



Full wwPDB EM Validation Report ⓘ

Nov 5, 2024 – 10:45 AM EST

PDB ID : 9E19
EMDB ID : EMD-47386
Title : Structure of RyR1 in the open state in the presence of pentoxifylline
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2024-10-21
Resolution : 4.04 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

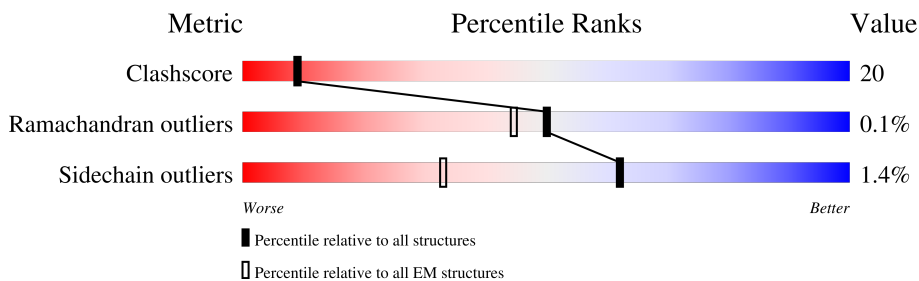
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.04 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 $\leq 5\%$. 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 | |
| 1 | B | 5037 | |
| 1 | C | 5037 | |
| 1 | D | 5037 | |
| 2 | E | 108 | |
| 2 | F | 108 | |
| 2 | G | 108 | |
| 2 | H | 108 | |

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 144136 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 |
|-----|-------|----------|-------|-------|------|------|-----|---------|-------|
| | | | Total | C | N | O | S | | |
| 1 | A | 4404 | 35150 | 22365 | 6063 | 6485 | 237 | 9 | 0 |
| 1 | B | 4404 | 35150 | 22365 | 6063 | 6485 | 237 | 9 | 0 |
| 1 | D | 4404 | 35150 | 22365 | 6063 | 6485 | 237 | 9 | 0 |
| 1 | C | 4404 | 35150 | 22365 | 6063 | 6485 | 237 | 9 | 0 |

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

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 2 | E | 107 | 831 | 527 | 146 | 154 | 4 | 0 | 0 |
| 2 | H | 107 | 831 | 527 | 146 | 154 | 4 | 0 | 0 |
| 2 | G | 107 | 831 | 527 | 146 | 154 | 4 | 0 | 0 |
| 2 | F | 107 | 831 | 527 | 146 | 154 | 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 |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 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 |
|-----|-------|----------|-------|----|---------|
| | | | Total | Ca | |
| 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).

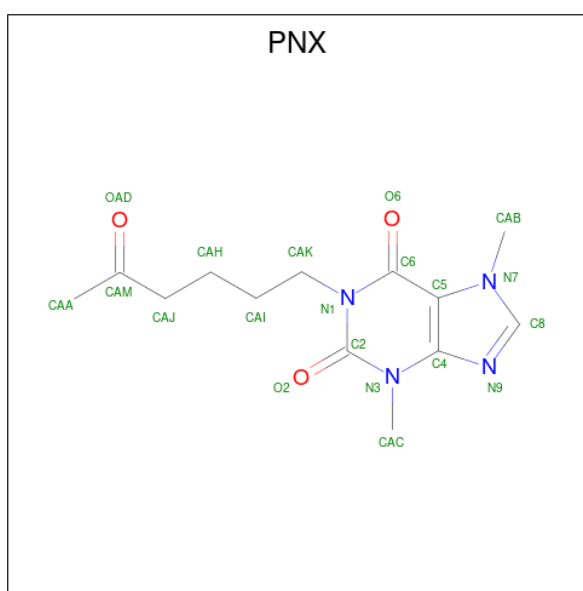
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Zn | |
| 5 | A | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |

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

- Molecule 6 is 3,7-DIMETHYL-1-(5-OXOHEXYL)-3,7-DIHYDRO-1H-PURINE-2,6-DIONE (three-letter code: PNX) (formula: C₁₃H₁₈N₄O₃) (labeled as "Ligand of Interest" by depositor).

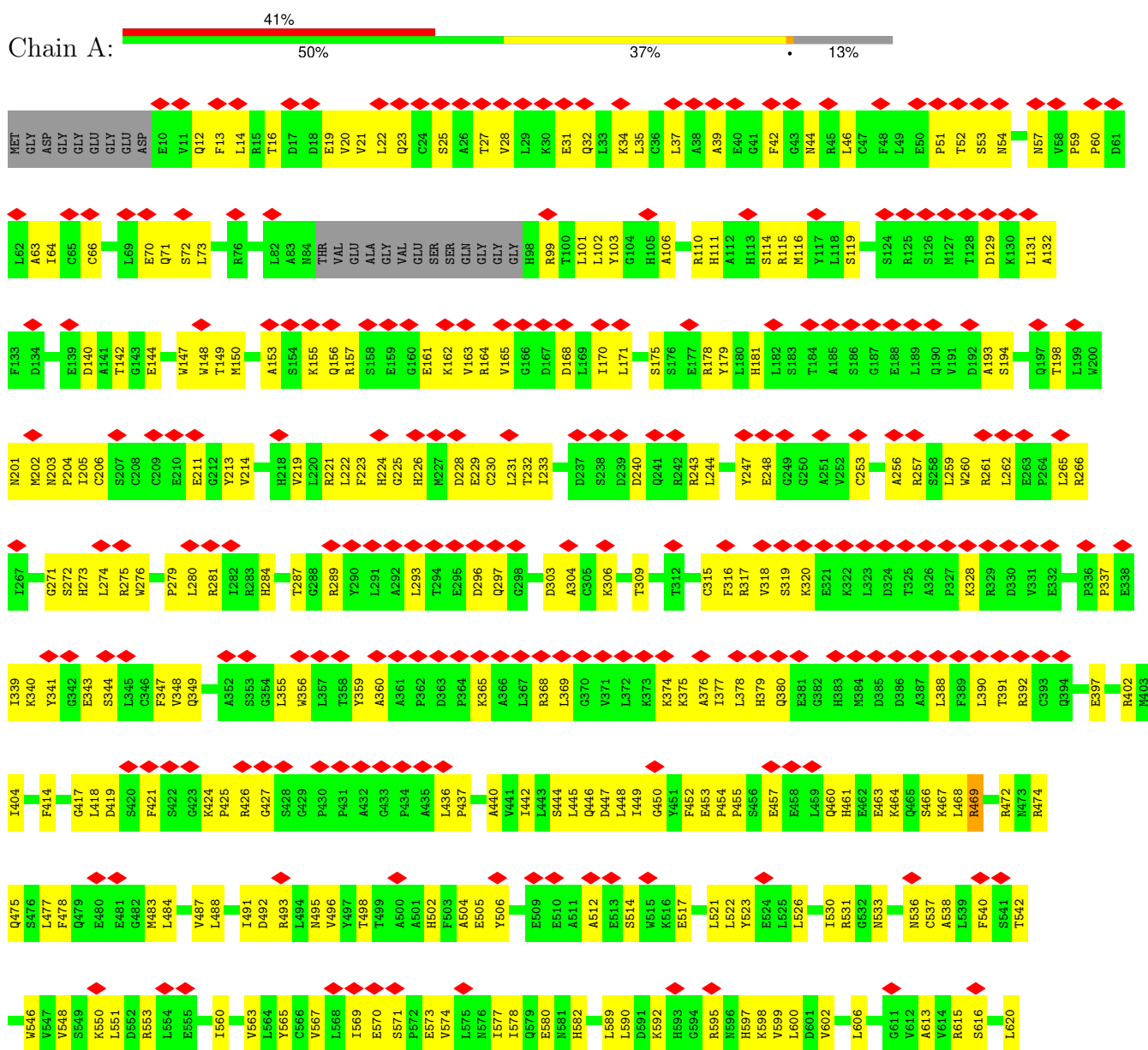


| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| 6 | A | 1 | Total | C | N | O | 0 |
| | | | 20 | 13 | 4 | 3 | |
| 6 | B | 1 | Total | C | N | O | 0 |
| | | | 20 | 13 | 4 | 3 | |
| 6 | D | 1 | Total | C | N | O | 0 |
| | | | 20 | 13 | 4 | 3 | |
| 6 | C | 1 | Total | C | N | O | 0 |
| | | | 20 | 13 | 4 | 3 | |

3 Residue-property plots

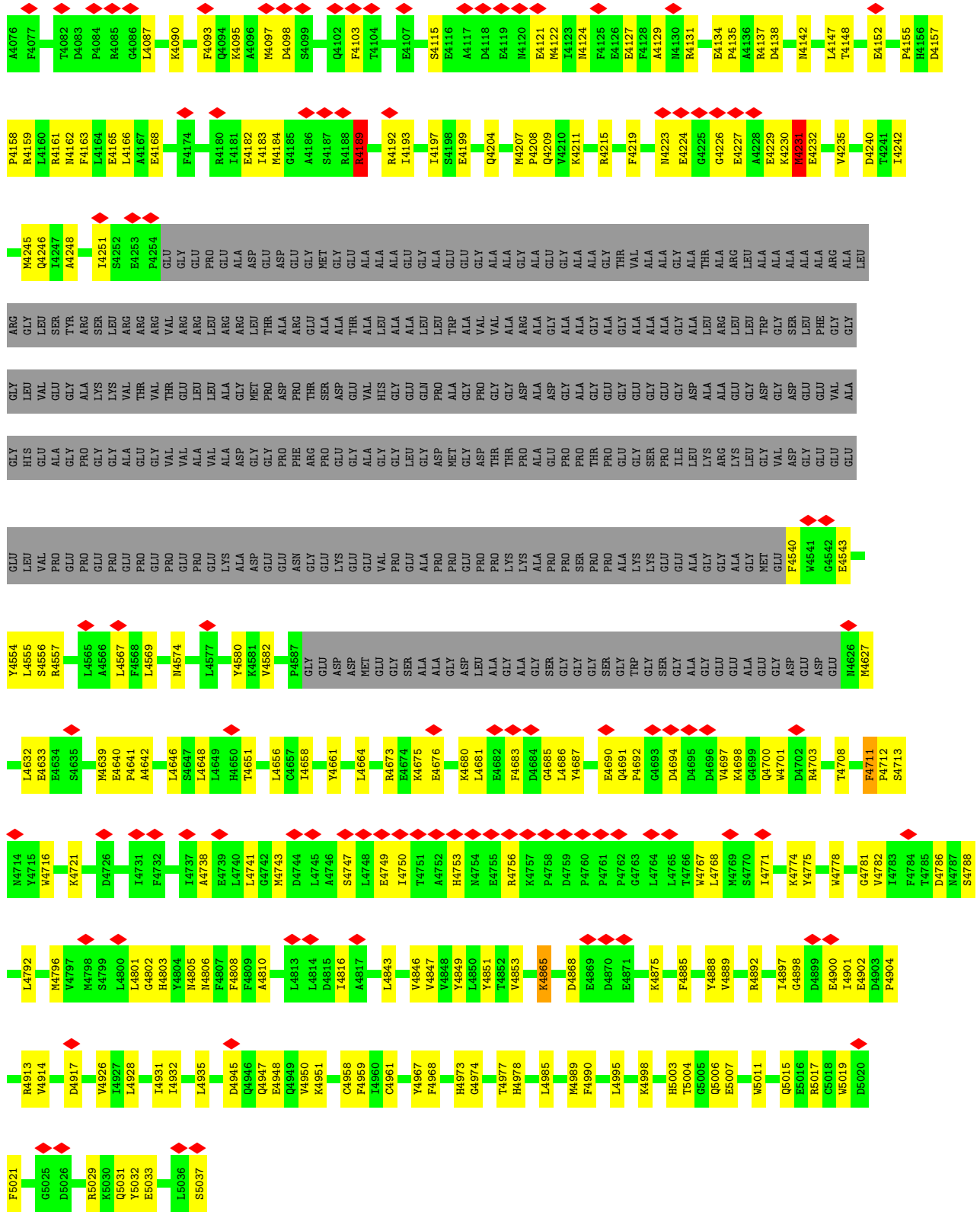
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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

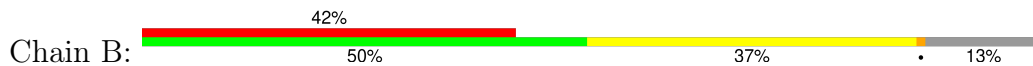


| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Q3127 | M3066 | I3006 | L2946 | W2886 | A2826 | W2766 | I2706 | T2645 | H2584 | V2521 | L2457 | A2383 |
| N3128 | C3067 | N3007 | D2947 | G2887 | R2827 | A2767 | A2707 | N2646 | T2585 | L2522 | R2458 | I2384 |
| L3129 | L3068 | Q3008 | T2948 | R2888 | E2828 | F2768 | G2708 | H2647 | T2586 | D2523 | S2459 | R2385 |
| T3130 | H3069 | F3010 | S2949 | K2889 | G2829 | D2769 | A2709 | E2648 | R2588 | V2524 | L2460 | I2386 |
| Y3131 | L3070 | T3011 | S2950 | K2890 | E2830 | K2770 | L2710 | R2650 | S2590 | L2463 | L2463 | S2387 |
| T3132 | A3072 | N3012 | I2951 | K2891 | GLU | P2771 | P2712 | R2651 | R2591 | F2526 | D2464 | E2388 |
| T3133 | S3073 | H3013 | E2952 | Q2892 | ARG | Q2772 | A2713 | W2652 | R2592 | P2528 | D2465 | D2389 |
| V3134 | S3074 | C3014 | K2953 | E2893 | THR | N2773 | D2714 | K2653 | R2593 | L2527 | L2466 | P2390 |
| A3135 | S3075 | L3015 | L2954 | E2894 | LYS | W2774 | Y2715 | Y2654 | S2594 | M2530 | I2469 | A2391 |
| L3136 | L3076 | Y3016 | F2955 | L2895 | LYS | W2775 | V2716 | C2656 | L2596 | R2531 | R2470 | R2392 |
| L3137 | A3077 | F3017 | A2956 | A2896 | LYS | S2776 | D2717 | L2657 | T2597 | S2471 | L2472 | G2396 |
| P3138 | R3078 | L3018 | F2957 | K2897 | LYS | Y2777 | A2717 | K2658 | K2597 | P2473 | L2474 | V2397 |
| V3139 | R3079 | S3019 | G2958 | G2898 | ARG | G2778 | S2719 | T2659 | A2598 | D2475 | Q2475 | ARG |
| L3140 | V3080 | T3020 | L2960 | G2900 | ILE | E2779 | S2720 | G2660 | R2600 | R2476 | Q2476 | ASP |
| T3141 | M3081 | A3021 | Q2961 | H2902 | SER | W2780 | S2721 | W2661 | D2601 | I2477 | I2477 | ARG |
| L3142 | K3082 | A3022 | Q2962 | H2903 | THR | D2782 | K2722 | A2662 | V2602 | P2477 | P2477 | ARG |
| F3143 | S3083 | K3023 | L2963 | L2904 | ALA | E2783 | A2723 | M2663 | I2603 | T2537 | T2478 | ARG |
| F3144 | G3084 | L3024 | L2964 | L2905 | GLN | E2784 | E2724 | F2664 | E2604 | A2539 | L2479 | GLU |
| H3145 | P3085 | L3025 | R2965 | L2906 | THR | G2785 | E2725 | G2665 | D2605 | T2541 | G2480 | HIS |
| H3146 | E3086 | G3026 | W2966 | L2907 | TYR | F2786 | E2726 | V2666 | C2606 | S2542 | K2481 | ARG |
| I3147 | I3087 | S3027 | M2967 | P2906 | PRO | T2787 | K2726 | T2667 | L2607 | R2544 | R2482 | PHE |
| V3148 | V3088 | G3028 | D2968 | Y2908 | ARG | H2788 | I2728 | S2668 | M2608 | T2544 | G2483 | GLY |
| H3149 | K3089 | G3029 | I2969 | Y2909 | GLU | P2789 | VAL | E2669 | A2609 | A2484 | R2484 | GLU |
| H3150 | A3090 | H3030 | S2970 | D2909 | GLY | W2790 | ALA | E2670 | L2610 | E2545 | P2410 | GLU |
| L3151 | G3091 | A3031 | Q2971 | T2910 | M2955 | L2791 | ALA | E2671 | C2611 | M2546 | P2411 | GLU |
| F3152 | L3092 | S3032 | E2972 | T2911 | H2956 | R2792 | GLY | E2672 | R2612 | A2547 | E2412 | GLU |
| G3153 | R3093 | N3033 | F2973 | T2912 | P2857 | Q2793 | F2735 | H2673 | Y2613 | L2548 | E2413 | GLU |
| L3154 | R3094 | K3034 | I2974 | T2913 | Q2858 | P2794 | F2736 | L2674 | L2614 | M2551 | N2414 | GLU |
| D3155 | S3095 | R3035 | L2975 | T2914 | Q2859 | Y2795 | D2737 | T2675 | R2615 | R2552 | R2415 | GLU |
| V3156 | F3096 | E3036 | H2976 | K2914 | P2860 | K2796 | P2738 | R2676 | P2616 | M2490 | V2416 | GLU |
| L3157 | A3099 | E3037 | L2977 | K2915 | D2861 | T2797 | P2739 | K2677 | S2617 | S2491 | H2417 | GLU |
| L3158 | S3100 | K3038 | E2978 | A2917 | L2862 | F2797 | F2739 | F2678 | M2618 | A2492 | L2418 | GLU |
| D3159 | E3101 | L3039 | R2979 | R2918 | S2863 | S2798 | P2739 | R2679 | L2619 | S2493 | L2418 | GLU |
| L3160 | E3102 | S3041 | A2979 | D2919 | G2864 | E2799 | W2740 | W2680 | Q2620 | F2494 | L2419 | GLU |
| V3161 | I3103 | T3040 | V2980 | R2920 | V2865 | E2741 | E2741 | W2681 | Q2621 | H2498 | F2425 | GLU |
| Q3162 | I3104 | L3042 | S2982 | R2921 | L2866 | L2743 | L2743 | I2682 | H2622 | D2497 | Y2426 | GLU |
| V3166 | K3105 | F3043 | S2983 | K2922 | S2868 | I2744 | I2744 | D2684 | L2623 | K2499 | I2430 | GLU |
| R3167 | M3106 | C3044 | G2984 | A2923 | R2869 | W2745 | W2745 | R2685 | L2626 | A2500 | D2431 | GLU |
| L3168 | V3107 | K3045 | R2985 | Q2924 | E2870 | L2746 | L2746 | S2685 | V2627 | S2501 | L2432 | GLU |
| L3169 | E3108 | L3046 | V2986 | E2925 | L2871 | I2747 | I2747 | L2686 | Y2628 | M2502 | L2433 | GLU |
| C3170 | N3109 | L3047 | E2987 | L2926 | L2872 | P2748 | P2748 | A2687 | F2628 | F2505 | G2434 | GLU |
| S3171 | L3110 | A3048 | K2988 | L2927 | L2873 | W2806 | W2806 | H2688 | D2629 | R2508 | R2435 | GLU |
| L3172 | R3111 | L3049 | S2989 | K2928 | M2874 | R2806 | R2806 | K2689 | D2630 | D2507 | E2439 | GLU |
| V3173 | L3112 | V3050 | P2990 | F2929 | A2875 | I2809 | I2809 | K2690 | P2631 | R2509 | I2443 | GLU |
| S3174 | G3113 | R3051 | H2991 | L2930 | E2876 | K2810 | D2752 | D2692 | I2632 | V2509 | K2447 | GLU |
| G3176 | K3114 | H3052 | E2992 | Q2931 | Q2877 | E2811 | S2753 | Q2693 | L2633 | Y2510 | G2448 | GLU |
| T3177 | V3115 | R3053 | Q2993 | K2933 | L2878 | S2812 | F2754 | E2694 | M2634 | I2512 | E2449 | GLU |
| L3178 | S3055 | S3055 | I2995 | N2933 | A2879 | L2813 | R2755 | L2695 | E2636 | E2513 | A2450 | GLU |
| R3179 | L3056 | L3056 | E2996 | G2934 | L2879 | K2814 | I2756 | Y2696 | A2637 | R2514 | L2451 | GLU |
| N3180 | F3057 | L3057 | F2997 | Y2935 | A2880 | R2815 | N2757 | R2697 | A2637 | Q2515 | R2452 | GLU |
| T3181 | G3058 | G3058 | L2998 | A2936 | M2881 | A2816 | K2757 | M2698 | M2578 | D2516 | L2453 | GLU |
| L3182 | V3059 | T3059 | F2998 | V2937 | Y2882 | I2817 | F2758 | M2699 | P2640 | F2517 | R2454 | GLU |
| V3183 | D3060 | S3060 | A2999 | T2938 | H2883 | A2818 | A2759 | A2699 | L2641 | D2580 | L2518 | GLU |
| E3184 | L3061 | I3001 | K3000 | T2939 | M2884 | W2819 | E2760 | A2699 | K2642 | S2581 | L2519 | GLU |
| L3185 | G3124 | L3002 | I3001 | Q2931 | N2885 | E2820 | T2761 | M2700 | L2643 | M2582 | L2520 | GLU |
| L3186 | V3125 | L3003 | L3002 | Q2931 | H2885 | E2820 | T2761 | P2701 | L2644 | L2583 | | GLU |
| R3187 | G3126 | P3004 | L3003 | Q2931 | H2885 | E2820 | T2761 | C2702 | L2644 | | | GLU |
| P3188 | | V3064 | L3005 | Q2931 | T2885 | E2820 | T2761 | L2702 | L2644 | | | GLU |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| H3994 | V3995 | F3996 | A3997 | H3998 | H3999 | M4000 | M4001 | M4002 | L4003 | Q4009 | L4012 | L4016 | L4017 | D4018 | L4019 | Q4020 | L4021 | M4022 | M4023 | V4024 | L4030 | L4031 | E4032 | V4035 | M4044 | V4045 | M4046 | M4047 | L4048 | V4049 | E4050 | S4051 | F3962 | N3963 | S3964 | L3965 | I3966 | E3967 | I3968 | I3969 | Q3970 | L3980 | A3981 | R3984 | L3985 | M3986 | V3989 | V3990 | G4073 | S4074 | F4075 | | | | | | | | | | | | | | | | | |
| I3917 | V3920 | Q3927 | E3928 | S3929 | I3930 | S3931 | R4002 | R4003 | F3933 | Y3936 | Y3937 | S3938 | G3939 | K3940 | D3941 | V3942 | I3943 | E3944 | E3945 | Q3946 | G3947 | K3948 | R3949 | R3950 | S3951 | S3952 | K3953 | A3954 | M3955 | S3956 | V3957 | A3958 | K3959 | Q3960 | V3961 | T3797 | I3802 | S3803 | I3804 | L3805 | E3811 | L3817 | D3818 | Y3819 | L3820 | D3822 | K3823 | K3824 | F3825 | V3826 | F3829 | Q3830 | L3835 | L3836 | L3837 | L3838 | L3839 | L3891 | H3895 | F3899 | V3990 | G3991 | F3992 | L3993 | | | | |
| L3835 | T3838 | L3842 | D3843 | L3844 | N3845 | E3848 | R3849 | Q3850 | N3851 | K3852 | A3853 | E3854 | G3855 | L3856 | G3857 | M3858 | V3859 | N3860 | E3861 | R3862 | D3863 | T3864 | G3865 | V3866 | L3867 | N3868 | R3869 | L3870 | Q3781 | C3786 | G3787 | K3788 | M3793 | V3794 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3722 | M3723 | A3724 | C3650 | N3651 | M3652 | F3653 | K3658 | A3659 | L3662 | L3663 | D3666 | H3667 | S3668 | F3669 | E3670 | M3673 | T3674 | D3675 | D3676 | L3677 | H3611 | | | | | | | |
| R3550 | E3551 | F3552 | L3553 | Q3554 | N3555 | N3556 | L3557 | R3498 | R3499 | G3500 | D3501 | R3502 | Y3503 | S3504 | V3505 | Q3506 | T3507 | S3508 | L3509 | I3510 | V3511 | A3512 | T3513 | E3514 | K3515 | K3516 | G3517 | L3518 | F3519 | L3522 | N3523 | M3524 | C3525 | D3526 | F3527 | T3528 | D3529 | Q3530 | D3531 | L3532 | T3533 | K3534 | L3535 | A3536 | Q3537 | T3538 | E3539 | S3540 | Y3541 | A3542 | L3543 | H3544 | D3545 | D3546 | Q3547 | E3548 | V3549 | | | | | | | | | | | |
| SER | ASP | GLU | GLN | THR | LYS | LYS | R3498 | R3499 | G3500 | D3501 | R3502 | Y3503 | S3504 | V3505 | Q3506 | T3507 | S3508 | L3509 | I3510 | V3511 | A3512 | T3513 | E3514 | K3515 | K3516 | G3517 | L3518 | F3519 | L3522 | N3523 | M3524 | C3525 | D3526 | F3527 | T3528 | D3529 | Q3530 | D3531 | L3532 | T3533 | K3534 | L3535 | A3536 | Q3537 | T3538 | E3539 | S3540 | Y3541 | A3542 | L3543 | H3544 | D3545 | D3546 | Q3547 | E3548 | V3549 | | | | | | | | | | | | |
| R3612 | Y3613 | K3614 | S3615 | K3616 | K3617 | A3618 | V3619 | H3620 | H3621 | K3622 | L3623 | L3624 | R3625 | K3626 | Q3627 | R3628 | R3629 | R3630 | A3631 | V3632 | V3633 | V3634 | A3634 | C3635 | F3636 | R3637 | M3638 | T3639 | Y3642 | N3643 | L3644 | P3645 | T3646 | H3647 | R3648 | A3649 | C3650 | N3651 | M3652 | F3653 | K3658 | A3659 | L3662 | L3663 | D3666 | H3667 | S3668 | F3669 | E3670 | M3673 | T3674 | D3675 | D3676 | L3677 | H3611 | | | | | | | | | | | | | |
| A3680 | G3681 | E3682 | Q3683 | E3684 | E3685 | E3686 | E3687 | E3688 | E3689 | V3690 | E3691 | E3692 | K3693 | K3694 | P3695 | D3696 | P3697 | H3699 | Q3700 | L3701 | R3707 | L3710 | T3711 | E3712 | K3713 | S3714 | K3715 | L3716 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3722 | M3723 | A3724 | C3725 | I3728 | M3729 | A3730 | K3731 | S3732 | C3733 | K3823 | K3824 | F3825 | V3826 | F3829 | Q3830 | L3835 | L3836 | L3837 | L3838 | L3839 | L3891 | H3895 | F3899 | G3908 | N3909 | T3910 | L3913 | L3916 | | | | | | |
| GLU | GLU | GLU | V3749 | E3750 | V3751 | F3752 | F3753 | E3754 | E3755 | K3756 | E3757 | M3758 | R3762 | S3768 | R3769 | L3770 | H3771 | T3772 | G3774 | A3775 | A3776 | E3777 | M3778 | V3779 | L3780 | Q3781 | C3786 | G3787 | K3788 | M3793 | V3794 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3722 | M3723 | A3724 | C3725 | I3728 | M3729 | A3730 | K3731 | S3732 | C3733 | K3823 | K3824 | F3825 | V3826 | F3829 | Q3830 | L3835 | L3836 | L3837 | L3838 | L3839 | L3891 | H3895 | F3899 | G3908 | N3909 | T3910 | L3913 | L3916 | | | |
| L3835 | T3838 | L3842 | D3843 | L3844 | N3845 | E3848 | R3849 | Q3850 | N3851 | K3852 | A3853 | E3854 | G3855 | L3856 | G3857 | M3858 | V3859 | N3860 | E3861 | R3862 | D3863 | T3864 | G3865 | V3866 | L3867 | N3868 | R3869 | L3870 | Q3781 | C3786 | G3787 | K3788 | M3793 | V3794 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3722 | M3723 | A3724 | C3725 | I3728 | M3729 | A3730 | K3731 | S3732 | C3733 | K3823 | K3824 | F3825 | V3826 | F3829 | Q3830 | L3835 | L3836 | L3837 | L3838 | L3839 | L3891 | H3895 | F3899 | G3908 | N3909 | T3910 | L3913 | L3916 |
| I3917 | V3920 | Q3927 | E3928 | S3929 | I3930 | S3931 | R4002 | R4003 | F3933 | Y3936 | Y3937 | S3938 | G3939 | K3940 | D3941 | V3942 | I3943 | E3944 | E3945 | Q3946 | G3947 | K3948 | R3949 | R3950 | S3951 | S3952 | K3953 | A3954 | M3955 | S3956 | V3957 | A3958 | K3959 | Q3960 | V3961 | F3962 | N3963 | S3964 | L3965 | I3966 | E3967 | I3968 | I3969 | Q3970 | L3980 | A3981 | R3984 | L3985 | M3986 | V3989 | V3990 | G4073 | S4074 | F4075 | | | | | | | | | | | | | | |
| L3835 | T3838 | L3842 | D3843 | L3844 | N3845 | E3848 | R3849 | Q3850 | N3851 | K3852 | A3853 | E3854 | G3855 | L3856 | G3857 | M3858 | V3859 | N3860 | E3861 | R3862 | D3863 | T3864 | G3865 | V3866 | L3867 | N3868 | R3869 | L3870 | Q3781 | C3786 | G3787 | K3788 | M3793 | V3794 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3722 | M3723 | A3724 | C3725 | I3728 | M3729 | A3730 | K3731 | S3732 | C3733 | K3823 | K3824 | F3825 | V3826 | F3829 | Q3830 | L3835 | L3836 | L3837 | L3838 | L3839 | L3891 | H3895 | F3899 | G3908 | N3909 | T3910 | L3913 | L3916 |



• Molecule 1: Ryanodine receptor 1



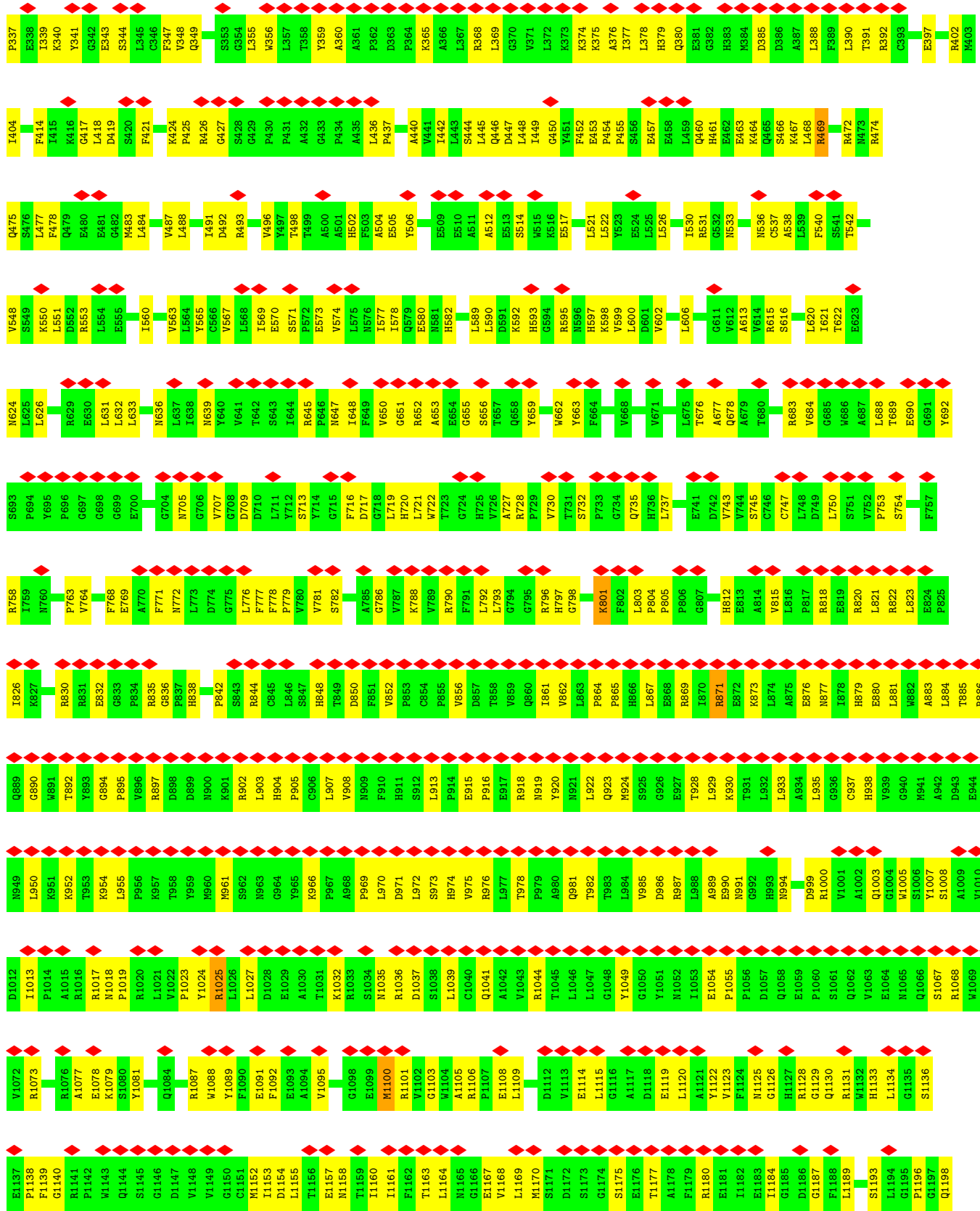
The table displays a grid of amino acid residues, each represented by a colored box containing a three-letter code and a number. The residues are arranged in a grid with some missing, indicated by red diamonds. The colors of the boxes vary, likely representing different chemical environments or validation metrics. The residues are organized into columns and rows, with some residues appearing in multiple columns. The grid is as follows:

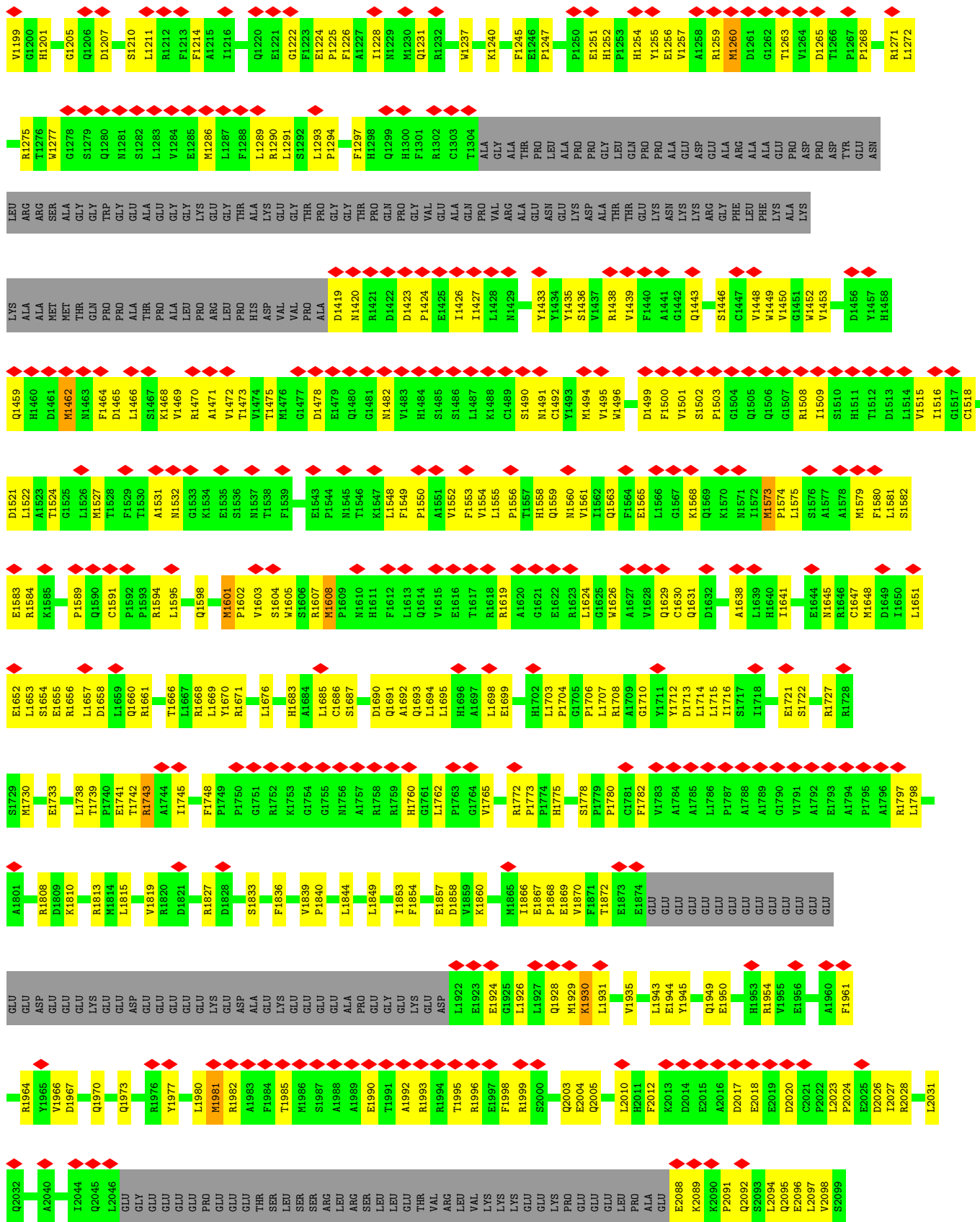
| | | | | | | | | | | | | | |
|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| MET | L62 | D134 | M202 | G271 | L339 | A406 | L471 | C537 | A613 | W686 | V752 | E819 | H879 |
| GLY | A63 | D140 | N203 | S272 | K340 | A408 | R472 | A538 | W614 | A687 | P753 | R820 | E880 |
| ASP | I64 | D142 | P204 | L273 | Y341 | N412 | R473 | L539 | R615 | L688 | S764 | L821 | L881 |
| E10 | C85 | T142 | L205 | L274 | G542 | N413 | R474 | F540 | S616 | T689 | F757 | R822 | W882 |
| V11 | C86 | G143 | C206 | R275 | E343 | Q413 | R475 | S541 | L620 | E690 | R758 | R823 | A883 |
| F13 | F67 | E144 | S207 | W276 | S444 | F414 | O476 | T542 | L621 | E691 | I759 | R824 | L884 |
| L14 | T88 | E147 | C208 | Q278 | L345 | F415 | L477 | T542 | L622 | Y692 | N760 | P825 | T885 |
| R15 | L69 | W147 | C209 | P279 | L346 | K416 | O479 | W546 | E623 | F696 | P763 | R826 | R886 |
| T16 | E70 | W148 | E210 | L280 | C346 | K417 | F479 | W547 | E624 | G697 | V764 | R827 | L887 |
| D17 | Q71 | T149 | E211 | R281 | F347 | L418 | E480 | W548 | L625 | G698 | F768 | R828 | Q888 |
| E19 | S72 | M150 | E212 | R282 | V348 | D419 | E481 | S549 | L626 | G699 | E769 | R829 | Q889 |
| V20 | L73 | E153 | G212 | I282 | Q349 | S420 | E482 | K550 | L626 | G699 | V764 | R830 | Q890 |
| L22 | R76 | A153 | Y213 | R283 | S353 | F421 | L483 | L551 | L626 | E700 | A770 | R831 | W891 |
| Q23 | R76 | S154 | V214 | H284 | G354 | K424 | W487 | D552 | R629 | E700 | F771 | R832 | T892 |
| C24 | R76 | S154 | H218 | V285 | L355 | P425 | L488 | R553 | E630 | E700 | A771 | R833 | Y893 |
| S25 | R76 | S154 | V219 | T286 | W356 | R426 | L488 | E555 | L631 | E700 | F772 | R834 | G894 |
| A26 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L632 | E700 | N772 | R835 | G895 |
| T27 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N773 | R836 | W896 |
| V28 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N774 | R837 | R897 |
| L29 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N775 | R838 | D898 |
| K30 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N776 | R839 | N900 |
| E31 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N777 | R840 | K901 |
| Q32 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N778 | R841 | R902 |
| L33 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N779 | R842 | L903 |
| K34 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N780 | R843 | H904 |
| L35 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N781 | R844 | P905 |
| C36 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N782 | R845 | C906 |
| L37 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N783 | R846 | L907 |
| A38 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N784 | R847 | L908 |
| A39 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N785 | R848 | O909 |
| E40 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N786 | R849 | F910 |
| G41 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N787 | R850 | H911 |
| F42 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N788 | R851 | C912 |
| G43 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N789 | R852 | L913 |
| M44 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N790 | R853 | P914 |
| R45 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N791 | R854 | E915 |
| L46 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N792 | R855 | L916 |
| C47 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N793 | R856 | E917 |
| F48 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N794 | R857 | R918 |
| L49 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N795 | R858 | N919 |
| E50 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N796 | R859 | Y920 |
| P51 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N797 | R860 | L921 |
| T52 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N798 | R861 | Q922 |
| S63 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N799 | R862 | M924 |
| N54 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N800 | R863 | S925 |
| M57 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N801 | R864 | G926 |
| V58 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N802 | R865 | L927 |
| P60 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N803 | R866 | E928 |
| D61 | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N804 | R867 | T928 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N805 | R868 | L929 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N806 | R869 | K930 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N807 | R870 | L931 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N808 | R871 | L932 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N809 | R872 | L933 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N810 | R873 | A934 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N811 | R874 | E936 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N812 | R875 | C937 |
| | R76 | S154 | V219 | T287 | W356 | R426 | L488 | E555 | L633 | E700 | N813 | R876 | H938 |

| | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|--|
| V939 | V1001 | S1061 | HI127 | G1187 | G1262 | ARG | ASN | V1448 | H1511 | M1573 | L1641 | L1714 | |
| 6940 | A1002 | Q1062 | R1128 | F1188 | T1263 | ALA | LYS | W1449 | T1512 | P1574 | P1642 | L1715 | |
| 8941 | Q1003 | V1063 | G1129 | L1189 | V1264 | ALA | LYS | V1450 | D1513 | L1575 | E1643 | S1716 | |
| A942 | W1004 | E1064 | Q1130 | GLY | D1265 | GLU | ARG | G1451 | D1514 | S1576 | E1644 | S1717 | |
| D943 | W1005 | E1064 | R1131 | S1193 | D1266 | ASP | PHE | W1452 | V1514 | M1579 | M1645 | L1718 | |
| E944 | S1006 | Q1066 | HI132 | L1194 | P1268 | PRO | LEU | V1453 | V1515 | F1580 | R1646 | E1721 | |
| R945 | Y1007 | S1067 | L1134 | G1195 | P1269 | TYR | PHE | Y1457 | I1516 | F1581 | C1647 | S1722 | |
| A946 | S1008 | R1068 | GLI35 | P1196 | R1271 | GLU | LYS | H1458 | G1518 | L1581 | M1648 | L1727 | |
| E947 | A1009 | R1068 | GLI36 | V1199 | L1272 | GLU | ALA | Q1459 | D1521 | L1650 | D1649 | L1728 | |
| D948 | E947 | W1010 | S1136 | W1199 | A1273 | ASN | LYS | H1460 | L1522 | E1583 | L1651 | S1729 | |
| 8949 | Q1011 | D1079 | E1137 | G1200 | H1274 | LEU | ALA | H1461 | L1523 | E1584 | L1652 | S1730 | |
| R950 | D1012 | R1071 | P1138 | H1201 | R1275 | ARG | ALA | M1462 | T1524 | K1585 | E1653 | M1729 | |
| R951 | I1013 | V1072 | F1139 | L1202 | T1276 | SER | MET | M1463 | G1525 | P1589 | S1654 | E1733 | |
| R952 | P1014 | R1073 | GLI40 | G1205 | W1277 | ALA | ALA | M1463 | G1526 | Q1590 | R1655 | E1734 | |
| R953 | A1015 | Q1206 | R1141 | Q1206 | G1278 | GLY | THR | F1464 | L1526 | C1591 | R1656 | L1738 | |
| R954 | R1016 | Q1207 | Q1206 | D1207 | S1279 | GLY | GLN | D1465 | M1527 | C1591 | L1657 | T1739 | |
| R955 | R1017 | R1076 | W1143 | D1207 | Q1280 | TRP | PRO | L1466 | T1528 | P1592 | D1658 | P1740 | |
| R956 | R1018 | A1077 | Q1144 | S1210 | N1281 | GLY | ALA | S1467 | F1529 | P1593 | L1659 | E1741 | |
| R957 | P1019 | E1078 | S1145 | L1211 | S1282 | ALA | THR | K1468 | T1530 | L1594 | Q1660 | E1742 | |
| R958 | R1020 | K1079 | S1146 | L1212 | S1283 | GLU | PRO | V1469 | A1531 | L1595 | R1661 | R1743 | |
| R959 | R1022 | S1080 | D1147 | F1213 | V1284 | GLY | ALA | R1470 | A1532 | E1596 | T1666 | A1744 | |
| R960 | V1023 | Y1081 | V1148 | F1214 | E1285 | LYS | PRO | A1471 | G1533 | V1597 | L1667 | I1745 | |
| R961 | Y1024 | Q1084 | G1150 | A1215 | M1286 | GLY | ARG | V1472 | S1536 | Q1598 | R1668 | R1748 | |
| R962 | R1025 | R1087 | C1151 | I1216 | L1287 | THR | LEU | T1473 | M1537 | M1601 | L1669 | P1749 | |
| R963 | L1026 | W1088 | M1152 | Q1220 | F1288 | ALA | PRO | T1474 | T1475 | P1602 | L1670 | P1750 | |
| R964 | L1027 | E1089 | I1153 | E1221 | F1289 | LYS | ASP | G1476 | M1476 | S1604 | R1671 | G1751 | |
| R965 | D1028 | F1090 | D1155 | G1222 | L1289 | GLU | VAL | G1477 | G1477 | W1605 | L1676 | R1752 | |
| R966 | E1029 | E1091 | T1156 | F1223 | R1290 | GLY | VAL | D1478 | D1478 | S1606 | H1683 | K1753 | |
| R967 | A1030 | F1092 | E1157 | E1224 | L1291 | PRO | PRO | E1479 | E1479 | M1608 | L1684 | G1754 | |
| R968 | T1031 | A1094 | M1158 | P1225 | S1292 | GLY | ALA | Q1480 | Q1480 | P1609 | L1685 | G1755 | |
| R969 | K1032 | V1095 | M1159 | F1226 | P1294 | THR | GLY | G1481 | G1481 | M1610 | C1686 | N1756 | |
| R970 | S1034 | G1098 | T1160 | I1227 | V1295 | PRO | THR | M1482 | M1482 | H1611 | D1690 | A1757 | |
| R971 | M1035 | E1099 | I1161 | I1228 | Q1296 | GLN | PRO | V1483 | V1483 | H1612 | Q1691 | R1758 | |
| R972 | R1036 | E1099 | F1182 | M1229 | F1298 | GLY | PRO | H1484 | H1484 | L1613 | Q1692 | R1759 | |
| R973 | D1037 | M1100 | T1163 | Q1231 | Q1299 | VAL | VAL | S1485 | S1485 | L1614 | Q1693 | H1760 | |
| R974 | S1038 | M1101 | L1164 | Q1232 | H1300 | GLY | ALA | S1486 | S1486 | V1615 | L1694 | G1761 | |
| R975 | C1040 | W1102 | G1166 | W1237 | F1301 | ALA | I1426 | L1487 | L1487 | E1616 | L1695 | L1762 | |
| R976 | Q1041 | E1103 | E1167 | W1237 | R1302 | GLN | I1427 | K1488 | K1488 | T1617 | H1696 | P1763 | |
| R977 | A1042 | L1109 | V1168 | K1240 | C1303 | PRO | L1428 | C1489 | C1489 | R1618 | L1698 | G1764 | |
| R978 | V1043 | E1108 | L1170 | F1245 | ALA | ARG | ALA | S1490 | S1490 | R1619 | E1699 | V1765 | |
| R979 | R1044 | L1109 | M1170 | E1246 | GLY | GLU | GLY | M1491 | M1491 | A1620 | D1700 | R1772 | |
| R980 | T1045 | L1109 | D1172 | P1247 | THR | ASN | THR | C1492 | C1492 | G1621 | A1701 | P1773 | |
| R981 | L1046 | L1113 | S1173 | P1250 | ALA | GLU | LEU | M1493 | M1493 | E1622 | H1702 | P1774 | |
| R982 | G1047 | E1114 | S1175 | H1251 | ALA | PRO | ALA | V1495 | V1495 | R1623 | L1703 | G1775 | |
| R983 | L1049 | L1115 | E1176 | H1252 | ALA | PRO | PRO | W1496 | W1496 | G1624 | P1704 | L1778 | |
| R985 | G1050 | G1116 | T1177 | P1253 | ALA | GLY | GLY | R1438 | R1438 | G1625 | G1705 | G1778 | |
| R986 | Y1051 | D1117 | A1178 | H1254 | ALA | GLY | GLY | V1439 | V1439 | W1626 | P1706 | P1779 | |
| R987 | N1052 | E1119 | E1178 | E1255 | ALA | THR | THR | F1440 | F1440 | A1627 | L1707 | P1780 | |
| R988 | E1054 | L1120 | I1181 | E1256 | GLU | GLY | GLY | A1441 | A1441 | V1628 | R1708 | C1781 | |
| R989 | P1055 | E1122 | E1183 | E1257 | GLU | GLN | VAL | G1442 | G1442 | Q1629 | G1710 | F1782 | |
| R991 | P1056 | F1123 | I1184 | V1257 | ASP | GLY | GLY | Q1443 | Q1443 | C1630 | G1711 | V1783 | |
| R992 | D1057 | M1125 | G1185 | D1261 | ALA | LYS | LYS | S1446 | S1446 | D1632 | Y1712 | A1784 | |
| R993 | Q1058 | G1126 | D1186 | D1261 | ALA | ALA | ALA | G1447 | G1447 | M1638 | D1713 | A1785 | |
| R994 | E1059 | | | | | | | | | L1639 | P1787 | L1786 | |
| R996 | P1060 | | | | | | | | | H1640 | A1788 | P1787 | |
| D999 | | | | | | | | | | | | | |
| R1000 | | | | | | | | | | | | | |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| L2633 | L2634 | L2635 | F2636 | A2637 | K2638 | M2639 | F2640 | L2641 | K2642 | L2643 | L2644 | T2645 | M2646 | H2647 | Y2648 | E2649 | K2650 | C2651 | M2652 | Y2653 | Y2654 | Y2655 | L2656 | C2657 | L2658 | F2659 | T2660 | M2661 | A2662 | M2663 | F2664 | G2665 | C2666 | L2667 | S2668 | E2669 | E2670 | F2671 | L2672 | H2673 | L2674 | L2675 | R2676 | K2677 | L2678 | M2679 | W2680 | G2681 | L2682 | F2683 | D2684 | S2685 | L2686 | A2687 | H2688 | K2689 | K2690 | P2691 | L2692 | | | |
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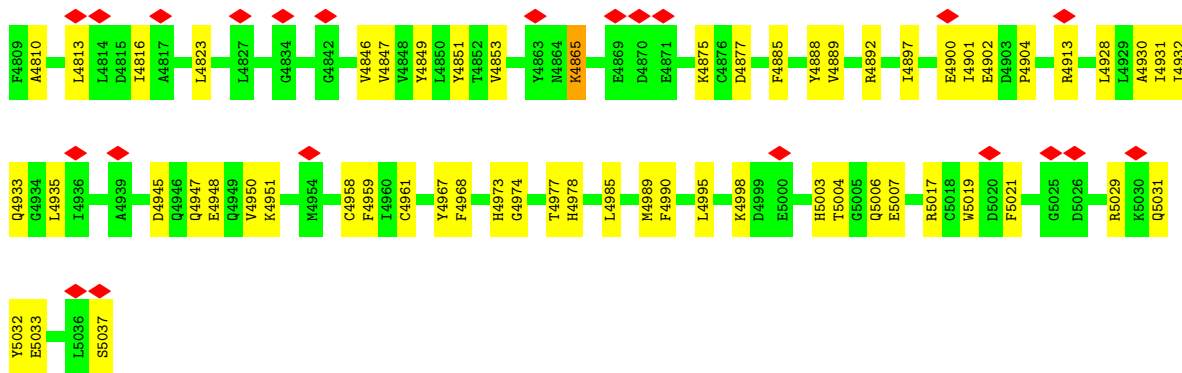
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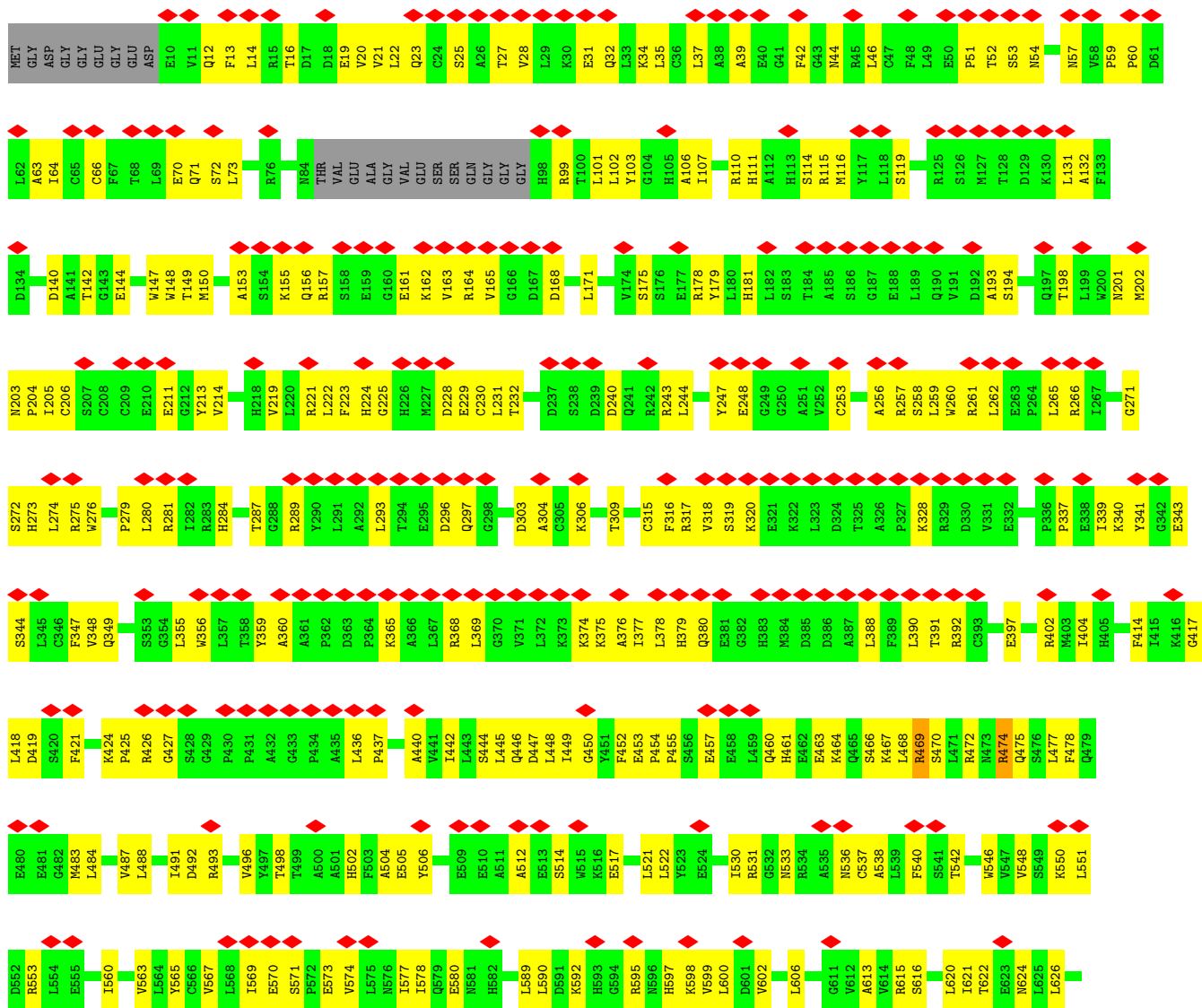
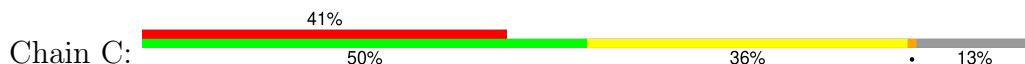


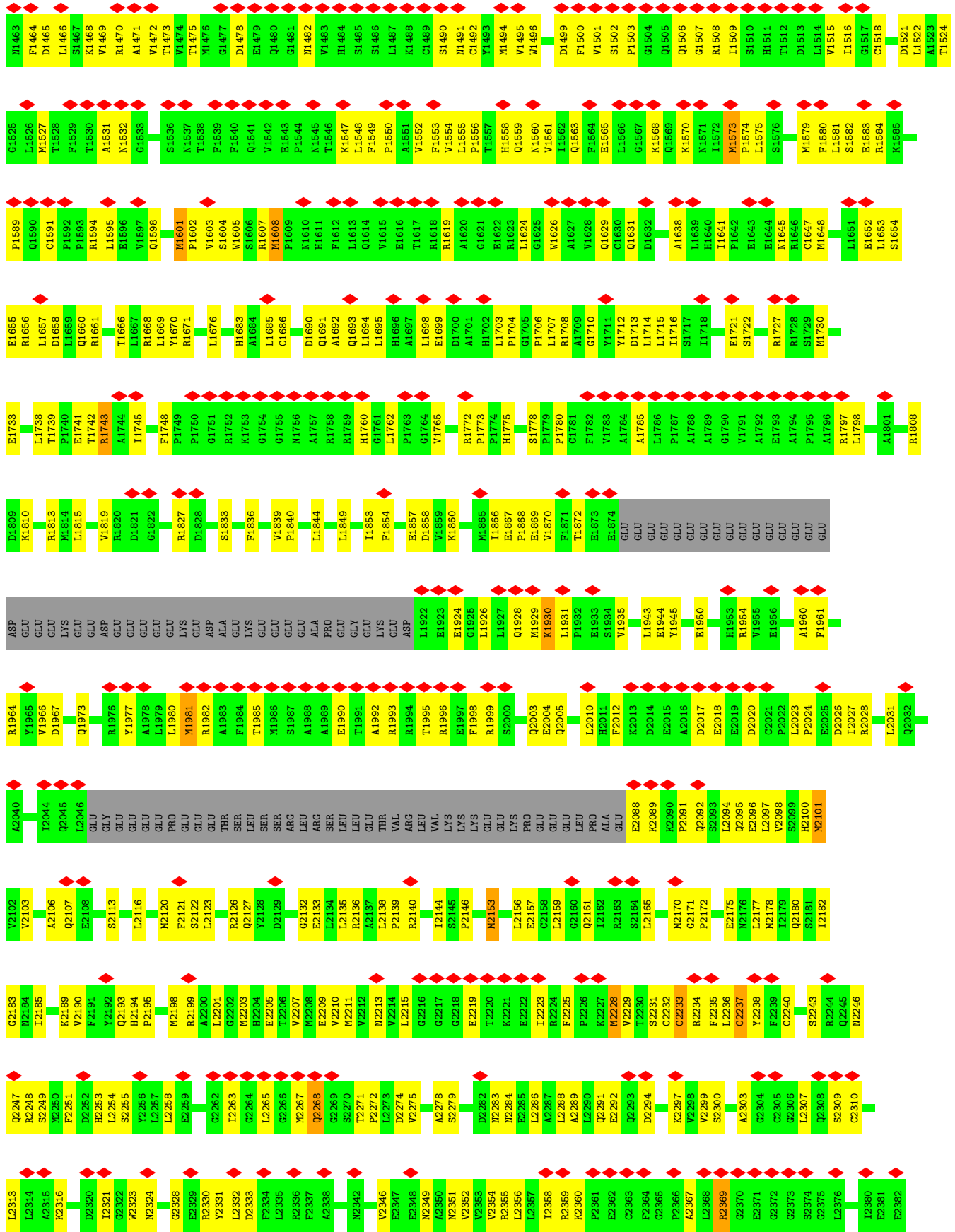
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| S2949 | S2950 | I2951 | E2952 | K2953 | R2954 | F2955 | A2956 | F2957 | G2958 | F2959 | L2960 | Q2961 | Q2962 | L2963 | L2964 | R2965 | W2966 | W2967 | D2968 | I2969 | S2970 | Q2971 | E2972 | F2973 | L2974 | A2975 | H2976 | L2977 | E2978 | A2979 | V2980 | V2981 | S2982 | S2983 | G2984 | R2985 | V2986 | E2987 | K2988 | S2989 | F2990 | H2991 | E2992 | Q2993 | E2994 | L2995 | K2996 | F2997 | F2998 | A2999 | K3000 | I3001 | L3002 | L3003 | P3004 | L3005 | I3006 | N3007 | Q3008 | | | | | | | | | | |



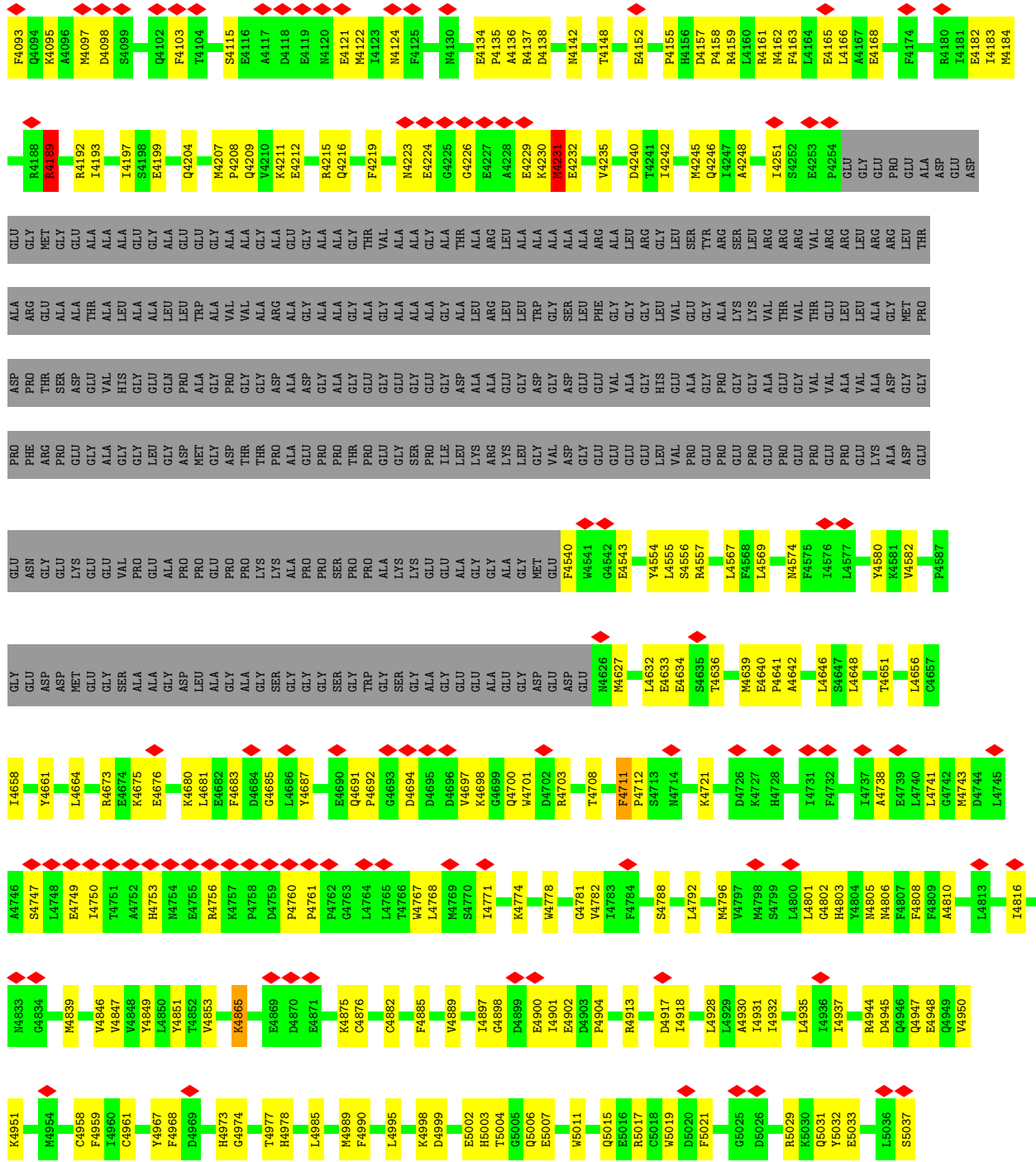
• Molecule 1: Ryanodine receptor 1



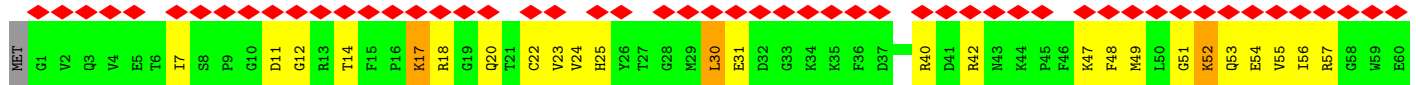
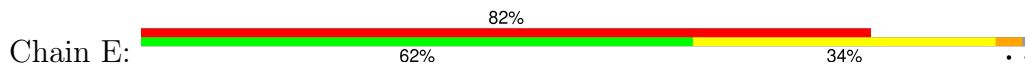


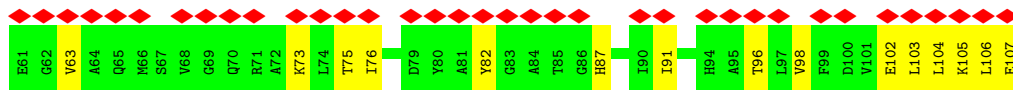
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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
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| G2708 | A2709 | L2710 | P2711 | Q2712 | D2713 | Y2714 | V2715 | D2716 | A2717 | S2718 | Y2719 | S2720 | S2721 | K2722 | A2723 | E2724 | LYS | ALA | THR | VAL | ASP | ALA | ALA | GLU | N2734 | D2735 | F2736 | D2737 | R2738 | P2739 | V2740 | E2741 | L2742 | L2743 | N2744 | V2745 | L2746 | L2747 | P2748 | E2749 | K2750 | L2751 | D2752 | S2753 | F2754 | L2755 | N2756 | K2757 | F2758 | R2759 | E2760 | Y2761 | H2762 | H2763 | E2764 | K2765 | W2766 | A2767 | | | | |
| F2768 | D2769 | K2770 | I2771 | Q2772 | N2773 | N2774 | W2775 | Y2777 | G2778 | E2779 | M2780 | V2781 | D2782 | E2783 | E2784 | L2785 | K2786 | H2788 | P2789 | M2790 | L2791 | R2792 | P2793 | Y2794 | K2795 | T2796 | S2798 | E2799 | K2800 | D2801 | K2802 | E2803 | I2804 | Y2805 | R2806 | V2807 | P2808 | L2809 | K2810 | E2811 | S2812 | K2813 | K2814 | A2815 | M2816 | I2817 | A2818 | V2819 | E2820 | T2821 | T2822 | I2823 | E2824 | K2825 | A2826 | R2827 | | | | | | |
| E2828 | G2829 | E2830 | GLU | ARG | THR | GLU | LYS | LYS | LYS | THR | LYS | ILE | SER | GLN | THR | ALA | GLN | THR | TYR | ASP | PRO | ARG | GLU | GLY | Y2855 | M2856 | Q2858 | P2859 | F2860 | L2862 | S2863 | G2864 | V2865 | T2866 | L2867 | S2868 | R2869 | E2870 | L2871 | Q2872 | A2873 | M2874 | A2875 | E2876 | Q2877 | L2878 | A2879 | E2880 | N2881 | Y2882 | M2883 | N2884 | T2885 | W2886 | G2887 | | | | | | | |
| R2888 | K2889 | R2890 | K2891 | R2892 | E2893 | L2894 | E2895 | A2896 | K2897 | G2898 | G2899 | G2900 | T2901 | H2902 | P2903 | L2904 | L2905 | Y2906 | P2907 | Y2908 | D2909 | T2910 | L2911 | T2912 | F2913 | Y2914 | K2915 | E2916 | K2917 | R2918 | D2919 | R2920 | E2921 | K2922 | A2923 | Q2924 | E2925 | L2926 | L2927 | K2928 | K2929 | F2929 | L2930 | Q2931 | M2932 | G2933 | G2934 | Y2935 | A2936 | V2937 | T2938 | G2939 | I3001 | L3002 | L3003 | P3004 | L3005 | I3006 | L2946 | D2947 | | |
| T2948 | S2949 | S2950 | I2951 | E2952 | K2953 | R2954 | F2955 | A2956 | P2957 | G2958 | F2959 | L2960 | Q2961 | Q2962 | L2963 | L2964 | R2965 | W2966 | M2967 | D2968 | I2969 | S2970 | Q2971 | E2972 | F2973 | L2974 | A2975 | H2976 | L2977 | E2978 | A2979 | V2980 | Y2981 | S2982 | S2983 | G2984 | R2985 | V2986 | E2987 | K2988 | S2989 | P2990 | H2991 | E2992 | Q2993 | E2994 | I2995 | K2996 | F2997 | P2998 | A2999 | G3000 | 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 | G3032 | N3033 | K3034 | E3035 | K3036 | E3037 | M3038 | I3039 | T3040 | S3041 | L3042 | F3043 | C3044 | K3045 | L3046 | A3047 | A3048 | L3049 | V3050 | R3051 | H3052 | R3053 | V3054 | S3055 | K3056 | F3057 | G3058 | T3059 | D3060 | A3061 | P3062 | L3063 | A3064 | V3065 | N3066 | C3067 | | | |
| L3068 | H3069 | I3070 | L3071 | A3072 | R3073 | S3074 | L3075 | D3076 | A3077 | R3078 | T3079 | M3080 | K3081 | K3082 | S3083 | G3084 | E3086 | I3087 | V3088 | K3089 | A3090 | G3091 | L3092 | R3093 | S3094 | F3095 | F3096 | E3097 | S3098 | A3099 | S3100 | E3101 | E3102 | I3103 | E3104 | K3105 | M3106 | V3107 | E3108 | N3109 | L3110 | R3111 | L3112 | G3113 | K3114 | V3115 | S3116 | GLN | ALA | ARG | THR | GLN | VAL | K3123 | G3124 | K3185 | L3186 | R3187 | Q3126 | Q3127 | F3188 | A3189 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L3190 | G3191 | E3192 | G3193 | L3194 | A3195 | R3196 | L3197 | A3198 | A3199 | A3200 | P3201 | V3202 | A3203 | A3204 | F3205 | L3206 | E3207 | P3208 | P3209 | L3210 | N3211 | E3212 | Y3213 | N3214 | A3215 | C3216 | S3217 | V3218 | Y3219 | T3220 | T3221 | K3222 | S3223 | P3224 | E3226 | R3227 | A3228 | E3229 | L3230 | G3231 | L3232 | P3233 | N3234 | S3235 | V3236 | E3237 | E3238 | M3239 | C3240 | P3241 | D3242 | I3243 | P3244 | L3246 | R3248 | L3249 | | |
| M3250 | A3251 | D3252 | G3253 | G3254 | L3255 | 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 | L3229 | E3290 | A3291 | P3292 | P3293 | P3294 | A3295 | L3296 | P3297 | A3298 | G3299 | A3300 | P3301 | P3302 | P3303 | C3304 | T3305 | A3306 | V3307 | S3309 |
| D3310 | H3311 | L3312 | N3313 | L3314 | L3315 | L3316 | G3317 | N3318 | L3319 | L3320 | R3321 | I3322 | I3323 | V3324 | N3325 | M3326 | L3327 | G3328 | I3329 | D3330 | E3331 | A3332 | T3333 | W3334 | M3335 | K3336 | R3337 | L3338 | V3340 | F3341 | A3342 | Q3343 | P3344 | I3345 | V3346 | S3347 | R3348 | A3349 | R3350 | P3351 | L3354 | H3355 | S3356 | H3357 | F3358 | I3359 | P3360 | P3361 | G3362 | L3363 | L3364 | L3365 | R3366 | R3368 | A3369 | G3370 | | |
| K3371 | V3372 | V3373 | A3374 | E3375 | E3376 | E3377 | Q3378 | R3380 | L3381 | E3382 | A3383 | K3384 | A3385 | E3386 | A3387 | E3388 | E3389 | G3390 | E3391 | L3392 | L3393 | V3394 | R3395 | D3396 | R3397 | F3398 | S3399 | V3400 | L3401 | C3402 | R3403 | D3404 | L3405 | Y3406 | A3407 | L3408 | Y3409 | P3410 | L3411 | L3412 | I3413 | R3414 | Y3415 | V3416 | D3417 | N3418 | N3419 | N3420 | H3422 | W3423 | L3424 | P3427 | N3428 | A3429 | A3431 | | | |
| E3432 | E3433 | L3434 | F3435 | R3436 | M3437 | V3438 | G3439 | I3441 | F3442 | L3443 | Y3444 | W3445 | S3446 | K3447 | S3448 | H3449 | N3450 | F3451 | R3452 | E3453 | E3454 | A3455 | Q3456 | N3457 | F3458 | V3459 | V3460 | Q3461 | E3462 | I3463 | N3464 | N3465 | N3466 | M3467 | S3468 | F3469 | L3470 | T3471 | D3472 | D3473 | S3474 | K3475 | S3476 | M3477 | A3479 | LYS | ALA | GLY | ASP | GLN | ALA | SER | GLY | GLY | SER | ASP | GLN | |
| GLU | ARG | THR | LYS | LYS | R3498 | R3499 | G3500 | D3501 | R3502 | Y3503 | S3504 | V3505 | Q3506 | T3507 | S3508 | L3509 | V3511 | A3512 | T3513 | L3514 | K3515 | L3516 | M3517 | L3518 | P3519 | I3520 | G3521 | L3522 | N3523 | M3524 | C3525 | A3526 | F3527 | L3528 | D3529 | Q3530 | D3531 | L3532 | M3533 | K3534 | A3535 | K3537 | T3538 | R3539 | Y3540 | L3541 | E3542 | L3543 | Q3544 | T3545 | D3546 | E3547 | E3548 | V3549 | R3550 | E3551 | | |
| F3552 | L3553 | Q3554 | N3555 | R3556 | L3557 | H3558 | L3559 | Q3560 | G3561 | K3562 | V3563 | E3564 | G3565 | S3566 | P3567 | S3568 | W3571 | Q3572 | M3573 | R3577 | G3578 | L3579 | P3580 | G3581 | R3582 | E3584 | D3585 | A3586 | R3587 | D3588 | P3589 | E3590 | L3591 | S3592 | V3593 | R3594 | R3595 | V3596 | E3598 | V3599 | S3600 | A3601 | Y3604 | H3605 | L3606 | E3607 | L3608 | Q3609 | T3609 | E3610 | H3611 | Y3612 | P3613 | E3614 | K3614 | S3615 | | |
| K3616 | A3618 | V3619 | W3620 | H3621 | K3622 | L3623 | L3624 | S3625 | K3626 | Q3627 | R3628 | R3629 | R3630 | A3631 | V3632 | A3634 | C3635 | F3636 | R3637 | M3638 | T3639 | P3640 | L3641 | Y3642 | N3643 | L3644 | F3645 | T3646 | H3647 | R3648 | A3649 | C3650 | N3651 | M3652 | F3653 | K3658 | L3662 | L3663 | D3666 | H3667 | S3668 | F3669 | E3670 | M3673 | L3674 | D3675 | D3676 | L3677 | A3680 | C3681 | E3682 | Q3683 | | | | | | |
| E3684 | E3685 | E3686 | E3687 | E3688 | E3689 | V3690 | E3691 | E3692 | K3693 | K3694 | P3695 | D3696 | P3697 | G3698 | H3699 | Q3700 | L3701 | R3707 | L3710 | T3711 | K3713 | S3714 | K3715 | L3716 | D3717 | E3718 | D3719 | Y3720 | L3721 | Y3725 | L3728 | M3729 | A3730 | S3732 | C3733 | H3734 | L3735 | E3736 | GLU | GLY | GLY | ASN | GLY | GLU | ALA | GLU | GLU | GLU | GLU | V3749 | E3750 | V3751 | | | | | | |
| S3752 | F3753 | E3754 | E3755 | K3756 | E3757 | M3758 | R3762 | S3768 | R3769 | L3770 | H3771 | T3772 | R3773 | G3774 | A3775 | V3779 | C3786 | K3787 | G3788 | M3793 | V3794 | T3797 | I3802 | S3803 | J3804 | L3805 | E3811 | L3817 | D3818 | Y3819 | K3821 | D3822 | K3823 | K3824 | E3825 | V3826 | F3829 | Q3830 | L3835 | T3838 | L3842 | D3843 | L3844 | N3845 | | | | | | | | | | | | | | |
| E3848 | R3849 | Q3850 | N3851 | K3852 | A3853 | E3854 | Q3855 | L3856 | G3857 | M3858 | V3859 | E3861 | D3862 | Q3863 | T3864 | V3865 | L3866 | K3867 | N3868 | Q3869 | N3870 | G3871 | E3872 | V3873 | K3874 | M3875 | D3878 | E3879 | F3880 | R3886 | Q3889 | L3890 | L3891 | H3895 | F3899 | G3908 | N3909 | T3910 | L3913 | L3916 | L3917 | V3920 | Q3927 | E3928 | S3929 | L3930 | S3931 | D3932 | | | | | | | | | | |
| F3933 | L4016 | L4017 | D4018 | L4019 | Q4020 | K4021 | D4022 | M4023 | V4024 | E3943 | E3944 | E3945 | Q3946 | G3947 | K3948 | R3949 | F3951 | M3955 | S3956 | V3957 | A3958 | K3959 | Q3960 | F3961 | N3962 | L3965 | T3966 | E3967 | Y3968 | L3969 | Q3970 | L3980 | A3981 | L3985 | W3986 | V3989 | G3990 | G3991 | F3992 | L3993 | H3994 | V3995 | F3996 | A3997 | H3998 | M3999 | M4000 | M4001 | K4002 | L4003 | Q4009 | L4012 | K4090 | | | | | |

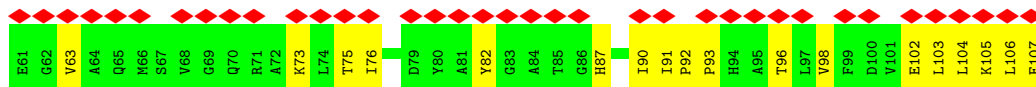
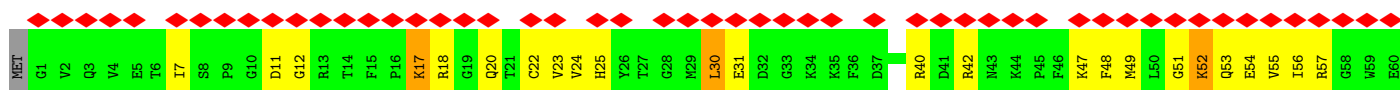
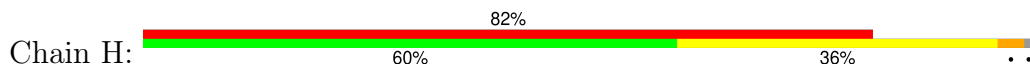


● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

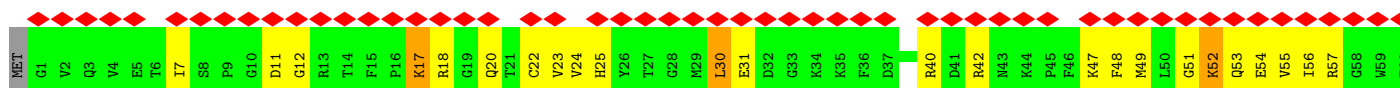
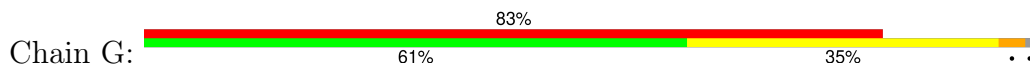




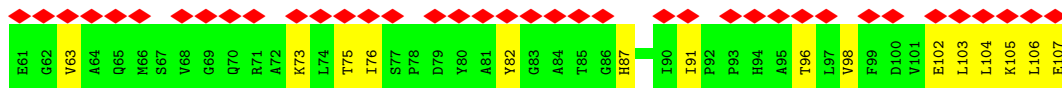
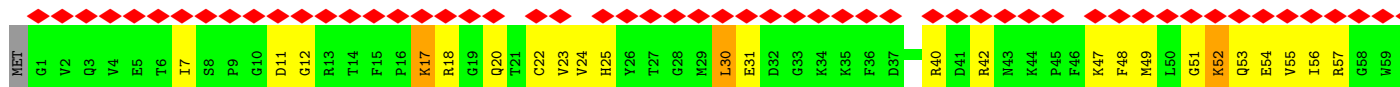
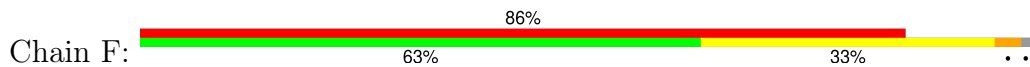
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



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



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



4 Experimental information

| Property | Value | Source |
|--------------------------------------|---|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 3336 | 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 ($e^-/\text{\AA}^2$) | 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 | 0.283 | Depositor |
| Minimum map value | -0.122 | Depositor |
| Average map value | 0.000 | Depositor |
| Map value standard deviation | 0.018 | Depositor |
| Recommended contour level | 0.1 | Depositor |
| Map size (\AA) | 428.544, 428.544, 428.544 | wwPDB |
| Map dimensions | 512, 512, 512 | wwPDB |
| Map angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (\AA) | 0.837, 0.837, 0.837 | 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: CA, ATP, ZN, PNX

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 | 0.27 | 2/35977 (0.0%) | 0.54 | 14/48726 (0.0%) |
| 1 | B | 0.27 | 2/35977 (0.0%) | 0.54 | 14/48726 (0.0%) |
| 1 | C | 0.27 | 2/35977 (0.0%) | 0.54 | 14/48726 (0.0%) |
| 1 | D | 0.27 | 2/35977 (0.0%) | 0.54 | 14/48726 (0.0%) |
| 2 | E | 0.27 | 0/850 | 0.59 | 1/1146 (0.1%) |
| 2 | F | 0.27 | 0/850 | 0.59 | 1/1146 (0.1%) |
| 2 | G | 0.27 | 0/850 | 0.59 | 1/1146 (0.1%) |
| 2 | H | 0.27 | 0/850 | 0.59 | 1/1146 (0.1%) |
| All | All | 0.27 | 8/147308 (0.0%) | 0.55 | 60/199488 (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 | 2 |
| 1 | B | 0 | 2 |
| 1 | C | 0 | 2 |
| 1 | D | 0 | 2 |
| All | All | 0 | 8 |

All (8) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | D | 2233 | CYS | CB-SG | -5.92 | 1.72 | 1.81 |
| 1 | C | 2233 | CYS | CB-SG | -5.91 | 1.72 | 1.81 |
| 1 | A | 2233 | CYS | CB-SG | -5.91 | 1.72 | 1.81 |
| 1 | B | 2233 | CYS | CB-SG | -5.90 | 1.72 | 1.81 |
| 1 | A | 2237 | CYS | CB-SG | 5.70 | 1.92 | 1.82 |
| 1 | C | 2237 | CYS | CB-SG | 5.70 | 1.92 | 1.82 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|------|-------------|----------|
| 1 | D | 2237 | CYS | CB-SG | 5.70 | 1.92 | 1.82 |
| 1 | B | 2237 | CYS | CB-SG | 5.67 | 1.91 | 1.82 |

All (60) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1 | D | 2578 | MET | CB-CG-SD | 8.49 | 137.88 | 112.40 |
| 1 | A | 2578 | MET | CB-CG-SD | 8.48 | 137.85 | 112.40 |
| 1 | B | 2578 | MET | CB-CG-SD | 8.48 | 137.85 | 112.40 |
| 1 | C | 2578 | MET | CB-CG-SD | 8.48 | 137.83 | 112.40 |
| 1 | A | 1071 | ARG | CA-CB-CG | 7.34 | 129.54 | 113.40 |
| 1 | C | 1071 | ARG | CA-CB-CG | 7.33 | 129.51 | 113.40 |
| 1 | D | 1071 | ARG | CA-CB-CG | 7.32 | 129.51 | 113.40 |
| 1 | B | 1071 | ARG | CA-CB-CG | 7.31 | 129.48 | 113.40 |
| 1 | B | 2932 | MET | CB-CG-SD | -6.65 | 92.46 | 112.40 |
| 1 | D | 2932 | MET | CB-CG-SD | -6.65 | 92.46 | 112.40 |
| 1 | A | 2932 | MET | CB-CG-SD | -6.64 | 92.48 | 112.40 |
| 1 | C | 2932 | MET | CB-CG-SD | -6.64 | 92.48 | 112.40 |
| 1 | B | 2876 | GLU | CA-CB-CG | 6.59 | 127.90 | 113.40 |
| 1 | C | 2876 | GLU | CA-CB-CG | 6.59 | 127.90 | 113.40 |
| 1 | A | 2876 | GLU | CA-CB-CG | 6.58 | 127.89 | 113.40 |
| 1 | D | 2876 | GLU | CA-CB-CG | 6.58 | 127.88 | 113.40 |
| 1 | A | 4189 | ARG | CG-CD-NE | 6.37 | 125.17 | 111.80 |
| 1 | C | 4189 | ARG | CG-CD-NE | 6.37 | 125.17 | 111.80 |
| 1 | D | 4189 | ARG | CG-CD-NE | 6.37 | 125.17 | 111.80 |
| 1 | B | 4189 | ARG | CG-CD-NE | 6.35 | 125.14 | 111.80 |
| 1 | C | 2578 | MET | CG-SD-CE | 6.34 | 110.35 | 100.20 |
| 1 | B | 2578 | MET | CG-SD-CE | 6.34 | 110.34 | 100.20 |
| 1 | D | 2578 | MET | CG-SD-CE | 6.32 | 110.32 | 100.20 |
| 1 | A | 2578 | MET | CG-SD-CE | 6.32 | 110.31 | 100.20 |
| 1 | C | 4231 | MET | CB-CG-SD | 6.31 | 131.32 | 112.40 |
| 1 | A | 4231 | MET | CB-CG-SD | 6.30 | 131.31 | 112.40 |
| 1 | B | 4231 | MET | CB-CG-SD | 6.30 | 131.31 | 112.40 |
| 1 | D | 4231 | MET | CB-CG-SD | 6.30 | 131.31 | 112.40 |
| 2 | F | 30 | LEU | CA-CB-CG | 5.91 | 128.90 | 115.30 |
| 2 | H | 30 | LEU | CA-CB-CG | 5.91 | 128.90 | 115.30 |
| 2 | G | 30 | LEU | CA-CB-CG | 5.91 | 128.90 | 115.30 |
| 2 | E | 30 | LEU | CA-CB-CG | 5.89 | 128.85 | 115.30 |
| 1 | B | 2530 | MET | CB-CG-SD | -5.82 | 94.93 | 112.40 |
| 1 | A | 2530 | MET | CB-CG-SD | -5.82 | 94.94 | 112.40 |
| 1 | C | 2530 | MET | CB-CG-SD | -5.82 | 94.94 | 112.40 |
| 1 | D | 2530 | MET | CB-CG-SD | -5.82 | 94.95 | 112.40 |

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Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|----------|------|-------------|----------|
| 1 | C | 2578 | MET | CA-CB-CG | 5.81 | 123.17 | 113.30 |
| 1 | B | 4189 | ARG | CD-NE-CZ | 5.80 | 131.72 | 123.60 |
| 1 | A | 2578 | MET | CA-CB-CG | 5.79 | 123.15 | 113.30 |
| 1 | A | 4189 | ARG | CD-NE-CZ | 5.79 | 131.71 | 123.60 |
| 1 | C | 4189 | ARG | CD-NE-CZ | 5.79 | 131.70 | 123.60 |
| 1 | B | 2578 | MET | CA-CB-CG | 5.79 | 123.13 | 113.30 |
| 1 | D | 4189 | ARG | CD-NE-CZ | 5.79 | 131.70 | 123.60 |
| 1 | D | 2578 | MET | CA-CB-CG | 5.77 | 123.11 | 113.30 |
| 1 | D | 2702 | CYS | CA-CB-SG | 5.44 | 123.79 | 114.00 |
| 1 | C | 2702 | CYS | CA-CB-SG | 5.44 | 123.79 | 114.00 |
| 1 | B | 2702 | CYS | CA-CB-SG | 5.44 | 123.78 | 114.00 |
| 1 | A | 2702 | CYS | CA-CB-SG | 5.43 | 123.78 | 114.00 |
| 1 | D | 2612[A] | ARG | CG-CD-NE | 5.25 | 122.83 | 111.80 |
| 1 | D | 2612[B] | ARG | CG-CD-NE | 5.25 | 122.83 | 111.80 |
| 1 | B | 2612[A] | ARG | CG-CD-NE | 5.25 | 122.83 | 111.80 |
| 1 | B | 2612[B] | ARG | CG-CD-NE | 5.25 | 122.83 | 111.80 |
| 1 | C | 2612[A] | ARG | CG-CD-NE | 5.25 | 122.82 | 111.80 |
| 1 | C | 2612[B] | ARG | CG-CD-NE | 5.25 | 122.82 | 111.80 |
| 1 | A | 2612[A] | ARG | CG-CD-NE | 5.24 | 122.81 | 111.80 |
| 1 | A | 2612[B] | ARG | CG-CD-NE | 5.24 | 122.81 | 111.80 |
| 1 | B | 3201 | MET | CA-CB-CG | 5.19 | 122.12 | 113.30 |
| 1 | D | 3201 | MET | CA-CB-CG | 5.18 | 122.10 | 113.30 |
| 1 | A | 3201 | MET | CA-CB-CG | 5.16 | 122.08 | 113.30 |
| 1 | C | 3201 | MET | CA-CB-CG | 5.14 | 122.03 | 113.30 |

There are no chirality outliers.

All (8) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|------|------|-----------|
| 1 | A | 1608 | MET | Peptide |
| 1 | A | 4189 | ARG | Sidechain |
| 1 | B | 1608 | MET | Peptide |
| 1 | B | 4189 | ARG | Sidechain |
| 1 | C | 1608 | MET | Peptide |
| 1 | C | 4189 | ARG | Sidechain |
| 1 | D | 1608 | MET | Peptide |
| 1 | D | 4189 | ARG | Sidechain |

5.2 Too-close contacts

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 | 1452 | 0 |
| 1 | B | 35150 | 0 | 34793 | 1463 | 0 |
| 1 | C | 35150 | 0 | 34793 | 1445 | 0 |
| 1 | D | 35150 | 0 | 34793 | 1424 | 0 |
| 2 | E | 831 | 0 | 831 | 31 | 0 |
| 2 | F | 831 | 0 | 831 | 27 | 0 |
| 2 | G | 831 | 0 | 831 | 29 | 0 |
| 2 | H | 831 | 0 | 831 | 30 | 0 |
| 3 | A | 31 | 0 | 12 | 0 | 0 |
| 3 | B | 31 | 0 | 12 | 0 | 0 |
| 3 | C | 31 | 0 | 12 | 0 | 0 |
| 3 | D | 31 | 0 | 12 | 0 | 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 |
| 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 | 20 | 0 | 18 | 2 | 0 |
| 6 | B | 20 | 0 | 18 | 2 | 0 |
| 6 | C | 20 | 0 | 18 | 1 | 0 |
| 6 | D | 20 | 0 | 18 | 1 | 0 |
| All | All | 144136 | 0 | 142616 | 5816 | 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 20.

