Full wwPDB EM Validation Report ⓘ

Nov 22, 2022 – 09:22 PM EST

PDB ID	:	7U9Z
EMDB ID	:	EMD-26410
Title	:	Structure of PKA phosphorylated human RyR2-R2474S in the open state
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2022-03-11
Resolution	:	3.29 Å(reported)
Based on initial model	:	7U9X

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

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

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

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

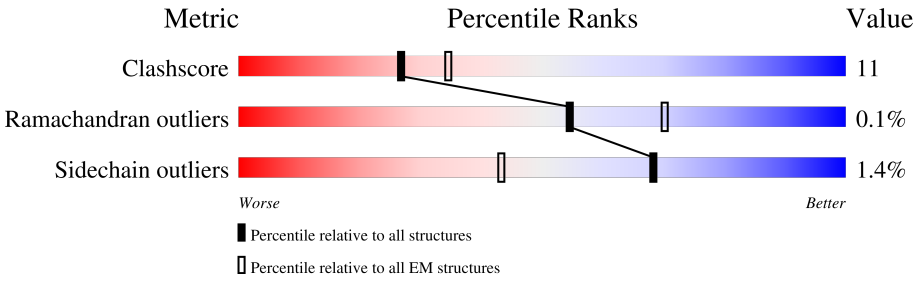
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 3.29 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	4967	11% 63% 21% • 15%
1	B	4967	11% 63% 21% • 15%
1	C	4967	11% 64% 20% • 15%
1	D	4967	11% 64% 21% • 15%
2	E	108	77% 20% ••
2	F	108	77% 20% ••
2	G	108	77% 20% ••
2	H	108	77% 20% ••

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 138688 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	4226	Total 33779	C 21520	N 5746	O 6283	S 230	2	0
1	B	4226	Total 33779	C 21520	N 5746	O 6283	S 230	2	0
1	C	4226	Total 33779	C 21520	N 5746	O 6283	S 230	2	0
1	D	4226	Total 33779	C 21520	N 5746	O 6283	S 230	2	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	2474	SER	ARG	variant	UNP Q92736
B	2474	SER	ARG	variant	UNP Q92736
C	2474	SER	ARG	variant	UNP Q92736
D	2474	SER	ARG	variant	UNP Q92736

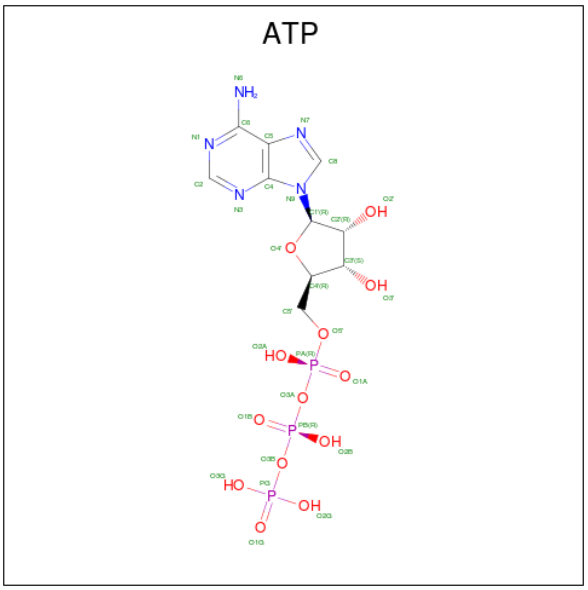
- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	E	107	Total 818	C 516	N 144	O 154	S 4	0	0
2	F	107	Total 818	C 516	N 144	O 154	S 4	0	0
2	G	107	Total 818	C 516	N 144	O 154	S 4	0	0
2	H	107	Total 818	C 516	N 144	O 154	S 4	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

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

- Molecule 4 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total C N O P 62 20 10 26 6	0
4	A	1	Total C N O P 62 20 10 26 6	0
4	B	1	Total C N O P 62 20 10 26 6	0
4	B	1	Total C N O P 62 20 10 26 6	0
4	C	1	Total C N O P 62 20 10 26 6	0
4	C	1	Total C N O P 62 20 10 26 6	0
4	D	1	Total C N O P 62 20 10 26 6	0

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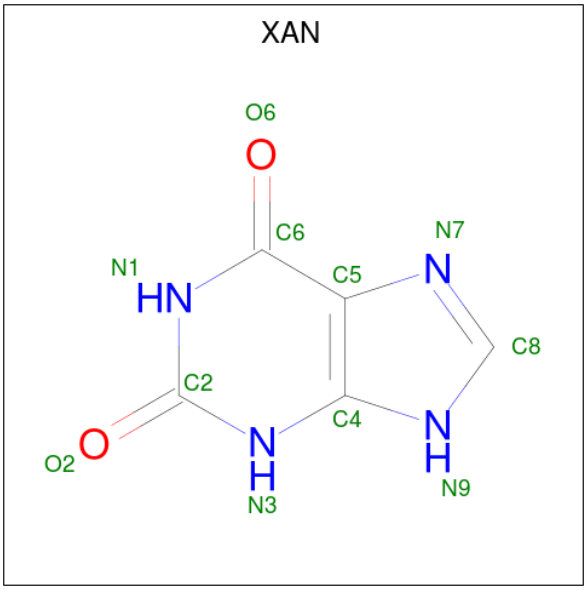
Mol	Chain	Residues	Atoms					AltConf
4	D	1	Total	C	N	O	P	0
			62	20	10	26	6	

- Molecule 5 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

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

- Molecule 6 is XANTHINE (three-letter code: XAN) (formula: $C_5H_4N_4O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			11	5	4	2	
6	B	1	Total	C	N	O	0
			11	5	4	2	
6	C	1	Total	C	N	O	0
			11	5	4	2	

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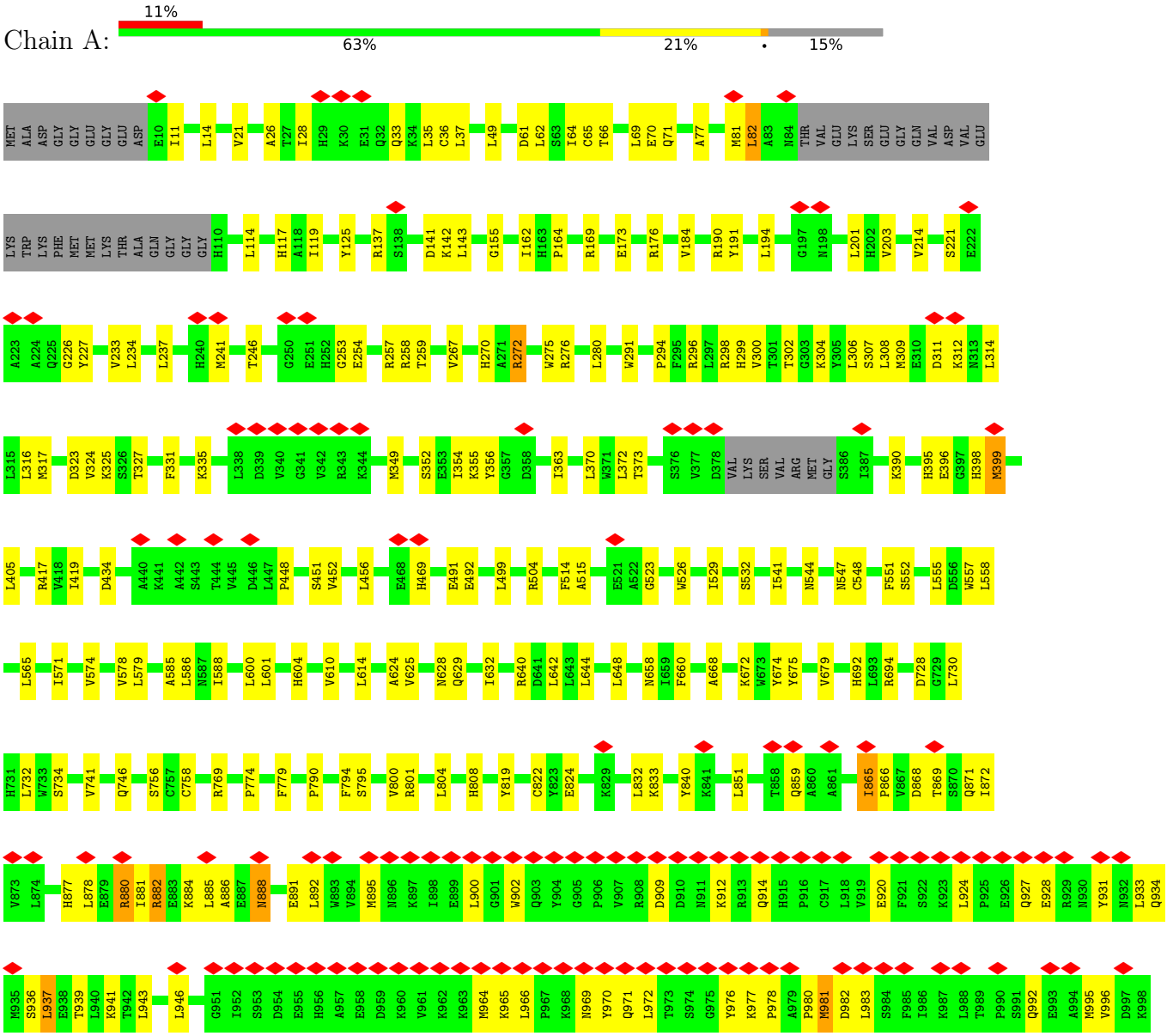
Mol	Chain	Residues	Atoms				AltConf
6	D	1	Total	C	N	O	0
			11	5	4	2	

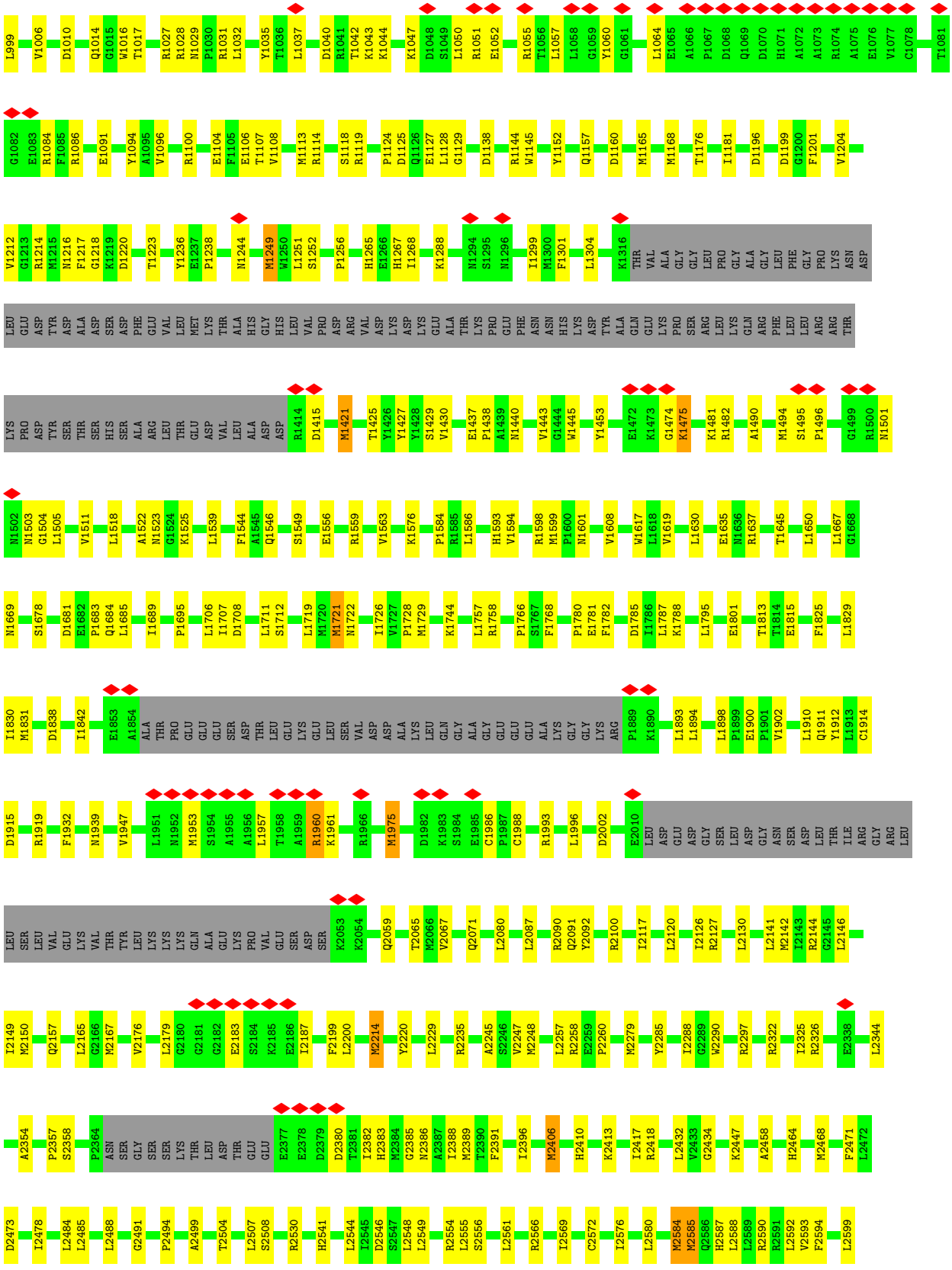
3 Residue-property plots (i)

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

• Molecule 1: Ryanodine receptor 2

Chain A:

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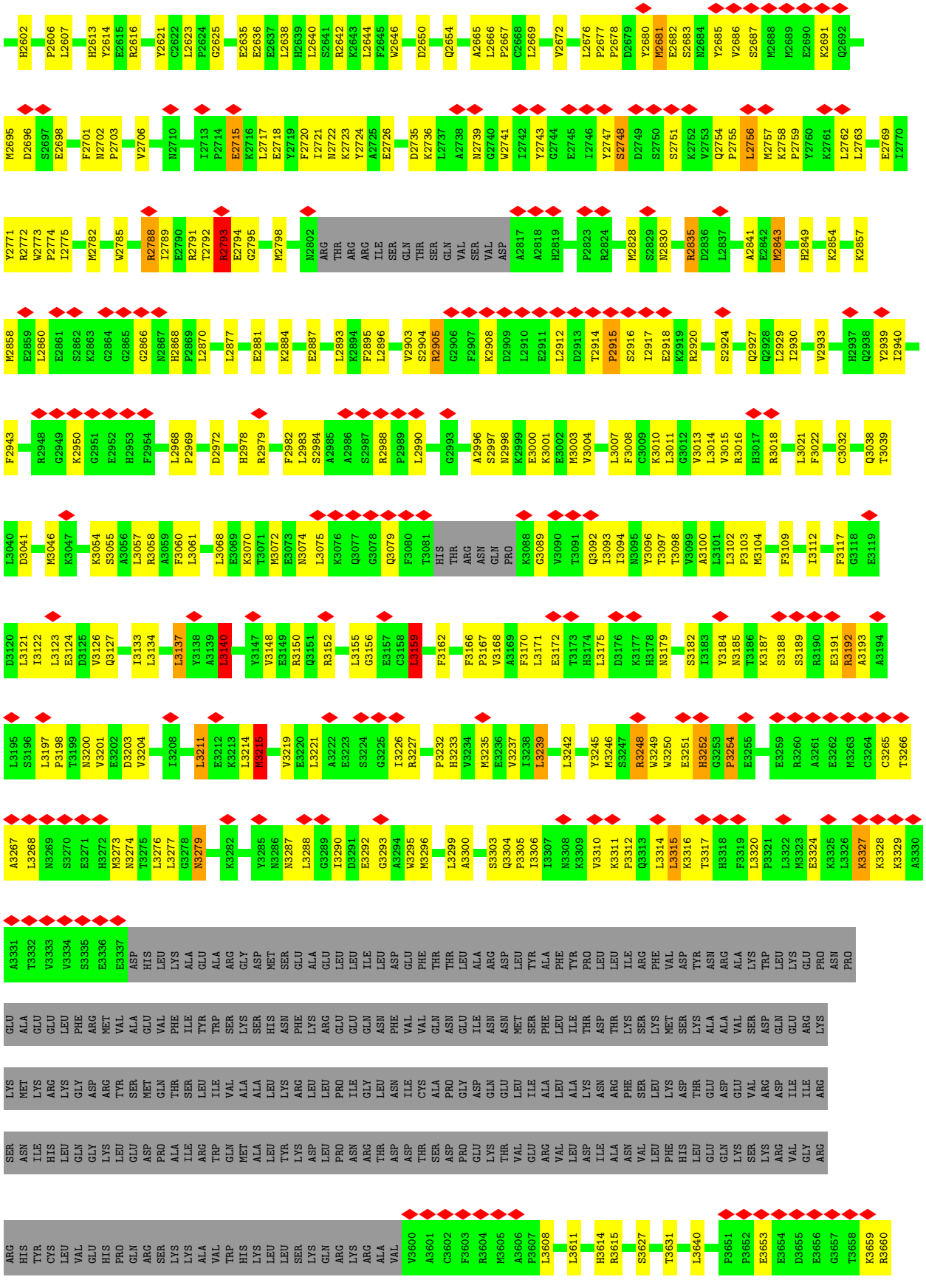
G1082 E1083 R1084 F1085 R1086 E1091 Y1094 A1095 V1096 R1100 E1104 F1105 E1106 T1107 V1108 M1113 R1114 S1118 R1119 P1124 D1125 Q1126 E1127 L1128 G1129 D1138 R1144 W1145 Y1152 Q1157 D1160 M1165 M1168 T1176 I1181 D1196 D1199 G1200 F1201 V1204
V1212 G1213 R1214 M1215 N1216 F1217 G1218 K1219 D1220 T1223 Y1236 E1237 P1238 N1244 M1249 W1250 L1251 S1252 P1256 H1265 E1266 H1267 I1268 K1288 N1294 S1295 N1296 I1299 M1300 F1301 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP
LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR
LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU THR GLU ASP VAL LEU ALA ASP ASP R1414 D1415 M1421 T1425 Y1426 Y1427 Y1428 S1429 V1430 E1437 P1438 A1439 N1440 V1443 G1444 W1445 Y1453 E1472 K1473 G1474 K1475 K1481 R1482 A1490 M1494 S1495 P1496 G1499 R1500 N1501
N1502 N1503 G1504 L1505 V1511 L1518 A1522 N1523 G1524 K1525 L1539 F1544 A1545 Q1546 S1549 E1556 R1559 V1563 K1576 P1584 R1585 L1586 H1593 V1594 R1598 M1599 P1600 N1601 V1608 W1617 L1618 V1619 L1630 E1635 N1636 R1637 T1645 L1650 L1667 G1668
N1669 S1678 D1681 E1682 P1683 Q1684 L1685 I1689 P1695 L1706 I1707 D1708 L1711 S1712 L1719 M1720 M1721 N1722 I1726 V1727 P1728 M1729 K1744 L1757 R1758 P1766 S1767 F1768 P1780 E1781 F1782 D1785 I1786 L1787 K1788 L1795 E1801 T1813 T1814 E1815 F1825 L1829
I1830 M1831 D1838 I1842 E1853 A1854 ALA THR PRO GLU GLU GLU SER ASP THR LEU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU GLU GLU ALA LYS GLY GLY LYS ARG P1889 K1890 L1893 L1894 L1898 P1899 E1900 P1901 V1902 L1910 Q1911 Y1912 L1913 C1914
D1915 R1919 F1932 N1939 V1947 L1951 N1952 M1953 S1954 A1955 A1956 L1957 T1958 A1959 R1960 K1961 R1966 M1975 D1982 K1983 S1984 E1985 C1986 P1987 C1988 R1993 L1996 D2002 E2010 LEU ASP GLU ASP GLY SER LEU ASP GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU
LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL GLU SER ASP SER K2053 K2054 Q2059 T2065 M2066 V2067 Q2071 L2080 L2087 R2090 Q2091 Y2092 R2100 I2117 L2120 I2126 R2127 L2130 L2141 M2142 I2143 R2144 G2145 L2146
I2149 M2150 Q2157 L2165 G2166 M2167 V2176 L2179 G2180 G2181 G2182 E2183 S2184 K2185 E2186 I2187 F2199 L2200 M2214 Y2220 L2229 R2235 A2245 S2246 V2247 M2248 L2257 R2258 E2259 P2260 M2279 Y2285 I2288 G2289 W2290 R2297 R2322 I2325 R2326 E2338 L2344
A2354 P2357 S2358 P2364 ASN SER GLY SER SER LYS THR LEU ASP THR GLU GLU E2377 E2378 D2379 D2380 T2381 I2382 H2383 M2384 G2385 N2386 A2387 I2388 M2389 T2390 F2391 I2396 M2406 H2410 K2413 I2417 R2418 L2432 V2433 G2434 K2447 A2458 H2464 M2468 F2471 L2472
D2473 I2478 L2484 L2485 L2488 G2491 P2494 A2499 T2504 L2507 S2508 R2530 H2541 L2544 I2545 D2546 S2547 L2548 L2549 R2554 L2555 S2556 L2561 R2566 I2569 C2572 I2576 L2580 M2584 M2585 Q2586 H2587 L2588 L2589 R2590 R2591 L2592 V2593 F2594 L2599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M2695 D2696 S2697 E2698 F2701 N2702 P2703 V2706 N2710 I2713 P2714 E2715 K2716 L2717 E2718 Y2719 F2720 I2721 N2722 K2723 Y2724 A2725 E2726 D2735 K2736 L2737 A2738 N2739 G2740 W2741 I2742 Y2743 G2744 E2745 I2746 Y2747 S2748 D2749 S2750 S2751 K2752 V2753 Q2754 P2755 L2756 M2757 K2758 P2759 Y2760 K2761 L2762 L2763 E2769 I2770
Y2771 R2772 W2773 P2774 I2775 M2782 W2785 R2788 I2789 E2790 R2791 T2792 R2793 E2794 G2795 M2798 N2802 ARG THR ARG ARG ILE SER GLN THR SER GLN VAL SER VAL ASP A2817 A2818 H2819 P2823 R2824 M2828 S2829 N2830 R2835 D2836 L2837 A2841 E2842 M2843 H2849 K2854 K2857
M2858 E2859 L2860 E2861 S2862 K2863 G2864 G2865 G2866 N2867 H2868 P2869 L2870 L2877 E2881 K2884 E2887 L2893 K2894 F2895 L2896 V2903 S2904 R2905 G2906 F2907 K2908 D2909 L2910 E2911 L2912 D2913 T2914 P2915 S2916 I2917 E2918 K2919 R2920 S2924 Q2927 Q2928 L2929 I2930 V2933 H2937 Q2938 Y2939 I2940
F2943 R2948 G2949 K2950 G2951 E2952 H2953 F2954 L2968 P2969 D2972 H2978 R2979 F2982 L2983 S2984 A2985 A2986 S2987 R2988 P2989 L2990 G2993 A2996 S2997 N2998 K2999 E3000 K3001 E3002 M3003 V3004 L3007 F3008 C3009 K3010 L3011 G3012 V3013 L3014 V3015 R3016 H3017 R3018 L3021 F3022 C3032 Q3038 T3039
L3040 D3041 M3046 K3047 K3054 S3055 A3056 L3057 R3058 A3059 F3060 L3061 L3068 E3069 K3070 T3071 M3072 E3073 N3074 L3075 K3076 Q3077 G3078 Q3079 F3080 T3081 HIS THR ARG ASN GLN PRO K3088 G3089 V3090 T3091 Q3092 I3093 I3094 N3095 Y3096 T3097 T3098 V3099 A3100 L3101 L3102 P3103 M3104 F3109 I3112 F3117 G3118 E3119
D3120 L3121 I3122 L3123 E3124 D3125 V3126 Q3127 I3133 L3134 L3137 Y3138 A3139 A3140 Y3147 V3148 E3149 R3150 Q3151 R3152 L3155 G3156 E3157 C3158 L3159 F3162 F3166 P3167 V3168 A3169 F3170 L3171 E3172 T3173 H3174 L3175 D3176 K3177 H3178 N3179 S3182 I3183 Y3184 N3185 T3186 K3187 S3188 S3189 R3190 E3191 R3192 A3193 A3194
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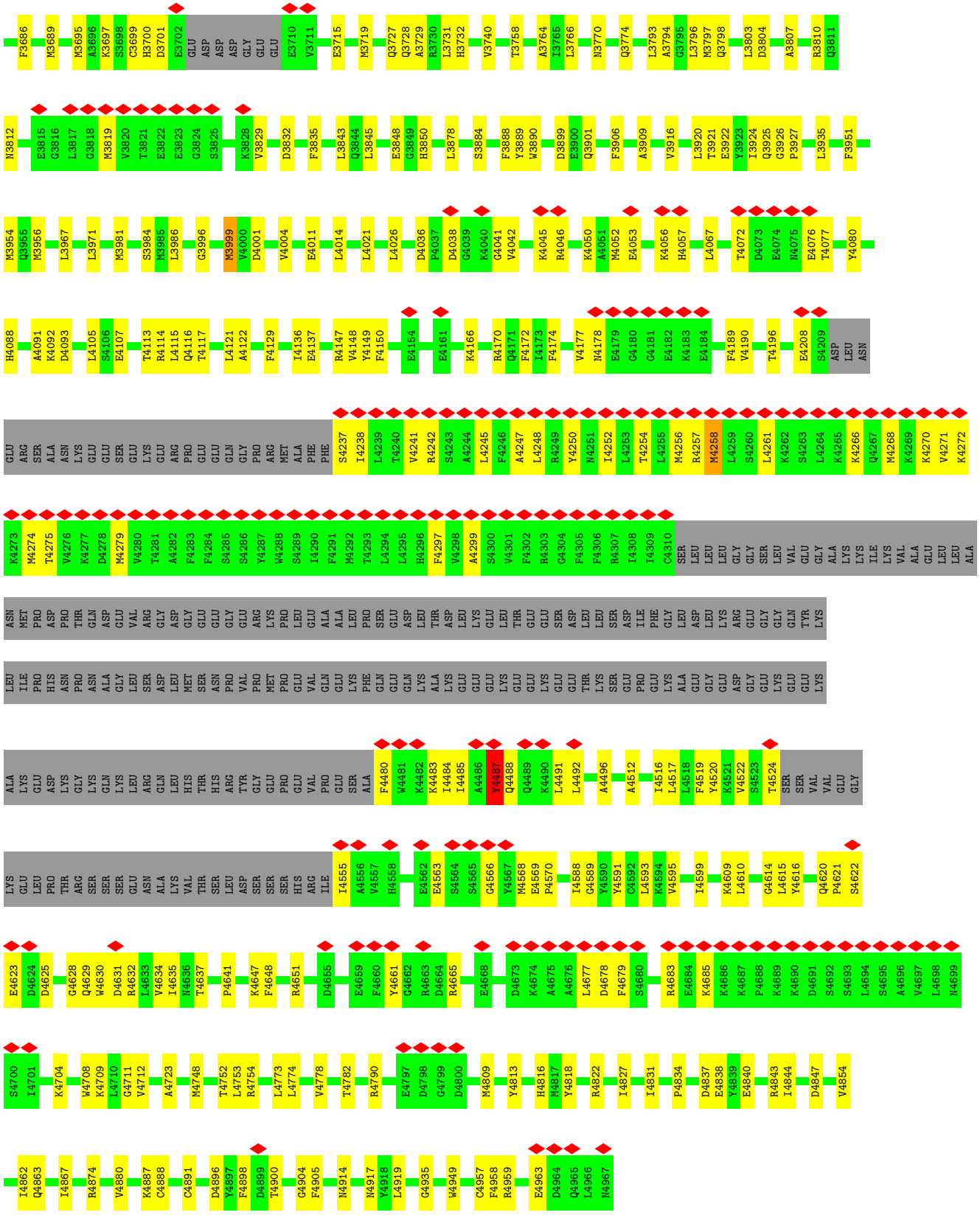
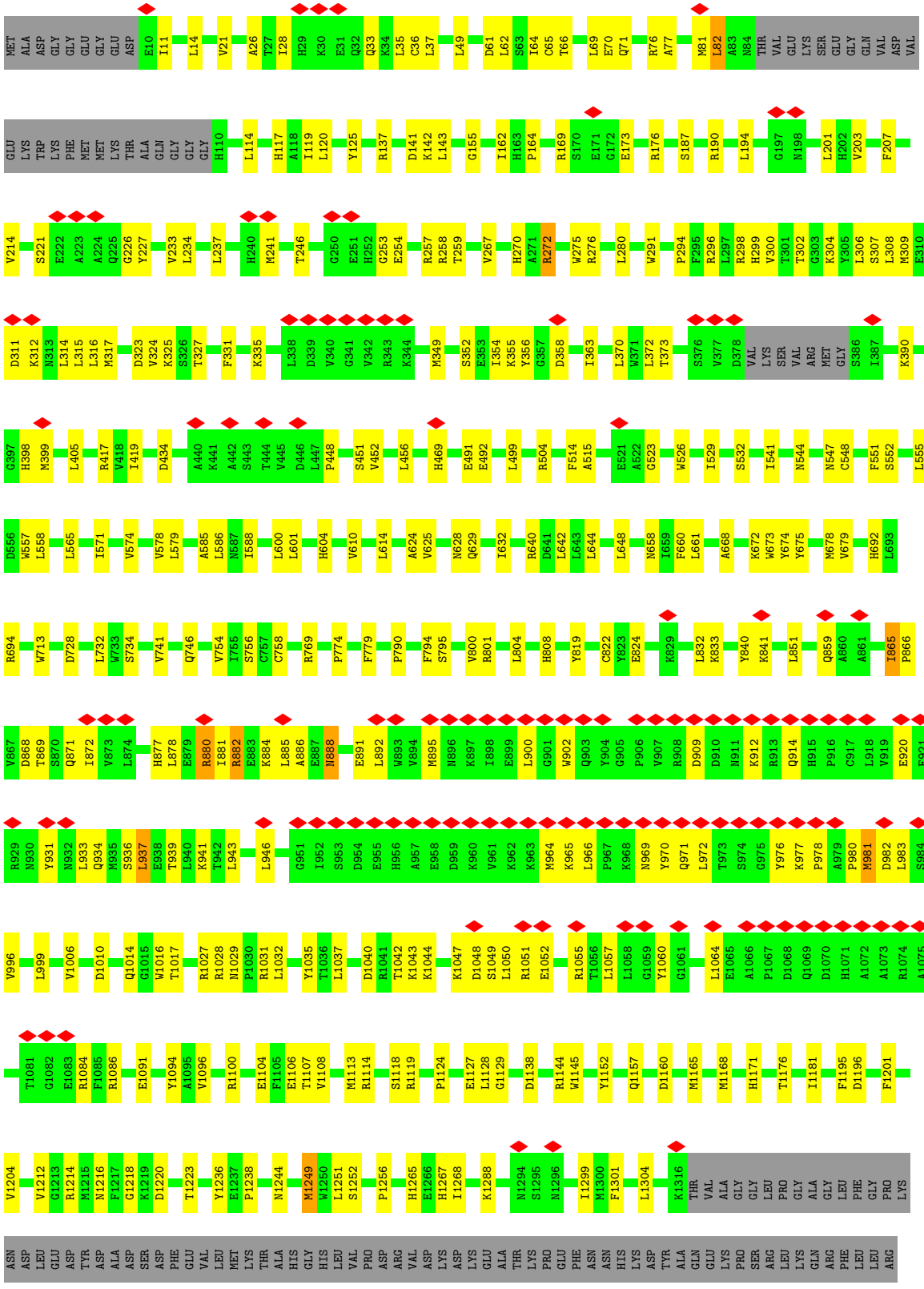
A3267 L3268 N3269 S3270 E3271 H3272 M3273 N3274 T3275 L3276 L3277 G3278 N3279 K3282 Y3285 N3286 N3287 L3288 G3289 I3290 D3291 E3292 G3293 A3294 W3295 M3296 L3299 A3300 S3303 Q3304 P3305 I3306 I3307 N3308 K3309 V3310 K3311 P3312 Q3313 L3314 L3315 K3316 T3317 H3318 F3319 L3320 P3321 L3322 M3323 E3324 K3325 L3326 K3327 K3328 K3329 A3330
A3331 T3332 V3333 V3334 S3335 E3336 E3337 ASP HIS LEU LYS ALA GLU ALA ARG GLY ASP MET SER GLU ALA GLU LEU LEU ILE LEU ASP GLU PHE THR THR LEU ALA ARG ASP LEU LEU TYR ALA PHE TYR PRO LEU LEU ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO
GLU ALA GLU GLU LEU PHE ARG MET VAL ALA GLU VAL PHE ILE TYR TRP SER LYS SER HIS ASN PHE LYS ARG GLU GLU GLN ASN PHE VAL VAL GLN ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR ASP THR LYS SER LYS MET SER LYS ALA ALA ARG ALA LYS VAL SER ASP GLN GLU ARG LYS
LYS MET LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU GLY PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN GLU LEU ASP LEU ALA ALA LEU LYS ASN ARG PHE SER LEU LYS ASP THR GLU ASP VAL GLU ARG ASP ILE ILE ARG
SER ASN ILE HIS LEU GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA ALA LEU TYR LYS ASP LEU PRO ASN ARG THR ASP ASP THR SER ASP PRO GLU LYS THR VAL GLU ARG VAL LEU ASP ILE ALA ASN VAL LEU PHE HIS LEU GLU GLN LYS SER LYS ARG VAL GLY ARG
ARG HIS TYR CYS LEU VAL GLU HIS PRO GLN ARG SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG LYS ARG ALA V3600 A3601 C3602 F3603 R3604 M3605 A3606 P3607 L3608 L3611 H3614 R3615 S3627 T3631 L3640 P3651 P3652 E3653 E3654 D3655 E3656 G3657 T3658 K3659 R3660

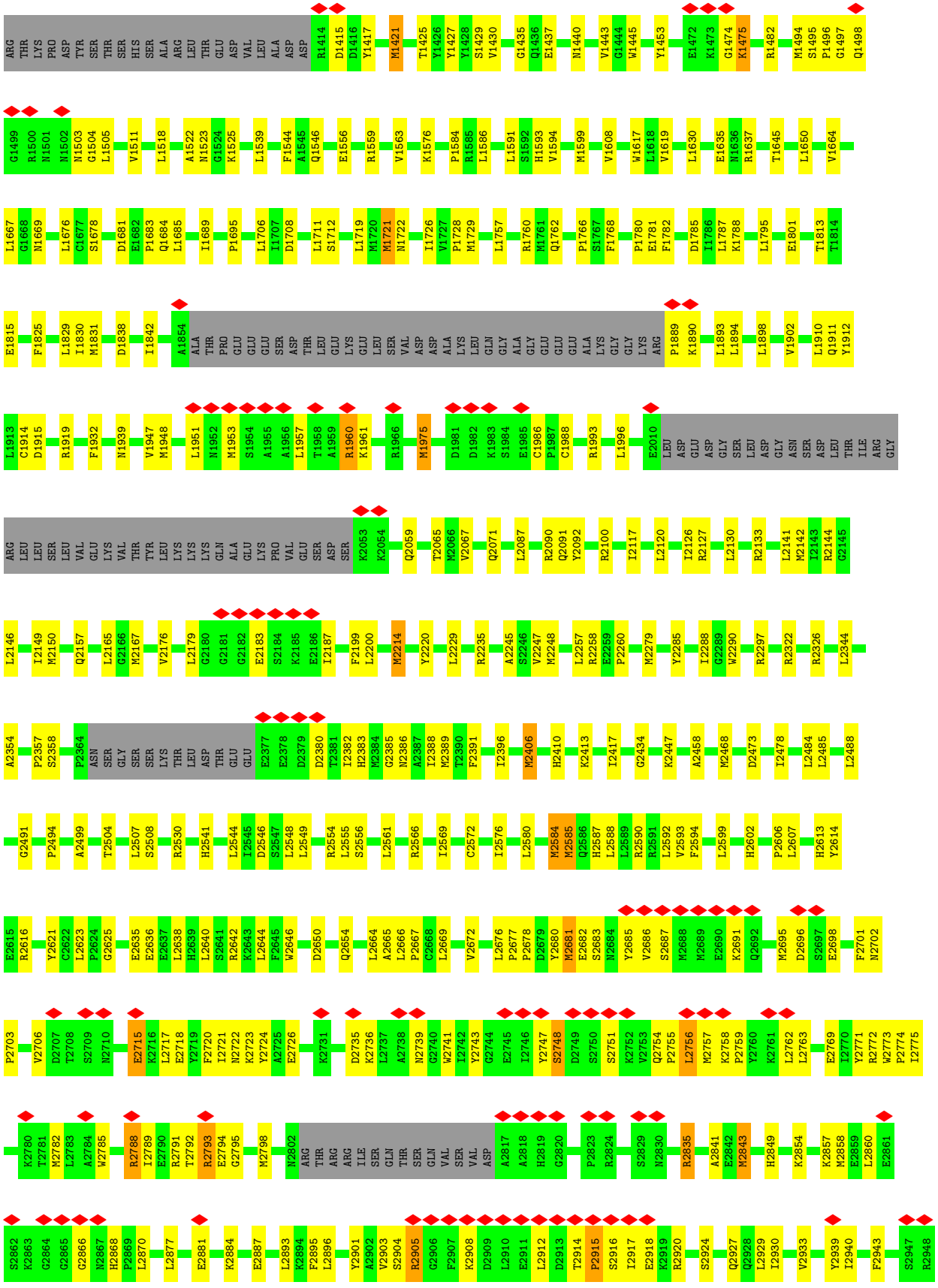


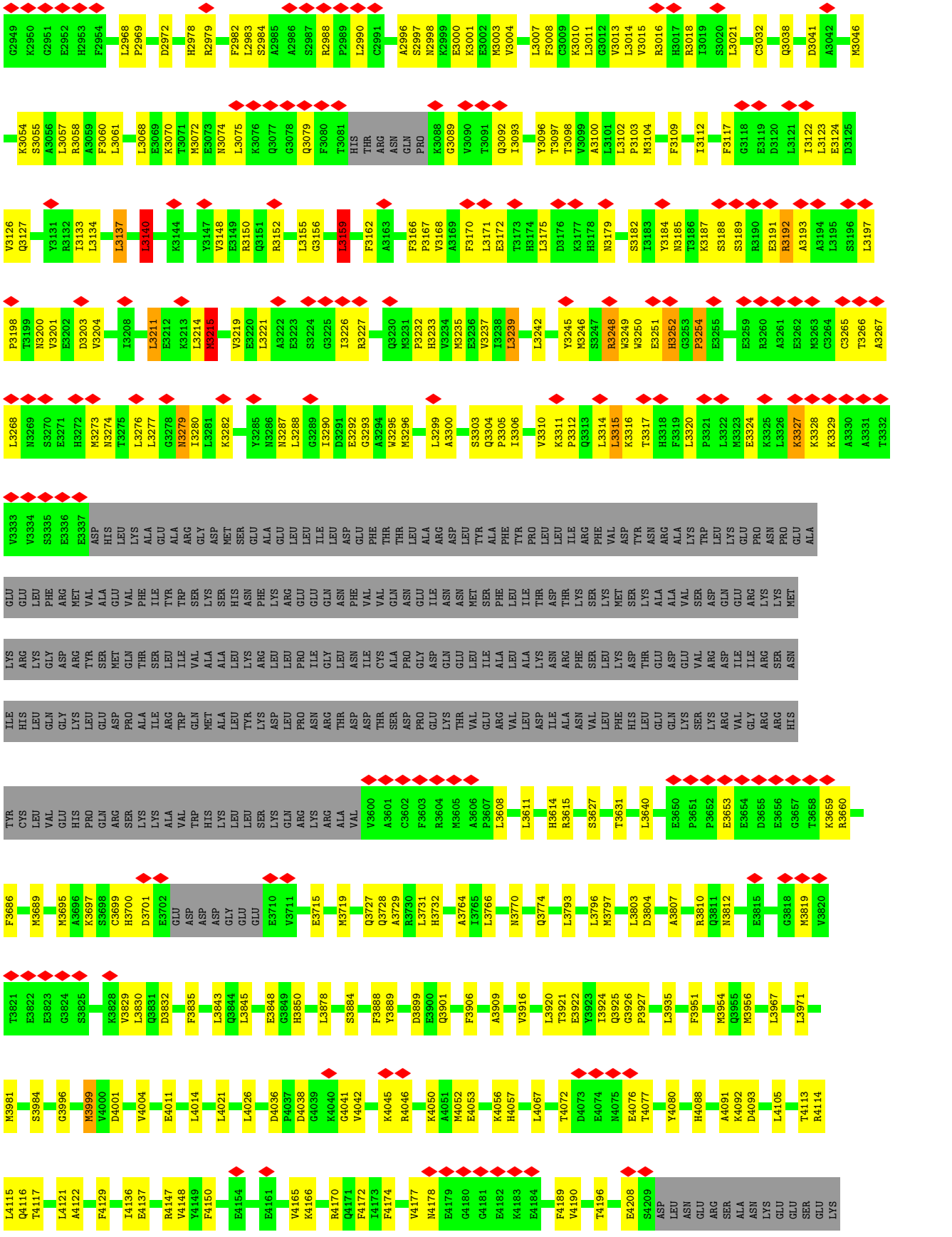
• Molecule 1: Ryanodine receptor 2

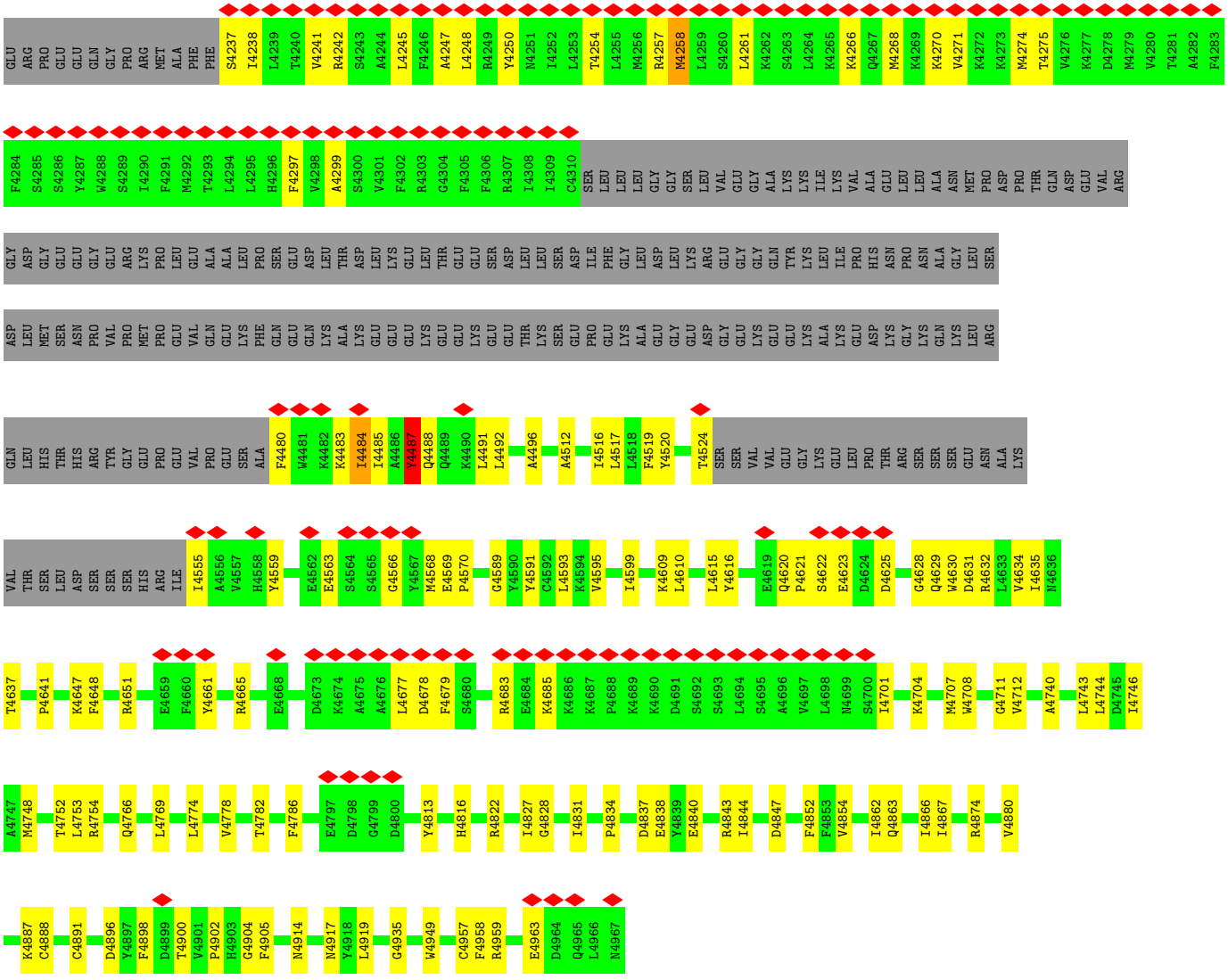
Chain B:


11%
63%
21%
15%


MET ALA ASP GLY GLY GLU GLY GLU ASP E10 I11 L14 V21 A26 T27 I28 H29 K30 E31 Q32 Q33 K34 L35 C36 L37 L49 D61 L62 S63 I64 C65 T66 L69 E70 Q71 R76 A77 M81 L82 A83 N84 THR VAL GLU LYS SER GLU GLY GLN VAL ASP VAL
GLU LYS TRP LYS PHE MET MET LYS THR ALA GLN GLY GLY GLY H110 L114 H117 A118 I119 L120 Y125 R137 D141 K142 L143 G155 I162 H163 P164 R169 S170 E171 G172 E173 R176 S187 R190 L194 G197 N198 L201 H202 V203 F207
V214 S221 E222 A223 A224 Q225 G226 Y227 V233 L234 L237 H240 M241 T246 G250 E251 H252 G253 E254 R257 R258 T259 V267 H270 A271 R272 W275 R276 L280 W291 P294 F295 R296 L297 R298 H299 V300 T301 T302 G303 K304 Y305 L306 S307 L308 M309 E310
D311 K312 N313 L314 L315 L316 M317 D323 V324 K325 S326 T327 F331 K335 L338 D339 V340 G341 V342 R343 K344 M349 S352 E353 I354 K355 Y356 G357 D358 I363 L370 W371 L372 T373 S376 V377 D378 VAL LYS SER VAL ARG MET GLY S386 I387 K390 H395 E396
G397 H398 M399 L405 R417 Y418 I419 D434 A440 K441 A442 S443 T444 V445 D446 L447 P448 S451 V452 L456 H469 E491 E492 L499 R504 F514 A515 E521 A522 G523 W526 I529 S532 I541 N544 N547 C548 F551 S552 L555
D556 W557 L558 L565 I571 V574 V578 L579 A585 L586 N587 I588 L600 L601 H604 V610 L614 A624 V625 N628 Q629 I632 R640 D641 L642 L643 L644 L648 N658 I659 F660 L661 A668 K672 W673 Y674 Y675 M678 V679 H692 L693
R694 W713 D728 L732 W733 S734 V741 Q746 V754 I755 S756 G757 C758 R769 P774 F779 P790 F794 S795 V800 R801 L804 H808 Y819 C822 Y823 E824 K829 L832 K833 Y840 K841 L851 Q859 A860 A861 I865 P866
V867 D868 T869 S870 Q871 I872 V873 L874 H877 L878 E879 R880 I881 R882 E883 K884 L885 A886 E887 N888 E891 L892 W893 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 C917 L918 V919 E920 F921 S922 K923 L924 P925 E926 Q927 E928
R929 N930 Y931 N932 L933 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L946 G951 I952 S953 D954 E955 H956 A957 E958 D959 K960 V961 K962 K963 M964 K965 L966 P967 K968 N969 Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 L988 Q992 M995
V996 L999 V1006 D1010 Q1014 G1015 W1016 T1017 R1027 R1028 N1029 P1030 R1031 L1032 Y1035 T1036 L1037 D1040 R1041 T1042 K1043 K1044 K1047 D1048 S1049 L1050 R1051 E1052 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 L1064 E1065 A1066 P1067 D1068 Q1069 D1070 H1071 A1072 A1073 R1074 A1075 E1076 V1077 C1078
T1081 G1082 E1083 R1084 F1085 R1086 E1091 Y1094 A1095 V1096 R1100 E1104 F1105 E1106 T1107 V1108 M1113 R1114 S1118 R1119 P1124 E1127 L1128 G1129 D1138 R1144 W1145 Y1152 Q1157 D1160 M1165 M1168 H1171 T1176 I1181 F1195 D1196 F1201
V1204 V1212 G1213 R1214 N1215 N1216 F1217 G1218 K1219 D1220 T1223 Y1236 E1237 P1238 N1244 M1249 W1250 L1251 S1252 P1256 H1265 E1266 H1267 I1268 K1288 N1294 S1295 N1296 I1299 M1300 F1301 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS
ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG

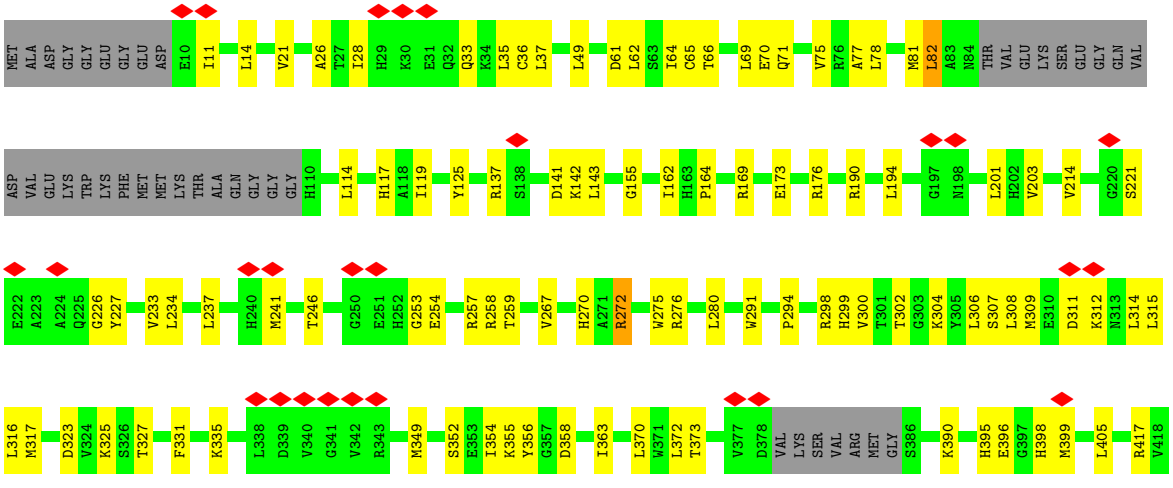


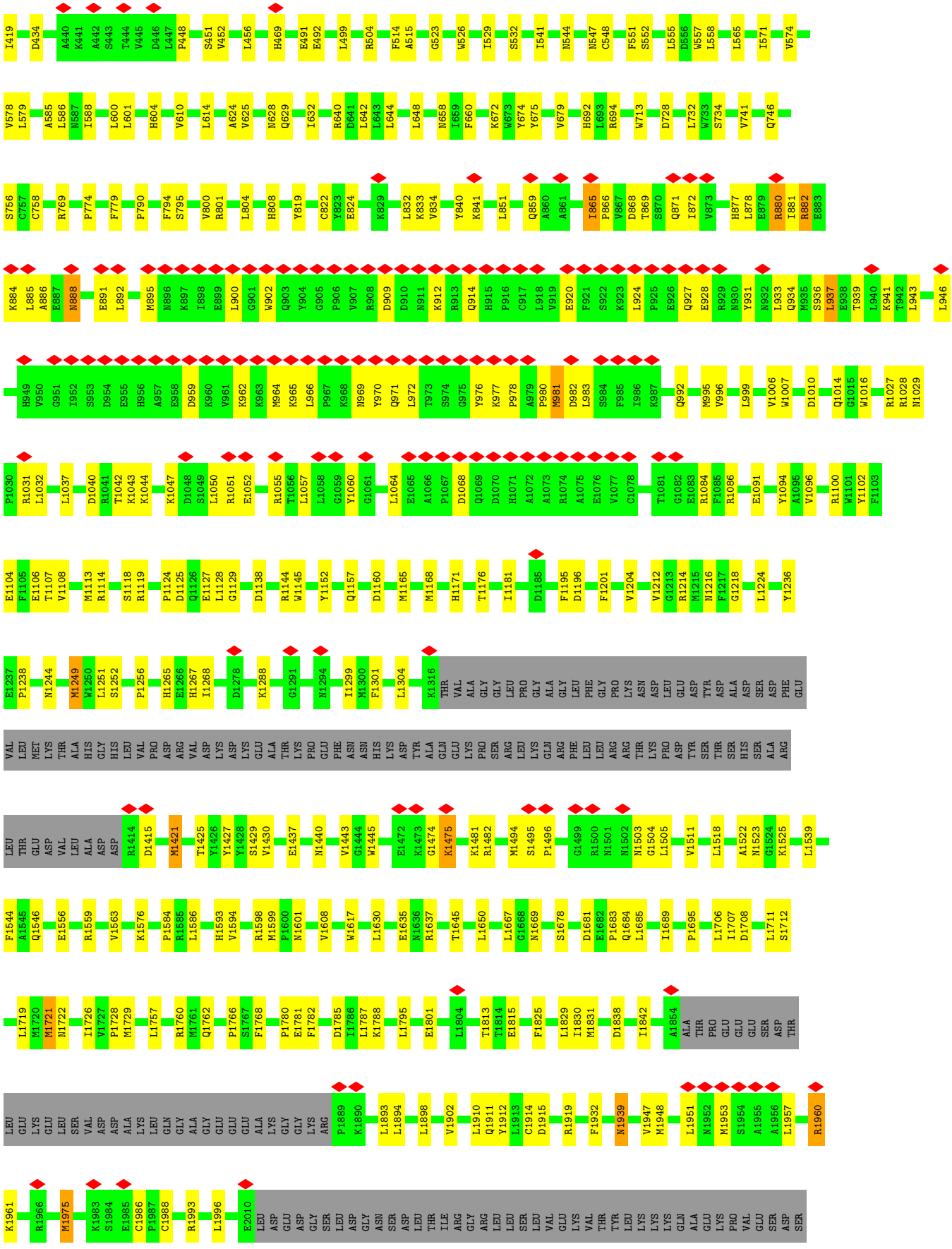


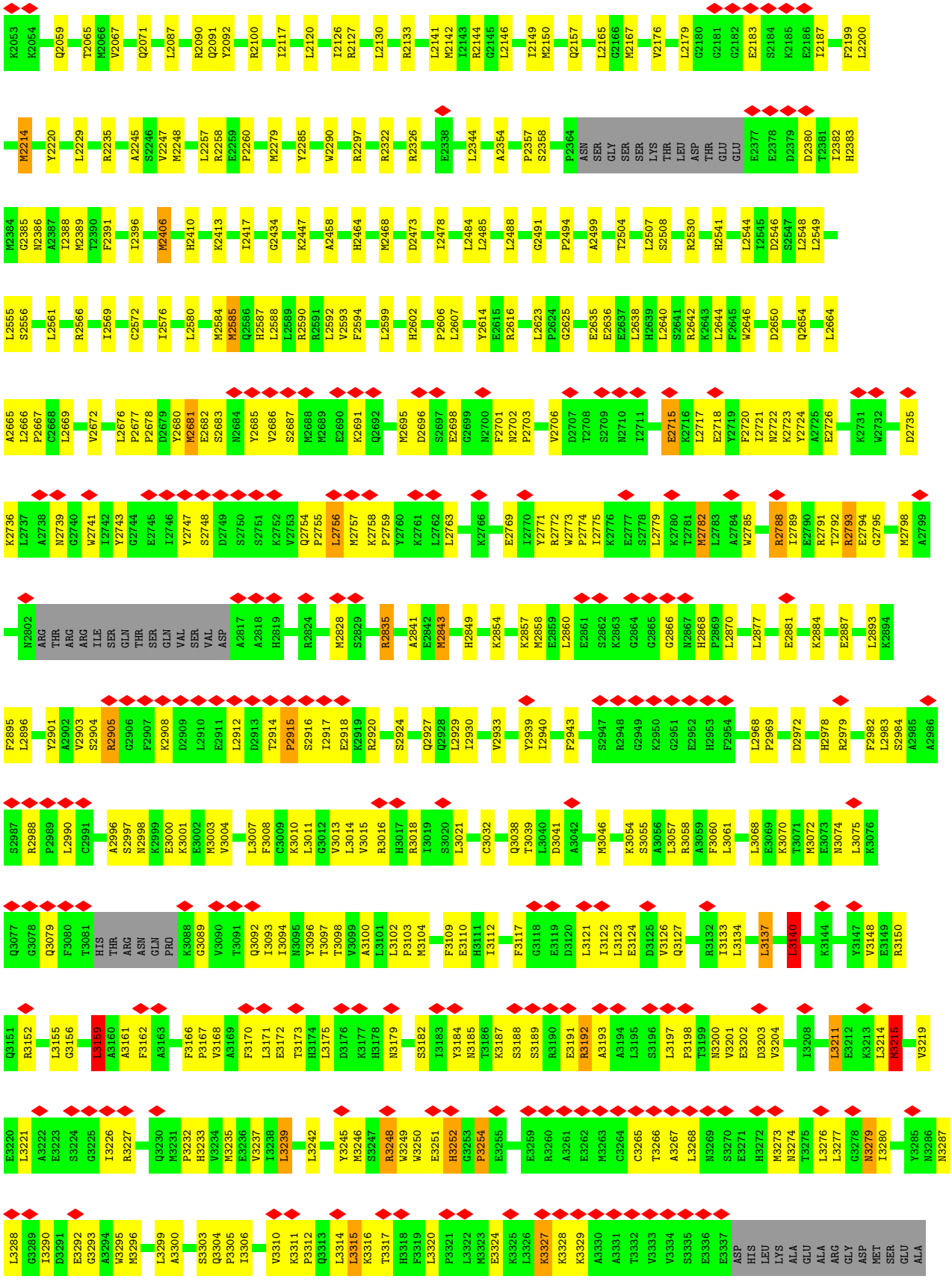


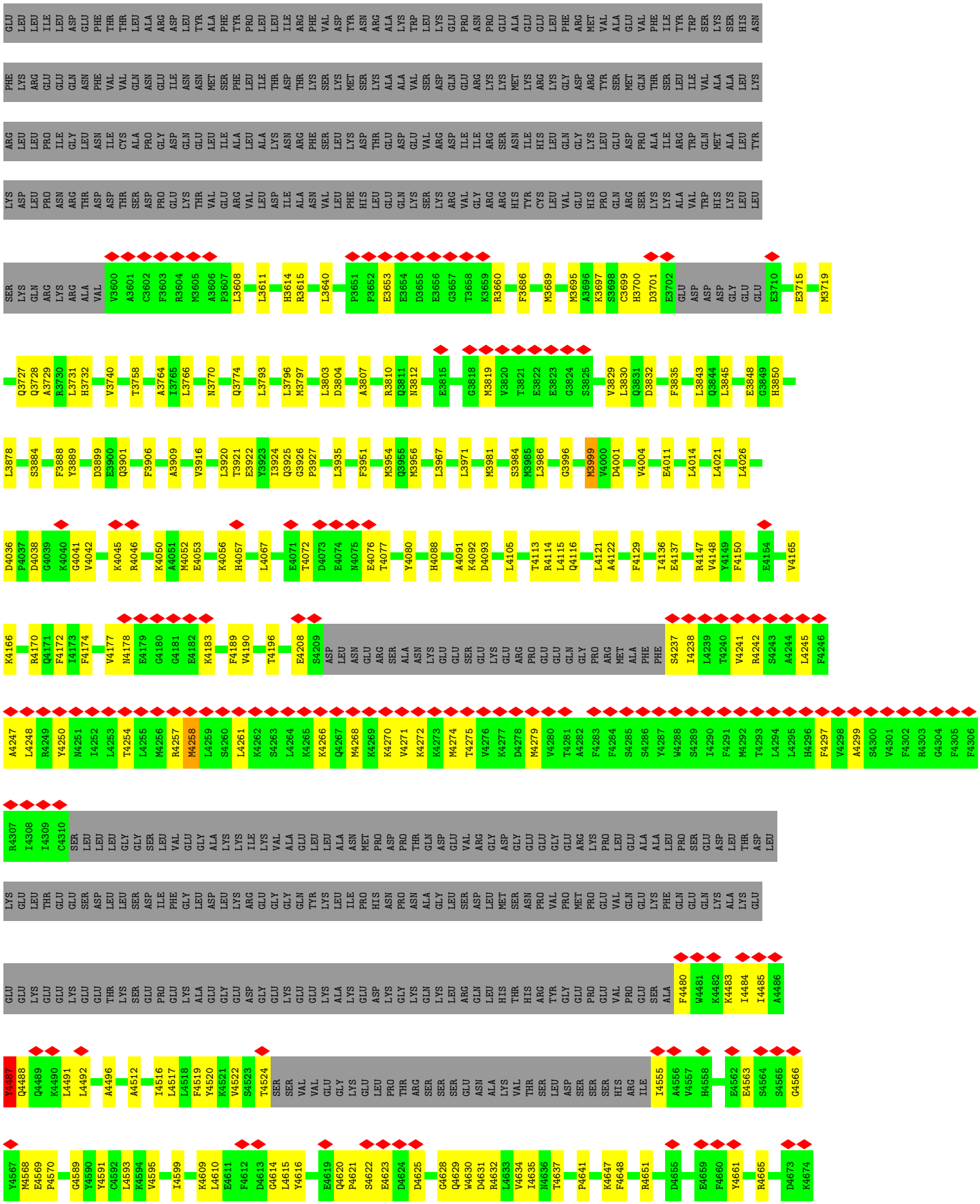
• Molecule 1: Ryanodine receptor 2

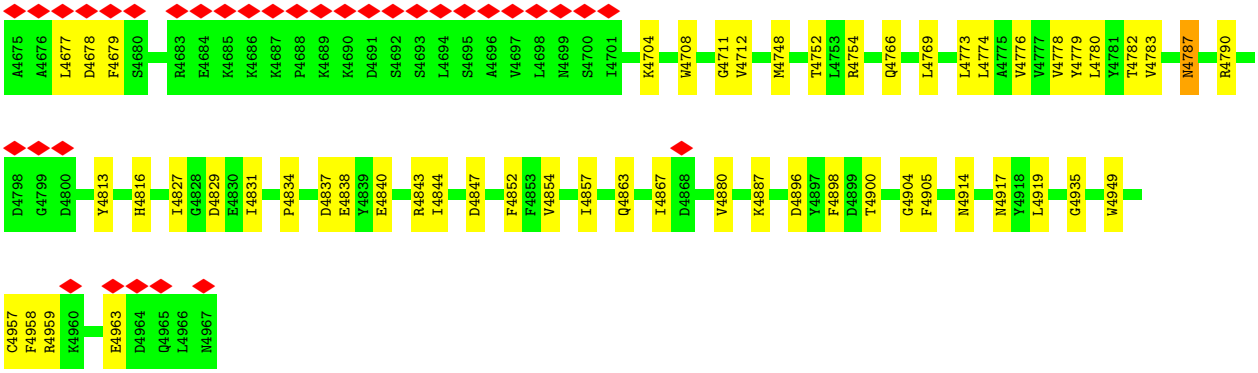
Chain C:




I419 D434 A440 K441 A442 S443 T444 V445 D446 L447 P448 S451 V452 L456 H469 E491 E492 L499 R504 F514 A515 G523 W526 I529 S532 I541 N544 N547 C548 F551 S552 L555 D556 W557 L558 L565 I571 V574
V578 L579 A585 L586 N587 I588 L600 L601 H604 V610 L614 A624 V625 N628 Q629 I632 R640 D641 L642 L643 L644 L648 N658 I659 F660 K672 W673 Y674 Y675 V679 H692 L693 R694 W713 D728 L732 W733 S734 V741 Q746
S756 C757 C758 R769 P774 F779 P790 F794 S795 V800 R801 L804 H808 Y819 C822 Y823 E824 K829 L832 K833 V834 Y840 K841 L851 Q859 A860 A861 I865 P866 V867 D868 T869 S870 Q871 I872 V873 H877 L878 E879 R880 I881 R882 E883
K884 L885 A886 E887 N888 E891 L892 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 C917 L918 V919 E920 F921 S922 K923 L924 P925 E926 Q927 E928 R929 N930 Y931 N932 L933 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L946
H949 V950 G951 I952 S953 D954 E955 H956 A957 E958 D959 K960 V961 K962 K963 M964 K965 L966 P967 K968 N969 Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 Q992 M995 V996 L999 V1006 W1007 D1010 Q1014 G1015 W1016 R1027 R1028 N1029
P1030 R1031 L1032 L1037 D1040 R1041 T1042 K1043 K1044 K1047 D1048 S1049 L1050 R1051 E1052 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 L1064 E1065 A1066 P1067 D1068 Q1069 D1070 H1071 A1072 A1073 R1074 A1075 E1076 V1077 C1078 T1081 G1082 E1083 R1084 F1085 R1086 E1091 Y1094 A1095 V1096 R1100 W1101 Y1102 F1103
E1104 F1105 E1106 T1107 V1108 M1113 R1114 S1118 R1119 P1124 D1125 Q1126 E1127 L1128 G1129 D1138 R1144 W1145 Y1152 Q1157 D1160 M1165 M1168 H1171 T1176 I1181 D1185 F1195 D1196 F1201 V1204 V1212 G1213 R1214 M1215 N1216 F1217 G1218 L1224 Y1236
E1237 P1238 N1244 M1249 W1250 L1251 S1252 P1256 H1265 E1266 H1267 I1268 D1278 K1288 G1291 N1294 I1299 M1300 F1301 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU
VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG
LEU THR GLU ASP VAL LEU ALA ASP R1414 D1415 M1421 T1425 Y1426 Y1427 Y1428 S1429 V1430 E1437 N1440 V1443 G1444 W1445 E1472 K1473 G1474 K1475 K1481 R1482 M1494 S1495 P1496 G1499 R1500 N1501 N1502 N1503 G1504 L1505 V1511 L1518 A1522 N1523 G1524 K1525 L1539
F1544 A1545 Q1546 E1556 R1559 V1563 K1576 P1584 R1585 L1586 H1593 V1594 R1598 M1599 P1600 N1601 V1608 W1617 L1630 E1635 N1636 R1637 T1645 L1650 L1667 G1668 N1669 S1678 D1681 E1682 P1683 Q1684 L1685 I1689 P1696 L1706 I1707 D1708 L1711 S1712
L1719 M1720 M1721 N1722 I1726 V1727 P1728 M1729 L1757 R1760 M1761 Q1762 P1766 S1767 F1768 P1780 E1781 F1782 D1785 I1786 L1787 K1788 L1795 E1801 L1804 T1813 T1814 E1815 F1825 L1829 I1830 M1831 D1838 I1842 A1854 ALA THR PRO GLU GLU SER ASP THR
LEU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU ALA LYS GLY GLY LYS ARG P1889 K1890 L1893 L1894 L1898 V1902 L1910 Q1911 Y1912 L1913 C1914 D1915 R1919 F1932 N1939 V1947 M1948 L1951 N1952 M1953 S1954 A1955 A1956 L1957 R1960
K1961 R1966 M1975 K1983 S1984 E1985 C1986 P1987 C1988 R1993 L1996 E2010 LEU ASP GLU ASP GLY SER LEU ASP GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL GLU SER ASP SER

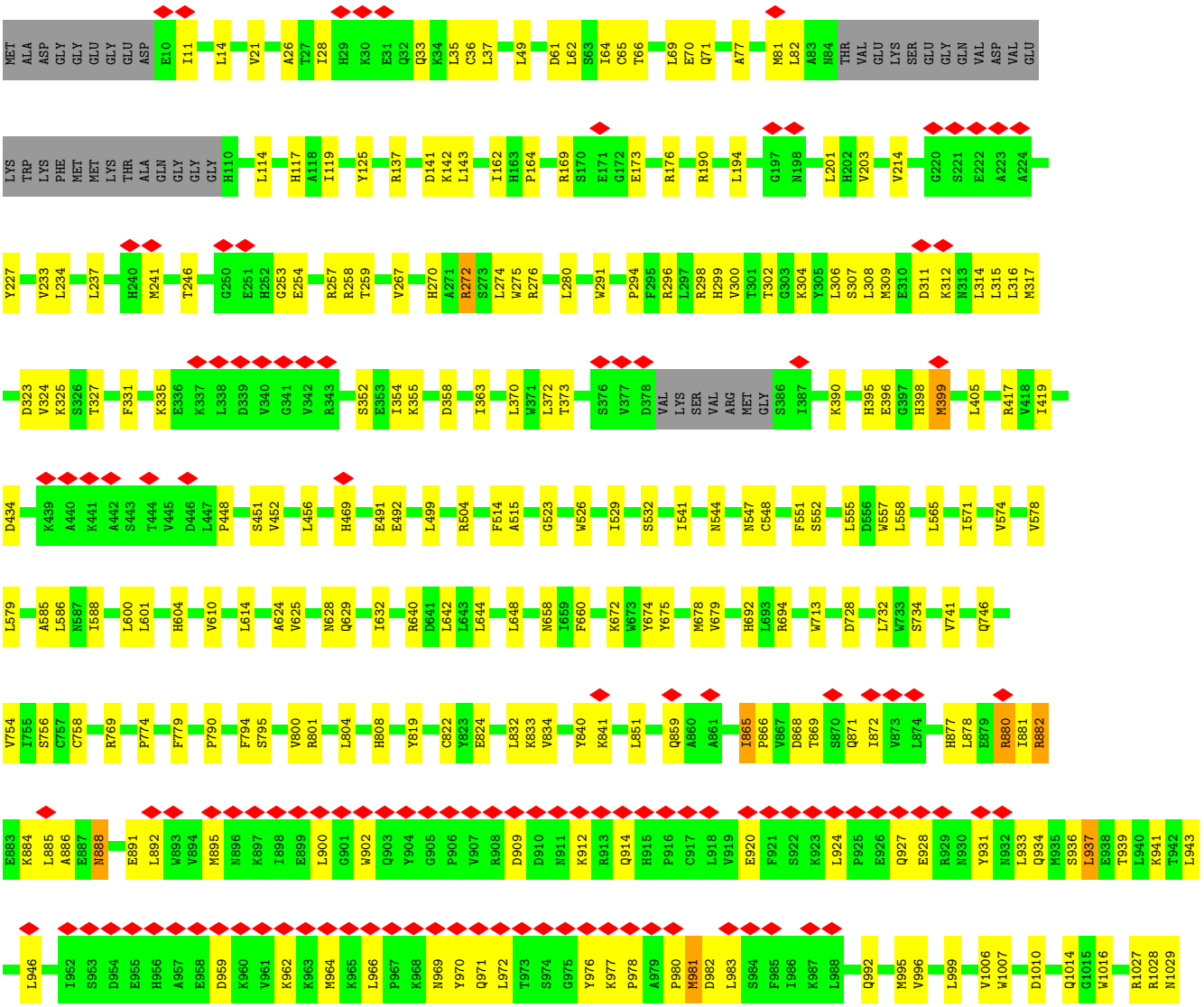


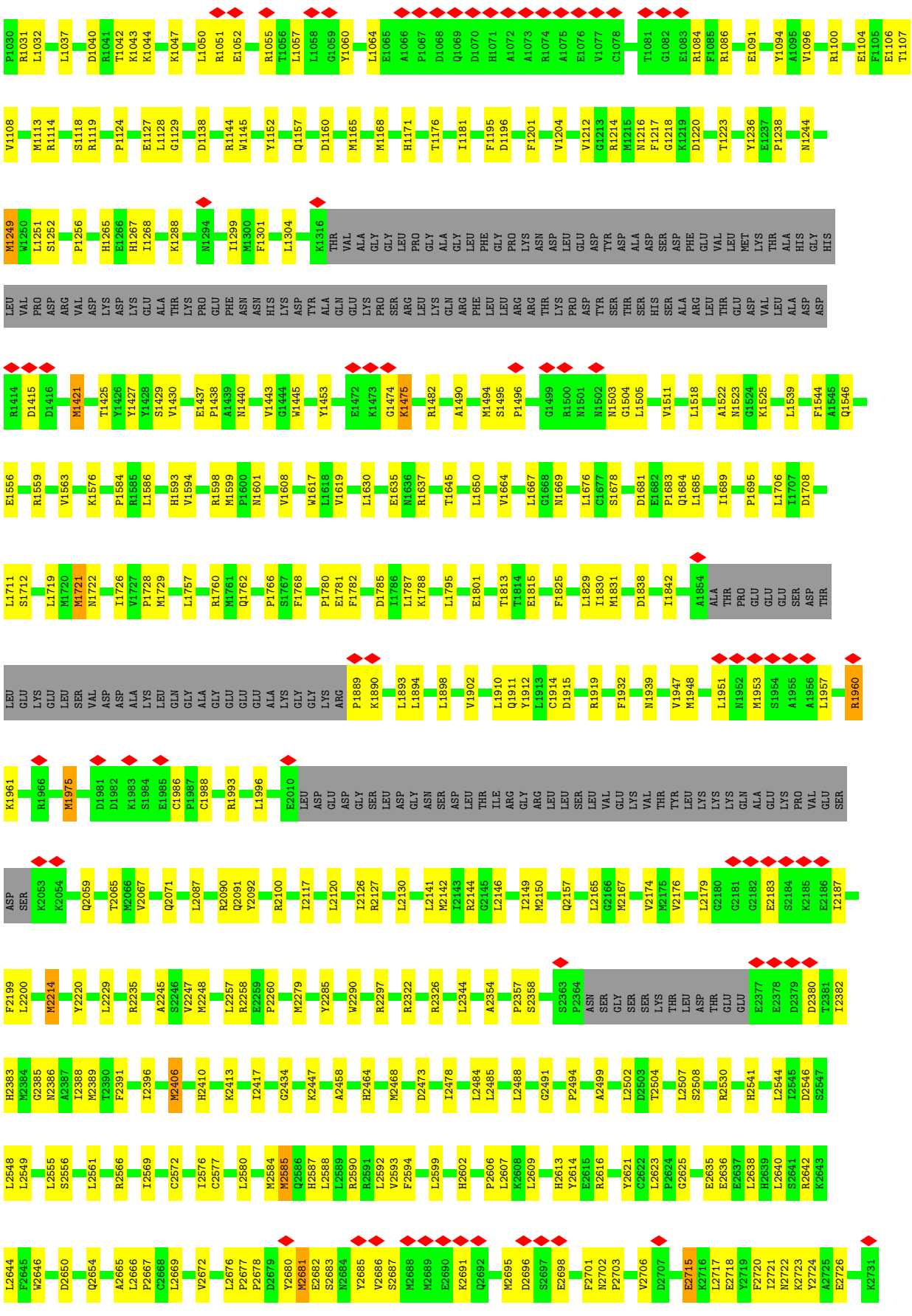


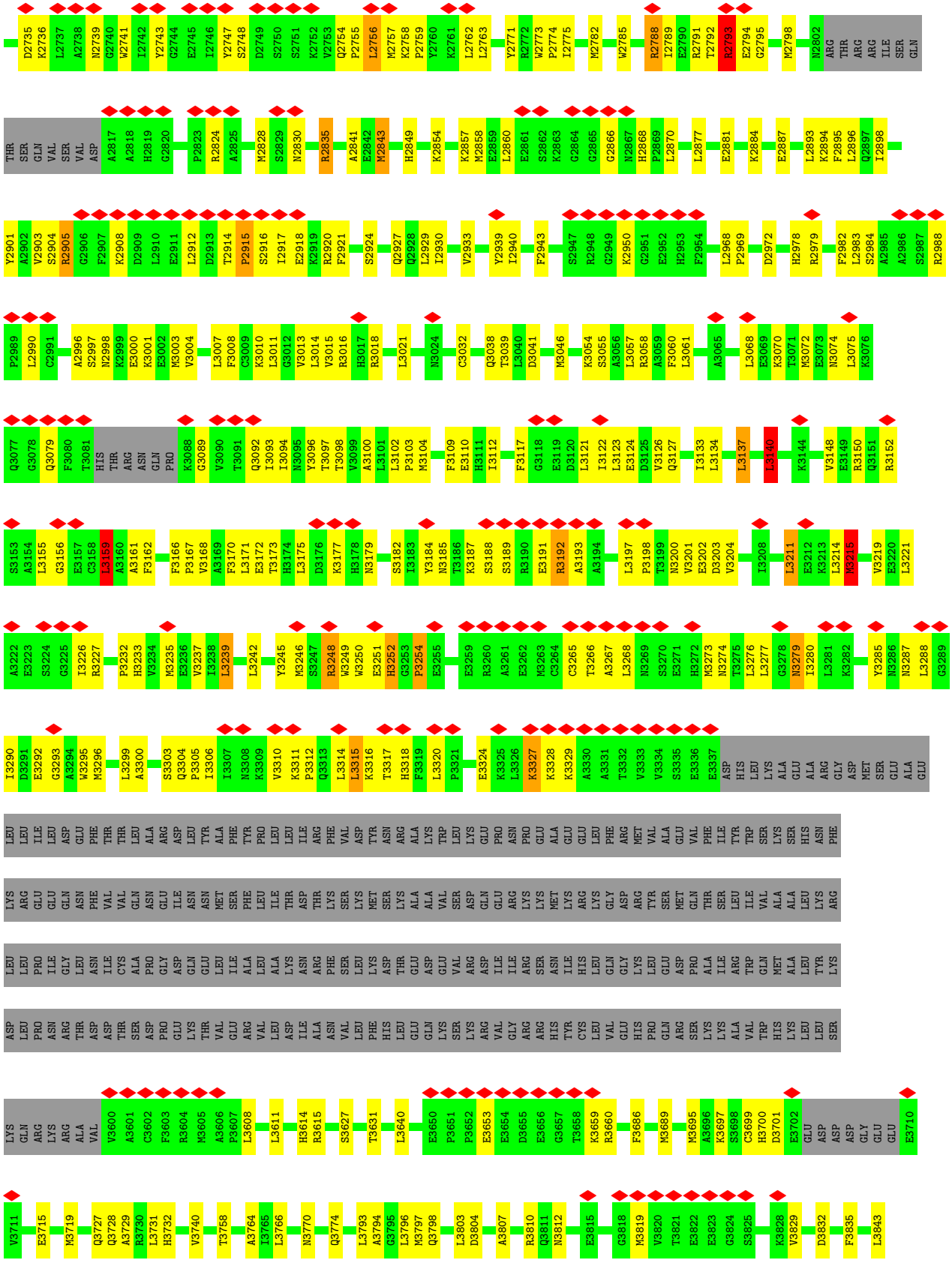


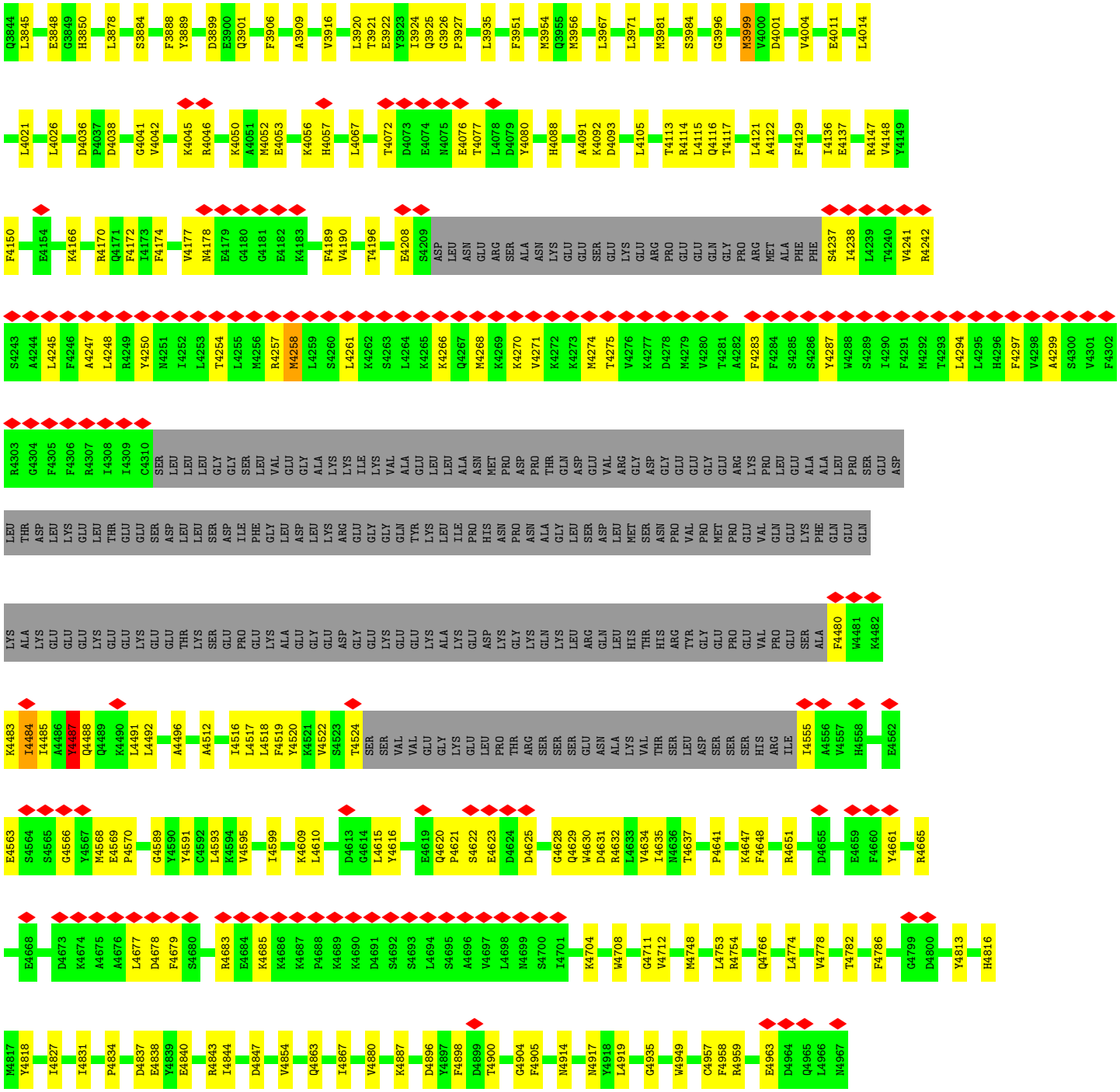
• Molecule 1: Ryanodine receptor 2

Chain D:







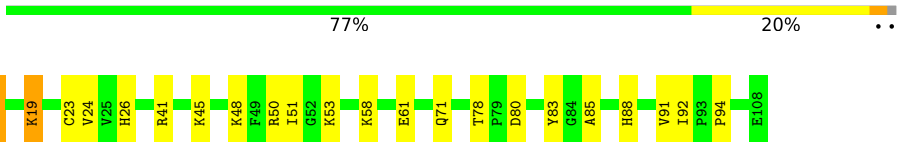


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain E:

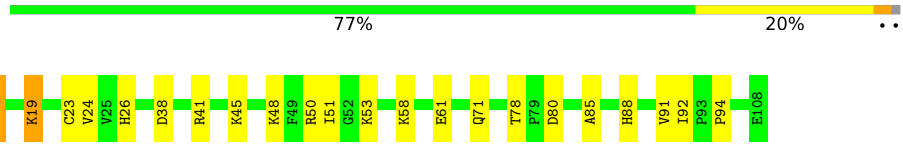
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain F:



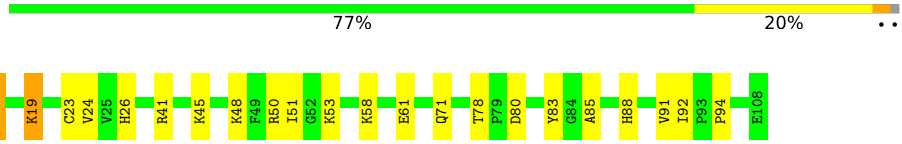
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain G:



• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain H:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	41126	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	58	Depositor
Minimum defocus (nm)	400	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.643	Depositor
Minimum map value	-0.018	Depositor
Average map value	0.012	Depositor
Map value standard deviation	0.032	Depositor
Recommended contour level	0.13	Depositor
Map size (Å)	425.984, 425.984, 425.984	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.832, 0.832, 0.832	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CA, ZN, XAN, ATP

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	0.26	1/34520 (0.0%)	0.53	21/46627 (0.0%)
1	B	0.26	1/34520 (0.0%)	0.53	20/46627 (0.0%)
1	C	0.26	1/34520 (0.0%)	0.53	20/46627 (0.0%)
1	D	0.26	1/34520 (0.0%)	0.53	21/46627 (0.0%)
2	E	0.32	0/834	0.62	0/1123
2	F	0.32	0/834	0.62	0/1123
2	G	0.32	0/834	0.62	0/1123
2	H	0.32	0/834	0.62	0/1123
All	All	0.26	4/141416 (0.0%)	0.53	82/191000 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	6
1	B	0	6
1	C	0	6
1	D	0	6
All	All	0	24

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	3254	PRO	CG-CD	-6.09	1.30	1.50
1	B	3254	PRO	CG-CD	-6.09	1.30	1.50
1	D	3254	PRO	CG-CD	-6.08	1.30	1.50
1	A	3254	PRO	CG-CD	-6.08	1.30	1.50

All (82) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	3159	LEU	CA-CB-CG	8.40	134.62	115.30
1	C	3159	LEU	CA-CB-CG	8.37	134.56	115.30
1	A	3159	LEU	CA-CB-CG	8.36	134.53	115.30
1	D	3159	LEU	CA-CB-CG	8.35	134.51	115.30
1	A	3254	PRO	N-CD-CG	-7.48	91.98	103.20
1	D	3254	PRO	N-CD-CG	-7.48	91.99	103.20
1	C	3254	PRO	N-CD-CG	-7.46	92.01	103.20
1	B	3254	PRO	N-CD-CG	-7.44	92.04	103.20
1	C	2793	ARG	CG-CD-NE	7.06	126.62	111.80
1	D	2793	ARG	CG-CD-NE	7.05	126.61	111.80
1	B	2793	ARG	CG-CD-NE	7.03	126.57	111.80
1	A	2793	ARG	CG-CD-NE	7.02	126.54	111.80
1	C	2793	ARG	CB-CG-CD	6.93	129.63	111.60
1	B	2793	ARG	CB-CG-CD	6.92	129.59	111.60
1	A	2793	ARG	CB-CG-CD	6.92	129.58	111.60
1	D	2793	ARG	CB-CG-CD	6.91	129.57	111.60
1	B	3140	LEU	CA-CB-CG	6.86	131.07	115.30
1	A	3140	LEU	CA-CB-CG	6.85	131.05	115.30
1	C	3140	LEU	CA-CB-CG	6.84	131.04	115.30
1	D	3140	LEU	CA-CB-CG	6.82	130.99	115.30
1	C	2756	LEU	CA-CB-CG	6.28	129.74	115.30
1	D	2756	LEU	CA-CB-CG	6.26	129.71	115.30
1	A	2756	LEU	CA-CB-CG	6.25	129.69	115.30
1	B	2756	LEU	CA-CB-CG	6.25	129.68	115.30
1	C	1975	MET	CA-CB-CG	6.22	123.87	113.30
1	B	1975	MET	CA-CB-CG	6.21	123.86	113.30
1	D	1975	MET	CA-CB-CG	6.21	123.86	113.30
1	A	1975	MET	CA-CB-CG	6.20	123.85	113.30
1	D	1975	MET	CB-CG-SD	6.09	130.67	112.40
1	A	1975	MET	CB-CG-SD	6.09	130.66	112.40
1	C	1975	MET	CB-CG-SD	6.08	130.63	112.40
1	B	1975	MET	CB-CG-SD	6.08	130.63	112.40
1	C	937	LEU	CA-CB-CG	5.97	129.04	115.30
1	B	937	LEU	CA-CB-CG	5.95	128.98	115.30
1	A	937	LEU	CA-CB-CG	5.94	128.97	115.30
1	D	937	LEU	CA-CB-CG	5.94	128.97	115.30
1	C	946	LEU	CA-CB-CG	5.88	128.81	115.30
1	B	946	LEU	CA-CB-CG	5.87	128.81	115.30
1	D	946	LEU	CA-CB-CG	5.87	128.80	115.30
1	A	946	LEU	CA-CB-CG	5.86	128.78	115.30
1	B	3254	PRO	CA-N-CD	-5.73	103.48	111.50
1	C	3999	MET	CA-CB-CG	5.73	123.03	113.30
1	A	3999	MET	CA-CB-CG	5.72	123.02	113.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	3999	MET	CA-CB-CG	5.72	123.02	113.30
1	C	3254	PRO	CA-N-CD	-5.72	103.49	111.50
1	D	3254	PRO	CA-N-CD	-5.71	103.51	111.50
1	A	3254	PRO	CA-N-CD	-5.70	103.52	111.50
1	D	3999	MET	CA-CB-CG	5.70	122.99	113.30
1	B	3072	MET	CB-CG-SD	-5.57	95.68	112.40
1	A	3072	MET	CB-CG-SD	-5.57	95.69	112.40
1	D	3072	MET	CB-CG-SD	-5.57	95.69	112.40
1	C	3072	MET	CB-CG-SD	-5.55	95.74	112.40
1	C	3215	MET	CB-CG-SD	5.49	128.86	112.40
1	A	3215	MET	CB-CG-SD	5.48	128.85	112.40
1	B	3215	MET	CB-CG-SD	5.48	128.85	112.40
1	D	3215	MET	CB-CG-SD	5.47	128.81	112.40
1	A	4258	MET	CA-CB-CG	5.45	122.57	113.30
1	D	4258	MET	CA-CB-CG	5.43	122.54	113.30
1	C	4258	MET	CA-CB-CG	5.42	122.52	113.30
1	B	4258	MET	CA-CB-CG	5.42	122.51	113.30
1	B	3315	LEU	CA-CB-CG	5.35	127.61	115.30
1	D	3315	LEU	CA-CB-CG	5.35	127.61	115.30
1	C	3315	LEU	CA-CB-CG	5.35	127.60	115.30
1	A	3315	LEU	CA-CB-CG	5.33	127.57	115.30
1	A	1721	MET	CB-CG-SD	5.21	128.02	112.40
1	B	1721	MET	CB-CG-SD	5.21	128.03	112.40
1	C	1721	MET	CB-CG-SD	5.21	128.02	112.40
1	C	3215	MET	CA-CB-CG	5.20	122.14	113.30
1	D	1721	MET	CB-CG-SD	5.20	128.00	112.40
1	B	3215	MET	CA-CB-CG	5.20	122.13	113.30
1	C	1721	MET	CG-SD-CE	5.20	108.51	100.20
1	D	3215	MET	CA-CB-CG	5.20	122.13	113.30
1	A	3215	MET	CA-CB-CG	5.19	122.13	113.30
1	A	1721	MET	CG-SD-CE	5.19	108.50	100.20
1	D	1721	MET	CG-SD-CE	5.19	108.50	100.20
1	B	1721	MET	CG-SD-CE	5.17	108.48	100.20
1	A	2905	ARG	CA-CB-CG	5.07	124.55	113.40
1	D	2905	ARG	CA-CB-CG	5.05	124.52	113.40
1	B	2905	ARG	CA-CB-CG	5.04	124.49	113.40
1	C	2905	ARG	CA-CB-CG	5.03	124.47	113.40
1	A	399	MET	CG-SD-CE	5.03	108.24	100.20
1	D	399	MET	CG-SD-CE	5.02	108.24	100.20

There are no chirality outliers.

All (24) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	2793	ARG	Sidechain
1	A	2835	ARG	Sidechain
1	A	2905	ARG	Sidechain
1	A	3248	ARG	Sidechain
1	A	3252	HIS	Peptide
1	A	4487	TYR	Peptide
1	B	2793	ARG	Sidechain
1	B	2835	ARG	Sidechain
1	B	2905	ARG	Sidechain
1	B	3248	ARG	Sidechain
1	B	3252	HIS	Peptide
1	B	4487	TYR	Peptide
1	C	2793	ARG	Sidechain
1	C	2835	ARG	Sidechain
1	C	2905	ARG	Sidechain
1	C	3248	ARG	Sidechain
1	C	3252	HIS	Peptide
1	C	4487	TYR	Peptide
1	D	2793	ARG	Sidechain
1	D	2835	ARG	Sidechain
1	D	2905	ARG	Sidechain
1	D	3248	ARG	Sidechain
1	D	3252	HIS	Peptide
1	D	4487	TYR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	33779	0	33454	770	0
1	B	33779	0	33454	768	0
1	C	33779	0	33454	746	0
1	D	33779	0	33454	747	0
2	E	818	0	821	21	0
2	F	818	0	821	20	0
2	G	818	0	821	18	0
2	H	818	0	821	20	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	62	0	24	2	0
4	B	62	0	24	2	0
4	C	62	0	24	3	0
4	D	62	0	24	3	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	11	0	4	0	0
6	B	11	0	4	0	0
6	C	11	0	4	0	0
6	D	11	0	4	0	0
All	All	138688	0	137212	3039	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 11.

