Full wwPDB EM Validation Report ⓘ

Nov 22, 2022 – 03:24 PM EST

PDB ID	:	7U9R
EMDB ID	:	EMD-26407
Title	:	Structure of PKA phosphorylated human RyR2 in the open state
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2022-03-11
Resolution	:	3.69 Å(reported)
Based on initial model	:	7U9Q

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:

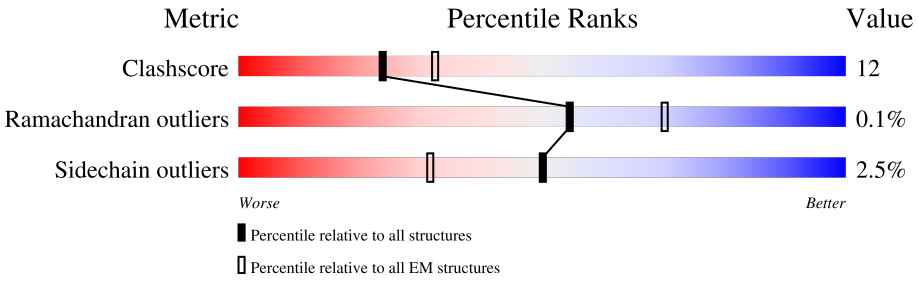
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (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 3.69 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	E	108	84% 15%
1	F	108	82% 17%
1	G	108	81% 19%
1	H	108	77% 22%
2	A	4967	8% 60% 23% 15%
2	B	4967	9% 60% 23% 15%
2	C	4967	9% 61% 23% 15%
2	D	4967	9% 61% 23% 15%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 138656 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

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

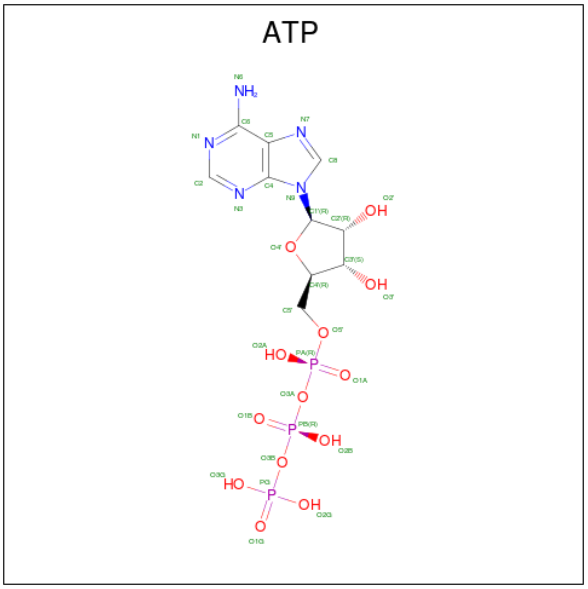
- Molecule 2 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	4224	Total	C	N	O	S	2	0
			33771	21516	5745	6280	230		
2	D	4224	Total	C	N	O	S	2	0
			33771	21516	5745	6280	230		
2	B	4224	Total	C	N	O	S	2	0
			33771	21516	5745	6280	230		
2	C	4224	Total	C	N	O	S	2	0
			33771	21516	5745	6280	230		

- 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	0
			1	1	
3	D	1	Total	Zn	0
			1	1	
3	B	1	Total	Zn	0
			1	1	
3	C	1	Total	Zn	0
			1	1	

- 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	0
			62	20	10	26	6	
4	A	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	D	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	D	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	B	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	B	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	C	1	Total	C	N	O	P	0
			62	20	10	26	6	
4	C	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	D	1	Total	Ca	0
			1	1	

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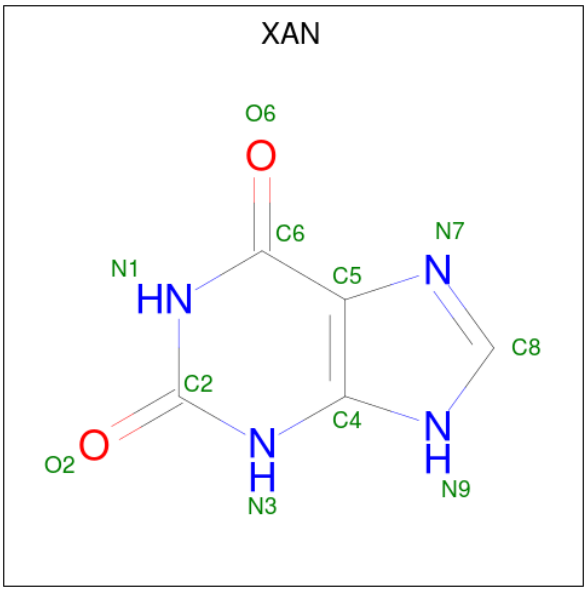
Mol	Chain	Residues	Atoms	AltConf
5	B	1	Total Ca 1 1	0
5	C	1	Total Ca 1 1	0

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



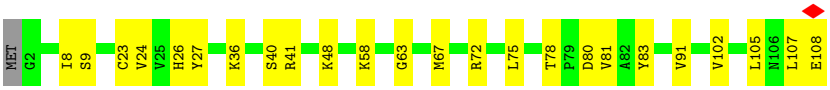
Mol	Chain	Residues	Atoms	AltConf
6	A	1	Total C N O 11 5 4 2	0
6	D	1	Total C N O 11 5 4 2	0
6	B	1	Total C N O 11 5 4 2	0
6	C	1	Total C N O 11 5 4 2	0

3 Residue-property plots (i)

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

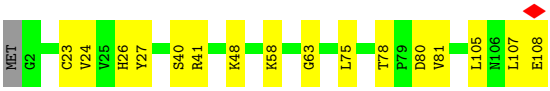
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain H:



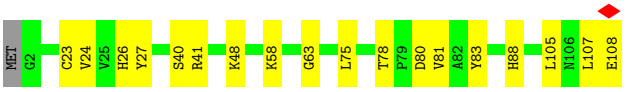
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain E:



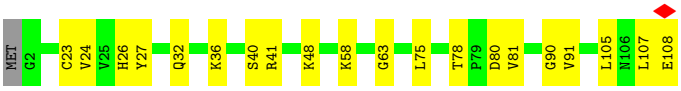
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain F:



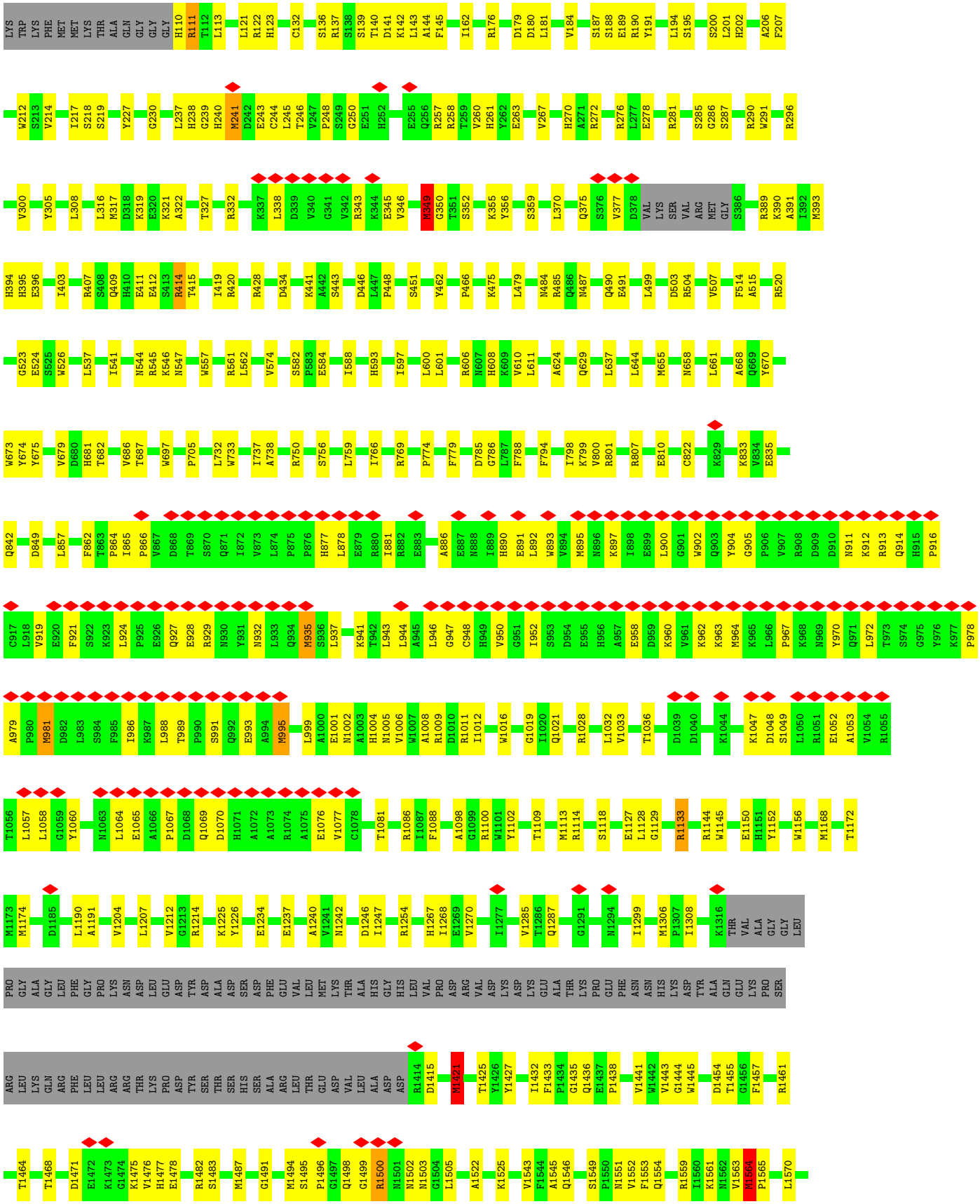
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

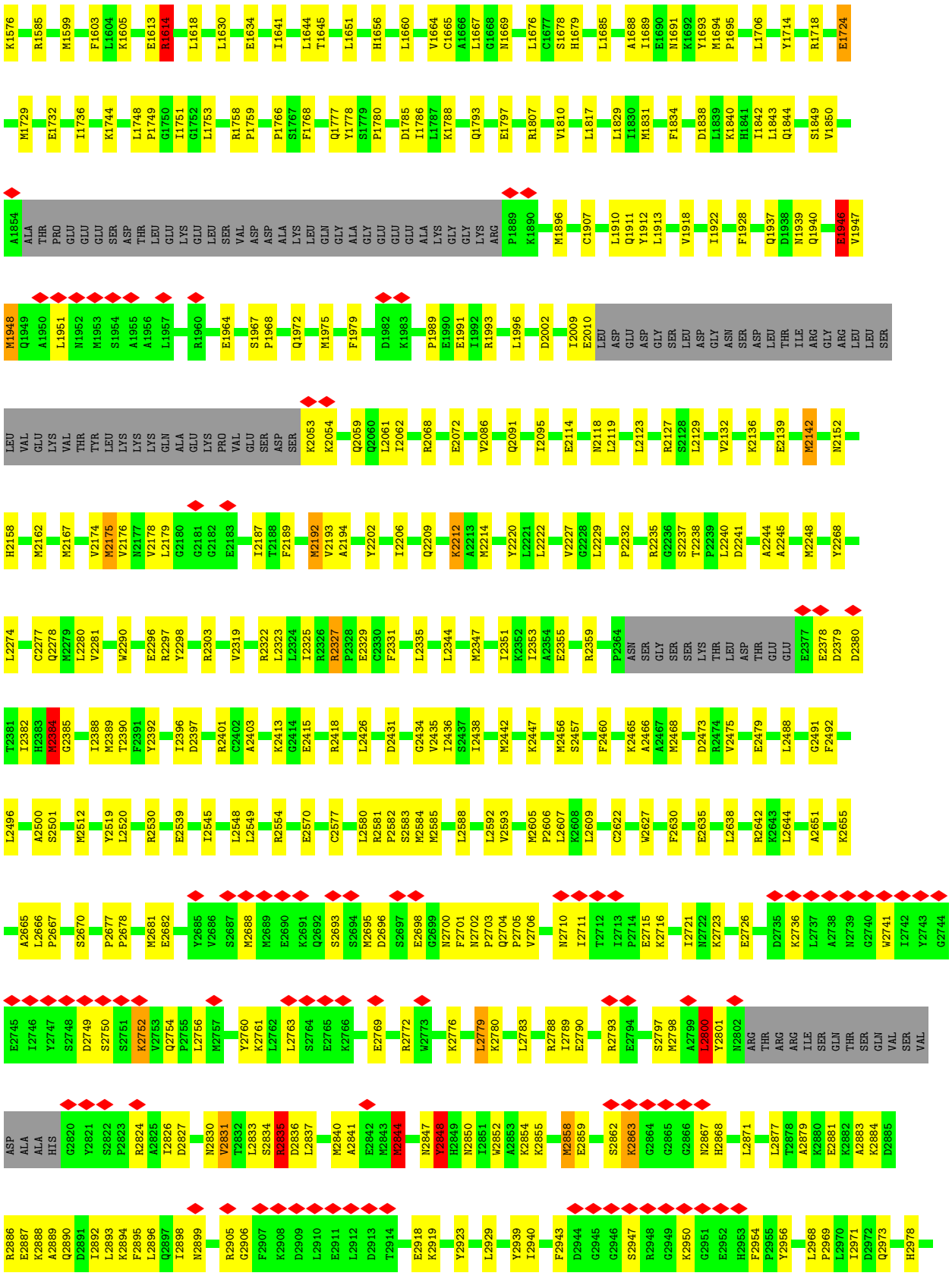
Chain G:

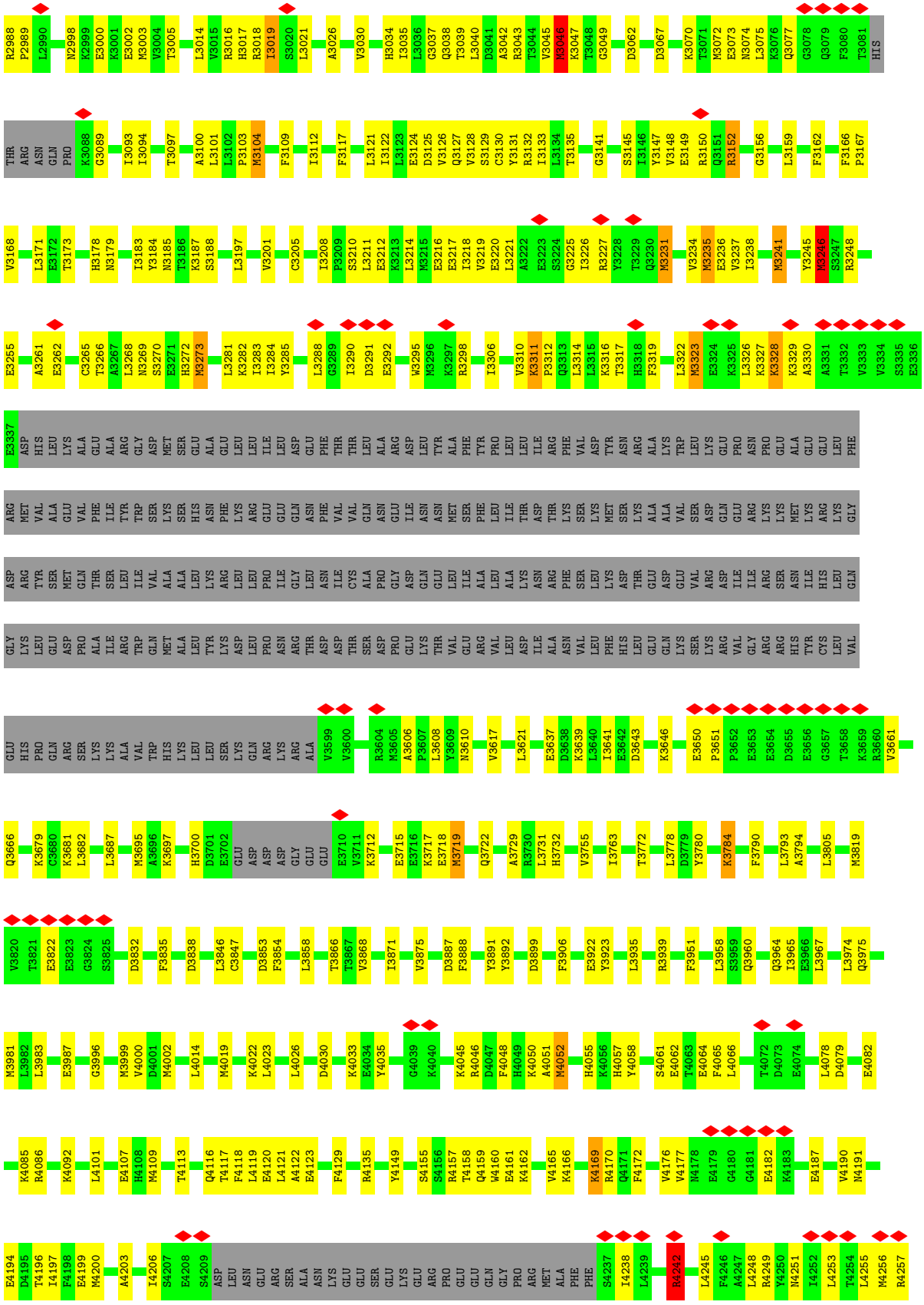


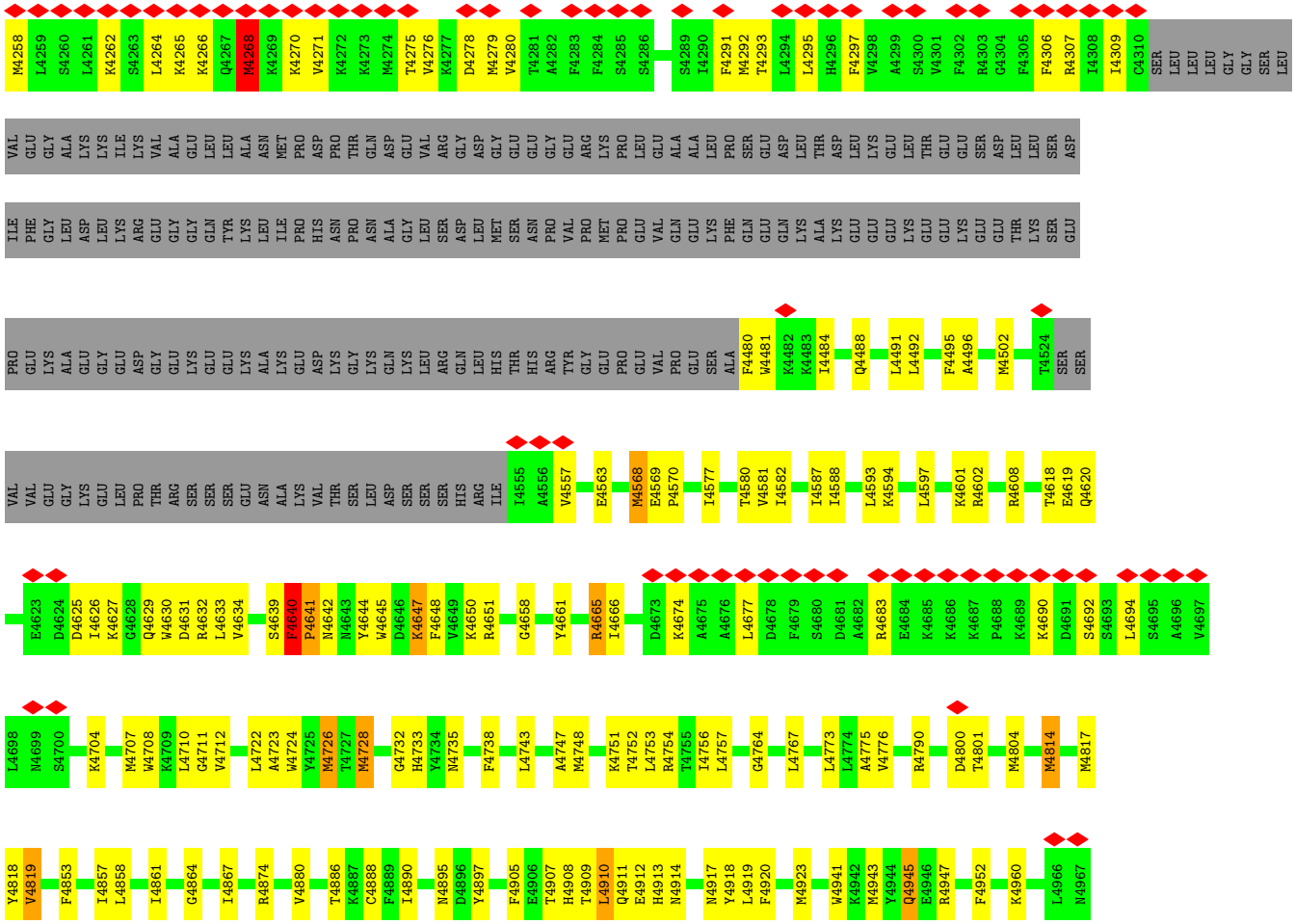
• Molecule 2: Ryanodine receptor 2

Chain A:

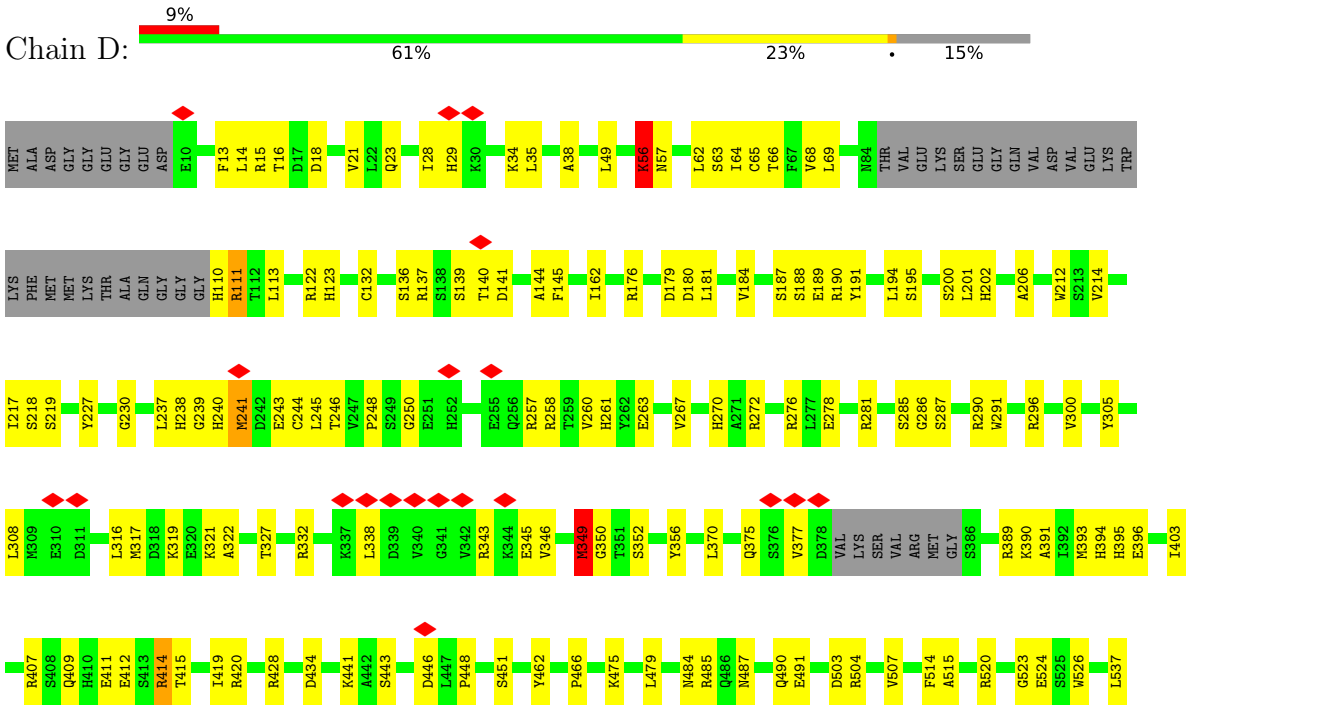

LYS TRP LYS PHE MET MET LYS THR ALA GLN GLY GLY GLY H110 R111 T112 L113 L121 R122 H123 C132 S136 R137 S138 S139 T140 D141 K142 L143 A144 F145 I162 R176 D179 D180 L181 V184 S187 S188 E189 R190 Y191 L194 S195 S200 L201 H202 A206 F207
W212 S213 V214 I217 S218 S219 Y227 G230 L237 H238 G239 H240 M241 D242 E243 C244 L245 T246 V247 P248 S249 G250 E251 H252 E255 Q256 R257 R258 T259 V260 H261 Y262 E263 V267 H270 A271 R272 R276 L277 E278 R281 S285 G286 S287 R290 W291 R296
V300 Y305 L308 L316 M317 D318 K319 E320 K321 A322 T327 R332 K337 L338 D339 V340 G341 V342 R343 K344 E345 V346 M349 G350 T351 S352 K355 Y356 S359 L370 Q375 S376 V377 D378 VAL LYS SER VAL ARG MET GLY S386 R389 K390 A391 T392 M393
H394 H395 E396 I403 R407 S408 Q409 H410 E411 E412 S413 R414 T415 I419 R420 R428 D434 K441 A442 S443 D446 L447 P448 S451 Y462 P466 K475 L479 N484 R485 Q486 N487 Q490 E491 L499 D503 R504 V507 F514 A515 R520
G523 E524 S525 W526 L537 I541 N544 R545 K546 N547 W557 R561 L562 V574 S582 P583 E584 I588 H593 I597 L600 L601 R606 W607 H608 K609 V610 L611 A624 Q629 L637 L644 M655 N658 L661 A668 Q669 Y670
W673 Y674 Y675 V679 D680 H681 T682 V686 T687 W697 P705 L732 W733 I737 A738 R750 S756 L759 I766 R769 P774 F779 D785 G786 L787 F788 F794 I798 K799 V800 R801 R807 E810 C822 K829 K833 V834 E835
Q842 D849 L857 F862 T863 P864 I865 P866 V867 D868 T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879 R880 I881 R882 E883 A886 E887 N888 I889 H890 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 K941 T942 L943 L944 A945 L946 G947 C948 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 L988 T989 P990 S991 Q992 E993 A994 M995 L999 A1000 E1001 N1002 A1003 H1004 N1005 V1006 W1007 A1008 R1009 D1010 R1011 I1012 W1016 G1019 I1020 Q1021 R1028 L1032 V1033 T1036 D1039 D1040 K1044 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055
T1056 L1057 L1058 G1059 Y1060 N1063 L1064 E1065 A1066 P1067 D1068 Q1069 D1070 H1071 A1072 A1073 R1074 A1075 E1076 V1077 C1078 T1081 R1086 I1087 F1088 A1098 G1099 R1100 W1101 Y1102 T1109 M1113 R1114 S1118 E1127 L1128 G1129 R1133 R1144 W1145 E1150 H1151 Y1152 W1156 M1168 T1172
M1173 M1174 D1185 L1190 A1191 V1204 L1207 V1212 G1213 R1214 K1225 Y1226 E1234 E1237 A1240 V1241 N1242 D1246 I1247 R1254 H1267 I1268 E1269 V1270 I1277 V1285 T1286 Q1287 G1291 N1294 I1299 M1306 P1307 I1308 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 I1432 F1433 P1434 G1435 Q1436 E1437 P1438 V1441 W1442 V1443 G1444 W1445 D1454 T1455 G1456 F1457 R1461
T1464 T1468 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 R1482 S1483 M1487 G1491 M1494 S1495 P1496 G1497 Q1498 G1499 R1500 N1501 N1502 N1503 G1504 L1505 A1522 K1525 V1543 F1544 A1545 Q1546 S1549 P1550 N1551 V1552 F1553 Q1554 R1559 I1560 K1561 N1562 V1563 M1564 P1565 L1570

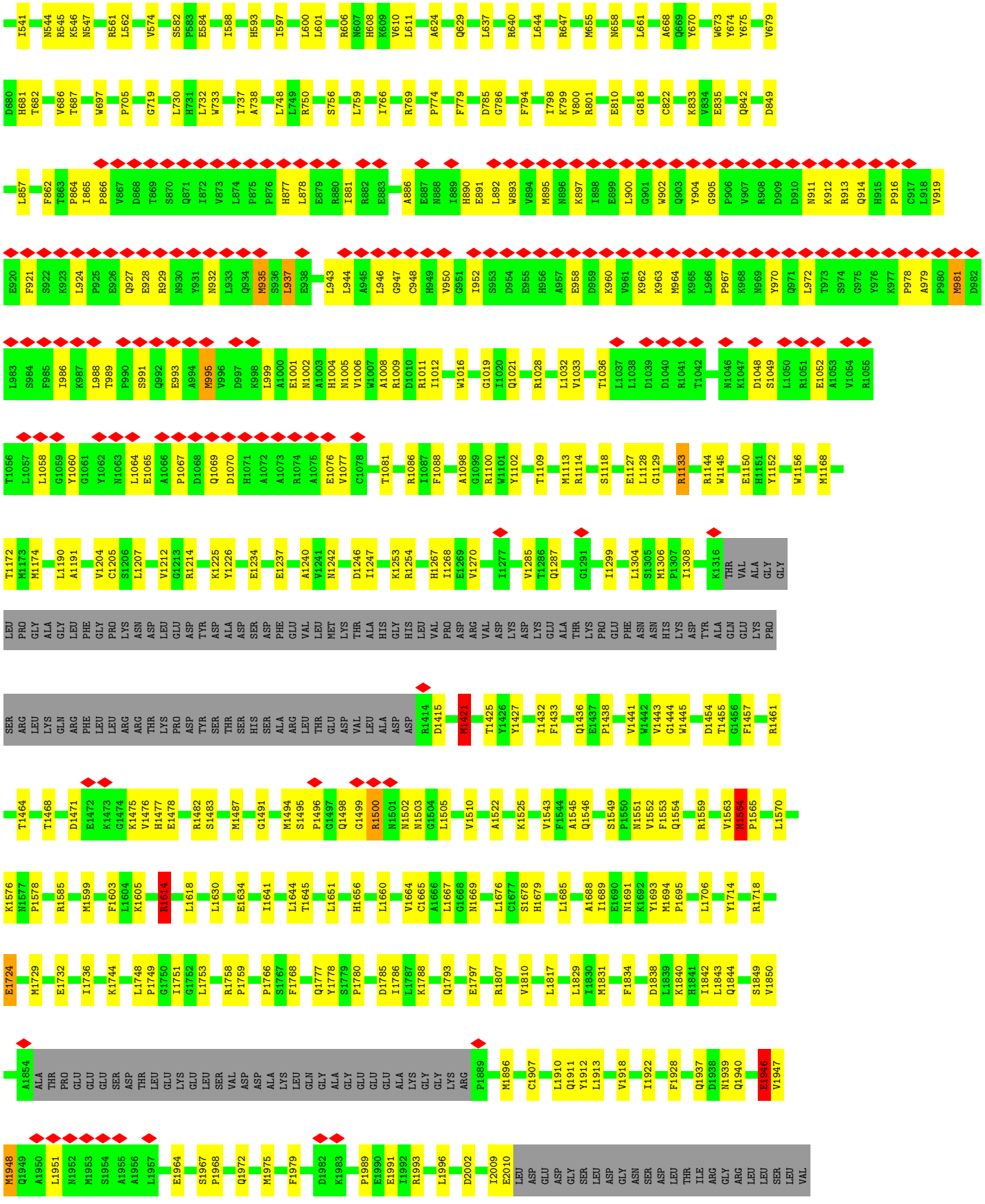






• Molecule 2: Ryanodine receptor 2

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D680 H681 T682 V686 T687 W697 P705 G719 L730 H731 L732 W733 I737 A738 L748 L749 R750 S756 L759 I766 R769 P774 F779 D785 G786 F794 I798 K799 V800 R801 E810 G818 C822 K833 V834 E835 Q842 D849
L857 F862 T863 P864 I865 P866 V867 D868 T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879 R880 I881 R882 E883 A886 E887 N888 I889 H890 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 L943 L944 A945 L946 G947 C948 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 L988 T989 P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999 A1000 E1001 N1002 A1003 H1004 N1005 V1006 W1007 A1008 R1009 D1010 R1011 I1012 W1016 G1019 I1020 Q1021 R1028 L1032 V1033 T1036 L1037 L1038 D1039 D1040 R1041 T1042 N1046 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055
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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 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 I1432 F1433 Q1436 E1437 P1438 V1441 W1442 V1443 G1444 W1445 D1454 T1455 G1456 F1457 R1461
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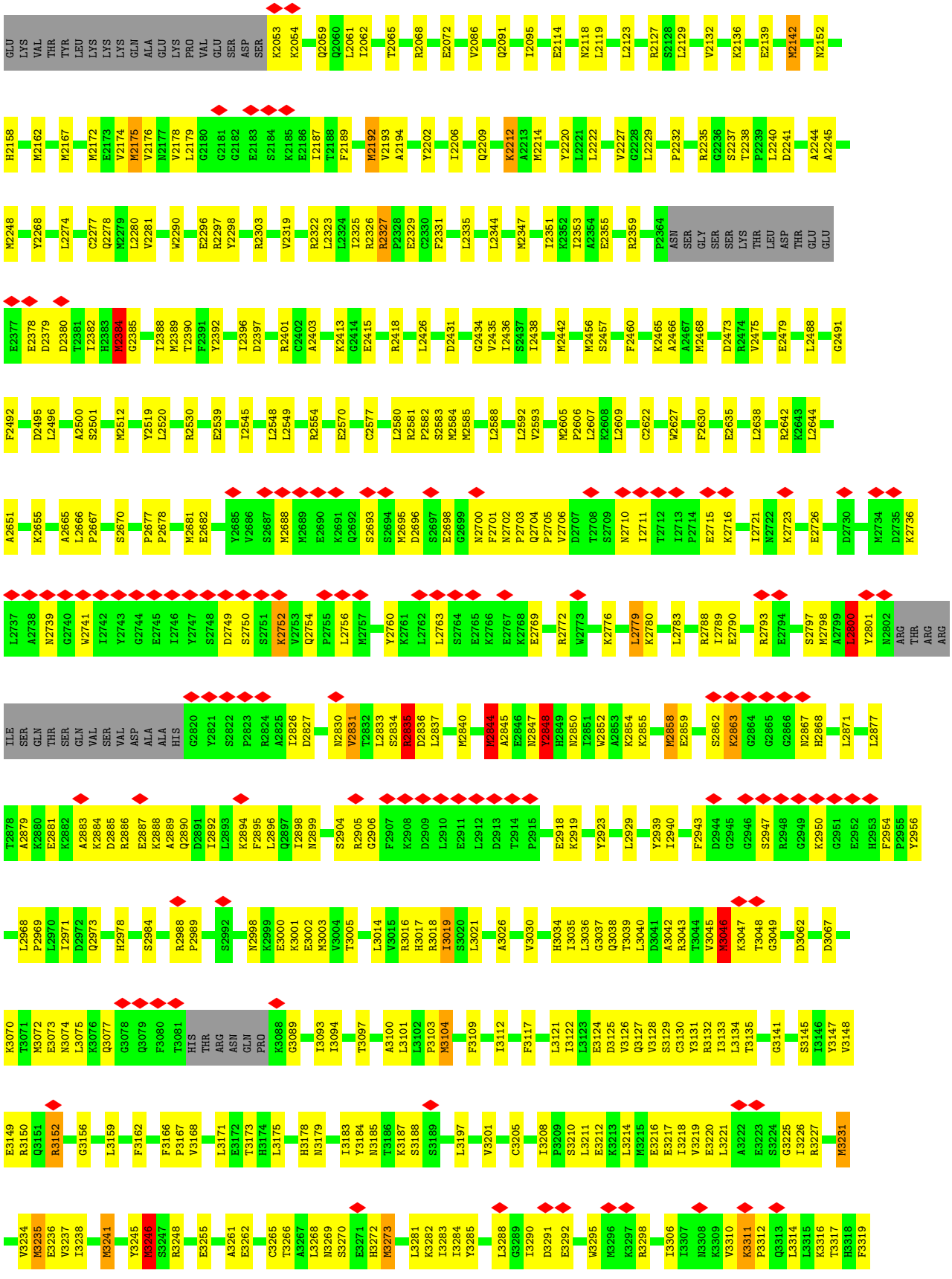
K1576 N1577 P1578 R1585 M1599 F1603 L1604 K1605 R1614 L1618 L1630 E1634 I1641 L1644 T1645 L1651 H1656 L1660 V1664 C1665 A1666 L1667 G1668 N1669 L1676 C1677 S1678 H1679 L1685 A1688 I1689 E1690 N1691 K1692 Y1693 M1694 P1695 L1706 Y1714 R1718
E1724 M1729 E1732 I1736 K1744 L1748 P1749 G1750 I1751 G1752 L1753 R1758 P1759 P1766 S1767 F1768 Q1777 Y1778 S1779 P1780 D1785 I1786 L1787 K1788 Q1793 E1797 R1807 V1810 L1817 L1829 I1830 M1831 F1834 D1838 L1839 K1840 H1841 I1842 L1843 Q1844 S1849 V1850
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 ALA LYS GLY GLY GLY LYS ARG P1889 M1896 C1907 L1910 Q1911 Y1912 L1913 V1918 I1922 F1928 Q1937 D1938 N1939 Q1940 E1946 V1947
M1948 Q1949 A1950 L1951 N1952 M1953 S1954 A1955 A1956 L1957 E1964 S1967 P1968 Q1972 M1975 F1979 D1982 K1983 P1989 E1990 E1991 T1992 R1993 L1996 D2002 I2009 E2010 LEU ASP GLU ASP GLY SER LEU ASP GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL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K2053 K2054 Q2059 Q2060 L2061 I2062 T2065 R2068 E2072 V2086 Q2091 I2095 E2114 N2118 L2119 L2123 R2127 S2128 L2129 V2132 K2136 E2139 M2142 N2152
H2158 M2162 M2167 M2172 E2173 V2174 M2175 V2176 N2177 V2178 L2179 G2180 G2181 G2182 E2183 S2184 K2185 E2186 I2187 T2188 F2189 M2192 V2193 A2194 Y2202 I2206 Q2209 K2212 A2213 M2214 Y2220 L2221 L2222 V2227 G2228 L2229 P2232 R2235 G2236 S2237 T2238 P2239 L2240 D2241 A2244 A2245
M2248 Y2268 L2274 C2277 Q2278 M2279 L2280 V2281 W2290 E2296 R2297 Y2298 R2303 V2319 R2322 L2323 L2324 I2325 R2326 R2327 P2328 E2329 C2330 F2331 L2335 L2344 M2347 I2351 K2352 I2353 A2354 E2355 R2359 P2364 ASN SER GLY SER SER LYS THR LEU ASP THR GLU GLU
E2377 E2378 D2379 D2380 T2381 I2382 H2383 M2384 G2385 I2388 M2389 T2390 F2391 Y2392 I2396 D2397 R2401 C2402 A2403 K2413 G2414 E2415 R2418 L2426 D2431 G2434 V2435 I2436 S2437 I2438 M2442 M2456 S2457 F2460 K2465 A2466 A2467 M2468 D2473 R2474 V2475 E2479 L2488 G2491
F2492 D2495 L2496 A2500 S2501 M2512 Y2519 L2520 R2530 E2539 I2545 L2548 L2549 R2554 E2570 C2577 L2580 R2581 P2582 S2583 M2584 M2585 L2588 L2592 V2593 M2605 P2606 L2607 K2608 L2609 C2622 W2627 F2630 E2635 L2638 R2642 K2643 L2644
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ILE SER GLN THR SER GLN VAL SER VAL ASP ALA ALA HIS G2820 Y2821 S2822 P2823 R2824 A2825 I2826 D2827 N2830 V2831 T2832 L2833 S2834 R2835 D2836 L2837 M2840 M2844 A2845 E2846 N2847 Y2848 H2849 M2850 I2851 W2852 A2853 K2854 K2855 M2858 E2859 S2862 K2863 G2864 G2865 G2866 N2867 H2868 L2871 L2877
T2878 A2879 K2880 E2881 K2882 A2883 K2884 D2885 R2886 E2887 K2888 A2889 Q2890 D2891 I2892 L2893 K2894 P2895 L2896 Q2897 I2898 N2899 S2904 R2905 G2906 F2907 K2908 D2909 L2910 E2911 L2912 D2913 T2914 P2915 E2918 K2919 Y2923 L2929 Y2939 I2940 F2943 D2944 G2945 G2946 S2947 R2948 G2949 K2950 G2951 E2952 H2953 F2954 P2955 Y2956
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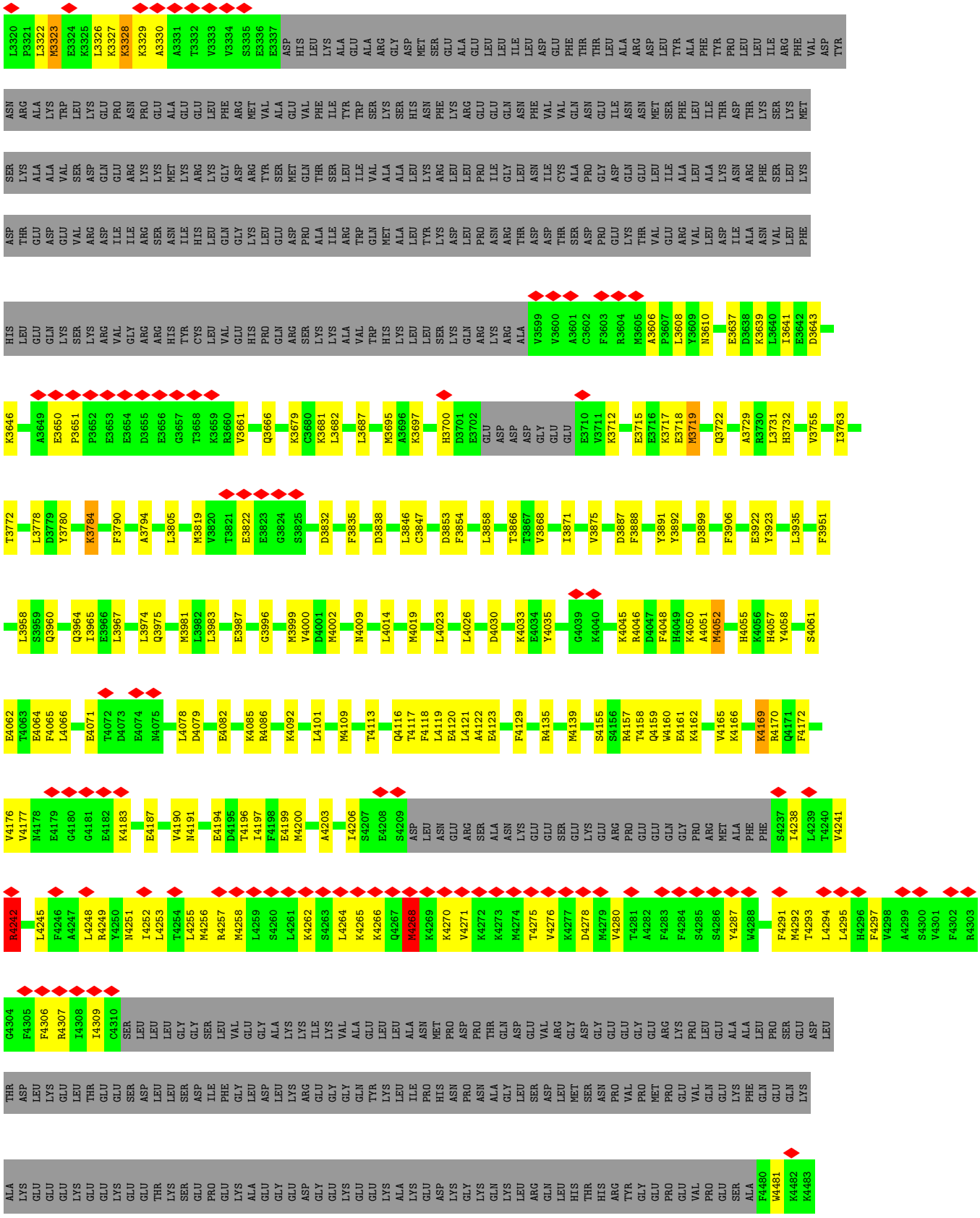
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ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA GLU GLU LEU PHE ARG MET VAL ALA GLU VAL PHE ILE TYR TRP SER LYS SER HIS ASN PHE LYS ARG GLU LEU GLU GLN ASN PHE VAL VAL GLN ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR ASP THR LYS SER LYS MET
SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET LYS ARG LYS GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN GLU LEU ILE ALA LEU ALA LYS ASN ARG PHE SER LEU LYS
ASP THR GLU ASP GLU VAL ARG ASP ILE ILE ILE ARG SER ASN ILE HIS LEU GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA LEU TYR LYS ASP PRO ASN ARG THR ASP ASP THR SER ASP PRO GLU LYS THR VAL GLU ARG VAL ALA 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 V3599 V3600 A3601 C3602 F3603 R3604 M3605 A3606 P3607 L3608 Y3609 N3610 E3637 D3638 K3639 L3640 I3641 E3642 D3643
K3646 A3649 E3650 P3651 P3652 E3653 E3654 D3655 E3656 G3657 T3658 K3659 R3660 V3661 Q3666 K3679 C3680 K3681 L3682 L3687 M3695 A3696 K3697 H3700 D3701 E3702 GLU ASP ASP GLY GLU GLU E3710 V3711 K3712 E3715 E3716 K3717 E3718 M3719 Q3722 A3729 R3730 L3731 H3732 V3755 I3763
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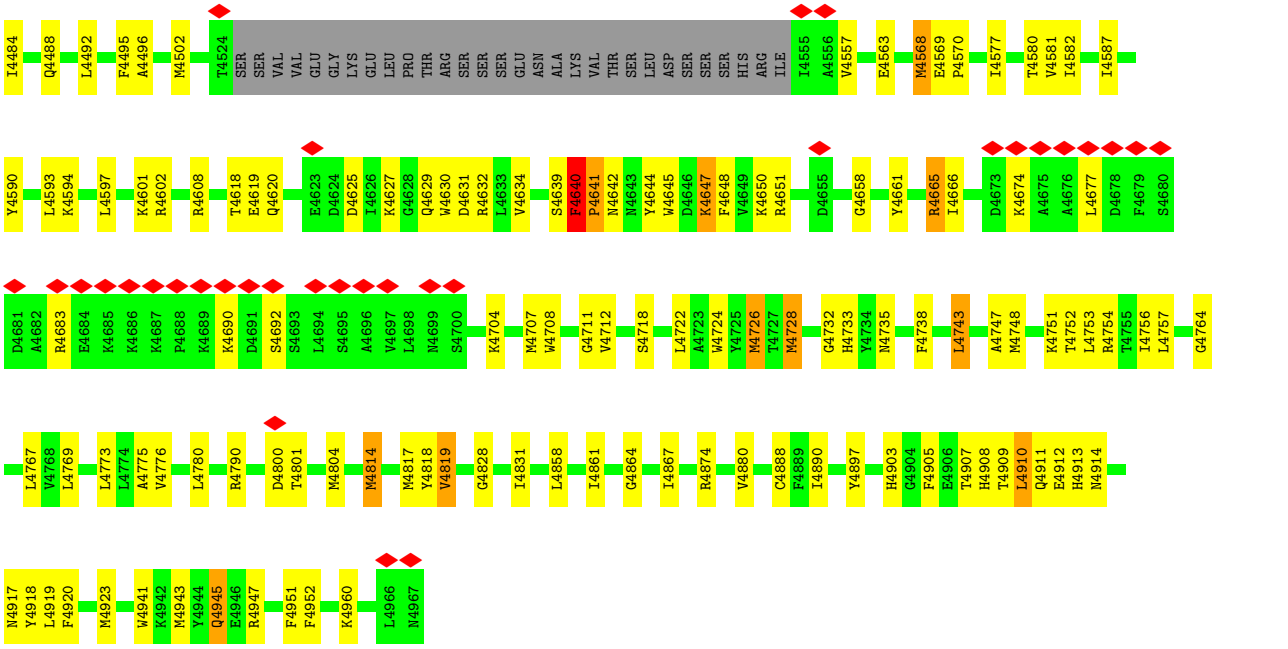
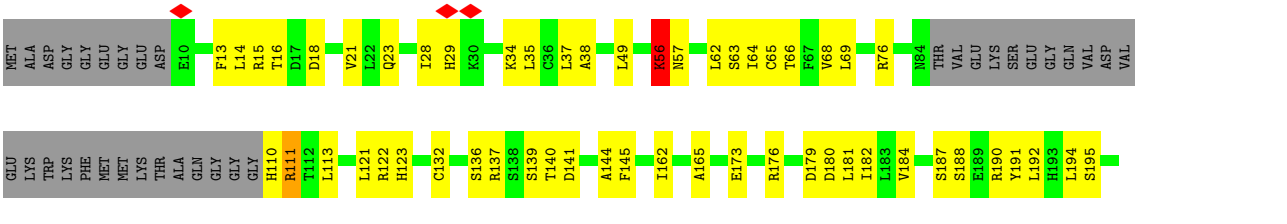
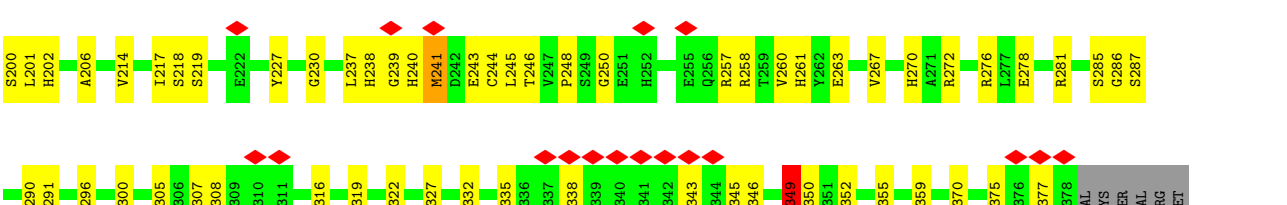
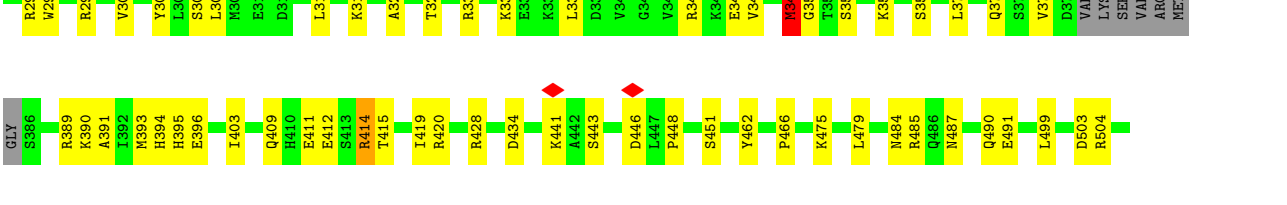
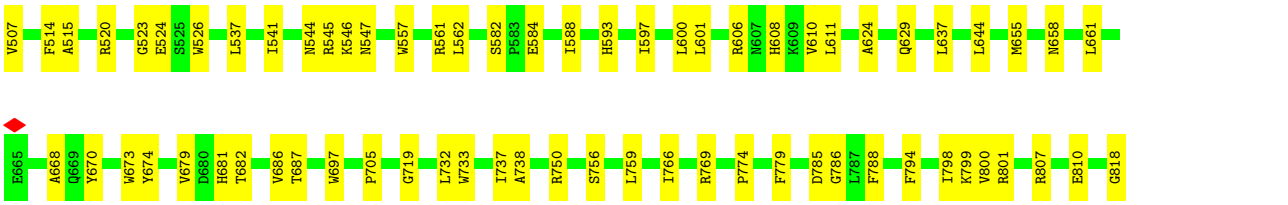
E4062 T4063 E4064 F4065 L4066 E4071 T4072 D4073 E4074 N4075 L4078 D4079 E4082 K4085 R4086 K4092 L4101 M4109 T4113 Q4116 T4117 F4118 L4119 E4120 L4121 A4122 E4123 F4129 R4135 M4139 S4155 S4156 R4157 T4158 Q4159 W4160 E4161 K4162 V4165 K4166 K4169 R4170 Q4171 F4172
V4176 V4177 N4178 E4179 G4180 G4181 E4182 K4183 E4187 V4190 N4191 E4194 D4195 T4196 I4197 F4198 E4199 M4200 A4203 I4206 S4207 E4208 S4209 ASP LEU ASN GLU ARG SER ALA ASN LYS GLU GLU SER GLU LYS GLU ARG PRO GLU GLU GLN GLY PRO ARG MET ALA PHE PHE S4237 I4238 L4239 T4240 V4241
R4242 L4245 F4246 A4247 L4248 R4249 Y4250 N4251 I4252 L4253 T4254 L4255 M4256 R4257 M4258 L4259 S4260 L4261 K4262 S4263 L4264 K4265 K4266 Q4267 M4268 K4269 K4270 V4271 K4272 K4273 M4274 T4275 V4276 K4277 D4278 M4279 V4280 T4281 A4282 F4283 F4284 S4285 S4286 Y4287 W4288 F4291 M4292 T4293 L4294 L4295 H4296 F4297 V4298 A4299 S4300 V4301 F4302 R4303
G4304 F4305 F4306 R4307 I4308 I4309 C4310 SER LEU LEU LEU GLY GLY SER LEU VAL GLU GLY GLY ALA LYS LYS ILE LYS VAL ALA GLU LEU LEU ALA ASN MET PRO ASP PRO THR GLN ASP GLU VAL ARG GLY ASP GLY GLU GLU GLY GLU ARG LYS PRO LEU GLU GLU ALA ALA LEU PRO PRO SER GLU ASP LEU
THR ASP LEU LYS GLU LEU THR GLU GLU SER ASP LEU LEU SER SER ASP ILE PHE GLY LEU ASP LEU LYS ARG GLU GLY GLY GLN TYR LYS LEU LEU ILE PRO HIS ASN PRO ASN ALA GLY LEU SER ASP LEU MET SER ASN PRO VAL PRO MET PRO GLU VAL GLN GLU LYS PHE GLN GLU GLN LYS
ALA LYS GLU GLU GLU LYS GLU GLU LYS GLU GLU LYS ALA LYS GLU GLY GLU ASP GLY GLU LYS GLU GLU LYS ALA LYS GLU GLY THR LYS SER GLU PRO GLU LYS ALA GLU GLY ASP GLY GLU LYS GLN LYS LEU ARG GLN LEU HIS THR HIS ARG TYR GLY GLU PRO GLU VAL PRO GLU SER ALA F4480 W4481 K4482 K4483





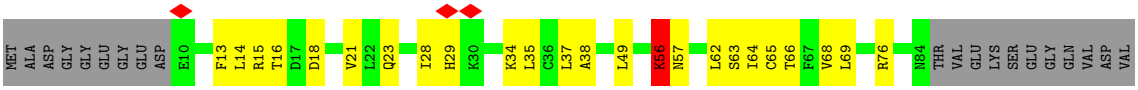


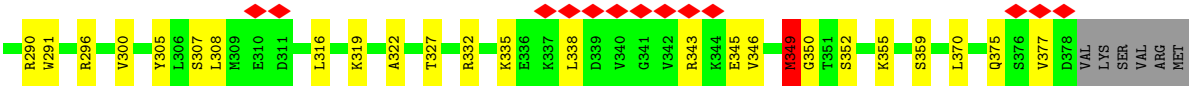


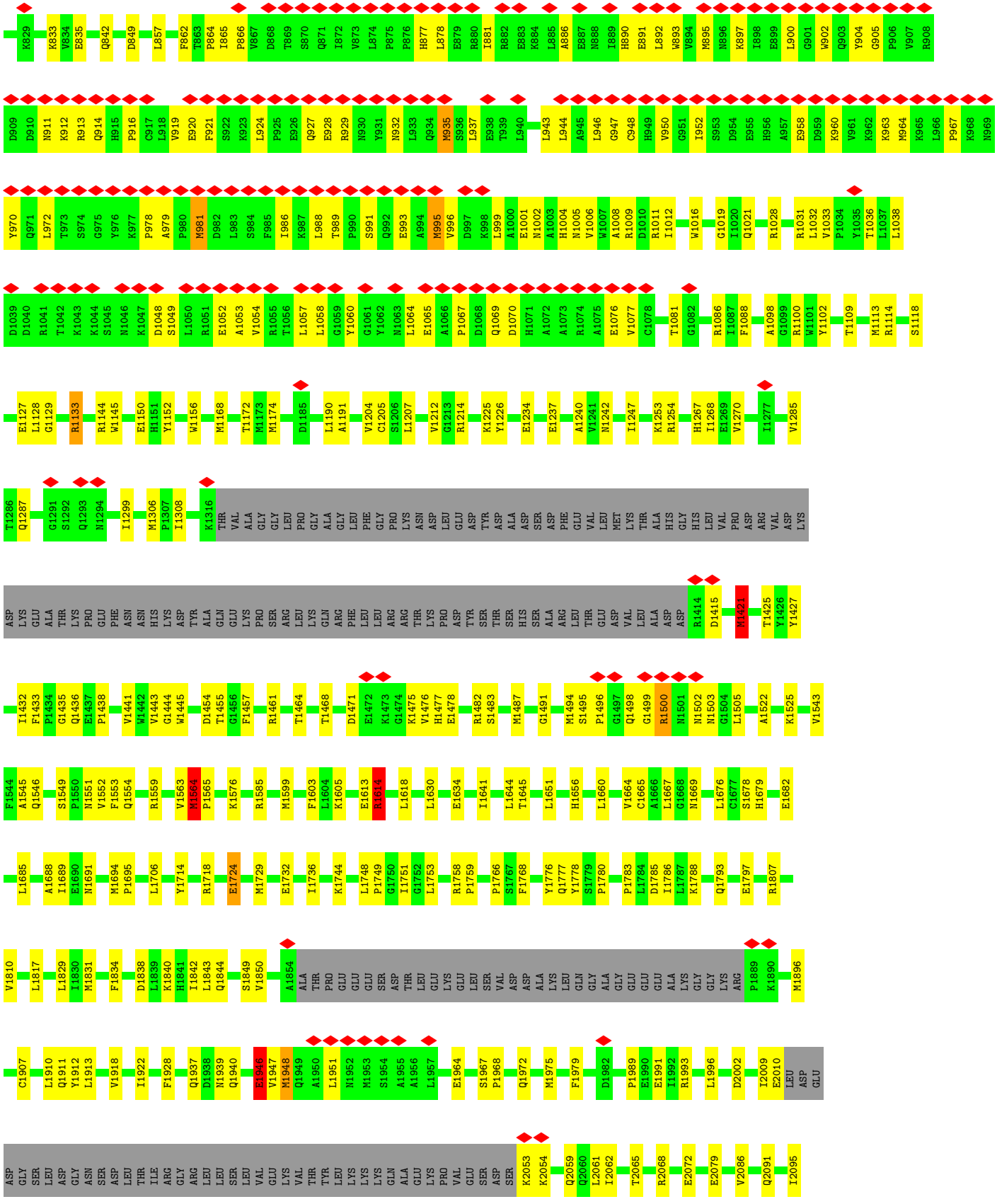


• Molecule 2: Ryanodine receptor 2

Chain B:



