
1:A:3768:SER:HA	1:A:3771:HIS:CD2	2.41	0.55
1:B:3261:ALA:HB1	1:B:3265:GLU:HG3	1.88	0.55
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.88	0.55
1:D:4989:MET:O	1:D:4993:MET:HG3	2.06	0.55
1:C:3261:ALA:HB1	1:C:3265:GLU:HG3	1.88	0.55
1:A:19:GLU:HG2	1:A:68:THR:HG22	1.88	0.55
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.39	0.55
1:A:2639:MET:HE3	1:A:2640:PRO:N	2.22	0.55
1:B:2639:MET:HE3	1:B:2640:PRO:N	2.22	0.55
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.39	0.55
1:D:2751:LEU:HD13	1:D:2823:ILE:HD13	1.87	0.55
1:D:3850:GLN:NE2	1:D:3872:GLU:OE1	2.32	0.55
1:D:4060:LYS:O	1:D:4064:MET:HG3	2.06	0.55
1:D:4686:LEU:HD12	1:D:4690:GLU:HG3	1.88	0.55
1:C:3768:SER:HA	1:C:3771:HIS:CD2	2.41	0.55
1:B:983:THR:O	1:B:987:ARG:HG3	2.06	0.55
1:B:2029:GLN:NE2	1:B:2033:ASP:OD1	2.40	0.55
1:D:700:GLU:OE2	1:D:1458:HIS:NE2	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1147:ASP:HB3	1:D:1164:LEU:HD11	1.87	0.55
1:D:4207:MET:HE2	1:D:4207:MET:HA	1.89	0.55
1:A:1031:THR:O	1:A:1035:ASN:ND2	2.36	0.55
1:A:1272:LEU:HD22	1:A:1289:LEU:HD11	1.88	0.55
1:B:462:GLU:OE2	1:B:462:GLU:N	2.27	0.55
1:B:4207:MET:HE2	1:B:4207:MET:HA	1.89	0.55
1:D:228:ASP:OD1	1:D:228:ASP:N	2.40	0.55
1:D:1999:ARG:HG2	1:D:3635:CYS:HB3	1.88	0.55
1:C:984:LEU:O	1:C:988:LEU:HG	2.05	0.55
1:C:2029:GLN:NE2	1:C:2033:ASP:OD1	2.40	0.55
1:A:856:VAL:H	1:A:991:ASN:ND2	2.04	0.55
2:G:50:LEU:H	2:G:50:LEU:HD12	1.71	0.55
1:B:4060:LYS:O	1:B:4064:MET:HG3	2.06	0.55
1:C:4060:LYS:O	1:C:4064:MET:HG3	2.06	0.55
1:A:2029:GLN:NE2	1:A:2033:ASP:OD1	2.40	0.55
1:A:3413:ILE:HD12	1:A:3509:LEU:HD23	1.89	0.55
1:A:4555:LEU:HD21	1:A:4656:LEU:HD22	1.87	0.55
1:B:19:GLU:HG2	1:B:68:THR:HG22	1.88	0.55
1:B:516:LYS:O	1:B:520:ASN:ND2	2.34	0.55
1:D:3638:MET:HE2	1:D:3638:MET:HA	1.89	0.55
1:D:4904:PRO:HB3	1:D:4913:ARG:HG2	1.89	0.55
1:C:516:LYS:O	1:C:520:ASN:ND2	2.34	0.55
1:C:950:LEU:HD13	1:C:970:LEU:HD11	1.88	0.55
1:A:228:ASP:OD1	1:A:228:ASP:N	2.40	0.55
1:A:3261:ALA:HB1	1:A:3265:GLU:HG3	1.88	0.55
1:A:4006:ASP:N	1:A:4006:ASP:OD1	2.38	0.55
1:B:4056:GLU:HG2	1:B:4166:LEU:HD13	1.89	0.55
1:B:4686:LEU:HD12	1:B:4690:GLU:HG3	1.89	0.55
1:D:309:THR:O	1:D:313:SER:OG	2.18	0.55
1:C:19:GLU:HG2	1:C:68:THR:HG22	1.88	0.55
1:D:950:LEU:HD13	1:D:970:LEU:HD11	1.88	0.54
1:C:2751:LEU:HD13	1:C:2823:ILE:HD13	1.87	0.54
1:A:2456:ILE:O	1:A:2459:SER:OG	2.17	0.54
1:A:2751:LEU:HD13	1:A:2823:ILE:HD13	1.87	0.54
1:A:3623:LEU:HD12	1:A:3624:LEU:H	1.72	0.54
1:A:4056:GLU:HG2	1:A:4166:LEU:HD13	1.89	0.54
1:B:3623:LEU:HD12	1:B:3624:LEU:H	1.72	0.54
1:D:2929:PHE:HA	1:D:2932:MET:SD	2.47	0.54
1:C:872:GLU:HA	1:C:922:LEU:HD11	1.88	0.54
1:C:4152:GLU:OE1	1:C:4194:TYR:OH	2.23	0.54
1:B:3356:SER:OG	1:B:3357:HIS:ND1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:983:THR:O	1:D:987:ARG:HG3	2.06	0.54
1:D:985:VAL:HG22	1:D:1043:VAL:HG21	1.89	0.54
1:D:2029:GLN:NE2	1:D:2033:ASP:OD1	2.40	0.54
1:D:4639:MET:HA	1:D:4642:ALA:HB3	1.87	0.54
1:C:3413:ILE:HD12	1:C:3509:LEU:HD23	1.88	0.54
1:B:309:THR:O	1:B:313:SER:OG	2.18	0.54
1:B:1999:ARG:HG2	1:B:3635:CYS:HB3	1.88	0.54
1:B:3638:MET:HA	1:B:3638:MET:HE2	1.89	0.54
1:C:985:VAL:HG22	1:C:1043:VAL:HG21	1.89	0.54
1:C:3442:PHE:CE1	1:C:3511:VAL:HG12	2.39	0.54
1:D:872:GLU:HA	1:D:922:LEU:HD11	1.88	0.54
1:D:3261:ALA:HB1	1:D:3265:GLU:HG3	1.88	0.54
1:C:2456:ILE:O	1:C:2459:SER:OG	2.17	0.54
1:C:2819:TRP:CG	1:C:2877:GLN:HE22	2.26	0.54
1:A:2149:VAL:O	1:A:2153:MET:HG2	2.08	0.54
1:A:2736:ASP:O	1:A:2738:ARG:NH1	2.40	0.54
1:A:2924:GLN:O	1:A:2928:LYS:HG2	2.08	0.54
1:A:2929:PHE:HA	1:A:2932:MET:SD	2.47	0.54
1:B:985:VAL:HG22	1:B:1043:VAL:HG21	1.89	0.54
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.39	0.54
1:B:1272:LEU:HD22	1:B:1289:LEU:HD11	1.87	0.54
1:B:2736:ASP:O	1:B:2738:ARG:NH1	2.40	0.54
1:D:3673:MET:HE1	1:D:3728:ILE:HD13	1.89	0.54
1:D:3723:MET:HE2	1:D:3793:MET:SD	2.47	0.54
1:A:483:MET:HE2	1:A:483:MET:H	1.72	0.54
1:A:1870:VAL:HA	1:A:2090:LYS:HZ3	1.71	0.54
1:A:4152:GLU:OE1	1:A:4194:TYR:OH	2.23	0.54
1:A:4207:MET:HA	1:A:4207:MET:HE2	1.89	0.54
1:B:2587:TYR:O	1:B:2590:SER:OG	2.18	0.54
1:B:3413:ILE:HD12	1:B:3509:LEU:HD23	1.88	0.54
1:B:3955:MET:HB3	1:B:4019:LEU:HD22	1.89	0.54
1:D:483:MET:HE2	1:D:483:MET:H	1.72	0.54
1:D:4555:LEU:HD21	1:D:4656:LEU:HD22	1.87	0.54
1:C:1996:ARG:NH2	1:C:1999:ARG:HE	2.05	0.54
1:C:2587:TYR:O	1:C:2590:SER:OG	2.18	0.54
1:C:2924:GLN:O	1:C:2928:LYS:HG2	2.08	0.54
1:C:3723:MET:HE2	1:C:3793:MET:SD	2.48	0.54
1:C:4056:GLU:HG2	1:C:4166:LEU:HD13	1.89	0.54
1:A:197:GLN:OE1	1:A:197:GLN:N	2.30	0.54
1:A:1996:ARG:NH2	1:A:1999:ARG:HE	2.05	0.54
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3673:MET:HE1	1:B:3728:ILE:HD13	1.89	0.54
1:D:2924:GLN:O	1:D:2928:LYS:HG2	2.08	0.54
1:D:4688:ILE:HG23	1:D:4732:PHE:CD1	2.43	0.54
1:C:462:GLU:OE2	1:C:462:GLU:N	2.27	0.54
1:C:2639:MET:HE3	1:C:2640:PRO:N	2.22	0.54
1:C:2929:PHE:HA	1:C:2932:MET:SD	2.47	0.54
1:C:4904:PRO:HB3	1:C:4913:ARG:HG2	1.88	0.54
1:A:4686:LEU:HD12	1:A:4690:GLU:HG3	1.89	0.54
2:F:18:ARG:HG2	2:F:18:ARG:NH1	2.21	0.54
1:B:1154:ASP:OD1	1:B:1156:THR:OG1	2.21	0.54
1:D:622:THR:HG23	1:D:626:LEU:HD12	1.90	0.54
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.90	0.54
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.88	0.54
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.90	0.54
1:A:1289:LEU:HD12	1:A:1562:ILE:HD11	1.90	0.54
1:B:2149:VAL:O	1:B:2153:MET:HG2	2.08	0.54
1:D:3955:MET:HB3	1:D:4019:LEU:HD22	1.89	0.54
1:C:228:ASP:OD1	1:C:228:ASP:N	2.40	0.54
1:C:3955:MET:HB3	1:C:4019:LEU:HD22	1.89	0.54
1:A:622:THR:HG23	1:A:626:LEU:HD12	1.90	0.53
1:A:2867:LEU:HB2	1:A:2928:LYS:HZ3	1.72	0.53
1:A:3535:LEU:O	1:A:3539:ARG:HG2	2.08	0.53
1:A:4904:PRO:HB3	1:A:4913:ARG:HG2	1.89	0.53
1:B:2819:TRP:CG	1:B:2877:GLN:HE22	2.26	0.53
1:C:275:ARG:HH21	1:C:328:LYS:HG3	1.74	0.53
1:C:3638:MET:HE2	1:C:3638:MET:HA	1.90	0.53
1:A:2519:LEU:HD13	1:A:2575:ARG:HG3	1.90	0.53
1:A:2765:LYS:NZ	1:A:2860:PRO:HA	2.23	0.53
1:A:2819:TRP:CG	1:A:2877:GLN:HE22	2.26	0.53
1:A:2978:GLU:OE2	1:A:3053:ARG:NH1	2.41	0.53
1:A:3723:MET:HE2	1:A:3793:MET:SD	2.47	0.53
1:B:2929:PHE:HA	1:B:2932:MET:SD	2.47	0.53
1:D:1996:ARG:NH2	1:D:1999:ARG:HE	2.05	0.53
1:D:2736:ASP:O	1:D:2738:ARG:NH1	2.40	0.53
1:D:4056:GLU:HG2	1:D:4166:LEU:HD13	1.89	0.53
1:C:3673:MET:HE1	1:C:3728:ILE:HD13	1.89	0.53
1:A:3955:MET:HB3	1:A:4019:LEU:HD22	1.89	0.53
1:B:1289:LEU:HD12	1:B:1562:ILE:HD11	1.90	0.53
1:D:1289:LEU:HD12	1:D:1562:ILE:HD11	1.90	0.53
1:D:2149:VAL:O	1:D:2153:MET:HG2	2.08	0.53
1:D:2382:GLU:O	1:D:2386:ILE:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2639:MET:HE3	1:D:2640:PRO:N	2.22	0.53
1:D:2819:TRP:CG	1:D:2877:GLN:HE22	2.26	0.53
1:C:2736:ASP:O	1:C:2738:ARG:NH1	2.40	0.53
1:C:3623:LEU:HD12	1:C:3624:LEU:H	1.72	0.53
1:A:3442:PHE:CE1	1:A:3511:VAL:HG12	2.39	0.53
1:B:872:GLU:HA	1:B:922:LEU:HD11	1.88	0.53
1:B:2660:GLY:HA3	1:B:2666:VAL:HG22	1.91	0.53
1:B:2924:GLN:O	1:B:2928:LYS:HG2	2.08	0.53
1:B:3723:MET:HE2	1:B:3793:MET:SD	2.48	0.53
1:D:516:LYS:O	1:D:520:ASN:ND2	2.34	0.53
1:D:2522:LEU:HD13	1:D:2582:MET:HE1	1.91	0.53
1:D:3442:PHE:CE1	1:D:3511:VAL:HG12	2.39	0.53
1:C:2382:GLU:O	1:C:2386:ILE:HG23	2.09	0.53
1:C:2522:LEU:HD13	1:C:2582:MET:HE1	1.90	0.53
1:A:4759:ASP:O	1:A:4761:PRO:HD3	2.09	0.53
1:B:483:MET:HE2	1:B:483:MET:H	1.72	0.53
1:B:2736:ASP:OD1	1:B:2736:ASP:N	2.41	0.53
1:D:2519:LEU:HD13	1:D:2575:ARG:HG3	1.90	0.53
1:D:4759:ASP:O	1:D:4761:PRO:HD3	2.09	0.53
1:A:4910:GLU:O	1:A:4914:VAL:HG13	2.09	0.53
2:E:18:ARG:HG2	2:E:18:ARG:NH1	2.21	0.53
1:B:228:ASP:OD1	1:B:228:ASP:N	2.40	0.53
1:B:3535:LEU:O	1:B:3539:ARG:HG2	2.08	0.53
1:D:2587:TYR:O	1:D:2590:SER:OG	2.18	0.53
1:C:2660:GLY:HA3	1:C:2666:VAL:HG22	1.91	0.53
1:C:2765:LYS:NZ	1:C:2860:PRO:HA	2.23	0.53
1:C:2867:LEU:HB2	1:C:2928:LYS:HZ3	1.73	0.53
1:A:2660:GLY:HA3	1:A:2666:VAL:HG22	1.91	0.53
1:A:4688:ILE:HG23	1:A:4732:PHE:CD1	2.43	0.53
1:B:4904:PRO:HB3	1:B:4913:ARG:HG2	1.89	0.53
1:D:1078:GLU:OE2	1:D:1654:SER:OG	2.19	0.53
1:D:2660:GLY:HA3	1:D:2666:VAL:HG22	1.91	0.53
1:D:2978:GLU:OE2	1:D:3053:ARG:NH1	2.41	0.53
1:A:3638:MET:HE2	1:A:3638:MET:HA	1.89	0.53
1:B:2382:GLU:O	1:B:2386:ILE:HG23	2.09	0.53
1:B:4910:GLU:O	1:B:4914:VAL:HG13	2.09	0.53
1:D:3623:LEU:HD12	1:D:3624:LEU:H	1.72	0.53
1:D:4910:GLU:O	1:D:4914:VAL:HG13	2.09	0.53
1:D:4963:ILE:HD13	1:D:5030:LYS:HE3	1.91	0.53
1:C:2978:GLU:OE2	1:C:3053:ARG:NH1	2.41	0.53
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3673:MET:HE1	1:A:3728:ILE:HD13	1.89	0.53
2:H:79:ASP:OD2	2:H:80:TYR:N	2.42	0.53
2:G:16:PRO:HG3	2:G:106:LEU:HD11	1.89	0.53
1:B:2003:GLN:NE2	1:B:2007:ASN:OD1	2.42	0.53
1:B:2522:LEU:HD13	1:B:2582:MET:HE1	1.90	0.53
1:B:3366:ARG:NH1	1:B:3440:GLU:OE1	2.34	0.53
1:B:4627:MET:H	1:B:4627:MET:CE	2.22	0.53
1:C:3389:GLU:N	1:C:3389:GLU:OE2	2.42	0.53
2:E:4:VAL:HG22	2:E:74:LEU:HD22	1.91	0.53
2:F:50:LEU:HD12	2:F:50:LEU:H	1.72	0.53
1:B:622:THR:HG23	1:B:626:LEU:HD12	1.90	0.53
1:B:2519:LEU:HD13	1:B:2575:ARG:HG3	1.90	0.53
1:D:2765:LYS:NZ	1:D:2860:PRO:HA	2.23	0.53
1:D:2813:LEU:HD13	1:D:2816:MET:SD	2.49	0.53
1:C:483:MET:HE2	1:C:483:MET:H	1.73	0.53
1:C:2819:TRP:CD1	1:C:2877:GLN:HE22	2.27	0.53
1:C:4688:ILE:HG23	1:C:4732:PHE:CD1	2.43	0.53
1:C:4759:ASP:O	1:C:4761:PRO:HD3	2.09	0.53
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	2.27	0.52
1:B:3389:GLU:N	1:B:3389:GLU:OE2	2.42	0.52
1:B:3528:THR:HG23	1:B:3573:MET:HE3	1.91	0.52
1:B:4759:ASP:O	1:B:4761:PRO:HD3	2.09	0.52
1:D:2288:LEU:O	1:D:3849:ARG:NH1	2.31	0.52
1:D:3528:THR:HG23	1:D:3573:MET:HE3	1.91	0.52
1:A:3528:THR:HG23	1:A:3573:MET:HE3	1.91	0.52
1:A:4769:MET:SD	1:A:4769:MET:N	2.73	0.52
1:B:275:ARG:HH21	1:B:328:LYS:HG3	1.74	0.52
1:D:2186:MET:HE2	1:D:2235:PHE:HA	1.92	0.52
1:C:2149:VAL:O	1:C:2153:MET:HG2	2.08	0.52
1:C:2792:ARG:NH2	1:C:2798:SER:OG	2.43	0.52
1:A:3389:GLU:N	1:A:3389:GLU:OE2	2.42	0.52
1:B:2978:GLU:OE2	1:B:3053:ARG:NH1	2.41	0.52
1:D:3389:GLU:N	1:D:3389:GLU:OE2	2.42	0.52
1:C:283:ARG:NH1	1:C:290:TYR:OH	2.42	0.52
1:C:2186:MET:HE2	1:C:2235:PHE:HA	1.91	0.52
1:C:4910:GLU:O	1:C:4914:VAL:HG13	2.09	0.52
1:A:283:ARG:NH1	1:A:290:TYR:OH	2.43	0.52
1:A:923:GLN:O	1:A:927:GLU:HG2	2.10	0.52
1:B:2813:LEU:HD13	1:B:2816:MET:SD	2.49	0.52
1:B:4688:ILE:HG23	1:B:4732:PHE:CD1	2.43	0.52
1:D:275:ARG:HH21	1:D:328:LYS:HG3	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3366:ARG:NH1	1:D:3440:GLU:OE1	2.34	0.52
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.08	0.52
1:D:4152:GLU:OE1	1:D:4194:TYR:OH	2.23	0.52
1:C:622:THR:HG23	1:C:626:LEU:HD12	1.90	0.52
1:C:2309:SER:OG	1:C:2321:ILE:O	2.20	0.52
1:C:3288:GLY:HA2	1:C:3303:PRO:HB3	1.92	0.52
1:C:3528:THR:HG23	1:C:3573:MET:HE3	1.91	0.52
1:A:293:LEU:HD13	1:A:378:LEU:HD12	1.91	0.52
1:A:492:ASP:OD1	1:A:546:TRP:NE1	2.42	0.52
1:A:913:LEU:HD11	1:A:918:ARG:HE	1.75	0.52
1:A:2186:MET:HE2	1:A:2235:PHE:HA	1.92	0.52
1:A:2813:LEU:HD13	1:A:2816:MET:SD	2.50	0.52
2:G:4:VAL:HG22	2:G:74:LEU:HD22	1.92	0.52
1:D:923:GLN:O	1:D:927:GLU:HG2	2.10	0.52
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.27	0.52
1:D:2309:SER:OG	1:D:2321:ILE:O	2.20	0.52
1:D:2456:ILE:O	1:D:2459:SER:OG	2.17	0.52
1:D:3545:THR:HG22	1:D:3548:GLU:HG3	1.91	0.52
1:C:308:HIS:CE1	1:C:310:LYS:HB3	2.45	0.52
1:A:1175:SER:OG	1:A:1180:ARG:NH1	2.43	0.52
1:A:2382:GLU:O	1:A:2386:ILE:HG23	2.09	0.52
1:A:4963:ILE:HD13	1:A:5030:LYS:HE3	1.91	0.52
2:E:44:LYS:HD2	2:E:44:LYS:O	2.10	0.52
1:B:923:GLN:O	1:B:927:GLU:HG2	2.10	0.52
1:B:1996:ARG:NH2	1:B:1999:ARG:HE	2.05	0.52
1:B:2751:LEU:O	1:B:2755:ILE:HG12	2.10	0.52
1:B:2819:TRP:CD1	1:B:2877:GLN:HE22	2.27	0.52
1:D:913:LEU:HD11	1:D:918:ARG:HE	1.75	0.52
1:D:1175:SER:OG	1:D:1180:ARG:NH1	2.43	0.52
1:D:2792:ARG:NH2	1:D:2798:SER:OG	2.43	0.52
1:C:293:LEU:HD13	1:C:378:LEU:HD12	1.91	0.52
1:C:2637:ALA:C	1:C:2640:PRO:HD2	2.35	0.52
1:A:4627:MET:H	1:A:4627:MET:CE	2.22	0.52
2:H:44:LYS:HD2	2:H:44:LYS:O	2.10	0.52
1:B:308:HIS:CE1	1:B:310:LYS:HB3	2.45	0.52
1:B:884:LEU:O	1:B:887:ILE:HG22	2.10	0.52
1:B:913:LEU:HD11	1:B:918:ARG:HE	1.75	0.52
1:D:2637:ALA:C	1:D:2640:PRO:HD2	2.35	0.52
1:C:2003:GLN:NE2	1:C:2007:ASN:OD1	2.42	0.52
1:C:2519:LEU:HD13	1:C:2575:ARG:HG3	1.90	0.52
1:C:3535:LEU:O	1:C:3539:ARG:HG2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.92	0.52
1:C:4963:ILE:HD13	1:C:5030:LYS:HE3	1.91	0.52
1:A:275:ARG:HH21	1:A:328:LYS:HG3	1.74	0.52
1:A:2736:ASP:OD1	1:A:2736:ASP:N	2.41	0.52
2:E:16:PRO:HG3	2:E:106:LEU:HD11	1.91	0.52
2:G:22:CYS:SG	2:G:50:LEU:HD11	2.50	0.52
2:F:79:ASP:OD1	2:F:80:TYR:N	2.43	0.52
1:B:4963:ILE:HD13	1:B:5030:LYS:HE3	1.91	0.52
1:D:867:LEU:HG	1:D:929:LEU:HD13	1.92	0.52
1:D:2382:GLU:OE1	1:D:2385:ARG:NH1	2.38	0.52
1:C:1547:LYS:NZ	1:C:1642:PRO:O	2.43	0.52
1:C:2751:LEU:O	1:C:2755:ILE:HG12	2.10	0.52
1:C:3443:ILE:HG12	1:C:3605:HIS:CD2	2.45	0.52
1:A:308:HIS:CE1	1:A:310:LYS:HB3	2.45	0.52
1:A:2587:TYR:O	1:A:2590:SER:OG	2.18	0.52
1:A:3377:GLU:HA	1:A:3380:ARG:HG2	1.92	0.52
2:E:22:CYS:SG	2:E:50:LEU:HD11	2.50	0.52
1:B:1547:LYS:NZ	1:B:1642:PRO:O	2.43	0.52
1:B:2001:PRO:HB3	1:B:3864:THR:HB	1.92	0.52
1:B:2309:SER:OG	1:B:2321:ILE:O	2.20	0.52
1:B:2792:ARG:NH2	1:B:2798:SER:OG	2.43	0.52
1:D:283:ARG:NH1	1:D:290:TYR:OH	2.42	0.52
1:C:2382:GLU:OE1	1:C:2385:ARG:NH1	2.38	0.52
1:C:4627:MET:H	1:C:4627:MET:CE	2.22	0.52
1:A:2522:LEU:HD13	1:A:2582:MET:HE1	1.90	0.52
1:A:3443:ILE:HG12	1:A:3605:HIS:CD2	2.45	0.52
2:E:79:ASP:OD2	2:E:80:TYR:N	2.43	0.52
1:B:1175:SER:OG	1:B:1180:ARG:NH1	2.43	0.52
1:B:1861:GLN:O	1:B:1865:MET:HE3	2.11	0.52
1:B:2573:GLU:OE2	1:B:2615:ARG:NE	2.42	0.52
1:B:3718:GLU:HG3	1:B:3723:MET:HE1	1.92	0.52
1:D:2819:TRP:CD1	1:D:2877:GLN:HE22	2.27	0.52
1:C:867:LEU:HG	1:C:929:LEU:HD13	1.92	0.52
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.21	0.52
1:C:1289:LEU:HD12	1:C:1562:ILE:HD11	1.90	0.52
1:A:309:THR:O	1:A:313:SER:OG	2.18	0.51
1:A:3455:GLU:OE2	1:A:3508:SER:OG	2.28	0.51
1:A:3718:GLU:HG3	1:A:3723:MET:HE1	1.93	0.51
1:B:3377:GLU:HA	1:B:3380:ARG:HG2	1.92	0.51
1:B:3443:ILE:HG12	1:B:3605:HIS:CD2	2.45	0.51
1:D:2812:SER:O	1:D:2816:MET:HE3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3288:GLY:HA2	1:D:3303:PRO:HB3	1.92	0.51
1:D:3377:GLU:HA	1:D:3380:ARG:HG2	1.92	0.51
1:C:952:LYS:HD3	1:C:970:LEU:HA	1.92	0.51
1:C:2813:LEU:HD13	1:C:2816:MET:SD	2.50	0.51
1:C:3545:THR:HG22	1:C:3548:GLU:HG3	1.91	0.51
1:A:1547:LYS:NZ	1:A:1642:PRO:O	2.43	0.51
1:A:2637:ALA:C	1:A:2640:PRO:HD2	2.35	0.51
1:A:2792:ARG:NH2	1:A:2798:SER:OG	2.43	0.51
2:F:4:VAL:HG22	2:F:74:LEU:HD22	1.92	0.51
1:B:975:VAL:HG12	1:B:1044:ARG:HH11	1.75	0.51
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	2.27	0.51
1:B:2186:MET:HE2	1:B:2235:PHE:HA	1.92	0.51
1:B:3916:ILE:HG22	1:B:3980:LEU:HD21	1.93	0.51
1:C:2736:ASP:OD1	1:C:2736:ASP:N	2.41	0.51
1:A:3545:THR:HG22	1:A:3548:GLU:HG3	1.91	0.51
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.92	0.51
2:G:79:ASP:OD2	2:G:80:TYR:N	2.42	0.51
1:B:3288:GLY:HA2	1:B:3303:PRO:HB3	1.92	0.51
1:D:293:LEU:HD13	1:D:378:LEU:HD12	1.91	0.51
1:D:1547:LYS:NZ	1:D:1642:PRO:O	2.43	0.51
1:D:1861:GLN:O	1:D:1865:MET:HE3	2.10	0.51
1:D:2751:LEU:O	1:D:2755:ILE:HG12	2.10	0.51
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.92	0.51
1:C:923:GLN:O	1:C:927:GLU:HG2	2.10	0.51
1:C:1175:SER:OG	1:C:1180:ARG:NH1	2.43	0.51
1:C:3356:SER:OG	1:C:3357:HIS:ND1	2.38	0.51
1:C:3377:GLU:HA	1:C:3380:ARG:HG2	1.92	0.51
1:A:2155:LEU:HD21	1:A:2198:MET:HE1	1.92	0.51
1:A:2812:SER:O	1:A:2816:MET:HE3	2.10	0.51
1:A:2819:TRP:CD1	1:A:2877:GLN:HE22	2.27	0.51
1:A:3182:TYR:HA	1:A:3185:LYS:HE3	1.93	0.51
1:B:293:LEU:HD13	1:B:378:LEU:HD12	1.91	0.51
1:D:70:GLU:OE2	1:D:110:ARG:NE	2.38	0.51
1:D:451:TYR:CZ	1:D:474:ARG:HD2	2.46	0.51
1:D:492:ASP:OD1	1:D:546:TRP:NE1	2.42	0.51
1:D:975:VAL:HG12	1:D:1044:ARG:HH11	1.75	0.51
1:D:3916:ILE:HG22	1:D:3980:LEU:HD21	1.93	0.51
1:C:913:LEU:HD11	1:C:918:ARG:HE	1.75	0.51
1:C:2001:PRO:HB3	1:C:3864:THR:HB	1.92	0.51
1:C:2327:GLY:O	1:C:2331:TYR:HD1	1.94	0.51
1:C:3916:ILE:HG22	1:C:3980:LEU:HD21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:700:GLU:OE2	1:A:1458:HIS:NE2	2.33	0.51
1:B:952:LYS:HD3	1:B:970:LEU:HA	1.93	0.51
1:B:3106:MET:SD	1:B:3129:LEU:HA	2.51	0.51
1:B:3862:ASP:OD1	1:B:3862:ASP:N	2.44	0.51
1:D:127:MET:H	1:D:127:MET:CE	2.21	0.51
1:D:2155:LEU:HD21	1:D:2198:MET:HE1	1.92	0.51
1:D:3455:GLU:OE2	1:D:3508:SER:OG	2.28	0.51
1:C:975:VAL:HG12	1:C:1044:ARG:HH11	1.75	0.51
1:C:3455:GLU:OE2	1:C:3508:SER:OG	2.28	0.51
1:A:975:VAL:HG12	1:A:1044:ARG:HH11	1.75	0.51
1:A:2751:LEU:O	1:A:2755:ILE:HG12	2.10	0.51
1:B:2637:ALA:C	1:B:2640:PRO:HD2	2.35	0.51
1:B:3391:GLU:HG3	1:B:3395:ARG:HE	1.76	0.51
1:D:308:HIS:CE1	1:D:310:LYS:HB3	2.45	0.51
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	2.27	0.51
1:C:5013:MET:HE1	1:C:5020:ASP:HB2	1.93	0.51
1:A:127:MET:H	1:A:127:MET:CE	2.22	0.51
1:A:451:TYR:CZ	1:A:474:ARG:HD2	2.46	0.51
1:A:884:LEU:O	1:A:887:ILE:HG22	2.10	0.51
1:A:2749:GLU:HG3	1:A:2752:ASP:HB2	1.93	0.51
1:A:3862:ASP:OD1	1:A:3862:ASP:N	2.44	0.51
1:B:451:TYR:CZ	1:B:474:ARG:HD2	2.46	0.51
1:D:3182:TYR:HA	1:D:3185:LYS:HE3	1.93	0.51
1:D:5013:MET:HE1	1:D:5020:ASP:HB2	1.93	0.51
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.93	0.51
1:B:1293:LEU:HD11	1:B:1594:ARG:HD3	1.93	0.51
1:B:2327:GLY:O	1:B:2331:TYR:HD1	1.94	0.51
1:D:2749:GLU:HG3	1:D:2752:ASP:HB2	1.93	0.51
1:C:492:ASP:OD1	1:C:546:TRP:NE1	2.42	0.51
1:C:884:LEU:O	1:C:887:ILE:HG22	2.10	0.51
1:C:1293:LEU:HD11	1:C:1594:ARG:HD3	1.93	0.51
1:C:1861:GLN:O	1:C:1865:MET:HE3	2.10	0.51
1:C:2155:LEU:HD21	1:C:2198:MET:HE1	1.92	0.51
1:A:2166:LEU:HD11	1:A:2206:THR:HG23	1.93	0.51
1:A:3916:ILE:HG22	1:A:3980:LEU:HD21	1.93	0.51
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.44	0.51
1:A:4843:LEU:HD21	1:D:4827:LEU:HD21	1.93	0.51
1:B:867:LEU:HG	1:B:929:LEU:HD13	1.92	0.51
1:B:2382:GLU:OE1	1:B:2385:ARG:NH1	2.38	0.51
1:B:3590:GLU:O	1:B:3594:ARG:HG2	2.11	0.51
1:B:5013:MET:HE1	1:B:5020:ASP:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1492:CYS:SG	1:D:1494:MET:HG3	2.51	0.51
1:D:2001:PRO:HB3	1:D:3864:THR:HB	1.92	0.51
1:D:3443:ILE:HG12	1:D:3605:HIS:CD2	2.45	0.51
1:D:3718:GLU:HG3	1:D:3723:MET:HE1	1.93	0.51
1:C:929:LEU:HA	1:C:932:LEU:HD12	1.93	0.51
1:A:1861:GLN:O	1:A:1865:MET:HE3	2.10	0.51
1:A:2001:PRO:HB3	1:A:3864:THR:HB	1.92	0.51
1:A:2327:GLY:O	1:A:2331:TYR:HD1	1.94	0.51
1:A:5013:MET:HE1	1:A:5020:ASP:HB2	1.93	0.51
2:F:44:LYS:HD2	2:F:44:LYS:O	2.11	0.51
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.93	0.51
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.44	0.51
1:B:2166:LEU:HD11	1:B:2206:THR:HG23	1.93	0.51
1:B:2812:SER:O	1:B:2816:MET:HE3	2.10	0.51
1:D:2311:PRO:HA	1:D:2314:LEU:HD23	1.93	0.51
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.93	0.51
1:C:2166:LEU:HD11	1:C:2206:THR:HG23	1.93	0.51
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.46	0.51
1:C:3260:GLY:HA2	1:C:3325:ASN:ND2	2.26	0.51
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.46	0.50
1:A:3202:PRO:HB2	1:A:3216:CYS:SG	2.51	0.50
1:B:127:MET:H	1:B:127:MET:CE	2.21	0.50
1:B:2155:LEU:HD21	1:B:2198:MET:HE1	1.92	0.50
1:B:2514:ASN:OD1	1:B:2514:ASN:N	2.45	0.50
1:B:3182:TYR:HA	1:B:3185:LYS:HE3	1.92	0.50
1:B:3545:THR:HG22	1:B:3548:GLU:HG3	1.91	0.50
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.44	0.50
1:B:4064:MET:HE1	1:B:4110:PHE:CD2	2.46	0.50
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.92	0.50
1:D:884:LEU:O	1:D:887:ILE:HG22	2.10	0.50
1:D:2003:GLN:NE2	1:D:2007:ASN:OD1	2.42	0.50
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.46	0.50
1:D:2812:SER:OG	1:D:2882:TYR:OH	2.15	0.50
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.11	0.50
1:C:1997:GLU:O	1:C:2000:SER:OG	2.27	0.50
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.44	0.50
1:C:3240:CYS:HB3	1:C:3243:ILE:HG12	1.93	0.50
1:A:2479:LEU:HB2	1:A:2541:PHE:HZ	1.77	0.50
2:H:4:VAL:HG22	2:H:74:LEU:HD22	1.93	0.50
1:B:3719:ASP:O	1:B:3723:MET:HE3	2.12	0.50
1:D:462:GLU:OE2	1:D:462:GLU:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2166:LEU:HD11	1:D:2206:THR:HG23	1.93	0.50
1:D:3240:CYS:HB3	1:D:3243:ILE:HG12	1.93	0.50
1:D:4064:MET:HE1	1:D:4110:PHE:CD2	2.46	0.50
1:C:451:TYR:CZ	1:C:474:ARG:HD2	2.46	0.50
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.11	0.50
1:C:3719:ASP:O	1:C:3723:MET:HE3	2.12	0.50
1:C:4064:MET:HE1	1:C:4110:PHE:CD2	2.46	0.50
1:A:3106:MET:SD	1:A:3129:LEU:HA	2.51	0.50
1:A:3590:GLU:O	1:A:3594:ARG:HG2	2.11	0.50
1:A:3872:GLU:HG3	1:A:3874:VAL:H	1.77	0.50
2:E:50:LEU:H	2:E:50:LEU:HD12	1.75	0.50
1:D:952:LYS:HD3	1:D:970:LEU:HA	1.93	0.50
1:D:2224:ARG:HG2	1:D:2225:PHE:CD2	2.47	0.50
1:D:3872:GLU:HG3	1:D:3874:VAL:H	1.77	0.50
1:C:3106:MET:SD	1:C:3129:LEU:HA	2.51	0.50
1:C:3391:GLU:HG3	1:C:3395:ARG:HE	1.76	0.50
1:A:952:LYS:HD3	1:A:970:LEU:HA	1.93	0.50
1:A:3260:GLY:HA2	1:A:3325:ASN:ND2	2.26	0.50
1:B:2479:LEU:HB2	1:B:2541:PHE:HZ	1.76	0.50
1:B:3202:PRO:HB2	1:B:3216:CYS:SG	2.51	0.50
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.93	0.50
1:D:2514:ASN:OD1	1:D:2514:ASN:N	2.45	0.50
1:D:3202:PRO:HB2	1:D:3216:CYS:SG	2.51	0.50
1:C:1492:CYS:SG	1:C:1494:MET:HG3	2.51	0.50
1:C:2479:LEU:HB2	1:C:2541:PHE:HZ	1.77	0.50
1:C:2749:GLU:HG3	1:C:2752:ASP:HB2	1.93	0.50
1:A:1492:CYS:SG	1:A:1494:MET:HG3	2.51	0.50
1:A:3288:GLY:HA2	1:A:3303:PRO:HB3	1.92	0.50
1:A:3391:GLU:HG3	1:A:3395:ARG:HE	1.76	0.50
1:B:2462:PRO:HG2	1:B:2465:ASP:HB2	1.93	0.50
1:B:3260:GLY:HA2	1:B:3325:ASN:ND2	2.27	0.50
1:D:1252:HIS:O	1:D:1275:ARG:NH1	2.45	0.50
1:D:2538:THR:O	1:D:2542:SER:HB2	2.11	0.50
1:D:3604:TYR:O	1:D:3607:GLU:HG3	2.12	0.50
1:C:3718:GLU:HG3	1:C:3723:MET:HE1	1.93	0.50
1:A:867:LEU:HG	1:A:929:LEU:HD13	1.92	0.50
1:A:2155:LEU:HD11	1:A:2198:MET:CE	2.42	0.50
2:G:44:LYS:HD2	2:G:44:LYS:O	2.12	0.50
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.46	0.50
1:D:2462:PRO:HG2	1:D:2465:ASP:HB2	1.93	0.50
1:D:2573:GLU:OE2	1:D:2615:ARG:NE	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3356:SER:OG	1:D:3357:HIS:ND1	2.38	0.50
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.44	0.50
1:C:2514:ASN:OD1	1:C:2514:ASN:N	2.44	0.50
1:C:2812:SER:O	1:C:2816:MET:HE3	2.10	0.50
1:A:1252:HIS:O	1:A:1275:ARG:NH1	2.45	0.50
1:A:3266:MET:O	1:A:3266:MET:HG2	2.12	0.50
1:B:929:LEU:HA	1:B:932:LEU:HD12	1.93	0.50
1:B:1252:HIS:O	1:B:1275:ARG:NH1	2.45	0.50
1:B:2749:GLU:HG3	1:B:2752:ASP:HB2	1.93	0.50
1:D:2327:GLY:O	1:D:2331:TYR:HD1	1.94	0.50
1:D:2827:ARG:NH2	1:D:2935:TYR:OH	2.45	0.50
1:D:3266:MET:O	1:D:3266:MET:HG2	2.12	0.50
1:D:3391:GLU:HG3	1:D:3395:ARG:HE	1.76	0.50
1:D:3719:ASP:O	1:D:3723:MET:HE3	2.12	0.50
1:C:601:ASP:OD1	1:C:1665:HIS:ND1	2.41	0.50
1:C:2462:PRO:HG2	1:C:2465:ASP:HB2	1.93	0.50
1:C:3539:ARG:NH1	1:C:3542:LEU:HD22	2.21	0.50
1:C:3862:ASP:N	1:C:3862:ASP:OD1	2.44	0.50
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.44	0.50
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.21	0.50
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.44	0.50
1:A:2538:THR:O	1:A:2542:SER:HB2	2.11	0.50
1:B:2827:ARG:NH2	1:B:2935:TYR:OH	2.45	0.50
1:D:127:MET:SD	1:D:128:THR:HG23	2.52	0.50
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.44	0.50
1:D:2781:VAL:HA	1:D:2789:PRO:HB2	1.93	0.50
1:C:2224:ARG:HG2	1:C:2225:PHE:CD2	2.47	0.50
1:C:3182:TYR:HA	1:C:3185:LYS:HE3	1.92	0.50
1:C:3604:TYR:O	1:C:3607:GLU:HG3	2.12	0.50
1:C:3872:GLU:HG3	1:C:3874:VAL:H	1.77	0.50
1:A:2514:ASN:OD1	1:A:2514:ASN:N	2.44	0.50
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.11	0.50
1:A:3556:ASN:HB3	1:A:3559:LEU:HD13	1.94	0.50
2:G:79:ASP:OD2	2:G:80:TYR:HD2	1.95	0.50
2:F:79:ASP:OD1	2:F:80:TYR:HD1	1.95	0.50
1:B:2311:PRO:HA	1:B:2314:LEU:HD23	1.93	0.50
1:B:3240:CYS:HB3	1:B:3243:ILE:HG12	1.93	0.50
1:D:2155:LEU:HD11	1:D:2198:MET:CE	2.42	0.50
1:D:3629:ARG:HA	1:D:3632:VAL:HG22	1.94	0.50
1:C:127:MET:SD	1:C:128:THR:HG23	2.52	0.50
1:C:758:ARG:HG2	1:C:763:PRO:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1252:HIS:O	1:C:1275:ARG:NH1	2.45	0.50
1:C:3556:ASN:HB3	1:C:3559:LEU:HD13	1.94	0.50
1:A:127:MET:SD	1:A:128:THR:HG23	2.52	0.49
1:B:1492:CYS:SG	1:B:1494:MET:HG3	2.51	0.49
1:B:1997:GLU:O	1:B:2000:SER:OG	2.28	0.49
1:B:2538:THR:O	1:B:2542:SER:HB2	2.11	0.49
1:B:3872:GLU:HG3	1:B:3874:VAL:H	1.77	0.49
1:D:3433:GLU:HG3	1:D:3437:MET:HE3	1.94	0.49
1:D:3590:GLU:O	1:D:3594:ARG:HG2	2.11	0.49
1:D:3604:TYR:O	1:D:3608:GLN:HG2	2.13	0.49
1:D:3862:ASP:OD1	1:D:3862:ASP:N	2.44	0.49
