Full wwPDB EM Validation Report ⓘ

Nov 11, 2024 – 06:45 AM EST

PDB ID	:	9E1C
EMDB ID	:	EMD-47389
Title	:	Structure of RyR1 in the primed state in the presence of IBMX
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2024-10-21
Resolution	:	2.63 Å(reported)
Based on initial model	:	7TZC

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

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

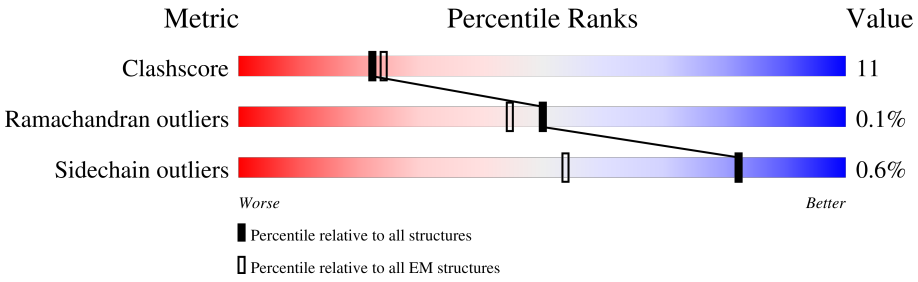
EMDB validation analysis	:	0.0.1.dev113
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.63 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	5037	23% 67% 20% 13%
1	B	5037	23% 67% 20% 13%
1	C	5037	23% 67% 20% 13%
1	D	5037	23% 67% 20% 13%
2	E	108	12% 71% 26% ...
2	F	108	11% 71% 26% ...
2	G	108	10% 69% 28% ...
2	H	108	12% 69% 28% ...

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 144120 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

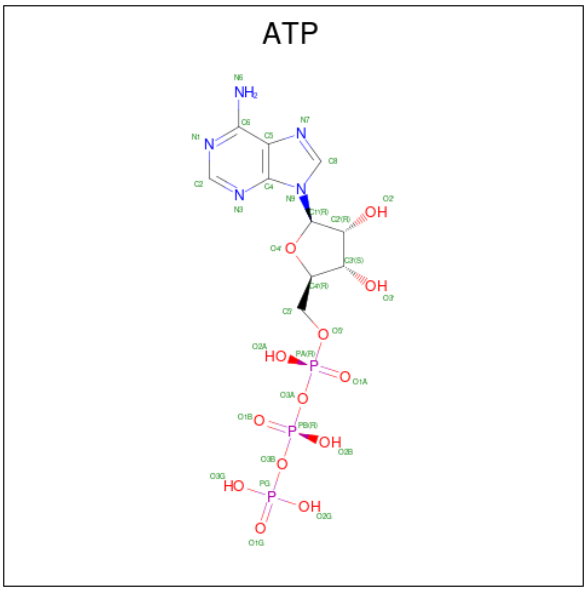
- Molecule 1 is a protein called Ryanodine receptor 1.

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

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

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

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



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

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

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

- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

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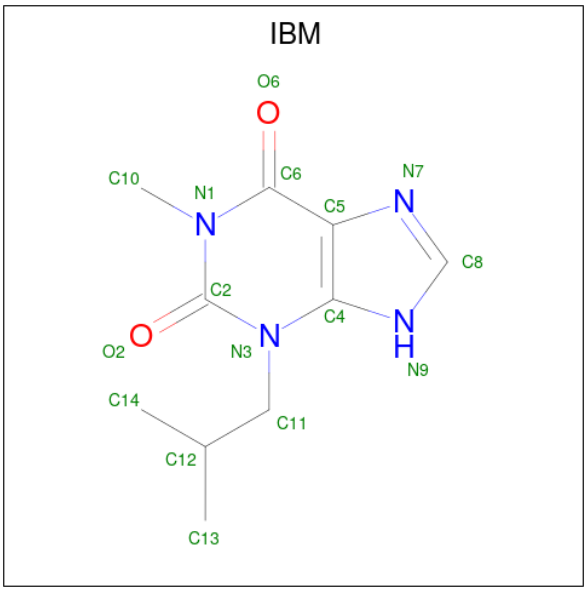
Mol	Chain	Residues	Atoms	AltConf
5	B	1	Total Zn 1 1	0
5	D	1	Total Zn 1 1	0
5	C	1	Total Zn 1 1	0

- Molecule 6 is 3-ISOBUTYL-1-METHYLXANTHINE (three-letter code: IBM) (formula: $C_{10}H_{14}N_4O_2$) (labeled as "Ligand of Interest" by depositor).



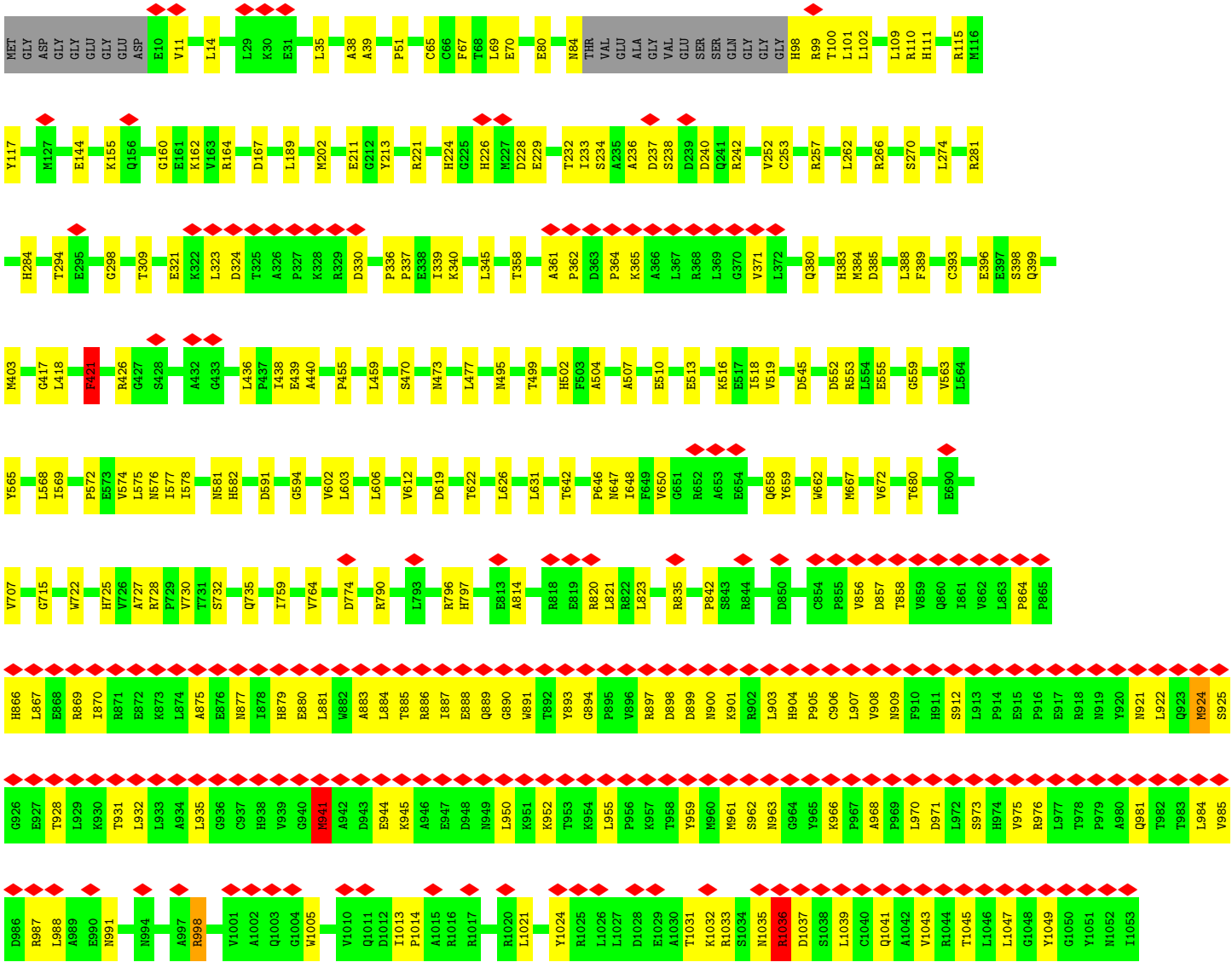
Mol	Chain	Residues	Atoms	AltConf
6	A	1	Total C N O 16 10 4 2	0
6	B	1	Total C N O 16 10 4 2	0
6	D	1	Total C N O 16 10 4 2	0
6	C	1	Total C N O 16 10 4 2	0

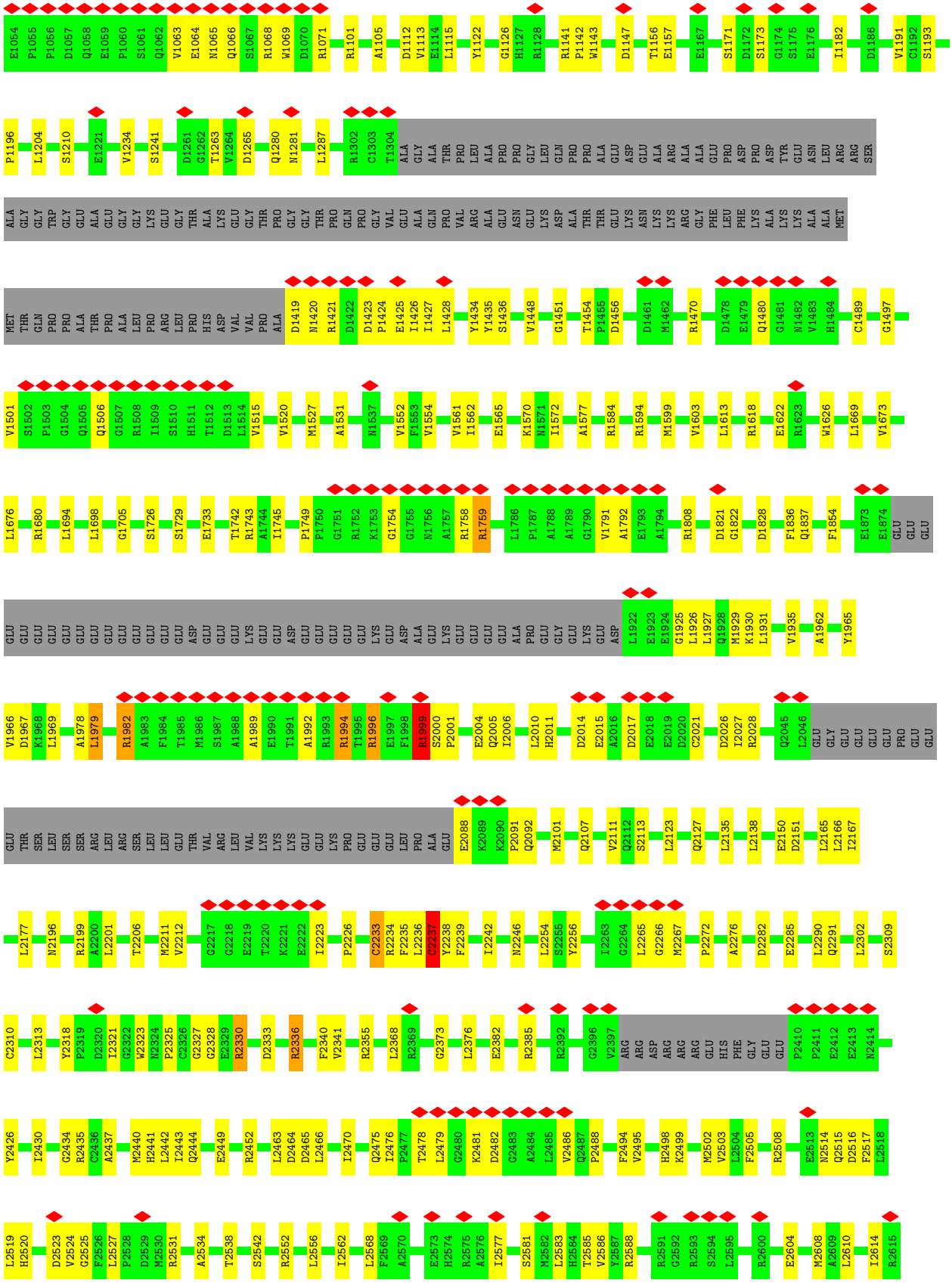
3 Residue-property plots (i)

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

- Molecule 1: Ryanodine receptor 1

Chain A:

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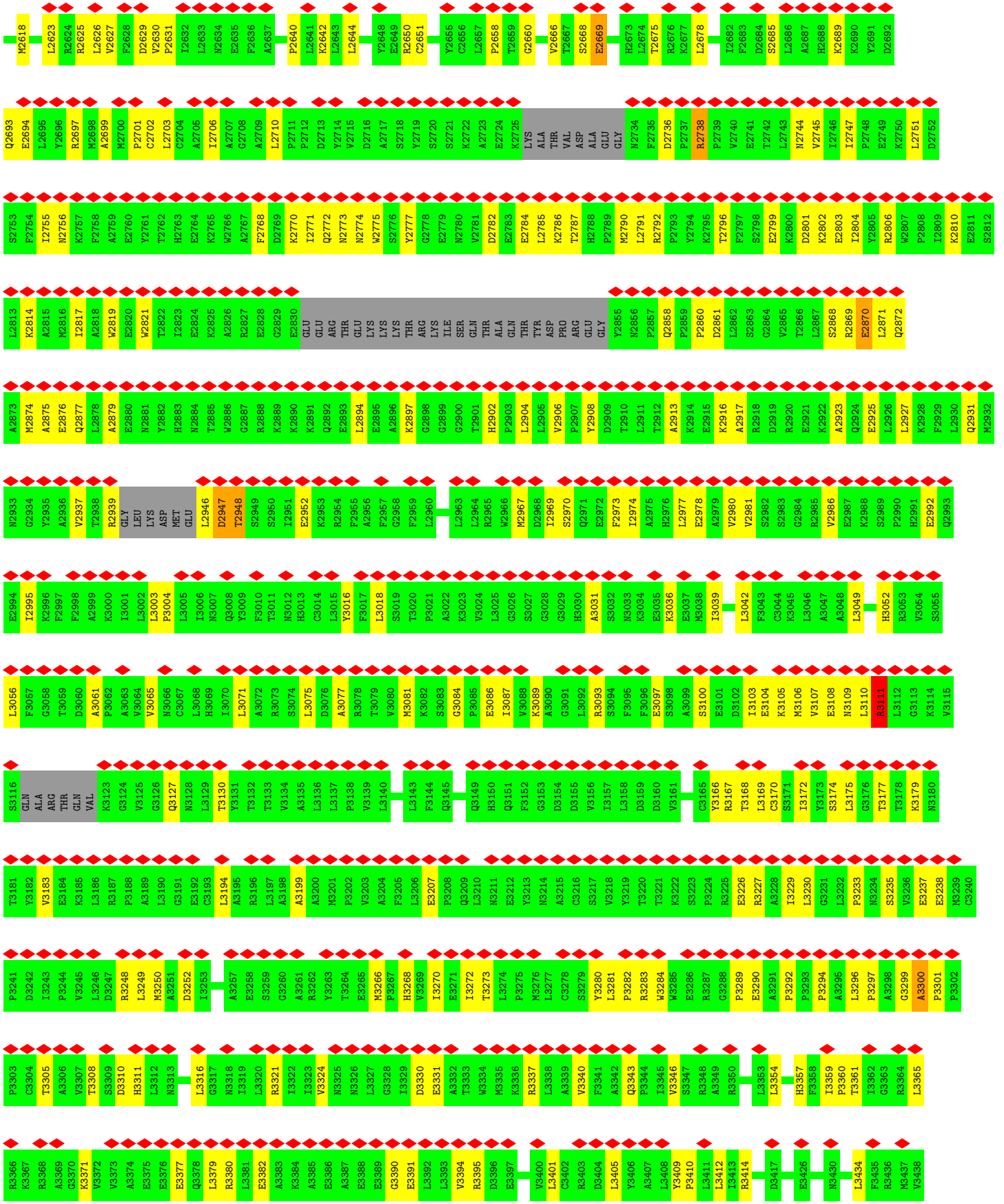
P1196 L1204 S1210 E1221 V1234 S1241 D1261 G1262 T1263 V1264 D1265 Q1280 N1281 L1287 R1302 C1303 T1304 ALA GLY ALA THR PRO LEU ALA PRO PRO GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER
ALA GLY GLY TRP GLY GLU ALA GLU GLY LYS GLU GLY THR ALA LYS GLU 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 ALA MET
MET THR GLN PRO PRO ALA THR PRO ALA LEU PRO ARG LEU PRO HIS ASP VAL VAL PRO ALA D1419 N1420 R1421 D1422 D1423 P1424 E1425 I1426 I1427 L1428 Y1434 Y1435 S1436 V1448 G1451 T1454 P1455 D1456 D1461 M1462 R1470 D1478 E1479 Q1480 G1481 N1482 V1483 H1484 C1489 G1497
V1501 S1502 P1503 G1504 Q1505 Q1506 G1507 R1508 I1509 S1510 H1511 T1512 D1513 L1514 V1515 V1520 M1527 A1531 N1537 V1552 F1553 V1554 V1561 I1562 E1565 K1570 N1571 I1572 A1577 R1584 R1594 M1599 V1603 L1613 R1618 E1622 R1623 W1626 L1669 V1673
L1676 R1680 L1694 L1698 G1705 S1726 S1729 E1733 T1742 R1743 A1744 I1745 P1749 P1750 G1751 R1752 K1753 G1754 G1755 N1756 A1757 R1758 R1759 L1786 P1787 A1788 A1789 G1790 V1791 A1792 E1793 A1794 R1808 D1821 G1822 D1828 F1836 Q1837 F1854 E1873 E1874 GLU GLU GLU
GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU LYS GLU GLU ASP GLU GLU GLU GLU LYS GLU ASP ALA GLU LYS GLU GLU GLU GLU ALA PRO GLU GLY GLU LYS GLU ASP L1922 E1923 E1924 G1925 L1926 L1927 Q1928 M1929 K1930 L1931 V1935 A1962 Y1965
V1966 D1967 K1968 L1969 A1978 L1979 R1982 A1983 F1984 T1985 M1986 S1987 A1988 A1989 E1990 T1991 A1992 R1993 R1994 T1995 R1996 E1997 F1998 R1999 S2000 P2001 E2004 Q2005 I2006 L2010 H2011 D2014 E2015 A2016 D2017 E2018 E2019 D2020 C2021 D2026 I2027 R2028 Q2045 L2046 GLU GLY GLU GLU GLU GLU PRO GLU GLU
GLU THR SER LEU SER SER ARG LEU ARG SER LEU LEU LEU GLU THR VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS PRO GLU GLU GLU LEU PRO ALA GLU E2088 K2089 K2090 P2091 Q2092 M2101 Q2107 V2111 Q2112 S2113 L2123 Q2127 L2135 L2138 E2150 D2151 L2165 L2166 I2167
L2177 N2196 R2199 A2200 L2201 T2206 M2211 V2212 G2217 G2218 E2219 T2220 K2221 E2222 I2223 P2226 C2233 R2234 F2235 L2236 C2237 Y2238 F2239 I2242 N2246 L2254 S2255 Y2256 I2263 G2264 L2265 G2266 M2267 P2272 A2276 D2282 E2285 L2290 Q2291 L2302 S2309
C2310 L2313 Y2318 P2319 D2320 I2321 G2322 W2323 W2324 P2325 C2326 G2327 G2328 E2329 R2330 D2333 R2336 F2340 V2341 R2355 L2368 R2389 G2373 L2376 E2382 R2385 R2392 G2396 V2397 ARG ARG ASP ARG ARG ARG GLU HIS PHE GLY GLU GLU P2410 P2411 E2412 E2413 N2414
Y2426 I2430 G2434 R2435 C2436 A2437 M2440 H2441 L2442 I2443 Q2444 E2449 R2452 L2463 D2464 D2465 L2466 I2470 Q2475 I2476 P2477 T2478 L2479 G2480 K2481 D2482 G2483 A2484 L2485 V2486 Q2487 P2488 F2494 V2495 H2498 K2499 M2502 V2503 L2504 F2505 R2508 E2513 N2514 Q2515 D2516 F2517 L2518
L2519 H2520 D2523 V2524 G2525 F2526 L2527 P2528 D2529 M2530 R2531 A2534 T2538 S2542 R2552 L2556 I2562 L2568 F2569 A2570 E2573 H2574 R2575 A2576 I2577 S2581 M2582 L2583 H2584 T2585 V2586 Y2587 R2588 R2591 G2592 R2593 S2594 L2595 R2600 E2604 M2608 A2609 L2610 I2614 R2615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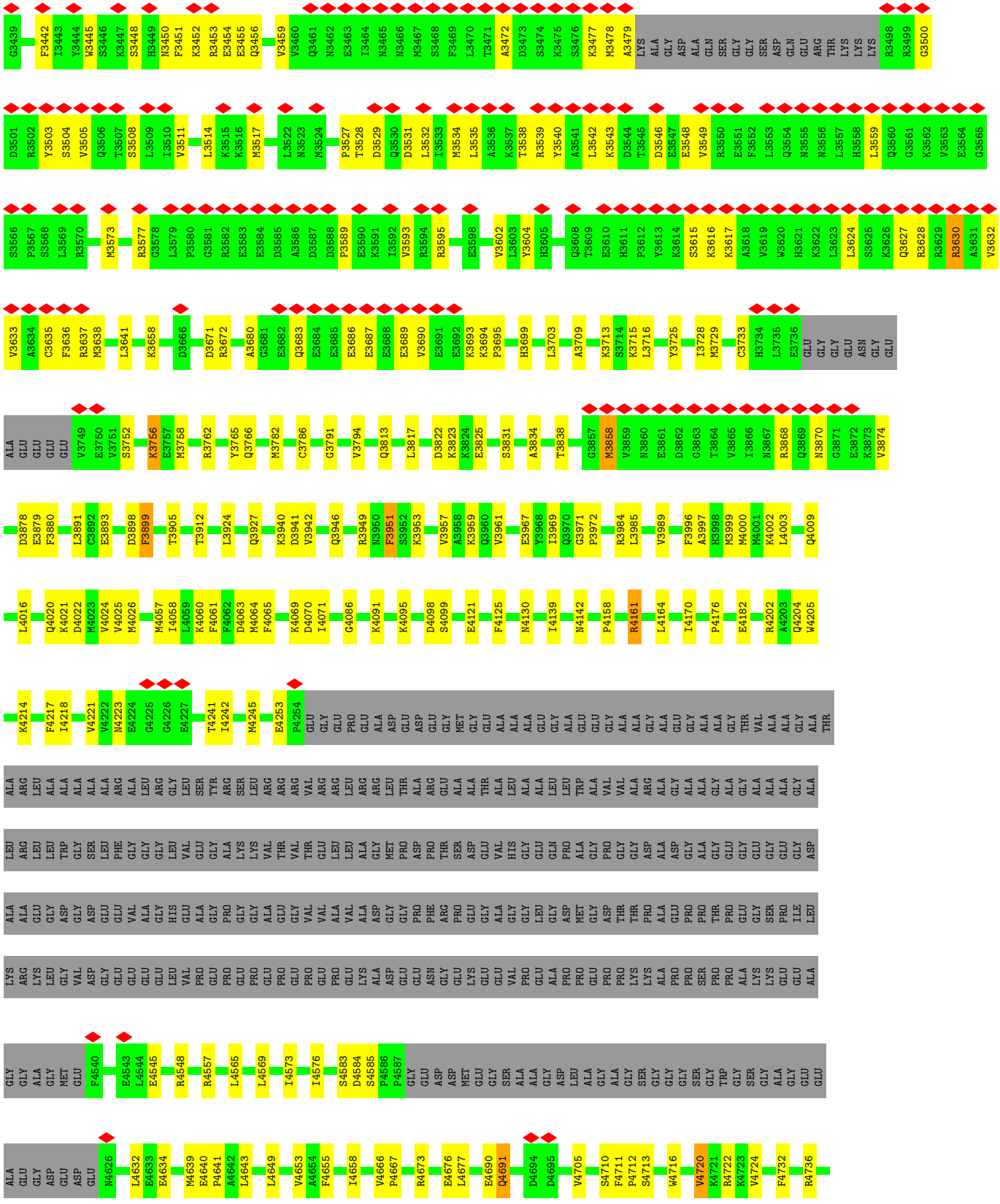
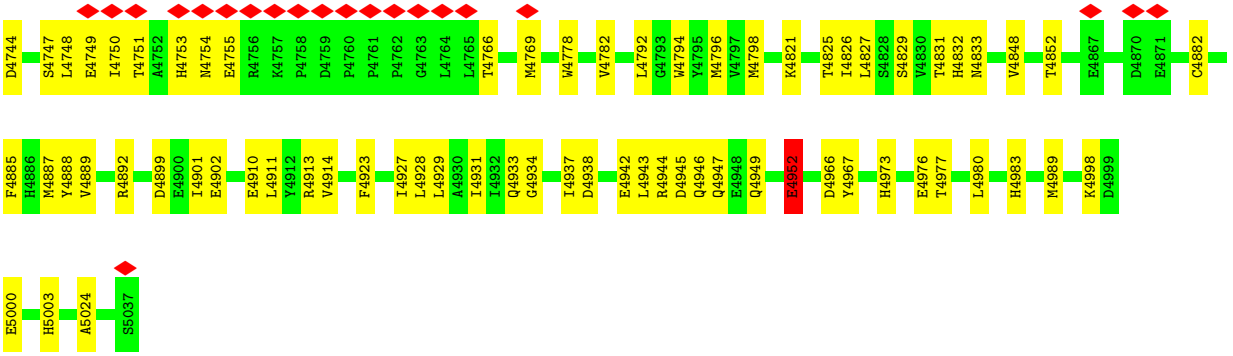
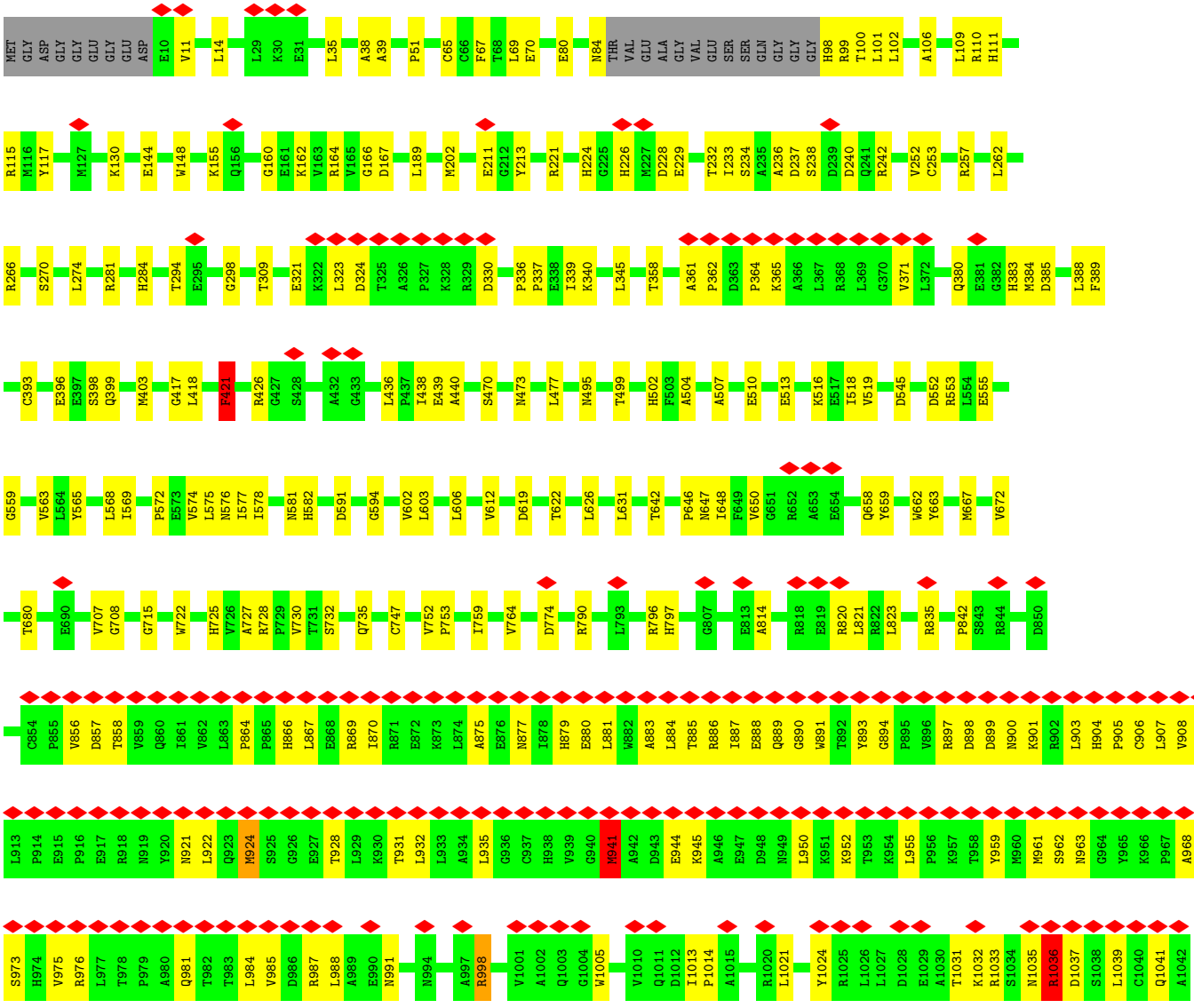
V2666 T2667 S2668 E2669 H2673 L2674 T2675 R2676 K2677 L2678 I2682 F2683 D2684 S2685 L2686 A2687 H2688 K2689 K2690 Y2691 D2692
Q2693 E2694 L2695 Y2696 R2697 M2698 A2699 M2700 P2701 C2702 L2703 C2704 A2705 I2706 A2707 G2708 A2709 L2710 P2711 P2712 D2713 Y2714 V2715 D2716 A2717 S2718 Y2719 S2720 S2721 K2722 A2723 E2724 K2725 LYS ALA THR VAL ASP ALA GLU GLY N2734 F2735 D2736 P2737 R2738 P2739 V2740 E2741 T2742 L2743 N2744 V2745 I2746 I2747 P2748 E2749 K2750 L2751 D2752
S2753 F2754 I2755 N2756 K2757 F2758 A2759 E2760 Y2761 T2762 H2763 E2764 K2765 W2766 A2767 F2768 D2769 K2770 I2771 Q2772 N2773 N2774 W2775 S2776 Y2777 G2778 E2779 N2780 V2781 D2782 E2783 E2784 L2785 K2786 T2787 H2788 P2789 M2790 L2791 R2792 P2793 Y2794 K2795 T2796 F2797 S2798 E2799 K2800 D2801 K2802 E2803 I2804 Y2805 R2806 W2807 P2808 I2809 K2810 E2811 S2812
L2813 K2814 A2815 M2816 I2817 A2818 W2819 E2820 W2821 T2822 I2823 E2824 K2825 A2826 R2827 E2828 G2829 E2830 GLU GLU ARG THR GLU LYS LYS LYS THR ARG LYS ILE SER GLN THR ALA GLN THR TYR ASP PRO ARG GLU GLY Y2855 N2856 P2857 Q2858 P2859 P2860 D2861 L2862 S2863 G2864 V2865 T2866 L2867 S2868 R2869 E2870 L2871 Q2872
A2873 M2874 A2875 E2876 Q2877 L2878 A2879 E2880 N2881 Y2882 H2883 N2884 T2885 W2886 G2887 R2888 K2889 K2890 K2891 Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904 L2905 V2906 P2907 Y2908 D2909 T2910 L2911 T2912 A2913 K2914 E2915 K2916 A2917 R2918 D2919 R2920 E2921 K2922 A2923 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932
N2933 G2934 Y2935 A2936 V2937 T2938 R2939 GLY LEU LYS ASP MET GLU L2946 D2947 T2948 S2949 S2950 I2951 E2952 K2953 R2954 F2955 A2956 F2957 G2958 F2959 L2960 L2963 L2964 R2965 W2966 M2967 D2968 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 A2979 V2980 V2981 S2982 S2983 G2984 R2985 V2986 E2987 K2988 S2989 P2990 H2991 E2992 Q2993
E2994 I2995 K2996 F2997 F2998 A2999 K3000 I3001 L3002 L3003 P3004 L3005 I3006 N3007 Q3008 Y3009 F3010 T3011 N3012 H3013 C3014 L3015 Y3016 F3017 L3018 S3019 T3020 P3021 A3022 K3023 V3024 L3025 G3026 S3027 G3028 G3029 H3030 A3031 S3032 N3033 K3034 E3035 K3036 E3037 M3038 I3039 L3042 F3043 C3044 K3045 L3046 A3047 A3048 L3049 H3052 R3053 V3054 S3055
L3056 F3057 G3058 T3059 D3060 A3061 P3062 A3063 V3064 V3065 N3066 C3067 L3068 H3069 I3070 L3071 A3072 R3073 S3074 L3075 D3076 A3077 R3078 T3079 V3080 M3081 K3082 S3083 G3084 P3085 E3086 I3087 V3088 K3089 A3090 G3091 L3092 R3093 S3094 F3095 F3096 E3097 S3098 A3099 S3100 E3101 D3102 I3103 E3104 K3105 M3106 V3107 E3108 N3109 L3110 R3111 L3112 G3113 K3114 V3115
S3116 GLN ALA ARG THR GLN VAL K3123 G3124 V3125 G3126 Q3127 N3128 L3129 T3130 Y3131 T3132 T3133 V3134 A3135 L3136 L3137 P3138 V3139 L3140 L3143 F3144 Q3145 Q3149 H3150 Q3151 F3152 G3153 D3154 D3155 Y3156 I3157 L3158 D3159 D3160 V3161 C3165 Y3166 R3167 T3168 L3169 C3170 S3171 I3172 Y3173 S3174 L3175 G3176 T3177 T3178 K3179 N3180
T3181 Y3182 V3183 E3184 K3185 L3186 R3187 P3188 A3189 L3190 G3191 E3192 C3193 L3194 A3195 R3196 L3197 A3198 A3199 A3200 M3201 P3202 V3203 A3204 F3205 L3206 E3207 P3208 Q3209 L3210 N3211 E3212 Y3213 N3214 A3215 C3216 S3217 V3218 Y3219 T3220 T3221 K3222 S3223 P3224 R3225 E3226 R3227 A3228 I3229 L3230 G3231 L3232 P3233 N3234 S3235 V3236 E3237 E3238 M3239 C3240
P3241 D3242 I3243 P3244 V3245 L3246 D3247 R3248 L3249 M3250 A3251 D3252 I3253 A3257 E3258 S3259 G3260 A3261 R3262 Y3263 T3264 E3265 M3266 P3267 H3268 V3269 I3270 E3271 I3272 T3273 L3274 P3275 M3276 L3277 C3278 S3279 Y3280 L3281 P3282 R3283 W3284 W3285 E3286 R3287 G3288 P3289 E3290 A3291 P3292 P3293 P3294 A3295 L3296 P3297 A3298 G3299 A3300 P3301 P3302
P3303 C3304 T3305 A3306 V3307 T3308 S3309 D3310 H3311 L3312 N3313 L3316 G3317 N3318 I3319 L3320 R3321 I3322 I3323 V3324 N3325 N3326 L3327 G3328 I3329 D3330 E3331 A3332 T3333 W3334 M3335 K3336 R3337 L3338 A3339 V3340 F3341 A3342 Q3343 P3344 I3345 V3346 S3347 R3348 A3349 R3350 L3353 L3354 H3357 F3358 I3359 P3360 T3361 I3362 G3363 R3364 L3365
R3366 K3367 R3368 A3369 G3370 K3371 V3372 V3373 A3374 E3375 E3376 E3377 Q3378 L3379 R3380 L3381 E3382 A3383 K3384 A3385 E3386 A3387 E3388 E3389 G3390 E3391 L3392 L3393 V3394 R3395 D3396 E3397 V3400 L3401 C3402 R3403 D3404 L3405 Y3406 A3407 L3408 Y3409 P3410 L3411 L3412 I3413 R3414 D3417 E3426 N3430 L3434 F3435 R3436 M3437 V3438

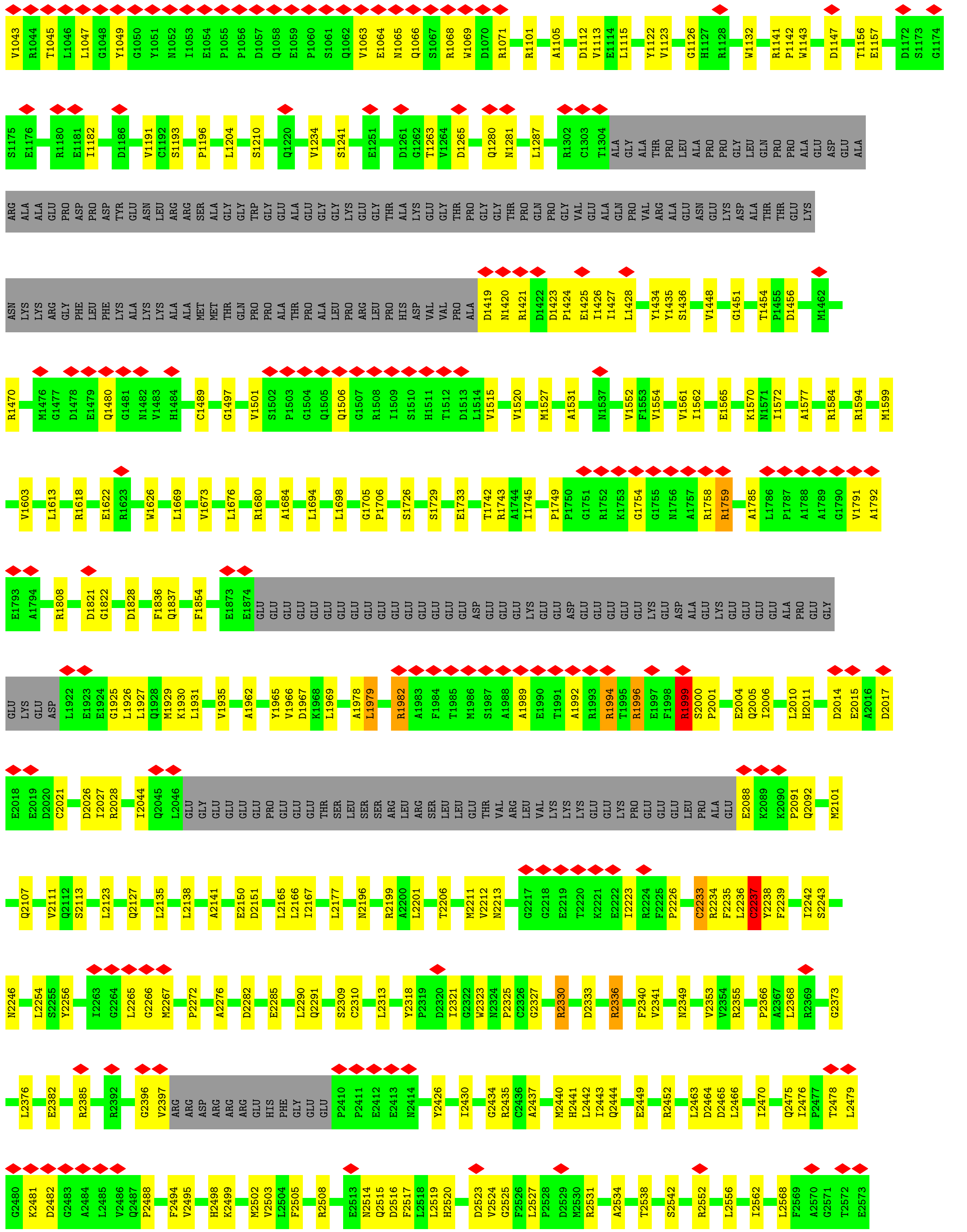




• Molecule 1: Ryanodine receptor 1

Chain B:

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S1175 E1176 R1180 E1181 I1182 D1186 V1191 C1192 S1193 P1196 L1204 S1210 Q1220 V1234 S1241 E1251 D1261 G1262 T1263 V1264 D1265 Q1280 N1281 L1287 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 D1419 N1420 R1421 D1422 D1423 P1424 E1425 I1426 I1427 L1428 Y1434 Y1435 S1436 V1448 G1451 T1454 P1455 D1456 M1462
R1470 M1476 G1477 D1478 E1479 Q1480 G1481 N1482 V1483 H1484 C1489 G1497 V1501 S1502 P1503 G1504 Q1505 Q1506 G1507 R1508 I1509 S1510 H1511 T1512 D1513 L1514 V1515 V1520 M1527 A1531 N1537 V1552 F1553 V1554 V1561 I1562 E1565 K1570 N1571 I1572 A1577 R1584 R1594 M1599
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E1793 A1794 R1808 D1821 G1822 D1828 F1836 Q1837 F1854 E1873 E1874 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 GLU LYS GLU ASP ALA GLU LYS GLU GLU GLU GLU ALA PRO GLU GLY
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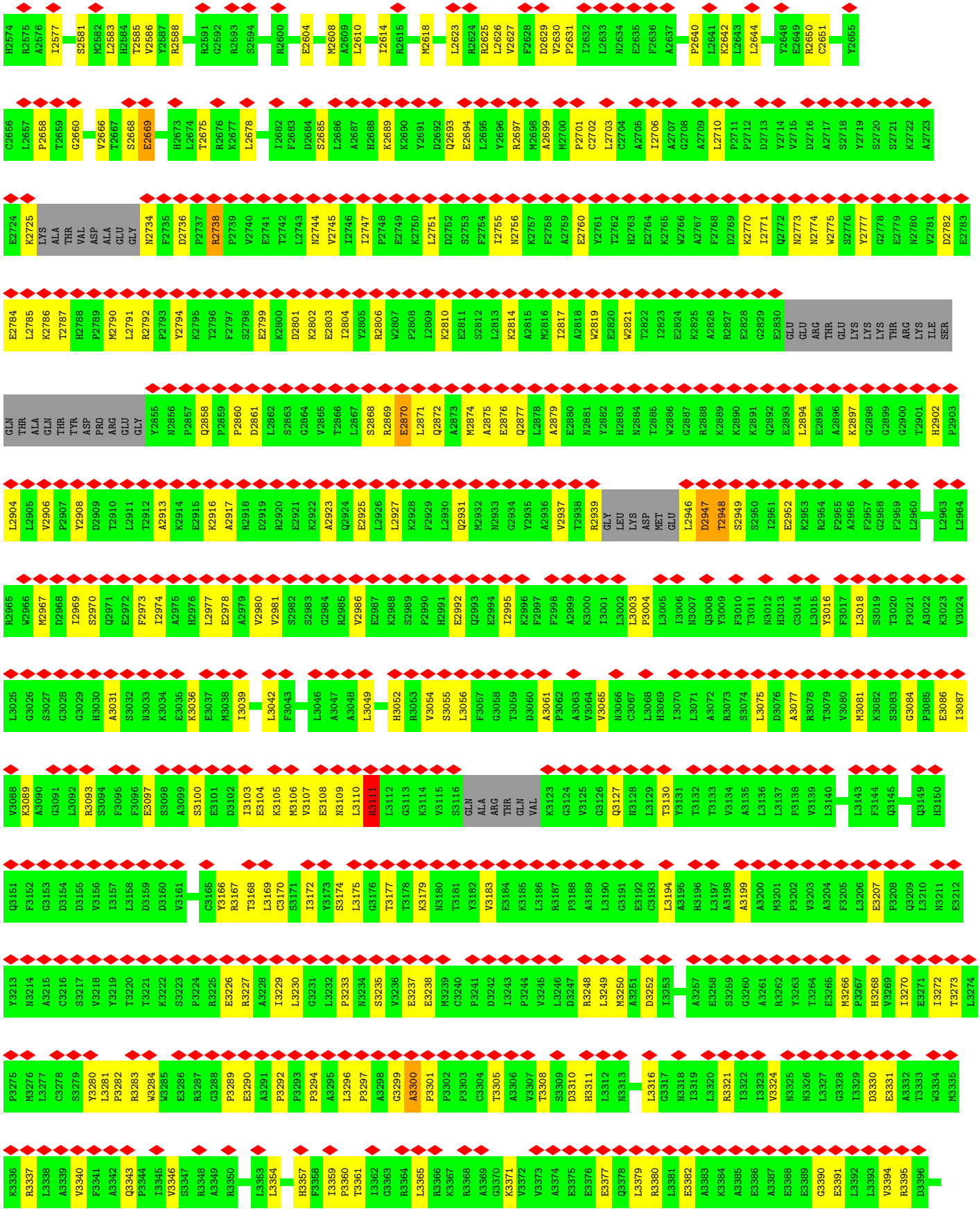
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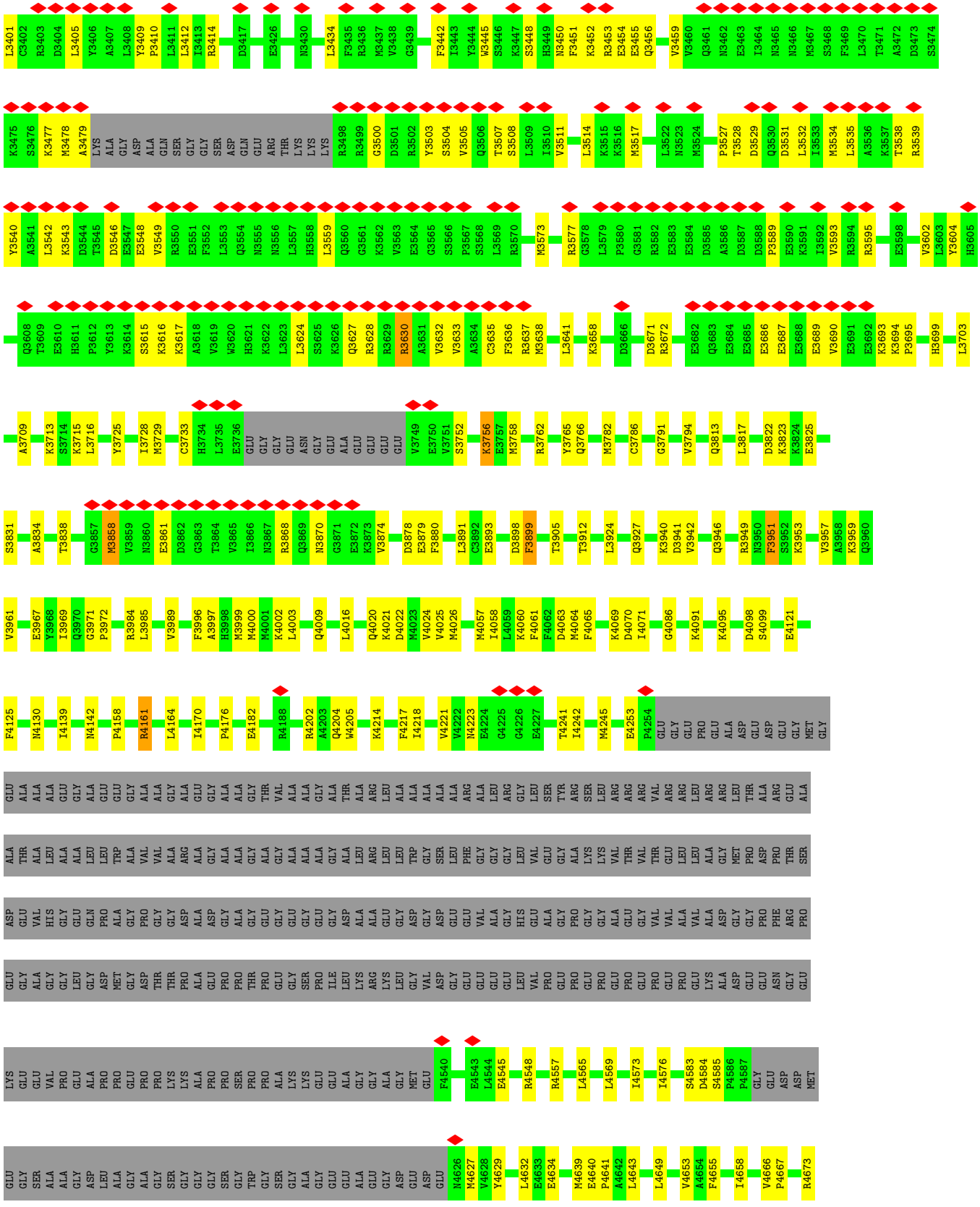
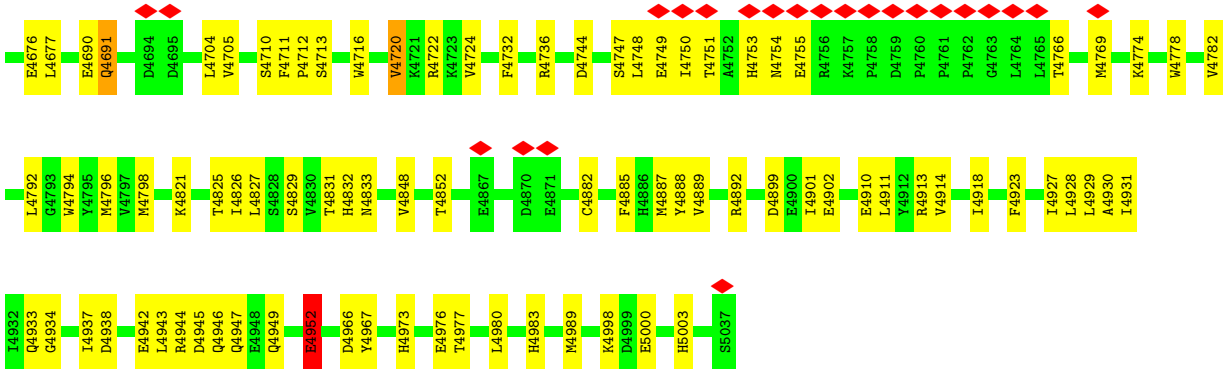
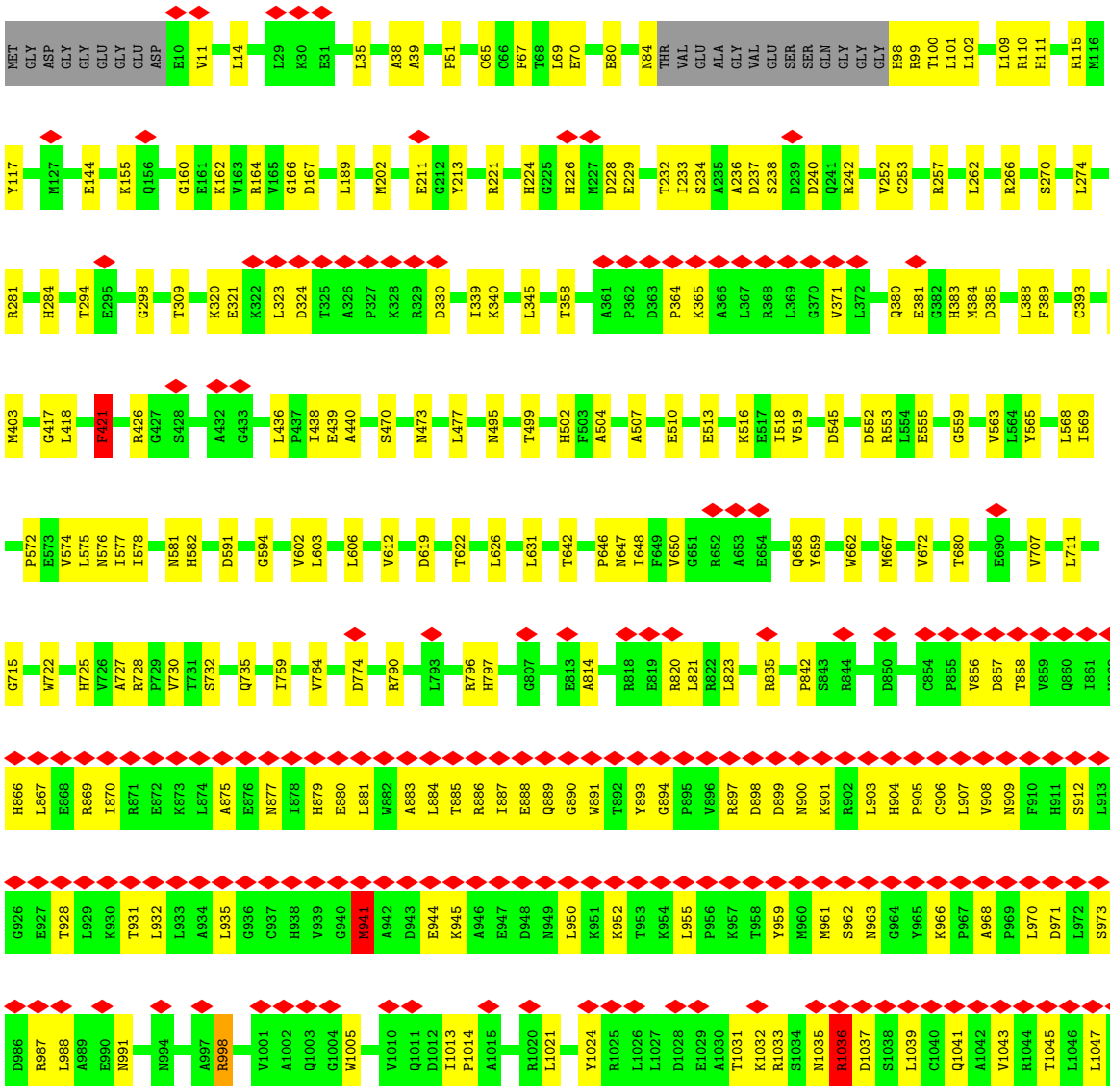
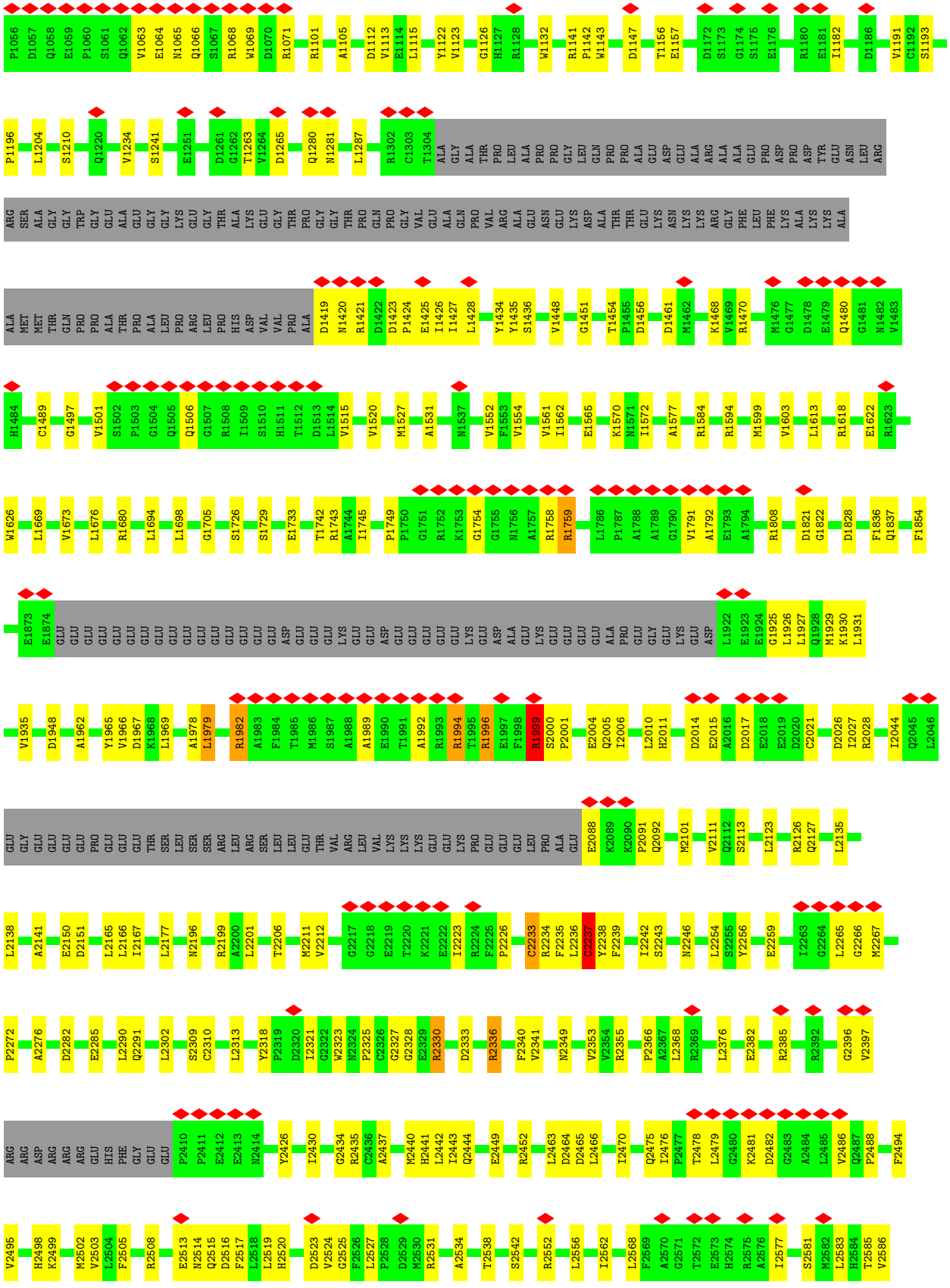