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T1286 Q1287 G1291 S1292 Q1293 N1294 I1299 M1306 P1307 I1308 K1316 THR VAL ALA GLY GLY LEU PRO PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU 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 N1421 T1425 Y1426 Y1427
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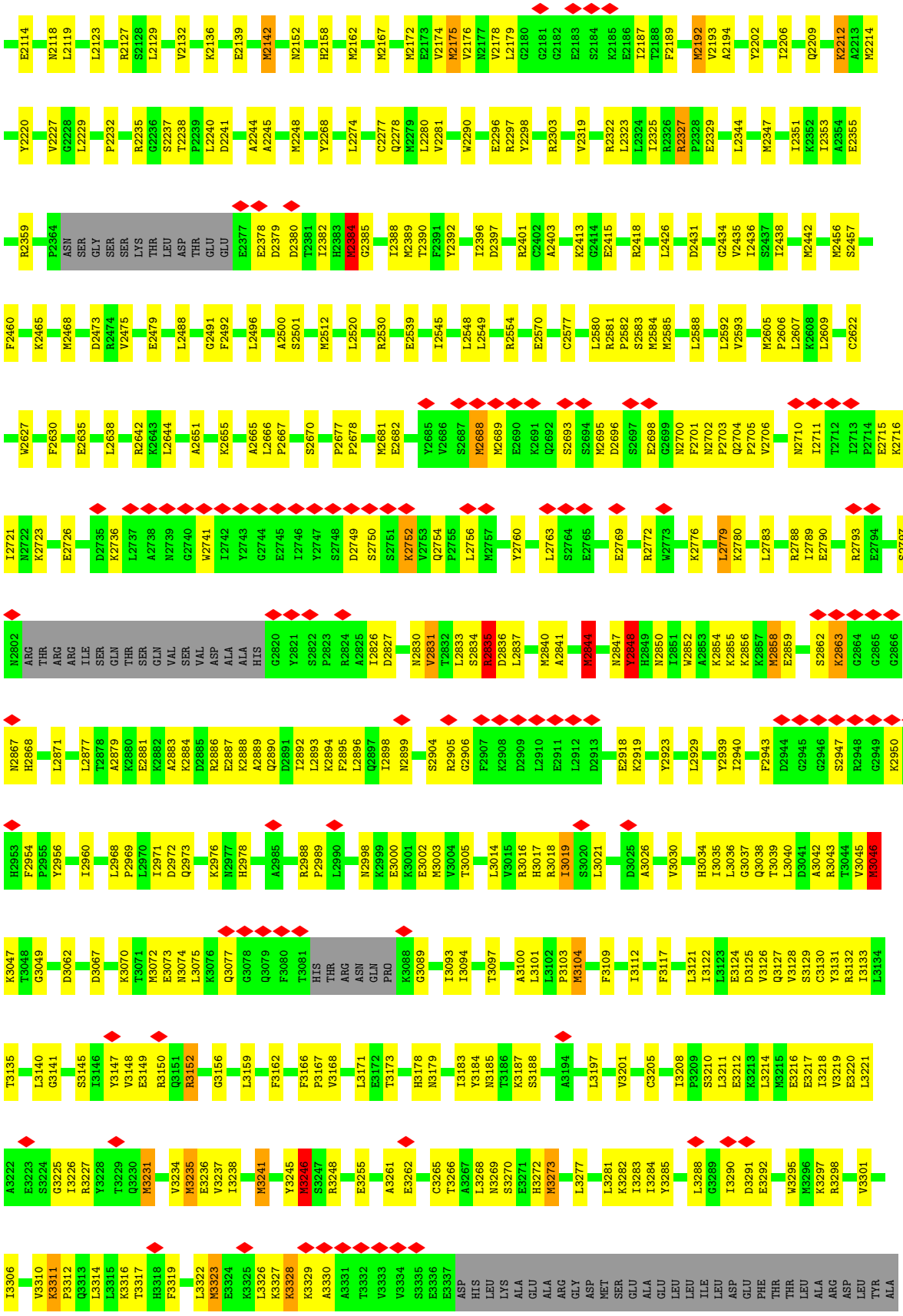
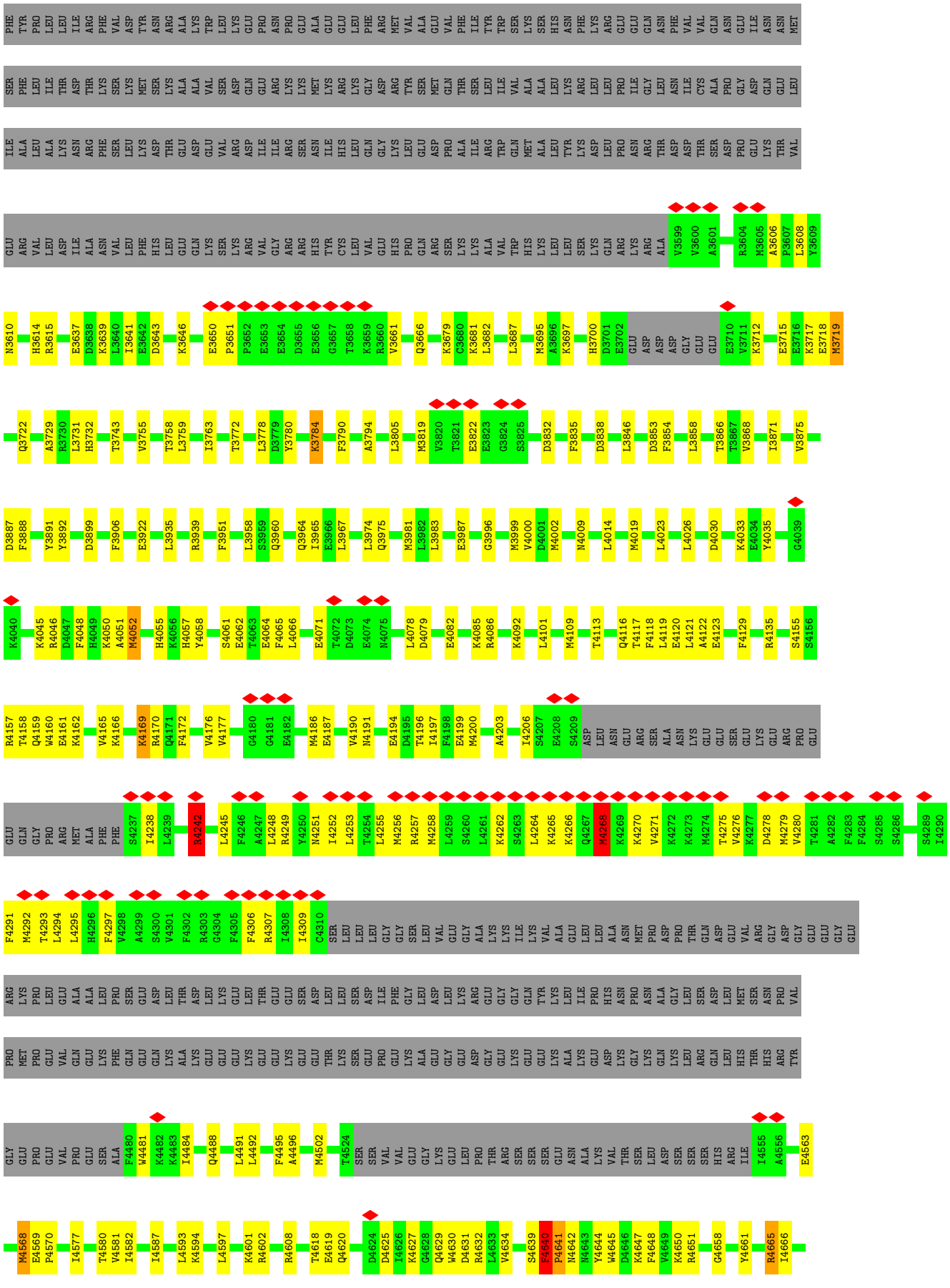
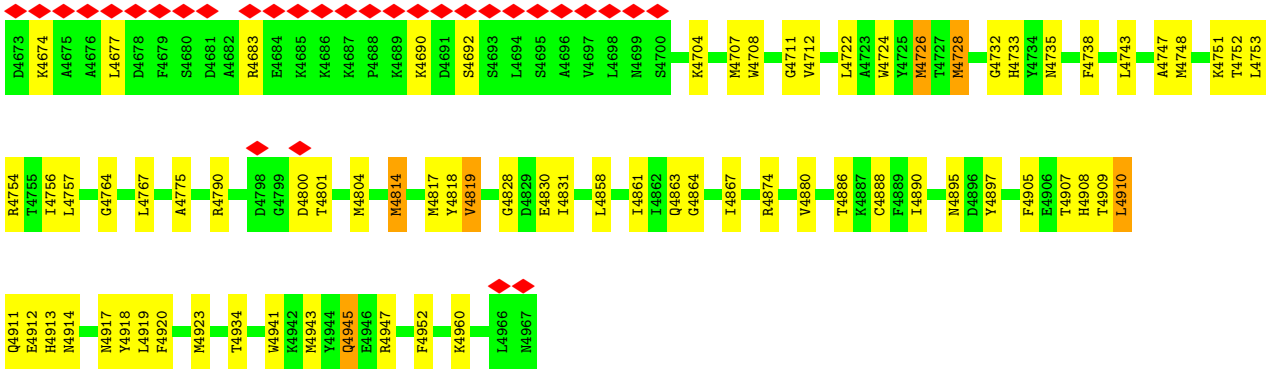
V1810 L1817 L1829 I1830 M1831 F1834 D1838 L1839 K1840 H1841 I1842 L1843 Q1844 S1849 V1850 A1854 ALA THR PRO GLU GLU SER ASP THR LEU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU GLU GLY LYS LYS ARG P1889 K1890 M1896
C1907 L1910 Q1911 Y1912 L1913 V1918 I1922 F1928 Q1937 D1938 N1939 Q1940 E1946 V1947 M1948 Q1949 A1950 L1951 N1952 M1953 S1954 A1955 A1956 L1957 E1964 S1967 P1968 Q1972 M1975 F1979 D1982 P1989 E1990 E1991 I1992 R1993 L1996 D2002 I2009 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 Q2060 L2061 I2062 T2065 R2068 E2072 E2079 V2086 Q2091 I2095

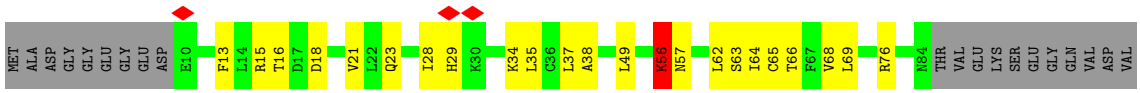


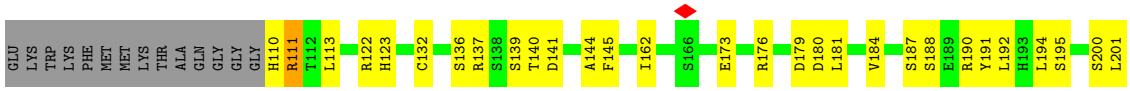


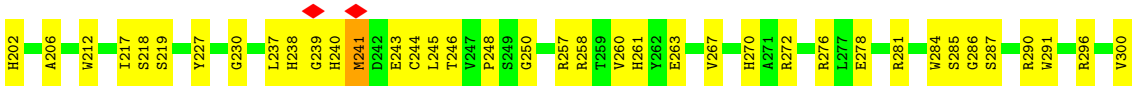


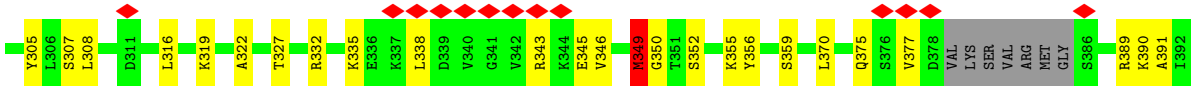
• Molecule 2: Ryanodine receptor 2

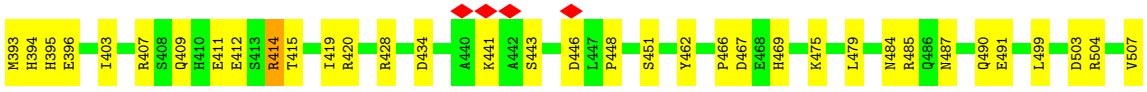
Chain C:

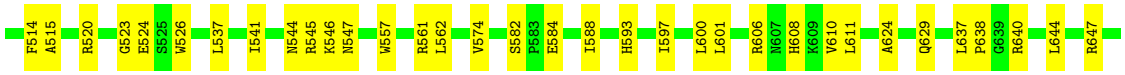


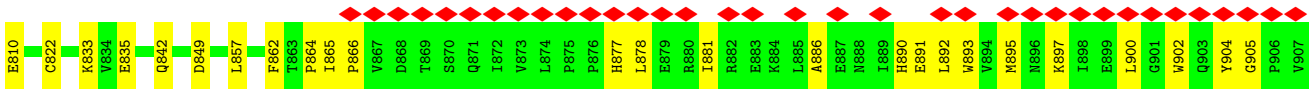


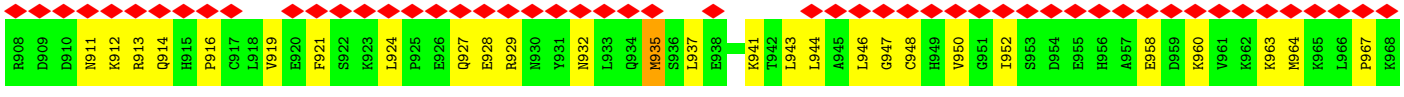


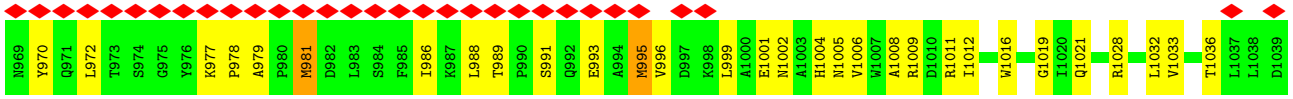


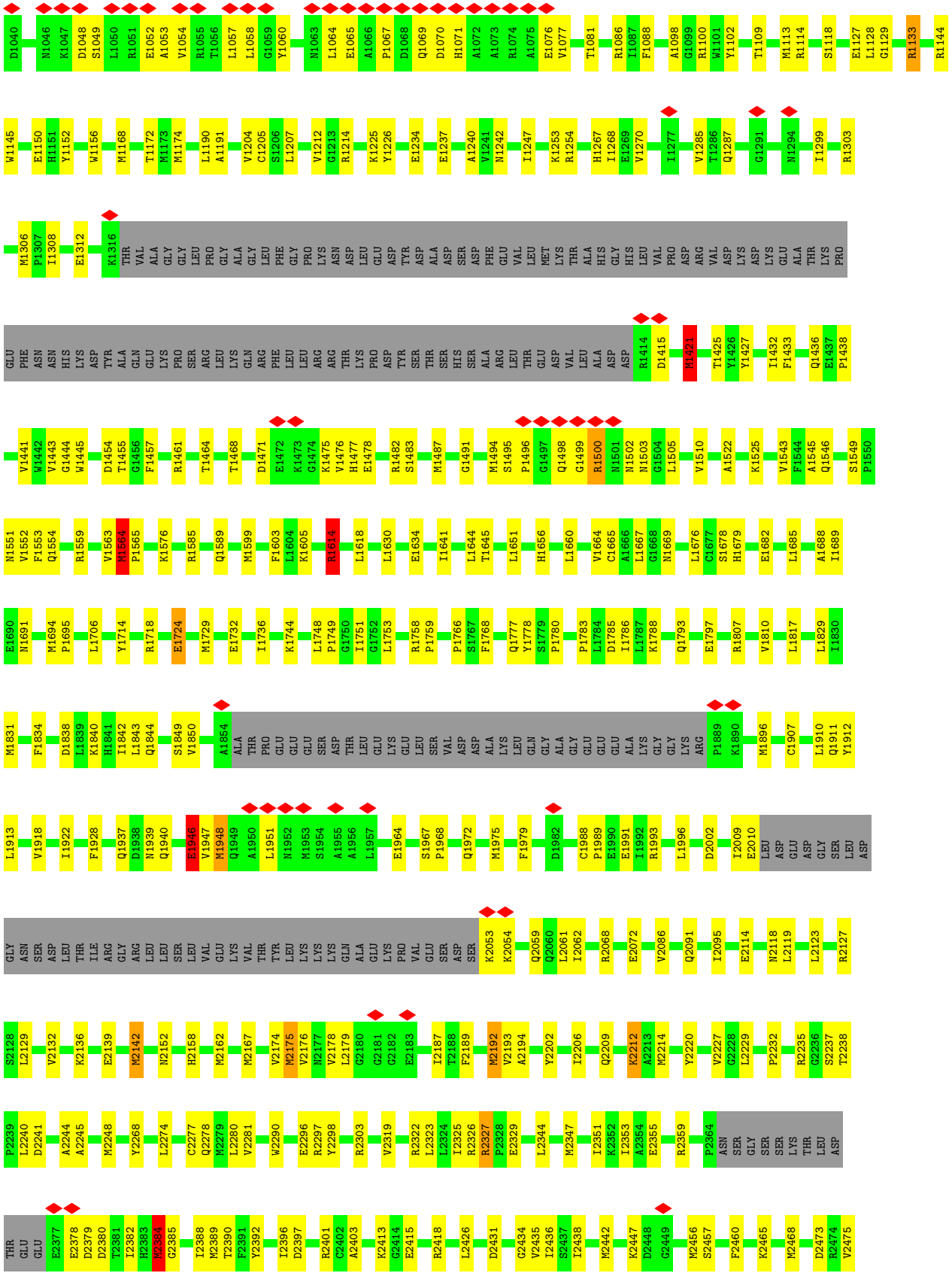








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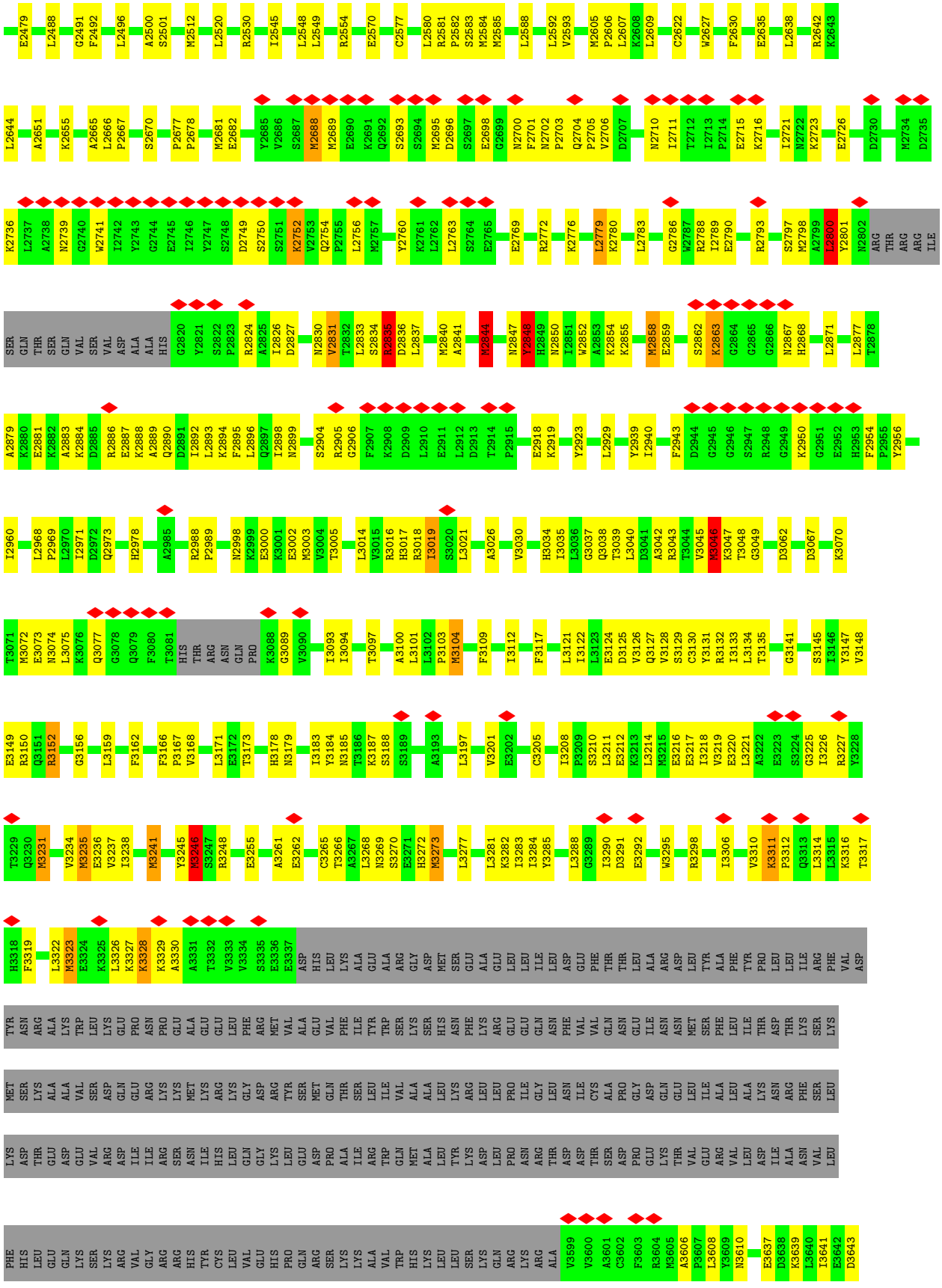
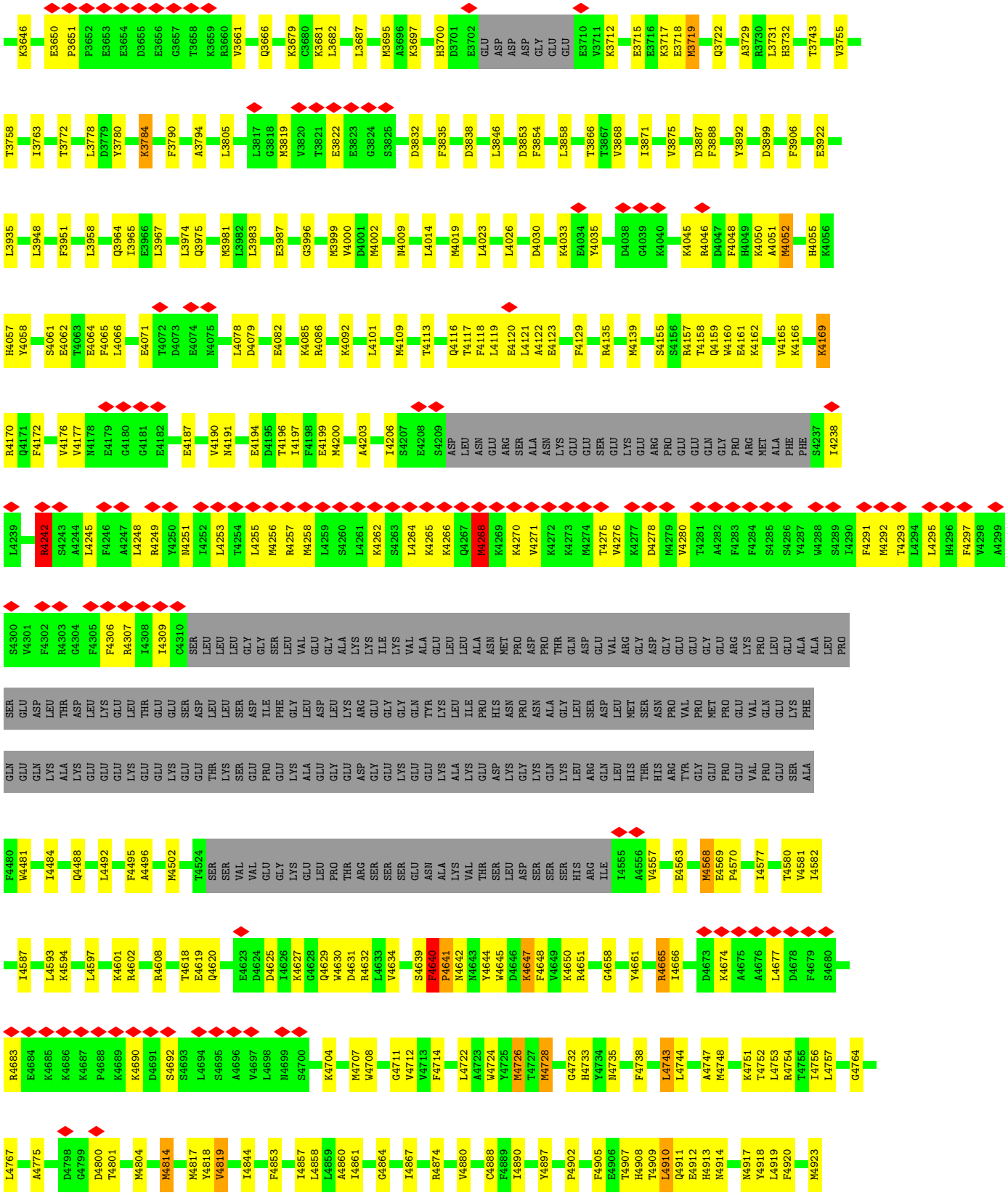
W1145 E1150 H1151 Y1152 W1156 M1168 T1172 M1173 M1174 L1190 A1191 V1204 C1205 S1206 L1207 V1212 G1213 R1214 K1225 Y1226 E1234 E1237 A1240 V1241 N1242 I1247 K1253 R1254 H1267 I1268 E1269 V1270 T1277 V1285 T1286 Q1287 G1291 N1294 I1299 R1303
M1306 P1307 I1308 E1312 K1316 THR VAL ALA GLY GLY LEU PRO GLY 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 I1432 F1433 Q1436 E1437 P1438
V1441 W1442 V1443 G1444 W1445 D1454 T1455 G1456 F1457 R1461 T1464 T1468 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 R1482 S1483 M1487 G1491 M1494 S1495 P1496 G1497 Q1498 G1499 R1500 N1501 N1502 N1503 G1504 L1505 V1510 A1522 K1525 V1543 F1544 A1545 Q1546 S1549 P1550
N1551 V1552 F1553 Q1554 R1559 V1563 M1564 P1565 K1576 R1585 Q1589 M1599 F1603 L1604 K1605 R1614 L1618 L1630 E1634 I1641 L1644 T1645 L1651 H1656 L1660 V1664 C1665 A1666 L1667 G1668 N1669 L1676 C1677 S1678 H1679 E1682 L1685 A1688 I1689
E1690 N1691 M1694 P1695 L1706 Y1714 R1718 E1724 M1729 E1732 I1736 K1744 L1748 P1749 G1750 I1751 G1752 L1753 R1758 P1759 P1766 S1767 F1768 Q1777 Y1778 S1779 P1780 P1783 L1784 D1785 I1786 L1787 K1788 Q1793 E1797 R1807 V1810 L1817 L1829 I1830
M1831 F1834 D1838 L1839 K1840 H1841 I1842 L1843 Q1844 S1849 V1850 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 ALA LYS GLY GLY LYS ARG P1889 K1890 M1896 C1907 L1910 Q1911 Y1912
L1913 V1918 I1922 F1928 Q1937 D1938 N1939 Q1940 E1946 V1947 N1948 Q1949 A1950 L1951 N1952 M1953 S1954 A1955 A1956 L1957 E1964 S1967 P1968 Q1972 M1975 F1979 D1982 C1988 P1989 E1990 E1991 I1992 R1993 L1996 D2002 I2009 E2010 LEU ASP GLU ASP GLY SER LEU ASP
GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU 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 Q2060 L2061 I2062 R2068 E2072 V2086 Q2091 I2095 E2114 N2118 L2119 L2123 R2127
S2128 L2129 V2132 K2136 E2139 M2142 N2152 H2158 M2162 M2167 V2174 M2175 V2176 N2177 V2178 L2179 G2180 G2181 G2182 E2183 I2187 T2188 F2189 M2192 V2193 A2194 Y2202 I2206 Q2209 K2212 A2213 M2214 Y2220 V2227 C2228 L2229 P2232 R2235 C2236 S2237 T2238
P2239 L2240 D2241 A2244 A2245 M2248 Y2268 L2274 C2277 Q2278 M2279 L2280 V2281 W2290 E2296 R2297 Y2298 R2303 V2319 R2322 L2323 L2324 I2325 R2326 R2327 P2328 E2329 L2344 M2347 I2351 K2352 I2353 A2354 E2355 R2359 P2364 ASN SER GLY SER SER LYS THR LEU ASP
THR GLU GLU E2377 E2378 D2379 D2380 T2381 I2382 H2383 M2384 G2385 I2388 M2389 T2390 F2391 Y2392 I2396 D2397 R2401 C2402 A2403 K2413 G2414 E2415 R2418 L2426 D2431 G2434 V2435 I2436 S2437 I2438 M2442 K2447 D2448 G2449 M2456 S2457 F2460 K2465 M2468 D2473 R2474 V2475

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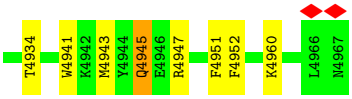
T3758 I3763 T3772 L3778 D3779 Y3780 K3784 F3790 A3794 L3805 L3817 G3818 M3819 V3820 T3821 E3822 E3823 G3824 S3825 D3832 F3835 D3838 L3846 D3853 F3854 L3858 T3866 T3867 V3868 I3871 V3875 D3887 F3888 Y3892 D3899 F3906 E3922
L3935 L3948 F3951 L3958 Q3964 I3965 E3966 L3967 L3974 Q3975 M3981 L3982 L3983 E3987 G3996 M3999 V4000 D4001 M4002 N4009 L4014 M4019 L4023 L4026 D4030 K4033 E4034 Y4035 D4038 G4039 K4040 K4045 R4046 D4047 F4048 H4049 K4050 A4051 M4052 H4055 K4056
H4057 Y4058 S4061 E4062 T4063 E4064 F4065 L4066 E4071 T4072 D4073 E4074 N4075 L4078 D4079 E4082 K4085 R4086 K4092 L4101 M4109 T4113 Q4116 T4117 F4118 L4119 E4120 L4121 A4122 E4123 F4129 R4135 M4139 S4155 S4156 R4157 T4158 Q4159 W4160 E4161 K4162 V4165 K4166 K4169
R4170 Q4171 F4172 V4176 V4177 N4178 E4179 G4180 G4181 E4182 E4187 V4190 N4191 E4194 D4195 T4196 I4197 F4198 E4199 M4200 A4203 I4206 S4207 E4208 S4209 ASP LEU ASN GLU ARG SER ALA ASN LYS GLU GLU SER GLU LYS GLU ARG PRO GLU GLU GLN GLY PRO ARG MET ALA PHE PHE S4237 I4238
L4239 R4242 S4243 A4244 L4245 F4246 A4247 L4248 R4249 Y4250 N4251 I4252 L4253 T4254 L4255 M4256 R4257 M4258 L4259 S4260 L4261 K4262 S4263 L4264 K4265 K4266 Q4267 M4268 K4269 K4270 V4271 K4272 K4273 M4274 T4275 V4276 K4277 D4278 M4279 V4280 T4281 A4282 F4283 F4284 S4285 S4286 Y4287 W4288 S4289 I4290 F4291 M4292 T4293 L4294 L4295 H4296 F4297 V4298 A4299
S4300 V4301 F4302 R4303 G4304 F4305 F4306 R4307 I4308 I4309 C4310 SER LEU LEU LEU GLY GLY SER LEU VAL GLU GLY ALA LYS LYS ILE LYS VAL ALA GLU LEU LEU LEU ALA ASN MET PRO ASP PRO THR GLN ASP GLU VAL ARG GLY ASP GLY GLU GLU GLY GLU ARG LYS PRO LEU LEU GLU ALA ALA LEU PRO
SER GLU ASP LEU THR ASP LEU LYS GLU LEU THR GLU GLU SER ASP LEU LEU SER ASP ILE PHE GLY LEU ASP LEU LYS ARG GLU GLY GLY GLN TYR LYS LEU ILE PRO HIS ASN PRO ASN ALA GLY LEU SER ASP LEU MET SER ASN PRO VAL PRO MET PRO GLU VAL GLN GLU LYS PHE
GLN GLU GLN LYS ALA LYS GLU GLU GLU LYS GLU GLU GLU LYS GLU GLU THR LYS SER GLU PRO GLU LYS ALA GLU GLY GLU ASP GLY GLU LYS GLU GLU LYS ALA LYS GLU ILE ASP LYS GLY LYS GLN LYS LEU ARG GLN LEU HIS THR HIS ARG TYR GLY GLU PRO GLU VAL PRO GLU GLU SER ALA
F4480 W4481 I4484 Q4488 L4492 F4495 A4496 M4502 T4524 SER SER VAL VAL GLU GLY LYS GLU LEU PRO THR ARG SER SER SER GLU ASN ALA LYS VAL THR SER LEU ASP SER SER SER HIS ARG ILE I4555 A4556 V4557 E4563 M4568 E4569 P4570 I4577 T4580 V4581 I4582
I4587 L4593 K4594 L4597 K4601 R4602 R4608 T4618 E4619 Q4620 E4623 D4624 D4625 I4626 K4627 G4628 Q4629 W4630 D4631 R4632 L4633 V4634 S4639 F4640 P4641 N4642 N4643 Y4644 W4645 D4646 K4647 F4648 V4649 K4650 R4651 G4658 Y4661 R4665 I4666 D4673 K4674 A4675 A4676 L4677 D4678 F4679 S4680
R4683 E4684 K4685 K4686 K4687 P4688 K4689 K4690 D4691 S4692 S4693 L4694 S4695 A4696 V4697 L4698 N4699 S4700 K4704 M4707 W4708 G4711 V4712 Y4713 F4714 L4722 A4723 W4724 Y4725 M4726 T4727 M4728 G4732 H4733 Y4734 N4735 F4738 L4743 L4744 A4747 M4748 K4751 T4752 L4753 R4754 T4755 I4756 L4757 G4764
L4767 A4775 D4798 G4799 D4800 T4801 M4804 M4814 M4817 Y4818 V4819 I4844 F4853 I4857 L4858 L4859 A4860 I4861 G4864 I4867 R4874 V4880 C4888 F4889 I4890 Y4897 P4902 F4905 E4906 T4907 H4908 T4909 L4910 Q4911 E4912 H4913 N4914 M4917 Y4918 L4919 F4920 M4923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K4942
M4943
Y4944
Q4945
E4946
R4947
F4951
F4952
K4960
L4966
N4967

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	20156	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	0.629	Depositor
Minimum map value	-0.015	Depositor
Average map value	0.016	Depositor
Map value standard deviation	0.035	Depositor
Recommended contour level	0.13	Depositor
Map size (Å)	427.008, 427.008, 427.008	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.834, 0.834, 0.834	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, XAN, ATP, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	E	0.27	0/834	0.50	0/1123
1	F	0.26	0/834	0.50	0/1123
1	G	0.26	0/834	0.50	0/1123
1	H	0.27	0/834	0.50	0/1123
2	A	0.27	0/34511	0.54	30/46614 (0.1%)
2	B	0.27	0/34511	0.54	30/46614 (0.1%)
2	C	0.27	0/34511	0.54	29/46614 (0.1%)
2	D	0.27	0/34511	0.54	30/46614 (0.1%)
All	All	0.27	0/141380	0.54	119/190948 (0.1%)

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
2	A	0	3
2	B	0	3
2	C	0	3
2	D	0	3
All	All	0	12

There are no bond length outliers.

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	2800	LEU	CA-CB-CG	13.22	145.71	115.30
2	D	2800	LEU	CA-CB-CG	13.22	145.71	115.30
2	B	2800	LEU	CA-CB-CG	13.22	145.70	115.30
2	A	2800	LEU	CA-CB-CG	13.21	145.69	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	4242	ARG	CA-CB-CG	9.30	133.86	113.40
2	C	4242	ARG	CA-CB-CG	9.30	133.86	113.40
2	D	4242	ARG	CA-CB-CG	9.29	133.85	113.40
2	B	4242	ARG	CA-CB-CG	9.28	133.81	113.40
2	C	4052	MET	CB-CG-SD	8.30	137.29	112.40
2	A	4052	MET	CB-CG-SD	8.29	137.28	112.40
2	B	4052	MET	CB-CG-SD	8.29	137.26	112.40
2	D	4052	MET	CB-CG-SD	8.28	137.25	112.40
2	C	3719	MET	CB-CG-SD	8.03	136.49	112.40
2	B	3719	MET	CB-CG-SD	8.02	136.46	112.40
2	A	3719	MET	CB-CG-SD	8.02	136.45	112.40
2	D	3719	MET	CB-CG-SD	8.01	136.43	112.40
2	D	4052	MET	CA-CB-CG	7.65	126.30	113.30
2	B	4052	MET	CA-CB-CG	7.63	126.28	113.30
2	A	4052	MET	CA-CB-CG	7.63	126.28	113.30
2	C	4052	MET	CA-CB-CG	7.63	126.27	113.30
2	B	1564	MET	CB-CG-SD	7.41	134.63	112.40
2	D	1564	MET	CB-CG-SD	7.41	134.62	112.40
2	A	1564	MET	CB-CG-SD	7.40	134.59	112.40
2	C	1564	MET	CB-CG-SD	7.38	134.55	112.40
2	C	3246	MET	CA-CB-CG	7.32	125.75	113.30
2	D	3246	MET	CA-CB-CG	7.31	125.73	113.30
2	A	3246	MET	CA-CB-CG	7.30	125.72	113.30
2	B	3246	MET	CA-CB-CG	7.30	125.72	113.30
2	B	3246	MET	CB-CG-SD	7.29	134.27	112.40
2	C	3246	MET	CB-CG-SD	7.29	134.27	112.40
2	A	3246	MET	CB-CG-SD	7.29	134.27	112.40
2	D	3246	MET	CB-CG-SD	7.28	134.24	112.40
2	C	2848	TYR	CA-CB-CG	7.13	126.95	113.40
2	A	2848	TYR	CA-CB-CG	7.12	126.92	113.40
2	D	2848	TYR	CA-CB-CG	7.11	126.91	113.40
2	B	2848	TYR	CA-CB-CG	7.11	126.90	113.40
2	D	1946	GLU	CA-CB-CG	7.08	128.97	113.40
2	B	1946	GLU	CA-CB-CG	7.07	128.95	113.40
2	A	1946	GLU	CA-CB-CG	7.06	128.93	113.40
2	C	1946	GLU	CA-CB-CG	7.04	128.90	113.40
2	A	4640	PHE	C-N-CD	-6.89	105.43	120.60
2	C	4640	PHE	C-N-CD	-6.89	105.43	120.60
2	B	4640	PHE	C-N-CD	-6.89	105.44	120.60
2	D	4640	PHE	C-N-CD	-6.89	105.44	120.60
2	C	4910	LEU	CA-CB-CG	6.79	130.93	115.30
2	A	4910	LEU	CA-CB-CG	6.79	130.91	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	4910	LEU	CA-CB-CG	6.78	130.90	115.30
2	B	4910	LEU	CA-CB-CG	6.78	130.90	115.30
2	B	3719	MET	CA-CB-CG	6.66	124.62	113.30
2	D	3719	MET	CA-CB-CG	6.66	124.62	113.30
2	A	3719	MET	CA-CB-CG	6.65	124.61	113.30
2	C	3719	MET	CA-CB-CG	6.62	124.55	113.30
2	B	349	MET	CB-CG-SD	6.48	131.85	112.40
2	A	349	MET	CB-CG-SD	6.47	131.82	112.40
2	D	349	MET	CB-CG-SD	6.47	131.82	112.40
2	C	349	MET	CB-CG-SD	6.47	131.82	112.40
2	A	4814	MET	CB-CG-SD	6.31	131.34	112.40
2	B	4814	MET	CB-CG-SD	6.31	131.34	112.40
2	D	4814	MET	CB-CG-SD	6.31	131.33	112.40
2	C	4814	MET	CB-CG-SD	6.30	131.31	112.40
2	D	2142	MET	CA-CB-CG	6.10	123.67	113.30
2	A	2142	MET	CA-CB-CG	6.09	123.65	113.30
2	C	2142	MET	CA-CB-CG	6.09	123.65	113.30
2	B	2142	MET	CA-CB-CG	6.07	123.61	113.30
2	B	2844	MET	CB-CG-SD	5.99	130.37	112.40
2	A	2844	MET	CB-CG-SD	5.98	130.34	112.40
2	C	2844	MET	CB-CG-SD	5.97	130.33	112.40
2	D	2844	MET	CB-CG-SD	5.96	130.29	112.40
2	B	56	LYS	CB-CG-CD	5.95	127.07	111.60
2	C	56	LYS	CB-CG-CD	5.95	127.07	111.60
2	A	56	LYS	CB-CG-CD	5.94	127.05	111.60
2	D	56	LYS	CB-CG-CD	5.94	127.04	111.60
2	C	4814	MET	CA-CB-CG	5.75	123.08	113.30
2	A	4814	MET	CA-CB-CG	5.74	123.06	113.30
2	D	4814	MET	CA-CB-CG	5.74	123.05	113.30
2	B	4814	MET	CA-CB-CG	5.73	123.04	113.30
2	C	3046	MET	CB-CG-SD	5.69	129.47	112.40
2	A	3046	MET	CB-CG-SD	5.68	129.45	112.40
2	D	3046	MET	CB-CG-SD	5.68	129.46	112.40
2	B	3046	MET	CB-CG-SD	5.66	129.39	112.40
2	D	3719	MET	CG-SD-CE	5.65	109.24	100.20
2	A	3719	MET	CG-SD-CE	5.63	109.20	100.20
2	C	3719	MET	CG-SD-CE	5.62	109.20	100.20
2	B	3719	MET	CG-SD-CE	5.62	109.18	100.20
2	C	2835	ARG	CA-CB-CG	5.59	125.69	113.40
2	B	2835	ARG	CA-CB-CG	5.58	125.69	113.40
2	A	2835	ARG	CA-CB-CG	5.55	125.62	113.40
2	D	2835	ARG	CA-CB-CG	5.55	125.60	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	2848	TYR	CB-CG-CD2	-5.49	117.71	121.00
2	C	1564	MET	CA-CB-CG	5.48	122.62	113.30
2	B	2848	TYR	CB-CG-CD2	-5.48	117.71	121.00
2	A	1564	MET	CA-CB-CG	5.46	122.59	113.30
2	D	1564	MET	CA-CB-CG	5.45	122.57	113.30
2	B	1564	MET	CA-CB-CG	5.45	122.56	113.30
2	A	2848	TYR	CB-CG-CD2	-5.42	117.75	121.00
2	D	2848	TYR	CB-CG-CD2	-5.40	117.76	121.00
2	C	1421	MET	CB-CG-SD	5.39	128.58	112.40
2	A	1421	MET	CB-CG-SD	5.39	128.57	112.40
2	B	1421	MET	CB-CG-SD	5.39	128.57	112.40
2	D	1421	MET	CB-CG-SD	5.38	128.55	112.40
2	D	4268	MET	CA-CB-CG	5.23	122.20	113.30
2	B	4268	MET	CA-CB-CG	5.23	122.19	113.30
2	A	4268	MET	CA-CB-CG	5.23	122.19	113.30
2	C	4268	MET	CA-CB-CG	5.22	122.18	113.30
2	A	2384	MET	CB-CG-SD	5.20	127.99	112.40
2	B	2384	MET	CB-CG-SD	5.19	127.97	112.40
2	C	2384	MET	CB-CG-SD	5.19	127.97	112.40
2	D	1614	ARG	CG-CD-NE	5.19	122.69	111.80
2	D	2384	MET	CB-CG-SD	5.18	127.95	112.40
2	B	1614	ARG	CG-CD-NE	5.17	122.66	111.80
2	A	1614	ARG	CG-CD-NE	5.17	122.65	111.80
2	C	1614	ARG	CG-CD-NE	5.14	122.60	111.80
2	D	2384	MET	CG-SD-CE	5.06	108.29	100.20
2	A	2384	MET	CG-SD-CE	5.04	108.26	100.20
2	B	2384	MET	CG-SD-CE	5.04	108.26	100.20
2	C	2384	MET	CG-SD-CE	5.03	108.25	100.20
2	D	2848	TYR	N-CA-CB	-5.02	101.56	110.60
2	B	2848	TYR	N-CA-CB	-5.02	101.56	110.60
2	A	2848	TYR	N-CA-CB	-5.02	101.57	110.60

There are no chirality outliers.

All (12) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	111	ARG	Sidechain
2	A	1614	ARG	Sidechain
2	A	4640	PHE	Peptide
2	B	111	ARG	Sidechain
2	B	1614	ARG	Sidechain
2	B	4640	PHE	Peptide

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Mol	Chain	Res	Type	Group
2	C	111	ARG	Sidechain
2	C	1614	ARG	Sidechain
2	C	4640	PHE	Peptide
2	D	111	ARG	Sidechain
2	D	1614	ARG	Sidechain
2	D	4640	PHE	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	E	818	0	821	12	0
1	F	818	0	821	14	0
1	G	818	0	821	17	0
1	H	818	0	821	20	0
2	A	33771	0	33453	849	0
2	B	33771	0	33453	836	0
2	C	33771	0	33453	823	0
2	D	33771	0	33453	858	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	62	0	24	5	0
4	B	62	0	24	5	0
4	C	62	0	24	5	0
4	D	62	0	24	5	0
5	A	1	0	0	1	0
5	B	1	0	0	1	0
5	C	1	0	0	1	0
5	D	1	0	0	1	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	138656	0	137208	3337	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 12.