1:C:11:VAL:HG11	1:C:164:ARG:HD3	1.94	0.49
1:A:1293:LEU:HD11	1:A:1594:ARG:HD3	1.93	0.49
1:A:3366:ARG:NH1	1:A:3440:GLU:OE1	2.34	0.49
1:A:3433:GLU:HG3	1:A:3437:MET:HE3	1.94	0.49
1:B:11:VAL:HG11	1:B:164:ARG:HD3	1.94	0.49
1:D:929:LEU:HA	1:D:932:LEU:HD12	1.93	0.49
1:D:2208:MET:HE1	1:D:2250:MET:HE1	1.94	0.49
1:D:2250:MET:O	1:D:2250:MET:HE3	2.12	0.49
1:D:3106:MET:SD	1:D:3129:LEU:HA	2.51	0.49
1:D:3233:PRO:HB2	1:D:3238:GLU:HB2	1.94	0.49
1:D:3556:ASN:HB3	1:D:3559:LEU:HD13	1.94	0.49
1:D:4627:MET:H	1:D:4627:MET:CE	2.22	0.49
1:C:127:MET:H	1:C:127:MET:CE	2.22	0.49
1:C:1031:THR:HG22	1:C:1035:ASN:HD21	1.78	0.49
1:C:2781:VAL:HA	1:C:2789:PRO:HB2	1.93	0.49
1:C:3590:GLU:O	1:C:3594:ARG:HG2	2.11	0.49
1:A:2208:MET:HE1	1:A:2250:MET:HE1	1.95	0.49
1:A:2311:PRO:HA	1:A:2314:LEU:HD23	1.93	0.49
1:B:283:ARG:NH1	1:B:290:TYR:OH	2.42	0.49
1:B:2155:LEU:HD11	1:B:2198:MET:CE	2.42	0.49
1:B:2781:VAL:HA	1:B:2789:PRO:HB2	1.93	0.49
1:D:320:LYS:NZ	1:D:383:HIS:O	2.32	0.49
1:C:2827:ARG:NH2	1:C:2935:TYR:OH	2.45	0.49
1:C:3433:GLU:HG3	1:C:3437:MET:HE3	1.95	0.49
1:A:2462:PRO:HG2	1:A:2465:ASP:HB2	1.93	0.49
1:A:3332:ALA:HB3	1:A:3403:ARG:NH1	2.28	0.49
1:A:3719:ASP:O	1:A:3723:MET:HE3	2.12	0.49
1:B:127:MET:SD	1:B:128:THR:HG23	2.52	0.49
1:B:3266:MET:HG2	1:B:3266:MET:O	2.12	0.49
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3260:GLY:HA2	1:D:3325:ASN:ND2	2.27	0.49
1:D:3539:ARG:NH1	1:D:3542:LEU:HD22	2.21	0.49
1:C:197:GLN:OE1	1:C:197:GLN:N	2.30	0.49
1:C:2155:LEU:HD11	1:C:2198:MET:CE	2.42	0.49
1:C:2311:PRO:HA	1:C:2314:LEU:HD23	1.93	0.49
1:C:2538:THR:O	1:C:2542:SER:HB2	2.11	0.49
1:C:3233:PRO:HB2	1:C:3238:GLU:HB2	1.94	0.49
1:C:3266:MET:O	1:C:3266:MET:HG2	2.12	0.49
1:C:3332:ALA:HB3	1:C:3403:ARG:NH1	2.28	0.49
1:A:3629:ARG:HA	1:A:3632:VAL:HG22	1.94	0.49
1:A:4064:MET:HE1	1:A:4110:PHE:CD2	2.46	0.49
1:B:3604:TYR:O	1:B:3608:GLN:HG2	2.13	0.49
1:C:2477:PRO:HB3	1:C:2487:GLN:HG2	1.95	0.49
1:C:3202:PRO:HB2	1:C:3216:CYS:SG	2.51	0.49
1:C:3449:HIS:C	1:C:3449:HIS:ND1	2.71	0.49
1:A:2827:ARG:NH2	1:A:2935:TYR:OH	2.45	0.49
1:A:3240:CYS:HB3	1:A:3243:ILE:HG12	1.93	0.49
1:A:4736:ARG:NH2	1:D:4079:ASP:OD2	2.36	0.49
1:B:2546:MET:HE2	1:B:2546:MET:HA	1.95	0.49
1:B:3604:TYR:O	1:B:3607:GLU:HG3	2.12	0.49
1:D:3332:ALA:HB3	1:D:3403:ARG:NH1	2.28	0.49
1:C:499:THR:HG23	1:C:502:HIS:H	1.77	0.49
1:C:3604:TYR:O	1:C:3608:GLN:HG2	2.12	0.49
1:A:1163:THR:HG22	1:A:1168:VAL:HA	1.95	0.49
1:A:2781:VAL:HA	1:A:2789:PRO:HB2	1.93	0.49
1:B:417:GLY:O	1:B:420:SER:OG	2.28	0.49
1:B:492:ASP:OD1	1:B:546:TRP:NE1	2.42	0.49
1:B:758:ARG:HG2	1:B:763:PRO:HA	1.94	0.49
1:B:3332:ALA:HB3	1:B:3403:ARG:NH1	2.28	0.49
1:D:1293:LEU:HD11	1:D:1594:ARG:HD3	1.93	0.49
1:C:3629:ARG:HA	1:C:3632:VAL:HG22	1.94	0.49
1:A:684:VAL:HG22	1:A:781:VAL:HG12	1.95	0.49
1:A:2382:GLU:OE1	1:A:2385:ARG:NH1	2.38	0.49
1:A:2546:MET:HA	1:A:2546:MET:HE2	1.95	0.49
1:A:3604:TYR:O	1:A:3607:GLU:HG3	2.12	0.49
2:H:79:ASP:OD2	2:H:80:TYR:HD1	1.96	0.49
2:F:22:CYS:SG	2:F:50:LEU:HD11	2.53	0.49
1:B:1170:MET:HE1	1:B:1176:GLU:HA	1.95	0.49
1:B:3449:HIS:ND1	1:B:3449:HIS:C	2.71	0.49
1:D:499:THR:HG23	1:D:502:HIS:H	1.77	0.49
1:D:2479:LEU:HB2	1:D:2541:PHE:HZ	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2812:SER:OG	1:C:2882:TYR:OH	2.15	0.49
1:A:758:ARG:HG2	1:A:763:PRO:HA	1.94	0.49
1:A:2003:GLN:NE2	1:A:2007:ASN:OD1	2.42	0.49
1:A:2250:MET:O	1:A:2250:MET:HE3	2.12	0.49
1:A:3539:ARG:HH11	1:A:3539:ARG:HA	1.78	0.49
1:A:3604:TYR:O	1:A:3608:GLN:HG2	2.13	0.49
1:B:2477:PRO:HB3	1:B:2487:GLN:HG2	1.95	0.49
1:B:2765:LYS:NZ	1:B:2859:PRO:O	2.44	0.49
1:B:3433:GLU:HG3	1:B:3437:MET:HE3	1.95	0.49
1:A:929:LEU:HA	1:A:932:LEU:HD12	1.93	0.49
1:A:1170:MET:HE1	1:A:1176:GLU:HA	1.95	0.49
1:A:2224:ARG:HG2	1:A:2225:PHE:CD2	2.47	0.49
1:B:700:GLU:OE2	1:B:1458:HIS:NE2	2.33	0.49
1:D:1753:LYS:HB3	1:D:1758:ARG:HA	1.95	0.49
1:C:1163:THR:HG22	1:C:1168:VAL:HA	1.95	0.49
1:C:2773:ASN:OD1	1:C:2786:LYS:NZ	2.37	0.49
1:B:273:HIS:CE1	1:B:334:MET:HE2	2.48	0.48
1:B:499:THR:HG23	1:B:502:HIS:H	1.77	0.48
1:B:667:MET:SD	1:B:790:ARG:NH2	2.86	0.48
1:B:2224:ARG:HG2	1:B:2225:PHE:CD2	2.47	0.48
1:B:3556:ASN:HB3	1:B:3559:LEU:HD13	1.94	0.48
1:C:1116:GLY:HA3	1:C:1132:TRP:HB3	1.95	0.48
1:A:601:ASP:OD1	1:A:1665:HIS:ND1	2.41	0.48
1:A:3233:PRO:HB2	1:A:3238:GLU:HB2	1.94	0.48
1:A:3941:ASP:OD1	1:A:3941:ASP:N	2.46	0.48
1:B:2208:MET:HE1	1:B:2250:MET:HE1	1.94	0.48
1:B:4092:ASP:HA	1:B:4095:LYS:HG2	1.95	0.48
1:D:667:MET:SD	1:D:790:ARG:NH2	2.86	0.48
1:D:684:VAL:HG22	1:D:781:VAL:HG12	1.95	0.48
1:D:758:ARG:HG2	1:D:763:PRO:HA	1.94	0.48
1:D:866:HIS:CE1	1:D:941:MET:HG2	2.49	0.48
1:C:1170:MET:HE1	1:C:1176:GLU:HA	1.95	0.48
1:C:2208:MET:HE1	1:C:2250:MET:HE1	1.95	0.48
1:C:2250:MET:HE3	1:C:2250:MET:O	2.12	0.48
1:A:2440:MET:HE3	1:A:2441:HIS:N	2.29	0.48
1:A:4079:ASP:OD2	1:B:4736:ARG:NH2	2.35	0.48
2:E:79:ASP:OD2	2:E:80:TYR:HD1	1.96	0.48
1:B:41:GLY:O	1:B:45:ARG:NH1	2.47	0.48
1:B:1031:THR:HG22	1:B:1035:ASN:HD21	1.78	0.48
1:B:1116:GLY:HA3	1:B:1132:TRP:HB3	1.95	0.48
1:B:3629:ARG:HA	1:B:3632:VAL:HG22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:11:VAL:HG11	1:D:164:ARG:HD3	1.94	0.48
1:D:1116:GLY:HA3	1:D:1132:TRP:HB3	1.95	0.48
1:D:4015:GLU:HA	1:D:4018:ASP:OD2	2.14	0.48
1:C:667:MET:SD	1:C:790:ARG:NH2	2.86	0.48
1:C:3264:THR:OG1	1:C:3265:GLU:OE1	2.31	0.48
1:C:3539:ARG:HA	1:C:3539:ARG:HH11	1.78	0.48
1:C:4015:GLU:HA	1:C:4018:ASP:OD2	2.14	0.48
1:A:1031:THR:HG22	1:A:1035:ASN:HD21	1.78	0.48
1:A:2816:MET:HB3	1:A:2816:MET:HE2	1.66	0.48
1:A:3449:HIS:C	1:A:3449:HIS:ND1	2.71	0.48
1:A:3539:ARG:NH1	1:A:3542:LEU:HD22	2.21	0.48
1:B:684:VAL:HG22	1:B:781:VAL:HG12	1.95	0.48
1:B:2440:MET:HE3	1:B:2441:HIS:N	2.29	0.48
1:B:2765:LYS:NZ	1:B:2857:PRO:HB2	2.27	0.48
1:B:3264:THR:OG1	1:B:3265:GLU:OE1	2.31	0.48
1:D:1170:MET:HE1	1:D:1176:GLU:HA	1.95	0.48
1:A:273:HIS:CE1	1:A:334:MET:HE2	2.49	0.48
1:A:1983:ALA:O	1:A:1987:SER:OG	2.28	0.48
1:A:1997:GLU:O	1:A:2000:SER:OG	2.27	0.48
1:A:3850:GLN:NE2	1:A:3872:GLU:OE1	2.33	0.48
2:H:11:ASP:OD2	2:H:12:GLY:N	2.47	0.48
1:D:273:HIS:CE1	1:D:334:MET:HE2	2.49	0.48
1:D:2440:MET:HE3	1:D:2441:HIS:N	2.29	0.48
1:D:3105:LYS:O	1:D:3108:GLU:HG3	2.14	0.48
1:D:3159:ASP:OD1	1:D:3159:ASP:N	2.46	0.48
1:C:2384:ILE:O	1:C:2387:SER:OG	2.28	0.48
1:A:499:THR:HG23	1:A:502:HIS:H	1.77	0.48
1:A:3226:GLU:C	1:A:3228:ALA:H	2.21	0.48
1:B:2250:MET:O	1:B:2250:MET:HE3	2.12	0.48
1:B:2668:SER:C	1:B:2670:GLU:H	2.22	0.48
1:B:3105:LYS:O	1:B:3108:GLU:HG3	2.14	0.48
1:D:1163:THR:HG22	1:D:1168:VAL:HA	1.95	0.48
1:C:2440:MET:HE3	1:C:2441:HIS:N	2.29	0.48
1:C:3226:GLU:C	1:C:3228:ALA:H	2.21	0.48
1:C:3263:TYR:N	1:C:3326:ASN:OD1	2.47	0.48
1:A:2477:PRO:HB3	1:A:2487:GLN:HG2	1.95	0.48
1:B:3201:MET:SD	1:B:3202:PRO:HD2	2.54	0.48
1:B:3455:GLU:OE2	1:B:3508:SER:OG	2.28	0.48
1:B:4000:MET:HE1	1:B:4058:ILE:HG12	1.95	0.48
1:B:4015:GLU:HA	1:B:4018:ASP:OD2	2.14	0.48
1:D:1024:TYR:CZ	1:D:1032:LYS:HG3	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1031:THR:HG22	1:D:1035:ASN:HD21	1.78	0.48
1:D:2736:ASP:OD1	1:D:2736:ASP:N	2.41	0.48
1:D:3263:TYR:N	1:D:3326:ASN:OD1	2.47	0.48
1:D:3449:HIS:C	1:D:3449:HIS:ND1	2.71	0.48
1:A:11:VAL:HG11	1:A:164:ARG:HD3	1.94	0.48
1:A:3256:LEU:HD11	1:A:3322:ILE:HD11	1.96	0.48
1:A:4000:MET:HE1	1:A:4058:ILE:HG12	1.95	0.48
2:F:11:ASP:OD2	2:F:12:GLY:N	2.47	0.48
1:B:3539:ARG:HA	1:B:3539:ARG:HH11	1.78	0.48
1:C:41:GLY:O	1:C:45:ARG:NH1	2.46	0.48
1:C:273:HIS:CE1	1:C:334:MET:HE2	2.49	0.48
1:C:700:GLU:OE2	1:C:1458:HIS:NE2	2.33	0.48
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.14	0.48
1:A:1116:GLY:HA3	1:A:1132:TRP:HB3	1.95	0.48
1:A:3263:TYR:N	1:A:3326:ASN:OD1	2.47	0.48
1:A:4888:TYR:HD1	1:B:4918:ILE:CD1	2.27	0.48
2:H:48:PHE:HZ	2:H:63:VAL:HG21	1.79	0.48
1:B:1163:THR:HG22	1:B:1168:VAL:HA	1.94	0.48
1:B:1753:LYS:HB3	1:B:1758:ARG:HA	1.95	0.48
1:B:3233:PRO:HB2	1:B:3238:GLU:HB2	1.94	0.48
1:B:3291:ALA:O	1:B:3293:PRO:HD3	2.14	0.48
1:B:4754:ASN:HB3	1:B:4756:ARG:HH21	1.79	0.48
1:D:2546:MET:HA	1:D:2546:MET:HE2	1.95	0.48
1:C:1024:TYR:CZ	1:C:1032:LYS:HG3	2.49	0.48
1:C:3201:MET:SD	1:C:3202:PRO:HD2	2.54	0.48
1:A:41:GLY:O	1:A:45:ARG:NH1	2.46	0.48
1:A:667:MET:SD	1:A:790:ARG:NH2	2.86	0.48
1:A:1078:GLU:OE2	1:A:1654:SER:OG	2.19	0.48
1:A:2185:ILE:HG21	1:A:2203:MET:HE1	1.95	0.48
1:A:2573:GLU:OE2	1:A:2615:ARG:NE	2.42	0.48
1:A:2773:ASN:OD1	1:A:2786:LYS:NZ	2.37	0.48
1:B:866:HIS:CE1	1:B:941:MET:HG2	2.49	0.48
1:D:1079:LYS:HA	1:D:1189:LEU:HD11	1.96	0.48
1:D:3291:ALA:O	1:D:3293:PRO:HD3	2.14	0.48
1:D:3539:ARG:HH11	1:D:3539:ARG:HA	1.78	0.48
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.14	0.48
1:D:4177:TYR:CE1	1:D:4199:GLU:HG3	2.49	0.48
1:D:4754:ASN:HB3	1:D:4756:ARG:HH21	1.79	0.48
1:C:684:VAL:HG22	1:C:781:VAL:HG12	1.95	0.48
1:C:866:HIS:CE1	1:C:941:MET:HG2	2.49	0.48
1:C:3105:LYS:O	1:C:3108:GLU:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:LYS:NZ	1:A:383:HIS:O	2.32	0.47
1:A:1024:TYR:CZ	1:A:1032:LYS:HG3	2.49	0.47
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.14	0.47
1:A:4092:ASP:HA	1:A:4095:LYS:HG2	1.95	0.47
1:A:4754:ASN:HB3	1:A:4756:ARG:HH21	1.79	0.47
1:B:774:ASP:OD2	1:B:1470:ARG:NH2	2.36	0.47
1:B:2185:ILE:HG21	1:B:2203:MET:HE1	1.95	0.47
1:B:2755:ILE:HD12	1:B:2813:LEU:HG	1.96	0.47
1:B:3256:LEU:HD11	1:B:3322:ILE:HD11	1.96	0.47
1:B:4177:TYR:CE1	1:B:4199:GLU:HG3	2.49	0.47
1:D:601:ASP:OD1	1:D:1665:HIS:ND1	2.41	0.47
1:D:2477:PRO:HB3	1:D:2487:GLN:HG2	1.95	0.47
1:D:4092:ASP:HA	1:D:4095:LYS:HG2	1.95	0.47
1:C:2546:MET:HE2	1:C:2546:MET:HA	1.95	0.47
1:A:1079:LYS:HA	1:A:1189:LEU:HD11	1.95	0.47
1:A:2393:ASP:OD1	1:A:2418:LEU:N	2.47	0.47
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.47	0.47
1:A:3291:ALA:O	1:A:3293:PRO:HD3	2.14	0.47
1:A:4177:TYR:CE1	1:A:4199:GLU:HG3	2.49	0.47
1:A:4888:TYR:HD1	1:B:4918:ILE:HD11	1.79	0.47
1:B:403:MET:HE1	1:B:451:TYR:CZ	2.50	0.47
1:D:41:GLY:O	1:D:45:ARG:NH1	2.47	0.47
1:D:2386:ILE:HG22	1:D:2392:ARG:CZ	2.45	0.47
1:D:2393:ASP:OD1	1:D:2418:LEU:N	2.47	0.47
1:D:3201:MET:SD	1:D:3202:PRO:HD2	2.54	0.47
1:D:3226:GLU:C	1:D:3228:ALA:H	2.21	0.47
1:C:2386:ILE:HG22	1:C:2392:ARG:CZ	2.45	0.47
1:C:2573:GLU:OE2	1:C:2615:ARG:NE	2.42	0.47
2:F:16:PRO:HG3	2:F:106:LEU:HD11	1.95	0.47
1:B:1024:TYR:CZ	1:B:1032:LYS:HG3	2.49	0.47
1:D:1983:ALA:O	1:D:1987:SER:OG	2.28	0.47
1:D:3442:PHE:CD2	1:D:3514:LEU:HD22	2.49	0.47
1:D:3686:GLU:N	1:D:3686:GLU:OE2	2.47	0.47
1:D:4000:MET:HE1	1:D:4058:ILE:HG12	1.95	0.47
1:C:70:GLU:OE2	1:C:110:ARG:NE	2.38	0.47
1:C:1753:LYS:HB3	1:C:1758:ARG:HA	1.95	0.47
1:A:3159:ASP:OD1	1:A:3159:ASP:N	2.46	0.47
1:A:3686:GLU:N	1:A:3686:GLU:OE2	2.47	0.47
1:B:70:GLU:OE2	1:B:110:ARG:NE	2.38	0.47
1:B:2209:GLU:HA	1:B:2212:VAL:HG22	1.97	0.47
1:B:2754:PHE:CE2	1:B:2813:LEU:HD11	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3226:GLU:C	1:B:3228:ALA:H	2.21	0.47
1:D:2185:ILE:HG21	1:D:2203:MET:HE1	1.95	0.47
1:D:3535:LEU:O	1:D:3538:THR:OG1	2.28	0.47
1:D:4813:LEU:O	1:D:4816:ILE:HG12	2.15	0.47
1:C:2393:ASP:OD1	1:C:2418:LEU:N	2.47	0.47
1:C:3686:GLU:N	1:C:3686:GLU:OE2	2.47	0.47
1:C:4092:ASP:HA	1:C:4095:LYS:HG2	1.95	0.47
1:C:4813:LEU:O	1:C:4816:ILE:HG12	2.15	0.47
1:A:403:MET:HE1	1:A:451:TYR:CZ	2.50	0.47
1:A:866:HIS:CE1	1:A:941:MET:HG2	2.49	0.47
1:A:2095:GLN:HG3	1:A:2127:GLN:HB3	1.97	0.47
1:B:2095:GLN:HG3	1:B:2127:GLN:HB3	1.97	0.47
1:B:3686:GLU:OE2	1:B:3686:GLU:N	2.47	0.47
1:B:3941:ASP:OD1	1:B:3941:ASP:N	2.46	0.47
1:D:2384:ILE:O	1:D:2387:SER:OG	2.28	0.47
1:D:3734:HIS:CG	1:D:3735:LEU:N	2.82	0.47
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.47	0.47
1:C:4968:PHE:O	1:C:4974:GLY:HA3	2.15	0.47
1:A:3114:LYS:HE3	1:A:3123:LYS:HD2	1.97	0.47
1:A:3362:ILE:HG22	1:A:3437:MET:HB3	1.97	0.47
1:A:4813:LEU:O	1:A:4816:ILE:HG12	2.15	0.47
1:B:3362:ILE:HG22	1:B:3437:MET:HB3	1.97	0.47
1:B:3734:HIS:CG	1:B:3735:LEU:N	2.82	0.47
1:B:4769:MET:SD	1:B:4769:MET:N	2.73	0.47
1:C:2185:ILE:HG21	1:C:2203:MET:HE1	1.95	0.47
1:C:4754:ASN:HB3	1:C:4756:ARG:HH21	1.79	0.47
1:A:70:GLU:OE2	1:A:110:ARG:NE	2.38	0.47
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.43	0.47
1:A:1753:LYS:HB3	1:A:1758:ARG:HA	1.95	0.47
1:A:3264:THR:OG1	1:A:3265:GLU:OE1	2.31	0.47
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.14	0.47
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.43	0.47
1:B:1079:LYS:HA	1:B:1189:LEU:HD11	1.95	0.47
1:B:1819:VAL:O	1:B:1929:MET:HE1	2.15	0.47
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.14	0.47
1:B:3114:LYS:HE3	1:B:3123:LYS:HD2	1.97	0.47
1:B:4888:TYR:HD1	1:C:4918:ILE:CD1	2.28	0.47
1:D:2095:GLN:HG3	1:D:2127:GLN:HB3	1.97	0.47
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.14	0.47
1:D:2527:LEU:HD11	1:D:2582:MET:HA	1.97	0.47
1:D:2773:ASN:OD1	1:D:2786:LYS:NZ	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3443:ILE:HG12	1:D:3605:HIS:HD2	1.80	0.47
1:D:4968:PHE:O	1:D:4974:GLY:HA3	2.15	0.47
1:C:2209:GLU:HA	1:C:2212:VAL:HG22	1.97	0.47
1:C:2755:ILE:HD12	1:C:2813:LEU:HG	1.96	0.47
1:C:3256:LEU:HD11	1:C:3322:ILE:HD11	1.96	0.47
1:C:3362:ILE:HG22	1:C:3437:MET:HB3	1.97	0.47
1:C:3442:PHE:CD2	1:C:3514:LEU:HD22	2.49	0.47
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.14	0.47
1:C:4769:MET:SD	1:C:4769:MET:N	2.73	0.47
1:A:1819:VAL:O	1:A:1929:MET:HE1	2.15	0.47
1:A:2755:ILE:HD12	1:A:2813:LEU:HG	1.97	0.47
1:A:4015:GLU:HA	1:A:4018:ASP:OD2	2.14	0.47
1:B:2386:ILE:HG22	1:B:2392:ARG:CZ	2.45	0.47
1:B:2773:ASN:OD1	1:B:2786:LYS:NZ	2.37	0.47
1:B:2782:ASP:N	1:B:2782:ASP:OD1	2.47	0.47
1:D:403:MET:HE1	1:D:451:TYR:CZ	2.50	0.47
1:D:571:SER:OG	1:D:573:GLU:OE1	2.25	0.47
1:D:2001:PRO:O	1:D:2005:GLN:HG3	2.15	0.47
1:D:2668:SER:C	1:D:2670:GLU:H	2.22	0.47
1:D:3717:ASP:OD1	1:D:3717:ASP:N	2.48	0.47
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.97	0.47
1:C:2095:GLN:HG3	1:C:2127:GLN:HB3	1.97	0.47
1:C:3291:ALA:O	1:C:3293:PRO:HD3	2.14	0.47
1:C:3734:HIS:CG	1:C:3735:LEU:N	2.82	0.47
1:C:4000:MET:HE1	1:C:4058:ILE:HG12	1.95	0.47
1:A:2209:GLU:HA	1:A:2212:VAL:HG22	1.97	0.47
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.48	0.47
1:A:3201:MET:SD	1:A:3202:PRO:HD2	2.54	0.47
1:A:3734:HIS:CG	1:A:3735:LEU:N	2.82	0.47
1:A:3842:LEU:HB2	1:A:3929:SER:HB2	1.97	0.47
1:B:3842:LEU:HB2	1:B:3929:SER:HB2	1.97	0.47
1:B:3850:GLN:NE2	1:B:3872:GLU:OE1	2.33	0.47
1:B:4079:ASP:OD2	1:C:4736:ARG:NH2	2.36	0.47
1:D:950:LEU:HD23	1:D:950:LEU:HA	1.81	0.47
1:C:2668:SER:C	1:C:2670:GLU:H	2.22	0.47
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.14	0.47
1:A:3579:LEU:HB2	1:A:3582:ARG:HG2	1.97	0.47
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.97	0.47
1:B:110:ARG:NH2	1:B:117:TYR:OH	2.48	0.47
1:B:2020:ASP:OD1	1:B:2020:ASP:N	2.42	0.47
1:B:4968:PHE:O	1:B:4974:GLY:HA3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:110:ARG:NH2	1:D:117:TYR:OH	2.48	0.47
1:D:4918:ILE:CD1	1:C:4888:TYR:HD1	2.27	0.47
1:C:2527:LEU:HD11	1:C:2582:MET:HA	1.97	0.47
1:C:3443:ILE:HG12	1:C:3605:HIS:HD2	1.80	0.47
1:C:3765:TYR:CD2	1:C:4753:HIS:HA	2.50	0.47
1:A:3442:PHE:CD2	1:A:3514:LEU:HD22	2.49	0.46
1:A:3717:ASP:OD1	1:A:3717:ASP:N	2.48	0.46
1:A:3996:PHE:CD2	1:A:4020:GLN:HG2	2.51	0.46
1:B:707:VAL:HG23	1:B:782:SER:HB3	1.97	0.46
1:B:3263:TYR:N	1:B:3326:ASN:OD1	2.47	0.46
1:B:3442:PHE:CD2	1:B:3514:LEU:HD22	2.49	0.46
1:D:438:ILE:HG23	1:D:518:ILE:HD11	1.98	0.46
1:D:3362:ILE:HG22	1:D:3437:MET:HB3	1.97	0.46
1:C:1079:LYS:HA	1:C:1189:LEU:HD11	1.96	0.46
1:C:4158:PRO:HA	1:C:4161:ARG:HD3	1.97	0.46
2:H:90:ILE:HG22	2:H:91:ILE:HG13	1.97	0.46
1:B:2757:LYS:O	1:B:2761:TYR:HB2	2.15	0.46
1:B:2812:SER:OG	1:B:2882:TYR:OH	2.15	0.46
1:B:4158:PRO:HA	1:B:4161:ARG:HD3	1.97	0.46
1:B:4813:LEU:O	1:B:4816:ILE:HG12	2.15	0.46
1:D:2101:MET:HE3	1:D:2105:TRP:CE3	2.50	0.46
1:D:3256:LEU:HD11	1:D:3322:ILE:HD11	1.96	0.46
1:C:707:VAL:HG23	1:C:782:SER:HB3	1.98	0.46
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.48	0.46
1:C:2754:PHE:CE2	1:C:2813:LEU:HD11	2.47	0.46
1:A:1168:VAL:HG11	1:A:1176:GLU:HG2	1.98	0.46
1:A:2668:SER:C	1:A:2670:GLU:H	2.22	0.46
1:A:3443:ILE:HG12	1:A:3605:HIS:HD2	1.80	0.46
2:G:32:ASP:OD2	2:G:34:LYS:NZ	2.46	0.46
2:F:87:HIS:HB3	2:F:90:ILE:HB	1.96	0.46
1:B:438:ILE:HG23	1:B:518:ILE:HD11	1.98	0.46
1:B:3765:TYR:CD2	1:B:4753:HIS:HA	2.50	0.46
1:B:4570:ALA:O	1:B:4574:ASN:ND2	2.44	0.46
1:B:4655:PHE:N	1:B:4796:MET:HE1	2.30	0.46
1:D:3114:LYS:HE3	1:D:3123:LYS:HD2	1.97	0.46
1:C:438:ILE:HG23	1:C:518:ILE:HD11	1.98	0.46
1:C:2101:MET:HE3	1:C:2105:TRP:CE3	2.50	0.46
1:A:1753:LYS:HD3	1:A:1759:ARG:N	2.31	0.46
1:A:2386:ILE:HG22	1:A:2392:ARG:CZ	2.45	0.46
1:A:4655:PHE:N	1:A:4796:MET:HE1	2.30	0.46
1:B:1753:LYS:HD3	1:B:1759:ARG:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2393:ASP:OD1	1:B:2418:LEU:N	2.47	0.46
1:B:3996:PHE:CD2	1:B:4020:GLN:HG2	2.51	0.46
1:D:1753:LYS:HD3	1:D:1759:ARG:N	2.31	0.46
1:D:2219:GLU:N	1:D:2219:GLU:OE2	2.49	0.46
1:D:4238:CYS:SG	1:D:4989:MET:HG2	2.56	0.46
1:A:707:VAL:HG23	1:A:782:SER:HB3	1.98	0.46
1:A:2512:ILE:HG21	1:A:2518:LEU:HD13	1.98	0.46
1:A:4968:PHE:O	1:A:4974:GLY:HA3	2.15	0.46
2:G:11:ASP:OD1	2:G:12:GLY:N	2.49	0.46
1:B:601:ASP:OD1	1:B:1665:HIS:ND1	2.41	0.46
1:B:1008:SER:HB3	1:B:1017:ARG:HB3	1.98	0.46
1:B:2001:PRO:O	1:B:2005:GLN:HG3	2.15	0.46
1:B:3579:LEU:HB2	1:B:3582:ARG:HG2	1.97	0.46
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.14	0.46
1:D:2755:ILE:HD12	1:D:2813:LEU:HG	1.97	0.46
1:D:4655:PHE:N	1:D:4796:MET:HE1	2.29	0.46
1:D:4769:MET:SD	1:D:4769:MET:N	2.73	0.46
1:C:1753:LYS:HD3	1:C:1759:ARG:N	2.31	0.46
1:C:4238:CYS:SG	1:C:4989:MET:HG2	2.56	0.46
1:A:2527:LEU:HD11	1:A:2582:MET:HA	1.97	0.46
1:A:2757:LYS:O	1:A:2761:TYR:HB2	2.15	0.46
1:A:2986:VAL:HG22	1:A:2988:LYS:H	1.81	0.46
2:E:11:ASP:OD1	2:E:12:GLY:N	2.49	0.46
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.48	0.46
1:B:2502:MET:HE2	1:B:2502:MET:N	2.31	0.46
1:B:2986:VAL:HG22	1:B:2988:LYS:H	1.81	0.46
1:B:4238:CYS:SG	1:B:4989:MET:HG2	2.56	0.46
1:D:3765:TYR:CD2	1:D:4753:HIS:HA	2.50	0.46
1:D:3996:PHE:CD2	1:D:4020:GLN:HG2	2.51	0.46
1:C:110:ARG:NH2	1:C:117:TYR:OH	2.48	0.46
1:C:4177:TYR:CE1	1:C:4199:GLU:HG3	2.49	0.46
1:A:438:ILE:HG23	1:A:518:ILE:HD11	1.98	0.46
1:A:866:HIS:CG	1:A:941:MET:HG2	2.51	0.46
1:A:2001:PRO:O	1:A:2005:GLN:HG3	2.15	0.46
1:B:194:SER:OG	1:B:195:PHE:N	2.49	0.46
1:B:1168:VAL:HG11	1:B:1176:GLU:HG2	1.98	0.46
1:B:2101:MET:HE3	1:B:2105:TRP:CE3	2.50	0.46
1:B:2512:ILE:HG21	1:B:2518:LEU:HD13	1.97	0.46
1:D:2209:GLU:HA	1:D:2212:VAL:HG22	1.97	0.46
1:D:2757:LYS:O	1:D:2761:TYR:HB2	2.15	0.46
1:C:710:ASP:OD1	1:C:713:SER:OG	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1819:VAL:O	1:C:1929:MET:HE1	2.15	0.46
1:C:2502:MET:HE2	1:C:2502:MET:N	2.31	0.46
1:C:2641:LEU:HD12	1:C:2698:MET:HE1	1.98	0.46
1:C:3734:HIS:CG	1:C:3735:LEU:H	2.34	0.46
1:A:2219:GLU:N	1:A:2219:GLU:OE2	2.49	0.46
1:A:2384:ILE:O	1:A:2387:SER:OG	2.28	0.46
1:A:2974:ILE:HG13	1:A:2975:ALA:N	2.31	0.46
1:A:3373:VAL:HG12	1:A:3398:PHE:HZ	1.81	0.46
2:F:18:ARG:NH2	2:F:50:LEU:HD22	2.22	0.46
1:B:2641:LEU:HD12	1:B:2698:MET:HE1	1.98	0.46
1:D:866:HIS:O	1:D:869:ARG:HG3	2.16	0.46
1:D:1997:GLU:O	1:D:2000:SER:OG	2.27	0.46
1:D:2974:ILE:HG13	1:D:2975:ALA:N	2.31	0.46
1:C:403:MET:HE1	1:C:451:TYR:CZ	2.50	0.46
1:C:571:SER:OG	1:C:573:GLU:OE1	2.25	0.46
1:C:1168:VAL:HG11	1:C:1176:GLU:HG2	1.98	0.46
1:C:2001:PRO:O	1:C:2005:GLN:HG3	2.15	0.46
1:C:3579:LEU:HB2	1:C:3582:ARG:HG2	1.97	0.46
1:A:110:ARG:NH2	1:A:117:TYR:OH	2.48	0.46
1:A:4238:CYS:SG	1:A:4989:MET:HG2	2.56	0.46
1:B:2219:GLU:OE2	1:B:2219:GLU:N	2.49	0.46
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.98	0.46
1:B:3373:VAL:HG12	1:B:3398:PHE:HZ	1.81	0.46
1:D:707:VAL:HG23	1:D:782:SER:HB3	1.97	0.46
1:D:957:LYS:O	1:D:960:MET:HG2	2.16	0.46
1:D:3842:LEU:HB2	1:D:3929:SER:HB2	1.97	0.46
1:C:866:HIS:CG	1:C:941:MET:HG2	2.51	0.46
1:C:2219:GLU:N	1:C:2219:GLU:OE2	2.49	0.46
1:C:2768:PHE:HB2	1:C:2857:PRO:HG2	1.98	0.46
1:C:3941:ASP:N	1:C:3941:ASP:OD1	2.46	0.46
1:A:894:GLY:HA3	1:A:903:LEU:HB3	1.98	0.46
1:A:1864:LYS:NZ	1:A:1871:PHE:O	2.45	0.46
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.98	0.46
1:A:3765:TYR:CD2	1:A:4753:HIS:HA	2.50	0.46
1:A:4686:LEU:HD23	1:A:4687:TYR:CE2	2.52	0.46
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.45	0.46
1:B:3856:LEU:HD12	1:B:3857:GLY:N	2.31	0.46
1:D:1168:VAL:HG11	1:D:1176:GLU:HG2	1.98	0.46
1:D:1819:VAL:O	1:D:1929:MET:HE1	2.15	0.46
1:D:2858:GLN:HB2	1:D:2859:PRO:HD3	1.98	0.46
1:C:350:HIS:CE1	1:C:352:ALA:HB3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2522:LEU:HD13	1:C:2582:MET:CE	2.46	0.46
1:C:2757:LYS:O	1:C:2761:TYR:HB2	2.16	0.46
1:C:3734:HIS:O	1:C:3736:GLU:HG3	2.16	0.46
1:C:3842:LEU:HB2	1:C:3929:SER:HB2	1.97	0.46
1:A:2101:MET:HE3	1:A:2105:TRP:CE3	2.50	0.45
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.52	0.45
1:B:866:HIS:O	1:B:869:ARG:HG3	2.16	0.45
1:B:3734:HIS:CG	1:B:3735:LEU:H	2.34	0.45
1:D:894:GLY:HA3	1:D:903:LEU:HB3	1.98	0.45
1:D:3269:VAL:HA	1:D:3273:THR:HB	1.98	0.45
1:D:3373:VAL:HG12	1:D:3398:PHE:HZ	1.81	0.45
1:D:3579:LEU:HB2	1:D:3582:ARG:HG2	1.97	0.45
1:D:3734:HIS:CG	1:D:3735:LEU:H	2.34	0.45
1:C:866:HIS:O	1:C:869:ARG:HG3	2.16	0.45
1:C:3996:PHE:CD2	1:C:4020:GLN:HG2	2.50	0.45
1:A:2012:PHE:CZ	1:A:2031:LEU:HD23	2.51	0.45
2:G:84:ALA:O	2:G:93:PRO:HB3	2.17	0.45
1:B:866:HIS:CG	1:B:941:MET:HG2	2.51	0.45
1:B:2527:LEU:HD11	1:B:2582:MET:HA	1.97	0.45
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.97	0.45
1:D:1226:PHE:O	1:D:1827:ARG:NH2	2.50	0.45
1:D:1469:VAL:HG13	1:D:1492:CYS:HB3	1.99	0.45
1:D:2522:LEU:HD13	1:D:2582:MET:CE	2.46	0.45
1:D:4158:PRO:HA	1:D:4161:ARG:HD3	1.97	0.45
1:C:3856:LEU:HD12	1:C:3857:GLY:N	2.31	0.45
1:A:774:ASP:OD2	1:A:1470:ARG:NH2	2.36	0.45
1:A:3734:HIS:CG	1:A:3735:LEU:H	2.34	0.45
1:A:4892:ARG:NH1	1:B:4895:GLY:O	2.44	0.45
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.52	0.45
1:D:866:HIS:CG	1:D:941:MET:HG2	2.51	0.45
1:D:2012:PHE:CZ	1:D:2031:LEU:HD23	2.51	0.45
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.48	0.45
1:D:2502:MET:N	1:D:2502:MET:HE2	2.31	0.45
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.98	0.45
1:D:3875:MET:HE3	1:D:3875:MET:HB3	1.75	0.45
1:D:4868:ASP:OD1	1:D:4870:ASP:N	2.50	0.45
1:C:3114:LYS:HE3	1:C:3123:LYS:HD2	1.97	0.45
1:C:4655:PHE:N	1:C:4796:MET:HE1	2.30	0.45
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.97	0.45
1:A:957:LYS:O	1:A:960:MET:HG2	2.16	0.45
1:A:4158:PRO:HA	1:A:4161:ARG:HD3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2758:PHE:CE2	1:B:2926:LEU:HD12	2.52	0.45
1:B:4686:LEU:HD23	1:B:4687:TYR:CE2	2.52	0.45
1:B:4827:LEU:HD21	1:C:4843:LEU:HD21	1.99	0.45
1:D:194:SER:OG	1:D:195:PHE:N	2.49	0.45
1:D:613:ALA:HB2	1:D:1676:LEU:HD12	1.98	0.45
1:C:1078:GLU:OE2	1:C:1654:SER:OG	2.19	0.45
1:C:2758:PHE:CE2	1:C:2926:LEU:HD12	2.52	0.45
1:A:194:SER:OG	1:A:195:PHE:N	2.49	0.45
1:A:1008:SER:HB3	1:A:1017:ARG:HB3	1.98	0.45
1:A:1297:PHE:CE2	1:A:1525:GLY:HA2	2.52	0.45
1:A:1469:VAL:HG13	1:A:1492:CYS:HB3	1.99	0.45
1:A:2502:MET:N	1:A:2502:MET:HE2	2.31	0.45
1:A:2754:PHE:CE2	1:A:2813:LEU:HD11	2.47	0.45
1:A:2758:PHE:CE2	1:A:2926:LEU:HD12	2.52	0.45
2:E:61:GLU:O	2:E:65:GLN:HG3	2.16	0.45
2:E:105:LYS:HZ2	2:E:105:LYS:HB3	1.82	0.45
2:G:18:ARG:NH2	2:G:50:LEU:HD22	2.22	0.45
2:G:88:PRO:HB2	1:C:1680:ARG:HH12	1.82	0.45
1:B:1297:PHE:CE2	1:B:1525:GLY:HA2	2.52	0.45
1:B:2012:PHE:CZ	1:B:2031:LEU:HD23	2.51	0.45
1:B:2208:MET:HE1	1:B:2250:MET:SD	2.57	0.45
1:B:2758:PHE:HE2	1:B:2926:LEU:HD12	1.82	0.45
1:D:2208:MET:HE1	1:D:2250:MET:SD	2.57	0.45
1:C:938:HIS:HB3	1:C:1054:GLU:HB3	1.99	0.45
1:C:1008:SER:HB3	1:C:1017:ARG:HB3	1.98	0.45
1:C:3445:TRP:NE1	1:C:3455:GLU:OE1	2.46	0.45
1:A:2641:LEU:HD12	1:A:2698:MET:HE1	1.98	0.45
1:A:3130:THR:HA	1:A:3133:THR:HG22	1.98	0.45
1:B:3535:LEU:O	1:B:3538:THR:OG1	2.28	0.45
1:B:3734:HIS:O	1:B:3736:GLU:HG3	2.16	0.45
1:B:4885:PHE:O	1:B:4889:VAL:HG22	2.17	0.45
1:D:2641:LEU:HD12	1:D:2698:MET:HE1	1.98	0.45
1:D:2758:PHE:HE2	1:D:2926:LEU:HD12	1.82	0.45
1:D:2782:ASP:N	1:D:2782:ASP:OD1	2.47	0.45
1:D:2986:VAL:HG22	1:D:2988:LYS:H	1.81	0.45
1:D:3856:LEU:HD12	1:D:3857:GLY:N	2.31	0.45
1:C:1469:VAL:HG13	1:C:1492:CYS:HB3	1.99	0.45
1:C:3762:ARG:CZ	1:C:4755:GLU:HB2	2.47	0.45
1:A:866:HIS:O	1:A:869:ARG:HG3	2.16	0.45
1:A:1226:PHE:O	1:A:1827:ARG:NH2	2.50	0.45
1:A:2758:PHE:HE2	1:A:2926:LEU:HD12	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2812:SER:OG	1:A:2882:TYR:OH	2.15	0.45
1:A:2858:GLN:HB2	1:A:2859:PRO:HD3	1.99	0.45
