Full wwPDB EM Validation Report

Mar 9, 2026 – 03:34 PM UTC

PDB ID	:	8UQ5 / pdb_00008uq5
EMDB ID	:	EMD-42461
Title	:	Structure of human RyR2-S2808D in the primed state in the presence of Rapamycin
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2023-10-23
Resolution	:	3.96 Å(reported)
Based on initial model	:	7UA5

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

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

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

The following versions of software and data (see references (1)) were used in the production of this report:

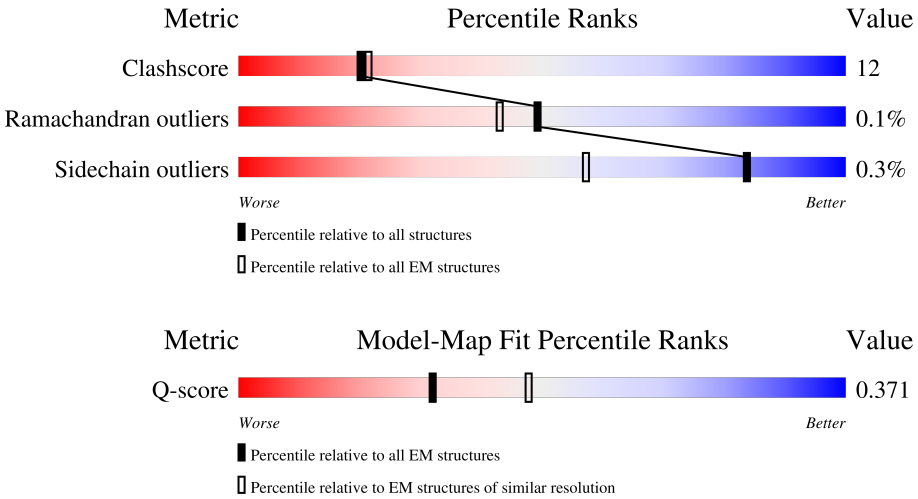
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance

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

The reported resolution of this entry is 3.96 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	7646 (3.46 - 4.46)

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

Mol	Chain	Length	Quality of chain
1	A	4967	16% 61% 24% 15%
1	B	4967	16% 61% 24% 15%
1	C	4967	16% 61% 24% 15%
1	D	4967	16% 61% 24% 15%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 135336 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 2.

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

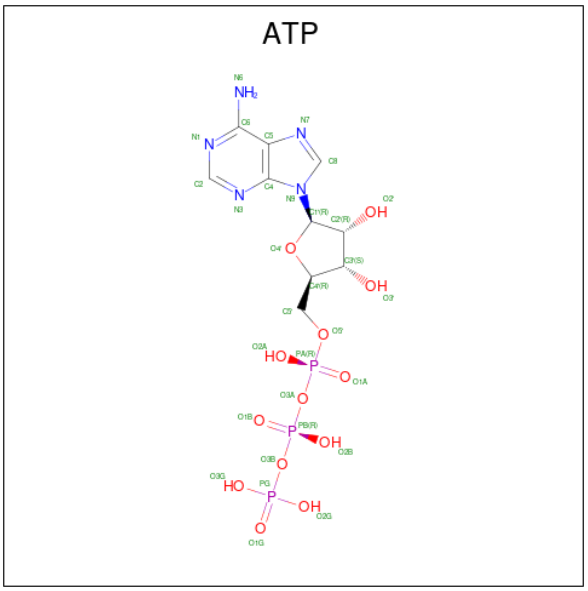
There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	2808	ASP	SER	engineered mutation	UNP Q92736
B	2808	ASP	SER	engineered mutation	UNP Q92736
C	2808	ASP	SER	engineered mutation	UNP Q92736
D	2808	ASP	SER	engineered mutation	UNP Q92736

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

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

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).

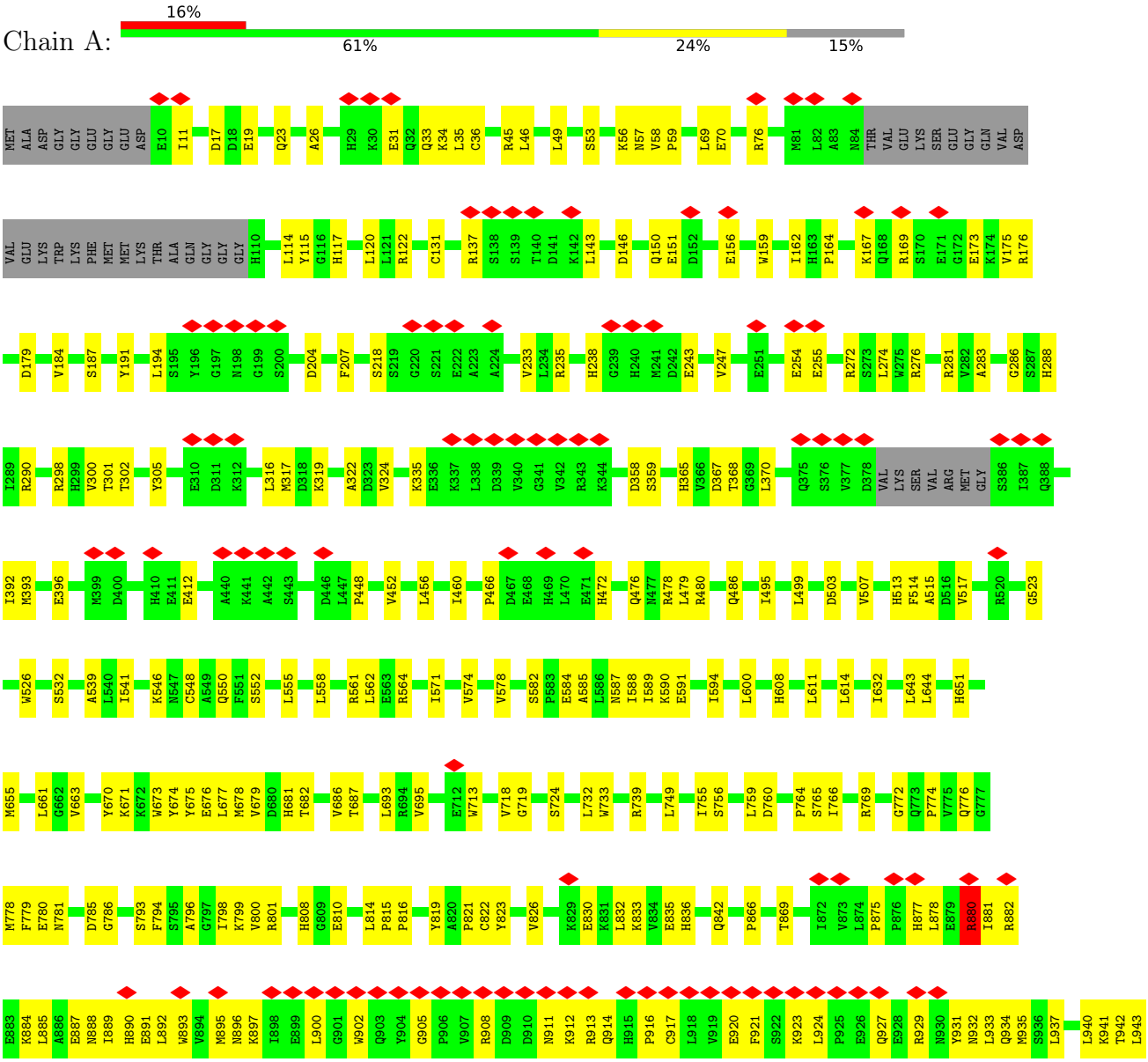


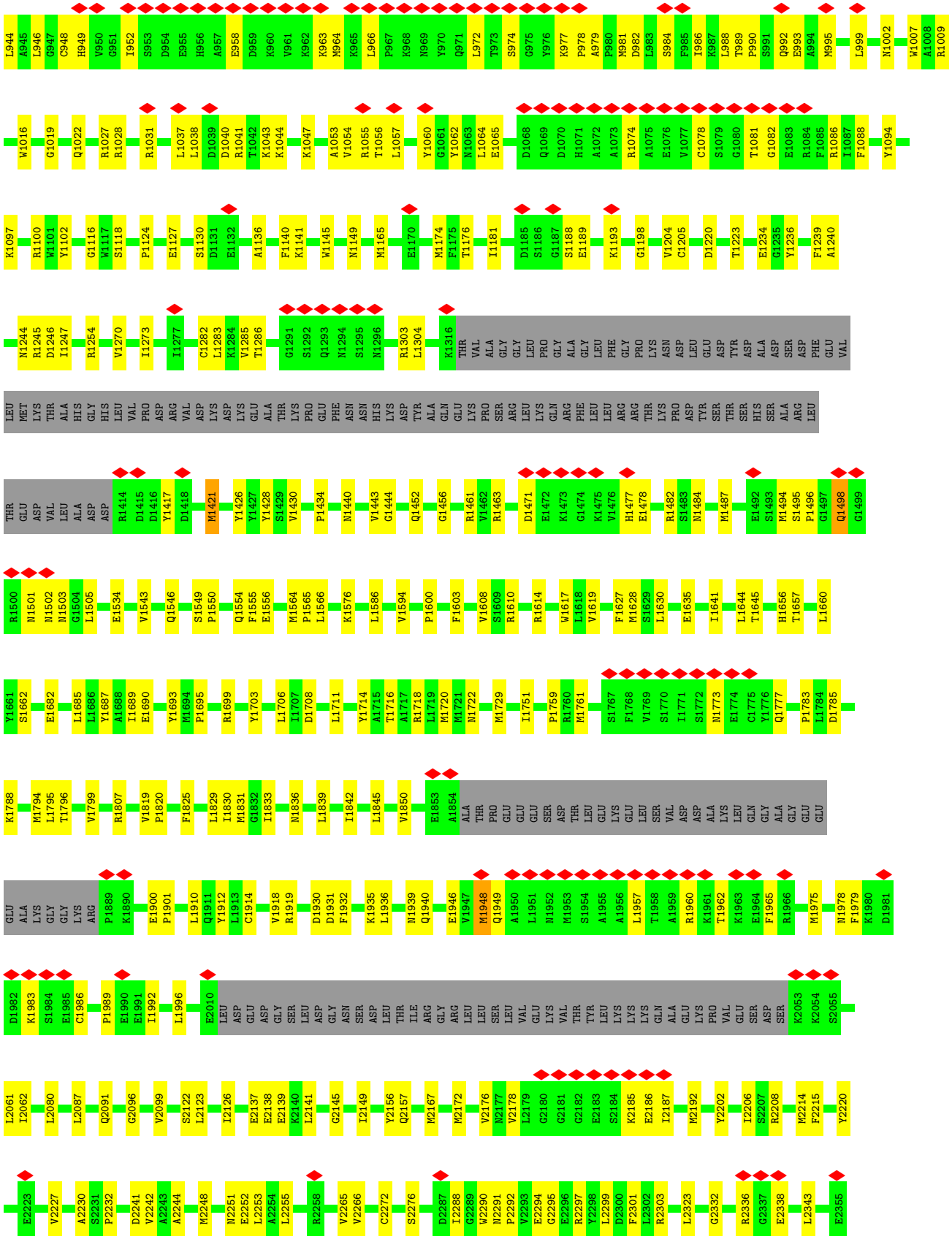
Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	C	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	C	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	D	1	Total	C	N	O	P	0
			31	10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

3 Residue-property plots (i)

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

- Molecule 1: Ryanodine receptor 2

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W1016 G1019 Q1022 R1027 R1028 R1031 L1037 L1038 D1039 D1040 R1041 T1042 K1043 K1044 K1047 A1053 V1054 R1055 T1056 L1057 Y1060 G1061 Y1062 N1063 L1064 E1065 D1068 Q1069 D1070 H1071 A1072 A1073 R1074 A1075 E1076 V1077 C1078 S1079 G1080 T1081 G1082 E1083 R1084 F1085 R1086 I1087 F1088 Y1094
K1097 R1100 W1101 Y1102 G1116 W1117 S1118 P1124 E1127 S1130 D1131 E1132 A1136 F1140 K1141 W1145 N1149 M1165 E1170 M1174 F1175 T1176 I1181 D1185 S1186 G1187 S1188 E1189 K1193 G1198 V1204 C1205 D1220 T1223 E1234 G1235 Y1236 F1239 A1240
N1244 R1245 D1246 I1247 R1254 V1270 I1273 I1277 C1282 L1283 K1284 V1285 T1286 G1291 S1292 Q1293 N1294 S1295 N1296 R1303 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL
LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ASP ALA ARG LEU
THR GLU ASP VAL LEU ALA ASP ASP R1414 D1415 D1416 Y1417 D1418 M1421 Y1426 Y1427 Y1428 S1429 V1430 P1434 N1440 V1443 G1444 Q1452 G1456 R1461 V1462 R1463 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 R1482 S1483 N1484 M1487 E1492 S1493 M1494 S1495 P1496 G1497 Q1498 G1499
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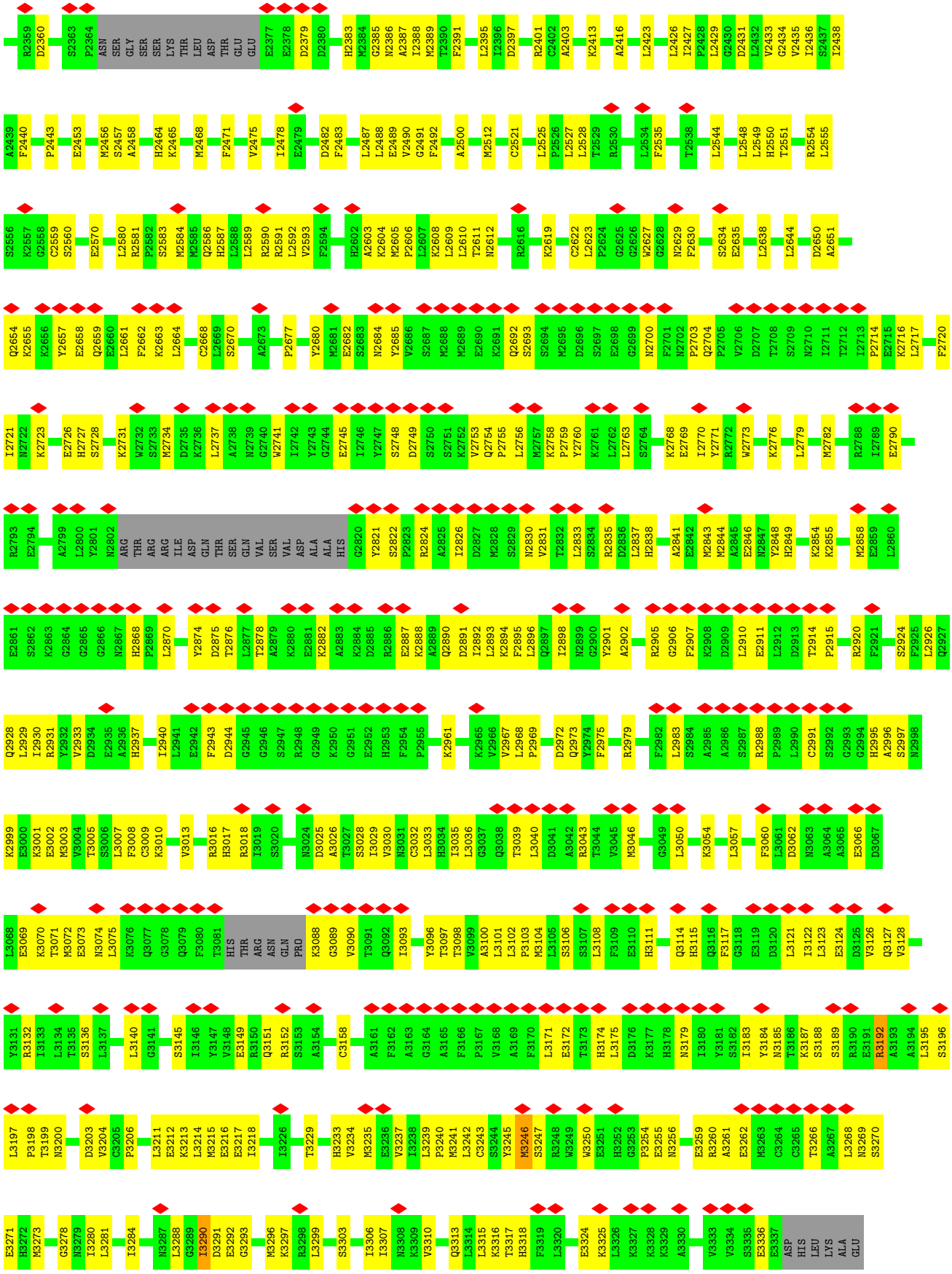
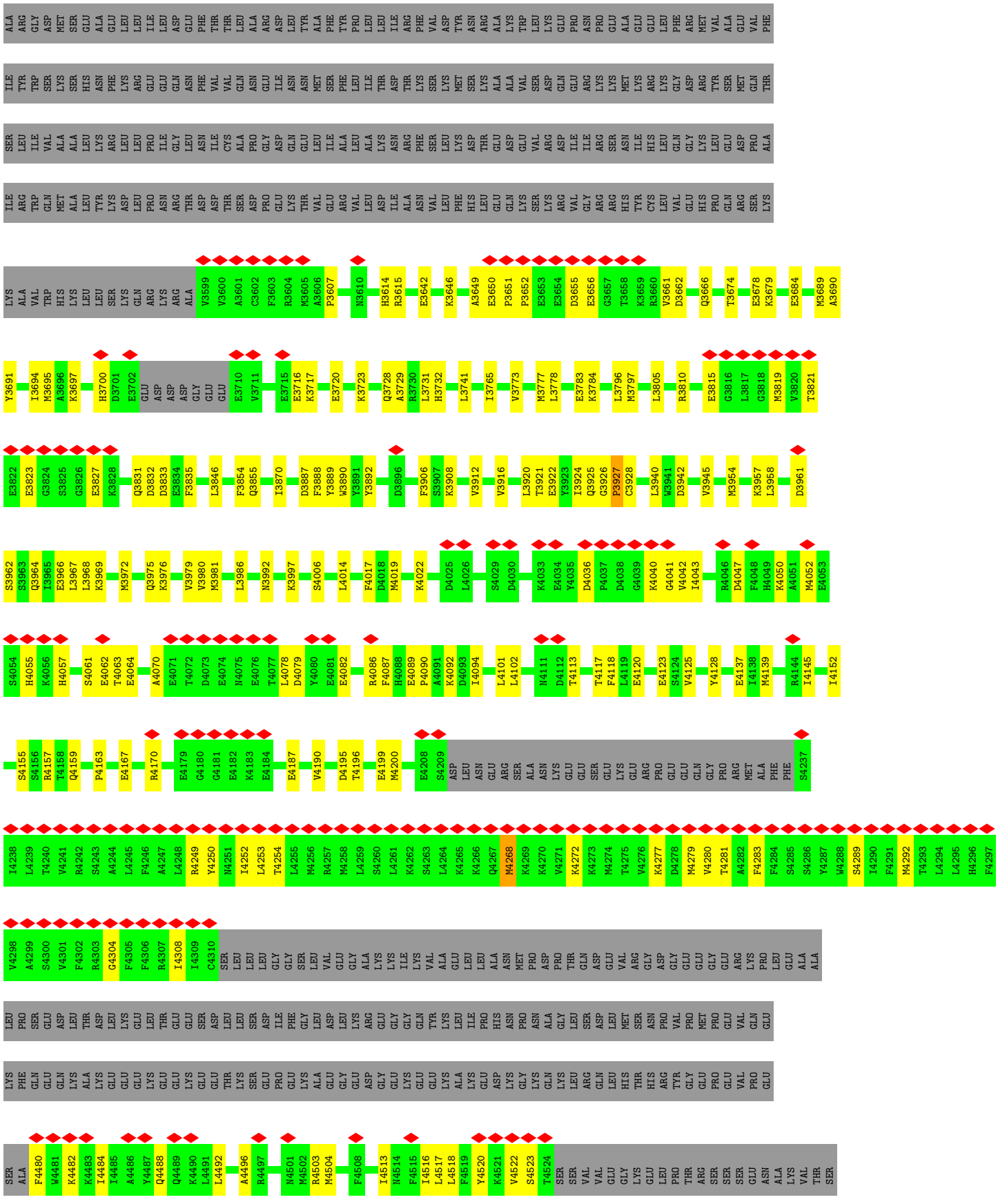
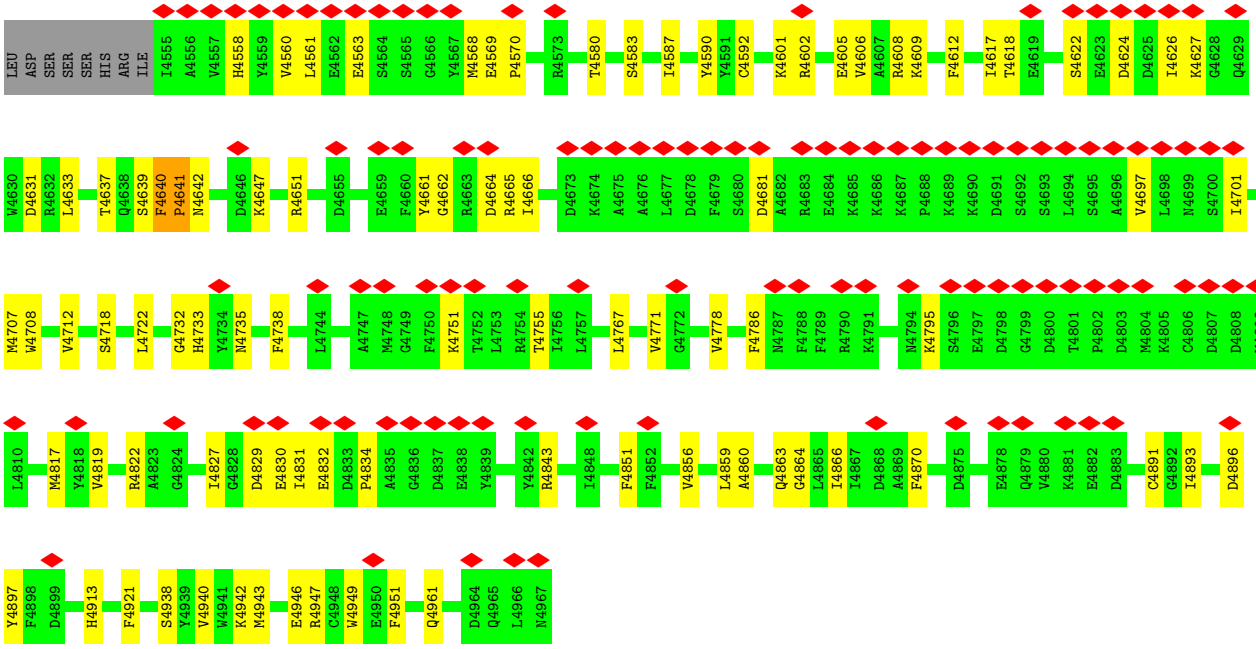
K1788 M1794 L1795 T1796 V1799 R1807 V1819 P1820 F1825 L1829 I1830 M1831 G1832 I1833 N1836 L1839 I1842 L1845 V1850 E1853 A1854 ALA THR PRO GLU GLU GLU SER ASP THR LEU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU
GLU ALA LYS GLY GLY LYS ARG P1889 K1890 E1900 P1901 L1910 Q1911 Y1912 L1913 C1914 V1918 R1919 D1930 D1931 F1932 K1935 L1936 N1939 Q1940 E1946 Y1947 M1948 Q1949 A1950 L1951 N1952 M1953 S1954 A1955 A1956 L1957 T1958 A1959 R1960 K1961 T1962 K1963 E1964 F1965 R1966 M1975 N1978 F1979 K1980 D1981
D1982 K1983 S1984 E1985 C1986 P1989 E1990 E1991 I1992 L1996 E2010 LEU ASP GLU ASP GLY SER LEU ASP GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL GLU GLU SER ASP SER K2053 K2064 S2055
L2061 I2062 L2080 L2087 Q2091 G2096 V2099 S2122 L2123 I2126 E2137 E2138 E2139 K2140 L2141 G2145 I2149 Y2156 Q2157 M2167 M2172 V2176 N2177 V2178 L2179 G2180 G2181 G2182 E2183 S2184 K2185 E2186 I2187 M2192 Y2202 I2206 S2207 R2208 M2214 F2215 Y2220
E2223 V2227 A2230 S2231 P2232 D2241 V2242 A2243 A2244 M2248 N2251 E2252 L2253 A2254 L2255 R2258 V2265 V2266 C2272 S2276 D2287 I2288 G2289 W2290 N2291 P2292 V2293 E2294 G2295 E2296 R2297 Y2298 L2299 D2300 F2301 L2302 R2303 L2323 G2332 R2336 G2337 E2338 L2343 E2355

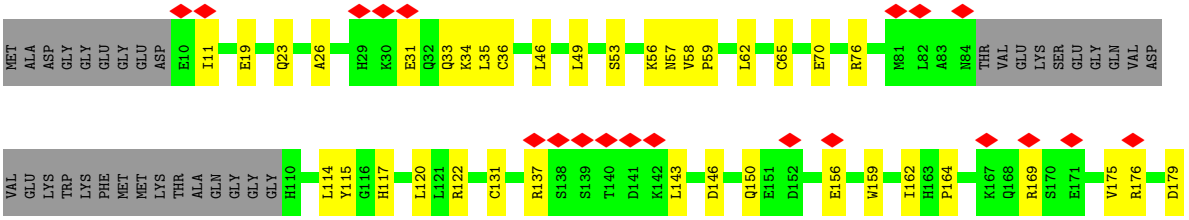


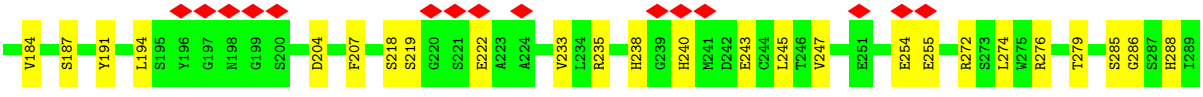


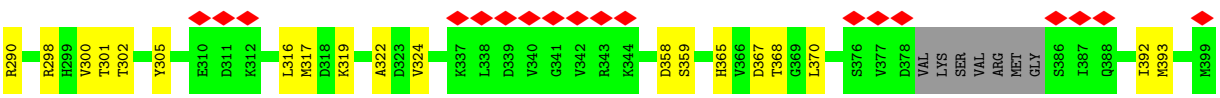


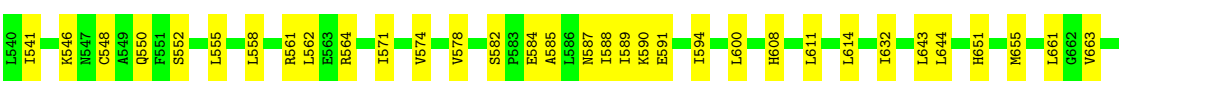
• Molecule 1: Ryanodine receptor 2

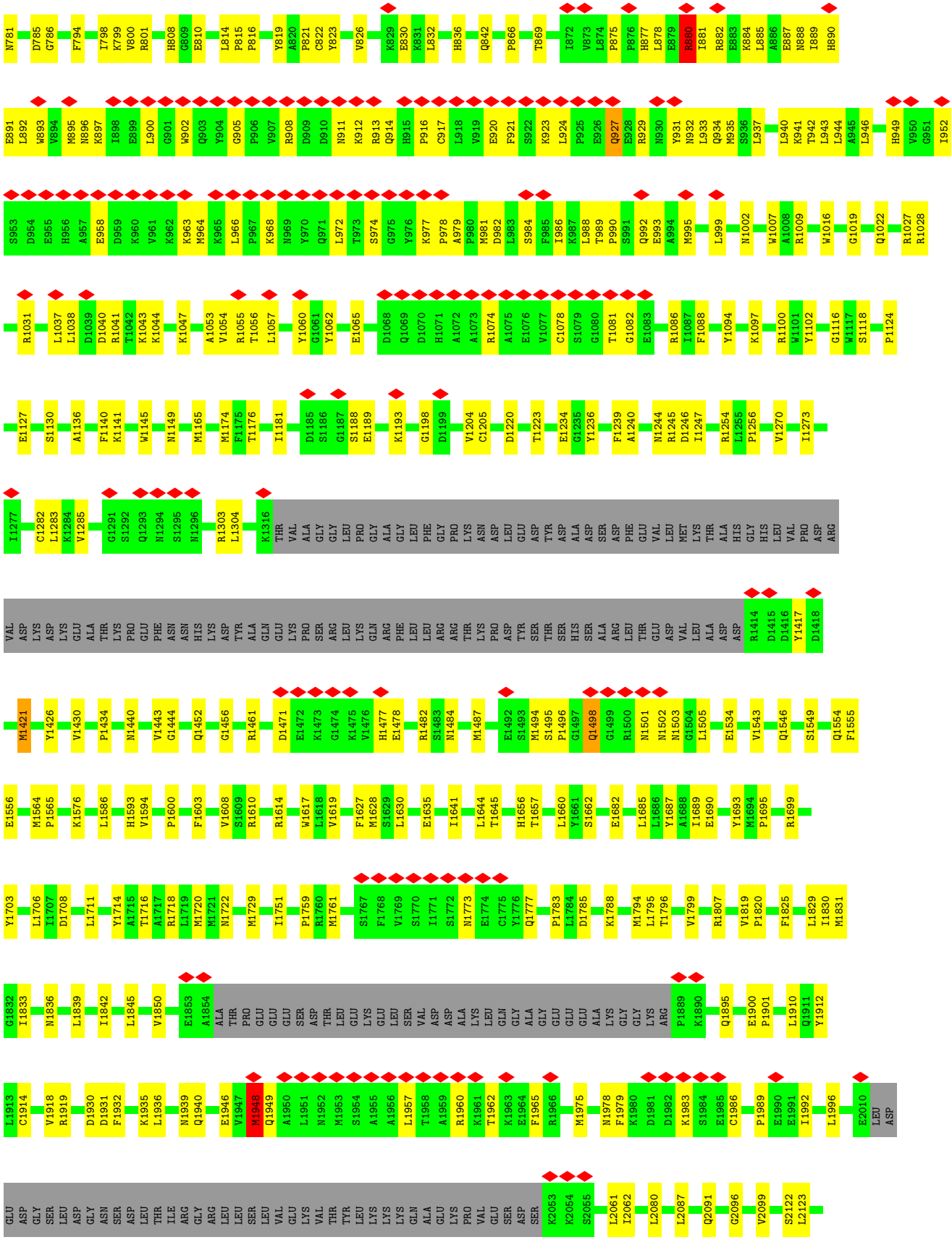
Chain B:







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I1277 C1282 L1283 K1284 V1285 G1291 S1292 Q1293 N1294 S1295 N1296 R1303 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG
VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU THR GLU ASP VAL LEU LEU ALA ASP R1414 D1415 D1416 Y1417 D1418
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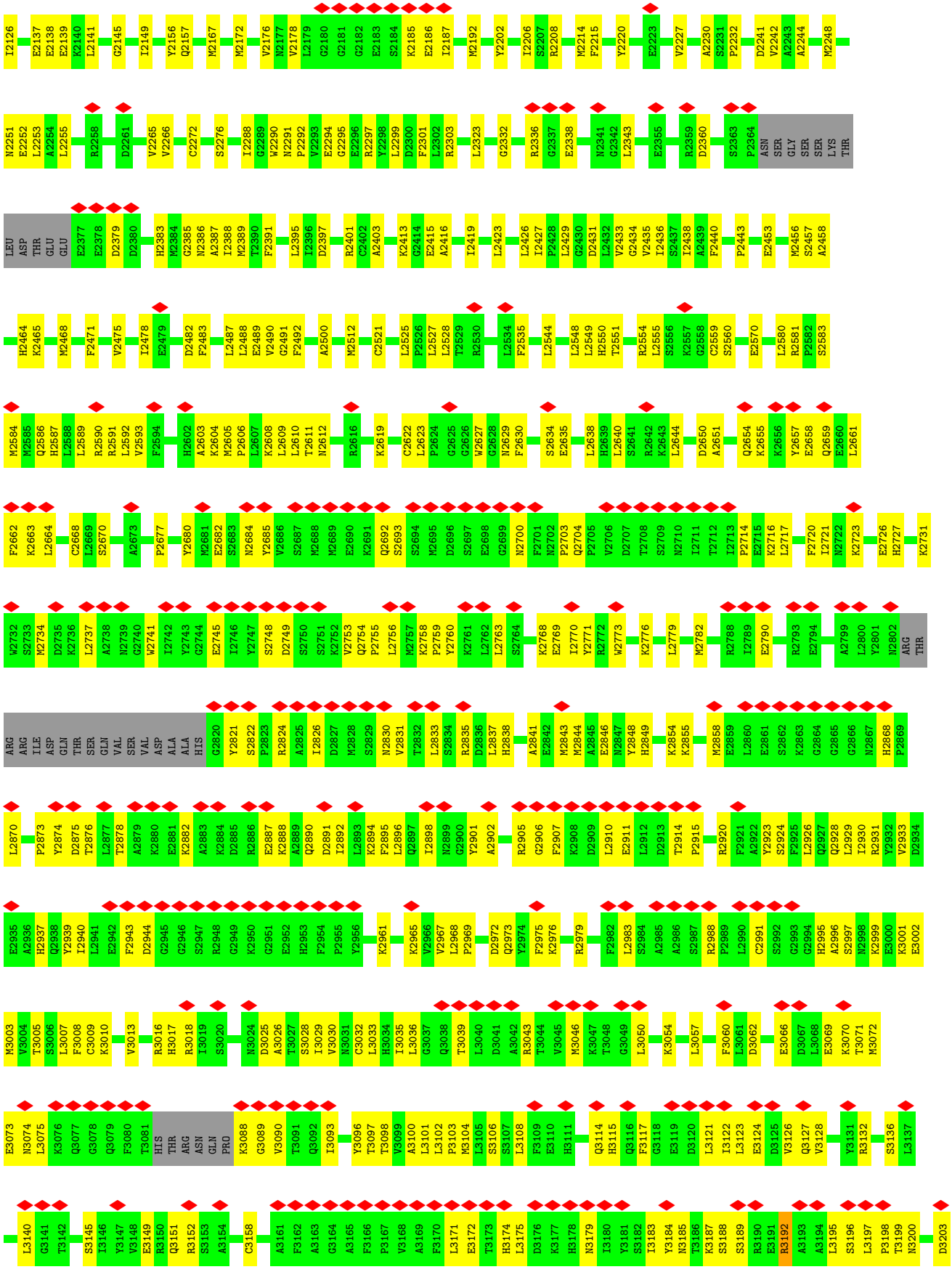
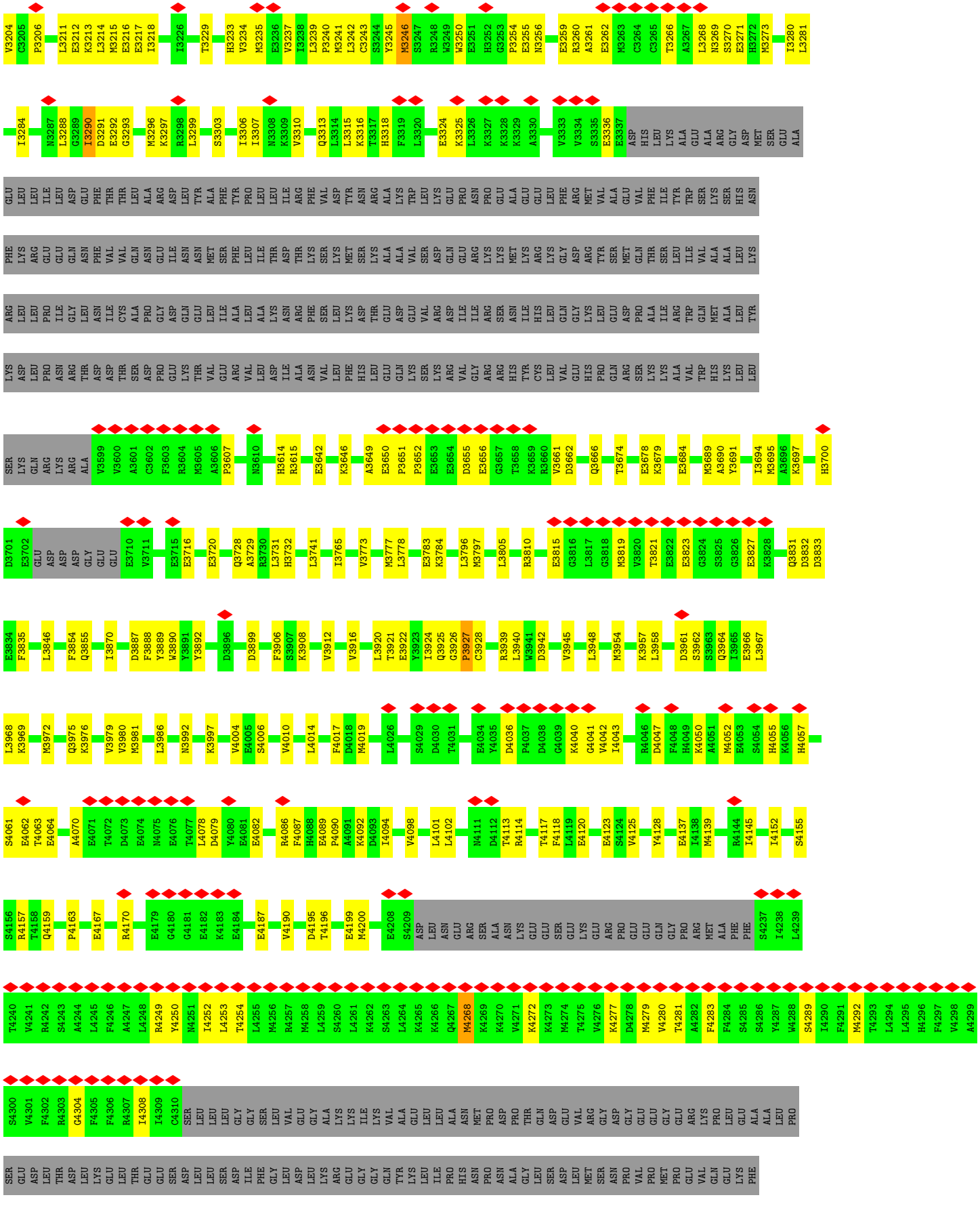
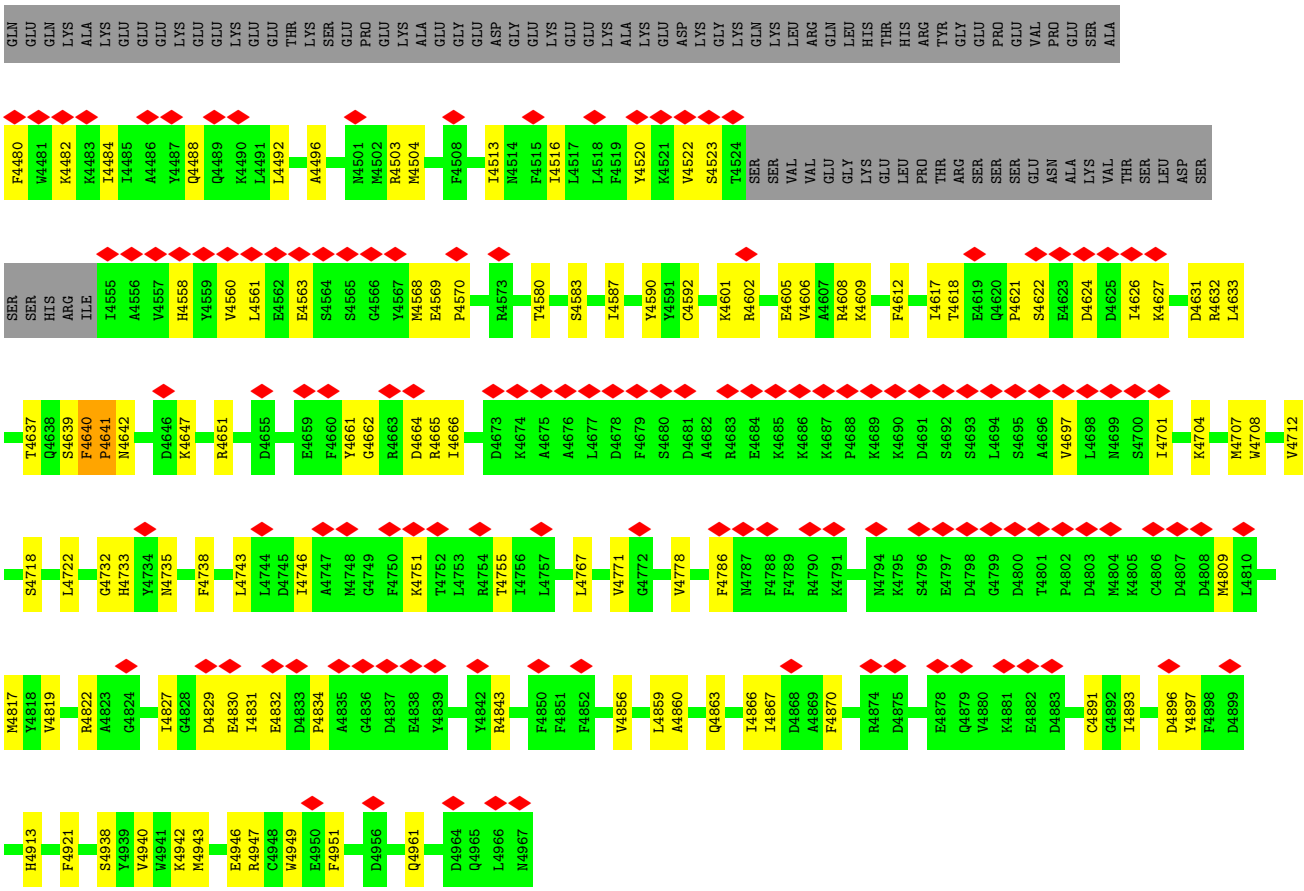
GLU ASP GLY SER LEU ASP GLY ASN SER ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL GLU SER ASP SER K2053 K2054 S2055 L2061 I2062 L2080 L2087 Q2091 G2096 V2099 S2122 L2123

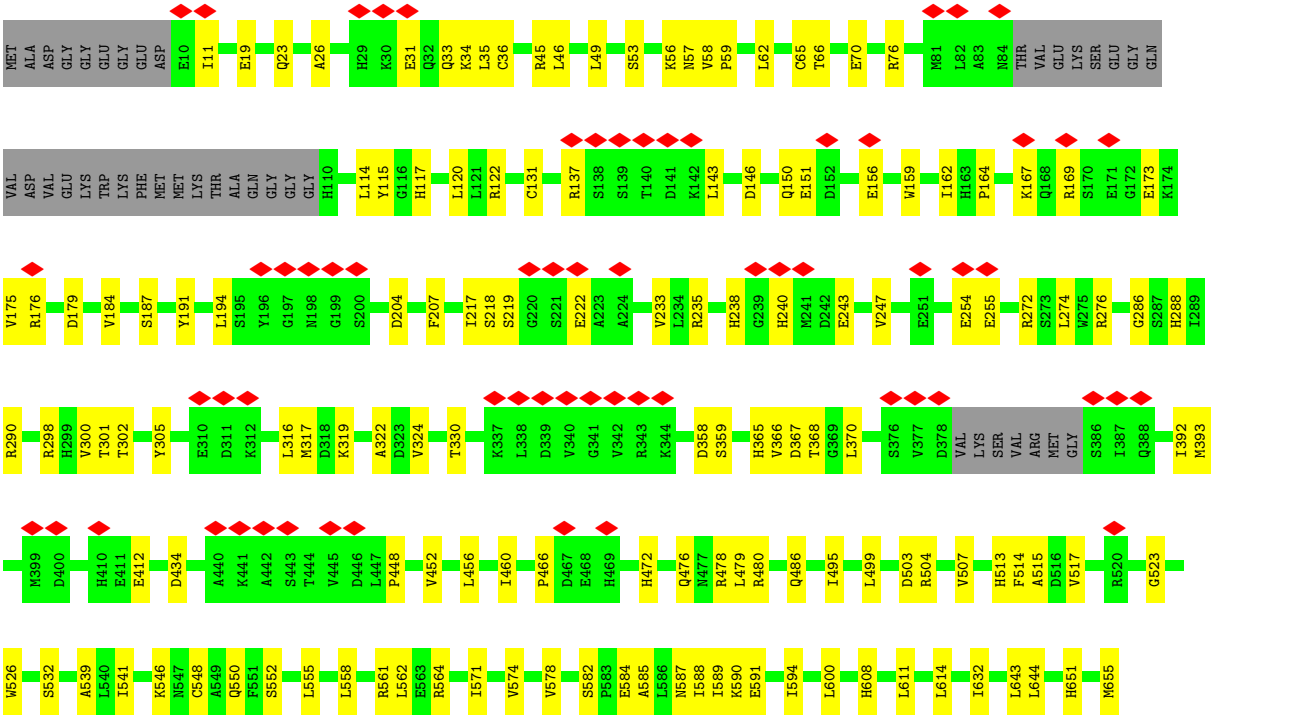


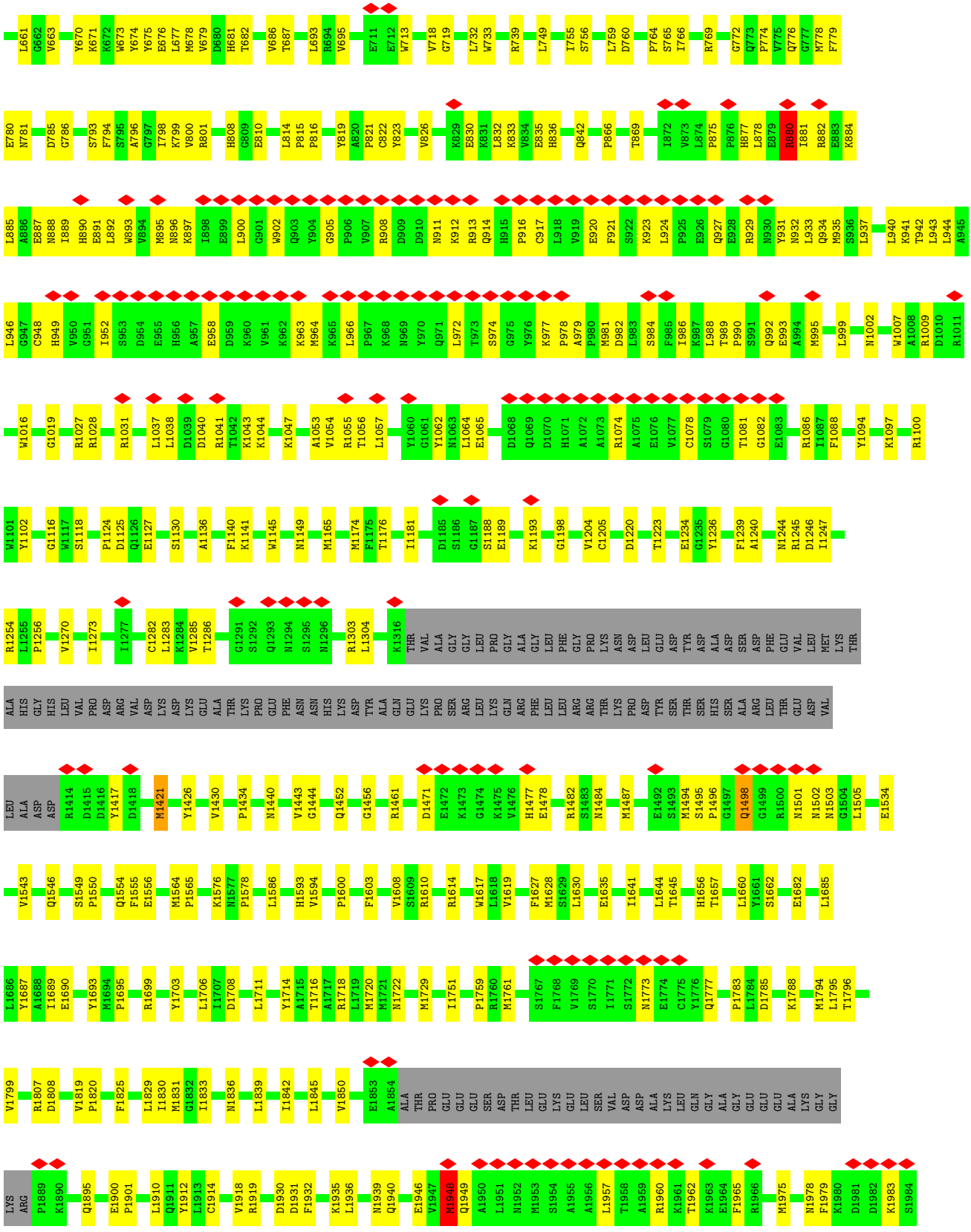




• Molecule 1: Ryanodine receptor 2

Chain C:

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W1101 Y1102 G1116 W1117 S1118 P1124 D1125 Q1126 E1127 S1130 A1136 F1140 K1141 W1145 N1149 M1165 M1174 F1175 T1176 I1181 D1185 S1186 G1187 S1188 E1189 K1193 G1198 V1204 C1205 D1220 T1223 E1234 G1235 Y1236 F1239 A1240 N1244 R1245 D1246 I1247
R1254 L1255 P1256 V1270 I1273 I1277 C1282 L1283 K1284 V1285 T1286 G1291 S1292 Q1293 N1294 S1295 N1296 R1303 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL LEU MET LYS THR
ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU THR GLU ASP VAL
LEU ALA ASP ASP R1414 D1415 D1416 Y1417 D1418 M1421 Y1426 V1430 P1434 N1440 V1443 G1444 Q1452 G1456 R1461 D1471 E1472 K1473 G1474 K1475 V1476 H1477 E1478 R1482 S1483 N1484 M1487 E1492 S1493 M1494 S1495 P1496 G1497 Q1498 G1499 R1500 N1501 N1502 N1503 G1504 L1505 E1534
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V1799 R1807 D1808 V1819 P1820 F1825 L1829 I1830 M1831 G1832 I1833 N1836 L1839 I1842 L1845 V1850 E1853 A1854 ALA THR PRO GLU GLU GLU GLU SER ASP THR LEU GLU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU GLU GLU ALA LYS GLY GLY
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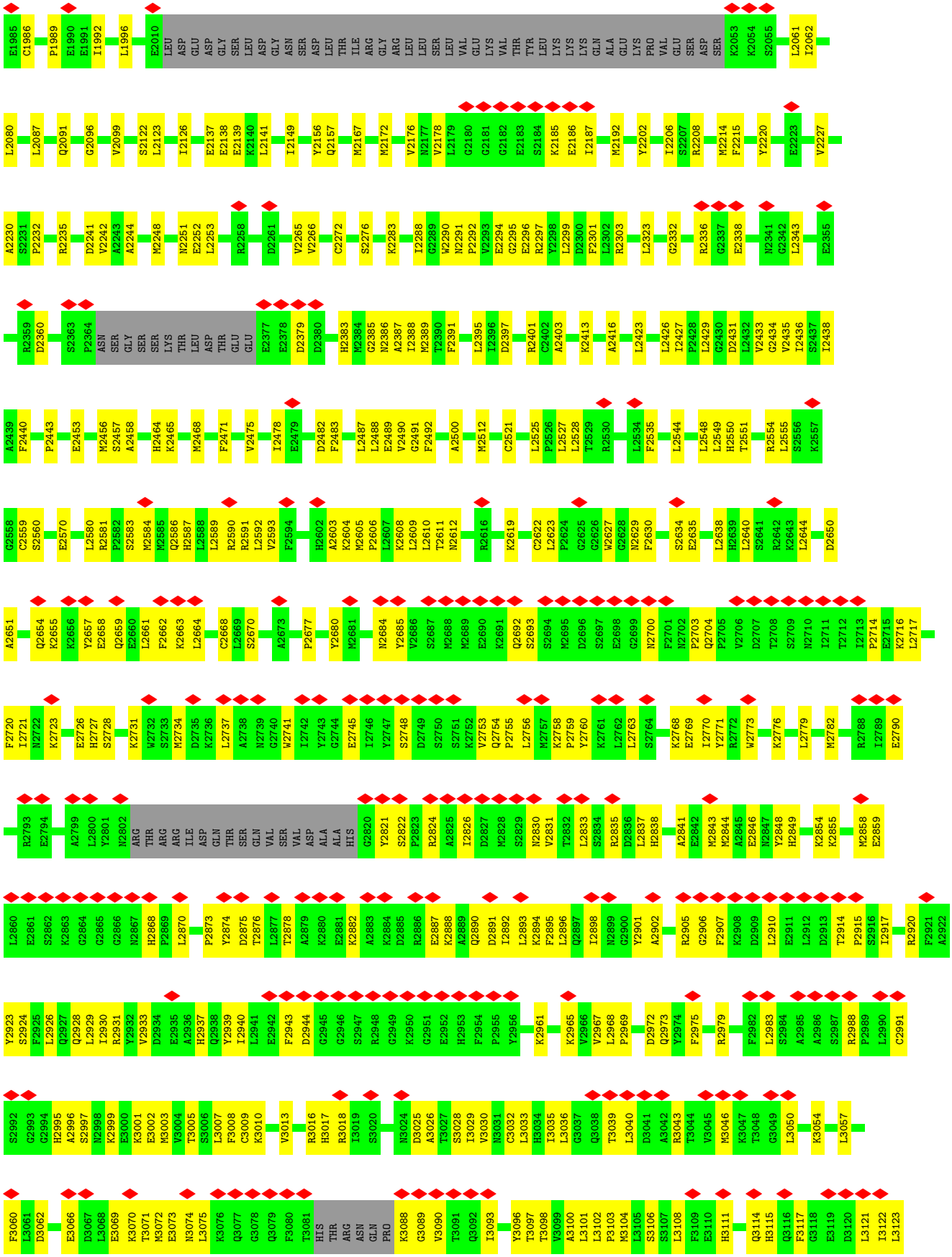