All (3039) 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:B:3166:PHE:O	1:B:3248:ARG:NH1	1.94	1.00
1:D:3166:PHE:O	1:D:3248:ARG:NH1	1.94	1.00
1:A:3166:PHE:O	1:A:3248:ARG:NH1	1.94	1.00
1:C:3166:PHE:O	1:C:3248:ARG:NH1	1.94	1.00
1:A:2741:TRP:HB3	1:A:2754:GLN:HB2	1.50	0.93
1:B:2741:TRP:HB3	1:B:2754:GLN:HB2	1.50	0.93
2:F:91:VAL:HG13	2:F:92:ILE:HD12	1.50	0.93
1:C:2741:TRP:HB3	1:C:2754:GLN:HB2	1.50	0.92
1:D:2741:TRP:HB3	1:D:2754:GLN:HB2	1.50	0.92
1:A:1501:ASN:OD1	1:D:2824:ARG:NH2	2.03	0.92
2:G:91:VAL:HG13	2:G:92:ILE:HD12	1.50	0.91
2:E:91:VAL:HG13	2:E:92:ILE:HD12	1.50	0.91
2:H:91:VAL:HG13	2:H:92:ILE:HD12	1.50	0.90
2:F:14:ARG:HG2	2:F:14:ARG:HH11	1.39	0.88
2:G:14:ARG:HG2	2:G:14:ARG:HH11	1.39	0.87
1:D:3172:GLU:HG3	1:D:3211:LEU:HD21	1.56	0.87
1:C:3172:GLU:HG3	1:C:3211:LEU:HD21	1.56	0.87
1:A:3172:GLU:HG3	1:A:3211:LEU:HD21	1.55	0.86
2:E:14:ARG:HG2	2:E:14:ARG:HH11	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3172:GLU:HG3	1:B:3211:LEU:HD21	1.55	0.86
1:B:4834:PRO:HB3	1:B:4843:ARG:HD3	1.58	0.86
1:C:4834:PRO:HB3	1:C:4843:ARG:HD3	1.58	0.86
2:H:14:ARG:HG2	2:H:14:ARG:HH11	1.39	0.85
1:A:4834:PRO:HB3	1:A:4843:ARG:HD3	1.58	0.85
1:D:4834:PRO:HB3	1:D:4843:ARG:HD3	1.58	0.84
1:C:4258:MET:HA	1:C:4261:LEU:HG	1.60	0.83
1:A:4258:MET:HA	1:A:4261:LEU:HG	1.60	0.82
1:D:4258:MET:HA	1:D:4261:LEU:HG	1.59	0.82
1:B:4258:MET:HA	1:B:4261:LEU:HG	1.60	0.82
1:A:2798:MET:SD	1:B:1498:GLN:N	2.52	0.81
1:B:3172:GLU:OE1	1:B:3245:TYR:OH	1.98	0.81
1:C:2979:ARG:HH12	1:C:3038:GLN:HB3	1.45	0.81
1:C:3172:GLU:OE1	1:C:3245:TYR:OH	1.98	0.81
2:F:50:ARG:HE	2:F:53:LYS:HG3	1.44	0.81
1:D:2979:ARG:HH12	1:D:3038:GLN:HB3	1.45	0.81
1:A:3172:GLU:OE1	1:A:3245:TYR:OH	1.98	0.80
2:H:50:ARG:HE	2:H:53:LYS:HG3	1.44	0.80
2:G:50:ARG:HE	2:G:53:LYS:HG3	1.44	0.80
1:D:3172:GLU:OE1	1:D:3245:TYR:OH	1.98	0.80
2:E:50:ARG:HE	2:E:53:LYS:HG3	1.44	0.80
1:B:2979:ARG:HH12	1:B:3038:GLN:HB3	1.45	0.80
1:D:3921:THR:O	1:D:3925:GLN:HB2	1.82	0.80
1:A:3921:THR:O	1:A:3925:GLN:HB2	1.82	0.79
1:A:2979:ARG:HH12	1:A:3038:GLN:HB3	1.45	0.79
1:B:3921:THR:O	1:B:3925:GLN:HB2	1.82	0.79
1:D:3803:LEU:HB2	1:D:3884:SER:HB2	1.65	0.79
1:C:3803:LEU:HB2	1:C:3884:SER:HB2	1.65	0.78
1:C:3921:THR:O	1:C:3925:GLN:HB2	1.82	0.78
1:C:1007:TRP:HE1	4:C:5005:ATP:HO3'	1.31	0.78
1:C:2736:LYS:HG2	1:C:2741:TRP:HB2	1.67	0.77
1:C:2593:VAL:HG22	1:C:2644:LEU:HB2	1.67	0.76
1:A:3803:LEU:HB2	1:A:3884:SER:HB2	1.65	0.76
1:B:2736:LYS:HG2	1:B:2741:TRP:HB2	1.67	0.76
1:B:3803:LEU:HB2	1:B:3884:SER:HB2	1.65	0.76
1:D:1007:TRP:HE1	4:D:5005:ATP:HO3'	1.31	0.76
1:B:601:LEU:HB3	1:B:642:LEU:HD21	1.68	0.76
1:A:601:LEU:HB3	1:A:642:LEU:HD21	1.68	0.75
1:D:601:LEU:HB3	1:D:642:LEU:HD21	1.68	0.75
1:A:2593:VAL:HG22	1:A:2644:LEU:HB2	1.67	0.75
1:B:3832:ASP:HB3	1:B:3835:PHE:HB3	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2736:LYS:HG2	1:D:2741:TRP:HB2	1.67	0.75
1:A:2736:LYS:HG2	1:A:2741:TRP:HB2	1.67	0.75
1:C:3832:ASP:HB3	1:C:3835:PHE:HB3	1.69	0.75
1:D:3832:ASP:HB3	1:D:3835:PHE:HB3	1.69	0.75
1:B:2593:VAL:HG22	1:B:2644:LEU:HB2	1.67	0.75
1:C:62:LEU:HA	1:C:65:CYS:HB2	1.69	0.74
1:D:2593:VAL:HG22	1:D:2644:LEU:HB2	1.67	0.74
1:B:1795:LEU:HD23	1:B:1842:ILE:HD11	1.70	0.74
1:A:3832:ASP:HB3	1:A:3835:PHE:HB3	1.69	0.74
1:C:601:LEU:HB3	1:C:642:LEU:HD21	1.68	0.74
1:D:3167:PRO:HA	1:D:3248:ARG:HH12	1.53	0.74
1:A:1795:LEU:HD23	1:A:1842:ILE:HD11	1.70	0.74
1:B:62:LEU:HA	1:B:65:CYS:HB2	1.69	0.74
1:C:3167:PRO:HA	1:C:3248:ARG:HH12	1.53	0.74
1:A:62:LEU:HA	1:A:65:CYS:HB2	1.69	0.73
1:C:1795:LEU:HD23	1:C:1842:ILE:HD11	1.70	0.73
1:C:3198:PRO:HG2	1:C:3204:VAL:HA	1.71	0.73
1:D:1795:LEU:HD23	1:D:1842:ILE:HD11	1.70	0.73
1:D:3198:PRO:HG2	1:D:3204:VAL:HA	1.71	0.73
1:B:3167:PRO:HA	1:B:3248:ARG:HH12	1.53	0.73
1:A:3123:LEU:O	1:A:3127:GLN:NE2	2.22	0.73
1:A:3167:PRO:HA	1:A:3248:ARG:HH12	1.53	0.73
1:A:3198:PRO:HG2	1:A:3204:VAL:HA	1.71	0.73
1:B:4622:SER:HB2	1:B:4632:ARG:HH22	1.54	0.73
1:A:2593:VAL:HG21	1:A:2640:LEU:HG	1.71	0.73
1:D:62:LEU:HA	1:D:65:CYS:HB2	1.69	0.73
1:D:335:LYS:NZ	1:D:398:HIS:O	2.22	0.72
1:B:3198:PRO:HG2	1:B:3204:VAL:HA	1.71	0.72
1:A:335:LYS:NZ	1:A:398:HIS:O	2.22	0.72
1:C:335:LYS:NZ	1:C:398:HIS:O	2.22	0.72
1:A:4874:ARG:HH12	1:B:4766:GLN:NE2	1.87	0.72
1:A:4622:SER:HB2	1:A:4632:ARG:HH22	1.54	0.72
1:C:4622:SER:HB2	1:C:4632:ARG:HH22	1.54	0.72
1:A:4274:MET:CE	1:B:4483:LYS:HD2	2.19	0.71
1:C:2593:VAL:HG21	1:C:2640:LEU:HG	1.71	0.71
1:D:2593:VAL:HG21	1:D:2640:LEU:HG	1.71	0.71
1:B:3123:LEU:O	1:B:3127:GLN:NE2	2.22	0.71
1:D:4622:SER:HB2	1:D:4632:ARG:HH22	1.54	0.71
1:D:3123:LEU:O	1:D:3127:GLN:NE2	2.22	0.71
1:B:335:LYS:NZ	1:B:398:HIS:O	2.22	0.71
1:A:2642:ARG:NH2	1:A:2681:MET:SD	2.64	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3123:LEU:O	1:C:3127:GLN:NE2	2.22	0.71
1:B:2642:ARG:NH2	1:B:2681:MET:SD	2.64	0.71
1:A:3200:ASN:HB3	1:A:3203:ASP:HB2	1.73	0.71
1:A:3303:SER:HA	1:A:3306:ILE:HD12	1.72	0.71
1:C:2642:ARG:NH2	1:C:2681:MET:SD	2.64	0.71
1:B:2860:LEU:HD22	1:B:2866:GLY:HA3	1.73	0.71
1:C:372:LEU:O	1:C:373:THR:HG22	1.91	0.71
1:D:3200:ASN:HB3	1:D:3203:ASP:HB2	1.73	0.71
1:A:2860:LEU:HD22	1:A:2866:GLY:HA3	1.73	0.70
1:C:2150:MET:HE1	1:C:2199:PHE:HA	1.71	0.70
1:D:372:LEU:O	1:D:373:THR:HG22	1.91	0.70
1:B:4831:ILE:HG13	1:B:4843:ARG:HH21	1.55	0.70
1:A:4831:ILE:HG13	1:A:4843:ARG:HH21	1.55	0.70
1:B:372:LEU:O	1:B:373:THR:HG22	1.91	0.70
1:B:2593:VAL:HG21	1:B:2640:LEU:HG	1.71	0.70
1:C:2860:LEU:HD22	1:C:2866:GLY:HA3	1.73	0.70
1:C:3303:SER:HA	1:C:3306:ILE:HD12	1.73	0.70
1:D:2642:ARG:NH2	1:D:2681:MET:SD	2.64	0.70
1:D:2860:LEU:HD22	1:D:2866:GLY:HA3	1.73	0.70
1:A:372:LEU:O	1:A:373:THR:HG22	1.91	0.70
1:A:1430:VAL:HG11	1:A:1443:VAL:HG21	1.74	0.70
1:C:4831:ILE:HG13	1:C:4843:ARG:HH21	1.55	0.70
1:D:3303:SER:HA	1:D:3306:ILE:HD12	1.72	0.70
1:A:3179:ASN:O	1:A:3185:ASN:ND2	2.25	0.70
1:C:3179:ASN:O	1:C:3185:ASN:ND2	2.25	0.70
1:D:4831:ILE:HG13	1:D:4843:ARG:HH21	1.56	0.70
1:B:3200:ASN:HB3	1:B:3203:ASP:HB2	1.73	0.70
1:A:4274:MET:HE1	1:B:4483:LYS:HD2	1.73	0.69
1:B:3303:SER:HA	1:B:3306:ILE:HD12	1.72	0.69
1:C:541:ILE:HD11	1:C:574:VAL:HG13	1.74	0.69
1:D:1430:VAL:HG11	1:D:1443:VAL:HG21	1.74	0.69
1:B:1430:VAL:HG11	1:B:1443:VAL:HG21	1.74	0.69
1:D:3179:ASN:O	1:D:3185:ASN:ND2	2.25	0.69
1:C:1430:VAL:HG11	1:C:1443:VAL:HG21	1.74	0.69
1:C:3200:ASN:HB3	1:C:3203:ASP:HB2	1.73	0.69
1:D:1010:ASP:O	1:D:1014:GLN:NE2	2.26	0.69
1:A:1010:ASP:O	1:A:1014:GLN:NE2	2.26	0.69
1:B:2592:LEU:HD22	1:B:2606:PRO:HB3	1.75	0.69
1:C:2592:LEU:HD22	1:C:2606:PRO:HB3	1.75	0.69
1:C:934:GLN:HA	1:C:937:LEU:HD23	1.75	0.69
1:D:934:GLN:HA	1:D:937:LEU:HD23	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1010:ASP:O	1:C:1014:GLN:NE2	2.26	0.69
1:A:541:ILE:HD11	1:A:574:VAL:HG13	1.74	0.68
1:B:541:ILE:HD11	1:B:574:VAL:HG13	1.74	0.68
1:B:3179:ASN:O	1:B:3185:ASN:ND2	2.25	0.68
2:E:14:ARG:HG2	2:E:14:ARG:NH1	2.07	0.68
1:B:1010:ASP:O	1:B:1014:GLN:NE2	2.26	0.68
1:D:1722:ASN:O	1:D:1919:ARG:NH2	2.27	0.68
1:B:1129:GLY:HA3	1:B:1145:TRP:HB3	1.76	0.68
1:C:1129:GLY:HA3	1:C:1145:TRP:HB3	1.76	0.68
1:D:2150:MET:HE1	1:D:2199:PHE:HA	1.75	0.68
1:B:972:LEU:HD21	1:B:976:TYR:HB3	1.76	0.68
1:A:2592:LEU:HD22	1:A:2606:PRO:HB3	1.75	0.68
1:B:254:GLU:OE2	1:B:304:LYS:NZ	2.27	0.68
1:B:934:GLN:HA	1:B:937:LEU:HD23	1.75	0.68
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.76	0.68
1:D:3070:LYS:O	1:D:3074:ASN:ND2	2.27	0.68
1:C:972:LEU:HD21	1:C:976:TYR:HB3	1.76	0.68
1:C:3812:ASN:OD1	1:C:3901:GLN:NE2	2.27	0.68
1:D:254:GLU:OE2	1:D:304:LYS:NZ	2.27	0.68
1:A:934:GLN:HA	1:A:937:LEU:HD23	1.75	0.67
1:A:3812:ASN:OD1	1:A:3901:GLN:NE2	2.27	0.67
1:B:1722:ASN:O	1:B:1919:ARG:NH2	2.27	0.67
1:B:3812:ASN:OD1	1:B:3901:GLN:NE2	2.27	0.67
1:C:1722:ASN:O	1:C:1919:ARG:NH2	2.27	0.67
1:D:1129:GLY:HA3	1:D:1145:TRP:HB3	1.76	0.67
1:C:4752:THR:HG21	1:D:4766:GLN:HG2	1.76	0.67
1:A:972:LEU:HD21	1:A:976:TYR:HB3	1.76	0.67
1:A:3070:LYS:O	1:A:3074:ASN:ND2	2.27	0.67
1:D:2592:LEU:HD22	1:D:2606:PRO:HB3	1.75	0.67
1:D:3296:MET:O	1:D:3300:ALA:N	2.26	0.67
1:A:1722:ASN:O	1:A:1919:ARG:NH2	2.27	0.67
1:B:3070:LYS:O	1:B:3074:ASN:ND2	2.27	0.67
1:D:541:ILE:HD11	1:D:574:VAL:HG13	1.74	0.67
1:D:972:LEU:HD21	1:D:976:TYR:HB3	1.76	0.67
1:C:3312:PRO:HA	1:C:3315:LEU:HG	1.76	0.67
1:D:3812:ASN:OD1	1:D:3901:GLN:NE2	2.27	0.67
1:A:3296:MET:O	1:A:3300:ALA:N	2.25	0.67
2:E:24:VAL:HG22	2:E:48:LYS:HG2	1.76	0.67
1:B:868:ASP:HB3	1:B:871:GLN:HE22	1.59	0.67
1:C:868:ASP:HB3	1:C:871:GLN:HE22	1.59	0.67
1:A:1129:GLY:HA3	1:A:1145:TRP:HB3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3312:PRO:HA	1:A:3315:LEU:HG	1.76	0.67
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.76	0.67
1:A:254:GLU:OE2	1:A:304:LYS:NZ	2.27	0.67
2:F:24:VAL:HG22	2:F:48:LYS:HG2	1.76	0.67
1:C:254:GLU:OE2	1:C:304:LYS:NZ	2.27	0.67
1:C:2549:LEU:HB3	1:C:2588:LEU:HD22	1.77	0.67
1:D:868:ASP:HB3	1:D:871:GLN:HE22	1.59	0.67
1:D:2549:LEU:HB3	1:D:2588:LEU:HD22	1.77	0.67
1:D:1766:PRO:HG3	1:D:1780:PRO:HB3	1.76	0.67
2:H:83:TYR:OH	1:D:1768:PHE:O	2.11	0.66
1:B:3312:PRO:HA	1:B:3315:LEU:HG	1.76	0.66
1:C:741:VAL:O	1:C:746:GLN:NE2	2.29	0.66
1:D:644:LEU:HD13	1:D:1630:LEU:HD21	1.77	0.66
1:D:741:VAL:O	1:D:746:GLN:NE2	2.29	0.66
1:C:3070:LYS:O	1:C:3074:ASN:ND2	2.27	0.66
1:C:1766:PRO:HG3	1:C:1780:PRO:HB3	1.76	0.66
1:D:234:LEU:HD12	1:D:405:LEU:HB3	1.77	0.66
1:B:741:VAL:O	1:B:746:GLN:NE2	2.29	0.66
1:B:1766:PRO:HG3	1:B:1780:PRO:HB3	1.76	0.66
1:A:648:LEU:HD12	1:A:1683:PRO:HB2	1.78	0.66
1:A:741:VAL:O	1:A:746:GLN:NE2	2.29	0.66
1:B:2681:MET:HG2	1:B:2682:GLU:H	1.61	0.66
1:C:2681:MET:HG2	1:C:2682:GLU:H	1.61	0.66
1:D:2681:MET:HG2	1:D:2682:GLU:H	1.61	0.66
1:D:3312:PRO:HA	1:D:3315:LEU:HG	1.76	0.66
1:A:868:ASP:HB3	1:A:871:GLN:HE22	1.59	0.66
2:F:14:ARG:HG2	2:F:14:ARG:NH1	2.07	0.66
1:B:648:LEU:HD12	1:B:1683:PRO:HB2	1.78	0.66
1:C:2179:LEU:O	1:C:2183:GLU:HB3	1.96	0.66
1:A:2179:LEU:O	1:A:2183:GLU:HB3	1.96	0.65
1:B:2549:LEU:HB3	1:B:2588:LEU:HD22	1.77	0.65
1:D:648:LEU:HD12	1:D:1683:PRO:HB2	1.78	0.65
1:A:644:LEU:HD13	1:A:1630:LEU:HD21	1.77	0.65
1:A:1766:PRO:HG3	1:A:1780:PRO:HB3	1.76	0.65
1:A:2549:LEU:HB3	1:A:2588:LEU:HD22	1.77	0.65
1:B:234:LEU:HD12	1:B:405:LEU:HB3	1.77	0.65
1:A:2681:MET:HG2	1:A:2682:GLU:H	1.61	0.65
1:B:3188:SER:O	1:B:3192:ARG:NH1	2.30	0.65
1:A:4818:TYR:HE1	1:B:4847:ASP:HB2	1.61	0.65
1:B:644:LEU:HD13	1:B:1630:LEU:HD21	1.77	0.65
1:B:2179:LEU:O	1:B:2183:GLU:HB3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3296:MET:O	1:B:3300:ALA:N	2.25	0.65
1:C:234:LEU:HD12	1:C:405:LEU:HB3	1.77	0.65
1:A:234:LEU:HD12	1:A:405:LEU:HB3	1.77	0.65
1:C:648:LEU:HD12	1:C:1683:PRO:HB2	1.78	0.65
1:C:3188:SER:O	1:C:3192:ARG:NH1	2.30	0.65
1:A:2150:MET:HE1	1:A:2199:PHE:HA	1.78	0.65
1:A:3188:SER:O	1:A:3192:ARG:NH1	2.30	0.65
1:C:644:LEU:HD13	1:C:1630:LEU:HD21	1.77	0.65
1:D:2179:LEU:O	1:D:2183:GLU:HB3	1.96	0.65
1:A:4256:MET:HE1	1:B:4701:ILE:HB	1.79	0.64
1:B:981:MET:HG2	1:B:982:ASP:H	1.62	0.64
1:B:2691:LYS:NZ	1:B:2843:MET:SD	2.65	0.64
1:B:4748:MET:O	1:B:4754:ARG:NH1	2.30	0.64
1:B:2996:ALA:HB3	1:B:3001:LYS:HE3	1.80	0.64
1:D:2996:ALA:HB3	1:D:3001:LYS:HE3	1.80	0.64
1:B:1249:MET:HA	1:B:1249:MET:HE2	1.80	0.64
1:C:981:MET:HG2	1:C:982:ASP:H	1.62	0.64
1:D:981:MET:HG2	1:D:982:ASP:H	1.62	0.64
1:D:2691:LYS:NZ	1:D:2843:MET:SD	2.65	0.64
1:D:3188:SER:O	1:D:3192:ARG:NH1	2.30	0.64
1:D:4748:MET:O	1:D:4754:ARG:NH1	2.30	0.64
2:G:14:ARG:HG2	2:G:14:ARG:NH1	2.07	0.64
1:A:981:MET:HG2	1:A:982:ASP:H	1.62	0.64
1:A:4822:ARG:NH1	1:B:4828:GLY:HA3	2.13	0.64
1:C:2996:ALA:HB3	1:C:3001:LYS:HE3	1.80	0.64
1:C:4748:MET:O	1:C:4754:ARG:NH1	2.30	0.64
1:A:4748:MET:O	1:A:4754:ARG:NH1	2.30	0.64
1:B:1947:VAL:HG13	1:B:1961:LYS:HE2	1.79	0.64
1:D:1040:ASP:O	1:D:1044:LYS:N	2.26	0.64
1:D:1911:GLN:OE1	1:D:2090:ARG:NH1	2.28	0.64
1:A:2996:ALA:HB3	1:A:3001:LYS:HE3	1.80	0.64
1:C:3159:LEU:HD21	1:C:3237:VAL:HB	1.80	0.64
1:D:3159:LEU:HD21	1:D:3237:VAL:HB	1.80	0.64
1:A:4790:ARG:NE	1:D:4522:VAL:HG21	2.13	0.63
2:E:19:LYS:HA	2:E:19:LYS:HE2	1.79	0.63
1:D:1947:VAL:HG13	1:D:1961:LYS:HE2	1.79	0.63
1:B:3159:LEU:HD21	1:B:3237:VAL:HB	1.80	0.63
1:D:3296:MET:HA	1:D:3299:LEU:HB2	1.81	0.63
1:D:4615:LEU:O	1:D:4620:GLN:N	2.28	0.63
1:A:3296:MET:HA	1:A:3299:LEU:HB2	1.81	0.63
1:A:4773:LEU:HD22	1:D:4753:LEU:HD22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:19:LYS:HA	2:H:19:LYS:HE2	1.79	0.63
1:B:1986:CYS:O	1:B:1993:ARG:NH2	2.32	0.63
1:C:2682:GLU:HB2	1:C:2685:TYR:HB2	1.81	0.63
1:D:713:TRP:O	1:D:841:LYS:NZ	2.28	0.63
1:A:1947:VAL:HG13	1:A:1961:LYS:HE2	1.79	0.63
1:B:3296:MET:HA	1:B:3299:LEU:HB2	1.81	0.63
1:C:1947:VAL:HG13	1:C:1961:LYS:HE2	1.79	0.63
1:D:2682:GLU:HB2	1:D:2685:TYR:HB2	1.81	0.63
1:A:1911:GLN:OE1	1:A:2090:ARG:NH1	2.28	0.63
2:H:14:ARG:HG2	2:H:14:ARG:NH1	2.07	0.63
1:C:2979:ARG:HH21	1:C:2983:LEU:HD13	1.64	0.63
1:A:4809:MET:HB3	1:D:4518:LEU:O	1.99	0.62
1:B:302:THR:HG22	1:B:304:LYS:HG3	1.81	0.62
1:C:4615:LEU:O	1:C:4620:GLN:N	2.28	0.62
1:A:272:ARG:O	1:A:299:HIS:NE2	2.26	0.62
2:F:19:LYS:HE2	2:F:19:LYS:HA	1.79	0.62
1:B:2979:ARG:HH21	1:B:2983:LEU:HD13	1.64	0.62
1:D:3011:LEU:HD22	1:D:3060:PHE:CZ	2.34	0.62
1:A:1986:CYS:O	1:A:1993:ARG:NH2	2.32	0.62
2:H:91:VAL:HG23	1:D:640:ARG:HH22	1.64	0.62
1:B:3697:LYS:HA	1:B:3700:HIS:CD2	2.34	0.62
1:C:2127:ARG:NH2	1:C:2165:LEU:O	2.32	0.62
1:C:2504:THR:O	1:C:2508:SER:N	2.31	0.62
1:D:1986:CYS:O	1:D:1993:ARG:NH2	2.32	0.62
1:A:2979:ARG:HH21	1:A:2983:LEU:HD13	1.64	0.62
2:G:19:LYS:HE2	2:G:19:LYS:HA	1.79	0.62
1:D:2127:ARG:NH2	1:D:2165:LEU:O	2.32	0.62
1:A:3159:LEU:HD21	1:A:3237:VAL:HB	1.80	0.62
1:B:2682:GLU:HB2	1:B:2685:TYR:HB2	1.81	0.62
1:B:2736:LYS:HA	1:B:2741:TRP:CD1	2.35	0.62
1:C:302:THR:HG22	1:C:304:LYS:HG3	1.81	0.62
1:C:1986:CYS:O	1:C:1993:ARG:NH2	2.32	0.62
1:A:395:HIS:ND1	1:A:396:GLU:OE2	2.33	0.62
1:A:4957:CYS:SG	1:A:4958:PHE:N	2.73	0.62
1:C:3011:LEU:HD22	1:C:3060:PHE:CZ	2.34	0.62
1:C:3296:MET:HA	1:C:3299:LEU:HB2	1.81	0.62
1:C:4274:MET:CE	1:D:4483:LYS:HD2	2.29	0.62
1:A:2682:GLU:HB2	1:A:2685:TYR:HB2	1.81	0.62
1:A:2691:LYS:NZ	1:A:2843:MET:SD	2.65	0.62
1:B:3011:LEU:HD22	1:B:3060:PHE:CZ	2.34	0.62
1:B:4957:CYS:SG	1:B:4958:PHE:N	2.73	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1645:THR:HG22	1:C:1695:PRO:HG3	1.81	0.62
1:C:3697:LYS:HA	1:C:3700:HIS:CD2	2.34	0.62
1:C:4957:CYS:SG	1:C:4958:PHE:N	2.73	0.62
1:C:323:ASP:O	1:C:325:LYS:N	2.33	0.62
1:C:395:HIS:ND1	1:C:396:GLU:OE2	2.33	0.62
1:C:2736:LYS:HA	1:C:2741:TRP:CD1	2.35	0.62
1:D:1645:THR:HG22	1:D:1695:PRO:HG3	1.81	0.62
1:D:3697:LYS:HA	1:D:3700:HIS:CD2	2.34	0.62
1:A:302:THR:HG22	1:A:304:LYS:HG3	1.81	0.61
1:A:2127:ARG:NH2	1:A:2165:LEU:O	2.32	0.61
1:B:1040:ASP:O	1:B:1044:LYS:N	2.26	0.61
1:B:3134:LEU:HD11	1:B:3170:PHE:CD1	2.35	0.61
1:C:3134:LEU:HD11	1:C:3170:PHE:CD1	2.35	0.61
1:C:3296:MET:O	1:C:3300:ALA:N	2.26	0.61
1:D:4247:ALA:HA	1:D:4250:TYR:CE1	2.35	0.61
1:B:395:HIS:ND1	1:B:396:GLU:OE2	2.33	0.61
1:B:2127:ARG:NH2	1:B:2165:LEU:O	2.32	0.61
1:B:4247:ALA:HA	1:B:4250:TYR:CE1	2.35	0.61
1:C:1040:ASP:O	1:C:1044:LYS:N	2.26	0.61
1:D:302:THR:HG22	1:D:304:LYS:HG3	1.81	0.61
1:A:1040:ASP:O	1:A:1044:LYS:N	2.26	0.61
1:A:3697:LYS:HA	1:A:3700:HIS:CD2	2.35	0.61
1:B:323:ASP:O	1:B:325:LYS:N	2.33	0.61
1:D:2736:LYS:HA	1:D:2741:TRP:CD1	2.35	0.61
1:B:1114:ARG:NH1	1:B:1128:LEU:O	2.34	0.61
1:C:629:GLN:OE1	1:C:1669:ASN:ND2	2.34	0.61
1:C:983:LEU:HD12	1:C:1055:ARG:HE	1.66	0.61
1:D:983:LEU:O	1:D:1055:ARG:NH2	2.33	0.61
1:D:2979:ARG:HH21	1:D:2983:LEU:HD13	1.64	0.61
1:A:1645:THR:HG22	1:A:1695:PRO:HG3	1.81	0.61
1:D:395:HIS:ND1	1:D:396:GLU:OE2	2.33	0.61
1:D:4957:CYS:SG	1:D:4958:PHE:N	2.73	0.61
1:A:2736:LYS:HA	1:A:2741:TRP:CD1	2.35	0.61
1:B:2792:THR:HG23	1:B:2795:GLY:H	1.66	0.61
1:D:2792:THR:HG23	1:D:2795:GLY:H	1.66	0.61
1:D:3134:LEU:HD11	1:D:3170:PHE:CD1	2.35	0.61
1:A:640:ARG:HH22	2:E:91:VAL:HG23	1.65	0.61
1:A:3011:LEU:HD22	1:A:3060:PHE:CZ	2.34	0.61
1:A:4247:ALA:HA	1:A:4250:TYR:CE1	2.35	0.61
1:B:713:TRP:O	1:B:841:LYS:NZ	2.28	0.61
1:B:1645:THR:HG22	1:B:1695:PRO:HG3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:629:GLN:OE1	1:D:1669:ASN:ND2	2.34	0.61
1:D:2638:LEU:HD11	1:D:2682:GLU:HB3	1.83	0.61
1:B:983:LEU:HD12	1:B:1055:ARG:HE	1.66	0.61
1:B:2638:LEU:HD11	1:B:2682:GLU:HB3	1.83	0.61
1:B:881:ILE:HA	1:B:884:LYS:HE2	1.83	0.61
1:C:4782:THR:HG21	1:C:4813:TYR:HA	1.83	0.61
1:D:981:MET:HG2	1:D:982:ASP:N	2.16	0.61
1:A:2792:THR:HG23	1:A:2795:GLY:H	1.66	0.61
1:B:983:LEU:O	1:B:1055:ARG:NH2	2.33	0.61
1:D:4782:THR:HG21	1:D:4813:TYR:HA	1.83	0.61
1:A:4001:ASP:OD1	1:A:4114:ARG:NH2	2.34	0.60
1:B:419:ILE:HG21	1:B:492:GLU:HG3	1.83	0.60
1:C:881:ILE:HA	1:C:884:LYS:HE2	1.83	0.60
1:C:1114:ARG:NH1	1:C:1128:LEU:O	2.34	0.60
1:C:2638:LEU:HD11	1:C:2682:GLU:HB3	1.83	0.60
1:C:4247:ALA:HA	1:C:4250:TYR:CE1	2.35	0.60
1:D:2504:THR:O	1:D:2508:SER:N	2.31	0.60
1:A:3134:LEU:HD11	1:A:3170:PHE:CD1	2.35	0.60
1:C:878:LEU:HA	1:C:881:ILE:HG22	1.82	0.60
1:C:1494:MET:HG3	1:C:1496:PRO:HD3	1.84	0.60
1:C:2691:LYS:NZ	1:C:2843:MET:SD	2.65	0.60
1:C:2722:ASN:O	1:C:2726:GLU:HG3	2.01	0.60
1:A:881:ILE:HA	1:A:884:LYS:HE2	1.83	0.60
1:B:272:ARG:O	1:B:299:HIS:NE2	2.26	0.60
1:B:1494:MET:HG3	1:B:1496:PRO:HD3	1.83	0.60
1:B:2722:ASN:O	1:B:2726:GLU:HG3	2.01	0.60
1:C:272:ARG:O	1:C:299:HIS:NE2	2.26	0.60
1:C:981:MET:HG2	1:C:982:ASP:N	2.16	0.60
1:D:544:ASN:HB3	1:D:547:ASN:HB2	1.84	0.60
1:B:981:MET:HG2	1:B:982:ASP:N	2.16	0.60
1:B:1047:LYS:O	1:B:1051:ARG:HG2	2.02	0.60
1:B:2150:MET:HE1	1:B:2199:PHE:HA	1.83	0.60
1:C:3807:ALA:HA	1:C:3810:ARG:HB2	1.84	0.60
1:C:4004:VAL:HG21	1:C:4114:ARG:HE	1.67	0.60
1:D:419:ILE:HG21	1:D:492:GLU:HG3	1.84	0.60
1:A:1114:ARG:NH1	1:A:1128:LEU:O	2.34	0.60
1:A:2722:ASN:O	1:A:2726:GLU:HG3	2.01	0.60
1:B:629:GLN:OE1	1:B:1669:ASN:ND2	2.34	0.60
1:C:419:ILE:HG21	1:C:492:GLU:HG3	1.84	0.60
1:C:1047:LYS:O	1:C:1051:ARG:HG2	2.02	0.60
1:C:4042:VAL:HB	1:C:4077:THR:HB	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:878:LEU:HA	1:D:881:ILE:HG22	1.82	0.60
1:D:3807:ALA:HA	1:D:3810:ARG:HB2	1.84	0.60
1:A:2638:LEU:HD11	1:A:2682:GLU:HB3	1.83	0.60
1:C:1911:GLN:OE1	1:C:2090:ARG:NH1	2.28	0.60
1:D:323:ASP:O	1:D:325:LYS:N	2.33	0.60
1:A:878:LEU:HA	1:A:881:ILE:HG22	1.82	0.60
1:A:909:ASP:HB3	1:A:912:LYS:HB2	1.84	0.60
1:A:983:LEU:HD12	1:A:1055:ARG:HE	1.66	0.60
1:B:276:ARG:HG3	1:B:300:VAL:HG22	1.84	0.60
1:B:4042:VAL:HB	1:B:4077:THR:HB	1.83	0.60
1:D:4004:VAL:HG21	1:D:4114:ARG:HE	1.67	0.60
2:G:45:LYS:NZ	1:C:1781:GLU:OE1	2.34	0.60
1:B:4001:ASP:OD1	1:B:4114:ARG:NH2	2.34	0.60
1:D:881:ILE:HA	1:D:884:LYS:HE2	1.83	0.60
1:D:4001:ASP:OD1	1:D:4114:ARG:NH2	2.34	0.60
1:A:276:ARG:HG3	1:A:300:VAL:HG22	1.84	0.60
1:A:981:MET:HG2	1:A:982:ASP:N	2.16	0.60
1:B:2680:TYR:O	1:B:2682:GLU:N	2.35	0.60
1:B:3109:PHE:HA	1:B:3112:ILE:HG12	1.83	0.60
1:B:3227:ARG:HH22	1:B:3292:GLU:HB3	1.67	0.60
1:B:3653:GLU:OE1	1:B:3660:ARG:NH1	2.35	0.60
1:C:1511:VAL:HG12	1:C:1518:LEU:HG	1.83	0.60
1:C:4001:ASP:OD1	1:C:4114:ARG:NH2	2.34	0.60
1:D:983:LEU:HD12	1:D:1055:ARG:HE	1.66	0.60
1:A:4272:LYS:HG2	1:B:4480:PHE:CZ	2.37	0.60
1:B:878:LEU:HA	1:B:881:ILE:HG22	1.82	0.60
1:C:909:ASP:HB3	1:C:912:LYS:HB2	1.84	0.60
1:C:2792:THR:HG23	1:C:2795:GLY:H	1.66	0.60
1:C:3653:GLU:OE1	1:C:3660:ARG:NH1	2.35	0.60
1:D:164:PRO:HB3	1:D:169:ARG:HB2	1.84	0.60
1:D:2722:ASN:O	1:D:2726:GLU:HG3	2.01	0.60
1:A:544:ASN:HB3	1:A:547:ASN:HB2	1.84	0.59
1:A:983:LEU:O	1:A:1055:ARG:NH2	2.33	0.59
1:B:3793:LEU:HD21	1:B:3843:LEU:HD21	1.84	0.59
1:B:3807:ALA:HA	1:B:3810:ARG:HB2	1.84	0.59
1:C:2488:LEU:HD21	1:C:2548:LEU:HD22	1.84	0.59
1:C:3227:ARG:HH22	1:C:3292:GLU:HB3	1.67	0.59
1:C:3793:LEU:HD21	1:C:3843:LEU:HD21	1.84	0.59
1:D:909:ASP:HB3	1:D:912:LYS:HB2	1.84	0.59
1:D:1494:MET:HG3	1:D:1496:PRO:HD3	1.83	0.59
1:D:1511:VAL:HG12	1:D:1518:LEU:HG	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:ILE:HG21	1:A:492:GLU:HG3	1.84	0.59
1:A:824:GLU:OE1	1:A:1028:ARG:NH1	2.35	0.59
1:A:1047:LYS:O	1:A:1051:ARG:HG2	2.02	0.59
1:A:3653:GLU:OE1	1:A:3660:ARG:NH1	2.35	0.59
1:B:1511:VAL:HG12	1:B:1518:LEU:HG	1.83	0.59
1:C:544:ASN:HB3	1:C:547:ASN:HB2	1.84	0.59
1:C:1249:MET:HE2	1:C:1249:MET:HA	1.84	0.59
1:C:2680:TYR:O	1:C:2682:GLU:N	2.35	0.59
1:C:3109:PHE:HA	1:C:3112:ILE:HG12	1.83	0.59
1:C:4488:GLN:O	1:C:4491:LEU:HB2	2.02	0.59
1:D:1047:LYS:O	1:D:1051:ARG:HG2	2.02	0.59
1:D:1114:ARG:NH1	1:D:1128:LEU:O	2.34	0.59
1:D:2680:TYR:O	1:D:2682:GLU:N	2.35	0.59
1:A:2258:ARG:HB3	1:A:2260:PRO:HD2	1.84	0.59
1:B:909:ASP:HB3	1:B:912:LYS:HB2	1.84	0.59
1:A:1494:MET:HG3	1:A:1496:PRO:HD3	1.83	0.59
1:A:4042:VAL:HB	1:A:4077:THR:HB	1.83	0.59
1:C:3276:LEU:HA	1:C:3279:ASN:HB2	1.84	0.59
1:D:3227:ARG:HH22	1:D:3292:GLU:HB3	1.67	0.59
1:D:3653:GLU:OE1	1:D:3660:ARG:NH1	2.35	0.59
1:A:4488:GLN:O	1:A:4491:LEU:HB2	2.02	0.59
1:A:4661:TYR:O	1:A:4665:ARG:NH1	2.34	0.59
1:B:2258:ARG:HB3	1:B:2260:PRO:HD2	1.84	0.59
1:C:983:LEU:O	1:C:1055:ARG:NH2	2.33	0.59
1:D:2488:LEU:HD21	1:D:2548:LEU:HD22	1.84	0.59
1:D:3109:PHE:HA	1:D:3112:ILE:HG12	1.84	0.59
1:D:4774:LEU:HD11	1:D:4854:VAL:HG13	1.84	0.59
1:A:308:LEU:HD11	1:A:370:LEU:HD12	1.85	0.59
1:A:1511:VAL:HG12	1:A:1518:LEU:HG	1.84	0.59
1:A:2680:TYR:O	1:A:2682:GLU:N	2.35	0.59
1:A:3807:ALA:HA	1:A:3810:ARG:HB2	1.84	0.59
1:B:3276:LEU:HA	1:B:3279:ASN:HB2	1.84	0.59
1:B:4004:VAL:HG21	1:B:4114:ARG:HE	1.67	0.59
1:B:4782:THR:HG21	1:B:4813:TYR:HA	1.83	0.59
1:C:824:GLU:OE1	1:C:1028:ARG:NH1	2.35	0.59
1:A:164:PRO:HB3	1:A:169:ARG:HB2	1.84	0.59
1:A:629:GLN:OE1	1:A:1669:ASN:ND2	2.34	0.59
1:A:3803:LEU:HD21	1:A:3909:ALA:HB2	1.85	0.59
1:A:3890:TRP:HB3	1:B:76:ARG:NH1	2.18	0.59
1:B:544:ASN:HB3	1:B:547:ASN:HB2	1.84	0.59
1:B:824:GLU:OE1	1:B:1028:ARG:NH1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4774:LEU:HD11	1:B:4854:VAL:HG13	1.84	0.59
1:C:3266:THR:O	1:C:3268:LEU:N	2.36	0.59
1:D:1100:ARG:HB2	1:D:1236:TYR:HA	1.84	0.59
1:A:3793:LEU:HD21	1:A:3843:LEU:HD21	1.84	0.59
1:B:558:LEU:HG	1:B:571:ILE:HG23	1.85	0.59
1:D:272:ARG:O	1:D:299:HIS:NE2	2.26	0.59
1:A:2930:ILE:HG23	1:A:3007:LEU:HD11	1.85	0.59
1:A:4782:THR:HG21	1:A:4813:TYR:HA	1.83	0.59
1:B:1100:ARG:HB2	1:B:1236:TYR:HA	1.84	0.59
1:C:558:LEU:HG	1:C:571:ILE:HG23	1.85	0.59
1:D:824:GLU:OE1	1:D:1028:ARG:NH1	2.36	0.59
1:D:2736:LYS:HA	1:D:2741:TRP:HD1	1.68	0.59
1:A:2685:TYR:C	1:A:2687:SER:H	2.06	0.59
1:A:3109:PHE:HA	1:A:3112:ILE:HG12	1.84	0.59
1:B:2747:TYR:HD1	1:B:2755:PRO:HG3	1.68	0.59
1:B:4488:GLN:O	1:B:4491:LEU:HB2	2.02	0.59
1:D:308:LEU:HD11	1:D:370:LEU:HD12	1.85	0.59
1:D:4042:VAL:HB	1:D:4077:THR:HB	1.83	0.59
1:C:3015:VAL:HG12	1:C:3018:ARG:HD2	1.85	0.58
1:D:2258:ARG:HB3	1:D:2260:PRO:HD2	1.84	0.58
1:D:3793:LEU:HD21	1:D:3843:LEU:HD21	1.84	0.58
1:D:4488:GLN:O	1:D:4491:LEU:HB2	2.02	0.58
1:A:70:GLU:HG2	1:A:71:GLN:HG2	1.84	0.58
1:A:1549:SER:CB	1:D:2830:ASN:HD21	2.16	0.58
1:A:3227:ARG:HH22	1:A:3292:GLU:HB3	1.67	0.58
1:A:3266:THR:O	1:A:3268:LEU:N	2.36	0.58
1:C:164:PRO:HB3	1:C:169:ARG:HB2	1.84	0.58
1:C:276:ARG:HG3	1:C:300:VAL:HG22	1.84	0.58
1:C:2747:TYR:HD1	1:C:2755:PRO:HG3	1.68	0.58
1:C:2930:ILE:HG23	1:C:3007:LEU:HD11	1.85	0.58
1:D:276:ARG:HG3	1:D:300:VAL:HG22	1.84	0.58
1:D:892:LEU:HD22	1:D:1052:GLU:HB3	1.85	0.58
1:A:2488:LEU:HD21	1:A:2548:LEU:HD22	1.84	0.58
1:A:2677:PRO:O	1:A:2681:MET:HE3	2.03	0.58
1:A:2736:LYS:HA	1:A:2741:TRP:HD1	1.68	0.58
2:H:14:ARG:HH11	2:H:14:ARG:CG	2.15	0.58
1:D:2685:TYR:C	1:D:2687:SER:H	2.06	0.58
1:A:1100:ARG:HB2	1:A:1236:TYR:HA	1.84	0.58
1:A:2504:THR:O	1:A:2508:SER:N	2.31	0.58
1:A:4004:VAL:HG21	1:A:4114:ARG:HE	1.67	0.58
1:C:1100:ARG:HB2	1:C:1236:TYR:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2258:ARG:HB3	1:C:2260:PRO:HD2	1.84	0.58
1:D:3276:LEU:HA	1:D:3279:ASN:HB2	1.85	0.58
1:A:892:LEU:HD22	1:A:1052:GLU:HB3	1.85	0.58
1:B:308:LEU:HD11	1:B:370:LEU:HD12	1.85	0.58
1:B:2930:ILE:HG23	1:B:3007:LEU:HD11	1.85	0.58
1:A:323:ASP:O	1:A:325:LYS:N	2.33	0.58
1:A:3172:GLU:HG2	1:A:3268:LEU:HD21	1.85	0.58
1:B:4615:LEU:O	1:B:4620:GLN:N	2.28	0.58
1:C:1057:LEU:HD21	1:C:1064:LEU:HG	1.86	0.58
1:C:4774:LEU:HD11	1:C:4854:VAL:HG13	1.84	0.58
1:D:233:VAL:HG22	1:D:276:ARG:HG2	1.86	0.58
1:A:2830:ASN:ND2	1:B:1435:GLY:HA3	2.19	0.58
1:C:70:GLU:HG2	1:C:71:GLN:HG2	1.84	0.58
1:D:3172:GLU:HG2	1:D:3268:LEU:HD21	1.85	0.58
1:A:1057:LEU:HD21	1:A:1064:LEU:HG	1.86	0.58
1:B:2677:PRO:O	1:B:2681:MET:HE3	2.04	0.58
1:C:308:LEU:HD11	1:C:370:LEU:HD12	1.85	0.58
1:D:1107:THR:HB	1:D:1113:MET:HE1	1.86	0.58
1:D:3015:VAL:HG12	1:D:3018:ARG:HD2	1.85	0.58
1:A:3276:LEU:HA	1:A:3279:ASN:HB2	1.84	0.58
1:B:1057:LEU:HD21	1:B:1064:LEU:HG	1.86	0.58
1:B:1157:GLN:N	1:B:1160:ASP:OD2	2.28	0.58
1:B:3266:THR:O	1:B:3268:LEU:N	2.36	0.58
1:C:233:VAL:HG22	1:C:276:ARG:HG2	1.86	0.58
1:C:3803:LEU:HD21	1:C:3909:ALA:HB2	1.85	0.58
1:D:1057:LEU:HD21	1:D:1064:LEU:HG	1.86	0.58
1:A:4774:LEU:HD11	1:A:4854:VAL:HG13	1.84	0.58
1:B:164:PRO:HB3	1:B:169:ARG:HB2	1.84	0.58
1:B:2685:TYR:C	1:B:2687:SER:H	2.06	0.58
1:B:2723:LYS:HG2	1:B:2895:PHE:HZ	1.69	0.58
1:C:892:LEU:HD22	1:C:1052:GLU:HB3	1.85	0.58
1:D:70:GLU:HG2	1:D:71:GLN:HG2	1.84	0.58
1:D:2723:LYS:HG2	1:D:2895:PHE:HZ	1.69	0.58
1:D:2930:ILE:HG23	1:D:3007:LEU:HD11	1.84	0.58
1:D:3803:LEU:HD21	1:D:3909:ALA:HB2	1.85	0.58
1:A:558:LEU:HG	1:A:571:ILE:HG23	1.85	0.57
1:A:1914:CYS:SG	1:A:2091:GLN:NE2	2.76	0.57
1:A:3100:ALA:O	1:A:3104:MET:HG2	2.04	0.57
1:C:2723:LYS:HG2	1:C:2895:PHE:HZ	1.69	0.57
1:D:558:LEU:HG	1:D:571:ILE:HG23	1.85	0.57
1:D:2677:PRO:O	1:D:2681:MET:HE3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3288:LEU:O	1:D:3328:LYS:NZ	2.37	0.57
1:A:194:LEU:HD11	1:A:201:LEU:HD23	1.86	0.57
1:B:70:GLU:HG2	1:B:71:GLN:HG2	1.84	0.57
1:B:2488:LEU:HD21	1:B:2548:LEU:HD22	1.84	0.57
1:C:882:ARG:NH1	1:C:936:SER:OG	2.37	0.57
1:C:2677:PRO:O	1:C:2681:MET:HE3	2.04	0.57
1:A:4177:VAL:HG11	1:A:4880:VAL:HA	1.86	0.57
1:B:892:LEU:HD22	1:B:1052:GLU:HB3	1.85	0.57
1:D:4177:VAL:HG11	1:D:4880:VAL:HA	1.86	0.57
1:A:2723:LYS:HG2	1:A:2895:PHE:HZ	1.69	0.57
1:B:1911:GLN:OE1	1:B:2090:ARG:NH1	2.28	0.57
1:B:3803:LEU:HD21	1:B:3909:ALA:HB2	1.85	0.57
1:B:4631:ASP:O	1:B:4635:ILE:HG12	2.05	0.57
1:C:2685:TYR:C	1:C:2687:SER:H	2.07	0.57
1:D:1157:GLN:N	1:D:1160:ASP:OD2	2.28	0.57
1:D:2623:LEU:HD23	1:D:2625:GLY:H	1.70	0.57
1:D:3100:ALA:O	1:D:3104:MET:HG2	2.05	0.57
1:D:4661:TYR:O	1:D:4665:ARG:NH1	2.35	0.57
1:A:2747:TYR:HD1	1:A:2755:PRO:HG3	1.68	0.57
1:B:882:ARG:NH1	1:B:936:SER:OG	2.37	0.57
1:B:2285:TYR:OH	1:B:2380:ASP:O	2.19	0.57
1:B:3100:ALA:O	1:B:3104:MET:HG2	2.04	0.57
1:B:3288:LEU:O	1:B:3328:LYS:NZ	2.37	0.57
1:B:4874:ARG:HH12	1:C:4766:GLN:CD	2.08	0.57
1:C:2736:LYS:HA	1:C:2741:TRP:HD1	1.68	0.57
1:C:3172:GLU:HG2	1:C:3268:LEU:HD21	1.85	0.57
1:D:882:ARG:NH1	1:D:936:SER:OG	2.37	0.57
1:A:2623:LEU:HD23	1:A:2625:GLY:H	1.69	0.57
1:A:3288:LEU:O	1:A:3328:LYS:NZ	2.37	0.57
1:B:4092:LYS:HA	1:B:4129:PHE:HZ	1.69	0.57
1:C:1107:THR:HB	1:C:1113:MET:HE1	1.86	0.57
1:C:1914:CYS:SG	1:C:2091:GLN:NE2	2.76	0.57
1:B:3015:VAL:HG12	1:B:3018:ARG:HD2	1.85	0.57
1:B:3172:GLU:HG2	1:B:3268:LEU:HD21	1.85	0.57
1:C:194:LEU:HD11	1:C:201:LEU:HD23	1.86	0.57
1:C:891:GLU:OE2	1:C:976:TYR:OH	2.23	0.57
1:C:3140:LEU:HD13	1:C:3155:LEU:HD22	1.86	0.57
1:D:3000:GLU:HA	1:D:3003:MET:HG2	1.87	0.57
1:A:1522:ALA:HB3	1:A:1525:LYS:HG3	1.87	0.57
1:A:4623:GLU:H	1:A:4629:GLN:HE21	1.52	0.57
1:B:2504:THR:O	1:B:2508:SER:N	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2623:LEU:HD23	1:C:2625:GLY:H	1.70	0.57
1:C:3166:PHE:HE1	1:C:3168:VAL:HB	1.70	0.57
1:A:891:GLU:OE2	1:A:976:TYR:OH	2.23	0.57
1:A:3015:VAL:HG12	1:A:3018:ARG:HD2	1.85	0.57
2:E:14:ARG:HH11	2:E:14:ARG:CG	2.15	0.57
1:B:1107:THR:HB	1:B:1113:MET:HE1	1.85	0.57
1:B:2623:LEU:HD23	1:B:2625:GLY:H	1.69	0.57
1:B:3140:LEU:HD13	1:B:3155:LEU:HD22	1.86	0.57
1:A:233:VAL:HG22	1:A:276:ARG:HG2	1.86	0.56
1:A:254:GLU:OE2	1:A:258:ARG:NH2	2.31	0.56
1:B:2736:LYS:HA	1:B:2741:TRP:HD1	1.68	0.56
1:B:3166:PHE:HE1	1:B:3168:VAL:HB	1.70	0.56
1:B:4866:ILE:HG21	1:C:4857:ILE:HG12	1.87	0.56
1:C:4631:ASP:O	1:C:4635:ILE:HG12	2.05	0.56
1:A:3140:LEU:HD13	1:A:3155:LEU:HD22	1.86	0.56
1:C:4623:GLU:H	1:C:4629:GLN:HE21	1.52	0.56
1:D:194:LEU:HD11	1:D:201:LEU:HD23	1.87	0.56
1:A:3004:VAL:HA	1:A:3007:LEU:HD13	1.87	0.56
1:B:1522:ALA:HB3	1:B:1525:LYS:HG3	1.87	0.56
1:B:2718:GLU:O	1:B:2722:ASN:ND2	2.38	0.56
1:C:4092:LYS:HA	1:C:4129:PHE:HZ	1.69	0.56
1:D:992:GLN:O	1:D:995:MET:HG3	2.06	0.56
1:D:3140:LEU:HD13	1:D:3155:LEU:HD22	1.86	0.56
1:A:3000:GLU:HA	1:A:3003:MET:HG2	1.87	0.56
1:A:4092:LYS:HA	1:A:4129:PHE:HZ	1.69	0.56
1:B:233:VAL:HG22	1:B:276:ARG:HG2	1.86	0.56
1:B:920:GLU:O	1:B:924:LEU:N	2.39	0.56
1:C:3100:ALA:O	1:C:3104:MET:HG2	2.04	0.56
1:A:920:GLU:O	1:A:924:LEU:N	2.39	0.56
1:A:992:GLN:O	1:A:995:MET:HG3	2.06	0.56
1:B:992:GLN:O	1:B:995:MET:HG3	2.06	0.56
1:C:1040:ASP:HA	1:C:1043:LYS:HB3	1.88	0.56
1:C:2718:GLU:O	1:C:2722:ASN:ND2	2.38	0.56
1:D:254:GLU:OE2	1:D:258:ARG:NH2	2.31	0.56
1:D:891:GLU:OE2	1:D:976:TYR:OH	2.23	0.56
1:D:3004:VAL:HA	1:D:3007:LEU:HD13	1.87	0.56
1:D:4092:LYS:HA	1:D:4129:PHE:HZ	1.69	0.56
1:D:4631:ASP:O	1:D:4635:ILE:HG12	2.05	0.56
1:A:4631:ASP:O	1:A:4635:ILE:HG12	2.05	0.56
1:C:4177:VAL:HG11	1:C:4880:VAL:HA	1.86	0.56
1:A:4588:ILE:HG12	1:D:4287:TYR:CD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4177:VAL:HG11	1:B:4880:VAL:HA	1.86	0.56
1:D:660:PHE:HB2	1:D:859:GLN:HG2	1.88	0.56
1:D:2747:TYR:HD1	1:D:2755:PRO:HG3	1.68	0.56
1:A:660:PHE:HB2	1:A:859:GLN:HG2	1.88	0.56
1:A:3246:MET:SD	1:A:3276:LEU:HD11	2.46	0.56
1:B:254:GLU:OE2	1:B:258:ARG:NH2	2.31	0.56
1:B:4623:GLU:H	1:B:4629:GLN:HE21	1.52	0.56
1:C:1157:GLN:N	1:C:1160:ASP:OD2	2.28	0.56
1:C:3288:LEU:O	1:C:3328:LYS:NZ	2.37	0.56
1:C:4661:TYR:O	1:C:4665:ARG:NH1	2.34	0.56
1:D:1522:ALA:HB3	1:D:1525:LYS:HG3	1.87	0.56
1:B:2504:THR:HB	1:B:2507:LEU:HB2	1.88	0.56
1:B:3246:MET:SD	1:B:3276:LEU:HD11	2.46	0.56
1:C:920:GLU:O	1:C:924:LEU:N	2.39	0.56
1:C:992:GLN:O	1:C:995:MET:HG3	2.06	0.56
1:D:2504:THR:HB	1:D:2507:LEU:HB2	1.88	0.56
1:A:4616:TYR:OH	1:A:4628:GLY:O	2.23	0.56
1:B:2599:LEU:HD21	1:B:2602:HIS:HB2	1.88	0.56
1:B:1040:ASP:HA	1:B:1043:LYS:HB3	1.88	0.55
1:B:4595:VAL:O	1:B:4599:ILE:HG12	2.06	0.55
1:C:2285:TYR:OH	1:C:2380:ASP:O	2.19	0.55
1:C:3000:GLU:HA	1:C:3003:MET:HG2	1.87	0.55
1:D:1040:ASP:HA	1:D:1043:LYS:HB3	1.88	0.55
1:D:1096:VAL:HG23	1:D:1168:MET:HE1	1.88	0.55
1:A:1157:GLN:N	1:A:1160:ASP:OD2	2.28	0.55
1:A:2285:TYR:OH	1:A:2380:ASP:O	2.19	0.55
1:B:142:LYS:HG2	1:B:143:LEU:HD12	1.89	0.55
1:C:1096:VAL:HG23	1:C:1168:MET:HE1	1.88	0.55
1:C:1114:ARG:HG2	1:C:1138:ASP:HB2	1.89	0.55
1:C:1522:ALA:HB3	1:C:1525:LYS:HG3	1.87	0.55
1:C:2504:THR:HB	1:C:2507:LEU:HB2	1.88	0.55
1:D:3246:MET:SD	1:D:3276:LEU:HD11	2.46	0.55
1:A:1107:THR:HB	1:A:1113:MET:HE1	1.86	0.55
1:B:194:LEU:HD11	1:B:201:LEU:HD23	1.86	0.55
1:C:2599:LEU:HD21	1:C:2602:HIS:HB2	1.88	0.55
1:D:920:GLU:O	1:D:924:LEU:N	2.39	0.55
1:D:4014:LEU:HD13	1:D:4122:ALA:HB2	1.89	0.55
1:A:966:LEU:HD12	1:A:978:PRO:HB2	1.89	0.55
1:A:2718:GLU:O	1:A:2722:ASN:ND2	2.39	0.55
1:B:966:LEU:HD12	1:B:978:PRO:HB2	1.89	0.55
1:B:3171:LEU:HD22	1:B:3214:LEU:HD21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:713:TRP:O	1:C:841:LYS:NZ	2.29	0.55
1:D:1914:CYS:SG	1:D:2091:GLN:NE2	2.76	0.55
1:D:2599:LEU:HD21	1:D:2602:HIS:HB2	1.89	0.55
1:D:4092:LYS:HG2	1:D:4129:PHE:CE1	2.42	0.55
1:D:4623:GLU:H	1:D:4629:GLN:HE21	1.52	0.55
1:B:61:ASP:OD2	1:B:64:ILE:HG12	2.07	0.55
1:B:891:GLU:OE2	1:B:976:TYR:OH	2.23	0.55
1:C:3246:MET:SD	1:C:3276:LEU:HD11	2.45	0.55
1:D:363:ILE:HB	1:D:372:LEU:HD22	1.88	0.55
1:D:4616:TYR:OH	1:D:4628:GLY:O	2.23	0.55
1:A:4615:LEU:O	1:A:4620:GLN:N	2.28	0.55
1:C:3004:VAL:HA	1:C:3007:LEU:HD13	1.87	0.55
1:D:61:ASP:OD2	1:D:64:ILE:HG12	2.07	0.55
1:A:1096:VAL:HG23	1:A:1168:MET:HE1	1.89	0.55
1:A:2504:THR:HB	1:A:2507:LEU:HB2	1.88	0.55
1:A:3171:LEU:HD22	1:A:3214:LEU:HD21	1.89	0.55
1:A:4092:LYS:HG2	1:A:4129:PHE:CE1	2.42	0.55
1:C:61:ASP:OD2	1:C:64:ILE:HG12	2.07	0.55
1:C:2706:VAL:HG21	1:C:2785:TRP:HE1	1.72	0.55
1:C:4014:LEU:HD13	1:C:4122:ALA:HB2	1.89	0.55
1:C:4092:LYS:HG2	1:C:4129:PHE:CE1	2.42	0.55
1:C:4595:VAL:O	1:C:4599:ILE:HG12	2.06	0.55
1:C:4678:ASP:OD1	1:C:4679:PHE:N	2.40	0.55
1:D:966:LEU:HD12	1:D:978:PRO:HB2	1.89	0.55
1:D:1114:ARG:HG2	1:D:1138:ASP:HB2	1.89	0.55
1:D:2706:VAL:HG21	1:D:2785:TRP:HE1	1.72	0.55
1:A:1040:ASP:HA	1:A:1043:LYS:HB3	1.88	0.55
1:A:2706:VAL:HG21	1:A:2785:TRP:HE1	1.72	0.55
1:B:660:PHE:HB2	1:B:859:GLN:HG2	1.87	0.55
1:B:3004:VAL:HA	1:B:3007:LEU:HD13	1.87	0.55
1:C:4274:MET:HE1	1:D:4483:LYS:HD2	1.87	0.55
1:D:1813:THR:HG22	1:D:1815:GLU:H	1.72	0.55
1:D:2718:GLU:O	1:D:2722:ASN:ND2	2.39	0.55
1:A:2325:ILE:HD12	1:B:207:PHE:CZ	2.42	0.55
1:A:3697:LYS:HA	1:A:3700:HIS:NE2	2.22	0.55
1:A:4843:ARG:NH1	1:A:4847:ASP:OD2	2.40	0.55
1:B:1096:VAL:HG23	1:B:1168:MET:HE1	1.88	0.55
1:B:2706:VAL:HG21	1:B:2785:TRP:HE1	1.72	0.55
1:B:3000:GLU:HA	1:B:3003:MET:HG2	1.87	0.55
1:B:3221:LEU:HD12	1:B:3226:ILE:HG21	1.89	0.55
1:C:808:HIS:CD2	1:C:832:LEU:HD12	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1953:MET:SD	1:C:1957:LEU:HD22	2.47	0.55
1:C:3697:LYS:HA	1:C:3700:HIS:NE2	2.22	0.55
1:D:808:HIS:CD2	1:D:832:LEU:HD12	2.42	0.55
1:D:3166:PHE:HB3	1:D:3170:PHE:CZ	2.42	0.55
1:A:3951:PHE:HA	1:A:3971:LEU:HD21	1.89	0.55
1:B:1114:ARG:HG2	1:B:1138:ASP:HB2	1.89	0.55
1:B:4092:LYS:HG2	1:B:4129:PHE:CE1	2.42	0.55
1:C:363:ILE:HB	1:C:372:LEU:HD22	1.88	0.55
1:C:660:PHE:HB2	1:C:859:GLN:HG2	1.87	0.55
1:C:966:LEU:HD12	1:C:978:PRO:HB2	1.89	0.55
1:D:4637:THR:HG22	1:D:4704:LYS:HB3	1.89	0.55
1:A:61:ASP:OD2	1:A:64:ILE:HG12	2.07	0.54
1:A:1813:THR:HG22	1:A:1815:GLU:H	1.72	0.54
1:A:4595:VAL:O	1:A:4599:ILE:HG12	2.06	0.54
1:A:4637:THR:HG22	1:A:4704:LYS:HB3	1.89	0.54
1:B:3166:PHE:HB3	1:B:3170:PHE:CZ	2.42	0.54
1:C:1124:PRO:HD2	1:C:1594:VAL:HG23	1.89	0.54
1:C:2912:LEU:HD12	1:C:2914:THR:H	1.72	0.54
1:C:3951:PHE:HA	1:C:3971:LEU:HD21	1.89	0.54
1:C:4616:TYR:OH	1:C:4628:GLY:O	2.23	0.54
1:C:4637:THR:HG22	1:C:4704:LYS:HB3	1.89	0.54
1:D:1953:MET:SD	1:D:1957:LEU:HD22	2.47	0.54
1:D:2972:ASP:HB2	1:D:3032:CYS:SG	2.48	0.54
1:B:259:THR:OG1	1:B:390:LYS:NZ	2.41	0.54
1:B:1124:PRO:HD2	1:B:1594:VAL:HG23	1.89	0.54
1:B:4621:PRO:O	1:B:4632:ARG:NH2	2.41	0.54
1:C:3221:LEU:HD12	1:C:3226:ILE:HG21	1.89	0.54
1:D:4595:VAL:O	1:D:4599:ILE:HG12	2.06	0.54
1:A:3166:PHE:HE1	1:A:3168:VAL:HB	1.70	0.54
1:A:3246:MET:HE3	1:A:3306:ILE:HG12	1.88	0.54
1:B:1813:THR:HG22	1:B:1815:GLU:H	1.72	0.54
1:B:2920:ARG:NH1	1:B:2998:ASN:O	2.41	0.54
1:C:2718:GLU:OE1	1:C:2718:GLU:N	2.41	0.54
1:D:3697:LYS:HA	1:D:3700:HIS:NE2	2.22	0.54
1:A:882:ARG:NH1	1:A:936:SER:OG	2.37	0.54
1:A:2599:LEU:HD21	1:A:2602:HIS:HB2	1.89	0.54
1:B:1932:PHE:CZ	1:B:1996:LEU:HD12	2.43	0.54
1:B:2718:GLU:OE1	1:B:2718:GLU:N	2.41	0.54
1:B:3697:LYS:HA	1:B:3700:HIS:NE2	2.22	0.54
1:B:4744:LEU:HG	1:C:4780:LEU:HD11	1.88	0.54
1:C:142:LYS:HG2	1:C:143:LEU:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:259:THR:OG1	1:C:390:LYS:NZ	2.41	0.54
1:C:2920:ARG:NH1	1:C:2998:ASN:O	2.41	0.54
1:D:259:THR:OG1	1:D:390:LYS:NZ	2.41	0.54
1:D:971:GLN:HE22	1:D:977:LYS:HG2	1.73	0.54
1:D:1124:PRO:HD2	1:D:1594:VAL:HG23	1.89	0.54
1:D:1932:PHE:CZ	1:D:1996:LEU:HD12	2.43	0.54
1:D:2920:ARG:NH1	1:D:2998:ASN:O	2.41	0.54
1:D:3152:ARG:HA	1:D:3155:LEU:HD12	1.89	0.54
1:D:3221:LEU:HD12	1:D:3226:ILE:HG21	1.89	0.54
1:A:363:ILE:HB	1:A:372:LEU:HD22	1.88	0.54
1:A:1124:PRO:HD2	1:A:1594:VAL:HG23	1.89	0.54
1:A:1932:PHE:CZ	1:A:1996:LEU:HD12	2.43	0.54
1:A:2748:SER:HG	1:A:2751:SER:HG	1.55	0.54
1:A:3152:ARG:HA	1:A:3155:LEU:HD12	1.89	0.54
1:A:4678:ASP:OD1	1:A:4679:PHE:N	2.40	0.54
1:B:1953:MET:SD	1:B:1957:LEU:HD22	2.47	0.54
1:B:2972:ASP:HB2	1:B:3032:CYS:SG	2.47	0.54
1:B:4843:ARG:NH1	1:B:4847:ASP:OD2	2.40	0.54
1:C:14:LEU:HD21	1:C:214:VAL:HG11	1.89	0.54
1:C:1932:PHE:CZ	1:C:1996:LEU:HD12	2.43	0.54
1:C:4843:ARG:NH1	1:C:4847:ASP:OD2	2.40	0.54
1:D:173:GLU:OE2	1:D:176:ARG:NH1	2.41	0.54
1:D:3166:PHE:HE1	1:D:3168:VAL:HB	1.70	0.54
1:D:4166:LYS:O	1:D:4170:ARG:HD2	2.08	0.54
1:A:1267:HIS:O	1:A:1288:LYS:N	2.39	0.54
1:A:3166:PHE:HB3	1:A:3170:PHE:CZ	2.42	0.54
1:B:971:GLN:HE22	1:B:977:LYS:HG2	1.73	0.54
1:B:3951:PHE:HA	1:B:3971:LEU:HD21	1.89	0.54
1:B:4661:TYR:O	1:B:4665:ARG:NH1	2.35	0.54
1:C:4621:PRO:O	1:C:4632:ARG:NH2	2.41	0.54
1:D:1249:MET:HE2	1:D:1249:MET:HA	1.90	0.54
1:D:3171:LEU:HD22	1:D:3214:LEU:HD21	1.89	0.54
1:A:2473:ASP:OD2	1:A:2530:ARG:NH2	2.41	0.54
1:A:2718:GLU:N	1:A:2718:GLU:OE1	2.41	0.54
1:B:3152:ARG:HA	1:B:3155:LEU:HD12	1.89	0.54
1:C:2485:LEU:HD13	1:C:2541:HIS:ND1	2.23	0.54
1:C:2561:LEU:O	1:C:2566:ARG:NH1	2.41	0.54
1:C:2972:ASP:HB2	1:C:3032:CYS:SG	2.47	0.54
1:C:3166:PHE:HB3	1:C:3170:PHE:CZ	2.42	0.54
1:D:142:LYS:HG2	1:D:143:LEU:HD12	1.88	0.54
1:D:3951:PHE:HA	1:D:3971:LEU:HD21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3906:PHE:HB3	1:A:3967:LEU:HD11	1.90	0.54
1:B:363:ILE:HB	1:B:372:LEU:HD22	1.88	0.54
1:B:4014:LEU:HD13	1:B:4122:ALA:HB2	1.88	0.54
1:D:2718:GLU:OE1	1:D:2718:GLU:N	2.41	0.54
1:D:4843:ARG:NH1	1:D:4847:ASP:OD2	2.40	0.54
1:A:971:GLN:HE22	1:A:977:LYS:HG2	1.73	0.54
1:A:1953:MET:SD	1:A:1957:LEU:HD22	2.47	0.54
1:A:2561:LEU:O	1:A:2566:ARG:NH1	2.41	0.54
1:B:2561:LEU:O	1:B:2566:ARG:NH1	2.41	0.54
1:B:3175:LEU:HD13	1:B:3265:CYS:O	2.08	0.54
1:B:4616:TYR:OH	1:B:4628:GLY:O	2.23	0.54
1:B:4637:THR:HG22	1:B:4704:LYS:HB3	1.89	0.54
1:B:4752:THR:HG21	1:C:4766:GLN:HG2	1.89	0.54
1:C:1813:THR:HG22	1:C:1815:GLU:H	1.72	0.54
1:C:3152:ARG:HA	1:C:3155:LEU:HD12	1.89	0.54
1:A:173:GLU:OE2	1:A:176:ARG:NH1	2.41	0.54
1:A:2912:LEU:HD12	1:A:2914:THR:H	1.73	0.54
1:A:2920:ARG:NH1	1:A:2998:ASN:O	2.41	0.54
1:A:4105:LEU:HB3	1:A:4115:LEU:HD21	1.90	0.54
1:A:4485:ILE:C	1:A:4487:TYR:H	2.11	0.54
1:B:2912:LEU:HD12	1:B:2914:THR:H	1.72	0.54
1:B:4753:LEU:HD22	1:C:4773:LEU:HB2	1.89	0.54
1:D:2561:LEU:O	1:D:2566:ARG:NH1	2.41	0.54
1:A:3166:PHE:HB3	1:A:3170:PHE:HZ	1.73	0.53
1:A:3175:LEU:HD13	1:A:3265:CYS:O	2.08	0.53
1:A:3221:LEU:HD12	1:A:3226:ILE:HG21	1.89	0.53
1:A:4072:THR:HB	1:A:4076:GLU:HA	1.90	0.53
2:F:91:VAL:HG23	1:B:640:ARG:HH22	1.73	0.53
1:B:808:HIS:CD2	1:B:832:LEU:HD12	2.42	0.53
1:B:3233:HIS:O	1:B:3237:VAL:HG22	2.08	0.53
1:C:254:GLU:OE2	1:C:258:ARG:NH2	2.31	0.53
1:C:3171:LEU:HD22	1:C:3214:LEU:HD21	1.89	0.53
1:C:3175:LEU:HD13	1:C:3265:CYS:O	2.08	0.53
1:C:3233:HIS:O	1:C:3237:VAL:HG22	2.08	0.53
1:C:4166:LYS:O	1:C:4170:ARG:HD2	2.08	0.53
1:D:4105:LEU:HB3	1:D:4115:LEU:HD21	1.90	0.53
1:D:4678:ASP:OD1	1:D:4679:PHE:N	2.40	0.53
1:A:14:LEU:HD21	1:A:214:VAL:HG11	1.90	0.53
1:A:142:LYS:HG2	1:A:143:LEU:HD12	1.88	0.53
1:A:1114:ARG:HG2	1:A:1138:ASP:HB2	1.89	0.53
1:A:1249:MET:HE2	1:A:1249:MET:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1249:MET:HB2	1:A:1599:MET:HB3	1.91	0.53
1:A:2789:ILE:HG12	1:A:2903:VAL:HG12	1.90	0.53
1:A:4014:LEU:HD13	1:A:4122:ALA:HB2	1.88	0.53
1:B:4166:LYS:O	1:B:4170:ARG:HD2	2.08	0.53
1:C:173:GLU:OE2	1:C:176:ARG:NH1	2.41	0.53
1:C:1118:SER:HB3	1:C:1204:VAL:HG11	1.89	0.53
1:C:3166:PHE:HB3	1:C:3170:PHE:HZ	1.74	0.53
1:C:3920:LEU:O	1:C:3924:ILE:HG12	2.09	0.53
1:D:931:TYR:O	1:D:934:GLN:HG3	2.09	0.53
1:D:1118:SER:HB3	1:D:1204:VAL:HG11	1.89	0.53
1:A:808:HIS:CD2	1:A:832:LEU:HD12	2.42	0.53
1:A:2485:LEU:HD13	1:A:2541:HIS:ND1	2.23	0.53
1:A:3920:LEU:O	1:A:3924:ILE:HG12	2.09	0.53
1:A:4753:LEU:HD21	1:B:4769:LEU:HB3	1.90	0.53
1:B:2485:LEU:HD13	1:B:2541:HIS:ND1	2.23	0.53
1:B:4485:ILE:C	1:B:4487:TYR:H	2.11	0.53
1:B:4651:ARG:NE	1:B:4677:LEU:HD22	2.24	0.53
1:D:3166:PHE:HB3	1:D:3170:PHE:HZ	1.74	0.53
1:D:3233:HIS:O	1:D:3237:VAL:HG22	2.08	0.53
1:D:4174:PHE:O	1:D:4178:ASN:ND2	2.42	0.53
1:A:259:THR:OG1	1:A:390:LYS:NZ	2.41	0.53
1:A:931:TYR:O	1:A:934:GLN:HG3	2.09	0.53
1:A:4621:PRO:O	1:A:4632:ARG:NH2	2.41	0.53
1:B:173:GLU:OE2	1:B:176:ARG:NH1	2.41	0.53
1:B:2789:ILE:HG12	1:B:2903:VAL:HG12	1.90	0.53
1:B:3906:PHE:HB3	1:B:3967:LEU:HD11	1.90	0.53
1:B:4678:ASP:OD1	1:B:4679:PHE:N	2.40	0.53
1:C:4053:GLU:O	1:C:4056:LYS:HG3	2.09	0.53
1:D:2285:TYR:OH	1:D:2380:ASP:O	2.19	0.53
1:D:2473:ASP:OD2	1:D:2530:ARG:NH2	2.41	0.53
1:D:2717:LEU:HD13	1:D:2791:ARG:HH21	1.74	0.53
1:D:4621:PRO:O	1:D:4632:ARG:NH2	2.41	0.53
1:B:2473:ASP:OD2	1:B:2530:ARG:NH2	2.41	0.53
1:B:3166:PHE:HB3	1:B:3170:PHE:HZ	1.74	0.53
1:B:4174:PHE:O	1:B:4178:ASN:ND2	2.42	0.53
1:C:3729:ALA:HA	1:C:3732:HIS:CD2	2.44	0.53
1:D:3906:PHE:HB3	1:D:3967:LEU:HD11	1.90	0.53
1:A:1118:SER:HB3	1:A:1204:VAL:HG11	1.89	0.53
1:A:1549:SER:HB2	1:D:2830:ASN:HD21	1.73	0.53
1:A:1726:ILE:HD12	1:A:2120:LEU:HD11	1.91	0.53
1:A:2972:ASP:HB2	1:A:3032:CYS:SG	2.47	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4166:LYS:O	1:A:4170:ARG:HD2	2.08	0.53
1:A:4651:ARG:NE	1:A:4677:LEU:HD22	2.24	0.53
1:B:1249:MET:HB2	1:B:1599:MET:HB3	1.91	0.53
1:C:971:GLN:HE22	1:C:977:LYS:HG2	1.73	0.53
1:A:4874:ARG:HH12	1:B:4766:GLN:CD	2.11	0.53
2:F:14:ARG:HH11	2:F:14:ARG:CG	2.15	0.53
1:B:3920:LEU:O	1:B:3924:ILE:HG12	2.09	0.53
1:C:931:TYR:O	1:C:934:GLN:HG3	2.09	0.53
1:C:2473:ASP:OD2	1:C:2530:ARG:NH2	2.41	0.53
1:C:3122:ILE:HG21	1:C:3166:PHE:CE2	2.43	0.53
1:C:4174:PHE:O	1:C:4178:ASN:ND2	2.42	0.53
1:D:1421:MET:HE1	1:D:1576:LYS:HB3	1.89	0.53
1:D:2789:ILE:HG12	1:D:2903:VAL:HG12	1.90	0.53
1:D:3122:ILE:HG21	1:D:3166:PHE:CE2	2.43	0.53
1:D:3920:LEU:O	1:D:3924:ILE:HG12	2.09	0.53
1:D:4053:GLU:O	1:D:4056:LYS:HG3	2.09	0.53
1:A:4045:LYS:HG3	1:A:4067:LEU:HD22	1.90	0.53
1:B:891:GLU:O	1:B:895:MET:HG3	2.09	0.53
1:B:931:TYR:O	1:B:934:GLN:HG3	2.09	0.53
1:B:1118:SER:HB3	1:B:1204:VAL:HG11	1.89	0.53
1:C:3906:PHE:HB3	1:C:3967:LEU:HD11	1.90	0.53
1:C:4045:LYS:HG3	1:C:4067:LEU:HD22	1.90	0.53
1:C:4105:LEU:HB3	1:C:4115:LEU:HD21	1.90	0.53
1:D:1267:HIS:O	1:D:1288:LYS:N	2.39	0.53
1:D:2485:LEU:HD13	1:D:2541:HIS:ND1	2.23	0.53
1:D:3729:ALA:HA	1:D:3732:HIS:CD2	2.44	0.53
1:A:2703:PRO:HG2	1:A:2854:LYS:HB2	1.91	0.53
1:A:3122:ILE:HG21	1:A:3166:PHE:CE2	2.43	0.53
1:B:14:LEU:HD23	1:B:69:LEU:HD11	1.91	0.53
1:B:2917:ILE:HG22	1:C:1068:ASP:OD1	2.08	0.53
1:C:1726:ILE:HD12	1:C:2120:LEU:HD11	1.91	0.53
1:C:4485:ILE:C	1:C:4487:TYR:H	2.11	0.53
1:D:2940:ILE:HG12	1:D:3013:VAL:HB	1.91	0.53
1:D:4072:THR:HB	1:D:4076:GLU:HA	1.91	0.53
1:D:4651:ARG:NE	1:D:4677:LEU:HD22	2.24	0.53
1:A:1106:GLU:OE2	1:A:1214:ARG:NH1	2.43	0.53
1:A:3729:ALA:HA	1:A:3732:HIS:CD2	2.44	0.53
1:B:3122:ILE:HG21	1:B:3166:PHE:CE2	2.43	0.53
1:B:4631:ASP:HA	1:B:4634:VAL:HG12	1.91	0.53
1:C:4831:ILE:HG13	1:C:4843:ARG:NH2	2.23	0.53
1:D:600:LEU:O	1:D:604:HIS:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1726:ILE:HD12	1:D:2120:LEU:HD11	1.91	0.53
1:A:891:GLU:O	1:A:895:MET:HG3	2.09	0.52
1:A:1685:LEU:O	1:A:1689:ILE:HG12	2.09	0.52
1:A:1894:LEU:HD13	1:A:2065:THR:HG21	1.92	0.52
1:A:3804:ASP:H	1:A:3829:VAL:HG13	1.75	0.52
1:B:1106:GLU:OE2	1:B:1214:ARG:NH1	2.43	0.52
1:B:1898:LEU:HD23	1:B:1902:VAL:HG12	1.91	0.52
1:C:891:GLU:O	1:C:895:MET:HG3	2.09	0.52
1:C:1249:MET:HB2	1:C:1599:MET:HB3	1.91	0.52
1:C:1267:HIS:O	1:C:1288:LYS:N	2.39	0.52
1:C:4651:ARG:NE	1:C:4677:LEU:HD22	2.24	0.52
1:D:934:GLN:HA	1:D:937:LEU:CD2	2.39	0.52
1:D:1249:MET:HB2	1:D:1599:MET:HB3	1.91	0.52
1:A:934:GLN:HA	1:A:937:LEU:CD2	2.39	0.52
1:A:4174:PHE:O	1:A:4178:ASN:ND2	2.42	0.52
1:A:4631:ASP:HA	1:A:4634:VAL:HG12	1.90	0.52
1:B:452:VAL:HG12	1:B:529:ILE:HD12	1.92	0.52
1:B:1910:LEU:HB2	1:B:2087:LEU:HD21	1.92	0.52
1:B:4045:LYS:HG3	1:B:4067:LEU:HD22	1.90	0.52
1:D:891:GLU:O	1:D:895:MET:HG3	2.09	0.52
1:D:2703:PRO:HG2	1:D:2854:LYS:HB2	1.91	0.52
1:A:679:VAL:HG23	1:A:800:VAL:HG12	1.91	0.52
1:A:2702:ASN:HA	1:A:2857:LYS:HE3	1.92	0.52
2:F:26:HIS:NE2	2:F:41:ARG:HG2	2.25	0.52
1:B:3246:MET:HE3	1:B:3306:ILE:HG12	1.91	0.52
1:B:4105:LEU:HB3	1:B:4115:LEU:HD21	1.90	0.52
1:C:934:GLN:HA	1:C:937:LEU:CD2	2.39	0.52
1:C:2789:ILE:HG12	1:C:2903:VAL:HG12	1.90	0.52
1:D:14:LEU:HD21	1:D:214:VAL:HG11	1.89	0.52
1:D:2702:ASN:HA	1:D:2857:LYS:HE3	1.92	0.52
1:D:2912:LEU:HD12	1:D:2914:THR:H	1.72	0.52
1:D:4045:LYS:HG3	1:D:4067:LEU:HD22	1.90	0.52
1:D:4831:ILE:HG13	1:D:4843:ARG:NH2	2.23	0.52
1:A:14:LEU:HD23	1:A:69:LEU:HD11	1.91	0.52
1:A:2717:LEU:HD13	1:A:2791:ARG:HH21	1.74	0.52
1:A:3233:HIS:O	1:A:3237:VAL:HG22	2.08	0.52
1:B:14:LEU:HD21	1:B:214:VAL:HG11	1.89	0.52
1:B:1726:ILE:HD12	1:B:2120:LEU:HD11	1.91	0.52
1:B:4072:THR:HB	1:B:4076:GLU:HA	1.91	0.52
1:C:600:LEU:O	1:C:604:HIS:HB2	2.10	0.52
1:C:4072:THR:HB	1:C:4076:GLU:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3175:LEU:HD13	1:D:3265:CYS:O	2.08	0.52
1:D:4485:ILE:C	1:D:4487:TYR:H	2.12	0.52
1:A:2940:ILE:HG12	1:A:3013:VAL:HB	1.92	0.52
1:A:2979:ARG:NH1	1:A:3038:GLN:HB3	2.22	0.52
1:B:1685:LEU:O	1:B:1689:ILE:HG12	2.10	0.52
1:B:2666:LEU:HD21	1:B:2969:PRO:HB2	1.92	0.52
1:C:2703:PRO:HG2	1:C:2854:LYS:HB2	1.91	0.52
1:C:2929:LEU:O	1:C:2933:VAL:HG23	2.10	0.52
1:C:2940:ILE:HG12	1:C:3013:VAL:HB	1.91	0.52
1:C:4631:ASP:HA	1:C:4634:VAL:HG12	1.90	0.52
1:D:2914:THR:HG22	1:D:2916:SER:H	1.75	0.52
1:D:3046:MET:HA	1:D:3054:LYS:HE3	1.92	0.52
1:D:3266:THR:O	1:D:3268:LEU:N	2.36	0.52
1:D:3804:ASP:H	1:D:3829:VAL:HG13	1.75	0.52
1:A:2914:THR:HG22	1:A:2916:SER:H	1.75	0.52
1:A:4053:GLU:O	1:A:4056:LYS:HG3	2.09	0.52
2:E:26:HIS:NE2	2:E:41:ARG:HG2	2.25	0.52
2:H:26:HIS:NE2	2:H:41:ARG:HG2	2.25	0.52
1:B:624:ALA:HB2	1:B:1667:LEU:HD12	1.91	0.52
1:B:1091:GLU:HB3	1:B:1094:TYR:HD2	1.75	0.52
1:B:3156:GLY:O	1:B:3159:LEU:HD12	2.10	0.52
1:B:3729:ALA:HA	1:B:3732:HIS:CD2	2.44	0.52
1:C:2666:LEU:HD21	1:C:2969:PRO:HB2	1.92	0.52
1:C:3041:ASP:HA	1:C:3117:PHE:HE2	1.75	0.52
1:D:1106:GLU:OE2	1:D:1214:ARG:NH1	2.43	0.52
1:D:3187:LYS:HB3	1:D:3191:GLU:HB2	1.92	0.52
1:B:1503:ASN:OD1	1:B:1504:GLY:N	2.43	0.52
1:B:3041:ASP:HA	1:B:3117:PHE:HE2	1.75	0.52
1:C:2717:LEU:HD13	1:C:2791:ARG:HH21	1.74	0.52
1:A:1031:ARG:HD2	1:A:1042:THR:HG21	1.91	0.52
1:A:1910:LEU:HB2	1:A:2087:LEU:HD21	1.92	0.52
1:A:3156:GLY:O	1:A:3159:LEU:HD12	2.09	0.52
1:A:4831:ILE:HG13	1:A:4843:ARG:NH2	2.23	0.52
1:B:1029:ASN:HB3	1:B:1032:LEU:HD13	1.92	0.52
1:B:2717:LEU:HD13	1:B:2791:ARG:HH21	1.74	0.52
1:B:4172:PHE:CZ	1:B:4189:PHE:HA	2.45	0.52
1:C:1106:GLU:OE2	1:C:1214:ARG:NH1	2.43	0.52
1:C:1503:ASN:OD1	1:C:1504:GLY:N	2.43	0.52
1:C:1910:LEU:HB2	1:C:2087:LEU:HD21	1.92	0.52
1:C:3046:MET:HA	1:C:3054:LYS:HE3	1.92	0.52
1:C:3187:LYS:HB3	1:C:3191:GLU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3804:ASP:H	1:C:3829:VAL:HG13	1.75	0.52
1:D:3041:ASP:HA	1:D:3117:PHE:HE2	1.75	0.52
2:G:26:HIS:NE2	2:G:41:ARG:HG2	2.25	0.52
1:B:679:VAL:HG23	1:B:800:VAL:HG12	1.91	0.52
1:B:881:ILE:HD11	1:B:1060:TYR:HB3	1.92	0.52
1:B:4053:GLU:O	1:B:4056:LYS:HG3	2.09	0.52
1:C:3156:GLY:HA2	1:C:3159:LEU:CD1	2.40	0.52
1:C:3156:GLY:O	1:C:3159:LEU:HD12	2.10	0.52
1:D:114:LEU:HB2	1:D:117:HIS:CD2	2.45	0.52
1:D:1685:LEU:O	1:D:1689:ILE:HG12	2.10	0.52
1:D:2666:LEU:HD21	1:D:2969:PRO:HB2	1.92	0.52
1:D:2929:LEU:O	1:D:2933:VAL:HG23	2.10	0.52
1:A:808:HIS:CE1	1:A:832:LEU:HB2	2.45	0.52