1:A:3856:LEU:HD12	1:A:3857:GLY:N	2.31	0.45
1:B:3539:ARG:NH1	1:B:3542:LEU:HD22	2.21	0.45
1:D:2512:ILE:HG21	1:D:2518:LEU:HD13	1.97	0.45
1:D:2768:PHE:HB2	1:D:2857:PRO:HG2	1.98	0.45
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.44	0.45
1:D:3941:ASP:OD1	1:D:3941:ASP:N	2.46	0.45
1:D:4736:ARG:NH2	1:C:4079:ASP:OD2	2.36	0.45
1:C:194:SER:OG	1:C:195:PHE:N	2.49	0.45
1:C:2986:VAL:HG22	1:C:2988:LYS:H	1.81	0.45
1:C:3373:VAL:HG12	1:C:3398:PHE:HZ	1.81	0.45
1:C:3535:LEU:O	1:C:3538:THR:OG1	2.28	0.45
1:A:710:ASP:OD1	1:A:713:SER:OG	2.26	0.45
1:A:2208:MET:HE1	1:A:2250:MET:SD	2.57	0.45
1:A:2768:PHE:HB2	1:A:2857:PRO:HG2	1.97	0.45
1:A:3762:ARG:CZ	1:A:4755:GLU:HB2	2.47	0.45
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.17	0.45
2:F:84:ALA:O	2:F:93:PRO:HB3	2.17	0.45
1:B:350:HIS:CE1	1:B:352:ALA:HB3	2.51	0.45
1:B:957:LYS:O	1:B:960:MET:HG2	2.16	0.45
1:B:2747:ILE:HD11	1:B:2814:LYS:HD3	1.99	0.45
1:B:2768:PHE:HB2	1:B:2857:PRO:HG2	1.97	0.45
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.52	0.45
1:D:3501:ASP:OD1	1:D:3501:ASP:N	2.50	0.45
1:C:1226:PHE:O	1:C:1827:ARG:NH2	2.50	0.45
1:C:2974:ILE:HG13	1:C:2975:ALA:N	2.31	0.45
1:C:3717:ASP:N	1:C:3717:ASP:OD1	2.48	0.45
1:C:4868:ASP:OD1	1:C:4870:ASP:N	2.50	0.45
1:A:350:HIS:CE1	1:A:352:ALA:HB3	2.51	0.45
2:E:11:ASP:OD1	2:E:11:ASP:C	2.60	0.45
2:H:84:ALA:O	2:H:93:PRO:HB3	2.17	0.45
1:B:894:GLY:HA3	1:B:903:LEU:HB3	1.98	0.45
1:D:350:HIS:CE1	1:D:352:ALA:HB3	2.52	0.45
1:D:2747:ILE:HD11	1:D:2814:LYS:HD3	1.99	0.45
1:D:4686:LEU:HD23	1:D:4687:TYR:CE2	2.52	0.45
1:D:4918:ILE:HD11	1:C:4888:TYR:HD1	1.82	0.45
1:C:2256:TYR:HD2	1:C:2256:TYR:O	2.00	0.45
1:C:2512:ILE:HG21	1:C:2518:LEU:HD13	1.97	0.45
1:C:2858:GLN:HB2	1:C:2859:PRO:HD3	1.98	0.45
1:C:3249:LEU:HD21	1:C:3273:THR:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4885:PHE:O	1:C:4889:VAL:HG22	2.17	0.45
1:A:365:LYS:HE3	1:A:365:LYS:HB3	1.74	0.45
1:A:2821:TRP:HH2	1:A:2877:GLN:HB3	1.82	0.45
1:A:3628:ARG:HG3	1:A:3631:ALA:HB3	1.99	0.45
1:A:4868:ASP:OD1	1:A:4870:ASP:N	2.50	0.45
2:E:11:ASP:OD1	2:E:13:ARG:N	2.32	0.45
2:E:29:MET:HE2	2:E:29:MET:HB3	1.81	0.45
1:B:1469:VAL:HG13	1:B:1492:CYS:HB3	1.99	0.45
1:B:3628:ARG:HG3	1:B:3631:ALA:HB3	1.99	0.45
1:B:3762:ARG:CZ	1:B:4755:GLU:HB2	2.47	0.45
1:D:2867:LEU:HD21	1:D:2871:LEU:HB3	1.99	0.45
1:C:144:GLU:HG3	1:C:175:SER:HB3	1.99	0.45
1:C:894:GLY:HA3	1:C:903:LEU:HB3	1.99	0.45
1:C:4686:LEU:HD23	1:C:4687:TYR:CE2	2.52	0.45
1:A:2747:ILE:HD11	1:A:2814:LYS:HD3	1.99	0.44
1:A:3269:VAL:HA	1:A:3273:THR:HB	1.98	0.44
1:B:144:GLU:HG3	1:B:175:SER:HB3	1.99	0.44
1:B:613:ALA:HB2	1:B:1676:LEU:HD12	1.99	0.44
1:B:3130:THR:HA	1:B:3133:THR:HG22	1.98	0.44
1:D:460:GLN:HB2	1:D:463:GLU:OE1	2.18	0.44
1:C:1297:PHE:CE2	1:C:1525:GLY:HA2	2.52	0.44
1:C:2208:MET:HE1	1:C:2250:MET:SD	2.57	0.44
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.52	0.44
1:C:2764:GLU:HG3	1:C:2857:PRO:HB3	2.00	0.44
1:C:3628:ARG:HG3	1:C:3631:ALA:HB3	1.99	0.44
1:A:399:GLN:HG2	1:A:403:MET:HE2	1.99	0.44
1:A:1025:ARG:H	1:A:1025:ARG:HD2	1.82	0.44
2:H:11:ASP:OD2	2:H:11:ASP:C	2.60	0.44
1:B:1226:PHE:O	1:B:1827:ARG:NH2	2.50	0.44
1:B:2823:ILE:HA	1:B:2937:VAL:HA	2.00	0.44
1:D:275:ARG:NH1	1:D:338:GLU:OE2	2.50	0.44
1:D:399:GLN:HG2	1:D:403:MET:HE2	1.99	0.44
1:D:1025:ARG:H	1:D:1025:ARG:HD2	1.82	0.44
1:C:275:ARG:NH1	1:C:338:GLU:OE2	2.50	0.44
1:C:3130:THR:HA	1:C:3133:THR:HG22	1.98	0.44
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.17	0.44
1:A:3734:HIS:O	1:A:3736:GLU:HG3	2.16	0.44
2:G:11:ASP:OD1	2:G:11:ASP:C	2.60	0.44
2:F:11:ASP:OD2	2:F:11:ASP:C	2.60	0.44
1:B:399:GLN:HG2	1:B:403:MET:HE2	1.99	0.44
1:B:1805:GLU:H	1:B:1805:GLU:CD	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2821:TRP:HD1	1:B:2939:ARG:HA	1.83	0.44
1:B:4868:ASP:OD1	1:B:4870:ASP:N	2.50	0.44
1:D:938:HIS:HB3	1:D:1054:GLU:HB3	1.99	0.44
1:D:1008:SER:HB3	1:D:1017:ARG:HB3	1.98	0.44
1:D:3445:TRP:NE1	1:D:3455:GLU:OE1	2.46	0.44
1:D:3762:ARG:CZ	1:D:4755:GLU:HB2	2.47	0.44
1:D:4843:LEU:HD21	1:C:4827:LEU:HD21	1.99	0.44
1:C:2012:PHE:CZ	1:C:2031:LEU:HD23	2.51	0.44
1:C:2623:LEU:O	1:C:2627:VAL:HG23	2.18	0.44
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.98	0.44
1:A:2821:TRP:HD1	1:A:2939:ARG:HA	1.83	0.44
1:A:3007:ASN:O	1:A:3011:THR:OG1	2.33	0.44
1:A:3137:LEU:HD21	1:A:3190:LEU:HD23	2.00	0.44
1:A:3534:MET:C	1:A:3534:MET:HE2	2.43	0.44
2:G:61:GLU:O	2:G:65:GLN:HG3	2.17	0.44
1:B:938:HIS:HB3	1:B:1054:GLU:HB3	1.99	0.44
1:B:961:MET:H	1:B:961:MET:HG2	1.58	0.44
1:B:2479:LEU:HD22	1:B:2480:GLY:H	1.83	0.44
1:B:2522:LEU:HD13	1:B:2582:MET:CE	2.46	0.44
1:B:2641:LEU:HD23	1:B:2641:LEU:HA	1.88	0.44
1:B:3249:LEU:HD21	1:B:3273:THR:HG23	1.99	0.44
1:B:3269:VAL:HA	1:B:3273:THR:HB	1.98	0.44
1:D:1823:GLY:O	1:D:1825:HIS:ND1	2.47	0.44
1:D:2256:TYR:O	1:D:2256:TYR:HD2	2.00	0.44
1:D:2758:PHE:CE2	1:D:2926:LEU:HD12	2.52	0.44
1:D:2793:PRO:HA	1:D:2855:TYR:CG	2.53	0.44
1:D:3130:THR:HA	1:D:3133:THR:HG22	1.98	0.44
1:D:4039:MET:HG2	1:D:4040:ILE:N	2.33	0.44
1:C:399:GLN:HG2	1:C:403:MET:HE2	1.99	0.44
1:C:460:GLN:HB2	1:C:463:GLU:OE1	2.18	0.44
1:C:501:ALA:O	1:C:505:GLU:HG3	2.18	0.44
1:C:613:ALA:HB2	1:C:1676:LEU:HD12	1.99	0.44
1:C:2747:ILE:HD11	1:C:2814:LYS:HD3	1.99	0.44
1:C:2755:ILE:CD1	1:C:2813:LEU:HG	2.48	0.44
1:C:2758:PHE:HE2	1:C:2926:LEU:HD12	1.82	0.44
1:A:4885:PHE:O	1:A:4889:VAL:HG22	2.17	0.44
1:B:901:LYS:HA	1:B:901:LYS:HD2	1.81	0.44
1:B:976:ARG:HA	1:B:1044:ARG:HH12	1.83	0.44
1:B:1970:GLN:HG2	1:B:3642:TYR:HA	2.00	0.44
1:B:2755:ILE:CD1	1:B:2813:LEU:HG	2.48	0.44
1:B:4039:MET:HG2	1:B:4040:ILE:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.18	0.44
1:D:1297:PHE:CE2	1:D:1525:GLY:HA2	2.52	0.44
1:D:1575:LEU:HD13	1:D:1579:MET:HE3	2.00	0.44
1:D:1970:GLN:HG2	1:D:3642:TYR:HA	2.00	0.44
1:D:2755:ILE:CD1	1:D:2813:LEU:HG	2.48	0.44
1:D:3310:ASP:HA	1:D:3350:ARG:HH12	1.83	0.44
1:D:3734:HIS:O	1:D:3736:GLU:HG3	2.16	0.44
1:C:957:LYS:O	1:C:960:MET:HG2	2.16	0.44
1:C:4039:MET:HG2	1:C:4040:ILE:N	2.33	0.44
1:A:613:ALA:HB2	1:A:1676:LEU:HD12	1.99	0.44
1:A:774:ASP:CG	1:A:1470:ARG:HH22	2.24	0.44
1:A:2522:LEU:HD13	1:A:2582:MET:CE	2.46	0.44
1:A:2755:ILE:CD1	1:A:2813:LEU:HG	2.48	0.44
1:B:2740:VAL:HG21	1:B:2819:TRP:NE1	2.33	0.44
1:B:3376:GLU:OE2	1:B:3450:ASN:ND2	2.51	0.44
1:B:3534:MET:C	1:B:3534:MET:HE2	2.43	0.44
1:B:3717:ASP:N	1:B:3717:ASP:OD1	2.48	0.44
1:D:501:ALA:O	1:D:505:GLU:HG3	2.18	0.44
1:D:2623:LEU:O	1:D:2627:VAL:HG23	2.18	0.44
1:D:3249:LEU:HD21	1:D:3273:THR:HG23	1.99	0.44
1:D:3264:THR:OG1	1:D:3265:GLU:OE1	2.31	0.44
1:C:950:LEU:HD23	1:C:950:LEU:HA	1.81	0.44
1:C:1575:LEU:HD13	1:C:1579:MET:HE3	2.00	0.44
1:C:1805:GLU:CD	1:C:1805:GLU:H	2.26	0.44
1:C:2178:MET:HE2	1:C:2178:MET:HB2	1.92	0.44
1:A:460:GLN:HB2	1:A:463:GLU:OE1	2.18	0.44
1:A:2793:PRO:HA	1:A:2855:TYR:CG	2.53	0.44
2:H:88:PRO:HB2	1:D:1680:ARG:HH12	1.82	0.44
1:B:460:GLN:HB2	1:B:463:GLU:OE1	2.18	0.44
1:B:1575:LEU:HD13	1:B:1579:MET:HE3	2.00	0.44
1:B:2974:ILE:HG13	1:B:2975:ALA:N	2.31	0.44
1:B:3443:ILE:HG12	1:B:3605:HIS:HD2	1.80	0.44
1:B:4892:ARG:NH1	1:C:4895:GLY:O	2.44	0.44
1:D:2716:ASP:OD1	1:D:2716:ASP:N	2.51	0.44
1:D:2754:PHE:CE2	1:D:2813:LEU:HD11	2.47	0.44
1:D:3628:ARG:HG3	1:D:3631:ALA:HB3	1.99	0.44
1:C:1970:GLN:HG2	1:C:3642:TYR:HA	2.00	0.44
1:C:2479:LEU:HD22	1:C:2480:GLY:H	1.83	0.44
1:C:2765:LYS:HD3	1:C:2765:LYS:HA	1.70	0.44
1:C:2821:TRP:HD1	1:C:2939:ARG:HA	1.82	0.44
1:C:2867:LEU:HD21	1:C:2871:LEU:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3501:ASP:OD1	1:C:3501:ASP:N	2.50	0.44
1:A:144:GLU:HG3	1:A:175:SER:HB3	1.99	0.44
1:A:1780:PRO:HG2	2:E:42:ARG:HD3	2.00	0.44
1:A:2764:GLU:HG3	1:A:2857:PRO:HB3	2.00	0.44
1:A:3310:ASP:HA	1:A:3350:ARG:HH12	1.83	0.44
1:A:4039:MET:HG2	1:A:4040:ILE:N	2.33	0.44
1:A:5030:LYS:HB2	1:A:5030:LYS:HE2	1.78	0.44
1:B:835:ARG:NH2	1:B:1210:SER:O	2.35	0.44
1:B:1000:ARG:HA	1:B:1003:GLN:OE1	2.18	0.44
1:B:2858:GLN:HB2	1:B:2859:PRO:HD3	1.98	0.44
1:B:3607:GLU:OE2	1:B:3608:GLN:NE2	2.48	0.44
1:B:3836:MET:HE3	1:B:3836:MET:HB2	1.82	0.44
1:D:2821:TRP:HD1	1:D:2939:ARG:HA	1.83	0.44
1:D:3534:MET:HE2	1:D:3534:MET:C	2.43	0.44
1:C:1000:ARG:HA	1:C:1003:GLN:OE1	2.18	0.44
1:C:3255:GLY:O	1:C:3258:GLU:HG3	2.18	0.44
1:C:3534:MET:C	1:C:3534:MET:HE2	2.43	0.44
1:A:3209:GLN:HG2	1:A:3210:LEU:HG	2.00	0.44
1:A:3376:GLU:OE2	1:A:3450:ASN:ND2	2.51	0.44
1:A:3835:LEU:HD22	1:A:3880:PHE:HZ	1.83	0.44
2:E:47:LYS:NZ	2:E:107:GLU:OE2	2.34	0.44
2:G:23:VAL:HG22	2:G:47:LYS:HD3	1.99	0.44
1:B:2516:ASP:N	1:B:2516:ASP:OD1	2.51	0.44
1:D:144:GLU:HG3	1:D:175:SER:HB3	2.00	0.44
1:D:2740:VAL:HG21	1:D:2819:TRP:NE1	2.33	0.44
1:D:3378:GLN:HA	1:D:3381:LEU:HD23	2.00	0.44
1:D:3590:GLU:H	1:D:3590:GLU:CD	2.26	0.44
1:C:365:LYS:HE3	1:C:365:LYS:HB3	1.74	0.44
1:C:3269:VAL:HA	1:C:3273:THR:HB	1.98	0.44
1:C:3376:GLU:OE2	1:C:3450:ASN:ND2	2.51	0.44
1:A:938:HIS:HB3	1:A:1054:GLU:HB3	1.99	0.43
1:A:950:LEU:HD23	1:A:950:LEU:HA	1.81	0.43
1:A:1575:LEU:HD13	1:A:1579:MET:HE3	2.00	0.43
1:A:1805:GLU:CD	1:A:1805:GLU:H	2.26	0.43
1:A:3249:LEU:HD21	1:A:3273:THR:HG23	1.99	0.43
1:A:3255:GLY:O	1:A:3258:GLU:HG3	2.18	0.43
1:A:4026:MET:HE2	1:A:4026:MET:HB3	1.81	0.43
1:A:4253:GLU:HG3	1:A:4557:ARG:HH21	1.83	0.43
1:B:3835:LEU:HD22	1:B:3880:PHE:HZ	1.83	0.43
1:B:4897:ILE:O	1:B:4901:ILE:HG12	2.18	0.43
1:D:403:MET:HE1	1:D:451:TYR:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1805:GLU:H	1:D:1805:GLU:CD	2.26	0.43
1:D:1943:LEU:HB2	1:D:2123:LEU:HD21	2.00	0.43
1:C:817:PRO:O	1:C:820:ARG:NH2	2.51	0.43
1:C:2694:GLU:HA	1:C:2697:ARG:NH1	2.33	0.43
1:A:501:ALA:O	1:A:505:GLU:HG3	2.18	0.43
1:A:817:PRO:O	1:A:820:ARG:NH2	2.51	0.43
1:A:2823:ILE:HA	1:A:2937:VAL:HA	2.00	0.43
1:A:3284:TRP:HB3	1:A:3305:THR:HG21	2.00	0.43
1:B:275:ARG:NH1	1:B:338:GLU:OE2	2.50	0.43
1:B:2623:LEU:O	1:B:2627:VAL:HG23	2.18	0.43
1:B:2764:GLU:HG3	1:B:2857:PRO:HB3	2.00	0.43
1:B:2765:LYS:HD3	1:B:2765:LYS:HA	1.70	0.43
1:B:2821:TRP:HB3	1:B:2937:VAL:HG22	2.01	0.43
1:B:3137:LEU:HD21	1:B:3190:LEU:HD23	2.00	0.43
1:B:4712:PRO:O	1:B:4718:LYS:NZ	2.42	0.43
1:D:140:ASP:OD1	1:D:142:THR:OG1	2.30	0.43
1:D:1465:ASP:OD1	1:D:1468:LYS:HG2	2.18	0.43
1:C:2823:ILE:HA	1:C:2937:VAL:HA	2.00	0.43
1:C:3378:GLN:HA	1:C:3381:LEU:HD23	2.00	0.43
1:C:4253:GLU:HG3	1:C:4557:ARG:HH21	1.83	0.43
1:A:1465:ASP:OD1	1:A:1468:LYS:HG2	2.18	0.43
1:A:1943:LEU:HB2	1:A:2123:LEU:HD21	2.00	0.43
1:A:2867:LEU:HD21	1:A:2871:LEU:HB3	1.99	0.43
2:F:32:ASP:OD2	2:F:34:LYS:NZ	2.47	0.43
1:B:501:ALA:O	1:B:505:GLU:HG3	2.18	0.43
1:B:2821:TRP:HH2	1:B:2877:GLN:HB3	1.83	0.43
1:B:3209:GLN:HG2	1:B:3210:LEU:HG	2.00	0.43
1:D:328:LYS:HE3	1:D:328:LYS:HB3	1.75	0.43
1:D:817:PRO:O	1:D:820:ARG:NH2	2.51	0.43
1:D:1099:GLU:CD	1:D:1125:ASN:HD21	2.26	0.43
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.17	0.43
1:D:4813:LEU:HD23	1:D:4813:LEU:HA	1.79	0.43
1:D:4897:ILE:O	1:D:4901:ILE:HG12	2.18	0.43
1:C:1943:LEU:HB2	1:C:2123:LEU:HD21	2.00	0.43
1:C:2821:TRP:HH2	1:C:2877:GLN:HB3	1.83	0.43
1:C:2821:TRP:HB3	1:C:2937:VAL:HG22	2.01	0.43
1:C:4897:ILE:O	1:C:4901:ILE:HG12	2.18	0.43
1:A:2538:THR:HG23	1:A:2541:PHE:H	1.83	0.43
1:A:2694:GLU:HA	1:A:2697:ARG:NH1	2.33	0.43
2:E:90:ILE:HG22	2:E:91:ILE:HG13	1.99	0.43
1:B:817:PRO:O	1:B:820:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:870:ILE:HG12	1:B:1051:TYR:HE2	1.84	0.43
1:B:1025:ARG:H	1:B:1025:ARG:HD2	1.82	0.43
1:B:1823:GLY:O	1:B:1825:HIS:ND1	2.47	0.43
1:B:2256:TYR:HD2	1:B:2256:TYR:O	2.00	0.43
1:B:4888:TYR:HD1	1:C:4918:ILE:HD11	1.83	0.43
1:D:664:PHE:HB3	1:D:811:CYS:SG	2.59	0.43
1:D:2479:LEU:HD22	1:D:2480:GLY:H	1.83	0.43
1:C:1465:ASP:OD1	1:C:1468:LYS:HG2	2.18	0.43
1:C:4184:MET:HE2	1:C:4184:MET:HB2	1.92	0.43
1:A:870:ILE:HG12	1:A:1051:TYR:HE2	1.84	0.43
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.18	0.43
1:A:2256:TYR:O	1:A:2256:TYR:HD2	2.00	0.43
1:A:2430:ILE:HB	1:A:2502:MET:HE1	2.00	0.43
1:A:2479:LEU:HD22	1:A:2480:GLY:H	1.83	0.43
1:A:3823:LYS:HD3	1:A:3823:LYS:HA	1.83	0.43
1:B:2867:LEU:HD21	1:B:2871:LEU:HB3	1.99	0.43
1:B:3255:GLY:O	1:B:3258:GLU:HG3	2.18	0.43
1:B:3875:MET:HE3	1:B:3875:MET:HB3	1.76	0.43
1:D:2821:TRP:HB3	1:D:2937:VAL:HG22	2.00	0.43
1:D:3209:GLN:HG2	1:D:3210:LEU:HG	2.00	0.43
1:D:3255:GLY:O	1:D:3258:GLU:HG3	2.18	0.43
1:D:3880:PHE:HA	1:D:3883:ASP:OD2	2.19	0.43
1:D:4023:MET:HE2	1:D:4023:MET:HB3	1.86	0.43
1:D:4885:PHE:O	1:D:4889:VAL:HG22	2.17	0.43
1:C:976:ARG:HA	1:C:1044:ARG:HH12	1.83	0.43
1:C:1025:ARG:H	1:C:1025:ARG:HD2	1.82	0.43
1:C:3284:TRP:HB3	1:C:3305:THR:HG21	2.00	0.43
1:A:2516:ASP:OD1	1:A:2516:ASP:N	2.51	0.43
1:A:2740:VAL:HG21	1:A:2819:TRP:NE1	2.33	0.43
1:A:3183:VAL:O	1:A:3187:ARG:HG3	2.19	0.43
1:A:3501:ASP:N	1:A:3501:ASP:OD1	2.50	0.43
1:A:3688:GLU:C	1:A:3690:VAL:H	2.27	0.43
2:F:48:PHE:HZ	2:F:63:VAL:HG21	1.84	0.43
2:F:88:PRO:HB2	1:B:1680:ARG:HH12	1.83	0.43
1:B:1231[B]:GLN:H	1:B:1231[B]:GLN:HG3	1.56	0.43
1:B:1465:ASP:OD1	1:B:1468:LYS:HG2	2.18	0.43
1:B:3310:ASP:HA	1:B:3350:ARG:HH12	1.83	0.43
1:B:3705:PHE:HA	1:B:3708:THR:HG22	2.01	0.43
1:B:3880:PHE:HA	1:B:3883:ASP:OD2	2.19	0.43
1:B:4067:LYS:NZ	1:B:4102:GLN:O	2.51	0.43
1:B:4093:PHE:CE2	1:B:4097:MET:HE3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.17	0.43
1:B:4253:GLU:HG3	1:B:4557:ARG:NH2	2.34	0.43
1:D:416:LYS:HE3	1:D:416:LYS:HB2	1.84	0.43
1:D:976:ARG:HA	1:D:1044:ARG:HH12	1.83	0.43
1:D:2516:ASP:OD1	1:D:2516:ASP:N	2.51	0.43
1:D:2694:GLU:HA	1:D:2697:ARG:NH1	2.33	0.43
1:D:2764:GLU:HG3	1:D:2857:PRO:HB3	2.00	0.43
1:D:4961:CYS:HB3	1:D:4983:HIS:CE1	2.54	0.43
1:C:403:MET:HE1	1:C:451:TYR:CE1	2.53	0.43
1:C:664:PHE:HB3	1:C:811:CYS:SG	2.59	0.43
1:C:1099:GLU:CD	1:C:1125:ASN:HD21	2.26	0.43
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.18	0.43
1:C:2793:PRO:HA	1:C:2855:TYR:CG	2.53	0.43
1:C:3137:LEU:HD21	1:C:3190:LEU:HD23	2.00	0.43
1:C:4253:GLU:HG3	1:C:4557:ARG:NH2	2.34	0.43
1:A:275:ARG:NH1	1:A:338:GLU:OE2	2.50	0.43
1:A:1970:GLN:HG2	1:A:3642:TYR:HA	2.00	0.43
1:A:2462:PRO:HB2	1:A:2464:ASP:OD1	2.19	0.43
1:A:2600:ARG:O	1:A:2604:GLU:HG3	2.19	0.43
1:A:2677:LYS:HB3	1:A:2677:LYS:HE2	1.85	0.43
1:A:2821:TRP:HB3	1:A:2937:VAL:HG22	2.00	0.43
1:A:3384:LYS:HD2	1:A:3386:GLU:HB3	2.01	0.43
1:A:4895:GLY:O	1:D:4892:ARG:NH1	2.44	0.43
1:A:4918:ILE:CD1	1:D:4888:TYR:HD1	2.31	0.43
2:G:11:ASP:OD1	2:G:13:ARG:N	2.32	0.43
1:B:2430:ILE:HB	1:B:2502:MET:HE1	2.00	0.43
1:B:2600:ARG:O	1:B:2604:GLU:HG3	2.19	0.43
1:B:2793:PRO:HA	1:B:2855:TYR:CG	2.53	0.43
1:B:3378:GLN:HA	1:B:3381:LEU:HD23	2.00	0.43
1:B:4961:CYS:HB3	1:B:4983:HIS:CE1	2.54	0.43
1:D:196:MET:SD	1:D:196:MET:N	2.92	0.43
1:D:1249:PRO:HA	1:D:1250:PRO:HD3	1.95	0.43
1:D:2462:PRO:HB2	1:D:2464:ASP:OD1	2.19	0.43
1:D:3183:VAL:O	1:D:3187:ARG:HG3	2.19	0.43
1:D:3284:TRP:HB3	1:D:3305:THR:HG21	2.00	0.43
1:D:4638:TYR:O	1:D:4641:PRO:HD2	2.19	0.43
1:C:416:LYS:HE3	1:C:416:LYS:HB2	1.84	0.43
1:C:2244:ARG:H	1:C:3861:GLU:CD	2.27	0.43
1:C:2600:ARG:O	1:C:2604:GLU:HG3	2.19	0.43
1:C:2740:VAL:HG21	1:C:2819:TRP:NE1	2.33	0.43
1:A:2238:TYR:O	1:A:2242:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3880:PHE:HA	1:A:3883:ASP:OD2	2.19	0.43
2:E:84:ALA:O	2:E:93:PRO:HB3	2.17	0.43
2:H:42:ARG:HD3	1:D:1780:PRO:HG2	2.01	0.43
2:H:57:ARG:HD3	2:H:80:TYR:HA	2.00	0.43
2:F:11:ASP:OD2	2:F:13:ARG:N	2.35	0.43
1:B:664:PHE:HB3	1:B:811:CYS:SG	2.59	0.43
1:B:1424:PRO:HA	1:B:1427:ILE:HG22	2.01	0.43
1:B:1864:LYS:NZ	1:B:1871:PHE:O	2.45	0.43
1:B:1943:LEU:HB2	1:B:2123:LEU:HD21	2.00	0.43
1:B:2694:GLU:HA	1:B:2697:ARG:NH1	2.33	0.43
1:B:2768:PHE:O	1:B:2771:ILE:HG22	2.19	0.43
1:B:3462:ASN:OD1	1:B:3462:ASN:N	2.52	0.43
1:B:3501:ASP:N	1:B:3501:ASP:OD1	2.50	0.43
1:B:3590:GLU:H	1:B:3590:GLU:CD	2.26	0.43
1:D:1447:CYS:HB3	1:D:1555:LEU:HB3	2.00	0.43
1:D:2538:THR:HG23	1:D:2541:PHE:H	1.83	0.43
1:D:3112:LEU:HA	1:D:3112:LEU:HD13	1.85	0.43
1:D:3137:LEU:HD21	1:D:3190:LEU:HD23	2.00	0.43
1:D:4253:GLU:HG3	1:D:4557:ARG:HH21	1.83	0.43
1:D:4627:MET:HE3	1:D:4627:MET:N	2.30	0.43
1:C:3590:GLU:CD	1:C:3590:GLU:H	2.26	0.43
1:C:3880:PHE:HA	1:C:3883:ASP:OD2	2.19	0.43
1:A:196:MET:SD	1:A:196:MET:N	2.92	0.43
1:A:664:PHE:HB3	1:A:811:CYS:SG	2.59	0.43
1:A:924:MET:O	1:A:928:THR:HG23	2.19	0.43
1:A:3478:MET:O	1:A:3478:MET:SD	2.77	0.43
1:A:3695:PRO:HB3	1:A:3699:HIS:HB3	2.01	0.43
1:A:4093:PHE:CE2	1:A:4097:MET:HE3	2.54	0.43
1:A:4840:THR:HG22	1:D:4826:ILE:HD13	2.00	0.43
2:H:32:ASP:OD2	2:H:34:LYS:NZ	2.45	0.43
2:F:44:LYS:HD2	2:F:44:LYS:C	2.44	0.43
1:B:196:MET:N	1:B:196:MET:SD	2.92	0.43
1:B:403:MET:HE1	1:B:451:TYR:CE1	2.53	0.43
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.18	0.43
1:B:3284:TRP:HB3	1:B:3305:THR:HG21	2.00	0.43
1:D:880:GLU:HG3	1:D:910:PHE:HB3	2.01	0.43
1:D:1658:ASP:OD1	1:D:1658:ASP:N	2.52	0.43
1:D:2430:ILE:HB	1:D:2502:MET:HE1	2.00	0.43
1:D:3376:GLU:OE2	1:D:3450:ASN:ND2	2.51	0.43
1:D:3835:LEU:HD22	1:D:3880:PHE:HZ	1.83	0.43
1:C:1424:PRO:HA	1:C:1427:ILE:HG22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1447:CYS:HB3	1:C:1555:LEU:HB3	2.00	0.43
1:C:1748:PHE:HB2	1:C:1758:ARG:NH2	2.34	0.43
1:C:2238:TYR:O	1:C:2242:ILE:HG13	2.19	0.43
1:C:2527:LEU:HD12	1:C:2527:LEU:HA	1.87	0.43
1:C:3382:GLU:OE1	1:C:3382:GLU:N	2.52	0.43
1:C:3525:CYS:SG	1:C:3599:VAL:HG21	2.59	0.43
1:C:3835:LEU:HD22	1:C:3880:PHE:HZ	1.83	0.43
1:C:4243:PHE:CE2	1:C:4247:ILE:HD11	2.54	0.43
1:A:738:LEU:HD23	1:A:738:LEU:HA	1.86	0.43
1:A:976:ARG:HA	1:A:1044:ARG:HH12	1.83	0.43
1:A:1000:ARG:HA	1:A:1003:GLN:OE1	2.18	0.43
1:A:1055:PRO:HA	1:A:1056:PRO:HD3	1.95	0.43
1:A:1099:GLU:CD	1:A:1125:ASN:HD21	2.26	0.43
1:A:3378:GLN:HA	1:A:3381:LEU:HD23	2.00	0.43
1:B:2527:LEU:HA	1:B:2527:LEU:HD12	1.87	0.43
1:B:3384:LYS:HD2	1:B:3386:GLU:HB3	2.01	0.43
1:D:961:MET:HE2	1:D:965:TYR:O	2.19	0.43
1:D:3634:ALA:HA	1:D:3637:ARG:HG2	2.01	0.43
1:C:81:MET:C	1:C:81:MET:HE2	2.44	0.43
1:C:2008:MET:HE1	1:C:2020:ASP:OD2	2.19	0.43
1:C:3689:GLU:C	1:C:3691:GLU:H	2.27	0.43
1:C:4961:CYS:HB3	1:C:4983:HIS:CE1	2.54	0.43
1:A:664:PHE:CZ	1:A:779:PRO:HB3	2.54	0.42
1:A:880:GLU:HG3	1:A:910:PHE:HB3	2.01	0.42
1:A:1575:LEU:HD23	1:A:1575:LEU:HA	1.84	0.42
1:A:1748:PHE:HB2	1:A:1758:ARG:NH2	2.34	0.42
1:A:2604:GLU:HG2	1:A:2639:MET:HG3	2.01	0.42
1:A:3277:LEU:HD23	1:A:3277:LEU:HA	1.90	0.42
1:A:3590:GLU:CD	1:A:3590:GLU:H	2.26	0.42
2:F:57:ARG:HE	2:F:57:ARG:HB2	1.56	0.42
1:B:2462:PRO:HB2	1:B:2464:ASP:OD1	2.19	0.42
1:B:2604:GLU:HG2	1:B:2639:MET:HG3	2.01	0.42
1:B:3689:GLU:C	1:B:3691:GLU:H	2.27	0.42
1:B:4638:TYR:O	1:B:4641:PRO:HD2	2.19	0.42
1:D:924:MET:O	1:D:928:THR:HG23	2.19	0.42
1:D:1000:ARG:HA	1:D:1003:GLN:OE1	2.18	0.42
1:D:2238:TYR:O	1:D:2242:ILE:HG13	2.19	0.42
1:D:2604:GLU:HG2	1:D:2639:MET:HG3	2.01	0.42
1:D:2641:LEU:HA	1:D:2641:LEU:HD23	1.88	0.42
1:D:4253:GLU:HG3	1:D:4557:ARG:NH2	2.34	0.42
1:D:4961:CYS:HA	1:D:5023:PRO:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:961:MET:HE2	1:C:965:TYR:O	2.19	0.42
1:C:2516:ASP:OD1	1:C:2516:ASP:N	2.51	0.42
1:C:2599:GLN:O	1:C:2603:ILE:HG13	2.19	0.42
1:A:81:MET:C	1:A:81:MET:HE2	2.44	0.42
1:A:403:MET:HE1	1:A:451:TYR:CE1	2.53	0.42
1:A:2599:GLN:O	1:A:2603:ILE:HG13	2.19	0.42
1:A:2881:ASN:HA	1:A:2884:ASN:HD21	1.83	0.42
1:A:4253:GLU:HG3	1:A:4557:ARG:NH2	2.34	0.42
1:A:4570:ALA:O	1:A:4574:ASN:ND2	2.44	0.42
1:A:4627:MET:HE3	1:A:4627:MET:N	2.30	0.42
1:B:81:MET:C	1:B:81:MET:HE2	2.44	0.42
1:B:1299:GLN:NE2	1:B:1545:ASN:OD1	2.53	0.42
1:B:1926:LEU:O	1:B:1929:MET:HB2	2.19	0.42
1:B:2310:CYS:O	1:B:2314:LEU:HD22	2.19	0.42
1:B:2765:LYS:NZ	1:B:2860:PRO:HA	2.23	0.42
1:B:3132:THR:HG22	1:B:3137:LEU:HD13	2.01	0.42
1:B:3944:GLU:OE1	1:B:3946:GLN:N	2.50	0.42
1:D:2008:MET:HE1	1:D:2020:ASP:OD2	2.19	0.42
1:D:2768:PHE:O	1:D:2771:ILE:HG22	2.19	0.42
1:D:2785:LEU:C	1:D:2786:LYS:HG3	2.44	0.42
1:D:2821:TRP:HH2	1:D:2877:GLN:HB3	1.82	0.42
1:D:2823:ILE:HA	1:D:2937:VAL:HA	2.00	0.42
1:D:4243:PHE:CE2	1:D:4247:ILE:HD11	2.54	0.42
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.43	0.42
1:C:2604:GLU:HG2	1:C:2639:MET:HG3	2.01	0.42
1:C:3209:GLN:HG2	1:C:3210:LEU:HG	2.00	0.42
1:C:3310:ASP:HA	1:C:3350:ARG:HH12	1.83	0.42
1:C:3478:MET:O	1:C:3478:MET:SD	2.77	0.42
1:C:3634:ALA:HA	1:C:3637:ARG:HG2	2.01	0.42
1:A:140:ASP:OD1	1:A:142:THR:OG1	2.30	0.42
1:A:328:LYS:HE3	1:A:328:LYS:HB3	1.75	0.42
1:A:961:MET:HE2	1:A:965:TYR:O	2.19	0.42
1:A:4961:CYS:HB3	1:A:4983:HIS:CE1	2.54	0.42
1:B:4253:GLU:HG3	1:B:4557:ARG:HH21	1.83	0.42
1:D:471:LEU:HA	1:D:474:ARG:HE	1.85	0.42
1:D:901:LYS:HD2	1:D:901:LYS:HA	1.81	0.42
1:D:1299:GLN:NE2	1:D:1545:ASN:OD1	2.53	0.42
1:D:2599:GLN:O	1:D:2603:ILE:HG13	2.19	0.42
1:D:2765:LYS:HD3	1:D:2765:LYS:HA	1.70	0.42
1:D:2990:PRO:HG2	1:D:2991:HIS:CE1	2.55	0.42
1:D:3062:PRO:HA	1:D:3065:VAL:HG22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3462:ASN:OD1	1:D:3462:ASN:N	2.52	0.42
1:D:3999:MET:HE3	1:D:3999:MET:HB3	1.82	0.42
1:C:471:LEU:HA	1:C:474:ARG:HE	1.85	0.42
1:C:2102:VAL:HG13	1:C:2120:MET:HE2	2.01	0.42
1:C:2263:ILE:HD12	1:C:2263:ILE:HA	1.92	0.42
1:C:2462:PRO:HB2	1:C:2464:ASP:OD1	2.19	0.42
1:C:2768:PHE:O	1:C:2771:ILE:HG22	2.19	0.42
1:C:3462:ASN:OD1	1:C:3462:ASN:N	2.52	0.42
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.45	0.42
1:A:648:ILE:HD13	1:A:811:CYS:HB3	2.01	0.42
1:A:667:MET:HE3	1:A:743:VAL:HG22	2.01	0.42
1:A:1037:ASP:O	1:A:1041:GLN:HG2	2.20	0.42
1:A:1658:ASP:N	1:A:1658:ASP:OD1	2.52	0.42
1:A:2527:LEU:HD12	1:A:2527:LEU:HA	1.87	0.42
1:A:3705:PHE:HA	1:A:3708:THR:HG22	2.01	0.42
1:A:4097:MET:HE2	1:A:4097:MET:HB2	1.71	0.42
1:A:4638:TYR:O	1:A:4641:PRO:HD2	2.19	0.42
2:H:47:LYS:NZ	2:H:107:GLU:OE2	2.30	0.42
2:F:57:ARG:HD3	2:F:80:TYR:HA	2.01	0.42
1:B:879:HIS:NE2	1:B:921:ASN:HB2	2.35	0.42
1:B:1447:CYS:HB3	1:B:1555:LEU:HB3	2.00	0.42
1:B:2238:TYR:O	1:B:2242:ILE:HG13	2.19	0.42
1:B:2998:PHE:HA	1:B:3002:LEU:HD23	2.02	0.42
1:B:3062:PRO:HA	1:B:3065:VAL:HG22	2.02	0.42
1:D:2102:VAL:HG13	1:D:2120:MET:HE2	2.01	0.42
1:D:2600:ARG:O	1:D:2604:GLU:HG3	2.19	0.42
1:D:3594:ARG:HA	1:D:3594:ARG:NH1	2.35	0.42
1:D:3688:GLU:C	1:D:3690:VAL:H	2.27	0.42
1:C:1930:LYS:HE2	1:C:1930:LYS:HB2	1.91	0.42
1:C:3688:GLU:C	1:C:3690:VAL:H	2.27	0.42
1:C:3999:MET:HE3	1:C:3999:MET:HB3	1.82	0.42
1:C:4134:GLU:HB3	1:C:4135:PRO:HD3	2.02	0.42
1:A:188:GLU:H	1:A:188:GLU:CD	2.28	0.42
1:A:922:LEU:HD13	1:A:922:LEU:HA	1.89	0.42
1:A:1447:CYS:HB3	1:A:1555:LEU:HB3	2.00	0.42
1:A:2623:LEU:O	1:A:2627:VAL:HG23	2.18	0.42
1:A:2990:PRO:HG2	1:A:2991:HIS:CE1	2.55	0.42
1:A:3367:LYS:HE3	1:A:3367:LYS:HB2	1.86	0.42
1:A:4897:ILE:O	1:A:4901:ILE:HG12	2.18	0.42
2:G:42:ARG:HD3	1:C:1780:PRO:HG2	2.02	0.42
1:B:336:PRO:HA	1:B:337:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:961:MET:HE2	1:B:965:TYR:O	2.19	0.42
1:B:1055:PRO:HA	1:B:1056:PRO:HD3	1.95	0.42
1:B:1099:GLU:CD	1:B:1125:ASN:HD21	2.26	0.42
1:B:1999:ARG:HG3	1:B:3635:CYS:C	2.45	0.42
1:B:2102:VAL:HG13	1:B:2120:MET:HE2	2.01	0.42
1:B:2307:LEU:HD21	1:B:2362:GLU:HB2	2.02	0.42
1:B:3183:VAL:O	1:B:3187:ARG:HG3	2.19	0.42
1:B:3688:GLU:C	1:B:3690:VAL:H	2.27	0.42
1:D:1926:LEU:O	1:D:1929:MET:HB2	2.19	0.42
1:D:1999:ARG:HG3	1:D:3635:CYS:C	2.45	0.42
1:D:2020:ASP:OD1	1:D:2020:ASP:N	2.42	0.42
1:D:3695:PRO:HB3	1:D:3699:HIS:HB3	2.01	0.42
1:C:640:TYR:CE2	1:C:1636:MET:HB3	2.55	0.42
1:C:709:ASP:OD1	1:C:725:HIS:ND1	2.48	0.42
1:C:1926:LEU:O	1:C:1929:MET:HB2	2.19	0.42
1:C:2430:ILE:HB	1:C:2502:MET:HE1	2.00	0.42
1:C:2785:LEU:C	1:C:2786:LYS:HG3	2.44	0.42
1:C:3062:PRO:HA	1:C:3065:VAL:HG22	2.02	0.42
1:C:4675:LYS:HG3	1:C:4715:TYR:CE1	2.55	0.42
1:C:4961:CYS:HA	1:C:5023:PRO:O	2.19	0.42
1:A:13:PHE:CE1	1:A:164:ARG:HG2	2.55	0.42
1:A:835:ARG:NH2	1:A:1210:SER:O	2.35	0.42
1:A:1926:LEU:O	1:A:1929:MET:HB2	2.19	0.42
1:A:2785:LEU:C	1:A:2786:LYS:HG3	2.44	0.42
1:A:4675:LYS:HG3	1:A:4715:TYR:CE1	2.55	0.42
1:B:788:LYS:HB2	1:B:788:LYS:HE3	1.82	0.42
1:B:924:MET:O	1:B:928:THR:HG23	2.19	0.42
1:B:1748:PHE:HB2	1:B:1758:ARG:NH2	2.34	0.42
1:B:2008:MET:HE1	1:B:2020:ASP:OD2	2.19	0.42
1:B:3525:CYS:SG	1:B:3599:VAL:HG21	2.59	0.42
1:B:4243:PHE:CE2	1:B:4247:ILE:HD11	2.54	0.42
1:B:4675:LYS:HG3	1:B:4715:TYR:CE1	2.55	0.42
1:D:1424:PRO:HA	1:D:1427:ILE:HG22	2.01	0.42
1:D:3478:MET:SD	1:D:3478:MET:O	2.77	0.42
1:D:3525:CYS:SG	1:D:3599:VAL:HG21	2.59	0.42
1:D:4093:PHE:CE2	1:D:4097:MET:HE3	2.54	0.42
1:D:4675:LYS:HG3	1:D:4715:TYR:CE1	2.55	0.42
1:C:2150:GLU:H	1:C:2150:GLU:CD	2.27	0.42
1:C:3183:VAL:O	1:C:3187:ARG:HG3	2.19	0.42
1:C:3384:LYS:HD2	1:C:3386:GLU:HB3	2.01	0.42
1:C:3594:ARG:HA	1:C:3594:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3944:GLU:H	1:C:3944:GLU:HG3	1.74	0.42
1:C:4093:PHE:CE2	1:C:4097:MET:HE3	2.54	0.42