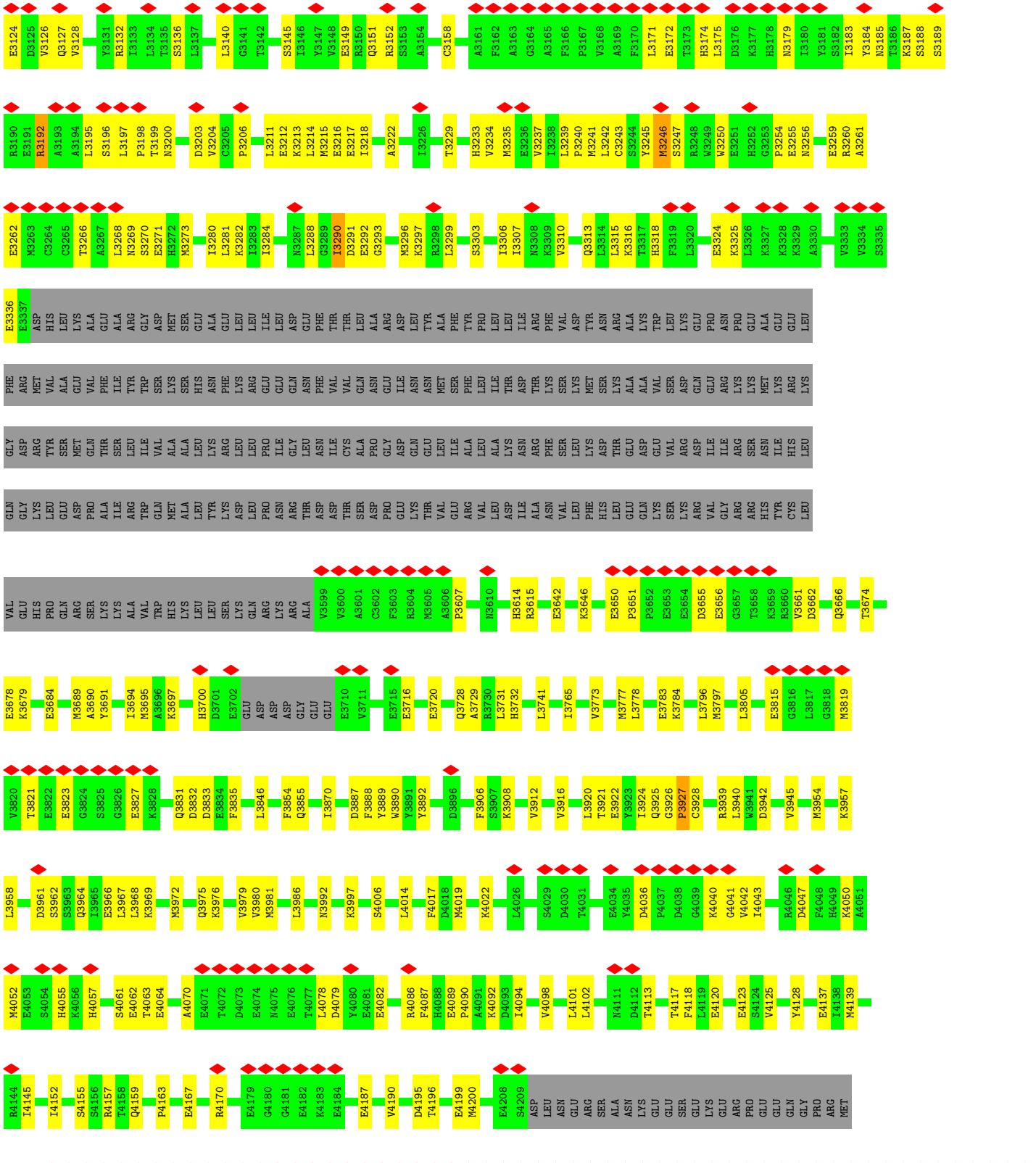
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R3190 E3191 R3192 A3193 A3194 L3195 S3196 L3197 P3198 T3199 N3200 D3203 V3204 C3205 P3206 L3211 E3212 K3213 L3214 M3215 E3216 E3217 I3218 A3222 I3226 T3229 H3233 V3234 M3235 E3236 V3237 I3238 L3239 P3240 M3241 L3242 C3243 S3244 Y3245 M3246 S3247 R3248 W3249 W3250 E3251 H3252 G3253 P3254 E3255 N3256 E3259 R3260 A3261
E3262 M3263 C3264 C3265 T3266 A3267 L3268 N3269 S3270 E3271 H3272 M3273 I3280 L3281 K3282 I3283 I3284 N3287 L3288 G3289 I3290 D3291 E3292 G3293 M3296 K3297 R3298 L3299 S3303 I3306 I3307 N3308 K3309 V3310 Q3313 L3314 L3315 K3316 T3317 H3318 F3319 L3320 E3324 K3325 L3326 K3327 K3328 K3329 A3330 V3333 V3334 S3335
E3336 E3337 ASP HIS LEU LYS ALA GLU GLU ALA ARG GLY ASP MET SER GLU ALA GLU LEU LEU ILE LEU ASP GLU PHE THR THR LEU ALA ARG ASP LEU TYR ALA PHE TYR PRO LEU LEU LEU ILE ARG PHE VAL ASP TYR ASN ARG ALA LYS TRP LEU LYS GLU PRO ASN PRO GLU ALA GLU GLU LEU
PHE ARG MET VAL ALA GLU VAL PHE ILE TYR TRP SER LYS SER HIS ASN PHE LYS ARG GLU GLU GLN ASN ASN PHE VAL VAL GLN ASN GLU ILE ASN ASN MET SER PHE LEU ILE THR ASP THR LYS SER LYS MET SER LYS ALA ALA VAL SER ASP GLN GLU ARG LYS LYS MET LYS ARG LYS
GLY ASP ARG TYR SER MET GLN THR SER LEU ILE VAL ALA ALA LEU LYS ARG LEU LEU PRO ILE GLY LEU ASN ILE CYS ALA PRO GLY ASP GLN GLU LEU ILE ALA LEU ALA LYS ASN ARG PHE SER LEU LYS ASP THR GLU GLU ASP GLU VAL ARG ASP ILE ILE ARG SER ASN ILE HIS LEU
GLN GLY LYS LEU GLU ASP PRO ALA ILE ARG TRP GLN MET ALA LEU TYR LYS ASP LEU PRO ASN ARG THR ASP ASP THR SER ASP PRO GLU LYS THR VAL GLU ARG VAL LEU ASP ILE ALA ASN VAL LEU PHE HIS LEU GLU GLU GLN LYS SER 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 N3610 H3614 R3615 E3642 K3646 E3650 P3651 P3652 E3653 E3654 D3655 E3656 G3657 T3658 K3659 R3660 V3661 D3662 Q3666 T3674
E3678 K3679 E3684 M3689 A3690 Y3691 I3694 M3695 A3696 K3697 H3700 D3701 E3702 GLU ASP ASP ASP GLY GLU GLU E3710 V3711 E3715 E3716 E3720 Q3728 A3729 R3730 L3731 H3732 L3741 I3765 V3773 M3777 L3778 E3783 K3784 L3796 M3797 L3805 E3815 G3816 L3817 G3818 M3819
V3820 T3821 E3822 E3823 G3824 S3825 G3826 E3827 K3828 Q3831 D3832 D3833 E3834 F3835 L3846 F3854 Q3855 I3870 D3887 F3888 Y3889 W3890 Y3891 Y3892 D3896 F3906 S3907 K3908 V3912 V3916 L3920 T3921 E3922 Y3923 I3924 Q3925 G3926 P3927 C3928 R3939 L3940 W3941 D3942 V3945 M3954 K3957
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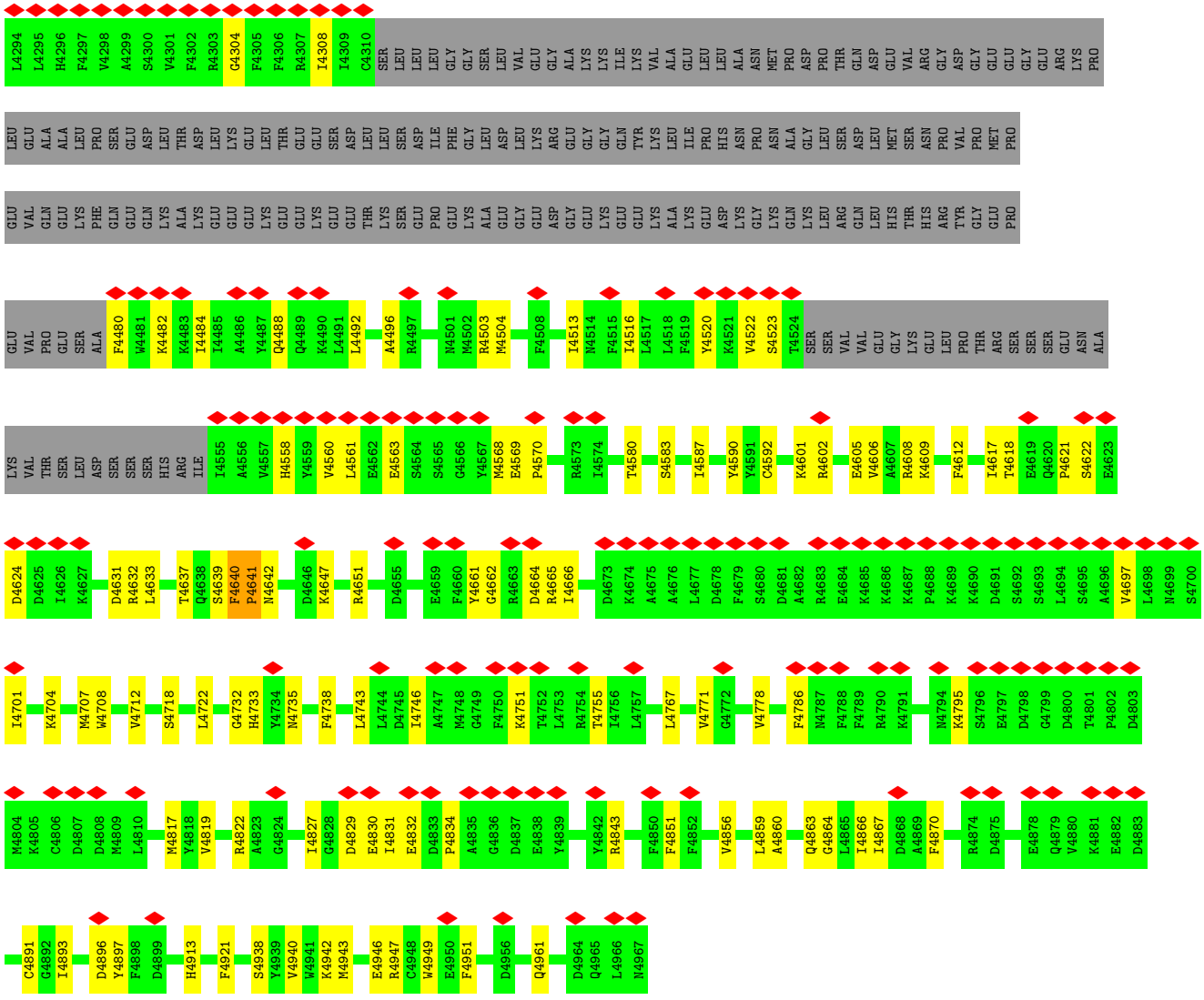
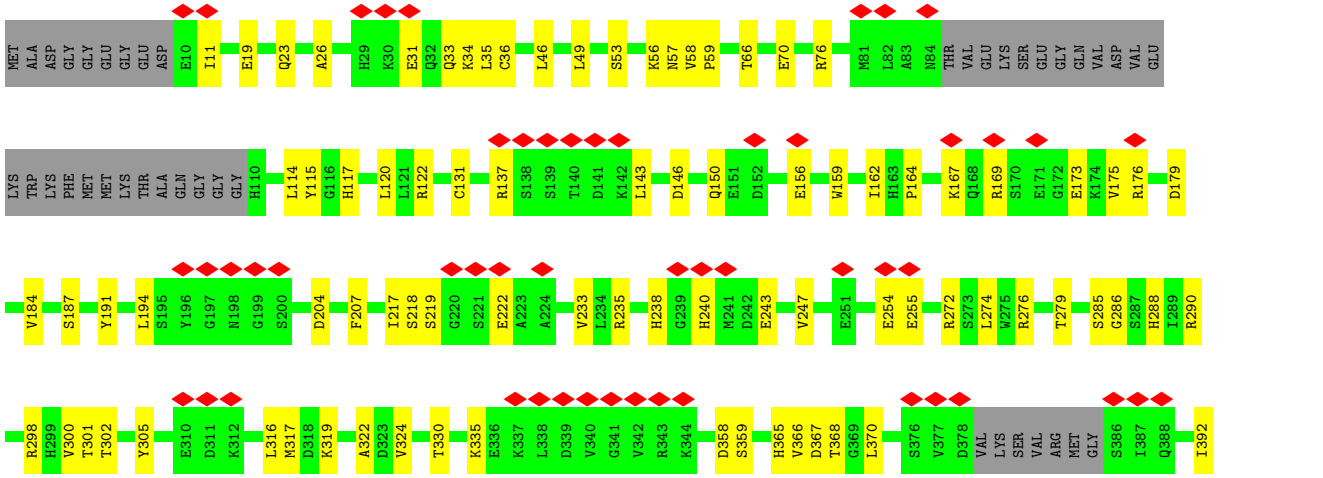
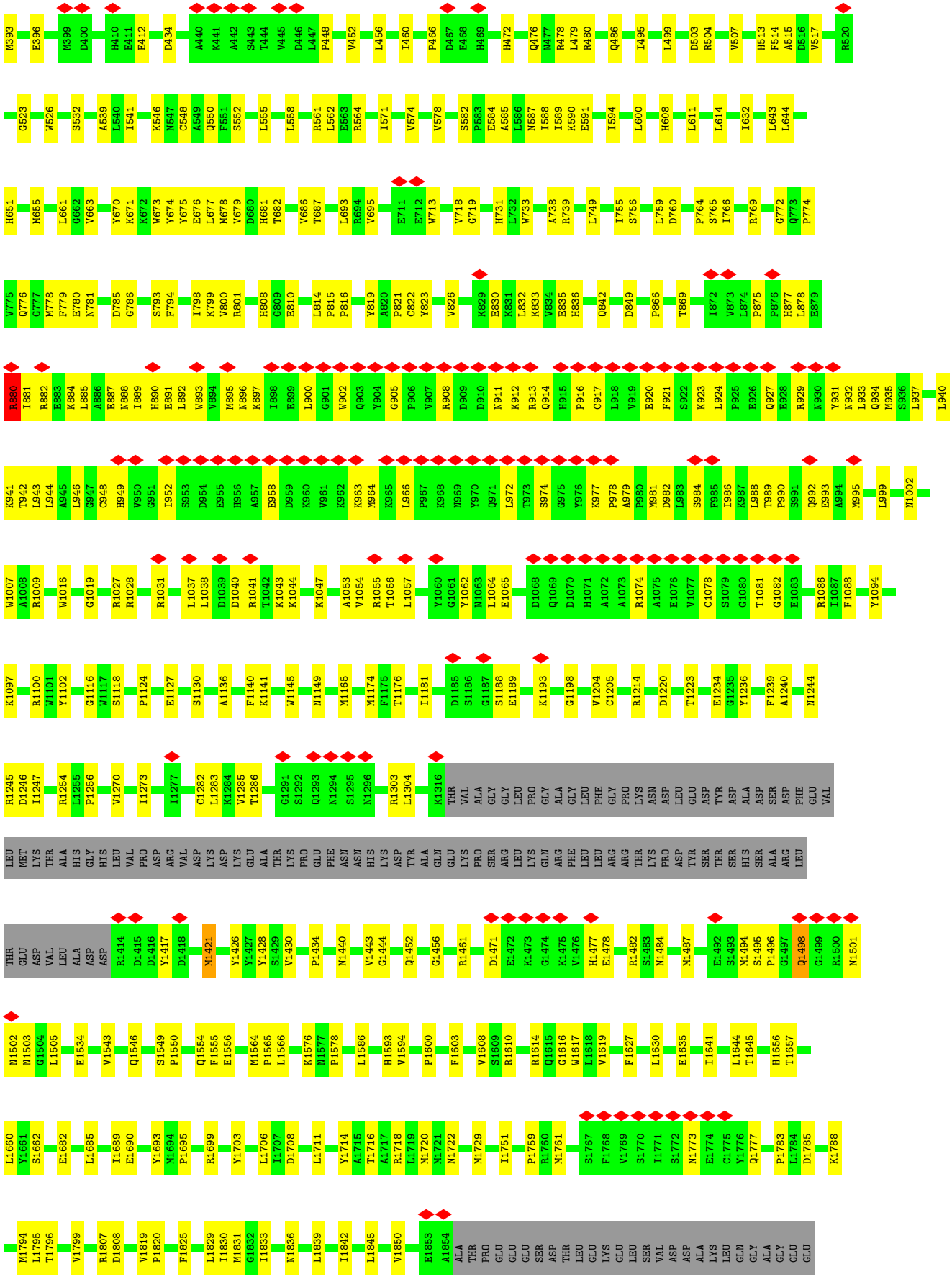
M4052 E4053 S4054 H4055 K4056 H4057 S4061 E4062 T4063 E4064 A4070 E4071 T4072 D4073 E4074 N4075 E4076 T4077 L4078 D4079 Y4080 E4081 E4082 R4086 F4087 H4088 E4089 P4090 A4091 K4092 D4093 I4094 V4098 L4101 L4102 N4111 D4112 T4113 T4117 F4118 L4119 E4120 E4123 S4124 V4125 Y4128 E4137 I4138 M4139
R4144 I4145 I4152 S4155 S4156 R4157 T4158 Q4159 P4163 E4167 R4170 E4179 G4180 G4181 E4182 K4183 E4184 E4187 V4190 D4195 T4196 E4199 M4200 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 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



• Molecule 1: Ryanodine receptor 2

Chain D:

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G523 W526 S532 A539 L540 I541 K546 N547 C548 A549 Q550 F551 S552 L555 L558 R561 L562 E563 R564 I571 V574 V578 S582 P583 E584 A585 L586 N587 I588 I589 K590 E591 I594 L600 H608 L611 L614 I632 L643 L644
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V775 Q776 G777 M778 F779 E780 N781 D785 G786 S793 F794 I798 K799 V800 R801 H808 G809 E810 L814 P815 P816 Y819 A820 P821 C822 Y823 V826 K829 E830 K831 L832 K833 V834 E835 H836 Q842 D849 P866 T869 I872 V873 L874 P875 P876 H877 L878 E879
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R1245 D1246 I1247 R1254 L1255 P1256 V1270 I1273 I1277 C1282 L1283 K1284 V1285 T1286 G1291 S1292 Q1293 N1294 S1295 N1296 R1303 L1304 K1316 THR VAL ALA GLY GLY LEU PRO GLY ALA GLY LEU PHE GLY PRO LYS ASN ASP LEU GLU ASP TYR ASP ALA ASP SER ASP PHE GLU VAL
LEU MET LYS THR ALA HIS GLY HIS LEU VAL PRO ASP ARG VAL ASP LYS ASP LYS GLU ALA THR LYS PRO GLU PHE ASN ASN HIS LYS ASP TYR ALA GLN GLU LYS PRO SER ARG LEU LYS GLN ARG PHE LEU LEU ARG ARG THR LYS PRO ASP TYR SER THR SER HIS SER ALA ARG LEU
THR GLU ASP VAL LEU ALA ASP ASP R1414 D1415 D1416 Y1417 D1418 M1421 Y1426 Y1427 Y1428 S1429 V1430 P1434 N1440 V1443 G1444 Q1452 G1456 R1461 D1471 E1472 K1473 K1474 K1475 V1476 H1477 E1478 R1482 S1483 N1484 M1487 E1492 S1493 M1494 S1495 P1496 G1497 Q1498 G1499 R1500 N1501
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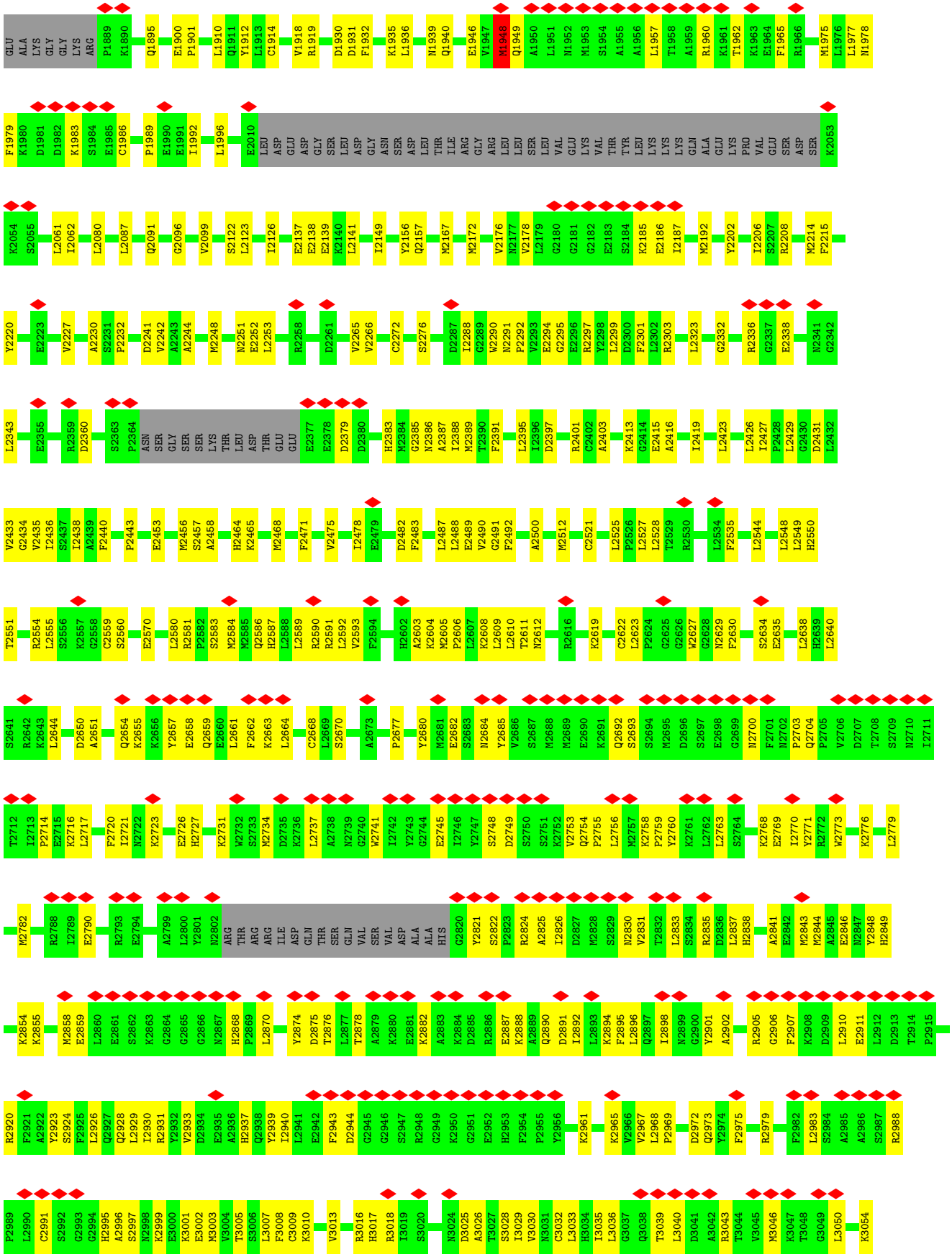
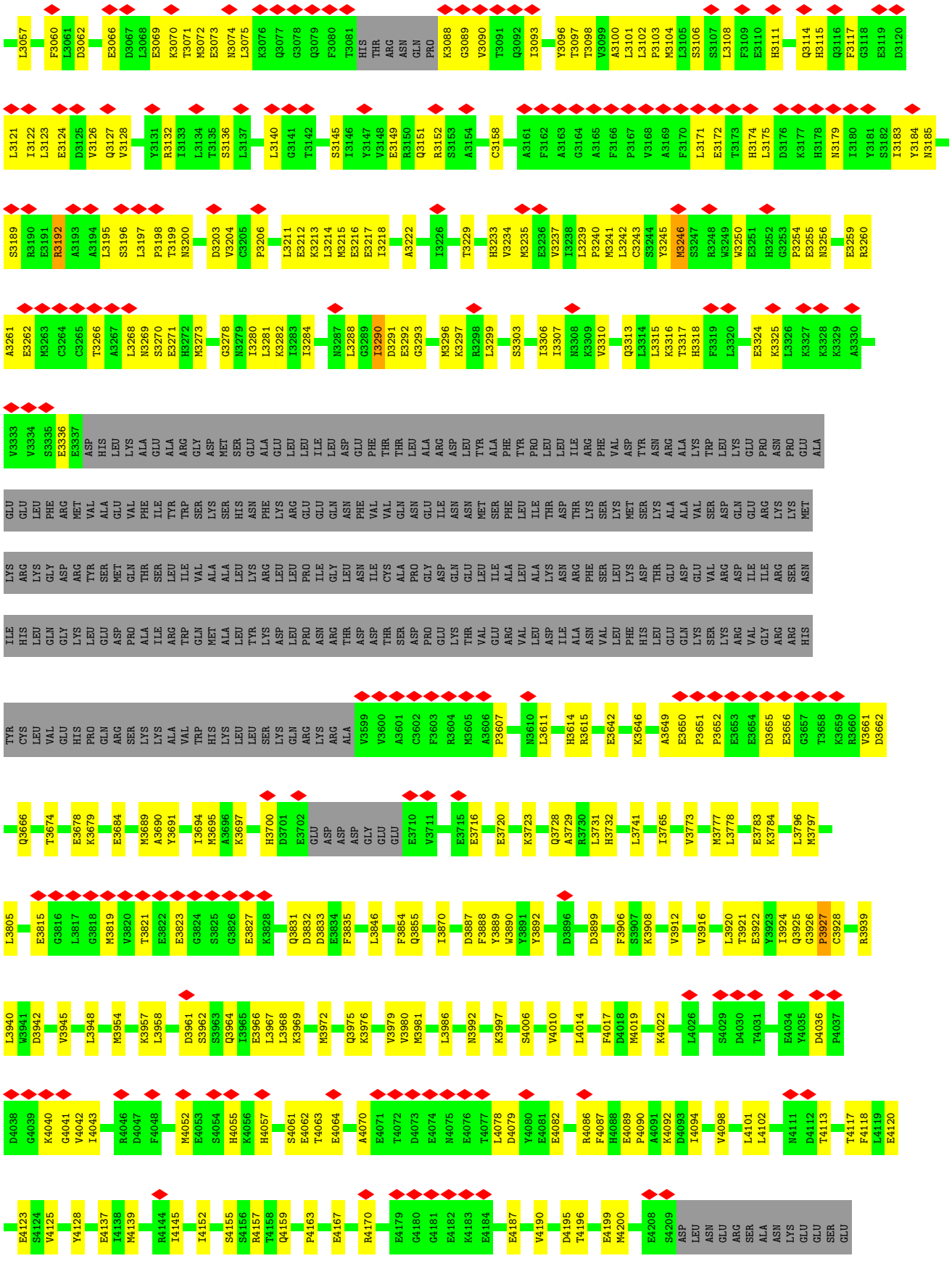
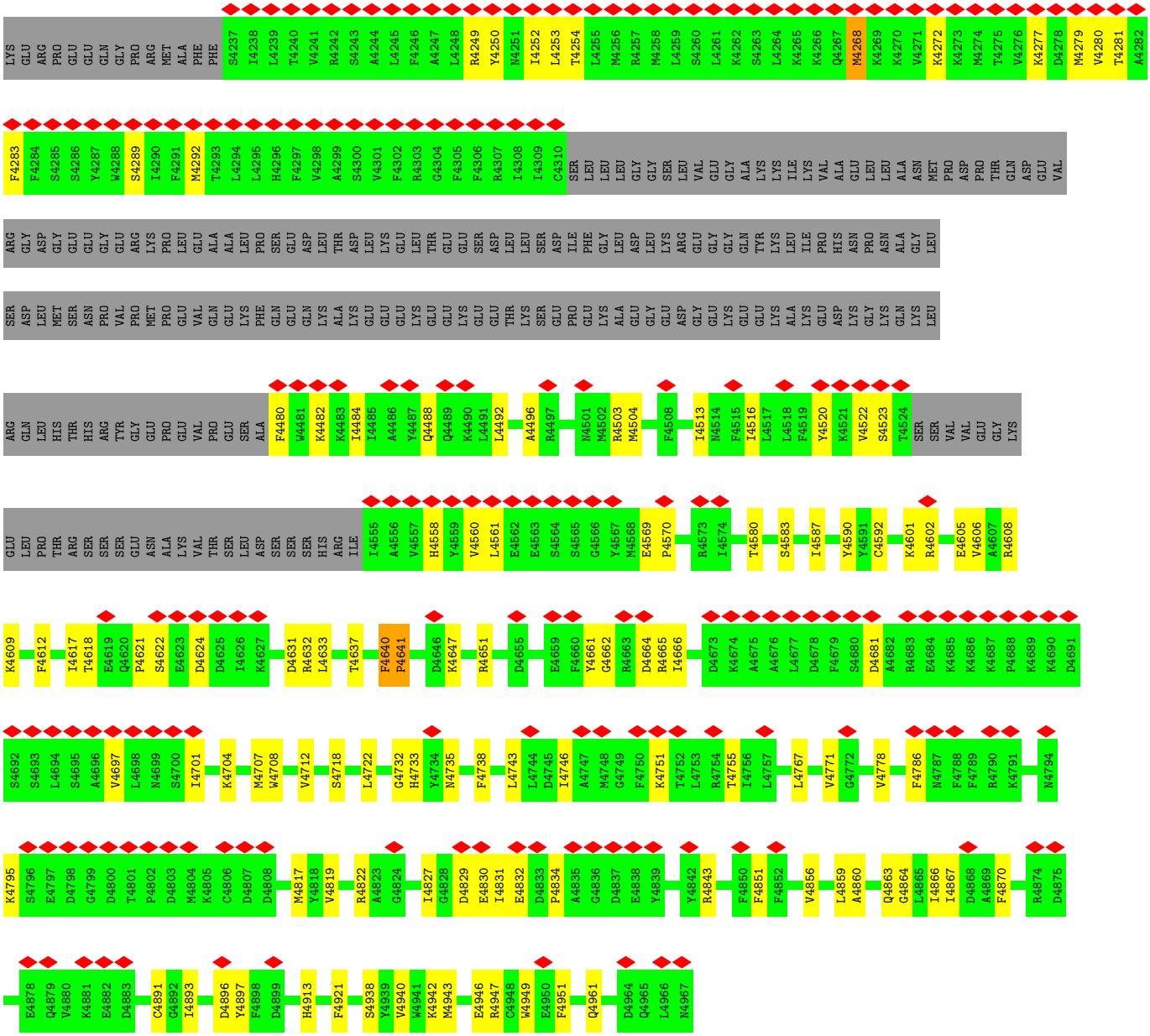
L1660 Y1661 S1662 E1682 L1685 I1689 E1690 Y1693 M1694 P1695 R1699 Y1703 L1706 I1707 D1708 L1711 Y1714 A1715 T1716 A1717 R1718 L1719 M1720 M1721 N1722 M1729 I1751 P1759 R1760 M1761 S1767 F1768 V1769 S1770 I1771 S1772 N1773 E1774 C1775 Y1776 Q1777 P1783 L1784 D1785 K1788
M1794 L1795 T1796 V1799 R1807 D1808 V1819 P1820 F1825 L1829 I1830 M1831 G1832 I1833 N1836 L1839 I1842 L1845 V1850 E1853 A1854 ALA THR PRO GLU GLU GLU SER ASP THR LEU GLU LYS GLU LEU SER VAL ASP ASP ALA LYS LEU GLN GLY ALA GLY GLU GLU



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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 ALA ASN MET PRO ASP PRO THR GLN ASP GLU VAL
ARG GLY ASP GLY GLU GLU GLY GLU ARG LYS PRO LEU GLU ALA ALA LEU PRO SER GLU ASP LEU THR ASP LEU LYS GLU 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 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 LYS GLU GLU THR LYS SER GLU PRO GLU LYS ALA GLU GLY GLU ASP GLY GLU LYS GLU GLU LYS ALA LYS GLU ASP LYS GLY 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 I4484 I4485 A4486 Y4487 Q4488 Q4489 K4490 L4491 L4492 A4496 R4497 N4501 M4502 R4503 M4504 F4508 I4513 N4514 F4515 I4516 L4517 L4518 F4519 Y4520 K4521 V4522 S4523 T4524
SER SER VAL VAL GLU GLY LYS
GLU LEU PRO THR ARG SER SER GLU ASN ALA LYS VAL THR SER LEU ASP SER SER SER HIS ARG ILE
I4455 A4456 V4457 H4458 Y4459 V4460 L4461 E4462 E4463 S4464 S4465 G4466 Y4467 M4468 E4469 P4570 R4573 I4574 T4580 S4583 I4587 Y4590 Y4591 C4592 K4601 R4602 E4605 V4606 A4607 R4608
K4609 F4612 I4617 T4618 E4619 Q4620 P4621 S4622 E4623 D4624 D4625 I4626 K4627 D4631 R4632 L4633 T4637 F4640 P4641 D4646 K4647 R4651 D4655 E4659 F4660 Y4661 G4662 R4663 D4664 R4665 I4666 D4673 K4674 A4675 A4676 L4677 D4678 F4679 S4680 D4681 A4682 R4683 E4684 K4685 K4686 K4687 P4688 K4689 K4690 D4691
S4692 S4693 L4694 S4695 A4696 V4697 L4698 N4699 S4700 I4701 K4704 M4707 W4708 V4712 S4718 L4722 G4732 H4733 Y4734 N4735 F4738 L4743 L4744 D4745 I4746 A4747 M4748 G4749 F4750 K4751 T4752 L4753 R4754 T4755 I4766 L4757 L4767 V4771 G4772 V4778 F4786 N4787 F4788 F4789 R4790 K4791 N4794
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E4878 Q4879 V4880 K4881 E4882 D4883 C4891 G4892 I4893 D4896 Y4897 F4898 D4899 H4913 F4921 S4938 Y4939 V4940 W4941 K4942 M4943 E4946 R4947 C4948 W4949 E4950 F4951 Q4961 D4964 Q4965 L4966 N4967

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	18232	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)	500	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.473	Depositor
Minimum map value	-0.016	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.022	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	424.96, 424.96, 424.96	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.83, 0.83, 0.83	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.15	0/34511	0.43	7/46614 (0.0%)
1	B	0.15	0/34511	0.43	7/46614 (0.0%)
1	C	0.15	0/34511	0.43	7/46614 (0.0%)
1	D	0.15	0/34511	0.43	7/46614 (0.0%)
All	All	0.15	0/138044	0.43	28/186456 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	3
1	C	0	3
1	D	0	3
All	All	0	12

There are no bond length outliers.

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	1948	MET	CB-CG-SD	7.13	134.09	112.70
1	B	1948	MET	CB-CG-SD	7.12	134.07	112.70
1	C	1948	MET	CB-CG-SD	7.12	134.07	112.70
1	A	1948	MET	CB-CG-SD	7.12	134.06	112.70
1	D	880	ARG	N-CA-CB	7.09	120.51	109.94
1	A	880	ARG	N-CA-CB	7.09	120.50	109.94
1	B	880	ARG	N-CA-CB	7.09	120.50	109.94
1	C	880	ARG	N-CA-CB	7.09	120.50	109.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	880	ARG	CA-CB-CG	6.90	127.90	114.10
1	B	880	ARG	CA-CB-CG	6.90	127.90	114.10
1	C	880	ARG	CA-CB-CG	6.90	127.90	114.10
1	D	880	ARG	CA-CB-CG	6.90	127.89	114.10
1	D	880	ARG	CB-CA-C	-5.78	101.56	110.81
1	A	880	ARG	CB-CA-C	-5.78	101.56	110.81
1	B	880	ARG	CB-CA-C	-5.78	101.56	110.81
1	C	880	ARG	CB-CA-C	-5.78	101.56	110.81
1	A	3290	ILE	CA-C-N	5.34	131.73	121.54
1	A	3290	ILE	C-N-CA	5.34	131.73	121.54
1	B	3290	ILE	CA-C-N	5.34	131.73	121.54
1	B	3290	ILE	C-N-CA	5.34	131.73	121.54
1	D	3290	ILE	CA-C-N	5.32	131.71	121.54
1	D	3290	ILE	C-N-CA	5.32	131.71	121.54
1	C	3290	ILE	CA-C-N	5.32	131.70	121.54
1	C	3290	ILE	C-N-CA	5.32	131.70	121.54
1	C	1836	ASN	CB-CA-C	-5.09	110.31	117.23
1	A	1836	ASN	CB-CA-C	-5.08	110.33	117.23
1	B	1836	ASN	CB-CA-C	-5.08	110.33	117.23
1	D	1836	ASN	CB-CA-C	-5.08	110.33	117.23

There are no chirality outliers.