All (3337) 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)
2:C:2844:MET:O	2:C:2848:TYR:HB2	1.61	1.01
2:A:2844:MET:O	2:A:2848:TYR:HB2	1.61	1.00
2:D:2844:MET:O	2:D:2848:TYR:HB2	1.61	0.99
2:B:2844:MET:O	2:B:2848:TYR:HB2	1.61	0.99
2:A:143:LEU:HD21	2:D:2325:ILE:HD11	1.44	0.99
2:A:4790:ARG:HH12	2:D:4557:VAL:HG21	1.32	0.93
2:A:2859:GLU:OE1	2:A:2863:LYS:NZ	2.02	0.93
2:D:2859:GLU:OE1	2:D:2863:LYS:NZ	2.02	0.93
2:B:2859:GLU:OE1	2:B:2863:LYS:NZ	2.02	0.92
2:C:2859:GLU:OE1	2:C:2863:LYS:NZ	2.02	0.92
2:B:810:GLU:HG2	2:B:1614:ARG:NH2	1.86	0.91
2:D:810:GLU:HG2	2:D:1614:ARG:NH2	1.86	0.91
2:C:3328:LYS:HE3	2:C:3328:LYS:HA	1.53	0.90
2:A:810:GLU:HG2	2:A:1614:ARG:NH2	1.86	0.90
2:A:1498:GLN:HB2	2:D:2798:MET:SD	2.11	0.90
2:C:810:GLU:HG2	2:C:1614:ARG:NH2	1.86	0.90
2:B:3328:LYS:HA	2:B:3328:LYS:HE3	1.53	0.89
2:D:2879:ALA:O	2:D:2886:ARG:NH2	2.06	0.88
2:D:3328:LYS:HA	2:D:3328:LYS:HE3	1.53	0.88
2:A:3328:LYS:HA	2:A:3328:LYS:HE3	1.53	0.87
2:B:2879:ALA:O	2:B:2886:ARG:NH2	2.06	0.87
2:C:2879:ALA:O	2:C:2886:ARG:NH2	2.06	0.87
2:A:2879:ALA:O	2:A:2886:ARG:NH2	2.06	0.87
2:C:1688:ALA:HA	2:C:1694:MET:HE1	1.57	0.87
2:D:810:GLU:HG2	2:D:1614:ARG:HH22	1.40	0.86
2:D:189:GLU:HB3	2:C:2326:ARG:HH12	1.38	0.86
2:B:1498:GLN:OE1	2:B:1500:ARG:NH1	2.09	0.86
2:B:1688:ALA:HA	2:B:1694:MET:HE1	1.58	0.86
2:A:810:GLU:HG2	2:A:1614:ARG:HH22	1.40	0.86
2:C:1498:GLN:OE1	2:C:1500:ARG:NH1	2.09	0.85
2:A:1498:GLN:OE1	2:A:1500:ARG:NH1	2.09	0.85
2:C:810:GLU:HG2	2:C:1614:ARG:HH22	1.40	0.85
2:D:1498:GLN:OE1	2:D:1500:ARG:NH1	2.09	0.84
2:B:810:GLU:HG2	2:B:1614:ARG:HH22	1.40	0.84
2:D:2129:LEU:HB3	2:D:2142:MET:HE1	1.59	0.84
2:B:4863:GLN:HE21	2:C:4860:ALA:HB2	1.41	0.84
2:B:2129:LEU:HB3	2:B:2142:MET:HE1	1.60	0.83
2:D:2848:TYR:OH	2:D:2888:LYS:NZ	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2848:TYR:OH	2:A:2888:LYS:NZ	2.12	0.83
2:A:2129:LEU:HB3	2:A:2142:MET:HE1	1.59	0.83
2:D:1688:ALA:HA	2:D:1694:MET:HE1	1.61	0.82
2:B:2848:TYR:OH	2:B:2888:LYS:NZ	2.12	0.82
2:C:2129:LEU:HB3	2:C:2142:MET:HE1	1.61	0.81
2:A:2192:MET:HA	2:A:2192:MET:HE3	1.64	0.79
2:C:1564:MET:HE2	2:C:1565:PRO:HD2	1.65	0.79
2:C:2592:LEU:HD22	2:C:2606:PRO:HB3	1.65	0.78
2:C:2793:ARG:O	2:C:2797:SER:OG	2.01	0.78
2:B:2793:ARG:O	2:B:2797:SER:OG	2.01	0.78
2:B:4279:MET:SD	2:C:4484:ILE:HD13	2.23	0.78
2:A:2592:LEU:HD22	2:A:2606:PRO:HB3	1.65	0.78
2:D:2793:ARG:O	2:D:2797:SER:OG	2.01	0.78
2:A:4279:MET:SD	2:B:4484:ILE:HD13	2.24	0.78
2:B:2142:MET:HB2	2:B:2192:MET:HE1	1.65	0.78
1:H:83:TYR:OH	2:D:1768:PHE:O	2.01	0.77
2:A:1688:ALA:HA	2:A:1694:MET:HE1	1.65	0.77
2:C:2848:TYR:OH	2:C:2888:LYS:NZ	2.12	0.77
2:D:2592:LEU:HD22	2:D:2606:PRO:HB3	1.65	0.77
2:A:332:ARG:NH2	2:A:338:LEU:O	2.18	0.77
2:D:2142:MET:HB2	2:D:2192:MET:HE1	1.66	0.77
2:A:2793:ARG:O	2:A:2797:SER:OG	2.01	0.77
2:B:332:ARG:NH2	2:B:338:LEU:O	2.18	0.77
2:A:143:LEU:HD11	2:D:2426:LEU:HD12	1.65	0.77
2:C:2142:MET:HB2	2:C:2192:MET:HE1	1.67	0.76
2:A:1564:MET:HE2	2:A:1565:PRO:HD2	1.67	0.76
2:C:2593:VAL:HG22	2:C:2644:LEU:HB2	1.66	0.76
2:B:4248:LEU:HB3	2:C:4707:MET:CE	2.15	0.76
2:C:4818:TYR:O	2:C:4819:VAL:HG12	1.86	0.76
2:A:4818:TYR:O	2:A:4819:VAL:HG12	1.86	0.76
2:B:2593:VAL:HG22	2:B:2644:LEU:HB2	1.66	0.76
2:A:2593:VAL:HG22	2:A:2644:LEU:HB2	1.66	0.76
2:D:332:ARG:NH2	2:D:338:LEU:O	2.18	0.76
2:D:4818:TYR:O	2:D:4819:VAL:HG12	1.86	0.76
2:D:2593:VAL:HG22	2:D:2644:LEU:HB2	1.66	0.76
2:B:2592:LEU:HD22	2:B:2606:PRO:HB3	1.65	0.75
2:C:332:ARG:NH2	2:C:338:LEU:O	2.18	0.75
2:D:1964:GLU:HG2	2:D:1975:MET:HE3	1.68	0.75
2:C:1964:GLU:HG2	2:C:1975:MET:HE3	1.69	0.75
2:B:1564:MET:HE2	2:B:1565:PRO:HD2	1.69	0.75
2:B:3281:LEU:HD13	2:B:3284:ILE:HD11	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3891:TYR:HA	2:B:76:ARG:HH22	1.50	0.75
2:B:4818:TYR:O	2:B:4819:VAL:HG12	1.86	0.75
2:C:3281:LEU:HD13	2:C:3284:ILE:HD11	1.69	0.75
2:D:189:GLU:OE1	2:C:2326:ARG:NH2	2.19	0.75
2:A:3281:LEU:HD13	2:A:3284:ILE:HD11	1.69	0.74
2:D:3281:LEU:HD13	2:D:3284:ILE:HD11	1.69	0.74
2:B:1964:GLU:HG2	2:B:1975:MET:HE3	1.68	0.74
2:A:679:VAL:HA	2:A:800:VAL:HG12	1.70	0.74
2:B:3891:TYR:HA	2:C:76:ARG:HH22	1.53	0.74
2:C:1308:ILE:HD13	2:C:1445:TRP:HZ3	1.52	0.73
2:A:1964:GLU:HG2	2:A:1975:MET:HE3	1.68	0.73
2:B:1308:ILE:HD13	2:B:1445:TRP:HZ3	1.52	0.73
2:A:1308:ILE:HD13	2:A:1445:TRP:HZ3	1.52	0.73
2:B:3871:ILE:HG22	2:B:3935:LEU:HD21	1.71	0.73
2:B:679:VAL:HA	2:B:800:VAL:HG12	1.70	0.73
2:A:3152:ARG:HB3	2:A:3236:GLU:HG2	1.70	0.73
2:A:290:ARG:HH21	2:A:350:GLY:HA3	1.54	0.73
2:B:4569:GLU:HG3	2:B:4570:PRO:HD3	1.71	0.73
2:B:3152:ARG:HB3	2:B:3236:GLU:HG2	1.70	0.72
2:C:679:VAL:HA	2:C:800:VAL:HG12	1.70	0.72
1:H:26:HIS:HB2	1:H:105:LEU:HD11	1.71	0.72
2:A:4626:ILE:HD13	2:D:4241:VAL:HG22	1.71	0.72
2:C:3871:ILE:HG22	2:C:3935:LEU:HD21	1.71	0.72
2:A:2142:MET:HB2	2:A:2192:MET:HE1	1.70	0.72
2:D:132:CYS:HG	2:D:187:SER:HG	1.37	0.72
2:A:3871:ILE:HG22	2:A:3935:LEU:HD21	1.71	0.72
1:F:26:HIS:HB2	1:F:105:LEU:HD11	1.72	0.72
2:D:4569:GLU:HG3	2:D:4570:PRO:HD3	1.71	0.72
2:B:2114:GLU:O	2:B:2118:ASN:ND2	2.23	0.72
2:D:1308:ILE:HD13	2:D:1445:TRP:HZ3	1.52	0.72
2:C:2192:MET:HA	2:C:2192:MET:HE3	1.71	0.72
1:E:26:HIS:HB2	1:E:105:LEU:HD11	1.71	0.72
2:B:290:ARG:HH21	2:B:350:GLY:HA3	1.54	0.72
2:C:290:ARG:HH21	2:C:350:GLY:HA3	1.54	0.72
2:A:1500:ARG:HG3	2:A:1505:LEU:HD22	1.72	0.72
2:B:943:LEU:HD21	2:B:999:LEU:HD11	1.72	0.72
2:B:4248:LEU:HB3	2:C:4707:MET:HE3	1.71	0.72
2:A:2114:GLU:O	2:A:2118:ASN:ND2	2.23	0.71
2:D:679:VAL:HA	2:D:800:VAL:HG12	1.70	0.71
1:G:26:HIS:HB2	1:G:105:LEU:HD11	1.72	0.71
2:D:943:LEU:HD21	2:D:999:LEU:HD11	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:943:LEU:HD21	2:A:999:LEU:HD11	1.72	0.71
2:C:3152:ARG:HB3	2:C:3236:GLU:HG2	1.70	0.71
2:D:290:ARG:HH21	2:D:350:GLY:HA3	1.54	0.71
2:A:4569:GLU:HG3	2:A:4570:PRO:HD3	1.71	0.71
2:D:2114:GLU:O	2:D:2118:ASN:ND2	2.23	0.71
2:D:3152:ARG:HB3	2:D:3236:GLU:HG2	1.70	0.71
2:D:1500:ARG:HG3	2:D:1505:LEU:HD22	1.71	0.71
2:C:4569:GLU:HG3	2:C:4570:PRO:HD3	1.71	0.71
2:D:3871:ILE:HG22	2:D:3935:LEU:HD21	1.71	0.71
2:B:4863:GLN:HE21	2:C:4860:ALA:CB	2.02	0.71
2:C:943:LEU:HD21	2:C:999:LEU:HD11	1.72	0.71
2:C:1500:ARG:HG3	2:C:1505:LEU:HD22	1.72	0.71
2:D:1549:SER:OG	2:C:2830:ASN:OD1	2.02	0.71
2:C:2114:GLU:O	2:C:2118:ASN:ND2	2.23	0.70
2:A:3184:TYR:HD2	2:A:3201:VAL:HG22	1.57	0.70
2:D:3965:ILE:HD11	2:D:4086:ARG:HH21	1.57	0.70
2:B:3184:TYR:HD2	2:B:3201:VAL:HG22	1.56	0.70
2:A:142:LYS:NZ	2:D:2426:LEU:O	2.24	0.70
2:A:1748:LEU:HD22	2:A:1843:LEU:HD13	1.74	0.70
2:B:1500:ARG:HG3	2:B:1505:LEU:HD22	1.72	0.70
2:B:3965:ILE:HD11	2:B:4086:ARG:HH21	1.57	0.70
2:C:905:GLY:HA3	2:C:914:GLN:HB3	1.74	0.70
2:D:2119:LEU:HB2	2:D:2152:ASN:HD22	1.57	0.70
2:A:3965:ILE:HD11	2:A:4086:ARG:HH21	1.57	0.69
2:D:375:GLN:HG3	2:D:377:VAL:HG22	1.74	0.69
2:C:2868:HIS:HB3	2:C:2871:LEU:HB2	1.74	0.69
2:A:1299:ILE:HD13	2:A:1546:GLN:HB2	1.74	0.69
2:D:886:ALA:HB1	2:D:929:ARG:HH22	1.58	0.69
2:D:1748:LEU:HD22	2:D:1843:LEU:HD13	1.74	0.69
2:B:375:GLN:HG3	2:B:377:VAL:HG22	1.74	0.69
2:C:375:GLN:HG3	2:C:377:VAL:HG22	1.74	0.69
2:A:375:GLN:HG3	2:A:377:VAL:HG22	1.74	0.69
2:D:2192:MET:HA	2:D:2192:MET:HE3	1.74	0.69
2:B:905:GLY:HA3	2:B:914:GLN:HB3	1.74	0.69
2:B:1732:GLU:HB3	2:B:1753:LEU:HD21	1.74	0.69
2:C:2682:GLU:HB3	2:C:2919:LYS:HE3	1.75	0.69
2:A:2570:GLU:HG2	2:A:2605:MET:HG3	1.75	0.69
2:D:2570:GLU:HG2	2:D:2605:MET:HG3	1.75	0.69
2:B:886:ALA:HB1	2:B:929:ARG:HH22	1.57	0.69
2:C:2119:LEU:HB2	2:C:2152:ASN:HD22	1.57	0.69
2:A:886:ALA:HB1	2:A:929:ARG:HH22	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4790:ARG:HH22	2:D:4557:VAL:HG11	1.56	0.69
2:B:2119:LEU:HB2	2:B:2152:ASN:HD22	1.57	0.69
2:B:2570:GLU:HG2	2:B:2605:MET:HG3	1.75	0.69
2:C:886:ALA:HB1	2:C:929:ARG:HH22	1.58	0.69
2:A:905:GLY:HA3	2:A:914:GLN:HB3	1.74	0.69
2:A:1732:GLU:HB3	2:A:1753:LEU:HD21	1.75	0.69
2:B:1748:LEU:HD22	2:B:1843:LEU:HD13	1.74	0.69
2:B:2736:LYS:HZ2	2:B:2754:GLN:HG2	1.57	0.69
2:C:2570:GLU:HG2	2:C:2605:MET:HG3	1.75	0.69
2:D:2682:GLU:HB3	2:D:2919:LYS:HE3	1.75	0.69
2:B:2868:HIS:HB3	2:B:2871:LEU:HB2	1.74	0.69
2:C:3184:TYR:HD2	2:C:3201:VAL:HG22	1.57	0.69
2:C:3965:ILE:HD11	2:C:4086:ARG:HH21	1.57	0.69
2:A:2868:HIS:HB3	2:A:2871:LEU:HB2	1.74	0.68
2:D:1564:MET:HE2	2:D:1565:PRO:HD2	1.75	0.68
2:D:1732:GLU:HB3	2:D:1753:LEU:HD21	1.75	0.68
2:D:3184:TYR:HD2	2:D:3201:VAL:HG22	1.57	0.68
2:C:1299:ILE:HD13	2:C:1546:GLN:HB2	1.74	0.68
2:D:1299:ILE:HD13	2:D:1546:GLN:HB2	1.74	0.68
2:A:1564:MET:CE	2:A:1565:PRO:HD2	2.24	0.68
2:D:1564:MET:CE	2:D:1565:PRO:HD2	2.24	0.68
2:A:1129:GLY:HA3	2:A:1145:TRP:HB3	1.75	0.68
2:B:1299:ILE:HD13	2:B:1546:GLN:HB2	1.74	0.68
2:A:132:CYS:SG	2:A:187:SER:OG	2.52	0.68
2:A:2119:LEU:HB2	2:A:2152:ASN:HD22	1.57	0.68
2:A:4248:LEU:HB3	2:B:4707:MET:HE3	1.74	0.68
2:C:1748:LEU:HD22	2:C:1843:LEU:HD13	1.74	0.68
2:D:3173:THR:HB	2:D:3201:VAL:HG12	1.76	0.68
2:D:1129:GLY:HA3	2:D:1145:TRP:HB3	1.75	0.68
2:C:63:SER:OG	2:C:276:ARG:NH1	2.27	0.68
2:C:1732:GLU:HB3	2:C:1753:LEU:HD21	1.75	0.68
2:A:2682:GLU:HB3	2:A:2919:LYS:HE3	1.75	0.68
2:D:63:SER:OG	2:D:276:ARG:NH1	2.27	0.68
2:D:3922:GLU:OE1	5:D:5003:CA:CA	1.71	0.68
2:B:63:SER:OG	2:B:276:ARG:NH1	2.27	0.68
2:B:1564:MET:CE	2:B:1565:PRO:HD2	2.24	0.68
2:C:3922:GLU:OE1	5:C:5003:CA:CA	1.71	0.68
2:A:3173:THR:HB	2:A:3201:VAL:HG12	1.76	0.67
2:D:905:GLY:HA3	2:D:914:GLN:HB3	1.74	0.67
2:B:4116:GLN:HA	2:B:4119:LEU:HD12	1.77	0.67
2:A:63:SER:OG	2:A:276:ARG:NH1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2834:SER:OG	2:C:2836:ASP:OD1	2.13	0.67
2:C:4116:GLN:HA	2:C:4119:LEU:HD12	1.77	0.67
2:A:4116:GLN:HA	2:A:4119:LEU:HD12	1.77	0.67
2:D:2868:HIS:HB3	2:D:2871:LEU:HB2	1.74	0.67
2:B:2682:GLU:HB3	2:B:2919:LYS:HE3	1.75	0.67
2:C:132:CYS:SG	2:C:187:SER:OG	2.52	0.67
2:D:4116:GLN:HA	2:D:4119:LEU:HD12	1.77	0.67
2:D:132:CYS:SG	2:D:187:SER:OG	2.52	0.67
2:A:2736:LYS:HZ2	2:A:2754:GLN:HG2	1.60	0.67
2:C:1129:GLY:HA3	2:C:1145:TRP:HB3	1.75	0.67
2:A:3922:GLU:OE1	5:A:5003:CA:CA	1.71	0.67
2:B:2194:ALA:HA	2:B:2237:SER:HB3	1.77	0.67
2:C:1564:MET:CE	2:C:1565:PRO:HD2	2.24	0.67
2:A:2827:ASP:OD2	2:A:2830:ASN:ND2	2.29	0.66
2:D:3282:LYS:HA	2:D:3285:TYR:CE1	2.31	0.66
2:C:2194:ALA:HA	2:C:2237:SER:HB3	1.77	0.66
2:C:2736:LYS:HZ2	2:C:2754:GLN:HG2	1.59	0.66
2:C:3173:THR:HB	2:C:3201:VAL:HG12	1.76	0.66
2:C:3282:LYS:HA	2:C:3285:TYR:CE1	2.31	0.66
2:D:2827:ASP:OD2	2:D:2830:ASN:ND2	2.29	0.66
2:B:3922:GLU:OE1	5:B:5003:CA:CA	1.71	0.66
2:D:2194:ALA:HA	2:D:2237:SER:HB3	1.77	0.66
2:B:1129:GLY:HA3	2:B:1145:TRP:HB3	1.75	0.66
2:B:2827:ASP:OD2	2:B:2830:ASN:ND2	2.29	0.66
2:C:2760:TYR:HA	2:C:2763:LEU:HD13	1.78	0.66
2:B:3173:THR:HB	2:B:3201:VAL:HG12	1.76	0.66
2:B:3282:LYS:HA	2:B:3285:TYR:CE1	2.31	0.66
2:C:2827:ASP:OD2	2:C:2830:ASN:ND2	2.28	0.66
2:A:2194:ALA:HA	2:A:2237:SER:HB3	1.77	0.66
2:A:2834:SER:OG	2:A:2836:ASP:OD1	2.13	0.66
2:D:2327:ARG:NH1	2:D:2327:ARG:HB3	2.11	0.66
2:B:2760:TYR:HA	2:B:2763:LEU:HD13	1.78	0.66
2:A:414:ARG:HH11	2:A:414:ARG:HG3	1.61	0.66
2:A:2229:LEU:HD23	2:A:2297:ARG:HH11	1.60	0.66
2:B:4035:TYR:HE1	2:B:4050:LYS:HE2	1.61	0.66
2:B:3124:GLU:OE2	2:B:3187:LYS:NZ	2.27	0.66
2:A:2241:ASP:OD2	2:A:2297:ARG:NH2	2.29	0.66
2:B:1946:GLU:OE1	2:B:1947:VAL:N	2.29	0.66
2:A:2327:ARG:NH1	2:A:2327:ARG:HB3	2.11	0.66
2:A:3282:LYS:HA	2:A:3285:TYR:CE1	2.31	0.66
2:A:4035:TYR:HE1	2:A:4050:LYS:HE2	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3246:MET:HE1	2:D:3268:LEU:HD22	1.77	0.66
2:B:2703:PRO:HB2	2:B:2854:LYS:HD2	1.78	0.66
2:C:2229:LEU:HD23	2:C:2297:ARG:HH11	1.60	0.66
2:C:2327:ARG:HB3	2:C:2327:ARG:NH1	2.11	0.66
2:D:414:ARG:HH11	2:D:414:ARG:HG3	1.61	0.65
2:B:414:ARG:HG3	2:B:414:ARG:HH11	1.61	0.65
2:C:3246:MET:HA	2:C:3246:MET:HE3	1.78	0.65
2:A:2703:PRO:HB2	2:A:2854:LYS:HD2	1.78	0.65
2:D:2834:SER:OG	2:D:2836:ASP:OD1	2.13	0.65
2:B:2834:SER:OG	2:B:2836:ASP:OD1	2.13	0.65
2:C:3999:MET:HE1	2:C:4101:LEU:HD11	1.78	0.65
2:A:3127:GLN:HB3	2:A:3183:ILE:HD12	1.78	0.65
2:D:2241:ASP:OD2	2:D:2297:ARG:NH2	2.29	0.65
2:C:414:ARG:HH11	2:C:414:ARG:HG3	1.61	0.65
2:C:3778:LEU:HD13	2:C:3854:PHE:HD1	1.62	0.65
2:A:188:SER:OG	2:A:190:ARG:NH1	2.30	0.65
2:A:3246:MET:HE1	2:A:3268:LEU:HD22	1.77	0.65
2:D:1946:GLU:OE1	2:D:1947:VAL:N	2.29	0.65
2:D:2760:TYR:HA	2:D:2763:LEU:HD13	1.78	0.65
2:A:1946:GLU:OE1	2:A:1947:VAL:N	2.29	0.65
2:C:2241:ASP:OD2	2:C:2297:ARG:NH2	2.29	0.65
2:C:4019:MET:HE1	2:C:4065:PHE:HD2	1.62	0.65
2:A:2760:TYR:HA	2:A:2763:LEU:HD13	1.78	0.65
2:D:2229:LEU:HD23	2:D:2297:ARG:HH11	1.60	0.65
2:C:4266:LYS:O	2:C:4270:LYS:HG2	1.97	0.65
2:D:3127:GLN:HB3	2:D:3183:ILE:HD12	1.78	0.65
2:B:188:SER:OG	2:B:190:ARG:NH1	2.30	0.65
2:C:1946:GLU:OE1	2:C:1947:VAL:N	2.29	0.65
2:D:1793:GLN:NE2	2:D:1797:GLU:OE2	2.30	0.65
2:D:4035:TYR:HE1	2:D:4050:LYS:HE2	1.61	0.65
2:B:2123:LEU:HD13	2:B:2167:MET:HG2	1.79	0.65
2:B:2229:LEU:HD23	2:B:2297:ARG:HH11	1.60	0.65
2:A:4266:LYS:O	2:A:4270:LYS:HG2	1.97	0.65
2:B:2241:ASP:OD2	2:B:2297:ARG:NH2	2.29	0.65
2:B:3225:GLY:O	2:B:3227:ARG:NH1	2.30	0.65
2:B:3246:MET:HA	2:B:3246:MET:HE3	1.78	0.65
2:C:4035:TYR:HE1	2:C:4050:LYS:HE2	1.61	0.65
2:A:137:ARG:NH1	2:A:139:SER:OG	2.30	0.65
2:A:3225:GLY:O	2:A:3227:ARG:NH1	2.30	0.65
2:D:986:ILE:HG12	2:D:1058:LEU:HB3	1.78	0.65
2:B:137:ARG:NH1	2:B:139:SER:OG	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1793:GLN:NE2	2:B:1797:GLU:OE2	2.30	0.65
2:C:2545:ILE:HG12	2:C:2580:LEU:HD21	1.79	0.65
2:B:2327:ARG:NH1	2:B:2327:ARG:HB3	2.11	0.64
2:A:1464:THR:HG22	2:A:1483:SER:HB2	1.79	0.64
2:D:769:ARG:HG2	2:D:774:PRO:HA	1.79	0.64
2:D:3225:GLY:O	2:D:3227:ARG:NH1	2.30	0.64
2:D:1464:THR:HG22	2:D:1483:SER:HB2	1.79	0.64
2:B:4266:LYS:O	2:B:4270:LYS:HG2	1.97	0.64
2:C:300:VAL:O	2:C:420:ARG:NH1	2.28	0.64
2:C:3127:GLN:HB3	2:C:3183:ILE:HD12	1.78	0.64
2:A:3124:GLU:OE2	2:A:3187:LYS:NZ	2.27	0.64
2:A:3999:MET:HE1	2:A:4101:LEU:HD11	1.78	0.64
2:B:986:ILE:HG12	2:B:1058:LEU:HB3	1.78	0.64
2:B:4019:MET:HE1	2:B:4065:PHE:HD2	1.62	0.64
2:B:3127:GLN:HB3	2:B:3183:ILE:HD12	1.78	0.64
2:C:2123:LEU:HD13	2:C:2167:MET:HG2	1.79	0.64
2:C:3225:GLY:O	2:C:3227:ARG:NH1	2.30	0.64
2:D:188:SER:OG	2:D:190:ARG:NH1	2.30	0.64
2:D:946:LEU:HB3	2:D:995:MET:HE1	1.79	0.64
2:D:2473:ASP:OD2	2:D:2530:ARG:NH2	2.31	0.64
2:A:1793:GLN:NE2	2:A:1797:GLU:OE2	2.30	0.64
2:A:2545:ILE:HG12	2:A:2580:LEU:HD21	1.79	0.64
2:D:2187:ILE:HG13	2:D:2227:VAL:HG13	1.79	0.64
2:D:3639:LYS:HA	2:D:4683:ARG:HH22	1.63	0.64
2:D:3778:LEU:HD13	2:D:3854:PHE:HD1	1.62	0.64
2:A:2187:ILE:HG13	2:A:2227:VAL:HG13	1.79	0.64
2:A:3639:LYS:HA	2:A:4683:ARG:HH22	1.63	0.64
2:D:2545:ILE:HG12	2:D:2580:LEU:HD21	1.79	0.64
2:D:2703:PRO:HB2	2:D:2854:LYS:HD2	1.78	0.64
2:D:4266:LYS:O	2:D:4270:LYS:HG2	1.97	0.64
2:C:1464:THR:HG22	2:C:1483:SER:HB2	1.79	0.64
2:C:4640:PHE:CD2	2:C:4641:PRO:HD3	2.33	0.64
2:A:4626:ILE:CD1	2:D:4241:VAL:HG22	2.28	0.64
2:B:132:CYS:SG	2:B:187:SER:OG	2.52	0.64
2:B:4120:GLU:HA	2:B:4123:GLU:HG2	1.80	0.64
2:C:2187:ILE:HG13	2:C:2227:VAL:HG13	1.79	0.64
2:C:2703:PRO:HB2	2:C:2854:LYS:HD2	1.79	0.64
2:C:3639:LYS:HA	2:C:4683:ARG:HH22	1.63	0.64
2:A:3778:LEU:HD13	2:A:3854:PHE:HD1	1.62	0.64
2:D:137:ARG:NH1	2:D:139:SER:OG	2.30	0.64
2:D:1502:ASN:OD1	2:D:1503:ASN:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:137:ARG:NH1	2:C:139:SER:OG	2.30	0.64
2:C:188:SER:OG	2:C:190:ARG:NH1	2.30	0.64
2:C:902:TRP:HD1	2:C:913:ARG:HA	1.62	0.64
2:A:2378:GLU:OE2	2:A:2457:SER:OG	2.17	0.63
2:A:4120:GLU:HA	2:A:4123:GLU:HG2	1.80	0.63
2:B:2473:ASP:OD2	2:B:2530:ARG:NH2	2.31	0.63
2:B:3639:LYS:HA	2:B:4683:ARG:HH22	1.63	0.63
2:B:4640:PHE:CD2	2:B:4641:PRO:HD3	2.33	0.63
2:C:2500:ALA:O	2:C:2554:ARG:NH1	2.32	0.63
2:D:3999:MET:HE1	2:D:4101:LEU:HD11	1.79	0.63
2:C:1502:ASN:OD1	2:C:1503:ASN:N	2.31	0.63
2:A:769:ARG:HG2	2:A:774:PRO:HA	1.79	0.63
2:A:2123:LEU:HD13	2:A:2167:MET:HG2	1.79	0.63
2:D:2123:LEU:HD13	2:D:2167:MET:HG2	1.79	0.63
2:B:2187:ILE:HG13	2:B:2227:VAL:HG13	1.79	0.63
2:C:769:ARG:HG2	2:C:774:PRO:HA	1.79	0.63
2:C:2473:ASP:OD2	2:C:2530:ARG:NH2	2.31	0.63
2:A:611:LEU:HD22	2:A:1660:LEU:HD22	1.81	0.63
2:D:4019:MET:HE1	2:D:4065:PHE:HD2	1.63	0.63
2:B:3255:GLU:OE2	2:B:3270:SER:N	2.32	0.63
2:B:3999:MET:HE1	2:B:4101:LEU:HD11	1.78	0.63
2:A:946:LEU:HB3	2:A:995:MET:HE1	1.80	0.63
2:A:4640:PHE:CD2	2:A:4641:PRO:HD3	2.33	0.63
2:D:3255:GLU:OE2	2:D:3270:SER:N	2.32	0.63
2:B:1937:GLN:NE2	2:B:3608:LEU:O	2.30	0.63
2:A:2473:ASP:OD2	2:A:2530:ARG:NH2	2.31	0.63
2:D:4640:PHE:CD2	2:D:4641:PRO:HD3	2.33	0.63
2:B:769:ARG:HG2	2:B:774:PRO:HA	1.79	0.63
2:B:3778:LEU:HD13	2:B:3854:PHE:HD1	1.62	0.63
2:A:986:ILE:HG12	2:A:1058:LEU:HB3	1.78	0.63
2:B:902:TRP:HD1	2:B:913:ARG:HA	1.62	0.63
2:B:1464:THR:HG22	2:B:1483:SER:HB2	1.79	0.63
2:A:865:ILE:O	2:A:1009:ARG:NH1	2.32	0.63
2:A:1502:ASN:OD1	2:A:1503:ASN:N	2.31	0.63
2:A:3255:GLU:OE2	2:A:3270:SER:N	2.32	0.63
2:D:611:LEU:HD22	2:D:1660:LEU:HD22	1.81	0.63
2:D:902:TRP:HD1	2:D:913:ARG:HA	1.62	0.63
2:B:611:LEU:HD22	2:B:1660:LEU:HD22	1.81	0.63
2:B:2545:ILE:HG12	2:B:2580:LEU:HD21	1.79	0.63
2:C:878:LEU:HD12	2:C:881:ILE:HD11	1.81	0.63
2:C:1793:GLN:NE2	2:C:1797:GLU:OE2	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:902:TRP:HD1	2:A:913:ARG:HA	1.62	0.63
2:A:2500:ALA:O	2:A:2554:ARG:NH1	2.32	0.63
2:A:2883:ALA:HA	2:A:2886:ARG:HE	1.64	0.63
2:D:1849:SER:HB2	2:D:2054:LYS:HD2	1.81	0.63
2:B:1502:ASN:OD1	2:B:1503:ASN:N	2.31	0.63
2:C:864:PRO:HB2	2:C:1009:ARG:HG3	1.80	0.63
2:C:865:ILE:O	2:C:1009:ARG:NH1	2.32	0.63
2:C:986:ILE:HG12	2:C:1058:LEU:HB3	1.78	0.63
2:A:864:PRO:HB2	2:A:1009:ARG:HG3	1.80	0.62
2:D:2378:GLU:OE2	2:D:2457:SER:OG	2.17	0.62
2:B:4187:GLU:OE2	2:B:4947:ARG:NH2	2.32	0.62
2:C:1433:PHE:CD2	2:C:1551:ASN:HB3	2.34	0.62
2:C:3124:GLU:OE2	2:C:3187:LYS:NZ	2.27	0.62
2:D:864:PRO:HB2	2:D:1009:ARG:HG3	1.80	0.62
2:C:686:VAL:HG13	2:C:687:THR:HG23	1.81	0.62
2:C:4120:GLU:HA	2:C:4123:GLU:HG2	1.80	0.62
2:A:4187:GLU:OE2	2:A:4947:ARG:NH2	2.32	0.62
2:A:4776:VAL:HG22	2:D:4743:LEU:HD23	1.79	0.62
2:D:2883:ALA:HA	2:D:2886:ARG:HE	1.64	0.62
2:B:946:LEU:HB3	2:B:995:MET:HE1	1.79	0.62
2:B:1849:SER:HB2	2:B:2054:LYS:HD2	1.81	0.62
2:B:2500:ALA:O	2:B:2554:ARG:NH1	2.32	0.62
2:B:3149:GLU:HA	2:B:3152:ARG:HD2	1.81	0.62
2:C:946:LEU:HB3	2:C:995:MET:HE1	1.79	0.62
2:C:3255:GLU:OE2	2:C:3270:SER:N	2.32	0.62
2:C:4187:GLU:OE2	2:C:4947:ARG:NH2	2.32	0.62
2:A:4019:MET:HE1	2:A:4065:PHE:HD2	1.63	0.62
2:D:1433:PHE:CD2	2:D:1551:ASN:HB3	2.34	0.62
2:B:3178:HIS:HE1	2:B:3265:CYS:HA	1.65	0.62
2:B:3892:TYR:OH	2:B:3899:ASP:OD1	2.14	0.62
2:B:4191:ASN:OD1	2:B:4608:ARG:NH1	2.31	0.62
2:A:878:LEU:HD12	2:A:881:ILE:HD11	1.81	0.62
2:A:4238:ILE:O	2:A:4242:ARG:HB3	2.00	0.62
2:D:686:VAL:HG13	2:D:687:THR:HG23	1.81	0.62
2:D:2887:GLU:HA	2:D:2890:GLN:HG2	1.82	0.62
2:D:4238:ILE:O	2:D:4242:ARG:HB3	2.00	0.62
2:B:864:PRO:HB2	2:B:1009:ARG:HG3	1.80	0.62
2:B:1433:PHE:CD2	2:B:1551:ASN:HB3	2.34	0.62
2:B:2887:GLU:HA	2:B:2890:GLN:HG2	1.82	0.62
2:C:1849:SER:HB2	2:C:2054:LYS:HD2	1.81	0.62
2:C:2378:GLU:OE2	2:C:2457:SER:OG	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2797:SER:HA	2:C:2800:LEU:HD12	1.81	0.62
2:C:4658:GLY:HA2	2:C:4666:ILE:HG21	1.81	0.62
2:D:3149:GLU:HA	2:D:3152:ARG:HD2	1.81	0.62
2:B:2378:GLU:OE2	2:B:2457:SER:OG	2.17	0.62
2:B:4169:LYS:NZ	4:B:5002:ATP:O1A	2.32	0.62
2:C:3178:HIS:HE1	2:C:3265:CYS:HA	1.65	0.62
2:D:3042:ALA:HB3	2:D:3117:PHE:HB3	1.82	0.62
2:D:4187:GLU:OE2	2:D:4947:ARG:NH2	2.32	0.62
2:C:2883:ALA:HA	2:C:2886:ARG:HE	1.64	0.62
2:C:2887:GLU:HA	2:C:2890:GLN:HG2	1.82	0.62
2:C:3892:TYR:OH	2:C:3899:ASP:OD1	2.14	0.62
2:A:2887:GLU:HA	2:A:2890:GLN:HG2	1.82	0.62
2:D:865:ILE:O	2:D:1009:ARG:NH1	2.32	0.62
2:D:3124:GLU:OE2	2:D:3187:LYS:NZ	2.27	0.62
2:B:865:ILE:O	2:B:1009:ARG:NH1	2.32	0.62
2:A:686:VAL:HG13	2:A:687:THR:HG23	1.81	0.62
2:D:3178:HIS:HE1	2:D:3265:CYS:HA	1.65	0.62
2:D:4120:GLU:HA	2:D:4123:GLU:HG2	1.80	0.62
2:D:4658:GLY:HA2	2:D:4666:ILE:HG21	1.81	0.62
2:B:3179:ASN:O	2:B:3185:ASN:ND2	2.31	0.62
2:A:3149:GLU:HA	2:A:3152:ARG:HD2	1.81	0.61
2:B:878:LEU:HD12	2:B:881:ILE:HD11	1.81	0.61
2:B:2883:ALA:HA	2:B:2886:ARG:HE	1.64	0.61
2:B:4238:ILE:O	2:B:4242:ARG:HB3	2.00	0.61
2:C:611:LEU:HD22	2:C:1660:LEU:HD22	1.81	0.61
2:C:3042:ALA:HB3	2:C:3117:PHE:HB3	1.82	0.61
2:C:4238:ILE:O	2:C:4242:ARG:HB3	2.00	0.61
2:A:176:ARG:HB2	2:A:179:ASP:HB2	1.83	0.61
2:A:3178:HIS:HE1	2:A:3265:CYS:HA	1.65	0.61
2:D:2500:ALA:O	2:D:2554:ARG:NH1	2.32	0.61
2:B:3697:LYS:HA	2:B:3700:HIS:CD2	2.35	0.61
2:B:3712:LYS:O	2:B:3717:LYS:NZ	2.33	0.61
2:C:1910:LEU:HD13	2:C:2062:ILE:HG12	1.83	0.61
2:C:3149:GLU:HA	2:C:3152:ARG:HD2	1.81	0.61
2:A:3261:ALA:O	2:A:3262:GLU:HG3	2.01	0.61
2:D:3316:LYS:O	2:D:3317:THR:OG1	2.18	0.61
2:D:4191:ASN:OD1	2:D:4608:ARG:NH1	2.31	0.61
2:A:2797:SER:HA	2:A:2800:LEU:HD12	1.82	0.61
2:A:4707:MET:CE	2:D:4249:ARG:HG2	2.30	0.61
2:D:176:ARG:HB2	2:D:179:ASP:HB2	1.82	0.61
2:D:2192:MET:HA	2:D:2192:MET:CE	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4658:GLY:HA2	2:A:4666:ILE:HG21	1.81	0.61
2:D:3712:LYS:O	2:D:3717:LYS:NZ	2.34	0.61
2:B:3281:LEU:HB3	2:B:3322:LEU:HD11	1.82	0.61
2:A:1849:SER:HB2	2:A:2054:LYS:HD2	1.81	0.61
2:A:3179:ASN:O	2:A:3185:ASN:ND2	2.31	0.61
2:D:1444:GLY:HA3	2:D:1487:MET:HA	1.83	0.61
2:D:1910:LEU:HD13	2:D:2062:ILE:HG12	1.82	0.61
2:D:2877:LEU:HD22	2:D:2881:GLU:HG3	1.83	0.61
2:D:3892:TYR:OH	2:D:3899:ASP:OD1	2.14	0.61
2:B:176:ARG:HB2	2:B:179:ASP:HB2	1.82	0.61
2:A:1433:PHE:CD2	2:A:1551:ASN:HB3	2.35	0.61
2:A:3697:LYS:HA	2:A:3700:HIS:CD2	2.36	0.61
2:A:3892:TYR:OH	2:A:3899:ASP:OD1	2.14	0.61
2:D:1937:GLN:NE2	2:D:3608:LEU:O	2.30	0.61
2:B:686:VAL:HG13	2:B:687:THR:HG23	1.81	0.61
2:B:2389:MET:HE1	2:B:2460:PHE:HA	1.83	0.61
2:B:3261:ALA:O	2:B:3262:GLU:HG3	2.01	0.61
2:C:515:ALA:HB2	2:C:523:GLY:HA3	1.83	0.61
2:C:3261:ALA:O	2:C:3262:GLU:HG3	2.01	0.61
2:A:3042:ALA:HB3	2:A:3117:PHE:HB3	1.82	0.61
2:A:3712:LYS:O	2:A:3717:LYS:NZ	2.33	0.61
2:D:3697:LYS:HA	2:D:3700:HIS:CD2	2.36	0.61
2:C:2192:MET:HA	2:C:2192:MET:CE	2.31	0.61
2:C:3712:LYS:O	2:C:3717:LYS:NZ	2.34	0.61
2:A:2736:LYS:HB3	2:A:2741:TRP:HB2	1.83	0.61
2:D:1748:LEU:HB3	2:D:1751:ILE:HD13	1.83	0.61
2:D:3281:LEU:HB3	2:D:3322:LEU:HD11	1.82	0.61
2:B:4658:GLY:HA2	2:B:4666:ILE:HG21	1.81	0.61
2:B:4800:ASP:OD1	2:B:4801:THR:N	2.34	0.61
2:C:2877:LEU:HD22	2:C:2881:GLU:HG3	1.83	0.61
1:H:36:LYS:H	2:D:647:ARG:NH2	1.99	0.60
2:A:300:VAL:O	2:A:420:ARG:NH1	2.28	0.60
2:A:3281:LEU:HB3	2:A:3322:LEU:HD11	1.82	0.60
2:B:1748:LEU:HB3	2:B:1751:ILE:HD13	1.83	0.60
2:B:2716:LYS:NZ	2:B:2789:ILE:O	2.29	0.60
2:B:2797:SER:HA	2:B:2800:LEU:HD12	1.82	0.60
2:C:1724:GLU:OE1	2:C:2127:ARG:NH1	2.32	0.60
2:C:4800:ASP:OD1	2:C:4801:THR:N	2.34	0.60
1:F:24:VAL:HG22	1:F:48:LYS:HG2	1.83	0.60
2:D:878:LEU:HD12	2:D:881:ILE:HD11	1.81	0.60
2:D:2797:SER:HA	2:D:2800:LEU:HD12	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1748:LEU:HB3	2:C:1751:ILE:HD13	1.83	0.60
2:C:3697:LYS:HA	2:C:3700:HIS:CD2	2.36	0.60
2:A:143:LEU:CD1	2:D:2426:LEU:HD12	2.31	0.60
2:A:1748:LEU:HB3	2:A:1751:ILE:HD13	1.83	0.60
2:A:2877:LEU:HD22	2:A:2881:GLU:HG3	1.83	0.60
2:A:4191:ASN:OD1	2:A:4608:ARG:NH1	2.31	0.60
2:D:4183:LYS:HE3	2:C:4902:PRO:HB3	1.82	0.60
2:B:1910:LEU:HD13	2:B:2062:ILE:HG12	1.83	0.60
2:C:1444:GLY:HA3	2:C:1487:MET:HA	1.83	0.60
2:C:3281:LEU:HB3	2:C:3322:LEU:HD11	1.82	0.60
2:A:1444:GLY:HA3	2:A:1487:MET:HA	1.83	0.60
2:A:2192:MET:HA	2:A:2192:MET:CE	2.31	0.60
2:D:3261:ALA:O	2:D:3262:GLU:HG3	2.01	0.60
2:B:1724:GLU:OE1	2:B:2127:ARG:NH1	2.32	0.60
2:B:3281:LEU:HG	2:B:3322:LEU:HD21	1.83	0.60
2:C:1144:ARG:NH1	2:C:1191:ALA:O	2.34	0.60
2:A:2389:MET:HE1	2:A:2460:PHE:HA	1.83	0.60
1:E:24:VAL:HG22	1:E:48:LYS:HG2	1.83	0.60
2:B:300:VAL:O	2:B:420:ARG:NH1	2.28	0.60
2:B:2192:MET:HA	2:B:2192:MET:CE	2.31	0.60
2:B:2192:MET:HA	2:B:2192:MET:HE3	1.83	0.60
2:B:2877:LEU:HD22	2:B:2881:GLU:HG3	1.83	0.60
2:B:3042:ALA:HB3	2:B:3117:PHE:HB3	1.82	0.60
2:A:1910:LEU:HD13	2:A:2062:ILE:HG12	1.82	0.60
2:B:515:ALA:HB2	2:B:523:GLY:HA3	1.83	0.60
2:A:250:GLY:HA2	2:A:257:ARG:HD3	1.84	0.60
2:A:904:TYR:O	2:A:914:GLN:NE2	2.35	0.60
2:A:2385:GLY:O	2:A:2389:MET:HG3	2.02	0.60
2:D:441:LYS:HD3	2:D:443:SER:H	1.67	0.60
2:D:2129:LEU:CB	2:D:2142:MET:HE1	2.31	0.60
2:D:2716:LYS:NZ	2:D:2789:ILE:O	2.29	0.60
2:C:2736:LYS:HB3	2:C:2741:TRP:HB2	1.83	0.60
2:C:4191:ASN:OD1	2:C:4608:ARG:NH1	2.31	0.60
2:D:1114:ARG:NH1	2:D:1128:LEU:O	2.33	0.60
2:B:2859:GLU:O	2:B:2862:SER:OG	2.16	0.60
2:B:4748:MET:O	2:B:4754:ARG:NH2	2.35	0.60
2:C:176:ARG:HB2	2:C:179:ASP:HB2	1.83	0.60
1:F:78:THR:OG1	1:F:80:ASP:OD1	2.17	0.60
2:D:2736:LYS:HB3	2:D:2741:TRP:HB2	1.83	0.60
2:B:250:GLY:HA2	2:B:257:ARG:HD3	1.84	0.60
2:B:2736:LYS:HB3	2:B:2741:TRP:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4748:MET:O	2:A:4754:ARG:NH2	2.35	0.60
2:D:2385:GLY:O	2:D:2389:MET:HG3	2.02	0.60
2:A:4907:THR:HA	2:A:4910:LEU:HD23	1.84	0.59
2:B:1433:PHE:HD2	2:B:1551:ASN:HB3	1.67	0.59
2:B:2385:GLY:O	2:B:2389:MET:HG3	2.02	0.59
2:C:441:LYS:HD3	2:C:443:SER:H	1.67	0.59
2:C:2385:GLY:O	2:C:2389:MET:HG3	2.02	0.59
2:A:1144:ARG:NH1	2:A:1191:ALA:O	2.34	0.59
2:D:1001:GLU:OE2	2:D:1005:ASN:ND2	2.35	0.59
2:B:1444:GLY:HA3	2:B:1487:MET:HA	1.83	0.59
2:A:1114:ARG:NH1	2:A:1128:LEU:O	2.33	0.59
2:A:3281:LEU:HG	2:A:3322:LEU:HD21	1.84	0.59
1:G:24:VAL:HG22	1:G:48:LYS:HG2	1.84	0.59
2:B:1718:ARG:HD3	2:B:1831:MET:HA	1.84	0.59
2:C:904:TYR:O	2:C:914:GLN:NE2	2.35	0.59
2:C:4262:LYS:HD3	2:C:4265:LYS:HZ1	1.67	0.59
2:A:466:PRO:HG2	2:A:479:LEU:HG	1.84	0.59
2:A:3316:LYS:O	2:A:3317:THR:OG1	2.18	0.59
2:D:434:ASP:OD1	2:D:504:ARG:NH1	2.36	0.59
2:D:904:TYR:O	2:D:914:GLN:NE2	2.35	0.59
2:D:1144:ARG:NH1	2:D:1191:ALA:O	2.34	0.59
2:D:4800:ASP:OD1	2:D:4801:THR:N	2.34	0.59
2:B:434:ASP:OD1	2:B:504:ARG:NH1	2.36	0.59
2:C:4748:MET:O	2:C:4754:ARG:NH2	2.35	0.59
2:A:270:HIS:CD2	2:A:491:GLU:HG3	2.38	0.59
2:A:1433:PHE:HD2	2:A:1551:ASN:HB3	1.67	0.59
2:B:1144:ARG:NH1	2:B:1191:ALA:O	2.34	0.59
2:A:207:PHE:CD2	2:D:2325:ILE:HG13	2.37	0.59
1:E:78:THR:OG1	1:E:80:ASP:OD1	2.17	0.59
1:G:78:THR:OG1	1:G:80:ASP:OD1	2.17	0.59
2:D:515:ALA:HB2	2:D:523:GLY:HA3	1.83	0.59
2:B:270:HIS:CD2	2:B:491:GLU:HG3	2.38	0.59
2:B:3316:LYS:O	2:B:3317:THR:OG1	2.18	0.59
2:C:270:HIS:CD2	2:C:491:GLU:HG3	2.38	0.59
2:C:2129:LEU:CB	2:C:2142:MET:HE1	2.30	0.59
2:C:2389:MET:HE1	2:C:2460:PHE:HA	1.83	0.59
2:A:434:ASP:OD1	2:A:504:ARG:NH1	2.36	0.59
2:D:270:HIS:CD2	2:D:491:GLU:HG3	2.38	0.59
2:D:291:TRP:O	2:D:343:ARG:NH2	2.36	0.59
2:D:466:PRO:HG2	2:D:479:LEU:HG	1.84	0.59
2:D:1433:PHE:HD2	2:D:1551:ASN:HB3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2389:MET:HE1	2:D:2460:PHE:HA	1.83	0.59
2:D:3016:ARG:HG2	2:D:3017:HIS:CD2	2.38	0.59
2:B:4630:TRP:CZ2	2:B:4711:GLY:HA3	2.38	0.59
2:B:4747:ALA:HB1	2:B:4757:LEU:HD23	1.84	0.59
2:C:3846:LEU:HB3	2:C:3854:PHE:CE2	2.38	0.59
1:H:24:VAL:HG22	1:H:48:LYS:HG2	1.84	0.59
2:A:291:TRP:O	2:A:343:ARG:NH2	2.36	0.59
2:A:515:ALA:HB2	2:A:523:GLY:HA3	1.83	0.59
2:D:2232:PRO:HD3	2:D:2382:ILE:HD11	1.84	0.59
2:B:2129:LEU:CB	2:B:2142:MET:HE1	2.30	0.59
2:C:1718:ARG:HD3	2:C:1831:MET:HA	1.84	0.59
2:A:1724:GLU:OE1	2:A:2127:ARG:NH1	2.32	0.59
2:A:2859:GLU:O	2:A:2862:SER:OG	2.16	0.59
2:A:4169:LYS:NZ	4:A:5002:ATP:O1A	2.32	0.59
2:A:4890:ILE:HD13	2:A:4913:HIS:HB3	1.85	0.59
2:D:4169:LYS:NZ	4:D:5002:ATP:O1A	2.31	0.59
2:D:4748:MET:O	2:D:4754:ARG:NH2	2.35	0.59
2:B:4082:GLU:HA	2:B:4085:LYS:HE2	1.84	0.59
2:C:291:TRP:O	2:C:343:ARG:NH2	2.36	0.59
2:C:1433:PHE:HD2	2:C:1551:ASN:HB3	1.67	0.59
2:C:3281:LEU:HG	2:C:3322:LEU:HD21	1.84	0.59
2:C:4747:ALA:HB1	2:C:4757:LEU:HD23	1.84	0.59
2:A:4014:LEU:HD13	2:A:4122:ALA:HB2	1.85	0.59
2:A:4082:GLU:HA	2:A:4085:LYS:HE2	1.84	0.59
2:D:1718:ARG:HD3	2:D:1831:MET:HA	1.84	0.59
2:D:2736:LYS:NZ	2:D:2754:GLN:HG2	2.18	0.59
2:B:3016:ARG:HG2	2:B:3017:HIS:CD2	2.38	0.59
2:C:250:GLY:HA2	2:C:257:ARG:HD3	1.84	0.59
2:C:434:ASP:OD1	2:C:504:ARG:NH1	2.36	0.59
2:C:4907:THR:HA	2:C:4910:LEU:HD23	1.84	0.59
2:A:2741:TRP:HA	2:A:2752:LYS:HG3	1.85	0.58
2:D:4747:ALA:HB1	2:D:4757:LEU:HD23	1.84	0.58
2:B:4580:THR:OG1	2:B:4733:HIS:NE2	2.27	0.58
2:A:194:LEU:HD21	2:A:201:LEU:HD22	1.85	0.58
2:A:2736:LYS:NZ	2:A:2754:GLN:HG2	2.18	0.58
2:A:3016:ARG:HG2	2:A:3017:HIS:CD2	2.38	0.58
2:D:1724:GLU:OE1	2:D:2127:ARG:NH1	2.32	0.58
2:D:3281:LEU:HG	2:D:3322:LEU:HD21	1.84	0.58
2:D:4082:GLU:HA	2:D:4085:LYS:HE2	1.84	0.58
2:C:466:PRO:HG2	2:C:479:LEU:HG	1.84	0.58
2:C:2940:ILE:HG21	2:C:3018:ARG:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3316:LYS:O	2:C:3317:THR:OG1	2.18	0.58
2:A:2940:ILE:HG21	2:A:3018:ARG:HD3	1.85	0.58
2:A:4800:ASP:OD1	2:A:4801:THR:N	2.34	0.58
2:D:194:LEU:HD21	2:D:201:LEU:HD22	1.85	0.58
2:D:3281:LEU:HA	2:D:3284:ILE:HG12	1.85	0.58
2:D:4907:THR:HA	2:D:4910:LEU:HD23	1.84	0.58
2:C:4890:ILE:HD13	2:C:4913:HIS:HB3	1.85	0.58
2:A:1967:SER:O	2:A:1972:GLN:NE2	2.30	0.58
2:D:141:ASP:OD2	2:D:144:ALA:N	2.37	0.58
2:D:250:GLY:HA2	2:D:257:ARG:HD3	1.84	0.58
2:D:300:VAL:O	2:D:420:ARG:NH1	2.28	0.58
2:D:2741:TRP:HA	2:D:2752:LYS:HG3	1.85	0.58
2:D:2847:ASN:O	2:D:2850:ASN:HB2	2.04	0.58
2:D:4014:LEU:HD13	2:D:4122:ALA:HB2	1.85	0.58
2:B:441:LYS:HD3	2:B:443:SER:H	1.67	0.58
2:B:1144:ARG:NE	2:B:1150:GLU:OE2	2.36	0.58
2:B:4907:THR:HA	2:B:4910:LEU:HD23	1.84	0.58
2:A:2232:PRO:HD3	2:A:2382:ILE:HD11	1.84	0.58
2:D:2736:LYS:HZ2	2:D:2754:GLN:HG2	1.68	0.58
2:D:3846:LEU:HB3	2:D:3854:PHE:CE2	2.38	0.58
2:B:291:TRP:O	2:B:343:ARG:NH2	2.36	0.58
2:B:904:TYR:O	2:B:914:GLN:NE2	2.35	0.58
2:C:2696:ASP:OD2	2:C:2702:ASN:N	2.36	0.58
2:C:4082:GLU:HA	2:C:4085:LYS:HE2	1.84	0.58
2:A:441:LYS:HD3	2:A:443:SER:H	1.67	0.58
2:A:972:LEU:HD22	2:A:978:PRO:HD3	1.86	0.58
2:A:1457:PHE:HD1	2:A:1461:ARG:HH21	1.51	0.58
2:A:1937:GLN:NE2	2:A:3608:LEU:O	2.30	0.58
2:D:2193:VAL:HG11	2:D:2227:VAL:HG11	1.85	0.58
2:B:466:PRO:HG2	2:B:479:LEU:HG	1.84	0.58
2:A:1718:ARG:HD3	2:A:1831:MET:HA	1.84	0.58
2:A:3281:LEU:HA	2:A:3284:ILE:HG12	1.85	0.58
2:A:3846:LEU:HB3	2:A:3854:PHE:CE2	2.38	0.58
2:D:411:GLU:OE1	2:D:484:ASN:ND2	2.37	0.58
2:D:2353:ILE:HG12	2:D:2359:ARG:HE	1.69	0.58
2:D:2940:ILE:HG21	2:D:3018:ARG:HD3	1.85	0.58
2:D:3695:MET:HE3	2:D:3731:LEU:HD13	1.86	0.58
2:B:3846:LEU:HB3	2:B:3854:PHE:CE2	2.38	0.58
2:B:4248:LEU:HB3	2:C:4707:MET:HE1	1.84	0.58
2:C:1144:ARG:NE	2:C:1150:GLU:OE2	2.37	0.58
2:A:3100:ALA:O	2:A:3104:MET:HG2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4630:TRP:CZ2	2:A:4711:GLY:HA3	2.38	0.58
2:D:3100:ALA:O	2:D:3104:MET:HG2	2.04	0.58
2:D:4630:TRP:CZ2	2:D:4711:GLY:HA3	2.38	0.58
2:C:2232:PRO:HD3	2:C:2382:ILE:HD11	1.84	0.58
2:C:2736:LYS:NZ	2:C:2754:GLN:HG2	2.18	0.58
2:A:16:THR:HG21	2:A:111:ARG:HB2	1.85	0.58
2:A:4747:ALA:HB1	2:A:4757:LEU:HD23	1.84	0.58
2:D:16:THR:HG21	2:D:111:ARG:HB2	1.85	0.58
2:B:3695:MET:HE3	2:B:3731:LEU:HD13	1.85	0.58
2:B:4818:TYR:HB2	2:C:4844:ILE:HG23	1.86	0.58
2:C:2193:VAL:HG11	2:C:2227:VAL:HG11	1.85	0.58
2:C:2716:LYS:NZ	2:C:2789:ILE:O	2.29	0.58
2:C:3016:ARG:HG2	2:C:3017:HIS:CD2	2.38	0.58
2:A:2696:ASP:OD2	2:A:2702:ASN:N	2.36	0.58
2:A:2847:ASN:O	2:A:2850:ASN:HB2	2.04	0.58
2:A:4197:ILE:HG13	2:A:4919:LEU:HD11	1.86	0.58
2:C:16:THR:HG21	2:C:111:ARG:HB2	1.85	0.58
2:C:4630:TRP:CZ2	2:C:4711:GLY:HA3	2.38	0.58
2:A:287:SER:HA	2:A:349:MET:HE2	1.86	0.57
2:A:2353:ILE:HG12	2:A:2359:ARG:HE	1.69	0.57
2:A:4776:VAL:HG22	2:D:4743:LEU:CD2	2.33	0.57
2:D:2635:GLU:HA	2:D:2638:LEU:HB2	1.86	0.57
2:B:972:LEU:HD22	2:B:978:PRO:HD3	1.86	0.57
2:B:1114:ARG:NH1	2:B:1128:LEU:O	2.33	0.57
2:B:2736:LYS:NZ	2:B:2754:GLN:HG2	2.18	0.57
2:B:3125:ASP:HA	2:B:3128:VAL:HG22	1.86	0.57
2:B:4197:ILE:HG13	2:B:4919:LEU:HD11	1.86	0.57
2:C:1937:GLN:NE2	2:C:3608:LEU:O	2.30	0.57
2:C:2635:GLU:HA	2:C:2638:LEU:HB2	1.86	0.57
2:C:3125:ASP:HA	2:C:3128:VAL:HG22	1.86	0.57
2:A:411:GLU:OE1	2:A:484:ASN:ND2	2.37	0.57
2:A:2716:LYS:NZ	2:A:2789:ILE:O	2.29	0.57
2:A:4661:TYR:HB3	2:A:4665:ARG:NH2	2.20	0.57
2:A:4710:LEU:HD22	2:D:4252:ILE:HD12	1.87	0.57
2:D:1144:ARG:NE	2:D:1150:GLU:OE2	2.37	0.57
2:B:2232:PRO:HD3	2:B:2382:ILE:HD11	1.84	0.57
2:B:2696:ASP:OD2	2:B:2702:ASN:N	2.36	0.57
2:B:4890:ILE:HD13	2:B:4913:HIS:HB3	1.85	0.57
2:C:1457:PHE:HD1	2:C:1461:ARG:HH21	1.51	0.57
2:C:2847:ASN:O	2:C:2850:ASN:HB2	2.04	0.57
2:C:4014:LEU:HD13	2:C:4122:ALA:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3125:ASP:HA	2:A:3128:VAL:HG22	1.86	0.57
2:A:3145:SER:O	2:A:3149:GLU:HG2	2.05	0.57
2:B:141:ASP:OD2	2:B:144:ALA:N	2.37	0.57
2:C:1749:PRO:HB2	2:C:1913:LEU:HD22	1.87	0.57
2:C:2353:ILE:HG12	2:C:2359:ARG:HE	1.69	0.57
2:C:2859:GLU:O	2:C:2862:SER:OG	2.16	0.57
2:C:3145:SER:O	2:C:3149:GLU:HG2	2.04	0.57
2:C:3281:LEU:HA	2:C:3284:ILE:HG12	1.85	0.57
2:A:2119:LEU:HB2	2:A:2152:ASN:ND2	2.20	0.57
2:C:1644:LEU:HD23	2:C:1651:LEU:HA	1.87	0.57
2:A:1001:GLU:OE2	2:A:1005:ASN:ND2	2.35	0.57
2:D:606:ARG:NH2	2:D:1634:GLU:OE2	2.38	0.57
2:D:2119:LEU:HB2	2:D:2152:ASN:ND2	2.20	0.57
2:B:194:LEU:HD21	2:B:201:LEU:HD22	1.85	0.57
2:B:1457:PHE:HD1	2:B:1461:ARG:HH21	1.51	0.57
2:B:2741:TRP:HA	2:B:2752:LYS:HG3	1.85	0.57
2:B:2940:ILE:HG21	2:B:3018:ARG:HD3	1.85	0.57
2:B:4014:LEU:HD13	2:B:4122:ALA:HB2	1.85	0.57
2:C:238:HIS:CG	2:C:239:GLY:H	2.23	0.57
2:C:411:GLU:OE1	2:C:484:ASN:ND2	2.37	0.57
2:C:2741:TRP:HA	2:C:2752:LYS:HG3	1.85	0.57
2:A:1144:ARG:NE	2:A:1150:GLU:OE2	2.37	0.57
2:A:3235:MET:SD	2:A:3283:ILE:HG21	2.45	0.57
2:A:3695:MET:HE3	2:A:3731:LEU:HD13	1.86	0.57
1:E:58:LYS:HE2	1:E:81:VAL:HA	1.87	0.57
2:D:972:LEU:HD22	2:D:978:PRO:HD3	1.86	0.57
2:B:3100:ALA:O	2:B:3104:MET:HG2	2.04	0.57
2:C:240:HIS:O	2:C:241:MET:HB2	2.05	0.57
2:C:606:ARG:NH2	2:C:1634:GLU:OE2	2.38	0.57
2:A:606:ARG:NH2	2:A:1634:GLU:OE2	2.38	0.57
2:A:1644:LEU:HD23	2:A:1651:LEU:HA	1.87	0.57
2:A:2296:GLU:HG3	2:A:2390:THR:HG22	1.87	0.57
2:D:1644:LEU:HD23	2:D:1651:LEU:HA	1.87	0.57
2:D:3125:ASP:HA	2:D:3128:VAL:HG22	1.86	0.57
2:B:240:HIS:O	2:B:241:MET:HB2	2.05	0.57
2:B:1001:GLU:OE2	2:B:1005:ASN:ND2	2.35	0.57
2:B:1011:ARG:HB3	2:B:1016:TRP:HB2	1.87	0.57
2:B:2119:LEU:HB2	2:B:2152:ASN:ND2	2.20	0.57
2:B:2847:ASN:O	2:B:2850:ASN:HB2	2.04	0.57
2:B:3235:MET:SD	2:B:3283:ILE:HG21	2.45	0.57
2:C:3100:ALA:O	2:C:3104:MET:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4197:ILE:HG13	2:C:4919:LEU:HD11	1.86	0.57
1:H:58:LYS:HE2	1:H:81:VAL:HA	1.87	0.57
2:D:3145:SER:O	2:D:3149:GLU:HG2	2.05	0.57
2:D:4580:THR:OG1	2:D:4733:HIS:NE2	2.27	0.57
2:B:411:GLU:OE1	2:B:484:ASN:ND2	2.37	0.57
2:B:415:THR:O	2:B:419:ILE:HG13	2.05	0.57
2:B:606:ARG:NH2	2:B:1634:GLU:OE2	2.38	0.57
2:B:3122:ILE:HG22	2:B:3126:VAL:HG22	1.87	0.57
2:B:3281:LEU:HA	2:B:3284:ILE:HG12	1.85	0.57
2:B:4294:LEU:HD12	2:C:4714:PHE:CE1	2.40	0.57
2:C:194:LEU:HD21	2:C:201:LEU:HD22	1.85	0.57
2:C:972:LEU:HD22	2:C:978:PRO:HD3	1.86	0.57
2:C:988:LEU:HD21	2:C:993:GLU:OE1	2.05	0.57
2:A:2635:GLU:HA	2:A:2638:LEU:HB2	1.86	0.57
2:D:1011:ARG:HB3	2:D:1016:TRP:HB2	1.87	0.57
2:B:988:LEU:HD21	2:B:993:GLU:OE1	2.05	0.57
2:B:4661:TYR:HB3	2:B:4665:ARG:NH2	2.19	0.57
2:A:141:ASP:OD2	2:A:144:ALA:N	2.37	0.57
2:A:238:HIS:CG	2:A:239:GLY:H	2.23	0.57
2:A:1011:ARG:HB3	2:A:1016:TRP:HB2	1.87	0.57
2:A:3122:ILE:HG22	2:A:3126:VAL:HG22	1.87	0.57
2:D:238:HIS:CG	2:D:239:GLY:H	2.23	0.57
2:D:415:THR:O	2:D:419:ILE:HG13	2.05	0.57
2:D:3695:MET:HB3	2:D:3731:LEU:HD11	1.87	0.57
2:B:3958:LEU:HD22	2:B:3964:GLN:HB3	1.87	0.57
2:A:1242:ASN:HB3	2:A:1807:ARG:HG3	1.87	0.56
2:A:2193:VAL:HG11	2:A:2227:VAL:HG11	1.85	0.56
2:D:2696:ASP:OD2	2:D:2702:ASN:N	2.36	0.56
2:B:1242:ASN:HB3	2:B:1807:ARG:HG3	1.87	0.56
2:B:1644:LEU:HD23	2:B:1651:LEU:HA	1.87	0.56
2:B:3695:MET:HB3	2:B:3731:LEU:HD11	1.87	0.56
2:A:1749:PRO:HB2	2:A:1913:LEU:HD22	1.86	0.56
2:A:2129:LEU:CB	2:A:2142:MET:HE1	2.33	0.56
2:A:3958:LEU:HD22	2:A:3964:GLN:HB3	1.87	0.56
2:D:1991:GLU:OE1	2:D:1991:GLU:N	2.31	0.56
2:D:2296:GLU:HG3	2:D:2390:THR:HG22	1.87	0.56
2:D:3179:ASN:O	2:D:3185:ASN:ND2	2.31	0.56
2:B:16:THR:HG21	2:B:111:ARG:HB2	1.85	0.56
2:B:2193:VAL:HG11	2:B:2227:VAL:HG11	1.85	0.56
2:A:28:ILE:HG22	2:A:29:HIS:ND1	2.21	0.56
2:A:240:HIS:O	2:A:241:MET:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3075:LEU:HD21	2:A:3094:ILE:HD12	1.88	0.56
2:A:3695:MET:HB3	2:A:3731:LEU:HD11	1.87	0.56
2:A:3784:LYS:HA	2:A:3784:LYS:HE3	1.88	0.56
2:A:4480:PHE:CE2	2:D:4268:MET:SD	2.98	0.56
2:D:1457:PHE:HD1	2:D:1461:ARG:HH21	1.51	0.56
2:D:1749:PRO:HB2	2:D:1913:LEU:HD22	1.86	0.56
2:D:4251:ASN:ND2	2:D:4293:THR:O	2.34	0.56
2:D:4661:TYR:HB3	2:D:4665:ARG:NH2	2.20	0.56
2:D:4890:ILE:HD13	2:D:4913:HIS:HB3	1.85	0.56
2:B:28:ILE:HG22	2:B:29:HIS:ND1	2.21	0.56
2:B:246:THR:HG21	2:B:267:VAL:HG11	1.87	0.56
2:B:2353:ILE:HG12	2:B:2359:ARG:HE	1.69	0.56
2:B:3075:LEU:HD21	2:B:3094:ILE:HD12	1.88	0.56
2:B:3145:SER:O	2:B:3149:GLU:HG2	2.05	0.56
2:B:3784:LYS:HA	2:B:3784:LYS:HE3	1.88	0.56
2:C:1011:ARG:HB3	2:C:1016:TRP:HB2	1.87	0.56
2:C:3179:ASN:O	2:C:3185:ASN:ND2	2.31	0.56
2:C:4118:PHE:HA	2:C:4121:LEU:HD12	1.88	0.56
2:A:246:THR:HG21	2:A:267:VAL:HG11	1.87	0.56
2:A:2059:GLN:NE2	2:A:2091:GLN:O	2.39	0.56
2:A:4480:PHE:CZ	2:D:4268:MET:SD	2.99	0.56
2:D:136:SER:HB2	2:D:145:PHE:HA	1.88	0.56
2:D:3122:ILE:HG22	2:D:3126:VAL:HG22	1.86	0.56
2:D:3184:TYR:HE1	2:D:3197:LEU:HD13	1.71	0.56
2:B:2723:LYS:HG2	2:B:2895:PHE:HZ	1.71	0.56
2:C:3184:TYR:HE1	2:C:3197:LEU:HD13	1.71	0.56
2:C:3695:MET:HB3	2:C:3731:LEU:HD11	1.87	0.56
2:C:3784:LYS:HE3	2:C:3784:LYS:HA	1.87	0.56
1:H:36:LYS:H	2:D:647:ARG:HH21	1.53	0.56
2:A:3238:ILE:O	2:A:3241:MET:HG3	2.06	0.56
2:D:3109:PHE:HA	2:D:3112:ILE:HG22	1.88	0.56
2:D:3235:MET:SD	2:D:3283:ILE:HG21	2.45	0.56
2:D:4197:ILE:HG13	2:D:4919:LEU:HD11	1.86	0.56
2:D:4858:LEU:HA	2:D:4861:ILE:HB	1.88	0.56
2:C:3122:ILE:HG22	2:C:3126:VAL:HG22	1.87	0.56
2:C:3695:MET:HE3	2:C:3731:LEU:HD13	1.86	0.56
2:C:4661:TYR:HB3	2:C:4665:ARG:NH2	2.20	0.56
2:A:988:LEU:HD21	2:A:993:GLU:OE1	2.05	0.56
2:D:3075:LEU:HD21	2:D:3094:ILE:HD12	1.88	0.56
2:B:4118:PHE:HA	2:B:4121:LEU:HD12	1.88	0.56
2:C:28:ILE:HG22	2:C:29:HIS:ND1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2059:GLN:NE2	2:C:2091:GLN:O	2.39	0.56
2:C:3235:MET:SD	2:C:3283:ILE:HG21	2.45	0.56
1:H:78:THR:OG1	1:H:80:ASP:OD1	2.17	0.56
2:A:3729:ALA:HA	2:A:3732:HIS:CD2	2.41	0.56
2:A:4858:LEU:HA	2:A:4861:ILE:HB	1.88	0.56
2:D:246:THR:HG21	2:D:267:VAL:HG11	1.87	0.56
2:D:287:SER:HA	2:D:349:MET:HE2	1.86	0.56
2:B:1749:PRO:HB2	2:B:1913:LEU:HD22	1.87	0.56
2:B:2059:GLN:NE2	2:B:2091:GLN:O	2.39	0.56
2:C:2238:THR:HG22	2:C:2240:LEU:H	1.71	0.56
2:C:2322:ARG:NH2	2:C:2415:GLU:OE2	2.39	0.56
2:C:2723:LYS:HG2	2:C:2895:PHE:HZ	1.71	0.56
2:C:2929:LEU:HD13	2:C:2971:ILE:HG12	1.88	0.56
2:A:1991:GLU:OE1	2:A:1991:GLU:N	2.32	0.56
2:A:4641:PRO:HB3	2:A:4644:TYR:HB3	1.87	0.56
1:F:58:LYS:HE2	1:F:81:VAL:HA	1.87	0.56
2:D:414:ARG:HH11	2:D:414:ARG:CG	2.19	0.56
2:D:490:GLN:OE1	2:D:546:LYS:NZ	2.39	0.56
2:B:238:HIS:CG	2:B:239:GLY:H	2.23	0.56
2:B:916:PRO:HA	2:B:919:VAL:HB	1.88	0.56
2:B:2296:GLU:HG3	2:B:2390:THR:HG22	1.87	0.56
2:B:2635:GLU:HA	2:B:2638:LEU:HB2	1.86	0.56
2:B:2929:LEU:HD13	2:B:2971:ILE:HG12	1.88	0.56
2:B:3184:TYR:HE1	2:B:3197:LEU:HD13	1.71	0.56
2:B:3729:ALA:HA	2:B:3732:HIS:CD2	2.41	0.56
2:B:4641:PRO:HB3	2:B:4644:TYR:HB3	1.88	0.56
2:C:136:SER:HB2	2:C:145:PHE:HA	1.88	0.56
2:C:916:PRO:HA	2:C:919:VAL:HB	1.88	0.56
2:C:1001:GLU:OE2	2:C:1005:ASN:ND2	2.35	0.56
2:C:4169:LYS:NZ	4:C:5002:ATP:O1A	2.32	0.56
2:C:4641:PRO:HB3	2:C:4644:TYR:HB3	1.88	0.56
2:A:415:THR:O	2:A:419:ILE:HG13	2.05	0.56
2:A:1114:ARG:NH2	2:A:1127:GLU:OE2	2.39	0.56
1:G:58:LYS:HE2	1:G:81:VAL:HA	1.87	0.56
2:C:246:THR:HG21	2:C:267:VAL:HG11	1.87	0.56
2:C:414:ARG:HH11	2:C:414:ARG:CG	2.19	0.56
2:C:415:THR:O	2:C:419:ILE:HG13	2.05	0.56
2:C:3075:LEU:HD21	2:C:3094:ILE:HD12	1.88	0.56
2:C:3238:ILE:O	2:C:3241:MET:HG3	2.06	0.56
2:A:490:GLN:OE1	2:A:546:LYS:NZ	2.39	0.56
2:A:4245:LEU:O	2:A:4249:ARG:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4633:LEU:HD11	2:D:4245:LEU:HD11	1.86	0.56
2:D:988:LEU:HD21	2:D:993:GLU:OE1	2.05	0.56
2:D:2723:LYS:HG2	2:D:2895:PHE:HZ	1.71	0.56
2:D:3784:LYS:HA	2:D:3784:LYS:HE3	1.87	0.56
2:D:4618:THR:OG1	2:D:4619:GLU:OE1	2.24	0.56
2:C:1242:ASN:HB3	2:C:1807:ARG:HG3	1.87	0.56
2:C:2296:GLU:HG3	2:C:2390:THR:HG22	1.87	0.56
2:A:414:ARG:HH11	2:A:414:ARG:CG	2.19	0.55
2:D:3958:LEU:HD22	2:D:3964:GLN:HB3	1.87	0.55
2:D:4118:PHE:HA	2:D:4121:LEU:HD12	1.88	0.55
2:D:4773:LEU:HB2	2:C:4753:LEU:HD22	1.88	0.55
2:B:136:SER:HB2	2:B:145:PHE:HA	1.88	0.55
2:B:2176:VAL:HG22	2:B:2220:TYR:CZ	2.41	0.55
2:B:2322:ARG:NH2	2:B:2415:GLU:OE2	2.39	0.55
2:B:4113:THR:O	2:B:4117:THR:HG23	2.07	0.55
2:C:4618:THR:OG1	2:C:4619:GLU:OE1	2.24	0.55
2:B:1114:ARG:NH2	2:B:1127:GLU:OE2	2.39	0.55
2:B:4245:LEU:O	2:B:4249:ARG:HG3	2.06	0.55
2:B:4858:LEU:HA	2:B:4861:ILE:HB	1.88	0.55
2:A:3109:PHE:HA	2:A:3112:ILE:HG22	1.88	0.55
2:A:4118:PHE:HA	2:A:4121:LEU:HD12	1.88	0.55
2:D:28:ILE:HG22	2:D:29:HIS:ND1	2.21	0.55
2:D:2238:THR:HG22	2:D:2240:LEU:H	1.71	0.55
2:D:3729:ALA:HA	2:D:3732:HIS:CD2	2.41	0.55
2:D:4481:TRP:HA	2:D:4484:ILE:HG22	1.88	0.55
2:D:4641:PRO:HB3	2:D:4644:TYR:HB3	1.88	0.55
2:C:3958:LEU:HD22	2:C:3964:GLN:HB3	1.87	0.55
1:H:91:VAL:O	2:D:640:ARG:NH2	2.40	0.55
1:H:108:GLU:OE2	1:H:108:GLU:N	2.40	0.55
2:A:4557:VAL:HG21	2:B:4790:ARG:HH12	1.72	0.55
2:D:842:GLN:HB2	2:D:1603:PHE:HB2	1.88	0.55
2:D:1114:ARG:NH2	2:D:1127:GLU:OE2	2.39	0.55
2:D:1242:ASN:HB3	2:D:1807:ARG:HG3	1.87	0.55
2:D:4245:LEU:O	2:D:4249:ARG:HG3	2.06	0.55
2:C:891:GLU:HG2	2:C:978:PRO:HA	1.89	0.55
2:C:2176:VAL:HG22	2:C:2220:TYR:CZ	2.41	0.55
2:C:3109:PHE:HA	2:C:3112:ILE:HG22	1.88	0.55
2:C:3661:VAL:HG23	2:C:3666:GLN:HG2	1.89	0.55
2:C:3729:ALA:HA	2:C:3732:HIS:CD2	2.41	0.55
1:F:108:GLU:N	1:F:108:GLU:OE2	2.40	0.55
2:D:584:GLU:O	2:D:588:ILE:HG12	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:891:GLU:HG2	2:D:978:PRO:HA	1.89	0.55
2:D:2059:GLN:NE2	2:D:2091:GLN:O	2.39	0.55
2:B:2212:LYS:HE2	2:B:3822:GLU:HG3	1.89	0.55
2:C:842:GLN:HB2	2:C:1603:PHE:HB2	1.89	0.55
2:C:3606:ALA:HB1	2:C:3610:ASN:HB2	1.88	0.55
2:D:916:PRO:HA	2:D:919:VAL:HB	1.88	0.55
2:B:3238:ILE:O	2:B:3241:MET:HG3	2.06	0.55
2:C:1114:ARG:NH2	2:C:1127:GLU:OE2	2.39	0.55
2:C:1114:ARG:NH1	2:C:1128:LEU:O	2.33	0.55
2:C:2212:LYS:HE2	2:C:3822:GLU:HG3	1.89	0.55
1:E:108:GLU:N	1:E:108:GLU:OE2	2.40	0.55
2:D:4113:THR:O	2:D:4117:THR:HG23	2.07	0.55
2:B:15:ARG:NH1	2:B:111:ARG:O	2.40	0.55
2:B:287:SER:HA	2:B:349:MET:HE2	1.87	0.55
2:B:2905:ARG:HH11	2:B:2906:GLY:H	1.54	0.55
2:B:3246:MET:HE1	2:B:3268:LEU:HD22	1.88	0.55
2:C:490:GLN:OE1	2:C:546:LYS:NZ	2.39	0.55
2:C:4245:LEU:O	2:C:4249:ARG:HG3	2.06	0.55
2:C:4580:THR:OG1	2:C:4733:HIS:NE2	2.27	0.55
1:G:108:GLU:N	1:G:108:GLU:OE2	2.40	0.55
2:D:240:HIS:O	2:D:241:MET:HB2	2.05	0.55
2:D:658:ASN:ND2	2:D:835:GLU:OE1	2.40	0.55
2:D:3238:ILE:O	2:D:3241:MET:HG3	2.06	0.55
2:B:2238:THR:HG22	2:B:2240:LEU:H	1.71	0.55
2:B:3661:VAL:HG23	2:B:3666:GLN:HG2	1.89	0.55
2:C:287:SER:HA	2:C:349:MET:HE2	1.87	0.55
2:C:658:ASN:ND2	2:C:835:GLU:OE1	2.40	0.55
2:C:4113:THR:O	2:C:4117:THR:HG23	2.07	0.55
2:C:4481:TRP:HA	2:C:4484:ILE:HG22	1.88	0.55
2:A:1744:LYS:NZ	2:A:2002:ASP:OD1	2.39	0.55
2:A:2176:VAL:HG22	2:A:2220:TYR:CZ	2.41	0.55
2:A:2322:ARG:NH2	2:A:2415:GLU:OE2	2.39	0.55
2:A:3606:ALA:HB1	2:A:3610:ASN:HB2	1.88	0.55
2:A:4113:THR:O	2:A:4117:THR:HG23	2.07	0.55
2:B:490:GLN:OE1	2:B:546:LYS:NZ	2.39	0.55
2:C:2852:TRP:HA	2:C:2855:LYS:NZ	2.22	0.55
2:C:4858:LEU:HA	2:C:4861:ILE:HB	1.88	0.55
2:A:916:PRO:HA	2:A:919:VAL:HB	1.88	0.55
2:A:4481:TRP:HA	2:A:4484:ILE:HG22	1.88	0.55
2:D:2176:VAL:HG22	2:D:2220:TYR:CZ	2.41	0.55
2:D:2322:ARG:NH2	2:D:2415:GLU:OE2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:584:GLU:O	2:B:588:ILE:HG12	2.07	0.55
2:B:1940:GLN:NE2	2:B:1964:GLU:OE2	2.40	0.55
2:B:4262:LYS:HD3	2:B:4265:LYS:HZ1	1.72	0.55
2:C:952:ILE:HD11	2:C:958:GLU:HG3	1.89	0.55
2:C:1004:HIS:NE2	2:C:1033:VAL:O	2.36	0.55
2:A:1133:ARG:HH11	2:A:1133:ARG:CG	2.21	0.54
2:A:1498:GLN:CB	2:D:2798:MET:SD	2.93	0.54
2:C:584:GLU:O	2:C:588:ILE:HG12	2.07	0.54
2:C:2119:LEU:HB2	2:C:2152:ASN:ND2	2.20	0.54
2:C:2905:ARG:HH11	2:C:2906:GLY:H	1.54	0.54
2:A:658:ASN:ND2	2:A:835:GLU:OE1	2.40	0.54
2:A:2723:LYS:HG2	2:A:2895:PHE:HZ	1.71	0.54
2:A:4502:MET:HG3	2:A:4582:ILE:HD11	1.89	0.54
2:B:1133:ARG:HH11	2:B:1133:ARG:CG	2.21	0.54
2:C:1714:TYR:CE2	2:C:1718:ARG:HD2	2.43	0.54
2:C:1744:LYS:NZ	2:C:2002:ASP:OD1	2.39	0.54
2:C:3246:MET:HE1	2:C:3268:LEU:HD22	1.88	0.54
2:A:1940:GLN:NE2	2:A:1964:GLU:OE2	2.40	0.54
2:A:2238:THR:HG22	2:A:2240:LEU:H	1.71	0.54
2:A:3184:TYR:CE1	2:A:3197:LEU:HD13	2.43	0.54
2:D:2852:TRP:HA	2:D:2855:LYS:NZ	2.22	0.54
2:D:3606:ALA:HB1	2:D:3610:ASN:HB2	1.88	0.54
2:D:4502:MET:HG3	2:D:4582:ILE:HD11	1.89	0.54
2:B:3234:VAL:HA	2:B:3238:ILE:HG12	1.89	0.54
2:C:4495:PHE:HE1	2:C:4502:MET:HE1	1.73	0.54
2:A:136:SER:HB2	2:A:145:PHE:HA	1.88	0.54
2:A:891:GLU:HG2	2:A:978:PRO:HA	1.89	0.54
2:A:4618:THR:OG1	2:A:4619:GLU:OE1	2.24	0.54
2:A:4694:LEU:HD22	2:D:4265:LYS:HD2	1.90	0.54
2:D:2929:LEU:HD13	2:D:2971:ILE:HG12	1.88	0.54
2:B:2581:ARG:HB3	2:B:2584:MET:HG2	1.90	0.54
2:B:2852:TRP:HA	2:B:2855:LYS:NZ	2.22	0.54
2:B:3109:PHE:HA	2:B:3112:ILE:HG22	1.88	0.54
2:C:3129:SER:O	2:C:3133:ILE:HG13	2.07	0.54
2:C:3234:VAL:HA	2:C:3238:ILE:HG12	1.89	0.54
2:A:584:GLU:O	2:A:588:ILE:HG12	2.07	0.54
2:A:2929:LEU:HD13	2:A:2971:ILE:HG12	1.88	0.54
2:A:3184:TYR:HE1	2:A:3197:LEU:HD13	1.71	0.54
2:A:4588:ILE:HG12	2:D:4287:TYR:HD2	1.71	0.54
2:D:1940:GLN:NE2	2:D:1964:GLU:OE2	2.40	0.54
2:D:2678:PRO:HD3	2:D:2978:HIS:CE1	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:952:ILE:HD11	2:D:958:GLU:HG3	1.89	0.54
2:D:2859:GLU:O	2:D:2862:SER:OG	2.16	0.54
2:B:842:GLN:HB2	2:B:1603:PHE:HB2	1.89	0.54
2:B:891:GLU:HG2	2:B:978:PRO:HA	1.89	0.54
2:B:2678:PRO:HD3	2:B:2978:HIS:CE1	2.43	0.54
2:B:4481:TRP:HA	2:B:4484:ILE:HG22	1.88	0.54
2:B:4751:LYS:HD2	2:B:4754:ARG:HH11	1.73	0.54
2:C:15:ARG:NH1	2:C:111:ARG:O	2.40	0.54
2:C:4251:ASN:HD22	2:C:4297:PHE:HB2	1.72	0.54
2:A:2905:ARG:HH11	2:A:2906:GLY:H	1.55	0.54
2:A:3661:VAL:HG23	2:A:3666:GLN:HG2	1.88	0.54
2:D:1133:ARG:HH11	2:D:1133:ARG:CG	2.21	0.54
2:D:3184:TYR:CE1	2:D:3197:LEU:HD13	2.43	0.54
2:D:3661:VAL:HG23	2:D:3666:GLN:HG2	1.89	0.54
2:B:3184:TYR:CE1	2:B:3197:LEU:HD13	2.43	0.54
2:B:4618:THR:OG1	2:B:4619:GLU:OE1	2.24	0.54
2:A:76:ARG:HH22	2:D:3891:TYR:HA	1.72	0.54
2:A:1714:TYR:CE2	2:A:1718:ARG:HD2	2.43	0.54
2:A:2581:ARG:HB3	2:A:2584:MET:HG2	1.90	0.54
2:A:2852:TRP:HA	2:A:2855:LYS:NZ	2.22	0.54
2:A:4751:LYS:HD2	2:A:4754:ARG:HH11	1.73	0.54
2:D:1714:TYR:CE2	2:D:1718:ARG:HD2	2.43	0.54
2:B:414:ARG:HH11	2:B:414:ARG:CG	2.19	0.54
2:B:3002:GLU:OE2	2:B:3049:GLY:HA2	2.08	0.54
2:B:3070:LYS:NZ	2:B:3093:ILE:HG13	2.23	0.54
2:B:3129:SER:O	2:B:3133:ILE:HG13	2.07	0.54
2:B:4251:ASN:HD22	2:B:4297:PHE:HB2	1.72	0.54
2:C:3070:LYS:NZ	2:C:3093:ILE:HG13	2.23	0.54
2:C:4196:THR:HA	2:C:4199:GLU:HG3	1.90	0.54
2:A:15:ARG:NH1	2:A:111:ARG:O	2.40	0.54
2:A:842:GLN:HB2	2:A:1603:PHE:HB2	1.88	0.54
2:D:2212:LYS:HE2	2:D:3822:GLU:HG3	1.89	0.54
2:B:655:MET:HB2	2:B:794:PHE:HE2	1.73	0.54
2:B:1714:TYR:CE2	2:B:1718:ARG:HD2	2.43	0.54
2:C:200:SER:OG	2:C:202:HIS:NE2	2.41	0.54
2:C:1940:GLN:NE2	2:C:1964:GLU:OE2	2.40	0.54
2:C:2678:PRO:HD3	2:C:2978:HIS:CE1	2.43	0.54
2:C:3184:TYR:CE1	2:C:3197:LEU:HD13	2.43	0.54
2:C:3637:GLU:HG2	2:C:3697:LYS:HE2	1.90	0.54
2:D:15:ARG:NH1	2:D:111:ARG:O	2.40	0.54
2:D:4196:THR:HA	2:D:4199:GLU:HG3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4251:ASN:HD22	2:D:4297:PHE:HB2	1.72	0.54
2:B:2139:GLU:HA	2:B:2192:MET:SD	2.48	0.54
2:C:1133:ARG:CG	2:C:1133:ARG:HH11	2.21	0.54
2:A:2212:LYS:HE2	2:A:3822:GLU:HG3	1.89	0.53
2:D:2905:ARG:HH11	2:D:2906:GLY:H	1.54	0.53
2:D:4262:LYS:HD3	2:D:4265:LYS:HZ1	1.72	0.53
2:B:952:ILE:HD11	2:B:958:GLU:HG3	1.89	0.53
2:B:3606:ALA:HB1	2:B:3610:ASN:HB2	1.88	0.53
2:B:3679:LYS:HG3	2:B:3681:LYS:O	2.09	0.53
2:C:4751:LYS:HD2	2:C:4754:ARG:HH11	1.73	0.53
2:A:3234:VAL:HA	2:A:3238:ILE:HG12	1.89	0.53
2:C:2581:ARG:HB3	2:C:2584:MET:HG2	1.90	0.53
2:C:3679:LYS:HG3	2:C:3681:LYS:O	2.09	0.53
2:A:13:PHE:HE1	2:A:176:ARG:HH21	1.57	0.53
2:A:952:ILE:HD11	2:A:958:GLU:HG3	1.89	0.53
2:A:3129:SER:O	2:A:3133:ILE:HG13	2.07	0.53
2:A:3323:MET:O	2:A:3327:LYS:HG2	2.09	0.53
2:A:4251:ASN:HD22	2:A:4297:PHE:HB2	1.72	0.53
2:D:1004:HIS:NE2	2:D:1033:VAL:O	2.35	0.53
2:D:1967:SER:O	2:D:1972:GLN:NE2	2.30	0.53
2:D:3234:VAL:HA	2:D:3238:ILE:HG12	1.89	0.53
2:B:1967:SER:O	2:B:1972:GLN:NE2	2.30	0.53
2:A:2139:GLU:HA	2:A:2192:MET:SD	2.48	0.53
2:D:13:PHE:HE1	2:D:176:ARG:HH21	1.57	0.53
2:D:219:SER:OG	2:D:349:MET:SD	2.64	0.53
2:D:3070:LYS:NZ	2:D:3093:ILE:HG13	2.23	0.53
2:D:3637:GLU:HG2	2:D:3697:LYS:HE2	1.90	0.53
2:B:658:ASN:ND2	2:B:835:GLU:OE1	2.40	0.53
2:B:3637:GLU:HG2	2:B:3697:LYS:HE2	1.90	0.53
2:C:13:PHE:HE1	2:C:176:ARG:HH21	1.57	0.53
2:C:2139:GLU:HA	2:C:2192:MET:SD	2.48	0.53
2:C:3002:GLU:OE2	2:C:3049:GLY:HA2	2.08	0.53
2:A:1979:PHE:CG	2:A:1993:ARG:HG2	2.44	0.53
2:A:3070:LYS:NZ	2:A:3093:ILE:HG13	2.23	0.53
2:D:1810:VAL:HB	2:D:1817:LEU:HD13	1.91	0.53
2:D:2642:ARG:NH1	2:D:2682:GLU:HB2	2.24	0.53
2:B:13:PHE:HE1	2:B:176:ARG:HH21	1.57	0.53
2:B:1979:PHE:CG	2:B:1993:ARG:HG2	2.44	0.53
2:B:4502:MET:HG3	2:B:4582:ILE:HD11	1.89	0.53
2:A:655:MET:HB2	2:A:794:PHE:HE2	1.73	0.53
2:A:2830:ASN:HB3	2:B:1435:GLY:HA3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3679:LYS:HG3	2:A:3681:LYS:O	2.09	0.53
2:D:1979:PHE:CG	2:D:1993:ARG:HG2	2.44	0.53
2:D:2351:ILE:O	2:D:2355:GLU:HG2	2.09	0.53
2:D:4751:LYS:HD2	2:D:4754:ARG:HH11	1.73	0.53
2:C:4502:MET:HG3	2:C:4582:ILE:HD11	1.90	0.53
2:A:15:ARG:HH12	2:A:111:ARG:C	2.12	0.53
2:A:200:SER:OG	2:A:202:HIS:NE2	2.41	0.53
2:A:2351:ILE:O	2:A:2355:GLU:HG2	2.09	0.53
2:A:2678:PRO:HD3	2:A:2978:HIS:CE1	2.43	0.53
2:A:3637:GLU:HG2	2:A:3697:LYS:HE2	1.90	0.53
2:A:4196:THR:HA	2:A:4199:GLU:HG3	1.90	0.53
2:D:4092:LYS:HD2	2:D:4129:PHE:CE1	2.44	0.53
2:B:15:ARG:HH12	2:B:111:ARG:C	2.12	0.53
2:B:3122:ILE:HD11	2:B:3167:PRO:HD3	1.91	0.53
2:C:877:HIS:HE1	2:C:950:VAL:HG23	1.74	0.53
2:C:3805:LEU:HD21	2:C:3888:PHE:HA	1.91	0.53
2:D:258:ARG:NH1	2:D:316:LEU:O	2.42	0.53
2:D:3002:GLU:OE2	2:D:3049:GLY:HA2	2.08	0.53
2:D:3323:MET:O	2:D:3327:LYS:HG2	2.09	0.53
2:D:3805:LEU:HD21	2:D:3888:PHE:HA	1.91	0.53
2:B:2642:ARG:NH1	2:B:2682:GLU:HB2	2.24	0.53
2:C:2642:ARG:NH1	2:C:2682:GLU:HB2	2.24	0.53
2:A:308:LEU:HD13	2:A:393:MET:HG3	1.91	0.53
2:A:2642:ARG:NH1	2:A:2682:GLU:HB2	2.24	0.53
2:A:3002:GLU:OE2	2:A:3049:GLY:HA2	2.08	0.53
2:A:4707:MET:HE2	2:D:4249:ARG:HG2	1.91	0.53
2:D:655:MET:HB2	2:D:794:PHE:HE2	1.73	0.53
2:D:1270:VAL:HG22	2:D:1285:VAL:HG22	1.91	0.53
2:D:2844:MET:HE3	2:D:2844:MET:HA	1.91	0.53
2:B:1477:HIS:ND1	2:B:1478:GLU:OE1	2.42	0.53
2:B:2351:ILE:O	2:B:2355:GLU:HG2	2.09	0.53
2:C:258:ARG:NH1	2:C:316:LEU:O	2.42	0.53
2:C:3221:LEU:HD22	2:C:3226:ILE:HD13	1.91	0.53
2:A:1477:HIS:ND1	2:A:1478:GLU:OE1	2.42	0.53
2:D:1499:GLY:O	2:D:1502:ASN:ND2	2.42	0.53
2:D:3679:LYS:HG3	2:D:3681:LYS:O	2.09	0.53
2:B:877:HIS:HE1	2:B:950:VAL:HG23	1.74	0.53
2:C:1499:GLY:O	2:C:1502:ASN:ND2	2.42	0.53
2:C:3122:ILE:HD11	2:C:3167:PRO:HD3	1.90	0.53
2:A:290:ARG:HB3	2:A:343:ARG:NH2	2.24	0.52
2:A:1810:VAL:HB	2:A:1817:LEU:HD13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3122:ILE:HD11	2:A:3167:PRO:HD3	1.91	0.52
2:D:200:SER:OG	2:D:202:HIS:NE2	2.41	0.52
2:D:305:TYR:OH	2:D:319:LYS:NZ	2.43	0.52
2:D:2581:ARG:HB3	2:D:2584:MET:HG2	1.90	0.52
2:D:4495:PHE:HE1	2:D:4502:MET:HE1	1.74	0.52