1:A:640:TYR:CE2	1:A:1636:MET:HB3	2.55	0.42
1:A:970:LEU:HG	1:A:972:LEU:HD21	2.02	0.42
1:A:2008:MET:HE1	1:A:2020:ASP:OD2	2.19	0.42
1:A:2998:PHE:HA	1:A:3002:LEU:HD23	2.01	0.42
1:A:3062:PRO:HA	1:A:3065:VAL:HG22	2.02	0.42
1:A:4961:CYS:HA	1:A:5023:PRO:O	2.19	0.42
1:B:2694:GLU:HA	1:B:2697:ARG:HH12	1.85	0.42
1:B:3478:MET:SD	1:B:3478:MET:O	2.77	0.42
1:B:4047:MET:HE3	1:B:4047:MET:HB3	1.78	0.42
1:D:1032:LYS:HE3	1:D:1032:LYS:HB2	1.88	0.42
1:D:1037:ASP:O	1:D:1041:GLN:HG2	2.20	0.42
1:D:2307:LEU:HD21	1:D:2362:GLU:HB2	2.02	0.42
1:D:2624:ARG:O	1:D:2627:VAL:HB	2.20	0.42
1:D:3384:LYS:HD2	1:D:3386:GLU:HB3	2.01	0.42
1:C:196:MET:N	1:C:196:MET:SD	2.92	0.42
1:C:664:PHE:CZ	1:C:779:PRO:HB3	2.54	0.42
1:C:870:ILE:HG12	1:C:1051:TYR:HE2	1.84	0.42
1:C:924:MET:O	1:C:928:THR:HG23	2.19	0.42
1:C:2998:PHE:HA	1:C:3002:LEU:HD23	2.01	0.42
1:C:3705:PHE:HA	1:C:3708:THR:HG22	2.01	0.42
1:C:4638:TYR:O	1:C:4641:PRO:HD2	2.19	0.42
1:A:2765:LYS:HD3	1:A:2765:LYS:HA	1.70	0.42
1:A:3462:ASN:OD1	1:A:3462:ASN:N	2.52	0.42
1:A:4902:GLU:O	1:A:4913:ARG:NH1	2.52	0.42
1:B:648:ILE:HD13	1:B:811:CYS:HB3	2.02	0.42
1:B:2538:THR:HG23	1:B:2541:PHE:H	1.83	0.42
1:B:2816:MET:HB3	1:B:2816:MET:HE2	1.66	0.42
1:D:640:TYR:CE2	1:D:1636:MET:HB3	2.55	0.42
1:D:870:ILE:HG12	1:D:1051:TYR:HE2	1.84	0.42
1:D:937:CYS:N	1:D:1056:PRO:HG3	2.35	0.42
1:D:970:LEU:HG	1:D:972:LEU:HD21	2.02	0.42
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.20	0.42
1:D:4060:LYS:HD2	1:D:4060:LYS:HA	1.91	0.42
1:C:13:PHE:CE1	1:C:164:ARG:HG2	2.55	0.42
1:C:970:LEU:HG	1:C:972:LEU:HD21	2.02	0.42
1:C:1055:PRO:HA	1:C:1056:PRO:HD3	1.95	0.42
1:C:2307:LEU:HD21	1:C:2362:GLU:HB2	2.02	0.42
1:C:2310:CYS:O	1:C:2314:LEU:HD22	2.19	0.42
1:C:2538:THR:HG23	1:C:2541:PHE:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2694:GLU:HA	1:C:2697:ARG:HH12	1.85	0.42
1:C:2907:PRO:HB2	1:C:2910:THR:HG23	2.02	0.42
1:C:4851:TYR:HD1	1:C:4916:PHE:CE1	2.38	0.42
1:A:471:LEU:HA	1:A:474:ARG:HE	1.85	0.42
1:A:901:LYS:HA	1:A:901:LYS:HD2	1.82	0.42
1:A:1424:PRO:HA	1:A:1427:ILE:HG22	2.01	0.42
1:A:1864:LYS:HE3	1:A:1872:THR:HA	2.02	0.42
1:A:2256:TYR:O	1:A:2259:GLU:HG3	2.20	0.42
1:A:2801:ASP:HA	1:A:2804:ILE:HG12	2.02	0.42
1:A:2907:PRO:HB2	1:A:2910:THR:HG23	2.02	0.42
1:A:3525:CYS:SG	1:A:3599:VAL:HG21	2.59	0.42
1:A:4790:LEU:HD23	1:A:4790:LEU:HA	1.90	0.42
2:H:54:GLU:OE1	2:H:55:VAL:HG13	2.20	0.42
1:B:188:GLU:H	1:B:188:GLU:CD	2.28	0.42
1:B:664:PHE:CZ	1:B:779:PRO:HB3	2.54	0.42
1:B:2150:GLU:H	1:B:2150:GLU:CD	2.27	0.42
1:B:2907:PRO:HB2	1:B:2910:THR:HG23	2.02	0.42
1:B:2912:THR:HG23	1:B:2914:LYS:HG3	2.02	0.42
1:B:3382:GLU:OE1	1:B:3382:GLU:N	2.52	0.42
1:B:4023:MET:HE2	1:B:4023:MET:HB3	1.86	0.42
1:B:4134:GLU:HB3	1:B:4135:PRO:HD3	2.02	0.42
1:B:4874:MET:HE3	1:B:4874:MET:HB3	1.90	0.42
1:D:774:ASP:CG	1:D:1470:ARG:HH22	2.24	0.42
1:D:879:HIS:NE2	1:D:921:ASN:HB2	2.35	0.42
1:D:1748:PHE:HB2	1:D:1758:ARG:NH2	2.34	0.42
1:D:2881:ASN:HA	1:D:2884:ASN:HD21	1.83	0.42
1:D:3852:LYS:HE3	1:D:3852:LYS:HB3	1.91	0.42
1:C:1299:GLN:NE2	1:C:1545:ASN:OD1	2.53	0.42
1:A:69:LEU:HD13	1:A:101:LEU:HD11	2.02	0.42
1:A:651:GLY:N	1:A:658:GLN:OE1	2.53	0.42
1:A:2574:HIS:CD2	1:A:2574:HIS:H	2.38	0.42
1:A:3607:GLU:OE2	1:A:3608:GLN:NE2	2.48	0.42
1:A:3621:HIS:O	1:A:3622:LYS:HG3	2.20	0.42
1:A:3762:ARG:HD3	1:A:4754:ASN:HA	2.02	0.42
1:A:4091:LYS:HE2	1:A:4091:LYS:HB2	1.89	0.42
1:A:4243:PHE:CE2	1:A:4247:ILE:HD11	2.54	0.42
1:A:4735:GLU:H	1:A:4735:GLU:CD	2.28	0.42
1:B:13:PHE:CE1	1:B:164:ARG:HG2	2.55	0.42
1:B:471:LEU:HA	1:B:474:ARG:HE	1.85	0.42
1:B:640:TYR:CE2	1:B:1636:MET:HB3	2.55	0.42
1:B:2191:PHE:CE2	1:B:2242:ILE:HD11	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3594:ARG:HA	1:B:3594:ARG:NH1	2.35	0.42
1:B:3695:PRO:HB3	1:B:3699:HIS:HB3	2.01	0.42
1:D:13:PHE:CE1	1:D:164:ARG:HG2	2.55	0.42
1:D:81:MET:HE2	1:D:81:MET:C	2.44	0.42
1:D:738:LEU:HA	1:D:738:LEU:HD23	1.86	0.42
1:D:1668:ARG:HG3	1:D:1671:ARG:NH2	2.35	0.42
1:D:2310:CYS:O	1:D:2314:LEU:HD22	2.19	0.42
1:D:4558:ASN:HB3	1:D:4561:THR:OG1	2.20	0.42
1:C:1488:LYS:HE3	1:C:1488:LYS:HB2	1.85	0.42
1:C:1999:ARG:HG3	1:C:3635:CYS:C	2.45	0.42
1:C:3132:THR:HG22	1:C:3137:LEU:HD13	2.01	0.42
1:C:3308:THR:H	1:C:3311:HIS:HD1	1.67	0.42
1:C:3695:PRO:HB3	1:C:3699:HIS:HB3	2.01	0.42
1:C:4148:THR:HG21	1:C:4180:ARG:HH21	1.85	0.42
1:C:5030:LYS:HB2	1:C:5030:LYS:HE2	1.78	0.42
1:A:788:LYS:HE3	1:A:788:LYS:HB2	1.82	0.41
1:A:805:PRO:HG2	1:A:808:TYR:CD1	2.55	0.41
1:A:1999:ARG:HG3	1:A:3635:CYS:C	2.45	0.41
1:A:2624:ARG:O	1:A:2627:VAL:HB	2.20	0.41
1:A:2768:PHE:O	1:A:2771:ILE:HG22	2.19	0.41
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.85	0.41
1:A:3382:GLU:OE1	1:A:3382:GLU:N	2.52	0.41
1:A:3731:LYS:HA	1:A:3734:HIS:CE1	2.55	0.41
1:A:4047:MET:HE3	1:A:4047:MET:HB3	1.78	0.41
1:B:176:SER:HG	1:B:178:ARG:HH11	1.61	0.41
1:B:3367:LYS:HE3	1:B:3367:LYS:HB2	1.86	0.41
1:B:4148:THR:HG21	1:B:4180:ARG:HH21	1.85	0.41
1:B:4184:MET:HE2	1:B:4184:MET:HB2	1.92	0.41
1:D:709:ASP:OD1	1:D:725:HIS:ND1	2.48	0.41
1:D:2150:GLU:H	1:D:2150:GLU:CD	2.27	0.41
1:D:3006:ILE:HG23	1:D:3010:PHE:CD2	2.55	0.41
1:D:3342:ALA:O	1:D:3345:ILE:HG12	2.21	0.41
1:D:4148:THR:HG21	1:D:4180:ARG:HH21	1.85	0.41
1:D:4917:ASP:OD2	1:C:4888:TYR:OH	2.25	0.41
1:C:2793:PRO:O	1:C:2797:PHE:N	2.53	0.41
1:C:4067:LYS:NZ	1:C:4102:GLN:O	2.51	0.41
1:C:4558:ASN:HB3	1:C:4561:THR:OG1	2.20	0.41
1:A:1299:GLN:NE2	1:A:1545:ASN:OD1	2.53	0.41
1:A:2019:GLU:H	1:A:2019:GLU:CD	2.28	0.41
1:A:2765:LYS:HZ1	1:A:2860:PRO:HA	1.85	0.41
1:A:3132:THR:HG22	1:A:3137:LEU:HD13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3689:GLU:C	1:A:3691:GLU:H	2.27	0.41
1:A:3933:PHE:HD2	1:A:3951:PHE:CE2	2.38	0.41
1:A:4558:ASN:HB3	1:A:4561:THR:OG1	2.20	0.41
2:G:13:ARG:HB2	2:G:13:ARG:CZ	2.51	0.41
2:F:42:ARG:HD3	1:B:1780:PRO:HG2	2.02	0.41
1:B:667:MET:HE3	1:B:743:VAL:HG22	2.01	0.41
1:B:880:GLU:HG3	1:B:910:PHE:HB3	2.01	0.41
1:B:937:CYS:N	1:B:1056:PRO:HG3	2.35	0.41
1:B:970:LEU:HG	1:B:972:LEU:HD21	2.02	0.41
1:B:1690:ASP:OD2	1:B:1693:GLN:NE2	2.53	0.41
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.85	0.41
1:B:3762:ARG:HD3	1:B:4754:ASN:HA	2.02	0.41
1:B:3933:PHE:HD2	1:B:3951:PHE:CE2	2.39	0.41
1:D:651:GLY:N	1:D:658:GLN:OE1	2.53	0.41
1:D:1694:LEU:O	1:D:1698:LEU:HG	2.21	0.41
1:D:2694:GLU:HA	1:D:2697:ARG:HH12	1.85	0.41
1:D:2907:PRO:HB2	1:D:2910:THR:HG23	2.02	0.41
1:D:3762:ARG:HD3	1:D:4754:ASN:HA	2.02	0.41
1:D:4895:GLY:O	1:C:4892:ARG:NH1	2.44	0.41
1:C:835:ARG:NH2	1:C:1210:SER:O	2.35	0.41
1:C:2624:ARG:O	1:C:2627:VAL:HB	2.20	0.41
1:C:3762:ARG:HD3	1:C:4754:ASN:HA	2.02	0.41
1:C:4570:ALA:O	1:C:4574:ASN:ND2	2.44	0.41
1:A:1694:LEU:O	1:A:1698:LEU:HG	2.21	0.41
1:A:1823:GLY:O	1:A:1825:HIS:ND1	2.47	0.41
1:A:2263:ILE:HD12	1:A:2263:ILE:HA	1.92	0.41
1:B:463:GLU:HG2	1:B:464:LYS:N	2.35	0.41
1:B:651:GLY:N	1:B:658:GLN:OE1	2.53	0.41
1:B:1658:ASP:OD1	1:B:1658:ASP:N	2.52	0.41
1:B:1668:ARG:HG3	1:B:1671:ARG:NH2	2.35	0.41
1:B:2599:GLN:O	1:B:2603:ILE:HG13	2.19	0.41
1:B:2785:LEU:C	1:B:2786:LYS:HG3	2.44	0.41
1:B:3465:ASN:C	1:B:3467:MET:H	2.28	0.41
1:D:803:LEU:HD12	1:D:804:PRO:HD2	2.02	0.41
1:D:1864:LYS:HE3	1:D:1872:THR:HA	2.02	0.41
1:D:1926:LEU:HB3	1:D:1939:MET:SD	2.60	0.41
1:D:2244:ARG:H	1:D:3861:GLU:CD	2.27	0.41
1:D:2677:LYS:HE2	1:D:2677:LYS:HB3	1.85	0.41
1:D:3465:ASN:C	1:D:3467:MET:H	2.28	0.41
1:C:2191:PHE:CE2	1:C:2242:ILE:HD11	2.55	0.41
1:C:2801:ASP:HA	1:C:2804:ILE:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3621:HIS:O	1:C:3622:LYS:HG3	2.20	0.41
1:C:3974:THR:O	1:C:3978:GLN:HG2	2.20	0.41
1:A:2123:LEU:HD12	1:A:2123:LEU:HA	1.95	0.41
1:A:2793:PRO:O	1:A:2797:PHE:N	2.53	0.41
1:A:3594:ARG:HA	1:A:3594:ARG:NH1	2.35	0.41
1:A:3634:ALA:HA	1:A:3637:ARG:HG2	2.01	0.41
2:F:54:GLU:OE2	2:F:55:VAL:HG13	2.20	0.41
1:B:274:LEU:HB3	1:B:339:ILE:HD12	2.03	0.41
1:B:365:LYS:HB3	1:B:365:LYS:HE3	1.74	0.41
1:B:2244:ARG:H	1:B:3861:GLU:CD	2.27	0.41
1:B:2256:TYR:O	1:B:2259:GLU:HG3	2.20	0.41
1:B:4902:GLU:O	1:B:4913:ARG:NH1	2.52	0.41
1:D:367:LEU:HD12	1:D:367:LEU:HA	1.89	0.41
1:D:805:PRO:HG2	1:D:808:TYR:CD1	2.55	0.41
1:D:2574:HIS:CD2	1:D:2574:HIS:H	2.38	0.41
1:D:3051:ARG:HA	1:D:3131:TYR:CE1	2.56	0.41
1:D:3308:THR:H	1:D:3311:HIS:HD1	1.67	0.41
1:D:3689:GLU:C	1:D:3691:GLU:H	2.27	0.41
1:D:3705:PHE:HA	1:D:3708:THR:HG22	2.01	0.41
1:C:648:ILE:HD13	1:C:811:CYS:HB3	2.01	0.41
1:C:667:MET:HE3	1:C:743:VAL:HG22	2.01	0.41
1:C:981:GLN:O	1:C:985:VAL:HG23	2.20	0.41
1:C:2881:ASN:HA	1:C:2884:ASN:HD21	1.83	0.41
1:C:3465:ASN:C	1:C:3467:MET:H	2.28	0.41
1:A:990:GLU:HA	1:A:1024:TYR:CG	2.56	0.41
1:A:2102:VAL:HG13	1:A:2120:MET:HE2	2.01	0.41
1:A:2307:LEU:HD21	1:A:2362:GLU:HB2	2.02	0.41
1:A:2310:CYS:O	1:A:2314:LEU:HD22	2.19	0.41
1:A:2775:TRP:CD2	1:A:2786:LYS:HE3	2.56	0.41
1:A:3006:ILE:HG23	1:A:3010:PHE:CD2	2.55	0.41
1:A:3445:TRP:NE1	1:A:3455:GLU:OE1	2.46	0.41
1:B:2793:PRO:O	1:B:2797:PHE:N	2.53	0.41
1:B:2819:TRP:C	1:B:2820:GLU:HG3	2.46	0.41
1:B:2990:PRO:HG2	1:B:2991:HIS:CE1	2.55	0.41
1:B:3051:ARG:HA	1:B:3131:TYR:CE1	2.56	0.41
1:B:4627:MET:HE3	1:B:4627:MET:N	2.30	0.41
1:D:664:PHE:CZ	1:D:779:PRO:HB3	2.54	0.41
1:D:3132:THR:HG22	1:D:3137:LEU:HD13	2.01	0.41
1:D:3508:SER:HB3	1:D:3511:VAL:HG22	2.02	0.41
1:D:4184:MET:HE2	1:D:4184:MET:HB2	1.92	0.41
1:C:458:GLU:H	1:C:458:GLU:HG3	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:803:LEU:HD12	1:C:804:PRO:HD2	2.02	0.41
1:C:901:LYS:HG3	1:C:903:LEU:HG	2.03	0.41
1:C:961:MET:H	1:C:961:MET:HG2	1.59	0.41
1:C:1668:ARG:HG3	1:C:1671:ARG:NH2	2.35	0.41
1:C:3162:GLN:OE1	1:C:3218:VAL:HG13	2.21	0.41
1:C:3875:MET:HE3	1:C:3875:MET:HB3	1.75	0.41
1:C:3933:PHE:HD2	1:C:3951:PHE:CE2	2.38	0.41
1:A:981:GLN:O	1:A:985:VAL:HG23	2.20	0.41
1:A:3342:ALA:O	1:A:3345:ILE:HG12	2.20	0.41
1:A:4148:THR:HG21	1:A:4180:ARG:HH21	1.85	0.41
1:B:2419:GLY:O	1:B:2423:MET:SD	2.79	0.41
1:B:2624:ARG:O	1:B:2627:VAL:HB	2.20	0.41
1:B:3112:LEU:HD13	1:B:3112:LEU:HA	1.85	0.41
1:B:4851:TYR:HD1	1:B:4916:PHE:CE1	2.38	0.41
1:B:4904:PRO:CB	1:B:4913:ARG:HG2	2.51	0.41
1:D:365:LYS:HB3	1:D:365:LYS:HE3	1.74	0.41
1:D:710:ASP:OD1	1:D:713:SER:OG	2.26	0.41
1:D:2628:PHE:HZ	1:D:2910:THR:HG21	1.86	0.41
1:D:2740:VAL:HG21	1:D:2819:TRP:HE1	1.86	0.41
1:D:2871:LEU:HG	1:D:2927:LEU:HD21	2.03	0.41
1:D:3230:LEU:H	1:D:3230:LEU:HD23	1.85	0.41
1:D:3731:LYS:HA	1:D:3734:HIS:CE1	2.56	0.41
1:D:3974:THR:O	1:D:3978:GLN:HG2	2.20	0.41
1:D:4134:GLU:HB3	1:D:4135:PRO:HD3	2.01	0.41
1:C:463:GLU:HG2	1:C:464:LYS:N	2.35	0.41
1:C:1032:LYS:HE3	1:C:1032:LYS:HB2	1.88	0.41
1:C:2628:PHE:HZ	1:C:2910:THR:HG21	1.86	0.41
1:C:4765:LEU:O	1:C:4769:MET:HE1	2.21	0.41
1:A:1183:GLU:CD	1:A:1183:GLU:H	2.29	0.41
1:A:1680:ARG:HH12	2:E:88:PRO:HB2	1.84	0.41
1:A:2191:PHE:CE2	1:A:2242:ILE:HD11	2.55	0.41
1:A:2383:ALA:HA	1:A:2386:ILE:HG12	2.03	0.41
1:A:2419:GLY:O	1:A:2422:ILE:N	2.54	0.41
1:A:2754:PHE:HB2	1:A:2935:TYR:CZ	2.55	0.41
1:A:3944:GLU:OE1	1:A:3946:GLN:N	2.50	0.41
1:A:4874:MET:HE3	1:A:4874:MET:HB3	1.90	0.41
2:E:29:MET:HG2	2:E:30:LEU:O	2.21	0.41
1:B:981:GLN:O	1:B:985:VAL:HG23	2.20	0.41
1:B:1434:TYR:OH	1:B:1436:SER:HB3	2.21	0.41
1:B:1820:ARG:O	1:B:1824:GLN:HG2	2.20	0.41
1:B:2019:GLU:CD	1:B:2019:GLU:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2092:GLN:HE21	1:B:2092:GLN:HB3	1.69	0.41
1:B:2412:GLU:C	1:B:2414:ASN:H	2.28	0.41
1:B:3445:TRP:NE1	1:B:3455:GLU:OE1	2.46	0.41
1:B:4010:ILE:O	1:B:4014:LYS:HG3	2.21	0.41
1:B:4735:GLU:H	1:B:4735:GLU:CD	2.28	0.41
1:D:274:LEU:HB3	1:D:339:ILE:HD12	2.03	0.41
1:D:1726:SER:O	1:D:1729:SER:OG	2.37	0.41
1:D:2191:PHE:CE2	1:D:2242:ILE:HD11	2.55	0.41
1:D:2419:GLY:O	1:D:2422:ILE:N	2.54	0.41
1:D:2998:PHE:HA	1:D:3002:LEU:HD23	2.01	0.41
1:D:3836:MET:HE3	1:D:3836:MET:HB2	1.82	0.41
1:D:3933:PHE:HD2	1:D:3951:PHE:CE2	2.39	0.41
1:D:4067:LYS:NZ	1:D:4102:GLN:O	2.51	0.41
1:D:4735:GLU:H	1:D:4735:GLU:CD	2.28	0.41
1:C:274:LEU:HB3	1:C:339:ILE:HD12	2.03	0.41
1:C:879:HIS:NE2	1:C:921:ASN:HB2	2.35	0.41
1:C:1690:ASP:OD2	1:C:1693:GLN:NE2	2.53	0.41
1:C:1820:ARG:O	1:C:1824:GLN:HG2	2.20	0.41
1:C:2019:GLU:H	1:C:2019:GLU:CD	2.28	0.41
1:A:879:HIS:NE2	1:A:921:ASN:HB2	2.35	0.41
1:A:937:CYS:N	1:A:1056:PRO:HG3	2.35	0.41
1:A:1808:ARG:HB2	1:A:1854:PHE:CE1	2.56	0.41
1:A:2150:GLU:H	1:A:2150:GLU:CD	2.27	0.41
1:A:2336:ARG:HG3	1:A:2431:ASP:OD2	2.21	0.41
1:A:2412:GLU:C	1:A:2414:ASN:H	2.28	0.41
1:A:4010:ILE:O	1:A:4014:LYS:HG3	2.21	0.41
2:H:24:VAL:HG21	2:H:59:TRP:HZ3	1.86	0.41
1:B:69:LEU:HD13	1:B:101:LEU:HD11	2.02	0.41
1:B:330:ASP:OD1	1:B:330:ASP:N	2.54	0.41
1:B:710:ASP:OD1	1:B:713:SER:OG	2.26	0.41
1:B:1037:ASP:O	1:B:1041:GLN:HG2	2.20	0.41
1:B:2419:GLY:O	1:B:2422:ILE:N	2.54	0.41
1:B:2775:TRP:CD2	1:B:2786:LYS:HE3	2.56	0.41
1:B:3634:ALA:HA	1:B:3637:ARG:HG2	2.01	0.41
1:B:3731:LYS:HA	1:B:3734:HIS:CE1	2.56	0.41
1:B:3974:THR:O	1:B:3978:GLN:HG2	2.20	0.41
1:B:4961:CYS:HA	1:B:5023:PRO:O	2.19	0.41
1:D:667:MET:HE3	1:D:743:VAL:HG22	2.01	0.41
1:D:990:GLU:HA	1:D:1024:TYR:CG	2.56	0.41
1:D:1690:ASP:OD2	1:D:1693:GLN:NE2	2.53	0.41
1:D:2017:ASP:OD1	1:D:2017:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2412:GLU:C	1:D:2414:ASN:H	2.28	0.41
1:D:2419:GLY:O	1:D:2423:MET:SD	2.79	0.41
1:D:2754:PHE:HB2	1:D:2935:TYR:CZ	2.56	0.41
1:D:2801:ASP:HA	1:D:2804:ILE:HG12	2.02	0.41
1:D:2816:MET:HE2	1:D:2816:MET:HB3	1.66	0.41
1:D:3523:ASN:O	1:D:3582:ARG:NH2	2.54	0.41
1:D:3607:GLU:OE2	1:D:3608:GLN:NE2	2.48	0.41
1:D:4765:LEU:O	1:D:4769:MET:HE1	2.20	0.41
1:C:69:LEU:HD13	1:C:101:LEU:HD11	2.02	0.41
1:C:328:LYS:HB3	1:C:328:LYS:HE3	1.75	0.41
1:C:651:GLY:N	1:C:658:GLN:OE1	2.53	0.41
1:C:937:CYS:N	1:C:1056:PRO:HG3	2.35	0.41
1:C:2336:ARG:HG3	1:C:2431:ASP:OD2	2.21	0.41
1:C:2412:GLU:C	1:C:2414:ASN:H	2.28	0.41
1:C:2641:LEU:HA	1:C:2641:LEU:HD23	1.88	0.41
1:C:2713:ASP:OD1	1:C:2713:ASP:N	2.52	0.41
1:C:2816:MET:HB3	1:C:2816:MET:HE2	1.66	0.41
1:C:2819:TRP:C	1:C:2820:GLU:HG3	2.46	0.41
1:C:3731:LYS:HA	1:C:3734:HIS:CE1	2.56	0.41
1:A:330:ASP:N	1:A:330:ASP:OD1	2.54	0.41
1:A:416:LYS:HE3	1:A:416:LYS:HB2	1.84	0.41
1:A:1690:ASP:OD2	1:A:1693:GLN:NE2	2.53	0.41
1:A:1926:LEU:HB3	1:A:1939:MET:SD	2.60	0.41
1:A:2628:PHE:HZ	1:A:2910:THR:HG21	1.86	0.41
1:A:2713:ASP:OD1	1:A:2713:ASP:N	2.52	0.41
1:A:2716:ASP:OD1	1:A:2716:ASP:N	2.51	0.41
1:A:2740:VAL:HG21	1:A:2819:TRP:HE1	1.86	0.41
1:A:3329:ILE:O	1:A:3403:ARG:NH2	2.54	0.41
1:A:3465:ASN:C	1:A:3467:MET:H	2.28	0.41
1:A:3523:ASN:O	1:A:3582:ARG:NH2	2.54	0.41
1:A:4942:GLU:HA	1:A:4945:ASP:OD2	2.21	0.41
2:F:13:ARG:HB2	2:F:13:ARG:CZ	2.51	0.41
1:B:306:LYS:HE3	1:B:306:LYS:HB2	1.94	0.41
1:B:803:LEU:HD12	1:B:804:PRO:HD2	2.02	0.41
1:B:805:PRO:HG2	1:B:808:TYR:CD1	2.55	0.41
1:B:1634:LEU:HD23	1:B:1634:LEU:HA	1.90	0.41
1:B:1864:LYS:HE3	1:B:1872:THR:HA	2.02	0.41
1:B:2574:HIS:CD2	1:B:2574:HIS:H	2.38	0.41
1:B:2628:PHE:HZ	1:B:2910:THR:HG21	1.86	0.41
1:B:2754:PHE:HB2	1:B:2935:TYR:CZ	2.56	0.41
1:B:3342:ALA:O	1:B:3345:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3508:SER:HB3	1:B:3511:VAL:HG22	2.02	0.41
1:B:3523:ASN:O	1:B:3582:ARG:NH2	2.54	0.41
1:B:4765:LEU:O	1:B:4769:MET:HE1	2.20	0.41
1:B:4942:GLU:HA	1:B:4945:ASP:OD2	2.21	0.41
1:D:503:PHE:HD2	1:D:512:ALA:HA	1.86	0.41
1:D:1820:ARG:O	1:D:1824:GLN:HG2	2.20	0.41
1:D:2019:GLU:H	1:D:2019:GLU:CD	2.28	0.41
1:D:2258:LEU:HD23	1:D:2258:LEU:HA	1.89	0.41
1:D:2819:TRP:C	1:D:2820:GLU:HG3	2.46	0.41
1:D:2912:THR:HG23	1:D:2914:LYS:HG3	2.02	0.41
1:D:3162:GLN:OE1	1:D:3218:VAL:HG13	2.21	0.41
1:D:3621:HIS:O	1:D:3622:LYS:HG3	2.20	0.41
1:D:4570:ALA:O	1:D:4574:ASN:ND2	2.44	0.41
1:D:4689:THR:OG1	1:D:4690:GLU:OE1	2.34	0.41
1:D:4851:TYR:HD1	1:D:4916:PHE:CE1	2.38	0.41
1:C:1037:ASP:O	1:C:1041:GLN:HG2	2.20	0.41
1:C:1658:ASP:OD1	1:C:1658:ASP:N	2.52	0.41
1:C:1694:LEU:O	1:C:1698:LEU:HG	2.21	0.41
1:C:1808:ARG:HB2	1:C:1854:PHE:CE1	2.56	0.41
1:C:1864:LYS:HE3	1:C:1872:THR:HA	2.02	0.41
1:C:1926:LEU:HB3	1:C:1939:MET:SD	2.60	0.41
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.20	0.41
1:C:2298:VAL:HG21	1:C:2334:PHE:CE2	2.56	0.41
1:C:2419:GLY:O	1:C:2423:MET:SD	2.79	0.41
1:C:2675:THR:HB	1:C:2710:LEU:HD21	2.03	0.41
1:C:2740:VAL:HG21	1:C:2819:TRP:HE1	1.86	0.41
1:C:2775:TRP:CD2	1:C:2786:LYS:HE3	2.56	0.41
1:C:2871:LEU:HG	1:C:2927:LEU:HD21	2.02	0.41
1:C:2912:THR:HG23	1:C:2914:LYS:HG3	2.02	0.41
1:C:3006:ILE:HG23	1:C:3010:PHE:CD2	2.55	0.41
1:C:3051:ARG:HA	1:C:3131:TYR:CE1	2.56	0.41
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.85	0.41
1:C:3342:ALA:O	1:C:3345:ILE:HG12	2.20	0.41
1:C:4010:ILE:O	1:C:4014:LYS:HG3	2.21	0.41
1:A:274:LEU:HB3	1:A:339:ILE:HD12	2.03	0.41
1:A:2479:LEU:HD22	1:A:2480:GLY:N	2.36	0.41
1:A:2531:ARG:HG2	1:A:2585:THR:HG21	2.03	0.41
1:A:2694:GLU:HA	1:A:2697:ARG:HH12	1.85	0.41
1:A:2912:THR:HG23	1:A:2914:LYS:HG3	2.02	0.41
1:A:3974:THR:O	1:A:3978:GLN:HG2	2.20	0.41
1:A:4765:LEU:O	1:A:4769:MET:HE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:503:PHE:HD2	1:B:512:ALA:HA	1.86	0.41
1:B:1694:LEU:O	1:B:1698:LEU:HG	2.21	0.41
1:B:2675:THR:HB	1:B:2710:LEU:HD21	2.02	0.41
1:B:2740:VAL:HG21	1:B:2819:TRP:HE1	1.86	0.41
1:B:3199:ALA:HB2	1:B:3279:SER:OG	2.21	0.41
1:B:3823:LYS:HA	1:B:3823:LYS:HD3	1.83	0.41
1:D:463:GLU:HG2	1:D:464:LYS:N	2.36	0.41
1:D:648:ILE:HD13	1:D:811:CYS:HB3	2.02	0.41
1:D:981:GLN:O	1:D:985:VAL:HG23	2.20	0.41
1:D:1808:ARG:HB2	1:D:1854:PHE:CE1	2.56	0.41
1:D:1999:ARG:HG3	1:D:3635:CYS:O	2.21	0.41
1:D:4026:MET:HE2	1:D:4026:MET:HB3	1.81	0.41
1:C:367:LEU:HD12	1:C:367:LEU:HA	1.89	0.41
1:C:503:PHE:HD2	1:C:512:ALA:HA	1.86	0.41
1:C:805:PRO:HG2	1:C:808:TYR:CD1	2.55	0.41
1:C:880:GLU:HG3	1:C:910:PHE:HB3	2.01	0.41
1:C:924:MET:HE3	1:C:924:MET:HB3	1.93	0.41
1:C:990:GLU:HG3	1:C:1024:TYR:HB3	2.03	0.41
1:C:1183:GLU:H	1:C:1183:GLU:CD	2.29	0.41
1:C:2383:ALA:HA	1:C:2386:ILE:HG12	2.03	0.41
1:C:2419:GLY:O	1:C:2422:ILE:N	2.54	0.41
1:C:2574:HIS:CD2	1:C:2574:HIS:H	2.38	0.41
1:C:2990:PRO:HG2	1:C:2991:HIS:CE1	2.55	0.41
1:A:990:GLU:HG3	1:A:1024:TYR:HB3	2.03	0.40
1:A:1434:TYR:OH	1:A:1436:SER:HB3	2.21	0.40
1:A:1820:ARG:O	1:A:1824:GLN:HG2	2.20	0.40
1:A:2419:GLY:O	1:A:2423:MET:SD	2.79	0.40
1:A:2907:PRO:O	1:A:2910:THR:OG1	2.39	0.40
1:A:3199:ALA:HB2	1:A:3279:SER:OG	2.21	0.40
1:A:3508:SER:HB3	1:A:3511:VAL:HG22	2.02	0.40
1:A:3535:LEU:O	1:A:3538:THR:OG1	2.28	0.40
1:A:4904:PRO:CB	1:A:4913:ARG:HG2	2.51	0.40
1:B:1488:LYS:HE3	1:B:1488:LYS:HB2	1.85	0.40
1:B:1926:LEU:HB3	1:B:1939:MET:SD	2.60	0.40
1:B:2871:LEU:HG	1:B:2927:LEU:HD21	2.03	0.40
1:B:3308:THR:H	1:B:3311:HIS:HD1	1.67	0.40
1:B:3329:ILE:O	1:B:3403:ARG:NH2	2.54	0.40
1:D:69:LEU:HD13	1:D:101:LEU:HD11	2.02	0.40
1:D:886:ARG:HB3	1:D:891:TRP:HB2	2.03	0.40
1:D:924:MET:HE3	1:D:924:MET:HB3	1.92	0.40
1:D:1575:LEU:HA	1:D:1575:LEU:HD23	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2775:TRP:CD2	1:D:2786:LYS:HE3	2.56	0.40
1:D:2793:PRO:O	1:D:2797:PHE:N	2.53	0.40
1:D:3329:ILE:O	1:D:3403:ARG:NH2	2.54	0.40
1:D:3733:CYS:HB2	1:D:3803:SER:OG	2.21	0.40
1:D:4105:GLY:O	1:D:4109:GLN:HG2	2.21	0.40
1:C:1434:TYR:OH	1:C:1436:SER:HB3	2.21	0.40
1:C:4047:MET:HB3	1:C:4047:MET:HE3	1.78	0.40
1:C:4689:THR:OG1	1:C:4690:GLU:OE1	2.34	0.40
1:A:2244:ARG:H	1:A:3861:GLU:CD	2.27	0.40
1:A:3051:ARG:HA	1:A:3131:TYR:CE1	2.55	0.40
1:A:3733:CYS:HB2	1:A:3803:SER:OG	2.21	0.40
2:F:17:LYS:HE3	2:F:17:LYS:HB3	1.81	0.40
1:B:901:LYS:HG3	1:B:903:LEU:HG	2.03	0.40
1:B:2123:LEU:HD12	1:B:2123:LEU:HA	1.95	0.40
1:B:2298:VAL:HG21	1:B:2334:PHE:CE2	2.56	0.40
1:B:3194:LEU:HD12	1:B:3194:LEU:HA	1.86	0.40
1:B:3232:LEU:HA	1:B:3233:PRO:HD3	1.89	0.40
1:B:3546:ASP:O	1:B:3550:ARG:HG3	2.22	0.40
1:D:2867:LEU:HD21	1:D:2871:LEU:HD23	2.03	0.40
1:D:3459:VAL:HG11	1:D:3503:TYR:HD1	1.87	0.40
1:C:589:LEU:HD12	1:C:589:LEU:HA	1.92	0.40
1:C:990:GLU:HA	1:C:1024:TYR:CG	2.56	0.40
1:C:2716:ASP:OD1	1:C:2716:ASP:N	2.51	0.40
1:C:4105:GLY:O	1:C:4109:GLN:HG2	2.21	0.40
1:C:4735:GLU:CD	1:C:4735:GLU:H	2.28	0.40
1:A:1668:ARG:HG3	1:A:1671:ARG:NH2	2.35	0.40
1:A:2017:ASP:OD1	1:A:2017:ASP:N	2.53	0.40
1:A:2759:ALA:HB1	1:A:2806:ARG:HA	2.04	0.40
1:A:2819:TRP:C	1:A:2820:GLU:HG3	2.46	0.40
1:A:3256:LEU:HD21	1:A:3269:VAL:HG11	2.04	0.40
1:A:4023:MET:HE2	1:A:4023:MET:HB3	1.86	0.40
1:A:4134:GLU:HB3	1:A:4135:PRO:HD3	2.02	0.40
2:E:54:GLU:OE2	2:E:55:VAL:HG13	2.22	0.40
1:B:2881:ASN:HA	1:B:2884:ASN:HD21	1.84	0.40
1:B:3733:CYS:HB2	1:B:3803:SER:OG	2.21	0.40
1:B:4558:ASN:HB3	1:B:4561:THR:OG1	2.20	0.40
1:D:1183:GLU:H	1:D:1183:GLU:CD	2.29	0.40
1:D:1858:ASP:O	1:D:1862:ILE:HG13	2.22	0.40
1:D:2390:PRO:C	1:D:2392:ARG:H	2.29	0.40
1:D:2675:THR:HB	1:D:2710:LEU:HD21	2.03	0.40
1:D:3232:LEU:HA	1:D:3233:PRO:HD3	1.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3528:THR:HG23	1:D:3573:MET:CE	2.52	0.40
1:D:3944:GLU:H	1:D:3944:GLU:HG3	1.74	0.40
1:C:330:ASP:OD1	1:C:330:ASP:N	2.54	0.40
1:C:1999:ARG:HG3	1:C:3635:CYS:O	2.21	0.40
1:C:2479:LEU:HD22	1:C:2480:GLY:N	2.36	0.40
1:C:3955:MET:HE3	1:C:4015:GLU:HG2	2.04	0.40
1:C:4023:MET:HE2	1:C:4023:MET:HB3	1.86	0.40
1:C:4060:LYS:HD2	1:C:4060:LYS:HA	1.91	0.40
1:A:463:GLU:HG2	1:A:464:LYS:N	2.36	0.40
1:A:1999:ARG:HG3	1:A:3635:CYS:O	2.21	0.40
1:A:3308:THR:H	1:A:3311:HIS:HD1	1.67	0.40
1:A:3528:THR:HG23	1:A:3573:MET:CE	2.52	0.40
1:A:3621:HIS:C	1:A:3622:LYS:HG3	2.47	0.40
1:A:4827:LEU:HD21	1:B:4843:LEU:HD21	2.02	0.40
1:A:4851:TYR:HD1	1:A:4916:PHE:CE1	2.38	0.40
2:E:13:ARG:CZ	2:E:13:ARG:HB2	2.51	0.40
2:H:29:MET:HG2	2:H:30:LEU:O	2.21	0.40
1:B:908:VAL:HG13	1:B:909:ASN:H	1.87	0.40
1:B:990:GLU:HA	1:B:1024:TYR:CG	2.56	0.40
1:B:1118:ASP:OD1	1:B:1118:ASP:N	2.55	0.40
1:B:2263:ILE:HD12	1:B:2263:ILE:HA	1.92	0.40
1:B:2390:PRO:C	1:B:2392:ARG:H	2.29	0.40
1:B:2663:ASN:ND2	1:B:2663:ASN:O	2.55	0.40
1:B:2785:LEU:O	1:B:2786:LYS:HG3	2.22	0.40
1:B:3368:ARG:O	1:B:3372:VAL:HG23	2.22	0.40
1:B:3528:THR:HG23	1:B:3573:MET:CE	2.52	0.40
1:B:3621:HIS:O	1:B:3622:LYS:HG3	2.20	0.40
1:D:901:LYS:HG3	1:D:903:LEU:HG	2.03	0.40
1:D:922:LEU:HD13	1:D:922:LEU:HA	1.89	0.40
1:D:2263:ILE:HD12	1:D:2263:ILE:HA	1.92	0.40
1:D:2298:VAL:HG21	1:D:2334:PHE:CE2	2.56	0.40
1:D:2663:ASN:ND2	1:D:2663:ASN:O	2.55	0.40
1:D:2785:LEU:O	1:D:2786:LYS:HG3	2.22	0.40
1:D:3582:ARG:HD3	1:D:3582:ARG:HA	1.91	0.40
1:C:2020:ASP:OD1	1:C:2020:ASP:N	2.42	0.40
1:C:2754:PHE:HB2	1:C:2935:TYR:CZ	2.56	0.40
1:C:3523:ASN:O	1:C:3582:ARG:NH2	2.54	0.40
1:C:3633:VAL:HG12	1:C:3637:ARG:HE	1.87	0.40
1:C:3733:CYS:HB2	1:C:3803:SER:OG	2.21	0.40
1:A:2785:LEU:O	1:A:2786:LYS:HG3	2.22	0.40
1:A:3162:GLN:OE1	1:A:3218:VAL:HG13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3240:CYS:HB3	1:A:3243:ILE:CG1	2.51	0.40
1:A:3531:ASP:HA	1:A:3534:MET:SD	2.62	0.40
2:E:17:LYS:HE3	2:E:17:LYS:HB3	1.80	0.40
2:E:44:LYS:HD2	2:E:44:LYS:C	2.46	0.40
1:B:950:LEU:HD23	1:B:950:LEU:HA	1.81	0.40
1:B:1183:GLU:H	1:B:1183:GLU:CD	2.29	0.40
1:B:2336:ARG:HG3	1:B:2431:ASP:OD2	2.21	0.40
1:B:3449:HIS:C	1:B:3449:HIS:HD1	2.29	0.40
1:B:3633:VAL:HG12	1:B:3637:ARG:HE	1.87	0.40
1:B:3955:MET:HE3	1:B:4015:GLU:HG2	2.04	0.40
1:B:4826:ILE:HD13	1:C:4840:THR:HG22	2.03	0.40
1:D:1118:ASP:OD1	1:D:1118:ASP:N	2.55	0.40
1:D:1286:MET:HE3	1:D:1286:MET:HB3	1.88	0.40
1:D:3693:LYS:HA	1:D:3693:LYS:HD2	1.89	0.40
1:D:3955:MET:HE3	1:D:4015:GLU:HG2	2.04	0.40
1:D:4097:MET:HB2	1:D:4097:MET:HE2	1.71	0.40
1:D:4211:LYS:O	1:D:4215:ARG:HG3	2.22	0.40
1:C:774:ASP:CG	1:C:1470:ARG:HH22	2.24	0.40
1:C:886:ARG:HB3	1:C:891:TRP:HB2	2.03	0.40
1:C:2126:ARG:NH2	1:C:2133:GLU:OE2	2.52	0.40
1:C:2390:PRO:C	1:C:2392:ARG:H	2.29	0.40
1:C:3400:VAL:HG23	1:C:3403:ARG:NH2	2.35	0.40
1:C:3459:VAL:HG11	1:C:3503:TYR:HD1	1.87	0.40
1:C:3528:THR:HG23	1:C:3573:MET:CE	2.52	0.40
1:C:4942:GLU:HA	1:C:4945:ASP:OD2	2.21	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	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
1	C	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
1	D	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
2	E	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	F	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	G	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	H	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
All	All	17960/20580 (87%)	17398 (97%)	562 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	3836/4276 (90%)	3815 (100%)	21 (0%)	86	90
1	B	3836/4276 (90%)	3816 (100%)	20 (0%)	86	90
1	C	3836/4276 (90%)	3815 (100%)	21 (0%)	86	90
1	D	3836/4276 (90%)	3817 (100%)	19 (0%)	86	90
2	E	89/90 (99%)	85 (96%)	4 (4%)	23	50
2	F	89/90 (99%)	85 (96%)	4 (4%)	23	50
2	G	89/90 (99%)	83 (93%)	6 (7%)	13	38
2	H	89/90 (99%)	84 (94%)	5 (6%)	17	44
All	All	15700/17464 (90%)	15600 (99%)	100 (1%)	82	89