All (12) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	3192	ARG	Sidechain
1	A	4640	PHE	Peptide
1	A	880	ARG	Sidechain
1	B	3192	ARG	Sidechain
1	B	4640	PHE	Peptide
1	B	880	ARG	Sidechain
1	C	3192	ARG	Sidechain
1	C	4640	PHE	Peptide
1	C	880	ARG	Sidechain
1	D	3192	ARG	Sidechain
1	D	4640	PHE	Peptide
1	D	880	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	33771	0	33455	844	0
1	B	33771	0	33455	838	0
1	C	33771	0	33455	848	0
1	D	33771	0	33455	853	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	62	0	24	1	0
3	B	62	0	24	2	0
3	C	62	0	24	1	0
3	D	62	0	24	1	0
All	All	135336	0	133916	3298	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 (3298) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4891:CYS:SG	1:B:4913:HIS:CE1	2.51	1.04
1:A:4891:CYS:SG	1:A:4913:HIS:CE1	2.51	1.02
1:D:4891:CYS:SG	1:D:4913:HIS:CE1	2.51	1.00
1:C:4891:CYS:SG	1:C:4913:HIS:CE1	2.51	1.00
1:C:3101:LEU:HA	1:C:3104:MET:HE2	1.49	0.94
1:A:4860:ALA:CB	1:D:4863:GLN:OE1	2.15	0.94
1:D:3101:LEU:HA	1:D:3104:MET:HE2	1.49	0.93
1:C:4863:GLN:OE1	1:D:4860:ALA:CB	2.17	0.92
1:A:2386:ASN:HD21	1:A:2458:ALA:HA	1.35	0.92
1:A:3101:LEU:HA	1:A:3104:MET:HE2	1.49	0.91
1:C:2386:ASN:HD21	1:C:2458:ALA:HA	1.35	0.91
1:D:2386:ASN:HD21	1:D:2458:ALA:HA	1.35	0.91
1:B:4863:GLN:OE1	1:C:4860:ALA:CB	2.18	0.90
1:B:3101:LEU:HA	1:B:3104:MET:HE2	1.49	0.89
1:B:2386:ASN:HD21	1:B:2458:ALA:HA	1.35	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3072:MET:HE3	1:B:3136:SER:HB2	1.57	0.87
1:A:3072:MET:HE3	1:A:3136:SER:HB2	1.57	0.87
1:B:3197:LEU:HD23	1:B:3199:THR:H	1.40	0.87
1:B:3246:MET:HE2	1:B:3273:MET:HG3	1.57	0.87
1:C:3072:MET:HE3	1:C:3136:SER:HB2	1.57	0.86
1:D:3197:LEU:HD23	1:D:3199:THR:H	1.40	0.86
1:A:3197:LEU:HD23	1:A:3199:THR:H	1.40	0.86
1:B:4831:ILE:HG13	1:B:4843:ARG:HH22	1.41	0.86
1:C:3197:LEU:HD23	1:C:3199:THR:H	1.40	0.86
1:D:1689:ILE:HG22	1:D:1794:MET:HE1	1.57	0.86
1:A:4831:ILE:HG13	1:A:4843:ARG:HH22	1.41	0.85
1:C:3246:MET:HE2	1:C:3273:MET:HG3	1.57	0.85
1:D:3072:MET:HE3	1:D:3136:SER:HB2	1.57	0.85
1:A:3246:MET:HE2	1:A:3273:MET:HG3	1.57	0.85
1:B:1689:ILE:HG22	1:B:1794:MET:HE1	1.57	0.85
1:A:1689:ILE:HG22	1:A:1794:MET:HE1	1.57	0.84
1:C:963:LYS:HG3	1:C:977:LYS:HD3	1.59	0.84
1:C:1689:ILE:HG22	1:C:1794:MET:HE1	1.57	0.84
1:D:3246:MET:HE2	1:D:3273:MET:HG3	1.57	0.84
1:A:4860:ALA:HB2	1:D:4863:GLN:OE1	1.76	0.84
1:B:963:LYS:HG3	1:B:977:LYS:HD3	1.59	0.84
1:C:4831:ILE:HG13	1:C:4843:ARG:HH22	1.41	0.83
1:A:963:LYS:HG3	1:A:977:LYS:HD3	1.59	0.83
1:A:940:LEU:HA	1:A:943:LEU:HD12	1.61	0.82
1:D:4831:ILE:HG13	1:D:4843:ARG:HH22	1.41	0.82
1:C:4863:GLN:OE1	1:D:4860:ALA:HB2	1.80	0.82
1:A:2692:GLN:HG3	1:A:2704:GLN:HB2	1.61	0.82
1:D:2692:GLN:HG3	1:D:2704:GLN:HB2	1.61	0.82
1:B:760:ASP:HB3	1:B:765:SER:HB3	1.62	0.82
1:D:963:LYS:HG3	1:D:977:LYS:HD3	1.59	0.82
1:C:760:ASP:HB3	1:C:765:SER:HB3	1.62	0.82
1:D:2456:MET:HE1	1:D:2512:MET:HE2	1.62	0.82
1:B:2659:GLN:OE1	1:B:2663:LYS:NZ	2.13	0.82
1:D:2659:GLN:OE1	1:D:2663:LYS:NZ	2.13	0.82
1:A:2659:GLN:OE1	1:A:2663:LYS:NZ	2.13	0.81
1:B:1910:LEU:HD13	1:B:2062:ILE:HG12	1.62	0.81
1:C:1910:LEU:HD13	1:C:2062:ILE:HG12	1.62	0.81
1:A:877:HIS:HA	1:A:880:ARG:NH1	1.96	0.81
1:A:2456:MET:HE1	1:A:2512:MET:HE2	1.62	0.81
1:B:4863:GLN:OE1	1:C:4860:ALA:HB2	1.81	0.81
1:C:2659:GLN:OE1	1:C:2663:LYS:NZ	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:877:HIS:HA	1:B:880:ARG:NH1	1.96	0.81
1:B:2692:GLN:HG3	1:B:2704:GLN:HB2	1.61	0.81
1:C:2456:MET:HE1	1:C:2512:MET:HE2	1.62	0.81
1:C:877:HIS:HA	1:C:880:ARG:NH1	1.96	0.81
1:C:940:LEU:HA	1:C:943:LEU:HD12	1.61	0.81
1:B:2456:MET:HE1	1:B:2512:MET:HE2	1.62	0.80
1:A:866:PRO:HD2	1:A:1009:ARG:HH21	1.46	0.80
1:D:866:PRO:HD2	1:D:1009:ARG:HH21	1.46	0.80
1:D:940:LEU:HA	1:D:943:LEU:HD12	1.61	0.80
1:D:760:ASP:HB3	1:D:765:SER:HB3	1.62	0.80
1:A:760:ASP:HB3	1:A:765:SER:HB3	1.62	0.80
1:C:2692:GLN:HG3	1:C:2704:GLN:HB2	1.61	0.80
1:A:4863:GLN:OE1	1:B:4860:ALA:CB	2.30	0.80
1:D:877:HIS:HA	1:D:880:ARG:NH1	1.96	0.80
1:B:940:LEU:HA	1:B:943:LEU:HD12	1.61	0.79
1:D:1910:LEU:HD13	1:D:2062:ILE:HG12	1.62	0.79
1:A:1910:LEU:HD13	1:A:2062:ILE:HG12	1.62	0.79
1:B:866:PRO:HD2	1:B:1009:ARG:HH21	1.46	0.79
1:B:3945:VAL:HG23	1:B:4006:SER:HB3	1.64	0.79
1:C:866:PRO:HD2	1:C:1009:ARG:HH21	1.46	0.79
1:A:2670:SER:HB2	1:A:2973:GLN:HG2	1.65	0.79
1:C:3945:VAL:HG23	1:C:4006:SER:HB3	1.64	0.79
1:C:2670:SER:HB2	1:C:2973:GLN:HG2	1.65	0.78
1:A:4196:THR:HG22	1:A:4200:MET:HE2	1.66	0.78
1:B:2386:ASN:ND2	1:B:2457:SER:O	2.17	0.78
1:A:3945:VAL:HG23	1:A:4006:SER:HB3	1.64	0.78
1:B:4196:THR:HG22	1:B:4200:MET:HE2	1.66	0.78
1:B:2670:SER:HB2	1:B:2973:GLN:HG2	1.65	0.78
1:D:2670:SER:HB2	1:D:2973:GLN:HG2	1.65	0.78
1:D:4040:LYS:HD2	1:D:4042:VAL:H	1.49	0.78
1:A:2386:ASN:ND2	1:A:2457:SER:O	2.17	0.78
1:D:2386:ASN:ND2	1:D:2457:SER:O	2.17	0.77
1:D:4196:THR:HG22	1:D:4200:MET:HE2	1.66	0.77
1:C:4040:LYS:HD2	1:C:4042:VAL:H	1.49	0.77
1:C:2386:ASN:ND2	1:C:2457:SER:O	2.17	0.77
1:D:3945:VAL:HG23	1:D:4006:SER:HB3	1.64	0.77
1:A:4040:LYS:HD2	1:A:4042:VAL:H	1.49	0.77
1:C:2139:GLU:HG3	1:C:2192:MET:HB2	1.67	0.76
1:C:4196:THR:HG22	1:C:4200:MET:HE2	1.66	0.76
1:A:2139:GLU:HG3	1:A:2192:MET:HB2	1.67	0.76
1:B:4040:LYS:HD2	1:B:4042:VAL:H	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2926:LEU:HB3	1:A:3003:MET:HE2	1.69	0.75
1:B:2139:GLU:HG3	1:B:2192:MET:HB2	1.67	0.75
1:C:4036:ASP:HB2	1:C:4043:ILE:HD13	1.69	0.74
1:B:2926:LEU:HB3	1:B:3003:MET:HE2	1.69	0.74
1:D:2139:GLU:HG3	1:D:2192:MET:HB2	1.67	0.74
1:B:4036:ASP:HB2	1:B:4043:ILE:HD13	1.70	0.74
1:D:2926:LEU:HB3	1:D:3003:MET:HE2	1.69	0.74
1:A:235:ARG:NH2	1:A:412:GLU:OE1	2.21	0.73
1:A:4860:ALA:HB1	1:D:4863:GLN:OE1	1.89	0.73
1:D:4036:ASP:HB2	1:D:4043:ILE:HD13	1.70	0.73
1:B:254:GLU:O	1:B:255:GLU:HG3	1.88	0.73
1:A:3179:ASN:O	1:A:3185:ASN:ND2	2.21	0.73
1:A:3255:GLU:OE2	1:A:3256:ASN:ND2	2.22	0.73
1:C:3179:ASN:O	1:C:3185:ASN:ND2	2.21	0.73
1:C:235:ARG:NH2	1:C:412:GLU:OE1	2.21	0.73
1:C:4859:LEU:O	1:C:4863:GLN:HG2	1.89	0.73
1:A:4036:ASP:HB2	1:A:4043:ILE:HD13	1.70	0.73
1:D:254:GLU:O	1:D:255:GLU:HG3	1.88	0.73
1:D:3046:MET:O	1:D:3054:LYS:NZ	2.20	0.73
1:D:3255:GLU:OE2	1:D:3256:ASN:ND2	2.22	0.73
1:C:254:GLU:O	1:C:255:GLU:HG3	1.88	0.73
1:C:2926:LEU:HB3	1:C:3003:MET:HE2	1.69	0.73
1:D:1689:ILE:HA	1:D:1703:TYR:HE1	1.54	0.73
1:D:4859:LEU:O	1:D:4863:GLN:HG2	1.89	0.72
1:C:2521:CYS:HA	1:C:2525:LEU:HD12	1.72	0.72
1:C:3046:MET:O	1:C:3054:LYS:NZ	2.20	0.72
1:B:235:ARG:NH2	1:B:412:GLU:OE1	2.21	0.72
1:B:3255:GLU:OE2	1:B:3256:ASN:ND2	2.22	0.72
1:D:3179:ASN:O	1:D:3185:ASN:ND2	2.21	0.72
1:B:2521:CYS:HA	1:B:2525:LEU:HD12	1.72	0.72
1:D:235:ARG:NH2	1:D:412:GLU:OE1	2.21	0.72
1:C:3255:GLU:OE2	1:C:3256:ASN:ND2	2.22	0.72
1:A:1689:ILE:HA	1:A:1703:TYR:HE1	1.54	0.72
1:B:946:LEU:HB2	1:B:995:MET:HE1	1.72	0.72
1:A:254:GLU:O	1:A:255:GLU:HG3	1.88	0.72
1:B:4859:LEU:O	1:B:4863:GLN:HG2	1.89	0.72
1:C:1689:ILE:HA	1:C:1703:TYR:HE1	1.54	0.72
1:A:3184:TYR:O	1:A:3192:ARG:NH2	2.23	0.72
1:C:946:LEU:HB2	1:C:995:MET:HE1	1.72	0.72
1:D:2521:CYS:HA	1:D:2525:LEU:HD12	1.72	0.71
1:D:880:ARG:HB2	1:D:884:LYS:HE2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4859:LEU:O	1:A:4863:GLN:HG2	1.89	0.71
1:B:466:PRO:HG2	1:B:479:LEU:HD12	1.72	0.71
1:B:3184:TYR:O	1:B:3192:ARG:NH2	2.23	0.71
1:D:3184:TYR:O	1:D:3192:ARG:NH2	2.23	0.71
1:A:466:PRO:HG2	1:A:479:LEU:HD12	1.72	0.71
1:A:2521:CYS:HA	1:A:2525:LEU:HD12	1.72	0.71
1:A:866:PRO:HG2	1:A:1009:ARG:HE	1.56	0.71
1:A:1434:PRO:O	1:D:2830:ASN:ND2	2.23	0.71
1:A:4863:GLN:OE1	1:B:4860:ALA:HB2	1.90	0.71
1:C:866:PRO:HG2	1:C:1009:ARG:HE	1.56	0.71
1:B:3179:ASN:O	1:B:3185:ASN:ND2	2.21	0.71
1:A:31:GLU:OE1	1:A:33:GLN:NE2	2.23	0.71
1:D:1714:TYR:OH	1:D:1718:ARG:NH2	2.24	0.71
1:B:31:GLU:OE1	1:B:33:GLN:NE2	2.23	0.70
1:B:1714:TYR:OH	1:B:1718:ARG:NH2	2.24	0.70
1:D:466:PRO:HG2	1:D:479:LEU:HD12	1.72	0.70
1:D:946:LEU:HB2	1:D:995:MET:HE1	1.72	0.70
1:B:233:VAL:HG22	1:B:276:ARG:HG2	1.73	0.70
1:C:31:GLU:OE1	1:C:33:GLN:NE2	2.23	0.70
1:C:1685:LEU:O	1:C:1689:ILE:HG12	1.91	0.70
1:C:3184:TYR:O	1:C:3192:ARG:NH2	2.23	0.70
1:A:946:LEU:HB2	1:A:995:MET:HE1	1.72	0.70
1:C:880:ARG:HB2	1:C:884:LYS:HE2	1.72	0.70
1:D:31:GLU:OE1	1:D:33:GLN:NE2	2.23	0.70
1:A:880:ARG:HB2	1:A:884:LYS:HE2	1.72	0.70
1:D:2187:ILE:HG21	1:D:2227:VAL:HG13	1.74	0.70
1:B:866:PRO:HG2	1:B:1009:ARG:HE	1.56	0.70
1:C:233:VAL:HG22	1:C:276:ARG:HG2	1.73	0.70
1:D:866:PRO:HG2	1:D:1009:ARG:HE	1.56	0.70
1:A:233:VAL:HG22	1:A:276:ARG:HG2	1.73	0.70
1:A:2187:ILE:HG21	1:A:2227:VAL:HG13	1.74	0.70
1:C:466:PRO:HG2	1:C:479:LEU:HD12	1.72	0.70
1:A:2822:SER:OG	1:A:2824:ARG:NH1	2.25	0.70
1:A:2251:ASN:HB3	1:A:3819:MET:HE1	1.74	0.70
1:B:1689:ILE:HA	1:B:1703:TYR:HE1	1.54	0.70
1:B:2187:ILE:HG21	1:B:2227:VAL:HG13	1.74	0.70
1:A:1714:TYR:OH	1:A:1718:ARG:NH2	2.24	0.69
1:A:3046:MET:O	1:A:3054:LYS:NZ	2.20	0.69
1:A:1685:LEU:O	1:A:1689:ILE:HG12	1.91	0.69
1:B:2251:ASN:HB3	1:B:3819:MET:HE1	1.74	0.69
1:C:2187:ILE:HG21	1:C:2227:VAL:HG13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2822:SER:OG	1:B:2824:ARG:NH1	2.25	0.69
1:B:2830:ASN:ND2	1:C:1434:PRO:O	2.25	0.69
1:D:1685:LEU:O	1:D:1689:ILE:HG12	1.91	0.69
1:B:3100:ALA:O	1:B:3104:MET:HG3	1.93	0.69
1:C:2251:ASN:HB3	1:C:3819:MET:HE1	1.74	0.69
1:B:880:ARG:HB2	1:B:884:LYS:HE2	1.72	0.69
1:B:921:PHE:HB2	1:B:929:ARG:HG3	1.75	0.69
1:B:1685:LEU:O	1:B:1689:ILE:HG12	1.91	0.69
1:B:4863:GLN:OE1	1:C:4860:ALA:HB1	1.93	0.69
1:D:233:VAL:HG22	1:D:276:ARG:HG2	1.73	0.69
1:B:247:VAL:O	1:B:272:ARG:NH2	2.25	0.69
1:C:921:PHE:HB2	1:C:929:ARG:HG3	1.75	0.69
1:C:1714:TYR:OH	1:C:1718:ARG:NH2	2.24	0.69
1:D:2251:ASN:HB3	1:D:3819:MET:HE1	1.74	0.69
1:A:3100:ALA:O	1:A:3104:MET:HG3	1.93	0.69
1:D:2822:SER:OG	1:D:2824:ARG:NH1	2.25	0.69
1:D:3100:ALA:O	1:D:3104:MET:HG3	1.93	0.68
1:A:921:PHE:HA	1:A:924:LEU:HD12	1.75	0.68
1:C:2822:SER:OG	1:C:2824:ARG:NH1	2.25	0.68
1:B:3046:MET:O	1:B:3054:LYS:NZ	2.20	0.68
1:A:247:VAL:O	1:A:272:ARG:NH2	2.25	0.68
1:C:247:VAL:O	1:C:272:ARG:NH2	2.25	0.68
1:D:921:PHE:HA	1:D:924:LEU:HD12	1.74	0.68
1:C:2252:GLU:HG2	1:C:3819:MET:HE2	1.76	0.68
1:C:921:PHE:HA	1:C:924:LEU:HD12	1.75	0.68
1:C:2830:ASN:ND2	1:D:1434:PRO:O	2.26	0.68
1:A:143:LEU:HD11	1:D:2426:LEU:HD23	1.75	0.68
1:A:2758:LYS:HZ2	1:A:2763:LEU:HA	1.57	0.68
1:B:921:PHE:HA	1:B:924:LEU:HD12	1.75	0.68
1:D:4187:GLU:OE2	1:D:4947:ARG:NH2	2.27	0.68
1:A:921:PHE:HB2	1:A:929:ARG:HG3	1.75	0.67
1:C:3100:ALA:O	1:C:3104:MET:HG3	1.93	0.67
1:C:4863:GLN:OE1	1:D:4860:ALA:HB1	1.93	0.67
1:D:1711:LEU:HB2	1:D:1831:MET:HE1	1.76	0.67
1:A:4829:ASP:H	1:D:4822:ARG:HH12	1.42	0.67
1:B:1097:LYS:NZ	1:B:1198:GLY:O	2.28	0.67
1:B:4187:GLU:OE2	1:B:4947:ARG:NH2	2.27	0.67
1:D:1097:LYS:NZ	1:D:1198:GLY:O	2.28	0.67
1:B:4863:GLN:HE22	1:C:4856:VAL:CG1	2.08	0.67
1:C:2924:SER:O	1:C:2928:GLN:NE2	2.28	0.67
1:C:4863:GLN:HE22	1:D:4856:VAL:CG1	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2924:SER:O	1:D:2928:GLN:NE2	2.28	0.67
1:A:1711:LEU:HB2	1:A:1831:MET:HE1	1.77	0.67
1:A:3797:MET:HE1	1:A:3870:ILE:HG23	1.77	0.67
1:D:247:VAL:O	1:D:272:ARG:NH2	2.25	0.67
1:A:4863:GLN:HE22	1:B:4856:VAL:CG1	2.07	0.67
1:B:2924:SER:O	1:B:2928:GLN:NE2	2.28	0.67
1:D:317:MET:HE1	1:D:322:ALA:HA	1.77	0.67
1:D:882:ARG:HG2	1:D:940:LEU:HD21	1.77	0.67
1:B:2208:ARG:HH22	1:B:3819:MET:HE3	1.60	0.67
1:D:921:PHE:HB2	1:D:929:ARG:HG3	1.75	0.67
1:B:1711:LEU:HB2	1:B:1831:MET:HE1	1.77	0.67
1:D:2252:GLU:HG2	1:D:3819:MET:HE2	1.76	0.67
1:A:1097:LYS:NZ	1:A:1198:GLY:O	2.28	0.67
1:A:2208:ARG:HH22	1:A:3819:MET:HE3	1.60	0.67
1:A:2924:SER:O	1:A:2928:GLN:NE2	2.28	0.67
1:B:317:MET:HE1	1:B:322:ALA:HA	1.77	0.67
1:C:1097:LYS:NZ	1:C:1198:GLY:O	2.28	0.67
1:B:2252:GLU:HG2	1:B:3819:MET:HE2	1.76	0.66
1:B:3797:MET:HE1	1:B:3870:ILE:HG23	1.77	0.66
1:C:587:ASN:O	1:C:590:LYS:NZ	2.28	0.66
1:C:2208:ARG:HH22	1:C:3819:MET:HE3	1.60	0.66
1:C:4187:GLU:OE2	1:C:4947:ARG:NH2	2.27	0.66
1:A:4187:GLU:OE2	1:A:4947:ARG:NH2	2.27	0.66
1:B:1714:TYR:HD2	1:B:1831:MET:HG3	1.61	0.66
1:D:3797:MET:HE1	1:D:3870:ILE:HG23	1.77	0.66
1:A:882:ARG:HG2	1:A:940:LEU:HD21	1.77	0.66
1:B:587:ASN:O	1:B:590:LYS:NZ	2.28	0.66
1:D:4092:LYS:NZ	1:D:4128:TYR:OH	2.29	0.66
1:A:317:MET:HE1	1:A:322:ALA:HA	1.77	0.66
1:A:2252:GLU:HG2	1:A:3819:MET:HE2	1.76	0.66
1:C:1711:LEU:HB2	1:C:1831:MET:HE1	1.77	0.66
1:C:982:ASP:OD2	1:C:984:SER:OG	2.14	0.66
1:D:982:ASP:OD2	1:D:984:SER:OG	2.14	0.66
1:B:882:ARG:HG2	1:B:940:LEU:HD21	1.77	0.66
1:D:1714:TYR:HD2	1:D:1831:MET:HG3	1.61	0.66
1:A:1714:TYR:HD2	1:A:1831:MET:HG3	1.61	0.65
1:D:3213:LYS:O	1:D:3216:GLU:HG3	1.96	0.65
1:A:3152:ARG:HH22	1:A:3233:HIS:CD2	2.15	0.65
1:A:4580:THR:OG1	1:A:4733:HIS:NE2	2.24	0.65
1:B:982:ASP:OD2	1:B:984:SER:OG	2.14	0.65
1:A:4092:LYS:NZ	1:A:4128:TYR:OH	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2435:VAL:HG11	1:B:2468:MET:HE3	1.79	0.65
1:C:3797:MET:HE1	1:C:3870:ILE:HG23	1.77	0.65
1:D:2208:ARG:HH22	1:D:3819:MET:HE3	1.60	0.65
1:D:3152:ARG:HH22	1:D:3233:HIS:CD2	2.15	0.65
1:A:982:ASP:OD2	1:A:984:SER:OG	2.14	0.65
1:A:2435:VAL:HG11	1:A:2468:MET:HE3	1.79	0.65
1:B:3152:ARG:HH22	1:B:3233:HIS:CD2	2.15	0.65
1:C:3152:ARG:HH22	1:C:3233:HIS:CD2	2.15	0.65
1:A:2779:LEU:HA	1:A:2782:MET:HG2	1.79	0.65
1:C:3213:LYS:O	1:C:3216:GLU:HG3	1.96	0.65
1:B:949:HIS:HB2	1:B:1065:GLU:HB2	1.79	0.65
1:C:949:HIS:HB2	1:C:1065:GLU:HB2	1.79	0.65
1:D:2435:VAL:HG11	1:D:2468:MET:HE3	1.79	0.65
1:A:587:ASN:O	1:A:590:LYS:NZ	2.28	0.65
1:A:3921:THR:HG22	1:A:3925:GLN:HE21	1.62	0.65
1:C:2833:LEU:HG	1:C:2894:LYS:HE3	1.78	0.65
1:C:4822:ARG:HH12	1:D:4829:ASP:H	1.45	0.65
1:D:2833:LEU:HG	1:D:2894:LYS:HE3	1.78	0.65
1:C:2435:VAL:HG11	1:C:2468:MET:HE3	1.79	0.64
1:A:2920:ARG:NH2	1:A:2997:SER:OG	2.31	0.64
1:B:3213:LYS:O	1:B:3216:GLU:HG3	1.96	0.64
1:B:4019:MET:HE2	1:B:4062:GLU:HG2	1.80	0.64
1:C:317:MET:HE1	1:C:322:ALA:HA	1.77	0.64
1:C:2920:ARG:NH2	1:C:2997:SER:OG	2.31	0.64
1:C:4092:LYS:NZ	1:C:4128:TYR:OH	2.29	0.64
1:D:3033:LEU:HD23	1:D:3104:MET:SD	2.38	0.64
1:A:3250:TRP:CZ3	1:A:3273:MET:HE1	2.33	0.64
1:B:905:GLY:HA3	1:B:914:GLN:HB3	1.79	0.64
1:C:1714:TYR:HD2	1:C:1831:MET:HG3	1.61	0.64
1:C:4019:MET:HE2	1:C:4062:GLU:HG2	1.80	0.64
1:C:4580:THR:OG1	1:C:4733:HIS:NE2	2.24	0.64
1:B:2920:ARG:NH2	1:B:2997:SER:OG	2.31	0.64
1:C:882:ARG:HG2	1:C:940:LEU:HD21	1.77	0.64
1:D:587:ASN:O	1:D:590:LYS:NZ	2.28	0.64
1:D:3921:THR:HG22	1:D:3925:GLN:HE21	1.63	0.64
1:B:2779:LEU:HA	1:B:2782:MET:HG2	1.79	0.64
1:B:3921:THR:HG22	1:B:3925:GLN:HE21	1.62	0.64
1:D:686:VAL:HG13	1:D:687:THR:HG23	1.79	0.64
1:A:3070:LYS:HZ1	1:A:3093:ILE:HG21	1.62	0.64
1:B:4092:LYS:NZ	1:B:4128:TYR:OH	2.29	0.64
1:B:4822:ARG:HH12	1:C:4829:ASP:H	1.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:905:GLY:HA3	1:C:914:GLN:HB3	1.80	0.64
1:D:2779:LEU:HA	1:D:2782:MET:HG2	1.79	0.64
1:A:3213:LYS:O	1:A:3216:GLU:HG3	1.96	0.64
1:A:3972:MET:HE3	1:A:4094:ILE:HD12	1.80	0.64
1:A:4019:MET:HE2	1:A:4062:GLU:HG2	1.80	0.64
1:B:3250:TRP:CZ3	1:B:3273:MET:HE1	2.33	0.64
1:C:2779:LEU:HA	1:C:2782:MET:HG2	1.79	0.64
1:C:3033:LEU:HD23	1:C:3104:MET:SD	2.38	0.64
1:A:2833:LEU:HG	1:A:2894:LYS:HE3	1.79	0.64
1:A:3033:LEU:HD23	1:A:3104:MET:SD	2.38	0.64
1:C:3921:THR:HG22	1:C:3925:GLN:HE21	1.62	0.64
1:A:670:TYR:O	1:A:673:TRP:NE1	2.31	0.63
1:B:2581:ARG:NH2	1:B:2629:ASN:O	2.32	0.63
1:B:2833:LEU:HG	1:B:2894:LYS:HE3	1.78	0.63
1:C:686:VAL:HG13	1:C:687:THR:HG23	1.79	0.63
1:D:989:THR:OG1	1:D:992:GLN:OE1	2.16	0.63
1:D:4019:MET:HE2	1:D:4062:GLU:HG2	1.80	0.63
1:A:686:VAL:HG13	1:A:687:THR:HG23	1.79	0.63
1:A:949:HIS:HB2	1:A:1065:GLU:HB2	1.79	0.63
1:B:670:TYR:O	1:B:673:TRP:NE1	2.31	0.63
1:C:2581:ARG:NH2	1:C:2629:ASN:O	2.32	0.63
1:A:989:THR:OG1	1:A:992:GLN:OE1	2.16	0.63
1:A:3293:GLY:O	1:A:3297:LYS:NZ	2.32	0.63
1:B:3033:LEU:HD23	1:B:3104:MET:SD	2.38	0.63
1:B:3972:MET:HE3	1:B:4094:ILE:HD12	1.80	0.63
1:C:670:TYR:O	1:C:673:TRP:NE1	2.31	0.63
1:D:3250:TRP:CZ3	1:D:3273:MET:HE1	2.33	0.63
1:B:562:LEU:HG	1:B:600:LEU:HD13	1.81	0.63
1:D:949:HIS:HB2	1:D:1065:GLU:HB2	1.79	0.63
1:D:2920:ARG:NH2	1:D:2997:SER:OG	2.31	0.63
1:A:2581:ARG:NH2	1:A:2629:ASN:O	2.32	0.63
1:A:4145:ILE:H	1:A:4961:GLN:HE22	1.45	0.63
1:A:4187:GLU:OE1	1:A:4949:TRP:NE1	2.28	0.63
1:C:3171:LEU:HG	1:C:3211:LEU:HB3	1.81	0.63
1:D:3972:MET:HE3	1:D:4094:ILE:HD12	1.80	0.63
1:C:3043:ARG:HE	1:C:3117:PHE:HD2	1.45	0.63
1:D:3123:LEU:H	1:D:3126:VAL:HB	1.63	0.63
1:C:562:LEU:HG	1:C:600:LEU:HD13	1.81	0.63
1:C:3250:TRP:CZ3	1:C:3273:MET:HE1	2.33	0.63
1:D:562:LEU:HG	1:D:600:LEU:HD13	1.81	0.63
1:B:3043:ARG:HE	1:B:3117:PHE:HD2	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:562:LEU:HG	1:A:600:LEU:HD13	1.81	0.62
1:A:3171:LEU:HG	1:A:3211:LEU:HB3	1.81	0.62
1:B:3293:GLY:O	1:B:3297:LYS:NZ	2.32	0.62
1:B:4580:THR:OG1	1:B:4733:HIS:NE2	2.24	0.62
1:B:4145:ILE:H	1:B:4961:GLN:HE22	1.45	0.62
1:C:3293:GLY:O	1:C:3297:LYS:NZ	2.32	0.62
1:D:670:TYR:O	1:D:673:TRP:NE1	2.31	0.62
1:D:3293:GLY:O	1:D:3297:LYS:NZ	2.32	0.62
1:B:1031:ARG:HG3	1:B:1038:LEU:HD11	1.82	0.62
1:B:3123:LEU:H	1:B:3126:VAL:HB	1.63	0.62
1:C:3123:LEU:H	1:C:3126:VAL:HB	1.63	0.62
1:B:989:THR:OG1	1:B:992:GLN:OE1	2.16	0.62
1:D:905:GLY:HA3	1:D:914:GLN:HB3	1.79	0.62
1:A:905:GLY:HA3	1:A:914:GLN:HB3	1.79	0.62
1:A:4640:PHE:CD2	1:A:4641:PRO:HD3	2.35	0.62
1:B:2844:MET:HE2	1:B:2848:TYR:HE2	1.65	0.62
1:C:1716:THR:HG22	1:C:1720:MET:HE2	1.81	0.62
1:B:594:ILE:HD11	1:B:632:ILE:HG13	1.82	0.62
1:C:594:ILE:HD11	1:C:632:ILE:HG13	1.82	0.62
1:C:2844:MET:HE2	1:C:2848:TYR:HE2	1.65	0.62
1:C:3972:MET:HE3	1:C:4094:ILE:HD12	1.80	0.62
1:B:1948:MET:HE3	1:B:1949:GLN:N	2.15	0.62
1:B:3122:ILE:HD12	1:B:3126:VAL:HG12	1.82	0.62
1:C:4145:ILE:H	1:C:4961:GLN:HE22	1.46	0.62
1:D:3088:LYS:HD2	1:D:3090:VAL:HG22	1.81	0.62
1:A:594:ILE:HD11	1:A:632:ILE:HG13	1.82	0.61
1:A:3123:LEU:H	1:A:3126:VAL:HB	1.63	0.61
1:B:3171:LEU:HG	1:B:3211:LEU:HB3	1.81	0.61
1:C:4640:PHE:CD2	1:C:4641:PRO:HD3	2.35	0.61
1:D:2581:ARG:NH2	1:D:2629:ASN:O	2.31	0.61
1:D:3043:ARG:HE	1:D:3117:PHE:HD2	1.45	0.61
1:B:686:VAL:HG13	1:B:687:THR:HG23	1.79	0.61
1:B:1716:THR:HG22	1:B:1720:MET:HE2	1.81	0.61
1:C:3122:ILE:HD12	1:C:3126:VAL:HG12	1.82	0.61
1:D:4145:ILE:H	1:D:4961:GLN:HE22	1.45	0.61
1:B:4640:PHE:CD2	1:B:4641:PRO:HD3	2.35	0.61
1:C:2622:CYS:HA	1:C:2677:PRO:HG3	1.83	0.61
1:B:1016:TRP:HA	1:B:1027:ARG:HB3	1.82	0.61
1:B:3088:LYS:HD2	1:B:3090:VAL:HG22	1.81	0.61
1:C:989:THR:OG1	1:C:992:GLN:OE1	2.16	0.61
1:C:2590:ARG:NH2	1:C:2875:ASP:OD2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3198:PRO:HD2	1:C:3204:VAL:HG22	1.83	0.61
1:D:877:HIS:NE2	1:D:1062:TYR:OH	2.34	0.61
1:A:1716:THR:HG22	1:A:1720:MET:HE2	1.81	0.61
1:A:2844:MET:HE2	1:A:2848:TYR:HE2	1.65	0.61
1:A:3043:ARG:HE	1:A:3117:PHE:HD2	1.45	0.61
1:D:1948:MET:HE3	1:D:1949:GLN:N	2.15	0.61
1:D:2844:MET:HE2	1:D:2848:TYR:HE2	1.65	0.61
1:D:3198:PRO:HD2	1:D:3204:VAL:HG22	1.83	0.61
1:D:4640:PHE:CD2	1:D:4641:PRO:HD3	2.35	0.61
1:A:1016:TRP:HA	1:A:1027:ARG:HB3	1.82	0.61
1:B:877:HIS:NE2	1:B:1062:TYR:OH	2.34	0.61
1:B:2622:CYS:HA	1:B:2677:PRO:HG3	1.83	0.61
1:D:594:ILE:HD11	1:D:632:ILE:HG13	1.82	0.61
1:C:877:HIS:NE2	1:C:1062:TYR:OH	2.34	0.61
1:D:2590:ARG:NH2	1:D:2875:ASP:OD2	2.34	0.61
1:D:2622:CYS:HA	1:D:2677:PRO:HG3	1.83	0.61
1:A:1761:MET:HE1	1:A:1833:ILE:HD11	1.82	0.61
1:B:2550:HIS:CD2	1:B:2591:ARG:HH12	2.19	0.61
1:B:3072:MET:HE3	1:B:3136:SER:CB	2.30	0.61
1:D:1031:ARG:HG3	1:D:1038:LEU:HD11	1.82	0.61
1:D:4187:GLU:OE1	1:D:4949:TRP:NE1	2.28	0.61
1:A:1031:ARG:HG3	1:A:1038:LEU:HD11	1.82	0.61
1:A:2413:LYS:HD2	1:A:2416:ALA:H	1.66	0.61
1:B:2590:ARG:NH2	1:B:2875:ASP:OD2	2.34	0.61
1:D:1716:THR:HG22	1:D:1720:MET:HE2	1.81	0.61
1:A:276:ARG:HG3	1:A:300:VAL:HG22	1.83	0.61
1:A:2996:ALA:O	1:A:3001:LYS:NZ	2.34	0.61
1:A:70:GLU:OE2	1:A:122:ARG:NE	2.31	0.60
1:A:3122:ILE:HD12	1:A:3126:VAL:HG12	1.82	0.60
1:B:276:ARG:HG3	1:B:300:VAL:HG22	1.83	0.60
1:B:2996:ALA:O	1:B:3001:LYS:NZ	2.34	0.60
1:C:1948:MET:HE3	1:C:1949:GLN:N	2.15	0.60
1:D:70:GLU:OE2	1:D:122:ARG:NE	2.31	0.60
1:D:3171:LEU:HG	1:D:3211:LEU:HB3	1.81	0.60
1:A:1456:GLY:O	1:A:1461:ARG:NH2	2.35	0.60
1:A:2550:HIS:CD2	1:A:2591:ARG:HH12	2.19	0.60
1:C:1456:GLY:O	1:C:1461:ARG:NH2	2.35	0.60
1:D:1761:MET:HE1	1:D:1833:ILE:HD11	1.82	0.60
1:B:2413:LYS:HD2	1:B:2416:ALA:H	1.66	0.60
1:B:3296:MET:HA	1:B:3299:LEU:HG	1.83	0.60
1:C:3296:MET:HA	1:C:3299:LEU:HG	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1016:TRP:HA	1:D:1027:ARG:HB3	1.82	0.60
1:D:3741:LEU:HD11	1:D:3777:MET:HB3	1.84	0.60
1:A:1948:MET:HE3	1:A:1949:GLN:N	2.15	0.60
1:A:3088:LYS:HD2	1:A:3090:VAL:HG22	1.81	0.60
1:A:3184:TYR:HE1	1:A:3197:LEU:HD21	1.66	0.60
1:A:3198:PRO:HD2	1:A:3204:VAL:HG22	1.83	0.60
1:C:1761:MET:HE1	1:C:1833:ILE:HD11	1.82	0.60
1:C:3072:MET:HE3	1:C:3136:SER:CB	2.30	0.60
1:B:1761:MET:HE1	1:B:1833:ILE:HD11	1.82	0.60
1:C:3088:LYS:HD2	1:C:3090:VAL:HG22	1.81	0.60
1:C:4187:GLU:OE1	1:C:4949:TRP:NE1	2.28	0.60
1:D:1456:GLY:O	1:D:1461:ARG:NH2	2.35	0.60
1:D:3122:ILE:HD12	1:D:3126:VAL:HG12	1.82	0.60
1:D:3184:TYR:HE1	1:D:3197:LEU:HD21	1.66	0.60
1:A:2622:CYS:HA	1:A:2677:PRO:HG3	1.83	0.60
1:C:1016:TRP:HA	1:C:1027:ARG:HB3	1.82	0.60
1:C:2550:HIS:CD2	1:C:2591:ARG:HH12	2.19	0.60
1:C:1031:ARG:HG3	1:C:1038:LEU:HD11	1.82	0.60
1:C:2996:ALA:O	1:C:3001:LYS:NZ	2.34	0.60
1:D:2360:ASP:OD2	1:D:2383:HIS:ND1	2.35	0.60
1:D:2413:LYS:HD2	1:D:2416:ALA:H	1.66	0.60
1:D:2996:ALA:O	1:D:3001:LYS:NZ	2.34	0.60
1:A:2590:ARG:NH2	1:A:2875:ASP:OD2	2.34	0.60
1:B:2360:ASP:OD2	1:B:2383:HIS:ND1	2.35	0.60
1:B:3235:MET:HA	1:B:3239:LEU:HD13	1.84	0.60
1:C:2426:LEU:HD23	1:D:143:LEU:HD11	1.83	0.60
1:D:4580:THR:OG1	1:D:4733:HIS:NE2	2.24	0.60
1:B:1074:ARG:HH12	1:B:1078:CYS:H	1.50	0.60
1:C:169:ARG:NE	1:C:179:ASP:OD2	2.30	0.60
1:C:3235:MET:HA	1:C:3239:LEU:HD13	1.84	0.60
1:C:276:ARG:HG3	1:C:300:VAL:HG22	1.83	0.59
1:A:3741:LEU:HD11	1:A:3777:MET:HB3	1.84	0.59
1:B:552:SER:HB2	1:B:588:ILE:HG13	1.84	0.59
1:B:3198:PRO:HD2	1:B:3204:VAL:HG22	1.83	0.59
1:C:1074:ARG:HH12	1:C:1078:CYS:H	1.50	0.59
1:D:169:ARG:NE	1:D:179:ASP:OD2	2.30	0.59
1:A:552:SER:HB2	1:A:588:ILE:HG13	1.84	0.59
1:A:2482:ASP:OD1	1:A:2483:PHE:N	2.36	0.59
1:B:1795:LEU:HD23	1:B:1842:ILE:HD11	1.85	0.59
1:C:2413:LYS:HD2	1:C:2416:ALA:H	1.66	0.59
1:C:2482:ASP:OD1	1:C:2483:PHE:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3741:LEU:HD11	1:C:3777:MET:HB3	1.84	0.59
1:D:276:ARG:HG3	1:D:300:VAL:HG22	1.83	0.59
1:D:2550:HIS:CD2	1:D:2591:ARG:HH12	2.19	0.59
1:D:3072:MET:HE3	1:D:3136:SER:CB	2.30	0.59
1:A:1074:ARG:HH12	1:A:1078:CYS:H	1.50	0.59
1:A:2176:VAL:HG22	1:A:2220:TYR:CZ	2.38	0.59
1:A:2360:ASP:OD2	1:A:2383:HIS:ND1	2.35	0.59
1:A:3025:ASP:O	1:A:3028:SER:OG	2.15	0.59
1:C:3184:TYR:HE1	1:C:3197:LEU:HD21	1.66	0.59
1:D:1795:LEU:HD23	1:D:1842:ILE:HD11	1.85	0.59
1:A:2928:GLN:HG3	1:A:2931:ARG:HH12	1.68	0.59
1:A:3072:MET:HE3	1:A:3136:SER:CB	2.30	0.59
1:C:2360:ASP:OD2	1:C:2383:HIS:ND1	2.35	0.59
1:A:1795:LEU:HD23	1:A:1842:ILE:HD11	1.85	0.59
1:B:2176:VAL:HG22	1:B:2220:TYR:CZ	2.38	0.59
1:C:2176:VAL:HG22	1:C:2220:TYR:CZ	2.38	0.59
1:D:558:LEU:HG	1:D:571:ILE:HG23	1.85	0.59
1:D:885:LEU:O	1:D:889:ILE:HG12	2.03	0.59
1:D:885:LEU:HD13	1:D:1057:LEU:HD22	1.85	0.59
1:D:3070:LYS:HZ1	1:D:3093:ILE:HG21	1.68	0.59
1:B:1456:GLY:O	1:B:1461:ARG:NH2	2.35	0.59
1:B:3184:TYR:HE1	1:B:3197:LEU:HD21	1.67	0.59
1:B:3242:LEU:O	1:B:3246:MET:HG3	2.03	0.59
1:C:1081:THR:OG1	1:C:1082:GLY:N	2.34	0.59
1:D:2482:ASP:OD1	1:D:2483:PHE:N	2.36	0.59
1:A:885:LEU:HD13	1:A:1057:LEU:HD22	1.85	0.59
1:A:3296:MET:HA	1:A:3299:LEU:HG	1.83	0.59
1:B:885:LEU:HD13	1:B:1057:LEU:HD22	1.85	0.59
1:B:2426:LEU:HD23	1:C:143:LEU:HD11	1.84	0.59
1:B:2928:GLN:HG3	1:B:2931:ARG:HH12	1.68	0.59
1:B:3741:LEU:HD11	1:B:3777:MET:HB3	1.84	0.59
1:C:1795:LEU:HD23	1:C:1842:ILE:HD11	1.85	0.59
1:A:247:VAL:HG11	1:A:316:LEU:HD11	1.85	0.59
1:A:558:LEU:HG	1:A:571:ILE:HG23	1.85	0.59
1:D:3296:MET:HA	1:D:3299:LEU:HG	1.83	0.59
1:A:885:LEU:O	1:A:889:ILE:HG12	2.03	0.59
1:A:2426:LEU:HD23	1:B:143:LEU:HD11	1.84	0.59
1:A:2830:ASN:ND2	1:B:1434:PRO:O	2.33	0.59
1:C:3242:LEU:O	1:C:3246:MET:HG3	2.03	0.59
1:D:2748:SER:HB3	1:D:2753:VAL:HB	1.85	0.59
1:A:3242:LEU:O	1:A:3246:MET:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3072:MET:CE	1:B:3136:SER:HB2	2.31	0.58
1:C:885:LEU:O	1:C:889:ILE:HG12	2.03	0.58
1:D:1074:ARG:HH12	1:D:1078:CYS:H	1.50	0.58
1:D:3235:MET:HA	1:D:3239:LEU:HD13	1.84	0.58
1:A:2855:LYS:HA	1:A:2858:MET:HE2	1.85	0.58
1:A:3235:MET:HA	1:A:3239:LEU:HD13	1.84	0.58
1:B:247:VAL:HG11	1:B:316:LEU:HD11	1.85	0.58
1:C:2928:GLN:HG3	1:C:2931:ARG:HH12	1.68	0.58
1:D:2176:VAL:HG22	1:D:2220:TYR:CZ	2.38	0.58
1:D:2928:GLN:HG3	1:D:2931:ARG:HH12	1.68	0.58
1:A:614:LEU:HD22	1:A:632:ILE:HG12	1.85	0.58
1:A:4860:ALA:HB2	1:D:4863:GLN:CD	2.28	0.58
1:B:885:LEU:O	1:B:889:ILE:HG12	2.03	0.58
1:B:2185:LYS:HD2	1:B:2185:LYS:O	2.04	0.58
1:B:2975:PHE:HB3	1:B:3039:THR:HG21	1.85	0.58
1:B:4819:VAL:HG12	1:B:4830:GLU:HG3	1.86	0.58
1:C:885:LEU:HD13	1:C:1057:LEU:HD22	1.85	0.58
1:D:990:PRO:HA	1:D:993:GLU:HB2	1.86	0.58
1:D:2338:GLU:N	1:D:2338:GLU:OE2	2.35	0.58
1:D:4943:MET:HA	1:D:4946:GLU:HG2	1.86	0.58
1:A:877:HIS:NE2	1:A:1062:TYR:OH	2.34	0.58
1:A:3313:GLN:HA	1:A:3316:LYS:HD3	1.86	0.58
1:A:4943:MET:HA	1:A:4946:GLU:HG2	1.85	0.58
1:B:240:HIS:O	1:C:167:LYS:NZ	2.33	0.58
1:C:70:GLU:OE2	1:C:122:ARG:NE	2.31	0.58
1:C:2338:GLU:N	1:C:2338:GLU:OE2	2.35	0.58
1:C:3261:ALA:O	1:C:3262:GLU:HG3	2.04	0.58
1:C:4863:GLN:CD	1:D:4860:ALA:HB2	2.28	0.58
1:D:552:SER:HB2	1:D:588:ILE:HG13	1.84	0.58
1:D:555:LEU:HD21	1:D:578:VAL:HG11	1.86	0.58
1:D:3192:ARG:HG2	1:D:3197:LEU:HD22	1.85	0.58
1:A:555:LEU:HD21	1:A:578:VAL:HG11	1.86	0.58
1:A:990:PRO:HA	1:A:993:GLU:HB2	1.86	0.58
1:A:3192:ARG:HG2	1:A:3197:LEU:HD22	1.85	0.58
1:A:4891:CYS:HB3	1:A:4893:ILE:HG13	1.85	0.58
1:B:2748:SER:HB3	1:B:2753:VAL:HB	1.85	0.58
1:B:2855:LYS:HA	1:B:2858:MET:HE2	1.85	0.58
1:B:3261:ALA:O	1:B:3262:GLU:HG3	2.04	0.58
1:B:4187:GLU:OE1	1:B:4949:TRP:NE1	2.28	0.58
1:C:555:LEU:HD21	1:C:578:VAL:HG11	1.86	0.58
1:C:990:PRO:HA	1:C:993:GLU:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3242:LEU:O	1:D:3246:MET:HG3	2.03	0.58
1:D:3684:GLU:HB3	1:D:3689:MET:HE1	1.86	0.58
1:B:555:LEU:HD21	1:B:578:VAL:HG11	1.86	0.58
1:B:990:PRO:HA	1:B:993:GLU:HB2	1.86	0.58
1:B:2482:ASP:OD1	1:B:2483:PHE:N	2.36	0.58
1:B:2592:LEU:HD22	1:B:2606:PRO:HB3	1.86	0.58
1:C:218:SER:HB3	1:C:286:GLY:HA3	1.86	0.58
1:C:552:SER:HB2	1:C:588:ILE:HG13	1.84	0.58
1:C:558:LEU:HG	1:C:571:ILE:HG23	1.85	0.58
1:C:2592:LEU:HD22	1:C:2606:PRO:HB3	1.86	0.58
1:C:2975:PHE:HB3	1:C:3039:THR:HG21	1.85	0.58
1:D:247:VAL:HG11	1:D:316:LEU:HD11	1.85	0.58
1:D:1962:THR:HA	1:D:1965:PHE:HD2	1.69	0.58
1:A:2581:ARG:HB3	1:A:2584:MET:HE1	1.86	0.58
1:A:4863:GLN:OE1	1:B:4860:ALA:HB1	2.04	0.58
1:B:218:SER:HB3	1:B:286:GLY:HA3	1.86	0.58
1:B:1842:ILE:HD12	1:B:1845:LEU:HD12	1.85	0.58
1:B:2760:TYR:HA	1:B:2763:LEU:HD12	1.86	0.58
1:B:3961:ASP:OD2	1:B:3964:GLN:NE2	2.37	0.58
1:A:3200:ASN:O	1:A:3204:VAL:HG23	2.04	0.58
1:B:2731:LYS:HA	1:B:2734:MET:HE2	1.86	0.58
1:C:4891:CYS:HB3	1:C:4893:ILE:HG13	1.85	0.58
1:D:3200:ASN:O	1:D:3204:VAL:HG23	2.04	0.58
1:D:3261:ALA:O	1:D:3262:GLU:HG3	2.04	0.58
1:A:2592:LEU:HD22	1:A:2606:PRO:HB3	1.86	0.58
1:A:2748:SER:HB3	1:A:2753:VAL:HB	1.85	0.58
1:A:3189:SER:HA	1:A:3192:ARG:HD2	1.86	0.58
1:A:4819:VAL:HG12	1:A:4830:GLU:HG3	1.86	0.58
1:B:3200:ASN:O	1:B:3204:VAL:HG23	2.04	0.58
1:C:247:VAL:HG11	1:C:316:LEU:HD11	1.85	0.58
1:C:1842:ILE:HD12	1:C:1845:LEU:HD12	1.85	0.58
1:D:466:PRO:HG3	1:D:478:ARG:HB3	1.86	0.58
1:D:2855:LYS:HA	1:D:2858:MET:HE2	1.85	0.58
1:B:558:LEU:HG	1:B:571:ILE:HG23	1.85	0.57
1:B:614:LEU:HD22	1:B:632:ILE:HG12	1.85	0.57
1:B:2929:LEU:O	1:B:2933:VAL:HG23	2.04	0.57
1:B:3025:ASP:O	1:B:3028:SER:OG	2.15	0.57
1:C:2748:SER:HB3	1:C:2753:VAL:HB	1.85	0.57
1:C:3189:SER:HA	1:C:3192:ARG:HD2	1.86	0.57
1:C:3200:ASN:O	1:C:3204:VAL:HG23	2.04	0.57
1:A:1962:THR:HA	1:A:1965:PHE:HD2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:466:PRO:HG3	1:B:478:ARG:HB3	1.86	0.57
1:B:514:PHE:HD2	1:B:526:TRP:HB2	1.68	0.57
1:B:4863:GLN:CD	1:C:4860:ALA:HB2	2.28	0.57
1:C:34:LYS:H	1:C:53:SER:HB3	1.69	0.57
1:C:1962:THR:HA	1:C:1965:PHE:HD2	1.69	0.57
1:C:2855:LYS:HA	1:C:2858:MET:HE2	1.85	0.57
1:C:2929:LEU:O	1:C:2933:VAL:HG23	2.04	0.57
1:C:3070:LYS:HZ1	1:C:3093:ILE:HG21	1.68	0.57
1:C:3684:GLU:HB3	1:C:3689:MET:HE1	1.86	0.57
1:C:4943:MET:HA	1:C:4946:GLU:HG2	1.85	0.57
1:D:1081:THR:OG1	1:D:1082:GLY:N	2.34	0.57
1:B:2581:ARG:HB3	1:B:2584:MET:HE1	1.86	0.57
1:B:4943:MET:HA	1:B:4946:GLU:HG2	1.85	0.57
1:C:514:PHE:HD2	1:C:526:TRP:HB2	1.69	0.57
1:C:614:LEU:HD22	1:C:632:ILE:HG12	1.85	0.57
1:C:2760:TYR:HA	1:C:2763:LEU:HD12	1.86	0.57
1:C:3072:MET:CE	1:C:3136:SER:HB2	2.31	0.57
1:D:614:LEU:HD22	1:D:632:ILE:HG12	1.85	0.57
1:D:3250:TRP:O	1:D:3256:ASN:ND2	2.38	0.57
1:A:514:PHE:HD2	1:A:526:TRP:HB2	1.68	0.57
1:A:2338:GLU:OE2	1:A:2338:GLU:N	2.35	0.57
1:A:2731:LYS:HA	1:A:2734:MET:HE2	1.86	0.57
1:B:4891:CYS:HB3	1:B:4893:ILE:HG13	1.85	0.57
1:D:2592:LEU:HD22	1:D:2606:PRO:HB3	1.86	0.57
1:D:3313:GLN:HA	1:D:3316:LYS:HD3	1.86	0.57
1:A:2929:LEU:O	1:A:2933:VAL:HG23	2.04	0.57
1:C:466:PRO:HG3	1:C:478:ARG:HB3	1.86	0.57
1:C:3192:ARG:HG2	1:C:3197:LEU:HD22	1.85	0.57
1:C:3313:GLN:HA	1:C:3316:LYS:HD3	1.86	0.57
1:D:774:PRO:O	1:D:776:GLN:NE2	2.38	0.57
1:A:1842:ILE:HD12	1:A:1845:LEU:HD12	1.85	0.57
1:A:4856:VAL:CG1	1:D:4863:GLN:HE22	2.16	0.57
1:B:114:LEU:HB2	1:B:117:HIS:CD2	2.40	0.57
1:B:2605:MET:SD	1:B:2606:PRO:HD3	2.45	0.57
1:B:3684:GLU:HB3	1:B:3689:MET:HE1	1.86	0.57
1:C:2605:MET:SD	1:C:2606:PRO:HD3	2.45	0.57
1:C:4819:VAL:HG12	1:C:4830:GLU:HG3	1.85	0.57
1:D:1100:ARG:NH2	1:D:1234:GLU:O	2.38	0.57
1:D:4819:VAL:HG12	1:D:4830:GLU:HG3	1.86	0.57
1:D:4891:CYS:HB3	1:D:4893:ILE:HG13	1.85	0.57
1:A:3072:MET:CE	1:A:3136:SER:HB2	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3261:ALA:O	1:A:3262:GLU:HG3	2.04	0.57
1:C:1100:ARG:NH2	1:C:1234:GLU:O	2.38	0.57
1:D:514:PHE:HD2	1:D:526:TRP:HB2	1.68	0.57
1:D:2608:LYS:O	1:D:2612:ASN:ND2	2.38	0.57
1:A:2185:LYS:O	1:A:2185:LYS:HD2	2.04	0.57
1:A:2703:PRO:HG2	1:A:2854:LYS:HG2	1.87	0.57
1:B:34:LYS:H	1:B:53:SER:HB3	1.69	0.57
1:B:1962:THR:HA	1:B:1965:PHE:HD2	1.69	0.57
1:B:2629:ASN:OD1	1:B:2630:PHE:N	2.38	0.57
1:B:3192:ARG:HG2	1:B:3197:LEU:HD22	1.85	0.57
1:D:2605:MET:SD	1:D:2606:PRO:HD3	2.45	0.57
1:A:1303:ARG:NH2	1:A:1635:GLU:OE1	2.38	0.57
1:A:1501:ASN:OD1	1:A:1502:ASN:N	2.38	0.57
1:A:4120:GLU:HA	1:A:4123:GLU:HG2	1.86	0.57
1:B:3313:GLN:HA	1:B:3316:LYS:HD3	1.86	0.57
1:C:114:LEU:HB2	1:C:117:HIS:CD2	2.40	0.57
1:C:2185:LYS:HD2	1:C:2185:LYS:O	2.04	0.57
1:C:2292:PRO:HB2	1:C:2387:ALA:HB1	1.87	0.57
1:C:2581:ARG:HB3	1:C:2584:MET:HE1	1.86	0.57
1:C:2703:PRO:HG2	1:C:2854:LYS:HG2	1.87	0.57
1:C:2731:LYS:HA	1:C:2734:MET:HE2	1.86	0.57
1:D:218:SER:HB3	1:D:286:GLY:HA3	1.86	0.57
1:D:2185:LYS:HD2	1:D:2185:LYS:O	2.04	0.57
1:D:2929:LEU:O	1:D:2933:VAL:HG23	2.04	0.57
1:A:1100:ARG:NH2	1:A:1234:GLU:O	2.38	0.57
1:A:2975:PHE:HB3	1:A:3039:THR:HG21	1.85	0.57
1:B:1421:MET:HE2	1:B:1576:LYS:HD2	1.87	0.57
1:D:34:LYS:H	1:D:53:SER:HB3	1.69	0.57
1:A:114:LEU:HB2	1:A:117:HIS:CD2	2.40	0.56
1:A:3729:ALA:HA	1:A:3732:HIS:CE1	2.40	0.56
1:B:952:ILE:HD11	1:B:958:GLU:HG3	1.87	0.56
1:B:3189:SER:HA	1:B:3192:ARG:HD2	1.86	0.56
1:B:3729:ALA:HA	1:B:3732:HIS:CE1	2.40	0.56
1:C:2629:ASN:OD1	1:C:2630:PHE:N	2.38	0.56
1:C:4661:TYR:HB2	1:C:4666:ILE:HD11	1.87	0.56
1:D:1303:ARG:NH2	1:D:1635:GLU:OE1	2.38	0.56
1:D:1714:TYR:OH	1:D:1759:PRO:O	2.19	0.56
1:D:2760:TYR:HA	1:D:2763:LEU:HD12	1.86	0.56
1:D:2769:GLU:C	1:D:2771:TYR:H	2.13	0.56
1:D:3189:SER:HA	1:D:3192:ARG:HD2	1.86	0.56
1:A:218:SER:HB3	1:A:286:GLY:HA3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:774:PRO:O	1:A:776:GLN:NE2	2.38	0.56
1:A:2605:MET:SD	1:A:2606:PRO:HD3	2.45	0.56
1:A:2629:ASN:OD1	1:A:2630:PHE:N	2.38	0.56
1:A:2769:GLU:C	1:A:2771:TYR:H	2.13	0.56
1:B:59:PRO:O	1:B:319:LYS:NZ	2.38	0.56
1:B:2608:LYS:O	1:B:2612:ASN:ND2	2.38	0.56
1:B:3250:TRP:O	1:B:3256:ASN:ND2	2.38	0.56
1:C:2608:LYS:O	1:C:2612:ASN:ND2	2.38	0.56
1:C:4120:GLU:HA	1:C:4123:GLU:HG2	1.86	0.56
1:D:2292:PRO:HB2	1:D:2387:ALA:HB1	1.87	0.56
1:A:466:PRO:HG3	1:A:478:ARG:HB3	1.86	0.56
1:A:2608:LYS:O	1:A:2612:ASN:ND2	2.38	0.56
1:A:2760:TYR:HA	1:A:2763:LEU:HD12	1.86	0.56
1:A:4707:MET:HA	1:D:4252:ILE:HD13	1.87	0.56
1:B:4120:GLU:HA	1:B:4123:GLU:HG2	1.86	0.56
1:B:4661:TYR:HB2	1:B:4666:ILE:HD11	1.87	0.56
1:C:2769:GLU:C	1:C:2771:TYR:H	2.13	0.56
1:C:3729:ALA:HA	1:C:3732:HIS:CE1	2.40	0.56
1:C:3961:ASP:OD2	1:C:3964:GLN:NE2	2.37	0.56
1:D:114:LEU:HB2	1:D:117:HIS:CD2	2.40	0.56
1:D:1842:ILE:HD12	1:D:1845:LEU:HD12	1.85	0.56
1:D:2581:ARG:HB3	1:D:2584:MET:HE1	1.86	0.56
1:D:2658:GLU:OE1	1:D:2661:LEU:N	2.38	0.56
1:D:2975:PHE:HB3	1:D:3039:THR:HG21	1.86	0.56
1:D:4661:TYR:HB2	1:D:4666:ILE:HD11	1.87	0.56
1:A:59:PRO:O	1:A:319:LYS:NZ	2.38	0.56
1:B:1303:ARG:NH2	1:B:1635:GLU:OE1	2.38	0.56
1:C:1303:ARG:NH2	1:C:1635:GLU:OE1	2.38	0.56
1:D:1501:ASN:OD1	1:D:1502:ASN:N	2.38	0.56
1:B:774:PRO:O	1:B:776:GLN:NE2	2.38	0.56
1:B:3281:LEU:HA	1:B:3284:ILE:HG12	1.88	0.56
1:D:2731:LYS:HA	1:D:2734:MET:HE2	1.86	0.56
1:A:972:LEU:HD23	1:A:974:SER:HB3	1.88	0.56
1:B:1501:ASN:OD1	1:B:1502:ASN:N	2.38	0.56
1:C:1501:ASN:OD1	1:C:1502:ASN:N	2.38	0.56
1:D:3729:ALA:HA	1:D:3732:HIS:CE1	2.40	0.56
1:A:655:MET:HG2	1:A:794:PHE:HE1	1.71	0.56
1:A:3684:GLU:HB3	1:A:3689:MET:HE1	1.86	0.56
1:C:1421:MET:HE2	1:C:1576:LYS:HD2	1.87	0.56
1:A:169:ARG:NE	1:A:179:ASP:OD2	2.30	0.56
1:A:4279:MET:HE3	1:B:4484:ILE:HG21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1100:ARG:NH2	1:B:1234:GLU:O	2.38	0.56
1:B:2604:LYS:HE2	1:B:2664:LEU:HD23	1.88	0.56
1:C:3281:LEU:HA	1:C:3284:ILE:HG12	1.88	0.56
1:D:59:PRO:O	1:D:319:LYS:NZ	2.38	0.56
1:D:655:MET:HG2	1:D:794:PHE:HE1	1.71	0.56
1:D:2734:MET:HA	1:D:2737:LEU:HG	1.87	0.56
1:D:3239:LEU:HD23	1:D:3280:ILE:HG12	1.88	0.56
1:D:3281:LEU:HA	1:D:3284:ILE:HG12	1.88	0.56
1:A:34:LYS:H	1:A:53:SER:HB3	1.69	0.56
1:A:3281:LEU:HA	1:A:3284:ILE:HG12	1.88	0.56
1:A:3324:GLU:OE1	1:A:3325:LYS:HD2	2.06	0.56
1:A:4822:ARG:HH12	1:B:4829:ASP:H	1.53	0.56
1:B:169:ARG:NE	1:B:179:ASP:OD2	2.30	0.56
1:B:1722:ASN:O	1:B:1919:ARG:NH2	2.39	0.56
1:C:972:LEU:HD23	1:C:974:SER:HB3	1.88	0.56
1:D:3324:GLU:OE1	1:D:3325:LYS:HD2	2.06	0.56
1:D:4120:GLU:HA	1:D:4123:GLU:HG2	1.86	0.56
1:A:1722:ASN:O	1:A:1919:ARG:NH2	2.39	0.56
1:A:2968:LEU:HB3	1:A:2969:PRO:HD3	1.88	0.56
1:A:4086:ARG:HH21	1:A:4087:PHE:HE2	1.54	0.56
1:B:2338:GLU:N	1:B:2338:GLU:OE2	2.35	0.56
1:B:2968:LEU:HB3	1:B:2969:PRO:HD3	1.88	0.56
1:C:3127:GLN:HE22	1:C:3184:TYR:H	1.54	0.56
1:D:2629:ASN:OD1	1:D:2630:PHE:N	2.38	0.56
1:B:655:MET:HG2	1:B:794:PHE:HE1	1.71	0.55
1:B:972:LEU:HD23	1:B:974:SER:HB3	1.88	0.55
1:B:2734:MET:HA	1:B:2737:LEU:HG	1.87	0.55
1:B:3324:GLU:OE1	1:B:3325:LYS:HD2	2.06	0.55
1:B:4086:ARG:HH21	1:B:4087:PHE:HE2	1.54	0.55
1:A:952:ILE:HD11	1:A:958:GLU:HG3	1.87	0.55
1:A:4661:TYR:HB2	1:A:4666:ILE:HD11	1.87	0.55
1:B:2292:PRO:HB2	1:B:2387:ALA:HB1	1.87	0.55
1:B:2769:GLU:C	1:B:2771:TYR:H	2.13	0.55
1:C:655:MET:HG2	1:C:794:PHE:HE1	1.71	0.55
1:C:4863:GLN:HE22	1:D:4856:VAL:HG12	1.70	0.55
1:D:972:LEU:HD23	1:D:974:SER:HB3	1.88	0.55
1:A:2292:PRO:HB2	1:A:2387:ALA:HB1	1.87	0.55
1:A:2604:LYS:HE2	1:A:2664:LEU:HD23	1.88	0.55
1:A:2734:MET:HA	1:A:2737:LEU:HG	1.87	0.55
1:C:59:PRO:O	1:C:319:LYS:NZ	2.38	0.55
1:C:2332:GLY:O	1:C:2336:ARG:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2604:LYS:HE2	1:C:2664:LEU:HD23	1.88	0.55
1:C:3691:TYR:O	1:C:3695:MET:HG3	2.07	0.55
1:D:952:ILE:HD11	1:D:958:GLU:HG3	1.87	0.55
1:D:2703:PRO:HG2	1:D:2854:LYS:HG2	1.87	0.55
1:D:2831:VAL:O	1:D:2894:LYS:NZ	2.40	0.55
1:D:3072:MET:CE	1:D:3136:SER:HB2	2.31	0.55
1:A:1239:PHE:O	1:A:1807:ARG:NH2	2.39	0.55
1:A:3239:LEU:HD23	1:A:3280:ILE:HG12	1.88	0.55
1:B:274:LEU:HD11	1:B:412:GLU:HG2	1.89	0.55
1:C:3025:ASP:O	1:C:3028:SER:OG	2.15	0.55
1:C:3239:LEU:HD23	1:C:3280:ILE:HG12	1.88	0.55
1:C:3324:GLU:OE1	1:C:3325:LYS:HD2	2.06	0.55
1:D:3961:ASP:OD2	1:D:3964:GLN:NE2	2.37	0.55
1:B:2703:PRO:HG2	1:B:2854:LYS:HG2	1.87	0.55
1:C:952:ILE:HD11	1:C:958:GLU:HG3	1.87	0.55
1:C:3250:TRP:O	1:C:3256:ASN:ND2	2.38	0.55
1:A:4484:ILE:HG21	1:D:4279:MET:HE3	1.89	0.55
1:C:4250:TYR:HA	1:C:4253:LEU:HD12	1.89	0.55
1:D:1421:MET:HE2	1:D:1576:LYS:HD2	1.87	0.55
1:D:1714:TYR:CD2	1:D:1831:MET:HG3	2.42	0.55
1:D:2604:LYS:HE2	1:D:2664:LEU:HD23	1.88	0.55
1:A:1421:MET:HE2	1:A:1576:LYS:HD2	1.87	0.55
1:A:2831:VAL:O	1:A:2894:LYS:NZ	2.40	0.55
1:B:3697:LYS:HD3	1:B:3700:HIS:NE2	2.22	0.55
1:C:274:LEU:HD11	1:C:412:GLU:HG2	1.89	0.55
1:C:774:PRO:O	1:C:776:GLN:NE2	2.38	0.55
1:D:3691:TYR:O	1:D:3695:MET:HG3	2.07	0.55
1:A:1699:ARG:NH1	1:A:1703:TYR:OH	2.40	0.55
1:A:2276:SER:OG	1:A:2288:ILE:O	2.20	0.55
1:B:3127:GLN:HE22	1:B:3184:TYR:H	1.54	0.55
1:B:3691:TYR:O	1:B:3695:MET:HG3	2.07	0.55
1:C:2658:GLU:OE1	1:C:2661:LEU:N	2.38	0.55
1:D:766:ILE:HB	1:D:779:PHE:HB2	1.89	0.55
1:D:877:HIS:CD2	1:D:1062:TYR:HH	2.25	0.55
1:D:3025:ASP:O	1:D:3028:SER:OG	2.15	0.55
1:D:3697:LYS:HD3	1:D:3700:HIS:NE2	2.22	0.55
1:A:274:LEU:HD11	1:A:412:GLU:HG2	1.89	0.55
1:A:582:SER:OG	1:A:584:GLU:OE1	2.25	0.55
1:B:70:GLU:OE2	1:B:122:ARG:NE	2.31	0.55
1:B:1662:SER:OG	1:B:1708:ASP:OD2	2.21	0.55
1:B:1699:ARG:NH1	1:B:1703:TYR:OH	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3239:LEU:HD23	1:B:3280:ILE:HG12	1.88	0.55
1:C:1239:PHE:O	1:C:1807:ARG:NH2	2.39	0.55
1:C:2734:MET:HA	1:C:2737:LEU:HG	1.87	0.55
1:A:3250:TRP:O	1:A:3256:ASN:ND2	2.38	0.55
1:C:766:ILE:HB	1:C:779:PHE:HB2	1.89	0.55
1:C:2831:VAL:O	1:C:2894:LYS:NZ	2.40	0.55
1:C:3102:LEU:HB3	1:C:3158:CYS:SG	2.47	0.55
1:D:1722:ASN:O	1:D:1919:ARG:NH2	2.39	0.55
1:A:766:ILE:HB	1:A:779:PHE:HB2	1.89	0.54
1:A:2423:LEU:HA	1:A:2426:LEU:HD12	1.89	0.54
1:B:2658:GLU:OE1	1:B:2661:LEU:N	2.38	0.54
1:B:2930:ILE:HD12	1:B:3003:MET:HE3	1.89	0.54
1:B:4250:TYR:HA	1:B:4253:LEU:HD12	1.89	0.54
1:C:2423:LEU:HA	1:C:2426:LEU:HD12	1.89	0.54
1:C:3697:LYS:HD3	1:C:3700:HIS:NE2	2.22	0.54
1:A:1685:LEU:HD13	1:A:1706:LEU:HD13	1.89	0.54
1:B:1239:PHE:O	1:B:1807:ARG:NH2	2.39	0.54
1:B:3992:ASN:O	1:B:3997:LYS:NZ	2.41	0.54
1:C:2968:LEU:HB3	1:C:2969:PRO:HD3	1.89	0.54