1:A:1494:MET:HE3	1:A:1505:LEU:HD12	1.92	0.52
1:A:3156:GLY:HA2	1:A:3159:LEU:CD1	2.40	0.52
1:A:3187:LYS:HB3	1:A:3191:GLU:HB2	1.92	0.52
1:B:600:LEU:O	1:B:604:HIS:HB2	2.10	0.52
1:C:452:VAL:HG12	1:C:529:ILE:HD12	1.92	0.52
1:C:1898:LEU:HD23	1:C:1902:VAL:HG12	1.91	0.52
1:D:4631:ASP:HA	1:D:4634:VAL:HG12	1.90	0.52
1:B:808:HIS:CE1	1:B:832:LEU:HB2	2.45	0.51
1:B:2703:PRO:HG2	1:B:2854:LYS:HB2	1.90	0.51
1:B:4092:LYS:HA	1:B:4129:PHE:CZ	2.45	0.51
1:B:4831:ILE:HG13	1:B:4843:ARG:NH2	2.23	0.51
1:C:1685:LEU:O	1:C:1689:ILE:HG12	2.09	0.51
1:A:624:ALA:HB2	1:A:1667:LEU:HD12	1.91	0.51
1:A:1898:LEU:HD23	1:A:1902:VAL:HG12	1.91	0.51
1:A:2666:LEU:HD21	1:A:2969:PRO:HB2	1.92	0.51
1:B:2940:ILE:HG12	1:B:3013:VAL:HB	1.91	0.51
1:C:14:LEU:HD23	1:C:69:LEU:HD11	1.91	0.51
1:C:1894:LEU:HD13	1:C:2065:THR:HG21	1.92	0.51
1:C:2702:ASN:HA	1:C:2857:LYS:HE3	1.92	0.51
1:D:1898:LEU:HD23	1:D:1902:VAL:HG12	1.91	0.51
1:D:2666:LEU:HB3	1:D:2667:PRO:HD3	1.92	0.51
1:A:600:LEU:O	1:A:604:HIS:HB2	2.10	0.51
1:A:3041:ASP:HA	1:A:3117:PHE:HE2	1.75	0.51
1:C:2666:LEU:HB3	1:C:2667:PRO:HD3	1.92	0.51
1:C:3018:ARG:HG2	1:C:3021:LEU:HD23	1.93	0.51
1:C:3250:TRP:O	1:C:3254:PRO:HD3	2.11	0.51
1:D:2979:ARG:NH1	1:D:3038:GLN:HB3	2.22	0.51
1:D:4172:PHE:CZ	1:D:4189:PHE:HA	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:452:VAL:HG12	1:A:529:ILE:HD12	1.92	0.51
1:A:674:TYR:CE1	1:A:756:SER:HB3	2.45	0.51
1:A:4959:ARG:O	1:A:4963:GLU:HG2	2.11	0.51
1:B:1894:LEU:HD13	1:B:2065:THR:HG21	1.92	0.51
1:B:3804:ASP:H	1:B:3829:VAL:HG13	1.75	0.51
1:D:679:VAL:HG23	1:D:800:VAL:HG12	1.91	0.51
1:D:1425:THR:HG22	1:D:1563:VAL:HG13	1.92	0.51
1:D:3156:GLY:O	1:D:3159:LEU:HD12	2.09	0.51
1:A:21:VAL:HG12	1:A:66:THR:HA	1.92	0.51
1:A:881:ILE:HD11	1:A:1060:TYR:HB3	1.92	0.51
1:A:4092:LYS:HA	1:A:4129:PHE:CZ	2.46	0.51
1:B:2914:THR:HG22	1:B:2916:SER:H	1.75	0.51
1:B:2929:LEU:O	1:B:2933:VAL:HG23	2.10	0.51
1:B:4559:TYR:OH	1:C:4790:ARG:NH2	2.44	0.51
1:C:114:LEU:HB2	1:C:117:HIS:CD2	2.45	0.51
1:C:624:ALA:HB2	1:C:1667:LEU:HD12	1.91	0.51
1:C:1029:ASN:HB3	1:C:1032:LEU:HD13	1.92	0.51
1:C:2914:THR:HG22	1:C:2916:SER:H	1.75	0.51
1:D:881:ILE:HD11	1:D:1060:TYR:HB3	1.92	0.51
1:D:2681:MET:HG2	1:D:2682:GLU:N	2.26	0.51
1:D:4625:ASP:O	1:D:4628:GLY:N	2.44	0.51
1:D:4648:PHE:HA	1:D:4651:ARG:HH11	1.76	0.51
1:A:1196:ASP:OD1	1:A:1196:ASP:N	2.44	0.51
1:A:1635:GLU:OE1	1:A:1637:ARG:NH1	2.44	0.51
1:A:4648:PHE:HA	1:A:4651:ARG:HH11	1.76	0.51
1:A:4837:ASP:OD1	1:A:4838:GLU:N	2.44	0.51
1:B:674:TYR:CE1	1:B:756:SER:HB3	2.45	0.51
1:B:1196:ASP:N	1:B:1196:ASP:OD1	2.44	0.51
1:B:1914:CYS:SG	1:B:2091:GLN:NE2	2.76	0.51
1:B:2396:ILE:HG13	1:B:2468:MET:HE1	1.93	0.51
1:B:3018:ARG:HG2	1:B:3021:LEU:HD23	1.93	0.51
1:C:808:HIS:CE1	1:C:832:LEU:HB2	2.45	0.51
1:C:1635:GLU:OE1	1:C:1637:ARG:NH1	2.44	0.51
1:C:4092:LYS:HG2	1:C:4129:PHE:HE1	1.76	0.51
1:D:674:TYR:CE1	1:D:756:SER:HB3	2.46	0.51
1:D:1031:ARG:HD2	1:D:1042:THR:HG21	1.91	0.51
1:A:2590:ARG:HA	1:A:2640:LEU:HD11	1.93	0.51
1:A:4524:THR:HB	1:A:4555:ILE:HD11	1.93	0.51
1:C:674:TYR:CE1	1:C:756:SER:HB3	2.46	0.51
1:D:14:LEU:HD23	1:D:69:LEU:HD11	1.91	0.51
1:D:624:ALA:HB2	1:D:1667:LEU:HD12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3250:TRP:O	1:D:3254:PRO:HD3	2.11	0.51
1:D:4959:ARG:O	1:D:4963:GLU:HG2	2.11	0.51
1:A:1029:ASN:HB3	1:A:1032:LEU:HD13	1.92	0.51
1:A:1091:GLU:HB3	1:A:1094:TYR:HD2	1.75	0.51
1:A:3182:SER:HB3	1:A:3185:ASN:HB2	1.93	0.51
1:A:4634:VAL:HB	1:A:4708:TRP:CG	2.46	0.51
1:B:21:VAL:HG12	1:B:66:THR:HA	1.93	0.51
1:B:996:VAL:HG13	1:B:1050:LEU:HB3	1.93	0.51
1:B:2702:ASN:HA	1:B:2857:LYS:HE3	1.92	0.51
1:B:4625:ASP:O	1:B:4628:GLY:N	2.44	0.51
1:B:4837:ASP:OD1	1:B:4838:GLU:N	2.44	0.51
1:C:1091:GLU:HB3	1:C:1094:TYR:HD2	1.75	0.51
1:C:4648:PHE:HA	1:C:4651:ARG:HH11	1.76	0.51
1:D:452:VAL:HG12	1:D:529:ILE:HD12	1.92	0.51
1:D:3156:GLY:HA2	1:D:3159:LEU:CD1	2.40	0.51
1:A:1503:ASN:OD1	1:A:1504:GLY:N	2.43	0.51
1:A:3250:TRP:O	1:A:3254:PRO:HD3	2.11	0.51
2:F:45:LYS:NZ	1:B:1781:GLU:OE1	2.44	0.51
1:B:1084:ARG:NH2	1:B:1127:GLU:OE2	2.43	0.51
1:B:2721:ILE:HG23	1:B:2775:ILE:HG21	1.93	0.51
1:B:4634:VAL:HB	1:B:4708:TRP:CG	2.46	0.51
1:C:679:VAL:HG23	1:C:800:VAL:HG12	1.91	0.51
1:C:4092:LYS:HA	1:C:4129:PHE:CZ	2.45	0.51
1:D:1503:ASN:OD1	1:D:1504:GLY:N	2.43	0.51
1:D:4634:VAL:HB	1:D:4708:TRP:CG	2.46	0.51
1:A:1425:THR:HG22	1:A:1563:VAL:HG13	1.92	0.51
1:A:2721:ILE:HG23	1:A:2775:ILE:HG21	1.93	0.51
1:A:3046:MET:HA	1:A:3054:LYS:HE3	1.92	0.51
1:A:4172:PHE:CZ	1:A:4189:PHE:HA	2.45	0.51
4:A:5005:ATP:O2G	4:A:5005:ATP:O2'	2.29	0.51
1:B:114:LEU:HB2	1:B:117:HIS:CD2	2.45	0.51
1:B:1031:ARG:HD2	1:B:1042:THR:HG21	1.91	0.51
1:B:2590:ARG:HA	1:B:2640:LEU:HD11	1.93	0.51
1:B:3046:MET:HA	1:B:3054:LYS:HE3	1.92	0.51
1:B:3187:LYS:HB3	1:B:3191:GLU:HB2	1.92	0.51
1:B:4959:ARG:O	1:B:4963:GLU:HG2	2.11	0.51
1:C:4625:ASP:O	1:C:4628:GLY:N	2.44	0.51
1:D:1910:LEU:HB2	1:D:2087:LEU:HD21	1.92	0.51
1:D:4609:LYS:HB3	1:D:4615:LEU:HD22	1.93	0.51
1:A:2929:LEU:O	1:A:2933:VAL:HG23	2.10	0.50
1:B:884:LYS:HB3	1:B:1060:TYR:CZ	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3924:ILE:HG21	1:C:3935:LEU:HD12	1.93	0.50
1:C:4959:ARG:O	1:C:4963:GLU:HG2	2.11	0.50
1:D:877:HIS:O	1:D:880:ARG:HD3	2.12	0.50
1:D:1029:ASN:HB3	1:D:1032:LEU:HD13	1.92	0.50
1:D:1708:ASP:HA	1:D:1712:SER:HB2	1.94	0.50
1:A:3018:ARG:HG2	1:A:3021:LEU:HD23	1.93	0.50
1:B:877:HIS:O	1:B:880:ARG:HD3	2.12	0.50
1:B:2681:MET:HG2	1:B:2682:GLU:N	2.26	0.50
1:B:4610:LEU:HD11	1:B:4635:ILE:HD12	1.94	0.50
1:C:3766:LEU:HB3	1:C:3845:LEU:HB3	1.94	0.50
1:C:4172:PHE:CZ	1:C:4189:PHE:HA	2.45	0.50
1:C:4634:VAL:HB	1:C:4708:TRP:CG	2.46	0.50
1:D:21:VAL:HG12	1:D:66:THR:HA	1.92	0.50
1:D:3018:ARG:HG2	1:D:3021:LEU:HD23	1.93	0.50
1:D:4046:ARG:HD3	1:D:4050:LYS:HE3	1.94	0.50
1:D:4524:THR:HB	1:D:4555:ILE:HD11	1.93	0.50
4:D:5005:ATP:O2G	4:D:5005:ATP:O2'	2.30	0.50
1:A:307:SER:HB3	1:A:327:THR:HG22	1.94	0.50
1:A:2666:LEU:HB3	1:A:2667:PRO:HD3	1.92	0.50
1:A:3098:THR:HG21	1:A:3150:ARG:HH12	1.77	0.50
1:B:3156:GLY:HA2	1:B:3159:LEU:CD1	2.40	0.50
1:C:884:LYS:HB3	1:C:1060:TYR:CZ	2.46	0.50
1:C:1031:ARG:HD2	1:C:1042:THR:HG21	1.92	0.50
1:C:4046:ARG:HD3	1:C:4050:LYS:HE3	1.94	0.50
1:C:4837:ASP:OD1	1:C:4838:GLU:N	2.44	0.50
1:D:996:VAL:HG13	1:D:1050:LEU:HB3	1.93	0.50
1:D:1635:GLU:OE1	1:D:1637:ARG:NH1	2.44	0.50
1:D:1894:LEU:HD13	1:D:2065:THR:HG21	1.91	0.50
1:D:2141:LEU:HD23	1:D:2144:ARG:HH12	1.77	0.50
1:D:2721:ILE:HG23	1:D:2775:ILE:HG21	1.93	0.50
1:D:3310:VAL:HG13	1:D:3314:LEU:HG	1.94	0.50
1:A:996:VAL:HG13	1:A:1050:LEU:HB3	1.93	0.50
1:A:3074:ASN:HA	1:A:3079:GLN:HB2	1.94	0.50
1:A:3273:MET:HA	1:A:3276:LEU:HG	1.94	0.50
1:A:3608:LEU:HD12	1:A:3611:LEU:HD12	1.94	0.50
1:A:4625:ASP:O	1:A:4628:GLY:N	2.44	0.50
1:A:4778:VAL:O	1:A:4782:THR:HG23	2.12	0.50
1:B:934:GLN:HA	1:B:937:LEU:CD2	2.39	0.50
1:B:3250:TRP:O	1:B:3254:PRO:HD3	2.11	0.50
1:B:4609:LYS:HB3	1:B:4615:LEU:HD22	1.93	0.50
1:C:1425:THR:HG22	1:C:1563:VAL:HG13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2681:MET:HG2	1:C:2682:GLU:N	2.26	0.50
1:C:4610:LEU:HD11	1:C:4635:ILE:HD12	1.94	0.50
1:D:280:LEU:HD12	1:D:294:PRO:HB2	1.94	0.50
1:D:808:HIS:CE1	1:D:832:LEU:HB2	2.46	0.50
1:D:3246:MET:HE3	1:D:3306:ILE:HG12	1.92	0.50
1:A:1084:ARG:NH2	1:A:1127:GLU:OE2	2.43	0.50
1:A:1708:ASP:HA	1:A:1712:SER:HB2	1.94	0.50
1:A:4610:LEU:HD11	1:A:4635:ILE:HD12	1.94	0.50
1:B:1299:ILE:HG12	1:B:1546:GLN:HB2	1.94	0.50
1:B:2930:ILE:HG21	1:B:3003:MET:HG3	1.94	0.50
1:C:280:LEU:HD12	1:C:294:PRO:HB2	1.94	0.50
1:C:881:ILE:HD11	1:C:1060:TYR:HB3	1.92	0.50
1:C:2141:LEU:HD23	1:C:2144:ARG:HH12	1.76	0.50
1:C:2930:ILE:HG21	1:C:3003:MET:HG3	1.94	0.50
1:C:3074:ASN:HA	1:C:3079:GLN:HB2	1.94	0.50
1:C:4045:LYS:H	1:C:4076:GLU:HB3	1.77	0.50
1:C:4522:VAL:HG23	1:D:4786:PHE:CZ	2.45	0.50
1:D:4610:LEU:HD11	1:D:4635:ILE:HD12	1.94	0.50
1:B:280:LEU:HD12	1:B:294:PRO:HB2	1.94	0.50
1:B:3766:LEU:HB3	1:B:3845:LEU:HB3	1.94	0.50
1:B:4036:ASP:HB2	1:B:4041:GLY:HA2	1.93	0.50
1:B:4778:VAL:O	1:B:4782:THR:HG23	2.12	0.50
1:C:2556:SER:HB2	1:C:2569:ILE:HG21	1.94	0.50
4:C:5005:ATP:O2G	4:C:5005:ATP:O2'	2.30	0.50
1:D:2590:ARG:HA	1:D:2640:LEU:HD11	1.93	0.50
1:D:4045:LYS:H	1:D:4076:GLU:HB3	1.77	0.50
1:D:4092:LYS:HG2	1:D:4129:PHE:HE1	1.76	0.50
1:A:280:LEU:HD12	1:A:294:PRO:HB2	1.94	0.50
1:A:3310:VAL:HG13	1:A:3314:LEU:HG	1.94	0.50
1:B:1425:THR:HG22	1:B:1563:VAL:HG13	1.92	0.50
1:B:1708:ASP:HA	1:B:1712:SER:HB2	1.93	0.50
1:B:2257:LEU:O	1:B:2258:ARG:NH1	2.45	0.50
1:B:3074:ASN:HA	1:B:3079:GLN:HB2	1.94	0.50
1:C:877:HIS:O	1:C:880:ARG:HD3	2.12	0.50
1:C:2721:ILE:HG23	1:C:2775:ILE:HG21	1.93	0.50
1:D:882:ARG:NH1	1:D:886:ALA:HB2	2.27	0.50
1:D:4036:ASP:HB2	1:D:4041:GLY:HA2	1.93	0.50
1:A:884:LYS:HB3	1:A:1060:TYR:CZ	2.46	0.50
1:A:2849:HIS:CD2	1:A:2877:LEU:HD11	2.47	0.50
1:B:1267:HIS:O	1:B:1288:LYS:N	2.39	0.50
1:B:2556:SER:HB2	1:B:2569:ILE:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2666:LEU:HB3	1:B:2667:PRO:HD3	1.92	0.50
1:B:2785:TRP:CZ3	1:B:2843:MET:HG2	2.47	0.50
1:B:4648:PHE:HA	1:B:4651:ARG:HH11	1.76	0.50
1:B:4753:LEU:HD22	1:C:4773:LEU:HD22	1.93	0.50
1:C:21:VAL:HG12	1:C:66:THR:HA	1.92	0.50
1:C:996:VAL:HG13	1:C:1050:LEU:HB3	1.93	0.50
1:C:2785:TRP:CZ3	1:C:2843:MET:HG2	2.47	0.50
1:D:1091:GLU:HB3	1:D:1094:TYR:HD2	1.75	0.50
1:D:2478:ILE:HD12	1:D:2484:LEU:HD13	1.94	0.50
1:D:2930:ILE:HG21	1:D:3003:MET:HG3	1.94	0.50
1:D:3182:SER:HB3	1:D:3185:ASN:HB2	1.93	0.50
1:D:3924:ILE:HG21	1:D:3935:LEU:HD12	1.93	0.50
1:D:4837:ASP:OD1	1:D:4838:GLU:N	2.44	0.50
1:A:966:LEU:HD13	1:A:970:TYR:HB3	1.94	0.50
1:A:2141:LEU:HD23	1:A:2144:ARG:HH12	1.76	0.50
1:A:2541:HIS:HD2	1:A:2544:LEU:HD13	1.77	0.50
1:A:2914:THR:O	1:A:2916:SER:N	2.45	0.50
1:A:4046:ARG:HD3	1:A:4050:LYS:HE3	1.94	0.50
1:B:306:LEU:HD21	1:B:314:LEU:HD22	1.94	0.50
1:B:3011:LEU:HB3	1:B:3060:PHE:CE1	2.47	0.50
1:B:3310:VAL:HG13	1:B:3314:LEU:HG	1.94	0.50
1:C:2914:THR:O	1:C:2916:SER:N	2.45	0.50
1:C:4036:ASP:HB2	1:C:4041:GLY:HA2	1.93	0.50
1:C:4524:THR:HB	1:C:4555:ILE:HD11	1.93	0.50
1:D:884:LYS:HB3	1:D:1060:TYR:CZ	2.47	0.50
1:D:2556:SER:HB2	1:D:2569:ILE:HG21	1.94	0.50
1:D:3098:THR:HG21	1:D:3150:ARG:HH12	1.77	0.50
1:A:1299:ILE:HG12	1:A:1546:GLN:HB2	1.94	0.49
1:A:1494:MET:HB3	1:A:1505:LEU:HD11	1.94	0.49
1:A:2884:LYS:O	1:A:2887:GLU:HG3	2.12	0.49
1:A:2984:SER:HA	1:A:2990:LEU:HB2	1.94	0.49
1:A:3011:LEU:HB3	1:A:3060:PHE:CE1	2.47	0.49
1:A:4045:LYS:H	1:A:4076:GLU:HB3	1.77	0.49
1:B:307:SER:HB3	1:B:327:THR:HG22	1.94	0.49
1:B:1494:MET:HB3	1:B:1505:LEU:HD11	1.94	0.49
1:B:2759:PRO:O	1:B:2763:LEU:HG	2.12	0.49
1:B:2984:SER:HA	1:B:2990:LEU:HB2	1.94	0.49
1:B:3924:ILE:HG21	1:B:3935:LEU:HD12	1.93	0.49
1:B:3996:GLY:O	1:B:3999:MET:HB2	2.12	0.49
1:B:4753:LEU:HD21	1:C:4769:LEU:O	2.12	0.49
4:B:5005:ATP:O2G	4:B:5005:ATP:O2'	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2718:GLU:HA	1:C:2721:ILE:HG13	1.94	0.49
1:C:2939:TYR:CZ	1:C:2943:PHE:HE2	2.30	0.49
1:C:3156:GLY:HA2	1:C:3159:LEU:HD11	1.94	0.49
1:D:307:SER:HB3	1:D:327:THR:HG22	1.94	0.49
1:D:2849:HIS:CD2	1:D:2877:LEU:HD11	2.47	0.49
1:A:969:ASN:OD1	1:A:970:TYR:N	2.45	0.49
1:A:3122:ILE:HA	1:A:3126:VAL:HG13	1.95	0.49
1:A:3803:LEU:HD22	1:A:3888:PHE:HE2	1.78	0.49
1:A:4036:ASP:HB2	1:A:4041:GLY:HA2	1.93	0.49
1:A:4270:LYS:O	1:A:4274:MET:HA	2.12	0.49
1:B:2914:THR:O	1:B:2916:SER:N	2.45	0.49
1:B:3122:ILE:HA	1:B:3126:VAL:HG13	1.94	0.49
1:C:3182:SER:HB3	1:C:3185:ASN:HB2	1.93	0.49
1:A:2982:PHE:HA	1:A:2996:ALA:HB2	1.95	0.49
1:A:3627:SER:O	1:A:3631:THR:OG1	2.23	0.49
1:A:3766:LEU:HB3	1:A:3845:LEU:HB3	1.94	0.49
1:A:3996:GLY:O	1:A:3999:MET:HB2	2.13	0.49
1:A:4021:LEU:HD21	1:A:4092:LYS:HB2	1.95	0.49
1:A:4196:THR:HB	1:A:4919:LEU:HD11	1.94	0.49
1:B:966:LEU:HD13	1:B:970:TYR:HB3	1.95	0.49
1:B:2141:LEU:HD23	1:B:2144:ARG:HH12	1.77	0.49
1:B:2884:LYS:O	1:B:2887:GLU:HG3	2.12	0.49
1:B:4045:LYS:H	1:B:4076:GLU:HB3	1.77	0.49
1:B:4524:THR:HB	1:B:4555:ILE:HD11	1.93	0.49
1:C:306:LEU:HD21	1:C:314:LEU:HD22	1.94	0.49
1:C:1494:MET:HB3	1:C:1505:LEU:HD11	1.94	0.49
1:C:3098:THR:HG21	1:C:3150:ARG:HH12	1.77	0.49
1:C:3193:ALA:HA	1:C:3197:LEU:HD22	1.94	0.49
1:D:1196:ASP:OD1	1:D:1196:ASP:N	2.44	0.49
1:D:2541:HIS:HD2	1:D:2544:LEU:HD13	1.77	0.49
1:D:2785:TRP:CZ3	1:D:2843:MET:HG2	2.47	0.49
1:D:2868:HIS:CE1	1:D:2870:LEU:HB2	2.48	0.49
1:D:4196:THR:HB	1:D:4919:LEU:HD11	1.94	0.49
1:D:4270:LYS:O	1:D:4274:MET:HA	2.12	0.49
1:D:4778:VAL:O	1:D:4782:THR:HG23	2.12	0.49
1:A:114:LEU:HB2	1:A:117:HIS:CD2	2.45	0.49
1:A:877:HIS:O	1:A:880:ARG:HD3	2.12	0.49
1:A:2257:LEU:O	1:A:2258:ARG:NH1	2.45	0.49
1:A:2478:ILE:HD12	1:A:2484:LEU:HD13	1.94	0.49
1:A:2868:HIS:CE1	1:A:2870:LEU:HB2	2.48	0.49
1:A:3156:GLY:HA2	1:A:3159:LEU:HD11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3924:ILE:HG21	1:A:3935:LEU:HD12	1.93	0.49
1:A:4609:LYS:HB3	1:A:4615:LEU:HD22	1.93	0.49
1:B:2849:HIS:CD2	1:B:2877:LEU:HD11	2.47	0.49
1:B:2997:SER:O	1:B:3000:GLU:HG2	2.13	0.49
1:B:3803:LEU:HD22	1:B:3888:PHE:HE2	1.77	0.49
1:C:1084:ARG:NH2	1:C:1127:GLU:OE2	2.43	0.49
1:C:2590:ARG:HA	1:C:2640:LEU:HD11	1.93	0.49
1:C:2884:LYS:O	1:C:2887:GLU:HG3	2.12	0.49
1:C:3011:LEU:HB3	1:C:3060:PHE:CE1	2.47	0.49
1:C:3273:MET:HA	1:C:3276:LEU:HG	1.93	0.49
1:C:4041:GLY:HA3	1:C:4080:TYR:CE1	2.47	0.49
1:C:4630:TRP:CZ2	1:C:4711:GLY:HA3	2.47	0.49
1:D:2257:LEU:O	1:D:2258:ARG:NH1	2.45	0.49
1:D:3011:LEU:HB3	1:D:3060:PHE:CE1	2.47	0.49
1:D:4563:GLU:CD	1:D:4566:GLY:H	2.16	0.49
1:A:692:HIS:O	1:A:794:PHE:HA	2.13	0.49
1:A:1218:GLY:HA3	1:A:1238:PRO:HB3	1.94	0.49
1:A:4041:GLY:HA3	1:A:4080:TYR:CE1	2.47	0.49
1:A:4092:LYS:HG2	1:A:4129:PHE:HE1	1.76	0.49
1:A:4272:LYS:HG2	1:B:4480:PHE:HZ	1.77	0.49
1:B:1218:GLY:HA3	1:B:1238:PRO:HB3	1.94	0.49
1:B:4046:ARG:HD3	1:B:4050:LYS:HE3	1.94	0.49
1:C:1299:ILE:HG12	1:C:1546:GLN:HB2	1.94	0.49
1:C:1708:ASP:HA	1:C:1712:SER:HB2	1.93	0.49
1:C:4778:VAL:O	1:C:4782:THR:HG23	2.12	0.49
1:D:1494:MET:HB3	1:D:1505:LEU:HD11	1.94	0.49
1:D:2841:ALA:HB2	1:D:2893:LEU:HD12	1.95	0.49
1:D:2939:TYR:CZ	1:D:2943:PHE:HE2	2.30	0.49
1:D:4136:ILE:HG13	1:D:4148:VAL:HB	1.95	0.49
1:A:2997:SER:O	1:A:3000:GLU:HG2	2.13	0.49
1:B:869:THR:HB	1:B:941:LYS:HB3	1.95	0.49
1:B:2478:ILE:HD12	1:B:2484:LEU:HD13	1.94	0.49
1:B:4041:GLY:HA3	1:B:4080:TYR:CE1	2.47	0.49
1:C:2849:HIS:CD2	1:C:2877:LEU:HD11	2.47	0.49
1:C:3996:GLY:O	1:C:3999:MET:HB2	2.13	0.49
1:C:4609:LYS:HB3	1:C:4615:LEU:HD22	1.93	0.49
1:D:2396:ILE:HG13	1:D:2468:MET:HE1	1.93	0.49
1:D:4021:LEU:HD21	1:D:4092:LYS:HB2	1.95	0.49
1:D:4041:GLY:HA3	1:D:4080:TYR:CE1	2.47	0.49
1:D:4092:LYS:HA	1:D:4129:PHE:CZ	2.46	0.49
1:D:4623:GLU:H	1:D:4629:GLN:NE2	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4630:TRP:CZ2	1:D:4711:GLY:HA3	2.47	0.49
1:A:640:ARG:NH2	2:E:91:VAL:HG23	2.28	0.49
1:A:2841:ALA:HB2	1:A:2893:LEU:HD12	1.95	0.49
1:A:3094:ILE:O	1:A:3097:THR:OG1	2.28	0.49
1:B:2868:HIS:CE1	1:B:2870:LEU:HB2	2.48	0.49
1:B:3188:SER:HA	1:B:3192:ARG:HD2	1.94	0.49
1:B:3608:LEU:HD12	1:B:3611:LEU:HD12	1.94	0.49
1:C:692:HIS:O	1:C:794:PHE:HA	2.13	0.49
1:C:966:LEU:HD13	1:C:970:TYR:HB3	1.95	0.49
1:C:1196:ASP:N	1:C:1196:ASP:OD1	2.44	0.49
1:C:3246:MET:HE3	1:C:3306:ILE:HG12	1.93	0.49
1:C:3608:LEU:HD12	1:C:3611:LEU:HD12	1.94	0.49
1:C:4136:ILE:HG13	1:C:4148:VAL:HB	1.94	0.49
1:D:306:LEU:HD21	1:D:314:LEU:HD22	1.95	0.49
1:D:966:LEU:HD13	1:D:970:TYR:HB3	1.95	0.49
1:D:2854:LYS:HG3	1:D:2858:MET:HE1	1.94	0.49
1:D:3074:ASN:HA	1:D:3079:GLN:HB2	1.94	0.49
1:D:3766:LEU:HB3	1:D:3845:LEU:HB3	1.93	0.49
1:D:3803:LEU:HD22	1:D:3888:PHE:HE2	1.78	0.49
1:A:882:ARG:NH1	1:A:886:ALA:HB2	2.27	0.49
1:A:4630:TRP:CZ2	1:A:4711:GLY:HA3	2.47	0.49
1:C:882:ARG:NH1	1:C:886:ALA:HB2	2.27	0.49
1:C:3167:PRO:HA	1:C:3248:ARG:NH1	2.26	0.49
1:C:4270:LYS:O	1:C:4274:MET:HA	2.12	0.49
1:C:4563:GLU:OE2	1:C:4566:GLY:N	2.46	0.49
1:D:969:ASN:OD1	1:D:970:TYR:N	2.45	0.49
1:D:2718:GLU:HA	1:D:2721:ILE:HG13	1.94	0.49
1:D:2997:SER:O	1:D:3000:GLU:HG2	2.13	0.49
1:A:2556:SER:HB2	1:A:2569:ILE:HG21	1.94	0.49
1:A:2681:MET:HG2	1:A:2682:GLU:N	2.26	0.49
1:A:2718:GLU:HA	1:A:2721:ILE:HG13	1.94	0.49
1:A:4279:MET:HE1	1:B:4484:ILE:O	2.12	0.49
1:B:1220:ASP:O	1:B:1223:THR:OG1	2.28	0.49
1:B:4270:LYS:O	1:B:4274:MET:HA	2.12	0.49
1:C:969:ASN:OD1	1:C:970:TYR:N	2.45	0.49
1:C:3122:ILE:HA	1:C:3126:VAL:HG13	1.95	0.49
1:C:4512:ALA:O	1:C:4516:ILE:HG12	2.13	0.49
1:D:869:THR:HB	1:D:941:LYS:HB3	1.95	0.49
1:D:1084:ARG:NH2	1:D:1127:GLU:OE2	2.43	0.49
1:D:2884:LYS:O	1:D:2887:GLU:HG3	2.12	0.49
1:D:2914:THR:O	1:D:2916:SER:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3094:ILE:O	1:D:3097:THR:OG1	2.28	0.49
1:A:869:THR:HB	1:A:941:LYS:HB3	1.95	0.49
1:A:2759:PRO:O	1:A:2763:LEU:HG	2.12	0.49
1:A:2930:ILE:HG21	1:A:3003:MET:HG3	1.94	0.49
1:B:2541:HIS:HD2	1:B:2544:LEU:HD13	1.77	0.49
1:B:3098:THR:HG21	1:B:3150:ARG:HH12	1.77	0.49
1:B:4512:ALA:O	1:B:4516:ILE:HG12	2.13	0.49
1:B:4623:GLU:H	1:B:4629:GLN:NE2	2.10	0.49
1:B:4630:TRP:CZ2	1:B:4711:GLY:HA3	2.47	0.49
1:C:869:THR:HB	1:C:941:LYS:HB3	1.95	0.49
1:C:4563:GLU:CD	1:C:4566:GLY:H	2.16	0.49
1:D:2354:ALA:HB2	1:D:2385:GLY:HA3	1.95	0.49
1:D:2546:ASP:OD2	1:D:2587:HIS:ND1	2.46	0.49
1:D:3285:TYR:OH	1:D:3318:HIS:O	2.17	0.49
1:D:3996:GLY:O	1:D:3999:MET:HB2	2.13	0.49
1:D:4512:ALA:O	1:D:4516:ILE:HG12	2.13	0.49
1:A:306:LEU:HD21	1:A:314:LEU:HD22	1.95	0.48
1:A:2785:TRP:CZ3	1:A:2843:MET:HG2	2.47	0.48
1:A:3137:LEU:O	1:A:3140:LEU:HD12	2.13	0.48
1:A:3193:ALA:HA	1:A:3197:LEU:HD22	1.94	0.48
1:B:3011:LEU:HB3	1:B:3060:PHE:CD1	2.48	0.48
1:B:3156:GLY:HA2	1:B:3159:LEU:HD11	1.94	0.48
1:B:3182:SER:HB3	1:B:3185:ASN:HB2	1.93	0.48
1:B:3273:MET:HA	1:B:3276:LEU:HG	1.93	0.48
1:C:2354:ALA:HB2	1:C:2385:GLY:HA3	1.95	0.48
1:D:3137:LEU:O	1:D:3140:LEU:HD12	2.13	0.48
1:D:3273:MET:HA	1:D:3276:LEU:HG	1.93	0.48
1:A:4563:GLU:CD	1:A:4566:GLY:H	2.16	0.48
1:B:882:ARG:NH1	1:B:886:ALA:HB2	2.27	0.48
1:B:1421:MET:HA	1:B:1421:MET:HE3	1.95	0.48
1:B:2150:MET:CE	1:B:2199:PHE:HA	2.43	0.48
1:B:2354:ALA:HB2	1:B:2385:GLY:HA3	1.95	0.48
1:B:2718:GLU:HA	1:B:2721:ILE:HG13	1.94	0.48
1:B:2841:ALA:HB2	1:B:2893:LEU:HD12	1.95	0.48
1:B:4021:LEU:HD21	1:B:4092:LYS:HB2	1.95	0.48
1:D:692:HIS:O	1:D:794:PHE:HA	2.13	0.48
1:D:2150:MET:CE	1:D:2199:PHE:HA	2.43	0.48
1:D:3188:SER:HA	1:D:3192:ARG:HD2	1.94	0.48
1:A:2396:ILE:HG13	1:A:2468:MET:HE1	1.96	0.48
1:A:2546:ASP:OD2	1:A:2587:HIS:ND1	2.46	0.48
1:A:2939:TYR:CZ	1:A:2943:PHE:HE2	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2988:ARG:HE	1:A:2990:LEU:HD11	1.79	0.48
1:A:3167:PRO:HA	1:A:3248:ARG:HH22	1.78	0.48
1:A:4623:GLU:H	1:A:4629:GLN:NE2	2.10	0.48
1:B:1522:ALA:N	1:B:1525:LYS:O	2.44	0.48
1:B:1782:PHE:HE2	1:B:1787:LEU:HD13	1.78	0.48
1:B:2141:LEU:HD23	1:B:2144:ARG:HH22	1.78	0.48
1:B:3193:ALA:HA	1:B:3197:LEU:HD22	1.94	0.48
1:C:307:SER:HB3	1:C:327:THR:HG22	1.94	0.48
1:C:2245:ALA:HA	1:C:2248:MET:HE3	1.95	0.48
1:C:2257:LEU:O	1:C:2258:ARG:NH1	2.45	0.48
1:C:2478:ILE:HD12	1:C:2484:LEU:HD13	1.94	0.48
1:C:2759:PRO:O	1:C:2763:LEU:HG	2.12	0.48
1:C:2841:ALA:HB2	1:C:2893:LEU:HD12	1.95	0.48
1:C:2984:SER:HA	1:C:2990:LEU:HB2	1.95	0.48
1:C:2997:SER:O	1:C:3000:GLU:HG2	2.13	0.48
1:C:3011:LEU:HB3	1:C:3060:PHE:CD1	2.48	0.48
1:C:3310:VAL:HG13	1:C:3314:LEU:HG	1.94	0.48
1:C:4914:ASN:HB3	1:C:4917:ASN:HB2	1.96	0.48
1:D:1299:ILE:HG12	1:D:1546:GLN:HB2	1.94	0.48
1:D:3075:LEU:HD11	1:D:3148:VAL:HG13	1.95	0.48
1:A:888:ASN:O	1:A:888:ASN:ND2	2.46	0.48
1:A:4914:ASN:HB3	1:A:4917:ASN:HB2	1.96	0.48
2:H:23:CYS:SG	2:H:51:ILE:HD11	2.53	0.48
1:B:692:HIS:O	1:B:794:PHE:HA	2.13	0.48
1:B:969:ASN:OD1	1:B:970:TYR:N	2.45	0.48
1:B:3167:PRO:HA	1:B:3248:ARG:HH22	1.78	0.48
1:B:4914:ASN:HB3	1:B:4917:ASN:HB2	1.96	0.48
1:C:2718:GLU:HG3	1:C:2721:ILE:HD12	1.96	0.48
1:C:4021:LEU:HD21	1:C:4092:LYS:HB2	1.95	0.48
1:D:1218:GLY:HA3	1:D:1238:PRO:HB3	1.94	0.48
1:D:2982:PHE:HA	1:D:2996:ALA:HB2	1.95	0.48
1:D:3011:LEU:HB3	1:D:3060:PHE:CD1	2.48	0.48
1:A:1251:LEU:HD11	1:A:1599:MET:HB2	1.96	0.48
1:A:2357:PRO:O	1:A:2358:SER:OG	2.28	0.48
1:A:3011:LEU:HB3	1:A:3060:PHE:CD1	2.48	0.48
1:A:4827:ILE:O	1:A:4831:ILE:HG12	2.14	0.48
2:G:23:CYS:SG	2:G:51:ILE:HD11	2.53	0.48
1:B:1719:LEU:HD13	1:B:1830:ILE:HD12	1.96	0.48
1:B:2718:GLU:HG3	1:B:2721:ILE:HD12	1.96	0.48
1:B:4519:PHE:HB2	1:B:4568:MET:HE1	1.96	0.48
1:C:1719:LEU:HD13	1:C:1830:ILE:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2546:ASP:OD2	1:C:2587:HIS:ND1	2.46	0.48
1:C:2868:HIS:CE1	1:C:2870:LEU:HB2	2.48	0.48
1:C:4196:THR:HB	1:C:4919:LEU:HD11	1.94	0.48
1:D:2718:GLU:HG3	1:D:2721:ILE:HD12	1.96	0.48
1:D:2759:PRO:O	1:D:2763:LEU:HG	2.12	0.48
1:D:2984:SER:HA	1:D:2990:LEU:HB2	1.95	0.48
1:D:3608:LEU:HD12	1:D:3611:LEU:HD12	1.94	0.48
1:A:1256:PRO:HG3	1:A:1593:HIS:NE2	2.29	0.48
1:A:3324:GLU:O	1:A:3327:LYS:HG3	2.14	0.48
1:A:4512:ALA:O	1:A:4516:ILE:HG12	2.13	0.48
1:A:4723:ALA:HB2	1:D:4294:LEU:HD21	1.95	0.48
1:B:1256:PRO:HG3	1:B:1593:HIS:NE2	2.29	0.48
1:B:2059:GLN:NE2	1:B:2091:GLN:O	2.47	0.48
1:B:2546:ASP:OD2	1:B:2587:HIS:ND1	2.46	0.48
1:C:3803:LEU:HD22	1:C:3888:PHE:CE2	2.49	0.48
1:C:4623:GLU:H	1:C:4629:GLN:NE2	2.10	0.48
1:D:77:ALA:O	1:D:81:MET:HG3	2.14	0.48
1:D:880:ARG:NH1	1:D:881:ILE:HB	2.29	0.48
1:D:1494:MET:HE3	1:D:1505:LEU:HD12	1.96	0.48
1:D:3193:ALA:HA	1:D:3197:LEU:HD22	1.94	0.48
1:D:4863:GLN:O	1:D:4867:ILE:HG12	2.14	0.48
1:A:125:TYR:CZ	1:A:417:ARG:HD3	2.49	0.48
1:A:880:ARG:NH1	1:A:881:ILE:HB	2.29	0.48
1:A:1220:ASP:O	1:A:1223:THR:OG1	2.28	0.48
1:A:1415:ASP:OD2	1:A:1559:ARG:NH2	2.41	0.48
1:A:2059:GLN:NE2	1:A:2091:GLN:O	2.47	0.48
1:A:3227:ARG:NH2	1:A:3292:GLU:HB3	2.29	0.48
1:A:4863:GLN:O	1:A:4867:ILE:HG12	2.14	0.48
1:B:965:LYS:HA	1:B:977:LYS:HZ1	1.79	0.48
1:B:1244:ASN:HD22	1:B:1801:GLU:HG3	1.79	0.48
1:B:2758:LYS:HG2	1:B:2759:PRO:HD2	1.96	0.48
1:B:3293:GLY:HA2	1:B:3295:TRP:CH2	2.49	0.48
1:B:4827:ILE:O	1:B:4831:ILE:HG12	2.14	0.48
1:B:4902:PRO:HB3	1:C:4183:LYS:HD3	1.96	0.48
1:C:77:ALA:O	1:C:81:MET:HG3	2.13	0.48
1:C:2396:ILE:HG13	1:C:2468:MET:HE1	1.95	0.48
1:C:2979:ARG:NH1	1:C:3038:GLN:HB3	2.22	0.48
1:C:3293:GLY:HA2	1:C:3295:TRP:CH2	2.49	0.48
1:C:3803:LEU:HD22	1:C:3888:PHE:HE2	1.78	0.48
1:D:3122:ILE:HA	1:D:3126:VAL:HG13	1.94	0.48
1:D:3156:GLY:HA2	1:D:3159:LEU:HD11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:730:LEU:HD11	2:E:8:ILE:HG23	1.96	0.48
1:A:2354:ALA:HB2	1:A:2385:GLY:HA3	1.95	0.48
1:A:3015:VAL:HG22	1:A:3016:ARG:H	1.79	0.48
1:A:3089:GLY:O	1:A:3092:GLN:HG3	2.14	0.48
1:A:4136:ILE:HG13	1:A:4148:VAL:HB	1.94	0.48
1:B:2176:VAL:HG22	1:B:2220:TYR:CZ	2.49	0.48
1:B:2988:ARG:HE	1:B:2990:LEU:HD11	1.78	0.48
1:B:4563:GLU:CD	1:B:4566:GLY:H	2.16	0.48
1:C:1218:GLY:HA3	1:C:1238:PRO:HB3	1.94	0.48
1:C:2927:GLN:HA	1:C:3003:MET:HE3	1.95	0.48
1:C:3075:LEU:HD11	1:C:3148:VAL:HG13	1.95	0.48
1:D:999:LEU:HD13	1:D:1050:LEU:HD21	1.96	0.48
1:D:1265:HIS:ND1	1:D:1268:ILE:HG12	2.29	0.48
1:D:2141:LEU:HD23	1:D:2144:ARG:HH22	1.79	0.48
1:D:3167:PRO:HA	1:D:3248:ARG:NH1	2.26	0.48
1:A:1421:MET:HE1	1:A:1576:LYS:HB3	1.95	0.48
1:A:2541:HIS:CD2	1:A:2544:LEU:HD13	2.49	0.48
1:A:4297:PHE:O	1:A:4299:ALA:N	2.44	0.48
1:A:4519:PHE:HB2	1:A:4568:MET:HE1	1.96	0.48
2:E:23:CYS:SG	2:E:51:ILE:HD11	2.53	0.48
1:B:1415:ASP:OD2	1:B:1559:ARG:NH2	2.41	0.48
1:B:2447:LYS:O	1:B:2447:LYS:HD2	2.14	0.48
1:B:3227:ARG:NH2	1:B:3292:GLU:HB3	2.29	0.48
1:B:3803:LEU:HD22	1:B:3888:PHE:CE2	2.49	0.48
1:B:4092:LYS:HG2	1:B:4129:PHE:HE1	1.76	0.48
1:C:125:TYR:CZ	1:C:417:ARG:HD3	2.49	0.48
1:C:880:ARG:NH1	1:C:881:ILE:HB	2.29	0.48
1:C:2176:VAL:HG22	1:C:2220:TYR:CZ	2.49	0.48
1:C:2717:LEU:O	1:C:2721:ILE:HG13	2.14	0.48
1:C:2982:PHE:HA	1:C:2996:ALA:HB2	1.95	0.48
1:C:3137:LEU:O	1:C:3140:LEU:HD12	2.13	0.48
1:C:3188:SER:HA	1:C:3192:ARG:HD2	1.94	0.48
1:C:4279:MET:CE	1:D:4488:GLN:HB2	2.43	0.48
1:A:965:LYS:HA	1:A:977:LYS:HZ1	1.79	0.48
1:A:3188:SER:HA	1:A:3192:ARG:HD2	1.94	0.48
1:B:2127:ARG:HA	1:B:2130:LEU:HD12	1.96	0.48
1:B:2939:TYR:CZ	1:B:2943:PHE:HE2	2.30	0.48
1:B:3008:PHE:HE2	1:B:3057:LEU:HD13	1.79	0.48
1:B:3137:LEU:O	1:B:3140:LEU:HD12	2.13	0.48
1:B:3324:GLU:O	1:B:3327:LYS:HG3	2.14	0.48
1:B:4863:GLN:O	1:B:4867:ILE:HG12	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:840:TYR:OH	1:C:851:LEU:O	2.31	0.48
1:C:2758:LYS:HG2	1:C:2759:PRO:HD2	1.96	0.48
1:D:2127:ARG:HA	1:D:2130:LEU:HD12	1.96	0.48
1:D:2988:ARG:HE	1:D:2990:LEU:HD11	1.78	0.48
1:D:3293:GLY:HA2	1:D:3295:TRP:CH2	2.49	0.48
1:A:77:ALA:O	1:A:81:MET:HG3	2.14	0.47
1:A:1522:ALA:N	1:A:1525:LYS:O	2.44	0.47
1:A:2383:HIS:ND1	1:A:2458:ALA:HB2	2.29	0.47
1:A:2695:MET:HB2	1:A:2698:GLU:HB3	1.96	0.47
1:A:3293:GLY:HA2	1:A:3295:TRP:CH2	2.49	0.47
1:A:4589:GLY:C	1:A:4591:TYR:H	2.18	0.47
2:E:78:THR:OG1	2:E:80:ASP:OD2	2.32	0.47
1:B:77:ALA:O	1:B:81:MET:HG3	2.14	0.47
1:B:125:TYR:CZ	1:B:417:ARG:HD3	2.49	0.47
1:B:880:ARG:NH1	1:B:881:ILE:HB	2.29	0.47
1:B:3013:VAL:HG22	1:B:3014:LEU:H	1.79	0.47
1:B:4196:THR:HB	1:B:4919:LEU:HD11	1.95	0.47
1:C:999:LEU:HD13	1:C:1050:LEU:HD21	1.96	0.47
1:C:2357:PRO:O	1:C:2358:SER:OG	2.28	0.47
1:C:2383:HIS:ND1	1:C:2458:ALA:HB2	2.29	0.47
1:C:2447:LYS:HD2	1:C:2447:LYS:O	2.14	0.47
1:C:2541:HIS:HD2	1:C:2544:LEU:HD13	1.77	0.47
1:C:3008:PHE:HE2	1:C:3057:LEU:HD13	1.79	0.47
1:C:4589:GLY:C	1:C:4591:TYR:H	2.18	0.47
1:C:4827:ILE:O	1:C:4831:ILE:HG12	2.14	0.47
1:D:3803:LEU:HD22	1:D:3888:PHE:CE2	2.49	0.47
1:D:4297:PHE:O	1:D:4299:ALA:N	2.44	0.47
1:A:1782:PHE:HE2	1:A:1787:LEU:HD13	1.78	0.47
1:A:3803:LEU:HD22	1:A:3888:PHE:CE2	2.49	0.47
1:B:888:ASN:O	1:B:888:ASN:ND2	2.46	0.47
1:B:1474:GLY:O	1:B:1475:LYS:HG2	2.15	0.47
1:B:4625:ASP:OD1	1:B:4625:ASP:N	2.47	0.47
1:C:1256:PRO:HG3	1:C:1593:HIS:NE2	2.29	0.47
1:C:1421:MET:HA	1:C:1421:MET:HE3	1.96	0.47
1:C:2141:LEU:HD23	1:C:2144:ARG:HH22	1.78	0.47
1:C:2988:ARG:HE	1:C:2990:LEU:HD11	1.78	0.47
1:D:888:ASN:O	1:D:888:ASN:ND2	2.46	0.47
1:D:4827:ILE:O	1:D:4831:ILE:HG12	2.14	0.47
1:A:1244:ASN:HD22	1:A:1801:GLU:HG3	1.79	0.47
1:A:1719:LEU:HD13	1:A:1830:ILE:HD12	1.96	0.47
1:A:2176:VAL:HG22	1:A:2220:TYR:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3058:ARG:HA	1:A:3061:LEU:HG	1.96	0.47
1:A:3075:LEU:HD11	1:A:3148:VAL:HG13	1.95	0.47
2:F:23:CYS:SG	2:F:51:ILE:HD11	2.53	0.47
2:H:78:THR:OG1	2:H:80:ASP:OD2	2.32	0.47
1:B:1304:LEU:HB3	1:B:1586:LEU:HD11	1.96	0.47
1:B:3089:GLY:O	1:B:3092:GLN:HG3	2.14	0.47
1:B:4136:ILE:HG13	1:B:4148:VAL:HB	1.95	0.47
1:B:4589:GLY:C	1:B:4591:TYR:H	2.18	0.47
1:C:3232:PRO:HA	1:C:3235:MET:SD	2.55	0.47
1:D:1251:LEU:HD11	1:D:1599:MET:HB2	1.96	0.47
1:D:4589:GLY:C	1:D:4591:TYR:H	2.18	0.47
1:D:4914:ASN:HB3	1:D:4917:ASN:HB2	1.96	0.47
1:A:2247:VAL:HG11	1:A:2257:LEU:HD11	1.97	0.47
1:A:2290:TRP:CZ2	1:A:2388:ILE:HG12	2.50	0.47
1:A:2718:GLU:HG3	1:A:2721:ILE:HD12	1.96	0.47
1:A:3189:SER:O	1:A:3192:ARG:NH1	2.48	0.47
1:B:1728:PRO:HD3	1:B:1757:LEU:HG	1.97	0.47
1:B:2290:TRP:CZ2	1:B:2388:ILE:HG12	2.50	0.47
1:B:2357:PRO:O	1:B:2358:SER:OG	2.28	0.47
1:B:2695:MET:HB2	1:B:2698:GLU:HB3	1.96	0.47
1:B:4190:VAL:HG21	1:B:4949:TRP:CZ2	2.49	0.47
1:C:1304:LEU:HB3	1:C:1586:LEU:HD11	1.96	0.47
1:C:2059:GLN:NE2	1:C:2091:GLN:O	2.47	0.47
1:D:2200:LEU:HD22	1:D:2214:MET:CE	2.45	0.47
1:D:2717:LEU:O	1:D:2721:ILE:HG13	2.14	0.47
1:A:2418:ARG:HD3	1:B:187:SER:O	2.15	0.47
1:A:3232:PRO:HA	1:A:3235:MET:SD	2.55	0.47
1:B:1251:LEU:HD11	1:B:1599:MET:HB2	1.96	0.47
1:B:1265:HIS:ND1	1:B:1268:ILE:HG12	2.29	0.47
1:B:2541:HIS:CD2	1:B:2544:LEU:HD13	2.49	0.47
1:B:3232:PRO:HA	1:B:3235:MET:SD	2.55	0.47
1:B:4297:PHE:O	1:B:4299:ALA:N	2.44	0.47
1:C:551:PHE:HE2	1:C:558:LEU:HD22	1.79	0.47
1:C:1474:GLY:O	1:C:1475:LYS:HG2	2.15	0.47
1:C:1782:PHE:HE2	1:C:1787:LEU:HD13	1.78	0.47
1:C:3015:VAL:HG22	1:C:3016:ARG:H	1.79	0.47
1:C:3089:GLY:O	1:C:3092:GLN:HG3	2.14	0.47
1:C:3701:ASP:OD2	1:C:3727:GLN:NE2	2.48	0.47
1:D:840:TYR:OH	1:D:851:LEU:O	2.31	0.47
1:D:1256:PRO:HG3	1:D:1593:HIS:NE2	2.29	0.47
1:D:1474:GLY:O	1:D:1475:LYS:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2059:GLN:NE2	1:D:2091:GLN:O	2.47	0.47
1:D:2447:LYS:HD2	1:D:2447:LYS:O	2.14	0.47
1:D:2696:ASP:HB2	1:D:2701:PHE:HD1	1.80	0.47
1:D:3167:PRO:HA	1:D:3248:ARG:HH22	1.78	0.47
1:D:3324:GLU:O	1:D:3327:LYS:HG3	2.14	0.47
1:D:4190:VAL:HG21	1:D:4949:TRP:CZ2	2.49	0.47
1:A:1265:HIS:ND1	1:A:1268:ILE:HG12	2.29	0.47
1:A:3614:HIS:CD2	1:A:3615:ARG:HG2	2.50	0.47
1:A:4237:SER:OG	1:A:4238:ILE:N	2.47	0.47
1:B:551:PHE:HE2	1:B:558:LEU:HD22	1.80	0.47
1:C:1265:HIS:ND1	1:C:1268:ILE:HG12	2.29	0.47
1:C:1421:MET:HE1	1:C:1576:LYS:HB3	1.96	0.47
1:C:1728:PRO:HD3	1:C:1757:LEU:HG	1.97	0.47
1:C:2247:VAL:HG11	1:C:2257:LEU:HD11	1.97	0.47
1:D:26:ALA:O	1:D:33:GLN:N	2.42	0.47
1:D:125:TYR:CZ	1:D:417:ARG:HD3	2.49	0.47
1:D:456:LEU:HD13	1:D:532:SER:HB2	1.97	0.47
1:D:2758:LYS:HG2	1:D:2759:PRO:HD2	1.96	0.47
1:D:3015:VAL:HG22	1:D:3016:ARG:H	1.79	0.47
1:D:3058:ARG:HA	1:D:3061:LEU:HG	1.96	0.47
1:D:3232:PRO:HA	1:D:3235:MET:SD	2.55	0.47
1:A:840:TYR:OH	1:A:851:LEU:O	2.31	0.47
1:A:999:LEU:HD13	1:A:1050:LEU:HD21	1.96	0.47
1:A:3068:LEU:HD12	1:A:3133:ILE:HG12	1.97	0.47
1:A:3796:LEU:HD22	1:A:3835:PHE:HZ	1.79	0.47
1:A:4625:ASP:OD1	1:A:4625:ASP:N	2.47	0.47
1:B:2200:LEU:HD22	1:B:2214:MET:CE	2.45	0.47
1:B:2235:ARG:HA	1:B:2297:ARG:HH22	1.80	0.47
1:B:2696:ASP:HB2	1:B:2701:PHE:HD1	1.80	0.47
1:B:2717:LEU:O	1:B:2721:ILE:HG13	2.14	0.47
1:B:2748:SER:OG	1:B:2751:SER:OG	2.33	0.47
1:B:3015:VAL:HG22	1:B:3016:ARG:H	1.79	0.47
1:B:3058:ARG:HA	1:B:3061:LEU:HG	1.96	0.47
1:B:3075:LEU:HD11	1:B:3148:VAL:HG13	1.96	0.47
1:B:3167:PRO:HA	1:B:3248:ARG:NH1	2.26	0.47
1:B:4266:LYS:HB3	1:B:4266:LYS:HE3	1.71	0.47
1:C:456:LEU:HD13	1:C:532:SER:HB2	1.97	0.47
1:C:1176:THR:HG22	1:C:1181:ILE:HD13	1.97	0.47
1:C:1244:ASN:HD22	1:C:1801:GLU:HG3	1.79	0.47
1:C:2200:LEU:HD22	1:C:2214:MET:CE	2.45	0.47
1:C:2541:HIS:CD2	1:C:2544:LEU:HD13	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2788:ARG:HD3	1:C:2904:SER:OG	2.15	0.47
1:C:2968:LEU:HB2	1:C:2969:PRO:HD3	1.97	0.47
1:C:3167:PRO:HA	1:C:3248:ARG:HH22	1.78	0.47
1:C:3189:SER:O	1:C:3192:ARG:NH1	2.48	0.47
1:C:3324:GLU:O	1:C:3327:LYS:HG3	2.14	0.47
1:D:1176:THR:HG22	1:D:1181:ILE:HD13	1.97	0.47
1:D:1244:ASN:HD22	1:D:1801:GLU:HG3	1.79	0.47
1:D:1719:LEU:HD13	1:D:1830:ILE:HD12	1.96	0.47
1:D:2235:ARG:HA	1:D:2297:ARG:HH22	1.80	0.47
1:D:2788:ARG:HD3	1:D:2904:SER:OG	2.15	0.47
1:D:2968:LEU:HB2	1:D:2969:PRO:HD3	1.97	0.47
1:D:3013:VAL:HG22	1:D:3014:LEU:H	1.79	0.47
1:D:4516:ILE:HG23	1:D:4568:MET:HE2	1.97	0.47
1:A:515:ALA:HB2	1:A:523:GLY:HA3	1.97	0.47
1:A:801:ARG:HG3	1:A:1617:TRP:C	2.36	0.47
1:A:2141:LEU:HD23	1:A:2144:ARG:HH22	1.79	0.47
1:A:2447:LYS:HD2	1:A:2447:LYS:O	2.14	0.47
1:A:2646:TRP:NE1	1:A:2924:SER:O	2.48	0.47
1:A:2943:PHE:CD1	1:A:3021:LEU:HD21	2.50	0.47
1:A:3008:PHE:HE2	1:A:3057:LEU:HD13	1.79	0.47
1:B:11:ILE:HG13	1:B:11:ILE:O	2.15	0.47
1:B:2247:VAL:HG11	1:B:2257:LEU:HD11	1.97	0.47
1:B:2982:PHE:HA	1:B:2996:ALA:HB2	1.95	0.47
1:B:3614:HIS:CD2	1:B:3615:ARG:HG2	2.50	0.47
1:C:927:GLN:NE2	1:C:928:GLU:HG3	2.30	0.47
1:C:4190:VAL:HG21	1:C:4949:TRP:CZ2	2.49	0.47
1:D:11:ILE:HG13	1:D:11:ILE:O	2.15	0.47
1:D:3068:LEU:HD12	1:D:3133:ILE:HG12	1.97	0.47
1:D:3070:LYS:HD3	1:D:3093:ILE:HD13	1.97	0.47
1:D:3089:GLY:O	1:D:3092:GLN:HG3	2.14	0.47
1:D:4625:ASP:OD1	1:D:4625:ASP:N	2.47	0.47
1:A:11:ILE:O	1:A:11:ILE:HG13	2.15	0.47
1:A:456:LEU:HD13	1:A:532:SER:HB2	1.97	0.47
1:B:2724:TYR:CD2	1:B:2775:ILE:HG12	2.50	0.47
1:C:1104:GLU:HB3	1:C:1216:ASN:HB3	1.97	0.47
1:C:1415:ASP:OD1	1:C:1415:ASP:N	2.48	0.47
1:C:2696:ASP:HB2	1:C:2701:PHE:HD1	1.80	0.47
1:D:2724:TYR:HD2	1:D:2775:ILE:HG12	1.80	0.47
1:D:4563:GLU:OE2	1:D:4566:GLY:N	2.46	0.47
1:A:26:ALA:O	1:A:33:GLN:N	2.42	0.47
1:A:2724:TYR:CD2	1:A:2775:ILE:HG12	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3070:LYS:HD3	1:A:3093:ILE:HD13	1.97	0.47
1:B:515:ALA:HB2	1:B:523:GLY:HA3	1.97	0.47
1:B:840:TYR:OH	1:B:851:LEU:O	2.31	0.47
1:C:2695:MET:HB2	1:C:2698:GLU:HB3	1.96	0.47
1:C:2724:TYR:HD2	1:C:2775:ILE:HG12	1.80	0.47
1:C:3796:LEU:HD22	1:C:3835:PHE:HZ	1.79	0.47
1:D:1782:PHE:HE2	1:D:1787:LEU:HD13	1.78	0.47
1:D:2541:HIS:CD2	1:D:2544:LEU:HD13	2.49	0.47
1:D:2678:PRO:HD3	1:D:2978:HIS:CE1	2.50	0.47
1:D:3614:HIS:CD2	1:D:3615:ARG:HG2	2.50	0.47
1:A:551:PHE:HE2	1:A:558:LEU:HD22	1.80	0.46
1:A:909:ASP:HB2	1:A:914:GLN:HB2	1.97	0.46
1:A:1125:ASP:OD1	1:A:1125:ASP:N	2.46	0.46
1:A:2127:ARG:HA	1:A:2130:LEU:HD12	1.96	0.46
1:A:2635:GLU:HG2	1:A:2636:GLU:N	2.30	0.46
1:B:999:LEU:HD13	1:B:1050:LEU:HD21	1.96	0.46
1:B:1176:THR:HG22	1:B:1181:ILE:HD13	1.97	0.46
1:B:2594:PHE:HZ	1:B:2698:GLU:OE1	1.98	0.46
1:B:2635:GLU:HG2	1:B:2636:GLU:N	2.30	0.46
1:B:2943:PHE:CD1	1:B:3021:LEU:HD21	2.50	0.46
1:B:3070:LYS:HD3	1:B:3093:ILE:HD13	1.97	0.46
1:C:888:ASN:O	1:C:888:ASN:ND2	2.46	0.46
1:C:2290:TRP:CZ2	1:C:2388:ILE:HG12	2.50	0.46
1:C:2406:MET:O	1:C:2410:HIS:ND1	2.45	0.46
1:C:3614:HIS:CD2	1:C:3615:ARG:HG2	2.50	0.46
1:C:4272:LYS:HG2	1:D:4480:PHE:CZ	2.50	0.46
1:D:143:LEU:O	1:D:190:ARG:NH2	2.48	0.46
1:D:1104:GLU:HB3	1:D:1216:ASN:HB3	1.97	0.46
1:D:2594:PHE:HZ	1:D:2698:GLU:OE1	1.98	0.46
1:D:3008:PHE:HE2	1:D:3057:LEU:HD13	1.79	0.46
1:D:3796:LEU:HD22	1:D:3835:PHE:HZ	1.79	0.46
1:D:4011:GLU:HG2	1:D:4121:LEU:HD22	1.97	0.46
1:A:1176:THR:HG22	1:A:1181:ILE:HD13	1.97	0.46
1:A:1474:GLY:O	1:A:1475:LYS:HG2	2.15	0.46
1:A:2696:ASP:HB2	1:A:2701:PHE:HD1	1.80	0.46
1:A:2717:LEU:O	1:A:2721:ILE:HG13	2.14	0.46
1:A:2788:ARG:HD3	1:A:2904:SER:OG	2.15	0.46
1:A:2915:PRO:HB2	1:A:2917:ILE:HG12	1.98	0.46
1:A:4137:GLU:OE1	1:A:4958:PHE:N	2.48	0.46
1:B:3189:SER:O	1:B:3192:ARG:NH1	2.48	0.46
1:B:4740:ALA:CB	1:C:4783:VAL:HG21	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2157:GLN:O	1:C:3615:ARG:NH2	2.44	0.46
1:C:3094:ILE:O	1:C:3097:THR:OG1	2.28	0.46
1:D:2247:VAL:HG11	1:D:2257:LEU:HD11	1.97	0.46
1:D:2383:HIS:ND1	1:D:2458:ALA:HB2	2.29	0.46
1:D:2695:MET:HB2	1:D:2698:GLU:HB3	1.96	0.46
1:A:1728:PRO:HD3	1:A:1757:LEU:HG	1.97	0.46
1:A:2724:TYR:HD2	1:A:2775:ILE:HG12	1.80	0.46
1:A:2758:LYS:HG2	1:A:2759:PRO:HD2	1.96	0.46
1:A:4190:VAL:HG21	1:A:4949:TRP:CZ2	2.49	0.46
1:B:927:GLN:NE2	1:B:928:GLU:HG3	2.30	0.46
1:B:1104:GLU:HB3	1:B:1216:ASN:HB3	1.97	0.46
1:B:2245:ALA:HA	1:B:2248:MET:HE3	1.97	0.46
1:B:2383:HIS:ND1	1:B:2458:ALA:HB2	2.29	0.46
1:B:2788:ARG:HD3	1:B:2904:SER:OG	2.15	0.46
1:B:2794:GLU:O	1:B:2798:MET:HG2	2.16	0.46
1:B:2915:PRO:HB2	1:B:2917:ILE:HG12	1.98	0.46
1:C:2200:LEU:HD22	1:C:2214:MET:HE2	1.97	0.46
1:C:2386:ASN:HA	1:C:2389:MET:HE2	1.97	0.46
1:C:3013:VAL:HG22	1:C:3014:LEU:H	1.79	0.46
1:C:3058:ARG:HA	1:C:3061:LEU:HG	1.96	0.46
1:C:4011:GLU:HG2	1:C:4121:LEU:HD22	1.97	0.46
1:D:1304:LEU:HB3	1:D:1586:LEU:HD11	1.96	0.46
1:D:2245:ALA:HA	1:D:2248:MET:HE3	1.97	0.46
1:D:2357:PRO:O	1:D:2358:SER:OG	2.28	0.46
1:D:2646:TRP:NE1	1:D:2924:SER:O	2.48	0.46
1:D:4036:ASP:OD1	1:D:4036:ASP:N	2.49	0.46
1:D:4237:SER:OG	1:D:4238:ILE:N	2.47	0.46
1:A:143:LEU:O	1:A:190:ARG:NH2	2.48	0.46
1:A:675:TYR:CZ	1:A:790:PRO:HB3	2.51	0.46
1:A:869:THR:O	1:A:872:ILE:HG12	2.16	0.46
1:A:1104:GLU:HB3	1:A:1216:ASN:HB3	1.97	0.46
1:A:2594:PHE:HZ	1:A:2698:GLU:OE1	1.98	0.46
1:A:4011:GLU:HG2	1:A:4121:LEU:HD22	1.97	0.46
1:A:4563:GLU:OE2	1:A:4566:GLY:N	2.46	0.46
1:A:4898:PHE:HD2	1:A:4905:PHE:HD1	1.64	0.46
1:B:456:LEU:HD13	1:B:532:SER:HB2	1.97	0.46
1:B:675:TYR:CZ	1:B:790:PRO:HB3	2.51	0.46
1:B:3796:LEU:HD22	1:B:3835:PHE:HZ	1.79	0.46
1:B:4137:GLU:OE1	1:B:4958:PHE:N	2.48	0.46
1:C:2127:ARG:HA	1:C:2130:LEU:HD12	1.96	0.46
1:C:2646:TRP:NE1	1:C:2924:SER:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3215:MET:O	1:C:3219:VAL:HG23	2.16	0.46
1:C:4137:GLU:OE1	1:C:4958:PHE:N	2.48	0.46
1:C:4519:PHE:HB2	1:C:4568:MET:HE1	1.97	0.46
1:D:551:PHE:HE2	1:D:558:LEU:HD22	1.80	0.46
1:D:1728:PRO:HD3	1:D:1757:LEU:HG	1.97	0.46
1:D:2176:VAL:HG22	1:D:2220:TYR:CZ	2.49	0.46
1:D:3215:MET:O	1:D:3219:VAL:HG23	2.16	0.46
1:D:3927:PRO:HD3	1:D:4935:GLY:HA3	1.98	0.46
1:D:4137:GLU:OE1	1:D:4958:PHE:N	2.48	0.46
1:A:1421:MET:HE3	1:A:1421:MET:HA	1.98	0.46
1:A:2794:GLU:O	1:A:2798:MET:HG2	2.16	0.46
1:A:3013:VAL:HG22	1:A:3014:LEU:H	1.79	0.46
2:H:45:LYS:NZ	1:D:1781:GLU:OE1	2.48	0.46
1:B:3068:LEU:HD12	1:B:3133:ILE:HG12	1.97	0.46
1:B:3774:GLN:NE2	1:B:3845:LEU:O	2.49	0.46
1:B:4898:PHE:HD2	1:B:4905:PHE:HD1	1.64	0.46
1:C:1251:LEU:HD11	1:C:1599:MET:HB2	1.96	0.46
1:C:2235:ARG:HA	1:C:2297:ARG:HH22	1.80	0.46
1:C:2594:PHE:HZ	1:C:2698:GLU:OE1	1.98	0.46
1:C:2794:GLU:O	1:C:2798:MET:HG2	2.16	0.46
1:C:3166:PHE:CE1	1:C:3168:VAL:HB	2.51	0.46
1:D:515:ALA:HB2	1:D:523:GLY:HA3	1.97	0.46
1:D:1494:MET:HG3	1:D:1495:SER:N	2.31	0.46
1:D:2258:ARG:HA	1:D:2258:ARG:HD3	1.77	0.46
1:D:3189:SER:O	1:D:3192:ARG:NH1	2.48	0.46
1:A:927:GLN:NE2	1:A:928:GLU:HG3	2.30	0.46
1:A:2235:ARG:HA	1:A:2297:ARG:HH22	1.80	0.46
1:B:869:THR:O	1:B:872:ILE:HG12	2.16	0.46
1:B:2968:LEU:HB2	1:B:2969:PRO:HD3	1.97	0.46
1:B:3927:PRO:HD3	1:B:4935:GLY:HA3	1.98	0.46
1:C:515:ALA:HB2	1:C:523:GLY:HA3	1.97	0.46
1:C:1494:MET:HG3	1:C:1495:SER:N	2.31	0.46
1:C:3227:ARG:NH2	1:C:3292:GLU:HB3	2.29	0.46
1:C:3288:LEU:HG	1:C:3329:LYS:NZ	2.31	0.46
1:C:4863:GLN:O	1:C:4867:ILE:HG12	2.14	0.46
1:A:1304:LEU:HB3	1:A:1586:LEU:HD11	1.97	0.46
1:A:3245:TYR:O	1:A:3249:TRP:HD1	1.99	0.46
1:A:3252:HIS:CE1	1:A:3265:CYS:HB2	2.51	0.46
2:F:78:THR:OG1	2:F:80:ASP:OD2	2.32	0.46
1:B:3288:LEU:HG	1:B:3329:LYS:NZ	2.31	0.46
1:B:3701:ASP:OD2	1:B:3727:GLN:NE2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4036:ASP:N	1:B:4036:ASP:OD1	2.49	0.46
1:C:331:PHE:HE1	1:C:363:ILE:HG12	1.81	0.46
1:C:2724:TYR:CD2	1:C:2775:ILE:HG12	2.50	0.46
1:C:3927:PRO:HD3	1:C:4935:GLY:HA3	1.98	0.46
1:D:2724:TYR:CD2	1:D:2775:ILE:HG12	2.50	0.46
1:D:2943:PHE:CD1	1:D:3021:LEU:HD21	2.50	0.46
1:D:3252:HIS:CE1	1:D:3265:CYS:HB2	2.51	0.46
1:D:4840:GLU:O	1:D:4844:ILE:HG12	2.16	0.46
1:A:270:HIS:ND1	1:A:491:GLU:HG3	2.31	0.46
1:A:1043:LYS:HG2	1:A:1047:LYS:NZ	2.31	0.46
1:A:1494:MET:HG3	1:A:1495:SER:N	2.31	0.46
1:A:2200:LEU:HD22	1:A:2214:MET:CE	2.45	0.46
1:A:4170:ARG:NH2	4:A:5002:ATP:O3G	2.49	0.46
1:A:4274:MET:HE3	1:B:4483:LYS:HD2	1.97	0.46
1:A:4862:ILE:HG21	1:B:4852:PHE:HE1	1.80	0.46
1:B:331:PHE:HE1	1:B:363:ILE:HG12	1.81	0.46
1:B:801:ARG:HG3	1:B:1617:TRP:C	2.35	0.46
1:B:2724:TYR:HD2	1:B:2775:ILE:HG12	1.80	0.46
1:B:3252:HIS:CE1	1:B:3265:CYS:HB2	2.51	0.46
1:C:3252:HIS:CE1	1:C:3265:CYS:HB2	2.51	0.46
1:C:4237:SER:OG	1:C:4238:ILE:N	2.47	0.46
1:D:927:GLN:NE2	1:D:928:GLU:HG3	2.30	0.46
1:D:4170:ARG:NH2	4:D:5002:ATP:O3G	2.49	0.46
1:A:3890:TRP:O	1:B:76:ARG:NH2	2.48	0.46
1:A:4252:ILE:HG13	1:B:4707:MET:HA	1.98	0.46
1:A:4844:ILE:HG23	1:D:4818:TYR:CD1	2.51	0.46
1:B:882:ARG:HH21	1:B:937:LEU:HD22	1.81	0.46
1:B:1043:LYS:HG2	1:B:1047:LYS:NZ	2.31	0.46
1:B:1415:ASP:N	1:B:1415:ASP:OD1	2.48	0.46
1:B:1494:MET:HG3	1:B:1495:SER:N	2.31	0.46
1:B:1635:GLU:OE1	1:B:1637:ARG:NH1	2.44	0.46
1:B:3166:PHE:CE1	1:B:3168:VAL:HB	2.51	0.46
1:B:3215:MET:O	1:B:3219:VAL:HG23	2.16	0.46
1:B:3245:TYR:O	1:B:3249:TRP:HD1	1.99	0.46
1:B:4208:GLU:HB3	1:B:4492:LEU:HD21	1.97	0.46
1:C:2635:GLU:HG2	1:C:2636:GLU:N	2.31	0.46
1:C:2943:PHE:CD1	1:C:3021:LEU:HD21	2.50	0.46
1:D:270:HIS:ND1	1:D:491:GLU:HG3	2.31	0.46
1:D:331:PHE:HE1	1:D:363:ILE:HG12	1.81	0.46
1:D:2406:MET:O	1:D:2410:HIS:ND1	2.45	0.46
1:D:3242:LEU:O	1:D:3246:MET:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3659:LYS:HA	1:D:3659:LYS:HD2	1.80	0.46
1:D:3924:ILE:HG13	1:D:3984:SER:OG	2.16	0.46
1:D:4898:PHE:HD2	1:D:4905:PHE:HD1	1.64	0.46
1:A:2678:PRO:HD3	1:A:2978:HIS:CE1	2.50	0.46
1:A:2893:LEU:HD23	1:A:2896:LEU:HD12	1.98	0.46
1:A:3924:ILE:HG13	1:A:3984:SER:OG	2.16	0.46
1:B:2149:ILE:HD13	1:B:2167:MET:CE	2.46	0.46
1:B:2678:PRO:HD3	1:B:2978:HIS:CE1	2.50	0.46
1:C:11:ILE:O	1:C:11:ILE:HG13	2.15	0.46
1:C:801:ARG:HG3	1:C:1617:TRP:C	2.36	0.46
1:C:882:ARG:HH21	1:C:937:LEU:HD22	1.81	0.46
1:C:2678:PRO:HD3	1:C:2978:HIS:CE1	2.50	0.46
1:C:3068:LEU:HD12	1:C:3133:ILE:HG12	1.97	0.46
1:D:675:TYR:CZ	1:D:790:PRO:HB3	2.51	0.46
1:D:1043:LYS:HG2	1:D:1047:LYS:NZ	2.31	0.46
1:A:3288:LEU:HG	1:A:3329:LYS:NZ	2.31	0.45
1:A:3774:GLN:NE2	1:A:3845:LEU:O	2.49	0.45
1:A:3927:PRO:HD3	1:A:4935:GLY:HA3	1.98	0.45
1:A:4113:THR:HA	1:A:4116:GLN:HB2	1.99	0.45
1:A:4208:GLU:HB3	1:A:4492:LEU:HD21	1.97	0.45
1:A:4622:SER:HB2	1:A:4632:ARG:NH2	2.28	0.45
1:B:1421:MET:HE1	1:B:1576:LYS:HB3	1.97	0.45
1:B:4113:THR:HA	1:B:4116:GLN:HB2	1.99	0.45
1:B:4496:ALA:HB1	1:B:4593:LEU:HD13	1.98	0.45
1:C:3070:LYS:HD3	1:C:3093:ILE:HD13	1.97	0.45
1:C:3093:ILE:O	1:C:3097:THR:HG23	2.17	0.45
1:D:869:THR:O	1:D:872:ILE:HG12	2.16	0.45
1:D:1119:ARG:HE	1:D:1201:PHE:HE1	1.64	0.45
1:A:882:ARG:HH21	1:A:937:LEU:HD22	1.81	0.45
1:A:3214:LEU:HD13	1:A:3242:LEU:HD21	1.98	0.45
1:A:3215:MET:O	1:A:3219:VAL:HG23	2.16	0.45
1:A:3803:LEU:HB3	1:A:3888:PHE:CE2	2.52	0.45
1:A:4026:LEU:HD11	1:A:4057:HIS:HB2	1.99	0.45
1:A:4840:GLU:O	1:A:4844:ILE:HG12	2.16	0.45
1:B:3242:LEU:O	1:B:3246:MET:HG2	2.16	0.45
1:B:4746:ILE:HD11	1:C:4776:VAL:HG21	1.97	0.45
1:C:1125:ASP:OD1	1:C:1125:ASP:N	2.46	0.45
1:C:3728:GLN:OE1	1:C:3770:ASN:ND2	2.49	0.45
1:C:4036:ASP:N	1:C:4036:ASP:OD1	2.49	0.45
1:C:4279:MET:HE1	1:D:4488:GLN:HB2	1.98	0.45
1:D:801:ARG:HG3	1:D:1617:TRP:C	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1415:ASP:OD2	1:D:1559:ARG:NH2	2.41	0.45
1:D:2290:TRP:CZ2	1:D:2388:ILE:HG12	2.50	0.45
1:D:2669:LEU:HA	1:D:2669:LEU:HD23	1.83	0.45
1:D:2794:GLU:O	1:D:2798:MET:HG2	2.16	0.45
1:A:758:CYS:HB3	1:A:819:TYR:CE2	2.51	0.45
1:A:4496:ALA:HB1	1:A:4593:LEU:HD13	1.98	0.45
1:B:909:ASP:HB2	1:B:914:GLN:HB2	1.98	0.45
1:B:1429:SER:OG	1:B:1556:GLU:HB2	2.16	0.45
1:C:909:ASP:HB2	1:C:914:GLN:HB2	1.97	0.45
1:C:1522:ALA:N	1:C:1525:LYS:O	2.44	0.45
1:C:2149:ILE:HD13	1:C:2167:MET:CE	2.46	0.45
1:C:4208:GLU:HB3	1:C:4492:LEU:HD21	1.97	0.45
1:D:614:LEU:HD22	1:D:632:ILE:HG12	1.98	0.45
1:D:4026:LEU:HD11	1:D:4057:HIS:HB2	1.99	0.45
1:D:4208:GLU:HB3	1:D:4492:LEU:HD21	1.97	0.45
1:D:4254:THR:HA	1:D:4257:ARG:HG2	1.98	0.45
1:A:331:PHE:HE1	1:A:363:ILE:HG12	1.81	0.45
1:A:964:MET:SD	1:A:980:PRO:HG2	2.57	0.45
1:A:2721:ILE:HG23	1:A:2775:ILE:CG2	2.47	0.45
1:A:2968:LEU:HB2	1:A:2969:PRO:HD3	1.97	0.45
1:A:4036:ASP:OD1	1:A:4036:ASP:N	2.49	0.45
1:A:4254:THR:HA	1:A:4257:ARG:HG2	1.98	0.45
1:B:1685:LEU:HB3	1:B:1706:LEU:HD12	1.98	0.45
1:B:2386:ASN:HA	1:B:2389:MET:HE2	1.98	0.45
1:B:2646:TRP:NE1	1:B:2924:SER:O	2.48	0.45
1:B:3924:ILE:HG13	1:B:3984:SER:OG	2.16	0.45
1:B:4170:ARG:NH2	4:B:5002:ATP:O3G	2.49	0.45
1:C:614:LEU:HD22	1:C:632:ILE:HG12	1.98	0.45
1:C:758:CYS:HB3	1:C:819:TYR:CE2	2.51	0.45
1:C:865:ILE:HG23	1:C:865:ILE:O	2.16	0.45
1:C:964:MET:SD	1:C:980:PRO:HG2	2.57	0.45
1:C:4898:PHE:O	1:C:4904:GLY:HA3	2.16	0.45
1:D:909:ASP:HB2	1:D:914:GLN:HB2	1.97	0.45
1:D:964:MET:SD	1:D:980:PRO:HG2	2.57	0.45
1:D:1429:SER:OG	1:D:1556:GLU:HB2	2.16	0.45
1:D:2635:GLU:HG2	1:D:2636:GLU:N	2.30	0.45
1:D:2893:LEU:HD23	1:D:2896:LEU:HD12	1.98	0.45
1:D:3166:PHE:CE1	1:D:3168:VAL:HB	2.51	0.45
1:D:3288:LEU:HG	1:D:3329:LYS:NZ	2.31	0.45
1:A:1086:ARG:NE	1:A:1252:SER:O	2.50	0.45
1:A:2126:ILE:HG12	1:A:2142:MET:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3093:ILE:O	1:A:3097:THR:HG23	2.16	0.45
1:A:4517:LEU:HD22	1:A:4520:TYR:CE2	2.52	0.45
1:B:143:LEU:O	1:B:190:ARG:NH2	2.48	0.45
1:B:448:PRO:HB2	1:B:451:SER:HB2	1.99	0.45
1:B:3214:LEU:HD13	1:B:3242:LEU:HD21	1.98	0.45
1:B:3803:LEU:HB3	1:B:3888:PHE:CE2	2.52	0.45
1:B:4268:MET:HA	1:B:4271:VAL:HG22	1.98	0.45
1:B:4517:LEU:HD22	1:B:4520:TYR:CE2	2.52	0.45
1:C:270:HIS:ND1	1:C:491:GLU:HG3	2.31	0.45
1:C:675:TYR:CZ	1:C:790:PRO:HB3	2.51	0.45
1:D:865:ILE:HD12	1:D:865:ILE:HA	1.70	0.45
1:D:865:ILE:HG23	1:D:865:ILE:O	2.16	0.45
1:D:4496:ALA:HB1	1:D:4593:LEU:HD13	1.98	0.45
1:D:4898:PHE:O	1:D:4904:GLY:HA3	2.16	0.45
1:A:2769:GLU:OE1	1:A:2772:ARG:NH1	2.43	0.45
1:A:2798:MET:CE	1:B:1497:GLY:HA2	2.47	0.45
1:A:2939:TYR:CZ	1:A:2943:PHE:CE2	3.05	0.45
1:B:3317:THR:H	1:B:3320:LEU:HD13	1.82	0.45
1:C:253:GLY:O	1:C:257:ARG:HG2	2.17	0.45
1:C:3287:ASN:O	1:C:3290:ILE:HG12	2.17	0.45
1:C:3803:LEU:HD13	1:C:3888:PHE:CD2	2.51	0.45
1:C:3924:ILE:HG13	1:C:3984:SER:OG	2.16	0.45
1:C:4898:PHE:HD2	1:C:4905:PHE:HD1	1.64	0.45
1:D:1086:ARG:NE	1:D:1252:SER:O	2.50	0.45
1:D:3093:ILE:O	1:D:3097:THR:HG23	2.16	0.45
1:D:3245:TYR:O	1:D:3249:TRP:HD1	1.99	0.45
1:D:3803:LEU:HB3	1:D:3888:PHE:CE2	2.52	0.45
1:A:448:PRO:HB2	1:A:451:SER:HB2	1.99	0.45
1:A:614:LEU:HD22	1:A:632:ILE:HG12	1.98	0.45
1:A:2720:PHE:CZ	1:A:2896:LEU:HD23	2.52	0.45
1:A:3803:LEU:HD13	1:A:3888:PHE:CD2	2.51	0.45
1:A:4588:ILE:HD13	1:D:4283:PHE:CE2	2.52	0.45
1:B:1757:LEU:HD22	1:B:2117:ILE:HD11	1.99	0.45
1:B:2126:ILE:HG12	1:B:2142:MET:HG3	1.99	0.45
1:B:2721:ILE:HG23	1:B:2775:ILE:CG2	2.47	0.45
1:B:2939:TYR:CZ	1:B:2943:PHE:CE2	3.05	0.45
1:B:3803:LEU:HD13	1:B:3888:PHE:CD2	2.51	0.45
1:B:4011:GLU:HG2	1:B:4121:LEU:HD22	1.97	0.45
1:C:869:THR:O	1:C:872:ILE:HG12	2.16	0.45
1:C:1086:ARG:NE	1:C:1252:SER:O	2.50	0.45
1:C:1429:SER:OG	1:C:1556:GLU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2157:GLN:O	1:D:3615:ARG:NH2	2.44	0.45
1:D:3214:LEU:HD13	1:D:3242:LEU:HD21	1.98	0.45
1:D:3227:ARG:NH2	1:D:3292:GLU:HB3	2.29	0.45
1:A:804:LEU:HD22	1:A:832:LEU:HD13	1.99	0.45
1:A:1429:SER:OG	1:A:1556:GLU:HB2	2.16	0.45
1:A:3167:PRO:HA	1:A:3248:ARG:NH1	2.26	0.45
1:A:3246:MET:CE	1:A:3306:ILE:HG12	2.46	0.45
1:A:3701:ASP:OD2	1:A:3727:GLN:NE2	2.48	0.45
1:A:4041:GLY:HA3	1:A:4080:TYR:HE1	1.82	0.45
1:B:270:HIS:ND1	1:B:491:GLU:HG3	2.31	0.45
1:B:614:LEU:HD22	1:B:632:ILE:HG12	1.98	0.45
1:B:1086:ARG:NE	1:B:1252:SER:O	2.50	0.45
1:B:2979:ARG:NH1	1:B:3038:GLN:HB3	2.22	0.45
1:B:3093:ILE:O	1:B:3097:THR:HG23	2.16	0.45
1:B:4840:GLU:O	1:B:4844:ILE:HG12	2.16	0.45
1:C:1043:LYS:HG2	1:C:1047:LYS:NZ	2.31	0.45
1:C:2258:ARG:HD3	1:C:2258:ARG:HA	1.77	0.45
1:C:2720:PHE:CZ	1:C:2896:LEU:HD23	2.52	0.45
1:C:3245:TYR:O	1:C:3249:TRP:HD1	1.99	0.45
1:C:4026:LEU:HD11	1:C:4057:HIS:HB2	1.99	0.45
1:C:4170:ARG:NH2	4:C:5002:ATP:O3G	2.49	0.45
1:D:804:LEU:HD22	1:D:832:LEU:HD13	1.99	0.45
1:D:2149:ILE:HD13	1:D:2167:MET:CE	2.46	0.45
1:D:2386:ASN:HA	1:D:2389:MET:HE2	1.98	0.45
1:D:2720:PHE:CZ	1:D:2896:LEU:HD23	2.52	0.45
1:D:3317:THR:H	1:D:3320:LEU:HD13	1.82	0.45
1:D:4517:LEU:HD22	1:D:4520:TYR:CE2	2.52	0.45
1:A:3166:PHE:CE1	1:A:3168:VAL:HB	2.51	0.45
1:A:3167:PRO:CA	1:A:3248:ARG:HH12	2.26	0.45
1:A:4898:PHE:O	1:A:4904:GLY:HA3	2.16	0.45
1:B:758:CYS:HB3	1:B:819:TYR:CE2	2.51	0.45
1:B:964:MET:SD	1:B:980:PRO:HG2	2.57	0.45
1:B:3248:ARG:O	1:B:3251:GLU:HB2	2.17	0.45
1:B:3793:LEU:O	1:B:3797:MET:HG3	2.17	0.45
1:B:4026:LEU:HD11	1:B:4057:HIS:HB2	1.99	0.45
1:B:4708:TRP:O	1:B:4712:VAL:HG12	2.17	0.45
1:C:304:LYS:HB3	1:C:317:MET:O	2.17	0.45
1:C:2915:PRO:HB2	1:C:2917:ILE:HG12	1.98	0.45
1:C:3246:MET:CE	1:C:3306:ILE:HG12	2.46	0.45
1:D:253:GLY:O	1:D:257:ARG:HG2	2.17	0.45
1:D:1415:ASP:N	1:D:1415:ASP:OD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3793:LEU:O	1:D:3797:MET:HG3	2.17	0.45