All (5816) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:2639:MET:HG2 | 1:B:2640:PRO:HD3 | 1.47 | 0.97 |
| 1:C:2639:MET:HG2 | 1:C:2640:PRO:HD3 | 1.47 | 0.96 |
| 1:D:2639:MET:HG2 | 1:D:2640:PRO:HD3 | 1.47 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2639:MET:HG2 | 1:A:2640:PRO:HD3 | 1.47 | 0.96 |
| 1:A:2821:TRP:NE1 | 1:A:2874:MET:SD | 2.46 | 0.89 |
| 1:D:2821:TRP:NE1 | 1:D:2874:MET:SD | 2.46 | 0.88 |
| 1:B:2821:TRP:NE1 | 1:B:2874:MET:SD | 2.46 | 0.87 |
| 1:C:2821:TRP:NE1 | 1:C:2874:MET:SD | 2.46 | 0.87 |
| 1:B:1067:SER:O | 1:B:1071:ARG:HB2 | 1.76 | 0.85 |
| 1:A:1067:SER:O | 1:A:1071:ARG:HB2 | 1.76 | 0.85 |
| 1:C:2607:LEU:HD22 | 1:C:2643:LEU:HD11 | 1.60 | 0.84 |
| 1:C:1067:SER:O | 1:C:1071:ARG:HB2 | 1.76 | 0.84 |
| 1:C:3889:GLN:HG3 | 1:C:3967:GLU:HG3 | 1.59 | 0.84 |
| 1:D:3889:GLN:HG3 | 1:D:3967:GLU:HG3 | 1.59 | 0.84 |
| 1:A:2607:LEU:HD22 | 1:A:2643:LEU:HD11 | 1.60 | 0.84 |
| 1:A:971:ASP:HB3 | 1:A:974:HIS:HD1 | 1.40 | 0.83 |
| 1:D:1067:SER:O | 1:D:1071:ARG:HB2 | 1.76 | 0.83 |
| 1:A:179:TYR:OH | 1:D:2359:ARG:NH1 | 2.10 | 0.83 |
| 1:D:2607:LEU:HD22 | 1:D:2643:LEU:HD11 | 1.60 | 0.83 |
| 1:B:4961:CYS:SG | 1:B:4978:HIS:CE1 | 2.72 | 0.82 |
| 1:A:3889:GLN:HG3 | 1:A:3967:GLU:HG3 | 1.59 | 0.82 |
| 1:B:3889:GLN:HG3 | 1:B:3967:GLU:HG3 | 1.59 | 0.82 |
| 1:A:4961:CYS:SG | 1:A:4978:HIS:CE1 | 2.72 | 0.82 |
| 1:B:2607:LEU:HD22 | 1:B:2643:LEU:HD11 | 1.60 | 0.82 |
| 1:B:2223:ILE:HG21 | 1:B:2267:MET:HB3 | 1.62 | 0.82 |
| 1:C:4961:CYS:SG | 1:C:4978:HIS:CE1 | 2.72 | 0.82 |
| 1:D:4961:CYS:SG | 1:D:4978:HIS:CE1 | 2.72 | 0.81 |
| 1:C:2223:ILE:HG21 | 1:C:2267:MET:HB3 | 1.62 | 0.81 |
| 1:C:3842:LEU:HB2 | 1:C:3929:SER:HB2 | 1.63 | 0.81 |
| 1:B:1668:ARG:HE | 1:B:1671:ARG:HH21 | 1.28 | 0.81 |
| 1:D:2223:ILE:HG21 | 1:D:2267:MET:HB3 | 1.62 | 0.81 |
| 1:A:3842:LEU:HB2 | 1:A:3929:SER:HB2 | 1.63 | 0.81 |
| 1:A:2223:ILE:HG21 | 1:A:2267:MET:HB3 | 1.62 | 0.80 |
| 1:A:2772:GLN:HG3 | 1:B:1506:GLN:NE2 | 1.97 | 0.80 |
| 1:B:844:ARG:HD2 | 1:B:1196:PRO:HB2 | 1.63 | 0.80 |
| 1:B:1686:CYS:SG | 1:B:1691:GLN:NE2 | 2.54 | 0.80 |
| 1:D:4904:PRO:HB3 | 1:D:4913:ARG:HD3 | 1.63 | 0.80 |
| 1:C:4904:PRO:HB3 | 1:C:4913:ARG:HD3 | 1.63 | 0.80 |
| 1:C:1686:CYS:SG | 1:C:1691:GLN:NE2 | 2.54 | 0.80 |
| 1:D:844:ARG:HD2 | 1:D:1196:PRO:HB2 | 1.63 | 0.80 |
| 1:B:452:PHE:O | 1:B:531:ARG:NH2 | 2.15 | 0.79 |
| 1:A:1668:ARG:HE | 1:A:1671:ARG:HH21 | 1.28 | 0.79 |
| 1:A:1686:CYS:SG | 1:A:1691:GLN:NE2 | 2.54 | 0.79 |
| 1:D:3842:LEU:HB2 | 1:D:3929:SER:HB2 | 1.63 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:4904:PRO:HB3 | 1:A:4913:ARG:HD3 | 1.63 | 0.79 |
| 1:A:4958:CYS:SG | 1:A:4961:CYS:HB2 | 2.23 | 0.79 |
| 1:D:275:ARG:HH21 | 1:D:328:LYS:HB3 | 1.48 | 0.79 |
| 1:D:4958:CYS:SG | 1:D:4961:CYS:HB2 | 2.23 | 0.79 |
| 1:B:3842:LEU:HB2 | 1:B:3929:SER:HB2 | 1.63 | 0.79 |
| 1:A:275:ARG:HH21 | 1:A:328:LYS:HB3 | 1.48 | 0.79 |
| 1:A:985:VAL:HG12 | 1:A:1039:LEU:HD22 | 1.65 | 0.79 |
| 1:D:179:TYR:OH | 1:C:2359:ARG:NH1 | 2.14 | 0.79 |
| 1:B:985:VAL:HG12 | 1:B:1039:LEU:HD22 | 1.65 | 0.79 |
| 1:B:4958:CYS:SG | 1:B:4961:CYS:HB2 | 2.23 | 0.79 |
| 1:A:3479:ALA:HB1 | 1:B:1140:GLY:HA2 | 1.63 | 0.79 |
| 1:D:452:PHE:O | 1:D:531:ARG:NH2 | 2.15 | 0.79 |
| 1:A:844:ARG:HD2 | 1:A:1196:PRO:HB2 | 1.63 | 0.79 |
| 1:A:452:PHE:O | 1:A:531:ARG:NH2 | 2.15 | 0.78 |
| 1:B:989:ALA:HB2 | 1:B:1039:LEU:HD21 | 1.65 | 0.78 |
| 1:C:632:LEU:HD23 | 1:C:1666:THR:HG23 | 1.65 | 0.78 |
| 1:B:4904:PRO:HB3 | 1:B:4913:ARG:HD3 | 1.63 | 0.78 |
| 1:D:989:ALA:HB2 | 1:D:1039:LEU:HD21 | 1.65 | 0.78 |
| 1:A:2591:ARG:HH12 | 1:A:2640:PRO:HG2 | 1.48 | 0.78 |
| 1:D:985:VAL:HG12 | 1:D:1039:LEU:HD22 | 1.65 | 0.78 |
| 1:C:452:PHE:O | 1:C:531:ARG:NH2 | 2.15 | 0.78 |
| 1:C:1668:ARG:HE | 1:C:1671:ARG:HH21 | 1.28 | 0.78 |
| 1:A:632:LEU:HD23 | 1:A:1666:THR:HG23 | 1.65 | 0.78 |
| 1:B:2591:ARG:HH12 | 1:B:2640:PRO:HG2 | 1.48 | 0.78 |
| 1:D:632:LEU:HD23 | 1:D:1666:THR:HG23 | 1.65 | 0.78 |
| 1:D:2591:ARG:HH12 | 1:D:2640:PRO:HG2 | 1.48 | 0.78 |
| 1:D:1668:ARG:HE | 1:D:1671:ARG:HH21 | 1.29 | 0.78 |
| 1:D:1686:CYS:SG | 1:D:1691:GLN:NE2 | 2.54 | 0.78 |
| 1:C:989:ALA:HB2 | 1:C:1039:LEU:HD21 | 1.65 | 0.78 |
| 1:D:1581:LEU:HD12 | 1:D:1584:ARG:HE | 1.49 | 0.78 |
| 1:C:844:ARG:HD2 | 1:C:1196:PRO:HB2 | 1.63 | 0.78 |
| 1:C:1581:LEU:HD12 | 1:C:1584:ARG:HE | 1.48 | 0.78 |
| 1:B:275:ARG:HH21 | 1:B:328:LYS:HB3 | 1.48 | 0.78 |
| 1:A:989:ALA:HB2 | 1:A:1039:LEU:HD21 | 1.65 | 0.78 |
| 1:C:985:VAL:HG12 | 1:C:1039:LEU:HD22 | 1.65 | 0.78 |
| 1:C:2591:ARG:HH12 | 1:C:2640:PRO:HG2 | 1.49 | 0.78 |
| 1:A:1581:LEU:HD12 | 1:A:1584:ARG:HE | 1.49 | 0.77 |
| 1:B:2823:ILE:HD11 | 1:B:2935:TYR:HB3 | 1.66 | 0.77 |
| 1:C:4958:CYS:SG | 1:C:4961:CYS:HB2 | 2.23 | 0.77 |
| 1:D:2823:ILE:HD11 | 1:D:2935:TYR:HB3 | 1.66 | 0.77 |
| 1:B:632:LEU:HD23 | 1:B:1666:THR:HG23 | 1.65 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:4242:ILE:HG22 | 1:C:4246:GLN:HE22 | 1.50 | 0.77 |
| 1:A:622:THR:HG23 | 1:A:626:LEU:HD12 | 1.67 | 0.77 |
| 1:B:622:THR:HG23 | 1:B:626:LEU:HD12 | 1.67 | 0.77 |
| 1:C:2823:ILE:HD11 | 1:C:2935:TYR:HB3 | 1.66 | 0.77 |
| 1:B:2522:LEU:HA | 1:B:2526:PHE:HB2 | 1.66 | 0.77 |
| 1:D:622:THR:HG23 | 1:D:626:LEU:HD12 | 1.67 | 0.77 |
| 1:D:2522:LEU:HA | 1:D:2526:PHE:HB2 | 1.66 | 0.76 |
| 1:C:2522:LEU:HA | 1:C:2526:PHE:HB2 | 1.66 | 0.76 |
| 1:B:3018:LEU:HB3 | 1:B:3025:LEU:HD12 | 1.67 | 0.76 |
| 1:C:622:THR:HG23 | 1:C:626:LEU:HD12 | 1.67 | 0.76 |
| 1:C:772:ASN:H | 1:C:1470:ARG:HH22 | 1.32 | 0.76 |
| 1:A:4242:ILE:HG22 | 1:A:4246:GLN:HE22 | 1.50 | 0.76 |
| 1:B:663:TYR:HE1 | 1:B:745:SER:HB2 | 1.51 | 0.76 |
| 1:A:772:ASN:H | 1:A:1470:ARG:HH22 | 1.32 | 0.76 |
| 1:A:2522:LEU:HA | 1:A:2526:PHE:HB2 | 1.66 | 0.76 |
| 1:B:1581:LEU:HD12 | 1:B:1584:ARG:HE | 1.49 | 0.76 |
| 1:C:275:ARG:HH21 | 1:C:328:LYS:HB3 | 1.48 | 0.76 |
| 1:C:663:TYR:HE1 | 1:C:745:SER:HB2 | 1.51 | 0.76 |
| 1:A:2823:ILE:HD11 | 1:A:2935:TYR:HB3 | 1.66 | 0.76 |
| 1:C:2752:ASP:OD1 | 1:C:2806:ARG:NH1 | 2.19 | 0.76 |
| 1:C:3018:LEU:HB3 | 1:C:3025:LEU:HD12 | 1.67 | 0.76 |
| 1:A:2752:ASP:OD1 | 1:A:2806:ARG:NH1 | 2.19 | 0.76 |
| 2:G:53:GLN:HE21 | 2:G:57:ARG:HG3 | 1.51 | 0.76 |
| 1:D:2534:ALA:HA | 1:D:2588:ARG:HH12 | 1.50 | 0.76 |
| 1:A:663:TYR:HE1 | 1:A:745:SER:HB2 | 1.51 | 0.76 |
| 2:H:53:GLN:HE21 | 2:H:57:ARG:HG3 | 1.51 | 0.76 |
| 1:D:663:TYR:HE1 | 1:D:745:SER:HB2 | 1.51 | 0.76 |
| 1:D:772:ASN:H | 1:D:1470:ARG:HH22 | 1.32 | 0.76 |
| 1:A:3409:TYR:HE2 | 1:A:3510:ILE:HG12 | 1.51 | 0.75 |
| 1:B:2534:ALA:HA | 1:B:2588:ARG:HH12 | 1.50 | 0.75 |
| 1:B:2752:ASP:OD1 | 1:B:2806:ARG:NH1 | 2.19 | 0.75 |
| 1:C:1683:HIS:NE2 | 1:C:1798:LEU:O | 2.17 | 0.75 |
| 1:D:4242:ILE:HG22 | 1:D:4246:GLN:HE22 | 1.50 | 0.75 |
| 1:A:4204:GLN:HB3 | 1:A:4245:MET:HG2 | 1.69 | 0.75 |
| 1:D:4204:GLN:HB3 | 1:D:4245:MET:HG2 | 1.69 | 0.75 |
| 1:B:772:ASN:H | 1:B:1470:ARG:HH22 | 1.32 | 0.75 |
| 1:B:4242:ILE:HG22 | 1:B:4246:GLN:HE22 | 1.50 | 0.75 |
| 1:D:2752:ASP:OD1 | 1:D:2806:ARG:NH1 | 2.19 | 0.75 |
| 1:D:3409:TYR:HE2 | 1:D:3510:ILE:HG12 | 1.51 | 0.75 |
| 1:B:2271:THR:HG23 | 1:B:2274:ASP:H | 1.52 | 0.75 |
| 1:C:2271:THR:HG23 | 1:C:2274:ASP:H | 1.52 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3018:LEU:HB3 | 1:A:3025:LEU:HD12 | 1.67 | 0.75 |
| 2:F:53:GLN:HE21 | 2:F:57:ARG:HG3 | 1.51 | 0.75 |
| 1:A:2534:ALA:HA | 1:A:2588:ARG:HH12 | 1.50 | 0.75 |
| 2:E:53:GLN:HE21 | 2:E:57:ARG:HG3 | 1.51 | 0.75 |
| 1:C:3114:LYS:HD2 | 1:C:3116:SER:H | 1.52 | 0.74 |
| 1:A:590:LEU:HD22 | 1:A:631:LEU:HD21 | 1.69 | 0.74 |
| 1:B:3114:LYS:HD2 | 1:B:3116:SER:H | 1.52 | 0.74 |
| 1:D:3018:LEU:HB3 | 1:D:3025:LEU:HD12 | 1.67 | 0.74 |
| 1:C:2534:ALA:HA | 1:C:2588:ARG:HH12 | 1.50 | 0.74 |
| 1:A:2271:THR:HG23 | 1:A:2274:ASP:H | 1.52 | 0.74 |
| 1:B:4204:GLN:HB3 | 1:B:4245:MET:HG2 | 1.69 | 0.74 |
| 1:C:590:LEU:HD22 | 1:C:631:LEU:HD21 | 1.69 | 0.74 |
| 1:A:1671:ARG:NH1 | 1:A:1710:GLY:O | 2.21 | 0.74 |
| 1:B:590:LEU:HD22 | 1:B:631:LEU:HD21 | 1.69 | 0.74 |
| 1:D:590:LEU:HD22 | 1:D:631:LEU:HD21 | 1.69 | 0.74 |
| 1:D:1671:ARG:NH1 | 1:D:1710:GLY:O | 2.21 | 0.74 |
| 1:D:2321:ILE:HD11 | 1:D:2418:LEU:HD13 | 1.69 | 0.74 |
| 1:C:3409:TYR:HE2 | 1:C:3510:ILE:HG12 | 1.51 | 0.74 |
| 1:B:3409:TYR:HE2 | 1:B:3510:ILE:HG12 | 1.51 | 0.74 |
| 1:C:2321:ILE:HD11 | 1:C:2418:LEU:HD13 | 1.69 | 0.74 |
| 1:C:3257:ALA:O | 1:C:3321:ARG:NH1 | 2.21 | 0.74 |
| 1:C:4204:GLN:HB3 | 1:C:4245:MET:HG2 | 1.68 | 0.74 |
| 1:B:1778:SER:HB2 | 1:B:1798:LEU:HB2 | 1.69 | 0.74 |
| 1:D:3114:LYS:HD2 | 1:D:3116:SER:H | 1.52 | 0.74 |
| 1:C:1778:SER:HB2 | 1:C:1798:LEU:HB2 | 1.69 | 0.74 |
| 1:B:4892:ARG:HH22 | 1:C:4898:GLY:HA3 | 1.51 | 0.74 |
| 1:C:1671:ARG:NH1 | 1:C:1710:GLY:O | 2.21 | 0.73 |
| 1:D:3946:GLN:OE1 | 1:D:3949:ARG:NH2 | 2.21 | 0.73 |
| 1:D:1778:SER:HB2 | 1:D:1798:LEU:HB2 | 1.69 | 0.73 |
| 1:A:3522:LEU:HD13 | 1:B:1220:GLN:O | 1.88 | 0.73 |
| 1:A:3539:ARG:NH1 | 1:A:3549:VAL:HA | 2.04 | 0.73 |
| 1:B:2247:GLN:NE2 | 1:B:2278:ALA:O | 2.21 | 0.73 |
| 1:B:3539:ARG:NH1 | 1:B:3549:VAL:HA | 2.04 | 0.73 |
| 1:D:3257:ALA:O | 1:D:3321:ARG:NH1 | 2.21 | 0.73 |
| 1:D:213:TYR:H | 1:D:341:TYR:H | 1.37 | 0.73 |
| 1:D:3354:LEU:HB2 | 1:D:3415:TYR:HE2 | 1.53 | 0.73 |
| 1:D:3513:THR:HG23 | 1:D:3516:LYS:HZ3 | 1.54 | 0.73 |
| 1:D:3577:ARG:HH12 | 1:D:3584:GLU:HB3 | 1.54 | 0.73 |
| 1:C:213:TYR:H | 1:C:341:TYR:H | 1.37 | 0.73 |
| 1:D:3147:ILE:HD12 | 1:D:3152:PHE:HB2 | 1.71 | 0.73 |
| 1:B:2095:GLN:NE2 | 1:B:2127:GLN:O | 2.17 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:221:ARG:NH1 | 1:D:253:CYS:O | 2.22 | 0.73 |
| 1:C:3577:ARG:HH12 | 1:C:3584:GLU:HB3 | 1.54 | 0.73 |
| 1:A:221:ARG:NH1 | 1:A:253:CYS:O | 2.22 | 0.73 |
| 1:A:3147:ILE:HD12 | 1:A:3152:PHE:HB2 | 1.71 | 0.73 |
| 1:D:1501:VAL:HB | 1:D:1508:ARG:HH21 | 1.54 | 0.73 |
| 1:C:3539:ARG:NH1 | 1:C:3549:VAL:HA | 2.04 | 0.73 |
| 1:A:2247:GLN:NE2 | 1:A:2278:ALA:O | 2.21 | 0.73 |
| 1:B:2321:ILE:HD11 | 1:B:2418:LEU:HD13 | 1.69 | 0.73 |
| 1:B:3147:ILE:HD12 | 1:B:3152:PHE:HB2 | 1.71 | 0.73 |
| 1:D:2271:THR:HG23 | 1:D:2274:ASP:H | 1.52 | 0.73 |
| 1:C:3147:ILE:HD12 | 1:C:3152:PHE:HB2 | 1.71 | 0.73 |
| 1:B:221:ARG:NH1 | 1:B:253:CYS:O | 2.22 | 0.72 |
| 1:B:3257:ALA:O | 1:B:3321:ARG:NH1 | 2.21 | 0.72 |
| 1:B:3354:LEU:HB2 | 1:B:3415:TYR:HE2 | 1.53 | 0.72 |
| 1:C:3354:LEU:HB2 | 1:C:3415:TYR:HE2 | 1.53 | 0.72 |
| 1:A:1699:GLU:OE1 | 1:A:1813:ARG:NH2 | 2.22 | 0.72 |
| 1:A:1778:SER:HB2 | 1:A:1798:LEU:HB2 | 1.69 | 0.72 |
| 1:A:2321:ILE:HD11 | 1:A:2418:LEU:HD13 | 1.69 | 0.72 |
| 1:B:2133:GLU:HG2 | 1:B:2136:ARG:HH21 | 1.54 | 0.72 |
| 1:B:2265:LEU:HB2 | 1:B:2330:ARG:HH11 | 1.54 | 0.72 |
| 1:D:3539:ARG:NH1 | 1:D:3549:VAL:HA | 2.04 | 0.72 |
| 1:C:4189:ARG:HH11 | 1:C:4189:ARG:HB2 | 1.54 | 0.72 |
| 1:A:3354:LEU:HB2 | 1:A:3415:TYR:HE2 | 1.53 | 0.72 |
| 1:C:3354:LEU:HA | 1:C:3358:PHE:HD2 | 1.54 | 0.72 |
| 1:B:213:TYR:H | 1:B:341:TYR:H | 1.37 | 0.72 |
| 1:D:2247:GLN:NE2 | 1:D:2278:ALA:O | 2.22 | 0.72 |
| 1:C:221:ARG:NH1 | 1:C:253:CYS:O | 2.22 | 0.72 |
| 1:A:213:TYR:H | 1:A:341:TYR:H | 1.37 | 0.72 |
| 1:A:2265:LEU:HB2 | 1:A:2330:ARG:HH11 | 1.54 | 0.72 |
| 1:A:4189:ARG:HB2 | 1:A:4189:ARG:HH11 | 1.54 | 0.72 |
| 1:B:1671:ARG:NH1 | 1:B:1710:GLY:O | 2.21 | 0.72 |
| 1:C:3308:THR:OG1 | 1:C:3310:ASP:OD1 | 2.08 | 0.72 |
| 1:A:4226:GLY:O | 1:A:4230:LYS:N | 2.23 | 0.72 |
| 1:B:1699:GLU:OE1 | 1:B:1813:ARG:NH2 | 2.22 | 0.72 |
| 1:D:3354:LEU:HA | 1:D:3358:PHE:HD2 | 1.54 | 0.72 |
| 1:A:1501:VAL:HB | 1:A:1508:ARG:HH21 | 1.54 | 0.72 |
| 1:A:3114:LYS:HD2 | 1:A:3116:SER:H | 1.52 | 0.72 |
| 1:D:1067:SER:O | 1:D:1071:ARG:CB | 2.38 | 0.72 |
| 1:C:1130:GLN:HG2 | 1:C:1138:PRO:HA | 1.72 | 0.72 |
| 1:B:1501:VAL:HB | 1:B:1508:ARG:HH21 | 1.54 | 0.72 |
| 1:D:1130:GLN:HG2 | 1:D:1138:PRO:HA | 1.72 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:2133:GLU:HG2 | 1:D:2136:ARG:HH21 | 1.54 | 0.72 |
| 1:C:417:GLY:HA3 | 1:C:436:LEU:HD21 | 1.71 | 0.72 |
| 1:C:1699:GLU:OE1 | 1:C:1813:ARG:NH2 | 2.22 | 0.72 |
| 1:A:417:GLY:HA3 | 1:A:436:LEU:HD21 | 1.71 | 0.72 |
| 1:A:1259:ARG:NH1 | 1:A:1591:CYS:SG | 2.63 | 0.72 |
| 1:D:2700:MET:HE1 | 1:D:3000:LYS:HB3 | 1.71 | 0.72 |
| 1:C:221:ARG:HE | 1:C:259:LEU:HD23 | 1.55 | 0.72 |
| 1:A:1130:GLN:HG2 | 1:A:1138:PRO:HA | 1.72 | 0.72 |
| 1:A:3513:THR:HG23 | 1:A:3516:LYS:HZ3 | 1.54 | 0.72 |
| 1:C:1205:GLY:HA2 | 1:C:1211:LEU:HD11 | 1.72 | 0.72 |
| 1:A:3257:ALA:O | 1:A:3321:ARG:NH1 | 2.21 | 0.71 |
| 1:B:3373:VAL:HG11 | 1:B:3444:TYR:HB3 | 1.72 | 0.71 |
| 1:B:4189:ARG:HB2 | 1:B:4189:ARG:HH11 | 1.54 | 0.71 |
| 1:B:4226:GLY:O | 1:B:4230:LYS:N | 2.23 | 0.71 |
| 1:D:1738:LEU:HB2 | 1:D:2146:PRO:HD3 | 1.72 | 0.71 |
| 1:C:1125:ASN:HD22 | 1:C:1128:ARG:HG2 | 1.55 | 0.71 |
| 1:C:1152:MET:HB2 | 1:C:1161:ILE:HB | 1.72 | 0.71 |
| 1:C:2133:GLU:HG2 | 1:C:2136:ARG:HH21 | 1.54 | 0.71 |
| 1:A:1067:SER:O | 1:A:1071:ARG:CB | 2.38 | 0.71 |
| 1:A:3577:ARG:HH12 | 1:A:3584:GLU:HB3 | 1.54 | 0.71 |
| 1:B:4711:PHE:HB3 | 1:B:4712:PRO:HD3 | 1.72 | 0.71 |
| 1:D:1699:GLU:OE1 | 1:D:1813:ARG:NH2 | 2.22 | 0.71 |
| 1:D:4711:PHE:HB3 | 1:D:4712:PRO:HD3 | 1.72 | 0.71 |
| 1:C:1738:LEU:HB2 | 1:C:2146:PRO:HD3 | 1.72 | 0.71 |
| 1:C:3513:THR:HG23 | 1:C:3516:LYS:HZ3 | 1.54 | 0.71 |
| 1:C:4711:PHE:HB3 | 1:C:4712:PRO:HD3 | 1.72 | 0.71 |
| 1:B:1067:SER:O | 1:B:1071:ARG:CB | 2.38 | 0.71 |
| 1:B:1125:ASN:HD22 | 1:B:1128:ARG:HG2 | 1.55 | 0.71 |
| 1:B:1130:GLN:HG2 | 1:B:1138:PRO:HA | 1.72 | 0.71 |
| 1:D:417:GLY:HA3 | 1:D:436:LEU:HD21 | 1.71 | 0.71 |
| 1:D:2095:GLN:NE2 | 1:D:2127:GLN:O | 2.17 | 0.71 |
| 1:D:3308:THR:OG1 | 1:D:3310:ASP:OD1 | 2.08 | 0.71 |
| 1:B:3577:ARG:HH12 | 1:B:3584:GLU:HB3 | 1.54 | 0.71 |
| 1:C:2265:LEU:HB2 | 1:C:2330:ARG:HH11 | 1.54 | 0.71 |
| 1:B:2209:GLU:O | 1:B:2213:ASN:ND2 | 2.24 | 0.71 |
| 1:B:3308:THR:OG1 | 1:B:3310:ASP:OD1 | 2.08 | 0.71 |
| 1:A:3354:LEU:HA | 1:A:3358:PHE:HD2 | 1.54 | 0.71 |
| 1:A:4711:PHE:HB3 | 1:A:4712:PRO:HD3 | 1.72 | 0.71 |
| 1:B:1259:ARG:NH1 | 1:B:1591:CYS:SG | 2.63 | 0.71 |
| 1:B:3417:ASP:HA | 1:B:3420:ARG:HE | 1.56 | 0.71 |
| 1:D:1259:ARG:NH1 | 1:D:1591:CYS:SG | 2.63 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:2265:LEU:HB2 | 1:D:2330:ARG:HH11 | 1.54 | 0.71 |
| 1:C:2209:GLU:O | 1:C:2213:ASN:ND2 | 2.24 | 0.71 |
| 1:A:3308:THR:OG1 | 1:A:3310:ASP:OD1 | 2.08 | 0.71 |
| 1:B:758:ARG:HG2 | 1:B:763:PRO:HA | 1.72 | 0.71 |
| 1:B:3354:LEU:HA | 1:B:3358:PHE:HD2 | 1.54 | 0.71 |
| 1:B:3513:THR:HG23 | 1:B:3516:LYS:HZ3 | 1.54 | 0.71 |
| 1:D:1125:ASN:HD22 | 1:D:1128:ARG:HG2 | 1.55 | 0.71 |
| 1:D:1683:HIS:NE2 | 1:D:1798:LEU:O | 2.17 | 0.71 |
| 1:D:2209:GLU:O | 1:D:2213:ASN:ND2 | 2.24 | 0.71 |
| 1:C:1067:SER:O | 1:C:1071:ARG:CB | 2.38 | 0.71 |
| 1:A:530:ILE:HA | 1:A:536:ASN:HD22 | 1.56 | 0.71 |
| 1:A:758:ARG:HG2 | 1:A:763:PRO:HA | 1.72 | 0.71 |
| 1:C:530:ILE:HA | 1:C:536:ASN:HD22 | 1.56 | 0.71 |
| 1:C:2827:ARG:HB2 | 1:C:2934:GLY:HA3 | 1.73 | 0.71 |
| 1:C:3373:VAL:HG11 | 1:C:3444:TYR:HB3 | 1.73 | 0.71 |
| 1:A:3417:ASP:HA | 1:A:3420:ARG:HE | 1.56 | 0.71 |
| 1:B:1205:GLY:HA2 | 1:B:1211:LEU:HD11 | 1.72 | 0.71 |
| 1:B:2827:ARG:HB2 | 1:B:2934:GLY:HA3 | 1.73 | 0.71 |
| 1:D:530:ILE:HA | 1:D:536:ASN:HD22 | 1.56 | 0.71 |
| 1:B:417:GLY:HA3 | 1:B:436:LEU:HD21 | 1.71 | 0.71 |
| 1:D:155:LYS:NZ | 1:C:225:GLY:HA2 | 2.06 | 0.71 |
| 1:A:1125:ASN:HD22 | 1:A:1128:ARG:HG2 | 1.55 | 0.70 |
| 1:A:1205:GLY:HA2 | 1:A:1211:LEU:HD11 | 1.72 | 0.70 |
| 1:A:2133:GLU:HG2 | 1:A:2136:ARG:HH21 | 1.54 | 0.70 |
| 1:C:1259:ARG:NH1 | 1:C:1591:CYS:SG | 2.63 | 0.70 |
| 1:C:3946:GLN:OE1 | 1:C:3949:ARG:NH2 | 2.21 | 0.70 |
| 1:C:4226:GLY:O | 1:C:4230:LYS:N | 2.23 | 0.70 |
| 1:A:2579:VAL:O | 1:A:2582:MET:HB2 | 1.91 | 0.70 |
| 1:D:758:ARG:HG2 | 1:D:763:PRO:HA | 1.72 | 0.70 |
| 1:A:3946:GLN:OE1 | 1:A:3949:ARG:NH2 | 2.21 | 0.70 |
| 1:D:221:ARG:HE | 1:D:259:LEU:HD23 | 1.55 | 0.70 |
| 1:A:3373:VAL:HG11 | 1:A:3444:TYR:HB3 | 1.72 | 0.70 |
| 1:A:3959:LYS:O | 1:A:3963:ASN:ND2 | 2.22 | 0.70 |
| 1:B:530:ILE:HA | 1:B:536:ASN:HD22 | 1.56 | 0.70 |
| 1:D:3417:ASP:HA | 1:D:3420:ARG:HE | 1.56 | 0.70 |
| 1:C:2247:GLN:NE2 | 1:C:2278:ALA:O | 2.21 | 0.70 |
| 1:A:1573:MET:SD | 1:A:1574:PRO:HD2 | 2.32 | 0.70 |
| 1:A:2209:GLU:O | 1:A:2213:ASN:ND2 | 2.24 | 0.70 |
| 1:D:4226:GLY:O | 1:D:4230:LYS:N | 2.23 | 0.70 |
| 1:C:645:ARG:HE | 1:C:826:ILE:HG13 | 1.57 | 0.70 |
| 1:C:2760:GLU:HA | 1:C:2802:LYS:HZ1 | 1.56 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|----------------------|--------------------------|-------------------|
| 1:A:221:ARG:HE | 1:A:259:LEU:HD23 | 1.55 | 0.70 |
| 1:B:1152:MET:HB2 | 1:B:1161:ILE:HB | 1.72 | 0.70 |
| 1:B:2579:VAL:O | 1:B:2582:MET:HB2 | 1.91 | 0.70 |
| 1:B:3981:ALA:O | 1:B:3986:TRP:NE1 | 2.22 | 0.70 |
| 1:C:2612[A]:ARG:HB3 | 1:C:2612[A]:ARG:HH11 | 1.57 | 0.70 |
| 1:C:3634:ALA:HA | 1:C:3637:ARG:HB3 | 1.74 | 0.70 |
| 1:A:3634:ALA:HA | 1:A:3637:ARG:HB3 | 1.74 | 0.70 |
| 1:B:1857:GLU:HA | 1:B:1860:LYS:HE2 | 1.74 | 0.70 |
| 1:D:1727:ARG:NH2 | 1:D:1773:PRO:O | 2.25 | 0.70 |
| 1:D:2579:VAL:O | 1:D:2582:MET:HB2 | 1.91 | 0.70 |
| 1:D:4189:ARG:HB2 | 1:D:4189:ARG:HH11 | 1.54 | 0.70 |
| 1:C:1857:GLU:HA | 1:C:1860:LYS:HE2 | 1.74 | 0.70 |
| 1:A:1152:MET:HB2 | 1:A:1161:ILE:HB | 1.72 | 0.70 |
| 1:A:1738:LEU:HB2 | 1:A:2146:PRO:HD3 | 1.73 | 0.70 |
| 1:B:1638:ALA:HB1 | 1:B:1647:CYS:HB2 | 1.74 | 0.70 |
| 1:B:2612[A]:ARG:HB3 | 1:B:2612[A]:ARG:HH11 | 1.57 | 0.70 |
| 1:B:4137:ARG:NH2 | 1:B:4199:GLU:OE2 | 2.25 | 0.70 |
| 1:D:1152:MET:HB2 | 1:D:1161:ILE:HB | 1.72 | 0.70 |
| 1:D:1573:MET:SD | 1:D:1574:PRO:HD2 | 2.32 | 0.70 |
| 1:C:1501:VAL:HB | 1:C:1508:ARG:HH21 | 1.54 | 0.70 |
| 1:B:1738:LEU:HB2 | 1:B:2146:PRO:HD3 | 1.72 | 0.70 |
| 1:D:1271:ARG:NH1 | 1:D:1272:LEU:O | 2.25 | 0.70 |
| 1:D:2103:VAL:HG12 | 1:D:2107:GLN:HE22 | 1.57 | 0.70 |
| 1:A:1271:ARG:NH1 | 1:A:1272:LEU:O | 2.25 | 0.70 |
| 1:D:3959:LYS:O | 1:D:3963:ASN:ND2 | 2.22 | 0.70 |
| 1:C:758:ARG:HG2 | 1:C:763:PRO:HA | 1.72 | 0.70 |
| 1:C:1271:ARG:NH1 | 1:C:1272:LEU:O | 2.25 | 0.70 |
| 1:C:2103:VAL:HG12 | 1:C:2107:GLN:HE22 | 1.57 | 0.70 |
| 1:A:213:TYR:CD2 | 1:A:337:PRO:HB2 | 2.27 | 0.69 |
| 1:A:2827:ARG:HB2 | 1:A:2934:GLY:HA3 | 1.73 | 0.69 |
| 2:H:30:LEU:HD12 | 2:H:31:GLU:H | 1.57 | 0.69 |
| 1:B:221:ARG:HE | 1:B:259:LEU:HD23 | 1.55 | 0.69 |
| 1:B:1271:ARG:NH1 | 1:B:1272:LEU:O | 2.25 | 0.69 |
| 1:B:1727:ARG:NH2 | 1:B:1773:PRO:O | 2.25 | 0.69 |
| 1:C:3417:ASP:HA | 1:C:3420:ARG:HE | 1.56 | 0.69 |
| 1:A:2095:GLN:NE2 | 1:A:2127:GLN:O | 2.17 | 0.69 |
| 1:B:1730:MET:O | 1:B:1772:ARG:NH2 | 2.25 | 0.69 |
| 1:B:2103:VAL:HG12 | 1:B:2107:GLN:HE22 | 1.57 | 0.69 |
| 1:B:3634:ALA:HA | 1:B:3637:ARG:HB3 | 1.74 | 0.69 |
| 1:D:2827:ARG:HB2 | 1:D:2934:GLY:HA3 | 1.73 | 0.69 |
| 1:A:1730:MET:O | 1:A:1772:ARG:NH2 | 2.25 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|----------------------|--------------------------|-------------------|
| 1:A:2103:VAL:HG12 | 1:A:2107:GLN:HE22 | 1.57 | 0.69 |
| 1:C:213:TYR:CD2 | 1:C:337:PRO:HB2 | 2.28 | 0.69 |
| 1:A:1436:SER:HB3 | 1:A:1565:GLU:HB2 | 1.75 | 0.69 |
| 1:B:537:CYS:HB3 | 1:B:571:SER:HB2 | 1.75 | 0.69 |
| 1:D:1078:GLU:OE2 | 1:D:1607:ARG:NH2 | 2.26 | 0.69 |
| 1:A:537:CYS:HB3 | 1:A:571:SER:HB2 | 1.75 | 0.69 |
| 1:D:1205:GLY:HA2 | 1:D:1211:LEU:HD11 | 1.72 | 0.69 |
| 1:D:3373:VAL:HG11 | 1:D:3444:TYR:HB3 | 1.72 | 0.69 |
| 1:D:3634:ALA:HA | 1:D:3637:ARG:HB3 | 1.74 | 0.69 |
| 1:D:4961:CYS:SG | 1:D:4978:HIS:HE1 | 2.16 | 0.69 |
| 1:C:1573:MET:SD | 1:C:1574:PRO:HD2 | 2.32 | 0.69 |
| 1:C:3354:LEU:HD12 | 1:C:3415:TYR:HD2 | 1.58 | 0.69 |
| 2:E:30:LEU:HD12 | 2:E:31:GLU:H | 1.58 | 0.69 |
| 1:D:213:TYR:CD2 | 1:D:337:PRO:HB2 | 2.27 | 0.69 |
| 1:D:1730:MET:O | 1:D:1772:ARG:NH2 | 2.25 | 0.69 |
| 1:C:3959:LYS:O | 1:C:3963:ASN:ND2 | 2.22 | 0.69 |
| 1:C:4137:ARG:NH2 | 1:C:4199:GLU:OE2 | 2.25 | 0.69 |
| 1:A:1727:ARG:NH2 | 1:A:1773:PRO:O | 2.25 | 0.69 |
| 1:A:2612[A]:ARG:HB3 | 1:A:2612[A]:ARG:HH11 | 1.57 | 0.69 |
| 1:B:1573:MET:SD | 1:B:1574:PRO:HD2 | 2.32 | 0.69 |
| 1:D:3354:LEU:HD12 | 1:D:3415:TYR:HD2 | 1.58 | 0.69 |
| 1:A:645:ARG:HE | 1:A:826:ILE:HG13 | 1.57 | 0.69 |
| 2:G:30:LEU:HD12 | 2:G:31:GLU:H | 1.57 | 0.69 |
| 1:B:213:TYR:CD2 | 1:B:337:PRO:HB2 | 2.28 | 0.69 |
| 1:B:1078:GLU:OE2 | 1:B:1607:ARG:NH2 | 2.26 | 0.69 |
| 1:B:1100:MET:N | 1:B:1125:ASN:OD1 | 2.26 | 0.69 |
| 1:B:3143:LEU:HD13 | 1:B:3146:HIS:HE1 | 1.58 | 0.69 |
| 1:D:645:ARG:HE | 1:D:826:ILE:HG13 | 1.57 | 0.69 |
| 1:D:1100:MET:N | 1:D:1125:ASN:OD1 | 2.26 | 0.69 |
| 1:D:2633:LEU:HD22 | 1:D:2641:LEU:HD11 | 1.75 | 0.69 |
| 1:C:1078:GLU:OE2 | 1:C:1607:ARG:NH2 | 2.26 | 0.69 |
| 1:C:1638:ALA:HB1 | 1:C:1647:CYS:HB2 | 1.74 | 0.69 |
| 1:A:1638:ALA:HB1 | 1:A:1647:CYS:HB2 | 1.74 | 0.69 |
| 1:B:155:LYS:HG3 | 1:B:156:GLN:N | 2.08 | 0.69 |
| 1:B:1453:VAL:HG12 | 1:B:1492:CYS:HB2 | 1.74 | 0.69 |
| 1:D:537:CYS:HB3 | 1:D:571:SER:HB2 | 1.75 | 0.69 |
| 1:D:4137:ARG:NH2 | 1:D:4199:GLU:OE2 | 2.25 | 0.69 |
| 1:C:1730:MET:O | 1:C:1772:ARG:NH2 | 2.25 | 0.69 |
| 1:C:3769:ARG:O | 1:C:3773:ARG:NH1 | 2.25 | 0.69 |
| 1:A:155:LYS:HG3 | 1:A:156:GLN:N | 2.08 | 0.69 |
| 2:F:23:VAL:HG22 | 2:F:47:LYS:HG2 | 1.75 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|----------------------|--------------------------|-------------------|
| 1:D:3981:ALA:O | 1:D:3986:TRP:NE1 | 2.22 | 0.69 |
| 1:C:2579:VAL:O | 1:C:2582:MET:HB2 | 1.91 | 0.69 |
| 1:A:1683:HIS:NE2 | 1:A:1798:LEU:O | 2.17 | 0.68 |
| 1:A:2107:GLN:O | 1:A:3694:LYS:NZ | 2.26 | 0.68 |
| 1:A:3981:ALA:O | 1:A:3986:TRP:NE1 | 2.22 | 0.68 |
| 1:A:4137:ARG:NH2 | 1:A:4199:GLU:OE2 | 2.25 | 0.68 |
| 1:B:2633:LEU:HD22 | 1:B:2641:LEU:HD11 | 1.75 | 0.68 |
| 1:D:1733:GLU:OE1 | 1:D:2140:ARG:NH2 | 2.26 | 0.68 |
| 1:D:2612[A]:ARG:HB3 | 1:D:2612[A]:ARG:HH11 | 1.57 | 0.68 |
| 1:C:2633:LEU:HD22 | 1:C:2641:LEU:HD11 | 1.75 | 0.68 |
| 1:A:1857:GLU:HA | 1:A:1860:LYS:HE2 | 1.74 | 0.68 |
| 1:A:2633:LEU:HD22 | 1:A:2641:LEU:HD11 | 1.75 | 0.68 |
| 1:D:1453:VAL:HG12 | 1:D:1492:CYS:HB2 | 1.74 | 0.68 |
| 1:C:4961:CYS:SG | 1:C:4978:HIS:HE1 | 2.16 | 0.68 |
| 1:B:3141:THR:HG23 | 1:B:3145:GLN:HE22 | 1.59 | 0.68 |
| 1:B:4580:TYR:OH | 1:B:4806:ASN:ND2 | 2.26 | 0.68 |
| 1:D:3465:ASN:HA | 1:D:3502:ARG:HG2 | 1.76 | 0.68 |
| 1:D:3769:ARG:O | 1:D:3773:ARG:NH1 | 2.25 | 0.68 |
| 1:B:3354:LEU:HD12 | 1:B:3415:TYR:HD2 | 1.58 | 0.68 |
| 1:B:3769:ARG:O | 1:B:3773:ARG:NH1 | 2.25 | 0.68 |
| 1:D:4580:TYR:OH | 1:D:4806:ASN:ND2 | 2.26 | 0.68 |
| 1:C:1436:SER:HB3 | 1:C:1565:GLU:HB2 | 1.75 | 0.68 |
| 1:A:1453:VAL:HG12 | 1:A:1492:CYS:HB2 | 1.74 | 0.68 |
| 1:B:3465:ASN:HA | 1:B:3502:ARG:HG2 | 1.76 | 0.68 |
| 1:C:537:CYS:HB3 | 1:C:571:SER:HB2 | 1.75 | 0.68 |
| 1:C:1443:GLN:NE2 | 1:C:1560:ASN:O | 2.27 | 0.68 |
| 1:A:1078:GLU:OE2 | 1:A:1607:ARG:NH2 | 2.26 | 0.68 |
| 1:B:1436:SER:HB3 | 1:B:1565:GLU:HB2 | 1.75 | 0.68 |
| 1:B:2107:GLN:O | 1:B:3694:LYS:NZ | 2.26 | 0.68 |
| 1:D:1857:GLU:HA | 1:D:1860:LYS:HE2 | 1.74 | 0.68 |
| 1:C:155:LYS:HG3 | 1:C:156:GLN:N | 2.08 | 0.68 |
| 1:A:1733:GLU:OE1 | 1:A:2140:ARG:NH2 | 2.26 | 0.68 |
| 1:A:4580:TYR:OH | 1:A:4806:ASN:ND2 | 2.26 | 0.68 |
| 2:E:23:VAL:HG22 | 2:E:47:LYS:HG2 | 1.75 | 0.68 |
| 1:B:2470:ILE:HG22 | 1:B:2525:GLY:HA3 | 1.76 | 0.68 |
| 1:B:3946:GLN:OE1 | 1:B:3949:ARG:NH2 | 2.21 | 0.68 |
| 1:D:1638:ALA:HB1 | 1:D:1647:CYS:HB2 | 1.74 | 0.68 |
| 1:C:1733:GLU:OE1 | 1:C:2140:ARG:NH2 | 2.26 | 0.68 |
| 1:C:3143:LEU:HD13 | 1:C:3146:HIS:HE1 | 1.58 | 0.68 |
| 1:A:3354:LEU:HD12 | 1:A:3415:TYR:HD2 | 1.58 | 0.68 |
| 1:A:4961:CYS:SG | 1:A:4978:HIS:HE1 | 2.15 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:22:LEU:HD21 | 1:B:37:LEU:HB3 | 1.76 | 0.68 |
| 1:B:915:GLU:O | 1:B:919:ASN:N | 2.26 | 0.68 |
| 1:B:1733:GLU:OE1 | 1:B:2140:ARG:NH2 | 2.26 | 0.68 |
| 1:D:915:GLU:O | 1:D:919:ASN:N | 2.27 | 0.68 |
| 1:D:1998:PHE:O | 1:D:2005:GLN:NE2 | 2.27 | 0.68 |
| 1:C:22:LEU:HD21 | 1:C:37:LEU:HB3 | 1.76 | 0.68 |
| 1:C:2211:MET:HE3 | 1:C:2236:LEU:HD12 | 1.76 | 0.68 |
| 1:C:4580:TYR:OH | 1:C:4806:ASN:ND2 | 2.26 | 0.68 |
| 1:A:1998:PHE:O | 1:A:2005:GLN:NE2 | 2.27 | 0.68 |
| 1:C:1100:MET:N | 1:C:1125:ASN:OD1 | 2.26 | 0.68 |
| 1:B:1443:GLN:NE2 | 1:B:1560:ASN:O | 2.27 | 0.68 |
| 2:H:23:VAL:HG22 | 2:H:47:LYS:HG2 | 1.75 | 0.67 |
| 1:B:645:ARG:HE | 1:B:826:ILE:HG13 | 1.57 | 0.67 |
| 1:B:2211:MET:HE3 | 1:B:2236:LEU:HD12 | 1.76 | 0.67 |
| 1:A:64:ILE:O | 1:A:111:HIS:NE2 | 2.27 | 0.67 |
| 1:A:1100:MET:N | 1:A:1125:ASN:OD1 | 2.26 | 0.67 |
| 1:A:3143:LEU:HD13 | 1:A:3146:HIS:HE1 | 1.58 | 0.67 |
| 1:A:3465:ASN:HA | 1:A:3502:ARG:HG2 | 1.76 | 0.67 |
| 1:A:3769:ARG:O | 1:A:3773:ARG:NH1 | 2.25 | 0.67 |
| 2:G:23:VAL:HG22 | 2:G:47:LYS:HG2 | 1.75 | 0.67 |
| 1:B:3959:LYS:O | 1:B:3963:ASN:ND2 | 2.22 | 0.67 |
| 1:D:595:ARG:HH12 | 1:D:633:LEU:HD11 | 1.58 | 0.67 |
| 1:D:2470:ILE:HG22 | 1:D:2525:GLY:HA3 | 1.76 | 0.67 |
| 1:C:3141:THR:HG23 | 1:C:3145:GLN:HE22 | 1.59 | 0.67 |
| 1:A:1745:ILE:O | 1:A:1964:ARG:NH2 | 2.27 | 0.67 |
| 1:B:4961:CYS:SG | 1:B:4978:HIS:HE1 | 2.15 | 0.67 |
| 1:D:155:LYS:HG3 | 1:D:156:GLN:N | 2.08 | 0.67 |
| 1:D:4877:ASP:O | 1:C:4582:VAL:HG12 | 1.94 | 0.67 |
| 1:C:153:ALA:H | 1:C:157:ARG:HG2 | 1.60 | 0.67 |
| 1:C:915:GLU:O | 1:C:919:ASN:N | 2.27 | 0.67 |
| 1:A:1443:GLN:NE2 | 1:A:1560:ASN:O | 2.27 | 0.67 |
| 1:A:1839:VAL:HG23 | 1:A:1935:VAL:HG22 | 1.77 | 0.67 |
| 1:A:2548:LEU:HB3 | 1:A:2552:ARG:NH1 | 2.10 | 0.67 |
| 1:B:64:ILE:O | 1:B:111:HIS:NE2 | 2.27 | 0.67 |
| 1:D:1745:ILE:O | 1:D:1964:ARG:NH2 | 2.27 | 0.67 |
| 1:A:22:LEU:HD21 | 1:A:37:LEU:HB3 | 1.76 | 0.67 |
| 1:A:1259:ARG:NH2 | 1:A:1595:LEU:O | 2.27 | 0.67 |
| 1:A:2760:GLU:HA | 1:A:2802:LYS:HZ1 | 1.57 | 0.67 |
| 1:A:3141:THR:HG23 | 1:A:3145:GLN:HE22 | 1.59 | 0.67 |
| 2:F:30:LEU:HD12 | 2:F:31:GLU:H | 1.57 | 0.67 |
| 1:D:2393:ASP:O | 1:D:2415:ARG:NH2 | 2.28 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:1453:VAL:HG12 | 1:C:1492:CYS:HB2 | 1.74 | 0.67 |
| 1:C:3981:ALA:O | 1:C:3986:TRP:NE1 | 2.22 | 0.67 |
| 1:B:595:ARG:HH12 | 1:B:633:LEU:HD11 | 1.58 | 0.67 |
| 1:D:1252:HIS:HE1 | 1:D:1255:TYR:HD2 | 1.41 | 0.67 |
| 1:D:3768:SER:HA | 1:D:3771:HIS:CD2 | 2.30 | 0.67 |
| 1:C:595:ARG:HH12 | 1:C:633:LEU:HD11 | 1.58 | 0.67 |
| 1:C:2548:LEU:HB3 | 1:C:2552:ARG:NH1 | 2.10 | 0.67 |
| 1:C:3465:ASN:HA | 1:C:3502:ARG:HG2 | 1.76 | 0.67 |
| 1:B:1259:ARG:NH2 | 1:B:1595:LEU:O | 2.27 | 0.67 |
| 1:D:2211:MET:HE3 | 1:D:2236:LEU:HD12 | 1.77 | 0.67 |
| 1:A:3990:VAL:HG13 | 1:A:4051:SER:HB2 | 1.77 | 0.67 |
| 1:B:1998:PHE:O | 1:B:2005:GLN:NE2 | 2.27 | 0.67 |
| 1:D:14:LEU:HB3 | 1:D:101:LEU:HD12 | 1.77 | 0.67 |
| 1:A:14:LEU:HB3 | 1:A:101:LEU:HD12 | 1.77 | 0.67 |
| 1:A:153:ALA:H | 1:A:157:ARG:HG2 | 1.60 | 0.67 |
| 1:B:2548:LEU:HB3 | 1:B:2552:ARG:NH1 | 2.10 | 0.67 |
| 1:D:22:LEU:HD21 | 1:D:37:LEU:HB3 | 1.76 | 0.67 |
| 1:D:1839:VAL:HG23 | 1:D:1935:VAL:HG22 | 1.77 | 0.67 |
| 1:C:1727:ARG:NH2 | 1:C:1773:PRO:O | 2.25 | 0.67 |
| 1:C:2470:ILE:HG22 | 1:C:2525:GLY:HA3 | 1.76 | 0.67 |
| 1:A:2674:LEU:HD11 | 1:A:2910:THR:HA | 1.77 | 0.67 |
| 1:A:3768:SER:HA | 1:A:3771:HIS:CD2 | 2.30 | 0.67 |
| 1:B:1089:TYR:OH | 1:B:1091:GLU:OE1 | 2.13 | 0.67 |
| 1:B:1683:HIS:NE2 | 1:B:1798:LEU:O | 2.17 | 0.67 |
| 1:B:2091:PRO:HB3 | 1:B:2096:GLU:HB2 | 1.77 | 0.67 |
| 1:B:2393:ASP:O | 1:B:2415:ARG:NH2 | 2.28 | 0.67 |
| 1:B:3768:SER:HA | 1:B:3771:HIS:CD2 | 2.30 | 0.67 |
| 1:D:64:ILE:O | 1:D:111:HIS:NE2 | 2.27 | 0.67 |
| 1:D:153:ALA:H | 1:D:157:ARG:HG2 | 1.59 | 0.67 |
| 1:D:1089:TYR:OH | 1:D:1091:GLU:OE1 | 2.13 | 0.67 |
| 1:C:2095:GLN:NE2 | 1:C:2127:GLN:O | 2.17 | 0.67 |
| 1:A:2211:MET:HE3 | 1:A:2236:LEU:HD12 | 1.76 | 0.66 |
| 1:B:990:GLU:HG2 | 1:B:1024:TYR:HB3 | 1.77 | 0.66 |
| 1:B:1745:ILE:O | 1:B:1964:ARG:NH2 | 2.27 | 0.66 |
| 1:B:2674:LEU:HD11 | 1:B:2910:THR:HA | 1.77 | 0.66 |
| 1:D:2674:LEU:HD11 | 1:D:2910:THR:HA | 1.77 | 0.66 |
| 1:C:850:ASP:O | 1:C:1025:ARG:NH2 | 2.28 | 0.66 |
| 1:C:990:GLU:HG2 | 1:C:1024:TYR:HB3 | 1.77 | 0.66 |
| 1:C:2091:PRO:HB3 | 1:C:2096:GLU:HB2 | 1.77 | 0.66 |
| 1:C:2674:LEU:HD11 | 1:C:2910:THR:HA | 1.77 | 0.66 |
| 1:A:1252:HIS:HE1 | 1:A:1255:TYR:HD2 | 1.41 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:3143:LEU:HD13 | 1:D:3146:HIS:HE1 | 1.58 | 0.66 |
| 1:D:3943:ILE:O | 1:D:3948:LYS:NZ | 2.28 | 0.66 |
| 1:D:4901:ILE:HG13 | 1:D:4913:ARG:HH21 | 1.60 | 0.66 |
| 1:C:2393:ASP:O | 1:C:2415:ARG:NH2 | 2.28 | 0.66 |
| 1:C:4901:ILE:HG13 | 1:C:4913:ARG:HH21 | 1.60 | 0.66 |
| 1:B:3990:VAL:HG13 | 1:B:4051:SER:HB2 | 1.77 | 0.66 |
| 1:D:1436:SER:HB3 | 1:D:1565:GLU:HB2 | 1.75 | 0.66 |
| 1:C:64:ILE:O | 1:C:111:HIS:NE2 | 2.27 | 0.66 |
| 1:C:2346:VAL:HG13 | 1:C:2349:ASN:HB2 | 1.78 | 0.66 |
| 1:C:4155:PRO:O | 1:C:4161:ARG:NH1 | 2.27 | 0.66 |
| 1:B:119:SER:HA | 1:B:148:TRP:HE1 | 1.60 | 0.66 |
| 1:D:850:ASP:O | 1:D:1025:ARG:NH2 | 2.28 | 0.66 |
| 1:D:1259:ARG:NH2 | 1:D:1595:LEU:O | 2.27 | 0.66 |
| 1:D:1443:GLN:NE2 | 1:D:1560:ASN:O | 2.27 | 0.66 |
| 1:C:1745:ILE:O | 1:C:1964:ARG:NH2 | 2.27 | 0.66 |
| 1:C:1998:PHE:O | 1:C:2005:GLN:NE2 | 2.27 | 0.66 |
| 1:A:1089:TYR:OH | 1:A:1091:GLU:OE1 | 2.13 | 0.66 |
| 1:A:1277:TRP:HD1 | 1:A:1559:GLN:HG3 | 1.61 | 0.66 |
| 1:B:102:LEU:HA | 1:B:162:LYS:HA | 1.78 | 0.66 |
| 1:D:2548:LEU:HB3 | 1:D:2552:ARG:NH1 | 2.10 | 0.66 |
| 1:C:3943:ILE:O | 1:C:3948:LYS:NZ | 2.28 | 0.66 |
| 1:A:119:SER:HA | 1:A:148:TRP:HE1 | 1.60 | 0.66 |
| 1:A:2393:ASP:O | 1:A:2415:ARG:NH2 | 2.28 | 0.66 |
| 1:B:1839:VAL:HG23 | 1:B:1935:VAL:HG22 | 1.77 | 0.66 |
| 1:D:1277:TRP:HD1 | 1:D:1559:GLN:HG3 | 1.61 | 0.66 |
| 1:A:548:VAL:HA | 1:A:551:LEU:HD23 | 1.77 | 0.66 |
| 1:A:1999:ARG:HD3 | 1:A:3635:CYS:HB2 | 1.78 | 0.66 |
| 1:A:2615:ARG:NH2 | 1:A:2664:PHE:O | 2.29 | 0.66 |
| 1:A:3943:ILE:O | 1:A:3948:LYS:NZ | 2.28 | 0.66 |
| 1:D:2615:ARG:NH2 | 1:D:2664:PHE:O | 2.29 | 0.66 |
| 1:C:14:LEU:HB3 | 1:C:101:LEU:HD12 | 1.77 | 0.66 |
| 1:C:1929:MET:O | 1:C:1930:LYS:HG3 | 1.96 | 0.66 |
| 1:C:3768:SER:HA | 1:C:3771:HIS:CD2 | 2.30 | 0.66 |
| 1:A:595:ARG:HH12 | 1:A:633:LEU:HD11 | 1.58 | 0.66 |
| 1:A:915:GLU:O | 1:A:919:ASN:N | 2.27 | 0.66 |
| 1:A:990:GLU:HG2 | 1:A:1024:TYR:HB3 | 1.77 | 0.66 |
| 1:A:1929:MET:O | 1:A:1930:LYS:HG3 | 1.96 | 0.66 |
| 1:A:3107:VAL:HG11 | 1:A:3171:SER:HB2 | 1.78 | 0.66 |
| 1:A:4901:ILE:HG13 | 1:A:4913:ARG:HH21 | 1.60 | 0.66 |
| 1:B:14:LEU:HB3 | 1:B:101:LEU:HD12 | 1.77 | 0.66 |
| 1:B:1252:HIS:HE1 | 1:B:1255:TYR:HD2 | 1.41 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3539:ARG:NH1 | 1:B:3552:PHE:HB3 | 2.11 | 0.66 |
| 1:D:990:GLU:HG2 | 1:D:1024:TYR:HB3 | 1.77 | 0.66 |
| 1:C:34:LYS:N | 1:C:53:SER:OG | 2.28 | 0.66 |
| 1:C:1089:TYR:OH | 1:C:1091:GLU:OE1 | 2.13 | 0.66 |
| 1:C:1259:ARG:NH2 | 1:C:1595:LEU:O | 2.27 | 0.66 |
| 1:C:3990:VAL:HG13 | 1:C:4051:SER:HB2 | 1.77 | 0.66 |
| 1:A:769:GLU:OE2 | 1:A:1475:THR:OG1 | 2.11 | 0.66 |
| 1:B:850:ASP:O | 1:B:1025:ARG:NH2 | 2.28 | 0.66 |
| 1:B:2591:ARG:NH2 | 1:B:2636:PHE:O | 2.29 | 0.66 |
| 1:B:3107:VAL:HG11 | 1:B:3171:SER:HB2 | 1.78 | 0.66 |
| 1:D:548:VAL:HA | 1:D:551:LEU:HD23 | 1.77 | 0.66 |
| 1:D:3107:VAL:HG11 | 1:D:3171:SER:HB2 | 1.78 | 0.66 |
| 1:C:1277:TRP:HD1 | 1:C:1559:GLN:HG3 | 1.61 | 0.66 |
| 1:A:850:ASP:O | 1:A:1025:ARG:NH2 | 2.28 | 0.66 |
| 1:B:442:ILE:HG23 | 1:B:446:GLN:HE22 | 1.61 | 0.66 |
| 1:B:3734:HIS:HD2 | 1:B:3736:GLU:H | 1.44 | 0.66 |
| 1:D:2107:GLN:O | 1:D:3694:LYS:NZ | 2.26 | 0.66 |
| 1:D:2346:VAL:HG13 | 1:D:2349:ASN:HB2 | 1.77 | 0.66 |
| 1:D:2591:ARG:NH2 | 1:D:2636:PHE:O | 2.29 | 0.66 |
| 1:A:2470:ILE:HG22 | 1:A:2525:GLY:HA3 | 1.76 | 0.65 |
| 1:A:3309:SER:OG | 1:A:3348:ARG:NH2 | 2.30 | 0.65 |
| 1:B:4901:ILE:HG13 | 1:B:4913:ARG:HH21 | 1.60 | 0.65 |
| 1:D:3141:THR:HG23 | 1:D:3145:GLN:HE22 | 1.59 | 0.65 |
| 1:C:2591:ARG:NH2 | 1:C:2636:PHE:O | 2.29 | 0.65 |
| 1:B:1833:SER:HB3 | 1:B:1836:PHE:HD2 | 1.62 | 0.65 |
| 1:D:1929:MET:O | 1:D:1930:LYS:HG3 | 1.96 | 0.65 |
| 1:B:221:ARG:NH2 | 1:B:397:GLU:OE1 | 2.28 | 0.65 |
| 1:C:221:ARG:NH2 | 1:C:397:GLU:OE1 | 2.28 | 0.65 |
| 1:C:1252:HIS:HE1 | 1:C:1255:TYR:HD2 | 1.41 | 0.65 |
| 1:C:1839:VAL:HG23 | 1:C:1935:VAL:HG22 | 1.77 | 0.65 |
| 1:A:2091:PRO:HB3 | 1:A:2096:GLU:HB2 | 1.77 | 0.65 |
| 1:A:2303:ALA:HB2 | 1:A:2360:LYS:HD3 | 1.79 | 0.65 |
| 1:A:2970:SER:HA | 1:A:2973:PHE:CE2 | 2.32 | 0.65 |
| 1:B:153:ALA:H | 1:B:157:ARG:HG2 | 1.60 | 0.65 |
| 1:B:1277:TRP:HD1 | 1:B:1559:GLN:HG3 | 1.61 | 0.65 |
| 1:B:2346:VAL:HG13 | 1:B:2349:ASN:HB2 | 1.77 | 0.65 |
| 1:D:3990:VAL:HG13 | 1:D:4051:SER:HB2 | 1.77 | 0.65 |
| 1:C:3734:HIS:HD2 | 1:C:3736:GLU:H | 1.44 | 0.65 |
| 1:A:3145:GLN:HE21 | 1:A:3196:ARG:HD3 | 1.62 | 0.65 |
| 1:B:769:GLU:OE2 | 1:B:1475:THR:OG1 | 2.11 | 0.65 |
| 1:B:3343:GLN:O | 1:B:3414:ARG:NH1 | 2.30 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:2091:PRO:HB3 | 1:D:2096:GLU:HB2 | 1.77 | 0.65 |
| 1:D:2303:ALA:HB2 | 1:D:2360:LYS:HD3 | 1.79 | 0.65 |
| 1:D:2685:SER:HA | 1:D:2688:HIS:CE1 | 2.32 | 0.65 |
| 1:D:3343:GLN:O | 1:D:3414:ARG:NH1 | 2.30 | 0.65 |
| 1:C:2685:SER:HA | 1:C:2688:HIS:CE1 | 2.32 | 0.65 |
| 1:C:3107:VAL:HG11 | 1:C:3171:SER:HB2 | 1.78 | 0.65 |
| 1:A:2760:GLU:HA | 1:A:2802:LYS:NZ | 2.11 | 0.65 |
| 1:B:548:VAL:HA | 1:B:551:LEU:HD23 | 1.77 | 0.65 |
| 1:B:886:ARG:NH1 | 1:B:961:MET:SD | 2.69 | 0.65 |
| 1:B:1929:MET:O | 1:B:1930:LYS:HG3 | 1.96 | 0.65 |
| 1:D:102:LEU:HA | 1:D:162:LYS:HA | 1.78 | 0.65 |
| 1:D:3145:GLN:HE21 | 1:D:3196:ARG:HD3 | 1.62 | 0.65 |
| 1:C:1154:ASP:O | 1:C:1158:ASN:N | 2.29 | 0.65 |
| 1:C:1833:SER:HB3 | 1:C:1836:PHE:HD2 | 1.62 | 0.65 |
| 1:C:4958:CYS:SG | 1:C:4961:CYS:CB | 2.84 | 0.65 |
| 1:A:102:LEU:HA | 1:A:162:LYS:HA | 1.78 | 0.65 |
| 1:B:2615:ARG:NH2 | 1:B:2664:PHE:O | 2.29 | 0.65 |
| 1:D:442:ILE:HG23 | 1:D:446:GLN:HE22 | 1.61 | 0.65 |
| 1:D:3309:SER:OG | 1:D:3348:ARG:NH2 | 2.30 | 0.65 |
| 1:D:3553:LEU:HA | 1:D:3556:ASN:HB2 | 1.78 | 0.65 |
| 1:C:3145:GLN:HE21 | 1:C:3196:ARG:HD3 | 1.62 | 0.65 |
| 1:C:3309:SER:OG | 1:C:3348:ARG:NH2 | 2.30 | 0.65 |
| 1:A:442:ILE:HG23 | 1:A:446:GLN:HE22 | 1.61 | 0.65 |
| 1:A:2346:VAL:HG13 | 1:A:2349:ASN:HB2 | 1.77 | 0.65 |
| 1:B:2685:SER:HA | 1:B:2688:HIS:CE1 | 2.32 | 0.65 |
| 1:D:12:GLN:HG2 | 1:D:165:VAL:HB | 1.79 | 0.65 |
| 1:D:155:LYS:HZ2 | 1:C:225:GLY:HA2 | 1.62 | 0.65 |
| 1:D:2548:LEU:HB3 | 1:D:2552:ARG:HH12 | 1.62 | 0.65 |
| 1:D:2970:SER:HA | 1:D:2973:PHE:CE2 | 2.32 | 0.65 |
| 1:C:769:GLU:OE2 | 1:C:1475:THR:OG1 | 2.11 | 0.65 |
| 1:C:1867:GLU:OE2 | 1:C:1928:GLN:NE2 | 2.29 | 0.65 |
| 1:C:2303:ALA:HB2 | 1:C:2360:LYS:HD3 | 1.79 | 0.65 |
| 1:C:3294:PRO:HB2 | 1:C:3297:PRO:HD2 | 1.79 | 0.65 |
| 1:D:1999:ARG:HD3 | 1:D:3635:CYS:HB2 | 1.78 | 0.65 |
| 1:C:119:SER:HA | 1:C:148:TRP:HE1 | 1.60 | 0.65 |
| 1:C:2760:GLU:HA | 1:C:2802:LYS:NZ | 2.11 | 0.65 |
| 1:A:1272:LEU:HD13 | 1:A:1289:LEU:HD21 | 1.79 | 0.65 |
| 1:A:3343:GLN:O | 1:A:3414:ARG:NH1 | 2.30 | 0.65 |
| 1:B:2771:ILE:O | 1:B:2774:ASN:ND2 | 2.30 | 0.65 |
| 1:D:221:ARG:NH2 | 1:D:397:GLU:OE1 | 2.28 | 0.65 |
| 1:D:2760:GLU:HA | 1:D:2802:LYS:NZ | 2.11 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:D:3539:ARG:NH1 | 1:D:3552:PHE:HB3 | 2.11 | 0.65 |
| 1:C:2615:ARG:NH2 | 1:C:2664:PHE:O | 2.29 | 0.65 |
| 1:A:2771:ILE:O | 1:A:2774:ASN:ND2 | 2.30 | 0.64 |
| 1:B:1999:ARG:HD3 | 1:B:3635:CYS:HB2 | 1.78 | 0.64 |
| 1:B:2303:ALA:HB2 | 1:B:2360:LYS:HD3 | 1.79 | 0.64 |
| 1:B:2369[B]:ARG:NE | 1:B:2369[B]:ARG:HA | 2.12 | 0.64 |
| 1:B:3943:ILE:O | 1:B:3948:LYS:NZ | 2.28 | 0.64 |
| 1:B:4207:MET:SD | 1:B:4208:PRO:HD2 | 2.37 | 0.64 |
| 1:D:156:GLN:HG2 | 1:D:164:ARG:HH22 | 1.62 | 0.64 |
| 1:A:491:ILE:HD11 | 1:A:522:LEU:HB3 | 1.80 | 0.64 |
| 1:A:2591:ARG:NH2 | 1:A:2636:PHE:O | 2.29 | 0.64 |
| 1:A:3539:ARG:NH1 | 1:A:3552:PHE:HB3 | 2.11 | 0.64 |
| 1:A:4207:MET:SD | 1:A:4208:PRO:HD2 | 2.37 | 0.64 |
| 1:A:4958:CYS:SG | 1:A:4961:CYS:CB | 2.84 | 0.64 |
| 1:B:491:ILE:HD11 | 1:B:522:LEU:HB3 | 1.80 | 0.64 |
| 1:D:119:SER:HA | 1:D:148:TRP:HE1 | 1.60 | 0.64 |
| 1:D:3294:PRO:HB2 | 1:D:3297:PRO:HD2 | 1.79 | 0.64 |
| 1:C:548:VAL:HA | 1:C:551:LEU:HD23 | 1.77 | 0.64 |
| 1:C:2107:GLN:O | 1:C:3694:LYS:NZ | 2.26 | 0.64 |
| 1:A:886:ARG:NH1 | 1:A:961:MET:SD | 2.69 | 0.64 |
| 1:A:2369[B]:ARG:NE | 1:A:2369[B]:ARG:HA | 2.12 | 0.64 |
| 1:B:224:HIS:O | 1:C:155:LYS:NZ | 2.30 | 0.64 |
| 1:B:3553:LEU:HA | 1:B:3556:ASN:HB2 | 1.78 | 0.64 |
| 1:C:156:GLN:HG2 | 1:C:164:ARG:HH22 | 1.62 | 0.64 |
| 1:C:2369[B]:ARG:HA | 1:C:2369[B]:ARG:NE | 2.12 | 0.64 |
| 1:B:34:LYS:N | 1:B:53:SER:OG | 2.28 | 0.64 |
| 1:B:1272:LEU:HD13 | 1:B:1289:LEU:HD21 | 1.79 | 0.64 |
| 1:B:2010:LEU:HD11 | 1:B:3653:PHE:HE1 | 1.63 | 0.64 |
| 1:B:3145:GLN:HE21 | 1:B:3196:ARG:HD3 | 1.62 | 0.64 |
| 1:B:4958:CYS:SG | 1:B:4961:CYS:CB | 2.84 | 0.64 |
| 1:D:2369[B]:ARG:NE | 1:D:2369[B]:ARG:HA | 2.12 | 0.64 |
| 1:C:442:ILE:HG23 | 1:C:446:GLN:HE22 | 1.61 | 0.64 |
| 1:C:3343:GLN:O | 1:C:3414:ARG:NH1 | 2.30 | 0.64 |
| 1:A:222:LEU:HD13 | 1:A:388:LEU:HD22 | 1.79 | 0.64 |
| 1:A:1833:SER:HB3 | 1:A:1836:PHE:HD2 | 1.62 | 0.64 |
| 1:A:2685:SER:HA | 1:A:2688:HIS:CE1 | 2.32 | 0.64 |
| 2:E:82:TYR:HE2 | 2:E:91:ILE:HD13 | 1.62 | 0.64 |
| 1:B:3309:SER:OG | 1:B:3348:ARG:NH2 | 2.30 | 0.64 |
| 1:C:102:LEU:HA | 1:C:162:LYS:HA | 1.78 | 0.64 |
| 1:C:222:LEU:HD13 | 1:C:388:LEU:HD22 | 1.79 | 0.64 |
| 1:A:12:GLN:HG2 | 1:A:165:VAL:HB | 1.79 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:156:GLN:HG2 | 1:B:164:ARG:HH22 | 1.62 | 0.64 |
| 1:D:769:GLU:OE2 | 1:D:1475:THR:OG1 | 2.11 | 0.64 |
| 1:D:772:ASN:H | 1:D:1470:ARG:NH2 | 1.95 | 0.64 |
| 1:D:1660:GLN:HE22 | 1:D:1706:PRO:HB2 | 1.63 | 0.64 |
| 1:D:1833:SER:HB3 | 1:D:1836:PHE:HD2 | 1.62 | 0.64 |
| 1:D:4207:MET:SD | 1:D:4208:PRO:HD2 | 2.37 | 0.64 |
| 1:C:886:ARG:NH1 | 1:C:961:MET:SD | 2.69 | 0.64 |
| 1:C:2970:SER:HA | 1:C:2973:PHE:CE2 | 2.32 | 0.64 |
| 1:C:2996:LYS:HE2 | 1:C:3000:LYS:HE3 | 1.80 | 0.64 |
| 1:A:214:VAL:HG22 | 1:A:341:TYR:HD1 | 1.63 | 0.64 |
| 1:B:971:ASP:HB3 | 1:B:974:HIS:ND1 | 2.13 | 0.64 |
| 1:C:971:ASP:HB3 | 1:C:974:HIS:ND1 | 2.13 | 0.64 |
| 1:C:2771:ILE:O | 1:C:2774:ASN:ND2 | 2.30 | 0.64 |
| 1:C:3539:ARG:NH1 | 1:C:3552:PHE:HB3 | 2.11 | 0.64 |
| 1:C:3553:LEU:HA | 1:C:3556:ASN:HB2 | 1.78 | 0.64 |
| 1:A:156:GLN:HG2 | 1:A:164:ARG:HH22 | 1.62 | 0.64 |
| 1:A:256:ALA:HB2 | 1:A:477:LEU:HD23 | 1.80 | 0.64 |
| 1:B:3294:PRO:HB2 | 1:B:3297:PRO:HD2 | 1.79 | 0.64 |
| 1:D:886:ARG:NH1 | 1:D:961:MET:SD | 2.69 | 0.64 |
| 1:D:3734:HIS:HD2 | 1:D:3736:GLU:H | 1.44 | 0.64 |
| 1:C:214:VAL:HG22 | 1:C:341:TYR:HD1 | 1.63 | 0.64 |
| 1:A:2548:LEU:HB3 | 1:A:2552:ARG:HH12 | 1.62 | 0.64 |
| 1:A:3553:LEU:HA | 1:A:3556:ASN:HB2 | 1.78 | 0.64 |
| 2:H:82:TYR:HE2 | 2:H:91:ILE:HD13 | 1.62 | 0.64 |
| 1:B:266:ARG:NH2 | 1:B:272:SER:OG | 2.31 | 0.64 |
| 1:B:2757:LYS:HG3 | 1:B:2830:GLU:HG3 | 1.80 | 0.64 |
| 1:B:2970:SER:HA | 1:B:2973:PHE:CE2 | 2.32 | 0.64 |
| 1:B:4902:GLU:O | 1:B:4913:ARG:NH2 | 2.31 | 0.64 |
| 1:D:266:ARG:NH2 | 1:D:272:SER:OG | 2.31 | 0.64 |
| 1:D:971:ASP:HB3 | 1:D:974:HIS:ND1 | 2.13 | 0.64 |
| 1:A:1660:GLN:HE22 | 1:A:1706:PRO:HB2 | 1.63 | 0.64 |
| 1:B:2583:LEU:HB3 | 1:B:2622:LEU:HD22 | 1.80 | 0.64 |
| 1:B:2760:GLU:HA | 1:B:2802:LYS:NZ | 2.11 | 0.64 |
| 1:D:491:ILE:HD11 | 1:D:522:LEU:HB3 | 1.80 | 0.64 |
| 1:D:4155:PRO:O | 1:D:4161:ARG:NH1 | 2.27 | 0.64 |
| 1:C:12:GLN:HG2 | 1:C:165:VAL:HB | 1.79 | 0.64 |
| 1:C:1272:LEU:HD13 | 1:C:1289:LEU:HD21 | 1.79 | 0.64 |
| 1:A:266:ARG:NH2 | 1:A:272:SER:OG | 2.31 | 0.63 |
| 1:A:772:ASN:H | 1:A:1470:ARG:NH2 | 1.95 | 0.63 |
| 1:A:2010:LEU:HD11 | 1:A:3653:PHE:HE1 | 1.63 | 0.63 |
| 1:A:3223:SER:OG | 1:A:3226:GLU:OE1 | 2.13 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4155:PRO:O | 1:B:4161:ARG:NH1 | 2.27 | 0.63 |
| 1:D:214:VAL:HG22 | 1:D:341:TYR:HD1 | 1.63 | 0.63 |
| 1:D:2289:ALA:O | 1:D:2291:GLN:NE2 | 2.31 | 0.63 |
| 1:D:2760:GLU:HA | 1:D:2802:LYS:HZ1 | 1.63 | 0.63 |
| 1:C:1660:GLN:HE22 | 1:C:1706:PRO:HB2 | 1.63 | 0.63 |
| 1:A:2757:LYS:HG3 | 1:A:2830:GLU:HG3 | 1.80 | 0.63 |
| 2:G:82:TYR:HE2 | 2:G:91:ILE:HD13 | 1.62 | 0.63 |
| 1:B:214:VAL:HG22 | 1:B:341:TYR:HD1 | 1.63 | 0.63 |
| 1:B:2548:LEU:HB3 | 1:B:2552:ARG:HH12 | 1.62 | 0.63 |
| 1:D:256:ALA:HB2 | 1:D:477:LEU:HD23 | 1.80 | 0.63 |
| 1:C:266:ARG:NH2 | 1:C:272:SER:OG | 2.31 | 0.63 |
| 1:C:491:ILE:HD11 | 1:C:522:LEU:HB3 | 1.80 | 0.63 |
| 1:C:830:ARG:HH12 | 1:C:832:GLU:HB2 | 1.63 | 0.63 |
| 1:C:2548:LEU:HB3 | 1:C:2552:ARG:HH12 | 1.62 | 0.63 |
| 1:A:4902:GLU:O | 1:A:4913:ARG:NH2 | 2.31 | 0.63 |
| 1:B:3293:PRO:HB2 | 1:B:3298:ALA:HB2 | 1.81 | 0.63 |
| 1:D:1867:GLU:OE2 | 1:D:1928:GLN:NE2 | 2.29 | 0.63 |
| 1:C:4207:MET:SD | 1:C:4208:PRO:HD2 | 2.37 | 0.63 |
| 1:A:1778:SER:OG | 1:A:1797:ARG:NH2 | 2.32 | 0.63 |
| 2:F:82:TYR:HE2 | 2:F:91:ILE:HD13 | 1.62 | 0.63 |
| 1:B:3204:ALA:O | 1:B:3211:ASN:ND2 | 2.32 | 0.63 |
| 1:D:2996:LYS:HE2 | 1:D:3000:LYS:HE3 | 1.80 | 0.63 |
| 1:D:3293:PRO:HB2 | 1:D:3298:ALA:HB2 | 1.81 | 0.63 |
| 1:C:256:ALA:HB2 | 1:C:477:LEU:HD23 | 1.80 | 0.63 |
| 1:A:3294:PRO:HB2 | 1:A:3297:PRO:HD2 | 1.79 | 0.63 |
| 1:A:3734:HIS:HD2 | 1:A:3736:GLU:H | 1.44 | 0.63 |
| 1:B:1154:ASP:O | 1:B:1158:ASN:N | 2.29 | 0.63 |
| 1:C:2757:LYS:HG3 | 1:C:2830:GLU:HG3 | 1.80 | 0.63 |
| 1:B:12:GLN:HG2 | 1:B:165:VAL:HB | 1.79 | 0.63 |
| 1:B:222:LEU:HD13 | 1:B:388:LEU:HD22 | 1.79 | 0.63 |
| 1:B:256:ALA:HB2 | 1:B:477:LEU:HD23 | 1.80 | 0.63 |
| 1:B:830:ARG:HH12 | 1:B:832:GLU:HB2 | 1.63 | 0.63 |
| 1:D:1154:ASP:O | 1:D:1158:ASN:N | 2.29 | 0.63 |
| 1:D:4902:GLU:O | 1:D:4913:ARG:NH2 | 2.31 | 0.63 |
| 1:C:2010:LEU:HD11 | 1:C:3653:PHE:HE1 | 1.63 | 0.63 |
| 1:A:676:THR:HG22 | 1:A:677:ALA:H | 1.64 | 0.63 |
| 1:A:2583:LEU:HB3 | 1:A:2622:LEU:HD22 | 1.80 | 0.63 |
| 1:A:2911:LEU:O | 1:A:2916:LYS:NZ | 2.32 | 0.63 |
| 1:B:1660:GLN:HE22 | 1:B:1706:PRO:HB2 | 1.63 | 0.63 |
| 1:B:2765:LYS:HA | 1:B:2768:PHE:HD2 | 1.64 | 0.63 |
| 1:B:2996:LYS:HE2 | 1:B:3000:LYS:HE3 | 1.80 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:1272:LEU:HD13 | 1:D:1289:LEU:HD21 | 1.79 | 0.63 |
| 1:D:2771:ILE:O | 1:D:2774:ASN:ND2 | 2.30 | 0.63 |
| 1:D:4958:CYS:SG | 1:D:4961:CYS:CB | 2.84 | 0.63 |
| 1:C:1999:ARG:HD3 | 1:C:3635:CYS:HB2 | 1.78 | 0.63 |
| 1:C:3204:ALA:O | 1:C:3211:ASN:ND2 | 2.32 | 0.63 |
| 1:C:3329:ILE:O | 1:C:3403:ARG:NH1 | 2.32 | 0.63 |
| 1:A:620:LEU:O | 1:A:624:ASN:ND2 | 2.30 | 0.63 |
| 1:B:340:LYS:HG2 | 1:B:343:GLU:HB2 | 1.81 | 0.63 |
| 1:D:222:LEU:HD13 | 1:D:388:LEU:HD22 | 1.79 | 0.63 |
| 1:D:830:ARG:HH12 | 1:D:832:GLU:HB2 | 1.63 | 0.63 |
| 1:D:2010:LEU:HD11 | 1:D:3653:PHE:HE1 | 1.63 | 0.63 |
| 1:D:3204:ALA:O | 1:D:3211:ASN:ND2 | 2.32 | 0.63 |
| 1:C:676:THR:HG22 | 1:C:677:ALA:H | 1.64 | 0.63 |
| 1:A:4846:VAL:HG21 | 1:D:4816:ILE:HD11 | 1.81 | 0.63 |
| 1:B:3282:PRO:HG2 | 1:B:3345:ILE:HG22 | 1.80 | 0.63 |
| 1:D:1778:SER:OG | 1:D:1797:ARG:NH2 | 2.32 | 0.63 |
| 1:D:2757:LYS:HG3 | 1:D:2830:GLU:HG3 | 1.80 | 0.63 |
| 1:C:772:ASN:H | 1:C:1470:ARG:NH2 | 1.95 | 0.63 |
| 1:C:2765:LYS:HA | 1:C:2768:PHE:HD2 | 1.64 | 0.63 |
| 1:C:3293:PRO:HB2 | 1:C:3298:ALA:HB2 | 1.81 | 0.63 |
| 1:C:4902:GLU:O | 1:C:4913:ARG:NH2 | 2.31 | 0.63 |
| 1:A:340:LYS:HG2 | 1:A:343:GLU:HB2 | 1.81 | 0.62 |
| 1:A:1870:VAL:HG11 | 1:A:2097:LEU:HD22 | 1.81 | 0.62 |
| 1:A:2996:LYS:HE2 | 1:A:3000:LYS:HE3 | 1.80 | 0.62 |
| 1:D:3282:PRO:HG2 | 1:D:3345:ILE:HG22 | 1.80 | 0.62 |
| 1:A:3293:PRO:HB2 | 1:A:3298:ALA:HB2 | 1.81 | 0.62 |
| 1:B:676:THR:HG22 | 1:B:677:ALA:H | 1.64 | 0.62 |
| 1:B:2948:THR:HG22 | 1:B:2949:SER:H | 1.64 | 0.62 |
| 1:C:1870:VAL:HG11 | 1:C:2097:LEU:HD22 | 1.81 | 0.62 |
| 1:A:221:ARG:NH2 | 1:A:397:GLU:OE1 | 2.28 | 0.62 |
| 1:A:2199:ARG:NH1 | 1:A:2246:ASN:OD1 | 2.32 | 0.62 |
| 1:D:842:PRO:HG3 | 1:D:1073:ARG:HG3 | 1.81 | 0.62 |
| 1:D:2583:LEU:HB3 | 1:D:2622:LEU:HD22 | 1.80 | 0.62 |
| 1:A:830:ARG:HH12 | 1:A:832:GLU:HB2 | 1.63 | 0.62 |
| 1:A:3282:PRO:HG2 | 1:A:3345:ILE:HG22 | 1.80 | 0.62 |
| 1:B:620:LEU:O | 1:B:624:ASN:ND2 | 2.30 | 0.62 |
| 1:B:2199:ARG:NH1 | 1:B:2246:ASN:OD1 | 2.32 | 0.62 |
| 1:D:620:LEU:O | 1:D:624:ASN:ND2 | 2.30 | 0.62 |
| 1:D:676:THR:HG22 | 1:D:677:ALA:H | 1.64 | 0.62 |
| 1:C:1778:SER:OG | 1:C:1797:ARG:NH2 | 2.32 | 0.62 |
| 1:A:248:GLU:OE1 | 1:A:257:ARG:NH2 | 2.33 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3329:ILE:O | 1:A:3403:ARG:NH1 | 2.32 | 0.62 |
| 2:G:24:VAL:HG12 | 2:G:103:LEU:HD13 | 1.81 | 0.62 |
| 1:B:3329:ILE:O | 1:B:3403:ARG:NH1 | 2.32 | 0.62 |
| 1:D:935:LEU:HD21 | 1:D:987:ARG:HD2 | 1.81 | 0.62 |
| 1:D:1870:VAL:HG21 | 1:D:2097:LEU:HD13 | 1.82 | 0.62 |
| 1:C:2583:LEU:HB3 | 1:C:2622:LEU:HD22 | 1.80 | 0.62 |
| 1:C:2911:LEU:O | 1:C:2916:LYS:NZ | 2.32 | 0.62 |
| 1:A:1140:GLY:HA3 | 1:A:1169:LEU:HD23 | 1.82 | 0.62 |
| 1:A:1245:PHE:HB3 | 1:A:1290:ARG:NH2 | 2.15 | 0.62 |
| 1:A:3324:VAL:HA | 1:A:3327:LEU:HG | 1.82 | 0.62 |
| 1:B:248:GLU:OE1 | 1:B:257:ARG:NH2 | 2.33 | 0.62 |
| 1:B:1778:SER:OG | 1:B:1797:ARG:NH2 | 2.32 | 0.62 |
| 1:B:1870:VAL:HG11 | 1:B:2097:LEU:HD22 | 1.81 | 0.62 |
| 1:D:1140:GLY:HA3 | 1:D:1169:LEU:HD23 | 1.82 | 0.62 |
| 1:D:1240:LYS:HB3 | 1:D:1604:SER:O | 2.00 | 0.62 |
| 1:C:935:LEU:HD21 | 1:C:987:ARG:HD2 | 1.82 | 0.62 |
| 1:C:2219:GLU:HB2 | 1:C:2263:ILE:HG12 | 1.82 | 0.62 |
| 1:C:2233:CYS:O | 1:C:2234:ARG:C | 2.38 | 0.62 |
| 1:C:3282:PRO:HG2 | 1:C:3345:ILE:HG22 | 1.80 | 0.62 |
| 1:A:935:LEU:HD21 | 1:A:987:ARG:HD2 | 1.82 | 0.62 |
| 1:A:1870:VAL:HG21 | 1:A:2097:LEU:HD13 | 1.82 | 0.62 |
| 1:A:3204:ALA:O | 1:A:3211:ASN:ND2 | 2.32 | 0.62 |
| 1:A:4155:PRO:O | 1:A:4161:ARG:NH1 | 2.27 | 0.62 |
| 1:B:772:ASN:H | 1:B:1470:ARG:NH2 | 1.95 | 0.62 |
| 1:B:3357:HIS:O | 1:B:3361:THR:HG23 | 2.00 | 0.62 |
| 1:D:340:LYS:HG2 | 1:D:343:GLU:HB2 | 1.81 | 0.62 |
| 1:D:1870:VAL:HG11 | 1:D:2097:LEU:HD22 | 1.81 | 0.62 |
| 1:D:2948:THR:HG22 | 1:D:2949:SER:H | 1.64 | 0.62 |
| 1:A:1294:PRO:HB3 | 1:A:1549:PHE:HE1 | 1.65 | 0.62 |
| 1:A:2272:PRO:HA | 1:A:2275:VAL:HG12 | 1.82 | 0.62 |
| 1:A:2289:ALA:O | 1:A:2291:GLN:NE2 | 2.31 | 0.62 |
| 1:B:856:VAL:HB | 1:B:991:ASN:HD21 | 1.65 | 0.62 |
| 1:B:1140:GLY:HA3 | 1:B:1169:LEU:HD23 | 1.82 | 0.62 |
| 1:B:1245:PHE:HB3 | 1:B:1290:ARG:NH2 | 2.15 | 0.62 |
| 1:D:248:GLU:OE1 | 1:D:257:ARG:NH2 | 2.33 | 0.62 |
| 1:D:2765:LYS:HA | 1:D:2768:PHE:HD2 | 1.64 | 0.62 |
| 1:D:2911:LEU:O | 1:D:2916:LYS:NZ | 2.32 | 0.62 |
| 1:D:3329:ILE:O | 1:D:3403:ARG:NH1 | 2.32 | 0.62 |
| 1:C:3350:ARG:O | 1:C:3415:TYR:OH | 2.17 | 0.62 |
| 1:A:4152:GLU:OE1 | 1:A:4192:ARG:NH1 | 2.31 | 0.62 |
| 2:H:24:VAL:HG12 | 2:H:103:LEU:HD13 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:2272:PRO:HA | 1:B:2275:VAL:HG12 | 1.82 | 0.62 |
| 1:B:3539:ARG:HH12 | 1:B:3549:VAL:HA | 1.64 | 0.62 |
| 1:B:3995:VAL:O | 1:B:3999:MET:HG2 | 2.00 | 0.62 |
| 1:D:402:ARG:NH1 | 1:D:402:ARG:O | 2.33 | 0.62 |
| 1:D:856:VAL:HB | 1:D:991:ASN:HD21 | 1.65 | 0.62 |
| 1:D:1245:PHE:HB3 | 1:D:1290:ARG:NH2 | 2.15 | 0.62 |
| 1:D:1294:PRO:HB3 | 1:D:1549:PHE:HE1 | 1.65 | 0.62 |
| 1:D:1462:MET:N | 1:D:1462:MET:SD | 2.73 | 0.62 |
| 1:D:2272:PRO:HA | 1:D:2275:VAL:HG12 | 1.82 | 0.62 |
| 1:D:2615:ARG:HB2 | 1:D:2618:MET:HE3 | 1.81 | 0.62 |
| 1:C:856:VAL:HB | 1:C:991:ASN:HD21 | 1.65 | 0.62 |
| 1:C:1245:PHE:HB3 | 1:C:1290:ARG:NH2 | 2.15 | 0.62 |
| 1:C:2610:LEU:HD23 | 1:C:2614:ILE:HD11 | 1.81 | 0.62 |
| 1:C:3321:ARG:HA | 1:C:3324:VAL:HG22 | 1.82 | 0.62 |
| 1:B:402:ARG:NH1 | 1:B:402:ARG:O | 2.33 | 0.62 |
| 1:B:2219:GLU:HB2 | 1:B:2263:ILE:HG12 | 1.81 | 0.62 |
| 1:D:3321:ARG:HA | 1:D:3324:VAL:HG22 | 1.82 | 0.62 |
| 1:C:402:ARG:NH1 | 1:C:402:ARG:O | 2.33 | 0.62 |
| 1:C:3504:SER:HB2 | 1:C:3507:THR:HG23 | 1.81 | 0.62 |
| 1:B:2610:LEU:HD23 | 1:B:2614:ILE:HD11 | 1.81 | 0.61 |
| 1:C:340:LYS:HG2 | 1:C:343:GLU:HB2 | 1.81 | 0.61 |
| 1:C:3995:VAL:O | 1:C:3999:MET:HG2 | 2.00 | 0.61 |
| 1:C:4242:ILE:O | 1:C:4246:GLN:NE2 | 2.33 | 0.61 |
| 1:A:842:PRO:HG3 | 1:A:1073:ARG:HG3 | 1.81 | 0.61 |
| 1:A:861:ILE:HA | 1:A:930:LYS:HE2 | 1.82 | 0.61 |
| 1:A:2765:LYS:HA | 1:A:2768:PHE:HD2 | 1.64 | 0.61 |
| 1:A:3995:VAL:O | 1:A:3999:MET:HG2 | 2.00 | 0.61 |
| 1:A:4242:ILE:O | 1:A:4246:GLN:NE2 | 2.33 | 0.61 |
| 1:B:1130:GLN:HE22 | 1:B:1136:SER:HB2 | 1.65 | 0.61 |
| 1:B:2447:LYS:HD2 | 1:B:2450:ALA:H | 1.66 | 0.61 |
| 1:B:3504:SER:HB2 | 1:B:3507:THR:HG23 | 1.81 | 0.61 |
| 1:B:4242:ILE:O | 1:B:4246:GLN:NE2 | 2.33 | 0.61 |
| 1:D:639:ASN:N | 1:D:678:GLN:OE1 | 2.33 | 0.61 |
| 1:D:2199:ARG:NH1 | 1:D:2246:ASN:OD1 | 2.32 | 0.61 |
| 1:C:639:ASN:N | 1:C:678:GLN:OE1 | 2.33 | 0.61 |
| 1:C:1130:GLN:HE22 | 1:C:1136:SER:HB2 | 1.65 | 0.61 |
| 1:C:1462:MET:SD | 1:C:1462:MET:N | 2.73 | 0.61 |
| 1:A:884:LEU:HG | 1:A:955:LEU:HD21 | 1.82 | 0.61 |
| 1:A:1506:GLN:NE2 | 1:D:2772:GLN:HG3 | 2.15 | 0.61 |
| 1:B:225:GLY:HA2 | 1:C:155:LYS:NZ | 2.16 | 0.61 |
| 1:D:3324:VAL:HA | 1:D:3327:LEU:HG | 1.82 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:C:349:GLN:NE2 | 1:C:355:LEU:O | 2.34 | 0.61 |
| 1:C:1245:PHE:HB3 | 1:C:1290:ARG:CZ | 2.31 | 0.61 |
| 1:C:2199:ARG:NH1 | 1:C:2246:ASN:OD1 | 2.32 | 0.61 |
| 1:C:2289:ALA:O | 1:C:2291:GLN:NE2 | 2.31 | 0.61 |
| 1:C:3057:PHE:HB3 | 1:C:3060:ASP:HB2 | 1.82 | 0.61 |
| 1:A:1743[A]:ARG:NH2 | 1:A:1967:ASP:OD2 | 2.32 | 0.61 |
| 1:A:2233:CYS:O | 1:A:2234:ARG:C | 2.38 | 0.61 |
| 1:A:2500:ALA:HB2 | 1:A:2553:TYR:HD1 | 1.65 | 0.61 |
| 1:A:3321:ARG:HA | 1:A:3324:VAL:HG22 | 1.82 | 0.61 |
| 1:A:4056:GLU:HG2 | 1:A:4166:LEU:HD22 | 1.82 | 0.61 |
| 1:B:1240:LYS:HB3 | 1:B:1604:SER:O | 2.00 | 0.61 |
| 1:B:1462:MET:N | 1:B:1462:MET:SD | 2.73 | 0.61 |
| 1:B:3321:ARG:HA | 1:B:3324:VAL:HG22 | 1.82 | 0.61 |
| 1:D:4056:GLU:HG2 | 1:D:4166:LEU:HD22 | 1.82 | 0.61 |
| 1:C:1140:GLY:HA3 | 1:C:1169:LEU:HD23 | 1.82 | 0.61 |
| 1:C:2272:PRO:HA | 1:C:2275:VAL:HG12 | 1.82 | 0.61 |
| 1:A:1240:LYS:HB3 | 1:A:1604:SER:O | 2.00 | 0.61 |
| 1:A:1619:ARG:HB2 | 1:A:1626:TRP:CE2 | 2.36 | 0.61 |
| 1:A:1990:GLU:OE1 | 1:A:1993:ARG:NH2 | 2.32 | 0.61 |
| 1:A:2447:LYS:HD2 | 1:A:2450:ALA:H | 1.65 | 0.61 |
| 1:A:2519:LEU:HD22 | 1:A:2575:ARG:HG2 | 1.82 | 0.61 |
| 1:B:1245:PHE:HB3 | 1:B:1290:ARG:CZ | 2.31 | 0.61 |
| 1:B:2911:LEU:O | 1:B:2916:LYS:NZ | 2.32 | 0.61 |
| 1:D:2447:LYS:HD2 | 1:D:2450:ALA:H | 1.65 | 0.61 |
| 1:D:3357:HIS:O | 1:D:3361:THR:HG23 | 2.00 | 0.61 |
| 1:D:3995:VAL:O | 1:D:3999:MET:HG2 | 2.00 | 0.61 |
| 1:C:2522:LEU:HB3 | 1:C:2582:MET:HE1 | 1.83 | 0.61 |
| 1:C:3357:HIS:O | 1:C:3361:THR:HG23 | 2.00 | 0.61 |
| 1:C:3539:ARG:HH12 | 1:C:3549:VAL:HA | 1.64 | 0.61 |
| 1:A:2219:GLU:HB2 | 1:A:2263:ILE:HG12 | 1.81 | 0.61 |
| 1:A:2610:LEU:HD23 | 1:A:2614:ILE:HD11 | 1.81 | 0.61 |
| 1:A:3504:SER:HB2 | 1:A:3507:THR:HG23 | 1.82 | 0.61 |
| 1:B:861:ILE:HA | 1:B:930:LYS:HE2 | 1.82 | 0.61 |
| 1:D:1130:GLN:HE22 | 1:D:1136:SER:HB2 | 1.65 | 0.61 |
| 1:D:1990:GLU:OE1 | 1:D:1993:ARG:NH2 | 2.32 | 0.61 |
| 1:C:248:GLU:OE1 | 1:C:257:ARG:NH2 | 2.33 | 0.61 |
| 1:C:842:PRO:HG3 | 1:C:1073:ARG:HG3 | 1.82 | 0.61 |
| 1:C:3895:HIS:NE2 | 1:C:3970:GLN:OE1 | 2.34 | 0.61 |
| 1:A:1245:PHE:HB3 | 1:A:1290:ARG:CZ | 2.31 | 0.61 |
| 1:B:2103:VAL:O | 1:B:2107:GLN:NE2 | 2.34 | 0.61 |
| 1:B:2760:GLU:HA | 1:B:2802:LYS:HZ1 | 1.64 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4892:ARG:HH12 | 1:C:4898:GLY:H | 1.49 | 0.61 |
| 1:D:2410:PRO:HB2 | 1:D:2413:GLU:HA | 1.82 | 0.61 |
| 1:D:2519:LEU:HD22 | 1:D:2575:ARG:HG2 | 1.82 | 0.61 |
| 1:C:2140:ARG:HH22 | 1:C:2201:LEU:HD23 | 1.66 | 0.61 |
| 1:A:856:VAL:HB | 1:A:991:ASN:HD21 | 1.65 | 0.61 |
| 1:A:3357:HIS:O | 1:A:3361:THR:HG23 | 2.00 | 0.61 |
| 1:B:349:GLN:NE2 | 1:B:355:LEU:O | 2.34 | 0.61 |
| 1:B:365:LYS:HE2 | 1:B:369:LEU:HD21 | 1.83 | 0.61 |
| 1:B:842:PRO:HG3 | 1:B:1073:ARG:HG3 | 1.81 | 0.61 |
| 1:B:1619:ARG:HB2 | 1:B:1626:TRP:CE2 | 2.36 | 0.61 |
| 1:B:3284:TRP:HB3 | 1:B:3305:THR:HG21 | 1.83 | 0.61 |
| 1:B:4152:GLU:OE1 | 1:B:4192:ARG:NH1 | 2.31 | 0.61 |
| 1:D:34:LYS:N | 1:D:53:SER:OG | 2.28 | 0.61 |
| 1:D:1245:PHE:HB3 | 1:D:1290:ARG:CZ | 2.31 | 0.61 |
| 1:C:1240:LYS:HB3 | 1:C:1604:SER:O | 2.00 | 0.61 |
| 1:C:1990:GLU:OE1 | 1:C:1993:ARG:NH2 | 2.32 | 0.61 |
| 1:C:2410:PRO:HB2 | 1:C:2413:GLU:HA | 1.82 | 0.61 |
| 1:A:1867:GLU:OE2 | 1:A:1928:GLN:NE2 | 2.29 | 0.61 |
| 1:A:2621:HIS:HA | 1:A:2624:ARG:HE | 1.66 | 0.61 |
| 2:E:18:ARG:HH11 | 2:E:51:GLY:HA3 | 1.65 | 0.61 |
| 2:E:24:VAL:HG12 | 2:E:103:LEU:HD13 | 1.81 | 0.61 |
| 2:H:18:ARG:HH11 | 2:H:51:GLY:HA3 | 1.65 | 0.61 |
| 1:B:935:LEU:HD21 | 1:B:987:ARG:HD2 | 1.82 | 0.61 |
| 1:D:349:GLN:NE2 | 1:D:355:LEU:O | 2.34 | 0.61 |
| 1:D:884:LEU:HG | 1:D:955:LEU:HD21 | 1.82 | 0.61 |
| 1:D:1224:GLU:OE2 | 1:D:1827:ARG:NH1 | 2.34 | 0.61 |
| 1:D:2233:CYS:O | 1:D:2234:ARG:C | 2.38 | 0.61 |
| 1:D:2610:LEU:HD23 | 1:D:2614:ILE:HD11 | 1.81 | 0.61 |
| 1:C:2948:THR:HG22 | 1:C:2949:SER:H | 1.64 | 0.61 |
| 1:C:4897:ILE:O | 1:C:4901:ILE:HG22 | 2.01 | 0.61 |
| 1:A:349:GLN:NE2 | 1:A:355:LEU:O | 2.34 | 0.61 |
| 1:A:1130:GLN:HE22 | 1:A:1136:SER:HB2 | 1.65 | 0.61 |
| 1:A:1224:GLU:OE2 | 1:A:1827:ARG:NH1 | 2.34 | 0.61 |
| 1:A:1462:MET:N | 1:A:1462:MET:SD | 2.73 | 0.61 |
| 1:A:2522:LEU:HB3 | 1:A:2582:MET:HE1 | 1.83 | 0.61 |
| 1:A:2948:THR:HG22 | 1:A:2949:SER:H | 1.64 | 0.61 |
| 1:A:3284:TRP:HB3 | 1:A:3305:THR:HG21 | 1.83 | 0.61 |
| 2:E:76:ILE:O | 2:E:96:THR:OG1 | 2.19 | 0.61 |
| 1:B:884:LEU:HG | 1:B:955:LEU:HD21 | 1.82 | 0.61 |
| 1:B:4056:GLU:HG2 | 1:B:4166:LEU:HD22 | 1.82 | 0.61 |
| 1:D:3057:PHE:HB3 | 1:D:3060:ASP:HB2 | 1.82 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:C:365:LYS:HE2 | 1:C:369:LEU:HD21 | 1.83 | 0.61 |
| 1:C:1294:PRO:HB3 | 1:C:1549:PHE:HE1 | 1.65 | 0.61 |
| 1:C:4680:LYS:O | 1:C:4685:GLY:N | 2.34 | 0.61 |
| 1:A:3376:GLU:HB3 | 1:A:3380:ARG:NH1 | 2.16 | 0.60 |
| 1:B:1870:VAL:HG21 | 1:B:2097:LEU:HD13 | 1.82 | 0.60 |
| 1:B:3289:PRO:HG2 | 1:B:3308:THR:HG22 | 1.83 | 0.60 |
| 1:B:3324:VAL:HA | 1:B:3327:LEU:HG | 1.82 | 0.60 |
| 1:B:4897:ILE:O | 1:B:4901:ILE:HG22 | 2.01 | 0.60 |
| 1:D:861:ILE:HA | 1:D:930:LYS:HE2 | 1.83 | 0.60 |
| 1:D:1271:ARG:NH2 | 1:D:1560:ASN:OD1 | 2.34 | 0.60 |
| 1:D:3376:GLU:HB3 | 1:D:3380:ARG:NH1 | 2.16 | 0.60 |
| 1:D:3504:SER:HB2 | 1:D:3507:THR:HG23 | 1.81 | 0.60 |
| 1:C:620:LEU:O | 1:C:624:ASN:ND2 | 2.30 | 0.60 |
| 1:C:2103:VAL:O | 1:C:2107:GLN:NE2 | 2.34 | 0.60 |
| 1:C:3980:LEU:HD23 | 1:C:4030:LEU:HD21 | 1.84 | 0.60 |
| 1:C:4056:GLU:HG2 | 1:C:4166:LEU:HD22 | 1.82 | 0.60 |
| 1:A:446:GLN:HE21 | 1:A:521:LEU:HD13 | 1.66 | 0.60 |
| 1:A:880:GLU:OE2 | 1:A:952:LYS:NZ | 2.34 | 0.60 |
| 1:A:971:ASP:HB3 | 1:A:974:HIS:ND1 | 2.13 | 0.60 |
| 1:A:2103:VAL:O | 1:A:2107:GLN:NE2 | 2.34 | 0.60 |
| 2:H:76:ILE:O | 2:H:96:THR:OG1 | 2.19 | 0.60 |
| 2:F:18:ARG:HH11 | 2:F:51:GLY:HA3 | 1.65 | 0.60 |
| 1:B:2410:PRO:HB2 | 1:B:2413:GLU:HA | 1.82 | 0.60 |
| 1:B:2621:HIS:HA | 1:B:2624:ARG:HE | 1.66 | 0.60 |
| 1:D:1619:ARG:HB2 | 1:D:1626:TRP:CE2 | 2.36 | 0.60 |
| 1:D:2219:GLU:HB2 | 1:D:2263:ILE:HG12 | 1.82 | 0.60 |
| 1:D:3206:LEU:HB3 | 1:D:3246:LEU:HB2 | 1.83 | 0.60 |
| 1:A:3980:LEU:HD23 | 1:A:4030:LEU:HD21 | 1.84 | 0.60 |
| 2:F:24:VAL:HG12 | 2:F:103:LEU:HD13 | 1.81 | 0.60 |
| 1:B:880:GLU:OE2 | 1:B:952:LYS:NZ | 2.34 | 0.60 |
| 1:B:1224:GLU:OE2 | 1:B:1827:ARG:NH1 | 2.34 | 0.60 |
| 1:B:1743[A]:ARG:NH2 | 1:B:1967:ASP:OD2 | 2.32 | 0.60 |
| 1:D:2140:ARG:HH22 | 1:D:2201:LEU:HD23 | 1.66 | 0.60 |
| 1:D:3895:HIS:NE2 | 1:D:3970:GLN:OE1 | 2.34 | 0.60 |
| 1:D:3980:LEU:HD23 | 1:D:4030:LEU:HD21 | 1.84 | 0.60 |
| 1:C:884:LEU:HG | 1:C:955:LEU:HD21 | 1.82 | 0.60 |
| 1:C:1870:VAL:HG21 | 1:C:2097:LEU:HD13 | 1.82 | 0.60 |
| 1:C:3289:PRO:HG2 | 1:C:3308:THR:HG22 | 1.83 | 0.60 |
| 1:C:3324:VAL:HA | 1:C:3327:LEU:HG | 1.82 | 0.60 |
| 1:C:4661:TYR:OH | 1:C:4788:SER:OG | 2.16 | 0.60 |
| 1:A:402:ARG:NH1 | 1:A:402:ARG:O | 2.33 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3057:PHE:HB3 | 1:A:3060:ASP:HB2 | 1.82 | 0.60 |
| 2:H:52:LYS:N | 2:H:52:LYS:HD2 | 2.17 | 0.60 |
| 1:B:1271:ARG:NH2 | 1:B:1560:ASN:OD1 | 2.34 | 0.60 |
| 1:B:2354:VAL:HG11 | 1:B:2453:ILE:HD12 | 1.84 | 0.60 |
| 1:B:2522:LEU:HB3 | 1:B:2582:MET:HE1 | 1.84 | 0.60 |
| 1:B:4691:GLN:OE1 | 1:B:4692:PRO:HD2 | 2.02 | 0.60 |
| 1:D:2500:ALA:HB2 | 1:D:2553:TYR:HD1 | 1.65 | 0.60 |
| 1:D:3284:TRP:HB3 | 1:D:3305:THR:HG21 | 1.83 | 0.60 |
| 1:D:3289:PRO:HG2 | 1:D:3308:THR:HG22 | 1.83 | 0.60 |
| 1:C:861:ILE:HA | 1:C:930:LYS:HE2 | 1.82 | 0.60 |
| 1:C:1619:ARG:HB2 | 1:C:1626:TRP:CE2 | 2.36 | 0.60 |
| 1:C:2354:VAL:HG11 | 1:C:2453:ILE:HD12 | 1.84 | 0.60 |
| 1:A:419:ASP:OD1 | 1:A:493:ARG:NH1 | 2.35 | 0.60 |
| 1:A:1154:ASP:O | 1:A:1158:ASN:N | 2.29 | 0.60 |
| 1:A:3289:PRO:HG2 | 1:A:3308:THR:HG22 | 1.83 | 0.60 |
| 1:A:4750:ILE:O | 1:A:4756:ARG:NH1 | 2.35 | 0.60 |
| 1:B:937:CYS:HA | 1:B:1054:GLU:O | 2.02 | 0.60 |
| 1:B:4750:ILE:O | 1:B:4756:ARG:NH1 | 2.35 | 0.60 |
| 1:D:59:PRO:HD2 | 1:D:304:ALA:HB1 | 1.84 | 0.60 |
| 1:D:4897:ILE:O | 1:D:4901:ILE:HG22 | 2.01 | 0.60 |
| 1:C:1224:GLU:OE2 | 1:C:1827:ARG:NH1 | 2.34 | 0.60 |
| 1:C:1225:PRO:HB2 | 1:C:1228:ILE:HB | 1.83 | 0.60 |
| 1:C:3824:LYS:HZ1 | 1:C:3908:GLY:HA3 | 1.67 | 0.60 |
| 1:A:34:LYS:N | 1:A:53:SER:OG | 2.28 | 0.60 |
| 1:A:1140:GLY:HA2 | 1:D:3479:ALA:HB1 | 1.83 | 0.60 |
| 2:G:48:PHE:HZ | 2:G:63:VAL:HG11 | 1.67 | 0.60 |
| 2:F:76:ILE:O | 2:F:96:THR:OG1 | 2.19 | 0.60 |
| 1:B:446:GLN:HE21 | 1:B:521:LEU:HD13 | 1.66 | 0.60 |
| 1:B:1294:PRO:HB3 | 1:B:1549:PHE:HE1 | 1.65 | 0.60 |
| 1:B:2140:ARG:HH22 | 1:B:2201:LEU:HD23 | 1.66 | 0.60 |
| 1:B:3980:LEU:HD23 | 1:B:4030:LEU:HD21 | 1.84 | 0.60 |
| 1:B:4680:LYS:O | 1:B:4685:GLY:N | 2.34 | 0.60 |
| 1:D:2949:SER:O | 1:D:2952:GLU:HG3 | 2.02 | 0.60 |
| 1:D:3539:ARG:HH12 | 1:D:3549:VAL:HA | 1.64 | 0.60 |
| 1:C:419:ASP:OD1 | 1:C:493:ARG:NH1 | 2.35 | 0.60 |
| 1:C:2700:MET:HE1 | 1:C:3000:LYS:HB3 | 1.83 | 0.60 |
| 1:C:2949:SER:O | 1:C:2952:GLU:HG3 | 2.02 | 0.60 |
| 1:C:3206:LEU:HB3 | 1:C:3246:LEU:HB2 | 1.83 | 0.60 |
| 1:A:1247:PRO:HA | 1:A:1598:GLN:HG2 | 1.83 | 0.60 |
| 1:A:2699:ALA:HB1 | 1:A:3001:ILE:HD11 | 1.83 | 0.60 |
| 1:A:2949:SER:O | 1:A:2952:GLU:HG3 | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 2:E:52:LYS:N | 2:E:52:LYS:HD2 | 2.17 | 0.60 |
| 1:B:1225:PRO:HB2 | 1:B:1228:ILE:HB | 1.84 | 0.60 |
| 1:D:880:GLU:OE2 | 1:D:952:LYS:NZ | 2.34 | 0.60 |
| 1:D:1247:PRO:HA | 1:D:1598:GLN:HG2 | 1.83 | 0.60 |
| 1:D:2165:LEU:HD13 | 1:D:2178:MET:HB3 | 1.84 | 0.60 |
| 1:D:3206:LEU:HD13 | 1:D:3246:LEU:HD13 | 1.84 | 0.60 |
| 1:D:4242:ILE:O | 1:D:4246:GLN:NE2 | 2.33 | 0.60 |
| 1:D:4768:LEU:HA | 1:D:4771:ILE:HD12 | 1.84 | 0.60 |
| 1:C:1648:MET:SD | 1:C:1656:ARG:NH2 | 2.75 | 0.60 |
| 1:C:1743[A]:ARG:NH2 | 1:C:1967:ASP:OD2 | 2.32 | 0.60 |
| 1:C:3395:ARG:O | 1:C:3399:SER:N | 2.34 | 0.60 |
| 1:A:2165:LEU:HD13 | 1:A:2178:MET:HB3 | 1.84 | 0.60 |
| 1:B:3057:PHE:HB3 | 1:B:3060:ASP:HB2 | 1.82 | 0.60 |
| 1:B:3206:LEU:HB3 | 1:B:3246:LEU:HB2 | 1.83 | 0.60 |
| 1:D:2103:VAL:O | 1:D:2107:GLN:NE2 | 2.34 | 0.60 |
| 1:C:73:LEU:O | 1:C:106:ALA:N | 2.33 | 0.60 |
| 1:C:1271:ARG:NH2 | 1:C:1560:ASN:OD1 | 2.34 | 0.60 |
| 1:C:2500:ALA:HB2 | 1:C:2553:TYR:HD1 | 1.65 | 0.60 |
| 1:C:2699:ALA:HB1 | 1:C:3001:ILE:HD11 | 1.83 | 0.60 |
| 1:A:937:CYS:HA | 1:A:1054:GLU:O | 2.02 | 0.60 |
| 1:A:2655:TYR:HD2 | 1:A:2709:ALA:HB1 | 1.67 | 0.60 |
| 1:A:3895:HIS:NE2 | 1:A:3970:GLN:OE1 | 2.34 | 0.60 |
| 2:F:52:LYS:N | 2:F:52:LYS:HD2 | 2.17 | 0.60 |
| 1:B:1247:PRO:HA | 1:B:1598:GLN:HG2 | 1.83 | 0.60 |
| 1:B:2165:LEU:HD13 | 1:B:2178:MET:HB3 | 1.84 | 0.60 |
| 1:B:2519:LEU:HD22 | 1:B:2575:ARG:HG2 | 1.82 | 0.60 |
| 1:D:3675:ASP:OD1 | 1:D:3676:ASP:N | 2.35 | 0.60 |
| 1:D:3731:LYS:HA | 1:D:3734:HIS:CE1 | 2.37 | 0.60 |
| 1:C:59:PRO:HD2 | 1:C:304:ALA:HB1 | 1.84 | 0.60 |
| 1:A:59:PRO:HD2 | 1:A:304:ALA:HB1 | 1.84 | 0.60 |
| 1:A:103:TYR:HD2 | 1:A:161:GLU:HB3 | 1.67 | 0.60 |
| 1:A:1101:ARG:HG3 | 1:A:1125:ASN:HB2 | 1.84 | 0.60 |
| 1:A:1995:THR:O | 1:A:1999:ARG:HG2 | 2.02 | 0.60 |
| 1:B:2949:SER:O | 1:B:2952:GLU:HG3 | 2.02 | 0.60 |
| 1:B:3376:GLU:HB3 | 1:B:3380:ARG:NH1 | 2.16 | 0.60 |
| 1:B:4661:TYR:OH | 1:B:4788:SER:OG | 2.15 | 0.60 |
| 1:D:340:LYS:HB3 | 1:D:344:SER:HB2 | 1.84 | 0.60 |
| 1:D:1240:LYS:O | 1:D:1603:VAL:HA | 2.02 | 0.60 |
| 1:D:1648:MET:SD | 1:D:1656:ARG:NH2 | 2.75 | 0.60 |
| 1:D:3395:ARG:O | 1:D:3399:SER:N | 2.34 | 0.60 |
| 1:D:4885:PHE:O | 1:D:4889:VAL:HG22 | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:880:GLU:OE2 | 1:C:952:LYS:NZ | 2.34 | 0.60 |
| 1:C:2447:LYS:HD2 | 1:C:2450:ALA:H | 1.65 | 0.60 |
| 1:C:2519:LEU:HD22 | 1:C:2575:ARG:HG2 | 1.82 | 0.60 |
| 1:C:2655:TYR:HD2 | 1:C:2709:ALA:HB1 | 1.67 | 0.60 |
| 1:C:3206:LEU:HD13 | 1:C:3246:LEU:HD13 | 1.84 | 0.60 |
| 1:A:365:LYS:HE2 | 1:A:369:LEU:HD21 | 1.83 | 0.59 |
| 1:A:1271:ARG:NH2 | 1:A:1560:ASN:OD1 | 2.34 | 0.59 |
| 2:E:54:GLU:HG2 | 2:E:55:VAL:HG23 | 1.84 | 0.59 |
| 1:B:365:LYS:HA | 1:B:368:ARG:HG2 | 1.84 | 0.59 |
| 1:B:1995:THR:O | 1:B:1999:ARG:HG2 | 2.02 | 0.59 |
| 1:B:3675:ASP:OD1 | 1:B:3676:ASP:N | 2.35 | 0.59 |
| 1:D:419:ASP:OD1 | 1:D:493:ARG:NH1 | 2.35 | 0.59 |
| 1:D:2683:PHE:HE2 | 1:D:2966:TRP:HE1 | 1.50 | 0.59 |
| 1:D:3183:VAL:HG22 | 1:D:3187:ARG:HG3 | 1.83 | 0.59 |
| 1:C:1163:THR:HG22 | 1:C:1168:VAL:HG22 | 1.84 | 0.59 |
| 1:C:1995:THR:O | 1:C:1999:ARG:HG2 | 2.02 | 0.59 |
| 1:C:2165:LEU:HD13 | 1:C:2178:MET:HB3 | 1.84 | 0.59 |
| 1:C:4691:GLN:OE1 | 1:C:4692:PRO:HD2 | 2.02 | 0.59 |
| 1:A:2140:ARG:HH22 | 1:A:2201:LEU:HD23 | 1.66 | 0.59 |
| 1:A:3539:ARG:HH12 | 1:A:3549:VAL:HA | 1.64 | 0.59 |
| 1:A:4897:ILE:O | 1:A:4901:ILE:HG22 | 2.01 | 0.59 |
| 1:B:73:LEU:O | 1:B:106:ALA:N | 2.33 | 0.59 |
| 1:B:639:ASN:N | 1:B:678:GLN:OE1 | 2.33 | 0.59 |
| 1:B:645:ARG:HH21 | 1:B:826:ILE:HG23 | 1.67 | 0.59 |
| 1:B:2233:CYS:O | 1:B:2234:ARG:C | 2.38 | 0.59 |
| 1:D:365:LYS:HE2 | 1:D:369:LEU:HD21 | 1.83 | 0.59 |
| 1:D:425:PRO:HA | 1:D:506:TYR:HA | 1.84 | 0.59 |
| 1:D:971:ASP:O | 1:D:974:HIS:ND1 | 2.36 | 0.59 |
| 1:D:2621:HIS:HA | 1:D:2624:ARG:HE | 1.66 | 0.59 |
| 1:C:2683:PHE:HE2 | 1:C:2966:TRP:HE1 | 1.50 | 0.59 |
| 1:C:3180:ASN:OD1 | 1:C:3181:THR:N | 2.35 | 0.59 |
| 1:A:4885:PHE:O | 1:A:4889:VAL:HG22 | 2.02 | 0.59 |
| 2:E:48:PHE:HZ | 2:E:63:VAL:HG11 | 1.67 | 0.59 |
| 2:G:18:ARG:HH11 | 2:G:51:GLY:HA3 | 1.65 | 0.59 |
| 1:D:645:ARG:HH21 | 1:D:826:ILE:HG23 | 1.67 | 0.59 |
| 1:D:937:CYS:HA | 1:D:1054:GLU:O | 2.02 | 0.59 |
| 1:D:4152:GLU:OE1 | 1:D:4192:ARG:NH1 | 2.31 | 0.59 |
| 1:D:4661:TYR:OH | 1:D:4788:SER:OG | 2.16 | 0.59 |
| 1:C:1660:GLN:HE21 | 1:C:1707:LEU:HG | 1.67 | 0.59 |
| 1:C:3376:GLU:HB3 | 1:C:3380:ARG:NH1 | 2.16 | 0.59 |
| 1:A:2522:LEU:HD23 | 1:A:2526:PHE:HD2 | 1.68 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3206:LEU:HD13 | 1:A:3246:LEU:HD13 | 1.84 | 0.59 |
| 1:A:3731:LYS:HA | 1:A:3734:HIS:CE1 | 2.37 | 0.59 |
| 1:A:4680:LYS:O | 1:A:4685:GLY:N | 2.34 | 0.59 |
| 2:H:48:PHE:HZ | 2:H:63:VAL:HG11 | 1.67 | 0.59 |
| 2:H:54:GLU:HG2 | 2:H:55:VAL:HG23 | 1.84 | 0.59 |
| 2:F:48:PHE:HZ | 2:F:63:VAL:HG11 | 1.67 | 0.59 |
| 1:B:103:TYR:HD2 | 1:B:161:GLU:HB3 | 1.67 | 0.59 |
| 1:B:2683:PHE:HE2 | 1:B:2966:TRP:HE1 | 1.50 | 0.59 |
| 1:B:3183:VAL:HG22 | 1:B:3187:ARG:HG3 | 1.83 | 0.59 |
| 1:B:3206:LEU:HD13 | 1:B:3246:LEU:HD13 | 1.84 | 0.59 |
| 1:B:3997:ALA:HA | 1:B:4000:MET:SD | 2.42 | 0.59 |
| 1:D:1660:GLN:HE21 | 1:D:1707:LEU:HG | 1.67 | 0.59 |
| 1:C:1555:LEU:HD12 | 1:C:1556:PRO:HD2 | 1.84 | 0.59 |
| 1:C:3284:TRP:HB3 | 1:C:3305:THR:HG21 | 1.83 | 0.59 |
| 1:C:3731:LYS:HA | 1:C:3734:HIS:CE1 | 2.37 | 0.59 |
| 1:A:639:ASN:N | 1:A:678:GLN:OE1 | 2.33 | 0.59 |
| 1:A:971:ASP:O | 1:A:974:HIS:ND1 | 2.36 | 0.59 |
| 1:A:1240:LYS:O | 1:A:1603:VAL:HA | 2.02 | 0.59 |
| 1:A:1648:MET:SD | 1:A:1656:ARG:NH2 | 2.75 | 0.59 |
| 1:A:3675:ASP:OD1 | 1:A:3676:ASP:N | 2.35 | 0.59 |
| 1:A:3997:ALA:HA | 1:A:4000:MET:SD | 2.43 | 0.59 |
| 1:A:4691:GLN:OE1 | 1:A:4692:PRO:HD2 | 2.02 | 0.59 |
| 2:G:52:LYS:HD2 | 2:G:52:LYS:N | 2.17 | 0.59 |
| 1:B:419:ASP:OD1 | 1:B:493:ARG:NH1 | 2.35 | 0.59 |
| 1:B:1555:LEU:HD12 | 1:B:1556:PRO:HD2 | 1.84 | 0.59 |
| 1:B:2585:THR:HG22 | 1:B:2588:ARG:HH21 | 1.68 | 0.59 |
| 1:B:2699:ALA:HB1 | 1:B:3001:ILE:HD11 | 1.83 | 0.59 |
| 1:B:3731:LYS:HA | 1:B:3734:HIS:CE1 | 2.37 | 0.59 |
| 1:D:1101:ARG:HG3 | 1:D:1125:ASN:HB2 | 1.84 | 0.59 |
| 1:D:1225:PRO:HB2 | 1:D:1228:ILE:HB | 1.84 | 0.59 |
| 1:D:3180:ASN:OD1 | 1:D:3181:THR:N | 2.35 | 0.59 |
| 1:D:3350:ARG:O | 1:D:3415:TYR:OH | 2.17 | 0.59 |
| 1:D:4750:ILE:O | 1:D:4756:ARG:NH1 | 2.35 | 0.59 |
| 1:C:645:ARG:HH21 | 1:C:826:ILE:HG23 | 1.67 | 0.59 |
| 1:A:181:HIS:ND1 | 1:A:198:THR:OG1 | 2.32 | 0.59 |
| 1:A:1555:LEU:HD12 | 1:A:1556:PRO:HD2 | 1.84 | 0.59 |
| 1:A:1660:GLN:HE21 | 1:A:1707:LEU:HG | 1.67 | 0.59 |
| 1:A:2466:LEU:HD21 | 1:A:2505:PHE:HD1 | 1.68 | 0.59 |
| 1:A:3206:LEU:HB3 | 1:A:3246:LEU:HB2 | 1.83 | 0.59 |
| 1:B:971:ASP:O | 1:B:974:HIS:ND1 | 2.36 | 0.59 |
| 1:B:3350:ARG:O | 1:B:3415:TYR:OH | 2.17 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3771:HIS:NE2 | 1:B:3811:GLU:OE2 | 2.35 | 0.59 |
| 1:B:4248:ALA:HA | 1:B:4251:ILE:HG12 | 1.85 | 0.59 |
| 1:D:1163:THR:HG22 | 1:D:1168:VAL:HG22 | 1.84 | 0.59 |
| 1:D:1995:THR:O | 1:D:1999:ARG:HG2 | 2.02 | 0.59 |
| 1:D:2522:LEU:HD23 | 1:D:2526:PHE:HD2 | 1.68 | 0.59 |
| 1:C:365:LYS:HA | 1:C:368:ARG:HG2 | 1.84 | 0.59 |
| 1:C:2621:HIS:HA | 1:C:2624:ARG:HE | 1.66 | 0.59 |
| 1:C:3997:ALA:HA | 1:C:4000:MET:SD | 2.43 | 0.59 |
| 1:A:425:PRO:HA | 1:A:506:TYR:HA | 1.84 | 0.59 |
| 1:A:645:ARG:HH21 | 1:A:826:ILE:HG23 | 1.67 | 0.59 |
| 1:A:2410:PRO:HB2 | 1:A:2413:GLU:HA | 1.82 | 0.59 |
| 1:A:2585:THR:HG22 | 1:A:2588:ARG:HH21 | 1.68 | 0.59 |
| 1:B:2500:ALA:HB2 | 1:B:2553:TYR:HD1 | 1.65 | 0.59 |
| 1:B:3730:ALA:O | 1:B:3734:HIS:ND1 | 2.36 | 0.59 |
| 1:B:4240:ASP:OD1 | 1:B:4675:LYS:NZ | 2.34 | 0.59 |
| 1:B:4885:PHE:O | 1:B:4889:VAL:HG22 | 2.02 | 0.59 |
| 1:D:1036:ARG:HA | 1:D:1039:LEU:HD12 | 1.85 | 0.59 |
| 1:D:4691:GLN:OE1 | 1:D:4692:PRO:HD2 | 2.02 | 0.59 |
| 1:C:2231:SER:HA | 1:C:2234:ARG:HG3 | 1.85 | 0.59 |
| 1:A:365:LYS:HA | 1:A:368:ARG:HG2 | 1.84 | 0.59 |
| 1:A:606:LEU:HD22 | 1:A:621:ILE:HD11 | 1.84 | 0.59 |
| 1:A:1170:MET:HB3 | 1:D:3479:ALA:HB3 | 1.84 | 0.59 |
| 1:A:3183:VAL:HG22 | 1:A:3187:ARG:HG3 | 1.83 | 0.59 |
| 1:A:3395:ARG:O | 1:A:3399:SER:N | 2.34 | 0.59 |
| 1:A:3434:LEU:O | 1:A:3438:VAL:HG12 | 2.03 | 0.59 |
| 1:A:4768:LEU:HA | 1:A:4771:ILE:HD12 | 1.84 | 0.59 |
| 2:G:76:ILE:O | 2:G:96:THR:OG1 | 2.19 | 0.59 |
| 1:B:59:PRO:HD2 | 1:B:304:ALA:HB1 | 1.84 | 0.59 |
| 1:B:1990:GLU:OE1 | 1:B:1993:ARG:NH2 | 2.32 | 0.59 |
| 1:B:2522:LEU:HD23 | 1:B:2526:PHE:HD2 | 1.68 | 0.59 |
| 1:C:3183:VAL:HG22 | 1:C:3187:ARG:HG3 | 1.83 | 0.59 |
| 1:C:3675:ASP:OD1 | 1:C:3676:ASP:N | 2.35 | 0.59 |
| 1:A:341:TYR:HA | 1:A:390:LEU:HD11 | 1.85 | 0.59 |
| 1:A:1087:ARG:NH2 | 1:A:1222:GLY:O | 2.36 | 0.59 |
| 1:A:1163:THR:HG22 | 1:A:1168:VAL:HG22 | 1.84 | 0.59 |
| 1:A:2354:VAL:HG11 | 1:A:2453:ILE:HD12 | 1.84 | 0.59 |
| 2:F:54:GLU:HG2 | 2:F:55:VAL:HG23 | 1.84 | 0.59 |
| 1:B:848:HIS:O | 1:B:852:VAL:HG23 | 2.03 | 0.59 |
| 1:B:1087:ARG:NH2 | 1:B:1222:GLY:O | 2.36 | 0.59 |
| 1:D:446:GLN:HE21 | 1:D:521:LEU:HD13 | 1.66 | 0.59 |
| 1:D:1087:ARG:NH2 | 1:D:1222:GLY:O | 2.36 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:D:2354:VAL:HG11 | 1:D:2453:ILE:HD12 | 1.84 | 0.59 |
| 1:D:3568:SER:HA | 1:D:3571:TRP:CD1 | 2.38 | 0.59 |
| 1:D:4162:ASN:OD1 | 1:D:4163:PHE:N | 2.36 | 0.59 |
| 1:C:446:GLN:HE21 | 1:C:521:LEU:HD13 | 1.66 | 0.59 |
| 1:C:937:CYS:HA | 1:C:1054:GLU:O | 2.02 | 0.59 |
| 1:C:2585:THR:HG22 | 1:C:2588:ARG:HH21 | 1.68 | 0.59 |
| 1:C:4750:ILE:O | 1:C:4756:ARG:NH1 | 2.35 | 0.59 |
| 1:C:4768:LEU:HA | 1:C:4771:ILE:HD12 | 1.84 | 0.59 |
| 1:A:1712:TYR:HD2 | 1:A:1844:LEU:HD13 | 1.68 | 0.59 |
| 1:A:3066:ASN:HA | 1:A:3069:HIS:HD2 | 1.68 | 0.59 |
| 1:A:3519:PRO:HB3 | 1:B:1220:GLN:HG3 | 1.85 | 0.59 |
| 1:B:1648:MET:SD | 1:B:1656:ARG:NH2 | 2.75 | 0.59 |
| 1:B:1660:GLN:HE21 | 1:B:1707:LEU:HG | 1.67 | 0.59 |
| 1:B:3644:LEU:HD12 | 1:B:3645:PRO:HD2 | 1.85 | 0.59 |
| 1:D:2585:THR:HG22 | 1:D:2588:ARG:HH21 | 1.67 | 0.59 |
| 1:C:1036:ARG:HA | 1:C:1039:LEU:HD12 | 1.85 | 0.59 |
| 1:C:1247:PRO:HA | 1:C:1598:GLN:HG2 | 1.83 | 0.59 |
| 1:B:425:PRO:HA | 1:B:506:TYR:HA | 1.84 | 0.58 |
| 1:B:492:ASP:O | 1:B:496:VAL:HG13 | 2.03 | 0.58 |
| 1:B:1867:GLU:OE2 | 1:B:1928:GLN:NE2 | 2.29 | 0.58 |
| 1:B:3078:ARG:NE | 1:B:3155:ASP:OD2 | 2.36 | 0.58 |
| 1:D:606:LEU:HD22 | 1:D:621:ILE:HD11 | 1.84 | 0.58 |
| 1:D:2466:LEU:HD21 | 1:D:2505:PHE:HD1 | 1.67 | 0.58 |
| 1:D:2624:ARG:HD2 | 1:D:2911:LEU:HA | 1.85 | 0.58 |
| 1:D:2655:TYR:HD2 | 1:D:2709:ALA:HB1 | 1.67 | 0.58 |
| 1:D:2699:ALA:HB1 | 1:D:3001:ILE:HD11 | 1.83 | 0.58 |
| 1:D:3066:ASN:HA | 1:D:3069:HIS:HD2 | 1.68 | 0.58 |
| 1:C:606:LEU:HD22 | 1:C:621:ILE:HD11 | 1.84 | 0.58 |
| 1:C:971:ASP:O | 1:C:974:HIS:ND1 | 2.36 | 0.58 |
| 1:C:3568:SER:HA | 1:C:3571:TRP:CD1 | 2.38 | 0.58 |
| 1:A:2683:PHE:HE2 | 1:A:2966:TRP:HE1 | 1.50 | 0.58 |
| 1:A:3730:ALA:O | 1:A:3734:HIS:ND1 | 2.36 | 0.58 |
| 1:B:341:TYR:HA | 1:B:390:LEU:HD11 | 1.85 | 0.58 |
| 1:B:954:LYS:NZ | 1:B:966:LYS:O | 2.36 | 0.58 |
| 1:B:1240:LYS:O | 1:B:1603:VAL:HA | 2.02 | 0.58 |
| 1:D:103:TYR:HD2 | 1:D:161:GLU:HB3 | 1.67 | 0.58 |
| 1:D:771:PHE:HB3 | 1:D:1472:VAL:HG23 | 1.85 | 0.58 |
| 1:D:1743[A]:ARG:NH2 | 1:D:1967:ASP:OD2 | 2.32 | 0.58 |
| 1:D:2522:LEU:HB3 | 1:D:2582:MET:HE1 | 1.84 | 0.58 |
| 1:D:3286:GLU:OE2 | 1:D:3287:ARG:NH1 | 2.37 | 0.58 |
| 1:C:1240:LYS:O | 1:C:1603:VAL:HA | 2.02 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2624:ARG:HD2 | 1:A:2911:LEU:HA | 1.85 | 0.58 |
| 1:A:4162:ASN:OD1 | 1:A:4163:PHE:N | 2.36 | 0.58 |
| 2:G:54:GLU:HG2 | 2:G:55:VAL:HG23 | 1.84 | 0.58 |
| 1:B:2466:LEU:HD21 | 1:B:2505:PHE:HD1 | 1.68 | 0.58 |
| 1:B:2700:MET:HE1 | 1:B:3000:LYS:HB3 | 1.84 | 0.58 |
| 1:B:3066:ASN:HA | 1:B:3069:HIS:HD2 | 1.68 | 0.58 |
| 1:D:848:HIS:O | 1:D:852:VAL:HG23 | 2.03 | 0.58 |
| 1:D:4248:ALA:HA | 1:D:4251:ILE:HG12 | 1.85 | 0.58 |
| 1:C:103:TYR:HD2 | 1:C:161:GLU:HB3 | 1.67 | 0.58 |
| 1:C:954:LYS:NZ | 1:C:966:LYS:O | 2.36 | 0.58 |
| 1:C:4885:PHE:O | 1:C:4889:VAL:HG22 | 2.02 | 0.58 |
| 1:A:340:LYS:HB3 | 1:A:344:SER:HB2 | 1.84 | 0.58 |
| 1:A:771:PHE:HB3 | 1:A:1472:VAL:HG23 | 1.85 | 0.58 |
| 1:B:2231:SER:HA | 1:B:2234:ARG:HG3 | 1.85 | 0.58 |
| 1:B:2624:ARG:HD2 | 1:B:2911:LEU:HA | 1.85 | 0.58 |
| 1:B:3354:LEU:HB2 | 1:B:3415:TYR:CE2 | 2.38 | 0.58 |
| 1:B:3434:LEU:O | 1:B:3438:VAL:HG12 | 2.03 | 0.58 |
| 1:D:365:LYS:HA | 1:D:368:ARG:HG2 | 1.84 | 0.58 |
| 1:D:1712:TYR:HD2 | 1:D:1844:LEU:HD13 | 1.68 | 0.58 |
| 1:C:340:LYS:HB3 | 1:C:344:SER:HB2 | 1.84 | 0.58 |
| 1:C:455:PRO:HB3 | 1:C:467:LYS:HD3 | 1.86 | 0.58 |
| 1:C:2624:ARG:HD2 | 1:C:2911:LEU:HA | 1.85 | 0.58 |
| 1:A:954:LYS:NZ | 1:A:966:LYS:O | 2.36 | 0.58 |
| 1:A:1252:HIS:O | 1:A:1275:ARG:NH1 | 2.37 | 0.58 |
| 1:A:2231:SER:HA | 1:A:2234:ARG:HG3 | 1.85 | 0.58 |
| 1:B:1036:ARG:HA | 1:B:1039:LEU:HD12 | 1.85 | 0.58 |
| 1:B:2655:TYR:HD2 | 1:B:2709:ALA:HB1 | 1.67 | 0.58 |
| 1:B:3003:LEU:HB2 | 1:B:3004:PRO:HD3 | 1.86 | 0.58 |
| 1:B:3286:GLU:OE2 | 1:B:3287:ARG:NH1 | 2.37 | 0.58 |
| 1:D:341:TYR:HA | 1:D:390:LEU:HD11 | 1.85 | 0.58 |
| 1:D:3730:ALA:O | 1:D:3734:HIS:ND1 | 2.36 | 0.58 |
| 1:C:425:PRO:HA | 1:C:506:TYR:HA | 1.84 | 0.58 |
| 1:C:1087:ARG:NH2 | 1:C:1222:GLY:O | 2.36 | 0.58 |
| 1:C:3223:SER:OG | 1:C:3226:GLU:OE1 | 2.13 | 0.58 |
| 1:C:3644:LEU:HD12 | 1:C:3645:PRO:HD2 | 1.85 | 0.58 |
| 1:C:3730:ALA:O | 1:C:3734:HIS:ND1 | 2.36 | 0.58 |
| 1:A:848:HIS:O | 1:A:852:VAL:HG23 | 2.03 | 0.58 |
| 1:A:1225:PRO:HB2 | 1:A:1228:ILE:HB | 1.84 | 0.58 |
| 1:B:1101:ARG:HG3 | 1:B:1125:ASN:HB2 | 1.84 | 0.58 |
| 1:B:2289:ALA:O | 1:B:2291:GLN:NE2 | 2.31 | 0.58 |
| 1:D:455:PRO:HB3 | 1:D:467:LYS:HD3 | 1.86 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:D:3003:LEU:HB2 | 1:D:3004:PRO:HD3 | 1.86 | 0.58 |
| 1:D:3223:SER:OG | 1:D:3226:GLU:OE1 | 2.13 | 0.58 |
| 1:D:3997:ALA:HA | 1:D:4000:MET:SD | 2.42 | 0.58 |
| 1:C:1101:ARG:HG3 | 1:C:1125:ASN:HB2 | 1.84 | 0.58 |
| 1:C:3434:LEU:O | 1:C:3438:VAL:HG12 | 2.03 | 0.58 |
| 1:C:3771:HIS:NE2 | 1:C:3811:GLU:OE2 | 2.35 | 0.58 |
| 1:C:4162:ASN:OD1 | 1:C:4163:PHE:N | 2.36 | 0.58 |
| 1:C:4211:LYS:HB3 | 1:C:4215:ARG:HH22 | 1.69 | 0.58 |
| 1:A:1106:ARG:NH1 | 1:A:1187:GLY:O | 2.37 | 0.58 |
| 1:A:2884:ASN:O | 1:A:2888:ARG:HD3 | 2.04 | 0.58 |
| 1:A:3051:ARG:NH2 | 1:A:3101:GLU:OE2 | 2.37 | 0.58 |
| 1:A:3078:ARG:NE | 1:A:3155:ASP:OD2 | 2.36 | 0.58 |
| 1:A:3771:HIS:NE2 | 1:A:3811:GLU:OE2 | 2.35 | 0.58 |
| 1:B:1743[B]:ARG:NH2 | 1:B:1967:ASP:OD2 | 2.32 | 0.58 |
| 1:B:2974:ILE:HD13 | 1:B:3049:LEU:HG | 1.85 | 0.58 |
| 1:B:3180:ASN:OD1 | 1:B:3181:THR:N | 2.35 | 0.58 |
| 1:B:4768:LEU:HA | 1:B:4771:ILE:HD12 | 1.84 | 0.58 |
| 1:D:492:ASP:O | 1:D:496:VAL:HG13 | 2.03 | 0.58 |
| 1:D:4680:LYS:O | 1:D:4685:GLY:N | 2.34 | 0.58 |
| 1:C:2522:LEU:HD23 | 1:C:2526:PHE:HD2 | 1.68 | 0.58 |
| 1:C:2884:ASN:O | 1:C:2888:ARG:HD3 | 2.04 | 0.58 |
| 1:A:2249:SER:O | 1:A:2253:HIS:ND1 | 2.37 | 0.58 |
| 1:A:3286:GLU:OE2 | 1:A:3287:ARG:NH1 | 2.37 | 0.58 |
| 1:A:4248:ALA:HA | 1:A:4251:ILE:HG12 | 1.85 | 0.58 |
| 1:B:44:ASN:ND2 | 1:B:46:LEU:O | 2.37 | 0.58 |
| 1:B:606:LEU:HD22 | 1:B:621:ILE:HD11 | 1.84 | 0.58 |
| 1:B:3568:SER:HA | 1:B:3571:TRP:CD1 | 2.38 | 0.58 |
| 1:C:719:LEU:HD23 | 1:C:735:GLN:HG2 | 1.86 | 0.58 |
| 1:A:455:PRO:HB3 | 1:A:467:LYS:HD3 | 1.86 | 0.58 |
| 1:A:3180:ASN:OD1 | 1:A:3181:THR:N | 2.35 | 0.58 |
| 1:A:4661:TYR:OH | 1:A:4788:SER:OG | 2.15 | 0.58 |
| 1:B:1712:TYR:HD2 | 1:B:1844:LEU:HD13 | 1.68 | 0.58 |
| 1:B:3895:HIS:NE2 | 1:B:3970:GLN:OE1 | 2.34 | 0.58 |
| 1:B:4162:ASN:OD1 | 1:B:4163:PHE:N | 2.36 | 0.58 |
| 1:D:719:LEU:HD23 | 1:D:735:GLN:HG2 | 1.86 | 0.58 |
| 1:D:1106:ARG:NH1 | 1:D:1187:GLY:O | 2.37 | 0.58 |
| 1:D:1555:LEU:HD12 | 1:D:1556:PRO:HD2 | 1.84 | 0.58 |
| 1:D:2974:ILE:HD13 | 1:D:3049:LEU:HG | 1.85 | 0.58 |
| 1:D:3348:ARG:O | 1:D:3350:ARG:NH2 | 2.37 | 0.58 |
| 1:D:4708:THR:HG22 | 1:D:4774:LYS:HB3 | 1.85 | 0.58 |
| 1:C:44:ASN:ND2 | 1:C:46:LEU:O | 2.37 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:655:GLY:HA3 | 1:C:852:VAL:HG13 | 1.86 | 0.58 |
| 1:C:1160:ILE:O | 1:C:1177:THR:OG1 | 2.22 | 0.58 |
| 1:C:3591:LYS:HA | 1:C:3594:ARG:CD | 2.34 | 0.58 |
| 1:A:2512:ILE:HD11 | 1:A:2518:LEU:HB2 | 1.86 | 0.58 |
| 1:A:3003:LEU:HB2 | 1:A:3004:PRO:HD3 | 1.86 | 0.58 |
| 1:A:3568:SER:HA | 1:A:3571:TRP:CD1 | 2.38 | 0.58 |
| 1:A:3591:LYS:HA | 1:A:3594:ARG:CD | 2.34 | 0.58 |
| 1:A:3644:LEU:HD12 | 1:A:3645:PRO:HD2 | 1.85 | 0.58 |
| 1:D:655:GLY:HA3 | 1:D:852:VAL:HG13 | 1.86 | 0.58 |
| 1:D:2231:SER:HA | 1:D:2234:ARG:HG3 | 1.85 | 0.58 |
| 1:D:4189:ARG:HB2 | 1:D:4189:ARG:NH1 | 2.19 | 0.58 |
| 1:C:771:PHE:HB3 | 1:C:1472:VAL:HG23 | 1.85 | 0.58 |
| 1:C:2466:LEU:HD21 | 1:C:2505:PHE:HD1 | 1.68 | 0.58 |
| 1:C:3286:GLU:OE2 | 1:C:3287:ARG:NH1 | 2.36 | 0.58 |
| 1:C:4248:ALA:HA | 1:C:4251:ILE:HG12 | 1.85 | 0.58 |
| 1:A:719:LEU:HD23 | 1:A:735:GLN:HG2 | 1.86 | 0.57 |
| 1:A:3822:ASP:OD1 | 1:A:3823:LYS:N | 2.37 | 0.57 |
| 1:A:4708:THR:HG22 | 1:A:4774:LYS:HB3 | 1.85 | 0.57 |
| 1:A:4721:LYS:HE2 | 1:A:4741:LEU:HB3 | 1.86 | 0.57 |
| 1:A:4898:GLY:HA3 | 1:D:4892:ARG:HH12 | 1.67 | 0.57 |
| 1:B:655:GLY:HA3 | 1:B:852:VAL:HG13 | 1.86 | 0.57 |
| 1:B:771:PHE:HB3 | 1:B:1472:VAL:HG23 | 1.85 | 0.57 |
| 1:D:3078:ARG:NE | 1:D:3155:ASP:OD2 | 2.36 | 0.57 |
| 1:D:3591:LYS:HA | 1:D:3594:ARG:CD | 2.34 | 0.57 |
| 1:C:3003:LEU:HB2 | 1:C:3004:PRO:HD3 | 1.86 | 0.57 |
| 1:C:3066:ASN:HA | 1:C:3069:HIS:HD2 | 1.68 | 0.57 |
| 1:C:3634:ALA:O | 1:C:3638:MET:HG3 | 2.04 | 0.57 |
| 1:A:3349:ALA:HB3 | 1:A:3415:TYR:HE1 | 1.69 | 0.57 |
| 1:B:179:TYR:N | 1:B:194:SER:O | 2.36 | 0.57 |
| 1:B:1163:THR:HG22 | 1:B:1168:VAL:HG22 | 1.84 | 0.57 |
| 1:B:2512:ILE:HD11 | 1:B:2518:LEU:HB2 | 1.86 | 0.57 |
| 1:B:2620:GLN:HA | 1:B:2623:LEU:HB2 | 1.86 | 0.57 |
| 1:B:3349:ALA:HB3 | 1:B:3415:TYR:HE1 | 1.69 | 0.57 |
| 1:B:3634:ALA:O | 1:B:3638:MET:HG3 | 2.04 | 0.57 |
| 1:B:4211:LYS:HB3 | 1:B:4215:ARG:HH22 | 1.69 | 0.57 |
| 1:D:2512:ILE:HD11 | 1:D:2518:LEU:HB2 | 1.86 | 0.57 |
| 1:D:3051:ARG:NH2 | 1:D:3101:GLU:OE2 | 2.37 | 0.57 |
| 1:D:4211:LYS:HB3 | 1:D:4215:ARG:HH22 | 1.69 | 0.57 |
| 1:C:3349:ALA:HB3 | 1:C:3415:TYR:HE1 | 1.70 | 0.57 |
| 1:C:4229:GLU:OE1 | 1:C:4229:GLU:N | 2.36 | 0.57 |
| 1:A:44:ASN:ND2 | 1:A:46:LEU:O | 2.37 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:492:ASP:O | 1:A:496:VAL:HG13 | 2.03 | 0.57 |
| 1:A:4229:GLU:OE1 | 1:A:4229:GLU:N | 2.36 | 0.57 |
| 1:B:3051:ARG:NH2 | 1:B:3101:GLU:OE2 | 2.37 | 0.57 |
| 1:B:3591:LYS:HA | 1:B:3594:ARG:CD | 2.34 | 0.57 |
| 1:B:4189:ARG:HB2 | 1:B:4189:ARG:NH1 | 2.19 | 0.57 |
| 1:D:181:HIS:ND1 | 1:D:198:THR:OG1 | 2.32 | 0.57 |
| 1:D:2884:ASN:O | 1:D:2888:ARG:HD3 | 2.04 | 0.57 |
| 1:D:3349:ALA:HB3 | 1:D:3415:TYR:HE1 | 1.69 | 0.57 |
| 1:C:179:TYR:N | 1:C:194:SER:O | 2.36 | 0.57 |
| 1:C:341:TYR:HA | 1:C:390:LEU:HD11 | 1.85 | 0.57 |
| 1:C:2355:ARG:HH12 | 1:C:2453:ILE:HD11 | 1.70 | 0.57 |
| 1:C:2512:ILE:HD11 | 1:C:2518:LEU:HB2 | 1.86 | 0.57 |
| 1:C:3822:ASP:OD1 | 1:C:3823:LYS:N | 2.37 | 0.57 |
| 1:A:655:GLY:HA3 | 1:A:852:VAL:HG13 | 1.86 | 0.57 |
| 1:B:340:LYS:HB3 | 1:B:344:SER:HB2 | 1.84 | 0.57 |
| 1:B:2884:ASN:O | 1:B:2888:ARG:HD3 | 2.04 | 0.57 |
| 1:B:5033:GLU:O | 1:B:5037:SER:OG | 2.21 | 0.57 |
| 1:D:3434:LEU:O | 1:D:3438:VAL:HG12 | 2.03 | 0.57 |
| 1:D:4240:ASP:OD1 | 1:D:4675:LYS:NZ | 2.34 | 0.57 |
| 1:C:492:ASP:O | 1:C:496:VAL:HG13 | 2.03 | 0.57 |
| 1:C:848:HIS:O | 1:C:852:VAL:HG23 | 2.03 | 0.57 |
| 1:C:1106:ARG:NH1 | 1:C:1187:GLY:O | 2.37 | 0.57 |
| 1:C:3348:ARG:O | 1:C:3350:ARG:NH2 | 2.37 | 0.57 |
| 1:A:3411:LEU:HD23 | 1:A:3414:ARG:HH22 | 1.69 | 0.57 |
| 1:B:455:PRO:HB3 | 1:B:467:LYS:HD3 | 1.86 | 0.57 |
| 1:B:2355:ARG:HH12 | 1:B:2453:ILE:HD11 | 1.70 | 0.57 |
| 1:D:999:ASP:O | 1:D:1003:GLN:HG3 | 2.04 | 0.57 |
| 1:D:1160:ILE:O | 1:D:1177:THR:OG1 | 2.22 | 0.57 |
| 1:D:1685:LEU:HD21 | 1:D:1714:LEU:HD11 | 1.87 | 0.57 |
| 1:C:2974:ILE:HD13 | 1:C:3049:LEU:HG | 1.85 | 0.57 |
| 1:C:3930:ILE:HG23 | 1:C:3951:PHE:HE1 | 1.70 | 0.57 |
| 1:A:999:ASP:O | 1:A:1003:GLN:HG3 | 2.04 | 0.57 |
| 1:A:1036:ARG:HA | 1:A:1039:LEU:HD12 | 1.85 | 0.57 |
| 1:B:3376:GLU:HB3 | 1:B:3380:ARG:HH12 | 1.70 | 0.57 |
| 1:B:3822:ASP:OD1 | 1:B:3823:LYS:N | 2.37 | 0.57 |
| 1:D:44:ASN:ND2 | 1:D:46:LEU:O | 2.37 | 0.57 |
| 1:D:3322:ILE:O | 1:D:3326:ASN:ND2 | 2.38 | 0.57 |
| 1:D:4721:LYS:HE2 | 1:D:4741:LEU:HB3 | 1.86 | 0.57 |
| 1:C:1685:LEU:HD21 | 1:C:1714:LEU:HD11 | 1.87 | 0.57 |
| 1:C:2506:LEU:O | 1:C:2511:GLY:N | 2.35 | 0.57 |
| 1:C:2620:GLN:HA | 1:C:2623:LEU:HB2 | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:A:224:HIS:O | 1:B:155:LYS:NZ | 2.38 | 0.57 |
| 1:A:3376:GLU:HB3 | 1:A:3380:ARG:HH12 | 1.70 | 0.57 |
| 1:A:3539:ARG:HH12 | 1:A:3552:PHE:HB3 | 1.70 | 0.57 |
| 1:A:3634:ALA:O | 1:A:3638:MET:HG3 | 2.04 | 0.57 |
| 1:B:683:ARG:O | 1:B:781:VAL:HA | 2.05 | 0.57 |
| 1:B:4721:LYS:HE2 | 1:B:4741:LEU:HB3 | 1.86 | 0.57 |
| 1:D:2355:ARG:HH12 | 1:D:2453:ILE:HD11 | 1.70 | 0.57 |
| 1:D:3395:ARG:HD2 | 1:D:3450:ASN:HD21 | 1.70 | 0.57 |
| 1:D:3930:ILE:HG23 | 1:D:3951:PHE:HE1 | 1.70 | 0.57 |
| 1:C:3411:LEU:HD23 | 1:C:3414:ARG:HH22 | 1.69 | 0.57 |
| 1:D:747:CYS:SG | 1:D:805:PRO:HG3 | 2.45 | 0.57 |
| 1:D:3771:HIS:NE2 | 1:D:3811:GLU:OE2 | 2.35 | 0.57 |
| 1:C:1252:HIS:O | 1:C:1275:ARG:NH1 | 2.37 | 0.57 |
| 1:A:683:ARG:HB3 | 1:A:707:VAL:HG12 | 1.87 | 0.57 |
| 1:A:1160:ILE:O | 1:A:1177:THR:OG1 | 2.22 | 0.57 |
| 1:B:1106:ARG:NH1 | 1:B:1187:GLY:O | 2.37 | 0.57 |
| 1:B:3236:VAL:HA | 1:B:3239:MET:HG2 | 1.87 | 0.57 |
| 1:D:73:LEU:O | 1:D:106:ALA:N | 2.33 | 0.57 |
| 1:D:1251:GLU:N | 1:D:1251:GLU:OE1 | 2.38 | 0.57 |
| 1:D:2249:SER:O | 1:D:2253:HIS:ND1 | 2.37 | 0.57 |
| 1:D:3944:GLU:OE2 | 1:D:3947:GLY:N | 2.38 | 0.57 |
| 1:C:683:ARG:O | 1:C:781:VAL:HA | 2.05 | 0.57 |
| 1:C:1944:GLU:OE2 | 1:C:2126:ARG:NH1 | 2.38 | 0.57 |
| 1:A:818:ARG:NH2 | 1:A:1027:LEU:O | 2.22 | 0.57 |
| 1:A:2772:GLN:O | 1:B:1506:GLN:NE2 | 2.38 | 0.57 |
| 1:A:2974:ILE:HD13 | 1:A:3049:LEU:HG | 1.85 | 0.57 |
| 1:A:3348:ARG:O | 1:A:3350:ARG:NH2 | 2.37 | 0.57 |
| 1:A:4189:ARG:HB2 | 1:A:4189:ARG:NH1 | 2.19 | 0.57 |
| 1:B:1944:GLU:OE2 | 1:B:2126:ARG:NH1 | 2.38 | 0.57 |
| 1:D:1252:HIS:O | 1:D:1275:ARG:NH1 | 2.37 | 0.57 |
| 1:D:1961:PHE:HA | 1:D:1964:ARG:HD2 | 1.87 | 0.57 |
| 1:D:3398:PHE:O | 1:D:3402:CYS:N | 2.34 | 0.57 |
| 1:D:3822:ASP:OD1 | 1:D:3823:LYS:N | 2.37 | 0.57 |
| 1:C:663:TYR:CE1 | 1:C:745:SER:HB2 | 2.36 | 0.57 |
| 1:C:999:ASP:O | 1:C:1003:GLN:HG3 | 2.05 | 0.57 |
| 1:C:1743[B]:ARG:NH2 | 1:C:1967:ASP:OD2 | 2.32 | 0.57 |
| 1:C:3051:ARG:NH2 | 1:C:3101:GLU:OE2 | 2.37 | 0.57 |
| 1:A:2620:GLN:HA | 1:A:2623:LEU:HB2 | 1.86 | 0.56 |
| 1:A:4901:ILE:HG23 | 1:A:4913:ARG:NH2 | 2.20 | 0.56 |
| 1:B:3395:ARG:O | 1:B:3399:SER:N | 2.34 | 0.56 |
| 1:B:3455:GLU:HA | 1:B:3458:PHE:CE1 | 2.40 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3788:GLY:HA2 | 1:B:3835:LEU:HG | 1.87 | 0.56 |
| 1:D:683:ARG:O | 1:D:781:VAL:HA | 2.05 | 0.56 |
| 1:D:954:LYS:NZ | 1:D:966:LYS:O | 2.36 | 0.56 |
| 1:D:3376:GLU:HB3 | 1:D:3380:ARG:HH12 | 1.70 | 0.56 |
| 1:D:3644:LEU:HD12 | 1:D:3645:PRO:HD2 | 1.85 | 0.56 |
| 1:D:3788:GLY:HA2 | 1:D:3835:LEU:HG | 1.87 | 0.56 |
| 1:A:3788:GLY:HA2 | 1:A:3835:LEU:HG | 1.87 | 0.56 |
| 1:B:719:LEU:HD23 | 1:B:735:GLN:HG2 | 1.86 | 0.56 |
| 1:B:1160:ILE:O | 1:B:1177:THR:OG1 | 2.22 | 0.56 |
| 1:B:3348:ARG:O | 1:B:3350:ARG:NH2 | 2.37 | 0.56 |
| 1:B:3411:LEU:HD23 | 1:B:3414:ARG:HH22 | 1.69 | 0.56 |
| 1:B:3819:TYR:CZ | 1:B:3823:LYS:HG3 | 2.41 | 0.56 |
| 1:B:4708:THR:HG22 | 1:B:4774:LYS:HB3 | 1.85 | 0.56 |
| 1:B:4901:ILE:HG23 | 1:B:4913:ARG:NH2 | 2.20 | 0.56 |
| 1:D:3411:LEU:HD23 | 1:D:3414:ARG:HH22 | 1.69 | 0.56 |
| 1:D:4846:VAL:HG21 | 1:C:4816:ILE:HD11 | 1.87 | 0.56 |
| 1:D:4901:ILE:HG23 | 1:D:4913:ARG:NH2 | 2.20 | 0.56 |
| 1:C:3819:TYR:CZ | 1:C:3823:LYS:HG3 | 2.41 | 0.56 |
| 1:C:4152:GLU:OE1 | 1:C:4192:ARG:NH1 | 2.31 | 0.56 |
| 1:A:73:LEU:O | 1:A:106:ALA:N | 2.33 | 0.56 |
| 1:A:683:ARG:O | 1:A:781:VAL:HA | 2.05 | 0.56 |
| 1:A:747:CYS:SG | 1:A:805:PRO:HG3 | 2.45 | 0.56 |
| 1:A:897:ARG:HB3 | 1:A:905:PRO:HD2 | 1.88 | 0.56 |
| 1:A:1251:GLU:N | 1:A:1251:GLU:OE1 | 2.38 | 0.56 |
| 1:A:1685:LEU:HD21 | 1:A:1714:LEU:HD11 | 1.87 | 0.56 |
| 1:A:1961:PHE:HA | 1:A:1964:ARG:HD2 | 1.87 | 0.56 |
| 1:A:2355:ARG:HH12 | 1:A:2453:ILE:HD11 | 1.70 | 0.56 |
| 1:A:3455:GLU:HA | 1:A:3458:PHE:CE1 | 2.41 | 0.56 |
| 1:A:3819:TYR:CZ | 1:A:3823:LYS:HG3 | 2.41 | 0.56 |
| 1:B:999:ASP:O | 1:B:1003:GLN:HG3 | 2.05 | 0.56 |
| 1:B:1087:ARG:HG3 | 1:B:1224:GLU:H | 1.70 | 0.56 |
| 1:B:1251:GLU:OE1 | 1:B:1251:GLU:N | 2.38 | 0.56 |
| 1:B:3223:SER:OG | 1:B:3226:GLU:OE1 | 2.13 | 0.56 |
| 1:B:4820:VAL:HG11 | 1:C:4839:MET:SD | 2.46 | 0.56 |
| 1:D:3719:ASP:H | 1:D:3793:MET:HE1 | 1.70 | 0.56 |
| 1:D:4183:ILE:HD13 | 1:D:4193:ILE:HD11 | 1.88 | 0.56 |
| 1:C:1251:GLU:OE1 | 1:C:1251:GLU:N | 2.38 | 0.56 |
| 1:C:1961:PHE:HA | 1:C:1964:ARG:HD2 | 1.87 | 0.56 |
| 1:C:3100:SER:O | 1:C:3103:ILE:HG22 | 2.05 | 0.56 |
| 1:C:3322:ILE:O | 1:C:3326:ASN:ND2 | 2.38 | 0.56 |
| 1:C:3376:GLU:HB3 | 1:C:3380:ARG:HH12 | 1.70 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:3395:ARG:HD2 | 1:C:3450:ASN:HD21 | 1.70 | 0.56 |
| 1:C:3788:GLY:HA2 | 1:C:3835:LEU:HG | 1.87 | 0.56 |
| 1:C:4183:ILE:HD13 | 1:C:4193:ILE:HD11 | 1.88 | 0.56 |
| 1:A:663:TYR:CE1 | 1:A:745:SER:HB2 | 2.36 | 0.56 |
| 1:A:3100:SER:O | 1:A:3103:ILE:HG22 | 2.05 | 0.56 |
| 1:A:3322:ILE:O | 1:A:3326:ASN:ND2 | 2.38 | 0.56 |
| 1:A:3398:PHE:O | 1:A:3402:CYS:N | 2.34 | 0.56 |
| 1:A:4240:ASP:OD1 | 1:A:4675:LYS:NZ | 2.34 | 0.56 |
| 1:B:897:ARG:HB3 | 1:B:905:PRO:HD2 | 1.88 | 0.56 |
| 1:B:2243:SER:HB3 | 1:B:2246:ASN:ND2 | 2.21 | 0.56 |
| 1:B:2249:SER:O | 1:B:2253:HIS:ND1 | 2.37 | 0.56 |
| 1:B:3322:ILE:O | 1:B:3326:ASN:ND2 | 2.38 | 0.56 |
| 1:D:897:ARG:HB3 | 1:D:905:PRO:HD2 | 1.88 | 0.56 |
| 1:D:2243:SER:HB3 | 1:D:2246:ASN:ND2 | 2.21 | 0.56 |
| 1:D:3634:ALA:O | 1:D:3638:MET:HG3 | 2.04 | 0.56 |
| 1:D:3695:PRO:HB3 | 1:D:3699:HIS:CD2 | 2.41 | 0.56 |
| 1:C:747:CYS:SG | 1:C:805:PRO:HG3 | 2.45 | 0.56 |
| 1:C:2243:SER:HB3 | 1:C:2246:ASN:ND2 | 2.21 | 0.56 |
| 1:C:2310:CYS:SG | 1:C:2313:LEU:HB2 | 2.46 | 0.56 |
| 1:C:3531:ASP:OD2 | 1:C:3532:LEU:N | 2.38 | 0.56 |
| 1:C:4901:ILE:HG23 | 1:C:4913:ARG:NH2 | 2.20 | 0.56 |
| 1:A:2243:SER:HB3 | 1:A:2246:ASN:ND2 | 2.21 | 0.56 |
| 1:A:4211:LYS:HB3 | 1:A:4215:ARG:HH22 | 1.69 | 0.56 |
| 1:B:111:HIS:HB3 | 1:B:114:SER:OG | 2.06 | 0.56 |
| 1:B:1685:LEU:HD21 | 1:B:1714:LEU:HD11 | 1.87 | 0.56 |
| 1:B:2506:LEU:O | 1:B:2511:GLY:N | 2.35 | 0.56 |
| 1:B:3020:THR:OG1 | 1:B:3023:LYS:O | 2.23 | 0.56 |
| 1:B:3100:SER:O | 1:B:3103:ILE:HG22 | 2.05 | 0.56 |
| 1:B:3695:PRO:HB3 | 1:B:3699:HIS:CD2 | 2.41 | 0.56 |
| 1:B:3930:ILE:HG23 | 1:B:3951:PHE:HE1 | 1.70 | 0.56 |
| 1:B:3944:GLU:OE2 | 1:B:3947:GLY:N | 2.38 | 0.56 |
| 1:B:4183:ILE:HD13 | 1:B:4193:ILE:HD11 | 1.88 | 0.56 |
| 1:D:652:ARG:HB2 | 1:D:750:LEU:HD13 | 1.88 | 0.56 |
| 1:D:663:TYR:CE1 | 1:D:745:SER:HB2 | 2.36 | 0.56 |
| 1:D:2310:CYS:SG | 1:D:2313:LEU:HB2 | 2.46 | 0.56 |
| 1:C:897:ARG:HB3 | 1:C:905:PRO:HD2 | 1.88 | 0.56 |
| 1:C:2195:PRO:O | 1:C:2199:ARG:HG3 | 2.06 | 0.56 |
| 1:C:4708:THR:HG22 | 1:C:4774:LYS:HB3 | 1.85 | 0.56 |
| 1:C:4721:LYS:HE2 | 1:C:4741:LEU:HB3 | 1.86 | 0.56 |
| 1:A:3395:ARG:HD2 | 1:A:3450:ASN:HD21 | 1.70 | 0.56 |
| 2:E:17:LYS:HE3 | 2:E:20:GLN:HB2 | 1.88 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:1252:HIS:O | 1:B:1275:ARG:NH1 | 2.37 | 0.56 |
| 1:B:1961:PHE:HA | 1:B:1964:ARG:HD2 | 1.87 | 0.56 |
| 1:B:3539:ARG:HH12 | 1:B:3552:PHE:HB3 | 1.70 | 0.56 |
| 1:B:4802:GLY:HA2 | 1:B:4808:PHE:HB2 | 1.88 | 0.56 |
| 1:D:892:THR:O | 1:D:904:HIS:N | 2.39 | 0.56 |
| 1:D:3455:GLU:HA | 1:D:3458:PHE:CE1 | 2.40 | 0.56 |
| 1:C:1712:TYR:HD2 | 1:C:1844:LEU:HD13 | 1.68 | 0.56 |
| 1:C:3236:VAL:HA | 1:C:3239:MET:HG2 | 1.87 | 0.56 |
| 1:C:3455:GLU:HA | 1:C:3458:PHE:CE1 | 2.41 | 0.56 |
| 1:A:111:HIS:HB3 | 1:A:114:SER:OG | 2.06 | 0.56 |
| 1:A:1944:GLU:OE2 | 1:A:2126:ARG:NH1 | 2.38 | 0.56 |
| 1:D:1101:ARG:HB2 | 1:D:1193:SER:HB3 | 1.88 | 0.56 |
| 1:D:1944:GLU:OE2 | 1:D:2126:ARG:NH1 | 2.38 | 0.56 |
| 1:D:2530:MET:HE1 | 1:D:2589:LEU:HD11 | 1.87 | 0.56 |
| 1:D:3286:GLU:HG2 | 1:D:3287:ARG:HD3 | 1.88 | 0.56 |
| 1:D:3531:ASP:OD2 | 1:D:3532:LEU:N | 2.38 | 0.56 |
| 1:D:3819:TYR:CZ | 1:D:3823:LYS:HG3 | 2.41 | 0.56 |
| 1:A:892:THR:O | 1:A:904:HIS:N | 2.39 | 0.56 |
| 1:A:4183:ILE:HD13 | 1:A:4193:ILE:HD11 | 1.88 | 0.56 |
| 1:B:747:CYS:SG | 1:B:805:PRO:HG3 | 2.45 | 0.56 |
| 1:B:3398:PHE:O | 1:B:3402:CYS:N | 2.34 | 0.56 |
| 1:D:4977:THR:OG1 | 1:D:5029:ARG:NH2 | 2.38 | 0.56 |
| 1:C:1101:ARG:HB2 | 1:C:1193:SER:HB3 | 1.88 | 0.56 |
| 1:C:4189:ARG:HB2 | 1:C:4189:ARG:NH1 | 2.19 | 0.56 |
| 1:A:1087:ARG:HG3 | 1:A:1224:GLU:H | 1.70 | 0.56 |
| 1:A:4977:THR:OG1 | 1:A:5029:ARG:NH2 | 2.38 | 0.56 |
| 1:B:683:ARG:HB3 | 1:B:707:VAL:HG12 | 1.87 | 0.56 |
| 1:B:884:LEU:HD11 | 1:B:969:PRO:HB3 | 1.88 | 0.56 |
| 1:B:2195:PRO:O | 1:B:2199:ARG:HG3 | 2.06 | 0.56 |
| 1:B:3395:ARG:HD2 | 1:B:3450:ASN:HD21 | 1.70 | 0.56 |
| 1:B:3458:PHE:HA | 1:B:3461:GLN:HG2 | 1.88 | 0.56 |
| 1:D:243:ARG:HH22 | 1:D:289:ARG:HD2 | 1.71 | 0.56 |
| 1:D:973:SER:O | 1:D:976:ARG:NH2 | 2.39 | 0.56 |
| 1:D:1438:ARG:HB3 | 1:D:1563:GLN:HB2 | 1.88 | 0.56 |
| 1:C:1087:ARG:HG3 | 1:C:1224:GLU:H | 1.70 | 0.56 |
| 1:C:1263:THR:OG1 | 1:C:1265:ASP:OD1 | 2.22 | 0.56 |
| 1:A:652:ARG:HB2 | 1:A:750:LEU:HD13 | 1.88 | 0.56 |
| 1:A:2700:MET:HE1 | 1:A:3000:LYS:HB3 | 1.87 | 0.56 |
| 1:A:3930:ILE:HG23 | 1:A:3951:PHE:HE1 | 1.70 | 0.56 |
| 1:A:4802:GLY:HA2 | 1:A:4808:PHE:HB2 | 1.88 | 0.56 |
| 1:B:3036:LYS:HG2 | 1:B:3076:ASP:HB3 | 1.88 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3286:GLU:HG2 | 1:B:3287:ARG:HD3 | 1.88 | 0.56 |
| 1:B:4892:ARG:HH12 | 1:C:4898:GLY:HA3 | 1.71 | 0.56 |
| 1:C:2249:SER:O | 1:C:2253:HIS:ND1 | 2.37 | 0.56 |
| 1:C:3286:GLU:HG2 | 1:C:3287:ARG:HD3 | 1.88 | 0.56 |
| 1:C:3395:ARG:NH1 | 1:C:3453:ARG:HH22 | 2.04 | 0.56 |
| 1:C:4240:ASP:OD1 | 1:C:4675:LYS:NZ | 2.34 | 0.56 |
| 1:A:226:HIS:HE1 | 1:B:155:LYS:HB2 | 1.70 | 0.55 |
| 1:A:3036:LYS:HG2 | 1:A:3076:ASP:HB3 | 1.88 | 0.55 |
| 1:A:3350:ARG:O | 1:A:3415:TYR:OH | 2.17 | 0.55 |
| 1:A:3695:PRO:HB3 | 1:A:3699:HIS:CD2 | 2.41 | 0.55 |
| 1:A:3944:GLU:OE2 | 1:A:3947:GLY:N | 2.38 | 0.55 |
| 2:F:17:LYS:HE3 | 2:F:20:GLN:HB2 | 1.88 | 0.55 |
| 1:B:504:ALA:HB2 | 1:B:512:ALA:HB2 | 1.89 | 0.55 |
| 1:D:683:ARG:HB3 | 1:D:707:VAL:HG12 | 1.87 | 0.55 |
| 1:D:2620:GLN:HA | 1:D:2623:LEU:HB2 | 1.86 | 0.55 |
| 1:D:3100:SER:O | 1:D:3103:ILE:HG22 | 2.05 | 0.55 |
| 1:D:3458:PHE:HA | 1:D:3461:GLN:HG2 | 1.88 | 0.55 |
| 1:C:243:ARG:HH22 | 1:C:289:ARG:HD2 | 1.71 | 0.55 |
| 1:C:683:ARG:HB3 | 1:C:707:VAL:HG12 | 1.87 | 0.55 |
| 1:C:884:LEU:HD11 | 1:C:969:PRO:HB3 | 1.88 | 0.55 |
| 1:C:973:SER:O | 1:C:976:ARG:NH2 | 2.39 | 0.55 |
| 1:A:281:ARG:NH1 | 1:A:309:THR:OG1 | 2.39 | 0.55 |
| 1:A:1438:ARG:HB3 | 1:A:1563:GLN:HB2 | 1.88 | 0.55 |
| 1:D:460:GLN:N | 1:D:463:GLU:OE2 | 2.39 | 0.55 |
| 1:D:884:LEU:HD11 | 1:D:969:PRO:HB3 | 1.88 | 0.55 |
| 1:D:3395:ARG:NH1 | 1:D:3453:ARG:HH22 | 2.04 | 0.55 |
| 1:C:281:ARG:NH1 | 1:C:309:THR:OG1 | 2.39 | 0.55 |
| 1:C:3354:LEU:HB2 | 1:C:3415:TYR:CE2 | 2.38 | 0.55 |
| 1:C:4977:THR:OG1 | 1:C:5029:ARG:NH2 | 2.39 | 0.55 |
| 1:A:973:SER:O | 1:A:976:ARG:NH2 | 2.39 | 0.55 |
| 1:A:2310:CYS:SG | 1:A:2313:LEU:HB2 | 2.46 | 0.55 |
| 1:A:3236:VAL:HA | 1:A:3239:MET:HG2 | 1.87 | 0.55 |
| 1:A:3354:LEU:HB2 | 1:A:3415:TYR:CE2 | 2.38 | 0.55 |
| 1:B:3531:ASP:OD2 | 1:B:3532:LEU:N | 2.38 | 0.55 |
| 1:D:274:LEU:HB3 | 1:D:339:ILE:HD13 | 1.89 | 0.55 |
| 1:D:1263:THR:OG1 | 1:D:1265:ASP:OD1 | 2.22 | 0.55 |
| 1:D:3236:VAL:HA | 1:D:3239:MET:HG2 | 1.87 | 0.55 |
| 1:D:3498:ARG:HG2 | 1:D:3501:ASP:H | 1.72 | 0.55 |
| 1:D:4802:GLY:HA2 | 1:D:4808:PHE:HB2 | 1.88 | 0.55 |
| 1:C:504:ALA:HB2 | 1:C:512:ALA:HB2 | 1.88 | 0.55 |
| 1:C:3601:ALA:HA | 1:C:3604:TYR:CD1 | 2.42 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:274:LEU:HB3 | 1:A:339:ILE:HD13 | 1.89 | 0.55 |
| 1:A:884:LEU:HD11 | 1:A:969:PRO:HB3 | 1.88 | 0.55 |
| 1:A:1291:LEU:HD12 | 1:A:1550:PRO:HG2 | 1.89 | 0.55 |
| 1:A:2195:PRO:O | 1:A:2199:ARG:HG3 | 2.06 | 0.55 |
| 1:A:3300:ALA:HB3 | 1:A:3301:PRO:HD3 | 1.89 | 0.55 |
| 1:A:3531:ASP:OD2 | 1:A:3532:LEU:N | 2.38 | 0.55 |
| 1:A:3550:ARG:O | 1:A:3554:GLN:HG2 | 2.07 | 0.55 |
| 1:B:281:ARG:NH1 | 1:B:309:THR:OG1 | 2.39 | 0.55 |
| 1:B:990:GLU:OE2 | 1:B:994:ASN:ND2 | 2.40 | 0.55 |
| 1:B:2310:CYS:SG | 1:B:2313:LEU:HB2 | 2.46 | 0.55 |
| 1:B:2764:GLU:HB3 | 1:B:2857:PRO:HG3 | 1.89 | 0.55 |
| 1:D:281:ARG:NH1 | 1:D:309:THR:OG1 | 2.39 | 0.55 |
| 1:D:3539:ARG:HH12 | 1:D:3552:PHE:HB3 | 1.70 | 0.55 |
| 1:C:3036:LYS:HG2 | 1:C:3076:ASP:HB3 | 1.88 | 0.55 |
| 1:A:2909:ASP:HA | 1:A:2916:LYS:HE3 | 1.89 | 0.55 |
| 1:A:3984:ARG:NH2 | 1:B:161:GLU:HA | 2.21 | 0.55 |
| 1:B:460:GLN:N | 1:B:463:GLU:OE2 | 2.39 | 0.55 |
| 1:B:652:ARG:HB2 | 1:B:750:LEU:HD13 | 1.88 | 0.55 |
| 1:D:1237:TRP:HE3 | 1:D:1605:TRP:HB3 | 1.72 | 0.55 |
| 1:C:466:SER:HA | 1:C:469:ARG:NH1 | 2.22 | 0.55 |
| 1:C:730:VAL:O | 1:C:735:GLN:NE2 | 2.39 | 0.55 |
| 1:C:3695:PRO:HB3 | 1:C:3699:HIS:CD2 | 2.41 | 0.55 |
| 1:A:3395:ARG:NH1 | 1:A:3453:ARG:HH22 | 2.04 | 0.55 |
| 1:A:3498:ARG:HG2 | 1:A:3501:ASP:H | 1.72 | 0.55 |
| 2:H:17:LYS:HE3 | 2:H:20:GLN:HB2 | 1.88 | 0.55 |
| 1:B:341:TYR:CE2 | 1:B:392:ARG:HG2 | 2.42 | 0.55 |
| 1:B:414:PHE:HA | 1:B:436:LEU:HD22 | 1.89 | 0.55 |
| 1:B:730:VAL:O | 1:B:735:GLN:NE2 | 2.39 | 0.55 |
| 1:B:1291:LEU:HD12 | 1:B:1550:PRO:HG2 | 1.89 | 0.55 |
| 1:B:1438:ARG:HB3 | 1:B:1563:GLN:HB2 | 1.88 | 0.55 |
| 1:B:2909:ASP:HA | 1:B:2916:LYS:HE3 | 1.89 | 0.55 |
| 1:B:3395:ARG:NH1 | 1:B:3453:ARG:HH22 | 2.04 | 0.55 |
| 1:D:730:VAL:O | 1:D:735:GLN:NE2 | 2.39 | 0.55 |
| 1:D:4016:LEU:O | 1:D:4020:GLN:HG3 | 2.07 | 0.55 |
| 1:C:111:HIS:HB3 | 1:C:114:SER:OG | 2.06 | 0.55 |
| 1:C:1443:GLN:NE2 | 1:C:1558:HIS:HB3 | 2.22 | 0.55 |
| 1:C:3955:MET:HE1 | 1:C:4016:LEU:HA | 1.88 | 0.55 |
| 1:A:175:SER:HA | 1:D:2452:ARG:HD3 | 1.89 | 0.55 |
| 1:A:466:SER:HA | 1:A:469:ARG:NH1 | 2.22 | 0.55 |
| 1:A:730:VAL:O | 1:A:735:GLN:NE2 | 2.39 | 0.55 |
| 1:A:1101:ARG:HB2 | 1:A:1193:SER:HB3 | 1.88 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3860:ASN:HB3 | 1:A:3865:VAL:HB | 1.88 | 0.55 |
| 1:A:3891:LEU:HB3 | 1:A:3899:PHE:CE2 | 2.42 | 0.55 |
| 1:A:4016:LEU:O | 1:A:4020:GLN:HG3 | 2.07 | 0.55 |
| 1:B:3860:ASN:HB3 | 1:B:3865:VAL:HB | 1.88 | 0.55 |
| 1:D:111:HIS:HB3 | 1:D:114:SER:OG | 2.06 | 0.55 |
| 1:D:414:PHE:HA | 1:D:436:LEU:HD22 | 1.89 | 0.55 |
| 1:D:3597:GLN:NE2 | 1:D:3598:GLU:HG3 | 2.22 | 0.55 |
| 1:C:3078:ARG:NE | 1:C:3155:ASP:OD2 | 2.36 | 0.55 |
| 1:C:3458:PHE:HA | 1:C:3461:GLN:HG2 | 1.88 | 0.55 |
| 1:C:3498:ARG:HG2 | 1:C:3501:ASP:H | 1.72 | 0.55 |
| 1:A:504:ALA:HB2 | 1:A:512:ALA:HB2 | 1.89 | 0.55 |
| 1:A:3286:GLU:HG2 | 1:A:3287:ARG:HD3 | 1.88 | 0.55 |
| 1:A:3824:LYS:HZ1 | 1:A:3908:GLY:HA3 | 1.72 | 0.55 |
| 1:A:4567:LEU:HD21 | 1:A:4816:ILE:HG22 | 1.89 | 0.55 |
| 2:G:17:LYS:HE3 | 2:G:20:GLN:HB2 | 1.88 | 0.55 |
| 1:B:1211:LEU:HB3 | 1:B:1214:PHE:HB3 | 1.88 | 0.55 |
| 1:B:1263:THR:OG1 | 1:B:1265:ASP:OD1 | 2.22 | 0.55 |
| 1:B:4567:LEU:HD21 | 1:B:4816:ILE:HG22 | 1.89 | 0.55 |
| 1:D:504:ALA:HB2 | 1:D:512:ALA:HB2 | 1.88 | 0.55 |
| 1:D:1291:LEU:HB3 | 1:D:1595:LEU:HD11 | 1.89 | 0.55 |
| 1:D:2951:ILE:HA | 1:D:2954:ARG:HD3 | 1.89 | 0.55 |
| 1:C:341:TYR:CE2 | 1:C:392:ARG:HG2 | 2.42 | 0.55 |
| 1:C:1211:LEU:HB3 | 1:C:1214:PHE:HB3 | 1.88 | 0.55 |
| 1:C:2764:GLU:HB3 | 1:C:2857:PRO:HG3 | 1.89 | 0.55 |
| 1:C:2909:ASP:HA | 1:C:2916:LYS:HE3 | 1.89 | 0.55 |
| 1:C:3597:GLN:NE2 | 1:C:3598:GLU:HG3 | 2.22 | 0.55 |
| 1:C:3891:LEU:HB3 | 1:C:3899:PHE:CE2 | 2.42 | 0.55 |
| 1:A:414:PHE:HA | 1:A:436:LEU:HD22 | 1.89 | 0.55 |
| 1:A:894:GLY:HA3 | 1:A:903:LEU:HD23 | 1.89 | 0.55 |
| 1:A:3324:VAL:HG11 | 1:A:3361:THR:HG22 | 1.89 | 0.55 |
| 1:A:3601:ALA:HA | 1:A:3604:TYR:CD1 | 2.42 | 0.55 |
| 1:A:3965:LEU:HA | 1:A:3968:TYR:HD2 | 1.72 | 0.55 |
| 1:B:243:ARG:HH22 | 1:B:289:ARG:HD2 | 1.71 | 0.55 |
| 1:B:3324:VAL:HG11 | 1:B:3361:THR:HG22 | 1.89 | 0.55 |
| 1:B:3824:LYS:HZ1 | 1:B:3908:GLY:HA3 | 1.72 | 0.55 |
| 1:B:4016:LEU:O | 1:B:4020:GLN:HG3 | 2.07 | 0.55 |
| 1:D:990:GLU:OE2 | 1:D:994:ASN:ND2 | 2.40 | 0.55 |
| 1:D:1087:ARG:HG3 | 1:D:1224:GLU:H | 1.70 | 0.55 |
| 1:D:2195:PRO:O | 1:D:2199:ARG:HG3 | 2.06 | 0.55 |
| 1:C:1291:LEU:HD12 | 1:C:1550:PRO:HG2 | 1.89 | 0.55 |
| 1:C:3324:VAL:HG11 | 1:C:3361:THR:HG22 | 1.89 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:3550:ARG:O | 1:C:3554:GLN:HG2 | 2.07 | 0.55 |
| 1:A:243:ARG:HH22 | 1:A:289:ARG:HD2 | 1.71 | 0.55 |
| 1:A:1741:GLU:O | 1:A:1745:ILE:HG13 | 2.07 | 0.55 |
| 1:A:2506:LEU:O | 1:A:2511:GLY:N | 2.35 | 0.55 |
| 1:A:2611:CYS:HA | 1:A:2614:ILE:HD12 | 1.89 | 0.55 |
| 1:A:2764:GLU:HB3 | 1:A:2857:PRO:HG3 | 1.89 | 0.55 |
| 1:A:3458:PHE:HA | 1:A:3461:GLN:HG2 | 1.88 | 0.55 |
| 1:B:274:LEU:HB3 | 1:B:339:ILE:HD13 | 1.89 | 0.55 |
| 1:B:3891:LEU:HB3 | 1:B:3899:PHE:CE2 | 2.42 | 0.55 |
| 1:D:2969:ILE:O | 1:D:2972:GLU:HG3 | 2.07 | 0.55 |
| 1:C:652:ARG:HB2 | 1:C:750:LEU:HD13 | 1.88 | 0.55 |
| 1:C:4802:GLY:HA2 | 1:C:4808:PHE:HB2 | 1.88 | 0.55 |
| 1:A:990:GLU:OE2 | 1:A:994:ASN:ND2 | 2.40 | 0.54 |
| 1:A:1211:LEU:HB3 | 1:A:1214:PHE:HB3 | 1.88 | 0.54 |
| 1:A:1237:TRP:HE3 | 1:A:1605:TRP:HB3 | 1.72 | 0.54 |
| 1:A:3110:LEU:HD21 | 1:A:3183:VAL:HB | 1.89 | 0.54 |
| 1:A:3207:GLU:O | 1:A:3211:ASN:HB2 | 2.08 | 0.54 |
| 1:A:4967:TYR:OH | 1:A:5033:GLU:OE2 | 2.21 | 0.54 |
| 1:B:894:GLY:HA3 | 1:B:903:LEU:HD23 | 1.89 | 0.54 |
| 1:B:1101:ARG:HB2 | 1:B:1193:SER:HB3 | 1.88 | 0.54 |
| 1:B:1237:TRP:HE3 | 1:B:1605:TRP:HB3 | 1.72 | 0.54 |
| 1:B:3110:LEU:HD21 | 1:B:3183:VAL:HB | 1.89 | 0.54 |
| 1:B:3965:LEU:HA | 1:B:3968:TYR:HD2 | 1.72 | 0.54 |
| 1:D:179:TYR:N | 1:D:194:SER:O | 2.36 | 0.54 |
| 1:D:1439:VAL:HG21 | 1:D:1448:VAL:HG11 | 1.90 | 0.54 |
| 1:D:2506:LEU:O | 1:D:2511:GLY:N | 2.35 | 0.54 |
| 1:D:2764:GLU:HB3 | 1:D:2857:PRO:HG3 | 1.89 | 0.54 |
| 1:D:3036:LYS:HG2 | 1:D:3076:ASP:HB3 | 1.88 | 0.54 |
| 1:D:3965:LEU:HA | 1:D:3968:TYR:HD2 | 1.72 | 0.54 |
| 1:C:274:LEU:HB3 | 1:C:339:ILE:HD13 | 1.89 | 0.54 |
| 1:C:1008:SER:HB2 | 1:C:1017:ARG:HB3 | 1.89 | 0.54 |
| 1:C:3539:ARG:HH12 | 1:C:3552:PHE:HB3 | 1.70 | 0.54 |
| 1:A:341:TYR:CE2 | 1:A:392:ARG:HG2 | 2.42 | 0.54 |
| 1:A:1443:GLN:NE2 | 1:A:1558:HIS:HB3 | 2.22 | 0.54 |
| 1:B:3207:GLU:O | 1:B:3211:ASN:HB2 | 2.07 | 0.54 |
| 1:D:1443:GLN:NE2 | 1:D:1558:HIS:HB3 | 2.22 | 0.54 |
| 1:D:2615:ARG:HB2 | 1:D:2618:MET:CE | 2.38 | 0.54 |
| 1:D:3207:GLU:O | 1:D:3211:ASN:HB2 | 2.07 | 0.54 |
| 1:D:3300:ALA:HB3 | 1:D:3301:PRO:HD3 | 1.89 | 0.54 |
| 1:C:1438:ARG:HB3 | 1:C:1563:GLN:HB2 | 1.88 | 0.54 |
| 1:C:3207:GLU:O | 1:C:3211:ASN:HB2 | 2.08 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:C:3540:TYR:OH | 1:C:3597:GLN:OE1 | 2.25 | 0.54 |
| 1:C:4567:LEU:HD21 | 1:C:4816:ILE:HG22 | 1.89 | 0.54 |
| 1:B:818:ARG:NH2 | 1:B:1027:LEU:O | 2.22 | 0.54 |
| 1:B:1443:GLN:NE2 | 1:B:1558:HIS:HB3 | 2.22 | 0.54 |
| 1:B:2951:ILE:HA | 1:B:2954:ARG:HD3 | 1.89 | 0.54 |
| 1:B:2969:ILE:O | 1:B:2972:GLU:HG3 | 2.07 | 0.54 |
| 1:B:4184:MET:HB3 | 1:B:5021:PHE:HA | 1.90 | 0.54 |
| 1:D:466:SER:HA | 1:D:469:ARG:NH1 | 2.22 | 0.54 |
| 1:D:3324:VAL:HG11 | 1:D:3361:THR:HG22 | 1.89 | 0.54 |
| 1:D:3860:ASN:HB3 | 1:D:3865:VAL:HB | 1.89 | 0.54 |
| 1:C:1713:ASP:HA | 1:C:1716:ILE:HD12 | 1.89 | 0.54 |
| 1:C:3860:ASN:HB3 | 1:C:3865:VAL:HB | 1.89 | 0.54 |
| 1:A:232:THR:HG21 | 1:A:257:ARG:HE | 1.73 | 0.54 |
| 1:A:293:LEU:HD13 | 1:A:378:LEU:HD23 | 1.90 | 0.54 |
| 1:A:1291:LEU:HB3 | 1:A:1595:LEU:HD11 | 1.89 | 0.54 |
| 1:A:3540:TYR:OH | 1:A:3597:GLN:OE1 | 2.25 | 0.54 |
| 1:B:892:THR:O | 1:B:904:HIS:N | 2.39 | 0.54 |
| 1:B:973:SER:O | 1:B:976:ARG:NH2 | 2.39 | 0.54 |
| 1:B:2159:LEU:HD21 | 1:B:2203:MET:HE1 | 1.88 | 0.54 |
| 1:B:2612[A]:ARG:HB3 | 1:B:2612[A]:ARG:NH1 | 2.23 | 0.54 |
| 1:B:3552:PHE:HA | 1:B:3555:ASN:ND2 | 2.23 | 0.54 |
| 1:D:3601:ALA:HA | 1:D:3604:TYR:CD1 | 2.42 | 0.54 |
| 1:C:131:LEU:O | 1:C:178:ARG:NE | 2.34 | 0.54 |
| 1:C:1439:VAL:HG21 | 1:C:1448:VAL:HG11 | 1.90 | 0.54 |
| 1:C:2178:MET:O | 1:C:2182:ILE:HG12 | 2.08 | 0.54 |
| 1:C:2615:ARG:HB2 | 1:C:2618:MET:CE | 2.37 | 0.54 |
| 1:C:2821:TRP:HZ3 | 1:C:2878:LEU:HD13 | 1.73 | 0.54 |
| 1:C:5033:GLU:O | 1:C:5037:SER:OG | 2.21 | 0.54 |
| 1:A:1008:SER:HB2 | 1:A:1017:ARG:HB3 | 1.89 | 0.54 |
| 1:A:2612[A]:ARG:HB3 | 1:A:2612[A]:ARG:NH1 | 2.23 | 0.54 |
| 1:A:3552:PHE:HA | 1:A:3555:ASN:ND2 | 2.23 | 0.54 |
| 1:A:4184:MET:HB3 | 1:A:5021:PHE:HA | 1.90 | 0.54 |
| 1:B:144:GLU:HB3 | 1:B:175:SER:HB3 | 1.90 | 0.54 |
| 1:B:225:GLY:HA2 | 1:C:155:LYS:HZ2 | 1.72 | 0.54 |
| 1:D:341:TYR:CE2 | 1:D:392:ARG:HG2 | 2.42 | 0.54 |
| 1:D:1211:LEU:HB3 | 1:D:1214:PHE:HB3 | 1.88 | 0.54 |
| 1:D:2909:ASP:HA | 1:D:2916:LYS:HE3 | 1.89 | 0.54 |
| 1:D:4567:LEU:HD21 | 1:D:4816:ILE:HG22 | 1.89 | 0.54 |
| 1:C:990:GLU:OE2 | 1:C:994:ASN:ND2 | 2.40 | 0.54 |
| 1:C:2330:ARG:HA | 1:C:2333:ASP:OD2 | 2.08 | 0.54 |
| 1:C:4016:LEU:O | 1:C:4020:GLN:HG3 | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:A:1439:VAL:HG21 | 1:A:1448:VAL:HG11 | 1.90 | 0.54 |
| 1:A:4219:PHE:HD1 | 1:A:4950:VAL:HG11 | 1.73 | 0.54 |
| 1:B:466:SER:HA | 1:B:469:ARG:NH1 | 2.22 | 0.54 |
| 1:B:3498:ARG:HG2 | 1:B:3501:ASP:H | 1.72 | 0.54 |
| 1:B:3597:GLN:NE2 | 1:B:3598:GLU:HG3 | 2.22 | 0.54 |
| 1:D:144:GLU:HB3 | 1:D:175:SER:HB3 | 1.90 | 0.54 |
| 1:D:1089:TYR:CZ | 1:D:1214:PHE:HB2 | 2.43 | 0.54 |
| 1:D:1721:GLU:HG2 | 1:D:1722:SER:N | 2.23 | 0.54 |
| 1:D:2534:ALA:HA | 1:D:2588:ARG:NH1 | 2.21 | 0.54 |
| 1:D:2612[A]:ARG:HH11 | 1:D:2612[A]:ARG:CB | 2.20 | 0.54 |
| 1:D:3354:LEU:HB2 | 1:D:3415:TYR:CE2 | 2.38 | 0.54 |
| 1:D:3891:LEU:HB3 | 1:D:3899:PHE:CE2 | 2.42 | 0.54 |
| 1:D:4540:PHE:O | 1:D:4543:GLU:HG3 | 2.08 | 0.54 |
| 1:C:1089:TYR:CZ | 1:C:1214:PHE:HB2 | 2.43 | 0.54 |
| 1:C:1721:GLU:HG2 | 1:C:1722:SER:N | 2.23 | 0.54 |
| 1:C:2969:ILE:O | 1:C:2972:GLU:HG3 | 2.07 | 0.54 |
| 1:C:3944:GLU:OE2 | 1:C:3947:GLY:N | 2.38 | 0.54 |
| 1:A:144:GLU:HB3 | 1:A:175:SER:HB3 | 1.90 | 0.54 |
| 1:A:2951:ILE:HA | 1:A:2954:ARG:HD3 | 1.89 | 0.54 |
| 1:A:3020:THR:OG1 | 1:A:3023:LYS:O | 2.23 | 0.54 |
| 1:B:1092:PHE:HZ | 1:B:1100:MET:SD | 2.31 | 0.54 |
| 1:B:2330:ARG:HA | 1:B:2333:ASP:OD2 | 2.07 | 0.54 |
| 1:B:2581:SER:O | 1:B:2585:THR:HG23 | 2.08 | 0.54 |
| 1:B:3300:ALA:HB3 | 1:B:3301:PRO:HD3 | 1.89 | 0.54 |
| 1:B:3955:MET:HE1 | 1:B:4016:LEU:HA | 1.88 | 0.54 |
| 1:D:3455:GLU:HA | 1:D:3458:PHE:CD1 | 2.43 | 0.54 |
| 1:D:3550:ARG:O | 1:D:3554:GLN:HG2 | 2.07 | 0.54 |
| 1:C:293:LEU:HD13 | 1:C:378:LEU:HD23 | 1.89 | 0.54 |
| 1:C:414:PHE:HA | 1:C:436:LEU:HD22 | 1.89 | 0.54 |
| 1:C:1237:TRP:HE3 | 1:C:1605:TRP:HB3 | 1.72 | 0.54 |
| 1:A:1089:TYR:CZ | 1:A:1214:PHE:HB2 | 2.43 | 0.54 |
| 1:A:2807:TRP:O | 1:A:2811:GLU:HG2 | 2.08 | 0.54 |
| 1:A:3955:MET:HE1 | 1:A:4016:LEU:HA | 1.88 | 0.54 |
| 1:A:4540:PHE:O | 1:A:4543:GLU:HG3 | 2.08 | 0.54 |
| 1:A:4582:VAL:HG12 | 1:B:4877:ASP:O | 2.08 | 0.54 |
| 1:B:25:SER:OG | 1:B:32:GLN:NE2 | 2.38 | 0.54 |
| 1:B:1115:LEU:HD21 | 1:B:1123:VAL:HG11 | 1.90 | 0.54 |
| 1:B:1154:ASP:HB3 | 1:B:1157:GLU:HB3 | 1.89 | 0.54 |
| 1:B:1950:GLU:OE2 | 1:B:1954:ARG:NE | 2.41 | 0.54 |
| 1:B:2611:CYS:HA | 1:B:2614:ILE:HD12 | 1.89 | 0.54 |
| 1:B:2615:ARG:HB2 | 1:B:2618:MET:CE | 2.38 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:B:4219:PHE:HD1 | 1:B:4950:VAL:HG11 | 1.73 | 0.54 |
| 1:D:886:ARG:HD3 | 1:D:907:LEU:HG | 1.90 | 0.54 |
| 1:D:1131:ARG:HH11 | 1:D:1139:PHE:HB2 | 1.73 | 0.54 |
| 1:D:1741:GLU:O | 1:D:1745:ILE:HG13 | 2.07 | 0.54 |
| 1:C:2530:MET:HE1 | 1:C:2589:LEU:HD11 | 1.89 | 0.54 |
| 1:C:3300:ALA:HB3 | 1:C:3301:PRO:HD3 | 1.89 | 0.54 |
| 1:A:1115:LEU:HD21 | 1:A:1123:VAL:HG11 | 1.90 | 0.54 |
| 1:A:2103:VAL:CG1 | 1:A:2107:GLN:HE22 | 2.21 | 0.54 |
| 1:B:884:LEU:O | 1:B:888:GLU:HG2 | 2.08 | 0.54 |
| 1:B:3550:ARG:O | 1:B:3554:GLN:HG2 | 2.07 | 0.54 |
| 1:B:3601:ALA:HA | 1:B:3604:TYR:CD1 | 2.42 | 0.54 |
| 1:D:3110:LEU:HD21 | 1:D:3183:VAL:HB | 1.89 | 0.54 |
| 1:D:3955:MET:HE1 | 1:D:4016:LEU:HA | 1.89 | 0.54 |
| 1:D:4229:GLU:OE1 | 1:D:4229:GLU:N | 2.36 | 0.54 |
| 1:C:144:GLU:HB3 | 1:C:175:SER:HB3 | 1.90 | 0.54 |
| 1:C:1131:ARG:HH11 | 1:C:1139:PHE:HB2 | 1.73 | 0.54 |
| 1:C:1741:GLU:O | 1:C:1745:ILE:HG13 | 2.07 | 0.54 |
| 1:C:2951:ILE:HA | 1:C:2954:ARG:HD3 | 1.89 | 0.54 |
| 1:C:3552:PHE:HA | 1:C:3555:ASN:ND2 | 2.23 | 0.54 |
| 1:A:1154:ASP:HB3 | 1:A:1157:GLU:HB3 | 1.89 | 0.54 |
| 1:A:1713:ASP:HA | 1:A:1716:ILE:HD12 | 1.89 | 0.54 |
| 1:A:2615:ARG:HB2 | 1:A:2618:MET:CE | 2.38 | 0.54 |
| 2:F:7:ILE:HD11 | 2:F:73:LYS:HB2 | 1.90 | 0.54 |
| 1:B:1741:GLU:O | 1:B:1745:ILE:HG13 | 2.07 | 0.54 |
| 1:D:232:THR:HG21 | 1:D:257:ARG:HE | 1.73 | 0.54 |
| 1:D:1291:LEU:HD12 | 1:D:1550:PRO:HG2 | 1.89 | 0.54 |
| 1:D:1713:ASP:HA | 1:D:1716:ILE:HD12 | 1.89 | 0.54 |
| 1:D:2103:VAL:CG1 | 1:D:2107:GLN:HE22 | 2.21 | 0.54 |
| 1:D:2612[A]:ARG:HB3 | 1:D:2612[A]:ARG:NH1 | 2.23 | 0.54 |
| 1:C:892:THR:O | 1:C:904:HIS:N | 2.39 | 0.54 |
| 1:C:2611:CYS:HA | 1:C:2614:ILE:HD12 | 1.89 | 0.54 |
| 1:A:1092:PHE:HZ | 1:A:1100:MET:SD | 2.31 | 0.53 |
| 1:A:1131:ARG:HH11 | 1:A:1139:PHE:HB2 | 1.73 | 0.53 |
| 1:A:2821:TRP:HZ3 | 1:A:2878:LEU:HD13 | 1.73 | 0.53 |
| 1:A:3842:LEU:HD13 | 1:A:3933:PHE:CD2 | 2.44 | 0.53 |
| 1:B:232:THR:HG21 | 1:B:257:ARG:HE | 1.73 | 0.53 |
| 1:B:796:ARG:NH1 | 1:B:796:ARG:HA | 2.23 | 0.53 |
| 1:B:1008:SER:HB2 | 1:B:1017:ARG:HB3 | 1.89 | 0.53 |
| 1:B:1131:ARG:HH11 | 1:B:1139:PHE:HB2 | 1.73 | 0.53 |
| 1:B:1439:VAL:HG21 | 1:B:1448:VAL:HG11 | 1.89 | 0.53 |
| 1:B:2178:MET:O | 1:B:2182:ILE:HG12 | 2.08 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:B:2265:LEU:HD13 | 1:B:2331:TYR:CE2 | 2.44 | 0.53 |
| 1:B:2821:TRP:HZ3 | 1:B:2878:LEU:HD13 | 1.73 | 0.53 |
| 1:B:4229:GLU:N | 1:B:4229:GLU:OE1 | 2.36 | 0.53 |
| 1:D:131:LEU:O | 1:D:178:ARG:NE | 2.34 | 0.53 |
| 1:D:1092:PHE:HZ | 1:D:1100:MET:SD | 2.31 | 0.53 |
| 1:C:2581:SER:O | 1:C:2585:THR:HG23 | 2.08 | 0.53 |
| 1:C:3110:LEU:HD21 | 1:C:3183:VAL:HB | 1.89 | 0.53 |
| 1:A:3262:ARG:HH22 | 1:A:3325:ASN:HB3 | 1.73 | 0.53 |
| 1:A:3597:GLN:NE2 | 1:A:3598:GLU:HG3 | 2.22 | 0.53 |
| 2:G:7:ILE:HD11 | 2:G:73:LYS:HB2 | 1.90 | 0.53 |
| 1:B:1089:TYR:CZ | 1:B:1214:PHE:HB2 | 2.43 | 0.53 |
| 1:B:1721:GLU:HG2 | 1:B:1722:SER:N | 2.23 | 0.53 |
| 1:B:4977:THR:OG1 | 1:B:5029:ARG:NH2 | 2.38 | 0.53 |
| 1:D:894:GLY:HA3 | 1:D:903:LEU:HD23 | 1.89 | 0.53 |
| 1:D:2611:CYS:HA | 1:D:2614:ILE:HD12 | 1.89 | 0.53 |
| 1:D:2807:TRP:O | 1:D:2811:GLU:HG2 | 2.08 | 0.53 |
| 1:D:3540:TYR:OH | 1:D:3597:GLN:OE1 | 2.25 | 0.53 |
| 1:C:424:LYS:HD2 | 1:C:425:PRO:HD2 | 1.89 | 0.53 |
| 1:C:788:LYS:HE2 | 1:C:1629:GLN:HG3 | 1.90 | 0.53 |
| 1:C:1092:PHE:HZ | 1:C:1100:MET:SD | 2.31 | 0.53 |
| 1:C:3455:GLU:HA | 1:C:3458:PHE:CD1 | 2.43 | 0.53 |
| 1:C:3842:LEU:HD13 | 1:C:3933:PHE:CD2 | 2.44 | 0.53 |
| 1:C:3965:LEU:HA | 1:C:3968:TYR:HD2 | 1.72 | 0.53 |
| 1:C:4184:MET:HB3 | 1:C:5021:PHE:HA | 1.90 | 0.53 |
| 1:A:424:LYS:HD2 | 1:A:425:PRO:HD2 | 1.89 | 0.53 |
| 1:A:886:ARG:HD3 | 1:A:907:LEU:HG | 1.90 | 0.53 |
| 1:A:2470:ILE:HA | 1:A:2499:LYS:HE3 | 1.91 | 0.53 |
| 1:B:424:LYS:HD2 | 1:B:425:PRO:HD2 | 1.89 | 0.53 |
| 1:B:3455:GLU:HA | 1:B:3458:PHE:CD1 | 2.43 | 0.53 |
| 1:B:3540:TYR:OH | 1:B:3597:GLN:OE1 | 2.25 | 0.53 |
| 1:D:293:LEU:HD13 | 1:D:378:LEU:HD23 | 1.90 | 0.53 |
| 1:D:788:LYS:HE2 | 1:D:1629:GLN:HG3 | 1.90 | 0.53 |
| 1:D:862:VAL:HG12 | 1:D:864:PRO:HD3 | 1.90 | 0.53 |
| 1:D:1115:LEU:HD21 | 1:D:1123:VAL:HG11 | 1.90 | 0.53 |
| 1:D:1170:MET:HB3 | 1:C:3479:ALA:HB3 | 1.90 | 0.53 |
| 1:D:2094:LEU:O | 1:D:2098:VAL:HG23 | 2.09 | 0.53 |
| 1:D:2821:TRP:HZ3 | 1:D:2878:LEU:HD13 | 1.73 | 0.53 |
| 1:D:3316:LEU:HD21 | 1:D:3346:VAL:HG13 | 1.91 | 0.53 |
| 1:D:3552:PHE:HA | 1:D:3555:ASN:ND2 | 2.23 | 0.53 |
| 1:C:1291:LEU:HB3 | 1:C:1595:LEU:HD11 | 1.89 | 0.53 |
| 1:C:2612[A]:ARG:HB3 | 1:C:2612[A]:ARG:NH1 | 2.23 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:A:179:TYR:N | 1:A:194:SER:O | 2.36 | 0.53 |
| 1:A:460:GLN:N | 1:A:463:GLU:OE2 | 2.39 | 0.53 |
| 1:A:1078:GLU:HB3 | 1:A:1081:TYR:HD2 | 1.74 | 0.53 |
| 1:A:1263:THR:OG1 | 1:A:1265:ASP:OD1 | 2.22 | 0.53 |
| 1:A:3244:PRO:HD2 | 1:A:3249:LEU:HD21 | 1.91 | 0.53 |
| 1:A:4018:ASP:HA | 1:A:4021:LYS:HE3 | 1.91 | 0.53 |
| 1:A:4947:GLN:HB3 | 1:A:4951:LYS:NZ | 2.24 | 0.53 |
| 1:B:1601:MET:CE | 1:B:1602:PRO:HD2 | 2.39 | 0.53 |
| 1:B:2530:MET:HE1 | 1:B:2589:LEU:HD11 | 1.90 | 0.53 |
| 1:B:4937:ILE:HD11 | 1:C:4930:ALA:HB1 | 1.90 | 0.53 |
| 1:D:2330:ARG:HA | 1:D:2333:ASP:OD2 | 2.07 | 0.53 |
| 1:C:818:ARG:NH2 | 1:C:1027:LEU:O | 2.22 | 0.53 |
| 1:C:886:ARG:HD3 | 1:C:907:LEU:HG | 1.90 | 0.53 |
| 1:C:1078:GLU:HB3 | 1:C:1081:TYR:HD2 | 1.74 | 0.53 |
| 1:C:1268:PRO:HB2 | 1:C:1591:CYS:HB2 | 1.91 | 0.53 |
| 1:C:2094:LEU:O | 1:C:2098:VAL:HG23 | 2.09 | 0.53 |
| 1:C:3020:THR:OG1 | 1:C:3023:LYS:O | 2.23 | 0.53 |
| 1:A:2330:ARG:HA | 1:A:2333:ASP:OD2 | 2.07 | 0.53 |
| 1:A:2581:SER:O | 1:A:2585:THR:HG23 | 2.08 | 0.53 |
| 1:A:2859:PRO:HB3 | 1:A:2932:MET:SD | 2.49 | 0.53 |
| 1:A:3316:LEU:HD21 | 1:A:3346:VAL:HG13 | 1.91 | 0.53 |
| 1:A:3455:GLU:HA | 1:A:3458:PHE:CD1 | 2.43 | 0.53 |
| 1:B:2740:VAL:HG12 | 1:B:2818:ALA:HB1 | 1.91 | 0.53 |
| 1:D:1459:GLN:OE1 | 1:D:1459:GLN:N | 2.41 | 0.53 |
| 1:C:468:LEU:HB3 | 1:C:472:ARG:HH12 | 1.74 | 0.53 |
| 1:C:1950:GLU:OE2 | 1:C:1954:ARG:NE | 2.41 | 0.53 |
| 1:C:2612[A]:ARG:HH11 | 1:C:2612[A]:ARG:CB | 2.20 | 0.53 |
| 1:C:3017:PHE:HA | 1:C:3031:ALA:HB2 | 1.91 | 0.53 |
| 1:A:25:SER:OG | 1:A:32:GLN:NE2 | 2.38 | 0.53 |
| 1:A:155:LYS:HG3 | 1:A:156:GLN:H | 1.72 | 0.53 |
| 1:A:600:LEU:HD11 | 1:A:1669:LEU:HD22 | 1.91 | 0.53 |
| 1:A:2969:ILE:O | 1:A:2972:GLU:HG3 | 2.07 | 0.53 |
| 1:B:1291:LEU:HB3 | 1:B:1595:LEU:HD11 | 1.89 | 0.53 |
| 1:B:1459:GLN:N | 1:B:1459:GLN:OE1 | 2.41 | 0.53 |
| 1:B:2470:ILE:HA | 1:B:2499:LYS:HE3 | 1.91 | 0.53 |
| 1:B:2570:ALA:HB2 | 1:B:2613:TYR:HB3 | 1.91 | 0.53 |
| 1:B:2803:GLU:OE1 | 1:B:2806:ARG:NE | 2.42 | 0.53 |
| 1:B:2807:TRP:O | 1:B:2811:GLU:HG2 | 2.08 | 0.53 |
| 1:B:3244:PRO:HD2 | 1:B:3249:LEU:HD21 | 1.91 | 0.53 |
| 1:B:3842:LEU:HD13 | 1:B:3933:PHE:CD2 | 2.44 | 0.53 |
| 1:D:25:SER:OG | 1:D:32:GLN:NE2 | 2.38 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:D:1950:GLU:OE2 | 1:D:1954:ARG:NE | 2.41 | 0.53 |
| 1:D:2577:ILE:HG13 | 1:D:2578:MET:H | 1.74 | 0.53 |
| 1:D:2581:SER:O | 1:D:2585:THR:HG23 | 2.08 | 0.53 |
| 1:D:3625:SER:O | 1:D:3629:ARG:HG2 | 2.09 | 0.53 |
| 1:D:4018:ASP:HA | 1:D:4021:LYS:HE3 | 1.91 | 0.53 |
| 1:D:4184:MET:HB3 | 1:D:5021:PHE:HA | 1.90 | 0.53 |