1:C:4086:ARG:HH21	1:C:4087:PHE:HE2	1.54	0.54
1:D:2096:GLY:HA2	1:D:2099:VAL:HG22	1.90	0.54
1:D:2968:LEU:HB3	1:D:2969:PRO:HD3	1.89	0.54
1:D:4086:ARG:HH21	1:D:4087:PHE:HE2	1.54	0.54
1:A:1304:LEU:HB3	1:A:1586:LEU:HD11	1.89	0.54
1:A:2658:GLU:OE1	1:A:2661:LEU:N	2.38	0.54
1:B:1714:TYR:CD2	1:B:1831:MET:HG3	2.42	0.54
1:C:3259:GLU:O	1:C:3260:ARG:HD3	2.07	0.54
1:C:4822:ARG:HH12	1:D:4829:ASP:N	2.05	0.54
1:D:3127:GLN:HE22	1:D:3184:TYR:H	1.54	0.54
1:A:76:ARG:NH1	1:D:3890:TRP:HB3	2.23	0.54
1:A:1714:TYR:CD2	1:A:1831:MET:HG3	2.42	0.54
1:B:1246:ASP:OD1	1:B:1693:TYR:OH	2.26	0.54
1:B:3124:GLU:C	1:B:3126:VAL:H	2.16	0.54
1:C:1699:ARG:NH1	1:C:1703:TYR:OH	2.40	0.54
1:C:2096:GLY:HA2	1:C:2099:VAL:HG22	1.90	0.54
1:D:274:LEU:HD11	1:D:412:GLU:HG2	1.89	0.54
1:D:3259:GLU:O	1:D:3260:ARG:HD3	2.08	0.54
1:A:2096:GLY:HA2	1:A:2099:VAL:HG22	1.90	0.54
1:A:3697:LYS:HD3	1:A:3700:HIS:NE2	2.22	0.54
1:A:4195:ASP:OD2	1:A:4601:LYS:NZ	2.38	0.54
1:B:2096:GLY:HA2	1:B:2099:VAL:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1722:ASN:O	1:C:1919:ARG:NH2	2.39	0.54
1:C:2758:LYS:HZ2	1:C:2763:LEU:HA	1.72	0.54
1:C:3124:GLU:C	1:C:3126:VAL:H	2.16	0.54
1:D:1304:LEU:HB3	1:D:1586:LEU:HD11	1.89	0.54
1:D:3102:LEU:HB3	1:D:3158:CYS:SG	2.48	0.54
1:D:3124:GLU:C	1:D:3126:VAL:H	2.16	0.54
1:D:4014:LEU:HD22	1:D:4125:VAL:HG11	1.90	0.54
1:B:766:ILE:HB	1:B:779:PHE:HB2	1.89	0.54
1:B:3102:LEU:HB3	1:B:3158:CYS:SG	2.47	0.54
1:D:1685:LEU:HD13	1:D:1706:LEU:HD13	1.89	0.54
1:D:2332:GLY:O	1:D:2336:ARG:HB2	2.07	0.54
1:A:3127:GLN:HE22	1:A:3184:TYR:H	1.54	0.54
1:A:3259:GLU:O	1:A:3260:ARG:HD3	2.08	0.54
1:B:4014:LEU:HD22	1:B:4125:VAL:HG11	1.90	0.54
1:B:4827:ILE:O	1:B:4831:ILE:HG12	2.08	0.54
1:C:582:SER:OG	1:C:584:GLU:OE1	2.25	0.54
1:C:1246:ASP:OD1	1:C:1693:TYR:OH	2.26	0.54
1:C:2610:LEU:HD13	1:C:2644:LEU:HD21	1.90	0.54
1:C:2929:LEU:HD11	1:C:2967:VAL:HG13	1.90	0.54
1:C:3805:LEU:HD21	1:C:3888:PHE:HA	1.90	0.54
1:C:4014:LEU:HD22	1:C:4125:VAL:HG11	1.90	0.54
1:D:1699:ARG:NH1	1:D:1703:TYR:OH	2.40	0.54
1:D:2930:ILE:HD12	1:D:3003:MET:HE3	1.89	0.54
1:D:4195:ASP:OD2	1:D:4601:LYS:NZ	2.38	0.54
1:D:4250:TYR:HA	1:D:4253:LEU:HD12	1.89	0.54
1:A:2087:LEU:O	1:A:2091:GLN:HG2	2.08	0.54
1:A:2332:GLY:O	1:A:2336:ARG:HB2	2.07	0.54
1:A:3237:VAL:O	1:A:3241:MET:HG2	2.08	0.54
1:A:4014:LEU:HD22	1:A:4125:VAL:HG11	1.90	0.54
1:B:2087:LEU:O	1:B:2091:GLN:HG2	2.08	0.54
1:B:2332:GLY:O	1:B:2336:ARG:HB2	2.07	0.54
1:C:1007:TRP:NE1	3:C:5003:ATP:O1G	2.41	0.54
1:D:582:SER:OG	1:D:584:GLU:OE1	2.25	0.54
1:D:1007:TRP:NE1	3:D:5003:ATP:O1G	2.41	0.54
1:D:3237:VAL:O	1:D:3241:MET:HG2	2.08	0.54
1:A:2929:LEU:HD11	1:A:2967:VAL:HG13	1.90	0.54
1:A:2930:ILE:HD12	1:A:3003:MET:HE3	1.89	0.54
1:A:3102:LEU:HB3	1:A:3158:CYS:SG	2.47	0.54
1:A:3691:TYR:O	1:A:3695:MET:HG3	2.07	0.54
1:A:3961:ASP:OD2	1:A:3964:GLN:NE2	2.37	0.54
1:A:3992:ASN:O	1:A:3997:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4786:PHE:CZ	1:D:4522:VAL:HG23	2.41	0.54
1:C:1685:LEU:HD13	1:C:1706:LEU:HD13	1.89	0.54
1:D:2423:LEU:HA	1:D:2426:LEU:HD12	1.89	0.54
1:B:3237:VAL:O	1:B:3241:MET:HG2	2.08	0.54
1:B:3805:LEU:HD21	1:B:3888:PHE:HA	1.90	0.54
1:C:2087:LEU:O	1:C:2091:GLN:HG2	2.08	0.54
1:D:1662:SER:OG	1:D:1708:ASP:OD2	2.21	0.54
1:D:3992:ASN:O	1:D:3997:LYS:NZ	2.41	0.54
1:B:19:GLU:OE1	1:B:218:SER:OG	2.26	0.53
1:B:2232:PRO:HG2	1:B:2379:ASP:HA	1.90	0.53
1:B:2423:LEU:HA	1:B:2426:LEU:HD12	1.89	0.53
1:B:2610:LEU:HD13	1:B:2644:LEU:HD21	1.90	0.53
1:B:2929:LEU:HD11	1:B:2967:VAL:HG13	1.90	0.53
1:C:1304:LEU:HB3	1:C:1586:LEU:HD11	1.89	0.53
1:C:4250:TYR:O	1:C:4254:THR:HG23	2.08	0.53
1:D:1239:PHE:O	1:D:1807:ARG:NH2	2.39	0.53
1:A:1081:THR:OG1	1:A:1082:GLY:N	2.34	0.53
1:B:3259:GLU:O	1:B:3260:ARG:HD3	2.08	0.53
1:B:4250:TYR:O	1:B:4254:THR:HG23	2.08	0.53
1:C:3986:LEU:HD12	1:C:4101:LEU:HD12	1.90	0.53
1:C:3992:ASN:O	1:C:3997:LYS:NZ	2.41	0.53
1:D:4250:TYR:O	1:D:4254:THR:HG23	2.08	0.53
1:D:4827:ILE:O	1:D:4831:ILE:HG12	2.08	0.53
1:B:582:SER:OG	1:B:584:GLU:OE1	2.25	0.53
1:C:2232:PRO:HG2	1:C:2379:ASP:HA	1.90	0.53
1:D:2403:ALA:HB2	1:D:2475:VAL:HG22	1.91	0.53
1:A:1246:ASP:OD1	1:A:1693:TYR:OH	2.26	0.53
1:B:2650:ASP:O	1:B:2654:GLN:HG2	2.09	0.53
1:C:2874:TYR:O	1:C:2882:LYS:HE2	2.09	0.53
1:C:4089:GLU:HB2	1:C:4090:PRO:HD3	1.91	0.53
1:D:2758:LYS:HG2	1:D:2759:PRO:HD2	1.91	0.53
1:D:4089:GLU:HB2	1:D:4090:PRO:HD3	1.91	0.53
1:A:1007:TRP:NE1	3:A:5003:ATP:O1G	2.41	0.53
1:A:2232:PRO:HG2	1:A:2379:ASP:HA	1.90	0.53
1:A:2610:LEU:HD13	1:A:2644:LEU:HD21	1.90	0.53
1:A:3072:MET:HG3	1:A:3140:LEU:HD21	1.91	0.53
1:A:4827:ILE:O	1:A:4831:ILE:HG12	2.08	0.53
1:A:4829:ASP:N	1:D:4822:ARG:HH12	2.04	0.53
1:B:1007:TRP:NE1	3:B:5003:ATP:O1G	2.41	0.53
1:B:1685:LEU:HD13	1:B:1706:LEU:HD13	1.89	0.53
1:B:2831:VAL:O	1:B:2894:LYS:NZ	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:546:LYS:O	1:C:550:GLN:HG2	2.09	0.53
1:C:875:PRO:HD2	1:C:878:LEU:HD23	1.90	0.53
1:C:2385:GLY:O	1:C:2389:MET:HG3	2.09	0.53
1:C:3237:VAL:O	1:C:3241:MET:HG2	2.08	0.53
1:D:875:PRO:HD2	1:D:878:LEU:HD23	1.90	0.53
1:A:2874:TYR:O	1:A:2882:LYS:HE2	2.09	0.53
1:A:4250:TYR:HA	1:A:4253:LEU:HD12	1.89	0.53
1:A:4602:ARG:HH11	1:A:4712:VAL:HG13	1.74	0.53
1:A:4661:TYR:HB3	1:A:4665:ARG:HE	1.74	0.53
1:B:546:LYS:O	1:B:550:GLN:HG2	2.09	0.53
1:B:2385:GLY:O	1:B:2389:MET:HG3	2.09	0.53
1:B:3070:LYS:HZ1	1:B:3093:ILE:HG21	1.74	0.53
1:B:4055:HIS:CD2	1:B:4057:HIS:HB2	2.44	0.53
1:B:4137:GLU:HB2	1:B:4913:HIS:HE2	1.73	0.53
1:B:4778:VAL:HG11	1:B:4817:MET:SD	2.49	0.53
1:C:2930:ILE:HD12	1:C:3003:MET:HE3	1.89	0.53
1:C:4145:ILE:H	1:C:4961:GLN:NE2	2.07	0.53
1:D:2087:LEU:O	1:D:2091:GLN:HG2	2.08	0.53
1:D:4055:HIS:CD2	1:D:4057:HIS:HB2	2.44	0.53
1:D:4137:GLU:HB2	1:D:4913:HIS:HE2	1.73	0.53
1:D:4602:ARG:HH11	1:D:4712:VAL:HG13	1.74	0.53
1:A:2758:LYS:HG2	1:A:2759:PRO:HD2	1.91	0.53
1:A:3892:TYR:O	1:A:3957:LYS:NZ	2.42	0.53
1:A:4778:VAL:HG11	1:A:4817:MET:SD	2.49	0.53
1:B:4602:ARG:HH11	1:B:4712:VAL:HG13	1.74	0.53
1:B:4822:ARG:HH12	1:C:4829:ASP:N	2.06	0.53
1:D:2232:PRO:HG2	1:D:2379:ASP:HA	1.91	0.53
1:D:2874:TYR:O	1:D:2882:LYS:HE2	2.09	0.53
1:D:2929:LEU:HD11	1:D:2967:VAL:HG13	1.90	0.53
1:D:3805:LEU:HD21	1:D:3888:PHE:HA	1.90	0.53
1:D:3892:TYR:O	1:D:3957:LYS:NZ	2.42	0.53
1:A:4055:HIS:CD2	1:A:4057:HIS:HB2	2.44	0.53
1:B:2589:LEU:O	1:B:2593:VAL:HG13	2.09	0.53
1:B:2758:LYS:HG2	1:B:2759:PRO:HD2	1.91	0.53
1:B:4863:GLN:HE22	1:C:4856:VAL:HG12	1.71	0.53
1:D:19:GLU:OE1	1:D:218:SER:OG	2.26	0.53
1:D:2385:GLY:O	1:D:2389:MET:HG3	2.09	0.53
1:D:3986:LEU:HD12	1:D:4101:LEU:HD12	1.90	0.53
1:D:4145:ILE:H	1:D:4961:GLN:NE2	2.06	0.53
1:D:4778:VAL:HG11	1:D:4817:MET:SD	2.49	0.53
1:A:19:GLU:OE1	1:A:218:SER:OG	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3805:LEU:HD11	1:A:3887:ASP:HB3	1.91	0.53
1:A:4137:GLU:HB2	1:A:4913:HIS:HE2	1.73	0.53
1:B:877:HIS:CD2	1:B:1062:TYR:HH	2.26	0.53
1:B:3986:LEU:HD12	1:B:4101:LEU:HD12	1.90	0.53
1:B:4661:TYR:HB3	1:B:4665:ARG:HE	1.74	0.53
1:C:2758:LYS:HG2	1:C:2759:PRO:HD2	1.91	0.53
1:C:4778:VAL:HG11	1:C:4817:MET:SD	2.49	0.53
1:A:2650:ASP:O	1:A:2654:GLN:HG2	2.09	0.53
1:A:2835:ARG:NH2	1:A:2838[B]:HIS:CE1	2.77	0.53
1:A:3124:GLU:C	1:A:3126:VAL:H	2.16	0.53
1:A:3805:LEU:HD21	1:A:3888:PHE:HA	1.90	0.53
1:B:2272:CYS:HB3	1:B:2291:ASN:HB2	1.91	0.53
1:C:2895:PHE:HA	1:C:2898:ILE:HG12	1.91	0.53
1:C:3892:TYR:O	1:C:3957:LYS:NZ	2.42	0.53
1:C:3972:MET:HE1	1:C:4017:PHE:HE1	1.74	0.53
1:D:279:THR:HG1	1:D:285:SER:HG	1.57	0.53
1:D:2610:LEU:HD13	1:D:2644:LEU:HD21	1.90	0.53
1:D:3222:ALA:O	1:D:3282:LYS:NZ	2.35	0.53
1:A:2385:GLY:O	1:A:2389:MET:HG3	2.09	0.52
1:A:3972:MET:HE1	1:A:4017:PHE:HE1	1.75	0.52
1:A:4250:TYR:O	1:A:4254:THR:HG23	2.08	0.52
1:A:4863:GLN:HE22	1:B:4856:VAL:HG13	1.74	0.52
1:B:1936:LEU:HA	1:B:1939:ASN:HD21	1.75	0.52
1:B:3072:MET:HG3	1:B:3140:LEU:HD21	1.91	0.52
1:B:3892:TYR:O	1:B:3957:LYS:NZ	2.42	0.52
1:B:3972:MET:HE1	1:B:4017:PHE:HE1	1.74	0.52
1:C:2589:LEU:O	1:C:2593:VAL:HG13	2.09	0.52
1:D:2589:LEU:O	1:D:2593:VAL:HG13	2.09	0.52
1:A:2589:LEU:O	1:A:2593:VAL:HG13	2.09	0.52
1:B:2895:PHE:HA	1:B:2898:ILE:HG12	1.91	0.52
1:B:3805:LEU:HD11	1:B:3887:ASP:HB3	1.91	0.52
1:B:4195:ASP:OD2	1:B:4601:LYS:NZ	2.38	0.52
1:C:1270:VAL:HG22	1:C:1285:VAL:HG22	1.91	0.52
1:C:2650:ASP:O	1:C:2654:GLN:HG2	2.09	0.52
1:C:4827:ILE:O	1:C:4831:ILE:HG12	2.08	0.52
1:D:1940:GLN:HE22	1:D:3607:PRO:HB3	1.74	0.52
1:D:2650:ASP:O	1:D:2654:GLN:HG2	2.09	0.52
1:D:3972:MET:HE1	1:D:4017:PHE:HE1	1.74	0.52
1:B:1124:PRO:HD2	1:B:1594:VAL:HG23	1.91	0.52
1:B:1304:LEU:HB3	1:B:1586:LEU:HD11	1.89	0.52
1:B:2835:ARG:NH2	1:B:2838[B]:HIS:CE1	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:19:GLU:OE1	1:C:218:SER:OG	2.26	0.52
1:C:2835:ARG:NH2	1:C:2838[B]:HIS:CE1	2.77	0.52
1:C:4602:ARG:HH11	1:C:4712:VAL:HG13	1.74	0.52
1:D:1116:GLY:HA3	1:D:1136:ALA:HA	1.92	0.52
1:A:2403:ALA:HB2	1:A:2475:VAL:HG22	1.91	0.52
1:C:2272:CYS:HB3	1:C:2291:ASN:HB2	1.91	0.52
1:C:2403:ALA:HB2	1:C:2475:VAL:HG22	1.91	0.52
1:C:4661:TYR:HB3	1:C:4665:ARG:HE	1.74	0.52
1:D:1270:VAL:HG22	1:D:1285:VAL:HG22	1.92	0.52
1:D:2835:ARG:NH2	1:D:2838[B]:HIS:CE1	2.77	0.52
1:D:4113:THR:O	1:D:4117:THR:HG23	2.10	0.52
1:A:546:LYS:O	1:A:550:GLN:HG2	2.09	0.52
1:A:3986:LEU:HD12	1:A:4101:LEU:HD12	1.90	0.52
1:B:643:LEU:HD13	1:B:1657:THR:HG23	1.92	0.52
1:B:4113:THR:O	1:B:4117:THR:HG23	2.10	0.52
1:B:4139:MET:HB3	1:B:4951:PHE:HA	1.92	0.52
1:B:4145:ILE:H	1:B:4961:GLN:NE2	2.07	0.52
1:C:4055:HIS:CD2	1:C:4057:HIS:HB2	2.44	0.52
1:C:4137:GLU:HB2	1:C:4913:HIS:HE2	1.73	0.52
1:C:4863:GLN:NE2	1:D:4856:VAL:HG13	2.24	0.52
1:D:546:LYS:O	1:D:550:GLN:HG2	2.09	0.52
1:D:1246:ASP:OD1	1:D:1693:TYR:OH	2.26	0.52
1:D:2905:ARG:HH11	1:D:2906:GLY:H	1.58	0.52
1:D:3072:MET:HG3	1:D:3140:LEU:HD21	1.91	0.52
1:D:4661:TYR:HB3	1:D:4665:ARG:HE	1.74	0.52
1:A:1940:GLN:HE22	1:A:3607:PRO:HB3	1.74	0.52
1:A:4113:THR:O	1:A:4117:THR:HG23	2.10	0.52
1:B:1116:GLY:HA3	1:B:1136:ALA:HA	1.92	0.52
1:B:1140:PHE:HD2	1:B:1141:LYS:HD2	1.74	0.52
1:B:2874:TYR:O	1:B:2882:LYS:HE2	2.09	0.52
1:C:1116:GLY:HA3	1:C:1136:ALA:HA	1.92	0.52
1:C:1936:LEU:HA	1:C:1939:ASN:HD21	1.75	0.52
1:A:1936:LEU:HA	1:A:1939:ASN:HD21	1.75	0.52
1:C:1140:PHE:HD2	1:C:1141:LYS:HD2	1.74	0.52
1:C:4831:ILE:HD11	1:C:4843:ARG:HH12	1.75	0.52
1:A:1116:GLY:HA3	1:A:1136:ALA:HA	1.92	0.52
1:A:4145:ILE:H	1:A:4961:GLN:NE2	2.07	0.52
1:B:875:PRO:HD2	1:B:878:LEU:HD23	1.90	0.52
1:B:1270:VAL:HG22	1:B:1285:VAL:HG22	1.92	0.52
1:B:4089:GLU:HB2	1:B:4090:PRO:HD3	1.91	0.52
1:D:1100:ARG:HH21	1:D:1234:GLU:HB3	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3805:LEU:HD11	1:D:3887:ASP:HB3	1.91	0.52
1:D:4831:ILE:HD11	1:D:4843:ARG:HH12	1.75	0.52
1:A:167:LYS:NZ	1:D:240:HIS:O	2.34	0.52
1:A:2605:MET:HA	1:A:2608:LYS:HE2	1.92	0.52
1:A:2895:PHE:HA	1:A:2898:ILE:HG12	1.91	0.52
1:A:4089:GLU:HB2	1:A:4090:PRO:HD3	1.91	0.52
1:B:2403:ALA:HB2	1:B:2475:VAL:HG22	1.91	0.52
1:B:3303:SER:HA	1:B:3306:ILE:HD13	1.92	0.52
1:C:681:HIS:HB3	1:C:799:LYS:HE2	1.92	0.52
1:D:3303:SER:HA	1:D:3306:ILE:HD13	1.92	0.52
1:D:4249:ARG:O	1:D:4253:LEU:HG	2.10	0.52
1:A:3303:SER:HA	1:A:3306:ILE:HD13	1.92	0.52
1:B:4279:MET:HE3	1:C:4484:ILE:HG21	1.92	0.52
1:C:892:LEU:HD21	1:C:1056:THR:HG21	1.92	0.52
1:D:3007:LEU:HA	1:D:3010:LYS:HG2	1.92	0.52
1:A:1100:ARG:HH21	1:A:1234:GLU:HB3	1.75	0.51
1:A:2905:ARG:HH11	1:A:2906:GLY:H	1.58	0.51
1:A:3007:LEU:HA	1:A:3010:LYS:HG2	1.92	0.51
1:D:643:LEU:HD13	1:D:1657:THR:HG23	1.92	0.51
1:A:942:THR:HG23	1:A:1002:ASN:HD22	1.76	0.51
1:A:4139:MET:HB3	1:A:4951:PHE:HA	1.92	0.51
1:B:358:ASP:OD1	1:B:359:SER:N	2.44	0.51
1:B:2758:LYS:HZ2	1:B:2763:LEU:HA	1.75	0.51
1:C:1662:SER:OG	1:C:1708:ASP:OD2	2.21	0.51
1:C:3303:SER:HA	1:C:3306:ILE:HD13	1.92	0.51
1:D:892:LEU:HD21	1:D:1056:THR:HG21	1.92	0.51
1:D:1124:PRO:HD2	1:D:1594:VAL:HG23	1.91	0.51
1:D:1140:PHE:HD2	1:D:1141:LYS:HD2	1.74	0.51
1:D:1564:MET:HE3	1:D:1565:PRO:HD2	1.92	0.51
1:A:2888:LYS:HA	1:A:2891:ASP:OD2	2.11	0.51
1:A:3009:CYS:HA	1:A:3060:PHE:CD1	2.46	0.51
1:A:4831:ILE:HD11	1:A:4843:ARG:HH12	1.75	0.51
1:B:1081:THR:OG1	1:B:1082:GLY:N	2.34	0.51
1:B:4863:GLN:NE2	1:C:4856:VAL:HG13	2.25	0.51
1:C:2888:LYS:HA	1:C:2891:ASP:OD2	2.11	0.51
1:C:3007:LEU:HA	1:C:3010:LYS:HG2	1.92	0.51
1:C:3072:MET:HG3	1:C:3140:LEU:HD21	1.91	0.51
1:C:3958:LEU:HB2	1:C:3968:LEU:HD13	1.93	0.51
1:D:2272:CYS:HB3	1:D:2291:ASN:HB2	1.91	0.51
1:A:875:PRO:HD2	1:A:878:LEU:HD23	1.90	0.51
1:A:1270:VAL:HG22	1:A:1285:VAL:HG22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2202:TYR:O	1:A:2206:ILE:HG12	2.11	0.51
1:B:1957:LEU:HD12	1:B:1960:ARG:HD2	1.92	0.51
1:B:2605:MET:HA	1:B:2608:LYS:HE2	1.92	0.51
1:B:2888:LYS:HA	1:B:2891:ASP:OD2	2.11	0.51
1:B:4831:ILE:HD11	1:B:4843:ARG:HH12	1.75	0.51
1:C:643:LEU:HD13	1:C:1657:THR:HG23	1.91	0.51
1:C:2436:ILE:HA	1:C:2465:LYS:HZ2	1.75	0.51
1:C:3805:LEU:HD11	1:C:3887:ASP:HB3	1.91	0.51
1:D:2888:LYS:HA	1:D:2891:ASP:OD2	2.11	0.51
1:A:1124:PRO:HD2	1:A:1594:VAL:HG23	1.91	0.51
1:A:1957:LEU:HD12	1:A:1960:ARG:HD2	1.92	0.51
1:A:2723:LYS:HA	1:A:2726:GLU:HB2	1.93	0.51
1:A:4249:ARG:O	1:A:4253:LEU:HG	2.10	0.51
1:B:3009:CYS:HA	1:B:3060:PHE:CD1	2.46	0.51
1:C:2684:ASN:OD1	1:C:2685:TYR:N	2.44	0.51
1:C:3890:TRP:HB3	1:D:76:ARG:NH1	2.26	0.51
1:C:4139:MET:HB3	1:C:4951:PHE:HA	1.92	0.51
1:C:4195:ASP:OD2	1:C:4601:LYS:NZ	2.38	0.51
1:A:892:LEU:HD21	1:A:1056:THR:HG21	1.92	0.51
1:B:2291:ASN:HB3	1:B:2294:GLU:OE2	2.11	0.51
1:B:3315:LEU:HA	1:B:3318:HIS:ND1	2.26	0.51
1:B:3968:LEU:O	1:B:3972:MET:HG2	2.11	0.51
1:B:4863:GLN:OE1	1:B:4863:GLN:HA	2.11	0.51
1:B:4863:GLN:HE22	1:C:4856:VAL:HG13	1.76	0.51
1:C:1714:TYR:CD2	1:C:1831:MET:HG3	2.42	0.51
1:C:1940:GLN:HE22	1:C:3607:PRO:HB3	1.74	0.51
1:C:2149:ILE:HG21	1:C:2167:MET:HE1	1.92	0.51
1:C:4863:GLN:HE22	1:D:4856:VAL:HG13	1.75	0.51
1:D:2605:MET:HA	1:D:2608:LYS:HE2	1.92	0.51
1:D:2895:PHE:HA	1:D:2898:ILE:HG12	1.91	0.51
1:D:3958:LEU:HB2	1:D:3968:LEU:HD13	1.93	0.51
1:A:4863:GLN:HE22	1:B:4856:VAL:HG12	1.75	0.51
1:B:2723:LYS:HA	1:B:2726:GLU:HB2	1.93	0.51
1:C:887:GLU:HA	1:C:890:HIS:ND1	2.26	0.51
1:C:4249:ARG:O	1:C:4253:LEU:HG	2.10	0.51
1:D:1936:LEU:HA	1:D:1939:ASN:HD21	1.75	0.51
1:D:2149:ILE:HG21	1:D:2167:MET:HE1	1.92	0.51
1:D:2276:SER:OG	1:D:2288:ILE:O	2.20	0.51
1:D:2723:LYS:HA	1:D:2726:GLU:HB2	1.93	0.51
1:D:3009:CYS:HA	1:D:3060:PHE:CD1	2.46	0.51
1:D:3315:LEU:HA	1:D:3318:HIS:ND1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3855:GLN:NE2	1:D:3922:GLU:O	2.44	0.51
1:A:681:HIS:HB3	1:A:799:LYS:HE2	1.92	0.51
1:A:1140:PHE:HD2	1:A:1141:LYS:HD2	1.74	0.51
1:A:1931:ASP:OD1	1:A:1932:PHE:N	2.44	0.51
1:A:2763:LEU:O	1:A:2768:LYS:NZ	2.44	0.51
1:A:3026:ALA:O	1:A:3030:VAL:HG23	2.11	0.51
1:A:3968:LEU:O	1:A:3972:MET:HG2	2.11	0.51
1:A:4047:ASP:HA	1:A:4050:LYS:HZ2	1.75	0.51
1:B:681:HIS:HB3	1:B:799:LYS:HE2	1.92	0.51
1:B:892:LEU:HD21	1:B:1056:THR:HG21	1.92	0.51
1:B:942:THR:HG23	1:B:1002:ASN:HD22	1.76	0.51
1:B:1100:ARG:HH21	1:B:1234:GLU:HB3	1.75	0.51
1:B:3007:LEU:HA	1:B:3010:LYS:HG2	1.92	0.51
1:B:3234:VAL:HG23	1:B:3235:MET:SD	2.51	0.51
1:B:3958:LEU:HB2	1:B:3968:LEU:HD13	1.93	0.51
1:C:2905:ARG:HH11	1:C:2906:GLY:H	1.58	0.51
1:C:3968:LEU:O	1:C:3972:MET:HG2	2.11	0.51
1:D:887:GLU:HA	1:D:890:HIS:ND1	2.26	0.51
1:D:942:THR:HG23	1:D:1002:ASN:HD22	1.76	0.51
1:D:3968:LEU:O	1:D:3972:MET:HG2	2.11	0.51
1:A:2123:LEU:HD13	1:A:2167:MET:HG2	1.93	0.51
1:A:3855:GLN:NE2	1:A:3922:GLU:O	2.44	0.51
1:C:358:ASP:OD1	1:C:359:SER:N	2.44	0.51
1:C:2202:TYR:O	1:C:2206:ILE:HG12	2.11	0.51
1:C:3009:CYS:HA	1:C:3060:PHE:CD1	2.46	0.51
1:C:3026:ALA:O	1:C:3030:VAL:HG23	2.11	0.51
1:C:4863:GLN:OE1	1:C:4863:GLN:HA	2.11	0.51
1:D:156:GLU:HG3	1:D:187:SER:HB3	1.93	0.51
1:D:1900:GLU:HG2	1:D:2080:LEU:HD23	1.92	0.51
1:A:643:LEU:HD13	1:A:1657:THR:HG23	1.92	0.51
1:A:2291:ASN:HB3	1:A:2294:GLU:OE2	2.11	0.51
1:A:4863:GLN:NE2	1:B:4856:VAL:HG13	2.25	0.51
1:B:2436:ILE:HA	1:B:2465:LYS:HZ2	1.76	0.51
1:B:3026:ALA:O	1:B:3030:VAL:HG23	2.11	0.51
1:C:156:GLU:HG3	1:C:187:SER:HB3	1.93	0.51
1:C:486:GLN:NE2	1:C:539:ALA:O	2.44	0.51
1:C:1100:ARG:HH21	1:C:1234:GLU:HB3	1.75	0.51
1:C:1124:PRO:HD2	1:C:1594:VAL:HG23	1.91	0.51
1:C:1240:ALA:HB2	1:C:1247:ILE:HD11	1.93	0.51
1:C:1931:ASP:OD1	1:C:1932:PHE:N	2.44	0.51
1:C:1975:MET:HA	1:C:1978:ASN:OD1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3025:ASP:O	1:C:3029:ILE:HD12	2.11	0.51
1:C:4113:THR:O	1:C:4117:THR:HG23	2.10	0.51
1:D:895:MET:HE3	1:D:977:LYS:O	2.11	0.51
1:D:1931:ASP:OD1	1:D:1932:PHE:N	2.44	0.51
1:D:3025:ASP:O	1:D:3029:ILE:HD12	2.11	0.51
1:A:1564:MET:HE3	1:A:1565:PRO:HD2	1.92	0.50
1:A:2272:CYS:HB3	1:A:2291:ASN:HB2	1.91	0.50
1:A:2684:ASN:OD1	1:A:2685:TYR:N	2.44	0.50
1:A:2988:ARG:HG3	1:A:2991:CYS:HA	1.94	0.50
1:B:887:GLU:HA	1:B:890:HIS:ND1	2.26	0.50
1:B:1940:GLN:HE22	1:B:3607:PRO:HB3	1.74	0.50
1:B:3940:LEU:HD11	1:B:3981:MET:HE1	1.93	0.50
1:C:896:ASN:O	1:C:900:LEU:HG	2.11	0.50
1:D:358:ASP:OD1	1:D:359:SER:N	2.44	0.50
1:D:486:GLN:NE2	1:D:539:ALA:O	2.44	0.50
1:D:3234:VAL:HG23	1:D:3235:MET:SD	2.51	0.50
1:A:358:ASP:OD1	1:A:359:SER:N	2.44	0.50
1:A:1975:MET:HA	1:A:1978:ASN:OD1	2.11	0.50
1:A:3315:LEU:HA	1:A:3318:HIS:ND1	2.26	0.50
1:A:3940:LEU:HD11	1:A:3981:MET:HE1	1.93	0.50
1:B:486:GLN:NE2	1:B:539:ALA:O	2.44	0.50
1:B:888:ASN:O	1:B:892:LEU:HG	2.12	0.50
1:B:2549:LEU:HD11	1:B:2580:LEU:HD11	1.93	0.50
1:B:2988:ARG:HG3	1:B:2991:CYS:HA	1.94	0.50
1:C:877:HIS:CD2	1:C:1062:TYR:HH	2.30	0.50
1:C:2763:LEU:O	1:C:2768:LYS:NZ	2.44	0.50
1:C:3315:LEU:HA	1:C:3318:HIS:ND1	2.26	0.50
1:C:3855:GLN:NE2	1:C:3922:GLU:O	2.44	0.50
1:D:1975:MET:HA	1:D:1978:ASN:OD1	2.11	0.50
1:D:2123:LEU:HD13	1:D:2167:MET:HG2	1.93	0.50
1:D:2202:TYR:O	1:D:2206:ILE:HG12	2.11	0.50
1:A:1714:TYR:OH	1:A:1759:PRO:O	2.19	0.50
1:A:2149:ILE:HG21	1:A:2167:MET:HE1	1.92	0.50
1:A:3958:LEU:HB2	1:A:3968:LEU:HD13	1.93	0.50
1:B:2276:SER:OG	1:B:2288:ILE:O	2.20	0.50
1:B:3890:TRP:HB3	1:C:76:ARG:NH1	2.26	0.50
1:B:4249:ARG:O	1:B:4253:LEU:HG	2.10	0.50
1:C:503:ASP:O	1:C:507:VAL:HG13	2.12	0.50
1:C:1900:GLU:HG2	1:C:2080:LEU:HD23	1.92	0.50
1:C:2244:ALA:O	1:C:2248:MET:HB2	2.11	0.50
1:C:2605:MET:HA	1:C:2608:LYS:HE2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4047:ASP:HA	1:C:4050:LYS:HZ2	1.77	0.50
1:C:4155:SER:O	1:C:4159:GLN:HG2	2.12	0.50
1:D:115:TYR:OH	1:D:179:ASP:OD2	2.29	0.50
1:D:896:ASN:O	1:D:900:LEU:HG	2.11	0.50
1:D:1240:ALA:HB2	1:D:1247:ILE:HD11	1.93	0.50
1:D:2291:ASN:HB3	1:D:2294:GLU:OE2	2.11	0.50
1:D:4608:ARG:HD3	1:D:4612:PHE:HE2	1.77	0.50
1:B:842:GLN:HB2	1:B:1603:PHE:HB2	1.93	0.50
1:B:877:HIS:HA	1:B:880:ARG:HH12	1.76	0.50
1:B:895:MET:HE3	1:B:977:LYS:O	2.11	0.50
1:B:896:ASN:O	1:B:900:LEU:HG	2.11	0.50
1:B:1444:GLY:HA3	1:B:1487:MET:HA	1.94	0.50
1:B:1564:MET:HE3	1:B:1565:PRO:HD2	1.92	0.50
1:B:2202:TYR:O	1:B:2206:ILE:HG12	2.11	0.50
1:B:2244:ALA:O	1:B:2248:MET:HB2	2.11	0.50
1:B:2763:LEU:O	1:B:2768:LYS:NZ	2.44	0.50
1:C:888:ASN:O	1:C:892:LEU:HG	2.12	0.50
1:C:1273:ILE:HB	1:C:1282:CYS:HB2	1.94	0.50
1:C:4608:ARG:HD3	1:C:4612:PHE:HE2	1.77	0.50
1:D:2763:LEU:O	1:D:2768:LYS:NZ	2.44	0.50
1:D:2988:ARG:HG3	1:D:2991:CYS:HA	1.94	0.50
1:D:4139:MET:HB3	1:D:4951:PHE:HA	1.92	0.50
1:A:887:GLU:HA	1:A:890:HIS:ND1	2.26	0.50
1:A:1273:ILE:HB	1:A:1282:CYS:HB2	1.94	0.50
1:A:1417:TYR:O	1:A:1421:MET:HG2	2.12	0.50
1:A:3234:VAL:HG23	1:A:3235:MET:SD	2.51	0.50
1:B:3025:ASP:O	1:B:3029:ILE:HD12	2.11	0.50
1:C:986:ILE:HD12	1:C:1055:ARG:HG3	1.94	0.50
1:C:1444:GLY:HA3	1:C:1487:MET:HA	1.94	0.50
1:C:2723:LYS:HA	1:C:2726:GLU:HB2	1.93	0.50
1:D:503:ASP:O	1:D:507:VAL:HG13	2.12	0.50
1:D:681:HIS:HB3	1:D:799:LYS:HE2	1.92	0.50
1:D:2758:LYS:HZ2	1:D:2763:LEU:HA	1.77	0.50
1:A:480:ARG:NH2	1:A:3678:GLU:OE2	2.45	0.50
1:A:503:ASP:O	1:A:507:VAL:HG13	2.12	0.50
1:B:115:TYR:OH	1:B:179:ASP:OD2	2.29	0.50
1:B:480:ARG:NH2	1:B:3678:GLU:OE2	2.45	0.50
1:B:1240:ALA:HB2	1:B:1247:ILE:HD11	1.93	0.50
1:B:1900:GLU:HG2	1:B:2080:LEU:HD23	1.92	0.50
1:B:1931:ASP:OD1	1:B:1932:PHE:N	2.44	0.50
1:B:3855:GLN:NE2	1:B:3922:GLU:O	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4155:SER:O	1:B:4159:GLN:HG2	2.12	0.50
1:B:4522:VAL:HG23	1:C:4786:PHE:CZ	2.47	0.50
1:C:1957:LEU:HD12	1:C:1960:ARG:HD2	1.92	0.50
1:C:4279:MET:HE3	1:D:4484:ILE:HG21	1.93	0.50
1:D:739:ARG:NH2	1:D:1478:GLU:OE2	2.45	0.50
1:D:1041:ARG:O	1:D:1044:LYS:HG3	2.12	0.50
1:D:4863:GLN:OE1	1:D:4863:GLN:HA	2.11	0.50
1:A:679:VAL:HA	1:A:800:VAL:HG12	1.94	0.50
1:A:1444:GLY:HA3	1:A:1487:MET:HA	1.94	0.50
1:A:1900:GLU:HG2	1:A:2080:LEU:HD23	1.92	0.50
1:B:2684:ASN:OD1	1:B:2685:TYR:N	2.44	0.50
1:C:679:VAL:HA	1:C:800:VAL:HG12	1.94	0.50
1:C:739:ARG:NH2	1:C:1478:GLU:OE2	2.45	0.50
1:C:2979:ARG:HH11	1:C:2983:LEU:HD12	1.76	0.50
1:D:480:ARG:NH2	1:D:3678:GLU:OE2	2.45	0.50
1:D:1444:GLY:HA3	1:D:1487:MET:HA	1.94	0.50
1:D:3026:ALA:O	1:D:3030:VAL:HG23	2.11	0.50
1:A:2549:LEU:HD11	1:A:2580:LEU:HD11	1.93	0.50
1:B:986:ILE:HD12	1:B:1055:ARG:HG3	1.94	0.50
1:B:1975:MET:HA	1:B:1978:ASN:OD1	2.11	0.50
1:B:2123:LEU:HD13	1:B:2167:MET:HG2	1.93	0.50
1:B:2905:ARG:HH11	1:B:2906:GLY:H	1.58	0.50
1:B:4608:ARG:HD3	1:B:4612:PHE:HE2	1.77	0.50
1:B:4617:ILE:HG13	1:B:4618:THR:N	2.27	0.50
1:C:2123:LEU:HD13	1:C:2167:MET:HG2	1.93	0.50
1:C:2291:ASN:HB3	1:C:2294:GLU:OE2	2.11	0.50
1:C:3234:VAL:HG23	1:C:3235:MET:SD	2.51	0.50
1:D:1273:ILE:HB	1:D:1282:CYS:HB2	1.94	0.50
1:D:1957:LEU:HD12	1:D:1960:ARG:HD2	1.92	0.50
1:A:156:GLU:HG3	1:A:187:SER:HB3	1.93	0.50
1:A:808:HIS:CE1	1:A:832:LEU:HB3	2.47	0.50
1:A:888:ASN:O	1:A:892:LEU:HG	2.12	0.50
1:A:895:MET:HE3	1:A:977:LYS:O	2.11	0.50
1:A:1041:ARG:O	1:A:1044:LYS:HG3	2.12	0.50
1:A:1240:ALA:HB2	1:A:1247:ILE:HD11	1.93	0.50
1:A:3025:ASP:O	1:A:3029:ILE:HD12	2.11	0.50
1:A:4822:ARG:HH12	1:B:4829:ASP:N	2.09	0.50
1:B:4047:ASP:HA	1:B:4050:LYS:HZ2	1.76	0.50
1:C:842:GLN:HB2	1:C:1603:PHE:HB2	1.93	0.50
1:C:895:MET:HE3	1:C:977:LYS:O	2.11	0.50
1:C:1417:TYR:O	1:C:1421:MET:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2988:ARG:HG3	1:C:2991:CYS:HA	1.94	0.50
1:C:3222:ALA:O	1:C:3282:LYS:NZ	2.35	0.50
1:D:888:ASN:O	1:D:892:LEU:HG	2.12	0.50
1:D:2549:LEU:HD11	1:D:2580:LEU:HD11	1.93	0.50
1:D:2684:ASN:OD1	1:D:2685:TYR:N	2.44	0.50
1:D:2979:ARG:HH11	1:D:2983:LEU:HD12	1.76	0.50
1:A:26:ALA:HB2	1:A:194:LEU:HD21	1.94	0.49
1:A:3172:GLU:HB2	1:A:3245:TYR:OH	2.12	0.49
1:A:3229:THR:HG23	1:A:3291:ASP:OD2	2.12	0.49
1:A:4569:GLU:HB3	1:A:4570:PRO:HD3	1.94	0.49
1:A:4863:GLN:OE1	1:A:4863:GLN:HA	2.11	0.49
1:B:1041:ARG:O	1:B:1044:LYS:HG3	2.12	0.49
1:B:3172:GLU:HB2	1:B:3245:TYR:OH	2.12	0.49
1:B:4280:VAL:HA	1:B:4283:PHE:CE1	2.47	0.49
1:C:2276:SER:OG	1:C:2288:ILE:O	2.20	0.49
1:C:4252:ILE:HD13	1:D:4707:MET:HA	1.94	0.49
1:C:4280:VAL:HA	1:C:4283:PHE:CE1	2.47	0.49
1:D:2244:ALA:O	1:D:2248:MET:HB2	2.11	0.49
1:D:3889:TYR:CD1	1:D:3954:MET:HE2	2.48	0.49
1:A:115:TYR:OH	1:A:179:ASP:OD2	2.29	0.49
1:A:896:ASN:O	1:A:900:LEU:HG	2.11	0.49
1:A:2488:LEU:HA	1:A:2492:PHE:HB2	1.95	0.49
1:B:26:ALA:HB2	1:B:194:LEU:HD21	1.94	0.49
1:B:1273:ILE:HB	1:B:1282:CYS:HB2	1.94	0.49
1:B:2290:TRP:CZ2	1:B:2388:ILE:HG12	2.48	0.49
1:B:3229:THR:HG23	1:B:3291:ASP:OD2	2.12	0.49
1:C:115:TYR:OH	1:C:179:ASP:OD2	2.29	0.49
1:C:942:THR:HG23	1:C:1002:ASN:HD22	1.76	0.49
1:C:3229:THR:HG23	1:C:3291:ASP:OD2	2.12	0.49
1:C:3324:GLU:O	1:C:3325:LYS:HB2	2.12	0.49
1:D:986:ILE:HD12	1:D:1055:ARG:HG3	1.94	0.49
1:D:2999:LYS:HA	1:D:3002:GLU:HG2	1.94	0.49
1:A:877:HIS:CD2	1:A:1062:TYR:HH	2.30	0.49
1:B:808:HIS:CE1	1:B:832:LEU:HB3	2.47	0.49
1:B:1417:TYR:O	1:B:1421:MET:HG2	2.12	0.49
1:B:2979:ARG:HG2	1:B:3039:THR:HG22	1.94	0.49
1:C:26:ALA:HB2	1:C:194:LEU:HD21	1.94	0.49
1:C:1564:MET:HE3	1:C:1565:PRO:HD2	1.92	0.49
1:C:2488:LEU:HA	1:C:2492:PHE:HB2	1.95	0.49
1:C:4522:VAL:HG23	1:D:4786:PHE:CZ	2.47	0.49
1:C:4617:ILE:HG13	1:C:4618:THR:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:679:VAL:HA	1:D:800:VAL:HG12	1.94	0.49
1:A:35:LEU:HD23	1:A:49:LEU:HB3	1.95	0.49
1:B:679:VAL:HA	1:B:800:VAL:HG12	1.94	0.49
1:B:739:ARG:NH2	1:B:1478:GLU:OE2	2.45	0.49
1:B:2635:GLU:HA	1:B:2638:LEU:HB2	1.95	0.49
1:C:2979:ARG:HG2	1:C:3039:THR:HG22	1.94	0.49
1:D:964:MET:HG2	1:D:981:MET:HA	1.94	0.49
1:A:842:GLN:HB2	1:A:1603:PHE:HB2	1.93	0.49
1:A:2999:LYS:HA	1:A:3002:GLU:HG2	1.94	0.49
1:C:480:ARG:NH2	1:C:3678:GLU:OE2	2.45	0.49
1:C:808:HIS:CE1	1:C:832:LEU:HB3	2.47	0.49
1:C:3008:PHE:CZ	1:C:3108:LEU:HD11	2.48	0.49
1:D:26:ALA:HB2	1:D:194:LEU:HD21	1.94	0.49
1:D:1417:TYR:O	1:D:1421:MET:HG2	2.12	0.49
1:D:4617:ILE:HG13	1:D:4618:THR:N	2.27	0.49
1:A:486:GLN:NE2	1:A:539:ALA:O	2.44	0.49
1:A:3889:TYR:CD1	1:A:3954:MET:HE2	2.48	0.49
1:B:35:LEU:HD23	1:B:49:LEU:HB3	1.95	0.49
1:B:156:GLU:HG3	1:B:187:SER:HB3	1.93	0.49
1:B:826:VAL:HG21	1:B:832:LEU:HB2	1.94	0.49
1:B:2149:ILE:HG21	1:B:2167:MET:HE1	1.92	0.49
1:B:2830:ASN:OD1	1:C:1549:SER:HB2	2.13	0.49
1:B:3650:GLU:HB2	1:B:3651:PRO:HD3	1.95	0.49
1:B:4252:ILE:HD13	1:C:4707:MET:HA	1.94	0.49
1:B:4569:GLU:HB3	1:B:4570:PRO:HD3	1.94	0.49
1:D:693:LEU:HD22	1:D:798:ILE:HD12	1.95	0.49
1:D:3316:LYS:C	1:D:3318:HIS:H	2.20	0.49
1:D:3940:LEU:HD11	1:D:3981:MET:HE1	1.93	0.49
1:D:4569:GLU:HB3	1:D:4570:PRO:HD3	1.94	0.49
1:A:611:LEU:HD22	1:A:1660:LEU:HD22	1.94	0.49
1:A:986:ILE:HD12	1:A:1055:ARG:HG3	1.94	0.49
1:A:2244:ALA:O	1:A:2248:MET:HB2	2.11	0.49
1:A:2979:ARG:HG2	1:A:3039:THR:HG22	1.94	0.49
1:A:3088:LYS:HD3	1:A:3089:GLY:N	2.28	0.49
1:A:4155:SER:O	1:A:4159:GLN:HG2	2.12	0.49
1:A:4834:PRO:HG3	1:A:4843:ARG:HD2	1.95	0.49
1:A:4864:GLY:HA2	1:D:4867:ILE:HG12	1.95	0.49
1:B:503:ASP:O	1:B:507:VAL:HG13	2.12	0.49
1:B:3174:HIS:CD2	1:B:3175:LEU:HG	2.48	0.49
1:C:2549:LEU:HD11	1:C:2580:LEU:HD11	1.93	0.49
1:C:2999:LYS:HA	1:C:3002:GLU:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:842:GLN:HB2	1:D:1603:PHE:HB2	1.94	0.49
1:D:3229:THR:HG23	1:D:3291:ASP:OD2	2.12	0.49
1:A:739:ARG:NH2	1:A:1478:GLU:OE2	2.45	0.49
1:A:4732:GLY:HA2	1:A:4738:PHE:HB2	1.95	0.49
1:B:2488:LEU:HA	1:B:2492:PHE:HB2	1.95	0.49
1:B:3100:ALA:O	1:B:3103:PRO:HD2	2.13	0.49
1:B:3889:TYR:CD1	1:B:3954:MET:HE2	2.48	0.49
1:B:4732:GLY:HA2	1:B:4738:PHE:HB2	1.95	0.49
1:B:4834:PRO:HG3	1:B:4843:ARG:HD2	1.95	0.49
1:C:964:MET:HG2	1:C:981:MET:HA	1.94	0.49
1:C:3316:LYS:C	1:C:3318:HIS:H	2.20	0.49
1:C:4834:PRO:HG3	1:C:4843:ARG:HD2	1.95	0.49
1:D:826:VAL:HG21	1:D:832:LEU:HB2	1.94	0.49
1:D:3324:GLU:O	1:D:3325:LYS:HB2	2.12	0.49
1:A:1040:ASP:HA	1:A:1043:LYS:HG2	1.95	0.49
1:A:1471:ASP:HB3	1:A:1477:HIS:NE2	2.28	0.49
1:A:4608:ARG:HD3	1:A:4612:PHE:HE2	1.77	0.49
1:A:4829:ASP:OD1	1:D:4822:ARG:NH2	2.46	0.49
1:B:1989:PRO:HB2	1:B:1992:ILE:HG12	1.95	0.49
1:B:3127:GLN:NE2	1:B:3183:ILE:HB	2.28	0.49
1:C:611:LEU:HD22	1:C:1660:LEU:HD22	1.94	0.49
1:C:3008:PHE:HZ	1:C:3108:LEU:HD11	1.78	0.49
1:C:3174:HIS:CD2	1:C:3175:LEU:HG	2.48	0.49
1:C:4896:ASP:OD2	1:C:4897:TYR:N	2.46	0.49
1:D:2488:LEU:HA	1:D:2492:PHE:HB2	1.95	0.49
1:D:3071:THR:HA	1:D:3074:ASN:ND2	2.28	0.49
1:D:4834:PRO:HG3	1:D:4843:ARG:HD2	1.95	0.49
1:D:4896:ASP:OD2	1:D:4897:TYR:N	2.46	0.49
1:A:830:GLU:OE1	1:A:830:GLU:N	2.46	0.49
1:A:3650:GLU:HB2	1:A:3651:PRO:HD3	1.95	0.49
1:A:4280:VAL:HA	1:A:4283:PHE:CE1	2.47	0.49
1:A:4617:ILE:HG13	1:A:4618:THR:N	2.27	0.49
1:B:162:ILE:HD12	1:B:175:VAL:HG21	1.95	0.49
1:B:1608:VAL:HG12	1:B:1619:VAL:HG22	1.95	0.49
1:B:2835:ARG:NH2	1:B:2838[A]:HIS:CE1	2.81	0.49
1:B:2843:MET:O	1:B:2846:GLU:HB2	2.13	0.49
1:B:3316:LYS:C	1:B:3318:HIS:H	2.20	0.49
1:C:1041:ARG:O	1:C:1044:LYS:HG3	2.12	0.49
1:C:2635:GLU:HA	1:C:2638:LEU:HB2	1.95	0.49
1:C:2968:LEU:HD11	1:C:3029:ILE:HA	1.95	0.49
1:C:3172:GLU:HB2	1:C:3245:TYR:OH	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3889:TYR:CD1	1:C:3954:MET:HE2	2.48	0.49
1:D:1471:ASP:HB3	1:D:1477:HIS:NE2	2.28	0.49
1:D:3127:GLN:NE2	1:D:3183:ILE:HB	2.28	0.49
1:D:4280:VAL:HA	1:D:4283:PHE:CE1	2.47	0.49
1:A:2290:TRP:CZ2	1:A:2388:ILE:HG12	2.48	0.48
1:A:2635:GLU:HA	1:A:2638:LEU:HB2	1.95	0.48
1:A:3071:THR:HA	1:A:3074:ASN:ND2	2.28	0.48
1:A:3324:GLU:O	1:A:3325:LYS:HB2	2.12	0.48
1:B:661:LEU:HD23	1:B:661:LEU:H	1.78	0.48
1:B:1703:TYR:CD2	1:B:1820:PRO:HB2	2.49	0.48
1:B:1714:TYR:OH	1:B:1759:PRO:O	2.19	0.48
1:C:661:LEU:HD23	1:C:661:LEU:H	1.78	0.48
1:C:826:VAL:HG21	1:C:832:LEU:HB2	1.94	0.48
1:C:2741:TRP:CE3	1:C:2754:GLN:HB2	2.48	0.48
1:D:2290:TRP:CZ2	1:D:2388:ILE:HG12	2.48	0.48
1:D:3088:LYS:HD3	1:D:3089:GLY:N	2.28	0.48
1:D:4079:ASP:O	1:D:4082:GLU:HG3	2.12	0.48
1:D:4155:SER:O	1:D:4159:GLN:HG2	2.12	0.48
1:A:1608:VAL:HG12	1:A:1619:VAL:HG22	1.95	0.48
1:A:1703:TYR:CD2	1:A:1820:PRO:HB2	2.49	0.48
1:A:2436:ILE:HA	1:A:2465:LYS:HZ2	1.78	0.48
1:A:2603:ALA:C	1:A:2606:PRO:HD2	2.39	0.48
1:A:2843:MET:O	1:A:2846:GLU:HB2	2.13	0.48
1:A:4079:ASP:O	1:A:4082:GLU:HG3	2.13	0.48
1:B:893:TRP:CZ3	1:B:924:LEU:HD21	2.48	0.48
1:B:1426:TYR:HA	1:B:1564:MET:O	2.13	0.48
1:B:1471:ASP:HB3	1:B:1477:HIS:NE2	2.28	0.48
1:B:1494:MET:HB2	1:B:1505:LEU:HD22	1.95	0.48
1:B:2478:ILE:HG21	1:B:2527:LEU:HD11	1.95	0.48
1:B:2979:ARG:HH11	1:B:2983:LEU:HD12	1.76	0.48
1:C:693:LEU:HD22	1:C:798:ILE:HD12	1.95	0.48
1:C:2290:TRP:CZ2	1:C:2388:ILE:HG12	2.48	0.48
1:C:4587:ILE:HD13	1:C:4722:LEU:HB3	1.95	0.48
1:D:1703:TYR:CD2	1:D:1820:PRO:HB2	2.48	0.48
1:D:2720:PHE:CE1	1:D:2896:LEU:HA	2.48	0.48
1:D:2843:MET:O	1:D:2846:GLU:HB2	2.13	0.48
1:D:2979:ARG:HG2	1:D:3039:THR:HG22	1.94	0.48
1:D:3008:PHE:CZ	1:D:3108:LEU:HD11	2.48	0.48
1:D:3172:GLU:HB2	1:D:3245:TYR:OH	2.12	0.48
1:A:693:LEU:HD22	1:A:798:ILE:HD12	1.95	0.48
1:A:826:VAL:HG21	1:A:832:LEU:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2944:ASP:OD1	1:A:3018:ARG:NH1	2.47	0.48
1:A:2968:LEU:HD11	1:A:3029:ILE:HA	1.95	0.48
1:A:3008:PHE:CZ	1:A:3108:LEU:HD11	2.48	0.48
1:A:3243:CYS:O	1:A:3247:SER:OG	2.29	0.48
1:B:663:VAL:HG23	1:B:671:LYS:HE3	1.95	0.48
1:B:2603:ALA:C	1:B:2606:PRO:HD2	2.39	0.48
1:C:893:TRP:CZ3	1:C:924:LEU:HD21	2.48	0.48
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.49	0.48
1:C:1426:TYR:HA	1:C:1564:MET:O	2.13	0.48
1:C:1471:ASP:HB3	1:C:1477:HIS:NE2	2.28	0.48
1:C:2830:ASN:OD1	1:D:1549:SER:HB2	2.12	0.48
1:C:3127:GLN:NE2	1:C:3183:ILE:HB	2.28	0.48
1:C:3940:LEU:HD11	1:C:3981:MET:HE1	1.93	0.48
1:D:35:LEU:HD23	1:D:49:LEU:HB3	1.95	0.48
1:D:808:HIS:CE1	1:D:832:LEU:HB3	2.47	0.48
1:D:893:TRP:CH2	1:D:924:LEU:HD21	2.49	0.48
1:D:2603:ALA:C	1:D:2606:PRO:HD2	2.38	0.48
1:D:2968:LEU:HD11	1:D:3029:ILE:HA	1.95	0.48
1:A:769:ARG:HH21	1:A:772:GLY:HA2	1.79	0.48
1:A:1426:TYR:HA	1:A:1564:MET:O	2.13	0.48
1:A:2849:HIS:ND1	1:A:2874:TYR:HB2	2.28	0.48
1:A:3316:LYS:C	1:A:3318:HIS:H	2.20	0.48
1:A:3833:ASP:OD2	1:A:3908:LYS:HE3	2.14	0.48
1:B:964:MET:HG2	1:B:981:MET:HA	1.94	0.48
1:B:1220:ASP:O	1:B:1223:THR:OG1	2.27	0.48
1:B:2741:TRP:CE3	1:B:2754:GLN:HB2	2.48	0.48
1:B:3088:LYS:HD3	1:B:3089:GLY:N	2.28	0.48
1:C:35:LEU:HD23	1:C:49:LEU:HB3	1.95	0.48
1:C:162:ILE:HD12	1:C:175:VAL:HG21	1.95	0.48
1:C:830:GLU:OE1	1:C:830:GLU:N	2.46	0.48
1:C:893:TRP:CH2	1:C:924:LEU:HD21	2.49	0.48
1:C:1220:ASP:O	1:C:1223:THR:OG1	2.27	0.48
1:C:1703:TYR:CD2	1:C:1820:PRO:HB2	2.49	0.48
1:C:2186:GLU:OE1	1:C:2187:ILE:N	2.41	0.48
1:C:2603:ALA:C	1:C:2606:PRO:HD2	2.39	0.48
1:C:3833:ASP:OD2	1:C:3908:LYS:HE3	2.14	0.48
1:C:4569:GLU:HB3	1:C:4570:PRO:HD3	1.94	0.48
1:D:893:TRP:CZ3	1:D:924:LEU:HD21	2.49	0.48
1:D:4488:GLN:O	1:D:4492:LEU:HD23	2.14	0.48
1:A:1549:SER:HB2	1:D:2830:ASN:OD1	2.13	0.48
1:B:1040:ASP:HA	1:B:1043:LYS:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1494:MET:HB2	1:C:1505:LEU:HD22	1.95	0.48
1:C:2720:PHE:CE1	1:C:2896:LEU:HA	2.48	0.48
1:C:2835:ARG:NH2	1:C:2838[A]:HIS:CE1	2.81	0.48
1:C:2849:HIS:ND1	1:C:2874:TYR:HB2	2.28	0.48
1:D:765:SER:OG	1:D:778:MET:HE1	2.14	0.48
1:D:769:ARG:HH21	1:D:772:GLY:HA2	1.79	0.48
1:D:877:HIS:HA	1:D:880:ARG:HH12	1.77	0.48
1:D:1426:TYR:HA	1:D:1564:MET:O	2.13	0.48
1:D:3008:PHE:HZ	1:D:3108:LEU:HD11	1.78	0.48
1:D:4587:ILE:HD13	1:D:4722:LEU:HB3	1.96	0.48
1:D:4605:GLU:HG3	1:D:4609:LYS:NZ	2.29	0.48
1:D:4732:GLY:HA2	1:D:4738:PHE:HB2	1.95	0.48
1:A:661:LEU:HD23	1:A:661:LEU:H	1.78	0.48
1:A:764:PRO:HB2	1:A:781:ASN:H	1.79	0.48
1:A:893:TRP:CH2	1:A:924:LEU:HD21	2.49	0.48
1:A:1220:ASP:O	1:A:1223:THR:OG1	2.27	0.48
1:A:1440:ASN:HB3	1:A:1546:GLN:HB3	1.96	0.48
1:A:3270:SER:HA	1:A:3273:MET:HE2	1.96	0.48
1:A:4488:GLN:O	1:A:4492:LEU:HD23	2.14	0.48
1:A:4605:GLU:HG3	1:A:4609:LYS:NZ	2.29	0.48
1:A:4896:ASP:OD2	1:A:4897:TYR:N	2.46	0.48
1:B:611:LEU:HD22	1:B:1660:LEU:HD22	1.94	0.48
1:B:1102:TYR:HD1	1:B:1165:MET:HG2	1.78	0.48
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.49	0.48
1:B:3324:GLU:O	1:B:3325:LYS:HB2	2.12	0.48
1:B:4488:GLN:O	1:B:4492:LEU:HD23	2.14	0.48
1:B:4605:GLU:HG3	1:B:4609:LYS:NZ	2.28	0.48
1:C:3650:GLU:HB2	1:C:3651:PRO:HD3	1.95	0.48
1:C:4079:ASP:O	1:C:4082:GLU:HG3	2.12	0.48
1:D:661:LEU:HD23	1:D:661:LEU:H	1.78	0.48
1:D:1989:PRO:HB2	1:D:1992:ILE:HG12	1.95	0.48
1:D:2741:TRP:CE3	1:D:2754:GLN:HB2	2.48	0.48
1:D:2868:HIS:CE1	1:D:2870:LEU:HB2	2.49	0.48
1:A:765:SER:OG	1:A:778:MET:HE1	2.14	0.48
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.49	0.48
1:A:2835:ARG:NH2	1:A:2838[A]:HIS:CE1	2.81	0.48
1:A:2979:ARG:HH11	1:A:2983:LEU:HD12	1.76	0.48
1:A:3100:ALA:O	1:A:3103:PRO:HD2	2.13	0.48
1:A:3127:GLN:NE2	1:A:3183:ILE:HB	2.28	0.48
1:A:3174:HIS:CD2	1:A:3175:LEU:HG	2.48	0.48
1:B:288:HIS:O	1:B:290:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:765:SER:OG	1:B:778:MET:HE1	2.14	0.48
1:B:2944:ASP:OD1	1:B:3018:ARG:NH1	2.47	0.48
1:B:3071:THR:HA	1:B:3074:ASN:ND2	2.28	0.48
1:B:3833:ASP:OD2	1:B:3908:LYS:HE3	2.14	0.48
1:B:4896:ASP:OD2	1:B:4897:TYR:N	2.46	0.48
1:C:2427:ILE:HD13	1:C:2471:PHE:CZ	2.49	0.48
1:C:2868:HIS:CE1	1:C:2870:LEU:HB2	2.49	0.48
1:C:3071:THR:HA	1:C:3074:ASN:ND2	2.28	0.48
1:C:3100:ALA:O	1:C:3103:PRO:HD2	2.13	0.48
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.49	0.48
1:D:3005:THR:O	1:D:3008:PHE:HB3	2.14	0.48
1:A:288:HIS:O	1:A:290:ARG:NH1	2.47	0.48
1:A:1494:MET:HB2	1:A:1505:LEU:HD22	1.95	0.48
1:A:1989:PRO:HB2	1:A:1992:ILE:HG12	1.95	0.48
1:A:2769:GLU:O	1:A:2771:TYR:N	2.42	0.48
1:A:3005:THR:O	1:A:3008:PHE:HB3	2.14	0.48
1:A:3233:HIS:O	1:A:3237:VAL:HG12	2.14	0.48
1:B:3270:SER:HA	1:B:3273:MET:HE2	1.96	0.48
1:C:3270:SER:HA	1:C:3273:MET:HE2	1.96	0.48
1:C:4605:GLU:HG3	1:C:4609:LYS:NZ	2.28	0.48
1:D:611:LEU:HD22	1:D:1660:LEU:HD22	1.95	0.48
1:D:663:VAL:HG23	1:D:671:LYS:HE3	1.95	0.48
1:D:764:PRO:HB2	1:D:781:ASN:H	1.79	0.48
1:D:830:GLU:N	1:D:830:GLU:OE1	2.46	0.48
1:D:2849:HIS:ND1	1:D:2874:TYR:HB2	2.28	0.48
1:D:3674:THR:O	1:D:3679:LYS:NZ	2.45	0.48
1:D:3833:ASP:OD2	1:D:3908:LYS:HE3	2.14	0.48
1:D:4832:GLU:O	1:D:4843:ARG:NH2	2.42	0.48
1:A:964:MET:HG2	1:A:981:MET:HA	1.94	0.48
1:A:2868:HIS:CE1	1:A:2870:LEU:HB2	2.49	0.48
1:A:4102:LEU:HD21	1:A:4118:PHE:CE2	2.49	0.48
1:A:4856:VAL:HG13	1:D:4863:GLN:HE22	1.79	0.48
1:B:2999:LYS:HA	1:B:3002:GLU:HG2	1.94	0.48
1:B:3008:PHE:CZ	1:B:3108:LEU:HD11	2.48	0.48
1:C:114:LEU:HB2	1:C:117:HIS:HD2	1.79	0.48
1:C:1608:VAL:HG12	1:C:1619:VAL:HG22	1.95	0.48
1:D:114:LEU:HB2	1:D:117:HIS:HD2	1.78	0.48
1:D:2427:ILE:HD13	1:D:2471:PHE:CZ	2.49	0.48
1:D:3270:SER:HA	1:D:3273:MET:HE2	1.96	0.48
1:A:162:ILE:HD12	1:A:175:VAL:HG21	1.95	0.48
1:A:2500:ALA:HB1	1:A:2554:ARG:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:764:PRO:HB2	1:B:781:ASN:H	1.79	0.48
1:B:1703:TYR:HD2	1:B:1820:PRO:HB2	1.79	0.48
1:B:2758:LYS:NZ	1:B:2763:LEU:HA	2.29	0.48
1:B:2790:GLU:O	1:B:2902:ALA:N	2.43	0.48
1:B:2849:HIS:ND1	1:B:2874:TYR:HB2	2.28	0.48
1:C:2944:ASP:OD1	1:C:3018:ARG:NH1	2.47	0.48
1:C:3088:LYS:HD3	1:C:3089:GLY:N	2.28	0.48
1:D:2635:GLU:HA	1:D:2638:LEU:HB2	1.95	0.48
1:D:3100:ALA:O	1:D:3103:PRO:HD2	2.13	0.48
1:D:3650:GLU:HB2	1:D:3651:PRO:HD3	1.95	0.48
1:A:2427:ILE:HD13	1:A:2471:PHE:CZ	2.49	0.47
1:A:2741:TRP:CE3	1:A:2754:GLN:HB2	2.48	0.47
1:B:3008:PHE:HZ	1:B:3108:LEU:HD11	1.78	0.47
1:B:4079:ASP:O	1:B:4082:GLU:HG3	2.12	0.47
1:C:1989:PRO:HB2	1:C:1992:ILE:HG12	1.95	0.47
1:C:2478:ILE:HG21	1:C:2527:LEU:HD11	1.95	0.47
1:D:674:TYR:CE1	1:D:756:SER:HB2	2.49	0.47
1:D:675:TYR:HB3	1:D:822:CYS:SG	2.54	0.47
1:D:1608:VAL:HG12	1:D:1619:VAL:HG22	1.95	0.47
1:D:3174:HIS:CD2	1:D:3175:LEU:HG	2.48	0.47
1:A:3008:PHE:HZ	1:A:3108:LEU:HD11	1.78	0.47
1:B:693:LEU:HD22	1:B:798:ILE:HD12	1.95	0.47
1:B:830:GLU:N	1:B:830:GLU:OE1	2.46	0.47
1:B:1440:ASN:HB3	1:B:1546:GLN:HB3	1.96	0.47
1:B:2720:PHE:CE1	1:B:2896:LEU:HA	2.48	0.47
1:B:4587:ILE:HD13	1:B:4722:LEU:HB3	1.95	0.47
1:C:1703:TYR:HD2	1:C:1820:PRO:HB2	1.79	0.47
1:D:365:HIS:HE1	1:D:367:ASP:HB2	1.79	0.47
1:D:1494:MET:HB2	1:D:1505:LEU:HD22	1.95	0.47
1:D:2500:ALA:HB1	1:D:2554:ARG:HD2	1.95	0.47
1:D:2835:ARG:NH2	1:D:2838[A]:HIS:CE1	2.81	0.47
1:D:2937:HIS:O	1:D:2940:ILE:HG22	2.14	0.47
1:D:3071:THR:O	1:D:3075:LEU:HD12	2.15	0.47
1:A:173:GLU:HA	1:D:3939:ARG:HH22	1.80	0.47
1:A:674:TYR:CE1	1:A:756:SER:HB2	2.49	0.47
1:A:2478:ILE:HG21	1:A:2527:LEU:HD11	1.95	0.47
1:A:4520:TYR:HA	1:A:4561:LEU:HD23	1.96	0.47
1:B:675:TYR:HB3	1:B:822:CYS:SG	2.54	0.47
1:B:893:TRP:CH2	1:B:924:LEU:HD21	2.49	0.47
1:B:2968:LEU:HD11	1:B:3029:ILE:HA	1.95	0.47
1:B:3071:THR:O	1:B:3075:LEU:HD12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3233:HIS:O	1:B:3237:VAL:HG12	2.14	0.47
1:B:3307:ILE:HA	1:B:3310:VAL:HG12	1.96	0.47
1:C:674:TYR:CE1	1:C:756:SER:HB2	2.49	0.47
1:C:3005:THR:O	1:C:3008:PHE:HB3	2.14	0.47
1:C:3307:ILE:HA	1:C:3310:VAL:HG12	1.96	0.47
1:C:4167:GLU:OE2	1:C:4170:ARG:NH1	2.47	0.47
1:D:2487:LEU:HA	1:D:2490:VAL:HG22	1.96	0.47
1:D:2944:ASP:OD1	1:D:3018:ARG:NH1	2.47	0.47
1:A:663:VAL:HG23	1:A:671:LYS:HE3	1.95	0.47
1:A:869:THR:HB	1:A:941:LYS:HB3	1.97	0.47
1:A:2609:LEU:HA	1:A:2612:ASN:HD21	1.80	0.47
1:A:2937:HIS:O	1:A:2940:ILE:HG22	2.14	0.47
1:B:3246:MET:HG3	1:B:3246:MET:H	1.36	0.47
1:C:675:TYR:HB3	1:C:822:CYS:SG	2.54	0.47
1:C:1102:TYR:HD1	1:C:1165:MET:HG2	1.78	0.47
1:C:2609:LEU:HA	1:C:2612:ASN:HD21	1.80	0.47
1:C:2758:LYS:NZ	1:C:2763:LEU:HA	2.29	0.47
1:C:3071:THR:O	1:C:3075:LEU:HD12	2.15	0.47
1:D:2609:LEU:HA	1:D:2612:ASN:HD21	1.80	0.47
1:D:4102:LEU:HD21	1:D:4118:PHE:CE2	2.49	0.47
1:D:4167:GLU:OE2	1:D:4170:ARG:NH1	2.47	0.47
1:A:590:LYS:HD3	1:A:590:LYS:HA	1.69	0.47
1:A:675:TYR:HB3	1:A:822:CYS:SG	2.54	0.47
1:A:1118:SER:HB3	1:A:1204:VAL:HG11	1.97	0.47
1:A:2720:PHE:CE1	1:A:2896:LEU:HA	2.48	0.47
1:A:2887:GLU:HA	1:A:2890:GLN:NE2	2.29	0.47