2:B:200:SER:OG	2:B:202:HIS:NE2	2.41	0.52
2:B:3221:LEU:HD22	2:B:3226:ILE:HD13	1.91	0.52
2:B:4092:LYS:HD2	2:B:4129:PHE:CE1	2.44	0.52
2:C:141:ASP:OD2	2:C:144:ALA:N	2.37	0.52
2:C:3187:LYS:O	2:C:3188:SER:OG	2.23	0.52
2:D:2139:GLU:HA	2:D:2192:MET:SD	2.48	0.52
2:B:562:LEU:HG	2:B:600:LEU:HD13	1.92	0.52
2:B:1499:GLY:O	2:B:1502:ASN:ND2	2.42	0.52
2:C:661:LEU:HD23	2:C:673:TRP:CD1	2.45	0.52
2:A:305:TYR:OH	2:A:319:LYS:NZ	2.43	0.52
2:A:4092:LYS:HD2	2:A:4129:PHE:CE1	2.44	0.52
2:D:661:LEU:HD23	2:D:673:TRP:CD1	2.45	0.52
2:D:3129:SER:O	2:D:3133:ILE:HG13	2.07	0.52
2:D:3221:LEU:HD22	2:D:3226:ILE:HD13	1.91	0.52
2:B:290:ARG:HB3	2:B:343:ARG:NH2	2.24	0.52
2:B:3323:MET:O	2:B:3327:LYS:HG2	2.09	0.52
2:B:3939:ARG:HH12	2:C:173:GLU:HG2	1.74	0.52
2:C:290:ARG:HB3	2:C:343:ARG:NH2	2.24	0.52
2:C:932:ASN:O	2:C:935:MET:HB3	2.10	0.52
2:C:3323:MET:O	2:C:3327:LYS:HG2	2.09	0.52
2:D:15:ARG:HH12	2:D:111:ARG:C	2.12	0.52
2:C:15:ARG:HH12	2:C:111:ARG:C	2.12	0.52
2:C:1270:VAL:HG22	2:C:1285:VAL:HG22	1.91	0.52
2:C:1967:SER:O	2:C:1972:GLN:NE2	2.30	0.52
2:C:3147:TYR:HD1	2:C:3150:ARG:HE	1.58	0.52
2:C:4251:ASN:ND2	2:C:4293:THR:O	2.34	0.52
2:D:3147:TYR:HD1	2:D:3150:ARG:HE	1.58	0.52
2:B:932:ASN:O	2:B:935:MET:HB3	2.10	0.52
2:B:1270:VAL:HG22	2:B:1285:VAL:HG22	1.91	0.52
2:C:308:LEU:HD13	2:C:393:MET:HG3	1.91	0.52
2:C:562:LEU:HG	2:C:600:LEU:HD13	1.92	0.52
2:A:462:TYR:CE2	2:A:485:ARG:HD3	2.45	0.52
2:A:661:LEU:HD23	2:A:673:TRP:CD1	2.44	0.52
2:A:801:ARG:HG2	2:A:1618:LEU:HA	1.92	0.52
2:A:1644:LEU:HB3	2:A:1651:LEU:HD13	1.92	0.52
2:B:238:HIS:HB3	2:B:243:GLU:HG3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:305:TYR:OH	2:B:319:LYS:NZ	2.43	0.52
2:B:3187:LYS:O	2:B:3188:SER:OG	2.23	0.52
2:C:655:MET:HB2	2:C:794:PHE:HE2	1.73	0.52
2:A:932:ASN:O	2:A:935:MET:HB3	2.10	0.52
2:A:1499:GLY:O	2:A:1502:ASN:ND2	2.42	0.52
2:D:877:HIS:HE1	2:D:950:VAL:HG23	1.74	0.52
2:B:2010:GLU:N	2:B:2010:GLU:OE2	2.43	0.52
2:B:3805:LEU:HD21	2:B:3888:PHE:HA	1.91	0.52
2:C:1810:VAL:HB	2:C:1817:LEU:HD13	1.90	0.52
2:C:4092:LYS:HD2	2:C:4129:PHE:CE1	2.44	0.52
2:D:462:TYR:CE2	2:D:485:ARG:HD3	2.45	0.52
2:D:3122:ILE:HD11	2:D:3167:PRO:HD3	1.91	0.52
2:D:4577:ILE:O	2:D:4581:VAL:HG23	2.10	0.52
2:B:801:ARG:HG2	2:B:1618:LEU:HA	1.92	0.52
2:B:1744:LYS:NZ	2:B:2002:ASP:OD1	2.39	0.52
2:B:4196:THR:HA	2:B:4199:GLU:HG3	1.90	0.52
2:A:877:HIS:HE1	2:A:950:VAL:HG23	1.74	0.52
2:A:3221:LEU:HD22	2:A:3226:ILE:HD13	1.91	0.52
2:A:3227:ARG:HE	2:A:3290:ILE:HG13	1.75	0.52
2:D:62:LEU:O	2:D:66:THR:HG23	2.10	0.52
2:D:932:ASN:O	2:D:935:MET:HB3	2.10	0.52
2:B:661:LEU:HD23	2:B:673:TRP:CD1	2.44	0.52
2:B:3156:GLY:HA2	2:B:3237:VAL:HG13	1.92	0.52
2:C:1644:LEU:HB3	2:C:1651:LEU:HD13	1.92	0.52
2:C:2351:ILE:O	2:C:2355:GLU:HG2	2.09	0.52
2:A:238:HIS:HB3	2:A:243:GLU:HG3	1.92	0.52
2:A:258:ARG:NH1	2:A:316:LEU:O	2.42	0.52
2:A:562:LEU:HG	2:A:600:LEU:HD13	1.92	0.52
2:A:682:THR:HG21	2:A:750:ARG:HA	1.92	0.52
2:A:2010:GLU:N	2:A:2010:GLU:OE2	2.43	0.52
2:A:4251:ASN:ND2	2:A:4293:THR:O	2.34	0.52
2:D:290:ARG:HB3	2:D:343:ARG:NH2	2.24	0.52
2:D:1477:HIS:ND1	2:D:1478:GLU:OE1	2.42	0.52
2:D:4790:ARG:HH12	2:C:4557:VAL:HG21	1.75	0.52
2:B:462:TYR:CE2	2:B:485:ARG:HD3	2.45	0.52
2:B:682:THR:HG21	2:B:750:ARG:HA	1.92	0.52
2:B:1048:ASP:OD1	2:B:1049:SER:N	2.43	0.52
2:B:1287:GLN:NE2	2:B:1549:SER:O	2.43	0.52
2:B:3227:ARG:HE	2:B:3290:ILE:HG13	1.75	0.52
2:C:305:TYR:OH	2:C:319:LYS:NZ	2.43	0.52
2:C:4092:LYS:HD2	2:C:4129:PHE:HE1	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1048:ASP:OD1	2:D:1049:SER:N	2.43	0.51
2:D:3156:GLY:HA2	2:D:3237:VAL:HG13	1.92	0.51
2:B:1810:VAL:HB	2:B:1817:LEU:HD13	1.91	0.51
2:B:3128:VAL:HG13	2:B:3183:ILE:HD13	1.93	0.51
2:C:2344:LEU:HD22	2:C:2434:GLY:HA3	1.92	0.51
2:C:3156:GLY:HA2	2:C:3237:VAL:HG13	1.92	0.51
2:A:3805:LEU:HD21	2:A:3888:PHE:HA	1.91	0.51
2:D:3227:ARG:HE	2:D:3290:ILE:HG13	1.75	0.51
2:D:4092:LYS:HD2	2:D:4129:PHE:HE1	1.75	0.51
2:B:35:LEU:HD22	2:B:49:LEU:HB3	1.92	0.51
2:B:258:ARG:NH1	2:B:316:LEU:O	2.42	0.51
2:B:4674:LYS:HA	2:B:4677:LEU:HD12	1.91	0.51
2:C:1287:GLN:NE2	2:C:1549:SER:O	2.43	0.51
2:C:1691:ASN:HB3	2:C:1694:MET:HE2	1.92	0.51
2:C:1979:PHE:CG	2:C:1993:ARG:HG2	2.44	0.51
2:A:1270:VAL:HG22	2:A:1285:VAL:HG22	1.91	0.51
2:D:35:LEU:HD22	2:D:49:LEU:HB3	1.92	0.51
2:D:308:LEU:HD13	2:D:393:MET:HG3	1.90	0.51
2:D:1133:ARG:HH11	2:D:1133:ARG:HG3	1.76	0.51
2:D:2344:LEU:HD22	2:D:2434:GLY:HA3	1.92	0.51
2:B:1267:HIS:HB2	2:B:1268:ILE:HD12	1.92	0.51
2:B:1432:ILE:HB	2:B:1505:LEU:HD23	1.93	0.51
2:B:3147:TYR:HD1	2:B:3150:ARG:HE	1.58	0.51
2:C:893:TRP:O	2:C:897:LYS:HG2	2.10	0.51
2:C:1267:HIS:HB2	2:C:1268:ILE:HD12	1.92	0.51
1:H:24:VAL:HG12	1:H:105:LEU:HD12	1.92	0.51
2:A:3156:GLY:HA2	2:A:3237:VAL:HG13	1.92	0.51
2:A:4674:LYS:HA	2:A:4677:LEU:HD12	1.91	0.51
2:D:801:ARG:HG2	2:D:1618:LEU:HA	1.92	0.51
2:D:1113:MET:HG2	2:D:1207:LEU:HD23	1.93	0.51
2:B:1113:MET:HG2	2:B:1207:LEU:HD23	1.93	0.51
2:B:4092:LYS:HD2	2:B:4129:PHE:HE1	1.75	0.51
2:B:4640:PHE:HB3	2:B:4650:LYS:HE3	1.93	0.51
2:C:878:LEU:HD13	2:C:950:VAL:HG21	1.93	0.51
2:C:4674:LYS:HA	2:C:4677:LEU:HD12	1.91	0.51
2:A:893:TRP:O	2:A:897:LYS:HG2	2.10	0.51
2:A:1048:ASP:OD1	2:A:1049:SER:N	2.43	0.51
2:A:1435:GLY:HA2	2:D:2831:VAL:HG12	1.93	0.51
2:A:3062:ASP:OD1	2:A:3129:SER:OG	2.19	0.51
2:A:3128:VAL:O	2:A:3132:ARG:HG3	2.11	0.51
2:A:4248:LEU:HG	2:A:4297:PHE:CE1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:238:HIS:HB3	2:D:243:GLU:HG3	1.92	0.51
2:D:4248:LEU:HG	2:D:4297:PHE:CE1	2.46	0.51
2:D:4908:HIS:HA	2:D:4912:GLU:HB2	1.93	0.51
2:B:308:LEU:HD13	2:B:393:MET:HG3	1.90	0.51
2:B:2436:ILE:HA	2:B:2465:LYS:HE3	1.93	0.51
2:C:2010:GLU:OE2	2:C:2010:GLU:N	2.43	0.51
2:A:3128:VAL:HG13	2:A:3183:ILE:HD13	1.92	0.51
2:A:4092:LYS:HD2	2:A:4129:PHE:HE1	1.75	0.51
2:A:4577:ILE:O	2:A:4581:VAL:HG23	2.10	0.51
2:D:893:TRP:O	2:D:897:LYS:HG2	2.10	0.51
2:D:1267:HIS:HB2	2:D:1268:ILE:HD12	1.92	0.51
2:D:1644:LEU:HB3	2:D:1651:LEU:HD13	1.92	0.51
2:D:1766:PRO:HG3	2:D:1780:PRO:HB3	1.92	0.51
2:D:2010:GLU:N	2:D:2010:GLU:OE2	2.43	0.51
2:D:3000:GLU:HA	2:D:3003:MET:HE2	1.93	0.51
2:D:3014:LEU:O	2:D:3018:ARG:HD2	2.11	0.51
2:D:3178:HIS:CE1	2:D:3265:CYS:HA	2.46	0.51
2:C:238:HIS:HB3	2:C:243:GLU:HG3	1.92	0.51
2:C:2831:VAL:O	2:C:2894:LYS:NZ	2.41	0.51
2:C:3014:LEU:O	2:C:3018:ARG:HD2	2.11	0.51
2:C:3227:ARG:HE	2:C:3290:ILE:HG13	1.75	0.51
2:C:4753:LEU:HA	2:C:4756:ILE:HD12	1.93	0.51
2:A:2721:ILE:HD13	2:A:2776:LYS:HG2	1.93	0.51
2:D:562:LEU:HG	2:D:600:LEU:HD13	1.92	0.51
2:D:1433:PHE:HZ	2:D:1554:GLN:HE21	1.59	0.51
2:B:3996:GLY:O	2:B:4000:VAL:HG23	2.11	0.51
2:B:4577:ILE:O	2:B:4581:VAL:HG23	2.10	0.51
2:C:1048:ASP:OD1	2:C:1049:SER:N	2.43	0.51
2:C:1477:HIS:ND1	2:C:1478:GLU:OE1	2.42	0.51
2:C:4248:LEU:HG	2:C:4297:PHE:CE1	2.46	0.51
2:A:62:LEU:O	2:A:66:THR:HG23	2.10	0.51
2:A:2436:ILE:HA	2:A:2465:LYS:HE3	1.93	0.51
2:A:4620:GLN:OE1	2:A:4632:ARG:NH2	2.43	0.51
2:D:878:LEU:HD13	2:D:950:VAL:HG21	1.93	0.51
2:D:3128:VAL:O	2:D:3132:ARG:HG3	2.11	0.51
2:D:3149:GLU:O	2:D:3152:ARG:HG2	2.11	0.51
2:D:4674:LYS:HA	2:D:4677:LEU:HD12	1.91	0.51
2:B:2344:LEU:HD22	2:B:2434:GLY:HA3	1.92	0.51
2:B:4248:LEU:HG	2:B:4297:PHE:CE1	2.46	0.51
2:C:801:ARG:HG2	2:C:1618:LEU:HA	1.92	0.51
2:C:3128:VAL:HG13	2:C:3183:ILE:HD13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3149:GLU:O	2:C:3152:ARG:HG2	2.11	0.51
2:A:2830:ASN:CB	2:B:1435:GLY:HA3	2.40	0.51
1:E:24:VAL:HG12	1:E:105:LEU:HD12	1.92	0.51
2:D:21:VAL:HG13	2:D:217:ILE:HG13	1.93	0.51
2:D:448:PRO:HB2	2:D:451:SER:OG	2.11	0.51
2:D:948:CYS:SG	2:D:1064:LEU:HB3	2.51	0.51
2:D:2721:ILE:HD13	2:D:2776:LYS:HG2	1.93	0.51
2:D:3147:TYR:HA	2:D:3150:ARG:HG2	1.92	0.51
2:D:4753:LEU:HA	2:D:4756:ILE:HD12	1.93	0.51
2:B:62:LEU:O	2:B:66:THR:HG23	2.10	0.51
2:B:4251:ASN:ND2	2:B:4293:THR:O	2.34	0.51
2:C:62:LEU:O	2:C:66:THR:HG23	2.10	0.51
2:C:462:TYR:CE2	2:C:485:ARG:HD3	2.45	0.51
2:C:1113:MET:HG2	2:C:1207:LEU:HD23	1.93	0.51
2:A:1113:MET:HG2	2:A:1207:LEU:HD23	1.93	0.51
2:A:1432:ILE:HB	2:A:1505:LEU:HD23	1.93	0.51
2:A:3149:GLU:O	2:A:3152:ARG:HG2	2.11	0.51
2:D:4648:PHE:HD2	2:D:4651:ARG:HE	1.59	0.51
2:C:219:SER:OG	2:C:349:MET:SD	2.64	0.51
2:C:1432:ILE:HB	2:C:1505:LEU:HD23	1.93	0.51
2:C:1468:THR:HG23	2:C:1476:VAL:HG13	1.93	0.51
2:C:1766:PRO:HG3	2:C:1780:PRO:HB3	1.93	0.51
2:C:3147:TYR:HA	2:C:3150:ARG:HG2	1.92	0.51
2:C:4158:THR:O	2:C:4162:LYS:HG3	2.11	0.51
2:A:1133:ARG:HH11	2:A:1133:ARG:HG3	1.75	0.50
2:A:3147:TYR:HD1	2:A:3150:ARG:HE	1.58	0.50
2:D:3996:GLY:O	2:D:4000:VAL:HG23	2.11	0.50
2:D:4158:THR:O	2:D:4162:LYS:HG3	2.11	0.50
2:B:2837:LEU:O	2:B:2840:MET:HB2	2.11	0.50
2:C:948:CYS:SG	2:C:1064:LEU:HB3	2.51	0.50
2:A:21:VAL:HG13	2:A:217:ILE:HG13	1.93	0.50
2:A:35:LEU:HD22	2:A:49:LEU:HB3	1.92	0.50
2:A:948:CYS:SG	2:A:1064:LEU:HB3	2.51	0.50
2:A:1008:ALA:O	2:A:1012:ILE:HG12	2.12	0.50
2:A:3000:GLU:HA	2:A:3003:MET:HE2	1.93	0.50
2:A:3014:LEU:O	2:A:3018:ARG:HD2	2.11	0.50
2:A:3996:GLY:O	2:A:4000:VAL:HG23	2.11	0.50
2:A:4648:PHE:HD2	2:A:4651:ARG:HE	1.59	0.50
2:D:2581:ARG:NH1	2:D:2583:SER:OG	2.45	0.50
2:B:1471:ASP:OD1	2:B:1475:LYS:N	2.45	0.50
2:B:1691:ASN:HB3	2:B:1694:MET:HE2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2721:ILE:HD13	2:C:2776:LYS:HG2	1.93	0.50
2:A:2837:LEU:O	2:A:2840:MET:HB2	2.11	0.50
2:D:162:ILE:HG23	2:D:181:LEU:HD11	1.93	0.50
2:D:682:THR:HG21	2:D:750:ARG:HA	1.92	0.50
2:D:1008:ALA:O	2:D:1012:ILE:HG12	2.12	0.50
2:D:3128:VAL:HG13	2:D:3183:ILE:HD13	1.92	0.50
2:B:1468:THR:HG23	2:B:1476:VAL:HG13	1.93	0.50
2:B:1979:PHE:HZ	2:B:1996:LEU:HB3	1.77	0.50
2:B:4625:ASP:O	2:B:4629:GLN:HG2	2.12	0.50
2:C:3000:GLU:HA	2:C:3003:MET:HE2	1.94	0.50
2:C:3128:VAL:O	2:C:3132:ARG:HG3	2.11	0.50
2:C:3130:CYS:HB3	2:C:3162:PHE:HZ	1.77	0.50
2:C:4577:ILE:O	2:C:4581:VAL:HG23	2.10	0.50
2:C:4625:ASP:O	2:C:4629:GLN:HG2	2.12	0.50
2:D:2436:ILE:HA	2:D:2465:LYS:HE3	1.93	0.50
2:B:893:TRP:O	2:B:897:LYS:HG2	2.10	0.50
2:B:1004:HIS:NE2	2:B:1033:VAL:O	2.35	0.50
2:B:1644:LEU:HB3	2:B:1651:LEU:HD13	1.92	0.50
2:B:2009:ILE:HD12	2:B:2095:ILE:HG12	1.94	0.50
2:B:3130:CYS:HB3	2:B:3162:PHE:HZ	1.77	0.50
2:B:3149:GLU:O	2:B:3152:ARG:HG2	2.11	0.50
2:B:4158:THR:O	2:B:4162:LYS:HG3	2.11	0.50
2:B:4908:HIS:HA	2:B:4912:GLU:HB2	1.93	0.50
2:C:916:PRO:HB2	2:C:924:LEU:HA	1.94	0.50
2:C:1433:PHE:HZ	2:C:1554:GLN:HE21	1.59	0.50
2:A:1098:ALA:HA	2:A:1168:MET:HB2	1.94	0.50
2:A:1287:GLN:NE2	2:A:1549:SER:O	2.43	0.50
2:A:1471:ASP:OD1	2:A:1475:LYS:N	2.45	0.50
2:A:4908:HIS:HA	2:A:4912:GLU:HB2	1.93	0.50
2:B:322:ALA:HB1	2:B:327:THR:HG21	1.94	0.50
2:B:3014:LEU:O	2:B:3018:ARG:HD2	2.11	0.50
2:C:1979:PHE:HZ	2:C:1996:LEU:HB3	1.77	0.50
2:C:2798:MET:HA	2:C:2801:TYR:CD2	2.47	0.50
2:C:3996:GLY:O	2:C:4000:VAL:HG23	2.11	0.50
2:C:4908:HIS:HA	2:C:4912:GLU:HB2	1.93	0.50
2:A:448:PRO:HB2	2:A:451:SER:OG	2.11	0.50
2:A:1433:PHE:HZ	2:A:1554:GLN:HE21	1.59	0.50
2:A:1788:LYS:HG3	2:A:1834:PHE:CE1	2.47	0.50
2:A:1979:PHE:HZ	2:A:1996:LEU:HB3	1.77	0.50
2:A:2798:MET:HA	2:A:2801:TYR:CD2	2.47	0.50
2:A:3130:CYS:HB3	2:A:3162:PHE:HZ	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3147:TYR:HA	2:A:3150:ARG:HG2	1.92	0.50
2:A:3246:MET:HA	2:A:3246:MET:CE	2.41	0.50
2:A:4625:ASP:O	2:A:4629:GLN:HG2	2.12	0.50
2:D:1788:LYS:HG3	2:D:1834:PHE:CE1	2.47	0.50
2:D:4640:PHE:HB3	2:D:4650:LYS:HE3	1.93	0.50
2:B:2142:MET:CB	2:B:2192:MET:HE1	2.37	0.50
2:C:162:ILE:HG23	2:C:181:LEU:HD11	1.93	0.50
2:C:862:PHE:CZ	2:C:864:PRO:HG3	2.46	0.50
2:C:1133:ARG:HH11	2:C:1133:ARG:HG3	1.75	0.50
2:C:2009:ILE:HD12	2:C:2095:ILE:HG12	1.94	0.50
2:C:2844:MET:HA	2:C:2844:MET:CE	2.42	0.50
2:A:76:ARG:HH12	2:D:3891:TYR:CA	2.25	0.50
2:A:878:LEU:HD13	2:A:950:VAL:HG21	1.93	0.50
2:A:2581:ARG:HG3	2:A:2582:PRO:HD2	1.94	0.50
2:A:2581:ARG:NH1	2:A:2583:SER:OG	2.45	0.50
2:A:4753:LEU:HA	2:A:4756:ILE:HD12	1.93	0.50
1:G:24:VAL:HG12	1:G:105:LEU:HD12	1.92	0.50
1:G:36:LYS:H	2:C:647:ARG:NH2	2.09	0.50
2:B:862:PHE:CZ	2:B:864:PRO:HG3	2.47	0.50
2:B:1766:PRO:HG3	2:B:1780:PRO:HB3	1.92	0.50
2:B:2581:ARG:HG3	2:B:2582:PRO:HD2	1.94	0.50
2:C:35:LEU:HD22	2:C:49:LEU:HB3	1.92	0.50
2:C:322:ALA:HB1	2:C:327:THR:HG21	1.94	0.50
2:C:2436:ILE:HA	2:C:2465:LYS:HE3	1.93	0.50
2:A:947:GLY:HA3	2:A:1067:PRO:HD3	1.94	0.50
2:A:1267:HIS:HB2	2:A:1268:ILE:HD12	1.92	0.50
2:A:1766:PRO:HG3	2:A:1780:PRO:HB3	1.92	0.50
2:A:3178:HIS:CE1	2:A:3265:CYS:HA	2.46	0.50
2:D:916:PRO:HB2	2:D:924:LEU:HA	1.94	0.50
2:D:1432:ILE:HB	2:D:1505:LEU:HD23	1.93	0.50
2:D:1468:THR:HG23	2:D:1476:VAL:HG13	1.93	0.50
2:D:2837:LEU:O	2:D:2840:MET:HB2	2.11	0.50
2:D:4055:HIS:CD2	2:D:4057:HIS:HB2	2.47	0.50
2:D:4769:LEU:O	2:C:4753:LEU:HD21	2.11	0.50
2:B:448:PRO:HB2	2:B:451:SER:OG	2.11	0.50
2:B:878:LEU:HD13	2:B:950:VAL:HG21	1.93	0.50
2:B:916:PRO:HB2	2:B:924:LEU:HA	1.94	0.50
2:B:948:CYS:SG	2:B:1064:LEU:HB3	2.51	0.50
2:B:2244:ALA:O	2:B:2248:MET:HB2	2.12	0.50
2:B:2844:MET:HA	2:B:2844:MET:CE	2.42	0.50
2:B:3326:LEU:O	2:B:3330:ALA:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4620:GLN:OE1	2:B:4632:ARG:NH2	2.43	0.50
2:C:394:HIS:CE1	2:C:396:GLU:HB2	2.47	0.50
2:C:2581:ARG:NH1	2:C:2583:SER:OG	2.45	0.50
2:D:1098:ALA:HA	2:D:1168:MET:HB2	1.94	0.50
2:D:1287:GLN:NE2	2:D:1549:SER:O	2.43	0.50
2:D:2244:ALA:O	2:D:2248:MET:HB2	2.12	0.50
2:D:3246:MET:HA	2:D:3246:MET:CE	2.41	0.50
2:B:2581:ARG:NH1	2:B:2583:SER:OG	2.45	0.50
2:C:184:VAL:HG22	2:C:191:TYR:CD1	2.47	0.50
2:C:682:THR:HG21	2:C:750:ARG:HA	1.92	0.50
2:C:1008:ALA:O	2:C:1012:ILE:HG12	2.12	0.50
2:C:1443:VAL:HG13	2:C:1543:VAL:HG22	1.94	0.50
2:C:2244:ALA:O	2:C:2248:MET:HB2	2.12	0.50
2:C:3326:LEU:O	2:C:3330:ALA:N	2.45	0.50
2:A:644:LEU:HD13	2:A:1630:LEU:HD21	1.94	0.49
2:A:661:LEU:O	2:A:788:PHE:N	2.37	0.49
2:A:2344:LEU:HD22	2:A:2434:GLY:HA3	1.92	0.49
2:A:3187:LYS:O	2:A:3188:SER:OG	2.23	0.49
2:A:4640:PHE:HB3	2:A:4650:LYS:HE3	1.93	0.49
2:D:862:PHE:CZ	2:D:864:PRO:HG3	2.46	0.49
2:D:1240:ALA:HB2	2:D:1247:ILE:HD11	1.94	0.49
2:D:3328:LYS:HA	2:D:3328:LYS:CE	2.32	0.49
2:D:4251:ASN:OD1	2:D:4293:THR:HG23	2.12	0.49
2:B:1008:ALA:O	2:B:1012:ILE:HG12	2.12	0.49
2:B:1133:ARG:HH11	2:B:1133:ARG:HG3	1.76	0.49
2:B:1788:LYS:HG3	2:B:1834:PHE:CE1	2.47	0.49
2:B:3019:ILE:HD13	2:B:3019:ILE:N	2.27	0.49
2:B:3128:VAL:O	2:B:3132:ARG:HG3	2.11	0.49
2:A:219:SER:OG	2:A:349:MET:SD	2.64	0.49
2:A:394:HIS:CE1	2:A:396:GLU:HB2	2.47	0.49
2:A:1838:ASP:O	2:A:1842:ILE:HG12	2.12	0.49
2:A:4045:LYS:HZ2	2:A:4078:LEU:HB3	1.77	0.49
2:A:4055:HIS:CD2	2:A:4057:HIS:HB2	2.47	0.49
2:A:4158:THR:O	2:A:4162:LYS:HG3	2.11	0.49
2:A:4253:LEU:O	2:A:4257:ARG:HG3	2.12	0.49
1:F:63:GLY:HA3	1:F:75:LEU:HD21	1.95	0.49
2:D:184:VAL:HG22	2:D:191:TYR:CD1	2.47	0.49
2:D:1685:LEU:HB3	2:D:1706:LEU:HD12	1.94	0.49
2:D:1691:ASN:HB3	2:D:1694:MET:HE2	1.94	0.49
2:D:3034:HIS:O	2:D:3038:GLN:HG2	2.12	0.49
2:D:3130:CYS:HB3	2:D:3162:PHE:HZ	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3853:ASP:OD1	2:D:3853:ASP:N	2.45	0.49
2:D:4625:ASP:O	2:D:4629:GLN:HG2	2.12	0.49
2:B:1421:MET:HA	2:B:1421:MET:CE	2.43	0.49
2:B:1678:SER:HB2	2:B:1768:PHE:CE2	2.47	0.49
2:B:1838:ASP:O	2:B:1842:ILE:HG12	2.12	0.49
2:B:4055:HIS:CD2	2:B:4057:HIS:HB2	2.47	0.49
2:C:1098:ALA:HA	2:C:1168:MET:HB2	1.94	0.49
2:C:1471:ASP:OD1	2:C:1475:LYS:N	2.45	0.49
2:C:2277:CYS:HB3	2:C:2280:LEU:HB2	1.94	0.49
2:C:3853:ASP:N	2:C:3853:ASP:OD1	2.45	0.49
2:C:4253:LEU:O	2:C:4257:ARG:HG3	2.12	0.49
2:A:248:PRO:HG3	2:A:261:HIS:HE1	1.78	0.49
2:A:862:PHE:CZ	2:A:864:PRO:HG3	2.46	0.49
2:A:946:LEU:CB	2:A:995:MET:HE1	2.43	0.49
2:A:2500:ALA:HB1	2:A:2554:ARG:HH11	1.78	0.49
2:A:2844:MET:HA	2:A:2844:MET:CE	2.42	0.49
2:A:4262:LYS:HD3	2:A:4265:LYS:HZ1	1.77	0.49
2:A:4495:PHE:HE1	2:A:4502:MET:HE1	1.77	0.49
2:A:4775:ALA:HA	2:A:4817:MET:HE2	1.94	0.49
1:E:63:GLY:HA3	1:E:75:LEU:HD21	1.95	0.49
1:F:24:VAL:HG12	1:F:105:LEU:HD12	1.92	0.49
2:D:394:HIS:CE1	2:D:396:GLU:HB2	2.47	0.49
2:D:629:GLN:OE1	2:D:1669:ASN:ND2	2.34	0.49
2:D:963:LYS:HD2	2:D:979:ALA:HB3	1.94	0.49
2:D:1471:ASP:OD1	2:D:1475:LYS:N	2.45	0.49
2:D:1838:ASP:O	2:D:1842:ILE:HG12	2.13	0.49
2:B:394:HIS:CE1	2:B:396:GLU:HB2	2.47	0.49
2:B:644:LEU:HD13	2:B:1630:LEU:HD21	1.94	0.49
2:B:2500:ALA:HB1	2:B:2554:ARG:HH11	1.78	0.49
2:B:2721:ILE:HD13	2:B:2776:LYS:HG2	1.93	0.49
2:B:2798:MET:HA	2:B:2801:TYR:CD2	2.47	0.49
2:B:3147:TYR:HA	2:B:3150:ARG:HG2	1.92	0.49
2:B:3996:GLY:HA3	2:B:4109:MET:HE3	1.95	0.49
2:B:4253:LEU:HA	2:B:4256:MET:HG3	1.95	0.49
2:C:21:VAL:HG13	2:C:217:ILE:HG13	1.93	0.49
2:C:448:PRO:HB2	2:C:451:SER:OG	2.12	0.49
2:C:798:ILE:HD12	2:C:800:VAL:HG22	1.95	0.49
2:C:3034:HIS:O	2:C:3038:GLN:HG2	2.12	0.49
2:C:4055:HIS:CD2	2:C:4057:HIS:HB2	2.47	0.49
1:H:63:GLY:HA3	1:H:75:LEU:HD21	1.95	0.49
2:A:1427:TYR:HB2	2:A:1563:VAL:HG11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:90:GLY:HA2	2:C:638:PRO:HD3	1.94	0.49
2:D:248:PRO:HG3	2:D:261:HIS:HE1	1.77	0.49
2:D:947:GLY:HA3	2:D:1067:PRO:HD3	1.94	0.49
2:D:1443:VAL:HG13	2:D:1543:VAL:HG22	1.94	0.49
2:D:2277:CYS:HB3	2:D:2280:LEU:HB2	1.95	0.49
2:D:2500:ALA:HB1	2:D:2554:ARG:HH11	1.78	0.49
2:D:2798:MET:HA	2:D:2801:TYR:CD2	2.47	0.49
2:D:3996:GLY:HA3	2:D:4109:MET:HE3	1.95	0.49
2:D:4790:ARG:HH22	2:C:4557:VAL:HG11	1.76	0.49
2:B:3697:LYS:HA	2:B:3700:HIS:NE2	2.28	0.49
2:B:4753:LEU:HA	2:B:4756:ILE:HD12	1.93	0.49
2:C:644:LEU:HD13	2:C:1630:LEU:HD21	1.94	0.49
2:C:661:LEU:O	2:C:788:PHE:N	2.37	0.49
2:C:1788:LYS:HG3	2:C:1834:PHE:CE1	2.47	0.49
2:C:2837:LEU:O	2:C:2840:MET:HB2	2.11	0.49
2:C:3246:MET:HA	2:C:3246:MET:CE	2.41	0.49
2:C:4648:PHE:HD2	2:C:4651:ARG:HE	1.59	0.49
2:A:798:ILE:HD12	2:A:800:VAL:HG22	1.95	0.49
2:A:963:LYS:HD2	2:A:979:ALA:HB3	1.94	0.49
2:A:1468:THR:HG23	2:A:1476:VAL:HG13	1.93	0.49
2:A:2835:ARG:HG3	2:A:2836:ASP:N	2.27	0.49
2:A:3326:LEU:O	2:A:3330:ALA:N	2.45	0.49
2:A:4251:ASN:OD1	2:A:4293:THR:HG23	2.12	0.49
2:D:261:HIS:CD2	2:D:263:GLU:HG3	2.48	0.49
2:D:1019:GLY:HA3	2:D:1028:ARG:HB3	1.95	0.49
2:D:2009:ILE:HD12	2:D:2095:ILE:HG12	1.94	0.49
2:D:2769:GLU:HA	2:D:2772:ARG:HB2	1.94	0.49
2:D:4023:LEU:HD13	2:D:4066:LEU:HD21	1.95	0.49
2:D:4253:LEU:O	2:D:4257:ARG:HG3	2.12	0.49
2:B:248:PRO:HG3	2:B:261:HIS:HE1	1.78	0.49
2:B:261:HIS:CD2	2:B:263:GLU:HG3	2.48	0.49
2:B:798:ILE:HD12	2:B:800:VAL:HG22	1.95	0.49
2:B:1427:TYR:HB2	2:B:1563:VAL:HG11	1.95	0.49
2:B:2202:TYR:O	2:B:2206:ILE:HG12	2.13	0.49
2:C:1968:PRO:O	2:C:1972:GLN:HG3	2.13	0.49
2:C:4640:PHE:HB3	2:C:4650:LYS:HE3	1.93	0.49
2:C:4941:TRP:NE1	2:C:4945:GLN:NE2	2.60	0.49
2:A:162:ILE:HG23	2:A:181:LEU:HD11	1.93	0.49
2:A:892:LEU:HD21	2:A:1052:GLU:HB3	1.95	0.49
2:A:1678:SER:HB2	2:A:1768:PHE:CE2	2.47	0.49
2:A:2009:ILE:HD12	2:A:2095:ILE:HG12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2769:GLU:HA	2:A:2772:ARG:HB2	1.95	0.49
2:A:3697:LYS:HA	2:A:3700:HIS:NE2	2.28	0.49
2:A:3853:ASP:OD1	2:A:3853:ASP:N	2.45	0.49
2:A:4253:LEU:HA	2:A:4256:MET:HG3	1.95	0.49
2:D:798:ILE:HD12	2:D:800:VAL:HG22	1.95	0.49
2:D:1678:SER:HB2	2:D:1768:PHE:CE2	2.47	0.49
2:B:21:VAL:HG13	2:B:217:ILE:HG13	1.93	0.49
2:B:184:VAL:HG22	2:B:191:TYR:CD1	2.47	0.49
2:B:1098:ALA:HA	2:B:1168:MET:HB2	1.94	0.49
2:B:1968:PRO:O	2:B:1972:GLN:HG3	2.13	0.49
2:B:4251:ASN:OD1	2:B:4293:THR:HG23	2.12	0.49
2:B:4630:TRP:CZ2	2:B:4708:TRP:HA	2.48	0.49
2:B:4648:PHE:HD2	2:B:4651:ARG:HE	1.59	0.49
2:C:1019:GLY:HA3	2:C:1028:ARG:HB3	1.95	0.49
2:C:2500:ALA:HB1	2:C:2554:ARG:HH11	1.78	0.49
2:C:2789:ILE:HD11	2:C:2896:LEU:HD22	1.95	0.49
2:C:3697:LYS:HA	2:C:3700:HIS:NE2	2.28	0.49
2:C:4251:ASN:OD1	2:C:4293:THR:HG23	2.12	0.49
2:A:4630:TRP:CZ2	2:A:4708:TRP:HA	2.48	0.49
2:A:4773:LEU:HD22	2:D:4753:LEU:HD22	1.94	0.49
2:D:892:LEU:HD21	2:D:1052:GLU:HB3	1.95	0.49
2:B:892:LEU:HD21	2:B:1052:GLU:HB3	1.95	0.49
2:B:1069:GLN:NE2	2:B:1070:ASP:O	2.46	0.49
2:B:1685:LEU:HD22	2:B:1706:LEU:HB2	1.95	0.49
2:B:3328:LYS:HA	2:B:3328:LYS:CE	2.32	0.49
2:B:4253:LEU:O	2:B:4257:ARG:HG3	2.12	0.49
2:C:1240:ALA:HB2	2:C:1247:ILE:HD11	1.94	0.49
2:C:4620:GLN:OE1	2:C:4632:ARG:NH2	2.43	0.49
2:A:184:VAL:HG22	2:A:191:TYR:CD1	2.47	0.49
2:A:916:PRO:HB2	2:A:924:LEU:HA	1.94	0.49
2:A:1019:GLY:HA3	2:A:1028:ARG:HB3	1.95	0.49
2:A:2651:ALA:O	2:A:2655:LYS:HB2	2.13	0.49
2:A:3034:HIS:O	2:A:3038:GLN:HG2	2.12	0.49
2:A:3328:LYS:HA	2:A:3328:LYS:CE	2.32	0.49
1:G:63:GLY:HA3	1:G:75:LEU:HD21	1.95	0.49
2:D:1427:TYR:HB2	2:D:1563:VAL:HG11	1.95	0.49
2:D:1758:ARG:HG3	2:D:1759:PRO:HD2	1.95	0.49
2:D:2789:ILE:HD11	2:D:2896:LEU:HD22	1.95	0.49
2:D:2835:ARG:HG3	2:D:2836:ASP:N	2.27	0.49
2:D:2884:LYS:O	2:D:2887:GLU:HG3	2.13	0.49
2:B:947:GLY:HA3	2:B:1067:PRO:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1100:ARG:NH1	2:B:1234:GLU:O	2.46	0.49
2:B:2835:ARG:HG3	2:B:2836:ASP:N	2.28	0.49
2:B:2943:PHE:O	2:B:2947:SER:OG	2.22	0.49
2:B:4023:LEU:HD13	2:B:4066:LEU:HD21	1.95	0.49
2:C:892:LEU:HD21	2:C:1052:GLU:HB3	1.95	0.49
2:C:4726:MET:HE2	2:C:4726:MET:HA	1.94	0.49
2:A:2244:ALA:O	2:A:2248:MET:HB2	2.12	0.49
2:A:4248:LEU:HB3	2:B:4707:MET:CE	2.40	0.49
2:A:4732:GLY:HA2	2:A:4738:PHE:HB2	1.95	0.49
2:D:1421:MET:CE	2:D:1421:MET:HA	2.43	0.49
2:D:1732:GLU:O	2:D:1736:ILE:HG13	2.13	0.49
2:D:3019:ILE:HD13	2:D:3019:ILE:N	2.27	0.49
2:D:4271:VAL:O	2:D:4271:VAL:HG12	2.13	0.49
2:D:4630:TRP:CZ2	2:D:4708:TRP:HA	2.48	0.49
2:B:2789:ILE:HD11	2:B:2896:LEU:HD22	1.95	0.49
2:B:2852:TRP:HA	2:B:2855:LYS:HZ3	1.78	0.49
2:B:4271:VAL:O	2:B:4271:VAL:HG12	2.13	0.49
2:C:1421:MET:HA	2:C:1421:MET:CE	2.43	0.49
2:C:1436:GLN:HG2	2:C:1552:VAL:HG23	1.95	0.49
2:C:1685:LEU:HD22	2:C:1706:LEU:HB2	1.95	0.49
2:C:3019:ILE:HD13	2:C:3019:ILE:N	2.27	0.49
2:C:4035:TYR:CE1	2:C:4050:LYS:HG3	2.48	0.49
2:A:261:HIS:CD2	2:A:263:GLU:HG3	2.48	0.49
2:A:1421:MET:HA	2:A:1421:MET:CE	2.43	0.49
2:A:2202:TYR:O	2:A:2206:ILE:HG12	2.12	0.49
2:A:2844:MET:HA	2:A:2844:MET:HE3	1.95	0.49
2:A:3019:ILE:HD13	2:A:3019:ILE:N	2.27	0.49
2:A:3996:GLY:HA3	2:A:4109:MET:HE3	1.95	0.49
2:A:4155:SER:O	2:A:4159:GLN:HG2	2.13	0.49
2:D:3043:ARG:O	2:D:3047:LYS:HG2	2.13	0.49
2:D:3326:LEU:O	2:D:3330:ALA:N	2.45	0.49
2:D:3697:LYS:HA	2:D:3700:HIS:NE2	2.28	0.49
2:B:355:LYS:O	2:B:359:SER:OG	2.23	0.49
2:B:3178:HIS:CE1	2:B:3265:CYS:HA	2.46	0.49
2:C:23:GLN:HG2	2:C:34:LYS:HD2	1.95	0.49
2:C:946:LEU:CB	2:C:995:MET:HE1	2.43	0.49
2:C:963:LYS:HD2	2:C:979:ALA:HB3	1.94	0.49
2:C:1100:ARG:NH1	2:C:1234:GLU:O	2.46	0.49
2:C:1678:SER:HB2	2:C:1768:PHE:CE2	2.47	0.49
2:A:2277:CYS:HB3	2:A:2280:LEU:HB2	1.94	0.48
2:A:2698:GLU:O	2:A:2698:GLU:HG2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2789:ILE:HD11	2:A:2896:LEU:HD22	1.95	0.48
2:A:4941:TRP:NE1	2:A:4945:GLN:NE2	2.60	0.48
2:D:4035:TYR:CE1	2:D:4050:LYS:HG3	2.48	0.48
2:B:162:ILE:HG23	2:B:181:LEU:HD11	1.93	0.48
2:B:963:LYS:HD2	2:B:979:ALA:HB3	1.94	0.48
2:B:1433:PHE:HZ	2:B:1554:GLN:HE21	1.59	0.48
2:B:3043:ARG:O	2:B:3047:LYS:HG2	2.13	0.48
2:B:3121:LEU:HD23	2:B:3122:ILE:HG23	1.94	0.48
2:B:4155:SER:O	2:B:4159:GLN:HG2	2.13	0.48
2:C:248:PRO:HG3	2:C:261:HIS:HE1	1.78	0.48
2:C:1069:GLN:NE2	2:C:1070:ASP:O	2.46	0.48
2:C:1088:PHE:CE1	2:C:1207:LEU:HD12	2.48	0.48
2:C:1732:GLU:O	2:C:1736:ILE:HG13	2.13	0.48
2:C:3043:ARG:O	2:C:3047:LYS:HG2	2.13	0.48
2:C:3996:GLY:HA3	2:C:4109:MET:HE3	1.95	0.48
2:C:4253:LEU:HA	2:C:4256:MET:HG3	1.95	0.48
2:A:23:GLN:HG2	2:A:34:LYS:HD2	1.95	0.48
2:A:1088:PHE:CE1	2:A:1207:LEU:HD12	2.48	0.48
2:A:1240:ALA:HB2	2:A:1247:ILE:HD11	1.94	0.48
2:A:2068:ARG:NH1	2:A:2072:GLU:OE1	2.46	0.48
2:A:2488:LEU:HD21	2:A:2548:LEU:HD22	1.95	0.48
2:A:4271:VAL:HG12	2:A:4271:VAL:O	2.13	0.48
2:A:4707:MET:HE1	2:D:4249:ARG:N	2.28	0.48
2:D:644:LEU:HD13	2:D:1630:LEU:HD21	1.94	0.48
2:D:1069:GLN:NE2	2:D:1070:ASP:O	2.46	0.48
2:D:1088:PHE:CE1	2:D:1207:LEU:HD12	2.48	0.48
2:D:1306:MET:SD	2:D:1585:ARG:HD3	2.54	0.48
2:D:1968:PRO:O	2:D:1972:GLN:HG3	2.13	0.48
2:D:1979:PHE:HZ	2:D:1996:LEU:HB3	1.77	0.48
2:D:2844:MET:HA	2:D:2844:MET:CE	2.42	0.48
2:B:1019:GLY:HA3	2:B:1028:ARG:HB3	1.95	0.48
2:B:3034:HIS:O	2:B:3038:GLN:HG2	2.12	0.48
2:B:3853:ASP:OD1	2:B:3853:ASP:N	2.45	0.48
2:C:1685:LEU:O	2:C:1689:ILE:HG12	2.14	0.48
2:C:1758:ARG:HG3	2:C:1759:PRO:HD2	1.95	0.48
2:C:2835:ARG:HG3	2:C:2836:ASP:N	2.27	0.48
2:C:2844:MET:HA	2:C:2844:MET:HE3	1.94	0.48
2:C:2884:LYS:O	2:C:2887:GLU:HG3	2.13	0.48
2:A:849:ASP:OD1	2:A:1214:ARG:NE	2.46	0.48
2:A:1306:MET:SD	2:A:1585:ARG:HD3	2.54	0.48
2:A:3312:PRO:O	2:A:3316:LYS:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4046:ARG:O	2:A:4050:LYS:HG2	2.14	0.48
2:A:4588:ILE:HG12	2:D:4287:TYR:CD2	2.47	0.48
2:D:322:ALA:HB1	2:D:327:THR:HG21	1.94	0.48
2:D:2581:ARG:HG3	2:D:2582:PRO:HD2	1.94	0.48
2:D:4155:SER:O	2:D:4159:GLN:HG2	2.13	0.48
2:D:4732:GLY:HA2	2:D:4738:PHE:HB2	1.95	0.48
2:B:219:SER:OG	2:B:349:MET:SD	2.64	0.48
2:B:1436:GLN:HG2	2:B:1552:VAL:HG23	1.95	0.48
2:B:2277:CYS:HB3	2:B:2280:LEU:HB2	1.94	0.48
2:B:4035:TYR:CE1	2:B:4050:LYS:HG3	2.48	0.48
2:B:4199:GLU:HB3	2:B:4597:LEU:HD13	1.96	0.48
2:C:947:GLY:HA3	2:C:1067:PRO:HD3	1.94	0.48
2:C:2581:ARG:HG3	2:C:2582:PRO:HD2	1.94	0.48
2:C:2693:SER:HB2	2:C:2704:GLN:HB2	1.95	0.48
2:C:2698:GLU:O	2:C:2698:GLU:HG2	2.12	0.48
2:A:1100:ARG:NH1	2:A:1234:GLU:O	2.46	0.48
2:A:1685:LEU:HD22	2:A:1706:LEU:HB2	1.95	0.48
2:A:2539:GLU:HA	2:A:2584:MET:HE1	1.96	0.48
2:A:3266:THR:OG1	2:A:3268:LEU:HG	2.14	0.48
2:D:849:ASP:OD1	2:D:1214:ARG:NE	2.46	0.48
2:B:1088:PHE:CE1	2:B:1207:LEU:HD12	2.48	0.48
2:B:1443:VAL:HG13	2:B:1543:VAL:HG22	1.94	0.48
2:B:3266:THR:OG1	2:B:3268:LEU:HG	2.14	0.48
2:C:4199:GLU:HB3	2:C:4597:LEU:HD13	1.96	0.48
2:A:1069:GLN:NE2	2:A:1070:ASP:O	2.46	0.48
2:A:1685:LEU:O	2:A:1689:ILE:HG12	2.14	0.48
2:A:1732:GLU:O	2:A:1736:ILE:HG13	2.13	0.48
2:A:4170:ARG:NH1	4:A:5002:ATP:O3G	2.46	0.48
2:A:4587:ILE:HD13	2:A:4722:LEU:HB3	1.95	0.48
2:D:1109:THR:O	2:D:1113:MET:HE1	2.13	0.48
2:D:2651:ALA:O	2:D:2655:LYS:HB2	2.13	0.48
2:B:4732:GLY:HA2	2:B:4738:PHE:HB2	1.95	0.48
2:C:261:HIS:CD2	2:C:263:GLU:HG3	2.48	0.48
2:C:1685:LEU:HB3	2:C:1706:LEU:HD12	1.94	0.48
2:C:1850:VAL:HG21	2:C:2061:LEU:HD13	1.96	0.48
2:C:2202:TYR:O	2:C:2206:ILE:HG12	2.12	0.48
2:C:4045:LYS:NZ	2:C:4071:GLU:O	2.40	0.48
2:C:4732:GLY:HA2	2:C:4738:PHE:HB2	1.95	0.48
2:A:2701:PHE:CE2	2:A:2703:PRO:HG3	2.48	0.48
2:A:4726:MET:HB3	2:D:4291:PHE:CE1	2.47	0.48
2:D:23:GLN:HG2	2:D:34:LYS:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4170:ARG:NH1	4:D:5002:ATP:O3G	2.46	0.48
2:D:4253:LEU:HA	2:D:4256:MET:HG3	1.95	0.48
2:D:4905:PHE:O	2:D:4909:THR:HG23	2.14	0.48
2:B:1240:ALA:HB2	2:B:1247:ILE:HD11	1.94	0.48
2:B:1685:LEU:O	2:B:1689:ILE:HG12	2.14	0.48
2:B:1685:LEU:HB3	2:B:1706:LEU:HD12	1.94	0.48
2:B:2488:LEU:HD21	2:B:2548:LEU:HD22	1.95	0.48
2:B:3246:MET:HA	2:B:3246:MET:CE	2.41	0.48
2:B:4046:ARG:O	2:B:4050:LYS:HG2	2.13	0.48
2:C:1427:TYR:HB2	2:C:1563:VAL:HG11	1.95	0.48
2:C:2701:PHE:CE2	2:C:2703:PRO:HG3	2.48	0.48
2:C:4630:TRP:CZ2	2:C:4708:TRP:HA	2.48	0.48
2:C:4775:ALA:HA	2:C:4817:MET:HE2	1.95	0.48
2:A:322:ALA:HB1	2:A:327:THR:HG21	1.94	0.48
2:A:1685:LEU:HB3	2:A:1706:LEU:HD12	1.95	0.48
2:A:2884:LYS:O	2:A:2887:GLU:HG3	2.13	0.48
2:A:4023:LEU:HD13	2:A:4066:LEU:HD21	1.95	0.48
2:D:1308:ILE:HD13	2:D:1445:TRP:CZ3	2.42	0.48
2:D:2202:TYR:O	2:D:2206:ILE:HG12	2.12	0.48
2:D:2693:SER:HB2	2:D:2704:GLN:HB2	1.95	0.48
2:D:2698:GLU:O	2:D:2698:GLU:HG2	2.12	0.48
2:B:946:LEU:CB	2:B:995:MET:HE1	2.43	0.48
2:C:4046:ARG:O	2:C:4050:LYS:HG2	2.14	0.48
2:A:1968:PRO:O	2:A:1972:GLN:HG3	2.13	0.48
2:A:3043:ARG:O	2:A:3047:LYS:HG2	2.13	0.48
2:A:3650:GLU:HB2	2:A:3651:PRO:HD3	1.96	0.48
2:A:4199:GLU:HB3	2:A:4597:LEU:HD13	1.96	0.48
2:A:4905:PHE:O	2:A:4909:THR:HG23	2.14	0.48
2:D:1850:VAL:HG21	2:D:2061:LEU:HD13	1.96	0.48
2:D:3187:LYS:O	2:D:3188:SER:OG	2.23	0.48
2:D:4046:ARG:O	2:D:4050:LYS:HG2	2.14	0.48
2:B:1306:MET:SD	2:B:1585:ARG:HD3	2.54	0.48
2:B:1758:ARG:HG3	2:B:1759:PRO:HD2	1.95	0.48
2:B:2651:ALA:O	2:B:2655:LYS:HB2	2.13	0.48
2:B:2698:GLU:HG2	2:B:2698:GLU:O	2.12	0.48
2:C:1838:ASP:O	2:C:1842:ILE:HG12	2.12	0.48
2:C:2651:ALA:O	2:C:2655:LYS:HB2	2.13	0.48
2:C:3266:THR:OG1	2:C:3268:LEU:HG	2.14	0.48
2:C:3832:ASP:HB2	2:C:3835:PHE:HB3	1.95	0.48
2:D:428:ARG:NH2	2:D:446:ASP:OD2	2.45	0.48
2:D:1454:ASP:OD1	2:D:1455:THR:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1685:LEU:HD22	2:D:1706:LEU:HB2	1.95	0.48
2:D:2831:VAL:O	2:D:2894:LYS:NZ	2.41	0.48
2:B:3312:PRO:O	2:B:3316:LYS:HG2	2.14	0.48
2:B:3832:ASP:HB2	2:B:3835:PHE:HB3	1.95	0.48
2:C:2488:LEU:HD21	2:C:2548:LEU:HD22	1.95	0.48
2:C:3121:LEU:HD23	2:C:3122:ILE:HG23	1.94	0.48
2:C:4271:VAL:O	2:C:4271:VAL:HG12	2.13	0.48
2:C:4587:ILE:HD13	2:C:4722:LEU:HB3	1.95	0.48
2:C:4752:THR:HA	2:C:4874:ARG:HH22	1.78	0.48
2:A:1438:PRO:HG2	2:A:1494:MET:SD	2.54	0.48
2:A:1443:VAL:HG13	2:A:1543:VAL:HG22	1.94	0.48
2:D:593:HIS:O	2:D:597:ILE:HG13	2.14	0.48
2:D:3121:LEU:HD23	2:D:3122:ILE:HG23	1.95	0.48
2:D:3312:PRO:O	2:D:3316:LYS:HG2	2.14	0.48
2:D:3650:GLU:HB2	2:D:3651:PRO:HD3	1.96	0.48
2:D:4752:THR:HA	2:D:4874:ARG:HH22	1.78	0.48
2:B:1732:GLU:O	2:B:1736:ILE:HG13	2.13	0.48
2:B:2693:SER:HB2	2:B:2704:GLN:HB2	1.95	0.48
2:B:2723:LYS:HD3	2:B:2899:ASN:HD21	1.79	0.48
2:B:3070:LYS:HZ3	2:B:3093:ILE:HG13	1.78	0.48
2:B:4045:LYS:NZ	2:B:4071:GLU:O	2.40	0.48
2:C:1306:MET:SD	2:C:1585:ARG:HD3	2.54	0.48
2:C:4495:PHE:CE1	2:C:4502:MET:HE1	2.49	0.48
2:A:503:ASP:O	2:A:507:VAL:HG13	2.14	0.47
2:A:1435:GLY:HA3	2:D:2830:ASN:HB3	1.95	0.47
2:A:2723:LYS:HD3	2:A:2899:ASN:HD21	1.79	0.47
2:D:4199:GLU:HB3	2:D:4597:LEU:HD13	1.96	0.47
2:D:4941:TRP:NE1	2:D:4945:GLN:NE2	2.60	0.47
2:B:2068:ARG:NH1	2:B:2072:GLU:OE1	2.46	0.47
2:B:4166:LYS:NZ	4:B:5002:ATP:O1G	2.47	0.47
2:B:4587:ILE:HD13	2:B:4722:LEU:HB3	1.95	0.47
2:C:1109:THR:O	2:C:1113:MET:HE1	2.13	0.47
2:C:2852:TRP:HA	2:C:2855:LYS:HZ2	1.79	0.47
2:C:4155:SER:O	2:C:4159:GLN:HG2	2.13	0.47
2:C:4170:ARG:NH1	4:C:5002:ATP:O3G	2.46	0.47
2:A:1113:MET:HB2	2:A:1156:TRP:HZ2	1.79	0.47
2:A:2831:VAL:O	2:A:2894:LYS:NZ	2.41	0.47
2:A:3939:ARG:HH12	2:B:173:GLU:HG2	1.78	0.47
2:A:4726:MET:HG3	2:D:4291:PHE:CD1	2.49	0.47
2:D:946:LEU:CB	2:D:995:MET:HE1	2.44	0.47
2:D:1685:LEU:O	2:D:1689:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2701:PHE:CE2	2:D:2703:PRO:HG3	2.48	0.47
2:D:3214:LEU:O	2:D:3218:ILE:HG12	2.15	0.47
2:D:4775:ALA:HA	2:D:4817:MET:HE2	1.97	0.47
2:B:503:ASP:O	2:B:507:VAL:HG13	2.14	0.47
2:B:2701:PHE:CE2	2:B:2703:PRO:HG3	2.48	0.47
2:B:2769:GLU:HA	2:B:2772:ARG:HB2	1.95	0.47
2:B:3650:GLU:HB2	2:B:3651:PRO:HD3	1.96	0.47
2:B:3939:ARG:NH1	2:C:173:GLU:HG2	2.28	0.47
2:B:4941:TRP:NE1	2:B:4945:GLN:NE2	2.60	0.47
2:C:3650:GLU:HB2	2:C:3651:PRO:HD3	1.96	0.47
2:A:2593:VAL:HA	2:A:2644:LEU:HD13	1.96	0.47
2:A:4752:THR:HA	2:A:4874:ARG:HH22	1.78	0.47
2:D:1436:GLN:HG2	2:D:1552:VAL:HG23	1.95	0.47
2:D:2723:LYS:HD3	2:D:2899:ASN:ND2	2.29	0.47
2:D:3266:THR:OG1	2:D:3268:LEU:HG	2.14	0.47
2:B:593:HIS:O	2:B:597:ILE:HG13	2.14	0.47
2:B:1253:LYS:HB2	2:B:1253:LYS:HE2	1.68	0.47
2:B:2290:TRP:CZ2	2:B:2388:ILE:HG12	2.50	0.47
2:B:2918:GLU:HA	2:B:2923:TYR:CD2	2.49	0.47
2:B:3000:GLU:HA	2:B:3003:MET:HE2	1.95	0.47
2:B:3062:ASP:OD1	2:B:3129:SER:OG	2.19	0.47
2:C:1438:PRO:HG2	2:C:1494:MET:SD	2.54	0.47
2:C:4023:LEU:HD13	2:C:4066:LEU:HD21	1.95	0.47
2:C:4905:PHE:O	2:C:4909:THR:HG23	2.14	0.47
2:A:1004:HIS:NE2	2:A:1033:VAL:O	2.36	0.47
2:A:2723:LYS:HD3	2:A:2899:ASN:ND2	2.29	0.47
2:A:3121:LEU:HD23	2:A:3122:ILE:HG23	1.94	0.47
1:F:88:HIS:NE2	2:B:1776:TYR:OH	2.38	0.47
2:D:1100:ARG:NH1	2:D:1234:GLU:O	2.46	0.47
2:D:3780:TYR:O	2:D:3784:LYS:HG2	2.14	0.47
2:B:705:PRO:HD3	2:B:857:LEU:HG	1.97	0.47
2:B:2114:GLU:OE1	2:B:2114:GLU:N	2.37	0.47
2:B:2539:GLU:HA	2:B:2584:MET:HE1	1.97	0.47
2:C:1225:LYS:HB3	2:C:1226:TYR:HD1	1.79	0.47
2:C:2723:LYS:HD3	2:C:2899:ASN:ND2	2.29	0.47
2:C:3070:LYS:HA	2:C:3073:GLU:HG3	1.96	0.47
2:A:189:GLU:O	2:D:2326:ARG:NH1	2.48	0.47
2:A:1758:ARG:HG3	2:A:1759:PRO:HD2	1.95	0.47
2:A:3794:ALA:HB2	2:A:3868:VAL:HG11	1.96	0.47
2:A:4166:LYS:NZ	4:A:5002:ATP:O1G	2.47	0.47
2:D:1225:LYS:HB3	2:D:1226:TYR:HD1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2488:LEU:HD21	2:D:2548:LEU:HD22	1.95	0.47
2:D:2593:VAL:HA	2:D:2644:LEU:HD13	1.96	0.47
2:D:2918:GLU:HA	2:D:2923:TYR:CD2	2.49	0.47
2:D:4587:ILE:HD13	2:D:4722:LEU:HB3	1.95	0.47
2:D:4620:GLN:OE1	2:D:4632:ARG:NH2	2.43	0.47
2:B:23:GLN:HG2	2:B:34:LYS:HD2	1.95	0.47
2:B:1438:PRO:HG2	2:B:1494:MET:SD	2.54	0.47
2:B:3269:ASN:HB2	2:B:3272:HIS:HB2	1.96	0.47
2:B:4905:PHE:O	2:B:4909:THR:HG23	2.14	0.47
2:C:4275:THR:HG22	2:C:4278:ASP:H	1.80	0.47
2:A:487:ASN:O	2:A:491:GLU:HG2	2.15	0.47
2:A:1118:SER:HB2	2:A:1204:VAL:HG11	1.97	0.47
2:A:2622:CYS:HA	2:A:2677:PRO:HG3	1.97	0.47
2:A:2833:LEU:HD22	2:A:2837:LEU:HD23	1.97	0.47
2:A:4035:TYR:CE1	2:A:4050:LYS:HG3	2.48	0.47
2:D:2068:ARG:NH1	2:D:2072:GLU:OE1	2.46	0.47
2:D:2290:TRP:CZ2	2:D:2388:ILE:HG12	2.49	0.47
2:D:2465:LYS:NZ	2:D:2495:ASP:OD2	2.37	0.47
2:D:3832:ASP:HB2	2:D:3835:PHE:HB3	1.95	0.47
2:B:1850:VAL:HG21	2:B:2061:LEU:HD13	1.96	0.47
2:B:1991:GLU:OE1	2:B:1991:GLU:N	2.31	0.47
2:B:2831:VAL:O	2:B:2894:LYS:NZ	2.41	0.47
2:C:503:ASP:O	2:C:507:VAL:HG13	2.14	0.47
2:C:1308:ILE:HD13	2:C:1445:TRP:CZ3	2.41	0.47
2:C:1991:GLU:OE1	2:C:1991:GLU:N	2.32	0.47
2:C:2769:GLU:HA	2:C:2772:ARG:HB2	1.95	0.47
2:C:3178:HIS:CE1	2:C:3265:CYS:HA	2.46	0.47
1:H:8:ILE:HG23	2:D:748:LEU:HB2	1.95	0.47
2:A:537:LEU:O	2:A:541:ILE:HG12	2.14	0.47
2:A:624:ALA:HB2	2:A:1667:LEU:HD12	1.97	0.47
2:A:629:GLN:OE1	2:A:1669:ASN:ND2	2.35	0.47
2:A:705:PRO:HD3	2:A:857:LEU:HG	1.97	0.47
2:A:1113:MET:HB2	2:A:1156:TRP:CZ2	2.50	0.47
2:A:1436:GLN:HG2	2:A:1552:VAL:HG23	1.95	0.47
2:A:2693:SER:HB2	2:A:2704:GLN:HB2	1.95	0.47
2:A:2779:LEU:HD21	2:A:2892:ILE:HD11	1.97	0.47
2:A:3035:ILE:O	2:A:3039:THR:HG23	2.15	0.47
2:A:3070:LYS:HA	2:A:3073:GLU:HG3	1.96	0.47
2:A:3214:LEU:O	2:A:3218:ILE:HG12	2.15	0.47
2:A:3832:ASP:HB2	2:A:3835:PHE:HB3	1.95	0.47
2:A:4275:THR:HG22	2:A:4278:ASP:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:487:ASN:O	2:D:491:GLU:HG2	2.15	0.47
2:D:1113:MET:HB2	2:D:1156:TRP:HZ2	1.79	0.47
2:D:1438:PRO:HG2	2:D:1494:MET:SD	2.54	0.47
2:D:1502:ASN:HB3	2:C:2824:ARG:HD3	1.97	0.47
2:D:2114:GLU:OE1	2:D:2114:GLU:N	2.37	0.47
2:D:2854:LYS:O	2:D:2858:MET:HG2	2.15	0.47
2:D:4495:PHE:CE1	2:D:4502:MET:HE1	2.50	0.47
2:B:1118:SER:HB2	2:B:1204:VAL:HG11	1.97	0.47
2:B:1144:ARG:HB3	2:B:1152:TYR:CD2	2.50	0.47
2:B:2174:VAL:O	2:B:2178:VAL:HG23	2.15	0.47
2:B:3288:LEU:HD22	2:B:3329:LYS:HB3	1.97	0.47
2:B:4275:THR:HG22	2:B:4278:ASP:H	1.80	0.47
2:C:355:LYS:O	2:C:359:SER:OG	2.23	0.47
2:C:487:ASN:O	2:C:491:GLU:HG2	2.15	0.47
2:C:674:TYR:CE1	2:C:756:SER:HB2	2.50	0.47
2:C:1113:MET:HB2	2:C:1156:TRP:CZ2	2.50	0.47
2:C:1454:ASP:OD1	2:C:1455:THR:N	2.47	0.47
2:C:1498:GLN:O	2:C:1500:ARG:HD3	2.15	0.47
2:C:2290:TRP:CZ2	2:C:2388:ILE:HG12	2.50	0.47
2:C:2593:VAL:HA	2:C:2644:LEU:HD13	1.96	0.47
2:C:2723:LYS:HD3	2:C:2899:ASN:HD21	1.79	0.47
2:C:3312:PRO:O	2:C:3316:LYS:HG2	2.14	0.47
2:A:1694:MET:HE2	2:A:1694:MET:HB2	1.66	0.47
2:A:3780:TYR:O	2:A:3784:LYS:HG2	2.14	0.47
2:A:4196:THR:O	2:A:4200:MET:HG3	2.15	0.47
2:A:4647:LYS:HE3	2:A:4647:LYS:HB3	1.54	0.47
2:B:674:TYR:CE1	2:B:756:SER:HB2	2.50	0.47
2:B:967:PRO:HD2	2:B:970:TYR:HB2	1.97	0.47
2:B:1113:MET:HB2	2:B:1156:TRP:CZ2	2.50	0.47
2:B:2593:VAL:HA	2:B:2644:LEU:HD13	1.96	0.47
2:B:4752:THR:HA	2:B:4874:ARG:HH22	1.78	0.47
2:C:537:LEU:O	2:C:541:ILE:HG12	2.14	0.47
2:C:2968:LEU:HB2	2:C:2969:PRO:HD3	1.97	0.47
2:A:1498:GLN:O	2:A:1500:ARG:HD3	2.15	0.47
2:A:2607:LEU:HD21	2:A:2665:ALA:HA	1.97	0.47
2:A:4182:GLU:OE2	2:D:4903:HIS:HA	2.15	0.47
2:D:503:ASP:O	2:D:507:VAL:HG13	2.14	0.47
2:D:2607:LEU:HD21	2:D:2665:ALA:HA	1.97	0.47
2:D:2723:LYS:HD3	2:D:2899:ASN:HD21	1.79	0.47
2:D:2833:LEU:HD22	2:D:2837:LEU:HD23	1.97	0.47
2:D:4245:LEU:HG	2:D:4249:ARG:HE	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1113:MET:HB2	2:B:1156:TRP:HZ2	1.80	0.47
2:B:1829:LEU:HG	2:B:1912:TYR:CE2	2.50	0.47
2:B:2884:LYS:O	2:B:2887:GLU:HG3	2.13	0.47
2:B:3214:LEU:O	2:B:3218:ILE:HG12	2.15	0.47
2:C:503:ASP:OD1	2:C:561:ARG:NH2	2.47	0.47
2:C:3214:LEU:O	2:C:3218:ILE:HG12	2.15	0.47
2:C:3780:TYR:O	2:C:3784:LYS:HG2	2.14	0.47
2:C:4166:LYS:NZ	4:C:5002:ATP:O1G	2.47	0.47
2:A:1144:ARG:HB3	2:A:1152:TYR:CD2	2.50	0.47
2:A:4245:LEU:HG	2:A:4249:ARG:HE	1.80	0.47
2:D:537:LEU:O	2:D:541:ILE:HG12	2.14	0.47
2:D:2779:LEU:HD21	2:D:2892:ILE:HD11	1.97	0.47
2:D:3070:LYS:HA	2:D:3073:GLU:HG3	1.96	0.47
2:D:3074:ASN:HA	2:D:3077:GLN:HG3	1.97	0.47
2:D:3269:ASN:HB2	2:D:3272:HIS:HB2	1.96	0.47
2:D:4726:MET:HE2	2:D:4726:MET:HA	1.97	0.47
2:B:428:ARG:NH2	2:B:446:ASP:OD2	2.45	0.47
2:C:2918:GLU:HA	2:C:2923:TYR:CD2	2.49	0.47
2:A:355:LYS:O	2:A:359:SER:OG	2.23	0.46
2:A:503:ASP:OD1	2:A:561:ARG:NH2	2.47	0.46
2:A:593:HIS:O	2:A:597:ILE:HG13	2.14	0.46
2:A:674:TYR:CE1	2:A:756:SER:HB2	2.50	0.46
2:A:2968:LEU:HB2	2:A:2969:PRO:HD3	1.97	0.46
2:A:3288:LEU:HD22	2:A:3329:LYS:HB3	1.97	0.46
2:A:4640:PHE:CG	2:A:4641:PRO:HD3	2.50	0.46
2:D:674:TYR:CE1	2:D:756:SER:HB2	2.50	0.46
2:D:4640:PHE:CG	2:D:4641:PRO:HD3	2.50	0.46
2:B:487:ASN:O	2:B:491:GLU:HG2	2.15	0.46
2:B:624:ALA:HB2	2:B:1667:LEU:HD12	1.97	0.46
2:B:866:PRO:HA	2:B:1009:ARG:NH1	2.31	0.46
2:B:1498:GLN:O	2:B:1500:ARG:HD3	2.15	0.46
2:B:2622:CYS:HA	2:B:2677:PRO:HG3	1.97	0.46
2:B:2723:LYS:HD3	2:B:2899:ASN:ND2	2.29	0.46
2:B:4196:THR:O	2:B:4200:MET:HG3	2.15	0.46
2:C:705:PRO:HD3	2:C:857:LEU:HG	1.97	0.46
2:C:2854:LYS:O	2:C:2858:MET:HG2	2.15	0.46
2:C:2883:ALA:HA	2:C:2886:ARG:NE	2.29	0.46
2:C:3016:ARG:NH2	2:C:3067:ASP:OD1	2.48	0.46
2:C:3035:ILE:O	2:C:3039:THR:HG23	2.15	0.46
2:A:1454:ASP:OD1	2:A:1455:THR:N	2.47	0.46
2:A:1850:VAL:HG21	2:A:2061:LEU:HD13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2290:TRP:CZ2	2:A:2388:ILE:HG12	2.50	0.46
2:A:3755:VAL:HG12	2:A:3835:PHE:HE1	1.81	0.46
2:D:2622:CYS:HA	2:D:2677:PRO:HG3	1.97	0.46
2:D:3755:VAL:HG12	2:D:3835:PHE:HE1	1.81	0.46
2:D:4276:VAL:O	2:D:4280:VAL:HG13	2.16	0.46
2:B:1225:LYS:HB3	2:B:1226:TYR:HD1	1.79	0.46
2:B:2854:LYS:O	2:B:2858:MET:HG2	2.15	0.46
2:B:2883:ALA:HA	2:B:2886:ARG:NE	2.29	0.46
2:B:3319:PHE:O	2:B:3323:MET:N	2.40	0.46
2:C:1118:SER:HB2	2:C:1204:VAL:HG11	1.97	0.46
2:C:2174:VAL:O	2:C:2178:VAL:HG23	2.15	0.46
2:C:3269:ASN:HB2	2:C:3272:HIS:HB2	1.96	0.46
2:C:3288:LEU:HD22	2:C:3329:LYS:HB3	1.97	0.46
2:C:4245:LEU:HG	2:C:4249:ARG:HE	1.80	0.46
2:C:4640:PHE:CG	2:C:4641:PRO:HD3	2.50	0.46
2:A:2854:LYS:O	2:A:2858:MET:HG2	2.15	0.46
2:A:2883:ALA:HA	2:A:2886:ARG:NE	2.29	0.46
2:D:1113:MET:HB2	2:D:1156:TRP:CZ2	2.50	0.46
2:D:1498:GLN:O	2:D:1500:ARG:HD3	2.15	0.46
2:D:3035:ILE:O	2:D:3039:THR:HG23	2.15	0.46
2:D:4275:THR:HG22	2:D:4278:ASP:H	1.80	0.46
2:B:2833:LEU:HD22	2:B:2837:LEU:HD23	1.96	0.46
2:B:3794:ALA:HB2	2:B:3868:VAL:HG11	1.96	0.46
2:C:593:HIS:O	2:C:597:ILE:HG13	2.14	0.46
2:C:1113:MET:HB2	2:C:1156:TRP:HZ2	1.80	0.46
2:A:866:PRO:HA	2:A:1009:ARG:NH1	2.31	0.46
2:A:4276:VAL:O	2:A:4280:VAL:HG13	2.16	0.46
2:D:1118:SER:HB2	2:D:1204:VAL:HG11	1.97	0.46
2:D:2319:VAL:O	2:D:2323:LEU:HG	2.16	0.46
2:D:2883:ALA:HA	2:D:2886:ARG:NE	2.29	0.46
2:B:3035:ILE:O	2:B:3039:THR:HG23	2.15	0.46
2:B:3037:GLY:HA2	2:B:3040:LEU:HG	1.98	0.46
2:B:4640:PHE:CG	2:B:4641:PRO:HD3	2.50	0.46
2:C:1144:ARG:HB3	2:C:1152:TYR:CD2	2.50	0.46
2:C:1605:LYS:HD3	2:C:1605:LYS:HA	1.75	0.46
2:C:1829:LEU:HG	2:C:1912:TYR:CE2	2.50	0.46
2:C:3794:ALA:HB2	2:C:3868:VAL:HG11	1.96	0.46
2:C:4196:THR:O	2:C:4200:MET:HG3	2.15	0.46
2:A:237:LEU:HD23	2:A:244:CYS:HB2	1.98	0.46
2:A:475:LYS:HB3	2:A:475:LYS:HE3	1.76	0.46
2:A:1225:LYS:HB3	2:A:1226:TYR:HD1	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1829:LEU:HG	2:A:1912:TYR:CE2	2.50	0.46
2:A:2918:GLU:HA	2:A:2923:TYR:CD2	2.49	0.46
2:A:3016:ARG:NH2	2:A:3067:ASP:OD1	2.48	0.46
2:A:3269:ASN:HB2	2:A:3272:HIS:HB2	1.96	0.46
2:A:4061:SER:O	2:A:4064:GLU:HG3	2.16	0.46
1:F:23:CYS:HA	1:F:107:LEU:HD23	1.98	0.46
2:D:967:PRO:HD2	2:D:970:TYR:HB2	1.97	0.46
2:D:1502:ASN:CB	2:C:2824:ARG:HD3	2.46	0.46
2:D:2174:VAL:O	2:D:2178:VAL:HG23	2.15	0.46
2:B:237:LEU:HD23	2:B:244:CYS:HB2	1.98	0.46
2:B:4248:LEU:HD13	2:C:4630:TRP:CH2	2.51	0.46
2:C:15:ARG:HB3	2:C:18:ASP:CG	2.36	0.46
2:C:668:ALA:HB2	2:C:1012:ILE:HD11	1.98	0.46
2:C:967:PRO:HD2	2:C:970:TYR:HB2	1.97	0.46
2:A:245:LEU:HD11	2:A:260:VAL:HG12	1.98	0.46
2:A:1691:ASN:HB3	2:A:1694:MET:HE2	1.96	0.46
2:D:15:ARG:HB3	2:D:18:ASP:CG	2.36	0.46
2:D:245:LEU:HD11	2:D:260:VAL:HG12	1.98	0.46
2:D:3311:LYS:HB3	2:D:3314:LEU:HB3	1.98	0.46
2:D:3794:ALA:HB2	2:D:3868:VAL:HG11	1.96	0.46
2:D:4009:ASN:OD1	2:D:4009:ASN:N	2.48	0.46
2:D:4196:THR:O	2:D:4200:MET:HG3	2.15	0.46
2:B:1109:THR:O	2:B:1113:MET:HE1	2.16	0.46
2:B:1454:ASP:OD1	2:B:1455:THR:N	2.47	0.46
2:B:3780:TYR:O	2:B:3784:LYS:HG2	2.14	0.46
2:B:4245:LEU:HG	2:B:4249:ARG:HE	1.80	0.46
2:C:3037:GLY:HA2	2:C:3040:LEU:HG	1.98	0.46
2:A:967:PRO:HD2	2:A:970:TYR:HB2	1.97	0.46
2:A:2384:MET:HA	2:A:2384:MET:CE	2.46	0.46
2:A:3074:ASN:HA	2:A:3077:GLN:HG3	1.97	0.46
2:D:705:PRO:HD3	2:D:857:LEU:HG	1.97	0.46
2:D:1829:LEU:HG	2:D:1912:TYR:CE2	2.50	0.46
2:D:2696:ASP:O	2:D:2700:ASN:HA	2.16	0.46
2:B:15:ARG:HB3	2:B:18:ASP:CG	2.36	0.46
2:B:537:LEU:O	2:B:541:ILE:HG12	2.14	0.46
2:B:2384:MET:HA	2:B:2384:MET:CE	2.46	0.46
2:B:2696:ASP:O	2:B:2700:ASN:HA	2.16	0.46
2:B:4170:ARG:NH1	4:B:5002:ATP:O3G	2.46	0.46
2:C:2384:MET:HA	2:C:2384:MET:CE	2.46	0.46
2:C:2696:ASP:O	2:C:2700:ASN:HA	2.16	0.46
2:C:4276:VAL:O	2:C:4280:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:28:ILE:HG22	2:A:29:HIS:CE1	2.51	0.46
2:A:2174:VAL:O	2:A:2178:VAL:HG23	2.15	0.46
2:A:4203:ALA:HA	2:A:4206:ILE:HG12	1.97	0.46
2:A:4639:SER:O	2:A:4639:SER:OG	2.33	0.46
2:D:1253:LYS:HB2	2:D:1253:LYS:HE2	1.68	0.46
2:D:1605:LYS:HA	2:D:1605:LYS:HD3	1.75	0.46
2:D:2384:MET:HA	2:D:2384:MET:CE	2.46	0.46
2:D:2488:LEU:HD12	2:D:2492:PHE:HB2	1.98	0.46
2:D:3217:GLU:O	2:D:3221:LEU:HG	2.16	0.46
2:D:4166:LYS:O	2:D:4170:ARG:HG2	2.16	0.46
2:B:1308:ILE:HD13	2:B:1445:TRP:CZ3	2.42	0.46
2:B:2779:LEU:HD21	2:B:2892:ILE:HD11	1.97	0.46
2:B:3269:ASN:O	2:B:3273:MET:HG2	2.16	0.46
2:C:2622:CYS:HA	2:C:2677:PRO:HG3	1.97	0.46
2:C:2779:LEU:HD21	2:C:2892:ILE:HD11	1.97	0.46
2:C:2833:LEU:HD22	2:C:2837:LEU:HD23	1.97	0.46
1:H:91:VAL:HG21	2:D:1768:PHE:CE1	2.51	0.46
2:A:2175:MET:O	2:A:2179:LEU:HG	2.16	0.46
2:A:2245:ALA:HA	2:A:2248:MET:HE3	1.97	0.46
2:A:2319:VAL:O	2:A:2323:LEU:HG	2.16	0.46
1:E:23:CYS:HA	1:E:107:LEU:HD23	1.98	0.46
2:B:28:ILE:HG22	2:B:29:HIS:CE1	2.51	0.46
2:B:1840:LYS:O	2:B:1844:GLN:HG2	2.16	0.46
2:B:1896:MET:O	2:B:1896:MET:HG2	2.16	0.46
2:B:2968:LEU:HB2	2:B:2969:PRO:HD3	1.97	0.46
2:B:3070:LYS:HA	2:B:3073:GLU:HG3	1.96	0.46
2:B:4061:SER:O	2:B:4064:GLU:HG3	2.16	0.46
2:B:4203:ALA:HA	2:B:4206:ILE:HG12	1.97	0.46
2:B:4276:VAL:O	2:B:4280:VAL:HG13	2.16	0.46
2:B:4918:TYR:HD2	2:B:4952:PHE:HE1	1.63	0.46
2:C:3269:ASN:O	2:C:3273:MET:HG2	2.16	0.46
2:A:428:ARG:NH2	2:A:446:ASP:OD2	2.45	0.46
2:D:3037:GLY:HA2	2:D:3040:LEU:HG	1.98	0.46
2:D:3288:LEU:HD22	2:D:3329:LYS:HB3	1.97	0.46
2:B:4009:ASN:OD1	2:B:4009:ASN:N	2.49	0.46
2:B:4597:LEU:HG	2:B:4601:LYS:HZ2	1.80	0.46
2:C:3755:VAL:HG12	2:C:3835:PHE:HE1	1.81	0.46
2:C:4203:ALA:HA	2:C:4206:ILE:HG12	1.97	0.46
2:C:4593:LEU:HG	2:C:4594:LYS:HE3	1.98	0.46
2:A:139:SER:O	2:A:141:ASP:N	2.49	0.45
2:A:890:HIS:CD2	2:A:921:PHE:HB3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3037:GLY:HA2	2:A:3040:LEU:HG	1.98	0.45
2:D:866:PRO:HA	2:D:1009:ARG:NH1	2.31	0.45
2:D:1785:ASP:OD1	2:D:1786:ILE:N	2.49	0.45
2:D:1840:LYS:O	2:D:1844:GLN:HG2	2.16	0.45
2:D:2175:MET:O	2:D:2179:LEU:HG	2.16	0.45
2:B:1918:VAL:O	2:B:1922:ILE:HG12	2.16	0.45
2:B:4058:TYR:HD1	2:B:4062:GLU:HB3	1.81	0.45
2:B:4079:ASP:O	2:B:4082:GLU:HG3	2.16	0.45
2:C:28:ILE:HG22	2:C:29:HIS:CE1	2.51	0.45
2:C:237:LEU:HD23	2:C:244:CYS:HB2	1.98	0.45
2:C:1785:ASP:OD1	2:C:1786:ILE:N	2.49	0.45
2:C:1840:LYS:O	2:C:1844:GLN:HG2	2.16	0.45
2:C:2319:VAL:O	2:C:2323:LEU:HG	2.16	0.45
2:A:4707:MET:HE1	2:D:4249:ARG:HG2	1.98	0.45
2:D:503:ASP:OD1	2:D:561:ARG:NH2	2.47	0.45
2:D:624:ALA:HB2	2:D:1667:LEU:HD12	1.97	0.45
2:D:766:ILE:HB	2:D:779:PHE:HB2	1.98	0.45
2:D:3016:ARG:NH2	2:D:3067:ASP:OD1	2.48	0.45
2:D:3269:ASN:O	2:D:3273:MET:HG2	2.16	0.45
2:D:4058:TYR:HD1	2:D:4062:GLU:HB3	1.81	0.45
2:D:4061:SER:O	2:D:4064:GLU:HG3	2.16	0.45
2:D:4593:LEU:HG	2:D:4594:LYS:HE3	1.99	0.45
2:B:218:SER:HB3	2:B:286:GLY:HA3	1.97	0.45
2:B:2607:LEU:HD21	2:B:2665:ALA:HA	1.97	0.45
2:B:2939:TYR:HB3	2:B:2956:TYR:CE2	2.51	0.45
2:B:3755:VAL:HG12	2:B:3835:PHE:HE1	1.81	0.45
2:C:181:LEU:N	2:C:212:TRP:O	2.48	0.45
2:C:290:ARG:HH12	2:C:346:VAL:HG22	1.81	0.45
2:C:866:PRO:HA	2:C:1009:ARG:NH1	2.31	0.45
2:C:2278:GLN:HA	2:C:2281:VAL:HG12	1.99	0.45
2:C:3306:ILE:O	2:C:3310:VAL:HG23	2.17	0.45
2:C:4009:ASN:OD1	2:C:4009:ASN:N	2.49	0.45
2:A:15:ARG:HB3	2:A:18:ASP:CG	2.36	0.45
2:A:2086:VAL:HG22	2:A:3687:LEU:HD13	1.99	0.45
2:A:2136:LYS:HE2	2:A:2189:PHE:CE1	2.51	0.45
2:A:2939:TYR:HB3	2:A:2956:TYR:CE2	2.51	0.45
2:A:4166:LYS:O	2:A:4170:ARG:HG2	2.15	0.45
2:D:237:LEU:HD23	2:D:244:CYS:HB2	1.98	0.45
2:D:1144:ARG:HB3	2:D:1152:TYR:CD2	2.50	0.45
2:D:1918:VAL:O	2:D:1922:ILE:HG12	2.16	0.45
2:D:4918:TYR:HD2	2:D:4952:PHE:HE1	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4726:MET:HA	2:B:4726:MET:HE2	1.98	0.45
2:C:218:SER:HB3	2:C:286:GLY:HA3	1.98	0.45
2:C:849:ASP:OD1	2:C:1214:ARG:NE	2.46	0.45
2:C:2068:ARG:NH1	2:C:2072:GLU:OE1	2.46	0.45
2:C:2175:MET:O	2:C:2179:LEU:HG	2.16	0.45
2:C:2607:LEU:HD21	2:C:2665:ALA:HA	1.97	0.45
2:C:3062:ASP:OD1	2:C:3129:SER:OG	2.19	0.45
2:C:3074:ASN:HA	2:C:3077:GLN:HG3	1.97	0.45
2:C:3171:LEU:HD12	2:C:3245:TYR:CG	2.52	0.45
2:C:3311:LYS:HB3	2:C:3314:LEU:HB3	1.98	0.45
2:C:4079:ASP:O	2:C:4082:GLU:HG3	2.16	0.45
2:C:4166:LYS:O	2:C:4170:ARG:HG2	2.15	0.45
2:A:290:ARG:HH12	2:A:346:VAL:HG22	1.81	0.45
2:A:1840:LYS:O	2:A:1844:GLN:HG2	2.16	0.45
2:A:2488:LEU:HD12	2:A:2492:PHE:HB2	1.98	0.45
2:A:2696:ASP:O	2:A:2700:ASN:HA	2.16	0.45
2:A:3097:THR:HA	2:A:3101:LEU:HB3	1.99	0.45
2:D:1246:ASP:OD1	2:D:1693:TYR:OH	2.30	0.45
2:D:2229:LEU:HD23	2:D:2297:ARG:NH1	2.31	0.45
2:D:3246:MET:HA	2:D:3246:MET:HE3	1.99	0.45
2:D:4639:SER:O	2:D:4639:SER:OG	2.33	0.45
2:B:2319:VAL:O	2:B:2323:LEU:HG	2.16	0.45
2:B:2844:MET:HA	2:B:2844:MET:HE3	1.98	0.45
2:C:624:ALA:HB2	2:C:1667:LEU:HD12	1.97	0.45
2:C:1016:TRP:HB3	2:C:1032:LEU:HD11	1.99	0.45
2:C:4061:SER:O	2:C:4064:GLU:HG3	2.16	0.45
2:A:1522:ALA:O	2:A:1525:LYS:HG2	2.17	0.45
2:A:3888:PHE:HD2	2:A:3906:PHE:CZ	2.35	0.45
2:A:4238:ILE:HD12	2:A:4238:ILE:H	1.82	0.45
1:G:23:CYS:HA	1:G:107:LEU:HD23	1.98	0.45
2:D:162:ILE:CG2	2:D:181:LEU:HD11	2.47	0.45
2:D:218:SER:HB3	2:D:286:GLY:HA3	1.98	0.45
2:D:890:HIS:CD2	2:D:921:PHE:HB3	2.51	0.45
2:D:2968:LEU:HB2	2:D:2969:PRO:HD3	1.97	0.45
2:D:3306:ILE:O	2:D:3310:VAL:HG23	2.17	0.45
2:D:3888:PHE:HD2	2:D:3906:PHE:CZ	2.35	0.45
2:D:3951:PHE:HZ	2:D:3974:LEU:HG	1.82	0.45
2:D:4166:LYS:NZ	4:D:5002:ATP:O1G	2.47	0.45
2:D:4647:LYS:HB3	2:D:4647:LYS:HE3	1.54	0.45
2:B:290:ARG:HH12	2:B:346:VAL:HG22	1.81	0.45
2:B:661:LEU:O	2:B:788:PHE:N	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:890:HIS:CD2	2:B:921:PHE:HB3	2.51	0.45
2:C:245:LEU:HD11	2:C:260:VAL:HG12	1.98	0.45
2:C:409:GLN:HB3	2:C:412:GLU:HG3	1.98	0.45
2:C:785:ASP:OD2	2:C:786:GLY:N	2.50	0.45
2:C:1441:VAL:HG13	2:C:1545:ALA:HB2	1.98	0.45
2:A:227:TYR:CG	2:A:352:SER:HB2	2.52	0.45
2:A:670:TYR:O	2:A:673:TRP:NE1	2.50	0.45
2:A:1896:MET:HG2	2:A:1896:MET:O	2.16	0.45
2:A:4079:ASP:O	2:A:4082:GLU:HG3	2.16	0.45
2:D:668:ALA:HB2	2:D:1012:ILE:HD11	1.98	0.45
2:D:3097:THR:HA	2:D:3101:LEU:HB3	1.99	0.45
2:B:162:ILE:CG2	2:B:181:LEU:HD11	2.47	0.45
2:B:1441:VAL:HG13	2:B:1545:ALA:HB2	1.98	0.45
2:B:3681:LYS:HG2	2:B:3682:LEU:N	2.32	0.45
2:B:4639:SER:OG	2:B:4639:SER:O	2.33	0.45
2:C:1522:ALA:O	2:C:1525:LYS:HG2	2.17	0.45
2:C:4918:TYR:HD2	2:C:4952:PHE:HE1	1.64	0.45
2:A:766:ILE:HB	2:A:779:PHE:HB2	1.98	0.45
2:A:3231:MET:CE	2:A:3234:VAL:H	2.30	0.45
2:A:3681:LYS:HG2	2:A:3682:LEU:N	2.32	0.45
2:A:4280:VAL:HG12	2:B:4491:LEU:HD11	1.98	0.45
2:D:409:GLN:HB3	2:D:412:GLU:HG3	1.98	0.45
2:D:1744:LYS:NZ	2:D:2002:ASP:OD1	2.39	0.45
2:B:179:ASP:OD1	2:B:180:ASP:N	2.50	0.45
2:B:245:LEU:HD11	2:B:260:VAL:HG12	1.98	0.45
2:B:668:ALA:HB2	2:B:1012:ILE:HD11	1.98	0.45
2:B:2086:VAL:HG22	2:B:3687:LEU:HD13	1.99	0.45
2:B:2136:LYS:HE2	2:B:2189:PHE:CE1	2.51	0.45
2:B:2175:MET:O	2:B:2179:LEU:HG	2.16	0.45
2:B:2278:GLN:HA	2:B:2281:VAL:HG12	1.99	0.45
2:B:4593:LEU:HG	2:B:4594:LYS:HE3	1.98	0.45
2:C:1918:VAL:O	2:C:1922:ILE:HG12	2.16	0.45
2:C:2136:LYS:HE2	2:C:2189:PHE:CE1	2.51	0.45
2:C:3641:ILE:HD11	2:C:3695:MET:HG2	1.99	0.45
2:C:4058:TYR:HD1	2:C:4062:GLU:HB3	1.81	0.45
2:A:218:SER:HB3	2:A:286:GLY:HA3	1.98	0.45
2:A:785:ASP:OD2	2:A:786:GLY:N	2.50	0.45
2:A:1109:THR:O	2:A:1113:MET:HE1	2.17	0.45
2:A:3217:GLU:O	2:A:3221:LEU:HG	2.16	0.45
2:A:3951:PHE:HZ	2:A:3974:LEU:HG	1.82	0.45
2:A:4580:THR:OG1	2:A:4733:HIS:NE2	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4593:LEU:HG	2:A:4594:LYS:HE3	1.99	0.45
2:D:28:ILE:HG22	2:D:29:HIS:CE1	2.51	0.45
2:D:733:TRP:CE2	2:D:738:ALA:HB2	2.52	0.45
2:D:2136:LYS:HE2	2:D:2189:PHE:CE1	2.51	0.45
2:D:2274:LEU:HG	2:D:2329:GLU:HG3	1.99	0.45
2:D:3231:MET:CE	2:D:3234:VAL:H	2.30	0.45
2:D:3681:LYS:HG2	2:D:3682:LEU:N	2.32	0.45
2:B:227:TYR:CG	2:B:352:SER:HB2	2.52	0.45
2:B:733:TRP:CE2	2:B:738:ALA:HB2	2.52	0.45
2:B:1522:ALA:O	2:B:1525:LYS:HG2	2.17	0.45
2:B:1928:PHE:HE2	2:B:1996:LEU:HD13	1.82	0.45
2:B:2229:LEU:HD23	2:B:2297:ARG:NH1	2.31	0.45
2:B:2245:ALA:HA	2:B:2248:MET:HE3	1.98	0.45
2:B:4166:LYS:O	2:B:4170:ARG:HG2	2.15	0.45
2:B:4238:ILE:H	2:B:4238:ILE:HD12	1.82	0.45
2:B:4775:ALA:HA	2:B:4817:MET:HE2	1.98	0.45
2:B:4863:GLN:NE2	2:C:4860:ALA:HB2	2.20	0.45
2:C:2749:ASP:OD1	2:C:2750:SER:N	2.50	0.45
2:C:2754:GLN:OE1	2:C:2756:LEU:HG	2.17	0.45
2:C:3097:THR:HA	2:C:3101:LEU:HB3	1.99	0.45
2:C:3906:PHE:HB3	2:C:3967:LEU:HD11	1.98	0.45
2:C:3951:PHE:HZ	2:C:3974:LEU:HG	1.82	0.45
1:H:23:CYS:HA	1:H:107:LEU:HD23	1.98	0.45
2:A:2068:ARG:HG2	2:A:2072:GLU:OE1	2.17	0.45
2:A:2585:MET:HG2	2:A:2585:MET:O	2.17	0.45
2:A:2943:PHE:O	2:A:2947:SER:OG	2.22	0.45
2:A:3311:LYS:HB3	2:A:3314:LEU:HB3	1.98	0.45
2:D:227:TYR:CG	2:D:352:SER:HB2	2.52	0.45
2:D:2068:ARG:HG2	2:D:2072:GLU:OE1	2.17	0.45
2:D:3906:PHE:HB3	2:D:3967:LEU:HD11	1.98	0.45
2:B:673:TRP:HH2	2:B:1028:ARG:HH22	1.65	0.45
2:B:911:ASN:OD1	2:B:912:LYS:N	2.50	0.45
2:B:2754:GLN:OE1	2:B:2756:LEU:HG	2.17	0.45
2:B:3074:ASN:HA	2:B:3077:GLN:HG3	1.97	0.45
2:B:4864:GLY:HA2	2:B:4867:ILE:HG12	1.99	0.45
2:C:162:ILE:CG2	2:C:181:LEU:HD11	2.47	0.45
2:C:629:GLN:OE1	2:C:1669:ASN:ND2	2.35	0.45
2:C:2447:LYS:HD3	2:C:2447:LYS:HA	1.83	0.45
2:C:2488:LEU:HD12	2:C:2492:PHE:HB2	1.98	0.45
2:C:3681:LYS:HG2	2:C:3682:LEU:N	2.32	0.45
2:A:409:GLN:HB3	2:A:412:GLU:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1441:VAL:HG13	2:A:1545:ALA:HB2	1.98	0.45
2:A:3171:LEU:HD12	2:A:3245:TYR:CG	2.52	0.45
2:A:3306:ILE:O	2:A:3310:VAL:HG23	2.17	0.45
2:A:4726:MET:HE2	2:A:4726:MET:HA	1.99	0.45
2:A:4918:TYR:HD2	2:A:4952:PHE:HE1	1.64	0.45
2:D:179:ASP:OD1	2:D:180:ASP:N	2.50	0.45
2:D:3131:TYR:O	2:D:3135:THR:HG23	2.17	0.45
2:D:3641:ILE:HD11	2:D:3695:MET:HG2	1.99	0.45
2:D:4864:GLY:HA2	2:D:4867:ILE:HG12	1.99	0.45
2:B:503:ASP:OD1	2:B:561:ARG:NH2	2.47	0.45
2:B:737:ILE:HD12	2:B:1482:ARG:HD3	1.99	0.45
2:B:1475:LYS:HE3	2:B:1475:LYS:HB3	1.79	0.45
2:B:3888:PHE:HD2	2:B:3906:PHE:CZ	2.35	0.45
2:C:227:TYR:CG	2:C:352:SER:HB2	2.52	0.45