| 1:C:232:THR:HG21 | 1:C:257:ARG:HE | 1.73 | 0.53 |
| 1:C:884:LEU:O | 1:C:888:GLU:HG2 | 2.08 | 0.53 |
| 1:C:1115:LEU:HD21 | 1:C:1123:VAL:HG11 | 1.90 | 0.53 |
| 1:C:2159:LEU:HD21 | 1:C:2203:MET:HE1 | 1.90 | 0.53 |
| 1:C:2740:VAL:HG12 | 1:C:2818:ALA:HB1 | 1.91 | 0.53 |
| 1:C:2807:TRP:O | 1:C:2811:GLU:HG2 | 2.08 | 0.53 |
| 1:C:2859:PRO:HB3 | 1:C:2932:MET:SD | 2.49 | 0.53 |
| 1:A:788:LYS:HE2 | 1:A:1629:GLN:HG3 | 1.90 | 0.53 |
| 1:A:884:LEU:O | 1:A:888:GLU:HG2 | 2.08 | 0.53 |
| 1:A:1601:MET:CE | 1:A:1602:PRO:HD2 | 2.39 | 0.53 |
| 1:A:2328:GLY:O | 1:A:2332:LEU:HG | 2.09 | 0.53 |
| 1:B:2542:SER:HB2 | 1:B:2594:SER:HB2 | 1.90 | 0.53 |
| 1:D:211:GLU:OE2 | 1:D:392:ARG:NH1 | 2.42 | 0.53 |
| 1:D:1601:MET:CE | 1:D:1602:PRO:HD2 | 2.39 | 0.53 |
| 1:D:2859:PRO:HB3 | 1:D:2932:MET:SD | 2.49 | 0.53 |
| 1:D:4219:PHE:HD1 | 1:D:4950:VAL:HG11 | 1.73 | 0.53 |
| 1:C:347:PHE:HB3 | 1:C:356:TRP:CZ3 | 2.44 | 0.53 |
| 1:C:894:GLY:HA3 | 1:C:903:LEU:HD23 | 1.89 | 0.53 |
| 1:C:3625:SER:O | 1:C:3629:ARG:HG2 | 2.09 | 0.53 |
| 1:A:538:ALA:O | 1:A:542:THR:HG23 | 2.09 | 0.53 |
| 1:A:955:LEU:HD12 | 1:A:966:LYS:HB3 | 1.91 | 0.53 |
| 1:A:1125:ASN:HB3 | 1:A:1128:ARG:CZ | 2.39 | 0.53 |
| 1:A:2159:LEU:HD21 | 1:A:2203:MET:HE1 | 1.91 | 0.53 |
| 1:A:3719:ASP:H | 1:A:3793:MET:HE1 | 1.74 | 0.53 |
| 1:B:2328:GLY:O | 1:B:2332:LEU:HG | 2.08 | 0.53 |
| 1:B:2612[A]:ARG:HH11 | 1:B:2612[A]:ARG:CB | 2.20 | 0.53 |
| 1:B:3479:ALA:HB1 | 1:C:1140:GLY:HA2 | 1.90 | 0.53 |
| 1:B:4556:SER:HB2 | 1:B:4664:LEU:HD13 | 1.91 | 0.53 |
| 1:B:4767:TRP:CE2 | 1:B:4771:ILE:HD11 | 2.44 | 0.53 |
| 1:D:424:LYS:HD2 | 1:D:425:PRO:HD2 | 1.89 | 0.53 |
| 1:D:707:VAL:HG23 | 1:D:713:SER:HB2 | 1.91 | 0.53 |
| 1:D:2178:MET:O | 1:D:2182:ILE:HG12 | 2.08 | 0.53 |
| 1:D:2182:ILE:HA | 1:D:2185:ILE:HD12 | 1.91 | 0.53 |
| 1:D:2272:PRO:O | 1:D:2275:VAL:HG12 | 2.09 | 0.53 |
| 1:D:3017:PHE:HA | 1:D:3031:ALA:HB2 | 1.91 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:3842:LEU:HD13 | 1:D:3933:PHE:CD2 | 2.44 | 0.53 |
| 1:C:460:GLN:N | 1:C:463:GLU:OE2 | 2.39 | 0.53 |
| 1:C:684:VAL:HG22 | 1:C:781:VAL:HG12 | 1.91 | 0.53 |
| 1:C:1154:ASP:HB3 | 1:C:1157:GLU:HB3 | 1.89 | 0.53 |
| 1:C:4219:PHE:HD1 | 1:C:4950:VAL:HG11 | 1.73 | 0.53 |
| 1:C:4540:PHE:O | 1:C:4543:GLU:HG3 | 2.08 | 0.53 |
| 1:A:468:LEU:HB3 | 1:A:472:ARG:HH12 | 1.74 | 0.53 |
| 1:A:707:VAL:HG23 | 1:A:713:SER:HB2 | 1.91 | 0.53 |
| 1:A:1950:GLU:OE2 | 1:A:1954:ARG:NE | 2.41 | 0.53 |
| 1:A:2182:ILE:HA | 1:A:2185:ILE:HD12 | 1.91 | 0.53 |
| 1:A:2542:SER:HB2 | 1:A:2594:SER:HB2 | 1.90 | 0.53 |
| 1:A:3147:ILE:CD1 | 1:A:3152:PHE:HB2 | 2.39 | 0.53 |
| 1:A:4556:SER:HB2 | 1:A:4664:LEU:HD13 | 1.91 | 0.53 |
| 1:B:181:HIS:ND1 | 1:B:198:THR:OG1 | 2.32 | 0.53 |
| 1:B:2182:ILE:HA | 1:B:2185:ILE:HD12 | 1.91 | 0.53 |
| 1:B:2514:ASN:HB2 | 1:B:2517:PHE:HB3 | 1.91 | 0.53 |
| 1:B:2859:PRO:HB3 | 1:B:2932:MET:SD | 2.48 | 0.53 |
| 1:B:3084:GLY:HA3 | 1:B:3089:LYS:HZ3 | 1.72 | 0.53 |
| 1:B:4018:ASP:HA | 1:B:4021:LYS:HE3 | 1.91 | 0.53 |
| 1:D:538:ALA:O | 1:D:542:THR:HG23 | 2.09 | 0.53 |
| 1:D:2023:LEU:HD22 | 1:D:2027:ILE:HG21 | 1.91 | 0.53 |
| 1:D:3244:PRO:HD2 | 1:D:3249:LEU:HD21 | 1.91 | 0.53 |
| 1:D:3262:ARG:HH22 | 1:D:3325:ASN:HB3 | 1.73 | 0.53 |
| 1:C:1601:MET:CE | 1:C:1602:PRO:HD2 | 2.39 | 0.53 |
| 1:C:2182:ILE:HA | 1:C:2185:ILE:HD12 | 1.91 | 0.53 |
| 1:C:2570:ALA:HB2 | 1:C:2613:TYR:HB3 | 1.91 | 0.53 |
| 1:C:3364:ARG:HA | 1:C:3367:LYS:HG2 | 1.91 | 0.53 |
| 1:C:4556:SER:HB2 | 1:C:4664:LEU:HD13 | 1.91 | 0.53 |
| 1:A:2094:LEU:O | 1:A:2098:VAL:HG23 | 2.09 | 0.53 |
| 1:A:2178:MET:O | 1:A:2182:ILE:HG12 | 2.08 | 0.53 |
| 1:A:2272:PRO:O | 1:A:2275:VAL:HG12 | 2.09 | 0.53 |
| 1:A:2355:ARG:O | 1:A:2359:ARG:HG2 | 2.09 | 0.53 |
| 1:B:1125:ASN:HB3 | 1:B:1128:ARG:CZ | 2.39 | 0.53 |
| 1:B:1713:ASP:HA | 1:B:1716:ILE:HD12 | 1.89 | 0.53 |
| 1:B:3316:LEU:HD21 | 1:B:3346:VAL:HG13 | 1.91 | 0.53 |
| 1:B:4540:PHE:O | 1:B:4543:GLU:HG3 | 2.08 | 0.53 |
| 1:D:468:LEU:HB3 | 1:D:472:ARG:HH12 | 1.74 | 0.53 |
| 1:D:796:ARG:NH1 | 1:D:796:ARG:HA | 2.24 | 0.53 |
| 1:D:884:LEU:O | 1:D:888:GLU:HG2 | 2.08 | 0.53 |
| 1:D:1154:ASP:HB3 | 1:D:1157:GLU:HB3 | 1.89 | 0.53 |
| 1:D:2265:LEU:HD13 | 1:D:2331:TYR:CE2 | 2.44 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:211:GLU:OE2 | 1:C:392:ARG:NH1 | 2.42 | 0.53 |
| 1:C:862:VAL:HG12 | 1:C:864:PRO:HD3 | 1.91 | 0.53 |
| 1:C:955:LEU:HD12 | 1:C:966:LYS:HB3 | 1.91 | 0.53 |
| 1:C:2514:ASN:HB2 | 1:C:2517:PHE:HB3 | 1.91 | 0.53 |
| 1:C:2803:GLU:OE1 | 1:C:2806:ARG:NE | 2.42 | 0.53 |
| 1:A:1459:GLN:OE1 | 1:A:1459:GLN:N | 2.41 | 0.52 |
| 1:A:1721:GLU:HG2 | 1:A:1722:SER:N | 2.23 | 0.52 |
| 1:A:2534:ALA:HA | 1:A:2588:ARG:NH1 | 2.21 | 0.52 |
| 1:A:4767:TRP:CE2 | 1:A:4771:ILE:HD11 | 2.44 | 0.52 |
| 1:B:468:LEU:HB3 | 1:B:472:ARG:HH12 | 1.74 | 0.52 |
| 1:B:600:LEU:HD11 | 1:B:1669:LEU:HD22 | 1.91 | 0.52 |
| 1:B:1240:LYS:CB | 1:B:1604:SER:O | 2.57 | 0.52 |
| 1:B:3625:SER:O | 1:B:3629:ARG:HG2 | 2.09 | 0.52 |
| 1:D:181:HIS:HA | 1:D:198:THR:HB | 1.91 | 0.52 |
| 1:D:2328:GLY:O | 1:D:2332:LEU:HG | 2.09 | 0.52 |
| 1:D:4556:SER:HB2 | 1:D:4664:LEU:HD13 | 1.91 | 0.52 |
| 1:C:1125:ASN:HB3 | 1:C:1128:ARG:CZ | 2.39 | 0.52 |
| 1:C:2470:ILE:HA | 1:C:2499:LYS:HE3 | 1.91 | 0.52 |
| 1:C:2577:ILE:HG13 | 1:C:2578:MET:H | 1.74 | 0.52 |
| 1:C:3316:LEU:HD21 | 1:C:3346:VAL:HG13 | 1.91 | 0.52 |
| 1:A:2265:LEU:HD13 | 1:A:2331:TYR:CE2 | 2.44 | 0.52 |
| 1:A:3625:SER:O | 1:A:3629:ARG:HG2 | 2.09 | 0.52 |
| 1:B:211:GLU:OE2 | 1:B:392:ARG:NH1 | 2.42 | 0.52 |
| 1:B:2094:LEU:O | 1:B:2098:VAL:HG23 | 2.09 | 0.52 |
| 1:B:2577:ILE:HG13 | 1:B:2578:MET:H | 1.74 | 0.52 |
| 1:B:3498:ARG:HD3 | 1:B:3501:ASP:HB2 | 1.92 | 0.52 |
| 1:D:659:TYR:O | 1:D:662:TRP:NE1 | 2.43 | 0.52 |
| 1:D:1125:ASN:HB3 | 1:D:1128:ARG:CZ | 2.39 | 0.52 |
| 1:D:1268:PRO:HB2 | 1:D:1591:CYS:HB2 | 1.91 | 0.52 |
| 1:D:2355:ARG:O | 1:D:2359:ARG:HG2 | 2.09 | 0.52 |
| 1:D:2672:LEU:HD22 | 1:D:2710:LEU:HD12 | 1.92 | 0.52 |
| 1:D:3392:LEU:HA | 1:D:3395:ARG:HB2 | 1.91 | 0.52 |
| 1:C:181:HIS:HA | 1:C:198:THR:HB | 1.91 | 0.52 |
| 1:C:181:HIS:ND1 | 1:C:198:THR:OG1 | 2.32 | 0.52 |
| 1:C:707:VAL:HG23 | 1:C:713:SER:HB2 | 1.91 | 0.52 |
| 1:C:796:ARG:NH1 | 1:C:796:ARG:HA | 2.24 | 0.52 |
| 1:C:1240:LYS:CB | 1:C:1604:SER:O | 2.57 | 0.52 |
| 1:A:684:VAL:HG22 | 1:A:781:VAL:HG12 | 1.91 | 0.52 |
| 1:A:796:ARG:NH1 | 1:A:796:ARG:HA | 2.24 | 0.52 |
| 1:A:2803:GLU:OE1 | 1:A:2806:ARG:NE | 2.42 | 0.52 |
| 1:B:347:PHE:HB3 | 1:B:356:TRP:CZ3 | 2.44 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:484:LEU:O | 1:B:488:LEU:HG | 2.09 | 0.52 |
| 1:B:538:ALA:O | 1:B:542:THR:HG23 | 2.09 | 0.52 |
| 1:B:1268:PRO:HB2 | 1:B:1591:CYS:HB2 | 1.91 | 0.52 |
| 1:B:2106:ALA:HB1 | 1:B:3697:PRO:HG3 | 1.91 | 0.52 |
| 1:B:2599:GLN:O | 1:B:2603:ILE:HG13 | 2.10 | 0.52 |
| 1:B:2747:ILE:HG22 | 1:B:2814:LYS:HE2 | 1.91 | 0.52 |
| 1:B:2772:GLN:HG3 | 1:C:1506:GLN:NE2 | 2.25 | 0.52 |
| 1:D:244:LEU:HB3 | 1:D:375:LYS:HZ3 | 1.75 | 0.52 |
| 1:D:257:ARG:O | 1:D:284:HIS:NE2 | 2.29 | 0.52 |
| 1:D:684:VAL:HG22 | 1:D:781:VAL:HG12 | 1.91 | 0.52 |
| 1:D:2616:PRO:HA | 1:D:2619:LEU:HD12 | 1.92 | 0.52 |
| 1:D:3536:ALA:HA | 1:D:3539:ARG:HB2 | 1.92 | 0.52 |
| 1:C:444:SER:O | 1:C:448:LEU:HG | 2.09 | 0.52 |
| 1:C:538:ALA:O | 1:C:542:THR:HG23 | 2.09 | 0.52 |
| 1:C:2672:LEU:HD22 | 1:C:2710:LEU:HD12 | 1.92 | 0.52 |
| 1:C:4767:TRP:CE2 | 1:C:4771:ILE:HD11 | 2.44 | 0.52 |
| 1:A:211:GLU:OE2 | 1:A:392:ARG:NH1 | 2.42 | 0.52 |
| 1:A:347:PHE:HB3 | 1:A:356:TRP:CZ3 | 2.44 | 0.52 |
| 1:A:2023:LEU:HD22 | 1:A:2027:ILE:HG21 | 1.91 | 0.52 |
| 1:A:2570:ALA:HB2 | 1:A:2613:TYR:HB3 | 1.91 | 0.52 |
| 1:A:3536:ALA:HA | 1:A:3539:ARG:HB2 | 1.92 | 0.52 |
| 1:A:3588:ASP:H | 1:A:3591:LYS:HE3 | 1.75 | 0.52 |
| 1:B:663:TYR:CE1 | 1:B:745:SER:HB2 | 2.36 | 0.52 |
| 1:B:886:ARG:HD3 | 1:B:907:LEU:HG | 1.90 | 0.52 |
| 1:B:2233:CYS:O | 1:B:2235:PHE:N | 2.42 | 0.52 |
| 1:B:2626:LEU:O | 1:B:2630:VAL:N | 2.42 | 0.52 |
| 1:D:484:LEU:O | 1:D:488:LEU:HG | 2.09 | 0.52 |
| 1:D:955:LEU:HD12 | 1:D:966:LYS:HB3 | 1.91 | 0.52 |
| 1:D:2570:ALA:HB2 | 1:D:2613:TYR:HB3 | 1.91 | 0.52 |
| 1:D:2740:VAL:HG12 | 1:D:2818:ALA:HB1 | 1.91 | 0.52 |
| 1:D:4767:TRP:CE2 | 1:D:4771:ILE:HD11 | 2.44 | 0.52 |
| 1:C:1005:TRP:CZ3 | 1:C:1018:ASN:HB2 | 2.45 | 0.52 |
| 1:C:2103:VAL:CG1 | 1:C:2107:GLN:HE22 | 2.21 | 0.52 |
| 1:C:2355:ARG:O | 1:C:2359:ARG:HG2 | 2.09 | 0.52 |
| 1:C:2542:SER:HB2 | 1:C:2594:SER:HB2 | 1.90 | 0.52 |
| 1:C:2623:LEU:O | 1:C:2627:VAL:HG23 | 2.09 | 0.52 |
| 1:C:3244:PRO:HD2 | 1:C:3249:LEU:HD21 | 1.91 | 0.52 |
| 1:C:3536:ALA:HA | 1:C:3539:ARG:HB2 | 1.92 | 0.52 |
| 1:C:4018:ASP:HA | 1:C:4021:LYS:HE3 | 1.91 | 0.52 |
| 1:A:181:HIS:HA | 1:A:198:THR:HB | 1.91 | 0.52 |
| 1:A:1005:TRP:CZ3 | 1:A:1018:ASN:HB2 | 2.45 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3123:LYS:HG3 | 1:A:3126:GLY:H | 1.75 | 0.52 |
| 1:B:293:LEU:HD13 | 1:B:378:LEU:HD23 | 1.90 | 0.52 |
| 1:B:2023:LEU:HD22 | 1:B:2027:ILE:HG21 | 1.91 | 0.52 |
| 1:B:2616:PRO:HA | 1:B:2619:LEU:HD12 | 1.92 | 0.52 |
| 1:D:347:PHE:HB3 | 1:D:356:TRP:CZ3 | 2.44 | 0.52 |
| 1:D:865:PRO:O | 1:D:869:ARG:HG2 | 2.10 | 0.52 |
| 1:D:3499:ARG:HG3 | 1:D:3502:ARG:HH22 | 1.75 | 0.52 |
| 1:D:5019:TRP:HH2 | 6:D:5304:PNX:HAA2 | 1.75 | 0.52 |
| 1:C:2265:LEU:HD13 | 1:C:2331:TYR:CE2 | 2.44 | 0.52 |
| 1:A:659:TYR:O | 1:A:662:TRP:NE1 | 2.43 | 0.52 |
| 1:A:2514:ASN:HB2 | 1:A:2517:PHE:HB3 | 1.91 | 0.52 |
| 1:A:2595:LEU:O | 1:A:2600:ARG:NH2 | 2.43 | 0.52 |
| 1:A:2672:LEU:HD22 | 1:A:2710:LEU:HD12 | 1.92 | 0.52 |
| 1:A:2696:TYR:O | 1:A:2700:MET:HE2 | 2.10 | 0.52 |
| 1:A:3019:SER:HB2 | 1:A:3030:HIS:HA | 1.92 | 0.52 |
| 1:A:3207:GLU:HG2 | 1:A:3210:LEU:HD12 | 1.92 | 0.52 |
| 1:A:3364:ARG:HA | 1:A:3367:LYS:HG2 | 1.91 | 0.52 |
| 2:H:7:ILE:HD11 | 2:H:73:LYS:HB2 | 1.90 | 0.52 |
| 1:B:155:LYS:HG3 | 1:B:156:GLN:H | 1.72 | 0.52 |
| 1:B:707:VAL:HG23 | 1:B:713:SER:HB2 | 1.91 | 0.52 |
| 1:B:865:PRO:O | 1:B:869:ARG:HG2 | 2.10 | 0.52 |
| 1:B:955:LEU:HD12 | 1:B:966:LYS:HB3 | 1.91 | 0.52 |
| 1:B:975:VAL:HG11 | 1:B:1044:ARG:O | 2.10 | 0.52 |
| 1:B:2140:ARG:NH2 | 1:B:2201:LEU:HD23 | 2.25 | 0.52 |
| 1:B:2595:LEU:O | 1:B:2600:ARG:NH2 | 2.43 | 0.52 |
| 1:B:2993:GLN:N | 1:B:2993:GLN:OE1 | 2.42 | 0.52 |
| 1:B:3536:ALA:HA | 1:B:3539:ARG:HB2 | 1.92 | 0.52 |
| 1:D:1005:TRP:CZ3 | 1:D:1018:ASN:HB2 | 2.45 | 0.52 |
| 1:D:2157:GLU:O | 1:D:2161:GLN:HG2 | 2.10 | 0.52 |
| 1:D:2233:CYS:O | 1:D:2235:PHE:N | 2.42 | 0.52 |
| 1:D:3123:LYS:HG3 | 1:D:3126:GLY:H | 1.74 | 0.52 |
| 1:D:3733:CYS:HB2 | 1:D:3803:SER:OG | 2.10 | 0.52 |
| 1:C:600:LEU:HD11 | 1:C:1669:LEU:HD22 | 1.91 | 0.52 |
| 1:C:1459:GLN:OE1 | 1:C:1459:GLN:N | 2.41 | 0.52 |
| 1:C:2135:LEU:HA | 1:C:2138:LEU:HD12 | 1.92 | 0.52 |
| 1:C:2272:PRO:O | 1:C:2275:VAL:HG12 | 2.09 | 0.52 |
| 1:C:3123:LYS:HG3 | 1:C:3126:GLY:H | 1.74 | 0.52 |
| 1:C:3262:ARG:HH22 | 1:C:3325:ASN:HB3 | 1.73 | 0.52 |
| 1:C:3499:ARG:HG3 | 1:C:3502:ARG:HH22 | 1.75 | 0.52 |
| 1:A:72:SER:HB3 | 1:A:101:LEU:HD22 | 1.92 | 0.52 |
| 1:A:484:LEU:O | 1:A:488:LEU:HG | 2.09 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:615:ARG:NH2 | 1:A:1676:LEU:O | 2.43 | 0.52 |
| 1:A:862:VAL:HG12 | 1:A:864:PRO:HD3 | 1.91 | 0.52 |
| 1:A:1240:LYS:CB | 1:A:1604:SER:O | 2.57 | 0.52 |
| 1:A:3392:LEU:HA | 1:A:3395:ARG:HB2 | 1.91 | 0.52 |
| 1:A:3733:CYS:HB2 | 1:A:3803:SER:OG | 2.10 | 0.52 |
| 1:A:4658:ILE:HD13 | 1:A:4792:LEU:HB3 | 1.92 | 0.52 |
| 1:B:444:SER:O | 1:B:448:LEU:HG | 2.09 | 0.52 |
| 1:B:659:TYR:O | 1:B:662:TRP:NE1 | 2.43 | 0.52 |
| 1:B:2258:LEU:HB3 | 1:B:2297:LYS:HE2 | 1.92 | 0.52 |
| 1:B:2272:PRO:O | 1:B:2275:VAL:HG12 | 2.09 | 0.52 |
| 1:B:2355:ARG:O | 1:B:2359:ARG:HG2 | 2.09 | 0.52 |
| 1:B:3017:PHE:HA | 1:B:3031:ALA:HB2 | 1.91 | 0.52 |
| 1:B:3262:ARG:HH22 | 1:B:3325:ASN:HB3 | 1.73 | 0.52 |
| 1:B:3499:ARG:HG3 | 1:B:3502:ARG:HH22 | 1.74 | 0.52 |
| 1:B:3588:ASP:H | 1:B:3591:LYS:HE3 | 1.75 | 0.52 |
| 1:B:4947:GLN:HB3 | 1:B:4951:LYS:NZ | 2.24 | 0.52 |
| 1:D:753:PRO:HB2 | 1:D:771:PHE:CZ | 2.45 | 0.52 |
| 1:D:1008:SER:HB2 | 1:D:1017:ARG:HB3 | 1.90 | 0.52 |
| 1:D:1423:ASP:HB3 | 1:D:1426:ILE:HG22 | 1.91 | 0.52 |
| 1:D:2470:ILE:HA | 1:D:2499:LYS:HE3 | 1.91 | 0.52 |
| 1:D:2694:GLU:OE2 | 1:D:2697:ARG:NE | 2.40 | 0.52 |
| 1:D:2891:LYS:O | 1:D:2895:GLU:HB3 | 2.10 | 0.52 |
| 1:D:2993:GLN:OE1 | 1:D:2993:GLN:N | 2.42 | 0.52 |
| 1:D:3364:ARG:HA | 1:D:3367:LYS:HG2 | 1.91 | 0.52 |
| 1:C:615:ARG:NH2 | 1:C:1676:LEU:O | 2.43 | 0.52 |
| 1:C:2106:ALA:HB1 | 1:C:3697:PRO:HG3 | 1.91 | 0.52 |
| 1:C:2328:GLY:O | 1:C:2332:LEU:HG | 2.09 | 0.52 |
| 1:C:2616:PRO:HA | 1:C:2619:LEU:HD12 | 1.92 | 0.52 |
| 1:C:3392:LEU:HA | 1:C:3395:ARG:HB2 | 1.91 | 0.52 |
| 1:C:3648:ARG:HA | 1:C:3651:ASN:HD22 | 1.75 | 0.52 |
| 1:C:4947:GLN:HB3 | 1:C:4951:LYS:NZ | 2.24 | 0.52 |
| 1:A:835:ARG:HG3 | 1:A:838:HIS:NE2 | 2.25 | 0.52 |
| 1:A:2258:LEU:HB3 | 1:A:2297:LYS:HE2 | 1.92 | 0.52 |
| 1:A:2577:ILE:HG13 | 1:A:2578:MET:H | 1.74 | 0.52 |
| 1:A:2616:PRO:HA | 1:A:2619:LEU:HD12 | 1.92 | 0.52 |
| 1:A:3550:ARG:HH12 | 1:A:3593:VAL:C | 2.13 | 0.52 |
| 1:A:4888:TYR:HD1 | 1:B:4914:VAL:HG13 | 1.74 | 0.52 |
| 1:B:862:VAL:HG12 | 1:B:864:PRO:HD3 | 1.90 | 0.52 |
| 1:B:1423:ASP:HB3 | 1:B:1426:ILE:HG22 | 1.91 | 0.52 |
| 1:B:4658:ILE:HD13 | 1:B:4792:LEU:HB3 | 1.92 | 0.52 |
| 1:D:72:SER:HB3 | 1:D:101:LEU:HD22 | 1.92 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:155:LYS:HG3 | 1:D:156:GLN:H | 1.72 | 0.52 |
| 1:D:600:LEU:HD11 | 1:D:1669:LEU:HD22 | 1.91 | 0.52 |
| 1:D:2106:ALA:HB1 | 1:D:3697:PRO:HG3 | 1.91 | 0.52 |
| 1:D:2135:LEU:HA | 1:D:2138:LEU:HD12 | 1.92 | 0.52 |
| 1:D:2542:SER:HB2 | 1:D:2594:SER:HB2 | 1.90 | 0.52 |
| 1:D:2747:ILE:HG22 | 1:D:2814:LYS:HE2 | 1.91 | 0.52 |
| 1:D:2951:ILE:HG21 | 1:D:3032:SER:OG | 2.10 | 0.52 |
| 1:C:404:ILE:HG12 | 1:C:483:MET:HE1 | 1.91 | 0.52 |
| 1:C:975:VAL:HG11 | 1:C:1044:ARG:O | 2.10 | 0.52 |
| 1:C:3550:ARG:HH12 | 1:C:3593:VAL:C | 2.13 | 0.52 |
| 1:C:3878:ASP:OD1 | 1:C:3879:GLU:N | 2.43 | 0.52 |
| 1:A:444:SER:O | 1:A:448:LEU:HG | 2.09 | 0.52 |
| 1:A:2891:LYS:O | 1:A:2895:GLU:HB3 | 2.10 | 0.52 |
| 1:B:684:VAL:HG22 | 1:B:781:VAL:HG12 | 1.91 | 0.52 |
| 1:B:788:LYS:HE2 | 1:B:1629:GLN:HG3 | 1.90 | 0.52 |
| 1:B:4068:LEU:O | 1:B:4072:VAL:HG13 | 2.10 | 0.52 |
| 1:B:5019:TRP:HH2 | 6:B:5304:PNX:HAA2 | 1.75 | 0.52 |
| 1:D:1078:GLU:HB3 | 1:D:1081:TYR:HD2 | 1.74 | 0.52 |
| 1:D:1101:ARG:NH1 | 1:D:1114:GLU:OE2 | 2.35 | 0.52 |
| 1:D:2812:SER:HB2 | 1:D:2882:TYR:CE1 | 2.45 | 0.52 |
| 1:D:3207:GLU:HG2 | 1:D:3210:LEU:HD12 | 1.92 | 0.52 |
| 1:D:3498:ARG:HD3 | 1:D:3501:ASP:HB2 | 1.91 | 0.52 |
| 1:D:3648:ARG:HA | 1:D:3651:ASN:HD22 | 1.75 | 0.52 |
| 1:C:155:LYS:HG3 | 1:C:156:GLN:H | 1.72 | 0.52 |
| 1:C:484:LEU:O | 1:C:488:LEU:HG | 2.09 | 0.52 |
| 1:C:753:PRO:HB2 | 1:C:771:PHE:CZ | 2.45 | 0.52 |
| 1:C:792:LEU:HD22 | 1:C:798:GLY:HA3 | 1.92 | 0.52 |
| 1:C:2789:PRO:O | 1:C:2792:ARG:NE | 2.42 | 0.52 |
| 1:C:3398:PHE:O | 1:C:3402:CYS:N | 2.34 | 0.52 |
| 1:C:3498:ARG:HD3 | 1:C:3501:ASP:HB2 | 1.91 | 0.52 |
| 1:C:3733:CYS:HB2 | 1:C:3803:SER:OG | 2.10 | 0.52 |
| 1:A:131:LEU:O | 1:A:178:ARG:NE | 2.34 | 0.52 |
| 1:A:2135:LEU:HA | 1:A:2138:LEU:HD12 | 1.92 | 0.52 |
| 1:A:2233:CYS:O | 1:A:2235:PHE:N | 2.42 | 0.52 |
| 1:A:2316:LYS:NZ | 1:A:2412:GLU:OE2 | 2.43 | 0.52 |
| 1:A:3092:LEU:HG | 1:A:3096:PHE:CE2 | 2.45 | 0.52 |
| 1:A:3499:ARG:HG3 | 1:A:3502:ARG:HH22 | 1.75 | 0.52 |
| 1:A:4223:ASN:HB3 | 1:A:4224:GLU:OE1 | 2.10 | 0.52 |
| 1:A:5019:TRP:HH2 | 6:A:5304:PNX:HAA2 | 1.75 | 0.52 |
| 2:E:7:ILE:HD11 | 2:E:73:LYS:HB2 | 1.90 | 0.52 |
| 1:B:615:ARG:NH2 | 1:B:1676:LEU:O | 2.43 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:792:LEU:HD22 | 1:B:798:GLY:HA3 | 1.92 | 0.52 |
| 1:B:2812:SER:HB2 | 1:B:2882:TYR:CE1 | 2.45 | 0.52 |
| 1:B:3550:ARG:HH12 | 1:B:3593:VAL:C | 2.13 | 0.52 |
| 1:D:2803:GLU:OE1 | 1:D:2806:ARG:NE | 2.42 | 0.52 |
| 1:D:3020:THR:OG1 | 1:D:3023:LYS:O | 2.23 | 0.52 |
| 1:D:3092:LEU:HG | 1:D:3096:PHE:CE2 | 2.45 | 0.52 |
| 1:D:4947:GLN:HB3 | 1:D:4951:LYS:NZ | 2.24 | 0.52 |
| 1:C:835:ARG:HG3 | 1:C:838:HIS:NE2 | 2.25 | 0.52 |
| 1:C:2233:CYS:O | 1:C:2235:PHE:N | 2.42 | 0.52 |
| 1:C:2615:ARG:HB2 | 1:C:2618:MET:HE3 | 1.91 | 0.52 |
| 1:C:2951:ILE:HG21 | 1:C:3032:SER:OG | 2.10 | 0.52 |
| 1:A:259:LEU:HD11 | 1:A:397:GLU:HG2 | 1.93 | 0.51 |
| 1:A:1268:PRO:HB2 | 1:A:1591:CYS:HB2 | 1.91 | 0.51 |
| 1:A:1423:ASP:HB3 | 1:A:1426:ILE:HG22 | 1.91 | 0.51 |
| 1:A:2755:ILE:HD11 | 1:A:2813:LEU:HD23 | 1.92 | 0.51 |
| 1:A:3017:PHE:HA | 1:A:3031:ALA:HB2 | 1.91 | 0.51 |
| 1:B:181:HIS:HA | 1:B:198:THR:HB | 1.91 | 0.51 |
| 1:B:2103:VAL:CG1 | 1:B:2107:GLN:HE22 | 2.21 | 0.51 |
| 1:B:2633:LEU:HB2 | 1:B:2689:LYS:HE2 | 1.92 | 0.51 |
| 1:B:3019:SER:HB2 | 1:B:3030:HIS:HA | 1.92 | 0.51 |
| 1:B:3104:GLU:HA | 1:B:3107:VAL:HG22 | 1.93 | 0.51 |
| 1:B:3364:ARG:HA | 1:B:3367:LYS:HG2 | 1.91 | 0.51 |
| 1:B:3648:ARG:HA | 1:B:3651:ASN:HD22 | 1.75 | 0.51 |
| 1:D:444:SER:O | 1:D:448:LEU:HG | 2.09 | 0.51 |
| 1:D:3035:GLU:HA | 1:D:3038:MET:HE2 | 1.92 | 0.51 |
| 1:C:865:PRO:O | 1:C:869:ARG:HG2 | 2.10 | 0.51 |
| 1:C:890:GLY:HA3 | 1:C:902:ARG:NH2 | 2.25 | 0.51 |
| 1:C:2157:GLU:O | 1:C:2161:GLN:HG2 | 2.10 | 0.51 |
| 1:C:2595:LEU:O | 1:C:2600:ARG:NH2 | 2.43 | 0.51 |
| 1:C:2599:GLN:O | 1:C:2603:ILE:HG13 | 2.10 | 0.51 |
| 1:C:2626:LEU:O | 1:C:2630:VAL:N | 2.43 | 0.51 |
| 1:A:865:PRO:O | 1:A:869:ARG:HG2 | 2.10 | 0.51 |
| 1:A:2106:ALA:HB1 | 1:A:3697:PRO:HG3 | 1.91 | 0.51 |
| 1:A:2740:VAL:HG12 | 1:A:2818:ALA:HB1 | 1.91 | 0.51 |
| 1:A:2812:SER:HB2 | 1:A:2882:TYR:CE1 | 2.45 | 0.51 |
| 1:A:3753:PHE:HA | 1:A:3756:LYS:NZ | 2.25 | 0.51 |
| 1:A:4068:LEU:O | 1:A:4072:VAL:HG13 | 2.10 | 0.51 |
| 1:B:404:ILE:HG12 | 1:B:483:MET:HE1 | 1.91 | 0.51 |
| 1:B:2135:LEU:HA | 1:B:2138:LEU:HD12 | 1.92 | 0.51 |
| 1:B:2672:LEU:HD22 | 1:B:2710:LEU:HD12 | 1.92 | 0.51 |
| 1:B:3092:LEU:HG | 1:B:3096:PHE:CE2 | 2.45 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:B:3392:LEU:HA | 1:B:3395:ARG:HB2 | 1.90 | 0.51 |
| 1:D:1155:LEU:HD12 | 1:D:1184:ILE:HG23 | 1.92 | 0.51 |
| 1:D:1240:LYS:CB | 1:D:1604:SER:O | 2.57 | 0.51 |
| 1:D:2599:GLN:O | 1:D:2603:ILE:HG13 | 2.10 | 0.51 |
| 1:D:3147:ILE:CD1 | 1:D:3152:PHE:HB2 | 2.39 | 0.51 |
| 1:C:259:LEU:HD11 | 1:C:397:GLU:HG2 | 1.93 | 0.51 |
| 1:C:2993:GLN:OE1 | 1:C:2993:GLN:N | 2.42 | 0.51 |
| 1:C:4223:ASN:HB3 | 1:C:4224:GLU:OE1 | 2.10 | 0.51 |
| 1:A:225:GLY:HA2 | 1:B:155:LYS:NZ | 2.25 | 0.51 |
| 1:A:753:PRO:HB2 | 1:A:771:PHE:CZ | 2.45 | 0.51 |
| 1:A:2623:LEU:O | 1:A:2627:VAL:HG23 | 2.09 | 0.51 |
| 1:A:3984:ARG:NH1 | 1:B:161:GLU:HG3 | 2.25 | 0.51 |
| 1:B:259:LEU:HD11 | 1:B:397:GLU:HG2 | 1.93 | 0.51 |
| 1:B:3733:CYS:HB2 | 1:B:3803:SER:OG | 2.10 | 0.51 |
| 1:B:4892:ARG:HH12 | 1:C:4898:GLY:N | 2.07 | 0.51 |
| 1:D:2514:ASN:HB2 | 1:D:2517:PHE:HB3 | 1.91 | 0.51 |
| 1:D:3019:SER:HB2 | 1:D:3030:HIS:HA | 1.92 | 0.51 |
| 1:D:3270:ILE:HG23 | 1:D:3274:LEU:HD12 | 1.93 | 0.51 |
| 1:D:3550:ARG:HH12 | 1:D:3593:VAL:C | 2.13 | 0.51 |
| 1:D:3878:ASP:OD1 | 1:D:3879:GLU:N | 2.43 | 0.51 |
| 1:C:2258:LEU:HB3 | 1:C:2297:LYS:HE2 | 1.92 | 0.51 |
| 1:A:2612[A]:ARG:HH11 | 1:A:2612[A]:ARG:CB | 2.20 | 0.51 |
| 1:B:72:SER:HB3 | 1:B:101:LEU:HD22 | 1.92 | 0.51 |
| 1:B:753:PRO:HB2 | 1:B:771:PHE:CZ | 2.45 | 0.51 |
| 1:B:1023:PRO:O | 1:B:1027:LEU:N | 2.44 | 0.51 |
| 1:B:1078:GLU:HB3 | 1:B:1081:TYR:HD2 | 1.74 | 0.51 |
| 1:B:3036:LYS:HD2 | 1:B:3076:ASP:H | 1.76 | 0.51 |
| 1:C:659:TYR:O | 1:C:662:TRP:NE1 | 2.42 | 0.51 |
| 1:C:1119:GLU:HA | 1:C:1133:HIS:NE2 | 2.26 | 0.51 |
| 1:C:1854:PHE:HD2 | 1:C:1858:ASP:HB3 | 1.76 | 0.51 |
| 1:C:2294:ASP:OD1 | 1:C:2297:LYS:NZ | 2.43 | 0.51 |
| 1:C:3141:THR:CG2 | 1:C:3145:GLN:HE22 | 2.24 | 0.51 |
| 1:C:3673:MET:SD | 1:C:3728:ILE:HD13 | 2.50 | 0.51 |
| 1:A:975:VAL:HG11 | 1:A:1044:ARG:O | 2.10 | 0.51 |
| 1:A:1155:LEU:HD12 | 1:A:1184:ILE:HG23 | 1.92 | 0.51 |
| 1:A:2157:GLU:O | 1:A:2161:GLN:HG2 | 2.10 | 0.51 |
| 1:A:2633:LEU:HB2 | 1:A:2689:LYS:HE2 | 1.92 | 0.51 |
| 1:A:2986:VAL:HG22 | 1:A:2988:LYS:H | 1.76 | 0.51 |
| 1:A:3647:HIS:O | 1:A:3651:ASN:ND2 | 2.44 | 0.51 |
| 1:B:835:ARG:HG3 | 1:B:838:HIS:NE2 | 2.25 | 0.51 |
| 1:B:1119:GLU:HA | 1:B:1133:HIS:NE2 | 2.25 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:2986:VAL:HG22 | 1:B:2988:LYS:H | 1.76 | 0.51 |
| 1:B:3123:LYS:HG3 | 1:B:3126:GLY:H | 1.75 | 0.51 |
| 1:B:3270:ILE:HG23 | 1:B:3274:LEU:HD12 | 1.93 | 0.51 |
| 1:B:3673:MET:SD | 1:B:3728:ILE:HD13 | 2.50 | 0.51 |
| 1:D:259:LEU:HD11 | 1:D:397:GLU:HG2 | 1.92 | 0.51 |
| 1:D:716:PHE:CE1 | 1:D:764:VAL:HG11 | 2.46 | 0.51 |
| 1:D:975:VAL:HG11 | 1:D:1044:ARG:O | 2.10 | 0.51 |
| 1:D:1977:TYR:O | 1:D:1981:MET:HG3 | 2.11 | 0.51 |
| 1:D:2140:ARG:NH2 | 1:D:2201:LEU:HD23 | 2.25 | 0.51 |
| 1:D:2595:LEU:O | 1:D:2600:ARG:NH2 | 2.43 | 0.51 |
| 1:D:3588:ASP:H | 1:D:3591:LYS:HE3 | 1.74 | 0.51 |
| 1:D:4223:ASN:HB3 | 1:D:4224:GLU:OE1 | 2.10 | 0.51 |
| 1:C:72:SER:HB3 | 1:C:101:LEU:HD22 | 1.92 | 0.51 |
| 1:C:3019:SER:HB2 | 1:C:3030:HIS:HA | 1.92 | 0.51 |
| 1:C:4683:PHE:CZ | 1:C:5017:ARG:HG3 | 2.46 | 0.51 |
| 1:A:1657:LEU:O | 1:A:1661:ARG:N | 2.37 | 0.51 |
| 1:A:2747:ILE:HG22 | 1:A:2814:LYS:HE2 | 1.91 | 0.51 |
| 1:A:3036:LYS:HD2 | 1:A:3076:ASP:H | 1.76 | 0.51 |
| 1:A:3270:ILE:HG23 | 1:A:3274:LEU:HD12 | 1.93 | 0.51 |
| 1:A:3667:HIS:CE1 | 1:A:3669:PHE:HB3 | 2.46 | 0.51 |
| 1:B:2469:ILE:HA | 1:B:2472:LEU:HD12 | 1.93 | 0.51 |
| 1:B:3039:ILE:HA | 1:B:3042:LEU:HD12 | 1.93 | 0.51 |
| 1:B:3100:SER:O | 1:B:3103:ILE:N | 2.43 | 0.51 |
| 1:B:3546:ASP:O | 1:B:3550:ARG:HG2 | 2.11 | 0.51 |
| 1:B:4683:PHE:CZ | 1:B:5017:ARG:HG3 | 2.46 | 0.51 |
| 1:D:615:ARG:NH2 | 1:D:1676:LEU:O | 2.43 | 0.51 |
| 1:D:2258:LEU:HB3 | 1:D:2297:LYS:HE2 | 1.92 | 0.51 |
| 1:D:3100:SER:O | 1:D:3103:ILE:N | 2.43 | 0.51 |
| 1:D:3206:LEU:HD12 | 1:D:3280:TYR:CZ | 2.46 | 0.51 |
| 1:D:3673:MET:SD | 1:D:3728:ILE:HD13 | 2.50 | 0.51 |
| 1:D:3753:PHE:HA | 1:D:3756:LYS:NZ | 2.25 | 0.51 |
| 1:C:1155:LEU:HD12 | 1:C:1184:ILE:HG23 | 1.93 | 0.51 |
| 1:C:1691:GLN:OE1 | 1:C:1691:GLN:N | 2.43 | 0.51 |
| 1:C:3986:TRP:HE3 | 1:C:4047:MET:HE3 | 1.75 | 0.51 |
| 1:A:1119:GLU:HA | 1:A:1133:HIS:NE2 | 2.25 | 0.51 |
| 1:A:2140:ARG:NH2 | 1:A:2201:LEU:HD23 | 2.25 | 0.51 |
| 1:A:3037:GLU:HG3 | 1:A:3080:VAL:HG22 | 1.92 | 0.51 |
| 1:A:3039:ILE:HA | 1:A:3042:LEU:HD12 | 1.93 | 0.51 |
| 1:A:3104:GLU:HA | 1:A:3107:VAL:HG22 | 1.93 | 0.51 |
| 1:B:1854:PHE:HD2 | 1:B:1858:ASP:HB3 | 1.76 | 0.51 |
| 1:B:2294:ASP:OD1 | 1:B:2297:LYS:NZ | 2.43 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:2891:LYS:O | 1:B:2895:GLU:HB3 | 2.10 | 0.51 |
| 1:B:3037:GLU:HG3 | 1:B:3080:VAL:HG22 | 1.92 | 0.51 |
| 1:B:3667:HIS:CE1 | 1:B:3669:PHE:HB3 | 2.46 | 0.51 |
| 1:B:4223:ASN:HB3 | 1:B:4224:GLU:OE1 | 2.10 | 0.51 |
| 1:D:890:GLY:HA3 | 1:D:902:ARG:NH2 | 2.25 | 0.51 |
| 1:D:2789:PRO:O | 1:D:2792:ARG:NE | 2.41 | 0.51 |
| 1:D:4658:ILE:HD13 | 1:D:4792:LEU:HB3 | 1.92 | 0.51 |
| 1:C:25:SER:OG | 1:C:32:GLN:NE2 | 2.38 | 0.51 |
| 1:C:1657:LEU:O | 1:C:1661:ARG:N | 2.37 | 0.51 |
| 1:C:2469:ILE:HA | 1:C:2472:LEU:HD12 | 1.93 | 0.51 |
| 1:C:2986:VAL:HG22 | 1:C:2988:LYS:H | 1.76 | 0.51 |
| 1:C:3410:PRO:HD3 | 1:C:3509:LEU:HD13 | 1.92 | 0.51 |
| 1:C:4068:LEU:O | 1:C:4072:VAL:HG13 | 2.10 | 0.51 |
| 1:C:4569:LEU:HD11 | 1:C:4646:LEU:HD22 | 1.92 | 0.51 |
| 1:A:716:PHE:CE1 | 1:A:764:VAL:HG11 | 2.46 | 0.51 |
| 1:A:890:GLY:HA3 | 1:A:902:ARG:NH2 | 2.25 | 0.51 |
| 1:A:1023:PRO:O | 1:A:1027:LEU:N | 2.44 | 0.51 |
| 1:A:2599:GLN:O | 1:A:2603:ILE:HG13 | 2.10 | 0.51 |
| 1:A:4063:ASP:OD1 | 1:A:4064:MET:N | 2.44 | 0.51 |
| 1:B:2157:GLU:O | 1:B:2161:GLN:HG2 | 2.10 | 0.51 |
| 1:B:2534:ALA:HA | 1:B:2588:ARG:NH1 | 2.21 | 0.51 |
| 1:B:2951:ILE:HG21 | 1:B:3032:SER:OG | 2.10 | 0.51 |
| 1:B:3103:ILE:HG21 | 1:B:3168:THR:HG23 | 1.92 | 0.51 |
| 1:B:3753:PHE:HA | 1:B:3756:LYS:NZ | 2.25 | 0.51 |
| 1:B:3878:ASP:OD1 | 1:B:3879:GLU:N | 2.43 | 0.51 |
| 1:D:426:ARG:NH1 | 1:D:427:GLY:O | 2.44 | 0.51 |
| 1:D:2623:LEU:O | 1:D:2627:VAL:HG23 | 2.10 | 0.51 |
| 1:D:2763:HIS:HB2 | 1:D:2802:LYS:NZ | 2.26 | 0.51 |
| 1:D:3039:ILE:HA | 1:D:3042:LEU:HD12 | 1.93 | 0.51 |
| 1:D:4063:ASP:OD1 | 1:D:4064:MET:N | 2.44 | 0.51 |
| 1:C:16:THR:OG1 | 1:C:99:ARG:N | 2.41 | 0.51 |
| 1:C:2812:SER:HB2 | 1:C:2882:TYR:CE1 | 2.45 | 0.51 |
| 1:C:3036:LYS:HD2 | 1:C:3076:ASP:H | 1.76 | 0.51 |
| 1:C:3104:GLU:HA | 1:C:3107:VAL:HG22 | 1.93 | 0.51 |
| 1:C:3207:GLU:HG2 | 1:C:3210:LEU:HD12 | 1.92 | 0.51 |
| 1:C:3416:VAL:O | 1:C:3420:ARG:N | 2.44 | 0.51 |
| 1:C:3546:ASP:O | 1:C:3550:ARG:HG2 | 2.11 | 0.51 |
| 1:C:3607:GLU:O | 1:C:3611:HIS:ND1 | 2.44 | 0.51 |
| 1:C:3753:PHE:HA | 1:C:3756:LYS:NZ | 2.25 | 0.51 |
| 1:A:1977:TYR:O | 1:A:1981:MET:HG3 | 2.11 | 0.51 |
| 1:A:3100:SER:O | 1:A:3103:ILE:N | 2.43 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:4640:GLU:HB2 | 1:A:4641:PRO:HD3 | 1.93 | 0.51 |
| 1:B:2623:LEU:O | 1:B:2627:VAL:HG23 | 2.09 | 0.51 |
| 1:B:3078:ARG:NH1 | 1:B:3152:PHE:HD1 | 2.09 | 0.51 |
| 1:D:1119:GLU:HA | 1:D:1133:HIS:NE2 | 2.25 | 0.51 |
| 1:D:3416:VAL:O | 1:D:3420:ARG:N | 2.44 | 0.51 |
| 1:C:1023:PRO:O | 1:C:1027:LEU:N | 2.44 | 0.51 |
| 1:C:2023:LEU:HD22 | 1:C:2027:ILE:HG21 | 1.91 | 0.51 |
| 1:C:2355:ARG:HE | 1:C:2358:ILE:HD11 | 1.76 | 0.51 |
| 1:C:2747:ILE:HG22 | 1:C:2814:LYS:HE2 | 1.91 | 0.51 |
| 1:C:2755:ILE:HD11 | 1:C:2813:LEU:HD23 | 1.92 | 0.51 |
| 1:C:3039:ILE:HA | 1:C:3042:LEU:HD12 | 1.93 | 0.51 |
| 1:A:2294:ASP:OD1 | 1:A:2297:LYS:NZ | 2.43 | 0.51 |
| 1:A:3206:LEU:HD12 | 1:A:3280:TYR:CZ | 2.46 | 0.51 |
| 1:A:4569:LEU:HD11 | 1:A:4646:LEU:HD22 | 1.92 | 0.51 |
| 1:B:1005:TRP:CZ3 | 1:B:1018:ASN:HB2 | 2.45 | 0.51 |
| 1:B:2696:TYR:O | 1:B:2700:MET:HE2 | 2.11 | 0.51 |
| 1:B:2763:HIS:HB2 | 1:B:2802:LYS:NZ | 2.26 | 0.51 |
| 1:B:3207:GLU:HG2 | 1:B:3210:LEU:HD12 | 1.92 | 0.51 |
| 1:D:792:LEU:HD22 | 1:D:798:GLY:HA3 | 1.92 | 0.51 |
| 1:C:716:PHE:CE1 | 1:C:764:VAL:HG11 | 2.46 | 0.51 |
| 1:C:3037:GLU:HG3 | 1:C:3080:VAL:HG22 | 1.92 | 0.51 |
| 1:C:3078:ARG:NH1 | 1:C:3152:PHE:HD1 | 2.09 | 0.51 |
| 1:C:3100:SER:O | 1:C:3103:ILE:N | 2.43 | 0.51 |
| 1:C:3206:LEU:HD12 | 1:C:3280:TYR:CZ | 2.46 | 0.51 |
| 1:C:4063:ASP:OD1 | 1:C:4064:MET:N | 2.44 | 0.51 |
| 1:A:213:TYR:N | 1:A:341:TYR:H | 2.08 | 0.50 |
| 1:A:231:LEU:HB2 | 1:A:247:TYR:CE1 | 2.47 | 0.50 |
| 1:A:792:LEU:HD22 | 1:A:798:GLY:HA3 | 1.92 | 0.50 |
| 1:A:2951:ILE:HG21 | 1:A:3032:SER:OG | 2.10 | 0.50 |
| 1:A:3062:PRO:HA | 1:A:3065:VAL:HG22 | 1.94 | 0.50 |
| 1:A:3673:MET:SD | 1:A:3728:ILE:HD13 | 2.50 | 0.50 |
| 1:A:3734:HIS:CD2 | 1:A:3736:GLU:H | 2.27 | 0.50 |
| 1:B:2755:ILE:HD11 | 1:B:2813:LEU:HD23 | 1.92 | 0.50 |
| 1:B:4063:ASP:OD1 | 1:B:4064:MET:N | 2.44 | 0.50 |
| 1:D:16:THR:OG1 | 1:D:99:ARG:N | 2.41 | 0.50 |
| 1:D:3354:LEU:HA | 1:D:3358:PHE:CD2 | 2.42 | 0.50 |
| 1:C:426:ARG:NH1 | 1:C:427:GLY:O | 2.43 | 0.50 |
| 1:C:2140:ARG:NH2 | 1:C:2201:LEU:HD23 | 2.25 | 0.50 |
| 1:C:3092:LEU:HG | 1:C:3096:PHE:CE2 | 2.45 | 0.50 |
| 1:C:3270:ILE:HG23 | 1:C:3274:LEU:HD12 | 1.93 | 0.50 |
| 1:C:3588:ASP:H | 1:C:3591:LYS:HE3 | 1.75 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:3695:PRO:HB3 | 1:C:3699:HIS:HD2 | 1.76 | 0.50 |
| 1:C:4189:ARG:HB3 | 1:C:5031:GLN:NE2 | 2.27 | 0.50 |
| 1:A:426:ARG:NH1 | 1:A:427:GLY:O | 2.44 | 0.50 |
| 1:A:3078:ARG:NH1 | 1:A:3152:PHE:HD1 | 2.09 | 0.50 |
| 1:A:3081:MET:HA | 1:A:3089:LYS:HE3 | 1.94 | 0.50 |
| 1:A:3416:VAL:O | 1:A:3420:ARG:N | 2.44 | 0.50 |
| 1:B:1122:TYR:HE1 | 1:B:1133:HIS:CE1 | 2.29 | 0.50 |
| 1:B:1155:LEU:HD12 | 1:B:1184:ILE:HG23 | 1.92 | 0.50 |
| 1:B:1977:TYR:O | 1:B:1981:MET:HG3 | 2.11 | 0.50 |
| 1:B:2875:ALA:HB3 | 1:B:2920:ARG:HH22 | 1.77 | 0.50 |
| 1:B:3607:GLU:O | 1:B:3611:HIS:ND1 | 2.44 | 0.50 |
| 1:D:231:LEU:HB2 | 1:D:247:TYR:CE1 | 2.47 | 0.50 |
| 1:D:2355:ARG:HE | 1:D:2358:ILE:HD11 | 1.76 | 0.50 |
| 1:D:2469:ILE:HA | 1:D:2472:LEU:HD12 | 1.93 | 0.50 |
| 1:D:2986:VAL:HG22 | 1:D:2988:LYS:H | 1.76 | 0.50 |
| 1:D:3062:PRO:HA | 1:D:3065:VAL:HG22 | 1.93 | 0.50 |
| 1:D:3104:GLU:HA | 1:D:3107:VAL:HG22 | 1.93 | 0.50 |
| 1:D:4683:PHE:CZ | 1:D:5017:ARG:HG3 | 2.46 | 0.50 |
| 1:C:257:ARG:O | 1:C:284:HIS:NE2 | 2.29 | 0.50 |
| 1:C:1423:ASP:HB3 | 1:C:1426:ILE:HG22 | 1.91 | 0.50 |
| 1:C:2367:ALA:HB3 | 1:C:2426:TYR:CE1 | 2.47 | 0.50 |
| 1:C:2788:HIS:CG | 1:C:2789:PRO:HD2 | 2.46 | 0.50 |
| 1:C:3035:GLU:HA | 1:C:3038:MET:HE2 | 1.93 | 0.50 |
| 1:C:4658:ILE:HD13 | 1:C:4792:LEU:HB3 | 1.92 | 0.50 |
| 1:A:2469:ILE:HA | 1:A:2472:LEU:HD12 | 1.93 | 0.50 |
| 1:A:2530:MET:HE1 | 1:A:2589:LEU:HD11 | 1.92 | 0.50 |
| 1:A:3546:ASP:O | 1:A:3550:ARG:HG2 | 2.11 | 0.50 |
| 1:A:3648:ARG:HA | 1:A:3651:ASN:HD22 | 1.75 | 0.50 |
| 1:A:3878:ASP:OD1 | 1:A:3879:GLU:N | 2.43 | 0.50 |
| 1:A:4189:ARG:HB3 | 1:A:5031:GLN:NE2 | 2.26 | 0.50 |
| 1:B:2367:ALA:HB3 | 1:B:2426:TYR:CE1 | 2.47 | 0.50 |
| 1:B:2615:ARG:HB2 | 1:B:2618:MET:HE3 | 1.91 | 0.50 |
| 1:D:70:GLU:OE2 | 1:D:110:ARG:NE | 2.45 | 0.50 |
| 1:D:2159:LEU:HD21 | 1:D:2203:MET:HE1 | 1.93 | 0.50 |
| 1:D:3647:HIS:O | 1:D:3651:ASN:ND2 | 2.44 | 0.50 |
| 1:D:4068:LEU:O | 1:D:4072:VAL:HG13 | 2.10 | 0.50 |
| 1:C:2534:ALA:HA | 1:C:2588:ARG:NH1 | 2.21 | 0.50 |
| 1:C:2875:ALA:HB3 | 1:C:2920:ARG:HH22 | 1.76 | 0.50 |
| 1:C:3647:HIS:O | 1:C:3651:ASN:ND2 | 2.44 | 0.50 |
| 1:C:5019:TRP:HH2 | 6:C:5304:PNX:HAA2 | 1.75 | 0.50 |
| 1:A:20:VAL:HG23 | 1:A:202:MET:HE2 | 1.93 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1122:TYR:HE1 | 1:A:1133:HIS:CE1 | 2.29 | 0.50 |
| 1:A:2123:LEU:O | 1:A:2127:GLN:HG2 | 2.12 | 0.50 |
| 1:A:2265:LEU:HB2 | 1:A:2330:ARG:HD2 | 1.94 | 0.50 |
| 1:A:2367:ALA:HB3 | 1:A:2426:TYR:CE1 | 2.47 | 0.50 |
| 1:A:2875:ALA:HB3 | 1:A:2920:ARG:HH22 | 1.76 | 0.50 |
| 1:A:2993:GLN:OE1 | 1:A:2993:GLN:N | 2.42 | 0.50 |
| 1:A:3607:GLU:O | 1:A:3611:HIS:ND1 | 2.44 | 0.50 |
| 1:A:3696:ASP:OD2 | 1:A:3773:ARG:NH2 | 2.45 | 0.50 |
| 1:A:3868:ARG:HH22 | 1:A:3870:ASN:HB3 | 1.76 | 0.50 |
| 1:B:20:VAL:HG23 | 1:B:202:MET:HE2 | 1.92 | 0.50 |
| 1:B:426:ARG:NH1 | 1:B:427:GLY:O | 2.44 | 0.50 |
| 1:B:890:GLY:HA3 | 1:B:902:ARG:NH2 | 2.25 | 0.50 |
| 1:B:1133:HIS:O | 1:B:1134:LEU:C | 2.50 | 0.50 |
| 1:B:2355:ARG:HE | 1:B:2358:ILE:HD11 | 1.76 | 0.50 |
| 1:B:3416:VAL:O | 1:B:3420:ARG:N | 2.44 | 0.50 |
| 1:B:3696:ASP:OD2 | 1:B:3773:ARG:NH2 | 2.45 | 0.50 |
| 1:B:4189:ARG:HB3 | 1:B:5031:GLN:NE2 | 2.27 | 0.50 |
| 1:D:404:ILE:HG12 | 1:D:483:MET:HE1 | 1.93 | 0.50 |
| 1:D:1109:LEU:HA | 1:D:1120:LEU:HD13 | 1.94 | 0.50 |
| 1:D:2294:ASP:OD1 | 1:D:2297:LYS:NZ | 2.43 | 0.50 |
| 1:D:3410:PRO:HD3 | 1:D:3509:LEU:HD13 | 1.92 | 0.50 |
| 1:D:3607:GLU:O | 1:D:3611:HIS:ND1 | 2.44 | 0.50 |
| 1:D:4189:ARG:HB3 | 1:D:5031:GLN:NE2 | 2.27 | 0.50 |
| 1:C:2288:LEU:O | 1:C:3849:ARG:NH1 | 2.45 | 0.50 |
| 1:C:2891:LYS:O | 1:C:2895:GLU:HB3 | 2.10 | 0.50 |
| 1:C:2998:PHE:HA | 1:C:3002:LEU:HD23 | 1.94 | 0.50 |
| 1:C:3081:MET:HA | 1:C:3089:LYS:HE3 | 1.94 | 0.50 |
| 1:C:3719:ASP:H | 1:C:3793:MET:HE1 | 1.76 | 0.50 |
| 1:A:418:LEU:HA | 1:A:421:PHE:CZ | 2.47 | 0.50 |
| 1:A:613:ALA:HB2 | 1:A:1676:LEU:HD12 | 1.94 | 0.50 |
| 1:A:1785:ALA:H | 2:E:55:VAL:HA | 1.76 | 0.50 |
| 1:A:3103:ILE:HG21 | 1:A:3168:THR:HG23 | 1.92 | 0.50 |
| 1:A:3532:LEU:HD21 | 1:A:3553:LEU:HD22 | 1.94 | 0.50 |
| 1:A:4843:LEU:HD13 | 1:D:4823:LEU:HD13 | 1.94 | 0.50 |
| 1:B:240:ASP:O | 1:B:243:ARG:HG2 | 2.11 | 0.50 |
| 1:B:2265:LEU:HB2 | 1:B:2330:ARG:HD2 | 1.94 | 0.50 |
| 1:B:3081:MET:HA | 1:B:3089:LYS:HE3 | 1.94 | 0.50 |
| 1:B:3206:LEU:HD12 | 1:B:3280:TYR:CZ | 2.46 | 0.50 |
| 1:D:1122:TYR:HE1 | 1:D:1133:HIS:CE1 | 2.29 | 0.50 |
| 1:D:1727:ARG:HB2 | 1:D:1775:HIS:HE1 | 1.77 | 0.50 |
| 1:D:3036:LYS:HD2 | 1:D:3076:ASP:H | 1.76 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:3141:THR:CG2 | 1:D:3145:GLN:HE22 | 2.24 | 0.50 |
| 1:D:3667:HIS:CE1 | 1:D:3669:PHE:HB3 | 2.46 | 0.50 |
| 1:D:3696:ASP:OD2 | 1:D:3773:ARG:NH2 | 2.44 | 0.50 |
| 1:C:20:VAL:HG23 | 1:C:202:MET:HE2 | 1.93 | 0.50 |
| 1:C:1109:LEU:HA | 1:C:1120:LEU:HD13 | 1.94 | 0.50 |
| 1:C:1133:HIS:O | 1:C:1134:LEU:C | 2.50 | 0.50 |
| 1:A:22:LEU:HD23 | 1:A:22:LEU:H | 1.77 | 0.50 |
| 1:A:1727:ARG:HB2 | 1:A:1775:HIS:HE1 | 1.77 | 0.50 |
| 1:A:2355:ARG:HE | 1:A:2358:ILE:HD11 | 1.76 | 0.50 |
| 1:A:3410:PRO:HD3 | 1:A:3509:LEU:HD13 | 1.92 | 0.50 |
| 1:A:3715:LYS:HD3 | 1:A:3716:LEU:O | 2.11 | 0.50 |
| 2:F:55:VAL:HG12 | 2:F:56:ILE:N | 2.27 | 0.50 |
| 1:B:265:LEU:HD12 | 1:B:279:PRO:HB2 | 1.94 | 0.50 |
| 1:B:2288:LEU:O | 1:B:3849:ARG:NH1 | 2.45 | 0.50 |
| 1:B:2694:GLU:OE2 | 1:B:2697:ARG:NE | 2.40 | 0.50 |
| 1:D:2265:LEU:HB2 | 1:D:2330:ARG:HD2 | 1.94 | 0.50 |
| 1:D:2367:ALA:HB3 | 1:D:2426:TYR:CE1 | 2.47 | 0.50 |
| 1:D:3103:ILE:HG21 | 1:D:3168:THR:HG23 | 1.92 | 0.50 |
| 1:C:70:GLU:OE2 | 1:C:110:ARG:NE | 2.45 | 0.50 |
| 1:C:265:LEU:HD12 | 1:C:279:PRO:HB2 | 1.94 | 0.50 |
| 1:C:468:LEU:HB3 | 1:C:472:ARG:NH1 | 2.27 | 0.50 |
| 1:C:1470:ARG:NH2 | 1:C:1471:ALA:O | 2.35 | 0.50 |
| 1:C:2265:LEU:HB2 | 1:C:2330:ARG:HD2 | 1.94 | 0.50 |
| 1:C:3696:ASP:OD2 | 1:C:3773:ARG:NH2 | 2.45 | 0.50 |
| 1:C:3715:LYS:HD3 | 1:C:3716:LEU:O | 2.11 | 0.50 |
| 1:C:3990:VAL:HA | 1:C:3993:LEU:HD12 | 1.94 | 0.50 |
| 1:A:257:ARG:O | 1:A:284:HIS:NE2 | 2.29 | 0.50 |
| 1:A:2763:HIS:HB2 | 1:A:2802:LYS:NZ | 2.26 | 0.50 |
| 1:B:3035:GLU:HA | 1:B:3038:MET:HE2 | 1.93 | 0.50 |
| 1:B:3647:HIS:O | 1:B:3651:ASN:ND2 | 2.44 | 0.50 |
| 1:B:3719:ASP:H | 1:B:3793:MET:HE1 | 1.77 | 0.50 |
| 1:B:4640:GLU:HB2 | 1:B:4641:PRO:HD3 | 1.93 | 0.50 |
| 1:D:835:ARG:HG3 | 1:D:838:HIS:NE2 | 2.25 | 0.50 |
| 1:D:1271:ARG:HH22 | 1:D:1560:ASN:HA | 1.77 | 0.50 |
| 1:D:2123:LEU:O | 1:D:2127:GLN:HG2 | 2.12 | 0.50 |
| 1:D:2875:ALA:HB2 | 1:D:2927:LEU:HD12 | 1.94 | 0.50 |
| 1:D:3546:ASP:O | 1:D:3550:ARG:HG2 | 2.11 | 0.50 |
| 1:D:3695:PRO:HB3 | 1:D:3699:HIS:HD2 | 1.76 | 0.50 |
| 1:D:3734:HIS:CD2 | 1:D:3736:GLU:H | 2.27 | 0.50 |
| 1:D:3842:LEU:HB2 | 1:D:3929:SER:CB | 2.40 | 0.50 |
| 1:C:1122:TYR:HE1 | 1:C:1133:HIS:CE1 | 2.29 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:2123:LEU:O | 1:C:2127:GLN:HG2 | 2.12 | 0.50 |
| 1:C:3103:ILE:HG21 | 1:C:3168:THR:HG23 | 1.92 | 0.50 |
| 1:C:3667:HIS:CE1 | 1:C:3669:PHE:HB3 | 2.46 | 0.50 |
| 1:C:3842:LEU:HB2 | 1:C:3929:SER:CB | 2.40 | 0.50 |
| 1:A:3498:ARG:HD3 | 1:A:3501:ASP:HB2 | 1.92 | 0.50 |
| 1:B:22:LEU:HD23 | 1:B:22:LEU:H | 1.77 | 0.50 |
| 1:B:418:LEU:HA | 1:B:421:PHE:CZ | 2.47 | 0.50 |
| 1:B:2998:PHE:HA | 1:B:3002:LEU:HD23 | 1.94 | 0.50 |
| 1:B:3532:LEU:HD21 | 1:B:3553:LEU:HD22 | 1.94 | 0.50 |
| 1:D:265:LEU:HD12 | 1:D:279:PRO:HB2 | 1.94 | 0.50 |
| 1:D:1854:PHE:HD2 | 1:D:1858:ASP:HB3 | 1.76 | 0.50 |
| 1:D:2633:LEU:HB2 | 1:D:2689:LYS:HE2 | 1.92 | 0.50 |
| 1:D:3283:ARG:HH12 | 1:D:3287:ARG:HH22 | 1.60 | 0.50 |
| 1:C:240:ASP:O | 1:C:243:ARG:HG2 | 2.11 | 0.50 |
| 1:C:244:LEU:HB3 | 1:C:375:LYS:HZ3 | 1.77 | 0.50 |
| 1:C:1582:SER:OG | 1:C:1583:GLU:OE1 | 2.29 | 0.50 |
| 1:C:1727:ARG:HB2 | 1:C:1775:HIS:HE1 | 1.77 | 0.50 |
| 1:C:1977:TYR:O | 1:C:1981:MET:HG3 | 2.11 | 0.50 |
| 1:C:2454:ARG:HE | 1:C:2458:ARG:NE | 2.10 | 0.50 |
| 1:C:2633:LEU:HB2 | 1:C:2689:LYS:HE2 | 1.92 | 0.50 |
| 1:C:3103:ILE:HG12 | 1:C:3168:THR:HG23 | 1.93 | 0.50 |
| 1:A:265:LEU:HD12 | 1:A:279:PRO:HB2 | 1.94 | 0.50 |
| 1:A:468:LEU:HB3 | 1:A:472:ARG:NH1 | 2.27 | 0.50 |
| 1:A:2788:HIS:CG | 1:A:2789:PRO:HD2 | 2.47 | 0.50 |
| 1:A:3103:ILE:HG12 | 1:A:3168:THR:HG23 | 1.93 | 0.50 |
| 1:A:4683:PHE:CZ | 1:A:5017:ARG:HG3 | 2.46 | 0.50 |
| 2:H:55:VAL:HG12 | 2:H:56:ILE:N | 2.27 | 0.50 |
| 1:B:131:LEU:O | 1:B:178:ARG:NE | 2.34 | 0.50 |
| 1:B:276:TRP:O | 1:B:328:LYS:NZ | 2.44 | 0.50 |
| 1:B:2540:THR:O | 1:B:2543:THR:OG1 | 2.27 | 0.50 |
| 1:B:2788:HIS:CG | 1:B:2789:PRO:HD2 | 2.47 | 0.50 |
| 1:B:3062:PRO:HA | 1:B:3065:VAL:HG22 | 1.93 | 0.50 |
| 1:D:42:PHE:HD1 | 1:D:447:ASP:HB3 | 1.77 | 0.50 |
| 1:D:206:CYS:HB2 | 1:D:271:GLY:HA3 | 1.94 | 0.50 |
| 1:D:276:TRP:O | 1:D:328:LYS:NZ | 2.44 | 0.50 |
| 1:D:2626:LEU:O | 1:D:2630:VAL:N | 2.42 | 0.50 |
| 1:D:3037:GLU:HG3 | 1:D:3080:VAL:HG22 | 1.92 | 0.50 |
| 1:D:3228:ALA:HA | 1:D:3232:LEU:HD23 | 1.94 | 0.50 |
| 1:C:231:LEU:HB2 | 1:C:247:TYR:CE1 | 2.47 | 0.50 |
| 1:C:1237:TRP:CE3 | 1:C:1605:TRP:HB3 | 2.47 | 0.50 |
| 1:C:2316:LYS:NZ | 1:C:2412:GLU:OE2 | 2.43 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:2520:HIS:O | 1:C:2524:VAL:HG22 | 2.12 | 0.50 |
| 1:C:2763:HIS:HB2 | 1:C:2802:LYS:NZ | 2.26 | 0.50 |
| 1:C:4640:GLU:HB2 | 1:C:4641:PRO:HD3 | 1.93 | 0.50 |
| 1:C:4865:LYS:HG3 | 1:C:4875:LYS:HE2 | 1.94 | 0.50 |
| 1:A:978:THR:O | 1:A:982:THR:HG23 | 2.12 | 0.49 |
| 1:A:1582:SER:OG | 1:A:1583:GLU:OE1 | 2.29 | 0.49 |
| 1:A:1854:PHE:HD2 | 1:A:1858:ASP:HB3 | 1.76 | 0.49 |
| 1:A:2648:TYR:CD2 | 1:A:2706:ILE:HG12 | 2.47 | 0.49 |
| 1:A:2875:ALA:HB2 | 1:A:2927:LEU:HD12 | 1.94 | 0.49 |
| 2:E:55:VAL:HG12 | 2:E:56:ILE:N | 2.27 | 0.49 |
| 2:G:55:VAL:HG12 | 2:G:56:ILE:N | 2.27 | 0.49 |
| 1:B:613:ALA:HB2 | 1:B:1676:LEU:HD12 | 1.94 | 0.49 |
| 1:B:716:PHE:CE1 | 1:B:764:VAL:HG11 | 2.46 | 0.49 |
| 1:B:978:THR:O | 1:B:982:THR:HG23 | 2.12 | 0.49 |
| 1:B:1808:ARG:HD2 | 1:B:1854:PHE:HA | 1.94 | 0.49 |
| 1:B:2439:GLU:O | 1:B:2443:ILE:HG12 | 2.12 | 0.49 |
| 1:B:2520:HIS:O | 1:B:2524:VAL:HG22 | 2.12 | 0.49 |
| 1:B:2648:TYR:CD2 | 1:B:2706:ILE:HG12 | 2.47 | 0.49 |
| 1:B:2875:ALA:HB2 | 1:B:2927:LEU:HD12 | 1.94 | 0.49 |
| 1:B:3410:PRO:HD3 | 1:B:3509:LEU:HD13 | 1.92 | 0.49 |
| 1:B:3734:HIS:CD2 | 1:B:3736:GLU:H | 2.27 | 0.49 |
| 1:D:20:VAL:HG23 | 1:D:202:MET:HE2 | 1.93 | 0.49 |
| 1:D:22:LEU:HD23 | 1:D:22:LEU:H | 1.77 | 0.49 |
| 1:D:240:ASP:O | 1:D:243:ARG:HG2 | 2.11 | 0.49 |
| 1:D:418:LEU:HA | 1:D:421:PHE:CZ | 2.47 | 0.49 |
| 1:D:1023:PRO:O | 1:D:1027:LEU:N | 2.44 | 0.49 |
| 1:D:1808:ARG:HD2 | 1:D:1854:PHE:HA | 1.94 | 0.49 |
| 1:D:2998:PHE:HA | 1:D:3002:LEU:HD23 | 1.94 | 0.49 |
| 1:D:3078:ARG:NH1 | 1:D:3152:PHE:HD1 | 2.09 | 0.49 |
| 1:C:3228:ALA:HA | 1:C:3232:LEU:HD23 | 1.94 | 0.49 |
| 1:A:1509:ILE:HD12 | 1:A:1509:ILE:H | 1.77 | 0.49 |
| 1:B:42:PHE:HD1 | 1:B:447:ASP:HB3 | 1.77 | 0.49 |
| 1:B:231:LEU:HB2 | 1:B:247:TYR:CE1 | 2.47 | 0.49 |
| 1:B:2316:LYS:NZ | 1:B:2412:GLU:OE2 | 2.43 | 0.49 |
| 1:B:3103:ILE:HG12 | 1:B:3168:THR:HG23 | 1.93 | 0.49 |
| 1:B:3986:TRP:HE3 | 1:B:4047:MET:HE3 | 1.76 | 0.49 |
| 1:B:4967:TYR:OH | 1:B:5033:GLU:OE2 | 2.21 | 0.49 |
| 1:D:360:ALA:HB2 | 1:D:377:ILE:HG23 | 1.94 | 0.49 |
| 1:D:1133:HIS:O | 1:D:1134:LEU:C | 2.50 | 0.49 |
| 1:D:2316:LYS:NZ | 1:D:2412:GLU:OE2 | 2.43 | 0.49 |
| 1:D:2454:ARG:HE | 1:D:2458:ARG:NE | 2.10 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:D:3103:ILE:HG12 | 1:D:3168:THR:HG23 | 1.93 | 0.49 |
| 1:D:3802:ILE:HD12 | 1:D:3886:ARG:HG3 | 1.94 | 0.49 |
| 1:C:360:ALA:HB2 | 1:C:377:ILE:HG23 | 1.94 | 0.49 |
| 1:C:2215:LEU:O | 1:C:2219:GLU:HB3 | 2.12 | 0.49 |
| 1:C:3802:ILE:HD12 | 1:C:3886:ARG:HG3 | 1.94 | 0.49 |
| 1:A:70:GLU:OE2 | 1:A:110:ARG:NE | 2.45 | 0.49 |
| 1:A:1089:TYR:HB3 | 1:A:1225:PRO:HA | 1.95 | 0.49 |
| 1:A:1743[B]:ARG:NH2 | 1:A:1967:ASP:OD2 | 2.32 | 0.49 |
| 1:A:1762:LEU:O | 1:A:1765:VAL:HG12 | 2.13 | 0.49 |
| 1:A:1815:LEU:O | 1:A:1819:VAL:HG23 | 2.12 | 0.49 |
| 1:A:4865:LYS:HG3 | 1:A:4875:LYS:HE2 | 1.94 | 0.49 |
| 1:B:1163:THR:HA | 1:B:1168:VAL:HA | 1.94 | 0.49 |
| 1:B:2170:MET:SD | 1:B:2171:GLY:N | 2.85 | 0.49 |
| 1:D:978:THR:O | 1:D:982:THR:HG23 | 2.12 | 0.49 |
| 1:D:2288:LEU:O | 1:D:3849:ARG:NH1 | 2.45 | 0.49 |
| 1:C:1815:LEU:O | 1:C:1819:VAL:HG23 | 2.12 | 0.49 |
| 1:C:2648:TYR:CD2 | 1:C:2706:ILE:HG12 | 2.47 | 0.49 |
| 1:C:3514:LEU:HA | 1:C:3517:MET:HG2 | 1.94 | 0.49 |
| 1:C:3989:VAL:HG13 | 1:C:4023:MET:HE3 | 1.94 | 0.49 |
| 1:A:42:PHE:HD1 | 1:A:447:ASP:HB3 | 1.77 | 0.49 |
| 1:A:454:PRO:HD3 | 1:A:531:ARG:NH2 | 2.27 | 0.49 |
| 1:A:721:LEU:HD11 | 1:A:768:PHE:HE1 | 1.76 | 0.49 |
| 1:A:972:LEU:HB3 | 1:A:1044:ARG:HG2 | 1.94 | 0.49 |
| 1:A:2865:VAL:HB | 1:A:2928:LYS:HD2 | 1.94 | 0.49 |
| 1:A:3936:TYR:N | 1:B:76:ARG:HH12 | 2.11 | 0.49 |
| 1:B:206:CYS:HB2 | 1:B:271:GLY:HA3 | 1.94 | 0.49 |
| 1:B:1582:SER:OG | 1:B:1583:GLU:OE1 | 2.29 | 0.49 |
| 1:B:4232:GLU:OE1 | 1:B:5019:TRP:NE1 | 2.42 | 0.49 |
| 1:B:4865:LYS:HG3 | 1:B:4875:LYS:HE2 | 1.94 | 0.49 |
| 1:D:454:PRO:HD3 | 1:D:531:ARG:NH2 | 2.28 | 0.49 |
| 1:D:972:LEU:HB3 | 1:D:1044:ARG:HG2 | 1.95 | 0.49 |
| 1:D:1089:TYR:HB3 | 1:D:1225:PRO:HA | 1.94 | 0.49 |
| 1:D:1509:ILE:H | 1:D:1509:ILE:HD12 | 1.77 | 0.49 |
| 1:D:2755:ILE:HD11 | 1:D:2813:LEU:HD23 | 1.92 | 0.49 |
| 1:D:3081:MET:HA | 1:D:3089:LYS:HE3 | 1.94 | 0.49 |
| 1:D:3868:ARG:HH22 | 1:D:3870:ASN:HB3 | 1.77 | 0.49 |
| 1:D:4087:LEU:HB2 | 1:D:4122:MET:HE2 | 1.93 | 0.49 |
| 1:D:4569:LEU:HD11 | 1:D:4646:LEU:HD22 | 1.92 | 0.49 |
| 1:D:4865:LYS:HG3 | 1:D:4875:LYS:HE2 | 1.94 | 0.49 |
| 1:C:418:LEU:HA | 1:C:421:PHE:CZ | 2.47 | 0.49 |
| 1:C:719:LEU:HA | 1:C:735:GLN:HE21 | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:721:LEU:HD11 | 1:C:768:PHE:HE1 | 1.76 | 0.49 |
| 1:C:972:LEU:HB3 | 1:C:1044:ARG:HG2 | 1.95 | 0.49 |
| 1:C:2875:ALA:HB2 | 1:C:2927:LEU:HD12 | 1.94 | 0.49 |
| 1:C:3951:PHE:O | 1:C:3955:MET:HG3 | 2.13 | 0.49 |
| 1:C:4138:ASP:O | 1:C:4142:ASN:ND2 | 2.37 | 0.49 |
| 1:A:1271:ARG:HH22 | 1:A:1560:ASN:HA | 1.77 | 0.49 |
| 1:A:3283:ARG:HH12 | 1:A:3287:ARG:HH22 | 1.60 | 0.49 |
| 1:A:3695:PRO:HB3 | 1:A:3699:HIS:HD2 | 1.76 | 0.49 |
| 1:A:3802:ILE:HD12 | 1:A:3886:ARG:HG3 | 1.94 | 0.49 |
| 1:B:815:VAL:O | 1:B:1007:TYR:OH | 2.27 | 0.49 |
| 1:B:1089:TYR:HB3 | 1:B:1225:PRO:HA | 1.94 | 0.49 |
| 1:B:2454:ARG:HE | 1:B:2458:ARG:NE | 2.10 | 0.49 |
| 1:B:3514:LEU:HA | 1:B:3517:MET:HG2 | 1.94 | 0.49 |
| 1:B:3622:LYS:HB2 | 1:B:3625:SER:OG | 2.13 | 0.49 |
| 1:B:3951:PHE:O | 1:B:3955:MET:HG3 | 2.13 | 0.49 |
| 1:B:4816:ILE:HD11 | 1:C:4846:VAL:HG21 | 1.95 | 0.49 |
| 1:D:836:GLY:HA3 | 1:D:1201:HIS:CE1 | 2.48 | 0.49 |
| 1:D:915:GLU:HA | 1:D:918:ARG:HB2 | 1.95 | 0.49 |
| 1:D:1237:TRP:CE3 | 1:D:1605:TRP:HB3 | 2.47 | 0.49 |
| 1:D:2170:MET:SD | 1:D:2171:GLY:N | 2.85 | 0.49 |
| 1:D:2207:VAL:O | 1:D:2211:MET:HG3 | 2.13 | 0.49 |
| 1:D:2431:ASP:OD1 | 1:D:2435:ARG:NE | 2.39 | 0.49 |
| 1:C:978:THR:O | 1:C:982:THR:HG23 | 2.12 | 0.49 |
| 1:C:1509:ILE:H | 1:C:1509:ILE:HD12 | 1.77 | 0.49 |
| 1:A:836:GLY:HA3 | 1:A:1201:HIS:CE1 | 2.48 | 0.49 |
| 1:A:1109:LEU:HA | 1:A:1120:LEU:HD13 | 1.94 | 0.49 |
| 1:A:2170:MET:SD | 1:A:2171:GLY:N | 2.85 | 0.49 |
| 1:A:2288:LEU:O | 1:A:3849:ARG:NH1 | 2.45 | 0.49 |
| 1:A:3035:GLU:HA | 1:A:3038:MET:HE2 | 1.93 | 0.49 |
| 1:A:3141:THR:CG2 | 1:A:3145:GLN:HE22 | 2.24 | 0.49 |
| 1:A:3951:PHE:O | 1:A:3955:MET:HG3 | 2.13 | 0.49 |
| 1:A:4232:GLU:OE1 | 1:A:5019:TRP:NE1 | 2.42 | 0.49 |
| 2:G:55:VAL:HG12 | 2:G:56:ILE:H | 1.78 | 0.49 |
| 1:B:468:LEU:HB3 | 1:B:472:ARG:NH1 | 2.27 | 0.49 |
| 1:B:574:VAL:HA | 1:B:577:ILE:HG12 | 1.95 | 0.49 |
| 1:B:972:LEU:HB3 | 1:B:1044:ARG:HG2 | 1.95 | 0.49 |
| 1:B:1509:ILE:H | 1:B:1509:ILE:HD12 | 1.77 | 0.49 |
| 1:B:1691:GLN:OE1 | 1:B:1691:GLN:N | 2.43 | 0.49 |
| 1:B:2123:LEU:O | 1:B:2127:GLN:HG2 | 2.12 | 0.49 |
| 1:B:2215:LEU:O | 1:B:2219:GLU:HB3 | 2.12 | 0.49 |
| 1:B:3349:ALA:HB3 | 1:B:3415:TYR:CE1 | 2.48 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3445:TRP:HD1 | 1:B:3451:PHE:CD2 | 2.31 | 0.49 |
| 1:B:3695:PRO:HB3 | 1:B:3699:HIS:HD2 | 1.76 | 0.49 |
| 1:D:468:LEU:HB3 | 1:D:472:ARG:NH1 | 2.27 | 0.49 |
| 1:D:574:VAL:O | 1:D:578:ILE:HG13 | 2.12 | 0.49 |
| 1:D:2299:VAL:HG11 | 1:D:2356:LEU:HD13 | 1.95 | 0.49 |
| 1:D:2788:HIS:CG | 1:D:2789:PRO:HD2 | 2.46 | 0.49 |
| 1:D:3248:ARG:NE | 1:D:3248:ARG:HA | 2.28 | 0.49 |
| 1:D:3532:LEU:HD21 | 1:D:3553:LEU:HD22 | 1.94 | 0.49 |
| 1:D:3990:VAL:HA | 1:D:3993:LEU:HD12 | 1.94 | 0.49 |
| 1:D:4639:MET:HA | 1:D:4642:ALA:HB3 | 1.95 | 0.49 |
| 1:C:22:LEU:HD23 | 1:C:22:LEU:H | 1.77 | 0.49 |
| 1:C:280:LEU:HD21 | 1:C:316:PHE:HB2 | 1.95 | 0.49 |
| 1:C:915:GLU:HA | 1:C:918:ARG:HB2 | 1.95 | 0.49 |
| 1:C:2088:GLU:OE1 | 1:C:2089:LYS:N | 2.46 | 0.49 |
| 1:C:2170:MET:SD | 1:C:2171:GLY:N | 2.85 | 0.49 |
| 1:C:2439:GLU:O | 1:C:2443:ILE:HG12 | 2.12 | 0.49 |
| 1:C:3062:PRO:HA | 1:C:3065:VAL:HG22 | 1.93 | 0.49 |
| 1:C:3248:ARG:HA | 1:C:3248:ARG:NE | 2.28 | 0.49 |
| 1:C:3280:TYR:O | 1:C:3284:TRP:HD1 | 1.96 | 0.49 |
| 1:C:4232:GLU:OE1 | 1:C:5019:TRP:NE1 | 2.42 | 0.49 |
| 1:A:240:ASP:O | 1:A:243:ARG:HG2 | 2.11 | 0.49 |
| 1:A:1992:ALA:HB1 | 1:A:1996:ARG:HH22 | 1.78 | 0.49 |
| 1:A:2215:LEU:O | 1:A:2219:GLU:HB3 | 2.12 | 0.49 |
| 1:A:4648:LEU:HD12 | 1:A:4803:HIS:HE1 | 1.78 | 0.49 |
| 1:B:719:LEU:HA | 1:B:735:GLN:HE21 | 1.77 | 0.49 |
| 1:B:1109:LEU:HA | 1:B:1120:LEU:HD13 | 1.94 | 0.49 |
| 1:B:2789:PRO:O | 1:B:2792:ARG:NE | 2.42 | 0.49 |
| 1:B:4892:ARG:HH12 | 1:C:4898:GLY:CA | 2.25 | 0.49 |
| 1:D:565:TYR:CZ | 1:D:569:ILE:HD11 | 2.48 | 0.49 |
| 1:D:2439:GLU:O | 1:D:2443:ILE:HG12 | 2.12 | 0.49 |
| 1:D:2875:ALA:HB3 | 1:D:2920:ARG:HH22 | 1.76 | 0.49 |
| 1:C:13:PHE:HE1 | 1:C:164:ARG:HG2 | 1.78 | 0.49 |
| 1:C:276:TRP:O | 1:C:328:LYS:NZ | 2.44 | 0.49 |
| 1:C:836:GLY:HA3 | 1:C:1201:HIS:CE1 | 2.48 | 0.49 |
| 1:A:574:VAL:HA | 1:A:577:ILE:HG12 | 1.95 | 0.49 |
| 1:A:2998:PHE:HA | 1:A:3002:LEU:HD23 | 1.94 | 0.49 |
| 1:A:3263:TYR:HD1 | 1:A:3270:ILE:HD12 | 1.78 | 0.49 |
| 1:B:16:THR:OG1 | 1:B:99:ARG:N | 2.41 | 0.49 |
| 1:B:280:LEU:HD21 | 1:B:316:PHE:HB2 | 1.95 | 0.49 |
| 1:B:793:LEU:HB3 | 1:B:812:HIS:HB3 | 1.95 | 0.49 |
| 1:B:836:GLY:HA3 | 1:B:1201:HIS:CE1 | 2.48 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:B:1815:LEU:O | 1:B:1819:VAL:HG23 | 2.12 | 0.49 |
| 1:B:2207:VAL:O | 1:B:2211:MET:HG3 | 2.13 | 0.49 |
| 1:D:2135:LEU:HD22 | 1:D:3662:ILE:HG22 | 1.95 | 0.49 |
| 1:D:2215:LEU:O | 1:D:2219:GLU:HB3 | 2.12 | 0.49 |
| 1:D:2520:HIS:O | 1:D:2524:VAL:HG22 | 2.12 | 0.49 |
| 1:D:2612[A]:ARG:HH11 | 1:D:2612[A]:ARG:CG | 2.26 | 0.49 |
| 1:D:4640:GLU:HB2 | 1:D:4641:PRO:HD3 | 1.93 | 0.49 |
| 1:C:1808:ARG:HD2 | 1:C:1854:PHE:HA | 1.94 | 0.49 |
| 1:C:2676:ARG:HB2 | 1:C:2714:TYR:HH | 1.76 | 0.49 |
| 1:C:2865:VAL:HB | 1:C:2928:LYS:HD2 | 1.94 | 0.49 |
| 1:C:3445:TRP:HD1 | 1:C:3451:PHE:CD2 | 2.31 | 0.49 |
| 1:A:1237:TRP:CE3 | 1:A:1605:TRP:HB3 | 2.47 | 0.49 |
| 1:A:1252:HIS:CE1 | 1:A:1254:HIS:HB2 | 2.48 | 0.49 |
| 1:A:1297:PHE:HE1 | 1:A:1548:LEU:HD12 | 1.78 | 0.49 |
| 1:A:2088:GLU:OE1 | 1:A:2089:LYS:N | 2.46 | 0.49 |
| 1:A:2210:VAL:HA | 1:A:2213:ASN:HD22 | 1.77 | 0.49 |
| 1:A:2234:ARG:O | 1:A:2238:TYR:HB2 | 2.12 | 0.49 |
| 1:A:2439:GLU:O | 1:A:2443:ILE:HG12 | 2.12 | 0.49 |
| 1:A:2712:PRO:HB3 | 1:A:2956:ALA:HB2 | 1.95 | 0.49 |
| 1:A:2948:THR:HG22 | 1:A:2952:GLU:HG2 | 1.95 | 0.49 |
| 1:A:3990:VAL:HA | 1:A:3993:LEU:HD12 | 1.94 | 0.49 |
| 1:A:5033:GLU:O | 1:A:5037:SER:OG | 2.21 | 0.49 |
| 2:G:42:ARG:HH21 | 1:C:1780:PRO:HB2 | 1.78 | 0.49 |
| 2:F:49:MET:N | 2:F:54:GLU:OE2 | 2.45 | 0.49 |
| 1:B:13:PHE:HE1 | 1:B:164:ARG:HG2 | 1.78 | 0.49 |
| 1:B:70:GLU:OE2 | 1:B:110:ARG:NE | 2.45 | 0.49 |
| 1:B:360:ALA:HB2 | 1:B:377:ILE:HG23 | 1.94 | 0.49 |
| 1:B:1748:PHE:HE1 | 1:B:1760:HIS:HA | 1.78 | 0.49 |
| 1:B:1992:ALA:HB1 | 1:B:1996:ARG:HH22 | 1.78 | 0.49 |
| 1:B:2712:PRO:HB3 | 1:B:2956:ALA:HB2 | 1.95 | 0.49 |
| 1:B:2963:LEU:O | 1:B:2967:MET:HG2 | 2.13 | 0.49 |
| 1:D:34:LYS:NZ | 1:D:53:SER:HA | 2.28 | 0.49 |
| 1:D:574:VAL:HA | 1:D:577:ILE:HG12 | 1.95 | 0.49 |
| 1:D:2210:VAL:HA | 1:D:2213:ASN:HD22 | 1.77 | 0.49 |
| 1:D:2349:ASN:HA | 1:D:2352:VAL:HG12 | 1.95 | 0.49 |
| 1:D:2648:TYR:CD2 | 1:D:2706:ILE:HG12 | 2.47 | 0.49 |
| 1:D:2712:PRO:HB3 | 1:D:2956:ALA:HB2 | 1.95 | 0.49 |
| 1:D:2865:VAL:HB | 1:D:2928:LYS:HD2 | 1.94 | 0.49 |
| 1:D:3157:ILE:HD12 | 1:D:3202:PRO:HD3 | 1.95 | 0.49 |
| 1:D:3445:TRP:HD1 | 1:D:3451:PHE:CD2 | 2.31 | 0.49 |
| 1:C:574:VAL:O | 1:C:578:ILE:HG13 | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:C:1748:PHE:HE1 | 1:C:1760:HIS:HA | 1.78 | 0.49 |
| 1:C:1762:LEU:O | 1:C:1765:VAL:HG12 | 2.13 | 0.49 |
| 1:C:2349:ASN:HA | 1:C:2352:VAL:HG12 | 1.95 | 0.49 |
| 1:C:2612[A]:ARG:HH11 | 1:C:2612[A]:ARG:CG | 2.26 | 0.49 |
| 1:C:2971:GLN:HE21 | 1:C:3049:LEU:HD11 | 1.78 | 0.49 |
| 1:C:3191:GLY:HA2 | 1:C:3272:ILE:HG23 | 1.95 | 0.49 |
| 1:A:574:VAL:O | 1:A:578:ILE:HG13 | 2.12 | 0.49 |
| 1:A:1808:ARG:HD2 | 1:A:1854:PHE:HA | 1.94 | 0.49 |
| 1:A:1867:GLU:CD | 1:A:1928:GLN:HE22 | 2.15 | 0.49 |
| 1:A:3281:LEU:O | 1:A:3307:VAL:HG11 | 2.13 | 0.49 |
| 1:B:1727:ARG:HB2 | 1:B:1775:HIS:HE1 | 1.77 | 0.49 |
| 1:B:3802:ILE:HD12 | 1:B:3886:ARG:HG3 | 1.94 | 0.49 |
| 1:B:4569:LEU:HD11 | 1:B:4646:LEU:HD22 | 1.92 | 0.49 |
| 1:D:13:PHE:HE1 | 1:D:164:ARG:HG2 | 1.78 | 0.49 |
| 1:D:721:LEU:HD11 | 1:D:768:PHE:HE1 | 1.76 | 0.49 |
| 1:D:1582:SER:OG | 1:D:1583:GLU:OE1 | 2.29 | 0.49 |
| 1:D:2088:GLU:OE1 | 1:D:2089:LYS:N | 2.46 | 0.49 |
| 1:D:2963:LEU:O | 1:D:2967:MET:HG2 | 2.13 | 0.49 |
| 1:D:3191:GLY:HA2 | 1:D:3272:ILE:HG23 | 1.94 | 0.49 |
| 1:D:3280:TYR:O | 1:D:3284:TRP:HD1 | 1.96 | 0.49 |
| 1:D:3715:LYS:HD3 | 1:D:3716:LEU:O | 2.11 | 0.49 |
| 1:D:3718:GLU:OE1 | 1:D:3793:MET:HE3 | 2.13 | 0.49 |
| 1:D:3951:PHE:O | 1:D:3955:MET:HG3 | 2.13 | 0.49 |
| 1:C:42:PHE:HD1 | 1:C:447:ASP:HB3 | 1.77 | 0.49 |
| 1:C:793:LEU:HB3 | 1:C:812:HIS:HB3 | 1.95 | 0.49 |
| 1:C:1271:ARG:HH22 | 1:C:1560:ASN:HA | 1.77 | 0.49 |
| 1:C:2540:THR:O | 1:C:2543:THR:OG1 | 2.27 | 0.49 |
| 1:C:2696:TYR:O | 1:C:2700:MET:HE2 | 2.12 | 0.49 |
| 1:C:2712:PRO:HB3 | 1:C:2956:ALA:HB2 | 1.95 | 0.49 |
| 1:C:3532:LEU:HD21 | 1:C:3553:LEU:HD22 | 1.94 | 0.49 |
| 1:C:4087:LEU:HB2 | 1:C:4122:MET:HE2 | 1.95 | 0.49 |
| 1:C:4639:MET:HA | 1:C:4642:ALA:HB3 | 1.95 | 0.49 |
| 1:C:4998:LYS:HB3 | 1:C:5003:HIS:HE1 | 1.78 | 0.49 |
| 1:A:2918:ARG:O | 1:A:2921:GLU:HG3 | 2.13 | 0.48 |
| 1:A:3445:TRP:HD1 | 1:A:3451:PHE:CD2 | 2.31 | 0.48 |
| 1:B:257:ARG:O | 1:B:284:HIS:NE2 | 2.29 | 0.48 |
| 1:B:1207:ASP:O | 1:B:1210:SER:OG | 2.30 | 0.48 |
| 1:B:1762:LEU:O | 1:B:1765:VAL:HG12 | 2.13 | 0.48 |
| 1:B:2612[A]:ARG:HH11 | 1:B:2612[A]:ARG:CG | 2.26 | 0.48 |
| 1:B:2772:GLN:O | 1:C:1506:GLN:NE2 | 2.42 | 0.48 |
| 1:B:3114:LYS:HD2 | 1:B:3116:SER:N | 2.25 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:B:3248:ARG:NE | 1:B:3248:ARG:HA | 2.28 | 0.48 |
| 1:B:3990:VAL:HA | 1:B:3993:LEU:HD12 | 1.94 | 0.48 |
| 1:B:4904:PRO:HG3 | 1:B:4913:ARG:HH11 | 1.78 | 0.48 |
| 1:B:4998:LYS:HB3 | 1:B:5003:HIS:HE1 | 1.78 | 0.48 |
| 1:D:797:HIS:CE1 | 1:D:821:LEU:HD22 | 2.48 | 0.48 |
| 1:D:1762:LEU:O | 1:D:1765:VAL:HG12 | 2.13 | 0.48 |
| 1:D:2234:ARG:O | 1:D:2238:TYR:HB2 | 2.12 | 0.48 |
| 1:D:2948:THR:HG22 | 1:D:2952:GLU:HG2 | 1.95 | 0.48 |
| 1:C:574:VAL:HA | 1:C:577:ILE:HG12 | 1.95 | 0.48 |
| 1:C:1252:HIS:CE1 | 1:C:1254:HIS:HB2 | 2.48 | 0.48 |
| 1:C:1992:ALA:HB1 | 1:C:1996:ARG:HH22 | 1.78 | 0.48 |
| 1:C:2207:VAL:O | 1:C:2211:MET:HG3 | 2.13 | 0.48 |
| 1:C:2210:VAL:HA | 1:C:2213:ASN:HD22 | 1.77 | 0.48 |
| 1:C:3147:ILE:CD1 | 1:C:3152:PHE:HB2 | 2.39 | 0.48 |
| 1:A:206:CYS:HB2 | 1:A:271:GLY:HA3 | 1.95 | 0.48 |
| 1:A:565:TYR:CZ | 1:A:569:ILE:HD11 | 2.48 | 0.48 |
| 1:A:915:GLU:HA | 1:A:918:ARG:HB2 | 1.95 | 0.48 |
| 1:A:1163:THR:HA | 1:A:1168:VAL:HA | 1.94 | 0.48 |
| 1:A:1780:PRO:HB2 | 2:E:42:ARG:HH21 | 1.78 | 0.48 |
| 1:A:1785:ALA:N | 2:E:55:VAL:HA | 2.29 | 0.48 |
| 1:A:2612[A]:ARG:HH11 | 1:A:2612[A]:ARG:CG | 2.26 | 0.48 |
| 1:A:2789:PRO:O | 1:A:2792:ARG:NE | 2.42 | 0.48 |
| 1:A:3957:VAL:O | 1:A:3961:VAL:HG23 | 2.14 | 0.48 |
| 1:A:4035:VAL:HG12 | 1:A:4189:ARG:NH2 | 2.28 | 0.48 |
| 1:A:4959:PHE:CD2 | 1:A:4985:LEU:HD21 | 2.48 | 0.48 |
| 2:G:105:LYS:HG2 | 2:G:107:GLU:OE1 | 2.13 | 0.48 |
| 2:F:105:LYS:HG2 | 2:F:107:GLU:OE1 | 2.14 | 0.48 |
| 1:B:1252:HIS:CE1 | 1:B:1254:HIS:HB2 | 2.48 | 0.48 |
| 1:B:2121:PHE:CZ | 1:B:3701:LEU:HB2 | 2.49 | 0.48 |
| 1:B:2234:ARG:O | 1:B:2238:TYR:HB2 | 2.12 | 0.48 |
| 1:B:2865:VAL:HB | 1:B:2928:LYS:HD2 | 1.94 | 0.48 |
| 1:B:2918:ARG:O | 1:B:2921:GLU:HG3 | 2.13 | 0.48 |
| 1:B:4928:LEU:O | 1:B:4932:ILE:HD12 | 2.13 | 0.48 |
| 1:D:1992:ALA:HB1 | 1:D:1996:ARG:HH22 | 1.78 | 0.48 |
| 1:D:2909:ASP:OD1 | 1:D:2909:ASP:N | 2.46 | 0.48 |
| 1:D:3349:ALA:HB3 | 1:D:3415:TYR:CE1 | 2.48 | 0.48 |
| 1:D:4998:LYS:HB3 | 1:D:5003:HIS:HE1 | 1.78 | 0.48 |
| 1:C:213:TYR:N | 1:C:341:TYR:H | 2.08 | 0.48 |
| 1:C:1089:TYR:HB3 | 1:C:1225:PRO:HA | 1.94 | 0.48 |
| 1:C:2121:PHE:CZ | 1:C:3701:LEU:HB2 | 2.48 | 0.48 |
| 1:C:4648:LEU:HD12 | 1:C:4803:HIS:HE1 | 1.78 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:360:ALA:HB2 | 1:A:377:ILE:HG23 | 1.95 | 0.48 |
| 1:A:688:LEU:HD23 | 1:A:690:GLU:H | 1.79 | 0.48 |
| 1:A:2359:ARG:NH1 | 1:B:179:TYR:OH | 2.46 | 0.48 |
| 1:A:2700:MET:CE | 1:A:3000:LYS:HB3 | 2.43 | 0.48 |
| 1:A:2909:ASP:OD1 | 1:A:2909:ASP:N | 2.46 | 0.48 |
| 2:E:82:TYR:CE2 | 2:E:87:HIS:HB2 | 2.49 | 0.48 |
| 2:G:82:TYR:CE2 | 2:G:87:HIS:HB2 | 2.49 | 0.48 |
| 2:F:55:VAL:HG12 | 2:F:56:ILE:H | 1.78 | 0.48 |
| 1:B:3715:LYS:HD3 | 1:B:3716:LEU:O | 2.11 | 0.48 |
| 1:B:4035:VAL:HG12 | 1:B:4189:ARG:NH2 | 2.28 | 0.48 |
| 1:B:4648:LEU:HD12 | 1:B:4803:HIS:HE1 | 1.78 | 0.48 |
| 1:D:1163:THR:HA | 1:D:1168:VAL:HA | 1.94 | 0.48 |
| 1:D:2918:ARG:O | 1:D:2921:GLU:HG3 | 2.13 | 0.48 |
| 1:D:3263:TYR:HD1 | 1:D:3270:ILE:HD12 | 1.78 | 0.48 |
| 1:D:4648:LEU:HD12 | 1:D:4803:HIS:HE1 | 1.78 | 0.48 |
| 1:C:320:LYS:HD2 | 1:C:356:TRP:CE2 | 2.48 | 0.48 |
| 1:C:450:GLY:HA2 | 1:C:453:GLU:OE1 | 2.14 | 0.48 |
| 1:C:1163:THR:HA | 1:C:1168:VAL:HA | 1.94 | 0.48 |
| 1:C:2234:ARG:O | 1:C:2238:TYR:HB2 | 2.12 | 0.48 |
| 1:A:13:PHE:HE1 | 1:A:164:ARG:HG2 | 1.78 | 0.48 |
| 1:A:719:LEU:HA | 1:A:735:GLN:HE21 | 1.77 | 0.48 |
| 1:A:2207:VAL:O | 1:A:2211:MET:HG3 | 2.13 | 0.48 |
| 1:A:2454:ARG:HE | 1:A:2458:ARG:NE | 2.10 | 0.48 |
| 1:A:2963:LEU:O | 1:A:2967:MET:HG2 | 2.13 | 0.48 |
| 1:A:3282:PRO:HG3 | 1:A:3312:LEU:HD11 | 1.95 | 0.48 |
| 1:A:3670:GLU:HG2 | 1:A:3728:ILE:HA | 1.96 | 0.48 |
| 1:A:4639:MET:HA | 1:A:4642:ALA:HB3 | 1.95 | 0.48 |
| 1:B:454:PRO:HD3 | 1:B:531:ARG:NH2 | 2.28 | 0.48 |
| 1:B:574:VAL:O | 1:B:578:ILE:HG13 | 2.12 | 0.48 |
| 1:B:3718:GLU:HA | 1:B:3793:MET:HE3 | 1.95 | 0.48 |
| 1:D:320:LYS:HD2 | 1:D:356:TRP:CE2 | 2.48 | 0.48 |
| 1:D:1252:HIS:CE1 | 1:D:1254:HIS:HB2 | 2.48 | 0.48 |
| 1:D:1297:PHE:HE1 | 1:D:1548:LEU:HD12 | 1.78 | 0.48 |
| 1:D:1815:LEU:O | 1:D:1819:VAL:HG23 | 2.12 | 0.48 |
| 1:D:2902:HIS:HD2 | 1:D:2903:PRO:HD2 | 1.78 | 0.48 |
| 1:D:3281:LEU:O | 1:D:3307:VAL:HG11 | 2.13 | 0.48 |
| 1:D:3986:TRP:HE3 | 1:D:4047:MET:HE3 | 1.77 | 0.48 |
| 1:C:454:PRO:HD3 | 1:C:531:ARG:NH2 | 2.27 | 0.48 |
| 1:C:2918:ARG:O | 1:C:2921:GLU:HG3 | 2.13 | 0.48 |
| 1:C:3868:ARG:HH22 | 1:C:3870:ASN:HB3 | 1.77 | 0.48 |
| 1:A:2761:TYR:HA | 1:A:2764:GLU:HB2 | 1.96 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3622:LYS:HB2 | 1:A:3625:SER:OG | 2.13 | 0.48 |
| 2:E:55:VAL:HG12 | 2:E:56:ILE:H | 1.78 | 0.48 |
| 2:H:105:LYS:HG2 | 2:H:107:GLU:OE1 | 2.13 | 0.48 |
| 2:G:49:MET:N | 2:G:54:GLU:OE2 | 2.45 | 0.48 |
| 1:B:721:LEU:HD11 | 1:B:768:PHE:HE1 | 1.76 | 0.48 |
| 1:B:2088:GLU:OE1 | 1:B:2089:LYS:N | 2.46 | 0.48 |
| 1:B:2676:ARG:HB2 | 1:B:2714:TYR:HH | 1.78 | 0.48 |
| 1:B:2700:MET:CE | 1:B:3000:LYS:HB3 | 2.43 | 0.48 |
| 1:B:2862:LEU:O | 1:B:2928:LYS:HG3 | 2.13 | 0.48 |
| 1:B:3050:VAL:HG12 | 1:B:3131:TYR:CE1 | 2.49 | 0.48 |
| 1:B:3191:GLY:HA2 | 1:B:3272:ILE:HG23 | 1.95 | 0.48 |
| 1:B:3280:TYR:O | 1:B:3284:TRP:HD1 | 1.96 | 0.48 |
| 1:B:3281:LEU:O | 1:B:3307:VAL:HG11 | 2.13 | 0.48 |
| 1:B:3629:ARG:O | 1:B:3633:VAL:HG23 | 2.14 | 0.48 |
| 1:B:3670:GLU:HG2 | 1:B:3728:ILE:HA | 1.96 | 0.48 |
| 1:D:719:LEU:HA | 1:D:735:GLN:HE21 | 1.77 | 0.48 |
| 1:D:1005:TRP:HH2 | 1:D:1013:ILE:HD13 | 1.78 | 0.48 |
| 1:D:3354:LEU:HD12 | 1:D:3415:TYR:CD2 | 2.45 | 0.48 |
| 1:D:3514:LEU:HA | 1:D:3517:MET:HG2 | 1.94 | 0.48 |
| 1:D:3531:ASP:O | 1:D:3534:MET:HG2 | 2.13 | 0.48 |
| 1:D:4061:PHE:HA | 1:D:4064:MET:CE | 2.43 | 0.48 |
| 1:C:565:TYR:CZ | 1:C:569:ILE:HD11 | 2.48 | 0.48 |
| 1:C:2761:TYR:HA | 1:C:2764:GLU:HB2 | 1.96 | 0.48 |
| 1:C:3283:ARG:HH12 | 1:C:3287:ARG:HH22 | 1.60 | 0.48 |
| 1:C:3349:ALA:HB3 | 1:C:3415:TYR:CE1 | 2.48 | 0.48 |
| 1:C:3525:CYS:SG | 1:C:3599:VAL:HG21 | 2.54 | 0.48 |
| 1:A:244:LEU:HB3 | 1:A:375:LYS:HZ3 | 1.78 | 0.48 |
| 1:A:1095:VAL:HB | 1:A:1199:VAL:HB | 1.96 | 0.48 |
| 1:A:1446:SER:HA | 1:A:1496:TRP:HE1 | 1.79 | 0.48 |
| 1:A:2626:LEU:O | 1:A:2630:VAL:N | 2.42 | 0.48 |
| 1:A:3157:ILE:HD12 | 1:A:3202:PRO:HD3 | 1.95 | 0.48 |
| 1:A:3248:ARG:NE | 1:A:3248:ARG:HA | 2.28 | 0.48 |
| 1:A:4061:PHE:HA | 1:A:4064:MET:CE | 2.43 | 0.48 |
| 1:B:355:LEU:HD22 | 1:B:380:GLN:HB3 | 1.96 | 0.48 |
| 1:B:565:TYR:CZ | 1:B:569:ILE:HD11 | 2.48 | 0.48 |
| 1:B:915:GLU:HA | 1:B:918:ARG:HB2 | 1.95 | 0.48 |
| 1:B:2198:MET:HA | 1:B:2201:LEU:HD12 | 1.95 | 0.48 |
| 1:B:2579:VAL:O | 1:B:2583:LEU:HG | 2.14 | 0.48 |
| 1:B:2948:THR:HG22 | 1:B:2949:SER:N | 2.29 | 0.48 |
| 1:B:3183:VAL:HA | 1:B:3186:LEU:HB2 | 1.96 | 0.48 |
| 1:B:3283:ARG:HH12 | 1:B:3287:ARG:HH22 | 1.60 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:3531:ASP:O | 1:B:3534:MET:HG2 | 2.13 | 0.48 |
| 1:B:3829:PHE:HB3 | 1:B:3913:ILE:HD11 | 1.96 | 0.48 |
| 1:B:3868:ARG:HH22 | 1:B:3870:ASN:HB3 | 1.77 | 0.48 |
| 1:B:3957:VAL:O | 1:B:3961:VAL:HG23 | 2.14 | 0.48 |
| 1:D:450:GLY:HA2 | 1:D:453:GLU:OE1 | 2.14 | 0.48 |
| 1:D:1291:LEU:HD13 | 1:D:1595:LEU:HD21 | 1.95 | 0.48 |
| 1:D:3573:MET:O | 1:D:3577:ARG:HG2 | 2.14 | 0.48 |
| 1:D:4060:LYS:HA | 1:D:4063:ASP:OD2 | 2.14 | 0.48 |
| 1:D:4959:PHE:CD2 | 1:D:4985:LEU:HD21 | 2.48 | 0.48 |
| 1:C:2909:ASP:N | 1:C:2909:ASP:OD1 | 2.46 | 0.48 |
| 1:C:3531:ASP:O | 1:C:3534:MET:HG2 | 2.13 | 0.48 |
| 1:A:989:ALA:CB | 1:A:1039:LEU:HD11 | 2.44 | 0.48 |
| 1:A:1133:HIS:O | 1:A:1134:LEU:C | 2.50 | 0.48 |
| 1:A:1631:GLN:OE1 | 1:A:1631:GLN:N | 2.47 | 0.48 |
| 1:A:2913:ALA:HA | 1:A:2916:LYS:HD2 | 1.96 | 0.48 |
| 1:A:4914:VAL:HG13 | 1:D:4888:TYR:HD1 | 1.77 | 0.48 |
| 2:F:82:TYR:CE2 | 2:F:87:HIS:HB2 | 2.49 | 0.48 |
| 1:B:1867:GLU:CD | 1:B:1928:GLN:HE22 | 2.15 | 0.48 |
| 1:B:2210:VAL:HA | 1:B:2213:ASN:HD22 | 1.77 | 0.48 |
| 1:B:2299:VAL:HG11 | 1:B:2356:LEU:HD13 | 1.95 | 0.48 |
| 1:B:2761:TYR:HA | 1:B:2764:GLU:HB2 | 1.96 | 0.48 |
| 1:B:3525:CYS:SG | 1:B:3599:VAL:HG21 | 2.54 | 0.48 |
| 1:D:793:LEU:HB3 | 1:D:812:HIS:HB3 | 1.95 | 0.48 |
| 1:D:1087:ARG:HD2 | 1:D:1222:GLY:O | 2.14 | 0.48 |
| 1:D:1095:VAL:HB | 1:D:1199:VAL:HB | 1.96 | 0.48 |
| 1:D:1631:GLN:OE1 | 1:D:1631:GLN:N | 2.47 | 0.48 |
| 1:D:2012:PHE:CZ | 1:D:2031:LEU:HD23 | 2.49 | 0.48 |
| 1:D:2541:PHE:O | 1:D:2544:THR:HG22 | 2.14 | 0.48 |
| 1:D:3376:GLU:OE1 | 1:D:3380:ARG:NH1 | 2.47 | 0.48 |
| 1:D:4035:VAL:HG12 | 1:D:4189:ARG:NH2 | 2.28 | 0.48 |
| 1:C:355:LEU:HD22 | 1:C:380:GLN:HB3 | 1.96 | 0.48 |
| 1:C:1207:ASP:O | 1:C:1210:SER:OG | 2.30 | 0.48 |
| 1:C:1631:GLN:N | 1:C:1631:GLN:OE1 | 2.47 | 0.48 |
| 1:C:2299:VAL:HG11 | 1:C:2356:LEU:HD13 | 1.95 | 0.48 |
| 1:C:3281:LEU:O | 1:C:3307:VAL:HG11 | 2.13 | 0.48 |
| 1:C:4904:PRO:HG3 | 1:C:4913:ARG:HH11 | 1.78 | 0.48 |
| 1:A:35:LEU:HG | 1:A:51:PRO:HA | 1.96 | 0.48 |
| 1:A:1748:PHE:HE1 | 1:A:1760:HIS:HA | 1.78 | 0.48 |
| 1:A:2012:PHE:CZ | 1:A:2031:LEU:HD23 | 2.49 | 0.48 |
| 1:A:2135:LEU:HD21 | 1:A:3663:LEU:HD23 | 1.95 | 0.48 |
| 1:A:2183:GLY:HA2 | 1:A:2234:ARG:HH22 | 1.79 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2520:HIS:O | 1:A:2524:VAL:HG22 | 2.12 | 0.48 |
| 1:A:2971:GLN:HE21 | 1:A:3049:LEU:HD11 | 1.78 | 0.48 |
| 1:A:3514:LEU:HA | 1:A:3517:MET:HG2 | 1.94 | 0.48 |
| 1:B:320:LYS:HD2 | 1:B:356:TRP:CE2 | 2.48 | 0.48 |
| 1:B:450:GLY:HA2 | 1:B:453:GLU:OE1 | 2.14 | 0.48 |
| 1:B:797:HIS:CE1 | 1:B:821:LEU:HD22 | 2.48 | 0.48 |
| 1:B:2541:PHE:O | 1:B:2544:THR:HG22 | 2.14 | 0.48 |
| 1:B:2948:THR:HG22 | 1:B:2952:GLU:HG2 | 1.95 | 0.48 |
| 1:B:3228:ALA:HA | 1:B:3232:LEU:HD23 | 1.94 | 0.48 |
| 1:B:4933:GLN:NE2 | 1:C:4930:ALA:HB2 | 2.28 | 0.48 |
| 1:D:1748:PHE:HE1 | 1:D:1760:HIS:HA | 1.78 | 0.48 |
| 1:D:2579:VAL:O | 1:D:2583:LEU:HG | 2.14 | 0.48 |
| 1:D:3282:PRO:HG3 | 1:D:3312:LEU:HD11 | 1.95 | 0.48 |
| 1:D:3829:PHE:HB3 | 1:D:3913:ILE:HD11 | 1.96 | 0.48 |
| 1:C:613:ALA:HB2 | 1:C:1676:LEU:HD12 | 1.94 | 0.48 |
| 1:C:688:LEU:HD23 | 1:C:690:GLU:H | 1.79 | 0.48 |
| 1:C:2198:MET:HA | 1:C:2201:LEU:HD12 | 1.95 | 0.48 |
| 1:C:2541:PHE:O | 1:C:2544:THR:HG22 | 2.14 | 0.48 |
| 1:C:3734:HIS:CD2 | 1:C:3736:GLU:H | 2.27 | 0.48 |
| 1:C:4035:VAL:HG12 | 1:C:4189:ARG:NH2 | 2.28 | 0.48 |
| 1:A:683:ARG:HB2 | 1:A:782:SER:HB2 | 1.96 | 0.48 |
| 1:A:793:LEU:HB3 | 1:A:812:HIS:HB3 | 1.95 | 0.48 |
| 1:A:1087:ARG:HD2 | 1:A:1222:GLY:O | 2.14 | 0.48 |
| 1:A:2121:PHE:CZ | 1:A:3701:LEU:HB2 | 2.49 | 0.48 |
| 1:A:2862:LEU:O | 1:A:2928:LYS:HG3 | 2.14 | 0.48 |
| 1:A:3228:ALA:HA | 1:A:3232:LEU:HD23 | 1.94 | 0.48 |
| 1:A:3280:TYR:O | 1:A:3284:TRP:HD1 | 1.96 | 0.48 |
| 1:A:3411:LEU:HD23 | 1:A:3414:ARG:NH2 | 2.29 | 0.48 |
| 1:A:3629:ARG:O | 1:A:3633:VAL:HG23 | 2.14 | 0.48 |
| 1:A:4805:ASN:HB3 | 1:A:4808:PHE:CD2 | 2.49 | 0.48 |
| 2:H:55:VAL:HG12 | 2:H:56:ILE:H | 1.78 | 0.48 |
| 1:B:1095:VAL:HB | 1:B:1199:VAL:HB | 1.96 | 0.48 |
| 1:B:1237:TRP:CE3 | 1:B:1605:TRP:HB3 | 2.47 | 0.48 |
| 1:B:1446:SER:HA | 1:B:1496:TRP:HE1 | 1.79 | 0.48 |
| 1:B:1631:GLN:OE1 | 1:B:1631:GLN:N | 2.47 | 0.48 |
| 1:B:2012:PHE:HB2 | 1:B:2018:GLU:HA | 1.96 | 0.48 |
| 1:B:2913:ALA:HA | 1:B:2916:LYS:HD2 | 1.96 | 0.48 |
| 1:B:3368:ARG:HG2 | 1:B:3371:LYS:NZ | 2.29 | 0.48 |
| 1:B:3411:LEU:HD23 | 1:B:3414:ARG:NH2 | 2.29 | 0.48 |
| 1:B:3424:LEU:HD23 | 1:B:3523:ASN:HD22 | 1.79 | 0.48 |
| 1:B:3573:MET:O | 1:B:3577:ARG:HG2 | 2.14 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4959:PHE:CD2 | 1:B:4985:LEU:HD21 | 2.48 | 0.48 |
| 1:D:2004:GLU:OE1 | 1:D:2004:GLU:N | 2.46 | 0.48 |
| 1:D:2862:LEU:O | 1:D:2928:LYS:HG3 | 2.13 | 0.48 |
| 1:C:206:CYS:HB2 | 1:C:271:GLY:HA3 | 1.94 | 0.48 |
| 1:C:4928:LEU:O | 1:C:4932:ILE:HD12 | 2.13 | 0.48 |
| 1:C:4959:PHE:CD2 | 1:C:4985:LEU:HD21 | 2.48 | 0.48 |
| 1:A:450:GLY:HA2 | 1:A:453:GLU:OE1 | 2.14 | 0.48 |
| 1:A:797:HIS:CE1 | 1:A:821:LEU:HD22 | 2.48 | 0.48 |
| 1:A:2004:GLU:OE1 | 1:A:2004:GLU:N | 2.46 | 0.48 |
| 1:A:2299:VAL:HG11 | 1:A:2356:LEU:HD13 | 1.95 | 0.48 |
| 1:A:2540:THR:O | 1:A:2543:THR:OG1 | 2.27 | 0.48 |
| 1:A:2902:HIS:HD2 | 1:A:2903:PRO:HD2 | 1.78 | 0.48 |
| 1:A:3525:CYS:SG | 1:A:3599:VAL:HG21 | 2.54 | 0.48 |
| 1:B:683:ARG:HB2 | 1:B:782:SER:HB2 | 1.96 | 0.48 |
| 1:B:1470:ARG:NH2 | 1:B:1471:ALA:O | 2.35 | 0.48 |
| 1:B:3376:GLU:OE1 | 1:B:3380:ARG:NH1 | 2.47 | 0.48 |
| 1:B:4060:LYS:HA | 1:B:4063:ASP:OD2 | 2.14 | 0.48 |
| 1:B:4931:ILE:O | 1:B:4935:LEU:HG | 2.14 | 0.48 |
| 1:D:175:SER:HA | 1:C:2452:ARG:HD3 | 1.96 | 0.48 |
| 1:D:989:ALA:CB | 1:D:1039:LEU:HD11 | 2.44 | 0.48 |
| 1:D:3050:VAL:HG12 | 1:D:3131:TYR:CE1 | 2.49 | 0.48 |
| 1:D:3622:LYS:HB2 | 1:D:3625:SER:OG | 2.13 | 0.48 |
| 1:D:4904:PRO:HG3 | 1:D:4913:ARG:HH11 | 1.78 | 0.48 |
| 1:C:1087:ARG:HD2 | 1:C:1222:GLY:O | 2.14 | 0.48 |
| 1:C:3157:ILE:HD12 | 1:C:3202:PRO:HD3 | 1.95 | 0.48 |
| 1:C:3168:THR:O | 1:C:3172:ILE:HD12 | 2.14 | 0.48 |
| 1:C:3368:ARG:HG2 | 1:C:3371:LYS:NZ | 2.29 | 0.48 |
| 1:C:3670:GLU:HG2 | 1:C:3728:ILE:HA | 1.96 | 0.48 |
| 1:C:4805:ASN:HB3 | 1:C:4808:PHE:CD2 | 2.49 | 0.48 |
| 1:C:4931:ILE:O | 1:C:4935:LEU:HG | 2.14 | 0.48 |
| 1:A:1465:ASP:HB3 | 1:A:1468:LYS:HB2 | 1.96 | 0.47 |
| 1:A:1691:GLN:OE1 | 1:A:1691:GLN:N | 2.43 | 0.47 |
| 1:A:3050:VAL:HG12 | 1:A:3131:TYR:CE1 | 2.49 | 0.47 |
| 1:A:3183:VAL:HA | 1:A:3186:LEU:HB2 | 1.96 | 0.47 |
| 1:A:4060:LYS:HA | 1:A:4063:ASP:OD2 | 2.14 | 0.47 |
| 1:A:4193:ILE:HG12 | 1:A:5006:GLN:OE1 | 2.14 | 0.47 |
| 1:B:989:ALA:CB | 1:B:1039:LEU:HD11 | 2.44 | 0.47 |
| 1:B:3343:GLN:OE1 | 1:B:3414:ARG:NH2 | 2.47 | 0.47 |
| 1:B:4968:PHE:O | 1:B:4974:GLY:HA3 | 2.14 | 0.47 |
| 1:D:613:ALA:HB2 | 1:D:1676:LEU:HD12 | 1.94 | 0.47 |
| 1:D:688:LEU:HD23 | 1:D:690:GLU:H | 1.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:2449:GLU:O | 1:D:2453:ILE:HG12 | 2.14 | 0.47 |
| 1:D:2533:ALA:HB1 | 1:D:2589:LEU:HD21 | 1.96 | 0.47 |
| 1:D:2761:TYR:HA | 1:D:2764:GLU:HB2 | 1.96 | 0.47 |
| 1:D:3525:CYS:SG | 1:D:3599:VAL:HG21 | 2.54 | 0.47 |
| 1:D:3996:PHE:CD2 | 1:D:4020:GLN:HG2 | 2.49 | 0.47 |
| 1:C:2948:THR:HG22 | 1:C:2952:GLU:HG2 | 1.95 | 0.47 |
| 1:C:2963:LEU:O | 1:C:2967:MET:HG2 | 2.13 | 0.47 |
| 1:C:3376:GLU:OE1 | 1:C:3380:ARG:NH1 | 2.47 | 0.47 |
| 1:C:3622:LYS:HB2 | 1:C:3625:SER:OG | 2.13 | 0.47 |
| 1:C:3829:PHE:HB3 | 1:C:3913:ILE:HD11 | 1.96 | 0.47 |
| 1:C:4968:PHE:O | 1:C:4974:GLY:HA3 | 2.14 | 0.47 |
| 1:A:2135:LEU:HD22 | 1:A:3662:ILE:HG22 | 1.95 | 0.47 |
| 1:A:2349:ASN:HA | 1:A:2352:VAL:HG12 | 1.95 | 0.47 |
| 1:A:3369:ALA:HA | 1:A:3372:VAL:HG22 | 1.96 | 0.47 |
| 1:A:3465:ASN:OD1 | 1:A:3467:MET:HB2 | 2.15 | 0.47 |
| 1:A:3829:PHE:HB3 | 1:A:3913:ILE:HD11 | 1.96 | 0.47 |
| 1:B:688:LEU:HD23 | 1:B:690:GLU:H | 1.79 | 0.47 |
| 1:B:2135:LEU:HD22 | 1:B:3662:ILE:HG22 | 1.95 | 0.47 |
| 1:B:2153:MET:O | 1:B:2157:GLU:HG2 | 2.15 | 0.47 |
| 1:B:3996:PHE:CD2 | 1:B:4020:GLN:HG2 | 2.49 | 0.47 |
| 1:B:4087:LEU:HB2 | 1:B:4122:MET:HE2 | 1.96 | 0.47 |
| 1:B:4189:ARG:NH2 | 1:B:5032:TYR:OH | 2.46 | 0.47 |
| 1:B:4197:ILE:HD13 | 1:B:4990:PHE:CD2 | 2.49 | 0.47 |
| 1:D:280:LEU:HD21 | 1:D:316:PHE:HB2 | 1.95 | 0.47 |
| 1:D:425:PRO:HG3 | 1:D:506:TYR:CZ | 2.49 | 0.47 |
| 1:D:1849:LEU:HB3 | 1:D:1945:TYR:CE2 | 2.50 | 0.47 |
| 1:D:1867:GLU:CD | 1:D:1928:GLN:HE22 | 2.15 | 0.47 |
| 1:D:2867:LEU:HD22 | 1:D:2928:LYS:HZ1 | 1.79 | 0.47 |
| 1:D:3465:ASN:OD1 | 1:D:3467:MET:HB2 | 2.14 | 0.47 |
| 1:C:797:HIS:CE1 | 1:C:821:LEU:HD22 | 2.48 | 0.47 |
| 1:C:1005:TRP:HH2 | 1:C:1013:ILE:HD13 | 1.78 | 0.47 |
| 1:C:1446:SER:HA | 1:C:1496:TRP:HE1 | 1.79 | 0.47 |
| 1:C:2135:LEU:HD22 | 1:C:3662:ILE:HG22 | 1.95 | 0.47 |
| 1:C:2182:ILE:HG13 | 1:C:2234:ARG:NH1 | 2.30 | 0.47 |
| 1:C:2449:GLU:O | 1:C:2453:ILE:HG12 | 2.14 | 0.47 |
| 1:C:3718:GLU:HA | 1:C:3793:MET:HE3 | 1.96 | 0.47 |
| 1:C:4061:PHE:HA | 1:C:4064:MET:CE | 2.43 | 0.47 |
| 1:C:4197:ILE:HD13 | 1:C:4990:PHE:CD2 | 2.49 | 0.47 |
| 1:A:34:LYS:NZ | 1:A:53:SER:HA | 2.28 | 0.47 |
| 1:A:280:LEU:HD21 | 1:A:316:PHE:HB2 | 1.95 | 0.47 |
| 1:A:653:ALA:N | 1:A:656:SER:OG | 2.48 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:A:2189:LYS:HZ1 | 1:A:2193:GLN:HB2 | 1.79 | 0.47 |
| 1:A:2948:THR:HG22 | 1:A:2949:SER:N | 2.29 | 0.47 |
| 1:A:3067:CYS:O | 1:A:3070:ILE:HG22 | 2.14 | 0.47 |
| 1:A:3438:VAL:HG13 | 1:A:3517:MET:CE | 2.45 | 0.47 |
| 1:A:3605:HIS:O | 1:A:3609:THR:HG23 | 2.15 | 0.47 |
| 1:A:4157:ASP:H | 1:A:4161:ARG:NH1 | 2.13 | 0.47 |
| 1:A:4904:PRO:HG3 | 1:A:4913:ARG:HH11 | 1.78 | 0.47 |
| 1:B:34:LYS:NZ | 1:B:53:SER:HA | 2.28 | 0.47 |
| 1:B:1005:TRP:HH2 | 1:B:1013:ILE:HD13 | 1.78 | 0.47 |
| 1:B:1291:LEU:HD13 | 1:B:1595:LEU:HD21 | 1.95 | 0.47 |
| 1:B:1465:ASP:HB3 | 1:B:1468:LYS:HB2 | 1.97 | 0.47 |
| 1:B:2012:PHE:CZ | 1:B:2031:LEU:HD23 | 2.49 | 0.47 |
| 1:B:2952:GLU:HA | 1:B:2957:PHE:CG | 2.49 | 0.47 |
| 1:B:3157:ILE:HG22 | 1:B:3162:GLN:CD | 2.35 | 0.47 |
| 1:B:3695:PRO:HB2 | 1:B:3700:GLN:HG2 | 1.97 | 0.47 |
| 1:B:4959:PHE:HD2 | 1:B:4985:LEU:HD21 | 1.79 | 0.47 |
| 1:D:1708:ARG:NH1 | 1:D:1836:PHE:O | 2.47 | 0.47 |
| 1:D:2198:MET:HA | 1:D:2201:LEU:HD12 | 1.95 | 0.47 |
| 1:D:3168:THR:O | 1:D:3172:ILE:HD12 | 2.14 | 0.47 |
| 1:D:4928:LEU:O | 1:D:4932:ILE:HD12 | 2.14 | 0.47 |
| 1:C:34:LYS:NZ | 1:C:53:SER:HA | 2.28 | 0.47 |
| 1:C:2575:ARG:HG3 | 1:C:2575:ARG:O | 2.14 | 0.47 |
| 1:C:2579:VAL:O | 1:C:2583:LEU:HG | 2.14 | 0.47 |
| 1:C:2902:HIS:HD2 | 1:C:2903:PRO:HD2 | 1.78 | 0.47 |
| 1:C:3527:PRO:HG2 | 1:C:3572:GLN:HB3 | 1.96 | 0.47 |
| 1:A:320:LYS:HD2 | 1:A:356:TRP:CE2 | 2.48 | 0.47 |
| 1:A:4959:PHE:HD2 | 1:A:4985:LEU:HD21 | 1.79 | 0.47 |
| 1:A:4998:LYS:HB3 | 1:A:5003:HIS:HE1 | 1.78 | 0.47 |
| 2:H:82:TYR:CE2 | 2:H:87:HIS:HB2 | 2.49 | 0.47 |
| 1:B:1271:ARG:HH22 | 1:B:1560:ASN:HA | 1.77 | 0.47 |
| 1:B:2268[B]:GLN:H | 1:B:2268[B]:GLN:HG3 | 1.49 | 0.47 |
| 1:B:2533:ALA:HB1 | 1:B:2589:LEU:HD21 | 1.96 | 0.47 |
| 1:B:2971:GLN:HE21 | 1:B:3049:LEU:HD11 | 1.78 | 0.47 |
| 1:B:3067:CYS:O | 1:B:3070:ILE:HG22 | 2.15 | 0.47 |
| 1:B:3263:TYR:HD1 | 1:B:3270:ILE:HD12 | 1.78 | 0.47 |
| 1:B:4805:ASN:HB3 | 1:B:4808:PHE:CD2 | 2.48 | 0.47 |
| 1:D:214:VAL:N | 1:D:341:TYR:HB2 | 2.30 | 0.47 |
| 1:D:1743[B]:ARG:NH2 | 1:D:1967:ASP:OD2 | 2.32 | 0.47 |
| 1:D:2177:LEU:O | 1:D:2180:GLN:HG3 | 2.15 | 0.47 |
| 1:D:2971:GLN:HE21 | 1:D:3049:LEU:HD11 | 1.78 | 0.47 |
| 1:D:4197:ILE:HD13 | 1:D:4990:PHE:CD2 | 2.50 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:52:THR:HA | 1:C:60:PRO:HG3 | 1.96 | 0.47 |
| 1:C:103:TYR:N | 1:C:161:GLU:O | 2.45 | 0.47 |
| 1:C:653:ALA:N | 1:C:656:SER:OG | 2.48 | 0.47 |
| 1:C:1708:ARG:NH1 | 1:C:1836:PHE:O | 2.47 | 0.47 |
| 1:C:2012:PHE:CZ | 1:C:2031:LEU:HD23 | 2.49 | 0.47 |
| 1:C:2700:MET:CE | 1:C:3000:LYS:HB3 | 2.43 | 0.47 |
| 1:C:3282:PRO:HG3 | 1:C:3312:LEU:HD11 | 1.95 | 0.47 |
| 1:C:3817:LEU:HD13 | 1:C:3899:PHE:HD1 | 1.79 | 0.47 |
| 1:C:3957:VAL:O | 1:C:3961:VAL:HG23 | 2.14 | 0.47 |
| 1:C:4189:ARG:NH2 | 1:C:5032:TYR:OH | 2.46 | 0.47 |
| 1:A:425:PRO:HG3 | 1:A:506:TYR:CZ | 2.49 | 0.47 |
| 1:A:437:PRO:HB2 | 1:A:440:ALA:HB3 | 1.97 | 0.47 |
| 1:A:3191:GLY:HA2 | 1:A:3272:ILE:HG23 | 1.94 | 0.47 |
| 1:A:3695:PRO:HB2 | 1:A:3700:GLN:HG2 | 1.96 | 0.47 |
| 1:A:4968:PHE:O | 1:A:4974:GLY:HA3 | 2.14 | 0.47 |
| 1:B:35:LEU:HG | 1:B:51:PRO:HA | 1.96 | 0.47 |
| 1:B:1297:PHE:HE1 | 1:B:1548:LEU:HD12 | 1.78 | 0.47 |
| 1:B:2517:PHE:CD1 | 1:B:2520:HIS:HE1 | 2.33 | 0.47 |
| 1:B:3069:HIS:ND1 | 1:B:3142:THR:OG1 | 2.27 | 0.47 |
| 1:B:3141:THR:CG2 | 1:B:3145:GLN:HE22 | 2.24 | 0.47 |
| 1:B:3605:HIS:O | 1:B:3609:THR:HG23 | 2.15 | 0.47 |
| 1:B:4061:PHE:HA | 1:B:4064:MET:CE | 2.43 | 0.47 |
| 1:B:4639:MET:HA | 1:B:4642:ALA:HB3 | 1.95 | 0.47 |
| 1:D:818:ARG:NH2 | 1:D:1027:LEU:O | 2.22 | 0.47 |
| 1:D:1446:SER:HA | 1:D:1496:TRP:HE1 | 1.79 | 0.47 |
| 1:D:1465:ASP:HB3 | 1:D:1468:LYS:HB2 | 1.96 | 0.47 |
| 1:D:2135:LEU:HD21 | 1:D:3663:LEU:HD23 | 1.95 | 0.47 |
| 1:D:2575:ARG:HG3 | 1:D:2575:ARG:O | 2.14 | 0.47 |
| 1:D:2952:GLU:HA | 1:D:2957:PHE:CG | 2.49 | 0.47 |
| 1:D:3369:ALA:HA | 1:D:3372:VAL:HG22 | 1.96 | 0.47 |
| 1:D:4805:ASN:HB3 | 1:D:4808:PHE:CD2 | 2.49 | 0.47 |
| 1:C:214:VAL:N | 1:C:341:TYR:HB2 | 2.30 | 0.47 |
| 1:C:225:GLY:HA3 | 1:C:228:ASP:OD1 | 2.15 | 0.47 |
| 1:C:1095:VAL:HB | 1:C:1199:VAL:HB | 1.96 | 0.47 |
| 1:C:1465:ASP:HB3 | 1:C:1468:LYS:HB2 | 1.96 | 0.47 |
| 1:C:2177:LEU:O | 1:C:2180:GLN:HG3 | 2.15 | 0.47 |
| 1:C:2234:ARG:O | 1:C:2238:TYR:CB | 2.62 | 0.47 |
| 1:C:2952:GLU:HA | 1:C:2957:PHE:CG | 2.49 | 0.47 |
| 1:C:3050:VAL:HG12 | 1:C:3131:TYR:CE1 | 2.49 | 0.47 |
| 1:C:3067:CYS:O | 1:C:3070:ILE:HG22 | 2.15 | 0.47 |
| 1:C:3573:MET:O | 1:C:3577:ARG:HG2 | 2.14 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:3941:ASP:OD1 | 1:C:3942:VAL:N | 2.48 | 0.47 |
| 1:A:276:TRP:O | 1:A:328:LYS:NZ | 2.44 | 0.47 |
| 1:A:2198:MET:HA | 1:A:2201:LEU:HD12 | 1.95 | 0.47 |
| 1:A:3168:THR:O | 1:A:3172:ILE:HD12 | 2.14 | 0.47 |
| 1:A:3531:ASP:O | 1:A:3534:MET:HG2 | 2.13 | 0.47 |
| 1:A:3986:TRP:HE3 | 1:A:4047:MET:HE3 | 1.79 | 0.47 |
| 1:A:4931:ILE:O | 1:A:4935:LEU:HG | 2.14 | 0.47 |
| 1:B:71:GLN:HB2 | 1:B:147:TRP:HH2 | 1.80 | 0.47 |
| 1:B:225:GLY:HA3 | 1:B:228:ASP:OD1 | 2.15 | 0.47 |
| 1:B:2132:GLY:O | 1:B:2136:ARG:HG3 | 2.15 | 0.47 |
| 1:B:2183:GLY:HA2 | 1:B:2234:ARG:HH22 | 1.79 | 0.47 |
| 1:B:2349:ASN:HA | 1:B:2352:VAL:HG12 | 1.95 | 0.47 |
| 1:B:3069:HIS:CE1 | 1:B:3142:THR:HG1 | 2.24 | 0.47 |
| 1:B:3282:PRO:HG3 | 1:B:3312:LEU:HD11 | 1.95 | 0.47 |
| 1:B:3817:LEU:HD13 | 1:B:3899:PHE:HD1 | 1.79 | 0.47 |
| 1:B:4193:ILE:HG12 | 1:B:5006:GLN:OE1 | 2.14 | 0.47 |
| 1:D:52:THR:HA | 1:D:60:PRO:HG3 | 1.97 | 0.47 |
| 1:D:442:ILE:CG2 | 1:D:446:GLN:HE22 | 2.27 | 0.47 |
| 1:D:981:GLN:HE21 | 1:D:1055:PRO:HB3 | 1.80 | 0.47 |
| 1:D:2121:PHE:CZ | 1:D:3701:LEU:HB2 | 2.49 | 0.47 |
| 1:D:2183:GLY:HA2 | 1:D:2234:ARG:HH22 | 1.79 | 0.47 |
| 1:D:2247:GLN:O | 1:D:2279:SER:OG | 2.33 | 0.47 |
| 1:D:2426:TYR:O | 1:D:2430:ILE:HG12 | 2.15 | 0.47 |
| 1:D:2566:ALA:HA | 1:D:2569:PHE:HD2 | 1.80 | 0.47 |
| 1:D:2913:ALA:HA | 1:D:2916:LYS:HD2 | 1.96 | 0.47 |
| 1:D:3824:LYS:HZ1 | 1:D:3908:GLY:HA3 | 1.79 | 0.47 |
| 1:D:4574:ASN:OD1 | 1:D:4810:ALA:HA | 2.15 | 0.47 |
| 1:D:4959:PHE:HD2 | 1:D:4985:LEU:HD21 | 1.79 | 0.47 |
| 1:D:4968:PHE:O | 1:D:4974:GLY:HA3 | 2.14 | 0.47 |
| 1:C:989:ALA:CB | 1:C:1039:LEU:HD11 | 2.44 | 0.47 |
| 1:C:1105:ALA:O | 1:C:1189:LEU:N | 2.47 | 0.47 |
| 1:C:1297:PHE:HE1 | 1:C:1548:LEU:HD12 | 1.78 | 0.47 |
| 1:C:1849:LEU:HB3 | 1:C:1945:TYR:CE2 | 2.49 | 0.47 |
| 1:C:2012:PHE:HB2 | 1:C:2018:GLU:HA | 1.96 | 0.47 |
| 1:C:2183:GLY:HA2 | 1:C:2234:ARG:HH22 | 1.79 | 0.47 |
| 1:C:2862:LEU:O | 1:C:2928:LYS:HG3 | 2.13 | 0.47 |
| 1:C:3183:VAL:HA | 1:C:3186:LEU:HB2 | 1.96 | 0.47 |
| 1:C:3996:PHE:CD2 | 1:C:4020:GLN:HG2 | 2.50 | 0.47 |
| 1:A:214:VAL:N | 1:A:341:TYR:HB2 | 2.30 | 0.47 |
| 1:A:442:ILE:CG2 | 1:A:446:GLN:HE22 | 2.27 | 0.47 |
| 1:A:1291:LEU:HD13 | 1:A:1595:LEU:HD21 | 1.95 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1849:LEU:HB3 | 1:A:1945:TYR:CE2 | 2.49 | 0.47 |
| 1:A:2153:MET:O | 1:A:2157:GLU:HG2 | 2.15 | 0.47 |
| 1:A:2177:LEU:O | 1:A:2180:GLN:HG3 | 2.15 | 0.47 |
| 1:A:2233:CYS:O | 1:A:2236:LEU:N | 2.48 | 0.47 |
| 1:A:2234:ARG:O | 1:A:2238:TYR:CB | 2.62 | 0.47 |
| 1:A:2247:GLN:O | 1:A:2279:SER:OG | 2.33 | 0.47 |
| 1:A:2533:ALA:HB1 | 1:A:2589:LEU:HD21 | 1.96 | 0.47 |
| 1:A:2579:VAL:O | 1:A:2583:LEU:HG | 2.14 | 0.47 |
| 1:A:2675:THR:HB | 1:A:2710:LEU:HD13 | 1.97 | 0.47 |
| 1:A:3002:LEU:O | 1:A:3006:ILE:HG12 | 2.14 | 0.47 |
| 1:A:3432:GLU:O | 1:A:3436:ARG:NE | 2.47 | 0.47 |
| 1:A:3573:MET:O | 1:A:3577:ARG:HG2 | 2.14 | 0.47 |
| 1:A:3996:PHE:CD2 | 1:A:4020:GLN:HG2 | 2.50 | 0.47 |
| 1:A:4197:ILE:HD13 | 1:A:4990:PHE:CD2 | 2.50 | 0.47 |
| 2:H:7:ILE:HG23 | 1:D:737:LEU:HB2 | 1.96 | 0.47 |
| 1:B:52:THR:HA | 1:B:60:PRO:HG3 | 1.96 | 0.47 |
| 1:B:103:TYR:N | 1:B:161:GLU:O | 2.45 | 0.47 |
| 1:B:103:TYR:CZ | 1:B:163:VAL:HA | 2.50 | 0.47 |
| 1:B:247:TYR:CE2 | 1:B:376:ALA:HB2 | 2.50 | 0.47 |
| 1:B:2004:GLU:OE1 | 1:B:2004:GLU:N | 2.46 | 0.47 |
| 1:B:2135:LEU:HD21 | 1:B:3663:LEU:HD23 | 1.95 | 0.47 |
| 1:B:2177:LEU:O | 1:B:2180:GLN:HG3 | 2.15 | 0.47 |
| 1:B:2247:GLN:O | 1:B:2279:SER:OG | 2.33 | 0.47 |
| 1:B:2359:ARG:NH1 | 1:C:179:TYR:OH | 2.47 | 0.47 |
| 1:B:2431:ASP:HB2 | 1:B:2501:SER:HB2 | 1.97 | 0.47 |
| 1:B:2449:GLU:O | 1:B:2453:ILE:HG12 | 2.14 | 0.47 |
| 1:B:3157:ILE:HD12 | 1:B:3202:PRO:HD3 | 1.95 | 0.47 |
| 1:B:3354:LEU:HA | 1:B:3358:PHE:CD2 | 2.42 | 0.47 |
| 1:B:3432:GLU:O | 1:B:3436:ARG:NE | 2.47 | 0.47 |
| 1:B:3438:VAL:HG13 | 1:B:3517:MET:CE | 2.45 | 0.47 |
| 1:B:3941:ASP:OD1 | 1:B:3942:VAL:N | 2.48 | 0.47 |
| 1:B:4711:PHE:HB3 | 1:B:4712:PRO:CD | 2.43 | 0.47 |
| 1:D:1691:GLN:OE1 | 1:D:1691:GLN:N | 2.43 | 0.47 |
| 1:D:2132:GLY:O | 1:D:2136:ARG:HG3 | 2.15 | 0.47 |
| 1:D:2233:CYS:O | 1:D:2236:LEU:N | 2.48 | 0.47 |
| 1:D:3067:CYS:O | 1:D:3070:ILE:HG22 | 2.15 | 0.47 |
| 1:D:3114:LYS:HD2 | 1:D:3116:SER:N | 2.25 | 0.47 |
| 1:D:3670:GLU:HG2 | 1:D:3728:ILE:HA | 1.95 | 0.47 |
| 1:D:4138:ASP:O | 1:D:4142:ASN:ND2 | 2.37 | 0.47 |
| 1:D:4193:ILE:HG12 | 1:D:5006:GLN:OE1 | 2.14 | 0.47 |
| 1:D:4778:TRP:O | 1:D:4782:VAL:HG23 | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:4900:GLU:OE1 | 1:D:4900:GLU:N | 2.48 | 0.47 |
| 1:C:442:ILE:CG2 | 1:C:446:GLN:HE22 | 2.27 | 0.47 |
| 1:C:469:ARG:HD2 | 1:C:3712:GLU:OE1 | 2.15 | 0.47 |
| 1:C:2135:LEU:HD21 | 1:C:3663:LEU:HD23 | 1.95 | 0.47 |
| 1:C:3114:LYS:HD2 | 1:C:3116:SER:N | 2.25 | 0.47 |
| 1:C:3157:ILE:HG22 | 1:C:3162:GLN:CD | 2.35 | 0.47 |
| 1:C:3438:VAL:HG13 | 1:C:3517:MET:CE | 2.45 | 0.47 |
| 1:C:3629:ARG:O | 1:C:3633:VAL:HG23 | 2.14 | 0.47 |
| 1:C:4060:LYS:HA | 1:C:4063:ASP:OD2 | 2.14 | 0.47 |
| 1:A:1005:TRP:HH2 | 1:A:1013:ILE:HD13 | 1.78 | 0.47 |
| 1:A:2132:GLY:O | 1:A:2136:ARG:HG3 | 2.15 | 0.47 |
| 1:A:2624:ARG:HB2 | 1:A:2910:THR:HB | 1.97 | 0.47 |
| 1:A:3157:ILE:HG22 | 1:A:3162:GLN:CD | 2.35 | 0.47 |
| 1:A:3354:LEU:HD12 | 1:A:3415:TYR:CD2 | 2.45 | 0.47 |
| 1:A:3368:ARG:HG2 | 1:A:3371:LYS:NZ | 2.29 | 0.47 |
| 1:A:3376:GLU:OE1 | 1:A:3380:ARG:NH1 | 2.47 | 0.47 |
| 1:A:4778:TRP:O | 1:A:4782:VAL:HG23 | 2.15 | 0.47 |
| 1:B:425:PRO:HG3 | 1:B:506:TYR:CZ | 2.49 | 0.47 |
| 1:B:2743:LEU:HD22 | 1:B:2811:GLU:OE1 | 2.15 | 0.47 |
| 1:B:2902:HIS:HD2 | 1:B:2903:PRO:HD2 | 1.79 | 0.47 |
| 1:B:2909:ASP:N | 1:B:2909:ASP:OD1 | 2.46 | 0.47 |
| 1:B:3168:THR:O | 1:B:3172:ILE:HD12 | 2.14 | 0.47 |
| 1:D:35:LEU:HG | 1:D:51:PRO:HA | 1.96 | 0.47 |
| 1:D:653:ALA:N | 1:D:656:SER:OG | 2.48 | 0.47 |
| 1:D:683:ARG:HB2 | 1:D:782:SER:HB2 | 1.96 | 0.47 |
| 1:D:1629:GLN:HE22 | 1:D:1631:GLN:HB3 | 1.80 | 0.47 |
| 1:D:2122:SER:O | 1:D:2126:ARG:HG3 | 2.15 | 0.47 |
| 1:D:2153:MET:O | 1:D:2157:GLU:HG2 | 2.15 | 0.47 |
| 1:D:2182:ILE:HG13 | 1:D:2234:ARG:NH1 | 2.29 | 0.47 |
| 1:D:2948:THR:HG22 | 1:D:2949:SER:N | 2.29 | 0.47 |
| 1:D:3343:GLN:OE1 | 1:D:3414:ARG:NH2 | 2.47 | 0.47 |
| 1:D:3411:LEU:HD23 | 1:D:3414:ARG:NH2 | 2.29 | 0.47 |
| 1:D:3817:LEU:HD13 | 1:D:3899:PHE:HD1 | 1.79 | 0.47 |
| 1:D:3941:ASP:OD1 | 1:D:3942:VAL:N | 2.48 | 0.47 |
| 1:D:3957:VAL:O | 1:D:3961:VAL:HG23 | 2.14 | 0.47 |
| 1:C:437:PRO:HB2 | 1:C:440:ALA:HB3 | 1.97 | 0.47 |
| 1:C:2122:SER:O | 1:C:2126:ARG:HG3 | 2.15 | 0.47 |
| 1:C:2132:GLY:O | 1:C:2136:ARG:HG3 | 2.15 | 0.47 |
| 1:C:3002:LEU:O | 1:C:3006:ILE:HG12 | 2.14 | 0.47 |
| 1:C:3411:LEU:HD23 | 1:C:3414:ARG:NH2 | 2.29 | 0.47 |
| 1:C:3424:LEU:HD23 | 1:C:3523:ASN:HD22 | 1.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:4193:ILE:HG12 | 1:C:5006:GLN:OE1 | 2.14 | 0.47 |
| 1:C:4711:PHE:HB3 | 1:C:4712:PRO:CD | 2.44 | 0.47 |
| 1:C:4959:PHE:HD2 | 1:C:4985:LEU:HD21 | 1.79 | 0.47 |
| 1:C:4967:TYR:OH | 1:C:5033:GLU:OE2 | 2.21 | 0.47 |
| 1:A:71:GLN:HB2 | 1:A:147:TRP:HH2 | 1.80 | 0.47 |
| 1:A:247:TYR:CE2 | 1:A:376:ALA:HB2 | 2.50 | 0.47 |
| 1:A:2426:TYR:O | 1:A:2430:ILE:HG12 | 2.15 | 0.47 |
| 1:A:3716:LEU:HD13 | 1:A:3793:MET:HG3 | 1.97 | 0.47 |
| 1:A:3718:GLU:HA | 1:A:3793:MET:HE3 | 1.97 | 0.47 |
| 1:A:3817:LEU:HD13 | 1:A:3899:PHE:HD1 | 1.79 | 0.47 |
| 1:A:4067:LYS:HB3 | 1:A:4103:PHE:HZ | 1.80 | 0.47 |
| 1:A:4928:LEU:O | 1:A:4932:ILE:HD12 | 2.13 | 0.47 |
| 1:B:1087:ARG:HD2 | 1:B:1222:GLY:O | 2.14 | 0.47 |
| 1:B:1657:LEU:O | 1:B:1661:ARG:N | 2.37 | 0.47 |
| 1:B:1658:ASP:OD1 | 1:B:1658:ASP:N | 2.48 | 0.47 |
| 1:B:1708:ARG:NH1 | 1:B:1836:PHE:O | 2.48 | 0.47 |
| 1:B:2559:LEU:HD11 | 1:B:2603:ILE:HG12 | 1.97 | 0.47 |
| 1:B:3002:LEU:O | 1:B:3006:ILE:HG12 | 2.14 | 0.47 |
| 1:B:3147:ILE:CD1 | 1:B:3152:PHE:HB2 | 2.39 | 0.47 |
| 1:B:3937:TYR:HD1 | 1:B:3940:LYS:HZ1 | 1.63 | 0.47 |
| 1:B:4888:TYR:OH | 1:C:4917:ASP:OD2 | 2.21 | 0.47 |
| 1:B:4892:ARG:NH2 | 1:C:4898:GLY:HA3 | 2.23 | 0.47 |
| 1:D:437:PRO:HB2 | 1:D:440:ALA:HB3 | 1.97 | 0.47 |
| 1:D:871:ARG:HH22 | 1:D:922:LEU:C | 2.19 | 0.47 |
| 1:D:2669:GLU:HA | 1:D:2672:LEU:HB2 | 1.97 | 0.47 |
| 1:D:2716:ASP:OD1 | 1:D:2716:ASP:N | 2.48 | 0.47 |
| 1:D:3368:ARG:HG2 | 1:D:3371:LYS:NZ | 2.29 | 0.47 |
| 1:D:3428:ASN:O | 1:D:3431:ALA:N | 2.48 | 0.47 |
| 1:C:224:HIS:CD2 | 1:C:388:LEU:HG | 2.50 | 0.47 |
| 1:C:683:ARG:HB2 | 1:C:782:SER:HB2 | 1.96 | 0.47 |
| 1:C:981:GLN:HE21 | 1:C:1055:PRO:HB3 | 1.80 | 0.47 |
| 1:C:2431:ASP:HB2 | 1:C:2501:SER:HB2 | 1.97 | 0.47 |
| 1:C:2517:PHE:CD1 | 1:C:2520:HIS:HE1 | 2.33 | 0.47 |
| 1:C:2743:LEU:HD22 | 1:C:2811:GLU:OE1 | 2.15 | 0.47 |
| 1:C:3605:HIS:O | 1:C:3609:THR:HG23 | 2.15 | 0.47 |
| 1:C:4778:TRP:O | 1:C:4782:VAL:HG23 | 2.15 | 0.47 |
| 1:A:16:THR:OG1 | 1:A:99:ARG:N | 2.41 | 0.47 |
| 1:A:103:TYR:CZ | 1:A:163:VAL:HA | 2.50 | 0.47 |
| 1:A:871:ARG:HH22 | 1:A:922:LEU:C | 2.19 | 0.47 |
| 1:A:881:LEU:O | 1:A:885:THR:HG23 | 2.15 | 0.47 |
| 1:A:1708:ARG:NH1 | 1:A:1836:PHE:O | 2.47 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2026:ASP:OD1 | 1:A:2027:ILE:N | 2.48 | 0.47 |
| 1:A:2694:GLU:OE2 | 1:A:2697:ARG:NE | 2.40 | 0.47 |
| 1:A:3424:LEU:HD23 | 1:A:3523:ASN:HD22 | 1.79 | 0.47 |
| 1:A:3428:ASN:O | 1:A:3431:ALA:N | 2.48 | 0.47 |
| 1:A:3959:LYS:HB2 | 1:A:3959:LYS:HE2 | 1.73 | 0.47 |
| 2:G:18:ARG:NH1 | 2:G:51:GLY:HA3 | 2.29 | 0.47 |
| 1:B:213:TYR:N | 1:B:341:TYR:H | 2.08 | 0.47 |
| 1:B:871:ARG:HH22 | 1:B:922:LEU:C | 2.19 | 0.47 |
| 1:B:1297:PHE:HA | 1:B:1522:LEU:HD22 | 1.97 | 0.47 |
| 1:B:2026:ASP:OD1 | 1:B:2027:ILE:N | 2.48 | 0.47 |
| 1:B:2122:SER:O | 1:B:2126:ARG:HG3 | 2.15 | 0.47 |
| 1:D:225:GLY:HA3 | 1:D:228:ASP:OD1 | 2.15 | 0.47 |
| 1:D:2026:ASP:OD1 | 1:D:2027:ILE:N | 2.48 | 0.47 |
| 1:D:2431:ASP:HB2 | 1:D:2501:SER:HB2 | 1.97 | 0.47 |
| 1:D:2517:PHE:CD1 | 1:D:2520:HIS:HE1 | 2.33 | 0.47 |
| 1:D:3438:VAL:HG13 | 1:D:3517:MET:CE | 2.45 | 0.47 |
| 1:D:3527:PRO:HG2 | 1:D:3572:GLN:HB3 | 1.96 | 0.47 |
| 1:C:247:TYR:CE2 | 1:C:376:ALA:HB2 | 2.50 | 0.47 |
| 1:C:1291:LEU:HD13 | 1:C:1595:LEU:HD21 | 1.95 | 0.47 |
| 1:C:2004:GLU:OE1 | 1:C:2004:GLU:N | 2.46 | 0.47 |
| 1:C:2153:MET:O | 1:C:2157:GLU:HG2 | 2.15 | 0.47 |
| 1:C:3077:ALA:HB1 | 1:C:3156:VAL:HG21 | 1.97 | 0.47 |
| 1:C:3343:GLN:OE1 | 1:C:3414:ARG:NH2 | 2.47 | 0.47 |
| 1:C:3716:LEU:HD13 | 1:C:3793:MET:HG3 | 1.97 | 0.47 |
| 1:C:3959:LYS:HB2 | 1:C:3959:LYS:HE2 | 1.73 | 0.47 |
| 1:A:355:LEU:HD22 | 1:A:380:GLN:HB3 | 1.96 | 0.46 |
| 1:A:1629:GLN:HE22 | 1:A:1631:GLN:HB3 | 1.80 | 0.46 |
| 1:A:2449:GLU:O | 1:A:2453:ILE:HG12 | 2.14 | 0.46 |
| 1:A:2517:PHE:CD1 | 1:A:2520:HIS:HE1 | 2.33 | 0.46 |
| 1:A:2536:LEU:HD23 | 1:A:2541:PHE:HD2 | 1.80 | 0.46 |
| 1:A:2559:LEU:HD11 | 1:A:2603:ILE:HG12 | 1.97 | 0.46 |
| 1:A:2908:TYR:HA | 1:A:2911:LEU:HG | 1.97 | 0.46 |
| 1:A:3527:PRO:HG2 | 1:A:3572:GLN:HB3 | 1.96 | 0.46 |
| 1:A:3681:GLY:O | 1:A:3682:GLU:HG3 | 2.16 | 0.46 |
| 1:A:4090:LYS:NZ | 1:A:4115:SER:OG | 2.48 | 0.46 |
| 1:A:4574:ASN:OD1 | 1:A:4810:ALA:HA | 2.15 | 0.46 |
| 2:E:105:LYS:HG2 | 2:E:107:GLU:OE1 | 2.14 | 0.46 |
| 2:H:49:MET:N | 2:H:54:GLU:OE2 | 2.45 | 0.46 |
| 1:B:2624:ARG:HB2 | 1:B:2910:THR:HB | 1.97 | 0.46 |
| 1:B:2908:TYR:HA | 1:B:2911:LEU:HG | 1.97 | 0.46 |
| 1:B:3758:MET:HB3 | 1:B:3762:ARG:HH12 | 1.80 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:B:3937:TYR:HA | 1:B:3940:LYS:NZ | 2.30 | 0.46 |
| 1:B:3959:LYS:HB2 | 1:B:3959:LYS:HE2 | 1.73 | 0.46 |
| 1:B:4574:ASN:OD1 | 1:B:4810:ALA:HA | 2.15 | 0.46 |
| 1:B:4900:GLU:OE1 | 1:B:4900:GLU:N | 2.48 | 0.46 |
| 1:D:247:TYR:CE2 | 1:D:376:ALA:HB2 | 2.50 | 0.46 |
| 1:D:2234:ARG:O | 1:D:2238:TYR:CB | 2.62 | 0.46 |
| 1:D:3157:ILE:HG22 | 1:D:3162:GLN:NE2 | 2.30 | 0.46 |
| 1:D:3424:LEU:HD23 | 1:D:3523:ASN:HD22 | 1.79 | 0.46 |
| 1:D:4157:ASP:H | 1:D:4161:ARG:NH1 | 2.12 | 0.46 |
| 1:C:1658:ASP:N | 1:C:1658:ASP:OD1 | 2.48 | 0.46 |
| 1:C:1867:GLU:CD | 1:C:1928:GLN:HE22 | 2.15 | 0.46 |
| 1:C:2026:ASP:OD1 | 1:C:2027:ILE:N | 2.48 | 0.46 |
| 1:C:2233:CYS:O | 1:C:2236:LEU:N | 2.48 | 0.46 |
| 1:C:2536:LEU:HD23 | 1:C:2541:PHE:HD2 | 1.80 | 0.46 |
| 1:C:3354:LEU:O | 1:C:3358:PHE:HB2 | 2.15 | 0.46 |
| 1:C:3369:ALA:HA | 1:C:3372:VAL:HG22 | 1.96 | 0.46 |
| 1:C:3428:ASN:O | 1:C:3431:ALA:N | 2.48 | 0.46 |
| 1:C:3465:ASN:OD1 | 1:C:3467:MET:HB2 | 2.15 | 0.46 |
| 1:C:4157:ASP:H | 1:C:4161:ARG:NH1 | 2.13 | 0.46 |
| 1:C:4574:ASN:OD1 | 1:C:4810:ALA:HA | 2.15 | 0.46 |
| 1:C:4900:GLU:OE1 | 1:C:4900:GLU:N | 2.48 | 0.46 |
| 1:A:650:VAL:HG23 | 1:A:777:PHE:HB2 | 1.98 | 0.46 |
| 1:A:1130:GLN:NE2 | 1:A:1136:SER:HB2 | 2.31 | 0.46 |
| 1:A:2182:ILE:HG13 | 1:A:2234:ARG:NH1 | 2.30 | 0.46 |
| 1:A:2566:ALA:HA | 1:A:2569:PHE:HD2 | 1.80 | 0.46 |
| 1:A:2609:ALA:O | 1:A:2612[A]:ARG:NH1 | 2.48 | 0.46 |
| 1:A:2952:GLU:HA | 1:A:2957:PHE:CG | 2.49 | 0.46 |
| 1:A:3718:GLU:OE1 | 1:A:3793:MET:HE3 | 2.16 | 0.46 |
| 1:A:3937:TYR:HA | 1:A:3940:LYS:NZ | 2.30 | 0.46 |
| 2:F:11:ASP:OD1 | 2:F:12:GLY:N | 2.49 | 0.46 |
| 1:B:437:PRO:HB2 | 1:B:440:ALA:HB3 | 1.97 | 0.46 |
| 1:B:653:ALA:N | 1:B:656:SER:OG | 2.48 | 0.46 |
| 1:B:2182:ILE:HG13 | 1:B:2234:ARG:NH1 | 2.30 | 0.46 |
| 1:B:3465:ASN:OD1 | 1:B:3467:MET:HB2 | 2.14 | 0.46 |
| 1:B:3527:PRO:HG2 | 1:B:3572:GLN:HB3 | 1.96 | 0.46 |
| 1:B:3585:ASP:OD1 | 1:B:3586:ALA:N | 2.49 | 0.46 |
| 1:D:359:TYR:HB2 | 1:D:374:LYS:NZ | 2.31 | 0.46 |
| 1:D:651:GLY:HA3 | 1:D:776:LEU:HD23 | 1.97 | 0.46 |
| 1:D:1657:LEU:O | 1:D:1661:ARG:N | 2.37 | 0.46 |
| 1:D:2624:ARG:HB2 | 1:D:2910:THR:HB | 1.97 | 0.46 |
| 1:D:2675:THR:HB | 1:D:2710:LEU:HD13 | 1.97 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:359:TYR:HB2 | 1:C:374:LYS:NZ | 2.31 | 0.46 |
| 1:C:425:PRO:HG3 | 1:C:506:TYR:CZ | 2.49 | 0.46 |
| 1:C:651:GLY:HA3 | 1:C:776:LEU:HD23 | 1.97 | 0.46 |
| 1:C:2247:GLN:O | 1:C:2279:SER:OG | 2.33 | 0.46 |
| 1:C:2313:LEU:HD11 | 1:C:2418:LEU:HD21 | 1.97 | 0.46 |
| 1:C:2626:LEU:O | 1:C:2630:VAL:HG23 | 2.15 | 0.46 |
| 1:C:2913:ALA:HA | 1:C:2916:LYS:HD2 | 1.96 | 0.46 |
| 1:C:3354:LEU:HA | 1:C:3358:PHE:CD2 | 2.42 | 0.46 |
| 1:C:3604:TYR:HD2 | 1:C:3608:GLN:HE22 | 1.63 | 0.46 |
| 1:A:1297:PHE:HA | 1:A:1522:LEU:HD22 | 1.98 | 0.46 |
| 1:A:2431:ASP:HB2 | 1:A:2501:SER:HB2 | 1.97 | 0.46 |
| 1:A:2799:GLU:O | 1:A:2802:LYS:HB2 | 2.16 | 0.46 |
| 1:A:2981:VAL:HA | 1:A:2985:ARG:HE | 1.81 | 0.46 |
| 2:H:18:ARG:NH1 | 2:H:51:GLY:HA3 | 2.29 | 0.46 |
| 2:G:11:ASP:OD1 | 2:G:12:GLY:N | 2.48 | 0.46 |
| 1:B:2536:LEU:HD23 | 1:B:2541:PHE:HD2 | 1.80 | 0.46 |
| 1:D:71:GLN:HB2 | 1:D:147:TRP:HH2 | 1.80 | 0.46 |
| 1:D:881:LEU:O | 1:D:885:THR:HG23 | 2.15 | 0.46 |
| 1:D:2012:PHE:HB2 | 1:D:2018:GLU:HA | 1.96 | 0.46 |
| 1:D:2981:VAL:HA | 1:D:2985:ARG:HE | 1.81 | 0.46 |
| 1:D:3067:CYS:O | 1:D:3071:LEU:HG | 2.16 | 0.46 |
| 1:D:3157:ILE:HG22 | 1:D:3162:GLN:CD | 2.35 | 0.46 |
| 1:D:3629:ARG:O | 1:D:3633:VAL:HG23 | 2.14 | 0.46 |
| 1:D:3695:PRO:HB2 | 1:D:3700:GLN:HG2 | 1.96 | 0.46 |
| 1:C:2426:TYR:O | 1:C:2430:ILE:HG12 | 2.15 | 0.46 |
| 1:C:3157:ILE:HG22 | 1:C:3162:GLN:NE2 | 2.30 | 0.46 |
| 1:C:3786:CYS:SG | 1:C:3794:VAL:HB | 2.56 | 0.46 |
| 1:C:3937:TYR:HA | 1:C:3940:LYS:NZ | 2.30 | 0.46 |
| 1:A:225:GLY:HA3 | 1:A:228:ASP:OD1 | 2.15 | 0.46 |
| 1:A:2199:ARG:NH2 | 1:A:3861:GLU:OE2 | 2.49 | 0.46 |
| 1:A:2292:GLU:OE2 | 1:A:2292:GLU:N | 2.34 | 0.46 |
| 1:A:2431:ASP:OD1 | 1:A:2435:ARG:NE | 2.39 | 0.46 |
| 1:A:2541:PHE:O | 1:A:2544:THR:HG22 | 2.14 | 0.46 |
| 1:A:2575:ARG:HG3 | 1:A:2575:ARG:O | 2.14 | 0.46 |
| 1:A:3402:CYS:HB3 | 1:A:3458:PHE:CE1 | 2.51 | 0.46 |
| 1:B:27:THR:OG1 | 1:B:32:GLN:OE1 | 2.28 | 0.46 |
| 1:B:168:ASP:OD1 | 1:B:201:ASN:ND2 | 2.49 | 0.46 |
| 1:B:214:VAL:N | 1:B:341:TYR:HB2 | 2.30 | 0.46 |
| 1:B:359:TYR:HB2 | 1:B:374:LYS:NZ | 2.31 | 0.46 |
| 1:B:442:ILE:CG2 | 1:B:446:GLN:HE22 | 2.27 | 0.46 |
| 1:B:647:ASN:ND2 | 1:B:822:ARG:HB3 | 2.31 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:B:881:LEU:O | 1:B:885:THR:HG23 | 2.15 | 0.46 |
| 1:B:1730:MET:HG3 | 1:B:1773:PRO:HG3 | 1.98 | 0.46 |
| 1:B:2802:LYS:HA | 1:B:2802:LYS:HD3 | 1.67 | 0.46 |
| 1:B:3077:ALA:HB1 | 1:B:3156:VAL:HG21 | 1.97 | 0.46 |
| 1:B:4052:SER:O | 1:B:4055:VAL:N | 2.48 | 0.46 |
| 1:B:4157:ASP:H | 1:B:4161:ARG:NH1 | 2.13 | 0.46 |
| 1:D:168:ASP:OD1 | 1:D:201:ASN:ND2 | 2.49 | 0.46 |
| 1:D:224:HIS:CD2 | 1:D:388:LEU:HG | 2.50 | 0.46 |
| 1:D:1105:ALA:O | 1:D:1189:LEU:N | 2.47 | 0.46 |
| 1:D:2268[B]:GLN:H | 1:D:2268[B]:GLN:HG3 | 1.49 | 0.46 |
| 1:D:3002:LEU:O | 1:D:3006:ILE:HG12 | 2.14 | 0.46 |
| 1:D:4182:GLU:HG2 | 1:D:4192:ARG:HG2 | 1.97 | 0.46 |
| 1:C:27:THR:OG1 | 1:C:32:GLN:OE1 | 2.28 | 0.46 |
| 1:C:103:TYR:CZ | 1:C:163:VAL:HA | 2.50 | 0.46 |
| 1:C:650:VAL:HG23 | 1:C:777:PHE:HB2 | 1.98 | 0.46 |
| 1:C:2098:VAL:HA | 1:C:2101:MET:HG2 | 1.98 | 0.46 |
| 1:C:2500:ALA:HB2 | 1:C:2553:TYR:CD1 | 2.49 | 0.46 |
| 1:C:3067:CYS:O | 1:C:3071:LEU:HG | 2.16 | 0.46 |
| 1:A:110:ARG:HH11 | 1:A:115:ARG:HE | 1.62 | 0.46 |
| 1:A:359:TYR:HB2 | 1:A:374:LYS:NZ | 2.31 | 0.46 |
| 1:A:3585:ASP:OD1 | 1:A:3586:ALA:N | 2.49 | 0.46 |
| 1:A:3786:CYS:SG | 1:A:3794:VAL:HB | 2.56 | 0.46 |
| 1:A:3941:ASP:OD1 | 1:A:3942:VAL:N | 2.48 | 0.46 |
| 2:G:55:VAL:HA | 1:C:1785:ALA:H | 1.79 | 0.46 |
| 1:B:418:LEU:HD13 | 1:B:493:ARG:HB2 | 1.98 | 0.46 |
| 1:B:716:PHE:HE1 | 1:B:764:VAL:HG11 | 1.81 | 0.46 |
| 1:B:2313:LEU:HD11 | 1:B:2418:LEU:HD21 | 1.97 | 0.46 |
| 1:B:2669:GLU:HA | 1:B:2672:LEU:HB2 | 1.97 | 0.46 |
| 1:B:3139:VAL:O | 1:B:3143:LEU:HD23 | 2.16 | 0.46 |
| 1:B:3369:ALA:HA | 1:B:3372:VAL:HG22 | 1.96 | 0.46 |
| 1:B:4071:ILE:HA | 1:B:4074:SER:HB3 | 1.98 | 0.46 |
| 1:B:4182:GLU:HG2 | 1:B:4192:ARG:HG2 | 1.97 | 0.46 |
| 1:B:4651:THR:HG1 | 1:B:4803:HIS:CD2 | 2.28 | 0.46 |
| 1:D:103:TYR:CZ | 1:D:163:VAL:HA | 2.50 | 0.46 |
| 1:D:213:TYR:N | 1:D:341:TYR:H | 2.08 | 0.46 |
| 1:D:355:LEU:HD22 | 1:D:380:GLN:HB3 | 1.96 | 0.46 |
| 1:D:647:ASN:ND2 | 1:D:822:ARG:HB3 | 2.31 | 0.46 |
| 1:D:830:ARG:NH1 | 1:D:832:GLU:HB2 | 2.30 | 0.46 |
| 1:D:2098:VAL:HA | 1:D:2101:MET:HG2 | 1.98 | 0.46 |
| 1:D:2536:LEU:HD23 | 1:D:2541:PHE:HD2 | 1.80 | 0.46 |
| 1:D:3183:VAL:HA | 1:D:3186:LEU:HB2 | 1.96 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:D:3354:LEU:O | 1:D:3358:PHE:HB2 | 2.15 | 0.46 |
| 1:D:3605:HIS:O | 1:D:3609:THR:HG23 | 2.15 | 0.46 |
| 1:D:4931:ILE:O | 1:D:4935:LEU:HG | 2.14 | 0.46 |
| 1:C:35:LEU:HG | 1:C:51:PRO:HA | 1.96 | 0.46 |
| 1:C:39:ALA:O | 1:C:111:HIS:NE2 | 2.49 | 0.46 |
| 1:C:1297:PHE:HA | 1:C:1522:LEU:HD22 | 1.98 | 0.46 |
| 1:C:1730:MET:HG3 | 1:C:1773:PRO:HG3 | 1.98 | 0.46 |
| 1:C:3402:CYS:HB3 | 1:C:3458:PHE:CE1 | 2.51 | 0.46 |
| 1:C:3585:ASP:OD1 | 1:C:3586:ALA:N | 2.49 | 0.46 |
| 1:A:39:ALA:O | 1:A:111:HIS:NE2 | 2.49 | 0.46 |
| 1:A:224:HIS:CD2 | 1:A:388:LEU:HG | 2.50 | 0.46 |
| 1:A:530:ILE:HG21 | 1:A:540:PHE:HE2 | 1.81 | 0.46 |
| 1:A:1730:MET:HG3 | 1:A:1773:PRO:HG3 | 1.98 | 0.46 |
| 1:A:2098:VAL:HA | 1:A:2101:MET:HG2 | 1.98 | 0.46 |
| 1:A:3308:THR:H | 1:A:3311:HIS:HB2 | 1.81 | 0.46 |
| 1:A:3571:TRP:CE2 | 1:B:1228:ILE:HG12 | 2.49 | 0.46 |
| 1:A:3721:LEU:HD12 | 1:A:3721:LEU:HA | 1.83 | 0.46 |
| 1:A:3758:MET:HB3 | 1:A:3762:ARG:HH12 | 1.80 | 0.46 |
| 1:A:4087:LEU:HB2 | 1:A:4122:MET:HE2 | 1.96 | 0.46 |
| 1:B:13:PHE:CE1 | 1:B:164:ARG:HG2 | 2.51 | 0.46 |
| 1:B:392:ARG:HH21 | 1:B:3910:THR:HA | 1.80 | 0.46 |
| 1:B:530:ILE:HG21 | 1:B:540:PHE:HE2 | 1.81 | 0.46 |
| 1:B:1629:GLN:NE2 | 1:B:1631:GLN:HB3 | 2.31 | 0.46 |
| 1:B:1849:LEU:HB3 | 1:B:1945:TYR:CE2 | 2.49 | 0.46 |
| 1:B:2098:VAL:HA | 1:B:2101:MET:HG2 | 1.98 | 0.46 |
| 1:B:2234:ARG:O | 1:B:2238:TYR:CB | 2.63 | 0.46 |
| 1:B:2619:LEU:HD13 | 1:B:2647:HIS:CE1 | 2.50 | 0.46 |
| 1:B:3840:SER:OG | 1:B:3877:ASP:OD1 | 2.28 | 0.46 |
| 1:D:303:ASP:H | 1:D:306:LYS:HE3 | 1.80 | 0.46 |
| 1:D:716:PHE:HE1 | 1:D:764:VAL:HG11 | 1.81 | 0.46 |
| 1:D:2237:CYS:O | 1:D:2240:CYS:HB2 | 2.16 | 0.46 |
| 1:D:2283:ASN:ND2 | 1:D:2286:LEU:HG | 2.31 | 0.46 |
| 1:D:2609:ALA:O | 1:D:2612[A]:ARG:NH1 | 2.48 | 0.46 |
| 1:D:2637:ALA:C | 1:D:2640:PRO:HD2 | 2.36 | 0.46 |
| 1:D:2743:LEU:HD22 | 1:D:2811:GLU:OE1 | 2.15 | 0.46 |
| 1:D:3965:LEU:O | 1:D:3969:ILE:HG12 | 2.16 | 0.46 |
| 1:D:4067:LYS:HB3 | 1:D:4103:PHE:HZ | 1.80 | 0.46 |
| 1:C:1297:PHE:CD2 | 1:C:1522:LEU:HA | 2.51 | 0.46 |
| 1:C:1629:GLN:HE22 | 1:C:1631:GLN:HB3 | 1.80 | 0.46 |
| 1:C:2619:LEU:HD13 | 1:C:2647:HIS:CE1 | 2.50 | 0.46 |
| 1:C:2807:TRP:HA | 1:C:2810:LYS:HG2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:3078:ARG:HG2 | 1:C:3082:LYS:NZ | 2.31 | 0.46 |
| 1:C:3695:PRO:HB2 | 1:C:3700:GLN:HG2 | 1.97 | 0.46 |
| 1:C:3719:ASP:H | 1:C:3793:MET:CE | 2.29 | 0.46 |
| 1:C:3937:TYR:HD1 | 1:C:3940:LYS:HZ1 | 1.63 | 0.46 |
| 1:A:52:THR:HA | 1:A:60:PRO:HG3 | 1.96 | 0.46 |
| 1:A:392:ARG:HH21 | 1:A:3910:THR:HA | 1.80 | 0.46 |
| 1:A:418:LEU:HD13 | 1:A:493:ARG:HB2 | 1.98 | 0.46 |
| 1:A:469:ARG:HD2 | 1:A:3712:GLU:OE1 | 2.15 | 0.46 |
| 1:A:2024:PRO:O | 1:A:2027:ILE:HG22 | 2.16 | 0.46 |
| 1:A:2358:ILE:HB | 1:B:195:PHE:CD1 | 2.50 | 0.46 |
| 1:A:3067:CYS:O | 1:A:3071:LEU:HG | 2.16 | 0.46 |
| 1:A:3139:VAL:O | 1:A:3143:LEU:HD23 | 2.16 | 0.46 |
| 1:A:3343:GLN:OE1 | 1:A:3414:ARG:NH2 | 2.47 | 0.46 |
| 1:A:3937:TYR:HD1 | 1:A:3940:LYS:HZ1 | 1.64 | 0.46 |
| 1:A:3965:LEU:O | 1:A:3969:ILE:HG12 | 2.16 | 0.46 |
| 1:B:469:ARG:HD2 | 1:B:3712:GLU:OE1 | 2.15 | 0.46 |
| 1:B:1297:PHE:CD2 | 1:B:1522:LEU:HA | 2.51 | 0.46 |
| 1:B:2237:CYS:O | 1:B:2240:CYS:HB2 | 2.16 | 0.46 |
| 1:B:2480:GLY:O | 1:B:2484:ALA:N | 2.47 | 0.46 |
| 1:B:2575:ARG:O | 1:B:2575:ARG:HG3 | 2.14 | 0.46 |
| 1:B:3604:TYR:HD2 | 1:B:3608:GLN:HE22 | 1.63 | 0.46 |
| 1:B:3681:GLY:O | 1:B:3682:GLU:HG3 | 2.16 | 0.46 |
| 1:B:3965:LEU:O | 1:B:3969:ILE:HG12 | 2.16 | 0.46 |
| 1:B:4892:ARG:NH1 | 1:C:4917:ASP:HB3 | 2.31 | 0.46 |
| 1:D:110:ARG:HH11 | 1:D:115:ARG:HE | 1.62 | 0.46 |
| 1:D:469:ARG:HD2 | 1:D:3712:GLU:OE1 | 2.15 | 0.46 |
| 1:D:650:VAL:HG23 | 1:D:777:PHE:HB2 | 1.98 | 0.46 |
| 1:D:1521:ASP:HB3 | 1:D:1524:THR:OG1 | 2.16 | 0.46 |
| 1:D:2619:LEU:HD13 | 1:D:2647:HIS:CE1 | 2.51 | 0.46 |
| 1:D:3077:ALA:HB1 | 1:D:3156:VAL:HG21 | 1.97 | 0.46 |
| 1:D:3540:TYR:O | 1:D:3543:LYS:HD2 | 2.16 | 0.46 |
| 1:D:3681:GLY:O | 1:D:3682:GLU:HG3 | 2.16 | 0.46 |
| 1:D:3937:TYR:HA | 1:D:3940:LYS:NZ | 2.30 | 0.46 |
| 1:C:110:ARG:HH11 | 1:C:115:ARG:HE | 1.62 | 0.46 |
| 1:C:2431:ASP:OD1 | 1:C:2435:ARG:NE | 2.39 | 0.46 |
| 1:C:2559:LEU:HD11 | 1:C:2603:ILE:HG12 | 1.97 | 0.46 |
| 1:C:2695:LEU:HA | 1:C:2698:MET:HE2 | 1.96 | 0.46 |
| 1:C:3069:HIS:ND1 | 1:C:3142:THR:OG1 | 2.27 | 0.46 |
| 1:C:4052:SER:O | 1:C:4055:VAL:N | 2.48 | 0.46 |
| 1:C:4071:ILE:HA | 1:C:4074:SER:HB3 | 1.98 | 0.46 |
| 1:A:13:PHE:CE1 | 1:A:164:ARG:HG2 | 2.51 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:404:ILE:HG12 | 1:A:483:MET:HE1 | 1.97 | 0.46 |
| 1:A:647:ASN:ND2 | 1:A:822:ARG:HB3 | 2.31 | 0.46 |
| 1:A:1521:ASP:HB3 | 1:A:1524:THR:OG1 | 2.16 | 0.46 |
| 1:B:2233:CYS:O | 1:B:2236:LEU:N | 2.48 | 0.46 |
| 1:B:3428:ASN:O | 1:B:3431:ALA:N | 2.48 | 0.46 |
| 1:B:3719:ASP:H | 1:B:3793:MET:CE | 2.29 | 0.46 |
| 1:B:3786:CYS:SG | 1:B:3794:VAL:HB | 2.56 | 0.46 |
| 1:B:4998:LYS:HB3 | 1:B:5003:HIS:CE1 | 2.51 | 0.46 |
| 1:D:39:ALA:O | 1:D:111:HIS:NE2 | 2.49 | 0.46 |
| 1:D:530:ILE:HG21 | 1:D:540:PHE:HE2 | 1.81 | 0.46 |
| 1:D:1297:PHE:HA | 1:D:1522:LEU:HD22 | 1.98 | 0.46 |
| 1:D:2271:THR:HG23 | 1:D:2274:ASP:N | 2.27 | 0.46 |
| 1:D:2908:TYR:HA | 1:D:2911:LEU:HG | 1.97 | 0.46 |
| 1:D:3402:CYS:HB3 | 1:D:3458:PHE:CE1 | 2.51 | 0.46 |
| 1:D:3937:TYR:HD1 | 1:D:3940:LYS:HZ1 | 1.64 | 0.46 |
| 1:C:71:GLN:HB2 | 1:C:147:TRP:HH2 | 1.80 | 0.46 |
| 1:C:881:LEU:O | 1:C:885:THR:HG23 | 2.15 | 0.46 |
| 1:C:1450:VAL:HB | 1:C:1516:ILE:HD13 | 1.98 | 0.46 |
| 1:C:2533:ALA:HB1 | 1:C:2589:LEU:HD21 | 1.96 | 0.46 |
| 1:C:2624:ARG:HB2 | 1:C:2910:THR:HB | 1.97 | 0.46 |
| 1:C:2637:ALA:C | 1:C:2640:PRO:HD2 | 2.36 | 0.46 |
| 1:C:2675:THR:HB | 1:C:2710:LEU:HD13 | 1.97 | 0.46 |
| 1:C:2908:TYR:HA | 1:C:2911:LEU:HG | 1.97 | 0.46 |
| 1:C:3681:GLY:O | 1:C:3682:GLU:HG3 | 2.16 | 0.46 |
| 1:C:4651:THR:OG1 | 1:C:4803:HIS:NE2 | 2.36 | 0.46 |
| 1:A:54:ASN:OD1 | 1:A:57:ASN:N | 2.32 | 0.46 |
| 1:A:1658:ASP:N | 1:A:1658:ASP:OD1 | 2.48 | 0.46 |
| 1:A:1690:ASP:O | 1:A:1693:GLN:HB2 | 2.16 | 0.46 |
| 1:A:2271:THR:HG23 | 1:A:2274:ASP:N | 2.27 | 0.46 |
| 1:A:2637:ALA:C | 1:A:2640:PRO:HD2 | 2.36 | 0.46 |
| 1:A:2743:LEU:HD22 | 1:A:2811:GLU:OE1 | 2.15 | 0.46 |
| 1:A:3157:ILE:HG22 | 1:A:3162:GLN:NE2 | 2.30 | 0.46 |
| 1:A:3349:ALA:HB3 | 1:A:3415:TYR:CE1 | 2.48 | 0.46 |
| 1:A:3354:LEU:O | 1:A:3358:PHE:HB2 | 2.15 | 0.46 |
| 1:A:4052:SER:O | 1:A:4055:VAL:N | 2.48 | 0.46 |
| 1:A:4182:GLU:HG2 | 1:A:4192:ARG:HG2 | 1.97 | 0.46 |
| 2:H:75:THR:HG23 | 2:H:98:VAL:HG22 | 1.98 | 0.46 |
| 1:B:224:HIS:CD2 | 1:B:388:LEU:HG | 2.50 | 0.46 |
| 1:B:262:LEU:HD21 | 1:B:280:LEU:HD22 | 1.98 | 0.46 |
| 1:B:929:LEU:O | 1:B:933:LEU:HG | 2.16 | 0.46 |
| 1:B:1490:SER:OG | 1:B:1492:CYS:O | 2.34 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:2426:TYR:O | 1:B:2430:ILE:HG12 | 2.15 | 0.46 |
| 1:B:2761:TYR:HB3 | 1:B:2929:PHE:CZ | 2.51 | 0.46 |
| 1:B:2807:TRP:HA | 1:B:2810:LYS:HG2 | 1.98 | 0.46 |
| 1:B:3067:CYS:O | 1:B:3071:LEU:HG | 2.16 | 0.46 |
| 1:B:3213:TYR:CD2 | 1:B:3302:PRO:HG2 | 2.51 | 0.46 |
| 1:D:1125:ASN:H | 1:D:1128:ARG:NH1 | 2.14 | 0.46 |
| 1:D:1490:SER:OG | 1:D:1492:CYS:O | 2.34 | 0.46 |
| 1:D:2292:GLU:OE2 | 1:D:2292:GLU:N | 2.35 | 0.46 |
| 1:D:2559:LEU:HD11 | 1:D:2603:ILE:HG12 | 1.97 | 0.46 |
| 1:D:4052:SER:O | 1:D:4055:VAL:N | 2.48 | 0.46 |
| 1:C:392:ARG:HH21 | 1:C:3910:THR:HA | 1.80 | 0.46 |
| 1:C:971:ASP:OD2 | 1:C:974:HIS:HB3 | 2.16 | 0.46 |
| 1:C:1452:TRP:CZ3 | 1:C:1550:PRO:HG3 | 2.51 | 0.46 |
| 1:C:1690:ASP:HB3 | 1:C:1693:GLN:HG3 | 1.98 | 0.46 |
| 1:C:2199:ARG:NH2 | 1:C:3861:GLU:OE2 | 2.49 | 0.46 |
| 1:C:2283:ASN:ND2 | 1:C:2286:LEU:HG | 2.31 | 0.46 |
| 1:C:2669:GLU:HA | 1:C:2672:LEU:HB2 | 1.97 | 0.46 |
| 1:C:2799:GLU:O | 1:C:2802:LYS:HB2 | 2.16 | 0.46 |
| 1:C:3263:TYR:HD1 | 1:C:3270:ILE:HD12 | 1.78 | 0.46 |
| 1:C:4067:LYS:HB3 | 1:C:4103:PHE:HZ | 1.80 | 0.46 |
| 1:C:4182:GLU:HG2 | 1:C:4192:ARG:HG2 | 1.97 | 0.46 |
| 1:A:103:TYR:N | 1:A:161:GLU:O | 2.45 | 0.46 |
| 1:A:651:GLY:HA3 | 1:A:776:LEU:HD23 | 1.97 | 0.46 |
| 1:A:716:PHE:HE1 | 1:A:764:VAL:HG11 | 1.81 | 0.46 |
| 1:A:2619:LEU:HD13 | 1:A:2647:HIS:CE1 | 2.51 | 0.46 |
| 1:A:3213:TYR:CD2 | 1:A:3302:PRO:HG2 | 2.51 | 0.46 |
| 1:A:4900:GLU:OE1 | 1:A:4900:GLU:N | 2.48 | 0.46 |
| 1:B:39:ALA:O | 1:B:111:HIS:NE2 | 2.49 | 0.46 |
| 1:B:981:GLN:HE21 | 1:B:1055:PRO:HB3 | 1.80 | 0.46 |
| 1:B:1629:GLN:HE22 | 1:B:1631:GLN:HB3 | 1.80 | 0.46 |
| 1:B:2199:ARG:NH2 | 1:B:3861:GLU:OE2 | 2.49 | 0.46 |
| 1:B:3154:ASP:HA | 1:B:3202:PRO:HB3 | 1.98 | 0.46 |
| 1:B:3157:ILE:HG22 | 1:B:3162:GLN:NE2 | 2.30 | 0.46 |
| 1:B:3199:ALA:O | 1:B:3283:ARG:NE | 2.49 | 0.46 |
| 1:B:4778:TRP:O | 1:B:4782:VAL:HG23 | 2.15 | 0.46 |
| 1:D:232:THR:CG2 | 1:D:257:ARG:HE | 2.29 | 0.46 |
| 1:D:392:ARG:HH21 | 1:D:3910:THR:HA | 1.80 | 0.46 |
| 1:D:1100:MET:HE2 | 1:D:1100:MET:HB2 | 1.79 | 0.46 |
| 1:D:2695:LEU:HA | 1:D:2698:MET:HE2 | 1.97 | 0.46 |
| 1:D:2761:TYR:HB3 | 1:D:2929:PHE:CZ | 2.51 | 0.46 |
| 1:D:2807:TRP:HA | 1:D:2810:LYS:HG2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:3078:ARG:HG2 | 1:D:3082:LYS:NZ | 2.31 | 0.46 |
| 1:D:3585:ASP:OD1 | 1:D:3586:ALA:N | 2.49 | 0.46 |
| 1:D:3786:CYS:SG | 1:D:3794:VAL:HB | 2.56 | 0.46 |
| 1:D:4967:TYR:OH | 1:D:5033:GLU:OE2 | 2.21 | 0.46 |
| 1:C:13:PHE:CE1 | 1:C:164:ARG:HG2 | 2.51 | 0.46 |
| 1:C:132:ALA:HA | 1:C:193:ALA:O | 2.16 | 0.46 |
| 1:C:140:ASP:OD2 | 1:C:142:THR:OG1 | 2.31 | 0.46 |
| 1:C:262:LEU:HD21 | 1:C:280:LEU:HD22 | 1.98 | 0.46 |
| 1:C:1100:MET:HE2 | 1:C:1100:MET:HB2 | 1.78 | 0.46 |
| 1:C:1450:VAL:HG22 | 1:C:1552:VAL:HG22 | 1.98 | 0.46 |
| 1:C:1808:ARG:HH11 | 1:C:1853:ILE:HG22 | 1.81 | 0.46 |
| 1:C:3199:ALA:O | 1:C:3283:ARG:NE | 2.49 | 0.46 |
| 1:C:3695:PRO:HB3 | 1:C:3699:HIS:HB3 | 1.98 | 0.46 |
| 1:A:303:ASP:H | 1:A:306:LYS:HE3 | 1.80 | 0.45 |
| 1:A:929:LEU:O | 1:A:933:LEU:HG | 2.16 | 0.45 |
| 1:A:981:GLN:HE21 | 1:A:1055:PRO:HB3 | 1.80 | 0.45 |
| 1:A:2122:SER:O | 1:A:2126:ARG:HG3 | 2.15 | 0.45 |
| 1:A:2313:LEU:HD11 | 1:A:2418:LEU:HD21 | 1.97 | 0.45 |
| 1:A:4998:LYS:HB3 | 1:A:5003:HIS:CE1 | 2.51 | 0.45 |
| 2:E:49:MET:N | 2:E:54:GLU:OE2 | 2.45 | 0.45 |
| 2:G:75:THR:HG23 | 2:G:98:VAL:HG22 | 1.98 | 0.45 |
| 1:B:223:PHE:CE2 | 1:B:230:CYS:HB2 | 2.51 | 0.45 |
| 1:B:303:ASP:H | 1:B:306:LYS:HE3 | 1.80 | 0.45 |
| 1:B:650:VAL:HG23 | 1:B:777:PHE:HB2 | 1.98 | 0.45 |
| 1:B:651:GLY:HA3 | 1:B:776:LEU:HD23 | 1.97 | 0.45 |
| 1:B:717:ASP:HB3 | 1:B:720:HIS:H | 1.81 | 0.45 |
| 1:B:830:ARG:NH1 | 1:B:832:GLU:HB2 | 2.29 | 0.45 |
| 1:B:1690:ASP:HB3 | 1:B:1693:GLN:HG3 | 1.98 | 0.45 |
| 1:B:2024:PRO:O | 1:B:2027:ILE:HG22 | 2.16 | 0.45 |
| 1:B:2675:THR:HB | 1:B:2710:LEU:HD13 | 1.97 | 0.45 |
| 1:B:2799:GLU:O | 1:B:2802:LYS:HB2 | 2.16 | 0.45 |
| 1:B:3078:ARG:HG2 | 1:B:3082:LYS:NZ | 2.31 | 0.45 |
| 1:B:4148:THR:HG22 | 1:B:4152:GLU:OE2 | 2.16 | 0.45 |
| 1:D:483:MET:O | 1:D:487:VAL:HG23 | 2.17 | 0.45 |
| 1:D:1730:MET:HG3 | 1:D:1773:PRO:HG3 | 1.98 | 0.45 |
| 1:D:2626:LEU:O | 1:D:2630:VAL:HG23 | 2.15 | 0.45 |
| 1:D:4090:LYS:NZ | 1:D:4115:SER:OG | 2.48 | 0.45 |
| 1:C:223:PHE:CE2 | 1:C:230:CYS:HB2 | 2.51 | 0.45 |
| 1:C:530:ILE:HG21 | 1:C:540:PHE:HE2 | 1.81 | 0.45 |
| 1:C:717:ASP:HB2 | 1:C:722:TRP:CD1 | 2.52 | 0.45 |
| 1:C:2694:GLU:OE2 | 1:C:2697:ARG:NE | 2.40 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:2948:THR:HG22 | 1:C:2949:SER:N | 2.29 | 0.45 |
| 1:A:132:ALA:HA | 1:A:193:ALA:O | 2.16 | 0.45 |
| 1:A:1450:VAL:HG22 | 1:A:1552:VAL:HG22 | 1.97 | 0.45 |
| 1:A:2500:ALA:HB2 | 1:A:2553:TYR:CD1 | 2.49 | 0.45 |
| 1:A:2669:GLU:HA | 1:A:2672:LEU:HB2 | 1.97 | 0.45 |
| 1:A:2927:LEU:HD23 | 1:A:2927:LEU:HA | 1.79 | 0.45 |
| 1:A:3078:ARG:HG2 | 1:A:3082:LYS:NZ | 2.31 | 0.45 |
| 1:A:4738:ALA:HA | 1:A:4743:MET:HG2 | 1.99 | 0.45 |
| 2:H:11:ASP:OD1 | 2:H:12:GLY:N | 2.48 | 0.45 |
| 2:H:42:ARG:HH21 | 1:D:1780:PRO:HB2 | 1.80 | 0.45 |
| 1:B:110:ARG:HH11 | 1:B:115:ARG:HE | 1.62 | 0.45 |
| 1:B:1008:SER:CB | 1:B:1017:ARG:HB3 | 2.46 | 0.45 |
| 1:B:1450:VAL:HG22 | 1:B:1552:VAL:HG22 | 1.97 | 0.45 |
| 1:B:2283:ASN:ND2 | 1:B:2286:LEU:HG | 2.31 | 0.45 |
| 1:B:2626:LEU:O | 1:B:2630:VAL:HG23 | 2.15 | 0.45 |
| 1:B:2781:VAL:HB | 1:B:2789:PRO:HG3 | 1.98 | 0.45 |
| 1:B:3354:LEU:HD12 | 1:B:3415:TYR:CD2 | 2.45 | 0.45 |
| 1:B:3354:LEU:O | 1:B:3358:PHE:HB2 | 2.15 | 0.45 |
| 1:B:4232:GLU:OE2 | 1:B:5017:ARG:NH1 | 2.43 | 0.45 |
| 1:D:140:ASP:OD2 | 1:D:142:THR:OG1 | 2.31 | 0.45 |
| 1:D:1690:ASP:O | 1:D:1693:GLN:HB2 | 2.16 | 0.45 |
| 1:D:1808:ARG:HH11 | 1:D:1853:ILE:HG22 | 1.81 | 0.45 |
| 1:D:2199:ARG:NH2 | 1:D:3861:GLU:OE2 | 2.49 | 0.45 |
| 1:D:2858:GLN:N | 1:D:2859:PRO:HD3 | 2.31 | 0.45 |
| 1:D:3154:ASP:HA | 1:D:3202:PRO:HB3 | 1.98 | 0.45 |
| 1:D:3308:THR:H | 1:D:3311:HIS:HB2 | 1.81 | 0.45 |
| 1:D:4998:LYS:HB3 | 1:D:5003:HIS:CE1 | 2.51 | 0.45 |
| 1:C:1521:ASP:HB3 | 1:C:1524:THR:OG1 | 2.16 | 0.45 |
| 1:C:1629:GLN:NE2 | 1:C:1631:GLN:HB3 | 2.31 | 0.45 |
| 1:C:2981:VAL:HA | 1:C:2985:ARG:HE | 1.80 | 0.45 |
| 1:C:3758:MET:HB3 | 1:C:3762:ARG:HH12 | 1.80 | 0.45 |
| 1:C:3965:LEU:O | 1:C:3969:ILE:HG12 | 2.16 | 0.45 |
| 1:A:445:LEU:O | 1:A:449:ILE:HD12 | 2.16 | 0.45 |
| 1:A:717:ASP:HB3 | 1:A:720:HIS:H | 1.81 | 0.45 |
| 1:A:1294:PRO:HB3 | 1:A:1549:PHE:CE1 | 2.49 | 0.45 |
| 1:A:1629:GLN:NE2 | 1:A:1631:GLN:HB3 | 2.31 | 0.45 |
| 1:A:1654:SER:HB3 | 1:A:1704:PRO:HD3 | 1.98 | 0.45 |
| 1:A:2807:TRP:HA | 1:A:2810:LYS:HG2 | 1.98 | 0.45 |
| 1:A:3077:ALA:HB1 | 1:A:3156:VAL:HG21 | 1.97 | 0.45 |
| 1:A:3154:ASP:HA | 1:A:3202:PRO:HB3 | 1.98 | 0.45 |
| 1:A:3540:TYR:O | 1:A:3543:LYS:HD2 | 2.16 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|-------------------|--------------------------|-------------------|
| 1:A:3604:TYR:HD2 | 1:A:3608:GLN:HE22 | 1.63 | 0.45 |
| 1:A:4020:GLN:O | 1:A:4024:VAL:HG23 | 2.17 | 0.45 |
| 1:A:4148:THR:HG22 | 1:A:4152:GLU:OE2 | 2.16 | 0.45 |
| 1:B:232:THR:CG2 | 1:B:257:ARG:HE | 2.29 | 0.45 |
| 1:B:1450:VAL:HB | 1:B:1516:ILE:HD13 | 1.98 | 0.45 |
| 1:B:4090:LYS:NZ | 1:B:4115:SER:OG | 2.48 | 0.45 |
| 1:D:223:PHE:CE2 | 1:D:230:CYS:HB2 | 2.51 | 0.45 |
| 1:D:418:LEU:HD13 | 1:D:493:ARG:HB2 | 1.98 | 0.45 |
| 1:D:537:CYS:SG | 1:D:570:GLU:HB3 | 2.56 | 0.45 |
| 1:D:1260:MET:O | 1:D:1260:MET:HG3 | 2.16 | 0.45 |
| 1:D:1297:PHE:CD2 | 1:D:1522:LEU:HA | 2.51 | 0.45 |
| 1:D:1452:TRP:CZ3 | 1:D:1550:PRO:HG3 | 2.51 | 0.45 |
| 1:D:2284:ASN:ND2 | 1:D:3856:LEU:HD23 | 2.32 | 0.45 |
| 1:D:3283:ARG:HH12 | 1:D:3287:ARG:NH2 | 2.15 | 0.45 |
| 1:D:3716:LEU:HD13 | 1:D:3793:MET:HG3 | 1.97 | 0.45 |
| 1:C:168:ASP:OD1 | 1:C:201:ASN:ND2 | 2.49 | 0.45 |
| 1:C:303:ASP:H | 1:C:306:LYS:HE3 | 1.80 | 0.45 |
| 1:C:871:ARG:HH22 | 1:C:922:LEU:C | 2.19 | 0.45 |
| 1:C:1260:MET:O | 1:C:1260:MET:HG3 | 2.16 | 0.45 |
| 1:C:2566:ALA:HA | 1:C:2569:PHE:HD2 | 1.80 | 0.45 |
| 1:C:3213:TYR:CD2 | 1:C:3302:PRO:HG2 | 2.51 | 0.45 |
| 1:C:4998:LYS:HB3 | 1:C:5003:HIS:CE1 | 2.51 | 0.45 |
| 1:A:772:ASN:N | 1:A:1470:ARG:HH22 | 2.09 | 0.45 |
| 1:A:986:ASP:HA | 1:A:1039:LEU:HD13 | 1.99 | 0.45 |
| 1:A:1125:ASN:H | 1:A:1128:ARG:NH1 | 2.14 | 0.45 |
| 1:A:1452:TRP:CZ3 | 1:A:1550:PRO:HG3 | 2.51 | 0.45 |
| 1:A:1743[B]:ARG:HH22 | 1:A:1967:ASP:CG | 2.19 | 0.45 |
| 1:A:2434:GLY:O | 1:A:2508:ARG:HG2 | 2.17 | 0.45 |
| 1:A:2761:TYR:HB3 | 1:A:2929:PHE:CZ | 2.51 | 0.45 |
| 1:A:2781:VAL:HB | 1:A:2789:PRO:HG3 | 1.98 | 0.45 |
| 1:A:3283:ARG:HH12 | 1:A:3287:ARG:NH2 | 2.15 | 0.45 |
| 1:A:3719:ASP:H | 1:A:3793:MET:CE | 2.29 | 0.45 |
| 1:B:1452:TRP:CZ3 | 1:B:1550:PRO:HG3 | 2.51 | 0.45 |
| 1:B:2566:ALA:HA | 1:B:2569:PHE:HD2 | 1.80 | 0.45 |
| 1:B:2981:VAL:HA | 1:B:2985:ARG:HE | 1.81 | 0.45 |
| 1:B:4189:ARG:HB3 | 1:B:5031:GLN:HE22 | 1.81 | 0.45 |
| 1:D:13:PHE:CE1 | 1:D:164:ARG:HG2 | 2.51 | 0.45 |
| 1:D:971:ASP:OD2 | 1:D:974:HIS:HB3 | 2.16 | 0.45 |
| 1:C:743:VAL:HG21 | 1:C:801:LYS:HE2 | 1.99 | 0.45 |
| 1:C:815:VAL:O | 1:C:1007:TYR:OH | 2.28 | 0.45 |
| 1:C:929:LEU:O | 1:C:933:LEU:HG | 2.16 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|---------------------|--------------------------|-------------------|
| 1:C:2190:VAL:HG13 | 1:C:2194:HIS:ND1 | 2.31 | 0.45 |
| 1:C:2237:CYS:O | 1:C:2240:CYS:HB2 | 2.16 | 0.45 |
| 1:C:2292:GLU:OE2 | 1:C:2292:GLU:N | 2.34 | 0.45 |
| 1:C:2499:LYS:NZ | 1:C:2529:ASP:OD1 | 2.44 | 0.45 |
| 1:C:2609:ALA:O | 1:C:2612[A]:ARG:NH1 | 2.48 | 0.45 |
| 1:C:4189:ARG:HB3 | 1:C:5031:GLN:HE22 | 1.81 | 0.45 |
| 1:A:1207:ASP:O | 1:A:1210:SER:OG | 2.30 | 0.45 |
| 1:A:2012:PHE:HB2 | 1:A:2018:GLU:HA | 1.96 | 0.45 |
| 1:A:2138:LEU:HD13 | 1:A:3658:LYS:HG3 | 1.99 | 0.45 |
| 1:A:2480:GLY:O | 1:A:2484:ALA:N | 2.47 | 0.45 |
| 1:B:445:LEU:O | 1:B:449:ILE:HD12 | 2.16 | 0.45 |
| 1:B:1100:MET:HE2 | 1:B:1100:MET:HB2 | 1.70 | 0.45 |
| 1:B:1131:ARG:HD3 | 1:B:1139:PHE:HB2 | 1.99 | 0.45 |
| 1:B:2017:ASP:HB2 | 1:B:2020:ASP:HB3 | 1.99 | 0.45 |
| 1:B:2190:VAL:HG13 | 1:B:2194:HIS:ND1 | 2.31 | 0.45 |
| 1:B:3402:CYS:HB3 | 1:B:3458:PHE:CE1 | 2.51 | 0.45 |
| 1:B:3442:PHE:CZ | 1:B:3514:LEU:HD22 | 2.52 | 0.45 |
| 1:D:132:ALA:HA | 1:D:193:ALA:O | 2.17 | 0.45 |
| 1:D:986:ASP:HA | 1:D:1039:LEU:HD13 | 1.99 | 0.45 |
| 1:D:1450:VAL:HG22 | 1:D:1552:VAL:HG22 | 1.97 | 0.45 |
| 1:D:1478:ASP:HB3 | 1:D:1482:ASN:HB3 | 1.99 | 0.45 |
| 1:D:2138:LEU:HD13 | 1:D:3658:LYS:HG3 | 1.99 | 0.45 |
| 1:D:2313:LEU:HD11 | 1:D:2418:LEU:HD21 | 1.97 | 0.45 |
| 1:D:3719:ASP:H | 1:D:3793:MET:CE | 2.29 | 0.45 |
| 1:D:4232:GLU:OE1 | 1:D:5019:TRP:NE1 | 2.42 | 0.45 |
| 1:D:4700:GLN:HA | 1:D:4703:ARG:HG3 | 1.99 | 0.45 |
| 1:D:4738:ALA:HA | 1:D:4743:MET:HG2 | 1.99 | 0.45 |
| 1:C:647:ASN:ND2 | 1:C:822:ARG:HB3 | 2.31 | 0.45 |
| 1:C:716:PHE:HE1 | 1:C:764:VAL:HG11 | 1.80 | 0.45 |
| 1:C:717:ASP:HB3 | 1:C:720:HIS:H | 1.81 | 0.45 |
| 1:C:2284:ASN:ND2 | 1:C:3856:LEU:HD23 | 2.32 | 0.45 |
| 1:C:3442:PHE:CZ | 1:C:3514:LEU:HD22 | 2.52 | 0.45 |
| 1:C:3459:VAL:HG13 | 1:C:3464:ILE:HG13 | 1.99 | 0.45 |
| 1:C:3540:TYR:O | 1:C:3543:LYS:HD2 | 2.16 | 0.45 |
| 1:A:168:ASP:OD1 | 1:A:201:ASN:ND2 | 2.49 | 0.45 |
| 1:A:213:TYR:HA | 1:A:339:ILE:O | 2.17 | 0.45 |
| 1:A:348:VAL:HG23 | 1:A:388:LEU:HD13 | 1.99 | 0.45 |
| 1:A:1008:SER:CB | 1:A:1017:ARG:HB3 | 2.46 | 0.45 |
| 1:A:1743[A]:ARG:HH22 | 1:A:1967:ASP:CG | 2.19 | 0.45 |
| 1:A:2017:ASP:HB2 | 1:A:2020:ASP:HB3 | 1.99 | 0.45 |
| 1:A:2284:ASN:ND2 | 1:A:3856:LEU:HD23 | 2.32 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2626:LEU:O | 1:A:2630:VAL:HG23 | 2.15 | 0.45 |
| 1:A:2676:ARG:O | 1:A:2680:TRP:HD1 | 2.00 | 0.45 |
| 1:B:103:TYR:CE1 | 1:B:163:VAL:HA | 2.52 | 0.45 |
| 1:B:244:LEU:HB3 | 1:B:375:LYS:HZ3 | 1.81 | 0.45 |
| 1:B:495:ASN:OD1 | 1:B:523:TYR:OH | 2.30 | 0.45 |
| 1:B:1128:ARG:HD2 | 1:B:1130:GLN:O | 2.17 | 0.45 |
| 1:B:1568:LYS:HG2 | 1:B:1589:PRO:HG3 | 1.99 | 0.45 |
| 1:B:1808:ARG:HH11 | 1:B:1853:ILE:HG22 | 1.80 | 0.45 |
| 1:B:2233:CYS:HB3 | 1:B:2237:CYS:HB2 | 1.72 | 0.45 |
| 1:B:3308:THR:H | 1:B:3311:HIS:HB2 | 1.81 | 0.45 |
| 1:D:717:ASP:HB2 | 1:D:722:TRP:CD1 | 2.52 | 0.45 |
| 1:D:929:LEU:O | 1:D:933:LEU:HG | 2.17 | 0.45 |
| 1:D:1257:VAL:HG22 | 1:D:1272:LEU:HD12 | 1.99 | 0.45 |
| 1:D:2248:ARG:HD3 | 1:D:2286:LEU:HD21 | 1.99 | 0.45 |
| 1:D:2434:GLY:O | 1:D:2508:ARG:HG2 | 2.17 | 0.45 |
| 1:D:2540:THR:O | 1:D:2543:THR:OG1 | 2.27 | 0.45 |
| 1:D:2799:GLU:O | 1:D:2802:LYS:HB2 | 2.16 | 0.45 |
| 1:D:3459:VAL:HG13 | 1:D:3464:ILE:HG13 | 1.99 | 0.45 |
| 1:D:4071:ILE:HA | 1:D:4074:SER:HB3 | 1.98 | 0.45 |
| 1:C:284:HIS:HB3 | 1:C:287:THR:OG1 | 2.17 | 0.45 |
| 1:C:537:CYS:SG | 1:C:570:GLU:HB3 | 2.56 | 0.45 |
| 1:C:683:ARG:HB2 | 1:C:782:SER:O | 2.17 | 0.45 |
| 1:C:1131:ARG:HD3 | 1:C:1139:PHE:HB2 | 1.99 | 0.45 |
| 1:C:2024:PRO:O | 1:C:2027:ILE:HG22 | 2.16 | 0.45 |
