WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Jun 16, 2025 – 02:57 PM EDT

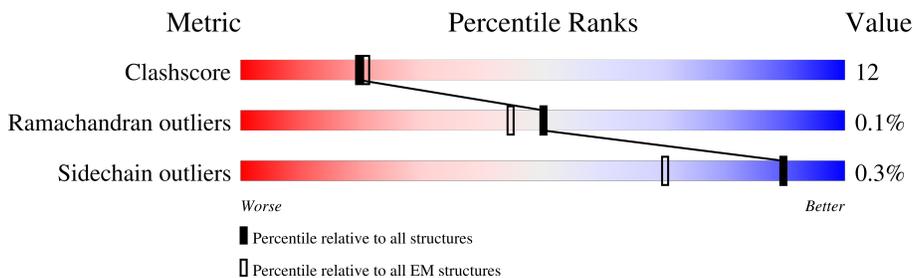|		
PDB ID	:	9E1C / pdb_00009e1c
EMDB ID	:	EMD-47389
Title	:	Structure of RyR1 in the primed state in the presence of IBMX
Authors	:	Miotto, M.C.; Marks, A.R.
Deposited on	:	2024-10-21
Resolution	:	2.63 Å(reported)
Based on initial model	:	7TZC

1   Overall quality at a glance   ⓘ

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

The reported resolution of this entry is 2.63 Å.

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

Metric	Percentile Ranks	Value
Clashscore		12
Ramachandran outliers		0.1%
Sidechain outliers		0.3%

Worse   *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures

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

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

Mol	Chain	Length	Quality of chain
1	A	5037	23% — 66% / 21% / 13%
1	B	5037	23% — 66% / 21% / 13%
1	C	5037	23% — 66% / 21% / 13%
1	D	5037	23% — 66% / 21% / 13%
2	E	108	12% — 71% / 27% / ••
2	F	108	11% — 71% / 27% / ••
2	G	108	10% — 69% / 29% / ••
2	H	108	12% — 69% / 29% / ••

2   Entry composition ⓘ

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

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

- Molecule 1 is a protein called Ryanodine receptor 1.

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

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

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

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

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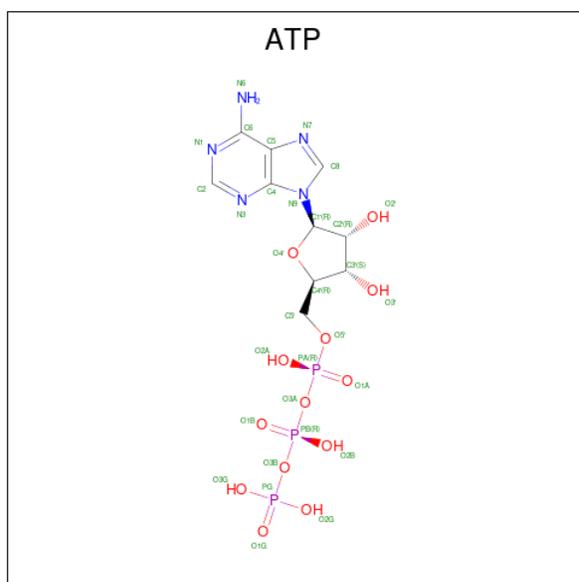
Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	C	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 4 is CALCIUM ION (CCD ID: CA) (formula: Ca).

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

- Molecule 5 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

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

- Molecule 6 is 3-ISOBUTYL-1-METHYLXANTHINE (CCD ID: IBM) (formula: $C_{10}H_{14}N_4O_2$) (labeled as "Ligand of Interest" by depositor).
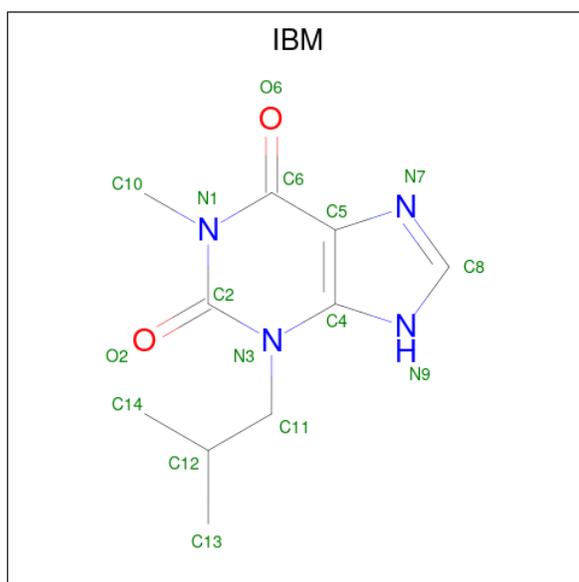
Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			16	10	4	2	
6	B	1	Total	C	N	O	0
			16	10	4	2	
6	D	1	Total	C	N	O	0
			16	10	4	2	
6	C	1	Total	C	N	O	0
			16	10	4	2	

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

I2562 L2568 F2569 A2570 E2573 H2574 R2575 A2576 I2577 M2578 S2581 M2582 L2583 H2584 T2585 V2586 Y2587 R2588 R2591 G2592 R2593 S2594 L2595 R2600 E2604 M2608 A2609 L2610 I2614 R2615 M2618 L2623 R2624 R2625 L2626 V2627 F2628 D2629 V2630 P2631 I2632 L2633 N2634 E2635 F2636 A2637 K2638 M2639 P2640 L2641
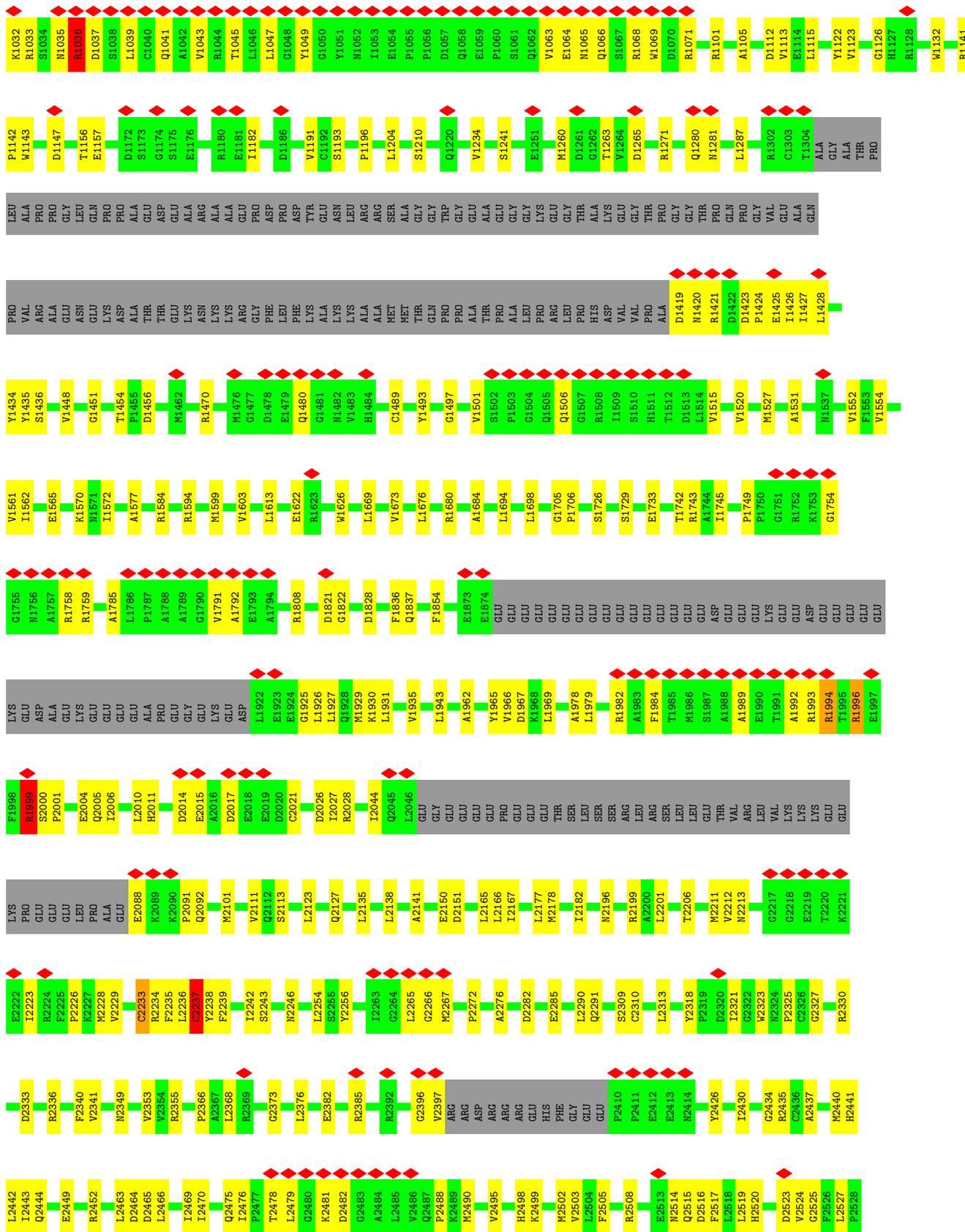
K2642 L2643 L2644 T2645 N2646 H2647 Y2648 E2649 R2650 C2651 Y2655 C2656 L2657 P2658 T2659 G2660 V2666 T2667 S2668 E2669 H2673 L2674 T2675 R2676 K2677 L2678 I2682 F2683 D2684 S2685 L2686 A2687 H2688 K2689 K2690 Y2691 D2692 Q2693 E2694 L2695 Y2696 R2697 M2698 A2699 M2700 P2701 C2702 L2703 C2704 A2705 I2706 A2707 G2708 A2709 L2710 P2711

P2712 D2713 Y2714 V2715 D2716 A2717 S2718 Y2719 S2720 S2721 K2722 A2723 E2724 K2725 LYS ALA THR VAL ASP ALA GLU GLY N2734 F2735 D2736 P2737 R2738 P2739 E2740 E2741 T2742 L2743 N2744 V2745 I2746 I2747 P2748 E2749 K2750 L2751 D2752 S2753 F2754 I2755 N2756 K2757 P2758 A2759 E2760 Y2761 T2762 H2763 E2764 K2765 W2766 A2767 F2768 D2769 K2770 I2771

Q2772 N2773 N2774 W2775 S2776 Y2777 G2778 E2779 N2780 V2781 D2782 E2783 E2784 L2785 K2786 T2787 H2788 P2789 M2790 L2791 R2792 P2793 Y2794 K2795 T2796 F2797 S2798 E2799 K2800 D2801 K2802 E2803 I2804 Y2805 R2806 W2807 P2808 I2809 K2810 E2811 S2812 L2813 K2814 A2815 M2816 I2817 A2818 W2819 E2820 W2821 T2822 I2823 E2824 K2825 A2826 R2827 E2828 G2829 E2830 GLU

GLU ARG THR GLU LYS LYS THR ARG LYS ILE SER GLN THR ALA GLN THR TYR ASP PRO ARG GLU GLY Y2855 N2856 P2857 Q2858 P2859 P2860 D2861 L2862 S2863 G2864 V2865 T2866 L2867 S2868 R2869 E2870 L2871 Q2872 A2873 M2874 A2875 E2876 Q2877 L2878 A2879 E2880 N2881 Y2882 H2883 N2884 T2885 W2886 G2887 R2888 K2889 K2890 K2891

Q2892 E2893 L2894 E2895 A2896 K2897 G2898 G2899 G2900 T2901 H2902 P2903 L2904 L2905 V2906 P2907 Y2908 D2909 T2910 L2911 T2912 A2913 K2914 E2915 K2916 A2917 R2918 D2919 R2920 E2921 K2922 A2923 Q2924 E2925 L2926 L2927 K2928 F2929 L2930 Q2931 M2932 N2933 G2934 Y2935 A2936 V2937 T2938 R2939 GLY LEU LYS ASP MET GLU L2946 D2947 T2948 S2949 S2950 I2951

E2952 K2953 R2954 F2955 A2956 F2957 G2958 F2959 L2960 L2963 L2964 R2965 W2966 M2967 D2968 I2969 S2970 Q2971 E2972 F2973 I2974 A2975 H2976 L2977 E2978 A2979 V2980 V2981 S2982 S2983 G2984 R2985 V2986 E2987 K2988 S2989 P2990 H2991 E2992 Q2993 E2994 I2995 K2996 F2997 A2998 A2999 K3000 I3001 L3002 L3003 P3004 L3005 I3006 N3007 Q3008 Y3009 F3010 T3011 N3012

H3013 C3014 L3015 V3016 F3017 L3018 S3019 T3020 P3021 A3022 K3023 V3024 L3025 G3026 S3027 G3028 G3029 H3030 A3031 S3032 N3033 K3034 E3035 K3036 M3038 I3039 L3042 F3043 C3044 K3045 L3046 A3047 A3048 L3049 H3052 R3053 V3054 S3055 L3056 F3057 G3058 T3059 D3060 A3061 P3062 A3063 V3064 V3065 N3066 C3067 L3068 H3069 I3070 L3071 A3072 R3073 S3074

L3075 D3076 A3077 R3078 T3079 V3080 M3081 K3082 S3083 G3084 P3085 E3086 I3087 V3088 K3089 A3090 G3091 L3092 R3093 S3094 F3095 F3096 E3097 S3098 A3099 S3100 E3101 D3102 I3103 E3104 K3105 M3106 V3107 E3108 N3109 L3110 R3111 L3112 G3113 K3114 V3115 S3116 GLN ALA ARG THR GLN VAL K3123 G3124 V3125 G3126 Q3127 N3128 L3129 T3130 Y3131 T3132 T3133 V3134

A3135 L3136 L3137 P3138 V3139 L3140 L3143 F3144 Q3145 Q3149 H3150 Q3151 F3152 G3153 D3154 D3155 V3156 I3157 L3158 D3159 D3160 V3161 C3165 Y3166 R3167 T3168 L3169 C3170 S3171 I3172 Y3173 S3174 L3175 G3176 T3177 T3178 K3179 N3180 T3181 Y3182 V3183 E3184 K3185 L3186 R3187 P3188 A3189 L3190 G3191 E3192 C3193 L3194 A3195 R3196 L3197 A3198 A3199

A3200 M3201 P3202 V3203 A3204 F3205 L3206 E3207 P3208 Q3209 L3210 N3211 E3212 Y3213 N3214 A3215 C3216 S3217 V3218 Y3219 T3220 T3221 K3222 S3223 P3224 R3225 E3226 R3227 A3228 I3229 L3230 G3231 L3232 P3233 N3234 S3235 V3236 E3237 E3238 M3239 C3240 P3241 D3242 I3243 P3244 V3245 L3246 D3247 R3248 L3249 M3250 A3251 D3252 I3253 A3257 E3258 S3259 G3260 A3261

R3262 Y3263 T3264 E3265 M3266 P3267 H3268 V3269 I3270 E3271 I3272 T3273 L3274 P3275 M3276 L3277 C3278 S3279 Y3280 L3281 P3282 R3283 W3284 W3285 E3286 R3287 G3288 P3289 E3290 A3291 P3292 P3293 P3294 A3295 L3296 P3297 A3298 G3299 A3300 P3301 P3302 P3303 C3304 T3305 A3306 V3307 T3308 S3309 D3310 H3311 L3312 L3313 L3316 G3317 N3318 I3319 L3320 R3321 I3322

I3323 V3324 N3325 N3326 L3327 G3328 I3329 D3330 D3330 E3331 A3332 T3333 W3334 M3335 K3336 R3337 L3338 A3339 V3340 F3341 A3342 Q3343 P3344 I3345 V3346 S3347 R3348 A3349 A3350 L3353 L3354 H3357 F3358 I3359 P3360 T3361 I3362 G3363 R3364 L3365 R3366 K3367 R3368 A3369 G3370 K3371 V3372 V3373 A3374 E3375 E3376 E3377 Q3378 L3379 R3380 L3381 E3382 A3383 K3384

• Molecule 1: Ryanodine receptor 1

Chain B:

23%

66% 21% 13%

● Molecule 1: Ryanodine receptor 1

Chain D:

• Molecule 1: Ryanodine receptor 1

Chain C:

23%

66% 21% 13%

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

Chain E:

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

Chain H:

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

Chain G:

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

Chain F:

4 Experimental information ⓘ

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.21	1/35977 (0.0%)	0.46	26/48726 (0.1%)
1	B	0.21	1/35977 (0.0%)	0.46	28/48726 (0.1%)
1	C	0.21	1/35977 (0.0%)	0.46	26/48726 (0.1%)
1	D	0.21	1/35977 (0.0%)	0.46	24/48726 (0.0%)
2	E	0.37	0/850	0.70	2/1146 (0.2%)
2	F	0.37	0/850	0.70	2/1146 (0.2%)
2	G	0.37	0/850	0.70	2/1146 (0.2%)
2	H	0.37	0/850	0.70	2/1146 (0.2%)
All	All	0.22	4/147308 (0.0%)	0.47	112/199488 (0.1%)

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

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

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	1999	ARG	CB-CG	5.45	1.68	1.52
1	A	1999	ARG	CB-CG	5.42	1.68	1.52
1	C	1999	ARG	CB-CG	5.42	1.68	1.52
1	B	1999	ARG	CB-CG	5.40	1.68	1.52

All (112) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	998	ARG	CG-CD-NE	12.45	139.38	112.00
1	A	998	ARG	CG-CD-NE	12.44	139.36	112.00
1	B	998	ARG	CG-CD-NE	12.43	139.35	112.00
1	C	998	ARG	CG-CD-NE	12.42	139.32	112.00
1	B	998	ARG	CB-CG-CD	11.95	138.77	111.30
1	A	998	ARG	CB-CG-CD	11.94	138.76	111.30
1	C	998	ARG	CB-CG-CD	11.94	138.76	111.30
1	D	998	ARG	CB-CG-CD	11.92	138.71	111.30
2	H	52	LYS	CD-CE-NZ	10.43	145.27	111.90
2	G	52	LYS	CD-CE-NZ	10.41	145.21	111.90
2	F	52	LYS	CD-CE-NZ	10.40	145.19	111.90
2	E	52	LYS	CD-CE-NZ	10.40	145.18	111.90
2	H	49	MET	CB-CG-SD	9.16	140.18	112.70
2	G	49	MET	CB-CG-SD	9.15	140.15	112.70
2	E	49	MET	CB-CG-SD	9.14	140.13	112.70
2	F	49	MET	CB-CG-SD	9.14	140.12	112.70
1	D	2237	CYS	CA-CB-SG	8.86	134.78	114.40
1	A	2237	CYS	CA-CB-SG	8.84	134.72	114.40
1	B	2237	CYS	CA-CB-SG	8.84	134.72	114.40
1	C	2237	CYS	CA-CB-SG	8.83	134.71	114.40
1	D	3111	ARG	CB-CG-CD	8.62	131.13	111.30
1	C	3111	ARG	CB-CG-CD	8.62	131.13	111.30
1	A	3111	ARG	CB-CG-CD	8.62	131.12	111.30
1	B	3111	ARG	CB-CG-CD	8.60	131.07	111.30
1	A	3111	ARG	CG-CD-NE	-8.43	93.46	112.00
1	B	3111	ARG	CG-CD-NE	-8.43	93.46	112.00
1	C	3111	ARG	CG-CD-NE	-8.43	93.46	112.00
1	D	3111	ARG	CG-CD-NE	-8.42	93.48	112.00
1	D	3250	MET	CB-CG-SD	8.12	137.06	112.70
1	A	3250	MET	CB-CG-SD	8.12	137.05	112.70
1	B	3250	MET	CB-CG-SD	8.10	137.01	112.70
1	C	3250	MET	CB-CG-SD	8.09	136.98	112.70
1	C	998	ARG	N-CA-C	-7.70	102.97	111.36
1	A	998	ARG	N-CA-C	-7.67	103.00	111.36
1	B	998	ARG	N-CA-C	-7.65	103.02	111.36
1	D	998	ARG	N-CA-C	-7.65	103.03	111.36
1	A	924	MET	CB-CG-SD	7.44	135.03	112.70
1	C	924	MET	CB-CG-SD	7.44	135.03	112.70
1	B	924	MET	CB-CG-SD	7.44	135.02	112.70
1	D	924	MET	CB-CG-SD	7.44	135.02	112.70
1	B	941	MET	CB-CG-SD	7.20	134.31	112.70
1	A	941	MET	CB-CG-SD	7.19	134.27	112.70
1	D	941	MET	CB-CG-SD	7.19	134.27	112.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	941	MET	CB-CG-SD	7.18	134.24	112.70
1	B	3756	LYS	CB-CG-CD	7.03	127.47	111.30
1	C	3756	LYS	CB-CG-CD	7.02	127.45	111.30
1	A	3756	LYS	CB-CG-CD	7.01	127.44	111.30
1	D	3756	LYS	CB-CG-CD	7.01	127.41	111.30
1	D	4952	GLU	CA-CB-CG	6.66	127.43	114.10
1	A	4952	GLU	CA-CB-CG	6.66	127.42	114.10
1	B	4952	GLU	CA-CB-CG	6.66	127.42	114.10
1	C	4952	GLU	CA-CB-CG	6.66	127.42	114.10
1	A	4952	GLU	CB-CG-CD	6.50	123.64	112.60
1	B	4952	GLU	CB-CG-CD	6.49	123.63	112.60
1	C	4952	GLU	CB-CG-CD	6.48	123.61	112.60
1	D	4952	GLU	CB-CG-CD	6.47	123.60	112.60
1	D	1994	ARG	CG-CD-NE	6.40	126.08	112.00
1	B	1994	ARG	CG-CD-NE	6.39	126.05	112.00
1	A	1994	ARG	CG-CD-NE	6.38	126.04	112.00
1	C	1994	ARG	CG-CD-NE	6.37	126.01	112.00
1	B	3111	ARG	CA-CB-CG	-6.30	101.50	114.10
1	A	3111	ARG	CA-CB-CG	-6.29	101.52	114.10
1	D	3111	ARG	CA-CB-CG	-6.28	101.53	114.10
1	C	3111	ARG	CA-CB-CG	-6.26	101.57	114.10
1	B	2233	CYS	N-CA-CB	6.17	120.93	110.49
1	C	2233	CYS	N-CA-CB	6.17	120.91	110.49
1	A	2233	CYS	N-CA-CB	6.17	120.91	110.49
1	D	2233	CYS	N-CA-CB	6.15	120.89	110.49
1	D	3467	MET	N-CA-C	-5.99	105.06	112.90
1	C	3467	MET	N-CA-C	-5.99	105.06	112.90
1	A	3467	MET	N-CA-C	-5.97	105.08	112.90
1	B	3467	MET	N-CA-C	-5.97	105.08	112.90
1	B	1036	ARG	CD-NE-CZ	-5.89	116.16	124.40
1	D	1036	ARG	CD-NE-CZ	-5.88	116.17	124.40
1	A	1036	ARG	CD-NE-CZ	-5.85	116.21	124.40
1	C	1036	ARG	CD-NE-CZ	-5.85	116.21	124.40
1	B	1999	ARG	CD-NE-CZ	-5.80	116.27	124.40
1	D	1999	ARG	CD-NE-CZ	-5.77	116.32	124.40
1	A	1999	ARG	CD-NE-CZ	-5.77	116.32	124.40
1	C	1999	ARG	CD-NE-CZ	-5.74	116.37	124.40
1	C	2237	CYS	N-CA-C	-5.68	106.22	114.12
1	A	2237	CYS	N-CA-C	-5.67	106.24	114.12
1	B	2237	CYS	N-CA-C	-5.67	106.25	114.12
1	D	2237	CYS	N-CA-C	-5.63	106.30	114.12
1	C	3756	LYS	CD-CE-NZ	-5.62	93.91	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	3756	LYS	CD-CE-NZ	-5.62	93.93	111.90
1	D	3756	LYS	CD-CE-NZ	-5.61	93.94	111.90
1	B	3756	LYS	CD-CE-NZ	-5.61	93.97	111.90
1	C	2237	CYS	CB-CA-C	5.59	118.77	109.38
1	D	2237	CYS	CB-CA-C	5.57	118.74	109.38
1	A	2237	CYS	CB-CA-C	5.57	118.73	109.38
1	B	2237	CYS	CB-CA-C	5.55	118.70	109.38
1	D	1994	ARG	N-CA-CB	5.52	118.33	110.16
1	A	1994	ARG	N-CA-CB	5.51	118.32	110.16
1	C	1994	ARG	N-CA-CB	5.50	118.30	110.16
1	B	1994	ARG	N-CA-CB	5.49	118.28	110.16
1	D	3756	LYS	CG-CD-CE	5.17	123.18	111.30
1	B	3756	LYS	CG-CD-CE	5.17	123.18	111.30
1	A	3756	LYS	CG-CD-CE	5.16	123.16	111.30
1	C	3756	LYS	CG-CD-CE	5.16	123.17	111.30
1	D	2237	CYS	N-CA-CB	-5.12	103.81	110.88
1	C	2237	CYS	N-CA-CB	-5.12	103.81	110.88
1	A	2237	CYS	N-CA-CB	-5.11	103.83	110.88
1	B	2237	CYS	N-CA-CB	-5.11	103.83	110.88
1	B	1993	ARG	CA-C-N	-5.04	113.14	120.29
1	B	1993	ARG	C-N-CA	-5.04	113.14	120.29
1	C	1993	ARG	CA-C-N	-5.04	113.14	120.29
1	C	1993	ARG	C-N-CA	-5.04	113.14	120.29
1	A	1993	ARG	CA-C-N	-5.01	113.17	120.29
1	A	1993	ARG	C-N-CA	-5.01	113.17	120.29
1	B	4665	LYS	CA-C-N	5.01	123.39	120.24
1	B	4665	LYS	C-N-CA	5.01	123.39	120.24

There are no chirality outliers.

All (28) planarity outliers are listed below:

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

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

5.2 Too-close contacts ⓘ

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	876	0
1	B	35150	0	34793	884	0
1	C	35150	0	34793	871	0
1	D	35150	0	34793	870	0
2	E	831	0	831	19	0
2	F	831	0	831	22	0
2	G	831	0	831	21	0
2	H	831	0	831	20	0
3	A	31	0	12	1	0
3	B	31	0	12	1	0
3	C	31	0	12	1	0
3	D	31	0	12	1	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	16	0	14	2	0
6	B	16	0	14	2	0
6	C	16	0	14	2	0
6	D	16	0	14	2	0
All	All	144120	0	142600	3527	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 12.