2:C:737:ILE:HD12	2:C:1482:ARG:HD3	1.99	0.45
2:C:890:HIS:CD2	2:C:921:PHE:HB3	2.51	0.45
2:C:3217:GLU:O	2:C:3221:LEU:HG	2.16	0.45
2:A:38:ALA:HB2	2:A:65:CYS:SG	2.58	0.44
2:A:674:TYR:HE1	2:A:756:SER:HB2	1.82	0.44
2:A:1077:VAL:O	2:A:1077:VAL:HG13	2.17	0.44
1:G:32:GLN:HB3	2:C:1312:GLU:OE1	2.17	0.44
2:D:670:TYR:OH	2:D:818:GLY:O	2.25	0.44
2:D:2278:GLN:HA	2:D:2281:VAL:HG12	1.99	0.44
2:B:38:ALA:HB2	2:B:65:CYS:SG	2.57	0.44
2:B:2068:ARG:HG2	2:B:2072:GLU:OE1	2.17	0.44
2:B:4135:ARG:HH11	2:B:4911:GLN:HB2	1.82	0.44
2:C:395:HIS:CE1	2:C:396:GLU:HG3	2.53	0.44
2:C:1777:GLN:O	2:C:1778:TYR:HB2	2.17	0.44
2:C:2939:TYR:HB3	2:C:2956:TYR:CE2	2.51	0.44
2:C:3231:MET:CE	2:C:3234:VAL:H	2.30	0.44
2:C:3888:PHE:HD2	2:C:3906:PHE:CZ	2.35	0.44
2:C:4162:LYS:NZ	2:C:4203:ALA:HB1	2.32	0.44
2:C:4864:GLY:HA2	2:C:4867:ILE:HG12	1.99	0.44
2:A:737:ILE:HD12	2:A:1482:ARG:HD3	1.99	0.44
2:A:1918:VAL:O	2:A:1922:ILE:HG12	2.16	0.44
2:A:1928:PHE:HE2	2:A:1996:LEU:HD13	1.82	0.44
2:A:2274:LEU:HG	2:A:2329:GLU:HG3	1.99	0.44
2:A:4495:PHE:CE1	2:A:4502:MET:HE1	2.53	0.44
2:D:1946:GLU:OE1	2:D:1947:VAL:HG23	2.18	0.44
2:D:4162:LYS:NZ	2:D:4203:ALA:HB1	2.33	0.44
2:D:4630:TRP:HE1	2:D:4712:VAL:HG23	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:849:ASP:OD1	2:B:1214:ARG:NE	2.46	0.44
2:B:3171:LEU:HD12	2:B:3245:TYR:CG	2.52	0.44
2:B:4079:ASP:HB3	2:B:4082:GLU:HG3	1.99	0.44
2:C:38:ALA:HB2	2:C:65:CYS:SG	2.58	0.44
2:C:3131:TYR:O	2:C:3135:THR:HG23	2.17	0.44
2:A:981:MET:HE1	2:A:1060:TYR:CE1	2.52	0.44
2:A:2749:ASP:OD1	2:A:2750:SER:N	2.50	0.44
2:A:3005:THR:HG21	2:A:3045:VAL:HG21	1.99	0.44
2:A:3269:ASN:O	2:A:3273:MET:HG2	2.16	0.44
2:A:3778:LEU:HD13	2:A:3854:PHE:CD1	2.49	0.44
2:A:3906:PHE:HB3	2:A:3967:LEU:HD11	1.99	0.44
2:D:238:HIS:HA	2:D:403:ILE:HG12	2.00	0.44
2:D:674:TYR:HE1	2:D:756:SER:HB2	1.83	0.44
2:D:785:ASP:OD2	2:D:786:GLY:N	2.50	0.44
2:D:2754:GLN:OE1	2:D:2756:LEU:HG	2.17	0.44
2:D:3171:LEU:HD12	2:D:3245:TYR:CG	2.52	0.44
2:D:4602:ARG:HH12	2:D:4627:LYS:HD2	1.83	0.44
2:B:409:GLN:HB3	2:B:412:GLU:HG3	1.98	0.44
2:B:629:GLN:OE1	2:B:1669:ASN:ND2	2.35	0.44
2:B:2488:LEU:HD12	2:B:2492:PHE:HB2	1.98	0.44
2:B:3306:ILE:O	2:B:3310:VAL:HG23	2.17	0.44
2:B:4630:TRP:HE1	2:B:4712:VAL:HG23	1.82	0.44
2:C:139:SER:O	2:C:141:ASP:N	2.49	0.44
2:C:670:TYR:O	2:C:673:TRP:NE1	2.50	0.44
2:C:2068:ARG:HG2	2:C:2072:GLU:OE1	2.17	0.44
2:C:2142:MET:CB	2:C:2192:MET:HE1	2.43	0.44
2:C:4630:TRP:HE1	2:C:4712:VAL:HG23	1.83	0.44
2:A:1016:TRP:HB3	2:A:1032:LEU:HD11	1.99	0.44
2:A:1785:ASP:OD1	2:A:1786:ILE:N	2.49	0.44
2:A:3018:ARG:HA	2:A:3021:LEU:HD13	2.00	0.44
2:A:4162:LYS:NZ	2:A:4203:ALA:HB1	2.32	0.44
2:A:4602:ARG:HH12	2:A:4627:LYS:HD2	1.83	0.44
2:D:514:PHE:HD2	2:D:526:TRP:HB2	1.83	0.44
2:D:2749:ASP:OD1	2:D:2750:SER:N	2.50	0.44
2:D:2939:TYR:HB3	2:D:2956:TYR:CE2	2.51	0.44
2:D:4157:ARG:O	2:D:4161:GLU:OE1	2.36	0.44
2:D:4203:ALA:HA	2:D:4206:ILE:HG12	1.97	0.44
2:B:69:LEU:HD13	2:B:113:LEU:HD21	2.00	0.44
2:B:670:TYR:O	2:B:673:TRP:NE1	2.50	0.44
2:B:1016:TRP:HB3	2:B:1032:LEU:HD11	1.99	0.44
2:B:1785:ASP:OD1	2:B:1786:ILE:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2863:LYS:HE2	2:B:2863:LYS:HB2	1.24	0.44
2:B:3217:GLU:O	2:B:3221:LEU:HG	2.16	0.44
2:B:3951:PHE:HZ	2:B:3974:LEU:HG	1.82	0.44
2:C:637:LEU:HD22	2:C:1679:HIS:CD2	2.53	0.44
2:C:733:TRP:CE2	2:C:738:ALA:HB2	2.52	0.44
2:C:981:MET:HE1	2:C:1060:TYR:CE1	2.52	0.44
2:C:1896:MET:HG2	2:C:1896:MET:O	2.16	0.44
2:C:1946:GLU:OE1	2:C:1947:VAL:HG23	2.18	0.44
2:C:2688:MET:HE2	2:C:2689:MET:H	1.82	0.44
2:C:4135:ARG:HH11	2:C:4911:GLN:HB2	1.82	0.44
2:C:4563:GLU:HG2	2:C:4568:MET:HB2	1.99	0.44
2:A:179:ASP:OD1	2:A:180:ASP:N	2.50	0.44
2:A:2706:VAL:HB	2:A:2847:ASN:HD21	1.83	0.44
2:A:4864:GLY:HA2	2:A:4867:ILE:HG12	1.99	0.44
2:D:38:ALA:HB2	2:D:65:CYS:SG	2.58	0.44
2:D:139:SER:O	2:D:141:ASP:N	2.49	0.44
2:D:230:GLY:HA3	2:D:285:SER:O	2.18	0.44
2:D:290:ARG:HH12	2:D:346:VAL:HG22	1.81	0.44
2:D:1441:VAL:HG13	2:D:1545:ALA:HB2	1.98	0.44
2:D:3042:ALA:O	2:D:3046:MET:HG2	2.18	0.44
2:D:3062:ASP:OD1	2:D:3129:SER:OG	2.19	0.44
2:D:4079:ASP:HB3	2:D:4082:GLU:HG3	1.99	0.44
2:D:4160:TRP:HA	2:D:4165:VAL:HG21	2.00	0.44
2:D:4238:ILE:H	2:D:4238:ILE:HD12	1.82	0.44
2:B:705:PRO:HB3	2:B:857:LEU:HD11	1.99	0.44
2:B:766:ILE:HB	2:B:779:PHE:HB2	1.98	0.44
2:B:2274:LEU:HG	2:B:2329:GLU:HG3	1.99	0.44
2:B:3018:ARG:HA	2:B:3021:LEU:HD13	2.00	0.44
2:B:3906:PHE:HB3	2:B:3967:LEU:HD11	1.98	0.44
2:B:4157:ARG:O	2:B:4161:GLU:OE1	2.36	0.44
2:B:4495:PHE:HE1	2:B:4502:MET:HE1	1.82	0.44
2:C:766:ILE:HB	2:C:779:PHE:HB2	1.98	0.44
2:C:3018:ARG:HA	2:C:3021:LEU:HD13	2.00	0.44
2:A:69:LEU:HD13	2:A:113:LEU:HD21	2.00	0.44
2:A:162:ILE:CG2	2:A:181:LEU:HD11	2.47	0.44
2:A:514:PHE:HD2	2:A:526:TRP:HB2	1.83	0.44
2:A:668:ALA:HB2	2:A:1012:ILE:HD11	1.98	0.44
2:A:733:TRP:CE2	2:A:738:ALA:HB2	2.52	0.44
2:A:2229:LEU:HD23	2:A:2297:ARG:NH1	2.31	0.44
2:A:2403:ALA:HB2	2:A:2475:VAL:HG22	2.00	0.44
2:A:3042:ALA:O	2:A:3046:MET:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4058:TYR:HD1	2:A:4062:GLU:HB3	1.81	0.44
2:D:520:ARG:O	2:D:524:GLU:HG2	2.18	0.44
2:D:1522:ALA:O	2:D:1525:LYS:HG2	2.17	0.44
2:D:1665:CYS:HB3	2:D:1676:LEU:HD12	2.00	0.44
2:D:3246:MET:HB3	2:D:3306:ILE:CD1	2.48	0.44
2:D:4135:ARG:HH11	2:D:4911:GLN:HB2	1.82	0.44
2:B:238:HIS:HA	2:B:403:ILE:HG12	2.00	0.44
2:B:520:ARG:O	2:B:524:GLU:HG2	2.18	0.44
2:B:545:ARG:HH11	2:B:582:SER:HA	1.83	0.44
2:B:1077:VAL:HG13	2:B:1077:VAL:O	2.18	0.44
2:B:2706:VAL:HB	2:B:2847:ASN:HD21	1.82	0.44
2:B:2859:GLU:C	2:B:2863:LYS:HZ3	2.20	0.44
2:B:3311:LYS:HB3	2:B:3314:LEU:HB3	1.98	0.44
2:B:4048:PHE:O	2:B:4051:ALA:HB3	2.18	0.44
2:C:69:LEU:HD13	2:C:113:LEU:HD21	2.00	0.44
2:C:179:ASP:OD1	2:C:180:ASP:N	2.50	0.44
2:C:911:ASN:OD1	2:C:912:LYS:N	2.50	0.44
2:C:2581:ARG:HG3	2:C:2630:PHE:CD1	2.53	0.44
2:A:520:ARG:O	2:A:524:GLU:HG2	2.18	0.44
2:A:981:MET:HE2	2:A:981:MET:HB3	1.90	0.44
2:A:2114:GLU:OE1	2:A:2114:GLU:N	2.37	0.44
2:A:2581:ARG:HG3	2:A:2630:PHE:CD1	2.53	0.44
2:A:2710:ASN:OD1	2:A:2711:ILE:N	2.51	0.44
2:A:3246:MET:HB3	2:A:3306:ILE:CD1	2.48	0.44
2:D:1928:PHE:HE2	2:D:1996:LEU:HD13	1.82	0.44
2:D:2710:ASN:OD1	2:D:2711:ILE:N	2.51	0.44
2:D:4048:PHE:O	2:D:4051:ALA:HB3	2.18	0.44
2:D:4079:ASP:O	2:D:4082:GLU:HG3	2.16	0.44
2:D:4911:GLN:HG2	2:D:4912:GLU:N	2.33	0.44
2:B:230:GLY:HA3	2:B:285:SER:O	2.18	0.44
2:B:395:HIS:CE1	2:B:396:GLU:HG3	2.53	0.44
2:C:195:SER:HB3	2:C:202:HIS:HB2	2.00	0.44
2:C:238:HIS:HA	2:C:403:ILE:HG12	2.00	0.44
2:C:1665:CYS:HB3	2:C:1676:LEU:HD12	2.00	0.44
2:C:1928:PHE:HE2	2:C:1996:LEU:HD13	1.82	0.44
2:C:2086:VAL:HG22	2:C:3687:LEU:HD13	1.99	0.44
2:C:2585:MET:O	2:C:2585:MET:HG2	2.17	0.44
2:C:4602:ARG:HH12	2:C:4627:LYS:HD2	1.83	0.44
2:C:4639:SER:OG	2:C:4642:ASN:HB2	2.18	0.44
2:A:140:THR:OG1	2:A:141:ASP:N	2.51	0.44
2:A:230:GLY:HA3	2:A:285:SER:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:290:ARG:NH2	2:A:350:GLY:HA3	2.27	0.44
2:A:911:ASN:OD1	2:A:912:LYS:N	2.50	0.44
2:A:3641:ILE:HD11	2:A:3695:MET:HG2	1.99	0.44
2:A:4045:LYS:NZ	2:A:4078:LEU:HB3	2.33	0.44
2:D:670:TYR:O	2:D:673:TRP:NE1	2.50	0.44
2:D:921:PHE:HB2	2:D:929:ARG:HD3	2.00	0.44
2:D:2585:MET:HG2	2:D:2585:MET:O	2.17	0.44
2:D:3018:ARG:HA	2:D:3021:LEU:HD13	2.00	0.44
2:B:1777:GLN:O	2:B:1778:TYR:HB2	2.17	0.44
2:B:2710:ASN:OD1	2:B:2711:ILE:N	2.51	0.44
2:B:4162:LYS:NZ	2:B:4203:ALA:HB1	2.32	0.44
2:B:4639:SER:OG	2:B:4642:ASN:HB2	2.18	0.44
2:B:4911:GLN:HG2	2:B:4912:GLU:N	2.33	0.44
2:C:673:TRP:HH2	2:C:1028:ARG:HH22	1.65	0.44
2:C:2710:ASN:OD1	2:C:2711:ILE:N	2.51	0.44
2:C:4045:LYS:NZ	2:C:4078:LEU:HB3	2.33	0.44
2:C:4597:LEU:HG	2:C:4601:LYS:HZ2	1.82	0.44
2:C:4911:GLN:HG2	2:C:4912:GLU:N	2.33	0.44
2:A:76:ARG:HH12	2:D:3891:TYR:HA	1.82	0.44
2:A:673:TRP:HH2	2:A:1028:ARG:HH22	1.65	0.44
2:A:1777:GLN:O	2:A:1778:TYR:HB2	2.18	0.44
2:A:1946:GLU:OE1	2:A:1947:VAL:HG23	2.18	0.44
2:A:2754:GLN:OE1	2:A:2756:LEU:HG	2.17	0.44
2:A:3246:MET:HA	2:A:3246:MET:HE3	1.99	0.44
2:A:3319:PHE:O	2:A:3323:MET:N	2.40	0.44
2:D:69:LEU:HD13	2:D:113:LEU:HD21	1.99	0.44
2:D:637:LEU:HD22	2:D:1679:HIS:CD2	2.53	0.44
2:D:989:THR:HG22	2:D:991:SER:H	1.83	0.44
2:D:1016:TRP:HB3	2:D:1032:LEU:HD11	1.99	0.44
2:D:2403:ALA:HB2	2:D:2475:VAL:HG22	2.00	0.44
2:B:278:GLU:HG2	2:B:296:ARG:HB2	1.99	0.44
2:B:674:TYR:HE1	2:B:756:SER:HB2	1.82	0.44
2:B:785:ASP:OD2	2:B:786:GLY:N	2.50	0.44
2:B:1425:THR:O	2:B:1564:MET:HB2	2.18	0.44
2:B:1946:GLU:OE1	2:B:1947:VAL:HG23	2.18	0.44
2:B:3097:THR:HA	2:B:3101:LEU:HB3	1.99	0.44
2:B:3141:GLY:HA2	2:B:3152:ARG:NH2	2.33	0.44
2:B:4264:LEU:HD23	2:B:4264:LEU:H	1.83	0.44
2:C:2403:ALA:HB2	2:C:2475:VAL:HG22	2.00	0.44
2:C:2413:LYS:HE3	2:C:2415:GLU:HB3	1.99	0.44
2:C:3875:VAL:HG21	2:C:3935:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1665:CYS:HB3	2:A:1676:LEU:HD12	2.00	0.43
2:A:2278:GLN:HA	2:A:2281:VAL:HG12	1.99	0.43
2:A:4135:ARG:HH11	2:A:4911:GLN:HB2	1.82	0.43
2:A:4491:LEU:HD11	2:D:4280:VAL:HG12	1.99	0.43
2:D:278:GLU:HG2	2:D:296:ARG:HB2	2.00	0.43
2:D:673:TRP:HH2	2:D:1028:ARG:HH22	1.65	0.43
2:D:737:ILE:HD12	2:D:1482:ARG:HD3	1.99	0.43
2:D:927:GLN:HG2	2:D:928:GLU:N	2.34	0.43
2:D:2436:ILE:HG22	2:D:2491:GLY:HA3	2.00	0.43
2:B:514:PHE:HD2	2:B:526:TRP:HB2	1.83	0.43
2:B:637:LEU:HD22	2:B:1679:HIS:CD2	2.53	0.43
2:B:900:LEU:HD13	2:B:902:TRP:HZ3	1.83	0.43
2:B:2403:ALA:HB2	2:B:2475:VAL:HG22	2.00	0.43
2:B:2585:MET:O	2:B:2585:MET:HG2	2.17	0.43
2:B:2826:ILE:HD13	2:B:2898:ILE:HD13	2.00	0.43
2:B:2972:ASP:HB3	2:B:2976:LYS:HZ1	1.83	0.43
2:B:3231:MET:CE	2:B:3234:VAL:H	2.30	0.43
2:B:4252:ILE:HG13	2:C:4707:MET:SD	2.58	0.43
2:C:278:GLU:HG2	2:C:296:ARG:HB2	1.99	0.43
2:C:514:PHE:HD2	2:C:526:TRP:HB2	1.83	0.43
2:C:674:TYR:HE1	2:C:756:SER:HB2	1.83	0.43
2:C:3005:THR:HG21	2:C:3045:VAL:HG21	1.99	0.43
2:C:3141:GLY:HA2	2:C:3152:ARG:NH2	2.33	0.43
2:C:3643:ASP:OD1	2:C:3646:LYS:NZ	2.50	0.43
2:C:4238:ILE:H	2:C:4238:ILE:HD12	1.82	0.43
2:A:637:LEU:HD22	2:A:1679:HIS:CD2	2.53	0.43
2:A:989:THR:HG22	2:A:991:SER:H	1.83	0.43
2:A:1425:THR:O	2:A:1564:MET:HB2	2.18	0.43
2:A:4639:SER:OG	2:A:4642:ASN:HB2	2.18	0.43
2:D:140:THR:OG1	2:D:141:ASP:N	2.51	0.43
2:D:195:SER:HB3	2:D:202:HIS:HB2	2.00	0.43
2:D:705:PRO:HB3	2:D:857:LEU:HD11	1.99	0.43
2:D:1077:VAL:O	2:D:1077:VAL:HG13	2.17	0.43
2:D:3171:LEU:HD13	2:D:3211:LEU:HD13	2.00	0.43
2:D:3847:CYS:HG	2:D:3923:TYR:HE1	1.64	0.43
2:D:4496:ALA:HB1	2:D:4593:LEU:HD13	2.00	0.43
2:C:520:ARG:O	2:C:524:GLU:HG2	2.18	0.43
2:C:944:LEU:HD21	2:C:950:VAL:HG22	2.01	0.43
2:C:1077:VAL:O	2:C:1077:VAL:HG13	2.18	0.43
2:C:2274:LEU:HG	2:C:2329:GLU:HG3	1.99	0.43
2:C:4048:PHE:O	2:C:4051:ALA:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:545:ARG:HH11	2:A:582:SER:HA	1.83	0.43
2:A:2268:TYR:HB3	2:A:2298:TYR:CZ	2.54	0.43
2:A:2436:ILE:HG22	2:A:2491:GLY:HA3	2.00	0.43
2:A:4160:TRP:HA	2:A:4165:VAL:HG21	2.00	0.43
2:D:1777:GLN:O	2:D:1778:TYR:HB2	2.18	0.43
2:D:2581:ARG:HG3	2:D:2630:PHE:CD1	2.53	0.43
2:D:2706:VAL:HB	2:D:2847:ASN:HD21	1.82	0.43
2:D:2984:SER:O	2:D:3001:LYS:NZ	2.36	0.43
2:D:3141:GLY:HA2	2:D:3152:ARG:NH2	2.33	0.43
2:D:3778:LEU:HD13	2:D:3854:PHE:CD1	2.49	0.43
2:B:195:SER:HB3	2:B:202:HIS:HB2	2.00	0.43
2:B:927:GLN:HG2	2:B:928:GLU:N	2.34	0.43
2:B:2436:ILE:HG22	2:B:2491:GLY:HA3	2.00	0.43
2:B:2749:ASP:OD1	2:B:2750:SER:N	2.50	0.43
2:B:3005:THR:HG21	2:B:3045:VAL:HG21	1.99	0.43
2:C:140:THR:OG1	2:C:141:ASP:N	2.51	0.43
2:C:2436:ILE:HG22	2:C:2491:GLY:HA3	2.00	0.43
2:C:3246:MET:HB3	2:C:3306:ILE:CD1	2.48	0.43
2:C:4496:ALA:HB1	2:C:4593:LEU:HD13	2.00	0.43
2:C:4639:SER:OG	2:C:4639:SER:O	2.33	0.43
2:A:238:HIS:HA	2:A:403:ILE:HG12	2.00	0.43
2:A:3131:TYR:O	2:A:3135:THR:HG23	2.17	0.43
2:D:395:HIS:CE1	2:D:396:GLU:HG3	2.53	0.43
2:D:911:ASN:OD1	2:D:912:LYS:N	2.50	0.43
2:D:1896:MET:O	2:D:1896:MET:HG2	2.16	0.43
2:D:2736:LYS:HZ3	2:D:2754:GLN:HE21	1.67	0.43
2:D:3210:SER:OG	2:D:3212:GLU:OE2	2.36	0.43
2:B:35:LEU:HD13	2:B:49:LEU:HD13	2.00	0.43
2:B:3159:LEU:HD23	2:B:3237:VAL:HG12	2.01	0.43
2:B:3246:MET:HB3	2:B:3306:ILE:CD1	2.48	0.43
2:C:2549:LEU:HB3	2:C:2588:LEU:HD22	2.01	0.43
2:C:3273:MET:HG2	2:C:3273:MET:H	1.61	0.43
2:A:948:CYS:HA	2:A:1065:GLU:O	2.19	0.43
2:A:1002:ASN:O	2:A:1006:VAL:HG23	2.19	0.43
2:A:3216:GLU:HA	2:A:3219:VAL:HG22	2.00	0.43
2:A:3291:ASP:O	2:A:3292:GLU:HG2	2.18	0.43
2:A:4048:PHE:O	2:A:4051:ALA:HB3	2.18	0.43
2:A:4157:ARG:O	2:A:4161:GLU:OE1	2.36	0.43
2:A:4631:ASP:O	2:A:4634:VAL:HG12	2.19	0.43
2:B:290:ARG:NH2	2:B:350:GLY:HA3	2.27	0.43
2:B:944:LEU:HD21	2:B:950:VAL:HG22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2581:ARG:HG3	2:B:2630:PHE:CD1	2.53	0.43
2:B:3042:ALA:O	2:B:3046:MET:HG2	2.18	0.43
2:B:3131:TYR:O	2:B:3135:THR:HG23	2.17	0.43
2:B:3268:LEU:HD23	2:B:3268:LEU:HA	1.80	0.43
2:B:4496:ALA:HB1	2:B:4593:LEU:HD13	2.00	0.43
2:C:2706:VAL:HB	2:C:2847:ASN:HD21	1.83	0.43
2:C:3042:ALA:O	2:C:3046:MET:HG2	2.18	0.43
2:C:3122:ILE:HA	2:C:3126:VAL:HG13	2.01	0.43
2:C:4172:PHE:CE1	2:C:4176:VAL:HG11	2.54	0.43
2:A:35:LEU:HD13	2:A:49:LEU:HD13	2.00	0.43
2:A:900:LEU:HD13	2:A:902:TRP:HZ3	1.83	0.43
2:A:2826:ILE:HD13	2:A:2898:ILE:HD13	2.00	0.43
2:A:3141:GLY:HA2	2:A:3152:ARG:NH2	2.33	0.43
2:A:4157:ARG:O	2:A:4160:TRP:HB3	2.19	0.43
2:A:4597:LEU:HG	2:A:4601:LYS:HZ2	1.83	0.43
2:D:608:HIS:HB2	2:D:1656:HIS:CD2	2.54	0.43
2:D:2086:VAL:HG22	2:D:3687:LEU:HD13	1.99	0.43
2:D:2413:LYS:HE3	2:D:2415:GLU:HB3	1.99	0.43
2:D:3005:THR:HG21	2:D:3045:VAL:HG21	1.99	0.43
2:D:4625:ASP:OD1	2:D:4625:ASP:N	2.47	0.43
2:D:4631:ASP:O	2:D:4634:VAL:HG12	2.19	0.43
2:D:4639:SER:OG	2:D:4642:ASN:HB2	2.18	0.43
2:D:4907:THR:HB	2:D:4911:GLN:HE22	1.84	0.43
2:B:948:CYS:HA	2:B:1065:GLU:O	2.19	0.43
2:B:981:MET:HE1	2:B:1060:TYR:CE1	2.52	0.43
2:B:2268:TYR:HB3	2:B:2298:TYR:CZ	2.54	0.43
2:B:2756:LEU:HD22	2:B:2763:LEU:HG	2.01	0.43
2:B:2889:ALA:O	2:B:2892:ILE:HG22	2.19	0.43
2:B:3273:MET:HG2	2:B:3273:MET:H	1.61	0.43
2:B:4306:PHE:HA	2:B:4309:ILE:HG12	2.00	0.43
2:B:4907:THR:HB	2:B:4911:GLN:HE22	1.84	0.43
2:C:900:LEU:HD13	2:C:902:TRP:HZ3	1.83	0.43
2:C:927:GLN:HG2	2:C:928:GLU:N	2.34	0.43
2:C:1425:THR:O	2:C:1564:MET:HB2	2.18	0.43
2:C:2889:ALA:O	2:C:2892:ILE:HG22	2.19	0.43
2:C:3159:LEU:HD23	2:C:3237:VAL:HG12	2.01	0.43
2:C:3210:SER:OG	2:C:3212:GLU:OE2	2.36	0.43
2:C:3295:TRP:HA	2:C:3298:ARG:HB2	2.01	0.43
2:C:4079:ASP:HB3	2:C:4082:GLU:HG3	1.99	0.43
2:C:4157:ARG:O	2:C:4161:GLU:OE1	2.36	0.43
2:C:4625:ASP:OD1	2:C:4625:ASP:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:278:GLU:HG2	2:A:296:ARG:HB2	1.99	0.43
2:A:3939:ARG:NH1	2:B:173:GLU:HG2	2.33	0.43
2:A:4907:THR:HB	2:A:4911:GLN:HE22	1.84	0.43
2:A:4911:GLN:HG2	2:A:4912:GLU:N	2.33	0.43
2:D:900:LEU:HD13	2:D:902:TRP:HZ3	1.83	0.43
2:D:948:CYS:HA	2:D:1065:GLU:O	2.19	0.43
2:D:2172:MET:HE3	2:D:2172:MET:HB3	1.84	0.43
2:D:2670:SER:HB2	2:D:2973:GLN:HG2	2.01	0.43
2:D:3122:ILE:HA	2:D:3126:VAL:HG13	2.01	0.43
2:D:3291:ASP:O	2:D:3292:GLU:HG2	2.18	0.43
2:D:4157:ARG:O	2:D:4160:TRP:HB3	2.19	0.43
2:B:981:MET:HE2	2:B:981:MET:HB3	1.92	0.43
2:B:1641:ILE:HA	2:B:1644:LEU:HD13	2.01	0.43
2:B:2413:LYS:HE3	2:B:2415:GLU:HB3	1.99	0.43
2:B:3291:ASP:O	2:B:3292:GLU:HG2	2.18	0.43
2:B:3641:ILE:HD11	2:B:3695:MET:HG2	1.99	0.43
2:B:4920:PHE:HA	2:B:4923:MET:HG2	2.01	0.43
2:C:475:LYS:HE3	2:C:475:LYS:HB3	1.75	0.43
2:C:608:HIS:HB2	2:C:1656:HIS:CD2	2.54	0.43
2:C:3983:LEU:O	2:C:3987:GLU:HG3	2.19	0.43
2:A:705:PRO:HB3	2:A:857:LEU:HD11	1.99	0.43
2:A:944:LEU:HD21	2:A:950:VAL:HG22	2.01	0.43
2:A:3159:LEU:HG	2:A:3241:MET:HB3	2.01	0.43
2:A:4306:PHE:HA	2:A:4309:ILE:HG12	2.00	0.43
2:A:4496:ALA:HB1	2:A:4593:LEU:HD13	2.00	0.43
2:A:4630:TRP:HE1	2:A:4712:VAL:HG23	1.82	0.43
2:A:4723:ALA:HB1	2:D:4294:LEU:HD21	2.00	0.43
1:F:83:TYR:OH	2:B:1768:PHE:O	2.28	0.43
2:D:1425:THR:O	2:D:1564:MET:HB2	2.18	0.43
2:D:4264:LEU:HD23	2:D:4264:LEU:H	1.83	0.43
2:D:4563:GLU:HG2	2:D:4568:MET:HB2	1.99	0.43
2:B:1421:MET:O	2:B:1576:LYS:NZ	2.51	0.43
2:B:3159:LEU:HG	2:B:3241:MET:HB3	2.01	0.43
2:B:4602:ARG:HH12	2:B:4627:LYS:HD2	1.83	0.43
2:C:428:ARG:NH2	2:C:446:ASP:OD2	2.45	0.43
2:C:989:THR:HG22	2:C:991:SER:H	1.83	0.43
2:C:2392:TYR:O	2:C:2396:ILE:HG12	2.19	0.43
2:C:3328:LYS:HA	2:C:3328:LYS:CE	2.32	0.43
2:C:4631:ASP:O	2:C:4634:VAL:HG12	2.19	0.43
2:A:395:HIS:CE1	2:A:396:GLU:HG3	2.53	0.43
2:A:732:LEU:HB3	2:A:779:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1308:ILE:HD13	2:A:1445:TRP:CZ3	2.41	0.43
2:A:1641:ILE:HA	2:A:1644:LEU:HD13	2.01	0.43
2:A:1664:VAL:HG23	2:A:1676:LEU:HD11	2.01	0.43
2:A:2413:LYS:HE3	2:A:2415:GLU:HB3	1.99	0.43
2:A:2705:PRO:HG3	2:A:2854:LYS:HG3	2.01	0.43
2:A:3100:ALA:C	2:A:3103:PRO:HD2	2.39	0.43
2:A:3171:LEU:HD13	2:A:3211:LEU:HD13	2.00	0.43
2:D:514:PHE:CD2	2:D:526:TRP:HB2	2.54	0.43
2:D:545:ARG:HH11	2:D:582:SER:HA	1.83	0.43
2:D:2209:GLN:O	2:D:2212:LYS:HB2	2.19	0.43
2:D:2889:ALA:O	2:D:2892:ILE:HG22	2.19	0.43
2:D:2943:PHE:CD1	2:D:2954:PHE:HE1	2.37	0.43
2:D:3026:ALA:O	2:D:3030:VAL:HG13	2.19	0.43
2:D:3216:GLU:HA	2:D:3219:VAL:HG22	2.00	0.43
2:D:4045:LYS:NZ	2:D:4078:LEU:HB3	2.33	0.43
2:D:4597:LEU:HG	2:D:4601:LYS:HZ2	1.84	0.43
2:B:140:THR:OG1	2:B:141:ASP:N	2.51	0.43
2:B:243:GLU:OE1	2:B:389:ARG:HD3	2.19	0.43
2:B:2209:GLN:O	2:B:2212:LYS:HB2	2.19	0.43
2:B:3016:ARG:NH2	2:B:3067:ASP:OD1	2.48	0.43
2:B:4045:LYS:NZ	2:B:4078:LEU:HB3	2.33	0.43
2:B:4172:PHE:CE1	2:B:4176:VAL:HG11	2.54	0.43
2:B:4563:GLU:HG2	2:B:4568:MET:HB2	2.00	0.43
2:B:4907:THR:HB	2:B:4911:GLN:NE2	2.34	0.43
2:C:35:LEU:HD13	2:C:49:LEU:HD13	2.00	0.43
2:C:921:PHE:HB2	2:C:929:ARG:HD3	2.00	0.43
2:C:4888:CYS:HA	4:C:5002:ATP:N7	2.34	0.43
2:C:4907:THR:HB	2:C:4911:GLN:HE22	1.84	0.43
2:A:608:HIS:HB2	2:A:1656:HIS:CD2	2.54	0.43
2:A:921:PHE:HB2	2:A:929:ARG:HD3	2.00	0.43
2:A:927:GLN:HG2	2:A:928:GLU:N	2.34	0.43
2:A:1505:LEU:HD12	2:A:1505:LEU:HA	1.89	0.43
2:A:2889:ALA:O	2:A:2892:ILE:HG22	2.19	0.43
2:A:3210:SER:OG	2:A:3212:GLU:OE2	2.36	0.43
1:F:80:ASP:OD1	1:F:81:VAL:N	2.52	0.43
2:D:1564:MET:HE3	2:D:1565:PRO:HD2	2.00	0.43
2:D:2943:PHE:O	2:D:2947:SER:OG	2.22	0.43
2:D:3159:LEU:HD23	2:D:3237:VAL:HG12	2.01	0.43
2:D:3875:VAL:HG21	2:D:3935:LEU:HD22	2.00	0.43
2:D:4172:PHE:CE1	2:D:4176:VAL:HG11	2.54	0.43
2:B:732:LEU:HB3	2:B:779:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1665:CYS:HB3	2:B:1676:LEU:HD12	2.00	0.43
2:B:2179:LEU:HA	2:B:2187:ILE:HD12	2.01	0.43
2:B:3100:ALA:C	2:B:3103:PRO:HD2	2.39	0.43
2:B:4030:ASP:O	2:B:4033:LYS:N	2.52	0.43
2:C:243:GLU:OE1	2:C:389:ARG:HD3	2.19	0.43
2:C:732:LEU:HB3	2:C:779:PHE:CZ	2.54	0.43
2:C:2379:ASP:OD1	2:C:2380:ASP:N	2.52	0.43
1:H:80:ASP:OD1	1:H:81:VAL:N	2.52	0.42
2:A:1421:MET:O	2:A:1576:LYS:NZ	2.51	0.42
2:A:2666:LEU:HB3	2:A:2667:PRO:HD3	2.01	0.42
2:A:3295:TRP:HA	2:A:3298:ARG:HB2	2.01	0.42
2:A:4172:PHE:CE1	2:A:4176:VAL:HG11	2.54	0.42
2:D:972:LEU:HD23	2:D:972:LEU:H	1.84	0.42
2:D:1002:ASN:O	2:D:1006:VAL:HG23	2.19	0.42
2:D:2379:ASP:OD1	2:D:2380:ASP:N	2.52	0.42
2:D:2703:PRO:HB2	2:D:2854:LYS:CD	2.47	0.42
2:D:2705:PRO:HG3	2:D:2854:LYS:HG3	2.01	0.42
2:B:514:PHE:CD2	2:B:526:TRP:HB2	2.54	0.42
2:B:2943:PHE:CD1	2:B:2954:PHE:HE1	2.37	0.42
2:B:3026:ALA:O	2:B:3030:VAL:HG13	2.19	0.42
2:B:3171:LEU:HD13	2:B:3211:LEU:HD13	2.00	0.42
2:B:3210:SER:OG	2:B:3212:GLU:OE2	2.36	0.42
2:B:3983:LEU:O	2:B:3987:GLU:HG3	2.18	0.42
2:B:4644:TYR:CD1	2:B:4645:TRP:HD1	2.37	0.42
2:C:230:GLY:HA3	2:C:285:SER:O	2.18	0.42
2:C:2756:LEU:HD22	2:C:2763:LEU:HG	2.01	0.42
2:C:2943:PHE:CD1	2:C:2954:PHE:HE1	2.37	0.42
2:C:4306:PHE:HA	2:C:4309:ILE:HG12	2.00	0.42
1:H:27:TYR:N	1:H:40:SER:OG	2.51	0.42
2:A:64:ILE:HA	2:A:123:HIS:HE2	1.85	0.42
2:A:2939:TYR:O	2:A:2956:TYR:OH	2.32	0.42
2:A:2943:PHE:CD1	2:A:2954:PHE:HE1	2.37	0.42
2:A:2998:ASN:O	2:A:3002:GLU:HG3	2.20	0.42
2:A:3718:GLU:O	2:A:3722:GLN:HG2	2.19	0.42
2:A:3875:VAL:HG21	2:A:3935:LEU:HD22	2.00	0.42
2:A:4079:ASP:HB3	2:A:4082:GLU:HG3	1.99	0.42
2:D:2179:LEU:HD23	2:D:2187:ILE:HG21	2.01	0.42
2:D:2245:ALA:HA	2:D:2248:MET:HE3	2.01	0.42
2:D:4888:CYS:HA	4:D:5002:ATP:N7	2.34	0.42
2:B:921:PHE:HB2	2:B:929:ARG:HD3	2.00	0.42
2:B:1438:PRO:HB2	2:B:1491:GLY:HA2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1748:LEU:HD23	2:B:1748:LEU:HA	1.94	0.42
2:B:2392:TYR:O	2:B:2396:ILE:HG12	2.19	0.42
2:B:2415:GLU:HA	2:B:2418:ARG:NH1	2.35	0.42
2:B:3122:ILE:HA	2:B:3126:VAL:HG13	2.01	0.42
2:B:3875:VAL:HG21	2:B:3935:LEU:HD22	2.00	0.42
2:B:4160:TRP:HA	2:B:4165:VAL:HG21	2.00	0.42
2:C:467:ASP:OD1	2:C:469:HIS:ND1	2.45	0.42
2:C:705:PRO:HB3	2:C:857:LEU:HD11	1.99	0.42
2:C:4030:ASP:O	2:C:4033:LYS:N	2.52	0.42
2:A:195:SER:HB3	2:A:202:HIS:HB2	2.00	0.42
2:A:972:LEU:HD23	2:A:972:LEU:H	1.85	0.42
2:A:4030:ASP:O	2:A:4033:LYS:N	2.52	0.42
2:A:4563:GLU:HG2	2:A:4568:MET:HB2	1.99	0.42
2:A:4907:THR:HB	2:A:4911:GLN:NE2	2.34	0.42
1:G:80:ASP:OD1	1:G:81:VAL:N	2.52	0.42
2:D:2549:LEU:HB3	2:D:2588:LEU:HD22	2.01	0.42
2:D:2998:ASN:O	2:D:3002:GLU:HG3	2.19	0.42
2:D:3983:LEU:O	2:D:3987:GLU:HG3	2.18	0.42
2:D:4644:TYR:CD1	2:D:4645:TRP:HD1	2.38	0.42
2:D:4704:LYS:HA	2:D:4704:LYS:HD3	1.92	0.42
2:D:4920:PHE:HA	2:D:4923:MET:HG2	2.01	0.42
2:B:670:TYR:OH	2:B:818:GLY:O	2.25	0.42
2:B:1002:ASN:O	2:B:1006:VAL:HG23	2.19	0.42
2:B:2172:MET:HE3	2:B:2172:MET:HB3	1.76	0.42
2:B:2479:GLU:N	2:B:2479:GLU:OE1	2.53	0.42
2:B:2549:LEU:HB3	2:B:2588:LEU:HD22	2.01	0.42
2:B:2726:GLU:OE1	2:B:2760:TYR:HB3	2.20	0.42
2:C:514:PHE:CD2	2:C:526:TRP:HB2	2.54	0.42
2:C:948:CYS:HA	2:C:1065:GLU:O	2.19	0.42
2:C:977:LYS:HA	2:C:978:PRO:HD3	1.83	0.42
2:C:981:MET:HE2	2:C:981:MET:HB3	1.86	0.42
2:C:2179:LEU:HD23	2:C:2187:ILE:HG21	2.01	0.42
2:C:2479:GLU:OE1	2:C:2479:GLU:N	2.53	0.42
2:C:2826:ILE:HD13	2:C:2898:ILE:HD13	2.00	0.42
2:C:4644:TYR:CE1	2:C:4645:TRP:CD1	3.08	0.42
2:A:1438:PRO:HB2	2:A:1491:GLY:HA2	2.01	0.42
2:A:2549:LEU:HB3	2:A:2588:LEU:HD22	2.01	0.42
2:A:2776:LYS:O	2:A:2780:LYS:HG2	2.20	0.42
2:A:3026:ALA:O	2:A:3030:VAL:HG13	2.19	0.42
2:A:3122:ILE:HA	2:A:3126:VAL:HG13	2.01	0.42
2:A:3643:ASP:OD1	2:A:3646:LYS:NZ	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4264:LEU:H	2:A:4264:LEU:HD23	1.83	0.42
1:E:80:ASP:OD1	1:E:81:VAL:N	2.52	0.42
1:G:36:LYS:H	2:C:647:ARG:HH21	1.67	0.42
2:D:944:LEU:HD21	2:D:950:VAL:HG22	2.01	0.42
2:D:1564:MET:HE1	2:D:1578:PRO:HA	2.01	0.42
2:D:2142:MET:CB	2:D:2192:MET:HE1	2.42	0.42
2:D:2479:GLU:OE1	2:D:2479:GLU:N	2.52	0.42
2:D:2826:ILE:HD13	2:D:2898:ILE:HD13	2.00	0.42
2:D:3273:MET:HG2	2:D:3273:MET:H	1.60	0.42
2:B:1038:LEU:HD12	2:B:1038:LEU:HA	1.78	0.42
2:B:1664:VAL:HG23	2:B:1676:LEU:HD11	2.01	0.42
2:B:2705:PRO:HG3	2:B:2854:LYS:HG3	2.01	0.42
2:B:2988:ARG:NH2	2:C:1071:HIS:NE2	2.67	0.42
2:B:3216:GLU:HA	2:B:3219:VAL:HG22	2.01	0.42
2:B:3718:GLU:O	2:B:3722:GLN:HG2	2.19	0.42
2:C:545:ARG:HH11	2:C:582:SER:HA	1.83	0.42
2:C:1076:GLU:HG2	2:C:1076:GLU:O	2.20	0.42
2:C:2209:GLN:O	2:C:2212:LYS:HB2	2.19	0.42
2:C:3291:ASP:O	2:C:3292:GLU:HG2	2.18	0.42
2:C:4644:TYR:CD1	2:C:4645:TRP:HD1	2.37	0.42
2:A:317:MET:SD	2:A:321:LYS:NZ	2.89	0.42
2:A:2898:ILE:HG23	2:B:1498:GLN:NE2	2.34	0.42
2:A:4920:PHE:HA	2:A:4923:MET:HG2	2.01	0.42
1:G:27:TYR:N	1:G:40:SER:OG	2.51	0.42
2:D:35:LEU:HD13	2:D:49:LEU:HD13	2.00	0.42
2:D:238:HIS:CG	2:D:239:GLY:N	2.88	0.42
2:D:2415:GLU:HA	2:D:2418:ARG:NH1	2.35	0.42
2:D:3100:ALA:C	2:D:3103:PRO:HD2	2.40	0.42
2:B:56:LYS:H	2:B:56:LYS:HG2	1.48	0.42
2:B:972:LEU:HD23	2:B:972:LEU:H	1.85	0.42
2:B:989:THR:HG22	2:B:991:SER:H	1.83	0.42
2:B:1133:ARG:HD3	2:B:1133:ARG:HA	1.80	0.42
2:B:2325:ILE:HD13	2:B:2426:LEU:HD11	2.02	0.42
2:B:2666:LEU:HB3	2:B:2667:PRO:HD3	2.01	0.42
2:B:3166:PHE:CE2	2:B:3168:VAL:HB	2.55	0.42
2:B:4177:VAL:HG11	2:B:4880:VAL:HA	2.02	0.42
2:B:4631:ASP:O	2:B:4634:VAL:HG12	2.19	0.42
2:C:2325:ILE:HD13	2:C:2426:LEU:HD11	2.02	0.42
2:C:2670:SER:HB2	2:C:2973:GLN:HG2	2.01	0.42
2:C:2726:GLU:OE1	2:C:2760:TYR:HB3	2.20	0.42
2:C:2998:ASN:O	2:C:3002:GLU:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3100:ALA:C	2:C:3103:PRO:HD2	2.39	0.42
2:A:143:LEU:HD21	2:D:2325:ILE:CD1	2.33	0.42
2:A:181:LEU:N	2:A:212:TRP:O	2.48	0.42
2:A:514:PHE:CD2	2:A:526:TRP:HB2	2.54	0.42
2:A:2209:GLN:O	2:A:2212:LYS:HB2	2.19	0.42
2:A:3951:PHE:CD2	2:A:3975:GLN:HG3	2.55	0.42
2:D:601:LEU:HD13	2:D:610:VAL:HB	2.02	0.42
2:D:2779:LEU:N	2:D:2779:LEU:HD23	2.35	0.42
2:D:3148:VAL:HG12	2:D:3152:ARG:HH12	1.84	0.42
2:D:4190:VAL:O	2:D:4194:GLU:HG3	2.20	0.42
2:B:308:LEU:HD21	2:B:370:LEU:HD12	2.02	0.42
2:B:608:HIS:HB2	2:B:1656:HIS:CD2	2.54	0.42
2:B:3140:LEU:HD23	2:B:3140:LEU:HA	1.92	0.42
2:B:4045:LYS:HZ2	2:B:4078:LEU:HB3	1.85	0.42
2:C:1475:LYS:HE3	2:C:1475:LYS:HB3	1.78	0.42
2:C:1939:ASN:ND2	2:C:1989:PRO:HG2	2.35	0.42
2:C:1988:CYS:HA	2:C:1989:PRO:HD3	1.92	0.42
2:A:56:LYS:HB2	2:A:57:ASN:OD1	2.20	0.42
2:A:2179:LEU:HD23	2:A:2187:ILE:HG21	2.01	0.42
2:A:2761:LYS:HD3	2:A:2761:LYS:HA	1.81	0.42
2:A:2852:TRP:HA	2:A:2855:LYS:HZ3	1.84	0.42
2:A:3205:CYS:HB2	2:A:3208:ILE:HG12	2.02	0.42
2:A:3983:LEU:O	2:A:3987:GLU:HG3	2.18	0.42
2:A:4888:CYS:HA	4:A:5002:ATP:N7	2.34	0.42
2:D:890:HIS:HA	2:D:893:TRP:CE3	2.55	0.42
2:D:1086:ARG:NH2	2:D:1254:ARG:HG3	2.35	0.42
2:D:1421:MET:HA	2:D:1421:MET:HE2	2.02	0.42
2:D:1664:VAL:HG23	2:D:1676:LEU:HD11	2.01	0.42
2:D:1939:ASN:ND2	2:D:1989:PRO:HG2	2.35	0.42
2:D:3159:LEU:HG	2:D:3241:MET:HB3	2.01	0.42
2:D:3951:PHE:CD2	2:D:3975:GLN:HG3	2.55	0.42
2:D:4907:THR:HB	2:D:4911:GLN:NE2	2.34	0.42
2:B:697:TRP:CE2	2:B:759:LEU:HB2	2.54	0.42
2:B:1939:ASN:ND2	2:B:1989:PRO:HG2	2.35	0.42
2:B:2235:ARG:NH2	2:B:2296:GLU:OE1	2.53	0.42
2:B:2379:ASP:OD1	2:B:2380:ASP:N	2.52	0.42
2:B:3295:TRP:HA	2:B:3298:ARG:HB2	2.01	0.42
2:C:697:TRP:CE2	2:C:759:LEU:HB2	2.54	0.42
2:C:1002:ASN:O	2:C:1006:VAL:HG23	2.19	0.42
2:C:1421:MET:HA	2:C:1421:MET:HE2	2.02	0.42
2:C:1641:ILE:HA	2:C:1644:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2268:TYR:HB3	2:C:2298:TYR:CZ	2.54	0.42
2:C:2705:PRO:HG3	2:C:2854:LYS:HG3	2.01	0.42
2:C:2779:LEU:HD23	2:C:2779:LEU:N	2.35	0.42
2:C:3148:VAL:HG12	2:C:3152:ARG:HH12	1.84	0.42
2:C:3216:GLU:HA	2:C:3219:VAL:HG22	2.01	0.42
2:C:4177:VAL:HG11	2:C:4880:VAL:HA	2.02	0.42
2:A:15:ARG:NH2	2:A:110:HIS:HB3	2.35	0.42
2:A:238:HIS:CG	2:A:239:GLY:N	2.88	0.42
2:A:243:GLU:OE1	2:A:389:ARG:HD3	2.19	0.42
2:A:1246:ASP:OD1	2:A:1693:TYR:OH	2.30	0.42
2:A:1688:ALA:HA	2:A:1694:MET:CE	2.44	0.42
2:A:2235:ARG:NH2	2:A:2296:GLU:OE1	2.53	0.42
2:A:2447:LYS:HD3	2:A:2447:LYS:HA	1.83	0.42
2:A:2693:SER:HA	2:A:2702:ASN:O	2.20	0.42
2:A:2756:LEU:HD22	2:A:2763:LEU:HG	2.01	0.42
2:A:3112:ILE:HD12	2:A:3117:PHE:HB2	2.02	0.42
2:A:3148:VAL:HG12	2:A:3152:ARG:HH12	1.84	0.42
2:A:3159:LEU:HD23	2:A:3237:VAL:HG12	2.01	0.42
2:A:3965:ILE:HD13	2:A:3965:ILE:HA	1.91	0.42
2:A:4085:LYS:HE2	2:A:4085:LYS:HB2	1.93	0.42
2:A:4897:TYR:CD2	2:A:4960:LYS:HE2	2.55	0.42
2:D:68:VAL:HG21	2:D:122:ARG:NH2	2.35	0.42
2:D:1948:MET:SD	2:D:1951:LEU:HD23	2.60	0.42
2:D:2756:LEU:HD22	2:D:2763:LEU:HG	2.01	0.42
2:D:3112:ILE:HD12	2:D:3117:PHE:HB2	2.02	0.42
2:D:3718:GLU:O	2:D:3722:GLN:HG2	2.19	0.42
2:D:4644:TYR:CE1	2:D:4645:TRP:CD1	3.08	0.42
2:D:4776:VAL:HG22	2:C:4743:LEU:HD23	2.02	0.42
2:B:1128:LEU:HD23	2:B:1128:LEU:HA	1.93	0.42
2:B:2397:ASP:O	2:B:2401:ARG:HG3	2.20	0.42
2:B:2670:SER:HB2	2:B:2973:GLN:HG2	2.01	0.42
2:B:2693:SER:HA	2:B:2702:ASN:O	2.20	0.42
2:B:2776:LYS:O	2:B:2780:LYS:HG2	2.20	0.42
2:B:3951:PHE:CD2	2:B:3975:GLN:HG3	2.55	0.42
2:C:68:VAL:HG21	2:C:122:ARG:NH2	2.35	0.42
2:C:904:TYR:HB2	2:C:919:VAL:HG22	2.01	0.42
2:C:1133:ARG:HD3	2:C:1133:ARG:HA	1.80	0.42
2:C:2179:LEU:HA	2:C:2187:ILE:HD12	2.01	0.42
2:C:3026:ALA:O	2:C:3030:VAL:HG13	2.19	0.42
2:C:3159:LEU:HG	2:C:3241:MET:HB3	2.01	0.42
2:C:3718:GLU:O	2:C:3722:GLN:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4157:ARG:O	2:C:4160:TRP:HB3	2.19	0.42
2:C:4160:TRP:HA	2:C:4165:VAL:HG21	2.00	0.42
2:C:4264:LEU:HD23	2:C:4264:LEU:H	1.83	0.42
2:C:4764:GLY:HA2	2:C:4767:LEU:HB2	2.02	0.42
2:A:56:LYS:H	2:A:56:LYS:HG2	1.48	0.42
2:A:281:ARG:HD2	2:A:345:GLU:OE2	2.20	0.42
2:A:697:TRP:CE2	2:A:759:LEU:HB2	2.54	0.42
2:A:890:HIS:HA	2:A:893:TRP:CE3	2.55	0.42
2:A:1086:ARG:NH2	2:A:1254:ARG:HG3	2.35	0.42
2:A:2325:ILE:HD13	2:A:2426:LEU:HD11	2.02	0.42
2:A:2397:ASP:O	2:A:2401:ARG:HG3	2.20	0.42
2:A:2577:CYS:HB2	2:A:2609:LEU:HD11	2.02	0.42
2:A:4255:LEU:HD13	2:A:4293:THR:OG1	2.20	0.42
2:A:4644:TYR:CE1	2:A:4645:TRP:CD1	3.08	0.42
2:D:697:TRP:CE2	2:D:759:LEU:HB2	2.54	0.42
2:D:1475:LYS:HE3	2:D:1475:LYS:HB3	1.79	0.42
2:D:1641:ILE:HA	2:D:1644:LEU:HD13	2.01	0.42
2:D:2235:ARG:NH2	2:D:2296:GLU:OE1	2.53	0.42
2:D:2325:ILE:HD13	2:D:2426:LEU:HD11	2.02	0.42
2:D:2397:ASP:O	2:D:2401:ARG:HG3	2.20	0.42
2:D:2539:GLU:HA	2:D:2584:MET:HE1	2.01	0.42
2:D:3295:TRP:HA	2:D:3298:ARG:HB2	2.00	0.42
2:D:3643:ASP:OD1	2:D:3646:LYS:NZ	2.50	0.42
2:D:3999:MET:HE3	2:D:3999:MET:HB3	1.96	0.42
2:B:139:SER:O	2:B:141:ASP:N	2.49	0.42
2:B:261:HIS:HD2	2:B:263:GLU:HG3	1.85	0.42
2:B:4157:ARG:O	2:B:4160:TRP:HB3	2.19	0.42
2:B:4888:CYS:HA	4:B:5002:ATP:N7	2.34	0.42
2:C:308:LEU:HD21	2:C:370:LEU:HD12	2.02	0.42
2:C:601:LEU:HD13	2:C:610:VAL:HB	2.02	0.42
2:C:1664:VAL:HG23	2:C:1676:LEU:HD11	2.01	0.42
2:C:2245:ALA:HA	2:C:2248:MET:HE3	2.01	0.42
2:C:4190:VAL:O	2:C:4194:GLU:HG3	2.20	0.42
2:C:4255:LEU:HD13	2:C:4293:THR:OG1	2.20	0.42
2:A:1102:TYR:N	2:A:1237:GLU:O	2.53	0.42
2:A:4630:TRP:HH2	2:A:4707:MET:HE3	1.85	0.42
2:A:4886:THR:O	2:A:4895:ASN:N	2.53	0.42
2:D:281:ARG:HD2	2:D:345:GLU:OE2	2.20	0.42
2:D:1306:MET:HE2	2:D:1570:LEU:HB3	2.01	0.42
2:D:2776:LYS:O	2:D:2780:LYS:HG2	2.20	0.42
2:D:3184:TYR:CD2	2:D:3201:VAL:HG22	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3790:PHE:HE1	2:D:3858:LEU:HD23	1.85	0.42
2:D:4306:PHE:HA	2:D:4309:ILE:HG12	2.00	0.42
2:D:4914:ASN:HB3	2:D:4917:ASN:HB2	2.02	0.42
2:B:56:LYS:HB2	2:B:57:ASN:OD1	2.20	0.42
2:B:1724:GLU:H	2:B:1724:GLU:HG2	1.42	0.42
2:B:4190:VAL:O	2:B:4194:GLU:HG3	2.20	0.42
2:B:4897:TYR:CD2	2:B:4960:LYS:HE2	2.55	0.42
2:C:64:ILE:HA	2:C:123:HIS:HE2	1.85	0.42
2:C:2397:ASP:O	2:C:2401:ARG:HG3	2.20	0.42
2:C:2496:LEU:HD23	2:C:2520:LEU:HD13	2.02	0.42
2:C:2859:GLU:C	2:C:2863:LYS:HZ3	2.20	0.42
2:C:3171:LEU:HD13	2:C:3211:LEU:HD13	2.00	0.42
2:C:4907:THR:HB	2:C:4911:GLN:NE2	2.34	0.42
2:A:601:LEU:HD13	2:A:610:VAL:HB	2.02	0.41
2:A:904:TYR:HB2	2:A:919:VAL:HG22	2.01	0.41
2:A:1475:LYS:HB3	2:A:1475:LYS:HE3	1.79	0.41
2:A:1948:MET:SD	2:A:1951:LEU:HD23	2.60	0.41
2:A:2779:LEU:N	2:A:2779:LEU:HD23	2.35	0.41
2:A:3046:MET:HA	2:A:3046:MET:CE	2.50	0.41
2:A:3217:GLU:O	2:A:3220:GLU:HG3	2.20	0.41
2:A:3793:LEU:HD23	2:A:3793:LEU:HA	1.93	0.41
2:A:3847:CYS:HG	2:A:3923:TYR:HE1	1.63	0.41
2:D:56:LYS:HB2	2:D:57:ASN:OD1	2.20	0.41
2:D:243:GLU:OE1	2:D:389:ARG:HD3	2.19	0.41
2:D:732:LEU:HB3	2:D:779:PHE:CZ	2.54	0.41
2:D:1438:PRO:HB2	2:D:1491:GLY:HA2	2.01	0.41
2:D:2666:LEU:HB3	2:D:2667:PRO:HD3	2.01	0.41
2:D:2726:GLU:OE1	2:D:2760:TYR:HB3	2.20	0.41
2:D:4030:ASP:O	2:D:4033:LYS:N	2.52	0.41
2:D:4587:ILE:CD1	2:D:4722:LEU:HB3	2.50	0.41
2:D:4764:GLY:HA2	2:D:4767:LEU:HB2	2.02	0.41
2:B:15:ARG:NH2	2:B:110:HIS:HB3	2.35	0.41
2:B:64:ILE:HA	2:B:123:HIS:HE2	1.84	0.41
2:B:890:HIS:HA	2:B:893:TRP:CE3	2.55	0.41
2:B:2496:LEU:HD23	2:B:2520:LEU:HD13	2.02	0.41
2:B:3212:GLU:H	2:B:3212:GLU:CD	2.24	0.41
2:B:3778:LEU:HD13	2:B:3854:PHE:CD1	2.49	0.41
2:B:3790:PHE:HE1	2:B:3858:LEU:HD23	1.85	0.41
2:B:4291:PHE:CZ	2:B:4295:LEU:HD11	2.55	0.41
2:B:4644:TYR:CE1	2:B:4645:TRP:CD1	3.08	0.41
2:C:281:ARG:HD2	2:C:345:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1128:LEU:HD23	2:C:1128:LEU:HA	1.93	0.41
2:C:1303:ARG:N	2:C:1589:GLN:O	2.50	0.41
2:C:4587:ILE:CD1	2:C:4722:LEU:HB3	2.50	0.41
2:A:261:HIS:HD2	2:A:263:GLU:HG3	1.85	0.41
2:A:1076:GLU:O	2:A:1076:GLU:HG2	2.20	0.41
2:A:2726:GLU:OE1	2:A:2760:TYR:HB3	2.20	0.41
2:A:4644:TYR:CD1	2:A:4645:TRP:HD1	2.38	0.41
1:F:26:HIS:HD2	1:F:41:ARG:CZ	2.34	0.41
2:D:981:MET:HE1	2:D:1060:TYR:CE1	2.55	0.41
2:D:1172:THR:HB	2:D:1190:LEU:HD22	2.03	0.41
2:D:2852:TRP:HA	2:D:2855:LYS:HZ2	1.85	0.41
2:B:1907:CYS:O	2:B:1911:GLN:HG2	2.20	0.41
2:B:2581:ARG:HG3	2:B:2630:PHE:HD1	1.85	0.41
2:B:3643:ASP:OD1	2:B:3646:LYS:NZ	2.50	0.41
2:B:3805:LEU:HD11	2:B:3887:ASP:HB3	2.02	0.41
2:B:4764:GLY:HA2	2:B:4767:LEU:HB2	2.02	0.41
2:B:4888:CYS:HB2	4:B:5002:ATP:HN61	1.85	0.41
2:C:972:LEU:HD23	2:C:972:LEU:H	1.85	0.41
2:C:3046:MET:HA	2:C:3046:MET:CE	2.50	0.41
2:C:4488:GLN:O	2:C:4492:LEU:HG	2.20	0.41
2:C:4920:PHE:HA	2:C:4923:MET:HG2	2.01	0.41
1:H:8:ILE:HA	2:D:730:LEU:HD11	2.02	0.41
2:A:2479:GLU:OE1	2:A:2479:GLU:N	2.53	0.41
2:A:3166:PHE:CE2	2:A:3168:VAL:HB	2.55	0.41
2:A:3790:PHE:HE1	2:A:3858:LEU:HD23	1.85	0.41
2:A:4291:PHE:CZ	2:A:4295:LEU:HD11	2.55	0.41
1:F:27:TYR:N	1:F:40:SER:OG	2.51	0.41
2:D:317:MET:SD	2:D:321:LYS:NZ	2.89	0.41
2:D:892:LEU:HA	2:D:895:MET:HG3	2.03	0.41
2:D:904:TYR:HB2	2:D:919:VAL:HG22	2.01	0.41
2:D:1614:ARG:NH1	2:D:1614:ARG:HB3	2.36	0.41
2:D:2268:TYR:HB3	2:D:2298:TYR:CZ	2.54	0.41
2:D:3046:MET:HA	2:D:3046:MET:CE	2.50	0.41
2:D:3089:GLY:O	2:D:3093:ILE:HG12	2.21	0.41
2:B:281:ARG:HD2	2:B:345:GLU:OE2	2.20	0.41
2:B:475:LYS:HE3	2:B:475:LYS:HB3	1.75	0.41
2:B:1076:GLU:O	2:B:1076:GLU:HG2	2.20	0.41
2:B:3046:MET:HA	2:B:3046:MET:CE	2.50	0.41
2:C:544:ASN:ND2	2:C:547:ASN:OD1	2.54	0.41
2:C:890:HIS:HA	2:C:893:TRP:CE3	2.55	0.41
2:C:892:LEU:HA	2:C:895:MET:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1086:ARG:NH2	2:C:1254:ARG:HG3	2.35	0.41
2:C:2235:ARG:NH2	2:C:2296:GLU:OE1	2.53	0.41
2:C:3217:GLU:O	2:C:3220:GLU:HG3	2.20	0.41
1:H:26:HIS:HD2	1:H:41:ARG:CZ	2.34	0.41
2:A:1939:ASN:ND2	2:A:1989:PRO:HG2	2.35	0.41
2:A:2158:HIS:O	2:A:2162:MET:HG2	2.20	0.41
2:A:2379:ASP:OD1	2:A:2380:ASP:N	2.52	0.41
2:A:2392:TYR:O	2:A:2396:ILE:HG12	2.19	0.41
2:A:2703:PRO:HB2	2:A:2854:LYS:CD	2.47	0.41
2:A:3763:ILE:HD11	2:A:3838:ASP:O	2.21	0.41
2:A:3805:LEU:HD11	2:A:3887:ASP:HB3	2.03	0.41
2:D:64:ILE:HA	2:D:123:HIS:HE2	1.85	0.41
2:D:356:TYR:HE2	2:D:407:ARG:HD2	1.86	0.41
2:D:2392:TYR:O	2:D:2396:ILE:HG12	2.19	0.41
2:D:3805:LEU:HD11	2:D:3887:ASP:HB3	2.03	0.41
2:D:4045:LYS:HZ2	2:D:4078:LEU:HB3	1.85	0.41
2:D:4177:VAL:HG11	2:D:4880:VAL:HA	2.02	0.41
2:D:4265:LYS:O	2:D:4268:MET:HB3	2.20	0.41
2:D:4724:TRP:O	2:D:4728:MET:HG2	2.21	0.41
2:B:996:VAL:HG22	2:B:1054:VAL:HG21	2.02	0.41
2:B:1053:ALA:O	2:B:1057:LEU:HD23	2.21	0.41
2:B:2179:LEU:HD23	2:B:2187:ILE:HG21	2.01	0.41
2:B:2434:GLY:O	2:B:2438:ILE:HG13	2.20	0.41
2:B:2577:CYS:HB2	2:B:2609:LEU:HD11	2.02	0.41
2:B:2998:ASN:O	2:B:3002:GLU:HG3	2.19	0.41
2:B:3036:LEU:HD12	2:B:3036:LEU:HA	1.92	0.41
2:B:3763:ILE:HD11	2:B:3838:ASP:O	2.20	0.41
2:C:349:MET:HE2	2:C:349:MET:HA	2.03	0.41
2:C:2581:ARG:HG3	2:C:2630:PHE:HD1	1.85	0.41
2:C:2693:SER:HA	2:C:2702:ASN:O	2.20	0.41
2:C:2776:LYS:O	2:C:2780:LYS:HG2	2.20	0.41
2:C:2998:ASN:ND2	2:C:3048:THR:OG1	2.53	0.41
2:C:3790:PHE:HE1	2:C:3858:LEU:HD23	1.85	0.41
2:C:4897:TYR:CD2	2:C:4960:LYS:HE2	2.55	0.41
2:A:1172:THR:HB	2:A:1190:LEU:HD22	2.03	0.41
2:A:1605:LYS:HA	2:A:1605:LYS:HD3	1.75	0.41
2:A:1614:ARG:NH1	2:A:1614:ARG:HB3	2.36	0.41
2:A:2581:ARG:HG3	2:A:2630:PHE:HD1	1.85	0.41
2:A:2824:ARG:CZ	2:B:1502:ASN:HA	2.51	0.41
2:A:2988:ARG:N	2:A:2989:PRO:HD3	2.36	0.41
2:A:4265:LYS:O	2:A:4268:MET:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4587:ILE:CD1	2:A:4722:LEU:HB3	2.50	0.41
1:E:27:TYR:N	1:E:40:SER:OG	2.51	0.41
2:D:181:LEU:N	2:D:212:TRP:O	2.48	0.41
2:D:1102:TYR:N	2:D:1237:GLU:O	2.53	0.41
2:D:2158:HIS:O	2:D:2162:MET:HG2	2.20	0.41
2:D:2325:ILE:HA	2:D:2325:ILE:HD12	1.82	0.41
2:D:3205:CYS:HB2	2:D:3208:ILE:HG12	2.02	0.41
2:D:4897:TYR:CD2	2:D:4960:LYS:HE2	2.54	0.41
2:B:349:MET:HE2	2:B:349:MET:HA	2.03	0.41
2:B:601:LEU:HD13	2:B:610:VAL:HB	2.02	0.41
2:B:1614:ARG:HB3	2:B:1614:ARG:NH1	2.36	0.41
2:B:1645:THR:HG22	2:B:1695:PRO:HG3	2.02	0.41
2:B:2779:LEU:N	2:B:2779:LEU:HD23	2.35	0.41
2:B:2788:ARG:HB3	2:B:2790:GLU:OE2	2.21	0.41
2:B:3217:GLU:O	2:B:3220:GLU:HG3	2.20	0.41
2:B:4690:LYS:HG3	2:B:4692:SER:H	1.86	0.41
2:C:1053:ALA:O	2:C:1057:LEU:HD23	2.21	0.41
2:C:1102:TYR:N	2:C:1237:GLU:O	2.53	0.41
2:C:1438:PRO:HB2	2:C:1491:GLY:HA2	2.01	0.41
2:C:2415:GLU:HA	2:C:2418:ARG:NH1	2.35	0.41
2:C:2788:ARG:HB2	2:C:2904:SER:HB3	2.03	0.41
2:C:2988:ARG:N	2:C:2989:PRO:HD3	2.36	0.41
2:C:3641:ILE:HD13	2:C:3641:ILE:HA	1.89	0.41
2:A:14:LEU:HD11	2:A:214:VAL:HG21	2.03	0.41
2:A:941:LYS:HB2	2:A:941:LYS:HE2	1.75	0.41
2:A:2415:GLU:HA	2:A:2418:ARG:NH1	2.35	0.41
2:A:4177:VAL:HG11	2:A:4880:VAL:HA	2.02	0.41
2:A:4190:VAL:O	2:A:4194:GLU:HG3	2.20	0.41
1:E:26:HIS:HD2	1:E:41:ARG:CZ	2.34	0.41
1:G:91:VAL:O	2:C:640:ARG:NH2	2.53	0.41
2:D:1076:GLU:O	2:D:1076:GLU:HG2	2.20	0.41
2:D:2179:LEU:HA	2:D:2187:ILE:HD12	2.01	0.41
2:D:2693:SER:HA	2:D:2702:ASN:O	2.20	0.41
2:D:3217:GLU:O	2:D:3220:GLU:HG3	2.20	0.41
2:D:4139:MET:HB3	2:D:4951:PHE:HA	2.02	0.41
2:B:904:TYR:HB2	2:B:919:VAL:HG22	2.01	0.41
2:B:1019:GLY:HA2	2:B:1028:ARG:HH21	1.86	0.41
2:B:2431:ASP:O	2:B:2435:VAL:HG23	2.21	0.41
2:B:3089:GLY:O	2:B:3093:ILE:HG12	2.21	0.41
2:B:3148:VAL:HG12	2:B:3152:ARG:HH12	1.84	0.41
2:B:4587:ILE:CD1	2:B:4722:LEU:HB3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:56:LYS:HB2	2:C:57:ASN:OD1	2.20	0.41
2:C:1088:PHE:HB2	2:C:1205:CYS:SG	2.61	0.41
2:C:1645:THR:HG22	2:C:1695:PRO:HG3	2.02	0.41
2:C:2158:HIS:O	2:C:2162:MET:HG2	2.20	0.41
2:C:2434:GLY:O	2:C:2438:ILE:HG13	2.20	0.41
2:C:2577:CYS:HB2	2:C:2609:LEU:HD11	2.02	0.41
2:C:2788:ARG:HB3	2:C:2790:GLU:OE2	2.20	0.41
2:C:3112:ILE:HD12	2:C:3117:PHE:HB2	2.02	0.41
2:C:3951:PHE:CD2	2:C:3975:GLN:HG3	2.55	0.41
2:C:4291:PHE:CZ	2:C:4295:LEU:HD11	2.55	0.41
2:C:4690:LYS:HG3	2:C:4692:SER:H	1.85	0.41
2:A:68:VAL:HG21	2:A:122:ARG:NH2	2.35	0.41
2:A:1421:MET:HA	2:A:1421:MET:HE2	2.02	0.41
2:A:2496:LEU:HD23	2:A:2520:LEU:HD13	2.02	0.41
2:A:2501:SER:HB2	2:A:2867:ASN:HB2	2.03	0.41
2:A:2545:ILE:O	2:A:2549:LEU:HG	2.21	0.41
2:A:2670:SER:HB2	2:A:2973:GLN:HG2	2.01	0.41
2:A:4107:GLU:OE1	2:A:4149:TYR:OH	2.23	0.41
1:G:26:HIS:HD2	1:G:41:ARG:CZ	2.34	0.41
2:D:544:ASN:ND2	2:D:547:ASN:OD1	2.54	0.41
2:D:1019:GLY:HA2	2:D:1028:ARG:HH21	1.86	0.41
2:D:2627:TRP:HB3	2:D:2630:PHE:HD2	1.85	0.41
2:D:2788:ARG:HB2	2:D:2904:SER:HB3	2.03	0.41
2:D:3036:LEU:HD12	2:D:3036:LEU:HA	1.93	0.41
2:B:14:LEU:HD11	2:B:214:VAL:HG21	2.03	0.41
2:B:68:VAL:HG21	2:B:122:ARG:NH2	2.35	0.41
2:B:1102:TYR:N	2:B:1237:GLU:O	2.53	0.41
2:B:1948:MET:SD	2:B:1951:LEU:HD23	2.60	0.41
2:B:4724:TRP:O	2:B:4728:MET:HG2	2.21	0.41
2:B:4886:THR:O	2:B:4895:ASN:N	2.53	0.41
2:C:281:ARG:NE	2:C:284:TRP:O	2.39	0.41
2:C:681:HIS:HB3	2:C:799:LYS:HB3	2.02	0.41
2:C:1907:CYS:O	2:C:1911:GLN:HG2	2.20	0.41
2:C:1948:MET:SD	2:C:1951:LEU:HD23	2.60	0.41
2:C:1979:PHE:CE1	2:C:1996:LEU:HD23	2.56	0.41
2:C:2396:ILE:HG21	2:C:2468:MET:SD	2.61	0.41
2:C:2545:ILE:O	2:C:2549:LEU:HG	2.21	0.41
2:C:2666:LEU:HB3	2:C:2667:PRO:HD3	2.01	0.41
2:C:3166:PHE:CE2	2:C:3168:VAL:HB	2.55	0.41
2:C:3212:GLU:H	2:C:3212:GLU:CD	2.24	0.41
2:C:4914:ASN:HB3	2:C:4917:ASN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:191:TYR:N	2:A:206:ALA:O	2.53	0.41
2:A:308:LEU:HD21	2:A:370:LEU:HD12	2.02	0.41
2:A:892:LEU:HA	2:A:895:MET:HG3	2.02	0.41
2:A:2179:LEU:HA	2:A:2187:ILE:HD12	2.01	0.41
2:A:2863:LYS:HB2	2:A:2863:LYS:HE2	1.24	0.41
2:A:3089:GLY:O	2:A:3093:ILE:HG12	2.21	0.41
2:A:4704:LYS:HA	2:A:4704:LYS:HD3	1.92	0.41
2:A:4724:TRP:O	2:A:4728:MET:HG2	2.21	0.41
1:E:26:HIS:CD2	1:E:41:ARG:HG2	2.56	0.41
1:G:26:HIS:CD2	1:G:41:ARG:HG2	2.56	0.41
2:D:15:ARG:NH2	2:D:110:HIS:HB3	2.35	0.41
2:D:1907:CYS:O	2:D:1911:GLN:HG2	2.20	0.41
2:D:2222:LEU:HD23	2:D:2222:LEU:HA	1.87	0.41
2:D:2496:LEU:HD23	2:D:2520:LEU:HD13	2.02	0.41
2:D:2577:CYS:HB2	2:D:2609:LEU:HD11	2.02	0.41
2:D:2788:ARG:HB3	2:D:2790:GLU:OE2	2.20	0.41
2:D:3166:PHE:CE2	2:D:3168:VAL:HB	2.55	0.41
2:D:4255:LEU:HD13	2:D:4293:THR:OG1	2.20	0.41
2:D:4488:GLN:O	2:D:4492:LEU:HG	2.20	0.41
2:D:4690:LYS:HG3	2:D:4692:SER:H	1.86	0.41
2:D:4704:LYS:O	2:D:4707:MET:HB3	2.21	0.41
2:D:4828:GLY:HA2	2:D:4831:ILE:HG22	2.02	0.41
2:D:4888:CYS:HB2	4:D:5002:ATP:HN61	1.85	0.41
2:B:1172:THR:HB	2:B:1190:LEU:HD22	2.03	0.41
2:B:2545:ILE:O	2:B:2549:LEU:HG	2.21	0.41
2:B:3205:CYS:HB2	2:B:3208:ILE:HG12	2.02	0.41
2:B:4255:LEU:HD13	2:B:4293:THR:OG1	2.20	0.41
2:C:996:VAL:HG22	2:C:1054:VAL:HG21	2.02	0.41
2:C:2863:LYS:HB2	2:C:2863:LYS:HE2	1.24	0.41
2:C:3089:GLY:O	2:C:3093:ILE:HG12	2.21	0.41
2:C:3805:LEU:HD11	2:C:3887:ASP:HB3	2.03	0.41
2:C:4732:GLY:HA2	2:C:4735:ASN:O	2.21	0.41
2:A:681:HIS:HB3	2:A:799:LYS:HB3	2.02	0.41
2:A:807:ARG:HA	2:A:1613:GLU:OE2	2.21	0.41
2:A:1415:ASP:OD2	2:A:1559:ARG:NH2	2.54	0.41
2:A:1979:PHE:CE1	2:A:1996:LEU:HD23	2.56	0.41
2:A:3212:GLU:CD	2:A:3212:GLU:H	2.24	0.41
2:A:3234:VAL:HG13	2:A:3238:ILE:HB	2.03	0.41
2:A:3617:VAL:O	2:A:3621:LEU:HG	2.21	0.41
2:D:308:LEU:HD21	2:D:370:LEU:HD12	2.02	0.41
2:D:390:LYS:HD3	2:D:391:ALA:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1304:LEU:HD23	2:D:1304:LEU:HA	1.92	0.41
2:D:1427:TYR:HD1	2:D:1510:VAL:HG22	1.86	0.41
2:D:2501:SER:HB2	2:D:2867:ASN:HB2	2.03	0.41
2:D:2545:ILE:O	2:D:2549:LEU:HG	2.21	0.41
2:D:2739:ASN:HB2	2:D:2741:TRP:HD1	1.86	0.41
2:D:2988:ARG:N	2:D:2989:PRO:HD3	2.36	0.41
2:D:3134:LEU:HB2	2:D:3162:PHE:CE1	2.56	0.41
2:D:3212:GLU:CD	2:D:3212:GLU:H	2.24	0.41
2:D:3763:ILE:HD11	2:D:3838:ASP:O	2.20	0.41
2:D:4291:PHE:CZ	2:D:4295:LEU:HD11	2.55	0.41
2:D:4780:LEU:HD11	2:C:4744:LEU:HG	2.02	0.41
2:B:69:LEU:HD23	2:B:121:LEU:HG	2.03	0.41
2:B:238:HIS:CG	2:B:239:GLY:N	2.88	0.41
2:B:390:LYS:HD3	2:B:391:ALA:H	1.86	0.41
2:B:681:HIS:HB3	2:B:799:LYS:HB3	2.02	0.41
2:B:1088:PHE:HB2	2:B:1205:CYS:SG	2.61	0.41
2:B:1415:ASP:OD2	2:B:1559:ARG:NH2	2.54	0.41
2:B:1505:LEU:HD12	2:B:1505:LEU:HA	1.89	0.41
2:B:2688:MET:HE2	2:B:2689:MET:H	1.85	0.41
2:B:2956:TYR:HD2	2:B:2960:ILE:HG12	1.86	0.41
2:B:2988:ARG:N	2:B:2989:PRO:HD3	2.36	0.41
2:B:3208:ILE:HG13	2:B:3208:ILE:O	2.21	0.41
2:B:3277:LEU:HD12	2:B:3310:VAL:HG21	2.03	0.41
2:B:3960:GLN:HE21	2:B:4065:PHE:HE1	1.68	0.41
2:B:4732:GLY:HA2	2:B:4735:ASN:O	2.21	0.41
2:B:4828:GLY:HA2	2:B:4831:ILE:HG22	2.02	0.41
2:C:15:ARG:NH2	2:C:110:HIS:HB3	2.35	0.41
2:C:191:TYR:N	2:C:206:ALA:O	2.54	0.41
2:C:307:SER:HB2	2:C:327:THR:HG22	2.03	0.41
2:C:719:GLY:HA3	2:C:733:TRP:HB3	2.03	0.41
2:C:1172:THR:HB	2:C:1190:LEU:HD22	2.03	0.41
2:C:1415:ASP:OD2	2:C:1559:ARG:NH2	2.54	0.41
2:C:1427:TYR:HD1	2:C:1510:VAL:HG22	1.86	0.41
2:C:2627:TRP:HB3	2:C:2630:PHE:HD2	1.85	0.41
2:C:3277:LEU:HD12	2:C:3310:VAL:HG21	2.03	0.41
2:C:4265:LYS:O	2:C:4268:MET:HB3	2.20	0.41
2:C:4853:PHE:HD1	2:C:4857:ILE:HD12	1.86	0.41
2:A:356:TYR:HE2	2:A:407:ARG:HD2	1.86	0.41
2:A:2331:PHE:HB3	2:A:2335:LEU:HB2	2.03	0.41
2:A:4026:LEU:HD13	2:A:4055:HIS:HB2	2.03	0.41
2:A:4704:LYS:O	2:A:4707:MET:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:26:HIS:CD2	1:F:41:ARG:HG2	2.56	0.41
2:D:14:LEU:HD11	2:D:214:VAL:HG21	2.03	0.41
2:D:962:LYS:O	2:D:981:MET:HA	2.21	0.41
2:D:1415:ASP:OD2	2:D:1559:ARG:NH2	2.54	0.41
2:D:2863:LYS:HB2	2:D:2863:LYS:HE2	1.24	0.41
2:D:2998:ASN:ND2	2:D:3048:THR:OG1	2.52	0.41
2:B:307:SER:HB2	2:B:327:THR:HG22	2.03	0.41
2:B:544:ASN:ND2	2:B:547:ASN:OD1	2.54	0.41
2:B:719:GLY:HA3	2:B:733:TRP:HB3	2.03	0.41
2:B:892:LEU:HA	2:B:895:MET:HG3	2.02	0.41
2:B:1086:ARG:NH2	2:B:1254:ARG:HG3	2.35	0.41
2:B:2841:ALA:HB2	2:B:2893:LEU:HD12	2.03	0.41
2:B:4265:LYS:O	2:B:4268:MET:HB3	2.20	0.41
2:C:1019:GLY:HA2	2:C:1028:ARG:HH21	1.86	0.41
2:C:1421:MET:O	2:C:1576:LYS:NZ	2.51	0.41
2:C:2841:ALA:HB2	2:C:2893:LEU:HD12	2.03	0.41
2:C:2956:TYR:HD2	2:C:2960:ILE:HG12	1.86	0.41
2:C:4026:LEU:HD13	2:C:4055:HIS:HB2	2.03	0.41
2:C:4139:MET:HB3	2:C:4951:PHE:HA	2.02	0.41
2:C:4647:LYS:HB3	2:C:4647:LYS:HE3	1.54	0.41
2:C:4704:LYS:O	2:C:4707:MET:HB3	2.21	0.41
2:C:4724:TRP:O	2:C:4728:MET:HG2	2.21	0.41
2:A:675:TYR:HB3	2:A:822:CYS:SG	2.62	0.40
2:A:1053:ALA:O	2:A:1057:LEU:HD23	2.21	0.40
2:A:1415:ASP:HA	2:A:1561:LYS:HZ3	1.86	0.40
2:A:1907:CYS:O	2:A:1911:GLN:HG2	2.20	0.40
2:A:2396:ILE:HG21	2:A:2468:MET:SD	2.61	0.40
2:A:2431:ASP:O	2:A:2435:VAL:HG23	2.21	0.40
2:A:3208:ILE:O	2:A:3208:ILE:HG13	2.21	0.40
2:A:3639:LYS:HA	2:A:4683:ARG:NH2	2.34	0.40
2:A:3960:GLN:HE21	2:A:4065:PHE:HE1	1.68	0.40
2:A:4732:GLY:HA2	2:A:4735:ASN:O	2.21	0.40
2:A:4764:GLY:HA2	2:A:4767:LEU:HB2	2.02	0.40
2:D:1225:LYS:HB3	2:D:1226:TYR:CD1	2.56	0.40
2:D:2434:GLY:O	2:D:2438:ILE:HG13	2.20	0.40
2:B:499:LEU:HD22	2:B:557:TRP:CZ3	2.56	0.40
2:B:2158:HIS:O	2:B:2162:MET:HG2	2.20	0.40
2:B:2501:SER:HB2	2:B:2867:ASN:HB2	2.03	0.40
2:B:2736:LYS:HB3	2:B:2741:TRP:CB	2.50	0.40
2:C:335:LYS:NZ	2:C:396:GLU:O	2.51	0.40
2:C:356:TYR:HE2	2:C:407:ARG:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:541:ILE:HD11	2:C:574:VAL:HG13	2.03	0.40
2:C:941:LYS:HB2	2:C:941:LYS:HE2	1.75	0.40
2:C:3763:ILE:HD11	2:C:3838:ASP:O	2.20	0.40
1:H:67:MET:SD	1:H:102:VAL:HG23	2.61	0.40
2:A:69:LEU:HD23	2:A:121:LEU:HG	2.03	0.40
2:A:76:ARG:NH2	2:D:3891:TYR:HA	2.35	0.40
2:A:499:LEU:HD22	2:A:557:TRP:CZ3	2.56	0.40
2:A:541:ILE:HD11	2:A:574:VAL:HG13	2.03	0.40
2:A:2466:ALA:HB2	2:A:2519:TYR:HD1	1.87	0.40
2:A:4079:ASP:HB3	2:A:4082:GLU:CG	2.52	0.40
2:A:4914:ASN:HB3	2:A:4917:ASN:HB2	2.02	0.40
2:D:675:TYR:HB3	2:D:822:CYS:SG	2.62	0.40
2:D:681:HIS:HB3	2:D:799:LYS:HB3	2.02	0.40
2:D:1088:PHE:HB2	2:D:1205:CYS:SG	2.61	0.40
2:D:1748:LEU:HD23	2:D:1748:LEU:HA	1.94	0.40
2:D:2062:ILE:HA	2:D:2065:THR:HG22	2.04	0.40
2:D:2331:PHE:HB3	2:D:2335:LEU:HB2	2.03	0.40
2:D:2431:ASP:O	2:D:2435:VAL:HG23	2.21	0.40
2:D:3124:GLU:C	2:D:3126:VAL:H	2.25	0.40
2:D:3175:LEU:HD23	2:D:3266:THR:HA	2.03	0.40
2:D:4590:TYR:OH	2:D:4718:SER:HB2	2.22	0.40
2:D:4732:GLY:HA2	2:D:4735:ASN:O	2.21	0.40
2:B:37:LEU:HD22	2:B:192:LEU:HD21	2.04	0.40
2:B:191:TYR:N	2:B:206:ALA:O	2.53	0.40
2:B:1979:PHE:CE1	2:B:1996:LEU:HD23	2.56	0.40
2:B:3743:THR:HB	2:B:3758:THR:HG21	2.04	0.40
2:B:4819:VAL:HG22	2:B:4830:GLU:OE2	2.22	0.40
2:C:545:ARG:NH1	2:C:582:SER:HA	2.36	0.40
2:C:675:TYR:HB3	2:C:822:CYS:SG	2.62	0.40
2:C:2703:PRO:HB2	2:C:2854:LYS:CD	2.47	0.40
2:C:2739:ASN:HB2	2:C:2741:TRP:HD1	1.86	0.40
2:C:3205:CYS:HB2	2:C:3208:ILE:HG12	2.02	0.40
2:C:4888:CYS:HB2	4:C:5002:ATP:HN61	1.86	0.40
2:A:14:LEU:HD23	2:A:14:LEU:HA	1.82	0.40
2:A:544:ASN:ND2	2:A:547:ASN:OD1	2.54	0.40
2:A:1047:LYS:HD3	2:A:1047:LYS:HA	1.96	0.40
2:A:3641:ILE:HD13	2:A:3641:ILE:HA	1.88	0.40
2:A:4888:CYS:HB2	4:A:5002:ATP:HN61	1.86	0.40
2:D:191:TYR:N	2:D:206:ALA:O	2.53	0.40
2:D:475:LYS:HE3	2:D:475:LYS:HB3	1.76	0.40
2:D:719:GLY:HA3	2:D:733:TRP:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1979:PHE:CE1	2:D:1996:LEU:HD23	2.56	0.40
2:D:2581:ARG:HG3	2:D:2630:PHE:HD1	1.85	0.40
2:D:2845:ALA:HB1	2:D:2885:ASP:HB3	2.04	0.40
2:D:3639:LYS:HA	2:D:4683:ARG:NH2	2.34	0.40
2:D:4045:LYS:NZ	2:D:4071:GLU:O	2.40	0.40
2:B:335:LYS:NZ	2:B:396:GLU:O	2.51	0.40
2:B:919:VAL:HG12	2:B:920:GLU:N	2.37	0.40
2:B:1425:THR:HG22	2:B:1563:VAL:HG13	2.02	0.40
2:B:1495:SER:N	2:B:1496:PRO:HD2	2.37	0.40
2:B:1605:LYS:HA	2:B:1605:LYS:HD3	1.75	0.40
2:B:1682:GLU:OE2	2:B:1783:PRO:HG2	2.22	0.40
2:B:2627:TRP:HB3	2:B:2630:PHE:HD2	1.85	0.40
2:B:2852:TRP:CH2	2:B:2856:LYS:HG3	2.57	0.40
2:B:3112:ILE:HD12	2:B:3117:PHE:HB2	2.02	0.40
2:B:3759:LEU:HD23	2:B:3759:LEU:HA	1.98	0.40
2:B:4026:LEU:HD13	2:B:4055:HIS:HB2	2.03	0.40
2:B:4079:ASP:HB3	2:B:4082:GLU:CG	2.52	0.40
2:B:4488:GLN:O	2:B:4492:LEU:HG	2.20	0.40
2:B:4914:ASN:HB3	2:B:4917:ASN:HB2	2.02	0.40
2:C:261:HIS:HD2	2:C:263:GLU:HG3	1.85	0.40
2:C:1495:SER:N	2:C:1496:PRO:HD2	2.37	0.40
2:C:2431:ASP:O	2:C:2435:VAL:HG23	2.21	0.40
2:C:2711:ILE:HG22	2:C:2780:LYS:HE3	2.04	0.40
2:C:3987:GLU:OE2	2:C:4934:THR:HB	2.21	0.40
1:H:9:SER:HB2	1:H:72:ARG:HB3	2.03	0.40
2:A:390:LYS:HD3	2:A:391:ALA:H	1.86	0.40
2:A:541:ILE:CD1	2:A:574:VAL:HG13	2.52	0.40
2:A:1225:LYS:HB3	2:A:1226:TYR:CD1	2.56	0.40
2:A:1306:MET:HE2	2:A:1570:LEU:HB3	2.03	0.40
2:A:1495:SER:N	2:A:1496:PRO:HD2	2.37	0.40
2:A:1645:THR:HG22	2:A:1695:PRO:HG3	2.02	0.40
2:A:2434:GLY:O	2:A:2438:ILE:HG13	2.20	0.40
2:A:2741:TRP:CE3	2:A:2754:GLN:HB2	2.56	0.40
2:A:3235:MET:HE1	2:A:3283:ILE:HD13	2.02	0.40
2:A:4022:LYS:HB2	2:A:4022:LYS:HE2	1.95	0.40
2:A:4764:GLY:HA2	2:A:4767:LEU:HD12	2.04	0.40
2:D:541:ILE:CD1	2:D:574:VAL:HG13	2.52	0.40
2:D:937:LEU:HD22	2:D:937:LEU:HA	1.96	0.40
2:D:1421:MET:O	2:D:1576:LYS:NZ	2.51	0.40
2:D:1495:SER:N	2:D:1496:PRO:HD2	2.37	0.40
2:D:2466:ALA:HB2	2:D:2519:TYR:HD1	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2716:LYS:NZ	2:D:2789:ILE:HG23	2.36	0.40
2:D:3319:PHE:O	2:D:3323:MET:N	2.40	0.40
2:D:3960:GLN:HE21	2:D:4065:PHE:HE1	1.68	0.40
2:D:4026:LEU:HD13	2:D:4055:HIS:HB2	2.03	0.40
2:B:165:ALA:HB2	2:B:182:ILE:HG23	2.04	0.40
2:B:807:ARG:HA	2:B:1613:GLU:OE2	2.21	0.40
2:B:1031:ARG:CG	2:B:1038:LEU:HD11	2.52	0.40
2:B:2062:ILE:HA	2:B:2065:THR:HG22	2.04	0.40
2:B:2079:GLU:H	2:B:2079:GLU:CD	2.25	0.40
2:B:2703:PRO:HB2	2:B:2854:LYS:CD	2.47	0.40
2:B:2904:SER:OG	2:B:2905:ARG:N	2.54	0.40
2:B:3235:MET:HE1	2:B:3283:ILE:HD13	2.03	0.40
2:B:3297:LYS:O	2:B:3301:VAL:HG23	2.22	0.40
2:B:3987:GLU:OE2	2:B:4934:THR:HB	2.21	0.40
2:B:4704:LYS:O	2:B:4707:MET:HB3	2.21	0.40
2:C:390:LYS:HD3	2:C:391:ALA:H	1.86	0.40
2:C:499:LEU:HD22	2:C:557:TRP:CZ3	2.57	0.40
2:C:1425:THR:HG22	2:C:1563:VAL:HG13	2.02	0.40
2:C:1682:GLU:OE2	2:C:1783:PRO:HG2	2.22	0.40
2:C:1913:LEU:HD23	2:C:1913:LEU:HA	1.93	0.40
2:C:2501:SER:HB2	2:C:2867:ASN:HB2	2.03	0.40
2:C:3134:LEU:HB2	2:C:3162:PHE:CE1	2.56	0.40
2:C:3319:PHE:O	2:C:3323:MET:N	2.40	0.40
2:C:3743:THR:HB	2:C:3758:THR:HG21	2.04	0.40
2:C:4580:THR:HG1	2:C:4733:HIS:CD2	2.30	0.40
2:A:962:LYS:O	2:A:981:MET:HA	2.21	0.40
2:A:1019:GLY:HA2	2:A:1028:ARG:HH21	1.86	0.40
2:A:1425:THR:HG22	2:A:1563:VAL:HG13	2.02	0.40
2:A:2222:LEU:HD23	2:A:2222:LEU:HA	1.87	0.40
2:A:2325:ILE:HA	2:A:2325:ILE:HD12	1.82	0.40
2:A:2627:TRP:HB3	2:A:2630:PHE:HD2	1.85	0.40
2:A:2788:ARG:HB3	2:A:2790:GLU:OE2	2.20	0.40
2:A:2841:ALA:HB2	2:A:2893:LEU:HD12	2.03	0.40
2:A:2898:ILE:HG23	2:B:1498:GLN:HE21	1.86	0.40
2:A:4488:GLN:O	2:A:4492:LEU:HG	2.20	0.40
2:A:4690:LYS:HG3	2:A:4692:SER:H	1.86	0.40
2:A:4853:PHE:HD1	2:A:4857:ILE:HD12	1.86	0.40
2:D:261:HIS:HD2	2:D:263:GLU:HG3	1.85	0.40
2:D:290:ARG:NH2	2:D:350:GLY:HA3	2.27	0.40
2:D:1425:THR:HG22	2:D:1563:VAL:HG13	2.02	0.40
2:D:1614:ARG:HB3	2:D:1614:ARG:CZ	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1645:THR:HG22	2:D:1695:PRO:HG3	2.02	0.40
2:D:2396:ILE:HG21	2:D:2468:MET:SD	2.61	0.40
2:D:2741:TRP:CE3	2:D:2754:GLN:HB2	2.56	0.40
2:D:4030:ASP:O	2:D:4033:LYS:HB2	2.22	0.40
2:D:4079:ASP:HB3	2:D:4082:GLU:CG	2.52	0.40
2:B:14:LEU:HD23	2:B:14:LEU:HA	1.82	0.40
2:B:545:ARG:NH1	2:B:582:SER:HA	2.36	0.40
2:B:2396:ILE:HG21	2:B:2468:MET:SD	2.61	0.40
2:B:2741:TRP:CE3	2:B:2754:GLN:HB2	2.56	0.40
2:B:3614:HIS:CD2	2:B:3615:ARG:HG2	2.57	0.40
2:B:4186:MET:O	2:B:4190:VAL:HG23	2.22	0.40
2:B:4764:GLY:HA2	2:B:4767:LEU:HD12	2.04	0.40
2:C:37:LEU:HD22	2:C:192:LEU:HD21	2.04	0.40
2:C:290:ARG:NH2	2:C:350:GLY:HA3	2.27	0.40
2:C:1253:LYS:HB2	2:C:1253:LYS:HE2	1.68	0.40
2:C:2786:GLY:C	2:C:2906:GLY:HA2	2.42	0.40
2:C:3948:LEU:HD23	2:C:3948:LEU:HA	1.97	0.40
2:C:4644:TYR:CD1	2:C:4645:TRP:CD1	3.10	0.40
2:C:4764:GLY:HA2	2:C:4767:LEU:HD12	2.04	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	E	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
1	F	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
1	G	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
1	H	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	A	4198/4967 (84%)	4091 (98%)	103 (2%)	4 (0%)	51	83