All (100) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	191	VAL
1	A	227	MET

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Mol	Chain	Res	Type
1	A	898	ASP
1	A	945	LYS
1	A	957	LYS
1	A	959	TYR
1	A	960	MET
1	A	1428	LEU
1	A	1538	THR
1	A	2037	ASP
1	A	2267	MET
1	A	2369[A]	ARG
1	A	2369[B]	ARG
1	A	2490	MET
1	A	2608	MET
1	A	3038	MET
1	A	3409	TYR
1	A	3449	HIS
1	A	3759	GLU
1	A	3899	PHE
1	A	4871	GLU
2	E	17	LYS
2	E	27	THR
2	E	53	GLN
2	E	85	THR
2	H	17	LYS
2	H	27	THR
2	H	35	LYS
2	H	53	GLN
2	H	85	THR
2	G	17	LYS
2	G	27	THR
2	G	35	LYS
2	G	43	ASN
2	G	53	GLN
2	G	85	THR
2	F	17	LYS
2	F	27	THR
2	F	53	GLN
2	F	85	THR
1	B	191	VAL
1	B	227	MET
1	B	898	ASP
1	B	945	LYS

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Mol	Chain	Res	Type
1	B	957	LYS
1	B	959	TYR
1	B	960	MET
1	B	1538	THR
1	B	2037	ASP
1	B	2267	MET
1	B	2369[A]	ARG
1	B	2369[B]	ARG
1	B	2490	MET
1	B	2608	MET
1	B	3038	MET
1	B	3409	TYR
1	B	3449	HIS
1	B	3759	GLU
1	B	3899	PHE
1	B	4871	GLU
1	D	191	VAL
1	D	898	ASP
1	D	945	LYS
1	D	957	LYS
1	D	959	TYR
1	D	960	MET
1	D	1428	LEU
1	D	1538	THR
1	D	2037	ASP
1	D	2267	MET
1	D	2369[A]	ARG
1	D	2369[B]	ARG
1	D	2490	MET
1	D	3038	MET
1	D	3409	TYR
1	D	3449	HIS
1	D	3759	GLU
1	D	3899	PHE
1	D	4871	GLU
1	C	191	VAL
1	C	227	MET
1	C	898	ASP
1	C	945	LYS
1	C	957	LYS
1	C	959	TYR
1	C	960	MET