All (3527) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1032:LYS:HB3	1:D:1036:ARG:HH12	1.14	1.13
1:A:935:LEU:HD13	1:A:987:ARG:HE	1.16	1.10
1:C:1032:LYS:HB3	1:C:1036:ARG:HH12	1.14	1.09
1:B:935:LEU:HD13	1:B:987:ARG:HE	1.16	1.08
1:A:1032:LYS:HB3	1:A:1036:ARG:HH12	1.14	1.08
1:B:1032:LYS:HB3	1:B:1036:ARG:HH12	1.14	1.08
1:D:935:LEU:HD13	1:D:987:ARG:HE	1.16	1.05
1:C:935:LEU:HD13	1:C:987:ARG:HE	1.16	1.05
1:A:2868:SER:OG	1:A:2870[B]:GLU:OE2	1.83	0.96
1:B:2868:SER:OG	1:B:2870[B]:GLU:OE2	1.83	0.96
1:C:2868:SER:OG	1:C:2870[B]:GLU:OE2	1.83	0.96
1:D:2868:SER:OG	1:D:2870[B]:GLU:OE2	1.83	0.94
1:D:1032:LYS:CB	1:D:1036:ARG:HH12	1.85	0.90
1:C:1032:LYS:CB	1:C:1036:ARG:HH12	1.85	0.90
1:B:1032:LYS:CB	1:B:1036:ARG:HH12	1.85	0.90
1:D:1032:LYS:HB3	1:D:1036:ARG:NH1	1.87	0.90
1:C:1032:LYS:HB3	1:C:1036:ARG:NH1	1.87	0.90
1:B:1032:LYS:HB3	1:B:1036:ARG:NH1	1.87	0.90
1:A:1032:LYS:CB	1:A:1036:ARG:HH12	1.85	0.90
1:B:935:LEU:HD13	1:B:987:ARG:NE	1.88	0.90
1:A:1032:LYS:HB3	1:A:1036:ARG:NH1	1.87	0.89
1:A:2452:ARG:NH1	1:B:144:GLU:OE1	2.05	0.89
1:D:2285:GLU:HG2	1:D:3858:MET:HE1	1.54	0.89
1:C:935:LEU:HD13	1:C:987:ARG:NE	1.88	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2285:GLU:HG2	1:A:3858:MET:HE1	1.54	0.89
1:B:2285:GLU:HG2	1:B:3858:MET:HE1	1.54	0.88
1:A:1561:VAL:HG12	1:A:1562:ILE:HG23	1.56	0.88
1:D:935:LEU:HD13	1:D:987:ARG:NE	1.88	0.88
1:C:2285:GLU:HG2	1:C:3858:MET:HE1	1.54	0.88
1:B:3817:LEU:HB2	1:B:3899:PHE:HE1	1.39	0.88
1:C:3817:LEU:HB2	1:C:3899:PHE:HE1	1.38	0.87
1:D:144:GLU:OE1	1:C:2452:ARG:NH1	2.06	0.87
1:A:935:LEU:HD13	1:A:987:ARG:NE	1.88	0.87
1:B:2452:ARG:NH1	1:C:144:GLU:OE1	2.07	0.86
1:D:1561:VAL:HG12	1:D:1562:ILE:HG23	1.56	0.86
1:C:1561:VAL:HG12	1:C:1562:ILE:HG23	1.56	0.86
1:A:3817:LEU:HB2	1:A:3899:PHE:HE1	1.38	0.85
1:A:3300:ALA:HB3	1:A:3301:PRO:HD3	1.57	0.85
1:B:1561:VAL:HG12	1:B:1562:ILE:HG23	1.56	0.85
1:D:3300:ALA:HB3	1:D:3301:PRO:HD3	1.57	0.85
1:C:3733:CYS:O	1:C:3766:GLN:NE2	2.09	0.85
1:B:4902:GLU:O	1:B:4913:ARG:NH1	2.10	0.85
1:C:4902:GLU:O	1:C:4913:ARG:NH1	2.10	0.85
1:B:3733:CYS:O	1:B:3766:GLN:NE2	2.09	0.85
1:D:4902:GLU:O	1:D:4913:ARG:NH1	2.10	0.85
1:A:3733:CYS:O	1:A:3766:GLN:NE2	2.09	0.84
1:B:3300:ALA:HB3	1:B:3301:PRO:HD3	1.57	0.84
1:D:3733:CYS:O	1:D:3766:GLN:NE2	2.09	0.84
1:A:4902:GLU:O	1:A:4913:ARG:NH1	2.10	0.84
1:C:3391:GLU:OE2	1:C:3450:ASN:ND2	2.11	0.84
1:D:3391:GLU:OE2	1:D:3450:ASN:ND2	2.11	0.84
1:D:3817:LEU:HB2	1:D:3899:PHE:HE1	1.38	0.84
1:C:3300:ALA:HB3	1:C:3301:PRO:HD3	1.57	0.84
1:A:3391:GLU:OE2	1:A:3450:ASN:ND2	2.11	0.84
1:C:667:MET:SD	1:C:790:ARG:NH2	2.51	0.84
1:B:884:LEU:HD22	1:B:955:LEU:HD11	1.60	0.83
1:B:667:MET:SD	1:B:790:ARG:NH2	2.51	0.83
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	1.97	0.83
1:B:3391:GLU:OE2	1:B:3450:ASN:ND2	2.11	0.83
1:A:667:MET:SD	1:A:790:ARG:NH2	2.51	0.82
1:B:2534:ALA:HB1	1:B:2588:ARG:HE	1.44	0.82
1:C:884:LEU:HD22	1:C:955:LEU:HD11	1.60	0.82
1:A:144:GLU:OE1	1:D:2452:ARG:NH1	2.13	0.82
1:A:884:LEU:HD22	1:A:955:LEU:HD11	1.60	0.82
1:D:667:MET:SD	1:D:790:ARG:NH2	2.51	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	1.97	0.82
1:D:884:LEU:HD22	1:D:955:LEU:HD11	1.60	0.82
1:A:2534:ALA:HB1	1:A:2588:ARG:HE	1.44	0.82
1:C:2534:ALA:HB1	1:C:2588:ARG:HE	1.44	0.82
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	1.97	0.81
1:D:110:ARG:NH1	1:D:117:TYR:OH	2.14	0.81
1:D:2534:ALA:HB1	1:D:2588:ARG:HE	1.44	0.81
1:D:3713:LYS:NZ	1:D:3715:LYS:O	2.14	0.81
1:C:3713:LYS:NZ	1:C:3715:LYS:O	2.14	0.81
1:B:110:ARG:NH1	1:B:117:TYR:OH	2.14	0.81
1:C:110:ARG:NH1	1:C:117:TYR:OH	2.14	0.80
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	1.97	0.80
1:B:1037:ASP:O	1:B:1041:GLN:NE2	2.15	0.80
1:C:1037:ASP:O	1:C:1041:GLN:NE2	2.15	0.80
1:D:1037:ASP:O	1:D:1041:GLN:NE2	2.15	0.80
1:A:3713:LYS:NZ	1:A:3715:LYS:O	2.14	0.80
1:A:110:ARG:NH1	1:A:117:TYR:OH	2.14	0.79
1:A:4899:ASP:OD1	1:D:4892:ARG:NH1	2.15	0.79
1:B:396:GLU:OE2	1:B:470:SER:OG	2.00	0.79
1:A:1037:ASP:O	1:A:1041:GLN:NE2	2.15	0.79
1:A:4744:ASP:OD2	1:A:4747:SER:OG	2.00	0.79
1:C:4744:ASP:OD2	1:C:4747:SER:OG	2.00	0.79
1:A:2694:GLU:OE1	1:A:2697:ARG:NH2	2.16	0.79
1:D:4744:ASP:OD2	1:D:4747:SER:OG	2.00	0.79
1:C:396:GLU:OE2	1:C:470:SER:OG	2.00	0.79
1:A:396:GLU:OE2	1:A:470:SER:OG	2.00	0.78
1:B:2382:GLU:OE1	1:B:2385:ARG:NH1	2.17	0.78
1:A:1263:THR:OG1	1:A:1265:ASP:OD1	2.00	0.78
1:D:396:GLU:OE2	1:D:470:SER:OG	2.00	0.78
1:D:2233:CYS:O	1:D:2234:ARG:C	2.27	0.78
1:C:2233:CYS:O	1:C:2234:ARG:C	2.26	0.78
1:C:2382:GLU:OE1	1:C:2385:ARG:NH1	2.17	0.78
1:C:1978:ALA:HB1	1:C:1982:ARG:HH12	1.47	0.78
2:F:11:ASP:OD2	2:F:67:SER:OG	2.02	0.78
1:D:1032:LYS:C	1:D:1036:ARG:NH1	2.42	0.78
1:D:2382:GLU:OE1	1:D:2385:ARG:NH1	2.17	0.78
1:D:2694:GLU:OE1	1:D:2697:ARG:NH2	2.16	0.78
1:C:1032:LYS:C	1:C:1036:ARG:NH1	2.42	0.78
1:B:1263:THR:OG1	1:B:1265:ASP:OD1	2.00	0.78
1:B:2694:GLU:OE1	1:B:2697:ARG:NH2	2.16	0.78
1:C:2694:GLU:OE1	1:C:2697:ARG:NH2	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3713:LYS:NZ	1:B:3715:LYS:O	2.14	0.78
1:C:1263:THR:OG1	1:C:1265:ASP:OD1	2.00	0.78
1:D:935:LEU:CD1	1:D:987:ARG:HE	1.95	0.77
1:A:1032:LYS:C	1:A:1036:ARG:NH1	2.42	0.77
1:B:1032:LYS:C	1:B:1036:ARG:NH1	2.42	0.77
1:A:935:LEU:CD1	1:A:987:ARG:HE	1.95	0.77
1:A:1978:ALA:HB1	1:A:1982:ARG:HH12	1.48	0.77
2:E:11:ASP:OD2	2:E:67:SER:OG	2.02	0.77
1:D:1263:THR:OG1	1:D:1265:ASP:OD1	2.00	0.77
1:A:2382:GLU:OE1	1:A:2385:ARG:NH1	2.17	0.77
1:B:4744:ASP:OD2	1:B:4747:SER:OG	2.00	0.77
2:G:11:ASP:OD2	2:G:67:SER:OG	2.02	0.77
1:B:883:ALA:HB1	1:B:907:LEU:HD12	1.67	0.77
1:A:2233:CYS:O	1:A:2234:ARG:C	2.26	0.77
1:B:2233:CYS:O	1:B:2234:ARG:C	2.27	0.77
1:B:1978:ALA:HB1	1:B:1982:ARG:HH12	1.47	0.77
1:B:4892:ARG:NH1	1:C:4899:ASP:OD1	2.17	0.77
1:A:883:ALA:HB1	1:A:907:LEU:HD12	1.67	0.76
1:A:1821:ASP:OD1	1:A:1822:GLY:N	2.18	0.76
2:H:11:ASP:OD2	2:H:67:SER:OG	2.02	0.76
1:D:1978:ALA:HB1	1:D:1982:ARG:HH12	1.47	0.76
1:C:4885:PHE:O	1:C:4889:VAL:HG22	1.86	0.76
1:D:4899:ASP:OD1	1:C:4892:ARG:NH1	2.17	0.76
1:D:1821:ASP:OD1	1:D:1822:GLY:N	2.18	0.76
1:A:1996:ARG:CZ	1:A:1999:ARG:HH12	1.99	0.76
1:B:3107:VAL:HB	1:B:3111:ARG:HH12	1.51	0.76
1:B:4933:GLN:OE1	1:B:4933:GLN:N	2.19	0.76
1:D:4885:PHE:O	1:D:4889:VAL:HG22	1.86	0.76
1:C:4933:GLN:OE1	1:C:4933:GLN:N	2.19	0.76
1:D:1996:ARG:CZ	1:D:1999:ARG:HH12	1.99	0.75
1:B:1821:ASP:OD1	1:B:1822:GLY:N	2.18	0.75
1:A:4885:PHE:O	1:A:4889:VAL:HG22	1.86	0.75
1:D:266:ARG:O	1:D:270:SER:OG	2.04	0.75
1:D:883:ALA:HB1	1:D:907:LEU:HD12	1.67	0.75
1:D:4000:MET:HE1	1:D:4058:ILE:HA	1.69	0.75
1:C:1821:ASP:OD1	1:C:1822:GLY:N	2.18	0.75
1:B:2777:TYR:HD1	1:B:2791:LEU:HD12	1.52	0.75
1:B:4000:MET:HE1	1:B:4058:ILE:HA	1.69	0.75
1:C:421:PHE:CE2	1:C:507:ALA:HB2	2.22	0.75
1:B:421:PHE:CE2	1:B:507:ALA:HB2	2.22	0.75
1:C:266:ARG:O	1:C:270:SER:OG	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:935:LEU:CD1	1:C:987:ARG:HE	1.95	0.75
1:C:2777:TYR:HD1	1:C:2791:LEU:HD12	1.52	0.75
1:A:4000:MET:HE1	1:A:4058:ILE:HA	1.69	0.75
1:B:4885:PHE:O	1:B:4889:VAL:HG22	1.86	0.75
1:C:1996:ARG:CZ	1:C:1999:ARG:HH12	1.99	0.75
1:C:4000:MET:HE1	1:C:4058:ILE:HA	1.69	0.75
1:D:3107:VAL:HB	1:D:3111:ARG:HH12	1.51	0.75
1:B:935:LEU:CD1	1:B:987:ARG:HE	1.95	0.75
1:B:3172:ILE:HA	1:B:3175:LEU:HD23	1.68	0.75
1:B:2785:LEU:HB3	1:B:2787:THR:HG23	1.69	0.74
1:D:421:PHE:CE2	1:D:507:ALA:HB2	2.22	0.74
1:C:3817:LEU:HB2	1:C:3899:PHE:CE1	2.22	0.74
1:A:421:PHE:CE2	1:A:507:ALA:HB2	2.22	0.74
1:A:3107:VAL:HB	1:A:3111:ARG:NH1	2.02	0.74
1:B:2946:LEU:O	1:B:2946:LEU:HD23	1.87	0.74
1:D:4933:GLN:N	1:D:4933:GLN:OE1	2.19	0.74
1:B:266:ARG:O	1:B:270:SER:OG	2.04	0.74
1:D:2946:LEU:O	1:D:2946:LEU:HD23	1.87	0.74
1:D:3172:ILE:HA	1:D:3175:LEU:HD23	1.69	0.74
1:C:2946:LEU:HD23	1:C:2946:LEU:O	1.87	0.74
1:A:266:ARG:O	1:A:270:SER:OG	2.04	0.74
1:A:2777:TYR:HD1	1:A:2791:LEU:HD12	1.52	0.74
1:B:3107:VAL:HB	1:B:3111:ARG:NH1	2.02	0.74
1:B:3817:LEU:HB2	1:B:3899:PHE:CE1	2.22	0.74
1:B:950:LEU:HD13	1:B:970:LEU:HG	1.69	0.74
1:D:3817:LEU:HB2	1:D:3899:PHE:CE1	2.22	0.74
1:D:4655:PHE:CA	1:D:4796:MET:HE1	2.18	0.74
1:A:2785:LEU:HB3	1:A:2787:THR:HG23	1.69	0.74
1:C:3107:VAL:HB	1:C:3111:ARG:HH12	1.51	0.74
1:A:950:LEU:HD13	1:A:970:LEU:HG	1.69	0.74
1:C:883:ALA:HB1	1:C:907:LEU:HD12	1.67	0.74
1:C:950:LEU:HD13	1:C:970:LEU:HG	1.69	0.74
1:C:3172:ILE:HA	1:C:3175:LEU:HD23	1.69	0.74
1:A:3817:LEU:HB2	1:A:3899:PHE:CE1	2.22	0.73
1:A:4655:PHE:CA	1:A:4796:MET:HE1	2.18	0.73
1:A:4933:GLN:OE1	1:A:4933:GLN:N	2.19	0.73
1:D:2777:TYR:HD1	1:D:2791:LEU:HD12	1.52	0.73
1:C:1927:LEU:HD22	1:C:2101:MET:SD	2.28	0.73
1:A:3107:VAL:HB	1:A:3111:ARG:HH12	1.51	0.73
1:B:1996:ARG:CZ	1:B:1999:ARG:HH12	1.99	0.73
1:A:2946:LEU:O	1:A:2946:LEU:HD23	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3107:VAL:HB	1:D:3111:ARG:NH1	2.02	0.73
1:A:2011:HIS:NE2	1:A:2017:ASP:OD2	2.21	0.73
1:B:1927:LEU:HD22	1:B:2101:MET:SD	2.28	0.73
1:D:950:LEU:HD13	1:D:970:LEU:HG	1.69	0.73
1:B:4655:PHE:CA	1:B:4796:MET:HE1	2.18	0.73
1:D:2011:HIS:NE2	1:D:2017:ASP:OD2	2.21	0.73
1:C:2785:LEU:HB3	1:C:2787:THR:HG23	1.69	0.73
1:A:1927:LEU:HD22	1:A:2101:MET:SD	2.28	0.73
1:C:3107:VAL:HB	1:C:3111:ARG:NH1	2.02	0.73
1:C:4655:PHE:CA	1:C:4796:MET:HE1	2.18	0.73
1:A:3172:ILE:HA	1:A:3175:LEU:HD23	1.68	0.73
1:D:1927:LEU:HD22	1:D:2101:MET:SD	2.28	0.73
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.71	0.73
1:B:1743[A]:ARG:NH2	1:B:1967:ASP:OD2	2.22	0.72
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.71	0.72
1:D:4069:LYS:NZ	1:D:4130:ASN:OD1	2.23	0.72
1:A:3627:GLN:O	1:A:3630:ARG:NH1	2.23	0.72
1:B:2011:HIS:NE2	1:B:2017:ASP:OD2	2.21	0.72
1:D:3627:GLN:O	1:D:3630:ARG:NH1	2.23	0.72
1:C:2011:HIS:NE2	1:C:2017:ASP:OD2	2.21	0.72
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.71	0.72
1:D:2785:LEU:HB3	1:D:2787:THR:HG23	1.69	0.72
1:A:4069:LYS:NZ	1:A:4130:ASN:OD1	2.23	0.72
1:B:3627:GLN:O	1:B:3630:ARG:NH1	2.23	0.72
1:D:1743[A]:ARG:NH2	1:D:1967:ASP:OD2	2.22	0.72
1:D:2265:LEU:HB2	1:D:2330:ARG:HH21	1.55	0.72
1:C:1743[A]:ARG:NH2	1:C:1967:ASP:OD2	2.22	0.72
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.71	0.71
1:B:835:ARG:NH2	1:B:1210:SER:O	2.23	0.71
1:C:221:ARG:NH1	1:C:253:CYS:O	2.24	0.71
1:A:2376:LEU:HD21	1:A:2502:MET:HE1	1.72	0.71
1:D:1996:ARG:NH2	1:D:1999:ARG:HH12	1.89	0.71
1:A:3514:LEU:HD21	1:A:3602:VAL:CG1	2.21	0.71
1:B:1996:ARG:NH2	1:B:1999:ARG:HH12	1.89	0.71
1:B:3514:LEU:HD21	1:B:3602:VAL:CG1	2.21	0.71
1:D:221:ARG:NH1	1:D:253:CYS:O	2.24	0.71
1:C:1996:ARG:NH2	1:C:1999:ARG:HH12	1.89	0.71
1:D:1112:ASP:OD1	1:D:1113:VAL:N	2.24	0.71
1:C:1112:ASP:OD1	1:C:1113:VAL:N	2.24	0.71
1:C:3514:LEU:HD21	1:C:3602:VAL:CG1	2.21	0.71
1:A:1112:ASP:OD1	1:A:1113:VAL:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1743[A]:ARG:NH2	1:A:1967:ASP:OD2	2.22	0.71
1:B:1749:PRO:HD2	1:B:1758:ARG:NH1	2.06	0.71
1:B:2376:LEU:HD21	1:B:2502:MET:HE1	1.72	0.71
1:A:221:ARG:NH1	1:A:253:CYS:O	2.24	0.71
1:D:835:ARG:NH2	1:D:1210:SER:O	2.23	0.71
1:C:672:VAL:O	1:C:680:THR:OG1	2.08	0.71
1:D:1749:PRO:HD2	1:D:1758:ARG:NH1	2.06	0.71
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.24	0.71
1:C:835:ARG:NH2	1:C:1210:SER:O	2.23	0.71
1:B:4069:LYS:NZ	1:B:4130:ASN:OD1	2.23	0.70
1:A:835:ARG:NH2	1:A:1210:SER:O	2.23	0.70
1:A:1749:PRO:HD2	1:A:1758:ARG:NH1	2.06	0.70
1:A:1996:ARG:NH2	1:A:1999:ARG:HH12	1.89	0.70
1:A:2265:LEU:HB2	1:A:2330:ARG:HH21	1.55	0.70
1:C:1749:PRO:HD2	1:C:1758:ARG:NH1	2.06	0.70
1:D:3514:LEU:HD21	1:D:3602:VAL:CG1	2.21	0.70
1:C:3627:GLN:O	1:C:3630:ARG:NH1	2.23	0.70
1:B:221:ARG:NH1	1:B:253:CYS:O	2.24	0.70
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.24	0.70
1:C:2265:LEU:HB2	1:C:2330:ARG:HH21	1.55	0.70
1:C:2376:LEU:HD21	1:C:2502:MET:HE1	1.72	0.70
1:A:3699:HIS:CE1	1:A:3703:LEU:HD11	2.27	0.70
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.24	0.70
1:A:2980:VAL:HG21	1:A:2986:VAL:HG12	1.74	0.70
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.24	0.70
1:D:2980:VAL:HG21	1:D:2986:VAL:HG12	1.74	0.70
1:C:2327:GLY:HA2	1:C:2330:ARG:CZ	2.22	0.70
1:C:4722:ARG:HE	1:C:4748:LEU:HD11	1.55	0.70
1:A:4892:ARG:NH1	1:B:4899:ASP:OD1	2.24	0.70
1:B:1112:ASP:OD1	1:B:1113:VAL:N	2.24	0.70
1:D:4722:ARG:HE	1:D:4748:LEU:HD11	1.55	0.70
1:B:2265:LEU:HB2	1:B:2330:ARG:HH21	1.55	0.69
1:D:3699:HIS:CE1	1:D:3703:LEU:HD11	2.27	0.69
1:A:393:CYS:SG	1:A:398:SER:OG	2.50	0.69
1:A:4722:ARG:HE	1:A:4748:LEU:HD11	1.55	0.69
1:B:393:CYS:SG	1:B:398:SER:OG	2.50	0.69
1:B:2980:VAL:HG21	1:B:2986:VAL:HG12	1.74	0.69
1:C:1999:ARG:O	1:C:3638:MET:CE	2.40	0.69
1:A:1999:ARG:O	1:A:3638:MET:CE	2.40	0.69
1:D:2514:ASN:ND2	1:D:2516:ASP:OD1	2.26	0.69
1:C:3699:HIS:CE1	1:C:3703:LEU:HD11	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2376:LEU:HD21	1:D:2502:MET:HE1	1.72	0.69
1:C:4158:PRO:HA	1:C:4161:ARG:HE	1.58	0.69
1:B:1999:ARG:O	1:B:3638:MET:CE	2.40	0.69
1:D:2233:CYS:O	1:D:2235:PHE:N	2.26	0.69
1:C:393:CYS:SG	1:C:398:SER:OG	2.50	0.69
1:B:4158:PRO:HA	1:B:4161:ARG:HE	1.58	0.69
1:C:2166:LEU:HD11	1:C:2206:THR:HG23	1.75	0.69
1:A:2514:ASN:ND2	1:A:2516:ASP:OD1	2.26	0.69
1:A:2869:ARG:HD3	1:A:2947:ASP:OD2	1.93	0.69
1:B:2327:GLY:HA2	1:B:2330:ARG:CZ	2.22	0.69
1:B:4722:ARG:HE	1:B:4748:LEU:HD11	1.56	0.69
1:D:393:CYS:SG	1:D:398:SER:OG	2.50	0.69
1:D:1999:ARG:O	1:D:3638:MET:CE	2.40	0.69
1:D:2327:GLY:HA2	1:D:2330:ARG:CZ	2.22	0.69
1:C:2514:ASN:ND2	1:C:2516:ASP:OD1	2.25	0.69
1:B:2514:ASN:ND2	1:B:2516:ASP:OD1	2.26	0.69
1:B:3699:HIS:CE1	1:B:3703:LEU:HD11	2.27	0.69
1:C:2233:CYS:O	1:C:2235:PHE:N	2.26	0.69
1:A:2327:GLY:HA2	1:A:2330:ARG:CZ	2.22	0.68
1:C:975:VAL:HG13	1:C:1047:LEU:HD23	1.76	0.68
1:C:4069:LYS:NZ	1:C:4130:ASN:OD1	2.23	0.68
1:B:2869:ARG:HD3	1:B:2947:ASP:OD2	1.93	0.68
1:D:887:ILE:HD11	1:D:907:LEU:HD11	1.75	0.68
1:A:887:ILE:HD11	1:A:907:LEU:HD11	1.75	0.68
1:A:2233:CYS:O	1:A:2235:PHE:N	2.26	0.68
1:B:975:VAL:HG13	1:B:1047:LEU:HD23	1.76	0.68
1:A:975:VAL:HG13	1:A:1047:LEU:HD23	1.76	0.68
1:B:2233:CYS:O	1:B:2235:PHE:N	2.26	0.68
1:D:975:VAL:HG13	1:D:1047:LEU:HD23	1.76	0.68
1:D:2869:ARG:HD3	1:D:2947:ASP:OD2	1.93	0.68
1:C:2980:VAL:HG21	1:C:2986:VAL:HG12	1.74	0.68
1:A:1577:ALA:O	1:A:1584:ARG:NH1	2.27	0.68
1:D:2166:LEU:HD11	1:D:2206:THR:HG23	1.75	0.68
1:B:2166:LEU:HD11	1:B:2206:THR:HG23	1.75	0.67
1:C:2675:THR:HB	1:C:2710:LEU:HD21	1.76	0.67
1:C:2869:ARG:HD3	1:C:2947:ASP:OD2	1.93	0.67
1:C:4998:LYS:HB3	1:C:5003:HIS:HE1	1.60	0.67
1:A:4158:PRO:HA	1:A:4161:ARG:HE	1.58	0.67
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.28	0.67
1:C:4827:LEU:O	1:C:4831:THR:HG23	1.94	0.67
1:A:4929:LEU:O	1:A:4933:GLN:OE1	2.13	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4966:ASP:OD1	1:A:4967:TYR:N	2.28	0.67
1:D:672:VAL:O	1:D:680:THR:OG1	2.08	0.67
1:C:2747:ILE:HD11	1:C:2751:LEU:HD22	1.77	0.67
1:A:2675:THR:HB	1:A:2710:LEU:HD21	1.76	0.67
1:B:4966:ASP:OD1	1:B:4967:TYR:N	2.28	0.67
1:B:4998:LYS:HB3	1:B:5003:HIS:HE1	1.60	0.67
1:D:4827:LEU:O	1:D:4831:THR:HG23	1.94	0.67
1:A:2166:LEU:HD11	1:A:2206:THR:HG23	1.75	0.67
1:B:4827:LEU:O	1:B:4831:THR:HG23	1.94	0.67
1:B:1577:ALA:O	1:B:1584:ARG:NH1	2.27	0.67
1:A:3531:ASP:OD1	1:A:3532:LEU:N	2.28	0.66
1:A:4827:LEU:O	1:A:4831:THR:HG23	1.94	0.66
1:B:887:ILE:HD11	1:B:907:LEU:HD11	1.75	0.66
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.28	0.66
1:D:4158:PRO:HA	1:D:4161:ARG:HE	1.58	0.66
1:C:3531:ASP:OD1	1:C:3532:LEU:N	2.29	0.66
1:B:2747:ILE:HD11	1:B:2751:LEU:HD22	1.77	0.66
1:A:3346:VAL:HG11	1:A:3414:ARG:HB2	1.77	0.66
1:D:869:ARG:NH2	1:D:941:MET:HE1	2.10	0.66
1:C:887:ILE:HD11	1:C:907:LEU:HD11	1.75	0.66
1:C:2330:ARG:HA	1:C:2333:ASP:OD2	1.96	0.66
1:D:4722:ARG:HE	1:D:4748:LEU:CD1	2.08	0.66
1:D:4966:ASP:OD1	1:D:4967:TYR:N	2.28	0.66
1:D:4998:LYS:HB3	1:D:5003:HIS:HE1	1.60	0.66
1:C:228:ASP:OD1	1:C:229:GLU:N	2.29	0.66
1:C:869:ARG:NH2	1:C:941:MET:HE1	2.11	0.66
1:C:3346:VAL:HG11	1:C:3414:ARG:HB2	1.77	0.66
1:C:4929:LEU:O	1:C:4933:GLN:OE1	2.13	0.66
1:A:2970:SER:HA	1:A:2973:PHE:CE1	2.30	0.66
1:A:3534:MET:O	1:A:3538:THR:HG23	1.96	0.66
1:B:2330:ARG:HA	1:B:2333:ASP:OD2	1.96	0.66
1:B:4929:LEU:O	1:B:4933:GLN:OE1	2.13	0.66
1:D:100:THR:HG21	1:D:162:LYS:HE3	1.78	0.66
1:C:100:THR:HG21	1:C:162:LYS:HE3	1.78	0.66
1:B:3834:ALA:O	1:B:3838:THR:HG23	1.96	0.66
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.28	0.66
1:D:2970:SER:HA	1:D:2973:PHE:CE1	2.30	0.66
1:D:4929:LEU:O	1:D:4933:GLN:OE1	2.13	0.66
1:C:1577:ALA:O	1:C:1584:ARG:NH1	2.27	0.66
1:B:3346:VAL:HG11	1:B:3414:ARG:HB2	1.77	0.66
1:D:2330:ARG:HA	1:D:2333:ASP:OD2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3346:VAL:HG11	1:D:3414:ARG:HB2	1.77	0.66
1:A:2747:ILE:HD11	1:A:2751:LEU:HD22	1.77	0.66
2:H:11:ASP:OD2	2:H:12:GLY:N	2.29	0.66
1:B:2970:SER:HA	1:B:2973:PHE:CE1	2.30	0.66
1:D:1577:ALA:O	1:D:1584:ARG:NH1	2.27	0.66
1:D:1999:ARG:O	1:D:1999:ARG:HG2	1.96	0.66
1:A:572:PRO:O	1:A:576:ASN:ND2	2.29	0.65
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.28	0.65
1:A:2576:ALA:HA	1:A:2618:MET:HE1	1.78	0.65
1:B:3111:ARG:NH2	1:B:3174:SER:OG	2.30	0.65
1:D:2675:THR:HB	1:D:2710:LEU:HD21	1.76	0.65
1:C:3534:MET:O	1:C:3538:THR:HG23	1.96	0.65
1:C:4722:ARG:HE	1:C:4748:LEU:CD1	2.08	0.65
1:C:4910:GLU:O	1:C:4914:VAL:HG13	1.96	0.65
1:B:4722:ARG:HE	1:B:4748:LEU:CD1	2.08	0.65
1:D:228:ASP:OD1	1:D:229:GLU:N	2.29	0.65
1:A:869:ARG:NH2	1:A:941:MET:HE1	2.11	0.65
1:A:4910:GLU:O	1:A:4914:VAL:HG13	1.96	0.65
1:B:1999:ARG:O	1:B:1999:ARG:HG2	1.96	0.65
1:B:4711:PHE:HB3	1:B:4712:PRO:HD3	1.78	0.65
1:B:572:PRO:O	1:B:576:ASN:ND2	2.29	0.65
1:B:3103:ILE:O	1:B:3107:VAL:HG13	1.97	0.65
1:D:572:PRO:O	1:D:576:ASN:ND2	2.29	0.65
1:D:2747:ILE:HD11	1:D:2751:LEU:HD22	1.77	0.65
1:D:4711:PHE:HB3	1:D:4712:PRO:HD3	1.78	0.65
1:C:4966:ASP:OD1	1:C:4967:TYR:N	2.28	0.65
1:A:3103:ILE:O	1:A:3107:VAL:HG13	1.97	0.65
1:A:4998:LYS:HB3	1:A:5003:HIS:HE1	1.60	0.65
1:B:228:ASP:OD1	1:B:229:GLU:N	2.29	0.65
1:B:869:ARG:NH2	1:B:941:MET:HE1	2.10	0.65
1:B:2675:THR:HB	1:B:2710:LEU:HD21	1.76	0.65
1:C:2520:HIS:O	1:C:2524:VAL:HG22	1.97	0.65
1:C:2970:SER:HA	1:C:2973:PHE:CE1	2.30	0.65
1:A:3834:ALA:O	1:A:3838:THR:HG23	1.96	0.65
2:G:11:ASP:OD2	2:G:12:GLY:N	2.29	0.65
1:D:3111:ARG:NH2	1:D:3174:SER:OG	2.30	0.65
1:D:3534:MET:O	1:D:3538:THR:HG23	1.96	0.65
1:D:4910:GLU:O	1:D:4914:VAL:HG13	1.96	0.65
1:A:228:ASP:OD1	1:A:229:GLU:N	2.29	0.65
1:A:2330:ARG:HA	1:A:2333:ASP:OD2	1.96	0.65
2:F:11:ASP:OD2	2:F:12:GLY:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3531:ASP:OD1	1:D:3532:LEU:N	2.28	0.65
1:C:3111:ARG:NH2	1:C:3174:SER:OG	2.30	0.65
1:B:3531:ASP:OD1	1:B:3532:LEU:N	2.28	0.65
1:B:4910:GLU:O	1:B:4914:VAL:HG13	1.96	0.65
1:D:1996:ARG:HE	1:D:1999:ARG:NH1	1.95	0.65
1:B:100:THR:HG21	1:B:162:LYS:HE3	1.78	0.65
1:B:672:VAL:O	1:B:680:THR:OG1	2.08	0.65
1:C:1996:ARG:HE	1:C:1999:ARG:NH1	1.95	0.65
1:A:100:THR:HG21	1:A:162:LYS:HE3	1.78	0.64
1:B:581:ASN:OD1	1:B:582:HIS:N	2.30	0.64
1:C:3834:ALA:O	1:C:3838:THR:HG23	1.96	0.64
1:C:4711:PHE:HB3	1:C:4712:PRO:HD3	1.78	0.64
1:A:3111:ARG:NH2	1:A:3174:SER:OG	2.30	0.64
1:A:4722:ARG:HE	1:A:4748:LEU:CD1	2.08	0.64
2:E:11:ASP:OD2	2:E:12:GLY:N	2.29	0.64
1:B:4091:LYS:NZ	1:B:4121:GLU:OE1	2.29	0.64
1:B:3110:LEU:HD23	1:B:3183:VAL:HG22	1.79	0.64
1:A:1996:ARG:HE	1:A:1999:ARG:NH1	1.95	0.64
1:A:581:ASN:OD1	1:A:582:HIS:N	2.30	0.64
1:A:418:LEU:HA	1:A:421:PHE:CE1	2.33	0.64
1:A:971:ASP:OD2	1:A:973:SER:OG	2.14	0.64
2:G:52:LYS:HB2	2:G:54:GLU:OE1	1.97	0.64
1:B:418:LEU:HA	1:B:421:PHE:CE1	2.33	0.64
1:B:2520:HIS:O	1:B:2524:VAL:HG22	1.97	0.64
1:D:3103:ILE:O	1:D:3107:VAL:HG13	1.97	0.64
1:D:3834:ALA:O	1:D:3838:THR:HG23	1.96	0.64
1:A:1999:ARG:O	1:A:3638:MET:HE1	1.98	0.64
1:C:572:PRO:O	1:C:576:ASN:ND2	2.29	0.64
1:C:3103:ILE:O	1:C:3107:VAL:HG13	1.97	0.64
1:A:1726:SER:O	1:A:1729:SER:OG	2.16	0.64
1:A:3110:LEU:HD23	1:A:3183:VAL:HG22	1.79	0.64
1:B:1996:ARG:HE	1:B:1999:ARG:NH1	1.95	0.64
1:D:2576:ALA:HA	1:D:2618:MET:HE1	1.79	0.64