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	B	4198/4967 (84%)	4092 (98%)	102 (2%)	4 (0%)	51 83
2	C	4198/4967 (84%)	4091 (98%)	103 (2%)	4 (0%)	51 83
2	D	4198/4967 (84%)	4092 (98%)	102 (2%)	4 (0%)	51 83
All	All	17212/20300 (85%)	16778 (98%)	418 (2%)	16 (0%)	54 83

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	1553	PHE
2	A	4641	PRO
2	A	4819	VAL
2	D	1553	PHE
2	D	4641	PRO
2	D	4819	VAL
2	B	1553	PHE
2	B	4641	PRO
2	B	4819	VAL
2	C	1553	PHE
2	C	4641	PRO
2	C	4819	VAL
2	A	1081	THR
2	D	1081	THR
2	B	1081	THR
2	C	1081	THR

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	E	88/89 (99%)	88 (100%)	0	100 100
1	F	88/89 (99%)	88 (100%)	0	100 100
1	G	88/89 (99%)	88 (100%)	0	100 100
1	H	88/89 (99%)	88 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	A	3708/4358 (85%)	3615 (98%)	93 (2%)	47 70
2	B	3708/4358 (85%)	3615 (98%)	93 (2%)	47 70
2	C	3708/4358 (85%)	3615 (98%)	93 (2%)	47 70
2	D	3708/4358 (85%)	3615 (98%)	93 (2%)	47 70
All	All	15184/17788 (85%)	14812 (98%)	372 (2%)	50 71