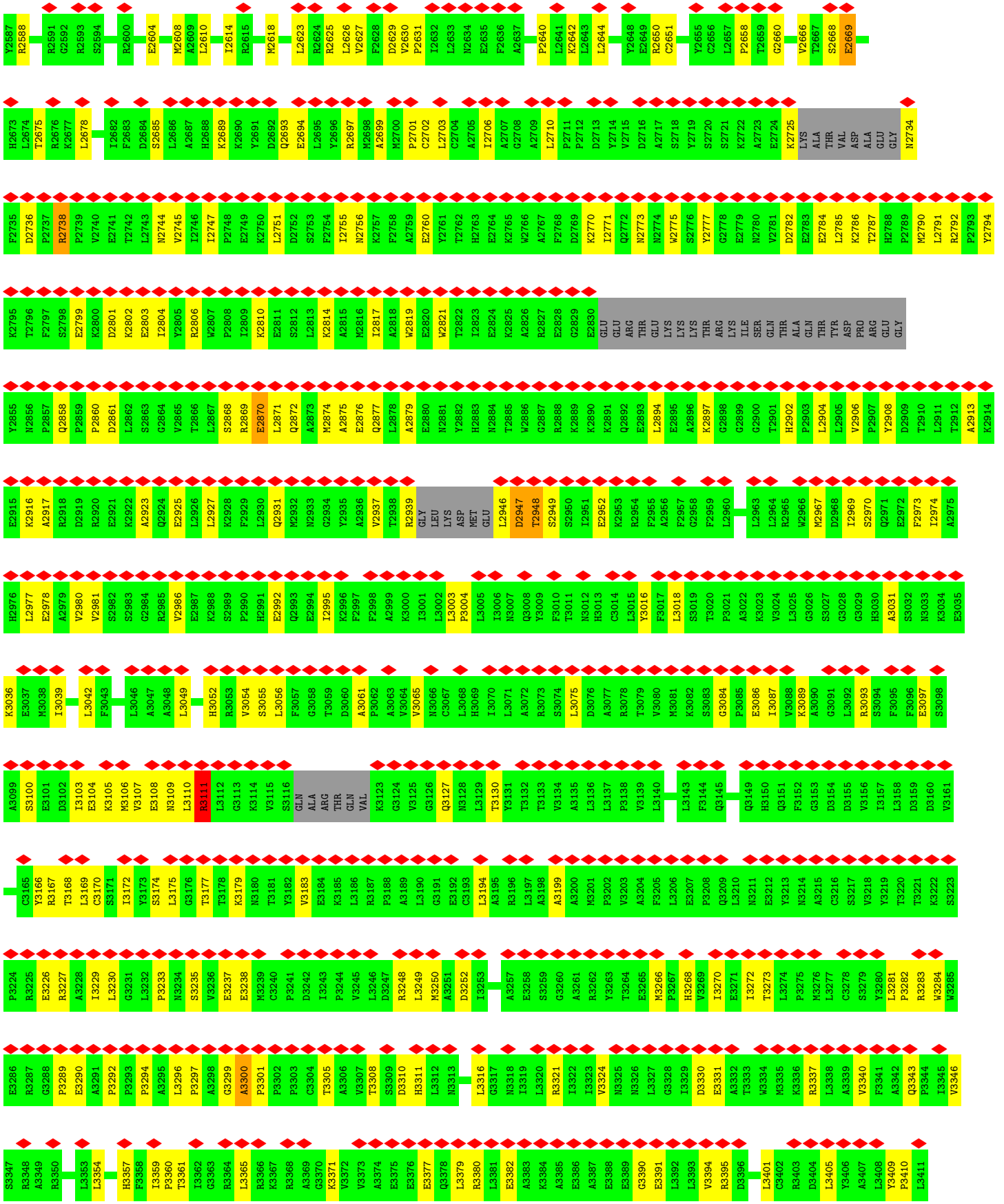


• Molecule 1: Ryanodine receptor 1

Chain D:



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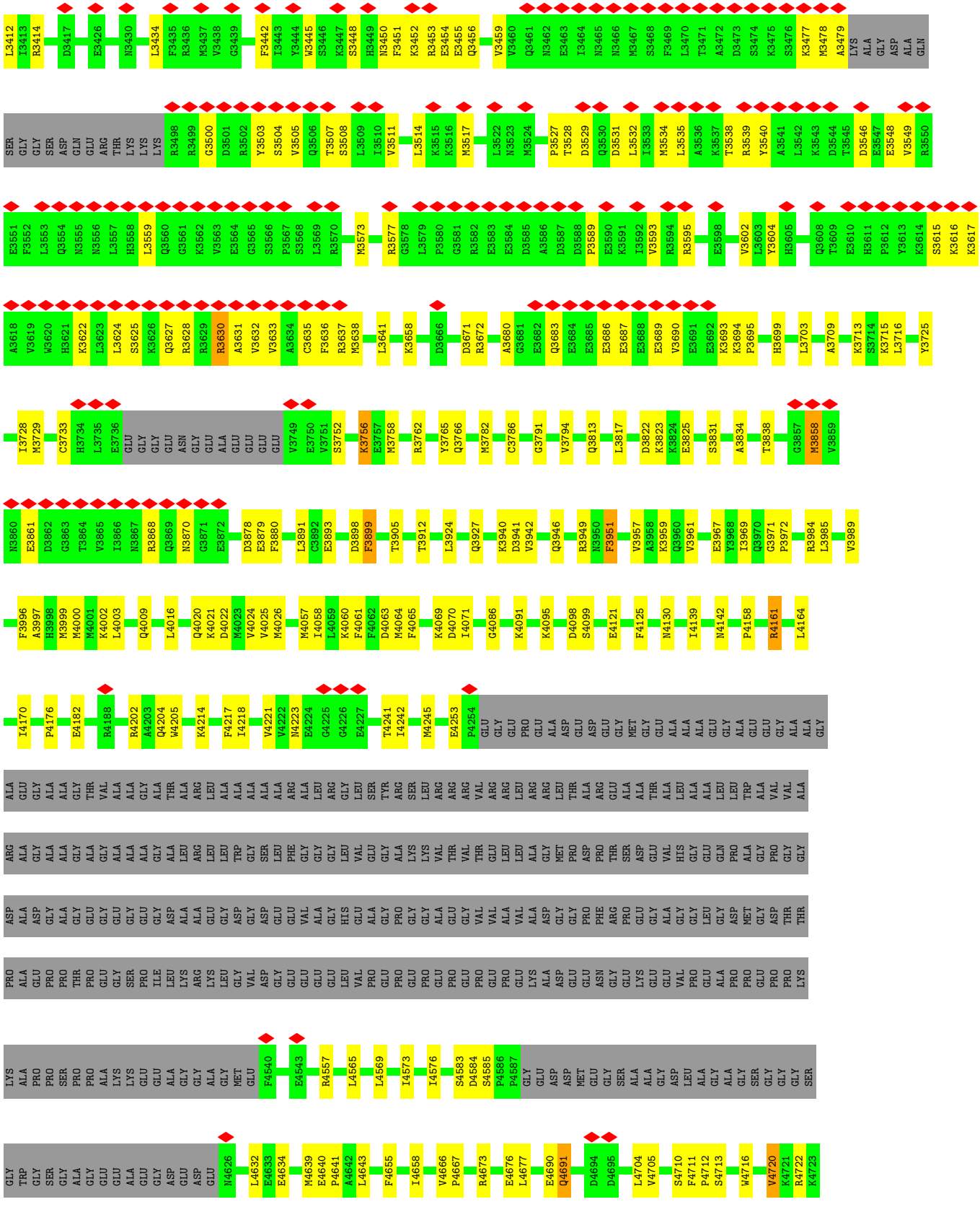
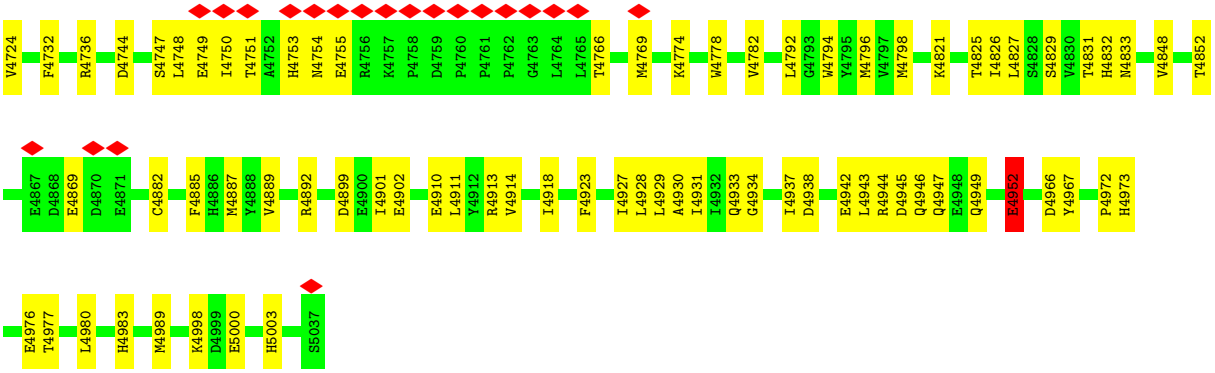
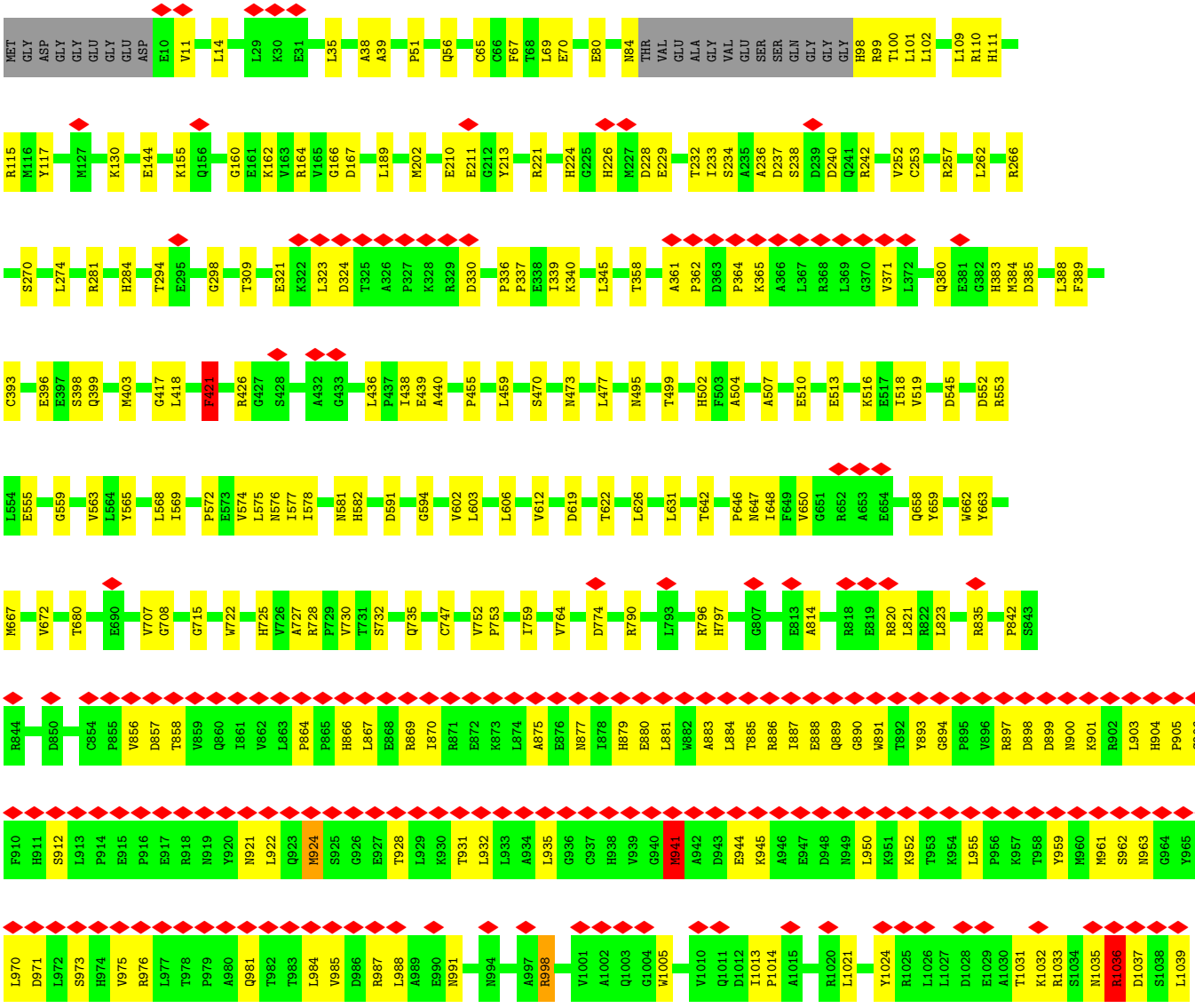
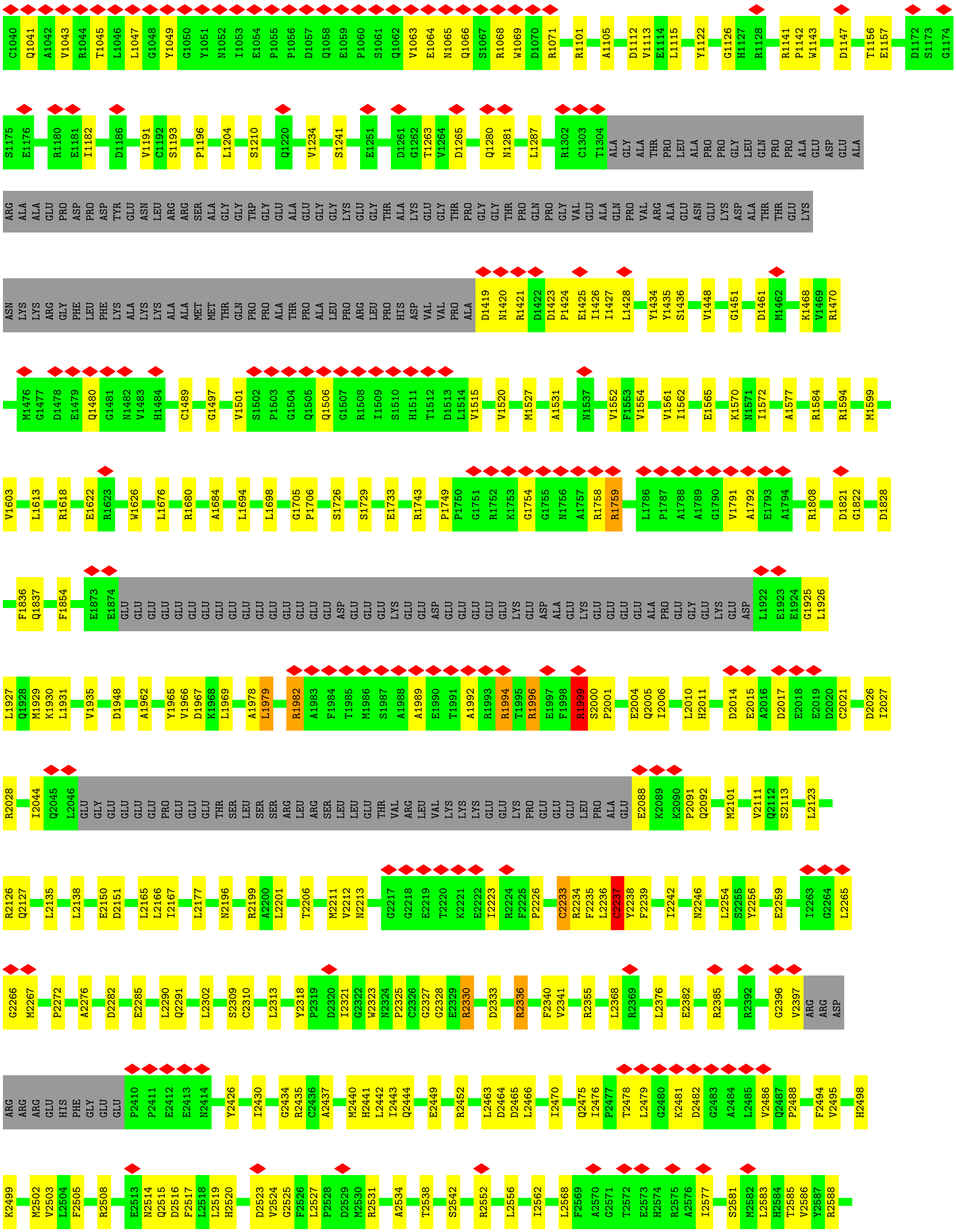




• Molecule 1: Ryanodine receptor 1

Chain C:

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ARG ARG ARG GLU HIS PHE GLY GLU GLU P2410 P2411 E2412 E2413 N2414 Y2426 I2430 G2434 R2435 C2436 A2437 M2440 H2441 L2442 I2443 Q2444 E2449 R2452 L2463 D2464 D2465 L2466 I2470 Q2475 I2476 P2477 T2478 L2479 G2480 K2481 D2482 G2483 A2484 L2485 V2486 Q2487 P2488 F2494 V2495 H2498
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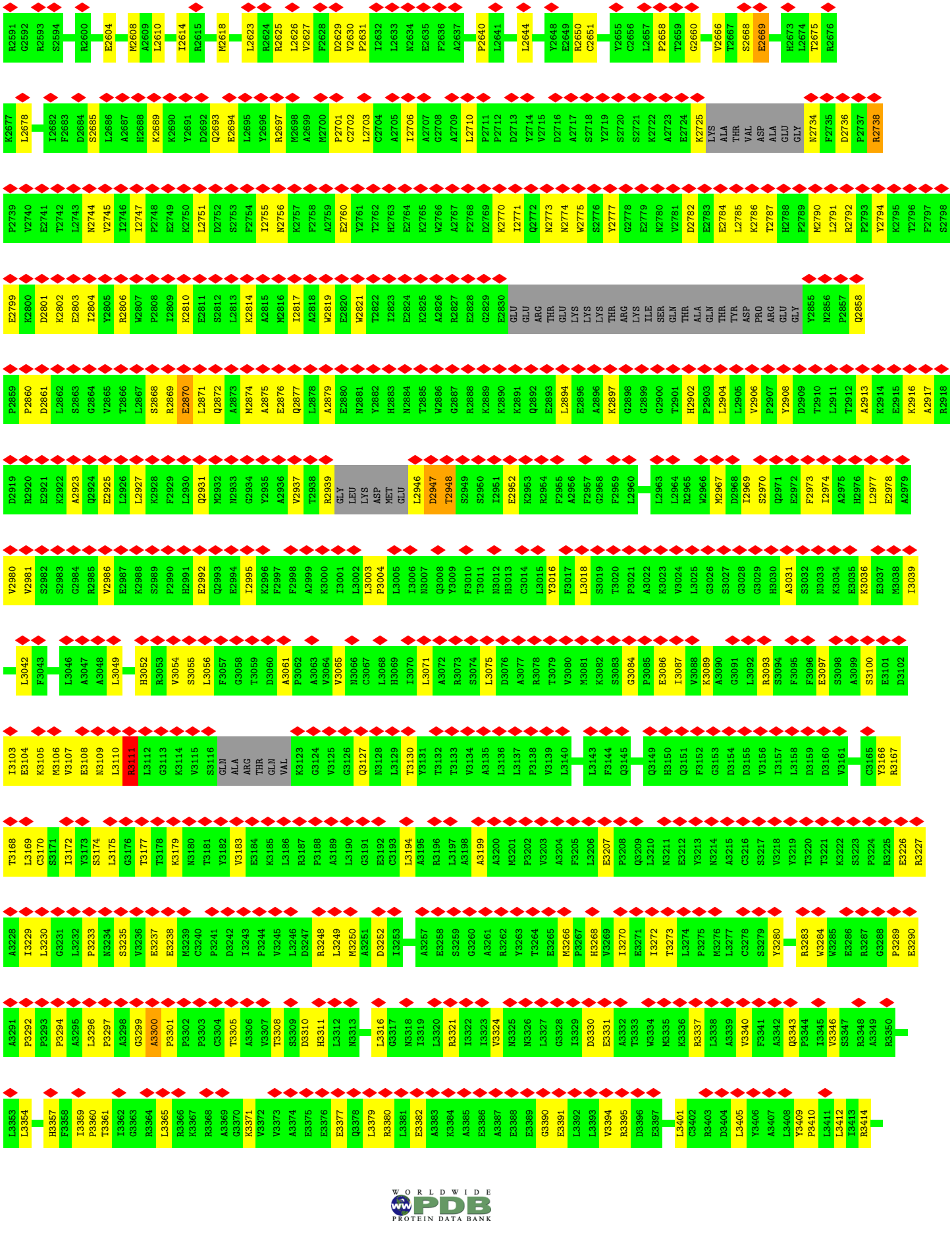
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K2677 L2678 I2682 F2683 D2684 S2685 L2686 A2687 H2688 K2689 K2690 Y2691 D2692 Q2693 E2694 L2695 Y2696 R2697 M2698 A2699 M2700 P2701 C2702 L2703 C2704 A2705 I2706 A2707 G2708 A2709 L2710 P2711 P2712 D2713 Y2714 V2715 D2716 A2717 S2718 Y2719 S2720 S2721 K2722 A2723 E2724 K2725 LYS ALA THR VAL ASP ALA GLU GLY N2734 F2735 D2736 P2737 R2738
P2739 V2740 E2741 T2742 L2743 N2744 V2745 I2746 I2747 P2748 E2749 K2750 L2751 D2752 S2753 F2754 I2755 N2756 K2757 F2758 A2759 E2760 Y2761 T2762 H2763 E2764 K2765 W2766 A2767 F2768 D2769 K2770 I2771 Q2772 N2773 N2774 W2775 S2776 Y2777 G2778 E2779 N2780 V2781 D2782 E2783 E2784 L2785 K2786 T2787 H2788 P2789 M2790 L2791 R2792 P2793 Y2794 K2795 T2796 F2797 S2798
E2799 K2800 D2801 K2802 E2803 I2804 Y2805 R2806 W2807 P2808 I2809 K2810 E2811 S2812 L2813 K2814 A2815 M2816 I2817 A2818 W2819 E2820 W2821 T2822 I2823 E2824 K2825 A2826 R2827 E2828 G2829 E2830 GLU GLU ARG THR GLU LYS LYS LYS THR ARG LYS ILE SER GLN THR ALA GLN THR TYR ASP PRO ARG GLU GLY Y2855 N2856 P2857 Q2858
P2859 P2860 D2861 L2862 S2863 G2864 V2865 T2866 L2867 S2868 R2869 E2870 L2871 Q2872 A2873 M2874 A2875 E2876 Q2877 L2878 A2879 E2880 N2881 Y2882 H2883 N2884 T2885 W2886 G2887 R2888 K2889 K2890 K2891 Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904 L2905 V2906 P2907 Y2908 D2909 T2910 L2911 T2912 A2913 K2914 E2915 K2916 A2917 R2918
D2919 R2920 E2921 K2922 A2923 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932 N2933 G2934 Y2935 A2936 V2937 T2938 R2939 GLY LEU LYS ASP MET GLU L2946 D2947 T2948 S2949 S2950 I2951 E2952 K2953 R2954 F2955 A2956 F2957 G2958 F2959 L2960 L2963 L2964 R2965 W2966 M2967 D2968 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 A2979
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L3042 F3043 L3046 A3047 A3048 L3049 H3052 R3053 V3054 S3055 L3056 F3057 G3058 T3059 D3060 A3061 P3062 A3063 V3064 V3065 N3066 C3067 L3068 H3069 I3070 L3071 A3072 R3073 S3074 L3075 D3076 A3077 R3078 T3079 V3080 M3081 K3082 S3083 G3084 P3085 E3086 I3087 V3088 K3089 A3090 G3091 L3092 R3093 S3094 F3095 F3096 E3097 S3098 A3099 S3100 E3101 D3102
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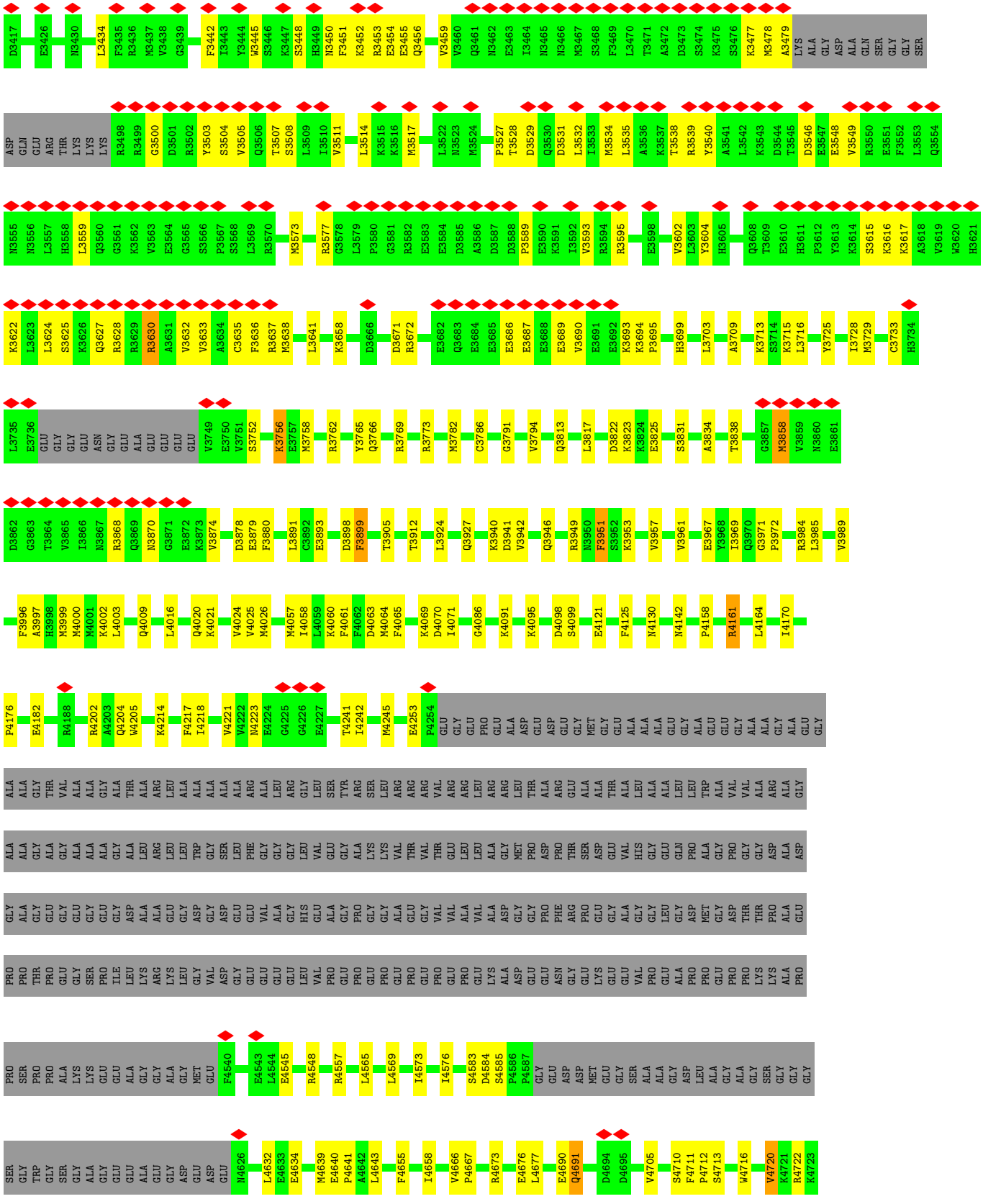
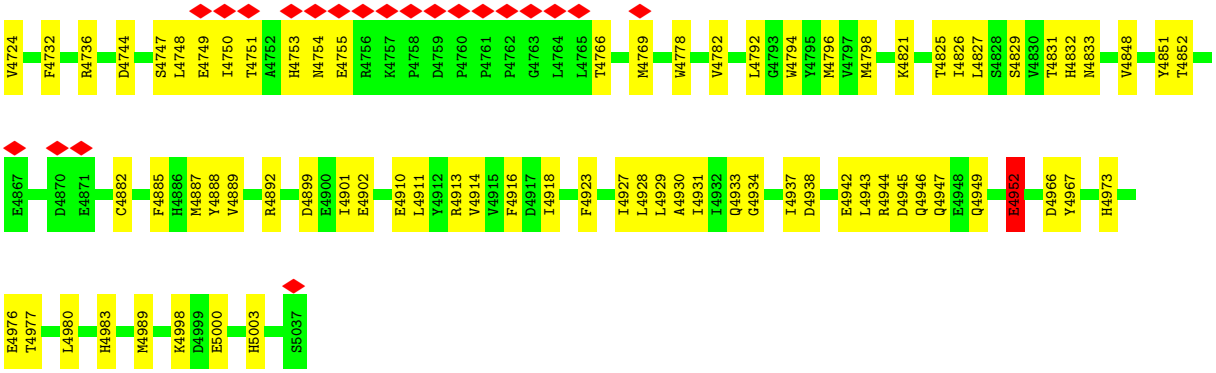
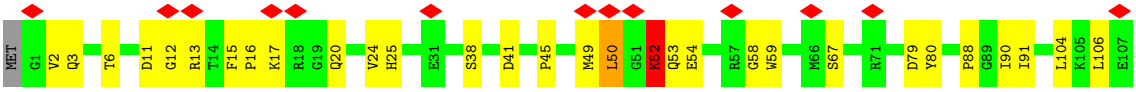
T3168 L3169 C3170 S3171 I3172 Y3173 S3174 L3175 G3176 T3177 T3178 K3179 N3180 T3181 Y3182 V3183 E3184 K3185 L3186 R3187 P3188 A3189 L3190 G3191 E3192 C3193 L3194 A3195 R3196 L3197 A3198 A3199 A3200 M3201 P3202 V3203 A3204 F3205 L3206 E3207 P3208 Q3209 L3210 N3211 E3212 Y3213 N3214 A3215 C3216 S3217 V3218 Y3219 T3220 T3221 K3222 S3223 P3224 R3225 E3226 R3227
A3228 I3229 L3230 G3231 L3232 P3233 N3234 S3235 V3236 E3237 E3238 M3239 C3240 P3241 D3242 I3243 P3244 V3245 L3246 D3247 R3248 L3249 M3250 A3251 D3252 I3253 A3257 E3258 S3259 G3260 A3261 R3262 Y3263 T3264 E3265 M3266 P3267 H3268 V3269 I3270 E3271 I3272 T3273 L3274 P3275 M3276 L3277 C3278 S3279 Y3280 R3283 W3284 W3285 E3286 R3287 G3288 P3289 E3290
A3291 P3292 P3293 P3294 A3295 L3296 P3297 A3298 G3299 A3300 P3301 P3302 P3303 C3304 T3305 A3306 V3307 T3308 S3309 D3310 H3311 L3312 N3313 L3316 G3317 N3318 I3319 L3320 R3321 I3322 I3323 V3324 N3325 N3326 L3327 G3328 I3329 D3330 E3331 A3332 T3333 W3334 M3335 K3336 R3337 L3338 A3339 V3340 F3341 A3342 Q3343 P3344 I3345 V3346 S3347 R3348 A3349 R3350
L3353 L3354 H3357 F3358 I3359 P3360 T3361 I3362 G3363 R3364 L3365 R3366 K3367 R3368 A3369 G3370 K3371 V3372 V3373 A3374 E3375 E3376 E3377 Q3378 L3379 R3380 L3381 E3382 A3383 K3384 A3385 E3386 A3387 E3388 E3389 G3390 E3391 L3392 L3393 V3394 R3395 D3396 E3397 L3401 C3402 R3403 D3404 L3405 Y3406 A3407 L3408 Y3409 P3410 L3411 L3412 T3413 R3414



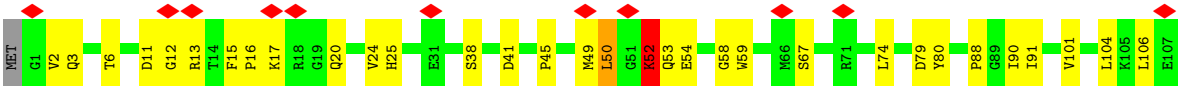


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

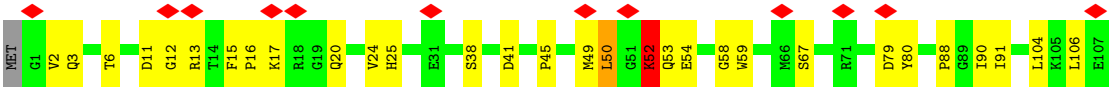


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

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



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



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	128983	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.485	Depositor
Minimum map value	-0.205	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.019	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	427.52, 427.52, 427.52	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.835, 0.835, 0.835	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.30	6/35977 (0.0%)	0.55	19/48726 (0.0%)
1	B	0.30	6/35977 (0.0%)	0.55	19/48726 (0.0%)
1	C	0.30	6/35977 (0.0%)	0.55	19/48726 (0.0%)
1	D	0.30	6/35977 (0.0%)	0.55	19/48726 (0.0%)
2	E	0.44	0/850	0.84	3/1146 (0.3%)
2	F	0.44	0/850	0.84	3/1146 (0.3%)
2	G	0.44	0/850	0.84	3/1146 (0.3%)
2	H	0.44	0/850	0.84	3/1146 (0.3%)
All	All	0.30	24/147308 (0.0%)	0.56	88/199488 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	7
1	B	0	7
1	C	0	7
1	D	0	7
All	All	0	28

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	2237	CYS	CB-SG	6.82	1.93	1.82
1	B	2237	CYS	CB-SG	6.82	1.93	1.82
1	C	2237	CYS	CB-SG	6.82	1.93	1.82
1	D	2237	CYS	CB-SG	6.81	1.93	1.82
1	D	1999	ARG	CB-CG	6.01	1.68	1.52
1	A	1999	ARG	CB-CG	5.98	1.68	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	1999	ARG	CB-CG	5.98	1.68	1.52
1	B	1999	ARG	CB-CG	5.96	1.68	1.52
1	D	2233	CYS	CB-SG	-5.96	1.72	1.81
1	B	2233	CYS	CB-SG	-5.95	1.72	1.81
1	A	2233	CYS	CB-SG	-5.95	1.72	1.81
1	C	2233	CYS	CB-SG	-5.95	1.72	1.81
1	A	3899	PHE	CD1-CE1	-5.55	1.28	1.39
1	B	3899	PHE	CD1-CE1	-5.54	1.28	1.39
1	C	3899	PHE	CD1-CE1	-5.53	1.28	1.39
1	D	3899	PHE	CD1-CE1	-5.52	1.28	1.39
1	A	1036	ARG	CG-CD	-5.32	1.38	1.51
1	D	1036	ARG	CG-CD	-5.31	1.38	1.51
1	C	1036	ARG	CG-CD	-5.31	1.38	1.51
1	B	1036	ARG	CG-CD	-5.29	1.38	1.51
1	C	1982	ARG	CG-CD	-5.17	1.39	1.51
1	A	1982	ARG	CG-CD	-5.14	1.39	1.51
1	B	1982	ARG	CG-CD	-5.12	1.39	1.51
1	D	1982	ARG	CG-CD	-5.12	1.39	1.51

All (88) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	52	LYS	CD-CE-NZ	14.60	145.27	111.70
2	G	52	LYS	CD-CE-NZ	14.57	145.21	111.70
2	F	52	LYS	CD-CE-NZ	14.56	145.19	111.70
2	E	52	LYS	CD-CE-NZ	14.56	145.18	111.70
1	D	998	ARG	CG-CD-NE	13.13	139.38	111.80
1	A	998	ARG	CG-CD-NE	13.12	139.36	111.80
1	B	998	ARG	CG-CD-NE	13.12	139.35	111.80
1	C	998	ARG	CG-CD-NE	13.11	139.32	111.80
1	D	2237	CYS	CA-CB-SG	11.54	134.78	114.00
1	A	2237	CYS	CA-CB-SG	11.51	134.72	114.00
1	B	2237	CYS	CA-CB-SG	11.51	134.72	114.00
1	C	2237	CYS	CA-CB-SG	11.50	134.71	114.00
1	B	998	ARG	CB-CG-CD	10.45	138.77	111.60
1	A	998	ARG	CB-CG-CD	10.45	138.76	111.60
1	C	998	ARG	CB-CG-CD	10.45	138.76	111.60
1	D	998	ARG	CB-CG-CD	10.43	138.71	111.60
2	H	49	MET	CB-CG-SD	9.26	140.18	112.40
2	G	49	MET	CB-CG-SD	9.25	140.15	112.40
2	E	49	MET	CB-CG-SD	9.24	140.13	112.40
2	F	49	MET	CB-CG-SD	9.24	140.12	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	3111	ARG	CG-CD-NE	-8.73	93.46	111.80
1	B	3111	ARG	CG-CD-NE	-8.73	93.46	111.80
1	C	3111	ARG	CG-CD-NE	-8.73	93.46	111.80
1	D	3111	ARG	CG-CD-NE	-8.72	93.48	111.80
1	D	3250	MET	CB-CG-SD	8.22	137.06	112.40
1	A	3250	MET	CB-CG-SD	8.22	137.05	112.40
1	B	3250	MET	CB-CG-SD	8.20	137.01	112.40
1	C	3250	MET	CB-CG-SD	8.19	136.98	112.40
1	C	3756	LYS	CD-CE-NZ	-7.73	93.91	111.70
1	A	3756	LYS	CD-CE-NZ	-7.73	93.93	111.70
1	D	3756	LYS	CD-CE-NZ	-7.72	93.94	111.70
1	B	3756	LYS	CD-CE-NZ	-7.71	93.97	111.70
1	A	924	MET	CB-CG-SD	7.54	135.03	112.40
1	B	924	MET	CB-CG-SD	7.54	135.02	112.40
1	D	924	MET	CB-CG-SD	7.54	135.02	112.40
1	C	924	MET	CB-CG-SD	7.54	135.03	112.40
1	D	3111	ARG	CB-CG-CD	7.51	131.13	111.60
1	C	3111	ARG	CB-CG-CD	7.51	131.13	111.60
1	A	3111	ARG	CB-CG-CD	7.51	131.12	111.60
1	B	3111	ARG	CB-CG-CD	7.49	131.07	111.60
1	B	941	MET	CB-CG-SD	7.30	134.31	112.40
1	D	941	MET	CB-CG-SD	7.29	134.27	112.40
1	A	941	MET	CB-CG-SD	7.29	134.27	112.40
1	C	941	MET	CB-CG-SD	7.28	134.24	112.40
2	F	50	LEU	CB-CG-CD2	6.90	122.73	111.00
2	E	50	LEU	CB-CG-CD2	6.89	122.72	111.00
2	H	50	LEU	CB-CG-CD2	6.88	122.69	111.00
2	G	50	LEU	CB-CG-CD2	6.87	122.68	111.00
1	D	1994	ARG	CG-CD-NE	6.80	126.08	111.80
1	B	1994	ARG	CG-CD-NE	6.79	126.05	111.80
1	A	1994	ARG	CG-CD-NE	6.78	126.04	111.80
1	C	1994	ARG	CG-CD-NE	6.76	126.01	111.80
1	D	2233	CYS	CA-CB-SG	6.50	125.70	114.00
1	B	2233	CYS	CA-CB-SG	6.50	125.69	114.00
1	A	2233	CYS	CA-CB-SG	6.49	125.68	114.00
1	C	2233	CYS	CA-CB-SG	6.45	125.62	114.00
1	B	4952	GLU	CA-CB-CG	6.38	127.42	113.40
1	D	4952	GLU	CA-CB-CG	6.38	127.43	113.40
1	A	4952	GLU	CA-CB-CG	6.37	127.42	113.40
1	C	4952	GLU	CA-CB-CG	6.37	127.42	113.40
1	B	3756	LYS	CB-CG-CD	6.10	127.47	111.60
1	C	3756	LYS	CB-CG-CD	6.09	127.45	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	3756	LYS	CB-CG-CD	6.09	127.44	111.60
1	D	3756	LYS	CB-CG-CD	6.08	127.41	111.60
1	C	2330	ARG	NE-CZ-NH1	6.04	123.32	120.30
1	D	2330	ARG	NE-CZ-NH1	5.99	123.29	120.30
1	A	2330	ARG	NE-CZ-NH1	5.96	123.28	120.30
1	B	2330	ARG	NE-CZ-NH1	5.86	123.23	120.30
1	B	2233	CYS	N-CA-CB	5.74	120.93	110.60
1	C	2233	CYS	N-CA-CB	5.73	120.91	110.60
1	A	2233	CYS	N-CA-CB	5.73	120.91	110.60
1	D	2233	CYS	N-CA-CB	5.72	120.89	110.60
1	A	1979	LEU	CB-CG-CD2	5.69	120.68	111.00
1	B	1979	LEU	CB-CG-CD2	5.68	120.66	111.00
1	D	1979	LEU	CB-CG-CD2	5.68	120.66	111.00
1	C	1979	LEU	CB-CG-CD2	5.67	120.63	111.00
1	B	3111	ARG	CA-CB-CG	-5.41	101.50	113.40
1	A	3111	ARG	CA-CB-CG	-5.40	101.52	113.40
1	D	3111	ARG	CA-CB-CG	-5.39	101.53	113.40
1	C	3111	ARG	CA-CB-CG	-5.38	101.57	113.40
1	B	1036	ARG	CD-NE-CZ	-5.31	116.16	123.60
1	D	1036	ARG	CD-NE-CZ	-5.31	116.17	123.60
1	A	1036	ARG	CD-NE-CZ	-5.28	116.21	123.60
1	C	1036	ARG	CD-NE-CZ	-5.28	116.21	123.60
1	B	1999	ARG	CD-NE-CZ	-5.23	116.27	123.60
1	D	1999	ARG	CD-NE-CZ	-5.20	116.32	123.60
1	A	1999	ARG	CD-NE-CZ	-5.20	116.32	123.60
1	C	1999	ARG	CD-NE-CZ	-5.16	116.37	123.60

There are no chirality outliers.

All (28) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1994	ARG	Sidechain
1	A	1996	ARG	Sidechain
1	A	1999	ARG	Sidechain
1	A	2237	CYS	Peptide
1	A	2947	ASP	Peptide
1	A	3111	ARG	Sidechain
1	A	421	PHE	Sidechain
1	B	1994	ARG	Sidechain
1	B	1996	ARG	Sidechain
1	B	1999	ARG	Sidechain
1	B	2237	CYS	Peptide