1:C:1726:SER:O	1:C:1729:SER:OG	2.16	0.64
1:A:1999:ARG:O	1:A:1999:ARG:HG2	1.96	0.64
1:D:418:LEU:HA	1:D:421:PHE:CE1	2.33	0.64
1:C:581:ASN:OD1	1:C:582:HIS:N	2.30	0.64
1:C:2576:ALA:HA	1:C:2618:MET:HE1	1.78	0.64
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.12	0.64
2:G:25:HIS:CD2	2:G:104:LEU:HD11	2.33	0.64
1:D:581:ASN:OD1	1:D:582:HIS:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2894:LEU:O	1:A:2897:LYS:N	2.32	0.63
2:F:52:LYS:HB2	2:F:54:GLU:OE1	1.97	0.63
1:C:2894:LEU:O	1:C:2897:LYS:N	2.32	0.63
1:A:1065:ASN:OD1	1:A:1066:GLN:N	2.32	0.63
1:A:4711:PHE:HB3	1:A:4712:PRO:HD3	1.78	0.63
1:B:2576:ALA:HA	1:B:2618:MET:HE1	1.79	0.63
1:B:1726:SER:O	1:B:1729:SER:OG	2.16	0.63
1:B:2212:VAL:HG21	1:B:2256:TYR:OH	1.99	0.63
1:B:3534:MET:O	1:B:3538:THR:HG23	1.96	0.63
1:D:2520:HIS:O	1:D:2524:VAL:HG22	1.97	0.63
1:C:1454:THR:OG1	1:C:1456:ASP:OD1	2.12	0.63
1:C:3284:TRP:O	1:C:3305:THR:HG21	1.99	0.63
1:C:3310:ASP:OD1	1:C:3311:HIS:N	2.31	0.63
1:A:1931:LEU:HD13	1:A:1935:VAL:HG11	1.81	0.63
1:A:1996:ARG:NE	1:A:1999:ARG:HH12	1.97	0.63
1:A:3310:ASP:OD1	1:A:3311:HIS:N	2.31	0.63
2:E:52:LYS:HB2	2:E:54:GLU:OE1	1.97	0.63
1:B:3284:TRP:O	1:B:3305:THR:HG21	1.99	0.63
1:D:3284:TRP:O	1:D:3305:THR:HG21	1.99	0.63
1:C:418:LEU:HA	1:C:421:PHE:CE1	2.33	0.63
1:C:1931:LEU:HD13	1:C:1935:VAL:HG11	1.80	0.63
1:C:1999:ARG:O	1:C:1999:ARG:HG2	1.96	0.63
1:C:3573:MET:HE3	1:C:3577:ARG:NH1	2.14	0.63
1:B:3573:MET:HE3	1:B:3577:ARG:NH1	2.14	0.63
1:A:672:VAL:O	1:A:680:THR:OG1	2.08	0.63
2:H:52:LYS:HB2	2:H:54:GLU:OE1	1.97	0.63
1:B:2894:LEU:O	1:B:2897:LYS:N	2.32	0.63
1:D:1996:ARG:NE	1:D:1999:ARG:HH12	1.96	0.63
1:C:1999:ARG:O	1:C:3638:MET:HE1	1.98	0.63
1:C:3110:LEU:HD23	1:C:3183:VAL:HG22	1.79	0.63
1:A:1033:ARG:HA	1:A:1036:ARG:CZ	2.29	0.63
1:A:2212:VAL:HG21	1:A:2256:TYR:OH	1.99	0.63
1:A:2520:HIS:O	1:A:2524:VAL:HG22	1.97	0.63
2:H:25:HIS:CD2	2:H:104:LEU:HD11	2.33	0.63
1:B:971:ASP:OD2	1:B:973:SER:OG	2.14	0.63
1:B:1999:ARG:O	1:B:3638:MET:HE1	1.98	0.63
1:D:1065:ASN:OD1	1:D:1066:GLN:N	2.32	0.63
1:D:2894:LEU:O	1:D:2897:LYS:N	2.31	0.63
1:C:1033:ARG:HA	1:C:1036:ARG:CZ	2.29	0.63
1:D:1726:SER:O	1:D:1729:SER:OG	2.16	0.63
2:E:25:HIS:CD2	2:E:104:LEU:HD11	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3310:ASP:OD1	1:B:3311:HIS:N	2.31	0.62
1:D:1033:ARG:HA	1:D:1036:ARG:CZ	2.29	0.62
1:D:1999:ARG:O	1:D:3638:MET:HE1	1.98	0.62
1:A:3442:PHE:HE1	1:A:3511:VAL:HG12	1.64	0.62
1:B:1033:ARG:HA	1:B:1036:ARG:CZ	2.29	0.62
1:B:1996:ARG:NE	1:B:1999:ARG:HH12	1.97	0.62
1:D:3110:LEU:HD23	1:D:3183:VAL:HG22	1.79	0.62
1:C:864:PRO:HD2	1:C:867:LEU:HD12	1.81	0.62
1:C:1996:ARG:NE	1:C:1999:ARG:HH12	1.97	0.62
1:A:3086:GLU:OE2	1:A:3093:ARG:NH1	2.33	0.62
2:F:25:HIS:CD2	2:F:104:LEU:HD11	2.33	0.62
1:B:1066:GLN:O	1:B:1071:ARG:NH2	2.33	0.62
1:B:2265:LEU:HD12	1:B:2266:GLY:N	2.15	0.62
1:D:3442:PHE:HE1	1:D:3511:VAL:HG12	1.64	0.62
1:A:2265:LEU:HD12	1:A:2266:GLY:N	2.15	0.62
1:B:864:PRO:HD2	1:B:867:LEU:HD12	1.81	0.62
1:B:928:THR:O	1:B:932:LEU:HD23	2.00	0.62
1:B:3635:CYS:HA	1:B:3638:MET:HE2	1.81	0.62
1:D:3635:CYS:HA	1:D:3638:MET:HE2	1.81	0.62
1:C:2265:LEU:HB2	1:C:2330:ARG:NH2	2.14	0.62
1:C:3442:PHE:HE1	1:C:3511:VAL:HG12	1.64	0.62
1:A:2265:LEU:HB2	1:A:2330:ARG:NH2	2.14	0.62
1:A:3284:TRP:O	1:A:3305:THR:HG21	1.99	0.62
1:D:864:PRO:HD2	1:D:867:LEU:HD12	1.81	0.62
1:D:2212:VAL:HG21	1:D:2256:TYR:OH	1.99	0.62
1:D:3310:ASP:OD1	1:D:3311:HIS:N	2.31	0.62
1:C:2212:VAL:HG21	1:C:2256:TYR:OH	1.99	0.62
1:C:2265:LEU:HD12	1:C:2266:GLY:N	2.15	0.62
1:A:885:THR:O	1:A:889:GLN:NE2	2.33	0.62
1:A:3573:MET:HE3	1:A:3577:ARG:NH1	2.14	0.62
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.12	0.62
1:C:1065:ASN:OD1	1:C:1066:GLN:N	2.32	0.62
1:C:3635:CYS:HA	1:C:3638:MET:HE2	1.81	0.62
1:C:4091:LYS:NZ	1:C:4121:GLU:OE1	2.29	0.62
1:A:4942:GLU:O	1:A:4945:ASP:OD1	2.18	0.62
1:B:4942:GLU:O	1:B:4945:ASP:OD1	2.18	0.62
1:D:885:THR:O	1:D:889:GLN:NE2	2.33	0.62
1:D:2744:ASN:OD1	1:D:2745:VAL:HG23	2.00	0.62
1:A:928:THR:O	1:A:932:LEU:HD23	2.00	0.61
1:A:3201:MET:HE2	1:A:3203:VAL:CG2	2.30	0.61
1:B:1931:LEU:HD13	1:B:1935:VAL:HG11	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2923:ALA:O	1:B:2927:LEU:HD23	2.00	0.61
1:D:1066:GLN:O	1:D:1071:ARG:NH2	2.33	0.61
1:C:928:THR:O	1:C:932:LEU:HD23	2.00	0.61
1:C:1066:GLN:O	1:C:1071:ARG:NH2	2.33	0.61
1:C:2923:ALA:O	1:C:2927:LEU:HD23	2.00	0.61
1:A:1066:GLN:O	1:A:1071:ARG:NH2	2.33	0.61
1:A:3984:ARG:NH2	1:B:160:GLY:O	2.30	0.61
1:B:1065:ASN:OD1	1:B:1066:GLN:N	2.32	0.61
1:D:928:THR:O	1:D:932:LEU:HD23	2.00	0.61
1:D:1931:LEU:HD13	1:D:1935:VAL:HG11	1.81	0.61
1:D:3201:MET:HE2	1:D:3203:VAL:CG2	2.30	0.61
1:C:885:THR:O	1:C:889:GLN:NE2	2.33	0.61
1:A:4091:LYS:NZ	1:A:4121:GLU:OE1	2.29	0.61
1:B:973:SER:O	1:B:976:ARG:NH1	2.34	0.61
1:D:2265:LEU:HD12	1:D:2266:GLY:N	2.15	0.61
1:C:2744:ASN:OD1	1:C:2745:VAL:HG23	2.00	0.61
1:A:2923:ALA:O	1:A:2927:LEU:HD23	2.00	0.61
2:H:25:HIS:HD2	2:H:104:LEU:HD21	1.65	0.61
1:B:2265:LEU:HB2	1:B:2330:ARG:NH2	2.14	0.61
1:B:2490:MET:HE1	1:B:2546:MET:HE2	1.83	0.61
1:B:885:THR:O	1:B:889:GLN:NE2	2.33	0.61
1:B:3086:GLU:OE2	1:B:3093:ARG:NH1	2.33	0.61
1:D:3573:MET:HE3	1:D:3577:ARG:NH1	2.14	0.61
1:C:2490:MET:HE1	1:C:2546:MET:HE2	1.83	0.61
1:C:4942:GLU:O	1:C:4945:ASP:OD1	2.18	0.61
1:D:4091:LYS:NZ	1:D:4121:GLU:OE1	2.29	0.61
1:D:973:SER:O	1:D:976:ARG:NH1	2.33	0.61
1:D:2490:MET:HE1	1:D:2546:MET:HE2	1.83	0.61
1:D:2923:ALA:O	1:D:2927:LEU:HD23	2.00	0.61
1:A:864:PRO:HD2	1:A:867:LEU:HD12	1.81	0.61
1:A:2744:ASN:OD1	1:A:2745:VAL:HG23	2.00	0.61
1:A:3635:CYS:HA	1:A:3638:MET:HE2	1.81	0.61
1:D:4942:GLU:O	1:D:4945:ASP:OD1	2.18	0.61
1:C:884:LEU:CD2	1:C:955:LEU:HD11	2.31	0.61
2:F:25:HIS:HD2	2:F:104:LEU:HD21	1.65	0.61
1:D:2516:ASP:OD1	1:D:2517:PHE:N	2.33	0.61
1:D:3086:GLU:OE2	1:D:3093:ARG:NH1	2.33	0.61
1:C:973:SER:O	1:C:976:ARG:NH1	2.34	0.61
1:B:3201:MET:HE2	1:B:3203:VAL:CG2	2.30	0.61
1:D:887:ILE:O	1:D:890:GLY:N	2.34	0.61
1:D:971:ASP:OD2	1:D:973:SER:OG	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2265:LEU:HB2	1:D:2330:ARG:NH2	2.14	0.61
1:B:2516:ASP:OD1	1:B:2517:PHE:N	2.33	0.60
1:B:2744:ASN:OD1	1:B:2745:VAL:HG23	2.00	0.60
1:B:3442:PHE:HE1	1:B:3511:VAL:HG12	1.64	0.60
1:A:2475:GLN:NE2	1:A:2476:ILE:O	2.35	0.60
1:A:2490:MET:HE1	1:A:2546:MET:HE2	1.83	0.60
1:B:887:ILE:O	1:B:890:GLY:N	2.34	0.60
1:A:2516:ASP:OD1	1:A:2517:PHE:N	2.33	0.60
1:B:884:LEU:CD2	1:B:955:LEU:HD11	2.31	0.60
1:B:1979:LEU:HD22	1:B:1982:ARG:NH2	2.17	0.60
1:C:3201:MET:HE2	1:C:3203:VAL:CG2	2.30	0.60
1:A:973:SER:O	1:A:976:ARG:NH1	2.34	0.60
2:G:25:HIS:HD2	2:G:104:LEU:HD21	1.65	0.60
1:C:887:ILE:O	1:C:890:GLY:N	2.34	0.60
1:D:2475:GLN:NE2	1:D:2476:ILE:O	2.35	0.60
1:D:3097:GLU:O	1:D:3100:SER:OG	2.19	0.60
1:A:887:ILE:O	1:A:890:GLY:N	2.34	0.60
2:E:25:HIS:HD2	2:E:104:LEU:HD21	1.65	0.60
1:B:2475:GLN:NE2	1:B:2476:ILE:O	2.35	0.60
1:D:3786:CYS:SG	1:D:3831:SER:OG	2.60	0.60
1:C:146:CYS:HG	1:C:147:TRP:CD1	2.19	0.60
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.01	0.60
1:D:1520:VAL:HG12	1:D:1527:MET:HG2	1.83	0.60
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.35	0.60
1:C:3529:ASP:OD2	1:C:3595:ARG:NH2	2.35	0.60
1:C:3786:CYS:SG	1:C:3831:SER:OG	2.60	0.60
1:D:988:LEU:HB2	1:D:1039:LEU:HD21	1.83	0.60
1:D:1979:LEU:HD22	1:D:1982:ARG:NH2	2.17	0.60
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.01	0.60
1:A:1520:VAL:HG12	1:A:1527:MET:HG2	1.83	0.60
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.35	0.60
1:B:2523:ASP:OD1	1:B:2524:VAL:HG13	2.02	0.59
1:B:3786:CYS:SG	1:B:3831:SER:OG	2.60	0.59
1:C:3086:GLU:OE2	1:C:3093:ARG:NH1	2.33	0.59
1:A:146:CYS:HG	1:A:147:TRP:CD1	2.20	0.59
1:A:2523:ASP:OD1	1:A:2524:VAL:HG13	2.02	0.59
1:B:568:LEU:HD12	1:B:602:VAL:HG13	1.84	0.59
1:B:988:LEU:HB2	1:B:1039:LEU:HD21	1.83	0.59
1:B:4749:GLU:OE1	1:B:4753:HIS:CD2	2.56	0.59
1:D:2523:ASP:OD1	1:D:2524:VAL:HG13	2.02	0.59
1:C:568:LEU:HD12	1:C:602:VAL:HG13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1979:LEU:HD22	1:C:1982:ARG:NH2	2.17	0.59
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.12	0.59
1:C:2475:GLN:NE2	1:C:2476:ILE:O	2.35	0.59
1:A:238:SER:OG	1:A:240:ASP:OD1	2.20	0.59
1:A:884:LEU:CD2	1:A:955:LEU:HD11	2.31	0.59
1:B:146:CYS:HG	1:B:147:TRP:CD1	2.20	0.59
1:C:1520:VAL:HG12	1:C:1527:MET:HG2	1.83	0.59
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.35	0.59
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.03	0.59
1:D:4749:GLU:OE1	1:D:4753:HIS:CD2	2.56	0.59
1:C:2516:ASP:OD1	1:C:2517:PHE:N	2.33	0.59
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.02	0.59
1:A:553:ARG:NE	1:A:555:GLU:OE2	2.36	0.59
1:A:1979:LEU:HD22	1:A:1982:ARG:NH2	2.17	0.59
1:B:553:ARG:NE	1:B:555:GLU:OE2	2.36	0.59
1:B:797:HIS:ND1	1:B:821:LEU:HD23	2.18	0.59
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.01	0.59
1:D:3308:THR:OG1	1:D:3310:ASP:OD1	2.21	0.59
1:D:4705:VAL:HG22	1:D:4711:PHE:HD1	1.68	0.59
1:A:2285:GLU:CG	1:A:3858:MET:HE1	2.31	0.59
1:A:3308:THR:OG1	1:A:3310:ASP:OD1	2.21	0.59
1:A:4749:GLU:OE1	1:A:4753:HIS:CD2	2.56	0.59
1:B:1520:VAL:HG12	1:B:1527:MET:HG2	1.83	0.59
1:D:553:ARG:NE	1:D:555:GLU:OE2	2.36	0.59
1:D:1024:TYR:OH	1:D:1036:ARG:NH1	2.36	0.59
1:C:797:HIS:ND1	1:C:821:LEU:HD23	2.18	0.59
1:B:2534:ALA:HB3	1:B:2588:ARG:HH21	1.68	0.59
1:B:3825:GLU:OE1	1:B:3825:GLU:N	2.36	0.59
1:D:4754:ASN:OD1	1:D:4755:GLU:N	2.36	0.59
1:A:3825:GLU:OE1	1:A:3825:GLU:N	2.36	0.59
1:B:984:LEU:HG	1:B:987:ARG:NH2	2.18	0.59
1:C:2285:GLU:CG	1:C:3858:MET:HE1	2.31	0.59
1:C:2534:ALA:HB3	1:C:2588:ARG:HH21	1.68	0.59
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.03	0.59
1:A:797:HIS:ND1	1:A:821:LEU:HD23	2.18	0.58
1:A:2534:ALA:HB3	1:A:2588:ARG:HH21	1.68	0.58
1:A:3786:CYS:SG	1:A:3831:SER:OG	2.60	0.58
1:A:4087:LEU:HB2	1:A:4122:MET:HE3	1.84	0.58
1:B:224:HIS:HA	1:B:388:LEU:HD23	1.85	0.58
1:B:4754:ASN:OD1	1:B:4755:GLU:N	2.36	0.58
1:D:146:CYS:HG	1:D:147:TRP:CD1	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2515:GLN:NE2	1:C:2568:LEU:O	2.36	0.58
1:A:224:HIS:HA	1:A:388:LEU:HD23	1.85	0.58
1:A:1570:LYS:O	1:A:1572:ILE:HD12	2.03	0.58
1:B:1552:VAL:HG11	1:B:1562:ILE:HD13	1.84	0.58
1:B:1570:LYS:O	1:B:1572:ILE:HD12	2.03	0.58
1:B:4087:LEU:HB2	1:B:4122:MET:HE3	1.84	0.58
1:D:2515:GLN:NE2	1:D:2568:LEU:O	2.36	0.58
1:C:2523:ASP:OD1	1:C:2524:VAL:HG13	2.02	0.58
1:D:1552:VAL:HG11	1:D:1562:ILE:HD13	1.84	0.58
1:C:984:LEU:HG	1:C:987:ARG:NH2	2.18	0.58
1:C:988:LEU:HB2	1:C:1039:LEU:HD21	1.83	0.58
1:C:4087:LEU:HB2	1:C:4122:MET:HE3	1.84	0.58
1:A:1024:TYR:OH	1:A:1036:ARG:NH1	2.36	0.58
1:D:2534:ALA:HB3	1:D:2588:ARG:HH21	1.68	0.58
1:C:1570:LYS:O	1:C:1572:ILE:HD12	2.03	0.58
1:A:988:LEU:HB2	1:A:1039:LEU:HD21	1.83	0.58
1:A:4754:ASN:OD1	1:A:4755:GLU:N	2.36	0.58
1:D:224:HIS:HA	1:D:388:LEU:HD23	1.86	0.58
1:C:3097:GLU:O	1:C:3100:SER:OG	2.19	0.58
1:C:3825:GLU:N	1:C:3825:GLU:OE1	2.36	0.58
1:C:4754:ASN:OD1	1:C:4755:GLU:N	2.36	0.58
1:A:568:LEU:HD12	1:A:602:VAL:HG13	1.84	0.58
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.35	0.58
1:B:2466:LEU:HD23	1:B:2502:MET:SD	2.44	0.58
1:B:3097:GLU:O	1:B:3100:SER:OG	2.19	0.58
1:B:4705:VAL:HG22	1:B:4711:PHE:HD1	1.68	0.58
1:D:473:ASN:O	1:D:477:LEU:HD13	2.03	0.58
1:D:984:LEU:HG	1:D:987:ARG:NH2	2.18	0.58
1:C:887:ILE:CD1	1:C:907:LEU:HD11	2.34	0.58
1:C:3052:HIS:CD2	1:C:3127:GLN:HE22	2.22	0.58
1:A:907:LEU:HD21	1:A:961:MET:HE3	1.86	0.58
1:A:4722:ARG:HH21	1:A:4748:LEU:HD12	1.69	0.58
1:D:907:LEU:HD21	1:D:961:MET:HE3	1.86	0.58
1:D:4722:ARG:HH21	1:D:4748:LEU:HD12	1.69	0.58
1:C:4749:GLU:OE1	1:C:4753:HIS:CD2	2.56	0.58
1:A:984:LEU:HG	1:A:987:ARG:NH2	2.18	0.58
1:A:1552:VAL:HG11	1:A:1562:ILE:HD13	1.84	0.58
1:A:2515:GLN:NE2	1:A:2568:LEU:O	2.36	0.58
1:A:3377:GLU:OE1	1:A:3380:ARG:NH2	2.37	0.58
1:A:4070:ASP:OD2	1:A:4071:ILE:N	2.37	0.58
1:A:4705:VAL:HG22	1:A:4711:PHE:HD1	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2226:PRO:O	1:B:2267:MET:HE1	2.04	0.58
1:B:3111:ARG:NH2	1:B:3175:LEU:HA	2.19	0.58
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.03	0.58
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.03	0.58
1:C:224:HIS:HA	1:C:388:LEU:HD23	1.86	0.58
1:A:887:ILE:CD1	1:A:907:LEU:HD11	2.34	0.58
1:B:473:ASN:O	1:B:477:LEU:HD13	2.03	0.58
1:B:4070:ASP:OD2	1:B:4071:ILE:N	2.37	0.58
1:B:4821:LYS:O	1:B:4825:THR:HG23	2.04	0.58
1:D:894:GLY:HA3	1:D:903:LEU:HB3	1.86	0.58
1:C:2466:LEU:HD23	1:C:2502:MET:SD	2.44	0.58
1:A:2466:LEU:HD23	1:A:2502:MET:SD	2.44	0.58
1:B:1024:TYR:OH	1:B:1036:ARG:NH1	2.36	0.58
1:B:2285:GLU:CG	1:B:3858:MET:HE1	2.31	0.58
1:B:2515:GLN:NE2	1:B:2568:LEU:O	2.36	0.58
1:B:3052:HIS:CD2	1:B:3127:GLN:HE22	2.22	0.58
1:D:568:LEU:HD12	1:D:602:VAL:HG13	1.84	0.58
1:D:887:ILE:CD1	1:D:907:LEU:HD11	2.34	0.58
1:D:2466:LEU:HD23	1:D:2502:MET:SD	2.44	0.58
1:D:4655:PHE:HA	1:D:4796:MET:HE1	1.86	0.58
1:C:3709:ALA:HB2	1:C:3782:MET:SD	2.44	0.58
1:D:238:SER:OG	1:D:240:ASP:OD1	2.20	0.57
1:D:1821:ASP:OD2	1:D:1837:GLN:NE2	2.37	0.57
1:D:3671:ASP:OD1	1:D:3672:ARG:N	2.38	0.57
1:C:473:ASN:O	1:C:477:LEU:HD13	2.03	0.57
1:A:1996:ARG:HE	1:A:1999:ARG:HH12	1.50	0.57
2:G:20:GLN:NE2	2:G:106:LEU:HD13	2.19	0.57
1:B:887:ILE:CD1	1:B:907:LEU:HD11	2.34	0.57
1:B:4655:PHE:HA	1:B:4796:MET:HE1	1.86	0.57
1:A:2226:PRO:O	1:A:2267:MET:HE1	2.04	0.57
1:A:3111:ARG:NH2	1:A:3175:LEU:HA	2.19	0.57
1:B:2869:ARG:NH1	1:B:2947:ASP:HB2	2.19	0.57
1:D:797:HIS:ND1	1:D:821:LEU:HD23	2.18	0.57
1:D:3111:ARG:NH2	1:D:3175:LEU:HA	2.19	0.57
1:D:4070:ASP:OD2	1:D:4071:ILE:N	2.37	0.57
1:C:1068:ARG:HA	1:C:1071:ARG:HH11	1.69	0.57
1:C:3308:THR:OG1	1:C:3310:ASP:OD1	2.21	0.57
1:A:473:ASN:O	1:A:477:LEU:HD13	2.03	0.57
1:A:894:GLY:HA3	1:A:903:LEU:HB3	1.86	0.57
1:A:2869:ARG:NH1	1:A:2947:ASP:HB2	2.19	0.57
2:H:20:GLN:NE2	2:H:106:LEU:HD13	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1821:ASP:OD2	1:B:1837:GLN:NE2	2.37	0.57
1:D:3343:GLN:O	1:D:3346:VAL:HG12	2.05	0.57
1:D:4087:LEU:HB2	1:D:4122:MET:HE3	1.84	0.57
1:D:4821:LYS:O	1:D:4825:THR:HG23	2.04	0.57
1:C:553:ARG:NE	1:C:555:GLU:OE2	2.36	0.57
1:C:1552:VAL:HG11	1:C:1562:ILE:HD13	1.84	0.57
1:A:1978:ALA:C	1:A:1982:ARG:CZ	2.77	0.57
1:B:1068:ARG:HA	1:B:1071:ARG:HH11	1.69	0.57
1:B:3709:ALA:HB2	1:B:3782:MET:SD	2.44	0.57
1:D:1570:LYS:O	1:D:1572:ILE:HD12	2.03	0.57
1:D:3709:ALA:HB2	1:D:3782:MET:SD	2.44	0.57
1:C:2226:PRO:O	1:C:2267:MET:HE1	2.04	0.57
1:C:4705:VAL:HG22	1:C:4711:PHE:HD1	1.68	0.57
1:A:3343:GLN:O	1:A:3346:VAL:HG12	2.05	0.57
2:E:20:GLN:NE2	2:E:106:LEU:HD13	2.19	0.57
1:C:3343:GLN:O	1:C:3346:VAL:HG12	2.05	0.57
1:C:3377:GLU:OE1	1:C:3380:ARG:NH2	2.37	0.57
1:D:1978:ALA:C	1:D:1982:ARG:CZ	2.78	0.57
1:D:2437:ALA:O	1:D:2508:ARG:NH2	2.38	0.57
1:C:1031:THR:O	1:C:1035:ASN:OD1	2.22	0.57
1:C:4722:ARG:NE	1:C:4748:LEU:HD11	2.20	0.57
1:B:1434:TYR:HB2	1:B:1572:ILE:HG21	1.87	0.57
1:C:971:ASP:OD2	1:C:973:SER:OG	2.14	0.57
1:C:2437:ALA:O	1:C:2508:ARG:NH2	2.38	0.57
1:C:2751:LEU:HD11	1:C:2817:ILE:HD12	1.87	0.57
1:C:3111:ARG:NH2	1:C:3175:LEU:HA	2.19	0.57
1:C:3671:ASP:OD1	1:C:3672:ARG:N	2.37	0.57
1:C:4821:LYS:O	1:C:4825:THR:HG23	2.04	0.57
1:A:1821:ASP:OD2	1:A:1837:GLN:NE2	2.37	0.57
1:B:907:LEU:HD21	1:B:961:MET:HE3	1.86	0.57
1:B:3671:ASP:OD1	1:B:3672:ARG:N	2.37	0.57
1:D:160:GLY:O	1:C:3984:ARG:NH2	2.32	0.57
1:D:1996:ARG:HE	1:D:1999:ARG:HH12	1.50	0.57
1:D:3052:HIS:CD2	1:D:3127:GLN:HE22	2.22	0.57
1:D:4722:ARG:NE	1:D:4748:LEU:HD11	2.20	0.57
1:C:35:LEU:HD23	1:C:51:PRO:HA	1.86	0.57
1:C:907:LEU:HD21	1:C:961:MET:HE3	1.86	0.57
1:A:3671:ASP:OD1	1:A:3672:ARG:N	2.37	0.57
2:E:15:PHE:O	2:E:17:LYS:NZ	2.38	0.57
2:F:15:PHE:O	2:F:17:LYS:NZ	2.38	0.57
1:B:2226:PRO:HB2	1:B:2267:MET:HE3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3343:GLN:O	1:B:3346:VAL:HG12	2.05	0.57
1:D:35:LEU:HD23	1:D:51:PRO:HA	1.87	0.57
1:D:1434:TYR:HB2	1:D:1572:ILE:HG21	1.87	0.57
1:C:1821:ASP:OD2	1:C:1837:GLN:NE2	2.37	0.57
1:C:2226:PRO:HB2	1:C:2267:MET:HE3	1.87	0.57
1:A:1031:THR:O	1:A:1035:ASN:OD1	2.22	0.56
1:A:3097:GLU:O	1:A:3100:SER:OG	2.19	0.56
1:A:3529:ASP:OD2	1:A:3595:ARG:NH2	2.35	0.56
1:A:3709:ALA:HB2	1:A:3782:MET:SD	2.44	0.56
1:A:3941:ASP:OD1	1:A:3942:VAL:N	2.38	0.56
1:B:4722:ARG:HH21	1:B:4748:LEU:HD12	1.69	0.56
1:D:3103:ILE:HD13	1:D:3168:THR:HG23	1.86	0.56
1:D:3365:LEU:HD11	1:D:3405:LEU:HD12	1.87	0.56
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.87	0.56
1:C:2869:ARG:NH1	1:C:2947:ASP:HB2	2.19	0.56
1:A:2437:ALA:O	1:A:2508:ARG:NH2	2.38	0.56
1:A:3695:PRO:HB3	1:A:3699:HIS:ND1	2.20	0.56
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.87	0.56
1:B:1978:ALA:C	1:B:1982:ARG:CZ	2.77	0.56
1:B:3377:GLU:OE1	1:B:3380:ARG:NH2	2.37	0.56
1:D:3084:GLY:O	1:D:3089:LYS:NZ	2.37	0.56
1:C:4722:ARG:HH21	1:C:4748:LEU:HD12	1.69	0.56
1:A:4821:LYS:O	1:A:4825:THR:HG23	2.04	0.56
1:B:1031:THR:O	1:B:1035:ASN:OD1	2.22	0.56
1:B:2469:ILE:HD13	1:B:2502:MET:HE3	1.88	0.56
1:B:3401:LEU:HD23	1:B:3451:PHE:HE1	1.70	0.56
1:B:4722:ARG:NE	1:B:4748:LEU:HD11	2.20	0.56
1:D:2226:PRO:O	1:D:2267:MET:HE1	2.04	0.56
1:D:2751:LEU:HD11	1:D:2817:ILE:HD12	1.87	0.56
1:D:2869:ARG:NH1	1:D:2947:ASP:HB2	2.19	0.56
1:D:3377:GLU:OE1	1:D:3380:ARG:NH2	2.37	0.56
1:D:3401:LEU:HD23	1:D:3451:PHE:HE1	1.70	0.56
1:D:3695:PRO:HB3	1:D:3699:HIS:ND1	2.20	0.56
1:C:1434:TYR:HB2	1:C:1572:ILE:HG21	1.87	0.56
1:C:1978:ALA:C	1:C:1982:ARG:CZ	2.77	0.56
1:C:1996:ARG:HE	1:C:1999:ARG:HH12	1.50	0.56
1:C:2927:LEU:O	1:C:2931:GLN:OE1	2.24	0.56
1:C:3084:GLY:O	1:C:3089:LYS:NZ	2.37	0.56
1:C:4070:ASP:OD2	1:C:4071:ILE:N	2.37	0.56
1:A:2226:PRO:HB2	1:A:2267:MET:HE3	1.87	0.56
1:A:2534:ALA:HB1	1:A:2588:ARG:NE	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3052:HIS:CD2	1:A:3127:GLN:HE22	2.22	0.56
2:H:15:PHE:O	2:H:17:LYS:NZ	2.38	0.56
2:F:20:GLN:NE2	2:F:106:LEU:HD13	2.19	0.56
1:B:35:LEU:HD23	1:B:51:PRO:HA	1.87	0.56
1:B:877:ASN:ND2	1:B:1045:THR:HG21	2.21	0.56
1:A:1434:TYR:HB2	1:A:1572:ILE:HG21	1.87	0.56
1:A:4655:PHE:HA	1:A:4796:MET:HE1	1.86	0.56
1:D:3941:ASP:OD1	1:D:3942:VAL:N	2.38	0.56
1:C:3695:PRO:HB3	1:C:3699:HIS:ND1	2.20	0.56
1:A:2782:ASP:O	1:A:2786:LYS:N	2.39	0.56
1:A:3103:ILE:HD13	1:A:3168:THR:HG23	1.86	0.56
1:A:3813:GLN:HG2	1:A:3899:PHE:HE2	1.71	0.56
1:A:4722:ARG:NE	1:A:4748:LEU:HD11	2.20	0.56
1:B:321:GLU:OE1	1:B:321:GLU:N	2.39	0.56
1:B:4848:VAL:HG11	1:B:4887:MET:HG2	1.88	0.56
1:D:98:HIS:C	1:D:99:ARG:HD2	2.31	0.56
1:D:884:LEU:CD2	1:D:955:LEU:HD11	2.31	0.56
1:D:1031:THR:O	1:D:1035:ASN:OD1	2.22	0.56
1:D:1068:ARG:HA	1:D:1071:ARG:HH11	1.69	0.56
1:D:2285:GLU:CG	1:D:3858:MET:HE1	2.31	0.56
1:D:3248:ARG:NH2	1:D:3252:ASP:OD1	2.37	0.56
1:C:2469:ILE:HD13	1:C:2502:MET:HE3	1.88	0.56
1:A:98:HIS:C	1:A:99:ARG:HD2	2.31	0.56
1:A:1045:THR:HG22	1:A:1049:TYR:CZ	2.41	0.56
1:B:3813:GLN:HG2	1:B:3899:PHE:HE2	1.71	0.56
1:B:4655:PHE:HA	1:B:4796:MET:CE	2.36	0.56
1:D:2226:PRO:HB2	1:D:2267:MET:HE3	1.87	0.56
1:D:4655:PHE:HA	1:D:4796:MET:CE	2.36	0.56
1:C:98:HIS:C	1:C:99:ARG:HD2	2.31	0.56
1:C:2229:VAL:HB	1:C:2267:MET:HE1	1.88	0.56
1:A:2977:LEU:HD22	1:A:3056:LEU:HD23	1.88	0.56
1:B:894:GLY:HA3	1:B:903:LEU:HB3	1.86	0.56
1:B:1996:ARG:HE	1:B:1999:ARG:HH12	1.50	0.56
1:B:2927:LEU:O	1:B:2931:GLN:OE1	2.24	0.56
1:B:3365:LEU:HD11	1:B:3405:LEU:HD12	1.87	0.56
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.87	0.56
1:C:3103:ILE:HD13	1:C:3168:THR:HG23	1.86	0.56
1:C:3813:GLN:HG2	1:C:3899:PHE:HE2	1.71	0.56
1:A:35:LEU:HD23	1:A:51:PRO:HA	1.86	0.56
1:A:1068:ARG:HA	1:A:1071:ARG:HH11	1.69	0.56
1:A:2196:ASN:OD1	1:A:2199:ARG:NH2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3365:LEU:HD11	1:A:3405:LEU:HD12	1.86	0.56
1:B:2229:VAL:HB	1:B:2267:MET:HE1	1.88	0.56
1:B:3016:TYR:O	1:B:3031:ALA:N	2.39	0.56
1:B:3695:PRO:HB3	1:B:3699:HIS:ND1	2.20	0.56
1:D:2229:VAL:HB	1:D:2267:MET:HE1	1.88	0.56
1:D:2782:ASP:O	1:D:2786:LYS:N	2.39	0.56
1:D:2977:LEU:HD22	1:D:3056:LEU:HD23	1.88	0.56
1:C:321:GLU:OE1	1:C:321:GLU:N	2.39	0.56
1:C:3365:LEU:HD11	1:C:3405:LEU:HD12	1.87	0.56