All (372) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A	56	LYS
2	A	241	MET
2	A	272	ARG
2	A	349	MET
2	A	414	ARG
2	A	833	LYS
2	A	935	MET
2	A	937	LEU
2	A	960	LYS
2	A	964	MET
2	A	981	MET
2	A	995	MET
2	A	1021	GLN
2	A	1036	THR
2	A	1133	ARG
2	A	1174	MET
2	A	1212	VAL
2	A	1421	MET
2	A	1500	ARG
2	A	1564	MET
2	A	1599	MET
2	A	1614	ARG
2	A	1724	GLU
2	A	1729	MET
2	A	1946	GLU
2	A	1948	MET
2	A	2053	LYS
2	A	2132	VAL
2	A	2175	MET
2	A	2192	MET
2	A	2212	LYS
2	A	2214	MET

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Mol	Chain	Res	Type
2	A	2303	ARG
2	A	2327	ARG
2	A	2347	MET
2	A	2384	MET
2	A	2442	MET
2	A	2456	MET
2	A	2512	MET
2	A	2681	MET
2	A	2688	MET
2	A	2695	MET
2	A	2715	GLU
2	A	2752	LYS
2	A	2779	LEU
2	A	2783	LEU
2	A	2800	LEU
2	A	2831	VAL
2	A	2835	ARG
2	A	2844	MET
2	A	2848	TYR
2	A	2858	MET
2	A	2863	LYS
2	A	2950	LYS
2	A	3019	ILE
2	A	3046	MET
2	A	3072	MET
2	A	3104	MET
2	A	3152	ARG
2	A	3231	MET
2	A	3235	MET
2	A	3241	MET
2	A	3246	MET
2	A	3248	ARG
2	A	3273	MET
2	A	3311	LYS
2	A	3323	MET
2	A	3328	LYS
2	A	3715	GLU
2	A	3719	MET
2	A	3772	THR
2	A	3784	LYS
2	A	3819	MET
2	A	3866	THR

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Mol	Chain	Res	Type
2	A	3981	MET
2	A	4002	MET
2	A	4052	MET
2	A	4169	LYS
2	A	4242	ARG
2	A	4258	MET
2	A	4268	MET
2	A	4292	MET
2	A	4307	ARG
2	A	4568	MET
2	A	4647	LYS
2	A	4665	ARG
2	A	4726	MET
2	A	4728	MET
2	A	4743	LEU
2	A	4804	MET
2	A	4814	MET
2	A	4943	MET
2	A	4945	GLN
2	D	56	LYS
2	D	241	MET
2	D	272	ARG
2	D	349	MET
2	D	414	ARG
2	D	833	LYS
2	D	935	MET
2	D	937	LEU
2	D	960	LYS
2	D	964	MET
2	D	981	MET
2	D	995	MET
2	D	1021	GLN
2	D	1036	THR
2	D	1133	ARG
2	D	1174	MET
2	D	1212	VAL
2	D	1421	MET
2	D	1500	ARG
2	D	1564	MET
2	D	1599	MET
2	D	1614	ARG
2	D	1724	GLU

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Mol	Chain	Res	Type
2	D	1729	MET
2	D	1946	GLU
2	D	1948	MET
2	D	2053	LYS
2	D	2132	VAL
2	D	2175	MET
2	D	2192	MET
2	D	2212	LYS
2	D	2214	MET
2	D	2303	ARG
2	D	2327	ARG
2	D	2347	MET
2	D	2384	MET
2	D	2442	MET
2	D	2456	MET
2	D	2512	MET
2	D	2681	MET
2	D	2688	MET
2	D	2695	MET
2	D	2715	GLU
2	D	2752	LYS
2	D	2779	LEU
2	D	2783	LEU
2	D	2800	LEU
2	D	2831	VAL
2	D	2835	ARG
2	D	2844	MET
2	D	2848	TYR
2	D	2858	MET
2	D	2863	LYS
2	D	2950	LYS
2	D	3019	ILE
2	D	3046	MET
2	D	3072	MET
2	D	3104	MET
2	D	3152	ARG
2	D	3231	MET
2	D	3235	MET
2	D	3241	MET
2	D	3246	MET
2	D	3248	ARG
2	D	3273	MET

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Mol	Chain	Res	Type
2	D	3311	LYS
2	D	3323	MET
2	D	3328	LYS
2	D	3715	GLU
2	D	3719	MET
2	D	3772	THR
2	D	3784	LYS
2	D	3819	MET
2	D	3866	THR
2	D	3981	MET
2	D	4002	MET
2	D	4052	MET
2	D	4169	LYS
2	D	4242	ARG
2	D	4258	MET
2	D	4268	MET
2	D	4292	MET
2	D	4307	ARG
2	D	4568	MET
2	D	4647	LYS
2	D	4665	ARG
2	D	4726	MET
2	D	4728	MET
2	D	4743	LEU
2	D	4804	MET
2	D	4814	MET
2	D	4943	MET
2	D	4945	GLN
2	B	56	LYS
2	B	241	MET
2	B	272	ARG
2	B	349	MET
2	B	414	ARG
2	B	833	LYS
2	B	935	MET
2	B	937	LEU
2	B	960	LYS
2	B	964	MET
2	B	981	MET
2	B	995	MET
2	B	1021	GLN
2	B	1036	THR

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Mol	Chain	Res	Type
2	B	1133	ARG
2	B	1174	MET
2	B	1212	VAL
2	B	1421	MET
2	B	1500	ARG
2	B	1564	MET
2	B	1599	MET
2	B	1614	ARG
2	B	1724	GLU
2	B	1729	MET
2	B	1946	GLU
2	B	1948	MET
2	B	2053	LYS
2	B	2132	VAL
2	B	2175	MET
2	B	2192	MET
2	B	2212	LYS
2	B	2214	MET
2	B	2303	ARG
2	B	2327	ARG
2	B	2347	MET
2	B	2384	MET
2	B	2442	MET
2	B	2456	MET
2	B	2512	MET
2	B	2681	MET
2	B	2688	MET
2	B	2695	MET
2	B	2715	GLU
2	B	2752	LYS
2	B	2779	LEU
2	B	2783	LEU
2	B	2800	LEU
2	B	2831	VAL
2	B	2835	ARG
2	B	2844	MET
2	B	2848	TYR
2	B	2858	MET
2	B	2863	LYS
2	B	2950	LYS
2	B	3019	ILE
2	B	3046	MET

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Mol	Chain	Res	Type
2	B	3072	MET
2	B	3104	MET
2	B	3152	ARG
2	B	3231	MET
2	B	3235	MET
2	B	3241	MET
2	B	3246	MET
2	B	3248	ARG
2	B	3273	MET
2	B	3311	LYS
2	B	3323	MET
2	B	3328	LYS
2	B	3715	GLU
2	B	3719	MET
2	B	3772	THR
2	B	3784	LYS
2	B	3819	MET
2	B	3866	THR
2	B	3981	MET
2	B	4002	MET
2	B	4052	MET
2	B	4169	LYS
2	B	4242	ARG
2	B	4258	MET
2	B	4268	MET
2	B	4292	MET
2	B	4307	ARG
2	B	4568	MET
2	B	4647	LYS
2	B	4665	ARG
2	B	4726	MET
2	B	4728	MET
2	B	4743	LEU
2	B	4804	MET
2	B	4814	MET
2	B	4943	MET
2	B	4945	GLN
2	C	56	LYS
2	C	241	MET
2	C	272	ARG
2	C	349	MET
2	C	414	ARG

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Mol	Chain	Res	Type
2	C	833	LYS
2	C	935	MET
2	C	937	LEU
2	C	960	LYS
2	C	964	MET
2	C	981	MET
2	C	995	MET
2	C	1021	GLN
2	C	1036	THR
2	C	1133	ARG
2	C	1174	MET
2	C	1212	VAL
2	C	1421	MET
2	C	1500	ARG
2	C	1564	MET
2	C	1599	MET
2	C	1614	ARG
2	C	1724	GLU
2	C	1729	MET
2	C	1946	GLU
2	C	1948	MET
2	C	2053	LYS
2	C	2132	VAL
2	C	2175	MET
2	C	2192	MET
2	C	2212	LYS
2	C	2214	MET
2	C	2303	ARG
2	C	2327	ARG
2	C	2347	MET
2	C	2384	MET
2	C	2442	MET
2	C	2456	MET
2	C	2512	MET
2	C	2681	MET
2	C	2688	MET
2	C	2695	MET
2	C	2715	GLU
2	C	2752	LYS
2	C	2779	LEU
2	C	2783	LEU
2	C	2800	LEU

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Mol	Chain	Res	Type
2	C	2831	VAL
2	C	2835	ARG
2	C	2844	MET
2	C	2848	TYR
2	C	2858	MET
2	C	2863	LYS
2	C	2950	LYS
2	C	3019	ILE
2	C	3046	MET
2	C	3072	MET
2	C	3104	MET
2	C	3152	ARG
2	C	3231	MET
2	C	3235	MET
2	C	3241	MET
2	C	3246	MET
2	C	3248	ARG
2	C	3273	MET
2	C	3311	LYS
2	C	3323	MET
2	C	3328	LYS
2	C	3715	GLU
2	C	3719	MET
2	C	3772	THR
2	C	3784	LYS
2	C	3819	MET
2	C	3866	THR
2	C	3981	MET
2	C	4002	MET
2	C	4052	MET
2	C	4169	LYS
2	C	4242	ARG
2	C	4258	MET
2	C	4268	MET
2	C	4292	MET
2	C	4307	ARG
2	C	4568	MET
2	C	4647	LYS
2	C	4665	ARG
2	C	4726	MET
2	C	4728	MET
2	C	4743	LEU

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Mol	Chain	Res	Type
2	C	4804	MET
2	C	4814	MET
2	C	4943	MET
2	C	4945	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
1	H	26	HIS
2	A	487	ASN
2	A	544	ASN
2	A	877	HIS
2	A	2118	ASN
2	A	2899	ASN
2	A	2978	HIS
2	A	3304	GLN
1	E	26	HIS
1	F	26	HIS
1	G	26	HIS
2	D	487	ASN
2	D	544	ASN
2	D	877	HIS
2	D	2118	ASN
2	D	2978	HIS
2	D	3304	GLN
2	B	487	ASN
2	B	544	ASN
2	B	877	HIS
2	B	2118	ASN
2	B	2899	ASN
2	B	2978	HIS
2	B	3304	GLN
2	B	4863	GLN
2	C	487	ASN
2	C	544	ASN
2	C	877	HIS
2	C	2118	ASN
2	C	2899	ASN
2	C	2978	HIS
2	C	3304	GLN

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	D	5004	-	8,12,12	1.56	1 (12%)	4,17,17	6.59	2 (50%)
6	XAN	A	5004	-	8,12,12	1.56	1 (12%)	4,17,17	6.55	2 (50%)
4	ATP	C	5002	-	26,33,33	0.60	0	31,52,52	0.73	2 (6%)
4	ATP	A	5002	-	26,33,33	0.60	0	31,52,52	0.73	2 (6%)
4	ATP	B	5005	-	26,33,33	0.67	0	31,52,52	0.73	1 (3%)
6	XAN	C	5004	-	8,12,12	1.56	1 (12%)	4,17,17	6.56	2 (50%)
4	ATP	B	5002	-	26,33,33	0.59	0	31,52,52	0.73	2 (6%)
4	ATP	C	5005	-	26,33,33	0.67	0	31,52,52	0.73	1 (3%)
4	ATP	A	5005	-	26,33,33	0.67	0	31,52,52	0.73	1 (3%)
4	ATP	D	5002	-	26,33,33	0.60	0	31,52,52	0.74	2 (6%)
4	ATP	D	5005	-	26,33,33	0.67	0	31,52,52	0.73	1 (3%)
6	XAN	B	5004	-	8,12,12	1.57	1 (12%)	4,17,17	6.56	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	D	5004	-	-	-	0/2/2/2
6	XAN	A	5004	-	-	-	0/2/2/2
4	ATP	C	5002	-	-	8/18/38/38	0/3/3/3
4	ATP	A	5002	-	-	8/18/38/38	0/3/3/3
4	ATP	B	5005	-	-	8/18/38/38	0/3/3/3
6	XAN	C	5004	-	-	-	0/2/2/2
4	ATP	B	5002	-	-	8/18/38/38	0/3/3/3
4	ATP	C	5005	-	-	8/18/38/38	0/3/3/3
4	ATP	A	5005	-	-	7/18/38/38	0/3/3/3
4	ATP	D	5002	-	-	8/18/38/38	0/3/3/3
4	ATP	D	5005	-	-	8/18/38/38	0/3/3/3
6	XAN	B	5004	-	-	-	0/2/2/2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	B	5004	XAN	C6-N1	4.05	1.40	1.33
6	D	5004	XAN	C6-N1	4.02	1.40	1.33
6	A	5004	XAN	C6-N1	4.02	1.40	1.33
6	C	5004	XAN	C6-N1	4.01	1.40	1.33

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	D	5004	XAN	C2-N1-C6	11.30	124.68	115.14
6	B	5004	XAN	C2-N1-C6	11.25	124.64	115.14
6	C	5004	XAN	C2-N1-C6	11.23	124.63	115.14
6	A	5004	XAN	C2-N1-C6	11.22	124.61	115.14
6	D	5004	XAN	C5-C6-N1	-6.76	114.18	123.43
6	C	5004	XAN	C5-C6-N1	-6.74	114.22	123.43
6	B	5004	XAN	C5-C6-N1	-6.73	114.22	123.43
6	A	5004	XAN	C5-C6-N1	-6.73	114.23	123.43
4	D	5002	ATP	C5-C6-N6	2.30	123.84	120.35
4	C	5002	ATP	C5-C6-N6	2.29	123.84	120.35
4	B	5005	ATP	C5-C6-N6	2.27	123.81	120.35
4	A	5002	ATP	C5-C6-N6	2.27	123.80	120.35
4	D	5005	ATP	C5-C6-N6	2.27	123.80	120.35
4	C	5005	ATP	C5-C6-N6	2.26	123.79	120.35
4	A	5005	ATP	C5-C6-N6	2.26	123.79	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	B	5002	ATP	C5-C6-N6	2.25	123.78	120.35
4	D	5002	ATP	PB-O3B-PG	2.07	139.93	132.83
4	A	5002	ATP	PB-O3B-PG	2.06	139.90	132.83
4	B	5002	ATP	PB-O3B-PG	2.06	139.89	132.83
4	C	5002	ATP	PB-O3B-PG	2.05	139.87	132.83

There are no chirality outliers.

All (63) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	5002	ATP	C5'-O5'-PA-O3A
4	A	5005	ATP	PB-O3B-PG-O2G
4	A	5005	ATP	C5'-O5'-PA-O1A
4	A	5005	ATP	C5'-O5'-PA-O2A
4	D	5002	ATP	C5'-O5'-PA-O3A
4	D	5005	ATP	PB-O3B-PG-O2G
4	D	5005	ATP	C5'-O5'-PA-O1A
4	D	5005	ATP	C5'-O5'-PA-O2A
4	B	5002	ATP	C5'-O5'-PA-O3A
4	B	5005	ATP	PB-O3B-PG-O2G
4	B	5005	ATP	C5'-O5'-PA-O1A
4	B	5005	ATP	C5'-O5'-PA-O2A
4	C	5002	ATP	C5'-O5'-PA-O3A
4	C	5005	ATP	PB-O3B-PG-O2G
4	C	5005	ATP	C5'-O5'-PA-O1A
4	C	5005	ATP	C5'-O5'-PA-O2A
4	A	5005	ATP	O4'-C4'-C5'-O5'
4	A	5005	ATP	C3'-C4'-C5'-O5'
4	D	5005	ATP	O4'-C4'-C5'-O5'
4	D	5005	ATP	C3'-C4'-C5'-O5'
4	B	5005	ATP	O4'-C4'-C5'-O5'
4	B	5005	ATP	C3'-C4'-C5'-O5'
4	C	5005	ATP	O4'-C4'-C5'-O5'
4	C	5005	ATP	C3'-C4'-C5'-O5'
4	A	5002	ATP	C3'-C4'-C5'-O5'
4	D	5002	ATP	C3'-C4'-C5'-O5'
4	B	5002	ATP	C3'-C4'-C5'-O5'
4	C	5002	ATP	C3'-C4'-C5'-O5'
4	A	5002	ATP	O4'-C4'-C5'-O5'
4	D	5002	ATP	O4'-C4'-C5'-O5'
4	B	5002	ATP	O4'-C4'-C5'-O5'
4	C	5002	ATP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
4	A	5002	ATP	C4'-C5'-O5'-PA
4	D	5002	ATP	C4'-C5'-O5'-PA
4	B	5002	ATP	C4'-C5'-O5'-PA
4	C	5002	ATP	C4'-C5'-O5'-PA
4	A	5002	ATP	C5'-O5'-PA-O1A
4	A	5002	ATP	C5'-O5'-PA-O2A
4	D	5002	ATP	C5'-O5'-PA-O1A
4	D	5002	ATP	C5'-O5'-PA-O2A
4	B	5002	ATP	C5'-O5'-PA-O1A
4	B	5002	ATP	C5'-O5'-PA-O2A
4	C	5002	ATP	C5'-O5'-PA-O1A
4	C	5002	ATP	C5'-O5'-PA-O2A
4	A	5002	ATP	PA-O3A-PB-O3B
4	D	5002	ATP	PA-O3A-PB-O3B
4	B	5002	ATP	PA-O3A-PB-O3B
4	C	5002	ATP	PA-O3A-PB-O3B
4	A	5005	ATP	PB-O3B-PG-O3G
4	D	5005	ATP	PB-O3B-PG-O3G
4	B	5005	ATP	PB-O3B-PG-O3G
4	C	5005	ATP	PB-O3B-PG-O3G
4	A	5005	ATP	C5'-O5'-PA-O3A
4	D	5005	ATP	C5'-O5'-PA-O3A
4	B	5005	ATP	C5'-O5'-PA-O3A
4	C	5005	ATP	C5'-O5'-PA-O3A
4	A	5002	ATP	PB-O3A-PA-O2A
4	D	5002	ATP	PB-O3A-PA-O2A
4	D	5005	ATP	PA-O3A-PB-O2B
4	B	5002	ATP	PB-O3A-PA-O2A
4	B	5005	ATP	PA-O3A-PB-O2B
4	C	5002	ATP	PB-O3A-PA-O2A
4	C	5005	ATP	PA-O3A-PB-O2B

There are no ring outliers.

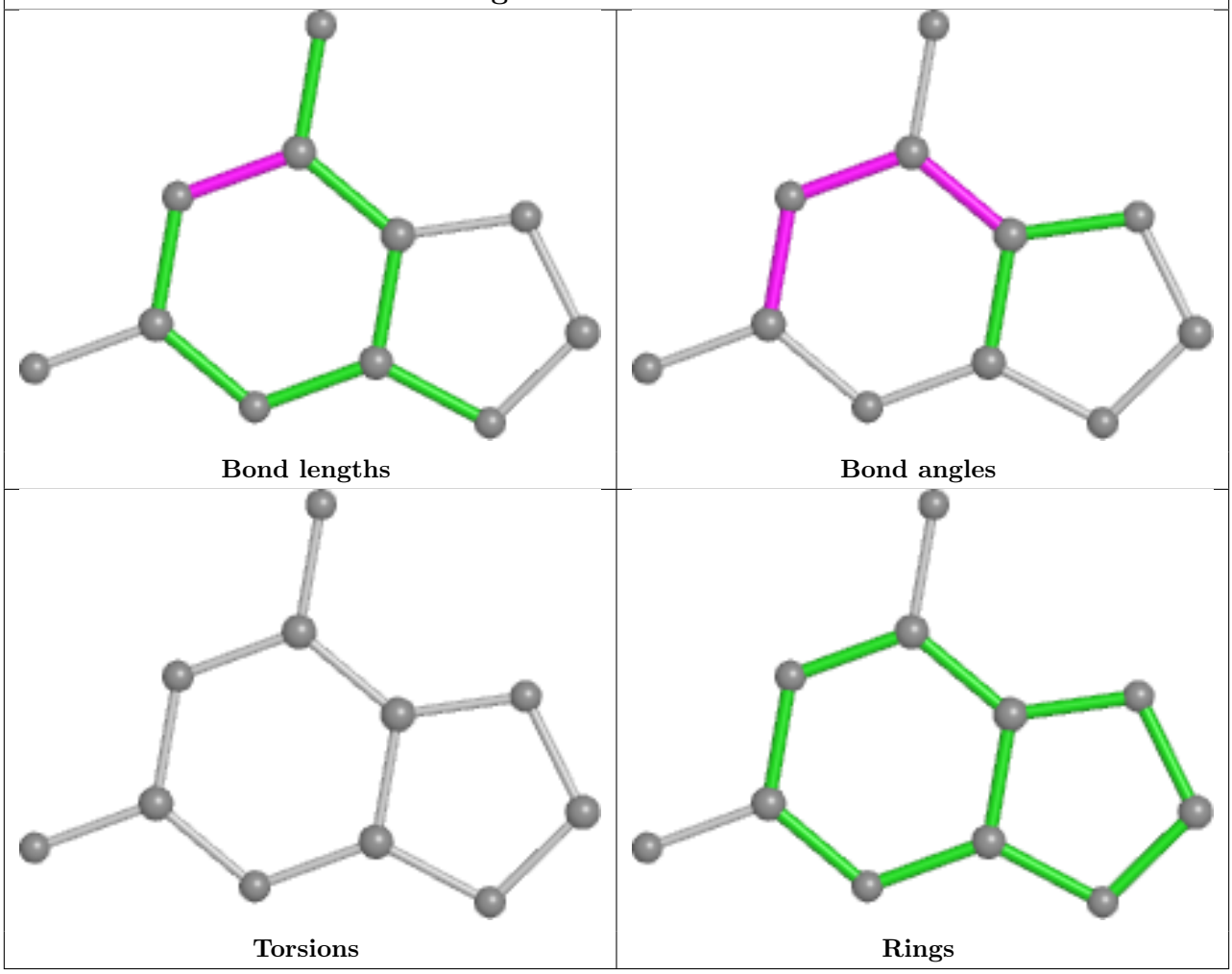
4 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	C	5002	ATP	5	0
4	A	5002	ATP	5	0
4	B	5002	ATP	5	0
4	D	5002	ATP	5	0

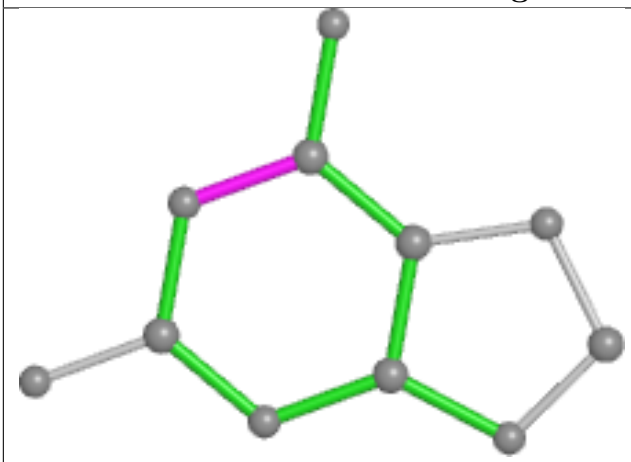
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths,

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.