| 1:C:4231:MET:HA | 1:C:4231:MET:CE | 2.47 | 0.45 |
| 1:A:483:MET:O | 1:A:487:VAL:HG23 | 2.17 | 0.45 |
| 1:A:537:CYS:SG | 1:A:570:GLU:HB3 | 2.56 | 0.45 |
| 1:A:683:ARG:HB2 | 1:A:782:SER:O | 2.17 | 0.45 |
| 1:A:705:ASN:ND2 | 1:A:709:ASP:O | 2.50 | 0.45 |
| 1:A:1470:ARG:NH2 | 1:A:1471:ALA:O | 2.35 | 0.45 |
| 1:A:1808:ARG:HH11 | 1:A:1853:ILE:HG22 | 1.81 | 0.45 |
| 1:A:2858:GLN:N | 1:A:2859:PRO:HD3 | 2.31 | 0.45 |
| 1:A:3442:PHE:CZ | 1:A:3514:LEU:HD22 | 2.52 | 0.45 |
| 1:A:4071:ILE:HA | 1:A:4074:SER:HB3 | 1.98 | 0.45 |
| 2:E:18:ARG:NH1 | 2:E:51:GLY:HA3 | 2.29 | 0.45 |
| 1:B:483:MET:O | 1:B:487:VAL:HG23 | 2.17 | 0.45 |
| 1:B:1125:ASN:H | 1:B:1128:ARG:NH1 | 2.14 | 0.45 |
| 1:B:1521:ASP:HB3 | 1:B:1524:THR:OG1 | 2.16 | 0.45 |
| 1:B:1690:ASP:O | 1:B:1693:GLN:HB2 | 2.16 | 0.45 |
| 1:B:2248:ARG:HD3 | 1:B:2286:LEU:HD21 | 1.99 | 0.45 |
| 1:B:4020:GLN:O | 1:B:4024:VAL:HG23 | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:B:4701:TRP:CZ2 | 1:B:4781:GLY:HA3 | 2.52 | 0.45 |
| 1:D:103:TYR:CE1 | 1:D:163:VAL:HA | 2.52 | 0.45 |
| 1:D:262:LEU:HD21 | 1:D:280:LEU:HD22 | 1.98 | 0.45 |
| 1:D:445:LEU:O | 1:D:449:ILE:HD12 | 2.16 | 0.45 |
| 1:D:1470:ARG:NH2 | 1:D:1471:ALA:O | 2.35 | 0.45 |
| 1:D:1607:ARG:HG2 | 1:D:1608:MET:N | 2.32 | 0.45 |
| 1:D:1658:ASP:N | 1:D:1658:ASP:OD1 | 2.48 | 0.45 |
| 1:D:1690:ASP:HB3 | 1:D:1693:GLN:HG3 | 1.98 | 0.45 |
| 1:D:1982:ARG:HH21 | 1:D:1985:THR:HG21 | 1.82 | 0.45 |
| 1:D:2781:VAL:HB | 1:D:2789:PRO:HG3 | 1.98 | 0.45 |
| 1:D:3139:VAL:O | 1:D:3143:LEU:HD23 | 2.16 | 0.45 |
| 1:D:3213:TYR:CD2 | 1:D:3302:PRO:HG2 | 2.51 | 0.45 |
| 1:D:4020:GLN:O | 1:D:4024:VAL:HG23 | 2.17 | 0.45 |
| 1:D:4701:TRP:CZ2 | 1:D:4781:GLY:HA3 | 2.52 | 0.45 |
| 1:D:4711:PHE:HB3 | 1:D:4712:PRO:CD | 2.44 | 0.45 |
| 1:C:705:ASN:ND2 | 1:C:709:ASP:O | 2.50 | 0.45 |
| 1:C:1607:ARG:HG2 | 1:C:1608:MET:N | 2.32 | 0.45 |
| 1:C:2858:GLN:N | 1:C:2859:PRO:HD3 | 2.31 | 0.45 |
| 1:C:3308:THR:H | 1:C:3311:HIS:HB2 | 1.81 | 0.45 |
| 1:C:4020:GLN:O | 1:C:4024:VAL:HG23 | 2.17 | 0.45 |
| 1:A:717:ASP:HB2 | 1:A:722:TRP:CD1 | 2.52 | 0.45 |
| 1:A:895:PRO:HD2 | 1:A:903:LEU:HD23 | 1.99 | 0.45 |
| 1:A:1297:PHE:CD2 | 1:A:1522:LEU:HA | 2.51 | 0.45 |
| 1:A:1478:ASP:HB3 | 1:A:1482:ASN:HB3 | 1.99 | 0.45 |
| 1:A:1607:ARG:HG2 | 1:A:1608:MET:N | 2.32 | 0.45 |
| 1:A:1690:ASP:HB3 | 1:A:1693:GLN:CG | 2.47 | 0.45 |
| 1:A:2355:ARG:O | 1:A:2358:ILE:HG12 | 2.17 | 0.45 |
| 1:A:2615:ARG:HB2 | 1:A:2618:MET:HE3 | 1.97 | 0.45 |
| 1:A:4003:LEU:HD23 | 1:A:4009:GLN:HB3 | 1.99 | 0.45 |
| 1:A:4189:ARG:NH2 | 1:A:5032:TYR:OH | 2.46 | 0.45 |
| 1:A:4701:TRP:CZ2 | 1:A:4781:GLY:HA3 | 2.52 | 0.45 |
| 1:A:4888:TYR:CD1 | 1:B:4914:VAL:HG13 | 2.52 | 0.45 |
| 1:B:132:ALA:HA | 1:B:193:ALA:O | 2.17 | 0.45 |
| 1:B:1260:MET:HG3 | 1:B:1260:MET:O | 2.16 | 0.45 |
| 1:B:1294:PRO:HB3 | 1:B:1549:PHE:CE1 | 2.49 | 0.45 |
| 1:B:2284:ASN:ND2 | 1:B:3856:LEU:HD23 | 2.32 | 0.45 |
| 1:B:2355:ARG:O | 1:B:2358:ILE:HG12 | 2.17 | 0.45 |
| 1:B:2434:GLY:O | 1:B:2508:ARG:HG2 | 2.17 | 0.45 |
| 1:B:2500:ALA:HB2 | 1:B:2553:TYR:CD1 | 2.49 | 0.45 |
| 1:B:2563:THR:HG22 | 1:B:2606:CYS:HA | 1.99 | 0.45 |
| 1:B:2609:ALA:O | 1:B:2612[A]:ARG:NH1 | 2.48 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:B:2637:ALA:C | 1:B:2640:PRO:HD2 | 2.36 | 0.45 |
| 1:B:2679:PHE:O | 1:B:2683:PHE:HB3 | 2.17 | 0.45 |
| 1:B:3226:GLU:O | 1:B:3227:ARG:HG2 | 2.17 | 0.45 |
| 1:B:3459:VAL:HG13 | 1:B:3464:ILE:HG13 | 1.99 | 0.45 |
| 1:B:3716:LEU:HD13 | 1:B:3793:MET:HG3 | 1.97 | 0.45 |
| 1:B:3718:GLU:OE1 | 1:B:3793:MET:HE3 | 2.17 | 0.45 |
| 1:B:4003:LEU:HD23 | 1:B:4009:GLN:HB3 | 1.99 | 0.45 |
| 1:B:4138:ASP:O | 1:B:4142:ASN:ND2 | 2.37 | 0.45 |
| 1:B:4849:TYR:O | 1:B:4853:VAL:HG23 | 2.17 | 0.45 |
| 1:D:683:ARG:HB2 | 1:D:782:SER:O | 2.17 | 0.45 |
| 1:D:717:ASP:HB3 | 1:D:720:HIS:H | 1.81 | 0.45 |
| 1:D:1128:ARG:HD2 | 1:D:1130:GLN:O | 2.17 | 0.45 |
| 1:D:1450:VAL:HB | 1:D:1516:ILE:HD13 | 1.98 | 0.45 |
| 1:D:1629:GLN:NE2 | 1:D:1631:GLN:HB3 | 2.31 | 0.45 |
| 1:C:103:TYR:CE1 | 1:C:163:VAL:HA | 2.52 | 0.45 |
| 1:C:418:LEU:HD13 | 1:C:493:ARG:HB2 | 1.98 | 0.45 |
| 1:C:986:ASP:HA | 1:C:1039:LEU:HD13 | 1.99 | 0.45 |
| 1:C:1690:ASP:O | 1:C:1693:GLN:HB2 | 2.16 | 0.45 |
| 1:C:2138:LEU:HD13 | 1:C:3658:LYS:HG3 | 1.99 | 0.45 |
| 1:C:2248:ARG:HD3 | 1:C:2286:LEU:HD21 | 1.99 | 0.45 |
| 1:C:2355:ARG:O | 1:C:2358:ILE:HG12 | 2.17 | 0.45 |
| 1:C:2781:VAL:HB | 1:C:2789:PRO:HG3 | 1.98 | 0.45 |
| 1:C:3154:ASP:HA | 1:C:3202:PRO:HB3 | 1.98 | 0.45 |
| 1:C:3283:ARG:HH12 | 1:C:3287:ARG:NH2 | 2.15 | 0.45 |
| 1:C:4700:GLN:HA | 1:C:4703:ARG:HG3 | 1.99 | 0.45 |
| 1:A:103:TYR:CE1 | 1:A:163:VAL:HA | 2.52 | 0.45 |
| 1:A:155:LYS:NZ | 1:D:225:GLY:HA2 | 2.32 | 0.45 |
| 1:A:2248:ARG:HD3 | 1:A:2286:LEU:HD21 | 1.99 | 0.45 |
| 1:A:2283:ASN:ND2 | 1:A:2286:LEU:HG | 2.31 | 0.45 |
| 1:A:4189:ARG:HB3 | 1:A:5031:GLN:HE22 | 1.81 | 0.45 |
| 2:F:18:ARG:NH1 | 2:F:51:GLY:HA3 | 2.29 | 0.45 |
| 1:B:683:ARG:HB2 | 1:B:782:SER:O | 2.17 | 0.45 |
| 1:B:1607:ARG:HG2 | 1:B:1608:MET:N | 2.32 | 0.45 |
| 1:B:2268[A]:GLN:H | 1:B:2268[A]:GLN:HG3 | 1.51 | 0.45 |
| 1:B:3546:ASP:O | 1:B:3549:VAL:HG22 | 2.17 | 0.45 |
| 1:B:3930:ILE:HG22 | 1:B:3995:VAL:HG11 | 1.99 | 0.45 |
| 1:B:4067:LYS:HB3 | 1:B:4103:PHE:HZ | 1.80 | 0.45 |
| 1:B:4231:MET:CE | 1:B:4231:MET:HA | 2.47 | 0.45 |
| 1:D:213:TYR:HB3 | 1:D:273:HIS:CD2 | 2.52 | 0.45 |
| 1:D:743:VAL:HG21 | 1:D:801:LYS:HE2 | 1.99 | 0.45 |
| 1:D:1008:SER:CB | 1:D:1017:ARG:HB3 | 2.46 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:1448:VAL:HG22 | 1:D:1554:VAL:HG23 | 1.99 | 0.45 |
| 1:D:3758:MET:HB3 | 1:D:3762:ARG:HH12 | 1.80 | 0.45 |
| 1:D:4148:THR:HG22 | 1:D:4152:GLU:OE2 | 2.16 | 0.45 |
| 1:D:4904:PRO:HG3 | 1:D:4913:ARG:NH1 | 2.32 | 0.45 |
| 1:C:213:TYR:HA | 1:C:339:ILE:O | 2.17 | 0.45 |
| 1:C:445:LEU:O | 1:C:449:ILE:HD12 | 2.16 | 0.45 |
| 1:C:1008:SER:CB | 1:C:1017:ARG:HB3 | 2.46 | 0.45 |
| 1:C:2679:PHE:O | 1:C:2683:PHE:HB3 | 2.17 | 0.45 |
| 1:C:4849:TYR:O | 1:C:4853:VAL:HG23 | 2.17 | 0.45 |
| 1:A:221:ARG:HB2 | 1:A:391:THR:OG1 | 2.17 | 0.45 |
| 1:A:232:THR:CG2 | 1:A:257:ARG:HE | 2.29 | 0.45 |
| 1:A:262:LEU:HD21 | 1:A:280:LEU:HD22 | 1.98 | 0.45 |
| 1:A:1257:VAL:HG22 | 1:A:1272:LEU:HD12 | 1.99 | 0.45 |
| 1:A:1452:TRP:HE1 | 1:A:1518:CYS:HB3 | 1.82 | 0.45 |
| 1:A:2237:CYS:O | 1:A:2240:CYS:HB2 | 2.16 | 0.45 |
| 1:A:2563:THR:HG22 | 1:A:2606:CYS:HA | 1.98 | 0.45 |
| 1:A:2719:TYR:HE2 | 1:A:2953:LYS:HA | 1.82 | 0.45 |
| 1:A:3459:VAL:HG13 | 1:A:3464:ILE:HG13 | 1.99 | 0.45 |
| 1:A:4711:PHE:HB3 | 1:A:4712:PRO:CD | 2.44 | 0.45 |
| 1:B:348:VAL:HG23 | 1:B:388:LEU:HD13 | 1.99 | 0.45 |
| 1:B:3283:ARG:HH12 | 1:B:3287:ARG:NH2 | 2.15 | 0.45 |
| 1:D:1130:GLN:NE2 | 1:D:1136:SER:HB2 | 2.31 | 0.45 |
| 1:D:1131:ARG:HD3 | 1:D:1139:PHE:HB2 | 1.99 | 0.45 |
| 1:D:2017:ASP:HB2 | 1:D:2020:ASP:HB3 | 1.99 | 0.45 |
| 1:D:2355:ARG:O | 1:D:2358:ILE:HG12 | 2.17 | 0.45 |
| 1:D:3036:LYS:HD2 | 1:D:3076:ASP:N | 2.32 | 0.45 |
| 1:D:3226:GLU:O | 1:D:3227:ARG:HG2 | 2.17 | 0.45 |
| 1:D:3604:TYR:HD2 | 1:D:3608:GLN:HE22 | 1.63 | 0.45 |
| 1:D:4694:ASP:HA | 1:D:4700:GLN:HE22 | 1.82 | 0.45 |
| 1:C:822:ARG:HE | 1:C:823:LEU:H | 1.65 | 0.45 |
| 1:C:883:ALA:HA | 1:C:886:ARG:HG3 | 2.00 | 0.45 |
| 1:C:2251:PHE:CG | 1:C:2286:LEU:HD22 | 2.52 | 0.45 |
| 1:C:2802:LYS:HD3 | 1:C:2802:LYS:HA | 1.67 | 0.45 |
| 1:C:3139:VAL:O | 1:C:3143:LEU:HD23 | 2.16 | 0.45 |
| 1:C:4904:PRO:HG3 | 1:C:4913:ARG:NH1 | 2.32 | 0.45 |
| 1:A:284:HIS:HB3 | 1:A:287:THR:OG1 | 2.17 | 0.44 |
| 1:A:830:ARG:NH1 | 1:A:832:GLU:HB2 | 2.30 | 0.44 |
| 1:A:1131:ARG:HD3 | 1:A:1139:PHE:HB2 | 1.99 | 0.44 |
| 1:A:1690:ASP:HB3 | 1:A:1693:GLN:HG3 | 1.98 | 0.44 |
| 1:A:2867:LEU:HD22 | 1:A:2928:LYS:HZ1 | 1.82 | 0.44 |
| 1:A:3226:GLU:O | 1:A:3227:ARG:HG2 | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:A:4904:PRO:HG3 | 1:A:4913:ARG:NH1 | 2.32 | 0.44 |
| 2:E:75:THR:HG23 | 2:E:98:VAL:HG22 | 1.98 | 0.44 |
| 2:F:25:HIS:O | 2:F:102:GLU:HB2 | 2.17 | 0.44 |
| 2:F:75:THR:HG23 | 2:F:98:VAL:HG22 | 1.98 | 0.44 |
| 1:B:213:TYR:HB3 | 1:B:273:HIS:CD2 | 2.52 | 0.44 |
| 1:B:537:CYS:SG | 1:B:570:GLU:HB3 | 2.56 | 0.44 |
| 1:B:683:ARG:HH12 | 1:B:717:ASP:HB2 | 1.82 | 0.44 |
| 1:B:1654:SER:HB3 | 1:B:1704:PRO:HD3 | 1.98 | 0.44 |
| 1:B:2138:LEU:HD13 | 1:B:3658:LYS:HG3 | 1.99 | 0.44 |
| 1:B:2223:ILE:HD12 | 1:B:2263:ILE:HG22 | 2.00 | 0.44 |
| 1:D:221:ARG:HB2 | 1:D:391:THR:OG1 | 2.17 | 0.44 |
| 1:D:526:LEU:HD12 | 1:D:526:LEU:HA | 1.87 | 0.44 |
| 1:D:573:GLU:O | 1:D:577:ILE:HG23 | 2.18 | 0.44 |
| 1:D:1207:ASP:O | 1:D:1210:SER:OG | 2.30 | 0.44 |
| 1:D:1452:TRP:HE1 | 1:D:1518:CYS:HB3 | 1.82 | 0.44 |
| 1:D:1743[B]:ARG:HH22 | 1:D:1967:ASP:CG | 2.19 | 0.44 |
| 1:D:2563:THR:HG22 | 1:D:2606:CYS:HA | 1.98 | 0.44 |
| 1:D:3442:PHE:CZ | 1:D:3514:LEU:HD22 | 2.52 | 0.44 |
| 1:D:4087:LEU:CD2 | 1:D:4124:ASN:HD22 | 2.31 | 0.44 |
| 1:D:4134:GLU:HB3 | 1:D:4135:PRO:HD3 | 1.99 | 0.44 |
| 1:C:23:GLN:NE2 | 1:C:34:LYS:HD2 | 2.32 | 0.44 |
| 1:C:203:ASN:HA | 1:C:204:PRO:HD3 | 1.83 | 0.44 |
| 1:C:232:THR:CG2 | 1:C:257:ARG:HE | 2.29 | 0.44 |
| 1:C:483:MET:O | 1:C:487:VAL:HG23 | 2.17 | 0.44 |
| 1:C:1257:VAL:HG22 | 1:C:1272:LEU:HD12 | 1.99 | 0.44 |
| 1:C:1452:TRP:HE1 | 1:C:1518:CYS:HB3 | 1.82 | 0.44 |
| 1:C:1654:SER:HB3 | 1:C:1704:PRO:HD3 | 1.99 | 0.44 |
| 1:C:2017:ASP:HB2 | 1:C:2020:ASP:HB3 | 1.99 | 0.44 |
| 1:C:2088:GLU:N | 1:C:2092:GLN:OE1 | 2.50 | 0.44 |
| 1:C:2690:LYS:HD3 | 1:C:2691:TYR:N | 2.32 | 0.44 |
| 1:C:4232:GLU:OE2 | 1:C:5017:ARG:NH1 | 2.42 | 0.44 |
| 1:A:719:LEU:HD11 | 2:E:7:ILE:HA | 1.99 | 0.44 |
| 1:A:743:VAL:HG21 | 1:A:801:LYS:HE2 | 1.99 | 0.44 |
| 1:A:1256:GLU:HB2 | 1:A:1275:ARG:HG3 | 1.99 | 0.44 |
| 1:A:1568:LYS:HG2 | 1:A:1589:PRO:HG3 | 1.99 | 0.44 |
| 1:A:2088:GLU:N | 1:A:2092:GLN:OE1 | 2.50 | 0.44 |
| 1:A:2190:VAL:HG13 | 1:A:2194:HIS:ND1 | 2.31 | 0.44 |
| 1:A:2369[B]:ARG:HA | 1:A:2369[B]:ARG:HE | 1.83 | 0.44 |
| 1:A:2679:PHE:O | 1:A:2683:PHE:HB3 | 2.17 | 0.44 |
| 1:A:3590:GLU:HA | 1:A:3593:VAL:HG22 | 1.99 | 0.44 |
| 1:A:4045:VAL:O | 1:A:4049:VAL:HG23 | 2.18 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:A:4995:LEU:HD21 | 1:A:5007:GLU:HB3 | 1.99 | 0.44 |
| 2:E:25:HIS:O | 2:E:102:GLU:HB2 | 2.17 | 0.44 |
| 1:B:140:ASP:OD2 | 1:B:142:THR:OG1 | 2.31 | 0.44 |
| 1:B:717:ASP:HB2 | 1:B:722:TRP:CD1 | 2.52 | 0.44 |
| 1:B:1690:ASP:HB3 | 1:B:1693:GLN:CG | 2.47 | 0.44 |
| 1:B:3416:VAL:HG22 | 1:B:3423:TRP:HZ3 | 1.82 | 0.44 |
| 1:B:3533:ILE:O | 1:B:3537:LYS:HG2 | 2.18 | 0.44 |
| 1:B:3540:TYR:O | 1:B:3543:LYS:HD2 | 2.16 | 0.44 |
| 1:B:4738:ALA:HA | 1:B:4743:MET:HG2 | 1.98 | 0.44 |
| 1:D:27:THR:OG1 | 1:D:32:GLN:OE1 | 2.28 | 0.44 |
| 1:D:1743[A]:ARG:HH22 | 1:D:1967:ASP:CG | 2.19 | 0.44 |
| 1:D:2369[B]:ARG:HA | 1:D:2369[B]:ARG:HE | 1.83 | 0.44 |
| 1:D:2679:PHE:O | 1:D:2683:PHE:HB3 | 2.17 | 0.44 |
| 1:D:4189:ARG:HB3 | 1:D:5031:GLN:HE22 | 1.81 | 0.44 |
| 1:D:4849:TYR:O | 1:D:4853:VAL:HG23 | 2.17 | 0.44 |
| 1:C:573:GLU:O | 1:C:577:ILE:HG23 | 2.18 | 0.44 |
| 1:C:1125:ASN:H | 1:C:1128:ARG:NH1 | 2.14 | 0.44 |
| 1:C:1128:ARG:HD2 | 1:C:1130:GLN:O | 2.17 | 0.44 |
| 1:C:1286:MET:HB3 | 1:C:1462:MET:HA | 1.99 | 0.44 |
| 1:C:1490:SER:OG | 1:C:1492:CYS:O | 2.34 | 0.44 |
| 1:C:1575:LEU:HG | 1:C:1579:MET:SD | 2.57 | 0.44 |
| 1:C:2960:LEU:HD12 | 1:C:3042:LEU:HD11 | 1.99 | 0.44 |
| 1:C:3775:ALA:O | 1:C:3779:VAL:HG23 | 2.17 | 0.44 |
| 1:C:4003:LEU:HD23 | 1:C:4009:GLN:HB3 | 1.99 | 0.44 |
| 1:C:4694:ASP:HA | 1:C:4700:GLN:HE22 | 1.82 | 0.44 |
| 1:C:4701:TRP:CZ2 | 1:C:4781:GLY:HA3 | 2.52 | 0.44 |
| 1:A:213:TYR:HB3 | 1:A:273:HIS:CD2 | 2.52 | 0.44 |
| 1:A:877:ASN:HA | 1:A:880:GLU:HG2 | 2.00 | 0.44 |
| 1:A:1448:VAL:HG22 | 1:A:1554:VAL:HG23 | 1.99 | 0.44 |
| 1:A:1450:VAL:HB | 1:A:1516:ILE:HD13 | 1.98 | 0.44 |
| 1:A:2512:ILE:HD13 | 1:A:2565:CYS:SG | 2.58 | 0.44 |
| 1:A:2690:LYS:HD3 | 1:A:2691:TYR:N | 2.32 | 0.44 |
| 1:A:3036:LYS:HD3 | 1:A:3039:ILE:HD11 | 2.00 | 0.44 |
| 1:A:3875:MET:HB3 | 1:A:3878:ASP:HB3 | 1.99 | 0.44 |
| 1:A:4694:ASP:HA | 1:A:4700:GLN:HE22 | 1.82 | 0.44 |
| 1:A:4849:TYR:O | 1:A:4853:VAL:HG23 | 2.17 | 0.44 |
| 1:B:213:TYR:HA | 1:B:339:ILE:O | 2.17 | 0.44 |
| 1:B:284:HIS:HB3 | 1:B:287:THR:OG1 | 2.17 | 0.44 |
| 1:B:877:ASN:HA | 1:B:880:GLU:HG2 | 2.00 | 0.44 |
| 1:B:1641:ILE:O | 1:B:1645:ASN:N | 2.51 | 0.44 |
| 1:B:2088:GLU:N | 1:B:2092:GLN:OE1 | 2.50 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:B:2369[B]:ARG:HA | 1:B:2369[B]:ARG:HE | 1.83 | 0.44 |
| 1:B:2960:LEU:HD12 | 1:B:3042:LEU:HD11 | 1.99 | 0.44 |
| 1:B:3873:LYS:HA | 1:B:3873:LYS:HD3 | 1.71 | 0.44 |
| 1:D:20:VAL:HG12 | 1:D:204:PRO:HA | 2.00 | 0.44 |
| 1:D:1496:TRP:HB3 | 1:D:1499:ASP:OD2 | 2.18 | 0.44 |
| 1:D:1575:LEU:HG | 1:D:1579:MET:SD | 2.57 | 0.44 |
| 1:D:2024:PRO:O | 1:D:2027:ILE:HG22 | 2.16 | 0.44 |
| 1:D:2251:PHE:CG | 1:D:2286:LEU:HD22 | 2.52 | 0.44 |
| 1:D:3199:ALA:O | 1:D:3283:ARG:NE | 2.49 | 0.44 |
| 1:D:4003:LEU:HD23 | 1:D:4009:GLN:HB3 | 1.99 | 0.44 |
| 1:D:4231:MET:HA | 1:D:4231:MET:CE | 2.47 | 0.44 |
| 1:C:1496:TRP:HB3 | 1:C:1499:ASP:OD2 | 2.18 | 0.44 |
| 1:C:1690:ASP:HB3 | 1:C:1693:GLN:CG | 2.47 | 0.44 |
| 1:C:2673:HIS:CD2 | 1:C:2909:ASP:HB2 | 2.53 | 0.44 |
| 1:C:2867:LEU:HD22 | 1:C:2928:LYS:HZ1 | 1.81 | 0.44 |
| 1:C:3226:GLU:O | 1:C:3227:ARG:HG2 | 2.17 | 0.44 |
| 1:A:223:PHE:CE2 | 1:A:230:CYS:HB2 | 2.51 | 0.44 |
| 1:A:790:ARG:NH1 | 1:A:1624:LEU:O | 2.47 | 0.44 |
| 1:A:1128:ARG:HD2 | 1:A:1130:GLN:O | 2.17 | 0.44 |
| 1:A:2369[A]:ARG:HE | 1:A:2369[A]:ARG:HB2 | 1.69 | 0.44 |
| 1:A:2805:TYR:O | 1:A:2809:ILE:HG12 | 2.18 | 0.44 |
| 1:A:3069:HIS:CE1 | 1:A:3142:THR:HG1 | 2.25 | 0.44 |
| 1:A:3695:PRO:HB3 | 1:A:3699:HIS:HB3 | 1.98 | 0.44 |
| 2:E:11:ASP:OD1 | 2:E:12:GLY:N | 2.48 | 0.44 |
| 2:G:25:HIS:O | 2:G:102:GLU:HB2 | 2.17 | 0.44 |
| 1:B:1452:TRP:HE1 | 1:B:1518:CYS:HB3 | 1.82 | 0.44 |
| 1:B:2673:HIS:CD2 | 1:B:2909:ASP:HB2 | 2.53 | 0.44 |
| 1:B:3695:PRO:HB3 | 1:B:3699:HIS:HB3 | 1.98 | 0.44 |
| 1:B:3775:ALA:O | 1:B:3779:VAL:HG23 | 2.17 | 0.44 |
| 1:B:4694:ASP:HA | 1:B:4700:GLN:HE22 | 1.82 | 0.44 |
| 1:B:4995:LEU:HD21 | 1:B:5007:GLU:HB3 | 1.99 | 0.44 |
| 1:D:213:TYR:HA | 1:D:339:ILE:O | 2.17 | 0.44 |
| 1:D:1654:SER:HB3 | 1:D:1704:PRO:HD3 | 1.98 | 0.44 |
| 1:D:1869:GLU:HA | 1:D:1872:THR:HG23 | 2.00 | 0.44 |
| 1:D:2233:CYS:HB3 | 1:D:2237:CYS:HB2 | 1.72 | 0.44 |
| 1:D:2676:ARG:O | 1:D:2680:TRP:HD1 | 2.00 | 0.44 |
| 1:D:2690:LYS:HD3 | 1:D:2691:TYR:N | 2.32 | 0.44 |
| 1:D:2757:LYS:HE3 | 1:D:2757:LYS:HB3 | 1.84 | 0.44 |
| 1:C:107:ILE:N | 1:C:148:TRP:O | 2.26 | 0.44 |
| 1:C:213:TYR:HB3 | 1:C:273:HIS:CD2 | 2.52 | 0.44 |
| 1:C:580:GLU:OE1 | 1:C:624:ASN:ND2 | 2.51 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:772:ASN:N | 1:C:1470:ARG:HH22 | 2.09 | 0.44 |
| 1:C:1641:ILE:O | 1:C:1645:ASN:N | 2.51 | 0.44 |
| 1:C:2189:LYS:HZ1 | 1:C:2193:GLN:HB2 | 1.82 | 0.44 |
| 1:C:2563:THR:HG22 | 1:C:2606:CYS:HA | 1.98 | 0.44 |
| 1:C:2716:ASP:OD1 | 1:C:2716:ASP:N | 2.48 | 0.44 |
| 1:C:2719:TYR:HE2 | 1:C:2953:LYS:HA | 1.82 | 0.44 |
| 1:A:580:GLU:OE1 | 1:A:624:ASN:ND2 | 2.51 | 0.44 |
| 1:A:1105:ALA:O | 1:A:1189:LEU:N | 2.47 | 0.44 |
| 1:A:1260:MET:O | 1:A:1260:MET:HG3 | 2.16 | 0.44 |
| 1:A:1496:TRP:HB3 | 1:A:1499:ASP:OD2 | 2.18 | 0.44 |
| 1:A:2211:MET:CE | 1:A:2232:CYS:HB3 | 2.48 | 0.44 |
| 1:A:2223:ILE:HD11 | 1:A:2229:VAL:HG21 | 1.99 | 0.44 |
| 1:A:2757:LYS:HE3 | 1:A:2757:LYS:HB3 | 1.84 | 0.44 |
| 1:A:3546:ASP:O | 1:A:3549:VAL:HG22 | 2.17 | 0.44 |
| 1:A:4231:MET:HA | 1:A:4231:MET:CE | 2.47 | 0.44 |
| 2:F:25:HIS:HB3 | 2:F:102:GLU:HB2 | 1.99 | 0.44 |
| 1:B:498:THR:HA | 1:B:553:ARG:HH22 | 1.83 | 0.44 |
| 1:B:971:ASP:OD2 | 1:B:974:HIS:HB3 | 2.16 | 0.44 |
| 1:B:1008:SER:HB2 | 1:B:1017:ARG:NE | 2.33 | 0.44 |
| 1:B:1079:LYS:HG2 | 1:B:1655:GLU:CD | 2.38 | 0.44 |
| 1:B:1286:MET:HB3 | 1:B:1462:MET:HA | 1.99 | 0.44 |
| 1:B:2223:ILE:HD11 | 1:B:2229:VAL:HG21 | 1.99 | 0.44 |
| 1:B:2858:GLN:N | 1:B:2859:PRO:HD3 | 2.31 | 0.44 |
| 1:B:3445:TRP:HD1 | 1:B:3451:PHE:HD2 | 1.66 | 0.44 |
| 1:D:155:LYS:HZ3 | 1:C:225:GLY:HA2 | 1.83 | 0.44 |
| 1:D:883:ALA:HA | 1:D:886:ARG:HG3 | 1.99 | 0.44 |
| 1:D:895:PRO:HD2 | 1:D:903:LEU:HD23 | 1.99 | 0.44 |
| 1:D:1568:LYS:HG2 | 1:D:1589:PRO:HG3 | 1.99 | 0.44 |
| 1:D:2464:ASP:OD1 | 1:D:2465:ASP:N | 2.51 | 0.44 |
| 1:D:3316:LEU:O | 1:D:3320:LEU:HG | 2.17 | 0.44 |
| 1:D:5033:GLU:O | 1:D:5037:SER:OG | 2.21 | 0.44 |
| 1:C:1448:VAL:HG22 | 1:C:1554:VAL:HG23 | 1.99 | 0.44 |
| 1:C:1982:ARG:HH21 | 1:C:1985:THR:HG21 | 1.82 | 0.44 |
| 1:C:3036:LYS:HD2 | 1:C:3076:ASP:N | 2.32 | 0.44 |
| 1:C:3316:LEU:O | 1:C:3320:LEU:HG | 2.17 | 0.44 |
| 1:C:3416:VAL:HG22 | 1:C:3423:TRP:HZ3 | 1.82 | 0.44 |
| 1:C:3989:VAL:HG13 | 1:C:4023:MET:CE | 2.48 | 0.44 |
| 1:C:4148:THR:HG22 | 1:C:4152:GLU:OE2 | 2.16 | 0.44 |
| 1:C:4158:PRO:HA | 1:C:4161:ARG:HB2 | 2.00 | 0.44 |
| 1:A:918:ARG:O | 1:A:922:LEU:HG | 2.17 | 0.44 |
| 1:A:1011:GLN:HB2 | 1:A:1019:PRO:HD2 | 2.00 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1037:ASP:O | 1:A:1041:GLN:HG2 | 2.18 | 0.44 |
| 1:A:1490:SER:OG | 1:A:1492:CYS:O | 2.34 | 0.44 |
| 1:A:1783:VAL:O | 2:E:55:VAL:HG13 | 2.18 | 0.44 |
| 1:A:1982:ARG:HH21 | 1:A:1985:THR:HG21 | 1.82 | 0.44 |
| 1:A:2223:ILE:HD12 | 1:A:2263:ILE:HG22 | 2.00 | 0.44 |
| 1:A:2530:MET:HE3 | 1:A:2585:THR:HB | 2.00 | 0.44 |
| 1:A:2638:LYS:HA | 1:A:2641:LEU:HD12 | 2.00 | 0.44 |
| 1:A:3036:LYS:HD2 | 1:A:3076:ASP:N | 2.32 | 0.44 |
| 1:A:3199:ALA:O | 1:A:3283:ARG:NE | 2.49 | 0.44 |
| 1:B:883:ALA:HA | 1:B:886:ARG:HG3 | 2.00 | 0.44 |
| 1:B:1446:SER:HA | 1:B:1496:TRP:NE1 | 2.33 | 0.44 |
| 1:B:2189:LYS:HZ3 | 1:B:2192:TYR:HB2 | 1.82 | 0.44 |
| 1:B:2211:MET:CE | 1:B:2232:CYS:HB3 | 2.48 | 0.44 |
| 1:B:4134:GLU:HB3 | 1:B:4135:PRO:HD3 | 1.99 | 0.44 |
| 1:B:4235:VAL:HG11 | 1:B:5019:TRP:CH2 | 2.53 | 0.44 |
| 1:D:348:VAL:HG23 | 1:D:388:LEU:HD13 | 1.99 | 0.44 |
| 1:D:1037:ASP:O | 1:D:1041:GLN:HG2 | 2.18 | 0.44 |
| 1:D:2512:ILE:HD13 | 1:D:2565:CYS:SG | 2.58 | 0.44 |
| 1:D:4158:PRO:HA | 1:D:4161:ARG:HB2 | 2.00 | 0.44 |
| 1:C:918:ARG:O | 1:C:922:LEU:HG | 2.17 | 0.44 |
| 1:C:1008:SER:HB2 | 1:C:1017:ARG:NE | 2.33 | 0.44 |
| 1:C:1011:GLN:HB2 | 1:C:1019:PRO:HD2 | 2.00 | 0.44 |
| 1:C:1478:ASP:HB3 | 1:C:1482:ASN:HB3 | 1.99 | 0.44 |
| 1:C:2577:ILE:HG13 | 1:C:2578:MET:N | 2.32 | 0.44 |
| 1:C:2761:TYR:HB3 | 1:C:2929:PHE:CZ | 2.51 | 0.44 |
| 1:C:3546:ASP:O | 1:C:3549:VAL:HG22 | 2.17 | 0.44 |
| 1:C:3930:ILE:HG22 | 1:C:3995:VAL:HG11 | 1.99 | 0.44 |
| 1:C:4165:GLU:HA | 1:C:4168:GLU:HG2 | 2.00 | 0.44 |
| 1:C:4738:ALA:HA | 1:C:4743:MET:HG2 | 1.99 | 0.44 |
| 1:A:20:VAL:HG12 | 1:A:204:PRO:HA | 2.00 | 0.44 |
| 1:A:23:GLN:NE2 | 1:A:34:LYS:HD2 | 2.32 | 0.44 |
| 1:A:1008:SER:HB2 | 1:A:1017:ARG:NE | 2.33 | 0.44 |
| 1:A:1252:HIS:CE1 | 1:A:1255:TYR:HD2 | 2.29 | 0.44 |
| 1:A:1641:ILE:O | 1:A:1645:ASN:N | 2.51 | 0.44 |
| 1:A:2243:SER:HB3 | 1:A:2246:ASN:CG | 2.38 | 0.44 |
| 1:A:2653:LYS:HB3 | 1:A:2661:TRP:HE1 | 1.82 | 0.44 |
| 1:A:2673:HIS:CD2 | 1:A:2909:ASP:HB2 | 2.53 | 0.44 |
| 1:A:2879:ALA:HB2 | 1:A:2923:ALA:HB2 | 2.00 | 0.44 |
| 1:A:3533:ILE:O | 1:A:3537:LYS:HG2 | 2.18 | 0.44 |
| 1:A:3930:ILE:HG22 | 1:A:3995:VAL:HG11 | 1.99 | 0.44 |
| 1:A:4087:LEU:CD2 | 1:A:4124:ASN:HD22 | 2.31 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:A:4165:GLU:HA | 1:A:4168:GLU:HG2 | 2.00 | 0.44 |
| 1:A:4235:VAL:HG11 | 1:A:5019:TRP:CH2 | 2.53 | 0.44 |
| 1:B:571:SER:OG | 1:B:574:VAL:HG23 | 2.18 | 0.44 |
| 1:B:986:ASP:HA | 1:B:1039:LEU:HD13 | 1.99 | 0.44 |
| 1:B:2577:ILE:HG13 | 1:B:2578:MET:N | 2.32 | 0.44 |
| 1:B:2676:ARG:O | 1:B:2680:TRP:HD1 | 2.00 | 0.44 |
| 1:B:2960:LEU:HD22 | 1:B:3035:GLU:HG3 | 2.00 | 0.44 |
| 1:B:3033:ASN:O | 1:B:3037:GLU:OE1 | 2.36 | 0.44 |
| 1:B:4904:PRO:HG3 | 1:B:4913:ARG:NH1 | 2.32 | 0.44 |
| 1:D:571:SER:OG | 1:D:574:VAL:HG23 | 2.18 | 0.44 |
| 1:D:683:ARG:HH12 | 1:D:717:ASP:HB2 | 1.82 | 0.44 |
| 1:D:918:ARG:O | 1:D:922:LEU:HG | 2.18 | 0.44 |
| 1:D:1256:GLU:HB2 | 1:D:1275:ARG:HG3 | 1.99 | 0.44 |
| 1:D:2490:MET:H | 1:D:2490:MET:HE2 | 1.83 | 0.44 |
| 1:D:2500:ALA:HB2 | 1:D:2553:TYR:CD1 | 2.49 | 0.44 |
| 1:D:3036:LYS:HD3 | 1:D:3039:ILE:HD11 | 2.00 | 0.44 |
| 1:D:3989:VAL:HG13 | 1:D:4023:MET:CE | 2.48 | 0.44 |
| 1:D:4235:VAL:HG11 | 1:D:5019:TRP:CH2 | 2.53 | 0.44 |
| 1:C:955:LEU:HG | 1:C:969:PRO:HD3 | 1.99 | 0.44 |
| 1:C:1866:ILE:HA | 1:C:1926:LEU:HD12 | 2.00 | 0.44 |
| 1:C:1869:GLU:HA | 1:C:1872:THR:HG23 | 2.00 | 0.44 |
| 1:C:2369[B]:ARG:HA | 1:C:2369[B]:ARG:HE | 1.82 | 0.44 |
| 1:C:2464:ASP:OD1 | 1:C:2465:ASP:N | 2.51 | 0.44 |
| 1:C:2512:ILE:HD13 | 1:C:2565:CYS:SG | 2.58 | 0.44 |
| 1:C:2676:ARG:O | 1:C:2680:TRP:HD1 | 2.00 | 0.44 |
| 1:C:3533:ILE:O | 1:C:3537:LYS:HG2 | 2.18 | 0.44 |
| 1:C:3590:GLU:HA | 1:C:3593:VAL:HG22 | 1.99 | 0.44 |
| 1:C:4087:LEU:CD2 | 1:C:4124:ASN:HD22 | 2.31 | 0.44 |
| 1:A:114:SER:OG | 1:A:116:MET:HB2 | 2.18 | 0.44 |
| 1:A:683:ARG:HH12 | 1:A:717:ASP:HB2 | 1.82 | 0.44 |
| 1:A:1446:SER:HA | 1:A:1496:TRP:NE1 | 2.33 | 0.44 |
| 1:A:3150:HIS:HB3 | 1:A:3152:PHE:CE1 | 2.53 | 0.44 |
| 1:A:3395:ARG:HH11 | 1:A:3453:ARG:HH22 | 1.66 | 0.44 |
| 1:A:3416:VAL:HG22 | 1:A:3423:TRP:HZ3 | 1.82 | 0.44 |
| 1:A:4158:PRO:HA | 1:A:4161:ARG:HB2 | 2.00 | 0.44 |
| 1:A:4700:GLN:HA | 1:A:4703:ARG:HG3 | 1.99 | 0.44 |
| 1:A:4892:ARG:NH1 | 1:B:4917:ASP:HB3 | 2.33 | 0.44 |
| 2:E:25:HIS:HB3 | 2:E:102:GLU:HB2 | 1.99 | 0.44 |
| 2:H:25:HIS:HB3 | 2:H:102:GLU:HB2 | 1.99 | 0.44 |
| 1:B:705:ASN:ND2 | 1:B:709:ASP:O | 2.50 | 0.44 |
| 1:B:822:ARG:HE | 1:B:823:LEU:H | 1.65 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:1491:ASN:OD1 | 1:B:1492:CYS:N | 2.51 | 0.44 |
| 1:B:1496:TRP:HB3 | 1:B:1499:ASP:OD2 | 2.18 | 0.44 |
| 1:B:2512:ILE:HD13 | 1:B:2565:CYS:SG | 2.58 | 0.44 |
| 1:B:2653:LYS:HB3 | 1:B:2661:TRP:HE1 | 1.82 | 0.44 |
| 1:B:3107:VAL:O | 1:B:3111:ARG:HG2 | 2.18 | 0.44 |
| 1:B:3395:ARG:HH11 | 1:B:3453:ARG:HH22 | 1.66 | 0.44 |
| 1:B:4127:GLU:OE1 | 1:B:4131:ARG:NH2 | 2.45 | 0.44 |
| 1:B:4165:GLU:HA | 1:B:4168:GLU:HG2 | 2.00 | 0.44 |
| 1:D:803:LEU:HG | 1:D:804:PRO:HD2 | 2.00 | 0.44 |
| 1:D:1008:SER:HB2 | 1:D:1017:ARG:NE | 2.33 | 0.44 |
| 1:D:2088:GLU:N | 1:D:2092:GLN:OE1 | 2.50 | 0.44 |
| 1:D:2190:VAL:HG13 | 1:D:2194:HIS:ND1 | 2.31 | 0.44 |
| 1:D:2211:MET:CE | 1:D:2232:CYS:HB3 | 2.48 | 0.44 |
| 1:D:2243:SER:HB3 | 1:D:2246:ASN:CG | 2.38 | 0.44 |
| 1:D:3107:VAL:O | 1:D:3111:ARG:HG2 | 2.18 | 0.44 |
| 1:D:3850:GLN:O | 1:D:3854:GLU:OE1 | 2.36 | 0.44 |
| 1:C:348:VAL:HG23 | 1:C:388:LEU:HD13 | 1.99 | 0.44 |
| 1:C:426:ARG:NE | 1:C:504:ALA:O | 2.51 | 0.44 |
| 1:C:571:SER:OG | 1:C:574:VAL:HG23 | 2.18 | 0.44 |
| 1:C:2211:MET:CE | 1:C:2232:CYS:HB3 | 2.48 | 0.44 |
| 1:C:3107:VAL:O | 1:C:3111:ARG:HG2 | 2.18 | 0.44 |
| 1:C:3354:LEU:HD12 | 1:C:3415:TYR:CD2 | 2.45 | 0.44 |
| 1:C:3607:GLU:HB3 | 1:C:3611:HIS:HE1 | 1.83 | 0.44 |
| 1:C:3718:GLU:OE1 | 1:C:3793:MET:HE3 | 2.17 | 0.44 |
| 1:C:3721:LEU:HD12 | 1:C:3721:LEU:HA | 1.83 | 0.44 |
| 1:A:1507:GLY:HA3 | 1:D:2774:ASN:OD1 | 2.17 | 0.44 |
| 1:A:2794:TYR:HA | 1:A:2797:PHE:HB2 | 2.00 | 0.44 |
| 1:A:2970:SER:O | 1:A:2974:ILE:HG12 | 2.18 | 0.44 |
| 1:A:2971:GLN:HA | 1:A:2974:ILE:HG12 | 2.00 | 0.44 |
| 1:A:3033:ASN:O | 1:A:3037:GLU:OE1 | 2.36 | 0.44 |
| 1:B:20:VAL:HG12 | 1:B:204:PRO:HA | 2.00 | 0.44 |
| 1:B:692:TYR:HD2 | 1:B:778:PHE:HZ | 1.65 | 0.44 |
| 1:B:743:VAL:HG21 | 1:B:801:LYS:HE2 | 1.99 | 0.44 |
| 1:B:790:ARG:NH1 | 1:B:1624:LEU:O | 2.47 | 0.44 |
| 1:B:803:LEU:HG | 1:B:804:PRO:HD2 | 2.00 | 0.44 |
| 1:B:955:LEU:HG | 1:B:969:PRO:HD3 | 2.00 | 0.44 |
| 1:B:1257:VAL:HG22 | 1:B:1272:LEU:HD12 | 1.99 | 0.44 |
| 1:B:1478:ASP:HB3 | 1:B:1482:ASN:HB3 | 1.99 | 0.44 |
| 1:B:1694:LEU:HB3 | 1:B:1715:LEU:HD12 | 2.00 | 0.44 |
| 1:B:2699:ALA:O | 1:B:2702:CYS:HB3 | 2.18 | 0.44 |
| 1:B:3850:GLN:O | 1:B:3854:GLU:OE1 | 2.36 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4158:PRO:HA | 1:B:4161:ARG:HB2 | 2.00 | 0.44 |
| 1:B:4865:LYS:HA | 1:B:4865:LYS:HD3 | 1.75 | 0.44 |
| 1:D:1032:LYS:O | 1:D:1036:ARG:NE | 2.47 | 0.44 |
| 1:D:1079:LYS:HG2 | 1:D:1655:GLU:CD | 2.38 | 0.44 |
| 1:D:3395:ARG:HH11 | 1:D:3453:ARG:HH22 | 1.66 | 0.44 |
| 1:D:3533:ILE:O | 1:D:3537:LYS:HG2 | 2.18 | 0.44 |
| 1:D:3590:GLU:HA | 1:D:3593:VAL:HG22 | 1.99 | 0.44 |
| 1:D:3596:VAL:HA | 1:D:3599:VAL:HG22 | 2.00 | 0.44 |
| 1:D:3718:GLU:HA | 1:D:3793:MET:HE3 | 2.00 | 0.44 |
| 1:D:3842:LEU:HD22 | 1:D:3933:PHE:CE2 | 2.53 | 0.44 |
| 1:D:3875:MET:HB3 | 1:D:3878:ASP:HB3 | 1.99 | 0.44 |
| 1:C:315:CYS:SG | 1:C:349:GLN:HB3 | 2.58 | 0.44 |
| 1:C:1164:LEU:N | 1:C:1167:GLU:O | 2.46 | 0.44 |
| 1:C:2223:ILE:HD12 | 1:C:2263:ILE:HG22 | 2.00 | 0.44 |
| 1:C:3150:HIS:HB3 | 1:C:3152:PHE:CE1 | 2.53 | 0.44 |
| 1:C:3596:VAL:HA | 1:C:3599:VAL:HG22 | 2.00 | 0.44 |
| 1:C:3842:LEU:HD22 | 1:C:3933:PHE:CE2 | 2.53 | 0.44 |
| 1:C:3875:MET:HB3 | 1:C:3878:ASP:HB3 | 1.99 | 0.44 |
| 1:A:573:GLU:O | 1:A:577:ILE:HG23 | 2.18 | 0.43 |
| 1:A:971:ASP:OD2 | 1:A:974:HIS:HB3 | 2.16 | 0.43 |
| 1:A:1088:TRP:HA | 1:A:1224:GLU:O | 2.18 | 0.43 |
| 1:A:1694:LEU:HB3 | 1:A:1715:LEU:HD12 | 2.00 | 0.43 |
| 1:A:2392:ARG:O | 1:A:2418:LEU:HD12 | 2.18 | 0.43 |
| 1:A:3107:VAL:O | 1:A:3111:ARG:HG2 | 2.18 | 0.43 |
| 1:A:3596:VAL:HA | 1:A:3599:VAL:HG22 | 2.00 | 0.43 |
| 1:A:4127:GLU:OE1 | 1:A:4131:ARG:NH2 | 2.45 | 0.43 |
| 1:A:4232:GLU:OE2 | 1:A:5017:ARG:NH1 | 2.43 | 0.43 |
| 2:H:25:HIS:O | 2:H:102:GLU:HB2 | 2.17 | 0.43 |
| 2:G:25:HIS:HB3 | 2:G:102:GLU:HB2 | 1.99 | 0.43 |
| 1:B:23:GLN:NE2 | 1:B:34:LYS:HD2 | 2.32 | 0.43 |
| 1:B:221:ARG:HB2 | 1:B:391:THR:OG1 | 2.17 | 0.43 |
| 1:B:470:SER:O | 1:B:474:ARG:NE | 2.50 | 0.43 |
| 1:B:573:GLU:O | 1:B:577:ILE:HG23 | 2.18 | 0.43 |
| 1:B:590:LEU:HD12 | 1:B:599:VAL:HG12 | 2.00 | 0.43 |
| 1:B:895:PRO:HD2 | 1:B:903:LEU:HD23 | 1.99 | 0.43 |
| 1:B:1101:ARG:NH1 | 1:B:1114:GLU:OE2 | 2.35 | 0.43 |
| 1:B:1448:VAL:HG22 | 1:B:1554:VAL:HG23 | 1.99 | 0.43 |
| 1:B:1982:ARG:HH21 | 1:B:1985:THR:HG21 | 1.82 | 0.43 |
| 1:B:2690:LYS:HD3 | 1:B:2691:TYR:N | 2.32 | 0.43 |
| 1:B:2970:SER:O | 1:B:2974:ILE:HG12 | 2.18 | 0.43 |
| 1:B:3794:VAL:HG13 | 1:B:3880:PHE:CE1 | 2.53 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|-------------------|--------------------------|-------------------|
| 1:B:4700:GLN:HA | 1:B:4703:ARG:HG3 | 1.99 | 0.43 |
| 1:D:23:GLN:NE2 | 1:D:34:LYS:HD2 | 2.32 | 0.43 |
| 1:D:284:HIS:HB3 | 1:D:287:THR:OG1 | 2.17 | 0.43 |
| 1:D:1424:PRO:HA | 1:D:1427:ILE:HG22 | 2.00 | 0.43 |
| 1:D:1641:ILE:O | 1:D:1645:ASN:N | 2.51 | 0.43 |
| 1:D:2638:LYS:HA | 1:D:2641:LEU:HD12 | 2.00 | 0.43 |
| 1:D:2879:ALA:HB2 | 1:D:2923:ALA:HB2 | 2.00 | 0.43 |
| 1:D:2960:LEU:HD12 | 1:D:3042:LEU:HD11 | 1.99 | 0.43 |
| 1:D:3069:HIS:CE1 | 1:D:3142:THR:HG1 | 2.25 | 0.43 |
| 1:D:3695:PRO:HB3 | 1:D:3699:HIS:HB3 | 1.98 | 0.43 |
| 1:D:4045:VAL:O | 1:D:4049:VAL:HG23 | 2.18 | 0.43 |
| 1:C:150:MET:HB3 | 1:C:171:LEU:HD12 | 2.00 | 0.43 |
| 1:C:221:ARG:HB2 | 1:C:391:THR:OG1 | 2.17 | 0.43 |
| 1:C:452:PHE:HZ | 1:C:478:PHE:HD2 | 1.66 | 0.43 |
| 1:C:683:ARG:HH12 | 1:C:717:ASP:HB2 | 1.82 | 0.43 |
| 1:C:1491:ASN:OD1 | 1:C:1492:CYS:N | 2.51 | 0.43 |
| 1:C:2223:ILE:HD11 | 1:C:2229:VAL:HG21 | 1.99 | 0.43 |
| 1:C:2434:GLY:O | 1:C:2508:ARG:HG2 | 2.17 | 0.43 |
| 1:A:571:SER:OG | 1:A:574:VAL:HG23 | 2.18 | 0.43 |
| 1:A:1175:SER:HB2 | 1:A:1180:ARG:HD3 | 2.01 | 0.43 |
| 1:A:1449:TRP:HB2 | 1:A:1553:PHE:HB2 | 2.00 | 0.43 |
| 1:A:1575:LEU:HG | 1:A:1579:MET:SD | 2.58 | 0.43 |
| 1:A:4554:TYR:HA | 1:A:4557:ARG:HH21 | 1.83 | 0.43 |
| 2:E:22:CYS:HB2 | 2:E:48:PHE:CE1 | 2.53 | 0.43 |
| 1:B:426:ARG:NE | 1:B:504:ALA:O | 2.51 | 0.43 |
| 1:B:1011:GLN:HB2 | 1:B:1019:PRO:HD2 | 2.00 | 0.43 |
| 1:B:2144:ILE:HD11 | 1:B:2194:HIS:CE1 | 2.53 | 0.43 |
| 1:B:3842:LEU:HB2 | 1:B:3929:SER:CB | 2.40 | 0.43 |
| 1:B:3875:MET:HB3 | 1:B:3878:ASP:HB3 | 1.98 | 0.43 |
| 1:D:114:SER:OG | 1:D:116:MET:HB2 | 2.18 | 0.43 |
| 1:D:822:ARG:HE | 1:D:823:LEU:H | 1.65 | 0.43 |
| 1:D:1125:ASN:O | 1:D:1128:ARG:NH2 | 2.52 | 0.43 |
| 1:D:1175:SER:HB2 | 1:D:1180:ARG:HD3 | 2.01 | 0.43 |
| 1:D:1286:MET:HB3 | 1:D:1462:MET:HA | 2.00 | 0.43 |
| 1:D:2392:ARG:O | 1:D:2418:LEU:HD12 | 2.18 | 0.43 |
| 1:D:2970:SER:O | 1:D:2974:ILE:HG12 | 2.18 | 0.43 |
| 1:C:692:TYR:HD2 | 1:C:778:PHE:HZ | 1.65 | 0.43 |
| 1:C:1088:TRP:HA | 1:C:1224:GLU:O | 2.18 | 0.43 |
| 1:C:1443:GLN:NE2 | 1:C:1561:VAL:HA | 2.34 | 0.43 |
| 1:C:1743[B]:ARG:HH22 | 1:C:1967:ASP:CG | 2.19 | 0.43 |
| 1:C:1966:VAL:HG21 | 1:C:3650:CYS:HA | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|-------------------|--------------------------|-------------------|
| 1:A:498:THR:HA | 1:A:553:ARG:HH22 | 1.83 | 0.43 |
| 1:A:1286:MET:HB3 | 1:A:1462:MET:HA | 1.99 | 0.43 |
| 1:A:1500:PHE:HB3 | 1:A:1531:ALA:HB1 | 2.01 | 0.43 |
| 1:A:1694:LEU:O | 1:A:1698:LEU:HG | 2.18 | 0.43 |
| 1:A:2415:ARG:HH22 | 1:A:2417:HIS:HA | 1.83 | 0.43 |
| 1:A:2464:ASP:OD1 | 1:A:2465:ASP:N | 2.51 | 0.43 |
| 1:A:2577:ILE:HG13 | 1:A:2578:MET:N | 2.32 | 0.43 |
| 1:A:2584[A]:HIS:NE2 | 1:A:2625:ARG:HG3 | 2.34 | 0.43 |
| 1:A:2960:LEU:HD22 | 1:A:3035:GLU:HG3 | 2.00 | 0.43 |
| 1:A:4555:LEU:HD21 | 1:A:4656:LEU:HD22 | 2.00 | 0.43 |
| 2:F:22:CYS:HB2 | 2:F:48:PHE:CE1 | 2.53 | 0.43 |
| 1:B:114:SER:OG | 1:B:116:MET:HB2 | 2.18 | 0.43 |
| 1:B:918:ARG:O | 1:B:922:LEU:HG | 2.17 | 0.43 |
| 1:B:1256:GLU:HB2 | 1:B:1275:ARG:HG3 | 1.99 | 0.43 |
| 1:B:1443:GLN:NE2 | 1:B:1561:VAL:HA | 2.33 | 0.43 |
| 1:B:2805:TYR:O | 1:B:2809:ILE:HG12 | 2.18 | 0.43 |
| 1:B:3522:LEU:HD13 | 1:C:1220:GLN:O | 2.17 | 0.43 |
| 1:B:3596:VAL:HA | 1:B:3599:VAL:HG22 | 2.00 | 0.43 |
| 1:B:4045:VAL:O | 1:B:4049:VAL:HG23 | 2.18 | 0.43 |
| 1:D:426:ARG:NE | 1:D:504:ALA:O | 2.51 | 0.43 |
| 1:D:580:GLU:OE1 | 1:D:624:ASN:ND2 | 2.51 | 0.43 |
| 1:D:705:ASN:ND2 | 1:D:709:ASP:O | 2.50 | 0.43 |
| 1:D:1088:TRP:HB2 | 1:D:1153:ILE:CG2 | 2.49 | 0.43 |
| 1:D:1164:LEU:N | 1:D:1167:GLU:O | 2.46 | 0.43 |
| 1:D:1435:TYR:HB2 | 1:D:1575:LEU:HD22 | 2.00 | 0.43 |
| 1:D:1500:PHE:HB3 | 1:D:1531:ALA:HB1 | 2.01 | 0.43 |
| 1:D:2415:ARG:HH22 | 1:D:2417:HIS:HA | 1.83 | 0.43 |
| 1:D:2654:TYR:HD1 | 1:D:2661:TRP:H | 1.66 | 0.43 |
| 1:D:2673:HIS:CD2 | 1:D:2909:ASP:HB2 | 2.53 | 0.43 |
| 1:C:260:TRP:CE2 | 1:C:284:HIS:HD2 | 2.37 | 0.43 |
| 1:C:648:ILE:HD11 | 1:C:779:PRO:HG2 | 2.01 | 0.43 |
| 1:C:1743[A]:ARG:HH22 | 1:C:1967:ASP:CG | 2.19 | 0.43 |
| 1:C:1931:LEU:HD12 | 1:C:1935:VAL:HG11 | 2.00 | 0.43 |
| 1:C:2205:GLU:O | 1:C:2209:GLU:HG2 | 2.18 | 0.43 |
| 1:C:2392:ARG:O | 1:C:2418:LEU:HD12 | 2.18 | 0.43 |
| 1:C:2415:ARG:HH22 | 1:C:2417:HIS:HA | 1.83 | 0.43 |
| 1:C:2699:ALA:O | 1:C:2702:CYS:HB3 | 2.18 | 0.43 |
| 1:C:3617:LYS:N | 1:C:3617:LYS:HD2 | 2.34 | 0.43 |
| 1:C:3850:GLN:O | 1:C:3854:GLU:OE1 | 2.36 | 0.43 |
| 1:C:4847:VAL:O | 1:C:4851:TYR:HD1 | 2.01 | 0.43 |
| 1:A:315:CYS:SG | 1:A:349:GLN:HB3 | 2.58 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:598:LYS:O | 1:A:602:VAL:HG23 | 2.18 | 0.43 |
| 1:A:1167:GLU:HB3 | 1:D:3477:LYS:NZ | 2.34 | 0.43 |
| 1:A:2950:SER:O | 1:A:2954:ARG:HG3 | 2.18 | 0.43 |
| 1:A:3607:GLU:HB3 | 1:A:3611:HIS:HE1 | 1.83 | 0.43 |
| 1:A:4158:PRO:HG2 | 1:A:4159:ARG:NH1 | 2.34 | 0.43 |
| 1:A:4847:VAL:O | 1:A:4851:TYR:HD1 | 2.01 | 0.43 |
| 1:B:260:TRP:CE2 | 1:B:284:HIS:HD2 | 2.37 | 0.43 |
| 1:B:452:PHE:HZ | 1:B:478:PHE:HD2 | 1.65 | 0.43 |
| 1:B:924:MET:O | 1:B:928:THR:HG23 | 2.18 | 0.43 |
| 1:B:1575:LEU:HG | 1:B:1579:MET:SD | 2.58 | 0.43 |
| 1:B:1866:ILE:HA | 1:B:1926:LEU:HD12 | 2.00 | 0.43 |
| 1:B:2243:SER:HB3 | 1:B:2246:ASN:CG | 2.38 | 0.43 |
| 1:B:2638:LYS:HA | 1:B:2641:LEU:HD12 | 2.00 | 0.43 |
| 1:B:2757:LYS:HB3 | 1:B:2757:LYS:HE3 | 1.84 | 0.43 |
| 1:B:3036:LYS:HD3 | 1:B:3039:ILE:HD11 | 2.00 | 0.43 |
| 1:D:498:THR:HA | 1:D:553:ARG:HH22 | 1.83 | 0.43 |
| 1:D:692:TYR:HD2 | 1:D:778:PHE:HZ | 1.65 | 0.43 |
| 1:D:955:LEU:HG | 1:D:969:PRO:HD3 | 2.00 | 0.43 |
| 1:D:1011:GLN:HB2 | 1:D:1019:PRO:HD2 | 2.00 | 0.43 |
| 1:D:1067:SER:O | 1:D:1071:ARG:HB3 | 2.18 | 0.43 |
| 1:D:1491:ASN:OD1 | 1:D:1492:CYS:N | 2.51 | 0.43 |
| 1:D:2719:TYR:HE2 | 1:D:2953:LYS:HA | 1.82 | 0.43 |
| 1:D:2950:SER:O | 1:D:2954:ARG:HG3 | 2.18 | 0.43 |
| 1:D:3078:ARG:HG2 | 1:D:3082:LYS:HZ2 | 1.82 | 0.43 |
| 1:D:3222:LYS:O | 1:D:3227:ARG:NH2 | 2.52 | 0.43 |
| 1:D:3805:LEU:HB3 | 1:D:3890:LEU:HB3 | 2.00 | 0.43 |
| 1:D:4061:PHE:HA | 1:D:4064:MET:HE2 | 2.01 | 0.43 |
| 1:D:4165:GLU:HA | 1:D:4168:GLU:HG2 | 2.00 | 0.43 |
| 1:C:114:SER:OG | 1:C:116:MET:HB2 | 2.18 | 0.43 |
| 1:C:590:LEU:HD12 | 1:C:599:VAL:HG12 | 2.00 | 0.43 |
| 1:C:598:LYS:O | 1:C:602:VAL:HG23 | 2.18 | 0.43 |
| 1:C:920:TYR:O | 1:C:923:GLN:HG3 | 2.19 | 0.43 |
| 1:C:1237:TRP:CZ2 | 1:C:1652:GLU:HA | 2.54 | 0.43 |
| 1:C:1500:PHE:HB3 | 1:C:1531:ALA:HB1 | 2.00 | 0.43 |
| 1:C:1568:LYS:HG2 | 1:C:1589:PRO:HG3 | 1.99 | 0.43 |
| 1:C:2653:LYS:HB3 | 1:C:2661:TRP:HE1 | 1.82 | 0.43 |
| 1:C:2805:TYR:O | 1:C:2809:ILE:HG12 | 2.18 | 0.43 |
| 1:C:2879:ALA:HB2 | 1:C:2923:ALA:HB2 | 2.00 | 0.43 |
| 1:C:2960:LEU:HD22 | 1:C:3035:GLU:HG3 | 1.99 | 0.43 |
| 1:C:4134:GLU:HB3 | 1:C:4135:PRO:HD3 | 1.99 | 0.43 |
| 1:C:4697:VAL:HG13 | 1:C:4698:LYS:HD3 | 2.01 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:A:260:TRP:CE2 | 1:A:284:HIS:HD2 | 2.37 | 0.43 |
| 1:A:590:LEU:HD12 | 1:A:599:VAL:HG12 | 2.00 | 0.43 |
| 1:A:692:TYR:HD2 | 1:A:778:PHE:HZ | 1.65 | 0.43 |
| 1:A:803:LEU:HG | 1:A:804:PRO:HD2 | 2.00 | 0.43 |
| 1:A:883:ALA:HA | 1:A:886:ARG:HG3 | 2.00 | 0.43 |
| 1:A:1424:PRO:HA | 1:A:1427:ILE:HG22 | 2.00 | 0.43 |
| 1:A:2251:PHE:CG | 1:A:2286:LEU:HD22 | 2.52 | 0.43 |
| 1:A:2695:LEU:HA | 1:A:2698:MET:HE2 | 2.01 | 0.43 |
| 1:A:3143:LEU:HD13 | 1:A:3146:HIS:CE1 | 2.47 | 0.43 |
| 1:A:3613:TYR:O | 1:A:3617:LYS:HD3 | 2.18 | 0.43 |
| 1:A:3699:HIS:HB2 | 1:A:3773:ARG:HG3 | 2.01 | 0.43 |
| 1:A:3775:ALA:O | 1:A:3779:VAL:HG23 | 2.17 | 0.43 |
| 1:A:3842:LEU:HD22 | 1:A:3933:PHE:CE2 | 2.53 | 0.43 |
| 1:B:315:CYS:SG | 1:B:349:GLN:HB3 | 2.58 | 0.43 |
| 1:B:598:LYS:O | 1:B:602:VAL:HG23 | 2.18 | 0.43 |
| 1:B:648:ILE:HD11 | 1:B:779:PRO:HG2 | 2.01 | 0.43 |
| 1:B:2271:THR:HG23 | 1:B:2274:ASP:N | 2.27 | 0.43 |
| 1:B:2417:HIS:HB2 | 1:B:2491:SER:O | 2.19 | 0.43 |
| 1:B:2584[A]:HIS:NE2 | 1:B:2625:ARG:HG3 | 2.34 | 0.43 |
| 1:B:3036:LYS:HD2 | 1:B:3076:ASP:N | 2.32 | 0.43 |
| 1:B:3316:LEU:O | 1:B:3320:LEU:HG | 2.18 | 0.43 |
| 1:B:3699:HIS:HB2 | 1:B:3773:ARG:HG3 | 2.01 | 0.43 |
| 1:B:3805:LEU:HB3 | 1:B:3890:LEU:HB3 | 2.00 | 0.43 |
| 1:B:4207:MET:HG3 | 1:B:4209:GLN:OE1 | 2.19 | 0.43 |
| 1:B:4554:TYR:HA | 1:B:4557:ARG:HH21 | 1.83 | 0.43 |
| 1:D:103:TYR:N | 1:D:161:GLU:O | 2.45 | 0.43 |
| 1:D:1088:TRP:HA | 1:D:1224:GLU:O | 2.18 | 0.43 |
| 1:D:1449:TRP:HB2 | 1:D:1553:PHE:HB2 | 2.00 | 0.43 |
| 1:D:1694:LEU:HB3 | 1:D:1715:LEU:HD12 | 2.00 | 0.43 |
| 1:D:1866:ILE:HA | 1:D:1926:LEU:HD12 | 1.99 | 0.43 |
| 1:D:1970:GLN:NE2 | 1:D:3641:LEU:O | 2.34 | 0.43 |
| 1:D:2268[A]:GLN:H | 1:D:2268[A]:GLN:HG3 | 1.51 | 0.43 |
| 1:D:2584[A]:HIS:NE2 | 1:D:2625:ARG:HG3 | 2.34 | 0.43 |
| 1:D:2699:ALA:O | 1:D:2702:CYS:HB3 | 2.18 | 0.43 |
| 1:D:2794:TYR:HA | 1:D:2797:PHE:HB2 | 2.00 | 0.43 |
| 1:D:3550:ARG:HH22 | 1:D:3593:VAL:HG23 | 1.84 | 0.43 |
| 1:D:4158:PRO:HG2 | 1:D:4159:ARG:NH1 | 2.34 | 0.43 |
| 1:C:213:TYR:HA | 1:C:340:LYS:HA | 2.00 | 0.43 |
| 1:C:498:THR:HA | 1:C:553:ARG:HH22 | 1.83 | 0.43 |
| 1:C:876:GLU:HG2 | 1:C:918:ARG:HH22 | 1.83 | 0.43 |
| 1:C:1079:LYS:HG2 | 1:C:1655:GLU:CD | 2.38 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:1130:GLN:NE2 | 1:C:1136:SER:HB2 | 2.31 | 0.43 |
| 1:C:1294:PRO:HB3 | 1:C:1549:PHE:CE1 | 2.49 | 0.43 |
| 1:C:1694:LEU:O | 1:C:1698:LEU:HG | 2.18 | 0.43 |
| 1:C:1694:LEU:HB3 | 1:C:1715:LEU:HD12 | 2.00 | 0.43 |
| 1:C:1708:ARG:O | 1:C:1712:TYR:HD1 | 2.02 | 0.43 |
| 1:C:2654:TYR:HD1 | 1:C:2661:TRP:H | 1.66 | 0.43 |
| 1:C:3550:ARG:HH22 | 1:C:3593:VAL:HG23 | 1.84 | 0.43 |
| 1:C:3699:HIS:HB2 | 1:C:3773:ARG:HG3 | 2.01 | 0.43 |
| 1:C:3873:LYS:HD3 | 1:C:3873:LYS:HA | 1.71 | 0.43 |
| 1:C:4090:LYS:NZ | 1:C:4115:SER:OG | 2.48 | 0.43 |
| 1:C:4158:PRO:HG2 | 1:C:4159:ARG:NH1 | 2.34 | 0.43 |
| 1:C:4207:MET:HG3 | 1:C:4209:GLN:OE1 | 2.19 | 0.43 |
| 1:A:19:GLU:OE1 | 1:A:205:ILE:HB | 2.19 | 0.43 |
| 1:A:452:PHE:HZ | 1:A:478:PHE:CD2 | 2.37 | 0.43 |
| 1:A:452:PHE:HZ | 1:A:478:PHE:HD2 | 1.66 | 0.43 |
| 1:A:924:MET:O | 1:A:928:THR:HG23 | 2.19 | 0.43 |
| 1:A:1079:LYS:HG2 | 1:A:1655:GLU:CD | 2.38 | 0.43 |
| 1:A:1101:ARG:NH1 | 1:A:1114:GLU:OE2 | 2.35 | 0.43 |
| 1:A:1443:GLN:NE2 | 1:A:1561:VAL:HA | 2.33 | 0.43 |
| 1:A:4134:GLU:HB3 | 1:A:4135:PRO:HD3 | 1.99 | 0.43 |
| 2:F:22:CYS:HA | 2:F:106:LEU:HD12 | 2.01 | 0.43 |
| 2:F:42:ARG:NH2 | 1:B:1780:PRO:O | 2.49 | 0.43 |
| 1:B:803:LEU:HD23 | 1:B:804:PRO:O | 2.18 | 0.43 |
| 1:B:1078:GLU:HG3 | 1:B:1655:GLU:OE2 | 2.19 | 0.43 |
| 1:B:1237:TRP:CZ2 | 1:B:1652:GLU:HA | 2.54 | 0.43 |
| 1:B:2464:ASP:OD1 | 1:B:2465:ASP:N | 2.51 | 0.43 |
| 1:B:2867:LEU:HD22 | 1:B:2928:LYS:NZ | 2.34 | 0.43 |
| 1:B:2950:SER:O | 1:B:2954:ARG:HG3 | 2.18 | 0.43 |
| 1:B:3078:ARG:NH1 | 1:B:3152:PHE:HA | 2.34 | 0.43 |
| 1:B:3590:GLU:HA | 1:B:3593:VAL:HG22 | 1.99 | 0.43 |
| 1:B:4087:LEU:CD2 | 1:B:4124:ASN:HD22 | 2.31 | 0.43 |
| 1:B:4632:LEU:HD23 | 1:B:4633:GLU:N | 2.34 | 0.43 |
| 1:B:4847:VAL:O | 1:B:4851:TYR:HD1 | 2.01 | 0.43 |
| 1:D:150:MET:HB3 | 1:D:171:LEU:HD12 | 2.00 | 0.43 |
| 1:D:315:CYS:SG | 1:D:349:GLN:HB3 | 2.58 | 0.43 |
| 1:D:452:PHE:HZ | 1:D:478:PHE:HD2 | 1.66 | 0.43 |
| 1:D:877:ASN:HA | 1:D:880:GLU:HG2 | 2.00 | 0.43 |
| 1:D:920:TYR:O | 1:D:923:GLN:HG3 | 2.19 | 0.43 |
| 1:D:1690:ASP:HB3 | 1:D:1693:GLN:CG | 2.47 | 0.43 |
| 1:D:1708:ARG:O | 1:D:1712:TYR:HD1 | 2.01 | 0.43 |
| 1:D:2144:ILE:HD11 | 1:D:2194:HIS:CE1 | 2.53 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 1:D:2189:LYS:HZ3 | 1:D:2192:TYR:HB2 | 1.84 | 0.43 |
| 1:D:2805:TYR:O | 1:D:2809:ILE:HG12 | 2.18 | 0.43 |
| 1:D:3078:ARG:NH1 | 1:D:3152:PHE:HA | 2.34 | 0.43 |
| 1:D:3343:GLN:HA | 1:D:3414:ARG:CZ | 2.49 | 0.43 |
| 1:D:3628:ARG:O | 1:D:3632:VAL:HG13 | 2.19 | 0.43 |
| 1:D:3991:GLY:HA2 | 1:D:3994:HIS:CE1 | 2.54 | 0.43 |
| 1:D:4847:VAL:O | 1:D:4851:TYR:HD1 | 2.01 | 0.43 |
| 1:C:877:ASN:HA | 1:C:880:GLU:HG2 | 2.00 | 0.43 |
| 1:C:1125:ASN:O | 1:C:1128:ARG:NH2 | 2.52 | 0.43 |
| 1:C:2144:ILE:HD11 | 1:C:2194:HIS:CE1 | 2.53 | 0.43 |
| 1:C:2584[A]:HIS:NE2 | 1:C:2625:ARG:HG3 | 2.34 | 0.43 |
| 1:C:3078:ARG:NH1 | 1:C:3152:PHE:HA | 2.34 | 0.43 |
| 1:C:3343:GLN:HA | 1:C:3414:ARG:CZ | 2.49 | 0.43 |
| 1:C:4045:VAL:O | 1:C:4049:VAL:HG23 | 2.18 | 0.43 |
| 1:A:106:ALA:HA | 1:A:149:THR:HA | 2.00 | 0.43 |
| 1:A:457:GLU:HA | 1:A:464:LYS:NZ | 2.34 | 0.43 |
| 1:A:876:GLU:HG2 | 1:A:918:ARG:HH22 | 1.83 | 0.43 |
| 1:A:955:LEU:HG | 1:A:969:PRO:HD3 | 2.00 | 0.43 |
| 1:A:2144:ILE:HD11 | 1:A:2194:HIS:CE1 | 2.53 | 0.43 |
| 1:A:2205:GLU:O | 1:A:2209:GLU:HG2 | 2.18 | 0.43 |
| 1:A:2471:SER:HA | 1:A:2525:GLY:HA2 | 2.01 | 0.43 |
| 1:A:3078:ARG:NH1 | 1:A:3152:PHE:HA | 2.34 | 0.43 |
| 1:A:3617:LYS:N | 1:A:3617:LYS:HD2 | 2.34 | 0.43 |
| 1:A:4681:LEU:HD21 | 1:A:4687:TYR:HD2 | 1.84 | 0.43 |
| 1:B:580:GLU:OE1 | 1:B:624:ASN:ND2 | 2.51 | 0.43 |
| 1:B:920:TYR:O | 1:B:923:GLN:HG3 | 2.19 | 0.43 |
| 1:B:1500:PHE:HB3 | 1:B:1531:ALA:HB1 | 2.01 | 0.43 |
| 1:B:1694:LEU:O | 1:B:1698:LEU:HG | 2.18 | 0.43 |
| 1:B:1755:GLY:O | 1:B:1758:ARG:NE | 2.49 | 0.43 |
| 1:B:2292:GLU:OE2 | 1:B:2292:GLU:N | 2.34 | 0.43 |
| 1:B:2392:ARG:O | 1:B:2418:LEU:HD12 | 2.18 | 0.43 |
| 1:B:2517:PHE:HA | 1:B:2520:HIS:ND1 | 2.33 | 0.43 |
| 1:B:2879:ALA:HB2 | 1:B:2923:ALA:HB2 | 2.00 | 0.43 |
| 1:B:3143:LEU:HA | 1:B:3146:HIS:HD1 | 1.84 | 0.43 |
| 1:B:3607:GLU:HB3 | 1:B:3611:HIS:HE1 | 1.83 | 0.43 |
| 1:B:3989:VAL:HG13 | 1:B:4023:MET:CE | 2.48 | 0.43 |
| 1:D:598:LYS:O | 1:D:602:VAL:HG23 | 2.18 | 0.43 |
| 1:D:2577:ILE:HG13 | 1:D:2578:MET:N | 2.32 | 0.43 |
| 1:D:3033:ASN:O | 1:D:3037:GLU:OE1 | 2.36 | 0.43 |
| 1:D:3416:VAL:HG22 | 1:D:3423:TRP:HZ3 | 1.82 | 0.43 |
| 1:D:3775:ALA:O | 1:D:3779:VAL:HG23 | 2.17 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:D:3930:ILE:HG22 | 1:D:3995:VAL:HG11 | 1.99 | 0.43 |
| 1:C:20:VAL:HG12 | 1:C:204:PRO:HA | 2.00 | 0.43 |
| 1:C:803:LEU:HD23 | 1:C:804:PRO:O | 2.18 | 0.43 |
| 1:C:895:PRO:HD2 | 1:C:903:LEU:HD23 | 1.99 | 0.43 |
| 1:C:1256:GLU:HB2 | 1:C:1275:ARG:HG3 | 1.99 | 0.43 |
| 1:C:1424:PRO:HA | 1:C:1427:ILE:HG22 | 2.00 | 0.43 |
| 1:C:2268[B]:GLN:H | 1:C:2268[B]:GLN:HG3 | 1.49 | 0.43 |
| 1:C:2950:SER:O | 1:C:2954:ARG:HG3 | 2.18 | 0.43 |
| 1:C:4673:ARG:O | 1:C:4676:GLU:HG3 | 2.19 | 0.43 |
| 1:A:213:TYR:HA | 1:A:340:LYS:HA | 2.00 | 0.43 |
| 1:A:226:HIS:CE1 | 1:B:155:LYS:HB2 | 2.52 | 0.43 |
| 1:A:1000:ARG:HH12 | 1:A:1018:ASN:HD22 | 1.66 | 0.43 |
| 1:A:1491:ASN:OD1 | 1:A:1492:CYS:N | 2.51 | 0.43 |
| 1:A:2654:TYR:HD1 | 1:A:2661:TRP:H | 1.66 | 0.43 |
| 1:A:2676:ARG:HB2 | 1:A:2714:TYR:HH | 1.83 | 0.43 |
| 1:A:2716:ASP:OD1 | 1:A:2716:ASP:N | 2.48 | 0.43 |
| 1:A:2763:HIS:HB2 | 1:A:2802:LYS:HZ3 | 1.84 | 0.43 |
| 1:A:3051:ARG:HA | 1:A:3131:TYR:CZ | 2.54 | 0.43 |
| 1:A:3202:PRO:C | 1:A:3284:TRP:HH2 | 2.22 | 0.43 |
| 1:A:3205:PHE:HE2 | 1:A:3243:ILE:HG12 | 1.84 | 0.43 |
| 1:A:3222:LYS:O | 1:A:3227:ARG:NH2 | 2.52 | 0.43 |
| 1:A:3550:ARG:HH22 | 1:A:3593:VAL:HG23 | 1.84 | 0.43 |
| 1:A:3601:ALA:HA | 1:A:3604:TYR:CE1 | 2.54 | 0.43 |
| 1:A:4138:ASP:O | 1:A:4142:ASN:ND2 | 2.37 | 0.43 |
| 1:A:4632:LEU:HD23 | 1:A:4633:GLU:N | 2.34 | 0.43 |
| 1:A:4651:THR:OG1 | 1:A:4803:HIS:NE2 | 2.36 | 0.43 |
| 1:A:4673:ARG:O | 1:A:4676:GLU:HG3 | 2.19 | 0.43 |
| 1:B:2431:ASP:OD1 | 1:B:2435:ARG:NE | 2.39 | 0.43 |
| 1:B:3842:LEU:HD22 | 1:B:3933:PHE:CE2 | 2.53 | 0.43 |
| 1:B:4697:VAL:HG13 | 1:B:4698:LYS:HD3 | 2.01 | 0.43 |
| 1:D:260:TRP:CE2 | 1:D:284:HIS:HD2 | 2.37 | 0.43 |
| 1:D:457:GLU:HA | 1:D:464:LYS:NZ | 2.34 | 0.43 |
| 1:D:3699:HIS:HB2 | 1:D:3773:ARG:HG3 | 2.01 | 0.43 |
| 1:D:3991:GLY:HA2 | 1:D:3994:HIS:ND1 | 2.34 | 0.43 |
| 1:C:830:ARG:NH1 | 1:C:832:GLU:HB2 | 2.30 | 0.43 |
| 1:C:1037:ASP:O | 1:C:1041:GLN:HG2 | 2.18 | 0.43 |
| 1:C:1067:SER:O | 1:C:1071:ARG:HB3 | 2.18 | 0.43 |
| 1:C:2867:LEU:HD22 | 1:C:2928:LYS:NZ | 2.34 | 0.43 |
| 1:C:3613:TYR:O | 1:C:3617:LYS:HD3 | 2.18 | 0.43 |
| 1:C:3794:VAL:HG13 | 1:C:3880:PHE:CE1 | 2.53 | 0.43 |
| 1:C:4555:LEU:HD21 | 1:C:4656:LEU:HD22 | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:4947:GLN:HB3 | 1:C:4951:LYS:HZ3 | 1.82 | 0.43 |
| 1:A:495:ASN:OD1 | 1:A:523:TYR:OH | 2.30 | 0.43 |
| 1:A:2517:PHE:HA | 1:A:2520:HIS:ND1 | 2.34 | 0.43 |
| 1:A:2960:LEU:HD12 | 1:A:3042:LEU:HD11 | 1.99 | 0.43 |
| 1:A:3059:THR:O | 1:A:3062:PRO:HD2 | 2.19 | 0.43 |
| 1:A:3093:ARG:HA | 1:A:3096:PHE:HD2 | 1.84 | 0.43 |
| 1:A:3114:LYS:HD2 | 1:A:3116:SER:N | 2.25 | 0.43 |
| 1:A:3316:LEU:O | 1:A:3320:LEU:HG | 2.17 | 0.43 |
| 1:A:3445:TRP:HD1 | 1:A:3451:PHE:HD2 | 1.66 | 0.43 |
| 1:A:3805:LEU:HB3 | 1:A:3890:LEU:HB3 | 2.00 | 0.43 |
| 1:A:4713:SER:OG | 1:A:4775:TYR:OH | 2.30 | 0.43 |
| 2:H:22:CYS:HB2 | 2:H:48:PHE:CE1 | 2.53 | 0.43 |
| 2:G:92:PRO:HA | 2:G:93:PRO:HD3 | 1.95 | 0.43 |
| 1:B:772:ASN:N | 1:B:1470:ARG:HH22 | 2.09 | 0.43 |
| 1:B:1869:GLU:HA | 1:B:1872:THR:HG23 | 2.00 | 0.43 |
| 1:B:2251:PHE:CG | 1:B:2286:LEU:HD22 | 2.52 | 0.43 |
| 1:B:2695:LEU:HA | 1:B:2698:MET:HE2 | 2.01 | 0.43 |
| 1:B:3150:HIS:HB3 | 1:B:3152:PHE:CE1 | 2.53 | 0.43 |
| 1:B:3991:GLY:HA2 | 1:B:3994:HIS:ND1 | 2.34 | 0.43 |
| 1:D:2223:ILE:HD12 | 1:D:2263:ILE:HG22 | 2.00 | 0.43 |
| 1:D:2517:PHE:HA | 1:D:2520:HIS:ND1 | 2.33 | 0.43 |
| 1:D:2653:LYS:HB3 | 1:D:2661:TRP:HE1 | 1.82 | 0.43 |
| 1:D:3601:ALA:HA | 1:D:3604:TYR:CE1 | 2.54 | 0.43 |
| 1:D:3613:TYR:O | 1:D:3617:LYS:HD3 | 2.18 | 0.43 |
| 1:D:3794:VAL:HG13 | 1:D:3880:PHE:CE1 | 2.53 | 0.43 |
| 1:D:4995:LEU:HD21 | 1:D:5007:GLU:HB3 | 1.99 | 0.43 |
| 1:C:502:HIS:HA | 1:C:505:GLU:OE1 | 2.19 | 0.43 |
| 1:C:1175:SER:HB2 | 1:C:1180:ARG:HD3 | 2.01 | 0.43 |
| 1:C:2243:SER:HB3 | 1:C:2246:ASN:CG | 2.38 | 0.43 |
| 1:C:3036:LYS:HD3 | 1:C:3039:ILE:HD11 | 2.00 | 0.43 |
| 1:C:3051:ARG:HA | 1:C:3131:TYR:CZ | 2.54 | 0.43 |
| 1:C:3143:LEU:HA | 1:C:3146:HIS:HD1 | 1.84 | 0.43 |
| 1:C:3805:LEU:HB3 | 1:C:3890:LEU:HB3 | 2.00 | 0.43 |
| 1:C:4235:VAL:HG11 | 1:C:5019:TRP:CH2 | 2.53 | 0.43 |
| 1:C:4995:LEU:HD21 | 1:C:5007:GLU:HB3 | 1.99 | 0.43 |
| 1:A:27:THR:OG1 | 1:A:32:GLN:OE1 | 2.28 | 0.43 |
| 1:A:150:MET:HB3 | 1:A:171:LEU:HD12 | 2.00 | 0.43 |
| 1:A:689:THR:HA | 1:A:778:PHE:HE2 | 1.84 | 0.43 |
| 1:A:1435:TYR:HB2 | 1:A:1575:LEU:HD22 | 2.00 | 0.43 |
| 1:A:1866:ILE:HA | 1:A:1926:LEU:HD12 | 2.00 | 0.43 |
| 1:A:2417:HIS:HB2 | 1:A:2491:SER:O | 2.19 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3144:PHE:CZ | 1:A:3197:LEU:HD12 | 2.54 | 0.43 |
| 1:A:3354:LEU:HA | 1:A:3358:PHE:CD2 | 2.42 | 0.43 |
| 1:A:3628:ARG:O | 1:A:3632:VAL:HG13 | 2.18 | 0.43 |
| 1:A:3842:LEU:HB2 | 1:A:3929:SER:CB | 2.40 | 0.43 |
| 1:A:4207:MET:HG3 | 1:A:4209:GLN:OE1 | 2.19 | 0.43 |
| 2:G:22:CYS:HB2 | 2:G:48:PHE:CE1 | 2.53 | 0.43 |
| 1:B:16:THR:HG1 | 1:B:99:ARG:H | 1.64 | 0.43 |
| 1:B:317:ARG:HG2 | 1:B:319:SER:H | 1.84 | 0.43 |
| 1:B:1105:ALA:O | 1:B:1189:LEU:N | 2.47 | 0.43 |
| 1:B:1175:SER:HB2 | 1:B:1180:ARG:HD3 | 2.00 | 0.43 |
| 1:B:1293:LEU:HD21 | 1:B:1594:ARG:HD3 | 2.01 | 0.43 |
| 1:B:2466:LEU:HG | 1:B:2502:MET:SD | 2.59 | 0.43 |
| 1:B:3059:THR:O | 1:B:3062:PRO:HD2 | 2.19 | 0.43 |
| 1:D:262:LEU:HD11 | 1:D:280:LEU:HD22 | 2.01 | 0.43 |
| 1:D:452:PHE:HZ | 1:D:478:PHE:CD2 | 2.37 | 0.43 |
| 1:D:590:LEU:HD12 | 1:D:599:VAL:HG12 | 2.01 | 0.43 |
| 1:D:924:MET:O | 1:D:928:THR:HG23 | 2.18 | 0.43 |
| 1:D:950:LEU:HB3 | 1:D:970:LEU:HD11 | 2.00 | 0.43 |
| 1:D:1100:MET:HE2 | 1:D:1198:GLN:HB3 | 2.01 | 0.43 |
| 1:D:1502:SER:HB2 | 1:D:1503:PRO:HD2 | 2.00 | 0.43 |
| 1:D:3445:TRP:HD1 | 1:D:3451:PHE:HD2 | 1.66 | 0.43 |
| 1:D:3546:ASP:O | 1:D:3549:VAL:HG22 | 2.18 | 0.43 |
| 1:D:3916:ILE:O | 1:D:3920:VAL:HG23 | 2.19 | 0.43 |
| 1:D:4673:ARG:O | 1:D:4676:GLU:HG3 | 2.19 | 0.43 |
| 1:C:262:LEU:HD11 | 1:C:280:LEU:HD22 | 2.01 | 0.43 |
| 1:C:514:SER:HA | 1:C:517:GLU:OE2 | 2.19 | 0.43 |
| 1:C:1446:SER:HA | 1:C:1496:TRP:NE1 | 2.33 | 0.43 |
| 1:C:2233:CYS:HB3 | 1:C:2237:CYS:HB2 | 1.71 | 0.43 |
| 1:C:2271:THR:HG23 | 1:C:2274:ASP:N | 2.27 | 0.43 |
| 1:C:2303:ALA:O | 1:C:2307:LEU:HG | 2.19 | 0.43 |
| 1:C:2466:LEU:HG | 1:C:2502:MET:SD | 2.59 | 0.43 |
| 1:C:2517:PHE:HA | 1:C:2520:HIS:ND1 | 2.34 | 0.43 |
| 1:C:2970:SER:O | 1:C:2974:ILE:HG12 | 2.18 | 0.43 |
| 1:C:3033:ASN:O | 1:C:3037:GLU:OE1 | 2.36 | 0.43 |
| 1:C:3432:GLU:O | 1:C:3436:ARG:NE | 2.47 | 0.43 |
| 1:C:3628:ARG:O | 1:C:3632:VAL:HG13 | 2.19 | 0.43 |
| 1:C:3991:GLY:HA2 | 1:C:3994:HIS:CE1 | 2.54 | 0.43 |
| 1:C:4945:ASP:HA | 1:C:4948:GLU:HG2 | 2.01 | 0.43 |
| 1:A:276:TRP:CH2 | 1:A:318:VAL:HB | 2.54 | 0.42 |
| 1:A:803:LEU:HD23 | 1:A:804:PRO:O | 2.18 | 0.42 |
| 1:A:1293:LEU:HD21 | 1:A:1594:ARG:HD3 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2960:LEU:HD21 | 1:A:3038:MET:HB2 | 2.01 | 0.42 |
| 1:A:3208:PRO:O | 1:A:3212:GLU:OE1 | 2.38 | 0.42 |
| 1:A:3989:VAL:HG13 | 1:A:4023:MET:HE3 | 2.01 | 0.42 |
| 2:H:90:ILE:HG23 | 1:D:1687:SER:OG | 2.19 | 0.42 |
| 1:B:276:TRP:CH2 | 1:B:318:VAL:HB | 2.54 | 0.42 |
| 1:B:452:PHE:HZ | 1:B:478:PHE:CD2 | 2.37 | 0.42 |
| 1:B:1424:PRO:HA | 1:B:1427:ILE:HG22 | 2.00 | 0.42 |
| 1:B:1502:SER:HB2 | 1:B:1503:PRO:HD2 | 2.00 | 0.42 |
| 1:B:2321:ILE:HG22 | 1:B:2323:TRP:H | 1.84 | 0.42 |
| 1:B:2471:SER:HA | 1:B:2525:GLY:HA2 | 2.01 | 0.42 |
| 1:B:2719:TYR:HE2 | 1:B:2953:LYS:HA | 1.82 | 0.42 |
| 1:B:3144:PHE:CZ | 1:B:3197:LEU:HD12 | 2.54 | 0.42 |
| 1:B:3202:PRO:C | 1:B:3284:TRP:HH2 | 2.22 | 0.42 |
| 1:B:3205:PHE:HE2 | 1:B:3243:ILE:HG12 | 1.84 | 0.42 |
| 1:B:4555:LEU:HD21 | 1:B:4656:LEU:HD22 | 2.00 | 0.42 |
| 1:D:19:GLU:OE1 | 1:D:205:ILE:HB | 2.19 | 0.42 |
| 1:D:214:VAL:HG22 | 1:D:341:TYR:CD1 | 2.50 | 0.42 |
| 1:D:1078:GLU:HG3 | 1:D:1655:GLU:OE2 | 2.19 | 0.42 |
| 1:D:1237:TRP:CZ2 | 1:D:1652:GLU:HA | 2.54 | 0.42 |
| 1:D:1966:VAL:HG21 | 1:D:3650:CYS:HA | 2.00 | 0.42 |
| 1:D:2700:MET:CE | 1:D:3000:LYS:HB3 | 2.43 | 0.42 |
| 1:D:2927:LEU:HD23 | 1:D:2927:LEU:HA | 1.79 | 0.42 |
| 1:D:2960:LEU:HD22 | 1:D:3035:GLU:HG3 | 1.99 | 0.42 |
| 1:D:3059:THR:O | 1:D:3062:PRO:HD2 | 2.19 | 0.42 |
| 1:D:3150:HIS:HB3 | 1:D:3152:PHE:CE1 | 2.53 | 0.42 |
| 1:D:3530:GLN:HA | 1:D:3533:ILE:HD12 | 2.01 | 0.42 |
| 1:D:4697:VAL:HG13 | 1:D:4698:LYS:HD3 | 2.01 | 0.42 |
| 1:C:803:LEU:HG | 1:C:804:PRO:HD2 | 2.00 | 0.42 |
| 1:C:924:MET:O | 1:C:928:THR:HG23 | 2.18 | 0.42 |
| 1:C:1000:ARG:HH12 | 1:C:1018:ASN:HD22 | 1.66 | 0.42 |
| 1:C:1088:TRP:HB2 | 1:C:1153:ILE:CG2 | 2.49 | 0.42 |
| 1:C:2638:LYS:HA | 1:C:2641:LEU:HD12 | 2.00 | 0.42 |
| 1:C:2763:HIS:HB2 | 1:C:2802:LYS:HZ3 | 1.83 | 0.42 |
| 1:C:2888:ARG:O | 1:C:2892:GLN:HG2 | 2.19 | 0.42 |
| 1:C:3144:PHE:CZ | 1:C:3197:LEU:HD12 | 2.54 | 0.42 |
| 1:C:3222:LYS:O | 1:C:3227:ARG:NH2 | 2.52 | 0.42 |
| 1:C:3779:VAL:HG13 | 1:C:3797:THR:HG22 | 2.01 | 0.42 |
| 1:C:3991:GLY:HA2 | 1:C:3994:HIS:ND1 | 2.34 | 0.42 |
| 1:C:4554:TYR:HA | 1:C:4557:ARG:HH21 | 1.84 | 0.42 |
| 1:A:502:HIS:HA | 1:A:505:GLU:OE1 | 2.19 | 0.42 |
| 1:A:950:LEU:HB3 | 1:A:970:LEU:HD11 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1088:TRP:HB2 | 1:A:1153:ILE:CG2 | 2.49 | 0.42 |
| 1:A:2303:ALA:O | 1:A:2307:LEU:HG | 2.19 | 0.42 |
| 1:A:2867:LEU:HD22 | 1:A:2928:LYS:NZ | 2.34 | 0.42 |
| 1:A:2888:ARG:O | 1:A:2892:GLN:HG2 | 2.19 | 0.42 |
| 1:A:3591:LYS:HA | 1:A:3594:ARG:NE | 2.34 | 0.42 |
| 1:A:3916:ILE:O | 1:A:3920:VAL:HG23 | 2.19 | 0.42 |
| 1:A:3991:GLY:HA2 | 1:A:3994:HIS:ND1 | 2.34 | 0.42 |
| 1:B:150:MET:HB3 | 1:B:171:LEU:HD12 | 2.00 | 0.42 |
| 1:B:1088:TRP:HB2 | 1:B:1153:ILE:CG2 | 2.49 | 0.42 |
| 1:B:3215:ALA:O | 1:B:3220:THR:OG1 | 2.31 | 0.42 |
| 1:B:3222:LYS:O | 1:B:3227:ARG:NH2 | 2.52 | 0.42 |
| 1:B:3617:LYS:HD2 | 1:B:3617:LYS:N | 2.34 | 0.42 |
| 1:B:3989:VAL:HG13 | 1:B:4023:MET:HE3 | 2.01 | 0.42 |
| 1:B:4673:ARG:O | 1:B:4676:GLU:HG3 | 2.19 | 0.42 |
| 1:B:4888:TYR:HA | 1:C:4918:ILE:HD11 | 2.00 | 0.42 |
| 1:D:276:TRP:CH2 | 1:D:318:VAL:HB | 2.54 | 0.42 |
| 1:D:790:ARG:NH1 | 1:D:1624:LEU:O | 2.47 | 0.42 |
| 1:D:803:LEU:HD23 | 1:D:804:PRO:O | 2.18 | 0.42 |
| 1:D:876:GLU:HG2 | 1:D:918:ARG:HH22 | 1.83 | 0.42 |
| 1:D:1668:ARG:HD3 | 1:D:1671:ARG:HE | 1.84 | 0.42 |
| 1:D:1739:THR:HB | 1:D:1742:THR:H | 1.84 | 0.42 |
| 1:D:2223:ILE:HD11 | 1:D:2229:VAL:HG21 | 1.99 | 0.42 |
| 1:D:2710:LEU:HD21 | 1:D:2714:TYR:HH | 1.84 | 0.42 |
| 1:D:2763:HIS:HB2 | 1:D:2802:LYS:HZ3 | 1.84 | 0.42 |
| 1:D:3084:GLY:HA3 | 1:D:3089:LYS:HZ3 | 1.83 | 0.42 |
| 1:D:3927:GLN:NE2 | 1:D:3931:SER:OG | 2.53 | 0.42 |
| 1:C:457:GLU:HA | 1:C:464:LYS:NZ | 2.34 | 0.42 |
| 1:C:589:LEU:HA | 1:C:592:LYS:HG2 | 2.02 | 0.42 |
| 1:C:1502:SER:HB2 | 1:C:1503:PRO:HD2 | 2.00 | 0.42 |
| 1:C:2779:GLU:HA | 1:C:2792:ARG:HG3 | 2.01 | 0.42 |
| 1:C:2971:GLN:HA | 1:C:2974:ILE:HG12 | 2.00 | 0.42 |
| 1:C:3368:ARG:HG2 | 1:C:3371:LYS:HZ3 | 1.84 | 0.42 |
| 1:C:3844:LEU:HD11 | 1:C:3932:ASP:HB3 | 2.01 | 0.42 |
| 1:C:4749:GLU:OE1 | 1:C:4753:HIS:NE2 | 2.53 | 0.42 |
| 1:A:262:LEU:HD11 | 1:A:280:LEU:HD22 | 2.01 | 0.42 |
| 1:A:920:TYR:O | 1:A:923:GLN:HG3 | 2.19 | 0.42 |
| 1:A:1237:TRP:CZ2 | 1:A:1652:GLU:HA | 2.54 | 0.42 |
| 1:A:1668:ARG:HD3 | 1:A:1671:ARG:HE | 1.84 | 0.42 |
| 1:A:1869:GLU:HA | 1:A:1872:THR:HG23 | 2.00 | 0.42 |
| 1:A:2466:LEU:HG | 1:A:2502:MET:SD | 2.59 | 0.42 |
| 1:A:2802:LYS:HA | 1:A:2802:LYS:HD3 | 1.67 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2907:PRO:HB2 | 1:A:2910:THR:HG23 | 2.02 | 0.42 |
| 1:A:3127:GLN:HA | 1:A:3130:THR:HG22 | 2.02 | 0.42 |
| 1:A:3779:VAL:HG13 | 1:A:3797:THR:HG22 | 2.01 | 0.42 |
| 1:A:3794:VAL:HG13 | 1:A:3880:PHE:CE1 | 2.53 | 0.42 |
| 1:A:3989:VAL:HG13 | 1:A:4023:MET:CE | 2.48 | 0.42 |
| 1:B:106:ALA:HA | 1:B:149:THR:HA | 2.01 | 0.42 |
| 1:B:457:GLU:HA | 1:B:464:LYS:NZ | 2.34 | 0.42 |
| 1:B:502:HIS:HA | 1:B:505:GLU:OE1 | 2.19 | 0.42 |
| 1:B:1088:TRP:HA | 1:B:1224:GLU:O | 2.18 | 0.42 |
| 1:B:1464:PHE:HZ | 1:B:1494:MET:HG3 | 1.84 | 0.42 |
| 1:B:2654:TYR:HD1 | 1:B:2661:TRP:H | 1.66 | 0.42 |
| 1:B:2794:TYR:HA | 1:B:2797:PHE:HB2 | 2.00 | 0.42 |
| 1:B:3550:ARG:HH22 | 1:B:3593:VAL:HG23 | 1.84 | 0.42 |
| 1:B:3927:GLN:NE2 | 1:B:3931:SER:OG | 2.53 | 0.42 |
| 1:B:4945:ASP:HA | 1:B:4948:GLU:HG2 | 2.01 | 0.42 |
| 1:D:1443:GLN:NE2 | 1:D:1561:VAL:HA | 2.33 | 0.42 |
| 1:D:1446:SER:HA | 1:D:1496:TRP:NE1 | 2.33 | 0.42 |
| 1:D:1694:LEU:O | 1:D:1698:LEU:HG | 2.18 | 0.42 |
| 1:D:2205:GLU:O | 1:D:2209:GLU:HG2 | 2.18 | 0.42 |
| 1:D:2303:ALA:O | 1:D:2307:LEU:HG | 2.19 | 0.42 |
| 1:D:2907:PRO:HB2 | 1:D:2910:THR:HG23 | 2.02 | 0.42 |
| 1:D:2958:GLY:O | 1:D:2962:GLN:HG2 | 2.19 | 0.42 |
| 1:D:2971:GLN:HA | 1:D:2974:ILE:HG12 | 2.00 | 0.42 |
| 1:D:3514:LEU:HD21 | 1:D:3606:LEU:HD13 | 2.01 | 0.42 |
| 1:D:3591:LYS:HA | 1:D:3594:ARG:NE | 2.34 | 0.42 |
| 1:D:3607:GLU:HB3 | 1:D:3611:HIS:HE1 | 1.83 | 0.42 |
| 1:D:4555:LEU:HD21 | 1:D:4656:LEU:HD22 | 2.00 | 0.42 |
| 1:D:4945:ASP:HA | 1:D:4948:GLU:HG2 | 2.01 | 0.42 |
| 1:C:106:ALA:HA | 1:C:149:THR:HA | 2.00 | 0.42 |
| 1:C:1293:LEU:HD21 | 1:C:1594:ARG:HD3 | 2.01 | 0.42 |
| 1:C:1449:TRP:HB2 | 1:C:1553:PHE:HB2 | 2.00 | 0.42 |
| 1:C:1668:ARG:HD3 | 1:C:1671:ARG:HE | 1.84 | 0.42 |
| 1:C:2321:ILE:HG22 | 1:C:2323:TRP:H | 1.84 | 0.42 |
| 1:C:2490:MET:HE2 | 1:C:2490:MET:H | 1.84 | 0.42 |
| 1:C:3205:PHE:HE2 | 1:C:3243:ILE:HG12 | 1.84 | 0.42 |
| 1:C:3375:GLU:O | 1:C:3378:GLN:HB3 | 2.19 | 0.42 |
| 1:C:4634:GLU:OE1 | 1:C:4636:THR:OG1 | 2.37 | 0.42 |
| 1:A:822:ARG:HE | 1:A:823:LEU:H | 1.65 | 0.42 |
| 1:A:1078:GLU:HG3 | 1:A:1655:GLU:OE2 | 2.19 | 0.42 |
| 1:A:1931:LEU:HD12 | 1:A:1935:VAL:HG11 | 2.00 | 0.42 |
| 1:A:2522:LEU:O | 1:A:2527:LEU:N | 2.48 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:A:3143:LEU:O | 1:A:3147:ILE:HG22 | 2.20 | 0.42 |
| 1:A:3363:GLY:HA2 | 1:A:3437:MET:HE1 | 2.01 | 0.42 |
| 1:A:3844:LEU:CD1 | 1:B:76:ARG:HD3 | 2.48 | 0.42 |
| 1:A:3850:GLN:O | 1:A:3854:GLU:OE1 | 2.36 | 0.42 |
| 1:A:3991:GLY:HA2 | 1:A:3994:HIS:CE1 | 2.54 | 0.42 |
| 1:A:4001:MET:HE1 | 1:A:4061:PHE:CD1 | 2.54 | 0.42 |
| 1:A:4749:GLU:OE1 | 1:A:4753:HIS:NE2 | 2.53 | 0.42 |
| 1:B:19:GLU:OE1 | 1:B:205:ILE:HB | 2.19 | 0.42 |
| 1:B:262:LEU:HD11 | 1:B:280:LEU:HD22 | 2.01 | 0.42 |
| 1:B:876:GLU:HG2 | 1:B:918:ARG:HH22 | 1.83 | 0.42 |
| 1:B:1000:ARG:HH12 | 1:B:1018:ASN:HD22 | 1.65 | 0.42 |
| 1:B:1931:LEU:HD12 | 1:B:1935:VAL:HG11 | 2.00 | 0.42 |
| 1:B:2369[A]:ARG:HE | 1:B:2369[A]:ARG:HB2 | 1.69 | 0.42 |
| 1:B:3157:ILE:HG23 | 1:B:3161:VAL:HB | 2.01 | 0.42 |
| 1:B:3613:TYR:O | 1:B:3617:LYS:HD3 | 2.18 | 0.42 |
| 1:B:3628:ARG:O | 1:B:3632:VAL:HG13 | 2.19 | 0.42 |
| 1:D:1032:LYS:C | 1:D:1036:ARG:HE | 2.23 | 0.42 |
| 1:D:2321:ILE:HG22 | 1:D:2323:TRP:H | 1.84 | 0.42 |
| 1:D:2393:ASP:OD1 | 1:D:2419:GLY:N | 2.44 | 0.42 |
| 1:D:2417:HIS:HB2 | 1:D:2491:SER:O | 2.19 | 0.42 |
| 1:D:2578:MET:HE3 | 1:D:2578:MET:HA | 2.00 | 0.42 |
| 1:D:2779:GLU:HA | 1:D:2792:ARG:HG3 | 2.02 | 0.42 |
| 1:D:3205:PHE:HE2 | 1:D:3243:ILE:HG12 | 1.84 | 0.42 |
| 1:D:3375:GLU:O | 1:D:3378:GLN:HB3 | 2.19 | 0.42 |
| 1:C:19:GLU:OE1 | 1:C:205:ILE:HB | 2.19 | 0.42 |
| 1:C:219:VAL:HG11 | 1:C:259:LEU:HB3 | 2.02 | 0.42 |
| 1:C:276:TRP:CH2 | 1:C:318:VAL:HB | 2.54 | 0.42 |
| 1:C:2522:LEU:O | 1:C:2527:LEU:N | 2.48 | 0.42 |
| 1:C:2794:TYR:HA | 1:C:2797:PHE:HB2 | 2.01 | 0.42 |
| 1:C:3530:GLN:HA | 1:C:3533:ILE:HD12 | 2.01 | 0.42 |
| 1:C:3591:LYS:HA | 1:C:3594:ARG:NE | 2.34 | 0.42 |
| 1:C:3890:LEU:HD23 | 1:C:3890:LEU:HA | 1.91 | 0.42 |
| 1:C:3916:ILE:O | 1:C:3920:VAL:HG23 | 2.19 | 0.42 |
| 1:C:4681:LEU:HD21 | 1:C:4687:TYR:HD2 | 1.84 | 0.42 |
| 1:A:1502:SER:HB2 | 1:A:1503:PRO:HD2 | 2.00 | 0.42 |
| 1:A:1660:GLN:NE2 | 1:A:1706:PRO:HB2 | 2.33 | 0.42 |
| 1:A:1854:PHE:CD2 | 1:A:1858:ASP:HB3 | 2.54 | 0.42 |
| 1:A:2321:ILE:HG22 | 1:A:2323:TRP:H | 1.84 | 0.42 |
| 1:A:3986:TRP:HE3 | 1:A:4047:MET:CE | 2.33 | 0.42 |
| 2:E:22:CYS:HA | 2:E:106:LEU:HD12 | 2.01 | 0.42 |
| 2:G:22:CYS:HA | 2:G:106:LEU:HD12 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:213:TYR:HA | 1:B:340:LYS:HA | 2.00 | 0.42 |
| 1:B:514:SER:HA | 1:B:517:GLU:OE2 | 2.19 | 0.42 |
| 1:B:589:LEU:HA | 1:B:592:LYS:HG2 | 2.01 | 0.42 |
| 1:B:722:TRP:CE2 | 1:B:727:ALA:HB2 | 2.54 | 0.42 |
| 1:B:2303:ALA:O | 1:B:2307:LEU:HG | 2.19 | 0.42 |
| 1:B:3078:ARG:O | 1:B:3081:MET:HG3 | 2.20 | 0.42 |
| 1:B:3127:GLN:HA | 1:B:3130:THR:HG22 | 2.02 | 0.42 |
| 1:B:3514:LEU:HD21 | 1:B:3606:LEU:HD13 | 2.01 | 0.42 |
| 1:B:4158:PRO:HG2 | 1:B:4159:ARG:NH1 | 2.34 | 0.42 |
| 1:B:4759:ASP:HA | 1:B:4760:PRO:HD3 | 1.92 | 0.42 |
| 1:D:213:TYR:HA | 1:D:340:LYS:HA | 2.00 | 0.42 |
| 1:D:502:HIS:HA | 1:D:505:GLU:OE1 | 2.19 | 0.42 |
| 1:D:1293:LEU:HD21 | 1:D:1594:ARG:HD3 | 2.01 | 0.42 |
| 1:D:1931:LEU:HD12 | 1:D:1935:VAL:HG11 | 2.00 | 0.42 |
| 1:D:2466:LEU:HG | 1:D:2502:MET:SD | 2.59 | 0.42 |
| 1:D:2539:ALA:O | 1:D:2543:THR:HG23 | 2.20 | 0.42 |
| 1:D:2694:GLU:O | 1:D:2697:ARG:HG3 | 2.20 | 0.42 |
| 1:D:3143:LEU:HA | 1:D:3146:HIS:HD1 | 1.84 | 0.42 |
| 1:D:3157:ILE:HG23 | 1:D:3161:VAL:HB | 2.01 | 0.42 |
| 1:D:3844:LEU:HD11 | 1:D:3932:ASP:HB3 | 2.01 | 0.42 |
| 1:D:4207:MET:HG3 | 1:D:4209:GLN:OE1 | 2.19 | 0.42 |
| 1:D:4651:THR:HG1 | 1:D:4803:HIS:CD2 | 2.30 | 0.42 |
| 1:D:4681:LEU:HD21 | 1:D:4687:TYR:HD2 | 1.84 | 0.42 |
| 1:D:4749:GLU:OE1 | 1:D:4753:HIS:NE2 | 2.53 | 0.42 |
| 1:C:2417:HIS:HB2 | 1:C:2491:SER:O | 2.19 | 0.42 |
| 1:C:2739:PRO:N | 1:C:2888:ARG:HH21 | 2.18 | 0.42 |
| 1:C:3069:HIS:CE1 | 1:C:3142:THR:HG1 | 2.24 | 0.42 |
| 1:C:3209:GLN:OE1 | 1:C:3209:GLN:N | 2.49 | 0.42 |
| 1:C:3981:ALA:HA | 1:C:3986:TRP:CZ2 | 2.54 | 0.42 |
| 1:A:1125:ASN:O | 1:A:1128:ARG:NH2 | 2.52 | 0.42 |
| 1:A:1126:GLY:O | 1:A:1129:GLY:N | 2.53 | 0.42 |
| 1:A:2739:PRO:N | 1:A:2888:ARG:HH21 | 2.18 | 0.42 |
| 1:A:2958:GLY:O | 1:A:2962:GLN:HG2 | 2.19 | 0.42 |
| 1:A:3378:GLN:OE1 | 1:A:3381:LEU:HD11 | 2.19 | 0.42 |
| 1:B:356:TRP:HB2 | 1:B:379:HIS:O | 2.20 | 0.42 |
| 1:B:732:SER:HB3 | 1:B:735:GLN:HG3 | 2.02 | 0.42 |
| 1:B:1125:ASN:O | 1:B:1128:ARG:NH2 | 2.52 | 0.42 |
| 1:B:1126:GLY:O | 1:B:1129:GLY:N | 2.53 | 0.42 |
| 1:B:1435:TYR:HB2 | 1:B:1575:LEU:HD22 | 2.00 | 0.42 |
| 1:B:1449:TRP:HB2 | 1:B:1553:PHE:HB2 | 2.00 | 0.42 |
| 1:B:1970:GLN:NE2 | 1:B:3641:LEU:O | 2.34 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:1977:TYR:HA | 1:B:1980:LEU:HB3 | 2.02 | 0.42 |
| 1:B:2415:ARG:HH22 | 1:B:2417:HIS:HA | 1.83 | 0.42 |
| 1:B:3051:ARG:HA | 1:B:3131:TYR:CZ | 2.54 | 0.42 |
| 1:B:3093:ARG:HA | 1:B:3096:PHE:HD2 | 1.84 | 0.42 |
| 1:B:3208:PRO:O | 1:B:3212:GLU:OE1 | 2.38 | 0.42 |
| 1:B:3845:ASN:O | 1:B:3849:ARG:HG3 | 2.20 | 0.42 |
| 1:B:3991:GLY:HA2 | 1:B:3994:HIS:CE1 | 2.54 | 0.42 |
| 1:B:4681:LEU:HD21 | 1:B:4687:TYR:HD2 | 1.84 | 0.42 |
| 1:D:355:LEU:HB2 | 1:D:378:LEU:HG | 2.02 | 0.42 |
| 1:D:402:ARG:HA | 1:D:402:ARG:HD2 | 1.95 | 0.42 |
| 1:D:648:ILE:HD11 | 1:D:779:PRO:HG2 | 2.00 | 0.42 |
| 1:D:1773:PRO:HD3 | 1:D:2156:LEU:HD21 | 2.02 | 0.42 |
| 1:D:2739:PRO:N | 1:D:2888:ARG:HH21 | 2.18 | 0.42 |
| 1:D:3051:ARG:HA | 1:D:3131:TYR:CZ | 2.54 | 0.42 |
| 1:D:3202:PRO:C | 1:D:3284:TRP:HH2 | 2.22 | 0.42 |
| 1:D:3845:ASN:O | 1:D:3849:ARG:HG3 | 2.20 | 0.42 |
| 1:C:63:ALA:N | 1:C:261:ARG:HH22 | 2.17 | 0.42 |
| 1:C:1712:TYR:CG | 1:C:1840:PRO:HB3 | 2.55 | 0.42 |
| 1:C:1739:THR:HB | 1:C:1742:THR:H | 1.85 | 0.42 |
| 1:C:1977:TYR:HA | 1:C:1980:LEU:HB3 | 2.02 | 0.42 |
| 1:C:2539:ALA:O | 1:C:2543:THR:HG23 | 2.20 | 0.42 |
| 1:C:2907:PRO:HB2 | 1:C:2910:THR:HG23 | 2.02 | 0.42 |
| 1:C:2927:LEU:HD23 | 1:C:2927:LEU:HA | 1.79 | 0.42 |
| 1:C:2951:ILE:O | 1:C:2954:ARG:HB2 | 2.20 | 0.42 |
| 1:C:3127:GLN:HA | 1:C:3130:THR:HG22 | 2.02 | 0.42 |
| 1:C:3145:GLN:HE21 | 1:C:3196:ARG:CD | 2.31 | 0.42 |
| 1:C:3202:PRO:C | 1:C:3284:TRP:HH2 | 2.22 | 0.42 |
| 1:C:3330:ASP:OD1 | 1:C:3331:GLU:N | 2.49 | 0.42 |
| 1:C:3927:GLN:NE2 | 1:C:3931:SER:OG | 2.53 | 0.42 |
| 1:C:4632:LEU:HD23 | 1:C:4633:GLU:N | 2.34 | 0.42 |
| 1:A:648:ILE:HD11 | 1:A:779:PRO:HG2 | 2.01 | 0.42 |
| 1:A:3343:GLN:HA | 1:A:3414:ARG:CZ | 2.49 | 0.42 |
| 1:A:4640:GLU:H | 1:A:4640:GLU:CD | 2.23 | 0.42 |
| 1:A:4661:TYR:OH | 1:A:4786:ASP:OD2 | 2.31 | 0.42 |
| 1:A:4917:ASP:HB3 | 1:D:4892:ARG:NH1 | 2.34 | 0.42 |
| 1:B:63:ALA:N | 1:B:261:ARG:HH22 | 2.17 | 0.42 |
| 1:B:1433:TYR:CD1 | 1:B:1573:MET:HB3 | 2.55 | 0.42 |
| 1:B:1712:TYR:CG | 1:B:1840:PRO:HB3 | 2.55 | 0.42 |
| 1:B:2739:PRO:N | 1:B:2888:ARG:HH21 | 2.18 | 0.42 |
| 1:B:2779:GLU:HA | 1:B:2792:ARG:HG3 | 2.02 | 0.42 |
| 1:B:4061:PHE:HA | 1:B:4064:MET:HE2 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4569:LEU:HD12 | 1:B:4569:LEU:HA | 1.92 | 0.42 |
| 1:D:28:VAL:O | 1:D:31:GLU:HG3 | 2.19 | 0.42 |
| 1:D:317:ARG:HG2 | 1:D:319:SER:H | 1.84 | 0.42 |
| 1:D:689:THR:HA | 1:D:778:PHE:HE2 | 1.84 | 0.42 |
| 1:D:1237:TRP:HZ2 | 1:D:1652:GLU:HA | 1.85 | 0.42 |
| 1:D:1466:LEU:HD11 | 1:D:1495:VAL:HA | 2.01 | 0.42 |
| 1:D:1854:PHE:CD2 | 1:D:1858:ASP:HB3 | 2.54 | 0.42 |
| 1:D:2696:TYR:O | 1:D:2700:MET:HE2 | 2.20 | 0.42 |
| 1:D:3378:GLN:OE1 | 1:D:3381:LEU:HD11 | 2.19 | 0.42 |
| 1:D:3779:VAL:HG13 | 1:D:3797:THR:HG22 | 2.01 | 0.42 |
| 1:D:3826:VAL:O | 1:D:3830:GLN:HG3 | 2.20 | 0.42 |
| 1:D:4554:TYR:HA | 1:D:4557:ARG:HH21 | 1.84 | 0.42 |
| 1:C:28:VAL:O | 1:C:31:GLU:HG3 | 2.19 | 0.42 |
| 1:C:732:SER:HB3 | 1:C:735:GLN:HG3 | 2.02 | 0.42 |
| 1:C:1126:GLY:O | 1:C:1129:GLY:N | 2.53 | 0.42 |
| 1:C:1435:TYR:HB2 | 1:C:1575:LEU:HD22 | 2.00 | 0.42 |
| 1:C:2532:ALA:O | 1:C:2536:LEU:HG | 2.20 | 0.42 |
| 1:C:3845:ASN:O | 1:C:3849:ARG:HG3 | 2.20 | 0.42 |
| 1:C:4801:LEU:HG | 1:C:4808:PHE:CD2 | 2.55 | 0.42 |
| 1:A:514:SER:HA | 1:A:517:GLU:OE2 | 2.19 | 0.42 |
| 1:A:1773:PRO:HD3 | 1:A:2156:LEU:HD21 | 2.02 | 0.42 |
| 1:A:2393:ASP:OD1 | 1:A:2419:GLY:N | 2.44 | 0.42 |
| 1:A:3514:LEU:HD21 | 1:A:3606:LEU:HD13 | 2.01 | 0.42 |
| 1:A:3845:ASN:O | 1:A:3849:ARG:HG3 | 2.20 | 0.42 |
| 1:A:4697:VAL:HG13 | 1:A:4698:LYS:HD3 | 2.01 | 0.42 |
| 1:B:1037:ASP:O | 1:B:1041:GLN:HG2 | 2.18 | 0.42 |
| 1:B:1966:VAL:HG21 | 1:B:3650:CYS:HA | 2.00 | 0.42 |
| 1:B:2960:LEU:HD21 | 1:B:3038:MET:HB2 | 2.01 | 0.42 |
| 1:B:3601:ALA:HA | 1:B:3604:TYR:CE1 | 2.54 | 0.42 |
| 1:B:3981:ALA:HA | 1:B:3986:TRP:CZ2 | 2.55 | 0.42 |
| 1:B:4044:MET:O | 1:B:4048:LEU:HG | 2.20 | 0.42 |
| 1:D:873:LYS:HG3 | 1:D:1049:TYR:OH | 2.20 | 0.42 |
| 1:D:2251:PHE:HA | 1:D:2254:LEU:HB2 | 2.02 | 0.42 |
| 1:D:2471:SER:HA | 1:D:2525:GLY:HA2 | 2.01 | 0.42 |
| 1:D:3143:LEU:HD13 | 1:D:3146:HIS:CE1 | 2.47 | 0.42 |
| 1:D:3143:LEU:O | 1:D:3147:ILE:HG22 | 2.20 | 0.42 |
| 1:D:3144:PHE:CZ | 1:D:3197:LEU:HD12 | 2.54 | 0.42 |
| 1:D:3208:PRO:O | 1:D:3212:GLU:OE1 | 2.38 | 0.42 |
| 1:D:3617:LYS:HD2 | 1:D:3617:LYS:N | 2.34 | 0.42 |
| 1:D:3872:GLU:HG3 | 1:D:3874:VAL:H | 1.85 | 0.42 |
| 1:D:3981:ALA:HA | 1:D:3986:TRP:CZ2 | 2.55 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:4189:ARG:NH2 | 1:D:5032:TYR:OH | 2.46 | 0.42 |
| 1:C:253:CYS:O | 1:C:258:SER:OG | 2.25 | 0.42 |
| 1:C:689:THR:HA | 1:C:778:PHE:HE2 | 1.84 | 0.42 |
| 1:C:1032:LYS:O | 1:C:1036:ARG:NE | 2.47 | 0.42 |
| 1:C:1078:GLU:HG3 | 1:C:1655:GLU:OE2 | 2.19 | 0.42 |
| 1:C:1103:GLY:HA3 | 1:C:1123:VAL:HG12 | 2.02 | 0.42 |
| 1:C:1433:TYR:CD1 | 1:C:1573:MET:HB3 | 2.55 | 0.42 |
| 1:C:2694:GLU:O | 1:C:2697:ARG:HG3 | 2.20 | 0.42 |
| 1:C:3066:ASN:HA | 1:C:3069:HIS:CD2 | 2.53 | 0.42 |
| 1:C:4865:LYS:HD3 | 1:C:4865:LYS:HA | 1.75 | 0.42 |
| 1:A:317:ARG:HG2 | 1:A:319:SER:H | 1.84 | 0.42 |
| 1:A:1068:ARG:HA | 1:A:1071:ARG:HB3 | 2.02 | 0.42 |
| 1:A:1433:TYR:CD1 | 1:A:1573:MET:HB3 | 2.55 | 0.42 |
| 1:A:1712:TYR:CG | 1:A:1840:PRO:HB3 | 2.55 | 0.42 |
| 1:A:2490:MET:H | 1:A:2490:MET:HE2 | 1.84 | 0.42 |
| 1:A:3375:GLU:O | 1:A:3378:GLN:HB3 | 2.19 | 0.42 |
| 1:A:3927:GLN:NE2 | 1:A:3931:SER:OG | 2.53 | 0.42 |
| 1:B:550:LYS:O | 1:B:560:ILE:HD13 | 2.20 | 0.42 |
| 1:B:1077:ALA:HB3 | 1:B:1189:LEU:HD22 | 2.02 | 0.42 |
| 1:B:2971:GLN:HA | 1:B:2974:ILE:HG12 | 2.00 | 0.42 |
| 1:B:3110:LEU:HD23 | 1:B:3175:LEU:HG | 2.02 | 0.42 |
| 1:B:3530:GLN:HA | 1:B:3533:ILE:HD12 | 2.01 | 0.42 |
| 1:B:3844:LEU:HD11 | 1:B:3932:ASP:HB3 | 2.01 | 0.42 |
| 1:B:3916:ILE:O | 1:B:3920:VAL:HG23 | 2.19 | 0.42 |
| 1:D:222:LEU:HD23 | 1:D:222:LEU:HA | 1.86 | 0.42 |
| 1:D:514:SER:HA | 1:D:517:GLU:OE2 | 2.19 | 0.42 |
| 1:D:722:TRP:CE2 | 1:D:727:ALA:HB2 | 2.55 | 0.42 |
| 1:D:838:HIS:CE1 | 1:D:1201:HIS:HB2 | 2.55 | 0.42 |
| 1:D:867:LEU:O | 1:D:871:ARG:HB2 | 2.20 | 0.42 |
| 1:D:3432:GLU:O | 1:D:3436:ARG:NE | 2.47 | 0.42 |
| 1:C:1464:PHE:HZ | 1:C:1494:MET:HG3 | 1.84 | 0.42 |
| 1:C:2453:ILE:O | 1:C:2457:LEU:HG | 2.20 | 0.42 |
| 1:C:3093:ARG:HA | 1:C:3096:PHE:HD2 | 1.84 | 0.42 |
| 1:C:3157:ILE:C | 1:C:3162:GLN:HE22 | 2.23 | 0.42 |
| 1:C:3514:LEU:HD21 | 1:C:3606:LEU:HD13 | 2.01 | 0.42 |
| 1:C:4760:PRO:HA | 1:C:4761:PRO:HD3 | 1.94 | 0.42 |
| 1:A:273:HIS:HB3 | 1:A:337:PRO:HA | 2.02 | 0.42 |
| 1:A:838:HIS:CE1 | 1:A:1201:HIS:HB2 | 2.55 | 0.42 |
| 1:A:1032:LYS:C | 1:A:1036:ARG:HE | 2.23 | 0.42 |
| 1:A:1992:ALA:HB1 | 1:A:1996:ARG:NH2 | 2.35 | 0.42 |
| 1:A:2699:ALA:O | 1:A:2702:CYS:HB3 | 2.18 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2779:GLU:HA | 1:A:2792:ARG:HG3 | 2.02 | 0.42 |
| 1:A:4147:LEU:HD23 | 1:A:4147:LEU:HA | 1.89 | 0.42 |
| 1:A:4747:SER:HA | 1:A:4750:ILE:HG12 | 2.02 | 0.42 |
| 1:B:385:ASP:OD1 | 1:C:156:GLN:NE2 | 2.53 | 0.42 |
| 1:B:950:LEU:HB3 | 1:B:970:LEU:HD11 | 2.01 | 0.42 |
| 1:B:1068:ARG:HA | 1:B:1071:ARG:HB3 | 2.02 | 0.42 |
| 1:B:1130:GLN:NE2 | 1:B:1136:SER:HB2 | 2.31 | 0.42 |
| 1:B:1164:LEU:N | 1:B:1167:GLU:O | 2.46 | 0.42 |
| 1:B:1466:LEU:HD11 | 1:B:1495:VAL:HA | 2.01 | 0.42 |
| 1:B:2499:LYS:NZ | 1:B:2529:ASP:OD1 | 2.44 | 0.42 |
| 1:B:2522:LEU:O | 1:B:2527:LEU:N | 2.48 | 0.42 |
| 1:B:2888:ARG:O | 1:B:2892:GLN:HG2 | 2.19 | 0.42 |
| 1:B:3143:LEU:O | 1:B:3147:ILE:HG22 | 2.20 | 0.42 |
| 1:B:3343:GLN:HA | 1:B:3414:ARG:CZ | 2.49 | 0.42 |
| 1:B:3587:ASP:HA | 1:B:3591:LYS:HE3 | 2.02 | 0.42 |
| 1:B:3591:LYS:HA | 1:B:3594:ARG:NE | 2.34 | 0.42 |
| 1:B:4093:PHE:O | 1:B:4097:MET:HG2 | 2.20 | 0.42 |
| 1:D:356:TRP:HB2 | 1:D:379:HIS:O | 2.20 | 0.42 |
| 1:D:589:LEU:HA | 1:D:592:LYS:HG2 | 2.01 | 0.42 |
| 1:D:1651:LEU:O | 1:D:1654:SER:OG | 2.25 | 0.42 |
| 1:D:1712:TYR:CG | 1:D:1840:PRO:HB3 | 2.55 | 0.42 |
| 1:D:3093:ARG:HA | 1:D:3096:PHE:HD2 | 1.84 | 0.42 |
| 1:D:3508:SER:O | 1:D:3511:VAL:HG22 | 2.20 | 0.42 |
| 1:D:4072:VAL:HG11 | 1:D:4129:ALA:HB2 | 2.02 | 0.42 |
| 1:C:317:ARG:HG2 | 1:C:319:SER:H | 1.84 | 0.42 |
| 1:C:356:TRP:HB2 | 1:C:379:HIS:O | 2.20 | 0.42 |
| 1:C:3143:LEU:O | 1:C:3147:ILE:HG22 | 2.20 | 0.42 |
| 1:C:3378:GLN:OE1 | 1:C:3381:LEU:HD11 | 2.19 | 0.42 |
| 1:C:3445:TRP:HD1 | 1:C:3451:PHE:HD2 | 1.66 | 0.42 |
| 1:C:3817:LEU:HG | 1:C:3821:LYS:HD2 | 2.02 | 0.42 |
| 1:A:28:VAL:O | 1:A:31:GLU:HG3 | 2.19 | 0.41 |
| 1:A:356:TRP:HB2 | 1:A:379:HIS:O | 2.20 | 0.41 |
| 1:A:1237:TRP:HZ2 | 1:A:1652:GLU:HA | 1.85 | 0.41 |
| 1:A:1708:ARG:O | 1:A:1712:TYR:HD1 | 2.02 | 0.41 |
| 1:A:1966:VAL:HG21 | 1:A:3650:CYS:HA | 2.00 | 0.41 |
| 1:A:2765:LYS:HA | 1:A:2768:PHE:CD2 | 2.50 | 0.41 |
| 1:A:2766:TRP:O | 1:A:2770:LYS:HG2 | 2.21 | 0.41 |
| 1:A:2951:ILE:O | 1:A:2954:ARG:HB2 | 2.20 | 0.41 |
| 1:A:3330:ASP:OD1 | 1:A:3331:GLU:N | 2.49 | 0.41 |
| 1:A:3850:GLN:O | 1:A:3853:ALA:HB3 | 2.20 | 0.41 |
| 1:A:3872:GLU:HG3 | 1:A:3874:VAL:H | 1.85 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:4072:VAL:HG11 | 1:A:4129:ALA:HB2 | 2.02 | 0.41 |
| 2:H:92:PRO:HA | 2:H:93:PRO:HD3 | 1.95 | 0.41 |
| 2:G:40:ARG:HH22 | 2:G:102:GLU:HG2 | 1.85 | 0.41 |
| 1:B:408:ALA:O | 1:B:412:ASN:ND2 | 2.40 | 0.41 |
| 1:B:689:THR:HA | 1:B:778:PHE:HE2 | 1.84 | 0.41 |
| 1:B:838:HIS:CE1 | 1:B:1201:HIS:HB2 | 2.55 | 0.41 |
| 1:B:1668:ARG:HD3 | 1:B:1671:ARG:HE | 1.84 | 0.41 |
| 1:B:1703:LEU:HD23 | 1:B:1704:PRO:O | 2.20 | 0.41 |
| 1:B:2003:GLN:OE1 | 1:B:3652:MET:HG3 | 2.20 | 0.41 |
| 1:B:3375:GLU:O | 1:B:3378:GLN:HB3 | 2.19 | 0.41 |
| 1:B:3378:GLN:OE1 | 1:B:3381:LEU:HD11 | 2.19 | 0.41 |
| 1:B:3509:LEU:HD23 | 1:B:3509:LEU:HA | 1.90 | 0.41 |
| 1:B:3779:VAL:HG13 | 1:B:3797:THR:HG22 | 2.01 | 0.41 |
| 1:B:4716:TRP:O | 1:B:4718:LYS:NZ | 2.50 | 0.41 |
| 1:B:4749:GLU:OE1 | 1:B:4753:HIS:NE2 | 2.53 | 0.41 |
| 1:B:4801:LEU:HG | 1:B:4808:PHE:CD2 | 2.55 | 0.41 |
| 1:D:219:VAL:HG11 | 1:D:259:LEU:HB3 | 2.02 | 0.41 |
| 1:D:732:SER:HB3 | 1:D:735:GLN:HG3 | 2.02 | 0.41 |
| 1:D:815:VAL:O | 1:D:1007:TYR:OH | 2.27 | 0.41 |
| 1:D:1000:ARG:HH12 | 1:D:1018:ASN:HD22 | 1.66 | 0.41 |
| 1:D:1126:GLY:O | 1:D:1129:GLY:N | 2.53 | 0.41 |
| 1:D:1433:TYR:CD1 | 1:D:1573:MET:HB3 | 2.55 | 0.41 |
| 1:D:3107:VAL:HB | 1:D:3175:LEU:HD11 | 2.02 | 0.41 |
| 1:D:3986:TRP:HE3 | 1:D:4047:MET:CE | 2.33 | 0.41 |
| 1:D:4632:LEU:HD23 | 1:D:4633:GLU:N | 2.34 | 0.41 |
| 1:D:4801:LEU:HG | 1:D:4808:PHE:CD2 | 2.55 | 0.41 |
| 1:C:1692:ALA:HA | 1:C:1695:LEU:HD12 | 2.02 | 0.41 |
| 1:C:2610:LEU:CD2 | 1:C:2614:ILE:HD11 | 2.48 | 0.41 |
| 1:C:3107:VAL:HB | 1:C:3175:LEU:HD11 | 2.02 | 0.41 |
| 1:C:3110:LEU:HD23 | 1:C:3175:LEU:HG | 2.02 | 0.41 |
| 1:C:3826:VAL:O | 1:C:3830:GLN:HG3 | 2.20 | 0.41 |
| 1:C:4020:GLN:O | 1:C:4023:MET:HB3 | 2.20 | 0.41 |
| 1:C:4093:PHE:O | 1:C:4097:MET:HG2 | 2.20 | 0.41 |
| 1:C:4885:PHE:CZ | 1:C:4889:VAL:HG21 | 2.55 | 0.41 |
| 1:A:550:LYS:O | 1:A:560:ILE:HD13 | 2.20 | 0.41 |
| 1:A:563:VAL:O | 1:A:567:VAL:HG23 | 2.21 | 0.41 |
| 1:A:589:LEU:HA | 1:A:592:LYS:HG2 | 2.01 | 0.41 |
| 1:A:732:SER:HB3 | 1:A:735:GLN:HG3 | 2.02 | 0.41 |
| 1:A:1103:GLY:HA3 | 1:A:1123:VAL:HG12 | 2.02 | 0.41 |
| 1:A:1466:LEU:HD11 | 1:A:1495:VAL:HA | 2.01 | 0.41 |
| 1:A:1653:LEU:O | 1:A:1660:GLN:HB2 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:3530:GLN:HA | 1:A:3533:ILE:HD12 | 2.01 | 0.41 |
| 1:A:3981:ALA:HA | 1:A:3986:TRP:CZ2 | 2.55 | 0.41 |
| 1:A:4945:ASP:HA | 1:A:4948:GLU:HG2 | 2.01 | 0.41 |
| 1:B:28:VAL:O | 1:B:31:GLU:HG3 | 2.19 | 0.41 |
| 1:B:645:ARG:NH2 | 1:B:826:ILE:HG23 | 2.34 | 0.41 |
| 1:B:1466:LEU:O | 1:B:1469:VAL:HG22 | 2.21 | 0.41 |
| 1:B:1699:GLU:OE2 | 1:B:1810:LYS:HE3 | 2.21 | 0.41 |
| 1:B:1815:LEU:HD12 | 1:B:1815:LEU:HA | 1.91 | 0.41 |
| 1:B:1992:ALA:HB1 | 1:B:1996:ARG:NH2 | 2.35 | 0.41 |
| 1:B:2532:ALA:O | 1:B:2536:LEU:HG | 2.20 | 0.41 |
| 1:B:3145:GLN:HE21 | 1:B:3196:ARG:CD | 2.31 | 0.41 |
| 1:B:3508:SER:O | 1:B:3511:VAL:HG22 | 2.20 | 0.41 |
| 1:B:4032:GLU:OE2 | 1:B:5004:THR:HB | 2.20 | 0.41 |
| 1:D:21:VAL:C | 1:D:202:MET:HE1 | 2.41 | 0.41 |
| 1:D:1077:ALA:HB3 | 1:D:1189:LEU:HD22 | 2.02 | 0.41 |
| 1:D:1692:ALA:HA | 1:D:1695:LEU:HD12 | 2.02 | 0.41 |
| 1:D:2453:ILE:O | 1:D:2457:LEU:HG | 2.20 | 0.41 |
| 1:D:2766:TRP:O | 1:D:2770:LYS:HG2 | 2.21 | 0.41 |
| 1:D:2888:ARG:O | 1:D:2892:GLN:HG2 | 2.19 | 0.41 |
| 1:D:2960:LEU:HD21 | 1:D:3038:MET:HB2 | 2.01 | 0.41 |
| 1:D:3729:MET:HG2 | 1:D:3770:LEU:HD13 | 2.02 | 0.41 |
| 1:D:4093:PHE:O | 1:D:4097:MET:HG2 | 2.20 | 0.41 |
| 1:C:296:ASP:OD1 | 1:C:297:GLN:N | 2.53 | 0.41 |
| 1:C:452:PHE:HZ | 1:C:478:PHE:CD2 | 2.37 | 0.41 |
| 1:C:636:ASN:HA | 1:C:1693:GLN:HE21 | 1.86 | 0.41 |
| 1:C:873:LYS:HG3 | 1:C:1049:TYR:OH | 2.20 | 0.41 |
| 1:C:950:LEU:HB3 | 1:C:970:LEU:HD11 | 2.01 | 0.41 |
| 1:C:1032:LYS:C | 1:C:1036:ARG:HE | 2.23 | 0.41 |
| 1:C:1237:TRP:HZ2 | 1:C:1652:GLU:HA | 1.85 | 0.41 |
| 1:C:1466:LEU:HD11 | 1:C:1495:VAL:HA | 2.01 | 0.41 |
| 1:C:3587:ASP:HA | 1:C:3591:LYS:HE3 | 2.02 | 0.41 |
| 1:C:3729:MET:HG2 | 1:C:3770:LEU:HD13 | 2.02 | 0.41 |
| 1:C:3817:LEU:HD13 | 1:C:3899:PHE:CD1 | 2.55 | 0.41 |
| 1:C:3872:GLU:HG3 | 1:C:3874:VAL:H | 1.85 | 0.41 |
| 1:A:63:ALA:N | 1:A:261:ARG:HH22 | 2.17 | 0.41 |
| 1:A:129:ASP:OD1 | 1:D:2371:GLU:N | 2.54 | 0.41 |
| 1:A:296:ASP:OD1 | 1:A:297:GLN:N | 2.53 | 0.41 |
| 1:A:616:SER:O | 1:A:620:LEU:HG | 2.21 | 0.41 |
| 1:A:867:LEU:O | 1:A:871:ARG:HB2 | 2.20 | 0.41 |
| 1:A:1699:GLU:OE2 | 1:A:1810:LYS:HE3 | 2.21 | 0.41 |
| 1:A:2003:GLN:OE1 | 1:A:3652:MET:HG3 | 2.20 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2172:PRO:O | 1:A:2175:GLU:HG2 | 2.21 | 0.41 |
| 1:A:2300:SER:HA | 1:A:2360:LYS:HE2 | 2.03 | 0.41 |
| 1:A:2669:GLU:HG2 | 1:A:2672:LEU:HD12 | 2.02 | 0.41 |
| 1:A:3078:ARG:O | 1:A:3081:MET:HG3 | 2.20 | 0.41 |
| 1:A:3078:ARG:O | 1:A:3082:LYS:HG3 | 2.21 | 0.41 |
| 1:A:3420:ARG:NH2 | 1:B:1167:GLU:OE1 | 2.53 | 0.41 |
| 1:A:3474:SER:HB3 | 1:B:1170:MET:HG2 | 2.02 | 0.41 |
| 1:A:4961:CYS:SG | 1:A:4978:HIS:NE2 | 2.94 | 0.41 |
| 2:H:22:CYS:HA | 2:H:106:LEU:HD12 | 2.01 | 0.41 |
| 1:B:867:LEU:O | 1:B:871:ARG:HB2 | 2.20 | 0.41 |
| 1:B:1708:ARG:O | 1:B:1712:TYR:HD1 | 2.02 | 0.41 |
| 1:B:2539:ALA:O | 1:B:2543:THR:HG23 | 2.20 | 0.41 |
| 1:B:2907:PRO:HB2 | 1:B:2910:THR:HG23 | 2.02 | 0.41 |
| 1:B:2958:GLY:O | 1:B:2962:GLN:HG2 | 2.20 | 0.41 |
| 1:B:3522:LEU:HD23 | 1:B:3522:LEU:HA | 1.91 | 0.41 |
| 1:B:3729:MET:HG2 | 1:B:3770:LEU:HD13 | 2.02 | 0.41 |
| 1:B:3752:SER:OG | 1:B:3755:GLU:HG3 | 2.20 | 0.41 |
| 1:B:3850:GLN:O | 1:B:3853:ALA:HB3 | 2.20 | 0.41 |
| 1:B:4554:TYR:HD1 | 1:B:4557:ARG:NH2 | 2.19 | 0.41 |
| 1:D:375:LYS:HD2 | 1:D:376:ALA:H | 1.85 | 0.41 |
| 1:D:550:LYS:O | 1:D:560:ILE:HD13 | 2.20 | 0.41 |
| 1:D:1653:LEU:O | 1:D:1660:GLN:HB2 | 2.21 | 0.41 |
| 1:D:1930:LYS:C | 1:D:1931:LEU:HD22 | 2.41 | 0.41 |
| 1:D:2003:GLN:OE1 | 1:D:3652:MET:HG3 | 2.20 | 0.41 |
| 1:D:2626:LEU:O | 1:D:2629:ASP:N | 2.53 | 0.41 |
| 1:D:2867:LEU:HD22 | 1:D:2928:LYS:NZ | 2.34 | 0.41 |
| 1:D:3078:ARG:O | 1:D:3081:MET:HG3 | 2.20 | 0.41 |
| 1:D:3110:LEU:HD23 | 1:D:3175:LEU:HG | 2.02 | 0.41 |
| 1:D:3127:GLN:HA | 1:D:3130:THR:HG22 | 2.02 | 0.41 |
| 1:D:3848:GLU:HB3 | 1:D:3852:LYS:NZ | 2.36 | 0.41 |
| 1:D:4634:GLU:OE1 | 1:D:4636:THR:OG1 | 2.37 | 0.41 |
| 1:D:4640:GLU:H | 1:D:4640:GLU:CD | 2.23 | 0.41 |
| 1:D:4973:HIS:O | 1:D:4977:THR:HG23 | 2.21 | 0.41 |
| 1:C:722:TRP:CE2 | 1:C:727:ALA:HB2 | 2.54 | 0.41 |
| 1:C:1100:MET:HE2 | 1:C:1198:GLN:HB3 | 2.02 | 0.41 |
| 1:C:2300:SER:HA | 1:C:2360:LYS:HE2 | 2.03 | 0.41 |
| 1:C:2471:SER:HA | 1:C:2525:GLY:HA2 | 2.01 | 0.41 |
| 1:C:3208:PRO:O | 1:C:3212:GLU:OE1 | 2.37 | 0.41 |
| 1:C:3835:LEU:HA | 1:C:3838:THR:HG22 | 2.02 | 0.41 |
| 1:A:938:HIS:HB2 | 1:A:1054:GLU:HB3 | 2.03 | 0.41 |
| 1:A:1739:THR:HB | 1:A:1742:THR:H | 1.85 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1945:TYR:CZ | 1:A:1949:GLN:NE2 | 2.86 | 0.41 |
| 1:A:1977:TYR:HA | 1:A:1980:LEU:HB3 | 2.02 | 0.41 |
| 1:A:2532:ALA:O | 1:A:2536:LEU:HG | 2.20 | 0.41 |
| 1:A:2539:ALA:O | 1:A:2543:THR:HG23 | 2.20 | 0.41 |
| 1:A:2758:PHE:HD2 | 1:A:2809:ILE:HG21 | 1.86 | 0.41 |
| 1:A:2863:SER:HB3 | 1:A:2924:GLN:NE2 | 2.35 | 0.41 |
| 1:A:3110:LEU:HD23 | 1:A:3175:LEU:HG | 2.02 | 0.41 |
| 1:A:3157:ILE:C | 1:A:3162:GLN:HE22 | 2.23 | 0.41 |
| 1:A:3729:MET:HG2 | 1:A:3770:LEU:HD13 | 2.02 | 0.41 |
| 1:A:4554:TYR:HD1 | 1:A:4557:ARG:NH2 | 2.19 | 0.41 |
| 1:A:4801:LEU:HG | 1:A:4808:PHE:CD2 | 2.55 | 0.41 |
| 1:A:4849:TYR:CE2 | 1:D:4813:LEU:HD12 | 2.55 | 0.41 |
| 1:A:4885:PHE:CZ | 1:A:4889:VAL:HG21 | 2.55 | 0.41 |
| 2:E:11:ASP:OD2 | 2:E:14:THR:OG1 | 2.31 | 0.41 |
| 1:B:1439:VAL:HB | 1:B:1514:LEU:HB3 | 2.03 | 0.41 |
| 1:B:1692:ALA:HA | 1:B:1695:LEU:HD12 | 2.03 | 0.41 |
| 1:B:2113:SER:OG | 1:B:2116:LEU:HB3 | 2.21 | 0.41 |
| 1:B:2626:LEU:O | 1:B:2629:ASP:N | 2.54 | 0.41 |
| 1:B:2785:LEU:HD12 | 1:B:2785:LEU:HA | 1.94 | 0.41 |
| 1:B:3595:ARG:O | 1:B:3599:VAL:HG22 | 2.21 | 0.41 |
| 1:B:3826:VAL:O | 1:B:3830:GLN:HG3 | 2.20 | 0.41 |
| 1:B:3986:TRP:HE3 | 1:B:4047:MET:CE | 2.33 | 0.41 |
| 1:B:4634:GLU:OE1 | 1:B:4636:THR:OG1 | 2.37 | 0.41 |
| 1:B:4973:HIS:O | 1:B:4977:THR:HG23 | 2.20 | 0.41 |
| 1:D:106:ALA:HA | 1:D:149:THR:HA | 2.00 | 0.41 |
| 1:D:563:VAL:O | 1:D:567:VAL:HG23 | 2.20 | 0.41 |
| 1:D:616:SER:O | 1:D:620:LEU:HG | 2.21 | 0.41 |
| 1:D:1670:TYR:CD2 | 1:D:1685:LEU:HD11 | 2.56 | 0.41 |
| 1:D:1699:GLU:OE2 | 1:D:1810:LYS:HE3 | 2.21 | 0.41 |
| 1:D:1868:PRO:O | 1:D:1872:THR:HG23 | 2.20 | 0.41 |
| 1:D:2225:PHE:O | 1:D:2228:MET:HB3 | 2.20 | 0.41 |
| 1:D:2532:ALA:O | 1:D:2536:LEU:HG | 2.20 | 0.41 |
| 1:D:3078:ARG:O | 1:D:3082:LYS:HG3 | 2.21 | 0.41 |
| 1:D:4001:MET:HE1 | 1:D:4061:PHE:CD1 | 2.55 | 0.41 |
| 1:D:4044:MET:O | 1:D:4048:LEU:HG | 2.20 | 0.41 |
| 1:C:470:SER:O | 1:C:474:ARG:NE | 2.50 | 0.41 |
| 1:C:563:VAL:O | 1:C:567:VAL:HG23 | 2.21 | 0.41 |
| 1:C:867:LEU:O | 1:C:871:ARG:HB2 | 2.20 | 0.41 |
| 1:C:1068:ARG:HA | 1:C:1071:ARG:HB3 | 2.02 | 0.41 |
| 1:C:1515:VAL:O | 1:C:1532:ASN:HA | 2.20 | 0.41 |
| 1:C:1653:LEU:O | 1:C:1660:GLN:HB2 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:1703:LEU:HD23 | 1:C:1704:PRO:O | 2.20 | 0.41 |
| 1:C:1854:PHE:CD2 | 1:C:1858:ASP:HB3 | 2.54 | 0.41 |
| 1:C:1930:LYS:C | 1:C:1931:LEU:HD22 | 2.41 | 0.41 |
| 1:C:1943:LEU:HD21 | 1:C:2098:VAL:HG21 | 2.03 | 0.41 |
| 1:C:2003:GLN:OE1 | 1:C:3652:MET:HG3 | 2.20 | 0.41 |
| 1:C:2172:PRO:O | 1:C:2175:GLU:HG2 | 2.21 | 0.41 |
| 1:C:2816:MET:HG2 | 1:C:2821:TRP:HE3 | 1.86 | 0.41 |
| 1:C:2958:GLY:O | 1:C:2962:GLN:HG2 | 2.19 | 0.41 |
| 1:C:2960:LEU:HD21 | 1:C:3038:MET:HB2 | 2.01 | 0.41 |
| 1:C:3078:ARG:O | 1:C:3081:MET:HG3 | 2.20 | 0.41 |
| 1:C:3601:ALA:HA | 1:C:3604:TYR:CE1 | 2.54 | 0.41 |
| 1:C:4001:MET:HE1 | 1:C:4061:PHE:CD1 | 2.56 | 0.41 |
| 1:C:4044:MET:O | 1:C:4048:LEU:HG | 2.20 | 0.41 |
| 1:A:140:ASP:OD2 | 1:A:142:THR:OG1 | 2.31 | 0.41 |
| 1:A:214:VAL:HG22 | 1:A:341:TYR:CD1 | 2.50 | 0.41 |
| 1:A:355:LEU:HB2 | 1:A:378:LEU:HG | 2.02 | 0.41 |
| 1:A:873:LYS:HG3 | 1:A:1049:TYR:OH | 2.20 | 0.41 |
| 1:A:1067:SER:O | 1:A:1071:ARG:HB3 | 2.18 | 0.41 |
| 1:A:2453:ILE:O | 1:A:2457:LEU:HG | 2.20 | 0.41 |
| 1:A:2694:GLU:O | 1:A:2697:ARG:HG3 | 2.20 | 0.41 |
| 1:A:3560:GLN:O | 1:A:3562:LYS:NZ | 2.54 | 0.41 |
| 1:A:4032:GLU:OE2 | 1:A:5004:THR:HB | 2.21 | 0.41 |
| 1:A:4090:LYS:HB2 | 1:A:4121:GLU:HB3 | 2.02 | 0.41 |
| 1:A:4093:PHE:O | 1:A:4097:MET:HG2 | 2.20 | 0.41 |
| 1:A:4973:HIS:O | 1:A:4977:THR:HG23 | 2.21 | 0.41 |
| 1:B:219:VAL:HG11 | 1:B:259:LEU:HB3 | 2.02 | 0.41 |
| 1:B:1515:VAL:O | 1:B:1532:ASN:HA | 2.20 | 0.41 |
| 1:B:1653:LEU:O | 1:B:1660:GLN:HB2 | 2.21 | 0.41 |
| 1:B:3872:GLU:HG3 | 1:B:3874:VAL:H | 1.85 | 0.41 |
| 1:D:63:ALA:N | 1:D:261:ARG:HH22 | 2.17 | 0.41 |
| 1:D:461:HIS:HB2 | 1:D:3707:ARG:NH1 | 2.36 | 0.41 |
| 1:D:938:HIS:HB2 | 1:D:1054:GLU:HB3 | 2.03 | 0.41 |
| 1:D:1466:LEU:O | 1:D:1469:VAL:HG22 | 2.21 | 0.41 |
| 1:D:1515:VAL:O | 1:D:1532:ASN:HA | 2.20 | 0.41 |
| 1:D:1977:TYR:HA | 1:D:1980:LEU:HB3 | 2.02 | 0.41 |
| 1:D:1992:ALA:HB1 | 1:D:1996:ARG:NH2 | 2.35 | 0.41 |
| 1:D:2676:ARG:HB2 | 1:D:2714:TYR:HH | 1.85 | 0.41 |
| 1:D:2683:PHE:HE2 | 1:D:2966:TRP:NE1 | 2.18 | 0.41 |
| 1:D:2758:PHE:HD2 | 1:D:2809:ILE:HG21 | 1.86 | 0.41 |
| 1:D:2807:TRP:HB3 | 1:D:2808:PRO:HD3 | 2.03 | 0.41 |
| 1:D:3339:ALA:O | 1:D:3343:GLN:HG2 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:3443:ILE:HG12 | 1:D:3605:HIS:CD2 | 2.56 | 0.41 |
| 1:D:3560:GLN:O | 1:D:3562:LYS:NZ | 2.53 | 0.41 |
| 1:C:355:LEU:HB2 | 1:C:378:LEU:HG | 2.02 | 0.41 |
| 1:C:550:LYS:O | 1:C:560:ILE:HD13 | 2.20 | 0.41 |
| 1:C:790:ARG:NH1 | 1:C:1624:LEU:O | 2.47 | 0.41 |
| 1:C:1868:PRO:O | 1:C:1872:THR:HG23 | 2.20 | 0.41 |
| 1:C:2225:PHE:O | 1:C:2228:MET:HB3 | 2.21 | 0.41 |
| 1:C:3539:ARG:HH22 | 1:C:3548:GLU:HG3 | 1.86 | 0.41 |
| 1:C:4747:SER:HA | 1:C:4750:ILE:HG12 | 2.02 | 0.41 |
| 1:C:4973:HIS:O | 1:C:4977:THR:HG23 | 2.21 | 0.41 |
| 1:A:203:ASN:HA | 1:A:204:PRO:HD3 | 1.83 | 0.41 |
| 1:A:219:VAL:CG1 | 1:A:259:LEU:HB3 | 2.51 | 0.41 |
| 1:A:592:LYS:HA | 1:A:1580:PHE:CE2 | 2.56 | 0.41 |
| 1:A:722:TRP:CE2 | 1:A:727:ALA:HB2 | 2.54 | 0.41 |
| 1:A:732:SER:N | 1:A:735:GLN:OE1 | 2.53 | 0.41 |
| 1:A:769:GLU:OE2 | 1:A:1473:THR:HG22 | 2.21 | 0.41 |
| 1:A:1092:PHE:CZ | 1:A:1100:MET:SD | 3.13 | 0.41 |
| 1:A:1464:PHE:HZ | 1:A:1494:MET:HG3 | 1.84 | 0.41 |
| 1:A:3508:SER:O | 1:A:3511:VAL:HG22 | 2.20 | 0.41 |
| 1:A:3587:ASP:HA | 1:A:3591:LYS:HE3 | 2.02 | 0.41 |
| 1:B:355:LEU:HB2 | 1:B:378:LEU:HG | 2.02 | 0.41 |
| 1:B:1237:TRP:HZ2 | 1:B:1652:GLU:HA | 1.85 | 0.41 |
| 1:B:1773:PRO:HD3 | 1:B:2156:LEU:HD21 | 2.02 | 0.41 |
| 1:B:2172:PRO:O | 1:B:2175:GLU:HG2 | 2.21 | 0.41 |
| 1:B:2205:GLU:O | 1:B:2209:GLU:HG2 | 2.18 | 0.41 |
| 1:B:2225:PHE:O | 1:B:2228:MET:HB3 | 2.21 | 0.41 |
| 1:B:2490:MET:HE2 | 1:B:2490:MET:H | 1.84 | 0.41 |
| 1:B:3848:GLU:HB3 | 1:B:3852:LYS:NZ | 2.36 | 0.41 |
| 1:B:4072:VAL:HG11 | 1:B:4129:ALA:HB2 | 2.02 | 0.41 |
| 1:B:4640:GLU:CD | 1:B:4640:GLU:H | 2.23 | 0.41 |
| 1:D:219:VAL:CG1 | 1:D:259:LEU:HB3 | 2.51 | 0.41 |
| 1:D:1464:PHE:HZ | 1:D:1494:MET:HG3 | 1.84 | 0.41 |
| 1:D:1703:LEU:HD23 | 1:D:1704:PRO:O | 2.20 | 0.41 |
| 1:D:2300:SER:HA | 1:D:2360:LYS:HE2 | 2.03 | 0.41 |
| 1:D:2638:LYS:O | 1:D:2641:LEU:HB2 | 2.21 | 0.41 |
| 1:D:2880:GLU:HA | 1:D:2908:TYR:HE2 | 1.86 | 0.41 |
| 1:D:4003:LEU:HD21 | 1:D:4012:LEU:HD23 | 2.02 | 0.41 |
| 1:C:273:HIS:HB3 | 1:C:337:PRO:HA | 2.02 | 0.41 |
| 1:C:592:LYS:HA | 1:C:1580:PHE:CE2 | 2.56 | 0.41 |
| 1:C:769:GLU:OE2 | 1:C:1473:THR:HG22 | 2.21 | 0.41 |
| 1:C:838:HIS:CE1 | 1:C:1201:HIS:HB2 | 2.55 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:1106:ARG:HB3 | 1:C:1108:GLU:OE1 | 2.21 | 0.41 |
| 1:C:1699:GLU:OE2 | 1:C:1810:LYS:HE3 | 2.20 | 0.41 |
| 1:C:2113:SER:OG | 1:C:2116:LEU:HB3 | 2.20 | 0.41 |
| 1:C:2757:LYS:HE3 | 1:C:2757:LYS:HB3 | 1.84 | 0.41 |
| 1:C:2880:GLU:HA | 1:C:2908:TYR:HE2 | 1.86 | 0.41 |
| 1:A:16:THR:HG1 | 1:A:99:ARG:H | 1.62 | 0.41 |
| 1:A:170:ILE:HD12 | 1:A:170:ILE:HA | 1.96 | 0.41 |
| 1:A:2113:SER:OG | 1:A:2116:LEU:HB3 | 2.20 | 0.41 |
| 1:A:2768:PHE:HE2 | 1:A:2857:PRO:HG2 | 1.86 | 0.41 |
| 1:A:2791:LEU:HD23 | 1:A:2791:LEU:HA | 1.88 | 0.41 |
| 1:A:3107:VAL:HB | 1:A:3175:LEU:HD11 | 2.02 | 0.41 |
| 1:A:3554:GLN:HA | 1:A:3557:LEU:HD13 | 2.03 | 0.41 |
| 1:A:3844:LEU:HD11 | 1:A:3932:ASP:HB3 | 2.01 | 0.41 |
| 1:B:1106:ARG:HB3 | 1:B:1108:GLU:OE1 | 2.21 | 0.41 |
| 1:B:1470:ARG:HB3 | 1:B:1491:ASN:CG | 2.41 | 0.41 |
| 1:B:1854:PHE:CD2 | 1:B:1858:ASP:HB3 | 2.54 | 0.41 |
| 1:B:2123:LEU:HD12 | 1:B:2123:LEU:HA | 1.92 | 0.41 |
| 1:B:2610:LEU:CD2 | 1:B:2614:ILE:HD11 | 2.48 | 0.41 |
| 1:B:3078:ARG:O | 1:B:3082:LYS:HG3 | 2.21 | 0.41 |
| 1:B:3817:LEU:HG | 1:B:3821:LYS:HD2 | 2.02 | 0.41 |
| 1:B:4554:TYR:HA | 1:B:4557:ARG:NH2 | 2.36 | 0.41 |
| 1:B:4760:PRO:HA | 1:B:4761:PRO:HD3 | 1.94 | 0.41 |
| 1:D:732:SER:N | 1:D:735:GLN:OE1 | 2.53 | 0.41 |
| 1:D:769:GLU:OE2 | 1:D:1473:THR:HG22 | 2.21 | 0.41 |
| 1:D:1943:LEU:HD21 | 1:D:2098:VAL:HG21 | 2.03 | 0.41 |
| 1:D:2610:LEU:CD2 | 1:D:2614:ILE:HD11 | 2.48 | 0.41 |
| 1:D:2863:SER:HB3 | 1:D:2924:GLN:NE2 | 2.35 | 0.41 |
| 1:D:2951:ILE:O | 1:D:2954:ARG:HB2 | 2.20 | 0.41 |
| 1:D:3725:TYR:HA | 1:D:3728:ILE:HD12 | 2.02 | 0.41 |
| 1:C:110:ARG:NH1 | 1:C:115:ARG:HE | 2.19 | 0.41 |
| 1:C:461:HIS:HB2 | 1:C:3707:ARG:NH1 | 2.36 | 0.41 |
| 1:C:2792:ARG:O | 1:C:2855:TYR:OH | 2.28 | 0.41 |
| 1:C:3059:THR:O | 1:C:3062:PRO:HD2 | 2.19 | 0.41 |
| 1:C:3157:ILE:HG23 | 1:C:3161:VAL:HB | 2.01 | 0.41 |
| 1:C:3395:ARG:HH11 | 1:C:3453:ARG:HH22 | 1.66 | 0.41 |
| 1:C:3443:ILE:HG12 | 1:C:3605:HIS:CD2 | 2.55 | 0.41 |
| 1:C:3752:SER:OG | 1:C:3755:GLU:HG3 | 2.21 | 0.41 |
| 1:C:4090:LYS:HB2 | 1:C:4121:GLU:HB3 | 2.02 | 0.41 |
| 1:C:4095:LYS:HA | 1:C:4098:ASP:OD2 | 2.21 | 0.41 |
| 1:A:426:ARG:NE | 1:A:504:ALA:O | 2.51 | 0.41 |
| 1:A:1992:ALA:O | 1:A:1995:THR:OG1 | 2.34 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2251:PHE:HA | 1:A:2254:LEU:HB2 | 2.02 | 0.41 |
| 1:A:3157:ILE:HG23 | 1:A:3161:VAL:HB | 2.01 | 0.41 |
| 1:A:3339:ALA:O | 1:A:3343:GLN:HG2 | 2.21 | 0.41 |
| 1:A:3595:ARG:O | 1:A:3599:VAL:HG22 | 2.21 | 0.41 |
| 1:A:3817:LEU:HG | 1:A:3821:LYS:HD2 | 2.02 | 0.41 |
| 1:A:3826:VAL:O | 1:A:3830:GLN:HG3 | 2.20 | 0.41 |
| 1:A:4020:GLN:O | 1:A:4023:MET:HB3 | 2.20 | 0.41 |
| 2:H:82:TYR:OH | 1:D:1782:PHE:O | 2.37 | 0.41 |
| 1:B:296:ASP:OD1 | 1:B:297:GLN:N | 2.53 | 0.41 |
| 1:B:592:LYS:HA | 1:B:1580:PHE:CE2 | 2.56 | 0.41 |
| 1:B:873:LYS:HG3 | 1:B:1049:TYR:OH | 2.20 | 0.41 |
| 1:B:1032:LYS:C | 1:B:1036:ARG:HE | 2.23 | 0.41 |
| 1:B:1067:SER:O | 1:B:1071:ARG:HB3 | 2.18 | 0.41 |
| 1:B:1670:TYR:CD2 | 1:B:1685:LEU:HD11 | 2.56 | 0.41 |
| 1:B:1739:THR:HB | 1:B:1742:THR:H | 1.84 | 0.41 |
| 1:B:1930:LYS:C | 1:B:1931:LEU:HD22 | 2.41 | 0.41 |
| 1:B:2638:LYS:O | 1:B:2641:LEU:HB2 | 2.21 | 0.41 |
| 1:B:2774:ASN:OD1 | 1:C:1507:GLY:HA3 | 2.20 | 0.41 |
| 1:B:2880:GLU:HA | 1:B:2908:TYR:HE2 | 1.86 | 0.41 |
| 1:B:2912:THR:HG22 | 1:B:2914:LYS:H | 1.86 | 0.41 |
| 1:B:2951:ILE:O | 1:B:2954:ARG:HB2 | 2.20 | 0.41 |
| 1:B:3157:ILE:C | 1:B:3162:GLN:HE22 | 2.23 | 0.41 |
| 1:B:3340:VAL:HA | 1:B:3343:GLN:HG2 | 2.02 | 0.41 |
| 1:B:3539:ARG:HH22 | 1:B:3548:GLU:HG3 | 1.86 | 0.41 |
| 1:B:3579:LEU:HD12 | 1:B:3582:ARG:H | 1.86 | 0.41 |
| 1:B:4001:MET:HE1 | 1:B:4061:PHE:CD1 | 2.56 | 0.41 |
| 1:B:4020:GLN:O | 1:B:4023:MET:HB3 | 2.20 | 0.41 |
| 1:B:4090:LYS:HB2 | 1:B:4121:GLU:HB3 | 2.02 | 0.41 |
| 1:D:1106:ARG:HB3 | 1:D:1108:GLU:OE1 | 2.21 | 0.41 |
| 1:D:2106:ALA:CB | 1:D:3697:PRO:HG3 | 2.51 | 0.41 |
| 1:D:2136:ARG:O | 1:D:2139:PRO:HD2 | 2.21 | 0.41 |
| 1:D:2912:THR:HG22 | 1:D:2914:LYS:H | 1.86 | 0.41 |
| 1:D:3330:ASP:OD1 | 1:D:3331:GLU:N | 2.49 | 0.41 |
| 1:D:3752:SER:OG | 1:D:3755:GLU:HG3 | 2.20 | 0.41 |
| 1:D:3873:LYS:HA | 1:D:3873:LYS:HD3 | 1.71 | 0.41 |
| 1:D:4067:LYS:HB3 | 1:D:4103:PHE:CZ | 2.56 | 0.41 |
| 1:D:4158:PRO:HG2 | 1:D:4159:ARG:HH12 | 1.86 | 0.41 |
| 1:C:219:VAL:CG1 | 1:C:259:LEU:HB3 | 2.51 | 0.41 |
| 1:C:228:ASP:OD1 | 1:C:229:GLU:N | 2.54 | 0.41 |
| 1:C:1088:TRP:HE3 | 1:C:1226:PHE:HA | 1.86 | 0.41 |
| 1:C:1470:ARG:HB3 | 1:C:1491:ASN:CG | 2.41 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:C:2024:PRO:O | 1:C:2028:ARG:HG3 | 2.21 | 0.41 |
| 1:C:2136:ARG:O | 1:C:2139:PRO:HD2 | 2.21 | 0.41 |
| 1:C:2351:ASN:O | 1:C:2355:ARG:HG2 | 2.21 | 0.41 |
| 1:C:2626:LEU:O | 1:C:2629:ASP:N | 2.53 | 0.41 |
| 1:C:2766:TRP:O | 1:C:2770:LYS:HG2 | 2.21 | 0.41 |
| 1:C:2768:PHE:HE2 | 1:C:2857:PRO:HG2 | 1.86 | 0.41 |
| 1:C:3160:ASP:OD1 | 1:C:3161:VAL:N | 2.54 | 0.41 |
| 1:C:3182:TYR:O | 1:C:3185:LYS:HG2 | 2.21 | 0.41 |
| 1:C:3340:VAL:HA | 1:C:3343:GLN:HG2 | 2.02 | 0.41 |
| 1:C:3560:GLN:O | 1:C:3562:LYS:NZ | 2.54 | 0.41 |
| 1:C:4554:TYR:HD1 | 1:C:4557:ARG:NH2 | 2.19 | 0.41 |
| 1:A:228:ASP:OD1 | 1:A:229:GLU:N | 2.54 | 0.41 |
| 1:A:232:THR:HG22 | 1:A:233:ILE:O | 2.21 | 0.41 |
| 1:A:533:ASN:HD22 | 1:A:536:ASN:ND2 | 2.19 | 0.41 |
| 1:A:597:HIS:HB3 | 1:A:1661:ARG:CZ | 2.51 | 0.41 |
| 1:A:786:GLY:N | 1:A:1630:CYS:O | 2.54 | 0.41 |
| 1:A:923:GLN:NE2 | 1:A:924:MET:SD | 2.94 | 0.41 |
| 1:A:1077:ALA:HB3 | 1:A:1189:LEU:HD22 | 2.02 | 0.41 |
| 1:A:1692:ALA:HA | 1:A:1695:LEU:HD12 | 2.02 | 0.41 |
| 1:A:1930:LYS:C | 1:A:1931:LEU:HD22 | 2.41 | 0.41 |
| 1:A:1970:GLN:O | 1:A:3642:TYR:HB3 | 2.21 | 0.41 |
| 1:A:2106:ALA:CB | 1:A:3697:PRO:HG3 | 2.51 | 0.41 |
| 1:A:2225:PHE:O | 1:A:2228:MET:HB3 | 2.21 | 0.41 |
| 1:A:2268[B]:GLN:H | 1:A:2268[B]:GLN:HG3 | 1.49 | 0.41 |
| 1:A:2638:LYS:O | 1:A:2641:LEU:HB2 | 2.21 | 0.41 |
| 1:A:2816:MET:HG2 | 1:A:2821:TRP:HE3 | 1.86 | 0.41 |
| 1:A:3401:LEU:HD22 | 1:A:3451:PHE:CE1 | 2.56 | 0.41 |
| 1:A:3508:SER:HB3 | 1:A:3511:VAL:HG22 | 2.03 | 0.41 |
| 1:A:3713:LYS:HE3 | 1:A:3717:ASP:OD2 | 2.21 | 0.41 |
| 1:A:3752:SER:OG | 1:A:3755:GLU:HG3 | 2.21 | 0.41 |
| 1:A:3817:LEU:HD13 | 1:A:3899:PHE:CD1 | 2.55 | 0.41 |
| 1:A:3835:LEU:HA | 1:A:3838:THR:HG22 | 2.02 | 0.41 |
| 1:A:4044:MET:O | 1:A:4048:LEU:HG | 2.20 | 0.41 |
| 1:A:4868:ASP:OD1 | 1:A:4868:ASP:N | 2.54 | 0.41 |
| 1:A:4926:VAL:HG13 | 1:D:4933:GLN:HG3 | 2.01 | 0.41 |
| 1:A:5011:TRP:O | 1:A:5015:GLN:HG2 | 2.21 | 0.41 |
| 2:H:40:ARG:HH22 | 2:H:102:GLU:HG2 | 1.85 | 0.41 |
| 2:F:73:LYS:HD2 | 2:F:73:LYS:HA | 1.88 | 0.41 |
| 1:B:110:ARG:NH1 | 1:B:115:ARG:HE | 2.19 | 0.41 |
| 1:B:219:VAL:CG1 | 1:B:259:LEU:HB3 | 2.51 | 0.41 |
| 1:B:551:LEU:HA | 1:B:560:ILE:HG21 | 2.03 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:563:VAL:O | 1:B:567:VAL:HG23 | 2.21 | 0.41 |
| 1:B:732:SER:N | 1:B:735:GLN:OE1 | 2.53 | 0.41 |
| 1:B:754:SER:HA | 1:B:768:PHE:O | 2.21 | 0.41 |
| 1:B:894:GLY:HA3 | 1:B:903:LEU:HB3 | 2.03 | 0.41 |
| 1:B:923:GLN:NE2 | 1:B:924:MET:SD | 2.94 | 0.41 |
| 1:B:1103:GLY:HA3 | 1:B:1123:VAL:HG12 | 2.02 | 0.41 |
| 1:B:1547:LYS:HE2 | 1:B:1645:ASN:HB2 | 2.03 | 0.41 |
| 1:B:1868:PRO:O | 1:B:1872:THR:HG23 | 2.20 | 0.41 |
| 1:B:1992:ALA:O | 1:B:1995:THR:OG1 | 2.34 | 0.41 |
| 1:B:2300:SER:HA | 1:B:2360:LYS:HE2 | 2.03 | 0.41 |
| 1:B:2475:GLN:CD | 1:B:2475:GLN:H | 2.24 | 0.41 |
| 1:B:2669:GLU:HG2 | 1:B:2672:LEU:HD12 | 2.03 | 0.41 |
| 1:B:2694:GLU:O | 1:B:2697:ARG:HG3 | 2.20 | 0.41 |
| 1:B:2816:MET:HG2 | 1:B:2821:TRP:HE3 | 1.86 | 0.41 |
| 1:B:3107:VAL:HB | 1:B:3175:LEU:HD11 | 2.03 | 0.41 |
| 1:B:3173:TYR:O | 1:B:3177:THR:HG23 | 2.21 | 0.41 |
| 1:B:3182:TYR:O | 1:B:3185:LYS:HG2 | 2.21 | 0.41 |
| 1:B:3443:ILE:HG12 | 1:B:3605:HIS:CD2 | 2.56 | 0.41 |
| 1:B:3713:LYS:HE3 | 1:B:3717:ASP:OD2 | 2.21 | 0.41 |
| 1:B:4189:ARG:NH1 | 1:B:4189:ARG:CB | 2.84 | 0.41 |
| 1:B:4227:GLU:O | 1:B:4230:LYS:HB3 | 2.21 | 0.41 |
| 1:B:4885:PHE:CZ | 1:B:4889:VAL:HG21 | 2.55 | 0.41 |
| 1:B:4892:ARG:NH1 | 1:C:4898:GLY:H | 2.16 | 0.41 |
| 1:D:21:VAL:HG12 | 1:D:66:CYS:HA | 2.02 | 0.41 |
| 1:D:273:HIS:HB3 | 1:D:337:PRO:HA | 2.02 | 0.41 |
| 1:D:475:GLN:HB3 | 1:D:533:ASN:ND2 | 2.36 | 0.41 |
| 1:D:522:LEU:HD23 | 1:D:522:LEU:HA | 1.88 | 0.41 |
| 1:D:636:ASN:HA | 1:D:1693:GLN:HE21 | 1.86 | 0.41 |
| 1:D:786:GLY:N | 1:D:1630:CYS:O | 2.54 | 0.41 |
| 1:D:1068:ARG:HA | 1:D:1071:ARG:HB3 | 2.02 | 0.41 |
| 1:D:2251:PHE:HE1 | 1:D:2290:LEU:HD23 | 1.86 | 0.41 |
| 1:D:2768:PHE:HE2 | 1:D:2857:PRO:HG2 | 1.86 | 0.41 |
| 1:D:2802:LYS:HA | 1:D:2802:LYS:HD3 | 1.67 | 0.41 |
| 1:D:3150:HIS:HB3 | 1:D:3152:PHE:CZ | 2.56 | 0.41 |
| 1:D:3508:SER:HB3 | 1:D:3511:VAL:HG22 | 2.03 | 0.41 |
| 1:D:3587:ASP:HA | 1:D:3591:LYS:HE3 | 2.02 | 0.41 |
| 1:D:3989:VAL:HG13 | 1:D:4023:MET:HE3 | 2.01 | 0.41 |
| 1:D:4090:LYS:HB2 | 1:D:4121:GLU:HB3 | 2.02 | 0.41 |
| 1:D:4554:TYR:HA | 1:D:4557:ARG:NH2 | 2.36 | 0.41 |
| 1:D:4747:SER:HA | 1:D:4750:ILE:HG12 | 2.02 | 0.41 |
| 1:D:4865:LYS:HD3 | 1:D:4865:LYS:HA | 1.75 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:4885:PHE:CZ | 1:D:4889:VAL:HG21 | 2.55 | 0.41 |
| 1:D:4930:ALA:HB1 | 1:C:4937:ILE:HD11 | 2.02 | 0.41 |
| 1:C:21:VAL:HG12 | 1:C:66:CYS:HA | 2.02 | 0.41 |
| 1:C:54:ASN:OD1 | 1:C:57:ASN:N | 2.32 | 0.41 |
| 1:C:375:LYS:HD2 | 1:C:376:ALA:H | 1.85 | 0.41 |
| 1:C:616:SER:O | 1:C:620:LEU:HG | 2.21 | 0.41 |
| 1:C:645:ARG:NH2 | 1:C:826:ILE:HG23 | 2.34 | 0.41 |
| 1:C:650:VAL:O | 1:C:777:PHE:N | 2.37 | 0.41 |
| 1:C:938:HIS:HB2 | 1:C:1054:GLU:HB3 | 2.03 | 0.41 |
| 1:C:1023:PRO:HB3 | 1:C:1025:ARG:NH1 | 2.36 | 0.41 |
| 1:C:1670:TYR:CD2 | 1:C:1685:LEU:HD11 | 2.56 | 0.41 |
| 1:C:1773:PRO:HD3 | 1:C:2156:LEU:HD21 | 2.02 | 0.41 |
| 1:C:2106:ALA:CB | 1:C:3697:PRO:HG3 | 2.51 | 0.41 |
| 1:C:2251:PHE:HA | 1:C:2254:LEU:HB2 | 2.02 | 0.41 |
| 1:C:2639:MET:HG2 | 1:C:2640:PRO:CD | 2.35 | 0.41 |
| 1:C:2863:SER:HB3 | 1:C:2924:GLN:NE2 | 2.35 | 0.41 |
| 1:C:2974:ILE:HG13 | 1:C:2975:ALA:N | 2.36 | 0.41 |
| 1:C:3078:ARG:O | 1:C:3082:LYS:HG3 | 2.21 | 0.41 |
| 1:C:3150:HIS:HB3 | 1:C:3152:PHE:CZ | 2.56 | 0.41 |
| 1:C:3401:LEU:HD22 | 1:C:3451:PHE:CE1 | 2.56 | 0.41 |
| 1:C:3508:SER:O | 1:C:3511:VAL:HG22 | 2.20 | 0.41 |
| 1:C:3850:GLN:O | 1:C:3853:ALA:HB3 | 2.20 | 0.41 |
| 1:A:222:LEU:HD23 | 1:A:222:LEU:HA | 1.86 | 0.41 |
| 1:A:475:GLN:HB3 | 1:A:533:ASN:ND2 | 2.36 | 0.41 |
| 1:A:636:ASN:HA | 1:A:1693:GLN:HE21 | 1.86 | 0.41 |
| 1:A:1439:VAL:HB | 1:A:1514:LEU:HB3 | 2.03 | 0.41 |
| 1:A:1466:LEU:O | 1:A:1469:VAL:HG22 | 2.21 | 0.41 |
| 1:A:2694:GLU:HA | 1:A:2697:ARG:HG3 | 2.03 | 0.41 |
| 1:A:3182:TYR:O | 1:A:3185:LYS:HG2 | 2.21 | 0.41 |
| 1:A:4003:LEU:HD21 | 1:A:4012:LEU:HD23 | 2.02 | 0.41 |
| 1:A:4189:ARG:NH1 | 1:A:4189:ARG:CB | 2.84 | 0.41 |
| 2:F:40:ARG:HH22 | 2:F:102:GLU:HG2 | 1.85 | 0.41 |
| 1:B:20:VAL:CG2 | 1:B:202:MET:HE2 | 2.50 | 0.41 |
| 1:B:107:ILE:N | 1:B:148:TRP:O | 2.26 | 0.41 |
| 1:B:526:LEU:O | 1:B:530:ILE:HG23 | 2.21 | 0.41 |
| 1:B:636:ASN:HA | 1:B:1693:GLN:HE21 | 1.86 | 0.41 |
| 1:B:879:HIS:CE1 | 1:B:913:LEU:HD13 | 2.56 | 0.41 |
| 1:B:1255:TYR:CE1 | 1:B:1274:HIS:HD2 | 2.40 | 0.41 |
| 1:B:1924:GLU:OE2 | 1:B:1924:GLU:N | 2.54 | 0.41 |
| 1:B:1970:GLN:O | 1:B:3642:TYR:HB3 | 2.21 | 0.41 |
| 1:B:2101:MET:HG3 | 1:B:2102:VAL:N | 2.36 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:2251:PHE:HA | 1:B:2254:LEU:HB2 | 2.02 | 0.41 |
| 1:B:2299:VAL:HG13 | 1:B:2360:LYS:NZ | 2.36 | 0.41 |
| 1:B:2453:ILE:O | 1:B:2457:LEU:HG | 2.20 | 0.41 |
| 1:B:2863:SER:HB3 | 1:B:2924:GLN:NE2 | 2.35 | 0.41 |
| 1:B:2974:ILE:HG13 | 1:B:2975:ALA:N | 2.36 | 0.41 |
| 1:B:3150:HIS:HB3 | 1:B:3152:PHE:CZ | 2.56 | 0.41 |
| 1:B:4999:ASP:HB3 | 1:B:5002:GLU:HG2 | 2.03 | 0.41 |
| 1:D:232:THR:HG22 | 1:D:233:ILE:O | 2.21 | 0.41 |
| 1:D:3066:ASN:HA | 1:D:3069:HIS:CD2 | 2.53 | 0.41 |
| 1:D:3182:TYR:O | 1:D:3185:LYS:HG2 | 2.21 | 0.41 |
| 1:D:3363:GLY:HA2 | 1:D:3437:MET:HE1 | 2.03 | 0.41 |
| 1:D:3539:ARG:HH22 | 1:D:3548:GLU:HG3 | 1.86 | 0.41 |
| 1:D:3554:GLN:HA | 1:D:3557:LEU:HD13 | 2.03 | 0.41 |
| 1:D:4227:GLU:O | 1:D:4230:LYS:HB3 | 2.21 | 0.41 |
| 1:D:4554:TYR:HD1 | 1:D:4557:ARG:NH2 | 2.19 | 0.41 |
| 1:C:475:GLN:HB3 | 1:C:533:ASN:ND2 | 2.36 | 0.41 |
| 1:C:879:HIS:CE1 | 1:C:913:LEU:HD13 | 2.56 | 0.41 |
| 1:C:1547:LYS:HE2 | 1:C:1645:ASN:HB2 | 2.03 | 0.41 |
| 1:C:1973:GLN:HE22 | 1:C:3641:LEU:H | 1.68 | 0.41 |
| 1:C:2598:ALA:O | 1:C:2602:VAL:HG23 | 2.21 | 0.41 |
| 1:C:2912:THR:HG22 | 1:C:2914:LYS:H | 1.86 | 0.41 |
| 1:C:3509:LEU:HD23 | 1:C:3509:LEU:HA | 1.90 | 0.41 |
| 1:C:4158:PRO:HG2 | 1:C:4159:ARG:HH12 | 1.86 | 0.41 |
| 1:C:4230:LYS:HD2 | 1:C:4959:PHE:CE1 | 2.56 | 0.41 |
| 1:C:4640:GLU:H | 1:C:4640:GLU:CD | 2.23 | 0.41 |
| 1:C:4876:CYS:HA | 1:C:4882:CYS:HB2 | 2.03 | 0.41 |
| 1:C:4961:CYS:SG | 1:C:4978:HIS:NE2 | 2.94 | 0.41 |
| 1:C:4999:ASP:HB3 | 1:C:5002:GLU:HG2 | 2.03 | 0.41 |
| 1:A:375:LYS:HD2 | 1:A:376:ALA:H | 1.85 | 0.40 |
| 1:A:461:HIS:HB2 | 1:A:3707:ARG:NH1 | 2.36 | 0.40 |
| 1:A:1815:LEU:HD12 | 1:A:1815:LEU:HA | 1.91 | 0.40 |
| 1:A:2626:LEU:O | 1:A:2629:ASP:N | 2.53 | 0.40 |
| 1:A:3068:LEU:HD23 | 1:A:3068:LEU:HA | 1.91 | 0.40 |
| 1:A:3150:HIS:HB3 | 1:A:3152:PHE:CZ | 2.56 | 0.40 |
| 1:A:3160:ASP:OD1 | 1:A:3161:VAL:N | 2.54 | 0.40 |
| 1:A:3173:TYR:O | 1:A:3177:THR:HG23 | 2.21 | 0.40 |
| 1:A:3539:ARG:HH22 | 1:A:3548:GLU:HG3 | 1.86 | 0.40 |
| 1:B:475:GLN:HB3 | 1:B:533:ASN:ND2 | 2.36 | 0.40 |
| 1:B:546:TRP:O | 1:B:550:LYS:HE2 | 2.21 | 0.40 |
| 1:B:597:HIS:HB3 | 1:B:1661:ARG:CZ | 2.51 | 0.40 |
| 1:B:1252:HIS:CE1 | 1:B:1255:TYR:HD2 | 2.30 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:B:3209:GLN:OE1 | 1:B:3209:GLN:N | 2.49 | 0.40 |
| 1:B:3339:ALA:O | 1:B:3343:GLN:HG2 | 2.21 | 0.40 |
| 1:B:3725:TYR:HA | 1:B:3728:ILE:HD12 | 2.03 | 0.40 |
| 1:B:3835:LEU:HA | 1:B:3838:THR:HG22 | 2.02 | 0.40 |
| 1:B:4147:LEU:HD23 | 1:B:4147:LEU:HA | 1.89 | 0.40 |
| 1:B:4212:GLU:O | 1:B:4216:GLN:HG2 | 2.21 | 0.40 |
| 1:D:110:ARG:NH1 | 1:D:115:ARG:HE | 2.19 | 0.40 |
| 1:D:203:ASN:HA | 1:D:204:PRO:HD3 | 1.83 | 0.40 |
| 1:D:533:ASN:HD22 | 1:D:536:ASN:ND2 | 2.19 | 0.40 |
| 1:D:879:HIS:CE1 | 1:D:913:LEU:HD13 | 2.56 | 0.40 |
| 1:D:916:PRO:HA | 1:D:919:ASN:HB2 | 2.04 | 0.40 |
| 1:D:1023:PRO:HB3 | 1:D:1025:ARG:NH1 | 2.36 | 0.40 |
| 1:D:1252:HIS:CE1 | 1:D:1255:TYR:HD2 | 2.29 | 0.40 |
| 1:D:1973:GLN:HE22 | 1:D:3641:LEU:H | 1.68 | 0.40 |
| 1:D:2024:PRO:O | 1:D:2028:ARG:HG3 | 2.21 | 0.40 |
| 1:D:2463:LEU:HA | 1:D:2466:LEU:HD13 | 2.03 | 0.40 |
| 1:D:2978:GLU:HA | 1:D:2981:VAL:HB | 2.03 | 0.40 |
| 1:D:3514:LEU:HA | 1:D:3517:MET:SD | 2.62 | 0.40 |
| 1:D:3840:SER:OG | 1:D:3877:ASP:OD1 | 2.28 | 0.40 |
| 1:D:4947:GLN:HB3 | 1:D:4951:LYS:HZ3 | 1.84 | 0.40 |
| 1:C:16:THR:HG1 | 1:C:99:ARG:H | 1.66 | 0.40 |
| 1:C:597:HIS:HB3 | 1:C:1661:ARG:CZ | 2.51 | 0.40 |
| 1:C:868:GLU:O | 1:C:871:ARG:HB3 | 2.21 | 0.40 |
| 1:C:894:GLY:HA3 | 1:C:903:LEU:HB3 | 2.03 | 0.40 |
| 1:C:923:GLN:NE2 | 1:C:924:MET:SD | 2.94 | 0.40 |
| 1:C:1924:GLU:OE2 | 1:C:1924:GLU:N | 2.54 | 0.40 |
| 1:C:1960:ALA:O | 1:C:1964:ARG:HG3 | 2.22 | 0.40 |
| 1:C:1992:ALA:HB1 | 1:C:1996:ARG:NH2 | 2.35 | 0.40 |
| 1:C:2268[A]:GLN:H | 1:C:2268[A]:GLN:HG3 | 1.51 | 0.40 |
| 1:C:2694:GLU:HA | 1:C:2697:ARG:HG3 | 2.03 | 0.40 |
| 1:C:3986:TRP:HE3 | 1:C:4047:MET:CE | 2.33 | 0.40 |
| 1:C:4212:GLU:O | 1:C:4216:GLN:HG2 | 2.21 | 0.40 |
| 1:C:4944:ARG:HE | 1:C:4944:ARG:HB3 | 1.74 | 0.40 |
| 1:C:5011:TRP:O | 1:C:5015:GLN:HG2 | 2.21 | 0.40 |
| 1:A:219:VAL:HG11 | 1:A:259:LEU:HB3 | 2.02 | 0.40 |
| 1:A:867:LEU:HD11 | 1:A:939:VAL:HG11 | 2.03 | 0.40 |
| 1:A:1088:TRP:HB2 | 1:A:1153:ILE:HG22 | 2.02 | 0.40 |
| 1:A:1703:LEU:HD23 | 1:A:1704:PRO:O | 2.20 | 0.40 |
| 1:A:1868:PRO:O | 1:A:1872:THR:HG23 | 2.20 | 0.40 |
| 1:A:2101:MET:HG3 | 1:A:2102:VAL:N | 2.36 | 0.40 |
| 1:A:2294:ASP:HA | 1:A:2297:LYS:HZ3 | 1.87 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:2598:ALA:O | 1:A:2602:VAL:HG23 | 2.21 | 0.40 |
| 1:A:2880:GLU:HA | 1:A:2908:TYR:HE2 | 1.86 | 0.40 |
| 1:A:2974:ILE:HG13 | 1:A:2975:ALA:N | 2.36 | 0.40 |
| 1:A:3443:ILE:HG12 | 1:A:3605:HIS:CD2 | 2.55 | 0.40 |
| 1:A:3859:VAL:HA | 1:A:3866:ILE:HA | 2.03 | 0.40 |
| 1:A:4067:LYS:O | 1:A:4071:ILE:HG12 | 2.22 | 0.40 |
| 1:A:4227:GLU:O | 1:A:4230:LYS:HB3 | 2.21 | 0.40 |
| 1:A:4928:LEU:O | 1:A:4931:ILE:N | 2.54 | 0.40 |
| 2:G:42:ARG:NH2 | 1:C:1780:PRO:HB2 | 2.36 | 0.40 |
| 1:B:616:SER:O | 1:B:620:LEU:HG | 2.21 | 0.40 |
| 1:B:769:GLU:OE2 | 1:B:1473:THR:HG22 | 2.21 | 0.40 |
| 1:B:1943:LEU:HD21 | 1:B:2098:VAL:HG21 | 2.03 | 0.40 |
| 1:B:1960:ALA:O | 1:B:1964:ARG:HG3 | 2.22 | 0.40 |
| 1:B:2530:MET:HE3 | 1:B:2585:THR:HB | 2.02 | 0.40 |
| 1:B:2768:PHE:HE2 | 1:B:2857:PRO:HG2 | 1.86 | 0.40 |
| 1:B:2978:GLU:HA | 1:B:2981:VAL:HB | 2.03 | 0.40 |
| 1:B:3554:GLN:HA | 1:B:3557:LEU:HD13 | 2.03 | 0.40 |
| 1:B:4247:ILE:O | 1:B:4251:ILE:HG23 | 2.22 | 0.40 |
| 1:D:592:LYS:HA | 1:D:1580:PHE:CE2 | 2.56 | 0.40 |
| 1:D:597:HIS:HB3 | 1:D:1661:ARG:CZ | 2.51 | 0.40 |
| 1:D:1088:TRP:HE3 | 1:D:1226:PHE:HA | 1.86 | 0.40 |
| 1:D:1109:LEU:HD11 | 1:D:1605:TRP:HZ2 | 1.87 | 0.40 |
| 1:D:1924:GLU:OE2 | 1:D:1924:GLU:N | 2.54 | 0.40 |
| 1:D:2351:ASN:O | 1:D:2355:ARG:HG2 | 2.21 | 0.40 |
| 1:D:3160:ASP:OD1 | 1:D:3161:VAL:N | 2.54 | 0.40 |
| 1:D:3210:LEU:HB3 | 1:D:3303:PRO:O | 2.22 | 0.40 |
| 1:D:3348:ARG:HH12 | 1:D:3350:ARG:HH12 | 1.69 | 0.40 |
| 1:D:3817:LEU:HG | 1:D:3821:LYS:HD2 | 2.02 | 0.40 |
| 1:D:3835:LEU:HA | 1:D:3838:THR:HG22 | 2.02 | 0.40 |
| 1:D:3850:GLN:O | 1:D:3853:ALA:HB3 | 2.20 | 0.40 |
| 1:D:4184:MET:HE3 | 1:D:4188:ARG:HA | 2.03 | 0.40 |
| 1:D:4928:LEU:O | 1:D:4931:ILE:N | 2.54 | 0.40 |
| 1:C:546:TRP:O | 1:C:550:LYS:HE2 | 2.21 | 0.40 |
| 1:C:1077:ALA:HB3 | 1:C:1189:LEU:HD22 | 2.02 | 0.40 |
| 1:C:1088:TRP:HB2 | 1:C:1153:ILE:HG22 | 2.03 | 0.40 |
| 1:C:1422:ASP:HA | 1:C:1570:LYS:HE2 | 2.03 | 0.40 |
| 1:C:1466:LEU:O | 1:C:1469:VAL:HG22 | 2.21 | 0.40 |
| 1:C:3391:GLU:C | 1:C:3395:ARG:HE | 2.25 | 0.40 |
| 1:C:3539:ARG:NH2 | 1:C:3548:GLU:HG3 | 2.36 | 0.40 |
| 1:C:3725:TYR:HA | 1:C:3728:ILE:HD12 | 2.02 | 0.40 |
| 1:A:21:VAL:HG12 | 1:A:66:CYS:HA | 2.02 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:546:TRP:O | 1:A:550:LYS:HE2 | 2.21 | 0.40 |
| 1:A:754:SER:HA | 1:A:768:PHE:O | 2.21 | 0.40 |
| 1:A:879:HIS:CE1 | 1:A:913:LEU:HD13 | 2.56 | 0.40 |
| 1:A:1106:ARG:HB3 | 1:A:1108:GLU:OE1 | 2.21 | 0.40 |
| 1:A:1470:ARG:HB3 | 1:A:1491:ASN:CG | 2.41 | 0.40 |
| 1:A:2258:LEU:HD23 | 1:A:2258:LEU:HA | 1.93 | 0.40 |
| 1:A:2463:LEU:HA | 1:A:2466:LEU:HD13 | 2.03 | 0.40 |
| 1:A:2912:THR:HG22 | 1:A:2914:LYS:H | 1.86 | 0.40 |
| 1:A:2978:GLU:HA | 1:A:2981:VAL:HB | 2.03 | 0.40 |
| 1:A:3188:PRO:HD3 | 1:A:3271:GLU:OE2 | 2.22 | 0.40 |
| 1:A:3340:VAL:HA | 1:A:3343:GLN:HG2 | 2.02 | 0.40 |
| 1:A:3725:TYR:HA | 1:A:3728:ILE:HD12 | 2.03 | 0.40 |
| 1:A:3848:GLU:HB3 | 1:A:3852:LYS:NZ | 2.36 | 0.40 |
| 1:A:3953:LYS:O | 1:A:3957:VAL:HG23 | 2.22 | 0.40 |
| 1:A:4095:LYS:HA | 1:A:4098:ASP:OD2 | 2.21 | 0.40 |
| 1:A:4230:LYS:HD2 | 1:A:4959:PHE:CE1 | 2.57 | 0.40 |
| 1:A:4686:LEU:O | 1:A:4690:GLU:N | 2.55 | 0.40 |
| 1:B:375:LYS:HD2 | 1:B:376:ALA:H | 1.85 | 0.40 |
| 1:B:461:HIS:HB2 | 1:B:3707:ARG:NH1 | 2.36 | 0.40 |
| 1:B:2136:ARG:O | 1:B:2139:PRO:HD2 | 2.21 | 0.40 |
| 1:B:2598:ALA:O | 1:B:2602:VAL:HG23 | 2.22 | 0.40 |
| 1:B:2758:PHE:HD2 | 1:B:2809:ILE:HG21 | 1.86 | 0.40 |
| 1:B:3050:VAL:HG12 | 1:B:3131:TYR:HE1 | 1.87 | 0.40 |
| 1:B:3777:GLU:O | 1:B:3781:GLN:HG3 | 2.22 | 0.40 |
| 1:B:3953:LYS:O | 1:B:3957:VAL:HG23 | 2.21 | 0.40 |
| 1:B:4003:LEU:HD21 | 1:B:4012:LEU:HD23 | 2.02 | 0.40 |
| 1:B:4095:LYS:HA | 1:B:4098:ASP:OD2 | 2.21 | 0.40 |
| 1:B:4947:GLN:HB3 | 1:B:4951:LYS:HZ3 | 1.84 | 0.40 |
| 1:B:4958:CYS:CB | 1:B:4961:CYS:HB2 | 2.52 | 0.40 |
| 1:D:182:LEU:HD12 | 1:D:182:LEU:HA | 1.88 | 0.40 |
| 1:D:228:ASP:OD1 | 1:D:229:GLU:N | 2.54 | 0.40 |
| 1:D:526:LEU:O | 1:D:530:ILE:HG23 | 2.21 | 0.40 |
| 1:D:754:SER:HA | 1:D:768:PHE:O | 2.21 | 0.40 |
| 1:D:1035:ASN:O | 1:D:1039:LEU:HG | 2.22 | 0.40 |
| 1:D:1103:GLY:HA3 | 1:D:1123:VAL:HG12 | 2.02 | 0.40 |
| 1:D:1945:TYR:CZ | 1:D:1949:GLN:NE2 | 2.86 | 0.40 |
| 1:D:2299:VAL:HG13 | 1:D:2360:LYS:NZ | 2.36 | 0.40 |
| 1:D:2598:ALA:O | 1:D:2602:VAL:HG23 | 2.21 | 0.40 |
| 1:D:2669:GLU:HG2 | 1:D:2672:LEU:HD12 | 2.03 | 0.40 |
| 1:D:3595:ARG:O | 1:D:3599:VAL:HG22 | 2.21 | 0.40 |
| 1:D:4032:GLU:OE2 | 1:D:5004:THR:HB | 2.20 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:732:SER:N | 1:C:735:GLN:OE1 | 2.54 | 0.40 |
| 1:C:1421:ARG:HD3 | 1:C:1421:ARG:HA | 1.92 | 0.40 |
| 1:C:2255:SER:HA | 1:C:2258:LEU:HB2 | 2.04 | 0.40 |
| 1:C:2578:MET:HA | 1:C:2578:MET:HE3 | 2.03 | 0.40 |
| 1:C:3143:LEU:HD13 | 1:C:3146:HIS:CE1 | 2.47 | 0.40 |
| 1:C:3753:PHE:HA | 1:C:3756:LYS:HZ3 | 1.85 | 0.40 |
| 1:C:3848:GLU:HB3 | 1:C:3852:LYS:NZ | 2.36 | 0.40 |
| 1:C:4067:LYS:HB3 | 1:C:4103:PHE:CZ | 2.56 | 0.40 |
| 1:A:526:LEU:HD12 | 1:A:526:LEU:HA | 1.87 | 0.40 |
| 1:A:526:LEU:O | 1:A:530:ILE:HG23 | 2.21 | 0.40 |
| 1:A:548:VAL:HG21 | 1:A:582:HIS:CE1 | 2.57 | 0.40 |
| 1:A:1032:LYS:O | 1:A:1036:ARG:NE | 2.47 | 0.40 |
| 1:A:1109:LEU:HD11 | 1:A:1605:TRP:HZ2 | 1.87 | 0.40 |
| 1:A:1255:TYR:CE1 | 1:A:1274:HIS:HD2 | 2.40 | 0.40 |
| 1:A:1515:VAL:O | 1:A:1532:ASN:HA | 2.20 | 0.40 |
| 1:A:1670:TYR:CD2 | 1:A:1685:LEU:HD11 | 2.56 | 0.40 |
| 1:A:2126:ARG:HG2 | 1:A:2133:GLU:OE2 | 2.22 | 0.40 |
| 1:A:2251:PHE:HE1 | 1:A:2290:LEU:HD23 | 1.86 | 0.40 |
| 1:A:2299:VAL:HG13 | 1:A:2360:LYS:NZ | 2.36 | 0.40 |
| 1:A:2807:TRP:HB3 | 1:A:2808:PRO:HD3 | 2.03 | 0.40 |
| 1:A:3539:ARG:NH2 | 1:A:3548:GLU:HG3 | 2.36 | 0.40 |
| 1:A:3579:LEU:HD12 | 1:A:3582:ARG:H | 1.86 | 0.40 |
| 1:A:3719:ASP:O | 1:A:3723:MET:HE3 | 2.22 | 0.40 |
| 1:A:3777:GLU:O | 1:A:3781:GLN:HG3 | 2.21 | 0.40 |
| 1:A:3950:ASN:O | 1:A:3953:LYS:HG2 | 2.22 | 0.40 |
| 1:A:3959:LYS:NZ | 1:A:4018:ASP:HB3 | 2.37 | 0.40 |
| 1:A:4158:PRO:HG2 | 1:A:4159:ARG:HH12 | 1.86 | 0.40 |
| 1:A:4554:TYR:HA | 1:A:4557:ARG:NH2 | 2.36 | 0.40 |
| 2:E:40:ARG:HH22 | 2:E:102:GLU:HG2 | 1.85 | 0.40 |
| 1:B:829:TYR:O | 1:B:840:VAL:N | 2.49 | 0.40 |
| 1:B:867:LEU:HD11 | 1:B:939:VAL:HG11 | 2.03 | 0.40 |
| 1:B:955:LEU:HD23 | 1:B:955:LEU:HA | 1.86 | 0.40 |
| 1:B:1294:PRO:HD3 | 1:B:1643:GLU:HG2 | 2.04 | 0.40 |
| 1:B:1973:GLN:HE22 | 1:B:3641:LEU:H | 1.68 | 0.40 |
| 1:B:1984:PHE:CD1 | 1:B:1991:THR:HG21 | 2.57 | 0.40 |
| 1:B:2694:GLU:HA | 1:B:2697:ARG:HG3 | 2.03 | 0.40 |
| 1:B:2763:HIS:HB2 | 1:B:2802:LYS:HZ3 | 1.85 | 0.40 |
| 1:B:2766:TRP:O | 1:B:2770:LYS:HG2 | 2.21 | 0.40 |
| 1:B:3210:LEU:HB3 | 1:B:3303:PRO:O | 2.22 | 0.40 |
| 1:B:3366:ARG:NH2 | 1:B:3367:LYS:HA | 2.37 | 0.40 |
| 1:B:3401:LEU:HD22 | 1:B:3451:PHE:CE1 | 2.56 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:B:4141:PHE:O | 1:B:4145:VAL:HG23 | 2.22 | 0.40 |
| 1:B:4747:SER:HA | 1:B:4750:ILE:HG12 | 2.02 | 0.40 |
| 1:B:4876:CYS:HA | 1:B:4882:CYS:HB2 | 2.03 | 0.40 |
| 1:B:5011:TRP:O | 1:B:5015:GLN:HG2 | 2.21 | 0.40 |
| 1:D:592:LYS:HG3 | 1:D:593:HIS:ND1 | 2.36 | 0.40 |
| 1:D:835:ARG:HH12 | 1:D:1095:VAL:HG21 | 1.87 | 0.40 |
| 1:D:1134:LEU:O | 1:D:1134:LEU:HD23 | 2.22 | 0.40 |
| 1:D:1470:ARG:HB3 | 1:D:1491:ASN:CG | 2.41 | 0.40 |
| 1:D:2101:MET:HG3 | 1:D:2102:VAL:N | 2.36 | 0.40 |
| 1:D:2126:ARG:HG2 | 1:D:2133:GLU:OE2 | 2.22 | 0.40 |
| 1:D:2264:GLY:HA2 | 1:D:2267:MET:HG3 | 2.03 | 0.40 |
| 1:D:2974:ILE:HG13 | 1:D:2975:ALA:N | 2.36 | 0.40 |
| 1:D:4095:LYS:HA | 1:D:4098:ASP:OD2 | 2.21 | 0.40 |
| 1:D:4230:LYS:HD2 | 1:D:4959:PHE:CE1 | 2.57 | 0.40 |
| 1:C:222:LEU:HD23 | 1:C:222:LEU:HA | 1.86 | 0.40 |
| 1:C:820:ARG:NH1 | 1:C:821:LEU:HB3 | 2.37 | 0.40 |
| 1:C:835:ARG:HH12 | 1:C:1095:VAL:HG21 | 1.86 | 0.40 |
| 1:C:916:PRO:HA | 1:C:919:ASN:HB2 | 2.04 | 0.40 |
| 1:C:1035:ASN:O | 1:C:1039:LEU:HG | 2.22 | 0.40 |
| 1:C:1109:LEU:HD11 | 1:C:1605:TRP:HZ2 | 1.87 | 0.40 |
| 1:C:1255:TYR:CE1 | 1:C:1274:HIS:HD2 | 2.40 | 0.40 |
| 1:C:2299:VAL:HG13 | 1:C:2360:LYS:NZ | 2.36 | 0.40 |
| 1:C:2480:GLY:O | 1:C:2484:ALA:N | 2.47 | 0.40 |
| 1:C:2758:PHE:HD2 | 1:C:2809:ILE:HG21 | 1.86 | 0.40 |
| 1:C:2884:ASN:OD1 | 1:C:2888:ARG:NH1 | 2.55 | 0.40 |
| 1:C:3078:ARG:NH2 | 1:C:3151:GLN:O | 2.54 | 0.40 |
| 1:C:3084:GLY:HA3 | 1:C:3089:LYS:NZ | 2.37 | 0.40 |
| 1:C:3103:ILE:HD12 | 1:C:3103:ILE:HA | 1.99 | 0.40 |
| 1:C:3339:ALA:O | 1:C:3343:GLN:HG2 | 2.21 | 0.40 |
| 1:C:4003:LEU:HD21 | 1:C:4012:LEU:HD23 | 2.02 | 0.40 |
| 1:A:156:GLN:NE2 | 1:D:385:ASP:OD1 | 2.54 | 0.40 |
| 1:A:1422:ASP:HA | 1:A:1570:LYS:HE2 | 2.03 | 0.40 |
| 1:A:1501:VAL:HB | 1:A:1508:ARG:NH2 | 2.30 | 0.40 |
| 1:A:1943:LEU:HD21 | 1:A:2098:VAL:HG21 | 2.03 | 0.40 |
| 1:A:2351:ASN:O | 1:A:2355:ARG:HG2 | 2.21 | 0.40 |
| 1:A:2475:GLN:CD | 1:A:2475:GLN:H | 2.24 | 0.40 |
| 1:A:4716:TRP:CZ2 | 6:A:5304:PNX:HAI2 | 2.57 | 0.40 |
| 1:B:277:GLY:HA2 | 1:B:315:CYS:HB2 | 2.04 | 0.40 |
| 1:B:533:ASN:HD22 | 1:B:536:ASN:ND2 | 2.19 | 0.40 |
| 1:B:856:VAL:HB | 1:B:991:ASN:ND2 | 2.35 | 0.40 |
| 1:B:1109:LEU:HD11 | 1:B:1605:TRP:HZ2 | 1.87 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:B:2765:LYS:O | 1:B:2768:PHE:HB2 | 2.22 | 0.40 |
| 1:B:2769:ASP:O | 1:B:2772:GLN:HB3 | 2.22 | 0.40 |
| 1:B:2884:ASN:OD1 | 1:B:2888:ARG:NH1 | 2.55 | 0.40 |
| 1:B:3296:LEU:HB3 | 1:B:3297:PRO:HD3 | 2.04 | 0.40 |
| 1:B:3508:SER:HB3 | 1:B:3511:VAL:HG22 | 2.03 | 0.40 |
| 1:B:3721:LEU:HD12 | 1:B:3721:LEU:HA | 1.83 | 0.40 |
| 1:B:3859:VAL:HA | 1:B:3866:ILE:HA | 2.03 | 0.40 |
| 1:B:4067:LYS:HB3 | 1:B:4103:PHE:CZ | 2.56 | 0.40 |
| 1:B:4151:SER:HA | 1:B:4160:LEU:HD21 | 2.04 | 0.40 |
| 1:B:4686:LEU:O | 1:B:4690:GLU:N | 2.55 | 0.40 |
| 1:B:4711:PHE:O | 1:B:4713:SER:N | 2.53 | 0.40 |
| 1:B:4716:TRP:CZ2 | 6:B:5304:PNX:HAI2 | 2.57 | 0.40 |
| 1:B:4928:LEU:O | 1:B:4931:ILE:N | 2.54 | 0.40 |
| 1:D:548:VAL:HG21 | 1:D:582:HIS:CE1 | 2.57 | 0.40 |
| 1:D:645:ARG:NH2 | 1:D:826:ILE:HG23 | 2.34 | 0.40 |
| 1:D:1419:ASP:HB3 | 1:D:1420:ASN:H | 1.67 | 0.40 |
| 1:D:2113:SER:OG | 1:D:2116:LEU:HB3 | 2.20 | 0.40 |
| 1:D:2369[A]:ARG:HE | 1:D:2369[A]:ARG:HB2 | 1.69 | 0.40 |
| 1:D:2694:GLU:HA | 1:D:2697:ARG:HG3 | 2.03 | 0.40 |
| 1:D:2964:LEU:HD23 | 1:D:2964:LEU:HA | 1.97 | 0.40 |
| 1:D:3188:PRO:HD3 | 1:D:3271:GLU:OE2 | 2.22 | 0.40 |
| 1:C:39:ALA:H | 1:C:111:HIS:CD2 | 2.40 | 0.40 |
| 1:C:2123:LEU:HD12 | 1:C:2123:LEU:HA | 1.93 | 0.40 |
| 1:C:2309:SER:HA | 1:C:2324:ASN:HB2 | 2.04 | 0.40 |
| 1:C:2978:GLU:HA | 1:C:2981:VAL:HB | 2.03 | 0.40 |
| 1:C:3296:LEU:HB3 | 1:C:3297:PRO:HD3 | 2.04 | 0.40 |
| 1:C:3427:PRO:HB3 | 1:C:3432:GLU:OE2 | 2.21 | 0.40 |
| 1:C:3514:LEU:HA | 1:C:3517:MET:SD | 2.62 | 0.40 |
| 1:C:3554:GLN:HA | 1:C:3557:LEU:HD13 | 2.03 | 0.40 |
| 1:C:3980:LEU:HD21 | 1:C:3985:LEU:HD22 | 2.04 | 0.40 |
| 1:C:4017:LEU:HD13 | 1:C:4136:ALA:HA | 2.04 | 0.40 |
| 1:C:4032:GLU:OE2 | 1:C:5004:THR:HB | 2.21 | 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%) | 4260 (97%) | 121 (3%) | 4 (0%) | 48 | 81 |
| 1 | B | 4385/5037 (87%) | 4260 (97%) | 121 (3%) | 4 (0%) | 48 | 81 |
| 1 | C | 4385/5037 (87%) | 4260 (97%) | 121 (3%) | 4 (0%) | 48 | 81 |
| 1 | D | 4385/5037 (87%) | 4261 (97%) | 120 (3%) | 4 (0%) | 48 | 81 |
| 2 | E | 105/108 (97%) | 102 (97%) | 3 (3%) | 0 | 100 | 100 |
| 2 | F | 105/108 (97%) | 102 (97%) | 3 (3%) | 0 | 100 | 100 |
| 2 | G | 105/108 (97%) | 102 (97%) | 3 (3%) | 0 | 100 | 100 |
| 2 | H | 105/108 (97%) | 102 (97%) | 3 (3%) | 0 | 100 | 100 |
| All | All | 17960/20580 (87%) | 17449 (97%) | 495 (3%) | 16 (0%) | 50 | 81 |

