Full wwPDB EM Validation Report ⓘ

Mar 24, 2026 – 07:24 pm GMT

PDB ID	:	9RCW / pdb_00009rcw
EMDB ID	:	EMD-53924
Title	:	Primed-state RyR1 in 0.01% POPC micelles, in complex with a nanobody and FKBP12
Authors	:	Li, C.; Efremov, R.G.
Deposited on	:	2025-05-30
Resolution	:	3.30 Å(reported)

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

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

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

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

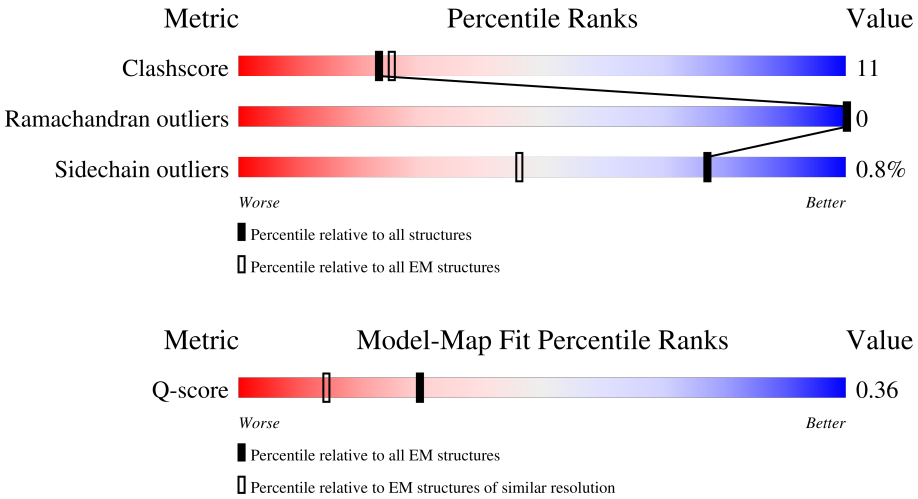
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up 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)	:	2.48.1

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 3.30 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	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	15087 (2.80 - 3.80)

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	B	126	15% 55% 42%
1	D	126	13% 56% 41%
1	H	126	15% 56% 41%
1	K	126	14% 60% 38%

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Mol	Chain	Length	Quality of chain
2	E	107	64% 68% 31%
2	F	107	65% 69% 30%
2	I	107	64% 65% 34%
2	L	107	63% 64% 35%
3	A	5027	64% 22% 14%
3	C	5027	64% 22% 14%
3	G	5027	64% 22% 14%
3	J	5027	64% 22% 14%

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 144632 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 Nanobody 9657.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	H	126	Total	C	N	O	S	0	0
			967	597	170	195	5		
1	K	126	Total	C	N	O	S	0	0
			967	597	170	195	5		
1	D	126	Total	C	N	O	S	0	0
			967	597	170	195	5		
1	B	126	Total	C	N	O	S	0	0
			967	597	170	195	5		

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

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

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	100	ASP	GLY	conflict	UNP Q8HYX6
L	100	ASP	GLY	conflict	UNP Q8HYX6
E	100	ASP	GLY	conflict	UNP Q8HYX6
F	100	ASP	GLY	conflict	UNP Q8HYX6

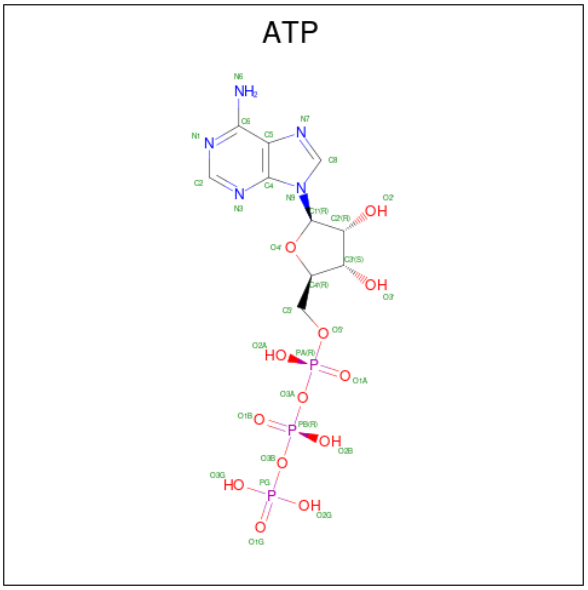
- Molecule 3 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	G	4318	Total	C	N	O	S	0	0
			34131	21738	5887	6282	224		
3	J	4318	Total	C	N	O	S	0	0
			34131	21738	5887	6282	224		
3	C	4318	Total	C	N	O	S	0	0
			34131	21738	5887	6282	224		
3	A	4318	Total	C	N	O	S	0	0
			34131	21738	5887	6282	224		

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
4	G	1	Total	Zn	0
			1	1	
4	J	1	Total	Zn	0
			1	1	
4	C	1	Total	Zn	0
			1	1	
4	A	1	Total	Zn	0
			1	1	

- Molecule 5 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
5	G	1	Total	C	N	O	P	0
			31	10	5	13	3	

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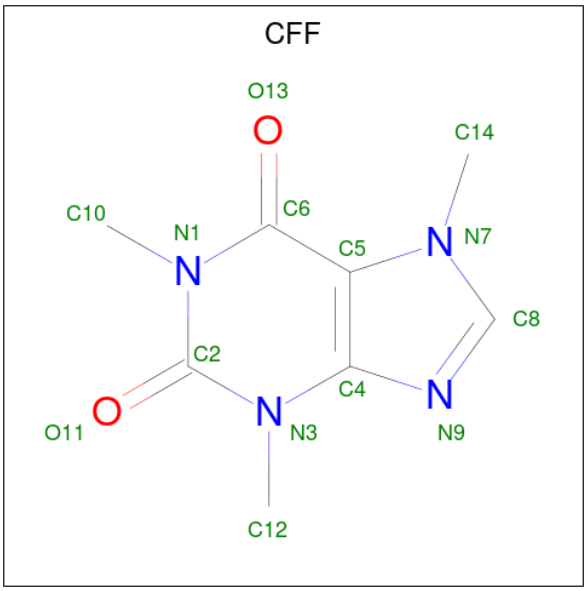
Mol	Chain	Residues	Atoms					AltConf
5	J	1	Total	C	N	O	P	0
			31	10	5	13	3	
5	C	1	Total	C	N	O	P	0
			31	10	5	13	3	
5	A	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 6 is CAFFEINE (CCD ID: CFF) (formula: $C_8H_{10}N_4O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	G	1	Total	C	N	O	0
			14	8	4	2	
6	J	1	Total	C	N	O	0
			14	8	4	2	
6	C	1	Total	C	N	O	0
			14	8	4	2	
6	A	1	Total	C	N	O	0
			14	8	4	2	

- Molecule 7 is CALCIUM ION (CCD ID: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
7	G	1	Total	Ca	0
			1	1	

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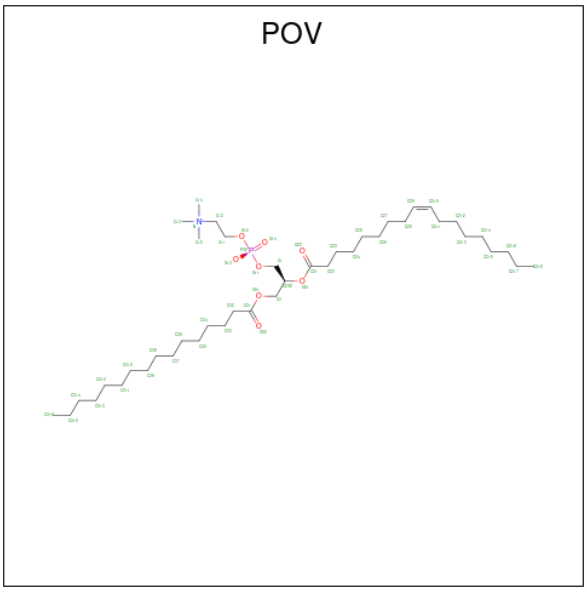
Mol	Chain	Residues	Atoms	AltConf
7	J	1	Total Ca 1 1	0
7	C	1	Total Ca 1 1	0
7	A	1	Total Ca 1 1	0

- Molecule 8 is (2S)-3-(hexadecanoyloxy)-2-[(9Z)-octadec-9-enoyloxy]propyl 2-(trimethylammonio)ethyl phosphate (CCD ID: POV) (formula: $C_{42}H_{82}NO_8P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
8	G	1	Total C N O P 34 24 1 8 1	0
8	G	1	Total C N O P 36 26 1 8 1	0
8	G	1	Total C N O P 45 35 1 8 1	0
8	G	1	Total C 13 13	0
8	G	1	Total C N O P 38 28 1 8 1	0
8	G	1	Total C N O P 29 19 1 8 1	0
8	J	1	Total C N O P 45 35 1 8 1	0

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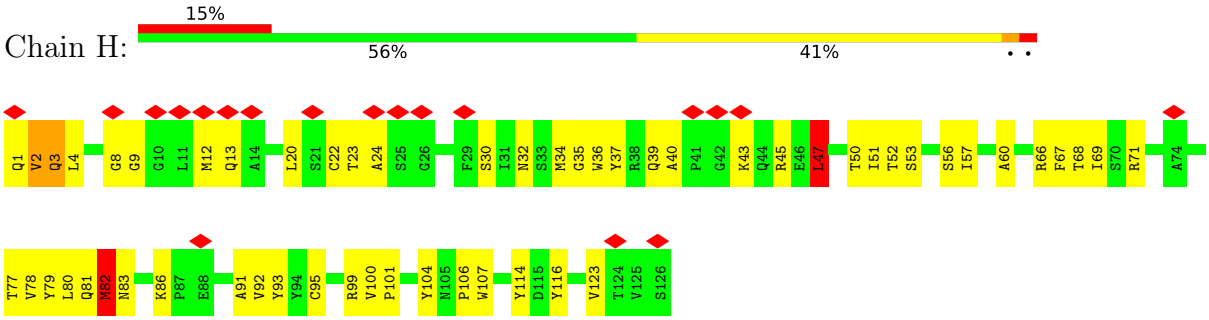
Mol	Chain	Residues	Atoms					AltConf
8	J	1	Total	C	N	O	P	0
			34	24	1	8	1	
8	J	1	Total	C	N	O	P	0
			36	26	1	8	1	
8	J	1	Total	C	N	O	P	0
			45	35	1	8	1	
8	J	1	Total	C	N	O	P	0
			38	28	1	8	1	
8	J	1	Total	C	N	O	P	0
			29	19	1	8	1	
8	C	1	Total	C	N	O	P	0
			34	24	1	8	1	
8	C	1	Total	C	N	O	P	0
			36	26	1	8	1	
8	C	1	Total	C				0
			13	13				
8	C	1	Total	C	N	O	P	0
			38	28	1	8	1	
8	C	1	Total	C	N	O	P	0
			29	19	1	8	1	
8	C	1	Total	C				0
			13	13				
8	A	1	Total	C	N	O	P	0
			34	24	1	8	1	
8	A	1	Total	C	N	O	P	0
			36	26	1	8	1	
8	A	1	Total	C	N	O	P	0
			45	35	1	8	1	
8	A	1	Total	C				0
			13	13				
8	A	1	Total	C	N	O	P	0
			38	28	1	8	1	
8	A	1	Total	C	N	O	P	0
			29	19	1	8	1	

3 Residue-property plots (i)

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

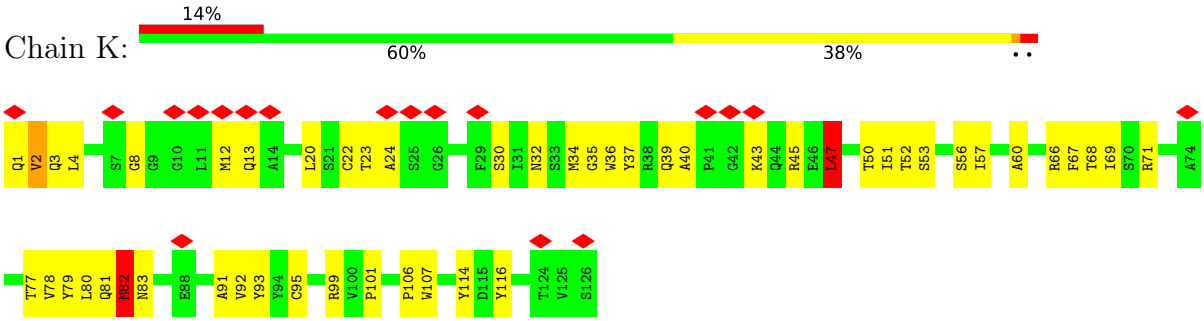
• Molecule 1: Nanobody 9657

Chain H:



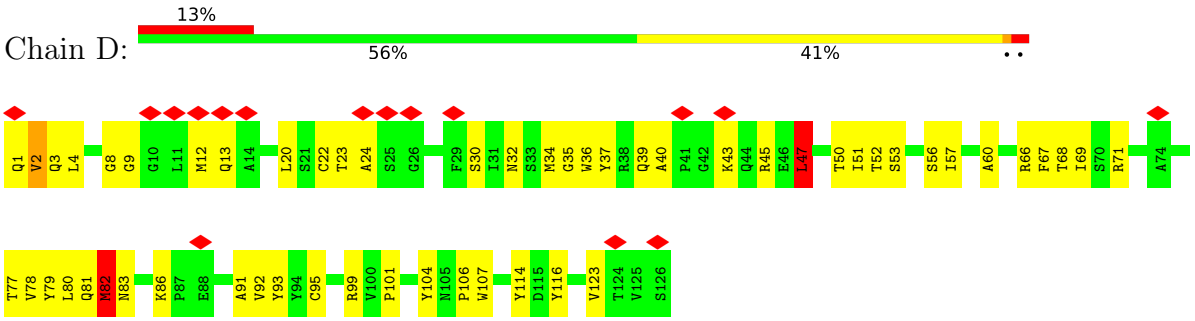
• Molecule 1: Nanobody 9657

Chain K:



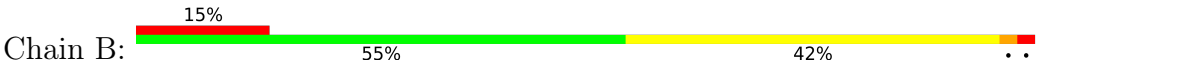
• Molecule 1: Nanobody 9657

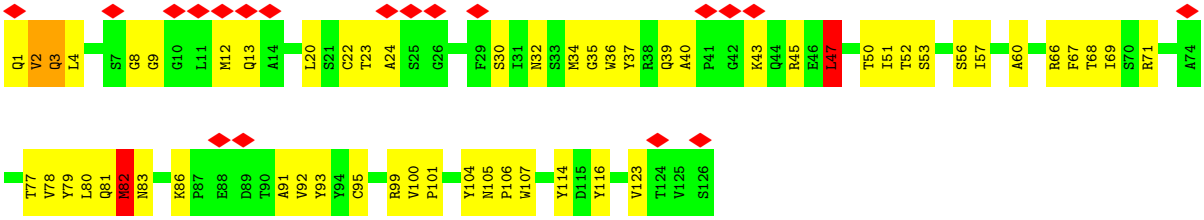
Chain D:



• Molecule 1: Nanobody 9657

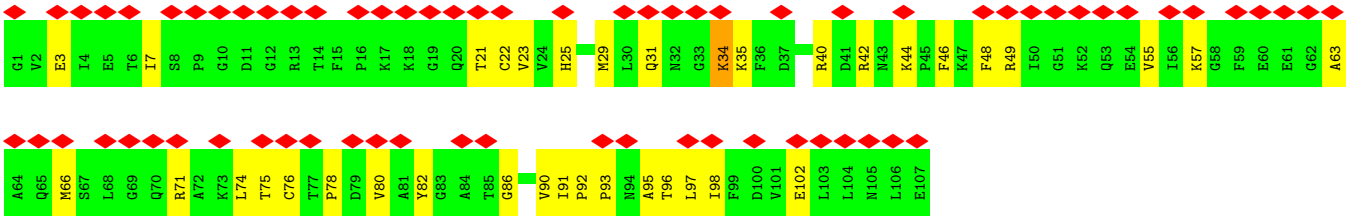
Chain B:





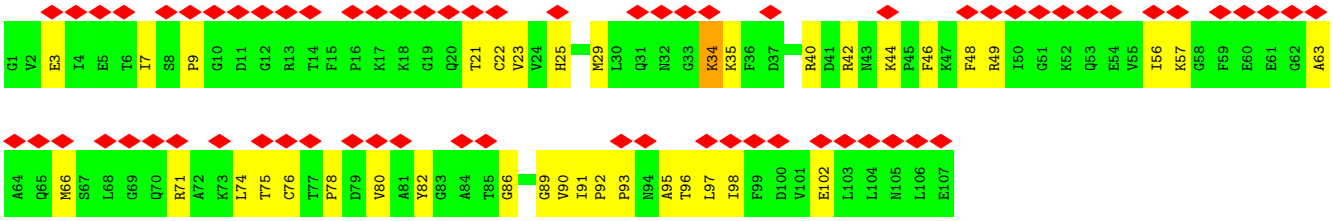
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain I:



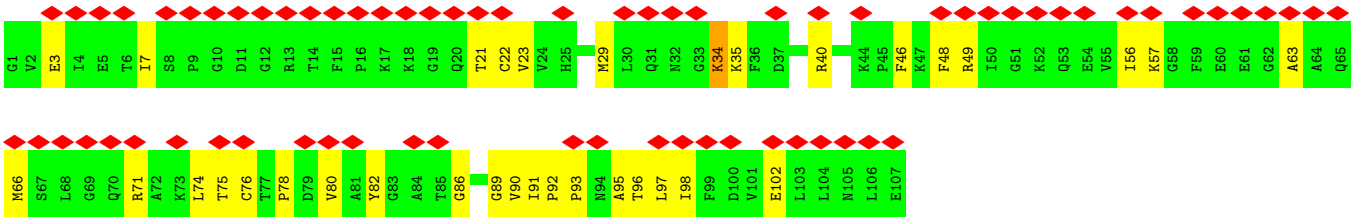
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain L:



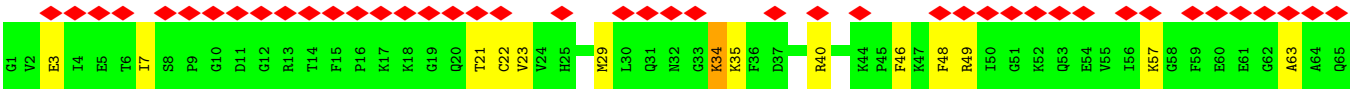
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

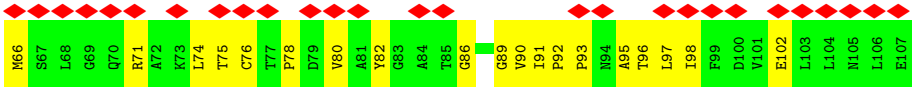
Chain E:



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

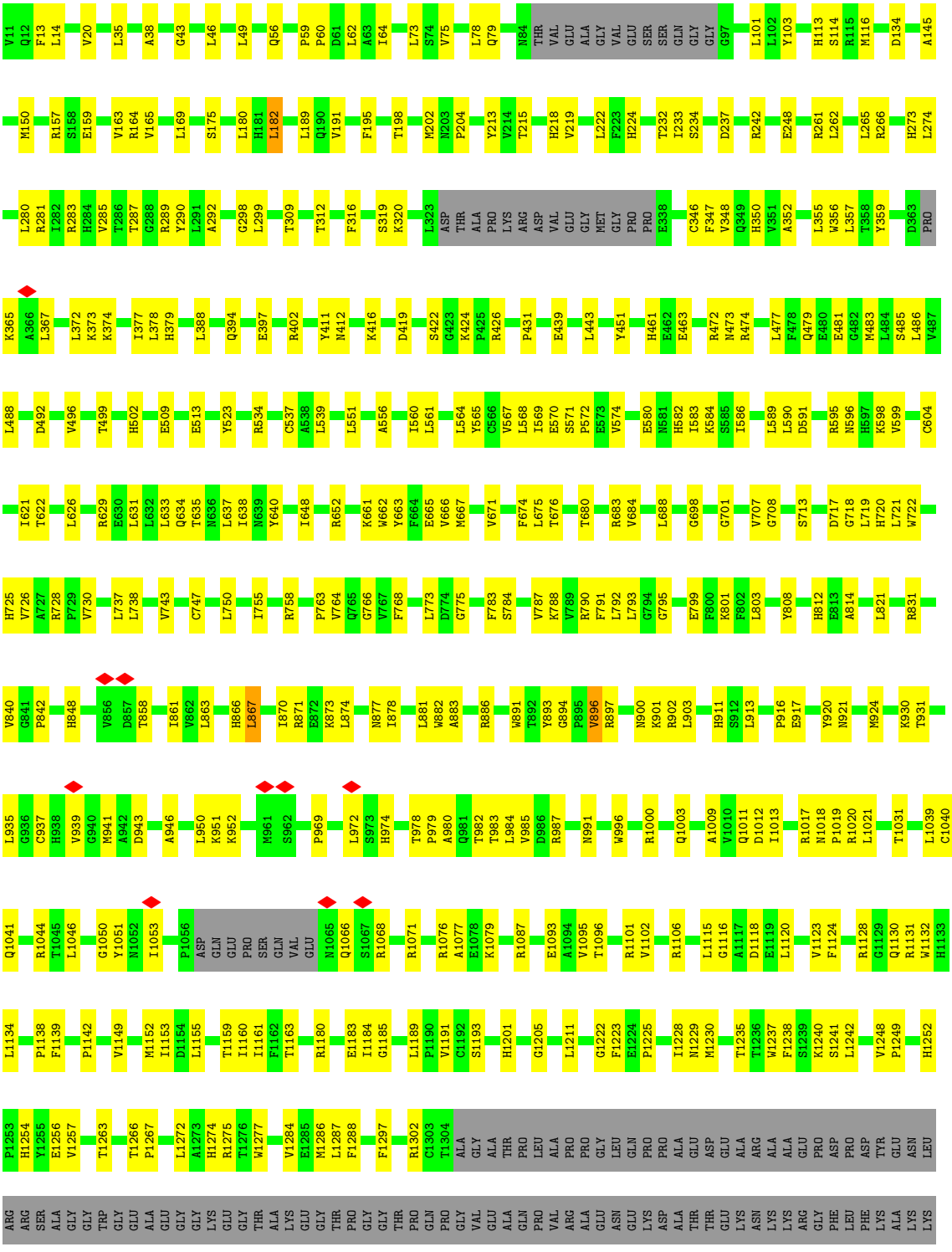
Chain F:

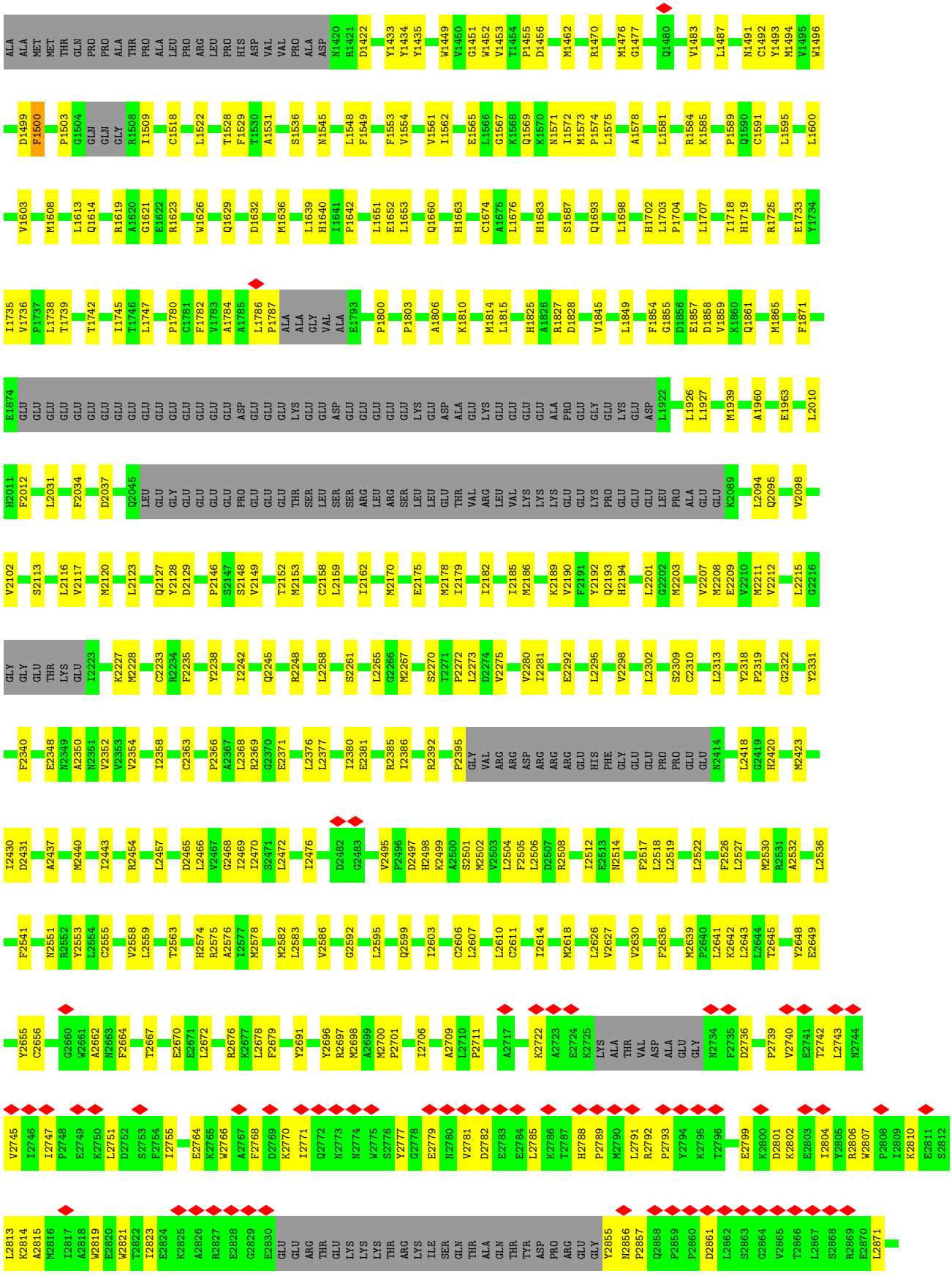


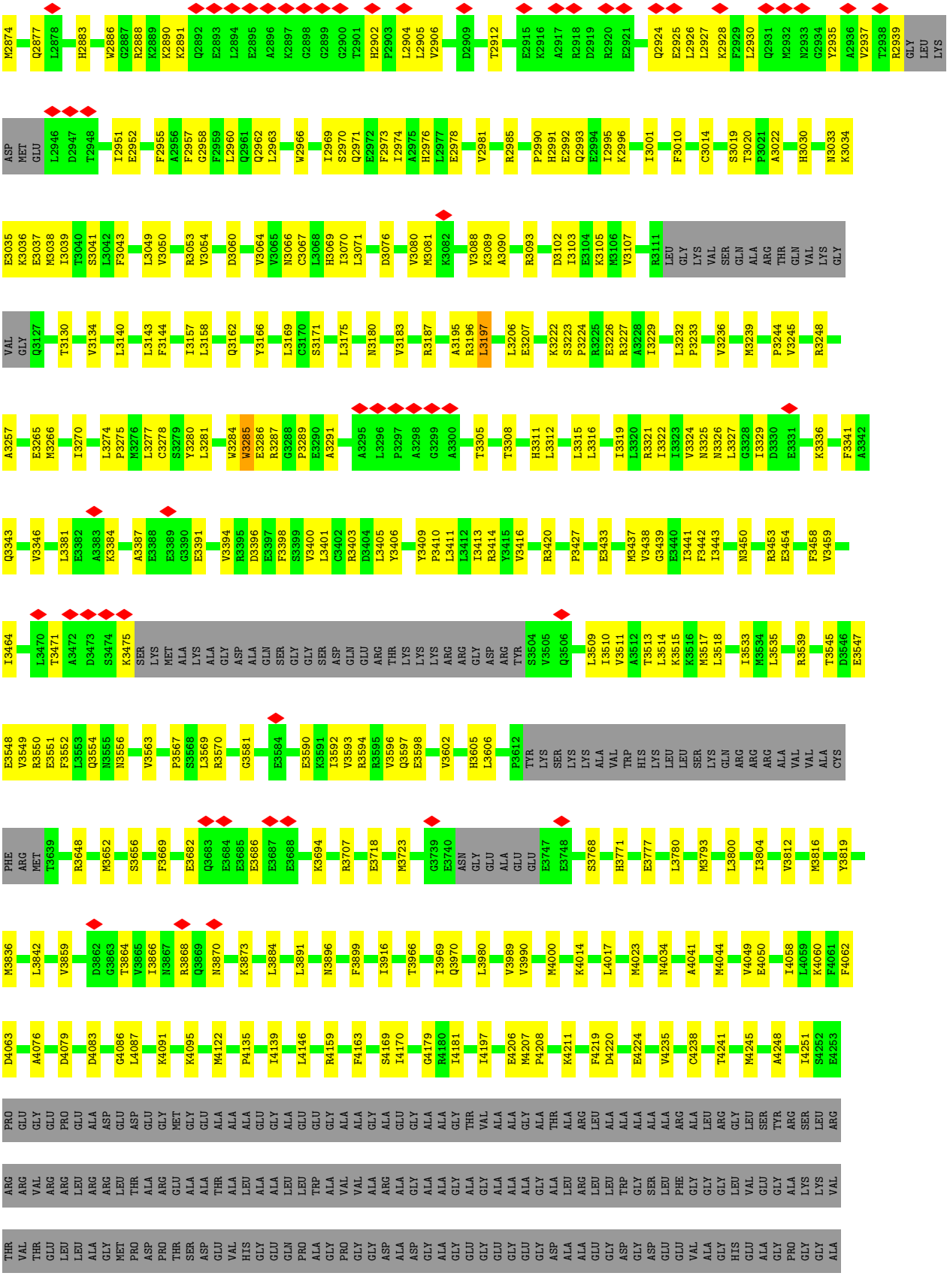


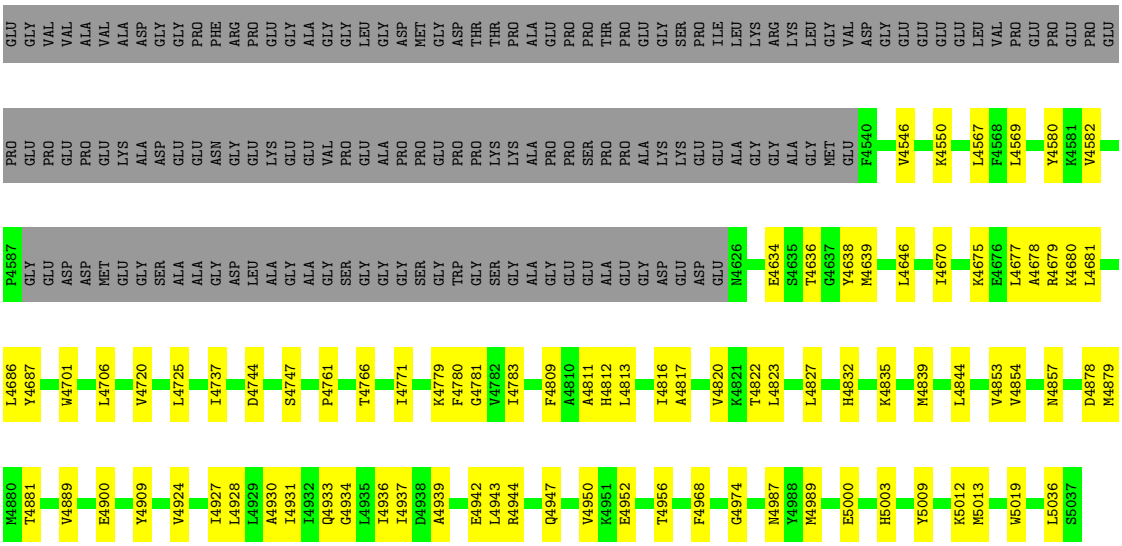
• Molecule 3: Ryanodine receptor 1

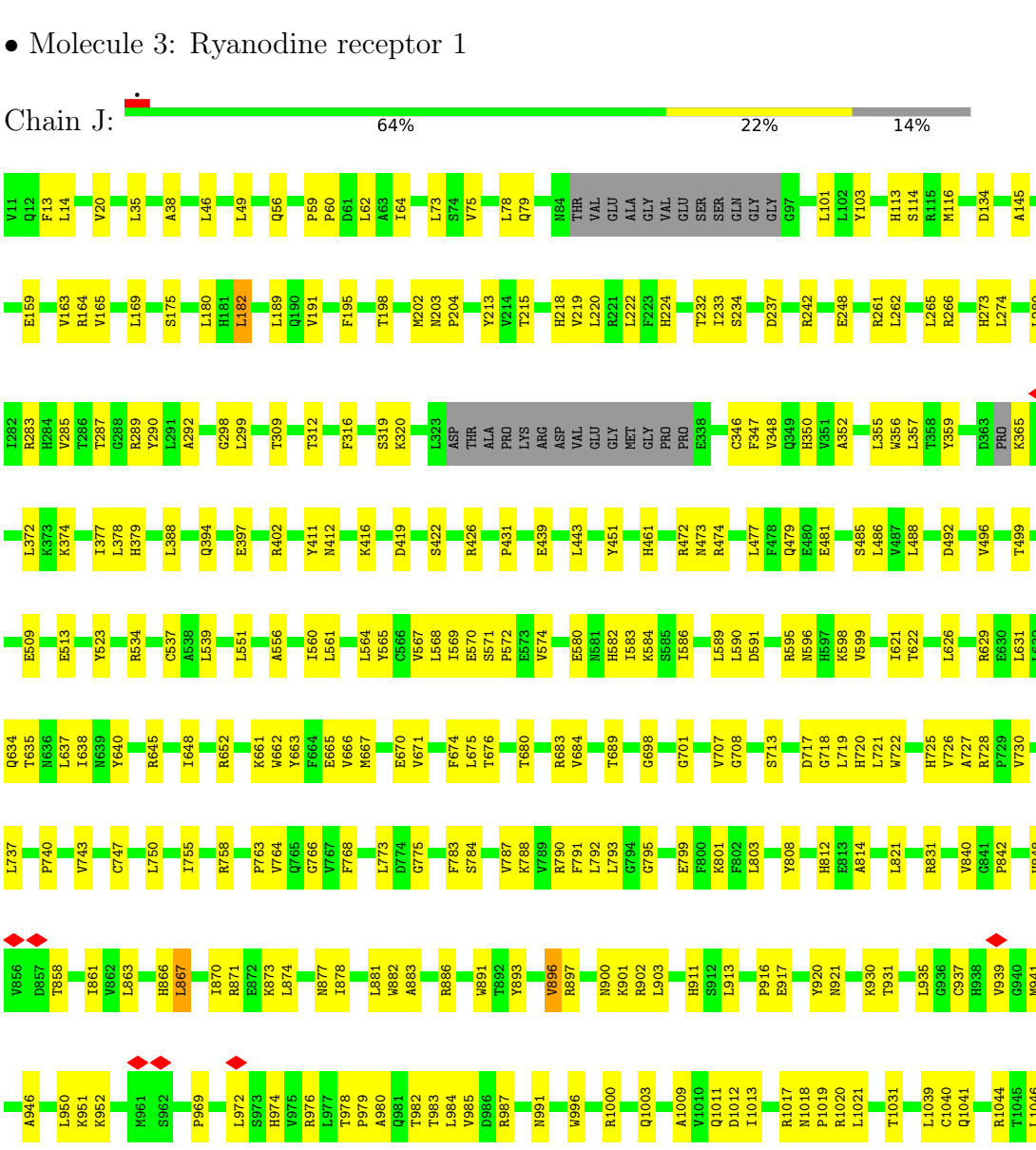
Chain G:





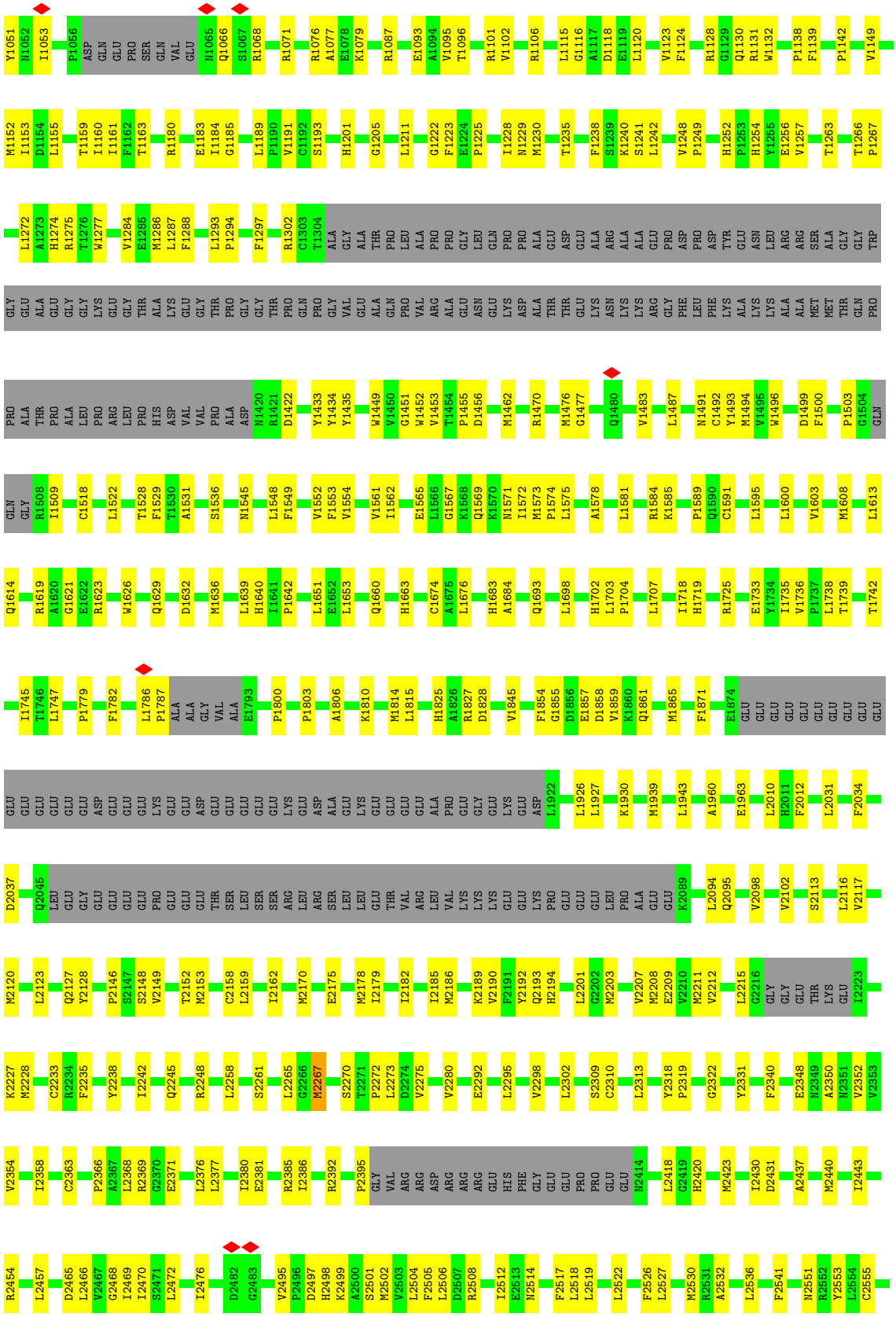

M2874 Q2877 L2878 H2883 W2886 G2887 R2888 K2889 K2890 K2891 Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904 L2905 V2906 D2909 T2912 E2915 K2916 A2917 R2918 D2919 R2920 E2921 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932 N2933 G2934 V2935 A2936 V2937 T2938 R2939 GLY LEU LYS
ASP MET GLU L2946 D2947 T2948 I2951 E2952 F2955 A2956 F2957 G2958 F2959 L2960 Q2961 Q2962 L2963 W2966 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 V2981 R2985 P2990 H2991 E2992 Q2993 E2994 I2995 K2996 I3001 F3010 C3014 S3019 T3020 P3021 A3022 H3030 N3033 K3034
E3035 K3036 E3037 M3038 I3039 T3040 S3041 L3042 F3043 L3049 V3050 R3053 V3054 D3060 V3064 V3065 N3066 C3067 L3068 H3069 I3070 L3071 D3076 V3080 M3081 K3082 V3088 K3089 A3090 R3093 D3102 I3103 E3104 K3105 W3106 V3107 R3111 LEU GLY LYS VAL SER GLN ALA ARG THR GLN VAL LYS GLY
VAL GLY Q3127 T3130 V3134 L3140 L3143 F3144 I3157 L3158 Q3162 Y3166 L3169 C3170 S3171 L3175 N3180 V3183 R3187 A3195 R3196 L3197 L3206 E3207 K3222 S3223 P3224 R3225 E3226 R3227 A3228 I3229 L3232 P3233 V3236 M3239 P3244 V3245 R3248
A3257 E3265 M3266 I3270 L3274 P3275 M3276 L3277 C3278 S3279 Y3280 L3281 W3284 W3285 E3286 R3287 G3288 P3289 E3290 A3291 A3295 L3296 P3297 A3298 G3299 A3300 T3305 T3308 H3311 L3312 L3315 L3316 I3319 L3320 R3321 I3322 I3323 V3324 N3325 N3326 L3327 G3328 I3329 D3330 E3331 K3336 F3341 A3342
Q3343 V3346 L3381 E3382 A3383 K3384 A3387 E3388 E3389 G3390 E3391 V3394 R3395 D3396 E3397 F3398 S3399 V3400 L3401 C3402 R3403 D3404 L3405 Y3406 Y3409 P3410 L3411 L3412 I3413 R3414 Y3415 V3416 R3420 P3427 E3433 M3437 V3438 G3439 E3440 I3441 F3442 I3443 N3450 R3453 E3454 F3458 V3459
I3464 L3470 T3471 A3472 D3473 S3474 K3475 SER LYS MET ALA LYS ALA GLY ASP ALA GLN SER GLY GLY SER ASP GLN GLU ARG THR LYS LYS LYS ARG ARG GLY ASP ARG TYR S3504 V3505 Q3506 L3509 I3510 V3511 A3512 T3513 L3514 K3515 K3516 M3517 L3518 I3533 M3534 L3535 R3539 T3545 D3546 E3547
E3548 V3549 R3550 E3551 F3552 L3553 Q3554 N3555 N3556 V3563 P3567 S3568 L3569 R3570 G3581 E3584 E3590 K3591 I3592 V3593 R3594 R3595 V3596 Q3597 E3598 V3602 H3605 L3606 P3612 TYR LYS SER LYS LYS ALA VAL TRP HIS LYS LEU LEU SER LYS GLN ARG ARG ARG ALA VAL VAL ALA CYS
PHE ARG MET T3639 R3648 M3652 S3656 F3669 E3682 Q3683 E3684 E3685 E3686 E3687 E3688 K3694 R3707 E3718 M3723 G3739 E3740 ASN GLY GLU ALA GLU GLU E3747 E3748 S3768 H3771 E3777 L3780 M3793 L3800 I3804 V3812 M3816 Y3819
M3836 L3842 V3859 D3862 G3863 T3864 V3865 I3866 N3867 R3868 Q3869 N3870 K3873 L3884 L3891 N3896 F3899 I3916 T3966 I3969 Q3970 L3980 V3989 V3990 M4000 K4014 L4017 M4023 N4034 A4041 M4044 V4049 E4050 I4058 L4059 K4060 F4061 F4062
D4063 A4076 D4079 D4083 G4086 L4087 K4091 K4095 M4122 P4135 I4139 L4146 R4159 F4163 S4169 I4170 G4179 R4180 I4181 I4197 E4206 M4207 P4208 K4211 F4219 D4220 E4224 V4235 C4238 T4241 M4245 A4248 I4251 S4252 E4253
PRO GLU GLY GLU PRO GLU ALA ASP GLU ASP GLU GLY MET GLY GLU ALA ALA ALA GLU GLY ALA GLU GLU GLY ALA ALA GLY ALA ALA ASP GLY ALA GLU GLY ALA ALA GLY THR VAL ALA ALA ALA GLY ALA THR ALA ARG LEU ALA ALA ALA ARG GLY LEU SER TYR ARG SER LEU ARG
ARG ARG VAL ARG ARG LEU ARG ARG LEU THR ALA ARG GLU ALA ALA THR ALA LEU ALA ALA ALA LEU LEU TRP ALA VAL ALA ARG ALA GLY ALA ALA GLY ALA ALA GLY GLY ALA LEU ARG LEU LEU TRP GLY SER LEU PHE GLY GLY GLY LEU GLY VAL GLU GLY LYS LYS VAL
THR VAL THR GLU LEU LEU ALA ALA GLY MET PRO ASP PRO THR SER ASP GLU VAL HIS GLY GLU GLN PRO ALA GLY PRO GLY GLY ASP ALA ASP GLY ALA GLU GLY GLU GLY GLU GLY ASP ALA ALA ALA GLU GLY ASP GLY ASP GLU GLU VAL ALA GLY HIS GLU ALA GLY PRO GLY GLY ALA

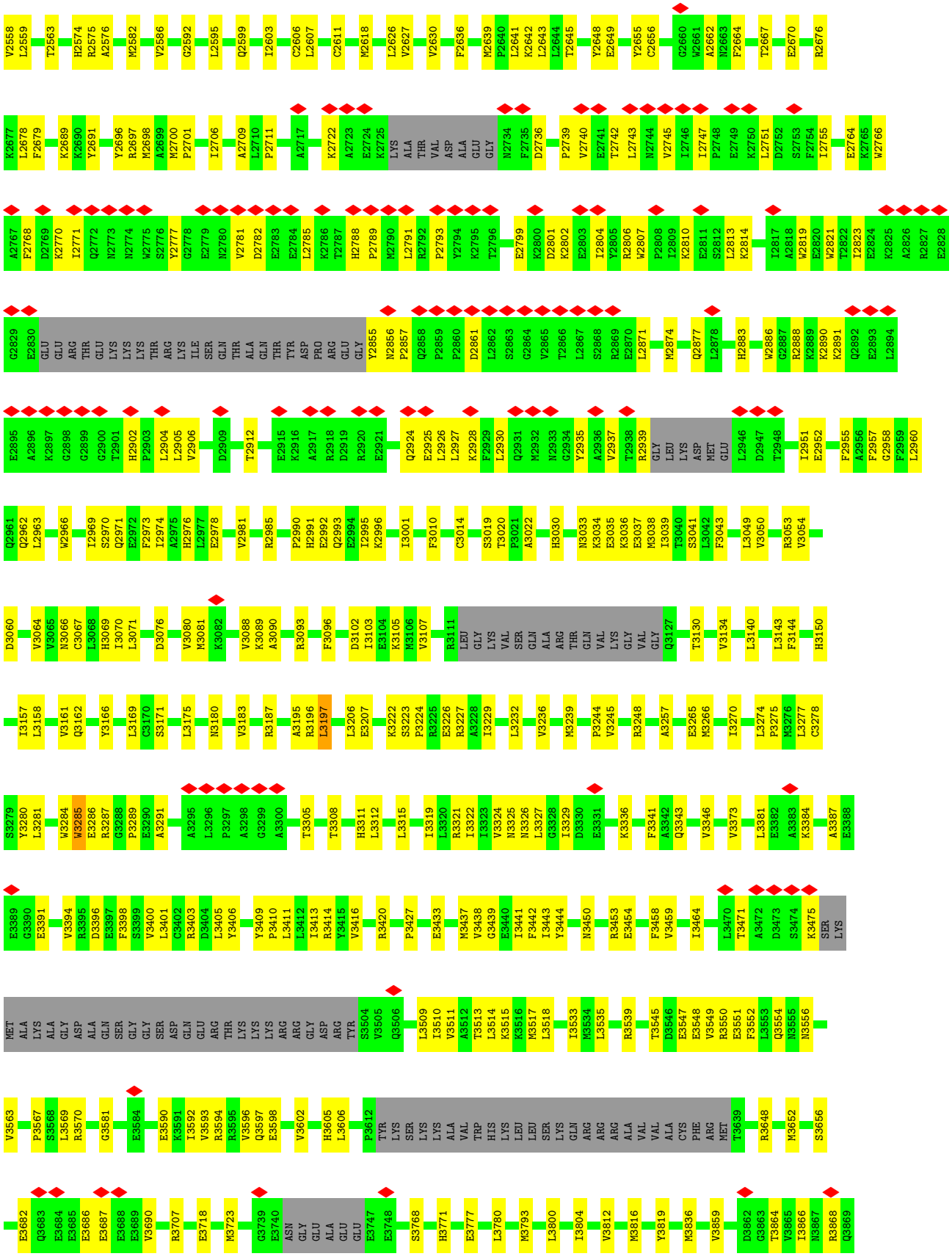


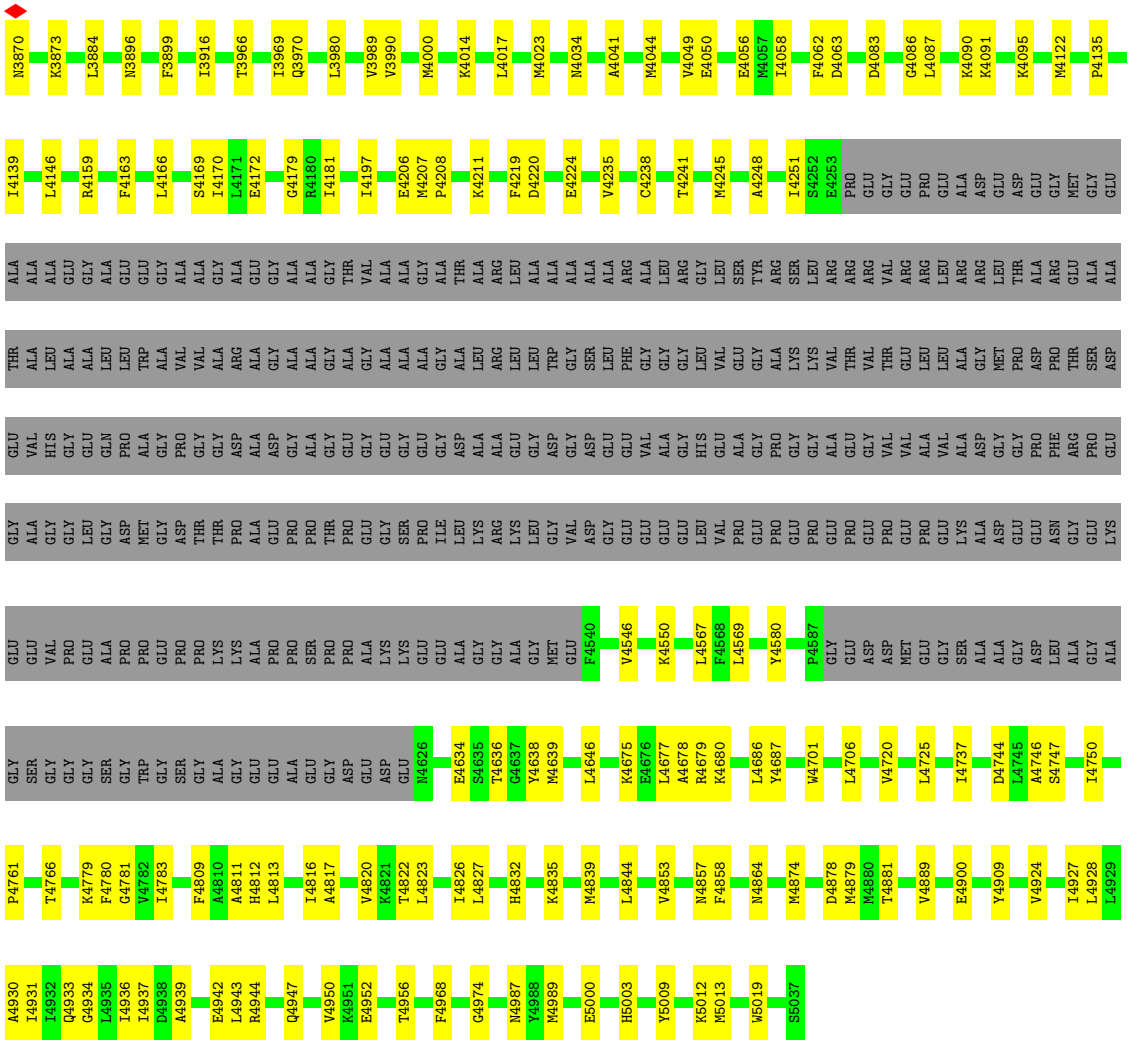


• Molecule 3: Ryanodine receptor 1

Chain J:

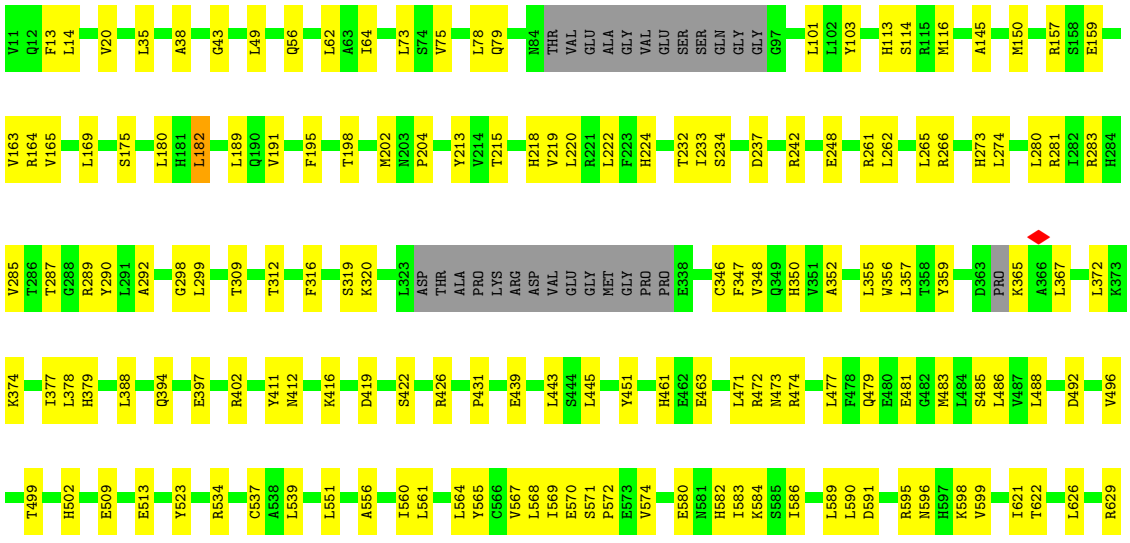


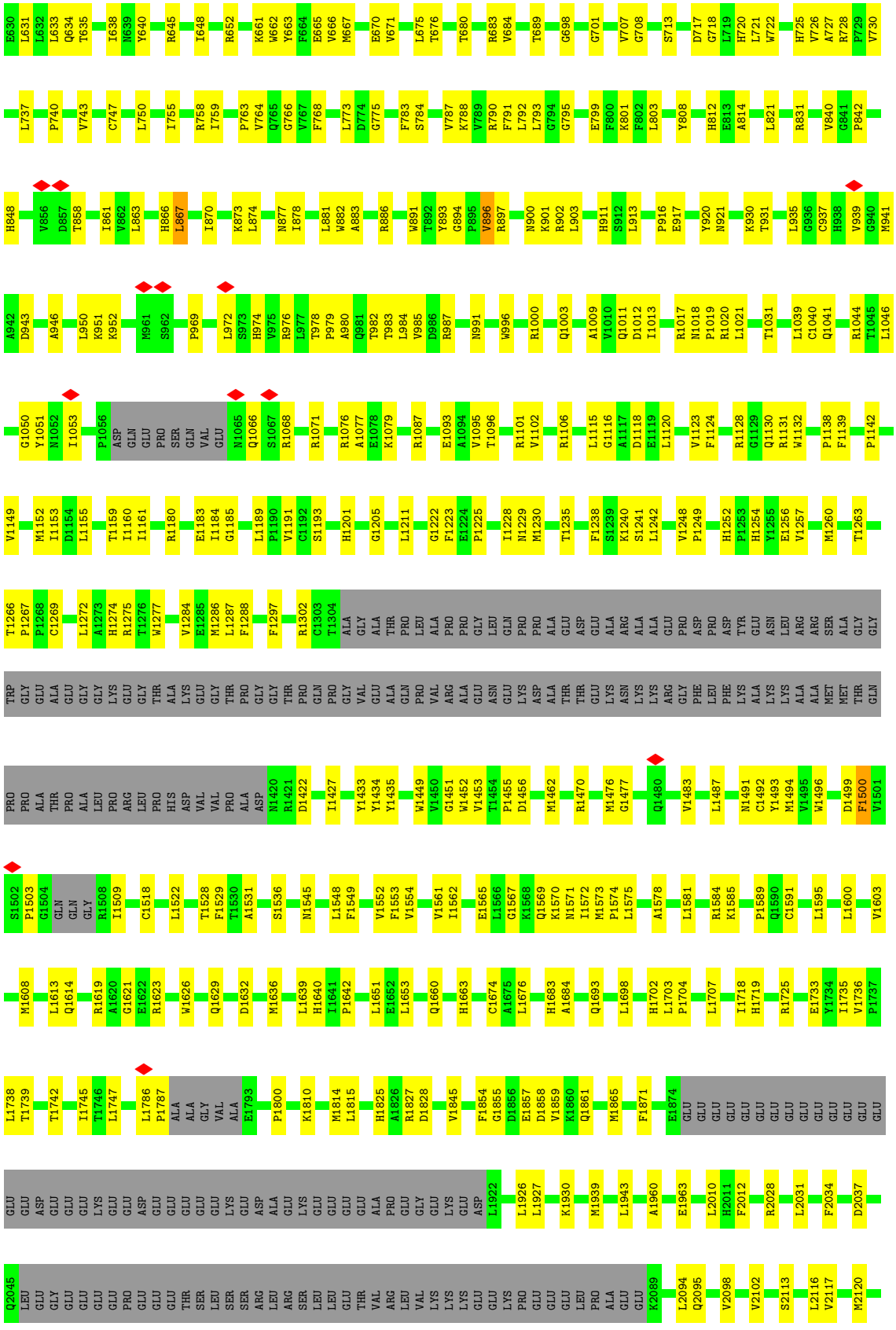




• Molecule 3: Ryanodine receptor 1

Chain C:

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L737 P740 V743 C747 L750 I755 R758 I759 P763 V764 Q765 G766 V767 F768 L773 D774 G775 F783 S784 V787 K788 V789 R790 F791 L792 L793 G794 G795 E799 F800 K801 F802 L803 Y808 H812 E813 A814 L821 R831 V840 G841 P842
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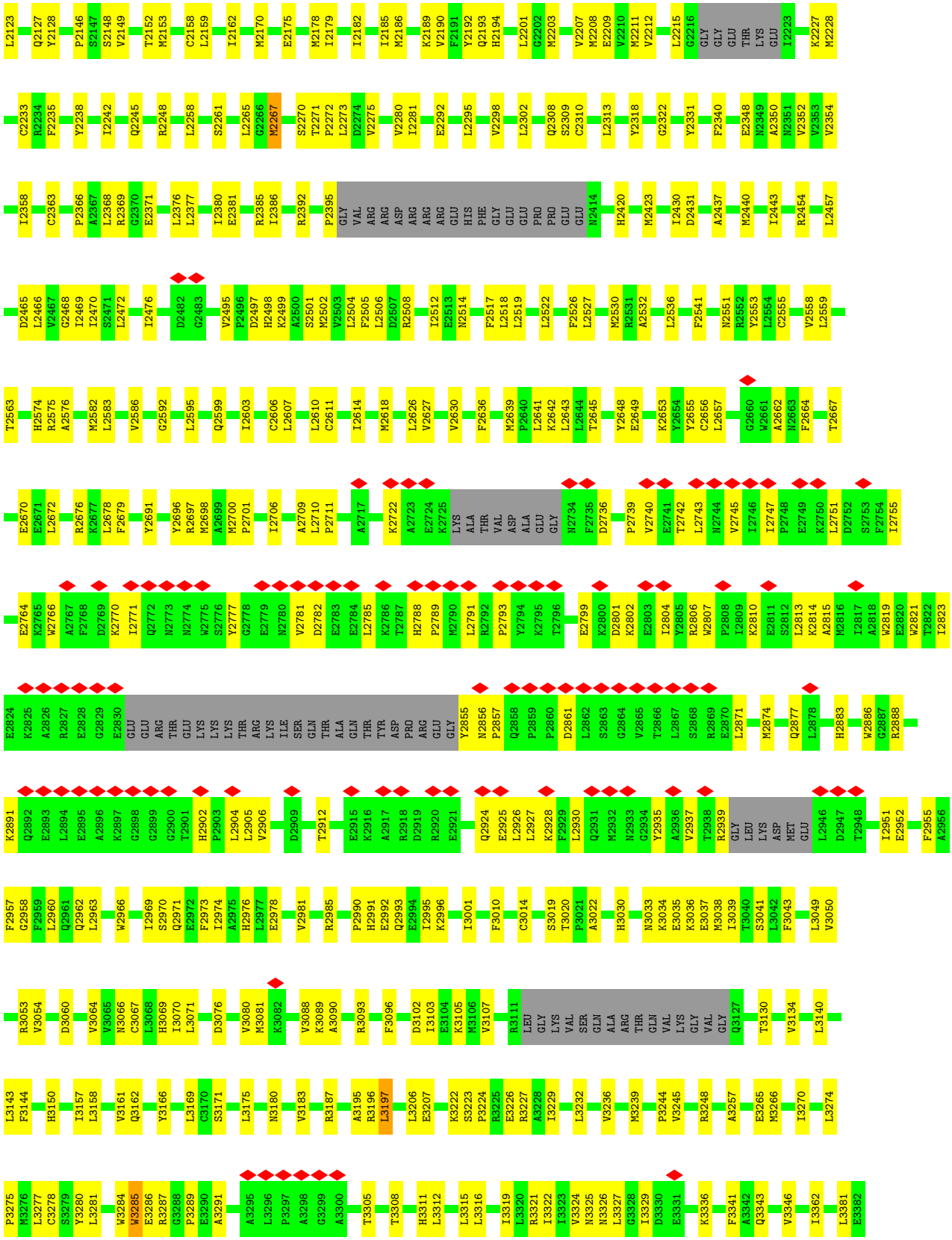
G1050 Y1051 N1052 I1053 P1056 ASP GLN GLU PRO SER GLN VAL GLU N1065 Q1066 S1067 R1068 R1071 R1076 A1077 E1078 K1079 R1087 E1093 A1094 V1095 T1096 R1101 V1102 R1106 L1115 G1116 A1117 D1118 E1119 L1120 V1123 F1124 R1128 G1129 Q1130 R1131 W1132 P1138 F1139 P1142
V1149 M1152 I1153 D1154 L1155 T1159 I1160 I1161 R1180 E1183 I1184 G1185 L1189 P1190 V1191 C1192 S1193 H1201 G1205 L1211 G1222 F1223 E1224 P1225 I1228 N1229 M1230 T1235 F1238 S1239 K1240 S1241 L1242 V1248 P1249 H1252 P1253 H1254 Y1255 E1256 V1257 M1260 T1263
T1266 P1267 P1268 C1269 L1272 A1273 H1274 R1275 T1276 W1277 V1284 E1285 M1286 L1287 F1288 F1297 R1302 C1303 T1304 ALA GLY ALA THR PRO LEU ALA PRO PRO GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY GLY
TRP GLY GLU ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY THR PRO GLY GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN
PRO PRO ALA THR PRO ALA LEU PRO ARG LEU PRO HIS ASP VAL VAL PRO ALA ASP N1420 R1421 D1422 I1427 Y1433 Y1434 Y1435 W1449 V1450 G1451 W1452 V1453 T1454 P1455 D1456 M1462 R1470 M1476 G1477 Q1480 V1483 L1487 N1491 C1492 Y1493 M1494 V1495 W1496 D1499 F1500 V1501
S1502 P1503 G1504 GLN GLN GLY R1508 I1509 C1518 L1522 T1528 F1529 T1530 A1531 S1536 N1545 L1548 F1549 V1552 F1553 V1554 V1561 I1562 E1565 L1566 G1567 K1568 Q1569 K1570 N1571 I1572 M1573 P1574 L1575 A1578 L1581 R1584 K1585 P1589 Q1590 C1591 L1595 L1600 V1603
M1608 L1613 Q1614 R1619 A1620 G1621 E1622 R1623 W1626 Q1629 D1632 M1636 L1639 H1640 I1641 P1642 L1651 E1652 L1653 Q1660 H1663 C1674 A1675 L1676 H1683 A1684 Q1693 L1698 H1702 L1703 P1704 L1707 I1718 H1719 R1725 E1733 Y1734 I1735 V1736 P1737
L1738 T1739 T1742 I1745 T1746 L1747 L1786 P1787 ALA ALA GLY VAL ALA E1793 P1800 K1810 M1814 L1815 H1825 A1826 R1827 D1828 V1845 F1854 G1855 D1856 E1857 D1858 V1859 K1860 Q1861 M1865 F1871 E1874 GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU
GLU GLU ASP GLU GLU GLU LYS GLU GLU ASP GLU GLU GLU GLU LYS SER SER ARG LEU ARG SER LEU LEU LEU THR VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS PRO GLU GLU GLU LEU PRO ALA GLU GLU L1922 L1926 L1927 K1930 M1939 L1943 A1960 E1963 L2010 H2011 F2012 R2028 L2031 F2034 D2037
Q2045 LEU GLU GLY GLU GLU GLU GLU GLU PRO GLU GLU GLU THR SER LEU SER SER ARG LEU ARG SER LEU LEU LEU THR VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS PRO GLU GLU GLU LEU PRO ALA GLU GLU K2089 L2094 Q2095 V2098 V2102 S2113 L2116 V2117 M2120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C2233 R2234 F2235 Y2238 I2242 Q2245 R2248 L2258 S2261 L2265 G2266 M2267 S2270 T2271 P2272 L2273 D2274 V2275 V2280 I2281 E2292 L2295 V2298 L2302 Q2308 S2309 C2310 L2313 Y2318 G2322 Y2331 F2340 E2348 N2349 A2350 N2351 V2352 V2353 V2354
I2358 C2363 P2366 A2367 L2368 R2369 G2370 E2371 L2376 L2377 I2380 E2381 R2385 I2386 R2392 P2395 GLY VAL ARG ARG ASP ARG ARG ARG GLU HIS PHE GLY GLU GLU PRO PRO GLU GLU N2414 H2420 M2423 I2430 D2431 A2437 M2440 I2443 R2454 L2457
D2465 L2466 V2467 G2468 I2469 I2470 S2471 L2472 I2476 D2482 G2483 V2495 P2496 D2497 H2498 K2499 A2500 S2501 M2502 V2503 L2504 F2505 L2506 D2507 R2508 I2512 E2513 N2514 F2517 L2518 L2519 L2522 F2526 L2527 M2530 R2531 A2532 L2536 F2541 N2551 R2552 Y2553 L2554 C2555 V2558 L2559
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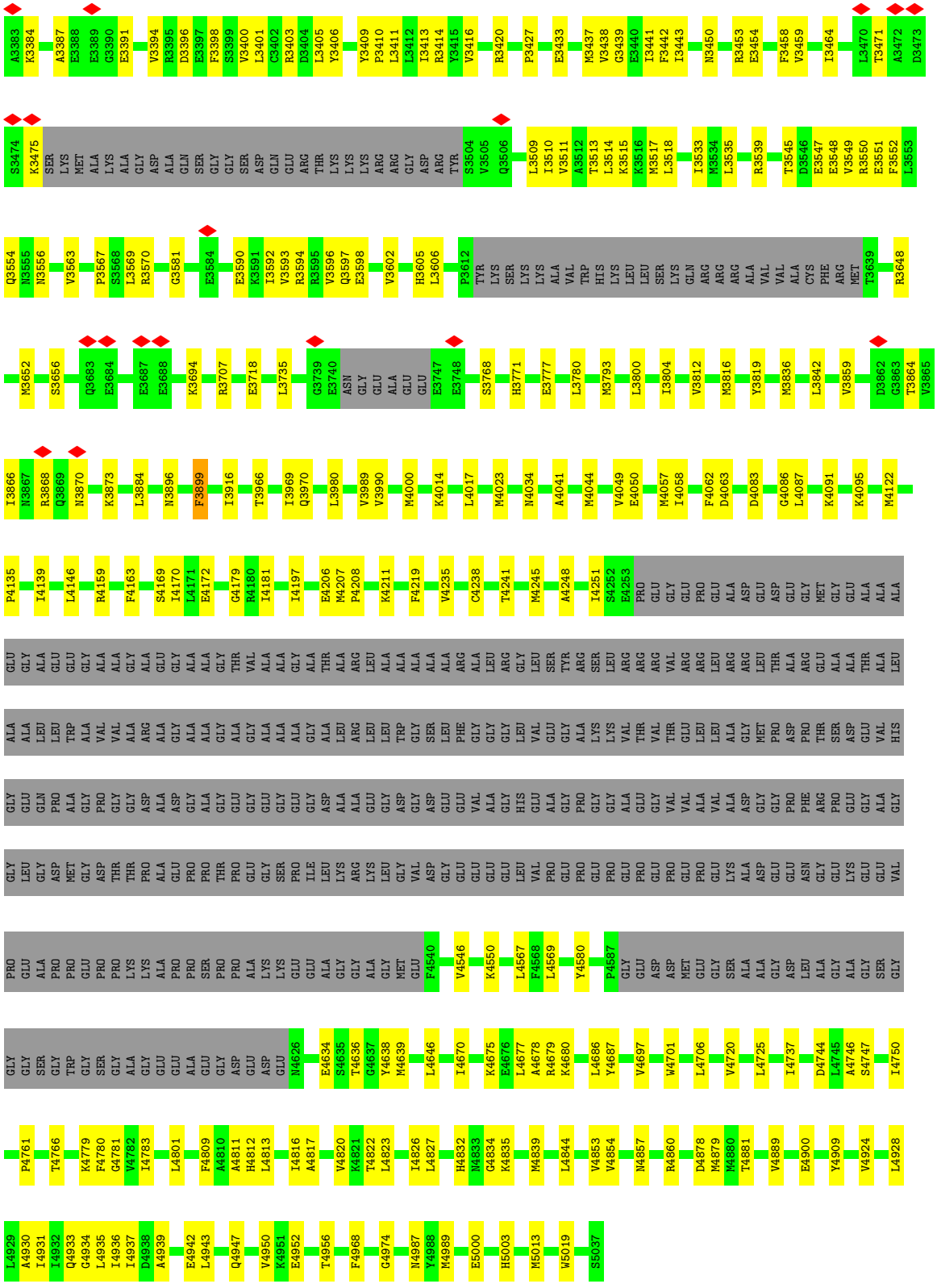
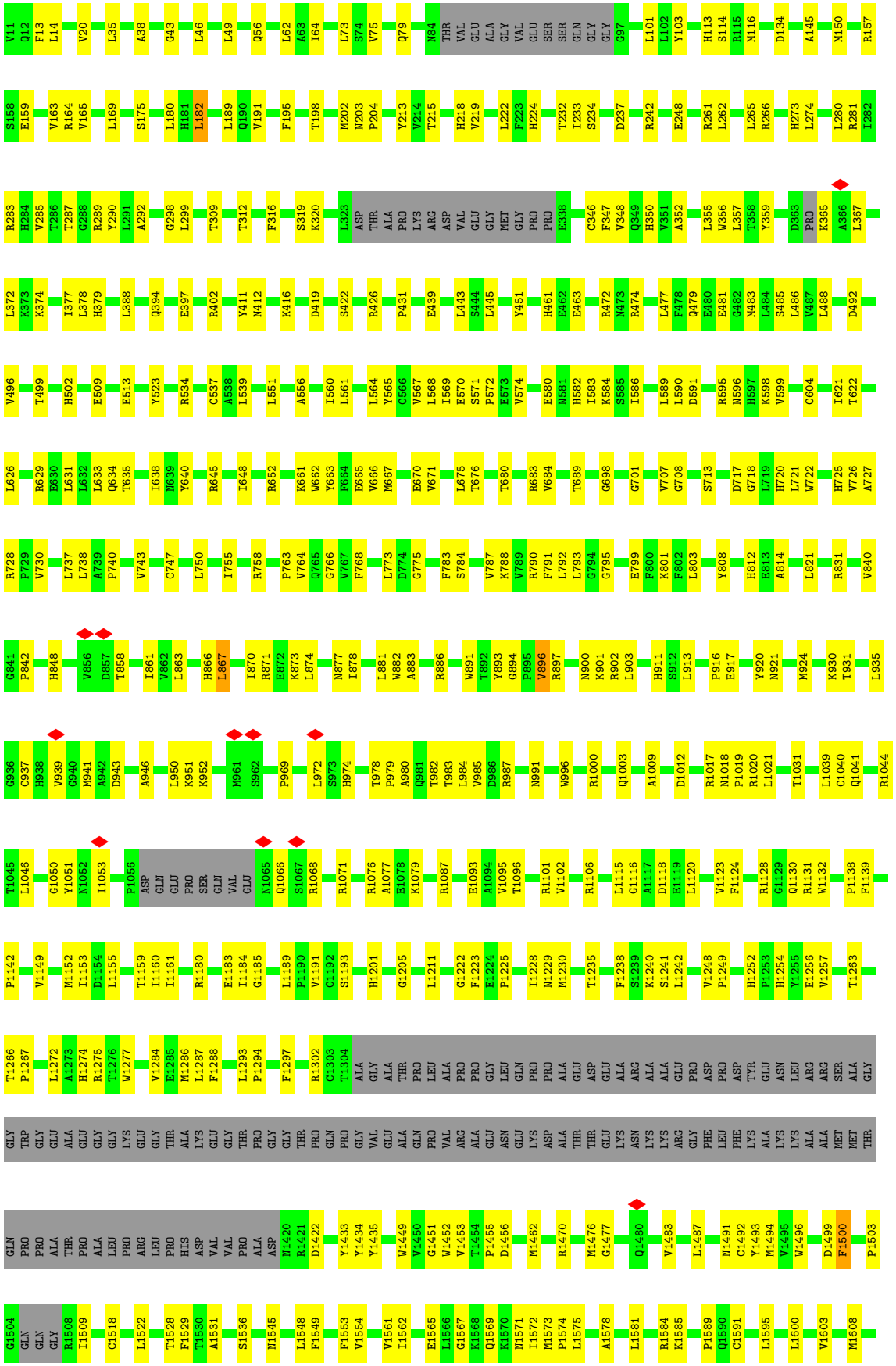
E2670 E2671 L2672 R2676 K2677 L2678 F2679 Y2691 Y2696 R2697 M2698 A2699 M2700 P2701 I2706 A2709 L2710 P2711 A2717 K2722 A2723 E2724 K2725 LYS ALA THR VAL ASP ALA GLU GLY N2734 F2735 D2736 P2739 V2740 E2741 T2742 L2743 N2744 V2745 I2746 I2747 P2748 E2749 K2750 L2751 D2752 S2753 F2754 I2755
E2764 K2765 W2766 A2767 F2768 D2769 K2770 I2771 Q2772 N2773 N2774 W2775 S2776 Y2777 G2778 E2779 N2780 V2781 D2782 E2783 E2784 L2785 K2786 T2787 H2788 P2789 M2790 L2791 R2792 P2793 Y2794 K2795 T2796 E2799 K2800 D2801 K2802 E2803 I2804 Y2805 R2806 W2807 P2808 I2809 K2810 E2811 S2812 L2813 K2814 A2815 M2816 I2817 A2818 W2819 E2820 W2821 T2822 I2823
E2824 K2825 A2826 R2827 E2828 G2829 E2830 GLU GLU ARG THR GLU LYS LYS LYS THR ARG LYS ILE SER GLN THR ALA GLN THR TYR ASP PRO ARG GLU GLY Y2855 N2856 P2857 Q2858 P2859 P2860 D2861 L2862 S2863 G2864 V2865 T2866 L2867 S2868 R2869 E2870 L2871 M2874 Q2877 L2878 H2883 W2886 G2887 R2888
K2891 Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904 L2905 V2906 D2909 T2912 E2915 K2916 A2917 R2918 D2919 R2920 E2921 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932 N2933 G2934 Y2935 A2936 V2937 T2938 R2939 GLY LEU LYS ASP MET GLU L2946 D2947 T2948 I2951 E2952 F2955 A2956
F2957 G2958 F2959 L2960 Q2961 Q2962 L2963 W2966 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 V2981 R2985 P2990 H2991 E2992 Q2993 E2994 I2995 K2996 I3001 F3010 C3014 S3019 T3020 P3021 A3022 H3030 N3033 K3034 E3035 K3036 E3037 M3038 I3039 T3040 S3041 L3042 F3043 L3049 V3050
R3053 V3054 D3060 V3064 V3065 N3066 C3067 L3068 H3069 I3070 L3071 D3076 V3080 M3081 K3082 V3088 K3089 A3090 R3093 F3096 D3102 I3103 E3104 K3105 M3106 V3107 R3111 LEU GLY LYS VAL SER GLN ALA ARG THR GLN VAL LYS GLY VAL GLY Q3127 T3130 V3134 L3140
L3143 F3144 H3150 I3157 L3158 V3161 Q3162 Y3166 L3169 C3170 S3171 L3175 N3180 V3183 R3187 A3195 R3196 L3197 L3206 E3207 K3222 S3223 P3224 R3225 E3226 R3227 A3228 I3229 L3232 V3236 M3239 P3244 V3245 R3248 A3257 E3265 M3266 I3270 L3274
P3275 M3276 L3277 C3278 S3279 Y3280 L3281 W3284 W3285 E3286 R3287 G3288 P3289 E3290 A3291 A3295 L3296 P3297 A3298 G3299 A3300 T3305 T3308 H3311 L3312 L3315 L3316 I3319 L3320 R3321 I3322 I3323 V3324 N3325 N3326 L3327 G3328 I3329 D3330 E3331 K3336 F3341 A3342 Q3343 V3346 I3362 L3381 E3382



• Molecule 3: Ryanodine receptor 1

Chain A: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S158 E159 V163 R164 V165 L169 S175 L180 H181 L182 L189 Q190 V191 F195 T198 M202 N203 P204 Y213 V214 T215 H218 V219 L222 F223 H224 T232 I233 S234 D237 R242 E248 R261 L262 L265 R266 H273 L274 L280 R281 I282
R283 H284 V285 T286 T287 G288 R289 Y290 L291 A292 G298 L299 T309 T312 F316 S319 K320 L323 ASP THR ALA PRO LYS ARG ASP VAL GLU GLY MET GLY PRO PRO E338 C346 F347 V348 Q349 H350 V351 A352 L355 W356 L357 T358 Y359 D363 PRO K365 A366 L367
L372 K373 K374 I377 L378 H379 L388 Q394 E397 R402 Y411 N412 K416 D419 S422 R426 P431 E439 L443 S444 L445 Y451 H461 E462 E463 R472 N473 R474 L477 F478 Q479 E480 E481 G482 M483 L484 S485 L486 V487 L488 D492
V496 T499 H502 E509 E513 Y623 R534 C537 A538 L539 L551 A556 I560 L561 L564 Y565 C566 V567 L568 I569 E570 S571 P572 E573 V574 E580 N581 H582 I583 K584 S585 I586 L589 L590 D591 R595 N596 H597 K598 V599 C604 I621 T622
L626 R629 E630 L631 L632 L633 Q634 T635 I638 N639 Y640 R645 I648 R652 K661 W662 Y663 F664 E665 V666 M667 E670 V671 L675 T676 T680 R683 V684 T689 G698 G701 V707 G708 S713 D717 G718 L719 H720 L721 W722 H725 V726 A727
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G936 C937 H938 V939 G940 M941 A942 D943 A946 L950 K951 K952 M961 S962 P969 L972 S973 H974 T978 P979 A980 Q981 T982 T983 L984 V985 D986 R987 N991 W996 R1000 Q1003 A1009 D1012 R1017 N1018 P1019 R1020 L1021 T1031 L1039 C1040 Q1041 R1044
T1045 L1046 G1050 Y1051 N1052 I1053 P1056 ASP GLN GLU PRO SER GLN VAL GLU N1065 Q1066 S1067 R1068 R1071 R1076 A1077 E1078 K1079 R1087 E1093 A1094 V1095 T1096 R1101 V1102 R1106 L1115 G1116 A1117 D1118 E1119 L1120 V1123 F1124 R1128 G1129 Q1130 R1131 W1132 P1138 F1139
P1142 V1149 M1152 I1153 D1154 L1155 T1159 I1160 I1161 R1180 E1183 I1184 G1185 L1189 P1190 V1191 C1192 S1193 H1201 G1205 L1211 G1222 F1223 E1224 P1225 I1228 N1229 M1230 T1235 F1238 S1239 K1240 S1241 L1242 V1248 P1249 H1252 P1253 H1254 Y1255 E1256 V1257 T1263
T1266 P1267 L1272 A1273 H1274 R1275 T1276 W1277 V1284 E1285 M1286 L1287 F1288 L1293 P1294 F1297 R1302 C1303 T1304 ALA GLY ALA THR PRO LEU ALA PRO PRO GLY LEU GLN LEU PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY
GLY TRP GLY GLU ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR
GLN PRO PRO ALA THR PRO ALA LEU PRO ARG LEU PRO HIS ASP VAL VAL PRO ALA ASP N1420 R1421 D1422 Y1433 Y1434 Y1435 W1449 V1450 G1451 W1452 V1453 T1454 P1455 D1456 M1462 R1470 M1476 G1477 Q1480 V1483 L1487 N1491 C1492 Y1493 M1494 V1495 W1496 D1499 F1500 P1503
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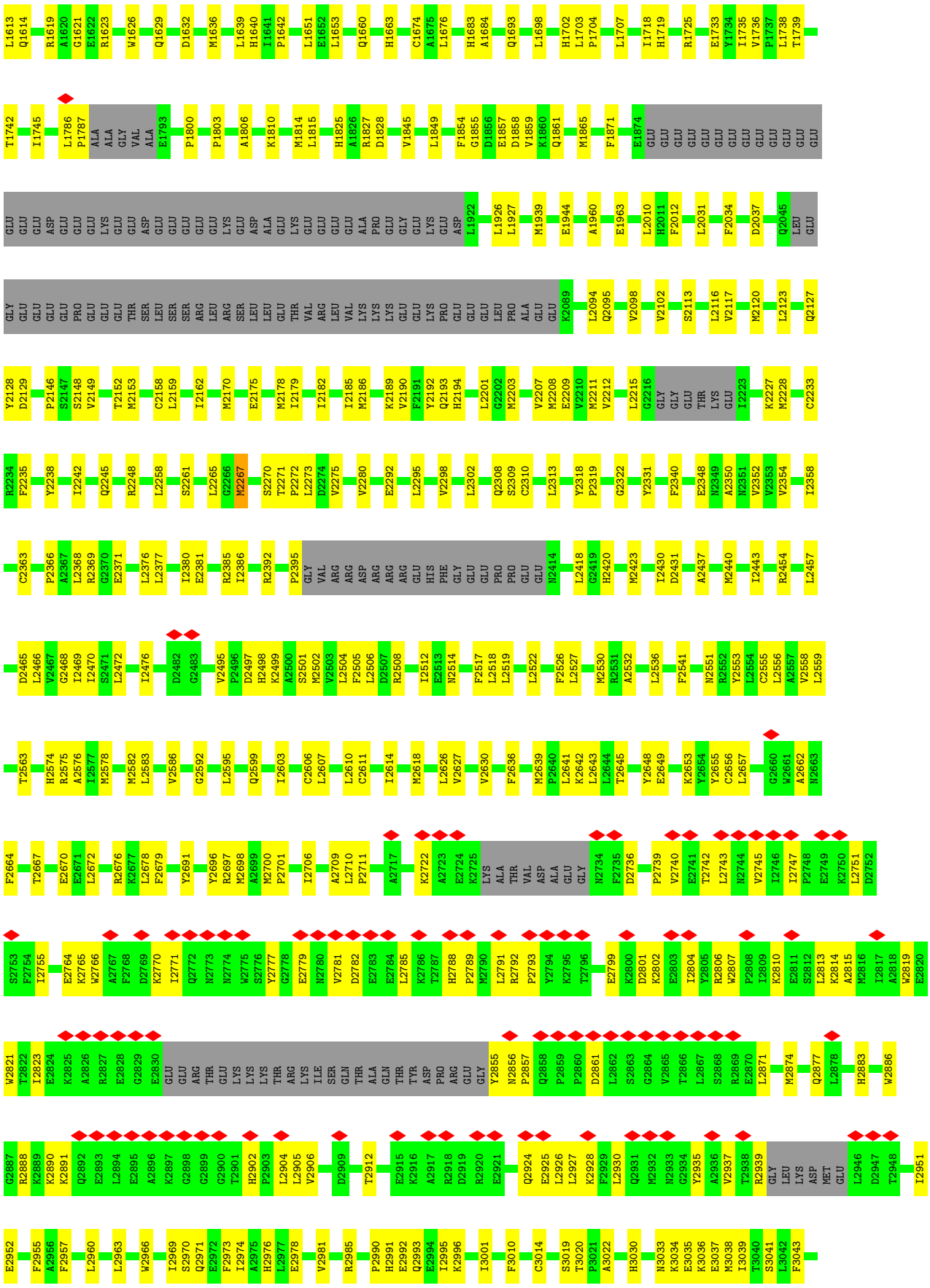

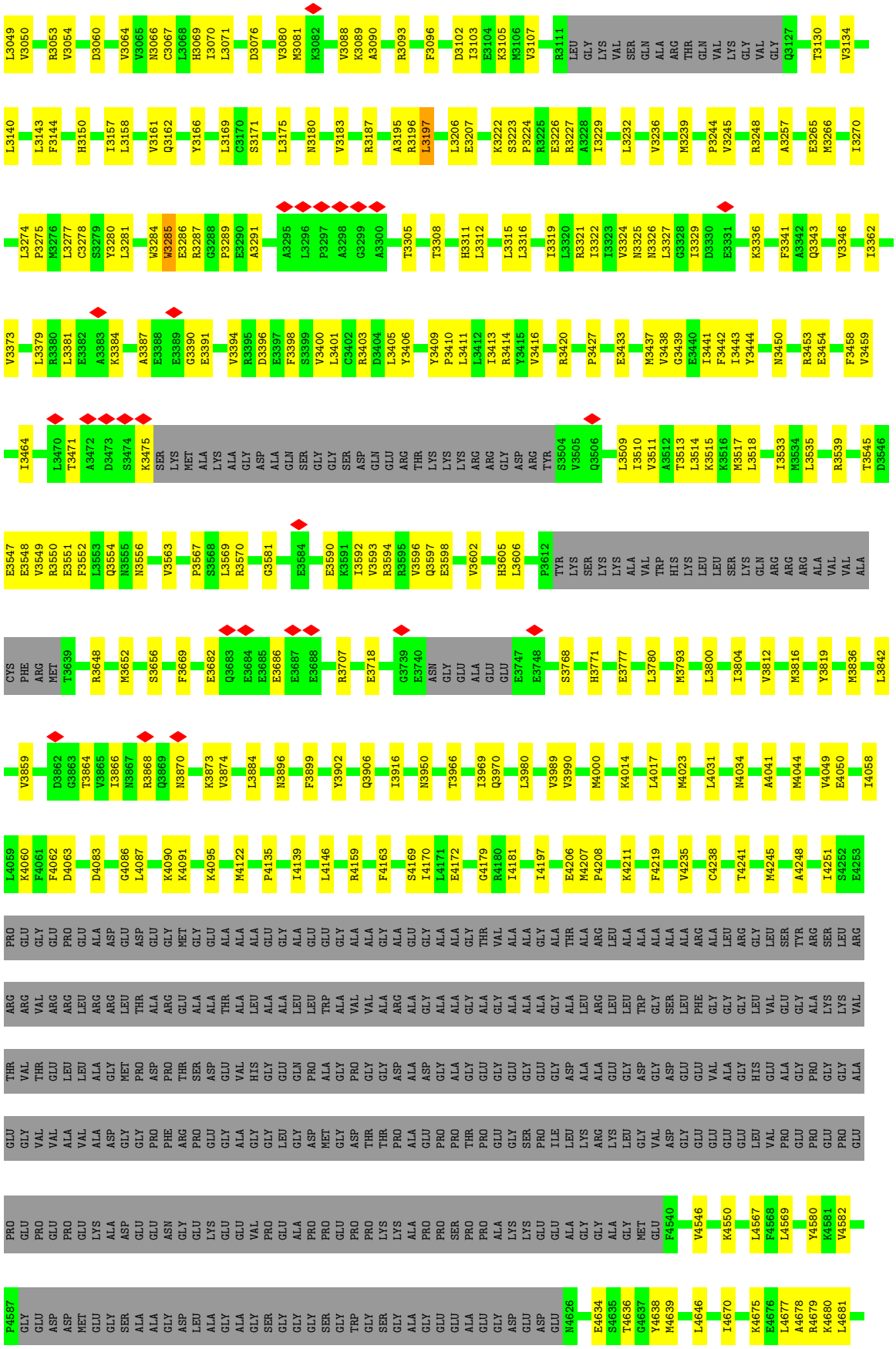

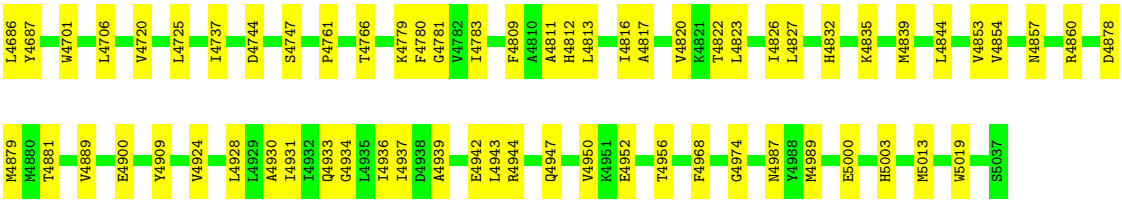
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F4809
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A4811
H4812
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A4817
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G4974
N4987
Y4988
M4989
E5000
H5003
M5013
W5019
S5037

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	39983	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	3.787	Depositor
Minimum map value	-1.672	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.113	Depositor
Recommended contour level	0.3	Depositor
Map size (Å)	488.544, 488.544, 488.544	wwPDB
Map dimensions	336, 336, 336	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.454, 1.454, 1.454	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	B	0.23	0/987	0.64	3/1340 (0.2%)
1	D	0.23	0/987	0.64	3/1340 (0.2%)
1	H	0.23	0/987	0.64	3/1340 (0.2%)
1	K	0.23	0/987	0.64	3/1340 (0.2%)
2	E	0.28	0/834	0.60	1/1123 (0.1%)
2	F	0.28	0/834	0.60	1/1123 (0.1%)
2	I	0.28	0/834	0.60	1/1123 (0.1%)
2	L	0.28	0/834	0.60	1/1123 (0.1%)
3	A	0.21	0/34899	0.42	2/47302 (0.0%)
3	C	0.21	0/34899	0.42	2/47302 (0.0%)
3	G	0.21	0/34899	0.42	2/47302 (0.0%)
3	J	0.21	0/34899	0.42	1/47302 (0.0%)
All	All	0.21	0/146880	0.44	23/199060 (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	B	0	1
1	D	0	1
1	H	0	1
1	K	0	1
All	All	0	4

There are no bond length outliers.

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	K	3	GLN	CA-CB-CG	8.84	131.78	114.10
1	B	3	GLN	CA-CB-CG	8.84	131.78	114.10
1	H	3	GLN	CA-CB-CG	8.84	131.77	114.10
1	D	3	GLN	CA-CB-CG	8.82	131.74	114.10
1	D	82	MET	CB-CG-SD	7.20	134.29	112.70
1	B	82	MET	CB-CG-SD	7.20	134.30	112.70
1	K	82	MET	CB-CG-SD	7.20	134.29	112.70
1	H	82	MET	CB-CG-SD	7.20	134.29	112.70
1	H	47	LEU	CA-CB-CG	6.95	140.63	116.30
1	D	47	LEU	CA-CB-CG	6.95	140.62	116.30
1	K	47	LEU	CA-CB-CG	6.93	140.57	116.30
1	B	47	LEU	CA-CB-CG	6.92	140.53	116.30
2	L	34	LYS	CD-CE-NZ	-6.58	90.86	111.90
2	I	34	LYS	CD-CE-NZ	-6.57	90.87	111.90
2	F	34	LYS	CD-CE-NZ	-6.57	90.87	111.90
2	E	34	LYS	CD-CE-NZ	-6.56	90.90	111.90
3	J	1503	PRO	N-CA-CB	6.01	110.17	103.44
3	A	1503	PRO	N-CA-CB	6.00	110.16	103.44
3	G	1503	PRO	N-CA-CB	5.98	110.14	103.44
3	C	1503	PRO	N-CA-CB	5.97	110.13	103.44
3	G	463	GLU	CA-CB-CG	5.01	124.12	114.10
3	C	463	GLU	CA-CB-CG	5.01	124.12	114.10
3	A	463	GLU	CA-CB-CG	5.01	124.11	114.10

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	2	VAL	Peptide
1	D	2	VAL	Peptide
1	H	2	VAL	Peptide
1	K	2	VAL	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	967	0	916	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	967	0	916	40	0
1	H	967	0	916	42	0
1	K	967	0	916	37	0
2	E	818	0	824	23	0
2	F	818	0	824	22	0
2	I	818	0	824	31	0
2	L	818	0	824	31	0
3	A	34131	0	33507	732	0
3	C	34131	0	33507	726	0
3	G	34131	0	33507	740	0
3	J	34131	0	33507	732	0
4	A	1	0	0	0	0
4	C	1	0	0	0	0
4	G	1	0	0	0	0
4	J	1	0	0	0	0
5	A	31	0	12	0	0
5	C	31	0	12	0	0
5	G	31	0	12	0	0
5	J	31	0	12	0	0
6	A	14	0	10	0	0
6	C	14	0	10	0	0
6	G	14	0	10	0	0
6	J	14	0	10	0	0
7	A	1	0	0	0	0
7	C	1	0	0	0	0
7	G	1	0	0	0	0
7	J	1	0	0	0	0
8	A	195	0	256	6	0
8	C	163	0	214	6	0
8	G	195	0	256	6	0
8	J	227	0	298	7	0
All	All	144632	0	142100	3131	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 11.