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Mol	Chain	Res	Type	Group
1	B	2947	ASP	Peptide
1	B	3111	ARG	Sidechain
1	B	421	PHE	Sidechain
1	C	1994	ARG	Sidechain
1	C	1996	ARG	Sidechain
1	C	1999	ARG	Sidechain
1	C	2237	CYS	Peptide
1	C	2947	ASP	Peptide
1	C	3111	ARG	Sidechain
1	C	421	PHE	Sidechain
1	D	1994	ARG	Sidechain
1	D	1996	ARG	Sidechain
1	D	1999	ARG	Sidechain
1	D	2237	CYS	Peptide
1	D	2947	ASP	Peptide
1	D	3111	ARG	Sidechain
1	D	421	PHE	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	35150	0	34793	805	0
1	B	35150	0	34793	818	0
1	C	35150	0	34793	802	0
1	D	35150	0	34793	798	0
2	E	831	0	831	18	0
2	F	831	0	831	21	0
2	G	831	0	831	20	0
2	H	831	0	831	19	0
3	A	31	0	12	1	0
3	B	31	0	12	1	0
3	C	31	0	12	1	0
3	D	31	0	12	1	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
6	A	16	0	14	2	0
6	B	16	0	14	2	0
6	C	16	0	14	2	0
6	D	16	0	14	2	0
All	All	144120	0	142600	3250	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 (3250) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1032:LYS:HB3	1:D:1036:ARG:HH12	1.14	1.13
1:A:935:LEU:HD13	1:A:987:ARG:HE	1.16	1.10
1:C:1032:LYS:HB3	1:C:1036:ARG:HH12	1.14	1.09
1:B:935:LEU:HD13	1:B:987:ARG:HE	1.16	1.08
1:A:1032:LYS:HB3	1:A:1036:ARG:HH12	1.14	1.08
1:B:1032:LYS:HB3	1:B:1036:ARG:HH12	1.14	1.08
1:D:935:LEU:HD13	1:D:987:ARG:HE	1.16	1.05
1:C:935:LEU:HD13	1:C:987:ARG:HE	1.16	1.05
1:A:2868:SER:OG	1:A:2870[B]:GLU:OE2	1.83	0.96
1:B:2868:SER:OG	1:B:2870[B]:GLU:OE2	1.83	0.96
1:C:2868:SER:OG	1:C:2870[B]:GLU:OE2	1.83	0.96
1:D:2868:SER:OG	1:D:2870[B]:GLU:OE2	1.83	0.94
1:D:1032:LYS:CB	1:D:1036:ARG:HH12	1.85	0.90
1:C:1032:LYS:CB	1:C:1036:ARG:HH12	1.85	0.90
1:B:1032:LYS:CB	1:B:1036:ARG:HH12	1.85	0.90
1:D:1032:LYS:HB3	1:D:1036:ARG:NH1	1.87	0.90
1:C:1032:LYS:HB3	1:C:1036:ARG:NH1	1.87	0.90
1:B:1032:LYS:HB3	1:B:1036:ARG:NH1	1.87	0.90
1:A:1032:LYS:CB	1:A:1036:ARG:HH12	1.85	0.90
1:B:935:LEU:HD13	1:B:987:ARG:NE	1.88	0.90
1:A:1032:LYS:HB3	1:A:1036:ARG:NH1	1.87	0.89
1:A:2452:ARG:NH1	1:B:144:GLU:OE1	2.05	0.89
1:C:935:LEU:HD13	1:C:987:ARG:NE	1.88	0.89
1:A:1561:VAL:HG12	1:A:1562:ILE:HG23	1.56	0.88
1:D:935:LEU:HD13	1:D:987:ARG:NE	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3817:LEU:HB2	1:B:3899:PHE:HE1	1.39	0.88
1:C:3817:LEU:HB2	1:C:3899:PHE:HE1	1.38	0.87
1:D:144:GLU:OE1	1:C:2452:ARG:NH1	2.06	0.87
1:A:935:LEU:HD13	1:A:987:ARG:NE	1.88	0.87
1:B:2452:ARG:NH1	1:C:144:GLU:OE1	2.07	0.86
1:D:1561:VAL:HG12	1:D:1562:ILE:HG23	1.56	0.86
1:C:1561:VAL:HG12	1:C:1562:ILE:HG23	1.56	0.86
1:A:3817:LEU:HB2	1:A:3899:PHE:HE1	1.38	0.85
1:A:3300:ALA:HB3	1:A:3301:PRO:HD3	1.57	0.85
1:B:1561:VAL:HG12	1:B:1562:ILE:HG23	1.56	0.85
1:D:3300:ALA:HB3	1:D:3301:PRO:HD3	1.57	0.85
1:C:3733:CYS:O	1:C:3766:GLN:NE2	2.09	0.85
1:B:4902:GLU:O	1:B:4913:ARG:NH1	2.10	0.85
1:C:4902:GLU:O	1:C:4913:ARG:NH1	2.10	0.85
1:B:3733:CYS:O	1:B:3766:GLN:NE2	2.09	0.85
1:D:4902:GLU:O	1:D:4913:ARG:NH1	2.10	0.85
1:A:3733:CYS:O	1:A:3766:GLN:NE2	2.09	0.84
1:B:3300:ALA:HB3	1:B:3301:PRO:HD3	1.57	0.84
1:D:3733:CYS:O	1:D:3766:GLN:NE2	2.09	0.84
1:A:4902:GLU:O	1:A:4913:ARG:NH1	2.10	0.84
1:C:3391:GLU:OE2	1:C:3450:ASN:ND2	2.11	0.84
1:D:3391:GLU:OE2	1:D:3450:ASN:ND2	2.11	0.84
1:D:3817:LEU:HB2	1:D:3899:PHE:HE1	1.38	0.84
1:C:3300:ALA:HB3	1:C:3301:PRO:HD3	1.57	0.84
1:A:3391:GLU:OE2	1:A:3450:ASN:ND2	2.11	0.84
1:C:667:MET:SD	1:C:790:ARG:NH2	2.51	0.84
1:B:884:LEU:HD22	1:B:955:LEU:HD11	1.60	0.83
1:B:667:MET:SD	1:B:790:ARG:NH2	2.51	0.83
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	1.97	0.83
1:B:3391:GLU:OE2	1:B:3450:ASN:ND2	2.11	0.83
1:A:667:MET:SD	1:A:790:ARG:NH2	2.51	0.82
1:B:2534:ALA:HB1	1:B:2588:ARG:HE	1.44	0.82
1:C:884:LEU:HD22	1:C:955:LEU:HD11	1.60	0.82
1:A:144:GLU:OE1	1:D:2452:ARG:NH1	2.13	0.82
1:A:884:LEU:HD22	1:A:955:LEU:HD11	1.60	0.82
1:D:667:MET:SD	1:D:790:ARG:NH2	2.51	0.82
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	1.97	0.82
1:D:884:LEU:HD22	1:D:955:LEU:HD11	1.60	0.82
1:A:2534:ALA:HB1	1:A:2588:ARG:HE	1.44	0.82
1:C:2534:ALA:HB1	1:C:2588:ARG:HE	1.44	0.82
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	1.97	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:110:ARG:NH1	1:D:117:TYR:OH	2.14	0.81
1:D:2534:ALA:HB1	1:D:2588:ARG:HE	1.44	0.81
1:D:3713:LYS:NZ	1:D:3715:LYS:O	2.14	0.81
1:C:3713:LYS:NZ	1:C:3715:LYS:O	2.14	0.81
1:B:110:ARG:NH1	1:B:117:TYR:OH	2.14	0.81
1:C:110:ARG:NH1	1:C:117:TYR:OH	2.14	0.80
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	1.97	0.80
1:B:1037:ASP:O	1:B:1041:GLN:NE2	2.15	0.80
1:C:1037:ASP:O	1:C:1041:GLN:NE2	2.15	0.80
1:D:1037:ASP:O	1:D:1041:GLN:NE2	2.15	0.80
1:A:110:ARG:NH1	1:A:117:TYR:OH	2.14	0.79
1:A:4899:ASP:OD1	1:D:4892:ARG:NH1	2.15	0.79
1:A:3713:LYS:NZ	1:A:3715:LYS:O	2.14	0.79
1:B:396:GLU:OE2	1:B:470:SER:OG	2.00	0.79
1:A:1037:ASP:O	1:A:1041:GLN:NE2	2.15	0.79
1:A:4744:ASP:OD2	1:A:4747:SER:OG	2.00	0.79
1:C:4744:ASP:OD2	1:C:4747:SER:OG	2.00	0.79
1:A:2694:GLU:OE1	1:A:2697:ARG:NH2	2.16	0.79
1:D:4744:ASP:OD2	1:D:4747:SER:OG	2.00	0.79
1:C:396:GLU:OE2	1:C:470:SER:OG	2.00	0.79
1:A:396:GLU:OE2	1:A:470:SER:OG	2.00	0.78
1:B:2382:GLU:OE1	1:B:2385:ARG:NH1	2.17	0.78
1:A:1263:THR:OG1	1:A:1265:ASP:OD1	2.00	0.78
1:D:396:GLU:OE2	1:D:470:SER:OG	2.00	0.78
1:C:2382:GLU:OE1	1:C:2385:ARG:NH1	2.17	0.78
1:C:1978:ALA:HB1	1:C:1982:ARG:HH12	1.47	0.78
2:F:11:ASP:OD2	2:F:67:SER:OG	2.02	0.78
1:D:2382:GLU:OE1	1:D:2385:ARG:NH1	2.17	0.78
1:D:2694:GLU:OE1	1:D:2697:ARG:NH2	2.16	0.78
1:B:1263:THR:OG1	1:B:1265:ASP:OD1	2.00	0.78
1:B:2694:GLU:OE1	1:B:2697:ARG:NH2	2.16	0.78
1:C:2694:GLU:OE1	1:C:2697:ARG:NH2	2.16	0.78
1:B:3713:LYS:NZ	1:B:3715:LYS:O	2.14	0.78
1:C:1263:THR:OG1	1:C:1265:ASP:OD1	2.00	0.78
1:D:935:LEU:CD1	1:D:987:ARG:HE	1.95	0.77
1:A:935:LEU:CD1	1:A:987:ARG:HE	1.95	0.77
1:A:1978:ALA:HB1	1:A:1982:ARG:HH12	1.48	0.77
2:E:11:ASP:OD2	2:E:67:SER:OG	2.02	0.77
1:D:1263:THR:OG1	1:D:1265:ASP:OD1	2.00	0.77
1:A:2382:GLU:OE1	1:A:2385:ARG:NH1	2.17	0.77
1:B:4744:ASP:OD2	1:B:4747:SER:OG	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:11:ASP:OD2	2:G:67:SER:OG	2.02	0.77
1:B:883:ALA:HB1	1:B:907:LEU:HD12	1.67	0.77
1:B:1978:ALA:HB1	1:B:1982:ARG:HH12	1.47	0.77
1:B:4892:ARG:NH1	1:C:4899:ASP:OD1	2.17	0.77
1:A:883:ALA:HB1	1:A:907:LEU:HD12	1.67	0.76
1:A:1821:ASP:OD1	1:A:1822:GLY:N	2.18	0.76
2:H:11:ASP:OD2	2:H:67:SER:OG	2.02	0.76
1:D:1978:ALA:HB1	1:D:1982:ARG:HH12	1.47	0.76
1:C:4885:PHE:O	1:C:4889:VAL:HG22	1.86	0.76
1:D:4899:ASP:OD1	1:C:4892:ARG:NH1	2.17	0.76
1:D:1821:ASP:OD1	1:D:1822:GLY:N	2.18	0.76
1:A:1996:ARG:CZ	1:A:1999:ARG:HH12	1.99	0.76
1:B:3107:VAL:HB	1:B:3111:ARG:HH12	1.51	0.76
1:B:4933:GLN:OE1	1:B:4933:GLN:N	2.19	0.76
1:D:4885:PHE:O	1:D:4889:VAL:HG22	1.86	0.76
1:C:4933:GLN:OE1	1:C:4933:GLN:N	2.19	0.76
1:D:1996:ARG:CZ	1:D:1999:ARG:HH12	1.99	0.75
1:B:1821:ASP:OD1	1:B:1822:GLY:N	2.18	0.75
1:A:4885:PHE:O	1:A:4889:VAL:HG22	1.86	0.75
1:D:266:ARG:O	1:D:270:SER:OG	2.04	0.75
1:D:883:ALA:HB1	1:D:907:LEU:HD12	1.67	0.75
1:C:1821:ASP:OD1	1:C:1822:GLY:N	2.18	0.75
1:B:2777:TYR:HD1	1:B:2791:LEU:HD12	1.52	0.75
1:C:421:PHE:CE2	1:C:507:ALA:HB2	2.22	0.75
1:B:421:PHE:CE2	1:B:507:ALA:HB2	2.22	0.75
1:C:266:ARG:O	1:C:270:SER:OG	2.04	0.75
1:C:935:LEU:CD1	1:C:987:ARG:HE	1.95	0.75
1:C:2777:TYR:HD1	1:C:2791:LEU:HD12	1.52	0.75
1:B:4885:PHE:O	1:B:4889:VAL:HG22	1.86	0.75
1:C:1996:ARG:CZ	1:C:1999:ARG:HH12	1.99	0.75
1:D:3107:VAL:HB	1:D:3111:ARG:HH12	1.51	0.75
1:B:935:LEU:CD1	1:B:987:ARG:HE	1.95	0.75
1:B:3172:ILE:HA	1:B:3175:LEU:HD23	1.68	0.75
1:B:2785:LEU:HB3	1:B:2787:THR:HG23	1.69	0.74
1:D:421:PHE:CE2	1:D:507:ALA:HB2	2.22	0.74
1:C:3817:LEU:HB2	1:C:3899:PHE:CE1	2.22	0.74
1:A:421:PHE:CE2	1:A:507:ALA:HB2	2.22	0.74
1:A:3107:VAL:HB	1:A:3111:ARG:NH1	2.02	0.74
1:B:2946:LEU:O	1:B:2946:LEU:HD23	1.87	0.74
1:D:4933:GLN:N	1:D:4933:GLN:OE1	2.19	0.74
1:B:266:ARG:O	1:B:270:SER:OG	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2946:LEU:O	1:D:2946:LEU:HD23	1.87	0.74
1:D:3172:ILE:HA	1:D:3175:LEU:HD23	1.69	0.74
1:C:2946:LEU:HD23	1:C:2946:LEU:O	1.87	0.74
1:A:266:ARG:O	1:A:270:SER:OG	2.04	0.74
1:A:2777:TYR:HD1	1:A:2791:LEU:HD12	1.52	0.74
1:B:3107:VAL:HB	1:B:3111:ARG:NH1	2.02	0.74
1:B:3817:LEU:HB2	1:B:3899:PHE:CE1	2.22	0.74
1:B:950:LEU:HD13	1:B:970:LEU:HG	1.69	0.74
1:D:3817:LEU:HB2	1:D:3899:PHE:CE1	2.22	0.74
1:A:2785:LEU:HB3	1:A:2787:THR:HG23	1.69	0.74
1:C:3107:VAL:HB	1:C:3111:ARG:HH12	1.51	0.74
1:A:950:LEU:HD13	1:A:970:LEU:HG	1.69	0.74
1:C:883:ALA:HB1	1:C:907:LEU:HD12	1.67	0.74
1:C:950:LEU:HD13	1:C:970:LEU:HG	1.69	0.74
1:C:3172:ILE:HA	1:C:3175:LEU:HD23	1.69	0.74
1:A:3817:LEU:HB2	1:A:3899:PHE:CE1	2.22	0.73
1:A:4933:GLN:OE1	1:A:4933:GLN:N	2.19	0.73
1:D:2777:TYR:HD1	1:D:2791:LEU:HD12	1.52	0.73
1:C:1927:LEU:HD22	1:C:2101:MET:SD	2.28	0.73
1:A:3107:VAL:HB	1:A:3111:ARG:HH12	1.51	0.73
1:B:1996:ARG:CZ	1:B:1999:ARG:HH12	1.99	0.73
1:D:2233:CYS:O	1:D:2234:ARG:C	2.27	0.73
1:A:2946:LEU:O	1:A:2946:LEU:HD23	1.87	0.73
1:D:3107:VAL:HB	1:D:3111:ARG:NH1	2.02	0.73
1:C:2233:CYS:O	1:C:2234:ARG:C	2.26	0.73
1:A:2011:HIS:NE2	1:A:2017:ASP:OD2	2.21	0.73
1:B:1927:LEU:HD22	1:B:2101:MET:SD	2.28	0.73
1:D:950:LEU:HD13	1:D:970:LEU:HG	1.69	0.73
1:D:1032:LYS:C	1:D:1036:ARG:NH1	2.42	0.73
1:D:2011:HIS:NE2	1:D:2017:ASP:OD2	2.21	0.73
1:C:2785:LEU:HB3	1:C:2787:THR:HG23	1.69	0.73
1:A:1927:LEU:HD22	1:A:2101:MET:SD	2.28	0.73
1:C:3107:VAL:HB	1:C:3111:ARG:NH1	2.02	0.73
1:A:3172:ILE:HA	1:A:3175:LEU:HD23	1.68	0.73
1:D:1927:LEU:HD22	1:D:2101:MET:SD	2.28	0.73
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.71	0.73
1:A:1032:LYS:C	1:A:1036:ARG:NH1	2.42	0.73
1:B:1032:LYS:C	1:B:1036:ARG:NH1	2.42	0.72
1:B:1743[A]:ARG:NH2	1:B:1967:ASP:OD2	2.22	0.72
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.71	0.72
1:A:2226:PRO:O	1:A:2267:MET:HE1	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2226:PRO:O	1:C:2267:MET:HE1	1.89	0.72
1:D:4069:LYS:NZ	1:D:4130:ASN:OD1	2.23	0.72
1:A:3627:GLN:O	1:A:3630:ARG:NH1	2.23	0.72
1:B:2011:HIS:NE2	1:B:2017:ASP:OD2	2.21	0.72
1:D:3627:GLN:O	1:D:3630:ARG:NH1	2.23	0.72
1:C:1032:LYS:C	1:C:1036:ARG:NH1	2.42	0.72
1:C:2011:HIS:NE2	1:C:2017:ASP:OD2	2.21	0.72
1:A:2233:CYS:O	1:A:2234:ARG:C	2.26	0.72
1:B:2233:CYS:O	1:B:2234:ARG:C	2.27	0.72
1:D:2226:PRO:O	1:D:2267:MET:HE1	1.90	0.72
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.71	0.72
1:D:2785:LEU:HB3	1:D:2787:THR:HG23	1.69	0.72
1:A:4069:LYS:NZ	1:A:4130:ASN:OD1	2.23	0.72
1:B:3627:GLN:O	1:B:3630:ARG:NH1	2.23	0.72
1:D:1743[A]:ARG:NH2	1:D:1967:ASP:OD2	2.22	0.72
1:D:2265:LEU:HB2	1:D:2330:ARG:HH21	1.55	0.72
1:C:1743[A]:ARG:NH2	1:C:1967:ASP:OD2	2.22	0.72
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.71	0.71
1:B:835:ARG:NH2	1:B:1210:SER:O	2.23	0.71
1:B:2226:PRO:O	1:B:2267:MET:HE1	1.89	0.71
1:C:221:ARG:NH1	1:C:253:CYS:O	2.24	0.71
1:D:1996:ARG:NH2	1:D:1999:ARG:HH12	1.89	0.71
1:A:3514:LEU:HD21	1:A:3602:VAL:CG1	2.21	0.71
1:B:1996:ARG:NH2	1:B:1999:ARG:HH12	1.89	0.71
1:B:3514:LEU:HD21	1:B:3602:VAL:CG1	2.21	0.71
1:D:221:ARG:NH1	1:D:253:CYS:O	2.24	0.71
1:C:1996:ARG:NH2	1:C:1999:ARG:HH12	1.89	0.71
1:D:1112:ASP:OD1	1:D:1113:VAL:N	2.24	0.71
1:C:1112:ASP:OD1	1:C:1113:VAL:N	2.24	0.71
1:C:3514:LEU:HD21	1:C:3602:VAL:CG1	2.21	0.71
1:A:1112:ASP:OD1	1:A:1113:VAL:N	2.24	0.71
1:A:1743[A]:ARG:NH2	1:A:1967:ASP:OD2	2.22	0.71
1:B:1749:PRO:HD2	1:B:1758:ARG:NH1	2.06	0.71
1:A:221:ARG:NH1	1:A:253:CYS:O	2.24	0.71
1:D:835:ARG:NH2	1:D:1210:SER:O	2.23	0.71
1:D:1749:PRO:HD2	1:D:1758:ARG:NH1	2.06	0.71
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.24	0.71
1:C:835:ARG:NH2	1:C:1210:SER:O	2.23	0.71
1:B:4069:LYS:NZ	1:B:4130:ASN:OD1	2.23	0.70
1:A:835:ARG:NH2	1:A:1210:SER:O	2.23	0.70
1:A:1749:PRO:HD2	1:A:1758:ARG:NH1	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1996:ARG:NH2	1:A:1999:ARG:HH12	1.89	0.70
1:A:2265:LEU:HB2	1:A:2330:ARG:HH21	1.55	0.70
1:C:1749:PRO:HD2	1:C:1758:ARG:NH1	2.06	0.70
1:D:3514:LEU:HD21	1:D:3602:VAL:CG1	2.21	0.70
1:C:3627:GLN:O	1:C:3630:ARG:NH1	2.23	0.70
1:B:221:ARG:NH1	1:B:253:CYS:O	2.24	0.70
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.24	0.70
1:C:2265:LEU:HB2	1:C:2330:ARG:HH21	1.55	0.70
1:A:3699:HIS:CE1	1:A:3703:LEU:HD11	2.27	0.70
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.24	0.70
1:A:2980:VAL:HG21	1:A:2986:VAL:HG12	1.74	0.70
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.24	0.70
1:D:2980:VAL:HG21	1:D:2986:VAL:HG12	1.74	0.70
1:C:2327:GLY:HA2	1:C:2330:ARG:CZ	2.22	0.70
1:C:4722:ARG:HE	1:C:4748:LEU:HD11	1.55	0.70
1:A:4892:ARG:NH1	1:B:4899:ASP:OD1	2.24	0.70
1:B:1112:ASP:OD1	1:B:1113:VAL:N	2.24	0.70
1:D:4722:ARG:HE	1:D:4748:LEU:HD11	1.55	0.70
1:B:2265:LEU:HB2	1:B:2330:ARG:HH21	1.55	0.69
1:D:3699:HIS:CE1	1:D:3703:LEU:HD11	2.27	0.69
1:A:393:CYS:SG	1:A:398:SER:OG	2.50	0.69
1:A:4722:ARG:HE	1:A:4748:LEU:HD11	1.55	0.69
1:B:393:CYS:SG	1:B:398:SER:OG	2.50	0.69
1:B:2980:VAL:HG21	1:B:2986:VAL:HG12	1.74	0.69
1:C:1999:ARG:O	1:C:3638:MET:CE	2.40	0.69
1:A:1999:ARG:O	1:A:3638:MET:CE	2.40	0.69
1:D:2514:ASN:ND2	1:D:2516:ASP:OD1	2.26	0.69
1:C:3699:HIS:CE1	1:C:3703:LEU:HD11	2.27	0.69
1:C:4158:PRO:HA	1:C:4161:ARG:HE	1.58	0.69
1:B:1999:ARG:O	1:B:3638:MET:CE	2.40	0.69
1:D:2233:CYS:O	1:D:2235:PHE:N	2.26	0.69
1:C:393:CYS:SG	1:C:398:SER:OG	2.50	0.69
1:B:4158:PRO:HA	1:B:4161:ARG:HE	1.58	0.69
1:C:2166:LEU:HD11	1:C:2206:THR:HG23	1.75	0.69
1:A:2514:ASN:ND2	1:A:2516:ASP:OD1	2.26	0.69
1:A:2869:ARG:HD3	1:A:2947:ASP:OD2	1.93	0.69
1:B:2327:GLY:HA2	1:B:2330:ARG:CZ	2.22	0.69
1:B:4722:ARG:HE	1:B:4748:LEU:HD11	1.56	0.69
1:D:393:CYS:SG	1:D:398:SER:OG	2.50	0.69
1:D:1999:ARG:O	1:D:3638:MET:CE	2.40	0.69
1:D:2327:GLY:HA2	1:D:2330:ARG:CZ	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2514:ASN:ND2	1:C:2516:ASP:OD1	2.25	0.69
1:B:2514:ASN:ND2	1:B:2516:ASP:OD1	2.26	0.69
1:B:3699:HIS:CE1	1:B:3703:LEU:HD11	2.27	0.69
1:C:2233:CYS:O	1:C:2235:PHE:N	2.26	0.69
1:A:2327:GLY:HA2	1:A:2330:ARG:CZ	2.22	0.68
1:C:975:VAL:HG13	1:C:1047:LEU:HD23	1.76	0.68
1:C:4069:LYS:NZ	1:C:4130:ASN:OD1	2.23	0.68
1:B:2869:ARG:HD3	1:B:2947:ASP:OD2	1.93	0.68
1:D:887:ILE:HD11	1:D:907:LEU:HD11	1.75	0.68
1:A:887:ILE:HD11	1:A:907:LEU:HD11	1.75	0.68
1:A:2233:CYS:O	1:A:2235:PHE:N	2.26	0.68
1:B:975:VAL:HG13	1:B:1047:LEU:HD23	1.76	0.68
1:A:975:VAL:HG13	1:A:1047:LEU:HD23	1.76	0.68
1:B:2233:CYS:O	1:B:2235:PHE:N	2.26	0.68
1:D:975:VAL:HG13	1:D:1047:LEU:HD23	1.76	0.68
1:D:2869:ARG:HD3	1:D:2947:ASP:OD2	1.93	0.68
1:C:2980:VAL:HG21	1:C:2986:VAL:HG12	1.74	0.68
1:A:1577:ALA:O	1:A:1584:ARG:NH1	2.27	0.68
1:B:2135:LEU:HD12	1:B:3658:LYS:HZ3	1.57	0.68
1:D:2166:LEU:HD11	1:D:2206:THR:HG23	1.75	0.68
1:B:2166:LEU:HD11	1:B:2206:THR:HG23	1.75	0.67
1:C:2675:THR:HB	1:C:2710:LEU:HD21	1.76	0.67
1:C:2869:ARG:HD3	1:C:2947:ASP:OD2	1.93	0.67
1:C:4998:LYS:HB3	1:C:5003:HIS:HE1	1.60	0.67
1:A:4158:PRO:HA	1:A:4161:ARG:HE	1.58	0.67
1:D:4655:PHE:CA	1:D:4796:MET:HE1	2.25	0.67
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.28	0.67
1:C:4827:LEU:O	1:C:4831:THR:HG23	1.94	0.67
1:A:4929:LEU:O	1:A:4933:GLN:OE1	2.13	0.67
1:A:4966:ASP:OD1	1:A:4967:TYR:N	2.28	0.67
1:C:2747:ILE:HD11	1:C:2751:LEU:HD22	1.77	0.67
1:A:2675:THR:HB	1:A:2710:LEU:HD21	1.76	0.67
1:B:4966:ASP:OD1	1:B:4967:TYR:N	2.28	0.67
1:B:4998:LYS:HB3	1:B:5003:HIS:HE1	1.60	0.67
1:D:4827:LEU:O	1:D:4831:THR:HG23	1.94	0.67
1:A:2166:LEU:HD11	1:A:2206:THR:HG23	1.75	0.67
1:B:4827:LEU:O	1:B:4831:THR:HG23	1.94	0.67
1:B:1577:ALA:O	1:B:1584:ARG:NH1	2.27	0.67
1:A:3531:ASP:OD1	1:A:3532:LEU:N	2.28	0.66
1:A:4827:LEU:O	1:A:4831:THR:HG23	1.94	0.66
1:B:887:ILE:HD11	1:B:907:LEU:HD11	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.28	0.66
1:D:4158:PRO:HA	1:D:4161:ARG:HE	1.58	0.66
1:C:3531:ASP:OD1	1:C:3532:LEU:N	2.29	0.66
1:B:2747:ILE:HD11	1:B:2751:LEU:HD22	1.77	0.66
1:A:3346:VAL:HG11	1:A:3414:ARG:HB2	1.77	0.66
1:C:887:ILE:HD11	1:C:907:LEU:HD11	1.75	0.66
1:C:2330:ARG:HA	1:C:2333:ASP:OD2	1.96	0.66
1:D:4722:ARG:HE	1:D:4748:LEU:CD1	2.08	0.66
1:D:4966:ASP:OD1	1:D:4967:TYR:N	2.28	0.66
1:D:4998:LYS:HB3	1:D:5003:HIS:HE1	1.60	0.66
1:C:228:ASP:OD1	1:C:229:GLU:N	2.29	0.66
1:C:3346:VAL:HG11	1:C:3414:ARG:HB2	1.77	0.66
1:C:4929:LEU:O	1:C:4933:GLN:OE1	2.13	0.66
1:A:2970:SER:HA	1:A:2973:PHE:CE1	2.30	0.66
1:A:3534:MET:O	1:A:3538:THR:HG23	1.96	0.66
1:B:2330:ARG:HA	1:B:2333:ASP:OD2	1.96	0.66
1:B:4929:LEU:O	1:B:4933:GLN:OE1	2.13	0.66
1:D:100:THR:HG21	1:D:162:LYS:HE3	1.78	0.66
1:C:100:THR:HG21	1:C:162:LYS:HE3	1.78	0.66
1:B:3834:ALA:O	1:B:3838:THR:HG23	1.96	0.66
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.28	0.66
1:D:2970:SER:HA	1:D:2973:PHE:CE1	2.30	0.66
1:D:4929:LEU:O	1:D:4933:GLN:OE1	2.13	0.66
1:C:1577:ALA:O	1:C:1584:ARG:NH1	2.27	0.66
1:B:3346:VAL:HG11	1:B:3414:ARG:HB2	1.77	0.66
1:D:2330:ARG:HA	1:D:2333:ASP:OD2	1.96	0.66
1:D:3346:VAL:HG11	1:D:3414:ARG:HB2	1.77	0.66
1:A:2747:ILE:HD11	1:A:2751:LEU:HD22	1.77	0.66
2:H:11:ASP:OD2	2:H:12:GLY:N	2.29	0.66
1:B:2970:SER:HA	1:B:2973:PHE:CE1	2.30	0.66
1:D:1577:ALA:O	1:D:1584:ARG:NH1	2.27	0.66
1:D:1999:ARG:O	1:D:1999:ARG:HG2	1.96	0.66
1:A:572:PRO:O	1:A:576:ASN:ND2	2.29	0.65
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.28	0.65
1:B:3111:ARG:NH2	1:B:3174:SER:OG	2.30	0.65
1:D:2675:THR:HB	1:D:2710:LEU:HD21	1.76	0.65
1:C:3534:MET:O	1:C:3538:THR:HG23	1.96	0.65
1:C:4722:ARG:HE	1:C:4748:LEU:CD1	2.08	0.65
1:C:4910:GLU:O	1:C:4914:VAL:HG13	1.96	0.65
1:B:663:TYR:HD1	1:B:747:CYS:HG	1.43	0.65
1:B:4722:ARG:HE	1:B:4748:LEU:CD1	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:228:ASP:OD1	1:D:229:GLU:N	2.29	0.65
1:C:663:TYR:HD1	1:C:747:CYS:HG	1.43	0.65
1:A:4910:GLU:O	1:A:4914:VAL:HG13	1.96	0.65
1:B:1999:ARG:O	1:B:1999:ARG:HG2	1.96	0.65
1:B:4711:PHE:HB3	1:B:4712:PRO:HD3	1.78	0.65
1:B:572:PRO:O	1:B:576:ASN:ND2	2.29	0.65
1:B:3103:ILE:O	1:B:3107:VAL:HG13	1.97	0.65
1:D:572:PRO:O	1:D:576:ASN:ND2	2.29	0.65
1:D:2747:ILE:HD11	1:D:2751:LEU:HD22	1.77	0.65
1:D:4711:PHE:HB3	1:D:4712:PRO:HD3	1.78	0.65
1:C:4966:ASP:OD1	1:C:4967:TYR:N	2.28	0.65
1:A:3103:ILE:O	1:A:3107:VAL:HG13	1.97	0.65
1:A:4998:LYS:HB3	1:A:5003:HIS:HE1	1.60	0.65
1:B:228:ASP:OD1	1:B:229:GLU:N	2.29	0.65
1:B:2675:THR:HB	1:B:2710:LEU:HD21	1.76	0.65
1:C:2520:HIS:O	1:C:2524:VAL:HG22	1.97	0.65
1:C:2970:SER:HA	1:C:2973:PHE:CE1	2.30	0.65
1:C:4655:PHE:CA	1:C:4796:MET:HE1	2.26	0.65
1:A:3834:ALA:O	1:A:3838:THR:HG23	1.96	0.65
2:G:11:ASP:OD2	2:G:12:GLY:N	2.29	0.65
1:D:3111:ARG:NH2	1:D:3174:SER:OG	2.30	0.65
1:D:3534:MET:O	1:D:3538:THR:HG23	1.96	0.65
1:D:4910:GLU:O	1:D:4914:VAL:HG13	1.96	0.65
1:A:228:ASP:OD1	1:A:229:GLU:N	2.29	0.65
1:A:1999:ARG:O	1:A:1999:ARG:HG2	1.96	0.65
1:A:2330:ARG:HA	1:A:2333:ASP:OD2	1.96	0.65
2:F:11:ASP:OD2	2:F:12:GLY:N	2.29	0.65
1:B:4655:PHE:CA	1:B:4796:MET:HE1	2.27	0.65
1:D:3531:ASP:OD1	1:D:3532:LEU:N	2.28	0.65
1:C:1999:ARG:O	1:C:1999:ARG:HG2	1.96	0.65
1:C:3111:ARG:NH2	1:C:3174:SER:OG	2.30	0.65
1:B:3531:ASP:OD1	1:B:3532:LEU:N	2.28	0.65
1:B:4910:GLU:O	1:B:4914:VAL:HG13	1.96	0.65
1:D:1996:ARG:HE	1:D:1999:ARG:NH1	1.95	0.65
1:B:100:THR:HG21	1:B:162:LYS:HE3	1.78	0.65
1:B:672:VAL:O	1:B:680:THR:OG1	2.08	0.65
1:C:1996:ARG:HE	1:C:1999:ARG:NH1	1.95	0.65
1:A:100:THR:HG21	1:A:162:LYS:HE3	1.78	0.64
1:B:581:ASN:OD1	1:B:582:HIS:N	2.30	0.64
1:C:3834:ALA:O	1:C:3838:THR:HG23	1.96	0.64
1:C:4711:PHE:HB3	1:C:4712:PRO:HD3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3111:ARG:NH2	1:A:3174:SER:OG	2.30	0.64
1:A:4722:ARG:HE	1:A:4748:LEU:CD1	2.08	0.64
2:E:11:ASP:OD2	2:E:12:GLY:N	2.29	0.64
1:B:3110:LEU:HD23	1:B:3183:VAL:HG22	1.79	0.64
1:A:1996:ARG:HE	1:A:1999:ARG:NH1	1.95	0.64
1:A:581:ASN:OD1	1:A:582:HIS:N	2.30	0.64
1:A:418:LEU:HA	1:A:421:PHE:CE1	2.33	0.64
1:A:971:ASP:OD2	1:A:973:SER:OG	2.14	0.64
2:G:52:LYS:HB2	2:G:54:GLU:OE1	1.97	0.64
1:B:418:LEU:HA	1:B:421:PHE:CE1	2.33	0.64
1:B:2520:HIS:O	1:B:2524:VAL:HG22	1.97	0.64
1:D:3103:ILE:O	1:D:3107:VAL:HG13	1.97	0.64
1:D:3834:ALA:O	1:D:3838:THR:HG23	1.96	0.64
1:C:572:PRO:O	1:C:576:ASN:ND2	2.29	0.64
1:C:3103:ILE:O	1:C:3107:VAL:HG13	1.97	0.64
1:A:1726:SER:O	1:A:1729:SER:OG	2.16	0.64
1:A:3110:LEU:HD23	1:A:3183:VAL:HG22	1.79	0.64
1:B:1996:ARG:HE	1:B:1999:ARG:NH1	1.95	0.64
1:C:1726:SER:O	1:C:1729:SER:OG	2.16	0.64
1:D:418:LEU:HA	1:D:421:PHE:CE1	2.33	0.64
1:C:581:ASN:OD1	1:C:582:HIS:N	2.30	0.64
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.12	0.64
2:G:25:HIS:CD2	2:G:104:LEU:HD11	2.33	0.64
1:B:4091:LYS:NZ	1:B:4121:GLU:OE1	2.29	0.64
1:D:581:ASN:OD1	1:D:582:HIS:N	2.30	0.64
1:D:1999:ARG:O	1:D:3638:MET:HE3	1.98	0.64
1:A:2894:LEU:O	1:A:2897:LYS:N	2.32	0.63
2:F:52:LYS:HB2	2:F:54:GLU:OE1	1.97	0.63
1:C:2894:LEU:O	1:C:2897:LYS:N	2.32	0.63
1:A:1065:ASN:OD1	1:A:1066:GLN:N	2.32	0.63
1:A:4711:PHE:HB3	1:A:4712:PRO:HD3	1.78	0.63
1:D:2135:LEU:HD12	1:D:3658:LYS:HZ3	1.63	0.63
1:B:1726:SER:O	1:B:1729:SER:OG	2.16	0.63
1:B:2212:VAL:HG21	1:B:2256:TYR:OH	1.99	0.63
1:B:3534:MET:O	1:B:3538:THR:HG23	1.96	0.63
1:D:2520:HIS:O	1:D:2524:VAL:HG22	1.97	0.63
1:C:3284:TRP:O	1:C:3305:THR:HG21	1.99	0.63
1:C:3310:ASP:OD1	1:C:3311:HIS:N	2.31	0.63
1:A:1931:LEU:HD13	1:A:1935:VAL:HG11	1.81	0.63
1:A:1996:ARG:NE	1:A:1999:ARG:HH12	1.97	0.63
1:A:3310:ASP:OD1	1:A:3311:HIS:N	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:52:LYS:HB2	2:E:54:GLU:OE1	1.97	0.63
1:B:3284:TRP:O	1:B:3305:THR:HG21	1.99	0.63
1:D:3284:TRP:O	1:D:3305:THR:HG21	1.99	0.63
1:C:418:LEU:HA	1:C:421:PHE:CE1	2.33	0.63
1:C:1931:LEU:HD13	1:C:1935:VAL:HG11	1.80	0.63
1:C:1999:ARG:O	1:C:3638:MET:HE3	1.97	0.63
1:A:672:VAL:O	1:A:680:THR:OG1	2.08	0.63
2:H:52:LYS:HB2	2:H:54:GLU:OE1	1.97	0.63
1:B:2894:LEU:O	1:B:2897:LYS:N	2.32	0.63
1:D:1996:ARG:NE	1:D:1999:ARG:HH12	1.96	0.63
1:C:3110:LEU:HD23	1:C:3183:VAL:HG22	1.79	0.63
1:A:1033:ARG:HA	1:A:1036:ARG:CZ	2.29	0.63
1:A:2212:VAL:HG21	1:A:2256:TYR:OH	1.99	0.63
1:A:2520:HIS:O	1:A:2524:VAL:HG22	1.97	0.63
2:H:25:HIS:CD2	2:H:104:LEU:HD11	2.33	0.63
1:B:971:ASP:OD2	1:B:973:SER:OG	2.14	0.63
1:D:1065:ASN:OD1	1:D:1066:GLN:N	2.32	0.63
1:D:2894:LEU:O	1:D:2897:LYS:N	2.31	0.63
1:C:1033:ARG:HA	1:C:1036:ARG:CZ	2.29	0.63
1:A:1999:ARG:O	1:A:3638:MET:HE1	1.99	0.63
1:A:4655:PHE:CA	1:A:4796:MET:HE1	2.29	0.63
1:D:1726:SER:O	1:D:1729:SER:OG	2.16	0.63
2:E:25:HIS:CD2	2:E:104:LEU:HD11	2.33	0.62
1:B:3310:ASP:OD1	1:B:3311:HIS:N	2.31	0.62
1:D:1033:ARG:HA	1:D:1036:ARG:CZ	2.29	0.62
1:A:3442:PHE:HE1	1:A:3511:VAL:HG12	1.64	0.62
1:B:1033:ARG:HA	1:B:1036:ARG:CZ	2.29	0.62
1:B:1996:ARG:NE	1:B:1999:ARG:HH12	1.97	0.62
1:D:3110:LEU:HD23	1:D:3183:VAL:HG22	1.79	0.62
1:C:864:PRO:HD2	1:C:867:LEU:HD12	1.81	0.62
1:C:1996:ARG:NE	1:C:1999:ARG:HH12	1.97	0.62
1:A:3086:GLU:OE2	1:A:3093:ARG:NH1	2.33	0.62
2:F:25:HIS:CD2	2:F:104:LEU:HD11	2.33	0.62
1:B:1066:GLN:O	1:B:1071:ARG:NH2	2.33	0.62
1:B:2265:LEU:HD12	1:B:2266:GLY:N	2.15	0.62
1:D:3442:PHE:HE1	1:D:3511:VAL:HG12	1.64	0.62
1:A:2265:LEU:HD12	1:A:2266:GLY:N	2.15	0.62
1:B:864:PRO:HD2	1:B:867:LEU:HD12	1.81	0.62
1:B:928:THR:O	1:B:932:LEU:HD23	2.00	0.62
1:C:2265:LEU:HB2	1:C:2330:ARG:NH2	2.14	0.62
1:C:3442:PHE:HE1	1:C:3511:VAL:HG12	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2265:LEU:HB2	1:A:2330:ARG:NH2	2.14	0.62
1:A:3284:TRP:O	1:A:3305:THR:HG21	1.99	0.62
1:D:864:PRO:HD2	1:D:867:LEU:HD12	1.81	0.62
1:D:2212:VAL:HG21	1:D:2256:TYR:OH	1.99	0.62
1:D:3310:ASP:OD1	1:D:3311:HIS:N	2.31	0.62
1:C:2212:VAL:HG21	1:C:2256:TYR:OH	1.99	0.62
1:C:2265:LEU:HD12	1:C:2266:GLY:N	2.15	0.62
1:C:3635:CYS:HA	1:C:3638:MET:HE2	1.82	0.62
1:A:885:THR:O	1:A:889:GLN:NE2	2.33	0.62
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.12	0.62
1:C:1065:ASN:OD1	1:C:1066:GLN:N	2.32	0.62
1:C:4091:LYS:NZ	1:C:4121:GLU:OE1	2.29	0.62
1:A:4942:GLU:O	1:A:4945:ASP:OD1	2.18	0.62
1:B:3635:CYS:HA	1:B:3638:MET:HE2	1.81	0.62
1:B:4942:GLU:O	1:B:4945:ASP:OD1	2.18	0.62
1:D:885:THR:O	1:D:889:GLN:NE2	2.33	0.62
1:D:2744:ASN:OD1	1:D:2745:VAL:HG23	2.00	0.62
1:A:928:THR:O	1:A:932:LEU:HD23	2.00	0.61
1:B:1931:LEU:HD13	1:B:1935:VAL:HG11	1.80	0.61
1:B:2923:ALA:O	1:B:2927:LEU:HD23	2.00	0.61
1:D:1066:GLN:O	1:D:1071:ARG:NH2	2.33	0.61
1:C:928:THR:O	1:C:932:LEU:HD23	2.00	0.61
1:C:1066:GLN:O	1:C:1071:ARG:NH2	2.33	0.61
1:C:2923:ALA:O	1:C:2927:LEU:HD23	2.00	0.61
1:A:1066:GLN:O	1:A:1071:ARG:NH2	2.33	0.61
1:A:3984:ARG:NH2	1:B:160:GLY:O	2.30	0.61
1:B:1065:ASN:OD1	1:B:1066:GLN:N	2.32	0.61
1:D:928:THR:O	1:D:932:LEU:HD23	2.00	0.61
1:D:1931:LEU:HD13	1:D:1935:VAL:HG11	1.81	0.61
1:C:885:THR:O	1:C:889:GLN:NE2	2.33	0.61
1:A:4091:LYS:NZ	1:A:4121:GLU:OE1	2.29	0.61
1:B:973:SER:O	1:B:976:ARG:NH1	2.34	0.61
1:D:2265:LEU:HD12	1:D:2266:GLY:N	2.15	0.61
1:C:2744:ASN:OD1	1:C:2745:VAL:HG23	2.00	0.61
1:A:2923:ALA:O	1:A:2927:LEU:HD23	2.00	0.61
2:H:25:HIS:HD2	2:H:104:LEU:HD21	1.65	0.61
1:B:2265:LEU:HB2	1:B:2330:ARG:NH2	2.14	0.61
1:B:885:THR:O	1:B:889:GLN:NE2	2.33	0.61
1:B:1999:ARG:O	1:B:3638:MET:HE1	2.00	0.61
1:B:3086:GLU:OE2	1:B:3093:ARG:NH1	2.33	0.61
1:C:4942:GLU:O	1:C:4945:ASP:OD1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4091:LYS:NZ	1:D:4121:GLU:OE1	2.29	0.61
1:A:2871:LEU:HD13	1:A:2874:MET:HE1	1.81	0.61
1:A:3635:CYS:HA	1:A:3638:MET:HE2	1.81	0.61
1:D:973:SER:O	1:D:976:ARG:NH1	2.33	0.61
1:D:2923:ALA:O	1:D:2927:LEU:HD23	2.00	0.61
1:A:864:PRO:HD2	1:A:867:LEU:HD12	1.81	0.61
1:A:2744:ASN:OD1	1:A:2745:VAL:HG23	2.00	0.61
1:D:4942:GLU:O	1:D:4945:ASP:OD1	2.18	0.61
1:C:884:LEU:CD2	1:C:955:LEU:HD11	2.31	0.61
2:F:25:HIS:HD2	2:F:104:LEU:HD21	1.65	0.61
1:D:2516:ASP:OD1	1:D:2517:PHE:N	2.33	0.61
1:D:3086:GLU:OE2	1:D:3093:ARG:NH1	2.33	0.61
1:C:973:SER:O	1:C:976:ARG:NH1	2.34	0.61
1:D:887:ILE:O	1:D:890:GLY:N	2.34	0.61
1:D:971:ASP:OD2	1:D:973:SER:OG	2.14	0.61
1:D:2265:LEU:HB2	1:D:2330:ARG:NH2	2.14	0.61
1:B:2516:ASP:OD1	1:B:2517:PHE:N	2.33	0.60
1:B:2744:ASN:OD1	1:B:2745:VAL:HG23	2.00	0.60
1:B:3442:PHE:HE1	1:B:3511:VAL:HG12	1.64	0.60
1:A:887:ILE:HD11	1:A:961:MET:HE3	1.83	0.60
1:A:2475:GLN:NE2	1:A:2476:ILE:O	2.35	0.60
1:B:887:ILE:O	1:B:890:GLY:N	2.34	0.60
1:D:2376:LEU:HD21	1:D:2502:MET:HE3	1.83	0.60
1:A:2516:ASP:OD1	1:A:2517:PHE:N	2.33	0.60
1:B:884:LEU:CD2	1:B:955:LEU:HD11	2.31	0.60
1:B:1979:LEU:HD22	1:B:1982:ARG:NH2	2.17	0.60
1:A:973:SER:O	1:A:976:ARG:NH1	2.34	0.60
2:G:25:HIS:HD2	2:G:104:LEU:HD21	1.65	0.60
1:D:3635:CYS:HA	1:D:3638:MET:HE2	1.82	0.60
1:C:887:ILE:O	1:C:890:GLY:N	2.34	0.60
1:D:2475:GLN:NE2	1:D:2476:ILE:O	2.35	0.60
1:D:3097:GLU:O	1:D:3100:SER:OG	2.19	0.60
1:A:887:ILE:O	1:A:890:GLY:N	2.34	0.60
2:E:25:HIS:HD2	2:E:104:LEU:HD21	1.65	0.60
1:B:2475:GLN:NE2	1:B:2476:ILE:O	2.35	0.60
1:D:3786:CYS:SG	1:D:3831:SER:OG	2.60	0.60
1:C:238:SER:OG	1:C:240:ASP:OD1	2.20	0.60
1:C:2376:LEU:HD21	1:C:2502:MET:HE3	1.83	0.60
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.01	0.60
1:D:1520:VAL:HG12	1:D:1527:MET:HG2	1.83	0.60
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3529:ASP:OD2	1:C:3595:ARG:NH2	2.35	0.60
1:C:3786:CYS:SG	1:C:3831:SER:OG	2.60	0.60
1:D:988:LEU:HB2	1:D:1039:LEU:HD21	1.83	0.60
1:D:1979:LEU:HD22	1:D:1982:ARG:NH2	2.17	0.60
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.01	0.60
1:A:1520:VAL:HG12	1:A:1527:MET:HG2	1.83	0.60
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.35	0.60
1:B:2523:ASP:OD1	1:B:2524:VAL:HG13	2.02	0.59
1:B:3786:CYS:SG	1:B:3831:SER:OG	2.60	0.59
1:B:887:ILE:HD11	1:B:961:MET:HE3	1.84	0.59
1:C:3086:GLU:OE2	1:C:3093:ARG:NH1	2.33	0.59
1:A:2523:ASP:OD1	1:A:2524:VAL:HG13	2.02	0.59
1:B:568:LEU:HD12	1:B:602:VAL:HG13	1.84	0.59
1:B:988:LEU:HB2	1:B:1039:LEU:HD21	1.83	0.59
1:B:4749:GLU:OE1	1:B:4753:HIS:CD2	2.56	0.59
1:D:2523:ASP:OD1	1:D:2524:VAL:HG13	2.02	0.59
1:C:568:LEU:HD12	1:C:602:VAL:HG13	1.84	0.59
1:C:1979:LEU:HD22	1:C:1982:ARG:NH2	2.17	0.59
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.12	0.59
1:C:2475:GLN:NE2	1:C:2476:ILE:O	2.35	0.59
1:A:238:SER:OG	1:A:240:ASP:OD1	2.20	0.59
1:A:884:LEU:CD2	1:A:955:LEU:HD11	2.31	0.59
1:C:1520:VAL:HG12	1:C:1527:MET:HG2	1.83	0.59
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.35	0.59
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.03	0.59
1:D:4749:GLU:OE1	1:D:4753:HIS:CD2	2.56	0.59
1:C:2516:ASP:OD1	1:C:2517:PHE:N	2.33	0.59
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.02	0.59
1:A:553:ARG:NE	1:A:555:GLU:OE2	2.36	0.59
1:A:1979:LEU:HD22	1:A:1982:ARG:NH2	2.17	0.59
1:B:553:ARG:NE	1:B:555:GLU:OE2	2.36	0.59
1:B:797:HIS:ND1	1:B:821:LEU:HD23	2.18	0.59
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.01	0.59
1:D:3308:THR:OG1	1:D:3310:ASP:OD1	2.21	0.59
1:D:4705:VAL:HG22	1:D:4711:PHE:HD1	1.68	0.59
1:A:3308:THR:OG1	1:A:3310:ASP:OD1	2.21	0.59
1:A:4749:GLU:OE1	1:A:4753:HIS:CD2	2.56	0.59
1:B:1520:VAL:HG12	1:B:1527:MET:HG2	1.83	0.59
1:D:553:ARG:NE	1:D:555:GLU:OE2	2.36	0.59
1:D:1024:TYR:OH	1:D:1036:ARG:NH1	2.36	0.59
1:C:797:HIS:ND1	1:C:821:LEU:HD23	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2534:ALA:HB3	1:B:2588:ARG:HH21	1.68	0.59
1:B:3825:GLU:OE1	1:B:3825:GLU:N	2.36	0.59
1:D:4754:ASN:OD1	1:D:4755:GLU:N	2.36	0.59
1:A:3825:GLU:OE1	1:A:3825:GLU:N	2.36	0.59
1:B:984:LEU:HG	1:B:987:ARG:NH2	2.18	0.59
1:C:2534:ALA:HB3	1:C:2588:ARG:HH21	1.68	0.59
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.03	0.59
1:A:797:HIS:ND1	1:A:821:LEU:HD23	2.18	0.58
1:A:2534:ALA:HB3	1:A:2588:ARG:HH21	1.68	0.58
1:A:3786:CYS:SG	1:A:3831:SER:OG	2.60	0.58
1:B:224:HIS:HA	1:B:388:LEU:HD23	1.85	0.58
1:B:4754:ASN:OD1	1:B:4755:GLU:N	2.36	0.58
1:C:2515:GLN:NE2	1:C:2568:LEU:O	2.36	0.58
1:A:224:HIS:HA	1:A:388:LEU:HD23	1.85	0.58
1:A:1570:LYS:O	1:A:1572:ILE:HD12	2.03	0.58
1:B:238:SER:OG	1:B:240:ASP:OD1	2.20	0.58
1:B:1552:VAL:HG11	1:B:1562:ILE:HD13	1.84	0.58
1:B:1570:LYS:O	1:B:1572:ILE:HD12	2.03	0.58
1:D:2515:GLN:NE2	1:D:2568:LEU:O	2.36	0.58
1:C:2523:ASP:OD1	1:C:2524:VAL:HG13	2.02	0.58
1:A:2376:LEU:HD21	1:A:2502:MET:HE3	1.84	0.58
1:D:1552:VAL:HG11	1:D:1562:ILE:HD13	1.84	0.58
1:C:984:LEU:HG	1:C:987:ARG:NH2	2.18	0.58
1:C:988:LEU:HB2	1:C:1039:LEU:HD21	1.83	0.58
1:A:167:ASP:HA	1:D:384:MET:HE1	1.85	0.58
1:A:1024:TYR:OH	1:A:1036:ARG:NH1	2.36	0.58
1:D:2534:ALA:HB3	1:D:2588:ARG:HH21	1.68	0.58
1:C:1570:LYS:O	1:C:1572:ILE:HD12	2.03	0.58
1:A:988:LEU:HB2	1:A:1039:LEU:HD21	1.83	0.58
1:A:4754:ASN:OD1	1:A:4755:GLU:N	2.36	0.58
1:D:224:HIS:HA	1:D:388:LEU:HD23	1.86	0.58
1:C:3097:GLU:O	1:C:3100:SER:OG	2.19	0.58
1:C:3825:GLU:N	1:C:3825:GLU:OE1	2.36	0.58
1:C:4754:ASN:OD1	1:C:4755:GLU:N	2.36	0.58
1:A:568:LEU:HD12	1:A:602:VAL:HG13	1.84	0.58
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.35	0.58
1:B:2466:LEU:HD23	1:B:2502:MET:SD	2.44	0.58
1:B:3097:GLU:O	1:B:3100:SER:OG	2.19	0.58
1:B:4705:VAL:HG22	1:B:4711:PHE:HD1	1.68	0.58
1:D:473:ASN:O	1:D:477:LEU:HD13	2.03	0.58
1:D:984:LEU:HG	1:D:987:ARG:NH2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:887:ILE:CD1	1:C:907:LEU:HD11	2.34	0.58
1:C:3052:HIS:CD2	1:C:3127:GLN:HE22	2.22	0.58
1:A:4722:ARG:HH21	1:A:4748:LEU:HD12	1.69	0.58
1:D:167:ASP:HA	1:C:384:MET:HE1	1.86	0.58
1:D:4722:ARG:HH21	1:D:4748:LEU:HD12	1.69	0.58
1:C:4749:GLU:OE1	1:C:4753:HIS:CD2	2.56	0.58
1:A:984:LEU:HG	1:A:987:ARG:NH2	2.18	0.58
1:A:1552:VAL:HG11	1:A:1562:ILE:HD13	1.84	0.58
1:A:2515:GLN:NE2	1:A:2568:LEU:O	2.36	0.58
1:A:3377:GLU:OE1	1:A:3380:ARG:NH2	2.37	0.58
1:A:4070:ASP:OD2	1:A:4071:ILE:N	2.37	0.58
1:A:4705:VAL:HG22	1:A:4711:PHE:HD1	1.68	0.58
1:B:3111:ARG:NH2	1:B:3175:LEU:HA	2.19	0.58
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.03	0.58
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.03	0.58
1:C:224:HIS:HA	1:C:388:LEU:HD23	1.86	0.58
1:C:2285:GLU:HG2	1:C:3858:MET:HE1	1.85	0.58
1:A:887:ILE:CD1	1:A:907:LEU:HD11	2.34	0.58
1:B:473:ASN:O	1:B:477:LEU:HD13	2.03	0.58
1:B:4070:ASP:OD2	1:B:4071:ILE:N	2.37	0.58
1:B:4821:LYS:O	1:B:4825:THR:HG23	2.04	0.58
1:D:887:ILE:HD11	1:D:961:MET:HE3	1.85	0.58
1:D:894:GLY:HA3	1:D:903:LEU:HB3	1.86	0.58
1:C:2466:LEU:HD23	1:C:2502:MET:SD	2.44	0.58
1:A:2466:LEU:HD23	1:A:2502:MET:SD	2.44	0.58
1:B:1024:TYR:OH	1:B:1036:ARG:NH1	2.36	0.58
1:B:2515:GLN:NE2	1:B:2568:LEU:O	2.36	0.58
1:B:3052:HIS:CD2	1:B:3127:GLN:HE22	2.22	0.58
1:D:568:LEU:HD12	1:D:602:VAL:HG13	1.84	0.58
1:D:887:ILE:CD1	1:D:907:LEU:HD11	2.34	0.58
1:D:2466:LEU:HD23	1:D:2502:MET:SD	2.44	0.58
1:C:3709:ALA:HB2	1:C:3782:MET:SD	2.44	0.58
1:D:238:SER:OG	1:D:240:ASP:OD1	2.20	0.57
1:D:1821:ASP:OD2	1:D:1837:GLN:NE2	2.37	0.57
1:D:3671:ASP:OD1	1:D:3672:ARG:N	2.38	0.57
1:C:473:ASN:O	1:C:477:LEU:HD13	2.03	0.57
1:A:1996:ARG:HE	1:A:1999:ARG:HH12	1.50	0.57
2:G:20:GLN:NE2	2:G:106:LEU:HD13	2.19	0.57
1:B:887:ILE:CD1	1:B:907:LEU:HD11	2.34	0.57
1:A:3111:ARG:NH2	1:A:3175:LEU:HA	2.19	0.57
1:B:2869:ARG:NH1	1:B:2947:ASP:HB2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:797:HIS:ND1	1:D:821:LEU:HD23	2.18	0.57
1:D:3111:ARG:NH2	1:D:3175:LEU:HA	2.19	0.57
1:D:4070:ASP:OD2	1:D:4071:ILE:N	2.37	0.57
1:C:1068:ARG:HA	1:C:1071:ARG:HH11	1.69	0.57
1:A:473:ASN:O	1:A:477:LEU:HD13	2.03	0.57
1:A:894:GLY:HA3	1:A:903:LEU:HB3	1.86	0.57
1:A:2869:ARG:NH1	1:A:2947:ASP:HB2	2.19	0.57
2:H:20:GLN:NE2	2:H:106:LEU:HD13	2.19	0.57
1:B:1821:ASP:OD2	1:B:1837:GLN:NE2	2.37	0.57
1:B:3573:MET:HE2	1:B:3577:ARG:HH12	1.66	0.57
1:D:3343:GLN:O	1:D:3346:VAL:HG12	2.05	0.57
1:D:4821:LYS:O	1:D:4825:THR:HG23	2.04	0.57
1:C:553:ARG:NE	1:C:555:GLU:OE2	2.36	0.57
1:C:1552:VAL:HG11	1:C:1562:ILE:HD13	1.84	0.57
1:B:1068:ARG:HA	1:B:1071:ARG:HH11	1.69	0.57
1:B:3709:ALA:HB2	1:B:3782:MET:SD	2.44	0.57
1:D:1570:LYS:O	1:D:1572:ILE:HD12	2.03	0.57
1:D:3709:ALA:HB2	1:D:3782:MET:SD	2.44	0.57
1:C:4705:VAL:HG22	1:C:4711:PHE:HD1	1.68	0.57
1:A:3343:GLN:O	1:A:3346:VAL:HG12	2.05	0.57
2:E:20:GLN:NE2	2:E:106:LEU:HD13	2.19	0.57
1:C:3343:GLN:O	1:C:3346:VAL:HG12	2.05	0.57
1:C:3377:GLU:OE1	1:C:3380:ARG:NH2	2.37	0.57
1:D:2437:ALA:O	1:D:2508:ARG:NH2	2.38	0.57
1:C:1031:THR:O	1:C:1035:ASN:OD1	2.22	0.57
1:C:4722:ARG:NE	1:C:4748:LEU:HD11	2.20	0.57
1:B:1434:TYR:HB2	1:B:1572:ILE:HG21	1.87	0.57
1:B:3477:LYS:HZ2	1:B:3479:ALA:HB2	1.68	0.57
1:C:971:ASP:OD2	1:C:973:SER:OG	2.14	0.57
1:C:2437:ALA:O	1:C:2508:ARG:NH2	2.38	0.57
1:C:2751:LEU:HD11	1:C:2817:ILE:HD12	1.87	0.57
1:C:3111:ARG:NH2	1:C:3175:LEU:HA	2.19	0.57
1:C:3671:ASP:OD1	1:C:3672:ARG:N	2.37	0.57
1:C:4821:LYS:O	1:C:4825:THR:HG23	2.04	0.57
1:A:1821:ASP:OD2	1:A:1837:GLN:NE2	2.37	0.57
1:A:3573:MET:HE2	1:A:3577:ARG:HH12	1.70	0.57
1:B:3671:ASP:OD1	1:B:3672:ARG:N	2.37	0.57
1:D:160:GLY:O	1:C:3984:ARG:NH2	2.32	0.57
1:D:1996:ARG:HE	1:D:1999:ARG:HH12	1.50	0.57
1:D:3052:HIS:CD2	1:D:3127:GLN:HE22	2.22	0.57
1:D:4722:ARG:NE	1:D:4748:LEU:HD11	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:35:LEU:HD23	1:C:51:PRO:HA	1.86	0.57
1:A:3671:ASP:OD1	1:A:3672:ARG:N	2.37	0.57
2:E:15:PHE:O	2:E:17:LYS:NZ	2.38	0.57
2:F:15:PHE:O	2:F:17:LYS:NZ	2.38	0.57
1:B:3343:GLN:O	1:B:3346:VAL:HG12	2.05	0.57
1:D:35:LEU:HD23	1:D:51:PRO:HA	1.87	0.57
1:D:1434:TYR:HB2	1:D:1572:ILE:HG21	1.87	0.57
1:C:887:ILE:HD11	1:C:961:MET:HE3	1.85	0.57
1:C:1821:ASP:OD2	1:C:1837:GLN:NE2	2.37	0.57
1:A:1031:THR:O	1:A:1035:ASN:OD1	2.22	0.56
1:A:3097:GLU:O	1:A:3100:SER:OG	2.19	0.56
1:A:3529:ASP:OD2	1:A:3595:ARG:NH2	2.35	0.56
1:A:3709:ALA:HB2	1:A:3782:MET:SD	2.44	0.56
1:A:3941:ASP:OD1	1:A:3942:VAL:N	2.38	0.56
1:B:4722:ARG:HH21	1:B:4748:LEU:HD12	1.69	0.56
1:D:2871:LEU:HD13	1:D:2874:MET:HE1	1.86	0.56
1:D:3103:ILE:HD13	1:D:3168:THR:HG23	1.86	0.56
1:D:3365:LEU:HD11	1:D:3405:LEU:HD12	1.87	0.56
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.87	0.56
1:C:2869:ARG:NH1	1:C:2947:ASP:HB2	2.19	0.56
1:A:2437:ALA:O	1:A:2508:ARG:NH2	2.38	0.56
1:A:3695:PRO:HB3	1:A:3699:HIS:ND1	2.20	0.56
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.87	0.56
1:B:3377:GLU:OE1	1:B:3380:ARG:NH2	2.37	0.56
1:C:4722:ARG:HH21	1:C:4748:LEU:HD12	1.69	0.56
1:A:4821:LYS:O	1:A:4825:THR:HG23	2.04	0.56
1:B:1031:THR:O	1:B:1035:ASN:OD1	2.22	0.56
1:B:1999:ARG:O	1:B:3638:MET:HE3	2.05	0.56
1:B:2376:LEU:HD21	1:B:2502:MET:HE3	1.87	0.56
1:B:3401:LEU:HD23	1:B:3451:PHE:HE1	1.70	0.56
1:B:4722:ARG:NE	1:B:4748:LEU:HD11	2.20	0.56
1:D:2751:LEU:HD11	1:D:2817:ILE:HD12	1.87	0.56
1:D:2869:ARG:NH1	1:D:2947:ASP:HB2	2.19	0.56
1:D:3377:GLU:OE1	1:D:3380:ARG:NH2	2.37	0.56
1:D:3401:LEU:HD23	1:D:3451:PHE:HE1	1.70	0.56
1:D:3695:PRO:HB3	1:D:3699:HIS:ND1	2.20	0.56
1:C:1434:TYR:HB2	1:C:1572:ILE:HG21	1.87	0.56
1:C:1996:ARG:HE	1:C:1999:ARG:HH12	1.50	0.56
1:C:2927:LEU:O	1:C:2931:GLN:OE1	2.24	0.56
1:C:4070:ASP:OD2	1:C:4071:ILE:N	2.37	0.56
1:A:2534:ALA:HB1	1:A:2588:ARG:NE	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3052:HIS:CD2	1:A:3127:GLN:HE22	2.22	0.56
2:H:15:PHE:O	2:H:17:LYS:NZ	2.38	0.56
2:F:20:GLN:NE2	2:F:106:LEU:HD13	2.19	0.56
1:B:35:LEU:HD23	1:B:51:PRO:HA	1.87	0.56
1:B:384:MET:HE1	1:C:167:ASP:HA	1.87	0.56
1:B:877:ASN:ND2	1:B:1045:THR:HG21	2.21	0.56
1:A:1434:TYR:HB2	1:A:1572:ILE:HG21	1.87	0.56
1:D:3941:ASP:OD1	1:D:3942:VAL:N	2.38	0.56
1:C:3695:PRO:HB3	1:C:3699:HIS:ND1	2.20	0.56
1:A:2782:ASP:O	1:A:2786:LYS:N	2.39	0.56
1:A:3103:ILE:HD13	1:A:3168:THR:HG23	1.86	0.56
1:A:3813:GLN:HG2	1:A:3899:PHE:HE2	1.71	0.56
1:A:4722:ARG:NE	1:A:4748:LEU:HD11	2.20	0.56
1:B:321:GLU:OE1	1:B:321:GLU:N	2.39	0.56
1:B:4848:VAL:HG11	1:B:4887:MET:HG2	1.88	0.56
1:D:884:LEU:CD2	1:D:955:LEU:HD11	2.31	0.56
1:D:1031:THR:O	1:D:1035:ASN:OD1	2.22	0.56
1:D:1068:ARG:HA	1:D:1071:ARG:HH11	1.69	0.56
1:D:3248:ARG:NH2	1:D:3252:ASP:OD1	2.37	0.56
1:A:1045:THR:HG22	1:A:1049:TYR:CZ	2.41	0.56
1:B:3813:GLN:HG2	1:B:3899:PHE:HE2	1.71	0.56
1:B:4655:PHE:HA	1:B:4796:MET:CE	2.36	0.56
1:D:4655:PHE:HA	1:D:4796:MET:CE	2.36	0.56
1:A:2977:LEU:HD22	1:A:3056:LEU:HD23	1.88	0.56
1:B:894:GLY:HA3	1:B:903:LEU:HB3	1.86	0.56