1:D:3803:LEU:HD13	1:D:3888:PHE:CD2	2.51	0.45
1:D:4708:TRP:O	1:D:4712:VAL:HG12	2.17	0.45
1:A:304:LYS:HB3	1:A:317:MET:O	2.17	0.45
1:A:1829:LEU:HG	1:A:1912:TYR:CE2	2.53	0.45
1:A:3274:ASN:HA	1:A:3277:LEU:HG	1.99	0.45
2:E:85:ALA:O	2:E:94:PRO:HB3	2.17	0.45
1:B:900:LEU:HD22	1:B:902:TRP:NE1	2.32	0.45
1:B:964:MET:O	1:B:980:PRO:HD2	2.17	0.45
1:B:2623:LEU:HD23	1:B:2625:GLY:N	2.32	0.45
1:C:658:ASN:HB2	1:C:833:LYS:H	1.82	0.45
1:C:3793:LEU:O	1:C:3797:MET:HG3	2.17	0.45
1:D:3246:MET:CE	1:D:3306:ILE:HG12	2.46	0.45
1:D:3627:SER:O	1:D:3631:THR:OG1	2.23	0.45
1:A:658:ASN:HB2	1:A:833:LYS:H	1.82	0.44
1:A:865:ILE:HG23	1:A:865:ILE:O	2.16	0.44
1:A:1119:ARG:HE	1:A:1201:PHE:HE1	1.64	0.44
1:A:2149:ILE:HD13	1:A:2167:MET:CE	2.46	0.44
1:A:3793:LEU:O	1:A:3797:MET:HG3	2.17	0.44
1:A:4268:MET:HA	1:A:4271:VAL:HG22	1.99	0.44
1:B:1494:MET:HE3	1:B:1505:LEU:HD12	1.99	0.44
1:B:2499:ALA:HB1	1:B:2555:LEU:HD11	2.00	0.44
1:B:3246:MET:CE	1:B:3306:ILE:HG12	2.46	0.44
1:B:4237:SER:OG	1:B:4238:ILE:N	2.47	0.44
1:B:4563:GLU:OE2	1:B:4566:GLY:N	2.46	0.44
1:C:2126:ILE:HG12	1:C:2142:MET:HG3	1.99	0.44
1:C:3312:PRO:HB2	1:C:3316:LYS:NZ	2.32	0.44
1:C:3324:GLU:HG2	1:C:3327:LYS:HE3	2.00	0.44
1:D:1757:LEU:HD22	1:D:2117:ILE:HD11	1.99	0.44
1:D:1829:LEU:HG	1:D:1912:TYR:CE2	2.53	0.44
1:D:2915:PRO:HB2	1:D:2917:ILE:HG12	1.98	0.44
1:D:3248:ARG:O	1:D:3251:GLU:HB2	2.17	0.44
1:D:4268:MET:HA	1:D:4271:VAL:HG22	1.98	0.44
1:A:3242:LEU:O	1:A:3246:MET:HG2	2.16	0.44
1:B:304:LYS:HB3	1:B:317:MET:O	2.17	0.44
1:B:3287:ASN:O	1:B:3290:ILE:HG12	2.17	0.44
1:B:4743:LEU:HD12	1:C:4779:TYR:CD2	2.52	0.44
1:B:4898:PHE:O	1:B:4904:GLY:HA3	2.16	0.44
1:C:448:PRO:HB2	1:C:451:SER:HB2	1.99	0.44
1:C:900:LEU:HD22	1:C:902:TRP:NE1	2.32	0.44
1:C:2914:THR:N	1:C:2915:PRO:HD2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3317:THR:H	1:C:3320:LEU:HD13	1.82	0.44
1:C:4113:THR:HA	1:C:4116:GLN:HB2	1.99	0.44
1:C:4622:SER:HB2	1:C:4632:ARG:NH2	2.28	0.44
1:C:4708:TRP:O	1:C:4712:VAL:HG12	2.17	0.44
1:C:4840:GLU:O	1:C:4844:ILE:HG12	2.16	0.44
1:D:882:ARG:HH21	1:D:937:LEU:HD22	1.81	0.44
1:D:1220:ASP:O	1:D:1223:THR:OG1	2.28	0.44
1:D:1685:LEU:HB3	1:D:1706:LEU:HD12	1.98	0.44
1:D:3274:ASN:HA	1:D:3277:LEU:HG	1.99	0.44
1:D:3312:PRO:HB2	1:D:3316:LYS:NZ	2.32	0.44
1:D:3774:GLN:NE2	1:D:3845:LEU:O	2.49	0.44
1:D:4113:THR:HA	1:D:4116:GLN:HB2	1.99	0.44
1:A:253:GLY:O	1:A:257:ARG:HG2	2.17	0.44
1:A:964:MET:O	1:A:980:PRO:HD2	2.17	0.44
1:A:3311:LYS:H	1:A:3314:LEU:HD21	1.82	0.44
1:B:270:HIS:CE1	1:B:491:GLU:HG3	2.53	0.44
1:B:865:ILE:HG23	1:B:865:ILE:O	2.16	0.44
1:B:877:HIS:CE1	1:B:878:LEU:HG	2.53	0.44
1:B:3235:MET:HA	1:B:3239:LEU:HD22	1.99	0.44
1:B:3311:LYS:H	1:B:3314:LEU:HD21	1.82	0.44
1:B:4254:THR:HA	1:B:4257:ARG:HG2	1.98	0.44
1:B:4862:ILE:HG21	1:C:4852:PHE:HE1	1.82	0.44
1:C:1685:LEU:HB3	1:C:1706:LEU:HD12	1.98	0.44
1:C:3242:LEU:O	1:C:3246:MET:HG2	2.16	0.44
1:C:4496:ALA:HB1	1:C:4593:LEU:HD13	1.98	0.44
1:D:304:LYS:HB3	1:D:317:MET:O	2.17	0.44
1:D:2126:ILE:HG12	1:D:2142:MET:HG3	1.99	0.44
1:A:1685:LEU:HB3	1:A:1706:LEU:HD12	1.98	0.44
1:A:2927:GLN:HA	1:A:3003:MET:HE3	1.99	0.44
1:A:3317:THR:H	1:A:3320:LEU:HD13	1.82	0.44
1:A:4137:GLU:HG2	1:A:4147:ARG:HD3	1.99	0.44
1:B:246:THR:HG21	1:B:267:VAL:HG21	2.00	0.44
1:B:552:SER:HB2	1:B:588:ILE:HD12	1.99	0.44
1:B:2914:THR:N	1:B:2915:PRO:HD2	2.33	0.44
1:B:3008:PHE:CE2	1:B:3057:LEU:HD13	2.53	0.44
1:C:964:MET:O	1:C:980:PRO:HD2	2.17	0.44
1:C:1415:ASP:OD2	1:C:1559:ARG:NH2	2.41	0.44
1:C:2127:ARG:O	1:C:2130:LEU:HB2	2.18	0.44
1:C:2669:LEU:HD23	1:C:2669:LEU:HA	1.83	0.44
1:C:2939:TYR:CZ	1:C:2943:PHE:CE2	3.05	0.44
1:C:3214:LEU:HD13	1:C:3242:LEU:HD21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:514:PHE:CD2	1:D:526:TRP:HB2	2.53	0.44
1:D:658:ASN:HB2	1:D:833:LYS:H	1.82	0.44
1:D:758:CYS:HB3	1:D:819:TYR:CE2	2.51	0.44
1:D:3287:ASN:O	1:D:3290:ILE:HG12	2.17	0.44
1:A:552:SER:HB2	1:A:588:ILE:HD12	1.99	0.44
1:A:1217:PHE:CE2	1:A:1249:MET:HE1	2.53	0.44
1:A:1415:ASP:N	1:A:1415:ASP:OD1	2.48	0.44
1:A:1795:LEU:HD12	1:A:1795:LEU:HA	1.87	0.44
1:A:2150:MET:CE	1:A:2199:PHE:HA	2.43	0.44
1:A:2914:THR:N	1:A:2915:PRO:HD2	2.33	0.44
1:A:4708:TRP:O	1:A:4712:VAL:HG12	2.17	0.44
1:B:253:GLY:O	1:B:257:ARG:HG2	2.17	0.44
1:B:2680:TYR:O	1:B:2683:SER:N	2.50	0.44
1:B:2720:PHE:CZ	1:B:2896:LEU:HD23	2.52	0.44
1:B:3324:GLU:HG2	1:B:3327:LYS:HE3	2.00	0.44
1:C:119:ILE:HD13	1:C:162:ILE:HD11	2.00	0.44
1:C:2623:LEU:HD23	1:C:2625:GLY:N	2.32	0.44
1:C:3803:LEU:HB3	1:C:3888:PHE:CE2	2.52	0.44
1:C:4041:GLY:HA3	1:C:4080:TYR:HE1	1.82	0.44
1:C:4088:HIS:HA	1:C:4091:ALA:HB3	1.99	0.44
1:C:4782:THR:HG22	1:C:4816:HIS:ND1	2.33	0.44
1:D:692:HIS:H	1:D:795:SER:HB3	1.83	0.44
1:D:2127:ARG:O	1:D:2130:LEU:HB2	2.18	0.44
1:D:2541:HIS:HB3	1:D:2544:LEU:HB3	2.00	0.44
1:D:2623:LEU:HD23	1:D:2625:GLY:N	2.33	0.44
1:D:3008:PHE:CE2	1:D:3057:LEU:HD13	2.53	0.44
1:D:4038:ASP:OD1	1:D:4038:ASP:N	2.51	0.44
1:D:4266:LYS:HB3	1:D:4266:LYS:HE3	1.71	0.44
1:A:3248:ARG:O	1:A:3251:GLU:HB2	2.17	0.44
1:A:4782:THR:HG22	1:A:4816:HIS:ND1	2.33	0.44
1:B:1119:ARG:HE	1:B:1201:PHE:HE1	1.64	0.44
1:B:1706:LEU:HD21	1:B:1787:LEU:HD21	2.00	0.44
1:B:2893:LEU:HD23	1:B:2896:LEU:HD12	1.98	0.44
1:C:1119:ARG:HE	1:C:1201:PHE:HE1	1.64	0.44
1:C:1757:LEU:HD22	1:C:2117:ILE:HD11	1.99	0.44
1:D:2721:ILE:HG23	1:D:2775:ILE:CG2	2.46	0.44
1:D:3235:MET:HA	1:D:3239:LEU:HD22	1.99	0.44
1:D:3324:GLU:HG2	1:D:3327:LYS:HE3	2.00	0.44
1:D:3728:GLN:OE1	1:D:3770:ASN:ND2	2.49	0.44
1:A:21:VAL:HB	1:A:36:CYS:SG	2.58	0.44
1:A:692:HIS:H	1:A:795:SER:HB3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:900:LEU:HD22	1:A:902:TRP:NE1	2.32	0.44
1:A:1781:GLU:OE1	2:E:45:LYS:NZ	2.51	0.44
1:A:2499:ALA:HB1	1:A:2555:LEU:HD11	2.00	0.44
1:A:2680:TYR:O	1:A:2683:SER:N	2.50	0.44
1:A:3728:GLN:OE1	1:A:3770:ASN:ND2	2.49	0.44
1:B:2642:ARG:NH1	1:B:2924:SER:HB3	2.33	0.44
1:B:3274:ASN:HA	1:B:3277:LEU:HG	1.99	0.44
1:C:804:LEU:HD22	1:C:832:LEU:HD13	1.99	0.44
1:C:1681:ASP:HB2	1:C:1684:GLN:HG3	2.00	0.44
1:C:2344:LEU:HD22	1:C:2434:GLY:HA3	2.00	0.44
1:D:119:ILE:HD13	1:D:162:ILE:HD11	2.00	0.44
1:D:1788:LYS:HD2	1:D:1838:ASP:OD2	2.18	0.44
1:D:2344:LEU:HD22	1:D:2434:GLY:HA3	2.00	0.44
1:D:2939:TYR:CZ	1:D:2943:PHE:CE2	3.05	0.44
1:D:4782:THR:HG22	1:D:4816:HIS:ND1	2.33	0.44
1:A:270:HIS:CE1	1:A:491:GLU:HG3	2.53	0.44
1:A:434:ASP:OD2	1:A:504:ARG:NH2	2.48	0.44
1:A:579:LEU:HD22	1:A:586:LEU:HD23	2.00	0.44
1:A:1706:LEU:HD21	1:A:1787:LEU:HD21	2.00	0.44
1:A:2541:HIS:HB3	1:A:2544:LEU:HB3	2.00	0.44
1:A:2676:LEU:HD23	1:A:2676:LEU:HA	1.81	0.44
1:A:4522:VAL:HG23	1:B:4786:PHE:CZ	2.53	0.44
1:B:672:LYS:HB3	1:B:819:TYR:HA	2.00	0.44
1:B:1829:LEU:HG	1:B:1912:TYR:CE2	2.53	0.44
1:B:2406:MET:O	1:B:2410:HIS:ND1	2.45	0.44
1:B:4045:LYS:HD3	1:B:4072:THR:HG21	2.00	0.44
1:C:143:LEU:O	1:C:190:ARG:NH2	2.48	0.44
1:C:246:THR:HG21	1:C:267:VAL:HG21	2.00	0.44
1:C:270:HIS:CE1	1:C:491:GLU:HG3	2.53	0.44
1:C:865:ILE:HD12	1:C:865:ILE:HA	1.70	0.44
1:C:2721:ILE:HG23	1:C:2775:ILE:CG2	2.47	0.44
1:C:2747:TYR:CD1	1:C:2755:PRO:HG3	2.51	0.44
1:C:2893:LEU:HD23	1:C:2896:LEU:HD12	1.98	0.44
1:C:3774:GLN:NE2	1:C:3845:LEU:O	2.49	0.44
1:C:4045:LYS:HD3	1:C:4072:THR:HG21	2.00	0.44
1:C:4137:GLU:HG2	1:C:4147:ARG:HD3	2.00	0.44
1:C:4254:THR:HA	1:C:4257:ARG:HG2	1.98	0.44
1:C:4279:MET:HE1	1:D:4484:ILE:O	2.18	0.44
1:C:4517:LEU:HD22	1:C:4520:TYR:CE2	2.52	0.44
1:A:119:ILE:HD13	1:A:162:ILE:HD11	2.00	0.44
1:A:1788:LYS:HD2	1:A:1838:ASP:OD2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3324:GLU:HG2	1:A:3327:LYS:HE3	1.99	0.44
1:A:4045:LYS:HD3	1:A:4072:THR:HG21	2.00	0.44
2:F:85:ALA:O	2:F:94:PRO:HB3	2.18	0.44
1:B:514:PHE:CD2	1:B:526:TRP:HB2	2.53	0.44
1:B:1788:LYS:HD2	1:B:1838:ASP:OD2	2.18	0.44
1:B:3282:LYS:HE3	1:B:3282:LYS:HB3	1.79	0.44
1:B:4088:HIS:HA	1:B:4091:ALA:HB3	1.99	0.44
1:C:877:HIS:CE1	1:C:878:LEU:HG	2.53	0.44
1:C:2499:ALA:HB1	1:C:2555:LEU:HD11	2.00	0.44
1:C:4268:MET:HA	1:C:4271:VAL:HG22	1.99	0.44
1:C:4896:ASP:O	1:C:4900:THR:HG23	2.18	0.44
1:D:672:LYS:HB3	1:D:819:TYR:HA	2.00	0.44
1:D:2914:THR:N	1:D:2915:PRO:HD2	2.33	0.44
1:D:3701:ASP:OD2	1:D:3727:GLN:NE2	2.48	0.44
1:A:672:LYS:HB3	1:A:819:TYR:HA	2.00	0.43
1:A:2747:TYR:CD1	1:A:2755:PRO:HG3	2.52	0.43
1:A:4091:ALA:C	1:A:4093:ASP:H	2.22	0.43
1:B:579:LEU:HD22	1:B:586:LEU:HD23	2.00	0.43
1:B:1681:ASP:HB2	1:B:1684:GLN:HG3	2.00	0.43
1:B:2613:HIS:NE2	1:B:2621:TYR:OH	2.37	0.43
1:B:4782:THR:HG22	1:B:4816:HIS:ND1	2.33	0.43
1:C:434:ASP:OD2	1:C:504:ARG:NH2	2.48	0.43
1:C:3248:ARG:O	1:C:3251:GLU:HB2	2.17	0.43
1:D:499:LEU:HD22	1:D:557:TRP:CZ3	2.53	0.43
1:D:900:LEU:HD22	1:D:902:TRP:NE1	2.33	0.43
1:D:1681:ASP:HB2	1:D:1684:GLN:HG3	2.00	0.43
1:D:2613:HIS:NE2	1:D:2621:TYR:OH	2.37	0.43
1:D:2681:MET:CG	1:D:2682:GLU:H	2.30	0.43
1:D:4896:ASP:O	1:D:4900:THR:HG23	2.18	0.43
1:A:1108:VAL:HB	1:A:1212:VAL:HB	2.00	0.43
1:A:2669:LEU:HD23	1:A:2669:LEU:HA	1.83	0.43
1:A:4752:THR:HG21	1:B:4766:GLN:HG2	2.00	0.43
2:E:26:HIS:HD2	2:E:41:ARG:NH1	2.16	0.43
2:G:78:THR:OG1	2:G:80:ASP:OD2	2.32	0.43
2:H:85:ALA:O	2:H:94:PRO:HB3	2.18	0.43
1:B:141:ASP:O	1:B:143:LEU:N	2.51	0.43
1:B:309:MET:HG2	1:B:312:LYS:NZ	2.33	0.43
1:B:658:ASN:HB2	1:B:833:LYS:H	1.82	0.43
1:B:804:LEU:HD22	1:B:832:LEU:HD13	1.99	0.43
1:B:2127:ARG:O	1:B:2130:LEU:HB2	2.18	0.43
1:B:2676:LEU:HD23	1:B:2676:LEU:HA	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3312:PRO:HB2	1:B:3316:LYS:NZ	2.32	0.43
1:C:1788:LYS:HD2	1:C:1838:ASP:OD2	2.18	0.43
1:C:2585:MET:O	1:C:2585:MET:HG3	2.18	0.43
1:C:2676:LEU:HA	1:C:2676:LEU:HD23	1.81	0.43
1:C:2769:GLU:OE1	1:C:2772:ARG:NH1	2.43	0.43
1:C:3008:PHE:CE2	1:C:3057:LEU:HD13	2.53	0.43
1:C:4038:ASP:N	1:C:4038:ASP:OD1	2.51	0.43
1:D:4088:HIS:HA	1:D:4091:ALA:HB3	1.99	0.43
1:D:4898:PHE:HA	1:D:4959:ARG:NH2	2.33	0.43
1:A:1481:LYS:HE3	1:A:1481:LYS:HB3	1.70	0.43
1:A:2127:ARG:O	1:A:2130:LEU:HB2	2.18	0.43
1:A:3008:PHE:CE2	1:A:3057:LEU:HD13	2.53	0.43
1:A:3287:ASN:O	1:A:3290:ILE:HG12	2.17	0.43
1:B:648:LEU:HD23	1:B:648:LEU:HA	1.87	0.43
1:B:4137:GLU:HG2	1:B:4147:ARG:HD3	1.99	0.43
1:B:4896:ASP:O	1:B:4900:THR:HG23	2.18	0.43
1:C:514:PHE:CD2	1:C:526:TRP:HB2	2.53	0.43
1:C:648:LEU:HD23	1:C:648:LEU:HA	1.88	0.43
1:C:972:LEU:HD23	1:C:972:LEU:H	1.84	0.43
1:C:2607:LEU:HD21	1:C:2665:ALA:HA	2.00	0.43
1:D:21:VAL:HB	1:D:36:CYS:SG	2.58	0.43
1:D:964:MET:O	1:D:980:PRO:HD2	2.17	0.43
1:D:2499:ALA:HB1	1:D:2555:LEU:HD11	2.00	0.43
1:A:37:LEU:HD13	1:A:203:VAL:HG21	2.00	0.43
1:A:877:HIS:CE1	1:A:878:LEU:HG	2.52	0.43
1:A:2572:CYS:O	1:A:2576:ILE:HG12	2.19	0.43
2:G:85:ALA:O	2:G:94:PRO:HB3	2.17	0.43
1:B:21:VAL:HB	1:B:36:CYS:SG	2.58	0.43
1:B:119:ILE:HD13	1:B:162:ILE:HD11	2.00	0.43
1:B:2747:TYR:CD1	1:B:2755:PRO:HG3	2.51	0.43
1:B:4898:PHE:HD1	1:B:4959:ARG:HH22	1.67	0.43
1:C:499:LEU:HD22	1:C:557:TRP:CZ3	2.53	0.43
1:C:692:HIS:H	1:C:795:SER:HB3	1.83	0.43
1:C:3192:ARG:HG2	1:C:3193:ALA:N	2.33	0.43
1:C:4898:PHE:HD1	1:C:4959:ARG:NH2	2.17	0.43
1:D:552:SER:HB2	1:D:588:ILE:HD12	1.99	0.43
1:D:877:HIS:CE1	1:D:878:LEU:HG	2.52	0.43
1:D:2580:LEU:O	1:D:2616:ARG:NH2	2.52	0.43
1:D:2927:GLN:HA	1:D:3003:MET:HE3	1.99	0.43
1:D:4041:GLY:HA3	1:D:4080:TYR:HE1	1.82	0.43
1:D:4622:SER:HB2	1:D:4632:ARG:NH2	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:514:PHE:CD2	1:A:526:TRP:HB2	2.53	0.43
1:A:3235:MET:HA	1:A:3239:LEU:HD22	1.99	0.43
1:A:4107:GLU:OE1	1:A:4149:TYR:OH	2.30	0.43
2:F:7:THR:HG22	2:F:71:GLN:NE2	2.34	0.43
1:B:26:ALA:O	1:B:33:GLN:N	2.42	0.43
1:B:694:ARG:HG2	1:B:728:ASP:HB3	2.01	0.43
1:B:4041:GLY:HA3	1:B:4080:TYR:HE1	1.82	0.43
1:B:4898:PHE:HD1	1:B:4959:ARG:NH2	2.17	0.43
1:C:1481:LYS:HE3	1:C:1481:LYS:HB3	1.70	0.43
1:C:1598:ARG:NH2	1:C:1601:ASN:OD1	2.49	0.43
1:C:1829:LEU:HG	1:C:1912:TYR:CE2	2.52	0.43
1:C:2541:HIS:HB3	1:C:2544:LEU:HB3	2.00	0.43
1:C:2580:LEU:O	1:C:2616:ARG:NH2	2.52	0.43
1:C:3235:MET:HA	1:C:3239:LEU:HD22	1.99	0.43
1:C:3246:MET:HE1	1:C:3280:ILE:HD12	2.00	0.43
1:C:4898:PHE:HA	1:C:4959:ARG:NH2	2.33	0.43
1:D:270:HIS:CE1	1:D:491:GLU:HG3	2.53	0.43
1:D:1427:TYR:HB2	1:D:1563:VAL:HG11	2.01	0.43
1:D:1522:ALA:N	1:D:1525:LYS:O	2.44	0.43
1:D:2642:ARG:NH1	1:D:2924:SER:HB3	2.33	0.43
1:D:4091:ALA:C	1:D:4093:ASP:H	2.22	0.43
1:D:4898:PHE:HD1	1:D:4959:ARG:HH22	1.67	0.43
1:A:499:LEU:HD22	1:A:557:TRP:CZ3	2.53	0.43
1:A:2245:ALA:HA	1:A:2248:MET:HE3	1.99	0.43
1:A:2580:LEU:O	1:A:2616:ARG:NH2	2.52	0.43
1:A:3312:PRO:HB2	1:A:3316:LYS:NZ	2.32	0.43
1:A:4088:HIS:HA	1:A:4091:ALA:HB3	1.99	0.43
1:A:4898:PHE:HD1	1:A:4959:ARG:HH22	1.67	0.43
1:B:574:VAL:O	1:B:578:VAL:HG23	2.19	0.43
1:B:1043:LYS:HG2	1:B:1047:LYS:HZ1	1.83	0.43
1:B:2681:MET:CG	1:B:2682:GLU:H	2.30	0.43
1:C:1427:TYR:HB2	1:C:1563:VAL:HG11	2.01	0.43
1:C:2642:ARG:NH1	1:C:2924:SER:HB3	2.33	0.43
1:C:4625:ASP:OD1	1:C:4625:ASP:N	2.47	0.43
1:C:4648:PHE:HA	1:C:4651:ARG:NH1	2.34	0.43
1:D:448:PRO:HB2	1:D:451:SER:HB2	1.99	0.43
1:D:555:LEU:HD21	1:D:578:VAL:HG11	2.01	0.43
1:D:579:LEU:HD22	1:D:586:LEU:HD23	2.00	0.43
1:A:2344:LEU:HD22	1:A:2434:GLY:HA3	2.00	0.43
1:A:4136:ILE:HG12	1:A:4150:PHE:HE1	1.84	0.43
1:A:4896:ASP:O	1:A:4900:THR:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:7:THR:HG22	2:E:71:GLN:NE2	2.33	0.43
2:F:26:HIS:HD2	2:F:41:ARG:NH1	2.16	0.43
1:B:499:LEU:HD22	1:B:557:TRP:CZ3	2.53	0.43
1:B:2939:TYR:CE2	1:B:2943:PHE:HE2	2.37	0.43
1:C:552:SER:HB2	1:C:588:ILE:HD12	1.99	0.43
1:C:1043:LYS:O	1:C:1047:LYS:HG3	2.19	0.43
1:C:2572:CYS:O	1:C:2576:ILE:HG12	2.19	0.43
1:C:2939:TYR:CE2	1:C:2943:PHE:HE2	2.37	0.43
1:C:3715:GLU:O	1:C:3719:MET:HG2	2.19	0.43
1:D:246:THR:HG21	1:D:267:VAL:HG21	2.00	0.43
1:D:434:ASP:OD2	1:D:504:ARG:NH2	2.48	0.43
1:D:574:VAL:O	1:D:578:VAL:HG23	2.19	0.43
1:D:3192:ARG:HG2	1:D:3193:ALA:N	2.33	0.43
1:D:4137:GLU:HG2	1:D:4147:ARG:HD3	1.99	0.43
1:D:4630:TRP:CD1	1:D:4708:TRP:CD1	3.07	0.43
1:A:246:THR:HG21	1:A:267:VAL:HG21	2.00	0.43
1:A:2642:ARG:NH1	1:A:2924:SER:HB3	2.33	0.43
1:A:3055:SER:HA	1:A:3058:ARG:HG2	2.01	0.43
1:A:4519:PHE:HB2	1:A:4568:MET:CE	2.49	0.43
1:A:4898:PHE:HA	1:A:4959:ARG:NH2	2.33	0.43
1:B:1893:LEU:O	1:B:1898:LEU:HD11	2.19	0.43
1:B:2344:LEU:HD22	1:B:2434:GLY:HA3	2.00	0.43
1:B:3699:CYS:HB2	1:B:3764:ALA:HB1	2.00	0.43
1:B:4208:GLU:HB2	1:B:4492:LEU:HD11	2.01	0.43
1:C:309:MET:HG2	1:C:312:LYS:NZ	2.33	0.43
1:C:1706:LEU:HD21	1:C:1787:LEU:HD21	2.00	0.43
1:C:1893:LEU:O	1:C:1898:LEU:HD11	2.19	0.43
1:C:4297:PHE:O	1:C:4299:ALA:N	2.44	0.43
1:C:4516:ILE:HG23	1:C:4568:MET:HE2	2.01	0.43
1:C:4641:PRO:HG2	1:C:4647:LYS:HA	2.01	0.43
1:C:4898:PHE:HD1	1:C:4959:ARG:HH22	1.66	0.43
1:D:694:ARG:HG2	1:D:728:ASP:HB3	2.01	0.43
1:D:1043:LYS:O	1:D:1047:LYS:HG3	2.19	0.43
1:D:2585:MET:HG3	1:D:2585:MET:O	2.18	0.43
1:A:11:ILE:HD12	1:A:176:ARG:HE	1.84	0.43
1:A:694:ARG:HG2	1:A:728:ASP:HB3	2.01	0.43
1:A:1757:LEU:HD22	1:A:2117:ILE:HD11	1.99	0.43
1:A:1893:LEU:O	1:A:1898:LEU:HD11	2.19	0.43
1:A:2939:TYR:CE2	1:A:2943:PHE:HE2	2.37	0.43
1:B:311:ASP:OD1	1:B:312:LYS:N	2.52	0.43
1:B:692:HIS:H	1:B:795:SER:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2157:GLN:O	1:B:3615:ARG:NH2	2.44	0.43
1:B:2580:LEU:O	1:B:2616:ARG:NH2	2.52	0.43
1:B:3055:SER:HA	1:B:3058:ARG:HG2	2.01	0.43
1:B:4648:PHE:HA	1:B:4651:ARG:NH1	2.34	0.43
1:C:37:LEU:HD13	1:C:203:VAL:HG21	2.00	0.43
1:C:574:VAL:O	1:C:578:VAL:HG23	2.19	0.43
1:C:1108:VAL:HB	1:C:1212:VAL:HB	2.00	0.43
1:C:1505:LEU:HG	1:C:1523:ASN:HD21	1.84	0.43
1:C:3124:GLU:HG2	1:C:3187:LYS:HD3	2.01	0.43
1:C:3274:ASN:HA	1:C:3277:LEU:HG	1.99	0.43
1:C:3311:LYS:H	1:C:3314:LEU:HD21	1.82	0.43
1:C:3699:CYS:HB2	1:C:3764:ALA:HB1	2.00	0.43
1:C:4748:MET:HA	1:C:4754:ARG:HG3	2.01	0.43
1:D:1706:LEU:HD21	1:D:1787:LEU:HD21	2.00	0.43
1:D:2572:CYS:O	1:D:2576:ILE:HG12	2.19	0.43
1:D:3124:GLU:HG2	1:D:3187:LYS:HD3	2.01	0.43
1:D:4641:PRO:HG2	1:D:4647:LYS:HA	2.01	0.43
1:A:1681:ASP:HB2	1:A:1684:GLN:HG3	2.00	0.43
1:A:2413:LYS:O	1:A:2417:ILE:HD12	2.19	0.43
1:A:2607:LEU:HD21	1:A:2665:ALA:HA	2.00	0.43
1:A:3986:LEU:HD23	1:A:3986:LEU:HA	1.91	0.43
2:H:7:THR:HG22	2:H:71:GLN:NE2	2.34	0.43
2:H:26:HIS:HD2	2:H:41:ARG:NH1	2.16	0.43
1:B:1108:VAL:HB	1:B:1212:VAL:HB	2.00	0.43
1:B:1889:PRO:HB2	1:B:1890:LYS:H	1.65	0.43
1:B:2413:LYS:O	1:B:2417:ILE:HD12	2.19	0.43
1:B:2541:HIS:HB3	1:B:2544:LEU:HB3	2.00	0.43
1:B:2572:CYS:O	1:B:2576:ILE:HG12	2.19	0.43
1:B:3192:ARG:HG2	1:B:3193:ALA:N	2.33	0.43
1:B:3728:GLN:OE1	1:B:3770:ASN:ND2	2.49	0.43
1:B:4136:ILE:HG12	1:B:4150:PHE:HE1	1.84	0.43
1:D:972:LEU:HD23	1:D:972:LEU:H	1.84	0.43
1:D:996:VAL:CG1	1:D:1050:LEU:HB3	2.49	0.43
1:D:1108:VAL:HB	1:D:1212:VAL:HB	2.00	0.43
1:D:1505:LEU:HG	1:D:1523:ASN:HD21	1.84	0.43
1:D:1825:PHE:CE1	1:D:1842:ILE:HG12	2.54	0.43
1:D:1893:LEU:O	1:D:1898:LEU:HD11	2.19	0.43
1:D:3010:LYS:HA	1:D:3013:VAL:HG12	2.01	0.43
1:D:4648:PHE:HA	1:D:4651:ARG:NH1	2.34	0.43
1:A:291:TRP:CZ2	1:A:354:ILE:HG13	2.54	0.42
1:A:574:VAL:O	1:A:578:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4648:PHE:HA	1:A:4651:ARG:NH1	2.34	0.42
1:B:11:ILE:HD12	1:B:176:ARG:HE	1.84	0.42
1:B:237:LEU:HD22	1:B:241:MET:SD	2.59	0.42
1:B:291:TRP:CZ2	1:B:354:ILE:HG13	2.54	0.42
1:B:1678:SER:HB2	1:B:1768:PHE:CE2	2.54	0.42
1:B:3246:MET:HE1	1:B:3280:ILE:HD12	2.01	0.42
1:B:4630:TRP:CD1	1:B:4708:TRP:CD1	3.07	0.42
1:B:4898:PHE:HA	1:B:4959:ARG:NH2	2.33	0.42
1:C:291:TRP:CZ2	1:C:354:ILE:HG13	2.54	0.42
1:C:2100:ARG:HH12	1:C:3686:PHE:HZ	1.67	0.42
1:C:4136:ILE:HG12	1:C:4150:PHE:HE1	1.84	0.42
1:D:309:MET:HG2	1:D:312:LYS:NZ	2.33	0.42
1:D:1889:PRO:HB2	1:D:1890:LYS:H	1.65	0.42
1:D:2607:LEU:HD21	1:D:2665:ALA:HA	2.00	0.42
1:D:2683:SER:OG	1:D:2921:PHE:O	2.31	0.42
1:D:3311:LYS:H	1:D:3314:LEU:HD21	1.82	0.42
1:D:4569:GLU:HB3	1:D:4570:PRO:HD3	2.02	0.42
1:A:237:LEU:HD22	1:A:241:MET:SD	2.59	0.42
1:A:882:ARG:NH2	1:A:933:LEU:HB2	2.34	0.42
1:A:1825:PHE:CE1	1:A:1842:ILE:HG12	2.54	0.42
1:A:3715:GLU:O	1:A:3719:MET:HG2	2.19	0.42
1:A:3889:TYR:HD1	1:A:3954:MET:CE	2.32	0.42
1:B:1043:LYS:O	1:B:1047:LYS:HG3	2.19	0.42
1:B:1505:LEU:HG	1:B:1523:ASN:HD21	1.84	0.42
1:B:3715:GLU:O	1:B:3719:MET:HG2	2.19	0.42
1:B:4091:ALA:C	1:B:4093:ASP:H	2.22	0.42
1:C:579:LEU:HD22	1:C:586:LEU:HD23	2.00	0.42
1:C:769:ARG:HG2	1:C:774:PRO:HA	2.01	0.42
1:C:996:VAL:CG1	1:C:1050:LEU:HB3	2.49	0.42
1:C:2229:LEU:HB3	1:C:2297:ARG:HD3	2.01	0.42
1:C:2413:LYS:O	1:C:2417:ILE:HD12	2.19	0.42
1:C:2917:ILE:HG13	1:C:2918:GLU:N	2.34	0.42
1:D:237:LEU:HD22	1:D:241:MET:SD	2.59	0.42
1:D:2100:ARG:HH12	1:D:3686:PHE:HZ	1.67	0.42
1:D:3699:CYS:HB2	1:D:3764:ALA:HB1	2.00	0.42
1:A:2917:ILE:HG13	1:A:2918:GLU:N	2.34	0.42
1:A:3189:SER:OG	1:A:3191:GLU:OE1	2.37	0.42
1:A:4748:MET:HA	1:A:4754:ARG:HG3	2.01	0.42
1:A:4898:PHE:HD1	1:A:4959:ARG:NH2	2.17	0.42
1:B:434:ASP:OD2	1:B:504:ARG:NH2	2.48	0.42
1:B:939:THR:O	1:B:943:LEU:HG	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1825:PHE:CE1	1:B:1842:ILE:HG12	2.54	0.42
1:B:3889:TYR:HD1	1:B:3954:MET:CE	2.32	0.42
1:B:4038:ASP:OD1	1:B:4038:ASP:N	2.51	0.42
1:B:4748:MET:HA	1:B:4754:ARG:HG3	2.01	0.42
1:C:141:ASP:O	1:C:143:LEU:N	2.51	0.42
1:C:694:ARG:HG2	1:C:728:ASP:HB3	2.01	0.42
1:C:2150:MET:CE	1:C:2199:PHE:HA	2.43	0.42
1:C:2681:MET:CG	1:C:2682:GLU:H	2.30	0.42
1:C:3304:GLN:HB3	1:C:3305:PRO:HD3	2.01	0.42
1:C:4091:ALA:C	1:C:4093:ASP:H	2.22	0.42
1:D:1598:ARG:NH2	1:D:1601:ASN:OD1	2.49	0.42
1:D:2413:LYS:O	1:D:2417:ILE:HD12	2.19	0.42
1:D:3055:SER:HA	1:D:3058:ARG:HG2	2.01	0.42
1:D:4898:PHE:HD1	1:D:4959:ARG:NH2	2.17	0.42
1:A:939:THR:O	1:A:943:LEU:HG	2.20	0.42
1:A:2828:MET:HE1	1:A:2895:PHE:HD1	1.84	0.42
1:A:3192:ARG:HG2	1:A:3193:ALA:N	2.33	0.42
1:A:3304:GLN:HB3	1:A:3305:PRO:HD3	2.01	0.42
1:A:4038:ASP:OD1	1:A:4038:ASP:N	2.51	0.42
2:F:58:LYS:HA	2:F:61:GLU:HB3	2.01	0.42
1:B:732:LEU:HB3	1:B:779:PHE:CZ	2.55	0.42
1:B:769:ARG:HG2	1:B:774:PRO:HA	2.01	0.42
1:B:1785:ASP:N	1:B:1785:ASP:OD1	2.53	0.42
1:C:21:VAL:HB	1:C:36:CYS:SG	2.58	0.42
1:C:939:THR:O	1:C:943:LEU:HG	2.20	0.42
1:C:3167:PRO:CA	1:C:3248:ARG:HH12	2.26	0.42
1:C:4272:LYS:HG2	1:D:4480:PHE:HZ	1.85	0.42
1:C:4519:PHE:HB2	1:C:4568:MET:CE	2.49	0.42
1:D:734:SER:O	1:D:1482:ARG:NH1	2.52	0.42
1:D:2939:TYR:CE2	1:D:2943:PHE:HE2	2.37	0.42
1:A:309:MET:HG2	1:A:312:LYS:NZ	2.33	0.42
1:A:311:ASP:OD1	1:A:312:LYS:N	2.52	0.42
1:A:555:LEU:HD21	1:A:578:VAL:HG11	2.01	0.42
1:A:866:PRO:HB3	1:A:1006:VAL:HG12	2.02	0.42
1:A:1043:LYS:O	1:A:1047:LYS:HG3	2.19	0.42
1:A:2157:GLN:O	1:A:3615:ARG:NH2	2.44	0.42
1:A:2285:TYR:CE1	1:A:2382:ILE:HG22	2.54	0.42
1:A:2585:MET:O	1:A:2585:MET:HG3	2.18	0.42
1:A:3889:TYR:HD1	1:A:3954:MET:HE1	1.84	0.42
1:A:4274:MET:HG3	1:A:4275:THR:N	2.35	0.42
2:G:26:HIS:HD2	2:G:41:ARG:NH1	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:882:ARG:NH2	1:B:933:LEU:HB2	2.34	0.42
1:B:1427:TYR:HB2	1:B:1563:VAL:HG11	2.01	0.42
1:B:1440:ASN:HB3	1:B:1546:GLN:HB3	2.02	0.42
1:B:1795:LEU:HD12	1:B:1795:LEU:HA	1.87	0.42
1:B:2258:ARG:HD3	1:B:2258:ARG:HA	1.77	0.42
1:B:3850:HIS:HB3	1:B:3926:GLY:HA3	2.01	0.42
1:C:237:LEU:HD22	1:C:241:MET:SD	2.59	0.42
1:C:1678:SER:HB2	1:C:1768:PHE:CE2	2.54	0.42
1:C:1957:LEU:HG	1:C:1960:ARG:CZ	2.50	0.42
1:C:3184:TYR:HD1	1:C:3201:VAL:HG12	1.85	0.42
1:C:4208:GLU:HB2	1:C:4492:LEU:HD11	2.01	0.42
1:C:4274:MET:HG3	1:C:4275:THR:N	2.35	0.42
1:D:1957:LEU:HG	1:D:1960:ARG:CZ	2.50	0.42
1:D:2285:TYR:CE1	1:D:2382:ILE:HG22	2.55	0.42
1:D:4274:MET:HG3	1:D:4275:THR:N	2.35	0.42
1:A:675:TYR:HB3	1:A:822:CYS:SG	2.60	0.42
1:A:1678:SER:HB2	1:A:1768:PHE:CE2	2.54	0.42
1:A:2179:LEU:HD23	1:A:2187:ILE:HD11	2.01	0.42
1:A:3011:LEU:HD13	1:A:3060:PHE:CD2	2.55	0.42
2:G:7:THR:HG22	2:G:71:GLN:NE2	2.34	0.42
1:B:548:CYS:SG	1:B:578:VAL:HA	2.60	0.42
1:B:1594:VAL:O	1:B:1594:VAL:HG13	2.20	0.42
1:B:2285:TYR:CE1	1:B:2382:ILE:HG22	2.55	0.42
1:B:2491:GLY:O	1:B:2494:PRO:HD2	2.20	0.42
1:B:2607:LEU:HD21	1:B:2665:ALA:HA	2.00	0.42
1:B:2769:GLU:OE1	1:B:2772:ARG:NH1	2.43	0.42
1:B:4569:GLU:HB3	1:B:4570:PRO:HD3	2.01	0.42
1:B:4622:SER:HB2	1:B:4632:ARG:NH2	2.28	0.42
1:C:311:ASP:OD1	1:C:312:LYS:N	2.52	0.42
1:C:672:LYS:HB3	1:C:819:TYR:HA	2.00	0.42
1:C:866:PRO:HB3	1:C:1006:VAL:HG12	2.02	0.42
1:C:2285:TYR:CE1	1:C:2382:ILE:HG22	2.55	0.42
1:C:3850:HIS:HB3	1:C:3926:GLY:HA3	2.01	0.42
1:C:3889:TYR:HD1	1:C:3954:MET:CE	2.32	0.42
1:D:311:ASP:OD1	1:D:312:LYS:N	2.52	0.42
1:D:548:CYS:SG	1:D:578:VAL:HA	2.60	0.42
1:D:866:PRO:HB3	1:D:1006:VAL:HG12	2.02	0.42
1:D:1217:PHE:CE2	1:D:1249:MET:HE1	2.54	0.42
1:D:3011:LEU:HD13	1:D:3060:PHE:CD2	2.55	0.42
1:D:3184:TYR:HD1	1:D:3201:VAL:HG12	1.85	0.42
1:D:4045:LYS:HD3	1:D:4072:THR:HG21	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4519:PHE:HB2	1:D:4568:MET:CE	2.49	0.42
1:A:548:CYS:SG	1:A:578:VAL:HA	2.60	0.42
1:A:601:LEU:HG	1:A:610:VAL:HG11	2.02	0.42
1:A:644:LEU:HD11	1:A:1650:LEU:HD22	2.02	0.42
1:A:734:SER:O	1:A:1482:ARG:NH1	2.52	0.42
1:A:972:LEU:HD23	1:A:972:LEU:H	1.84	0.42
1:A:2939:TYR:HH	1:A:3022:PHE:HE1	1.68	0.42
1:A:4723:ALA:CB	1:D:4294:LEU:HD21	2.50	0.42
1:B:37:LEU:HD13	1:B:203:VAL:HG21	2.00	0.42
1:B:555:LEU:HD21	1:B:578:VAL:HG11	2.01	0.42
1:B:625:VAL:HG12	1:B:628:ASN:H	1.85	0.42
1:B:2067:VAL:O	1:B:2071:GLN:HG2	2.20	0.42
1:B:2743:TYR:HD1	1:B:2757:MET:HB3	1.85	0.42
1:B:4274:MET:HG3	1:B:4275:THR:N	2.35	0.42
1:C:315:LEU:HD12	1:C:315:LEU:HA	1.94	0.42
1:C:601:LEU:HG	1:C:610:VAL:HG11	2.02	0.42
1:C:1825:PHE:CE1	1:C:1842:ILE:HG12	2.54	0.42
1:C:3055:SER:HA	1:C:3058:ARG:HG2	2.01	0.42
1:D:11:ILE:HD12	1:D:176:ARG:HE	1.84	0.42
1:D:141:ASP:O	1:D:143:LEU:N	2.51	0.42
1:D:732:LEU:HB3	1:D:779:PHE:CZ	2.55	0.42
1:D:1440:ASN:HB3	1:D:1546:GLN:HB3	2.01	0.42
1:D:1785:ASP:OD1	1:D:1785:ASP:N	2.53	0.42
1:D:2950:LYS:HD2	1:D:2950:LYS:HA	1.91	0.42
1:D:3246:MET:HE1	1:D:3280:ILE:HD12	2.01	0.42
1:A:141:ASP:O	1:A:143:LEU:N	2.51	0.42
1:A:258:ARG:HD2	1:A:316:LEU:O	2.20	0.42
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.55	0.42
1:A:1598:ARG:NH2	1:A:1601:ASN:OD1	2.49	0.42
1:A:2743:TYR:HD1	1:A:2757:MET:HB3	1.85	0.42
1:A:3010:LYS:HA	1:A:3013:VAL:HG12	2.01	0.42
1:A:3184:TYR:HD1	1:A:3201:VAL:HG12	1.85	0.42
1:A:3699:CYS:HB2	1:A:3764:ALA:HB1	2.00	0.42
2:E:26:HIS:CD2	2:E:41:ARG:HG2	2.55	0.42
2:E:58:LYS:HA	2:E:61:GLU:HB3	2.01	0.42
2:G:91:VAL:HG23	1:C:640:ARG:HH22	1.84	0.42
1:B:1711:LEU:HB3	1:B:1831:MET:SD	2.60	0.42
1:B:3011:LEU:HD13	1:B:3060:PHE:CD2	2.55	0.42
1:B:4242:ARG:HA	1:B:4245:LEU:HD12	2.02	0.42
1:B:4641:PRO:HG2	1:B:4647:LYS:HA	2.01	0.42
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2067:VAL:O	1:C:2071:GLN:HG2	2.20	0.42
1:C:3010:LYS:HA	1:C:3013:VAL:HG12	2.01	0.42
1:C:3695:MET:HB3	1:C:3731:LEU:HD11	2.02	0.42
1:C:4569:GLU:HB3	1:C:4570:PRO:HD3	2.02	0.42
1:C:4630:TRP:CD1	1:C:4708:TRP:CD1	3.07	0.42
1:D:61:ASP:OD1	1:D:298:ARG:NH1	2.53	0.42
1:D:258:ARG:HD2	1:D:316:LEU:O	2.20	0.42
1:D:291:TRP:CZ2	1:D:354:ILE:HG13	2.54	0.42
1:D:644:LEU:HD11	1:D:1650:LEU:HD22	2.02	0.42
1:D:939:THR:O	1:D:943:LEU:HG	2.20	0.42
1:D:1711:LEU:HB3	1:D:1831:MET:SD	2.60	0.42
1:D:3715:GLU:O	1:D:3719:MET:HG2	2.19	0.42
1:D:4748:MET:HA	1:D:4754:ARG:HG3	2.01	0.42
1:A:996:VAL:CG1	1:A:1050:LEU:HB3	2.49	0.42
1:A:1505:LEU:HG	1:A:1523:ASN:HD21	1.84	0.42
1:A:1957:LEU:HG	1:A:1960:ARG:CZ	2.50	0.42
1:A:2623:LEU:HD23	1:A:2625:GLY:N	2.32	0.42
1:A:4480:PHE:N	1:A:4483:LYS:HE3	2.35	0.42
1:B:61:ASP:OD1	1:B:298:ARG:NH1	2.53	0.42
1:B:972:LEU:HD23	1:B:972:LEU:H	1.84	0.42
1:B:1957:LEU:HG	1:B:1960:ARG:CZ	2.50	0.42
1:B:2584:MET:HE2	1:B:2584:MET:HB3	1.83	0.42
1:B:2669:LEU:HD23	1:B:2669:LEU:HA	1.83	0.42
1:C:2383:HIS:CE1	1:C:2458:ALA:HB2	2.55	0.42
1:C:2854:LYS:HG3	1:C:2858:MET:HE1	2.01	0.42
1:D:648:LEU:HD23	1:D:648:LEU:HA	1.88	0.42
1:D:2229:LEU:HB3	1:D:2297:ARG:HD3	2.01	0.42
1:D:2771:TYR:O	1:D:2774:PRO:HD2	2.20	0.42
1:D:3850:HIS:HB3	1:D:3926:GLY:HA3	2.01	0.42
1:D:4519:PHE:HB2	1:D:4568:MET:HE1	2.02	0.42
1:A:769:ARG:HG2	1:A:774:PRO:HA	2.01	0.42
1:A:1427:TYR:HB2	1:A:1563:VAL:HG11	2.01	0.42
1:A:2383:HIS:CE1	1:A:2458:ALA:HB2	2.55	0.42
1:A:2773:TRP:HB3	1:A:2774:PRO:HD3	2.02	0.42
1:A:4242:ARG:HA	1:A:4245:LEU:HD12	2.02	0.42
1:A:4266:LYS:C	1:A:4268:MET:H	2.24	0.42
1:A:4630:TRP:CD1	1:A:4708:TRP:CD1	3.07	0.42
1:B:644:LEU:HD11	1:B:1650:LEU:HD22	2.02	0.42
1:B:996:VAL:CG1	1:B:1050:LEU:HB3	2.49	0.42
1:B:2396:ILE:HD13	1:B:2396:ILE:HA	1.96	0.42
1:B:3109:PHE:CD2	1:B:3162:PHE:HD1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3124:GLU:HG2	1:B:3187:LYS:HD3	2.01	0.42
1:C:26:ALA:O	1:C:33:GLN:N	2.42	0.42
1:C:1711:LEU:HB3	1:C:1831:MET:SD	2.60	0.42
1:C:1785:ASP:OD1	1:C:1785:ASP:N	2.53	0.42
1:C:2179:LEU:HD23	1:C:2187:ILE:HD11	2.01	0.42
1:C:3011:LEU:HD13	1:C:3060:PHE:CD2	2.55	0.42
1:C:4248:LEU:HG	1:C:4297:PHE:CE1	2.55	0.42
1:C:4266:LYS:HE3	1:C:4266:LYS:HB3	1.71	0.42
1:D:1678:SER:HB2	1:D:1768:PHE:CE2	2.54	0.42
1:D:2146:LEU:O	1:D:2150:MET:HG2	2.20	0.42
1:D:2680:TYR:O	1:D:2683:SER:N	2.50	0.42
1:D:2917:ILE:HG13	1:D:2918:GLU:N	2.34	0.42
1:D:3695:MET:HB3	1:D:3731:LEU:HD11	2.02	0.42
1:D:3878:LEU:HB2	1:D:3916:VAL:HG11	2.02	0.42
1:D:4208:GLU:HB2	1:D:4492:LEU:HD11	2.01	0.42
1:A:296:ARG:HH21	1:A:324:VAL:H	1.68	0.41
1:A:648:LEU:HD23	1:A:648:LEU:HA	1.87	0.41
1:A:1608:VAL:HG23	1:A:1619:VAL:HG12	2.02	0.41
1:A:2491:GLY:O	1:A:2494:PRO:HD2	2.20	0.41
1:A:2681:MET:CG	1:A:2682:GLU:H	2.30	0.41
2:H:58:LYS:HA	2:H:61:GLU:HB3	2.02	0.41
1:B:315:LEU:HD12	1:B:315:LEU:HA	1.94	0.41
1:B:1988:CYS:O	1:B:1993:ARG:NE	2.53	0.41
1:B:2585:MET:O	1:B:2585:MET:HG3	2.18	0.41
1:B:4519:PHE:HB2	1:B:4568:MET:CE	2.49	0.41
1:B:4822:ARG:NE	1:C:4829:ASP:OD1	2.53	0.41
1:C:565:LEU:HD12	1:C:1584:PRO:HG3	2.02	0.41
1:C:1594:VAL:HG13	1:C:1594:VAL:O	2.20	0.41
1:C:2771:TYR:O	1:C:2774:PRO:HD2	2.20	0.41
1:D:882:ARG:NH2	1:D:933:LEU:HB2	2.34	0.41
1:D:1594:VAL:O	1:D:1594:VAL:HG13	2.20	0.41
1:D:1915:ASP:HA	1:D:2090:ARG:HH22	1.86	0.41
1:D:2067:VAL:O	1:D:2071:GLN:HG2	2.20	0.41
1:D:2491:GLY:O	1:D:2494:PRO:HD2	2.20	0.41
1:D:2747:TYR:CD1	1:D:2755:PRO:HG3	2.51	0.41
1:D:3016:ARG:HA	1:D:3096:TYR:CG	2.55	0.41
1:D:3177:LYS:O	1:D:3185:ASN:ND2	2.46	0.41
1:D:4136:ILE:HG12	1:D:4150:PHE:HE1	1.84	0.41
1:A:1199:ASP:OD1	1:A:1199:ASP:N	2.53	0.41
1:A:2146:LEU:O	1:A:2150:MET:HG2	2.20	0.41
1:A:2854:LYS:HG3	1:A:2858:MET:HE1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3878:LEU:HB2	1:A:3916:VAL:HG11	2.02	0.41
1:A:4279:MET:CE	1:B:4488:GLN:HB2	2.50	0.41
1:A:4683:ARG:HG2	1:A:4685:LYS:HG2	2.02	0.41
1:B:35:LEU:HD23	1:B:49:LEU:HB3	2.02	0.41
1:B:258:ARG:HD2	1:B:316:LEU:O	2.20	0.41
1:B:884:LYS:HB3	1:B:1060:TYR:CE2	2.56	0.41
1:B:2554:ARG:HA	1:B:2554:ARG:HD2	1.90	0.41
1:B:2614:TYR:CD2	1:B:2672:VAL:HA	2.56	0.41
1:B:2917:ILE:HG13	1:B:2918:GLU:N	2.34	0.41
1:B:3184:TYR:HD1	1:B:3201:VAL:HG12	1.85	0.41
1:B:3189:SER:OG	1:B:3191:GLU:OE1	2.37	0.41
1:B:4266:LYS:C	1:B:4268:MET:H	2.24	0.41
1:C:11:ILE:HD12	1:C:176:ARG:HE	1.84	0.41
1:C:1494:MET:HE3	1:C:1505:LEU:HD12	2.01	0.41
1:C:2491:GLY:O	1:C:2494:PRO:HD2	2.20	0.41
1:C:4480:PHE:N	1:C:4483:LYS:HE3	2.35	0.41
1:D:37:LEU:HD13	1:D:203:VAL:HG21	2.00	0.41
1:D:1144:ARG:HD3	1:D:1152:TYR:HB2	2.02	0.41
1:D:2755:PRO:C	1:D:2756:LEU:HD23	2.41	0.41
1:D:2773:TRP:HB3	1:D:2774:PRO:HD3	2.02	0.41
1:D:3889:TYR:HD1	1:D:3954:MET:CE	2.32	0.41
1:D:4242:ARG:HA	1:D:4245:LEU:HD12	2.02	0.41
1:D:4248:LEU:HG	1:D:4297:PHE:CE1	2.55	0.41
1:A:2258:ARG:HA	1:A:2258:ARG:HD3	1.77	0.41
1:A:3850:HIS:HB3	1:A:3926:GLY:HA3	2.01	0.41
1:A:4208:GLU:HB2	1:A:4492:LEU:HD11	2.01	0.41
2:F:26:HIS:CD2	2:F:41:ARG:HG2	2.55	0.41
2:F:88:HIS:ND1	2:F:91:VAL:HG12	2.36	0.41
2:G:58:LYS:HA	2:G:61:GLU:HB3	2.01	0.41
1:B:601:LEU:HG	1:B:610:VAL:HG11	2.02	0.41
1:B:866:PRO:HB3	1:B:1006:VAL:HG12	2.02	0.41
1:B:2092:TYR:CE2	1:B:3640:LEU:HD13	2.56	0.41
1:B:3167:PRO:CA	1:B:3248:ARG:HH12	2.26	0.41
1:B:3659:LYS:HD2	1:B:3659:LYS:HA	1.80	0.41
1:B:3848:GLU:HA	1:B:3922:GLU:OE2	2.21	0.41
1:C:227:TYR:CG	1:C:352:SER:HB3	2.55	0.41
1:C:548:CYS:SG	1:C:578:VAL:HA	2.60	0.41
1:C:2715:GLU:OE1	1:C:2715:GLU:HA	2.21	0.41
1:C:3016:ARG:HA	1:C:3096:TYR:CG	2.55	0.41
1:C:3878:LEU:HB2	1:C:3916:VAL:HG11	2.02	0.41
1:C:4242:ARG:HA	1:C:4245:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2179:LEU:HD23	1:D:2187:ILE:HD11	2.01	0.41
1:A:137:ARG:HD2	1:A:137:ARG:O	2.21	0.41
1:A:1440:ASN:HB3	1:A:1546:GLN:HB3	2.02	0.41
1:A:2067:VAL:O	1:A:2071:GLN:HG2	2.20	0.41
1:A:2100:ARG:HH12	1:A:3686:PHE:HZ	1.67	0.41
1:A:2614:TYR:CD2	1:A:2672:VAL:HA	2.56	0.41
1:A:3109:PHE:CD2	1:A:3162:PHE:HD1	2.38	0.41
1:A:4569:GLU:HB3	1:A:4570:PRO:HD3	2.01	0.41
2:H:88:HIS:ND1	2:H:91:VAL:HG12	2.36	0.41
1:B:137:ARG:O	1:B:137:ARG:HD2	2.20	0.41
1:B:2739:ASN:HB3	1:B:2741:TRP:CD1	2.55	0.41
1:B:2771:TYR:O	1:B:2774:PRO:HD2	2.20	0.41
1:B:3304:GLN:HB3	1:B:3305:PRO:HD3	2.01	0.41
1:B:4248:LEU:HG	1:B:4297:PHE:CE1	2.55	0.41
1:C:234:LEU:HD23	1:C:275:TRP:O	2.21	0.41
1:C:555:LEU:HD21	1:C:578:VAL:HG11	2.01	0.41
1:C:734:SER:O	1:C:1482:ARG:NH1	2.52	0.41
1:C:1445:TRP:HB3	1:C:1539:LEU:HB3	2.02	0.41
1:D:565:LEU:HD12	1:D:1584:PRO:HG3	2.02	0.41
1:D:601:LEU:HG	1:D:610:VAL:HG11	2.02	0.41
1:D:1608:VAL:HG23	1:D:1619:VAL:HG12	2.02	0.41
1:D:3109:PHE:CD2	1:D:3162:PHE:HD1	2.38	0.41
1:D:3167:PRO:CA	1:D:3248:ARG:HH12	2.26	0.41
1:D:3304:GLN:HB3	1:D:3305:PRO:HD3	2.01	0.41
1:A:2715:GLU:OE1	1:A:2715:GLU:HA	2.21	0.41
1:A:2739:ASN:HB3	1:A:2741:TRP:CD1	2.55	0.41
1:A:3124:GLU:HG2	1:A:3187:LYS:HD3	2.01	0.41
1:A:3133:ILE:O	1:A:3137:LEU:HD23	2.21	0.41
1:A:4248:LEU:HG	1:A:4297:PHE:CE1	2.55	0.41
1:B:234:LEU:HD23	1:B:275:TRP:O	2.21	0.41
1:B:675:TYR:HB3	1:B:822:CYS:SG	2.60	0.41
1:B:2179:LEU:HD23	1:B:2187:ILE:HD11	2.01	0.41
1:B:2715:GLU:HA	1:B:2715:GLU:OE1	2.21	0.41
1:B:2854:LYS:HG3	1:B:2858:MET:HE1	2.03	0.41
1:B:4683:ARG:HG2	1:B:4685:LYS:HG2	2.02	0.41
1:C:675:TYR:HB3	1:C:822:CYS:SG	2.60	0.41
1:C:1915:ASP:HA	1:C:2090:ARG:HH22	1.86	0.41
1:C:2146:LEU:O	1:C:2150:MET:HG2	2.20	0.41
1:C:2614:TYR:CD2	1:C:2672:VAL:HA	2.56	0.41
1:C:3102:LEU:HB3	1:C:3103:PRO:HD3	2.02	0.41
1:D:35:LEU:HD23	1:D:49:LEU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:296:ARG:HH21	1:D:324:VAL:H	1.68	0.41
1:D:2739:ASN:HB3	1:D:2741:TRP:CD1	2.55	0.41
1:A:565:LEU:HD12	1:A:1584:PRO:HG3	2.02	0.41
1:A:578:VAL:HG12	1:A:585:ALA:HB2	2.02	0.41
1:A:625:VAL:HG12	1:A:628:ASN:H	1.85	0.41
1:A:865:ILE:HA	1:A:865:ILE:HD12	1.70	0.41
1:A:884:LYS:HB3	1:A:1060:TYR:CE2	2.55	0.41
1:A:1988:CYS:O	1:A:1993:ARG:NE	2.53	0.41
1:A:2229:LEU:HB3	1:A:2297:ARG:HD3	2.02	0.41
1:A:2322:ARG:O	1:A:2326:ARG:HG2	2.21	0.41
1:A:2406:MET:O	1:A:2410:HIS:ND1	2.45	0.41
1:A:4516:ILE:HG23	1:A:4568:MET:HE2	2.02	0.41
1:B:227:TYR:CG	1:B:352:SER:HB3	2.55	0.41
1:B:625:VAL:HG22	1:B:2133:ARG:HD3	2.03	0.41
1:B:2100:ARG:HH12	1:B:3686:PHE:HZ	1.67	0.41
1:B:3016:ARG:HA	1:B:3096:TYR:CG	2.55	0.41
1:B:4483:LYS:O	1:B:4485:ILE:N	2.52	0.41
1:C:258:ARG:HD2	1:C:316:LEU:O	2.20	0.41
1:C:2092:TYR:CE2	1:C:3640:LEU:HD13	2.56	0.41
1:C:2755:PRO:C	1:C:2756:LEU:HD23	2.41	0.41
1:C:3986:LEU:HD23	1:C:3986:LEU:HA	1.91	0.41
1:C:4165:VAL:HG13	1:C:4196:THR:HG23	2.03	0.41
1:C:4237:SER:O	1:C:4241:VAL:HG23	2.21	0.41
1:D:769:ARG:HG2	1:D:774:PRO:HA	2.01	0.41
1:D:1988:CYS:O	1:D:1993:ARG:NE	2.53	0.41
1:D:2092:TYR:CE2	1:D:3640:LEU:HD13	2.56	0.41
1:D:2870:LEU:HD21	1:D:2881:GLU:OE1	2.21	0.41
1:A:1100:ARG:CB	1:A:1236:TYR:HA	2.51	0.41
1:A:1445:TRP:HB3	1:A:1539:LEU:HB3	2.02	0.41
1:A:1711:LEU:HB3	1:A:1831:MET:SD	2.60	0.41
1:A:2290:TRP:HZ3	1:A:2391:PHE:CD2	2.39	0.41
1:A:2386:ASN:HA	1:A:2389:MET:HE2	2.01	0.41
1:A:3695:MET:HB3	1:A:3731:LEU:HD11	2.02	0.41
1:A:4641:PRO:HG2	1:A:4647:LYS:HA	2.01	0.41
2:F:83:TYR:OH	1:B:1768:PHE:O	2.27	0.41
2:G:88:HIS:ND1	2:G:91:VAL:HG12	2.36	0.41
1:B:120:LEU:HD12	1:B:120:LEU:HA	1.94	0.41
1:B:1144:ARG:HD3	1:B:1152:TYR:HB2	2.02	0.41
1:B:1171:HIS:HD2	1:B:1195:PHE:O	2.04	0.41
1:B:2773:TRP:HB3	1:B:2774:PRO:HD3	2.02	0.41
1:B:3314:LEU:H	1:B:3314:LEU:HD23	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4634:VAL:HB	1:B:4708:TRP:CD1	2.56	0.41
1:C:61:ASP:OD1	1:C:298:ARG:NH1	2.53	0.41
1:C:137:ARG:HD2	1:C:137:ARG:O	2.20	0.41
1:C:355:LYS:HD3	1:C:358:ASP:HB2	2.03	0.41
1:C:2322:ARG:O	1:C:2326:ARG:HG2	2.21	0.41
1:C:3740:VAL:HG13	1:C:3758:THR:HG22	2.03	0.41
1:D:355:LYS:HD3	1:D:358:ASP:HB2	2.03	0.41
1:D:882:ARG:NH2	1:D:937:LEU:HD22	2.36	0.41
1:D:2650:ASP:O	1:D:2654:GLN:HG2	2.21	0.41
1:D:2715:GLU:OE1	1:D:2715:GLU:HA	2.21	0.41
1:D:2743:TYR:HD1	1:D:2757:MET:HB3	1.85	0.41
1:D:3794:ALA:O	1:D:3798:GLN:OE1	2.39	0.41
1:A:61:ASP:OD1	1:A:298:ARG:NH1	2.53	0.41
1:A:668:ALA:O	1:A:1017:THR:OG1	2.36	0.41
1:A:882:ARG:NH2	1:A:937:LEU:HD22	2.36	0.41
1:A:1144:ARG:HD3	1:A:1152:TYR:HB2	2.02	0.41
1:A:1594:VAL:HG13	1:A:1594:VAL:O	2.20	0.41
1:A:1785:ASP:OD1	1:A:1785:ASP:N	2.53	0.41
1:A:2554:ARG:HA	1:A:2554:ARG:HD2	1.90	0.41
1:A:4266:LYS:HB3	1:A:4266:LYS:HE3	1.71	0.41
2:H:26:HIS:CD2	2:H:41:ARG:HG2	2.55	0.41
1:B:668:ALA:O	1:B:1017:THR:OG1	2.36	0.41
1:B:734:SER:O	1:B:1482:ARG:NH1	2.52	0.41
1:B:2383:HIS:CE1	1:B:2458:ALA:HB2	2.55	0.41
1:B:2720:PHE:HB2	1:B:2901:TYR:HE2	1.86	0.41
1:B:4480:PHE:N	1:B:4483:LYS:HE3	2.35	0.41
1:C:578:VAL:HG12	1:C:585:ALA:HB2	2.02	0.41
1:C:644:LEU:HD11	1:C:1650:LEU:HD22	2.02	0.41
1:C:674:TYR:HE1	1:C:756:SER:HB3	1.86	0.41
1:C:2739:ASN:HB3	1:C:2741:TRP:CD1	2.55	0.41
1:C:3189:SER:OG	1:C:3191:GLU:OE1	2.37	0.41
1:D:137:ARG:HD2	1:D:137:ARG:O	2.20	0.41
1:D:227:TYR:CG	1:D:352:SER:HB3	2.56	0.41
1:D:625:VAL:HG12	1:D:628:ASN:H	1.85	0.41
1:D:881:ILE:HG12	1:D:885:LEU:CD2	2.51	0.41
1:D:1664:VAL:HG23	1:D:1676:LEU:HD11	2.02	0.41
1:D:2758:LYS:NZ	1:D:2762:LEU:HB3	2.36	0.41
1:D:3122:ILE:HA	1:D:3126:VAL:CG1	2.51	0.41
1:D:3740:VAL:HG13	1:D:3758:THR:HG22	2.02	0.41
1:A:227:TYR:CG	1:A:352:SER:HB3	2.55	0.41
1:A:1437:GLU:OE1	1:A:1440:ASN:ND2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1707:ILE:O	1:A:1712:SER:N	2.54	0.41
1:A:2613:HIS:NE2	1:A:2621:TYR:OH	2.37	0.41
1:A:2650:ASP:O	1:A:2654:GLN:HG2	2.21	0.41
1:A:2755:PRO:C	1:A:2756:LEU:HD23	2.41	0.41
1:A:3016:ARG:HA	1:A:3096:TYR:CG	2.55	0.41
1:A:3102:LEU:HB3	1:A:3103:PRO:HD3	2.02	0.41
1:A:3122:ILE:HA	1:A:3126:VAL:CG1	2.51	0.41
1:A:3314:LEU:HD23	1:A:3314:LEU:H	1.86	0.41
1:A:3740:VAL:HG13	1:A:3758:THR:HG22	2.03	0.41
1:A:3794:ALA:O	1:A:3798:GLN:OE1	2.39	0.41
1:A:4599:ILE:HG21	1:A:4709:LYS:HZ3	1.86	0.41
1:A:4888:CYS:HB3	1:A:4891:CYS:SG	2.61	0.41
2:E:50:ARG:NE	2:E:53:LYS:HG3	2.25	0.41
1:B:355:LYS:HE3	1:B:355:LYS:HB2	1.97	0.41
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.56	0.41
1:B:881:ILE:HG12	1:B:885:LEU:CD2	2.51	0.41
1:B:882:ARG:NH2	1:B:937:LEU:HD22	2.36	0.41
1:B:1417:TYR:O	1:B:1421:MET:HG2	2.21	0.41
1:B:1437:GLU:OE1	1:B:1440:ASN:ND2	2.54	0.41
1:B:2322:ARG:O	1:B:2326:ARG:HG2	2.21	0.41
1:B:2772:ARG:HA	1:B:2775:ILE:HD12	2.03	0.41
1:B:3010:LYS:HA	1:B:3013:VAL:HG12	2.01	0.41
1:B:4237:SER:O	1:B:4241:VAL:HG23	2.21	0.41
1:B:4485:ILE:C	1:B:4487:TYR:N	2.75	0.41
1:B:4516:ILE:HG23	1:B:4568:MET:HE2	2.02	0.41
1:B:4888:CYS:HB3	1:B:4891:CYS:SG	2.61	0.41
1:C:625:VAL:HG22	1:C:2133:ARG:HD3	2.03	0.41
1:C:881:ILE:HG12	1:C:885:LEU:CD2	2.51	0.41
1:C:882:ARG:NH2	1:C:937:LEU:HD22	2.36	0.41
1:C:882:ARG:NH2	1:C:933:LEU:HB2	2.34	0.41
1:C:884:LYS:HB3	1:C:1060:TYR:CE2	2.56	0.41
1:C:1016:TRP:CD1	1:C:1027:ARG:HB3	2.56	0.41
1:C:1437:GLU:OE1	1:C:1440:ASN:ND2	2.54	0.41
1:C:1988:CYS:O	1:C:1993:ARG:NE	2.54	0.41
1:C:3109:PHE:CD2	1:C:3162:PHE:HD1	2.38	0.41
1:C:3277:LEU:HD13	1:C:3310:VAL:HG22	2.03	0.41
1:C:4241:VAL:O	1:C:4245:LEU:HG	2.21	0.41
1:D:234:LEU:HD23	1:D:275:TRP:O	2.21	0.41
1:D:675:TYR:HB3	1:D:822:CYS:SG	2.60	0.41
1:D:678:MET:HB2	1:D:754:VAL:HG22	2.03	0.41
1:D:1171:HIS:HD2	1:D:1195:PHE:O	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1437:GLU:OE1	1:D:1440:ASN:ND2	2.54	0.41
1:D:2322:ARG:O	1:D:2326:ARG:HG2	2.21	0.41
1:D:2383:HIS:CE1	1:D:2458:ALA:HB2	2.55	0.41
1:D:2828:MET:CE	1:D:2895:PHE:HD1	2.34	0.41
1:D:3248:ARG:HE	1:D:3248:ARG:HB2	1.69	0.41
1:D:4266:LYS:C	1:D:4268:MET:H	2.24	0.41
1:D:4480:PHE:N	1:D:4483:LYS:HE3	2.35	0.41
1:A:881:ILE:HG12	1:A:885:LEU:CD2	2.51	0.41
1:A:2092:TYR:CE2	1:A:3640:LEU:HD13	2.56	0.41
1:A:2464:HIS:O	1:A:2468:MET:HG2	2.21	0.41
1:A:2870:LEU:HD21	1:A:2881:GLU:OE1	2.21	0.41
1:A:2950:LYS:HD2	1:A:2950:LYS:HA	1.91	0.41
1:A:3848:GLU:HA	1:A:3922:GLU:OE2	2.20	0.41
1:A:4634:VAL:HB	1:A:4708:TRP:CD1	2.56	0.41
2:G:26:HIS:CD2	2:G:41:ARG:HG2	2.55	0.41
1:B:221:SER:OG	1:B:349:MET:HG3	2.21	0.41
1:B:355:LYS:HD3	1:B:358:ASP:HB2	2.03	0.41
1:B:1948:MET:O	1:B:1951:LEU:HD22	2.21	0.41
1:B:2146:LEU:O	1:B:2150:MET:HG2	2.20	0.41
1:B:2229:LEU:HB3	1:B:2297:ARG:HD3	2.02	0.41
1:B:2288:ILE:HD12	1:B:2290:TRP:NE1	2.36	0.41
1:B:2927:GLN:HA	1:B:3003:MET:HE3	2.01	0.41
1:B:3122:ILE:HA	1:B:3126:VAL:CG1	2.50	0.41
1:B:4257:ARG:O	1:B:4261:LEU:HG	2.21	0.41
1:C:221:SER:OG	1:C:349:MET:HG3	2.21	0.41
1:C:1948:MET:O	1:C:1951:LEU:HD22	2.21	0.41
1:C:2290:TRP:HZ3	1:C:2391:PHE:CD2	2.39	0.41
1:C:2680:TYR:O	1:C:2683:SER:N	2.50	0.41
1:C:2773:TRP:HB3	1:C:2774:PRO:HD3	2.02	0.41
1:C:2843:MET:HE2	1:C:2843:MET:HB2	1.79	0.41
1:C:2870:LEU:HD21	1:C:2881:GLU:OE1	2.21	0.41
1:C:4266:LYS:C	1:C:4268:MET:H	2.24	0.41
1:C:4787:ASN:HD22	1:C:4787:ASN:N	2.19	0.41
1:D:315:LEU:HD12	1:D:315:LEU:HA	1.93	0.41
1:D:1016:TRP:CD1	1:D:1027:ARG:HB3	2.56	0.41
1:D:1301:PHE:HB3	1:D:1544:PHE:CE1	2.56	0.41
1:D:1445:TRP:HB3	1:D:1539:LEU:HB3	2.02	0.41
1:D:2464:HIS:O	1:D:2468:MET:HG2	2.21	0.41
1:D:2676:LEU:HD23	1:D:2676:LEU:HA	1.81	0.41
1:D:2793:ARG:HH21	1:D:2793:ARG:HD3	1.75	0.41
1:D:3110:GLU:HG3	1:D:3161:ALA:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3173:THR:OG1	1:D:3202:GLU:HG3	2.21	0.41
1:A:355:LYS:HE3	1:A:355:LYS:HB2	1.97	0.40
1:A:1758:ARG:HA	1:A:1758:ARG:HD2	1.97	0.40
1:A:2288:ILE:HD12	1:A:2290:TRP:NE1	2.36	0.40
1:A:2758:LYS:HZ1	1:A:2762:LEU:HB3	1.85	0.40
1:A:2771:TYR:O	1:A:2774:PRO:HD2	2.20	0.40
1:A:4862:ILE:HG21	1:B:4852:PHE:CE1	2.55	0.40
2:F:50:ARG:NE	2:F:53:LYS:HG3	2.25	0.40
1:B:578:VAL:HG12	1:B:585:ALA:HB2	2.02	0.40
1:B:678:MET:HB2	1:B:754:VAL:HG22	2.03	0.40
1:B:1035:TYR:CZ	1:B:1043:LYS:HG3	2.56	0.40
1:B:1100:ARG:CB	1:B:1236:TYR:HA	2.51	0.40
1:B:1525:LYS:HE3	1:B:1525:LYS:HB2	1.97	0.40
1:B:1591:LEU:HD12	1:B:1591:LEU:HA	1.96	0.40
1:B:2870:LEU:HD21	1:B:2881:GLU:OE1	2.21	0.40
1:B:3878:LEU:HB2	1:B:3916:VAL:HG11	2.02	0.40
1:C:35:LEU:HD23	1:C:49:LEU:HB3	2.02	0.40
1:C:625:VAL:HG12	1:C:628:ASN:H	1.85	0.40
1:C:1144:ARG:HD3	1:C:1152:TYR:HB2	2.02	0.40
1:C:1301:PHE:HB3	1:C:1544:PHE:CE1	2.56	0.40
1:C:2507:LEU:HD23	1:C:2507:LEU:HA	1.91	0.40
1:C:2650:ASP:O	1:C:2654:GLN:HG2	2.21	0.40
1:C:2720:PHE:HB2	1:C:2901:TYR:HE2	1.86	0.40
1:C:2828:MET:CE	1:C:2895:PHE:HD1	2.34	0.40
1:C:3173:THR:OG1	1:C:3202:GLU:HG3	2.22	0.40
1:C:3848:GLU:HA	1:C:3922:GLU:OE2	2.20	0.40
1:D:2614:TYR:CD2	1:D:2672:VAL:HA	2.56	0.40
1:D:2849:HIS:CE1	1:D:2877:LEU:HD11	2.56	0.40
1:D:3102:LEU:HB3	1:D:3103:PRO:HD3	2.02	0.40
1:A:35:LEU:HD23	1:A:49:LEU:HB3	2.02	0.40
1:A:1256:PRO:HG2	1:A:1453:TYR:HB2	2.04	0.40
1:A:1438:PRO:O	1:A:1490:ALA:HB3	2.22	0.40
1:A:2793:ARG:HH21	1:A:2793:ARG:HD3	1.75	0.40
1:A:2849:HIS:CE1	1:A:2877:LEU:HD11	2.56	0.40
1:A:3659:LYS:HD2	1:A:3659:LYS:HA	1.80	0.40
1:A:4257:ARG:O	1:A:4261:LEU:HG	2.21	0.40
1:A:4818:TYR:OH	1:B:4843:ARG:NH1	2.44	0.40
2:E:88:HIS:ND1	2:E:91:VAL:HG12	2.36	0.40
1:B:565:LEU:HD12	1:B:1584:PRO:HG3	2.02	0.40
1:B:1301:PHE:HB3	1:B:1544:PHE:CE1	2.56	0.40
1:B:2650:ASP:O	1:B:2654:GLN:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2849:HIS:CE1	1:B:2877:LEU:HD11	2.56	0.40
1:B:3803:LEU:HD23	1:B:3830:LEU:HG	2.04	0.40
1:C:965:LYS:HA	1:C:977:LYS:HZ1	1.85	0.40
1:C:1102:TYR:HE1	1:C:1224:LEU:HD13	1.86	0.40
1:C:1760:ARG:NH2	1:C:1762:GLN:OE1	2.54	0.40
1:C:1939:ASN:C	1:C:1939:ASN:HD22	2.25	0.40
1:C:2464:HIS:O	1:C:2468:MET:HG2	2.21	0.40
1:C:2849:HIS:CE1	1:C:2877:LEU:HD11	2.56	0.40
1:C:2979:ARG:NH2	1:C:3039:THR:HA	2.37	0.40
1:C:3110:GLU:HG3	1:C:3161:ALA:HB2	2.03	0.40
1:C:3899:ASP:OD2	1:C:3901:GLN:HG2	2.22	0.40
1:C:4274:MET:HE3	1:D:4483:LYS:HD2	2.01	0.40
1:C:4485:ILE:C	1:C:4487:TYR:N	2.75	0.40
1:D:274:LEU:HD23	1:D:274:LEU:HA	1.93	0.40
1:D:834:VAL:O	1:D:1608:VAL:HG21	2.21	0.40
1:D:959:ASP:O	1:D:962:LYS:HE3	2.22	0.40
1:D:1438:PRO:O	1:D:1490:ALA:HB3	2.21	0.40
1:D:1948:MET:O	1:D:1951:LEU:HD22	2.21	0.40
1:D:2894:LYS:O	1:D:2898:ILE:HG12	2.22	0.40
1:D:2979:ARG:NH2	1:D:3039:THR:HA	2.37	0.40
1:D:4237:SER:O	1:D:4241:VAL:HG23	2.21	0.40
1:D:4634:VAL:HB	1:D:4708:TRP:CD1	2.56	0.40
1:A:184:VAL:HG22	1:A:191:TYR:CD1	2.57	0.40
1:A:234:LEU:HD23	1:A:275:TRP:O	2.21	0.40
1:A:1035:TYR:CZ	1:A:1043:LYS:HG3	2.56	0.40
1:A:1301:PHE:HB3	1:A:1544:PHE:CE1	2.56	0.40
1:A:2432:LEU:HD11	1:A:2471:PHE:HD2	1.86	0.40
1:A:2584:MET:HE2	1:A:2584:MET:HB3	1.83	0.40
1:A:2758:LYS:NZ	1:A:2762:LEU:HB3	2.36	0.40
1:A:3312:PRO:HA	1:A:3315:LEU:CG	2.48	0.40
2:G:38:ASP:HB2	1:C:1768:PHE:HD2	1.85	0.40
1:B:1048:ASP:OD1	1:B:1049:SER:N	2.55	0.40
1:B:1256:PRO:HG2	1:B:1453:TYR:HB2	2.04	0.40
1:B:1760:ARG:NH2	1:B:1762:GLN:OE1	2.54	0.40
1:B:2290:TRP:HZ3	1:B:2391:PHE:CD2	2.39	0.40
1:B:3102:LEU:HB3	1:B:3103:PRO:HD3	2.02	0.40
1:B:3627:SER:O	1:B:3631:THR:OG1	2.23	0.40
1:B:4635:ILE:HD13	1:B:4635:ILE:HA	1.94	0.40
1:C:226:GLY:HA2	1:C:356:TYR:HD2	1.86	0.40
1:C:959:ASP:O	1:C:962:LYS:HE3	2.22	0.40
1:C:2779:LEU:HA	1:C:2782:MET:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3121:LEU:O	1:C:3126:VAL:HG11	2.22	0.40
1:C:4634:VAL:HB	1:C:4708:TRP:CD1	2.56	0.40
1:C:4635:ILE:HD13	1:C:4635:ILE:HA	1.94	0.40
1:D:578:VAL:HG12	1:D:585:ALA:HB2	2.02	0.40
1:D:884:LYS:HB3	1:D:1060:TYR:CE2	2.56	0.40
1:D:1760:ARG:NH2	1:D:1762:GLN:OE1	2.54	0.40
1:D:1894:LEU:HD23	1:D:1894:LEU:HA	1.93	0.40
1:D:2502:LEU:HD13	1:D:2507:LEU:HB3	2.04	0.40
1:D:2577:CYS:SG	1:D:2609:LEU:HD11	2.62	0.40
1:D:3121:LEU:O	1:D:3126:VAL:HG11	2.22	0.40
1:D:3133:ILE:O	1:D:3137:LEU:HD23	2.21	0.40
1:D:3899:ASP:OD2	1:D:3901:GLN:HG2	2.21	0.40
1:D:4241:VAL:O	1:D:4245:LEU:HG	2.21	0.40
1:D:4257:ARG:O	1:D:4261:LEU:HG	2.21	0.40
1:A:226:GLY:HA2	1:A:356:TYR:HD2	1.86	0.40
1:A:1016:TRP:CD1	1:A:1027:ARG:HB3	2.56	0.40
1:A:1744:LYS:NZ	1:A:2002:ASP:OD1	2.54	0.40
1:A:1915:ASP:HA	1:A:2090:ARG:HH22	1.86	0.40
1:A:2933:VAL:HG11	1:A:3007:LEU:HG	2.04	0.40
1:A:3121:LEU:O	1:A:3126:VAL:HG11	2.22	0.40
1:A:4237:SER:O	1:A:4241:VAL:HG23	2.21	0.40
1:A:4609:LYS:O	1:A:4614:GLY:N	2.55	0.40
2:H:19:LYS:HA	2:H:19:LYS:CE	2.50	0.40
1:B:82:LEU:CD2	1:B:155:GLY:H	2.35	0.40
1:B:1016:TRP:CD1	1:B:1027:ARG:HB3	2.56	0.40
1:B:1664:VAL:HG23	1:B:1676:LEU:HD11	2.02	0.40
1:B:2755:PRO:C	1:B:2756:LEU:HD23	2.41	0.40
1:B:4113:THR:O	1:B:4117:THR:HG23	2.22	0.40
1:B:4165:VAL:HG13	1:B:4196:THR:HG23	2.03	0.40
1:C:75:VAL:O	1:C:78:LEU:HB3	2.22	0.40
1:C:834:VAL:O	1:C:1608:VAL:HG21	2.21	0.40
1:C:1043:LYS:HG2	1:C:1047:LYS:HZ1	1.87	0.40
1:C:1171:HIS:HD2	1:C:1195:PHE:O	2.04	0.40
1:C:2664:LEU:O	1:C:2667:PRO:HD2	2.22	0.40
1:C:3122:ILE:HA	1:C:3126:VAL:CG1	2.51	0.40
1:C:3803:LEU:HD23	1:C:3830:LEU:HG	2.04	0.40
1:C:4172:PHE:HZ	1:C:4189:PHE:HA	1.87	0.40
1:D:1256:PRO:HG2	1:D:1453:TYR:HB2	2.04	0.40
1:D:2142:MET:SD	1:D:2174:VAL:HG21	2.62	0.40
1:D:2290:TRP:HZ3	1:D:2391:PHE:CD2	2.39	0.40
1:D:2720:PHE:HB2	1:D:2901:TYR:HE2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3092:GLN:NE2	1:D:3093:ILE:HG13	2.37	0.40
1:D:3277:LEU:HD13	1:D:3310:VAL:HG22	2.03	0.40
1:D:4683:ARG:HG2	1:D:4685:LYS:HG2	2.02	0.40
1:A:82:LEU:CD2	1:A:155:GLY:H	2.35	0.40
1:A:221:SER:OG	1:A:349:MET:HG3	2.21	0.40
1:A:1900:GLU:HG2	1:A:2080:LEU:HD23	2.03	0.40
1:A:2979:ARG:NH2	1:A:3039:THR:HA	2.37	0.40
1:A:3277:LEU:HD13	1:A:3310:VAL:HG22	2.03	0.40
1:A:3899:ASP:OD2	1:A:3901:GLN:HG2	2.21	0.40
1:A:4113:THR:O	1:A:4117:THR:HG23	2.22	0.40
1:B:226:GLY:HA2	1:B:356:TYR:HD2	1.86	0.40
1:B:296:ARG:HH21	1:B:324:VAL:H	1.68	0.40
1:B:1445:TRP:HB3	1:B:1539:LEU:HB3	2.02	0.40
1:B:1608:VAL:HG23	1:B:1619:VAL:HG12	2.02	0.40
1:B:1915:ASP:HA	1:B:2090:ARG:HH22	1.85	0.40
1:B:2664:LEU:O	1:B:2667:PRO:HD2	2.22	0.40
1:B:2758:LYS:NZ	1:B:2762:LEU:HB3	2.36	0.40
1:B:3695:MET:HB3	1:B:3731:LEU:HD11	2.02	0.40
1:B:3899:ASP:OD2	1:B:3901:GLN:HG2	2.21	0.40
1:C:82:LEU:CD2	1:C:155:GLY:H	2.35	0.40
1:C:1707:ILE:O	1:C:1712:SER:N	2.54	0.40
1:C:2743:TYR:HD1	1:C:2757:MET:HB3	1.85	0.40
1:C:4609:LYS:O	1:C:4614:GLY:N	2.55	0.40
1:D:2685:TYR:C	1:D:2687:SER:N	2.74	0.40
1:D:2933:VAL:HG11	1:D:3007:LEU:HG	2.04	0.40
1:D:3848:GLU:HA	1:D:3922:GLU:OE2	2.20	0.40
1:D:4113:THR:O	1:D:4117:THR:HG23	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	4200/4967 (85%)	4001 (95%)	193 (5%)	6 (0%)	51	81
1	B	4200/4967 (85%)	4000 (95%)	194 (5%)	6 (0%)	51	81
1	C	4200/4967 (85%)	4000 (95%)	194 (5%)	6 (0%)	51	81
1	D	4200/4967 (85%)	4000 (95%)	194 (5%)	6 (0%)	51	81
2	E	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
2	F	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
2	G	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
2	H	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
All	All	17220/20300 (85%)	16405 (95%)	791 (5%)	24 (0%)	54	81