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Mol	Chain	Res	Type
1	C	1428	LEU
1	C	1538	THR
1	C	2037	ASP
1	C	2267	MET
1	C	2369[A]	ARG
1	C	2369[B]	ARG
1	C	2490	MET
1	C	2608	MET
1	C	3038	MET
1	C	3409	TYR
1	C	3449	HIS
1	C	3759	GLU
1	C	3899	PHE
1	C	4871	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (123) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	224	HIS
1	A	241	GLN
1	A	593	HIS
1	A	911	HIS
1	A	921	ASN
1	A	949	ASN
1	A	963	ASN
1	A	991	ASN
1	A	1011	GLN
1	A	1066	GLN
1	A	1229	ASN
1	A	1420	ASN
1	A	2127	GLN
1	A	2260	ASN
1	A	2291	GLN
1	A	2498	HIS
1	A	2877	GLN
1	A	2883	HIS
1	A	3211	ASN
1	A	3355	HIS
1	A	3704	HIS
1	A	3914	ASN
1	A	4009	GLN
1	A	4054	ASN

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Mol	Chain	Res	Type
1	A	4120	ASN
1	A	4133	GLN
1	A	4156	HIS
1	A	4162	ASN
1	A	4836	GLN
2	E	20	GLN
2	E	43	ASN
2	H	43	ASN
2	G	20	GLN
2	G	43	ASN
2	F	20	GLN
2	F	43	ASN
2	F	65	GLN
1	B	224	HIS
1	B	241	GLN
1	B	461	HIS
1	B	593	HIS
1	B	838	HIS
1	B	911	HIS
1	B	921	ASN
1	B	963	ASN
1	B	991	ASN
1	B	1011	GLN
1	B	1066	GLN
1	B	1229	ASN
1	B	1420	ASN
1	B	2245	GLN
1	B	2260	ASN
1	B	2291	GLN
1	B	2877	GLN
1	B	2883	HIS
1	B	3180	ASN
1	B	3355	HIS
1	B	3704	HIS
1	B	3914	ASN
1	B	4009	GLN
1	B	4054	ASN
1	B	4120	ASN
1	B	4156	HIS
1	B	4162	ASN
1	B	4836	GLN
1	D	224	HIS

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Mol	Chain	Res	Type
1	D	241	GLN
1	D	593	HIS
1	D	838	HIS
1	D	911	HIS
1	D	921	ASN
1	D	949	ASN
1	D	963	ASN
1	D	991	ASN
1	D	1011	GLN
1	D	1066	GLN
1	D	1229	ASN
1	D	1420	ASN
1	D	1719	HIS
1	D	2253	HIS
1	D	2260	ASN
1	D	2291	GLN
1	D	2756	ASN
1	D	2877	GLN
1	D	2883	HIS
1	D	3355	HIS
1	D	3704	HIS
1	D	3914	ASN
1	D	4009	GLN
1	D	4054	ASN
1	D	4120	ASN
1	D	4133	GLN
1	D	4156	HIS
1	D	4162	ASN
1	D	4836	GLN
1	C	224	HIS
1	C	241	GLN
1	C	593	HIS
1	C	838	HIS
1	C	911	HIS
1	C	921	ASN
1	C	949	ASN
1	C	963	ASN
1	C	991	ASN
1	C	1011	GLN
1	C	1066	GLN
1	C	1229	ASN
1	C	1719	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	1938	GLN
1	C	2253	HIS
1	C	2260	ASN
1	C	2291	GLN
1	C	2877	GLN
1	C	2883	HIS
1	C	3180	ASN
1	C	3355	HIS
1	C	3704	HIS
1	C	3914	ASN
1	C	4009	GLN
1	C	4120	ASN
1	C	4156	HIS
1	C	4162	ASN
1	C	4836	GLN

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	ATP	B	5301	-	28,33,33	0.65	0	34,52,52	0.99	2 (5%)
3	ATP	C	5301	-	28,33,33	0.67	0	34,52,52	1.00	2 (5%)
3	ATP	D	5301	-	28,33,33	0.66	0	34,52,52	0.99	2 (5%)
6	A1BD5	C	5304	-	16,16,16	0.96	0	21,23,23	0.73	0
6	A1BD5	A	5304	-	16,16,16	0.97	0	21,23,23	0.73	0
6	A1BD5	B	5304	-	16,16,16	0.96	0	21,23,23	0.73	0
6	A1BD5	D	5304	-	16,16,16	0.96	0	21,23,23	0.73	0
3	ATP	A	5301	-	28,33,33	0.66	0	34,52,52	0.99	2 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	B	5301	-	-	9/18/38/38	0/3/3/3
3	ATP	C	5301	-	-	9/18/38/38	0/3/3/3
3	ATP	D	5301	-	-	9/18/38/38	0/3/3/3
6	A1BD5	C	5304	-	-	0/4/4/4	0/2/2/2
6	A1BD5	A	5304	-	-	0/4/4/4	0/2/2/2
6	A1BD5	B	5304	-	-	0/4/4/4	0/2/2/2
6	A1BD5	D	5304	-	-	0/4/4/4	0/2/2/2
3	ATP	A	5301	-	-	9/18/38/38	0/3/3/3

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	5301	ATP	C4'-O4'-C1'	-4.65	105.67	109.92
3	B	5301	ATP	C4'-O4'-C1'	-4.59	105.72	109.92
3	A	5301	ATP	C4'-O4'-C1'	-4.59	105.72	109.92
3	D	5301	ATP	C4'-O4'-C1'	-4.58	105.73	109.92
3	C	5301	ATP	C5-C6-N6	2.36	123.90	120.31
3	B	5301	ATP	C5-C6-N6	2.35	123.89	120.31
3	A	5301	ATP	C5-C6-N6	2.34	123.88	120.31
3	D	5301	ATP	C5-C6-N6	2.34	123.87	120.31

There are no chirality outliers.

All (36) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	5301	ATP	PB-O3B-PG-O2G
3	A	5301	ATP	C5'-O5'-PA-O1A
3	A	5301	ATP	C5'-O5'-PA-O2A
3	A	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	PB-O3B-PG-O2G
3	B	5301	ATP	C5'-O5'-PA-O1A
3	B	5301	ATP	C5'-O5'-PA-O2A
3	B	5301	ATP	C5'-O5'-PA-O3A
3	D	5301	ATP	PB-O3B-PG-O2G
3	D	5301	ATP	C5'-O5'-PA-O1A
3	D	5301	ATP	C5'-O5'-PA-O2A
3	D	5301	ATP	C5'-O5'-PA-O3A
3	C	5301	ATP	PB-O3B-PG-O2G
3	C	5301	ATP	C5'-O5'-PA-O1A
3	C	5301	ATP	C5'-O5'-PA-O2A
3	C	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	PB-O3B-PG-O3G
3	B	5301	ATP	PB-O3B-PG-O3G
3	D	5301	ATP	PB-O3B-PG-O3G
3	C	5301	ATP	PB-O3B-PG-O3G
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	C3'-C4'-C5'-O5'
3	B	5301	ATP	C3'-C4'-C5'-O5'
3	D	5301	ATP	C3'-C4'-C5'-O5'
3	C	5301	ATP	C3'-C4'-C5'-O5'
3	A	5301	ATP	C4'-C5'-O5'-PA
3	B	5301	ATP	C4'-C5'-O5'-PA
3	D	5301	ATP	C4'-C5'-O5'-PA
3	C	5301	ATP	C4'-C5'-O5'-PA
3	A	5301	ATP	PB-O3B-PG-O1G
3	B	5301	ATP	PB-O3B-PG-O1G
3	D	5301	ATP	PB-O3B-PG-O1G
3	C	5301	ATP	PB-O3B-PG-O1G

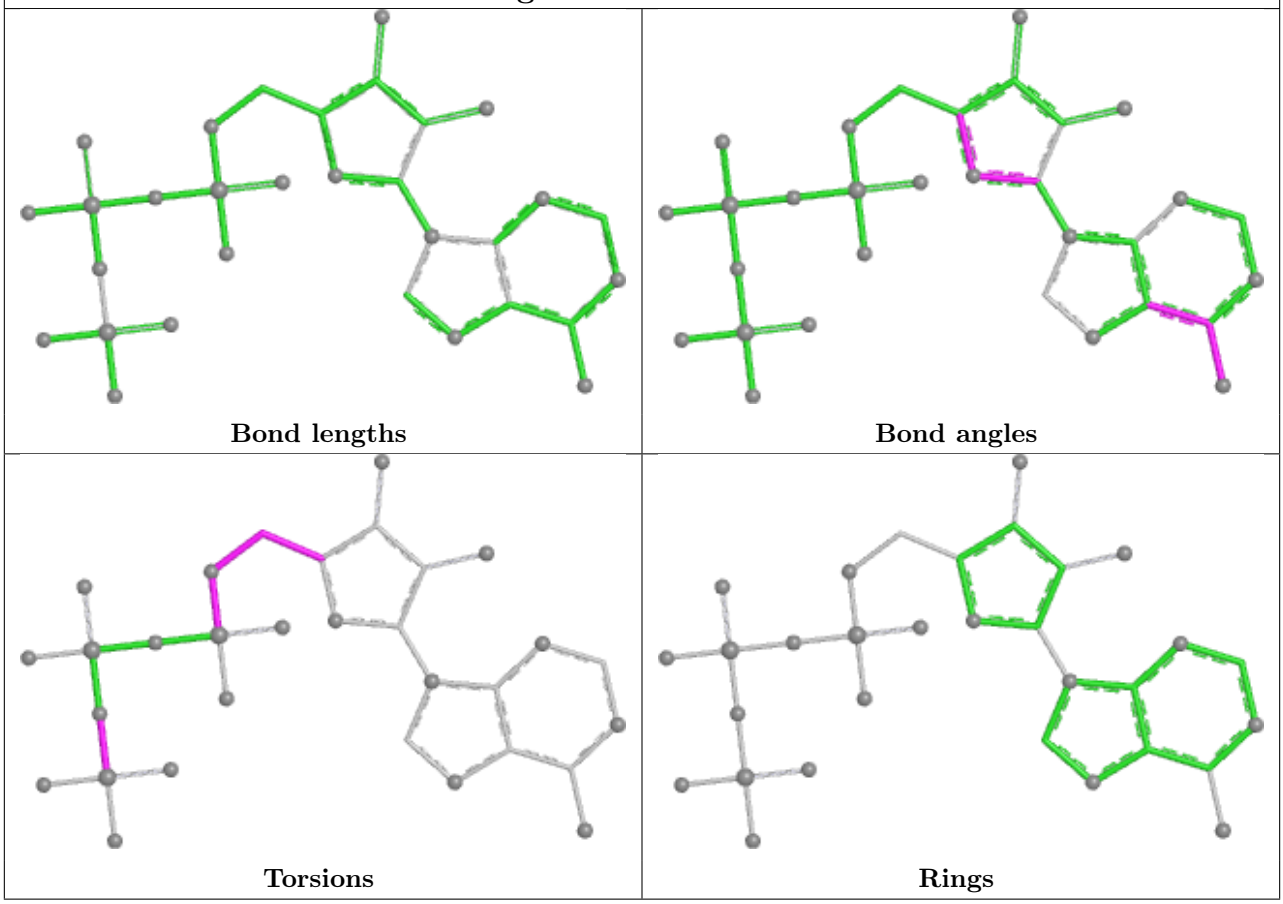
There are no ring outliers.

No monomer is involved in short contacts.