1:B:1996:ARG:HE	1:B:1999:ARG:HH12	1.50	0.56
1:B:2927:LEU:O	1:B:2931:GLN:OE1	2.24	0.56
1:B:3365:LEU:HD11	1:B:3405:LEU:HD12	1.87	0.56
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.87	0.56
1:C:3103:ILE:HD13	1:C:3168:THR:HG23	1.86	0.56
1:C:3813:GLN:HG2	1:C:3899:PHE:HE2	1.71	0.56
1:A:35:LEU:HD23	1:A:51:PRO:HA	1.86	0.56
1:A:1068:ARG:HA	1:A:1071:ARG:HH11	1.69	0.56
1:A:2196:ASN:OD1	1:A:2199:ARG:NH2	2.35	0.56
1:A:3365:LEU:HD11	1:A:3405:LEU:HD12	1.86	0.56
1:B:3016:TYR:O	1:B:3031:ALA:N	2.39	0.56
1:B:3695:PRO:HB3	1:B:3699:HIS:ND1	2.20	0.56
1:D:2782:ASP:O	1:D:2786:LYS:N	2.39	0.56
1:D:2977:LEU:HD22	1:D:3056:LEU:HD23	1.88	0.56
1:C:321:GLU:OE1	1:C:321:GLU:N	2.39	0.56
1:C:3308:THR:OG1	1:C:3310:ASP:OD1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3365:LEU:HD11	1:C:3405:LEU:HD12	1.87	0.56
1:A:2751:LEU:HD11	1:A:2817:ILE:HD12	1.87	0.56
1:A:3477:LYS:HZ3	1:B:1141:ARG:HB2	1.71	0.56
1:D:1045:THR:HG22	1:D:1049:TYR:CZ	2.41	0.56
1:C:2782:ASP:O	1:C:2786:LYS:N	2.39	0.56
1:C:4747:SER:O	1:C:4751:THR:HG23	2.06	0.56
1:A:877:ASN:ND2	1:A:1045:THR:HG21	2.21	0.55
1:A:4848:VAL:HG11	1:A:4887:MET:HG2	1.88	0.55
1:B:2775:TRP:CZ3	1:B:2785:LEU:HD11	2.42	0.55
1:D:4747:SER:O	1:D:4751:THR:HG23	2.06	0.55
1:C:4848:VAL:HG11	1:C:4887:MET:HG2	1.88	0.55
1:A:1930:LYS:O	1:A:1930:LYS:HD3	2.07	0.55
1:A:2927:LEU:O	1:A:2931:GLN:OE1	2.24	0.55
1:A:4655:PHE:HA	1:A:4796:MET:CE	2.36	0.55
1:B:3529:ASP:OD2	1:B:3595:ARG:NH2	2.35	0.55
1:D:877:ASN:ND2	1:D:1045:THR:HG21	2.21	0.55
1:A:3248:ARG:NH2	1:A:3252:ASP:OD1	2.37	0.55
1:B:1930:LYS:O	1:B:1930:LYS:HD3	2.06	0.55
1:B:2239:PHE:HA	1:B:2242:ILE:HD12	1.89	0.55
1:B:3514:LEU:HD21	1:B:3602:VAL:HG11	1.88	0.55
1:D:2872:GLN:O	1:D:2876:GLU:OE1	2.25	0.55
1:D:4848:VAL:HG11	1:D:4887:MET:HG2	1.88	0.55
1:C:1024:TYR:OH	1:C:1036:ARG:NH1	2.36	0.55
1:C:2872:GLN:O	1:C:2876:GLU:OE1	2.25	0.55
1:C:3016:TYR:O	1:C:3031:ALA:N	2.39	0.55
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.87	0.55
1:A:384:MET:HE1	1:B:166:GLY:O	2.06	0.55
1:A:3401:LEU:HD23	1:A:3451:PHE:HE1	1.70	0.55
1:B:1045:THR:HG22	1:B:1049:TYR:CZ	2.41	0.55
1:B:4747:SER:O	1:B:4751:THR:HG23	2.06	0.55
1:D:3813:GLN:HG2	1:D:3899:PHE:HE2	1.71	0.55
1:A:2239:PHE:HA	1:A:2242:ILE:HD12	1.89	0.55
1:A:3940:LYS:O	1:A:4002:LYS:NZ	2.29	0.55
1:B:2782:ASP:O	1:B:2786:LYS:N	2.39	0.55
1:B:3103:ILE:HD13	1:B:3168:THR:HG23	1.86	0.55
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.88	0.55
1:D:981:GLN:O	1:D:985:VAL:HG23	2.07	0.55
1:C:894:GLY:HA3	1:C:903:LEU:HB3	1.86	0.55
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.88	0.55
1:C:3477:LYS:HZ2	1:C:3479:ALA:HB2	1.71	0.55
1:A:2135:LEU:HD12	1:A:3658:LYS:NZ	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:15:PHE:O	2:G:17:LYS:NZ	2.38	0.55
1:D:2927:LEU:O	1:D:2931:GLN:OE1	2.24	0.55
1:C:877:ASN:ND2	1:C:1045:THR:HG21	2.21	0.55
1:C:2135:LEU:HD12	1:C:3658:LYS:NZ	2.21	0.55
1:A:1999:ARG:O	1:A:3638:MET:HE3	2.06	0.55
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.42	0.55
1:B:2437:ALA:O	1:B:2508:ARG:NH2	2.38	0.55
1:C:2977:LEU:HD22	1:C:3056:LEU:HD23	1.88	0.55
1:C:3401:LEU:HD23	1:C:3451:PHE:HE1	1.70	0.55
1:C:3941:ASP:OD1	1:C:3942:VAL:N	2.38	0.55
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.42	0.55
1:B:1005:TRP:HB3	1:B:1021:LEU:HD22	1.89	0.55
1:D:3107:VAL:O	1:D:3111:ARG:HG3	2.07	0.55
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.42	0.55
1:C:3573:MET:HE2	1:C:3577:ARG:HH12	1.70	0.55
1:C:4655:PHE:HA	1:C:4796:MET:CE	2.36	0.55
1:C:4705:VAL:HG13	1:C:4711:PHE:CE1	2.42	0.55
1:A:321:GLU:OE1	1:A:321:GLU:N	2.39	0.55
1:A:1005:TRP:HB3	1:A:1021:LEU:HD22	1.89	0.55
1:A:4098:ASP:OD1	1:A:4099:SER:N	2.40	0.55
1:B:2977:LEU:HD22	1:B:3056:LEU:HD23	1.88	0.55
1:D:1999:ARG:O	1:D:3638:MET:HE1	2.06	0.55
1:D:2196:ASN:OD1	1:D:2199:ARG:NH2	2.35	0.55
1:D:3825:GLU:OE1	1:D:3825:GLU:N	2.36	0.55
1:C:981:GLN:O	1:C:985:VAL:HG23	2.07	0.55
1:A:2858:GLN:O	1:A:2860:PRO:HD3	2.07	0.55
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.88	0.55
1:B:2135:LEU:HD12	1:B:3658:LYS:NZ	2.21	0.55
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.89	0.55
1:B:2872:GLN:O	1:B:2876:GLU:OE1	2.25	0.55
1:B:3084:GLY:O	1:B:3089:LYS:NZ	2.37	0.55
1:B:3941:ASP:OD1	1:B:3942:VAL:N	2.38	0.55
1:D:321:GLU:OE1	1:D:321:GLU:N	2.39	0.55
1:D:1930:LYS:O	1:D:1930:LYS:HD3	2.06	0.55
1:D:2135:LEU:HD12	1:D:3658:LYS:NZ	2.22	0.55
1:A:3061:ALA:O	1:A:3065:VAL:HG23	2.07	0.54
1:A:3084:GLY:O	1:A:3089:LYS:NZ	2.37	0.54
1:C:2858:GLN:O	1:C:2860:PRO:HD3	2.07	0.54
1:C:2948:THR:HB	1:C:2952:GLU:HB2	1.90	0.54
1:C:3061:ALA:O	1:C:3065:VAL:HG23	2.07	0.54
1:C:3107:VAL:O	1:C:3111:ARG:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4176:PRO:O	1:C:4202:ARG:NH2	2.40	0.54
1:A:897:ARG:NH2	1:A:906:CYS:SG	2.73	0.54
1:A:2660:GLY:HA3	1:A:2666:VAL:HG12	1.89	0.54
1:A:3107:VAL:O	1:A:3111:ARG:HG3	2.07	0.54
1:A:4176:PRO:O	1:A:4202:ARG:NH2	2.40	0.54
1:B:3061:ALA:O	1:B:3065:VAL:HG23	2.07	0.54
1:B:4098:ASP:OD1	1:B:4099:SER:N	2.40	0.54
1:C:4098:ASP:OD1	1:C:4099:SER:N	2.40	0.54
1:A:2872:GLN:O	1:A:2876:GLU:OE1	2.25	0.54
1:A:3514:LEU:HD21	1:A:3602:VAL:HG11	1.88	0.54
1:A:4747:SER:O	1:A:4751:THR:HG23	2.06	0.54
1:B:2026:ASP:OD1	1:B:2027:ILE:N	2.40	0.54
1:D:3061:ALA:O	1:D:3065:VAL:HG23	2.07	0.54
1:C:2239:PHE:HA	1:C:2242:ILE:HD12	1.89	0.54
1:A:2775:TRP:CZ3	1:A:2785:LEU:HD11	2.42	0.54
1:A:3891:LEU:O	1:A:3899:PHE:HD2	1.90	0.54
1:B:2948:THR:HB	1:B:2952:GLU:HB2	1.90	0.54
1:B:3308:THR:OG1	1:B:3310:ASP:OD1	2.21	0.54
1:B:4176:PRO:O	1:B:4202:ARG:NH2	2.40	0.54
1:D:1005:TRP:HB3	1:D:1021:LEU:HD22	1.89	0.54
1:D:2858:GLN:O	1:D:2860:PRO:HD3	2.07	0.54
1:C:1045:THR:HG22	1:C:1049:TYR:CZ	2.41	0.54
1:C:2775:TRP:CZ3	1:C:2785:LEU:HD11	2.42	0.54
1:C:3442:PHE:CE1	1:C:3511:VAL:HG12	2.42	0.54
1:A:2026:ASP:OD1	1:A:2027:ILE:N	2.40	0.54
1:A:2751:LEU:CD2	1:A:2755:ILE:HD11	2.38	0.54
1:B:2751:LEU:HD11	1:B:2817:ILE:HD12	1.87	0.54
1:D:2775:TRP:CZ3	1:D:2785:LEU:HD11	2.42	0.54
1:D:3442:PHE:CE1	1:D:3511:VAL:HG12	2.42	0.54
1:D:4098:ASP:OD1	1:D:4099:SER:N	2.40	0.54
1:D:4176:PRO:O	1:D:4202:ARG:NH2	2.40	0.54
1:C:1930:LYS:O	1:C:1930:LYS:HD3	2.07	0.54
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.89	0.54
1:C:2869:ARG:CZ	1:C:2947:ASP:HB2	2.38	0.54
1:A:2948:THR:HB	1:A:2952:GLU:HB2	1.90	0.54
1:B:213:TYR:CE1	1:B:340:LYS:HD3	2.43	0.54
1:B:2751:LEU:CD2	1:B:2755:ILE:HD11	2.38	0.54
1:D:2026:ASP:OD1	1:D:2027:ILE:N	2.40	0.54
1:D:2239:PHE:HA	1:D:2242:ILE:HD12	1.89	0.54
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.89	0.54
1:D:2751:LEU:CD2	1:D:2755:ILE:HD11	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.88	0.54
1:C:897:ARG:NH2	1:C:906:CYS:SG	2.73	0.54
1:A:981:GLN:O	1:A:985:VAL:HG23	2.07	0.54
1:A:4705:VAL:HG13	1:A:4711:PHE:CE1	2.42	0.54
1:B:3107:VAL:O	1:B:3111:ARG:HG3	2.07	0.54
1:B:3442:PHE:CE1	1:B:3511:VAL:HG12	2.42	0.54
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.90	0.54
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.42	0.54
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.81	0.54
1:A:1427:ILE:HG23	1:A:1428:LEU:HD22	1.90	0.54
1:A:2233:CYS:O	1:A:2236:LEU:N	2.41	0.54
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.90	0.54
1:B:3689:GLU:OE2	1:B:3694:LYS:HB2	2.08	0.54
1:D:213:TYR:CE1	1:D:340:LYS:HD3	2.43	0.54
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.81	0.54
1:D:2948:THR:HB	1:D:2952:GLU:HB2	1.90	0.54
1:D:3529:ASP:OD2	1:D:3595:ARG:NH2	2.35	0.54
1:C:3514:LEU:HD21	1:C:3602:VAL:HG11	1.88	0.54
1:A:3016:TYR:O	1:A:3031:ALA:N	2.39	0.54
1:B:281:ARG:NH2	1:B:309:THR:OG1	2.41	0.54
1:B:908:VAL:HG23	1:B:963:ASN:ND2	2.23	0.54
1:B:3891:LEU:O	1:B:3899:PHE:HD2	1.90	0.54
1:B:4705:VAL:HG13	1:B:4711:PHE:CE1	2.42	0.54
1:D:3514:LEU:HD21	1:D:3602:VAL:HG11	1.88	0.54
1:C:213:TYR:CE1	1:C:340:LYS:HD3	2.43	0.54
1:C:2751:LEU:CD2	1:C:2755:ILE:HD11	2.38	0.54
1:A:2771:ILE:HG22	1:B:1506:GLN:OE1	2.08	0.54
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.90	0.54
1:B:2233:CYS:O	1:B:2236:LEU:N	2.41	0.54
1:B:2660:GLY:HA3	1:B:2666:VAL:HG12	1.89	0.54
1:D:281:ARG:NH2	1:D:309:THR:OG1	2.41	0.54
1:D:4241:THR:HB	1:D:4989:MET:HE3	1.90	0.54
1:C:3330:ASP:OD1	1:C:3331:GLU:N	2.41	0.54
1:A:2869:ARG:CZ	1:A:2947:ASP:HB2	2.38	0.53
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.90	0.53
1:A:3689:GLU:OE2	1:A:3694:LYS:HB2	2.08	0.53
1:B:2858:GLN:O	1:B:2860:PRO:HD3	2.07	0.53
1:B:2871:LEU:O	1:B:2874:MET:HG2	2.08	0.53
1:D:3330:ASP:OD1	1:D:3331:GLU:N	2.41	0.53
1:A:3365:LEU:HD21	1:A:3405:LEU:HD12	1.91	0.53
1:A:3442:PHE:CE1	1:A:3511:VAL:HG12	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.81	0.53
1:B:981:GLN:O	1:B:985:VAL:HG23	2.07	0.53
1:D:1427:ILE:HG23	1:D:1428:LEU:HD22	1.90	0.53
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.90	0.53
1:D:3365:LEU:HD21	1:D:3405:LEU:HD12	1.91	0.53
1:C:908:VAL:HG13	1:C:912:SER:HB2	1.91	0.53
1:C:1999:ARG:O	1:C:3638:MET:HE1	2.07	0.53
1:C:2233:CYS:O	1:C:2236:LEU:N	2.41	0.53
1:C:3248:ARG:NH2	1:C:3252:ASP:OD1	2.37	0.53
1:D:908:VAL:HG13	1:D:912:SER:HB2	1.91	0.53
1:D:2871:LEU:O	1:D:2874:MET:HG2	2.08	0.53
1:D:3689:GLU:OE2	1:D:3694:LYS:HB2	2.08	0.53
1:D:3891:LEU:O	1:D:3899:PHE:HD2	1.90	0.53
1:C:1005:TRP:HB3	1:C:1021:LEU:HD22	1.89	0.53
1:C:4000:MET:HE1	1:C:4061:PHE:CB	2.38	0.53
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.40	0.53
1:B:2534:ALA:HB1	1:B:2588:ARG:NE	2.19	0.53
1:D:2463:LEU:HA	1:D:2466:LEU:HD12	1.91	0.53
1:D:2869:ARG:CZ	1:D:2947:ASP:HB2	2.38	0.53
1:D:4705:VAL:HG13	1:D:4711:PHE:CE1	2.42	0.53
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.90	0.53
1:C:2948:THR:HB	1:C:2952:GLU:CB	2.39	0.53
1:C:3689:GLU:OE2	1:C:3694:LYS:HB2	2.08	0.53
1:A:384:MET:HE1	1:B:167:ASP:HA	1.89	0.53
1:A:908:VAL:HG23	1:A:963:ASN:ND2	2.23	0.53
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.89	0.53
1:B:2869:ARG:CZ	1:B:2947:ASP:HB2	2.38	0.53
1:D:1141:ARG:HB2	1:C:3477:LYS:HZ3	1.73	0.53
1:C:2026:ASP:OD1	1:C:2027:ILE:N	2.40	0.53
1:C:3891:LEU:O	1:C:3899:PHE:HD2	1.90	0.53
1:A:3330:ASP:OD1	1:A:3331:GLU:N	2.41	0.53
1:D:69:LEU:HD13	1:D:101:LEU:HD11	1.91	0.53
1:D:908:VAL:HG23	1:D:963:ASN:ND2	2.23	0.53
1:D:4655:PHE:HA	1:D:4796:MET:HE1	1.91	0.53
1:C:69:LEU:HD13	1:C:101:LEU:HD11	1.91	0.53
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.91	0.53
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.81	0.53
1:C:2265:LEU:HD13	1:C:2330:ARG:NH2	2.24	0.53
1:A:281:ARG:NH2	1:A:309:THR:OG1	2.41	0.53
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.91	0.53
1:A:1978:ALA:C	1:A:1982:ARG:CZ	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1427:ILE:HG23	1:B:1428:LEU:HD22	1.90	0.53
1:B:1554:VAL:HG21	1:B:1561:VAL:CG1	2.39	0.53
1:D:2658:PRO:O	1:D:2666:VAL:HG11	2.09	0.53
1:D:2948:THR:HB	1:D:2952:GLU:CB	2.39	0.53
1:C:2658:PRO:O	1:C:2666:VAL:HG11	2.09	0.53
1:A:213:TYR:CE1	1:A:340:LYS:HD3	2.43	0.53
1:B:887:ILE:HG23	1:B:959:TYR:OH	2.09	0.53
1:B:3330:ASP:OD1	1:B:3331:GLU:N	2.41	0.53
1:D:2233:CYS:O	1:D:2236:LEU:N	2.41	0.53
1:D:2265:LEU:HD13	1:D:2330:ARG:NH2	2.24	0.53
1:D:2660:GLY:HA3	1:D:2666:VAL:HG12	1.89	0.53
1:C:281:ARG:NH2	1:C:309:THR:OG1	2.41	0.53
1:C:3365:LEU:HD21	1:C:3405:LEU:HD12	1.91	0.53
1:C:4241:THR:HB	1:C:4989:MET:HE3	1.90	0.53
1:A:2001:PRO:HG3	1:A:3638:MET:SD	2.49	0.53
1:A:2254:LEU:HD11	1:A:2276:ALA:HB1	1.91	0.53
1:A:2463:LEU:HA	1:A:2466:LEU:HD12	1.91	0.53
1:A:2871:LEU:O	1:A:2874:MET:HG2	2.08	0.53
1:B:2001:PRO:HG3	1:B:3638:MET:SD	2.49	0.53
1:B:2254:LEU:HD11	1:B:2276:ALA:HB1	1.91	0.53
1:B:2948:THR:HB	1:B:2952:GLU:CB	2.39	0.53
1:B:3365:LEU:HD21	1:B:3405:LEU:HD12	1.90	0.53
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.91	0.53
1:C:1926:LEU:HD23	1:C:1929:MET:SD	2.49	0.53
1:C:3762:ARG:NH1	1:C:4755:GLU:OE1	2.42	0.53
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.90	0.53
1:A:2265:LEU:HD13	1:A:2330:ARG:NH2	2.24	0.53
1:A:3177:THR:O	1:A:3179:LYS:NZ	2.36	0.53
1:A:4241:THR:HB	1:A:4989:MET:HE3	1.89	0.53
1:D:3166:TYR:O	1:D:3170:CYS:SG	2.67	0.53
1:C:887:ILE:HG23	1:C:959:TYR:OH	2.09	0.53
1:C:2001:PRO:HG3	1:C:3638:MET:SD	2.49	0.53
1:C:2660:GLY:HA3	1:C:2666:VAL:HG12	1.89	0.53
1:A:69:LEU:HD13	1:A:101:LEU:HD11	1.91	0.52
1:A:887:ILE:HG23	1:A:959:TYR:OH	2.09	0.52
1:A:2948:THR:HB	1:A:2952:GLU:CB	2.39	0.52
1:B:1926:LEU:HD23	1:B:1929:MET:SD	2.49	0.52
1:B:2265:LEU:HD13	1:B:2330:ARG:NH2	2.24	0.52
1:B:2658:PRO:O	1:B:2666:VAL:HG11	2.09	0.52
1:B:4241:THR:HB	1:B:4989:MET:HE3	1.90	0.52
1:D:672:VAL:O	1:D:680:THR:OG1	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:887:ILE:HG23	1:D:959:TYR:OH	2.09	0.52
1:C:233:ILE:HD12	1:C:242:ARG:HB3	1.92	0.52
1:A:3762:ARG:NH1	1:A:4755:GLU:OE1	2.42	0.52
1:A:4632:LEU:HB3	1:A:4634:GLU:OE1	2.10	0.52
1:B:69:LEU:HD13	1:B:101:LEU:HD11	1.91	0.52
1:B:1978:ALA:C	1:B:1982:ARG:CZ	2.77	0.52
1:B:2196:ASN:OD1	1:B:2199:ARG:NH2	2.35	0.52
1:B:3477:LYS:HZ3	1:C:1141:ARG:HB2	1.75	0.52
1:D:233:ILE:HD12	1:D:242:ARG:HB3	1.92	0.52
1:D:2001:PRO:HG3	1:D:3638:MET:SD	2.49	0.52
1:D:2138:LEU:HB2	1:D:3658:LYS:HZ1	1.74	0.52
1:D:3762:ARG:NH1	1:D:4755:GLU:OE1	2.42	0.52
1:C:908:VAL:HG23	1:C:963:ASN:ND2	2.23	0.52
1:C:2534:ALA:HB1	1:C:2588:ARG:NE	2.19	0.52
1:A:3166:TYR:O	1:A:3170:CYS:SG	2.67	0.52
1:A:4928:LEU:HA	1:A:4931:ILE:HD12	1.91	0.52
1:D:1978:ALA:C	1:D:1982:ARG:CZ	2.78	0.52
1:C:1427:ILE:HG23	1:C:1428:LEU:HD22	1.90	0.52
1:C:2668:SER:O	1:C:2669:GLU:CB	2.57	0.52
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.90	0.52
1:A:233:ILE:HD12	1:A:242:ARG:HB3	1.92	0.52
1:A:2871:LEU:HD13	1:A:2874:MET:CE	2.39	0.52
1:B:2908:TYR:CZ	1:B:2916:LYS:HG3	2.45	0.52
1:B:3104:GLU:O	1:B:3107:VAL:HG22	2.10	0.52
1:B:3166:TYR:O	1:B:3170:CYS:SG	2.67	0.52
1:B:3762:ARG:NH1	1:B:4755:GLU:OE1	2.42	0.52
1:D:2668:SER:O	1:D:2669:GLU:CB	2.57	0.52
1:D:2747:ILE:HD12	1:D:2814:LYS:HD3	1.91	0.52
1:D:3104:GLU:O	1:D:3107:VAL:HG22	2.10	0.52
1:C:2577:ILE:H	1:C:2577:ILE:HD12	1.75	0.52
1:C:4928:LEU:HA	1:C:4931:ILE:HD12	1.91	0.52
1:A:908:VAL:HG13	1:A:912:SER:HB2	1.91	0.52
1:A:1554:VAL:HG21	1:A:1561:VAL:CG1	2.39	0.52
1:A:3477:LYS:HZ2	1:A:3479:ALA:HB2	1.75	0.52
1:B:2871:LEU:HD13	1:B:2874:MET:CE	2.39	0.52
1:D:545:ASP:OD1	1:D:582:HIS:NE2	2.40	0.52
1:D:1554:VAL:HG21	1:D:1561:VAL:CG1	2.39	0.52
1:D:1926:LEU:HD23	1:D:1929:MET:SD	2.50	0.52
1:D:2254:LEU:HD11	1:D:2276:ALA:HB1	1.91	0.52
1:D:3573:MET:HE2	1:D:3577:ARG:HH12	1.75	0.52
1:C:545:ASP:OD1	1:C:582:HIS:NE2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2463:LEU:HA	1:C:2466:LEU:HD12	1.91	0.52
1:C:3052:HIS:HA	1:C:3127:GLN:NE2	2.25	0.52
1:C:4720:VAL:O	1:C:4724:VAL:HG23	2.10	0.52
1:B:908:VAL:HG13	1:B:912:SER:HB2	1.91	0.52
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.90	0.52
1:B:3052:HIS:HA	1:B:3127:GLN:NE2	2.25	0.52
1:D:575:LEU:HD22	1:D:606:LEU:HA	1.92	0.52
1:C:2138:LEU:HB2	1:C:3658:LYS:HZ1	1.75	0.52
1:C:2254:LEU:HD11	1:C:2276:ALA:HB1	1.91	0.52
1:C:2871:LEU:O	1:C:2874:MET:HG2	2.08	0.52
1:C:2894:LEU:HD12	1:C:2897:LYS:HE2	1.92	0.52
1:A:1926:LEU:HD23	1:A:1929:MET:SD	2.49	0.52
1:B:233:ILE:HD12	1:B:242:ARG:HB3	1.92	0.52
1:B:3395:ARG:HD3	1:B:3453:ARG:NH1	2.25	0.52
1:C:672:VAL:O	1:C:680:THR:OG1	2.08	0.52
1:C:3166:TYR:O	1:C:3170:CYS:SG	2.67	0.52
1:A:575:LEU:HD22	1:A:606:LEU:HA	1.92	0.52
1:A:1039:LEU:O	1:A:1043:VAL:HG23	2.09	0.52
1:A:2658:PRO:O	1:A:2666:VAL:HG11	2.09	0.52
1:A:3052:HIS:HA	1:A:3127:GLN:NE2	2.25	0.52
2:F:6:THR:HG23	2:F:6:THR:O	2.10	0.52
1:B:4928:LEU:HA	1:B:4931:ILE:HD12	1.91	0.52
1:D:2744:ASN:OD1	1:D:2745:VAL:N	2.43	0.52
1:D:3690:VAL:O	1:D:3693:LYS:HE3	2.10	0.52
1:D:4998:LYS:HB3	1:D:5003:HIS:CE1	2.45	0.52
1:C:575:LEU:HD22	1:C:606:LEU:HA	1.92	0.52
1:C:1039:LEU:O	1:C:1043:VAL:HG23	2.09	0.52
1:C:2744:ASN:OD1	1:C:2745:VAL:N	2.43	0.52
1:A:358:THR:OG1	1:A:383:HIS:ND1	2.42	0.52
1:A:2577:ILE:H	1:A:2577:ILE:HD12	1.75	0.52
1:B:897:ARG:NH2	1:B:906:CYS:SG	2.73	0.52
1:B:1828:ASP:N	1:B:1828:ASP:OD1	2.43	0.52
1:B:2285:GLU:HG2	1:B:3858:MET:HE1	1.92	0.52
1:B:2577:ILE:H	1:B:2577:ILE:HD12	1.75	0.52
1:B:3716:LEU:HD21	1:B:3782:MET:HE3	1.92	0.52
1:B:5000:GLU:HA	1:B:5003:HIS:CD2	2.45	0.52
1:D:3395:ARG:HD3	1:D:3453:ARG:NH1	2.25	0.52
1:D:3997:ALA:HB1	1:D:4057:MET:SD	2.50	0.52
1:C:1978:ALA:C	1:C:1982:ARG:CZ	2.77	0.52
1:C:2871:LEU:HD13	1:C:2874:MET:CE	2.39	0.52
1:A:2775:TRP:CE3	1:A:2785:LEU:HD21	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1978:ALA:CB	1:B:1982:ARG:HH12	2.18	0.52
1:B:3997:ALA:HB1	1:B:4057:MET:SD	2.50	0.52
1:B:4632:LEU:HB3	1:B:4634:GLU:OE1	2.10	0.52
1:D:3230:LEU:HD23	1:D:3230:LEU:H	1.75	0.52
1:D:4720:VAL:O	1:D:4724:VAL:HG23	2.10	0.52
1:C:1424:PRO:O	1:C:1428:LEU:HD23	2.10	0.52
1:C:2196:ASN:OD1	1:C:2199:ARG:NH2	2.35	0.52
1:C:2908:TYR:CZ	1:C:2916:LYS:HG3	2.45	0.52
1:C:3690:VAL:O	1:C:3693:LYS:HE3	2.10	0.52
1:A:98:HIS:C	1:A:99:ARG:HD2	2.31	0.51
1:A:2668:SER:O	1:A:2669:GLU:CB	2.57	0.51
1:A:4778:TRP:O	1:A:4782:VAL:HG23	2.10	0.51
1:B:575:LEU:HD22	1:B:606:LEU:HA	1.92	0.51
1:B:1039:LEU:O	1:B:1043:VAL:HG23	2.09	0.51
1:B:2088:GLU:N	1:B:2088:GLU:OE1	2.43	0.51
1:B:2463:LEU:HA	1:B:2466:LEU:HD12	1.91	0.51
1:D:1039:LEU:O	1:D:1043:VAL:HG23	2.09	0.51
1:D:1749:PRO:HD2	1:D:1758:ARG:HH12	1.75	0.51
1:D:2871:LEU:HD13	1:D:2874:MET:CE	2.39	0.51
1:D:3016:TYR:O	1:D:3031:ALA:N	2.39	0.51
1:D:4158:PRO:HA	1:D:4161:ARG:NE	2.26	0.51
1:A:2744:ASN:OD1	1:A:2745:VAL:N	2.43	0.51
1:A:2894:LEU:HD12	1:A:2897:LYS:HE2	1.92	0.51
1:A:3104:GLU:O	1:A:3107:VAL:HG22	2.10	0.51
1:A:4576:ILE:HG23	1:A:4639:MET:SD	2.51	0.51
1:B:2744:ASN:OD1	1:B:2745:VAL:N	2.43	0.51
1:B:2747:ILE:HD12	1:B:2814:LYS:HD3	1.91	0.51
1:B:4720:VAL:O	1:B:4724:VAL:HG23	2.10	0.51
1:D:98:HIS:C	1:D:99:ARG:HD2	2.31	0.51
1:C:1554:VAL:HG21	1:C:1561:VAL:CG1	2.39	0.51
1:C:2775:TRP:CE3	1:C:2785:LEU:HD21	2.45	0.51
1:C:3104:GLU:O	1:C:3107:VAL:HG22	2.10	0.51
1:C:3395:ARG:HD3	1:C:3453:ARG:NH1	2.25	0.51
1:C:5000:GLU:HA	1:C:5003:HIS:CD2	2.45	0.51
1:A:2000:SER:O	1:A:2005:GLN:NE2	2.41	0.51
1:A:3690:VAL:O	1:A:3693:LYS:HE3	2.10	0.51
1:A:3997:ALA:HB1	1:A:4057:MET:SD	2.50	0.51
1:B:3984:ARG:NH2	1:C:160:GLY:O	2.32	0.51
1:D:1424:PRO:O	1:D:1428:LEU:HD23	2.10	0.51
1:D:2534:ALA:HB1	1:D:2588:ARG:NE	2.19	0.51
1:D:2908:TYR:CZ	1:D:2916:LYS:HG3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3084:GLY:O	1:D:3089:LYS:NZ	2.37	0.51
1:D:4576:ILE:HG23	1:D:4639:MET:SD	2.51	0.51
1:C:399:GLN:O	1:C:403:MET:HG3	2.11	0.51
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.44	0.51
1:C:3997:ALA:HB1	1:C:4057:MET:SD	2.50	0.51
1:C:4584:ASP:OD2	1:C:4585:SER:N	2.44	0.51
1:A:1749:PRO:HD2	1:A:1758:ARG:HH12	1.75	0.51
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.44	0.51
1:A:2138:LEU:HB2	1:A:3658:LYS:HZ1	1.75	0.51
1:A:5000:GLU:HA	1:A:5003:HIS:CD2	2.45	0.51
1:B:1424:PRO:O	1:B:1428:LEU:HD23	2.10	0.51
1:B:2894:LEU:HD12	1:B:2897:LYS:HE2	1.92	0.51
1:D:2088:GLU:OE1	1:D:2088:GLU:N	2.43	0.51
1:D:2775:TRP:CE3	1:D:2785:LEU:HD21	2.45	0.51
1:C:3940:LYS:O	1:C:4002:LYS:NZ	2.29	0.51
1:C:4632:LEU:HB3	1:C:4634:GLU:OE1	2.10	0.51
1:A:1424:PRO:O	1:A:1428:LEU:HD23	2.10	0.51
1:A:2908:TYR:CZ	1:A:2916:LYS:HG3	2.45	0.51
1:A:4158:PRO:HA	1:A:4161:ARG:NE	2.25	0.51
1:B:774:ASP:OD2	1:B:1470:ARG:NH2	2.43	0.51
1:B:2138:LEU:HB2	1:B:3658:LYS:HZ1	1.75	0.51
1:B:2327:GLY:CA	1:B:2330:ARG:NH2	2.74	0.51
1:B:3346:VAL:HG11	1:B:3414:ARG:CB	2.41	0.51
1:B:4778:TRP:O	1:B:4782:VAL:HG23	2.10	0.51
1:D:2285:GLU:HG2	1:D:3858:MET:HE1	1.92	0.51
1:D:2894:LEU:HD12	1:D:2897:LYS:HE2	1.92	0.51
1:D:3951:PHE:CE1	1:D:3999:MET:HE1	2.46	0.51
1:C:98:HIS:C	1:C:99:ARG:HD2	2.31	0.51
1:C:4778:TRP:O	1:C:4782:VAL:HG23	2.10	0.51
1:A:2088:GLU:OE1	1:A:2088:GLU:N	2.43	0.51
1:B:399:GLN:O	1:B:403:MET:HG3	2.11	0.51
1:B:2775:TRP:CE3	1:B:2785:LEU:HD21	2.45	0.51
1:B:4158:PRO:HA	1:B:4161:ARG:NE	2.25	0.51
1:B:4576:ILE:HG23	1:B:4639:MET:SD	2.51	0.51
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.44	0.51
1:D:2623:LEU:O	1:D:2627:VAL:HG23	2.11	0.51
1:D:3104:GLU:HA	1:D:3107:VAL:HG22	1.93	0.51
1:D:4632:LEU:HB3	1:D:4634:GLU:OE1	2.10	0.51
1:D:4778:TRP:O	1:D:4782:VAL:HG23	2.10	0.51
1:C:1978:ALA:CB	1:C:1982:ARG:HH12	2.18	0.51
1:C:2088:GLU:OE1	1:C:2088:GLU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2623:LEU:O	1:C:2627:VAL:HG23	2.11	0.51
1:C:2747:ILE:HD12	1:C:2814:LYS:HD3	1.91	0.51
1:A:2327:GLY:CA	1:A:2330:ARG:NH2	2.74	0.51
1:A:2747:ILE:HD12	1:A:2814:LYS:HD3	1.91	0.51
1:A:3104:GLU:HA	1:A:3107:VAL:HG22	1.93	0.51
1:A:3346:VAL:HG11	1:A:3414:ARG:CB	2.41	0.51
1:A:4584:ASP:OD2	1:A:4585:SER:N	2.44	0.51
1:A:4720:VAL:O	1:A:4724:VAL:HG23	2.10	0.51
1:A:4998:LYS:HB3	1:A:5003:HIS:CE1	2.45	0.51
1:D:4928:LEU:HA	1:D:4931:ILE:HD12	1.91	0.51
1:D:5000:GLU:HA	1:D:5003:HIS:CD2	2.45	0.51
1:C:1421:ARG:O	1:C:1570:LYS:NZ	2.33	0.51
1:A:774:ASP:OD2	1:A:1470:ARG:NH2	2.43	0.51
2:E:52:LYS:O	2:E:53:GLN:HB2	2.11	0.51
2:G:52:LYS:O	2:G:53:GLN:HB2	2.11	0.51
1:B:232:THR:HG21	1:B:252:VAL:HG21	1.92	0.51
1:B:3752:SER:O	1:B:3756:LYS:HG3	2.11	0.51
1:B:4000:MET:HE1	1:B:4061:PHE:CB	2.41	0.51
1:D:232:THR:HG21	1:D:252:VAL:HG21	1.93	0.51
1:D:399:GLN:O	1:D:403:MET:HG3	2.11	0.51
1:D:3036:LYS:O	1:D:3039:ILE:HG22	2.11	0.51
1:C:358:THR:HG1	1:C:383:HIS:HD1	1.57	0.51
1:C:2434:GLY:O	1:C:2508:ARG:NE	2.36	0.51
1:C:2974:ILE:O	1:C:2978:GLU:OE1	2.29	0.51
1:A:1828:ASP:N	1:A:1828:ASP:OD1	2.43	0.51
1:A:3036:LYS:O	1:A:3039:ILE:HG22	2.11	0.51
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.75	0.51
2:H:16:PRO:HB2	2:H:50:LEU:HD11	1.92	0.51
2:F:16:PRO:HB2	2:F:50:LEU:HD11	1.92	0.51
1:B:2668:SER:O	1:B:2669:GLU:CB	2.57	0.51
1:B:3169:LEU:CD1	1:B:3194:LEU:HD11	2.41	0.51
1:B:3699:HIS:ND1	1:B:3703:LEU:HD11	2.26	0.51
1:D:2199:ARG:NE	1:D:2246:ASN:OD1	2.37	0.51
1:D:3316:LEU:HD21	1:D:3346:VAL:HG23	1.93	0.51
1:D:3401:LEU:O	1:D:3405:LEU:HD13	2.11	0.51
1:C:2871:LEU:HD13	1:C:2874:MET:HE1	1.92	0.51
1:C:3316:LEU:HD21	1:C:3346:VAL:HG23	1.93	0.51
1:C:3633:VAL:O	1:C:3637:ARG:HG2	2.11	0.51
1:B:80:GLU:O	1:B:84:ASN:ND2	2.44	0.51
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.44	0.51
1:B:3690:VAL:O	1:B:3693:LYS:HE3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4655:PHE:HB2	1:B:4796:MET:HE1	1.93	0.51
1:D:2577:ILE:HD12	1:D:2577:ILE:H	1.75	0.51
1:D:3052:HIS:HA	1:D:3127:GLN:NE2	2.25	0.51
1:D:3633:VAL:O	1:D:3637:ARG:HG2	2.11	0.51
1:C:1828:ASP:OD1	1:C:1828:ASP:N	2.43	0.51
1:C:3084:GLY:O	1:C:3089:LYS:NZ	2.37	0.51
1:A:3395:ARG:HD3	1:A:3453:ARG:NH1	2.25	0.50
1:A:4655:PHE:HB2	1:A:4796:MET:HE1	1.93	0.50
2:G:6:THR:HG23	2:G:6:THR:O	2.10	0.50
1:D:2327:GLY:CA	1:D:2330:ARG:NH2	2.74	0.50
1:D:3169:LEU:CD1	1:D:3194:LEU:HD11	2.41	0.50
1:C:2327:GLY:CA	1:C:2330:ARG:NH2	2.74	0.50
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.75	0.50
1:C:3455:GLU:O	1:C:3459:VAL:HG23	2.11	0.50
1:A:80:GLU:O	1:A:84:ASN:ND2	2.44	0.50
2:E:6:THR:HG23	2:E:6:THR:O	2.10	0.50
2:G:16:PRO:HB2	2:G:50:LEU:HD11	1.93	0.50
1:B:2974:ILE:O	1:B:2978:GLU:OE1	2.29	0.50
1:B:4584:ASP:OD2	1:B:4585:SER:N	2.44	0.50
1:D:2974:ILE:O	1:D:2978:GLU:OE1	2.29	0.50
1:D:4716:TRP:CD1	6:D:5304:IBM:H12	2.47	0.50
1:C:80:GLU:O	1:C:84:ASN:ND2	2.44	0.50
1:C:3104:GLU:HA	1:C:3107:VAL:HG22	1.93	0.50
1:C:3752:SER:O	1:C:3756:LYS:HG3	2.11	0.50
1:C:4576:ILE:HG23	1:C:4639:MET:SD	2.51	0.50
1:A:160:GLY:O	1:D:3984:ARG:NH2	2.38	0.50
1:A:3169:LEU:CD1	1:A:3194:LEU:HD11	2.41	0.50
1:A:4655:PHE:HA	1:A:4796:MET:HE1	1.94	0.50
1:A:4938:ASP:OD1	1:D:4944:ARG:NE	2.44	0.50
2:E:16:PRO:HB2	2:E:50:LEU:HD11	1.92	0.50
1:B:3104:GLU:HA	1:B:3107:VAL:HG22	1.93	0.50
1:B:3248:ARG:NH2	1:B:3252:ASP:OD1	2.37	0.50
1:B:4182:GLU:OE1	1:B:4983:HIS:NE2	2.44	0.50
1:D:4584:ASP:OD2	1:D:4585:SER:N	2.44	0.50
1:C:774:ASP:OD2	1:C:1470:ARG:NH2	2.43	0.50
1:A:2552:ARG:O	1:A:2556:LEU:HD23	2.12	0.50
1:A:2623:LEU:O	1:A:2627:VAL:HG23	2.11	0.50
1:A:3633:VAL:O	1:A:3637:ARG:HG2	2.11	0.50
1:B:3036:LYS:O	1:B:3039:ILE:HG22	2.11	0.50
1:B:3455:GLU:O	1:B:3459:VAL:HG23	2.11	0.50
1:D:1828:ASP:N	1:D:1828:ASP:OD1	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3036:LYS:O	1:C:3039:ILE:HG22	2.11	0.50
1:C:3690:VAL:O	1:C:3693:LYS:CE	2.60	0.50
1:A:236:ALA:O	1:A:237:ASP:OD1	2.30	0.50
1:A:988:LEU:CB	1:A:1039:LEU:HD21	2.42	0.50
1:A:1978:ALA:CB	1:A:1982:ARG:HH12	2.18	0.50
1:A:2111:VAL:HG12	1:A:2113:SER:H	1.77	0.50
1:A:3226:GLU:O	1:A:3227:ARG:HB2	2.12	0.50
1:A:4021:LYS:O	1:A:4025:VAL:HG23	2.12	0.50
1:B:236:ALA:O	1:B:237:ASP:OD1	2.30	0.50
1:B:3690:VAL:O	1:B:3693:LYS:CE	2.60	0.50
1:D:774:ASP:OD2	1:D:1470:ARG:NH2	2.43	0.50
1:D:3445:TRP:O	1:D:3452:LYS:NZ	2.43	0.50
1:C:3699:HIS:ND1	1:C:3703:LEU:HD11	2.26	0.50
1:A:232:THR:HG21	1:A:252:VAL:HG21	1.92	0.50
1:A:3401:LEU:O	1:A:3405:LEU:HD13	2.11	0.50
1:A:3957:VAL:O	1:A:3961:VAL:HG23	2.12	0.50
2:F:52:LYS:O	2:F:53:GLN:HB2	2.11	0.50
1:B:98:HIS:C	1:B:99:ARG:HD2	2.31	0.50
1:D:80:GLU:O	1:D:84:ASN:ND2	2.44	0.50
1:D:1978:ALA:CB	1:D:1982:ARG:HH12	2.18	0.50
1:D:3455:GLU:O	1:D:3459:VAL:HG23	2.11	0.50
1:C:2685:SER:O	1:C:2689:LYS:HG2	2.12	0.50
1:A:1141:ARG:HB2	1:D:3477:LYS:HZ3	1.77	0.50
1:A:2165:LEU:HD21	1:A:2177:LEU:HD23	1.94	0.50
1:A:3813:GLN:O	1:A:3899:PHE:HZ	1.95	0.50
1:B:2165:LEU:HD21	1:B:2177:LEU:HD23	1.94	0.50
1:B:2973:PHE:CE2	1:B:2995:ILE:HG12	2.47	0.50
1:B:3633:VAL:O	1:B:3637:ARG:HG2	2.11	0.50
1:D:1978:ALA:C	1:D:1982:ARG:NH1	2.65	0.50
1:D:2165:LEU:HD21	1:D:2177:LEU:HD23	1.94	0.50
1:D:2552:ARG:O	1:D:2556:LEU:HD23	2.12	0.50
1:D:3266:MET:SD	1:D:3270:ILE:HG13	2.52	0.50
1:D:3957:VAL:O	1:D:3961:VAL:HG23	2.12	0.50
1:D:4655:PHE:CB	1:D:4796:MET:HE1	2.42	0.50
1:C:2165:LEU:HD21	1:C:2177:LEU:HD23	1.94	0.50
1:C:3957:VAL:O	1:C:3961:VAL:HG23	2.12	0.50
1:C:4583:SER:OG	1:C:4585:SER:O	2.29	0.50
1:A:4716:TRP:CD1	6:A:5304:IBM:H12	2.47	0.50
1:B:988:LEU:CB	1:B:1039:LEU:HD21	2.42	0.50
1:B:2430:ILE:HG13	1:B:2502:MET:HE1	1.94	0.50
1:B:2685:SER:O	1:B:2689:LYS:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.75	0.50
1:B:4021:LYS:O	1:B:4025:VAL:HG23	2.12	0.50
1:D:897:ARG:NH2	1:D:906:CYS:SG	2.73	0.50
1:D:2494:PHE:HD1	1:D:2498:HIS:HD1	1.59	0.50
1:D:3226:GLU:O	1:D:3227:ARG:HB2	2.12	0.50
1:C:236:ALA:O	1:C:237:ASP:OD1	2.30	0.50
1:C:3401:LEU:O	1:C:3405:LEU:HD13	2.11	0.50
1:A:3448:SER:O	1:A:3452:LYS:NZ	2.37	0.50
1:B:2552:ARG:O	1:B:2556:LEU:HD23	2.12	0.50
1:B:4655:PHE:CB	1:B:4796:MET:HE1	2.42	0.50
1:C:232:THR:HG21	1:C:252:VAL:HG21	1.93	0.50
1:C:887:ILE:CD1	1:C:961:MET:HE3	2.42	0.50
1:C:1978:ALA:C	1:C:1982:ARG:NH1	2.65	0.50
1:A:2974:ILE:O	1:A:2978:GLU:OE1	2.29	0.49
1:A:3752:SER:O	1:A:3756:LYS:HG3	2.11	0.49
1:A:4182:GLU:OE1	1:A:4983:HIS:NE2	2.44	0.49
2:E:25:HIS:CE1	2:E:45:PRO:HG3	2.47	0.49
2:G:25:HIS:CE1	2:G:45:PRO:HG3	2.47	0.49
1:B:1749:PRO:HD2	1:B:1758:ARG:HH12	1.75	0.49
1:D:236:ALA:O	1:D:237:ASP:OD1	2.30	0.49
1:D:2440:MET:O	1:D:2443:ILE:N	2.45	0.49
1:D:2524:VAL:HG23	1:D:2525:GLY:N	2.27	0.49
1:C:257:ARG:O	1:C:284:HIS:NE2	2.43	0.49
1:C:642:THR:HG23	1:C:1613:LEU:HD12	1.94	0.49
1:C:988:LEU:CB	1:C:1039:LEU:HD21	2.42	0.49
1:C:2581:SER:O	1:C:2585:THR:HG23	2.12	0.49
1:C:3169:LEU:CD1	1:C:3194:LEU:HD11	2.41	0.49
1:A:925:SER:O	1:A:928:THR:OG1	2.23	0.49
1:A:1978:ALA:C	1:A:1982:ARG:NH1	2.65	0.49
1:A:3716:LEU:HD21	1:A:3782:MET:HE3	1.94	0.49
2:H:6:THR:HG23	2:H:6:THR:O	2.10	0.49
2:H:52:LYS:O	2:H:53:GLN:HB2	2.11	0.49
1:B:642:THR:HG23	1:B:1613:LEU:HD12	1.94	0.49
1:B:2494:PHE:HD1	1:B:2498:HIS:HD1	1.59	0.49
1:B:2623:LEU:O	1:B:2627:VAL:HG23	2.11	0.49
1:B:3401:LEU:O	1:B:3405:LEU:HD13	2.11	0.49
1:B:4998:LYS:HB3	1:B:5003:HIS:CE1	2.44	0.49
1:A:3455:GLU:O	1:A:3459:VAL:HG23	2.11	0.49
1:A:4766:THR:HA	1:A:4769:MET:HE2	1.94	0.49
1:B:1978:ALA:C	1:B:1982:ARG:NH1	2.65	0.49
1:B:1978:ALA:O	1:B:1982:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2524:VAL:HG23	1:B:2525:GLY:N	2.27	0.49
1:B:3365:LEU:HD21	1:B:3405:LEU:CD1	2.43	0.49
1:D:900:ASN:OD1	1:D:901:LYS:N	2.46	0.49
1:D:3752:SER:O	1:D:3756:LYS:HG3	2.11	0.49
1:D:4655:PHE:HB2	1:D:4796:MET:HE1	1.93	0.49
1:C:4716:TRP:CD1	6:C:5304:IBM:H12	2.47	0.49
1:A:2494:PHE:HD1	1:A:2498:HIS:HD1	1.59	0.49
1:A:2973:PHE:CE2	1:A:2995:ILE:HG12	2.47	0.49
1:B:900:ASN:OD1	1:B:901:LYS:N	2.46	0.49
1:B:2538:THR:O	1:B:2542:SER:N	2.46	0.49
1:B:2581:SER:O	1:B:2585:THR:HG23	2.12	0.49
1:B:3316:LEU:HD21	1:B:3346:VAL:HG23	1.93	0.49
1:B:4716:TRP:CD1	6:B:5304:IBM:H12	2.47	0.49
1:D:887:ILE:CD1	1:D:961:MET:HE3	2.42	0.49
1:D:2111:VAL:HG12	1:D:2113:SER:H	1.77	0.49
1:D:2285:GLU:HG2	1:D:3858:MET:CE	2.43	0.49
1:D:3690:VAL:O	1:D:3693:LYS:CE	2.60	0.49
1:D:4021:LYS:O	1:D:4025:VAL:HG23	2.12	0.49
1:C:2440:MET:O	1:C:2443:ILE:N	2.45	0.49
1:C:2524:VAL:HG23	1:C:2525:GLY:N	2.27	0.49
1:C:3226:GLU:O	1:C:3227:ARG:HB2	2.12	0.49
1:A:399:GLN:O	1:A:403:MET:HG3	2.11	0.49
1:A:900:ASN:OD1	1:A:901:LYS:N	2.46	0.49
1:A:2524:VAL:HG23	1:A:2525:GLY:N	2.27	0.49
1:A:2660:GLY:CA	1:A:2666:VAL:HG12	2.43	0.49
1:A:3690:VAL:O	1:A:3693:LYS:CE	2.60	0.49
1:B:70:GLU:OE2	1:B:110:ARG:HD2	2.13	0.49
1:B:575:LEU:HA	1:B:578:ILE:HG12	1.95	0.49
1:D:642:THR:HG23	1:D:1613:LEU:HD12	1.94	0.49
1:D:988:LEU:CB	1:D:1039:LEU:HD21	2.42	0.49
1:D:2973:PHE:CE2	1:D:2995:ILE:HG12	2.47	0.49
1:D:3365:LEU:HD21	1:D:3405:LEU:CD1	2.43	0.49
1:D:3699:HIS:ND1	1:D:3703:LEU:HD11	2.26	0.49
1:D:3813:GLN:O	1:D:3899:PHE:HZ	1.95	0.49
1:C:2494:PHE:HD1	1:C:2498:HIS:HD1	1.59	0.49
1:C:2660:GLY:CA	1:C:2666:VAL:HG12	2.43	0.49
1:C:2973:PHE:CE2	1:C:2995:ILE:HG12	2.47	0.49
1:C:2974:ILE:HD12	1:C:3049:LEU:HD11	1.95	0.49
1:C:3365:LEU:HD21	1:C:3405:LEU:CD1	2.43	0.49
1:C:4655:PHE:HB2	1:C:4796:MET:HE1	1.93	0.49
1:A:70:GLU:OE2	1:A:110:ARG:HD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1999:ARG:CB	1:A:1999:ARG:HH11	2.26	0.49
1:A:3266:MET:SD	1:A:3270:ILE:HG13	2.52	0.49
1:B:3226:GLU:O	1:B:3227:ARG:HB2	2.12	0.49
1:D:3477:LYS:NZ	1:D:3479:ALA:HB2	2.28	0.49
1:C:70:GLU:OE2	1:C:110:ARG:HD2	2.13	0.49
1:C:2552:ARG:O	1:C:2556:LEU:HD23	2.12	0.49
1:C:3266:MET:SD	1:C:3270:ILE:HG13	2.52	0.49
1:C:4655:PHE:HA	1:C:4796:MET:HE1	1.92	0.49
1:A:2992:GLU:HA	1:A:2995:ILE:HD12	1.95	0.49
1:A:3316:LEU:HD21	1:A:3346:VAL:HG23	1.93	0.49
1:A:4655:PHE:CB	1:A:4796:MET:HE1	2.42	0.49
1:B:418:LEU:HD23	1:B:421:PHE:CZ	2.48	0.49
1:B:603:LEU:HD23	1:B:606:LEU:HD12	1.94	0.49
1:D:418:LEU:HD23	1:D:421:PHE:CZ	2.48	0.49
1:D:1112:ASP:OD1	1:D:1113:VAL:HG23	2.13	0.49
1:D:4000:MET:HE1	1:D:4058:ILE:HA	1.94	0.49
1:C:4655:PHE:CB	1:C:4796:MET:HE1	2.42	0.49
2:E:88:PRO:O	2:E:90:ILE:HD12	2.13	0.49
1:B:3299:GLY:O	1:B:3300:ALA:HB2	2.13	0.49
1:B:3477:LYS:NZ	1:B:3479:ALA:HB2	2.28	0.49
1:B:3539:ARG:NH2	1:B:3548:GLU:OE2	2.38	0.49
1:B:3957:VAL:O	1:B:3961:VAL:HG23	2.12	0.49
1:B:4937:ILE:HG12	1:C:4934:GLY:HA2	1.95	0.49
1:D:3177:THR:O	1:D:3179:LYS:NZ	2.36	0.49
1:D:4583:SER:OG	1:D:4585:SER:O	2.29	0.49
1:C:1999:ARG:CB	1:C:1999:ARG:HH11	2.26	0.49
1:C:4021:LYS:O	1:C:4025:VAL:HG23	2.12	0.49
1:A:2801:ASP:OD1	1:A:2802:LYS:N	2.46	0.49
1:A:2806:ARG:HE	1:A:2810:LYS:NZ	2.11	0.49
1:A:3365:LEU:HD21	1:A:3405:LEU:CD1	2.43	0.49
2:H:25:HIS:CE1	2:H:45:PRO:HG3	2.47	0.49
1:B:545:ASP:OD1	1:B:582:HIS:NE2	2.40	0.49
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.95	0.49
1:B:2285:GLU:HG2	1:B:3858:MET:CE	2.43	0.49
1:B:2440:MET:O	1:B:2443:ILE:N	2.45	0.49
1:C:2819:TRP:O	1:C:2821:TRP:CD1	2.66	0.49
1:A:732:SER:O	1:A:735:GLN:HG3	2.13	0.49
1:B:2660:GLY:CA	1:B:2666:VAL:HG12	2.43	0.49
1:B:2974:ILE:HD12	1:B:3049:LEU:HD11	1.94	0.49
1:B:4902:GLU:O	1:B:4913:ARG:CZ	2.61	0.49
1:D:1978:ALA:O	1:D:1982:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4000:MET:HG2	1:D:4061:PHE:CE2	2.48	0.49
1:C:900:ASN:OD1	1:C:901:LYS:N	2.46	0.49
1:C:1978:ALA:O	1:C:1982:ARG:NH1	2.45	0.49
1:C:3346:VAL:HG11	1:C:3414:ARG:CB	2.41	0.49
1:C:3354:LEU:HD11	1:C:3434:LEU:HD22	1.95	0.49
1:A:418:LEU:HD23	1:A:421:PHE:CZ	2.48	0.48
1:A:1069:TRP:CZ3	1:A:1112:ASP:HB2	2.48	0.48
1:A:1962:ALA:O	1:A:1966:VAL:HG23	2.13	0.48
1:A:1978:ALA:O	1:A:1982:ARG:NH1	2.45	0.48
1:A:2440:MET:O	1:A:2443:ILE:N	2.45	0.48
1:A:2685:SER:O	1:A:2689:LYS:HG2	2.12	0.48
1:A:3199:ALA:O	1:A:3283:ARG:NE	2.40	0.48
1:A:4000:MET:HG2	1:A:4061:PHE:CE2	2.48	0.48
2:H:88:PRO:O	2:H:90:ILE:HD12	2.13	0.48
2:G:79:ASP:OD2	2:G:80:TYR:HD1	1.96	0.48
2:F:79:ASP:OD2	2:F:80:TYR:HD1	1.96	0.48
1:B:2871:LEU:HD13	1:B:2874:MET:HE1	1.93	0.48
1:D:732:SER:O	1:D:735:GLN:HG3	2.13	0.48
1:D:1962:ALA:O	1:D:1966:VAL:HG23	2.13	0.48
1:D:1999:ARG:CB	1:D:1999:ARG:HH11	2.26	0.48
1:D:4934:GLY:HA2	1:C:4937:ILE:HG12	1.95	0.48
1:C:2285:GLU:HG2	1:C:3858:MET:CE	2.43	0.48
1:C:3448:SER:O	1:C:3452:LYS:NZ	2.37	0.48
1:C:4766:THR:HA	1:C:4769:MET:HE2	1.95	0.48
1:A:1733:GLU:HG2	1:A:2201:LEU:HD23	1.95	0.48
1:A:2107:GLN:O	1:A:3694:LYS:NZ	2.34	0.48
1:A:3108:GLU:O	1:A:3111:ARG:HB2	2.14	0.48
1:A:3354:LEU:HD11	1:A:3434:LEU:HD22	1.95	0.48
1:A:3699:HIS:ND1	1:A:3703:LEU:HD11	2.26	0.48
1:A:4902:GLU:O	1:A:4913:ARG:CZ	2.61	0.48
2:E:79:ASP:OD2	2:E:80:TYR:HD1	1.96	0.48
2:H:79:ASP:OD2	2:H:80:TYR:HD1	1.96	0.48
2:F:25:HIS:CE1	2:F:45:PRO:HG3	2.47	0.48
1:B:732:SER:O	1:B:735:GLN:HG3	2.13	0.48
1:B:3108:GLU:O	1:B:3111:ARG:HB2	2.14	0.48
1:B:3266:MET:SD	1:B:3270:ILE:HG13	2.52	0.48
1:B:4000:MET:HG2	1:B:4061:PHE:CE2	2.48	0.48
1:B:4565:LEU:O	1:B:4569:LEU:HD13	2.13	0.48
1:D:70:GLU:OE2	1:D:110:ARG:HD2	2.13	0.48
1:D:879:HIS:CE1	1:D:921:ASN:HD22	2.31	0.48
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2660:GLY:CA	1:D:2666:VAL:HG12	2.43	0.48
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.13	0.48
1:C:603:LEU:HD23	1:C:606:LEU:HD12	1.94	0.48
1:C:1112:ASP:OD1	1:C:1113:VAL:HG23	2.13	0.48
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.13	0.48
1:C:4690:GLU:O	1:C:4691:GLN:HB2	2.13	0.48
1:A:3299:GLY:O	1:A:3300:ALA:HB2	2.13	0.48
2:E:2:VAL:CG2	2:E:58:GLY:HA2	2.44	0.48
2:H:2:VAL:CG2	2:H:58:GLY:HA2	2.44	0.48
1:B:266:ARG:NE	1:B:330:ASP:OD2	2.46	0.48
1:B:1999:ARG:CB	1:B:1999:ARG:HH11	2.26	0.48
1:B:2111:VAL:HG12	1:B:2113:SER:H	1.77	0.48
1:B:2199:ARG:NE	1:B:2246:ASN:OD1	2.37	0.48
1:B:2801:ASP:OD1	1:B:2802:LYS:N	2.46	0.48
1:B:2806:ARG:HE	1:B:2810:LYS:NZ	2.11	0.48
1:B:2819:TRP:O	1:B:2821:TRP:CD1	2.66	0.48
1:D:2806:ARG:HE	1:D:2810:LYS:NZ	2.11	0.48
1:D:3448:SER:O	1:D:3452:LYS:NZ	2.37	0.48
1:C:877:ASN:O	1:C:881:LEU:HD23	2.13	0.48
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.95	0.48
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.96	0.48
1:C:4902:GLU:O	1:C:4913:ARG:CZ	2.61	0.48
1:A:3477:LYS:NZ	1:A:3479:ALA:HB2	2.28	0.48
1:A:4000:MET:HE1	1:A:4058:ILE:HA	1.94	0.48
1:A:4690:GLU:O	1:A:4691:GLN:HB2	2.14	0.48
2:G:88:PRO:O	2:G:90:ILE:HD12	2.13	0.48
1:B:3813:GLN:O	1:B:3899:PHE:HZ	1.95	0.48
1:B:4583:SER:OG	1:B:4585:SER:O	2.29	0.48
1:D:102:LEU:HD23	1:D:162:LYS:HA	1.96	0.48
1:D:1069:TRP:CZ3	1:D:1112:ASP:HB2	2.48	0.48
1:D:1733:GLU:HG2	1:D:2201:LEU:HD23	1.95	0.48
1:D:2819:TRP:O	1:D:2821:TRP:CD1	2.66	0.48
1:D:3299:GLY:O	1:D:3300:ALA:HB2	2.13	0.48
1:D:3477:LYS:HZ2	1:D:3479:ALA:HB2	1.79	0.48
1:D:4170:ILE:H	1:D:4170:ILE:HD12	1.79	0.48
1:C:266:ARG:NE	1:C:330:ASP:OD2	2.46	0.48
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.95	0.48
1:C:3299:GLY:O	1:C:3300:ALA:HB2	2.13	0.48
1:A:102:LEU:HD23	1:A:162:LYS:HA	1.96	0.48
1:A:877:ASN:O	1:A:881:LEU:HD23	2.13	0.48
1:A:1979:LEU:N	1:A:1982:ARG:NH2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2285:GLU:HG2	1:A:3858:MET:CE	2.43	0.48
1:A:2581:SER:O	1:A:2585:THR:HG23	2.12	0.48
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.96	0.48
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.13	0.48
2:F:88:PRO:O	2:F:90:ILE:HD12	2.13	0.48
1:B:722:TRP:CZ2	1:B:727:ALA:HB2	2.49	0.48
1:B:887:ILE:CD1	1:B:961:MET:HE3	2.43	0.48
1:B:4655:PHE:HA	1:B:4796:MET:HE1	1.92	0.48
1:B:4766:THR:HA	1:B:4769:MET:HE2	1.96	0.48
1:D:3940:LYS:O	1:D:4002:LYS:NZ	2.29	0.48
1:C:722:TRP:CZ2	1:C:727:ALA:HB2	2.49	0.48
1:C:879:HIS:CE1	1:C:921:ASN:HD22	2.31	0.48
1:C:2806:ARG:HE	1:C:2810:LYS:NZ	2.11	0.48
1:C:4565:LEU:O	1:C:4569:LEU:HD13	2.13	0.48
1:A:603:LEU:HD23	1:A:606:LEU:HD12	1.94	0.48
1:A:619:ASP:OD2	1:A:1680:ARG:NH2	2.47	0.48
1:A:879:HIS:CE1	1:A:921:ASN:HD22	2.31	0.48
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.95	0.48
1:A:2974:ILE:HD12	1:A:3049:LEU:HD11	1.94	0.48
1:B:1069:TRP:CZ3	1:B:1112:ASP:HB2	2.48	0.48
1:B:1791:VAL:O	1:B:1792:ALA:HB3	2.14	0.48
1:D:2581:SER:O	1:D:2585:THR:HG23	2.12	0.48
1:D:2685:SER:O	1:D:2689:LYS:HG2	2.12	0.48
1:D:2801:ASP:OD1	1:D:2802:LYS:N	2.46	0.48
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.95	0.48
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.96	0.48
1:D:3445:TRP:NE1	1:D:3455:GLU:OE1	2.45	0.48
1:C:418:LEU:HD23	1:C:421:PHE:CZ	2.48	0.48
1:C:575:LEU:HA	1:C:578:ILE:HG12	1.95	0.48
1:C:1069:TRP:CZ3	1:C:1112:ASP:HB2	2.48	0.48
1:C:2538:THR:O	1:C:2542:SER:N	2.46	0.48
1:C:2801:ASP:OD1	1:C:2802:LYS:N	2.46	0.48
1:C:3813:GLN:O	1:C:3899:PHE:HZ	1.95	0.48
1:C:4000:MET:HG2	1:C:4061:PHE:CE2	2.48	0.48
1:A:2434:GLY:O	1:A:2508:ARG:NE	2.36	0.48
1:A:4565:LEU:O	1:A:4569:LEU:HD13	2.13	0.48
1:B:1733:GLU:HG2	1:B:2201:LEU:HD23	1.95	0.48
1:D:266:ARG:NE	1:D:330:ASP:OD2	2.46	0.48
1:D:796:ARG:O	1:D:1622:GLU:O	2.32	0.48
1:D:2000:SER:O	1:D:2005:GLN:NE2	2.41	0.48
1:D:2992:GLU:HA	1:D:2995:ILE:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1999:ARG:O	1:C:1999:ARG:CG	2.62	0.48
1:C:3108:GLU:O	1:C:3111:ARG:HB2	2.14	0.48
1:C:3477:LYS:NZ	1:C:3479:ALA:HB2	2.28	0.48
1:C:4170:ILE:H	1:C:4170:ILE:HD12	1.79	0.48
1:A:266:ARG:NE	1:A:330:ASP:OD2	2.46	0.48
1:A:642:THR:HG23	1:A:1613:LEU:HD12	1.94	0.48
1:A:1112:ASP:OD1	1:A:1113:VAL:HG23	2.13	0.48
1:A:1999:ARG:O	1:A:1999:ARG:CG	2.62	0.48
1:A:2475:GLN:OE1	1:A:2488:PRO:HB3	2.14	0.48
1:B:358:THR:OG1	1:B:383:HIS:ND1	2.42	0.48
1:B:796:ARG:O	1:B:1622:GLU:O	2.32	0.48
1:B:1979:LEU:N	1:B:1982:ARG:NH2	2.61	0.48