All (3131) 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)
3:J:2806:ARG:HE	3:J:2810:LYS:HE2	1.44	0.83
3:A:2806:ARG:HE	3:A:2810:LYS:HE2	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2592:GLY:HA2	3:C:2595:LEU:HD12	1.62	0.82
3:J:2592:GLY:HA2	3:J:2595:LEU:HD12	1.62	0.81
3:A:2592:GLY:HA2	3:A:2595:LEU:HD12	1.62	0.81
3:C:2806:ARG:HE	3:C:2810:LYS:HE2	1.44	0.81
3:J:4238:CYS:HA	3:J:4989:MET:HE1	1.62	0.81
3:C:4238:CYS:HA	3:C:4989:MET:HE1	1.61	0.80
3:G:4238:CYS:HA	3:G:4989:MET:HE1	1.61	0.80
3:G:2806:ARG:HE	3:G:2810:LYS:HE2	1.44	0.80
3:A:4238:CYS:HA	3:A:4989:MET:HE1	1.62	0.80
3:G:2592:GLY:HA2	3:G:2595:LEU:HD12	1.62	0.79
3:A:2823:ILE:HG13	3:A:2937:VAL:HB	1.64	0.79
3:C:972:LEU:HB2	3:C:1044:ARG:HD2	1.65	0.78
3:J:2823:ILE:HG13	3:J:2937:VAL:HB	1.64	0.78
3:A:972:LEU:HB2	3:A:1044:ARG:HD2	1.66	0.78
3:G:2823:ILE:HG13	3:G:2937:VAL:HB	1.64	0.78
3:C:2823:ILE:HG13	3:C:2937:VAL:HB	1.64	0.77
3:J:972:LEU:HB2	3:J:1044:ARG:HD2	1.65	0.77
2:F:91:ILE:HD12	2:F:92:PRO:HD2	1.68	0.77
2:L:91:ILE:HD12	2:L:92:PRO:HD2	1.67	0.76
3:G:972:LEU:HB2	3:G:1044:ARG:HD2	1.66	0.76
2:I:91:ILE:HD12	2:I:92:PRO:HD2	1.68	0.76
2:E:91:ILE:HD12	2:E:92:PRO:HD2	1.67	0.76
3:C:2960:LEU:HB3	3:C:3038:MET:HE1	1.69	0.74
2:F:82:TYR:HB2	2:F:86:GLY:HA2	1.70	0.74
2:I:82:TYR:HB2	2:I:86:GLY:HA2	1.70	0.74
1:H:106:PRO:HB3	3:G:882:TRP:HB2	1.68	0.74
3:A:2960:LEU:HB3	3:A:3038:MET:HE1	1.69	0.73
2:L:82:TYR:HB2	2:L:86:GLY:HA2	1.70	0.73
2:E:90:VAL:HG23	2:E:91:ILE:HG22	1.70	0.73
2:I:35:LYS:H	2:I:35:LYS:HD2	1.54	0.73
3:J:2960:LEU:HB3	3:J:3038:MET:HE1	1.69	0.72
3:C:1435:TYR:HB3	3:C:1575:LEU:HD12	1.71	0.72
2:E:82:TYR:HB2	2:E:86:GLY:HA2	1.70	0.72
2:L:90:VAL:HG23	2:L:91:ILE:HG22	1.70	0.72
2:F:35:LYS:H	2:F:35:LYS:HD2	1.54	0.72
2:F:90:VAL:HG23	2:F:91:ILE:HG22	1.70	0.72
3:G:1561:VAL:HG12	3:G:1562:ILE:HG13	1.72	0.72
3:A:1435:TYR:HB3	3:A:1575:LEU:HD12	1.71	0.72
3:J:950:LEU:HD22	3:J:969:PRO:HB2	1.72	0.72
3:C:1087:ARG:HH21	3:C:1222:GLY:HA3	1.55	0.72
3:G:2960:LEU:HB3	3:G:3038:MET:HE1	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:106:PRO:HB3	3:J:882:TRP:HB2	1.70	0.72
3:J:1435:TYR:HB3	3:J:1575:LEU:HD12	1.71	0.72
3:A:1087:ARG:HH21	3:A:1222:GLY:HA3	1.55	0.72
2:E:35:LYS:H	2:E:35:LYS:HD2	1.54	0.71
3:C:950:LEU:HD22	3:C:969:PRO:HB2	1.72	0.71
2:L:35:LYS:H	2:L:35:LYS:HD2	1.54	0.71
3:A:2971:GLN:HB2	3:A:3049:LEU:HD22	1.72	0.71
3:G:1087:ARG:HH21	3:G:1222:GLY:HA3	1.55	0.71
3:J:1561:VAL:HG12	3:J:1562:ILE:HG13	1.72	0.71
2:I:90:VAL:HG23	2:I:91:ILE:HG22	1.70	0.71
3:G:633:LEU:HB3	3:G:1639:LEU:HD11	1.73	0.71
3:G:1435:TYR:HB3	3:G:1575:LEU:HD12	1.71	0.71
3:G:2971:GLN:HB2	3:G:3049:LEU:HD22	1.72	0.71
3:A:1561:VAL:HG12	3:A:1562:ILE:HG13	1.72	0.71
3:A:633:LEU:HB3	3:A:1639:LEU:HD11	1.73	0.71
3:A:950:LEU:HD22	3:A:969:PRO:HB2	1.72	0.70
3:C:1561:VAL:HG12	3:C:1562:ILE:HG13	1.72	0.70
3:G:950:LEU:HD22	3:G:969:PRO:HB2	1.72	0.70
3:J:666:VAL:HG21	3:J:684:VAL:HG21	1.74	0.70
3:C:1256:GLU:HB2	3:C:1275:ARG:HE	1.57	0.70
3:J:1256:GLU:HB2	3:J:1275:ARG:HE	1.57	0.70
1:B:106:PRO:HB3	3:A:882:TRP:HB2	1.73	0.70
3:C:666:VAL:HG21	3:C:684:VAL:HG21	1.74	0.70
3:J:1087:ARG:HH21	3:J:1222:GLY:HA3	1.55	0.70
3:J:2971:GLN:HB2	3:J:3049:LEU:HD22	1.72	0.70
3:G:1256:GLU:HB2	3:G:1275:ARG:HE	1.57	0.70
3:G:666:VAL:HG21	3:G:684:VAL:HG21	1.74	0.69
1:D:71:ARG:HB2	1:D:78:VAL:HG23	1.74	0.69
3:C:2971:GLN:HB2	3:C:3049:LEU:HD22	1.72	0.69
3:A:1256:GLU:HB2	3:A:1275:ARG:HE	1.57	0.69
3:J:2627:VAL:HG22	3:J:2678:LEU:HD12	1.74	0.69
3:C:633:LEU:HB3	3:C:1639:LEU:HD11	1.73	0.69
3:J:633:LEU:HB3	3:J:1639:LEU:HD11	1.73	0.69
3:G:2641:LEU:HD23	3:G:2698:MET:HG2	1.75	0.69
3:A:666:VAL:HG21	3:A:684:VAL:HG21	1.74	0.69
3:A:2627:VAL:HG22	3:A:2678:LEU:HD12	1.74	0.69
3:G:1241:SER:HA	3:G:1603:VAL:HG12	1.75	0.69
1:D:106:PRO:HB3	3:C:882:TRP:HB2	1.73	0.69
3:J:1297:PHE:HB2	3:J:1545:ASN:H	1.59	0.68
3:J:4044:MET:HE1	3:J:4146:LEU:HD11	1.74	0.68
3:C:4044:MET:HE1	3:C:4146:LEU:HD11	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:71:ARG:HB2	1:B:78:VAL:HG23	1.74	0.68
3:A:1241:SER:HA	3:A:1603:VAL:HG12	1.75	0.68
3:G:2248:ARG:HG2	3:G:3868:ARG:HE	1.59	0.68
3:C:2627:VAL:HG22	3:C:2678:LEU:HD12	1.74	0.68
3:A:2248:ARG:HG2	3:A:3868:ARG:HE	1.59	0.68
1:K:71:ARG:HB2	1:K:78:VAL:HG23	1.74	0.68
2:I:7:ILE:HB	2:I:71:ARG:HG3	1.76	0.68
3:G:896:VAL:HB	3:G:903:LEU:HD13	1.76	0.68
3:A:1297:PHE:HB2	3:A:1545:ASN:H	1.59	0.68
3:A:2641:LEU:HD23	3:A:2698:MET:HG2	1.75	0.68
3:A:2782:ASP:HB3	3:A:2785:LEU:HB2	1.76	0.68
3:G:2782:ASP:HB3	3:G:2785:LEU:HB2	1.76	0.68
3:G:4044:MET:HE1	3:G:4146:LEU:HD11	1.74	0.68
3:J:2248:ARG:HG2	3:J:3868:ARG:HE	1.59	0.68
3:C:1477:GLY:HA3	3:C:1483:VAL:HA	1.76	0.68
3:C:2248:ARG:HG2	3:C:3868:ARG:HE	1.59	0.68
3:A:764:VAL:HG13	3:A:766:GLY:H	1.59	0.68
3:J:2641:LEU:HD23	3:J:2698:MET:HG2	1.75	0.68
3:C:2782:ASP:HB3	3:C:2785:LEU:HB2	1.76	0.68
1:H:71:ARG:HB2	1:H:78:VAL:HG23	1.74	0.68
3:G:2627:VAL:HG22	3:G:2678:LEU:HD12	1.74	0.68
3:J:1241:SER:HA	3:J:1603:VAL:HG12	1.75	0.68
3:J:1477:GLY:HA3	3:J:1483:VAL:HA	1.76	0.68
3:J:2782:ASP:HB3	3:J:2785:LEU:HB2	1.76	0.68
3:A:1477:GLY:HA3	3:A:1483:VAL:HA	1.76	0.68
3:G:1477:GLY:HA3	3:G:1483:VAL:HA	1.76	0.67
3:C:499:THR:HG23	3:C:502:HIS:H	1.59	0.67
3:C:1297:PHE:HB2	3:C:1545:ASN:H	1.59	0.67
3:A:499:THR:HG23	3:A:502:HIS:H	1.59	0.67
3:G:499:THR:HG23	3:G:502:HIS:H	1.59	0.67
3:G:764:VAL:HG13	3:G:766:GLY:H	1.59	0.67
3:G:1297:PHE:HB2	3:G:1545:ASN:H	1.58	0.67
3:C:2641:LEU:HD23	3:C:2698:MET:HG2	1.75	0.67
1:K:53:SER:HB2	3:J:916:PRO:HB3	1.76	0.67
3:G:2366:PRO:HA	3:G:2369:ARG:HH12	1.60	0.67
3:J:348:VAL:HG13	3:J:357:LEU:HD13	1.77	0.67
3:J:499:THR:HG23	3:J:502:HIS:H	1.59	0.67
2:E:63:ALA:HA	2:E:66:MET:HE2	1.76	0.67
3:C:896:VAL:HB	3:C:903:LEU:HD13	1.76	0.67
2:L:7:ILE:HB	2:L:71:ARG:HG3	1.76	0.67
2:F:7:ILE:HB	2:F:71:ARG:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:896:VAL:HB	3:A:903:LEU:HD13	1.76	0.67
2:E:7:ILE:HB	2:E:71:ARG:HG3	1.76	0.67
3:A:4044:MET:HE1	3:A:4146:LEU:HD11	1.74	0.67
3:C:1241:SER:HA	3:C:1603:VAL:HG12	1.75	0.66
3:A:2930:LEU:HA	3:A:2935:TYR:HD2	1.61	0.66
2:I:63:ALA:HA	2:I:66:MET:HE2	1.76	0.66
3:G:1249:PRO:HG2	3:G:1252:HIS:HB2	1.78	0.66
3:J:896:VAL:HB	3:J:903:LEU:HD13	1.76	0.66
3:G:1238:PHE:HD2	3:G:1608:MET:HG2	1.61	0.66
3:J:1249:PRO:HG2	3:J:1252:HIS:HB2	1.78	0.66
3:A:1249:PRO:HG2	3:A:1252:HIS:HB2	1.78	0.66
3:C:764:VAL:HG13	3:C:766:GLY:H	1.59	0.66
3:C:2930:LEU:HA	3:C:2935:TYR:HD2	1.61	0.66
3:A:2366:PRO:HA	3:A:2369:ARG:HH12	1.60	0.66
3:C:348:VAL:HG13	3:C:357:LEU:HD13	1.77	0.66
3:C:1238:PHE:HD2	3:C:1608:MET:HG2	1.61	0.66
3:A:1238:PHE:HD2	3:A:1608:MET:HG2	1.61	0.66
3:G:4878:ASP:HB3	3:G:4881:THR:HG22	1.78	0.66
3:J:1238:PHE:HD2	3:J:1608:MET:HG2	1.61	0.66
3:J:4878:ASP:HB3	3:J:4881:THR:HG22	1.78	0.66
2:L:63:ALA:HA	2:L:66:MET:HE2	1.76	0.66
3:C:4878:ASP:HB3	3:C:4881:THR:HG22	1.78	0.66
3:J:2366:PRO:HA	3:J:2369:ARG:HH12	1.60	0.66
2:F:63:ALA:HA	2:F:66:MET:HE2	1.76	0.66
3:G:793:LEU:HD22	3:G:821:LEU:HD21	1.78	0.66
3:A:4878:ASP:HB3	3:A:4881:THR:HG22	1.78	0.66
3:G:3718:GLU:HA	3:G:3793:MET:HE3	1.78	0.65
3:J:764:VAL:HG13	3:J:766:GLY:H	1.59	0.65
3:C:1249:PRO:HG2	3:C:1252:HIS:HB2	1.78	0.65
3:J:793:LEU:HD22	3:J:821:LEU:HD21	1.78	0.65
3:J:3718:GLU:HA	3:J:3793:MET:HE3	1.78	0.65
3:A:2981:VAL:HA	3:A:2985:ARG:HA	1.78	0.65
3:G:348:VAL:HG13	3:G:357:LEU:HD13	1.77	0.65
3:C:3718:GLU:HA	3:C:3793:MET:HE3	1.78	0.65
3:G:2930:LEU:HA	3:G:2935:TYR:HD2	1.61	0.65
3:G:2969:ILE:HG22	3:G:2973:PHE:HE2	1.62	0.65
3:J:629:ARG:HB3	3:J:634:GLN:NE2	2.12	0.65
3:C:2366:PRO:HA	3:C:2369:ARG:HH12	1.60	0.65
3:C:3286:GLU:HA	3:C:3291:ALA:HB3	1.77	0.65
3:A:348:VAL:HG13	3:A:357:LEU:HD13	1.77	0.65
3:G:629:ARG:HB3	3:G:634:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:2930:LEU:HA	3:J:2935:TYR:HD2	1.61	0.65
3:A:3286:GLU:HA	3:A:3291:ALA:HB3	1.78	0.65
3:A:3718:GLU:HA	3:A:3793:MET:HE3	1.79	0.65
3:J:2981:VAL:HA	3:J:2985:ARG:HA	1.78	0.64
3:J:3286:GLU:HA	3:J:3291:ALA:HB3	1.78	0.64
3:J:3563:VAL:HG12	3:J:3570:ARG:HD3	1.80	0.64
3:C:2981:VAL:HA	3:C:2985:ARG:HA	1.78	0.64
3:J:1118:ASP:HB3	3:J:1120:LEU:HD12	1.80	0.64
3:C:629:ARG:HB3	3:C:634:GLN:NE2	2.12	0.64
3:J:2233:CYS:HB3	3:J:2270:SER:HB3	1.80	0.64
3:G:2233:CYS:HB3	3:G:2270:SER:HB3	1.80	0.64
3:A:265:LEU:HD13	3:A:281:ARG:HE	1.62	0.64
3:A:2969:ILE:HG22	3:A:2973:PHE:HE2	1.62	0.64
3:G:3563:VAL:HG12	3:G:3570:ARG:HD3	1.80	0.64
3:C:3563:VAL:HG12	3:C:3570:ARG:HD3	1.80	0.64
3:G:3286:GLU:HA	3:G:3291:ALA:HB3	1.77	0.64
3:C:2969:ILE:HG22	3:C:2973:PHE:HE2	1.62	0.64
3:A:629:ARG:HB3	3:A:634:GLN:NE2	2.12	0.64
3:J:2969:ILE:HG22	3:J:2973:PHE:HE2	1.62	0.63
3:A:793:LEU:HD22	3:A:821:LEU:HD21	1.78	0.63
3:G:2981:VAL:HA	3:G:2985:ARG:HA	1.78	0.63
3:C:2679:PHE:HB2	3:C:2706:ILE:HG21	1.81	0.63
3:G:265:LEU:HD13	3:G:281:ARG:HE	1.63	0.63
3:G:1118:ASP:HB3	3:G:1120:LEU:HD12	1.80	0.63
3:G:4087:LEU:HD12	3:G:4122:MET:HB3	1.80	0.63
3:J:2679:PHE:HB2	3:J:2706:ILE:HG21	1.81	0.63
3:C:38:ALA:HB1	3:C:64:ILE:HG13	1.81	0.63
3:A:3563:VAL:HG12	3:A:3570:ARG:HD3	1.80	0.63
3:J:38:ALA:HB1	3:J:64:ILE:HG13	1.81	0.63
3:C:793:LEU:HD22	3:C:821:LEU:HD21	1.78	0.63
3:C:2747:ILE:HG21	3:C:2814:LYS:HE3	1.81	0.63
3:A:2679:PHE:HB2	3:A:2706:ILE:HG21	1.81	0.63
3:C:4087:LEU:HD12	3:C:4122:MET:HB3	1.80	0.63
3:A:38:ALA:HB1	3:A:64:ILE:HG13	1.81	0.63
3:J:4087:LEU:HD12	3:J:4122:MET:HB3	1.80	0.63
3:C:265:LEU:HD13	3:C:281:ARG:HE	1.62	0.63
3:J:891:TRP:HA	3:J:902:ARG:HG3	1.80	0.63
3:A:2233:CYS:HB3	3:A:2270:SER:HB3	1.80	0.63
3:A:1118:ASP:HB3	3:A:1120:LEU:HD12	1.80	0.62
3:J:2747:ILE:HG21	3:J:2814:LYS:HE3	1.81	0.62
3:C:1118:ASP:HB3	3:C:1120:LEU:HD12	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2233:CYS:HB3	3:C:2270:SER:HB3	1.80	0.62
3:G:2679:PHE:HB2	3:G:2706:ILE:HG21	1.81	0.62
3:G:262:LEU:HD13	3:G:274:LEU:HD12	1.82	0.62
3:J:2215:LEU:HD22	3:J:2265:LEU:HD23	1.80	0.62
3:C:891:TRP:HA	3:C:902:ARG:HG3	1.80	0.62
3:J:2190:VAL:HA	3:J:2193:GLN:HG2	1.81	0.62
3:A:2215:LEU:HD22	3:A:2265:LEU:HD23	1.80	0.62
3:G:38:ALA:HB1	3:G:64:ILE:HG13	1.81	0.62
3:G:2215:LEU:HD22	3:G:2265:LEU:HD23	1.80	0.62
3:J:262:LEU:HD13	3:J:274:LEU:HD12	1.82	0.62
3:G:1093:GLU:HB3	3:G:1201:HIS:HB3	1.81	0.62
3:A:4087:LEU:HD12	3:A:4122:MET:HB3	1.80	0.62
3:C:262:LEU:HD13	3:C:274:LEU:HD12	1.82	0.62
3:C:2190:VAL:HA	3:C:2193:GLN:HG2	1.81	0.62
3:A:671:VAL:HG12	3:A:787:VAL:HG23	1.82	0.62
3:G:671:VAL:HG12	3:G:787:VAL:HG23	1.82	0.62
3:G:2696:TYR:HB3	3:G:3001:ILE:HD11	1.82	0.62
3:G:2747:ILE:HG21	3:G:2814:LYS:HE3	1.81	0.62
3:J:671:VAL:HG12	3:J:787:VAL:HG23	1.82	0.62
3:G:2190:VAL:HA	3:G:2193:GLN:HG2	1.81	0.61
3:C:2696:TYR:HB3	3:C:3001:ILE:HD11	1.82	0.61
3:A:891:TRP:HA	3:A:902:ARG:HG3	1.80	0.61
3:C:2215:LEU:HD22	3:C:2265:LEU:HD23	1.80	0.61
3:A:262:LEU:HD13	3:A:274:LEU:HD12	1.81	0.61
3:A:1093:GLU:HB3	3:A:1201:HIS:HB3	1.81	0.61
3:A:2696:TYR:HB3	3:A:3001:ILE:HD11	1.82	0.61
3:A:2747:ILE:HG21	3:A:2814:LYS:HE3	1.81	0.61
3:A:2781:VAL:HG12	3:A:2789:PRO:HB2	1.83	0.61
3:A:3081:MET:HB3	3:A:3089:LYS:HE3	1.82	0.61
1:H:51:ILE:HD13	1:H:69:ILE:HG23	1.82	0.61
3:A:2190:VAL:HA	3:A:2193:GLN:HG2	1.81	0.61
3:J:265:LEU:HD13	3:J:281:ARG:HE	1.63	0.61
3:J:1093:GLU:HB3	3:J:1201:HIS:HB3	1.81	0.61
3:C:2781:VAL:HG12	3:C:2789:PRO:HB2	1.83	0.61
3:C:3081:MET:HB3	3:C:3089:LYS:HE3	1.83	0.61
3:G:891:TRP:HA	3:G:902:ARG:HG3	1.80	0.61
3:G:3081:MET:HB3	3:G:3089:LYS:HE3	1.83	0.61
3:J:2696:TYR:HB3	3:J:3001:ILE:HD11	1.82	0.61
3:J:2781:VAL:HG12	3:J:2789:PRO:HB2	1.83	0.61
3:C:1093:GLU:HB3	3:C:1201:HIS:HB3	1.81	0.61
3:G:2358:ILE:HG13	3:A:195:PHE:CE2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2781:VAL:HG12	3:G:2789:PRO:HB2	1.83	0.61
3:J:1115:LEU:HB3	3:J:1123:VAL:HG11	1.83	0.61
3:C:671:VAL:HG12	3:C:787:VAL:HG23	1.82	0.61
3:J:485:SER:HA	3:J:488:LEU:HD12	1.82	0.61
3:C:485:SER:HA	3:C:488:LEU:HD12	1.82	0.61
1:B:67:PHE:HB3	1:B:80:LEU:HD11	1.82	0.61
3:A:1115:LEU:HB3	3:A:1123:VAL:HG11	1.83	0.61
3:J:3270:ILE:HA	3:J:3274:LEU:HD12	1.83	0.61
1:D:67:PHE:HB3	1:D:80:LEU:HD11	1.82	0.61
1:K:51:ILE:HD13	1:K:69:ILE:HG23	1.82	0.61
3:G:2551:ASN:HD21	3:G:2595:LEU:HD23	1.66	0.60
3:J:3081:MET:HB3	3:J:3089:LYS:HE3	1.83	0.60
3:C:3043:PHE:HE2	3:C:3143:LEU:HD21	1.65	0.60
3:C:3270:ILE:HA	3:C:3274:LEU:HD12	1.83	0.60
3:J:858:THR:HG21	3:J:931:THR:HG22	1.83	0.60
1:H:67:PHE:HB3	1:H:80:LEU:HD11	1.82	0.60
3:J:3043:PHE:HE2	3:J:3143:LEU:HD21	1.65	0.60
3:A:485:SER:HA	3:A:488:LEU:HD12	1.82	0.60
3:A:2740:VAL:HG21	3:A:2819:TRP:HE1	1.67	0.60
3:A:2764:GLU:HB3	3:A:2857:PRO:HD3	1.83	0.60
3:G:485:SER:HA	3:G:488:LEU:HD12	1.82	0.60
3:G:3270:ILE:HA	3:G:3274:LEU:HD12	1.83	0.60
3:G:4680:LYS:HB3	3:G:4686:LEU:HD22	1.84	0.60
1:D:53:SER:HB2	3:C:916:PRO:HB3	1.82	0.60
3:C:2551:ASN:HD21	3:C:2595:LEU:HD23	1.66	0.60
3:C:4680:LYS:HB3	3:C:4686:LEU:HD22	1.84	0.60
1:B:51:ILE:HD13	1:B:69:ILE:HG23	1.82	0.60
3:A:4241:THR:O	3:A:4245:MET:HG3	2.02	0.60
3:G:2740:VAL:HG21	3:G:2819:TRP:HE1	1.66	0.60
3:G:3043:PHE:HE2	3:G:3143:LEU:HD21	1.65	0.60
1:K:67:PHE:HB3	1:K:80:LEU:HD11	1.82	0.60
3:C:195:PHE:CE2	3:A:2358:ILE:HG13	2.37	0.60
3:G:2764:GLU:HB3	3:G:2857:PRO:HD3	1.83	0.60
3:G:195:PHE:CE2	3:J:2358:ILE:HG13	2.37	0.60
3:J:2740:VAL:HG21	3:J:2819:TRP:HE1	1.66	0.60
3:A:2551:ASN:HD21	3:A:2595:LEU:HD23	1.66	0.60
3:A:4680:LYS:HB3	3:A:4686:LEU:HD22	1.84	0.60
3:J:4680:LYS:HB3	3:J:4686:LEU:HD22	1.84	0.60
1:B:53:SER:HB2	3:A:916:PRO:HB3	1.84	0.60
3:A:3043:PHE:HE2	3:A:3143:LEU:HD21	1.65	0.60
3:G:1115:LEU:HB3	3:G:1123:VAL:HG11	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4241:THR:O	3:C:4245:MET:HG3	2.02	0.59
3:J:195:PHE:CE2	3:C:2358:ILE:HG13	2.37	0.59
1:D:51:ILE:HD13	1:D:69:ILE:HG23	1.82	0.59
3:C:640:TYR:HB3	3:C:1613:LEU:HD11	1.84	0.59
3:C:858:THR:HG21	3:C:931:THR:HG22	1.83	0.59
3:G:640:TYR:HB3	3:G:1613:LEU:HD11	1.85	0.59
3:J:2951:ILE:HG21	3:J:3034:LYS:HD2	1.85	0.59
3:C:683:ARG:HG2	3:C:717:ASP:HB3	1.84	0.59
3:A:2656:CYS:HA	3:A:2711:PRO:HG3	1.85	0.59
3:A:3034:LYS:O	3:A:3038:MET:HG3	2.03	0.59
3:G:2951:ILE:HG21	3:G:3034:LYS:HD2	1.84	0.59
1:B:35:GLY:HA2	1:B:50:THR:HA	1.84	0.59
3:A:683:ARG:HG2	3:A:717:ASP:HB3	1.84	0.59
3:A:2951:ILE:HG21	3:A:3034:LYS:HD2	1.84	0.59
3:J:2551:ASN:HD21	3:J:2595:LEU:HD23	1.66	0.59
3:A:3270:ILE:HA	3:A:3274:LEU:HD12	1.83	0.59
3:J:683:ARG:HG2	3:J:717:ASP:HB3	1.84	0.59
3:C:2740:VAL:HG21	3:C:2819:TRP:HE1	1.66	0.59
3:A:858:THR:HG21	3:A:931:THR:HG22	1.83	0.59
3:G:858:THR:HG21	3:G:931:THR:HG22	1.83	0.59
3:G:4241:THR:O	3:G:4245:MET:HG3	2.02	0.59
3:J:1698:LEU:HD23	3:J:1814:MET:HE1	1.85	0.59
3:J:2656:CYS:HA	3:J:2711:PRO:HG3	1.85	0.59
3:J:2764:GLU:HB3	3:J:2857:PRO:HD3	1.83	0.59
3:A:640:TYR:HB3	3:A:1613:LEU:HD11	1.85	0.59
3:J:640:TYR:HB3	3:J:1613:LEU:HD11	1.85	0.59
3:C:870:ILE:HA	3:C:873:LYS:HE2	1.85	0.59
3:C:1115:LEU:HB3	3:C:1123:VAL:HG11	1.83	0.59
3:C:2764:GLU:HB3	3:C:2857:PRO:HD3	1.83	0.59
3:A:4811:ALA:HB2	8:A:5106:POV:H39A	1.85	0.59
3:A:2639:MET:HE2	3:A:2642:LYS:HE2	1.85	0.59
1:H:35:GLY:HA2	1:H:50:THR:HA	1.84	0.58
3:J:101:LEU:HB3	3:J:150:MET:HE1	1.85	0.58
3:G:2639:MET:HE2	3:G:2642:LYS:HE2	1.85	0.58
3:J:4241:THR:O	3:J:4245:MET:HG3	2.02	0.58
3:C:2973:PHE:CD1	3:C:2995:ILE:HG12	2.38	0.58
1:D:35:GLY:HA2	1:D:50:THR:HA	1.84	0.58
3:G:720:HIS:HB3	3:G:728:ARG:H	1.69	0.58
3:G:1698:LEU:HD23	3:G:1814:MET:HE1	1.85	0.58
1:K:35:GLY:HA2	1:K:50:THR:HA	1.84	0.58
3:J:590:LEU:HB3	3:J:631:LEU:HD13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1698:LEU:HD23	3:C:1814:MET:HE1	1.85	0.58
3:A:1274:HIS:HB3	3:A:1277:TRP:HB2	1.84	0.58
3:G:101:LEU:HB3	3:G:150:MET:HE1	1.85	0.58
3:J:1274:HIS:HB3	3:J:1277:TRP:HB2	1.84	0.58
3:J:1573:MET:HE3	3:J:1574:PRO:HD2	1.85	0.58
3:J:2973:PHE:CD1	3:J:2995:ILE:HG12	2.38	0.58
3:J:3066:ASN:HA	3:J:3069:HIS:HD1	1.69	0.58
3:J:3236:VAL:HA	3:J:3239:MET:HG3	1.86	0.58
3:C:101:LEU:HB3	3:C:150:MET:HE1	1.85	0.58
3:C:2951:ILE:HG21	3:C:3034:LYS:HD2	1.85	0.58
3:C:3034:LYS:O	3:C:3038:MET:HG3	2.03	0.58
3:C:3236:VAL:HA	3:C:3239:MET:HG3	1.86	0.58
3:A:720:HIS:HB3	3:A:728:ARG:H	1.69	0.58
3:G:1020:ARG:HH21	3:G:1031:THR:HG23	1.69	0.58
3:G:3034:LYS:O	3:G:3038:MET:HG3	2.02	0.58
3:A:101:LEU:HB3	3:A:150:MET:HE1	1.85	0.58
3:A:1020:ARG:HH21	3:A:1031:THR:HG23	1.69	0.58
3:G:2656:CYS:HA	3:G:2711:PRO:HG3	1.85	0.58
3:G:2973:PHE:CD1	3:G:2995:ILE:HG12	2.38	0.58
3:J:3020:THR:HG22	3:J:3022:ALA:H	1.69	0.58
3:C:2874:MET:HE1	3:C:2937:VAL:HG21	1.86	0.58
3:A:2377:LEU:HG	3:A:2465:ASP:HA	1.85	0.58
3:A:3020:THR:HG22	3:A:3022:ALA:H	1.69	0.58
3:G:1274:HIS:HB3	3:G:1277:TRP:HB2	1.84	0.58
3:G:3033:ASN:HA	3:G:3036:LYS:HD2	1.86	0.58
3:G:3236:VAL:HA	3:G:3239:MET:HG3	1.86	0.58
3:G:4811:ALA:HB2	8:G:5106:POV:H39A	1.84	0.58
3:J:870:ILE:HA	3:J:873:LYS:HE2	1.85	0.58
3:C:1274:HIS:HB3	3:C:1277:TRP:HB2	1.84	0.58
3:A:1041:GLN:HA	3:A:1044:ARG:HE	1.69	0.58
3:G:233:ILE:HG13	3:G:234:SER:N	2.19	0.58
3:G:3020:THR:HG22	3:G:3022:ALA:H	1.69	0.58
3:J:720:HIS:HB3	3:J:728:ARG:H	1.69	0.58
3:J:3034:LYS:O	3:J:3038:MET:HG3	2.03	0.58
3:J:3563:VAL:HA	3:J:3569:LEU:HD11	1.86	0.58
3:C:590:LEU:HB3	3:C:631:LEU:HD13	1.85	0.58
3:C:2368:LEU:HD21	3:C:2376:LEU:HD13	1.86	0.58
3:C:3066:ASN:HA	3:C:3069:HIS:HD1	1.69	0.58
3:A:2431:ASP:HB2	3:A:2501:SER:HB2	1.85	0.58
3:A:2973:PHE:CD1	3:A:2995:ILE:HG12	2.38	0.58
3:C:1020:ARG:HH21	3:C:1031:THR:HG23	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3533:ILE:HG12	3:C:3596:VAL:HG23	1.86	0.58
3:A:590:LEU:HB3	3:A:631:LEU:HD13	1.85	0.58
3:J:622:THR:HG23	3:J:626:LEU:HD22	1.86	0.57
3:J:2310:CYS:HB3	3:J:2313:LEU:HB2	1.86	0.57
3:J:2380:ILE:HD12	3:J:2469:ILE:HG23	1.86	0.57
3:J:3427:PRO:HD2	3:J:3581:GLY:HA3	1.86	0.57
3:J:4811:ALA:HB2	8:J:5107:POV:H39A	1.85	0.57
3:C:720:HIS:HB3	3:C:728:ARG:H	1.69	0.57
3:C:1573:MET:HE3	3:C:1574:PRO:HD2	1.85	0.57
3:C:2380:ILE:HD12	3:C:2469:ILE:HG23	1.86	0.57
3:C:2788:HIS:HB3	3:C:2791:LEU:HD22	1.86	0.57
3:G:1041:GLN:HA	3:G:1044:ARG:HE	1.69	0.57
3:G:2788:HIS:HB3	3:G:2791:LEU:HD22	1.86	0.57
3:G:3533:ILE:HG12	3:G:3596:VAL:HG23	1.86	0.57
3:J:2368:LEU:HD21	3:J:2376:LEU:HD13	1.86	0.57
3:J:2431:ASP:HB2	3:J:2501:SER:HB2	1.86	0.57
3:J:2788:HIS:HB3	3:J:2791:LEU:HD22	1.86	0.57
3:C:1041:GLN:HA	3:C:1044:ARG:HE	1.69	0.57
3:C:1453:VAL:HG23	3:C:1549:PHE:HB2	1.87	0.57
3:A:49:LEU:HD11	3:A:191:VAL:HB	1.86	0.57
3:A:870:ILE:HA	3:A:873:LYS:HE2	1.85	0.57
3:A:1698:LEU:HD23	3:A:1814:MET:HE1	1.85	0.57
3:G:870:ILE:HA	3:G:873:LYS:HE2	1.85	0.57
3:G:2380:ILE:HD12	3:G:2469:ILE:HG23	1.86	0.57
3:G:3427:PRO:HD2	3:G:3581:GLY:HA3	1.87	0.57
3:J:1020:ARG:HH21	3:J:1031:THR:HG23	1.69	0.57
3:J:3090:ALA:HA	3:J:3093:ARG:HD2	1.87	0.57
2:E:89:GLY:HA3	3:C:1684:ALA:HB1	1.85	0.57
3:A:2380:ILE:HD12	3:A:2469:ILE:HG23	1.86	0.57
3:A:3066:ASN:HA	3:A:3069:HIS:HD1	1.69	0.57
2:I:78:PRO:HD3	2:I:96:THR:HG22	1.87	0.57
3:G:683:ARG:HG2	3:G:717:ASP:HB3	1.84	0.57
3:G:3384:LYS:H	3:G:3387:ALA:HB3	1.68	0.57
2:L:78:PRO:HD3	2:L:96:THR:HG22	1.87	0.57
2:L:86:GLY:H	2:L:93:PRO:HA	1.70	0.57
3:J:265:LEU:H	3:J:280:LEU:HA	1.69	0.57
3:J:3384:LYS:H	3:J:3387:ALA:HB3	1.68	0.57
3:C:1927:LEU:HD23	3:C:1939:MET:HE3	1.86	0.57
3:C:2377:LEU:HG	3:C:2465:ASP:HA	1.85	0.57
3:A:1927:LEU:HD23	3:A:1939:MET:HE3	1.86	0.57
3:A:2368:LEU:HD21	3:A:2376:LEU:HD13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2788:HIS:HB3	3:A:2791:LEU:HD22	1.86	0.57
3:A:3236:VAL:HA	3:A:3239:MET:HG3	1.86	0.57
3:A:3563:VAL:HA	3:A:3569:LEU:HD11	1.86	0.57
2:I:86:GLY:H	2:I:93:PRO:HA	1.70	0.57
3:G:2310:CYS:HB3	3:G:2313:LEU:HB2	1.86	0.57
2:E:78:PRO:HD3	2:E:96:THR:HG22	1.87	0.57
3:C:2639:MET:HE2	3:C:2642:LYS:HE2	1.85	0.57
3:A:2874:MET:HE1	3:A:2937:VAL:HG21	1.86	0.57
3:A:3033:ASN:HA	3:A:3036:LYS:HD2	1.86	0.57
3:G:590:LEU:HB3	3:G:631:LEU:HD13	1.85	0.57
3:G:622:THR:HG23	3:G:626:LEU:HD22	1.86	0.57
3:G:1453:VAL:HG23	3:G:1549:PHE:HB2	1.87	0.57
3:G:2368:LEU:HD21	3:G:2376:LEU:HD13	1.86	0.57
3:G:3066:ASN:HA	3:G:3069:HIS:HD1	1.69	0.57
3:J:233:ILE:HG13	3:J:234:SER:N	2.19	0.57
3:J:2874:MET:HE1	3:J:2937:VAL:HG21	1.86	0.57
3:C:49:LEU:HD11	3:C:191:VAL:HB	1.86	0.57
3:C:569:ILE:HG23	3:C:570:GLU:HG2	1.87	0.57
3:C:2656:CYS:HA	3:C:2711:PRO:HG3	1.85	0.57
3:C:3384:LYS:H	3:C:3387:ALA:HB3	1.68	0.57
2:F:78:PRO:HD3	2:F:96:THR:HG22	1.87	0.57
3:G:2377:LEU:HG	3:G:2465:ASP:HA	1.85	0.57
3:J:569:ILE:HG23	3:J:570:GLU:HG2	1.87	0.57
3:J:4909:TYR:HE1	8:J:5101:POV:H22	1.69	0.57
3:C:2431:ASP:HB2	3:C:2501:SER:HB2	1.85	0.57
3:C:3020:THR:HG22	3:C:3022:ALA:H	1.69	0.57
3:C:3427:PRO:HD2	3:C:3581:GLY:HA3	1.86	0.57
3:A:1453:VAL:HG23	3:A:1549:PHE:HB2	1.86	0.57
3:A:1573:MET:HE3	3:A:1574:PRO:HD2	1.85	0.57
3:G:1573:MET:HE3	3:G:1574:PRO:HD2	1.85	0.57
3:J:1041:GLN:HA	3:J:1044:ARG:HE	1.69	0.57
3:J:3033:ASN:HA	3:J:3036:LYS:HD2	1.86	0.57
3:J:3593:VAL:HG23	3:J:3594:ARG:HE	1.69	0.57
3:C:622:THR:HG23	3:C:626:LEU:HD22	1.86	0.57
3:C:3593:VAL:HG23	3:C:3594:ARG:HE	1.69	0.57
3:A:1302:ARG:HD3	3:A:1302:ARG:H	1.70	0.57
3:G:265:LEU:H	3:G:280:LEU:HA	1.69	0.57
3:G:3567:PRO:HG2	3:A:1825:HIS:HB2	1.86	0.57
3:J:1051:TYR:HB3	3:J:1053:ILE:HG22	1.87	0.57
3:A:265:LEU:H	3:A:280:LEU:HA	1.69	0.57
3:A:1452:TRP:HB2	3:A:1493:TYR:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2431:ASP:HB2	3:G:2501:SER:HB2	1.85	0.57
3:J:49:LEU:HD11	3:J:191:VAL:HB	1.86	0.57
3:J:2639:MET:HE2	3:J:2642:LYS:HE2	1.85	0.57
3:C:2777:TYR:HE2	3:C:2793:PRO:HD3	1.70	0.57
3:G:569:ILE:HG23	3:G:570:GLU:HG2	1.87	0.56
3:G:1302:ARG:H	3:G:1302:ARG:HD3	1.70	0.56
3:G:1452:TRP:HB2	3:G:1493:TYR:HB2	1.87	0.56
3:G:2116:LEU:O	3:G:2120:MET:HG2	2.05	0.56
3:G:3563:VAL:HA	3:G:3569:LEU:HD11	1.86	0.56
3:J:2377:LEU:HG	3:J:2465:ASP:HA	1.85	0.56
3:C:233:ILE:HG13	3:C:234:SER:N	2.19	0.56
3:C:567:VAL:HG12	3:C:574:VAL:HG21	1.87	0.56
3:A:3384:LYS:H	3:A:3387:ALA:HB3	1.68	0.56
3:G:2874:MET:HE1	3:G:2937:VAL:HG21	1.86	0.56
3:J:1452:TRP:HB2	3:J:1493:TYR:HB2	1.87	0.56
3:J:1453:VAL:HG23	3:J:1549:PHE:HB2	1.86	0.56
3:C:1452:TRP:HB2	3:C:1493:TYR:HB2	1.87	0.56
3:A:2777:TYR:HE2	3:A:2793:PRO:HD3	1.70	0.56
3:A:2976:HIS:CE1	3:A:2990:PRO:HD3	2.40	0.56
3:A:3427:PRO:HD2	3:A:3581:GLY:HA3	1.87	0.56
3:G:1927:LEU:HD23	3:G:1939:MET:HE3	1.86	0.56
3:G:3090:ALA:HA	3:G:3093:ARG:HD2	1.86	0.56
3:J:114:SER:HB3	3:J:116:MET:HG3	1.87	0.56
3:J:1302:ARG:H	3:J:1302:ARG:HD3	1.70	0.56
3:J:1745:ILE:H	3:J:1745:ILE:HD12	1.71	0.56
3:J:1825:HIS:HB2	3:C:3567:PRO:HG2	1.86	0.56
3:J:3533:ILE:HG12	3:J:3596:VAL:HG23	1.86	0.56
3:C:2310:CYS:HB3	3:C:2313:LEU:HB2	1.86	0.56
3:C:3284:TRP:CD1	3:C:3305:THR:HG1	2.24	0.56
3:C:3563:VAL:HA	3:C:3569:LEU:HD11	1.86	0.56
3:A:622:THR:HG23	3:A:626:LEU:HD22	1.86	0.56
3:A:3090:ALA:HA	3:A:3093:ARG:HD2	1.86	0.56
3:G:114:SER:HB3	3:G:116:MET:HG3	1.87	0.56
3:J:2116:LEU:O	3:J:2120:MET:HG2	2.05	0.56
3:J:801:LYS:HD2	3:J:1623:ARG:HH22	1.71	0.56
3:J:2976:HIS:CE1	3:J:2990:PRO:HD3	2.40	0.56
3:C:265:LEU:H	3:C:280:LEU:HA	1.69	0.56
3:C:3033:ASN:HA	3:C:3036:LYS:HD2	1.86	0.56
3:C:4811:ALA:HB2	8:C:5106:POV:H39A	1.86	0.56
2:F:86:GLY:H	2:F:93:PRO:HA	1.70	0.56
3:A:2302:LEU:HD12	3:A:2363:CYS:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:1051:TYR:HB3	3:G:1053:ILE:HG22	1.87	0.56
3:G:1825:HIS:HB2	3:J:3567:PRO:HG2	1.87	0.56
3:J:2777:TYR:HE2	3:J:2793:PRO:HD3	1.70	0.56
2:E:86:GLY:H	2:E:93:PRO:HA	1.70	0.56
3:A:1745:ILE:H	3:A:1745:ILE:HD12	1.71	0.56
3:G:49:LEU:HD11	3:G:191:VAL:HB	1.86	0.56
3:C:20:VAL:HG21	3:C:202:MET:HG2	1.87	0.56
3:C:2976:HIS:CE1	3:C:2990:PRO:HD3	2.40	0.56
3:A:2310:CYS:HB3	3:A:2313:LEU:HB2	1.86	0.56
3:G:801:LYS:HD2	3:G:1623:ARG:HH22	1.71	0.56
3:J:1927:LEU:HD23	3:J:1939:MET:HE3	1.86	0.56
3:A:567:VAL:HG12	3:A:574:VAL:HG21	1.87	0.56
3:G:3406:TYR:HD1	3:G:3509:LEU:HB2	1.71	0.56
3:J:3226:GLU:HA	3:J:3229:ILE:HG12	1.88	0.56
3:J:3284:TRP:CD1	3:J:3305:THR:HG1	2.23	0.56
3:C:1745:ILE:H	3:C:1745:ILE:HD12	1.71	0.56
3:C:3090:ALA:HA	3:C:3093:ARG:HD2	1.86	0.56
3:C:3406:TYR:HD1	3:C:3509:LEU:HB2	1.71	0.56
3:G:298:GLY:HA3	3:G:377:ILE:HA	1.88	0.56
3:G:2302:LEU:HD12	3:G:2363:CYS:HB3	1.88	0.56
3:G:3593:VAL:HG23	3:G:3594:ARG:HE	1.69	0.56
1:D:24:ALA:HB2	1:D:34:MET:HE1	1.88	0.56
3:C:1051:TYR:HB3	3:C:1053:ILE:HG22	1.87	0.56
3:C:2116:LEU:O	3:C:2120:MET:HG2	2.05	0.56
3:C:2871:LEU:HG	3:C:2927:LEU:HD21	1.88	0.56
2:F:71:ARG:HB3	2:F:102:GLU:HB3	1.88	0.56
3:A:1051:TYR:HB3	3:A:1053:ILE:HG22	1.87	0.56
3:A:3533:ILE:HG12	3:A:3596:VAL:HG23	1.86	0.56
3:G:233:ILE:HG13	3:G:234:SER:H	1.71	0.55
3:G:567:VAL:HG12	3:G:574:VAL:HG21	1.87	0.55
1:K:24:ALA:HB2	1:K:34:MET:HE1	1.88	0.55
3:J:20:VAL:HG21	3:J:202:MET:HG2	1.87	0.55
3:J:35:LEU:HD13	3:J:182:LEU:HD21	1.88	0.55
3:J:567:VAL:HG12	3:J:574:VAL:HG21	1.87	0.55
2:E:71:ARG:HB3	2:E:102:GLU:HB3	1.88	0.55
3:C:1825:HIS:HB2	3:A:3567:PRO:HG2	1.87	0.55
3:C:2186:MET:HE1	3:C:2235:PHE:HA	1.88	0.55
3:A:20:VAL:HG21	3:A:202:MET:HG2	1.87	0.55
3:A:233:ILE:HG13	3:A:234:SER:N	2.19	0.55
3:A:569:ILE:HG23	3:A:570:GLU:HG2	1.87	0.55
3:G:2777:TYR:HE2	3:G:2793:PRO:HD3	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:233:ILE:HG13	3:J:234:SER:H	1.72	0.55
3:J:556:ALA:O	3:J:560:ILE:HD12	2.06	0.55
3:J:3859:VAL:HG22	3:J:3864:THR:HA	1.89	0.55
3:C:2302:LEU:HD12	3:C:2363:CYS:HB3	1.88	0.55
3:A:801:LYS:HD2	3:A:1623:ARG:HH22	1.71	0.55
3:A:3406:TYR:HD1	3:A:3509:LEU:HB2	1.71	0.55
3:A:3593:VAL:HG23	3:A:3594:ARG:HE	1.69	0.55
2:I:40:ARG:NH1	3:G:674:PHE:HB3	2.21	0.55
2:I:71:ARG:HB3	2:I:102:GLU:HB3	1.88	0.55
3:G:2976:HIS:CE1	3:G:2990:PRO:HD3	2.40	0.55
3:C:556:ALA:O	3:C:560:ILE:HD12	2.06	0.55
3:C:801:LYS:HD2	3:C:1623:ARG:HH22	1.71	0.55
3:C:1302:ARG:HD3	3:C:1302:ARG:H	1.70	0.55
3:A:298:GLY:HA3	3:A:377:ILE:HA	1.88	0.55
3:A:2116:LEU:O	3:A:2120:MET:HG2	2.05	0.55
3:A:3226:GLU:HA	3:A:3229:ILE:HG12	1.88	0.55
3:G:35:LEU:HD13	3:G:182:LEU:HD21	1.88	0.55
3:G:3859:VAL:HG22	3:G:3864:THR:HA	1.89	0.55
3:J:298:GLY:HA3	3:J:377:ILE:HA	1.88	0.55
3:J:3180:ASN:HD21	3:J:3183:VAL:HG13	1.72	0.55
3:C:3226:GLU:HA	3:C:3229:ILE:HG12	1.88	0.55
3:G:4780:PHE:HD1	3:G:4783:ILE:HD11	1.72	0.55
3:J:2186:MET:HE1	3:J:2235:PHE:HA	1.88	0.55
3:J:2871:LEU:HG	3:J:2927:LEU:HD21	1.88	0.55
3:A:114:SER:HB3	3:A:116:MET:HG3	1.87	0.55
1:H:53:SER:HB2	3:G:916:PRO:HB3	1.89	0.55
3:C:4834:GLY:HA3	8:C:5108:POV:H24	1.87	0.55
2:I:76:CYS:HB2	2:I:97:LEU:HB2	1.89	0.55
3:G:556:ALA:O	3:G:560:ILE:HD12	2.06	0.55
3:J:3414:ARG:HH21	3:J:3471:THR:HG23	1.72	0.55
3:J:3916:ILE:HG22	3:J:3980:LEU:HD21	1.89	0.55
3:J:4780:PHE:HD1	3:J:4783:ILE:HD11	1.72	0.55
3:C:4780:PHE:HD1	3:C:4783:ILE:HD11	1.72	0.55
3:A:3870:ASN:HB2	3:A:3873:LYS:HE2	1.89	0.55
3:G:20:VAL:HG21	3:G:202:MET:HG2	1.87	0.55
3:G:1745:ILE:HD12	3:G:1745:ILE:H	1.71	0.55
3:G:2871:LEU:HG	3:G:2927:LEU:HD21	1.88	0.55
3:G:3916:ILE:HG22	3:G:3980:LEU:HD21	1.89	0.55
3:C:114:SER:HB3	3:C:116:MET:HG3	1.87	0.55
3:C:1567:GLY:HA2	3:C:1589:PRO:HB3	1.89	0.55
3:C:3916:ILE:HG22	3:C:3980:LEU:HD21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:233:ILE:HG13	3:A:234:SER:H	1.71	0.55
3:A:1567:GLY:HA2	3:A:1589:PRO:HB3	1.89	0.55
3:A:2871:LEU:HG	3:A:2927:LEU:HD21	1.88	0.55
3:G:551:LEU:HD13	3:G:589:LEU:HD11	1.89	0.55
3:J:2302:LEU:HD12	3:J:2363:CYS:HB3	1.88	0.55
3:J:3406:TYR:HD1	3:J:3509:LEU:HB2	1.71	0.55
3:C:233:ILE:HG13	3:C:234:SER:H	1.71	0.55
3:C:1676:LEU:HA	3:C:1725:ARG:HH12	1.72	0.55
3:C:4909:TYR:HE1	8:A:5107:POV:H22	1.72	0.55
3:G:1567:GLY:HA2	3:G:1589:PRO:HB3	1.89	0.55
2:L:71:ARG:HB3	2:L:102:GLU:HB3	1.88	0.55
3:J:1738:LEU:HB2	3:J:2146:PRO:HD3	1.89	0.55
3:A:556:ALA:O	3:A:560:ILE:HD12	2.06	0.55
3:A:3859:VAL:HG22	3:A:3864:THR:HA	1.89	0.55
1:H:24:ALA:HB2	1:H:34:MET:HE1	1.88	0.54
3:G:3284:TRP:CD1	3:G:3305:THR:HG1	2.25	0.54
3:J:62:LEU:HB3	3:J:261:ARG:HH12	1.72	0.54
3:A:2186:MET:HE1	3:A:2235:PHE:HA	1.88	0.54
3:A:3916:ILE:HG22	3:A:3980:LEU:HD21	1.89	0.54
3:C:3066:ASN:O	3:C:3070:ILE:HG13	2.08	0.54
2:F:76:CYS:HB2	2:F:97:LEU:HB2	1.89	0.54
3:G:1676:LEU:HA	3:G:1725:ARG:HH22	1.72	0.54
3:G:3226:GLU:HA	3:G:3229:ILE:HG12	1.88	0.54
3:J:551:LEU:HD13	3:J:589:LEU:HD11	1.89	0.54
3:J:1068:ARG:HG3	3:J:1071:ARG:HB2	1.90	0.54
3:J:1567:GLY:HA2	3:J:1589:PRO:HB3	1.89	0.54
3:J:1676:LEU:HA	3:J:1725:ARG:HH12	1.72	0.54
3:J:3066:ASN:O	3:J:3070:ILE:HG13	2.08	0.54
2:E:76:CYS:HB2	2:E:97:LEU:HB2	1.89	0.54
3:C:943:ASP:HB2	3:C:946:ALA:HB3	1.90	0.54
3:C:2272:PRO:HA	3:C:2275:VAL:HG12	1.90	0.54
3:A:3284:TRP:CD1	3:A:3305:THR:HG1	2.26	0.54
3:G:1676:LEU:HA	3:G:1725:ARG:HH12	1.72	0.54
3:G:2186:MET:HE1	3:G:2235:PHE:HA	1.88	0.54
3:G:3180:ASN:HD21	3:G:3183:VAL:HG13	1.72	0.54
3:J:3321:ARG:HH11	3:J:3324:VAL:HG11	1.72	0.54
3:C:1676:LEU:HA	3:C:1725:ARG:HH22	1.72	0.54
3:C:3870:ASN:HB2	3:C:3873:LYS:HE2	1.89	0.54
1:B:24:ALA:HB2	1:B:34:MET:HE1	1.88	0.54
3:A:886:ARG:HH12	3:A:893:TYR:HA	1.72	0.54
3:A:1131:ARG:HH11	3:A:1139:PHE:HB2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1676:LEU:HA	3:A:1725:ARG:HH22	1.72	0.54
3:A:3515:LYS:HA	3:A:3518:LEU:HD13	1.89	0.54
2:I:25:HIS:HE1	3:G:674:PHE:CD2	2.25	0.54
3:G:3321:ARG:HH11	3:G:3324:VAL:HG11	1.72	0.54
3:G:3414:ARG:HH21	3:G:3471:THR:HG23	1.72	0.54
3:G:4909:TYR:HE1	8:J:5108:POV:H22	1.72	0.54
3:C:298:GLY:HA3	3:C:377:ILE:HA	1.88	0.54
3:C:3859:VAL:HG22	3:C:3864:THR:HA	1.89	0.54
3:A:35:LEU:HD13	3:A:182:LEU:HD21	1.88	0.54
3:A:3180:ASN:HD21	3:A:3183:VAL:HG13	1.72	0.54
3:A:4780:PHE:HD1	3:A:4783:ILE:HD11	1.72	0.54
2:L:76:CYS:HB2	2:L:97:LEU:HB2	1.89	0.54
3:J:1676:LEU:HA	3:J:1725:ARG:HH22	1.72	0.54
3:C:596:ASN:HB2	3:C:599:VAL:HG23	1.90	0.54
3:A:596:ASN:HB2	3:A:599:VAL:HG23	1.90	0.54
3:A:1066:GLN:HE22	3:A:1068:ARG:HE	1.56	0.54
3:G:937:CYS:HB3	3:G:1053:ILE:HG13	1.89	0.54
3:G:1131:ARG:HH11	3:G:1139:PHE:HB2	1.73	0.54
3:G:3515:LYS:HA	3:G:3518:LEU:HD13	1.89	0.54
1:K:52:THR:HB	1:K:56:SER:HB3	1.90	0.54
3:J:3336:LYS:HE3	3:J:3464:ILE:HD11	1.90	0.54
3:C:35:LEU:HD13	3:C:182:LEU:HD21	1.88	0.54
3:C:62:LEU:HB3	3:C:261:ARG:HH12	1.72	0.54
3:A:1676:LEU:HA	3:A:1725:ARG:HH12	1.72	0.54
3:A:3066:ASN:O	3:A:3070:ILE:HG13	2.08	0.54
3:A:3336:LYS:HE3	3:A:3464:ILE:HD11	1.90	0.54
1:H:52:THR:HB	1:H:56:SER:HB3	1.90	0.54
3:G:2158:CYS:O	3:G:2162:ILE:HG13	2.08	0.54
3:G:3324:VAL:HA	3:G:3327:LEU:HD22	1.89	0.54
3:G:3870:ASN:HB2	3:G:3873:LYS:HE2	1.89	0.54
3:J:917:GLU:HA	3:J:920:TYR:HB3	1.90	0.54
3:J:4857:ASN:HD22	8:C:5106:POV:H33	1.72	0.54
1:D:52:THR:HB	1:D:56:SER:HB3	1.90	0.54
3:C:917:GLU:HA	3:C:920:TYR:HB3	1.90	0.54
3:C:1066:GLN:HE22	3:C:1068:ARG:HE	1.56	0.54
3:C:1738:LEU:HB2	3:C:2146:PRO:HD3	1.89	0.54
3:C:3324:VAL:HA	3:C:3327:LEU:HD22	1.89	0.54
3:A:237:ASP:HA	3:A:242:ARG:HE	1.73	0.54
3:G:62:LEU:HB3	3:G:261:ARG:HH12	1.72	0.54
3:J:237:ASP:HA	3:J:242:ARG:HE	1.73	0.54
3:J:2158:CYS:O	3:J:2162:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:638:ILE:HD11	3:C:1636:MET:HE2	1.90	0.54
3:C:758:ARG:HA	3:C:763:PRO:HA	1.90	0.54
3:C:3336:LYS:HE3	3:C:3464:ILE:HD11	1.90	0.54
3:C:4839:MET:HE1	8:C:5107:POV:H218	1.90	0.54
3:A:62:LEU:HB3	3:A:261:ARG:HH12	1.72	0.54
3:A:1810:LYS:HG2	3:A:1814:MET:HE2	1.90	0.54
3:A:2272:PRO:HA	3:A:2275:VAL:HG12	1.90	0.54
3:G:886:ARG:HH12	3:G:893:TYR:HA	1.72	0.54
3:J:3245:VAL:HG13	3:J:3248:ARG:H	1.73	0.54
3:J:3324:VAL:HA	3:J:3327:LEU:HD22	1.89	0.54
3:C:237:ASP:HA	3:C:242:ARG:HE	1.73	0.54
3:C:551:LEU:HD13	3:C:589:LEU:HD11	1.89	0.54
3:C:1068:ARG:HG3	3:C:1071:ARG:HB2	1.90	0.54
1:B:39:GLN:HB2	1:B:92:VAL:HG22	1.89	0.54
1:B:52:THR:HB	1:B:56:SER:HB3	1.90	0.54
3:A:943:ASP:HB2	3:A:946:ALA:HB3	1.90	0.54
1:H:39:GLN:HB2	1:H:92:VAL:HG22	1.89	0.53
3:G:897:ARG:HH12	3:G:913:LEU:HD23	1.73	0.53
3:G:1066:GLN:HE22	3:G:1068:ARG:HE	1.55	0.53
3:G:1738:LEU:HB2	3:G:2146:PRO:HD3	1.89	0.53
3:G:3066:ASN:O	3:G:3070:ILE:HG13	2.08	0.53
8:G:5107:POV:H22	3:A:4909:TYR:HE1	1.72	0.53
3:J:2272:PRO:HA	3:J:2275:VAL:HG12	1.90	0.53
3:J:3870:ASN:HB2	3:J:3873:LYS:HE2	1.89	0.53
3:C:2158:CYS:O	3:C:2162:ILE:HG13	2.08	0.53
3:C:3245:VAL:HG13	3:C:3248:ARG:H	1.73	0.53
3:A:638:ILE:HD11	3:A:1636:MET:HE2	1.90	0.53
3:A:3443:ILE:HG12	3:A:3605:HIS:HD2	1.73	0.53
3:A:4809:PHE:HA	3:A:4812:HIS:HD2	1.73	0.53
3:G:1068:ARG:HG3	3:G:1071:ARG:HB2	1.90	0.53
3:G:1153:ILE:HG13	3:G:1160:ILE:HG12	1.90	0.53
3:G:1810:LYS:HG2	3:G:1814:MET:HE2	1.90	0.53
3:G:2159:LEU:HA	3:G:2162:ILE:HD12	1.91	0.53
3:J:1810:LYS:HG2	3:J:1814:MET:HE2	1.90	0.53
3:J:4858:PHE:HE2	8:J:5101:POV:H2	1.73	0.53
3:C:667:MET:HB3	3:C:743:VAL:HG13	1.91	0.53
3:A:551:LEU:HD13	3:A:589:LEU:HD11	1.89	0.53
3:A:3324:VAL:HA	3:A:3327:LEU:HD22	1.89	0.53
3:G:2751:LEU:O	3:G:2755:ILE:HG12	2.09	0.53
3:J:1153:ILE:HG13	3:J:1160:ILE:HG12	1.90	0.53
3:A:2751:LEU:O	3:A:2755:ILE:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:917:GLU:HA	3:G:920:TYR:HB3	1.90	0.53
3:G:1733:GLU:HG2	3:G:2201:LEU:HD23	1.91	0.53
3:G:3336:LYS:HE3	3:G:3464:ILE:HD11	1.90	0.53
3:J:2924:GLN:O	3:J:2928:LYS:HG2	2.09	0.53
3:J:3416:VAL:O	3:J:3420:ARG:HB2	2.09	0.53
3:J:4809:PHE:HA	3:J:4812:HIS:HD2	1.73	0.53
3:C:886:ARG:HH12	3:C:893:TYR:HA	1.72	0.53
3:C:2801:ASP:HA	3:C:2804:ILE:HG12	1.91	0.53
3:C:3321:ARG:HH11	3:C:3324:VAL:HG11	1.72	0.53
3:C:3414:ARG:HH21	3:C:3471:THR:HG23	1.72	0.53
3:A:897:ARG:HH12	3:A:913:LEU:HD23	1.73	0.53
3:J:638:ILE:HD11	3:J:1636:MET:HE2	1.90	0.53
3:J:886:ARG:HH12	3:J:893:TYR:HA	1.72	0.53
3:J:1131:ARG:HH11	3:J:1139:PHE:HB2	1.73	0.53
1:D:36:TRP:HZ3	1:D:93:TYR:HB3	1.74	0.53
3:C:1153:ILE:HG13	3:C:1160:ILE:HG12	1.90	0.53
3:C:3180:ASN:HD21	3:C:3183:VAL:HG13	1.72	0.53
1:B:36:TRP:HZ3	1:B:93:TYR:HB3	1.74	0.53
3:A:937:CYS:HB3	3:A:1053:ILE:HG13	1.89	0.53
3:G:237:ASP:HA	3:G:242:ARG:HE	1.73	0.53
3:G:596:ASN:HB2	3:G:599:VAL:HG23	1.90	0.53
3:G:2148:SER:O	3:G:2152:THR:HG23	2.09	0.53
1:K:101:PRO:HG2	3:J:917:GLU:HG3	1.91	0.53
3:J:943:ASP:HB2	3:J:946:ALA:HB3	1.90	0.53
3:J:1267:PRO:HG2	3:J:1565:GLU:HB3	1.91	0.53
3:J:1733:GLU:HG2	3:J:2201:LEU:HD23	1.90	0.53
3:C:1131:ARG:HH11	3:C:1139:PHE:HB2	1.73	0.53
3:C:3416:VAL:O	3:C:3420:ARG:HB2	2.09	0.53
3:G:2924:GLN:O	3:G:2928:LYS:HG2	2.09	0.53
3:J:3443:ILE:HG12	3:J:3605:HIS:HD2	1.74	0.53
3:J:3515:LYS:HA	3:J:3518:LEU:HD13	1.89	0.53
1:D:39:GLN:HB2	1:D:92:VAL:HG22	1.89	0.53
3:C:937:CYS:HB3	3:C:1053:ILE:HG13	1.89	0.53
3:C:1079:LYS:HA	3:C:1189:LEU:HD11	1.91	0.53
3:C:3515:LYS:HA	3:C:3518:LEU:HD13	1.89	0.53
3:C:4697:VAL:HB	8:C:5109:POV:H1A	1.90	0.53
3:A:2801:ASP:HA	3:A:2804:ILE:HG12	1.91	0.53
3:A:3245:VAL:HG13	3:A:3248:ARG:H	1.73	0.53
3:A:3416:VAL:O	3:A:3420:ARG:HB2	2.08	0.53
1:K:8:GLY:HA3	1:K:20:LEU:HA	1.91	0.53
3:J:758:ARG:HA	3:J:763:PRO:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:937:CYS:HB3	3:J:1053:ILE:HG13	1.89	0.53
3:J:2801:ASP:HA	3:J:2804:ILE:HG12	1.91	0.53
3:C:698:GLY:H	3:C:1636:MET:HE1	1.74	0.53
3:C:2159:LEU:HA	3:C:2162:ILE:HD12	1.91	0.53
3:A:1738:LEU:HB2	3:A:2146:PRO:HD3	1.89	0.53
3:A:3414:ARG:HH21	3:A:3471:THR:HG23	1.72	0.53
2:I:25:HIS:HE1	3:G:674:PHE:CE2	2.27	0.53
1:D:8:GLY:HA3	1:D:20:LEU:HA	1.91	0.53
3:A:698:GLY:H	3:A:1636:MET:HE1	1.74	0.53
3:A:2148:SER:O	3:A:2152:THR:HG23	2.09	0.53
3:A:3321:ARG:HH11	3:A:3324:VAL:HG11	1.72	0.53
3:A:3969:ILE:HD13	3:A:3980:LEU:HD12	1.91	0.53
3:G:2476:ILE:HD11	3:G:2532:ALA:HB1	1.91	0.53
3:G:2801:ASP:HA	3:G:2804:ILE:HG12	1.91	0.53
3:G:3245:VAL:HG13	3:G:3248:ARG:H	1.73	0.53
3:J:667:MET:HB3	3:J:743:VAL:HG13	1.91	0.53
3:J:2159:LEU:HA	3:J:2162:ILE:HD12	1.91	0.53
2:F:89:GLY:HA3	3:A:1684:ALA:HB1	1.89	0.53
3:A:1068:ARG:HG3	3:A:1071:ARG:HB2	1.90	0.53
3:G:758:ARG:HA	3:G:763:PRO:HA	1.90	0.52
3:G:2272:PRO:HA	3:G:2275:VAL:HG12	1.90	0.52
3:J:2476:ILE:HD11	3:J:2532:ALA:HB1	1.92	0.52
3:J:3969:ILE:HD13	3:J:3980:LEU:HD12	1.91	0.52
3:C:951:LYS:H	3:C:974:HIS:HE1	1.55	0.52
3:C:2495:VAL:HG23	3:C:2497:ASP:H	1.74	0.52
3:G:638:ILE:HD11	3:G:1636:MET:HE2	1.90	0.52
3:G:4546:VAL:HG22	3:G:4550:LYS:HE3	1.92	0.52
3:J:951:LYS:H	3:J:974:HIS:HE1	1.55	0.52
3:J:2751:LEU:O	3:J:2755:ILE:HG12	2.09	0.52
3:C:1810:LYS:HG2	3:C:1814:MET:HE2	1.90	0.52
3:A:1079:LYS:HA	3:A:1189:LEU:HD11	1.91	0.52
3:A:2512:ILE:HG21	3:A:2518:LEU:HD13	1.92	0.52
3:G:943:ASP:HB2	3:G:946:ALA:HB3	1.90	0.52
3:G:2466:LEU:O	3:G:2470:ILE:HG13	2.09	0.52
3:G:2512:ILE:HG21	3:G:2518:LEU:HD13	1.92	0.52
3:G:3224:PRO:HA	3:G:3227:ARG:HD2	1.92	0.52
3:G:3416:VAL:O	3:G:3420:ARG:HB2	2.08	0.52
1:K:39:GLN:HB2	1:K:92:VAL:HG22	1.89	0.52
3:J:596:ASN:HB2	3:J:599:VAL:HG23	1.90	0.52
3:J:2175:GLU:O	3:J:2179:ILE:HG12	2.09	0.52
3:J:4546:VAL:HG22	3:J:4550:LYS:HE3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2751:LEU:O	3:C:2755:ILE:HG12	2.09	0.52
3:C:3969:ILE:HD13	3:C:3980:LEU:HD12	1.91	0.52
3:A:667:MET:HB3	3:A:743:VAL:HG13	1.90	0.52
3:A:951:LYS:H	3:A:974:HIS:HE1	1.55	0.52
3:A:2158:CYS:O	3:A:2162:ILE:HG13	2.08	0.52
3:A:2466:LEU:O	3:A:2470:ILE:HG13	2.09	0.52
1:H:36:TRP:HZ3	1:H:93:TYR:HB3	1.74	0.52
3:C:4049:VAL:HG11	3:C:4159:ARG:HB3	1.92	0.52
3:A:917:GLU:HA	3:A:920:TYR:HB3	1.90	0.52
3:A:4839:MET:HE1	8:A:5108:POV:H218	1.92	0.52
1:H:8:GLY:HA3	1:H:20:LEU:HA	1.91	0.52
2:I:7:ILE:HA	3:G:719:LEU:HD21	1.92	0.52
3:G:698:GLY:H	3:G:1636:MET:HE1	1.74	0.52
3:J:897:ARG:HH12	3:J:913:LEU:HD23	1.73	0.52
3:C:4546:VAL:HG22	3:C:4550:LYS:HE3	1.92	0.52
3:A:758:ARG:HA	3:A:763:PRO:HA	1.90	0.52
3:A:2159:LEU:HA	3:A:2162:ILE:HD12	1.91	0.52
3:A:4680:LYS:HD3	3:A:4686:LEU:HD13	1.92	0.52
3:G:667:MET:HB3	3:G:743:VAL:HG13	1.91	0.52
3:G:4809:PHE:HA	3:G:4812:HIS:HD2	1.73	0.52
3:J:232:THR:HG21	3:J:248:GLU:HB3	1.92	0.52
3:J:1066:GLN:HE22	3:J:1068:ARG:HE	1.56	0.52
3:J:2512:ILE:HG21	3:J:2518:LEU:HD13	1.92	0.52
3:J:3224:PRO:HA	3:J:3227:ARG:HD2	1.92	0.52
3:J:3438:VAL:HA	3:J:3441:ILE:HD12	1.92	0.52
3:J:4049:VAL:HG11	3:J:4159:ARG:HB3	1.92	0.52
3:C:750:LEU:HD13	3:C:773:LEU:HD12	1.92	0.52
3:C:1267:PRO:HG2	3:C:1565:GLU:HB3	1.91	0.52
3:C:2148:SER:O	3:C:2152:THR:HG23	2.09	0.52
3:C:2175:GLU:O	3:C:2179:ILE:HG12	2.09	0.52
3:C:2626:LEU:O	3:C:2630:VAL:HG22	2.10	0.52
3:C:3443:ILE:HG12	3:C:3605:HIS:HD2	1.74	0.52
3:A:750:LEU:HD13	3:A:773:LEU:HD12	1.92	0.52
3:A:1252:HIS:CE1	3:A:1254:HIS:HB2	2.45	0.52
3:A:2626:LEU:O	3:A:2630:VAL:HG22	2.10	0.52
3:A:3539:ARG:HG3	3:A:3549:VAL:HG12	1.92	0.52
3:G:750:LEU:HD13	3:G:773:LEU:HD12	1.92	0.52
3:G:951:LYS:H	3:G:974:HIS:HE1	1.55	0.52
3:G:4567:LEU:HD21	3:G:4816:ILE:HG22	1.92	0.52
3:C:145:ALA:HA	3:C:175:SER:HB2	1.92	0.52
3:C:2476:ILE:HD11	3:C:2532:ALA:HB1	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:232:THR:HG21	3:A:248:GLU:HB3	1.92	0.52
3:A:1115:LEU:HD23	3:A:1123:VAL:HG21	1.92	0.52
3:A:1926:LEU:HG	3:A:1939:MET:HE1	1.92	0.52
3:A:4546:VAL:HG22	3:A:4550:LYS:HE3	1.92	0.52
3:G:150:MET:HB3	3:G:169:LEU:HD12	1.92	0.52
3:G:2495:VAL:HG23	3:G:2497:ASP:H	1.74	0.52
3:G:3130:THR:O	3:G:3134:VAL:HG12	2.10	0.52
3:G:3443:ILE:HG12	3:G:3605:HIS:HD2	1.74	0.52
3:G:3539:ARG:HG3	3:G:3549:VAL:HG12	1.92	0.52
1:K:36:TRP:HZ3	1:K:93:TYR:HB3	1.74	0.52
3:J:698:GLY:H	3:J:1636:MET:HE1	1.74	0.52
3:J:2148:SER:O	3:J:2152:THR:HG23	2.09	0.52
1:D:107:TRP:HZ2	3:C:921:ASN:HA	1.75	0.52
3:C:1252:HIS:CE1	3:C:1254:HIS:HB2	2.45	0.52
3:C:1733:GLU:HG2	3:C:2201:LEU:HD23	1.90	0.52
3:C:2924:GLN:O	3:C:2928:LYS:HG2	2.09	0.52
1:B:8:GLY:HA3	1:B:20:LEU:HA	1.91	0.52
3:A:1733:GLU:HG2	3:A:2201:LEU:HD23	1.91	0.52
3:G:1267:PRO:HG2	3:G:1565:GLU:HB3	1.91	0.52
3:G:3326:ASN:HB2	3:G:3329:ILE:HG12	1.92	0.52
3:J:150:MET:HB3	3:J:169:LEU:HD12	1.92	0.52
3:C:13:PHE:HA	3:C:164:ARG:HA	1.92	0.52
3:C:150:MET:HB3	3:C:169:LEU:HD12	1.92	0.52
3:C:1115:LEU:HD23	3:C:1123:VAL:HG21	1.92	0.52
1:H:39:GLN:HG2	1:H:45:ARG:HD2	1.91	0.52
3:G:2175:GLU:O	3:G:2179:ILE:HG12	2.09	0.52
3:G:3969:ILE:HD13	3:G:3980:LEU:HD12	1.91	0.52
3:J:145:ALA:HA	3:J:175:SER:HB2	1.92	0.52
3:J:2309:SER:HB2	3:J:2322:GLY:H	1.75	0.52
3:C:2512:ILE:HG21	3:C:2518:LEU:HD13	1.92	0.52
3:C:3438:VAL:HA	3:C:3441:ILE:HD12	1.92	0.52
3:A:1040:CYS:O	3:A:1044:ARG:HG3	2.10	0.52
3:A:1267:PRO:HG2	3:A:1565:GLU:HB3	1.91	0.52
3:A:1434:TYR:HB3	3:A:1572:ILE:HG21	1.92	0.52
3:G:1079:LYS:HA	3:G:1189:LEU:HD11	1.91	0.51
3:G:4049:VAL:HG11	3:G:4159:ARG:HB3	1.92	0.51
3:C:897:ARG:HH12	3:C:913:LEU:HD23	1.73	0.51
3:C:1422:ASP:CG	3:C:1571:ASN:H	2.19	0.51
3:C:3285:TRP:CZ3	3:C:3291:ALA:HB2	2.45	0.51
3:A:2175:GLU:O	3:A:2179:ILE:HG12	2.09	0.51
3:A:2476:ILE:HD11	3:A:2532:ALA:HB1	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:232:THR:HG21	3:G:248:GLU:HB3	1.92	0.51
3:G:1252:HIS:CE1	3:G:1254:HIS:HB2	2.45	0.51
3:J:1079:LYS:HA	3:J:1189:LEU:HD11	1.91	0.51
3:J:1252:HIS:CE1	3:J:1254:HIS:HB2	2.44	0.51
3:J:1422:ASP:CG	3:J:1571:ASN:H	2.19	0.51
3:J:2626:LEU:O	3:J:2630:VAL:HG22	2.10	0.51
3:C:2466:LEU:O	3:C:2470:ILE:HG13	2.09	0.51
3:C:2574:HIS:HB2	3:C:2575:ARG:HE	1.75	0.51
3:C:2963:LEU:HA	3:C:2966:TRP:CD1	2.45	0.51
3:C:4680:LYS:HD3	3:C:4686:LEU:HD13	1.92	0.51
3:C:4809:PHE:HA	3:C:4812:HIS:HD2	1.73	0.51
3:A:1153:ILE:HG13	3:A:1160:ILE:HG12	1.90	0.51
3:A:2318:TYR:HA	3:A:2395:PRO:HA	1.92	0.51
3:G:2318:TYR:HA	3:G:2395:PRO:HA	1.92	0.51
3:J:952:LYS:H	3:J:969:PRO:HA	1.75	0.51
3:J:2318:TYR:HA	3:J:2395:PRO:HA	1.92	0.51
3:J:3326:ASN:HB2	3:J:3329:ILE:HG12	1.92	0.51
3:J:4680:LYS:HD3	3:J:4686:LEU:HD13	1.92	0.51
3:C:1926:LEU:HG	3:C:1939:MET:HE1	1.92	0.51
3:C:2318:TYR:HA	3:C:2395:PRO:HA	1.92	0.51
3:A:2924:GLN:O	3:A:2928:LYS:HG2	2.09	0.51
3:A:3224:PRO:HA	3:A:3227:ARG:HD2	1.92	0.51
2:I:44:LYS:HZ3	3:G:1780:PRO:HD2	1.76	0.51
3:G:1926:LEU:HG	3:G:1939:MET:HE1	1.92	0.51
3:J:750:LEU:HD13	3:J:773:LEU:HD12	1.92	0.51
3:J:878:ILE:HD13	3:J:881:LEU:HD12	1.92	0.51
3:J:3285:TRP:CZ3	3:J:3291:ALA:HB2	2.45	0.51
1:D:101:PRO:HG2	3:C:917:GLU:HG3	1.92	0.51
3:C:232:THR:HG21	3:C:248:GLU:HB3	1.92	0.51
3:C:878:ILE:HD13	3:C:881:LEU:HD12	1.92	0.51
3:C:1434:TYR:HB3	3:C:1572:ILE:HG21	1.92	0.51
3:A:2309:SER:HB2	3:A:2322:GLY:H	1.75	0.51
3:A:4844:LEU:HD11	3:A:4924:VAL:HG13	1.93	0.51
3:G:726:VAL:HB	3:G:728:ARG:HH12	1.76	0.51
3:G:1434:TYR:HB3	3:G:1572:ILE:HG21	1.92	0.51
3:G:2626:LEU:O	3:G:2630:VAL:HG22	2.10	0.51
3:G:3438:VAL:HA	3:G:3441:ILE:HD12	1.92	0.51
3:G:4680:LYS:HD3	3:G:4686:LEU:HD13	1.92	0.51
3:G:4844:LEU:HD11	3:G:4924:VAL:HG13	1.93	0.51
2:L:29:MET:HA	2:L:34:LYS:O	2.11	0.51
3:J:13:PHE:HA	3:J:164:ARG:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:2574:HIS:HB2	3:J:2575:ARG:HE	1.75	0.51
2:E:29:MET:HA	2:E:34:LYS:O	2.11	0.51
3:C:1528:THR:C	3:C:1529:PHE:HD2	2.19	0.51
3:C:2309:SER:HB2	3:C:2322:GLY:H	1.75	0.51
1:B:39:GLN:HG2	1:B:45:ARG:HD2	1.91	0.51
3:A:150:MET:HB3	3:A:169:LEU:HD12	1.92	0.51
3:A:1554:VAL:HB	3:A:1562:ILE:HD11	1.93	0.51
3:A:2495:VAL:HG23	3:A:2497:ASP:H	1.74	0.51
3:A:4049:VAL:HG11	3:A:4159:ARG:HB3	1.92	0.51
3:G:3285:TRP:CZ3	3:G:3291:ALA:HB2	2.45	0.51
3:G:4839:MET:HE1	8:G:5108:POV:H218	1.91	0.51
3:J:2466:LEU:O	3:J:2470:ILE:HG13	2.09	0.51
3:C:1040:CYS:O	3:C:1044:ARG:HG3	2.10	0.51
3:C:4567:LEU:HD21	3:C:4816:ILE:HG22	1.92	0.51
2:F:29:MET:HA	2:F:34:LYS:O	2.11	0.51
3:A:145:ALA:HA	3:A:175:SER:HB2	1.92	0.51
3:A:3130:THR:O	3:A:3134:VAL:HG12	2.10	0.51
2:I:29:MET:HA	2:I:34:LYS:O	2.11	0.51
3:G:2700:MET:SD	3:G:2701:PRO:HD3	2.51	0.51
3:J:1040:CYS:O	3:J:1044:ARG:HG3	2.10	0.51
3:J:1528:THR:C	3:J:1529:PHE:HD2	2.19	0.51
3:C:3326:ASN:HB2	3:C:3329:ILE:HG12	1.92	0.51
3:C:3966:THR:HG22	3:C:3970:GLN:HG3	1.93	0.51
3:A:3326:ASN:HB2	3:A:3329:ILE:HG12	1.92	0.51
3:A:4567:LEU:HD21	3:A:4816:ILE:HG22	1.92	0.51
2:I:55:VAL:HA	3:G:1784:ALA:HA	1.91	0.51
3:G:13:PHE:HA	3:G:164:ARG:HA	1.92	0.51
3:G:1528:THR:C	3:G:1529:PHE:HD2	2.19	0.51
3:J:1115:LEU:HD23	3:J:1123:VAL:HG21	1.92	0.51
3:J:2963:LEU:HA	3:J:2966:TRP:CD1	2.45	0.51
3:J:3539:ARG:HG3	3:J:3549:VAL:HG12	1.92	0.51
3:J:4928:LEU:HD23	3:J:4931:ILE:HD12	1.93	0.51
3:C:726:VAL:HB	3:C:728:ARG:HH12	1.76	0.51
3:C:1554:VAL:HB	3:C:1562:ILE:HD11	1.93	0.51
3:C:3206:LEU:HD12	3:C:3207:GLU:H	1.76	0.51
3:A:726:VAL:HB	3:A:728:ARG:HH12	1.76	0.51
3:A:863:LEU:HD22	3:A:867:LEU:HG	1.93	0.51
3:A:2440:MET:HE2	3:A:2440:MET:HA	1.93	0.51
3:A:2861:ASP:HB2	3:A:2925:GLU:HG2	1.93	0.51
3:G:1040:CYS:O	3:G:1044:ARG:HG3	2.10	0.51
3:J:675:LEU:HG	3:J:676:THR:HG23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:3089:LYS:HG3	3:J:3093:ARG:HE	1.76	0.51
3:C:863:LEU:HD22	3:C:867:LEU:HG	1.93	0.51
3:C:3130:THR:O	3:C:3134:VAL:HG12	2.10	0.51
3:A:1422:ASP:CG	3:A:1571:ASN:H	2.19	0.51
3:G:675:LEU:HG	3:G:676:THR:HG23	1.93	0.51
3:G:1115:LEU:HD22	3:G:1193:SER:HB2	1.93	0.51
3:G:2771:ILE:HG21	3:G:2856:ASN:HD21	1.76	0.51
3:G:4928:LEU:HD23	3:G:4931:ILE:HD12	1.93	0.51
3:J:726:VAL:HB	3:J:728:ARG:HH12	1.76	0.51
3:J:1613:LEU:H	3:J:1613:LEU:HD12	1.76	0.51
3:J:4567:LEU:HD21	3:J:4816:ILE:HG22	1.92	0.51
3:C:2700:MET:SD	3:C:2701:PRO:HD3	2.51	0.51
3:C:3224:PRO:HA	3:C:3227:ARG:HD2	1.92	0.51
3:A:13:PHE:HA	3:A:164:ARG:HA	1.92	0.51
3:A:2380:ILE:HD13	3:A:2472:LEU:HD13	1.93	0.51
3:A:2963:LEU:HA	3:A:2966:TRP:CD1	2.45	0.51
3:A:3206:LEU:HD12	3:A:3207:GLU:H	1.76	0.51
3:A:3285:TRP:CZ3	3:A:3291:ALA:HB2	2.45	0.51
3:A:3308:THR:H	3:A:3311:HIS:HB2	1.76	0.51
3:A:3438:VAL:HA	3:A:3441:ILE:HD12	1.92	0.51
3:G:1422:ASP:CG	3:G:1571:ASN:H	2.19	0.50
3:G:2309:SER:HB2	3:G:2322:GLY:H	1.75	0.50
3:G:2963:LEU:HA	3:G:2966:TRP:CD1	2.45	0.50
3:G:3514:LEU:O	3:G:3518:LEU:HD12	2.11	0.50
2:L:34:LYS:HE3	3:J:629:ARG:CZ	2.40	0.50
3:J:2495:VAL:HG23	3:J:2497:ASP:H	1.74	0.50
3:C:372:LEU:H	3:C:372:LEU:HD12	1.76	0.50
3:C:3308:THR:H	3:C:3311:HIS:HB2	1.76	0.50
3:C:3539:ARG:HG3	3:C:3549:VAL:HG12	1.92	0.50
3:A:1115:LEU:HD22	3:A:1193:SER:HB2	1.93	0.50
3:A:1613:LEU:H	3:A:1613:LEU:HD12	1.76	0.50
3:G:2380:ILE:HD13	3:G:2472:LEU:HD13	1.93	0.50
3:G:2574:HIS:HB2	3:G:2575:ARG:HE	1.75	0.50
3:J:2700:MET:SD	3:J:2701:PRO:HD3	2.51	0.50
3:J:3400:VAL:HG13	3:J:3403:ARG:HH21	1.76	0.50
3:J:4844:LEU:HD11	3:J:4924:VAL:HG13	1.93	0.50
1:D:39:GLN:HG2	1:D:45:ARG:HD2	1.91	0.50
3:C:675:LEU:HG	3:C:676:THR:HG23	1.93	0.50
3:C:2861:ASP:HB2	3:C:2925:GLU:HG2	1.93	0.50
3:A:783:PHE:HB2	3:A:787:VAL:HG11	1.93	0.50
3:A:2821:TRP:HD1	3:A:2939:ARG:HA	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3450:ASN:HA	3:A:3453:ARG:HG2	1.93	0.50
3:A:3966:THR:HG22	3:A:3970:GLN:HG3	1.93	0.50
3:G:1554:VAL:HB	3:G:1562:ILE:HD11	1.93	0.50
3:G:2739:PRO:HG3	3:G:2888:ARG:HG2	1.94	0.50
3:J:372:LEU:HD12	3:J:372:LEU:H	1.76	0.50
3:J:943:ASP:HA	3:J:1050:GLY:HA3	1.94	0.50
3:J:3130:THR:O	3:J:3134:VAL:HG12	2.10	0.50
3:C:2420:HIS:HA	3:C:2423:MET:HE3	1.94	0.50
3:C:3089:LYS:HG3	3:C:3093:ARG:HE	1.76	0.50
3:G:145:ALA:HA	3:G:175:SER:HB2	1.92	0.50
3:G:372:LEU:HD12	3:G:372:LEU:H	1.76	0.50
3:G:952:LYS:H	3:G:969:PRO:HA	1.76	0.50
3:G:1613:LEU:H	3:G:1613:LEU:HD12	1.76	0.50
3:G:2821:TRP:HD1	3:G:2939:ARG:HA	1.76	0.50
3:G:3400:VAL:HG13	3:G:3403:ARG:HH21	1.77	0.50
3:G:3966:THR:HG22	3:G:3970:GLN:HG3	1.93	0.50
1:K:39:GLN:HG2	1:K:45:ARG:HD2	1.91	0.50
3:J:1926:LEU:HG	3:J:1939:MET:HE1	1.92	0.50
3:J:2739:PRO:HG3	3:J:2888:ARG:HG2	1.94	0.50
3:J:3308:THR:H	3:J:3311:HIS:HB2	1.76	0.50
3:C:357:LEU:HD12	3:C:357:LEU:H	1.77	0.50
3:C:411:TYR:HB2	3:C:486:LEU:HD21	1.93	0.50
3:C:1115:LEU:HD22	3:C:1193:SER:HB2	1.93	0.50
3:C:2189:LYS:HD2	3:C:2192:TYR:HD2	1.77	0.50
3:C:2380:ILE:HD13	3:C:2472:LEU:HD13	1.93	0.50
3:C:3400:VAL:HG13	3:C:3403:ARG:HH21	1.76	0.50
3:A:411:TYR:HB2	3:A:486:LEU:HD21	1.93	0.50
3:A:2739:PRO:HG3	3:A:2888:ARG:HG2	1.94	0.50
3:G:665:GLU:HB2	3:G:792:LEU:HB2	1.93	0.50
3:G:1115:LEU:HD23	3:G:1123:VAL:HG21	1.92	0.50
3:G:3107:VAL:HG11	3:G:3171:SER:HB2	1.93	0.50
3:G:3398:PHE:HE1	3:G:3450:ASN:HB2	1.77	0.50
3:J:1248:VAL:HG11	3:J:1257:VAL:HG11	1.94	0.50
3:J:1434:TYR:HB3	3:J:1572:ILE:HG21	1.92	0.50
3:J:3648:ARG:O	3:J:3652:MET:HG2	2.12	0.50
3:C:1613:LEU:H	3:C:1613:LEU:HD12	1.76	0.50
3:C:3648:ARG:O	3:C:3652:MET:HG2	2.12	0.50
1:B:107:TRP:HZ2	3:A:921:ASN:HA	1.76	0.50
3:A:878:ILE:HD13	3:A:881:LEU:HD12	1.92	0.50
3:A:2574:HIS:HB2	3:A:2575:ARG:HE	1.75	0.50
3:G:943:ASP:HA	3:G:1050:GLY:HA3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2189:LYS:HD2	3:G:2192:TYR:HD2	1.77	0.50
3:G:2466:LEU:HD21	3:G:2505:PHE:HD1	1.76	0.50
3:G:2806:ARG:HG3	3:G:2810:LYS:HZ3	1.77	0.50
3:J:911:HIS:HB2	3:J:913:LEU:HG	1.94	0.50
3:J:2189:LYS:HD2	3:J:2192:TYR:HD2	1.77	0.50
3:J:3206:LEU:HD12	3:J:3207:GLU:H	1.76	0.50
3:J:3398:PHE:HE1	3:J:3450:ASN:HB2	1.77	0.50
3:J:4839:MET:HE1	8:C:5110:POV:H218	1.92	0.50
3:C:3450:ASN:HA	3:C:3453:ARG:HG2	1.93	0.50
3:A:372:LEU:H	3:A:372:LEU:HD12	1.76	0.50
3:A:675:LEU:HG	3:A:676:THR:HG23	1.93	0.50
3:A:2189:LYS:HD2	3:A:2192:TYR:HD2	1.77	0.50
3:A:2420:HIS:HA	3:A:2423:MET:HE3	1.94	0.50
3:G:878:ILE:HD13	3:G:881:LEU:HD12	1.92	0.50
3:J:718:GLY:HA3	3:J:737:LEU:HA	1.94	0.50
3:J:2771:ILE:HG21	3:J:2856:ASN:HD21	1.77	0.50
3:J:2806:ARG:HG3	3:J:2810:LYS:HZ3	1.77	0.50
3:J:3037:GLU:HA	3:J:3080:VAL:HG22	1.93	0.50
3:C:665:GLU:HB2	3:C:792:LEU:HB2	1.93	0.50
3:C:911:HIS:HB2	3:C:913:LEU:HG	1.94	0.50
3:C:2178:MET:O	3:C:2182:ILE:HG13	2.12	0.50