All (16) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | A | 908 | VAL |
| 1 | A | 3300 | ALA |
| 1 | A | 4711 | PHE |
| 1 | B | 908 | VAL |
| 1 | B | 3300 | ALA |
| 1 | B | 4711 | PHE |
| 1 | D | 908 | VAL |
| 1 | D | 3300 | ALA |
| 1 | D | 4711 | PHE |
| 1 | C | 908 | VAL |
| 1 | C | 3300 | ALA |
| 1 | C | 4711 | PHE |
| 1 | A | 2702 | CYS |
| 1 | B | 2702 | CYS |
| 1 | D | 2702 | CYS |
| 1 | C | 2702 | CYS |

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%) | 3776 (98%) | 60 (2%) | 58 | 74 |
| 1 | B | 3836/4276 (90%) | 3776 (98%) | 60 (2%) | 58 | 74 |
| 1 | C | 3836/4276 (90%) | 3776 (98%) | 60 (2%) | 58 | 74 |
| 1 | D | 3836/4276 (90%) | 3776 (98%) | 60 (2%) | 58 | 74 |
| 2 | E | 89/90 (99%) | 86 (97%) | 3 (3%) | 32 | 54 |
| 2 | F | 89/90 (99%) | 86 (97%) | 3 (3%) | 32 | 54 |
| 2 | G | 89/90 (99%) | 86 (97%) | 3 (3%) | 32 | 54 |
| 2 | H | 89/90 (99%) | 86 (97%) | 3 (3%) | 32 | 54 |
| All | All | 15700/17464 (90%) | 15448 (98%) | 252 (2%) | 62 | 74 |