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2681	MET
1	A	2686	VAL
1	A	2915	PRO
1	B	2681	MET
1	B	2686	VAL
1	B	2915	PRO
1	C	2681	MET
1	C	2686	VAL
1	C	2915	PRO
1	D	2681	MET
1	D	2686	VAL
1	D	2915	PRO
1	A	1475	LYS
1	A	3267	ALA
1	B	1475	LYS
1	B	3267	ALA
1	C	1475	LYS
1	C	3267	ALA
1	D	1475	LYS
1	D	3267	ALA
1	A	4484	ILE
1	B	4484	ILE
1	C	4484	ILE
1	D	4484	ILE

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	3708/4358 (85%)	3660 (99%)	48 (1%)	69 82
1	B	3708/4358 (85%)	3660 (99%)	48 (1%)	69 82
1	C	3708/4358 (85%)	3659 (99%)	49 (1%)	69 82
1	D	3708/4358 (85%)	3660 (99%)	48 (1%)	69 82
2	E	88/89 (99%)	85 (97%)	3 (3%)	37 65
2	F	88/89 (99%)	85 (97%)	3 (3%)	37 65
2	G	88/89 (99%)	85 (97%)	3 (3%)	37 65
2	H	88/89 (99%)	85 (97%)	3 (3%)	37 65
All	All	15184/17788 (85%)	14979 (99%)	205 (1%)	68 82