3:C:2499:LYS:HB3	3:C:2553:TYR:CZ	2.47	0.50
3:C:4844:LEU:HD11	3:C:4924:VAL:HG13	1.93	0.50
3:A:4939:ALA:HA	3:A:4942:GLU:HG2	1.94	0.50
3:G:3343:GLN:HE22	3:G:3410:PRO:HB2	1.77	0.50
3:G:3648:ARG:O	3:G:3652:MET:HG2	2.12	0.50
3:J:2380:ILE:HD13	3:J:2472:LEU:HD13	1.93	0.50
3:J:2499:LYS:HB3	3:J:2553:TYR:CZ	2.47	0.50
2:E:21:THR:HG23	2:E:49:ARG:HE	1.77	0.50
3:C:952:LYS:H	3:C:969:PRO:HA	1.76	0.50
3:C:1248:VAL:HG11	3:C:1257:VAL:HG11	1.94	0.50
3:C:2771:ILE:HG21	3:C:2856:ASN:HD21	1.77	0.50
2:F:21:THR:HG23	2:F:49:ARG:HE	1.77	0.50
3:A:718:GLY:HA3	3:A:737:LEU:HA	1.94	0.50
3:A:2466:LEU:HD21	3:A:2505:PHE:HD1	1.76	0.50
3:G:831:ARG:HE	3:G:840:VAL:HG11	1.77	0.50
3:G:863:LEU:HD22	3:G:867:LEU:HG	1.93	0.50
3:G:3308:THR:H	3:G:3311:HIS:HB2	1.76	0.50
3:J:1115:LEU:HD22	3:J:1193:SER:HB2	1.93	0.50
3:J:1554:VAL:HB	3:J:1562:ILE:HD11	1.93	0.50
3:J:2861:ASP:HB2	3:J:2925:GLU:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:3107:VAL:HG11	3:J:3171:SER:HB2	1.93	0.50
3:J:3966:THR:HG22	3:J:3970:GLN:HG3	1.93	0.50
3:C:718:GLY:HA3	3:C:737:LEU:HA	1.94	0.50
3:C:2209:GLU:HA	3:C:2212:VAL:HG23	1.94	0.50
3:C:2739:PRO:HG3	3:C:2888:ARG:HG2	1.94	0.50
3:C:2821:TRP:HD1	3:C:2939:ARG:HA	1.76	0.50
3:C:3514:LEU:O	3:C:3518:LEU:HD12	2.12	0.50
3:A:357:LEU:H	3:A:357:LEU:HD12	1.77	0.50
3:A:665:GLU:HB2	3:A:792:LEU:HB2	1.93	0.50
3:A:1528:THR:C	3:A:1529:PHE:HD2	2.19	0.50
3:A:3398:PHE:HE1	3:A:3450:ASN:HB2	1.77	0.50
3:A:3400:VAL:HG13	3:A:3403:ARG:HH21	1.76	0.50
1:H:107:TRP:HZ2	3:G:921:ASN:HA	1.77	0.49
3:G:2861:ASP:HB2	3:G:2925:GLU:HG2	1.93	0.49
3:G:3406:TYR:CD1	3:G:3509:LEU:HB2	2.47	0.49
2:L:21:THR:HG23	2:L:49:ARG:HE	1.77	0.49
3:J:866:HIS:O	3:J:870:ILE:HD12	2.12	0.49
3:J:2420:HIS:HA	3:J:2423:MET:HE3	1.94	0.49
3:J:3450:ASN:HA	3:J:3453:ARG:HG2	1.93	0.49
3:C:3037:GLU:HA	3:C:3080:VAL:HG22	1.93	0.49
3:C:3406:TYR:CD1	3:C:3509:LEU:HB2	2.47	0.49
3:C:4939:ALA:HA	3:C:4942:GLU:HG2	1.94	0.49
3:A:831:ARG:HE	3:A:840:VAL:HG11	1.77	0.49
3:A:1581:LEU:HA	3:A:1584:ARG:HG3	1.94	0.49
3:A:3514:LEU:O	3:A:3518:LEU:HD12	2.12	0.49
3:A:3648:ARG:O	3:A:3652:MET:HG2	2.12	0.49
1:H:39:GLN:O	1:H:91:ALA:HB1	2.12	0.49
3:G:718:GLY:HA3	3:G:737:LEU:HA	1.94	0.49
3:G:2209:GLU:HA	3:G:2212:VAL:HG23	1.94	0.49
3:G:3089:LYS:HG3	3:G:3093:ARG:HE	1.76	0.49
3:G:3206:LEU:HD12	3:G:3207:GLU:H	1.76	0.49
3:G:3450:ASN:HA	3:G:3453:ARG:HG2	1.93	0.49
3:C:2440:MET:HA	3:C:2440:MET:HE2	1.93	0.49
1:B:39:GLN:O	1:B:91:ALA:HB1	2.12	0.49
3:A:911:HIS:HB2	3:A:913:LEU:HG	1.94	0.49
3:G:783:PHE:HB2	3:G:787:VAL:HG11	1.93	0.49
3:G:911:HIS:HB2	3:G:913:LEU:HG	1.94	0.49
3:G:1230:MET:HB3	3:G:1828:ASP:HB3	1.94	0.49
3:G:1248:VAL:HG11	3:G:1257:VAL:HG11	1.94	0.49
3:G:2420:HIS:HA	3:G:2423:MET:HE3	1.93	0.49
3:G:2499:LYS:HB3	3:G:2553:TYR:CZ	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2883:HIS:HA	3:G:2886:TRP:CE2	2.47	0.49
3:J:357:LEU:H	3:J:357:LEU:HD12	1.77	0.49
3:J:783:PHE:HB2	3:J:787:VAL:HG11	1.93	0.49
3:C:866:HIS:O	3:C:870:ILE:HD12	2.12	0.49
3:A:426:ARG:HG3	3:A:431:PRO:HA	1.94	0.49
3:A:943:ASP:HA	3:A:1050:GLY:HA3	1.94	0.49
3:A:1230:MET:HB3	3:A:1828:ASP:HB3	1.94	0.49
3:A:2700:MET:SD	3:A:2701:PRO:HD3	2.51	0.49
3:G:984:LEU:HD22	3:G:987:ARG:NH2	2.27	0.49
3:G:2440:MET:HE2	3:G:2440:MET:HA	1.93	0.49
3:J:2178:MET:O	3:J:2182:ILE:HG13	2.12	0.49
3:J:2821:TRP:HD1	3:J:2939:ARG:HA	1.76	0.49
3:J:3406:TYR:CD1	3:J:3509:LEU:HB2	2.47	0.49
3:C:1230:MET:HB3	3:C:1828:ASP:HB3	1.94	0.49
3:A:952:LYS:H	3:A:969:PRO:HA	1.75	0.49
3:A:2178:MET:O	3:A:2182:ILE:HG13	2.12	0.49
2:I:21:THR:HG23	2:I:49:ARG:HE	1.77	0.49
3:G:842:PRO:HG2	3:G:1071:ARG:C	2.38	0.49
3:J:426:ARG:HG3	3:J:431:PRO:HA	1.94	0.49
3:J:831:ARG:HE	3:J:840:VAL:HG11	1.77	0.49
3:J:2381:GLU:O	3:J:2385:ARG:HG2	2.13	0.49
3:J:2440:MET:HE2	3:J:2440:MET:HA	1.93	0.49
3:J:3206:LEU:HB3	3:J:3280:TYR:CE1	2.48	0.49
3:J:3244:PRO:HB2	3:J:3248:ARG:HD3	1.94	0.49
3:J:3343:GLN:HE22	3:J:3410:PRO:HB2	1.77	0.49
3:J:3514:LEU:O	3:J:3518:LEU:HD12	2.12	0.49
3:C:831:ARG:HE	3:C:840:VAL:HG11	1.77	0.49
3:C:984:LEU:HD22	3:C:987:ARG:NH2	2.28	0.49
3:C:3107:VAL:HG11	3:C:3171:SER:HB2	1.93	0.49
3:A:1248:VAL:HG11	3:A:1257:VAL:HG11	1.94	0.49
3:A:2777:TYR:HB2	3:A:2791:LEU:HG	1.95	0.49
3:A:2974:ILE:HG13	3:A:3053:ARG:HH12	1.78	0.49
3:A:3037:GLU:HA	3:A:3080:VAL:HG22	1.94	0.49
3:A:4952:GLU:O	3:A:4956:THR:HG22	2.13	0.49
3:G:411:TYR:HB2	3:G:486:LEU:HD21	1.93	0.49
3:G:2178:MET:O	3:G:2182:ILE:HG13	2.12	0.49
1:K:39:GLN:O	1:K:91:ALA:HB1	2.12	0.49
3:J:2466:LEU:HD21	3:J:2505:PHE:HD1	1.76	0.49
3:J:2883:HIS:HA	3:J:2886:TRP:CE2	2.47	0.49
3:J:2974:ILE:HG13	3:J:3053:ARG:HH12	1.78	0.49
3:C:943:ASP:HA	3:C:1050:GLY:HA3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2466:LEU:HD21	3:C:2505:PHE:HD1	1.76	0.49
3:A:2499:LYS:HB3	3:A:2553:TYR:CZ	2.47	0.49
3:A:2883:HIS:HA	3:A:2886:TRP:CE2	2.47	0.49
3:A:2978:GLU:HA	3:A:2981:VAL:HG22	1.93	0.49
3:A:3089:LYS:HG3	3:A:3093:ARG:HE	1.76	0.49
3:A:3343:GLN:HE22	3:A:3410:PRO:HB2	1.77	0.49
3:G:2974:ILE:HG13	3:G:3053:ARG:HH12	1.78	0.49
3:J:411:TYR:HB2	3:J:486:LEU:HD21	1.93	0.49
3:J:863:LEU:HD22	3:J:867:LEU:HG	1.93	0.49
3:J:2978:GLU:HA	3:J:2981:VAL:HG22	1.93	0.49
3:C:350:HIS:HE1	3:C:352:ALA:HB3	1.78	0.49
3:C:3206:LEU:HB3	3:C:3280:TYR:CE1	2.48	0.49
3:A:2771:ILE:HG21	3:A:2856:ASN:HD21	1.77	0.49
3:A:3401:LEU:O	3:A:3405:LEU:HG	2.13	0.49
3:A:3598:GLU:O	3:A:3602:VAL:HG23	2.13	0.49
3:G:972:LEU:HB2	3:G:1044:ARG:HH11	1.77	0.49
3:G:1225:PRO:HB2	3:G:1228:ILE:HB	1.95	0.49
3:G:2978:GLU:HA	3:G:2981:VAL:HG22	1.93	0.49
3:G:3037:GLU:HA	3:G:3080:VAL:HG22	1.94	0.49
3:G:3598:GLU:O	3:G:3602:VAL:HG23	2.13	0.49
3:J:4952:GLU:O	3:J:4956:THR:HG22	2.13	0.49
3:C:1130:GLN:HG2	3:C:1138:PRO:HA	1.94	0.49
3:C:1735:ILE:HD11	3:C:2201:LEU:HD21	1.95	0.49
3:C:3343:GLN:HE22	3:C:3410:PRO:HB2	1.77	0.49
3:A:842:PRO:HG2	3:A:1071:ARG:C	2.38	0.49
3:G:2381:GLU:O	3:G:2385:ARG:HG2	2.13	0.49
3:G:4952:GLU:O	3:G:4956:THR:HG22	2.13	0.49
3:J:350:HIS:HE1	3:J:352:ALA:HB3	1.78	0.49
3:J:1581:LEU:HA	3:J:1584:ARG:HG3	1.94	0.49
3:C:3398:PHE:HE1	3:C:3450:ASN:HB2	1.77	0.49
3:A:3590:GLU:O	3:A:3594:ARG:HG2	2.13	0.49
3:A:4928:LEU:HD23	3:A:4931:ILE:HD12	1.93	0.49
3:G:663:TYR:HD1	3:G:747:CYS:HB3	1.78	0.49
3:G:1130:GLN:HG2	3:G:1138:PRO:HA	1.94	0.49
3:C:165:VAL:HG12	3:C:204:PRO:HG2	1.95	0.49
3:C:426:ARG:HG3	3:C:431:PRO:HA	1.94	0.49
3:C:1581:LEU:HA	3:C:1584:ARG:HG3	1.94	0.49
3:C:2182:ILE:O	3:C:2185:ILE:HG22	2.13	0.49
3:C:4952:GLU:O	3:C:4956:THR:HG22	2.13	0.49
3:A:1272:LEU:HD21	3:A:1287:LEU:HD23	1.95	0.49
3:G:1272:LEU:HD21	3:G:1287:LEU:HD23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2777:TYR:HB2	3:G:2791:LEU:HG	1.95	0.48
2:L:34:LYS:HZ1	3:J:629:ARG:NE	2.10	0.48
3:J:591:ASP:HA	3:J:631:LEU:HD21	1.95	0.48
3:J:842:PRO:HG2	3:J:1071:ARG:C	2.38	0.48
3:J:1225:PRO:HB2	3:J:1228:ILE:HB	1.95	0.48
3:J:1230:MET:HB3	3:J:1828:ASP:HB3	1.94	0.48
3:J:2182:ILE:O	3:J:2185:ILE:HG22	2.13	0.48
3:J:2209:GLU:HA	3:J:2212:VAL:HG23	1.94	0.48
1:D:39:GLN:O	1:D:91:ALA:HB1	2.12	0.48
3:C:2883:HIS:HA	3:C:2886:TRP:CE2	2.48	0.48
3:C:3244:PRO:HB2	3:C:3248:ARG:HD3	1.94	0.48
3:C:3598:GLU:O	3:C:3602:VAL:HG23	2.13	0.48
1:B:101:PRO:HG2	3:A:917:GLU:HG3	1.94	0.48
3:A:3107:VAL:HG11	3:A:3171:SER:HB2	1.94	0.48
3:G:1581:LEU:HA	3:G:1584:ARG:HG3	1.94	0.48
3:G:1735:ILE:HD11	3:G:2201:LEU:HD21	1.95	0.48
3:G:4939:ALA:HA	3:G:4942:GLU:HG2	1.94	0.48
3:J:165:VAL:HG12	3:J:204:PRO:HG2	1.95	0.48
3:J:213:TYR:HB3	3:J:273:HIS:HE1	1.78	0.48
3:J:665:GLU:HB2	3:J:792:LEU:HB2	1.93	0.48
3:J:3346:VAL:HG21	3:J:3411:LEU:HB3	1.95	0.48
3:C:2978:GLU:HA	3:C:2981:VAL:HG22	1.93	0.48
3:C:4928:LEU:HD23	3:C:4931:ILE:HD12	1.93	0.48
3:A:951:LYS:HE2	3:A:974:HIS:HE2	1.78	0.48
3:A:2182:ILE:O	3:A:2185:ILE:HG22	2.13	0.48
2:I:31:GLN:HE22	3:G:1545:ASN:HD21	1.61	0.48
3:G:951:LYS:HE2	3:G:974:HIS:HE2	1.78	0.48
3:G:3277:LEU:O	3:G:3281:LEU:HD12	2.13	0.48
3:J:1871:PHE:HZ	3:J:2094:LEU:HD13	1.79	0.48
3:J:3401:LEU:O	3:J:3405:LEU:HG	2.13	0.48
3:C:788:LYS:HG2	3:C:1629:GLN:HG3	1.95	0.48
3:C:1433:TYR:CD2	3:C:1578:ALA:HB2	2.49	0.48
3:C:2170:MET:HE1	3:C:2178:MET:HE1	1.95	0.48
3:A:316:PHE:HD2	3:A:346:CYS:HB2	1.78	0.48
3:A:3277:LEU:O	3:A:3281:LEU:HD12	2.13	0.48
3:G:213:TYR:HB3	3:G:273:HIS:HE1	1.79	0.48
3:J:663:TYR:HD1	3:J:747:CYS:HB3	1.78	0.48
3:J:3590:GLU:O	3:J:3594:ARG:HG2	2.13	0.48
3:J:4634:GLU:HG3	3:J:4639:MET:HB2	1.96	0.48
3:J:4939:ALA:HA	3:J:4942:GLU:HG2	1.94	0.48
3:C:2806:ARG:HG3	3:C:2810:LYS:HZ3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4989:MET:HE2	3:C:4989:MET:HA	1.95	0.48
3:A:663:TYR:HD1	3:A:747:CYS:HB3	1.78	0.48
3:A:3406:TYR:CD1	3:A:3509:LEU:HB2	2.47	0.48
3:G:299:LEU:HD22	3:G:378:LEU:HG	1.96	0.48
3:G:426:ARG:HG3	3:G:431:PRO:HA	1.94	0.48
3:G:564:LEU:O	3:G:568:LEU:HG	2.14	0.48
3:G:1451:GLY:HA3	3:G:1494:MET:HA	1.96	0.48
3:G:1815:LEU:HD22	3:G:1845:VAL:HG21	1.96	0.48
3:G:3206:LEU:HB3	3:G:3280:TYR:CE1	2.48	0.48
3:G:3590:GLU:O	3:G:3594:ARG:HG2	2.13	0.48
3:J:788:LYS:HG2	3:J:1629:GLN:HG3	1.95	0.48
3:J:1130:GLN:HG2	3:J:1138:PRO:HA	1.95	0.48
3:J:1155:LEU:HD12	3:J:1184:ILE:HD12	1.95	0.48
3:J:1815:LEU:HD22	3:J:1845:VAL:HG21	1.96	0.48
3:C:591:ASP:HA	3:C:631:LEU:HD21	1.95	0.48
3:C:783:PHE:HB2	3:C:787:VAL:HG11	1.94	0.48
3:C:2777:TYR:HB2	3:C:2791:LEU:HG	1.95	0.48
3:C:3346:VAL:HG21	3:C:3411:LEU:HB3	1.95	0.48
3:C:3401:LEU:O	3:C:3405:LEU:HG	2.13	0.48
3:G:866:HIS:O	3:G:870:ILE:HD12	2.12	0.48
3:G:1703:LEU:HD12	3:G:1704:PRO:HD2	1.95	0.48
3:G:2182:ILE:O	3:G:2185:ILE:HG22	2.13	0.48
3:C:842:PRO:HG2	3:C:1071:ARG:C	2.38	0.48
3:C:951:LYS:HE2	3:C:974:HIS:HE2	1.78	0.48
3:C:972:LEU:HB2	3:C:1044:ARG:HH11	1.77	0.48
3:C:2381:GLU:O	3:C:2385:ARG:HG2	2.13	0.48
3:C:2563:THR:HG22	3:C:2606:CYS:HA	1.96	0.48
3:C:2676:ARG:HG3	3:C:2955:PHE:CD2	2.49	0.48
3:A:984:LEU:HD22	3:A:987:ARG:NH2	2.28	0.48
3:A:1130:GLN:HG2	3:A:1138:PRO:HA	1.95	0.48
3:A:1433:TYR:CD2	3:A:1578:ALA:HB2	2.49	0.48
3:A:2563:THR:HG22	3:A:2606:CYS:HA	1.96	0.48
1:H:114:TYR:HE1	3:G:996:TRP:HB2	1.79	0.48
3:G:165:VAL:HG12	3:G:204:PRO:HG2	1.95	0.48
3:G:316:PHE:HD2	3:G:346:CYS:HB2	1.79	0.48
3:G:357:LEU:H	3:G:357:LEU:HD12	1.77	0.48
3:G:2170:MET:HE1	3:G:2178:MET:HE1	1.95	0.48
3:G:3401:LEU:O	3:G:3405:LEU:HG	2.13	0.48
2:L:9:PRO:HD3	3:J:736:HIS:HA	1.95	0.48
3:J:320:LYS:HA	3:J:356:TRP:CH2	2.49	0.48
3:J:1433:TYR:CD2	3:J:1578:ALA:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:2777:TYR:HB2	3:J:2791:LEU:HG	1.95	0.48
3:C:1272:LEU:HD21	3:C:1287:LEU:HD23	1.95	0.48
3:C:1451:GLY:HA3	3:C:1494:MET:HA	1.96	0.48
3:C:1703:LEU:HD12	3:C:1704:PRO:HD2	1.95	0.48
3:A:534:ARG:HH21	3:A:572:PRO:HD3	1.79	0.48
3:A:591:ASP:HA	3:A:631:LEU:HD21	1.95	0.48
3:A:3244:PRO:HB2	3:A:3248:ARG:HD3	1.94	0.48
3:A:3989:VAL:HG13	3:A:4023:MET:SD	2.54	0.48
1:H:104:TYR:HE2	3:G:913:LEU:HD21	1.79	0.48
3:G:350:HIS:HE1	3:G:352:ALA:HB3	1.78	0.48
3:G:1433:TYR:CD2	3:G:1578:ALA:HB2	2.49	0.48
3:G:3244:PRO:HB2	3:G:3248:ARG:HD3	1.94	0.48
3:G:3346:VAL:HG21	3:G:3411:LEU:HB3	1.95	0.48
3:J:564:LEU:O	3:J:568:LEU:HG	2.14	0.48
3:J:1272:LEU:HD21	3:J:1287:LEU:HD23	1.95	0.48
3:J:3277:LEU:O	3:J:3281:LEU:HD12	2.13	0.48
1:B:114:TYR:HE1	3:A:996:TRP:HB2	1.78	0.48
3:A:213:TYR:HB3	3:A:273:HIS:HE1	1.78	0.48
3:A:299:LEU:HD22	3:A:378:LEU:HG	1.96	0.48
3:A:561:LEU:HD23	3:A:598:LYS:HE2	1.96	0.48
3:A:866:HIS:O	3:A:870:ILE:HD12	2.12	0.48
3:A:1703:LEU:HD12	3:A:1704:PRO:HD2	1.95	0.48
3:A:3103:ILE:O	3:A:3107:VAL:HG13	2.14	0.48
3:G:1155:LEU:HD12	3:G:1184:ILE:HD12	1.95	0.48
3:G:4634:GLU:HG3	3:G:4639:MET:HB2	1.96	0.48
3:J:972:LEU:HB2	3:J:1044:ARG:HH11	1.77	0.48
3:J:2563:THR:HG22	3:J:2606:CYS:HA	1.96	0.48
3:J:2755:ILE:HG23	3:J:2813:LEU:HD13	1.96	0.48
3:C:213:TYR:HB3	3:C:273:HIS:HE1	1.78	0.48
3:C:320:LYS:HA	3:C:356:TRP:CH2	2.49	0.48
3:C:534:ARG:HH21	3:C:572:PRO:HD3	1.79	0.48
3:C:1155:LEU:HD12	3:C:1184:ILE:HD12	1.95	0.48
3:A:1155:LEU:HD12	3:A:1184:ILE:HD12	1.95	0.48
3:A:2209:GLU:HA	3:A:2212:VAL:HG23	1.94	0.48
3:A:2381:GLU:O	3:A:2385:ARG:HG2	2.13	0.48
3:A:2676:ARG:HG3	3:A:2955:PHE:CD2	2.49	0.48
3:A:3206:LEU:HB3	3:A:3280:TYR:CE1	2.48	0.48
1:K:12:MET:HE3	1:K:13:GLN:H	1.78	0.48
3:J:580:GLU:O	3:J:584:LYS:HG2	2.14	0.48
3:J:984:LEU:HD22	3:J:987:ARG:NH2	2.28	0.48
3:J:1451:GLY:HA3	3:J:1494:MET:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1614:GLN:HE21	3:J:1632:ASP:HB3	1.79	0.48
3:J:2170:MET:HE1	3:J:2178:MET:HE1	1.95	0.48
1:D:12:MET:HE3	1:D:13:GLN:H	1.79	0.48
3:C:663:TYR:HD1	3:C:747:CYS:HB3	1.78	0.48
3:C:1871:PHE:HZ	3:C:2094:LEU:HD13	1.79	0.48
3:C:3277:LEU:O	3:C:3281:LEU:HD12	2.13	0.48
3:C:3590:GLU:O	3:C:3594:ARG:HG2	2.13	0.48
3:C:3989:VAL:HG13	3:C:4023:MET:SD	2.54	0.48
3:A:350:HIS:HE1	3:A:352:ALA:HB3	1.78	0.48
3:A:788:LYS:HG2	3:A:1629:GLN:HG3	1.95	0.48
3:A:1815:LEU:HD22	3:A:1845:VAL:HG21	1.96	0.48
3:G:1854:PHE:HD1	3:G:1858:ASP:HB3	1.79	0.47
2:L:91:ILE:HD11	2:L:95:ALA:HB3	1.96	0.47
3:J:1703:LEU:HD12	3:J:1704:PRO:HD2	1.95	0.47
3:C:1225:PRO:HB2	3:C:1228:ILE:HB	1.95	0.47
3:C:1569:GLN:HG3	3:C:1570:LYS:HZ1	1.77	0.47
3:C:3103:ILE:O	3:C:3107:VAL:HG13	2.14	0.47
3:A:1225:PRO:HB2	3:A:1228:ILE:HB	1.95	0.47
3:A:1854:PHE:HD1	3:A:1858:ASP:HB3	1.79	0.47
2:I:91:ILE:HD11	2:I:95:ALA:HB3	1.97	0.47
3:G:320:LYS:HA	3:G:356:TRP:CH2	2.49	0.47
3:G:534:ARG:HH21	3:G:572:PRO:HD3	1.79	0.47
3:G:561:LEU:HD23	3:G:598:LYS:HE2	1.96	0.47
3:G:2010:LEU:HD23	3:G:3656:SER:OG	2.14	0.47
3:J:316:PHE:HD2	3:J:346:CYS:HB2	1.79	0.47
3:J:1735:ILE:HD11	3:J:2201:LEU:HD21	1.95	0.47
3:J:3443:ILE:HG12	3:J:3605:HIS:CD2	2.49	0.47
3:J:3598:GLU:O	3:J:3602:VAL:HG23	2.13	0.47
3:C:580:GLU:O	3:C:584:LYS:HG2	2.14	0.47
3:C:1815:LEU:HD22	3:C:1845:VAL:HG21	1.96	0.47
3:C:2974:ILE:HG13	3:C:3053:ARG:HH12	1.78	0.47
3:A:165:VAL:HG12	3:A:204:PRO:HG2	1.95	0.47
3:A:972:LEU:HB2	3:A:1044:ARG:HH11	1.77	0.47
3:A:1735:ILE:HD11	3:A:2201:LEU:HD21	1.95	0.47
3:A:2170:MET:HE1	3:A:2178:MET:HE1	1.95	0.47
3:G:3103:ILE:O	3:G:3107:VAL:HG13	2.14	0.47
3:G:4989:MET:HE2	3:G:4989:MET:HA	1.95	0.47
3:J:941:MET:HA	3:J:1051:TYR:HA	1.96	0.47
3:J:2676:ARG:HG3	3:J:2955:PHE:CD2	2.49	0.47
3:J:3592:ILE:O	3:J:3596:VAL:HG12	2.14	0.47
3:J:4930:ALA:HB2	3:C:4933:GLN:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:561:LEU:HD23	3:C:598:LYS:HE2	1.96	0.47
3:C:1433:TYR:CD2	3:C:1573:MET:HB3	2.50	0.47
3:C:2010:LEU:HD23	3:C:3656:SER:OG	2.14	0.47
3:C:2799:GLU:HA	3:C:2802:LYS:HB2	1.96	0.47
3:C:3443:ILE:HG12	3:C:3605:HIS:CD2	2.49	0.47
3:C:4248:ALA:HA	3:C:4251:ILE:HG12	1.96	0.47
3:A:4677:LEU:HD11	3:A:4687:TYR:HE2	1.79	0.47
3:A:4989:MET:HA	3:A:4989:MET:HE2	1.95	0.47
3:G:3443:ILE:HG12	3:G:3605:HIS:CD2	2.49	0.47
3:G:4206:GLU:HA	3:G:4211:LYS:HE3	1.97	0.47
3:J:1854:PHE:HD1	3:J:1858:ASP:HB3	1.79	0.47
3:J:2010:LEU:HD23	3:J:3656:SER:OG	2.14	0.47
3:J:3989:VAL:HG13	3:J:4023:MET:SD	2.54	0.47
3:J:4989:MET:HE2	3:J:4989:MET:HA	1.95	0.47
3:C:1614:GLN:HE21	3:C:1632:ASP:HB3	1.79	0.47
3:A:564:LEU:O	3:A:568:LEU:HG	2.14	0.47
3:A:580:GLU:O	3:A:584:LYS:HG2	2.14	0.47
3:A:1433:TYR:CD2	3:A:1573:MET:HB3	2.50	0.47
3:A:1451:GLY:HA3	3:A:1494:MET:HA	1.96	0.47
3:A:2522:LEU:HA	3:A:2526:PHE:HB2	1.97	0.47
3:A:2555:CYS:SG	3:A:2599:GLN:HG2	2.54	0.47
3:A:4206:GLU:HA	3:A:4211:LYS:HE3	1.97	0.47
3:A:4681:LEU:HA	3:A:4681:LEU:HD23	1.77	0.47
3:G:591:ASP:HA	3:G:631:LEU:HD21	1.95	0.47
3:G:941:MET:HA	3:G:1051:TYR:HA	1.96	0.47
3:G:1614:GLN:HE21	3:G:1632:ASP:HB3	1.79	0.47
3:G:2563:THR:HG22	3:G:2606:CYS:HA	1.96	0.47
3:G:3346:VAL:HB	3:G:3411:LEU:HD12	1.97	0.47
3:J:534:ARG:HH21	3:J:572:PRO:HD3	1.79	0.47
3:J:561:LEU:HD23	3:J:598:LYS:HE2	1.96	0.47
3:J:1076:ARG:HG2	3:J:1077:ALA:O	2.15	0.47
3:C:941:MET:HA	3:C:1051:TYR:HA	1.96	0.47
3:C:3346:VAL:HB	3:C:3411:LEU:HD12	1.97	0.47
3:C:3592:ILE:O	3:C:3596:VAL:HG12	2.14	0.47
3:A:320:LYS:HA	3:A:356:TRP:CH2	2.49	0.47
3:A:1614:GLN:HE21	3:A:1632:ASP:HB3	1.79	0.47
3:A:3346:VAL:HG21	3:A:3411:LEU:HB3	1.95	0.47
3:A:3443:ILE:HG12	3:A:3605:HIS:CD2	2.49	0.47
3:G:788:LYS:HG2	3:G:1629:GLN:HG3	1.95	0.47
3:G:1076:ARG:HG2	3:G:1077:ALA:O	2.15	0.47
3:G:2676:ARG:HG3	3:G:2955:PHE:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2969:ILE:HG22	3:G:2973:PHE:CE2	2.47	0.47
3:G:3768:SER:HA	3:G:3771:HIS:CE1	2.50	0.47
3:G:3989:VAL:HG13	3:G:4023:MET:SD	2.54	0.47
3:J:721:LEU:HB3	3:J:768:PHE:HE2	1.80	0.47
3:J:2969:ILE:HG22	3:J:2973:PHE:CE2	2.47	0.47
3:C:299:LEU:HD22	3:C:378:LEU:HG	1.96	0.47
3:C:795:GLY:HA3	3:C:812:HIS:CE1	2.50	0.47
3:C:2098:VAL:HB	3:C:2127:GLN:HG3	1.97	0.47
3:C:2655:TYR:HA	3:C:2667:THR:HB	1.96	0.47
3:A:629:ARG:HH21	3:A:634:GLN:HG2	1.80	0.47
3:A:1871:PHE:HZ	3:A:2094:LEU:HD13	1.79	0.47
3:A:2098:VAL:HB	3:A:2127:GLN:HG3	1.97	0.47
3:A:2599:GLN:O	3:A:2603:ILE:HG12	2.15	0.47
1:H:12:MET:HE3	1:H:13:GLN:H	1.79	0.47
3:G:320:LYS:HA	3:G:356:TRP:HH2	1.80	0.47
3:G:560:ILE:HD12	3:G:560:ILE:H	1.80	0.47
3:G:580:GLU:O	3:G:584:LYS:HG2	2.14	0.47
3:G:629:ARG:HH21	3:G:634:GLN:HG2	1.80	0.47
3:G:661:LYS:HB3	3:G:808:TYR:CD1	2.50	0.47
3:G:1433:TYR:CD2	3:G:1573:MET:HB3	2.50	0.47
3:G:2799:GLU:HA	3:G:2802:LYS:HB2	1.97	0.47
3:G:4248:ALA:HA	3:G:4251:ILE:HG12	1.97	0.47
3:G:4744:ASP:HB3	3:G:4747:SER:HB3	1.97	0.47
3:J:299:LEU:HD22	3:J:378:LEU:HG	1.96	0.47
3:J:629:ARG:HH21	3:J:634:GLN:HG2	1.80	0.47
3:J:795:GLY:HA3	3:J:812:HIS:CE1	2.50	0.47
3:J:951:LYS:HE2	3:J:974:HIS:HE2	1.78	0.47
3:J:1619:ARG:HA	3:J:1626:TRP:HA	1.97	0.47
3:J:1619:ARG:HH21	3:J:1621:GLY:HA2	1.79	0.47
3:J:3103:ILE:O	3:J:3107:VAL:HG13	2.14	0.47
3:J:3804:ILE:HG22	3:J:3812:VAL:HG21	1.97	0.47
2:E:91:ILE:HD11	2:E:95:ALA:HB3	1.96	0.47
3:C:629:ARG:HH21	3:C:634:GLN:HG2	1.80	0.47
3:C:629:ARG:NH2	3:C:634:GLN:HG2	2.30	0.47
3:C:985:VAL:HG13	3:C:1039:LEU:HB3	1.96	0.47
3:C:1128:ARG:HA	3:C:1142:PRO:HG3	1.97	0.47
3:C:1288:PHE:HB2	3:C:1600:LEU:HB2	1.97	0.47
3:C:2755:ILE:HG23	3:C:2813:LEU:HD13	1.96	0.47
3:C:3437:MET:O	3:C:3441:ILE:HG13	2.15	0.47
3:C:4634:GLU:HG3	3:C:4639:MET:HB2	1.96	0.47
1:B:23:THR:HA	1:B:77:THR:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:104:TYR:HE2	3:A:913:LEU:HD21	1.80	0.47
2:F:91:ILE:HD11	2:F:95:ALA:HB3	1.96	0.47
3:A:320:LYS:HA	3:A:356:TRP:HH2	1.80	0.47
3:A:941:MET:HA	3:A:1051:TYR:HA	1.96	0.47
3:A:985:VAL:HG13	3:A:1039:LEU:HB3	1.97	0.47
3:A:1076:ARG:HG2	3:A:1077:ALA:O	2.15	0.47
3:A:1128:ARG:HA	3:A:1142:PRO:HG3	1.97	0.47
3:A:3592:ILE:O	3:A:3596:VAL:HG12	2.14	0.47
3:G:2555:CYS:SG	3:G:2599:GLN:HG2	2.54	0.47
3:G:2599:GLN:O	3:G:2603:ILE:HG12	2.15	0.47
2:L:7:ILE:HA	3:J:719:LEU:HD21	1.96	0.47
3:J:661:LYS:HB3	3:J:808:TYR:CD1	2.50	0.47
3:J:3036:LYS:HG2	3:J:3076:ASP:HB3	1.97	0.47
3:C:1619:ARG:HA	3:C:1626:TRP:HA	1.97	0.47
3:C:1854:PHE:HD1	3:C:1858:ASP:HB3	1.79	0.47
3:C:4677:LEU:HD11	3:C:4687:TYR:HE2	1.79	0.47
3:A:3346:VAL:HB	3:A:3411:LEU:HD12	1.97	0.47
3:A:3768:SER:HA	3:A:3771:HIS:CE1	2.50	0.47
3:A:3804:ILE:HG22	3:A:3812:VAL:HG21	1.97	0.47
3:A:4248:ALA:HA	3:A:4251:ILE:HG12	1.97	0.47
3:G:292:ALA:HB2	3:G:312:THR:HG22	1.97	0.47
3:G:985:VAL:HG13	3:G:1039:LEU:HB3	1.96	0.47
3:G:1018:ASN:HB3	3:G:1021:LEU:HD23	1.97	0.47
3:G:3592:ILE:O	3:G:3596:VAL:HG12	2.14	0.47
3:J:292:ALA:HB2	3:J:312:THR:HG22	1.97	0.47
3:J:629:ARG:NH2	3:J:634:GLN:HG2	2.30	0.47
3:J:2258:LEU:HA	3:J:2261:SER:HB3	1.97	0.47
3:J:2555:CYS:SG	3:J:2599:GLN:HG2	2.54	0.47
3:J:3346:VAL:HB	3:J:3411:LEU:HD12	1.97	0.47
3:C:316:PHE:HD2	3:C:346:CYS:HB2	1.79	0.47
3:C:2258:LEU:HA	3:C:2261:SER:HB3	1.97	0.47
3:C:2522:LEU:HA	3:C:2526:PHE:HB2	1.97	0.47
3:C:3804:ILE:HG22	3:C:3812:VAL:HG21	1.97	0.47
1:B:12:MET:HE3	1:B:13:GLN:H	1.79	0.47
3:A:1018:ASN:HB3	3:A:1021:LEU:HD23	1.97	0.47
3:A:2755:ILE:HG23	3:A:2813:LEU:HD13	1.96	0.47
3:A:2902:HIS:HE1	3:A:2904:LEU:HD13	1.80	0.47
3:A:3036:LYS:HG2	3:A:3076:ASP:HB3	1.97	0.47
3:G:721:LEU:HB3	3:G:768:PHE:HE2	1.80	0.47
3:G:2098:VAL:HB	3:G:2127:GLN:HG3	1.97	0.47
3:G:3036:LYS:HG2	3:G:3076:ASP:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:3804:ILE:HG22	3:G:3812:VAL:HG21	1.97	0.47
3:J:461:HIS:CD2	3:J:3707:ARG:HG3	2.50	0.47
3:J:799:GLU:HB2	3:J:1623:ARG:HH11	1.79	0.47
1:D:40:ALA:HB3	1:D:43:LYS:HB2	1.97	0.47
3:C:564:LEU:O	3:C:568:LEU:HG	2.14	0.47
3:C:1619:ARG:HH21	3:C:1621:GLY:HA2	1.79	0.47
3:C:2102:VAL:HG13	3:C:2120:MET:HE3	1.97	0.47
3:C:2599:GLN:O	3:C:2603:ILE:HG12	2.15	0.47
3:A:629:ARG:NH2	3:A:634:GLN:HG2	2.30	0.47
1:H:23:THR:HA	1:H:77:THR:HG23	1.96	0.46
1:H:40:ALA:HB3	1:H:43:LYS:HB2	1.98	0.46
3:J:320:LYS:HA	3:J:356:TRP:HH2	1.80	0.46
3:J:2519:LEU:HA	3:J:2522:LEU:HD12	1.97	0.46
3:J:2799:GLU:HA	3:J:2802:LYS:HB2	1.96	0.46
3:J:3406:TYR:HB3	3:J:3509:LEU:HD22	1.97	0.46
1:D:2:VAL:HB	1:D:116:TYR:CD2	2.51	0.46
3:C:1076:ARG:HG2	3:C:1077:ALA:O	2.15	0.46
3:C:3019:SER:HB3	3:C:3030:HIS:HA	1.98	0.46
3:A:461:HIS:CD2	3:A:3707:ARG:HG3	2.51	0.46
3:A:795:GLY:HA3	3:A:812:HIS:CE1	2.50	0.46
3:A:1614:GLN:NE2	3:A:1632:ASP:H	2.14	0.46
3:A:2102:VAL:HG13	3:A:2120:MET:HE3	1.97	0.46
3:A:3437:MET:O	3:A:3441:ILE:HG13	2.15	0.46
3:G:35:LEU:HD21	3:G:189:LEU:HD22	1.97	0.46
3:G:984:LEU:HD22	3:G:987:ARG:HH21	1.81	0.46
3:G:2012:PHE:HZ	3:G:2031:LEU:HD23	1.80	0.46
3:G:3547:GLU:O	3:G:3551:GLU:HG2	2.15	0.46
3:J:2655:TYR:HA	3:J:2667:THR:HB	1.96	0.46
3:J:3437:MET:O	3:J:3441:ILE:HG13	2.15	0.46
3:J:4677:LEU:HD11	3:J:4687:TYR:HE2	1.79	0.46
3:C:2094:LEU:O	3:C:2098:VAL:HG23	2.16	0.46
3:C:2519:LEU:HA	3:C:2522:LEU:HD12	1.97	0.46
3:C:2902:HIS:HE1	3:C:2904:LEU:HD13	1.80	0.46
3:C:3442:PHE:HA	3:C:3510:ILE:HD11	1.97	0.46
3:A:935:LEU:HD11	3:A:991:ASN:HD22	1.80	0.46
3:A:3547:GLU:O	3:A:3551:GLU:HG2	2.15	0.46
3:G:461:HIS:CD2	3:G:3707:ARG:HG3	2.51	0.46
3:G:1286:MET:HB2	3:G:1462:MET:HA	1.97	0.46
3:G:1569:GLN:HB3	3:G:1572:ILE:HD12	1.98	0.46
3:G:1619:ARG:HH21	3:G:1621:GLY:HA2	1.79	0.46
3:G:4933:GLN:HG2	3:A:4930:ALA:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:2599:GLN:O	3:J:2603:ILE:HG12	2.15	0.46
3:J:3768:SER:HA	3:J:3771:HIS:CE1	2.50	0.46
3:C:320:LYS:HA	3:C:356:TRP:HH2	1.80	0.46
3:C:799:GLU:HB2	3:C:1623:ARG:HH11	1.79	0.46
3:C:2555:CYS:SG	3:C:2599:GLN:HG2	2.54	0.46
3:A:1569:GLN:HB3	3:A:1572:ILE:HD12	1.98	0.46
3:A:2672:LEU:HD12	3:A:2672:LEU:HA	1.81	0.46
3:A:2799:GLU:HA	3:A:2802:LYS:HB2	1.97	0.46
3:G:877:ASN:O	3:G:881:LEU:HG	2.15	0.46
3:G:2377:LEU:O	3:G:2381:GLU:HG2	2.16	0.46
3:J:985:VAL:HG13	3:J:1039:LEU:HB3	1.96	0.46
3:J:1433:TYR:CD2	3:J:1573:MET:HB3	2.50	0.46
3:J:2973:PHE:HA	3:J:2976:HIS:CD2	2.51	0.46
3:J:3223:SER:O	3:J:3226:GLU:HG3	2.16	0.46
3:J:4206:GLU:HA	3:J:4211:LYS:HE3	1.97	0.46
3:J:4744:ASP:HB3	3:J:4747:SER:HB3	1.97	0.46
3:C:560:ILE:HD12	3:C:560:ILE:H	1.80	0.46
3:C:3102:ASP:HA	3:C:3105:LYS:HE2	1.98	0.46
3:C:3547:GLU:O	3:C:3551:GLU:HG2	2.15	0.46
3:A:565:TYR:O	3:A:569:ILE:HG22	2.16	0.46
3:A:2010:LEU:HD23	3:A:3656:SER:OG	2.14	0.46
3:A:2012:PHE:HZ	3:A:2031:LEU:HD23	1.80	0.46
3:A:3513:THR:O	3:A:3517:MET:HG2	2.16	0.46
3:G:2522:LEU:HA	3:G:2526:PHE:HB2	1.97	0.46
3:G:2662:ALA:HB3	3:G:2664:PHE:CE2	2.51	0.46
3:G:3437:MET:O	3:G:3441:ILE:HG13	2.15	0.46
3:G:4675:LYS:O	3:G:4679:ARG:HG2	2.16	0.46
3:J:224:HIS:HA	3:J:388:LEU:HG	1.98	0.46
3:J:1128:ARG:HA	3:J:1142:PRO:HG3	1.97	0.46
3:J:2102:VAL:HG13	3:J:2120:MET:HE3	1.97	0.46
3:J:3019:SER:HB3	3:J:3030:HIS:HA	1.97	0.46
3:J:3442:PHE:HA	3:J:3510:ILE:HD11	1.97	0.46
1:D:23:THR:HA	1:D:77:THR:HG23	1.96	0.46
3:C:984:LEU:HD22	3:C:987:ARG:HH21	1.81	0.46
3:C:1614:GLN:NE2	3:C:1632:ASP:H	2.14	0.46
3:C:2662:ALA:HB3	3:C:2664:PHE:CE2	2.51	0.46
3:C:3223:SER:O	3:C:3226:GLU:HG3	2.15	0.46
2:F:29:MET:HB3	2:F:34:LYS:H	1.81	0.46
3:A:292:ALA:HB2	3:A:312:THR:HG22	1.97	0.46
3:A:1619:ARG:HH21	3:A:1621:GLY:HA2	1.79	0.46
3:A:2655:TYR:HA	3:A:2667:THR:HB	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3223:SER:O	3:A:3226:GLU:HG3	2.15	0.46
3:A:4634:GLU:HG3	3:A:4639:MET:HB2	1.96	0.46
3:G:439:GLU:O	3:G:443:LEU:HG	2.16	0.46
3:G:1619:ARG:HB3	3:G:1626:TRP:CD2	2.51	0.46
3:G:1871:PHE:HZ	3:G:2094:LEU:HD13	1.79	0.46
3:G:2648:TYR:HD2	3:G:2709:ALA:HB3	1.81	0.46
3:G:3019:SER:HB3	3:G:3030:HIS:HA	1.97	0.46
3:G:4677:LEU:HD11	3:G:4687:TYR:HE2	1.79	0.46
1:K:53:SER:HA	1:K:71:ARG:NH2	2.31	0.46
2:L:89:GLY:HA3	3:J:1684:ALA:HB1	1.97	0.46
3:J:1288:PHE:HB2	3:J:1600:LEU:HB2	1.97	0.46
3:J:3547:GLU:O	3:J:3551:GLU:HG2	2.15	0.46
3:J:4248:ALA:HA	3:J:4251:ILE:HG12	1.97	0.46
3:C:472:ARG:HB2	3:C:472:ARG:NH1	2.30	0.46
3:C:3459:VAL:HG23	3:C:3464:ILE:HB	1.97	0.46
3:C:4206:GLU:HA	3:C:4211:LYS:HE3	1.97	0.46
3:C:4744:ASP:HB3	3:C:4747:SER:HB3	1.97	0.46
1:B:40:ALA:HB3	1:B:43:LYS:HB2	1.98	0.46
1:B:53:SER:HA	1:B:71:ARG:NH2	2.31	0.46
3:A:35:LEU:HD21	3:A:189:LEU:HD22	1.97	0.46
3:A:472:ARG:NH1	3:A:472:ARG:HB2	2.30	0.46
3:A:582:HIS:O	3:A:586:ILE:HG12	2.16	0.46
3:A:799:GLU:HB2	3:A:1623:ARG:HH11	1.79	0.46
3:A:1288:PHE:HB2	3:A:1600:LEU:HB2	1.97	0.46
3:A:3413:ILE:HD12	3:A:3475:LYS:HG2	1.98	0.46
3:G:629:ARG:HB3	3:G:634:GLN:HE22	1.79	0.46
3:G:629:ARG:NH2	3:G:634:GLN:HG2	2.30	0.46
3:G:795:GLY:HA3	3:G:812:HIS:CE1	2.50	0.46
3:G:799:GLU:HB2	3:G:1623:ARG:HH11	1.79	0.46
3:G:935:LEU:HD11	3:G:991:ASN:HD22	1.80	0.46
3:G:1128:ARG:HA	3:G:1142:PRO:HG3	1.97	0.46
3:G:1470:ARG:HA	3:G:1470:ARG:HD3	1.75	0.46
3:G:1619:ARG:HA	3:G:1626:TRP:HA	1.97	0.46
3:G:2559:LEU:O	3:G:2563:THR:HG23	2.16	0.46
3:G:2755:ILE:HG23	3:G:2813:LEU:HD13	1.96	0.46
3:G:3102:ASP:HA	3:G:3105:LYS:HE2	1.98	0.46
3:G:4725:LEU:HA	3:G:4737:ILE:HG21	1.97	0.46
3:G:4936:ILE:HD11	3:A:4930:ALA:HB3	1.98	0.46
1:K:23:THR:HA	1:K:77:THR:HG23	1.96	0.46
1:K:40:ALA:HB3	1:K:43:LYS:HB2	1.98	0.46
3:J:2098:VAL:HB	3:J:2127:GLN:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:2527:LEU:HD21	3:J:2582:MET:HB2	1.98	0.46
3:J:2648:TYR:HD2	3:J:2709:ALA:HB3	1.81	0.46
3:J:3396:ASP:O	3:J:3400:VAL:HG23	2.16	0.46
2:E:29:MET:HB3	2:E:34:LYS:H	1.81	0.46
3:C:113:HIS:CE1	3:C:402:ARG:HB3	2.51	0.46
3:C:1930:LYS:HB2	3:C:1930:LYS:HE3	1.79	0.46
3:C:3036:LYS:HG2	3:C:3076:ASP:HB3	1.97	0.46
3:C:3406:TYR:HB3	3:C:3509:LEU:HD22	1.97	0.46
3:C:3513:THR:O	3:C:3517:MET:HG2	2.16	0.46
3:C:4675:LYS:O	3:C:4679:ARG:HG2	2.16	0.46
3:C:4857:ASN:HD22	8:A:5106:POV:H33	1.81	0.46
3:A:1286:MET:HB2	3:A:1462:MET:HA	1.97	0.46
3:A:2267:MET:HE3	3:A:2267:MET:HB2	1.79	0.46
3:A:2527:LEU:HD21	3:A:2582:MET:HB2	1.98	0.46
3:A:2973:PHE:HA	3:A:2976:HIS:CD2	2.51	0.46
3:G:1861:GLN:O	3:G:1865:MET:HB3	2.16	0.46
3:G:2179:ILE:HD12	3:G:2227:LYS:HE3	1.98	0.46
3:G:2519:LEU:HD13	3:G:2522:LEU:HD12	1.98	0.46
3:G:2655:TYR:HA	3:G:2667:THR:HB	1.96	0.46
3:G:2902:HIS:HE1	3:G:2904:LEU:HD13	1.80	0.46
3:G:3396:ASP:O	3:G:3400:VAL:HG23	2.16	0.46
3:G:4930:ALA:HB3	3:J:4936:ILE:HD11	1.98	0.46
3:J:560:ILE:HD12	3:J:560:ILE:H	1.80	0.46
3:J:1455:PRO:HG3	3:J:1549:PHE:HE1	1.81	0.46
3:J:1569:GLN:HB3	3:J:1572:ILE:HD12	1.98	0.46
3:J:2094:LEU:O	3:J:2098:VAL:HG23	2.16	0.46
3:J:2102:VAL:HG13	3:J:2120:MET:HB2	1.98	0.46
3:J:3102:ASP:HA	3:J:3105:LYS:HE2	1.98	0.46
1:D:53:SER:HA	1:D:71:ARG:NH2	2.31	0.46
3:C:935:LEU:HD11	3:C:991:ASN:HD22	1.80	0.46
3:C:2012:PHE:HZ	3:C:2031:LEU:HD23	1.80	0.46
3:C:2952:GLU:HA	3:C:2957:PHE:CG	2.51	0.46
3:C:4930:ALA:HB2	3:A:4933:GLN:HG2	1.96	0.46
3:C:4930:ALA:HB3	3:A:4936:ILE:HD11	1.98	0.46
1:B:2:VAL:HB	1:B:116:TYR:CD2	2.51	0.46
3:A:224:HIS:HA	3:A:388:LEU:HG	1.98	0.46
3:A:2526:PHE:O	3:A:2530:MET:HG3	2.16	0.46
3:A:3396:ASP:O	3:A:3400:VAL:HG23	2.16	0.46
3:G:3459:VAL:HG23	3:G:3464:ILE:HB	1.97	0.46
3:J:59:PRO:HA	3:J:60:PRO:HD3	1.86	0.46
3:J:472:ARG:NH1	3:J:472:ARG:HB2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1286:MET:HB2	3:J:1462:MET:HA	1.97	0.46
3:J:1683:HIS:CG	3:J:1800:PRO:HG3	2.51	0.46
3:J:2012:PHE:HZ	3:J:2031:LEU:HD23	1.81	0.46
3:J:3413:ILE:HD12	3:J:3475:LYS:HG2	1.98	0.46
3:C:661:LYS:HB3	3:C:808:TYR:CD1	2.50	0.46
3:C:1286:MET:HB2	3:C:1462:MET:HA	1.97	0.46
3:C:1569:GLN:HB3	3:C:1572:ILE:HD12	1.98	0.46
3:C:2973:PHE:HA	3:C:2976:HIS:CD2	2.51	0.46
3:C:3768:SER:HA	3:C:3771:HIS:CE1	2.50	0.46
3:A:113:HIS:CE1	3:A:402:ARG:HB3	2.51	0.46
3:A:439:GLU:O	3:A:443:LEU:HG	2.16	0.46
3:A:4889:VAL:HG12	3:A:4900:GLU:HG3	1.98	0.46
1:H:2:VAL:HB	1:H:116:TYR:CD2	2.51	0.46
3:G:980:ALA:O	3:G:984:LEU:HG	2.16	0.46
3:G:2736:ASP:HA	3:G:2891:LYS:HD2	1.98	0.46
2:L:29:MET:HB3	2:L:34:LYS:H	1.81	0.46
3:J:35:LEU:HD21	3:J:189:LEU:HD22	1.97	0.46
3:J:877:ASN:O	3:J:881:LEU:HG	2.15	0.46
3:J:2179:ILE:HD12	3:J:2227:LYS:HE3	1.98	0.46
3:J:3257:ALA:HA	3:J:3325:ASN:HD21	1.81	0.46
3:J:4930:ALA:HB3	3:C:4936:ILE:HD11	1.98	0.46
3:C:224:HIS:HA	3:C:388:LEU:HG	1.98	0.46
3:C:461:HIS:CD2	3:C:3707:ARG:HG3	2.51	0.46
3:C:582:HIS:O	3:C:586:ILE:HG12	2.16	0.46
3:C:1861:GLN:O	3:C:1865:MET:HB3	2.16	0.46
3:C:2377:LEU:O	3:C:2381:GLU:HG2	2.16	0.46
3:A:560:ILE:HD12	3:A:560:ILE:H	1.80	0.46
3:A:877:ASN:O	3:A:881:LEU:HG	2.15	0.46
3:A:980:ALA:O	3:A:984:LEU:HG	2.16	0.46
3:A:1619:ARG:HA	3:A:1626:TRP:HA	1.97	0.46
3:A:1619:ARG:HB3	3:A:1626:TRP:CD2	2.51	0.46
2:I:90:VAL:HG12	3:G:1687:SER:OG	2.16	0.45
3:G:103:TYR:HB2	3:G:159:GLU:HA	1.98	0.45
3:G:707:VAL:O	3:G:713:SER:HB2	2.16	0.45
3:G:1184:ILE:HD12	3:G:1184:ILE:HA	1.87	0.45
3:G:2526:PHE:O	3:G:2530:MET:HG3	2.16	0.45
3:G:2527:LEU:HD21	3:G:2582:MET:HB2	1.98	0.45
3:G:3223:SER:O	3:G:3226:GLU:HG3	2.15	0.45
3:G:3409:TYR:O	3:G:3413:ILE:HG23	2.17	0.45
3:G:4857:ASN:HD22	8:J:5107:POV:H33	1.81	0.45
3:G:4930:ALA:HB2	3:J:4933:GLN:HG2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:113:HIS:CE1	3:J:402:ARG:HB3	2.51	0.45
3:J:935:LEU:HD11	3:J:991:ASN:HD22	1.80	0.45
3:J:1018:ASN:HB3	3:J:1021:LEU:HD23	1.97	0.45
3:J:2519:LEU:HD13	3:J:2522:LEU:HD12	1.98	0.45
3:J:2522:LEU:HA	3:J:2526:PHE:HB2	1.97	0.45
3:J:2526:PHE:O	3:J:2530:MET:HG3	2.16	0.45
3:J:2902:HIS:HE1	3:J:2904:LEU:HD13	1.80	0.45
3:J:2952:GLU:HA	3:J:2957:PHE:CG	2.51	0.45
3:J:4675:LYS:O	3:J:4679:ARG:HG2	2.16	0.45
3:J:4943:LEU:O	3:J:4947:GLN:HG2	2.16	0.45
3:C:283:ARG:HB2	3:C:290:TYR:CE1	2.51	0.45
3:C:292:ALA:HB2	3:C:312:THR:HG22	1.97	0.45
3:C:565:TYR:O	3:C:569:ILE:HG22	2.16	0.45
3:C:707:VAL:O	3:C:713:SER:HB2	2.16	0.45
3:C:4943:LEU:O	3:C:4947:GLN:HG2	2.16	0.45
3:A:984:LEU:HD22	3:A:987:ARG:HH21	1.81	0.45
3:A:2952:GLU:HA	3:A:2957:PHE:CG	2.51	0.45
3:A:3019:SER:HB3	3:A:3030:HIS:HA	1.97	0.45
2:I:29:MET:HB3	2:I:34:LYS:H	1.81	0.45
3:G:472:ARG:NH1	3:G:472:ARG:HB2	2.30	0.45
3:G:1183:GLU:CD	3:G:1183:GLU:H	2.25	0.45
3:G:3406:TYR:HB3	3:G:3509:LEU:HD22	1.97	0.45
3:G:4889:VAL:HG12	3:G:4900:GLU:HG3	1.99	0.45
1:K:2:VAL:HB	1:K:116:TYR:CD2	2.51	0.45
3:J:1619:ARG:HB3	3:J:1626:TRP:CD2	2.51	0.45
3:J:2377:LEU:O	3:J:2381:GLU:HG2	2.16	0.45
3:J:2662:ALA:HB3	3:J:2664:PHE:CE2	2.51	0.45
3:J:2736:ASP:HA	3:J:2891:LYS:HD2	1.99	0.45
3:J:2743:LEU:HD12	3:J:2807:TRP:HZ2	1.81	0.45
1:D:51:ILE:HB	1:D:69:ILE:HD13	1.99	0.45
3:C:629:ARG:HB3	3:C:634:GLN:HE22	1.79	0.45
3:C:721:LEU:HB3	3:C:768:PHE:HE2	1.80	0.45
3:C:1619:ARG:HB3	3:C:1626:TRP:CD2	2.51	0.45
3:C:3413:ILE:HD12	3:C:3475:LYS:HG2	1.98	0.45
3:A:707:VAL:O	3:A:713:SER:HB2	2.16	0.45
3:A:1455:PRO:HG3	3:A:1549:PHE:HE1	1.81	0.45
3:A:2648:TYR:HD2	3:A:2709:ALA:HB3	1.81	0.45
3:A:3257:ALA:HA	3:A:3325:ASN:HD21	1.81	0.45
3:G:224:HIS:HA	3:G:388:LEU:HG	1.98	0.45
3:G:1101:ARG:HB2	3:G:1193:SER:HB3	1.98	0.45
3:G:1455:PRO:HG3	3:G:1549:PHE:HE1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2519:LEU:HA	3:G:2522:LEU:HD12	1.97	0.45
3:G:3413:ILE:HD12	3:G:3475:LYS:HG2	1.98	0.45
3:J:439:GLU:O	3:J:443:LEU:HG	2.16	0.45
3:J:980:ALA:O	3:J:984:LEU:HG	2.17	0.45
3:J:984:LEU:HD22	3:J:987:ARG:HH21	1.81	0.45
3:J:3459:VAL:HG23	3:J:3464:ILE:HB	1.97	0.45
1:D:114:TYR:HE1	3:C:996:TRP:HB2	1.81	0.45
3:C:35:LEU:HD21	3:C:189:LEU:HD22	1.97	0.45
3:C:439:GLU:O	3:C:443:LEU:HG	2.16	0.45
3:C:1018:ASN:HB3	3:C:1021:LEU:HD23	1.97	0.45
3:C:1152:MET:HE3	3:C:1161:ILE:HB	1.99	0.45
3:C:1639:LEU:HD23	3:C:1653:LEU:HD11	1.99	0.45
3:C:2527:LEU:HD21	3:C:2582:MET:HB2	1.98	0.45
3:C:2648:TYR:HD2	3:C:2709:ALA:HB3	1.81	0.45
3:C:4854:VAL:HG11	8:A:5107:POV:H211	1.98	0.45
1:B:51:ILE:HB	1:B:69:ILE:HD13	1.99	0.45
3:A:708:GLY:HA3	3:A:722:TRP:HB3	1.99	0.45
3:A:2094:LEU:O	3:A:2098:VAL:HG23	2.16	0.45
3:A:3102:ASP:HA	3:A:3105:LYS:HE2	1.98	0.45
3:A:3459:VAL:HG23	3:A:3464:ILE:HB	1.97	0.45
3:A:4675:LYS:O	3:A:4679:ARG:HG2	2.16	0.45
3:A:4943:LEU:O	3:A:4947:GLN:HG2	2.16	0.45
3:G:1683:HIS:CG	3:G:1800:PRO:HG3	2.51	0.45
3:G:2258:LEU:HA	3:G:2261:SER:HB3	1.97	0.45
3:G:2973:PHE:HA	3:G:2976:HIS:CD2	2.51	0.45
3:G:3442:PHE:HA	3:G:3510:ILE:HD11	1.97	0.45
1:K:68:THR:HB	1:K:81:GLN:HB3	1.98	0.45
3:J:667:MET:SD	3:J:790:ARG:HB2	2.57	0.45
3:J:3550:ARG:HE	3:J:3597:GLN:CD	2.24	0.45
3:C:667:MET:SD	3:C:790:ARG:HB2	2.57	0.45
3:C:980:ALA:O	3:C:984:LEU:HG	2.16	0.45
3:C:1101:ARG:HB2	3:C:1193:SER:HB3	1.98	0.45
3:C:2526:PHE:O	3:C:2530:MET:HG3	2.16	0.45
3:C:3257:ALA:HA	3:C:3325:ASN:HD21	1.81	0.45
3:A:661:LYS:HB3	3:A:808:TYR:CD1	2.50	0.45
3:A:667:MET:SD	3:A:790:ARG:HB2	2.57	0.45
3:A:1116:GLY:HA3	3:A:1132:TRP:HB3	1.99	0.45
3:A:3406:TYR:HB3	3:A:3509:LEU:HD22	1.97	0.45
3:G:565:TYR:O	3:G:569:ILE:HG22	2.16	0.45
3:G:1288:PHE:HB2	3:G:1600:LEU:HB2	1.97	0.45
3:G:2102:VAL:HG13	3:G:2120:MET:HE3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2743:LEU:HD12	3:G:2807:TRP:HZ2	1.81	0.45
3:G:2952:GLU:HA	3:G:2957:PHE:CG	2.51	0.45
3:G:4832:HIS:CE1	3:G:4942:GLU:HG3	2.52	0.45
1:K:51:ILE:HB	1:K:69:ILE:HD13	1.99	0.45
3:J:365:LYS:HE2	3:J:367:LEU:HD23	1.99	0.45
3:J:2559:LEU:O	3:J:2563:THR:HG23	2.16	0.45
3:J:3567:PRO:HA	3:J:3570:ARG:HB2	1.99	0.45
3:J:3777:GLU:HG2	3:J:3819:TYR:CD1	2.52	0.45
3:J:4725:LEU:HA	3:J:4737:ILE:HG21	1.97	0.45
3:C:365:LYS:HE2	3:C:367:LEU:HD23	1.99	0.45
3:C:1455:PRO:HG3	3:C:1549:PHE:HE1	1.81	0.45
3:C:1470:ARG:HA	3:C:1470:ARG:HD3	1.75	0.45
3:C:1683:HIS:CG	3:C:1800:PRO:HG3	2.51	0.45
3:C:2179:ILE:HD12	3:C:2227:LYS:HE3	1.98	0.45
3:A:365:LYS:HE2	3:A:367:LEU:HD23	1.99	0.45
3:A:775:GLY:H	3:A:848:HIS:CE1	2.35	0.45
3:A:1639:LEU:HD23	3:A:1653:LEU:HD11	1.99	0.45
3:A:1683:HIS:CG	3:A:1800:PRO:HG3	2.51	0.45
3:A:2386:ILE:HG12	3:A:2392:ARG:NH1	2.32	0.45
3:A:2519:LEU:HA	3:A:2522:LEU:HD12	1.97	0.45
3:A:4744:ASP:HB3	3:A:4747:SER:HB3	1.97	0.45
3:G:913:LEU:HD22	3:G:917:GLU:HB2	1.99	0.45
3:G:2207:VAL:HG22	3:G:2211:MET:HE3	1.99	0.45
3:G:3567:PRO:HA	3:G:3570:ARG:HB2	1.99	0.45
3:J:103:TYR:HB2	3:J:159:GLU:HA	1.98	0.45
3:J:1184:ILE:HD12	3:J:1184:ILE:HA	1.87	0.45
3:J:2592:GLY:HA3	3:J:2636:PHE:HE2	1.82	0.45
3:J:4853:VAL:HA	3:J:4879:MET:HE1	1.99	0.45
1:D:66:ARG:HE	1:D:83:ASN:HB2	1.82	0.45
1:D:68:THR:HB	1:D:81:GLN:HB3	1.98	0.45
3:C:708:GLY:HA3	3:C:722:TRP:HB3	1.99	0.45
3:C:877:ASN:O	3:C:881:LEU:HG	2.15	0.45
3:C:3550:ARG:HE	3:C:3597:GLN:CD	2.24	0.45
1:B:68:THR:HB	1:B:81:GLN:HB3	1.98	0.45
3:A:1663:HIS:HD2	3:A:1707:LEU:HD22	1.81	0.45
3:A:2258:LEU:HA	3:A:2261:SER:HB3	1.97	0.45
3:A:2970:SER:HA	3:A:2973:PHE:CZ	2.52	0.45
3:G:1747:LEU:HD23	3:G:1747:LEU:HA	1.81	0.45
3:G:2094:LEU:O	3:G:2098:VAL:HG23	2.16	0.45
3:G:3257:ALA:HA	3:G:3325:ASN:HD21	1.81	0.45
1:K:114:TYR:HE1	3:J:996:TRP:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:582:HIS:O	3:J:586:ILE:HG12	2.16	0.45
3:J:629:ARG:HB3	3:J:634:GLN:HE22	1.79	0.45
3:J:1614:GLN:NE2	3:J:1632:ASP:H	2.14	0.45
3:J:4761:PRO:HB2	3:J:4766:THR:HB	1.99	0.45
3:C:394:GLN:HB2	3:C:397:GLU:HG2	1.99	0.45
3:C:2969:ILE:HG22	3:C:2973:PHE:CE2	2.47	0.45
3:C:3067:CYS:O	3:C:3071:LEU:HG	2.16	0.45
3:C:3227:ARG:HB3	3:C:3232:LEU:HB2	1.98	0.45
3:C:3550:ARG:O	3:C:3554:GLN:HG2	2.17	0.45
3:C:4725:LEU:HA	3:C:4737:ILE:HG21	1.97	0.45
3:C:4832:HIS:CE1	3:C:4942:GLU:HG3	2.52	0.45
3:A:1861:GLN:O	3:A:1865:MET:HB3	2.16	0.45
3:A:2179:ILE:HD12	3:A:2227:LYS:HE3	1.98	0.45
3:A:2377:LEU:O	3:A:2381:GLU:HG2	2.16	0.45
3:A:2736:ASP:HA	3:A:2891:LYS:HD2	1.98	0.45
3:A:3227:ARG:HB3	3:A:3232:LEU:HB2	1.98	0.45
3:A:3409:TYR:O	3:A:3413:ILE:HG23	2.17	0.45
3:A:3442:PHE:HA	3:A:3510:ILE:HD11	1.97	0.45
1:H:51:ILE:HB	1:H:69:ILE:HD13	1.99	0.45
1:H:53:SER:HA	1:H:71:ARG:NH2	2.31	0.45
3:G:1663:HIS:HD2	3:G:1707:LEU:HD22	1.81	0.45
3:J:1663:HIS:HD2	3:J:1707:LEU:HD22	1.81	0.45
3:J:1861:GLN:O	3:J:1865:MET:HB3	2.16	0.45
3:J:3550:ARG:O	3:J:3554:GLN:HG2	2.17	0.45
3:J:4813:LEU:HA	3:J:4813:LEU:HD23	1.77	0.45
3:C:775:GLY:H	3:C:848:HIS:CE1	2.35	0.45
3:C:2519:LEU:HD13	3:C:2522:LEU:HD12	1.98	0.45
3:C:2626:LEU:HD23	3:C:2626:LEU:HA	1.86	0.45
3:C:2970:SER:HA	3:C:2973:PHE:CZ	2.52	0.45
3:C:3107:VAL:HG12	3:C:3175:LEU:HG	1.99	0.45
3:A:1101:ARG:HB2	3:A:1193:SER:HB3	1.98	0.45
3:A:2559:LEU:O	3:A:2563:THR:HG23	2.16	0.45
3:A:3257:ALA:HB1	3:A:3321:ARG:HB3	1.99	0.45
3:A:3567:PRO:HA	3:A:3570:ARG:HB2	1.99	0.45
3:A:4832:HIS:CE1	3:A:4942:GLU:HG3	2.52	0.45
3:G:1614:GLN:NE2	3:G:1632:ASP:H	2.14	0.45
3:G:2102:VAL:HG13	3:G:2120:MET:HB2	1.98	0.45
3:G:2466:LEU:HD21	3:G:2505:PHE:CD1	2.52	0.45
3:G:2495:VAL:HG22	3:G:2498:HIS:CE1	2.52	0.45
3:G:3286:GLU:HG2	3:G:3287:ARG:HD2	1.99	0.45
3:G:3513:THR:O	3:G:3517:MET:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:4761:PRO:HB2	3:G:4766:THR:HB	1.99	0.45
3:G:4943:LEU:O	3:G:4947:GLN:HG2	2.16	0.45
3:J:1116:GLY:HA3	3:J:1132:TRP:HB3	1.99	0.45
3:J:1152:MET:HE3	3:J:1161:ILE:HB	1.99	0.45
3:J:1183:GLU:H	3:J:1183:GLU:CD	2.25	0.45
3:J:2495:VAL:HG22	3:J:2498:HIS:CE1	2.52	0.45
3:J:3107:VAL:HG12	3:J:3175:LEU:HG	1.99	0.45
3:J:3222:LYS:HB3	3:J:3226:GLU:OE2	2.17	0.45
3:J:3257:ALA:HB1	3:J:3321:ARG:HB3	1.99	0.45
3:C:913:LEU:HD22	3:C:917:GLU:HB2	1.99	0.45
3:C:3409:TYR:O	3:C:3413:ILE:HG23	2.17	0.45
3:C:3777:GLU:HG2	3:C:3819:TYR:CD1	2.52	0.45
3:C:4853:VAL:HA	3:C:4879:MET:HE1	1.99	0.45
3:A:1183:GLU:CD	3:A:1183:GLU:H	2.25	0.45
3:A:2102:VAL:HG13	3:A:2120:MET:HB2	1.98	0.45
3:A:2662:ALA:HB3	3:A:2664:PHE:CE2	2.51	0.45
3:A:3183:VAL:O	3:A:3187:ARG:HG3	2.17	0.45
3:A:3406:TYR:HD2	3:A:3458:PHE:HE2	1.65	0.45
3:A:4062:PHE:HB2	3:A:4170:ILE:HD11	1.99	0.45
3:G:365:LYS:HE2	3:G:367:LEU:HD23	1.99	0.45
3:G:582:HIS:O	3:G:586:ILE:HG12	2.16	0.45
3:G:1960:ALA:O	3:G:1963:GLU:HG3	2.18	0.45
8:G:5106:POV:H33	3:A:4857:ASN:HD22	1.81	0.45
3:J:565:TYR:O	3:J:569:ILE:HG22	2.16	0.45
3:J:708:GLY:HA3	3:J:722:TRP:HB3	1.98	0.45
3:J:1101:ARG:HB2	3:J:1193:SER:HB3	1.98	0.45
3:J:3067:CYS:O	3:J:3071:LEU:HG	2.16	0.45
3:J:3513:THR:O	3:J:3517:MET:HG2	2.16	0.45
3:J:3836:MET:HG3	3:J:3884:LEU:HD21	1.98	0.45
3:J:4062:PHE:HB2	3:J:4170:ILE:HD11	1.99	0.45
3:J:4832:HIS:CE1	3:J:4942:GLU:HG3	2.52	0.45
3:C:755:ILE:HB	3:C:768:PHE:HB2	1.99	0.45
3:C:1076:ARG:HB2	3:C:1191:VAL:HG23	1.99	0.45
3:C:1855:GLY:O	3:C:1859:VAL:HG22	2.17	0.45
3:C:2559:LEU:O	3:C:2563:THR:HG23	2.16	0.45
3:C:4889:VAL:HG12	3:C:4900:GLU:HG3	1.98	0.45
2:F:3:GLU:HB2	2:F:75:THR:HB	1.99	0.45
3:A:222:LEU:HB3	3:A:388:LEU:HD23	2.00	0.45
1:H:53:SER:HA	1:H:71:ARG:HH22	1.82	0.44
3:G:755:ILE:HB	3:G:768:PHE:HB2	1.99	0.44
3:G:2193:GLN:HG3	3:G:2194:HIS:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2468:GLY:O	3:G:2472:LEU:HD12	2.17	0.44
3:G:2522:LEU:HD22	3:G:2582:MET:HE1	1.99	0.44
1:K:1:GLN:HB3	1:K:2:VAL:H	1.54	0.44
3:J:283:ARG:HB2	3:J:290:TYR:CE1	2.52	0.44
3:J:707:VAL:O	3:J:713:SER:HB2	2.16	0.44
3:J:755:ILE:HB	3:J:768:PHE:HB2	1.99	0.44
3:J:1240:LYS:HG2	3:J:1242:LEU:H	1.82	0.44
3:J:1252:HIS:HE1	3:J:1254:HIS:HB2	1.83	0.44
3:J:2207:VAL:HG22	3:J:2211:MET:HE3	1.99	0.44
3:J:2522:LEU:HD22	3:J:2582:MET:HE1	1.99	0.44
3:J:3406:TYR:HD2	3:J:3458:PHE:HE2	1.65	0.44
3:J:4181:ILE:HG22	3:J:4987:ASN:HB3	2.00	0.44
3:C:648:ILE:HD11	3:C:821:LEU:HD11	1.99	0.44
3:C:662:TRP:CH2	3:C:814:ALA:HB2	2.52	0.44
3:C:821:LEU:HD12	3:C:821:LEU:HA	1.88	0.44
3:C:1116:GLY:HA3	3:C:1132:TRP:HB3	1.99	0.44
3:C:1184:ILE:HD12	3:C:1184:ILE:HA	1.87	0.44
3:C:2495:VAL:HG22	3:C:2498:HIS:CE1	2.52	0.44
3:C:2736:ASP:HA	3:C:2891:LYS:HD2	1.98	0.44
3:C:3286:GLU:HG2	3:C:3287:ARG:HD2	1.99	0.44
1:B:66:ARG:HE	1:B:83:ASN:HB2	1.82	0.44
3:A:103:TYR:HB2	3:A:159:GLU:HA	1.98	0.44
3:A:721:LEU:HB3	3:A:768:PHE:HE2	1.80	0.44
3:A:1076:ARG:HB2	3:A:1191:VAL:HG23	1.99	0.44
3:A:2207:VAL:HG22	3:A:2211:MET:HE3	1.99	0.44
3:A:2468:GLY:O	3:A:2472:LEU:HD12	2.17	0.44
3:A:3067:CYS:O	3:A:3071:LEU:HG	2.16	0.44
3:A:3222:LYS:HB3	3:A:3226:GLU:OE2	2.17	0.44
3:A:3286:GLU:HG2	3:A:3287:ARG:HD2	1.99	0.44
3:G:113:HIS:CE1	3:G:402:ARG:HB3	2.51	0.44
3:G:483:MET:HE3	3:G:483:MET:HB3	1.80	0.44
3:G:1855:GLY:O	3:G:1859:VAL:HG22	2.17	0.44
3:G:3406:TYR:HD2	3:G:3458:PHE:HE2	1.65	0.44
3:G:3550:ARG:O	3:G:3554:GLN:HG2	2.17	0.44
3:G:4062:PHE:HB2	3:G:4170:ILE:HD11	1.99	0.44
3:J:3545:THR:HG23	3:J:3548:GLU:H	1.83	0.44
3:J:4889:VAL:HG12	3:J:4900:GLU:HG3	1.98	0.44
3:C:222:LEU:HB3	3:C:388:LEU:HD23	1.99	0.44
3:C:2386:ILE:HG12	3:C:2392:ARG:NH1	2.32	0.44
3:C:2743:LEU:HD12	3:C:2807:TRP:HZ2	1.81	0.44
3:C:3060:ASP:O	3:C:3064:VAL:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4761:PRO:HB2	3:C:4766:THR:HB	1.99	0.44
1:B:51:ILE:HG23	1:B:71:ARG:HH11	1.82	0.44
3:A:394:GLN:HB2	3:A:397:GLU:HG2	1.99	0.44
3:A:755:ILE:HB	3:A:768:PHE:HB2	1.99	0.44
3:A:1240:LYS:HG2	3:A:1242:LEU:H	1.82	0.44
3:A:2193:GLN:HG3	3:A:2194:HIS:CD2	2.52	0.44
3:A:2340:PHE:HE1	3:A:2508:ARG:HH21	1.65	0.44
1:H:51:ILE:HG23	1:H:71:ARG:HH11	1.82	0.44
2:I:3:GLU:HB2	2:I:75:THR:HB	2.00	0.44
3:G:1229:ASN:HB2	3:G:1827:ARG:HH11	1.83	0.44
3:G:1240:LYS:HG2	3:G:1242:LEU:H	1.83	0.44
3:G:3239:MET:HB3	3:G:3239:MET:HE2	1.63	0.44
3:G:3550:ARG:HE	3:G:3597:GLN:CD	2.24	0.44
3:G:4681:LEU:HD23	3:G:4681:LEU:HA	1.77	0.44
3:J:3442:PHE:CE2	3:J:3511:VAL:HG12	2.52	0.44
3:C:701:GLY:HA3	3:C:725:HIS:NE2	2.33	0.44
3:C:2102:VAL:HG13	3:C:2120:MET:HB2	1.98	0.44
3:C:2350:ALA:O	3:C:2354:VAL:HG12	2.18	0.44
3:C:3222:LYS:HB3	3:C:3226:GLU:OE2	2.17	0.44
3:C:3257:ALA:HB1	3:C:3321:ARG:HB3	1.99	0.44
3:C:3406:TYR:HD2	3:C:3458:PHE:HE2	1.65	0.44
3:C:3545:THR:HG23	3:C:3548:GLU:H	1.83	0.44
3:A:1152:MET:HE3	3:A:1161:ILE:HB	1.99	0.44
3:A:2522:LEU:HD22	3:A:2582:MET:HE1	1.99	0.44
3:A:4725:LEU:HA	3:A:4737:ILE:HG21	1.97	0.44
3:G:3067:CYS:O	3:G:3071:LEU:HG	2.16	0.44
3:G:3257:ALA:HB1	3:G:3321:ARG:HB3	1.99	0.44
1:K:53:SER:HA	1:K:71:ARG:HH22	1.82	0.44
3:J:680:THR:HG23	3:J:784:SER:HB3	1.99	0.44
3:J:1639:LEU:HD23	3:J:1653:LEU:HD11	1.99	0.44
3:J:2238:TYR:O	3:J:2242:ILE:HG12	2.18	0.44
3:J:2506:LEU:HD12	3:J:2506:LEU:HA	1.85	0.44
3:J:2926:LEU:O	3:J:2930:LEU:HG	2.18	0.44
3:J:3286:GLU:HG2	3:J:3287:ARG:HD2	1.99	0.44
3:J:3409:TYR:O	3:J:3413:ILE:HG23	2.17	0.44
3:J:4779:LYS:O	3:J:4783:ILE:HG12	2.17	0.44
3:C:103:TYR:HB2	3:C:159:GLU:HA	1.98	0.44
3:C:2193:GLN:HG3	3:C:2194:HIS:CD2	2.52	0.44
3:C:3396:ASP:O	3:C:3400:VAL:HG23	2.16	0.44
3:C:4057:MET:HE2	3:C:4057:MET:HB3	1.89	0.44
3:A:1229:ASN:HB2	3:A:1827:ARG:HH11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1960:ALA:O	3:A:1963:GLU:HG3	2.18	0.44
3:A:2495:VAL:HG22	3:A:2498:HIS:CE1	2.52	0.44
3:A:4761:PRO:HB2	3:A:4766:THR:HB	1.99	0.44
3:G:215:THR:O	3:G:218:HIS:HB2	2.18	0.44
3:G:667:MET:SD	3:G:790:ARG:HB2	2.57	0.44
3:G:775:GLY:H	3:G:848:HIS:CE1	2.35	0.44
3:G:866:HIS:HB2	3:G:939:VAL:HG22	2.00	0.44
3:G:2386:ILE:HG12	3:G:2392:ARG:NH1	2.32	0.44
3:G:3222:LYS:HB3	3:G:3226:GLU:OE2	2.17	0.44
3:G:4181:ILE:HG22	3:G:4987:ASN:HB3	2.00	0.44
3:J:1229:ASN:HB2	3:J:1827:ARG:HH11	1.83	0.44
3:J:1855:GLY:O	3:J:1859:VAL:HG22	2.17	0.44
3:J:2350:ALA:O	3:J:2354:VAL:HG12	2.18	0.44
3:J:2386:ILE:HG12	3:J:2392:ARG:NH1	2.32	0.44
3:J:2697:ARG:HH22	3:J:2698:MET:HE3	1.83	0.44
3:J:3281:LEU:HD11	3:J:3315:LEU:HD13	2.00	0.44
1:D:53:SER:HA	1:D:71:ARG:HH22	1.82	0.44
3:C:1663:HIS:HD2	3:C:1707:LEU:HD22	1.81	0.44
3:C:3567:PRO:HA	3:C:3570:ARG:HB2	1.99	0.44
3:C:3836:MET:HG3	3:C:3884:LEU:HD21	1.98	0.44
3:C:4062:PHE:HB2	3:C:4170:ILE:HD11	1.99	0.44
3:A:523:TYR:CE1	3:A:560:ILE:HG13	2.53	0.44
3:A:1252:HIS:HE1	3:A:1254:HIS:HB2	1.83	0.44
3:A:2519:LEU:HD13	3:A:2522:LEU:HD12	1.98	0.44
3:A:3060:ASP:O	3:A:3064:VAL:HG22	2.17	0.44
3:A:4853:VAL:HA	3:A:4879:MET:HE1	1.99	0.44
1:H:66:ARG:HE	1:H:83:ASN:HB2	1.82	0.44
3:G:680:THR:HG23	3:G:784:SER:HB3	2.00	0.44
3:G:708:GLY:HA3	3:G:722:TRP:HB3	1.99	0.44
3:G:1252:HIS:HE1	3:G:1254:HIS:HB2	1.83	0.44
3:G:2149:VAL:O	3:G:2153:MET:HG2	2.18	0.44
3:G:2238:TYR:O	3:G:2242:ILE:HG12	2.18	0.44
3:G:3144:PHE:HB3	3:G:3196:ARG:HB3	2.00	0.44
3:G:3836:MET:HG3	3:G:3884:LEU:HD21	1.98	0.44
3:G:4853:VAL:HA	3:G:4879:MET:HE1	1.99	0.44
8:G:5107:POV:H211	3:A:4854:VAL:HG11	1.99	0.44
1:K:66:ARG:HE	1:K:83:ASN:HB2	1.82	0.44
3:J:701:GLY:HA3	3:J:725:HIS:NE2	2.33	0.44
3:J:775:GLY:H	3:J:848:HIS:CE1	2.35	0.44
3:J:866:HIS:HB2	3:J:939:VAL:HG22	2.00	0.44
3:J:913:LEU:HD22	3:J:917:GLU:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1960:ALA:O	3:J:1963:GLU:HG3	2.17	0.44
3:J:3060:ASP:O	3:J:3064:VAL:HG22	2.17	0.44
3:C:523:TYR:CE1	3:C:560:ILE:HG13	2.53	0.44
3:C:2976:HIS:HE1	3:C:2990:PRO:HD3	1.83	0.44
3:A:629:ARG:HB3	3:A:634:GLN:HE22	1.79	0.44
3:A:1205:GLY:HA2	3:A:1211:LEU:HD13	2.00	0.44
3:A:3239:MET:HE2	3:A:3239:MET:HB3	1.63	0.44
3:A:3550:ARG:HE	3:A:3597:GLN:CD	2.24	0.44
3:G:1152:MET:HE3	3:G:1161:ILE:HB	1.99	0.44
3:G:2976:HIS:HE1	3:G:2990:PRO:HD3	1.83	0.44
3:G:3227:ARG:HB3	3:G:3232:LEU:HB2	1.98	0.44
3:G:3281:LEU:HD11	3:G:3315:LEU:HD13	1.99	0.44
3:G:3442:PHE:CE2	3:G:3511:VAL:HG12	2.52	0.44
3:J:662:TRP:CH2	3:J:814:ALA:HB2	2.52	0.44
3:J:2149:VAL:O	3:J:2153:MET:HG2	2.18	0.44
3:J:3227:ARG:HB3	3:J:3232:LEU:HB2	1.98	0.44
3:J:4857:ASN:HB3	8:J:5101:POV:H14	1.99	0.44
1:D:104:TYR:HE2	3:C:913:LEU:HD21	1.82	0.44
2:E:3:GLU:HB2	2:E:75:THR:HB	2.00	0.44
3:C:1183:GLU:H	3:C:1183:GLU:CD	2.25	0.44
3:C:1205:GLY:HA2	3:C:1211:LEU:HD13	2.00	0.44
3:C:2468:GLY:O	3:C:2472:LEU:HD12	2.17	0.44
3:C:2926:LEU:O	3:C:2930:LEU:HG	2.18	0.44
3:A:215:THR:O	3:A:218:HIS:HB2	2.18	0.44
3:A:283:ARG:HB2	3:A:290:TYR:CE1	2.52	0.44
3:A:979:PRO:O	3:A:983:THR:HG23	2.18	0.44
3:A:3550:ARG:O	3:A:3554:GLN:HG2	2.17	0.44
3:A:3836:MET:HG3	3:A:3884:LEU:HD21	1.98	0.44
3:A:4569:LEU:HG	3:A:4646:LEU:HD12	2.00	0.44
3:G:283:ARG:HB2	3:G:290:TYR:CE1	2.52	0.44
3:G:1000:ARG:HE	3:G:1003:GLN:NE2	2.16	0.44
3:G:1435:TYR:CE1	3:G:1518:CYS:HB2	2.53	0.44
3:G:3183:VAL:O	3:G:3187:ARG:HG3	2.17	0.44
3:J:394:GLN:HB2	3:J:397:GLU:HG2	1.99	0.44
3:J:5000:GLU:HA	3:J:5003:HIS:CE1	2.53	0.44
2:E:56:ILE:HD12	2:E:56:ILE:HA	1.81	0.44
3:C:1960:ALA:O	3:C:1963:GLU:HG3	2.17	0.44
3:C:2592:GLY:HA3	3:C:2636:PHE:HE2	1.82	0.44
3:C:2766:TRP:O	3:C:2770:LYS:HG2	2.18	0.44
3:C:3183:VAL:O	3:C:3187:ARG:HG3	2.17	0.44
3:C:3442:PHE:CE2	3:C:3511:VAL:HG12	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:662:TRP:CH2	3:A:814:ALA:HB2	2.52	0.44
3:A:680:THR:HG23	3:A:784:SER:HB3	1.99	0.44
3:A:1585:LYS:HD3	3:A:1585:LYS:HA	1.83	0.44
3:A:1653:LEU:HD23	3:A:1660:GLN:HA	2.00	0.44
3:A:1855:GLY:O	3:A:1859:VAL:HG22	2.17	0.44
3:A:2149:VAL:O	3:A:2153:MET:HG2	2.18	0.44
3:A:2238:TYR:O	3:A:2242:ILE:HG12	2.18	0.44
3:A:2743:LEU:HD12	3:A:2807:TRP:HZ2	1.81	0.44
3:A:2969:ILE:HG22	3:A:2973:PHE:CE2	2.47	0.44
3:A:4000:MET:HE1	3:A:4058:ILE:HG23	2.00	0.44
1:H:68:THR:HB	1:H:81:GLN:HB3	1.98	0.44
3:G:283:ARG:HG2	3:G:285:VAL:H	1.83	0.44
3:G:1116:GLY:HA3	3:G:1132:TRP:HB3	1.99	0.44
3:G:2514:ASN:HB2	3:G:2517:PHE:HB3	2.00	0.44
3:G:3866:ILE:HD12	3:G:3866:ILE:H	1.83	0.44
3:J:461:HIS:NE2	3:J:3707:ARG:HG3	2.33	0.44
3:J:979:PRO:O	3:J:983:THR:HG23	2.18	0.44
3:J:1277:TRP:HZ3	3:J:1284:VAL:HG21	1.83	0.44
3:J:1297:PHE:CD1	3:J:1522:LEU:HA	2.53	0.44
2:E:46:PHE:CE2	2:E:48:PHE:HB3	2.53	0.44
3:C:283:ARG:HG2	3:C:285:VAL:H	1.83	0.44
3:C:479:GLN:HE21	3:C:539:LEU:HD13	1.83	0.44
3:C:2207:VAL:HG22	3:C:2211:MET:HE3	1.99	0.44
3:C:2238:TYR:O	3:C:2242:ILE:HG12	2.18	0.44
3:C:2340:PHE:HE1	3:C:2508:ARG:HH21	1.65	0.44
3:C:4000:MET:HE1	3:C:4058:ILE:HG23	2.00	0.44
3:A:701:GLY:HA3	3:A:725:HIS:NE2	2.33	0.44
3:A:2123:LEU:O	3:A:2127:GLN:HG2	2.18	0.44
3:A:2766:TRP:O	3:A:2770:LYS:HG2	2.18	0.44
3:A:3777:GLU:HG2	3:A:3819:TYR:CD1	2.52	0.44
3:A:4181:ILE:HG22	3:A:4987:ASN:HB3	1.99	0.44
3:A:5000:GLU:HA	3:A:5003:HIS:CE1	2.53	0.44
2:I:46:PHE:CE2	2:I:48:PHE:HB3	2.53	0.43
3:G:1452:TRP:HB3	3:G:1548:LEU:HD13	2.00	0.43
3:G:1639:LEU:HD23	3:G:1653:LEU:HD11	1.99	0.43
3:G:2592:GLY:HA3	3:G:2636:PHE:HE2	1.82	0.43
3:G:2905:LEU:HD23	3:G:2905:LEU:HA	1.87	0.43
3:G:2926:LEU:O	3:G:2930:LEU:HG	2.18	0.43
3:G:2970:SER:HA	3:G:2973:PHE:CZ	2.52	0.43
3:G:3453:ARG:NH1	3:G:3454:GLU:HG2	2.33	0.43
3:G:4000:MET:HE1	3:G:4058:ILE:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:3:GLU:HB2	2:L:75:THR:HB	2.00	0.43
3:J:222:LEU:HB3	3:J:388:LEU:HD23	1.99	0.43
3:J:551:LEU:HD11	3:J:564:LEU:HD22	2.00	0.43
3:J:2193:GLN:HG3	3:J:2194:HIS:CD2	2.53	0.43
3:J:4000:MET:HE1	3:J:4058:ILE:HG23	2.00	0.43
1:D:1:GLN:HB3	1:D:2:VAL:H	1.54	0.43
1:D:51:ILE:HG23	1:D:71:ARG:HH11	1.82	0.43
3:C:551:LEU:HD11	3:C:564:LEU:HD22	2.00	0.43
3:C:979:PRO:O	3:C:983:THR:HG23	2.18	0.43
3:C:1277:TRP:HZ3	3:C:1284:VAL:HG21	1.83	0.43
3:C:2522:LEU:HD22	3:C:2582:MET:HE1	1.99	0.43
3:C:4235:VAL:HG11	3:C:5019:TRP:CH2	2.54	0.43