1:A:2469:ILE:HD13	1:A:2502:MET:HE3	1.88	0.56
1:A:2751:LEU:HD11	1:A:2817:ILE:HD12	1.87	0.56
1:A:3477:LYS:HZ3	1:B:1141:ARG:HB2	1.71	0.56
1:D:1045:THR:HG22	1:D:1049:TYR:CZ	2.41	0.56
1:D:1141:ARG:HB2	1:C:3477:LYS:HZ3	1.70	0.56
1:C:2782:ASP:O	1:C:2786:LYS:N	2.39	0.56
1:C:4747:SER:O	1:C:4751:THR:HG23	2.06	0.56
1:A:877:ASN:ND2	1:A:1045:THR:HG21	2.21	0.55
1:A:4848:VAL:HG11	1:A:4887:MET:HG2	1.88	0.55
1:B:2775:TRP:CZ3	1:B:2785:LEU:HD11	2.42	0.55
1:D:4747:SER:O	1:D:4751:THR:HG23	2.06	0.55
1:C:4655:PHE:HA	1:C:4796:MET:HE1	1.86	0.55
1:C:4848:VAL:HG11	1:C:4887:MET:HG2	1.88	0.55
1:A:1930:LYS:O	1:A:1930:LYS:HD3	2.07	0.55
1:A:2927:LEU:O	1:A:2931:GLN:OE1	2.24	0.55
1:A:4655:PHE:HA	1:A:4796:MET:CE	2.36	0.55
1:B:3529:ASP:OD2	1:B:3595:ARG:NH2	2.35	0.55
1:D:877:ASN:ND2	1:D:1045:THR:HG21	2.21	0.55
1:A:3248:ARG:NH2	1:A:3252:ASP:OD1	2.37	0.55
1:B:1930:LYS:O	1:B:1930:LYS:HD3	2.06	0.55
1:B:1943:LEU:CD1	1:B:2101:MET:HE1	2.37	0.55
1:B:2239:PHE:HA	1:B:2242:ILE:HD12	1.89	0.55
1:B:3514:LEU:HD21	1:B:3602:VAL:HG11	1.88	0.55
1:D:2135:LEU:HD12	1:D:3658:LYS:NZ	2.22	0.55
1:D:2872:GLN:O	1:D:2876:GLU:OE1	2.25	0.55
1:D:4848:VAL:HG11	1:D:4887:MET:HG2	1.88	0.55
1:C:1024:TYR:OH	1:C:1036:ARG:NH1	2.36	0.55
1:C:1943:LEU:CD1	1:C:2101:MET:HE1	2.37	0.55
1:C:2872:GLN:O	1:C:2876:GLU:OE1	2.25	0.55
1:C:3016:TYR:O	1:C:3031:ALA:N	2.39	0.55
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.87	0.55
1:A:3401:LEU:HD23	1:A:3451:PHE:HE1	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1045:THR:HG22	1:B:1049:TYR:CZ	2.41	0.55
1:B:4747:SER:O	1:B:4751:THR:HG23	2.06	0.55
1:D:1943:LEU:CD1	1:D:2101:MET:HE1	2.37	0.55
1:D:3813:GLN:HG2	1:D:3899:PHE:HE2	1.71	0.55
1:C:4241:THR:CG2	1:C:4989:MET:HE1	2.37	0.55
1:A:2239:PHE:HA	1:A:2242:ILE:HD12	1.89	0.55
1:B:98:HIS:C	1:B:99:ARG:HD2	2.31	0.55
1:B:2782:ASP:O	1:B:2786:LYS:N	2.39	0.55
1:B:3103:ILE:HD13	1:B:3168:THR:HG23	1.86	0.55
1:B:3266:MET:HE2	1:B:3269:VAL:HB	1.89	0.55
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.88	0.55
1:D:981:GLN:O	1:D:985:VAL:HG23	2.07	0.55
1:D:1999:ARG:O	1:D:3638:MET:HE3	2.07	0.55
1:D:2469:ILE:HD13	1:D:2502:MET:HE3	1.88	0.55
1:C:894:GLY:HA3	1:C:903:LEU:HB3	1.86	0.55
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.88	0.55
1:A:2135:LEU:HD12	1:A:3658:LYS:NZ	2.22	0.55
2:G:15:PHE:O	2:G:17:LYS:NZ	2.38	0.55
1:D:2927:LEU:O	1:D:2931:GLN:OE1	2.24	0.55
1:D:3951:PHE:CE1	1:D:3999:MET:HE1	2.42	0.55
1:C:877:ASN:ND2	1:C:1045:THR:HG21	2.21	0.55
1:C:1999:ARG:O	1:C:3638:MET:HE3	2.07	0.55
1:C:2135:LEU:HD12	1:C:3658:LYS:NZ	2.21	0.55
1:A:1943:LEU:CD1	1:A:2101:MET:HE1	2.37	0.55
1:B:384:MET:HE1	1:C:167:ASP:HA	1.89	0.55
1:B:1421:ARG:O	1:B:1570:LYS:NZ	2.33	0.55
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.42	0.55
1:B:2437:ALA:O	1:B:2508:ARG:NH2	2.38	0.55
1:B:4241:THR:CG2	1:B:4989:MET:HE1	2.37	0.55
1:C:2977:LEU:HD22	1:C:3056:LEU:HD23	1.88	0.55
1:C:3401:LEU:HD23	1:C:3451:PHE:HE1	1.70	0.55
1:C:3941:ASP:OD1	1:C:3942:VAL:N	2.38	0.55
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.42	0.55
1:B:1005:TRP:HB3	1:B:1021:LEU:HD22	1.89	0.55
1:B:3477:LYS:HZ3	1:C:1141:ARG:HB2	1.72	0.55
1:D:3107:VAL:O	1:D:3111:ARG:HG3	2.07	0.55
1:C:408:ALA:HB2	1:C:483:MET:HE1	1.89	0.55
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.42	0.55
1:C:4655:PHE:HA	1:C:4796:MET:CE	2.36	0.55
1:C:4705:VAL:HG13	1:C:4711:PHE:CE1	2.42	0.55
1:A:321:GLU:OE1	1:A:321:GLU:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1005:TRP:HB3	1:A:1021:LEU:HD22	1.89	0.55
1:A:3951:PHE:CE1	1:A:3999:MET:HE1	2.42	0.55
1:A:4098:ASP:OD1	1:A:4099:SER:N	2.40	0.55
1:A:4241:THR:CG2	1:A:4989:MET:HE1	2.37	0.55
1:B:2977:LEU:HD22	1:B:3056:LEU:HD23	1.88	0.55
1:D:2196:ASN:OD1	1:D:2199:ARG:NH2	2.35	0.55
1:D:3825:GLU:OE1	1:D:3825:GLU:N	2.36	0.55
1:C:981:GLN:O	1:C:985:VAL:HG23	2.07	0.55
1:A:2229:VAL:HB	1:A:2267:MET:HE1	1.88	0.55
1:A:2858:GLN:O	1:A:2860:PRO:HD3	2.07	0.55
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.88	0.55
1:B:2135:LEU:HD12	1:B:3658:LYS:NZ	2.21	0.55
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.89	0.55
1:B:2872:GLN:O	1:B:2876:GLU:OE1	2.25	0.55
1:B:3084:GLY:O	1:B:3089:LYS:NZ	2.37	0.55
1:B:3941:ASP:OD1	1:B:3942:VAL:N	2.38	0.55
1:D:321:GLU:OE1	1:D:321:GLU:N	2.39	0.55
1:D:408:ALA:HB2	1:D:483:MET:HE1	1.89	0.55
1:D:1930:LYS:O	1:D:1930:LYS:HD3	2.06	0.55
1:D:1978:ALA:C	1:D:1982:ARG:NH1	2.65	0.55
1:A:3061:ALA:O	1:A:3065:VAL:HG23	2.07	0.54
1:A:3084:GLY:O	1:A:3089:LYS:NZ	2.37	0.54
1:D:167:ASP:HA	1:C:384:MET:HE1	1.88	0.54
1:C:2858:GLN:O	1:C:2860:PRO:HD3	2.07	0.54
1:C:2948:THR:HB	1:C:2952:GLU:HB2	1.90	0.54
1:C:3061:ALA:O	1:C:3065:VAL:HG23	2.07	0.54
1:C:3107:VAL:O	1:C:3111:ARG:HG3	2.07	0.54
1:C:4176:PRO:O	1:C:4202:ARG:NH2	2.40	0.54
1:A:897:ARG:NH2	1:A:906:CYS:SG	2.73	0.54
1:A:2660:GLY:HA3	1:A:2666:VAL:HG12	1.89	0.54
1:A:3107:VAL:O	1:A:3111:ARG:HG3	2.07	0.54
1:A:3266:MET:HE2	1:A:3269:VAL:HB	1.89	0.54
1:A:4176:PRO:O	1:A:4202:ARG:NH2	2.40	0.54
1:B:3061:ALA:O	1:B:3065:VAL:HG23	2.07	0.54
1:B:4098:ASP:OD1	1:B:4099:SER:N	2.40	0.54
1:C:1978:ALA:C	1:C:1982:ARG:NH1	2.65	0.54
1:C:4098:ASP:OD1	1:C:4099:SER:N	2.40	0.54
1:A:167:ASP:HA	1:D:384:MET:HE1	1.87	0.54
1:A:384:MET:HE1	1:B:167:ASP:HA	1.89	0.54
1:A:1978:ALA:C	1:A:1982:ARG:NH1	2.65	0.54
1:A:2872:GLN:O	1:A:2876:GLU:OE1	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3514:LEU:HD21	1:A:3602:VAL:HG11	1.88	0.54
1:A:4747:SER:O	1:A:4751:THR:HG23	2.06	0.54
1:A:4839:MET:HE3	1:D:4820:VAL:HG11	1.89	0.54
1:B:2026:ASP:OD1	1:B:2027:ILE:N	2.40	0.54
1:D:3061:ALA:O	1:D:3065:VAL:HG23	2.07	0.54
1:C:2239:PHE:HA	1:C:2242:ILE:HD12	1.89	0.54
1:A:2775:TRP:CZ3	1:A:2785:LEU:HD11	2.42	0.54
1:A:3891:LEU:O	1:A:3899:PHE:HD2	1.90	0.54
1:B:2948:THR:HB	1:B:2952:GLU:HB2	1.90	0.54
1:B:3308:THR:OG1	1:B:3310:ASP:OD1	2.21	0.54
1:B:4176:PRO:O	1:B:4202:ARG:NH2	2.40	0.54
1:D:1005:TRP:HB3	1:D:1021:LEU:HD22	1.89	0.54
1:D:2858:GLN:O	1:D:2860:PRO:HD3	2.07	0.54
1:D:2960:LEU:HB3	1:D:3038:MET:HE2	1.90	0.54
1:C:1045:THR:HG22	1:C:1049:TYR:CZ	2.41	0.54
1:C:2775:TRP:CZ3	1:C:2785:LEU:HD11	2.42	0.54
1:C:3442:PHE:CE1	1:C:3511:VAL:HG12	2.42	0.54
1:A:2026:ASP:OD1	1:A:2027:ILE:N	2.40	0.54
1:A:2751:LEU:CD2	1:A:2755:ILE:HD11	2.38	0.54
1:B:2751:LEU:HD11	1:B:2817:ILE:HD12	1.87	0.54
1:D:2775:TRP:CZ3	1:D:2785:LEU:HD11	2.42	0.54
1:D:3442:PHE:CE1	1:D:3511:VAL:HG12	2.42	0.54
1:D:4098:ASP:OD1	1:D:4099:SER:N	2.40	0.54
1:D:4176:PRO:O	1:D:4202:ARG:NH2	2.40	0.54
1:C:1930:LYS:O	1:C:1930:LYS:HD3	2.07	0.54
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.89	0.54
1:C:2869:ARG:CZ	1:C:2947:ASP:HB2	2.38	0.54
1:A:2948:THR:HB	1:A:2952:GLU:HB2	1.90	0.54
1:B:213:TYR:CE1	1:B:340:LYS:HD3	2.43	0.54
1:B:1999:ARG:O	1:B:3638:MET:HE3	2.07	0.54
1:B:2751:LEU:CD2	1:B:2755:ILE:HD11	2.38	0.54
1:D:2026:ASP:OD1	1:D:2027:ILE:N	2.40	0.54
1:D:2239:PHE:HA	1:D:2242:ILE:HD12	1.89	0.54
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.89	0.54
1:D:2751:LEU:CD2	1:D:2755:ILE:HD11	2.38	0.54
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.88	0.54
1:C:897:ARG:NH2	1:C:906:CYS:SG	2.73	0.54
1:C:2960:LEU:HB3	1:C:3038:MET:HE2	1.90	0.54
1:A:408:ALA:HB2	1:A:483:MET:HE1	1.89	0.54
1:A:981:GLN:O	1:A:985:VAL:HG23	2.07	0.54
1:A:4705:VAL:HG13	1:A:4711:PHE:CE1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3107:VAL:O	1:B:3111:ARG:HG3	2.07	0.54
1:B:3442:PHE:CE1	1:B:3511:VAL:HG12	2.42	0.54
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.90	0.54
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.42	0.54
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.81	0.54
1:A:1427:ILE:HG23	1:A:1428:LEU:HD22	1.90	0.54
1:A:2233:CYS:O	1:A:2236:LEU:N	2.41	0.54
1:B:408:ALA:HB2	1:B:483:MET:HE1	1.89	0.54
1:B:2960:LEU:HB3	1:B:3038:MET:HE2	1.90	0.54
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.90	0.54
1:B:3448:SER:O	1:B:3452:LYS:NZ	2.37	0.54
1:B:3689:GLU:OE2	1:B:3694:LYS:HB2	2.08	0.54
1:B:3951:PHE:CE1	1:B:3999:MET:HE1	2.42	0.54
1:D:213:TYR:CE1	1:D:340:LYS:HD3	2.43	0.54
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.81	0.54
1:D:2948:THR:HB	1:D:2952:GLU:HB2	1.90	0.54
1:D:3529:ASP:OD2	1:D:3595:ARG:NH2	2.35	0.54
1:C:3514:LEU:HD21	1:C:3602:VAL:HG11	1.88	0.54
1:C:3951:PHE:CE1	1:C:3999:MET:HE1	2.42	0.54
1:A:3016:TYR:O	1:A:3031:ALA:N	2.39	0.54
1:B:281:ARG:NH2	1:B:309:THR:OG1	2.41	0.54
1:B:908:VAL:HG23	1:B:963:ASN:ND2	2.23	0.54
1:B:3891:LEU:O	1:B:3899:PHE:HD2	1.90	0.54
1:B:4705:VAL:HG13	1:B:4711:PHE:CE1	2.42	0.54
1:D:3514:LEU:HD21	1:D:3602:VAL:HG11	1.88	0.54
1:D:4241:THR:CG2	1:D:4989:MET:HE1	2.37	0.54
1:C:213:TYR:CE1	1:C:340:LYS:HD3	2.43	0.54
1:C:2751:LEU:CD2	1:C:2755:ILE:HD11	2.38	0.54
1:C:3266:MET:HE2	1:C:3269:VAL:HB	1.89	0.54
1:A:1999:ARG:O	1:A:3638:MET:HE3	2.07	0.54
1:A:2771:ILE:HG22	1:B:1506:GLN:OE1	2.08	0.54
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.90	0.54
1:B:1978:ALA:C	1:B:1982:ARG:NH1	2.65	0.54
1:B:2233:CYS:O	1:B:2236:LEU:N	2.41	0.54
1:B:2660:GLY:HA3	1:B:2666:VAL:HG12	1.89	0.54
1:D:281:ARG:NH2	1:D:309:THR:OG1	2.41	0.54
1:C:3330:ASP:OD1	1:C:3331:GLU:N	2.41	0.54
1:A:2869:ARG:CZ	1:A:2947:ASP:HB2	2.38	0.53
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.90	0.53
1:A:3689:GLU:OE2	1:A:3694:LYS:HB2	2.08	0.53
1:B:2858:GLN:O	1:B:2860:PRO:HD3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2871:LEU:O	1:B:2874:MET:HG2	2.08	0.53
1:D:3330:ASP:OD1	1:D:3331:GLU:N	2.41	0.53
1:A:3365:LEU:HD21	1:A:3405:LEU:HD12	1.91	0.53
1:A:3442:PHE:CE1	1:A:3511:VAL:HG12	2.42	0.53
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.81	0.53
1:B:981:GLN:O	1:B:985:VAL:HG23	2.07	0.53
1:D:1427:ILE:HG23	1:D:1428:LEU:HD22	1.90	0.53
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.90	0.53
1:D:3365:LEU:HD21	1:D:3405:LEU:HD12	1.91	0.53
1:C:908:VAL:HG13	1:C:912:SER:HB2	1.91	0.53
1:C:2233:CYS:O	1:C:2236:LEU:N	2.41	0.53
1:C:3248:ARG:NH2	1:C:3252:ASP:OD1	2.37	0.53
1:B:710:ASP:OD1	1:B:713:SER:OG	2.19	0.53
1:D:908:VAL:HG13	1:D:912:SER:HB2	1.91	0.53
1:D:2871:LEU:O	1:D:2874:MET:HG2	2.08	0.53
1:D:3689:GLU:OE2	1:D:3694:LYS:HB2	2.08	0.53
1:D:3891:LEU:O	1:D:3899:PHE:HD2	1.90	0.53
1:C:1005:TRP:HB3	1:C:1021:LEU:HD22	1.89	0.53
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.40	0.53
1:B:2534:ALA:HB1	1:B:2588:ARG:NE	2.19	0.53
1:D:2463:LEU:HA	1:D:2466:LEU:HD12	1.91	0.53
1:D:2869:ARG:CZ	1:D:2947:ASP:HB2	2.38	0.53
1:D:4705:VAL:HG13	1:D:4711:PHE:CE1	2.42	0.53
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.90	0.53
1:C:2948:THR:HB	1:C:2952:GLU:CB	2.39	0.53
1:C:3689:GLU:OE2	1:C:3694:LYS:HB2	2.08	0.53
1:A:908:VAL:HG23	1:A:963:ASN:ND2	2.23	0.53
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.89	0.53
1:B:2869:ARG:CZ	1:B:2947:ASP:HB2	2.38	0.53
1:C:2026:ASP:OD1	1:C:2027:ILE:N	2.40	0.53
1:C:3891:LEU:O	1:C:3899:PHE:HD2	1.90	0.53
1:A:3330:ASP:OD1	1:A:3331:GLU:N	2.41	0.53
1:D:69:LEU:HD13	1:D:101:LEU:HD11	1.91	0.53
1:D:908:VAL:HG23	1:D:963:ASN:ND2	2.23	0.53
1:D:3266:MET:HE2	1:D:3269:VAL:HB	1.89	0.53
1:C:69:LEU:HD13	1:C:101:LEU:HD11	1.91	0.53
1:C:238:SER:OG	1:C:240:ASP:OD1	2.20	0.53
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.91	0.53
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.81	0.53
1:C:2265:LEU:HD13	1:C:2330:ARG:NH2	2.24	0.53
1:A:281:ARG:NH2	1:A:309:THR:OG1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.91	0.53
1:A:2960:LEU:HB3	1:A:3038:MET:HE2	1.90	0.53
1:B:1427:ILE:HG23	1:B:1428:LEU:HD22	1.90	0.53
1:B:1554:VAL:HG21	1:B:1561:VAL:CG1	2.39	0.53
1:D:2658:PRO:O	1:D:2666:VAL:HG11	2.09	0.53
1:D:2948:THR:HB	1:D:2952:GLU:CB	2.39	0.53
1:C:2658:PRO:O	1:C:2666:VAL:HG11	2.09	0.53
1:A:213:TYR:CE1	1:A:340:LYS:HD3	2.43	0.53
1:A:2871:LEU:HD13	1:A:2874:MET:CE	2.39	0.53
1:B:887:ILE:HG23	1:B:959:TYR:OH	2.09	0.53
1:B:3330:ASP:OD1	1:B:3331:GLU:N	2.41	0.53
1:D:2233:CYS:O	1:D:2236:LEU:N	2.41	0.53
1:D:2265:LEU:HD13	1:D:2330:ARG:NH2	2.24	0.53
1:D:2660:GLY:HA3	1:D:2666:VAL:HG12	1.89	0.53
1:D:2871:LEU:HD13	1:D:2874:MET:CE	2.39	0.53
1:D:4000:MET:HE3	1:D:4061:PHE:HB2	1.91	0.53
1:C:281:ARG:NH2	1:C:309:THR:OG1	2.41	0.53
1:C:2226:PRO:CB	1:C:2267:MET:HE3	2.39	0.53
1:C:3365:LEU:HD21	1:C:3405:LEU:HD12	1.91	0.53
1:A:2001:PRO:HG3	1:A:3638:MET:SD	2.49	0.53
1:A:2254:LEU:HD11	1:A:2276:ALA:HB1	1.91	0.53
1:A:2463:LEU:HA	1:A:2466:LEU:HD12	1.91	0.53
1:A:2871:LEU:O	1:A:2874:MET:HG2	2.08	0.53
1:B:2001:PRO:HG3	1:B:3638:MET:SD	2.49	0.53
1:B:2138:LEU:HB2	1:B:3658:LYS:HZ1	1.74	0.53
1:B:2254:LEU:HD11	1:B:2276:ALA:HB1	1.91	0.53
1:B:2948:THR:HB	1:B:2952:GLU:CB	2.39	0.53
1:B:3365:LEU:HD21	1:B:3405:LEU:HD12	1.90	0.53
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.91	0.53
1:C:1926:LEU:HD23	1:C:1929:MET:SD	2.49	0.53
1:C:3762:ARG:NH1	1:C:4755:GLU:OE1	2.42	0.53
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.90	0.53
1:A:2265:LEU:HD13	1:A:2330:ARG:NH2	2.24	0.53
1:A:3177:THR:O	1:A:3179:LYS:NZ	2.36	0.53
1:D:3166:TYR:O	1:D:3170:CYS:SG	2.67	0.53
1:C:887:ILE:HG23	1:C:959:TYR:OH	2.09	0.53
1:C:2001:PRO:HG3	1:C:3638:MET:SD	2.49	0.53
1:C:2660:GLY:HA3	1:C:2666:VAL:HG12	1.89	0.53
1:A:69:LEU:HD13	1:A:101:LEU:HD11	1.91	0.52
1:A:887:ILE:HG23	1:A:959:TYR:OH	2.09	0.52
1:A:1421:ARG:O	1:A:1570:LYS:NZ	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2948:THR:HB	1:A:2952:GLU:CB	2.39	0.52
1:B:1926:LEU:HD23	1:B:1929:MET:SD	2.49	0.52
1:B:2265:LEU:HD13	1:B:2330:ARG:NH2	2.24	0.52
1:B:2658:PRO:O	1:B:2666:VAL:HG11	2.09	0.52
1:D:887:ILE:HG23	1:D:959:TYR:OH	2.09	0.52
1:C:233:ILE:HD12	1:C:242:ARG:HB3	1.92	0.52
1:A:3762:ARG:NH1	1:A:4755:GLU:OE1	2.42	0.52
1:A:4632:LEU:HB3	1:A:4634:GLU:OE1	2.10	0.52
1:B:69:LEU:HD13	1:B:101:LEU:HD11	1.91	0.52
1:B:2196:ASN:OD1	1:B:2199:ARG:NH2	2.35	0.52
1:D:233:ILE:HD12	1:D:242:ARG:HB3	1.92	0.52
1:D:2001:PRO:HG3	1:D:3638:MET:SD	2.49	0.52
1:D:3762:ARG:NH1	1:D:4755:GLU:OE1	2.42	0.52
1:C:908:VAL:HG23	1:C:963:ASN:ND2	2.23	0.52
1:C:2534:ALA:HB1	1:C:2588:ARG:NE	2.19	0.52
1:A:3166:TYR:O	1:A:3170:CYS:SG	2.67	0.52
1:A:4928:LEU:HA	1:A:4931:ILE:HD12	1.91	0.52
1:B:2226:PRO:CB	1:B:2267:MET:HE3	2.39	0.52
1:C:1427:ILE:HG23	1:C:1428:LEU:HD22	1.90	0.52
1:C:2668:SER:O	1:C:2669:GLU:CB	2.57	0.52
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.90	0.52
1:A:233:ILE:HD12	1:A:242:ARG:HB3	1.92	0.52
1:B:2908:TYR:CZ	1:B:2916:LYS:HG3	2.45	0.52
1:B:3104:GLU:O	1:B:3107:VAL:HG22	2.10	0.52
1:B:3166:TYR:O	1:B:3170:CYS:SG	2.67	0.52
1:B:3762:ARG:NH1	1:B:4755:GLU:OE1	2.42	0.52
1:B:4000:MET:HE3	1:B:4061:PHE:HB2	1.91	0.52
1:D:2668:SER:O	1:D:2669:GLU:CB	2.57	0.52
1:D:2747:ILE:HD12	1:D:2814:LYS:HD3	1.91	0.52
1:D:2871:LEU:HA	1:D:2874:MET:HE3	1.91	0.52
1:D:3104:GLU:O	1:D:3107:VAL:HG22	2.10	0.52
1:C:2577:ILE:H	1:C:2577:ILE:HD12	1.75	0.52
1:C:4928:LEU:HA	1:C:4931:ILE:HD12	1.91	0.52
1:A:908:VAL:HG13	1:A:912:SER:HB2	1.91	0.52
1:A:1554:VAL:HG21	1:A:1561:VAL:CG1	2.39	0.52
1:A:3477:LYS:HZ2	1:A:3479:ALA:HB2	1.75	0.52
1:B:2871:LEU:HD13	1:B:2874:MET:CE	2.39	0.52
1:D:545:ASP:OD1	1:D:582:HIS:NE2	2.40	0.52
1:D:1554:VAL:HG21	1:D:1561:VAL:CG1	2.39	0.52
1:D:1926:LEU:HD23	1:D:1929:MET:SD	2.50	0.52
1:D:2254:LEU:HD11	1:D:2276:ALA:HB1	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4839:MET:HE3	1:C:4820:VAL:HG11	1.92	0.52
1:C:545:ASP:OD1	1:C:582:HIS:NE2	2.40	0.52
1:C:2463:LEU:HA	1:C:2466:LEU:HD12	1.91	0.52
1:C:3052:HIS:HA	1:C:3127:GLN:NE2	2.25	0.52
1:C:4720:VAL:O	1:C:4724:VAL:HG23	2.10	0.52
1:A:4000:MET:HE3	1:A:4061:PHE:HB2	1.91	0.52
1:B:908:VAL:HG13	1:B:912:SER:HB2	1.91	0.52
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.90	0.52
1:B:3052:HIS:HA	1:B:3127:GLN:NE2	2.25	0.52
1:B:3201:MET:HE2	1:B:3203:VAL:HG22	1.91	0.52
1:D:575:LEU:HD22	1:D:606:LEU:HA	1.92	0.52
1:C:2138:LEU:HB2	1:C:3658:LYS:HZ1	1.75	0.52
1:C:2254:LEU:HD11	1:C:2276:ALA:HB1	1.91	0.52
1:C:2871:LEU:O	1:C:2874:MET:HG2	2.08	0.52
1:C:2894:LEU:HD12	1:C:2897:LYS:HE2	1.92	0.52
1:A:1926:LEU:HD23	1:A:1929:MET:SD	2.49	0.52
1:B:233:ILE:HD12	1:B:242:ARG:HB3	1.92	0.52
1:B:3395:ARG:HD3	1:B:3453:ARG:NH1	2.25	0.52
1:B:3573:MET:HE3	1:B:3577:ARG:HH12	1.75	0.52
1:B:4820:VAL:HG11	1:C:4839:MET:HE3	1.92	0.52
1:C:3166:TYR:O	1:C:3170:CYS:SG	2.67	0.52
1:A:575:LEU:HD22	1:A:606:LEU:HA	1.92	0.52
1:A:1039:LEU:O	1:A:1043:VAL:HG23	2.09	0.52
1:A:2658:PRO:O	1:A:2666:VAL:HG11	2.09	0.52
1:A:3052:HIS:HA	1:A:3127:GLN:NE2	2.25	0.52
1:A:4655:PHE:N	1:A:4796:MET:HE1	2.25	0.52
2:F:6:THR:HG23	2:F:6:THR:O	2.10	0.52
1:B:4928:LEU:HA	1:B:4931:ILE:HD12	1.91	0.52
1:D:2744:ASN:OD1	1:D:2745:VAL:N	2.43	0.52
1:D:3690:VAL:O	1:D:3693:LYS:HE3	2.10	0.52
1:D:4998:LYS:HB3	1:D:5003:HIS:CE1	2.45	0.52
1:C:575:LEU:HD22	1:C:606:LEU:HA	1.92	0.52
1:C:1039:LEU:O	1:C:1043:VAL:HG23	2.09	0.52
1:C:2744:ASN:OD1	1:C:2745:VAL:N	2.43	0.52
1:C:3573:MET:HE3	1:C:3577:ARG:HH12	1.75	0.52
1:A:358:THR:OG1	1:A:383:HIS:ND1	2.42	0.52
1:A:2577:ILE:H	1:A:2577:ILE:HD12	1.75	0.52
1:B:897:ARG:NH2	1:B:906:CYS:SG	2.73	0.52
1:B:1828:ASP:OD1	1:B:1828:ASP:N	2.43	0.52
1:B:2577:ILE:H	1:B:2577:ILE:HD12	1.75	0.52
1:B:5000:GLU:HA	1:B:5003:HIS:CD2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3395:ARG:HD3	1:D:3453:ARG:NH1	2.25	0.52
1:D:3997:ALA:HB1	1:D:4057:MET:SD	2.50	0.52
1:C:2871:LEU:HD13	1:C:2874:MET:CE	2.39	0.52
1:C:2871:LEU:HA	1:C:2874:MET:HE3	1.91	0.52
1:A:2775:TRP:CE3	1:A:2785:LEU:HD21	2.45	0.52
1:A:3448:SER:O	1:A:3452:LYS:NZ	2.37	0.52
1:B:1978:ALA:CB	1:B:1982:ARG:HH12	2.18	0.52
1:B:3997:ALA:HB1	1:B:4057:MET:SD	2.50	0.52
1:B:4632:LEU:HB3	1:B:4634:GLU:OE1	2.10	0.52
1:D:3230:LEU:HD23	1:D:3230:LEU:H	1.75	0.52
1:D:4720:VAL:O	1:D:4724:VAL:HG23	2.10	0.52
1:C:1424:PRO:O	1:C:1428:LEU:HD23	2.10	0.52
1:C:2196:ASN:OD1	1:C:2199:ARG:NH2	2.35	0.52
1:C:2908:TYR:CZ	1:C:2916:LYS:HG3	2.45	0.52
1:C:3690:VAL:O	1:C:3693:LYS:HE3	2.10	0.52
1:A:2226:PRO:CB	1:A:2267:MET:HE3	2.39	0.51
1:A:2668:SER:O	1:A:2669:GLU:CB	2.57	0.51
1:A:4778:TRP:O	1:A:4782:VAL:HG23	2.10	0.51
1:B:575:LEU:HD22	1:B:606:LEU:HA	1.92	0.51
1:B:1039:LEU:O	1:B:1043:VAL:HG23	2.09	0.51
1:B:2088:GLU:N	1:B:2088:GLU:OE1	2.43	0.51
1:B:2463:LEU:HA	1:B:2466:LEU:HD12	1.91	0.51
1:D:1039:LEU:O	1:D:1043:VAL:HG23	2.09	0.51
1:D:1749:PRO:HD2	1:D:1758:ARG:HH12	1.75	0.51
1:D:3016:TYR:O	1:D:3031:ALA:N	2.39	0.51
1:D:4158:PRO:HA	1:D:4161:ARG:NE	2.26	0.51
1:A:2744:ASN:OD1	1:A:2745:VAL:N	2.43	0.51
1:A:2894:LEU:HD12	1:A:2897:LYS:HE2	1.92	0.51
1:A:3104:GLU:O	1:A:3107:VAL:HG22	2.10	0.51
1:A:4576:ILE:HG23	1:A:4639:MET:SD	2.51	0.51
1:B:2744:ASN:OD1	1:B:2745:VAL:N	2.43	0.51
1:B:2747:ILE:HD12	1:B:2814:LYS:HD3	1.91	0.51
1:B:4720:VAL:O	1:B:4724:VAL:HG23	2.10	0.51
1:D:2226:PRO:CB	1:D:2267:MET:HE3	2.39	0.51
1:D:4655:PHE:N	1:D:4796:MET:HE1	2.25	0.51
1:C:1554:VAL:HG21	1:C:1561:VAL:CG1	2.39	0.51
1:C:2775:TRP:CE3	1:C:2785:LEU:HD21	2.45	0.51
1:C:3104:GLU:O	1:C:3107:VAL:HG22	2.10	0.51
1:C:3395:ARG:HD3	1:C:3453:ARG:NH1	2.25	0.51
1:C:5000:GLU:HA	1:C:5003:HIS:CD2	2.45	0.51
1:A:2000:SER:O	1:A:2005:GLN:NE2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3690:VAL:O	1:A:3693:LYS:HE3	2.10	0.51
1:A:3997:ALA:HB1	1:A:4057:MET:SD	2.50	0.51
1:B:3984:ARG:NH2	1:C:160:GLY:O	2.32	0.51
1:D:1424:PRO:O	1:D:1428:LEU:HD23	2.10	0.51
1:D:2534:ALA:HB1	1:D:2588:ARG:NE	2.19	0.51
1:D:2908:TYR:CZ	1:D:2916:LYS:HG3	2.45	0.51
1:D:4576:ILE:HG23	1:D:4639:MET:SD	2.51	0.51
1:C:399:GLN:O	1:C:403:MET:HG3	2.11	0.51
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.44	0.51
1:C:3201:MET:HE2	1:C:3203:VAL:HG22	1.91	0.51
1:C:3997:ALA:HB1	1:C:4057:MET:SD	2.50	0.51
1:C:4584:ASP:OD2	1:C:4585:SER:N	2.44	0.51
1:A:1749:PRO:HD2	1:A:1758:ARG:HH12	1.75	0.51
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.44	0.51
1:A:2138:LEU:HB2	1:A:3658:LYS:HZ1	1.75	0.51
1:A:5000:GLU:HA	1:A:5003:HIS:CD2	2.45	0.51
1:B:1424:PRO:O	1:B:1428:LEU:HD23	2.10	0.51
1:B:2894:LEU:HD12	1:B:2897:LYS:HE2	1.92	0.51
1:D:2088:GLU:OE1	1:D:2088:GLU:N	2.43	0.51