1:A:2896:LEU:HG	1:A:2901:TYR:HB2	1.96	0.47
1:A:3674:THR:O	1:A:3679:LYS:NZ	2.45	0.47
1:A:4517:LEU:O	1:B:4809:MET:HG2	2.15	0.47
1:B:1054:VAL:HA	1:B:1057:LEU:HD12	1.97	0.47
1:B:1118:SER:HB3	1:B:1204:VAL:HG11	1.97	0.47
1:B:2487:LEU:HA	1:B:2490:VAL:HG22	1.96	0.47
1:B:3032:CYS:O	1:B:3035:ILE:HG22	2.15	0.47
1:B:4167:GLU:OE2	1:B:4170:ARG:NH1	2.47	0.47
1:C:365:HIS:HE1	1:C:367:ASP:HB2	1.80	0.47
1:C:769:ARG:HH21	1:C:772:GLY:HA2	1.79	0.47
1:C:1040:ASP:HA	1:C:1043:LYS:HG2	1.95	0.47
1:C:3233:HIS:O	1:C:3237:VAL:HG12	2.14	0.47
1:C:4102:LEU:HD21	1:C:4118:PHE:CE2	2.49	0.47
1:D:1040:ASP:HA	1:D:1043:LYS:HG2	1.95	0.47
1:A:893:TRP:CZ3	1:A:924:LEU:HD21	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:908:ARG:HG2	1:A:916:PRO:HD2	1.96	0.47
1:A:3071:THR:O	1:A:3075:LEU:HD12	2.15	0.47
1:A:4587:ILE:HD13	1:A:4722:LEU:HB3	1.96	0.47
1:B:674:TYR:CE1	1:B:756:SER:HB2	2.49	0.47
1:B:2609:LEU:HA	1:B:2612:ASN:HD21	1.80	0.47
1:B:2868:HIS:CE1	1:B:2870:LEU:HB2	2.49	0.47
1:B:3005:THR:O	1:B:3008:PHE:HB3	2.14	0.47
1:B:3778:LEU:HD13	1:B:3854:PHE:HD1	1.79	0.47
1:B:4052:MET:HE2	1:B:4063:THR:HG23	1.97	0.47
1:C:764:PRO:HB2	1:C:781:ASN:H	1.79	0.47
1:C:2843:MET:O	1:C:2846:GLU:HB2	2.13	0.47
1:D:869:THR:HB	1:D:941:LYS:HB3	1.96	0.47
1:D:2478:ILE:HG21	1:D:2527:LEU:HD11	1.95	0.47
1:A:114:LEU:HB2	1:A:117:HIS:HD2	1.79	0.47
1:A:365:HIS:HE1	1:A:367:ASP:HB2	1.80	0.47
1:A:943:LEU:HD21	1:A:999:LEU:HD11	1.97	0.47
1:A:1703:TYR:HD2	1:A:1820:PRO:HB2	1.79	0.47
1:A:1751:ILE:HG23	1:A:1839:LEU:HD23	1.97	0.47
1:A:2157:GLN:O	1:A:3615:ARG:NH2	2.48	0.47
1:A:4633:LEU:HD13	1:A:4707:MET:HE1	1.97	0.47
1:B:476:GLN:NE2	1:B:3678:GLU:OE1	2.46	0.47
1:B:676:GLU:HG3	1:B:756:SER:HB3	1.97	0.47
1:B:769:ARG:HH21	1:B:772:GLY:HA2	1.79	0.47
1:B:1751:ILE:HG23	1:B:1839:LEU:HD23	1.97	0.47
1:B:2500:ALA:HB1	1:B:2554:ARG:HD2	1.95	0.47
1:B:2726:GLU:HG3	1:B:2760:TYR:HB3	1.97	0.47
1:B:4040:LYS:NZ	1:B:4042:VAL:O	2.48	0.47
1:B:4520:TYR:HA	1:B:4561:LEU:HD23	1.96	0.47
1:B:4633:LEU:HD13	1:B:4707:MET:HE1	1.97	0.47
1:C:663:VAL:HG23	1:C:671:LYS:HE3	1.95	0.47
1:C:765:SER:OG	1:C:778:MET:HE1	2.14	0.47
1:C:2156:TYR:HE1	1:C:2202:TYR:HE2	1.61	0.47
1:C:2487:LEU:HA	1:C:2490:VAL:HG22	1.96	0.47
1:C:2500:ALA:HB1	1:C:2554:ARG:HD2	1.95	0.47
1:C:2717:LEU:O	1:C:2721:ILE:HG23	2.15	0.47
1:C:2937:HIS:O	1:C:2940:ILE:HG22	2.14	0.47
1:C:4488:GLN:O	1:C:4492:LEU:HD23	2.14	0.47
1:C:4590:TYR:OH	1:C:4718:SER:HB2	2.15	0.47
1:C:4732:GLY:HA2	1:C:4738:PHE:HB2	1.95	0.47
1:D:162:ILE:HD12	1:D:175:VAL:HG21	1.95	0.47
1:D:590:LYS:HD3	1:D:590:LYS:HA	1.69	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1440:ASN:HB3	1:D:1546:GLN:HB3	1.96	0.47
1:D:2726:GLU:HG3	1:D:2760:TYR:HB3	1.97	0.47
1:D:2891:ASP:OD1	1:D:2892:ILE:N	2.48	0.47
1:D:3233:HIS:O	1:D:3237:VAL:HG12	2.14	0.47
1:A:1054:VAL:HA	1:A:1057:LEU:HD12	1.97	0.47
1:A:1102:TYR:HD1	1:A:1165:MET:HG2	1.78	0.47
1:A:2303:ARG:HE	1:A:2401:ARG:NE	2.13	0.47
1:A:3032:CYS:O	1:A:3035:ILE:HG22	2.15	0.47
1:A:4167:GLU:OE2	1:A:4170:ARG:NH1	2.47	0.47
1:B:2157:GLN:O	1:B:3615:ARG:NH2	2.48	0.47
1:B:2427:ILE:HD13	1:B:2471:PHE:CZ	2.49	0.47
1:B:2887:GLU:HA	1:B:2890:GLN:NE2	2.29	0.47
1:C:1118:SER:HB3	1:C:1204:VAL:HG11	1.97	0.47
1:C:2887:GLU:HA	1:C:2890:GLN:NE2	2.29	0.47
1:C:4268:MET:O	1:C:4272:LYS:HG2	2.15	0.47
1:C:4633:LEU:HD13	1:C:4707:MET:HE1	1.97	0.47
1:D:908:ARG:HG2	1:D:916:PRO:HD2	1.96	0.47
1:D:1102:TYR:HD1	1:D:1165:MET:HG2	1.78	0.47
1:D:2156:TYR:HE1	1:D:2202:TYR:HE2	1.61	0.47
1:D:2896:LEU:HG	1:D:2901:TYR:HB2	1.96	0.47
1:D:4520:TYR:HA	1:D:4561:LEU:HD23	1.96	0.47
1:D:4583:SER:O	1:D:4587:ILE:HG12	2.15	0.47
1:D:4633:LEU:HD13	1:D:4707:MET:HE1	1.97	0.47
1:A:2487:LEU:HA	1:A:2490:VAL:HG22	1.96	0.47
1:A:2790:GLU:O	1:A:2902:ALA:N	2.42	0.47
1:A:4590:TYR:OH	1:A:4718:SER:HB2	2.15	0.47
1:B:392:ILE:HG13	1:B:393:MET:H	1.80	0.47
1:B:869:THR:HB	1:B:941:LYS:HB3	1.97	0.47
1:B:2443:PRO:HD3	1:B:2512:MET:HG2	1.97	0.47
1:B:4637:THR:HG22	1:B:4704:LYS:HE3	1.97	0.47
1:D:2303:ARG:HE	1:D:2401:ARG:NE	2.13	0.47
1:D:3032:CYS:O	1:D:3035:ILE:HG22	2.15	0.47
1:A:2156:TYR:HE1	1:A:2202:TYR:HE2	1.61	0.47
1:A:4832:GLU:O	1:A:4843:ARG:NH2	2.42	0.47
1:B:1714:TYR:CE1	1:B:1759:PRO:HB2	2.50	0.47
1:B:4268:MET:O	1:B:4272:LYS:HG2	2.15	0.47
1:C:869:THR:HB	1:C:941:LYS:HB3	1.97	0.47
1:C:2619:LYS:HZ2	1:C:2627:TRP:CG	2.32	0.47
1:C:2714:PRO:HD2	1:C:2717:LEU:HB2	1.97	0.47
1:C:2726:GLU:HG3	1:C:2760:TYR:HB3	1.96	0.47
1:C:4583:SER:O	1:C:4587:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4637:THR:HG22	1:C:4704:LYS:HE3	1.97	0.47
1:D:1703:TYR:HD2	1:D:1820:PRO:HB2	1.79	0.47
1:D:2443:PRO:HD3	1:D:2512:MET:HG2	1.97	0.47
1:D:3033:LEU:HA	1:D:3036:LEU:HD12	1.97	0.47
1:D:3284:ILE:O	1:D:3288:LEU:HG	2.15	0.47
1:A:1043:LYS:O	1:A:1047:LYS:HB2	2.15	0.46
1:A:2230:ALA:HB2	1:A:2294:GLU:OE1	2.15	0.46
1:A:4518:LEU:O	1:B:4809:MET:HB3	2.15	0.46
1:B:1979:PHE:HZ	1:B:1996:LEU:HB3	1.80	0.46
1:B:2431:ASP:O	1:B:2435:VAL:HG23	2.15	0.46
1:B:2891:ASP:OD1	1:B:2892:ILE:N	2.48	0.46
1:B:3033:LEU:HA	1:B:3036:LEU:HD12	1.97	0.46
1:C:676:GLU:HG3	1:C:756:SER:HB3	1.97	0.46
1:C:3033:LEU:HA	1:C:3036:LEU:HD12	1.97	0.46
1:C:3284:ILE:O	1:C:3288:LEU:HG	2.16	0.46
1:C:3778:LEU:HD13	1:C:3854:PHE:HD1	1.80	0.46
1:C:4631:ASP:HA	1:C:4708:TRP:HE1	1.81	0.46
1:D:1088:PHE:HB2	1:D:1205:CYS:SG	2.55	0.46
1:D:2714:PRO:HD2	1:D:2717:LEU:HB2	1.97	0.46
1:D:2887:GLU:HA	1:D:2890:GLN:NE2	2.29	0.46
1:A:2397:ASP:O	1:A:2401:ARG:HG3	2.16	0.46
1:A:2559:CYS:SG	1:A:2560:SER:N	2.88	0.46
1:A:3070:LYS:NZ	1:A:3093:ILE:HG21	2.31	0.46
1:A:3254:PRO:HD3	1:A:3266:THR:O	2.16	0.46
1:A:3778:LEU:HD13	1:A:3854:PHE:HD1	1.80	0.46
1:A:4851:PHE:CG	1:D:4822:ARG:HG2	2.50	0.46
1:B:943:LEU:HD21	1:B:999:LEU:HD11	1.97	0.46
1:B:966:LEU:H	1:B:978:PRO:HG2	1.80	0.46
1:B:1641:ILE:HA	1:B:1644:LEU:HD13	1.97	0.46
1:B:2559:CYS:SG	1:B:2560:SER:N	2.88	0.46
1:B:2759:PRO:HG3	1:B:2821:TYR:HE1	1.81	0.46
1:B:4102:LEU:HD21	1:B:4118:PHE:CE2	2.49	0.46
1:C:1440:ASN:HB3	1:C:1546:GLN:HB3	1.96	0.46
1:C:1714:TYR:CE1	1:C:1759:PRO:HB2	2.50	0.46
1:C:2157:GLN:O	1:C:3615:ARG:NH2	2.48	0.46
1:C:3674:THR:O	1:C:3679:LYS:NZ	2.45	0.46
1:D:1714:TYR:CE1	1:D:1759:PRO:HB2	2.50	0.46
1:D:2717:LEU:O	1:D:2721:ILE:HG23	2.15	0.46
1:D:2758:LYS:NZ	1:D:2763:LEU:HA	2.29	0.46
1:D:3307:ILE:HA	1:D:3310:VAL:HG12	1.96	0.46
1:A:1914:CYS:O	1:A:1918:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2891:ASP:OD1	1:A:2892:ILE:N	2.48	0.46
1:B:365:HIS:HE1	1:B:367:ASP:HB2	1.79	0.46
1:B:2717:LEU:O	1:B:2721:ILE:HG23	2.15	0.46
1:B:3284:ILE:O	1:B:3288:LEU:HG	2.15	0.46
1:B:4583:SER:O	1:B:4587:ILE:HG12	2.15	0.46
1:C:1979:PHE:HZ	1:C:1996:LEU:HB3	1.80	0.46
1:D:1118:SER:HB3	1:D:1204:VAL:HG11	1.97	0.46
1:D:1682:GLU:OE2	1:D:1783:PRO:HG2	2.15	0.46
1:D:2769:GLU:O	1:D:2771:TYR:N	2.42	0.46
1:D:3778:LEU:HD13	1:D:3854:PHE:HD1	1.80	0.46
1:D:3961:ASP:OD1	1:D:3962:SER:N	2.48	0.46
1:D:4052:MET:HE2	1:D:4063:THR:HG23	1.97	0.46
1:D:4631:ASP:HA	1:D:4708:TRP:HE1	1.81	0.46
1:A:1088:PHE:HB2	1:A:1205:CYS:SG	2.55	0.46
1:A:3097:THR:HG23	1:A:3101:LEU:HD23	1.97	0.46
1:A:4268:MET:O	1:A:4272:LYS:HG2	2.15	0.46
1:B:2937:HIS:O	1:B:2940:ILE:HG22	2.14	0.46
1:C:2172:MET:O	1:C:2176:VAL:HG23	2.16	0.46
1:C:2208:ARG:NH2	1:C:3819:MET:HE3	2.29	0.46
1:C:2891:ASP:OD1	1:C:2892:ILE:N	2.48	0.46
1:C:3017:HIS:HD2	1:C:3093:ILE:HG12	1.81	0.46
1:C:3032:CYS:O	1:C:3035:ILE:HG22	2.15	0.46
1:C:3254:PRO:HD3	1:C:3266:THR:O	2.16	0.46
1:C:3662:ASP:O	1:C:3666:GLN:HG3	2.16	0.46
1:C:4052:MET:HE2	1:C:4063:THR:HG23	1.97	0.46
1:D:943:LEU:HD21	1:D:999:LEU:HD11	1.97	0.46
1:D:4268:MET:O	1:D:4272:LYS:HG2	2.15	0.46
1:A:1682:GLU:OE2	1:A:1783:PRO:HG2	2.15	0.46
1:A:2745:GLU:HA	1:A:2755:PRO:HB3	1.97	0.46
1:A:2759:PRO:HG3	1:A:2821:TYR:HE1	1.81	0.46
1:A:3033:LEU:HA	1:A:3036:LEU:HD12	1.97	0.46
1:A:4583:SER:O	1:A:4587:ILE:HG12	2.15	0.46
1:A:4631:ASP:HA	1:A:4708:TRP:HE1	1.81	0.46
1:A:4637:THR:HG22	1:A:4704:LYS:HE3	1.97	0.46
1:B:908:ARG:HG2	1:B:916:PRO:HD2	1.96	0.46
1:B:1682:GLU:OE2	1:B:1783:PRO:HG2	2.15	0.46
1:B:3017:HIS:CD2	1:B:3093:ILE:HG12	2.50	0.46
1:B:3070:LYS:NZ	1:B:3093:ILE:HG21	2.31	0.46
1:C:881:ILE:HG22	1:C:885:LEU:HD12	1.98	0.46
1:C:1054:VAL:HA	1:C:1057:LEU:HD12	1.97	0.46
1:C:2431:ASP:O	1:C:2435:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2559:CYS:SG	1:C:2560:SER:N	2.88	0.46
1:D:392:ILE:HG13	1:D:393:MET:H	1.80	0.46
1:D:966:LEU:H	1:D:978:PRO:HG2	1.80	0.46
1:D:2745:GLU:HA	1:D:2755:PRO:HB3	1.97	0.46
1:D:2759:PRO:HG3	1:D:2821:TYR:HE1	1.81	0.46
1:D:4590:TYR:OH	1:D:4718:SER:HB2	2.15	0.46
1:D:4637:THR:HG22	1:D:4704:LYS:HE3	1.97	0.46
1:A:392:ILE:HG13	1:A:393:MET:H	1.80	0.46
1:A:890:HIS:CD2	1:A:921:PHE:HB3	2.51	0.46
1:A:1452:GLN:OE1	1:A:1484:ASN:ND2	2.49	0.46
1:A:1641:ILE:HA	1:A:1644:LEU:HD13	1.97	0.46
1:A:1714:TYR:CE1	1:A:1759:PRO:HB2	2.50	0.46
1:A:1979:PHE:HZ	1:A:1996:LEU:HB3	1.80	0.46
1:A:2172:MET:O	1:A:2176:VAL:HG23	2.16	0.46
1:A:2431:ASP:O	1:A:2435:VAL:HG23	2.15	0.46
1:A:3284:ILE:O	1:A:3288:LEU:HG	2.16	0.46
1:A:3307:ILE:HA	1:A:3310:VAL:HG12	1.96	0.46
1:B:219:SER:OG	1:B:222:GLU:OE2	2.33	0.46
1:B:932:ASN:HA	1:B:935:MET:HE2	1.98	0.46
1:B:1043:LYS:O	1:B:1047:LYS:HB2	2.15	0.46
1:B:2156:TYR:HE1	1:B:2202:TYR:HE2	1.61	0.46
1:B:3254:PRO:HD3	1:B:3266:THR:O	2.16	0.46
1:B:4590:TYR:OH	1:B:4718:SER:HB2	2.15	0.46
1:C:2230:ALA:HB2	1:C:2294:GLU:OE1	2.16	0.46
1:C:2303:ARG:HE	1:C:2401:ARG:NE	2.13	0.46
1:C:4520:TYR:HA	1:C:4561:LEU:HD23	1.96	0.46
1:D:1914:CYS:O	1:D:1918:VAL:HG23	2.15	0.46
1:D:3213:LYS:O	1:D:3217:GLU:OE1	2.34	0.46
1:D:3297:LYS:HG2	1:D:3336:GLU:OE1	2.16	0.46
1:A:920:GLU:HG2	1:A:923:LYS:H	1.81	0.46
1:A:3662:ASP:O	1:A:3666:GLN:HG3	2.16	0.46
1:A:4052:MET:HE2	1:A:4063:THR:HG23	1.97	0.46
1:A:4522:VAL:HG23	1:B:4786:PHE:CZ	2.50	0.46
1:B:114:LEU:HB2	1:B:117:HIS:HD2	1.79	0.46
1:B:1088:PHE:HB2	1:B:1205:CYS:SG	2.55	0.46
1:B:3642:GLU:HG3	1:B:3646:LYS:NZ	2.31	0.46
1:B:3674:THR:O	1:B:3679:LYS:NZ	2.45	0.46
1:C:219:SER:OG	1:C:222:GLU:OE2	2.33	0.46
1:C:476:GLN:NE2	1:C:3678:GLU:OE1	2.46	0.46
1:C:920:GLU:HG2	1:C:923:LYS:H	1.81	0.46
1:C:1452:GLN:OE1	1:C:1484:ASN:ND2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2397:ASP:O	1:C:2401:ARG:HG3	2.16	0.46
1:C:2745:GLU:HA	1:C:2755:PRO:HB3	1.97	0.46
1:C:2790:GLU:O	1:C:2902:ALA:N	2.42	0.46
1:C:3642:GLU:HG3	1:C:3646:LYS:NZ	2.31	0.46
1:D:920:GLU:HG2	1:D:923:LYS:H	1.81	0.46
1:D:2172:MET:O	1:D:2176:VAL:HG23	2.16	0.46
1:D:3100:ALA:C	1:D:3103:PRO:HD2	2.41	0.46
1:A:1283:LEU:HB2	1:A:1555:PHE:HB2	1.98	0.46
1:A:2717:LEU:O	1:A:2721:ILE:HG23	2.15	0.46
1:A:3213:LYS:O	1:A:3217:GLU:OE1	2.34	0.46
1:A:3243:CYS:HA	1:A:3246:MET:SD	2.56	0.46
1:B:2178:VAL:HG21	1:B:2192:MET:HE1	1.98	0.46
1:B:2873:PRO:O	1:B:2876:THR:OG1	2.30	0.46
1:B:2928:GLN:HG3	1:B:2931:ARG:NH1	2.31	0.46
1:C:392:ILE:HG13	1:C:393:MET:H	1.80	0.46
1:D:288:HIS:O	1:D:290:ARG:NH1	2.47	0.46
1:D:1452:GLN:OE1	1:D:1484:ASN:ND2	2.49	0.46
1:D:2230:ALA:HB2	1:D:2294:GLU:OE1	2.15	0.46
1:A:476:GLN:NE2	1:A:3678:GLU:OE1	2.46	0.46
1:A:676:GLU:HG3	1:A:756:SER:HB3	1.97	0.46
1:A:2208:ARG:NH2	1:A:3819:MET:HE3	2.29	0.46
1:B:1610:ARG:HB2	1:B:1617:TRP:CD2	2.51	0.46
1:B:3100:ALA:C	1:B:3103:PRO:HD2	2.41	0.46
1:B:3243:CYS:HA	1:B:3246:MET:SD	2.56	0.46
1:B:3250:TRP:CH2	1:B:3273:MET:HE1	2.51	0.46
1:B:3662:ASP:O	1:B:3666:GLN:HG3	2.16	0.46
1:C:1682:GLU:OE2	1:C:1783:PRO:HG2	2.15	0.46
1:C:2928:GLN:HG3	1:C:2931:ARG:NH1	2.31	0.46
1:C:3002:GLU:O	1:C:3005:THR:OG1	2.30	0.46
1:C:3017:HIS:CD2	1:C:3093:ILE:HG12	2.50	0.46
1:C:4480:PHE:HE2	1:C:4482:LYS:HB2	1.81	0.46
1:D:676:GLU:HG3	1:D:756:SER:HB3	1.97	0.46
1:D:897:LYS:NZ	1:D:917:CYS:SG	2.89	0.46
1:D:1979:PHE:HZ	1:D:1996:LEU:HB3	1.80	0.46
1:D:2157:GLN:O	1:D:3615:ARG:NH2	2.48	0.46
1:D:2431:ASP:O	1:D:2435:VAL:HG23	2.15	0.46
1:D:2436:ILE:HA	1:D:2465:LYS:HZ2	1.80	0.46
1:D:3017:HIS:CD2	1:D:3093:ILE:HG12	2.50	0.46
1:D:3017:HIS:HD2	1:D:3093:ILE:HG12	1.81	0.46
1:A:56:LYS:HA	1:A:324:VAL:HG23	1.98	0.46
1:A:1610:ARG:HB2	1:A:1617:TRP:CD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2443:PRO:HD3	1:A:2512:MET:HG2	1.97	0.46
1:A:3017:HIS:HD2	1:A:3093:ILE:HG12	1.81	0.46
1:A:3642:GLU:HG3	1:A:3646:LYS:NZ	2.31	0.46
1:A:4480:PHE:HE2	1:A:4482:LYS:HB2	1.81	0.46
1:B:279:THR:OG1	1:B:285:SER:OG	2.33	0.46
1:B:881:ILE:HG22	1:B:885:LEU:HD12	1.98	0.46
1:B:2896:LEU:HG	1:B:2901:TYR:HB2	1.96	0.46
1:B:3297:LYS:HG2	1:B:3336:GLU:OE1	2.16	0.46
1:C:472:HIS:O	1:C:476:GLN:HG2	2.16	0.46
1:C:890:HIS:CD2	1:C:921:PHE:HB3	2.51	0.46
1:C:897:LYS:NZ	1:C:917:CYS:SG	2.89	0.46
1:C:966:LEU:H	1:C:978:PRO:HG2	1.80	0.46
1:C:1641:ILE:HA	1:C:1644:LEU:HD13	1.97	0.46
1:C:2178:VAL:HG21	1:C:2192:MET:HE1	1.98	0.46
1:D:1043:LYS:O	1:D:1047:LYS:HB2	2.15	0.46
1:D:1054:VAL:HA	1:D:1057:LEU:HD12	1.97	0.46
1:D:1610:ARG:HB2	1:D:1617:TRP:CD2	2.51	0.46
1:D:1641:ILE:HA	1:D:1644:LEU:HD13	1.97	0.46
1:D:2559:CYS:SG	1:D:2560:SER:N	2.88	0.46
1:D:3070:LYS:NZ	1:D:3093:ILE:HG21	2.31	0.46
1:D:4480:PHE:HE2	1:D:4482:LYS:HB2	1.81	0.46
1:A:897:LYS:NZ	1:A:917:CYS:SG	2.89	0.45
1:A:1086:ARG:NH2	1:A:1254:ARG:HG3	2.32	0.45
1:A:2714:PRO:HD2	1:A:2717:LEU:HB2	1.97	0.45
1:A:2726:GLU:HG3	1:A:2760:TYR:HB3	1.97	0.45
1:A:3100:ALA:C	1:A:3103:PRO:HD2	2.41	0.45
1:B:1914:CYS:O	1:B:1918:VAL:HG23	2.15	0.45
1:B:2303:ARG:HE	1:B:2401:ARG:NE	2.13	0.45
1:B:3017:HIS:HD2	1:B:3093:ILE:HG12	1.81	0.45
1:C:288:HIS:O	1:C:290:ARG:NH1	2.47	0.45
1:C:3097:THR:HG23	1:C:3101:LEU:HD23	1.98	0.45
1:C:4832:GLU:O	1:C:4843:ARG:NH2	2.42	0.45
1:D:932:ASN:HA	1:D:935:MET:HE2	1.98	0.45
1:D:1086:ARG:NH2	1:D:1254:ARG:HG3	2.32	0.45
1:D:1751:ILE:HG23	1:D:1839:LEU:HD23	1.97	0.45
1:D:2178:VAL:HG21	1:D:2192:MET:HE1	1.98	0.45
1:D:2215:PHE:CD2	1:D:2253:LEU:HD22	2.51	0.45
1:A:931:TYR:O	1:A:934:GLN:HG3	2.16	0.45
1:A:2178:VAL:HG21	1:A:2192:MET:HE1	1.98	0.45
1:A:4938:SER:O	1:A:4942:LYS:HG2	2.17	0.45
1:B:56:LYS:HA	1:B:324:VAL:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:590:LYS:HD3	1:B:590:LYS:HA	1.69	0.45
1:B:644:LEU:HD13	1:B:1630:LEU:HD21	1.98	0.45
1:B:897:LYS:NZ	1:B:917:CYS:SG	2.89	0.45
1:B:2230:ALA:HB2	1:B:2294:GLU:OE1	2.15	0.45
1:B:2745:GLU:HA	1:B:2755:PRO:HB3	1.97	0.45
1:B:2833:LEU:HD22	1:B:2837:LEU:HD13	1.99	0.45
1:B:3961:ASP:OD1	1:B:3962:SER:N	2.48	0.45
1:C:908:ARG:HG2	1:C:916:PRO:HD2	1.96	0.45
1:C:943:LEU:HD21	1:C:999:LEU:HD11	1.97	0.45
1:C:1751:ILE:HG23	1:C:1839:LEU:HD23	1.97	0.45
1:C:2896:LEU:HG	1:C:2901:TYR:HB2	1.96	0.45
1:C:3100:ALA:C	1:C:3103:PRO:HD2	2.41	0.45
1:C:4040:LYS:NZ	1:C:4042:VAL:O	2.48	0.45
1:D:56:LYS:HA	1:D:324:VAL:HG23	1.98	0.45
1:D:881:ILE:HG22	1:D:885:LEU:HD12	1.98	0.45
1:D:2397:ASP:O	1:D:2401:ARG:HG3	2.16	0.45
1:D:2833:LEU:HD22	1:D:2837:LEU:HD13	1.99	0.45
1:D:3145:SER:O	1:D:3149:GLU:HG2	2.17	0.45
1:D:3243:CYS:HA	1:D:3246:MET:SD	2.56	0.45
1:D:3254:PRO:HD3	1:D:3266:THR:O	2.16	0.45
1:A:644:LEU:HD13	1:A:1630:LEU:HD21	1.98	0.45
1:A:3017:HIS:CD2	1:A:3093:ILE:HG12	2.50	0.45
1:A:4252:ILE:HD13	1:B:4707:MET:HA	1.99	0.45
1:B:1086:ARG:NH2	1:B:1254:ARG:HG3	2.32	0.45
1:B:1594:VAL:O	1:B:1594:VAL:HG13	2.17	0.45
1:C:56:LYS:HA	1:C:324:VAL:HG23	1.98	0.45
1:C:964:MET:SD	1:C:979:ALA:HB3	2.57	0.45
1:C:1286:THR:OG1	1:C:1550:PRO:O	2.27	0.45
1:C:3213:LYS:O	1:C:3217:GLU:OE1	2.34	0.45
1:D:890:HIS:CD2	1:D:921:PHE:HB3	2.51	0.45
1:D:1283:LEU:HB2	1:D:1555:PHE:HB2	1.98	0.45
1:D:3250:TRP:CH2	1:D:3273:MET:HE1	2.51	0.45
1:D:3662:ASP:O	1:D:3666:GLN:HG3	2.16	0.45
1:D:3846:LEU:HB3	1:D:3854:PHE:CE2	2.51	0.45
1:A:472:HIS:O	1:A:476:GLN:HG2	2.16	0.45
1:A:964:MET:SD	1:A:979:ALA:HB3	2.57	0.45
1:B:472:HIS:O	1:B:476:GLN:HG2	2.16	0.45
1:B:920:GLU:HG2	1:B:923:LYS:H	1.81	0.45
1:B:1975:MET:O	1:B:1986:CYS:HB3	2.17	0.45
1:B:2172:MET:O	1:B:2176:VAL:HG23	2.16	0.45
1:B:2714:PRO:HD2	1:B:2717:LEU:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3097:THR:HG23	1:B:3101:LEU:HD23	1.97	0.45
1:B:4631:ASP:HA	1:B:4708:TRP:HE1	1.81	0.45
1:C:2215:PHE:CD2	1:C:2253:LEU:HD22	2.51	0.45
1:C:3070:LYS:NZ	1:C:3093:ILE:HG21	2.31	0.45
1:C:3187:LYS:O	1:C:3188:SER:OG	2.32	0.45
1:C:3846:LEU:HB3	1:C:3854:PHE:CE2	2.52	0.45
1:D:476:GLN:NE2	1:D:3678:GLU:OE1	2.46	0.45
1:D:2928:GLN:HG3	1:D:2931:ARG:NH1	2.31	0.45
1:A:966:LEU:H	1:A:978:PRO:HG2	1.80	0.45
1:A:2619:LYS:HZ2	1:A:2627:TRP:CG	2.35	0.45
1:A:3728:GLN:HG2	1:A:3765:ILE:HA	1.98	0.45
1:B:2215:PHE:CD2	1:B:2253:LEU:HD22	2.51	0.45
1:B:3145:SER:O	1:B:3149:GLU:HG2	2.17	0.45
1:B:3846:LEU:HB3	1:B:3854:PHE:CE2	2.52	0.45
1:C:644:LEU:HD13	1:C:1630:LEU:HD21	1.98	0.45
1:C:816:PRO:HB2	1:C:819:TYR:CD1	2.52	0.45
1:C:1088:PHE:HB2	1:C:1205:CYS:SG	2.56	0.45
1:C:3243:CYS:O	1:C:3247:SER:OG	2.29	0.45
1:C:3728:GLN:HG2	1:C:3765:ILE:HA	1.98	0.45
1:C:4145:ILE:N	1:C:4961:GLN:HE22	2.14	0.45
1:D:816:PRO:HB2	1:D:819:TYR:CD1	2.52	0.45
1:D:2186:GLU:OE1	1:D:2187:ILE:N	2.41	0.45
1:D:2846:GLU:OE2	1:D:2874:TYR:HD2	2.00	0.45
1:D:3097:THR:HG23	1:D:3101:LEU:HD23	1.98	0.45
1:D:4938:SER:O	1:D:4942:LYS:HG2	2.17	0.45
1:A:1795:LEU:O	1:A:1799:VAL:HG23	2.17	0.45
1:A:2215:PHE:CD2	1:A:2253:LEU:HD22	2.51	0.45
1:A:2910:LEU:HD23	1:A:2910:LEU:H	1.81	0.45
1:A:3145:SER:O	1:A:3149:GLU:HG2	2.17	0.45
1:B:1785:ASP:O	1:B:1788:LYS:HG2	2.17	0.45
1:C:1283:LEU:HB2	1:C:1555:PHE:HB2	1.98	0.45
1:C:2833:LEU:HD22	1:C:2837:LEU:HD13	1.99	0.45
1:D:931:TYR:O	1:D:934:GLN:HG3	2.16	0.45
1:D:2910:LEU:HD23	1:D:2910:LEU:H	1.81	0.45
1:D:3642:GLU:HG3	1:D:3646:LYS:NZ	2.31	0.45
1:D:4040:LYS:NZ	1:D:4042:VAL:O	2.48	0.45
1:D:4605:GLU:HG3	1:D:4609:LYS:HZ3	1.82	0.45
1:A:655:MET:HE1	1:A:836:HIS:CG	2.52	0.45
1:A:932:ASN:HA	1:A:935:MET:HE2	1.98	0.45
1:A:2433:VAL:HG22	1:A:2487:LEU:HD13	1.99	0.45
1:A:4856:VAL:HG13	1:D:4863:GLN:NE2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4863:GLN:CD	1:B:4860:ALA:HB2	2.41	0.45
1:B:46:LEU:HD21	1:B:146:ASP:HB3	1.99	0.45
1:B:890:HIS:CD2	1:B:921:PHE:HB3	2.51	0.45
1:B:931:TYR:O	1:B:934:GLN:HG3	2.16	0.45
1:B:1283:LEU:HB2	1:B:1555:PHE:HB2	1.98	0.45
1:B:2397:ASP:O	1:B:2401:ARG:HG3	2.16	0.45
1:B:2887:GLU:HA	1:B:2890:GLN:CD	2.42	0.45
1:B:4280:VAL:HA	1:B:4283:PHE:CD1	2.52	0.45
1:C:45:ARG:NH1	1:C:151:GLU:OE2	2.35	0.45
1:C:1043:LYS:O	1:C:1047:LYS:HB2	2.15	0.45
1:C:1825:PHE:CE1	1:C:1842:ILE:HG12	2.52	0.45
1:C:2759:PRO:HG3	1:C:2821:TYR:HE1	1.80	0.45
1:C:4938:SER:O	1:C:4942:LYS:HG2	2.17	0.45
1:D:46:LEU:HD21	1:D:146:ASP:HB3	1.99	0.45
1:D:882:ARG:HD3	1:D:937:LEU:HD12	1.99	0.45
1:D:964:MET:SD	1:D:979:ALA:HB3	2.57	0.45
1:D:1594:VAL:O	1:D:1594:VAL:HG13	2.17	0.45
1:D:2436:ILE:HG22	1:D:2491:GLY:HA3	1.99	0.45
1:A:335:LYS:NZ	1:A:396:GLU:O	2.26	0.45
1:A:2833:LEU:HD22	1:A:2837:LEU:HD13	1.99	0.45
1:A:3846:LEU:HB3	1:A:3854:PHE:CE2	2.52	0.45
1:A:4040:LYS:NZ	1:A:4042:VAL:O	2.48	0.45
1:B:164:PRO:HB3	1:B:169:ARG:HB2	1.99	0.45
1:B:816:PRO:HB2	1:B:819:TYR:CD1	2.52	0.45
1:B:2434:GLY:O	1:B:2438:ILE:HG13	2.17	0.45
1:B:4145:ILE:N	1:B:4961:GLN:HE22	2.14	0.45
1:B:4480:PHE:HE2	1:B:4482:LYS:HB2	1.81	0.45
1:C:164:PRO:HB3	1:C:169:ARG:HB2	1.99	0.45
1:C:931:TYR:O	1:C:934:GLN:HG3	2.16	0.45
1:C:932:ASN:HA	1:C:935:MET:HE2	1.98	0.45
1:C:1914:CYS:O	1:C:1918:VAL:HG23	2.15	0.45
1:C:1975:MET:O	1:C:1986:CYS:HB3	2.17	0.45
1:C:3250:TRP:CH2	1:C:3273:MET:HE1	2.51	0.45
1:D:676:GLU:HA	1:D:756:SER:HA	1.99	0.45
1:D:2790:GLU:O	1:D:2902:ALA:N	2.42	0.45
1:D:3128:VAL:O	1:D:3132:ARG:HG3	2.17	0.45
1:A:46:LEU:HD21	1:A:146:ASP:HB3	1.99	0.45
1:A:137:ARG:HH12	1:A:204:ASP:HB3	1.82	0.45
1:A:561:ARG:HB3	1:A:564:ARG:HD2	1.99	0.45
1:A:882:ARG:HD3	1:A:937:LEU:HD12	1.99	0.45
1:A:3297:LYS:HG2	1:A:3336:GLU:OE1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1443:VAL:HG13	1:B:1543:VAL:HG22	1.99	0.45
1:B:1452:GLN:OE1	1:B:1484:ASN:ND2	2.49	0.45
1:B:3213:LYS:O	1:B:3217:GLU:OE1	2.34	0.45
1:B:4822:ARG:HG2	1:C:4851:PHE:CG	2.52	0.45
1:C:810:GLU:OE1	1:C:1614:ARG:HA	2.17	0.45
1:C:912:LYS:HD2	1:C:914:GLN:HG2	1.99	0.45
1:C:1785:ASP:O	1:C:1788:LYS:HG2	2.17	0.45
1:C:1795:LEU:O	1:C:1799:VAL:HG23	2.17	0.45
1:C:2434:GLY:O	1:C:2438:ILE:HG13	2.17	0.45
1:C:3297:LYS:HG2	1:C:3336:GLU:OE1	2.16	0.45
1:D:644:LEU:HD13	1:D:1630:LEU:HD21	1.98	0.45
1:D:1825:PHE:CE1	1:D:1842:ILE:HG12	2.52	0.45
1:D:2887:GLU:HA	1:D:2890:GLN:CD	2.42	0.45
1:D:4145:ILE:N	1:D:4961:GLN:HE22	2.14	0.45
1:A:881:ILE:HG22	1:A:885:LEU:HD12	1.98	0.45
1:A:1501:ASN:ND2	1:D:2825:ALA:O	2.35	0.45
1:A:1714:TYR:HE1	1:A:1759:PRO:HB2	1.82	0.45
1:A:2846:GLU:OE2	1:A:2874:TYR:HD2	2.00	0.45
1:A:3250:TRP:CH2	1:A:3273:MET:HE1	2.51	0.45
1:B:882:ARG:HD3	1:B:937:LEU:HD12	1.99	0.45
1:B:2433:VAL:HG22	1:B:2487:LEU:HD13	1.99	0.45
1:B:3728:GLN:HG2	1:B:3765:ILE:HA	1.98	0.45
1:C:137:ARG:HH12	1:C:204:ASP:HB3	1.82	0.45
1:C:682:THR:HG23	1:C:798:ILE:HD13	1.98	0.45
1:C:1714:TYR:HE1	1:C:1759:PRO:HB2	1.82	0.45
1:C:2202:TYR:CE2	1:C:2206:ILE:HD11	2.52	0.45
1:C:3243:CYS:HA	1:C:3246:MET:SD	2.56	0.45
1:C:4137:GLU:HB2	1:C:4913:HIS:NE2	2.32	0.45
1:C:4822:ARG:HG2	1:D:4851:PHE:CG	2.52	0.45
1:D:1714:TYR:HE1	1:D:1759:PRO:HB2	1.82	0.45
1:D:2434:GLY:O	1:D:2438:ILE:HG13	2.17	0.45
1:A:164:PRO:HB3	1:A:169:ARG:HB2	1.99	0.44
1:A:816:PRO:HB2	1:A:819:TYR:CD1	2.52	0.44
1:A:1718:ARG:HD2	1:A:1830:ILE:O	2.17	0.44
1:A:2887:GLU:HA	1:A:2890:GLN:CD	2.42	0.44
1:A:3796:LEU:HD22	1:A:3835:PHE:HZ	1.82	0.44
1:A:3961:ASP:OD1	1:A:3962:SER:N	2.48	0.44
1:A:4617:ILE:HG13	1:A:4618:THR:H	1.82	0.44
1:B:912:LYS:HD2	1:B:914:GLN:HG2	1.99	0.44
1:B:1714:TYR:HE1	1:B:1759:PRO:HB2	1.82	0.44
1:B:3203:ASP:O	1:B:3206:PRO:HD3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3214:LEU:O	1:B:3218:ILE:HG12	2.17	0.44
1:C:1610:ARG:HB2	1:C:1617:TRP:CD2	2.51	0.44
1:D:912:LYS:HD2	1:D:914:GLN:HG2	1.99	0.44
1:D:2202:TYR:CE2	1:D:2206:ILE:HD11	2.52	0.44
1:D:2208:ARG:NH2	1:D:3819:MET:HE3	2.29	0.44
1:D:4137:GLU:HB2	1:D:4913:HIS:NE2	2.32	0.44
1:A:1443:VAL:HG13	1:A:1543:VAL:HG22	1.99	0.44
1:A:1825:PHE:CE1	1:A:1842:ILE:HG12	2.52	0.44
1:A:2928:GLN:HG3	1:A:2931:ARG:NH1	2.31	0.44
1:A:3214:LEU:O	1:A:3218:ILE:HG12	2.17	0.44
1:A:4137:GLU:HB2	1:A:4913:HIS:NE2	2.32	0.44
1:A:4280:VAL:HA	1:A:4283:PHE:CD1	2.52	0.44
1:B:821:PRO:HB2	1:B:823:TYR:CD1	2.53	0.44
1:B:964:MET:SD	1:B:979:ALA:HB3	2.57	0.44
1:B:1718:ARG:HD2	1:B:1830:ILE:O	2.17	0.44
1:C:676:GLU:HA	1:C:756:SER:HA	1.99	0.44
1:C:877:HIS:HA	1:C:880:ARG:HH12	1.77	0.44
1:C:1016:TRP:CD1	1:C:1027:ARG:HH11	2.36	0.44
1:C:1443:VAL:HG13	1:C:1543:VAL:HG22	1.99	0.44
1:C:2443:PRO:HD3	1:C:2512:MET:HG2	1.97	0.44
1:C:3145:SER:O	1:C:3149:GLU:HG2	2.17	0.44
1:D:472:HIS:O	1:D:476:GLN:HG2	2.16	0.44
1:D:1016:TRP:CD1	1:D:1027:ARG:HH11	2.36	0.44
1:D:1443:VAL:HG13	1:D:1543:VAL:HG22	1.99	0.44
1:D:1850:VAL:HG21	1:D:2061:LEU:HD13	1.99	0.44
1:A:2988:ARG:HH12	1:A:2995:HIS:HB2	1.83	0.44
1:A:3128:VAL:O	1:A:3132:ARG:HG3	2.17	0.44
1:A:3259:GLU:C	1:A:3260:ARG:HD3	2.42	0.44
1:A:4145:ILE:N	1:A:4961:GLN:HE22	2.14	0.44
1:B:2266:VAL:HG11	1:B:2323:LEU:HB3	2.00	0.44
1:B:3273:MET:HE2	1:B:3273:MET:HB2	1.86	0.44
1:B:3796:LEU:HD22	1:B:3835:PHE:HZ	1.82	0.44
1:C:882:ARG:HD3	1:C:937:LEU:HD12	1.99	0.44
1:C:1086:ARG:NH2	1:C:1254:ARG:HG3	2.32	0.44
1:C:1482:ARG:NE	1:C:1534:GLU:OE2	2.49	0.44
1:C:2910:LEU:HD23	1:C:2910:LEU:H	1.81	0.44
1:C:4863:GLN:NE2	1:D:4856:VAL:CG1	2.77	0.44
1:A:456:LEU:HD13	1:A:532:SER:HB2	1.99	0.44
1:A:877:HIS:HA	1:A:880:ARG:HH12	1.76	0.44
1:A:3655:ASP:OD1	1:A:3656:GLU:N	2.50	0.44
1:A:3976:LYS:O	1:A:3980:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4152:ILE:HG21	1:A:4157:ARG:NH2	2.33	0.44
1:B:1100:ARG:HG2	1:B:1236:TYR:HA	1.99	0.44
1:B:1825:PHE:CE1	1:B:1842:ILE:HG12	2.52	0.44
1:B:2846:GLU:OE2	1:B:2874:TYR:HD2	2.00	0.44
1:B:2988:ARG:HH12	1:B:2995:HIS:HB2	1.83	0.44
1:C:2241:ASP:OD2	1:C:2297:ARG:NH2	2.50	0.44
1:C:3203:ASP:O	1:C:3206:PRO:HD3	2.18	0.44
1:C:3290:ILE:O	1:C:3291:ASP:OD1	2.36	0.44
1:C:4280:VAL:HA	1:C:4283:PHE:CD1	2.52	0.44
1:D:651:HIS:NE2	1:D:1627:PHE:HB3	2.32	0.44
1:D:655:MET:HE1	1:D:836:HIS:CG	2.52	0.44
1:D:878:LEU:HD21	1:D:944:LEU:HD11	1.99	0.44
1:D:1094:TYR:CD1	1:D:1247:ILE:HG23	2.53	0.44
1:D:2241:ASP:OD2	1:D:2297:ARG:NH2	2.50	0.44
1:D:3259:GLU:C	1:D:3260:ARG:HD3	2.43	0.44
1:D:3290:ILE:O	1:D:3291:ASP:OD1	2.36	0.44
1:D:3920:LEU:O	1:D:3924:ILE:HG12	2.18	0.44
1:A:821:PRO:HB2	1:A:823:TYR:CD1	2.53	0.44
1:A:878:LEU:HD21	1:A:944:LEU:HD11	1.99	0.44
1:A:1094:TYR:CD1	1:A:1247:ILE:HG23	2.53	0.44
1:A:1975:MET:O	1:A:1986:CYS:HB3	2.17	0.44
1:A:2434:GLY:O	1:A:2438:ILE:HG13	2.17	0.44
1:A:3054:LYS:O	1:A:3057:LEU:HG	2.18	0.44
1:B:810:GLU:OE1	1:B:1614:ARG:HA	2.17	0.44
1:B:2436:ILE:HG22	1:B:2491:GLY:HA3	1.99	0.44
1:B:3054:LYS:O	1:B:3057:LEU:HG	2.18	0.44
1:B:4938:SER:O	1:B:4942:LYS:HG2	2.17	0.44
1:C:46:LEU:HD21	1:C:146:ASP:HB3	1.99	0.44
1:C:561:ARG:HB3	1:C:564:ARG:HD2	1.99	0.44
1:C:895:MET:HE2	1:C:972:LEU:HD22	2.00	0.44
1:C:1594:VAL:HG13	1:C:1594:VAL:O	2.17	0.44
1:C:2266:VAL:HG11	1:C:2323:LEU:HB3	2.00	0.44
1:C:3259:GLU:C	1:C:3260:ARG:HD3	2.42	0.44
1:C:3796:LEU:HD22	1:C:3835:PHE:HZ	1.82	0.44
1:D:514:PHE:CD2	1:D:526:TRP:HB2	2.51	0.44
1:D:895:MET:HE2	1:D:972:LEU:HD22	2.00	0.44
1:D:2433:VAL:HG22	1:D:2487:LEU:HD13	1.99	0.44
1:D:4152:ILE:HG21	1:D:4157:ARG:NH2	2.33	0.44
1:A:682:THR:HG23	1:A:798:ILE:HD13	1.98	0.44
1:A:1662:SER:OG	1:A:1708:ASP:OD2	2.21	0.44
1:A:2202:TYR:CE2	1:A:2206:ILE:HD11	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3912:VAL:O	1:A:3916:VAL:HG23	2.18	0.44
1:B:1016:TRP:CD1	1:B:1027:ARG:HH11	2.36	0.44
1:B:2241:ASP:OD2	1:B:2297:ARG:NH2	2.51	0.44
1:B:3926:GLY:O	1:B:3928:CYS:N	2.51	0.44
1:C:678:MET:HG2	1:C:801:ARG:NH2	2.33	0.44
1:C:1094:TYR:CD1	1:C:1247:ILE:HG23	2.53	0.44
1:C:2283:LYS:HB3	1:C:2283:LYS:HE2	1.84	0.44
1:C:3832:ASP:N	1:C:3832:ASP:OD1	2.50	0.44
1:C:4152:ILE:HG21	1:C:4157:ARG:NH2	2.33	0.44
1:C:4617:ILE:HG13	1:C:4618:THR:H	1.82	0.44
1:D:810:GLU:OE1	1:D:1614:ARG:HA	2.17	0.44
1:D:1100:ARG:HG2	1:D:1236:TYR:HA	1.99	0.44
1:D:2593:VAL:HG12	1:D:2644:LEU:HD13	2.00	0.44
1:D:3292:GLU:O	1:D:3296:MET:HE1	2.18	0.44
1:D:3796:LEU:HD22	1:D:3835:PHE:HZ	1.82	0.44
1:A:655:MET:HG2	1:A:794:PHE:CE1	2.53	0.44
1:A:810:GLU:OE1	1:A:1614:ARG:HA	2.17	0.44
1:A:895:MET:HE2	1:A:972:LEU:HD22	2.00	0.44
1:A:1019:GLY:HA3	1:A:1028:ARG:HD2	2.00	0.44
1:A:1850:VAL:HG21	1:A:2061:LEU:HD13	1.99	0.44
1:A:2241:ASP:OD2	1:A:2297:ARG:NH2	2.50	0.44
1:A:2593:VAL:HG12	1:A:2644:LEU:HD13	2.00	0.44
1:A:2875:ASP:OD1	1:A:2876:THR:N	2.51	0.44
1:A:3106:SER:HB3	1:A:3158:CYS:SG	2.58	0.44
1:A:3926:GLY:O	1:A:3928:CYS:N	2.51	0.44
1:B:298:ARG:HD2	1:B:305:TYR:CZ	2.53	0.44
1:B:651:HIS:NE2	1:B:1627:PHE:HB3	2.32	0.44
1:B:1019:GLY:HA3	1:B:1028:ARG:HD2	2.00	0.44
1:B:1795:LEU:O	1:B:1799:VAL:HG23	2.17	0.44
1:B:2910:LEU:HD23	1:B:2910:LEU:H	1.82	0.44
1:B:3128:VAL:O	1:B:3132:ARG:HG3	2.17	0.44
1:B:4102:LEU:HD21	1:B:4118:PHE:HE2	1.83	0.44
1:C:651:HIS:NE2	1:C:1627:PHE:HB3	2.33	0.44
1:C:988:LEU:HB2	1:C:1055:ARG:HD2	2.00	0.44
1:C:2846:GLU:OE2	1:C:2874:TYR:HD2	2.00	0.44
1:C:2988:ARG:HH12	1:C:2995:HIS:HB2	1.83	0.44
1:C:3920:LEU:O	1:C:3924:ILE:HG12	2.18	0.44
1:D:1174:MET:HG3	1:D:1189:GLU:O	2.18	0.44
1:D:1502:ASN:OD1	1:D:1503:ASN:N	2.51	0.44
1:D:1729:MET:HE1	1:D:1930:ASP:HB2	1.99	0.44
1:D:2875:ASP:OD1	1:D:2876:THR:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2988:ARG:HH12	1:D:2995:HIS:HB2	1.83	0.44
1:A:298:ARG:HD2	1:A:305:TYR:CZ	2.53	0.44
1:A:1016:TRP:CD1	1:A:1027:ARG:HH11	2.36	0.44
1:A:2436:ILE:HG22	1:A:2491:GLY:HA3	1.99	0.44
1:A:3184:TYR:CE1	1:A:3197:LEU:HD21	2.51	0.44
1:B:988:LEU:HB2	1:B:1055:ARG:HD2	2.00	0.44
1:C:1850:VAL:HG21	1:C:2061:LEU:HD13	1.99	0.44
1:C:2875:ASP:OD1	1:C:2876:THR:N	2.51	0.44
1:C:3912:VAL:O	1:C:3916:VAL:HG23	2.18	0.44
1:D:164:PRO:HB3	1:D:169:ARG:HB2	1.99	0.44
1:D:301:THR:HG23	1:D:302:THR:HG23	2.00	0.44
1:D:682:THR:HG23	1:D:798:ILE:HD13	1.98	0.44
1:D:1785:ASP:O	1:D:1788:LYS:HG2	2.17	0.44
1:D:3203:ASP:O	1:D:3206:PRO:HD3	2.17	0.44
1:D:3290:ILE:O	1:D:3292:GLU:N	2.50	0.44
1:D:3926:GLY:O	1:D:3928:CYS:N	2.51	0.44
1:D:4622:SER:OG	1:D:4624:ASP:OD1	2.35	0.44
1:A:1286:THR:OG1	1:A:1550:PRO:O	2.27	0.44
1:A:1594:VAL:HG13	1:A:1594:VAL:O	2.17	0.44
1:A:2583:SER:OG	1:A:2584:MET:SD	2.76	0.44
1:A:3920:LEU:O	1:A:3924:ILE:HG12	2.18	0.44
1:A:4622:SER:OG	1:A:4624:ASP:OD1	2.35	0.44
1:B:678:MET:HG2	1:B:801:ARG:NH2	2.33	0.44
1:B:895:MET:HE2	1:B:972:LEU:HD22	2.00	0.44
1:B:1174:MET:HG3	1:B:1189:GLU:O	2.18	0.44
1:B:1482:ARG:NE	1:B:1534:GLU:OE2	2.49	0.44
1:B:1850:VAL:HG21	1:B:2061:LEU:HD13	1.99	0.44
1:B:2202:TYR:CE2	1:B:2206:ILE:HD11	2.52	0.44
1:B:2619:LYS:HZ2	1:B:2627:TRP:CG	2.36	0.44
1:B:3106:SER:HB3	1:B:3158:CYS:SG	2.58	0.44
1:C:456:LEU:HD13	1:C:532:SER:HB2	1.99	0.44
1:C:655:MET:HE1	1:C:836:HIS:CG	2.52	0.44
1:C:719:GLY:HA3	1:C:733:TRP:HB3	2.00	0.44
1:C:1718:ARG:HD2	1:C:1830:ILE:O	2.17	0.44
1:C:2433:VAL:HG22	1:C:2487:LEU:HD13	1.99	0.44
1:D:143:LEU:HD12	1:D:207:PHE:HE2	1.83	0.44
1:D:561:ARG:HB3	1:D:564:ARG:HD2	1.99	0.44
1:D:1019:GLY:HA3	1:D:1028:ARG:HD2	2.00	0.44
1:D:1053:ALA:O	1:D:1057:LEU:HG	2.18	0.44
1:D:1795:LEU:O	1:D:1799:VAL:HG23	2.17	0.44
1:D:2638:LEU:HD23	1:D:2638:LEU:HA	1.88	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3054:LYS:O	1:D:3057:LEU:HG	2.18	0.44
1:D:3106:SER:HB3	1:D:3158:CYS:SG	2.58	0.44
1:D:3214:LEU:O	1:D:3218:ILE:HG12	2.17	0.44
1:A:676:GLU:HA	1:A:756:SER:HA	1.99	0.43
1:A:988:LEU:HB2	1:A:1055:ARG:HD2	2.00	0.43
1:A:1053:ALA:O	1:A:1057:LEU:HG	2.18	0.43
1:A:1174:MET:HG3	1:A:1189:GLU:O	2.18	0.43
1:A:3292:GLU:O	1:A:3296:MET:HE1	2.18	0.43
1:A:4277:LYS:O	1:A:4280:VAL:HG12	2.18	0.43
1:B:456:LEU:HD13	1:B:532:SER:HB2	1.99	0.43
1:B:1053:ALA:O	1:B:1057:LEU:HG	2.18	0.43
1:B:1502:ASN:OD1	1:B:1503:ASN:N	2.51	0.43
1:B:2693:SER:OG	1:B:2700:ASN:O	2.36	0.43
1:B:2835:ARG:HH21	1:B:2838[B]:HIS:CE1	2.36	0.43
1:B:3246:MET:HB3	1:B:3268:LEU:HD21	2.00	0.43
1:B:4137:GLU:HB2	1:B:4913:HIS:NE2	2.32	0.43
1:C:677:LEU:HD22	1:C:695:VAL:HG21	2.01	0.43
1:C:1053:ALA:O	1:C:1057:LEU:HG	2.18	0.43
1:C:1100:ARG:HG2	1:C:1236:TYR:HA	1.99	0.43
1:C:2693:SER:OG	1:C:2700:ASN:O	2.36	0.43
1:C:2887:GLU:HA	1:C:2890:GLN:CD	2.42	0.43
1:C:3214:LEU:O	1:C:3218:ILE:HG12	2.17	0.43
1:D:456:LEU:HD13	1:D:532:SER:HB2	1.99	0.43
1:D:1220:ASP:O	1:D:1223:THR:OG1	2.27	0.43
1:D:1975:MET:O	1:D:1986:CYS:HB3	2.17	0.43
1:D:3728:GLN:HG2	1:D:3765:ILE:HA	1.98	0.43
1:D:3912:VAL:O	1:D:3916:VAL:HG23	2.18	0.43
1:A:301:THR:HG23	1:A:302:THR:HG23	2.00	0.43
1:A:651:HIS:NE2	1:A:1627:PHE:HB3	2.32	0.43
1:A:1785:ASP:O	1:A:1788:LYS:HG2	2.17	0.43
1:B:495:ILE:O	1:B:499:LEU:HD23	2.19	0.43
1:B:655:MET:HE1	1:B:836:HIS:CG	2.52	0.43
1:B:3259:GLU:C	1:B:3260:ARG:HD3	2.42	0.43
1:B:3815:GLU:HG3	1:B:3821:THR:HG21	2.00	0.43
1:B:3976:LYS:O	1:B:3980:VAL:HG23	2.18	0.43
1:B:4602:ARG:O	1:B:4606:VAL:HG23	2.19	0.43
1:B:4622:SER:OG	1:B:4624:ASP:OD1	2.35	0.43
1:C:655:MET:HG2	1:C:794:PHE:CE1	2.53	0.43
1:C:3106:SER:HB3	1:C:3158:CYS:SG	2.58	0.43
1:C:3128:VAL:O	1:C:3132:ARG:HG3	2.17	0.43
1:C:3184:TYR:CE1	1:C:3197:LEU:HD21	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3246:MET:HB3	1:C:3268:LEU:HD21	2.00	0.43
1:C:4602:ARG:O	1:C:4606:VAL:HG23	2.19	0.43
1:D:608:HIS:HB2	1:D:1656:HIS:ND1	2.33	0.43
1:D:821:PRO:HB2	1:D:823:TYR:CD1	2.53	0.43
1:D:1718:ARG:HD2	1:D:1830:ILE:O	2.17	0.43
1:D:2453:GLU:OE2	1:D:2456:MET:HE3	2.18	0.43
1:D:3069:GLU:HA	1:D:3072:MET:HE2	2.00	0.43
1:D:4617:ILE:HG13	1:D:4618:THR:H	1.82	0.43
1:D:4831:ILE:HG13	1:D:4843:ARG:NH2	2.22	0.43
1:A:912:LYS:HD2	1:A:914:GLN:HG2	1.99	0.43
1:A:2266:VAL:HG11	1:A:2323:LEU:HB3	2.00	0.43
1:A:3069:GLU:HA	1:A:3072:MET:HE2	2.00	0.43
1:A:3197:LEU:HA	1:A:3198:PRO:HD3	1.90	0.43
1:A:3246:MET:HG3	1:A:3246:MET:H	1.36	0.43
1:B:137:ARG:HH12	1:B:204:ASP:HB3	1.82	0.43
1:B:682:THR:HG23	1:B:798:ILE:HD13	1.98	0.43
1:B:1495:SER:OG	1:B:1496:PRO:HD3	2.18	0.43
1:B:2440:PHE:CZ	1:B:2465:LYS:HD2	2.54	0.43
1:B:2453:GLU:OE2	1:B:2456:MET:HE3	2.18	0.43
1:B:3009:CYS:O	1:B:3013:VAL:HG23	2.18	0.43
1:B:3069:GLU:HA	1:B:3072:MET:HE2	2.00	0.43
1:B:3921:THR:O	1:B:3925:GLN:HG3	2.18	0.43
1:B:4152:ILE:HG21	1:B:4157:ARG:NH2	2.33	0.43
1:B:4277:LYS:O	1:B:4280:VAL:HG12	2.18	0.43
1:C:301:THR:HG23	1:C:302:THR:HG23	2.00	0.43
1:C:2453:GLU:OE2	1:C:2456:MET:HE3	2.18	0.43
1:C:2835:ARG:HH21	1:C:2838[B]:HIS:CE1	2.37	0.43
1:D:678:MET:HG2	1:D:801:ARG:NH2	2.33	0.43
1:A:608:HIS:HB2	1:A:1656:HIS:ND1	2.33	0.43
1:A:661:LEU:HD11	1:A:759:LEU:HD23	2.01	0.43
1:A:964:MET:HE3	1:A:964:MET:HB2	1.80	0.43
1:A:1495:SER:OG	1:A:1496:PRO:HD3	2.18	0.43
1:A:3203:ASP:O	1:A:3206:PRO:HD3	2.18	0.43
1:B:131:CYS:SG	1:B:150:GLN:HB2	2.58	0.43
1:B:456:LEU:O	1:B:460:ILE:HG12	2.19	0.43
1:B:677:LEU:HD22	1:B:695:VAL:HG21	2.00	0.43
1:B:778:MET:HG3	1:B:780:GLU:HG3	2.01	0.43
1:C:964:MET:HE3	1:C:964:MET:HB2	1.80	0.43
1:C:1502:ASN:OD1	1:C:1503:ASN:N	2.51	0.43
1:C:1785:ASP:HA	1:C:1788:LYS:HG2	2.01	0.43
1:C:2343:LEU:HB3	1:C:2431:ASP:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2488:LEU:HD21	1:C:2548:LEU:HD13	2.00	0.43
1:C:3695:MET:HE2	1:C:3731:LEU:HD22	2.00	0.43
1:D:655:MET:HG2	1:D:794:PHE:CE1	2.53	0.43
1:D:661:LEU:HD11	1:D:759:LEU:HD23	2.01	0.43
1:D:2488:LEU:HD21	1:D:2548:LEU:HD13	2.00	0.43
1:D:3815:GLU:HG3	1:D:3821:THR:HG21	2.00	0.43
1:D:3976:LYS:O	1:D:3980:VAL:HG23	2.18	0.43
1:A:495:ILE:O	1:A:499:LEU:HD23	2.19	0.43
1:A:778:MET:HG3	1:A:780:GLU:HG3	2.01	0.43
1:A:1100:ARG:HG2	1:A:1236:TYR:HA	1.99	0.43
1:A:2835:ARG:HH21	1:A:2838[B]:HIS:CE1	2.37	0.43
1:B:370:LEU:C	1:B:393:MET:HE3	2.44	0.43
1:B:561:ARG:HB3	1:B:564:ARG:HD2	1.99	0.43
1:B:1729:MET:HE1	1:B:1930:ASP:HB2	1.99	0.43
1:B:1773:ASN:O	1:B:1777:GLN:HG3	2.18	0.43
1:B:2383:HIS:HD2	1:B:2457:SER:O	2.01	0.43
1:B:2727:HIS:HE2	1:B:2826:ILE:H	1.66	0.43
1:B:2875:ASP:OD1	1:B:2876:THR:N	2.51	0.43
1:B:3912:VAL:O	1:B:3916:VAL:HG23	2.18	0.43
1:B:4831:ILE:HG13	1:B:4843:ARG:NH2	2.22	0.43
1:C:143:LEU:HD12	1:C:207:PHE:HE2	1.83	0.43
1:C:1019:GLY:HA3	1:C:1028:ARG:HD2	2.00	0.43
1:C:2489:GLU:HB2	1:C:2544:LEU:HD11	2.01	0.43
1:C:3069:GLU:HA	1:C:3072:MET:HE2	2.00	0.43
1:C:3655:ASP:OD1	1:C:3656:GLU:N	2.50	0.43
1:C:3815:GLU:HG3	1:C:3821:THR:HG21	2.00	0.43
1:C:4277:LYS:O	1:C:4280:VAL:HG12	2.18	0.43
1:C:4622:SER:OG	1:C:4624:ASP:OD1	2.35	0.43
1:D:335:LYS:NZ	1:D:396:GLU:O	2.26	0.43
1:D:677:LEU:HD22	1:D:695:VAL:HG21	2.00	0.43
1:D:964:MET:HE3	1:D:964:MET:HB2	1.80	0.43
1:D:988:LEU:HB2	1:D:1055:ARG:HD2	2.00	0.43
1:D:3009:CYS:O	1:D:3013:VAL:HG23	2.18	0.43
1:A:456:LEU:O	1:A:460:ILE:HG12	2.19	0.43
1:A:893:TRP:HH2	1:A:917:CYS:HB2	1.84	0.43
1:A:1502:ASN:OD1	1:A:1503:ASN:N	2.51	0.43
1:A:1773:ASN:O	1:A:1777:GLN:HG3	2.18	0.43
1:A:2343:LEU:HB3	1:A:2431:ASP:HB3	2.00	0.43
1:A:3043:ARG:HH22	1:A:3115:HIS:CD2	2.37	0.43
1:A:4602:ARG:O	1:A:4606:VAL:HG23	2.19	0.43
1:B:676:GLU:HA	1:B:756:SER:HA	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:719:GLY:HA3	1:B:733:TRP:HB3	2.00	0.43
1:B:4617:ILE:HG13	1:B:4618:THR:H	1.83	0.43
1:C:131:CYS:SG	1:C:150:GLN:HB2	2.59	0.43
1:C:821:PRO:HB2	1:C:823:TYR:CD1	2.53	0.43
1:C:1125:ASP:OD1	1:C:1125:ASP:N	2.52	0.43
1:C:3054:LYS:O	1:C:3057:LEU:HG	2.18	0.43
1:C:3976:LYS:O	1:C:3980:VAL:HG23	2.18	0.43
1:C:4102:LEU:HD21	1:C:4118:PHE:HE2	1.83	0.43
1:D:298:ARG:HD2	1:D:305:TYR:CZ	2.53	0.43
1:D:370:LEU:C	1:D:393:MET:HE3	2.44	0.43
1:D:778:MET:HG3	1:D:780:GLU:HG3	2.01	0.43
1:D:2266:VAL:HG11	1:D:2323:LEU:HB3	2.00	0.43
1:D:2714:PRO:HB2	1:D:2716:LYS:HG2	2.01	0.43
1:D:4061:SER:O	1:D:4064:GLU:HG3	2.19	0.43
1:D:4196:THR:HA	1:D:4199:GLU:HG3	2.01	0.43
1:A:17:ASP:N	1:A:69:LEU:O	2.45	0.43
1:A:120:LEU:HB2	1:A:159:TRP:CZ3	2.54	0.43
1:A:131:CYS:SG	1:A:150:GLN:HB2	2.58	0.43
1:A:143:LEU:HD12	1:A:207:PHE:HE2	1.83	0.43
1:A:3290:ILE:O	1:A:3291:ASP:OD1	2.36	0.43
1:B:608:HIS:HB2	1:B:1656:HIS:ND1	2.33	0.43
1:B:2343:LEU:HB3	1:B:2431:ASP:HB3	2.00	0.43
1:B:2769:GLU:C	1:B:2771:TYR:N	2.77	0.43
1:B:3050:LEU:O	1:B:3054:LYS:HG2	2.19	0.43
1:B:3655:ASP:OD1	1:B:3656:GLU:N	2.50	0.43
1:B:4061:SER:O	1:B:4064:GLU:HG3	2.19	0.43
1:B:4196:THR:HA	1:B:4199:GLU:HG3	2.01	0.43
1:C:120:LEU:HB2	1:C:159:TRP:CZ3	2.54	0.43
1:C:3292:GLU:O	1:C:3296:MET:HE1	2.18	0.43
1:C:3614:HIS:CD2	1:C:3615:ARG:HG2	2.54	0.43
1:C:3690:ALA:O	1:C:3694:ILE:HG13	2.19	0.43
1:C:3926:GLY:O	1:C:3928:CYS:N	2.51	0.43
1:D:434:ASP:OD1	1:D:504:ARG:NE	2.49	0.43
1:D:2693:SER:OG	1:D:2700:ASN:O	2.37	0.43
1:D:4277:LYS:O	1:D:4280:VAL:HG12	2.18	0.43
1:D:4280:VAL:HA	1:D:4283:PHE:CD1	2.52	0.43
1:D:4647:LYS:O	1:D:4651:ARG:NH2	2.52	0.43
1:A:2453:GLU:OE2	1:A:2456:MET:HE3	2.18	0.43
1:A:3009:CYS:O	1:A:3013:VAL:HG23	2.18	0.43
1:A:3174:HIS:HE1	1:A:3211:LEU:HD21	1.84	0.43
1:A:4102:LEU:HD21	1:A:4118:PHE:HE2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4196:THR:HA	1:A:4199:GLU:HG3	2.01	0.43
1:B:120:LEU:HB2	1:B:159:TRP:CZ3	2.54	0.43
1:B:1796:THR:OG1	1:B:1845:LEU:HD11	2.19	0.43
1:B:2215:PHE:CG	1:B:2253:LEU:HD22	2.54	0.43
1:B:2488:LEU:HD21	1:B:2548:LEU:HD13	2.00	0.43
1:B:3197:LEU:HA	1:B:3198:PRO:HD3	1.90	0.43
1:B:3290:ILE:O	1:B:3291:ASP:OD1	2.36	0.43
1:C:1244:ASN:OD1	1:C:1245:ARG:N	2.52	0.43
1:C:2383:HIS:HD2	1:C:2457:SER:O	2.01	0.43
1:C:2436:ILE:HG22	1:C:2491:GLY:HA3	1.99	0.43
1:C:2726:GLU:OE1	1:C:2726:GLU:N	2.51	0.43
1:C:4061:SER:O	1:C:4064:GLU:HG3	2.19	0.43
1:C:4196:THR:HA	1:C:4199:GLU:HG3	2.01	0.43
1:D:1610:ARG:HA	1:D:1617:TRP:HA	2.01	0.43
1:D:2215:PHE:CG	1:D:2253:LEU:HD22	2.54	0.43
1:D:2343:LEU:HB3	1:D:2431:ASP:HB3	2.00	0.43
1:D:2440:PHE:CZ	1:D:2465:LYS:HD2	2.54	0.43
1:D:3184:TYR:CE1	1:D:3197:LEU:HD21	2.51	0.43
1:D:3316:LYS:O	1:D:3317:THR:OG1	2.35	0.43
1:D:3832:ASP:OD1	1:D:3832:ASP:N	2.50	0.43
1:A:3002:GLU:O	1:A:3005:THR:OG1	2.30	0.43
1:A:3246:MET:HB3	1:A:3268:LEU:HD21	2.00	0.43
1:A:3815:GLU:HG3	1:A:3821:THR:HG21	2.00	0.43
1:A:3832:ASP:OD1	1:A:3832:ASP:N	2.50	0.43
1:B:1785:ASP:HA	1:B:1788:LYS:HG2	2.01	0.43
1:B:3062:ASP:O	1:B:3066:GLU:OE1	2.37	0.43
1:B:3292:GLU:O	1:B:3296:MET:HE1	2.18	0.43
1:C:298:ARG:HD2	1:C:305:TYR:CZ	2.53	0.43
1:C:661:LEU:HD12	1:C:673:TRP:CD1	2.54	0.43
1:C:778:MET:HG3	1:C:780:GLU:HG3	2.01	0.43
1:C:878:LEU:HD21	1:C:944:LEU:HD11	1.99	0.43
1:C:1174:MET:HG3	1:C:1189:GLU:O	2.18	0.43
1:C:3009:CYS:O	1:C:3013:VAL:HG23	2.18	0.43
1:C:3270:SER:HA	1:C:3273:MET:CE	2.49	0.43
1:C:3939:ARG:HH22	1:D:173:GLU:HA	1.83	0.43
1:D:893:TRP:HH2	1:D:917:CYS:HB2	1.84	0.43
1:D:2583:SER:OG	1:D:2584:MET:SD	2.76	0.43
1:D:3195:LEU:HD23	1:D:3196:SER:N	2.34	0.43
1:D:3921:THR:O	1:D:3925:GLN:HG3	2.18	0.43