3:C:5000:GLU:HA	3:C:5003:HIS:CE1	2.53	0.43
1:B:53:SER:HA	1:B:71:ARG:HH22	1.82	0.43
3:A:1152:MET:HB3	3:A:1223:PHE:CD2	2.53	0.43
3:A:1297:PHE:CD1	3:A:1522:LEU:HA	2.53	0.43
3:A:2592:GLY:HA3	3:A:2636:PHE:HE2	1.82	0.43
3:A:2697:ARG:HH22	3:A:2698:MET:HE3	1.83	0.43
3:A:2742:THR:HA	3:A:2745:VAL:HB	2.00	0.43
3:A:2926:LEU:O	3:A:2930:LEU:HG	2.18	0.43
3:G:319:SER:HA	3:G:347:PHE:HE2	1.83	0.43
3:G:1152:MET:HB3	3:G:1223:PHE:CD2	2.53	0.43
3:G:2302:LEU:HD23	3:G:2331:TYR:HB2	2.00	0.43
3:G:3777:GLU:HG2	3:G:3819:TYR:CD1	2.52	0.43
3:G:4779:LYS:O	3:G:4783:ILE:HG12	2.17	0.43
1:K:51:ILE:HG23	1:K:71:ARG:HH11	1.82	0.43
3:J:1575:LEU:HD23	3:J:1575:LEU:HA	1.86	0.43
3:J:3866:ILE:H	3:J:3866:ILE:HD12	1.83	0.43
3:C:680:THR:HG23	3:C:784:SER:HB3	1.99	0.43
3:C:866:HIS:HB2	3:C:939:VAL:HG22	2.00	0.43
3:C:1229:ASN:HB2	3:C:1827:ARG:HH11	1.83	0.43
3:C:2113:SER:O	3:C:2117:VAL:HG23	2.19	0.43
3:C:2742:THR:HA	3:C:2745:VAL:HB	2.00	0.43
1:B:4:LEU:HD11	1:B:95:CYS:O	2.18	0.43
3:A:103:TYR:CZ	3:A:163:VAL:HG12	2.54	0.43
3:A:283:ARG:HG2	3:A:285:VAL:H	1.83	0.43
3:A:728:ARG:HE	3:A:1487:LEU:HD22	1.83	0.43
3:A:3545:THR:HG23	3:A:3548:GLU:H	1.82	0.43
1:H:37:TYR:CZ	1:H:47:LEU:HB3	2.54	0.43
3:G:979:PRO:O	3:G:983:THR:HG23	2.18	0.43
3:G:2340:PHE:HE1	3:G:2508:ARG:HH21	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2350:ALA:O	3:G:2354:VAL:HG12	2.18	0.43
3:G:2648:TYR:CD2	3:G:2706:ILE:HD13	2.54	0.43
3:G:3545:THR:HG23	3:G:3548:GLU:H	1.82	0.43
1:K:4:LEU:HD11	1:K:95:CYS:O	2.18	0.43
1:K:107:TRP:HZ2	3:J:921:ASN:HA	1.83	0.43
3:J:283:ARG:HG2	3:J:285:VAL:H	1.83	0.43
3:J:648:ILE:HD11	3:J:821:LEU:HD11	1.99	0.43
3:J:2468:GLY:O	3:J:2472:LEU:HD12	2.17	0.43
3:J:3183:VAL:O	3:J:3187:ARG:HG3	2.17	0.43
3:J:3453:ARG:NH1	3:J:3454:GLU:HG2	2.33	0.43
3:C:595:ARG:NH2	3:C:1642:PRO:HD2	2.33	0.43
3:C:4670:ILE:HD13	3:C:4670:ILE:HA	1.88	0.43
3:C:4839:MET:HG3	3:A:4822:THR:HG21	2.00	0.43
3:A:56:GLN:HG3	3:A:309:THR:HG21	2.00	0.43
3:A:730:VAL:HG23	3:A:1476:MET:HG2	2.01	0.43
3:A:1000:ARG:HE	3:A:1003:GLN:NE2	2.16	0.43
3:A:1106:ARG:HB2	3:A:1120:LEU:HB3	2.01	0.43
3:A:2302:LEU:HD23	3:A:2331:TYR:HB2	2.00	0.43
3:A:2514:ASN:HB2	3:A:2517:PHE:HB3	2.00	0.43
3:A:3284:TRP:HB3	3:A:3305:THR:HG21	2.01	0.43
3:A:4779:LYS:O	3:A:4783:ILE:HG12	2.18	0.43
2:I:42:ARG:HH12	3:G:1782:PHE:HD1	1.65	0.43
3:G:222:LEU:HB3	3:G:388:LEU:HD23	1.99	0.43
3:G:394:GLN:HB2	3:G:397:GLU:HG2	1.99	0.43
3:G:461:HIS:NE2	3:G:3707:ARG:HG3	2.33	0.43
3:G:523:TYR:CE1	3:G:560:ILE:HG13	2.53	0.43
3:G:701:GLY:HA3	3:G:725:HIS:NE2	2.33	0.43
3:G:1095:VAL:HG12	3:G:1096:THR:HG23	2.00	0.43
3:G:2233:CYS:CB	3:G:2270:SER:HB3	2.48	0.43
3:G:3107:VAL:HG12	3:G:3175:LEU:HG	1.99	0.43
3:J:1435:TYR:CE1	3:J:1518:CYS:HB2	2.53	0.43
3:J:1747:LEU:HD23	3:J:1747:LEU:HA	1.81	0.43
3:J:2123:LEU:O	3:J:2127:GLN:HG2	2.18	0.43
3:J:2766:TRP:O	3:J:2770:LYS:HG2	2.18	0.43
3:J:3284:TRP:HB3	3:J:3305:THR:HG21	2.00	0.43
3:C:728:ARG:HE	3:C:1487:LEU:HD22	1.83	0.43
3:C:1152:MET:HB3	3:C:1223:PHE:CD2	2.53	0.43
3:C:1240:LYS:HG2	3:C:1242:LEU:H	1.83	0.43
3:C:1297:PHE:CD1	3:C:1522:LEU:HA	2.53	0.43
3:C:1435:TYR:CE1	3:C:1518:CYS:HB2	2.53	0.43
3:C:2348:GLU:CD	3:C:2348:GLU:H	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2648:TYR:CD2	3:C:2706:ILE:HD13	2.54	0.43
3:C:3453:ARG:NH1	3:C:3454:GLU:HG2	2.33	0.43
3:C:4779:LYS:O	3:C:4783:ILE:HG12	2.18	0.43
3:A:648:ILE:HD11	3:A:821:LEU:HD11	1.99	0.43
3:A:1184:ILE:HD12	3:A:1184:ILE:HA	1.87	0.43
3:A:4207:MET:HG3	3:A:4208:PRO:HD2	2.00	0.43
3:G:551:LEU:HD11	3:G:564:LEU:HD22	2.00	0.43
3:G:730:VAL:HG23	3:G:1476:MET:HG2	2.01	0.43
3:G:2377:LEU:HD23	3:G:2377:LEU:HA	1.83	0.43
3:G:4813:LEU:HD23	3:G:4813:LEU:HA	1.77	0.43
3:G:5000:GLU:HA	3:G:5003:HIS:CE1	2.53	0.43
3:J:14:LEU:H	3:J:14:LEU:HD12	1.84	0.43
3:J:287:THR:HB	3:J:289:ARG:HE	1.84	0.43
3:J:2113:SER:O	3:J:2117:VAL:HG23	2.18	0.43
3:J:2742:THR:HA	3:J:2745:VAL:HB	2.00	0.43
3:J:2970:SER:HA	3:J:2973:PHE:CZ	2.52	0.43
3:J:3144:PHE:HB3	3:J:3196:ARG:HB3	2.00	0.43
3:C:103:TYR:CZ	3:C:163:VAL:HG12	2.54	0.43
3:C:1263:THR:HB	3:C:1266:THR:HB	2.01	0.43
3:C:2149:VAL:O	3:C:2153:MET:HG2	2.18	0.43
3:A:445:LEU:HD23	3:A:445:LEU:HA	1.87	0.43
3:A:2466:LEU:HD21	3:A:2505:PHE:CD1	2.52	0.43
3:G:1277:TRP:HZ3	3:G:1284:VAL:HG21	1.83	0.43
3:G:1653:LEU:HD23	3:G:1660:GLN:HA	2.00	0.43
3:G:2348:GLU:H	3:G:2348:GLU:CD	2.27	0.43
3:G:2742:THR:HA	3:G:2745:VAL:HB	2.00	0.43
3:G:3060:ASP:O	3:G:3064:VAL:HG22	2.18	0.43
3:G:3284:TRP:HB3	3:G:3305:THR:HG21	2.01	0.43
3:G:4569:LEU:HG	3:G:4646:LEU:HD12	2.00	0.43
3:G:4854:VAL:HG11	8:J:5108:POV:H211	1.99	0.43
3:J:103:TYR:CZ	3:J:163:VAL:HG12	2.54	0.43
3:J:595:ARG:NH2	3:J:1642:PRO:HD2	2.33	0.43
3:J:1000:ARG:HE	3:J:1003:GLN:NE2	2.16	0.43
3:J:1076:ARG:HB2	3:J:1191:VAL:HG23	1.99	0.43
3:J:1786:LEU:HD12	3:J:1787:PRO:HD2	2.01	0.43
3:J:2648:TYR:CD2	3:J:2706:ILE:HD13	2.54	0.43
3:J:2939:ARG:H	3:J:2939:ARG:HG3	1.63	0.43
3:J:4928:LEU:HD23	3:J:4928:LEU:HA	1.84	0.43
3:C:14:LEU:HD12	3:C:14:LEU:H	1.84	0.43
3:C:56:GLN:HG3	3:C:309:THR:HG21	2.00	0.43
3:C:75:VAL:O	3:C:79:GLN:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:537:CYS:SG	3:C:571:SER:HB2	2.59	0.43
3:C:1106:ARG:HB2	3:C:1120:LEU:HB3	2.01	0.43
3:C:1651:LEU:HD13	3:C:1702:HIS:HB2	2.01	0.43
3:C:2302:LEU:HD23	3:C:2331:TYR:HB2	2.00	0.43
3:C:3780:LEU:HD11	3:C:3816:MET:HG2	2.01	0.43
2:F:57:LYS:HE2	2:F:80:VAL:HG12	2.01	0.43
3:A:551:LEU:HD11	3:A:564:LEU:HD22	2.00	0.43
3:A:866:HIS:HB2	3:A:939:VAL:HG22	2.00	0.43
3:A:2976:HIS:HE1	3:A:2990:PRO:HD3	1.83	0.43
3:A:3107:VAL:HG12	3:A:3175:LEU:HG	1.99	0.43
3:A:4235:VAL:HG11	3:A:5019:TRP:CH2	2.53	0.43
3:A:4813:LEU:HD23	3:A:4813:LEU:HA	1.77	0.43
3:A:4823:LEU:HD23	3:A:4823:LEU:HA	1.84	0.43
3:G:355:LEU:HD22	3:G:379:HIS:HA	2.01	0.43
3:G:479:GLN:HE21	3:G:539:LEU:HD13	1.83	0.43
3:G:637:LEU:HD23	3:G:637:LEU:HA	1.92	0.43
3:G:1076:ARG:HB2	3:G:1191:VAL:HG23	1.99	0.43
2:L:46:PHE:CE2	2:L:48:PHE:HB3	2.53	0.43
3:J:523:TYR:CE1	3:J:560:ILE:HG13	2.53	0.43
3:J:3144:PHE:CE2	3:J:3197:LEU:HB2	2.54	0.43
3:J:3780:LEU:HD11	3:J:3816:MET:HG2	2.01	0.43
3:J:4207:MET:HG3	3:J:4208:PRO:HD2	2.00	0.43
1:D:32:ASN:HB2	1:D:99:ARG:HA	2.01	0.43
2:E:57:LYS:HE2	2:E:80:VAL:HG12	2.01	0.43
3:C:1452:TRP:HB3	3:C:1548:LEU:HD13	2.00	0.43
3:C:2466:LEU:HD21	3:C:2505:PHE:CD1	2.52	0.43
3:C:2514:ASN:HB2	3:C:2517:PHE:HB3	2.00	0.43
3:C:2697:ARG:HH22	3:C:2698:MET:HE3	1.83	0.43
3:C:3866:ILE:H	3:C:3866:ILE:HD12	1.83	0.43
3:A:319:SER:HA	3:A:347:PHE:HE2	1.83	0.43
3:A:1277:TRP:HZ3	3:A:1284:VAL:HG21	1.83	0.43
3:A:1435:TYR:CE1	3:A:1518:CYS:HB2	2.53	0.43
3:A:1786:LEU:HD12	3:A:1787:PRO:HD2	2.01	0.43
3:A:3144:PHE:HB3	3:A:3196:ARG:HB3	2.00	0.43
3:A:3453:ARG:NH1	3:A:3454:GLU:HG2	2.33	0.43
3:A:3780:LEU:HD11	3:A:3816:MET:HG2	2.01	0.43
3:A:4060:LYS:HB3	3:A:4060:LYS:HE3	1.76	0.43
1:H:32:ASN:HB2	1:H:99:ARG:HA	2.01	0.43
1:H:101:PRO:HG2	3:G:917:GLU:HG3	2.01	0.43
3:G:75:VAL:O	3:G:79:GLN:HG3	2.19	0.43
3:G:180:LEU:HD23	3:G:180:LEU:HA	1.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:537:CYS:SG	3:G:571:SER:HB2	2.59	0.43
3:G:662:TRP:CH2	3:G:814:ALA:HB2	2.52	0.43
3:G:1297:PHE:CD1	3:G:1522:LEU:HA	2.53	0.43
3:G:2123:LEU:O	3:G:2127:GLN:HG2	2.18	0.43
3:G:3442:PHE:HE2	3:G:3511:VAL:HG12	1.84	0.43
3:G:4235:VAL:HG11	3:G:5019:TRP:CH2	2.54	0.43
3:J:75:VAL:O	3:J:79:GLN:HG3	2.19	0.43
3:J:1653:LEU:HD23	3:J:1660:GLN:HA	2.00	0.43
3:J:1674:CYS:SG	3:J:1718:ILE:HG22	2.59	0.43
3:J:2626:LEU:HD23	3:J:2626:LEU:HA	1.85	0.43
3:J:4235:VAL:HG11	3:J:5019:TRP:CH2	2.54	0.43
3:C:78:LEU:HD12	3:C:78:LEU:HA	1.83	0.43
3:C:287:THR:HB	3:C:289:ARG:HE	1.84	0.43
3:C:477:LEU:O	3:C:481:GLU:HG2	2.19	0.43
3:C:1000:ARG:HE	3:C:1003:GLN:NE2	2.16	0.43
3:C:1653:LEU:HD23	3:C:1660:GLN:HA	2.00	0.43
3:C:1674:CYS:SG	3:C:1718:ILE:HG22	2.59	0.43
3:C:3144:PHE:CE2	3:C:3197:LEU:HB2	2.54	0.43
1:B:37:TYR:CZ	1:B:47:LEU:HB3	2.54	0.43
3:A:73:LEU:HD12	3:A:73:LEU:HA	1.90	0.43
3:A:2350:ALA:O	3:A:2354:VAL:HG12	2.18	0.43
3:A:2377:LEU:HD23	3:A:2469:ILE:HG13	2.00	0.43
3:A:3442:PHE:CE2	3:A:3511:VAL:HG12	2.52	0.43
3:A:3896:ASN:OD1	3:A:3899:PHE:HB2	2.19	0.43
3:G:14:LEU:H	3:G:14:LEU:HD12	1.84	0.43
3:G:103:TYR:CZ	3:G:163:VAL:HG12	2.54	0.43
3:G:451:TYR:CE1	3:G:474:ARG:HD2	2.54	0.43
3:G:2377:LEU:HD23	3:G:2469:ILE:HG13	2.00	0.43
3:G:2670:GLU:HG3	3:G:2912:THR:HA	2.01	0.43
3:G:3035:GLU:O	3:G:3039:ILE:HG23	2.19	0.43
3:G:3433:GLU:O	3:G:3437:MET:HG2	2.19	0.43
3:G:3780:LEU:HD11	3:G:3816:MET:HG2	2.01	0.43
1:K:37:TYR:CZ	1:K:47:LEU:HB3	2.54	0.43
2:L:25:HIS:HE1	3:J:674:PHE:CD2	2.37	0.43
3:J:1452:TRP:HB3	3:J:1548:LEU:HD13	2.00	0.43
3:J:1470:ARG:HD3	3:J:1470:ARG:HA	1.74	0.43
3:J:2340:PHE:HE1	3:J:2508:ARG:HH21	1.65	0.43
3:J:2466:LEU:HD21	3:J:2505:PHE:CD1	2.52	0.43
3:J:2536:LEU:HG	3:J:2541:PHE:HB3	2.01	0.43
3:J:3035:GLU:O	3:J:3039:ILE:HG23	2.19	0.43
3:C:157:ARG:HA	3:C:157:ARG:HD3	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:461:HIS:NE2	3:C:3707:ARG:HG3	2.33	0.43
3:C:1496:TRP:CE3	3:C:1499:ASP:HB2	2.54	0.43
3:C:1786:LEU:HD12	3:C:1787:PRO:HD2	2.01	0.43
3:C:2443:ILE:HG12	3:C:2454:ARG:NH1	2.34	0.43
3:C:2672:LEU:HD12	3:C:2672:LEU:HA	1.81	0.43
3:C:3284:TRP:HB3	3:C:3305:THR:HG21	2.01	0.43
3:C:4817:ALA:HB1	3:C:4827:LEU:HD22	2.00	0.43
2:F:46:PHE:CE2	2:F:48:PHE:HB3	2.53	0.43
3:A:479:GLN:HE21	3:A:539:LEU:HD13	1.83	0.43
3:A:913:LEU:HD22	3:A:917:GLU:HB2	1.99	0.43
3:A:1496:TRP:CE3	3:A:1499:ASP:HB2	2.54	0.43
3:A:3144:PHE:CE2	3:A:3197:LEU:HB2	2.54	0.43
3:A:3281:LEU:HD11	3:A:3315:LEU:HD13	1.99	0.43
3:A:3866:ILE:H	3:A:3866:ILE:HD12	1.83	0.43
3:A:4034:ASN:HD21	3:A:4041:ALA:HB2	1.84	0.43
3:G:56:GLN:HG3	3:G:309:THR:HG21	2.00	0.43
3:G:477:LEU:O	3:G:481:GLU:HG2	2.19	0.43
3:G:1205:GLY:HA2	3:G:1211:LEU:HD13	2.00	0.43
3:G:2113:SER:O	3:G:2117:VAL:HG23	2.18	0.43
3:G:2766:TRP:O	3:G:2770:LYS:HG2	2.18	0.43
3:G:3278:CYS:SG	3:G:3341:PHE:HB3	2.59	0.43
3:J:56:GLN:HG3	3:J:309:THR:HG21	2.00	0.43
3:J:78:LEU:HD12	3:J:78:LEU:HA	1.83	0.43
3:J:215:THR:O	3:J:218:HIS:HB2	2.18	0.43
3:J:1205:GLY:HA2	3:J:1211:LEU:HD13	2.00	0.43
3:J:2377:LEU:HD23	3:J:2469:ILE:HG13	2.00	0.43
3:J:3319:ILE:O	3:J:3322:ILE:HG12	2.19	0.43
3:J:3433:GLU:O	3:J:3437:MET:HG2	2.19	0.43
3:C:445:LEU:HD23	3:C:445:LEU:HA	1.87	0.43
3:C:2208:MET:O	3:C:2212:VAL:HG23	2.19	0.43
3:C:2905:LEU:HD23	3:C:2905:LEU:HA	1.87	0.43
3:C:3281:LEU:HD11	3:C:3315:LEU:HD13	1.99	0.43
3:C:4181:ILE:HG22	3:C:4987:ASN:HB3	2.00	0.43
3:C:4207:MET:HG3	3:C:4208:PRO:HD2	2.00	0.43
3:A:75:VAL:O	3:A:79:GLN:HG3	2.19	0.43
3:A:461:HIS:NE2	3:A:3707:ARG:HG3	2.33	0.43
3:A:477:LEU:O	3:A:481:GLU:HG2	2.19	0.43
3:A:1263:THR:HB	3:A:1266:THR:HB	2.01	0.43
3:A:2648:TYR:CD2	3:A:2706:ILE:HD13	2.54	0.43
3:A:3010:PHE:O	3:A:3014:CYS:HB3	2.19	0.43
1:H:4:LEU:HD11	1:H:95:CYS:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:100:VAL:HG22	3:G:924:MET:HE1	2.00	0.42
3:G:1786:LEU:HD12	3:G:1787:PRO:HD2	2.01	0.42
3:G:2443:ILE:HG12	3:G:2454:ARG:NH1	2.34	0.42
3:G:3144:PHE:CE2	3:G:3197:LEU:HB2	2.54	0.42
3:G:3166:TYR:O	3:G:3169:LEU:HG	2.19	0.42
3:G:3768:SER:HA	3:G:3771:HIS:ND1	2.34	0.42
1:K:32:ASN:HB2	1:K:99:ARG:HA	2.01	0.42
2:L:57:LYS:HE2	2:L:80:VAL:HG12	2.01	0.42
3:J:355:LEU:HD22	3:J:379:HIS:HA	2.00	0.42
3:J:1095:VAL:HG12	3:J:1096:THR:HG23	2.00	0.42
3:J:1263:THR:HB	3:J:1266:THR:HB	2.01	0.42
3:J:2670:GLU:HG3	3:J:2912:THR:HA	2.01	0.42
3:J:3050:VAL:HB	3:J:3054:VAL:HG12	2.01	0.42
3:J:3896:ASN:OD1	3:J:3899:PHE:HB2	2.19	0.42
1:D:4:LEU:HD11	1:D:95:CYS:O	2.18	0.42
3:C:801:LYS:HE3	3:C:801:LYS:HB3	1.89	0.42
3:C:1095:VAL:HG12	3:C:1096:THR:HG23	2.00	0.42
3:C:2377:LEU:HD23	3:C:2469:ILE:HG13	2.00	0.42
3:C:2536:LEU:HG	3:C:2541:PHE:HB3	2.01	0.42
3:C:3050:VAL:HB	3:C:3054:VAL:HG12	2.01	0.42
3:C:3144:PHE:HB3	3:C:3196:ARG:HB3	2.00	0.42
3:C:3439:GLY:O	3:C:3443:ILE:HG13	2.19	0.42
3:C:3441:ILE:HG13	3:C:3441:ILE:H	1.71	0.42
1:B:1:GLN:HB3	1:B:2:VAL:H	1.54	0.42
3:A:287:THR:HB	3:A:289:ARG:HE	1.84	0.42
3:A:978:THR:O	3:A:982:THR:HG23	2.19	0.42
3:A:2113:SER:O	3:A:2117:VAL:HG23	2.18	0.42
3:A:2443:ILE:HG12	3:A:2454:ARG:NH1	2.34	0.42
3:A:2578:MET:HE3	3:A:2578:MET:HB3	1.81	0.42
3:A:2607:LEU:HD21	3:A:2643:LEU:HD22	2.01	0.42
1:H:51:ILE:HD12	1:H:51:ILE:HA	1.91	0.42
3:G:652:ARG:HB2	3:G:750:LEU:HB3	2.02	0.42
3:G:728:ARG:HE	3:G:1487:LEU:HD22	1.83	0.42
3:G:1496:TRP:CE3	3:G:1499:ASP:HB2	2.54	0.42
3:G:2583:LEU:HD12	3:G:2583:LEU:HA	1.85	0.42
3:G:3010:PHE:O	3:G:3014:CYS:HB3	2.19	0.42
3:G:4817:ALA:HB1	3:G:4827:LEU:HD22	2.00	0.42
3:G:4835:LYS:O	3:G:4839:MET:HG2	2.19	0.42
3:J:477:LEU:O	3:J:481:GLU:HG2	2.19	0.42
3:J:479:GLN:HE21	3:J:539:LEU:HD13	1.83	0.42
3:J:492:ASP:O	3:J:496:VAL:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1651:LEU:HD13	3:J:1702:HIS:HB2	2.01	0.42
3:J:3041:SER:HB3	3:J:3088:VAL:HG22	2.02	0.42
3:J:4090:LYS:HE3	3:J:4090:LYS:HB2	1.90	0.42
3:J:4817:ALA:HB1	3:J:4827:LEU:HD22	2.00	0.42
3:C:2034:PHE:HA	3:C:2037:ASP:OD2	2.19	0.42
3:C:4569:LEU:HG	3:C:4646:LEU:HD12	2.00	0.42
3:A:537:CYS:SG	3:A:571:SER:HB2	2.58	0.42
3:A:595:ARG:NH2	3:A:1642:PRO:HD2	2.33	0.42
3:A:1452:TRP:HB3	3:A:1548:LEU:HD13	2.00	0.42
3:A:2034:PHE:HA	3:A:2037:ASP:OD2	2.19	0.42
2:I:21:THR:HG23	2:I:49:ARG:NE	2.35	0.42
3:G:978:THR:O	3:G:982:THR:HG23	2.19	0.42
3:G:1106:ARG:HB2	3:G:1120:LEU:HB3	2.01	0.42
3:G:1263:THR:HB	3:G:1266:THR:HB	2.01	0.42
3:G:2034:PHE:HA	3:G:2037:ASP:OD2	2.19	0.42
3:G:2697:ARG:HH22	3:G:2698:MET:HE3	1.83	0.42
3:G:3265:GLU:OE1	3:G:3266:MET:HB3	2.20	0.42
3:J:451:TYR:CE1	3:J:474:ARG:HD2	2.54	0.42
3:J:509:GLU:O	3:J:513:GLU:HG3	2.19	0.42
3:J:1068:ARG:HA	3:J:1068:ARG:HD3	1.84	0.42
3:J:1152:MET:HB3	3:J:1223:PHE:CD2	2.53	0.42
3:J:2034:PHE:HA	3:J:2037:ASP:OD2	2.19	0.42
3:J:2233:CYS:CB	3:J:2270:SER:HB3	2.48	0.42
3:J:3439:GLY:O	3:J:3443:ILE:HG13	2.19	0.42
3:J:3442:PHE:HE2	3:J:3511:VAL:HG12	1.84	0.42
3:C:451:TYR:CE1	3:C:474:ARG:HD2	2.54	0.42
3:C:1159:THR:HG22	3:C:1180:ARG:HA	2.02	0.42
3:C:2123:LEU:O	3:C:2127:GLN:HG2	2.18	0.42
3:C:2607:LEU:HD21	3:C:2643:LEU:HD22	2.01	0.42
3:C:2670:GLU:HG3	3:C:2912:THR:HA	2.01	0.42
3:C:3362:ILE:HD12	3:C:3362:ILE:HA	1.89	0.42
3:A:1159:THR:HG22	3:A:1180:ARG:HA	2.02	0.42
3:A:2348:GLU:CD	3:A:2348:GLU:H	2.27	0.42
3:A:2765:LYS:HD3	3:A:2765:LYS:HA	1.86	0.42
3:A:3050:VAL:HB	3:A:3054:VAL:HG12	2.01	0.42
3:A:3166:TYR:O	3:A:3169:LEU:HG	2.20	0.42
3:A:3278:CYS:SG	3:A:3341:PHE:HB3	2.59	0.42
3:A:3442:PHE:HE2	3:A:3511:VAL:HG12	1.84	0.42
3:G:883:ALA:HA	3:G:886:ARG:HE	1.84	0.42
3:G:1674:CYS:SG	3:G:1718:ILE:HG22	2.59	0.42
3:G:2228:MET:HA	3:G:2228:MET:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2930:LEU:HA	3:G:2935:TYR:CD2	2.49	0.42
3:G:3041:SER:HB3	3:G:3088:VAL:HG22	2.02	0.42
3:G:4063:ASP:HB2	3:G:4169:SER:HB2	2.02	0.42
8:G:5110:POV:H13B	8:G:5110:POV:H11A	1.85	0.42
3:J:180:LEU:HD23	3:J:180:LEU:HA	1.92	0.42
3:J:537:CYS:SG	3:J:571:SER:HB2	2.59	0.42
3:J:1106:ARG:HB2	3:J:1120:LEU:HB3	2.01	0.42
3:J:2348:GLU:H	3:J:2348:GLU:CD	2.27	0.42
3:J:2514:ASN:HB2	3:J:2517:PHE:HB3	2.00	0.42
3:J:3768:SER:HA	3:J:3771:HIS:ND1	2.34	0.42
2:E:21:THR:HG23	2:E:49:ARG:NE	2.35	0.42
3:C:355:LEU:HD22	3:C:379:HIS:HA	2.01	0.42
3:C:883:ALA:HA	3:C:886:ARG:HE	1.84	0.42
3:C:3010:PHE:O	3:C:3014:CYS:HB3	2.19	0.42
3:C:3035:GLU:O	3:C:3039:ILE:HG23	2.19	0.42
3:C:3433:GLU:O	3:C:3437:MET:HG2	2.19	0.42
3:A:4835:LYS:O	3:A:4839:MET:HG2	2.19	0.42
3:G:509:GLU:O	3:G:513:GLU:HG3	2.19	0.42
3:G:595:ARG:NH2	3:G:1642:PRO:HD2	2.33	0.42
3:G:2578:MET:HE3	3:G:2578:MET:HB3	1.81	0.42
3:G:3800:LEU:O	3:G:3804:ILE:HG12	2.19	0.42
3:G:4034:ASN:HD21	3:G:4041:ALA:HB2	1.84	0.42
3:G:4207:MET:HG3	3:G:4208:PRO:HD2	2.00	0.42
3:G:4687:TYR:CD2	3:G:4706:LEU:HD11	2.55	0.42
1:K:47:LEU:HD11	1:K:60:ALA:HB3	2.01	0.42
3:J:728:ARG:HE	3:J:1487:LEU:HD22	1.83	0.42
3:J:730:VAL:HG23	3:J:1476:MET:HG2	2.01	0.42
3:J:2302:LEU:HD23	3:J:2331:TYR:HB2	2.00	0.42
3:J:3800:LEU:O	3:J:3804:ILE:HG12	2.19	0.42
3:J:4678:ALA:HB1	3:J:4720:VAL:HG21	2.02	0.42
3:J:4835:LYS:O	3:J:4839:MET:HG2	2.19	0.42
3:C:215:THR:O	3:C:218:HIS:HB2	2.18	0.42
3:C:509:GLU:O	3:C:513:GLU:HG3	2.19	0.42
3:C:583:ILE:HD13	3:C:621:ILE:HG13	2.02	0.42
3:C:3278:CYS:SG	3:C:3341:PHE:HB3	2.59	0.42
3:C:3442:PHE:HE2	3:C:3511:VAL:HG12	1.84	0.42
3:C:3768:SER:HA	3:C:3771:HIS:ND1	2.34	0.42
3:C:4678:ALA:HB1	3:C:4720:VAL:HG21	2.01	0.42
3:A:509:GLU:O	3:A:513:GLU:HG3	2.19	0.42
3:A:1102:VAL:HG11	3:A:1149:VAL:HG11	2.02	0.42
3:A:2233:CYS:CB	3:A:2270:SER:HB3	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2670:GLU:HG3	3:A:2912:THR:HA	2.01	0.42
3:A:2691:TYR:HB2	3:A:2993:GLN:HA	2.01	0.42
3:A:3041:SER:HB3	3:A:3088:VAL:HG22	2.02	0.42
3:A:4820:VAL:HG13	3:A:4823:LEU:HB2	2.02	0.42
2:I:31:GLN:HE22	3:G:1545:ASN:ND2	2.17	0.42
3:G:78:LEU:HD12	3:G:78:LEU:HA	1.82	0.42
3:G:359:TYR:HB2	3:G:374:LYS:HB3	2.01	0.42
3:G:492:ASP:O	3:G:496:VAL:HG13	2.19	0.42
3:G:900:ASN:HB2	3:G:901:LYS:HZ2	1.84	0.42
3:G:1849:LEU:HD12	3:G:1849:LEU:HA	1.79	0.42
3:G:2526:PHE:CE1	3:G:2558:VAL:HG13	2.55	0.42
3:G:3842:LEU:HD23	3:G:3842:LEU:HA	1.89	0.42
3:J:359:TYR:HB2	3:J:374:LYS:HB3	2.01	0.42
3:J:412:ASN:O	3:J:416:LYS:HG2	2.20	0.42
3:J:863:LEU:HD21	3:J:930:LYS:HE3	2.02	0.42
3:J:883:ALA:HA	3:J:886:ARG:HE	1.84	0.42
3:J:1500:PHE:HD2	3:J:1531:ALA:HB2	1.84	0.42
3:J:3441:ILE:HG13	3:J:3441:ILE:H	1.71	0.42
3:J:3535:LEU:HD23	3:J:3556:ASN:HB3	2.02	0.42
3:J:4091:LYS:O	3:J:4095:LYS:HG2	2.20	0.42
3:J:4687:TYR:CD2	3:J:4706:LEU:HD11	2.55	0.42
3:C:492:ASP:O	3:C:496:VAL:HG13	2.19	0.42
3:C:730:VAL:HG23	3:C:1476:MET:HG2	2.01	0.42
3:C:1500:PHE:CZ	3:C:1536:SER:HB2	2.55	0.42
3:C:2267:MET:HB2	3:C:2267:MET:HE3	1.79	0.42
3:C:2470:ILE:HG21	3:C:2526:PHE:CE2	2.55	0.42
3:C:3319:ILE:O	3:C:3322:ILE:HG12	2.19	0.42
3:C:3800:LEU:O	3:C:3804:ILE:HG12	2.19	0.42
3:C:4091:LYS:O	3:C:4095:LYS:HG2	2.20	0.42
3:C:4813:LEU:HD23	3:C:4813:LEU:HA	1.77	0.42
2:F:21:THR:HG23	2:F:49:ARG:NE	2.35	0.42
3:A:355:LEU:HD22	3:A:379:HIS:HA	2.01	0.42
3:A:583:ILE:HD13	3:A:621:ILE:HG13	2.02	0.42
3:A:652:ARG:HB2	3:A:750:LEU:HB3	2.02	0.42
3:A:1857:GLU:O	3:A:1861:GLN:HG2	2.20	0.42
3:A:3035:GLU:O	3:A:3039:ILE:HG23	2.19	0.42
3:A:3043:PHE:CE2	3:A:3143:LEU:HD21	2.51	0.42
3:A:4636:THR:HG22	3:A:4638:TYR:HD2	1.85	0.42
3:G:583:ILE:HD13	3:G:621:ILE:HG13	2.02	0.42
3:G:648:ILE:HD11	3:G:821:LEU:HD11	1.99	0.42
3:G:1102:VAL:HG11	3:G:1149:VAL:HG11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2211:MET:N	3:G:2211:MET:HE2	2.35	0.42
3:G:3316:LEU:HD12	3:G:3316:LEU:HA	1.91	0.42
3:G:4822:THR:HG21	3:A:4839:MET:HG3	2.01	0.42
1:K:30:SER:H	1:K:99:ARG:HD2	1.85	0.42
2:L:56:ILE:HA	2:L:56:ILE:HD12	1.81	0.42
3:J:652:ARG:HB2	3:J:750:LEU:HB3	2.02	0.42
3:J:1159:THR:HG22	3:J:1180:ARG:HA	2.02	0.42
3:J:1496:TRP:CE3	3:J:1499:ASP:HB2	2.54	0.42
3:J:2443:ILE:HG12	3:J:2454:ARG:NH1	2.34	0.42
3:J:3278:CYS:SG	3:J:3341:PHE:HB3	2.59	0.42
3:J:4049:VAL:HG12	3:J:4163:PHE:HE2	1.84	0.42
3:J:4569:LEU:HG	3:J:4646:LEU:HD12	2.00	0.42
3:J:4820:VAL:HG13	3:J:4823:LEU:HB2	2.02	0.42
1:D:51:ILE:HD12	1:D:51:ILE:HA	1.91	0.42
2:E:40:ARG:HD3	2:E:40:ARG:HA	1.89	0.42
3:C:900:ASN:HB2	3:C:901:LYS:HZ2	1.84	0.42
3:C:978:THR:O	3:C:982:THR:HG23	2.19	0.42
3:C:1747:LEU:HD23	3:C:1747:LEU:HA	1.81	0.42
3:C:4820:VAL:HG13	3:C:4823:LEU:HB2	2.02	0.42
1:B:32:ASN:HB2	1:B:99:ARG:HA	2.01	0.42
1:B:57:ILE:HG23	1:B:69:ILE:HG22	2.02	0.42
3:A:913:LEU:HD23	3:A:913:LEU:HA	1.94	0.42
3:A:1651:LEU:HD13	3:A:1702:HIS:HB2	2.01	0.42
3:A:2470:ILE:HG21	3:A:2526:PHE:CE2	2.55	0.42
3:A:3768:SER:HA	3:A:3771:HIS:ND1	2.34	0.42
3:A:4044:MET:HE2	3:A:4044:MET:HB3	1.86	0.42
3:A:4817:ALA:HB1	3:A:4827:LEU:HD22	2.00	0.42
2:I:57:LYS:HE2	2:I:80:VAL:HG12	2.01	0.42
3:G:1159:THR:HG22	3:G:1180:ARG:HA	2.02	0.42
3:G:1500:PHE:HD2	3:G:1531:ALA:HB2	1.84	0.42
3:G:1718:ILE:HG13	3:G:1719:HIS:ND1	2.35	0.42
3:G:3723:MET:HE3	3:G:3723:MET:HB3	1.93	0.42
3:G:4049:VAL:HG12	3:G:4163:PHE:HE2	1.84	0.42
3:J:46:LEU:HD11	3:J:134:ASP:HB3	2.02	0.42
3:J:978:THR:O	3:J:982:THR:HG23	2.19	0.42
3:J:1930:LYS:HE3	3:J:1930:LYS:HB2	1.79	0.42
3:J:2208:MET:O	3:J:2212:VAL:HG23	2.19	0.42
3:J:3723:MET:HE3	3:J:3723:MET:HB3	1.94	0.42
3:J:4839:MET:HG3	3:C:4822:THR:HG21	2.01	0.42
1:D:37:TYR:CZ	1:D:47:LEU:HB3	2.54	0.42
3:C:319:SER:HA	3:C:347:PHE:HE2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1640:HIS:CE1	3:C:1642:PRO:HA	2.55	0.42
3:C:2281:ILE:HD13	3:C:2281:ILE:HA	1.89	0.42
3:C:3391:GLU:HA	3:C:3394:VAL:HG22	2.02	0.42
3:C:3842:LEU:HD23	3:C:3842:LEU:HA	1.88	0.42
3:C:4083:ASP:HB2	3:C:4086:GLY:O	2.20	0.42
3:C:4687:TYR:CD2	3:C:4706:LEU:HD11	2.55	0.42
3:C:4835:LYS:O	3:C:4839:MET:HG2	2.19	0.42
3:A:180:LEU:O	3:A:198:THR:HB	2.20	0.42
3:A:419:ASP:HA	3:A:422:SER:HB2	2.02	0.42
3:A:1739:THR:H	3:A:1742:THR:HB	1.85	0.42
3:A:1849:LEU:HA	3:A:1849:LEU:HD12	1.79	0.42
3:A:3265:GLU:OE1	3:A:3266:MET:HB3	2.20	0.42
3:A:3362:ILE:HD12	3:A:3362:ILE:HA	1.89	0.42
3:A:3518:LEU:HD11	3:A:3606:LEU:HD22	2.02	0.42
1:H:57:ILE:HG23	1:H:69:ILE:HG22	2.02	0.42
2:I:74:LEU:O	2:I:98:ILE:HA	2.20	0.42
3:G:858:THR:HA	3:G:861:ILE:HD13	2.02	0.42
3:G:1500:PHE:CZ	3:G:1536:SER:HB2	2.55	0.42
3:G:3050:VAL:HB	3:G:3054:VAL:HG12	2.01	0.42
1:K:67:PHE:CD1	1:K:82:MET:HE3	2.55	0.42
3:J:2377:LEU:HD23	3:J:2377:LEU:HA	1.83	0.42
3:J:2470:ILE:HG21	3:J:2526:PHE:CE2	2.55	0.42
3:J:2576:ALA:HB1	3:J:2618:MET:SD	2.60	0.42
3:J:2958:GLY:O	3:J:2962:GLN:HG2	2.20	0.42
2:E:22:CYS:HB2	2:E:48:PHE:CE1	2.55	0.42
3:C:1575:LEU:HA	3:C:1575:LEU:HD23	1.86	0.42
3:C:3041:SER:HB3	3:C:3088:VAL:HG22	2.02	0.42
3:C:3140:LEU:HA	3:C:3143:LEU:HD12	2.02	0.42
3:C:3265:GLU:OE1	3:C:3266:MET:HB3	2.20	0.42
3:C:4034:ASN:HD21	3:C:4041:ALA:HB2	1.84	0.42
3:C:4049:VAL:HG12	3:C:4163:PHE:HE2	1.84	0.42
1:B:47:LEU:HD11	1:B:60:ALA:HB3	2.01	0.42
2:F:40:ARG:HD3	2:F:40:ARG:HA	1.89	0.42
2:F:74:LEU:O	2:F:98:ILE:HA	2.20	0.42
3:A:157:ARG:HA	3:A:157:ARG:HD3	1.84	0.42
3:A:821:LEU:HD12	3:A:821:LEU:HA	1.88	0.42
3:A:900:ASN:HB2	3:A:901:LYS:HZ2	1.85	0.42
3:A:1293:LEU:HA	3:A:1294:PRO:HD3	1.90	0.42
3:A:4687:TYR:CD2	3:A:4706:LEU:HD11	2.55	0.42
8:A:5110:POV:H13B	8:A:5110:POV:H11A	1.85	0.42
3:G:219:VAL:HG12	3:G:261:ARG:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:412:ASN:O	3:G:416:LYS:HG2	2.20	0.42
3:G:1739:THR:H	3:G:1742:THR:HB	1.85	0.42
3:G:3391:GLU:HA	3:G:3394:VAL:HG22	2.02	0.42
3:G:4014:LYS:HG2	3:G:4135:PRO:HB3	2.02	0.42
1:K:30:SER:HA	1:K:99:ARG:HB3	2.02	0.42
2:L:74:LEU:O	2:L:98:ILE:HA	2.20	0.42
3:J:319:SER:HA	3:J:347:PHE:HE2	1.83	0.42
3:J:1739:THR:H	3:J:1742:THR:HB	1.85	0.42
3:J:2526:PHE:CE1	3:J:2558:VAL:HG13	2.55	0.42
3:J:3166:TYR:O	3:J:3169:LEU:HG	2.20	0.42
1:D:30:SER:H	1:D:99:ARG:HD2	1.85	0.42
3:C:73:LEU:HD12	3:C:73:LEU:HA	1.89	0.42
3:C:359:TYR:HB2	3:C:374:LYS:HB3	2.01	0.42
3:C:652:ARG:HB2	3:C:750:LEU:HB3	2.02	0.42
3:C:951:LYS:HA	3:C:951:LYS:HD3	1.80	0.42
3:C:1585:LYS:HD3	3:C:1585:LYS:HA	1.83	0.42
3:C:3316:LEU:HD12	3:C:3316:LEU:HA	1.91	0.42
3:C:3896:ASN:OD1	3:C:3899:PHE:HB2	2.19	0.42
1:B:9:GLY:HA3	1:B:123:VAL:HG22	2.02	0.42
1:B:30:SER:H	1:B:99:ARG:HD2	1.85	0.42
3:A:635:THR:HG22	3:A:1693:GLN:NE2	2.35	0.42
3:A:883:ALA:HA	3:A:886:ARG:HE	1.84	0.42
3:A:1068:ARG:HD3	3:A:1068:ARG:HA	1.84	0.42
3:A:1095:VAL:HG12	3:A:1096:THR:HG23	2.00	0.42
3:A:1500:PHE:HD2	3:A:1531:ALA:HB2	1.84	0.42
3:A:1640:HIS:CE1	3:A:1642:PRO:HA	2.55	0.42
3:A:1674:CYS:SG	3:A:1718:ILE:HG22	2.59	0.42
3:A:2208:MET:O	3:A:2212:VAL:HG23	2.19	0.42
3:A:2211:MET:N	3:A:2211:MET:HE2	2.35	0.42
1:H:30:SER:H	1:H:99:ARG:HD2	1.85	0.41
1:H:47:LEU:HD11	1:H:60:ALA:HB3	2.01	0.41
1:H:67:PHE:CD1	1:H:82:MET:HE3	2.55	0.41
3:G:951:LYS:HD3	3:G:951:LYS:HA	1.80	0.41
3:G:2470:ILE:HG21	3:G:2526:PHE:CE2	2.55	0.41
3:G:2536:LEU:HG	3:G:2541:PHE:HB3	2.01	0.41
3:G:2649:GLU:H	3:G:2649:GLU:HG2	1.75	0.41
3:G:3289:PRO:HB2	3:G:3308:THR:HG22	2.02	0.41
3:G:3400:VAL:HG13	3:G:3403:ARG:HE	1.85	0.41
3:G:4678:ALA:HB1	3:G:4720:VAL:HG21	2.01	0.41
3:G:4928:LEU:HD23	3:G:4928:LEU:HA	1.84	0.41
2:L:34:LYS:NZ	3:J:629:ARG:HD3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:803:LEU:HD22	3:J:803:LEU:H	1.85	0.41
3:J:1449:TRP:HB2	3:J:1553:PHE:HB2	2.02	0.41
3:J:3391:GLU:HA	3:J:3394:VAL:HG22	2.02	0.41
3:J:3400:VAL:HG13	3:J:3403:ARG:HE	1.85	0.41
3:J:4701:TRP:CZ2	3:J:4781:GLY:HA3	2.55	0.41
3:J:4968:PHE:O	3:J:4974:GLY:HA3	2.21	0.41
1:D:9:GLY:HA3	1:D:123:VAL:HG22	2.02	0.41
1:D:67:PHE:CD1	1:D:82:MET:HE3	2.55	0.41
3:C:635:THR:HG22	3:C:1693:GLN:NE2	2.35	0.41
3:C:803:LEU:HD22	3:C:803:LEU:H	1.85	0.41
3:C:1009:ALA:HA	3:C:1019:PRO:HB3	2.02	0.41
3:C:1252:HIS:HE1	3:C:1254:HIS:HB2	1.83	0.41
3:C:1449:TRP:HB2	3:C:1553:PHE:HB2	2.02	0.41
3:C:3518:LEU:HD11	3:C:3606:LEU:HD22	2.02	0.41
3:C:3694:LYS:HE2	3:C:3694:LYS:HB3	1.96	0.41
3:A:14:LEU:H	3:A:14:LEU:HD12	1.84	0.41
3:A:182:LEU:HD12	3:A:182:LEU:HA	1.88	0.41
3:A:492:ASP:O	3:A:496:VAL:HG13	2.19	0.41
3:A:894:GLY:HA3	3:A:903:LEU:HA	2.02	0.41
3:A:2228:MET:HA	3:A:2228:MET:HE3	2.01	0.41
3:A:3038:MET:HE2	3:A:3038:MET:HB2	1.96	0.41
3:A:3391:GLU:HA	3:A:3394:VAL:HG22	2.02	0.41
3:A:3433:GLU:O	3:A:3437:MET:HG2	2.19	0.41
3:A:3990:VAL:HG21	3:A:4050:GLU:OE2	2.20	0.41
3:G:1651:LEU:HD13	3:G:1702:HIS:HB2	2.01	0.41
3:G:2610:LEU:O	3:G:2614:ILE:HG12	2.21	0.41
3:G:2691:TYR:HB2	3:G:2993:GLN:HA	2.01	0.41
3:G:3990:VAL:HG21	3:G:4050:GLU:OE2	2.20	0.41
3:G:4179:GLY:HA3	3:G:4197:ILE:HD11	2.02	0.41
3:G:4636:THR:HG22	3:G:4638:TYR:HD2	1.85	0.41
2:L:22:CYS:HB2	2:L:48:PHE:CE1	2.55	0.41
2:L:44:LYS:NZ	3:J:1779:PRO:HB3	2.36	0.41
3:J:1500:PHE:CZ	3:J:1536:SER:HB2	2.55	0.41
3:J:2504:LEU:O	3:J:2508:ARG:HB2	2.20	0.41
3:J:2607:LEU:HD21	3:J:2643:LEU:HD22	2.01	0.41
3:J:3010:PHE:O	3:J:3014:CYS:HB3	2.19	0.41
3:J:3158:LEU:HA	3:J:3162:GLN:HG3	2.02	0.41
3:J:4034:ASN:HD21	3:J:4041:ALA:HB2	1.84	0.41
3:C:3990:VAL:HG21	3:C:4050:GLU:OE2	2.20	0.41
3:A:451:TYR:CE1	3:A:474:ARG:HD2	2.54	0.41
3:A:863:LEU:HD21	3:A:930:LYS:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2526:PHE:CE1	3:A:2558:VAL:HG13	2.55	0.41
3:A:3089:LYS:HG3	3:A:3093:ARG:NE	2.35	0.41
3:A:3096:PHE:CG	3:A:3161:VAL:HG13	2.56	0.41
3:A:4014:LYS:HG2	3:A:4135:PRO:HB3	2.02	0.41
3:A:4091:LYS:O	3:A:4095:LYS:HG2	2.20	0.41
3:A:4968:PHE:O	3:A:4974:GLY:HA3	2.20	0.41
1:H:86:LYS:H	1:H:86:LYS:HG3	1.63	0.41
3:G:863:LEU:HD21	3:G:930:LYS:HE3	2.01	0.41
3:G:1640:HIS:CE1	3:G:1642:PRO:HA	2.55	0.41
3:G:2281:ILE:HD13	3:G:2281:ILE:HA	1.89	0.41
3:G:2292:GLU:HA	3:G:2295:LEU:HD23	2.02	0.41
3:G:2576:ALA:HB1	3:G:2618:MET:SD	2.60	0.41
3:G:3439:GLY:O	3:G:3443:ILE:HG13	2.19	0.41
3:G:4017:LEU:HD22	3:G:4139:ILE:HG21	2.02	0.41
3:G:4968:PHE:O	3:G:4974:GLY:HA3	2.20	0.41
2:L:42:ARG:HH12	3:J:1782:PHE:HD1	1.68	0.41
3:J:2267:MET:HE3	3:J:2267:MET:HB2	1.79	0.41
3:J:2691:TYR:HB2	3:J:2993:GLN:HA	2.01	0.41
3:J:2764:GLU:HG2	3:J:2855:TYR:HA	2.02	0.41
3:J:3539:ARG:HD3	3:J:3539:ARG:HA	1.93	0.41
3:J:3990:VAL:HG21	3:J:4050:GLU:OE2	2.20	0.41
3:C:894:GLY:HA3	3:C:903:LEU:HA	2.02	0.41
3:C:1500:PHE:HD2	3:C:1531:ALA:HB2	1.84	0.41
3:C:2292:GLU:HA	3:C:2295:LEU:HD23	2.02	0.41
3:C:2526:PHE:CE1	3:C:2558:VAL:HG13	2.55	0.41
1:B:30:SER:HA	1:B:99:ARG:HB3	2.02	0.41
3:A:1009:ALA:HA	3:A:1019:PRO:HB3	2.02	0.41
3:A:2466:LEU:HD23	3:A:2506:LEU:HD13	2.02	0.41
3:A:2504:LEU:O	3:A:2508:ARG:HB2	2.20	0.41
3:A:2536:LEU:HG	3:A:2541:PHE:HB3	2.01	0.41
3:A:2815:ALA:O	3:A:2819:TRP:HD1	2.04	0.41
3:A:3150:HIS:N	3:A:3150:HIS:CD2	2.89	0.41
3:A:4091:LYS:H	3:A:4091:LYS:HG2	1.74	0.41
3:G:73:LEU:HD12	3:G:73:LEU:HA	1.90	0.41
3:G:1106:ARG:NH1	3:G:1185:GLY:HA3	2.35	0.41
3:G:1585:LYS:HD3	3:G:1585:LYS:HA	1.83	0.41
3:G:2607:LEU:HD21	3:G:2643:LEU:HD22	2.01	0.41
3:G:3319:ILE:O	3:G:3322:ILE:HG12	2.19	0.41
3:G:3535:LEU:HD23	3:G:3556:ASN:HB3	2.02	0.41
3:G:3896:ASN:OD1	3:G:3899:PHE:HB2	2.19	0.41
3:G:4091:LYS:O	3:G:4095:LYS:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:4839:MET:HG3	3:J:4822:THR:HG21	2.01	0.41
3:G:4944:ARG:HG2	3:G:4944:ARG:NH1	2.35	0.41
3:J:180:LEU:O	3:J:198:THR:HB	2.20	0.41
3:J:645:ARG:HH12	3:J:689:THR:HG22	1.86	0.41
3:J:2211:MET:HE2	3:J:2211:MET:N	2.35	0.41
3:J:2292:GLU:HA	3:J:2295:LEU:HD23	2.02	0.41
3:J:3289:PRO:HB2	3:J:3308:THR:HG22	2.02	0.41
3:J:3550:ARG:HD3	3:J:3594:ARG:NH1	2.36	0.41
3:C:180:LEU:O	3:C:198:THR:HB	2.20	0.41
3:C:1857:GLU:O	3:C:1861:GLN:HG2	2.20	0.41
3:C:2722:LYS:HD3	3:C:2877:GLN:NE2	2.35	0.41
3:C:3289:PRO:HB2	3:C:3308:THR:HG22	2.03	0.41
3:C:4701:TRP:CZ2	3:C:4781:GLY:HA3	2.55	0.41
3:C:4801:LEU:HD23	3:C:4801:LEU:HA	1.89	0.41
3:A:46:LEU:HD11	3:A:134:ASP:HB3	2.02	0.41
3:A:359:TYR:HB2	3:A:374:LYS:HB3	2.01	0.41
3:A:483:MET:HE3	3:A:483:MET:HB3	1.80	0.41
3:A:1500:PHE:CZ	3:A:1536:SER:HB2	2.55	0.41
3:A:2821:TRP:CD1	3:A:2939:ARG:HA	2.56	0.41
3:A:3800:LEU:O	3:A:3804:ILE:HG12	2.19	0.41
3:A:4701:TRP:CZ2	3:A:4781:GLY:HA3	2.55	0.41
3:G:287:THR:HB	3:G:289:ARG:HE	1.84	0.41
3:G:803:LEU:HD22	3:G:803:LEU:H	1.85	0.41
3:G:1449:TRP:HB2	3:G:1553:PHE:HB2	2.02	0.41
3:G:2245:GLN:HB3	3:G:3868:ARG:NH1	2.35	0.41
3:G:2319:PRO:HD2	3:G:2418:LEU:HD11	2.03	0.41
3:G:4701:TRP:CZ2	3:G:4781:GLY:HA3	2.56	0.41
3:G:4820:VAL:HG13	3:G:4823:LEU:HB2	2.02	0.41
3:J:219:VAL:HG12	3:J:261:ARG:HB2	2.01	0.41
3:J:583:ILE:HD13	3:J:621:ILE:HG13	2.01	0.41
3:J:1011:GLN:HE21	3:J:1013:ILE:HD11	1.86	0.41
3:J:1293:LEU:HA	3:J:1294:PRO:HD3	1.90	0.41
3:J:1640:HIS:CE1	3:J:1642:PRO:HA	2.55	0.41
3:J:2228:MET:HA	3:J:2228:MET:HE3	2.01	0.41
3:J:2743:LEU:HD12	3:J:2807:TRP:CZ2	2.56	0.41
3:J:4017:LEU:HD22	3:J:4139:ILE:HG21	2.02	0.41
3:J:4245:MET:HG3	3:J:4245:MET:H	1.66	0.41
3:C:412:ASN:O	3:C:416:LYS:HG2	2.20	0.41
3:C:722:TRP:CZ2	3:C:727:ALA:HB2	2.56	0.41
3:C:858:THR:HA	3:C:861:ILE:HD13	2.02	0.41
3:C:1106:ARG:NH1	3:C:1185:GLY:HA3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1718:ILE:HG13	3:C:1719:HIS:ND1	2.35	0.41
3:C:2466:LEU:HD23	3:C:2506:LEU:HD13	2.02	0.41
3:C:2576:ALA:HB1	3:C:2618:MET:SD	2.60	0.41
3:C:2992:GLU:O	3:C:2996:LYS:HG2	2.21	0.41
3:C:3096:PHE:CG	3:C:3161:VAL:HG13	2.56	0.41
3:C:3180:ASN:ND2	3:C:3183:VAL:HG13	2.36	0.41
3:C:3400:VAL:HG13	3:C:3403:ARG:HE	1.86	0.41
3:C:4034:ASN:ND2	3:C:4041:ALA:HB2	2.36	0.41
3:C:4968:PHE:O	3:C:4974:GLY:HA3	2.20	0.41
3:A:874:LEU:HD11	3:A:1046:LEU:HD21	2.02	0.41
3:A:2582:MET:O	3:A:2586:VAL:HG23	2.21	0.41
3:A:2722:LYS:HD3	3:A:2877:GLN:NE2	2.35	0.41
3:A:3439:GLY:O	3:A:3443:ILE:HG13	2.19	0.41
3:A:4063:ASP:HB2	3:A:4169:SER:HB2	2.02	0.41
2:I:40:ARG:HA	2:I:40:ARG:HD3	1.89	0.41
3:G:180:LEU:O	3:G:198:THR:HB	2.20	0.41
3:G:635:THR:HG22	3:G:1693:GLN:NE2	2.35	0.41
3:G:1134:LEU:HD23	3:G:1134:LEU:HA	1.93	0.41
3:G:2208:MET:O	3:G:2212:VAL:HG23	2.19	0.41
3:G:2815:ALA:O	3:G:2819:TRP:HD1	2.03	0.41
3:G:3089:LYS:HG3	3:G:3093:ARG:NE	2.36	0.41
3:G:3140:LEU:HA	3:G:3143:LEU:HD12	2.02	0.41
3:G:3682:GLU:O	3:G:3686:GLU:HG2	2.21	0.41
3:J:473:ASN:O	3:J:477:LEU:HG	2.21	0.41
3:J:2369:ARG:HD2	3:J:2371:GLU:HB3	2.03	0.41
3:J:2437:ALA:HB3	3:J:2508:ARG:HD2	2.03	0.41
3:J:2649:GLU:H	3:J:2649:GLU:HG2	1.75	0.41
3:J:3409:TYR:HD1	3:J:3409:TYR:HA	1.80	0.41
3:J:4014:LYS:HG2	3:J:4135:PRO:HB3	2.02	0.41
3:J:4063:ASP:HB2	3:J:4169:SER:HB2	2.02	0.41
3:J:4179:GLY:HA3	3:J:4197:ILE:HD11	2.02	0.41
1:D:57:ILE:HG23	1:D:69:ILE:HG22	2.02	0.41
3:C:2170:MET:HE2	3:C:2170:MET:HA	2.03	0.41
3:C:2504:LEU:O	3:C:2508:ARG:HB2	2.20	0.41
3:C:2506:LEU:HD12	3:C:2506:LEU:HA	1.86	0.41
3:C:2583:LEU:HD12	3:C:2583:LEU:HA	1.86	0.41
3:C:2691:TYR:HB2	3:C:2993:GLN:HA	2.01	0.41
3:C:2815:ALA:O	3:C:2819:TRP:HD1	2.04	0.41
3:C:2958:GLY:O	3:C:2962:GLN:HG2	2.20	0.41
3:C:3089:LYS:HG3	3:C:3093:ARG:NE	2.36	0.41
3:C:3550:ARG:HD3	3:C:3594:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4014:LYS:HG2	3:C:4135:PRO:HB3	2.02	0.41
3:A:43:GLY:HA2	3:A:443:LEU:HB2	2.03	0.41
3:A:858:THR:HA	3:A:861:ILE:HD13	2.02	0.41
3:A:1106:ARG:NH1	3:A:1185:GLY:HA3	2.35	0.41
3:A:1449:TRP:HB2	3:A:1553:PHE:HB2	2.03	0.41
3:A:2245:GLN:HB3	3:A:3868:ARG:NH1	2.35	0.41
3:A:2261:SER:HB2	3:A:2273:LEU:HD22	2.02	0.41
3:A:2437:ALA:HB3	3:A:2508:ARG:HD2	2.03	0.41
3:A:2576:ALA:HB1	3:A:2618:MET:SD	2.60	0.41
3:A:2764:GLU:HG2	3:A:2855:TYR:HA	2.02	0.41
3:A:3400:VAL:HG13	3:A:3403:ARG:HE	1.86	0.41
3:A:4017:LEU:HD22	3:A:4139:ILE:HG21	2.02	0.41
3:A:4049:VAL:HG12	3:A:4163:PHE:HE2	1.84	0.41
3:A:4678:ALA:HB1	3:A:4720:VAL:HG21	2.02	0.41
3:A:4934:GLY:HA2	3:A:4937:ILE:HB	2.03	0.41
1:H:114:TYR:CE1	3:G:996:TRP:HB2	2.56	0.41
3:G:2676:ARG:HG3	3:G:2955:PHE:HD2	1.86	0.41
3:G:2890:LYS:HB3	3:G:2905:LEU:HD21	2.03	0.41
3:G:3550:ARG:HD3	3:G:3594:ARG:NH1	2.36	0.41
3:G:4060:LYS:HB3	3:G:4060:LYS:HE3	1.77	0.41
3:J:900:ASN:HB2	3:J:901:LYS:HZ2	1.85	0.41
3:J:2976:HIS:HE1	3:J:2990:PRO:HD3	1.83	0.41
3:J:4083:ASP:HB2	3:J:4086:GLY:O	2.20	0.41
3:J:4636:THR:HG22	3:J:4638:TYR:HD2	1.85	0.41
1:D:47:LEU:HD11	1:D:60:ALA:HB3	2.01	0.41
3:C:219:VAL:HG12	3:C:261:ARG:HB2	2.01	0.41
3:C:1011:GLN:HE21	3:C:1013:ILE:HD11	1.86	0.41
3:C:2348:GLU:O	3:C:2352:VAL:HG22	2.21	0.41
3:A:1718:ILE:HG13	3:A:1719:HIS:ND1	2.35	0.41
3:A:2348:GLU:O	3:A:2352:VAL:HG22	2.21	0.41
3:A:2992:GLU:O	3:A:2996:LYS:HG2	2.21	0.41
3:A:3195:ALA:HB2	3:A:3275:PRO:HB3	2.03	0.41
3:A:3319:ILE:O	3:A:3322:ILE:HG12	2.19	0.41
3:A:3517:MET:HE3	3:A:3517:MET:HB3	1.90	0.41
3:A:3550:ARG:HD3	3:A:3594:ARG:NH1	2.36	0.41
3:A:3842:LEU:HD23	3:A:3842:LEU:HA	1.89	0.41
3:A:4034:ASN:ND2	3:A:4041:ALA:HB2	2.36	0.41
3:A:4083:ASP:HB2	3:A:4086:GLY:O	2.20	0.41
3:G:419:ASP:HA	3:G:422:SER:HB2	2.02	0.41
3:G:874:LEU:HD11	3:G:1046:LEU:HD21	2.02	0.41
3:G:2369:ARG:HD2	3:G:2371:GLU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2430:ILE:HG21	3:G:2502:MET:SD	2.61	0.41
3:G:2504:LEU:O	3:G:2508:ARG:HB2	2.20	0.41
3:G:3180:ASN:ND2	3:G:3183:VAL:HG13	2.36	0.41
3:G:4034:ASN:ND2	3:G:4041:ALA:HB2	2.36	0.41
3:G:4083:ASP:HB2	3:G:4086:GLY:O	2.20	0.41
3:G:5036:LEU:HD13	3:G:5036:LEU:HA	1.95	0.41
3:J:635:THR:HG22	3:J:1693:GLN:NE2	2.35	0.41
3:J:1106:ARG:NH1	3:J:1185:GLY:HA3	2.35	0.41
3:J:1456:ASP:O	3:J:1491:ASN:HB2	2.21	0.41
3:J:1857:GLU:O	3:J:1861:GLN:HG2	2.20	0.41
3:J:2245:GLN:HB3	3:J:3868:ARG:NH1	2.35	0.41
3:J:2689:LYS:HB3	3:J:2689:LYS:HE2	1.93	0.41
3:J:3140:LEU:HA	3:J:3143:LEU:HD12	2.02	0.41
3:J:3265:GLU:OE1	3:J:3266:MET:HB3	2.20	0.41
3:J:3518:LEU:HD11	3:J:3606:LEU:HD22	2.02	0.41
2:E:74:LEU:O	2:E:98:ILE:HA	2.20	0.41
3:C:1591:CYS:HA	3:C:1595:LEU:HD21	2.03	0.41
3:C:2430:ILE:HG21	3:C:2502:MET:SD	2.61	0.41
3:C:2821:TRP:CD1	3:C:2939:ARG:HA	2.56	0.41
3:C:3195:ALA:HB2	3:C:3275:PRO:HB3	2.03	0.41
3:C:3535:LEU:HD23	3:C:3556:ASN:HB3	2.02	0.41
3:C:4063:ASP:HB2	3:C:4169:SER:HB2	2.02	0.41
3:C:4179:GLY:HA3	3:C:4197:ILE:HD11	2.02	0.41
2:F:22:CYS:HB2	2:F:48:PHE:CE1	2.55	0.41
3:A:412:ASN:O	3:A:416:LYS:HG2	2.20	0.41
3:A:2170:MET:HE2	3:A:2170:MET:HA	2.03	0.41
3:A:2292:GLU:HA	3:A:2295:LEU:HD23	2.02	0.41
3:A:2369:ARG:HD2	3:A:2371:GLU:HB3	2.03	0.41
3:A:2610:LEU:O	3:A:2614:ILE:HG12	2.21	0.41
3:A:3289:PRO:HB2	3:A:3308:THR:HG22	2.02	0.41
3:A:4944:ARG:NH1	3:A:4944:ARG:HG2	2.35	0.41
3:G:46:LEU:HD11	3:G:134:ASP:HB3	2.02	0.41
3:G:157:ARG:HD3	3:G:157:ARG:HA	1.84	0.41
3:G:424:LYS:HA	3:G:424:LYS:HD2	1.86	0.41
3:G:551:LEU:HD23	3:G:551:LEU:HA	1.89	0.41
3:G:604:CYS:O	3:G:604:CYS:SG	2.79	0.41
3:G:1012:ASP:HB3	3:G:1017:ARG:HB2	2.03	0.41
3:G:1857:GLU:O	3:G:1861:GLN:HG2	2.20	0.41
3:G:2295:LEU:HA	3:G:2298:VAL:HG12	2.03	0.41
3:G:2437:ALA:HB3	3:G:2508:ARG:HD2	2.03	0.41
3:G:2743:LEU:HD12	3:G:2807:TRP:CZ2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:2958:GLY:O	3:G:2962:GLN:HG2	2.20	0.41
3:G:2992:GLU:O	3:G:2996:LYS:HG2	2.21	0.41
3:G:3891:LEU:HD23	3:G:3891:LEU:HA	1.93	0.41
1:K:2:VAL:HB	1:K:116:TYR:CG	2.56	0.41
3:J:182:LEU:HD12	3:J:182:LEU:HA	1.88	0.41
3:J:220:LEU:HD21	3:J:262:LEU:HD21	2.03	0.41
3:J:722:TRP:CZ2	3:J:727:ALA:HB2	2.56	0.41
3:J:858:THR:HA	3:J:861:ILE:HD13	2.02	0.41
3:J:1102:VAL:HG11	3:J:1149:VAL:HG11	2.02	0.41
3:J:1293:LEU:HA	3:J:1293:LEU:HD13	1.92	0.41
3:J:1591:CYS:HA	3:J:1595:LEU:HD21	2.03	0.41
3:J:2319:PRO:HD2	3:J:2418:LEU:HD11	2.03	0.41
3:J:2582:MET:O	3:J:2586:VAL:HG23	2.21	0.41
3:J:2890:LYS:HB3	3:J:2905:LEU:HD21	2.03	0.41
3:J:3195:ALA:HB2	3:J:3275:PRO:HB3	2.03	0.41
3:J:3682:GLU:O	3:J:3686:GLU:HG2	2.21	0.41
3:J:4934:GLY:HA2	3:J:4937:ILE:HB	2.03	0.41
3:C:43:GLY:HA2	3:C:443:LEU:HB2	2.03	0.41
3:C:473:ASN:O	3:C:477:LEU:HG	2.21	0.41
3:C:670:GLU:HA	3:C:740:PRO:HB3	2.03	0.41
3:C:863:LEU:HD21	3:C:930:LYS:HE3	2.02	0.41
3:C:1102:VAL:HG11	3:C:1149:VAL:HG11	2.02	0.41
3:C:1943:LEU:HD23	3:C:1943:LEU:HA	1.84	0.41
3:C:2228:MET:HE3	3:C:2228:MET:HA	2.01	0.41
3:C:2295:LEU:HA	3:C:2298:VAL:HG12	2.03	0.41
3:C:2309:SER:HB2	3:C:2322:GLY:N	2.36	0.41
3:C:2369:ARG:HD2	3:C:2371:GLU:HB3	2.03	0.41
3:C:2437:ALA:HB3	3:C:2508:ARG:HD2	2.03	0.41
3:C:2443:ILE:HD12	3:C:2443:ILE:HA	1.95	0.41
3:C:2764:GLU:HG2	3:C:2855:TYR:HA	2.02	0.41
3:C:3166:TYR:O	3:C:3169:LEU:HG	2.20	0.41
3:C:3324:VAL:HA	3:C:3327:LEU:CD2	2.51	0.41
3:C:4636:THR:HG22	3:C:4638:TYR:HD2	1.85	0.41
3:C:4822:THR:O	3:C:4826:ILE:HG12	2.21	0.41
3:C:4934:GLY:HA2	3:C:4937:ILE:HB	2.03	0.41
3:A:213:TYR:HB3	3:A:273:HIS:CE1	2.56	0.41
3:A:219:VAL:HG12	3:A:261:ARG:HB2	2.01	0.41
3:A:604:CYS:O	3:A:604:CYS:SG	2.79	0.41
3:A:722:TRP:CZ2	3:A:727:ALA:HB2	2.56	0.41
3:A:803:LEU:HD22	3:A:803:LEU:H	1.85	0.41
3:A:867:LEU:O	3:A:871:ARG:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1012:ASP:HB3	3:A:1017:ARG:HB2	2.03	0.41
3:A:1297:PHE:HB2	3:A:1545:ASN:N	2.33	0.41
3:A:1456:ASP:O	3:A:1491:ASN:HB2	2.21	0.41
3:A:2583:LEU:HD12	3:A:2583:LEU:HA	1.86	0.41
3:A:2679:PHE:HB2	3:A:2706:ILE:CG2	2.50	0.41
3:A:3316:LEU:HD12	3:A:3316:LEU:HA	1.91	0.41
3:A:3539:ARG:HD3	3:A:3539:ARG:HA	1.93	0.41
3:A:3682:GLU:O	3:A:3686:GLU:HG2	2.21	0.41
3:A:4031:LEU:HD12	3:A:4031:LEU:HA	1.94	0.41
3:A:4670:ILE:HD13	3:A:4670:ILE:HA	1.88	0.41
3:A:4822:THR:O	3:A:4826:ILE:HG12	2.21	0.41
1:H:1:GLN:O	1:H:3:GLN:HB2	2.21	0.41
1:H:2:VAL:HB	1:H:116:TYR:CG	2.56	0.41
3:G:213:TYR:HB3	3:G:273:HIS:CE1	2.56	0.41
3:G:894:GLY:HA3	3:G:903:LEU:HA	2.02	0.41
3:G:1009:ALA:HA	3:G:1019:PRO:HB3	2.02	0.41
3:G:1011:GLN:HE21	3:G:1013:ILE:HD11	1.86	0.41
3:G:1683:HIS:CD2	3:G:1800:PRO:HG3	2.56	0.41
3:G:2159:LEU:HD13	3:G:2203:MET:HB3	2.03	0.41
3:G:2466:LEU:HD23	3:G:2506:LEU:HD13	2.03	0.41
3:G:2559:LEU:H	3:G:2559:LEU:HD12	1.85	0.41
3:G:2722:LYS:HD3	3:G:2877:GLN:NE2	2.35	0.41
3:G:2764:GLU:HG2	3:G:2855:TYR:HA	2.02	0.41
3:G:2995:ILE:HG22	3:G:2996:LYS:HD3	2.03	0.41
3:G:3158:LEU:HA	3:G:3162:GLN:HG3	2.02	0.41
3:G:3232:LEU:HA	3:G:3233:PRO:HD3	1.90	0.41
3:G:3441:ILE:HG13	3:G:3441:ILE:H	1.71	0.41
1:K:57:ILE:HG23	1:K:69:ILE:HG22	2.02	0.41
2:L:21:THR:HG23	2:L:49:ARG:NE	2.35	0.41
3:J:821:LEU:HD12	3:J:821:LEU:HA	1.88	0.41
3:J:1552:VAL:C	3:J:1553:PHE:HD1	2.29	0.41
3:J:2559:LEU:H	3:J:2559:LEU:HD12	1.86	0.41
3:J:2995:ILE:HG22	3:J:2996:LYS:HD3	2.03	0.41
3:J:4939:ALA:O	3:J:4942:GLU:HB2	2.21	0.41
3:C:483:MET:HE3	3:C:483:MET:HB3	1.79	0.41
3:C:2271:THR:HG22	3:C:2273:LEU:H	1.86	0.41
3:C:2610:LEU:O	3:C:2614:ILE:HG12	2.21	0.41
3:C:2645:THR:O	3:C:2649:GLU:HG2	2.21	0.41
3:C:2676:ARG:HG3	3:C:2955:PHE:HD2	1.86	0.41
3:C:3158:LEU:HA	3:C:3162:GLN:HG3	2.02	0.41
3:C:3735:LEU:HD23	3:C:3735:LEU:HA	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:100:VAL:HG22	3:A:924:MET:HE1	2.02	0.41
3:A:1591:CYS:HA	3:A:1595:LEU:HD21	2.03	0.41
3:A:2095:GLN:HA	3:A:2127:GLN:NE2	2.36	0.41
3:A:2295:LEU:HA	3:A:2298:VAL:HG12	2.03	0.41
3:A:2653:LYS:HB3	3:A:2657:LEU:HD12	2.03	0.41
3:A:2676:ARG:HG3	3:A:2955:PHE:HD2	1.86	0.41
3:A:2995:ILE:HG22	3:A:2996:LYS:HD3	2.03	0.41
3:A:3535:LEU:HD23	3:A:3556:ASN:HB3	2.02	0.41
3:G:248:GLU:HB2	3:G:373:LYS:HD2	2.03	0.40
3:G:473:ASN:O	3:G:477:LEU:HG	2.21	0.40
3:G:821:LEU:HD12	3:G:821:LEU:HA	1.88	0.40
3:G:1149:VAL:HA	3:G:1163:THR:O	2.22	0.40
3:G:2095:GLN:HA	3:G:2127:GLN:NE2	2.37	0.40
3:G:2348:GLU:O	3:G:2352:VAL:HG22	2.21	0.40
3:G:2672:LEU:HA	3:G:2672:LEU:HD12	1.81	0.40
3:G:4582:VAL:HG11	3:A:4860:ARG:HH11	1.86	0.40
3:G:4939:ALA:O	3:G:4942:GLU:HB2	2.21	0.40
2:L:40:ARG:HD3	2:L:40:ARG:HA	1.89	0.40
3:J:419:ASP:HA	3:J:422:SER:HB2	2.02	0.40
3:J:874:LEU:HD11	3:J:1046:LEU:HD21	2.02	0.40
3:J:1149:VAL:HA	3:J:1163:THR:O	2.22	0.40
3:J:1585:LYS:HD3	3:J:1585:LYS:HA	1.83	0.40
3:J:1718:ILE:HG13	3:J:1719:HIS:ND1	2.35	0.40
3:J:2261:SER:HB2	3:J:2273:LEU:HD22	2.02	0.40
3:J:2348:GLU:O	3:J:2352:VAL:HG22	2.21	0.40
3:J:2466:LEU:HD23	3:J:2506:LEU:HD13	2.02	0.40
3:J:2722:LYS:HD3	3:J:2877:GLN:NE2	2.35	0.40
1:D:2:VAL:HB	1:D:116:TYR:CG	2.56	0.40
1:D:30:SER:HA	1:D:99:ARG:HB3	2.02	0.40
3:C:220:LEU:HD21	3:C:262:LEU:HD21	2.04	0.40
3:C:874:LEU:HD11	3:C:1046:LEU:HD21	2.02	0.40
3:C:2095:GLN:HA	3:C:2127:GLN:NE2	2.37	0.40
3:C:2159:LEU:HD13	3:C:2203:MET:HB3	2.03	0.40
3:C:2211:MET:HE2	3:C:2211:MET:N	2.35	0.40
3:C:2245:GLN:HB3	3:C:3868:ARG:NH1	2.35	0.40
3:C:3150:HIS:CD2	3:C:3150:HIS:N	2.89	0.40
3:C:4172:GLU:HA	3:C:4172:GLU:OE1	2.21	0.40
3:A:2556:LEU:HD23	3:A:2556:LEU:HA	1.89	0.40
3:A:3140:LEU:HA	3:A:3143:LEU:HD12	2.02	0.40
3:A:3324:VAL:HA	3:A:3327:LEU:CD2	2.51	0.40
1:H:30:SER:HA	1:H:99:ARG:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:22:CYS:HB2	2:I:48:PHE:CE1	2.55	0.40
3:G:1591:CYS:HA	3:G:1595:LEU:HD21	2.03	0.40
3:G:1803:PRO:HB2	3:G:1806:ALA:HB3	2.04	0.40
3:G:2261:SER:HB2	3:G:2273:LEU:HD22	2.02	0.40
3:G:2582:MET:O	3:G:2586:VAL:HG23	2.21	0.40
3:G:3195:ALA:HB2	3:G:3275:PRO:HB3	2.03	0.40
3:G:4677:LEU:HD12	3:G:4677:LEU:HA	1.88	0.40
3:J:1009:ALA:HA	3:J:1019:PRO:HB3	2.02	0.40
3:J:1066:GLN:NE2	3:J:1068:ARG:HE	2.19	0.40
3:J:1229:ASN:HB2	3:J:1827:ARG:HG3	2.03	0.40
3:J:1803:PRO:HB2	3:J:1806:ALA:HB3	2.04	0.40
3:J:1943:LEU:HD23	3:J:1943:LEU:HA	1.84	0.40
3:J:2645:THR:O	3:J:2649:GLU:HG2	2.21	0.40
3:J:3089:LYS:HG3	3:J:3093:ARG:NE	2.35	0.40
3:J:3687:GLU:HB3	3:J:3690:VAL:HB	2.03	0.40
3:J:4034:ASN:ND2	3:J:4041:ALA:HB2	2.36	0.40
3:J:4746:ALA:O	3:J:4750:ILE:HG23	2.21	0.40
3:J:4822:THR:O	3:J:4826:ILE:HG12	2.21	0.40
3:J:4944:ARG:HG2	3:J:4944:ARG:NH1	2.35	0.40
3:J:5009:TYR:O	3:J:5012:LYS:HG2	2.22	0.40
3:C:1739:THR:H	3:C:1742:THR:HB	1.85	0.40
3:C:2261:SER:HB2	3:C:2273:LEU:HD22	2.02	0.40
3:C:2653:LYS:HB3	3:C:2657:LEU:HD12	2.03	0.40
3:C:2995:ILE:HG22	3:C:2996:LYS:HD3	2.03	0.40
1:B:2:VAL:HB	1:B:116:TYR:CG	2.56	0.40
1:B:67:PHE:CD1	1:B:82:MET:HE3	2.55	0.40
3:A:670:GLU:HA	3:A:740:PRO:HB3	2.03	0.40
3:A:717:ASP:O	3:A:738:LEU:HD23	2.21	0.40
3:A:2129:ASP:HB2	3:A:3669:PHE:CZ	2.57	0.40
3:A:2271:THR:HG22	3:A:2273:LEU:H	1.86	0.40
3:A:2559:LEU:HD12	3:A:2559:LEU:H	1.85	0.40
3:A:2645:THR:O	3:A:2649:GLU:HG2	2.21	0.40
3:A:2710:LEU:HD12	3:A:2711:PRO:HD2	2.04	0.40
3:A:3874:VAL:HG11	3:A:3950:ASN:HD21	1.86	0.40
3:G:717:ASP:O	3:G:738:LEU:HD23	2.21	0.40
3:G:1237:TRP:CZ3	3:G:1652:GLU:HG3	2.57	0.40
3:G:1456:ASP:O	3:G:1491:ASN:HB2	2.21	0.40
3:G:2129:ASP:HB2	3:G:3669:PHE:CZ	2.57	0.40
3:G:2939:ARG:H	3:G:2939:ARG:HG3	1.63	0.40
3:G:3517:MET:HE3	3:G:3517:MET:HB3	1.90	0.40
3:G:3518:LEU:HD11	3:G:3606:LEU:HD22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:3694:LYS:HE2	3:G:3694:LYS:HB3	1.96	0.40
3:G:4670:ILE:HD13	3:G:4670:ILE:HA	1.88	0.40
3:G:4823:LEU:HA	3:G:4823:LEU:HD23	1.84	0.40
3:G:5009:TYR:O	3:G:5012:LYS:HG2	2.22	0.40
3:J:20:VAL:HG23	3:J:203:ASN:C	2.47	0.40
3:J:73:LEU:HD12	3:J:73:LEU:HA	1.90	0.40
3:J:867:LEU:O	3:J:871:ARG:HB2	2.21	0.40
3:J:972:LEU:HD12	3:J:976:ARG:HA	2.04	0.40
3:J:1012:ASP:HB3	3:J:1017:ARG:HB2	2.03	0.40
3:J:2159:LEU:HD13	3:J:2203:MET:HB3	2.03	0.40
3:J:2768:PHE:O	3:J:2771:ILE:HG22	2.21	0.40
3:J:3150:HIS:CD2	3:J:3150:HIS:N	2.89	0.40
3:J:4172:GLU:HA	3:J:4172:GLU:OE1	2.21	0.40
3:C:419:ASP:HA	3:C:422:SER:HB2	2.02	0.40
3:C:1260:MET:HE2	3:C:1269:CYS:SG	2.62	0.40
3:C:1552:VAL:C	3:C:1553:PHE:HD1	2.29	0.40
3:C:2930:LEU:HB3	3:C:2935:TYR:HB2	2.04	0.40
3:C:2960:LEU:CB	3:C:3038:MET:HE1	2.47	0.40
3:C:4044:MET:HE2	3:C:4044:MET:HB3	1.86	0.40
1:B:105:ASN:HA	3:A:920:TYR:OH	2.22	0.40
3:A:645:ARG:HH12	3:A:689:THR:HG22	1.86	0.40
3:A:952:LYS:HD3	3:A:952:LYS:HA	1.90	0.40
3:A:2159:LEU:HD13	3:A:2203:MET:HB3	2.03	0.40
3:A:2189:LYS:HD2	3:A:2192:TYR:CD2	2.57	0.40
3:A:2308:GLN:HG2	3:A:2309:SER:N	2.37	0.40
3:A:3373:VAL:HG21	3:A:3444:TYR:HB3	2.03	0.40
3:A:3902:TYR:O	3:A:3906:GLN:HG3	2.22	0.40
3:A:4090:LYS:HB2	3:A:4090:LYS:HE3	1.90	0.40
1:H:9:GLY:HA3	1:H:123:VAL:HG22	2.02	0.40
3:G:43:GLY:HA2	3:G:443:LEU:HB2	2.03	0.40
3:G:867:LEU:O	3:G:871:ARG:HB2	2.21	0.40
3:G:2645:THR:O	3:G:2649:GLU:HG2	2.21	0.40
3:G:2768:PHE:O	3:G:2771:ILE:HG22	2.21	0.40
3:G:4220:ASP:O	3:G:4224:GLU:HB2	2.22	0.40
1:K:51:ILE:HD12	1:K:51:ILE:HA	1.91	0.40
3:J:637:LEU:HD23	3:J:637:LEU:HA	1.92	0.40
3:J:1683:HIS:CD2	3:J:1800:PRO:HG3	2.56	0.40
3:J:2095:GLN:HA	3:J:2127:GLN:NE2	2.37	0.40
3:J:2309:SER:HB2	3:J:2322:GLY:N	2.36	0.40
3:J:3373:VAL:HG21	3:J:3444:TYR:HB3	2.03	0.40
3:J:3593:VAL:HA	3:J:3596:VAL:HG12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:4220:ASP:O	3:J:4224:GLU:HB2	2.22	0.40
3:J:4864:ASN:HB2	3:J:4874:MET:HE1	2.03	0.40
3:C:972:LEU:HD12	3:C:976:ARG:HA	2.04	0.40
3:C:1012:ASP:HB3	3:C:1017:ARG:HB2	2.03	0.40
3:C:2012:PHE:CE2	3:C:2028:ARG:HG3	2.57	0.40
3:C:2308:GLN:HG2	3:C:2309:SER:N	2.37	0.40
3:C:2559:LEU:H	3:C:2559:LEU:HD12	1.86	0.40
3:C:2582:MET:O	3:C:2586:VAL:HG23	2.21	0.40
3:C:2710:LEU:HD12	3:C:2711:PRO:HD2	2.04	0.40
3:C:2930:LEU:HA	3:C:2935:TYR:CD2	2.49	0.40
3:C:4219:PHE:CD1	3:C:4950:VAL:HG21	2.57	0.40
3:C:4860:ARG:HH11	3:A:4582:VAL:HG11	1.87	0.40
1:B:86:LYS:H	1:B:86:LYS:HG3	1.63	0.40
3:A:1470:ARG:HA	3:A:1470:ARG:HD3	1.75	0.40
3:A:2319:PRO:HD2	3:A:2418:LEU:HD11	2.03	0.40
3:A:2890:LYS:HB3	3:A:2905:LEU:HD21	2.03	0.40
3:A:3158:LEU:HA	3:A:3162:GLN:HG3	2.02	0.40
3:A:4179:GLY:HA3	3:A:4197:ILE:HD11	2.02	0.40
3:G:59:PRO:HA	3:G:60:PRO:HD3	1.86	0.40
3:G:688:LEU:HD11	3:G:775:GLY:HA3	2.03	0.40
3:G:2189:LYS:HD2	3:G:2192:TYR:CD2	2.57	0.40
3:G:2779:GLU:HA	3:G:2792:ARG:HG2	2.03	0.40
3:G:4076:ALA:O	3:G:4079:ASP:HB3	2.22	0.40
3:G:4219:PHE:CD1	3:G:4950:VAL:HG21	2.56	0.40
3:G:4934:GLY:HA2	3:G:4937:ILE:HB	2.03	0.40
3:J:670:GLU:HA	3:J:740:PRO:HB3	2.03	0.40
3:J:2295:LEU:HA	3:J:2298:VAL:HG12	2.03	0.40
3:J:2430:ILE:HG21	3:J:2502:MET:SD	2.61	0.40
3:J:2930:LEU:HA	3:J:2935:TYR:CD2	2.49	0.40
3:J:2992:GLU:O	3:J:2996:LYS:HG2	2.21	0.40
3:J:3096:PHE:CG	3:J:3161:VAL:HG13	2.56	0.40
3:J:4056:GLU:HG2	3:J:4166:LEU:HD13	2.04	0.40
3:J:4219:PHE:CD1	3:J:4950:VAL:HG21	2.57	0.40
3:J:4937:ILE:HD13	3:J:4937:ILE:HA	1.95	0.40
3:J:5000:GLU:HA	3:J:5003:HIS:ND1	2.36	0.40
1:D:86:LYS:H	1:D:86:LYS:HG3	1.63	0.40
3:C:471:LEU:HA	3:C:474:ARG:HE	1.86	0.40
3:C:645:ARG:HH12	3:C:689:THR:HG22	1.86	0.40
3:C:1427:ILE:HD13	3:C:1427:ILE:HA	1.93	0.40
3:C:1456:ASP:O	3:C:1491:ASN:HB2	2.21	0.40
3:C:3034:LYS:HA	3:C:3037:GLU:OE1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4017:LEU:HD22	3:C:4139:ILE:HG21	2.02	0.40
3:C:4746:ALA:O	3:C:4750:ILE:HG23	2.21	0.40
3:C:4935:LEU:HD23	3:C:4935:LEU:HA	1.89	0.40
1:B:1:GLN:O	1:B:3:GLN:HB2	2.22	0.40
1:B:51:ILE:HD12	1:B:51:ILE:HA	1.91	0.40
3:A:20:VAL:HG23	3:A:203:ASN:C	2.47	0.40
3:A:1683:HIS:CD2	3:A:1800:PRO:HG3	2.56	0.40
3:A:1803:PRO:HB2	3:A:1806:ALA:HB3	2.04	0.40
3:A:2430:ILE:HG21	3:A:2502:MET:SD	2.61	0.40
3:A:2779:GLU:HA	3:A:2792:ARG:HG2	2.03	0.40
3:A:3379:LEU:HD11	3:A:3390:GLY:C	2.46	0.40
3:A:4172:GLU:HA	3:A:4172:GLU:OE1	2.21	0.40
3:A:4219:PHE:CD1	3:A:4950:VAL:HG21	2.57	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	B	124/126 (98%)	115 (93%)	9 (7%)	0	100	100
1	D	124/126 (98%)	116 (94%)	8 (6%)	0	100	100
1	H	124/126 (98%)	116 (94%)	8 (6%)	0	100	100
1	K	124/126 (98%)	116 (94%)	8 (6%)	0	100	100
2	E	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
2	F	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
2	I	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
2	L	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
3	A	4276/5027 (85%)	4150 (97%)	126 (3%)	0	100	100
3	C	4276/5027 (85%)	4149 (97%)	127 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	G	4276/5027 (85%)	4149 (97%)	127 (3%)	0	100	100
3	J	4276/5027 (85%)	4149 (97%)	127 (3%)	0	100	100
All	All	18020/21040 (86%)	17452 (97%)	568 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	104/104 (100%)	100 (96%)	4 (4%)	28	56
1	D	104/104 (100%)	100 (96%)	4 (4%)	28	56
1	H	104/104 (100%)	100 (96%)	4 (4%)	28	56
1	K	104/104 (100%)	100 (96%)	4 (4%)	28	56
2	E	88/88 (100%)	87 (99%)	1 (1%)	70	82
2	F	88/88 (100%)	87 (99%)	1 (1%)	70	82
2	I	88/88 (100%)	87 (99%)	1 (1%)	70	82
2	L	88/88 (100%)	87 (99%)	1 (1%)	70	82
3	A	3670/4270 (86%)	3643 (99%)	27 (1%)	81	88
3	C	3670/4270 (86%)	3642 (99%)	28 (1%)	79	87
3	G	3670/4270 (86%)	3642 (99%)	28 (1%)	79	87
3	J	3670/4270 (86%)	3644 (99%)	26 (1%)	81	88
All	All	15448/17848 (87%)	15319 (99%)	129 (1%)	77	87