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.95	0.48
1:B:4690:GLU:O	1:B:4691:GLN:HB2	2.13	0.48
1:D:856:VAL:HG12	1:D:991:ASN:ND2	2.29	0.48
1:D:2974:ILE:HD12	1:D:3049:LEU:HD11	1.94	0.48
1:D:4766:THR:HA	1:D:4769:MET:HE2	1.94	0.48
1:D:4938:ASP:OD1	1:C:4944:ARG:NE	2.47	0.48
1:C:1962:ALA:O	1:C:1966:VAL:HG23	2.13	0.48
1:C:2111:VAL:HG12	1:C:2113:SER:H	1.77	0.48
1:C:4204:GLN:HB3	1:C:4245:MET:HG2	1.95	0.48
1:A:39:ALA:O	1:A:111:HIS:NE2	2.47	0.48
1:A:2871:LEU:HD13	1:A:2874:MET:SD	2.54	0.48
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.95	0.48
1:A:4170:ILE:HD12	1:A:4170:ILE:H	1.79	0.48
1:B:856:VAL:HG12	1:B:991:ASN:ND2	2.29	0.48
1:B:3615:SER:O	1:B:3616:LYS:HG2	2.14	0.48
1:B:4170:ILE:H	1:B:4170:ILE:HD12	1.79	0.48
1:D:39:ALA:O	1:D:111:HIS:NE2	2.47	0.48
1:D:575:LEU:HA	1:D:578:ILE:HG12	1.95	0.48
1:D:1676:LEU:HB3	1:D:2167:ILE:HD12	1.96	0.48
1:D:3354:LEU:HD11	1:D:3434:LEU:HD22	1.94	0.48
1:D:4182:GLU:OE1	1:D:4983:HIS:NE2	2.44	0.48
1:D:4673:ARG:O	1:D:4676:GLU:HG3	2.14	0.48
1:D:4902:GLU:O	1:D:4913:ARG:CZ	2.61	0.48
1:C:1791:VAL:O	1:C:1792:ALA:HB3	2.14	0.48
1:A:3996:PHE:HD1	1:A:4016:LEU:HD11	1.79	0.48
1:B:1112:ASP:OD1	1:B:1113:VAL:HG23	2.13	0.48
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.95	0.48
1:B:3337:ARG:O	1:B:3340:VAL:HG22	2.14	0.48
1:B:3354:LEU:HD11	1:B:3434:LEU:HD22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3996:PHE:HD1	1:B:4016:LEU:HD11	1.79	0.48
1:D:417:GLY:O	1:D:421:PHE:CD1	2.67	0.48
1:D:603:LEU:HD23	1:D:606:LEU:HD12	1.94	0.48
1:D:877:ASN:O	1:D:881:LEU:HD23	2.13	0.48
1:D:2871:LEU:HD13	1:D:2874:MET:SD	2.54	0.48
1:C:309:THR:O	1:C:309:THR:HG22	2.14	0.48
1:C:732:SER:O	1:C:735:GLN:HG3	2.13	0.48
1:C:1733:GLU:HG2	1:C:2201:LEU:HD23	1.95	0.48
1:C:2992:GLU:HA	1:C:2995:ILE:HD12	1.95	0.48
1:A:417:GLY:O	1:A:421:PHE:CD1	2.67	0.47
1:A:884:LEU:O	1:A:888:GLU:OE1	2.32	0.47
1:A:1791:VAL:O	1:A:1792:ALA:HB3	2.14	0.47
1:A:4204:GLN:HB3	1:A:4245:MET:HG2	1.96	0.47
2:H:20:GLN:HE21	2:H:106:LEU:HB3	1.78	0.47
2:G:2:VAL:CG2	2:G:58:GLY:HA2	2.44	0.47
1:B:879:HIS:CE1	1:B:921:ASN:HD22	2.31	0.47
1:B:886:ARG:HG3	1:B:891:TRP:HB2	1.96	0.47
1:B:2000:SER:O	1:B:2005:GLN:NE2	2.41	0.47
1:D:358:THR:OG1	1:D:383:HIS:ND1	2.42	0.47
1:D:886:ARG:HG3	1:D:891:TRP:HB2	1.96	0.47
1:D:2538:THR:O	1:D:2542:SER:N	2.46	0.47
1:D:3346:VAL:HG11	1:D:3414:ARG:CB	2.41	0.47
1:D:4690:GLU:O	1:D:4691:GLN:HB2	2.13	0.47
1:C:1749:PRO:HD2	1:C:1758:ARG:HH12	1.75	0.47
1:C:2475:GLN:OE1	1:C:2488:PRO:HB3	2.14	0.47
1:C:2904:LEU:O	1:C:2906:VAL:HG22	2.14	0.47
1:A:856:VAL:HG12	1:A:991:ASN:ND2	2.29	0.47
1:B:39:ALA:O	1:B:111:HIS:NE2	2.47	0.47
1:B:4204:GLN:HB3	1:B:4245:MET:HG2	1.96	0.47
1:D:1979:LEU:N	1:D:1982:ARG:NH2	2.61	0.47
1:D:2475:GLN:OE1	1:D:2488:PRO:HB3	2.14	0.47
1:C:891:TRP:CZ2	1:C:899:ASP:HA	2.50	0.47
1:C:1979:LEU:HD22	1:C:1982:ARG:HH21	1.78	0.47
1:C:1979:LEU:N	1:C:1982:ARG:NH2	2.61	0.47
1:C:3985:LEU:HD11	1:C:4026:MET:HE1	1.96	0.47
1:A:2430:ILE:HG13	1:A:2502:MET:HE1	1.96	0.47
1:A:2515:GLN:O	1:A:2519:LEU:HG	2.15	0.47
2:E:20:GLN:HE21	2:E:106:LEU:HB3	1.78	0.47
1:B:309:THR:HG22	1:B:309:THR:O	2.14	0.47
1:B:2475:GLN:OE1	1:B:2488:PRO:HB3	2.14	0.47
1:B:2583:LEU:O	1:B:2586:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2992:GLU:HA	1:B:2995:ILE:HD12	1.95	0.47
1:B:3985:LEU:HD11	1:B:4026:MET:HE1	1.96	0.47
1:B:4732:PHE:O	1:B:4736:ARG:NH1	2.45	0.47
1:D:3337:ARG:O	1:D:3340:VAL:HG22	2.15	0.47
1:D:3615:SER:O	1:D:3616:LYS:HG2	2.14	0.47
1:D:3985:LEU:O	1:D:3989:VAL:HG23	2.14	0.47
1:C:102:LEU:HD23	1:C:162:LYS:HA	1.96	0.47
1:C:856:VAL:HG12	1:C:991:ASN:ND2	2.29	0.47
1:C:4158:PRO:HA	1:C:4161:ARG:NE	2.25	0.47
1:A:2819:TRP:O	1:A:2821:TRP:CD1	2.66	0.47
1:A:3105:LYS:O	1:A:3109:ASN:ND2	2.48	0.47
1:A:3615:SER:O	1:A:3616:LYS:HG2	2.14	0.47
1:A:3985:LEU:O	1:A:3989:VAL:HG23	2.14	0.47
1:B:619:ASP:OD2	1:B:1680:ARG:NH2	2.47	0.47
1:B:1962:ALA:O	1:B:1966:VAL:HG23	2.13	0.47
1:B:2515:GLN:O	1:B:2519:LEU:HG	2.15	0.47
1:B:3379:LEU:HD23	1:B:3382:GLU:OE2	2.15	0.47
1:C:417:GLY:O	1:C:421:PHE:CD1	2.67	0.47
1:C:886:ARG:HD3	1:C:891:TRP:CE3	2.50	0.47
1:C:2583:LEU:O	1:C:2586:VAL:HG12	2.15	0.47
1:C:3615:SER:O	1:C:3616:LYS:HG2	2.14	0.47
1:A:309:THR:O	1:A:309:THR:HG22	2.14	0.47
1:A:891:TRP:CZ2	1:A:899:ASP:HA	2.50	0.47
1:A:1979:LEU:HD22	1:A:1982:ARG:HH21	1.78	0.47
1:A:3878:ASP:N	1:A:3878:ASP:OD1	2.48	0.47
2:F:2:VAL:CG2	2:F:58:GLY:HA2	2.44	0.47
1:B:3765:TYR:CE1	1:B:4753:HIS:ND1	2.83	0.47
1:D:1506:GLN:OE1	1:C:2771:ILE:HG22	2.14	0.47
1:D:1979:LEU:HD22	1:D:1982:ARG:HH21	1.78	0.47
1:D:3108:GLU:O	1:D:3111:ARG:HB2	2.14	0.47
1:D:4565:LEU:O	1:D:4569:LEU:HD13	2.13	0.47
1:C:2355:ARG:NH2	1:C:2449:GLU:OE2	2.48	0.47
1:B:887:ILE:HD11	1:B:961:MET:CE	2.45	0.47
1:B:1979:LEU:HD22	1:B:1982:ARG:HH21	1.78	0.47
1:B:3528:THR:HG23	1:B:3573:MET:SD	2.55	0.47
1:D:886:ARG:HD3	1:D:891:TRP:CE3	2.50	0.47
1:D:891:TRP:CZ2	1:D:899:ASP:HA	2.50	0.47
1:D:1791:VAL:O	1:D:1792:ALA:HB3	2.14	0.47
1:D:3765:TYR:CE1	1:D:4753:HIS:ND1	2.83	0.47
1:D:3893:GLU:HA	1:D:3967:GLU:OE2	2.15	0.47
1:C:3379:LEU:HD23	1:C:3382:GLU:OE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3985:LEU:O	1:C:3989:VAL:HG23	2.14	0.47
1:C:3996:PHE:HD1	1:C:4016:LEU:HD11	1.79	0.47
1:C:4673:ARG:O	1:C:4676:GLU:HG3	2.14	0.47
1:A:575:LEU:HA	1:A:578:ILE:HG12	1.95	0.47
1:A:886:ARG:HD3	1:A:891:TRP:CE3	2.50	0.47
1:A:3505:VAL:O	1:A:3511:VAL:HG21	2.15	0.47
2:G:20:GLN:HE21	2:G:106:LEU:HB3	1.79	0.47
2:F:20:GLN:HE21	2:F:106:LEU:HB3	1.78	0.47
1:B:38:ALA:HB2	1:B:65:CYS:SG	2.55	0.47
1:B:102:LEU:HD23	1:B:162:LYS:HA	1.96	0.47
1:B:417:GLY:O	1:B:421:PHE:CD1	2.67	0.47
1:B:436:LEU:O	1:B:438:ILE:HD12	2.15	0.47
1:B:877:ASN:O	1:B:881:LEU:HD23	2.13	0.47
1:B:886:ARG:HD3	1:B:891:TRP:CE3	2.50	0.47
1:B:891:TRP:CZ2	1:B:899:ASP:HA	2.50	0.47
1:B:1999:ARG:O	1:B:1999:ARG:CG	2.62	0.47
1:B:2327:GLY:HA2	1:B:2330:ARG:NH2	2.29	0.47
1:B:2355:ARG:NH2	1:B:2449:GLU:OE2	2.48	0.47
1:B:2872:GLN:O	1:B:2875:ALA:N	2.48	0.47
1:B:2904:LEU:O	1:B:2906:VAL:HG22	2.14	0.47
1:B:3448:SER:O	1:B:3452:LYS:NZ	2.37	0.47
1:D:2583:LEU:O	1:D:2586:VAL:HG12	2.15	0.47
1:D:2904:LEU:O	1:D:2906:VAL:HG22	2.14	0.47
1:D:3505:VAL:O	1:D:3511:VAL:HG21	2.15	0.47
1:D:3996:PHE:HD1	1:D:4016:LEU:HD11	1.79	0.47
1:D:4204:GLN:HB3	1:D:4245:MET:HG2	1.96	0.47
1:D:4655:PHE:CA	1:D:4796:MET:CE	2.93	0.47
1:C:39:ALA:O	1:C:111:HIS:NE2	2.47	0.47
1:C:436:LEU:O	1:C:438:ILE:HD12	2.15	0.47
1:C:495:ASN:OD1	1:C:553:ARG:NH1	2.48	0.47
1:C:884:LEU:O	1:C:888:GLU:OE1	2.32	0.47
1:C:886:ARG:HG3	1:C:891:TRP:HB2	1.96	0.47
1:C:2872:GLN:O	1:C:2875:ALA:N	2.48	0.47
1:C:3337:ARG:O	1:C:3340:VAL:HG22	2.15	0.47
1:C:3765:TYR:CE1	1:C:4753:HIS:ND1	2.83	0.47
1:C:3878:ASP:N	1:C:3878:ASP:OD1	2.48	0.47
1:C:3893:GLU:HA	1:C:3967:GLU:OE2	2.15	0.47
1:A:796:ARG:O	1:A:1622:GLU:O	2.32	0.47
1:A:2327:GLY:HA2	1:A:2330:ARG:NH2	2.29	0.47
1:A:2913:ALA:O	1:A:2917:ALA:N	2.48	0.47
1:B:3985:LEU:O	1:B:3989:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.13	0.47
1:D:309:THR:HG22	1:D:309:THR:O	2.14	0.47
1:D:722:TRP:CZ2	1:D:727:ALA:HB2	2.49	0.47
1:D:984:LEU:O	1:D:988:LEU:HD23	2.15	0.47
1:D:3878:ASP:N	1:D:3878:ASP:OD1	2.48	0.47
1:C:2199:ARG:NE	1:C:2246:ASN:OD1	2.37	0.47
1:C:2327:GLY:HA2	1:C:2330:ARG:NH2	2.29	0.47
1:C:2515:GLN:O	1:C:2519:LEU:HG	2.15	0.47
1:A:436:LEU:O	1:A:438:ILE:HD12	2.15	0.47
1:A:722:TRP:CZ2	1:A:727:ALA:HB2	2.49	0.47
1:A:1480:GLN:O	1:A:1480:GLN:HG2	2.15	0.47
1:A:1676:LEU:HB3	1:A:2167:ILE:HD12	1.96	0.47
1:A:3951:PHE:CE1	1:A:3999:MET:HE1	2.50	0.47
1:B:884:LEU:O	1:B:888:GLU:OE1	2.32	0.47
1:D:869:ARG:NH2	1:D:941:MET:HE1	2.29	0.47
1:D:3379:LEU:HD23	1:D:3382:GLU:OE2	2.15	0.47
1:C:796:ARG:O	1:C:1622:GLU:O	2.32	0.47
1:C:3105:LYS:O	1:C:3109:ASN:ND2	2.48	0.47
1:C:3445:TRP:O	1:C:3452:LYS:NZ	2.43	0.47
1:A:358:THR:HG1	1:A:383:HIS:HD1	1.57	0.47
1:A:880:GLU:O	1:A:884:LEU:HG	2.15	0.47
1:A:2199:ARG:NE	1:A:2246:ASN:OD1	2.37	0.47
1:A:4583:SER:OG	1:A:4585:SER:O	2.29	0.47
1:A:4673:ARG:O	1:A:4676:GLU:HG3	2.14	0.47
1:B:11:VAL:HG11	1:B:164:ARG:HD2	1.97	0.47
1:B:495:ASN:OD1	1:B:553:ARG:NH1	2.48	0.47
1:B:3105:LYS:O	1:B:3109:ASN:ND2	2.48	0.47
1:D:880:GLU:O	1:D:884:LEU:HG	2.15	0.47
1:D:1421:ARG:O	1:D:1570:LYS:NZ	2.33	0.47
1:D:1999:ARG:O	1:D:1999:ARG:CG	2.62	0.47
1:D:2515:GLN:O	1:D:2519:LEU:HG	2.15	0.47
1:D:3105:LYS:O	1:D:3109:ASN:ND2	2.48	0.47
1:D:3266:MET:SD	1:D:3266:MET:O	2.73	0.47
1:C:1032:LYS:C	1:C:1036:ARG:HH12	2.18	0.47
1:C:3445:TRP:NE1	1:C:3455:GLU:OE1	2.45	0.47
1:C:4182:GLU:OE1	1:C:4983:HIS:NE2	2.44	0.47
1:A:221:ARG:CZ	1:A:253:CYS:O	2.63	0.46
1:A:886:ARG:HG3	1:A:891:TRP:HB2	1.96	0.46
1:A:3893:GLU:HA	1:A:3967:GLU:OE2	2.15	0.46
1:B:1480:GLN:O	1:B:1480:GLN:HG2	2.15	0.46
1:B:1676:LEU:HB3	1:B:2167:ILE:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2693:GLN:OE1	1:B:2697:ARG:NH1	2.48	0.46
1:B:4677:LEU:HD23	1:B:4711:PHE:CE1	2.50	0.46
1:D:2006:ILE:O	1:D:2010:LEU:HD13	2.15	0.46
1:D:3528:THR:HG23	1:D:3573:MET:SD	2.55	0.46
1:C:3528:THR:HG23	1:C:3573:MET:SD	2.55	0.46
1:A:38:ALA:HB2	1:A:65:CYS:SG	2.55	0.46
1:A:3477:LYS:HZ3	1:B:1141:ARG:CB	2.28	0.46
1:A:3528:THR:HG23	1:A:3573:MET:SD	2.55	0.46
1:A:3573:MET:CE	1:A:3577:ARG:HH12	2.28	0.46
1:B:884:LEU:O	1:B:887:ILE:HB	2.15	0.46
1:B:2871:LEU:HD13	1:B:2874:MET:SD	2.54	0.46
1:D:884:LEU:O	1:D:888:GLU:OE1	2.32	0.46
1:D:2355:ARG:NH2	1:D:2449:GLU:OE2	2.48	0.46
1:D:2872:GLN:O	1:D:2875:ALA:N	2.48	0.46
1:C:11:VAL:HG11	1:C:164:ARG:HD2	1.97	0.46
1:C:38:ALA:HB2	1:C:65:CYS:SG	2.55	0.46
1:C:2871:LEU:HD13	1:C:2874:MET:SD	2.54	0.46
1:C:2913:ALA:O	1:C:2917:ALA:N	2.48	0.46
1:C:4677:LEU:HD23	1:C:4711:PHE:CE1	2.51	0.46
1:A:2355:ARG:NH2	1:A:2449:GLU:OE2	2.48	0.46
1:A:2583:LEU:O	1:A:2586:VAL:HG12	2.15	0.46
1:A:2693:GLN:OE1	1:A:2697:ARG:NH1	2.49	0.46
1:A:2904:LEU:O	1:A:2906:VAL:HG22	2.14	0.46
1:A:4677:LEU:HD23	1:A:4711:PHE:CE1	2.51	0.46
1:B:2861:ASP:OD1	1:B:2925:GLU:HG2	2.16	0.46
1:B:3390:GLY:O	1:B:3394:VAL:HG13	2.15	0.46
1:D:2913:ALA:O	1:D:2917:ALA:N	2.48	0.46
1:D:4749:GLU:O	1:D:4753:HIS:CD2	2.69	0.46
1:C:499:THR:HG23	1:C:502:HIS:H	1.81	0.46
1:C:3177:THR:O	1:C:3179:LYS:NZ	2.36	0.46
1:C:4655:PHE:CA	1:C:4796:MET:CE	2.93	0.46
1:A:213:TYR:HA	1:A:339:ILE:O	2.16	0.46
1:A:2006:ILE:O	1:A:2010:LEU:HD13	2.15	0.46
1:A:4934:GLY:HA2	1:D:4937:ILE:HG12	1.98	0.46
1:B:984:LEU:O	1:B:988:LEU:HD23	2.15	0.46
1:B:3445:TRP:NE1	1:B:3455:GLU:OE1	2.44	0.46
1:D:38:ALA:HB2	1:D:65:CYS:SG	2.55	0.46
1:D:221:ARG:CZ	1:D:253:CYS:O	2.63	0.46
1:D:3539:ARG:NH2	1:D:3548:GLU:OE2	2.38	0.46
1:C:1480:GLN:HG2	1:C:1480:GLN:O	2.15	0.46
1:C:3505:VAL:O	1:C:3511:VAL:HG21	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4732:PHE:O	1:C:4736:ARG:NH1	2.45	0.46
1:A:887:ILE:CD1	1:A:961:MET:HE3	2.44	0.46
1:A:3337:ARG:O	1:A:3340:VAL:HG22	2.14	0.46
1:A:4749:GLU:O	1:A:4753:HIS:CD2	2.69	0.46
1:B:1032:LYS:C	1:B:1036:ARG:HH12	2.18	0.46
1:B:2913:ALA:O	1:B:2917:ALA:N	2.48	0.46
1:D:759:ILE:HG23	1:D:759:ILE:O	2.16	0.46
1:D:1480:GLN:O	1:D:1480:GLN:HG2	2.15	0.46
1:D:4677:LEU:HD23	1:D:4711:PHE:CE1	2.51	0.46
1:C:213:TYR:HA	1:C:339:ILE:O	2.16	0.46
1:C:323:LEU:C	1:C:324:ASP:OD1	2.54	0.46
1:C:884:LEU:O	1:C:887:ILE:HB	2.15	0.46
1:C:1676:LEU:HB3	1:C:2167:ILE:HD12	1.96	0.46
1:A:3379:LEU:HD23	1:A:3382:GLU:OE2	2.15	0.46
1:A:3765:TYR:CE1	1:A:4753:HIS:ND1	2.83	0.46
1:A:4892:ARG:HD3	1:B:4918:ILE:HD13	1.98	0.46
1:B:213:TYR:HA	1:B:339:ILE:O	2.16	0.46
1:B:1036:ARG:HH11	1:B:1036:ARG:HD3	1.48	0.46
1:B:1808:ARG:HG2	1:B:1854:PHE:CE1	2.51	0.46
1:B:2373:GLY:O	1:C:130:LYS:NZ	2.45	0.46
1:D:213:TYR:HA	1:D:339:ILE:O	2.16	0.46
1:D:2327:GLY:HA2	1:D:2330:ARG:NH2	2.29	0.46
1:D:2693:GLN:OE1	1:D:2697:ARG:NH1	2.49	0.46
1:C:619:ASP:OD2	1:C:1680:ARG:NH2	2.47	0.46
1:C:984:LEU:O	1:C:988:LEU:HD23	2.15	0.46
1:A:3573:MET:HB3	1:A:3577:ARG:NH1	2.31	0.46
1:A:4000:MET:HE1	1:A:4061:PHE:CB	2.46	0.46
1:A:4749:GLU:OE2	1:A:4750:ILE:HG23	2.16	0.46
1:A:4832:HIS:ND1	1:A:4833:ASN:OD1	2.45	0.46
1:B:221:ARG:CZ	1:B:253:CYS:O	2.63	0.46
1:B:880:GLU:O	1:B:884:LEU:HG	2.14	0.46
1:B:2313:LEU:HD12	1:B:2318:TYR:CD1	2.51	0.46
1:B:3893:GLU:HA	1:B:3967:GLU:OE2	2.15	0.46
1:B:4060:LYS:O	1:B:4063:ASP:OD1	2.34	0.46
1:D:323:LEU:C	1:D:324:ASP:OD1	2.54	0.46
1:D:887:ILE:HD11	1:D:961:MET:CE	2.45	0.46
1:D:2784:GLU:OE2	1:D:2785:LEU:HD12	2.16	0.46
1:C:221:ARG:CZ	1:C:253:CYS:O	2.63	0.46
1:C:3106:MET:O	1:C:3110:LEU:HD13	2.16	0.46
1:A:495:ASN:OD1	1:A:553:ARG:NH1	2.48	0.46
1:A:2538:THR:O	1:A:2542:SER:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2872:GLN:O	1:A:2875:ALA:N	2.48	0.46
1:B:421:PHE:CD2	1:B:421:PHE:O	2.69	0.46
1:B:875:ALA:CB	1:B:922:LEU:HD23	2.46	0.46
1:B:2771:ILE:HG22	1:C:1506:GLN:OE1	2.15	0.46
1:B:3505:VAL:O	1:B:3511:VAL:HG21	2.15	0.46
1:B:3573:MET:HB3	1:B:3577:ARG:NH1	2.31	0.46
1:D:421:PHE:O	1:D:421:PHE:CD2	2.69	0.46
1:D:2937:VAL:O	1:D:2937:VAL:HG13	2.16	0.46
1:D:3390:GLY:O	1:D:3394:VAL:HG13	2.15	0.46
1:C:14:LEU:HD13	1:C:202:MET:SD	2.56	0.46
1:C:421:PHE:CD2	1:C:421:PHE:O	2.69	0.46
1:C:880:GLU:O	1:C:884:LEU:HG	2.14	0.46
1:C:887:ILE:HD11	1:C:961:MET:CE	2.45	0.46
1:C:3266:MET:SD	1:C:3266:MET:O	2.74	0.46
1:C:3300:ALA:HB3	1:C:3301:PRO:CD	2.39	0.46
1:A:499:THR:HG23	1:A:502:HIS:H	1.81	0.46
1:A:875:ALA:CB	1:A:922:LEU:HD23	2.46	0.46
1:A:884:LEU:O	1:A:887:ILE:HB	2.15	0.46
1:A:3100:SER:O	1:A:3104:GLU:OE1	2.34	0.46
1:A:4242:ILE:HB	6:A:5304:IBM:H132	1.98	0.46
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.98	0.46
1:B:2138:LEU:O	1:B:2141:ALA:N	2.45	0.46
1:B:2949:SER:OG	1:B:2952:GLU:OE1	2.25	0.46
1:B:3100:SER:O	1:B:3104:GLU:OE1	2.34	0.46
1:B:4655:PHE:CA	1:B:4796:MET:CE	2.93	0.46
1:B:4673:ARG:O	1:B:4676:GLU:HG3	2.14	0.46
1:D:650:VAL:HA	1:D:658:GLN:NE2	2.31	0.46
1:D:891:TRP:HZ2	1:D:899:ASP:HA	1.81	0.46
1:D:3106:MET:O	1:D:3110:LEU:HD13	2.16	0.46
1:C:211:GLU:O	1:C:340:LYS:NZ	2.49	0.46
1:C:3390:GLY:O	1:C:3394:VAL:HG13	2.15	0.46
1:C:3573:MET:HB3	1:C:3577:ARG:NH1	2.31	0.46
1:C:4749:GLU:O	1:C:4753:HIS:CD2	2.69	0.46
1:A:11:VAL:HG11	1:A:164:ARG:HD2	1.97	0.46
1:A:759:ILE:O	1:A:759:ILE:HG23	2.16	0.46
1:A:984:LEU:O	1:A:988:LEU:HD23	2.15	0.46
1:A:4060:LYS:O	1:A:4063:ASP:OD1	2.34	0.46
1:A:4732:PHE:O	1:A:4736:ARG:NH1	2.45	0.46
1:B:384:MET:HG3	1:B:385:ASP:N	2.31	0.46
1:B:553:ARG:NH2	1:B:555:GLU:OE2	2.49	0.46
1:B:952:LYS:HD3	1:B:968:ALA:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3940:LYS:O	1:B:4002:LYS:NZ	2.29	0.46
1:B:4749:GLU:OE2	1:B:4750:ILE:HG23	2.16	0.46
1:D:436:LEU:O	1:D:438:ILE:HD12	2.15	0.46
1:D:884:LEU:O	1:D:887:ILE:HB	2.15	0.46
1:D:3573:MET:CE	1:D:3577:ARG:HH12	2.28	0.46
1:D:3573:MET:HB3	1:D:3577:ARG:NH1	2.31	0.46
1:D:3999:MET:HE3	1:D:3999:MET:HB3	1.80	0.46
1:C:2233:CYS:HB3	1:C:2237:CYS:HB3	1.66	0.46
1:C:2784:GLU:OE2	1:C:2785:LEU:HD12	2.16	0.46
1:C:4242:ILE:HB	6:C:5304:IBM:H132	1.98	0.46
1:C:4749:GLU:OE2	1:C:4750:ILE:HG23	2.16	0.46
1:A:650:VAL:HA	1:A:658:GLN:NE2	2.31	0.45
1:A:1141:ARG:CB	1:D:3477:LYS:HZ3	2.29	0.45
1:A:3266:MET:SD	1:A:3266:MET:O	2.74	0.45
1:A:4944:ARG:NE	1:B:4938:ASP:OD1	2.48	0.45
1:B:14:LEU:HD13	1:B:202:MET:SD	2.56	0.45
1:B:421:PHE:HE2	1:B:507:ALA:HB2	1.79	0.45
1:B:1979:LEU:HA	1:B:1982:ARG:NH2	2.31	0.45
1:B:2736:ASP:OD1	1:B:2736:ASP:O	2.35	0.45
1:B:2937:VAL:O	1:B:2937:VAL:HG13	2.16	0.45
1:B:3500:GLY:O	1:B:3504:SER:OG	2.33	0.45
1:B:4826:ILE:O	1:B:4829:SER:OG	2.25	0.45
1:D:11:VAL:HG11	1:D:164:ARG:HD2	1.97	0.45
1:D:14:LEU:HD13	1:D:202:MET:SD	2.56	0.45
1:D:619:ASP:OD2	1:D:1680:ARG:NH2	2.47	0.45
1:D:2313:LEU:HD12	1:D:2318:TYR:CD1	2.51	0.45
1:D:4242:ILE:HB	6:D:5304:IBM:H132	1.98	0.45
1:D:4794:TRP:O	1:D:4798:MET:HG2	2.16	0.45
1:C:759:ILE:HG23	1:C:759:ILE:O	2.16	0.45
1:C:891:TRP:HZ2	1:C:899:ASP:HA	1.81	0.45
1:C:2736:ASP:OD1	1:C:2736:ASP:O	2.34	0.45
1:A:211:GLU:O	1:A:340:LYS:NZ	2.49	0.45
1:A:952:LYS:HD3	1:A:968:ALA:HB3	1.98	0.45
1:A:2135:LEU:HD12	1:A:3658:LYS:HZ3	1.79	0.45
1:A:2373:GLY:O	1:B:130:LYS:NZ	2.41	0.45
1:B:1497:GLY:O	1:B:1501:VAL:HG13	2.16	0.45
1:B:2946:LEU:O	1:B:2946:LEU:CD2	2.62	0.45
1:B:3266:MET:SD	1:B:3266:MET:O	2.74	0.45
1:B:3878:ASP:OD1	1:B:3878:ASP:N	2.48	0.45
1:B:4242:ILE:HB	6:B:5304:IBM:H132	1.98	0.45
1:D:887:ILE:CD1	1:D:961:MET:CE	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1979:LEU:HA	1:D:1982:ARG:NH2	2.31	0.45
1:D:4911:LEU:O	1:D:4914:VAL:HG22	2.16	0.45
1:C:1979:LEU:HA	1:C:1982:ARG:NH2	2.31	0.45
1:C:2313:LEU:HD12	1:C:2318:TYR:CD1	2.51	0.45
1:C:2693:GLN:OE1	1:C:2697:ARG:NH1	2.49	0.45
1:C:3500:GLY:O	1:C:3504:SER:OG	2.33	0.45
1:C:4545:GLU:OE2	1:C:4548:ARG:NH2	2.39	0.45
1:C:4794:TRP:O	1:C:4798:MET:HG2	2.16	0.45
1:C:4998:LYS:HB3	1:C:5003:HIS:CE1	2.45	0.45
1:A:323:LEU:C	1:A:324:ASP:OD1	2.54	0.45
1:A:574:VAL:HA	1:A:577:ILE:HG12	1.99	0.45
1:A:1497:GLY:O	1:A:1501:VAL:HG13	2.16	0.45
1:A:2736:ASP:O	1:A:2736:ASP:OD1	2.34	0.45
1:A:2861:ASP:OD1	1:A:2925:GLU:HG2	2.16	0.45
1:A:2937:VAL:O	1:A:2937:VAL:HG13	2.16	0.45
1:A:3207:GLU:OE1	1:A:3280:TYR:OH	2.31	0.45
1:A:4710:SER:O	1:A:4713:SER:OG	2.25	0.45
1:B:211:GLU:O	1:B:340:LYS:NZ	2.49	0.45
1:B:897:ARG:HH22	1:B:906:CYS:HG	1.63	0.45
1:B:1965:TYR:CE2	1:B:1969:LEU:HD11	2.52	0.45
1:B:3573:MET:CE	1:B:3577:ARG:HH12	2.28	0.45
1:B:4705:VAL:HG13	1:B:4711:PHE:CD1	2.51	0.45
1:B:4832:HIS:ND1	1:B:4833:ASN:OD1	2.45	0.45
1:D:495:ASN:OD1	1:D:553:ARG:NH1	2.48	0.45
1:D:2233:CYS:HB3	1:D:2237:CYS:HB3	1.67	0.45
1:D:3100:SER:O	1:D:3104:GLU:OE1	2.34	0.45
1:D:4749:GLU:OE2	1:D:4750:ILE:HG23	2.16	0.45
1:C:4095:LYS:O	1:C:4098:ASP:OD1	2.35	0.45
1:A:14:LEU:HD13	1:A:202:MET:SD	2.56	0.45
1:A:553:ARG:NH2	1:A:555:GLU:OE2	2.49	0.45
1:A:891:TRP:HZ2	1:A:899:ASP:HA	1.81	0.45
1:A:2313:LEU:HD12	1:A:2318:TYR:CD1	2.51	0.45
1:A:2340:PHE:CG	1:A:2435:ARG:HD3	2.51	0.45
1:A:3535:LEU:HD11	1:A:3559:LEU:HD22	1.99	0.45
1:A:4794:TRP:O	1:A:4798:MET:HG2	2.16	0.45
1:B:1105:ALA:HB2	1:B:1191:VAL:HG11	1.98	0.45
1:B:4794:TRP:O	1:B:4798:MET:HG2	2.16	0.45
1:D:384:MET:HG3	1:D:385:ASP:N	2.31	0.45
1:D:952:LYS:HD3	1:D:968:ALA:HB3	1.98	0.45
1:D:1497:GLY:O	1:D:1501:VAL:HG13	2.16	0.45
1:D:2340:PHE:CG	1:D:2435:ARG:HD3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3535:LEU:HD11	1:D:3559:LEU:HD22	1.99	0.45
1:D:4658:ILE:HD13	1:D:4792:LEU:HB3	1.98	0.45
1:C:2430:ILE:HG13	1:C:2502:MET:HE1	1.97	0.45
1:C:2725:LYS:NZ	1:C:2734:ASN:O	2.49	0.45
1:A:421:PHE:CD2	1:A:421:PHE:O	2.69	0.45
1:A:2368:LEU:N	1:A:2368:LEU:HD12	2.32	0.45
1:A:4095:LYS:O	1:A:4098:ASP:OD1	2.35	0.45
1:B:336:PRO:HA	1:B:337:PRO:HD3	1.87	0.45
1:B:2014:ASP:O	1:B:2015:GLU:HB3	2.17	0.45
1:B:2233:CYS:HB3	1:B:2237:CYS:HB3	1.67	0.45
1:B:3924:LEU:O	1:B:3927:GLN:HG3	2.17	0.45
1:D:211:GLU:O	1:D:340:LYS:NZ	2.49	0.45
1:D:707:VAL:HG12	1:D:715:GLY:HA3	1.99	0.45
1:D:2725:LYS:NZ	1:D:2734:ASN:O	2.49	0.45
1:D:4060:LYS:O	1:D:4063:ASP:OD1	2.34	0.45
1:D:4705:VAL:HG13	1:D:4711:PHE:CD1	2.52	0.45
1:C:553:ARG:NH2	1:C:555:GLU:OE2	2.49	0.45
1:C:707:VAL:HG12	1:C:715:GLY:HA3	1.99	0.45
1:C:887:ILE:CD1	1:C:961:MET:CE	2.95	0.45
1:C:1280:GLN:O	1:C:1281:ASN:OD1	2.35	0.45
1:C:1965:TYR:CE2	1:C:1969:LEU:HD11	2.52	0.45
1:C:2937:VAL:HG13	1:C:2937:VAL:O	2.16	0.45
1:C:3207:GLU:OE1	1:C:3280:TYR:OH	2.31	0.45
1:C:3539:ARG:NH2	1:C:3548:GLU:OE2	2.38	0.45
1:A:565:TYR:O	1:A:569:ILE:HG12	2.17	0.45
1:A:2006:ILE:HD11	1:A:3641:LEU:HD11	1.98	0.45
1:A:2223:ILE:HG23	1:A:2223:ILE:O	2.17	0.45
1:B:323:LEU:C	1:B:324:ASP:OD1	2.54	0.45
1:B:499:THR:HG23	1:B:502:HIS:H	1.81	0.45
1:B:931:THR:O	1:B:935:LEU:HG	2.17	0.45
1:B:1996:ARG:NE	1:B:1999:ARG:NH1	2.61	0.45
1:D:730:VAL:HG21	1:D:764:VAL:HG12	1.99	0.45
1:D:931:THR:O	1:D:935:LEU:HG	2.17	0.45
1:D:1808:ARG:HG2	1:D:1854:PHE:CE1	2.51	0.45
1:D:2430:ILE:HG13	1:D:2502:MET:HE1	1.97	0.45
1:D:3924:LEU:O	1:D:3927:GLN:HG3	2.17	0.45
1:D:4000:MET:HE1	1:D:4061:PHE:CB	2.46	0.45
1:C:647:ASN:ND2	1:C:820:ARG:O	2.44	0.45
1:C:650:VAL:HA	1:C:658:GLN:NE2	2.31	0.45
1:C:857:ASP:OD2	1:C:858:THR:N	2.50	0.45
1:C:869:ARG:NH2	1:C:941:MET:HE1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:875:ALA:CB	1:C:922:LEU:HD23	2.46	0.45
1:C:1497:GLY:O	1:C:1501:VAL:HG13	2.16	0.45
1:C:2006:ILE:O	1:C:2010:LEU:HD13	2.15	0.45
1:C:2006:ILE:HD11	1:C:3641:LEU:HD11	1.98	0.45
1:C:2340:PHE:CG	1:C:2435:ARG:HD3	2.51	0.45
1:C:3971:GLY:N	1:C:3972:PRO:HA	2.32	0.45
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.98	0.45
1:C:4705:VAL:HG13	1:C:4711:PHE:CD1	2.51	0.45
1:A:612:VAL:HG13	1:A:2167:ILE:O	2.17	0.45
1:A:887:ILE:CD1	1:A:961:MET:CE	2.95	0.45
1:A:941:MET:SD	1:A:944:GLU:HA	2.57	0.45
1:A:1032:LYS:O	1:A:1036:ARG:NH1	2.50	0.45
1:A:1808:ARG:HG2	1:A:1854:PHE:CE1	2.51	0.45
1:A:1979:LEU:HA	1:A:1982:ARG:NH2	2.31	0.45
1:A:3434:LEU:HD23	1:A:3517:MET:CE	2.47	0.45
1:A:3985:LEU:HD11	1:A:4026:MET:HE1	1.99	0.45
1:A:4911:LEU:O	1:A:4914:VAL:HG22	2.16	0.45
1:B:67:PHE:HB3	1:B:109:LEU:HD22	1.98	0.45
1:B:759:ILE:HG23	1:B:759:ILE:O	2.16	0.45
1:B:857:ASP:OD2	1:B:858:THR:N	2.50	0.45
1:B:891:TRP:HZ2	1:B:899:ASP:HA	1.81	0.45
1:B:1280:GLN:O	1:B:1281:ASN:OD1	2.35	0.45
1:B:3106:MET:O	1:B:3110:LEU:HD13	2.16	0.45
1:B:3229:ILE:HG13	1:B:3230:LEU:N	2.32	0.45
1:B:3300:ALA:CB	1:B:3301:PRO:HD3	2.40	0.45
1:B:3434:LEU:HD23	1:B:3517:MET:CE	2.47	0.45
1:B:4658:ILE:HD13	1:B:4792:LEU:HB3	1.98	0.45
1:D:612:VAL:HG13	1:D:2167:ILE:O	2.17	0.45
1:D:857:ASP:OD2	1:D:858:THR:N	2.50	0.45
1:D:1280:GLN:O	1:D:1281:ASN:OD1	2.35	0.45
1:D:2014:ASP:O	1:D:2015:GLU:HB3	2.17	0.45
1:D:2736:ASP:O	1:D:2736:ASP:OD1	2.34	0.45
1:D:2879:ALA:HB1	1:D:2908:TYR:OH	2.17	0.45
1:D:3229:ILE:HG13	1:D:3230:LEU:N	2.32	0.45
1:D:3300:ALA:HB3	1:D:3301:PRO:CD	2.39	0.45
1:C:421:PHE:HD1	1:C:421:PHE:H	1.64	0.45
1:C:1032:LYS:O	1:C:1036:ARG:NH1	2.50	0.45
1:C:2861:ASP:OD1	1:C:2925:GLU:HG2	2.16	0.45
1:C:3535:LEU:HD11	1:C:3559:LEU:HD22	1.99	0.45
1:C:4911:LEU:O	1:C:4914:VAL:HG22	2.16	0.45
1:A:384:MET:HG3	1:A:385:ASP:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1506:GLN:OE1	1:D:2771:ILE:HG22	2.17	0.45
1:A:2751:LEU:HD23	1:A:2755:ILE:CD1	2.47	0.45
1:A:3106:MET:O	1:A:3110:LEU:HD13	2.16	0.45
1:A:3390:GLY:O	1:A:3394:VAL:HG13	2.15	0.45
1:A:3445:TRP:NE1	1:A:3455:GLU:OE1	2.45	0.45
2:E:90:ILE:HG22	2:E:91:ILE:HG13	1.99	0.45
1:B:612:VAL:HG13	1:B:2167:ILE:O	2.17	0.45
1:B:3971:GLY:N	1:B:3972:PRO:HA	2.32	0.45
1:B:4095:LYS:O	1:B:4098:ASP:OD1	2.35	0.45
1:D:426:ARG:NH1	1:D:504:ALA:O	2.50	0.45
1:D:499:THR:HG23	1:D:502:HIS:H	1.81	0.45
1:D:875:ALA:CB	1:D:922:LEU:HD23	2.46	0.45
1:D:941:MET:SD	1:D:944:GLU:HA	2.57	0.45
1:D:1105:ALA:HB2	1:D:1191:VAL:HG11	1.98	0.45
1:D:1965:TYR:CE2	1:D:1969:LEU:HD11	2.52	0.45
1:D:2223:ILE:HG23	1:D:2223:ILE:O	2.17	0.45
1:D:2368:LEU:HD12	1:D:2368:LEU:N	2.32	0.45
1:D:2861:ASP:OD1	1:D:2925:GLU:HG2	2.16	0.45
1:D:3624:LEU:O	1:D:3628:ARG:HG2	2.17	0.45
1:D:3971:GLY:N	1:D:3972:PRO:HA	2.32	0.45
1:D:4095:LYS:O	1:D:4098:ASP:OD1	2.35	0.45
1:D:4826:ILE:O	1:D:4829:SER:OG	2.25	0.45
1:C:1808:ARG:HG2	1:C:1854:PHE:CE1	2.51	0.45
1:C:3573:MET:CE	1:C:3577:ARG:HH12	2.28	0.45
1:C:4060:LYS:O	1:C:4063:ASP:OD1	2.34	0.45
1:A:659:TYR:O	1:A:662:TRP:NE1	2.47	0.45
1:A:887:ILE:HD11	1:A:961:MET:CE	2.45	0.45
1:A:2226:PRO:HA	1:A:2267:MET:HE1	1.99	0.45
1:A:3791:GLY:O	1:A:3794:VAL:HG12	2.17	0.45
1:A:4655:PHE:CA	1:A:4796:MET:CE	2.93	0.45
2:F:54:GLU:O	1:B:1785:ALA:N	2.36	0.45
1:B:659:TYR:O	1:B:662:TRP:NE1	2.47	0.45
1:B:823:LEU:HD13	1:B:1626:TRP:CE3	2.52	0.45
1:B:1032:LYS:O	1:B:1036:ARG:NH1	2.50	0.45
1:B:2006:ILE:O	1:B:2010:LEU:HD13	2.15	0.45
1:B:2340:PHE:CG	1:B:2435:ARG:HD3	2.51	0.45
1:B:2879:ALA:HB1	1:B:2908:TYR:OH	2.17	0.45
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.98	0.45
1:B:4911:LEU:O	1:B:4914:VAL:HG22	2.16	0.45
1:D:877:ASN:HA	1:D:880:GLU:HG2	1.99	0.45
1:D:2234:ARG:O	1:D:2238:TYR:HD2	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3292:PRO:O	1:D:3294:PRO:HD3	2.17	0.45
1:C:384:MET:HG3	1:C:385:ASP:N	2.31	0.45
1:C:2000:SER:O	1:C:2005:GLN:NE2	2.41	0.45
1:C:2135:LEU:HD12	1:C:3658:LYS:HZ3	1.80	0.45
1:C:3199:ALA:O	1:C:3283:ARG:NE	2.40	0.45
1:C:3434:LEU:HD23	1:C:3517:MET:CE	2.47	0.45
1:C:3791:GLY:O	1:C:3794:VAL:HG12	2.17	0.45
1:C:4832:HIS:ND1	1:C:4833:ASN:OD1	2.45	0.45
1:A:823:LEU:HD13	1:A:1626:TRP:CE3	2.52	0.45
1:A:3229:ILE:HG13	1:A:3230:LEU:N	2.32	0.45
1:A:3300:ALA:CB	1:A:3301:PRO:HD3	2.40	0.45
1:B:650:VAL:HA	1:B:658:GLN:NE2	2.31	0.45
1:B:4749:GLU:O	1:B:4753:HIS:CD2	2.69	0.45
1:D:553:ARG:NH2	1:D:555:GLU:OE2	2.49	0.45
1:D:2309:SER:HB2	1:D:2321:ILE:O	2.17	0.45
1:D:3359:ILE:HD13	1:D:3434:LEU:HD13	1.99	0.45
1:D:3500:GLY:O	1:D:3504:SER:OG	2.33	0.45
1:D:3540:TYR:HB3	1:D:3604:TYR:CD2	2.52	0.45
1:C:725:HIS:ND1	1:C:725:HIS:O	2.50	0.45
1:A:67:PHE:HB3	1:A:109:LEU:HD22	1.98	0.44
1:A:234:SER:OG	1:A:240:ASP:OD2	2.29	0.44
1:A:421:PHE:HD1	1:A:421:PHE:H	1.64	0.44
1:A:1280:GLN:O	1:A:1281:ASN:OD1	2.35	0.44
1:A:1287:LEU:HD11	1:A:1599:MET:HE3	1.98	0.44
1:A:3289:PRO:O	1:A:3290:GLU:HB2	2.18	0.44
1:A:3359:ILE:HD13	1:A:3434:LEU:HD13	1.99	0.44
1:B:426:ARG:NH1	1:B:504:ALA:O	2.50	0.44
1:B:565:TYR:O	1:B:569:ILE:HG12	2.17	0.44
1:B:2784:GLU:OE2	1:B:2785:LEU:HD12	2.16	0.44
1:B:3292:PRO:O	1:B:3294:PRO:HD3	2.17	0.44
1:B:3535:LEU:HD11	1:B:3559:LEU:HD22	1.99	0.44
1:B:3868:ARG:HH12	1:B:3870:ASN:HB3	1.82	0.44
1:B:4944:ARG:NE	1:C:4938:ASP:OD1	2.47	0.44
1:D:823:LEU:HD13	1:D:1626:TRP:CE3	2.52	0.44
1:D:2738:ARG:HG2	1:D:2738:ARG:O	2.17	0.44
1:D:2821:TRP:CH2	1:D:2877:GLN:OE1	2.70	0.44
1:D:3632:VAL:O	1:D:3636:PHE:HD2	2.00	0.44
1:D:4732:PHE:O	1:D:4736:ARG:NH1	2.45	0.44
1:C:2014:ASP:O	1:C:2015:GLU:HB3	2.17	0.44
1:C:2309:SER:HB2	1:C:2321:ILE:O	2.17	0.44
1:C:3229:ILE:HG13	1:C:3230:LEU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3359:ILE:HB	1:C:3360:PRO:HD3	2.00	0.44
1:C:3624:LEU:O	1:C:3628:ARG:HG2	2.17	0.44
1:A:257:ARG:O	1:A:284:HIS:NE2	2.43	0.44
1:A:2738:ARG:O	1:A:2738:ARG:HG2	2.17	0.44
1:A:2784:GLU:OE2	1:A:2785:LEU:HD12	2.16	0.44
1:A:4705:VAL:HG13	1:A:4711:PHE:CD1	2.52	0.44
1:B:1999:ARG:HH11	1:B:1999:ARG:HB3	1.83	0.44
1:B:2368:LEU:HD12	1:B:2368:LEU:N	2.32	0.44
1:B:3624:LEU:O	1:B:3628:ARG:HG2	2.17	0.44
1:B:3817:LEU:HD21	1:B:3898:ASP:HB3	1.99	0.44
1:C:2004:GLU:OE1	1:C:2004:GLU:N	2.51	0.44
1:C:2784:GLU:OE2	1:C:2785:LEU:CD1	2.65	0.44
1:C:2879:ALA:HB1	1:C:2908:TYR:OH	2.17	0.44
1:C:3924:LEU:O	1:C:3927:GLN:HG3	2.17	0.44
1:A:426:ARG:NH1	1:A:504:ALA:O	2.50	0.44
1:A:730:VAL:HG21	1:A:764:VAL:HG12	1.98	0.44
1:A:1105:ALA:HB2	1:A:1191:VAL:HG11	1.98	0.44
1:A:2309:SER:HB2	1:A:2321:ILE:O	2.17	0.44
1:A:2821:TRP:CH2	1:A:2877:GLN:OE1	2.70	0.44
1:A:2946:LEU:O	1:A:2946:LEU:CD2	2.61	0.44
1:A:3359:ILE:HB	1:A:3360:PRO:HD3	2.00	0.44
1:A:3868:ARG:HH12	1:A:3870:ASN:HB3	1.82	0.44
1:A:3924:LEU:O	1:A:3927:GLN:HG3	2.17	0.44
1:B:384:MET:HE1	1:C:166:GLY:O	2.17	0.44
1:B:707:VAL:HG12	1:B:715:GLY:HA3	1.99	0.44
1:B:2751:LEU:HD23	1:B:2755:ILE:CD1	2.47	0.44
1:B:2784:GLU:OE2	1:B:2785:LEU:CD1	2.65	0.44
1:B:2821:TRP:CH2	1:B:2877:GLN:OE1	2.70	0.44
1:B:3589:PRO:O	1:B:3593:VAL:HG13	2.18	0.44
1:D:725:HIS:ND1	1:D:725:HIS:O	2.50	0.44
1:D:797:HIS:CG	1:D:821:LEU:HD23	2.52	0.44
1:D:3434:LEU:HD23	1:D:3517:MET:CE	2.47	0.44
1:D:4943:LEU:O	1:D:4947:GLN:HG2	2.18	0.44
1:C:612:VAL:HG13	1:C:2167:ILE:O	2.17	0.44
1:C:1105:ALA:HB2	1:C:1191:VAL:HG11	1.98	0.44
1:C:1126:GLY:O	1:C:1142:PRO:HA	2.18	0.44
1:C:1999:ARG:HH11	1:C:1999:ARG:HB3	1.83	0.44
1:C:3100:SER:O	1:C:3104:GLU:OE1	2.34	0.44
1:C:3292:PRO:O	1:C:3294:PRO:HD3	2.17	0.44
1:C:3632:VAL:O	1:C:3636:PHE:HD2	2.00	0.44
1:A:725:HIS:ND1	1:A:725:HIS:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:857:ASP:OD2	1:A:858:THR:N	2.50	0.44
1:A:931:THR:O	1:A:935:LEU:HG	2.17	0.44
1:A:2004:GLU:N	1:A:2004:GLU:OE1	2.51	0.44
1:A:2785:LEU:O	1:A:2786:LYS:HG2	2.18	0.44
1:A:4658:ILE:HD13	1:A:4792:LEU:HB3	1.98	0.44
1:A:4937:ILE:HG12	1:B:4934:GLY:HA2	2.00	0.44
1:B:421:PHE:H	1:B:421:PHE:HD1	1.64	0.44
1:B:869:ARG:NH2	1:B:941:MET:HE1	2.32	0.44
1:B:887:ILE:CD1	1:B:961:MET:CE	2.95	0.44
1:B:941:MET:SD	1:B:944:GLU:HA	2.57	0.44
1:B:1126:GLY:O	1:B:1142:PRO:HA	2.18	0.44
1:B:1435:TYR:OH	1:B:1451:GLY:O	2.35	0.44
1:B:2309:SER:HB2	1:B:2321:ILE:O	2.17	0.44
1:B:3371:LYS:HE2	1:B:3371:LYS:HA	2.00	0.44
1:B:3527:PRO:HD2	1:B:3573:MET:SD	2.57	0.44
1:D:2751:LEU:CD1	1:D:2817:ILE:CD1	2.96	0.44
1:D:2785:LEU:O	1:D:2786:LYS:HG2	2.18	0.44
1:D:3359:ILE:HB	1:D:3360:PRO:HD3	2.00	0.44
1:D:3527:PRO:HD2	1:D:3573:MET:SD	2.57	0.44
1:D:3559:LEU:HD23	1:D:3559:LEU:O	2.18	0.44
1:D:3589:PRO:O	1:D:3593:VAL:HG13	2.18	0.44
1:D:3716:LEU:HD21	1:D:3782:MET:HE3	1.99	0.44
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.98	0.44
1:D:4983:HIS:O	3:D:5301:ATP:N6	2.51	0.44
1:C:823:LEU:HD13	1:C:1626:TRP:CE3	2.52	0.44
1:C:897:ARG:HG3	1:C:905:PRO:HD2	2.00	0.44
1:C:952:LYS:HD3	1:C:968:ALA:HB3	1.98	0.44
1:C:1287:LEU:HD11	1:C:1599:MET:HE3	1.98	0.44
1:C:2821:TRP:CH2	1:C:2877:GLN:OE1	2.70	0.44
1:C:3589:PRO:O	1:C:3593:VAL:HG13	2.18	0.44
1:A:2014:ASP:O	1:A:2015:GLU:HB3	2.17	0.44
1:A:2784:GLU:OE2	1:A:2785:LEU:CD1	2.65	0.44
1:A:3500:GLY:O	1:A:3504:SER:OG	2.33	0.44
1:A:3559:LEU:HD23	1:A:3559:LEU:O	2.18	0.44
1:A:4943:LEU:O	1:A:4947:GLN:HG2	2.18	0.44
1:B:262:LEU:HD12	1:B:274:LEU:HD11	2.00	0.44
1:B:646:PRO:HB2	1:B:648:ILE:CD1	2.48	0.44
1:B:725:HIS:O	1:B:725:HIS:ND1	2.50	0.44
1:B:1115:LEU:HD12	1:B:1193:SER:HB3	2.00	0.44
1:B:3359:ILE:HB	1:B:3360:PRO:HD3	2.00	0.44
1:B:4748:LEU:O	1:B:4751:THR:OG1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4852:THR:HG23	1:B:4882:CYS:HB3	1.99	0.44
1:B:4943:LEU:O	1:B:4947:GLN:HG2	2.18	0.44
1:D:2703:LEU:N	1:D:2703:LEU:HD12	2.33	0.44
1:D:3199:ALA:O	1:D:3283:ARG:NE	2.40	0.44
1:C:67:PHE:HB3	1:C:109:LEU:HD22	1.98	0.44
1:C:552:ASP:OD1	1:C:553:ARG:N	2.51	0.44
1:C:931:THR:O	1:C:935:LEU:HG	2.17	0.44
1:C:941:MET:SD	1:C:944:GLU:HA	2.57	0.44
1:A:897:ARG:HG3	1:A:905:PRO:HD2	2.00	0.44
1:A:1965:TYR:CE2	1:A:1969:LEU:HD11	2.52	0.44
1:A:3589:PRO:O	1:A:3593:VAL:HG13	2.18	0.44
1:A:3971:GLY:N	1:A:3972:PRO:HA	2.32	0.44
1:B:897:ARG:HG3	1:B:905:PRO:HD2	2.00	0.44
1:B:1419:ASP:CG	1:B:1420:ASN:H	2.21	0.44
1:B:2006:ILE:HD11	1:B:3641:LEU:HD11	1.99	0.44
1:B:2527:LEU:O	1:B:2531:ARG:HG3	2.18	0.44
1:B:2785:LEU:O	1:B:2786:LYS:HG2	2.18	0.44
1:B:3289:PRO:O	1:B:3290:GLU:HB2	2.18	0.44
1:D:67:PHE:HB3	1:D:109:LEU:HD22	1.98	0.44
1:D:897:ARG:HG3	1:D:905:PRO:HD2	2.00	0.44
1:D:1435:TYR:OH	1:D:1451:GLY:O	2.35	0.44
1:D:2336:ARG:HG2	1:D:2435:ARG:HD2	2.00	0.44
1:D:3791:GLY:O	1:D:3794:VAL:HG12	2.17	0.44
1:D:3817:LEU:HD21	1:D:3898:ASP:HB3	1.99	0.44
1:D:4852:THR:HG23	1:D:4882:CYS:HB3	1.99	0.44
1:C:262:LEU:HD12	1:C:274:LEU:HD11	2.00	0.44
1:C:426:ARG:NH1	1:C:504:ALA:O	2.50	0.44
1:C:565:TYR:O	1:C:569:ILE:HG12	2.17	0.44
1:C:646:PRO:HB2	1:C:648:ILE:CD1	2.48	0.44
1:C:2234:ARG:O	1:C:2238:TYR:HD2	2.00	0.44
1:C:3127:GLN:O	1:C:3130:THR:HG22	2.18	0.44
1:C:4943:LEU:O	1:C:4947:GLN:HG2	2.18	0.44
1:A:262:LEU:HD12	1:A:274:LEU:HD11	2.00	0.44
1:A:2703:LEU:N	1:A:2703:LEU:HD12	2.32	0.44
1:A:2755:ILE:HD13	1:A:2810:LYS:HG2	2.00	0.44
1:B:552:ASP:OD1	1:B:553:ARG:N	2.51	0.44
1:B:1287:LEU:HD11	1:B:1599:MET:HE3	1.99	0.44
1:B:2234:ARG:O	1:B:2238:TYR:HD2	2.00	0.44
1:B:3199:ALA:O	1:B:3283:ARG:NE	2.40	0.44
1:D:294:THR:O	1:D:298:GLY:N	2.51	0.44
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:877:ASN:HA	1:C:880:GLU:HG2	1.99	0.44
1:C:2223:ILE:O	1:C:2223:ILE:HG23	2.17	0.44
1:C:3527:PRO:HD2	1:C:3573:MET:SD	2.57	0.44
1:C:3540:TYR:HB3	1:C:3604:TYR:CD2	2.52	0.44
1:C:4658:ILE:HD13	1:C:4792:LEU:HB3	1.99	0.44
1:A:866:HIS:O	1:A:869:ARG:HG2	2.18	0.44
1:A:1126:GLY:O	1:A:1142:PRO:HA	2.18	0.44
1:A:1999:ARG:HH11	1:A:1999:ARG:HB3	1.83	0.44
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.18	0.44
1:A:2234:ARG:O	1:A:2238:TYR:HD2	2.00	0.44
1:A:2285:GLU:HG2	1:A:3858:MET:HE1	2.00	0.44
1:A:2336:ARG:HG2	1:A:2435:ARG:HD2	2.00	0.44
1:A:2751:LEU:HD11	1:A:2817:ILE:CD1	2.48	0.44
1:A:2756:ASN:HA	1:A:2806:ARG:HH12	1.83	0.44
1:B:574:VAL:HA	1:B:577:ILE:HG12	1.98	0.44
1:B:730:VAL:HG21	1:B:764:VAL:HG12	1.98	0.44
1:B:2091:PRO:O	1:B:2092:GLN:HB2	2.18	0.44
1:B:3365:LEU:HD11	1:B:3405:LEU:CD1	2.48	0.44
1:B:3540:TYR:HB3	1:B:3604:TYR:CD2	2.52	0.44
1:B:4000:MET:HE1	1:B:4058:ILE:HA	1.99	0.44
1:D:262:LEU:HD12	1:D:274:LEU:HD11	2.00	0.44
1:D:552:ASP:OD1	1:D:553:ARG:N	2.51	0.44
1:D:2006:ILE:HD11	1:D:3641:LEU:HD11	1.98	0.44
1:D:2527:LEU:O	1:D:2531:ARG:HG3	2.18	0.44
1:D:2625:ARG:NH1	1:D:2629:ASP:OD1	2.51	0.44
1:D:2755:ILE:HD13	1:D:2810:LYS:HG2	2.00	0.44
1:D:2784:GLU:OE2	1:D:2785:LEU:CD1	2.65	0.44
1:D:4710:SER:O	1:D:4713:SER:OG	2.25	0.44
1:C:421:PHE:HE2	1:C:507:ALA:HB2	1.79	0.44
1:C:559:GLY:O	1:C:563:VAL:HG23	2.18	0.44
1:C:574:VAL:HA	1:C:577:ILE:HG12	1.99	0.44
1:C:2091:PRO:O	1:C:2092:GLN:HB2	2.18	0.44
1:C:2368:LEU:N	1:C:2368:LEU:HD12	2.32	0.44
1:A:707:VAL:HG12	1:A:715:GLY:HA3	1.99	0.44
1:A:797:HIS:CG	1:A:821:LEU:HD23	2.52	0.44
1:A:2527:LEU:O	1:A:2531:ARG:HG3	2.18	0.44
1:A:3266:MET:SD	1:A:3270:ILE:HD11	2.58	0.44
1:A:3292:PRO:O	1:A:3294:PRO:HD3	2.17	0.44
1:A:3365:LEU:HD11	1:A:3405:LEU:CD1	2.48	0.44
1:A:3624:LEU:O	1:A:3628:ARG:HG2	2.17	0.44
1:A:4024:VAL:HG11	1:A:4142:ASN:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4933:GLN:HG3	1:B:4930:ALA:CB	2.48	0.44
1:B:234:SER:OG	1:B:240:ASP:OD2	2.29	0.44
1:B:797:HIS:CG	1:B:821:LEU:HD23	2.52	0.44
1:B:2434:GLY:O	1:B:2508:ARG:NE	2.36	0.44
1:B:2725:LYS:NZ	1:B:2734:ASN:O	2.49	0.44
1:B:2751:LEU:HD11	1:B:2817:ILE:CD1	2.48	0.44
1:B:3127:GLN:O	1:B:3130:THR:HG22	2.18	0.44
1:B:3266:MET:SD	1:B:3270:ILE:HD11	2.58	0.44
1:B:3791:GLY:O	1:B:3794:VAL:HG12	2.17	0.44
1:D:417:GLY:O	1:D:421:PHE:HD1	2.01	0.44
1:D:421:PHE:HD1	1:D:421:PHE:H	1.64	0.44
1:D:574:VAL:O	1:D:578:ILE:HG12	2.18	0.44
1:D:866:HIS:O	1:D:869:ARG:HG2	2.18	0.44
1:D:893:TYR:HB3	1:D:962:SER:OG	2.18	0.44
1:D:1999:ARG:HH11	1:D:1999:ARG:HB3	1.83	0.44
1:D:2751:LEU:HD23	1:D:2755:ILE:CD1	2.47	0.44
1:C:1436:SER:OG	1:C:1565:GLU:HB2	2.18	0.44
1:A:552:ASP:OD1	1:A:553:ARG:N	2.51	0.43
1:A:2879:ALA:HB1	1:A:2908:TYR:OH	2.17	0.43
1:A:3104:GLU:OE2	1:A:3167:ARG:HB3	2.18	0.43
2:G:90:ILE:HD11	1:C:1684:ALA:HA	2.00	0.43
1:B:2223:ILE:HG23	1:B:2223:ILE:O	2.17	0.43
1:B:2703:LEU:HD12	1:B:2703:LEU:N	2.32	0.43
1:B:2738:ARG:HG2	1:B:2738:ARG:O	2.17	0.43
1:B:2751:LEU:CD1	1:B:2817:ILE:CD1	2.96	0.43
1:B:3632:VAL:O	1:B:3636:PHE:HD2	2.00	0.43
1:D:574:VAL:HA	1:D:577:ILE:HG12	1.99	0.43
1:D:2004:GLU:OE1	1:D:2004:GLU:N	2.51	0.43
1:D:2091:PRO:O	1:D:2092:GLN:HB2	2.18	0.43
1:D:2756:ASN:HA	1:D:2806:ARG:HH12	1.83	0.43
1:C:3300:ALA:CB	1:C:3301:PRO:HD3	2.40	0.43
1:C:3999:MET:HE3	1:C:3999:MET:HB3	1.75	0.43
1:C:4710:SER:O	1:C:4713:SER:OG	2.24	0.43
1:A:574:VAL:O	1:A:578:ILE:HG12	2.18	0.43
1:A:1435:TYR:OH	1:A:1451:GLY:O	2.35	0.43
1:A:2212:VAL:HG11	1:A:2256:TYR:CZ	2.54	0.43
1:A:2499:LYS:O	1:A:2503:VAL:HG23	2.18	0.43
1:A:3391:GLU:HG2	1:A:3395:ARG:HH21	1.83	0.43
1:A:3540:TYR:HB3	1:A:3604:TYR:CD2	2.52	0.43
1:A:3891:LEU:O	1:A:3899:PHE:CD2	2.71	0.43
1:A:4826:ILE:O	1:A:4829:SER:OG	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4852:THR:HG23	1:A:4882:CYS:HB3	1.99	0.43
2:G:90:ILE:HG22	2:G:91:ILE:HG13	1.99	0.43
2:F:90:ILE:HG22	2:F:91:ILE:HG13	1.99	0.43
1:B:559:GLY:O	1:B:563:VAL:HG23	2.18	0.43
1:B:877:ASN:HA	1:B:880:GLU:HG2	1.99	0.43
1:B:2004:GLU:OE1	1:B:2004:GLU:N	2.51	0.43
1:B:2336:ARG:HG2	1:B:2435:ARG:HD2	2.00	0.43
1:D:1032:LYS:O	1:D:1036:ARG:NH1	2.50	0.43
1:D:3104:GLU:OE2	1:D:3167:ARG:HB3	2.18	0.43
1:D:3127:GLN:O	1:D:3130:THR:HG22	2.18	0.43
1:D:3266:MET:SD	1:D:3270:ILE:HD11	2.58	0.43
1:D:3289:PRO:O	1:D:3290:GLU:HB2	2.18	0.43
1:C:294:THR:O	1:C:298:GLY:N	2.50	0.43
1:C:797:HIS:CG	1:C:821:LEU:HD23	2.52	0.43
1:C:893:TYR:HB3	1:C:962:SER:OG	2.18	0.43
1:C:2703:LEU:HD12	1:C:2703:LEU:N	2.33	0.43
1:C:2751:LEU:HD23	1:C:2755:ILE:CD1	2.47	0.43
1:C:2751:LEU:CD1	1:C:2817:ILE:CD1	2.96	0.43
1:A:1419:ASP:CG	1:A:1420:ASN:H	2.21	0.43
1:A:1436:SER:OG	1:A:1565:GLU:HB2	2.18	0.43
1:A:3409:TYR:N	1:A:3410:PRO:HD2	2.33	0.43
1:A:3539:ARG:NH2	1:A:3548:GLU:OE2	2.38	0.43
2:E:38:SER:HB3	2:E:41:ASP:OD1	2.19	0.43
1:B:2499:LYS:O	1:B:2503:VAL:HG23	2.18	0.43
1:B:2755:ILE:HD13	1:B:2810:LYS:HG2	2.00	0.43
1:B:3359:ILE:HD13	1:B:3434:LEU:HD13	1.99	0.43
1:B:3559:LEU:O	1:B:3559:LEU:HD23	2.18	0.43
1:D:565:TYR:O	1:D:569:ILE:HG12	2.17	0.43
1:D:1287:LEU:HD11	1:D:1599:MET:HE3	2.00	0.43
1:D:2499:LYS:O	1:D:2503:VAL:HG23	2.19	0.43
1:C:345:LEU:HD21	1:C:389:PHE:CZ	2.54	0.43
1:C:417:GLY:O	1:C:421:PHE:HD1	2.01	0.43
1:C:730:VAL:HG21	1:C:764:VAL:HG12	1.98	0.43
1:C:1122:TYR:CE2	1:C:1182:ILE:HD12	2.54	0.43
1:C:1419:ASP:CG	1:C:1420:ASN:H	2.21	0.43
1:C:2738:ARG:O	1:C:2738:ARG:HG2	2.17	0.43
1:C:2785:LEU:O	1:C:2786:LYS:HG2	2.18	0.43
1:C:3266:MET:SD	1:C:3270:ILE:HD11	2.58	0.43
1:C:3391:GLU:HG2	1:C:3395:ARG:HH21	1.83	0.43
1:C:3409:TYR:N	1:C:3410:PRO:HD2	2.33	0.43
1:A:646:PRO:HB2	1:A:648:ILE:CD1	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:90:ILE:HG22	2:H:91:ILE:HG13	1.99	0.43
1:B:893:TYR:HB3	1:B:962:SER:OG	2.18	0.43
1:B:2604:GLU:O	1:B:2608:MET:HG2	2.19	0.43
1:B:4253:GLU:OE1	1:B:4557:ARG:NE	2.52	0.43
1:D:867:LEU:HA	1:D:870:ILE:HG22	2.01	0.43
1:D:1122:TYR:CE2	1:D:1182:ILE:HD12	2.53	0.43
1:D:2668:SER:O	1:D:2669:GLU:HB2	2.18	0.43
1:C:574:VAL:O	1:C:578:ILE:HG12	2.19	0.43
1:C:1435:TYR:OH	1:C:1451:GLY:O	2.35	0.43
1:C:1989:ALA:O	1:C:1992:ALA:HB3	2.19	0.43
1:C:2336:ARG:HG2	1:C:2435:ARG:HD2	2.00	0.43
1:C:2499:LYS:O	1:C:2503:VAL:HG23	2.19	0.43
1:C:3559:LEU:O	1:C:3559:LEU:HD23	2.18	0.43
1:A:877:ASN:HA	1:A:880:GLU:HG2	1.99	0.43
1:A:2091:PRO:O	1:A:2092:GLN:HB2	2.18	0.43
1:A:2751:LEU:CD1	1:A:2817:ILE:CD1	2.96	0.43
1:A:3632:VAL:O	1:A:3636:PHE:HD2	2.00	0.43
1:A:4253:GLU:OE1	1:A:4557:ARG:NE	2.52	0.43
1:A:4545:GLU:OE2	1:A:4548:ARG:NH2	2.39	0.43
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.18	0.43
1:B:4024:VAL:HG11	1:B:4142:ASN:HB3	2.00	0.43
1:B:4933:GLN:HG3	1:C:4930:ALA:CB	2.48	0.43