1:D:2775:TRP:CE3	1:D:2785:LEU:HD21	2.45	0.51
1:C:4632:LEU:HB3	1:C:4634:GLU:OE1	2.10	0.51
1:A:1424:PRO:O	1:A:1428:LEU:HD23	2.10	0.51
1:A:2908:TYR:CZ	1:A:2916:LYS:HG3	2.45	0.51
1:A:3573:MET:HE3	1:A:3577:ARG:HH12	1.75	0.51
1:A:4158:PRO:HA	1:A:4161:ARG:NE	2.25	0.51
1:B:774:ASP:OD2	1:B:1470:ARG:NH2	2.43	0.51
1:B:2327:GLY:CA	1:B:2330:ARG:NH2	2.74	0.51
1:B:2871:LEU:HA	1:B:2874:MET:HE3	1.91	0.51
1:B:3346:VAL:HG11	1:B:3414:ARG:CB	2.41	0.51
1:B:4778:TRP:O	1:B:4782:VAL:HG23	2.10	0.51
1:D:2894:LEU:HD12	1:D:2897:LYS:HE2	1.92	0.51
1:C:3448:SER:O	1:C:3452:LYS:NZ	2.37	0.51
1:C:4000:MET:HE3	1:C:4061:PHE:HB2	1.91	0.51
1:C:4778:TRP:O	1:C:4782:VAL:HG23	2.10	0.51
1:A:2088:GLU:OE1	1:A:2088:GLU:N	2.43	0.51
1:A:3445:TRP:O	1:A:3452:LYS:NZ	2.43	0.51
1:B:399:GLN:O	1:B:403:MET:HG3	2.11	0.51
1:B:2775:TRP:CE3	1:B:2785:LEU:HD21	2.45	0.51
1:B:4158:PRO:HA	1:B:4161:ARG:NE	2.25	0.51
1:B:4576:ILE:HG23	1:B:4639:MET:SD	2.51	0.51
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2623:LEU:O	1:D:2627:VAL:HG23	2.11	0.51
1:D:3104:GLU:HA	1:D:3107:VAL:HG22	1.93	0.51
1:D:3985:LEU:HD11	1:D:4026:MET:HE1	1.93	0.51
1:D:4632:LEU:HB3	1:D:4634:GLU:OE1	2.10	0.51
1:D:4778:TRP:O	1:D:4782:VAL:HG23	2.10	0.51
1:C:1978:ALA:CB	1:C:1982:ARG:HH12	2.18	0.51
1:C:2088:GLU:OE1	1:C:2088:GLU:N	2.43	0.51
1:C:2623:LEU:O	1:C:2627:VAL:HG23	2.11	0.51
1:C:2747:ILE:HD12	1:C:2814:LYS:HD3	1.91	0.51
1:A:2327:GLY:CA	1:A:2330:ARG:NH2	2.74	0.51
1:A:2747:ILE:HD12	1:A:2814:LYS:HD3	1.91	0.51
1:A:3104:GLU:HA	1:A:3107:VAL:HG22	1.93	0.51
1:A:3346:VAL:HG11	1:A:3414:ARG:CB	2.41	0.51
1:A:3521:GLY:HA2	1:A:3524:MET:HE2	1.93	0.51
1:A:4584:ASP:OD2	1:A:4585:SER:N	2.44	0.51
1:A:4720:VAL:O	1:A:4724:VAL:HG23	2.10	0.51
1:A:4998:LYS:HB3	1:A:5003:HIS:CE1	2.45	0.51
1:D:2519:LEU:HD22	1:D:2578:MET:HE1	1.93	0.51
1:D:4928:LEU:HA	1:D:4931:ILE:HD12	1.91	0.51
1:D:5000:GLU:HA	1:D:5003:HIS:CD2	2.45	0.51
1:C:1421:ARG:O	1:C:1570:LYS:NZ	2.33	0.51
1:A:774:ASP:OD2	1:A:1470:ARG:NH2	2.43	0.51
1:A:3985:LEU:HD11	1:A:4026:MET:HE1	1.93	0.51
2:E:52:LYS:O	2:E:53:GLN:HB2	2.11	0.51
1:B:232:THR:HG21	1:B:252:VAL:HG21	1.92	0.51
1:B:1287:LEU:HD11	1:B:1599:MET:HE3	1.93	0.51
1:B:3752:SER:O	1:B:3756:LYS:HG3	2.11	0.51
1:D:232:THR:HG21	1:D:252:VAL:HG21	1.93	0.51
1:D:399:GLN:O	1:D:403:MET:HG3	2.11	0.51
1:D:3036:LYS:O	1:D:3039:ILE:HG22	2.11	0.51
1:D:3201:MET:HE2	1:D:3203:VAL:HG22	1.91	0.51
1:C:323:LEU:C	1:C:324:ASP:OD1	2.54	0.51
1:C:358:THR:HG1	1:C:383:HIS:HD1	1.57	0.51
1:C:2434:GLY:O	1:C:2508:ARG:NE	2.36	0.51
1:C:2974:ILE:O	1:C:2978:GLU:OE1	2.29	0.51
1:A:1828:ASP:N	1:A:1828:ASP:OD1	2.43	0.51
1:A:3036:LYS:O	1:A:3039:ILE:HG22	2.11	0.51
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.75	0.51
2:H:16:PRO:HB2	2:H:50:LEU:HD11	1.92	0.51
2:F:16:PRO:HB2	2:F:50:LEU:HD11	1.92	0.51
1:B:1032:LYS:C	1:B:1036:ARG:HH12	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2668:SER:O	1:B:2669:GLU:CB	2.57	0.51
1:B:3169:LEU:CD1	1:B:3194:LEU:HD11	2.41	0.51
1:B:3699:HIS:ND1	1:B:3703:LEU:HD11	2.26	0.51
1:B:4655:PHE:N	1:B:4796:MET:HE1	2.25	0.51
1:D:2199:ARG:NE	1:D:2246:ASN:OD1	2.37	0.51
1:D:3316:LEU:HD21	1:D:3346:VAL:HG23	1.93	0.51
1:D:3401:LEU:O	1:D:3405:LEU:HD13	2.11	0.51
1:C:3316:LEU:HD21	1:C:3346:VAL:HG23	1.93	0.51
1:C:3633:VAL:O	1:C:3637:ARG:HG2	2.11	0.51
1:C:4826:ILE:O	1:C:4829:SER:OG	2.25	0.51
1:B:80:GLU:O	1:B:84:ASN:ND2	2.44	0.51
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.44	0.51
1:B:3690:VAL:O	1:B:3693:LYS:HE3	2.10	0.51
1:D:323:LEU:C	1:D:324:ASP:OD1	2.54	0.51
1:D:2577:ILE:HD12	1:D:2577:ILE:H	1.75	0.51
1:D:3052:HIS:HA	1:D:3127:GLN:NE2	2.25	0.51
1:D:3633:VAL:O	1:D:3637:ARG:HG2	2.11	0.51
1:C:1828:ASP:OD1	1:C:1828:ASP:N	2.43	0.51
1:A:3201:MET:HE2	1:A:3203:VAL:HG22	1.91	0.50
1:A:3395:ARG:HD3	1:A:3453:ARG:NH1	2.25	0.50
2:G:6:THR:HG23	2:G:6:THR:O	2.10	0.50
1:D:2327:GLY:CA	1:D:2330:ARG:NH2	2.74	0.50
1:D:3169:LEU:CD1	1:D:3194:LEU:HD11	2.41	0.50
1:C:2327:GLY:CA	1:C:2330:ARG:NH2	2.74	0.50
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.75	0.50
1:C:3455:GLU:O	1:C:3459:VAL:HG23	2.11	0.50
1:A:80:GLU:O	1:A:84:ASN:ND2	2.44	0.50
1:A:2871:LEU:HA	1:A:2874:MET:HE3	1.91	0.50
2:E:6:THR:HG23	2:E:6:THR:O	2.10	0.50
2:G:16:PRO:HB2	2:G:50:LEU:HD11	1.93	0.50
1:B:2974:ILE:O	1:B:2978:GLU:OE1	2.29	0.50
1:B:4584:ASP:OD2	1:B:4585:SER:N	2.44	0.50
1:D:2974:ILE:O	1:D:2978:GLU:OE1	2.29	0.50
1:D:4716:TRP:CD1	6:D:5304:IBM:H12	2.47	0.50
1:C:80:GLU:O	1:C:84:ASN:ND2	2.44	0.50
1:C:3104:GLU:HA	1:C:3107:VAL:HG22	1.93	0.50
1:C:3521:GLY:HA2	1:C:3524:MET:HE2	1.93	0.50
1:C:3752:SER:O	1:C:3756:LYS:HG3	2.11	0.50
1:C:4576:ILE:HG23	1:C:4639:MET:SD	2.51	0.50
1:A:160:GLY:O	1:D:3984:ARG:NH2	2.38	0.50
1:A:3169:LEU:CD1	1:A:3194:LEU:HD11	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4938:ASP:OD1	1:D:4944:ARG:NE	2.44	0.50
2:E:16:PRO:HB2	2:E:50:LEU:HD11	1.92	0.50
1:B:3104:GLU:HA	1:B:3107:VAL:HG22	1.93	0.50
1:B:3248:ARG:NH2	1:B:3252:ASP:OD1	2.37	0.50
1:B:3985:LEU:HD11	1:B:4026:MET:HE1	1.93	0.50
1:B:4182:GLU:OE1	1:B:4983:HIS:NE2	2.44	0.50
1:D:4584:ASP:OD2	1:D:4585:SER:N	2.44	0.50
1:C:774:ASP:OD2	1:C:1470:ARG:NH2	2.43	0.50
1:C:2519:LEU:HD22	1:C:2578:MET:HE1	1.93	0.50
1:A:1287:LEU:HD11	1:A:1599:MET:HE3	1.93	0.50
1:A:2552:ARG:O	1:A:2556:LEU:HD23	2.12	0.50
1:A:2623:LEU:O	1:A:2627:VAL:HG23	2.11	0.50
1:A:3633:VAL:O	1:A:3637:ARG:HG2	2.11	0.50
1:B:3036:LYS:O	1:B:3039:ILE:HG22	2.11	0.50
1:B:3455:GLU:O	1:B:3459:VAL:HG23	2.11	0.50
1:C:3036:LYS:O	1:C:3039:ILE:HG22	2.11	0.50
1:C:3690:VAL:O	1:C:3693:LYS:CE	2.60	0.50
1:C:3985:LEU:HD11	1:C:4026:MET:HE1	1.93	0.50
1:C:4655:PHE:N	1:C:4796:MET:HE1	2.25	0.50
1:A:236:ALA:O	1:A:237:ASP:OD1	2.30	0.50
1:A:988:LEU:CB	1:A:1039:LEU:HD21	2.42	0.50
1:A:1978:ALA:CB	1:A:1982:ARG:HH12	2.18	0.50
1:A:2111:VAL:HG12	1:A:2113:SER:H	1.77	0.50
1:A:3226:GLU:O	1:A:3227:ARG:HB2	2.12	0.50
1:A:4021:LYS:O	1:A:4025:VAL:HG23	2.12	0.50
1:B:236:ALA:O	1:B:237:ASP:OD1	2.30	0.50
1:B:3690:VAL:O	1:B:3693:LYS:CE	2.60	0.50
1:D:774:ASP:OD2	1:D:1470:ARG:NH2	2.43	0.50
1:D:3445:TRP:O	1:D:3452:LYS:NZ	2.43	0.50
1:C:1287:LEU:HD11	1:C:1599:MET:HE3	1.92	0.50
1:C:3699:HIS:ND1	1:C:3703:LEU:HD11	2.26	0.50
1:A:232:THR:HG21	1:A:252:VAL:HG21	1.92	0.50
1:A:323:LEU:C	1:A:324:ASP:OD1	2.54	0.50
1:A:3332:ALA:CB	1:A:3335:MET:HE3	2.42	0.50
1:A:3401:LEU:O	1:A:3405:LEU:HD13	2.11	0.50
1:A:3957:VAL:O	1:A:3961:VAL:HG23	2.12	0.50
2:F:52:LYS:O	2:F:53:GLN:HB2	2.11	0.50
1:D:80:GLU:O	1:D:84:ASN:ND2	2.44	0.50
1:D:1287:LEU:HD11	1:D:1599:MET:HE3	1.93	0.50
1:D:1828:ASP:OD1	1:D:1828:ASP:N	2.43	0.50
1:D:1978:ALA:CB	1:D:1982:ARG:HH12	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3455:GLU:O	1:D:3459:VAL:HG23	2.11	0.50
1:C:2685:SER:O	1:C:2689:LYS:HG2	2.12	0.50
1:A:2165:LEU:HD21	1:A:2177:LEU:HD23	1.94	0.50
1:A:3813:GLN:O	1:A:3899:PHE:HZ	1.95	0.50
1:B:2165:LEU:HD21	1:B:2177:LEU:HD23	1.94	0.50
1:B:2973:PHE:CE2	1:B:2995:ILE:HG12	2.47	0.50
1:B:3633:VAL:O	1:B:3637:ARG:HG2	2.11	0.50
1:D:2165:LEU:HD21	1:D:2177:LEU:HD23	1.94	0.50
1:D:2552:ARG:O	1:D:2556:LEU:HD23	2.12	0.50
1:D:3266:MET:SD	1:D:3270:ILE:HG13	2.52	0.50
1:D:3521:GLY:HA2	1:D:3524:MET:HE2	1.93	0.50
1:D:3957:VAL:O	1:D:3961:VAL:HG23	2.12	0.50
1:C:2165:LEU:HD21	1:C:2177:LEU:HD23	1.94	0.50
1:C:3957:VAL:O	1:C:3961:VAL:HG23	2.12	0.50
1:C:4583:SER:OG	1:C:4585:SER:O	2.29	0.50
1:A:2519:LEU:HD22	1:A:2578:MET:HE1	1.93	0.50
1:A:4716:TRP:CD1	6:A:5304:IBM:H12	2.47	0.50
1:B:988:LEU:CB	1:B:1039:LEU:HD21	2.42	0.50
1:B:2685:SER:O	1:B:2689:LYS:HG2	2.12	0.50
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.75	0.50
1:B:3477:LYS:HZ2	1:B:3479:ALA:HB2	1.76	0.50
1:B:4021:LYS:O	1:B:4025:VAL:HG23	2.12	0.50
1:D:897:ARG:NH2	1:D:906:CYS:SG	2.73	0.50
1:D:2138:LEU:HB2	1:D:3658:LYS:HZ1	1.76	0.50
1:D:3226:GLU:O	1:D:3227:ARG:HB2	2.12	0.50
1:C:236:ALA:O	1:C:237:ASP:OD1	2.30	0.50
1:C:3401:LEU:O	1:C:3405:LEU:HD13	2.11	0.50
1:A:1141:ARG:HB2	1:D:3477:LYS:HZ3	1.77	0.50
1:B:2552:ARG:O	1:B:2556:LEU:HD23	2.12	0.50
1:D:130:LYS:NZ	1:C:2373:GLY:O	2.44	0.50
1:D:3332:ALA:CB	1:D:3335:MET:HE3	2.41	0.50
1:C:232:THR:HG21	1:C:252:VAL:HG21	1.93	0.50
1:A:2974:ILE:O	1:A:2978:GLU:OE1	2.29	0.49
1:A:3752:SER:O	1:A:3756:LYS:HG3	2.11	0.49
1:A:4182:GLU:OE1	1:A:4983:HIS:NE2	2.44	0.49
2:E:25:HIS:CE1	2:E:45:PRO:HG3	2.47	0.49
2:G:25:HIS:CE1	2:G:45:PRO:HG3	2.47	0.49
1:B:323:LEU:C	1:B:324:ASP:OD1	2.54	0.49
1:B:1749:PRO:HD2	1:B:1758:ARG:HH12	1.75	0.49
1:D:236:ALA:O	1:D:237:ASP:OD1	2.30	0.49
1:D:2440:MET:O	1:D:2443:ILE:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2524:VAL:HG23	1:D:2525:GLY:N	2.27	0.49
1:D:3477:LYS:HZ2	1:D:3479:ALA:HB2	1.77	0.49
1:C:257:ARG:O	1:C:284:HIS:NE2	2.43	0.49
1:C:642:THR:HG23	1:C:1613:LEU:HD12	1.94	0.49
1:C:988:LEU:CB	1:C:1039:LEU:HD21	2.42	0.49
1:C:2581:SER:O	1:C:2585:THR:HG23	2.12	0.49
1:C:3169:LEU:CD1	1:C:3194:LEU:HD11	2.41	0.49
1:C:3332:ALA:CB	1:C:3335:MET:HE3	2.42	0.49
2:H:6:THR:HG23	2:H:6:THR:O	2.10	0.49
2:H:52:LYS:O	2:H:53:GLN:HB2	2.11	0.49
1:B:642:THR:HG23	1:B:1613:LEU:HD12	1.94	0.49
1:B:2623:LEU:O	1:B:2627:VAL:HG23	2.11	0.49
1:B:3401:LEU:O	1:B:3405:LEU:HD13	2.11	0.49
1:B:4998:LYS:HB3	1:B:5003:HIS:CE1	2.44	0.49
1:D:710:ASP:OD1	1:D:713:SER:OG	2.19	0.49
1:A:3455:GLU:O	1:A:3459:VAL:HG23	2.11	0.49
1:B:1978:ALA:O	1:B:1982:ARG:NH1	2.45	0.49
1:B:2524:VAL:HG23	1:B:2525:GLY:N	2.27	0.49
1:B:3332:ALA:CB	1:B:3335:MET:HE3	2.42	0.49
1:B:3365:LEU:HD21	1:B:3405:LEU:CD1	2.43	0.49
1:D:900:ASN:OD1	1:D:901:LYS:N	2.46	0.49
1:D:1260:MET:HE2	1:D:1271:ARG:HE	1.78	0.49
1:D:3752:SER:O	1:D:3756:LYS:HG3	2.11	0.49
1:C:4716:TRP:CD1	6:C:5304:IBM:H12	2.47	0.49
1:A:2973:PHE:CE2	1:A:2995:ILE:HG12	2.47	0.49
1:B:900:ASN:OD1	1:B:901:LYS:N	2.46	0.49
1:B:2538:THR:O	1:B:2542:SER:N	2.46	0.49
1:B:2581:SER:O	1:B:2585:THR:HG23	2.12	0.49
1:B:3316:LEU:HD21	1:B:3346:VAL:HG23	1.93	0.49
1:B:4716:TRP:CD1	6:B:5304:IBM:H12	2.47	0.49
1:D:2111:VAL:HG12	1:D:2113:SER:H	1.77	0.49
1:D:3690:VAL:O	1:D:3693:LYS:CE	2.60	0.49
1:D:4021:LYS:O	1:D:4025:VAL:HG23	2.12	0.49
1:C:1260:MET:HE2	1:C:1271:ARG:HE	1.78	0.49
1:C:2440:MET:O	1:C:2443:ILE:N	2.45	0.49
1:C:2524:VAL:HG23	1:C:2525:GLY:N	2.27	0.49
1:C:3226:GLU:O	1:C:3227:ARG:HB2	2.12	0.49
1:A:399:GLN:O	1:A:403:MET:HG3	2.11	0.49
1:A:710:ASP:OD1	1:A:713:SER:OG	2.19	0.49
1:A:900:ASN:OD1	1:A:901:LYS:N	2.46	0.49
1:A:2524:VAL:HG23	1:A:2525:GLY:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2660:GLY:CA	1:A:2666:VAL:HG12	2.43	0.49
1:A:3690:VAL:O	1:A:3693:LYS:CE	2.60	0.49
1:B:70:GLU:OE2	1:B:110:ARG:HD2	2.13	0.49
1:B:575:LEU:HA	1:B:578:ILE:HG12	1.95	0.49
1:B:2519:LEU:HD22	1:B:2578:MET:HE1	1.93	0.49
1:D:642:THR:HG23	1:D:1613:LEU:HD12	1.94	0.49
1:D:988:LEU:CB	1:D:1039:LEU:HD21	2.42	0.49
1:D:2973:PHE:CE2	1:D:2995:ILE:HG12	2.47	0.49
1:D:3365:LEU:HD21	1:D:3405:LEU:CD1	2.43	0.49
1:D:3699:HIS:ND1	1:D:3703:LEU:HD11	2.26	0.49
1:D:3813:GLN:O	1:D:3899:PHE:HZ	1.95	0.49
1:C:2660:GLY:CA	1:C:2666:VAL:HG12	2.43	0.49
1:C:2973:PHE:CE2	1:C:2995:ILE:HG12	2.47	0.49
1:C:2974:ILE:HD12	1:C:3049:LEU:HD11	1.95	0.49
1:C:3365:LEU:HD21	1:C:3405:LEU:CD1	2.43	0.49
1:A:70:GLU:OE2	1:A:110:ARG:HD2	2.13	0.49
1:A:1999:ARG:CB	1:A:1999:ARG:HH11	2.26	0.49
1:A:3266:MET:SD	1:A:3270:ILE:HG13	2.52	0.49
1:A:4744:ASP:CG	1:A:4747:SER:HG	2.11	0.49
1:B:3226:GLU:O	1:B:3227:ARG:HB2	2.12	0.49
1:B:3445:TRP:O	1:B:3452:LYS:NZ	2.43	0.49
1:D:3477:LYS:NZ	1:D:3479:ALA:HB2	2.28	0.49
1:C:70:GLU:OE2	1:C:110:ARG:HD2	2.13	0.49
1:C:2552:ARG:O	1:C:2556:LEU:HD23	2.12	0.49
1:C:3266:MET:SD	1:C:3270:ILE:HG13	2.52	0.49
1:A:2992:GLU:HA	1:A:2995:ILE:HD12	1.95	0.49
1:A:3316:LEU:HD21	1:A:3346:VAL:HG23	1.93	0.49
1:B:418:LEU:HD23	1:B:421:PHE:CZ	2.48	0.49
1:B:603:LEU:HD23	1:B:606:LEU:HD12	1.94	0.49
1:B:1260:MET:HE2	1:B:1271:ARG:HE	1.78	0.49
1:B:3521:GLY:HA2	1:B:3524:MET:HE2	1.93	0.49
1:D:418:LEU:HD23	1:D:421:PHE:CZ	2.48	0.49
1:D:1112:ASP:OD1	1:D:1113:VAL:HG23	2.13	0.49
1:A:4820:VAL:HG11	1:B:4839:MET:HE3	1.95	0.49
2:E:88:PRO:O	2:E:90:ILE:HD12	2.13	0.49
1:B:3299:GLY:O	1:B:3300:ALA:HB2	2.13	0.49
1:B:3477:LYS:NZ	1:B:3479:ALA:HB2	2.28	0.49
1:B:3539:ARG:NH2	1:B:3548:GLU:OE2	2.38	0.49
1:B:3957:VAL:O	1:B:3961:VAL:HG23	2.12	0.49
1:B:4937:ILE:HG12	1:C:4934:GLY:HA2	1.95	0.49
1:D:2211:MET:HA	1:D:2228:MET:HE1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3177:THR:O	1:D:3179:LYS:NZ	2.36	0.49
1:D:4583:SER:OG	1:D:4585:SER:O	2.29	0.49
1:C:1999:ARG:CB	1:C:1999:ARG:HH11	2.26	0.49
1:C:4021:LYS:O	1:C:4025:VAL:HG23	2.12	0.49
1:A:2801:ASP:OD1	1:A:2802:LYS:N	2.46	0.49
1:A:2806:ARG:HE	1:A:2810:LYS:NZ	2.11	0.49
1:A:3365:LEU:HD21	1:A:3405:LEU:CD1	2.43	0.49
2:H:25:HIS:CE1	2:H:45:PRO:HG3	2.47	0.49
2:G:52:LYS:O	2:G:53:GLN:HB2	2.11	0.49
1:B:545:ASP:OD1	1:B:582:HIS:NE2	2.40	0.49
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.95	0.49
1:B:2135:LEU:HD12	1:B:3658:LYS:HZ3	1.76	0.49
1:B:2440:MET:O	1:B:2443:ILE:N	2.45	0.49
1:D:3573:MET:HE3	1:D:3577:ARG:HH12	1.75	0.49
1:C:2000:SER:HG	1:C:2004:GLU:HB2	1.78	0.49
1:C:2819:TRP:O	1:C:2821:TRP:CD1	2.66	0.49
1:A:732:SER:O	1:A:735:GLN:HG3	2.13	0.49
1:A:4826:ILE:O	1:A:4829:SER:OG	2.25	0.49
1:B:1419:ASP:CG	1:B:1420:ASN:H	2.21	0.49
1:B:2660:GLY:CA	1:B:2666:VAL:HG12	2.43	0.49
1:B:2974:ILE:HD12	1:B:3049:LEU:HD11	1.94	0.49
1:B:4902:GLU:O	1:B:4913:ARG:CZ	2.61	0.49
1:D:1978:ALA:O	1:D:1982:ARG:NH1	2.45	0.49
1:D:4000:MET:HG2	1:D:4061:PHE:CE2	2.48	0.49
1:C:900:ASN:OD1	1:C:901:LYS:N	2.46	0.49
1:C:1978:ALA:O	1:C:1982:ARG:NH1	2.45	0.49
1:C:3346:VAL:HG11	1:C:3414:ARG:CB	2.41	0.49
1:C:3354:LEU:HD11	1:C:3434:LEU:HD22	1.95	0.49
1:A:418:LEU:HD23	1:A:421:PHE:CZ	2.48	0.48
1:A:1069:TRP:CZ3	1:A:1112:ASP:HB2	2.48	0.48
1:A:1962:ALA:O	1:A:1966:VAL:HG23	2.13	0.48
1:A:1978:ALA:O	1:A:1982:ARG:NH1	2.45	0.48
1:A:2440:MET:O	1:A:2443:ILE:N	2.45	0.48
1:A:2685:SER:O	1:A:2689:LYS:HG2	2.12	0.48
1:A:3199:ALA:O	1:A:3283:ARG:NE	2.40	0.48
1:A:4000:MET:HG2	1:A:4061:PHE:CE2	2.48	0.48
2:H:88:PRO:O	2:H:90:ILE:HD12	2.13	0.48
2:G:79:ASP:OD2	2:G:80:TYR:HD1	1.96	0.48
2:F:79:ASP:OD2	2:F:80:TYR:HD1	1.96	0.48
1:D:732:SER:O	1:D:735:GLN:HG3	2.13	0.48
1:D:1962:ALA:O	1:D:1966:VAL:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1999:ARG:CB	1:D:1999:ARG:HH11	2.26	0.48
1:D:4934:GLY:HA2	1:C:4937:ILE:HG12	1.95	0.48
1:A:1260:MET:HE2	1:A:1271:ARG:HE	1.78	0.48
1:A:1733:GLU:HG2	1:A:2201:LEU:HD23	1.95	0.48
1:A:3108:GLU:O	1:A:3111:ARG:HB2	2.14	0.48
1:A:3354:LEU:HD11	1:A:3434:LEU:HD22	1.95	0.48
1:A:3699:HIS:ND1	1:A:3703:LEU:HD11	2.26	0.48
1:A:4902:GLU:O	1:A:4913:ARG:CZ	2.61	0.48
2:E:79:ASP:OD2	2:E:80:TYR:HD1	1.96	0.48
2:H:79:ASP:OD2	2:H:80:TYR:HD1	1.96	0.48
2:F:25:HIS:CE1	2:F:45:PRO:HG3	2.47	0.48
1:B:732:SER:O	1:B:735:GLN:HG3	2.13	0.48
1:B:3108:GLU:O	1:B:3111:ARG:HB2	2.14	0.48
1:B:3266:MET:SD	1:B:3270:ILE:HG13	2.52	0.48
1:B:4000:MET:HG2	1:B:4061:PHE:CE2	2.48	0.48
1:B:4565:LEU:O	1:B:4569:LEU:HD13	2.13	0.48
1:D:70:GLU:OE2	1:D:110:ARG:HD2	2.13	0.48
1:D:879:HIS:CE1	1:D:921:ASN:HD22	2.31	0.48
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.95	0.48
1:D:2660:GLY:CA	1:D:2666:VAL:HG12	2.43	0.48
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.13	0.48
1:C:603:LEU:HD23	1:C:606:LEU:HD12	1.94	0.48
1:C:1112:ASP:OD1	1:C:1113:VAL:HG23	2.13	0.48
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.13	0.48
1:C:4690:GLU:O	1:C:4691:GLN:HB2	2.13	0.48
1:A:3299:GLY:O	1:A:3300:ALA:HB2	2.13	0.48
2:E:2:VAL:CG2	2:E:58:GLY:HA2	2.44	0.48
2:H:2:VAL:CG2	2:H:58:GLY:HA2	2.44	0.48
1:B:266:ARG:NE	1:B:330:ASP:OD2	2.46	0.48
1:B:1999:ARG:CB	1:B:1999:ARG:HH11	2.26	0.48
1:B:2111:VAL:HG12	1:B:2113:SER:H	1.77	0.48
1:B:2199:ARG:NE	1:B:2246:ASN:OD1	2.37	0.48
1:B:2801:ASP:OD1	1:B:2802:LYS:N	2.46	0.48
1:B:2806:ARG:HE	1:B:2810:LYS:NZ	2.11	0.48
1:B:2819:TRP:O	1:B:2821:TRP:CD1	2.66	0.48
1:D:107:ILE:HG23	1:D:150:MET:HE2	1.96	0.48
1:D:2806:ARG:HE	1:D:2810:LYS:NZ	2.11	0.48
1:D:2886:TRP:CD1	1:D:2889:LYS:HZ3	2.32	0.48
1:D:3448:SER:O	1:D:3452:LYS:NZ	2.37	0.48
1:C:107:ILE:HG23	1:C:150:MET:HE2	1.96	0.48
1:C:877:ASN:O	1:C:881:LEU:HD23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.95	0.48
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.96	0.48
1:C:4902:GLU:O	1:C:4913:ARG:CZ	2.61	0.48
1:A:3477:LYS:NZ	1:A:3479:ALA:HB2	2.28	0.48
1:A:4690:GLU:O	1:A:4691:GLN:HB2	2.14	0.48
2:G:88:PRO:O	2:G:90:ILE:HD12	2.13	0.48
1:B:1024:TYR:HH	1:B:1036:ARG:HH11	1.61	0.48
1:B:3813:GLN:O	1:B:3899:PHE:HZ	1.95	0.48
1:B:4583:SER:OG	1:B:4585:SER:O	2.29	0.48
1:D:102:LEU:HD23	1:D:162:LYS:HA	1.96	0.48
1:D:1069:TRP:CZ3	1:D:1112:ASP:HB2	2.48	0.48
1:D:1733:GLU:HG2	1:D:2201:LEU:HD23	1.95	0.48
1:D:2819:TRP:O	1:D:2821:TRP:CD1	2.66	0.48
1:D:3299:GLY:O	1:D:3300:ALA:HB2	2.13	0.48
1:D:4170:ILE:H	1:D:4170:ILE:HD12	1.79	0.48
1:C:266:ARG:NE	1:C:330:ASP:OD2	2.46	0.48
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.95	0.48
1:C:3299:GLY:O	1:C:3300:ALA:HB2	2.13	0.48
1:A:102:LEU:HD23	1:A:162:LYS:HA	1.96	0.48
1:A:877:ASN:O	1:A:881:LEU:HD23	2.13	0.48
1:A:1979:LEU:N	1:A:1982:ARG:NH2	2.61	0.48
1:A:2581:SER:O	1:A:2585:THR:HG23	2.12	0.48
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.96	0.48
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.13	0.48
2:F:88:PRO:O	2:F:90:ILE:HD12	2.13	0.48
1:B:722:TRP:CZ2	1:B:727:ALA:HB2	2.49	0.48
1:D:3940:LYS:O	1:D:4002:LYS:NZ	2.29	0.48
1:D:4748:LEU:O	1:D:4751:THR:OG1	2.32	0.48
1:C:722:TRP:CZ2	1:C:727:ALA:HB2	2.49	0.48
1:C:879:HIS:CE1	1:C:921:ASN:HD22	2.31	0.48
1:C:2806:ARG:HE	1:C:2810:LYS:NZ	2.11	0.48
1:C:4565:LEU:O	1:C:4569:LEU:HD13	2.13	0.48
1:A:603:LEU:HD23	1:A:606:LEU:HD12	1.94	0.48
1:A:619:ASP:OD2	1:A:1680:ARG:NH2	2.47	0.48
1:A:879:HIS:CE1	1:A:921:ASN:HD22	2.31	0.48
1:A:1419:ASP:CG	1:A:1420:ASN:H	2.21	0.48
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.95	0.48
1:A:2886:TRP:CD1	1:A:2889:LYS:HZ3	2.32	0.48
1:A:2974:ILE:HD12	1:A:3049:LEU:HD11	1.94	0.48
1:B:1069:TRP:CZ3	1:B:1112:ASP:HB2	2.48	0.48
1:B:1791:VAL:O	1:B:1792:ALA:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2211:MET:HA	1:B:2228:MET:HE1	1.95	0.48
1:D:2581:SER:O	1:D:2585:THR:HG23	2.12	0.48
1:D:2685:SER:O	1:D:2689:LYS:HG2	2.12	0.48
1:D:2801:ASP:OD1	1:D:2802:LYS:N	2.46	0.48
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.95	0.48
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.96	0.48
1:D:3445:TRP:NE1	1:D:3455:GLU:OE1	2.45	0.48
1:C:418:LEU:HD23	1:C:421:PHE:CZ	2.48	0.48
1:C:575:LEU:HA	1:C:578:ILE:HG12	1.95	0.48
1:C:1069:TRP:CZ3	1:C:1112:ASP:HB2	2.48	0.48
1:C:1419:ASP:CG	1:C:1420:ASN:H	2.21	0.48
1:C:2538:THR:O	1:C:2542:SER:N	2.46	0.48
1:C:2801:ASP:OD1	1:C:2802:LYS:N	2.46	0.48
1:C:3813:GLN:O	1:C:3899:PHE:HZ	1.95	0.48
1:C:4000:MET:HG2	1:C:4061:PHE:CE2	2.48	0.48
1:A:2434:GLY:O	1:A:2508:ARG:NE	2.36	0.48
1:A:4565:LEU:O	1:A:4569:LEU:HD13	2.13	0.48
1:A:4655:PHE:CB	1:A:4796:MET:HE1	2.43	0.48
1:B:1733:GLU:HG2	1:B:2201:LEU:HD23	1.95	0.48
1:B:2608:MET:HE2	1:B:2642:LYS:NZ	2.29	0.48
1:D:266:ARG:NE	1:D:330:ASP:OD2	2.46	0.48
1:D:796:ARG:O	1:D:1622:GLU:O	2.32	0.48
1:D:2000:SER:O	1:D:2005:GLN:NE2	2.41	0.48
1:D:2992:GLU:HA	1:D:2995:ILE:HD12	1.95	0.48
1:C:1999:ARG:O	1:C:1999:ARG:CG	2.62	0.48
1:C:3108:GLU:O	1:C:3111:ARG:HB2	2.14	0.48
1:C:3477:LYS:NZ	1:C:3479:ALA:HB2	2.28	0.48
1:C:4170:ILE:H	1:C:4170:ILE:HD12	1.79	0.48
1:A:107:ILE:HG23	1:A:150:MET:HE2	1.96	0.48
1:A:266:ARG:NE	1:A:330:ASP:OD2	2.46	0.48
1:A:642:THR:HG23	1:A:1613:LEU:HD12	1.94	0.48
1:A:1112:ASP:OD1	1:A:1113:VAL:HG23	2.13	0.48
1:A:1999:ARG:O	1:A:1999:ARG:CG	2.62	0.48
1:A:2475:GLN:OE1	1:A:2488:PRO:HB3	2.14	0.48
1:B:358:THR:OG1	1:B:383:HIS:ND1	2.42	0.48
1:B:796:ARG:O	1:B:1622:GLU:O	2.32	0.48
1:B:1979:LEU:N	1:B:1982:ARG:NH2	2.61	0.48
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.95	0.48
1:B:4690:GLU:O	1:B:4691:GLN:HB2	2.13	0.48
1:B:4744:ASP:CG	1:B:4747:SER:HG	2.11	0.48