All (129) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	22	CYS
1	H	47	LEU
1	H	79	TYR
1	H	82	MET

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Mol	Chain	Res	Type
2	I	23	VAL
3	G	182	LEU
3	G	266	ARG
3	G	791	PHE
3	G	867	LEU
3	G	896	VAL
3	G	1124	PHE
3	G	1235	THR
3	G	1492	CYS
3	G	1500	PHE
3	G	1509	ILE
3	G	1736	VAL
3	G	2128	TYR
3	G	2267	MET
3	G	2280	VAL
3	G	2457	LEU
3	G	2611	CYS
3	G	2906	VAL
3	G	2991	HIS
3	G	3157	ILE
3	G	3197	LEU
3	G	3285	TRP
3	G	3312	LEU
3	G	3381	LEU
3	G	3552	PHE
3	G	4580	TYR
3	G	4771	ILE
3	G	4927	ILE
3	G	5013	MET
1	K	22	CYS
1	K	47	LEU
1	K	79	TYR
1	K	82	MET
2	L	23	VAL
3	J	182	LEU
3	J	266	ARG
3	J	791	PHE
3	J	867	LEU
3	J	896	VAL
3	J	1124	PHE
3	J	1235	THR
3	J	1492	CYS

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Mol	Chain	Res	Type
3	J	1509	ILE
3	J	1736	VAL
3	J	2128	TYR
3	J	2267	MET
3	J	2280	VAL
3	J	2457	LEU
3	J	2611	CYS
3	J	2906	VAL
3	J	2991	HIS
3	J	3157	ILE
3	J	3197	LEU
3	J	3285	TRP
3	J	3312	LEU
3	J	3381	LEU
3	J	3552	PHE
3	J	4580	TYR
3	J	4927	ILE
3	J	5013	MET
1	D	22	CYS
1	D	47	LEU
1	D	79	TYR
1	D	82	MET
2	E	23	VAL
3	C	182	LEU
3	C	266	ARG
3	C	759	ILE
3	C	791	PHE
3	C	867	LEU
3	C	896	VAL
3	C	1124	PHE
3	C	1235	THR
3	C	1492	CYS
3	C	1500	PHE
3	C	1509	ILE
3	C	1736	VAL
3	C	2128	TYR
3	C	2267	MET
3	C	2280	VAL
3	C	2457	LEU
3	C	2611	CYS
3	C	2906	VAL
3	C	2991	HIS

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Mol	Chain	Res	Type
3	C	3157	ILE
3	C	3197	LEU
3	C	3285	TRP
3	C	3312	LEU
3	C	3381	LEU
3	C	3552	PHE
3	C	3899	PHE
3	C	4580	TYR
3	C	5013	MET
1	B	22	CYS
1	B	47	LEU
1	B	79	TYR
1	B	82	MET
2	F	23	VAL
3	A	182	LEU
3	A	266	ARG
3	A	791	PHE
3	A	867	LEU
3	A	896	VAL
3	A	1124	PHE
3	A	1235	THR
3	A	1492	CYS
3	A	1500	PHE
3	A	1509	ILE
3	A	1736	VAL
3	A	1944	GLU
3	A	2128	TYR
3	A	2267	MET
3	A	2280	VAL
3	A	2457	LEU
3	A	2611	CYS
3	A	2906	VAL
3	A	2991	HIS
3	A	3157	ILE
3	A	3197	LEU
3	A	3285	TRP
3	A	3312	LEU
3	A	3381	LEU
3	A	3552	PHE
3	A	4580	TYR
3	A	5013	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (156)

such sidechains are listed below:

Mol	Chain	Res	Type
1	H	119	GLN
1	H	122	GLN
2	I	25	HIS
2	I	31	GLN
2	I	94	ASN
3	G	98	HIS
3	G	151	HIS
3	G	226	HIS
3	G	579	GLN
3	G	921	ASN
3	G	991	ASN
3	G	1011	GLN
3	G	1052	ASN
3	G	1066	GLN
3	G	1201	HIS
3	G	1203	ASN
3	G	1274	HIS
3	G	1614	GLN
3	G	1631	GLN
3	G	1861	GLN
3	G	2169	GLN
3	G	2213	ASN
3	G	2441	HIS
3	G	2487	GLN
3	G	2574	HIS
3	G	2772	GLN
3	G	2877	GLN
3	G	2971	GLN
3	G	3180	ASN
3	G	3325	ASN
3	G	3998	HIS
3	G	4246	GLN
3	G	4700	GLN
3	G	4946	GLN
3	G	4973	HIS
1	K	119	GLN
1	K	122	GLN
2	L	25	HIS
2	L	31	GLN
2	L	94	ASN
3	J	98	HIS
3	J	151	HIS

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Mol	Chain	Res	Type
3	J	226	HIS
3	J	394	GLN
3	J	461	HIS
3	J	579	GLN
3	J	921	ASN
3	J	923	GLN
3	J	991	ASN
3	J	1011	GLN
3	J	1052	ASN
3	J	1066	GLN
3	J	1203	ASN
3	J	1274	HIS
3	J	1614	GLN
3	J	1631	GLN
3	J	1861	GLN
3	J	2169	GLN
3	J	2441	HIS
3	J	2487	GLN
3	J	2574	HIS
3	J	2772	GLN
3	J	2877	GLN
3	J	2971	GLN
3	J	3180	ASN
3	J	3325	ASN
3	J	3418	ASN
3	J	3869	GLN
3	J	3998	HIS
3	J	4034	ASN
3	J	4246	GLN
3	J	4857	ASN
3	J	4946	GLN
3	J	4973	HIS
3	J	5003	HIS
1	D	119	GLN
1	D	122	GLN
2	E	31	GLN
2	E	94	ASN
3	C	98	HIS
3	C	151	HIS
3	C	226	HIS
3	C	394	GLN
3	C	461	HIS

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Mol	Chain	Res	Type
3	C	579	GLN
3	C	812	HIS
3	C	919	ASN
3	C	921	ASN
3	C	991	ASN
3	C	1011	GLN
3	C	1052	ASN
3	C	1066	GLN
3	C	1203	ASN
3	C	1274	HIS
3	C	1614	GLN
3	C	1631	GLN
3	C	1861	GLN
3	C	1928	GLN
3	C	2169	GLN
3	C	2441	HIS
3	C	2487	GLN
3	C	2574	HIS
3	C	2877	GLN
3	C	2971	GLN
3	C	3180	ASN
3	C	3325	ASN
3	C	3998	HIS
3	C	4034	ASN
3	C	4216	GLN
3	C	4246	GLN
3	C	4700	GLN
3	C	4946	GLN
3	C	4973	HIS
3	C	5003	HIS
1	B	119	GLN
1	B	122	GLN
2	F	31	GLN
2	F	94	ASN
3	A	98	HIS
3	A	226	HIS
3	A	394	GLN
3	A	461	HIS
3	A	579	GLN
3	A	812	HIS
3	A	848	HIS
3	A	921	ASN

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Mol	Chain	Res	Type
3	A	981	GLN
3	A	991	ASN
3	A	1011	GLN
3	A	1052	ASN
3	A	1066	GLN
3	A	1201	HIS
3	A	1203	ASN
3	A	1274	HIS
3	A	1614	GLN
3	A	1631	GLN
3	A	1691	GLN
3	A	1861	GLN
3	A	1928	GLN
3	A	2169	GLN
3	A	2441	HIS
3	A	2487	GLN
3	A	2574	HIS
3	A	2772	GLN
3	A	2877	GLN
3	A	2971	GLN
3	A	3180	ASN
3	A	3325	ASN
3	A	3860	ASN
3	A	3998	HIS
3	A	4216	GLN
3	A	4246	GLN
3	A	4700	GLN
3	A	4857	ASN
3	A	4946	GLN
3	A	4973	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 40 ligands modelled in this entry, 8 are monoatomic - leaving 32 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	$\#\|Z\| > 2$
8	POV	J	5108	-	44,44,51	0.52	0	50,52,59	0.51	0
8	POV	J	5110	-	28,28,51	0.64	0	34,36,59	0.63	0
8	POV	G	5105	-	33,33,51	0.60	0	39,41,59	0.50	0
8	POV	C	5108	-	37,37,51	0.58	0	43,45,59	0.52	0
6	CFF	J	5104	-	8,15,15	1.11	1 (12%)	8,23,23	2.49	2 (25%)
6	CFF	C	5103	-	8,15,15	1.11	1 (12%)	8,23,23	2.49	2 (25%)
8	POV	C	5105	-	33,33,51	0.60	0	39,41,59	0.50	0
8	POV	J	5107	-	35,35,51	0.60	0	41,43,59	0.58	0
8	POV	G	5108	-	12,12,51	0.20	0	11,11,59	0.27	0
5	ATP	J	5103	-	26,33,33	0.62	0	31,52,52	0.81	1 (3%)
8	POV	J	5101	-	44,44,51	0.52	0	50,52,59	0.51	0
8	POV	G	5107	-	44,44,51	0.52	0	50,52,59	0.51	0
5	ATP	A	5102	-	26,33,33	0.62	0	31,52,52	0.81	1 (3%)
8	POV	J	5109	-	37,37,51	0.58	0	43,45,59	0.52	0
8	POV	C	5110	-	12,12,51	0.20	0	11,11,59	0.27	0
8	POV	G	5106	-	35,35,51	0.60	0	41,43,59	0.58	0
8	POV	C	5109	-	28,28,51	0.64	0	34,36,59	0.63	0
6	CFF	A	5103	-	8,15,15	1.11	1 (12%)	8,23,23	2.49	2 (25%)
8	POV	G	5109	-	37,37,51	0.58	0	43,45,59	0.52	0
5	ATP	G	5102	-	26,33,33	0.62	0	31,52,52	0.81	1 (3%)
8	POV	G	5110	-	28,28,51	0.64	0	34,36,59	0.63	0
8	POV	A	5105	-	33,33,51	0.60	0	39,41,59	0.50	0
8	POV	C	5106	-	35,35,51	0.60	0	41,43,59	0.58	0
8	POV	A	5108	-	12,12,51	0.20	0	11,11,59	0.27	0
8	POV	A	5110	-	28,28,51	0.64	0	34,36,59	0.63	0
8	POV	C	5107	-	12,12,51	0.20	0	11,11,59	0.27	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
8	POV	A	5106	-	35,35,51	0.60	0	41,43,59	0.58	0
8	POV	A	5107	-	44,44,51	0.52	0	50,52,59	0.51	0
6	CFF	G	5103	-	8,15,15	1.11	1 (12%)	8,23,23	2.49	2 (25%)
8	POV	J	5106	-	33,33,51	0.60	0	39,41,59	0.50	0
5	ATP	C	5102	-	26,33,33	0.62	0	31,52,52	0.81	1 (3%)
8	POV	A	5109	-	37,37,51	0.58	0	43,45,59	0.52	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
8	POV	J	5108	-	-	12/48/48/55	-
8	POV	J	5110	-	-	9/32/32/55	-
8	POV	G	5105	-	-	10/37/37/55	-
8	POV	C	5108	-	-	16/41/41/55	-
6	CFF	J	5104	-	-	-	0/2/2/2
6	CFF	C	5103	-	-	-	0/2/2/2
8	POV	C	5105	-	-	10/37/37/55	-
8	POV	J	5107	-	-	11/39/39/55	-
8	POV	G	5108	-	-	2/10/10/55	-
5	ATP	J	5103	-	-	1/18/38/38	0/3/3/3
8	POV	J	5101	-	-	12/48/48/55	-
8	POV	G	5107	-	-	12/48/48/55	-
5	ATP	A	5102	-	-	1/18/38/38	0/3/3/3
8	POV	J	5109	-	-	16/41/41/55	-
8	POV	C	5110	-	-	2/10/10/55	-
8	POV	G	5106	-	-	11/39/39/55	-
8	POV	C	5109	-	-	9/32/32/55	-
6	CFF	A	5103	-	-	-	0/2/2/2
8	POV	G	5109	-	-	16/41/41/55	-
5	ATP	G	5102	-	-	1/18/38/38	0/3/3/3
8	POV	G	5110	-	-	9/32/32/55	-
8	POV	A	5105	-	-	10/37/37/55	-
8	POV	C	5106	-	-	11/39/39/55	-
8	POV	A	5108	-	-	2/10/10/55	-
8	POV	A	5110	-	-	9/32/32/55	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	POV	C	5107	-	-	2/10/10/55	-
8	POV	A	5106	-	-	11/39/39/55	-
8	POV	A	5107	-	-	12/48/48/55	-
6	CFF	G	5103	-	-	-	0/2/2/2
8	POV	J	5106	-	-	10/37/37/55	-
5	ATP	C	5102	-	-	1/18/38/38	0/3/3/3
8	POV	A	5109	-	-	16/41/41/55	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	5103	CFF	C5-C4	-2.03	1.36	1.39
6	C	5103	CFF	C5-C4	-2.03	1.36	1.39
6	G	5103	CFF	C5-C4	-2.03	1.36	1.39
6	J	5104	CFF	C5-C4	-2.03	1.36	1.39

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	G	5103	CFF	C5-C6-N1	-5.83	111.98	118.20
6	J	5104	CFF	C5-C6-N1	-5.83	111.98	118.20
6	C	5103	CFF	C5-C6-N1	-5.83	111.98	118.20
6	A	5103	CFF	C5-C6-N1	-5.83	111.98	118.20
6	J	5104	CFF	C4-C5-C6	3.63	122.29	119.96
6	C	5103	CFF	C4-C5-C6	3.63	122.29	119.96
6	G	5103	CFF	C4-C5-C6	3.62	122.29	119.96
6	A	5103	CFF	C4-C5-C6	3.62	122.29	119.96
5	J	5103	ATP	C5-C6-N6	2.25	123.78	120.35
5	G	5102	ATP	C5-C6-N6	2.25	123.78	120.35
5	C	5102	ATP	C5-C6-N6	2.25	123.78	120.35
5	A	5102	ATP	C5-C6-N6	2.25	123.77	120.35

There are no chirality outliers.

All (244) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	G	5105	POV	O22-C21-O21-C2
8	G	5106	POV	C1-O11-P-O12
8	G	5106	POV	C1-O11-P-O13
8	G	5106	POV	C1-O11-P-O14

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Mol	Chain	Res	Type	Atoms
8	G	5106	POV	C12-C11-O12-P
8	G	5107	POV	C1-O11-P-O13
8	G	5107	POV	C11-O12-P-O14
8	G	5107	POV	O12-C11-C12-N
8	G	5107	POV	O22-C21-O21-C2
8	G	5109	POV	C1-O11-P-O13
8	G	5109	POV	C11-O12-P-O14
8	G	5110	POV	C1-O11-P-O13
8	G	5110	POV	C1-O11-P-O14
8	G	5110	POV	O12-C11-C12-N
8	J	5101	POV	C1-O11-P-O13
8	J	5101	POV	C11-O12-P-O14
8	J	5101	POV	O12-C11-C12-N
8	J	5101	POV	O22-C21-O21-C2
8	J	5106	POV	O22-C21-O21-C2
8	J	5107	POV	C1-O11-P-O12
8	J	5107	POV	C1-O11-P-O13
8	J	5107	POV	C1-O11-P-O14
8	J	5107	POV	C12-C11-O12-P
8	J	5108	POV	C1-O11-P-O13
8	J	5108	POV	C11-O12-P-O14
8	J	5108	POV	O12-C11-C12-N
8	J	5108	POV	O22-C21-O21-C2
8	J	5109	POV	C1-O11-P-O13
8	J	5109	POV	C11-O12-P-O14
8	J	5110	POV	C1-O11-P-O13
8	J	5110	POV	C1-O11-P-O14
8	J	5110	POV	O12-C11-C12-N
8	C	5105	POV	O22-C21-O21-C2
8	C	5106	POV	C1-O11-P-O12
8	C	5106	POV	C1-O11-P-O13
8	C	5106	POV	C1-O11-P-O14
8	C	5106	POV	C12-C11-O12-P
8	C	5108	POV	C1-O11-P-O13
8	C	5108	POV	C11-O12-P-O14
8	C	5109	POV	C1-O11-P-O13
8	C	5109	POV	C1-O11-P-O14
8	C	5109	POV	O12-C11-C12-N
8	A	5105	POV	O22-C21-O21-C2
8	A	5106	POV	C1-O11-P-O12
8	A	5106	POV	C1-O11-P-O13
8	A	5106	POV	C1-O11-P-O14

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Mol	Chain	Res	Type	Atoms
8	A	5106	POV	C12-C11-O12-P
8	A	5107	POV	C1-O11-P-O13
8	A	5107	POV	C11-O12-P-O14
8	A	5107	POV	O12-C11-C12-N
8	A	5107	POV	O22-C21-O21-C2
8	A	5109	POV	C1-O11-P-O13
8	A	5109	POV	C11-O12-P-O14
8	A	5110	POV	C1-O11-P-O13
8	A	5110	POV	C1-O11-P-O14
8	A	5110	POV	O12-C11-C12-N
8	G	5105	POV	C22-C21-O21-C2
8	G	5107	POV	C22-C21-O21-C2
8	J	5101	POV	C22-C21-O21-C2
8	J	5106	POV	C22-C21-O21-C2
8	J	5108	POV	C22-C21-O21-C2
8	C	5105	POV	C22-C21-O21-C2
8	A	5105	POV	C22-C21-O21-C2
8	A	5107	POV	C22-C21-O21-C2
8	G	5105	POV	C11-O12-P-O11
8	G	5107	POV	C1-O11-P-O12
8	G	5107	POV	C11-O12-P-O11
8	G	5109	POV	C11-O12-P-O11
8	G	5110	POV	C1-O11-P-O12
8	G	5110	POV	C11-O12-P-O11
8	J	5101	POV	C1-O11-P-O12
8	J	5101	POV	C11-O12-P-O11
8	J	5106	POV	C11-O12-P-O11
8	J	5108	POV	C1-O11-P-O12
8	J	5108	POV	C11-O12-P-O11
8	J	5109	POV	C11-O12-P-O11
8	J	5110	POV	C1-O11-P-O12
8	J	5110	POV	C11-O12-P-O11
8	C	5105	POV	C11-O12-P-O11
8	C	5108	POV	C11-O12-P-O11
8	C	5109	POV	C1-O11-P-O12
8	C	5109	POV	C11-O12-P-O11
8	A	5105	POV	C11-O12-P-O11
8	A	5107	POV	C1-O11-P-O12
8	A	5107	POV	C11-O12-P-O11
8	A	5109	POV	C11-O12-P-O11
8	A	5110	POV	C1-O11-P-O12
8	A	5110	POV	C11-O12-P-O11

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Mol	Chain	Res	Type	Atoms
8	G	5109	POV	C26-C27-C28-C29
8	J	5109	POV	C26-C27-C28-C29
8	C	5108	POV	C26-C27-C28-C29
8	A	5109	POV	C26-C27-C28-C29
8	G	5108	POV	C211-C212-C213-C214
8	C	5107	POV	C211-C212-C213-C214
8	C	5110	POV	C211-C212-C213-C214
8	A	5108	POV	C211-C212-C213-C214
8	G	5109	POV	C25-C26-C27-C28
8	J	5109	POV	C25-C26-C27-C28
8	C	5108	POV	C25-C26-C27-C28
8	A	5109	POV	C25-C26-C27-C28
8	G	5105	POV	C32-C31-O31-C3
8	J	5106	POV	C32-C31-O31-C3
8	C	5105	POV	C32-C31-O31-C3
8	A	5105	POV	C32-C31-O31-C3
8	G	5109	POV	C32-C31-O31-C3
8	J	5109	POV	C32-C31-O31-C3
8	C	5108	POV	C32-C31-O31-C3
8	A	5109	POV	C32-C31-O31-C3
8	G	5105	POV	O32-C31-O31-C3
8	J	5106	POV	O32-C31-O31-C3
8	C	5105	POV	O32-C31-O31-C3
8	A	5105	POV	O32-C31-O31-C3
8	G	5109	POV	O32-C31-O31-C3
8	J	5109	POV	O32-C31-O31-C3
8	C	5108	POV	O32-C31-O31-C3
8	A	5109	POV	O32-C31-O31-C3
8	G	5109	POV	O11-C1-C2-C3
8	J	5109	POV	O11-C1-C2-C3
8	C	5108	POV	O11-C1-C2-C3
8	A	5109	POV	O11-C1-C2-C3
8	G	5109	POV	O11-C1-C2-O21
8	J	5109	POV	O11-C1-C2-O21
8	C	5108	POV	O11-C1-C2-O21
8	A	5109	POV	O11-C1-C2-O21
8	G	5106	POV	C11-O12-P-O11
8	J	5107	POV	C11-O12-P-O11
8	C	5106	POV	C11-O12-P-O11
8	A	5106	POV	C11-O12-P-O11
8	G	5106	POV	C2-C1-O11-P
8	J	5107	POV	C2-C1-O11-P

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Mol	Chain	Res	Type	Atoms
8	C	5106	POV	C2-C1-O11-P
8	A	5106	POV	C2-C1-O11-P
8	G	5105	POV	C11-O12-P-O14
8	G	5106	POV	C11-O12-P-O13
8	G	5107	POV	C11-O12-P-O13
8	G	5109	POV	C11-O12-P-O13
8	G	5110	POV	C11-O12-P-O14
8	J	5101	POV	C11-O12-P-O13
8	J	5106	POV	C11-O12-P-O14
8	J	5107	POV	C11-O12-P-O13
8	J	5108	POV	C11-O12-P-O13
8	J	5109	POV	C11-O12-P-O13
8	J	5110	POV	C11-O12-P-O14
8	C	5105	POV	C11-O12-P-O14
8	C	5106	POV	C11-O12-P-O13
8	C	5108	POV	C11-O12-P-O13
8	C	5109	POV	C11-O12-P-O14
8	A	5105	POV	C11-O12-P-O14
8	A	5106	POV	C11-O12-P-O13
8	A	5107	POV	C11-O12-P-O13
8	A	5109	POV	C11-O12-P-O13
8	A	5110	POV	C11-O12-P-O14
8	G	5109	POV	C12-C11-O12-P
8	J	5109	POV	C12-C11-O12-P
8	C	5108	POV	C12-C11-O12-P
8	A	5109	POV	C12-C11-O12-P
8	G	5106	POV	O11-C1-C2-O21
8	J	5107	POV	O11-C1-C2-O21
8	C	5106	POV	O11-C1-C2-O21
8	A	5106	POV	O11-C1-C2-O21
8	G	5109	POV	C1-O11-P-O12
8	J	5109	POV	C1-O11-P-O12
8	C	5108	POV	C1-O11-P-O12
8	A	5109	POV	C1-O11-P-O12
8	G	5106	POV	O22-C21-O21-C2
8	J	5107	POV	O22-C21-O21-C2
8	C	5106	POV	O22-C21-O21-C2
8	A	5106	POV	O22-C21-O21-C2
8	J	5106	POV	C25-C26-C27-C28
8	A	5105	POV	C25-C26-C27-C28
8	G	5105	POV	C25-C26-C27-C28
8	C	5105	POV	C25-C26-C27-C28

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Mol	Chain	Res	Type	Atoms
8	J	5101	POV	C214-C215-C216-C217
8	G	5107	POV	C214-C215-C216-C217
8	J	5108	POV	C214-C215-C216-C217
8	A	5107	POV	C214-C215-C216-C217
8	G	5106	POV	C22-C21-O21-C2
8	J	5107	POV	C22-C21-O21-C2
8	C	5106	POV	C22-C21-O21-C2
8	A	5106	POV	C22-C21-O21-C2
8	G	5109	POV	C21-C22-C23-C24
8	J	5109	POV	C21-C22-C23-C24
8	C	5108	POV	C21-C22-C23-C24
8	A	5109	POV	C21-C22-C23-C24
8	G	5110	POV	C11-C12-N-C13
8	J	5110	POV	C11-C12-N-C13
8	C	5109	POV	C11-C12-N-C13
8	A	5110	POV	C11-C12-N-C13
8	G	5108	POV	C26-C27-C28-C29
8	C	5107	POV	C26-C27-C28-C29
8	C	5110	POV	C26-C27-C28-C29
8	A	5108	POV	C26-C27-C28-C29
8	G	5110	POV	C11-C12-N-C15
8	J	5110	POV	C11-C12-N-C15
8	C	5109	POV	C11-C12-N-C15
8	A	5110	POV	C11-C12-N-C15
8	G	5109	POV	O21-C2-C3-O31
8	J	5109	POV	O21-C2-C3-O31
8	C	5108	POV	O21-C2-C3-O31
8	A	5109	POV	O21-C2-C3-O31
8	G	5105	POV	O31-C31-C32-C33
8	J	5106	POV	O31-C31-C32-C33
8	C	5105	POV	O31-C31-C32-C33
8	A	5105	POV	O31-C31-C32-C33
8	G	5107	POV	C29-C210-C211-C212
8	J	5101	POV	C29-C210-C211-C212
8	J	5108	POV	C29-C210-C211-C212
8	A	5107	POV	C29-C210-C211-C212
8	G	5109	POV	C1-O11-P-O14
8	G	5110	POV	C11-C12-N-C14
8	J	5109	POV	C1-O11-P-O14
8	J	5110	POV	C11-C12-N-C14
8	C	5108	POV	C1-O11-P-O14
8	C	5109	POV	C11-C12-N-C14

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Mol	Chain	Res	Type	Atoms
8	A	5109	POV	C1-O11-P-O14
8	A	5110	POV	C11-C12-N-C14
5	G	5102	ATP	O4'-C4'-C5'-O5'
5	J	5103	ATP	O4'-C4'-C5'-O5'
5	C	5102	ATP	O4'-C4'-C5'-O5'
5	A	5102	ATP	O4'-C4'-C5'-O5'
8	G	5106	POV	O11-C1-C2-C3
8	J	5107	POV	O11-C1-C2-C3
8	C	5106	POV	O11-C1-C2-C3
8	A	5106	POV	O11-C1-C2-C3
8	G	5109	POV	C27-C28-C29-C210
8	J	5109	POV	C27-C28-C29-C210
8	C	5108	POV	C27-C28-C29-C210
8	A	5109	POV	C27-C28-C29-C210
8	G	5107	POV	O21-C21-C22-C23
8	J	5108	POV	O21-C21-C22-C23
8	J	5101	POV	O21-C21-C22-C23
8	A	5107	POV	O21-C21-C22-C23
8	G	5105	POV	O11-C1-C2-O21
8	J	5106	POV	O11-C1-C2-O21
8	C	5105	POV	O11-C1-C2-O21
8	A	5105	POV	O11-C1-C2-O21
8	G	5105	POV	O32-C31-C32-C33
8	J	5106	POV	O32-C31-C32-C33
8	C	5105	POV	O32-C31-C32-C33
8	A	5105	POV	O32-C31-C32-C33
8	A	5107	POV	C33-C34-C35-C36
8	G	5107	POV	C33-C34-C35-C36
8	J	5101	POV	C33-C34-C35-C36
8	J	5108	POV	C33-C34-C35-C36

There are no ring outliers.