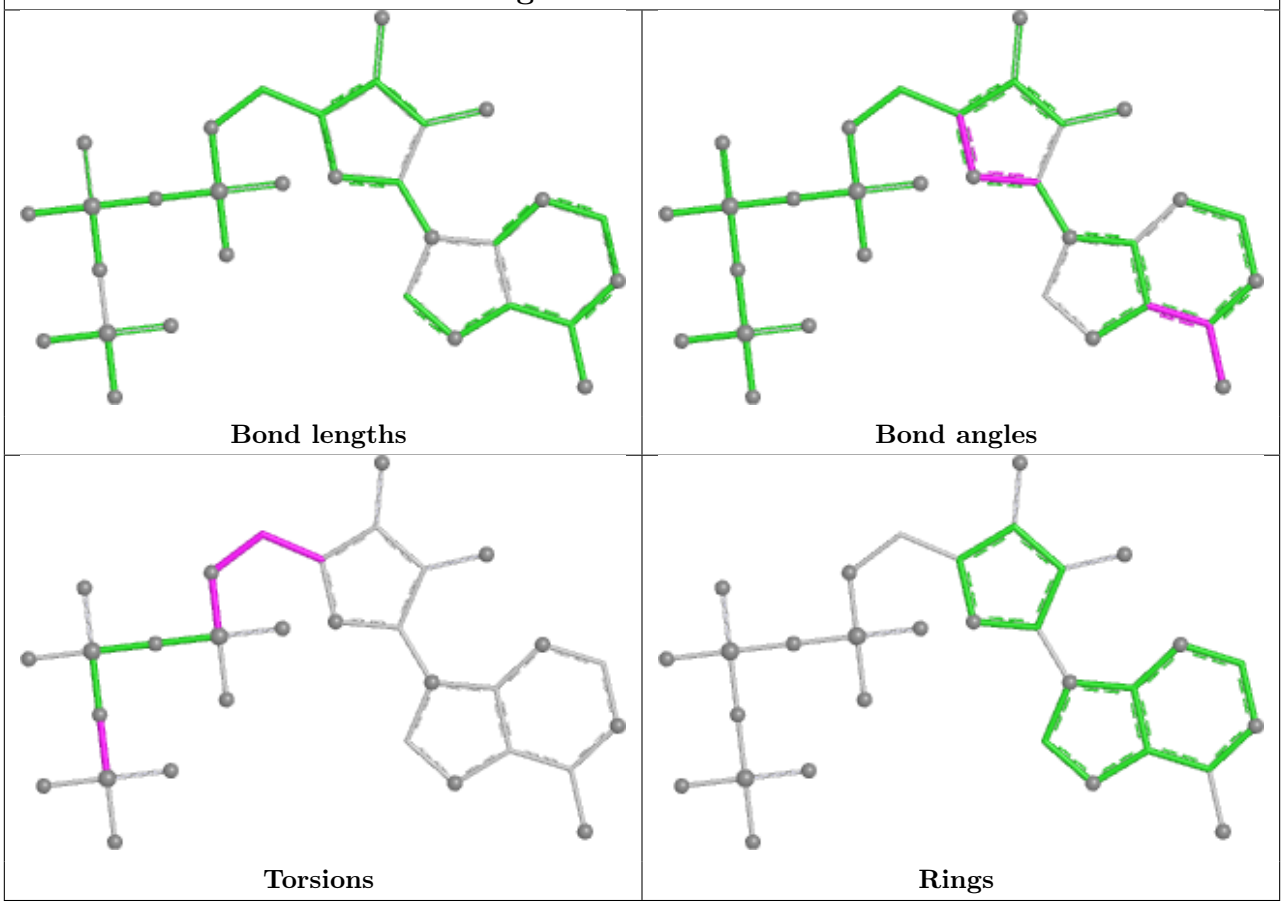
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is

within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

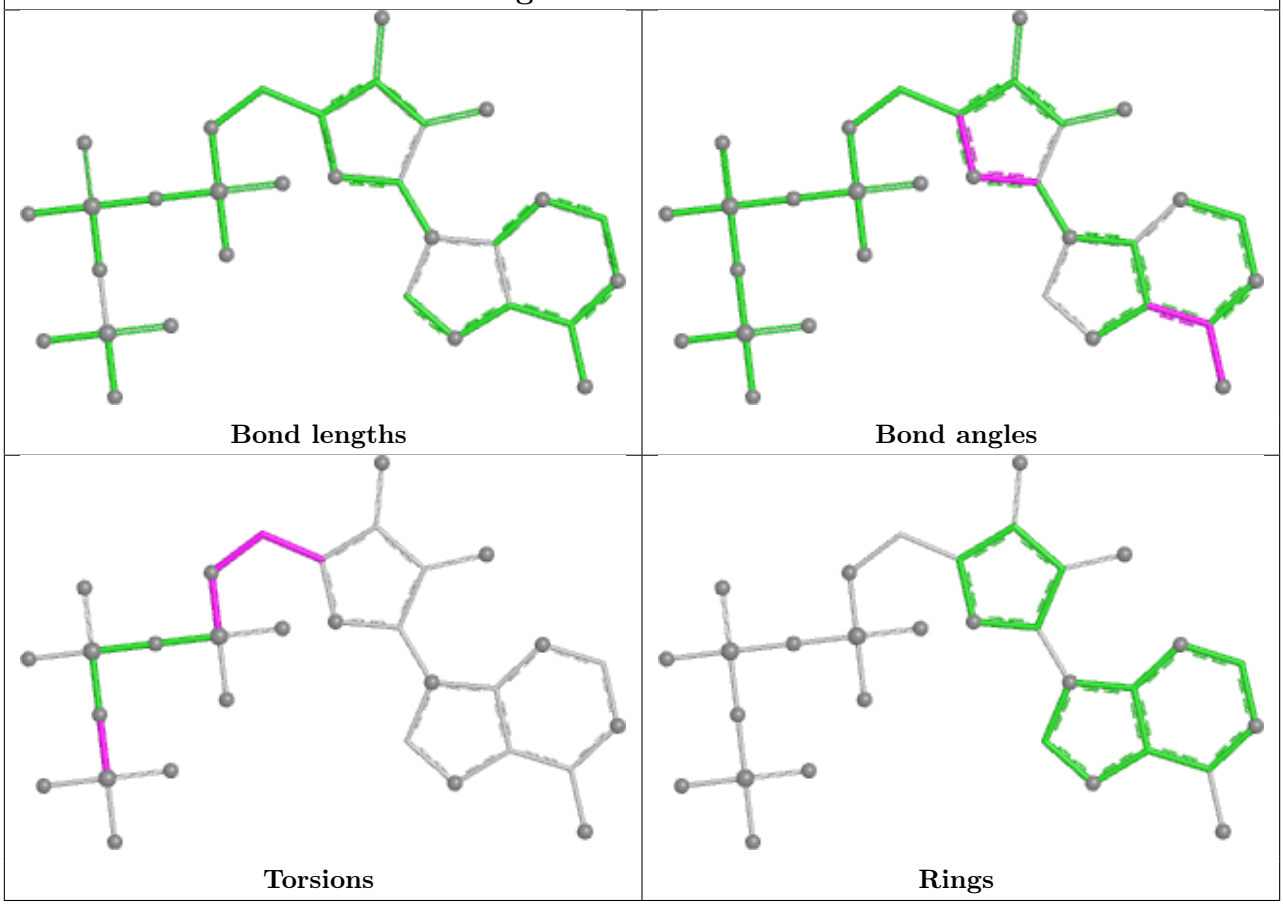
Ligand ATP B 5301



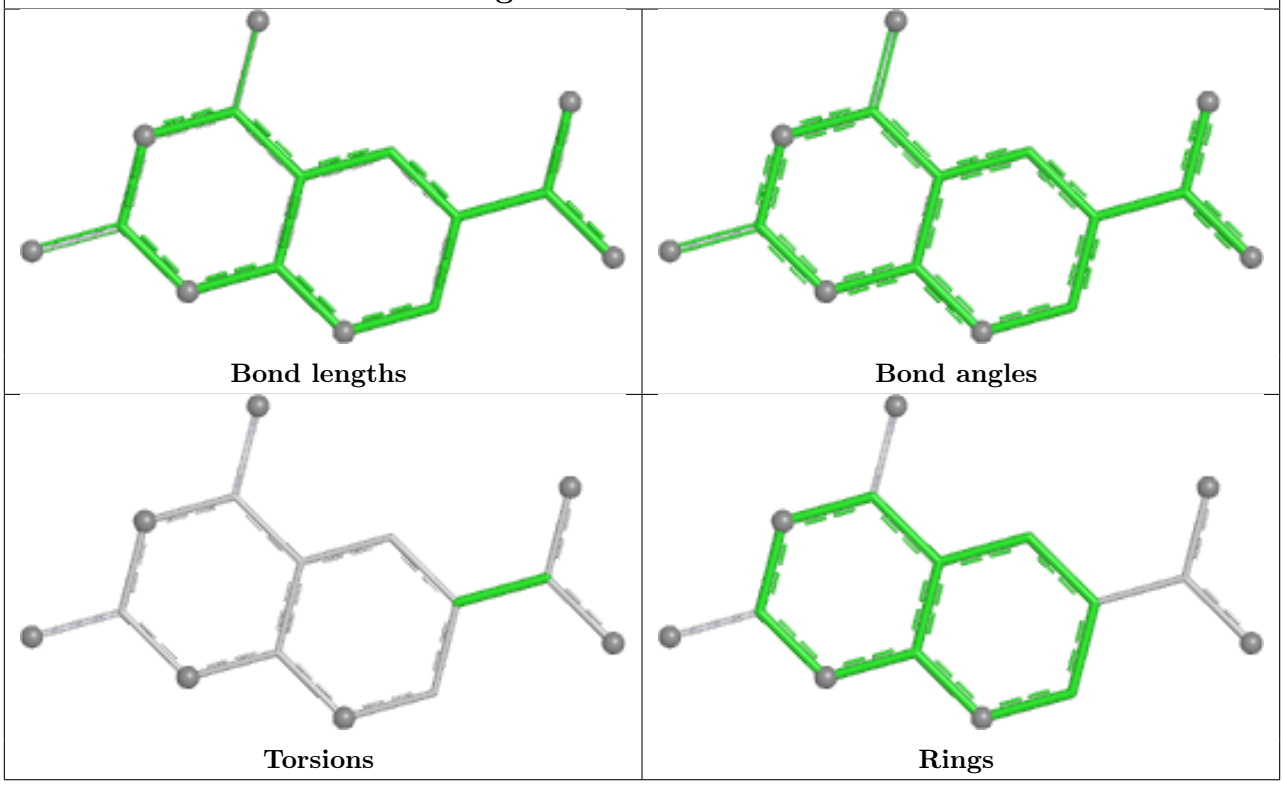
Ligand ATP C 5301

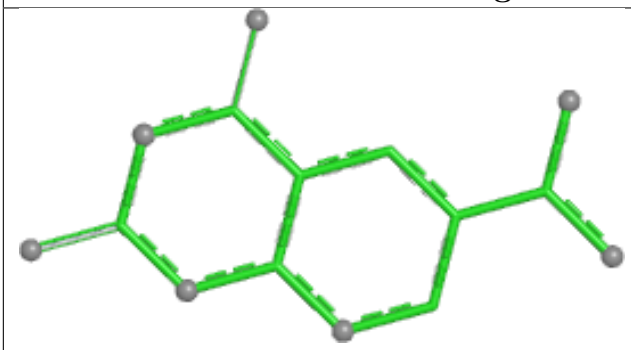
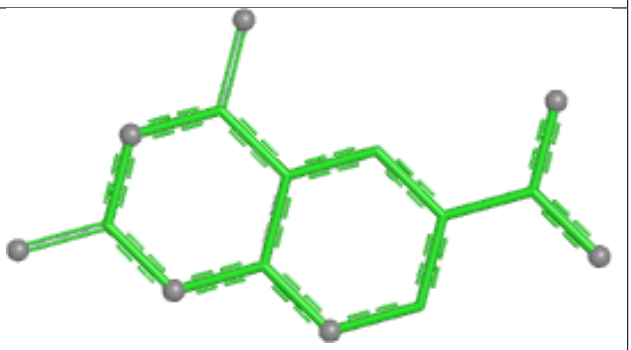
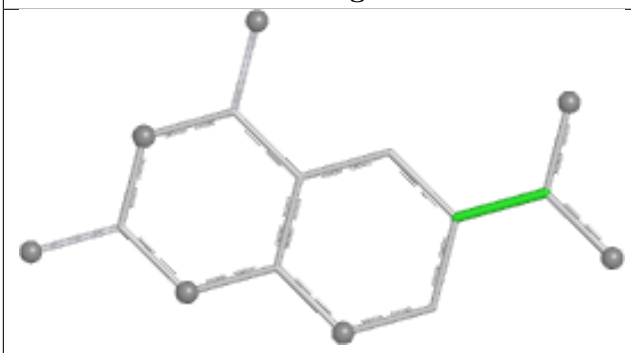
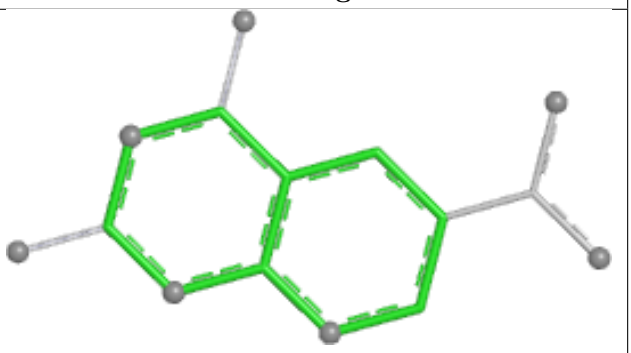


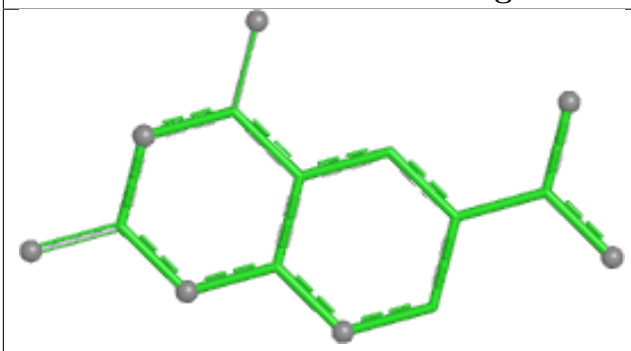
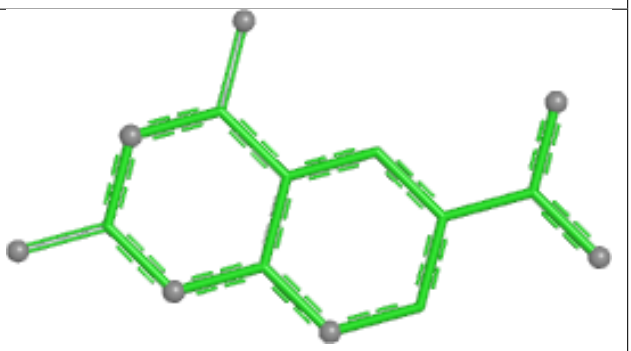
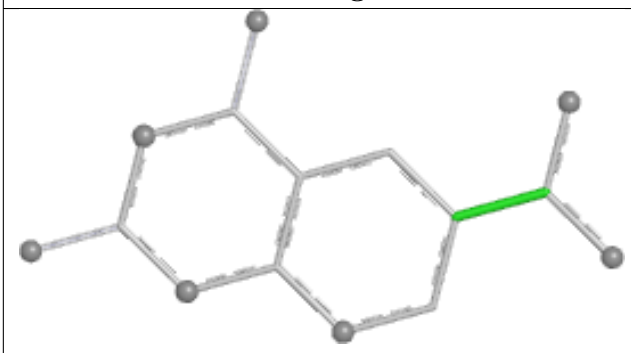
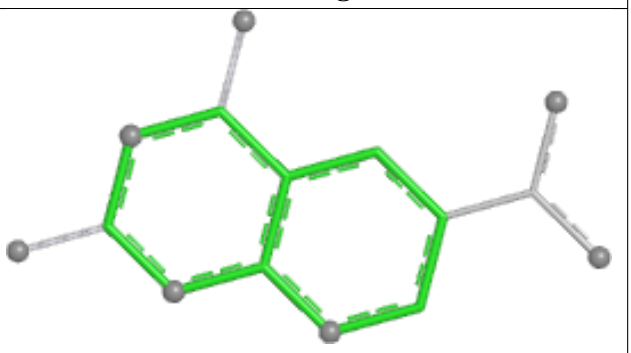
Ligand ATP D 5301



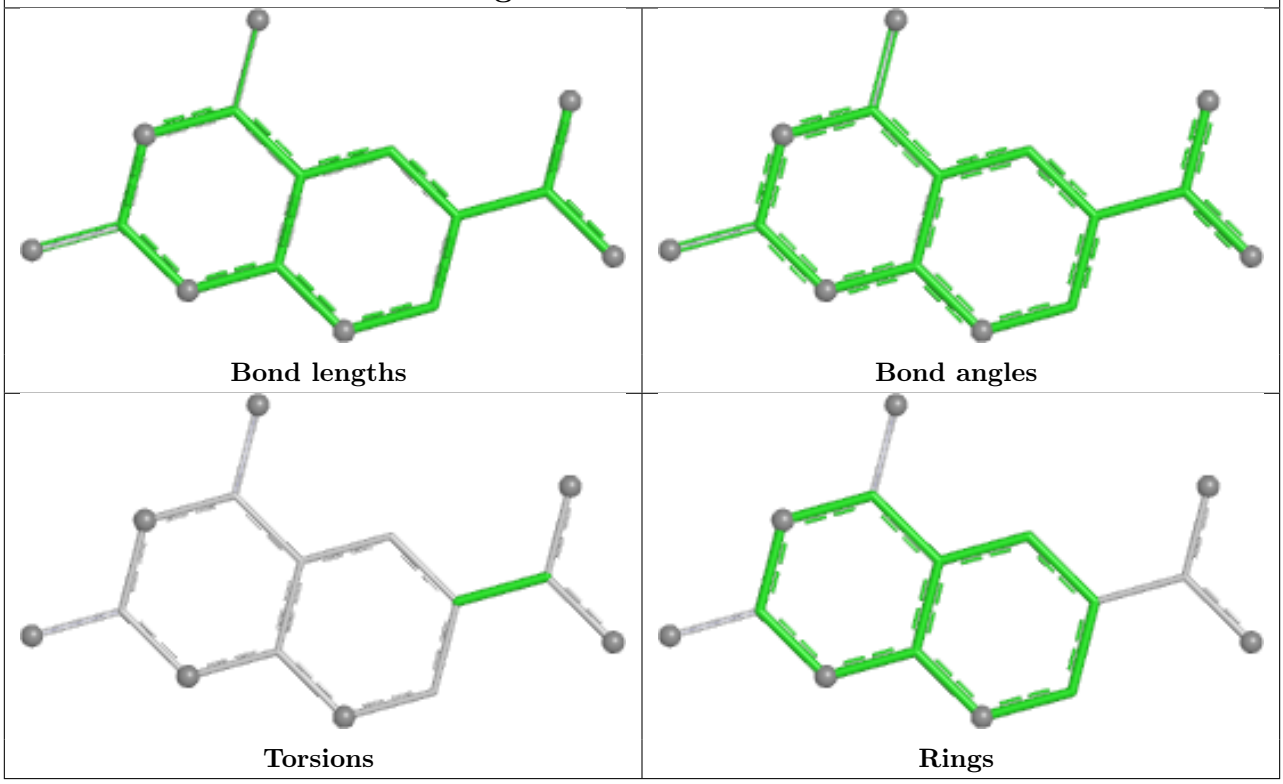
Ligand A1BD5 C 5304



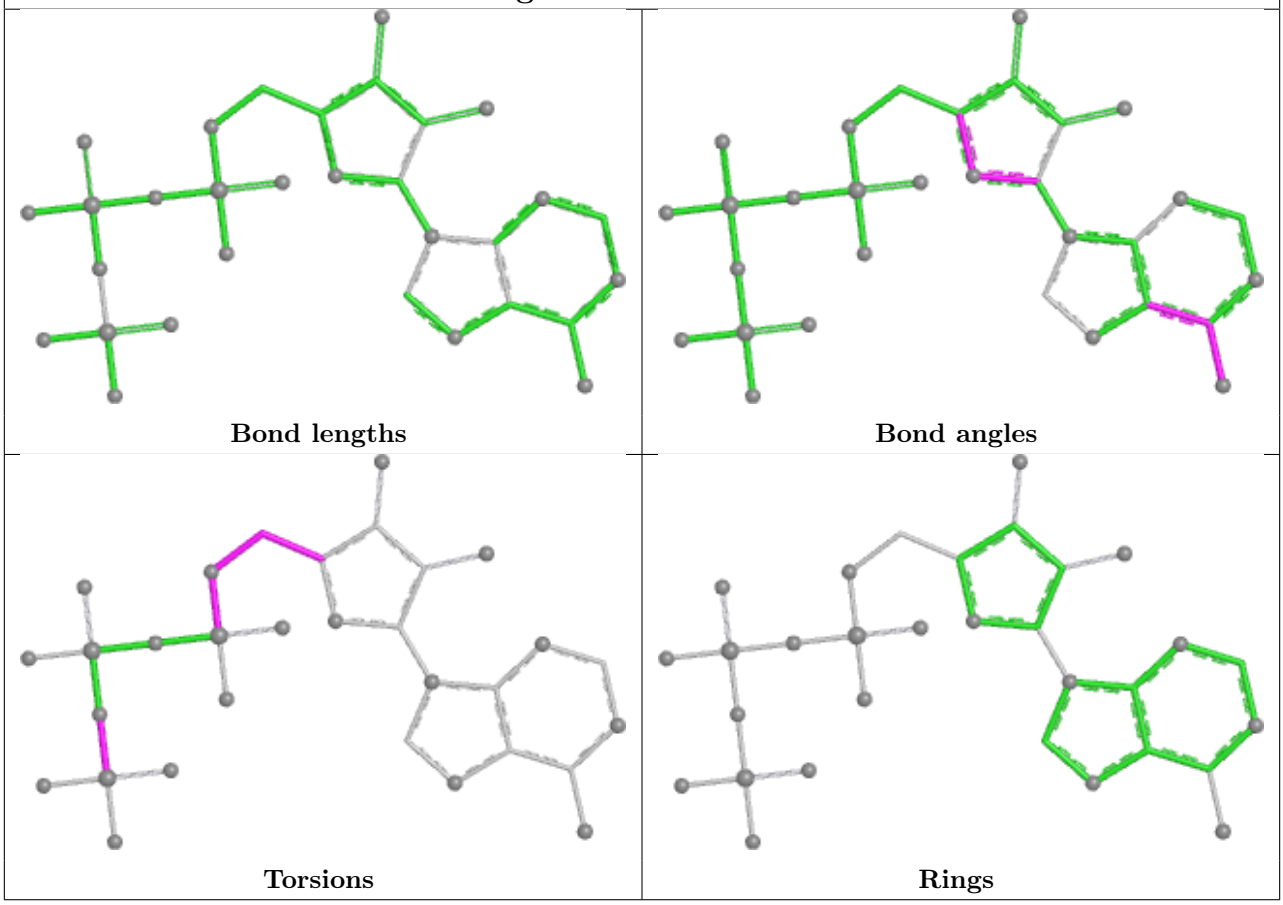
Ligand A1BD5 A 5304	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand A1BD5 B 5304	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand A1BD5 D 5304



Ligand ATP A 5301



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.

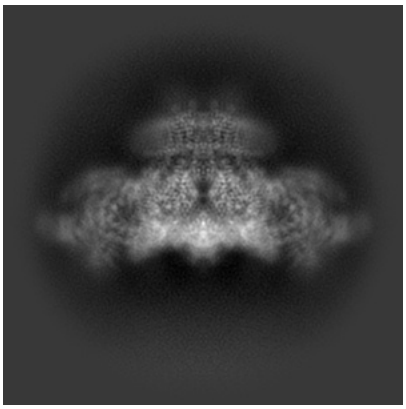
6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-47394. These allow visual inspection of the internal detail of the map and identification of artifacts.

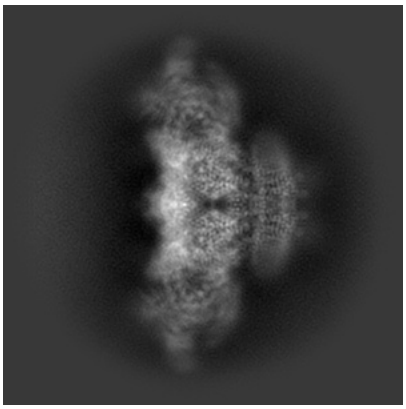
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections (i)

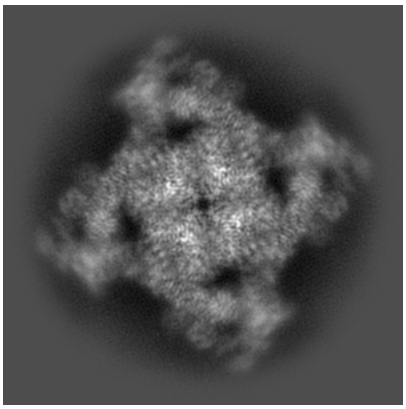
6.1.1 Primary map



X

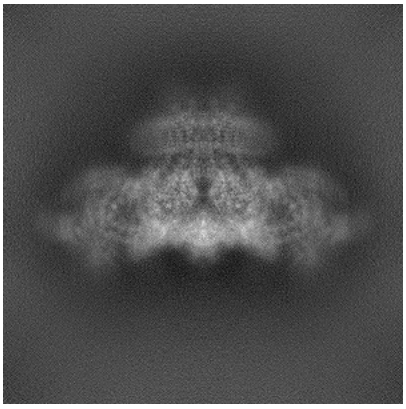


Y

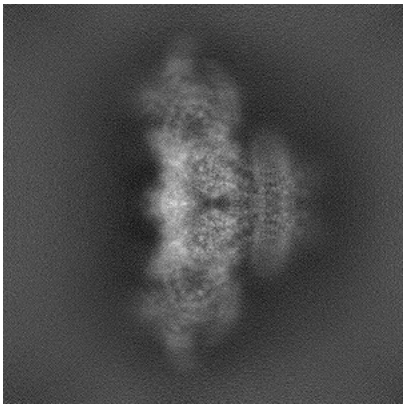


Z

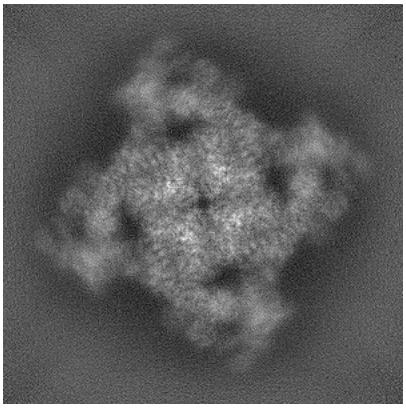
6.1.2 Raw map



X



Y

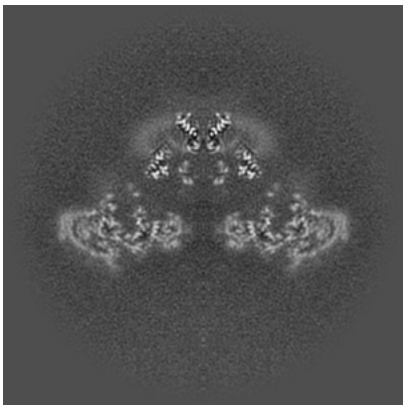


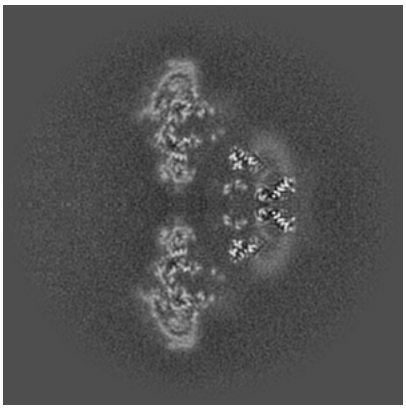
Z

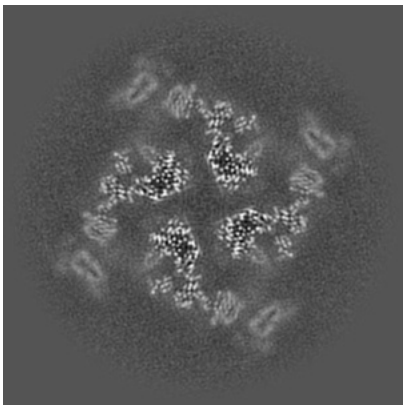
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

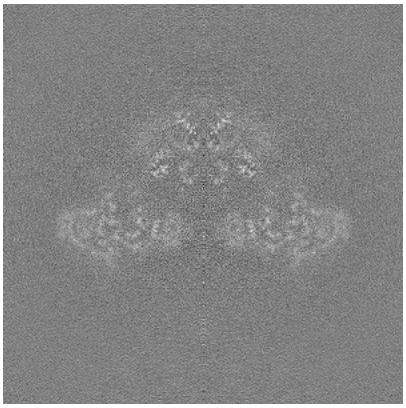
6.2.1 Primary map

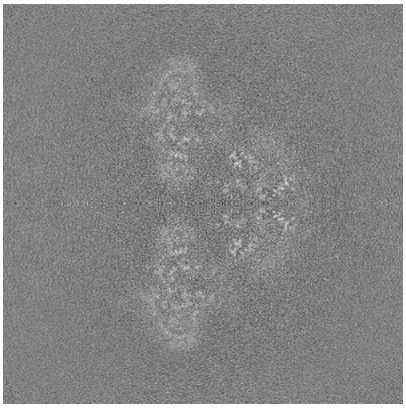

X Index: 256

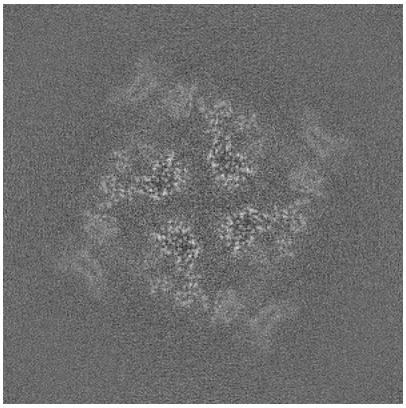

Y Index: 256


Z Index: 256

6.2.2 Raw map


X Index: 256

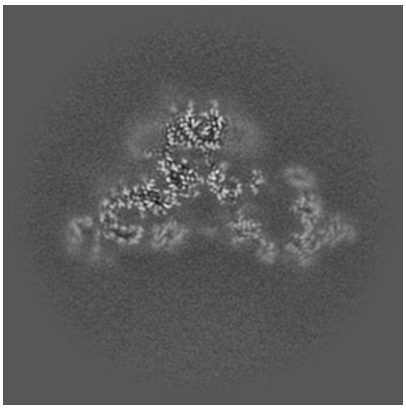

Y Index: 256

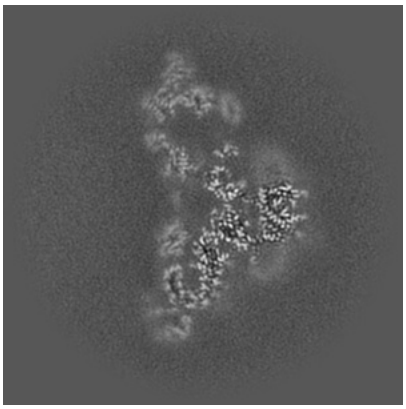

Z Index: 256

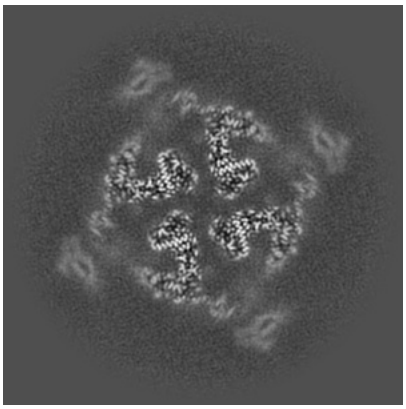
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

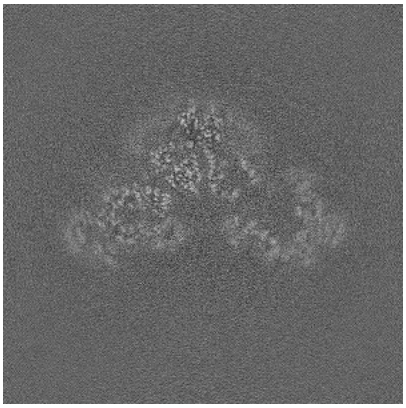
6.3.1 Primary map

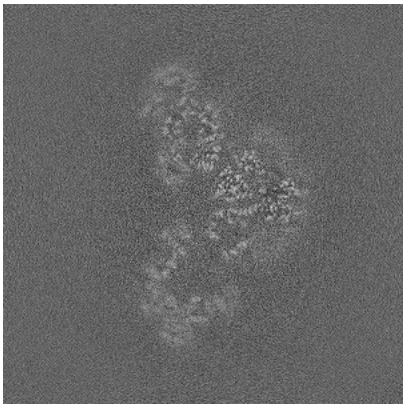

X Index: 239

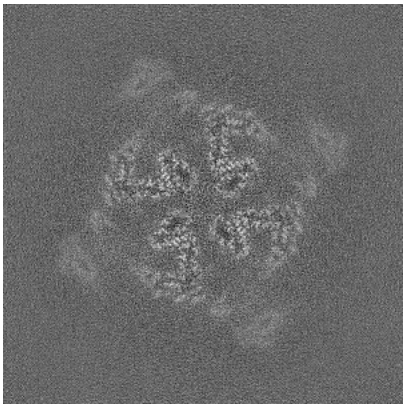

Y Index: 273


Z Index: 265

6.3.2 Raw map


X Index: 244

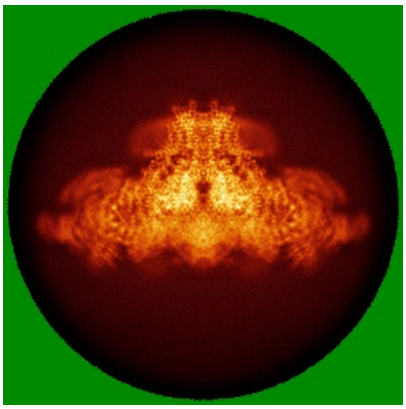

Y Index: 244

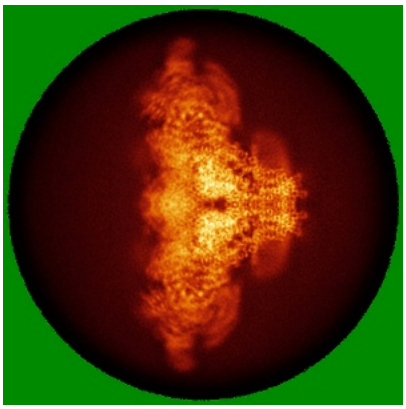

Z Index: 266

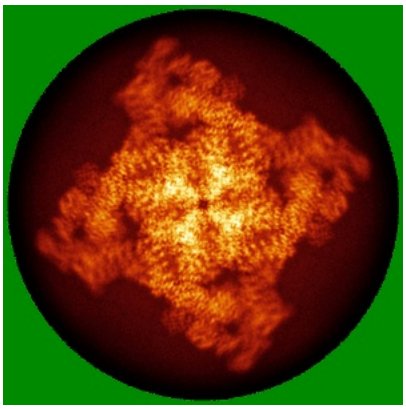
The images above show the largest variance slices of the map in three orthogonal directions.