All (205) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	28	ILE
1	A	82	LEU
1	A	272	ARG
1	A	399	MET
1	A	469	HIS
1	A	865	ILE
1	A	880	ARG
1	A	882	ARG
1	A	888	ASN
1	A	981	MET
1	A	1037	LEU
1	A	1165	MET
1	A	1249	MET
1	A	1421	MET
1	A	1721	MET
1	A	1729	MET
1	A	1939	ASN
1	A	1960	ARG
1	A	1975	MET

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Mol	Chain	Res	Type
1	A	2214	MET
1	A	2279	MET
1	A	2406	MET
1	A	2584	MET
1	A	2585	MET
1	A	2715	GLU
1	A	2735	ASP
1	A	2748	SER
1	A	2782	MET
1	A	2788	ARG
1	A	2835	ARG
1	A	2843	MET
1	A	2908	LYS
1	A	3137	LEU
1	A	3140	LEU
1	A	3159	LEU
1	A	3192	ARG
1	A	3211	LEU
1	A	3215	MET
1	A	3239	LEU
1	A	3279	ASN
1	A	3327	LYS
1	A	3689	MET
1	A	3819	MET
1	A	3956	MET
1	A	3981	MET
1	A	4052	MET
1	A	4487	TYR
1	A	4887	LYS
2	E	6	GLU
2	E	14	ARG
2	E	19	LYS
2	F	6	GLU
2	F	14	ARG
2	F	19	LYS
2	G	6	GLU
2	G	14	ARG
2	G	19	LYS
2	H	6	GLU
2	H	14	ARG
2	H	19	LYS
1	B	28	ILE

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Mol	Chain	Res	Type
1	B	82	LEU
1	B	272	ARG
1	B	399	MET
1	B	469	HIS
1	B	865	ILE
1	B	880	ARG
1	B	882	ARG
1	B	888	ASN
1	B	981	MET
1	B	1037	LEU
1	B	1165	MET
1	B	1249	MET
1	B	1421	MET
1	B	1721	MET
1	B	1729	MET
1	B	1939	ASN
1	B	1960	ARG
1	B	1975	MET
1	B	2214	MET
1	B	2279	MET
1	B	2406	MET
1	B	2584	MET
1	B	2585	MET
1	B	2715	GLU
1	B	2735	ASP
1	B	2748	SER
1	B	2782	MET
1	B	2788	ARG
1	B	2835	ARG
1	B	2843	MET
1	B	2908	LYS
1	B	3137	LEU
1	B	3140	LEU
1	B	3159	LEU
1	B	3192	ARG
1	B	3211	LEU
1	B	3215	MET
1	B	3239	LEU
1	B	3279	ASN
1	B	3327	LYS
1	B	3689	MET
1	B	3819	MET

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Mol	Chain	Res	Type
1	B	3956	MET
1	B	3981	MET
1	B	4052	MET
1	B	4487	TYR
1	B	4887	LYS
1	C	28	ILE
1	C	82	LEU
1	C	272	ARG
1	C	399	MET
1	C	469	HIS
1	C	865	ILE
1	C	880	ARG
1	C	882	ARG
1	C	888	ASN
1	C	981	MET
1	C	1037	LEU
1	C	1165	MET
1	C	1249	MET
1	C	1421	MET
1	C	1721	MET
1	C	1729	MET
1	C	1939	ASN
1	C	1960	ARG
1	C	1975	MET
1	C	2214	MET
1	C	2279	MET
1	C	2406	MET
1	C	2584	MET
1	C	2585	MET
1	C	2715	GLU
1	C	2735	ASP
1	C	2748	SER
1	C	2782	MET
1	C	2788	ARG
1	C	2835	ARG
1	C	2843	MET
1	C	2908	LYS
1	C	3137	LEU
1	C	3140	LEU
1	C	3159	LEU
1	C	3192	ARG
1	C	3211	LEU

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Mol	Chain	Res	Type
1	C	3215	MET
1	C	3239	LEU
1	C	3279	ASN
1	C	3327	LYS
1	C	3689	MET
1	C	3819	MET
1	C	3956	MET
1	C	3981	MET
1	C	4052	MET
1	C	4487	TYR
1	C	4787	ASN
1	C	4887	LYS
1	D	28	ILE
1	D	82	LEU
1	D	272	ARG
1	D	399	MET
1	D	469	HIS
1	D	865	ILE
1	D	880	ARG
1	D	882	ARG
1	D	888	ASN
1	D	981	MET
1	D	1037	LEU
1	D	1165	MET
1	D	1249	MET
1	D	1421	MET
1	D	1721	MET
1	D	1729	MET
1	D	1939	ASN
1	D	1960	ARG
1	D	1975	MET
1	D	2214	MET
1	D	2279	MET
1	D	2406	MET
1	D	2584	MET
1	D	2585	MET
1	D	2715	GLU
1	D	2735	ASP
1	D	2748	SER
1	D	2782	MET
1	D	2788	ARG
1	D	2835	ARG

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Mol	Chain	Res	Type
1	D	2843	MET
1	D	2908	LYS
1	D	3137	LEU
1	D	3140	LEU
1	D	3159	LEU
1	D	3192	ARG
1	D	3211	LEU
1	D	3215	MET
1	D	3239	LEU
1	D	3279	ASN
1	D	3327	LYS
1	D	3689	MET
1	D	3819	MET
1	D	3956	MET
1	D	3981	MET
1	D	4052	MET
1	D	4487	TYR
1	D	4887	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (23) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1014	GLN
1	A	2849	HIS
1	A	3127	GLN
1	A	3901	GLN
1	A	3949	HIS
2	E	26	HIS
2	F	26	HIS
2	G	26	HIS
2	H	26	HIS
1	B	1014	GLN
1	B	2849	HIS
1	B	3901	GLN
1	B	3949	HIS
1	C	1014	GLN
1	C	2849	HIS
1	C	3901	GLN
1	C	3949	HIS
1	D	1014	GLN
1	D	2830	ASN
1	D	2849	HIS

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Mol	Chain	Res	Type
1	D	3127	GLN
1	D	3901	GLN
1	D	3949	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 20 ligands modelled in this entry, 8 are monoatomic - leaving 12 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	$\#\|Z\| > 2$
6	XAN	B	5004	-	8,12,12	1.51	2 (25%)	4,17,17	3.26	2 (50%)
4	ATP	B	5005	-	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
4	ATP	D	5002	-	26,33,33	0.60	0	31,52,52	0.76	2 (6%)
6	XAN	C	5004	-	8,12,12	1.51	2 (25%)	4,17,17	3.25	2 (50%)
4	ATP	B	5002	-	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
4	ATP	C	5002	-	26,33,33	0.60	0	31,52,52	0.76	2 (6%)
4	ATP	C	5005	-	26,33,33	0.60	0	31,52,52	0.74	2 (6%)
4	ATP	D	5005	-	26,33,33	0.61	0	31,52,52	0.74	2 (6%)
6	XAN	A	5004	-	8,12,12	1.51	2 (25%)	4,17,17	3.27	2 (50%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	ATP	A	5002	-	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
4	ATP	A	5005	-	26,33,33	0.61	0	31,52,52	0.74	2 (6%)
6	XAN	D	5004	-	8,12,12	1.51	2 (25%)	4,17,17	3.26	2 (50%)

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
6	XAN	B	5004	-	-	-	0/2/2/2
4	ATP	B	5005	-	-	6/18/38/38	0/3/3/3
4	ATP	D	5002	-	-	7/18/38/38	0/3/3/3
6	XAN	C	5004	-	-	-	0/2/2/2
4	ATP	B	5002	-	-	7/18/38/38	0/3/3/3
4	ATP	C	5002	-	-	7/18/38/38	0/3/3/3
4	ATP	C	5005	-	-	6/18/38/38	0/3/3/3
4	ATP	D	5005	-	-	6/18/38/38	0/3/3/3
6	XAN	A	5004	-	-	-	0/2/2/2
4	ATP	A	5002	-	-	7/18/38/38	0/3/3/3
4	ATP	A	5005	-	-	6/18/38/38	0/3/3/3
6	XAN	D	5004	-	-	-	0/2/2/2

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	5004	XAN	C5-C4	-2.65	1.33	1.40
6	B	5004	XAN	C5-C4	-2.65	1.33	1.40
6	C	5004	XAN	C5-C4	-2.64	1.33	1.40
6	A	5004	XAN	C5-C4	-2.64	1.33	1.40
6	A	5004	XAN	O6-C6	-2.24	1.18	1.24
6	D	5004	XAN	O6-C6	-2.23	1.18	1.24
6	B	5004	XAN	O6-C6	-2.22	1.19	1.24
6	C	5004	XAN	O6-C6	-2.22	1.19	1.24

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A	5004	XAN	C2-N1-C6	5.79	120.03	115.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	D	5004	XAN	C2-N1-C6	5.78	120.03	115.14
6	B	5004	XAN	C2-N1-C6	5.78	120.02	115.14
6	C	5004	XAN	C2-N1-C6	5.75	120.00	115.14
6	A	5004	XAN	C5-C6-N1	-2.53	119.97	123.43
6	D	5004	XAN	C5-C6-N1	-2.52	119.99	123.43
6	C	5004	XAN	C5-C6-N1	-2.52	119.99	123.43
6	B	5004	XAN	C5-C6-N1	-2.50	120.02	123.43
4	D	5002	ATP	C5-C6-N6	2.31	123.86	120.35
4	C	5002	ATP	C5-C6-N6	2.31	123.86	120.35
4	B	5005	ATP	C5-C6-N6	2.30	123.85	120.35
4	D	5005	ATP	C5-C6-N6	2.29	123.83	120.35
4	C	5005	ATP	C5-C6-N6	2.29	123.83	120.35
4	A	5005	ATP	C5-C6-N6	2.26	123.79	120.35
4	A	5002	ATP	C5-C6-N6	2.26	123.78	120.35
4	B	5002	ATP	C5-C6-N6	2.26	123.78	120.35
4	A	5005	ATP	PB-O3B-PG	2.06	139.90	132.83
4	B	5005	ATP	PB-O3B-PG	2.06	139.88	132.83
4	C	5005	ATP	PB-O3B-PG	2.06	139.88	132.83
4	C	5002	ATP	PB-O3B-PG	2.06	139.88	132.83
4	D	5005	ATP	PB-O3B-PG	2.05	139.87	132.83
4	D	5002	ATP	PB-O3B-PG	2.05	139.85	132.83
4	B	5002	ATP	PB-O3B-PG	2.04	139.83	132.83
4	A	5002	ATP	PB-O3B-PG	2.03	139.81	132.83

There are no chirality outliers.

All (52) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	5002	ATP	C5'-O5'-PA-O1A
4	A	5002	ATP	C3'-C4'-C5'-O5'
4	A	5005	ATP	O4'-C4'-C5'-O5'
4	A	5005	ATP	C3'-C4'-C5'-O5'
4	B	5002	ATP	C5'-O5'-PA-O1A
4	B	5002	ATP	C3'-C4'-C5'-O5'
4	B	5005	ATP	O4'-C4'-C5'-O5'
4	B	5005	ATP	C3'-C4'-C5'-O5'
4	C	5002	ATP	C5'-O5'-PA-O1A
4	C	5002	ATP	C3'-C4'-C5'-O5'
4	C	5005	ATP	O4'-C4'-C5'-O5'
4	C	5005	ATP	C3'-C4'-C5'-O5'
4	D	5002	ATP	C5'-O5'-PA-O1A
4	D	5002	ATP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
4	D	5005	ATP	O4'-C4'-C5'-O5'
4	D	5005	ATP	C3'-C4'-C5'-O5'
4	A	5002	ATP	O4'-C4'-C5'-O5'
4	B	5002	ATP	O4'-C4'-C5'-O5'
4	C	5002	ATP	O4'-C4'-C5'-O5'
4	D	5002	ATP	O4'-C4'-C5'-O5'
4	A	5005	ATP	C4'-C5'-O5'-PA
4	B	5005	ATP	C4'-C5'-O5'-PA
4	C	5005	ATP	C4'-C5'-O5'-PA
4	D	5005	ATP	C4'-C5'-O5'-PA
4	A	5002	ATP	PB-O3A-PA-O5'
4	A	5005	ATP	PB-O3A-PA-O5'
4	B	5002	ATP	PB-O3A-PA-O5'
4	B	5005	ATP	PB-O3A-PA-O5'
4	C	5002	ATP	PB-O3A-PA-O5'
4	C	5005	ATP	PB-O3A-PA-O5'
4	D	5002	ATP	PB-O3A-PA-O5'
4	D	5005	ATP	PB-O3A-PA-O5'
4	A	5002	ATP	C5'-O5'-PA-O3A
4	A	5005	ATP	C5'-O5'-PA-O3A
4	B	5002	ATP	C5'-O5'-PA-O3A
4	B	5005	ATP	C5'-O5'-PA-O3A
4	C	5002	ATP	C5'-O5'-PA-O3A
4	C	5005	ATP	C5'-O5'-PA-O3A
4	D	5002	ATP	C5'-O5'-PA-O3A
4	D	5005	ATP	C5'-O5'-PA-O3A
4	A	5002	ATP	C4'-C5'-O5'-PA
4	B	5002	ATP	C4'-C5'-O5'-PA
4	C	5002	ATP	C4'-C5'-O5'-PA
4	D	5002	ATP	C4'-C5'-O5'-PA
4	A	5002	ATP	C5'-O5'-PA-O2A
4	B	5002	ATP	C5'-O5'-PA-O2A
4	C	5002	ATP	C5'-O5'-PA-O2A
4	D	5002	ATP	C5'-O5'-PA-O2A
4	A	5005	ATP	PA-O3A-PB-O1B
4	B	5005	ATP	PA-O3A-PB-O1B
4	C	5005	ATP	PA-O3A-PB-O1B
4	D	5005	ATP	PA-O3A-PB-O1B

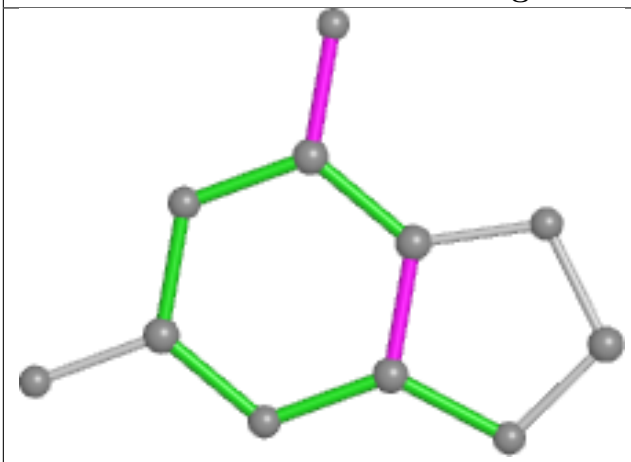
There are no ring outliers.

8 monomers are involved in 10 short contacts:

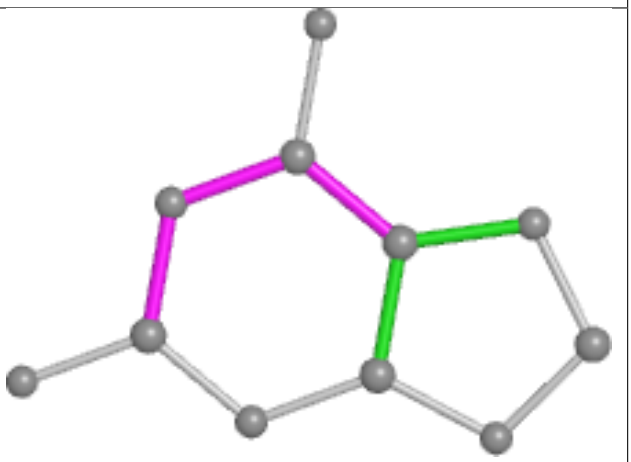
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	5005	ATP	1	0
4	D	5002	ATP	1	0
4	B	5002	ATP	1	0
4	C	5002	ATP	1	0
4	C	5005	ATP	2	0
4	D	5005	ATP	2	0
4	A	5002	ATP	1	0
4	A	5005	ATP	1	0