16 monomers are involved in 25 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	J	5108	POV	2	0
8	C	5108	POV	1	0
8	J	5107	POV	2	0
8	G	5108	POV	1	0
8	J	5101	POV	3	0
8	G	5107	POV	2	0
8	C	5110	POV	1	0

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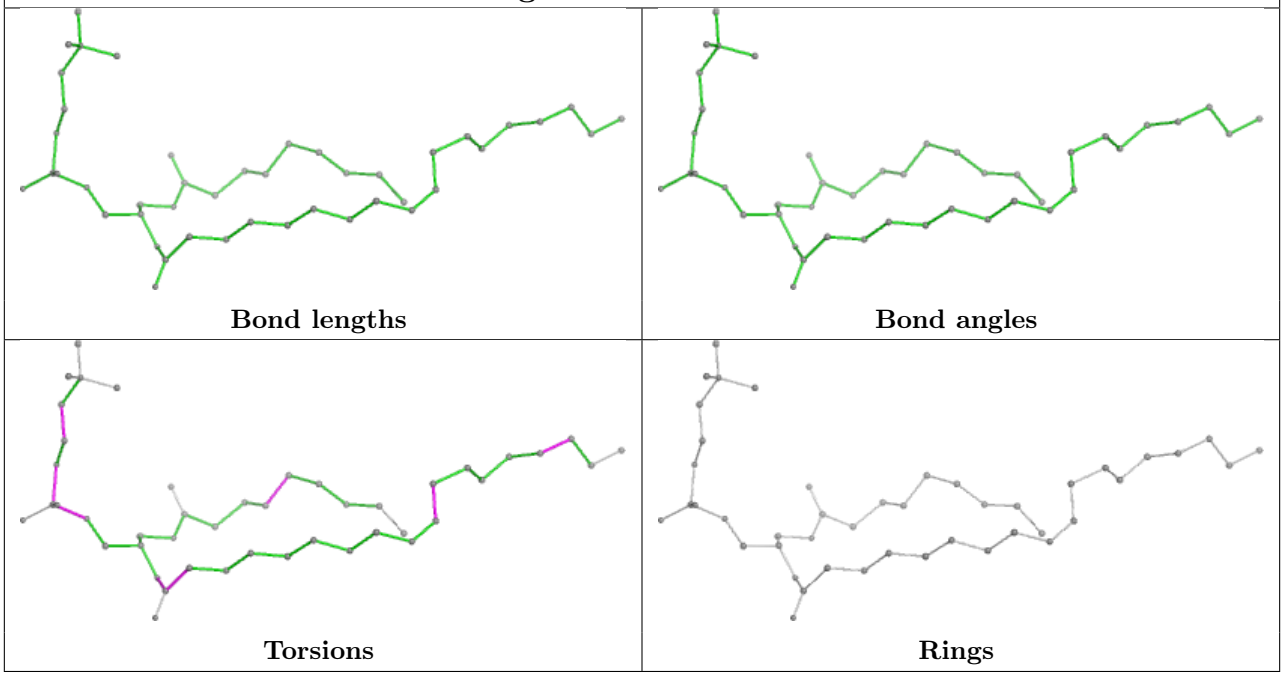
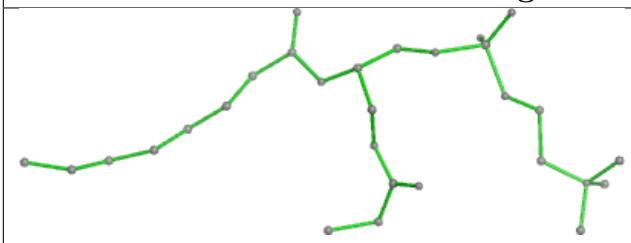
Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	G	5106	POV	2	0
8	C	5109	POV	1	0
8	G	5110	POV	1	0
8	C	5106	POV	2	0
8	A	5108	POV	1	0
8	A	5110	POV	1	0
8	C	5107	POV	1	0
8	A	5106	POV	2	0
8	A	5107	POV	2	0

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.