1:D:2751:LEU:HD11	1:D:2817:ILE:CD1	2.48	0.43
1:D:3434:LEU:HB3	1:D:3517:MET:HE1	2.01	0.43
1:D:4930:ALA:CB	1:C:4933:GLN:HG3	2.48	0.43
1:C:3365:LEU:HD11	1:C:3405:LEU:CD1	2.48	0.43
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.34	0.43
1:A:345:LEU:HD21	1:A:389:PHE:CZ	2.54	0.43
1:A:380:GLN:OE1	1:A:380:GLN:N	2.47	0.43
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.34	0.43
2:H:38:SER:HB3	2:H:41:ASP:OD1	2.19	0.43
2:G:38:SER:HB3	2:G:41:ASP:OD1	2.19	0.43
2:F:38:SER:HB3	2:F:41:ASP:OD1	2.19	0.43
1:B:866:HIS:O	1:B:869:ARG:HG2	2.18	0.43
1:B:1931:LEU:HD13	1:B:1935:VAL:CG1	2.47	0.43
1:B:4205:TRP:CZ2	1:B:4214:LYS:HD3	2.54	0.43
1:D:234:SER:OG	1:D:240:ASP:OD2	2.29	0.43
1:D:1115:LEU:HD12	1:D:1193:SER:HB3	2.00	0.43
1:D:1241:SER:HA	1:D:1603:VAL:HG22	2.01	0.43
1:D:1436:SER:OG	1:D:1565:GLU:HB2	2.18	0.43
1:D:2323:TRP:CZ3	1:D:2325:PRO:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2478:THR:HG22	1:D:2479:LEU:N	2.33	0.43
1:D:2534:ALA:CB	1:D:2588:ARG:HE	2.24	0.43
1:D:4024:VAL:HG11	1:D:4142:ASN:HB3	2.00	0.43
1:D:4973:HIS:O	1:D:4977:THR:HG23	2.19	0.43
1:C:1978:ALA:HB1	1:C:1982:ARG:NH1	2.26	0.43
1:C:2751:LEU:HD11	1:C:2817:ILE:CD1	2.48	0.43
1:C:3087:ILE:H	1:C:3087:ILE:HD12	1.84	0.43
1:C:3817:LEU:HD21	1:C:3898:ASP:HB3	1.99	0.43
1:C:3951:PHE:CE1	1:C:3999:MET:HE1	2.53	0.43
1:A:336:PRO:HA	1:A:337:PRO:HD3	1.87	0.43
1:A:647:ASN:ND2	1:A:820:ARG:O	2.44	0.43
1:A:2226:PRO:O	1:A:2267:MET:CE	2.65	0.43
1:A:2290:LEU:HD23	1:A:2291:GLN:N	2.34	0.43
1:A:2309:SER:OG	1:A:2310:CYS:N	2.52	0.43
1:A:2470:ILE:HG22	1:A:2525:GLY:HA3	2.01	0.43
1:B:2323:TRP:CZ3	1:B:2325:PRO:HG3	2.54	0.43
1:B:3087:ILE:HD12	1:B:3087:ILE:H	1.84	0.43
1:B:3233:PRO:CB	1:B:3238:GLU:HB2	2.49	0.43
1:B:4983:HIS:O	3:B:5301:ATP:N6	2.51	0.43
1:D:646:PRO:HB2	1:D:648:ILE:CD1	2.48	0.43
1:D:2902:HIS:CE1	1:D:2904:LEU:HB3	2.54	0.43
1:D:3365:LEU:HD11	1:D:3405:LEU:CD1	2.48	0.43
1:C:1115:LEU:HD12	1:C:1193:SER:HB3	2.00	0.43
1:C:1241:SER:HA	1:C:1603:VAL:HG22	2.01	0.43
1:C:2323:TRP:CZ3	1:C:2325:PRO:HG3	2.54	0.43
1:C:2946:LEU:O	1:C:2946:LEU:CD2	2.62	0.43
1:C:3233:PRO:CB	1:C:3238:GLU:HB2	2.49	0.43
1:C:3289:PRO:O	1:C:3290:GLU:HB2	2.18	0.43
1:C:4253:GLU:OE1	1:C:4557:ARG:NE	2.52	0.43
1:A:559:GLY:O	1:A:563:VAL:HG23	2.18	0.43
1:A:869:ARG:NH2	1:A:941:MET:HE1	2.33	0.43
1:A:1978:ALA:O	1:A:1982:ARG:CZ	2.67	0.43
1:A:1989:ALA:O	1:A:1992:ALA:HB3	2.19	0.43
1:A:2902:HIS:CE1	1:A:2904:LEU:HB3	2.54	0.43
1:A:3450:ASN:HA	1:A:3453:ARG:HG2	2.01	0.43
1:A:3527:PRO:HD2	1:A:3573:MET:SD	2.57	0.43
1:A:3817:LEU:HD21	1:A:3898:ASP:HB3	1.99	0.43
1:A:4983:HIS:O	3:A:5301:ATP:N6	2.51	0.43
1:B:2290:LEU:HD23	1:B:2291:GLN:N	2.34	0.43
1:B:2675:THR:CG2	1:B:2706:ILE:HG23	2.49	0.43
1:B:2902:HIS:CE1	1:B:2904:LEU:HB3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.34	0.43
1:D:1126:GLY:O	1:D:1142:PRO:HA	2.18	0.43
1:D:2675:THR:CG2	1:D:2706:ILE:HG23	2.49	0.43
1:D:2773:ASN:OD1	1:D:2773:ASN:C	2.57	0.43
1:D:3087:ILE:H	1:D:3087:ILE:HD12	1.84	0.43
1:D:3546:ASP:O	1:D:3549:VAL:HG22	2.19	0.43
1:D:3969:ILE:O	1:D:3972:PRO:HA	2.19	0.43
1:C:1143:TRP:HB2	1:C:1147:ASP:HB2	2.01	0.43
1:C:1461:ASP:OD2	1:C:1468:LYS:NZ	2.49	0.43
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.18	0.43
1:C:2135:LEU:O	1:C:3658:LYS:NZ	2.52	0.43
1:C:2675:THR:CG2	1:C:2706:ILE:HG23	2.49	0.43
1:C:3371:LYS:HE2	1:C:3371:LYS:HA	2.00	0.43
1:C:3868:ARG:HH12	1:C:3870:ASN:HB3	1.82	0.43
1:A:1036:ARG:HH11	1:A:1036:ARG:HD3	1.48	0.43
1:A:2784:GLU:CD	1:A:2785:LEU:HD12	2.39	0.43
1:A:3233:PRO:CB	1:A:3238:GLU:HB2	2.49	0.43
1:A:3969:ILE:O	1:A:3972:PRO:HA	2.19	0.43
1:A:4973:HIS:O	1:A:4977:THR:HG23	2.19	0.43
1:B:345:LEU:HD21	1:B:389:PHE:CZ	2.54	0.43
1:B:364:PRO:O	1:B:365:LYS:HB3	2.19	0.43
1:B:886:ARG:HG2	1:B:904:HIS:CD2	2.54	0.43
1:B:1978:ALA:O	1:B:1982:ARG:CZ	2.67	0.43
1:D:648:ILE:HD11	1:D:821:LEU:HD11	2.00	0.43
1:D:1068:ARG:CA	1:D:1071:ARG:HH11	2.32	0.43
1:D:1143:TRP:HB2	1:D:1147:ASP:HB2	2.01	0.43
1:D:1743[B]:ARG:NH2	1:D:1967:ASP:OD2	2.52	0.43
1:D:2604:GLU:O	1:D:2608:MET:HG2	2.19	0.43
1:D:3233:PRO:CB	1:D:3238:GLU:HB2	2.49	0.43
1:D:3409:TYR:N	1:D:3410:PRO:HD2	2.33	0.43
1:D:3868:ARG:HH12	1:D:3870:ASN:HB3	1.82	0.43
1:D:4253:GLU:OE1	1:D:4557:ARG:NE	2.52	0.43
1:C:69:LEU:CD1	1:C:101:LEU:HD11	2.49	0.43
1:C:622:THR:HG23	1:C:626:LEU:HD12	2.00	0.43
1:C:866:HIS:O	1:C:869:ARG:HG2	2.18	0.43
1:C:867:LEU:HA	1:C:870:ILE:HG22	2.01	0.43
1:C:886:ARG:HG2	1:C:904:HIS:CD2	2.54	0.43
1:C:1925:GLY:O	1:C:1929:MET:HG3	2.19	0.43
1:C:2226:PRO:HA	1:C:2267:MET:HE1	2.01	0.43
1:C:2290:LEU:HD23	1:C:2291:GLN:N	2.34	0.43
1:C:2309:SER:OG	1:C:2310:CYS:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3104:GLU:OE2	1:C:3167:ARG:HB3	2.18	0.43
1:C:3546:ASP:O	1:C:3549:VAL:HG22	2.19	0.43
1:C:4973:HIS:O	1:C:4977:THR:HG23	2.19	0.43
1:A:1115:LEU:HD12	1:A:1193:SER:HB3	2.00	0.43
1:A:1122:TYR:CE2	1:A:1182:ILE:HD12	2.53	0.43
1:A:2135:LEU:O	1:A:3658:LYS:NZ	2.52	0.43
1:A:2226:PRO:CA	1:A:2267:MET:HE1	2.48	0.43
1:A:2478:THR:HG22	1:A:2479:LEU:N	2.33	0.43
1:A:3127:GLN:O	1:A:3130:THR:HG22	2.18	0.43
1:B:648:ILE:HD11	1:B:821:LEU:HD11	2.00	0.43
1:B:1989:ALA:O	1:B:1992:ALA:HB3	2.19	0.43
1:B:2478:THR:HG22	1:B:2479:LEU:N	2.33	0.43
1:B:2630:VAL:N	1:B:2631:PRO:CD	2.82	0.43
1:B:4253:GLU:OE1	1:B:4253:GLU:N	2.52	0.43
1:B:4973:HIS:O	1:B:4977:THR:HG23	2.19	0.43
1:D:69:LEU:CD1	1:D:101:LEU:HD11	2.49	0.43
1:D:166:GLY:O	1:C:384:MET:HE1	2.18	0.43
1:D:510:GLU:HA	1:D:513:GLU:OE2	2.19	0.43
1:D:2630:VAL:N	1:D:2631:PRO:CD	2.82	0.43
1:D:2821:TRP:CD1	1:D:2939:ARG:O	2.72	0.43
1:D:3371:LYS:HE2	1:D:3371:LYS:HA	2.00	0.43
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.34	0.43
1:D:4976:GLU:O	1:D:4980:LEU:HD23	2.19	0.43
1:C:1931:LEU:HD13	1:C:1935:VAL:CG1	2.47	0.43
1:C:2212:VAL:HG11	1:C:2256:TYR:CZ	2.54	0.43
1:C:2527:LEU:O	1:C:2531:ARG:HG3	2.18	0.43
1:C:2604:GLU:O	1:C:2608:MET:HG2	2.19	0.43
1:C:2668:SER:O	1:C:2669:GLU:HB2	2.18	0.43
1:C:4024:VAL:HG11	1:C:4142:ASN:HB3	2.00	0.43
1:A:510:GLU:HA	1:A:513:GLU:OE2	2.19	0.42
1:A:893:TYR:HB3	1:A:962:SER:OG	2.18	0.42
1:A:1421:ARG:O	1:A:1570:LYS:NZ	2.33	0.42
1:A:1925:GLY:O	1:A:1929:MET:HG3	2.19	0.42
1:A:2604:GLU:O	1:A:2608:MET:HG2	2.19	0.42
1:A:2668:SER:O	1:A:2669:GLU:HB2	2.18	0.42
1:A:2675:THR:CG2	1:A:2706:ILE:HG23	2.49	0.42
1:A:2770:LYS:O	1:A:2773:ASN:OD1	2.37	0.42
1:A:3456:GLN:HG3	1:A:3503:TYR:CD2	2.54	0.42
1:A:4003:LEU:HA	1:A:4009:GLN:OE1	2.19	0.42
1:A:4205:TRP:CZ2	1:A:4214:LYS:HD3	2.54	0.42
1:B:1436:SER:OG	1:B:1565:GLU:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2212:VAL:HG11	1:B:2256:TYR:CZ	2.54	0.42
1:B:2650:ARG:HG3	1:B:2651:CYS:SG	2.59	0.42
1:B:3456:GLN:HG3	1:B:3503:TYR:CD2	2.54	0.42
1:B:3969:ILE:O	1:B:3972:PRO:HA	2.19	0.42
1:B:4749:GLU:OE1	1:B:4753:HIS:NE2	2.52	0.42
1:B:4888:TYR:HA	1:C:4918:ILE:HD11	2.01	0.42
1:D:1989:ALA:O	1:D:1992:ALA:HB3	2.19	0.42
1:D:2212:VAL:HG11	1:D:2256:TYR:CZ	2.54	0.42
1:D:2784:GLU:CD	1:D:2785:LEU:HD12	2.39	0.42
1:D:3531:ASP:O	1:D:3535:LEU:HG	2.19	0.42
1:D:4205:TRP:CZ2	1:D:4214:LYS:HD3	2.54	0.42
1:D:4832:HIS:ND1	1:D:4833:ASN:OD1	2.45	0.42
1:C:659:TYR:O	1:C:662:TRP:NE1	2.47	0.42
1:C:2650:ARG:HG3	1:C:2651:CYS:SG	2.59	0.42
1:C:3725:TYR:HA	1:C:3728:ILE:HD12	2.01	0.42
1:C:4748:LEU:O	1:C:4751:THR:OG1	2.32	0.42
1:A:648:ILE:HD11	1:A:821:LEU:HD11	2.00	0.42
1:B:257:ARG:O	1:B:284:HIS:NE2	2.43	0.42
1:B:1122:TYR:CE2	1:B:1182:ILE:HD12	2.54	0.42
1:B:1421:ARG:O	1:B:1570:LYS:NZ	2.33	0.42
1:B:1423:ASP:HB3	1:B:1426:ILE:HD12	2.01	0.42
1:B:2756:ASN:HA	1:B:2806:ARG:HH12	1.83	0.42
1:D:320:LYS:NZ	1:D:381:GLU:O	2.43	0.42
1:D:908:VAL:HG13	1:D:909:ASN:N	2.35	0.42
1:D:1419:ASP:CG	1:D:1420:ASN:H	2.21	0.42
1:D:1925:GLY:O	1:D:1929:MET:HG3	2.19	0.42
1:D:2949:SER:OG	1:D:2952:GLU:OE1	2.25	0.42
1:C:56:GLN:O	1:C:309:THR:OG1	2.29	0.42
1:C:648:ILE:HD11	1:C:821:LEU:HD11	2.00	0.42
1:C:908:VAL:HG13	1:C:909:ASN:N	2.35	0.42
1:C:1758:ARG:CZ	1:C:1759:ARG:NH1	2.82	0.42
1:C:3359:ILE:HD13	1:C:3434:LEU:HD13	1.99	0.42
1:C:4976:GLU:O	1:C:4980:LEU:HD23	2.19	0.42
1:A:364:PRO:O	1:A:365:LYS:HB3	2.19	0.42
1:A:901:LYS:HG3	1:A:903:LEU:HD12	2.01	0.42
1:A:1743[B]:ARG:NH2	1:A:1967:ASP:OD2	2.52	0.42
1:A:1758:ARG:CZ	1:A:1759:ARG:NH1	2.82	0.42
1:A:2323:TRP:CZ3	1:A:2325:PRO:HG3	2.54	0.42
1:A:2481:LYS:O	1:A:2482:ASP:OD2	2.38	0.42
1:A:2821:TRP:CD1	1:A:2939:ARG:O	2.72	0.42
1:A:3087:ILE:H	1:A:3087:ILE:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3531:ASP:O	1:A:3535:LEU:HG	2.19	0.42
1:B:622:THR:HG23	1:B:626:LEU:HD12	2.00	0.42
1:B:2481:LYS:O	1:B:2482:ASP:OD2	2.38	0.42
1:B:3409:TYR:N	1:B:3410:PRO:HD2	2.33	0.42
1:D:622:THR:HG23	1:D:626:LEU:HD12	2.00	0.42
1:D:886:ARG:HG2	1:D:904:HIS:CD2	2.54	0.42
1:D:1978:ALA:O	1:D:1982:ARG:CZ	2.67	0.42
1:D:4749:GLU:OE1	1:D:4753:HIS:NE2	2.52	0.42
1:C:380:GLN:OE1	1:C:380:GLN:N	2.47	0.42
1:C:2000:SER:OG	1:C:2004:GLU:HB2	2.20	0.42
1:C:2481:LYS:O	1:C:2482:ASP:OD2	2.38	0.42
1:C:3321:ARG:O	1:C:3324:VAL:HG22	2.19	0.42
1:C:3716:LEU:HD21	1:C:3782:MET:HE3	2.02	0.42
1:C:4205:TRP:CZ2	1:C:4214:LYS:HD3	2.54	0.42
1:C:4214:LYS:O	1:C:4218:ILE:HG12	2.20	0.42
1:C:4852:THR:HG23	1:C:4882:CYS:HB3	1.99	0.42
1:A:870:ILE:HD11	1:A:1049:TYR:CD2	2.55	0.42
1:A:1758:ARG:NH2	1:A:1759:ARG:CZ	2.83	0.42
1:A:3546:ASP:O	1:A:3549:VAL:HG22	2.19	0.42
1:A:4976:GLU:O	1:A:4980:LEU:HD23	2.19	0.42
1:B:901:LYS:HG3	1:B:903:LEU:HD12	2.02	0.42
1:B:2000:SER:OG	1:B:2004:GLU:HB2	2.19	0.42
1:B:2668:SER:O	1:B:2669:GLU:HB2	2.18	0.42
1:B:2821:TRP:CD1	1:B:2939:ARG:O	2.72	0.42
1:B:3321:ARG:O	1:B:3324:VAL:HG22	2.20	0.42
1:B:3546:ASP:O	1:B:3549:VAL:HG22	2.19	0.42
1:D:870:ILE:HD11	1:D:1049:TYR:CD2	2.55	0.42
1:D:901:LYS:HG3	1:D:903:LEU:HD12	2.01	0.42
1:D:2000:SER:OG	1:D:2004:GLU:HB2	2.20	0.42
1:D:2309:SER:OG	1:D:2310:CYS:N	2.52	0.42
1:D:3296:LEU:HB3	1:D:3297:PRO:HD3	2.02	0.42
1:D:3985:LEU:HD11	1:D:4026:MET:HE1	2.02	0.42
1:C:510:GLU:HA	1:C:513:GLU:OE2	2.19	0.42
1:C:648:ILE:HD11	1:C:821:LEU:CD1	2.50	0.42
1:C:2625:ARG:NH1	1:C:2629:ASP:OD1	2.51	0.42
1:C:2630:VAL:N	1:C:2631:PRO:CD	2.82	0.42
1:C:2755:ILE:HD13	1:C:2810:LYS:HG2	2.00	0.42
1:C:2902:HIS:CE1	1:C:2904:LEU:HB3	2.54	0.42
1:A:2773:ASN:OD1	1:A:2773:ASN:C	2.57	0.42
1:A:3371:LYS:HE2	1:A:3371:LYS:HA	2.00	0.42
1:B:417:GLY:O	1:B:421:PHE:HD1	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1758:ARG:HG2	1:B:1759:ARG:N	2.35	0.42
1:B:3107:VAL:HG12	1:B:3175:LEU:HD21	2.02	0.42
1:B:3531:ASP:O	1:B:3535:LEU:HG	2.19	0.42
1:B:4573:ILE:HG23	1:B:4643:LEU:HD11	2.02	0.42
1:D:559:GLY:O	1:D:563:VAL:HG23	2.18	0.42
1:D:1141:ARG:CB	1:C:3477:LYS:HZ3	2.32	0.42
1:D:2290:LEU:HD23	1:D:2291:GLN:N	2.34	0.42
1:D:3321:ARG:O	1:D:3324:VAL:HG22	2.19	0.42
1:D:3456:GLN:HG3	1:D:3503:TYR:CD2	2.54	0.42
1:D:3985:LEU:HD11	1:D:4026:MET:CE	2.50	0.42
1:C:901:LYS:HG3	1:C:903:LEU:HD12	2.01	0.42
1:C:1068:ARG:CA	1:C:1071:ARG:HH11	2.32	0.42
1:C:1758:ARG:NH2	1:C:1759:ARG:CZ	2.83	0.42
1:C:2440:MET:O	1:C:2444:GLN:OE1	2.38	0.42
1:C:2478:THR:HG22	1:C:2479:LEU:N	2.33	0.42
1:C:4749:GLU:OE1	1:C:4753:HIS:NE2	2.52	0.42
1:C:4983:HIS:O	3:C:5301:ATP:N6	2.51	0.42
1:A:417:GLY:O	1:A:421:PHE:HD1	2.01	0.42
1:A:648:ILE:HD11	1:A:821:LEU:CD1	2.50	0.42
1:A:898:ASP:HB2	1:A:901:LYS:HB2	2.02	0.42
1:A:1032:LYS:C	1:A:1036:ARG:HH12	2.18	0.42
1:A:1068:ARG:CA	1:A:1071:ARG:HH11	2.32	0.42
1:A:1171:SER:OG	1:A:1173:SER:OG	2.33	0.42
1:A:2650:ARG:HG3	1:A:2651:CYS:SG	2.59	0.42
1:A:3294:PRO:HB2	1:A:3297:PRO:HD2	2.02	0.42
1:A:3874:VAL:O	1:A:3953:LYS:NZ	2.53	0.42
1:A:4214:LYS:O	1:A:4218:ILE:HG12	2.20	0.42
1:B:69:LEU:CD1	1:B:101:LEU:HD11	2.49	0.42
1:B:226:HIS:ND1	1:B:226:HIS:O	2.53	0.42
1:B:510:GLU:HA	1:B:513:GLU:OE2	2.19	0.42
1:B:1143:TRP:HB2	1:B:1147:ASP:HB2	2.01	0.42
1:B:1241:SER:HA	1:B:1603:VAL:HG22	2.01	0.42
1:B:2226:PRO:HA	1:B:2267:MET:HE1	2.02	0.42
1:B:2625:ARG:NH1	1:B:2629:ASP:OD1	2.51	0.42
1:B:3391:GLU:HG2	1:B:3395:ARG:HH21	1.83	0.42
1:B:4710:SER:O	1:B:4713:SER:OG	2.25	0.42
1:D:659:TYR:O	1:D:662:TRP:NE1	2.47	0.42
1:D:898:ASP:HB2	1:D:901:LYS:HB2	2.02	0.42
1:D:1758:ARG:CZ	1:D:1759:ARG:NH1	2.82	0.42
1:D:2770:LYS:O	1:D:2773:ASN:OD1	2.37	0.42
1:D:2967:MET:HG3	1:D:3042:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:870:ILE:HD11	1:C:1049:TYR:CD2	2.55	0.42
1:C:1515:VAL:O	1:C:1531:ALA:O	2.38	0.42
1:C:2770:LYS:O	1:C:2773:ASN:OD1	2.37	0.42
1:C:3456:GLN:HG3	1:C:3503:TYR:CD2	2.54	0.42
1:C:4161:ARG:HA	1:C:4164:LEU:HD12	2.01	0.42
1:A:867:LEU:HA	1:A:870:ILE:HG22	2.01	0.42
1:A:2211:MET:SD	1:A:2272:PRO:HG3	2.60	0.42
1:A:3321:ARG:O	1:A:3324:VAL:HG22	2.19	0.42
1:A:4749:GLU:OE1	1:A:4753:HIS:NE2	2.52	0.42
1:B:867:LEU:HA	1:B:870:ILE:HG22	2.01	0.42
1:B:870:ILE:HD11	1:B:1049:TYR:CD2	2.55	0.42
1:B:2211:MET:SD	1:B:2272:PRO:HG3	2.60	0.42
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.55	0.42
1:B:2770:LYS:O	1:B:2773:ASN:OD1	2.37	0.42
1:B:3296:LEU:HB3	1:B:3297:PRO:HD3	2.02	0.42
1:B:3450:ASN:HA	1:B:3453:ARG:HG2	2.01	0.42
1:B:3686:GLU:O	1:B:3687:GLU:HB3	2.20	0.42
1:B:3951:PHE:CE1	1:B:3999:MET:HE1	2.54	0.42
1:B:4923:PHE:HA	1:B:4927:ILE:HD12	2.01	0.42
1:D:226:HIS:ND1	1:D:226:HIS:O	2.53	0.42
1:D:1754:GLY:O	1:D:1758:ARG:HB2	2.20	0.42
1:D:2969:ILE:O	1:D:2973:PHE:CD1	2.73	0.42
1:C:1978:ALA:O	1:C:1982:ARG:CZ	2.67	0.42
1:C:2969:ILE:O	1:C:2973:PHE:CD1	2.73	0.42
1:C:3296:LEU:HB3	1:C:3297:PRO:HD3	2.02	0.42
1:C:4573:ILE:HG23	1:C:4643:LEU:HD11	2.02	0.42
1:A:110:ARG:HH21	1:A:115:ARG:HD2	1.85	0.42
1:A:1241:SER:HA	1:A:1603:VAL:HG22	2.01	0.42
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.55	0.42
1:A:2630:VAL:N	1:A:2631:PRO:CD	2.82	0.42
1:A:2701:PRO:C	1:A:2702:CYS:SG	2.98	0.42
1:A:2777:TYR:CD1	1:A:2791:LEU:HD12	2.43	0.42
1:A:3107:VAL:HG12	1:A:3175:LEU:HD21	2.02	0.42
1:A:3686:GLU:O	1:A:3687:GLU:HB3	2.20	0.42
1:A:3725:TYR:HA	1:A:3728:ILE:HD12	2.01	0.42
1:A:3985:LEU:HD11	1:A:4026:MET:CE	2.50	0.42
1:B:574:VAL:O	1:B:578:ILE:HG12	2.18	0.42
1:B:1515:VAL:O	1:B:1531:ALA:O	2.38	0.42
1:B:2309:SER:OG	1:B:2310:CYS:N	2.52	0.42
1:B:2784:GLU:CD	1:B:2785:LEU:HD12	2.39	0.42
1:B:2969:ILE:O	1:B:2973:PHE:CD1	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3268:HIS:ND1	1:B:3272:ILE:HD12	2.35	0.42
1:B:3725:TYR:O	1:B:3729:MET:HG3	2.20	0.42
1:B:3999:MET:HE3	1:B:3999:MET:HB3	1.75	0.42
1:B:4704:LEU:O	1:B:4774:LYS:NZ	2.52	0.42
1:D:110:ARG:HH21	1:D:115:ARG:HD2	1.85	0.42
1:D:345:LEU:HD21	1:D:389:PHE:CZ	2.54	0.42
1:D:2481:LYS:O	1:D:2482:ASP:OD2	2.38	0.42
1:C:898:ASP:HB2	1:C:901:LYS:HB2	2.02	0.42
1:C:2773:ASN:OD1	1:C:2773:ASN:C	2.57	0.42
1:C:2784:GLU:CD	1:C:2785:LEU:HD12	2.39	0.42
1:C:2801:ASP:HA	1:C:2804:ILE:HG12	2.02	0.42
1:A:69:LEU:CD1	1:A:101:LEU:HD11	2.49	0.42
1:A:622:THR:HG23	1:A:626:LEU:HD12	2.00	0.42
1:A:1423:ASP:HB3	1:A:1426:ILE:HD12	2.01	0.42
1:A:1758:ARG:HG2	1:A:1759:ARG:N	2.35	0.42
1:A:2562:ILE:HG22	1:A:2610:LEU:HD21	2.02	0.42
1:A:3725:TYR:O	1:A:3729:MET:HG3	2.20	0.42
1:A:4573:ILE:HG23	1:A:4643:LEU:HD11	2.02	0.42
1:A:4923:PHE:HA	1:A:4927:ILE:HD12	2.01	0.42
1:B:98:HIS:N	1:B:99:ARG:HH11	2.18	0.42
1:B:380:GLN:OE1	1:B:380:GLN:N	2.47	0.42
1:B:2799:GLU:O	1:B:2803:GLU:OE1	2.38	0.42
1:B:4003:LEU:HA	1:B:4009:GLN:OE1	2.19	0.42
1:B:4545:GLU:OE2	1:B:4548:ARG:NH2	2.39	0.42
1:B:4976:GLU:O	1:B:4980:LEU:HD23	2.19	0.42
1:D:866:HIS:HA	1:D:869:ARG:HG2	2.02	0.42
1:D:1758:ARG:HG2	1:D:1759:ARG:N	2.35	0.42
1:D:2650:ARG:HG3	1:D:2651:CYS:SG	2.59	0.42
1:D:2801:ASP:HA	1:D:2804:ILE:HG12	2.02	0.42
1:D:3905:THR:HA	1:D:3912:THR:OG1	2.20	0.42
1:D:4086:GLY:O	1:D:4125:PHE:CE2	2.73	0.42
1:D:4573:ILE:HG23	1:D:4643:LEU:HD11	2.02	0.42
1:D:4949:GLN:HA	1:D:4952:GLU:HG3	2.02	0.42
1:C:438:ILE:HG23	1:C:518:ILE:HD11	2.02	0.42
1:C:887:ILE:HG13	1:C:907:LEU:CD1	2.50	0.42
1:C:1423:ASP:HB3	1:C:1426:ILE:HD12	2.01	0.42
1:C:1758:ARG:HG2	1:C:1759:ARG:N	2.35	0.42
1:C:2430:ILE:HG22	1:C:2505:PHE:HB2	2.02	0.42
1:C:2821:TRP:CD1	1:C:2939:ARG:O	2.72	0.42
1:C:3107:VAL:HG12	1:C:3175:LEU:HD21	2.02	0.42
1:C:3531:ASP:O	1:C:3535:LEU:HG	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3686:GLU:O	1:C:3687:GLU:HB3	2.20	0.42
1:C:3822:ASP:OD1	1:C:3823:LYS:N	2.53	0.42
1:A:886:ARG:HG2	1:A:904:HIS:CD2	2.54	0.42
1:A:1515:VAL:O	1:A:1531:ALA:O	2.38	0.42
1:A:2376:LEU:HD11	1:A:2426:TYR:HB3	2.02	0.42
1:A:2967:MET:HG3	1:A:3042:LEU:HD12	2.02	0.42
1:A:3296:LEU:HB3	1:A:3297:PRO:HD3	2.02	0.42
2:G:24:VAL:HG21	2:G:59:TRP:HZ3	1.85	0.42
1:B:877:ASN:HD21	1:B:970:LEU:HD13	1.85	0.42
1:B:1758:ARG:CZ	1:B:1759:ARG:NH1	2.82	0.42
1:B:1978:ALA:HB1	1:B:1982:ARG:NH1	2.26	0.42
1:B:2440:MET:O	1:B:2444:GLN:OE1	2.38	0.42
1:B:3104:GLU:OE2	1:B:3167:ARG:HB3	2.18	0.42
1:B:3207:GLU:OE1	1:B:3280:TYR:OH	2.31	0.42
1:B:3395:ARG:HB3	1:B:3454:GLU:OE1	2.20	0.42
1:B:4161:ARG:HA	1:B:4164:LEU:HD12	2.01	0.42
1:D:438:ILE:HG23	1:D:518:ILE:HD11	2.02	0.42
1:D:516:LYS:O	1:D:519:VAL:HG22	2.20	0.42
1:D:647:ASN:ND2	1:D:820:ARG:O	2.44	0.42
1:D:3725:TYR:HA	1:D:3728:ILE:HD12	2.01	0.42
1:D:4918:ILE:HD11	1:C:4888:TYR:HA	2.01	0.42
1:C:226:HIS:ND1	1:C:226:HIS:O	2.53	0.42
1:C:364:PRO:O	1:C:365:LYS:HB3	2.19	0.42
1:C:1694:LEU:O	1:C:1698:LEU:HG	2.20	0.42
1:C:2470:ILE:HG22	1:C:2525:GLY:HA3	2.01	0.42
1:C:3294:PRO:HB2	1:C:3297:PRO:HD2	2.02	0.42
1:C:3969:ILE:O	1:C:3972:PRO:HA	2.19	0.42
1:A:2799:GLU:O	1:A:2803:GLU:OE1	2.38	0.41
1:A:3268:HIS:ND1	1:A:3272:ILE:HD12	2.35	0.41
1:A:4086:GLY:O	1:A:4125:PHE:CE2	2.73	0.41
1:B:1925:GLY:O	1:B:1929:MET:HG3	2.19	0.41
1:B:3249:LEU:HD11	1:B:3273:THR:HG21	2.01	0.41
1:B:3985:LEU:HD11	1:B:4026:MET:CE	2.50	0.41
1:D:1758:ARG:NH2	1:D:1759:ARG:CZ	2.83	0.41
1:D:2044:ILE:HD12	1:D:2044:ILE:H	1.85	0.41
1:D:2434:GLY:O	1:D:2508:ARG:NE	2.36	0.41
1:D:3235:SER:OG	1:D:3237:GLU:OE1	2.38	0.41
1:D:4869:GLU:OE2	1:D:4869:GLU:N	2.53	0.41
1:C:516:LYS:O	1:C:519:VAL:HG22	2.20	0.41
1:C:2562:ILE:HG22	1:C:2610:LEU:HD21	2.02	0.41
1:C:2701:PRO:C	1:C:2702:CYS:SG	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3235:SER:OG	1:C:3237:GLU:OE1	2.38	0.41
1:C:3395:ARG:HB3	1:C:3454:GLU:OE1	2.20	0.41
1:C:4086:GLY:O	1:C:4125:PHE:CE2	2.73	0.41
1:A:98:HIS:N	1:A:99:ARG:HH11	2.18	0.41
1:A:294:THR:O	1:A:298:GLY:N	2.50	0.41
1:A:1669:LEU:O	1:A:1673:VAL:HG22	2.20	0.41
1:A:3999:MET:HB3	1:A:3999:MET:HE3	1.77	0.41
1:B:438:ILE:HG23	1:B:518:ILE:HD11	2.02	0.41
1:B:887:ILE:HG13	1:B:907:LEU:CD1	2.50	0.41
1:B:1157:GLU:OE1	1:B:1157:GLU:N	2.53	0.41
1:B:2773:ASN:OD1	1:B:2773:ASN:C	2.57	0.41
1:B:3725:TYR:HA	1:B:3728:ILE:HD12	2.01	0.41
1:D:1694:LEU:O	1:D:1698:LEU:HG	2.20	0.41
1:D:2470:ILE:HG22	1:D:2525:GLY:HA3	2.01	0.41
1:D:3450:ASN:HA	1:D:3453:ARG:HG2	2.01	0.41
1:D:3478:MET:SD	1:D:3478:MET:O	2.78	0.41
1:D:3686:GLU:O	1:D:3687:GLU:HB3	2.20	0.41
1:C:110:ARG:HH21	1:C:115:ARG:HD2	1.85	0.41
1:C:877:ASN:HD21	1:C:970:LEU:HD13	1.85	0.41
1:C:1157:GLU:OE1	1:C:1157:GLU:N	2.53	0.41
1:C:2756:ASN:HA	1:C:2806:ARG:HH12	1.83	0.41
1:C:4666:VAL:N	1:C:4667:PRO:CD	2.83	0.41
1:A:1204:LEU:HD12	1:A:1234:VAL:HB	2.03	0.41
1:A:1694:LEU:O	1:A:1698:LEU:HG	2.20	0.41
1:A:1742:THR:HA	1:A:1745:ILE:HD12	2.02	0.41
1:A:1996:ARG:NE	1:A:1999:ARG:NH1	2.61	0.41
1:A:5024:ALA:HB3	1:D:4972:PRO:HB3	2.02	0.41
1:B:14:LEU:CB	1:B:101:LEU:HD12	2.50	0.41
1:B:648:ILE:HD11	1:B:821:LEU:CD1	2.50	0.41
1:B:1758:ARG:NH2	1:B:1759:ARG:CZ	2.83	0.41
1:B:2233:CYS:HA	1:B:2237:CYS:HB2	2.03	0.41
1:B:3294:PRO:HB2	1:B:3297:PRO:HD2	2.02	0.41
1:B:3891:LEU:O	1:B:3899:PHE:CD2	2.71	0.41
1:D:39:ALA:O	1:D:111:HIS:CE1	2.73	0.41
1:D:224:HIS:HB2	1:D:229:GLU:OE2	2.21	0.41
1:D:364:PRO:O	1:D:365:LYS:HB3	2.19	0.41
1:D:1515:VAL:O	1:D:1531:ALA:O	2.38	0.41
1:D:2138:LEU:O	1:D:2141:ALA:N	2.45	0.41
1:D:2376:LEU:HD11	1:D:2426:TYR:HB3	2.02	0.41
1:D:2440:MET:O	1:D:2444:GLN:OE1	2.38	0.41
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3249:LEU:HD11	1:D:3273:THR:HG21	2.01	0.41
1:D:4161:ARG:HA	1:D:4164:LEU:HD12	2.02	0.41
1:C:14:LEU:CB	1:C:101:LEU:HD12	2.51	0.41
1:C:866:HIS:HA	1:C:869:ARG:HG2	2.02	0.41
1:C:1743[B]:ARG:NH2	1:C:1967:ASP:OD2	2.52	0.41
1:C:1758:ARG:NH2	1:C:1759:ARG:NH1	2.69	0.41
1:C:2211:MET:SD	1:C:2272:PRO:HG3	2.60	0.41
1:C:2233:CYS:HA	1:C:2237:CYS:HB2	2.02	0.41
1:C:3874:VAL:O	1:C:3953:LYS:NZ	2.53	0.41
1:A:908:VAL:HG13	1:A:909:ASN:N	2.34	0.41
1:A:1143:TRP:HB2	1:A:1147:ASP:HB2	2.01	0.41
1:A:2233:CYS:HA	1:A:2237:CYS:HB2	2.03	0.41
1:A:2614:ILE:CG2	1:A:2618:MET:HB2	2.51	0.41
1:A:3822:ASP:OD1	1:A:3823:LYS:N	2.53	0.41
1:A:3905:THR:HA	1:A:3912:THR:OG1	2.20	0.41
1:A:4666:VAL:N	1:A:4667:PRO:CD	2.83	0.41
1:A:4949:GLN:HA	1:A:4952:GLU:HG3	2.02	0.41
1:B:224:HIS:HB2	1:B:229:GLU:OE2	2.21	0.41
1:B:866:HIS:HA	1:B:869:ARG:HG2	2.02	0.41
1:B:908:VAL:HG13	1:B:909:ASN:N	2.35	0.41
1:B:1068:ARG:CA	1:B:1071:ARG:HH11	2.32	0.41
1:B:1694:LEU:O	1:B:1698:LEU:HG	2.20	0.41
1:B:1754:GLY:O	1:B:1758:ARG:HB2	2.20	0.41
1:B:2282:ASP:HA	1:B:2341:VAL:HG13	2.02	0.41
1:B:3822:ASP:OD1	1:B:3823:LYS:N	2.53	0.41
1:B:3874:VAL:O	1:B:3953:LYS:NZ	2.53	0.41
1:D:1204:LEU:HD12	1:D:1234:VAL:HB	2.03	0.41
1:D:2211:MET:SD	1:D:2272:PRO:HG3	2.60	0.41
1:D:3268:HIS:ND1	1:D:3272:ILE:HD12	2.35	0.41
1:D:3391:GLU:HG2	1:D:3395:ARG:HH21	1.83	0.41
1:D:4003:LEU:HA	1:D:4009:GLN:OE1	2.20	0.41
1:D:4214:LYS:O	1:D:4218:ILE:HG12	2.20	0.41
1:D:4666:VAL:N	1:D:4667:PRO:CD	2.83	0.41
1:D:4748:LEU:O	1:D:4751:THR:OG1	2.32	0.41
1:C:98:HIS:N	1:C:99:ARG:HH11	2.18	0.41
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.54	0.41
1:C:3018:LEU:HD21	1:C:3075:LEU:O	2.20	0.41
1:C:3478:MET:O	1:C:3478:MET:SD	2.78	0.41
1:C:3504:SER:HB2	1:C:3507:THR:HG23	2.03	0.41
1:C:3985:LEU:HD11	1:C:4026:MET:CE	2.50	0.41
1:C:4000:MET:HE1	1:C:4061:PHE:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:39:ALA:O	1:A:111:HIS:CE1	2.73	0.41
1:A:438:ILE:HG23	1:A:518:ILE:HD11	2.02	0.41
1:A:2441:HIS:CE1	1:A:2442:LEU:HG	2.56	0.41
1:A:2625:ARG:NH1	1:A:2629:ASP:OD1	2.51	0.41
1:B:594:GLY:HA2	1:B:1594:ARG:HD2	2.03	0.41
1:B:1425:GLU:OE2	1:B:1425:GLU:N	2.53	0.41
1:B:1669:LEU:O	1:B:1673:VAL:HG22	2.21	0.41
1:B:2470:ILE:HG22	1:B:2525:GLY:HA3	2.01	0.41
1:B:2701:PRO:C	1:B:2702:CYS:SG	2.98	0.41
1:B:3177:THR:O	1:B:3179:LYS:NZ	2.36	0.41
1:B:3478:MET:SD	1:B:3478:MET:O	2.78	0.41
1:B:4214:LYS:O	1:B:4218:ILE:HG12	2.20	0.41
1:B:4705:VAL:HG13	1:B:4711:PHE:HE1	1.85	0.41
1:D:98:HIS:N	1:D:99:ARG:HH11	2.18	0.41
1:D:648:ILE:HD11	1:D:821:LEU:CD1	2.50	0.41
1:D:1036:ARG:HH11	1:D:1036:ARG:HD3	1.48	0.41
1:D:2614:ILE:CG2	1:D:2618:MET:HB2	2.51	0.41
1:D:2782:ASP:N	1:D:2782:ASP:OD1	2.54	0.41
1:D:3725:TYR:O	1:D:3729:MET:HG3	2.20	0.41
1:D:3822:ASP:OD1	1:D:3823:LYS:N	2.53	0.41
1:C:1036:ARG:HH11	1:C:1036:ARG:HD3	1.48	0.41
1:C:3508:SER:O	1:C:3511:VAL:HG22	2.21	0.41
1:C:3716:LEU:HD11	1:C:3782:MET:HE1	2.03	0.41
1:C:4923:PHE:HA	1:C:4927:ILE:HD12	2.01	0.41
1:A:887:ILE:HG13	1:A:907:LEU:CD1	2.50	0.41
1:A:1754:GLY:O	1:A:1758:ARG:HB2	2.20	0.41
1:A:2801:ASP:HA	1:A:2804:ILE:HG12	2.02	0.41
1:A:3445:TRP:O	1:A:3452:LYS:NZ	2.43	0.41
1:A:3478:MET:O	1:A:3478:MET:SD	2.78	0.41
2:F:24:VAL:HG21	2:F:59:TRP:HZ3	1.85	0.41
1:B:39:ALA:O	1:B:111:HIS:CE1	2.73	0.41
1:B:1204:LEU:HD12	1:B:1234:VAL:HB	2.03	0.41
1:B:2441:HIS:CE1	1:B:2442:LEU:HG	2.56	0.41
1:B:2562:ILE:HG22	1:B:2610:LEU:HD21	2.01	0.41
1:B:4000:MET:HG2	1:B:4061:PHE:CD2	2.56	0.41
1:B:4086:GLY:O	1:B:4125:PHE:CE2	2.73	0.41
1:B:4666:VAL:N	1:B:4667:PRO:CD	2.83	0.41
1:D:2135:LEU:O	1:D:3658:LYS:NZ	2.51	0.41
1:D:2946:LEU:O	1:D:2946:LEU:CD2	2.62	0.41
1:D:3107:VAL:HG12	1:D:3175:LEU:HD21	2.02	0.41
1:D:3395:ARG:HB3	1:D:3454:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4205:TRP:CH2	1:D:4214:LYS:HD3	2.56	0.41
1:C:39:ALA:O	1:C:111:HIS:CE1	2.73	0.41
1:C:594:GLY:HA2	1:C:1594:ARG:HD2	2.03	0.41
1:C:708:GLY:HA3	1:C:722:TRP:HB3	2.02	0.41
1:C:1425:GLU:OE2	1:C:1425:GLU:N	2.53	0.41
1:C:2967:MET:HG3	1:C:3042:LEU:HD12	2.02	0.41
1:C:3450:ASN:HA	1:C:3453:ARG:HG2	2.01	0.41
1:C:4000:MET:HG2	1:C:4061:PHE:CD2	2.56	0.41
1:C:4253:GLU:OE1	1:C:4253:GLU:N	2.52	0.41
1:A:594:GLY:HA2	1:A:1594:ARG:HD2	2.03	0.41
1:A:2000:SER:OG	1:A:2004:GLU:HB2	2.19	0.41
1:A:2969:ILE:O	1:A:2973:PHE:CD1	2.73	0.41
1:A:2978:GLU:HA	1:A:2981:VAL:HG12	2.02	0.41
1:A:3249:LEU:HD11	1:A:3273:THR:HG21	2.01	0.41
1:A:3395:ARG:HB3	1:A:3454:GLU:OE1	2.20	0.41
1:A:4161:ARG:HA	1:A:4164:LEU:HD12	2.01	0.41
2:H:24:VAL:HG21	2:H:59:TRP:HZ3	1.85	0.41
1:B:266:ARG:NH2	1:B:330:ASP:OD1	2.52	0.41
1:B:1063:VAL:HG13	1:B:1064:GLU:N	2.36	0.41
1:B:1742:THR:HA	1:B:1745:ILE:HD12	2.02	0.41
1:B:1743[B]:ARG:NH2	1:B:1967:ASP:OD2	2.52	0.41
1:B:2782:ASP:OD1	1:B:2782:ASP:N	2.54	0.41
1:B:3111:ARG:NH2	1:B:3175:LEU:N	2.69	0.41
1:D:14:LEU:CB	1:D:101:LEU:HD12	2.50	0.41
1:D:1032:LYS:C	1:D:1036:ARG:HH12	2.18	0.41
1:D:1157:GLU:OE1	1:D:1157:GLU:N	2.53	0.41
1:D:1758:ARG:NH2	1:D:1759:ARG:NH1	2.68	0.41
1:D:2233:CYS:HA	1:D:2237:CYS:HB2	2.03	0.41
1:D:2562:ILE:HG22	1:D:2610:LEU:HD21	2.02	0.41
1:D:3018:LEU:HD21	1:D:3075:LEU:O	2.20	0.41
1:D:3111:ARG:NH2	1:D:3175:LEU:N	2.69	0.41
1:D:4942:GLU:O	1:D:4946:GLN:HG3	2.21	0.41
1:C:234:SER:OG	1:C:240:ASP:OD2	2.29	0.41
1:C:336:PRO:HA	1:C:337:PRO:HD3	1.87	0.41
1:C:1705:GLY:HA3	1:C:1836:PHE:CG	2.56	0.41
1:C:2226:PRO:CA	1:C:2267:MET:HE1	2.51	0.41
1:C:2441:HIS:CE1	1:C:2442:LEU:HG	2.56	0.41
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.55	0.41
1:C:4000:MET:HE1	1:C:4058:ILE:HA	2.02	0.41
1:C:4003:LEU:HA	1:C:4009:GLN:OE1	2.19	0.41
1:C:4705:VAL:HG13	1:C:4711:PHE:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:226:HIS:ND1	1:A:226:HIS:O	2.53	0.41
1:A:439:GLU:HG2	1:A:440:ALA:N	2.36	0.41
1:A:516:LYS:O	1:A:519:VAL:HG22	2.20	0.41
1:A:877:ASN:HD21	1:A:970:LEU:HD13	1.84	0.41
1:A:1705:GLY:HA3	1:A:1836:PHE:CG	2.56	0.41
1:A:1758:ARG:NH2	1:A:1759:ARG:NH1	2.68	0.41
1:A:2150:GLU:HG2	1:A:2151:ASP:N	2.36	0.41
1:A:3235:SER:OG	1:A:3237:GLU:OE1	2.38	0.41
1:A:4888:TYR:HA	1:B:4918:ILE:HD11	2.03	0.41
1:B:591:ASP:HA	1:B:631:LEU:HD21	2.03	0.41
1:B:898:ASP:HB2	1:B:901:LYS:HB2	2.02	0.41
1:B:924:MET:O	1:B:928:THR:HG23	2.21	0.41
1:B:1423:ASP:O	1:B:1427:ILE:HG22	2.21	0.41
1:B:2044:ILE:HD12	1:B:2044:ILE:H	1.85	0.41
1:B:2967:MET:HG3	1:B:3042:LEU:HD12	2.02	0.41
1:B:3504:SER:HB2	1:B:3507:THR:HG23	2.03	0.41
1:B:3508:SER:O	1:B:3511:VAL:HG22	2.21	0.41
1:B:3879:GLU:HG2	1:B:3880:PHE:N	2.36	0.41
1:B:4061:PHE:CE2	1:B:4065:PHE:HE2	2.39	0.41
1:D:1063:VAL:HG13	1:D:1064:GLU:N	2.36	0.41
1:D:1931:LEU:HD13	1:D:1935:VAL:CG1	2.47	0.41
1:D:2701:PRO:C	1:D:2702:CYS:SG	2.98	0.41
1:D:2760:GLU:OE2	1:D:2794:TYR:CE1	2.74	0.41
1:D:3508:SER:O	1:D:3511:VAL:HG22	2.21	0.41
1:D:3959:LYS:HG3	1:D:4022:ASP:OD2	2.21	0.41
1:D:4923:PHE:HA	1:D:4927:ILE:HD12	2.01	0.41
1:C:591:ASP:HA	1:C:631:LEU:HD21	2.03	0.41
1:C:924:MET:O	1:C:928:THR:HG23	2.21	0.41
1:C:2777:TYR:CD1	1:C:2791:LEU:HD12	2.43	0.41
1:C:3268:HIS:ND1	1:C:3272:ILE:HD12	2.35	0.41
1:A:224:HIS:HB2	1:A:229:GLU:OE2	2.21	0.41
1:A:371:VAL:HG13	1:A:371:VAL:O	2.20	0.41
1:A:866:HIS:HA	1:A:869:ARG:HG2	2.02	0.41
1:A:950:LEU:HD12	1:A:950:LEU:O	2.21	0.41
1:A:1063:VAL:HG13	1:A:1064:GLU:N	2.36	0.41
1:A:1423:ASP:O	1:A:1427:ILE:HG22	2.21	0.41
1:A:2430:ILE:HG22	1:A:2505:PHE:HB2	2.02	0.41
1:A:2440:MET:O	1:A:2444:GLN:OE1	2.38	0.41
1:A:3077:ALA:O	1:A:3081:MET:HG2	2.21	0.41
1:A:3281:LEU:HB2	1:A:3282:PRO:HD3	2.03	0.41
1:A:3879:GLU:HG2	1:A:3880:PHE:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4000:MET:HG2	1:A:4061:PHE:CD2	2.56	0.41
2:E:24:VAL:HG21	2:E:59:TRP:HZ3	1.85	0.41
1:B:110:ARG:HH21	1:B:115:ARG:HD2	1.85	0.41
1:B:361:ALA:O	1:B:362:PRO:C	2.59	0.41
1:B:371:VAL:HG13	1:B:371:VAL:O	2.20	0.41
1:B:439:GLU:HG2	1:B:440:ALA:N	2.36	0.41
1:B:516:LYS:O	1:B:519:VAL:HG22	2.20	0.41
1:B:647:ASN:ND2	1:B:820:ARG:O	2.44	0.41
1:B:842:PRO:O	1:B:1196:PRO:HA	2.21	0.41
1:B:950:LEU:O	1:B:950:LEU:HD12	2.21	0.41
1:B:1758:ARG:NH2	1:B:1759:ARG:NH1	2.68	0.41
1:B:2226:PRO:O	1:B:2267:MET:CE	2.65	0.41
1:B:2777:TYR:CD1	1:B:2791:LEU:HD12	2.43	0.41
1:B:3300:ALA:HB3	1:B:3301:PRO:CD	2.39	0.41
1:B:3946:GLN:NE2	1:B:3949:ARG:HD3	2.36	0.41
1:B:3959:LYS:HG3	1:B:4022:ASP:OD2	2.21	0.41
1:B:4952:GLU:C	1:B:4952:GLU:OE1	2.60	0.41
1:D:257:ARG:O	1:D:284:HIS:NE2	2.43	0.41
1:D:591:ASP:HA	1:D:631:LEU:HD21	2.03	0.41
1:D:594:GLY:HA2	1:D:1594:ARG:HD2	2.03	0.41
1:D:877:ASN:HD21	1:D:970:LEU:HD13	1.85	0.41
1:D:887:ILE:HG13	1:D:907:LEU:CD1	2.50	0.41
1:D:1423:ASP:HB3	1:D:1426:ILE:HD12	2.01	0.41
1:D:1461:ASP:OD2	1:D:1468:LYS:NZ	2.49	0.41
1:D:1705:GLY:HA3	1:D:1836:PHE:CG	2.56	0.41
1:D:1948:ASP:OD1	1:D:2126:ARG:NH2	2.45	0.41
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.21	0.41
1:D:2282:ASP:HA	1:D:2341:VAL:HG13	2.02	0.41
1:D:2302:LEU:CD1	1:D:2328:GLY:HA2	2.51	0.41
1:D:2430:ILE:HG22	1:D:2505:PHE:HB2	2.02	0.41
1:D:2608:MET:CE	1:D:2642:LYS:NZ	2.84	0.41
1:D:2699:ALA:O	1:D:2702:CYS:HA	2.21	0.41
1:D:2978:GLU:HA	1:D:2981:VAL:HG12	2.02	0.41
1:D:3054:VAL:HG13	1:D:3055:SER:N	2.36	0.41
1:D:3294:PRO:HB2	1:D:3297:PRO:HD2	2.02	0.41
1:D:3879:GLU:HG2	1:D:3880:PHE:N	2.36	0.41
1:D:4021:LYS:N	1:D:4139:ILE:HD13	2.36	0.41
1:D:4061:PHE:CE2	1:D:4065:PHE:HE2	2.39	0.41
1:C:358:THR:OG1	1:C:383:HIS:ND1	2.42	0.41
1:C:361:ALA:O	1:C:362:PRO:C	2.59	0.41
1:C:371:VAL:O	1:C:371:VAL:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1063:VAL:HG13	1:C:1064:GLU:N	2.36	0.41
1:C:2044:ILE:H	1:C:2044:ILE:HD12	1.86	0.41
1:C:2282:ASP:HA	1:C:2341:VAL:HG13	2.02	0.41
1:C:2396:GLY:O	1:C:2397:VAL:C	2.59	0.41
1:C:2760:GLU:OE2	1:C:2794:TYR:CE1	2.74	0.41
1:C:3249:LEU:HD11	1:C:3273:THR:HG21	2.01	0.41
1:C:3769:ARG:O	1:C:3773:ARG:NH1	2.48	0.41
1:C:3946:GLN:NE2	1:C:3949:ARG:HD3	2.36	0.41
1:C:4061:PHE:CE2	1:C:4065:PHE:HE2	2.39	0.41
1:C:4942:GLU:O	1:C:4946:GLN:HG3	2.21	0.41
1:A:361:ALA:O	1:A:362:PRO:C	2.59	0.41
1:A:438:ILE:HD12	1:A:438:ILE:H	1.86	0.41
1:A:1157:GLU:OE1	1:A:1157:GLU:N	2.53	0.41
1:A:1425:GLU:OE2	1:A:1425:GLU:N	2.53	0.41
1:A:1931:LEU:HD13	1:A:1935:VAL:CG1	2.47	0.41
1:A:3946:GLN:NE2	1:A:3949:ARG:HD3	2.36	0.41
1:A:3959:LYS:HG3	1:A:4022:ASP:OD2	2.21	0.41
1:B:438:ILE:HD12	1:B:438:ILE:H	1.86	0.41
1:B:2135:LEU:O	1:B:3658:LYS:NZ	2.51	0.41
1:B:2150:GLU:HG2	1:B:2151:ASP:N	2.36	0.41
1:B:2430:ILE:HG22	1:B:2505:PHE:HB2	2.02	0.41
1:B:2760:GLU:OE2	1:B:2794:TYR:CE1	2.74	0.41
1:B:2790:MET:HA	1:B:2792:ARG:NH1	2.36	0.41
1:B:2801:ASP:HA	1:B:2804:ILE:HG12	2.02	0.41
1:B:4021:LYS:N	1:B:4139:ILE:HD13	2.36	0.41
1:D:380:GLN:OE1	1:D:380:GLN:N	2.47	0.41
1:D:1425:GLU:OE2	1:D:1425:GLU:N	2.53	0.41
1:D:2323:TRP:NE1	1:D:2366:PRO:HG3	2.36	0.41
1:D:2486:VAL:O	1:D:2486:VAL:HG13	2.21	0.41
1:D:2799:GLU:O	1:D:2803:GLU:OE1	2.38	0.41
1:D:3281:LEU:HB2	1:D:3282:PRO:HD3	2.03	0.41
1:D:4253:GLU:OE1	1:D:4253:GLU:N	2.52	0.41
1:C:1013:ILE:N	1:C:1014:PRO:CD	2.84	0.41
1:C:2978:GLU:HA	1:C:2981:VAL:HG12	2.02	0.41
1:C:3054:VAL:HG13	1:C:3055:SER:N	2.36	0.41
1:C:3111:ARG:NH2	1:C:3175:LEU:N	2.69	0.41
1:C:3905:THR:HA	1:C:3912:THR:OG1	2.20	0.41
1:C:4205:TRP:CH2	1:C:4214:LYS:HD3	2.56	0.41
1:C:4949:GLN:HA	1:C:4952:GLU:HG3	2.02	0.41
1:A:14:LEU:CB	1:A:101:LEU:HD12	2.50	0.40
1:A:924:MET:O	1:A:928:THR:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2233:CYS:HB3	1:A:2237:CYS:HB3	1.67	0.40
1:A:2302:LEU:CD1	1:A:2328:GLY:HA2	2.51	0.40
1:A:2608:MET:CE	1:A:2642:LYS:NZ	2.84	0.40
1:A:2790:MET:HA	1:A:2792:ARG:NH1	2.36	0.40
1:A:3018:LEU:HD21	1:A:3075:LEU:O	2.20	0.40
1:A:3508:SER:O	1:A:3511:VAL:HG22	2.21	0.40
1:A:4021:LYS:N	1:A:4139:ILE:HD13	2.36	0.40
1:B:294:THR:O	1:B:298:GLY:N	2.51	0.40
1:B:2212:VAL:HG23	1:B:2213:ASN:N	2.37	0.40
1:B:2608:MET:CE	1:B:2642:LYS:NZ	2.84	0.40
1:B:2773:ASN:OD1	1:B:2774:ASN:N	2.55	0.40
1:B:3018:LEU:HD21	1:B:3075:LEU:O	2.20	0.40
1:B:3542:LEU:O	1:B:3543:LYS:HB2	2.21	0.40
1:B:3905:THR:HA	1:B:3912:THR:OG1	2.20	0.40
1:D:421:PHE:HE2	1:D:507:ALA:HB2	1.79	0.40
1:D:950:LEU:HD12	1:D:950:LEU:O	2.21	0.40
1:D:1126:GLY:HA3	1:D:1143:TRP:CE3	2.57	0.40
1:D:3680:ALA:HB1	1:D:3683:GLN:NE2	2.37	0.40
1:D:3946:GLN:NE2	1:D:3949:ARG:HD3	2.36	0.40
1:C:1033:ARG:HA	1:C:1036:ARG:NH2	2.36	0.40
1:C:1754:GLY:O	1:C:1758:ARG:HB2	2.20	0.40
1:C:3891:LEU:O	1:C:3899:PHE:CD2	2.71	0.40
1:A:455:PRO:HB2	1:A:459:LEU:HD12	2.03	0.40
1:A:869:ARG:NH2	1:A:941:MET:CE	2.85	0.40
1:A:1031:THR:O	1:A:1032:LYS:C	2.59	0.40
1:A:2699:ALA:O	1:A:2702:CYS:HA	2.21	0.40
1:A:2810:LYS:O	1:A:2814:LYS:HG3	2.22	0.40
1:A:3071:LEU:O	1:A:3075:LEU:HG	2.21	0.40
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.21	0.40
1:A:3414:ARG:NH1	1:A:3472:ALA:HB3	2.37	0.40
1:A:4061:PHE:CE2	1:A:4065:PHE:HE2	2.39	0.40
1:A:4649:LEU:O	1:A:4653:VAL:HG23	2.22	0.40
1:A:4952:GLU:C	1:A:4952:GLU:OE1	2.60	0.40
1:B:869:ARG:NH2	1:B:941:MET:CE	2.85	0.40
1:B:2376:LEU:HD11	1:B:2426:TYR:HB3	2.02	0.40
1:B:2978:GLU:HA	1:B:2981:VAL:HG12	2.02	0.40
1:B:3077:ALA:O	1:B:3081:MET:HG2	2.21	0.40
1:B:3235:SER:OG	1:B:3237:GLU:OE1	2.38	0.40
1:B:4205:TRP:CH2	1:B:4214:LYS:HD3	2.56	0.40
1:B:4649:LEU:O	1:B:4653:VAL:HG23	2.21	0.40
1:D:438:ILE:HD12	1:D:438:ILE:H	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:869:ARG:NH2	1:D:941:MET:CE	2.85	0.40
1:D:955:LEU:HD12	1:D:966:LYS:HB3	2.03	0.40
1:D:1031:THR:O	1:D:1032:LYS:C	2.59	0.40
1:D:1742:THR:HA	1:D:1745:ILE:HD12	2.02	0.40
1:D:2150:GLU:HG2	1:D:2151:ASP:N	2.36	0.40
1:D:2396:GLY:O	1:D:2397:VAL:C	2.59	0.40
1:D:3504:SER:HB2	1:D:3507:THR:HG23	2.03	0.40
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.22	0.40
1:D:3628:ARG:HB2	1:D:3631:ALA:HB3	2.03	0.40
1:D:4000:MET:HG2	1:D:4061:PHE:CD2	2.56	0.40
1:D:4704:LEU:O	1:D:4774:LYS:NZ	2.52	0.40
1:C:455:PRO:HB2	1:C:459:LEU:HD12	2.03	0.40
1:C:752:VAL:HB	1:C:753:PRO:C	2.42	0.40
1:C:1031:THR:O	1:C:1032:LYS:C	2.59	0.40
1:C:1204:LEU:HD12	1:C:1234:VAL:HB	2.03	0.40
1:C:1705:GLY:N	1:C:1706:PRO:CD	2.85	0.40
1:C:2150:GLU:HG2	1:C:2151:ASP:N	2.36	0.40
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.21	0.40
1:C:2376:LEU:HD11	1:C:2426:TYR:HB3	2.02	0.40
1:C:3879:GLU:HG2	1:C:3880:PHE:N	2.36	0.40
1:C:4826:ILE:O	1:C:4829:SER:OG	2.25	0.40
1:A:418:LEU:HD23	1:A:421:PHE:HZ	1.86	0.40
1:A:591:ASP:HA	1:A:631:LEU:HD21	2.03	0.40
1:A:955:LEU:HD12	1:A:966:LYS:HB3	2.03	0.40
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.54	0.40
1:A:3111:ARG:NH2	1:A:3175:LEU:N	2.69	0.40
1:A:3542:LEU:O	1:A:3543:LYS:HB2	2.21	0.40
1:A:4205:TRP:CH2	1:A:4214:LYS:HD3	2.56	0.40
2:H:74:LEU:HD13	2:H:101:VAL:CG2	2.51	0.40
1:B:708:GLY:HA3	1:B:722:TRP:HB3	2.02	0.40
1:B:1013:ILE:N	1:B:1014:PRO:CD	2.84	0.40
1:B:1033:ARG:HA	1:B:1036:ARG:NH2	2.36	0.40
1:B:1123:VAL:HG23	1:B:1132:TRP:HB2	2.04	0.40
1:B:1126:GLY:HA3	1:B:1143:TRP:CE3	2.57	0.40
1:B:2699:ALA:O	1:B:2702:CYS:HA	2.21	0.40
1:B:3281:LEU:HB2	1:B:3282:PRO:HD3	2.03	0.40
1:B:4949:GLN:HA	1:B:4952:GLU:HG3	2.02	0.40
1:D:711:LEU:HD23	1:D:711:LEU:HA	1.97	0.40
1:D:842:PRO:O	1:D:1196:PRO:HA	2.21	0.40
1:D:1123:VAL:HG23	1:D:1132:TRP:HB2	2.04	0.40
1:D:2349:ASN:O	1:D:2353:VAL:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3622:LYS:HB3	1:D:3625:SER:OG	2.21	0.40
1:D:3891:LEU:O	1:D:3899:PHE:CD2	2.71	0.40
1:C:439:GLU:HG2	1:C:440:ALA:N	2.36	0.40
1:C:2799:GLU:O	1:C:2803:GLU:OE1	2.38	0.40
1:C:3725:TYR:O	1:C:3729:MET:HG3	2.20	0.40
1:A:908:VAL:HG23	1:A:963:ASN:HD22	1.86	0.40
1:A:1013:ILE:N	1:A:1014:PRO:CD	2.84	0.40
1:A:1126:GLY:HA3	1:A:1143:TRP:CE3	2.57	0.40
1:A:1979:LEU:CA	1:A:1982:ARG:NH2	2.84	0.40
1:A:2282:ASP:HA	1:A:2341:VAL:HG13	2.02	0.40
1:A:2482:ASP:OD2	1:A:2482:ASP:C	2.60	0.40
1:A:3454:GLU:HA	1:A:3454:GLU:OE2	2.22	0.40
1:A:4098:ASP:OD1	1:A:4098:ASP:C	2.60	0.40
1:A:4942:GLU:O	1:A:4946:GLN:HG3	2.21	0.40
2:G:74:LEU:HD13	2:G:101:VAL:CG2	2.51	0.40
1:B:106:ALA:HA	1:B:148:TRP:O	2.22	0.40
1:B:752:VAL:HB	1:B:753:PRO:C	2.42	0.40
1:B:1705:GLY:HA3	1:B:1836:PHE:CG	2.56	0.40
1:B:2107:GLN:O	1:B:3694:LYS:NZ	2.34	0.40
1:B:2323:TRP:NE1	1:B:2366:PRO:HG3	2.36	0.40
1:B:2349:ASN:O	1:B:2353:VAL:HG23	2.21	0.40
1:B:2396:GLY:O	1:B:2397:VAL:C	2.60	0.40
1:B:2614:ILE:CG2	1:B:2618:MET:HB2	2.51	0.40
1:B:3054:VAL:HG13	1:B:3055:SER:N	2.36	0.40
1:B:3454:GLU:HA	1:B:3454:GLU:OE2	2.22	0.40
1:B:4627:MET:HG2	1:B:4629:TYR:CZ	2.57	0.40
1:D:371:VAL:O	1:D:371:VAL:HG13	2.20	0.40
1:D:1669:LEU:O	1:D:1673:VAL:HG22	2.21	0.40
1:D:2441:HIS:CE1	1:D:2442:LEU:HG	2.56	0.40
1:C:210:GLU:HB2	1:C:213:TYR:HD2	1.86	0.40
1:C:224:HIS:HB2	1:C:229:GLU:OE2	2.21	0.40
1:C:1126:GLY:HA3	1:C:1143:TRP:CE3	2.57	0.40
1:C:2614:ILE:CG2	1:C:2618:MET:HB2	2.51	0.40
1:C:3071:LEU:O	1:C:3075:LEU:HG	2.21	0.40
1:C:3622:LYS:HB3	1:C:3625:SER:OG	2.21	0.40
1:A:842:PRO:O	1:A:1196:PRO:HA	2.21	0.40
1:A:2486:VAL:O	1:A:2486:VAL:HG13	2.21	0.40
1:A:2768:PHE:O	1:A:2772:GLN:OE1	2.40	0.40
1:A:2773:ASN:OD1	1:A:2774:ASN:N	2.55	0.40
1:A:2792:ARG:HB3	1:A:2796:THR:OG1	2.22	0.40
1:A:3680:ALA:HB1	1:A:3683:GLN:NE2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:2:VAL:HG22	2:F:58:GLY:HA2	2.03	0.40
2:F:90:ILE:HD11	1:B:1684:ALA:HA	2.03	0.40
1:B:1705:GLY:N	1:B:1706:PRO:CD	2.84	0.40
1:B:1979:LEU:CA	1:B:1982:ARG:NH2	2.84	0.40
1:B:2243:SER:HB2	1:B:3861:GLU:OE2	2.22	0.40
1:B:4098:ASP:OD1	1:B:4098:ASP:C	2.60	0.40
1:B:4942:GLU:O	1:B:4946:GLN:HG3	2.21	0.40
1:D:439:GLU:HG2	1:D:440:ALA:N	2.36	0.40
1:D:1013:ILE:N	1:D:1014:PRO:CD	2.84	0.40
1:D:1978:ALA:CA	1:D:1982:ARG:HH12	2.35	0.40
1:D:2243:SER:HB2	1:D:3861:GLU:OE2	2.22	0.40
1:D:2513:GLU:N	1:D:2513:GLU:OE1	2.55	0.40
1:D:2790:MET:HA	1:D:2792:ARG:NH1	2.36	0.40
1:C:438:ILE:HD12	1:C:438:ILE:H	1.87	0.40
1:C:842:PRO:O	1:C:1196:PRO:HA	2.21	0.40
1:C:1948:ASP:OD1	1:C:2126:ARG:NH2	2.45	0.40
1:C:1978:ALA:CA	1:C:1982:ARG:HH12	2.35	0.40
1:C:2212:VAL:HG23	1:C:2213:ASN:N	2.37	0.40
1:C:2302:LEU:CD1	1:C:2328:GLY:HA2	2.51	0.40
1:C:2486:VAL:HG13	1:C:2486:VAL:O	2.21	0.40
1:C:2773:ASN:OD1	1:C:2774:ASN:N	2.55	0.40
1:C:2790:MET:HA	1:C:2792:ARG:NH1	2.36	0.40
1:C:4851:TYR:HD1	1:C:4916:PHE:CE1	2.40	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48 65
1	B	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48 65