All (252) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|---------|------|
| 1 | A | 469 | ARG |
| 1 | A | 474 | ARG |
| 1 | A | 728 | ARG |
| 1 | A | 801 | LYS |
| 1 | A | 820 | ARG |
| 1 | A | 871 | ARG |
| 1 | A | 1025 | ARG |
| 1 | A | 1071 | ARG |
| 1 | A | 1100 | MET |
| 1 | A | 1231[A] | GLN |
| 1 | A | 1231[B] | GLN |
| 1 | A | 1260 | MET |
| 1 | A | 1462 | MET |
| 1 | A | 1527 | MET |
| 1 | A | 1573 | MET |
| 1 | A | 1601 | MET |
| 1 | A | 1743[A] | ARG |
| 1 | A | 1743[B] | ARG |
| 1 | A | 1930 | LYS |
| 1 | A | 1981 | MET |
| 1 | A | 2100[A] | HIS |
| 1 | A | 2100[B] | HIS |
| 1 | A | 2101 | MET |
| 1 | A | 2120 | MET |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 2153 | MET |
| 1 | A | 2228 | MET |
| 1 | A | 2268[A] | GLN |
| 1 | A | 2268[B] | GLN |
| 1 | A | 2369[A] | ARG |
| 1 | A | 2369[B] | ARG |
| 1 | A | 2490 | MET |
| 1 | A | 2578 | MET |
| 1 | A | 2584[A] | HIS |
| 1 | A | 2584[B] | HIS |
| 1 | A | 2612[A] | ARG |
| 1 | A | 2612[B] | ARG |
| 1 | A | 2625 | ARG |
| 1 | A | 2650 | ARG |
| 1 | A | 2876 | GLU |
| 1 | A | 2914 | LYS |
| 1 | A | 2932 | MET |
| 1 | A | 2937 | VAL |
| 1 | A | 2939 | ARG |
| 1 | A | 3201 | MET |
| 1 | A | 3283 | ARG |
| 1 | A | 3335 | MET |
| 1 | A | 3395 | ARG |
| 1 | A | 3422[A] | HIS |
| 1 | A | 3422[B] | HIS |
| 1 | A | 3453 | ARG |
| 1 | A | 3467 | MET |
| 1 | A | 3517 | MET |
| 1 | A | 3594 | ARG |
| 1 | A | 3773 | ARG |
| 1 | A | 4189 | ARG |
| 1 | A | 4231 | MET |
| 1 | A | 4627 | MET |
| 1 | A | 4796 | MET |
| 1 | A | 4865 | LYS |
| 1 | A | 4989 | MET |
| 2 | E | 17 | LYS |
| 2 | E | 52 | LYS |
| 2 | E | 104 | LEU |
| 2 | H | 17 | LYS |
| 2 | H | 52 | LYS |
| 2 | H | 104 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | G | 17 | LYS |
| 2 | G | 52 | LYS |
| 2 | G | 104 | LEU |
| 2 | F | 17 | LYS |
| 2 | F | 52 | LYS |
| 2 | F | 104 | LEU |
| 1 | B | 469 | ARG |
| 1 | B | 474 | ARG |
| 1 | B | 728 | ARG |
| 1 | B | 801 | LYS |
| 1 | B | 820 | ARG |
| 1 | B | 871 | ARG |
| 1 | B | 1025 | ARG |
| 1 | B | 1071 | ARG |
| 1 | B | 1100 | MET |
| 1 | B | 1231[A] | GLN |
| 1 | B | 1231[B] | GLN |
| 1 | B | 1260 | MET |
| 1 | B | 1462 | MET |
| 1 | B | 1527 | MET |
| 1 | B | 1573 | MET |
| 1 | B | 1601 | MET |
| 1 | B | 1743[A] | ARG |
| 1 | B | 1743[B] | ARG |
| 1 | B | 1930 | LYS |
| 1 | B | 1981 | MET |
| 1 | B | 2100[A] | HIS |
| 1 | B | 2100[B] | HIS |
| 1 | B | 2101 | MET |
| 1 | B | 2120 | MET |
| 1 | B | 2153 | MET |
| 1 | B | 2228 | MET |
| 1 | B | 2268[A] | GLN |
| 1 | B | 2268[B] | GLN |
| 1 | B | 2369[A] | ARG |
| 1 | B | 2369[B] | ARG |
| 1 | B | 2490 | MET |
| 1 | B | 2578 | MET |
| 1 | B | 2584[A] | HIS |
| 1 | B | 2584[B] | HIS |
| 1 | B | 2612[A] | ARG |
| 1 | B | 2612[B] | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B | 2625 | ARG |
| 1 | B | 2650 | ARG |
| 1 | B | 2876 | GLU |
| 1 | B | 2914 | LYS |
| 1 | B | 2932 | MET |
| 1 | B | 2937 | VAL |
| 1 | B | 2939 | ARG |
| 1 | B | 3201 | MET |
| 1 | B | 3283 | ARG |
| 1 | B | 3335 | MET |
| 1 | B | 3395 | ARG |
| 1 | B | 3422[A] | HIS |
| 1 | B | 3422[B] | HIS |
| 1 | B | 3453 | ARG |
| 1 | B | 3467 | MET |
| 1 | B | 3517 | MET |
| 1 | B | 3594 | ARG |
| 1 | B | 3773 | ARG |
| 1 | B | 4189 | ARG |
| 1 | B | 4231 | MET |
| 1 | B | 4627 | MET |
| 1 | B | 4796 | MET |
| 1 | B | 4865 | LYS |
| 1 | B | 4989 | MET |
| 1 | D | 469 | ARG |
| 1 | D | 474 | ARG |
| 1 | D | 728 | ARG |
| 1 | D | 801 | LYS |
| 1 | D | 820 | ARG |
| 1 | D | 871 | ARG |
| 1 | D | 1025 | ARG |
| 1 | D | 1071 | ARG |
| 1 | D | 1100 | MET |
| 1 | D | 1231[A] | GLN |
| 1 | D | 1231[B] | GLN |
| 1 | D | 1260 | MET |
| 1 | D | 1462 | MET |
| 1 | D | 1527 | MET |
| 1 | D | 1573 | MET |
| 1 | D | 1601 | MET |
| 1 | D | 1743[A] | ARG |
| 1 | D | 1743[B] | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | D | 1930 | LYS |
| 1 | D | 1981 | MET |
| 1 | D | 2100[A] | HIS |
| 1 | D | 2100[B] | HIS |
| 1 | D | 2101 | MET |
| 1 | D | 2120 | MET |
| 1 | D | 2153 | MET |
| 1 | D | 2228 | MET |
| 1 | D | 2268[A] | GLN |
| 1 | D | 2268[B] | GLN |
| 1 | D | 2369[A] | ARG |
| 1 | D | 2369[B] | ARG |
| 1 | D | 2490 | MET |
| 1 | D | 2578 | MET |
| 1 | D | 2584[A] | HIS |
| 1 | D | 2584[B] | HIS |
| 1 | D | 2612[A] | ARG |
| 1 | D | 2612[B] | ARG |
| 1 | D | 2625 | ARG |
| 1 | D | 2650 | ARG |
| 1 | D | 2876 | GLU |
| 1 | D | 2914 | LYS |
| 1 | D | 2932 | MET |
| 1 | D | 2937 | VAL |
| 1 | D | 2939 | ARG |
| 1 | D | 3201 | MET |
| 1 | D | 3283 | ARG |
| 1 | D | 3335 | MET |
| 1 | D | 3395 | ARG |
| 1 | D | 3422[A] | HIS |
| 1 | D | 3422[B] | HIS |
| 1 | D | 3453 | ARG |
| 1 | D | 3467 | MET |
| 1 | D | 3517 | MET |
| 1 | D | 3594 | ARG |
| 1 | D | 3773 | ARG |
| 1 | D | 4189 | ARG |
| 1 | D | 4231 | MET |
| 1 | D | 4627 | MET |
| 1 | D | 4796 | MET |
| 1 | D | 4865 | LYS |
| 1 | D | 4989 | MET |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | C | 469 | ARG |
| 1 | C | 474 | ARG |
| 1 | C | 728 | ARG |
| 1 | C | 801 | LYS |
| 1 | C | 820 | ARG |
| 1 | C | 871 | ARG |
| 1 | C | 1025 | ARG |
| 1 | C | 1071 | ARG |
| 1 | C | 1100 | MET |
| 1 | C | 1231[A] | GLN |
| 1 | C | 1231[B] | GLN |
| 1 | C | 1260 | MET |
| 1 | C | 1462 | MET |
| 1 | C | 1527 | MET |
| 1 | C | 1573 | MET |
| 1 | C | 1601 | MET |
| 1 | C | 1743[A] | ARG |
| 1 | C | 1743[B] | ARG |
| 1 | C | 1930 | LYS |
| 1 | C | 1981 | MET |
| 1 | C | 2100[A] | HIS |
| 1 | C | 2100[B] | HIS |
| 1 | C | 2101 | MET |
| 1 | C | 2120 | MET |
| 1 | C | 2153 | MET |
| 1 | C | 2228 | MET |
| 1 | C | 2268[A] | GLN |
| 1 | C | 2268[B] | GLN |
| 1 | C | 2369[A] | ARG |
| 1 | C | 2369[B] | ARG |
| 1 | C | 2490 | MET |
| 1 | C | 2578 | MET |
| 1 | C | 2584[A] | HIS |
| 1 | C | 2584[B] | HIS |
| 1 | C | 2612[A] | ARG |
| 1 | C | 2612[B] | ARG |
| 1 | C | 2625 | ARG |
| 1 | C | 2650 | ARG |
| 1 | C | 2876 | GLU |
| 1 | C | 2914 | LYS |
| 1 | C | 2932 | MET |
| 1 | C | 2937 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|---------|------|
| 1 | C | 2939 | ARG |
| 1 | C | 3201 | MET |
| 1 | C | 3283 | ARG |
| 1 | C | 3335 | MET |
| 1 | C | 3395 | ARG |
| 1 | C | 3422[A] | HIS |
| 1 | C | 3422[B] | HIS |
| 1 | C | 3453 | ARG |
| 1 | C | 3467 | MET |
| 1 | C | 3517 | MET |
| 1 | C | 3594 | ARG |
| 1 | C | 3773 | ARG |
| 1 | C | 4189 | ARG |
| 1 | C | 4231 | MET |
| 1 | C | 4627 | MET |
| 1 | C | 4796 | MET |
| 1 | C | 4865 | LYS |
| 1 | C | 4989 | MET |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (98) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | A | 23 | GLN |
| 1 | A | 255 | HIS |
| 1 | A | 349 | GLN |
| 1 | A | 446 | GLN |
| 1 | A | 533 | ASN |
| 1 | A | 536 | ASN |
| 1 | A | 866 | HIS |
| 1 | A | 921 | ASN |
| 1 | A | 1252 | HIS |
| 1 | A | 1629 | GLN |
| 1 | A | 1660 | GLN |
| 1 | A | 2107 | GLN |
| 1 | A | 2213 | ASN |
| 1 | A | 2763 | HIS |
| 1 | A | 2971 | GLN |
| 1 | A | 3145 | GLN |
| 1 | A | 3211 | ASN |
| 1 | A | 3419 | ASN |
| 1 | A | 3465 | ASN |
| 1 | A | 3611 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 3734 | HIS |
| 1 | A | 3927 | GLN |
| 1 | A | 4246 | GLN |
| 1 | A | 4806 | ASN |
| 1 | A | 5003 | HIS |
| 2 | E | 53 | GLN |
| 2 | H | 53 | GLN |
| 2 | G | 53 | GLN |
| 2 | F | 53 | GLN |
| 1 | B | 349 | GLN |
| 1 | B | 446 | GLN |
| 1 | B | 533 | ASN |
| 1 | B | 536 | ASN |
| 1 | B | 866 | HIS |
| 1 | B | 921 | ASN |
| 1 | B | 1252 | HIS |
| 1 | B | 1629 | GLN |
| 1 | B | 1660 | GLN |
| 1 | B | 2107 | GLN |
| 1 | B | 2213 | ASN |
| 1 | B | 2763 | HIS |
| 1 | B | 2971 | GLN |
| 1 | B | 3145 | GLN |
| 1 | B | 3211 | ASN |
| 1 | B | 3419 | ASN |
| 1 | B | 3465 | ASN |
| 1 | B | 3611 | HIS |
| 1 | B | 3734 | HIS |
| 1 | B | 3927 | GLN |
| 1 | B | 4246 | GLN |
| 1 | B | 4806 | ASN |
| 1 | D | 23 | GLN |
| 1 | D | 255 | HIS |
| 1 | D | 349 | GLN |
| 1 | D | 446 | GLN |
| 1 | D | 533 | ASN |
| 1 | D | 536 | ASN |
| 1 | D | 866 | HIS |
| 1 | D | 921 | ASN |
| 1 | D | 1252 | HIS |
| 1 | D | 1629 | GLN |
| 1 | D | 1660 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | D | 2107 | GLN |
| 1 | D | 2213 | ASN |
| 1 | D | 2763 | HIS |
| 1 | D | 2971 | GLN |
| 1 | D | 3145 | GLN |
| 1 | D | 3211 | ASN |
| 1 | D | 3419 | ASN |
| 1 | D | 3465 | ASN |
| 1 | D | 3611 | HIS |
| 1 | D | 3734 | HIS |
| 1 | D | 3927 | GLN |
| 1 | D | 4246 | GLN |
| 1 | D | 4806 | ASN |
| 1 | C | 156 | GLN |
| 1 | C | 349 | GLN |
| 1 | C | 446 | GLN |
| 1 | C | 533 | ASN |
| 1 | C | 536 | ASN |
| 1 | C | 866 | HIS |
| 1 | C | 921 | ASN |
| 1 | C | 1252 | HIS |
| 1 | C | 1629 | GLN |
| 1 | C | 1660 | GLN |
| 1 | C | 2107 | GLN |
| 1 | C | 2213 | ASN |
| 1 | C | 2763 | HIS |
| 1 | C | 2971 | GLN |
| 1 | C | 3145 | GLN |
| 1 | C | 3211 | ASN |
| 1 | C | 3419 | ASN |
| 1 | C | 3465 | ASN |
| 1 | C | 3611 | HIS |
| 1 | C | 3734 | HIS |
| 1 | C | 3927 | GLN |
| 1 | C | 4246 | GLN |
| 1 | C | 4806 | ASN |