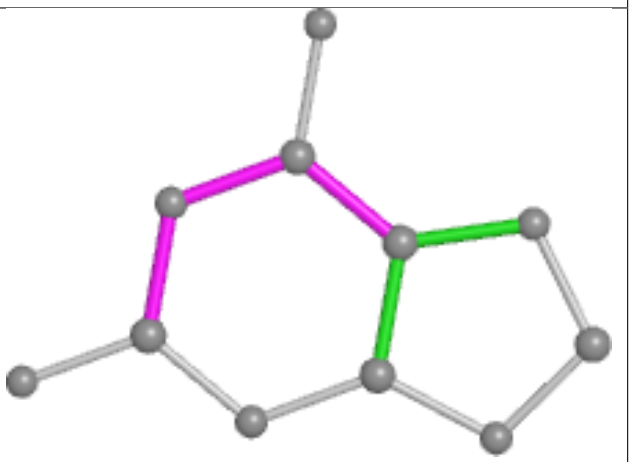
Ligand XAN D 5004



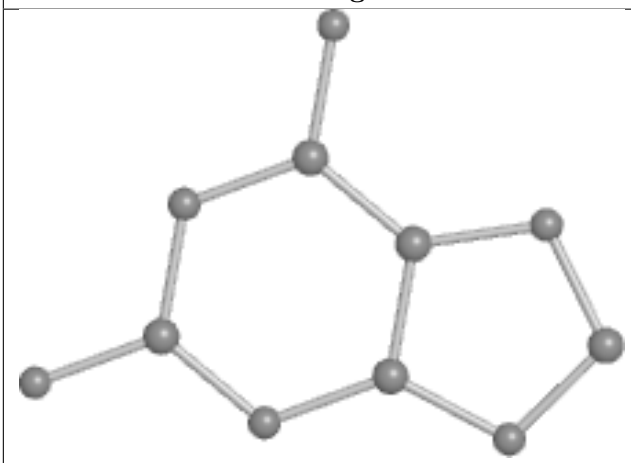
Ligand XAN A 5004



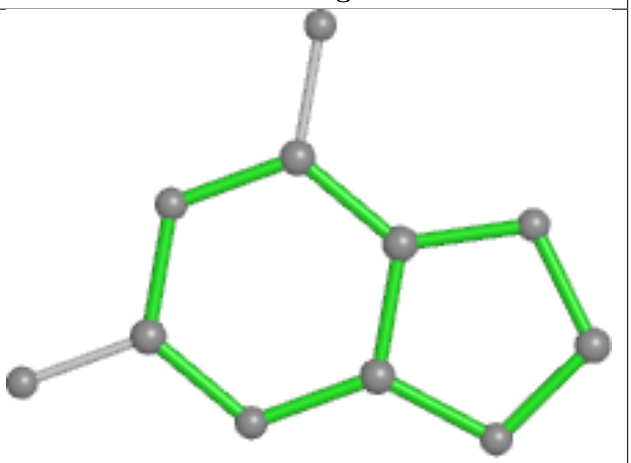
Bond lengths



Bond angles

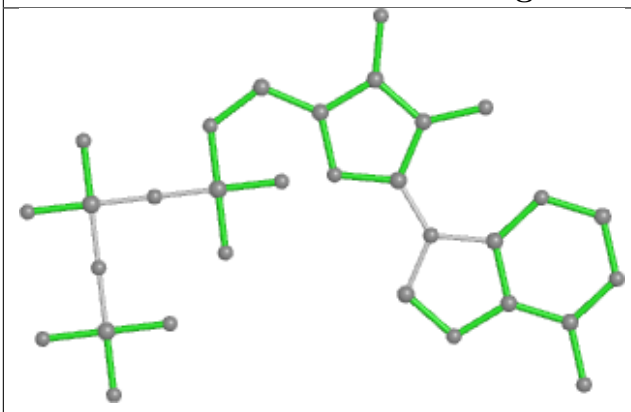


Torsions

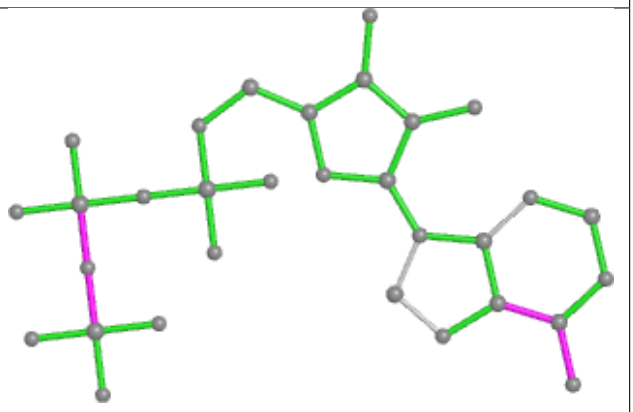


Rings

Ligand ATP C 5002



Bond lengths



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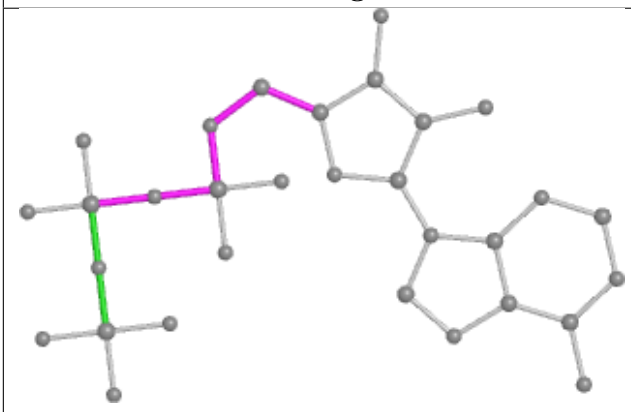

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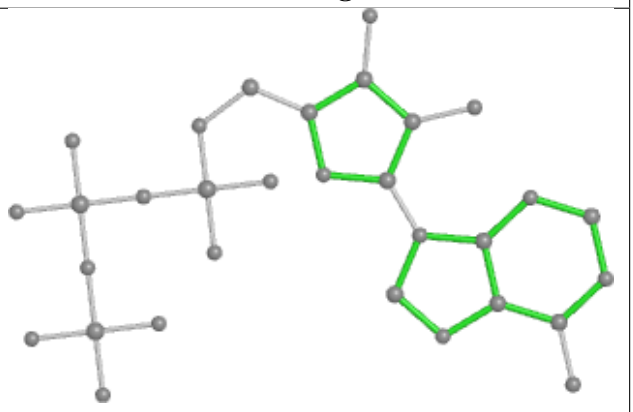
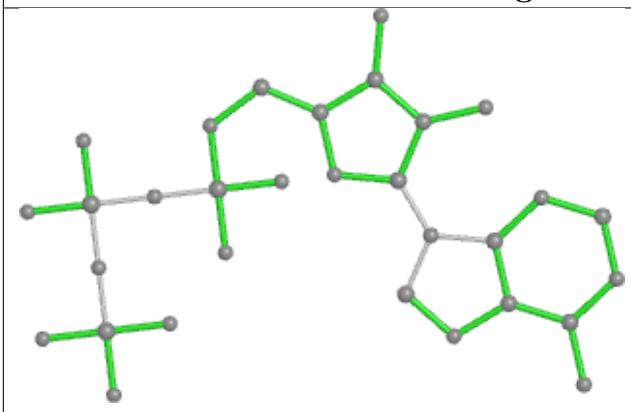


Rings

Ligand ATP A 5002



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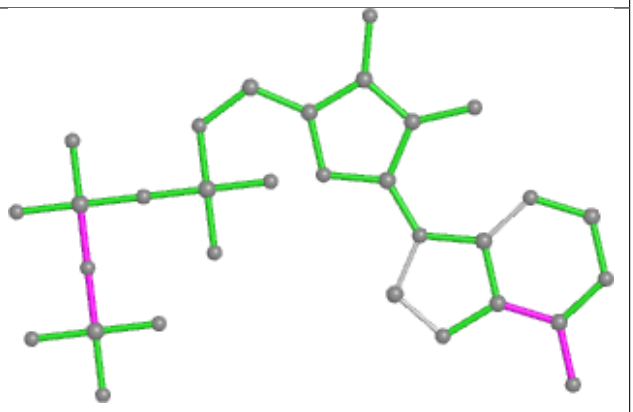
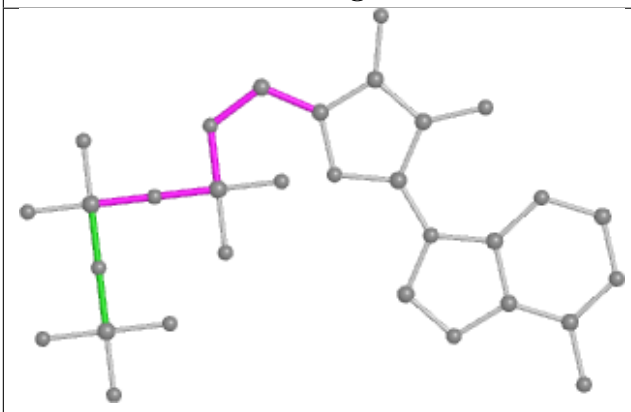
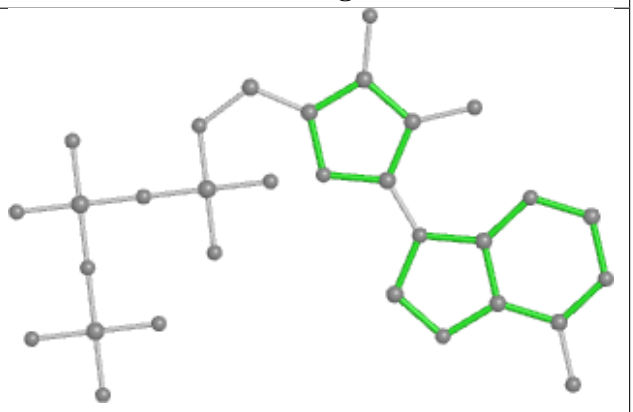


Bond angles

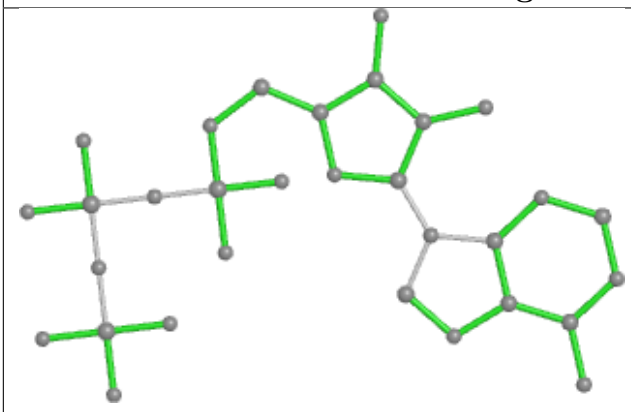


Torsions

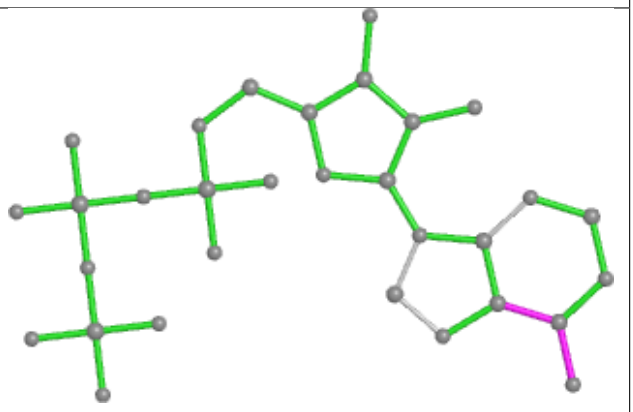


Rings

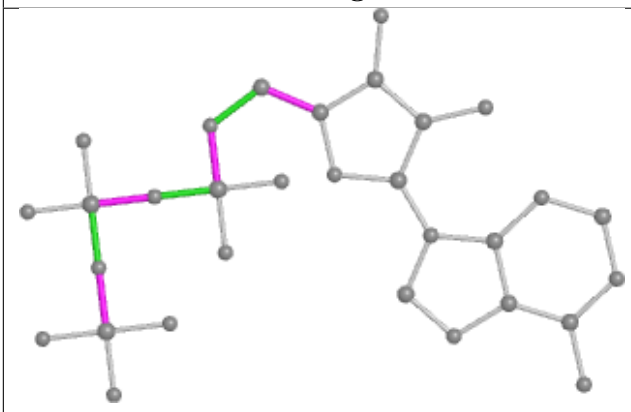
Ligand ATP B 5005



Bond lengths



Bond angles



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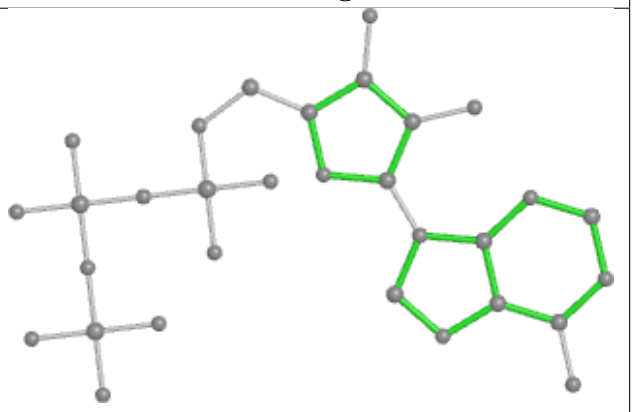
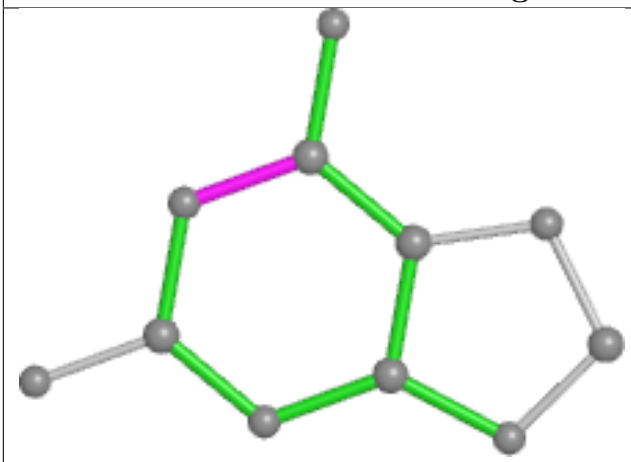
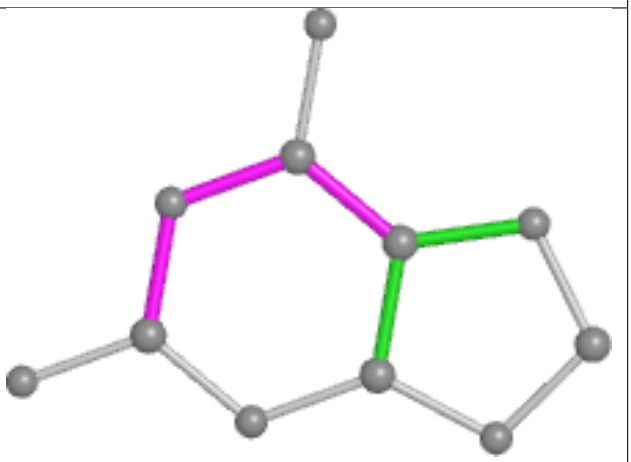


Rings

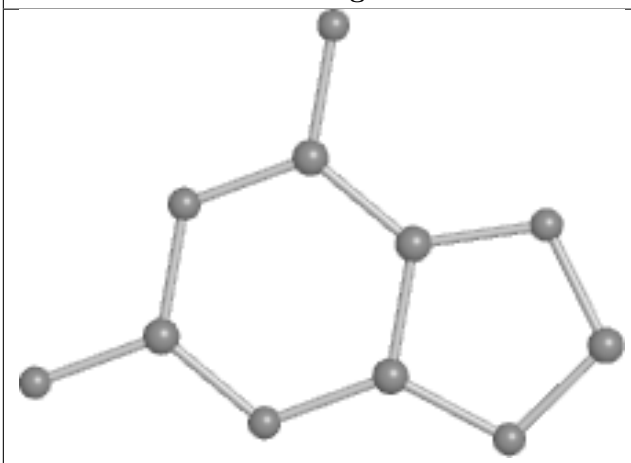
Ligand XAN C 5004



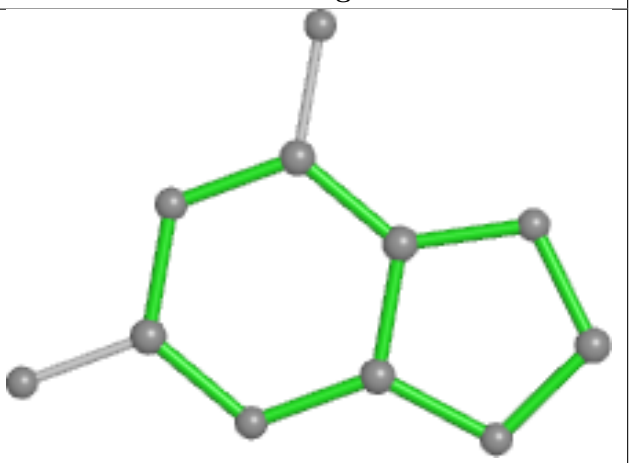
Bond lengths



Bond angles

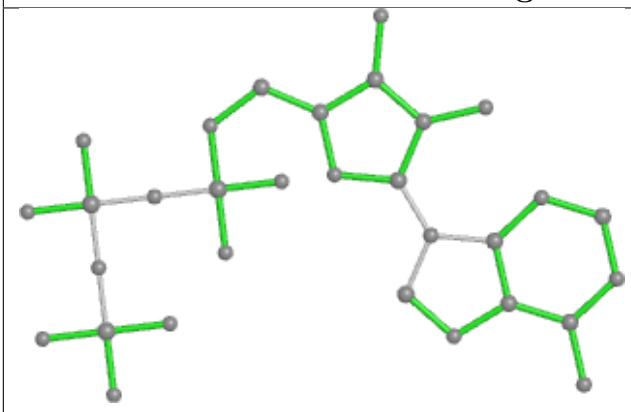


Torsions

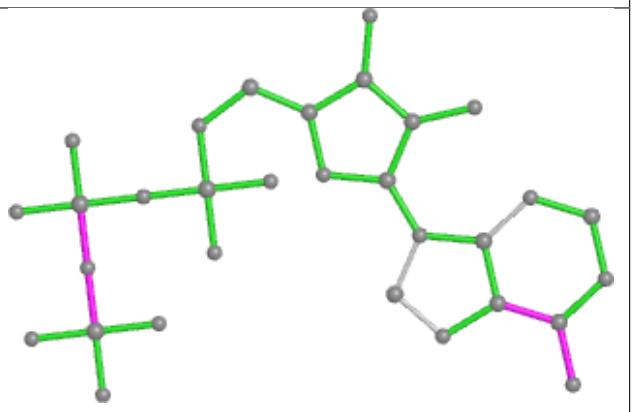


Rings

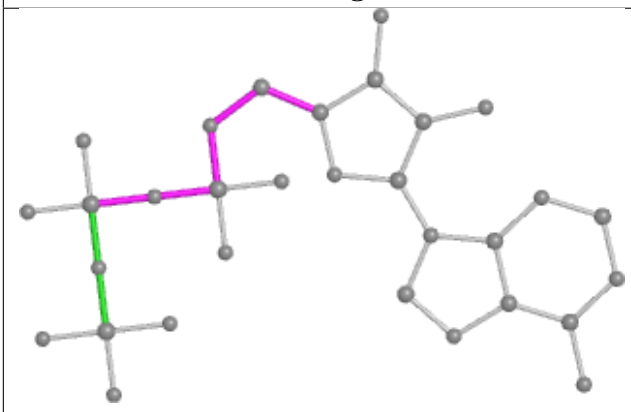
Ligand ATP B 5002



Bond lengths



Bond angles



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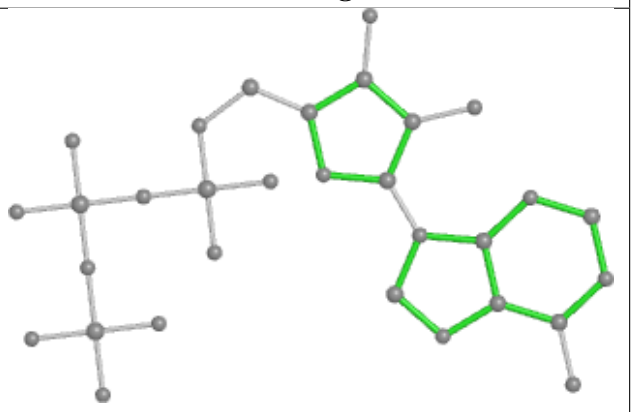
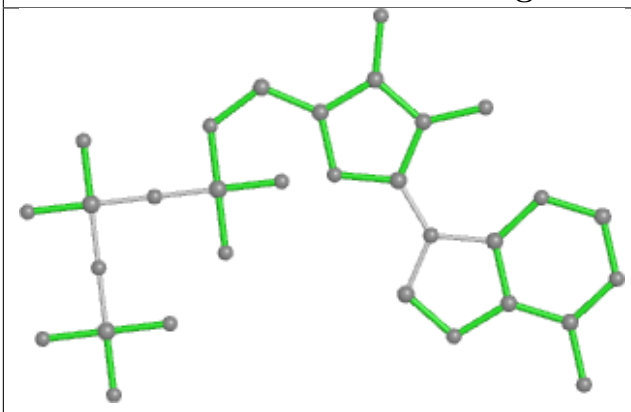
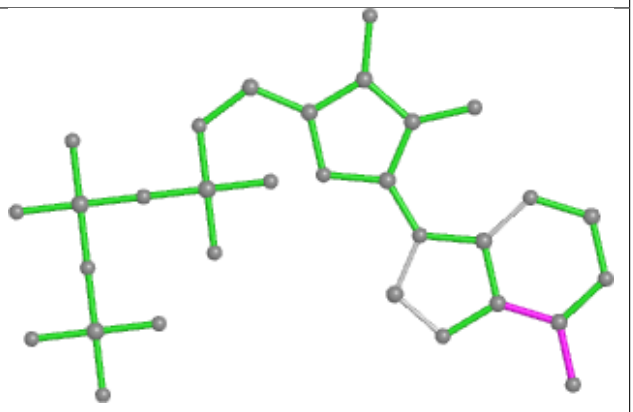


Rings

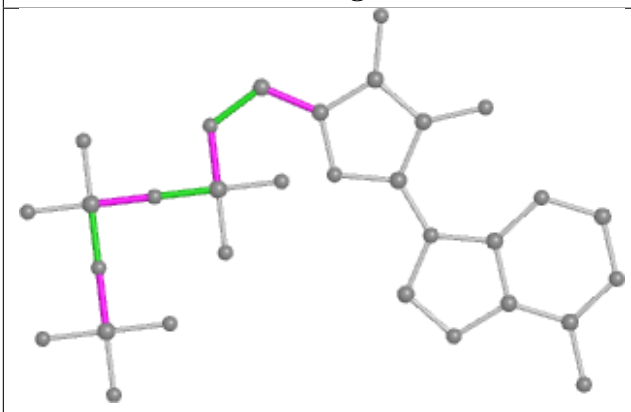
Ligand ATP C 5005



Bond lengths



Bond angles



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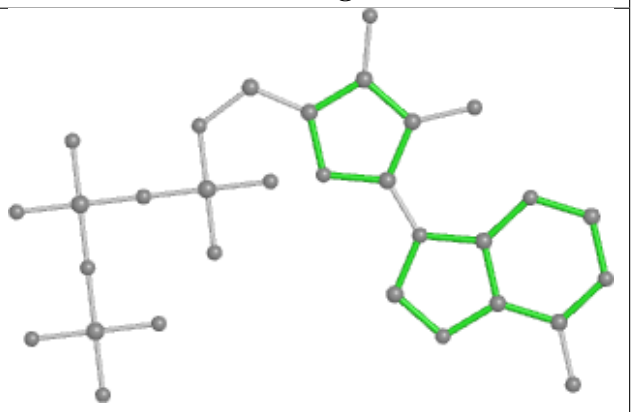
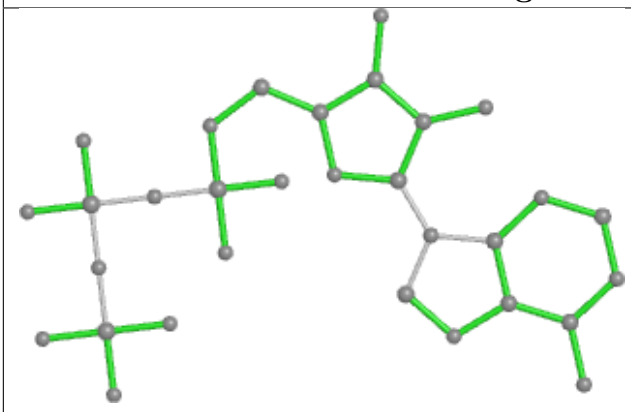


Rings

Ligand ATP A 5005



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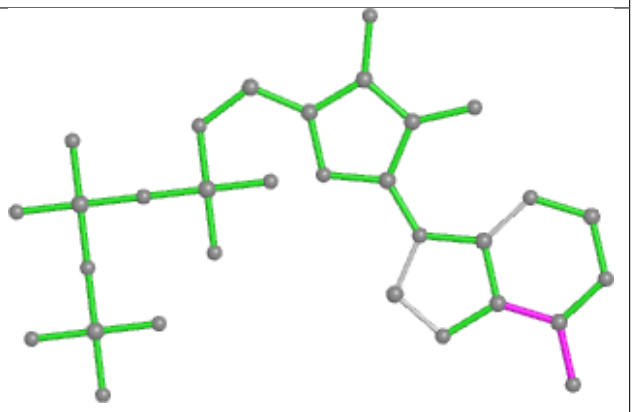
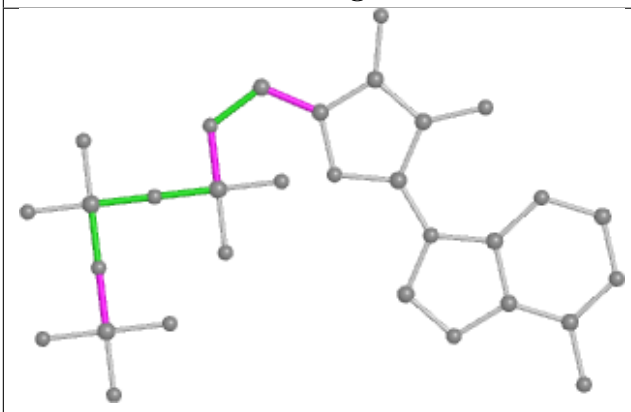
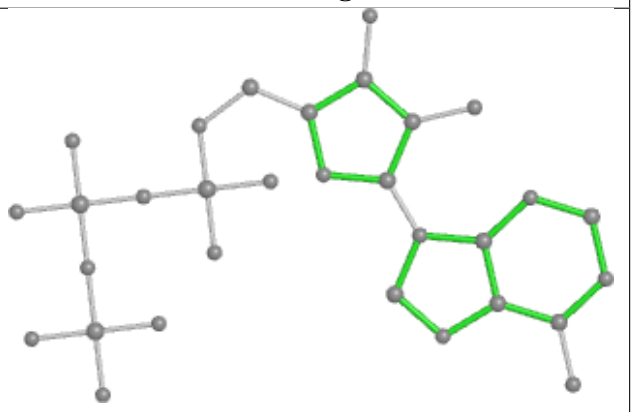


Bond angles

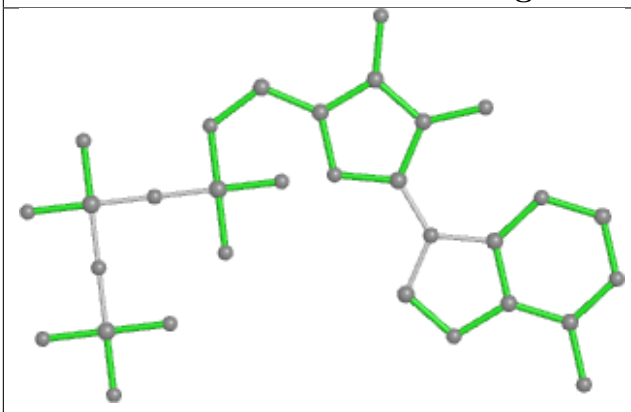


Torsions

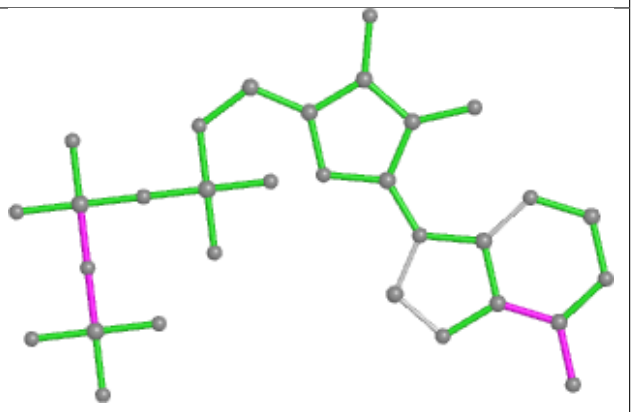


Rings

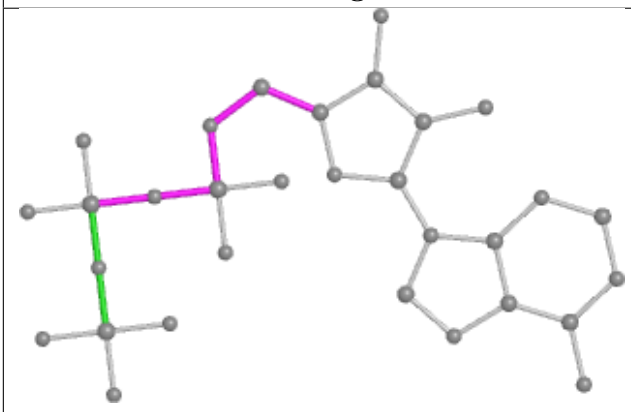
Ligand ATP D 5002



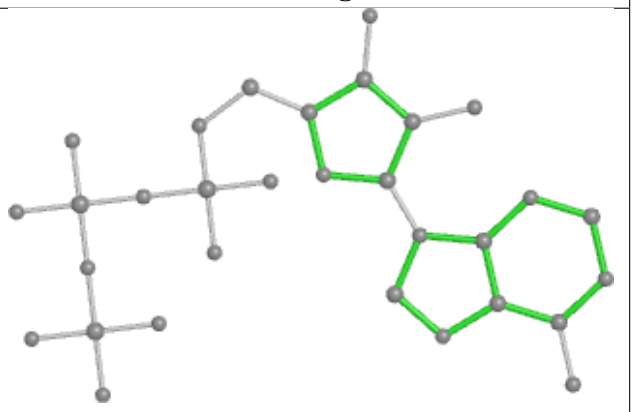
Bond lengths



Bond angles

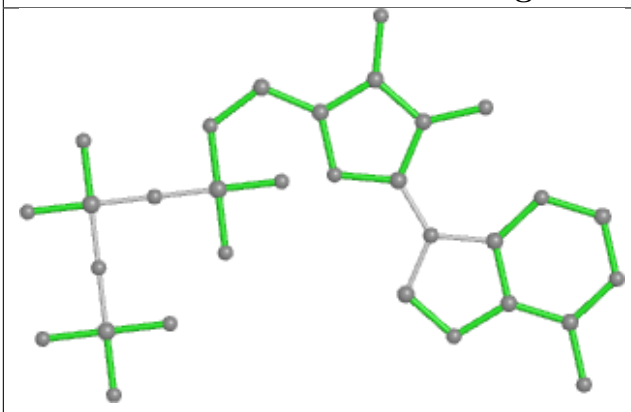


Torsions

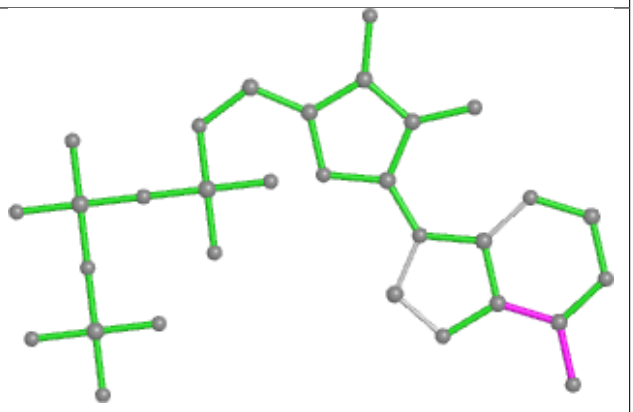


Rings

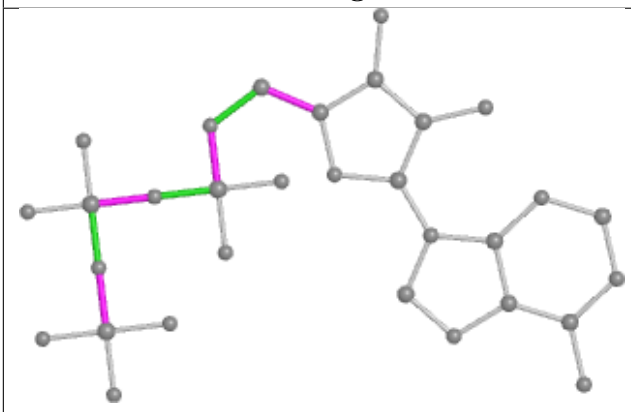
Ligand ATP D 5005



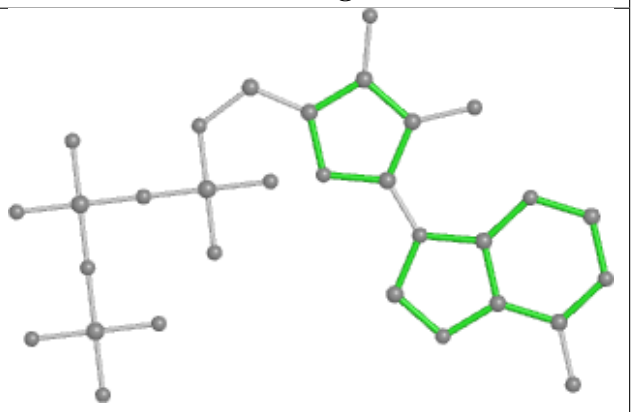
Bond lengths



Bond angles

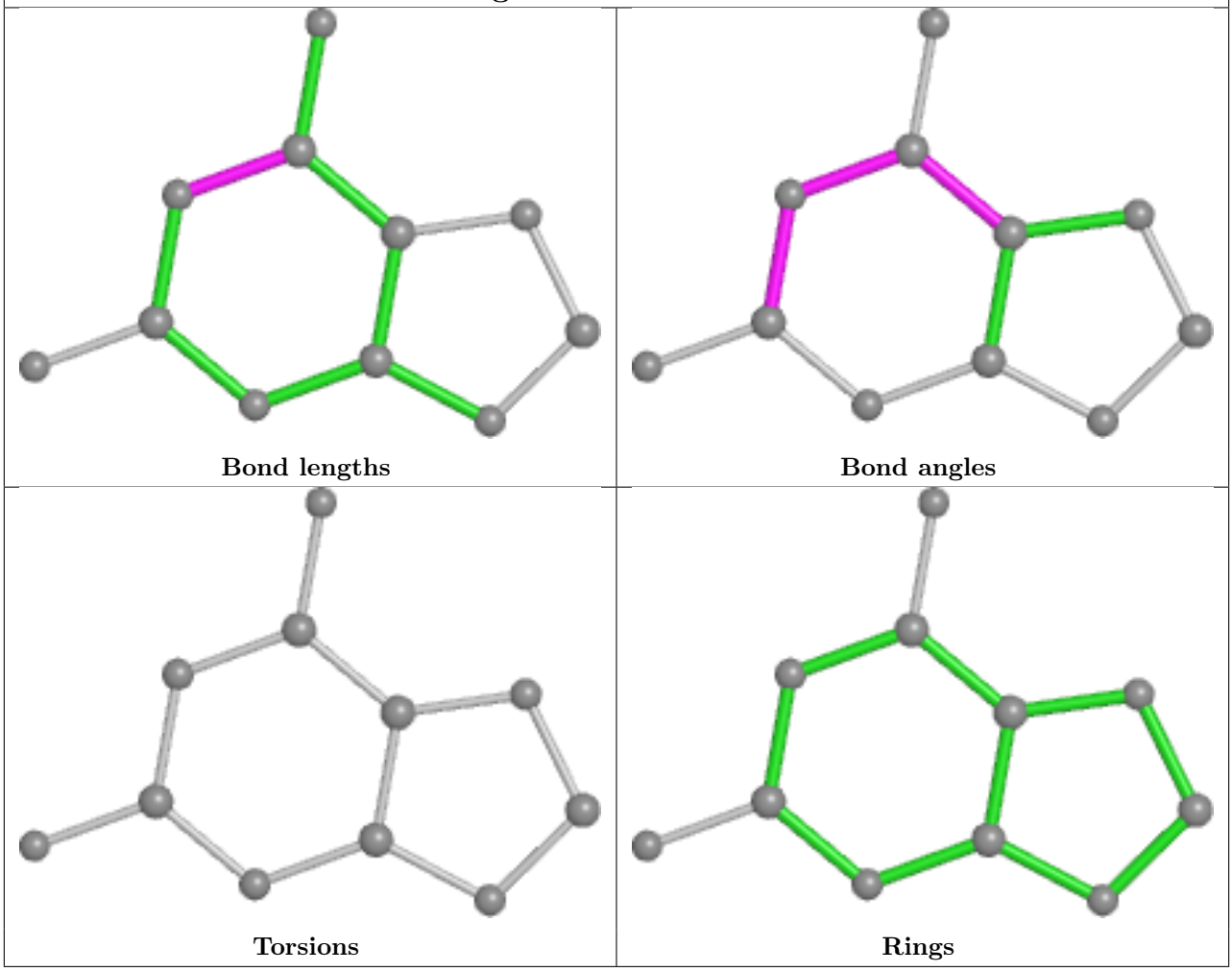


Torsions



Rings

Ligand XAN B 5004



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

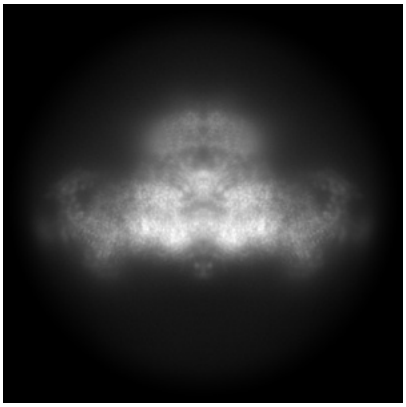
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26407. These allow visual inspection of the internal detail of the map and identification of artifacts.

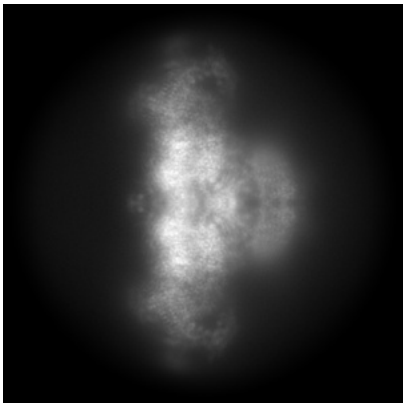
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

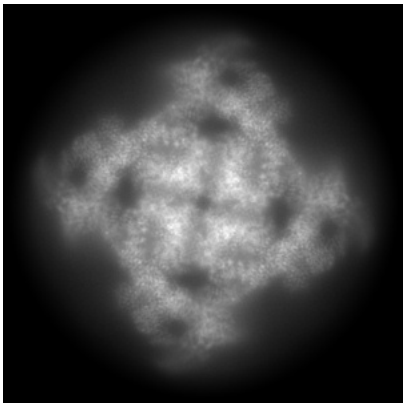
6.1.1 Primary map



X



Y

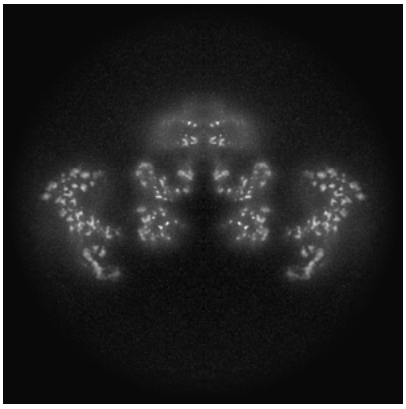


Z

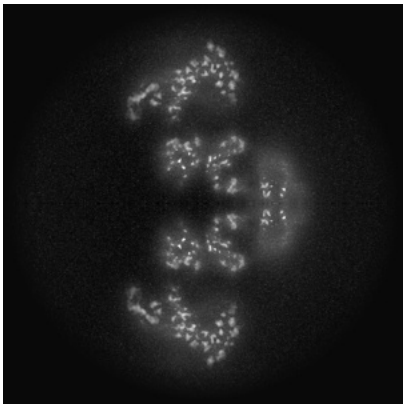
The images above show the map projected in three orthogonal directions.

6.2 Central slices

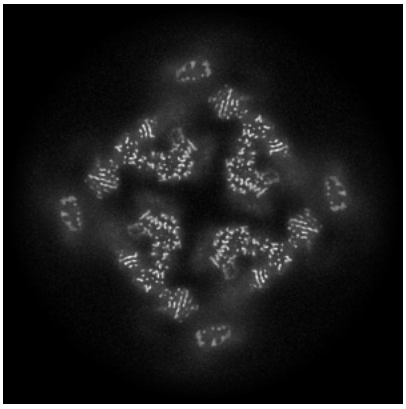
6.2.1 Primary map



X Index: 256



Y Index: 256

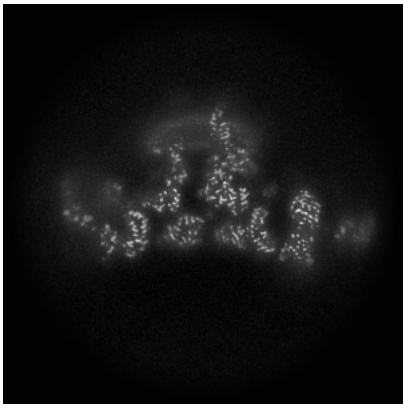


Z Index: 256

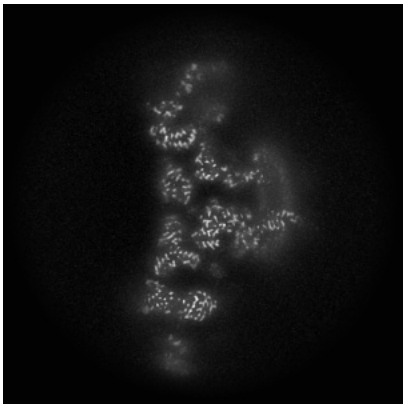
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

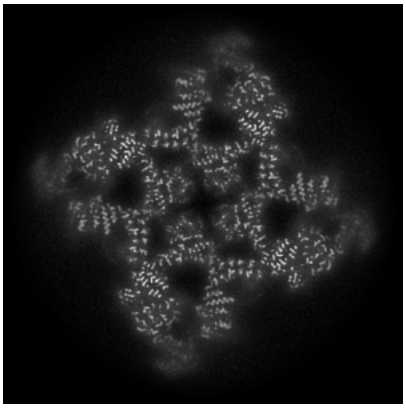
6.3.1 Primary map



X Index: 292



Y Index: 292

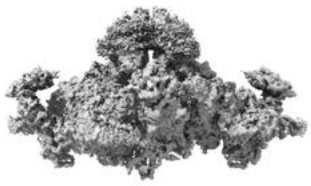


Z Index: 227

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

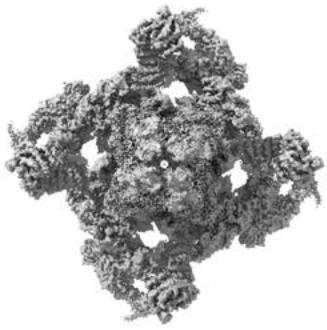
6.4 Orthogonal surface views (i)

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.

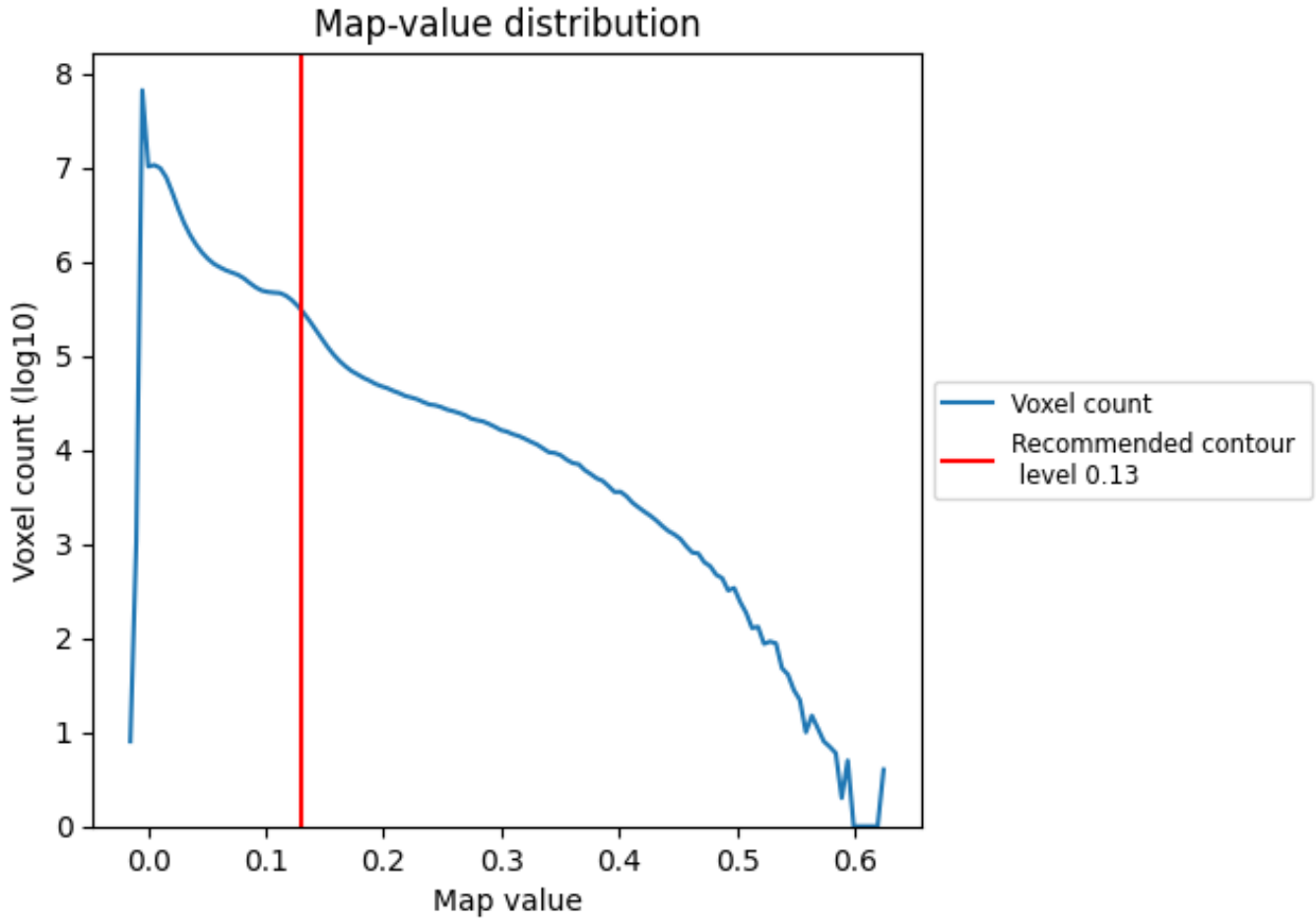
6.5 Mask visualisation (i)

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

7 Map analysis

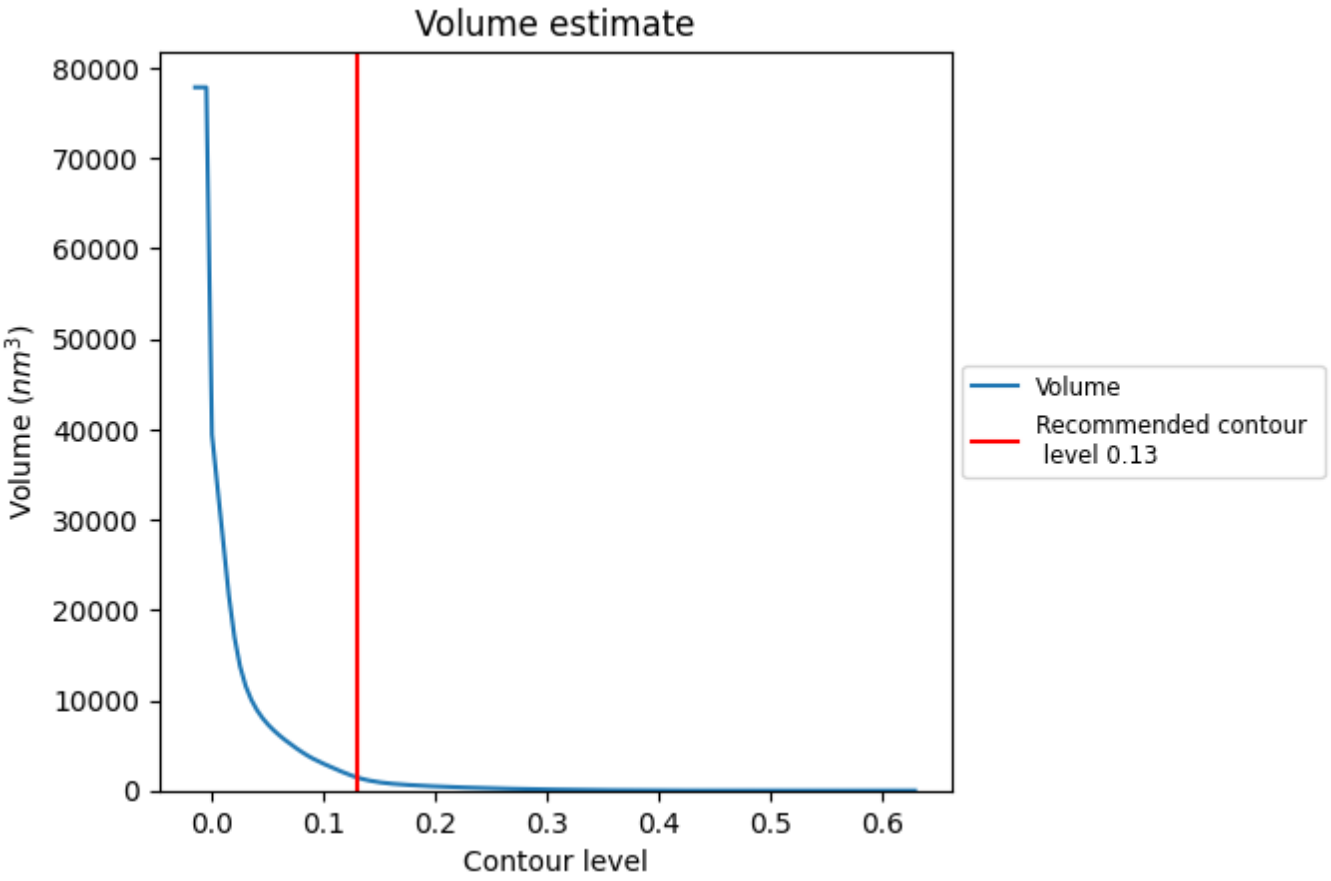
This section contains the results of statistical analysis of the map.

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.

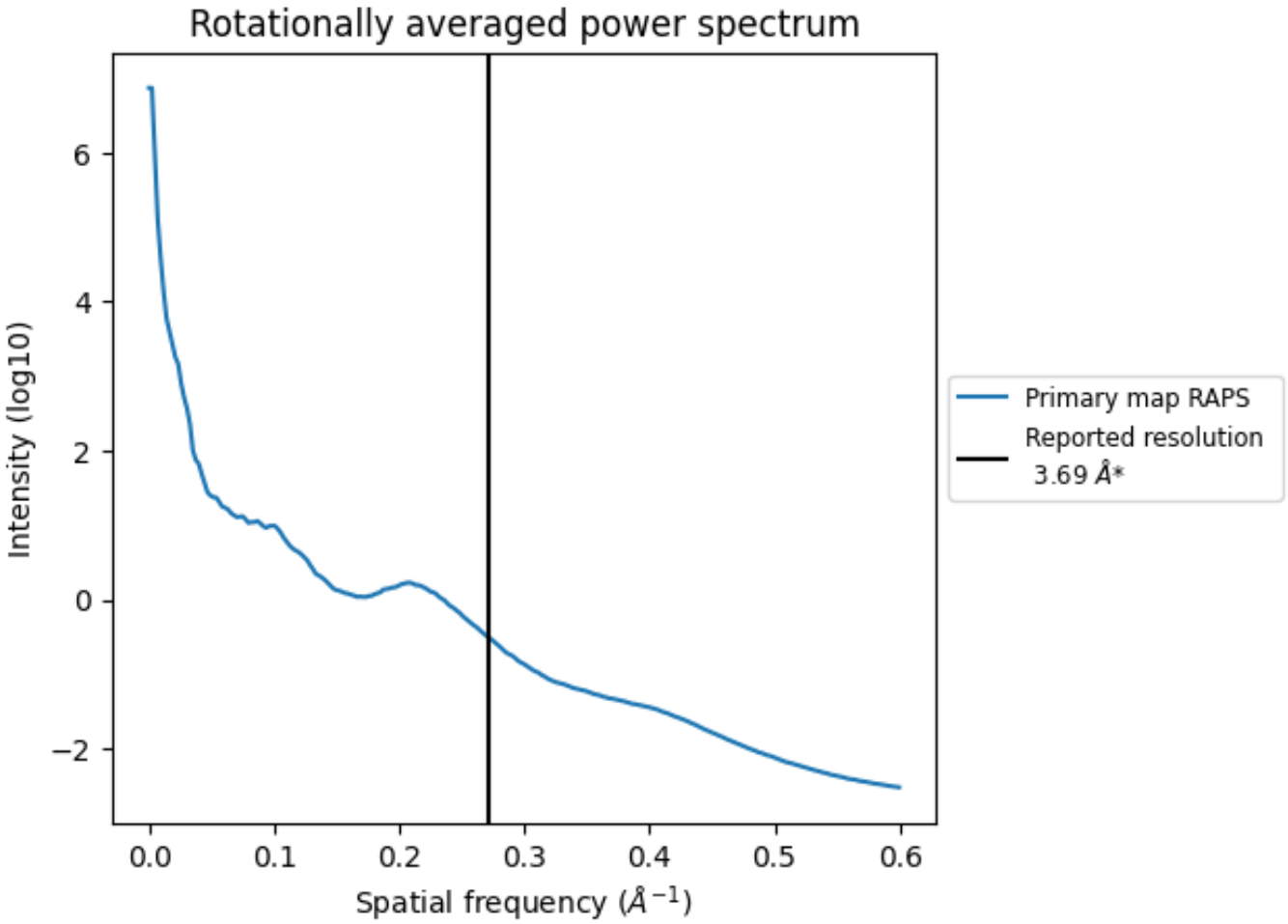
7.2 Volume estimate



The volume at the recommended contour level is 1461 nm^3; this corresponds to an approximate mass of 1320 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 0.271 Å^{-1}

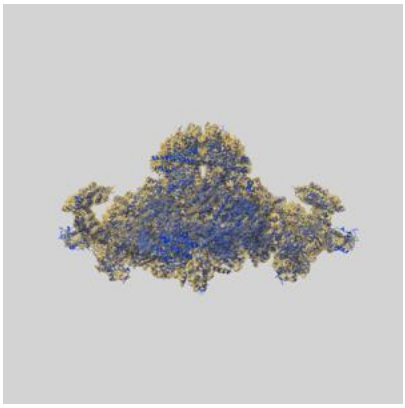
8 Fourier-Shell correlation (i)

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

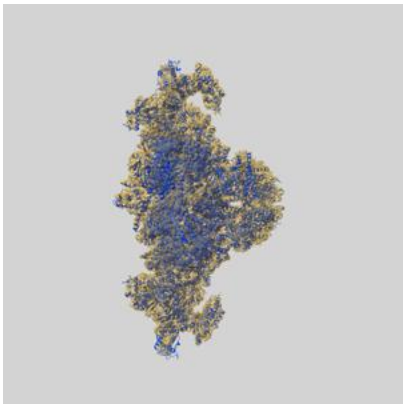
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-26407 and PDB model 7U9R. Per-residue inclusion information can be found in section 3 on page 6.

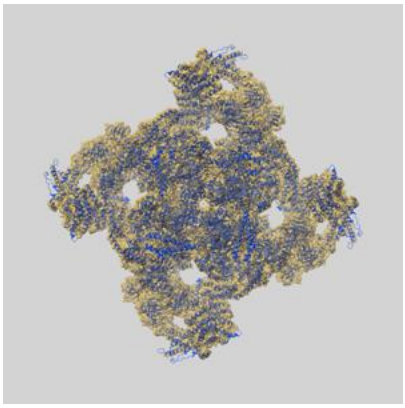
9.1 Map-model overlay



X



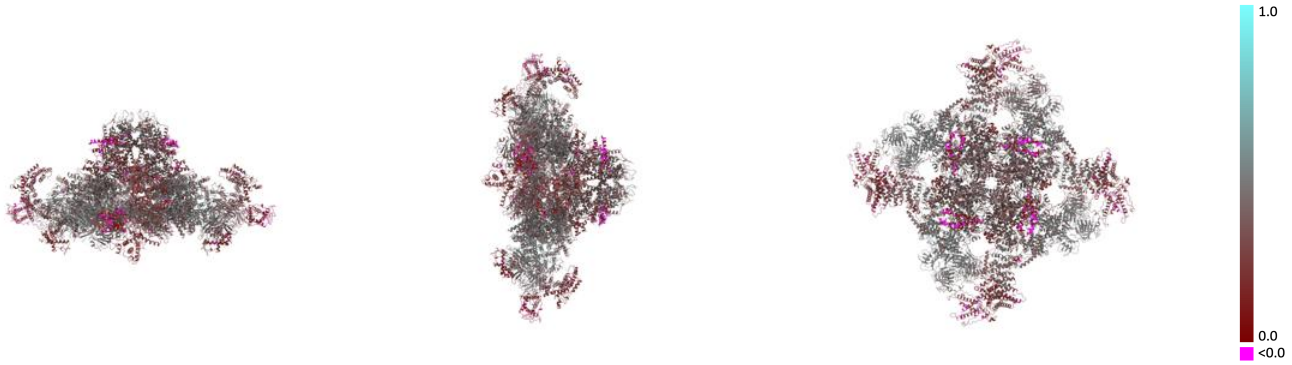
Y



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.

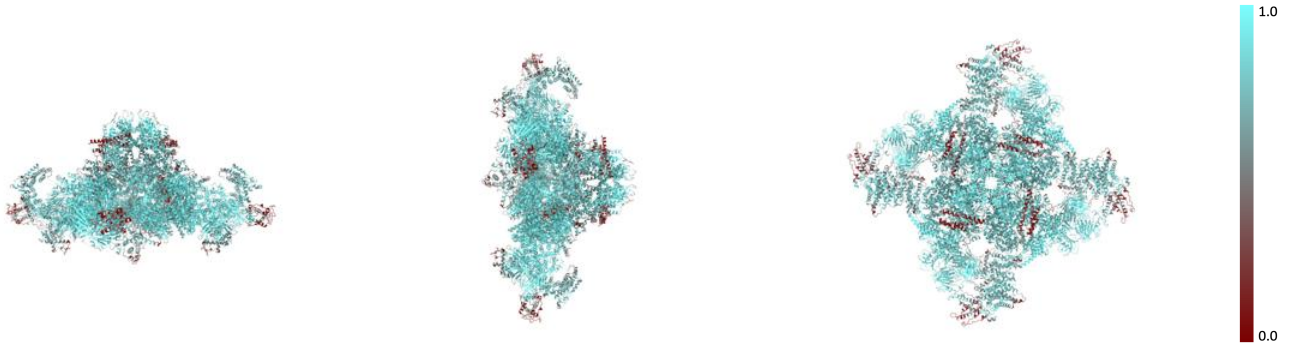
9.2 Q-score mapped to coordinate model



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.

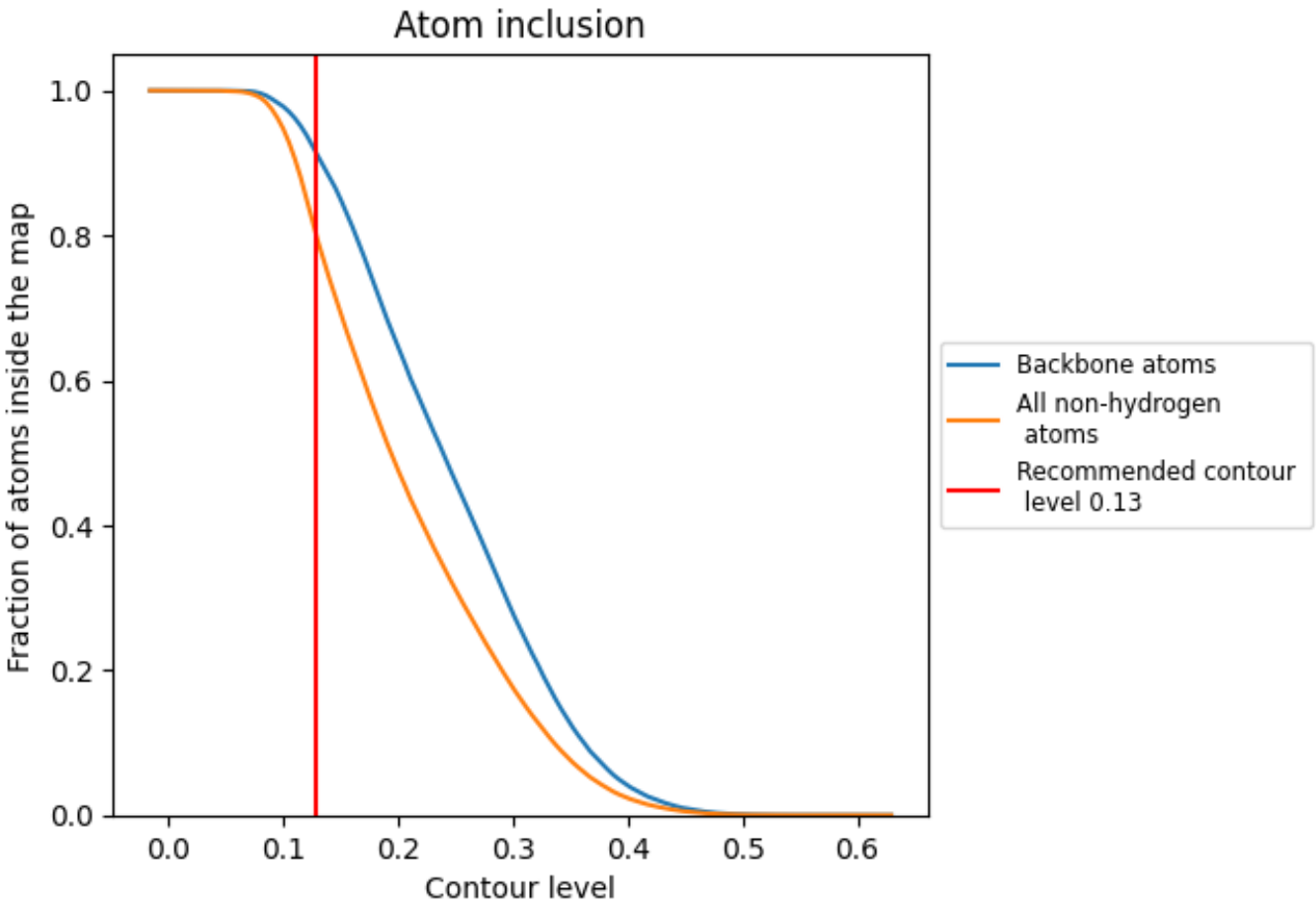
9.3 Atom inclusion mapped to coordinate model



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, 91% of all backbone atoms, 80% 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	0.7976	0.3530
A	0.7992	0.3650
B	0.7928	0.3440
C	0.7908	0.3410
D	0.7964	0.3510
E	0.9169	0.4860
F	0.9194	0.4720
G	0.9119	0.4770
H	0.9094	0.4720