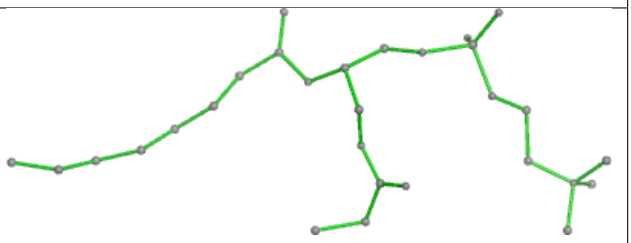
Ligand POV J 5108



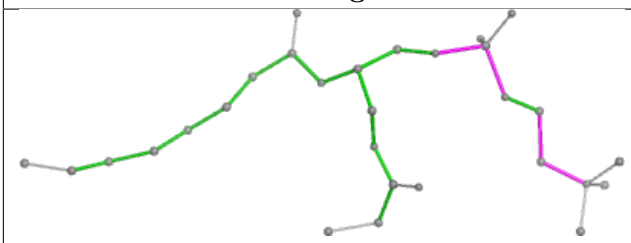
Ligand POV J 5110



Bond lengths



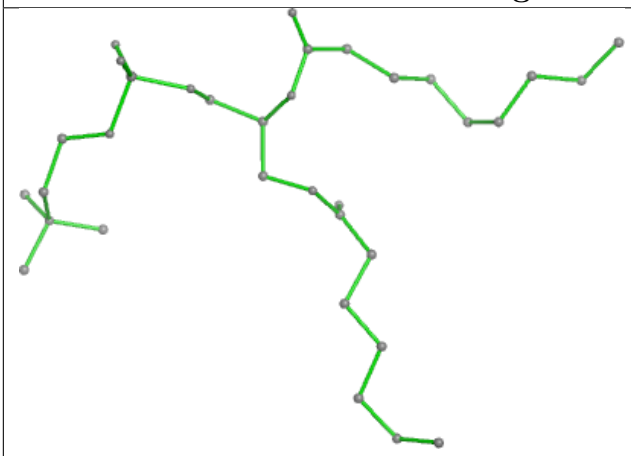
Bond angles



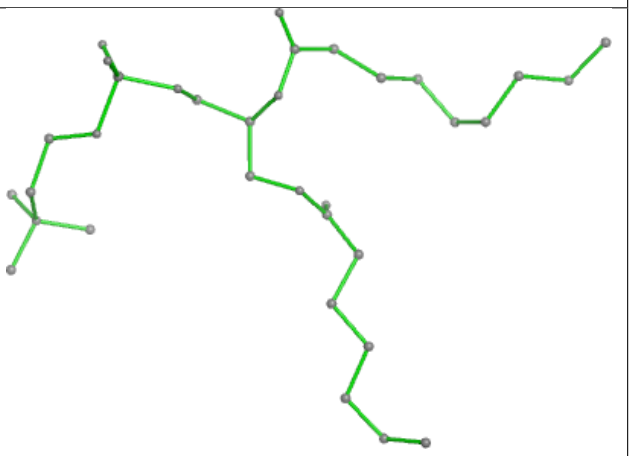
Torsions

Rings

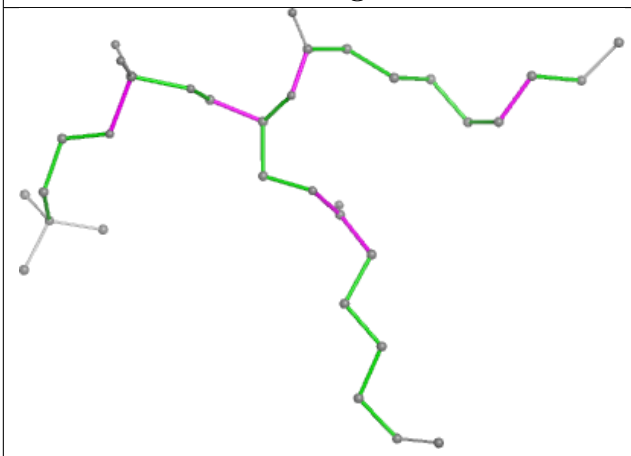
Ligand POV G 5105



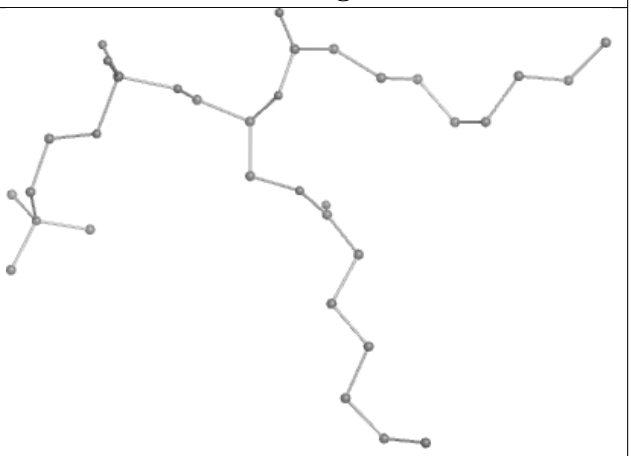
Bond lengths



Bond angles

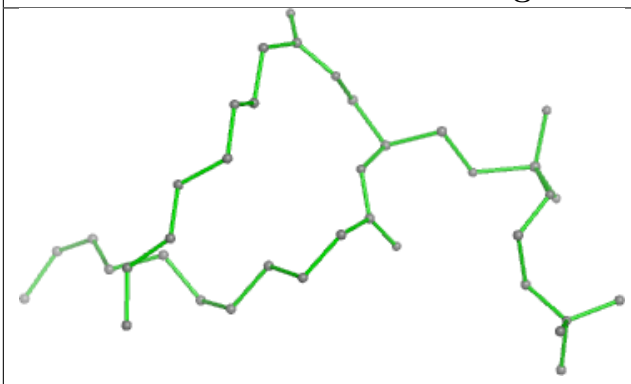


Torsions

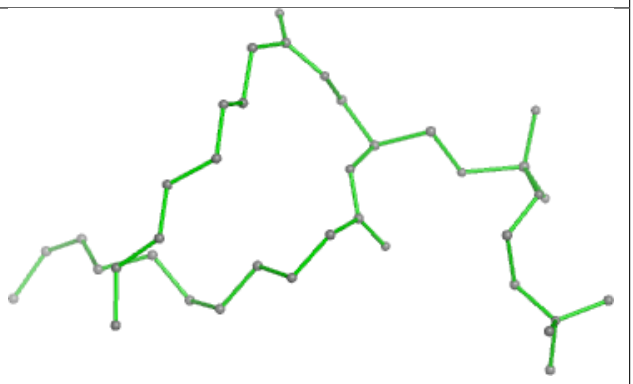


Rings

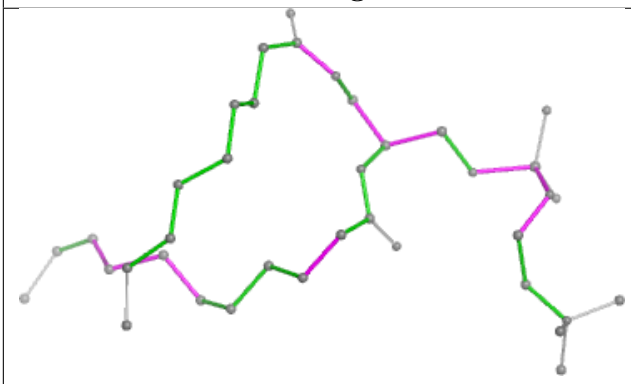
Ligand POV C 5108



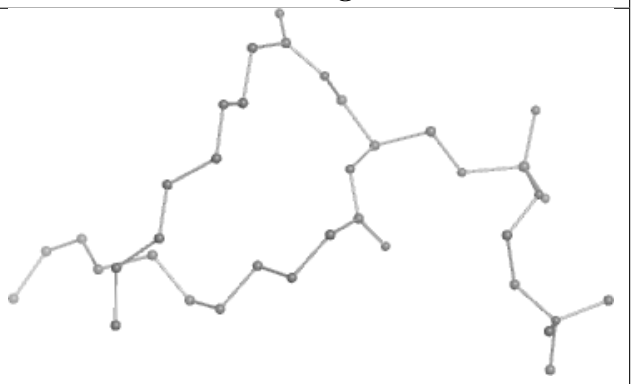
Bond lengths



Bond angles

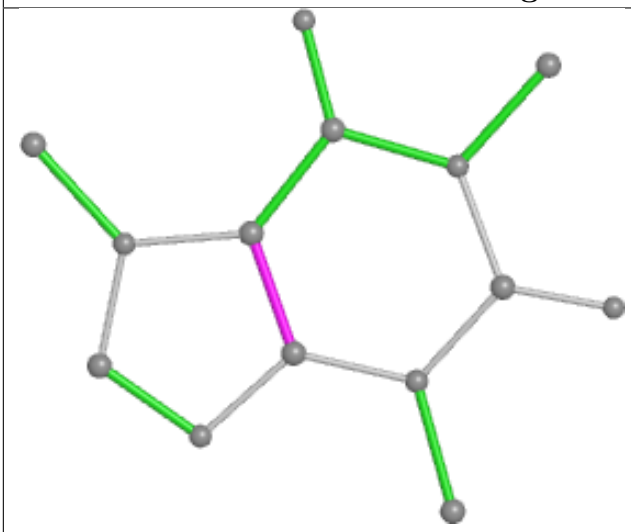


Torsions

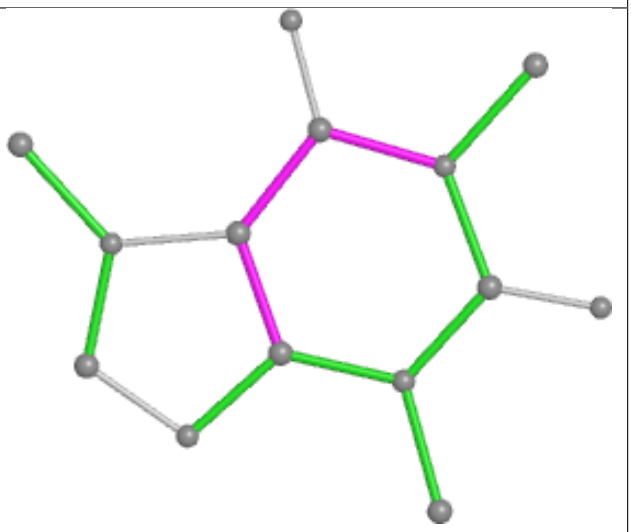


Rings

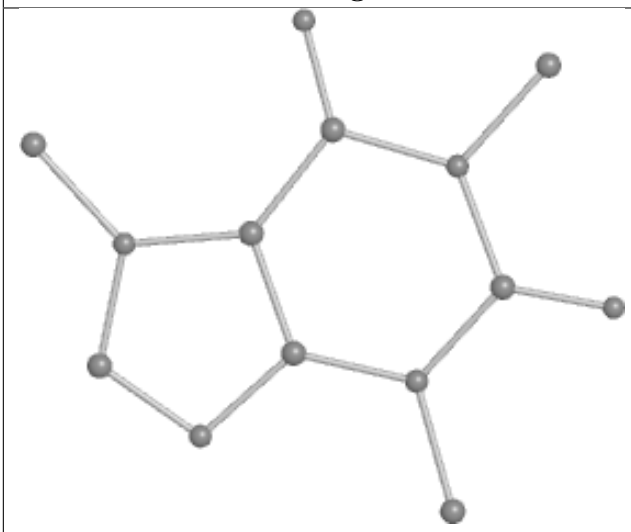
Ligand CFF J 5104



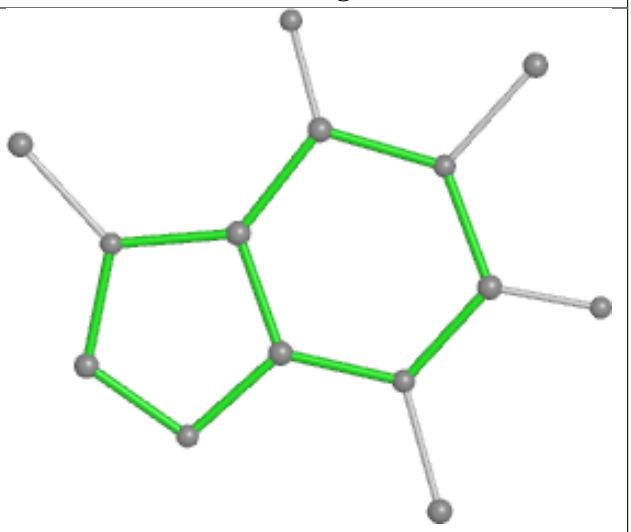
Bond lengths



Bond angles

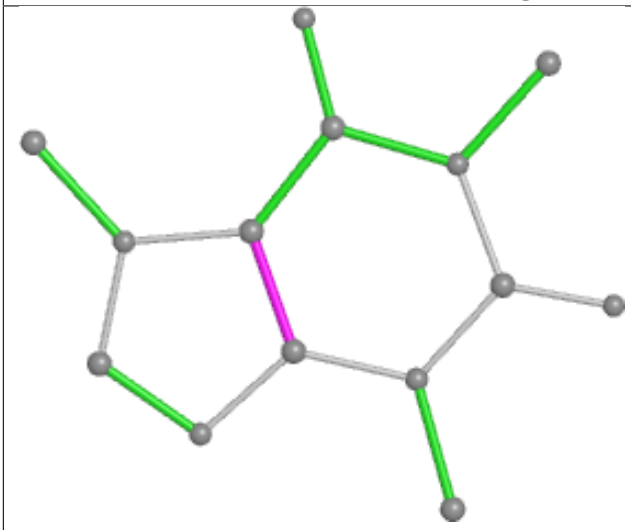


Torsions

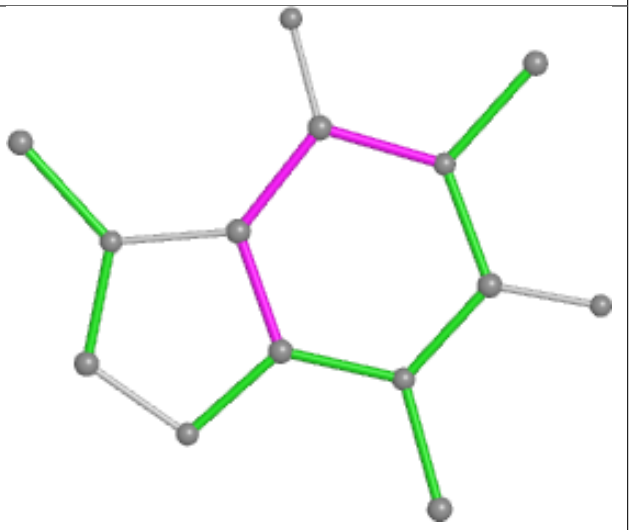


Rings

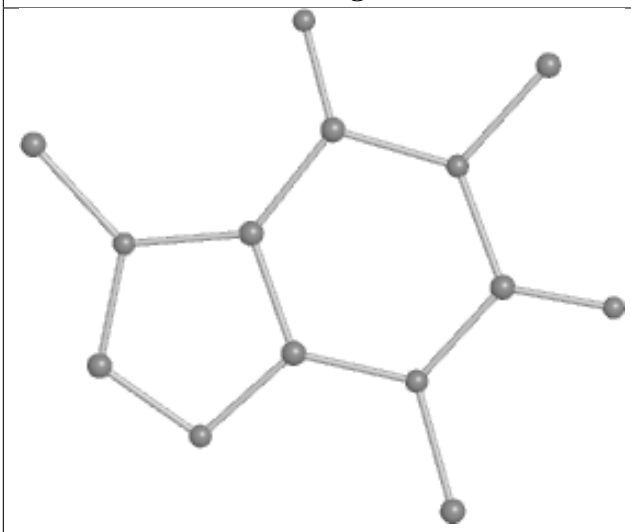
Ligand CFF C 5103



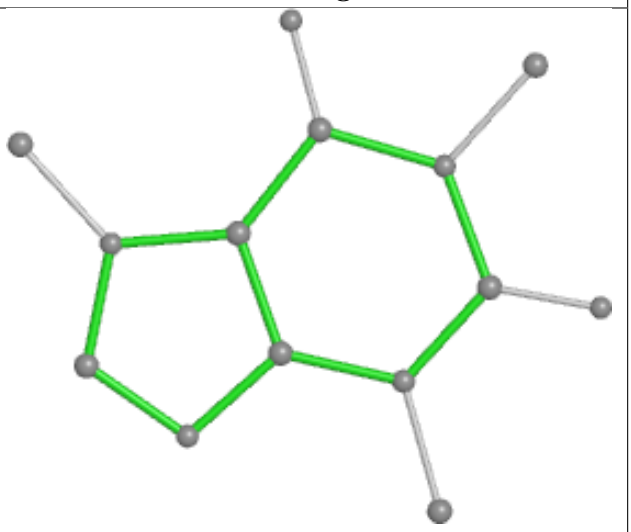
Bond lengths



Bond angles

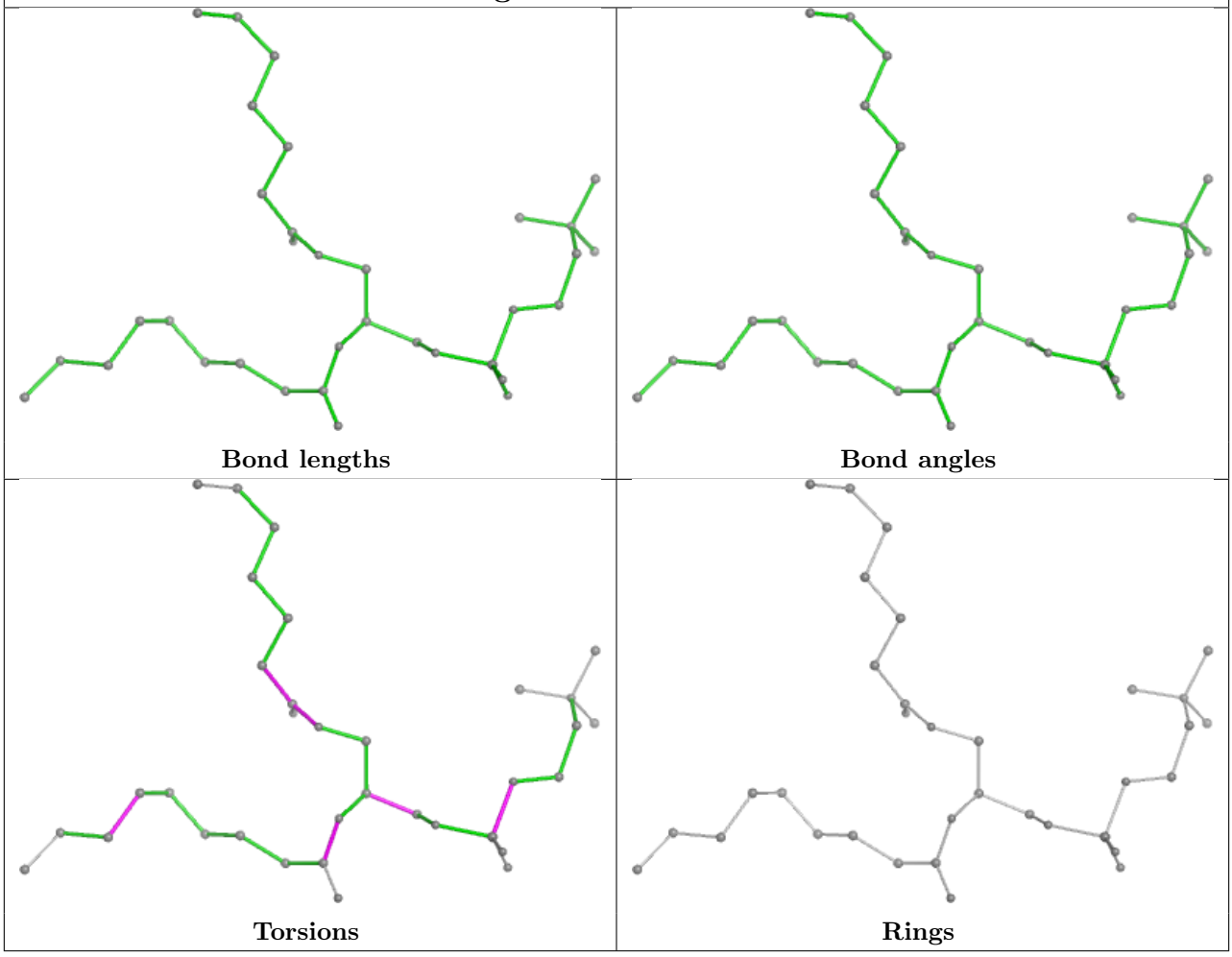


Torsions

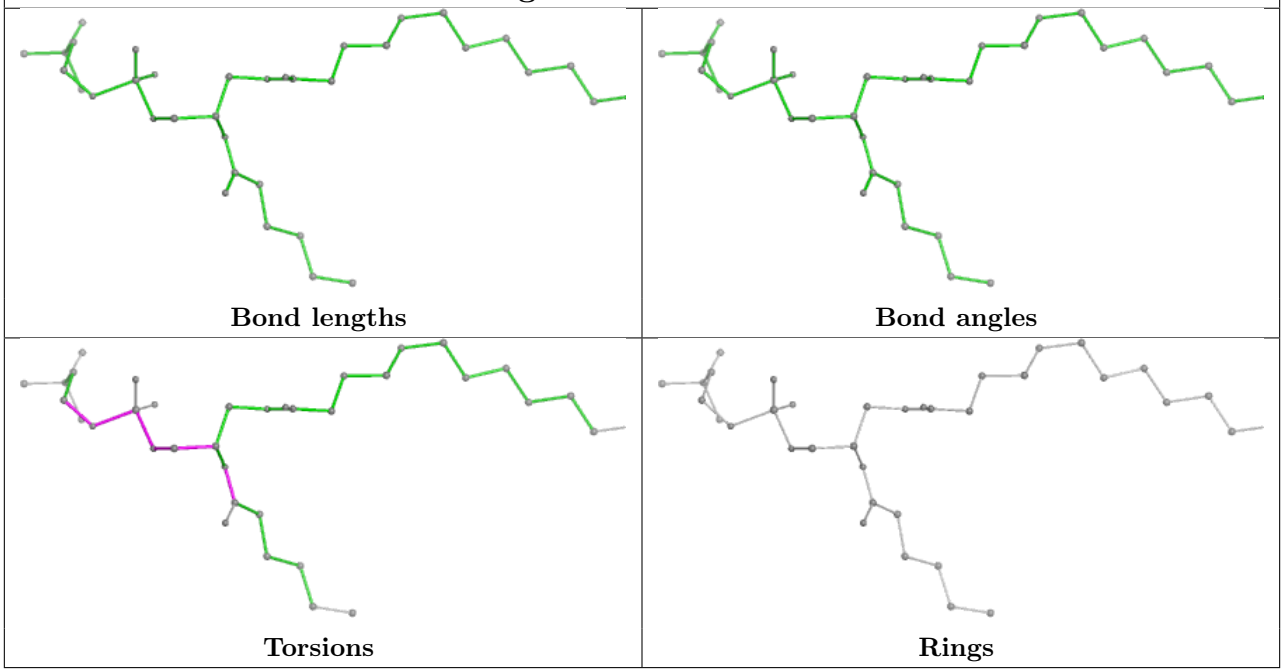


Rings

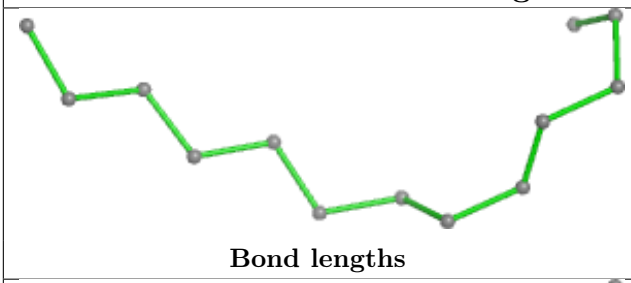
Ligand POV C 5105



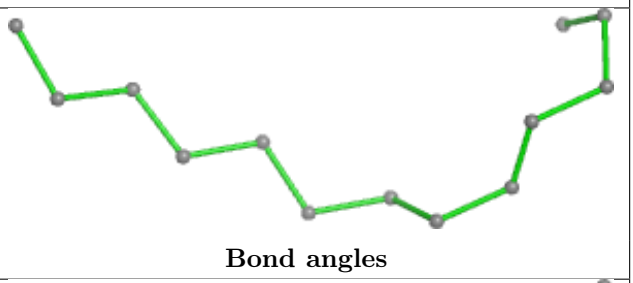
Ligand POV J 5107



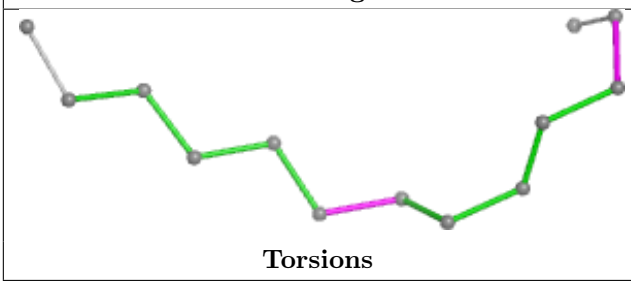
Ligand POV G 5108



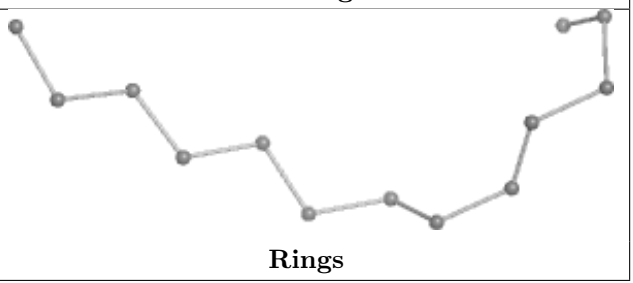
Bond lengths



Bond angles

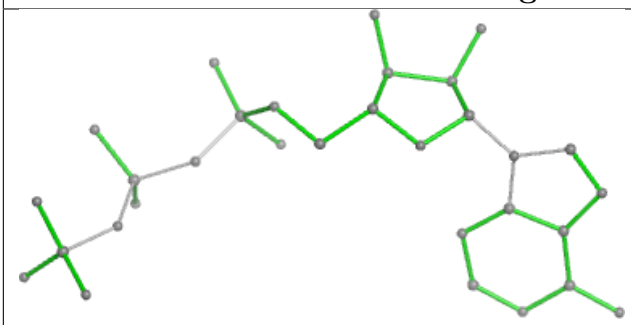


Torsions

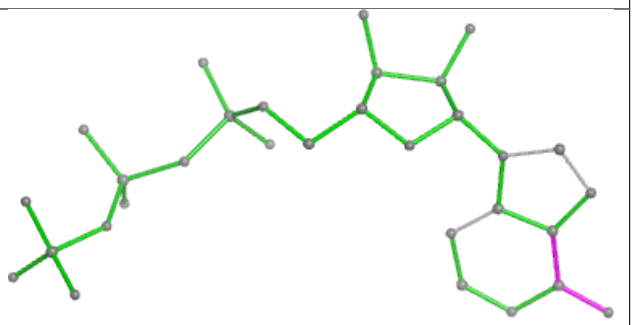


Rings

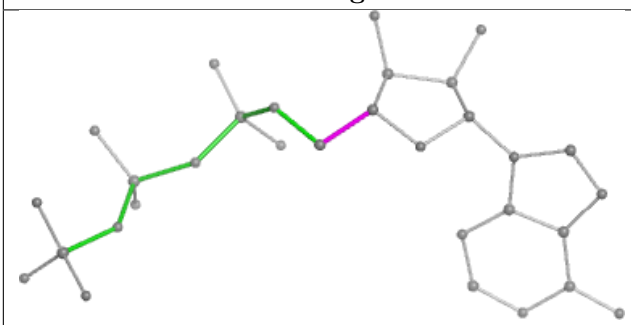
Ligand ATP J 5103



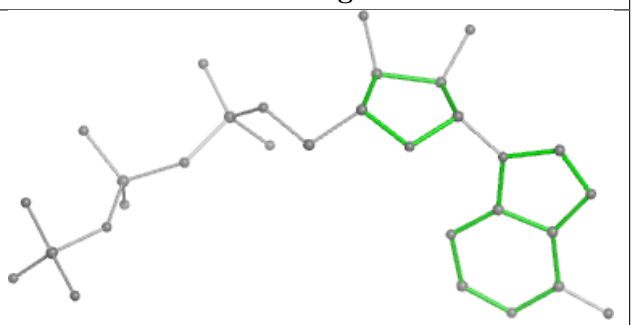
Bond lengths



Bond angles

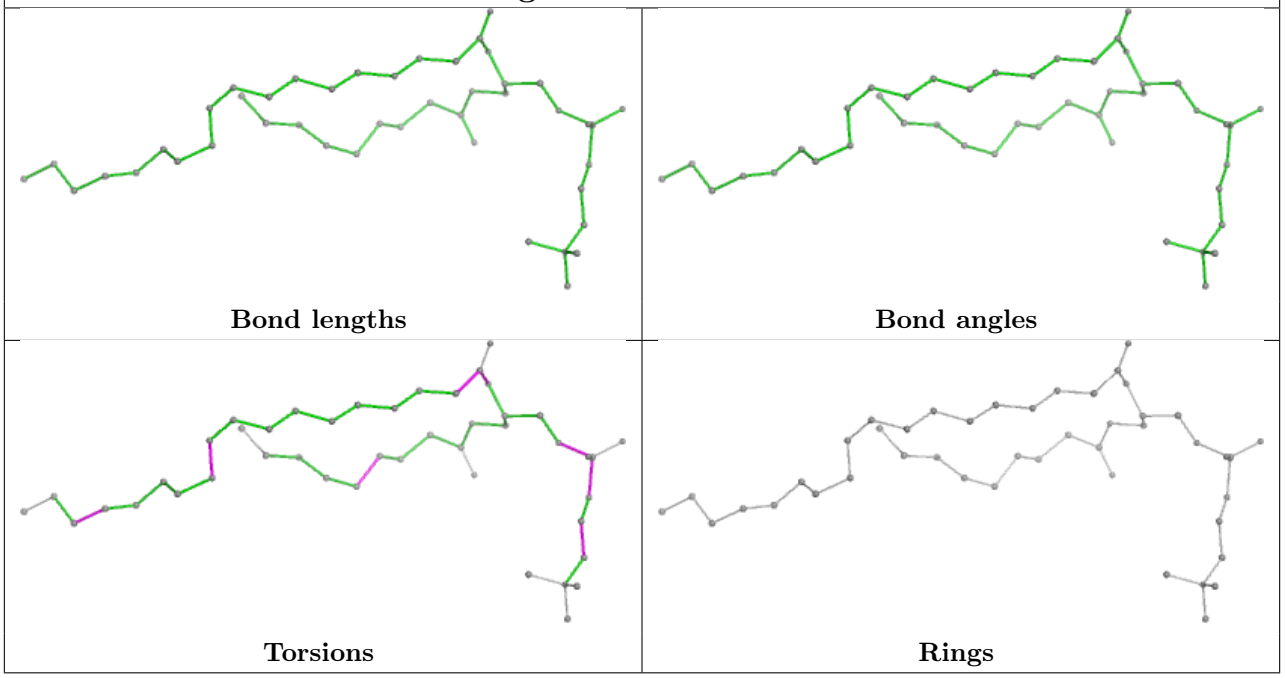


Torsions

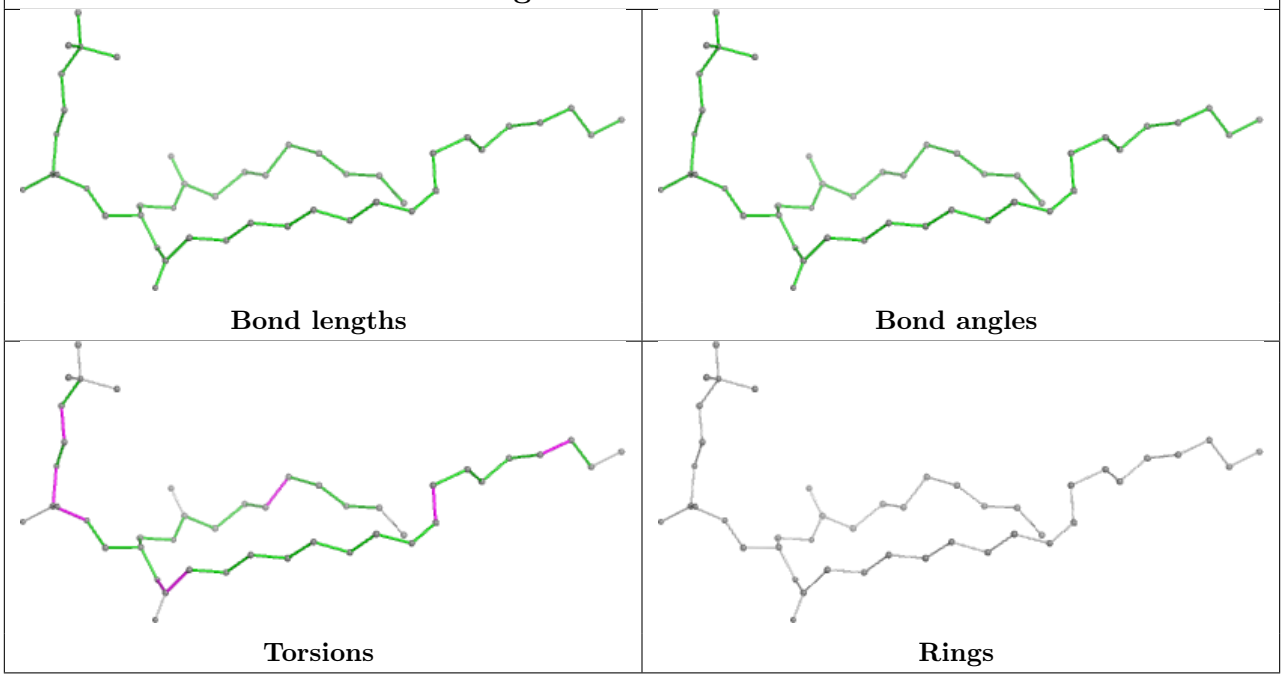


Rings

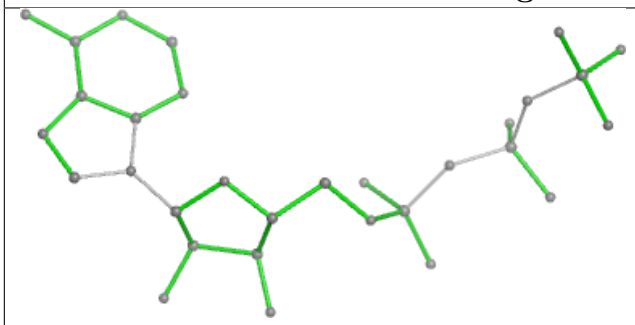
Ligand POV J 5101



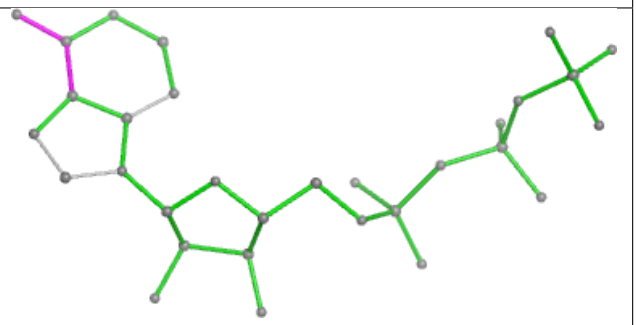
Ligand POV G 5107



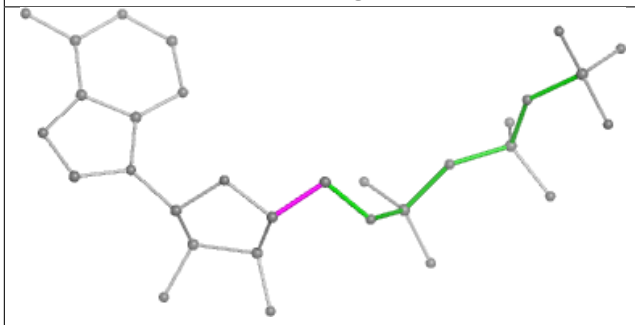
Ligand ATP A 5102



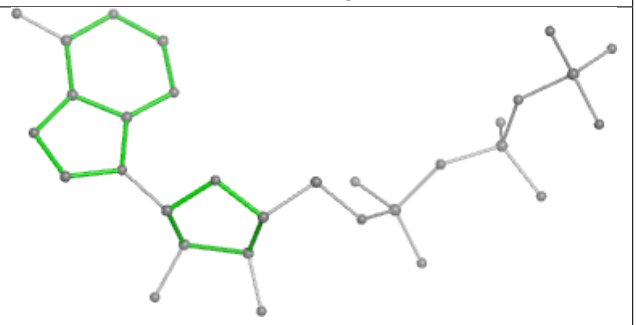
Bond lengths



Bond angles

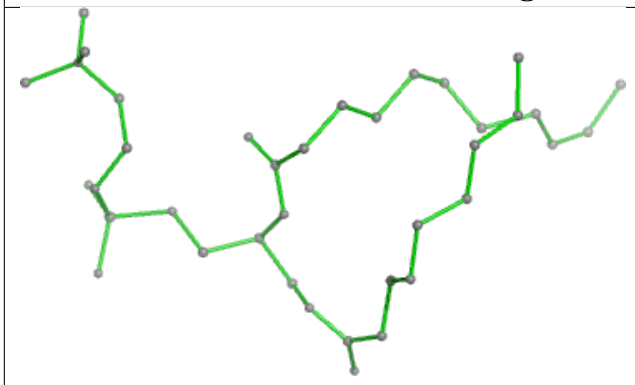


Torsions

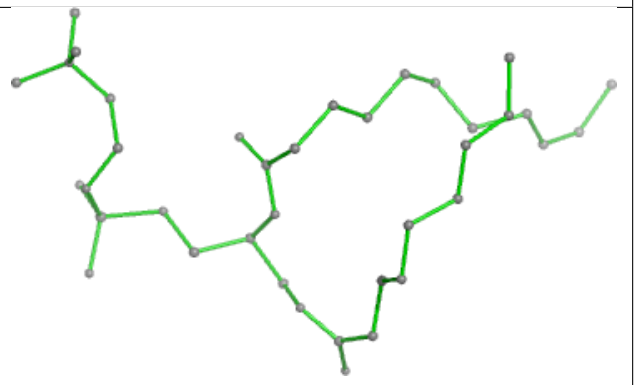


Rings

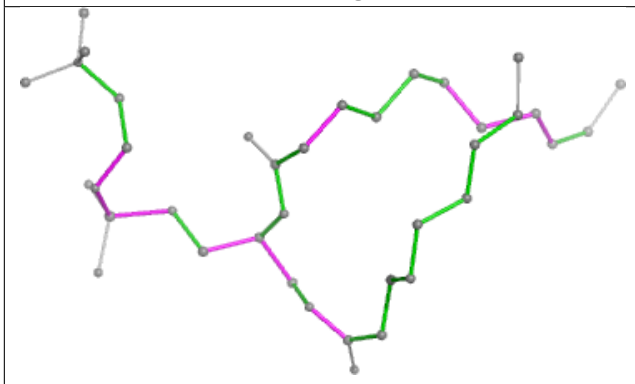
Ligand POV J 5109



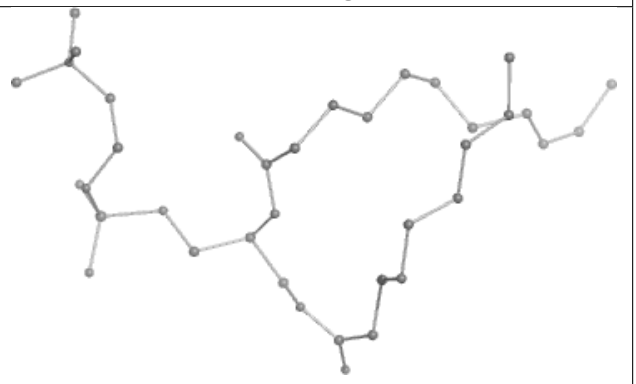
Bond lengths



Bond angles

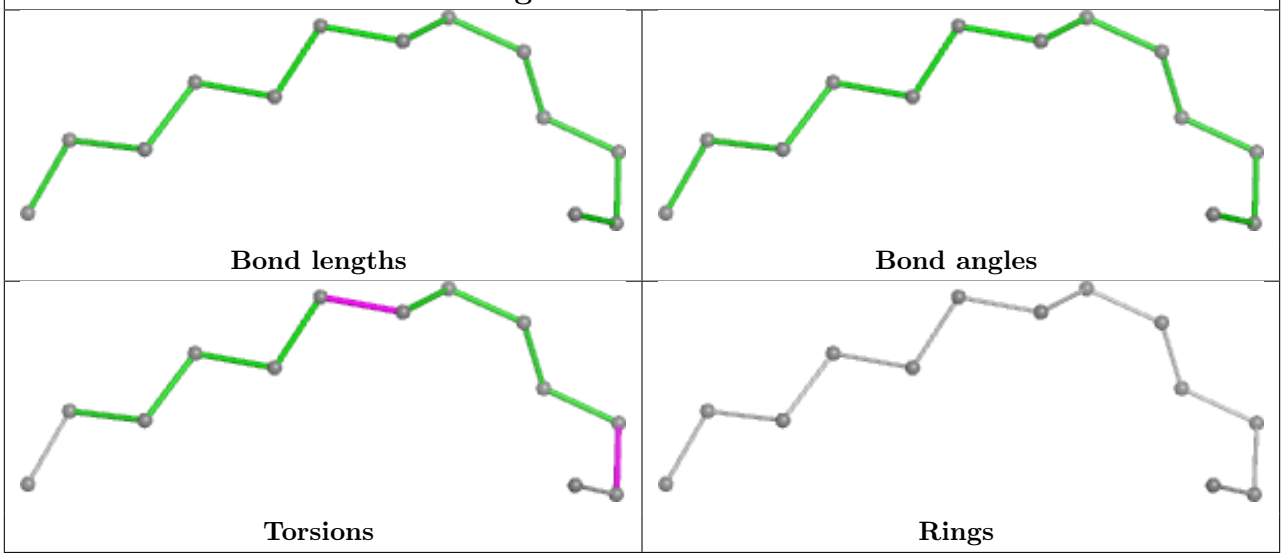


Torsions

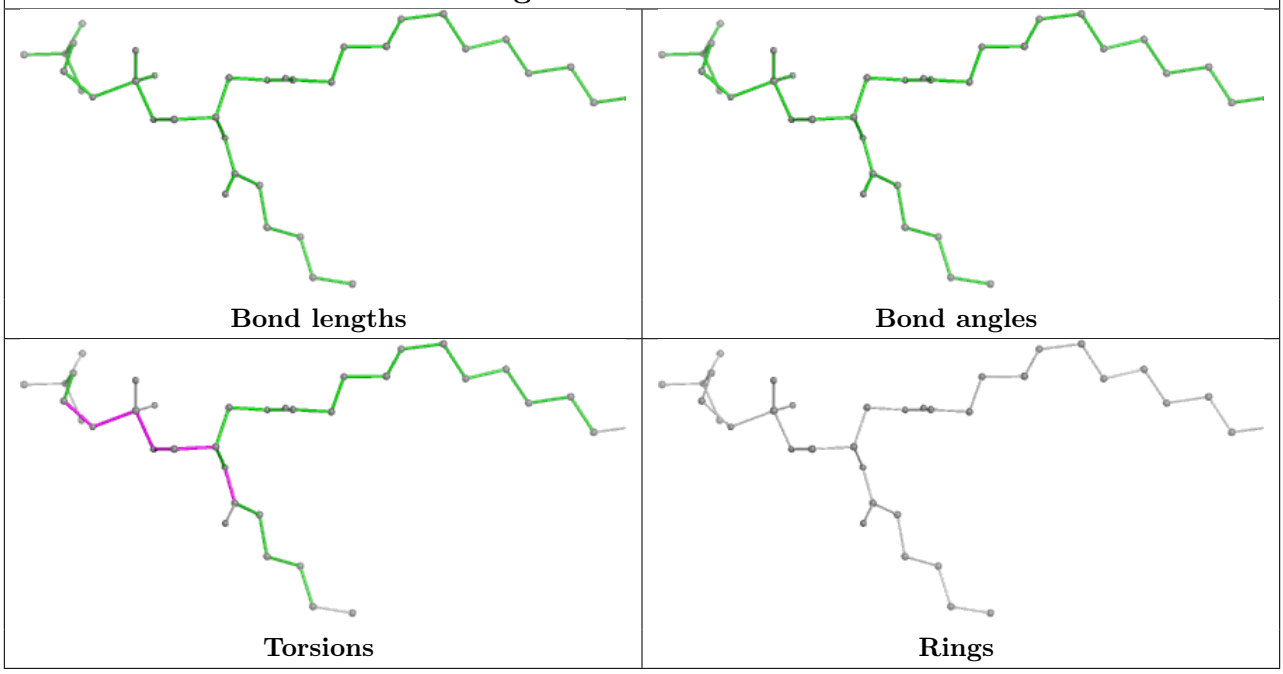


Rings

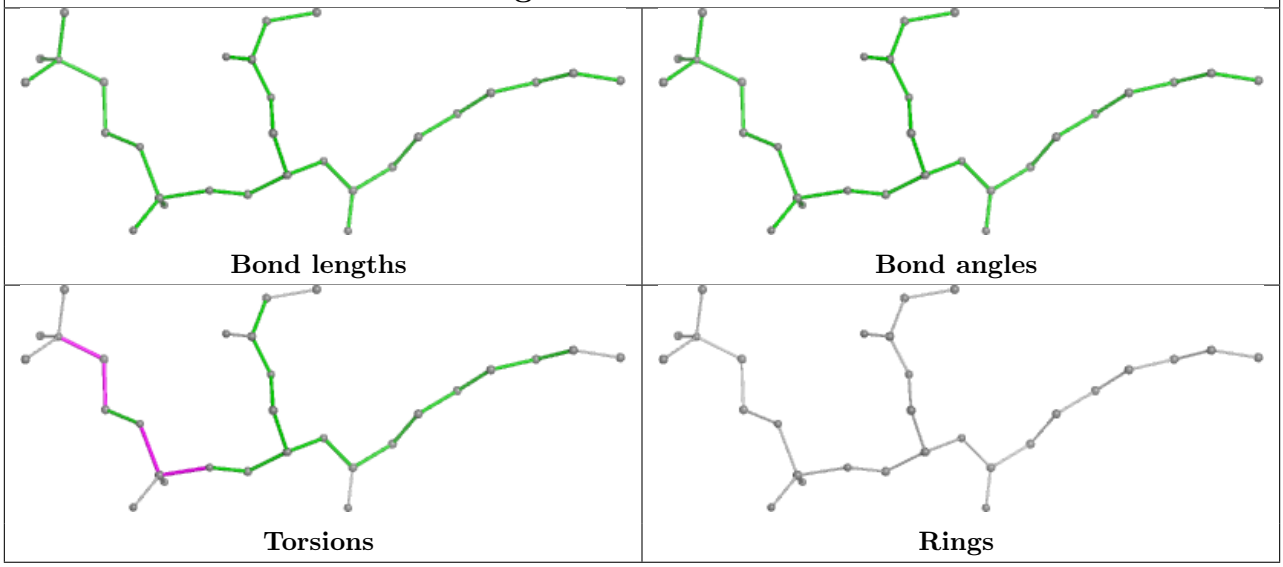
Ligand POV C 5110



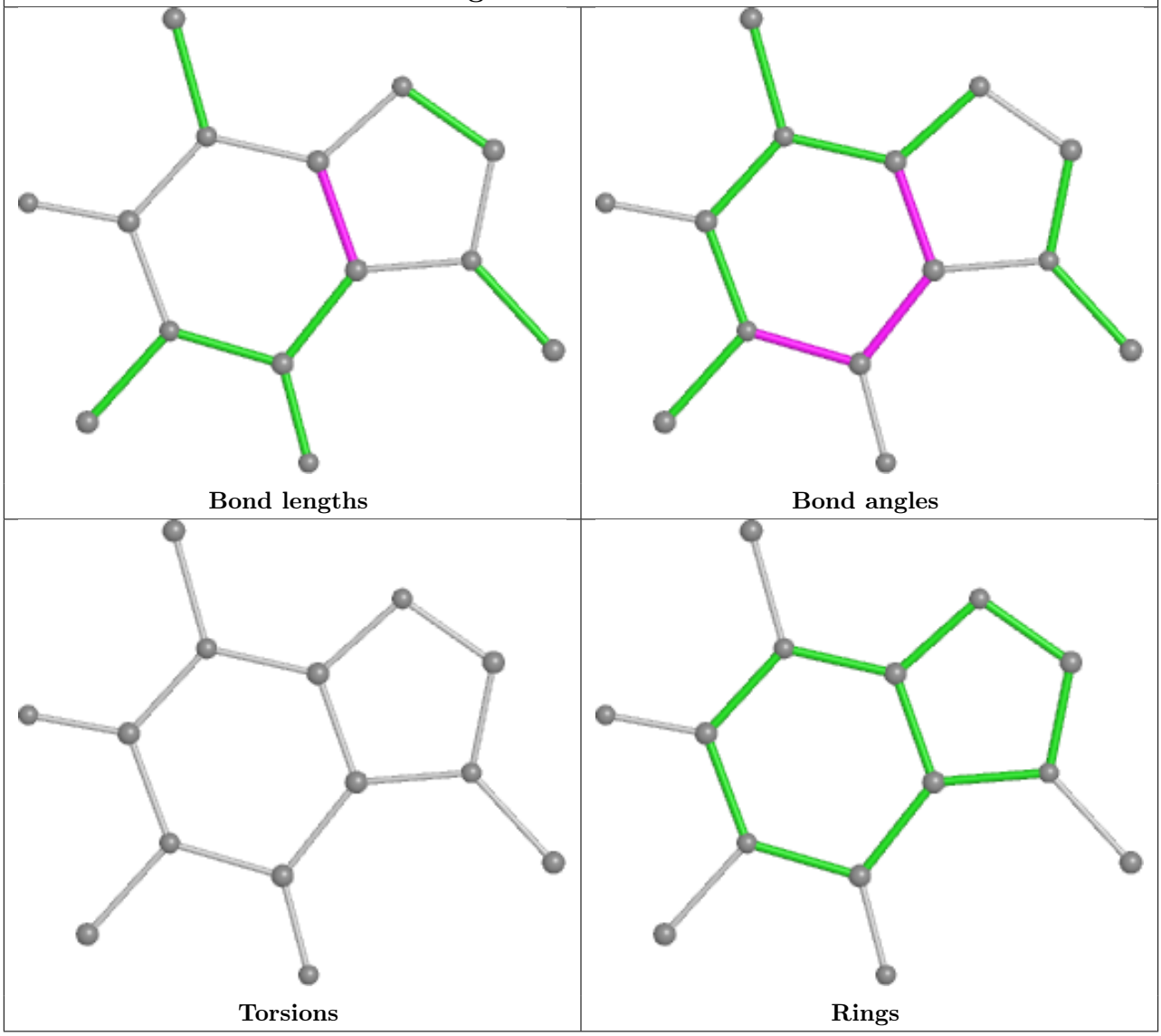
Ligand POV G 5106



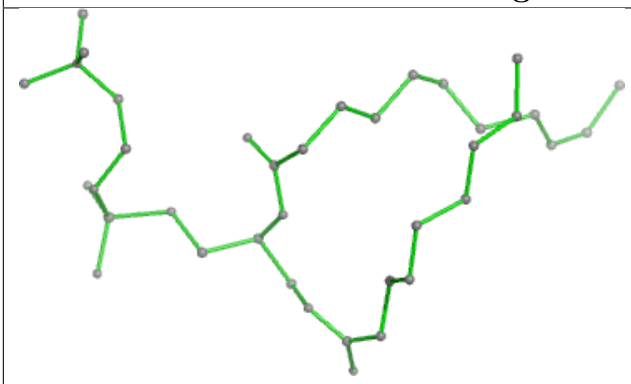
Ligand POV C 5109



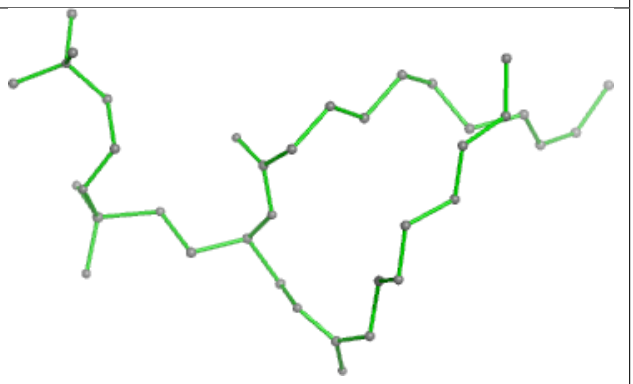
Ligand CFF A 5103



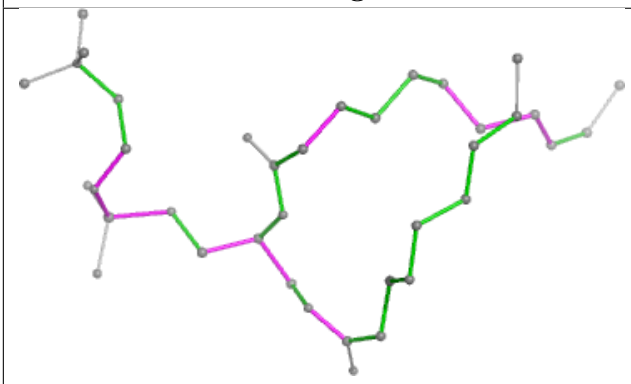
Ligand POV G 5109



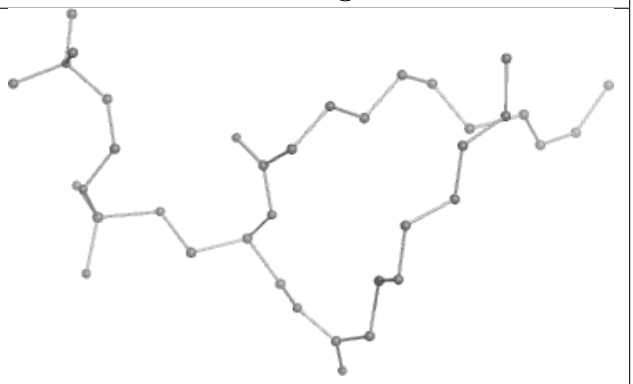
Bond lengths



Bond angles

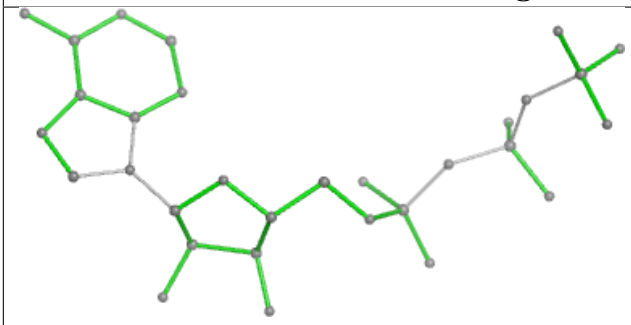


Torsions

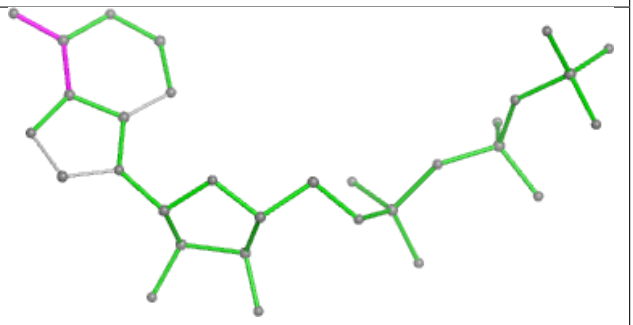


Rings

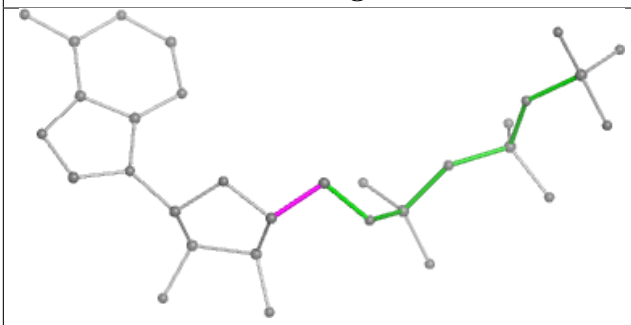
Ligand ATP G 5102



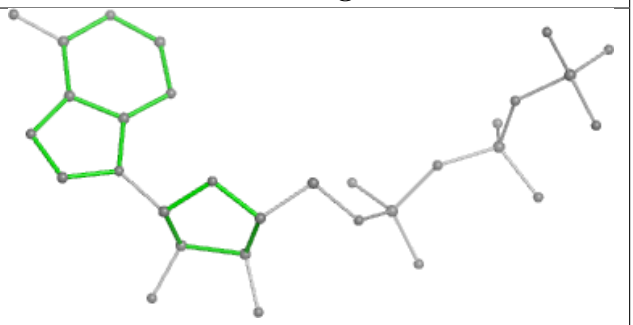
Bond lengths



Bond angles

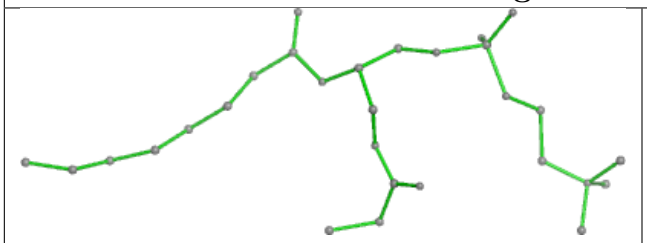


Torsions

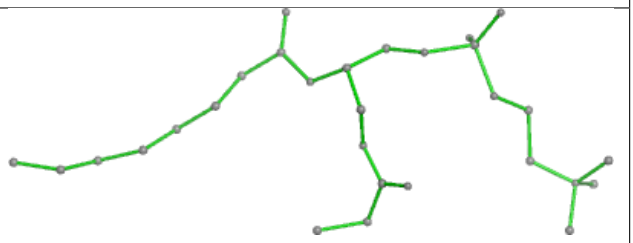


Rings

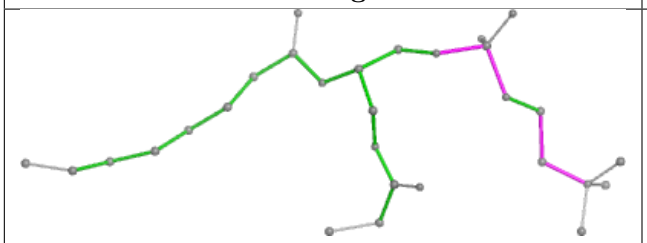
Ligand POV G 5110



Bond lengths



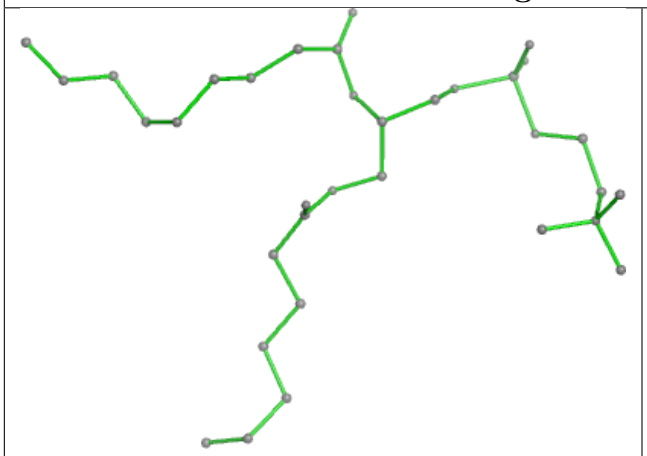
Bond angles



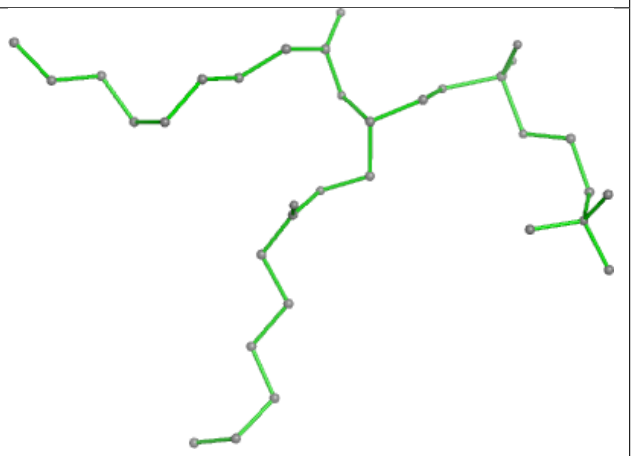
Torsions

Rings

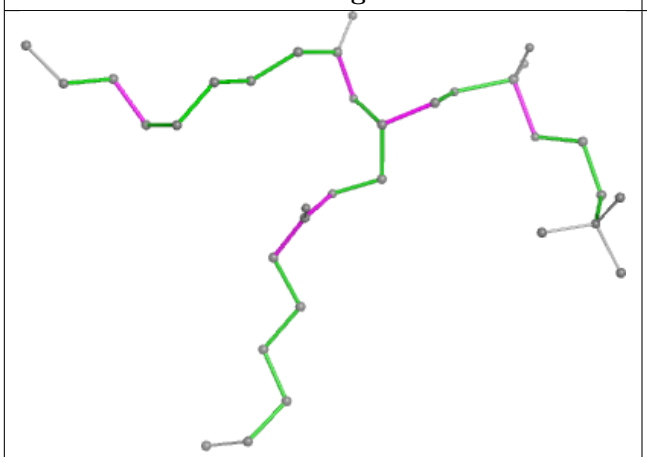
Ligand POV A 5105



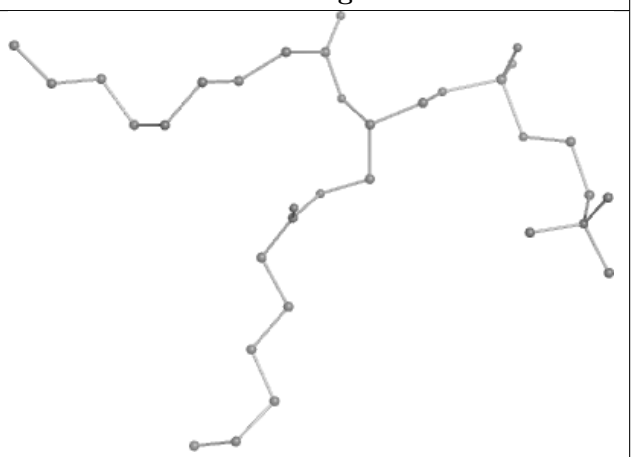
Bond lengths



Bond angles

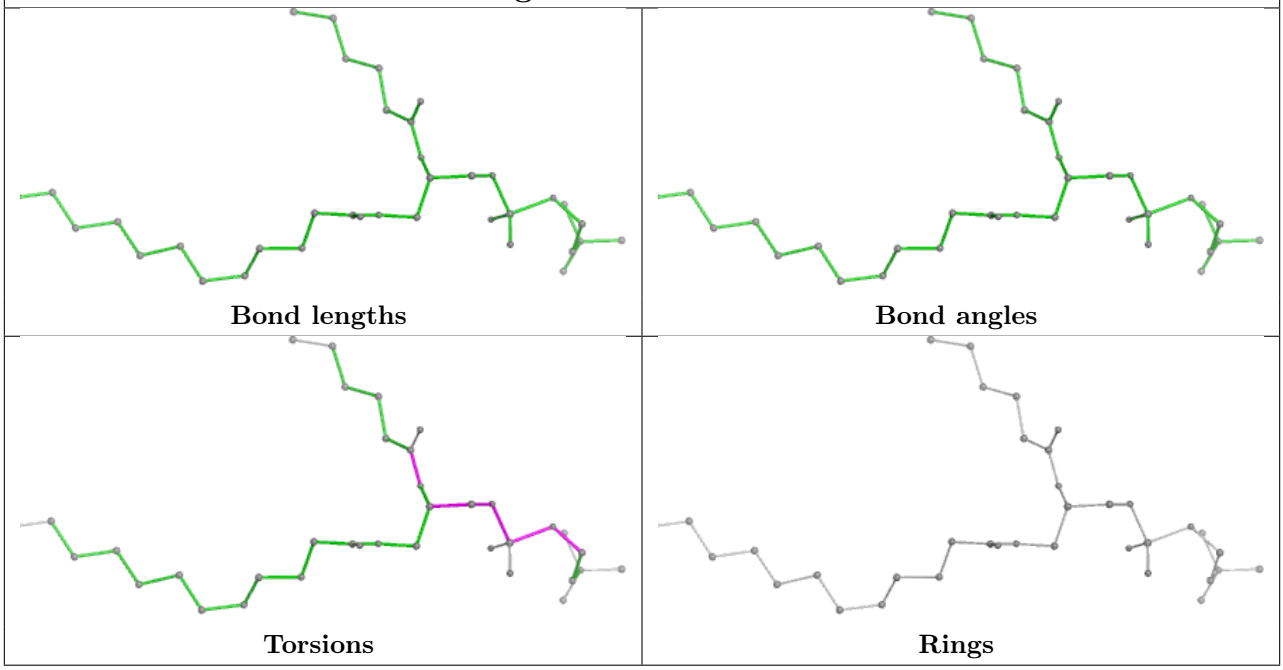


Torsions

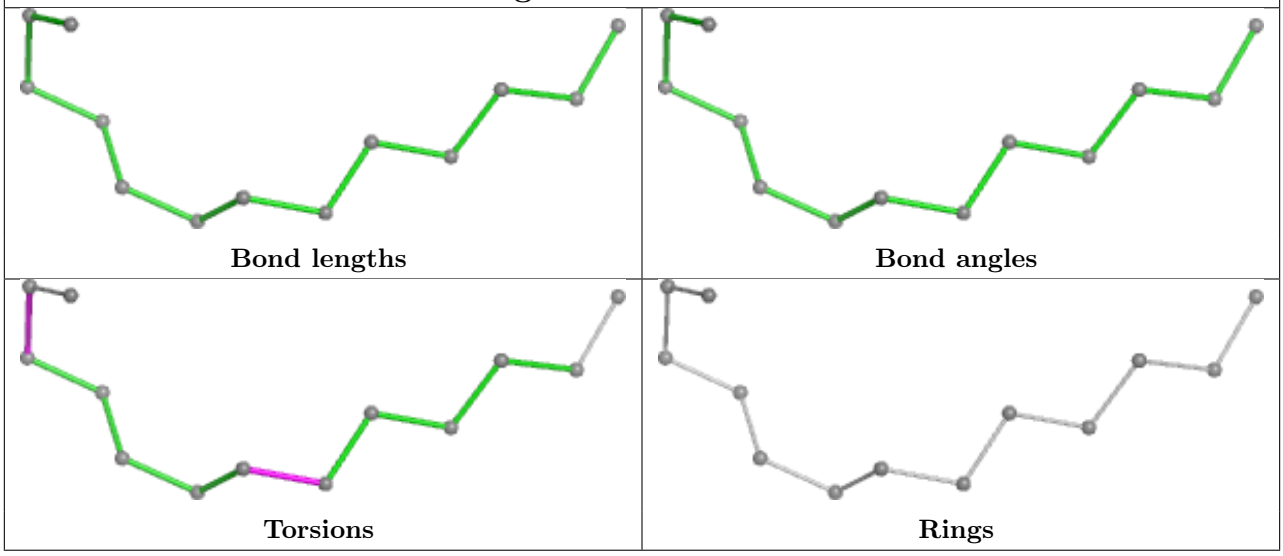


Rings

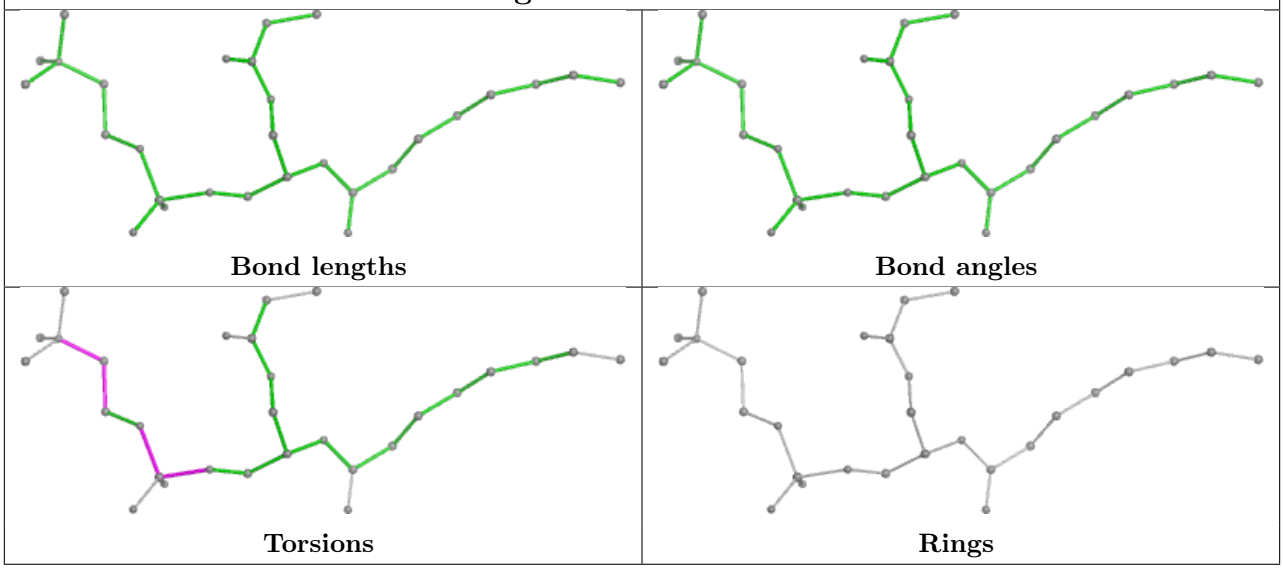
Ligand POV C 5106



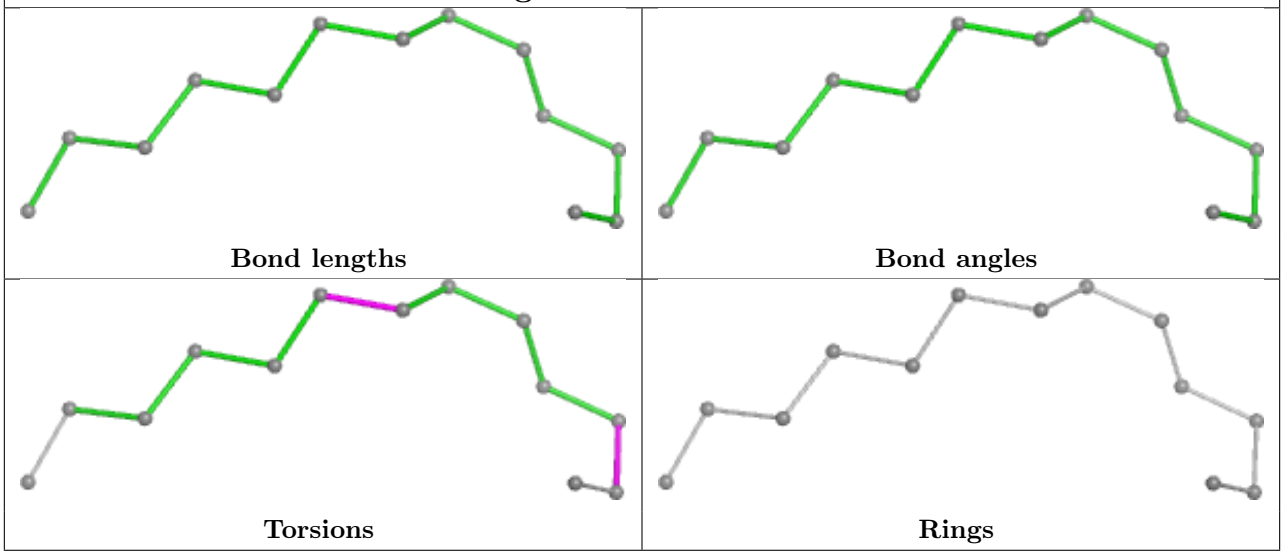
Ligand POV A 5108



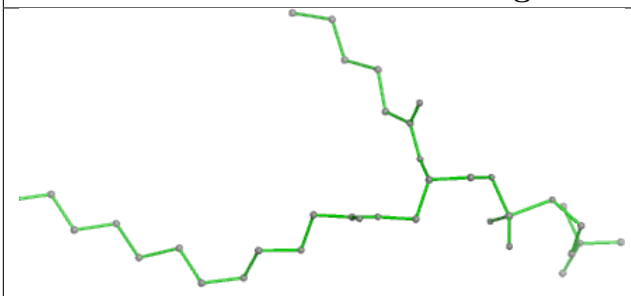
Ligand POV A 5110



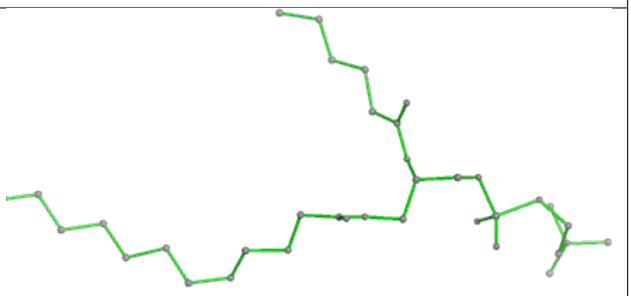
Ligand POV C 5107



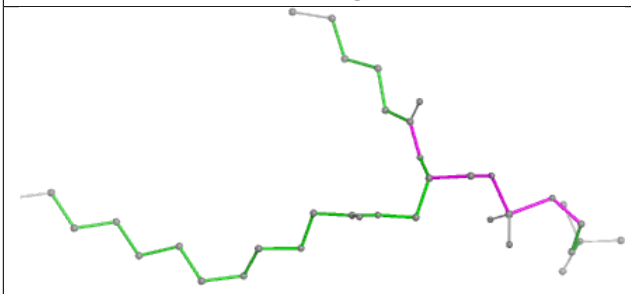
Ligand POV A 5106



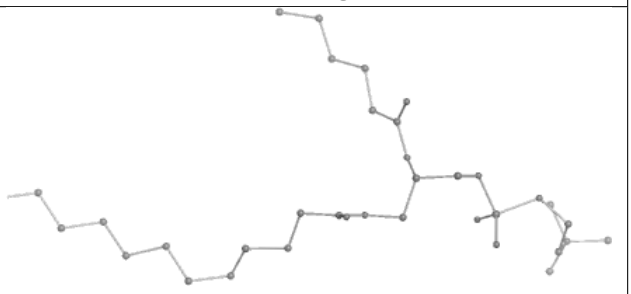
Bond lengths



Bond angles

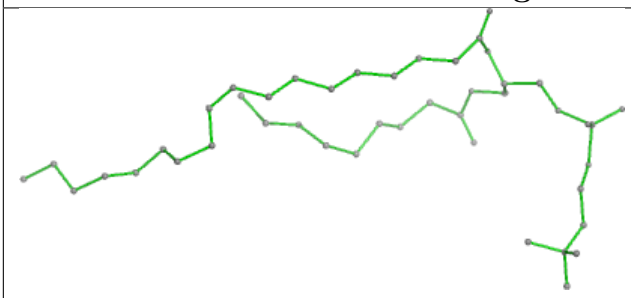


Torsions

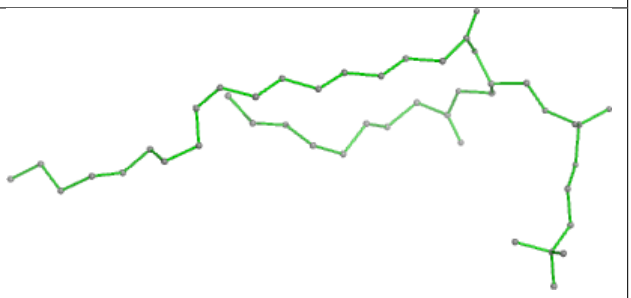


Rings

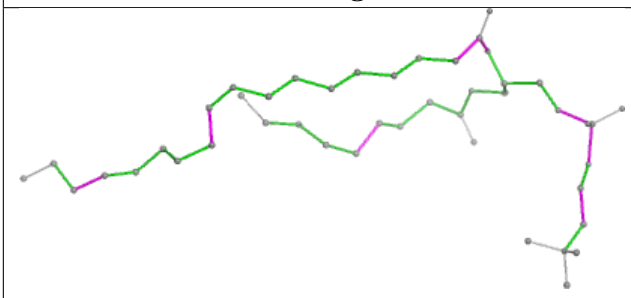
Ligand POV A 5107



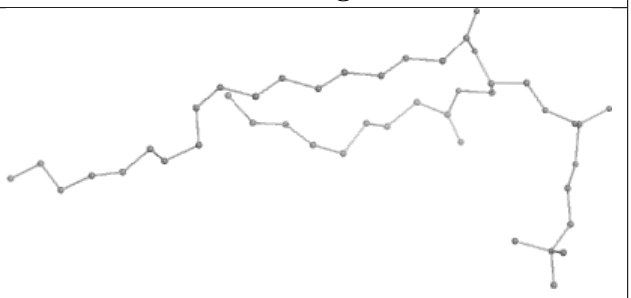
Bond lengths



Bond angles

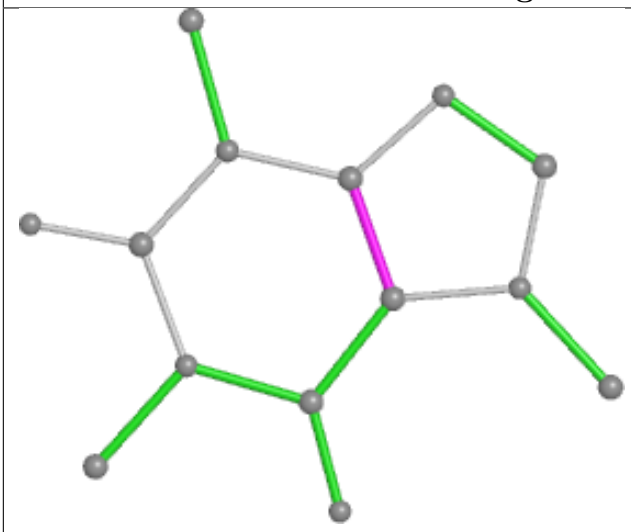


Torsions

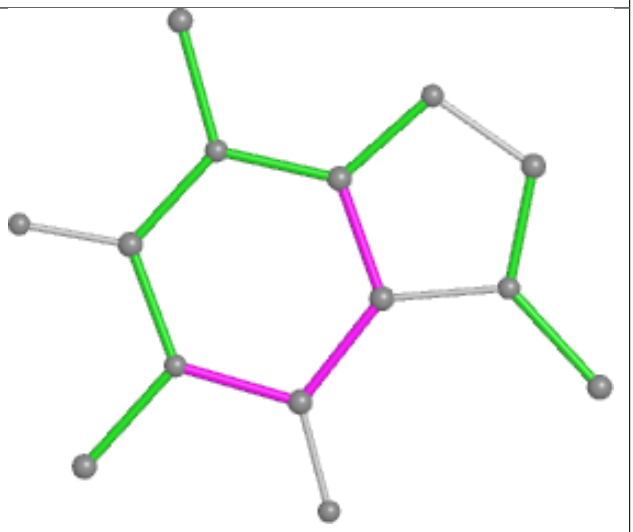


Rings

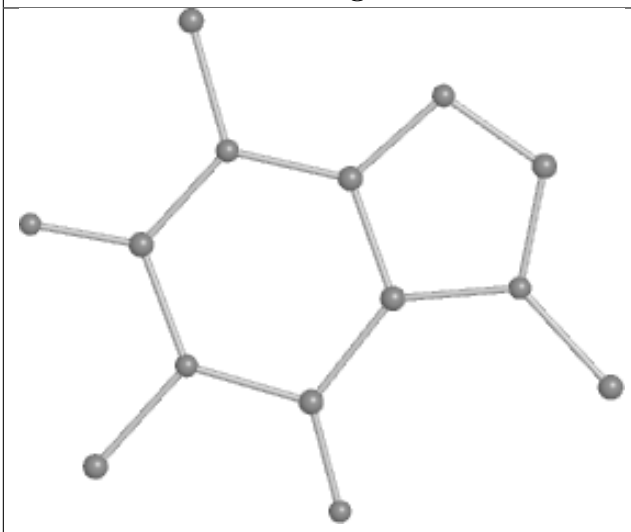
Ligand CFF G 5103



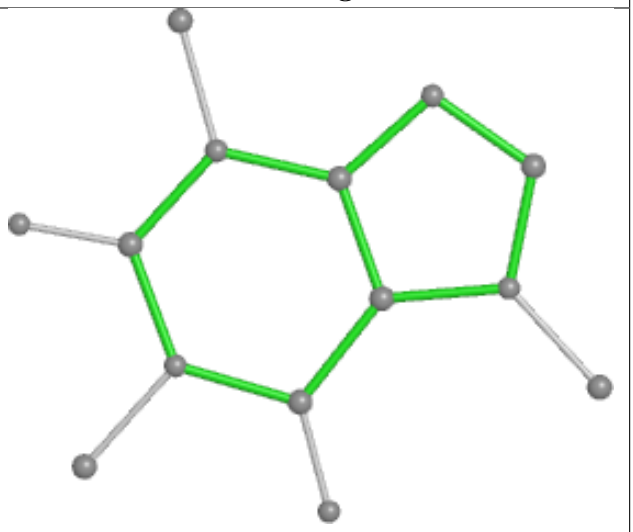
Bond lengths



Bond angles

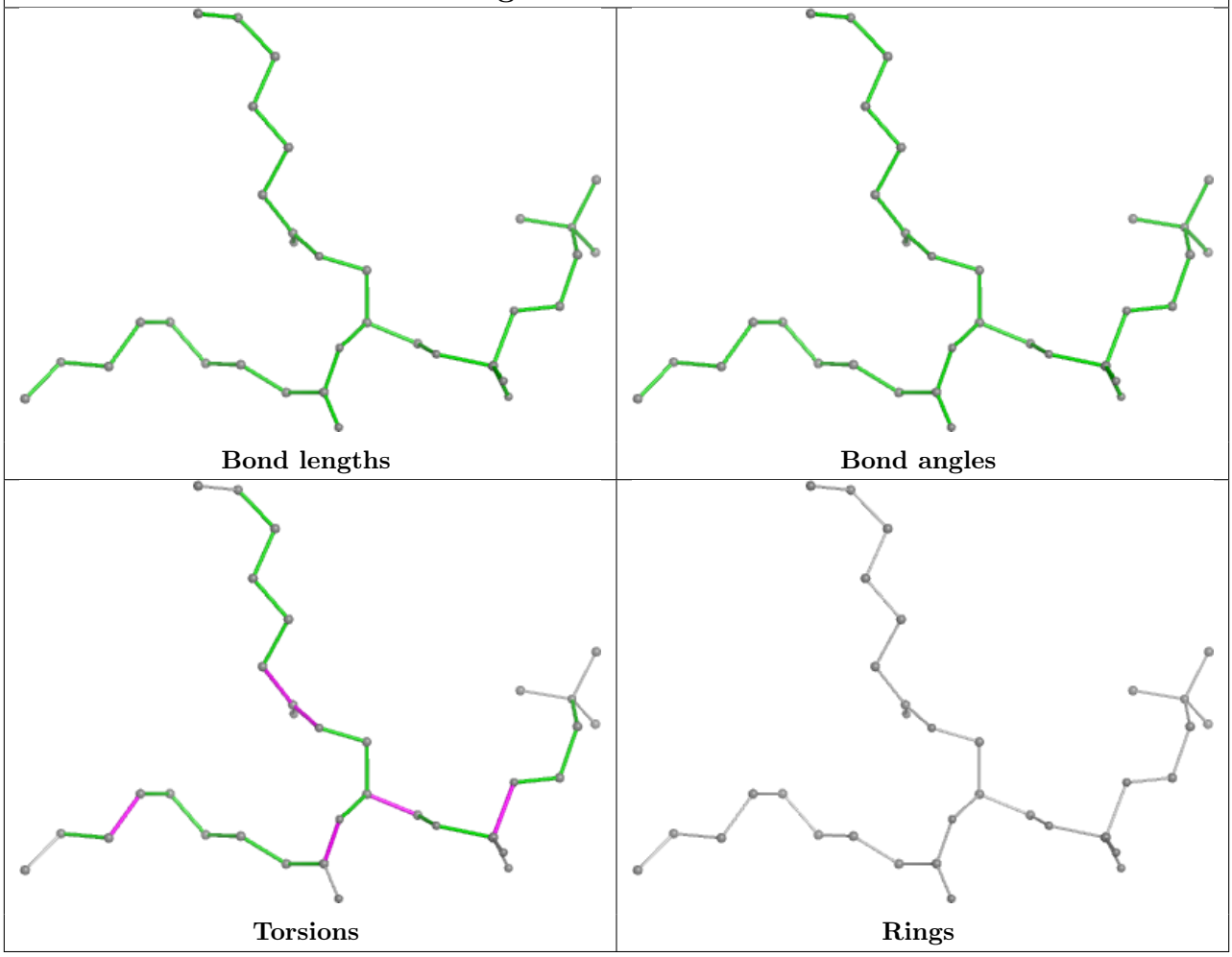


Torsions

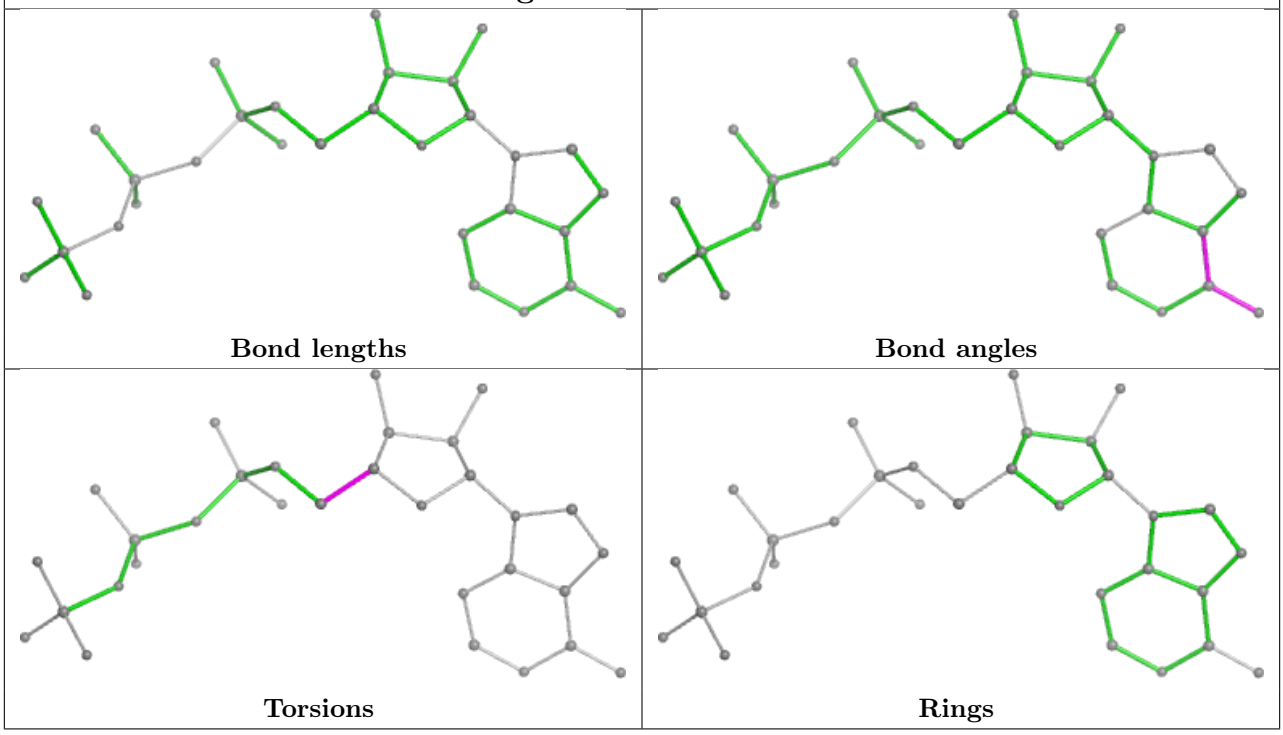


Rings

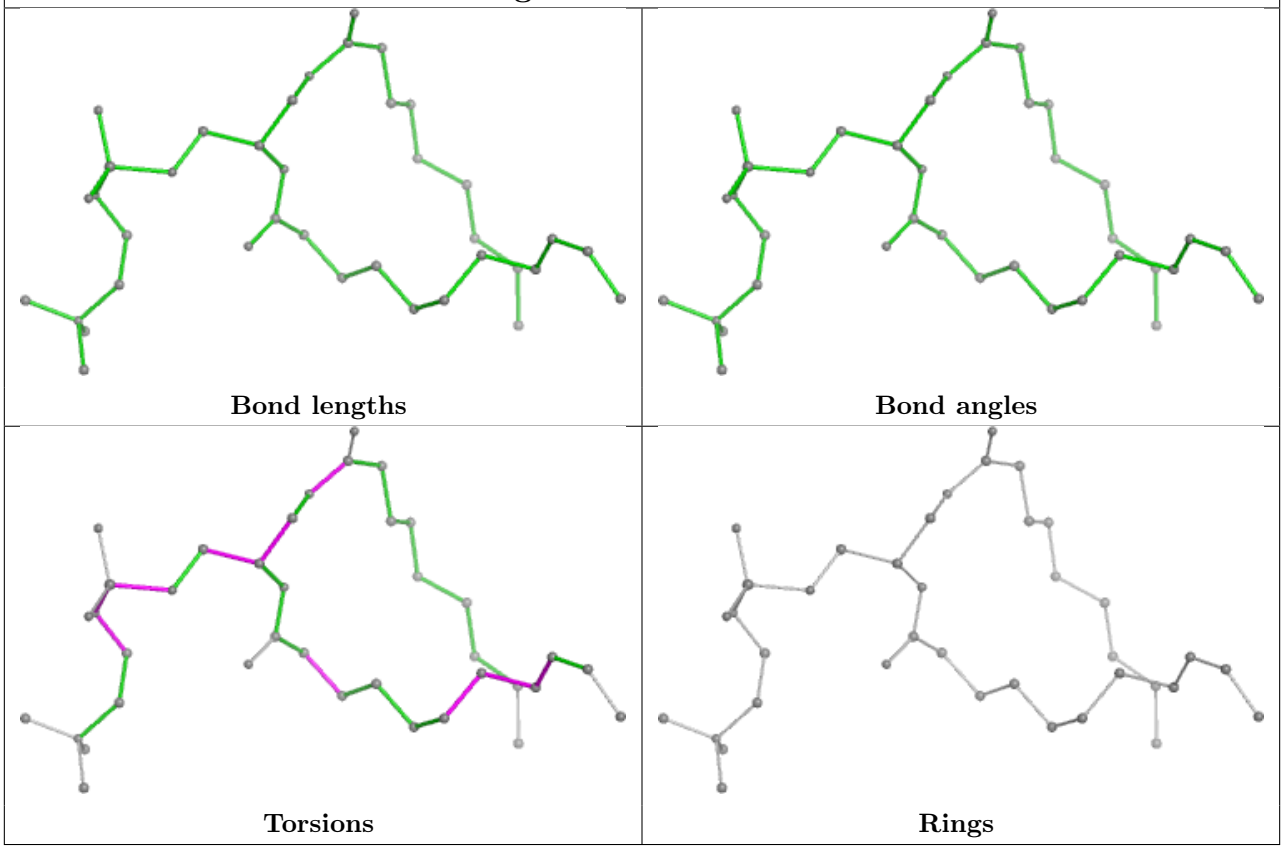
Ligand POV J 5106



Ligand ATP C 5102



Ligand POV A 5109



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.

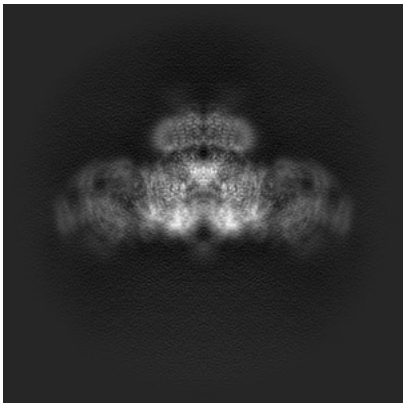
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-53924. These allow visual inspection of the internal detail of the map and identification of artifacts.

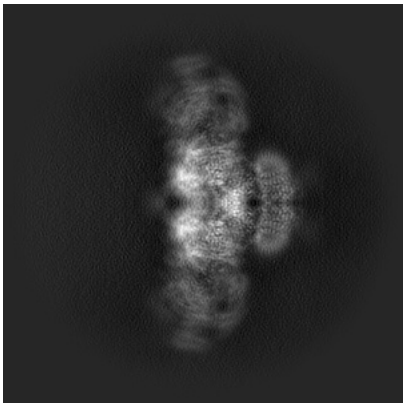
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

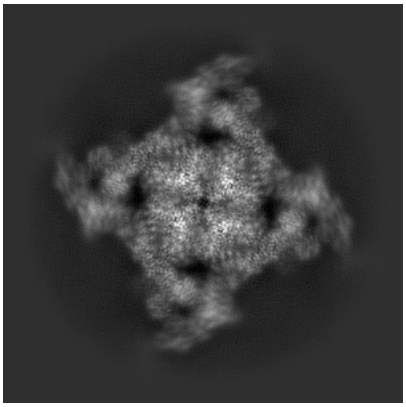
6.1.1 Primary map



X



Y

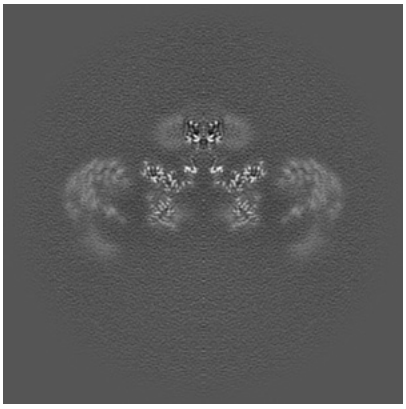


Z

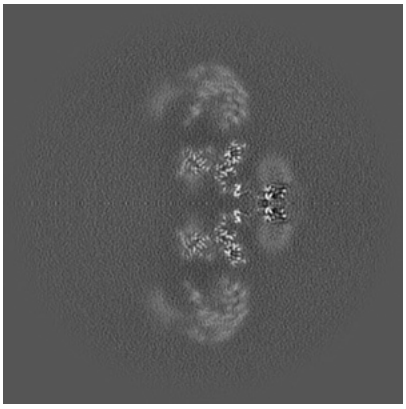
The images above show the map projected in three orthogonal directions.

6.2 Central slices

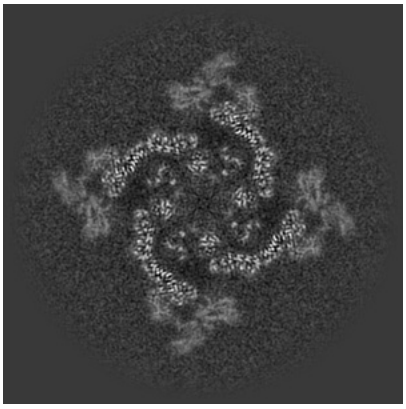
6.2.1 Primary map



X Index: 168



Y Index: 168

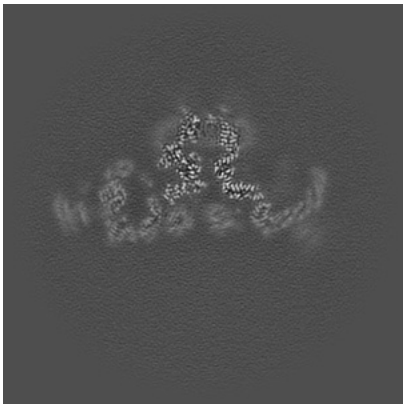


Z Index: 168

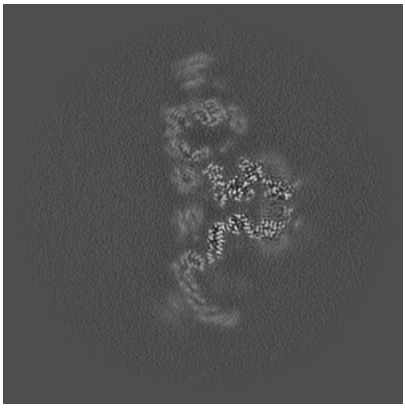
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

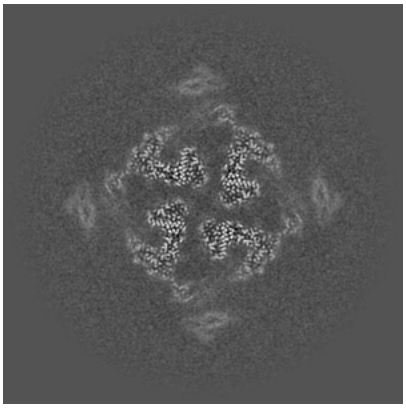
6.3.1 Primary map



X Index: 151



Y Index: 151

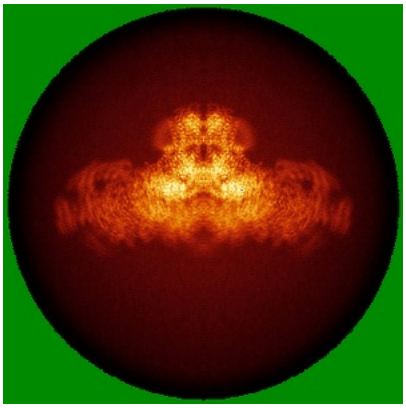


Z Index: 182

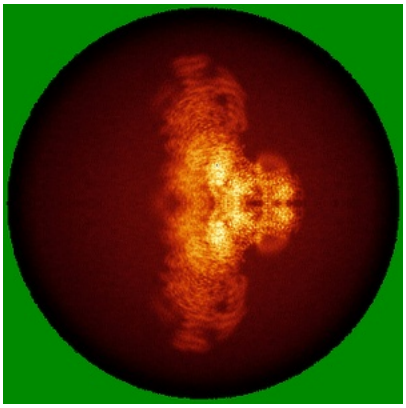
The images above show the largest variance slices of the map in three orthogonal directions.

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

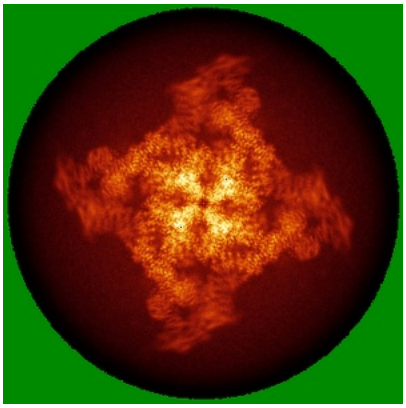
6.4.1 Primary map



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 0.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

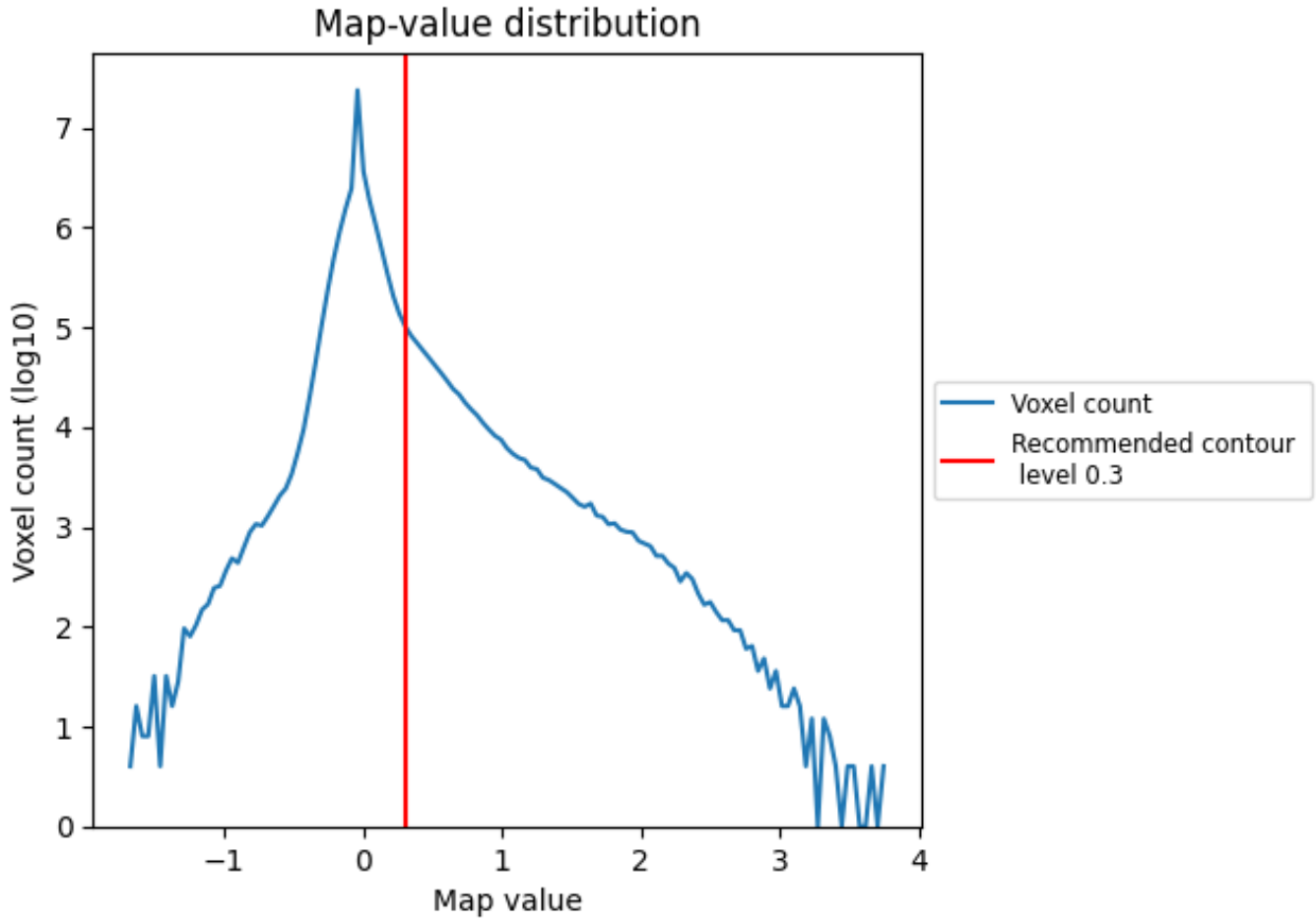
6.6 Mask visualisation (i)

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

7 Map analysis

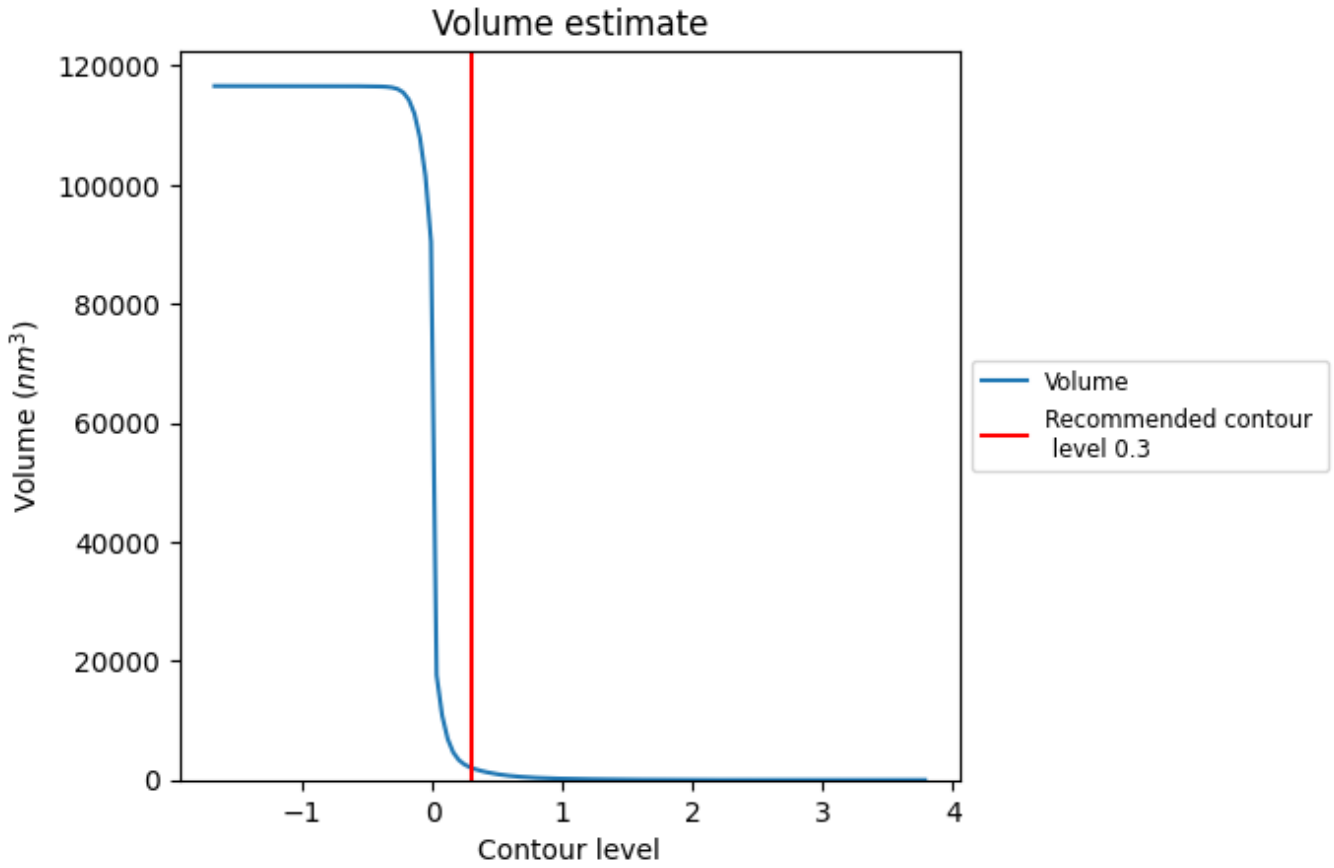
This section contains the results of statistical analysis of the map.

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.

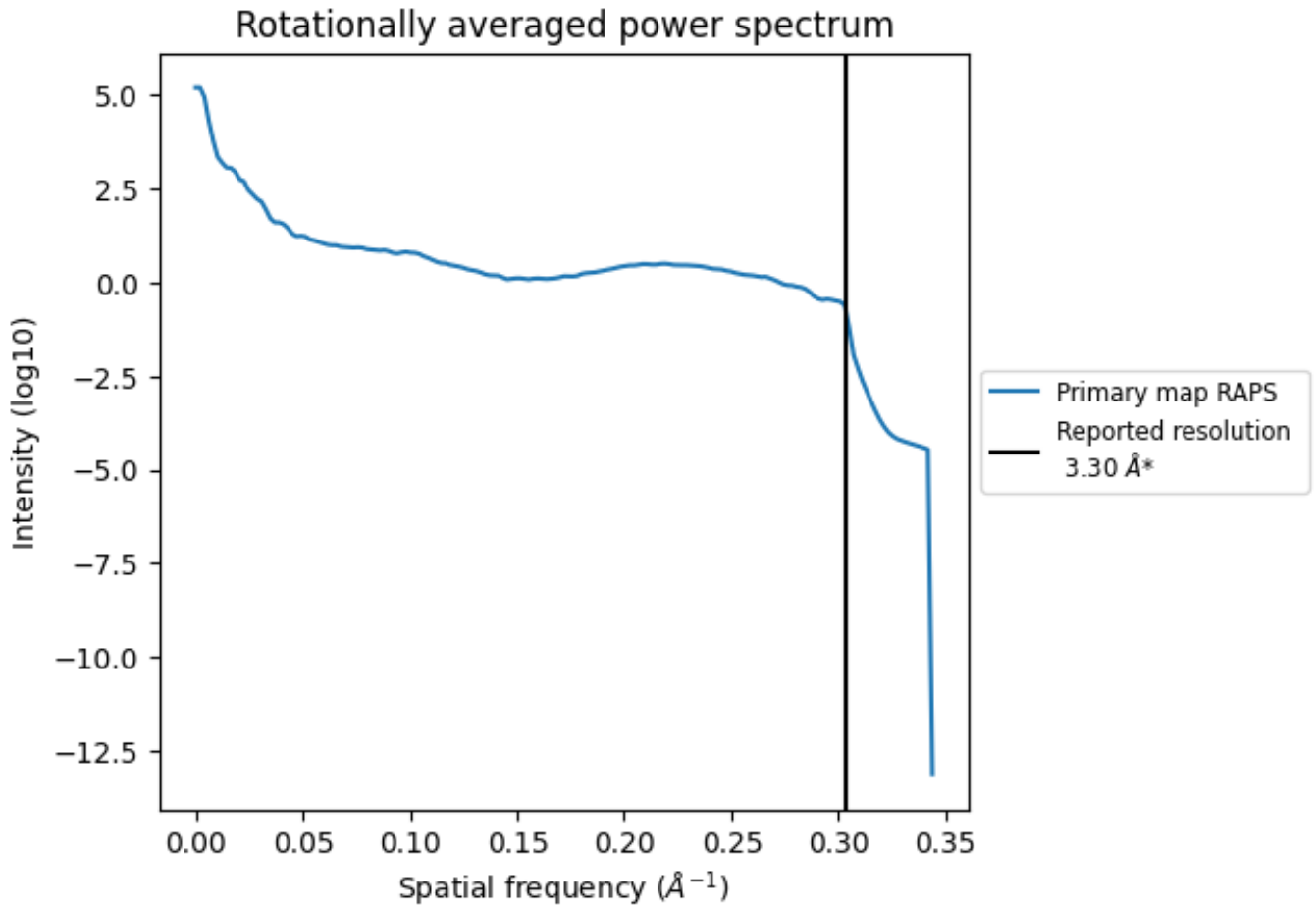
7.2 Volume estimate



The volume at the recommended contour level is 2061 nm^3; this corresponds to an approximate mass of 1861 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 0.303 $Å^{-1}$

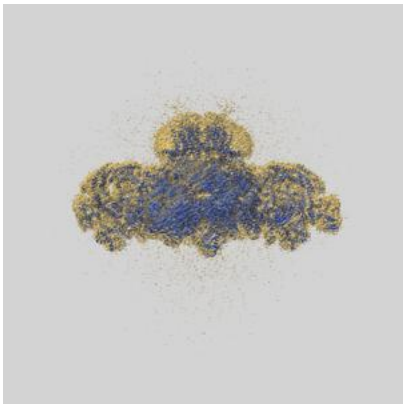
8 Fourier-Shell correlation (i)

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

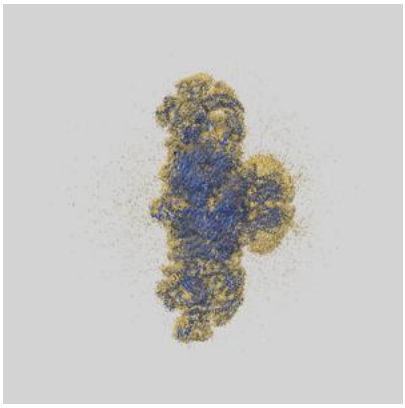
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-53924 and PDB model 9RCW. Per-residue inclusion information can be found in section 3 on page 9.

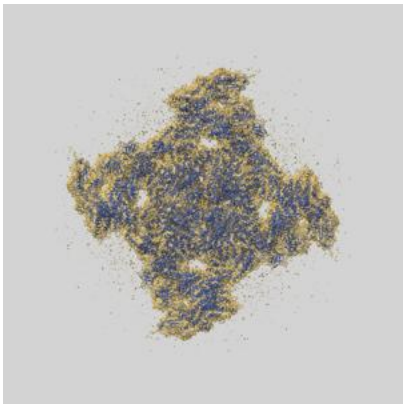
9.1 Map-model overlay



X



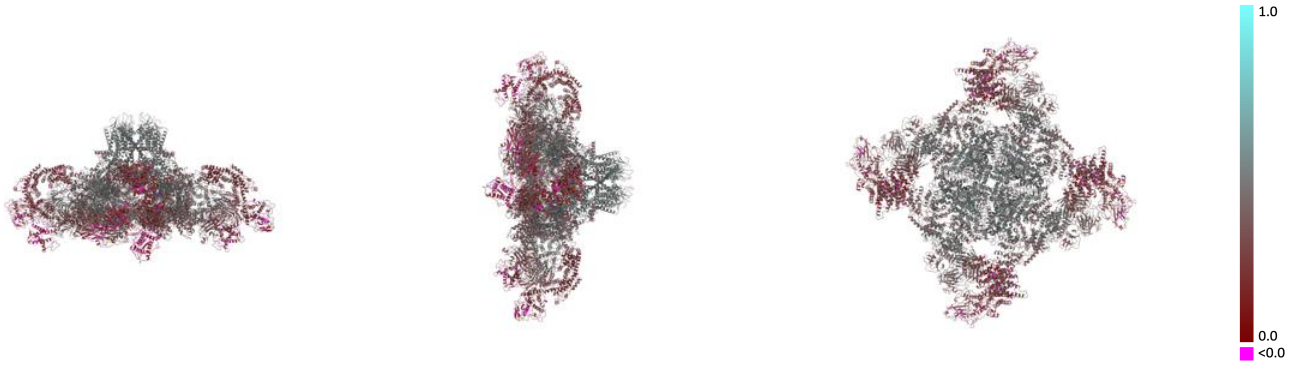
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.3 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.

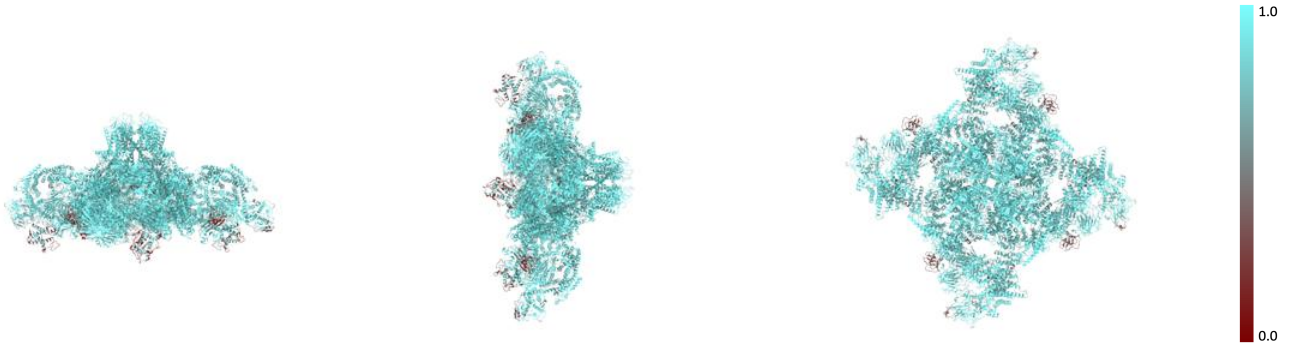
9.2 Q-score mapped to coordinate model (i)



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.

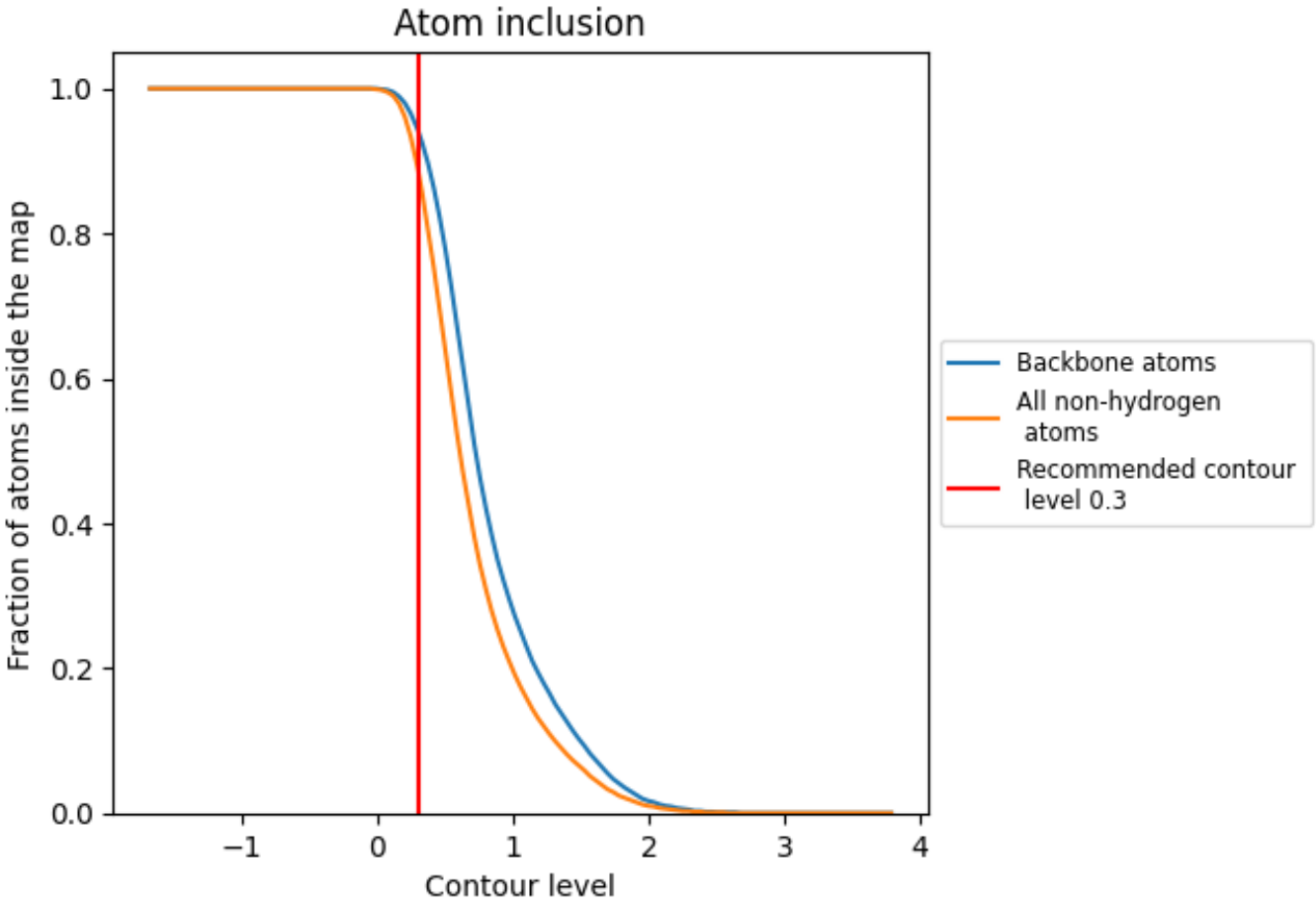
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.3).

9.4 Atom inclusion (i)



At the recommended contour level, 94% of all backbone atoms, 89% 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 (0.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8900	0.3600
A	0.9070	0.3660
B	0.7750	0.1840
C	0.9060	0.3660
D	0.7670	0.1810
E	0.3450	0.2990
F	0.3450	0.2960
G	0.9070	0.3670
H	0.7810	0.1790
I	0.3450	0.3020
J	0.9070	0.3670
K	0.7730	0.1820
L	0.3470	0.3010