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 | A | 5301 | - | 28,33,33 | 0.62 | 0 | 34,52,52 | 0.95 | 2 (5%) |
| 3 | ATP | D | 5301 | - | 28,33,33 | 0.62 | 0 | 34,52,52 | 0.94 | 2 (5%) |
| 6 | PNX | C | 5304 | - | 13,21,21 | 1.35 | 2 (15%) | 13,30,30 | 1.06 | 1 (7%) |
| 6 | PNX | A | 5304 | - | 13,21,21 | 1.36 | 2 (15%) | 13,30,30 | 1.06 | 1 (7%) |
| 3 | ATP | B | 5301 | - | 28,33,33 | 0.63 | 0 | 34,52,52 | 0.95 | 2 (5%) |
| 3 | ATP | C | 5301 | - | 28,33,33 | 0.61 | 0 | 34,52,52 | 0.95 | 2 (5%) |
| 6 | PNX | D | 5304 | - | 13,21,21 | 1.36 | 2 (15%) | 13,30,30 | 1.07 | 1 (7%) |
| 6 | PNX | B | 5304 | - | 13,21,21 | 1.37 | 2 (15%) | 13,30,30 | 1.07 | 1 (7%) |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 3 | ATP | A | 5301 | - | - | 4/18/38/38 | 0/3/3/3 |
| 3 | ATP | D | 5301 | - | - | 4/18/38/38 | 0/3/3/3 |
| 6 | PNX | C | 5304 | - | - | 4/7/7/7 | 0/2/2/2 |
| 6 | PNX | A | 5304 | - | - | 4/7/7/7 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 3 | ATP | B | 5301 | - | - | 4/18/38/38 | 0/3/3/3 |
| 3 | ATP | C | 5301 | - | - | 4/18/38/38 | 0/3/3/3 |
| 6 | PNX | D | 5304 | - | - | 4/7/7/7 | 0/2/2/2 |
| 6 | PNX | B | 5304 | - | - | 4/7/7/7 | 0/2/2/2 |