1:B:4748:LEU:O	1:B:4751:THR:OG1	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:856:VAL:HG12	1:D:991:ASN:ND2	2.29	0.48
1:D:2974:ILE:HD12	1:D:3049:LEU:HD11	1.94	0.48
1:D:4938:ASP:OD1	1:C:4944:ARG:NE	2.47	0.48
1:C:1962:ALA:O	1:C:1966:VAL:HG23	2.13	0.48
1:C:2111:VAL:HG12	1:C:2113:SER:H	1.77	0.48
1:C:3999:MET:HE3	1:C:3999:MET:HB3	1.83	0.48
1:C:4204:GLN:HB3	1:C:4245:MET:HG2	1.95	0.48
1:C:4241:THR:HB	1:C:4989:MET:HE1	1.96	0.48
1:C:4655:PHE:CB	1:C:4796:MET:HE1	2.43	0.48
1:A:39:ALA:O	1:A:111:HIS:NE2	2.47	0.48
1:A:2871:LEU:HD13	1:A:2874:MET:SD	2.54	0.48
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.95	0.48
1:A:4170:ILE:HD12	1:A:4170:ILE:H	1.79	0.48
1:B:856:VAL:HG12	1:B:991:ASN:ND2	2.29	0.48
1:B:3615:SER:O	1:B:3616:LYS:HG2	2.14	0.48
1:B:4170:ILE:H	1:B:4170:ILE:HD12	1.79	0.48
1:D:39:ALA:O	1:D:111:HIS:NE2	2.47	0.48
1:D:575:LEU:HA	1:D:578:ILE:HG12	1.95	0.48
1:D:1676:LEU:HB3	1:D:2167:ILE:HD12	1.96	0.48
1:D:3354:LEU:HD11	1:D:3434:LEU:HD22	1.94	0.48
1:D:4182:GLU:OE1	1:D:4983:HIS:NE2	2.44	0.48
1:D:4673:ARG:O	1:D:4676:GLU:HG3	2.14	0.48
1:D:4826:ILE:O	1:D:4829:SER:OG	2.25	0.48
1:D:4902:GLU:O	1:D:4913:ARG:CZ	2.61	0.48
1:C:1791:VAL:O	1:C:1792:ALA:HB3	2.14	0.48
1:A:3996:PHE:HD1	1:A:4016:LEU:HD11	1.79	0.48
1:B:1112:ASP:OD1	1:B:1113:VAL:HG23	2.13	0.48
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.95	0.48
1:B:3337:ARG:O	1:B:3340:VAL:HG22	2.14	0.48
1:B:3354:LEU:HD11	1:B:3434:LEU:HD22	1.95	0.48
1:B:3996:PHE:HD1	1:B:4016:LEU:HD11	1.79	0.48
1:B:4766:THR:HA	1:B:4769:MET:HE2	1.96	0.48
1:D:417:GLY:O	1:D:421:PHE:CD1	2.67	0.48
1:D:603:LEU:HD23	1:D:606:LEU:HD12	1.94	0.48
1:D:877:ASN:O	1:D:881:LEU:HD23	2.13	0.48
1:D:2576:ALA:CA	1:D:2618:MET:HE1	2.44	0.48
1:D:2642:LYS:HB2	1:D:2698:MET:HE1	1.96	0.48
1:D:2871:LEU:HD13	1:D:2874:MET:SD	2.54	0.48
1:D:4655:PHE:CB	1:D:4796:MET:HE1	2.43	0.48
1:C:309:THR:O	1:C:309:THR:HG22	2.14	0.48
1:C:732:SER:O	1:C:735:GLN:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1733:GLU:HG2	1:C:2201:LEU:HD23	1.95	0.48
1:C:2992:GLU:HA	1:C:2995:ILE:HD12	1.95	0.48
1:C:3477:LYS:HZ2	1:C:3479:ALA:HB2	1.79	0.48
1:A:417:GLY:O	1:A:421:PHE:CD1	2.67	0.47
1:A:884:LEU:O	1:A:888:GLU:OE1	2.32	0.47
1:A:1791:VAL:O	1:A:1792:ALA:HB3	2.14	0.47
1:A:4204:GLN:HB3	1:A:4245:MET:HG2	1.96	0.47
2:H:20:GLN:HE21	2:H:106:LEU:HB3	1.78	0.47
2:G:2:VAL:CG2	2:G:58:GLY:HA2	2.44	0.47
1:B:107:ILE:HG23	1:B:150:MET:HE2	1.96	0.47
1:B:879:HIS:CE1	1:B:921:ASN:HD22	2.31	0.47
1:B:886:ARG:HG3	1:B:891:TRP:HB2	1.96	0.47
1:B:2000:SER:O	1:B:2005:GLN:NE2	2.41	0.47
1:D:358:THR:OG1	1:D:383:HIS:ND1	2.42	0.47
1:D:886:ARG:HG3	1:D:891:TRP:HB2	1.96	0.47
1:D:2538:THR:O	1:D:2542:SER:N	2.46	0.47
1:D:2773:ASN:C	1:D:2773:ASN:OD1	2.57	0.47
1:D:3346:VAL:HG11	1:D:3414:ARG:CB	2.41	0.47
1:D:4690:GLU:O	1:D:4691:GLN:HB2	2.13	0.47
1:C:1749:PRO:HD2	1:C:1758:ARG:HH12	1.75	0.47
1:C:2475:GLN:OE1	1:C:2488:PRO:HB3	2.14	0.47
1:C:2904:LEU:O	1:C:2906:VAL:HG22	2.14	0.47
1:C:4766:THR:HA	1:C:4769:MET:HE2	1.96	0.47
1:A:856:VAL:HG12	1:A:991:ASN:ND2	2.29	0.47
1:A:2784:GLU:CD	1:A:2785:LEU:HD12	2.39	0.47
1:B:39:ALA:O	1:B:111:HIS:NE2	2.47	0.47
1:B:2886:TRP:CD1	1:B:2889:LYS:HZ3	2.32	0.47
1:B:4204:GLN:HB3	1:B:4245:MET:HG2	1.96	0.47
1:D:1141:ARG:CB	1:C:3477:LYS:HZ3	2.26	0.47
1:D:1979:LEU:N	1:D:1982:ARG:NH2	2.61	0.47
1:D:2475:GLN:OE1	1:D:2488:PRO:HB3	2.14	0.47
1:D:4710:SER:O	1:D:4713:SER:OG	2.25	0.47
1:C:891:TRP:CZ2	1:C:899:ASP:HA	2.50	0.47
1:C:1979:LEU:HD22	1:C:1982:ARG:HH21	1.78	0.47
1:C:1979:LEU:N	1:C:1982:ARG:NH2	2.61	0.47
1:C:2211:MET:HA	1:C:2228:MET:HE1	1.95	0.47
1:A:2515:GLN:O	1:A:2519:LEU:HG	2.15	0.47
2:E:20:GLN:HE21	2:E:106:LEU:HB3	1.78	0.47
1:B:2475:GLN:OE1	1:B:2488:PRO:HB3	2.14	0.47
1:B:2583:LEU:O	1:B:2586:VAL:HG12	2.15	0.47
1:B:2992:GLU:HA	1:B:2995:ILE:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4732:PHE:O	1:B:4736:ARG:NH1	2.45	0.47
1:D:2608:MET:HE2	1:D:2642:LYS:NZ	2.29	0.47
1:D:3337:ARG:O	1:D:3340:VAL:HG22	2.15	0.47
1:D:3615:SER:O	1:D:3616:LYS:HG2	2.14	0.47
1:D:3985:LEU:O	1:D:3989:VAL:HG23	2.14	0.47
1:C:102:LEU:HD23	1:C:162:LYS:HA	1.96	0.47
1:C:856:VAL:HG12	1:C:991:ASN:ND2	2.29	0.47
1:C:4158:PRO:HA	1:C:4161:ARG:NE	2.25	0.47
1:C:4748:LEU:O	1:C:4751:THR:OG1	2.32	0.47
1:A:2211:MET:HA	1:A:2228:MET:HE1	1.95	0.47
1:A:2819:TRP:O	1:A:2821:TRP:CD1	2.66	0.47
1:A:3105:LYS:O	1:A:3109:ASN:ND2	2.48	0.47
1:A:3615:SER:O	1:A:3616:LYS:HG2	2.14	0.47
1:A:3985:LEU:O	1:A:3989:VAL:HG23	2.14	0.47
1:B:619:ASP:OD2	1:B:1680:ARG:NH2	2.47	0.47
1:B:1962:ALA:O	1:B:1966:VAL:HG23	2.13	0.47
1:B:2515:GLN:O	1:B:2519:LEU:HG	2.15	0.47
1:B:3379:LEU:HD23	1:B:3382:GLU:OE2	2.15	0.47
1:D:3999:MET:HE3	1:D:3999:MET:HB3	1.83	0.47
1:C:417:GLY:O	1:C:421:PHE:CD1	2.67	0.47
1:C:886:ARG:HD3	1:C:891:TRP:CE3	2.50	0.47
1:C:2583:LEU:O	1:C:2586:VAL:HG12	2.15	0.47
1:C:3615:SER:O	1:C:3616:LYS:HG2	2.14	0.47
1:A:309:THR:O	1:A:309:THR:HG22	2.14	0.47
1:A:891:TRP:CZ2	1:A:899:ASP:HA	2.50	0.47
1:A:1979:LEU:HD22	1:A:1982:ARG:HH21	1.78	0.47
1:A:2576:ALA:CA	1:A:2618:MET:HE1	2.44	0.47
1:A:2608:MET:HE2	1:A:2642:LYS:NZ	2.29	0.47
2:F:2:VAL:CG2	2:F:58:GLY:HA2	2.44	0.47
1:B:3765:TYR:CE1	1:B:4753:HIS:ND1	2.83	0.47
1:D:887:ILE:HD11	1:D:961:MET:CE	2.45	0.47
1:D:1419:ASP:CG	1:D:1420:ASN:H	2.21	0.47
1:D:1506:GLN:OE1	1:C:2771:ILE:HG22	2.14	0.47
1:D:1979:LEU:HD22	1:D:1982:ARG:HH21	1.78	0.47
1:D:3108:GLU:O	1:D:3111:ARG:HB2	2.14	0.47
1:D:4565:LEU:O	1:D:4569:LEU:HD13	2.13	0.47
1:C:2355:ARG:NH2	1:C:2449:GLU:OE2	2.48	0.47
1:A:4000:MET:HE3	1:A:4061:PHE:CB	2.45	0.47
1:B:887:ILE:HD11	1:B:961:MET:CE	2.45	0.47
1:B:1979:LEU:HD22	1:B:1982:ARG:HH21	1.78	0.47
1:B:3528:THR:HG23	1:B:3573:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:886:ARG:HD3	1:D:891:TRP:CE3	2.50	0.47
1:D:891:TRP:CZ2	1:D:899:ASP:HA	2.50	0.47
1:D:1791:VAL:O	1:D:1792:ALA:HB3	2.14	0.47
1:D:2582:MET:HE3	1:D:2610:LEU:HD13	1.96	0.47
1:D:2784:GLU:CD	1:D:2785:LEU:HD12	2.39	0.47
1:D:3765:TYR:CE1	1:D:4753:HIS:ND1	2.83	0.47
1:D:3893:GLU:HA	1:D:3967:GLU:OE2	2.15	0.47
1:D:4241:THR:HB	1:D:4989:MET:HE1	1.96	0.47
1:C:2608:MET:HE2	1:C:2642:LYS:NZ	2.29	0.47
1:C:3379:LEU:HD23	1:C:3382:GLU:OE2	2.15	0.47
1:C:3985:LEU:O	1:C:3989:VAL:HG23	2.14	0.47
1:C:3996:PHE:HD1	1:C:4016:LEU:HD11	1.79	0.47
1:C:4673:ARG:O	1:C:4676:GLU:HG3	2.14	0.47
1:A:575:LEU:HA	1:A:578:ILE:HG12	1.95	0.47
1:A:886:ARG:HD3	1:A:891:TRP:CE3	2.50	0.47
1:A:2773:ASN:C	1:A:2773:ASN:OD1	2.57	0.47
1:A:3505:VAL:O	1:A:3511:VAL:HG21	2.15	0.47
2:G:20:GLN:HE21	2:G:106:LEU:HB3	1.79	0.47
2:F:20:GLN:HE21	2:F:106:LEU:HB3	1.78	0.47
1:B:38:ALA:HB2	1:B:65:CYS:SG	2.55	0.47
1:B:102:LEU:HD23	1:B:162:LYS:HA	1.96	0.47
1:B:417:GLY:O	1:B:421:PHE:CD1	2.67	0.47
1:B:436:LEU:O	1:B:438:ILE:HD12	2.15	0.47
1:B:877:ASN:O	1:B:881:LEU:HD23	2.13	0.47
1:B:886:ARG:HD3	1:B:891:TRP:CE3	2.50	0.47
1:B:891:TRP:CZ2	1:B:899:ASP:HA	2.50	0.47
1:B:1999:ARG:O	1:B:1999:ARG:CG	2.62	0.47
1:B:2327:GLY:HA2	1:B:2330:ARG:NH2	2.29	0.47
1:B:2355:ARG:NH2	1:B:2449:GLU:OE2	2.48	0.47
1:B:2576:ALA:CA	1:B:2618:MET:HE1	2.44	0.47
1:B:2872:GLN:O	1:B:2875:ALA:N	2.48	0.47
1:B:2904:LEU:O	1:B:2906:VAL:HG22	2.14	0.47
1:D:2583:LEU:O	1:D:2586:VAL:HG12	2.15	0.47
1:D:2904:LEU:O	1:D:2906:VAL:HG22	2.14	0.47
1:D:3505:VAL:O	1:D:3511:VAL:HG21	2.15	0.47
1:D:3996:PHE:HD1	1:D:4016:LEU:HD11	1.79	0.47
1:D:4204:GLN:HB3	1:D:4245:MET:HG2	1.96	0.47
1:C:39:ALA:O	1:C:111:HIS:NE2	2.47	0.47
1:C:436:LEU:O	1:C:438:ILE:HD12	2.15	0.47
1:C:495:ASN:OD1	1:C:553:ARG:NH1	2.48	0.47
1:C:884:LEU:O	1:C:888:GLU:OE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:886:ARG:HG3	1:C:891:TRP:HB2	1.96	0.47
1:C:2642:LYS:HB2	1:C:2698:MET:HE1	1.96	0.47
1:C:2784:GLU:CD	1:C:2785:LEU:HD12	2.39	0.47
1:C:2872:GLN:O	1:C:2875:ALA:N	2.48	0.47
1:C:2886:TRP:CD1	1:C:2889:LYS:HZ3	2.33	0.47
1:C:3337:ARG:O	1:C:3340:VAL:HG22	2.15	0.47
1:C:3765:TYR:CE1	1:C:4753:HIS:ND1	2.83	0.47
1:C:3878:ASP:N	1:C:3878:ASP:OD1	2.48	0.47
1:C:3893:GLU:HA	1:C:3967:GLU:OE2	2.15	0.47
1:A:796:ARG:O	1:A:1622:GLU:O	2.32	0.47
1:A:2327:GLY:HA2	1:A:2330:ARG:NH2	2.29	0.47
1:A:2642:LYS:HB2	1:A:2698:MET:HE1	1.96	0.47
1:A:2913:ALA:O	1:A:2917:ALA:N	2.48	0.47
1:B:3985:LEU:O	1:B:3989:VAL:HG23	2.14	0.47
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.13	0.47
1:B:4866:SER:OG	1:B:4871:GLU:O	2.31	0.47
1:D:309:THR:HG22	1:D:309:THR:O	2.14	0.47
1:D:722:TRP:CZ2	1:D:727:ALA:HB2	2.49	0.47
1:D:984:LEU:O	1:D:988:LEU:HD23	2.15	0.47
1:D:3878:ASP:N	1:D:3878:ASP:OD1	2.48	0.47
1:D:4000:MET:HE3	1:D:4061:PHE:CB	2.45	0.47
1:C:887:ILE:HD11	1:C:961:MET:CE	2.45	0.47
1:C:2199:ARG:NE	1:C:2246:ASN:OD1	2.37	0.47
1:C:2327:GLY:HA2	1:C:2330:ARG:NH2	2.29	0.47
1:C:2515:GLN:O	1:C:2519:LEU:HG	2.15	0.47
1:C:2582:MET:HE3	1:C:2610:LEU:HD13	1.96	0.47
1:C:4000:MET:HE3	1:C:4061:PHE:CB	2.45	0.47
1:A:436:LEU:O	1:A:438:ILE:HD12	2.15	0.47
1:A:722:TRP:CZ2	1:A:727:ALA:HB2	2.49	0.47
1:A:887:ILE:HD11	1:A:961:MET:CE	2.45	0.47
1:A:1676:LEU:HB3	1:A:2167:ILE:HD12	1.96	0.47
1:A:4748:LEU:O	1:A:4751:THR:OG1	2.32	0.47
1:B:884:LEU:O	1:B:888:GLU:OE1	2.32	0.47
1:B:2784:GLU:CD	1:B:2785:LEU:HD12	2.39	0.47
1:D:3379:LEU:HD23	1:D:3382:GLU:OE2	2.15	0.47
1:C:796:ARG:O	1:C:1622:GLU:O	2.32	0.47
1:C:3105:LYS:O	1:C:3109:ASN:ND2	2.48	0.47
1:C:3445:TRP:O	1:C:3452:LYS:NZ	2.43	0.47
1:A:358:THR:HG1	1:A:383:HIS:HD1	1.57	0.47
1:A:880:GLU:O	1:A:884:LEU:HG	2.15	0.47
1:A:2199:ARG:NE	1:A:2246:ASN:OD1	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2701:PRO:C	1:A:2702:CYS:SG	2.98	0.47
1:A:3434:LEU:HB3	1:A:3517:MET:HE1	1.97	0.47
1:A:4241:THR:HB	1:A:4989:MET:HE1	1.96	0.47
1:A:4583:SER:OG	1:A:4585:SER:O	2.29	0.47
1:A:4673:ARG:O	1:A:4676:GLU:HG3	2.14	0.47
1:B:11:VAL:HG11	1:B:164:ARG:HD2	1.97	0.47
1:B:495:ASN:OD1	1:B:553:ARG:NH1	2.48	0.47
1:B:3105:LYS:O	1:B:3109:ASN:ND2	2.48	0.47
1:B:3434:LEU:HB3	1:B:3517:MET:HE1	1.97	0.47
1:B:4655:PHE:CB	1:B:4796:MET:HE1	2.43	0.47
1:D:880:GLU:O	1:D:884:LEU:HG	2.15	0.47
1:D:1421:ARG:O	1:D:1570:LYS:NZ	2.33	0.47
1:D:1999:ARG:O	1:D:1999:ARG:CG	2.62	0.47
1:D:2515:GLN:O	1:D:2519:LEU:HG	2.15	0.47
1:D:3105:LYS:O	1:D:3109:ASN:ND2	2.48	0.47
1:D:3266:MET:SD	1:D:3266:MET:O	2.73	0.47
1:D:3434:LEU:HB3	1:D:3517:MET:HE1	1.97	0.47
1:C:2773:ASN:C	1:C:2773:ASN:OD1	2.57	0.47
1:C:3445:TRP:NE1	1:C:3455:GLU:OE1	2.45	0.47
1:C:4182:GLU:OE1	1:C:4983:HIS:NE2	2.44	0.47
1:A:221:ARG:CZ	1:A:253:CYS:O	2.63	0.46
1:A:886:ARG:HG3	1:A:891:TRP:HB2	1.96	0.46
1:A:1480:GLN:O	1:A:1480:GLN:HG2	2.15	0.46
1:A:3893:GLU:HA	1:A:3967:GLU:OE2	2.15	0.46
1:B:1480:GLN:O	1:B:1480:GLN:HG2	2.15	0.46
1:B:1676:LEU:HB3	1:B:2167:ILE:HD12	1.96	0.46
1:B:2693:GLN:OE1	1:B:2697:ARG:NH1	2.48	0.46
1:B:4677:LEU:HD23	1:B:4711:PHE:CE1	2.50	0.46
1:D:2006:ILE:O	1:D:2010:LEU:HD13	2.15	0.46
1:D:3528:THR:HG23	1:D:3573:MET:SD	2.55	0.46
1:C:3528:THR:HG23	1:C:3573:MET:SD	2.55	0.46
1:A:38:ALA:HB2	1:A:65:CYS:SG	2.55	0.46
1:A:3477:LYS:HZ3	1:B:1141:ARG:CB	2.28	0.46
1:A:3528:THR:HG23	1:A:3573:MET:SD	2.55	0.46
1:A:3573:MET:CE	1:A:3577:ARG:HH12	2.28	0.46
1:B:884:LEU:O	1:B:887:ILE:HB	2.15	0.46
1:B:2871:LEU:HD13	1:B:2874:MET:SD	2.54	0.46
1:B:4241:THR:HB	1:B:4989:MET:HE1	1.96	0.46
1:D:884:LEU:O	1:D:888:GLU:OE1	2.32	0.46
1:D:2355:ARG:NH2	1:D:2449:GLU:OE2	2.48	0.46
1:D:2872:GLN:O	1:D:2875:ALA:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:11:VAL:HG11	1:C:164:ARG:HD2	1.97	0.46
1:C:38:ALA:HB2	1:C:65:CYS:SG	2.55	0.46
1:C:2576:ALA:CB	1:C:2618:MET:HE1	2.45	0.46
1:C:2871:LEU:HD13	1:C:2874:MET:SD	2.54	0.46
1:C:2913:ALA:O	1:C:2917:ALA:N	2.48	0.46
1:C:4677:LEU:HD23	1:C:4711:PHE:CE1	2.51	0.46
1:A:2355:ARG:NH2	1:A:2449:GLU:OE2	2.48	0.46
1:A:2583:LEU:O	1:A:2586:VAL:HG12	2.15	0.46
1:A:2693:GLN:OE1	1:A:2697:ARG:NH1	2.49	0.46
1:A:2904:LEU:O	1:A:2906:VAL:HG22	2.14	0.46
1:A:4677:LEU:HD23	1:A:4711:PHE:CE1	2.51	0.46
1:B:2861:ASP:OD1	1:B:2925:GLU:HG2	2.16	0.46
1:B:3390:GLY:O	1:B:3394:VAL:HG13	2.15	0.46
1:B:3858:MET:HB3	1:B:3858:MET:HE3	1.84	0.46
1:D:2913:ALA:O	1:D:2917:ALA:N	2.48	0.46
1:D:4749:GLU:O	1:D:4753:HIS:CD2	2.69	0.46
1:C:499:THR:HG23	1:C:502:HIS:H	1.81	0.46
1:C:2701:PRO:C	1:C:2702:CYS:SG	2.98	0.46
1:C:3177:THR:O	1:C:3179:LYS:NZ	2.36	0.46
1:A:213:TYR:HA	1:A:339:ILE:O	2.16	0.46
1:A:1024:TYR:HH	1:A:1036:ARG:HH11	1.61	0.46
1:A:1032:LYS:C	1:A:1036:ARG:HH12	2.18	0.46
1:A:2006:ILE:O	1:A:2010:LEU:HD13	2.15	0.46
1:A:2576:ALA:CB	1:A:2618:MET:HE1	2.45	0.46
1:A:4766:THR:HA	1:A:4769:MET:HE2	1.96	0.46
1:A:4934:GLY:HA2	1:D:4937:ILE:HG12	1.98	0.46
1:B:309:THR:HG22	1:B:309:THR:O	2.14	0.46
1:B:984:LEU:O	1:B:988:LEU:HD23	2.15	0.46
1:B:3445:TRP:NE1	1:B:3455:GLU:OE1	2.44	0.46
1:D:38:ALA:HB2	1:D:65:CYS:SG	2.55	0.46
1:D:221:ARG:CZ	1:D:253:CYS:O	2.63	0.46
1:D:3539:ARG:NH2	1:D:3548:GLU:OE2	2.38	0.46
1:D:4766:THR:HA	1:D:4769:MET:HE2	1.96	0.46
1:C:2107:GLN:O	1:C:3694:LYS:NZ	2.34	0.46
1:C:3505:VAL:O	1:C:3511:VAL:HG21	2.15	0.46
1:C:4732:PHE:O	1:C:4736:ARG:NH1	2.45	0.46
1:A:3337:ARG:O	1:A:3340:VAL:HG22	2.14	0.46
1:A:4749:GLU:O	1:A:4753:HIS:CD2	2.69	0.46
1:B:2642:LYS:HB2	1:B:2698:MET:HE1	1.96	0.46
1:B:2773:ASN:OD1	1:B:2773:ASN:C	2.57	0.46
1:B:2913:ALA:O	1:B:2917:ALA:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1480:GLN:O	1:D:1480:GLN:HG2	2.15	0.46
1:D:4677:LEU:HD23	1:D:4711:PHE:CE1	2.51	0.46
1:C:213:TYR:HA	1:C:339:ILE:O	2.16	0.46
1:C:884:LEU:O	1:C:887:ILE:HB	2.15	0.46
1:C:1676:LEU:HB3	1:C:2167:ILE:HD12	1.96	0.46
1:A:3379:LEU:HD23	1:A:3382:GLU:OE2	2.15	0.46
1:A:3765:TYR:CE1	1:A:4753:HIS:ND1	2.83	0.46
1:A:4655:PHE:HB2	1:A:4796:MET:HE1	1.98	0.46
1:A:4892:ARG:HD3	1:B:4918:ILE:HD13	1.98	0.46
1:B:213:TYR:HA	1:B:339:ILE:O	2.16	0.46
1:B:1036:ARG:HH11	1:B:1036:ARG:HD3	1.48	0.46
1:B:1808:ARG:HG2	1:B:1854:PHE:CE1	2.51	0.46
1:B:2373:GLY:O	1:C:130:LYS:NZ	2.45	0.46
1:B:2576:ALA:CB	1:B:2618:MET:HE1	2.45	0.46
1:B:4000:MET:HE3	1:B:4061:PHE:CB	2.45	0.46
1:D:213:TYR:HA	1:D:339:ILE:O	2.16	0.46
1:D:2327:GLY:HA2	1:D:2330:ARG:NH2	2.29	0.46
1:D:2693:GLN:OE1	1:D:2697:ARG:NH1	2.49	0.46
1:C:619:ASP:OD2	1:C:1680:ARG:NH2	2.47	0.46
1:C:984:LEU:O	1:C:988:LEU:HD23	2.15	0.46
1:C:3434:LEU:HB3	1:C:3517:MET:HE1	1.97	0.46
1:A:3573:MET:HB3	1:A:3577:ARG:NH1	2.31	0.46
1:A:4749:GLU:OE2	1:A:4750:ILE:HG23	2.16	0.46
1:A:4832:HIS:ND1	1:A:4833:ASN:OD1	2.45	0.46
1:A:4866:SER:OG	1:A:4871:GLU:O	2.31	0.46
1:B:221:ARG:CZ	1:B:253:CYS:O	2.63	0.46
1:B:880:GLU:O	1:B:884:LEU:HG	2.14	0.46
1:B:2313:LEU:HD12	1:B:2318:TYR:CD1	2.51	0.46
1:B:2701:PRO:C	1:B:2702:CYS:SG	2.98	0.46
1:B:3477:LYS:HZ3	1:C:1141:ARG:CB	2.28	0.46
1:B:3893:GLU:HA	1:B:3967:GLU:OE2	2.15	0.46
1:B:4060:LYS:O	1:B:4063:ASP:OD1	2.34	0.46
1:D:2784:GLU:OE2	1:D:2785:LEU:HD12	2.16	0.46
1:C:221:ARG:CZ	1:C:253:CYS:O	2.63	0.46
1:C:3106:MET:O	1:C:3110:LEU:HD13	2.16	0.46
1:A:495:ASN:OD1	1:A:553:ARG:NH1	2.48	0.46
1:A:2538:THR:O	1:A:2542:SER:N	2.46	0.46
1:A:2872:GLN:O	1:A:2875:ALA:N	2.48	0.46
1:B:421:PHE:CD2	1:B:421:PHE:O	2.69	0.46
1:B:875:ALA:CB	1:B:922:LEU:HD23	2.46	0.46
1:B:2582:MET:HE3	1:B:2610:LEU:HD13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2771:ILE:HG22	1:C:1506:GLN:OE1	2.15	0.46
1:B:3505:VAL:O	1:B:3511:VAL:HG21	2.15	0.46
1:B:3573:MET:HB3	1:B:3577:ARG:NH1	2.31	0.46
1:B:4655:PHE:HB2	1:B:4796:MET:HE1	1.98	0.46
1:D:421:PHE:O	1:D:421:PHE:CD2	2.69	0.46
1:D:2937:VAL:O	1:D:2937:VAL:HG13	2.16	0.46
1:D:3390:GLY:O	1:D:3394:VAL:HG13	2.15	0.46
1:C:14:LEU:HD13	1:C:202:MET:SD	2.56	0.46
1:C:421:PHE:CD2	1:C:421:PHE:O	2.69	0.46
1:C:880:GLU:O	1:C:884:LEU:HG	2.14	0.46
1:C:3266:MET:SD	1:C:3266:MET:O	2.74	0.46
1:C:3300:ALA:HB3	1:C:3301:PRO:CD	2.39	0.46
1:A:499:THR:HG23	1:A:502:HIS:H	1.81	0.46
1:A:875:ALA:CB	1:A:922:LEU:HD23	2.46	0.46
1:A:884:LEU:O	1:A:887:ILE:HB	2.15	0.46
1:A:3100:SER:O	1:A:3104:GLU:OE1	2.34	0.46
1:A:4242:ILE:HB	6:A:5304:IBM:H132	1.98	0.46
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.98	0.46
1:B:2138:LEU:O	1:B:2141:ALA:N	2.45	0.46
1:B:3100:SER:O	1:B:3104:GLU:OE1	2.34	0.46
1:B:4673:ARG:O	1:B:4676:GLU:HG3	2.14	0.46
1:D:650:VAL:HA	1:D:658:GLN:NE2	2.31	0.46
1:D:891:TRP:HZ2	1:D:899:ASP:HA	1.81	0.46
1:D:2576:ALA:CB	1:D:2618:MET:HE1	2.45	0.46
1:D:3106:MET:O	1:D:3110:LEU:HD13	2.16	0.46
1:C:211:GLU:O	1:C:340:LYS:NZ	2.49	0.46
1:C:3390:GLY:O	1:C:3394:VAL:HG13	2.15	0.46
1:C:3573:MET:HB3	1:C:3577:ARG:NH1	2.31	0.46
1:C:4749:GLU:O	1:C:4753:HIS:CD2	2.69	0.46
1:A:11:VAL:HG11	1:A:164:ARG:HD2	1.97	0.46
1:A:759:ILE:O	1:A:759:ILE:HG23	2.16	0.46
1:A:984:LEU:O	1:A:988:LEU:HD23	2.15	0.46
1:A:3878:ASP:N	1:A:3878:ASP:OD1	2.48	0.46
1:A:4060:LYS:O	1:A:4063:ASP:OD1	2.34	0.46
1:A:4732:PHE:O	1:A:4736:ARG:NH1	2.45	0.46
1:B:384:MET:HG3	1:B:385:ASP:N	2.31	0.46
1:B:553:ARG:NH2	1:B:555:GLU:OE2	2.49	0.46
1:B:952:LYS:HD3	1:B:968:ALA:HB3	1.98	0.46
1:B:4749:GLU:OE2	1:B:4750:ILE:HG23	2.16	0.46
1:D:436:LEU:O	1:D:438:ILE:HD12	2.15	0.46
1:D:884:LEU:O	1:D:887:ILE:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3573:MET:CE	1:D:3577:ARG:HH12	2.28	0.46
1:D:3573:MET:HB3	1:D:3577:ARG:NH1	2.31	0.46
1:C:1480:GLN:HG2	1:C:1480:GLN:O	2.15	0.46
1:C:2233:CYS:HB3	1:C:2237:CYS:HB3	1.66	0.46
1:C:2784:GLU:OE2	1:C:2785:LEU:HD12	2.16	0.46
1:C:4242:ILE:HB	6:C:5304:IBM:H132	1.98	0.46
1:C:4749:GLU:OE2	1:C:4750:ILE:HG23	2.16	0.46
1:A:650:VAL:HA	1:A:658:GLN:NE2	2.31	0.45
1:A:2582:MET:HE3	1:A:2610:LEU:HD13	1.96	0.45
1:A:3266:MET:SD	1:A:3266:MET:O	2.74	0.45
1:A:4944:ARG:NE	1:B:4938:ASP:OD1	2.48	0.45
1:B:14:LEU:HD13	1:B:202:MET:SD	2.56	0.45
1:B:421:PHE:HE2	1:B:507:ALA:HB2	1.79	0.45
1:B:1979:LEU:HA	1:B:1982:ARG:NH2	2.31	0.45
1:B:2736:ASP:OD1	1:B:2736:ASP:O	2.35	0.45
1:B:3500:GLY:O	1:B:3504:SER:OG	2.33	0.45
1:B:4826:ILE:O	1:B:4829:SER:OG	2.25	0.45
1:D:11:VAL:HG11	1:D:164:ARG:HD2	1.97	0.45
1:D:14:LEU:HD13	1:D:202:MET:SD	2.56	0.45
1:D:619:ASP:OD2	1:D:1680:ARG:NH2	2.47	0.45
1:D:2313:LEU:HD12	1:D:2318:TYR:CD1	2.51	0.45
1:D:4242:ILE:HB	6:D:5304:IBM:H132	1.98	0.45
1:D:4794:TRP:O	1:D:4798:MET:HG2	2.16	0.45
1:C:759:ILE:HG23	1:C:759:ILE:O	2.16	0.45
1:C:891:TRP:HZ2	1:C:899:ASP:HA	1.81	0.45
1:C:2736:ASP:OD1	1:C:2736:ASP:O	2.34	0.45
1:A:211:GLU:O	1:A:340:LYS:NZ	2.49	0.45
1:A:952:LYS:HD3	1:A:968:ALA:HB3	1.98	0.45
1:A:2135:LEU:HD12	1:A:3658:LYS:HZ3	1.79	0.45
1:A:2373:GLY:O	1:B:130:LYS:NZ	2.41	0.45
1:B:1497:GLY:O	1:B:1501:VAL:HG13	2.16	0.45
1:B:2946:LEU:O	1:B:2946:LEU:CD2	2.62	0.45
1:B:3266:MET:SD	1:B:3266:MET:O	2.74	0.45
1:B:3878:ASP:OD1	1:B:3878:ASP:N	2.48	0.45
1:B:4242:ILE:HB	6:B:5304:IBM:H132	1.98	0.45
1:D:759:ILE:HG23	1:D:759:ILE:O	2.16	0.45
1:D:887:ILE:CD1	1:D:961:MET:CE	2.95	0.45
1:D:1461:ASP:OD2	1:D:1468:LYS:NZ	2.49	0.45
1:D:1979:LEU:HA	1:D:1982:ARG:NH2	2.31	0.45
1:D:2701:PRO:C	1:D:2702:CYS:SG	2.98	0.45
1:D:4911:LEU:O	1:D:4914:VAL:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:361:ALA:O	1:C:362:PRO:C	2.59	0.45
1:C:1979:LEU:HA	1:C:1982:ARG:NH2	2.31	0.45
1:C:2313:LEU:HD12	1:C:2318:TYR:CD1	2.51	0.45
1:C:2396:GLY:O	1:C:2397:VAL:C	2.59	0.45
1:C:2693:GLN:OE1	1:C:2697:ARG:NH1	2.49	0.45
1:C:3500:GLY:O	1:C:3504:SER:OG	2.33	0.45
1:C:4545:GLU:OE2	1:C:4548:ARG:NH2	2.39	0.45
1:C:4794:TRP:O	1:C:4798:MET:HG2	2.16	0.45
1:C:4998:LYS:HB3	1:C:5003:HIS:CE1	2.45	0.45
1:A:574:VAL:HA	1:A:577:ILE:HG12	1.99	0.45
1:A:1497:GLY:O	1:A:1501:VAL:HG13	2.16	0.45
1:A:2736:ASP:O	1:A:2736:ASP:OD1	2.34	0.45
1:A:2861:ASP:OD1	1:A:2925:GLU:HG2	2.16	0.45
1:A:2937:VAL:O	1:A:2937:VAL:HG13	2.16	0.45
1:A:3207:GLU:OE1	1:A:3280:TYR:OH	2.31	0.45
1:A:4710:SER:O	1:A:4713:SER:OG	2.25	0.45
1:B:211:GLU:O	1:B:340:LYS:NZ	2.49	0.45
1:B:897:ARG:HH22	1:B:906:CYS:HG	1.63	0.45
1:B:1965:TYR:CE2	1:B:1969:LEU:HD11	2.52	0.45
1:B:2569:PHE:CE1	1:B:2582:MET:HE1	2.52	0.45
1:B:3573:MET:CE	1:B:3577:ARG:HH12	2.28	0.45
1:B:4705:VAL:HG13	1:B:4711:PHE:CD1	2.51	0.45
1:B:4832:HIS:ND1	1:B:4833:ASN:OD1	2.45	0.45
1:D:495:ASN:OD1	1:D:553:ARG:NH1	2.48	0.45
1:D:2233:CYS:HB3	1:D:2237:CYS:HB3	1.67	0.45
1:D:3100:SER:O	1:D:3104:GLU:OE1	2.34	0.45
1:D:4749:GLU:OE2	1:D:4750:ILE:HG23	2.16	0.45