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	C	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48 65
1	D	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48 65
2	E	105/108 (97%)	99 (94%)	6 (6%)	0	100 100
2	F	105/108 (97%)	99 (94%)	6 (6%)	0	100 100
2	G	105/108 (97%)	99 (94%)	6 (6%)	0	100 100
2	H	105/108 (97%)	99 (94%)	6 (6%)	0	100 100
All	All	17960/20580 (87%)	17376 (97%)	568 (3%)	16 (0%)	50 65

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	3300	ALA
1	B	3300	ALA
1	D	3300	ALA
1	C	3300	ALA
1	A	2669	GLU
1	B	2669	GLU
1	D	2669	GLU
1	C	2669	GLU
1	A	2948	THR
1	B	2948	THR
1	D	2948	THR
1	C	2948	THR
1	A	4691	GLN
1	B	4691	GLN
1	D	4691	GLN
1	C	4691	GLN

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	3836/4276 (90%)	3815 (100%)	21 (0%)	86 93

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	3836/4276 (90%)	3815 (100%)	21 (0%)	86 93
1	C	3836/4276 (90%)	3815 (100%)	21 (0%)	86 93
1	D	3836/4276 (90%)	3815 (100%)	21 (0%)	86 93
2	E	89/90 (99%)	86 (97%)	3 (3%)	32 49
2	F	89/90 (99%)	86 (97%)	3 (3%)	32 49
2	G	89/90 (99%)	86 (97%)	3 (3%)	32 49
2	H	89/90 (99%)	86 (97%)	3 (3%)	32 49
All	All	15700/17464 (90%)	15604 (99%)	96 (1%)	82 92

All (96) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	155	LYS
1	A	421	PHE
1	A	941	MET
1	A	945	LYS
1	A	998	ARG
1	A	1036	ARG
1	A	1618	ARG
1	A	1759	ARG
1	A	2336	ARG
1	A	2738	ARG
1	A	2870[A]	GLU
1	A	2870[B]	GLU
1	A	3617	LYS
1	A	3630	ARG
1	A	3758	MET
1	A	3858	MET
1	A	3951	PHE
1	A	4161	ARG
1	A	4223	ASN
1	A	4720	VAL
1	A	4952	GLU
2	E	3	GLN
2	E	13	ARG
2	E	52	LYS
2	H	3	GLN
2	H	13	ARG
2	H	52	LYS
2	G	3	GLN

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Mol	Chain	Res	Type
2	G	13	ARG
2	G	52	LYS
2	F	3	GLN
2	F	13	ARG
2	F	52	LYS
1	B	155	LYS
1	B	421	PHE
1	B	941	MET
1	B	945	LYS
1	B	998	ARG
1	B	1036	ARG
1	B	1618	ARG
1	B	1759	ARG
1	B	2336	ARG
1	B	2738	ARG
1	B	2870[A]	GLU
1	B	2870[B]	GLU
1	B	3617	LYS
1	B	3630	ARG
1	B	3758	MET
1	B	3858	MET
1	B	3951	PHE
1	B	4161	ARG
1	B	4223	ASN
1	B	4720	VAL
1	B	4952	GLU
1	D	155	LYS
1	D	421	PHE
1	D	941	MET
1	D	945	LYS
1	D	998	ARG
1	D	1036	ARG
1	D	1618	ARG
1	D	1759	ARG
1	D	2336	ARG
1	D	2738	ARG
1	D	2870[A]	GLU
1	D	2870[B]	GLU
1	D	3617	LYS
1	D	3630	ARG
1	D	3758	MET
1	D	3858	MET

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Mol	Chain	Res	Type
1	D	3951	PHE
1	D	4161	ARG
1	D	4223	ASN
1	D	4720	VAL
1	D	4952	GLU
1	C	155	LYS
1	C	421	PHE
1	C	941	MET
1	C	945	LYS
1	C	998	ARG
1	C	1036	ARG
1	C	1618	ARG
1	C	1759	ARG
1	C	2336	ARG
1	C	2738	ARG
1	C	2870[A]	GLU
1	C	2870[B]	GLU
1	C	3617	LYS
1	C	3630	ARG
1	C	3758	MET
1	C	3858	MET
1	C	3951	PHE
1	C	4161	ARG
1	C	4223	ASN
1	C	4720	VAL
1	C	4952	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (55) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	105	HIS
1	A	838	HIS
1	A	879	HIS
1	A	889	GLN
1	A	904	HIS
1	A	1041	GLN
1	A	2417	HIS
1	A	2902	HIS
1	A	2991	HIS
1	A	3052	HIS
1	A	3109	ASN
1	A	3127	GLN

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Mol	Chain	Res	Type
1	A	5003	HIS
2	E	25	HIS
2	H	25	HIS
2	G	25	HIS
2	F	25	HIS
1	B	105	HIS
1	B	838	HIS
1	B	879	HIS
1	B	889	GLN
1	B	904	HIS
1	B	1041	GLN
1	B	2902	HIS
1	B	2991	HIS
1	B	3052	HIS
1	B	3109	ASN
1	B	3127	GLN
1	B	5003	HIS
1	D	105	HIS
1	D	838	HIS
1	D	879	HIS
1	D	889	GLN
1	D	904	HIS
1	D	1041	GLN
1	D	2417	HIS
1	D	2902	HIS
1	D	2991	HIS
1	D	3052	HIS
1	D	3109	ASN
1	D	3127	GLN
1	D	5003	HIS
1	C	105	HIS
1	C	838	HIS
1	C	879	HIS
1	C	889	GLN
1	C	904	HIS
1	C	1041	GLN
1	C	2417	HIS
1	C	2902	HIS
1	C	2991	HIS
1	C	3052	HIS
1	C	3109	ASN
1	C	3127	GLN

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Mol	Chain	Res	Type
1	C	5003	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 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	ATP	B	5301	-	28,33,33	0.61	0	34,52,52	1.00	3 (8%)
6	IBM	B	5304	-	8,17,17	0.80	0	11,25,25	2.30	4 (36%)
3	ATP	A	5301	-	28,33,33	0.60	0	34,52,52	1.00	3 (8%)
6	IBM	A	5304	-	8,17,17	0.77	0	11,25,25	2.29	4 (36%)
3	ATP	C	5301	-	28,33,33	0.61	0	34,52,52	1.00	3 (8%)
6	IBM	D	5304	-	8,17,17	0.78	0	11,25,25	2.29	4 (36%)
6	IBM	C	5304	-	8,17,17	0.78	0	11,25,25	2.29	4 (36%)
3	ATP	D	5301	-	28,33,33	0.60	0	34,52,52	1.00	3 (8%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the

Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

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

There are no bond length outliers.

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	D	5304	IBM	C5-C6-N1	-4.77	113.36	118.20
6	B	5304	IBM	C5-C6-N1	-4.77	113.36	118.20
6	C	5304	IBM	C5-C6-N1	-4.75	113.37	118.20
6	A	5304	IBM	C5-C6-N1	-4.74	113.39	118.20
6	B	5304	IBM	C11-N3-C4	4.02	121.87	118.46
6	C	5304	IBM	C11-N3-C4	4.02	121.87	118.46
6	A	5304	IBM	C11-N3-C4	4.01	121.86	118.46
6	D	5304	IBM	C11-N3-C4	3.98	121.83	118.46
6	D	5304	IBM	C4-C5-C6	3.12	122.33	119.96
6	B	5304	IBM	C4-C5-C6	3.11	122.33	119.96
6	C	5304	IBM	C4-C5-C6	3.07	122.30	119.96
6	A	5304	IBM	C4-C5-C6	3.05	122.28	119.96
3	B	5301	ATP	O4'-C1'-N9	-2.45	105.49	108.75
3	D	5301	ATP	O4'-C1'-N9	-2.43	105.52	108.75
3	A	5301	ATP	O4'-C1'-N9	-2.42	105.53	108.75
6	A	5304	IBM	C5-C4-N9	-2.42	105.90	110.87
6	B	5304	IBM	C5-C4-N9	-2.41	105.92	110.87
6	C	5304	IBM	C5-C4-N9	-2.41	105.92	110.87
3	C	5301	ATP	C5-C6-N6	2.40	123.97	120.31
6	D	5304	IBM	C5-C4-N9	-2.40	105.93	110.87
3	B	5301	ATP	C5-C6-N6	2.40	123.97	120.31
3	C	5301	ATP	O4'-C1'-N9	-2.39	105.58	108.75
3	A	5301	ATP	C5-C6-N6	2.38	123.94	120.31
3	D	5301	ATP	C5-C6-N6	2.37	123.92	120.31
3	D	5301	ATP	O2'-C2'-C3'	-2.26	104.57	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	5301	ATP	O2'-C2'-C3'	-2.26	104.59	111.82
3	C	5301	ATP	O2'-C2'-C3'	-2.25	104.60	111.82
3	B	5301	ATP	O2'-C2'-C3'	-2.25	104.61	111.82

There are no chirality outliers.

All (36) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	A	5304	IBM	C12-C11-N3-C4
6	A	5304	IBM	N3-C11-C12-C13
6	A	5304	IBM	N3-C11-C12-C14
6	B	5304	IBM	C12-C11-N3-C4
6	B	5304	IBM	N3-C11-C12-C13
6	B	5304	IBM	N3-C11-C12-C14
6	D	5304	IBM	C12-C11-N3-C4
6	D	5304	IBM	N3-C11-C12-C13
6	D	5304	IBM	N3-C11-C12-C14
6	C	5304	IBM	C12-C11-N3-C4
6	C	5304	IBM	N3-C11-C12-C13
6	C	5304	IBM	N3-C11-C12-C14
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	PB-O3B-PG-O1G
3	B	5301	ATP	PB-O3B-PG-O1G
3	D	5301	ATP	PB-O3B-PG-O1G
3	C	5301	ATP	PB-O3B-PG-O1G
3	A	5301	ATP	PB-O3A-PA-O1A
3	B	5301	ATP	PB-O3A-PA-O1A
3	D	5301	ATP	PB-O3A-PA-O1A
3	C	5301	ATP	PB-O3A-PA-O1A
3	A	5301	ATP	PB-O3B-PG-O2G
3	A	5301	ATP	PB-O3B-PG-O3G
3	B	5301	ATP	PB-O3B-PG-O2G
3	B	5301	ATP	PB-O3B-PG-O3G
3	D	5301	ATP	PB-O3B-PG-O2G
3	D	5301	ATP	PB-O3B-PG-O3G
3	C	5301	ATP	PB-O3B-PG-O2G
3	C	5301	ATP	PB-O3B-PG-O3G
3	A	5301	ATP	PB-O3A-PA-O2A
3	B	5301	ATP	PB-O3A-PA-O2A

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Mol	Chain	Res	Type	Atoms
3	D	5301	ATP	PB-O3A-PA-O2A
3	C	5301	ATP	PB-O3A-PA-O2A

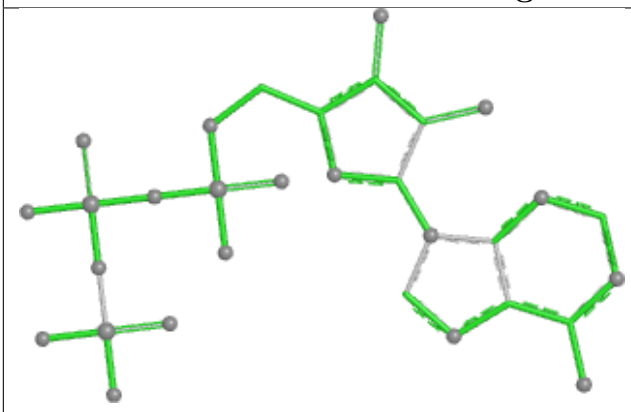
There are no ring outliers.

8 monomers are involved in 12 short contacts:

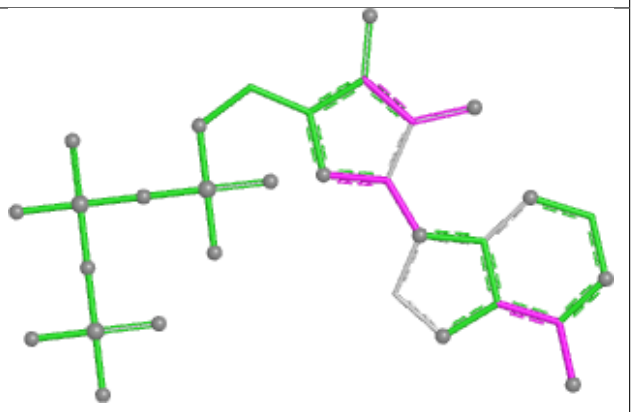
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	5301	ATP	1	0
6	B	5304	IBM	2	0
3	A	5301	ATP	1	0
6	A	5304	IBM	2	0
3	C	5301	ATP	1	0
6	D	5304	IBM	2	0
6	C	5304	IBM	2	0
3	D	5301	ATP	1	0