All (8) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 6 | B | 5304 | PNX | C6-N1 | -3.10 | 1.32 | 1.38 |
| 6 | A | 5304 | PNX | C6-N1 | -3.08 | 1.33 | 1.38 |
| 6 | D | 5304 | PNX | C6-N1 | -3.06 | 1.33 | 1.38 |
| 6 | C | 5304 | PNX | C6-N1 | -3.04 | 1.33 | 1.38 |
| 6 | D | 5304 | PNX | O6-C6 | -2.41 | 1.18 | 1.24 |
| 6 | C | 5304 | PNX | O6-C6 | -2.40 | 1.18 | 1.24 |
| 6 | A | 5304 | PNX | O6-C6 | -2.38 | 1.18 | 1.24 |
| 6 | B | 5304 | PNX | O6-C6 | -2.36 | 1.19 | 1.24 |

All (12) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 3 | B | 5301 | ATP | C4'-O4'-C1' | -4.29 | 106.00 | 109.92 |
| 3 | A | 5301 | ATP | C4'-O4'-C1' | -4.26 | 106.02 | 109.92 |
| 3 | C | 5301 | ATP | C4'-O4'-C1' | -4.24 | 106.04 | 109.92 |
| 3 | D | 5301 | ATP | C4'-O4'-C1' | -4.24 | 106.05 | 109.92 |
| 6 | B | 5304 | PNX | C4-C5-C6 | -2.69 | 117.91 | 119.96 |
| 6 | D | 5304 | PNX | C4-C5-C6 | -2.67 | 117.92 | 119.96 |
| 6 | A | 5304 | PNX | C4-C5-C6 | -2.66 | 117.93 | 119.96 |
| 6 | C | 5304 | PNX | C4-C5-C6 | -2.63 | 117.95 | 119.96 |
| 3 | C | 5301 | ATP | C5-C6-N6 | 2.30 | 123.81 | 120.31 |
| 3 | A | 5301 | ATP | C5-C6-N6 | 2.27 | 123.77 | 120.31 |
| 3 | D | 5301 | ATP | C5-C6-N6 | 2.26 | 123.75 | 120.31 |
| 3 | B | 5301 | ATP | C5-C6-N6 | 2.24 | 123.73 | 120.31 |

There are no chirality outliers.

All (32) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 6 | A | 5304 | PNX | CAI-CAH-CAJ-CAM |
| 6 | B | 5304 | PNX | CAI-CAH-CAJ-CAM |
| 6 | D | 5304 | PNX | CAI-CAH-CAJ-CAM |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 6 | C | 5304 | PNX | CAI-CAH-CAJ-CAM |
| 6 | A | 5304 | PNX | CAH-CAJ-CAM-OAD |
| 6 | B | 5304 | PNX | CAH-CAJ-CAM-OAD |
| 6 | D | 5304 | PNX | CAH-CAJ-CAM-OAD |
| 6 | C | 5304 | PNX | CAH-CAJ-CAM-OAD |
| 6 | A | 5304 | PNX | CAH-CAJ-CAM-CAA |
| 6 | B | 5304 | PNX | CAH-CAJ-CAM-CAA |
| 6 | D | 5304 | PNX | CAH-CAJ-CAM-CAA |
| 6 | C | 5304 | PNX | CAH-CAJ-CAM-CAA |
| 6 | D | 5304 | PNX | CAJ-CAH-CAI-CAK |
| 6 | C | 5304 | PNX | CAJ-CAH-CAI-CAK |
| 6 | B | 5304 | PNX | CAJ-CAH-CAI-CAK |
| 6 | A | 5304 | PNX | CAJ-CAH-CAI-CAK |
| 3 | A | 5301 | ATP | PG-O3B-PB-O3A |
| 3 | B | 5301 | ATP | PG-O3B-PB-O3A |
| 3 | D | 5301 | ATP | PG-O3B-PB-O3A |
| 3 | C | 5301 | ATP | PG-O3B-PB-O3A |
| 3 | A | 5301 | ATP | PB-O3A-PA-O2A |
| 3 | B | 5301 | ATP | PB-O3A-PA-O2A |
| 3 | D | 5301 | ATP | PB-O3A-PA-O2A |
| 3 | C | 5301 | ATP | PB-O3A-PA-O2A |
| 3 | A | 5301 | ATP | PG-O3B-PB-O1B |
| 3 | B | 5301 | ATP | PG-O3B-PB-O1B |
| 3 | D | 5301 | ATP | PG-O3B-PB-O1B |
| 3 | C | 5301 | ATP | PG-O3B-PB-O1B |
| 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 |

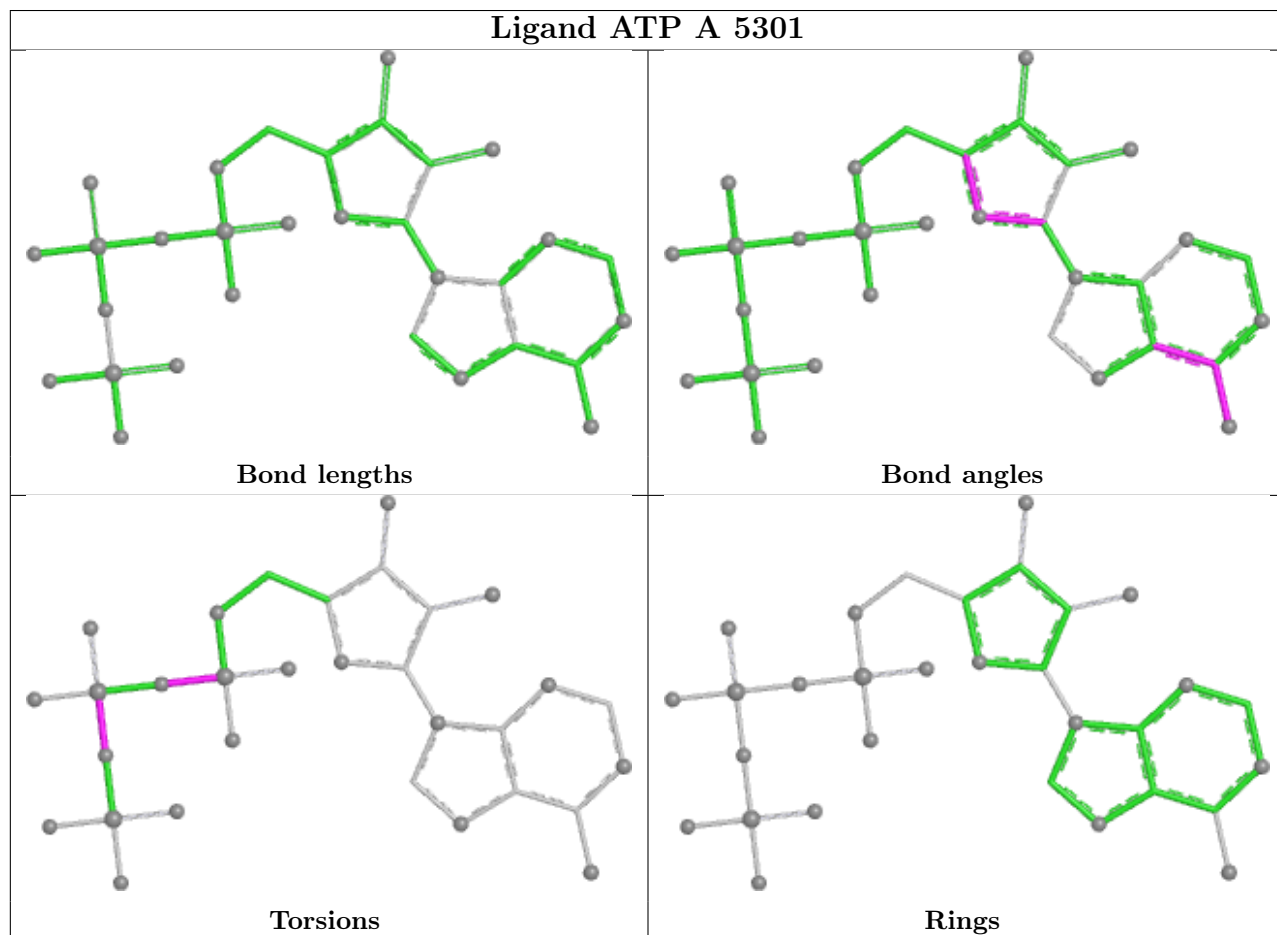
There are no ring outliers.

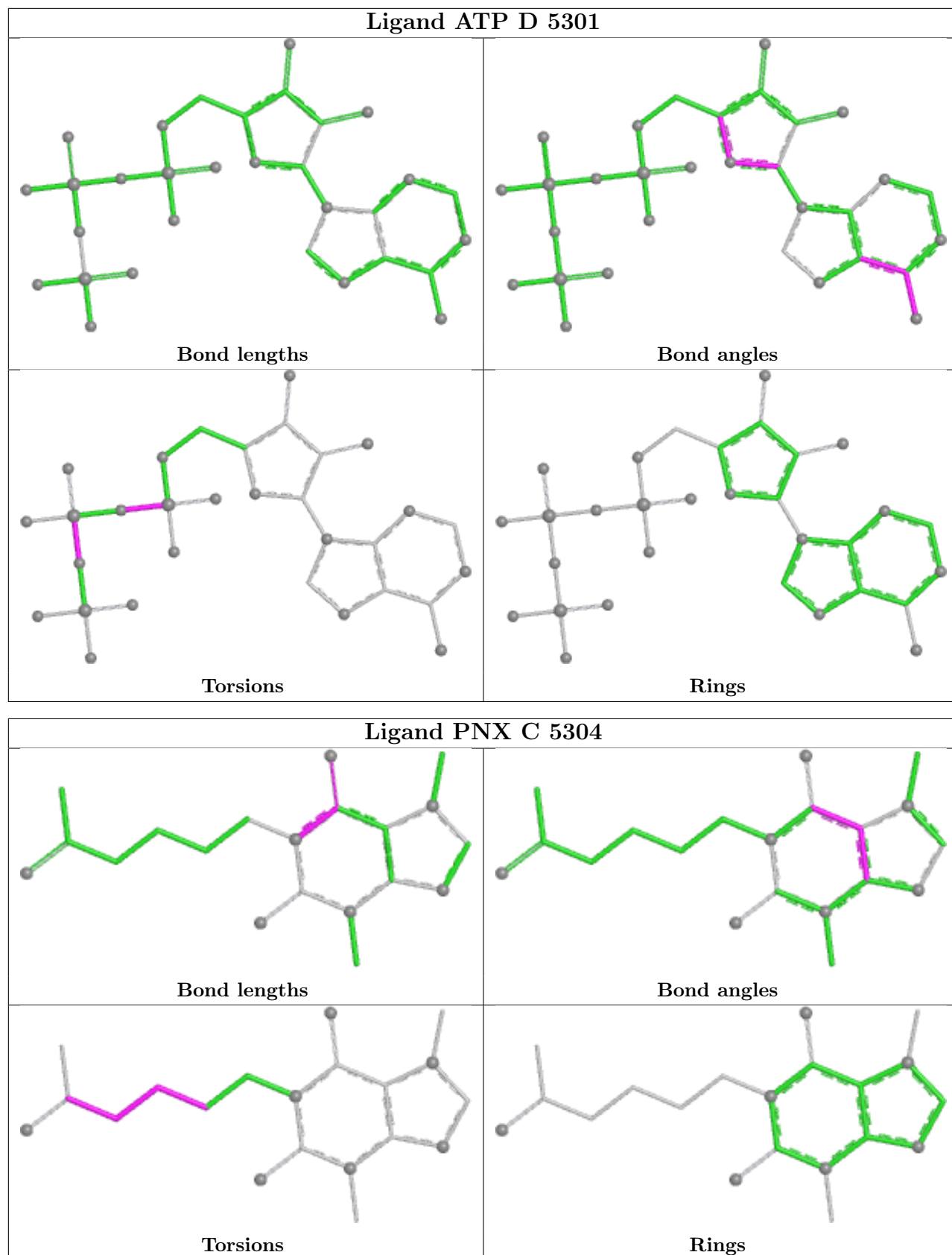
4 monomers are involved in 6 short contacts:

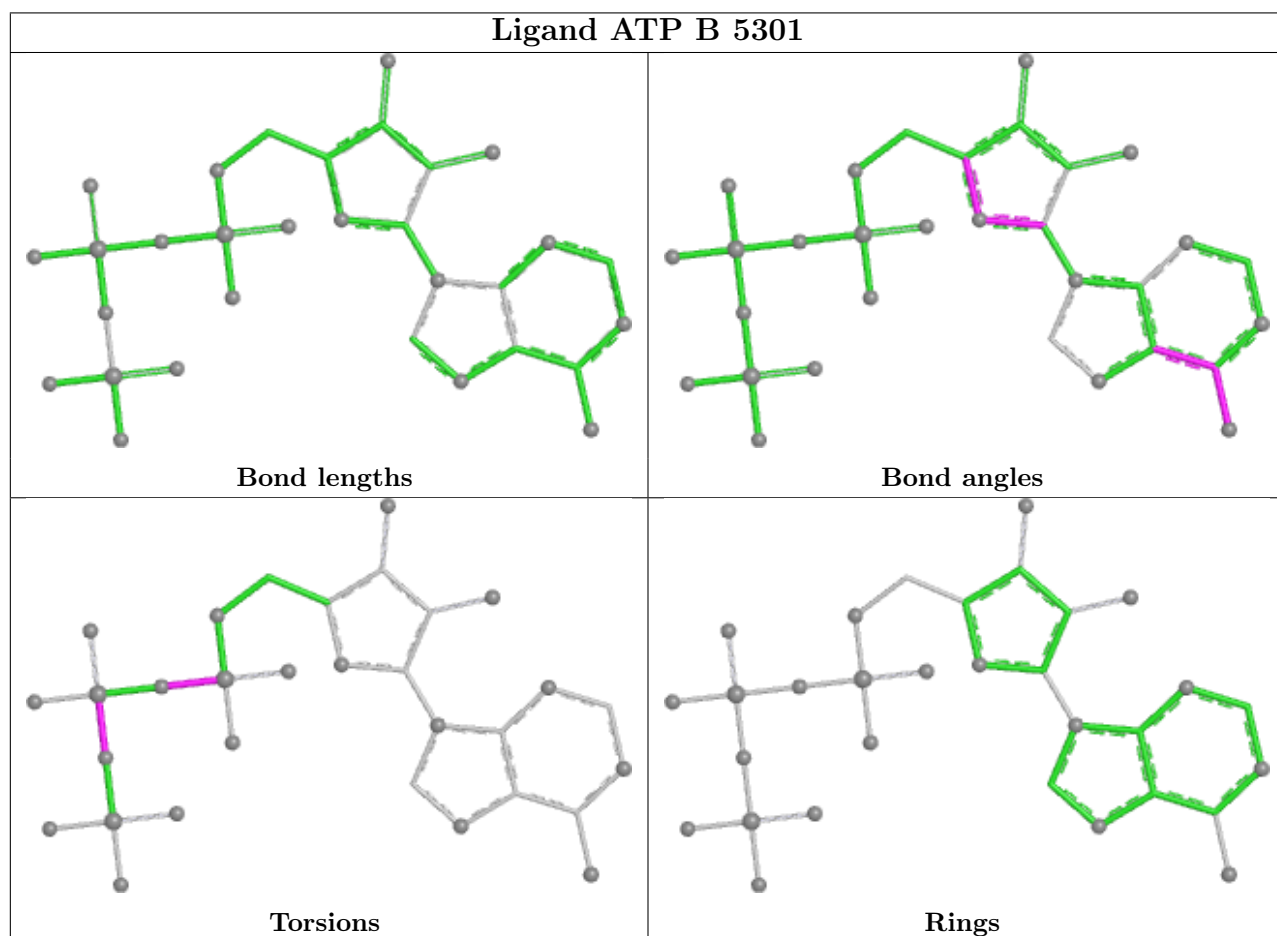
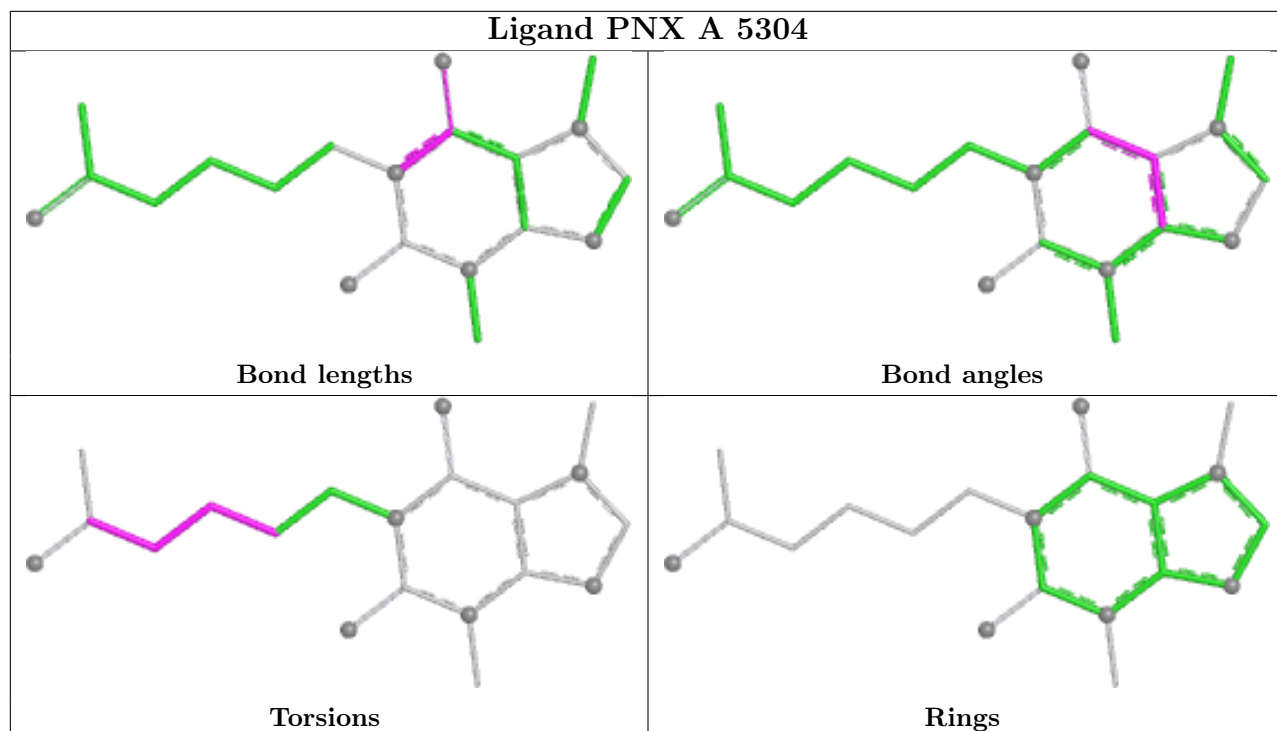
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 6 | C | 5304 | PNX | 1 | 0 |
| 6 | A | 5304 | PNX | 2 | 0 |
| 6 | D | 5304 | PNX | 1 | 0 |
| 6 | B | 5304 | PNX | 2 | 0 |

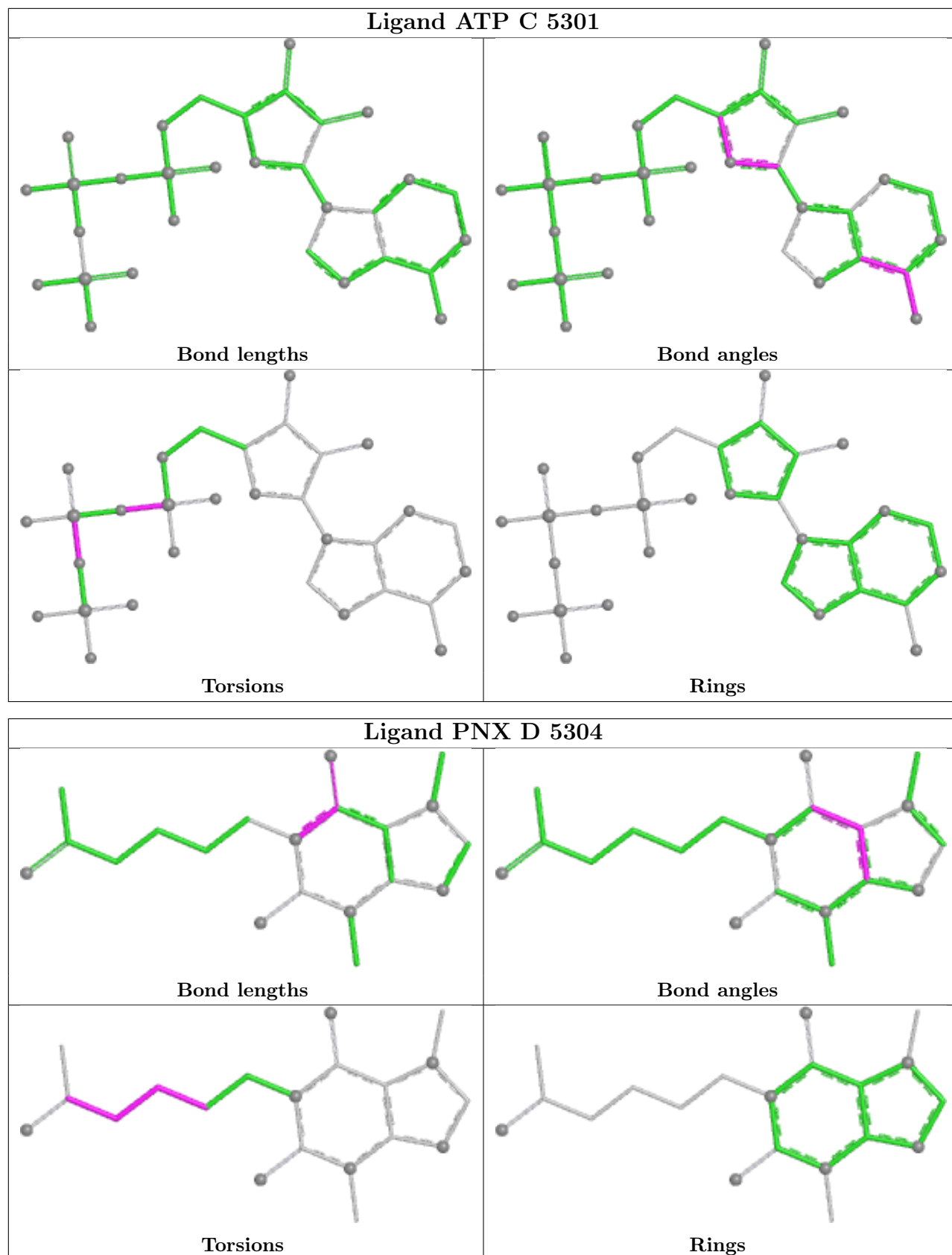
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will

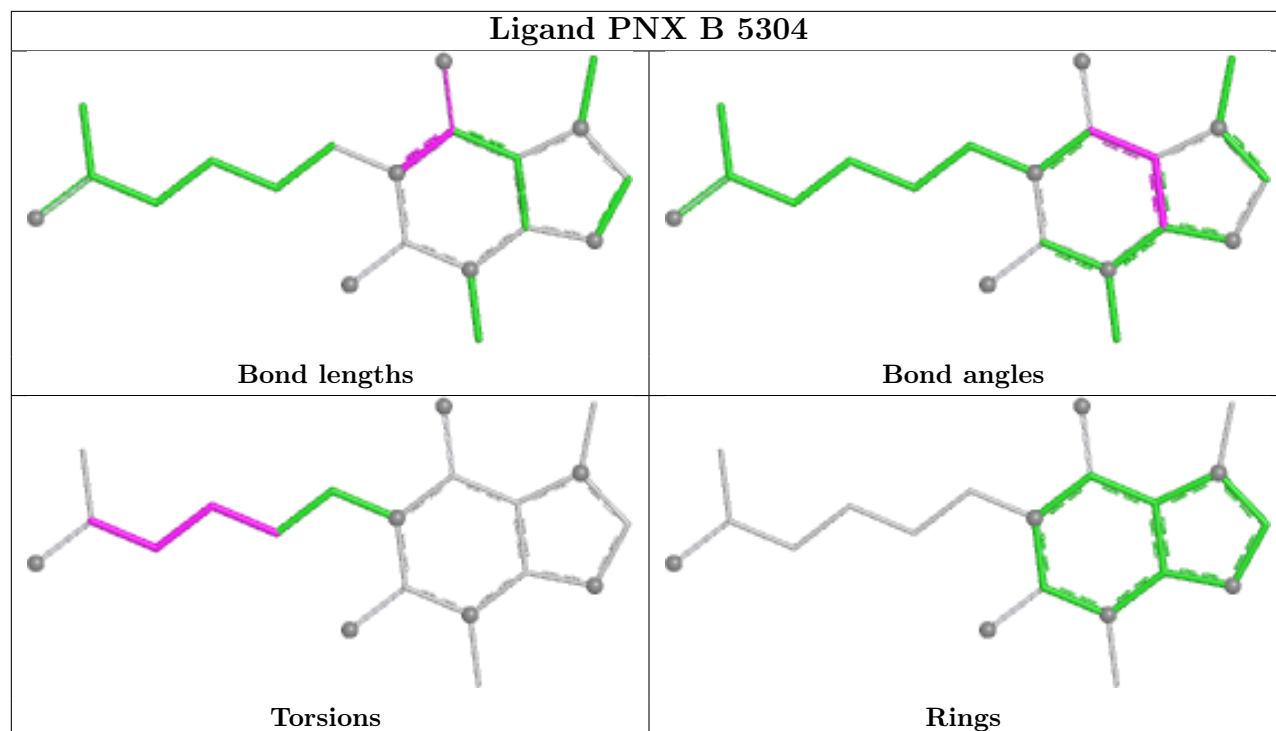
also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted 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.











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.

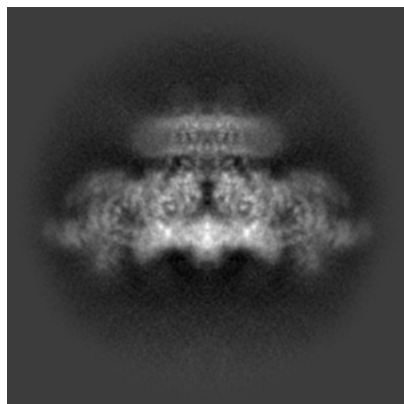
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47386. These allow visual inspection of the internal detail of the map and identification of artifacts.

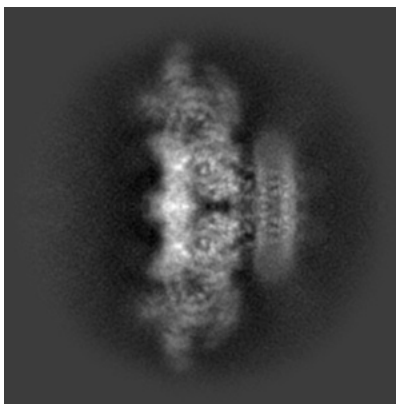
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

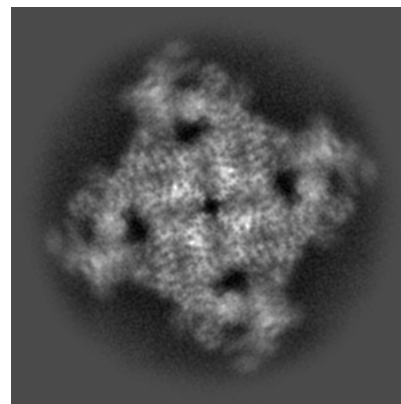
6.1.1 Primary map



X

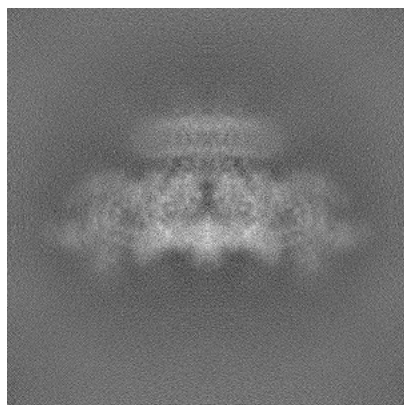


Y

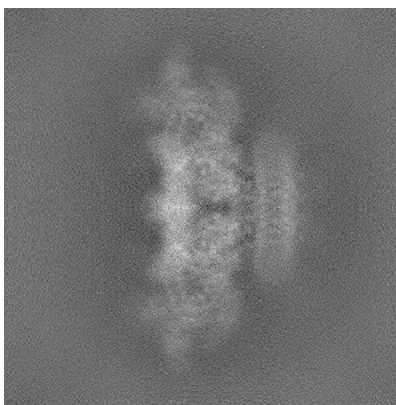


Z

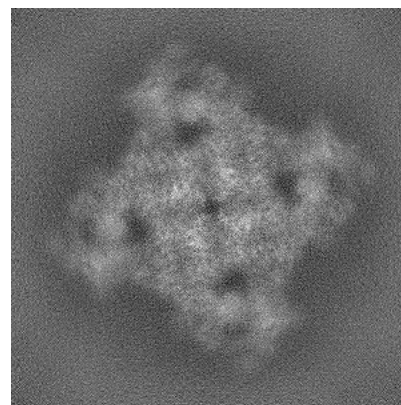
6.1.2 Raw map



X



Y

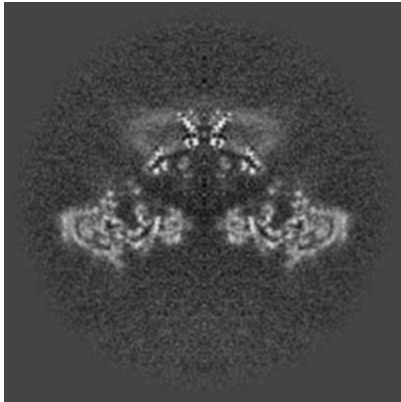


Z

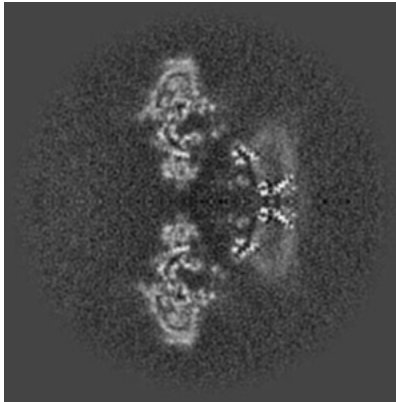
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

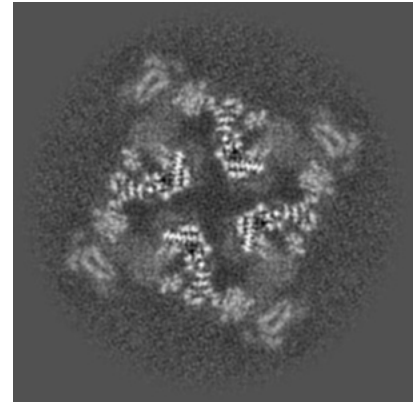
6.2.1 Primary map



X Index: 256

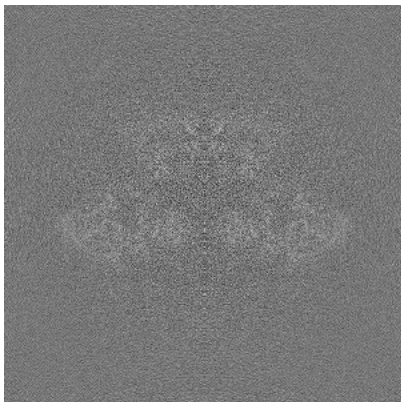


Y Index: 256

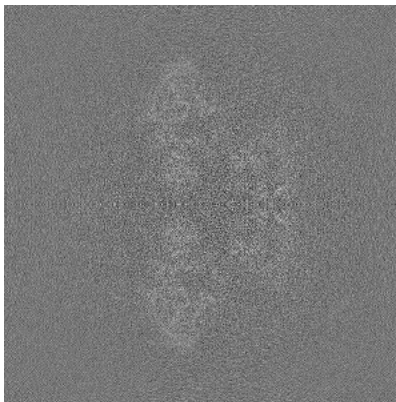


Z Index: 256

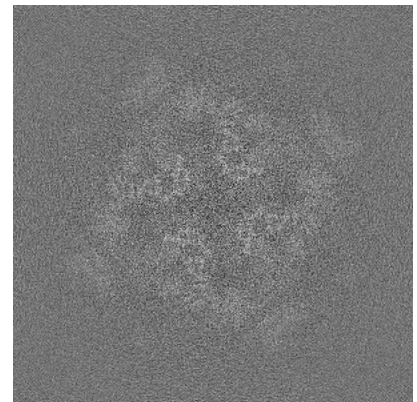
6.2.2 Raw map



X Index: 256



Y Index: 256

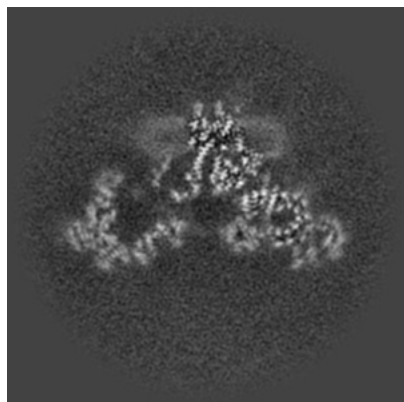


Z Index: 256

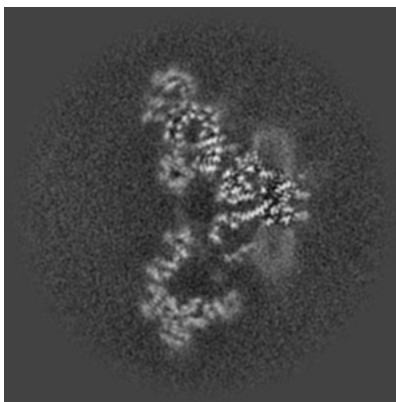
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

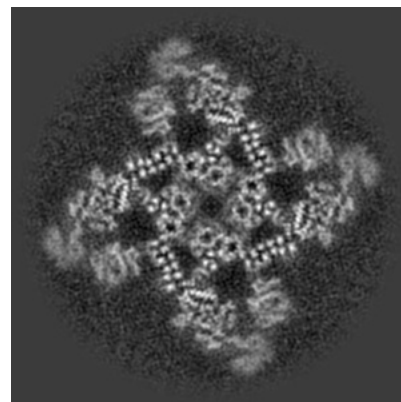
6.3.1 Primary map



X Index: 269

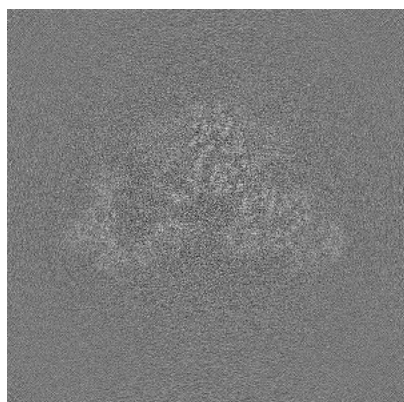


Y Index: 243

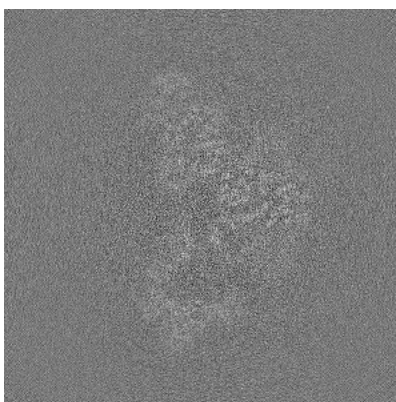


Z Index: 229

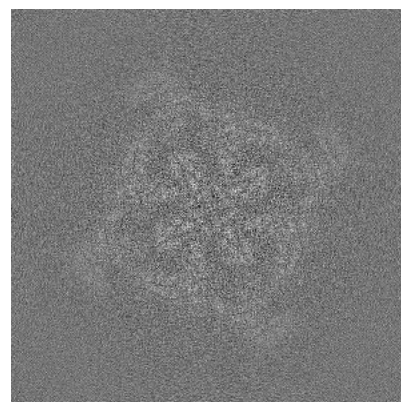
6.3.2 Raw map



X Index: 270



Y Index: 242

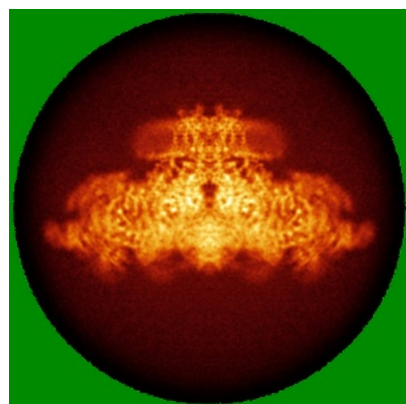


Z Index: 275

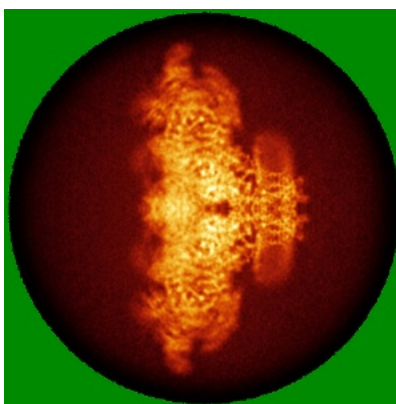
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

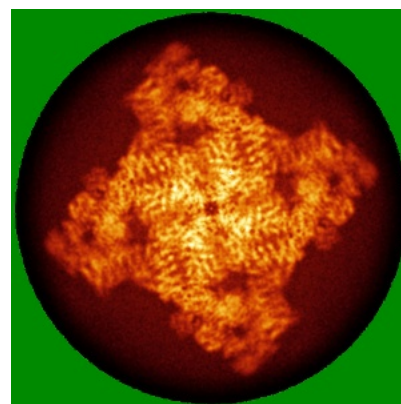
6.4.1 Primary map



X

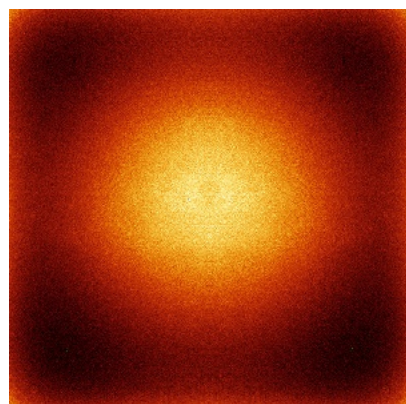


Y

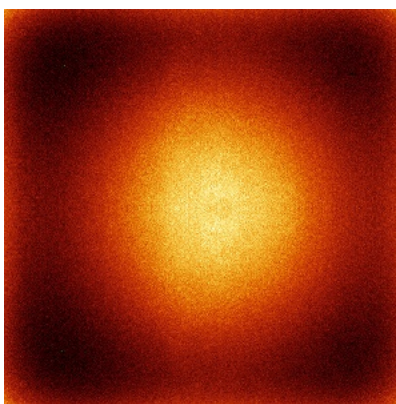


Z

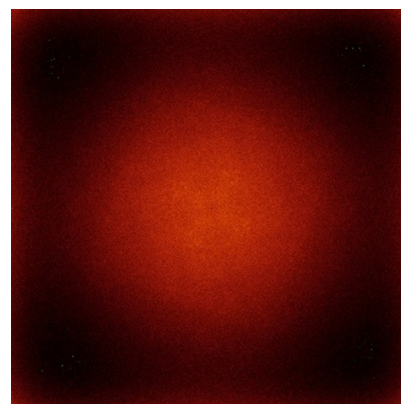
6.4.2 Raw map



X



Y

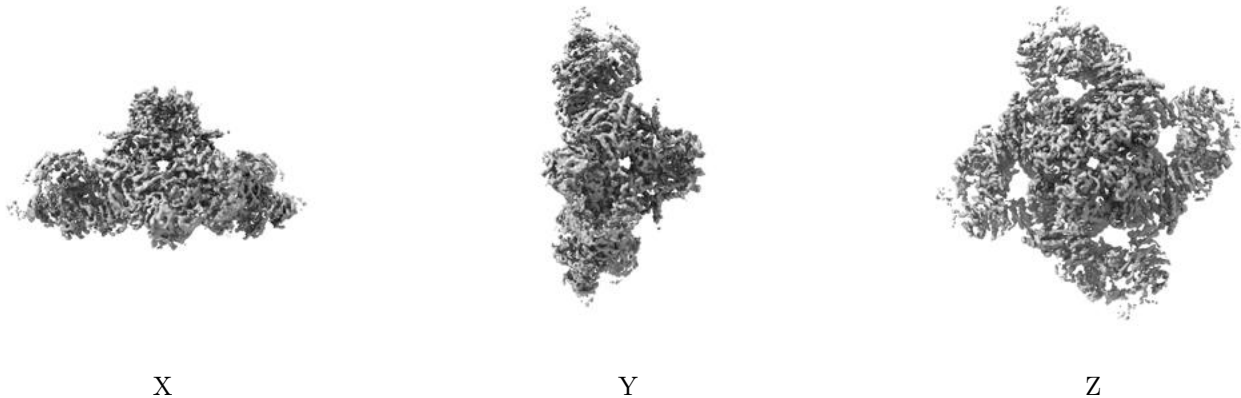


Z

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.

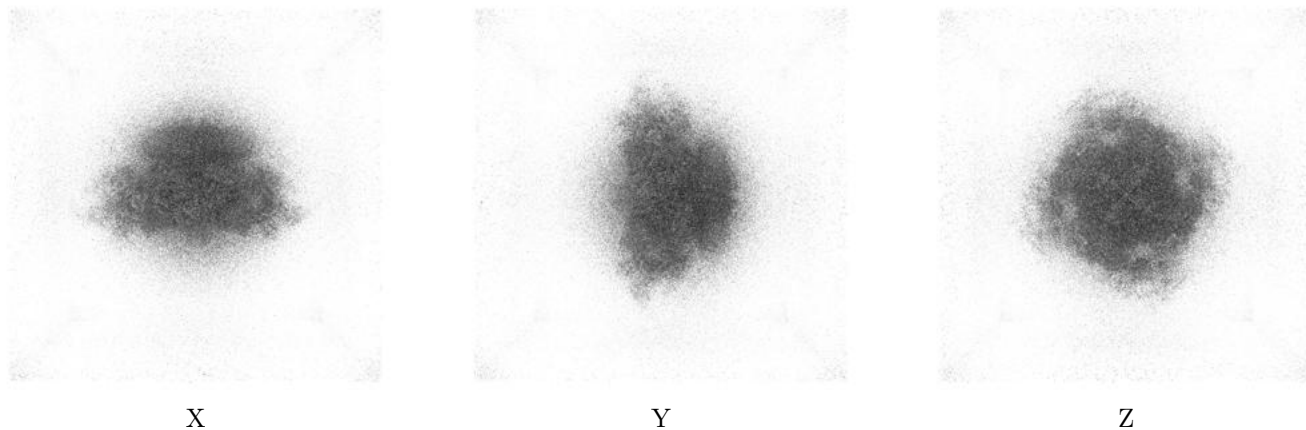
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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



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.

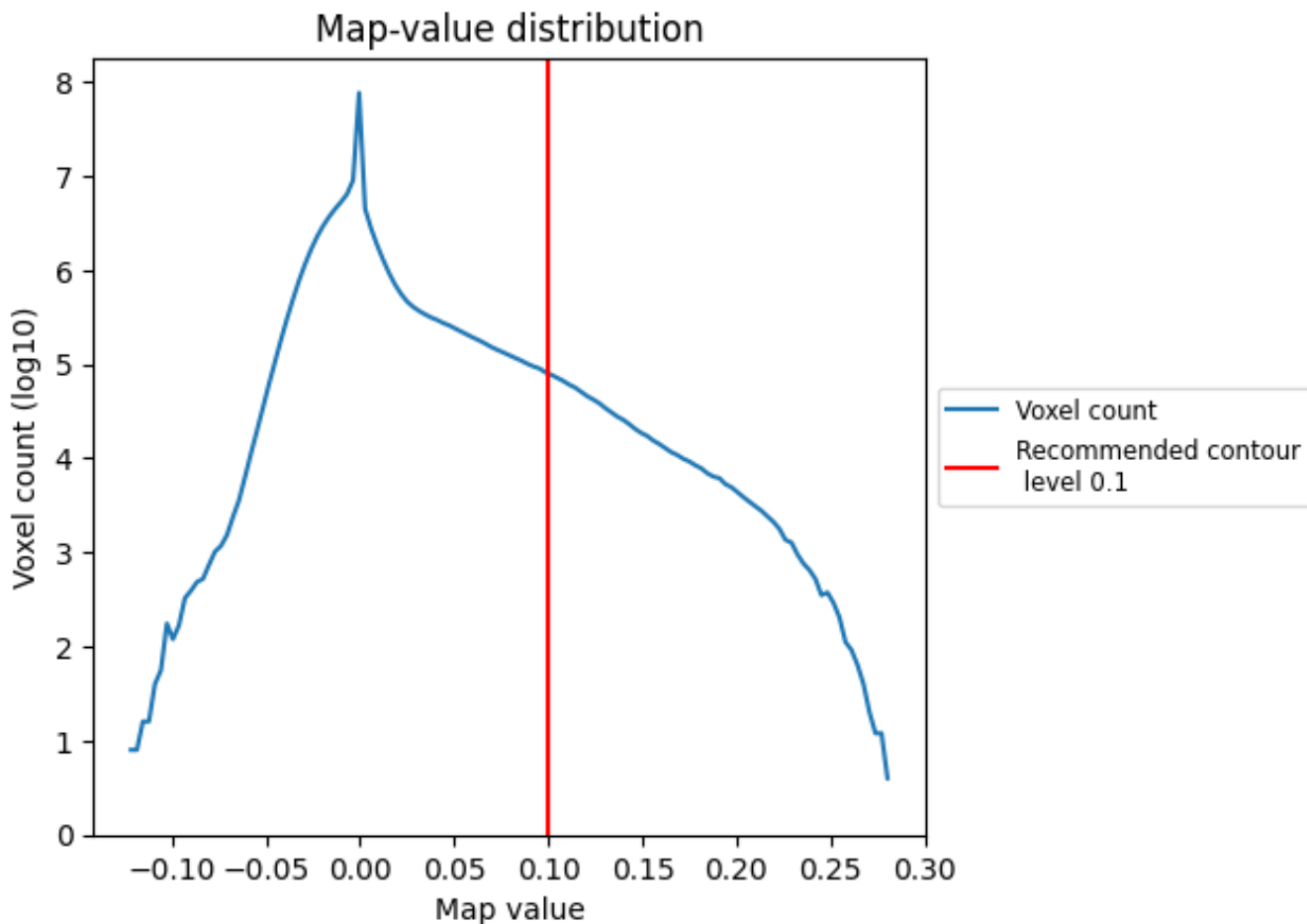
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

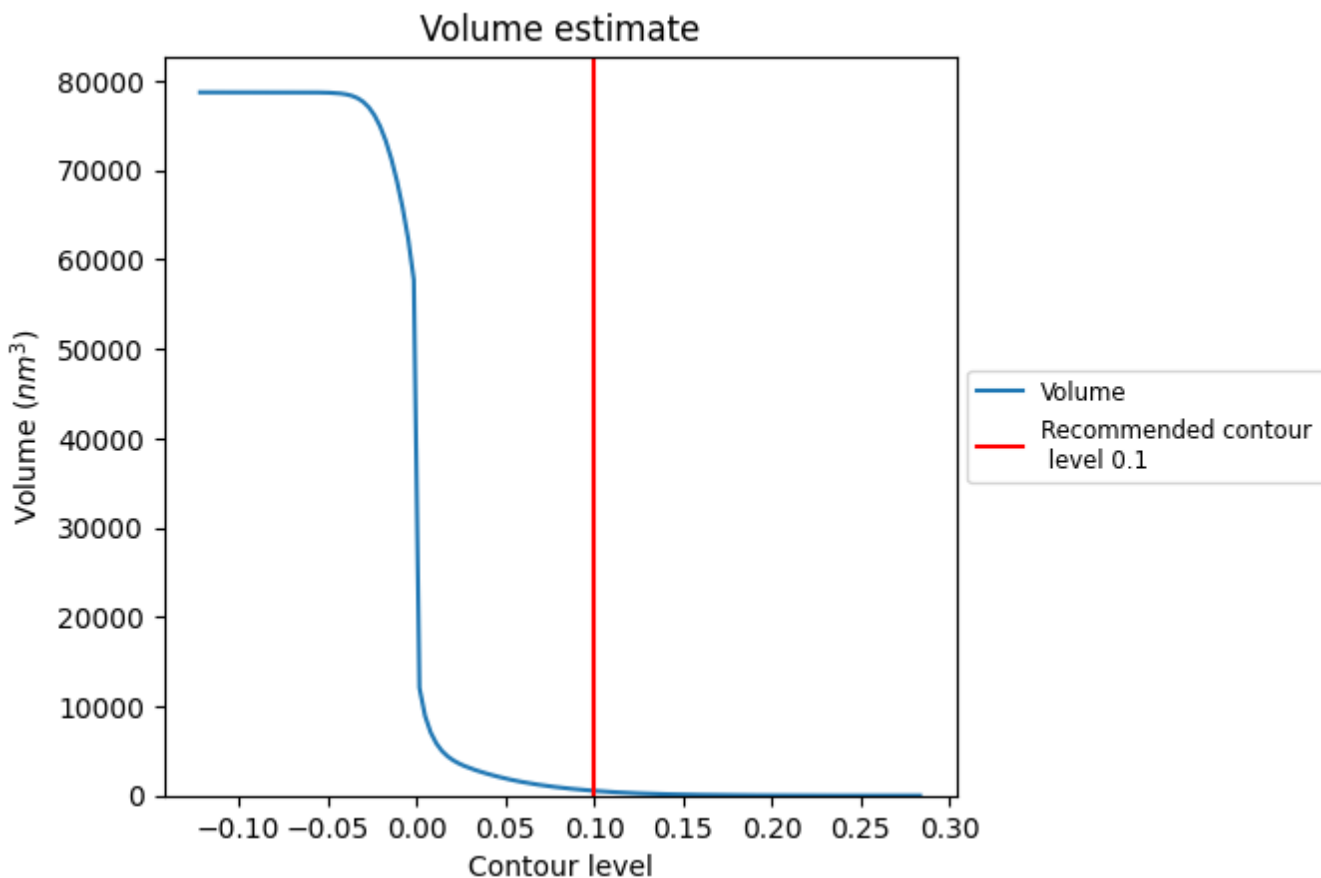
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

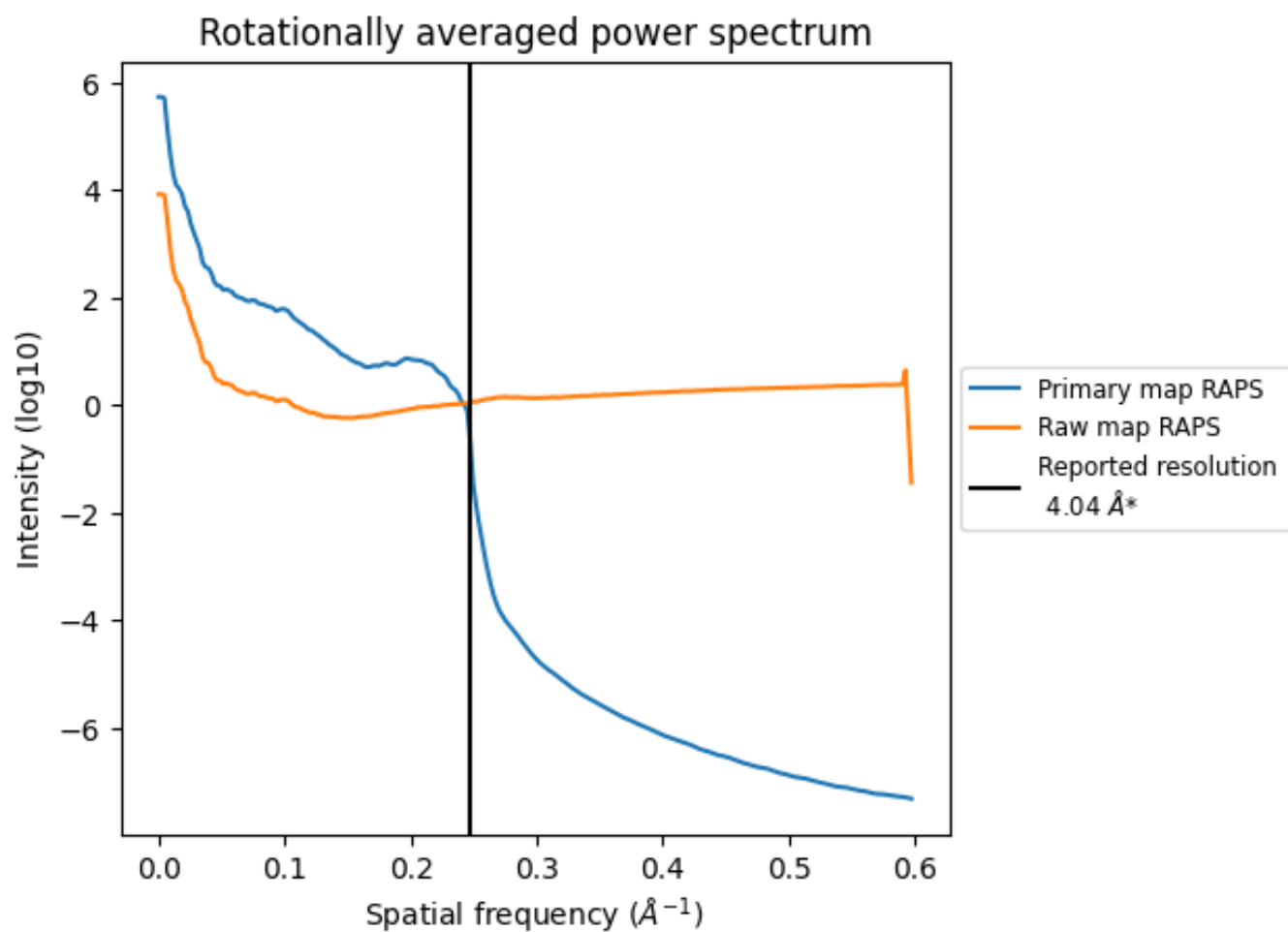
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 534 nm³; this corresponds to an approximate mass of 482 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 [\(i\)](#)

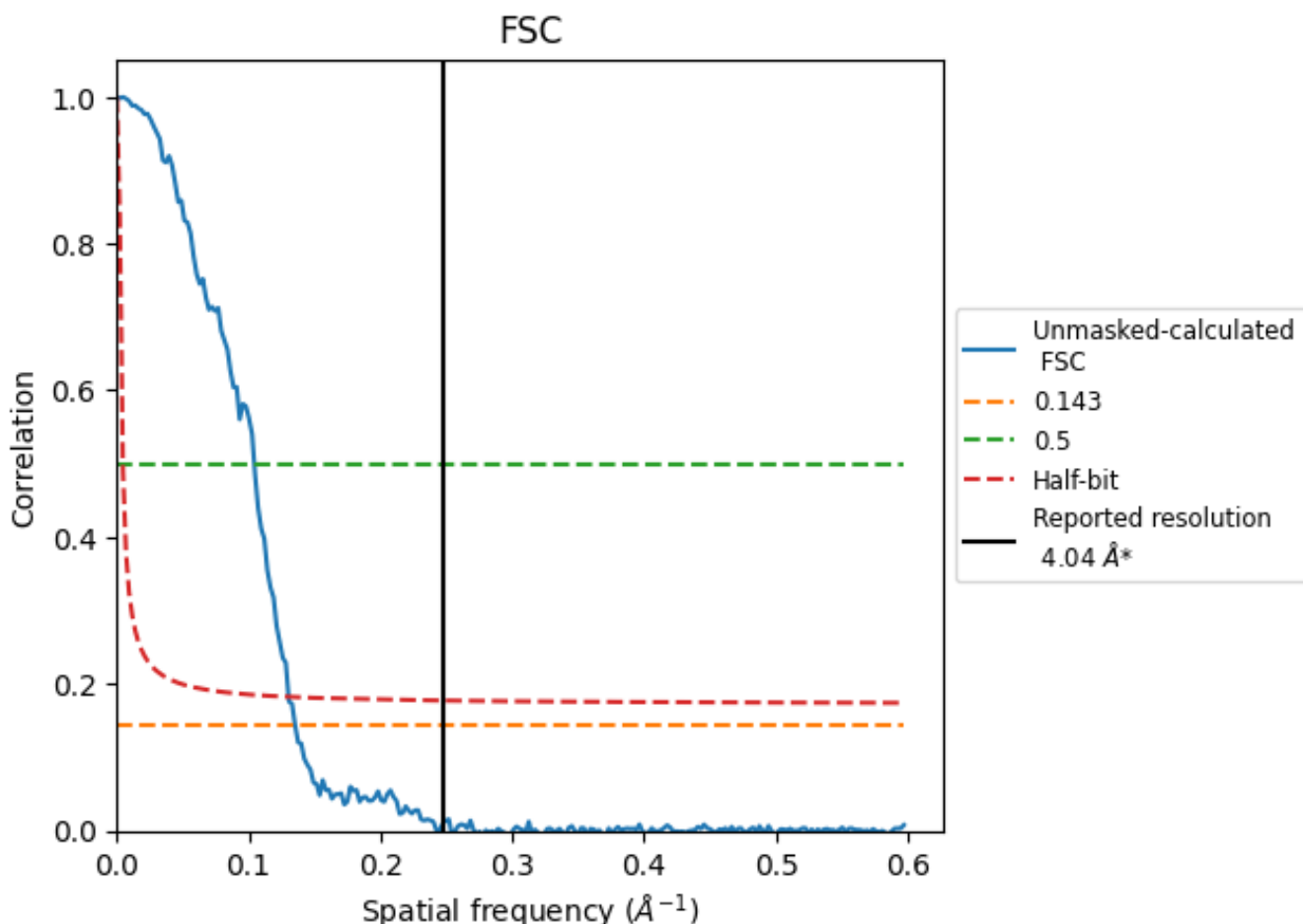


*Reported resolution corresponds to spatial frequency of 0.248 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.248 Å⁻¹

8.2 Resolution estimates [i](#)

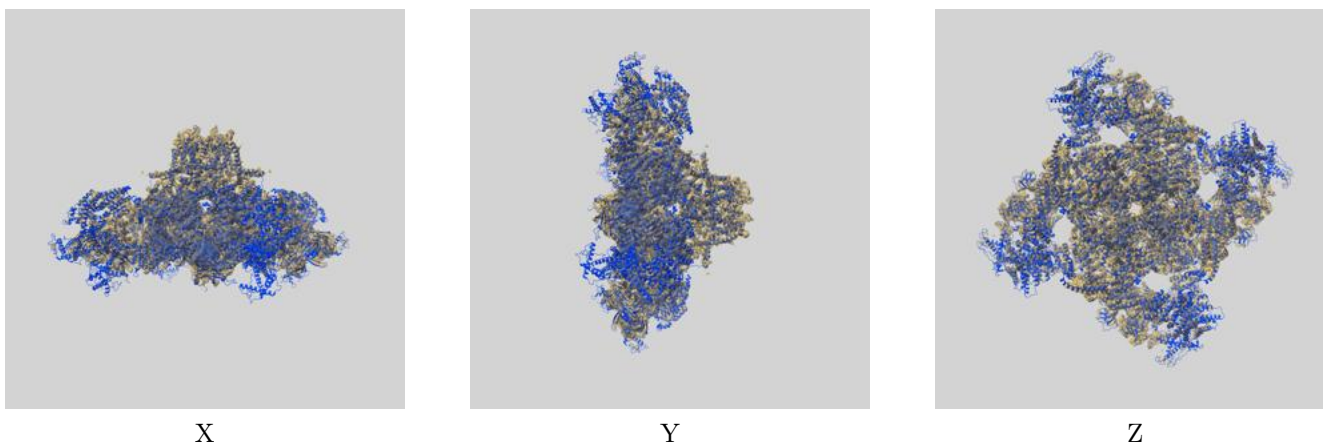
| Resolution estimate (Å) | Estimation criterion (FSC cut-off) | | |
|---------------------------|------------------------------------|------|----------|
| | 0.143 | 0.5 | Half-bit |
| Reported by author | 4.04 | - | - |
| Author-provided FSC curve | - | - | - |
| Unmasked-calculated* | 7.39 | 9.58 | 7.67 |

*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 7.39 differs from the reported value 4.04 by more than 10 %

9 Map-model fit [i](#)

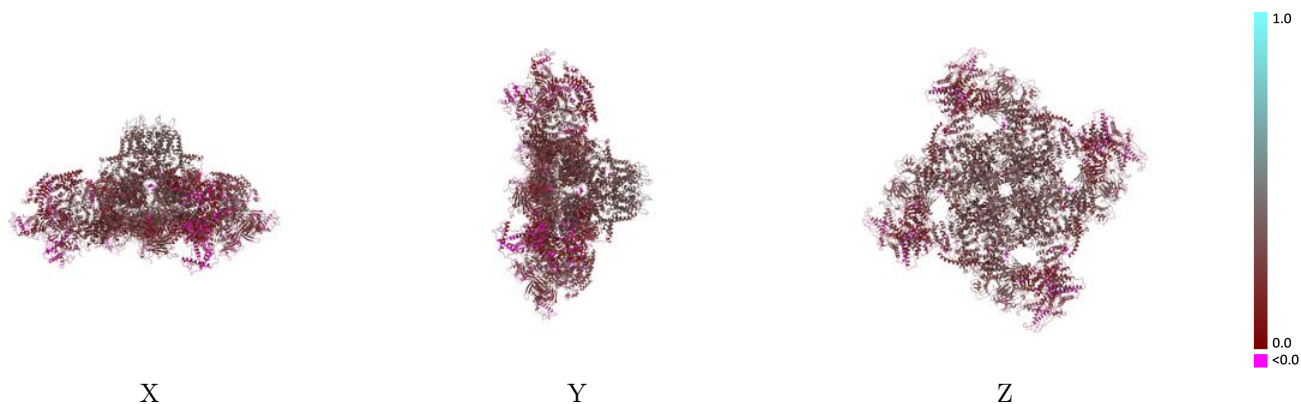
This section contains information regarding the fit between EMDB map EMD-47386 and PDB model 9E19. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



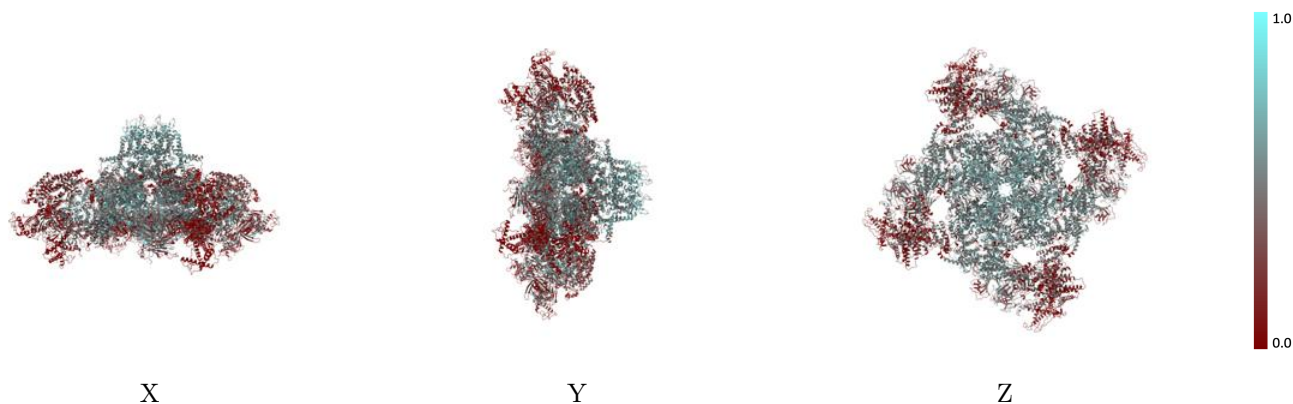
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [\(i\)](#)



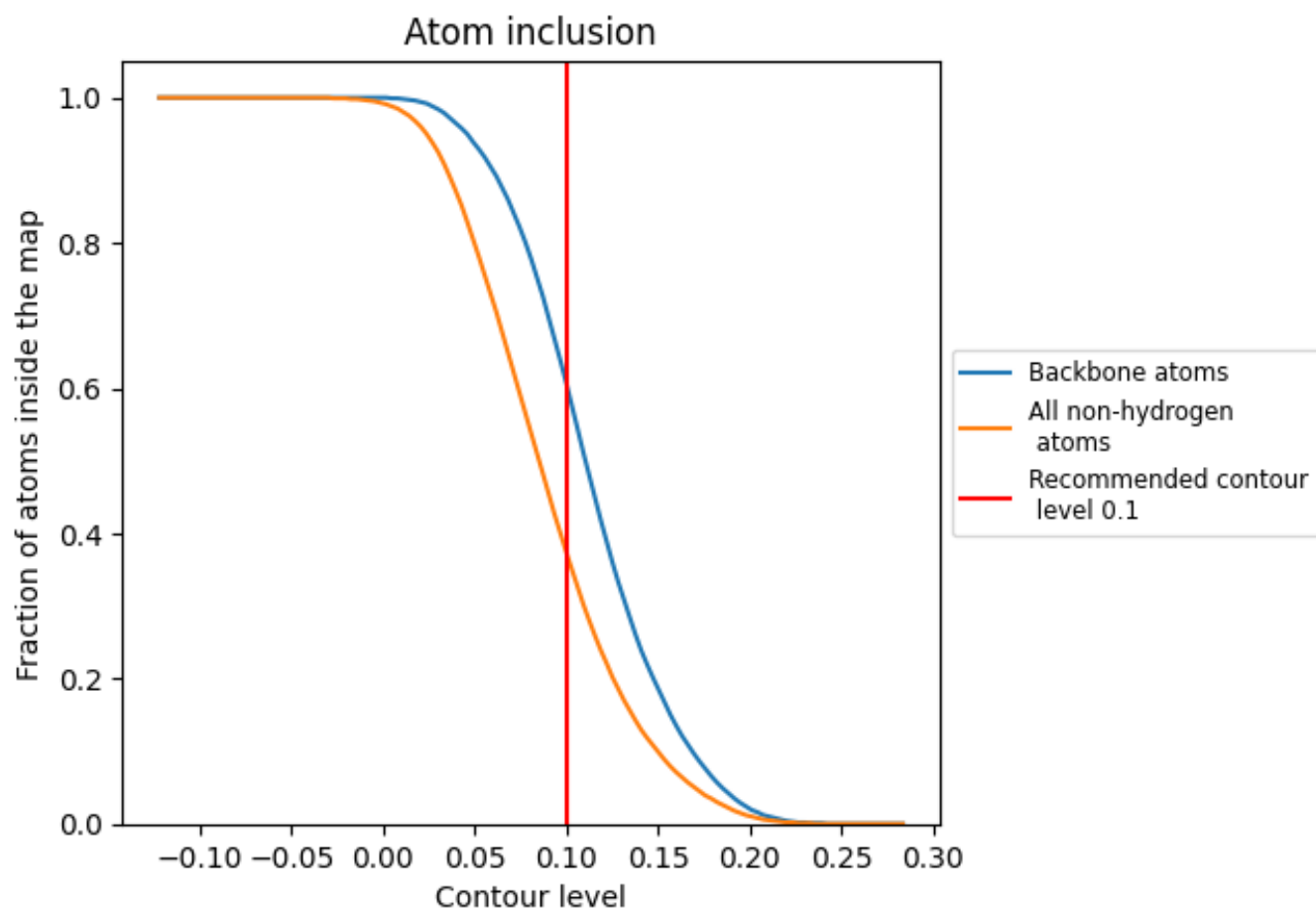
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 [\(i\)](#)



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, 61% of all backbone atoms, 37% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

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 |  0.3740 |  0.2250 |
| A |  0.3800 |  0.2270 |
| B |  0.3770 |  0.2240 |
| C |  0.3780 |  0.2240 |
| D |  0.3790 |  0.2250 |
| E |  0.1930 |  0.2270 |
| F |  0.1950 |  0.2210 |
| G |  0.1980 |  0.2260 |
| H |  0.1910 |  0.2270 |