1:D:4102:LEU:HD21	1:D:4118:PHE:HE2	1.83	0.43
1:A:678:MET:HG2	1:A:801:ARG:NH2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:719:GLY:HA3	1:A:733:TRP:HB3	2.00	0.43
1:B:893:TRP:HH2	1:B:917:CYS:HB2	1.84	0.43
1:B:1244:ASN:OD1	1:B:1245:ARG:N	2.52	0.43
1:B:3127:GLN:CD	1:B:3183:ILE:HB	2.44	0.43
1:B:3212:GLU:HA	1:B:3215:MET:HG3	2.01	0.43
1:B:3270:SER:HA	1:B:3273:MET:CE	2.49	0.43
1:B:3690:ALA:O	1:B:3694:ILE:HG13	2.19	0.43
1:B:3920:LEU:O	1:B:3924:ILE:HG12	2.18	0.43
1:B:4647:LYS:O	1:B:4651:ARG:NH2	2.52	0.43
1:C:1127:GLU:HB3	1:C:1130:SER:HB3	2.01	0.43
1:C:1773:ASN:O	1:C:1777:GLN:HG3	2.18	0.43
1:C:1796:THR:OG1	1:C:1845:LEU:HD11	2.19	0.43
1:C:3043:ARG:HH22	1:C:3115:HIS:CD2	2.37	0.43
1:C:3212:GLU:HA	1:C:3215:MET:HG3	2.01	0.43
1:C:3966:GLU:HA	1:C:3969:LYS:HG2	2.01	0.43
1:D:137:ARG:HH12	1:D:204:ASP:HB3	1.82	0.43
1:D:2336:ARG:HB3	1:D:2338:GLU:OE2	2.19	0.43
1:D:2619:LYS:HZ2	1:D:2627:TRP:CG	2.37	0.43
1:D:4503:ARG:HA	1:D:4503:ARG:HD2	1.87	0.43
1:D:4921:PHE:HE2	1:D:4940:VAL:HG11	1.84	0.43
1:A:785:ASP:OD1	1:A:786:GLY:N	2.52	0.42
1:A:1610:ARG:HA	1:A:1617:TRP:HA	2.01	0.42
1:A:2429:LEU:HD21	1:A:2483:PHE:CZ	2.54	0.42
1:A:2570:GLU:HG2	1:A:2605:MET:HB3	2.01	0.42
1:A:2693:SER:OG	1:A:2700:ASN:O	2.36	0.42
1:A:3921:THR:O	1:A:3925:GLN:HG3	2.18	0.42
1:A:4647:LYS:O	1:A:4651:ARG:NH2	2.52	0.42
1:A:4831:ILE:HG13	1:A:4843:ARG:NH2	2.22	0.42
1:A:4856:VAL:HG12	1:D:4863:GLN:HE22	1.82	0.42
1:B:878:LEU:HD21	1:B:944:LEU:HD11	1.99	0.42
1:B:929:ARG:NH1	1:B:933:LEU:HB2	2.34	0.42
1:B:2214:MET:HE2	1:B:2242:VAL:HG11	2.01	0.42
1:B:2429:LEU:HD21	1:B:2483:PHE:CZ	2.54	0.42
1:B:3184:TYR:CE1	1:B:3197:LEU:HD21	2.51	0.42
1:C:370:LEU:C	1:C:393:MET:HE3	2.44	0.42
1:C:434:ASP:OD1	1:C:504:ARG:NE	2.49	0.42
1:C:590:LYS:HA	1:C:590:LYS:HD3	1.69	0.42
1:C:608:HIS:HB2	1:C:1656:HIS:ND1	2.33	0.42
1:C:785:ASP:OD1	1:C:786:GLY:N	2.52	0.42
1:C:2336:ARG:HB3	1:C:2338:GLU:OE2	2.19	0.42
1:C:2638:LEU:HD23	1:C:2638:LEU:HA	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3195:LEU:HD23	1:C:3196:SER:N	2.34	0.42
1:D:131:CYS:SG	1:D:150:GLN:HB2	2.59	0.42
1:D:3043:ARG:HH22	1:D:3115:HIS:CD2	2.37	0.42
1:D:3270:SER:HA	1:D:3273:MET:CE	2.49	0.42
1:D:3655:ASP:OD1	1:D:3656:GLU:N	2.50	0.42
1:A:1244:ASN:OD1	1:A:1245:ARG:N	2.52	0.42
1:A:1729:MET:HE1	1:A:1930:ASP:HB2	1.99	0.42
1:A:1785:ASP:HA	1:A:1788:LYS:HG2	2.01	0.42
1:A:2714:PRO:HB2	1:A:2716:LYS:HG2	2.01	0.42
1:A:3127:GLN:CD	1:A:3183:ILE:HB	2.44	0.42
1:A:4767:LEU:O	1:A:4771:VAL:HG23	2.19	0.42
1:B:143:LEU:HD12	1:B:207:PHE:HE2	1.83	0.42
1:B:1430:VAL:HG11	1:B:1443:VAL:HG21	2.02	0.42
1:B:3043:ARG:HH22	1:B:3115:HIS:CD2	2.37	0.42
1:B:3832:ASP:OD1	1:B:3832:ASP:N	2.50	0.42
1:B:3939:ARG:HH22	1:C:173:GLU:HA	1.84	0.42
1:B:4697:VAL:O	1:B:4701:ILE:HG13	2.20	0.42
1:C:548:CYS:HB3	1:C:582:SER:HB2	2.01	0.42
1:C:893:TRP:HH2	1:C:917:CYS:HB2	1.84	0.42
1:C:2583:SER:OG	1:C:2584:MET:SD	2.76	0.42
1:C:2593:VAL:HG12	1:C:2644:LEU:HD13	2.00	0.42
1:C:3921:THR:O	1:C:3925:GLN:HG3	2.18	0.42
1:D:456:LEU:O	1:D:460:ILE:HG12	2.19	0.42
1:D:929:ARG:NH1	1:D:933:LEU:HB2	2.34	0.42
1:D:1773:ASN:O	1:D:1777:GLN:HG3	2.19	0.42
1:D:3246:MET:HB3	1:D:3268:LEU:HD21	2.00	0.42
1:D:3614:HIS:CD2	1:D:3615:ARG:HG2	2.54	0.42
1:A:448:PRO:HB2	1:A:452:VAL:HG23	2.01	0.42
1:A:591:GLU:O	1:A:594:ILE:HG22	2.20	0.42
1:A:661:LEU:HD12	1:A:673:TRP:CD1	2.54	0.42
1:A:670:TYR:HB2	1:A:1028:ARG:HH12	1.84	0.42
1:A:677:LEU:HD22	1:A:695:VAL:HG21	2.00	0.42
1:A:891:GLU:O	1:A:895:MET:HG2	2.20	0.42
1:A:929:ARG:NH1	1:A:933:LEU:HB2	2.34	0.42
1:A:2214:MET:HE2	1:A:2242:VAL:HG11	2.01	0.42
1:A:2215:PHE:CG	1:A:2253:LEU:HD22	2.54	0.42
1:A:2336:ARG:HB3	1:A:2338:GLU:OE2	2.19	0.42
1:A:2488:LEU:HD21	1:A:2548:LEU:HD13	2.00	0.42
1:A:2727:HIS:HE2	1:A:2826:ILE:H	1.66	0.42
1:A:2830:ASN:OD1	1:B:1549:SER:HB2	2.19	0.42
1:A:3823:GLU:OE2	1:A:3827:GLU:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3975:GLN:O	1:A:3979:VAL:HG23	2.19	0.42
1:A:4289:SER:HA	1:A:4292:MET:HG3	2.02	0.42
1:B:301:THR:HG23	1:B:302:THR:HG23	2.00	0.42
1:B:513:HIS:O	1:B:517:VAL:HG23	2.19	0.42
1:B:514:PHE:CD2	1:B:526:TRP:HB2	2.51	0.42
1:B:515:ALA:HB2	1:B:523:GLY:HA3	2.01	0.42
1:B:661:LEU:HD11	1:B:759:LEU:HD23	2.01	0.42
1:B:661:LEU:HD12	1:B:673:TRP:CD1	2.54	0.42
1:B:764:PRO:HB2	1:B:781:ASN:N	2.35	0.42
1:B:2593:VAL:HG12	1:B:2644:LEU:HD13	2.00	0.42
1:B:3695:MET:HE2	1:B:3731:LEU:HD22	2.01	0.42
1:B:3783:GLU:OE2	1:B:3784:LYS:HG2	2.19	0.42
1:B:3823:GLU:OE2	1:B:3827:GLU:N	2.53	0.42
1:B:3975:GLN:O	1:B:3979:VAL:HG23	2.19	0.42
1:B:4277:LYS:HA	1:B:4280:VAL:HG12	2.02	0.42
1:B:4832:GLU:O	1:B:4843:ARG:NH2	2.42	0.42
1:C:764:PRO:HB2	1:C:781:ASN:N	2.35	0.42
1:C:1176:THR:HB	1:C:1181:ILE:HD13	2.01	0.42
1:C:1729:MET:HE1	1:C:1930:ASP:HB2	1.99	0.42
1:C:2586:GLN:HE21	1:C:2587:HIS:CE1	2.38	0.42
1:C:3127:GLN:CD	1:C:3183:ILE:HB	2.44	0.42
1:C:4070:ALA:HB1	1:C:4078:LEU:HD13	2.01	0.42
1:D:120:LEU:HB2	1:D:159:TRP:CZ3	2.54	0.42
1:D:513:HIS:O	1:D:517:VAL:HG23	2.19	0.42
1:D:670:TYR:HB2	1:D:1028:ARG:HH12	1.84	0.42
1:D:719:GLY:HA3	1:D:733:TRP:HB3	2.00	0.42
1:D:2835:ARG:HH21	1:D:2838[B]:HIS:CE1	2.37	0.42
1:A:541:ILE:HD13	1:A:574:VAL:HG13	2.02	0.42
1:A:2435:VAL:O	1:A:2465:LYS:NZ	2.53	0.42
1:A:3098:THR:HB	1:A:3151:GLN:HG2	2.01	0.42
1:A:3695:MET:HE2	1:A:3731:LEU:HD22	2.01	0.42
1:A:3926:GLY:O	1:A:3927:PRO:C	2.63	0.42
1:A:4503:ARG:HD2	1:A:4503:ARG:HA	1.87	0.42
1:A:4697:VAL:O	1:A:4701:ILE:HG13	2.20	0.42
1:B:1094:TYR:CD1	1:B:1247:ILE:HG23	2.53	0.42
1:B:1690:GLU:HA	1:B:1794:MET:HE2	2.01	0.42
1:C:902:TRP:CH2	1:C:913:ARG:HA	2.55	0.42
1:C:3174:HIS:HE1	1:C:3211:LEU:HD21	1.84	0.42
1:C:3823:GLU:OE2	1:C:3827:GLU:N	2.53	0.42
1:C:3926:GLY:O	1:C:3927:PRO:C	2.63	0.42
1:C:4647:LYS:O	1:C:4651:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4867:ILE:HG12	1:D:4864:GLY:HA2	2.01	0.42
1:D:219:SER:OG	1:D:222:GLU:OE2	2.33	0.42
1:D:655:MET:HE1	1:D:836:HIS:CD2	2.54	0.42
1:D:661:LEU:HD12	1:D:673:TRP:CD1	2.54	0.42
1:D:2769:GLU:C	1:D:2771:TYR:N	2.77	0.42
1:D:3050:LEU:O	1:D:3054:LYS:HG2	2.19	0.42
1:D:3098:THR:HB	1:D:3151:GLN:HG2	2.01	0.42
1:D:3212:GLU:HA	1:D:3215:MET:HG3	2.01	0.42
1:D:3723:LYS:NZ	1:D:4681:ASP:O	2.42	0.42
1:D:3783:GLU:OE2	1:D:3784:LYS:HG2	2.19	0.42
1:D:3926:GLY:O	1:D:3927:PRO:C	2.63	0.42
1:D:3966:GLU:HA	1:D:3969:LYS:HG2	2.01	0.42
1:D:4036:ASP:OD2	1:D:4041:GLY:HA2	2.20	0.42
1:A:370:LEU:C	1:A:393:MET:HE3	2.44	0.42
1:A:2299:LEU:HD22	1:A:2395:LEU:HA	2.01	0.42
1:A:3050:LEU:O	1:A:3054:LYS:HG2	2.19	0.42
1:A:4036:ASP:OD2	1:A:4041:GLY:HA2	2.20	0.42
1:A:4523:SER:HB2	1:A:4560:VAL:HG12	2.02	0.42
1:A:4664:ASP:OD1	1:A:4665:ARG:N	2.53	0.42
1:A:4921:PHE:HE2	1:A:4940:VAL:HG11	1.84	0.42
1:B:448:PRO:HB2	1:B:452:VAL:HG23	2.01	0.42
1:B:548:CYS:HB3	1:B:582:SER:HB2	2.01	0.42
1:B:2570:GLU:HG2	1:B:2605:MET:HB3	2.01	0.42
1:B:2583:SER:OG	1:B:2584:MET:SD	2.76	0.42
1:B:3728:GLN:O	1:B:3732:HIS:ND1	2.49	0.42
1:C:456:LEU:O	1:C:460:ILE:HG12	2.19	0.42
1:C:541:ILE:HD13	1:C:574:VAL:HG13	2.02	0.42
1:C:655:MET:HE1	1:C:836:HIS:CD2	2.54	0.42
1:C:661:LEU:HD11	1:C:759:LEU:HD23	2.01	0.42
1:C:1430:VAL:HG11	1:C:1443:VAL:HG21	2.02	0.42
1:C:1610:ARG:HA	1:C:1617:TRP:HA	2.01	0.42
1:C:2888:LYS:O	1:C:2892:ILE:HG22	2.20	0.42
1:C:3246:MET:HG3	1:C:3246:MET:H	1.36	0.42
1:C:4697:VAL:O	1:C:4701:ILE:HG13	2.20	0.42
1:D:495:ILE:O	1:D:499:LEU:HD23	2.19	0.42
1:D:1127:GLU:HB3	1:D:1130:SER:HB3	2.01	0.42
1:D:2727:HIS:HE2	1:D:2826:ILE:H	1.66	0.42
1:D:4070:ALA:HB1	1:D:4078:LEU:HD13	2.01	0.42
1:D:4289:SER:HA	1:D:4292:MET:HG3	2.02	0.42
1:D:4602:ARG:O	1:D:4606:VAL:HG23	2.19	0.42
1:D:4697:VAL:O	1:D:4701:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4767:LEU:O	1:D:4771:VAL:HG23	2.19	0.42
1:A:513:HIS:O	1:A:517:VAL:HG23	2.19	0.42
1:A:1430:VAL:HG11	1:A:1443:VAL:HG21	2.02	0.42
1:A:2122:SER:O	1:A:2126:ILE:HG12	2.20	0.42
1:A:2440:PHE:CZ	1:A:2465:LYS:HD2	2.54	0.42
1:A:3043:ARG:HH22	1:A:3115:HIS:HD2	1.67	0.42
1:A:3723:LYS:NZ	1:A:4681:ASP:O	2.42	0.42
1:A:4061:SER:O	1:A:4064:GLU:HG3	2.19	0.42
1:B:785:ASP:OD1	1:B:786:GLY:N	2.52	0.42
1:B:968:LYS:HA	1:B:968:LYS:HD2	1.89	0.42
1:B:1645:THR:HG22	1:B:1695:PRO:HG3	2.01	0.42
1:B:2336:ARG:HB3	1:B:2338:GLU:OE2	2.19	0.42
1:B:2651:ALA:O	1:B:2655:LYS:HB2	2.20	0.42
1:B:2657:TYR:CE1	1:B:2961:LYS:HG2	2.55	0.42
1:B:3195:LEU:HD23	1:B:3196:SER:N	2.34	0.42
1:B:4117:THR:HA	1:B:4120:GLU:OE1	2.20	0.42
1:C:670:TYR:HB2	1:C:1028:ARG:HH12	1.84	0.42
1:C:1690:GLU:HA	1:C:1794:MET:HE2	2.01	0.42
1:C:3098:THR:HB	1:C:3151:GLN:HG2	2.01	0.42
1:C:4767:LEU:O	1:C:4771:VAL:HG23	2.19	0.42
1:D:585:ALA:O	1:D:589:ILE:HG12	2.19	0.42
1:D:1785:ASP:HA	1:D:1788:LYS:HG2	2.00	0.42
1:D:2299:LEU:HD21	1:D:2395:LEU:HD12	2.01	0.42
1:D:2972:ASP:OD1	1:D:3032:CYS:HA	2.20	0.42
1:D:3062:ASP:O	1:D:3066:GLU:OE1	2.37	0.42
1:D:3174:HIS:HE1	1:D:3211:LEU:HD21	1.84	0.42
1:D:3197:LEU:HA	1:D:3198:PRO:HD3	1.90	0.42
1:D:3695:MET:HE2	1:D:3731:LEU:HD22	2.01	0.42
1:A:877:HIS:CG	1:A:878:LEU:N	2.88	0.42
1:A:1463:ARG:HE	1:A:1463:ARG:HB3	1.67	0.42
1:A:2634:SER:O	1:A:2635:GLU:HB3	2.19	0.42
1:A:3195:LEU:HD23	1:A:3196:SER:N	2.34	0.42
1:A:3614:HIS:CD2	1:A:3615:ARG:HG2	2.54	0.42
1:B:891:GLU:O	1:B:895:MET:HG2	2.20	0.42
1:B:1188:SER:HB2	1:B:1193:LYS:NZ	2.35	0.42
1:B:2122:SER:O	1:B:2126:ILE:HG12	2.20	0.42
1:B:2528:LEU:HD22	1:B:2535:PHE:HZ	1.84	0.42
1:B:2638:LEU:HB3	1:B:2680:TYR:CE1	2.55	0.42
1:B:2726:GLU:OE1	1:B:2726:GLU:N	2.51	0.42
1:B:3098:THR:HB	1:B:3151:GLN:HG2	2.01	0.42
1:B:3614:HIS:CD2	1:B:3615:ARG:HG2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4523:SER:HB2	1:B:4560:VAL:HG12	2.02	0.42
1:C:23:GLN:HG2	1:C:36:CYS:SG	2.60	0.42
1:C:495:ILE:O	1:C:499:LEU:HD23	2.19	0.42
1:C:1495:SER:OG	1:C:1496:PRO:HD3	2.18	0.42
1:C:2295:GLY:HA3	1:C:2391:PHE:CE2	2.55	0.42
1:C:2299:LEU:HD22	1:C:2395:LEU:HA	2.01	0.42
1:C:2440:PHE:CZ	1:C:2465:LYS:HD2	2.54	0.42
1:C:2638:LEU:HB3	1:C:2680:TYR:CE1	2.55	0.42
1:C:2651:ALA:O	1:C:2655:LYS:HB2	2.20	0.42
1:C:3050:LEU:O	1:C:3054:LYS:HG2	2.19	0.42
1:D:515:ALA:HB2	1:D:523:GLY:HA3	2.01	0.42
1:D:902:TRP:CH2	1:D:913:ARG:HA	2.55	0.42
1:D:1495:SER:OG	1:D:1496:PRO:HD3	2.18	0.42
1:D:1690:GLU:HA	1:D:1794:MET:HE2	2.01	0.42
1:D:1819:VAL:HG21	1:D:1901:PRO:HB2	2.02	0.42
1:D:2299:LEU:HD22	1:D:2395:LEU:HA	2.01	0.42
1:D:2489:GLU:HB2	1:D:2544:LEU:HD11	2.01	0.42
1:D:2638:LEU:HB3	1:D:2680:TYR:CE1	2.55	0.42
1:A:1127:GLU:HB3	1:A:1130:SER:HB3	2.01	0.42
1:A:1690:GLU:HA	1:A:1794:MET:HE2	2.01	0.42
1:A:2186:GLU:CD	1:A:2187:ILE:H	2.28	0.42
1:A:2383:HIS:HD2	1:A:2457:SER:O	2.01	0.42
1:A:2528:LEU:HD22	1:A:2535:PHE:HZ	1.84	0.42
1:A:3316:LYS:O	1:A:3317:THR:OG1	2.35	0.42
1:B:23:GLN:HG2	1:B:36:CYS:SG	2.60	0.42
1:B:591:GLU:O	1:B:594:ILE:HG22	2.20	0.42
1:B:927:GLN:HE22	3:B:5003:ATP:HO2'	1.63	0.42
1:B:3290:ILE:O	1:B:3292:GLU:N	2.50	0.42
1:C:585:ALA:O	1:C:589:ILE:HG12	2.19	0.42
1:C:891:GLU:O	1:C:895:MET:HG2	2.20	0.42
1:C:2265:VAL:HG21	1:C:2301:PHE:CD2	2.55	0.42
1:C:2622:CYS:SG	1:C:2623:LEU:N	2.93	0.42
1:C:2727:HIS:HE2	1:C:2826:ILE:H	1.66	0.42
1:C:3975:GLN:O	1:C:3979:VAL:HG23	2.19	0.42
1:C:4036:ASP:OD2	1:C:4041:GLY:HA2	2.20	0.42
1:C:4289:SER:HA	1:C:4292:MET:HG3	2.02	0.42
1:D:591:GLU:O	1:D:594:ILE:HG22	2.20	0.42
1:D:785:ASP:OD1	1:D:786:GLY:N	2.52	0.42
1:D:1244:ASN:OD1	1:D:1245:ARG:N	2.52	0.42
1:D:1482:ARG:NE	1:D:1534:GLU:OE2	2.49	0.42
1:D:1796:THR:OG1	1:D:1845:LEU:HD11	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2122:SER:O	1:D:2126:ILE:HG12	2.20	0.42
1:D:2295:GLY:HA3	1:D:2391:PHE:CE2	2.55	0.42
1:D:2429:LEU:HD21	1:D:2483:PHE:CZ	2.54	0.42
1:D:3690:ALA:O	1:D:3694:ILE:HG13	2.19	0.42
1:A:184:VAL:HG22	1:A:191:TYR:CE1	2.55	0.42
1:A:585:ALA:O	1:A:589:ILE:HG12	2.19	0.42
1:A:1946:GLU:O	1:A:1949:GLN:HG3	2.20	0.42
1:A:2295:GLY:HA3	1:A:2391:PHE:CE2	2.55	0.42
1:A:2622:CYS:SG	1:A:2623:LEU:N	2.93	0.42
1:A:2657:TYR:CE1	1:A:2961:LYS:HG2	2.55	0.42
1:A:2972:ASP:OD1	1:A:3032:CYS:HA	2.20	0.42
1:A:4277:LYS:HA	1:A:4280:VAL:HG12	2.02	0.42
1:B:2299:LEU:HD22	1:B:2395:LEU:HA	2.01	0.42
1:B:2435:VAL:O	1:B:2465:LYS:NZ	2.53	0.42
1:B:2773:TRP:HA	1:B:2776:LYS:HD2	2.02	0.42
1:B:3187:LYS:O	1:B:3188:SER:OG	2.32	0.42
1:C:11:ILE:HD12	1:C:176:ARG:HE	1.85	0.42
1:C:887:GLU:HA	1:C:890:HIS:CE1	2.55	0.42
1:C:1645:THR:HG22	1:C:1695:PRO:HG3	2.01	0.42
1:C:1936:LEU:HA	1:C:1939:ASN:ND2	2.35	0.42
1:C:2714:PRO:HB2	1:C:2716:LYS:HG2	2.01	0.42
1:C:3661:VAL:HG23	1:C:3666:GLN:HG2	2.02	0.42
1:C:4277:LYS:HA	1:C:4280:VAL:HG12	2.02	0.42
1:D:548:CYS:HB3	1:D:582:SER:HB2	2.01	0.42
1:D:887:GLU:HA	1:D:890:HIS:CE1	2.55	0.42
1:D:891:GLU:O	1:D:895:MET:HG2	2.20	0.42
1:D:1946:GLU:O	1:D:1949:GLN:HG3	2.20	0.42
1:D:2528:LEU:HD22	1:D:2535:PHE:HZ	1.84	0.42
1:D:3315:LEU:HD23	1:D:3315:LEU:O	2.20	0.42
1:D:3823:GLU:OE2	1:D:3827:GLU:N	2.53	0.42
1:A:655:MET:HE1	1:A:836:HIS:CD2	2.54	0.42
1:A:718:VAL:HG23	1:A:793:SER:HB3	2.02	0.42
1:A:1796:THR:OG1	1:A:1845:LEU:HD11	2.19	0.42
1:A:2299:LEU:HD21	1:A:2395:LEU:HD12	2.01	0.42
1:A:2651:ALA:O	1:A:2655:LYS:HB2	2.20	0.42
1:A:2773:TRP:HA	1:A:2776:LYS:HD2	2.02	0.42
1:A:2888:LYS:O	1:A:2892:ILE:HG22	2.20	0.42
1:A:3212:GLU:HA	1:A:3215:MET:HG3	2.01	0.42
1:A:3315:LEU:O	1:A:3315:LEU:HD23	2.20	0.42
1:B:877:HIS:CG	1:B:878:LEU:N	2.88	0.42
1:B:902:TRP:CH2	1:B:913:ARG:HA	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1610:ARG:HA	1:B:1617:TRP:HA	2.01	0.42
1:B:1946:GLU:O	1:B:1949:GLN:HG3	2.20	0.42
1:B:2471:PHE:CE1	1:B:2475:VAL:HG21	2.55	0.42
1:B:3174:HIS:HE1	1:B:3211:LEU:HD21	1.84	0.42
1:C:274:LEU:HD23	1:C:274:LEU:HA	1.88	0.42
1:C:732:LEU:HD23	1:C:732:LEU:HA	1.91	0.42
1:C:2570:GLU:HG2	1:C:2605:MET:HB3	2.01	0.42
1:C:2634:SER:O	1:C:2635:GLU:HB3	2.19	0.42
1:C:3942:ASP:O	1:C:3945:VAL:HG12	2.20	0.42
1:D:1094:TYR:OH	1:D:1808:ASP:OD2	2.25	0.42
1:D:1977:LEU:HD23	1:D:1977:LEU:HA	1.88	0.42
1:D:2265:VAL:HG21	1:D:2301:PHE:CD2	2.55	0.42
1:D:2383:HIS:HD2	1:D:2457:SER:O	2.01	0.42
1:D:3127:GLN:CD	1:D:3183:ILE:HB	2.44	0.42
1:D:4496:ALA:HB2	1:D:4592:CYS:HB3	2.02	0.42
1:A:23:GLN:HG2	1:A:36:CYS:SG	2.60	0.41
1:A:3270:SER:HA	1:A:3273:MET:CE	2.49	0.41
1:A:3690:ALA:O	1:A:3694:ILE:HG13	2.19	0.41
1:A:3783:GLU:OE2	1:A:3784:LYS:HG2	2.19	0.41
1:A:3942:ASP:O	1:A:3945:VAL:HG12	2.20	0.41
1:A:3966:GLU:HA	1:A:3969:LYS:HG2	2.01	0.41
1:B:655:MET:HE1	1:B:836:HIS:CD2	2.54	0.41
1:B:2186:GLU:CD	1:B:2187:ILE:H	2.28	0.41
1:B:2208:ARG:NH2	1:B:3819:MET:HE3	2.29	0.41
1:B:2299:LEU:HD21	1:B:2395:LEU:HD12	2.01	0.41
1:B:2888:LYS:O	1:B:2892:ILE:HG22	2.20	0.41
1:B:3016:ARG:HA	1:B:3096:TYR:CZ	2.55	0.41
1:B:3966:GLU:HA	1:B:3969:LYS:HG2	2.01	0.41
1:C:1978:ASN:HB3	1:C:1983:LYS:HE2	2.01	0.41
1:C:2215:PHE:CG	1:C:2253:LEU:HD22	2.54	0.41
1:C:2429:LEU:HD21	1:C:2483:PHE:CZ	2.55	0.41
1:C:2611:THR:OG1	1:C:2668:CYS:HB2	2.19	0.41
1:C:2657:TYR:CE1	1:C:2961:LYS:HG2	2.55	0.41
1:C:3043:ARG:O	1:C:3046:MET:HG3	2.20	0.41
1:C:3315:LEU:O	1:C:3315:LEU:HD23	2.20	0.41
1:C:3783:GLU:OE2	1:C:3784:LYS:HG2	2.19	0.41
1:C:4732:GLY:HA2	1:C:4735:ASN:O	2.20	0.41
1:D:1176:THR:HB	1:D:1181:ILE:HD13	2.01	0.41
1:D:2634:SER:O	1:D:2635:GLU:HB3	2.19	0.41
1:D:2657:TYR:CE1	1:D:2961:LYS:HG2	2.55	0.41
1:D:3069:GLU:O	1:D:3073:GLU:OE1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3611:LEU:HD23	1:D:3611:LEU:HA	1.92	0.41
1:D:4190:VAL:HG11	1:D:4949:TRP:CH2	2.55	0.41
1:A:57:ASN:OD1	1:A:58:VAL:N	2.53	0.41
1:A:274:LEU:HD23	1:A:274:LEU:HA	1.88	0.41
1:A:2489:GLU:HB2	1:A:2544:LEU:HD11	2.01	0.41
1:A:2878:THR:O	1:A:2882:LYS:HG3	2.20	0.41
1:A:3016:ARG:HA	1:A:3096:TYR:CZ	2.55	0.41
1:B:1145:TRP:CE2	1:B:1149:ASN:HB3	2.55	0.41
1:B:2611:THR:OG1	1:B:2668:CYS:HB2	2.19	0.41
1:B:3043:ARG:O	1:B:3046:MET:HG3	2.20	0.41
1:B:3315:LEU:HD23	1:B:3315:LEU:O	2.20	0.41
1:B:3661:VAL:HG23	1:B:3666:GLN:HG2	2.02	0.41
1:B:4036:ASP:OD2	1:B:4041:GLY:HA2	2.20	0.41
1:B:4523:SER:HB3	1:B:4558:HIS:HB2	2.02	0.41
1:B:4863:GLN:OE1	1:B:4863:GLN:CA	2.68	0.41
1:B:4867:ILE:HG12	1:C:4864:GLY:HA2	2.02	0.41
1:C:184:VAL:HG22	1:C:191:TYR:CE1	2.55	0.41
1:C:911:ASN:OD1	1:C:912:LYS:N	2.53	0.41
1:C:1819:VAL:HG21	1:C:1901:PRO:HB2	2.02	0.41
1:C:2235:ARG:NH2	1:C:2296:GLU:OE1	2.41	0.41
1:C:2435:VAL:O	1:C:2465:LYS:NZ	2.53	0.41
1:C:2528:LEU:HD22	1:C:2535:PHE:HZ	1.84	0.41
1:C:2551:THR:O	1:C:2555:LEU:HD23	2.20	0.41
1:C:3827:GLU:O	1:C:3831:GLN:HA	2.20	0.41
1:C:3906:PHE:HB3	1:C:3967:LEU:HD11	2.02	0.41
1:C:4523:SER:HB3	1:C:4558:HIS:HB2	2.02	0.41
1:C:4664:ASP:OD1	1:C:4665:ARG:N	2.53	0.41
1:D:1430:VAL:HG11	1:D:1443:VAL:HG21	2.02	0.41
1:D:1554:GLN:NE2	1:D:1556:GLU:OE2	2.54	0.41
1:D:2551:THR:O	1:D:2555:LEU:HD23	2.20	0.41
1:D:2622:CYS:SG	1:D:2623:LEU:N	2.93	0.41
1:D:2657:TYR:HA	1:D:2662:PHE:CE1	2.55	0.41
1:D:2773:TRP:HA	1:D:2776:LYS:HD2	2.02	0.41
1:D:3975:GLN:O	1:D:3979:VAL:HG23	2.19	0.41
1:D:4513:ILE:O	1:D:4516:ILE:HG22	2.21	0.41
1:A:281:ARG:NE	1:A:283:ALA:O	2.46	0.41
1:A:732:LEU:HD23	1:A:732:LEU:HA	1.91	0.41
1:A:902:TRP:CH2	1:A:913:ARG:HA	2.55	0.41
1:A:1145:TRP:CE2	1:A:1149:ASN:HB3	2.55	0.41
1:A:1482:ARG:NE	1:A:1534:GLU:OE2	2.49	0.41
1:A:2657:TYR:HA	1:A:2662:PHE:CE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3273:MET:HE2	1:A:3273:MET:HB2	1.86	0.41
1:A:3290:ILE:C	1:A:3292:GLU:H	2.27	0.41
1:A:4117:THR:HA	1:A:4120:GLU:OE1	2.20	0.41
1:A:4496:ALA:HB2	1:A:4592:CYS:HB3	2.02	0.41
1:A:4523:SER:HB3	1:A:4558:HIS:HB2	2.02	0.41
1:B:238:HIS:HB3	1:B:243:GLU:HG2	2.03	0.41
1:B:2295:GLY:HA3	1:B:2391:PHE:CE2	2.55	0.41
1:B:2714:PRO:HB2	1:B:2716:LYS:HG2	2.01	0.41
1:B:2988:ARG:HH22	1:B:2995:HIS:N	2.19	0.41
1:B:3827:GLU:O	1:B:3831:GLN:HA	2.20	0.41
1:B:3892:TYR:OH	1:B:3899:ASP:OD1	2.27	0.41
1:B:4664:ASP:OD1	1:B:4665:ARG:N	2.53	0.41
1:B:4767:LEU:O	1:B:4771:VAL:HG23	2.19	0.41
1:C:591:GLU:O	1:C:594:ILE:HG22	2.20	0.41
1:C:2627:TRP:HB2	1:C:2630:PHE:HB2	2.02	0.41
1:C:2940:ILE:HD12	1:C:2943:PHE:HD1	1.86	0.41
1:C:4513:ILE:O	1:C:4516:ILE:HG22	2.20	0.41
1:C:4662:GLY:O	1:C:4666:ILE:HD12	2.21	0.41
1:D:833:LYS:HB2	1:D:835:GLU:OE2	2.21	0.41
1:D:1689:ILE:HA	1:D:1703:TYR:CE1	2.45	0.41
1:D:2570:GLU:HG2	1:D:2605:MET:HB3	2.01	0.41
1:D:2940:ILE:HD12	1:D:2943:PHE:HD1	1.86	0.41
1:D:2988:ARG:HH22	1:D:2995:HIS:N	2.19	0.41
1:D:3728:GLN:O	1:D:3732:HIS:ND1	2.49	0.41
1:D:4523:SER:HB3	1:D:4558:HIS:HB2	2.02	0.41
1:D:4732:GLY:HA2	1:D:4735:ASN:O	2.20	0.41
1:A:46:LEU:HD23	1:A:46:LEU:HA	1.94	0.41
1:A:238:HIS:HB3	1:A:243:GLU:HG2	2.03	0.41
1:A:1176:THR:HB	1:A:1181:ILE:HD13	2.02	0.41
1:A:2265:VAL:HG21	1:A:2301:PHE:CD2	2.55	0.41
1:A:2471:PHE:CE1	1:A:2475:VAL:HG21	2.55	0.41
1:A:2940:ILE:HD12	1:A:2943:PHE:HD1	1.86	0.41
1:A:3171:LEU:HD11	1:A:3214:LEU:HD12	2.02	0.41
1:A:4070:ALA:HB1	1:A:4078:LEU:HD13	2.01	0.41
1:B:2487:LEU:HA	1:B:2487:LEU:HD12	1.91	0.41
1:B:3043:ARG:HH22	1:B:3115:HIS:HD2	1.67	0.41
1:B:4289:SER:HA	1:B:4292:MET:HG3	2.02	0.41
1:B:4662:GLY:O	1:B:4666:ILE:HD12	2.21	0.41
1:C:240:HIS:O	1:D:167:LYS:NZ	2.33	0.41
1:C:1554:GLN:NE2	1:C:1556:GLU:OE2	2.54	0.41
1:C:2214:MET:HE2	1:C:2242:VAL:HG11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2657:TYR:HA	1:C:2662:PHE:CE1	2.54	0.41
1:C:3069:GLU:O	1:C:3073:GLU:OE1	2.38	0.41
1:C:3728:GLN:O	1:C:3732:HIS:ND1	2.49	0.41
1:C:4117:THR:HA	1:C:4120:GLU:OE1	2.20	0.41
1:C:4921:PHE:HE2	1:C:4940:VAL:HG11	1.84	0.41
1:D:23:GLN:HG2	1:D:36:CYS:SG	2.60	0.41
1:D:274:LEU:HD23	1:D:274:LEU:HA	1.88	0.41
1:D:764:PRO:HB2	1:D:781:ASN:N	2.35	0.41
1:D:877:HIS:CG	1:D:878:LEU:N	2.88	0.41
1:D:1428:TYR:HB3	1:D:1566:LEU:HD22	2.02	0.41
1:D:2214:MET:HE2	1:D:2242:VAL:HG11	2.01	0.41
1:D:2651:ALA:O	1:D:2655:LYS:HB2	2.20	0.41
1:D:2659:GLN:CD	1:D:2663:LYS:HZ2	2.22	0.41
1:D:2878:THR:O	1:D:2882:LYS:HG3	2.20	0.41
1:D:4277:LYS:HA	1:D:4280:VAL:HG12	2.02	0.41
1:D:4523:SER:HB2	1:D:4560:VAL:HG12	2.02	0.41
1:D:4621:PRO:HD2	1:D:4632:ARG:HH21	1.86	0.41
1:A:11:ILE:HD12	1:A:176:ARG:HE	1.85	0.41
1:A:764:PRO:HB2	1:A:781:ASN:N	2.35	0.41
1:A:887:GLU:HA	1:A:890:HIS:CE1	2.55	0.41
1:A:2841:ALA:HA	1:A:2844:MET:HG3	2.02	0.41
1:A:3237:VAL:C	1:A:3240:PRO:HD2	2.46	0.41
1:A:3827:GLU:O	1:A:3831:GLN:HA	2.20	0.41
1:A:4190:VAL:HG11	1:A:4949:TRP:CH2	2.55	0.41
1:A:4863:GLN:OE1	1:A:4863:GLN:CA	2.68	0.41
1:B:585:ALA:O	1:B:589:ILE:HG12	2.19	0.41
1:B:670:TYR:HB2	1:B:1028:ARG:HH12	1.84	0.41
1:B:2489:GLU:HB2	1:B:2544:LEU:HD11	2.01	0.41
1:B:2657:TYR:HA	1:B:2662:PHE:CE1	2.54	0.41
1:B:2940:ILE:HD12	1:B:2943:PHE:HD1	1.86	0.41
1:B:3260:ARG:HG2	1:B:3260:ARG:O	2.21	0.41
1:B:3942:ASP:O	1:B:3945:VAL:HG12	2.20	0.41
1:B:4513:ILE:O	1:B:4516:ILE:HG22	2.21	0.41
1:B:4751:LYS:O	1:B:4755:THR:HG23	2.21	0.41
1:C:57:ASN:OD1	1:C:58:VAL:N	2.53	0.41
1:C:1043:LYS:O	1:C:1047:LYS:CB	2.69	0.41
1:C:2907:PHE:CE2	1:C:2910:LEU:HB3	2.56	0.41
1:C:3260:ARG:HG2	1:C:3260:ARG:O	2.21	0.41
1:C:3716:GLU:O	1:C:3720:GLU:OE1	2.39	0.41
1:C:4190:VAL:HG11	1:C:4949:TRP:CH2	2.55	0.41
1:C:4503:ARG:HD2	1:C:4503:ARG:HA	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:541:ILE:HD13	1:D:574:VAL:HG13	2.02	0.41
1:D:911:ASN:OD1	1:D:912:LYS:N	2.53	0.41
1:D:2389:MET:HE3	1:D:2464:HIS:CE1	2.56	0.41
1:D:2684:ASN:HD21	1:D:2911:GLU:C	2.29	0.41
1:D:3016:ARG:HA	1:D:3096:TYR:CZ	2.55	0.41
1:D:3040:LEU:O	1:D:3111:HIS:NE2	2.54	0.41
1:D:4163:PRO:O	1:D:4167:GLU:HG2	2.21	0.41
1:A:515:ALA:HB2	1:A:523:GLY:HA3	2.01	0.41
1:A:814:LEU:HD12	1:A:815:PRO:HD2	2.02	0.41
1:A:1188:SER:HB2	1:A:1193:LYS:NZ	2.35	0.41
1:A:1428:TYR:HB3	1:A:1566:LEU:HD22	2.02	0.41
1:A:1978:ASN:HB3	1:A:1983:LYS:HE2	2.01	0.41
1:A:2178:VAL:HG21	1:A:2192:MET:CE	2.50	0.41
1:A:2580:LEU:HD23	1:A:2581:ARG:O	2.21	0.41
1:A:2586:GLN:HE21	1:A:2587:HIS:CE1	2.38	0.41
1:A:2930:ILE:O	1:A:3010:LYS:NZ	2.54	0.41
1:A:3043:ARG:O	1:A:3046:MET:HG3	2.20	0.41
1:A:3260:ARG:O	1:A:3260:ARG:HG2	2.21	0.41
1:B:57:ASN:OD1	1:B:58:VAL:N	2.53	0.41
1:B:1127:GLU:HB3	1:B:1130:SER:HB3	2.01	0.41
1:B:1554:GLN:NE2	1:B:1556:GLU:OE2	2.54	0.41
1:B:2186:GLU:OE1	1:B:2187:ILE:N	2.41	0.41
1:B:2551:THR:O	1:B:2555:LEU:HD23	2.20	0.41
1:B:3237:VAL:C	1:B:3240:PRO:HD2	2.46	0.41
1:B:4070:ALA:HB1	1:B:4078:LEU:HD13	2.01	0.41
1:B:4163:PRO:O	1:B:4167:GLU:HG2	2.21	0.41
1:B:4732:GLY:HA2	1:B:4735:ASN:O	2.20	0.41
1:B:4743:LEU:O	1:B:4746:ILE:HG12	2.21	0.41
1:C:448:PRO:HB2	1:C:452:VAL:HG23	2.01	0.41
1:C:515:ALA:HB2	1:C:523:GLY:HA3	2.01	0.41
1:C:833:LYS:HB2	1:C:835:GLU:OE2	2.21	0.41
1:C:929:ARG:NH1	1:C:933:LEU:HB2	2.34	0.41
1:C:1145:TRP:CE2	1:C:1149:ASN:HB3	2.55	0.41
1:C:2178:VAL:HG21	1:C:2192:MET:CE	2.50	0.41
1:C:2988:ARG:HH22	1:C:2995:HIS:N	2.18	0.41
1:C:3016:ARG:HA	1:C:3096:TYR:CZ	2.55	0.41
1:D:184:VAL:HG22	1:D:191:TYR:CE1	2.55	0.41
1:D:448:PRO:HB2	1:D:452:VAL:HG23	2.01	0.41
1:D:1978:ASN:HB3	1:D:1983:LYS:HE2	2.01	0.41
1:D:2138:GLU:HA	1:D:2141:LEU:HD12	2.02	0.41
1:D:2435:VAL:O	1:D:2465:LYS:NZ	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2611:THR:OG1	1:D:2668:CYS:HB2	2.19	0.41
1:D:2726:GLU:OE1	1:D:2726:GLU:N	2.51	0.41
1:D:2888:LYS:O	1:D:2892:ILE:HG22	2.20	0.41
1:D:2907:PHE:CE2	1:D:2910:LEU:HB3	2.55	0.41
1:D:3171:LEU:HD11	1:D:3214:LEU:HD12	2.02	0.41
1:D:3661:VAL:HG23	1:D:3666:GLN:HG2	2.02	0.41
1:A:911:ASN:OD1	1:A:912:LYS:N	2.53	0.41
1:A:1819:VAL:HG21	1:A:1901:PRO:HB2	2.02	0.41
1:A:1932:PHE:CE1	1:A:1996:LEU:HB2	2.56	0.41
1:A:2638:LEU:HB3	1:A:2680:TYR:CE1	2.55	0.41
1:A:3062:ASP:O	1:A:3066:GLU:OE1	2.37	0.41
1:A:4163:PRO:O	1:A:4167:GLU:HG2	2.21	0.41
1:A:4751:LYS:O	1:A:4755:THR:HG23	2.21	0.41
1:B:11:ILE:HD12	1:B:176:ARG:HE	1.85	0.41
1:B:184:VAL:HG22	1:B:191:TYR:CE1	2.55	0.41
1:B:814:LEU:HD12	1:B:815:PRO:HD2	2.02	0.41
1:B:2178:VAL:HG21	1:B:2192:MET:CE	2.50	0.41
1:B:3906:PHE:HB3	1:B:3967:LEU:HD11	2.02	0.41
1:B:4190:VAL:HG11	1:B:4949:TRP:CH2	2.55	0.41
1:C:513:HIS:O	1:C:517:VAL:HG23	2.20	0.41
1:C:1188:SER:HB2	1:C:1193:LYS:NZ	2.35	0.41
1:C:1935:LYS:O	1:C:1939:ASN:ND2	2.54	0.41
1:C:2122:SER:O	1:C:2126:ILE:HG12	2.20	0.41
1:C:2471:PHE:CE1	1:C:2475:VAL:HG21	2.55	0.41
1:C:3114:GLN:NE2	1:C:3115:HIS:CE1	2.89	0.41
1:C:3273:MET:HE2	1:C:3273:MET:HB2	1.86	0.41
1:C:4496:ALA:HB2	1:C:4592:CYS:HB3	2.02	0.41
1:C:4863:GLN:OE1	1:C:4863:GLN:CA	2.68	0.41
1:D:718:VAL:HG23	1:D:793:SER:HB3	2.02	0.41
1:D:2303:ARG:HG2	1:D:2401:ARG:HD2	2.02	0.41
1:D:3043:ARG:HH22	1:D:3115:HIS:HD2	1.67	0.41
1:D:3237:VAL:C	1:D:3240:PRO:HD2	2.46	0.41
1:D:3827:GLU:O	1:D:3831:GLN:HA	2.20	0.41
1:D:3942:ASP:O	1:D:3945:VAL:HG12	2.20	0.41
1:D:4664:ASP:OD1	1:D:4665:ARG:N	2.53	0.41
1:D:4863:GLN:OE1	1:D:4863:GLN:CA	2.68	0.41
1:A:548:CYS:HB3	1:A:582:SER:HB2	2.01	0.41
1:A:2682:GLU:O	1:A:2682:GLU:HG2	2.21	0.41
1:A:2988:ARG:HH22	1:A:2995:HIS:N	2.19	0.41
1:A:4277:LYS:O	1:A:4281:THR:HG23	2.21	0.41
1:A:4513:ILE:O	1:A:4516:ILE:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:62:LEU:HA	1:B:65:CYS:HB2	2.02	0.41
1:B:1895:GLN:O	1:B:1895:GLN:HG2	2.21	0.41
1:B:1932:PHE:CE1	1:B:1996:LEU:HB2	2.56	0.41
1:B:2622:CYS:SG	1:B:2623:LEU:N	2.93	0.41
1:B:4921:PHE:HE2	1:B:4940:VAL:HG11	1.84	0.41
1:C:877:HIS:CG	1:C:878:LEU:N	2.88	0.41
1:C:2137:GLU:HG2	1:C:2138:GLU:N	2.36	0.41
1:C:2972:ASP:OD1	1:C:3032:CYS:HA	2.20	0.41
1:C:3040:LEU:O	1:C:3111:HIS:NE2	2.54	0.41
1:C:3237:VAL:C	1:C:3240:PRO:HD2	2.46	0.41
1:C:3290:ILE:O	1:C:3292:GLU:N	2.50	0.41
1:C:4621:PRO:HD2	1:C:4632:ARG:HH21	1.86	0.41
1:C:4751:LYS:O	1:C:4755:THR:HG23	2.21	0.41
1:D:678:MET:HE3	1:D:679:VAL:H	1.86	0.41
1:D:1145:TRP:CE2	1:D:1149:ASN:HB3	2.55	0.41
1:D:2939:TYR:HB3	1:D:2943:PHE:CE1	2.56	0.41
1:D:3732:HIS:CG	1:D:3773:VAL:HG22	2.56	0.41
1:A:514:PHE:CD2	1:A:526:TRP:HB2	2.51	0.41
1:A:686:VAL:HG11	1:A:796:ALA:HB3	2.03	0.41
1:A:808:HIS:CD2	1:A:832:LEU:HD23	2.56	0.41
1:A:866:PRO:HB3	1:A:1002:ASN:OD1	2.21	0.41
1:A:1645:THR:HG22	1:A:1695:PRO:HG3	2.01	0.41
1:A:2126:ILE:HD11	1:A:2145:GLY:HA3	2.03	0.41
1:A:2303:ARG:HG2	1:A:2401:ARG:HD2	2.02	0.41
1:A:2551:THR:O	1:A:2555:LEU:HD23	2.20	0.41
1:A:2611:THR:OG1	1:A:2668:CYS:HB2	2.19	0.41
1:A:2769:GLU:C	1:A:2771:TYR:N	2.77	0.41
1:A:3269:ASN:OD1	1:A:3271:GLU:HG3	2.21	0.41
1:A:3649:ALA:C	1:A:3652:PRO:HD2	2.46	0.41
1:A:3732:HIS:CG	1:A:3773:VAL:HG22	2.56	0.41
1:A:4022:LYS:NZ	1:A:4057:HIS:HB3	2.36	0.41
1:A:4795:LYS:NZ	1:A:4830:GLU:O	2.54	0.41
1:B:541:ILE:HD13	1:B:574:VAL:HG13	2.02	0.41
1:B:887:GLU:HA	1:B:890:HIS:CE1	2.55	0.41
1:B:1043:LYS:O	1:B:1047:LYS:CB	2.69	0.41
1:B:1628:MET:HE3	1:B:1687:TYR:HD2	1.86	0.41
1:B:1978:ASN:HB3	1:B:1983:LYS:HE2	2.01	0.41
1:B:2137:GLU:HG2	1:B:2138:GLU:N	2.36	0.41
1:B:2255:LEU:O	1:B:3810:ARG:HD3	2.21	0.41
1:B:2586:GLN:HE21	1:B:2587:HIS:CE1	2.38	0.41
1:B:2590:ARG:HA	1:B:2640:LEU:HD22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2684:ASN:HD21	1:B:2911:GLU:C	2.29	0.41
1:B:2841:ALA:HA	1:B:2844:MET:HG3	2.02	0.41
1:B:2878:THR:O	1:B:2882:LYS:HG3	2.20	0.41
1:B:2907:PHE:CE2	1:B:2910:LEU:HB3	2.56	0.41
1:B:2939:TYR:HB3	1:B:2943:PHE:CE1	2.56	0.41
1:B:2961:LYS:O	1:B:2965:LYS:HE2	2.21	0.41
1:B:2972:ASP:OD1	1:B:3032:CYS:HA	2.20	0.41
1:B:3269:ASN:OD1	1:B:3271:GLU:HG3	2.21	0.41
1:B:3732:HIS:CG	1:B:3773:VAL:HG22	2.56	0.41
1:B:3926:GLY:O	1:B:3927:PRO:C	2.63	0.41
1:B:4621:PRO:HD2	1:B:4632:ARG:HH21	1.86	0.41
1:B:4639:SER:O	1:B:4642:ASN:HB2	2.21	0.41
1:C:238:HIS:HB3	1:C:243:GLU:HG2	2.03	0.41
1:C:718:VAL:HG23	1:C:793:SER:HB3	2.02	0.41
1:C:1564:MET:HE1	1:C:1578:PRO:HA	2.03	0.41
1:C:1946:GLU:O	1:C:1949:GLN:HG3	2.20	0.41
1:C:2299:LEU:HD21	1:C:2395:LEU:HD12	2.01	0.41
1:C:2389:MET:HE3	1:C:2464:HIS:CE1	2.56	0.41
1:C:2590:ARG:HA	1:C:2640:LEU:HD22	2.03	0.41
1:C:2769:GLU:C	1:C:2771:TYR:N	2.77	0.41
1:C:2773:TRP:HA	1:C:2776:LYS:HD2	2.02	0.41
1:C:3043:ARG:HH22	1:C:3115:HIS:HD2	1.67	0.41
1:C:3269:ASN:OD1	1:C:3271:GLU:HG3	2.21	0.41
1:C:4022:LYS:NZ	1:C:4057:HIS:HB3	2.36	0.41
1:C:4523:SER:HB2	1:C:4560:VAL:HG12	2.02	0.41
1:D:11:ILE:HD12	1:D:176:ARG:HE	1.85	0.41
1:D:57:ASN:OD1	1:D:58:VAL:N	2.53	0.41
1:D:1188:SER:HB2	1:D:1193:LYS:NZ	2.35	0.41
1:D:1645:THR:HG22	1:D:1695:PRO:HG3	2.01	0.41
1:D:1895:GLN:O	1:D:1895:GLN:HG2	2.21	0.41
1:D:2178:VAL:HG21	1:D:2192:MET:CE	2.50	0.41
1:D:2186:GLU:CD	1:D:2187:ILE:H	2.28	0.41
1:D:2471:PHE:CE1	1:D:2475:VAL:HG21	2.55	0.41
1:D:2586:GLN:HE21	1:D:2587:HIS:CE1	2.38	0.41
1:D:2682:GLU:HG2	1:D:2682:GLU:O	2.21	0.41
1:D:2930:ILE:O	1:D:3010:LYS:NZ	2.54	0.41
1:D:3649:ALA:C	1:D:3652:PRO:HD2	2.46	0.41
1:D:3906:PHE:HB3	1:D:3967:LEU:HD11	2.02	0.41
1:D:4117:THR:HA	1:D:4120:GLU:OE1	2.20	0.41
1:D:4795:LYS:NZ	1:D:4830:GLU:O	2.54	0.41
1:A:718:VAL:HG13	1:A:724:SER:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1935:LYS:O	1:A:1939:ASN:ND2	2.54	0.41
1:A:2138:GLU:HA	1:A:2141:LEU:HD12	2.02	0.41
1:A:2255:LEU:O	1:A:3810:ARG:HD3	2.21	0.41
1:A:2684:ASN:HD21	1:A:2911:GLU:C	2.29	0.41
1:A:3717:LYS:HB2	1:A:3717:LYS:HE2	1.91	0.41
1:A:4732:GLY:HA2	1:A:4735:ASN:O	2.20	0.41
1:B:245:LEU:HD12	1:B:245:LEU:HA	1.95	0.41
1:B:365:HIS:CE1	1:B:368:THR:HG23	2.56	0.41
1:B:731:HIS:HB3	1:B:738:ALA:HB1	2.03	0.41
1:B:808:HIS:CD2	1:B:832:LEU:HD23	2.56	0.41
1:B:911:ASN:OD1	1:B:912:LYS:N	2.53	0.41
1:B:1176:THR:HB	1:B:1181:ILE:HD13	2.02	0.41
1:B:2062:ILE:HG21	1:B:2087:LEU:HG	2.03	0.41
1:B:2389:MET:HE3	1:B:2464:HIS:CE1	2.56	0.41
1:B:2914:THR:OG1	1:B:2915:PRO:HD3	2.21	0.41
1:B:3069:GLU:O	1:B:3073:GLU:OE1	2.38	0.41
1:B:3114:GLN:NE2	1:B:3115:HIS:CE1	2.89	0.41
1:B:3716:GLU:O	1:B:3720:GLU:OE1	2.39	0.41
1:B:4277:LYS:O	1:B:4281:THR:HG23	2.21	0.41
1:B:4503:ARG:HD2	1:B:4503:ARG:HA	1.87	0.41
1:C:365:HIS:CE1	1:C:368:THR:HG23	2.56	0.41
1:C:866:PRO:HB3	1:C:1002:ASN:OD1	2.21	0.41
1:C:1979:PHE:CZ	1:C:1996:LEU:HB3	2.56	0.41
1:C:2923:TYR:HE1	1:C:2999:LYS:HB3	1.86	0.41
1:C:2939:TYR:HB3	1:C:2943:PHE:CE1	2.56	0.41
1:C:4277:LYS:O	1:C:4281:THR:HG23	2.21	0.41
1:C:4304:GLY:O	1:C:4308:ILE:HG12	2.21	0.41
1:C:4743:LEU:O	1:C:4746:ILE:HG12	2.21	0.41
1:D:731:HIS:HB3	1:D:738:ALA:HB1	2.03	0.41
1:D:866:PRO:HB3	1:D:1002:ASN:OD1	2.21	0.41
1:D:1043:LYS:O	1:D:1047:LYS:CB	2.69	0.41
1:D:1256:PRO:HG3	1:D:1593:HIS:CD2	2.56	0.41
1:D:1829:LEU:HG	1:D:1912:TYR:CE2	2.56	0.41
1:D:3008:PHE:HZ	1:D:3108:LEU:HD21	1.86	0.41
1:D:4277:LYS:O	1:D:4281:THR:HG23	2.21	0.41
1:D:4751:LYS:O	1:D:4755:THR:HG23	2.21	0.41
1:A:948:CYS:HB2	1:A:1064:LEU:HD13	2.03	0.40
1:A:2137:GLU:HG2	1:A:2138:GLU:N	2.36	0.40
1:A:2726:GLU:N	1:A:2726:GLU:OE1	2.51	0.40
1:A:2907:PHE:CE2	1:A:2910:LEU:HB3	2.56	0.40
1:A:2914:THR:OG1	1:A:2915:PRO:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3040:LEU:O	1:A:3111:HIS:NE2	2.54	0.40
1:A:3278:GLY:HA2	1:A:3281:LEU:HG	2.03	0.40
1:B:718:VAL:HG13	1:B:724:SER:HB3	2.03	0.40
1:B:1256:PRO:HG3	1:B:1593:HIS:CD2	2.56	0.40
1:B:1819:VAL:HG21	1:B:1901:PRO:HB2	2.02	0.40
1:B:1829:LEU:HG	1:B:1912:TYR:CE2	2.56	0.40
1:B:2265:VAL:HG21	1:B:2301:PHE:CD2	2.55	0.40
1:B:2389:MET:HE3	1:B:2464:HIS:HE1	1.86	0.40
1:B:2634:SER:O	1:B:2635:GLU:HB3	2.19	0.40
1:B:2923:TYR:HE1	1:B:2999:LYS:HB3	1.86	0.40
1:B:2930:ILE:O	1:B:3010:LYS:NZ	2.54	0.40
1:B:3002:GLU:O	1:B:3005:THR:OG1	2.30	0.40
1:B:3649:ALA:C	1:B:3652:PRO:HD2	2.46	0.40
1:B:4496:ALA:HB2	1:B:4592:CYS:HB3	2.02	0.40
1:B:4563:GLU:HA	1:B:4568:MET:SD	2.61	0.40
1:C:330:THR:HG23	1:C:366:VAL:HG22	2.03	0.40
1:C:678:MET:HE3	1:C:679:VAL:H	1.86	0.40
1:C:686:VAL:HG11	1:C:796:ALA:HB3	2.03	0.40
1:C:749:LEU:HD22	1:C:755:ILE:HD11	2.03	0.40
1:C:1256:PRO:HG3	1:C:1593:HIS:CD2	2.56	0.40
1:C:2138:GLU:HA	1:C:2141:LEU:HD12	2.02	0.40
1:C:2186:GLU:CD	1:C:2187:ILE:H	2.28	0.40
1:C:2389:MET:HE3	1:C:2464:HIS:HE1	1.86	0.40
1:C:2841:ALA:HA	1:C:2844:MET:HG3	2.02	0.40
1:C:3062:ASP:O	1:C:3066:GLU:OE1	2.37	0.40
1:C:4163:PRO:O	1:C:4167:GLU:HG2	2.21	0.40
1:D:238:HIS:HB3	1:D:243:GLU:HG2	2.03	0.40
1:D:1286:THR:OG1	1:D:1550:PRO:O	2.27	0.40
1:D:1564:MET:HE1	1:D:1578:PRO:HA	2.03	0.40
1:D:2137:GLU:HG2	1:D:2138:GLU:N	2.36	0.40
1:D:3043:ARG:O	1:D:3046:MET:HG3	2.20	0.40
1:D:3269:ASN:OD1	1:D:3271:GLU:HG3	2.21	0.40
1:D:3716:GLU:O	1:D:3720:GLU:OE1	2.39	0.40
1:D:3892:TYR:OH	1:D:3899:ASP:OD1	2.27	0.40
1:D:4866:ILE:HG22	1:D:4870:PHE:CE2	2.57	0.40
1:A:713:TRP:CE2	1:A:1600:PRO:HD3	2.57	0.40
1:A:749:LEU:HD22	1:A:755:ILE:HD11	2.03	0.40
1:A:942:THR:CG2	1:A:1002:ASN:HD22	2.34	0.40
1:A:1554:GLN:NE2	1:A:1556:GLU:OE2	2.54	0.40
1:A:1628:MET:HE3	1:A:1687:TYR:HD2	1.86	0.40
1:A:2627:TRP:HB2	1:A:2630:PHE:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3114:GLN:NE2	1:A:3115:HIS:CE1	2.89	0.40
1:A:3661:VAL:HG23	1:A:3666:GLN:HG2	2.02	0.40
1:A:4639:SER:O	1:A:4642:ASN:HB2	2.21	0.40
1:B:713:TRP:CE2	1:B:1600:PRO:HD3	2.57	0.40
1:B:1979:PHE:CZ	1:B:1996:LEU:HB3	2.56	0.40
1:B:2973:GLN:HA	1:B:2976:LYS:HG2	2.04	0.40
1:B:4587:ILE:CD1	1:B:4722:LEU:HB3	2.52	0.40
1:C:66:THR:HG22	1:C:217:ILE:HG21	2.03	0.40
1:C:814:LEU:HD12	1:C:815:PRO:HD2	2.02	0.40
1:C:893:TRP:CZ3	1:C:924:LEU:HD11	2.57	0.40
1:C:1895:GLN:HG2	1:C:1895:GLN:O	2.21	0.40
1:C:2833:LEU:HD11	1:C:2893:LEU:HD22	2.03	0.40
1:C:2855:LYS:O	1:C:2859:GLU:OE1	2.39	0.40
1:C:2878:THR:O	1:C:2882:LYS:HG3	2.20	0.40
1:C:2930:ILE:O	1:C:3010:LYS:NZ	2.54	0.40
1:C:4587:ILE:CD1	1:C:4722:LEU:HB3	2.52	0.40
1:C:4639:SER:O	1:C:4642:ASN:HB2	2.21	0.40
1:D:713:TRP:CE2	1:D:1600:PRO:HD3	2.57	0.40
1:D:814:LEU:HD12	1:D:815:PRO:HD2	2.02	0.40
1:D:849:ASP:OD1	1:D:1214:ARG:NH2	2.54	0.40
1:D:2590:ARG:HA	1:D:2640:LEU:HD22	2.03	0.40
1:D:2741:TRP:CZ3	1:D:2749:ASP:HA	2.56	0.40
1:D:2841:ALA:HA	1:D:2844:MET:HG3	2.02	0.40
1:D:2855:LYS:O	1:D:2859:GLU:OE1	2.39	0.40
1:D:3260:ARG:O	1:D:3260:ARG:HG2	2.21	0.40
1:D:3278:GLY:HA2	1:D:3281:LEU:HG	2.03	0.40
1:D:3948:LEU:HD22	1:D:4010:VAL:HG22	2.03	0.40
1:D:3966:GLU:HG2	1:D:3967:LEU:N	2.36	0.40
1:D:4094:ILE:O	1:D:4098:VAL:HG23	2.21	0.40
1:A:1220:ASP:HB3	1:A:1223:THR:HG23	2.04	0.40
1:A:1829:LEU:HG	1:A:1912:TYR:CE2	2.56	0.40
1:A:2295:GLY:HA3	1:A:2391:PHE:HE2	1.86	0.40
1:A:2741:TRP:CZ3	1:A:2749:ASP:HA	2.56	0.40
1:A:3187:LYS:O	1:A:3188:SER:OG	2.32	0.40
1:A:3966:GLU:HG2	1:A:3967:LEU:N	2.36	0.40
1:A:4626:ILE:HG13	1:A:4627:LYS:HD3	2.03	0.40
1:B:893:TRP:CZ3	1:B:924:LEU:HD11	2.57	0.40
1:B:1935:LYS:O	1:B:1939:ASN:ND2	2.54	0.40
1:B:2126:ILE:HD11	1:B:2145:GLY:HA3	2.03	0.40
1:B:3171:LEU:HD11	1:B:3214:LEU:HD12	2.02	0.40
1:B:3942:ASP:HA	1:B:3945:VAL:HG12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4304:GLY:O	1:B:4308:ILE:HG12	2.21	0.40
1:B:4480:PHE:CE2	1:B:4482:LYS:HB2	2.56	0.40
1:B:4626:ILE:HG13	1:B:4627:LYS:HD3	2.03	0.40
1:C:62:LEU:HA	1:C:65:CYS:HB2	2.02	0.40
1:C:713:TRP:CE2	1:C:1600:PRO:HD3	2.57	0.40
1:C:942:THR:CG2	1:C:1002:ASN:HD22	2.34	0.40
1:C:948:CYS:HB2	1:C:1064:LEU:HD13	2.03	0.40
1:C:1094:TYR:OH	1:C:1808:ASP:OD2	2.25	0.40
1:C:1829:LEU:HG	1:C:1912:TYR:CE2	2.56	0.40
1:C:2728:SER:HA	1:C:2731:LYS:NZ	2.36	0.40
1:C:2914:THR:OG1	1:C:2915:PRO:HD3	2.21	0.40
1:C:3008:PHE:HZ	1:C:3108:LEU:HD21	1.86	0.40
1:C:3255:GLU:H	1:C:3255:GLU:HG3	1.74	0.40
1:C:4094:ILE:O	1:C:4098:VAL:HG23	2.21	0.40
1:D:66:THR:HG22	1:D:217:ILE:HG21	2.03	0.40
1:D:365:HIS:CE1	1:D:368:THR:HG23	2.56	0.40
1:D:948:CYS:HB2	1:D:1064:LEU:HD13	2.03	0.40
1:D:1935:LYS:O	1:D:1939:ASN:ND2	2.54	0.40
1:D:2295:GLY:HA3	1:D:2391:PHE:HE2	1.86	0.40
1:D:2415:GLU:O	1:D:2419:ILE:HG12	2.22	0.40
1:D:2923:TYR:HE1	1:D:2999:LYS:HB3	1.86	0.40
1:D:3114:GLN:NE2	1:D:3115:HIS:CE1	2.89	0.40
1:D:4480:PHE:CE2	1:D:4482:LYS:HB2	2.56	0.40
1:D:4662:GLY:O	1:D:4666:ILE:HD12	2.20	0.40
1:D:4743:LEU:O	1:D:4746:ILE:HG12	2.21	0.40
1:A:881:ILE:HD12	1:A:1060:TYR:HE2	1.87	0.40
1:A:986:ILE:HB	1:A:1055:ARG:CZ	2.52	0.40
1:A:1016:TRP:HZ3	1:A:1022:GLN:HE22	1.70	0.40
1:A:2389:MET:HE3	1:A:2464:HIS:CE1	2.56	0.40
1:A:2728:SER:HA	1:A:2731:LYS:NZ	2.36	0.40
1:A:3008:PHE:HZ	1:A:3108:LEU:HD21	1.87	0.40
1:A:3069:GLU:O	1:A:3073:GLU:OE1	2.38	0.40
1:A:3906:PHE:HB3	1:A:3967:LEU:HD11	2.02	0.40
1:A:4587:ILE:CD1	1:A:4722:LEU:HB3	2.52	0.40
1:A:4662:GLY:O	1:A:4666:ILE:HD12	2.21	0.40
1:B:749:LEU:HD22	1:B:755:ILE:HD11	2.03	0.40
1:B:2580:LEU:HD23	1:B:2581:ARG:O	2.21	0.40
1:B:2741:TRP:CZ3	1:B:2749:ASP:HA	2.57	0.40
1:B:3948:LEU:HD22	1:B:4010:VAL:HG22	2.03	0.40
1:B:4866:ILE:HG22	1:B:4870:PHE:CE2	2.56	0.40
1:C:986:ILE:HB	1:C:1055:ARG:CZ	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1628:MET:HE3	1:C:1687:TYR:HD2	1.86	0.40
1:C:2580:LEU:HD23	1:C:2581:ARG:O	2.21	0.40
1:C:2961:LYS:O	1:C:2965:LYS:HE2	2.21	0.40
1:C:3961:ASP:OD1	1:C:3962:SER:N	2.48	0.40
1:C:4563:GLU:HA	1:C:4568:MET:SD	2.61	0.40
1:D:330:THR:HG23	1:D:366:VAL:HG22	2.03	0.40
1:D:749:LEU:HD22	1:D:755:ILE:HD11	2.04	0.40
1:D:893:TRP:CZ3	1:D:924:LEU:HD11	2.57	0.40
1:D:942:THR:CG2	1:D:1002:ASN:HD22	2.34	0.40
1:D:1932:PHE:CE1	1:D:1996:LEU:HB2	2.56	0.40
1:D:2580:LEU:HD23	1:D:2581:ARG:O	2.21	0.40
1:D:3290:ILE:C	1:D:3292:GLU:H	2.27	0.40
1:D:4022:LYS:NZ	1:D:4057:HIS:HB3	2.36	0.40
1:D:4587:ILE:CD1	1:D:4722:LEU:HB3	2.52	0.40
1:A:45:ARG:NH1	1:A:151:GLU:OE2	2.35	0.40
1:A:365:HIS:CE1	1:A:368:THR:HG23	2.56	0.40
1:A:833:LYS:HB2	1:A:835:GLU:OE2	2.21	0.40
1:A:893:TRP:CZ3	1:A:924:LEU:HD11	2.57	0.40
1:A:1936:LEU:HA	1:A:1939:ASN:ND2	2.35	0.40
1:A:2833:LEU:HD11	1:A:2893:LEU:HD22	2.03	0.40
1:A:3716:GLU:O	1:A:3720:GLU:OE1	2.39	0.40
1:A:3890:TRP:HB3	1:B:76:ARG:NH1	2.36	0.40
1:A:4304:GLY:O	1:A:4308:ILE:HG12	2.21	0.40
1:A:4563:GLU:HA	1:A:4568:MET:SD	2.61	0.40
1:A:4866:ILE:HG22	1:A:4870:PHE:CE2	2.57	0.40
1:B:274:LEU:HD23	1:B:274:LEU:HA	1.88	0.40
1:B:881:ILE:HD12	1:B:1060:TYR:HE2	1.87	0.40
1:B:1016:TRP:HZ3	1:B:1022:GLN:HE22	1.70	0.40
1:B:2138:GLU:HA	1:B:2141:LEU:HD12	2.02	0.40
1:B:2415:GLU:O	1:B:2419:ILE:HG12	2.22	0.40
1:B:2682:GLU:O	1:B:2682:GLU:HG2	2.21	0.40
1:B:4004:VAL:HG11	1:B:4114:ARG:HB3	2.04	0.40
1:B:4094:ILE:O	1:B:4098:VAL:HG23	2.21	0.40
1:C:1564:MET:CE	1:C:1565:PRO:HD2	2.52	0.40
1:C:2873:PRO:O	1:C:2876:THR:OG1	2.30	0.40
1:C:2917:ILE:HD12	1:C:2917:ILE:HA	2.00	0.40
1:C:3732:HIS:CG	1:C:3773:VAL:HG22	2.56	0.40
1:C:3942:ASP:HA	1:C:3945:VAL:HG12	2.04	0.40
1:C:4152:ILE:HG21	1:C:4157:ARG:HH21	1.86	0.40
1:C:4795:LYS:NZ	1:C:4830:GLU:O	2.54	0.40
1:C:4866:ILE:HG22	1:C:4870:PHE:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:808:HIS:O	1:D:1616:GLY:HA2	2.22	0.40
1:D:2961:LYS:O	1:D:2965:LYS:HE2	2.21	0.40
1:D:3246:MET:HG3	1:D:3246:MET:H	1.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	4198/4967 (84%)	4085 (97%)	109 (3%)	4 (0%)	48	81
1	B	4198/4967 (84%)	4085 (97%)	109 (3%)	4 (0%)	48	81
1	C	4198/4967 (84%)	4085 (97%)	109 (3%)	4 (0%)	48	81
1	D	4198/4967 (84%)	4084 (97%)	110 (3%)	4 (0%)	48	81
All	All	16792/19868 (84%)	16339 (97%)	437 (3%)	16 (0%)	49	81