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

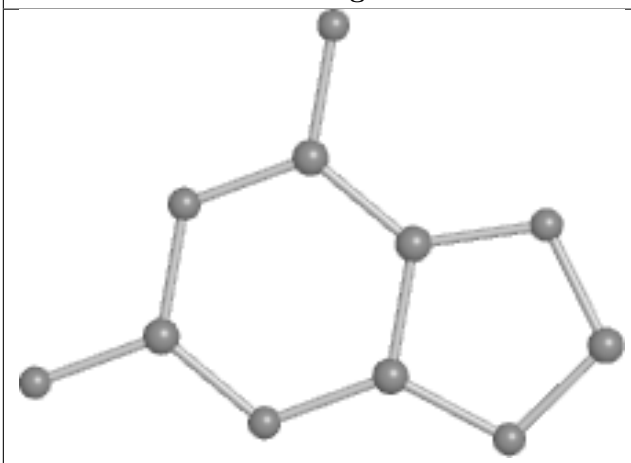
Ligand XAN B 5004



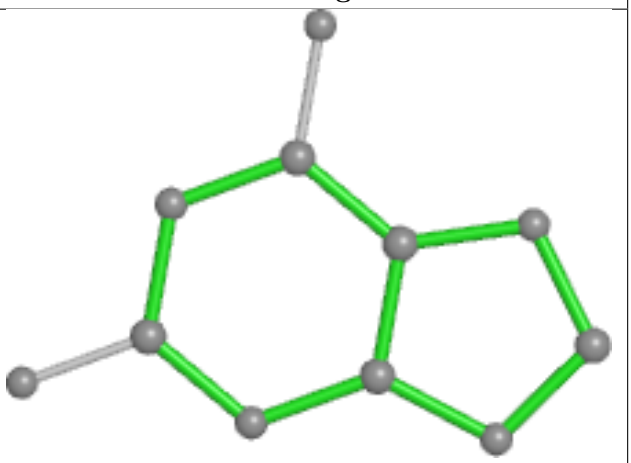
Bond lengths



Bond angles

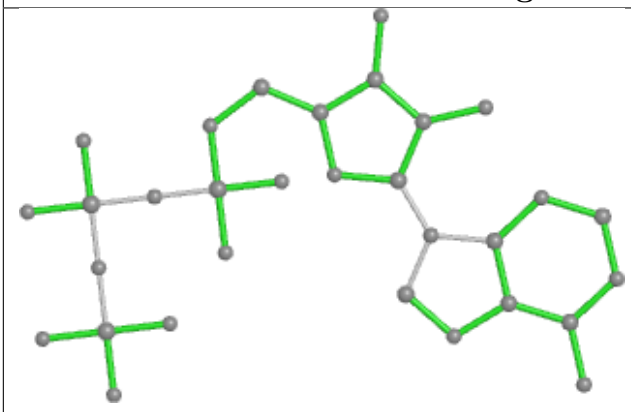


Torsions

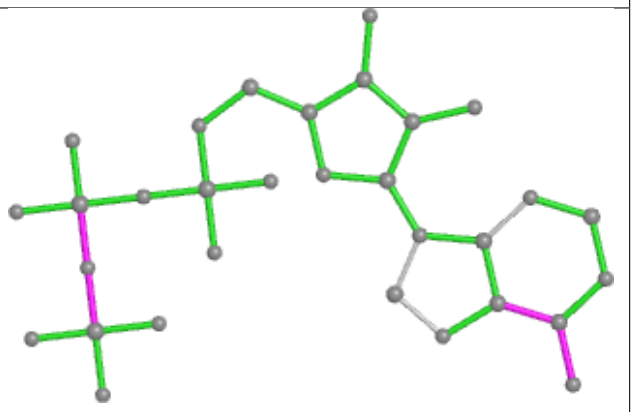


Rings

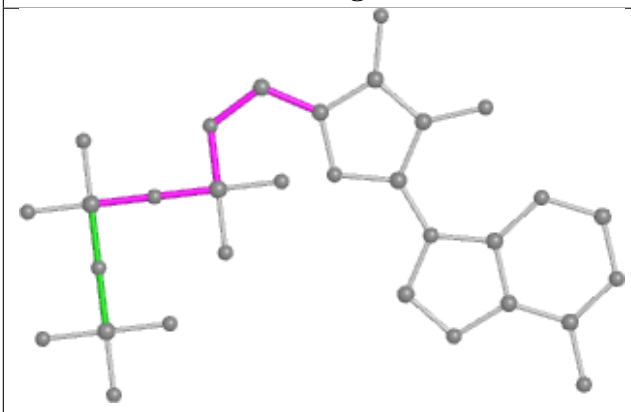
Ligand ATP B 5005



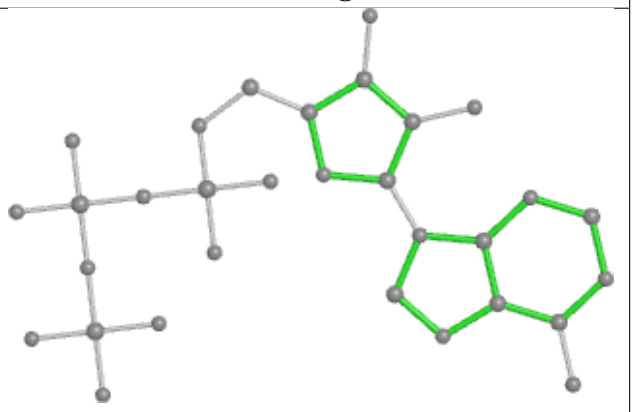
Bond lengths



Bond angles

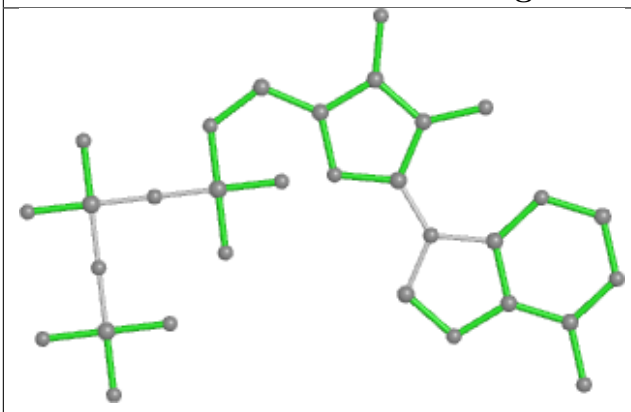


Torsions

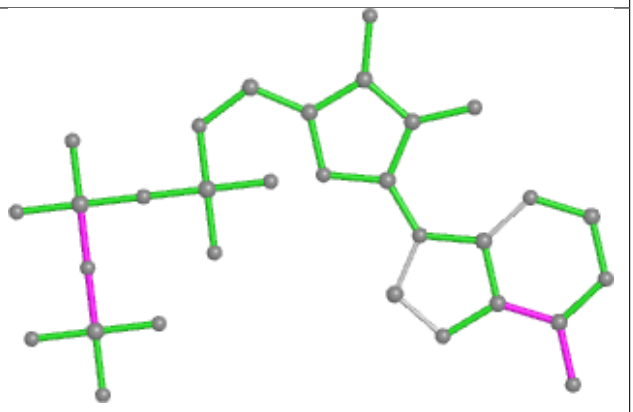


Rings

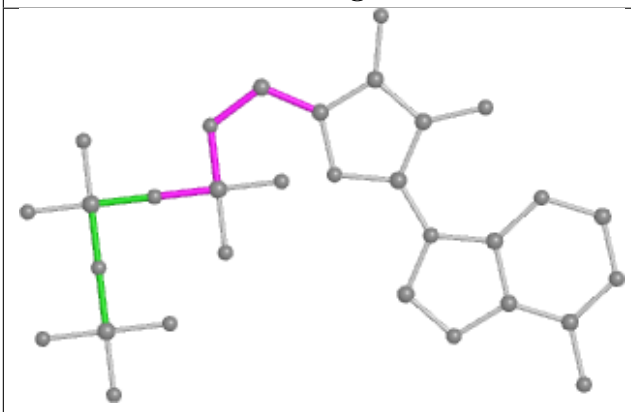
Ligand ATP D 5002



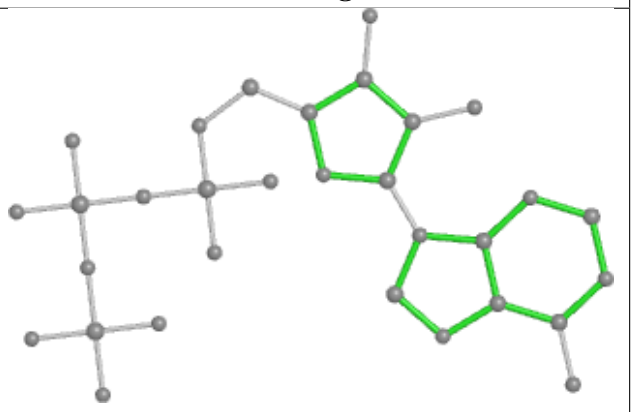
Bond lengths



Bond angles

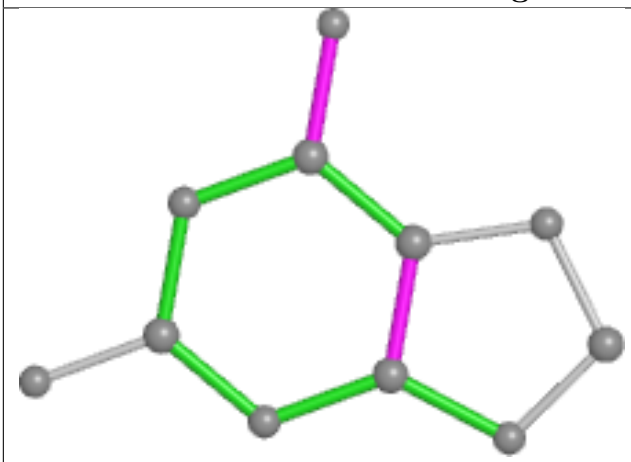


Torsions

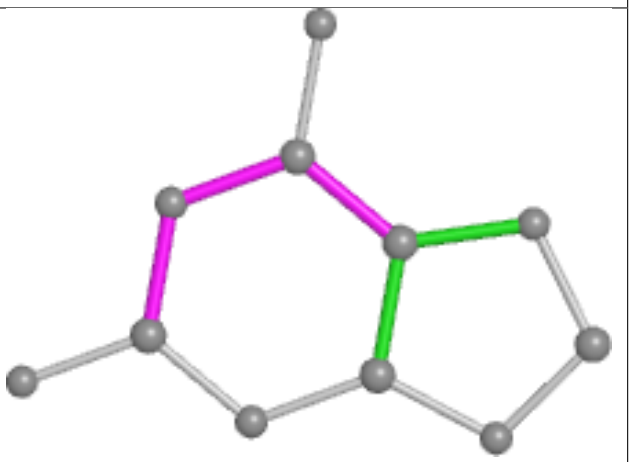


Rings

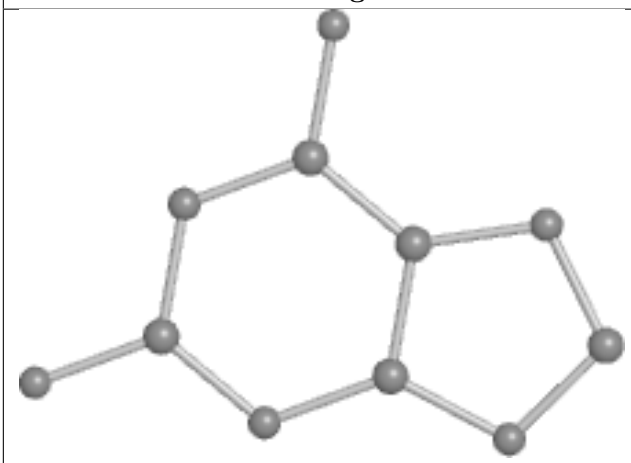
Ligand XAN C 5004



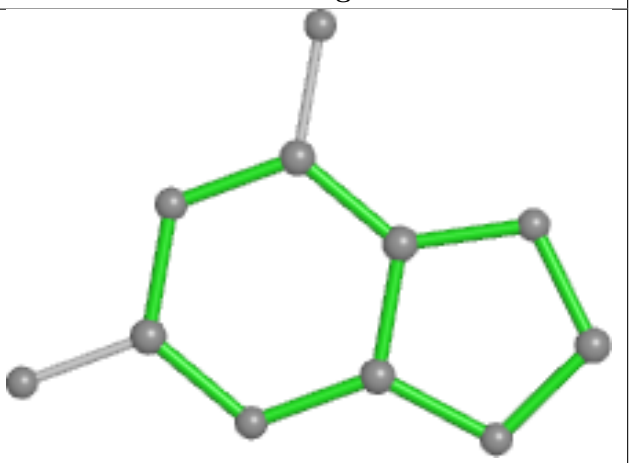
Bond lengths



Bond angles

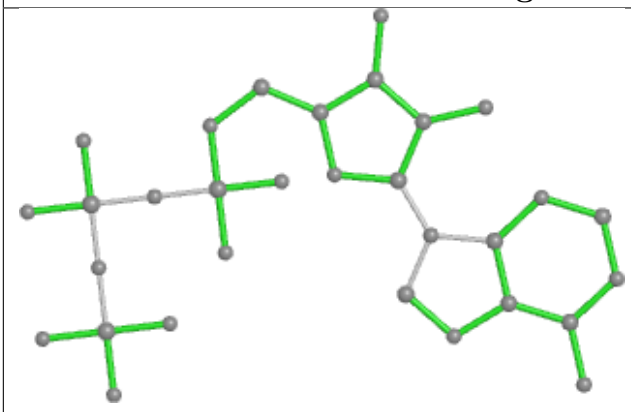


Torsions

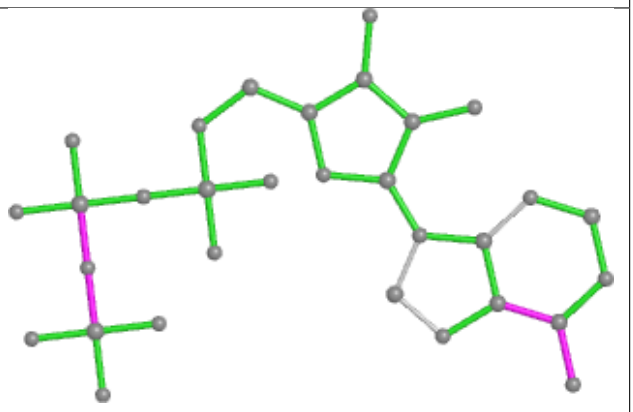


Rings

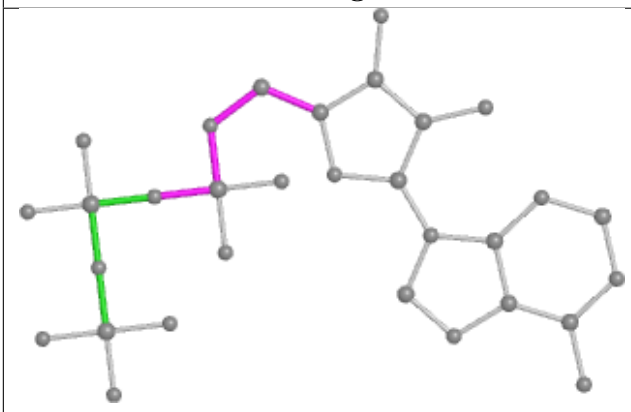
Ligand ATP B 5002



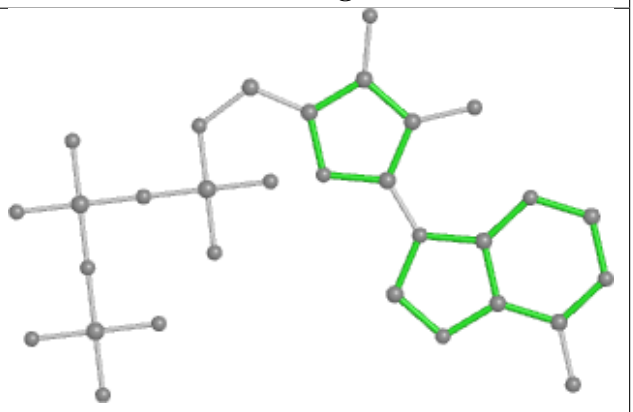
Bond lengths



Bond angles

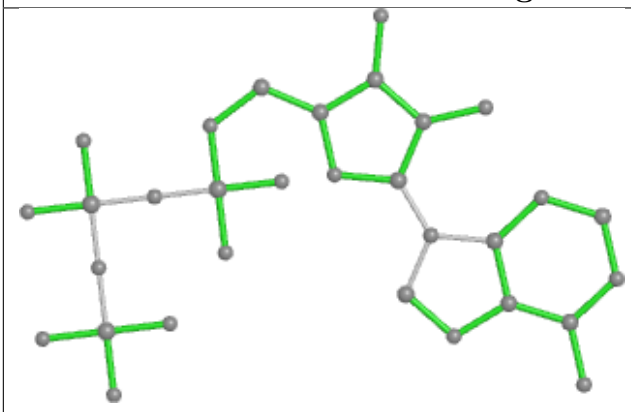


Torsions

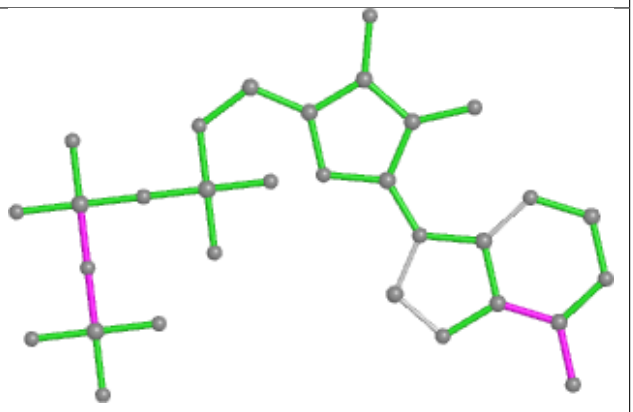


Rings

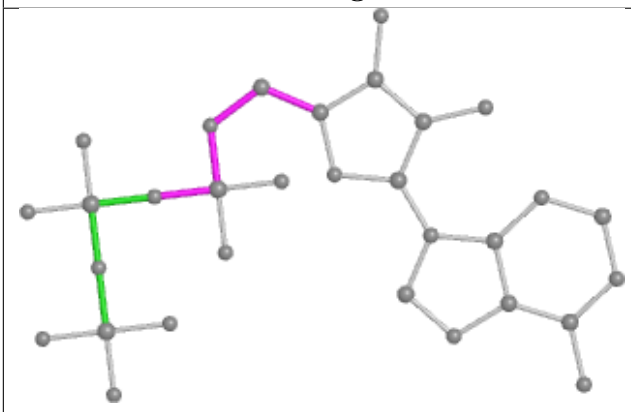
Ligand ATP C 5002



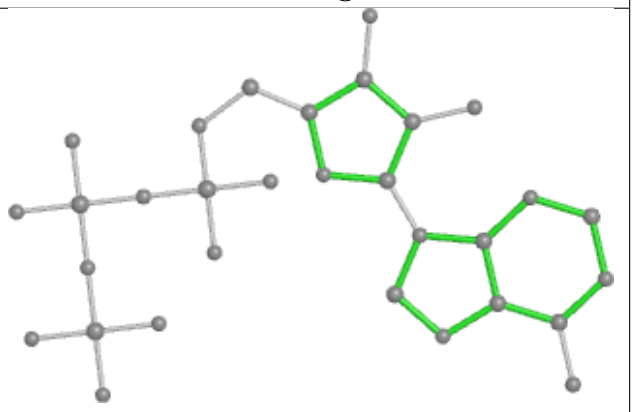
Bond lengths



Bond angles

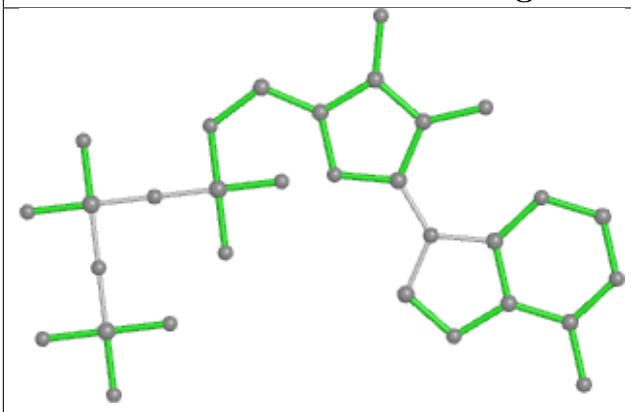


Torsions

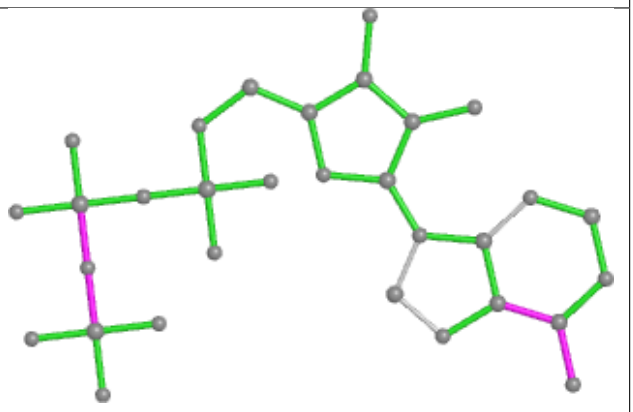


Rings

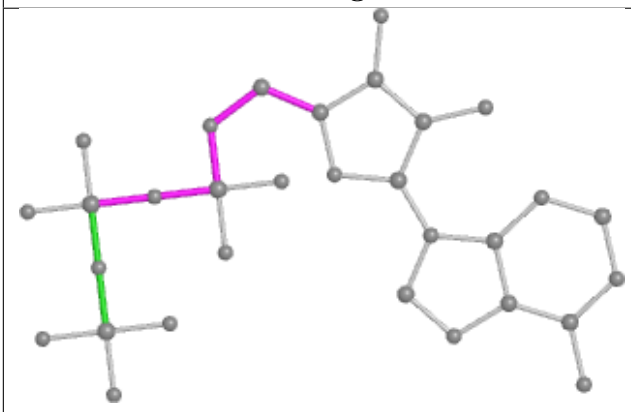
Ligand ATP C 5005



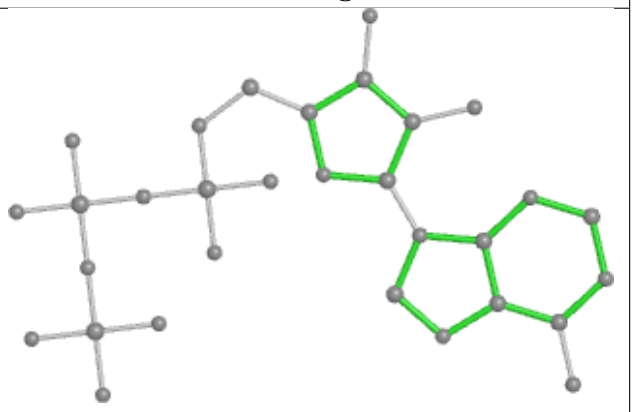
Bond lengths



Bond angles

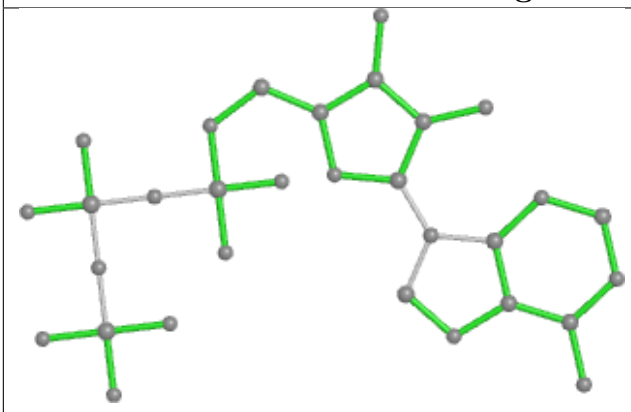


Torsions

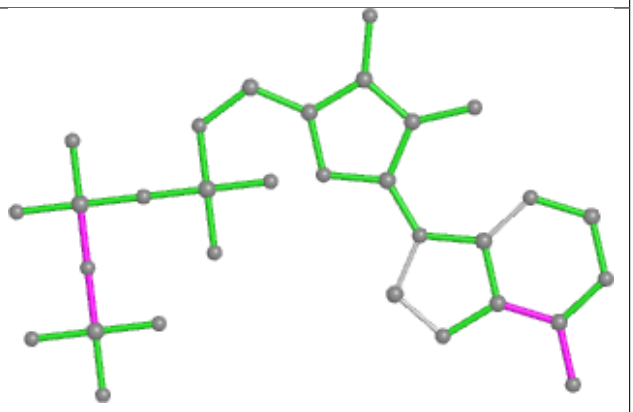


Rings

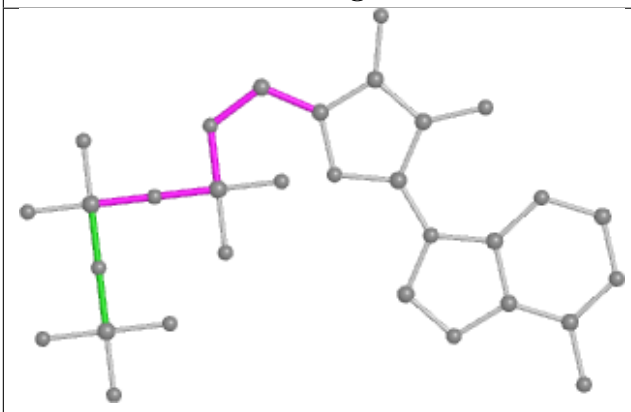
Ligand ATP D 5005



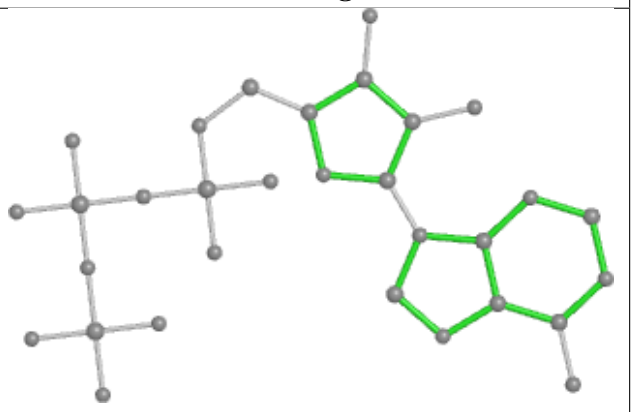
Bond lengths



Bond angles

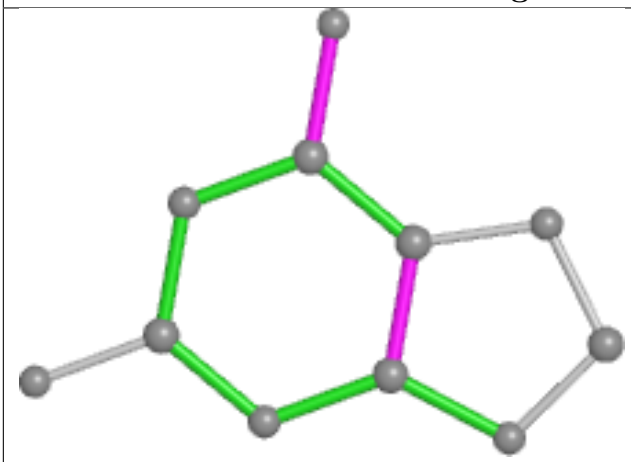


Torsions

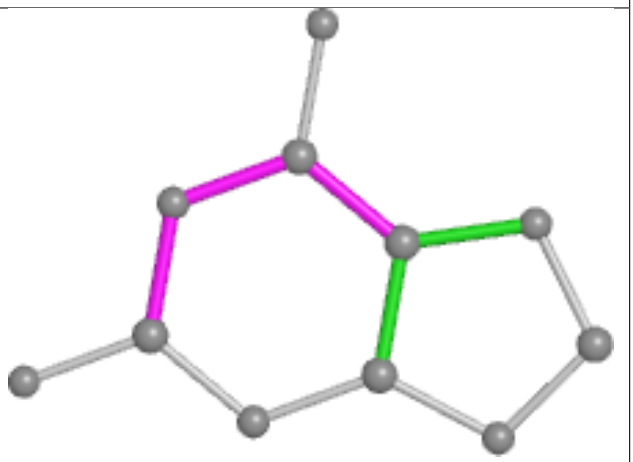


Rings

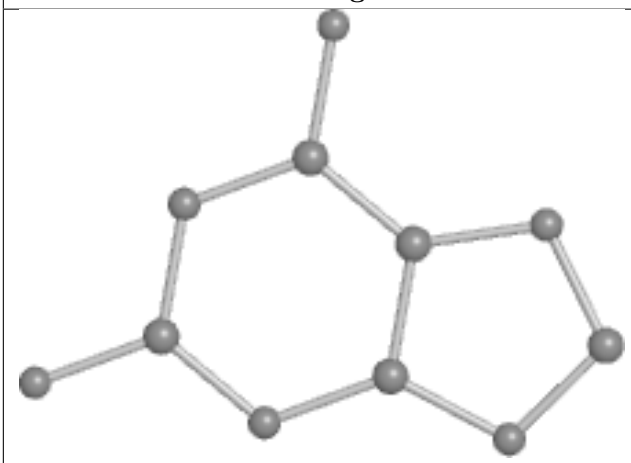
Ligand XAN A 5004



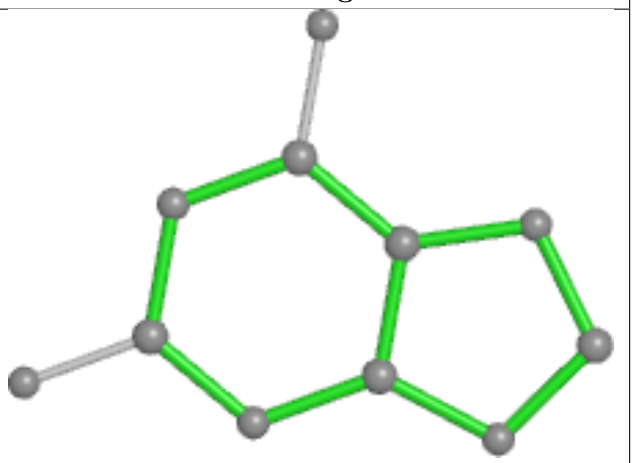
Bond lengths



Bond angles

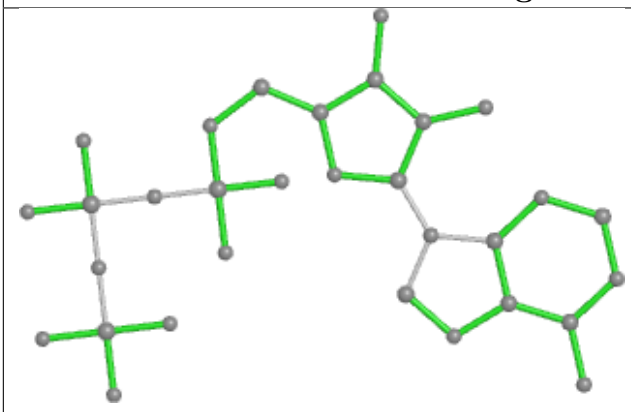


Torsions

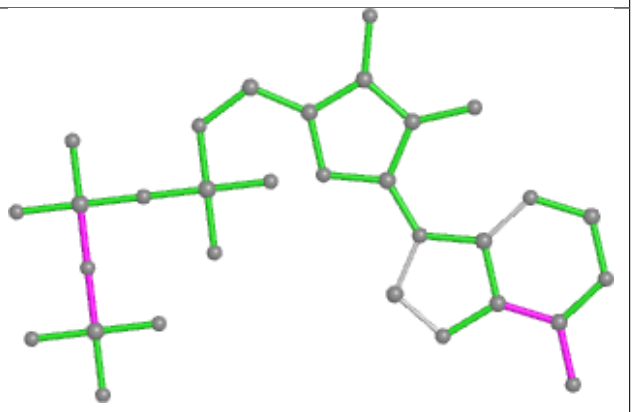


Rings

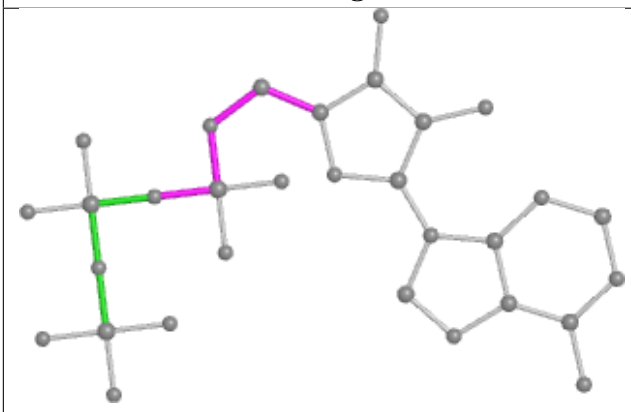
Ligand ATP A 5002



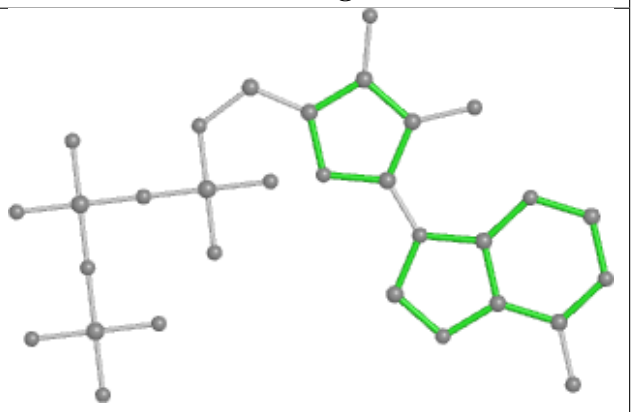
Bond lengths



Bond angles

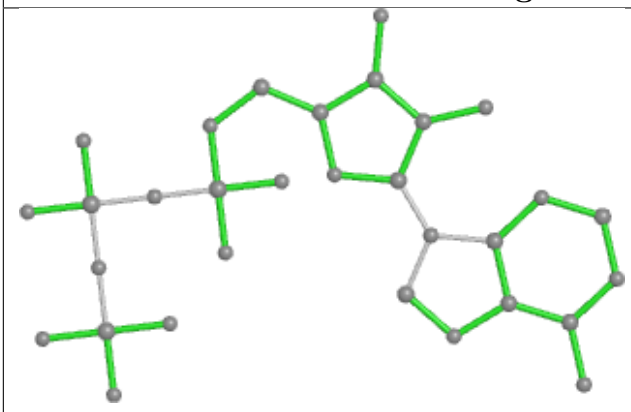


Torsions

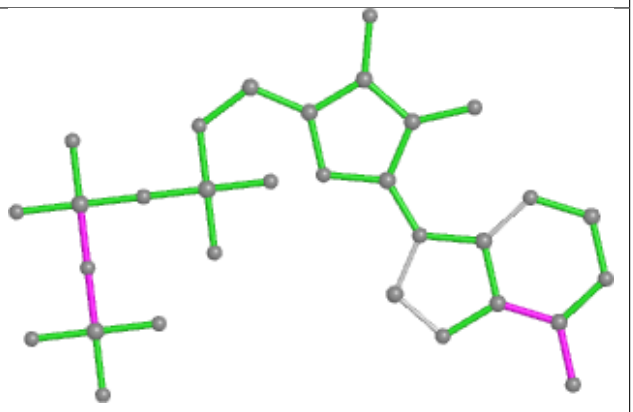


Rings

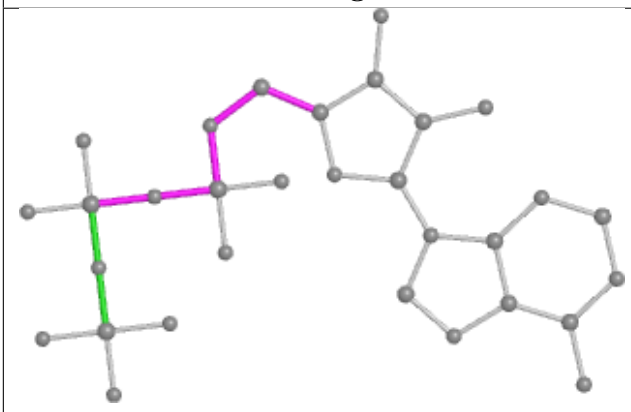
Ligand ATP A 5005



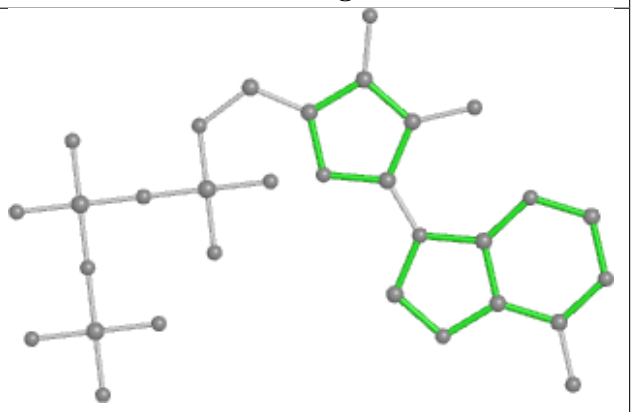
Bond lengths



Bond angles

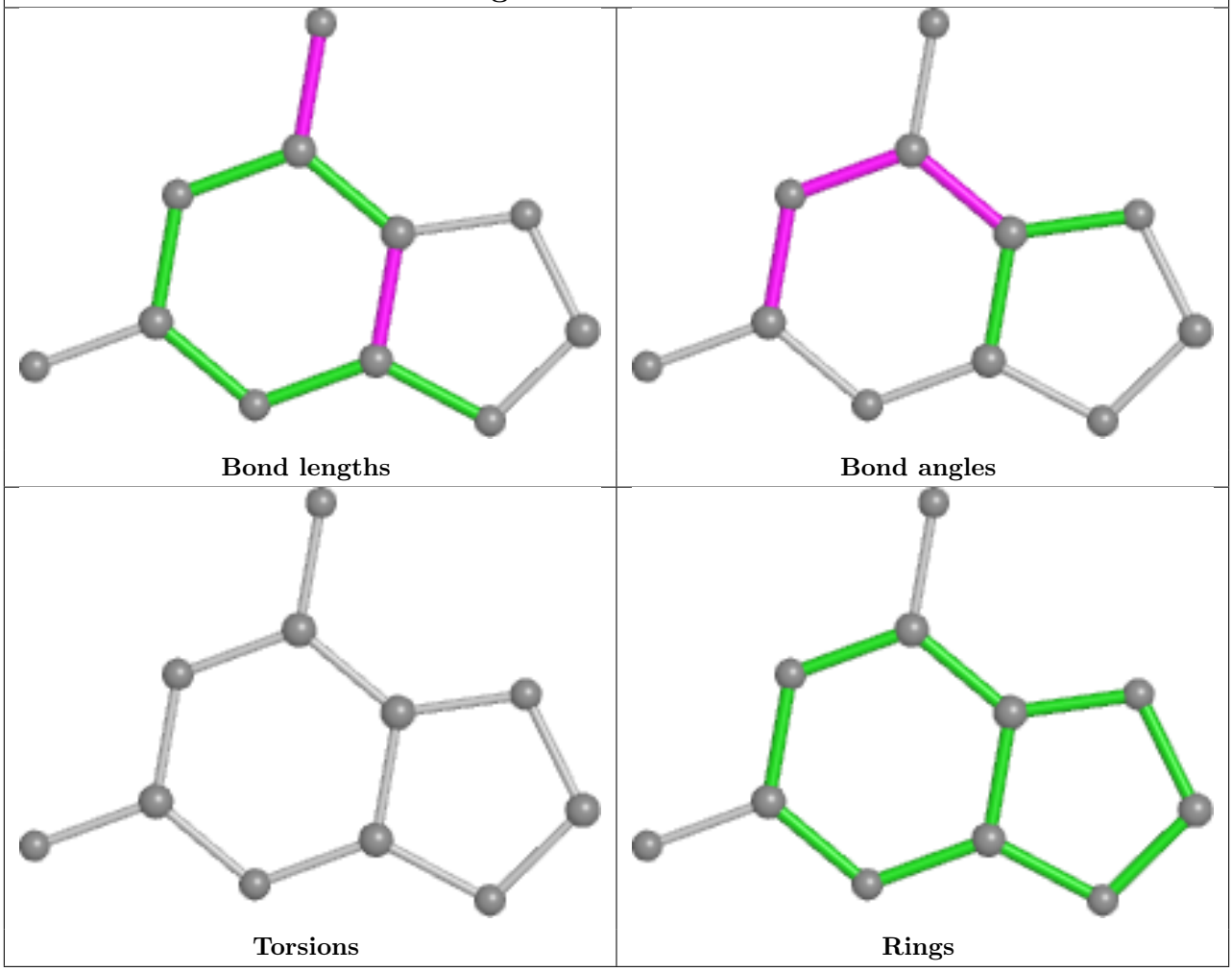


Torsions



Rings

Ligand XAN D 5004



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

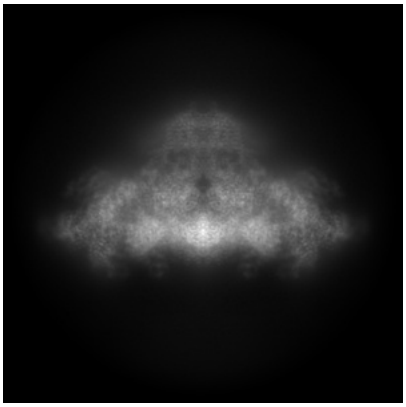
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26410. These allow visual inspection of the internal detail of the map and identification of artifacts.

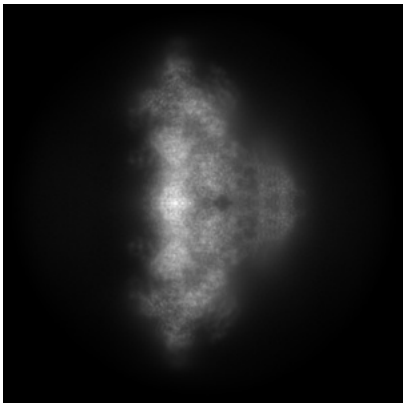
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

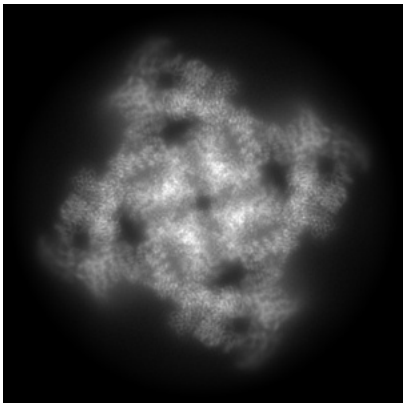
6.1.1 Primary map



X



Y

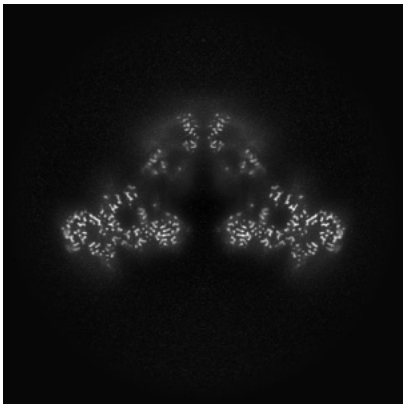


Z

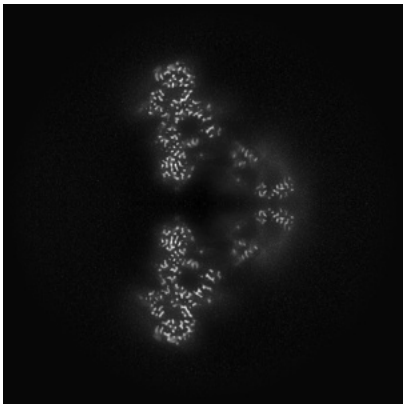
The images above show the map projected in three orthogonal directions.

6.2 Central slices

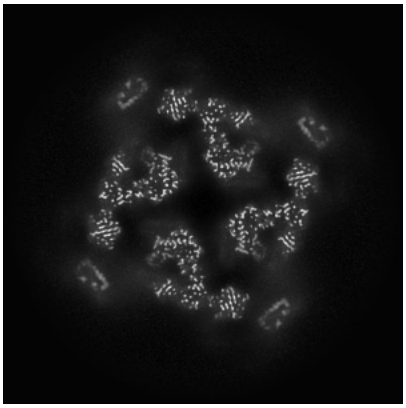
6.2.1 Primary map



X Index: 256



Y Index: 256

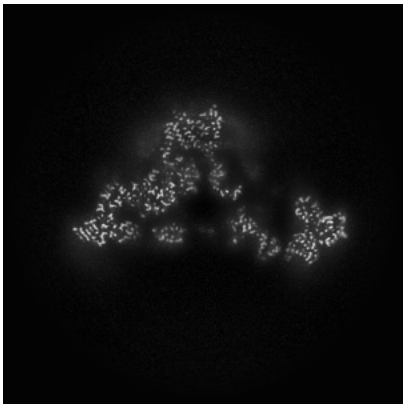


Z Index: 256

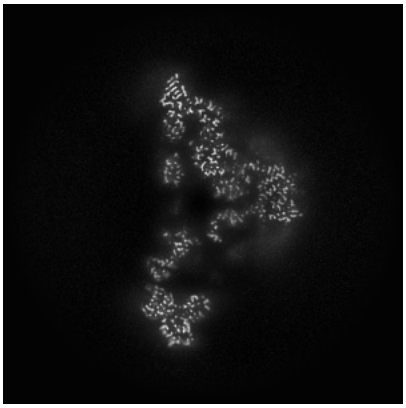
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

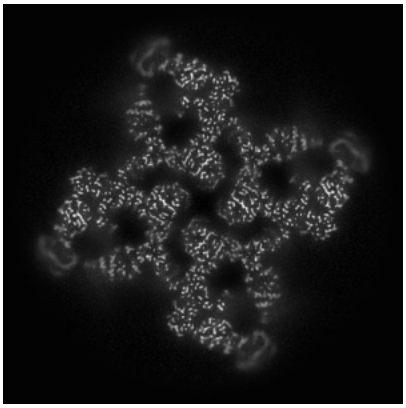
6.3.1 Primary map



X Index: 238



Y Index: 238

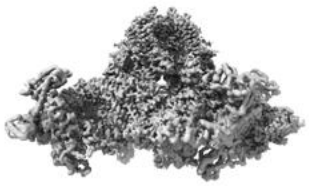


Z Index: 220

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

6.4 Orthogonal surface views (i)

6.4.1 Primary map



X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.13. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

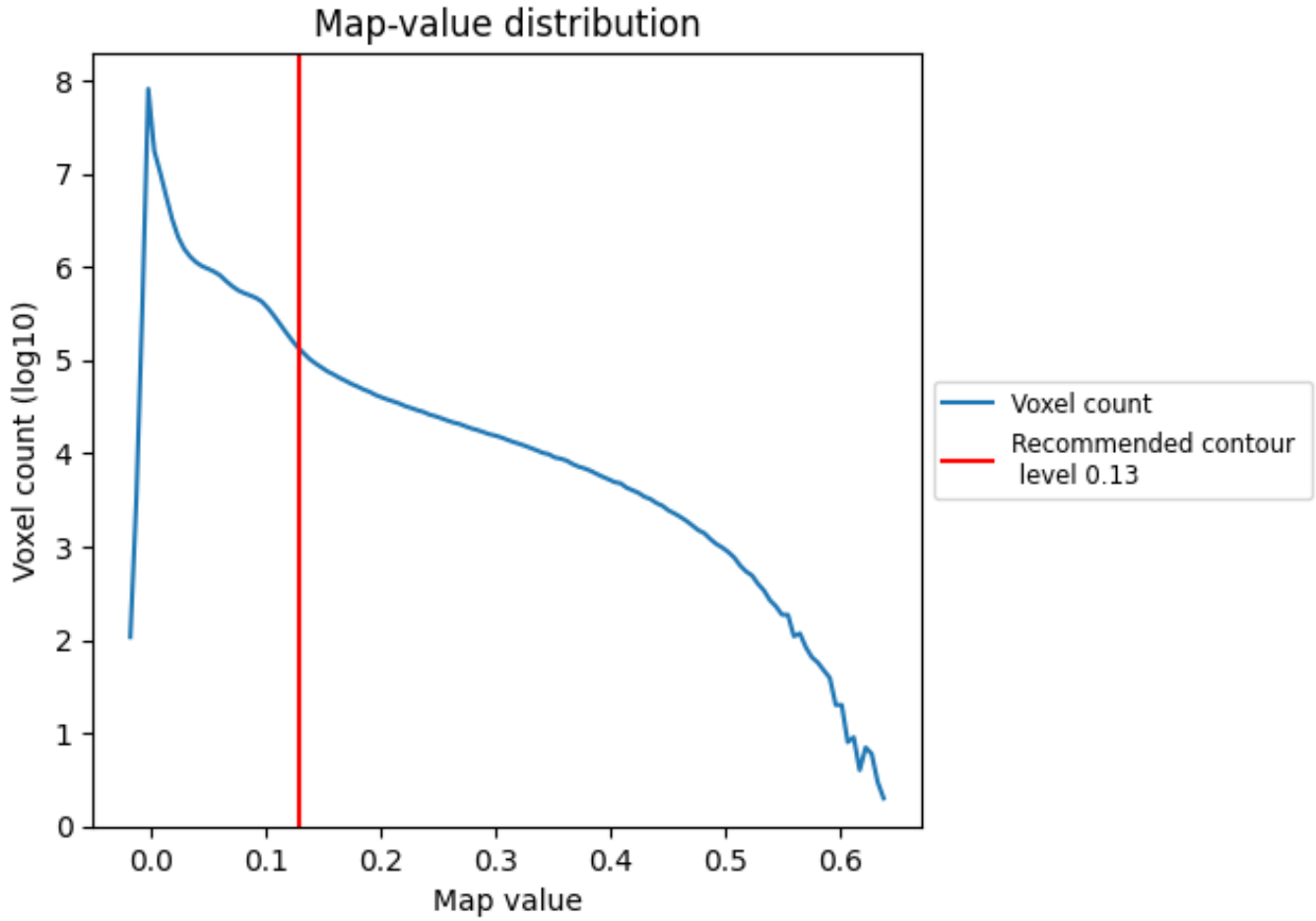
6.5 Mask visualisation (i)

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

7 Map analysis

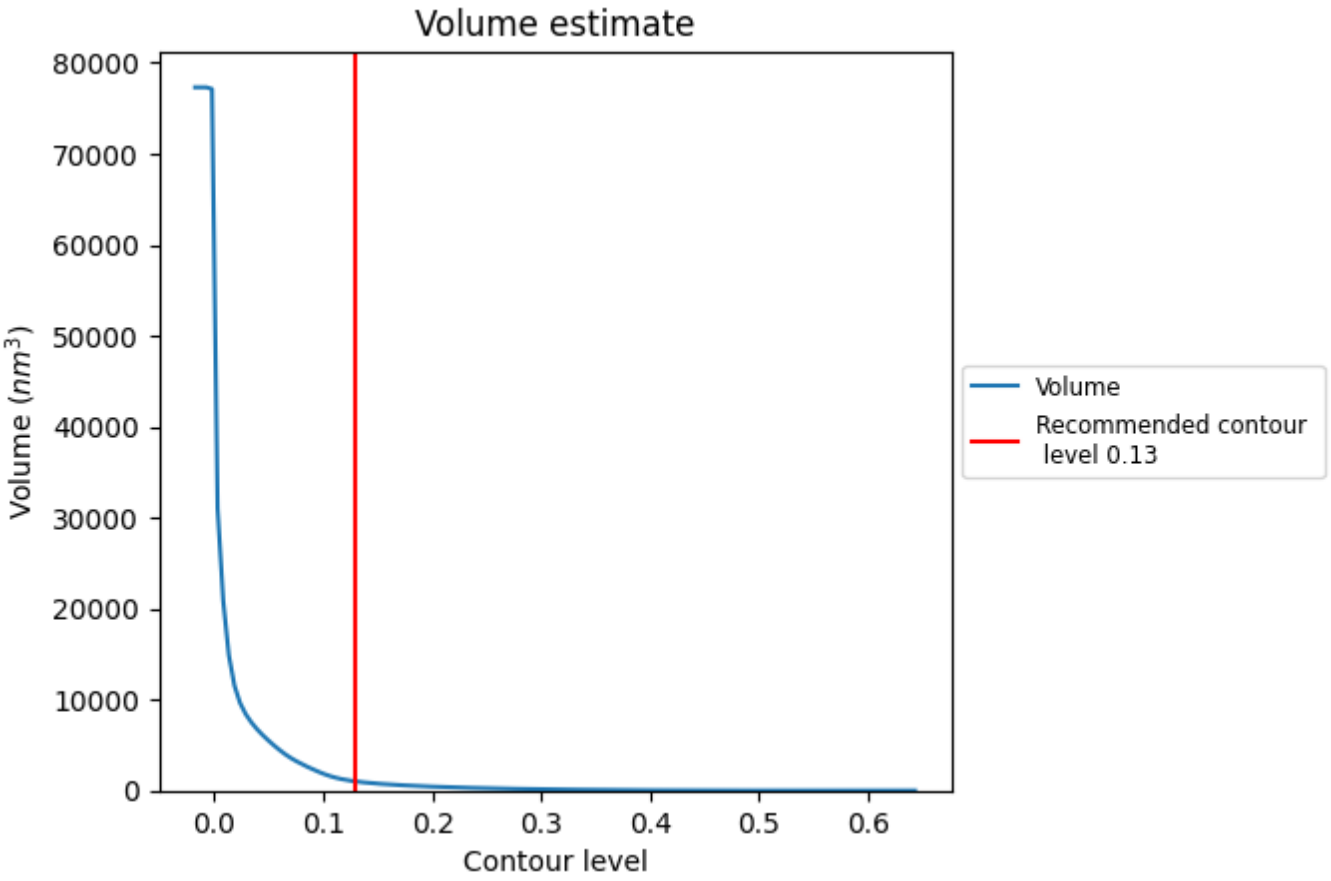
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

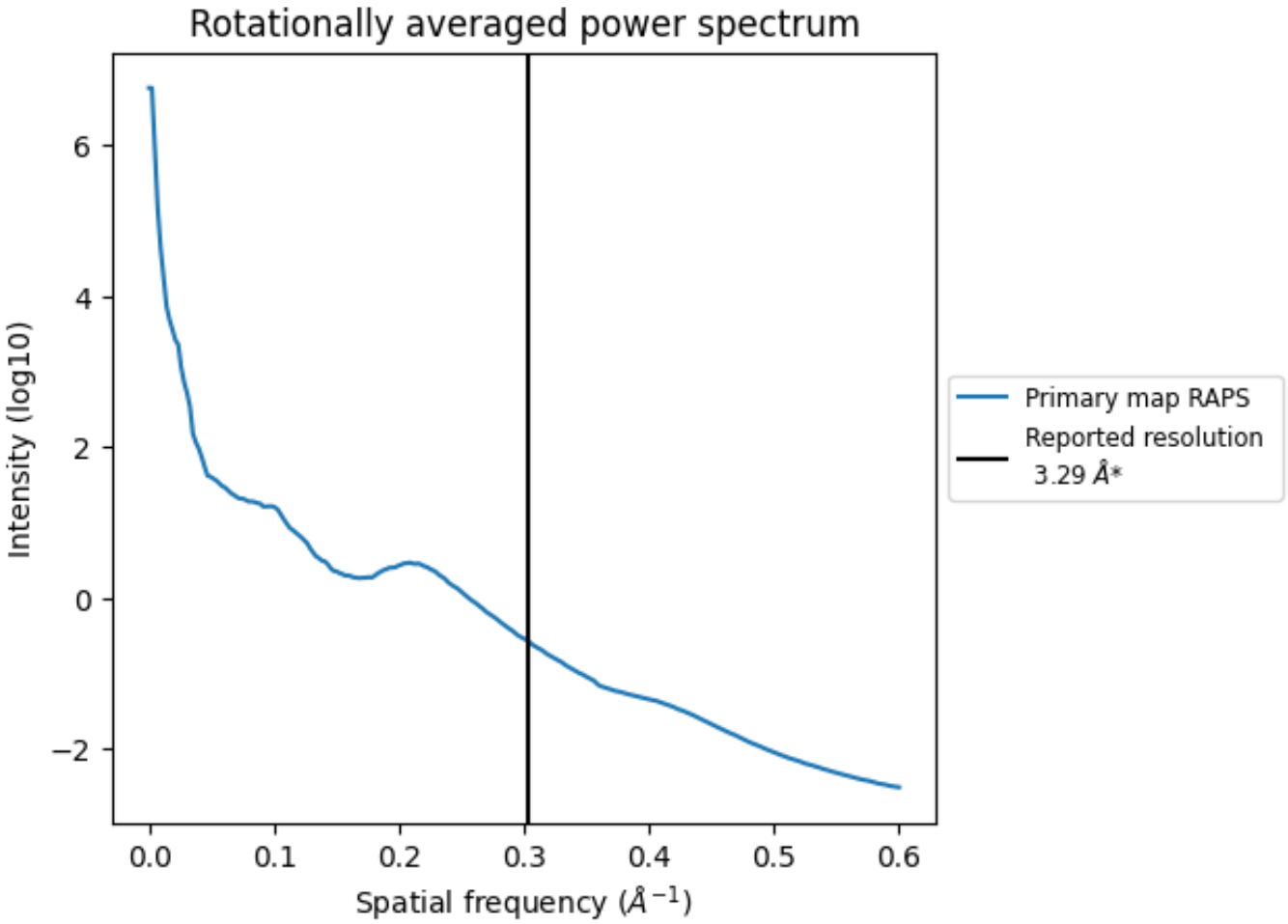
7.2 Volume estimate



The volume at the recommended contour level is 1001 nm^3; this corresponds to an approximate mass of 904 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 0.304 Å^{-1}

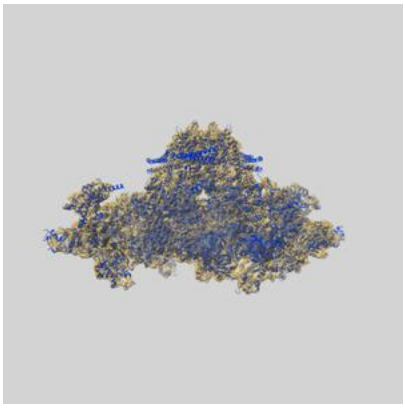
8 Fourier-Shell correlation (i)

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

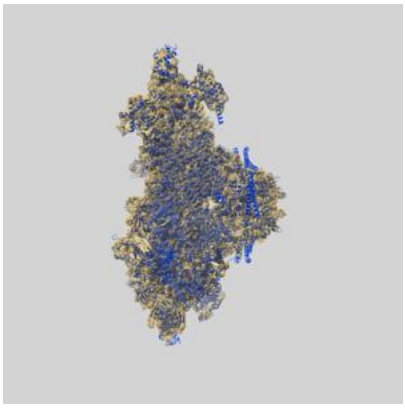
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-26410 and PDB model 7U9Z. Per-residue inclusion information can be found in section 3 on page 7.

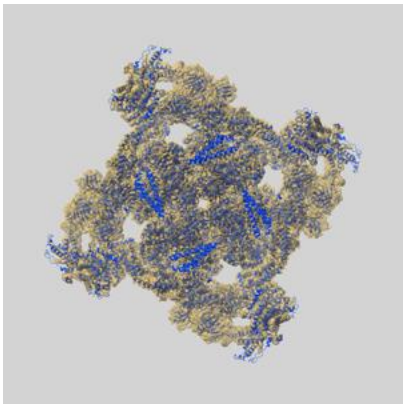
9.1 Map-model overlay



X



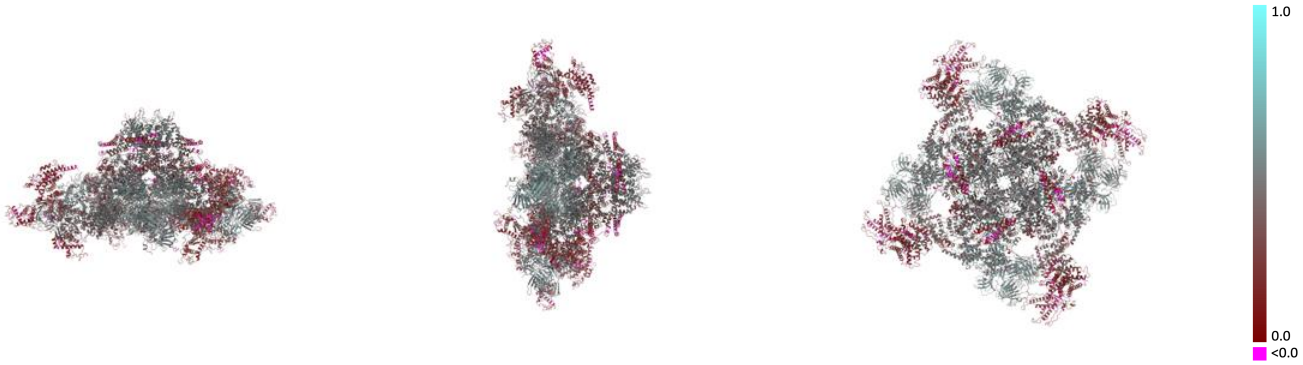
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.13 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.

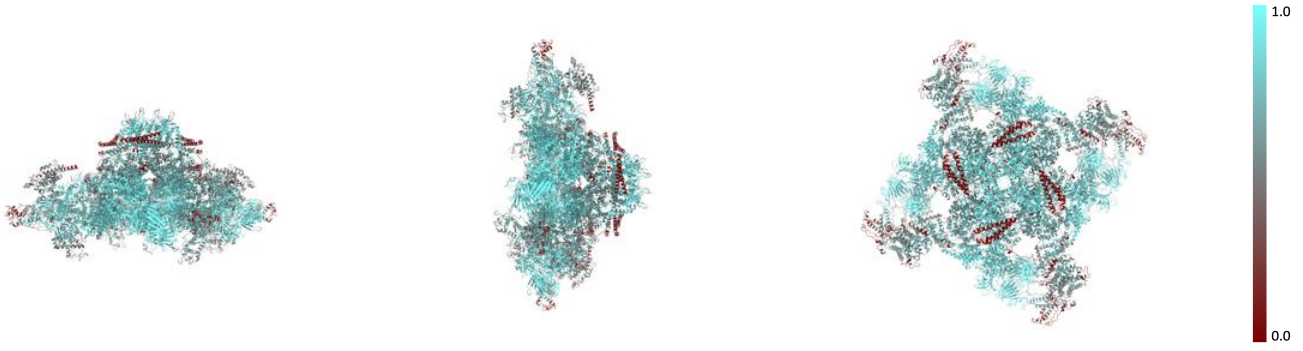
9.2 Q-score mapped to coordinate model



X Y Z

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

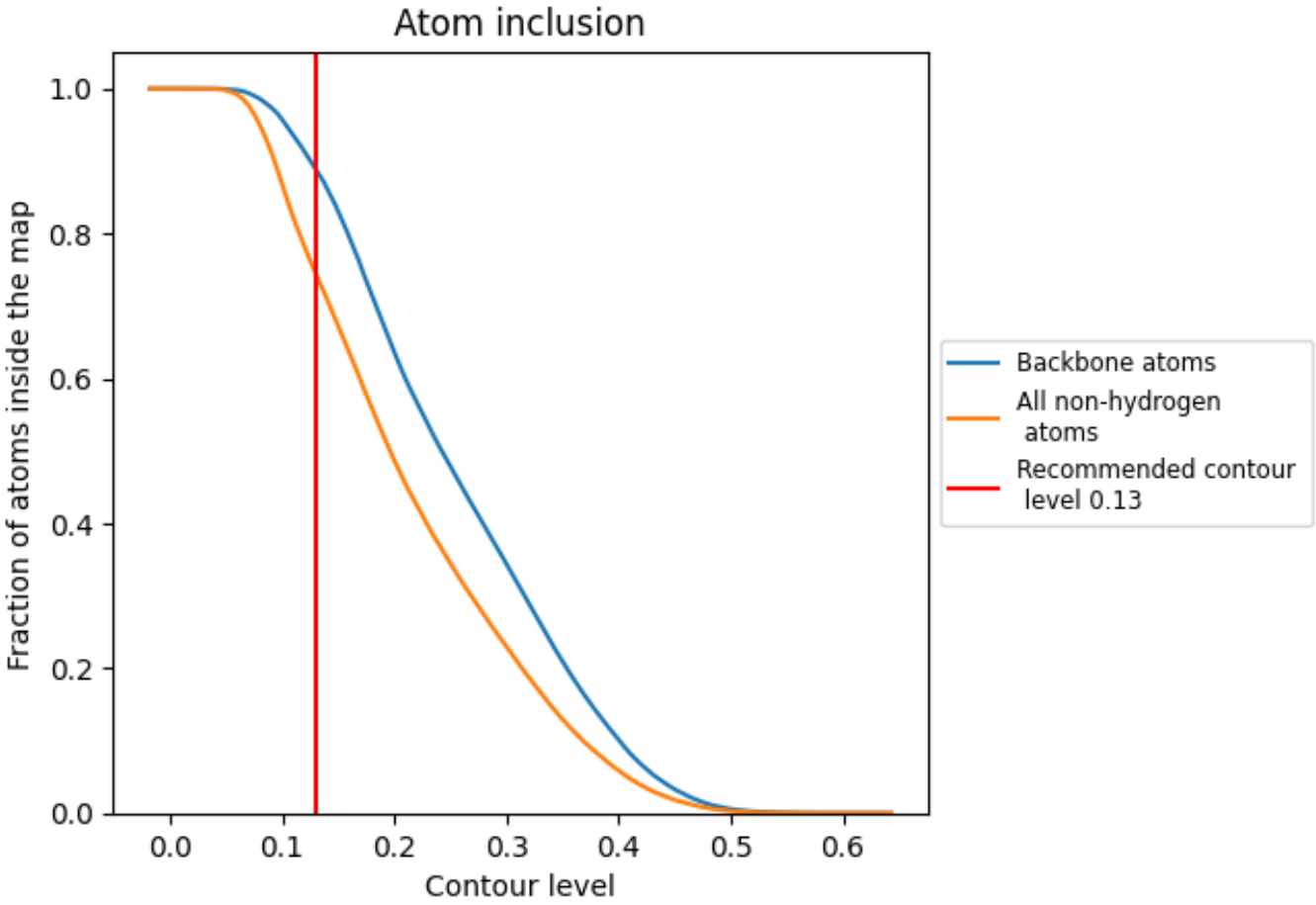
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.13).

9.4 Atom inclusion (i)



At the recommended contour level, 89% of all backbone atoms, 74% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.13) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7442	0.3940
A	0.7367	0.3860
B	0.7431	0.3980
C	0.7384	0.3850
D	0.7417	0.3940
E	0.9181	0.5420
F	0.9132	0.5260
G	0.9156	0.5250
H	0.9206	0.5450