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

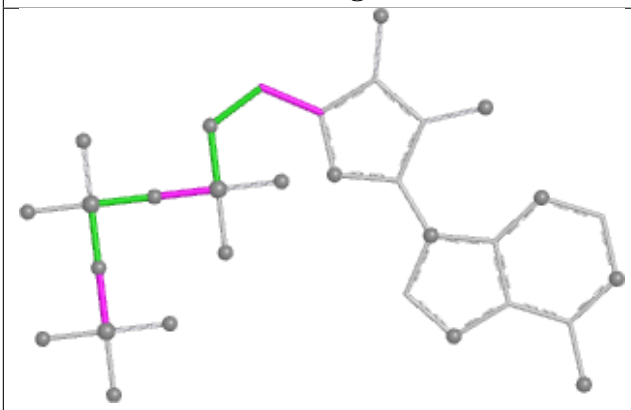
Ligand ATP B 5301



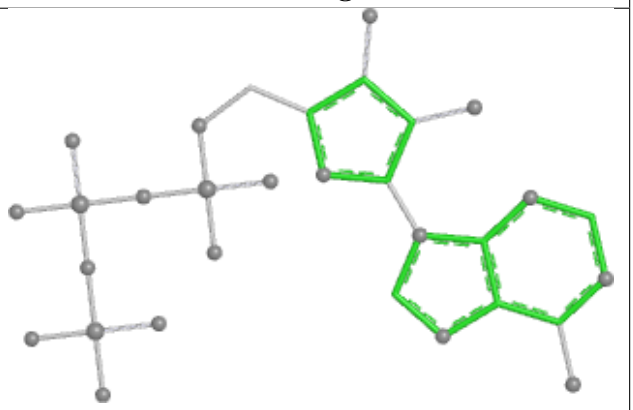
Bond lengths



Bond angles

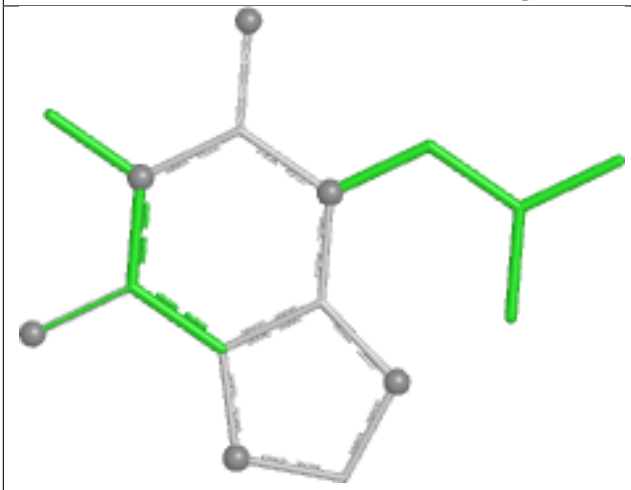


Torsions

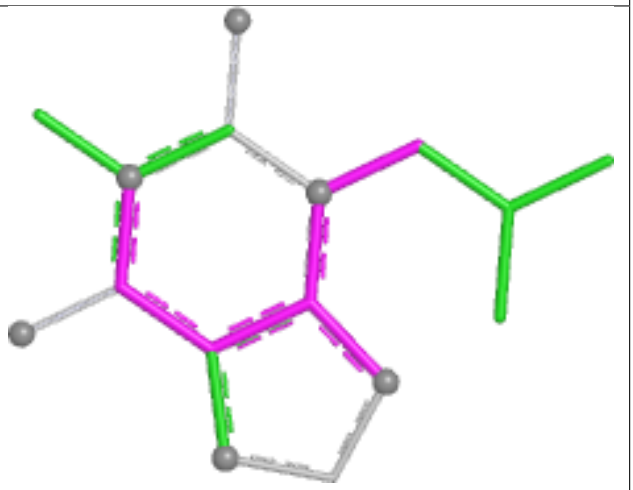


Rings

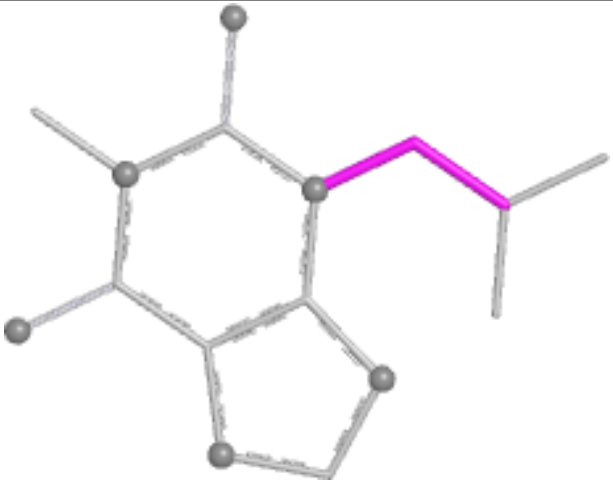
Ligand IBM B 5304



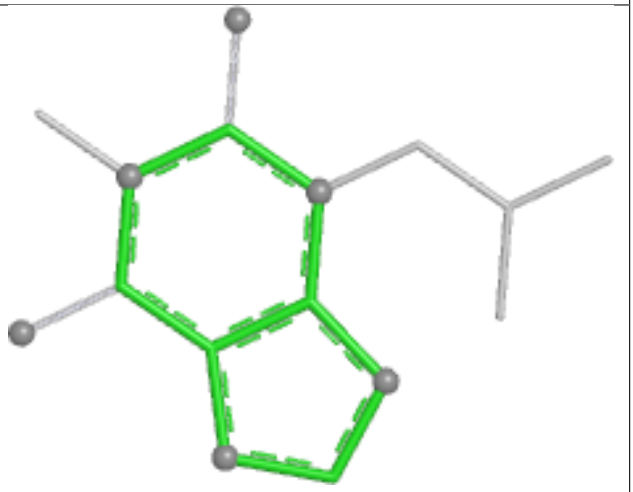
Bond lengths



Bond angles

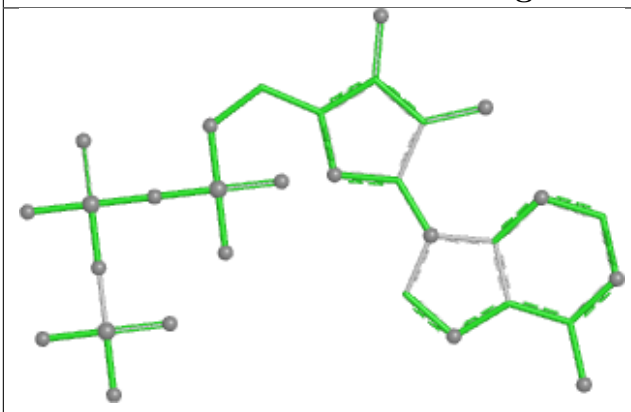


Torsions

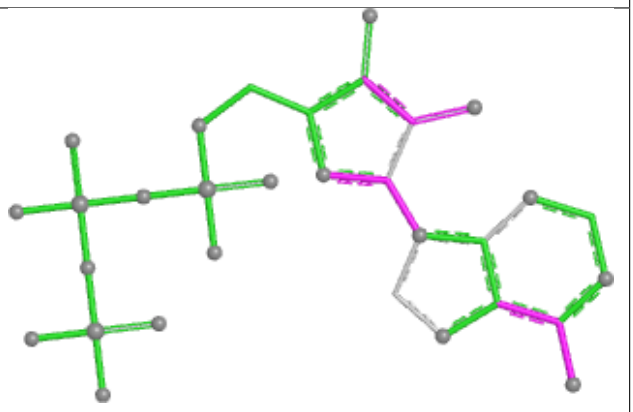


Rings

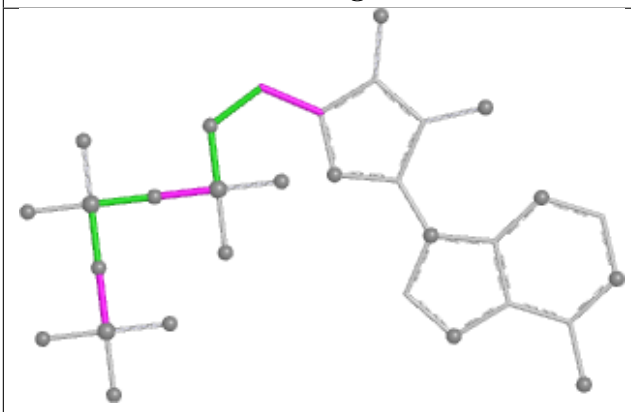
Ligand ATP A 5301



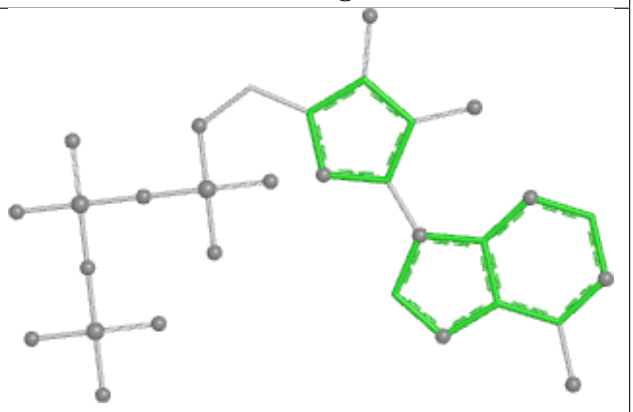
Bond lengths



Bond angles

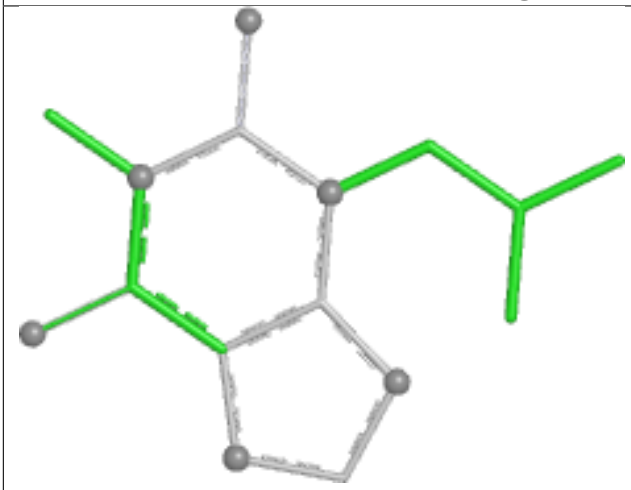


Torsions

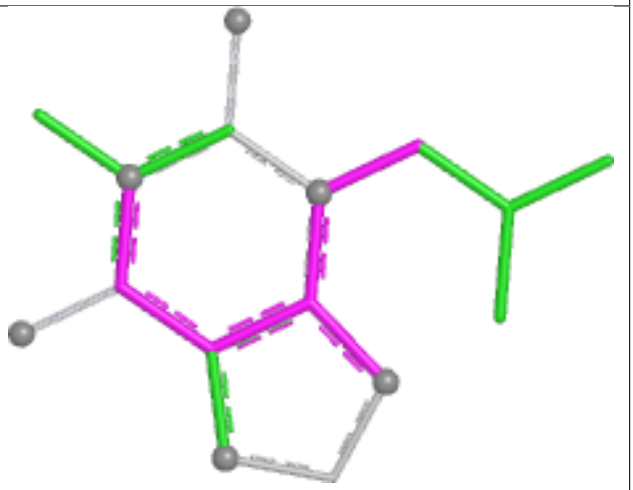


Rings

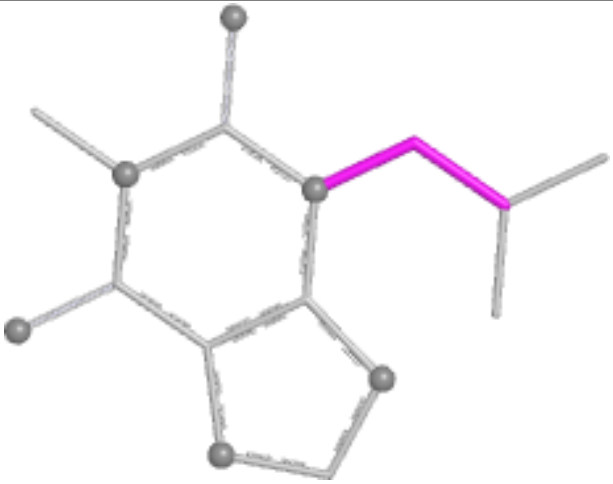
Ligand IBM A 5304



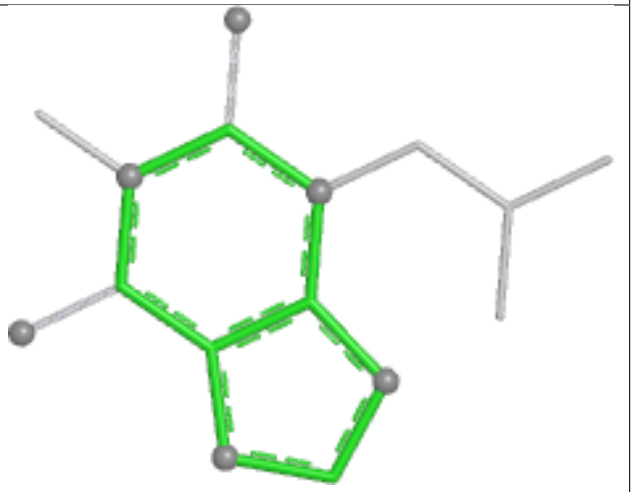
Bond lengths



Bond angles

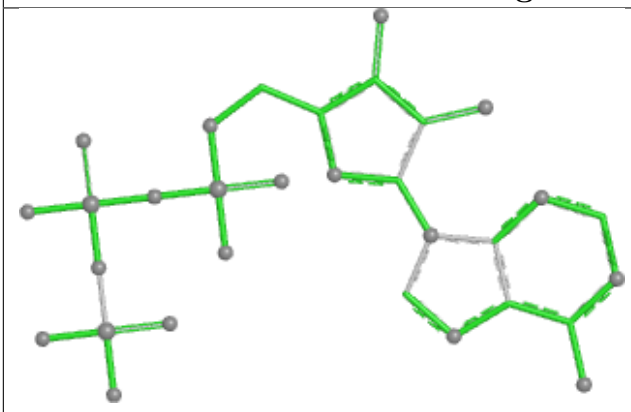


Torsions

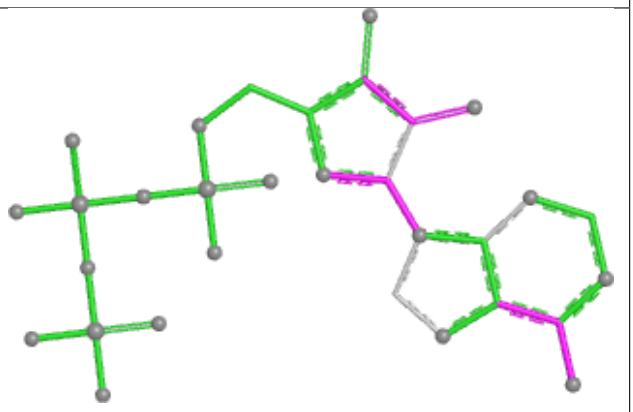


Rings

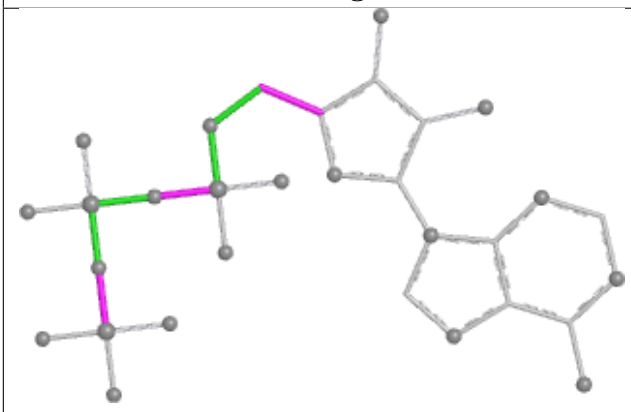
Ligand ATP C 5301



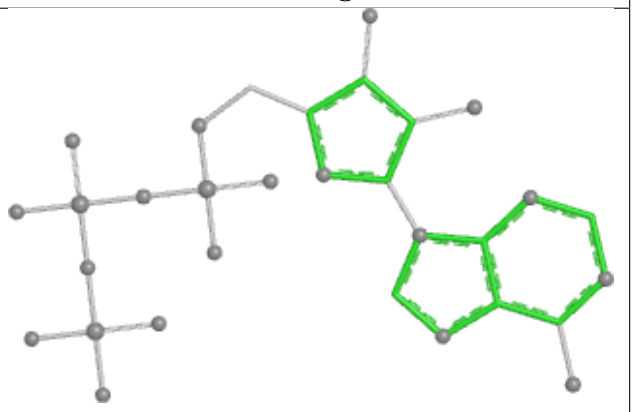
Bond lengths



Bond angles

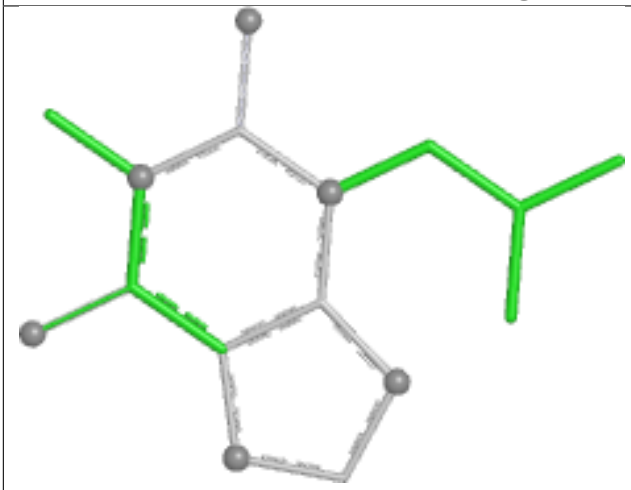


Torsions

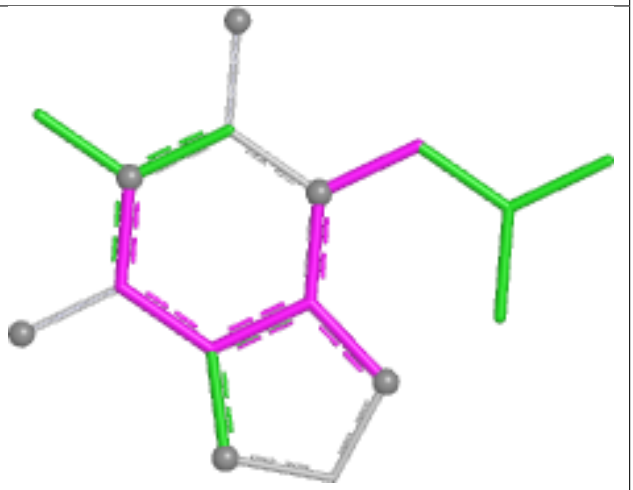


Rings

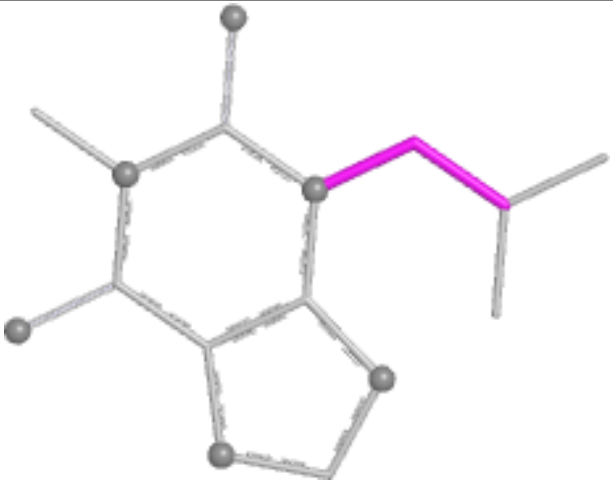
Ligand IBM D 5304



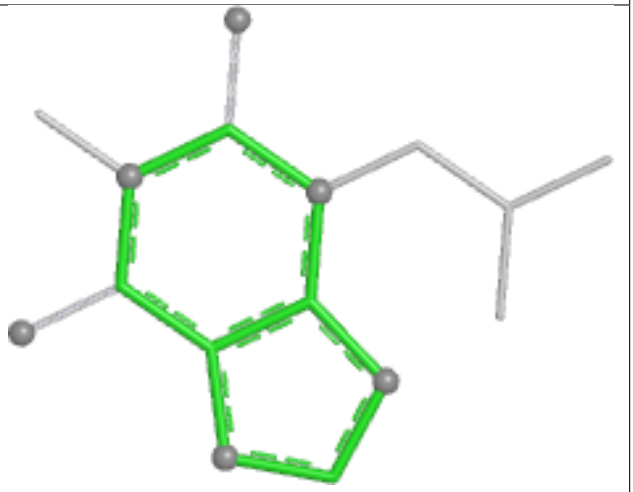
Bond lengths



Bond angles

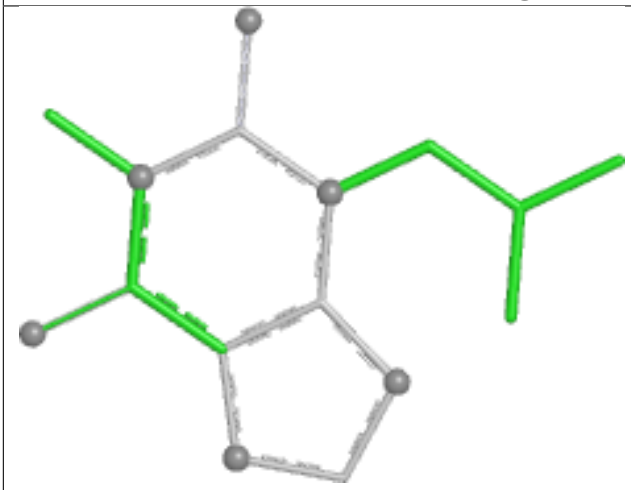


Torsions

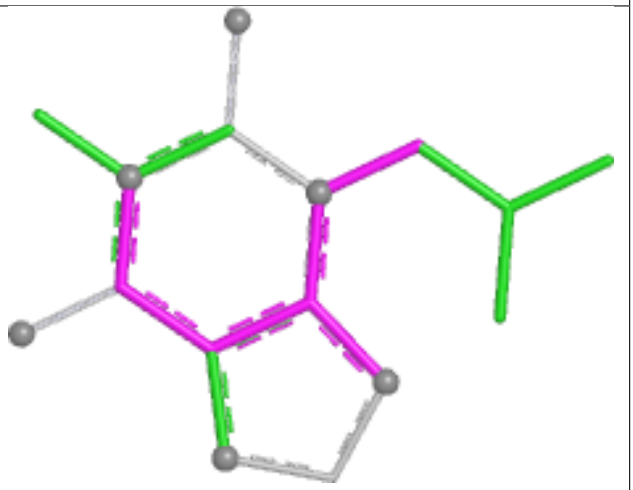


Rings

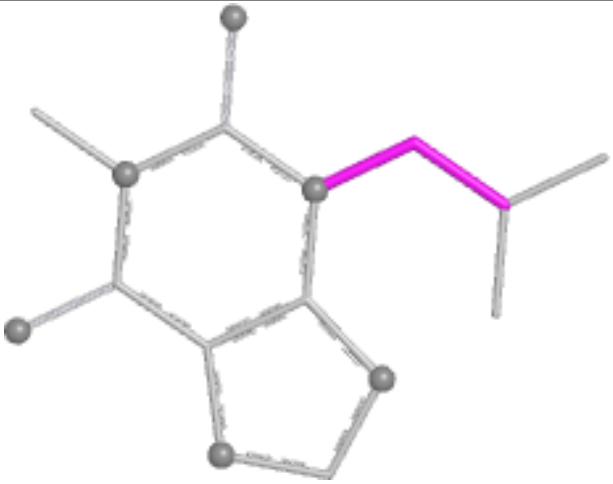
Ligand IBM C 5304



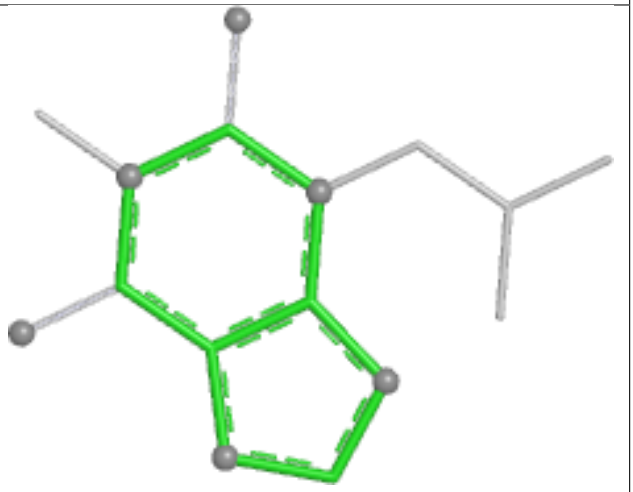
Bond lengths



Bond angles

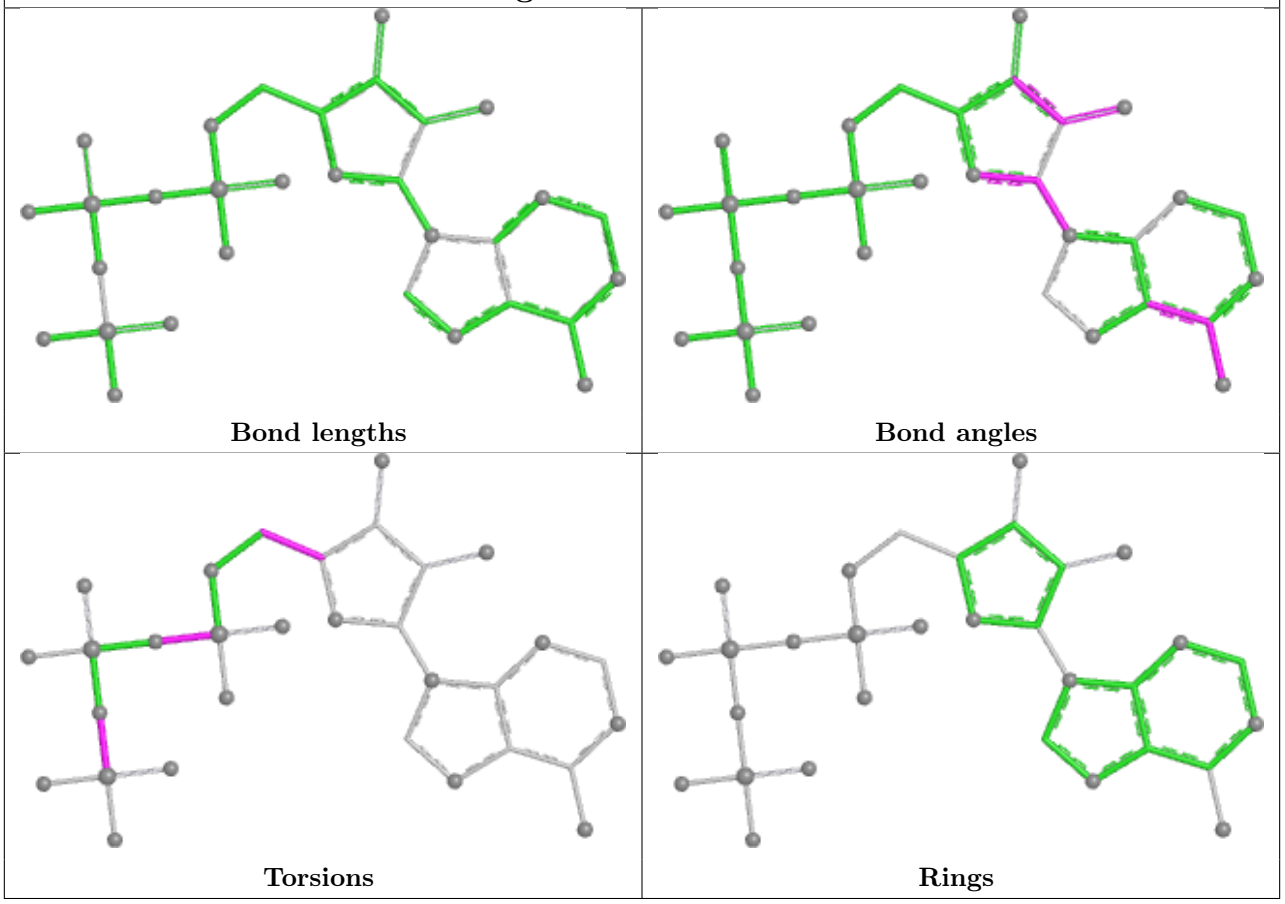


Torsions



Rings

Ligand ATP D 5301



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

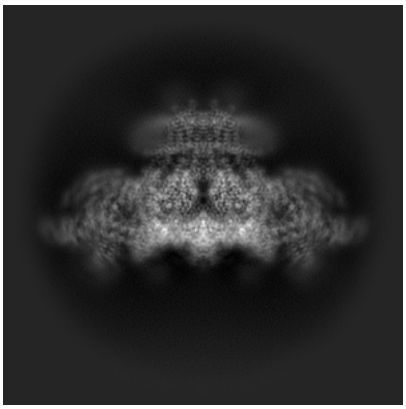
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-47389. These allow visual inspection of the internal detail of the map and identification of artifacts.

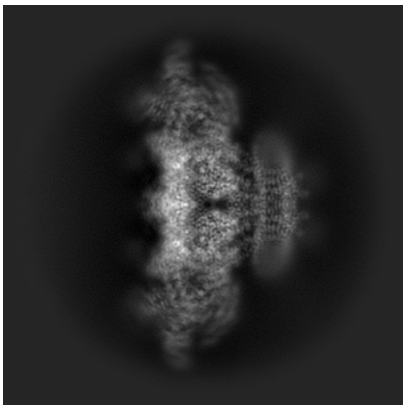
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

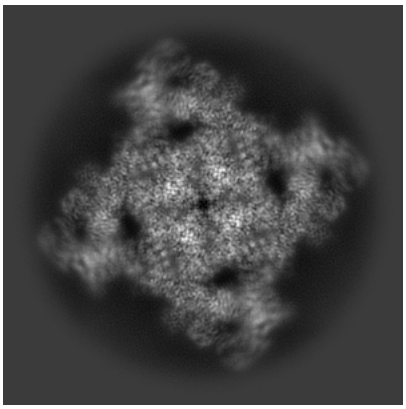
6.1.1 Primary map



X

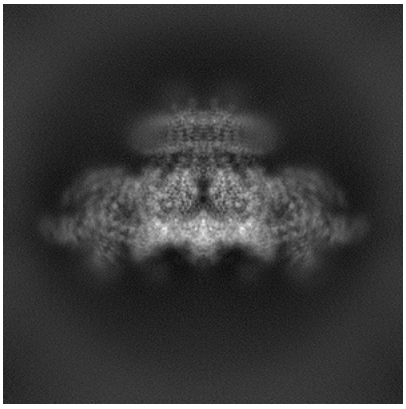


Y

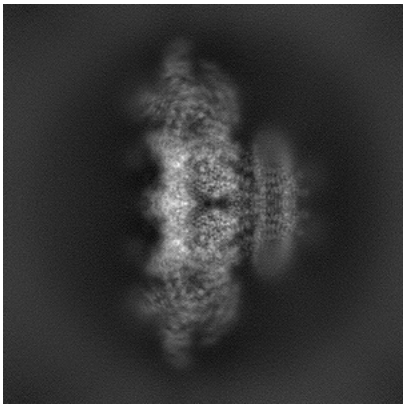


Z

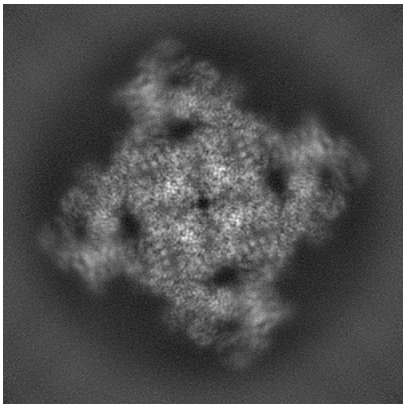
6.1.2 Raw map



X



Y

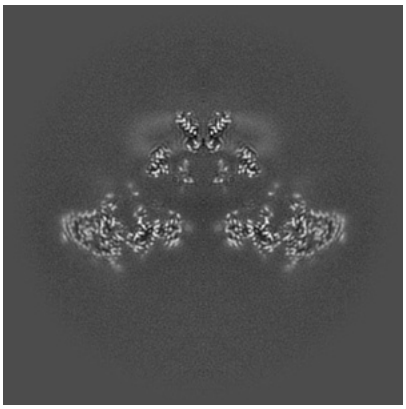


Z

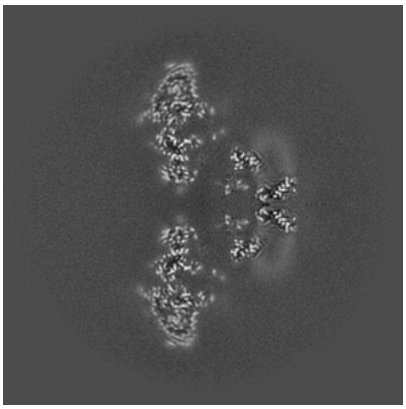
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

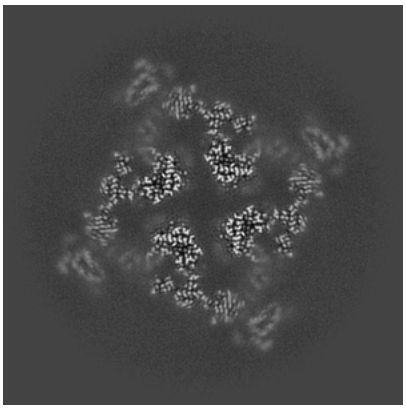
6.2.1 Primary map



X Index: 256

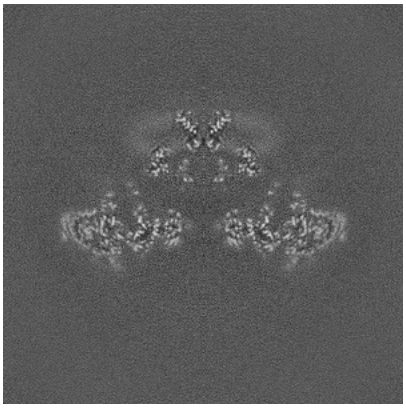


Y Index: 256

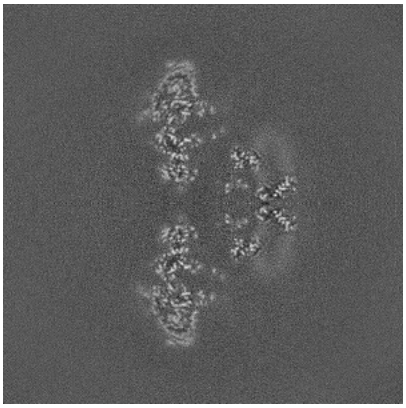


Z Index: 256

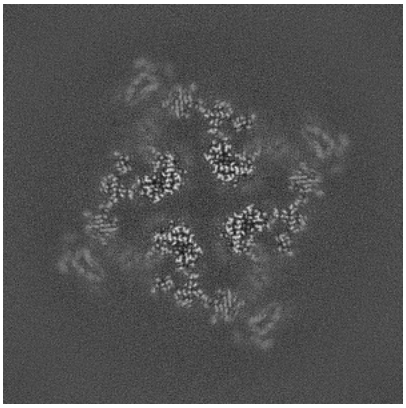
6.2.2 Raw map



X Index: 256



Y Index: 256

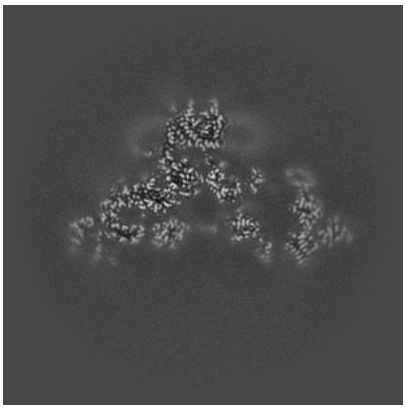


Z Index: 256

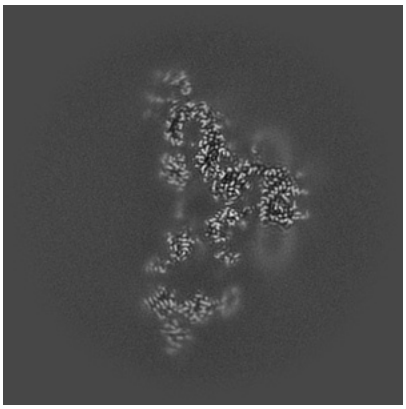
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

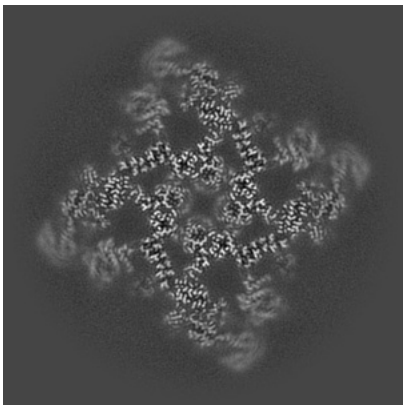
6.3.1 Primary map



X Index: 239

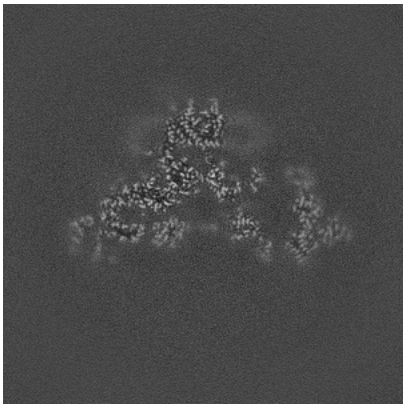


Y Index: 239

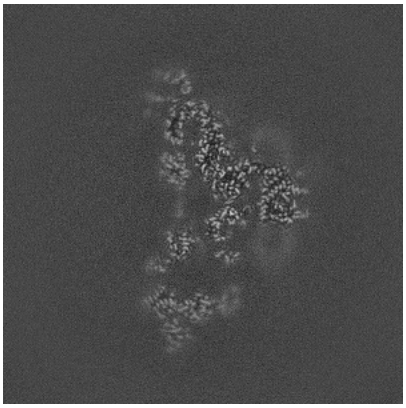


Z Index: 229

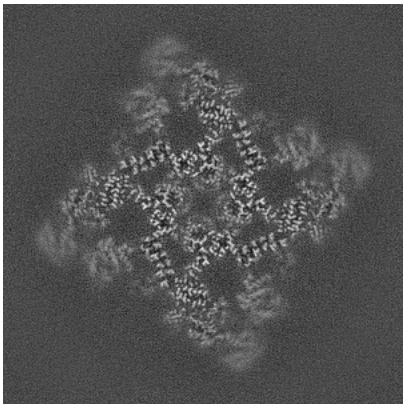
6.3.2 Raw map



X Index: 239



Y Index: 239

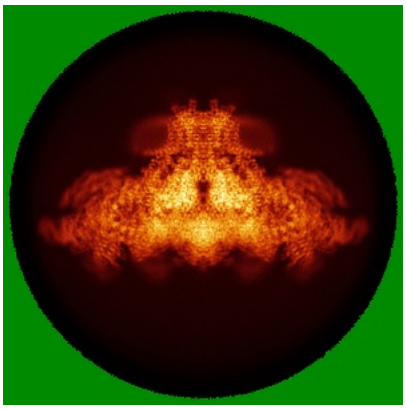


Z Index: 229

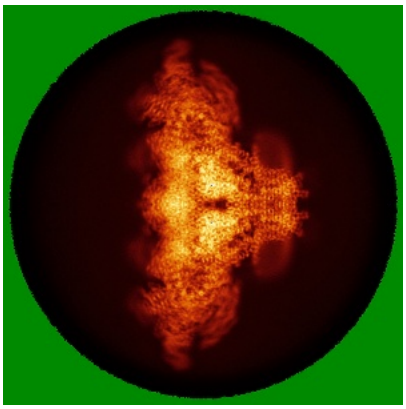
The images above show the largest variance slices of the map in three orthogonal directions.

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

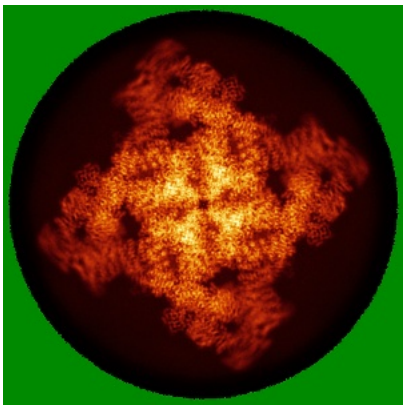
6.4.1 Primary map



X

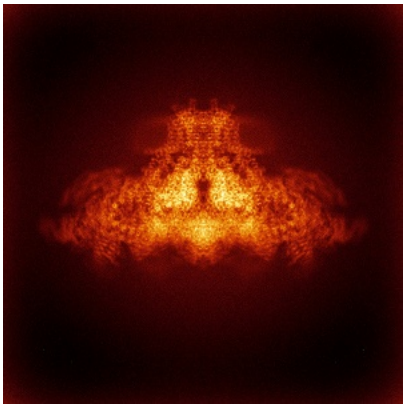


Y

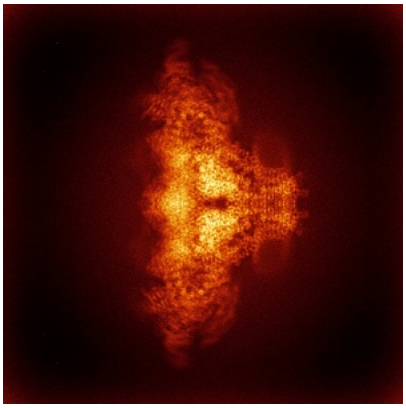


Z

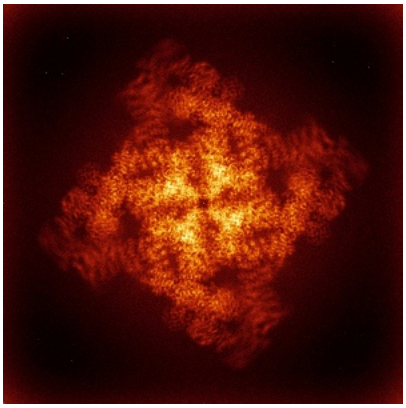
6.4.2 Raw map



X



Y

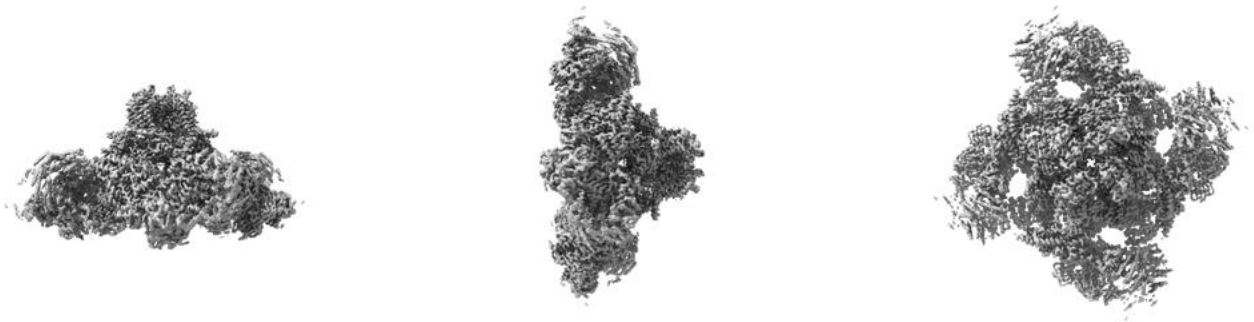


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

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

6.5.2 Raw map

X Y Z

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

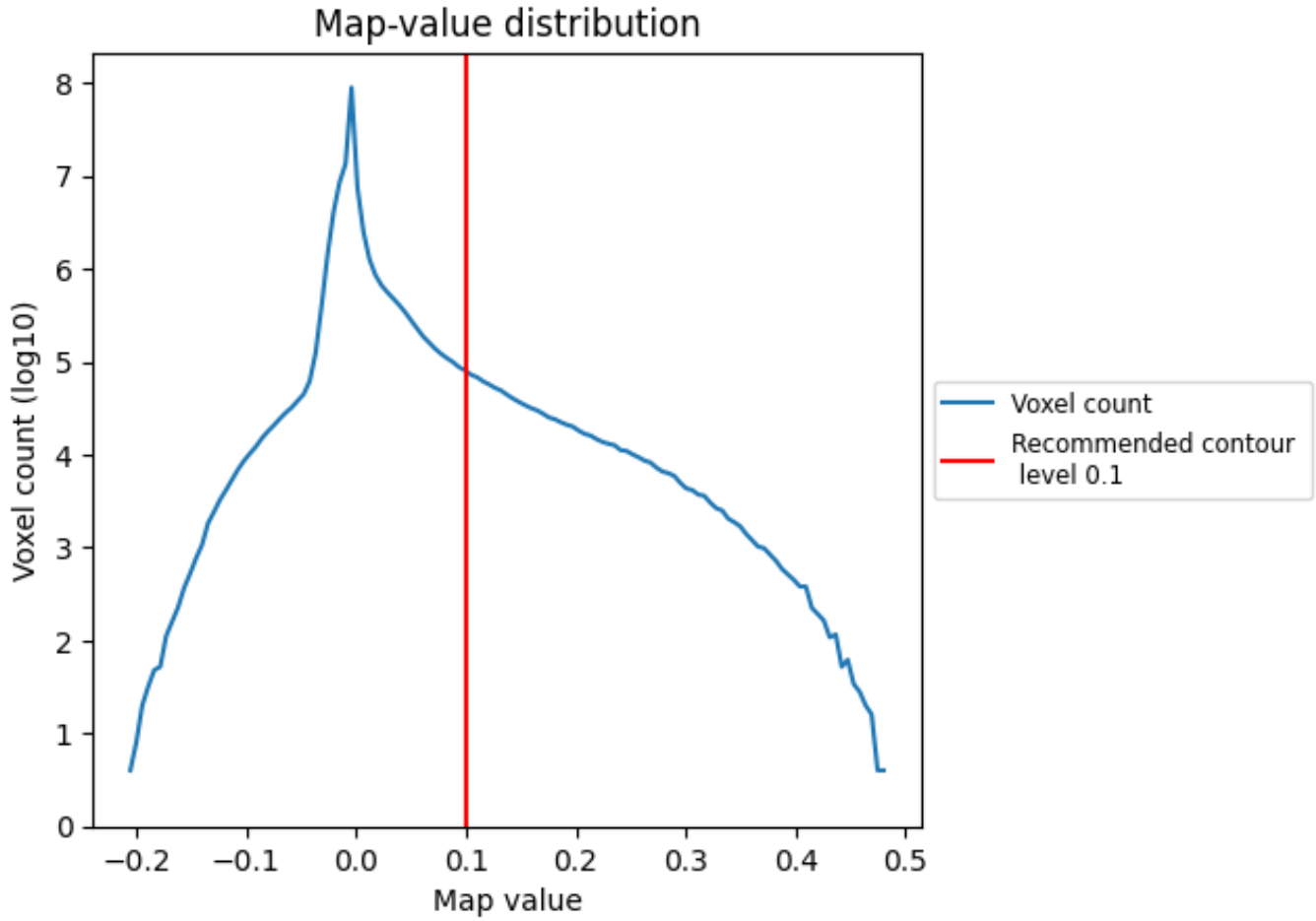
6.6 Mask visualisation (i)

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

7 Map analysis

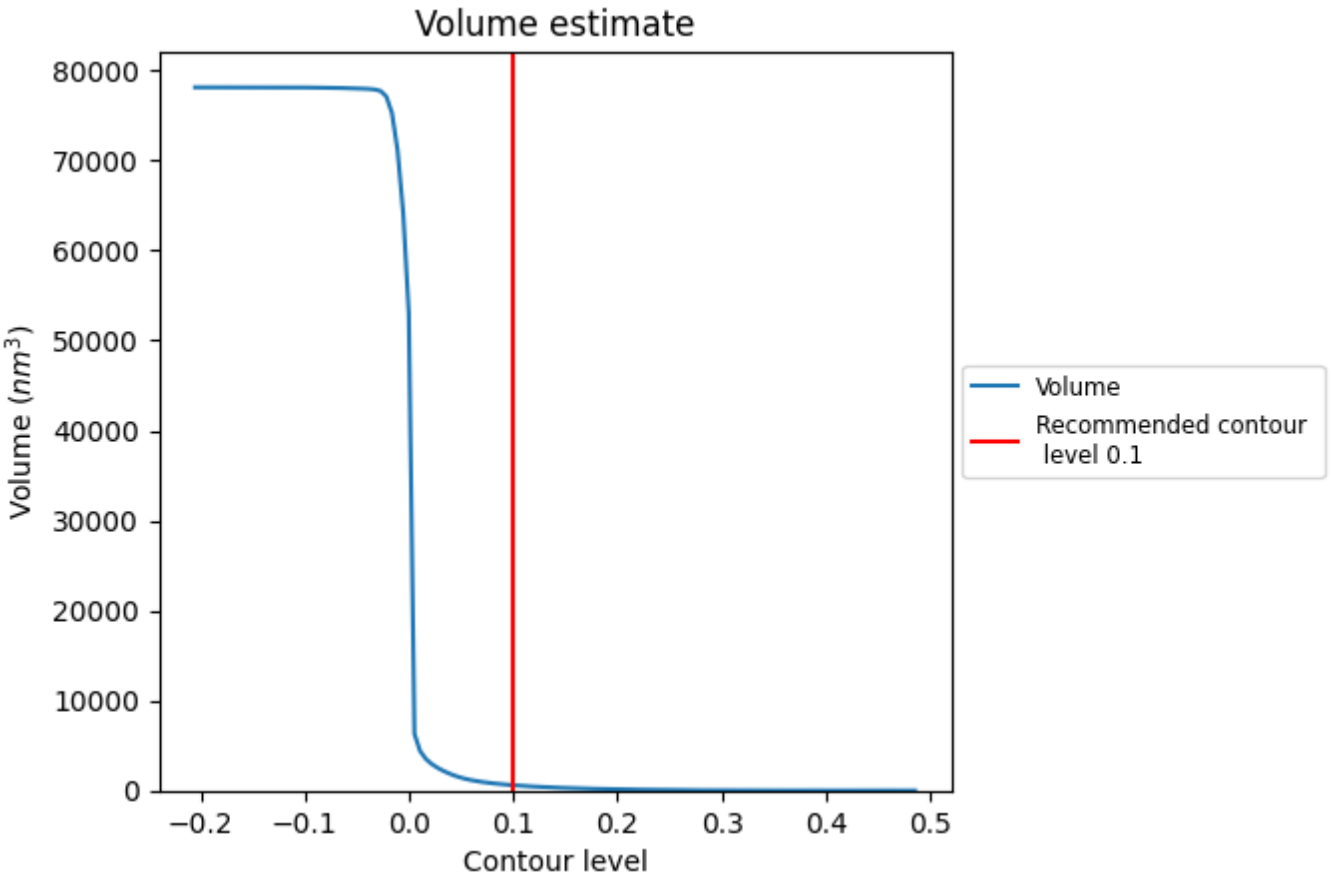
This section contains the results of statistical analysis of the map.

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.

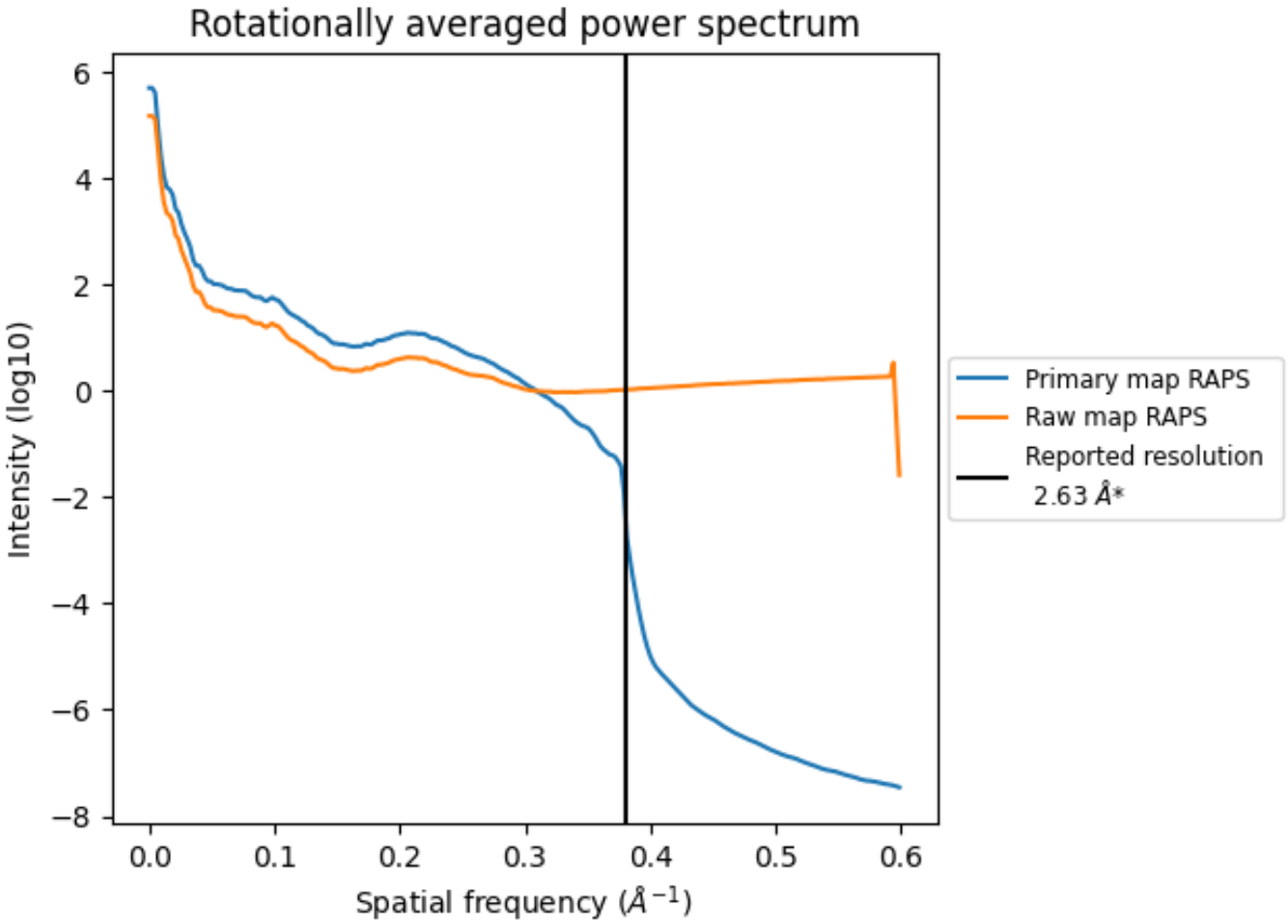
7.2 Volume estimate



The volume at the recommended contour level is 594 nm^3; this corresponds to an approximate mass of 536 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)

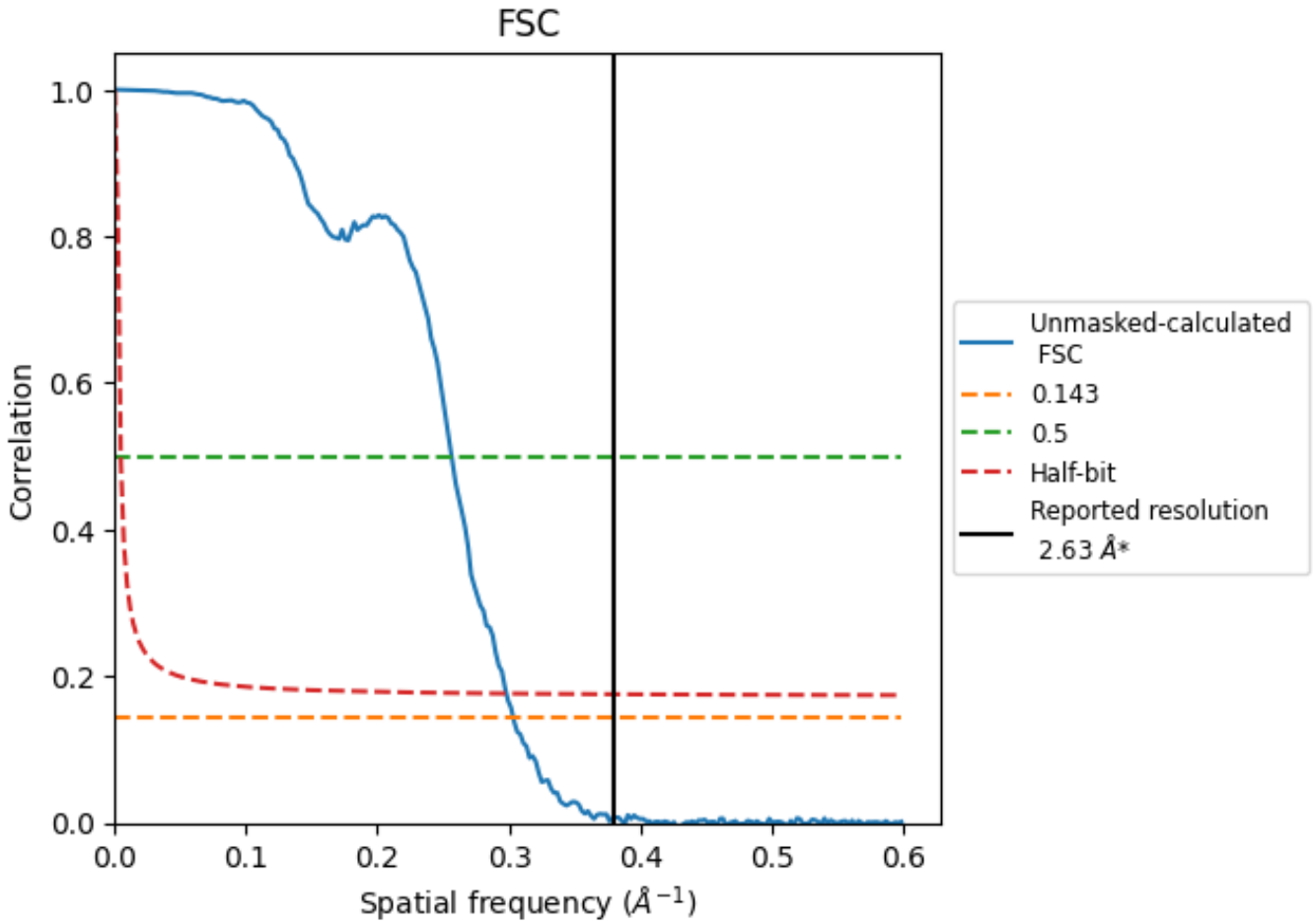


*Reported resolution corresponds to spatial frequency of 0.380 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.380 Å^{-1}

8.2 Resolution estimates (i)

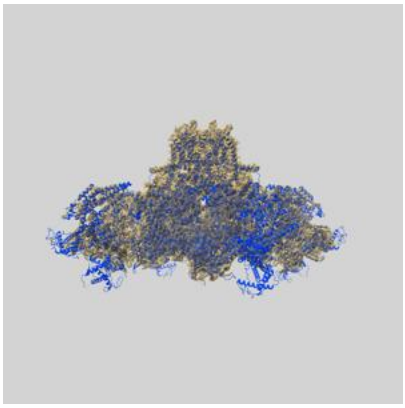
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.63	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.30	3.90	3.35

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.30 differs from the reported value 2.63 by more than 10 %

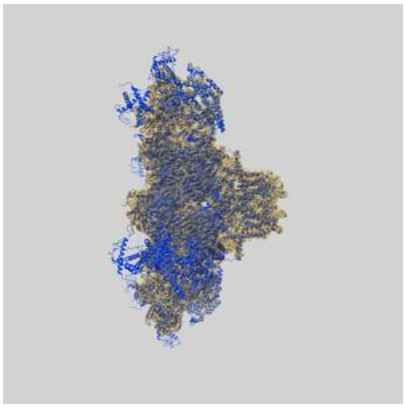
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-47389 and PDB model 9E1C. Per-residue inclusion information can be found in section 3 on page 6.

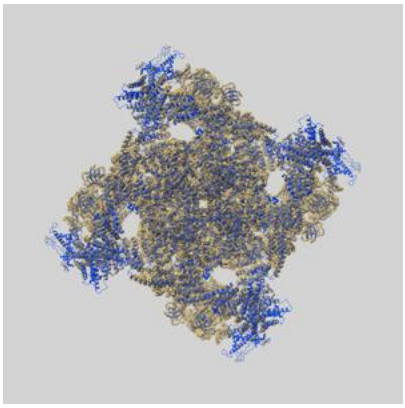
9.1 Map-model overlay



X



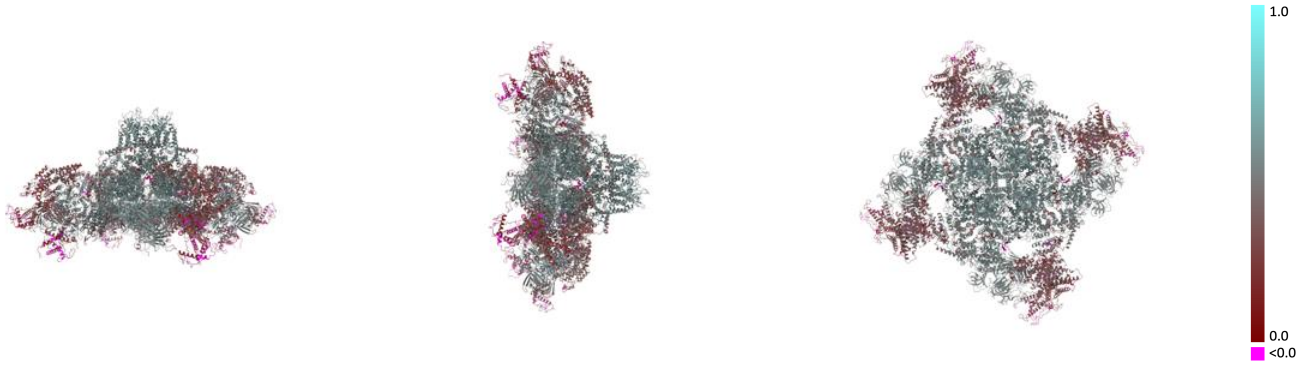
Y



Z

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

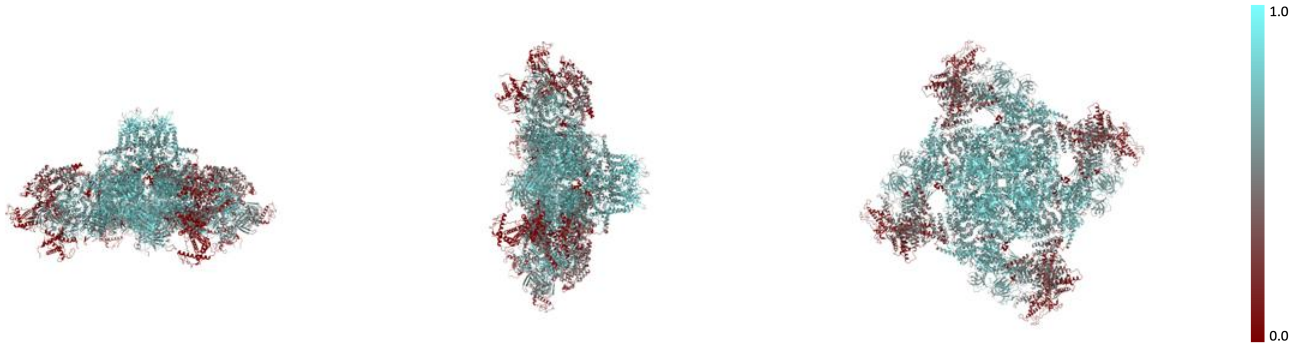
9.2 Q-score mapped to coordinate model (i)



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.

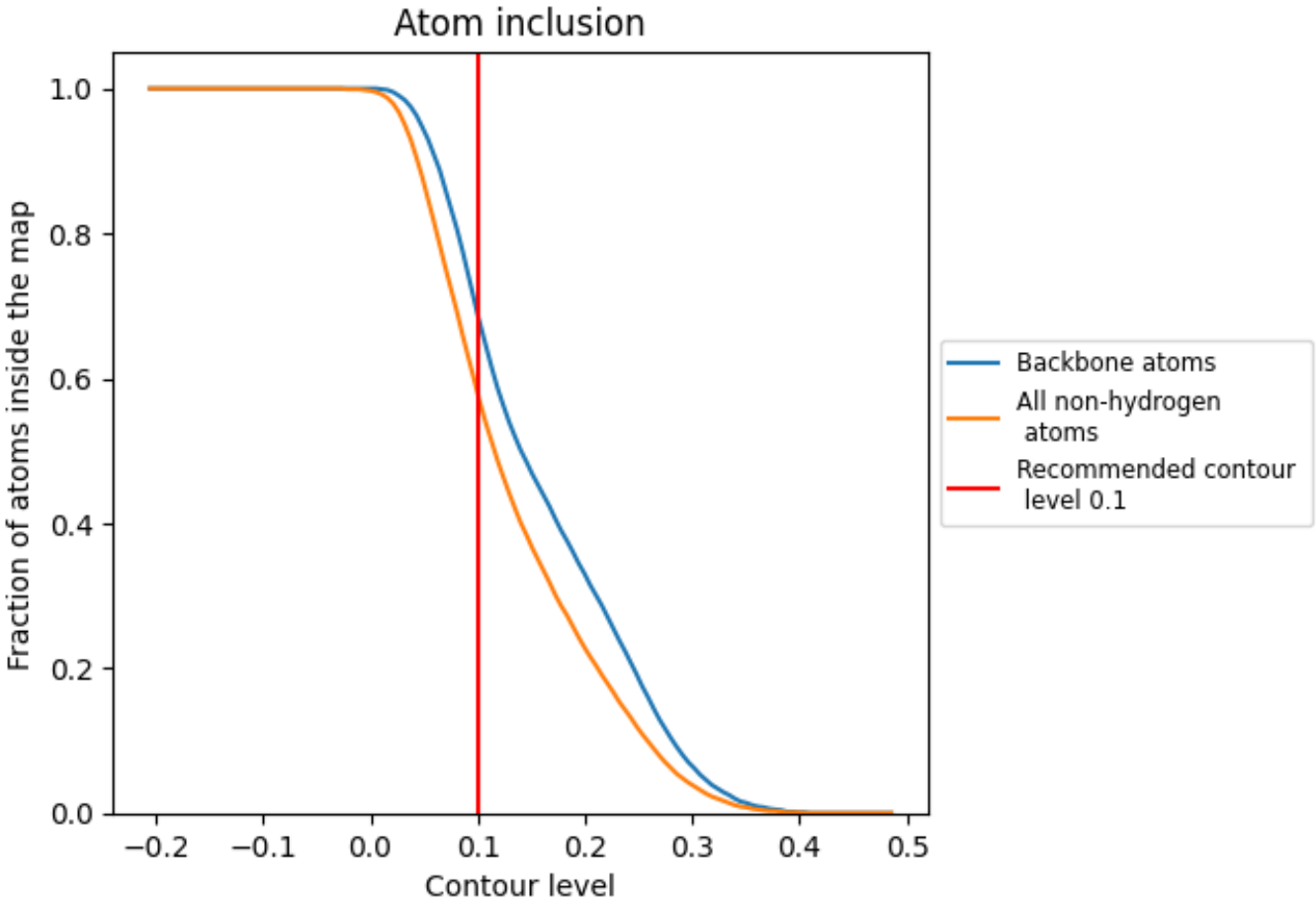
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 69% of all backbone atoms, 58% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5780	0.4410
A	0.5780	0.4390
B	0.5780	0.4400
C	0.5780	0.4390
D	0.5780	0.4390
E	0.5880	0.5100
F	0.5930	0.5090
G	0.5930	0.5050
H	0.5890	0.5050