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2770	ILE
1	A	3927	PRO
1	A	4641	PRO
1	B	2770	ILE
1	B	3927	PRO
1	B	4641	PRO
1	C	2770	ILE
1	C	3927	PRO
1	C	4641	PRO
1	D	2770	ILE
1	D	3927	PRO
1	D	4641	PRO

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Mol	Chain	Res	Type
1	A	1498	GLN
1	B	1498	GLN
1	C	1498	GLN
1	D	1498	GLN

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3434/4358 (79%)	3424 (100%)	10 (0%)	86	85
1	B	3708/4358 (85%)	3697 (100%)	11 (0%)	86	85
1	C	3708/4358 (85%)	3697 (100%)	11 (0%)	86	85
1	D	3708/4358 (85%)	3697 (100%)	11 (0%)	86	85
All	All	14558/17432 (84%)	14515 (100%)	43 (0%)	84	85

All (43) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	880	ARG
1	A	927	GLN
1	A	1037	LEU
1	A	1421	MET
1	A	1498	GLN
1	A	2756	LEU
1	A	3121	LEU
1	A	3246	MET
1	A	4268	MET
1	A	4504	MET
1	B	880	ARG
1	B	927	GLN
1	B	1037	LEU
1	B	1421	MET
1	B	1498	GLN
1	B	1948	MET
1	B	2756	LEU

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Mol	Chain	Res	Type
1	B	3121	LEU
1	B	3246	MET
1	B	4268	MET
1	B	4504	MET
1	C	880	ARG
1	C	927	GLN
1	C	1037	LEU
1	C	1421	MET
1	C	1498	GLN
1	C	1948	MET
1	C	2756	LEU
1	C	3121	LEU
1	C	3246	MET
1	C	4268	MET
1	C	4504	MET
1	D	880	ARG
1	D	927	GLN
1	D	1037	LEU
1	D	1421	MET
1	D	1498	GLN
1	D	1948	MET
1	D	2756	LEU
1	D	3121	LEU
1	D	3246	MET
1	D	4268	MET
1	D	4504	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (243) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	79	GLN
1	A	193	HIS
1	A	208	GLN
1	A	261	HIS
1	A	288	HIS
1	A	313	ASN
1	A	487	ASN
1	A	544	ASN
1	A	604	HIS
1	A	731	HIS
1	A	836	HIS
1	A	949	HIS

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Mol	Chain	Res	Type
1	A	1022	GLN
1	A	1126	GLN
1	A	1169	ASN
1	A	1296	ASN
1	A	1498	GLN
1	A	1554	GLN
1	A	1577	ASN
1	A	1656	HIS
1	A	1670	HIS
1	A	2195	ASN
1	A	2316	ASN
1	A	2386	ASN
1	A	2586	GLN
1	A	2612	ASN
1	A	2899	ASN
1	A	2973	GLN
1	A	3017	HIS
1	A	3034	HIS
1	A	3038	GLN
1	A	3114	GLN
1	A	3115	HIS
1	A	3174	HIS
1	A	3233	HIS
1	A	3252	HIS
1	A	3274	ASN
1	A	3287	ASN
1	A	3304	GLN
1	A	3722	GLN
1	A	3767	ASN
1	A	3770	ASN
1	A	3775	GLN
1	A	3925	GLN
1	A	3949	HIS
1	A	3953	HIS
1	A	4009	ASN
1	A	4097	ASN
1	A	4108	HIS
1	A	4178	ASN
1	A	4489	GLN
1	A	4514	ASN
1	A	4636	ASN
1	A	4706	GLN

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Mol	Chain	Res	Type
1	A	4787	ASN
1	A	4876	GLN
1	A	4961	GLN
1	B	79	GLN
1	B	193	HIS
1	B	208	GLN
1	B	261	HIS
1	B	288	HIS
1	B	313	ASN
1	B	487	ASN
1	B	544	ASN
1	B	604	HIS
1	B	836	HIS
1	B	927	GLN
1	B	949	HIS
1	B	1022	GLN
1	B	1126	GLN
1	B	1169	ASN
1	B	1296	ASN
1	B	1498	GLN
1	B	1577	ASN
1	B	1656	HIS
1	B	1939	ASN
1	B	1940	GLN
1	B	2059	GLN
1	B	2195	ASN
1	B	2251	ASN
1	B	2316	ASN
1	B	2386	ASN
1	B	2586	GLN
1	B	2612	ASN
1	B	2899	ASN
1	B	2973	GLN
1	B	3017	HIS
1	B	3034	HIS
1	B	3114	GLN
1	B	3115	HIS
1	B	3174	HIS
1	B	3233	HIS
1	B	3252	HIS
1	B	3274	ASN
1	B	3287	ASN

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Mol	Chain	Res	Type
1	B	3304	GLN
1	B	3722	GLN
1	B	3767	ASN
1	B	3770	ASN
1	B	3775	GLN
1	B	3925	GLN
1	B	3949	HIS
1	B	3953	HIS
1	B	4009	ASN
1	B	4055	HIS
1	B	4097	ASN
1	B	4108	HIS
1	B	4178	ASN
1	B	4488	GLN
1	B	4489	GLN
1	B	4514	ASN
1	B	4766	GLN
1	B	4787	ASN
1	B	4876	GLN
1	B	4961	GLN
1	C	79	GLN
1	C	193	HIS
1	C	208	GLN
1	C	261	HIS
1	C	288	HIS
1	C	313	ASN
1	C	487	ASN
1	C	544	ASN
1	C	604	HIS
1	C	836	HIS
1	C	949	HIS
1	C	1002	ASN
1	C	1022	GLN
1	C	1126	GLN
1	C	1169	ASN
1	C	1211	GLN
1	C	1296	ASN
1	C	1498	GLN
1	C	1554	GLN
1	C	1577	ASN
1	C	1656	HIS
1	C	1670	HIS

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Mol	Chain	Res	Type
1	C	1939	ASN
1	C	1940	GLN
1	C	2059	GLN
1	C	2195	ASN
1	C	2251	ASN
1	C	2316	ASN
1	C	2386	ASN
1	C	2586	GLN
1	C	2899	ASN
1	C	2973	GLN
1	C	2995	HIS
1	C	3017	HIS
1	C	3034	HIS
1	C	3114	GLN
1	C	3115	HIS
1	C	3174	HIS
1	C	3233	HIS
1	C	3252	HIS
1	C	3274	ASN
1	C	3287	ASN
1	C	3304	GLN
1	C	3722	GLN
1	C	3770	ASN
1	C	3775	GLN
1	C	3925	GLN
1	C	3949	HIS
1	C	3953	HIS
1	C	4055	HIS
1	C	4097	ASN
1	C	4108	HIS
1	C	4178	ASN
1	C	4489	GLN
1	C	4514	ASN
1	C	4636	ASN
1	C	4706	GLN
1	C	4742	HIS
1	C	4766	GLN
1	C	4787	ASN
1	C	4876	GLN
1	C	4961	GLN
1	D	79	GLN
1	D	193	HIS

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Mol	Chain	Res	Type
1	D	208	GLN
1	D	261	HIS
1	D	288	HIS
1	D	313	ASN
1	D	487	ASN
1	D	544	ASN
1	D	604	HIS
1	D	731	HIS
1	D	836	HIS
1	D	949	HIS
1	D	1022	GLN
1	D	1126	GLN
1	D	1169	ASN
1	D	1211	GLN
1	D	1296	ASN
1	D	1498	GLN
1	D	1554	GLN
1	D	1577	ASN
1	D	1656	HIS
1	D	1670	HIS
1	D	1939	ASN
1	D	1940	GLN
1	D	2059	GLN
1	D	2195	ASN
1	D	2251	ASN
1	D	2316	ASN
1	D	2386	ASN
1	D	2586	GLN
1	D	2612	ASN
1	D	2899	ASN
1	D	2973	GLN
1	D	3017	HIS
1	D	3034	HIS
1	D	3038	GLN
1	D	3114	GLN
1	D	3115	HIS
1	D	3174	HIS
1	D	3233	HIS
1	D	3252	HIS
1	D	3274	ASN
1	D	3287	ASN
1	D	3304	GLN

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Mol	Chain	Res	Type
1	D	3722	GLN
1	D	3767	ASN
1	D	3770	ASN
1	D	3775	GLN
1	D	3925	GLN
1	D	3949	HIS
1	D	3953	HIS
1	D	4009	ASN
1	D	4055	HIS
1	D	4097	ASN
1	D	4104	ASN
1	D	4178	ASN
1	D	4489	GLN
1	D	4514	ASN
1	D	4636	ASN
1	D	4706	GLN
1	D	4742	HIS
1	D	4766	GLN
1	D	4787	ASN
1	D	4876	GLN
1	D	4961	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 oligosaccharides in this entry.

5.6 Ligand geometry

Of 12 ligands modelled in this entry, 4 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	ATP	A	5002	-	32,33,33	0.25	0	48,52,52	0.29	0
3	ATP	D	5002	-	32,33,33	0.25	0	48,52,52	0.29	0
3	ATP	D	5003	-	32,33,33	0.25	0	48,52,52	0.27	0
3	ATP	C	5002	-	32,33,33	0.25	0	48,52,52	0.29	0
3	ATP	C	5003	-	32,33,33	0.25	0	48,52,52	0.27	0
3	ATP	B	5002	-	32,33,33	0.26	0	48,52,52	0.29	0
3	ATP	B	5003	-	32,33,33	0.25	0	48,52,52	0.27	0
3	ATP	A	5003	-	32,33,33	0.25	0	48,52,52	0.27	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	A	5002	-	-	6/22/38/38	0/3/3/3
3	ATP	D	5002	-	-	6/22/38/38	0/3/3/3
3	ATP	D	5003	-	-	9/22/38/38	0/3/3/3
3	ATP	C	5002	-	-	6/22/38/38	0/3/3/3
3	ATP	C	5003	-	-	9/22/38/38	0/3/3/3
3	ATP	B	5002	-	-	6/22/38/38	0/3/3/3
3	ATP	B	5003	-	-	9/22/38/38	0/3/3/3
3	ATP	A	5003	-	-	9/22/38/38	0/3/3/3

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (60) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	5002	ATP	O4'-C4'-C5'-O5'
3	A	5002	ATP	C3'-C4'-C5'-O5'
3	A	5003	ATP	O4'-C4'-C5'-O5'
3	B	5002	ATP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
3	B	5002	ATP	C3'-C4'-C5'-O5'
3	B	5003	ATP	O4'-C4'-C5'-O5'
3	C	5002	ATP	O4'-C4'-C5'-O5'
3	C	5002	ATP	C3'-C4'-C5'-O5'
3	C	5003	ATP	O4'-C4'-C5'-O5'
3	D	5002	ATP	O4'-C4'-C5'-O5'
3	D	5002	ATP	C3'-C4'-C5'-O5'
3	D	5003	ATP	O4'-C4'-C5'-O5'
3	A	5003	ATP	C3'-C4'-C5'-O5'
3	B	5003	ATP	C3'-C4'-C5'-O5'
3	C	5003	ATP	C3'-C4'-C5'-O5'
3	D	5003	ATP	C3'-C4'-C5'-O5'
3	A	5003	ATP	C2'-C1'-N9-C8
3	B	5003	ATP	C2'-C1'-N9-C8
3	C	5003	ATP	C2'-C1'-N9-C8
3	D	5003	ATP	C2'-C1'-N9-C8
3	A	5003	ATP	C2'-C1'-N9-C4
3	B	5003	ATP	C2'-C1'-N9-C4
3	C	5003	ATP	C2'-C1'-N9-C4
3	D	5003	ATP	C2'-C1'-N9-C4
3	A	5002	ATP	C5'-O5'-PA-O3A
3	B	5002	ATP	C5'-O5'-PA-O3A
3	C	5002	ATP	C5'-O5'-PA-O3A
3	D	5002	ATP	C5'-O5'-PA-O3A
3	A	5002	ATP	C4'-C5'-O5'-PA
3	A	5003	ATP	C4'-C5'-O5'-PA
3	B	5002	ATP	C4'-C5'-O5'-PA
3	B	5003	ATP	C4'-C5'-O5'-PA
3	C	5002	ATP	C4'-C5'-O5'-PA
3	C	5003	ATP	C4'-C5'-O5'-PA
3	D	5002	ATP	C4'-C5'-O5'-PA
3	D	5003	ATP	C4'-C5'-O5'-PA
3	A	5002	ATP	O4'-C1'-N9-C8
3	B	5002	ATP	O4'-C1'-N9-C8
3	C	5002	ATP	O4'-C1'-N9-C8
3	D	5002	ATP	O4'-C1'-N9-C8
3	A	5002	ATP	O4'-C1'-N9-C4
3	B	5002	ATP	O4'-C1'-N9-C4
3	C	5002	ATP	O4'-C1'-N9-C4
3	D	5002	ATP	O4'-C1'-N9-C4
3	A	5003	ATP	PG-O3B-PB-O1B
3	B	5003	ATP	PG-O3B-PB-O1B

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Mol	Chain	Res	Type	Atoms
3	C	5003	ATP	PG-O3B-PB-O1B
3	D	5003	ATP	PG-O3B-PB-O1B
3	A	5003	ATP	O4'-C1'-N9-C8
3	B	5003	ATP	O4'-C1'-N9-C8
3	C	5003	ATP	O4'-C1'-N9-C8
3	D	5003	ATP	O4'-C1'-N9-C8
3	A	5003	ATP	PG-O3B-PB-O3A
3	B	5003	ATP	PG-O3B-PB-O3A
3	C	5003	ATP	PG-O3B-PB-O3A
3	D	5003	ATP	PG-O3B-PB-O3A
3	A	5003	ATP	PA-O3A-PB-O2B
3	B	5003	ATP	PA-O3A-PB-O2B
3	C	5003	ATP	PA-O3A-PB-O2B
3	D	5003	ATP	PA-O3A-PB-O2B

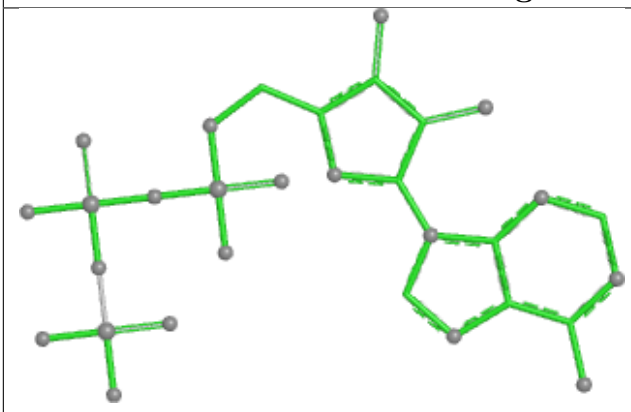
There are no ring outliers.