1:C:4095:LYS:O	1:C:4098:ASP:OD1	2.35	0.45
1:A:14:LEU:HD13	1:A:202:MET:SD	2.56	0.45
1:A:553:ARG:NH2	1:A:555:GLU:OE2	2.49	0.45
1:A:891:TRP:HZ2	1:A:899:ASP:HA	1.81	0.45
1:A:2313:LEU:HD12	1:A:2318:TYR:CD1	2.51	0.45
1:A:2340:PHE:CG	1:A:2435:ARG:HD3	2.51	0.45
1:A:3535:LEU:HD11	1:A:3559:LEU:HD22	1.99	0.45
1:A:3999:MET:HE3	1:A:3999:MET:HB3	1.83	0.45
1:A:4794:TRP:O	1:A:4798:MET:HG2	2.16	0.45
1:B:1105:ALA:HB2	1:B:1191:VAL:HG11	1.98	0.45
1:B:4794:TRP:O	1:B:4798:MET:HG2	2.16	0.45
1:D:384:MET:HG3	1:D:385:ASP:N	2.31	0.45
1:D:952:LYS:HD3	1:D:968:ALA:HB3	1.98	0.45
1:D:1031:THR:O	1:D:1032:LYS:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1497:GLY:O	1:D:1501:VAL:HG13	2.16	0.45
1:D:2340:PHE:CG	1:D:2435:ARG:HD3	2.51	0.45
1:D:3535:LEU:HD11	1:D:3559:LEU:HD22	1.99	0.45
1:D:4658:ILE:HD13	1:D:4792:LEU:HB3	1.98	0.45
1:C:2725:LYS:NZ	1:C:2734:ASN:O	2.49	0.45
1:A:421:PHE:CD2	1:A:421:PHE:O	2.69	0.45
1:A:1031:THR:O	1:A:1032:LYS:C	2.59	0.45
1:A:2368:LEU:N	1:A:2368:LEU:HD12	2.32	0.45
1:A:4095:LYS:O	1:A:4098:ASP:OD1	2.35	0.45
1:A:4952:GLU:C	1:A:4952:GLU:OE1	2.60	0.45
1:B:336:PRO:HA	1:B:337:PRO:HD3	1.87	0.45
1:B:2233:CYS:HB3	1:B:2237:CYS:HB3	1.67	0.45
1:B:3924:LEU:O	1:B:3927:GLN:HG3	2.17	0.45
1:B:4952:GLU:C	1:B:4952:GLU:OE1	2.60	0.45
1:D:211:GLU:O	1:D:340:LYS:NZ	2.49	0.45
1:D:707:VAL:HG12	1:D:715:GLY:HA3	1.99	0.45
1:D:2396:GLY:O	1:D:2397:VAL:C	2.59	0.45
1:D:2725:LYS:NZ	1:D:2734:ASN:O	2.49	0.45
1:D:4060:LYS:O	1:D:4063:ASP:OD1	2.34	0.45
1:D:4705:VAL:HG13	1:D:4711:PHE:CD1	2.52	0.45
1:C:553:ARG:NH2	1:C:555:GLU:OE2	2.49	0.45
1:C:707:VAL:HG12	1:C:715:GLY:HA3	1.99	0.45
1:C:752:VAL:HB	1:C:753:PRO:C	2.42	0.45
1:C:887:ILE:CD1	1:C:961:MET:CE	2.95	0.45
1:C:1031:THR:O	1:C:1032:LYS:C	2.59	0.45
1:C:1280:GLN:O	1:C:1281:ASN:OD1	2.35	0.45
1:C:1965:TYR:CE2	1:C:1969:LEU:HD11	2.52	0.45
1:C:2937:VAL:HG13	1:C:2937:VAL:O	2.16	0.45
1:C:3207:GLU:OE1	1:C:3280:TYR:OH	2.31	0.45
1:C:3539:ARG:NH2	1:C:3548:GLU:OE2	2.38	0.45
1:A:565:TYR:O	1:A:569:ILE:HG12	2.17	0.45
1:A:2006:ILE:HD11	1:A:3641:LEU:HD11	1.98	0.45
1:A:2223:ILE:HG23	1:A:2223:ILE:O	2.17	0.45
1:B:499:THR:HG23	1:B:502:HIS:H	1.81	0.45
1:B:931:THR:O	1:B:935:LEU:HG	2.17	0.45
1:B:1996:ARG:NE	1:B:1999:ARG:NH1	2.61	0.45
1:D:730:VAL:HG21	1:D:764:VAL:HG12	1.99	0.45
1:D:931:THR:O	1:D:935:LEU:HG	2.17	0.45
1:D:1032:LYS:C	1:D:1036:ARG:HH12	2.18	0.45
1:D:1808:ARG:HG2	1:D:1854:PHE:CE1	2.51	0.45
1:D:3924:LEU:O	1:D:3927:GLN:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:647:ASN:ND2	1:C:820:ARG:O	2.44	0.45
1:C:650:VAL:HA	1:C:658:GLN:NE2	2.31	0.45
1:C:857:ASP:OD2	1:C:858:THR:N	2.50	0.45
1:C:875:ALA:CB	1:C:922:LEU:HD23	2.46	0.45
1:C:1497:GLY:O	1:C:1501:VAL:HG13	2.16	0.45
1:C:2006:ILE:O	1:C:2010:LEU:HD13	2.15	0.45
1:C:2006:ILE:HD11	1:C:3641:LEU:HD11	1.98	0.45
1:C:2340:PHE:CG	1:C:2435:ARG:HD3	2.51	0.45
1:C:3971:GLY:N	1:C:3972:PRO:HA	2.32	0.45
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.98	0.45
1:C:4705:VAL:HG13	1:C:4711:PHE:CD1	2.51	0.45
1:A:612:VAL:HG13	1:A:2167:ILE:O	2.17	0.45
1:A:887:ILE:CD1	1:A:961:MET:CE	2.95	0.45
1:A:941:MET:SD	1:A:944:GLU:HA	2.57	0.45
1:A:1032:LYS:O	1:A:1036:ARG:NH1	2.50	0.45
1:A:1808:ARG:HG2	1:A:1854:PHE:CE1	2.51	0.45
1:A:1979:LEU:HA	1:A:1982:ARG:NH2	2.31	0.45
1:A:2482:ASP:C	1:A:2482:ASP:OD2	2.60	0.45
1:A:3434:LEU:HD23	1:A:3517:MET:CE	2.47	0.45
1:A:4911:LEU:O	1:A:4914:VAL:HG22	2.16	0.45
1:B:67:PHE:HB3	1:B:109:LEU:HD22	1.98	0.45
1:B:759:ILE:HG23	1:B:759:ILE:O	2.16	0.45
1:B:857:ASP:OD2	1:B:858:THR:N	2.50	0.45
1:B:891:TRP:HZ2	1:B:899:ASP:HA	1.81	0.45
1:B:1280:GLN:O	1:B:1281:ASN:OD1	2.35	0.45
1:B:2396:GLY:O	1:B:2397:VAL:C	2.60	0.45
1:B:3106:MET:O	1:B:3110:LEU:HD13	2.16	0.45
1:B:3229:ILE:HG13	1:B:3230:LEU:N	2.32	0.45
1:B:3300:ALA:CB	1:B:3301:PRO:HD3	2.40	0.45
1:B:3434:LEU:HD23	1:B:3517:MET:CE	2.47	0.45
1:B:4658:ILE:HD13	1:B:4792:LEU:HB3	1.98	0.45
1:D:612:VAL:HG13	1:D:2167:ILE:O	2.17	0.45
1:D:857:ASP:OD2	1:D:858:THR:N	2.50	0.45
1:D:1280:GLN:O	1:D:1281:ASN:OD1	2.35	0.45
1:D:2014:ASP:O	1:D:2015:GLU:HB3	2.17	0.45
1:D:2736:ASP:O	1:D:2736:ASP:OD1	2.34	0.45
1:D:2879:ALA:HB1	1:D:2908:TYR:OH	2.17	0.45
1:D:3229:ILE:HG13	1:D:3230:LEU:N	2.32	0.45
1:D:3300:ALA:HB3	1:D:3301:PRO:CD	2.39	0.45
1:D:4655:PHE:HB2	1:D:4796:MET:HE1	1.98	0.45
1:C:421:PHE:HD1	1:C:421:PHE:H	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1032:LYS:O	1:C:1036:ARG:NH1	2.50	0.45
1:C:2226:PRO:O	1:C:2267:MET:CE	2.65	0.45
1:C:2861:ASP:OD1	1:C:2925:GLU:HG2	2.16	0.45
1:C:3535:LEU:HD11	1:C:3559:LEU:HD22	1.99	0.45
1:C:4655:PHE:HB2	1:C:4796:MET:HE1	1.98	0.45
1:C:4911:LEU:O	1:C:4914:VAL:HG22	2.16	0.45
1:A:361:ALA:O	1:A:362:PRO:C	2.59	0.45
1:A:384:MET:HG3	1:A:385:ASP:N	2.31	0.45
1:A:1506:GLN:OE1	1:D:2771:ILE:HG22	2.17	0.45
1:A:2751:LEU:HD23	1:A:2755:ILE:CD1	2.47	0.45
1:A:3106:MET:O	1:A:3110:LEU:HD13	2.16	0.45
1:A:3390:GLY:O	1:A:3394:VAL:HG13	2.15	0.45
1:A:3445:TRP:NE1	1:A:3455:GLU:OE1	2.45	0.45
2:E:90:ILE:HG22	2:E:91:ILE:HG13	1.99	0.45
1:B:612:VAL:HG13	1:B:2167:ILE:O	2.17	0.45
1:B:2806:ARG:HE	1:B:2810:LYS:HZ1	1.64	0.45
1:B:3716:LEU:HD21	1:B:3782:MET:HE3	1.99	0.45
1:B:3971:GLY:N	1:B:3972:PRO:HA	2.32	0.45
1:B:4095:LYS:O	1:B:4098:ASP:OD1	2.35	0.45
1:D:426:ARG:NH1	1:D:504:ALA:O	2.50	0.45
1:D:499:THR:HG23	1:D:502:HIS:H	1.81	0.45
1:D:875:ALA:CB	1:D:922:LEU:HD23	2.46	0.45
1:D:941:MET:SD	1:D:944:GLU:HA	2.57	0.45
1:D:1105:ALA:HB2	1:D:1191:VAL:HG11	1.98	0.45
1:D:1965:TYR:CE2	1:D:1969:LEU:HD11	2.52	0.45
1:D:2223:ILE:HG23	1:D:2223:ILE:O	2.17	0.45
1:D:2368:LEU:HD12	1:D:2368:LEU:N	2.32	0.45
1:D:2861:ASP:OD1	1:D:2925:GLU:HG2	2.16	0.45
1:D:3624:LEU:O	1:D:3628:ARG:HG2	2.17	0.45
1:D:3971:GLY:N	1:D:3972:PRO:HA	2.32	0.45
1:D:4095:LYS:O	1:D:4098:ASP:OD1	2.35	0.45
1:C:1808:ARG:HG2	1:C:1854:PHE:CE1	2.51	0.45
1:C:2489:LYS:O	1:C:2493:SER:OG	2.32	0.45
1:C:2569:PHE:CE1	1:C:2582:MET:HE1	2.51	0.45
1:C:3573:MET:CE	1:C:3577:ARG:HH12	2.28	0.45
1:C:4060:LYS:O	1:C:4063:ASP:OD1	2.34	0.45
1:A:659:TYR:O	1:A:662:TRP:NE1	2.47	0.45
1:A:752:VAL:HB	1:A:753:PRO:C	2.42	0.45
1:A:3791:GLY:O	1:A:3794:VAL:HG12	2.17	0.45
2:F:54:GLU:O	1:B:1785:ALA:N	2.36	0.45
1:B:659:TYR:O	1:B:662:TRP:NE1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:823:LEU:HD13	1:B:1626:TRP:CE3	2.52	0.45
1:B:2006:ILE:O	1:B:2010:LEU:HD13	2.15	0.45
1:B:2340:PHE:CG	1:B:2435:ARG:HD3	2.51	0.45
1:B:2879:ALA:HB1	1:B:2908:TYR:OH	2.17	0.45
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.98	0.45
1:B:4911:LEU:O	1:B:4914:VAL:HG22	2.16	0.45
1:D:877:ASN:HA	1:D:880:GLU:HG2	1.99	0.45
1:D:2226:PRO:O	1:D:2267:MET:CE	2.65	0.45
1:D:2234:ARG:O	1:D:2238:TYR:HD2	2.00	0.45
1:D:3292:PRO:O	1:D:3294:PRO:HD3	2.17	0.45
1:D:4952:GLU:OE1	1:D:4952:GLU:C	2.60	0.45
1:C:384:MET:HG3	1:C:385:ASP:N	2.31	0.45
1:C:2000:SER:O	1:C:2005:GLN:NE2	2.41	0.45
1:C:2135:LEU:HD12	1:C:3658:LYS:HZ3	1.80	0.45
1:C:3199:ALA:O	1:C:3283:ARG:NE	2.40	0.45
1:C:3434:LEU:HD23	1:C:3517:MET:CE	2.47	0.45
1:C:3791:GLY:O	1:C:3794:VAL:HG12	2.17	0.45
1:C:4832:HIS:ND1	1:C:4833:ASN:OD1	2.45	0.45
1:C:4952:GLU:C	1:C:4952:GLU:OE1	2.60	0.45
1:A:823:LEU:HD13	1:A:1626:TRP:CE3	2.52	0.45
1:A:907:LEU:CD2	1:A:961:MET:HE3	2.47	0.45
1:A:1141:ARG:CB	1:D:3477:LYS:HZ3	2.29	0.45
1:A:3229:ILE:HG13	1:A:3230:LEU:N	2.32	0.45
1:A:3300:ALA:CB	1:A:3301:PRO:HD3	2.40	0.45
1:B:361:ALA:O	1:B:362:PRO:C	2.59	0.45
1:B:650:VAL:HA	1:B:658:GLN:NE2	2.31	0.45
1:B:1031:THR:O	1:B:1032:LYS:C	2.59	0.45
1:B:2937:VAL:O	1:B:2937:VAL:HG13	2.16	0.45
1:B:4098:ASP:OD1	1:B:4098:ASP:C	2.60	0.45
1:B:4749:GLU:O	1:B:4753:HIS:CD2	2.69	0.45
1:D:361:ALA:O	1:D:362:PRO:C	2.59	0.45
1:D:553:ARG:NH2	1:D:555:GLU:OE2	2.49	0.45
1:D:2309:SER:HB2	1:D:2321:ILE:O	2.17	0.45
1:D:3359:ILE:HD13	1:D:3434:LEU:HD13	1.99	0.45
1:D:3500:GLY:O	1:D:3504:SER:OG	2.33	0.45
1:D:3540:TYR:HB3	1:D:3604:TYR:CD2	2.52	0.45
1:C:725:HIS:ND1	1:C:725:HIS:O	2.50	0.45
1:A:67:PHE:HB3	1:A:109:LEU:HD22	1.98	0.44
1:A:421:PHE:HD1	1:A:421:PHE:H	1.64	0.44
1:A:1280:GLN:O	1:A:1281:ASN:OD1	2.35	0.44
1:A:2396:GLY:O	1:A:2397:VAL:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3289:PRO:O	1:A:3290:GLU:HB2	2.18	0.44
1:A:3359:ILE:HD13	1:A:3434:LEU:HD13	1.99	0.44
1:B:426:ARG:NH1	1:B:504:ALA:O	2.50	0.44
1:B:565:TYR:O	1:B:569:ILE:HG12	2.17	0.44
1:B:2014:ASP:O	1:B:2015:GLU:HB3	2.17	0.44
1:B:2784:GLU:OE2	1:B:2785:LEU:HD12	2.16	0.44
1:B:3292:PRO:O	1:B:3294:PRO:HD3	2.17	0.44
1:B:3535:LEU:HD11	1:B:3559:LEU:HD22	1.99	0.44
1:B:3868:ARG:HH12	1:B:3870:ASN:HB3	1.82	0.44
1:B:4944:ARG:NE	1:C:4938:ASP:OD1	2.47	0.44
1:D:823:LEU:HD13	1:D:1626:TRP:CE3	2.52	0.44
1:D:907:LEU:CD2	1:D:961:MET:HE3	2.47	0.44
1:D:2638:LYS:O	1:D:2698:MET:HE2	2.18	0.44
1:D:2821:TRP:CH2	1:D:2877:GLN:OE1	2.70	0.44
1:D:3632:VAL:O	1:D:3636:PHE:HD2	2.00	0.44
1:D:4732:PHE:O	1:D:4736:ARG:NH1	2.45	0.44
1:C:907:LEU:CD2	1:C:961:MET:HE3	2.47	0.44
1:C:1032:LYS:C	1:C:1036:ARG:HH12	2.18	0.44
1:C:2014:ASP:O	1:C:2015:GLU:HB3	2.17	0.44
1:C:2309:SER:HB2	1:C:2321:ILE:O	2.17	0.44
1:C:3229:ILE:HG13	1:C:3230:LEU:N	2.32	0.44
1:C:3359:ILE:HB	1:C:3360:PRO:HD3	2.00	0.44
1:C:3624:LEU:O	1:C:3628:ARG:HG2	2.17	0.44
1:C:3716:LEU:HD21	1:C:3782:MET:HE3	1.99	0.44
1:A:257:ARG:O	1:A:284:HIS:NE2	2.43	0.44
1:A:2226:PRO:O	1:A:2267:MET:CE	2.65	0.44
1:A:2738:ARG:O	1:A:2738:ARG:HG2	2.17	0.44
1:A:2784:GLU:OE2	1:A:2785:LEU:HD12	2.16	0.44
1:A:4705:VAL:HG13	1:A:4711:PHE:CD1	2.52	0.44
1:B:907:LEU:CD2	1:B:961:MET:HE3	2.47	0.44
1:B:1999:ARG:HH11	1:B:1999:ARG:HB3	1.83	0.44
1:B:2368:LEU:HD12	1:B:2368:LEU:N	2.32	0.44
1:B:3624:LEU:O	1:B:3628:ARG:HG2	2.17	0.44
1:B:3817:LEU:HD21	1:B:3898:ASP:HB3	1.99	0.44
1:D:2482:ASP:C	1:D:2482:ASP:OD2	2.60	0.44
1:C:2004:GLU:OE1	1:C:2004:GLU:N	2.51	0.44
1:C:2784:GLU:OE2	1:C:2785:LEU:CD1	2.65	0.44
1:C:2879:ALA:HB1	1:C:2908:TYR:OH	2.17	0.44
1:C:3924:LEU:O	1:C:3927:GLN:HG3	2.17	0.44
1:A:426:ARG:NH1	1:A:504:ALA:O	2.50	0.44
1:A:730:VAL:HG21	1:A:764:VAL:HG12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1105:ALA:HB2	1:A:1191:VAL:HG11	1.98	0.44
1:A:2309:SER:HB2	1:A:2321:ILE:O	2.17	0.44
1:A:2821:TRP:CH2	1:A:2877:GLN:OE1	2.70	0.44
1:A:2946:LEU:O	1:A:2946:LEU:CD2	2.61	0.44
1:A:3359:ILE:HB	1:A:3360:PRO:HD3	2.00	0.44
1:A:3868:ARG:HH12	1:A:3870:ASN:HB3	1.82	0.44
1:A:3924:LEU:O	1:A:3927:GLN:HG3	2.17	0.44
1:B:707:VAL:HG12	1:B:715:GLY:HA3	1.99	0.44
1:B:2751:LEU:HD23	1:B:2755:ILE:CD1	2.47	0.44
1:B:2784:GLU:OE2	1:B:2785:LEU:CD1	2.65	0.44
1:B:2821:TRP:CH2	1:B:2877:GLN:OE1	2.70	0.44
1:B:3589:PRO:O	1:B:3593:VAL:HG13	2.18	0.44
1:D:725:HIS:ND1	1:D:725:HIS:O	2.50	0.44
1:D:797:HIS:CG	1:D:821:LEU:HD23	2.52	0.44
1:D:3434:LEU:HD23	1:D:3517:MET:CE	2.47	0.44
1:D:4098:ASP:OD1	1:D:4098:ASP:C	2.60	0.44
1:D:4943:LEU:O	1:D:4947:GLN:HG2	2.18	0.44
1:C:612:VAL:HG13	1:C:2167:ILE:O	2.17	0.44
1:C:1105:ALA:HB2	1:C:1191:VAL:HG11	1.98	0.44
1:C:1126:GLY:O	1:C:1142:PRO:HA	2.18	0.44
1:C:1999:ARG:HH11	1:C:1999:ARG:HB3	1.83	0.44
1:C:3100:SER:O	1:C:3104:GLU:OE1	2.34	0.44
1:C:3292:PRO:O	1:C:3294:PRO:HD3	2.17	0.44
1:C:3632:VAL:O	1:C:3636:PHE:HD2	2.00	0.44
1:A:725:HIS:ND1	1:A:725:HIS:O	2.50	0.44
1:A:857:ASP:OD2	1:A:858:THR:N	2.50	0.44
1:A:931:THR:O	1:A:935:LEU:HG	2.17	0.44
1:A:2004:GLU:N	1:A:2004:GLU:OE1	2.51	0.44
1:A:2569:PHE:CE1	1:A:2582:MET:HE1	2.52	0.44
1:A:2785:LEU:O	1:A:2786:LYS:HG2	2.18	0.44
1:A:4658:ILE:HD13	1:A:4792:LEU:HB3	1.98	0.44
1:A:4937:ILE:HG12	1:B:4934:GLY:HA2	2.00	0.44
1:B:421:PHE:H	1:B:421:PHE:HD1	1.64	0.44
1:B:887:ILE:CD1	1:B:961:MET:CE	2.95	0.44
1:B:941:MET:SD	1:B:944:GLU:HA	2.57	0.44
1:B:1126:GLY:O	1:B:1142:PRO:HA	2.18	0.44
1:B:1435:TYR:OH	1:B:1451:GLY:O	2.35	0.44
1:B:2309:SER:HB2	1:B:2321:ILE:O	2.17	0.44
1:B:2482:ASP:C	1:B:2482:ASP:OD2	2.60	0.44
1:B:3371:LYS:HE2	1:B:3371:LYS:HA	2.00	0.44
1:B:3527:PRO:HD2	1:B:3573:MET:SD	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:752:VAL:HB	1:D:753:PRO:C	2.42	0.44
1:D:2569:PHE:CE1	1:D:2582:MET:HE1	2.52	0.44
1:D:2751:LEU:CD1	1:D:2817:ILE:CD1	2.96	0.44
1:D:2785:LEU:O	1:D:2786:LYS:HG2	2.18	0.44
1:D:3359:ILE:HB	1:D:3360:PRO:HD3	2.00	0.44
1:D:3527:PRO:HD2	1:D:3573:MET:SD	2.57	0.44
1:D:3559:LEU:HD23	1:D:3559:LEU:O	2.18	0.44
1:D:3589:PRO:O	1:D:3593:VAL:HG13	2.18	0.44
1:D:3716:LEU:HD21	1:D:3782:MET:HE3	1.99	0.44
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.98	0.44
1:D:4983:HIS:O	3:D:5301:ATP:N6	2.51	0.44
1:C:823:LEU:HD13	1:C:1626:TRP:CE3	2.52	0.44
1:C:897:ARG:HG3	1:C:905:PRO:HD2	2.00	0.44
1:C:952:LYS:HD3	1:C:968:ALA:HB3	1.98	0.44
1:C:2576:ALA:CA	1:C:2618:MET:HE1	2.44	0.44
1:C:2638:LYS:O	1:C:2698:MET:HE2	2.18	0.44
1:C:2821:TRP:CH2	1:C:2877:GLN:OE1	2.70	0.44
1:C:3589:PRO:O	1:C:3593:VAL:HG13	2.18	0.44
1:C:3858:MET:HE3	1:C:3858:MET:HB3	1.84	0.44
1:A:2014:ASP:O	1:A:2015:GLU:HB3	2.17	0.44
1:A:2784:GLU:OE2	1:A:2785:LEU:CD1	2.65	0.44
1:A:3500:GLY:O	1:A:3504:SER:OG	2.33	0.44
1:A:3559:LEU:HD23	1:A:3559:LEU:O	2.18	0.44
1:A:4098:ASP:OD1	1:A:4098:ASP:C	2.60	0.44
1:A:4943:LEU:O	1:A:4947:GLN:HG2	2.18	0.44
1:B:262:LEU:HD12	1:B:274:LEU:HD11	2.00	0.44
1:B:646:PRO:HB2	1:B:648:ILE:CD1	2.48	0.44
1:B:725:HIS:O	1:B:725:HIS:ND1	2.50	0.44
1:B:752:VAL:HB	1:B:753:PRO:C	2.42	0.44
1:B:1115:LEU:HD12	1:B:1193:SER:HB3	2.00	0.44
1:B:2226:PRO:O	1:B:2267:MET:CE	2.65	0.44
1:B:3359:ILE:HB	1:B:3360:PRO:HD3	2.00	0.44
1:B:4852:THR:HG23	1:B:4882:CYS:HB3	1.99	0.44
1:B:4943:LEU:O	1:B:4947:GLN:HG2	2.18	0.44
1:D:2703:LEU:N	1:D:2703:LEU:HD12	2.33	0.44
1:D:3199:ALA:O	1:D:3283:ARG:NE	2.40	0.44
1:D:3332:ALA:HB1	1:D:3335:MET:HE3	2.00	0.44
1:C:67:PHE:HB3	1:C:109:LEU:HD22	1.98	0.44
1:C:552:ASP:OD1	1:C:553:ARG:N	2.51	0.44
1:C:931:THR:O	1:C:935:LEU:HG	2.17	0.44
1:C:941:MET:SD	1:C:944:GLU:HA	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4952:GLU:O	1:C:4956:THR:OG1	2.33	0.44
1:A:897:ARG:HG3	1:A:905:PRO:HD2	2.00	0.44
1:A:1965:TYR:CE2	1:A:1969:LEU:HD11	2.52	0.44
1:A:2638:LYS:O	1:A:2698:MET:HE2	2.18	0.44
1:A:2859:PRO:HG3	1:A:2932:MET:HE2	2.00	0.44
1:A:3589:PRO:O	1:A:3593:VAL:HG13	2.18	0.44
1:A:3971:GLY:N	1:A:3972:PRO:HA	2.32	0.44
1:B:897:ARG:HG3	1:B:905:PRO:HD2	2.00	0.44
1:B:2006:ILE:HD11	1:B:3641:LEU:HD11	1.99	0.44
1:B:2527:LEU:O	1:B:2531:ARG:HG3	2.18	0.44
1:B:2785:LEU:O	1:B:2786:LYS:HG2	2.18	0.44
1:B:3289:PRO:O	1:B:3290:GLU:HB2	2.18	0.44
1:D:67:PHE:HB3	1:D:109:LEU:HD22	1.98	0.44
1:D:897:ARG:HG3	1:D:905:PRO:HD2	2.00	0.44
1:D:1435:TYR:OH	1:D:1451:GLY:O	2.35	0.44
1:D:2336:ARG:HG2	1:D:2435:ARG:HD2	2.00	0.44
1:D:2738:ARG:HG2	1:D:2738:ARG:O	2.17	0.44
1:D:3791:GLY:O	1:D:3794:VAL:HG12	2.17	0.44
1:D:3817:LEU:HD21	1:D:3898:ASP:HB3	1.99	0.44
1:D:4852:THR:HG23	1:D:4882:CYS:HB3	1.99	0.44
1:C:262:LEU:HD12	1:C:274:LEU:HD11	2.00	0.44
1:C:426:ARG:NH1	1:C:504:ALA:O	2.50	0.44
1:C:565:TYR:O	1:C:569:ILE:HG12	2.17	0.44
1:C:646:PRO:HB2	1:C:648:ILE:CD1	2.48	0.44
1:C:2234:ARG:O	1:C:2238:TYR:HD2	2.00	0.44
1:C:2482:ASP:OD2	1:C:2482:ASP:C	2.60	0.44
1:C:3127:GLN:O	1:C:3130:THR:HG22	2.18	0.44
1:C:4943:LEU:O	1:C:4947:GLN:HG2	2.18	0.44
1:A:262:LEU:HD12	1:A:274:LEU:HD11	2.00	0.44
1:A:2703:LEU:N	1:A:2703:LEU:HD12	2.32	0.44
1:A:2755:ILE:HD13	1:A:2810:LYS:HG2	2.00	0.44
1:A:2785:LEU:C	1:A:2786:LYS:HG2	2.43	0.44
1:A:3716:LEU:HD21	1:A:3782:MET:HE3	1.99	0.44
1:B:552:ASP:OD1	1:B:553:ARG:N	2.51	0.44
1:B:2234:ARG:O	1:B:2238:TYR:HD2	2.00	0.44
1:B:2785:LEU:C	1:B:2786:LYS:HG2	2.43	0.44
1:B:2859:PRO:HG3	1:B:2932:MET:HE2	2.00	0.44
1:B:3199:ALA:O	1:B:3283:ARG:NE	2.40	0.44
1:D:294:THR:O	1:D:298:GLY:N	2.51	0.44
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.18	0.44
1:C:877:ASN:HA	1:C:880:GLU:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2223:ILE:O	1:C:2223:ILE:HG23	2.17	0.44
1:C:3332:ALA:HB1	1:C:3335:MET:HE3	2.00	0.44
1:C:3527:PRO:HD2	1:C:3573:MET:SD	2.57	0.44
1:C:3540:TYR:HB3	1:C:3604:TYR:CD2	2.52	0.44
1:C:4658:ILE:HD13	1:C:4792:LEU:HB3	1.99	0.44
1:A:866:HIS:O	1:A:869:ARG:HG2	2.18	0.44
1:A:1126:GLY:O	1:A:1142:PRO:HA	2.18	0.44
1:A:1999:ARG:HH11	1:A:1999:ARG:HB3	1.83	0.44
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.18	0.44
1:A:2234:ARG:O	1:A:2238:TYR:HD2	2.00	0.44
1:A:2336:ARG:HG2	1:A:2435:ARG:HD2	2.00	0.44
1:A:2751:LEU:HD11	1:A:2817:ILE:CD1	2.48	0.44
1:A:2756:ASN:HA	1:A:2806:ARG:HH12	1.83	0.44
1:A:3332:ALA:HB1	1:A:3335:MET:HE3	2.00	0.44
1:B:574:VAL:HA	1:B:577:ILE:HG12	1.98	0.44
1:B:730:VAL:HG21	1:B:764:VAL:HG12	1.98	0.44
1:B:2091:PRO:O	1:B:2092:GLN:HB2	2.18	0.44
1:B:2638:LYS:O	1:B:2698:MET:HE2	2.18	0.44
1:B:3365:LEU:HD11	1:B:3405:LEU:CD1	2.48	0.44
1:B:3540:TYR:HB3	1:B:3604:TYR:CD2	2.52	0.44
1:D:262:LEU:HD12	1:D:274:LEU:HD11	2.00	0.44
1:D:552:ASP:OD1	1:D:553:ARG:N	2.51	0.44
1:D:2006:ILE:HD11	1:D:3641:LEU:HD11	1.98	0.44
1:D:2527:LEU:O	1:D:2531:ARG:HG3	2.18	0.44
1:D:2625:ARG:NH1	1:D:2629:ASP:OD1	2.51	0.44
1:D:2755:ILE:HD13	1:D:2810:LYS:HG2	2.00	0.44
1:D:2784:GLU:OE2	1:D:2785:LEU:CD1	2.65	0.44
1:C:421:PHE:HE2	1:C:507:ALA:HB2	1.79	0.44
1:C:559:GLY:O	1:C:563:VAL:HG23	2.18	0.44
1:C:574:VAL:HA	1:C:577:ILE:HG12	1.99	0.44
1:C:1493:TYR:CB	1:C:1527:MET:HE1	2.48	0.44
1:C:2091:PRO:O	1:C:2092:GLN:HB2	2.18	0.44
1:C:2368:LEU:N	1:C:2368:LEU:HD12	2.32	0.44
1:A:707:VAL:HG12	1:A:715:GLY:HA3	1.99	0.44
1:A:797:HIS:CG	1:A:821:LEU:HD23	2.52	0.44
1:A:2527:LEU:O	1:A:2531:ARG:HG3	2.18	0.44
1:A:3266:MET:SD	1:A:3270:ILE:HD11	2.58	0.44
1:A:3292:PRO:O	1:A:3294:PRO:HD3	2.17	0.44
1:A:3365:LEU:HD11	1:A:3405:LEU:CD1	2.48	0.44
1:A:3624:LEU:O	1:A:3628:ARG:HG2	2.17	0.44
1:A:4024:VAL:HG11	1:A:4142:ASN:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4933:GLN:HG3	1:B:4930:ALA:CB	2.48	0.44
1:B:234:SER:OG	1:B:240:ASP:OD2	2.29	0.44
1:B:797:HIS:CG	1:B:821:LEU:HD23	2.52	0.44
1:B:2434:GLY:O	1:B:2508:ARG:NE	2.36	0.44
1:B:2725:LYS:NZ	1:B:2734:ASN:O	2.49	0.44
1:B:2751:LEU:HD11	1:B:2817:ILE:CD1	2.48	0.44
1:B:3127:GLN:O	1:B:3130:THR:HG22	2.18	0.44
1:B:3266:MET:SD	1:B:3270:ILE:HD11	2.58	0.44
1:B:3791:GLY:O	1:B:3794:VAL:HG12	2.17	0.44
1:D:417:GLY:O	1:D:421:PHE:HD1	2.01	0.44
1:D:421:PHE:HD1	1:D:421:PHE:H	1.64	0.44
1:D:574:VAL:O	1:D:578:ILE:HG12	2.18	0.44
1:D:866:HIS:O	1:D:869:ARG:HG2	2.18	0.44
1:D:893:TYR:HB3	1:D:962:SER:OG	2.18	0.44
1:D:1999:ARG:HH11	1:D:1999:ARG:HB3	1.83	0.44
1:D:2608:MET:HE3	1:D:2608:MET:HB3	1.85	0.44
1:D:2751:LEU:HD23	1:D:2755:ILE:CD1	2.47	0.44
1:C:1436:SER:OG	1:C:1565:GLU:HB2	2.18	0.44
1:A:552:ASP:OD1	1:A:553:ARG:N	2.51	0.43
1:A:2879:ALA:HB1	1:A:2908:TYR:OH	2.17	0.43
1:A:3104:GLU:OE2	1:A:3167:ARG:HB3	2.18	0.43
2:G:90:ILE:HD11	1:C:1684:ALA:HA	2.00	0.43
1:B:1493:TYR:CB	1:B:1527:MET:HE1	2.48	0.43
1:B:2223:ILE:HG23	1:B:2223:ILE:O	2.17	0.43
1:B:2703:LEU:HD12	1:B:2703:LEU:N	2.32	0.43
1:B:2738:ARG:HG2	1:B:2738:ARG:O	2.17	0.43
1:B:2751:LEU:CD1	1:B:2817:ILE:CD1	2.96	0.43
1:B:3632:VAL:O	1:B:3636:PHE:HD2	2.00	0.43
1:D:107:ILE:CG2	1:D:150:MET:HE2	2.48	0.43
1:D:574:VAL:HA	1:D:577:ILE:HG12	1.99	0.43
1:D:2004:GLU:OE1	1:D:2004:GLU:N	2.51	0.43
1:D:2091:PRO:O	1:D:2092:GLN:HB2	2.18	0.43
1:D:2756:ASN:HA	1:D:2806:ARG:HH12	1.83	0.43
1:C:107:ILE:CG2	1:C:150:MET:HE2	2.48	0.43
1:C:2785:LEU:C	1:C:2786:LYS:HG2	2.43	0.43
1:C:3300:ALA:CB	1:C:3301:PRO:HD3	2.40	0.43
1:C:4710:SER:O	1:C:4713:SER:OG	2.24	0.43
1:A:574:VAL:O	1:A:578:ILE:HG12	2.18	0.43
1:A:1435:TYR:OH	1:A:1451:GLY:O	2.35	0.43
1:A:1493:TYR:CB	1:A:1527:MET:HE1	2.48	0.43
1:A:2212:VAL:HG11	1:A:2256:TYR:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2499:LYS:O	1:A:2503:VAL:HG23	2.18	0.43
1:A:3391:GLU:HG2	1:A:3395:ARG:HH21	1.83	0.43
1:A:3540:TYR:HB3	1:A:3604:TYR:CD2	2.52	0.43
1:A:3891:LEU:O	1:A:3899:PHE:CD2	2.71	0.43
1:A:4852:THR:HG23	1:A:4882:CYS:HB3	1.99	0.43
2:G:90:ILE:HG22	2:G:91:ILE:HG13	1.99	0.43
2:F:90:ILE:HG22	2:F:91:ILE:HG13	1.99	0.43
1:B:220:LEU:C	1:B:220:LEU:HD12	2.43	0.43
1:B:559:GLY:O	1:B:563:VAL:HG23	2.18	0.43
1:B:877:ASN:HA	1:B:880:GLU:HG2	1.99	0.43
1:B:2004:GLU:OE1	1:B:2004:GLU:N	2.51	0.43
1:B:2336:ARG:HG2	1:B:2435:ARG:HD2	2.00	0.43
1:D:1032:LYS:O	1:D:1036:ARG:NH1	2.50	0.43