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

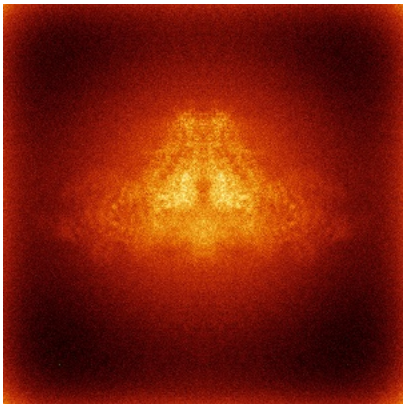
6.4.1 Primary map

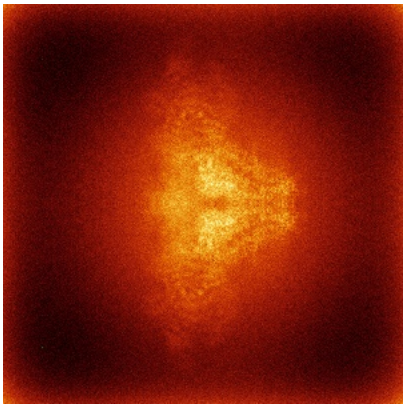

X

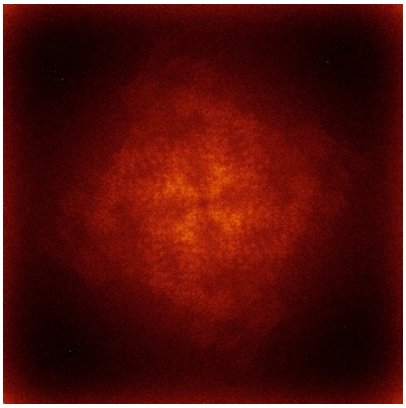

Y


Z

6.4.2 Raw map


X

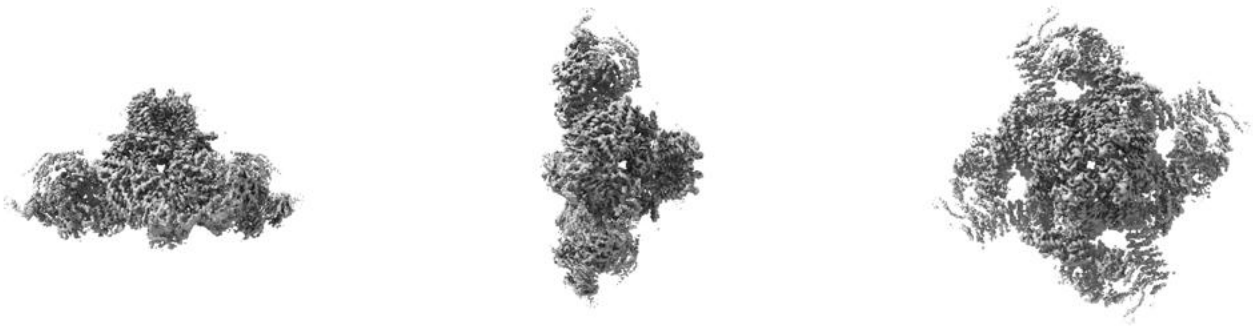

Y


Z

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

6.5 Orthogonal surface views (i)

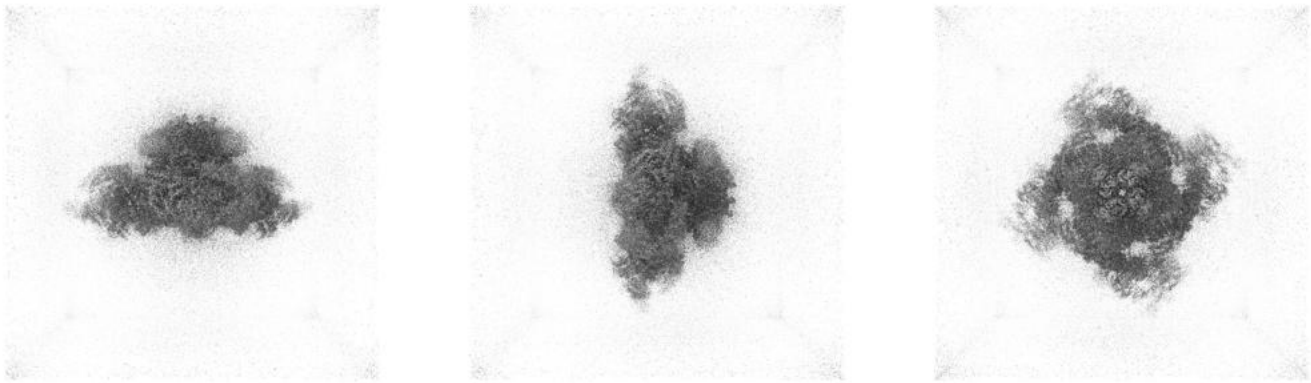
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

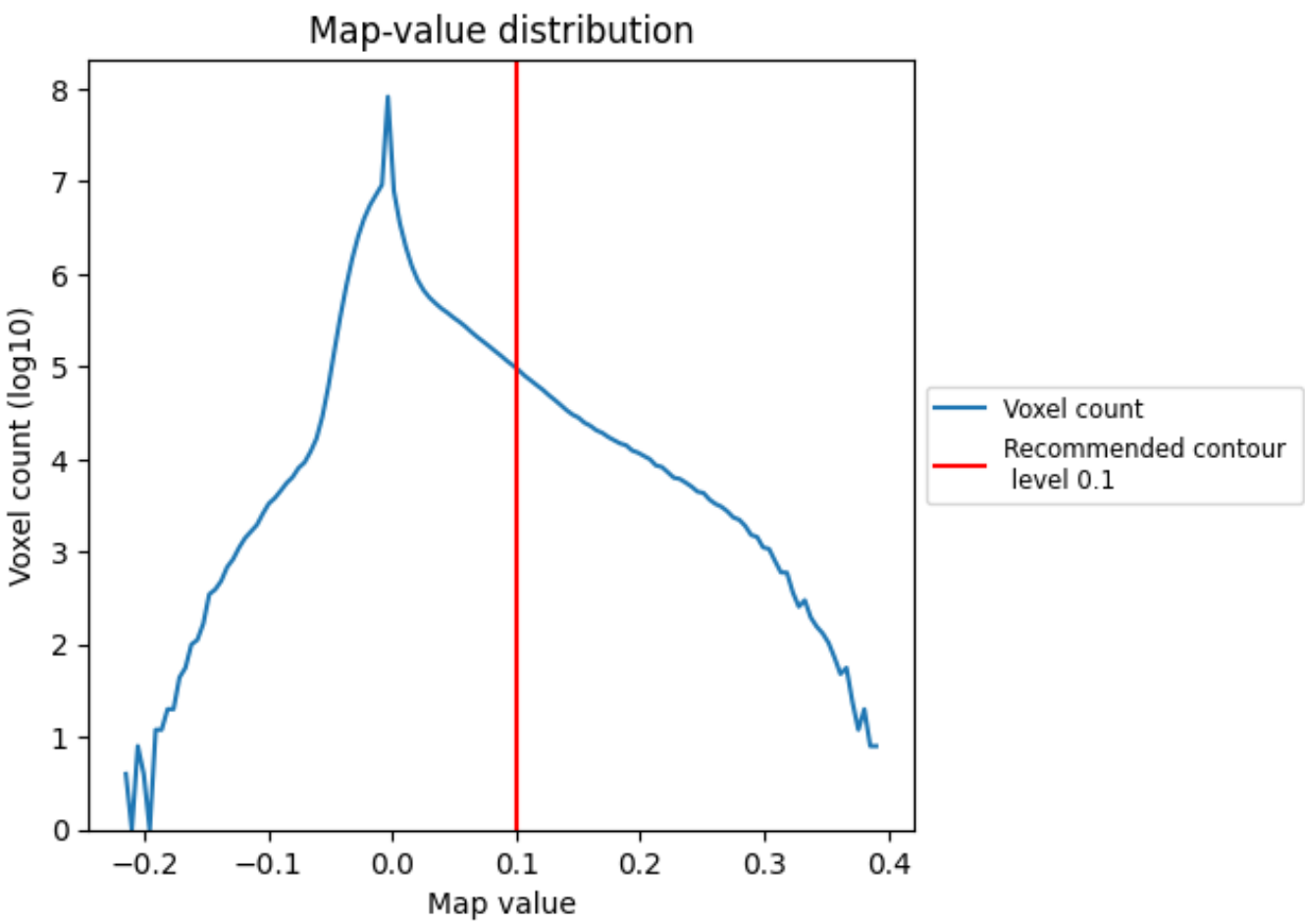
6.6 Mask visualisation (i)

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

7 Map analysis (i)

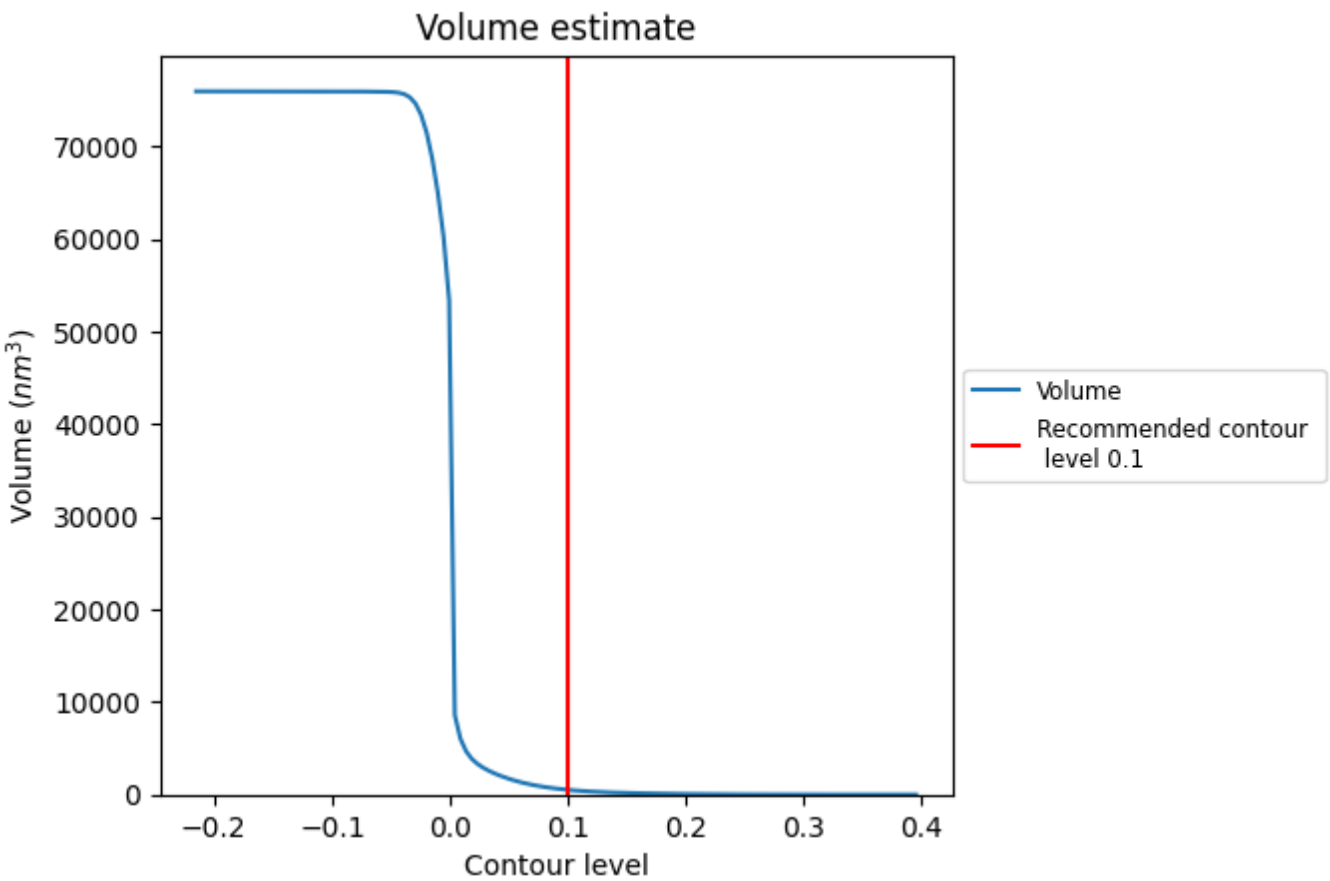
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution (i)



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.

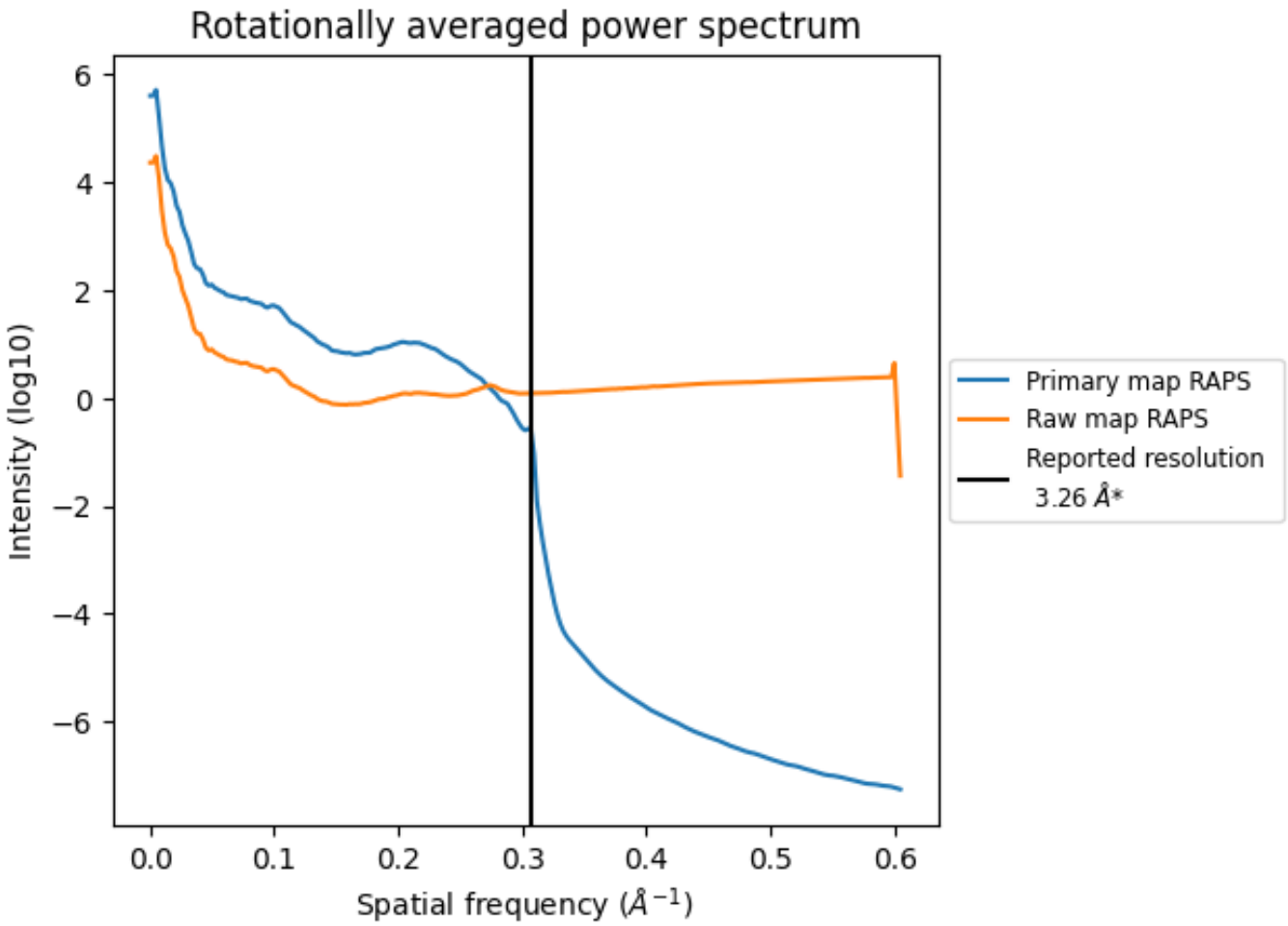
7.2 Volume estimate (i)



The volume at the recommended contour level is 512 nm^3; this corresponds to an approximate mass of 463 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)

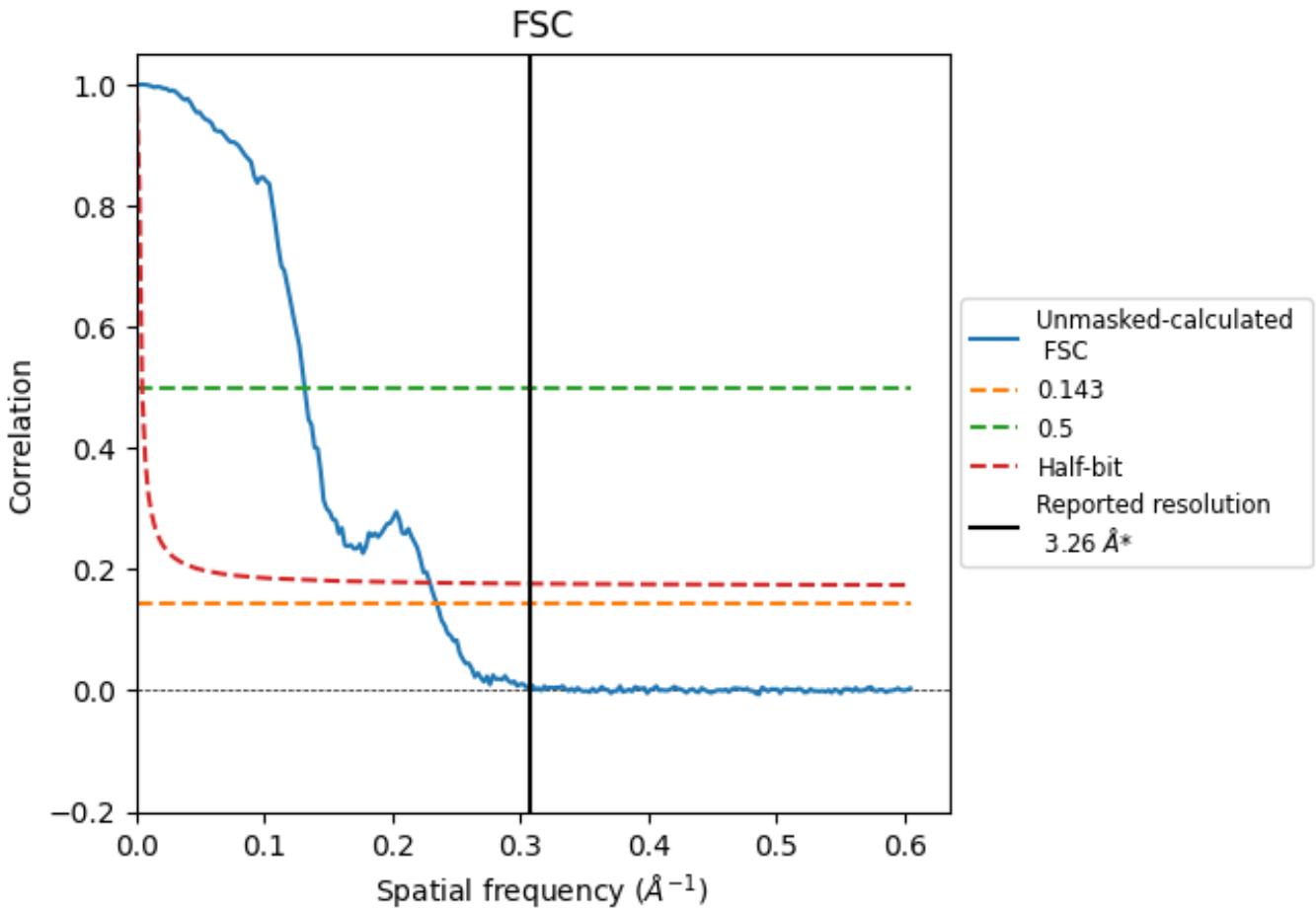


*Reported resolution corresponds to spatial frequency of 0.307 Å^{-1}

8 Fourier-Shell correlation (i)

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 (i)



*Reported resolution corresponds to spatial frequency of 0.307 Å^{-1}

8.2 Resolution estimates (i)

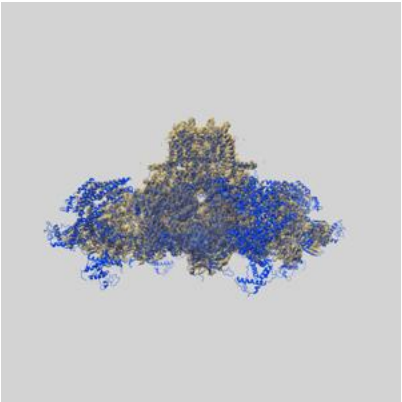
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.26	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.26	7.60	4.36

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.26 differs from the reported value 3.26 by more than 10 %

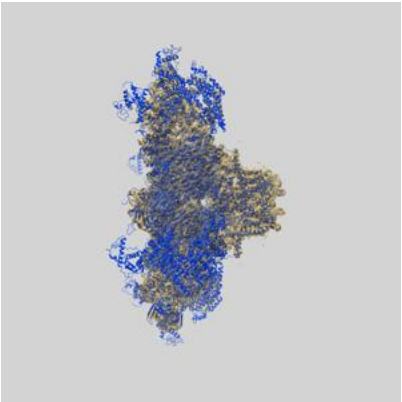
9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-47394 and PDB model 9E1H. Per-residue inclusion information can be found in section 3 on page 7.

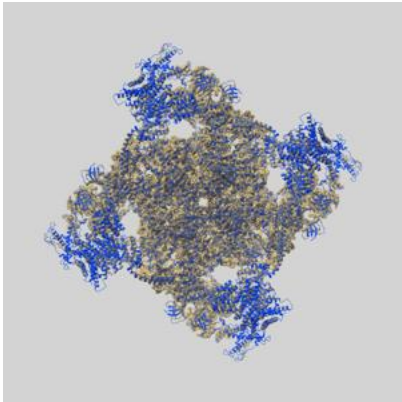
9.1 Map-model overlay (i)



X



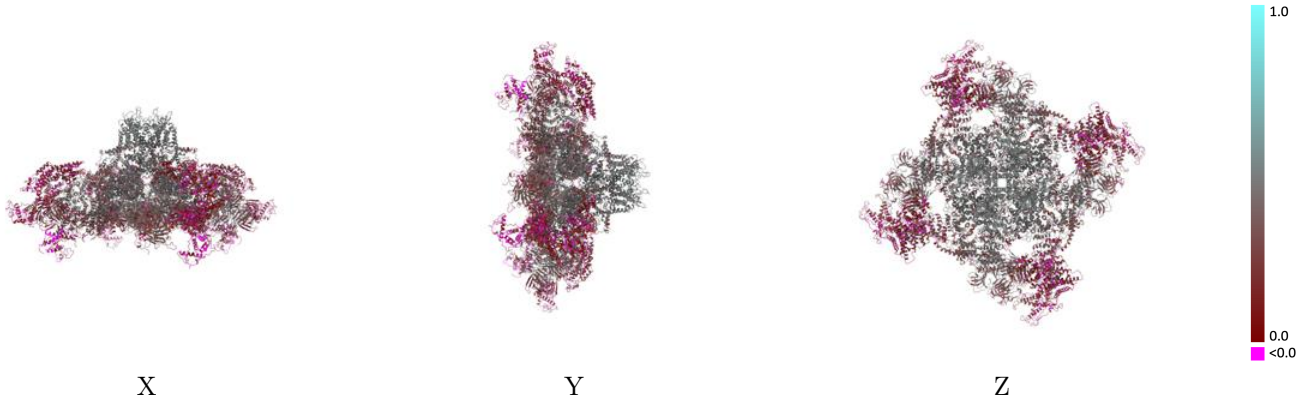
Y



Z

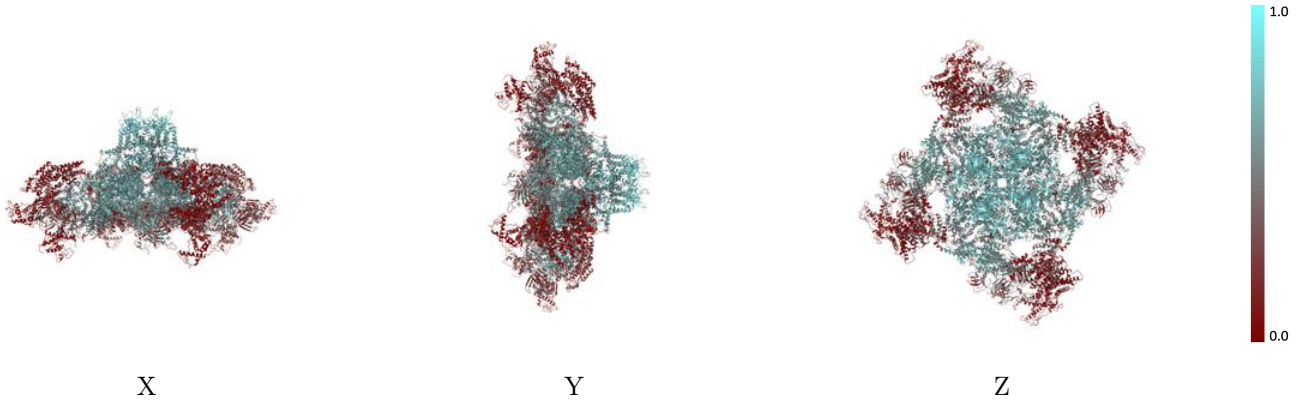
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)



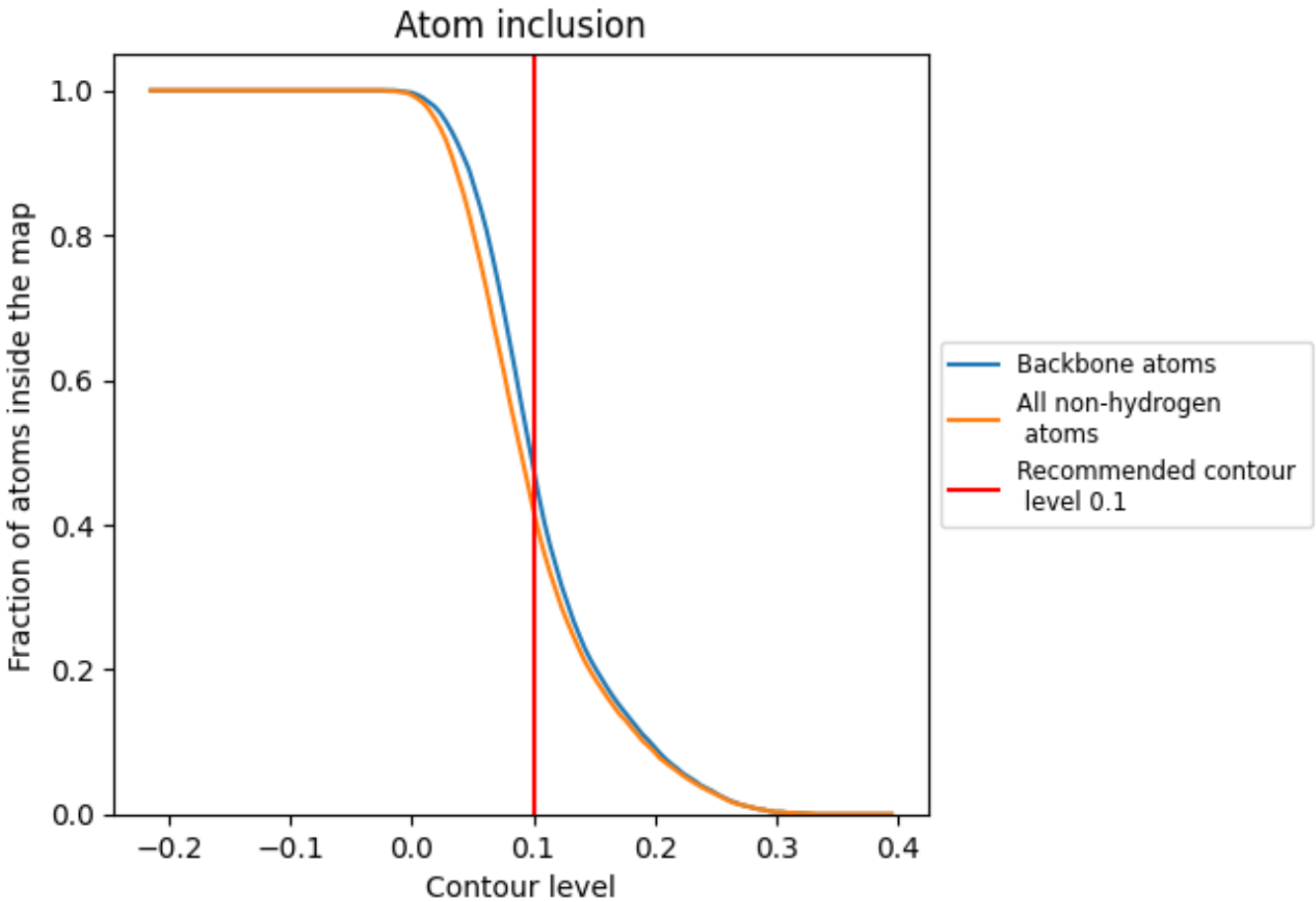
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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)



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 (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 48% of all backbone atoms, 42% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4210	0.3140
A	0.4340	0.3130
B	0.4350	0.3130
C	0.4340	0.3130
D	0.4340	0.3130
E	0.2440	0.3570
F	0.2440	0.3560
G	0.2470	0.3530
H	0.2420	0.3560