4 monomers are involved in 5 short contacts:

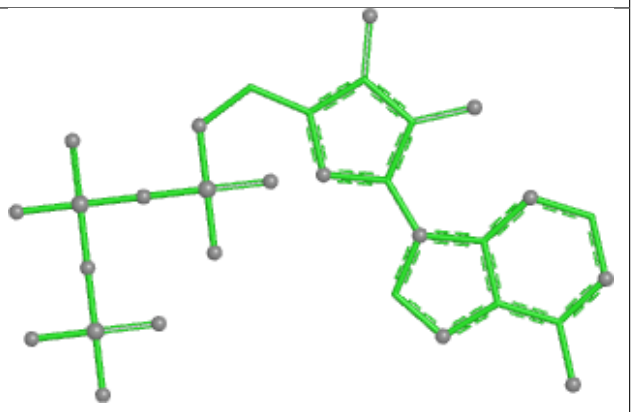
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	5003	ATP	1	0
3	C	5003	ATP	1	0
3	B	5003	ATP	2	0
3	A	5003	ATP	1	0

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

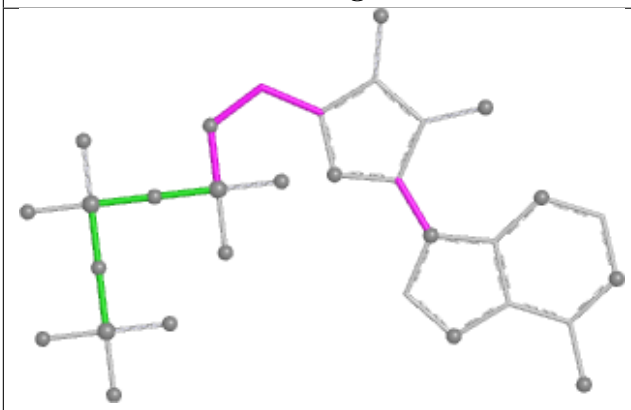
Ligand ATP A 5002



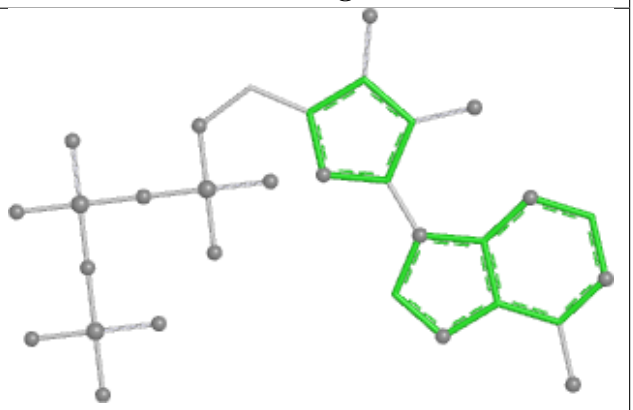
Bond lengths



Bond angles

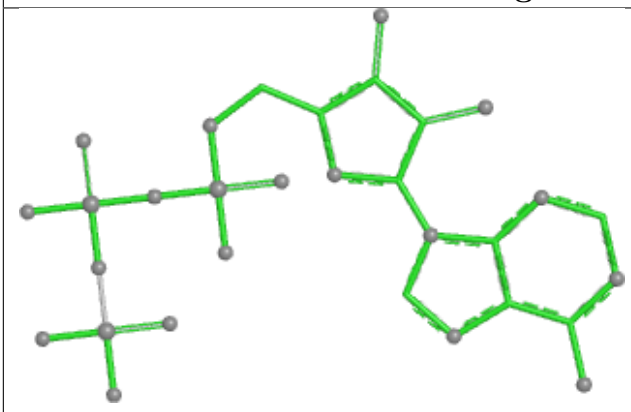


Torsions

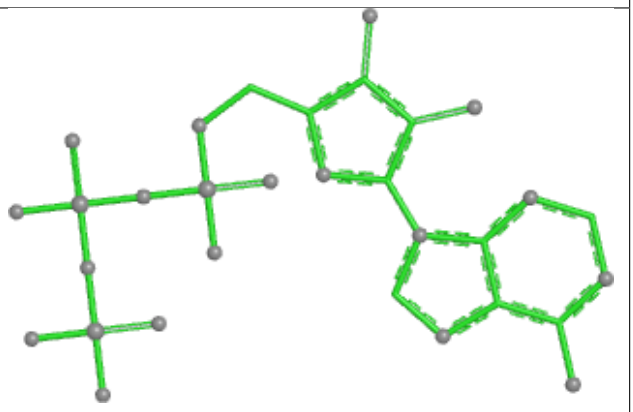


Rings

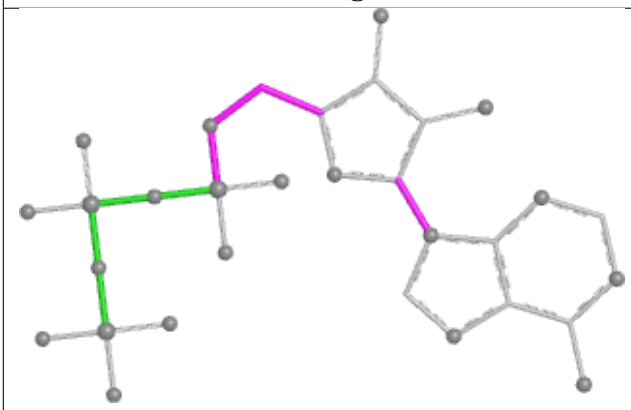
Ligand ATP D 5002



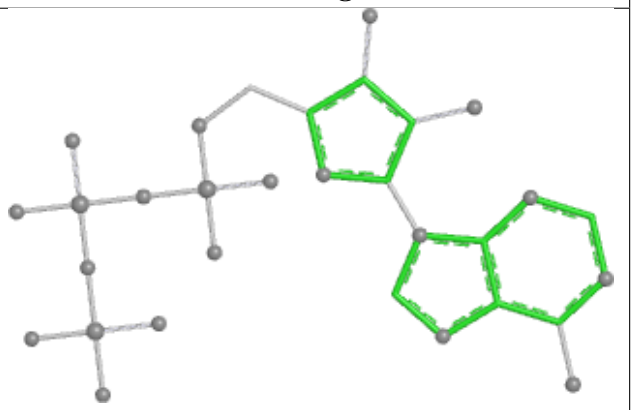
Bond lengths



Bond angles

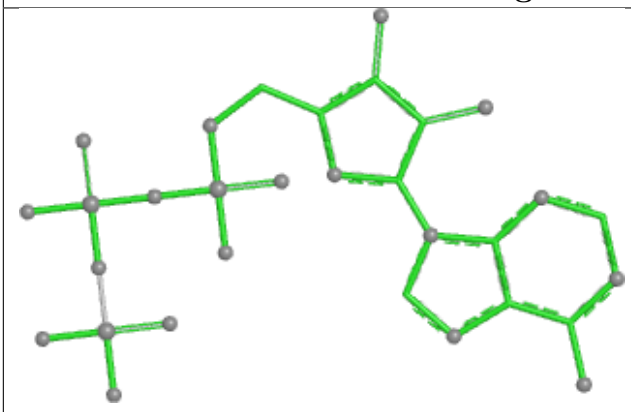


Torsions

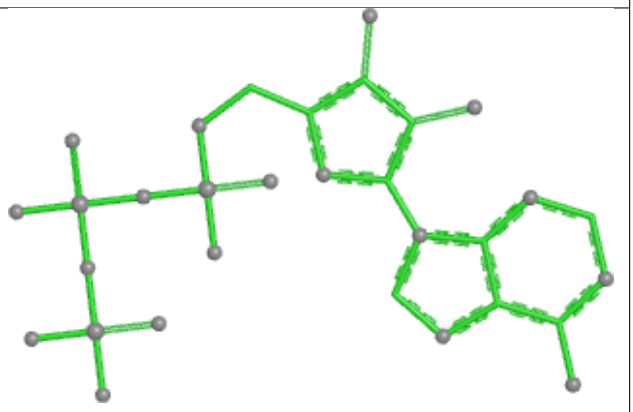


Rings

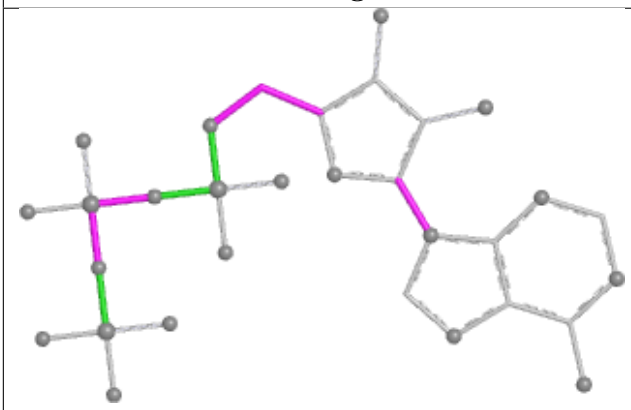
Ligand ATP D 5003



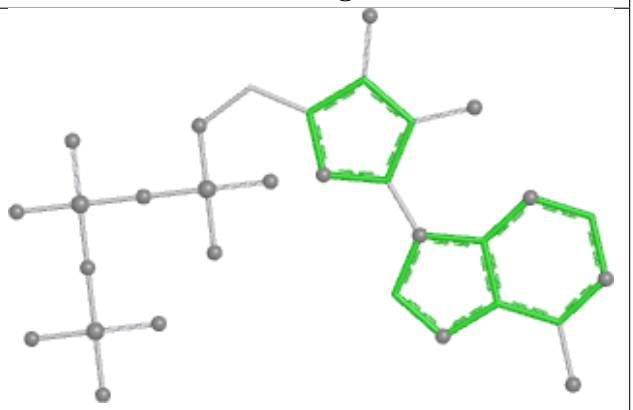
Bond lengths



Bond angles

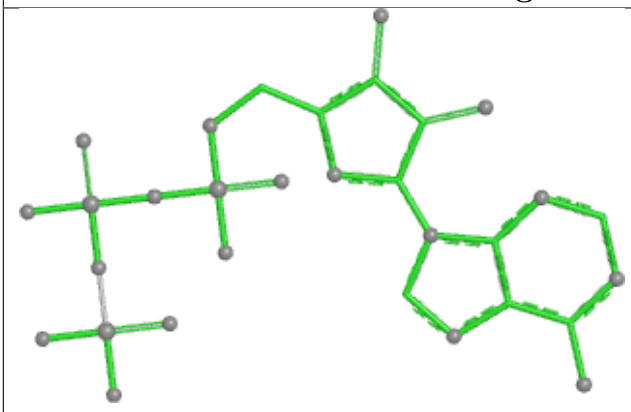


Torsions

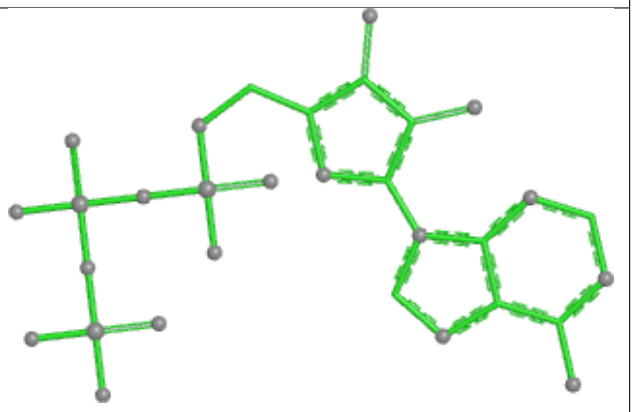


Rings

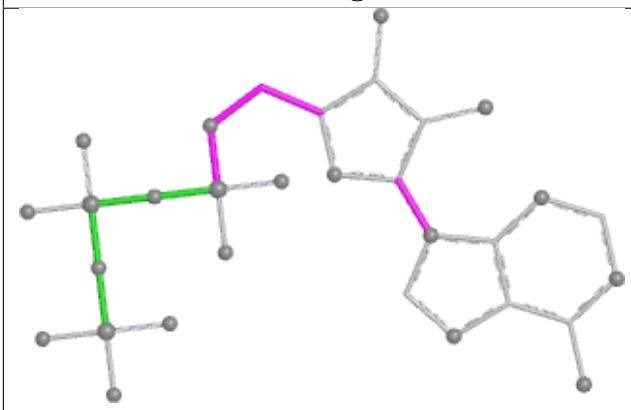
Ligand ATP C 5002



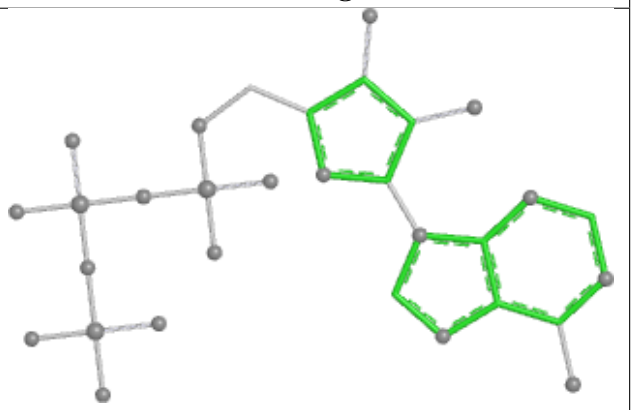
Bond lengths



Bond angles

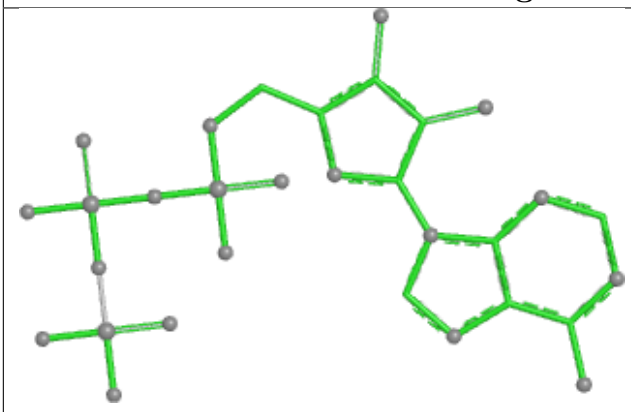


Torsions

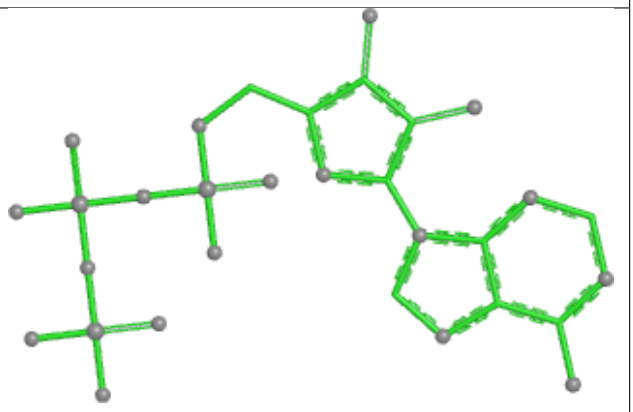


Rings

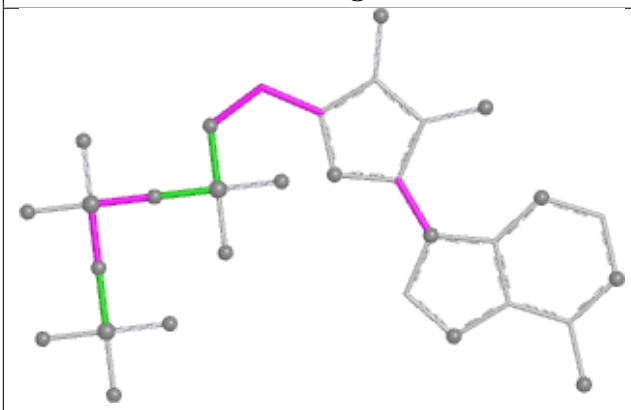
Ligand ATP C 5003



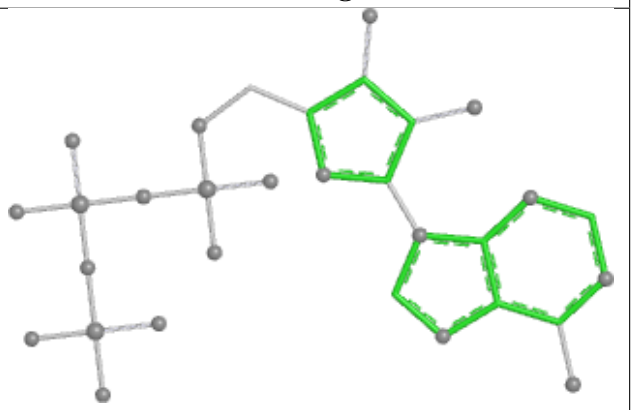
Bond lengths



Bond angles

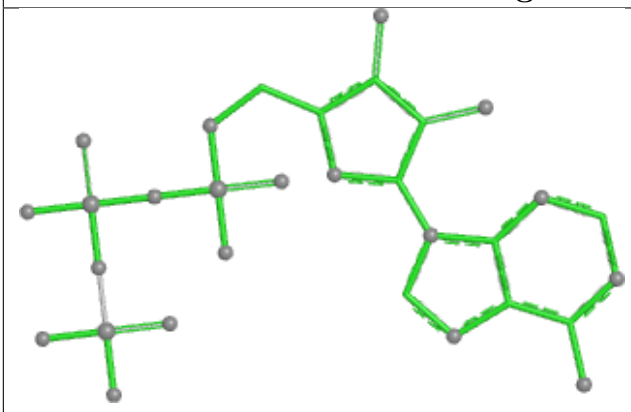


Torsions

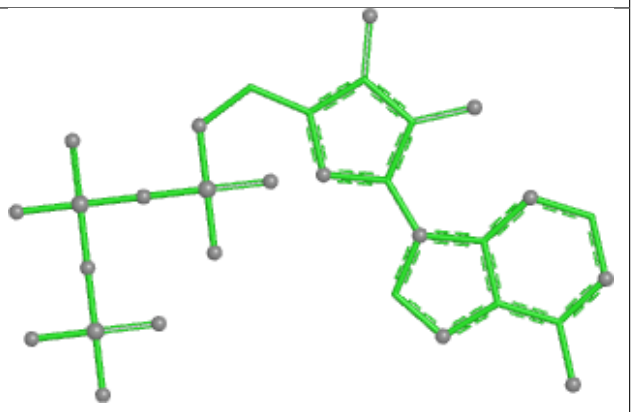


Rings

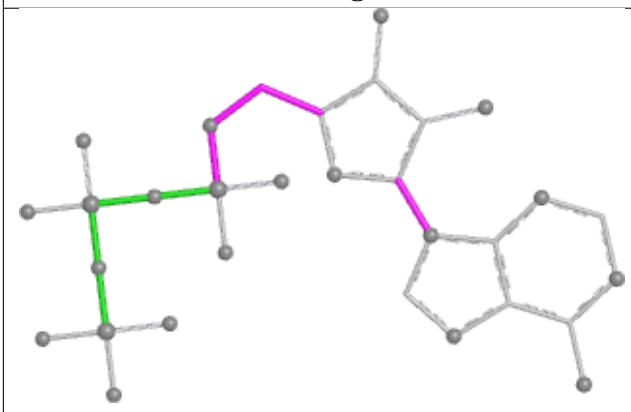
Ligand ATP B 5002



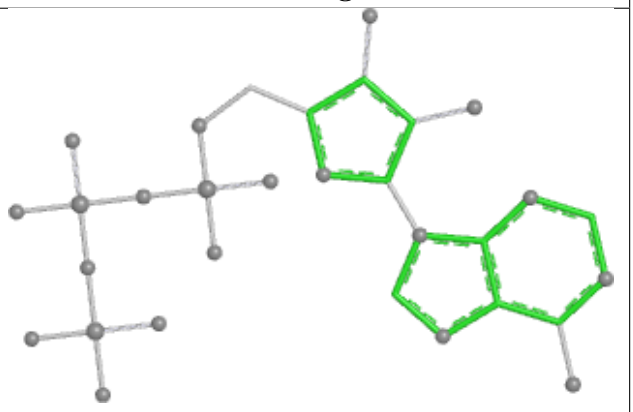
Bond lengths



Bond angles

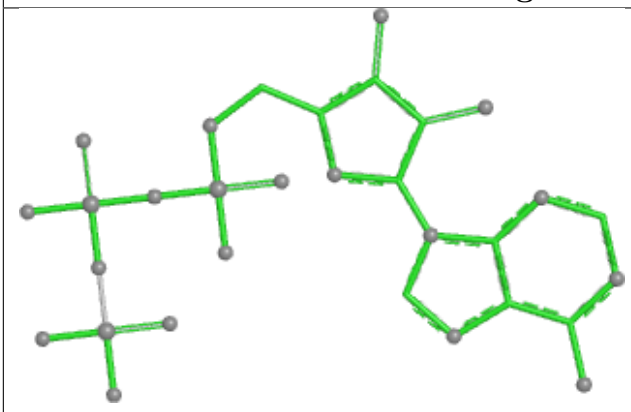


Torsions

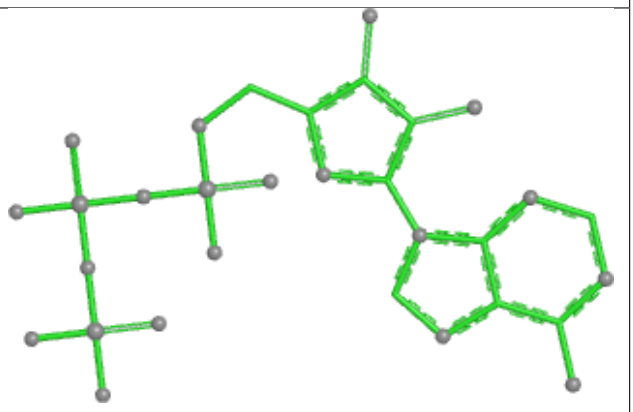


Rings

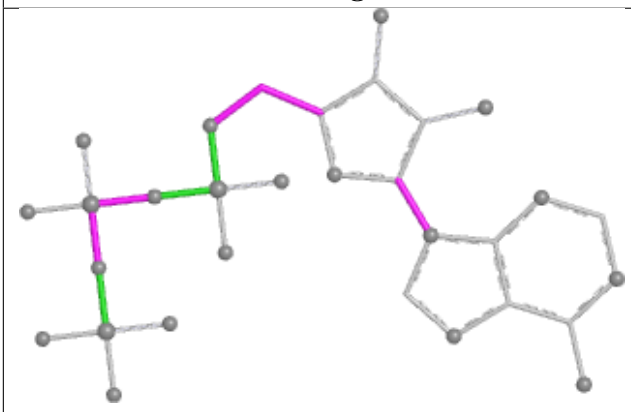
Ligand ATP B 5003



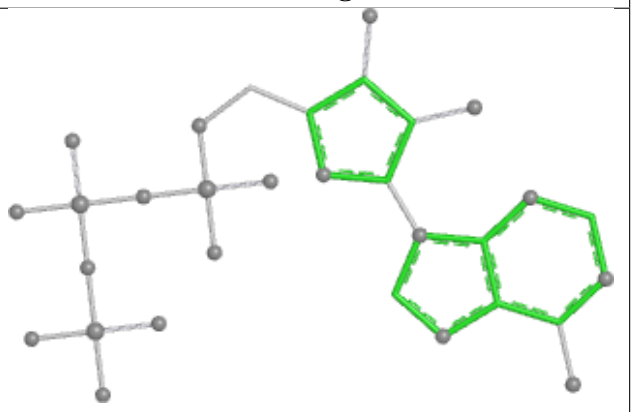
Bond lengths



Bond angles

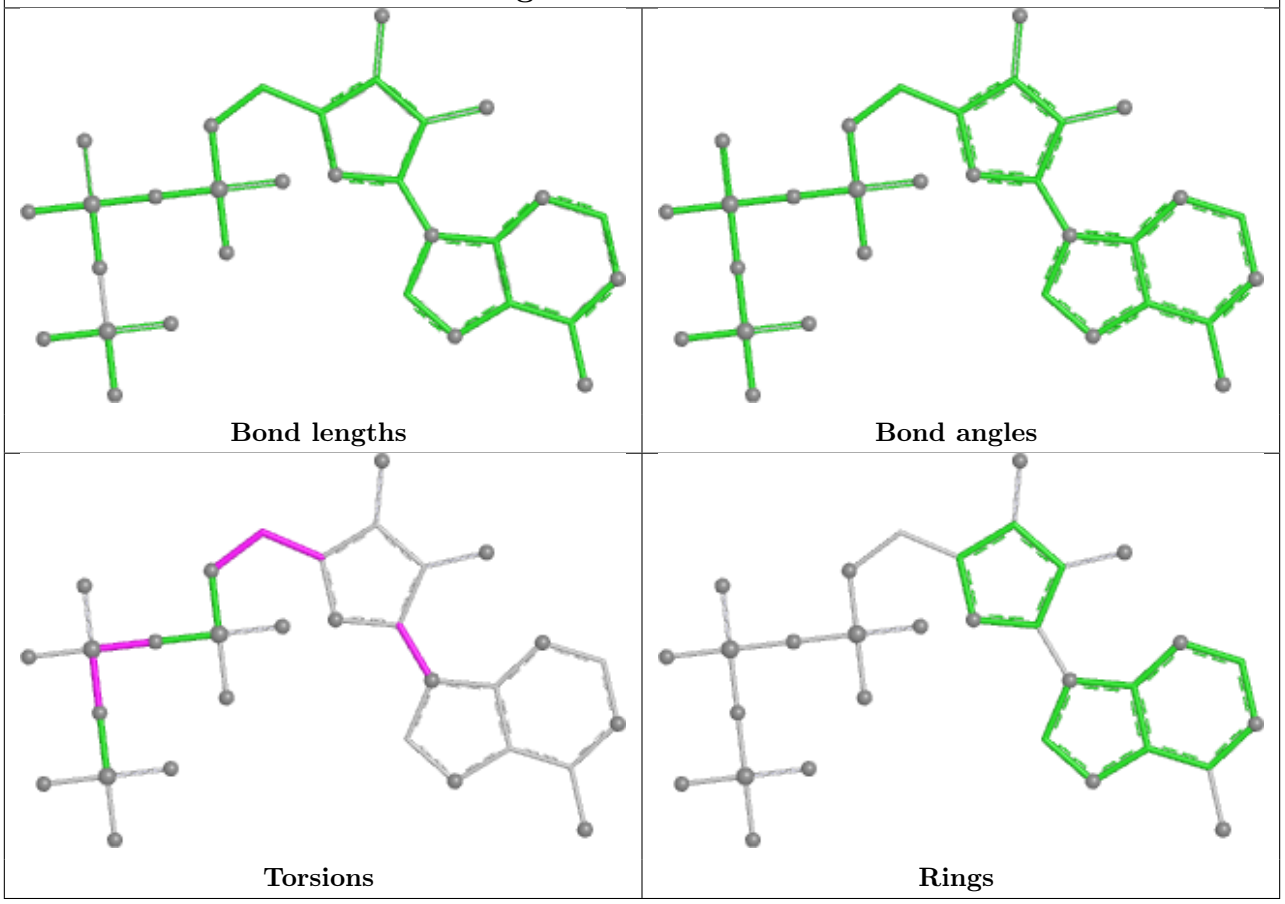


Torsions



Rings

Ligand ATP A 5003



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

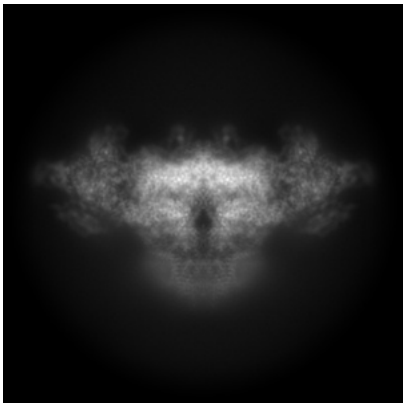
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-42461. These allow visual inspection of the internal detail of the map and identification of artifacts.

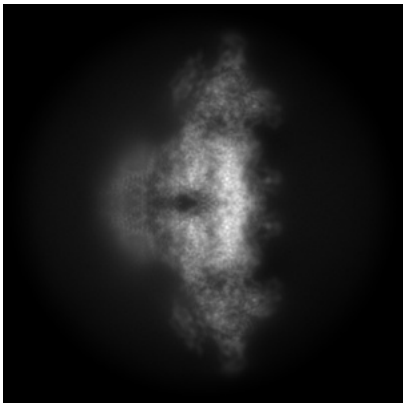
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

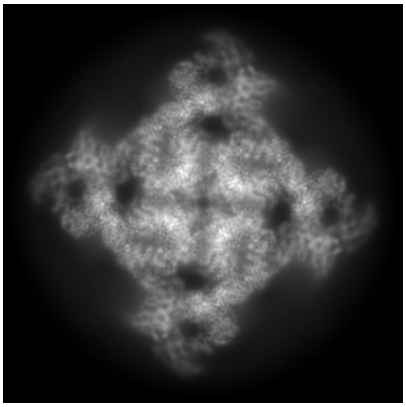
6.1.1 Primary map



X



Y

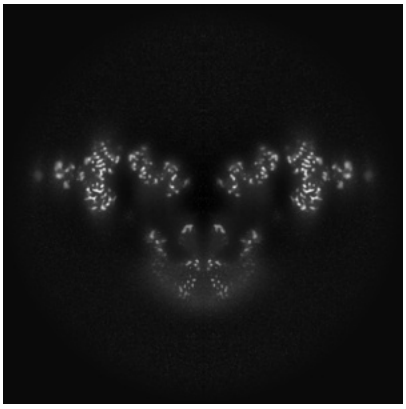


Z

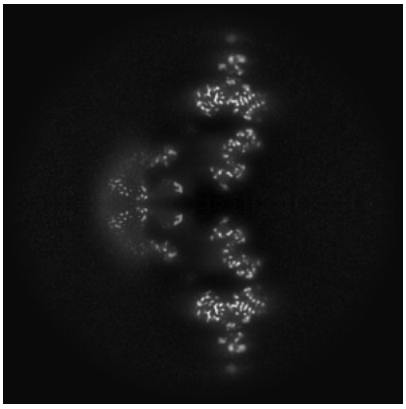
The images above show the map projected in three orthogonal directions.

6.2 Central slices

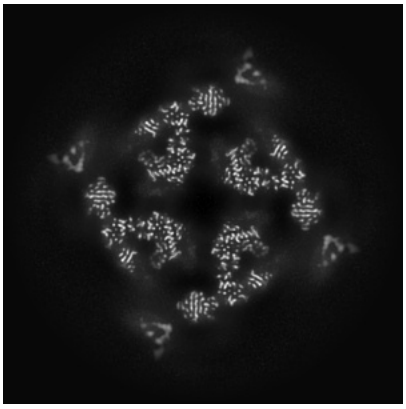
6.2.1 Primary map



X Index: 256



Y Index: 256

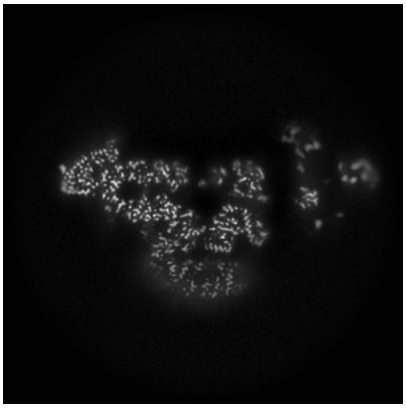


Z Index: 256

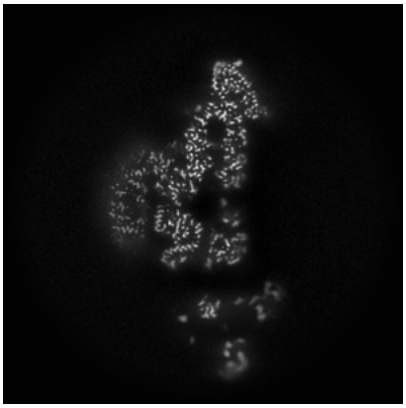
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

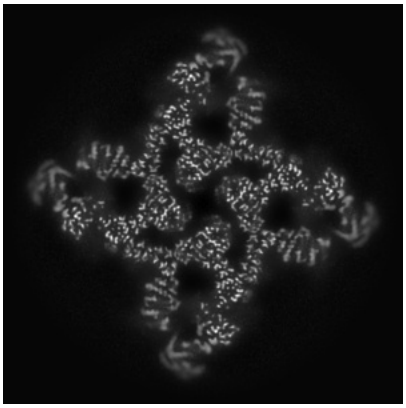
6.3.1 Primary map



X Index: 279



Y Index: 279

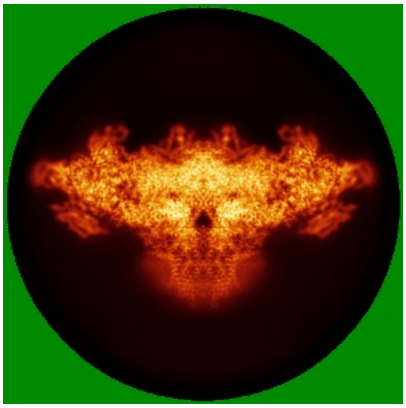


Z Index: 289

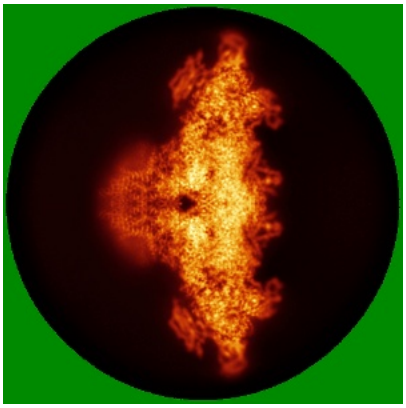
The images above show the largest variance slices of the map in three orthogonal directions.

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

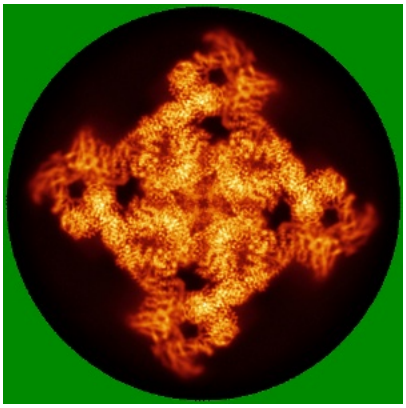
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

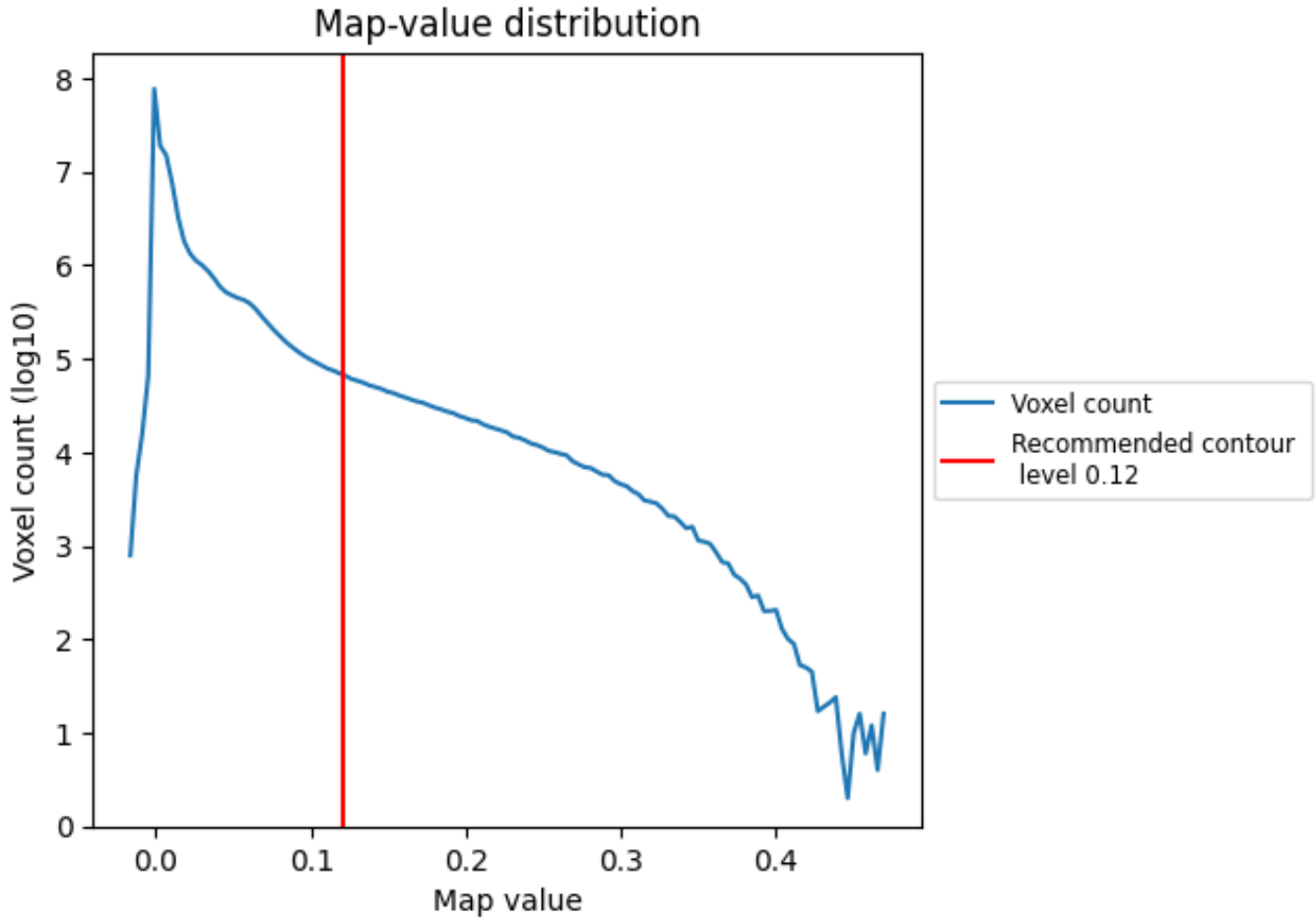
6.6 Mask visualisation (i)

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

7 Map analysis

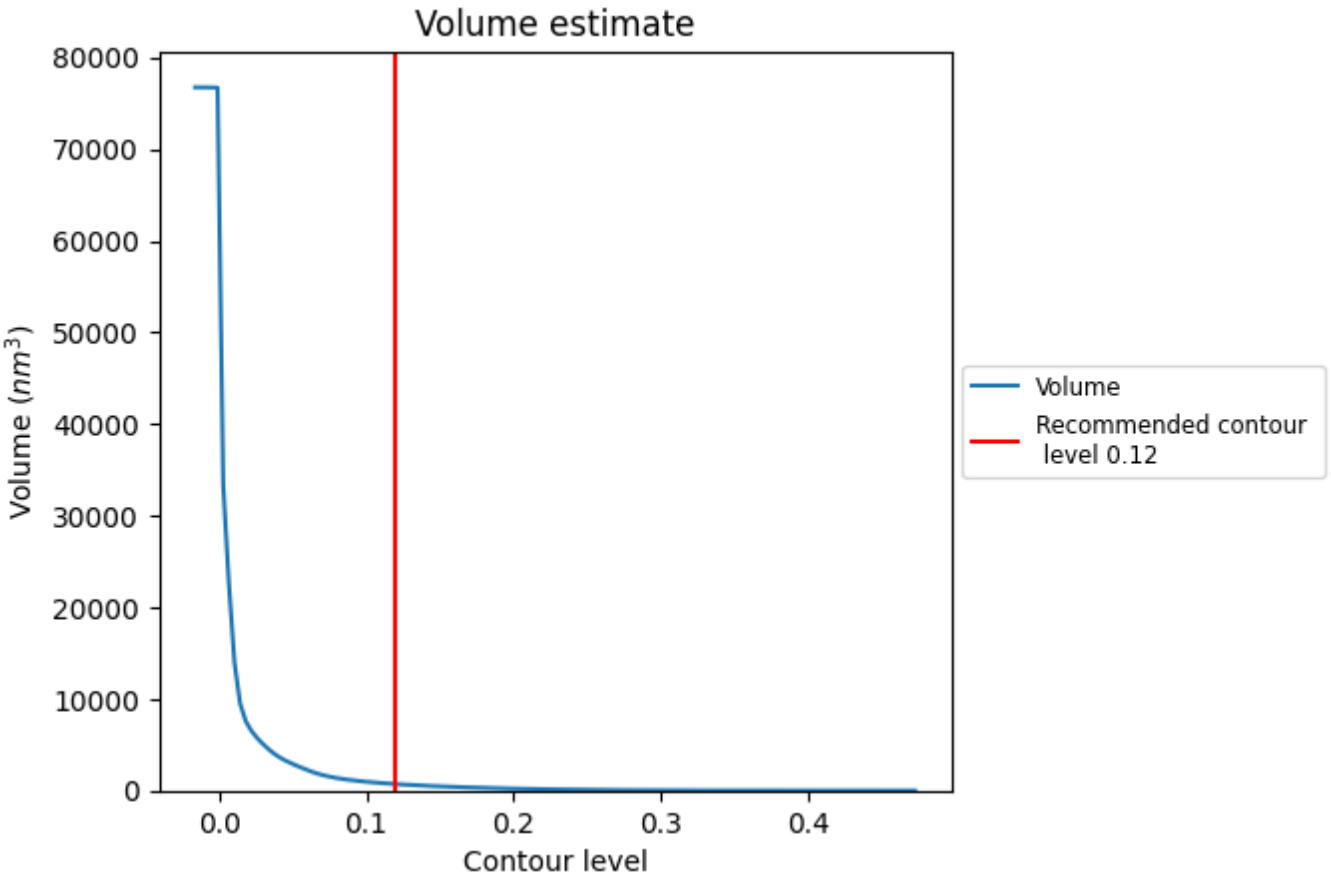
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

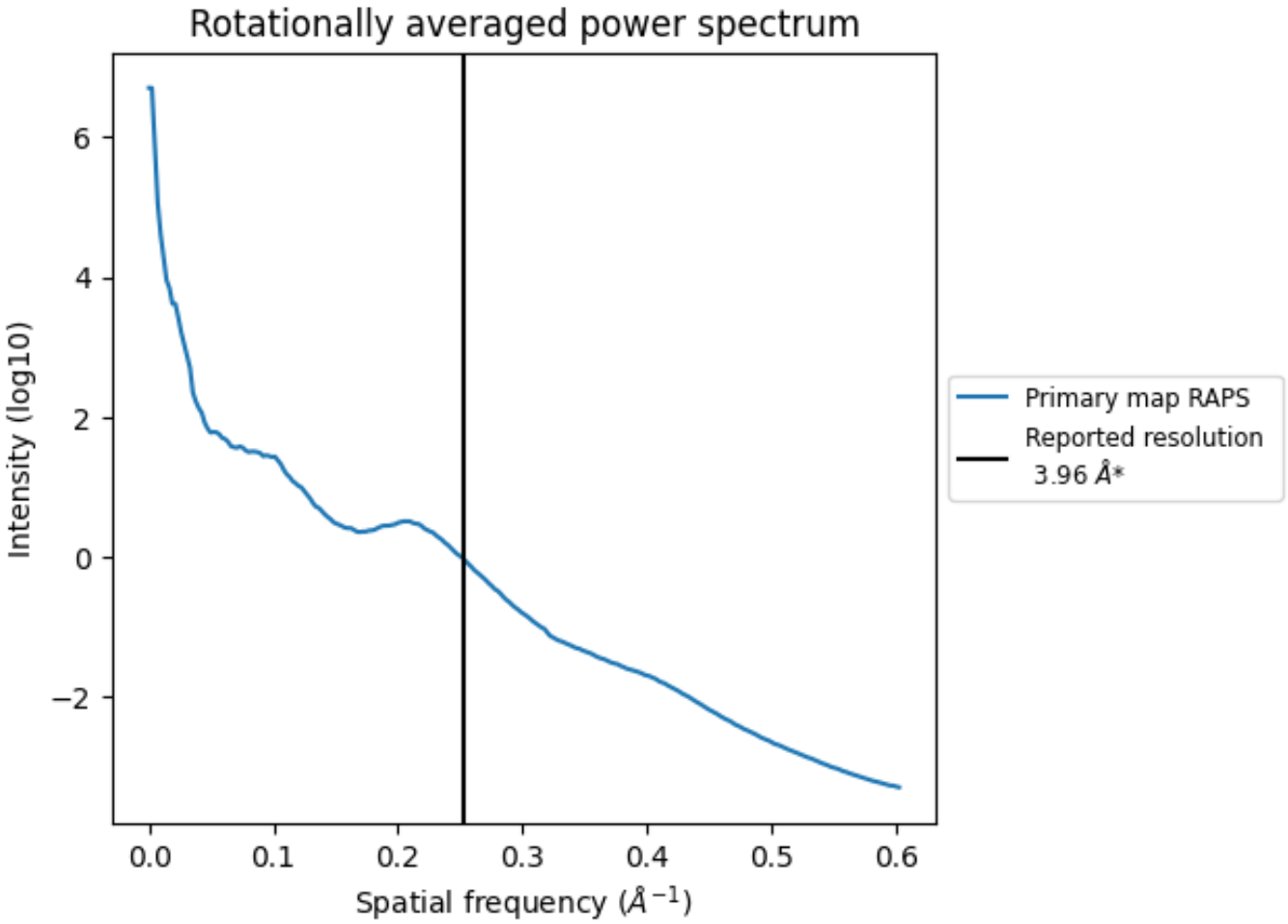
7.2 Volume estimate



The volume at the recommended contour level is 708 nm^3; this corresponds to an approximate mass of 640 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 0.253 $Å^{-1}$

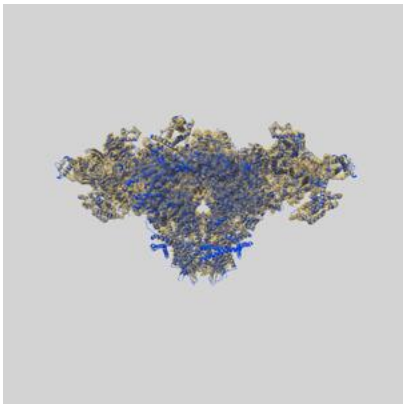
8 Fourier-Shell correlation

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

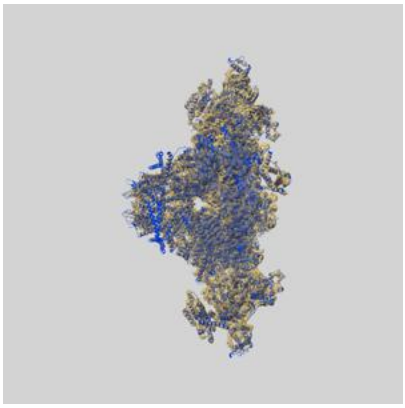
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-42461 and PDB model 8UQ5. Per-residue inclusion information can be found in section 3 on page 5.

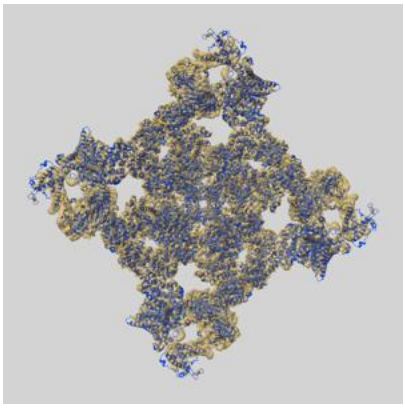
9.1 Map-model overlay



X



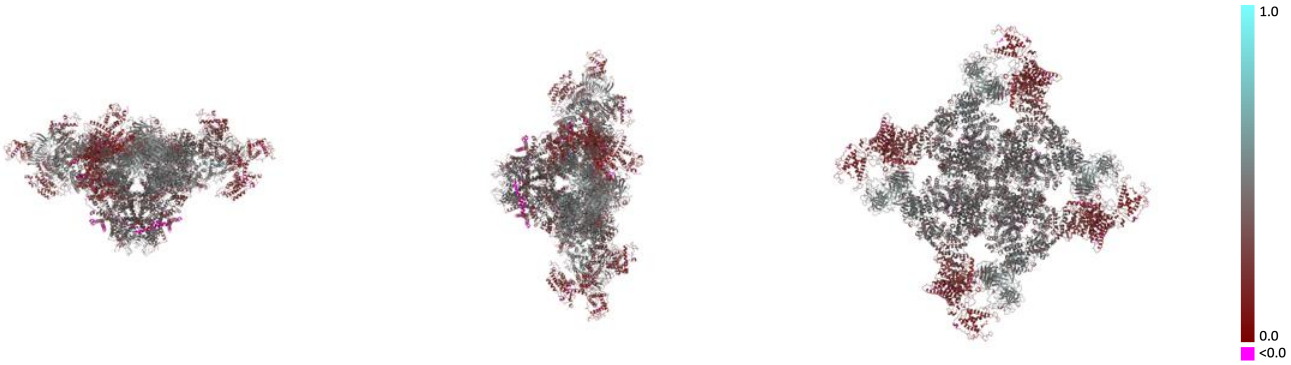
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

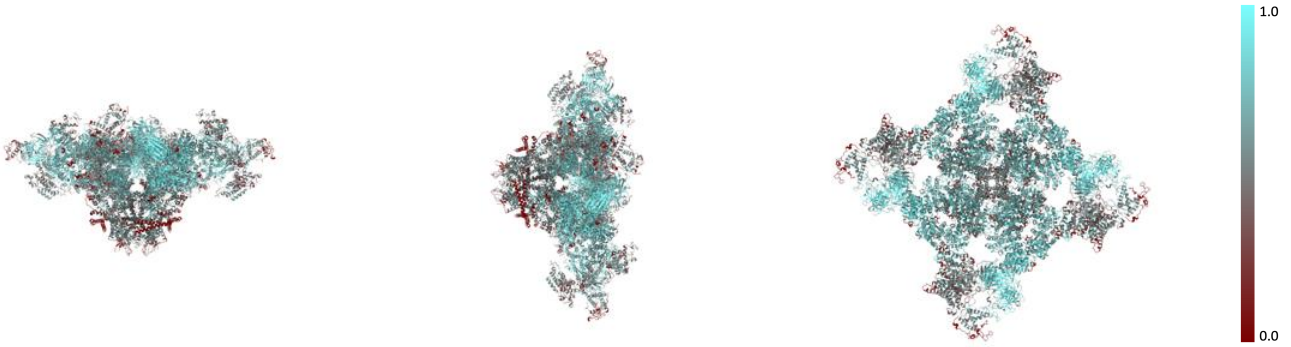
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

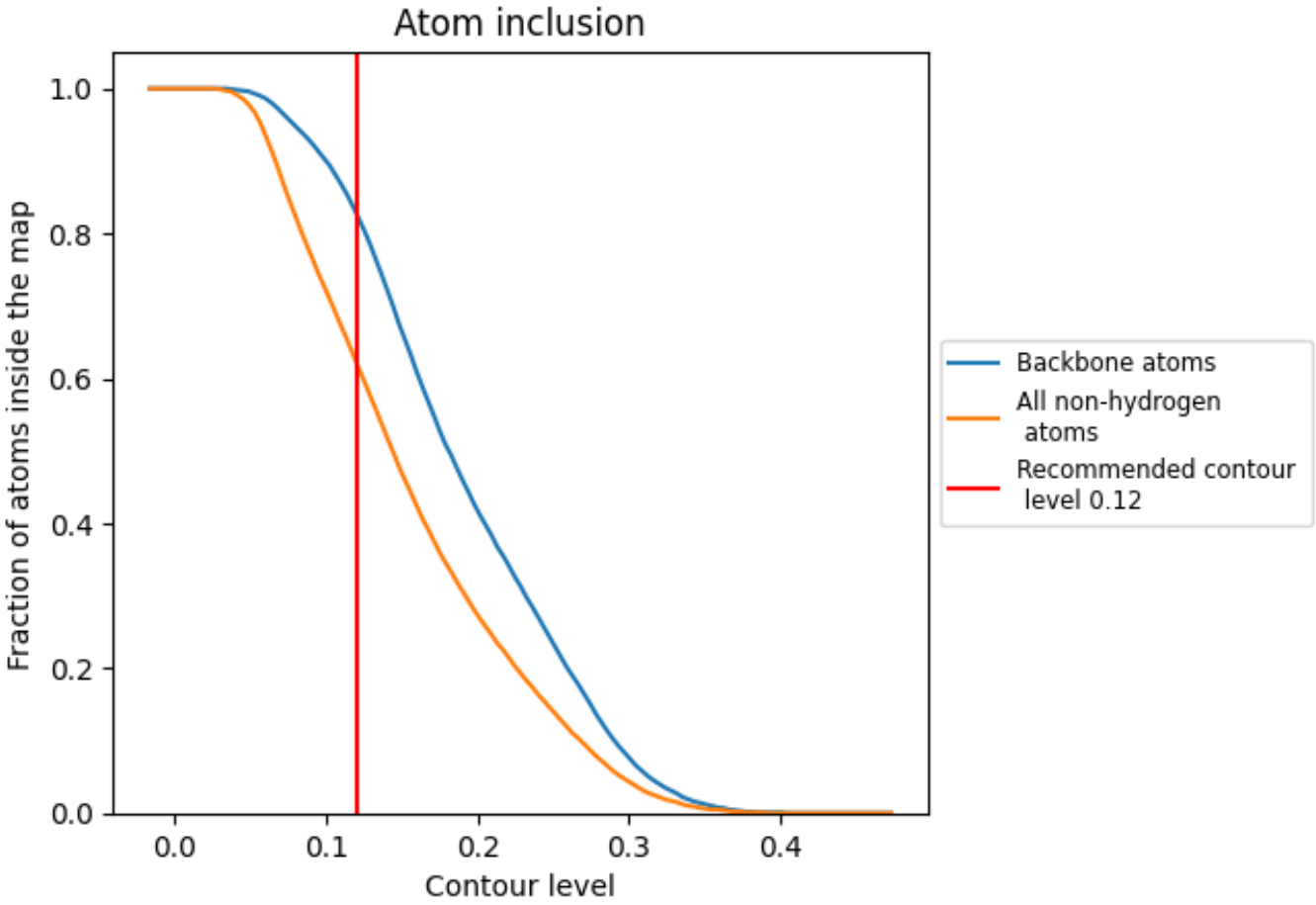
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.12).

9.4 Atom inclusion (i)



At the recommended contour level, 83% of all backbone atoms, 62% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6210	0.3710
A	0.6200	0.3710
B	0.6220	0.3710
C	0.6220	0.3710
D	0.6210	0.3720