1:D:3104:GLU:OE2	1:D:3167:ARG:HB3	2.18	0.43
1:D:3127:GLN:O	1:D:3130:THR:HG22	2.18	0.43
1:D:3266:MET:SD	1:D:3270:ILE:HD11	2.58	0.43
1:D:3289:PRO:O	1:D:3290:GLU:HB2	2.18	0.43
1:C:294:THR:O	1:C:298:GLY:N	2.50	0.43
1:C:797:HIS:CG	1:C:821:LEU:HD23	2.52	0.43
1:C:893:TYR:HB3	1:C:962:SER:OG	2.18	0.43
1:C:2703:LEU:HD12	1:C:2703:LEU:N	2.33	0.43
1:C:2751:LEU:HD23	1:C:2755:ILE:CD1	2.47	0.43
1:C:2751:LEU:CD1	1:C:2817:ILE:CD1	2.96	0.43
1:A:1436:SER:OG	1:A:1565:GLU:HB2	2.18	0.43
1:A:3409:TYR:N	1:A:3410:PRO:HD2	2.33	0.43
1:A:3539:ARG:NH2	1:A:3548:GLU:OE2	2.38	0.43
2:E:38:SER:HB3	2:E:41:ASP:OD1	2.19	0.43
1:B:887:ILE:CD1	1:B:961:MET:HE1	2.49	0.43
1:B:2499:LYS:O	1:B:2503:VAL:HG23	2.18	0.43
1:B:2755:ILE:HD13	1:B:2810:LYS:HG2	2.00	0.43
1:B:3359:ILE:HD13	1:B:3434:LEU:HD13	1.99	0.43
1:B:3559:LEU:O	1:B:3559:LEU:HD23	2.18	0.43
1:D:565:TYR:O	1:D:569:ILE:HG12	2.17	0.43
1:D:887:ILE:HD11	1:D:961:MET:HE3	2.01	0.43
1:D:1493:TYR:CB	1:D:1527:MET:HE1	2.48	0.43
1:D:2499:LYS:O	1:D:2503:VAL:HG23	2.19	0.43
1:C:220:LEU:C	1:C:220:LEU:HD12	2.43	0.43
1:C:345:LEU:HD21	1:C:389:PHE:CZ	2.54	0.43
1:C:417:GLY:O	1:C:421:PHE:HD1	2.01	0.43
1:C:730:VAL:HG21	1:C:764:VAL:HG12	1.98	0.43
1:C:1122:TYR:CE2	1:C:1182:ILE:HD12	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2738:ARG:O	1:C:2738:ARG:HG2	2.17	0.43
1:C:2785:LEU:O	1:C:2786:LYS:HG2	2.18	0.43
1:C:3266:MET:SD	1:C:3270:ILE:HD11	2.58	0.43
1:C:3391:GLU:HG2	1:C:3395:ARG:HH21	1.83	0.43
1:C:3409:TYR:N	1:C:3410:PRO:HD2	2.33	0.43
1:A:220:LEU:HD12	1:A:220:LEU:C	2.44	0.43
1:A:646:PRO:HB2	1:A:648:ILE:CD1	2.48	0.43
2:H:90:ILE:HG22	2:H:91:ILE:HG13	1.99	0.43
1:B:893:TYR:HB3	1:B:962:SER:OG	2.18	0.43
1:B:2604:GLU:O	1:B:2608:MET:HG2	2.19	0.43
1:B:2869:ARG:HD3	1:B:2947:ASP:CG	2.44	0.43
1:B:4253:GLU:OE1	1:B:4557:ARG:NE	2.52	0.43
1:D:867:LEU:HA	1:D:870:ILE:HG22	2.01	0.43
1:D:1122:TYR:CE2	1:D:1182:ILE:HD12	2.53	0.43
1:D:2668:SER:O	1:D:2669:GLU:HB2	2.18	0.43
1:D:2859:PRO:HG3	1:D:2932:MET:HE2	2.00	0.43
1:C:574:VAL:O	1:C:578:ILE:HG12	2.19	0.43
1:C:1435:TYR:OH	1:C:1451:GLY:O	2.35	0.43
1:C:1989:ALA:O	1:C:1992:ALA:HB3	2.19	0.43
1:C:2336:ARG:HG2	1:C:2435:ARG:HD2	2.00	0.43
1:C:2499:LYS:O	1:C:2503:VAL:HG23	2.19	0.43
1:C:2608:MET:HE1	1:C:2646:ASN:ND2	2.34	0.43
1:C:3559:LEU:O	1:C:3559:LEU:HD23	2.18	0.43
1:A:877:ASN:HA	1:A:880:GLU:HG2	1.99	0.43
1:A:2091:PRO:O	1:A:2092:GLN:HB2	2.18	0.43
1:A:2625:ARG:NH1	1:A:2629:ASP:CG	2.77	0.43
1:A:2751:LEU:CD1	1:A:2817:ILE:CD1	2.96	0.43
1:A:3632:VAL:O	1:A:3636:PHE:HD2	2.00	0.43
1:A:4253:GLU:OE1	1:A:4557:ARG:NE	2.52	0.43
1:A:4545:GLU:OE2	1:A:4548:ARG:NH2	2.39	0.43
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.18	0.43
1:B:2135:LEU:O	1:B:3658:LYS:NZ	2.51	0.43
1:B:4024:VAL:HG11	1:B:4142:ASN:HB3	2.00	0.43
1:B:4933:GLN:HG3	1:C:4930:ALA:CB	2.48	0.43
1:D:2751:LEU:HD11	1:D:2817:ILE:CD1	2.48	0.43
1:D:2785:LEU:C	1:D:2786:LYS:HG2	2.43	0.43
1:D:3111:ARG:NH2	1:D:3174:SER:C	2.77	0.43
1:D:4930:ALA:CB	1:C:4933:GLN:HG3	2.48	0.43
1:C:3365:LEU:HD11	1:C:3405:LEU:CD1	2.48	0.43
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.34	0.43
1:A:345:LEU:HD21	1:A:389:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:380:GLN:OE1	1:A:380:GLN:N	2.47	0.43
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.34	0.43
2:H:38:SER:HB3	2:H:41:ASP:OD1	2.19	0.43
2:G:38:SER:HB3	2:G:41:ASP:OD1	2.19	0.43
2:F:38:SER:HB3	2:F:41:ASP:OD1	2.19	0.43
1:B:866:HIS:O	1:B:869:ARG:HG2	2.18	0.43
1:B:1931:LEU:HD13	1:B:1935:VAL:CG1	2.47	0.43
1:B:4205:TRP:CZ2	1:B:4214:LYS:HD3	2.54	0.43
1:D:234:SER:OG	1:D:240:ASP:OD2	2.29	0.43
1:D:1115:LEU:HD12	1:D:1193:SER:HB3	2.00	0.43
1:D:1241:SER:HA	1:D:1603:VAL:HG22	2.01	0.43
1:D:1436:SER:OG	1:D:1565:GLU:HB2	2.18	0.43
1:D:2135:LEU:HD12	1:D:3658:LYS:HZ3	1.83	0.43
1:D:2323:TRP:CZ3	1:D:2325:PRO:HG3	2.54	0.43
1:D:2478:THR:HG22	1:D:2479:LEU:N	2.33	0.43
1:D:2534:ALA:CB	1:D:2588:ARG:HE	2.24	0.43
1:D:4024:VAL:HG11	1:D:4142:ASN:HB3	2.00	0.43
1:D:4973:HIS:O	1:D:4977:THR:HG23	2.19	0.43
1:C:1978:ALA:HB1	1:C:1982:ARG:NH1	2.26	0.43
1:C:2751:LEU:HD11	1:C:2817:ILE:CD1	2.48	0.43
1:C:3087:ILE:H	1:C:3087:ILE:HD12	1.84	0.43
1:C:3817:LEU:HD21	1:C:3898:ASP:HB3	1.99	0.43
1:C:4704:LEU:O	1:C:4774:LYS:NZ	2.52	0.43
1:A:336:PRO:HA	1:A:337:PRO:HD3	1.87	0.43
1:A:647:ASN:ND2	1:A:820:ARG:O	2.44	0.43
1:A:887:ILE:HD11	1:A:961:MET:HE3	2.01	0.43
1:A:2290:LEU:HD23	1:A:2291:GLN:N	2.34	0.43
1:A:2309:SER:OG	1:A:2310:CYS:N	2.52	0.43
1:A:2470:ILE:HG22	1:A:2525:GLY:HA3	2.01	0.43
1:A:2702:CYS:C	1:A:2704:CYS:H	2.27	0.43
1:A:4952:GLU:O	1:A:4956:THR:OG1	2.33	0.43
1:B:2323:TRP:CZ3	1:B:2325:PRO:HG3	2.54	0.43
1:B:3087:ILE:HD12	1:B:3087:ILE:H	1.84	0.43
1:B:3233:PRO:CB	1:B:3238:GLU:HB2	2.49	0.43
1:B:4983:HIS:O	3:B:5301:ATP:N6	2.51	0.43
1:D:646:PRO:HB2	1:D:648:ILE:CD1	2.48	0.43
1:D:2902:HIS:CE1	1:D:2904:LEU:HB3	2.54	0.43
1:D:3365:LEU:HD11	1:D:3405:LEU:CD1	2.48	0.43
1:C:887:ILE:HD11	1:C:961:MET:HE3	2.01	0.43
1:C:1115:LEU:HD12	1:C:1193:SER:HB3	2.00	0.43
1:C:1241:SER:HA	1:C:1603:VAL:HG22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2323:TRP:CZ3	1:C:2325:PRO:HG3	2.54	0.43
1:C:2946:LEU:O	1:C:2946:LEU:CD2	2.62	0.43
1:C:3233:PRO:CB	1:C:3238:GLU:HB2	2.49	0.43
1:C:3289:PRO:O	1:C:3290:GLU:HB2	2.18	0.43
1:C:3296:LEU:HD23	1:C:3296:LEU:C	2.44	0.43
1:C:4253:GLU:OE1	1:C:4557:ARG:NE	2.52	0.43
1:A:559:GLY:O	1:A:563:VAL:HG23	2.18	0.43
1:A:1280:GLN:O	1:A:1281:ASN:CG	2.62	0.43
1:A:1978:ALA:O	1:A:1982:ARG:CZ	2.67	0.43
1:A:1989:ALA:O	1:A:1992:ALA:HB3	2.19	0.43
1:A:2608:MET:HE1	1:A:2646:ASN:ND2	2.34	0.43
1:A:2902:HIS:CE1	1:A:2904:LEU:HB3	2.54	0.43
1:A:3296:LEU:C	1:A:3296:LEU:HD23	2.44	0.43
1:A:3450:ASN:HA	1:A:3453:ARG:HG2	2.01	0.43
1:A:3527:PRO:HD2	1:A:3573:MET:SD	2.57	0.43
1:A:3817:LEU:HD21	1:A:3898:ASP:HB3	1.99	0.43
1:A:4983:HIS:O	3:A:5301:ATP:N6	2.51	0.43
1:B:2290:LEU:HD23	1:B:2291:GLN:N	2.34	0.43
1:B:2675:THR:CG2	1:B:2706:ILE:HG23	2.49	0.43
1:B:2902:HIS:CE1	1:B:2904:LEU:HB3	2.54	0.43
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.34	0.43
1:D:1126:GLY:O	1:D:1142:PRO:HA	2.18	0.43
1:D:2608:MET:HE1	1:D:2646:ASN:ND2	2.34	0.43
1:D:2675:THR:CG2	1:D:2706:ILE:HG23	2.49	0.43
1:D:3087:ILE:H	1:D:3087:ILE:HD12	1.84	0.43
1:D:3546:ASP:O	1:D:3549:VAL:HG22	2.19	0.43
1:D:3969:ILE:O	1:D:3972:PRO:HA	2.19	0.43
1:C:1143:TRP:HB2	1:C:1147:ASP:HB2	2.01	0.43
1:C:1461:ASP:OD2	1:C:1468:LYS:NZ	2.49	0.43
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.18	0.43
1:C:2135:LEU:O	1:C:3658:LYS:NZ	2.52	0.43
1:C:2675:THR:CG2	1:C:2706:ILE:HG23	2.49	0.43
1:C:2869:ARG:HD3	1:C:2947:ASP:CG	2.44	0.43
1:C:3111:ARG:NH2	1:C:3174:SER:C	2.77	0.43
1:C:3371:LYS:HE2	1:C:3371:LYS:HA	2.00	0.43
1:C:3868:ARG:HH12	1:C:3870:ASN:HB3	1.82	0.43
1:A:1036:ARG:HH11	1:A:1036:ARG:HD3	1.48	0.43
1:A:3233:PRO:CB	1:A:3238:GLU:HB2	2.49	0.43
1:A:3969:ILE:O	1:A:3972:PRO:HA	2.19	0.43
1:A:4973:HIS:O	1:A:4977:THR:HG23	2.19	0.43
1:B:345:LEU:HD21	1:B:389:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:364:PRO:O	1:B:365:LYS:HB3	2.19	0.43
1:B:886:ARG:HG2	1:B:904:HIS:CD2	2.54	0.43
1:B:1032:LYS:O	1:B:1036:ARG:NH1	2.50	0.43
1:B:1821:ASP:OD1	1:B:1821:ASP:C	2.62	0.43
1:B:1978:ALA:O	1:B:1982:ARG:CZ	2.67	0.43
1:D:648:ILE:HD11	1:D:821:LEU:HD11	2.00	0.43
1:D:887:ILE:CD1	1:D:961:MET:HE1	2.49	0.43
1:D:1068:ARG:CA	1:D:1071:ARG:HH11	2.32	0.43
1:D:1143:TRP:HB2	1:D:1147:ASP:HB2	2.01	0.43
1:D:1743[B]:ARG:NH2	1:D:1967:ASP:OD2	2.52	0.43
1:D:1821:ASP:OD1	1:D:1821:ASP:C	2.62	0.43
1:D:2135:LEU:O	1:D:3658:LYS:NZ	2.51	0.43
1:D:2604:GLU:O	1:D:2608:MET:HG2	2.19	0.43
1:D:2625:ARG:NH1	1:D:2629:ASP:CG	2.77	0.43
1:D:3233:PRO:CB	1:D:3238:GLU:HB2	2.49	0.43
1:D:3409:TYR:N	1:D:3410:PRO:HD2	2.33	0.43
1:D:3514:LEU:HD23	1:D:3514:LEU:C	2.44	0.43
1:D:3868:ARG:HH12	1:D:3870:ASN:HB3	1.82	0.43
1:D:4253:GLU:OE1	1:D:4557:ARG:NE	2.52	0.43
1:C:69:LEU:CD1	1:C:101:LEU:HD11	2.49	0.43
1:C:622:THR:HG23	1:C:626:LEU:HD12	2.00	0.43
1:C:866:HIS:O	1:C:869:ARG:HG2	2.18	0.43
1:C:867:LEU:HA	1:C:870:ILE:HG22	2.01	0.43
1:C:886:ARG:HG2	1:C:904:HIS:CD2	2.54	0.43
1:C:1925:GLY:O	1:C:1929:MET:HG3	2.19	0.43
1:C:2290:LEU:HD23	1:C:2291:GLN:N	2.34	0.43
1:C:2309:SER:OG	1:C:2310:CYS:N	2.52	0.43
1:C:3104:GLU:OE2	1:C:3167:ARG:HB3	2.18	0.43
1:C:3546:ASP:O	1:C:3549:VAL:HG22	2.19	0.43
1:C:4973:HIS:O	1:C:4977:THR:HG23	2.19	0.43
1:A:1115:LEU:HD12	1:A:1193:SER:HB3	2.00	0.43
1:A:1122:TYR:CE2	1:A:1182:ILE:HD12	2.53	0.43
1:A:2135:LEU:O	1:A:3658:LYS:NZ	2.52	0.43
1:A:3127:GLN:O	1:A:3130:THR:HG22	2.18	0.43
1:A:4716:TRP:CD1	1:A:4716:TRP:H	2.37	0.43
1:B:648:ILE:HD11	1:B:821:LEU:HD11	2.00	0.43
1:B:1989:ALA:O	1:B:1992:ALA:HB3	2.19	0.43
1:B:2478:THR:HG22	1:B:2479:LEU:N	2.33	0.43
1:B:2630:VAL:N	1:B:2631:PRO:CD	2.82	0.43
1:B:3111:ARG:NH2	1:B:3174:SER:C	2.77	0.43
1:B:4253:GLU:OE1	1:B:4253:GLU:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4973:HIS:O	1:B:4977:THR:HG23	2.19	0.43
1:D:69:LEU:CD1	1:D:101:LEU:HD11	2.49	0.43
1:D:227:MET:HE1	1:D:389:PHE:CG	2.54	0.43
1:D:510:GLU:HA	1:D:513:GLU:OE2	2.19	0.43
1:D:2630:VAL:N	1:D:2631:PRO:CD	2.82	0.43
1:D:2702:CYS:C	1:D:2704:CYS:H	2.27	0.43
1:D:2821:TRP:CD1	1:D:2939:ARG:O	2.72	0.43
1:D:3371:LYS:HE2	1:D:3371:LYS:HA	2.00	0.43
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.34	0.43
1:D:4952:GLU:O	1:D:4956:THR:OG1	2.33	0.43
1:D:4976:GLU:O	1:D:4980:LEU:HD23	2.19	0.43
1:C:1280:GLN:O	1:C:1281:ASN:CG	2.62	0.43
1:C:1931:LEU:HD13	1:C:1935:VAL:CG1	2.47	0.43
1:C:2212:VAL:HG11	1:C:2256:TYR:CZ	2.54	0.43
1:C:2527:LEU:O	1:C:2531:ARG:HG3	2.18	0.43
1:C:2604:GLU:O	1:C:2608:MET:HG2	2.19	0.43
1:C:2668:SER:O	1:C:2669:GLU:HB2	2.18	0.43
1:C:4024:VAL:HG11	1:C:4142:ASN:HB3	2.00	0.43
1:A:510:GLU:HA	1:A:513:GLU:OE2	2.19	0.42
1:A:887:ILE:CD1	1:A:961:MET:HE1	2.49	0.42
1:A:893:TYR:HB3	1:A:962:SER:OG	2.18	0.42
1:A:1925:GLY:O	1:A:1929:MET:HG3	2.19	0.42
1:A:2604:GLU:O	1:A:2608:MET:HG2	2.19	0.42
1:A:2668:SER:O	1:A:2669:GLU:HB2	2.18	0.42
1:A:2675:THR:CG2	1:A:2706:ILE:HG23	2.49	0.42
1:A:2770:LYS:O	1:A:2773:ASN:OD1	2.37	0.42
1:A:3456:GLN:HG3	1:A:3503:TYR:CD2	2.54	0.42
1:A:4003:LEU:HA	1:A:4009:GLN:OE1	2.19	0.42
1:A:4205:TRP:CZ2	1:A:4214:LYS:HD3	2.54	0.42
1:B:1436:SER:OG	1:B:1565:GLU:HB2	2.18	0.42
1:B:2212:VAL:HG11	1:B:2256:TYR:CZ	2.54	0.42
1:B:2650:ARG:HG3	1:B:2651:CYS:SG	2.59	0.42
1:B:3332:ALA:HB1	1:B:3335:MET:HE3	2.00	0.42
1:B:3456:GLN:HG3	1:B:3503:TYR:CD2	2.54	0.42
1:B:3969:ILE:O	1:B:3972:PRO:HA	2.19	0.42
1:B:4749:GLU:OE1	1:B:4753:HIS:NE2	2.52	0.42
1:B:4888:TYR:HA	1:C:4918:ILE:HD11	2.01	0.42
1:D:1989:ALA:O	1:D:1992:ALA:HB3	2.19	0.42
1:D:2212:VAL:HG11	1:D:2256:TYR:CZ	2.54	0.42
1:D:3296:LEU:C	1:D:3296:LEU:HD23	2.44	0.42
1:D:3531:ASP:O	1:D:3535:LEU:HG	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4205:TRP:CZ2	1:D:4214:LYS:HD3	2.54	0.42
1:D:4832:HIS:ND1	1:D:4833:ASN:OD1	2.45	0.42
1:C:659:TYR:O	1:C:662:TRP:NE1	2.47	0.42
1:C:2650:ARG:HG3	1:C:2651:CYS:SG	2.59	0.42
1:C:3514:LEU:C	1:C:3514:LEU:HD23	2.44	0.42
1:C:3725:TYR:HA	1:C:3728:ILE:HD12	2.01	0.42
1:A:227:MET:HE1	1:A:389:PHE:CG	2.54	0.42
1:A:648:ILE:HD11	1:A:821:LEU:HD11	2.00	0.42
1:B:257:ARG:O	1:B:284:HIS:NE2	2.43	0.42
1:B:1122:TYR:CE2	1:B:1182:ILE:HD12	2.54	0.42
1:B:1280:GLN:O	1:B:1281:ASN:CG	2.62	0.42
1:B:1423:ASP:HB3	1:B:1426:ILE:HD12	2.01	0.42
1:B:2756:ASN:HA	1:B:2806:ARG:HH12	1.83	0.42
1:D:908:VAL:HG13	1:D:909:ASN:N	2.35	0.42
1:D:1925:GLY:O	1:D:1929:MET:HG3	2.19	0.42
1:C:56:GLN:O	1:C:309:THR:OG1	2.29	0.42
1:C:648:ILE:HD11	1:C:821:LEU:HD11	2.00	0.42
1:C:908:VAL:HG13	1:C:909:ASN:N	2.35	0.42
1:C:1758:ARG:CZ	1:C:1759:ARG:NH1	2.82	0.42
1:C:2859:PRO:HG3	1:C:2932:MET:HE2	2.00	0.42
1:C:3359:ILE:HD13	1:C:3434:LEU:HD13	1.99	0.42
1:C:4976:GLU:O	1:C:4980:LEU:HD23	2.19	0.42
1:A:364:PRO:O	1:A:365:LYS:HB3	2.19	0.42
1:A:901:LYS:HG3	1:A:903:LEU:HD12	2.01	0.42
1:A:1743[B]:ARG:NH2	1:A:1967:ASP:OD2	2.52	0.42
1:A:1758:ARG:CZ	1:A:1759:ARG:NH1	2.82	0.42
1:A:2323:TRP:CZ3	1:A:2325:PRO:HG3	2.54	0.42
1:A:2481:LYS:O	1:A:2482:ASP:OD2	2.38	0.42
1:A:2821:TRP:CD1	1:A:2939:ARG:O	2.72	0.42
1:A:3087:ILE:H	1:A:3087:ILE:HD12	1.84	0.42
1:A:3531:ASP:O	1:A:3535:LEU:HG	2.19	0.42
1:B:622:THR:HG23	1:B:626:LEU:HD12	2.00	0.42
1:B:2481:LYS:O	1:B:2482:ASP:OD2	2.38	0.42
1:B:3409:TYR:N	1:B:3410:PRO:HD2	2.33	0.42
1:B:3514:LEU:HD23	1:B:3514:LEU:C	2.44	0.42
1:B:4716:TRP:CD1	1:B:4716:TRP:H	2.37	0.42
1:D:220:LEU:C	1:D:220:LEU:HD12	2.43	0.42
1:D:622:THR:HG23	1:D:626:LEU:HD12	2.00	0.42
1:D:886:ARG:HG2	1:D:904:HIS:CD2	2.54	0.42
1:D:1978:ALA:O	1:D:1982:ARG:CZ	2.67	0.42
1:D:4749:GLU:OE1	1:D:4753:HIS:NE2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:380:GLN:OE1	1:C:380:GLN:N	2.47	0.42
1:C:2000:SER:OG	1:C:2004:GLU:HB2	2.20	0.42
1:C:2481:LYS:O	1:C:2482:ASP:OD2	2.38	0.42
1:C:2702:CYS:C	1:C:2704:CYS:H	2.27	0.42
1:C:3321:ARG:O	1:C:3324:VAL:HG22	2.19	0.42
1:C:4098:ASP:OD1	1:C:4098:ASP:C	2.60	0.42
1:C:4205:TRP:CZ2	1:C:4214:LYS:HD3	2.54	0.42
1:C:4214:LYS:O	1:C:4218:ILE:HG12	2.20	0.42
1:C:4238:CYS:HA	1:C:4989:MET:HE3	2.02	0.42
1:C:4852:THR:HG23	1:C:4882:CYS:HB3	1.99	0.42
1:A:870:ILE:HD11	1:A:1049:TYR:CD2	2.55	0.42
1:A:1758:ARG:NH2	1:A:1759:ARG:CZ	2.83	0.42
1:A:2478:THR:HG22	1:A:2479:LEU:N	2.33	0.42
1:A:2725:LYS:NZ	1:A:2734:ASN:O	2.49	0.42
1:A:3111:ARG:NH2	1:A:3174:SER:C	2.77	0.42
1:A:3546:ASP:O	1:A:3549:VAL:HG22	2.19	0.42
1:A:4087:LEU:CB	1:A:4122:MET:HE3	2.48	0.42
1:A:4976:GLU:O	1:A:4980:LEU:HD23	2.19	0.42
1:B:901:LYS:HG3	1:B:903:LEU:HD12	2.02	0.42
1:B:2000:SER:OG	1:B:2004:GLU:HB2	2.19	0.42
1:B:2608:MET:HE1	1:B:2646:ASN:ND2	2.34	0.42
1:B:2625:ARG:NH1	1:B:2629:ASP:CG	2.77	0.42
1:B:2668:SER:O	1:B:2669:GLU:HB2	2.18	0.42
1:B:2821:TRP:CD1	1:B:2939:ARG:O	2.72	0.42
1:B:3321:ARG:O	1:B:3324:VAL:HG22	2.20	0.42
1:B:3546:ASP:O	1:B:3549:VAL:HG22	2.19	0.42
1:D:870:ILE:HD11	1:D:1049:TYR:CD2	2.55	0.42
1:D:901:LYS:HG3	1:D:903:LEU:HD12	2.01	0.42
1:D:2000:SER:OG	1:D:2004:GLU:HB2	2.20	0.42
1:D:3296:LEU:HB3	1:D:3297:PRO:HD3	2.02	0.42
1:D:3478:MET:O	1:D:3479:ALA:C	2.63	0.42
1:D:4087:LEU:CB	1:D:4122:MET:HE3	2.48	0.42
1:C:227:MET:HE1	1:C:389:PHE:CG	2.54	0.42
1:C:510:GLU:HA	1:C:513:GLU:OE2	2.19	0.42
1:C:648:ILE:HD11	1:C:821:LEU:CD1	2.50	0.42
1:C:2625:ARG:NH1	1:C:2629:ASP:OD1	2.51	0.42
1:C:2630:VAL:N	1:C:2631:PRO:CD	2.82	0.42
1:C:2755:ILE:HD13	1:C:2810:LYS:HG2	2.00	0.42
1:C:2902:HIS:CE1	1:C:2904:LEU:HB3	2.54	0.42
1:C:4716:TRP:CD1	1:C:4716:TRP:H	2.37	0.42
1:A:107:ILE:CG2	1:A:150:MET:HE2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3371:LYS:HE2	1:A:3371:LYS:HA	2.00	0.42
1:B:417:GLY:O	1:B:421:PHE:HD1	2.01	0.42
1:B:1758:ARG:HG2	1:B:1759:ARG:N	2.35	0.42
1:B:2702:CYS:C	1:B:2704:CYS:H	2.27	0.42
1:B:3107:VAL:HG12	1:B:3175:LEU:HD21	2.02	0.42
1:B:3531:ASP:O	1:B:3535:LEU:HG	2.19	0.42
1:B:4573:ILE:HG23	1:B:4643:LEU:HD11	2.02	0.42
1:D:559:GLY:O	1:D:563:VAL:HG23	2.18	0.42
1:D:2290:LEU:HD23	1:D:2291:GLN:N	2.34	0.42
1:D:3321:ARG:O	1:D:3324:VAL:HG22	2.19	0.42
1:D:3456:GLN:HG3	1:D:3503:TYR:CD2	2.54	0.42
1:D:3985:LEU:HD11	1:D:4026:MET:CE	2.50	0.42
1:D:4238:CYS:HA	1:D:4989:MET:HE3	2.02	0.42
1:C:901:LYS:HG3	1:C:903:LEU:HD12	2.01	0.42
1:C:1068:ARG:CA	1:C:1071:ARG:HH11	2.32	0.42
1:C:1758:ARG:NH2	1:C:1759:ARG:CZ	2.83	0.42
1:C:2440:MET:O	1:C:2444:GLN:OE1	2.38	0.42
1:C:2478:THR:HG22	1:C:2479:LEU:N	2.33	0.42
1:C:4087:LEU:CB	1:C:4122:MET:HE3	2.49	0.42
1:C:4749:GLU:OE1	1:C:4753:HIS:NE2	2.52	0.42
1:C:4983:HIS:O	3:C:5301:ATP:N6	2.51	0.42
1:A:417:GLY:O	1:A:421:PHE:HD1	2.01	0.42
1:A:648:ILE:HD11	1:A:821:LEU:CD1	2.50	0.42
1:A:898:ASP:HB2	1:A:901:LYS:HB2	2.02	0.42
1:A:1068:ARG:CA	1:A:1071:ARG:HH11	2.32	0.42
1:A:1171:SER:OG	1:A:1173:SER:OG	2.33	0.42
1:A:2481:LYS:O	1:A:2482:ASP:CG	2.63	0.42
1:A:2650:ARG:HG3	1:A:2651:CYS:SG	2.59	0.42
1:A:3294:PRO:HB2	1:A:3297:PRO:HD2	2.02	0.42
1:A:3874:VAL:O	1:A:3953:LYS:NZ	2.53	0.42
1:A:4214:LYS:O	1:A:4218:ILE:HG12	2.20	0.42
1:B:69:LEU:CD1	1:B:101:LEU:HD11	2.49	0.42
1:B:226:HIS:ND1	1:B:226:HIS:O	2.53	0.42
1:B:227:MET:HE1	1:B:389:PHE:CG	2.54	0.42
1:B:510:GLU:HA	1:B:513:GLU:OE2	2.19	0.42
1:B:1143:TRP:HB2	1:B:1147:ASP:HB2	2.01	0.42
1:B:1241:SER:HA	1:B:1603:VAL:HG22	2.01	0.42
1:B:2625:ARG:NH1	1:B:2629:ASP:OD1	2.51	0.42
1:B:3391:GLU:HG2	1:B:3395:ARG:HH21	1.83	0.42
1:B:4710:SER:O	1:B:4713:SER:OG	2.25	0.42
1:D:323:LEU:O	1:D:324:ASP:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:659:TYR:O	1:D:662:TRP:NE1	2.47	0.42
1:D:898:ASP:HB2	1:D:901:LYS:HB2	2.02	0.42
1:D:1280:GLN:O	1:D:1281:ASN:CG	2.62	0.42
1:D:1758:ARG:CZ	1:D:1759:ARG:NH1	2.82	0.42
1:D:2309:SER:OG	1:D:2310:CYS:N	2.52	0.42
1:D:2770:LYS:O	1:D:2773:ASN:OD1	2.37	0.42
1:D:2869:ARG:HD3	1:D:2947:ASP:CG	2.44	0.42
1:D:2967:MET:HG3	1:D:3042:LEU:HD12	2.02	0.42
1:C:870:ILE:HD11	1:C:1049:TYR:CD2	2.55	0.42
1:C:887:ILE:CD1	1:C:961:MET:HE1	2.49	0.42
1:C:1515:VAL:O	1:C:1531:ALA:O	2.38	0.42
1:C:2625:ARG:NH1	1:C:2629:ASP:CG	2.77	0.42
1:C:2770:LYS:O	1:C:2773:ASN:OD1	2.37	0.42
1:C:3456:GLN:HG3	1:C:3503:TYR:CD2	2.54	0.42
1:C:4161:ARG:HA	1:C:4164:LEU:HD12	2.01	0.42
1:A:867:LEU:HA	1:A:870:ILE:HG22	2.01	0.42
1:A:2211:MET:SD	1:A:2272:PRO:HG3	2.60	0.42
1:A:3321:ARG:O	1:A:3324:VAL:HG22	2.19	0.42
1:A:4749:GLU:OE1	1:A:4753:HIS:NE2	2.52	0.42
1:B:867:LEU:HA	1:B:870:ILE:HG22	2.01	0.42
1:B:870:ILE:HD11	1:B:1049:TYR:CD2	2.55	0.42
1:B:887:ILE:HD11	1:B:961:MET:HE3	2.01	0.42
1:B:2211:MET:SD	1:B:2272:PRO:HG3	2.60	0.42
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.55	0.42
1:B:2770:LYS:O	1:B:2773:ASN:OD1	2.37	0.42
1:B:3296:LEU:HB3	1:B:3297:PRO:HD3	2.02	0.42
1:B:3450:ASN:HA	1:B:3453:ARG:HG2	2.01	0.42
1:B:3686:GLU:O	1:B:3687:GLU:HB3	2.20	0.42
1:B:3874:VAL:O	1:B:3953:LYS:NZ	2.53	0.42
1:B:4238:CYS:HA	1:B:4989:MET:HE3	2.02	0.42
1:B:4704:LEU:O	1:B:4774:LYS:NZ	2.52	0.42
1:B:4923:PHE:HA	1:B:4927:ILE:HD12	2.01	0.42
1:D:226:HIS:ND1	1:D:226:HIS:O	2.53	0.42
1:D:1754:GLY:O	1:D:1758:ARG:HB2	2.20	0.42
1:D:2969:ILE:O	1:D:2973:PHE:CD1	2.73	0.42
1:C:2969:ILE:O	1:C:2973:PHE:CD1	2.73	0.42
1:C:3296:LEU:HB3	1:C:3297:PRO:HD3	2.02	0.42
1:C:4573:ILE:HG23	1:C:4643:LEU:HD11	2.02	0.42
1:A:110:ARG:HH21	1:A:115:ARG:HD2	1.85	0.42
1:A:1241:SER:HA	1:A:1603:VAL:HG22	2.01	0.42
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2630:VAL:N	1:A:2631:PRO:CD	2.82	0.42
1:A:2777:TYR:CD1	1:A:2791:LEU:HD12	2.43	0.42
1:A:3107:VAL:HG12	1:A:3175:LEU:HD21	2.02	0.42
1:A:3514:LEU:HD23	1:A:3514:LEU:C	2.44	0.42
1:A:3686:GLU:O	1:A:3687:GLU:HB3	2.20	0.42
1:A:3725:TYR:HA	1:A:3728:ILE:HD12	2.01	0.42
1:A:3985:LEU:HD11	1:A:4026:MET:CE	2.50	0.42
1:B:107:ILE:CG2	1:B:150:MET:HE2	2.48	0.42
1:B:574:VAL:O	1:B:578:ILE:HG12	2.18	0.42
1:B:1515:VAL:O	1:B:1531:ALA:O	2.38	0.42
1:B:2481:LYS:O	1:B:2482:ASP:CG	2.63	0.42
1:B:2969:ILE:O	1:B:2973:PHE:CD1	2.73	0.42
1:B:3268:HIS:ND1	1:B:3272:ILE:HD12	2.35	0.42
1:B:3725:TYR:O	1:B:3729:MET:HG3	2.20	0.42
1:D:110:ARG:HH21	1:D:115:ARG:HD2	1.85	0.42
1:D:345:LEU:HD21	1:D:389:PHE:CZ	2.54	0.42
1:D:2481:LYS:O	1:D:2482:ASP:OD2	2.38	0.42
1:C:898:ASP:HB2	1:C:901:LYS:HB2	2.02	0.42
1:C:2481:LYS:O	1:C:2482:ASP:CG	2.63	0.42
1:C:2801:ASP:HA	1:C:2804:ILE:HG12	2.02	0.42
1:A:69:LEU:CD1	1:A:101:LEU:HD11	2.49	0.42
1:A:622:THR:HG23	1:A:626:LEU:HD12	2.00	0.42
1:A:1423:ASP:HB3	1:A:1426:ILE:HD12	2.01	0.42
1:A:1758:ARG:HG2	1:A:1759:ARG:N	2.35	0.42
1:A:2562:ILE:HG22	1:A:2610:LEU:HD21	2.02	0.42
1:A:3725:TYR:O	1:A:3729:MET:HG3	2.20	0.42
1:A:4573:ILE:HG23	1:A:4643:LEU:HD11	2.02	0.42
1:A:4923:PHE:HA	1:A:4927:ILE:HD12	2.01	0.42
1:B:98:HIS:N	1:B:99:ARG:HH11	2.18	0.42
1:B:323:LEU:O	1:B:324:ASP:C	2.63	0.42
1:B:380:GLN:OE1	1:B:380:GLN:N	2.47	0.42
1:B:2309:SER:OG	1:B:2310:CYS:N	2.52	0.42
1:B:2799:GLU:O	1:B:2803:GLU:OE1	2.38	0.42
1:B:3296:LEU:HD23	1:B:3296:LEU:C	2.44	0.42
1:B:4003:LEU:HA	1:B:4009:GLN:OE1	2.19	0.42
1:B:4087:LEU:CB	1:B:4122:MET:HE3	2.48	0.42
1:B:4545:GLU:OE2	1:B:4548:ARG:NH2	2.39	0.42
1:B:4976:GLU:O	1:B:4980:LEU:HD23	2.19	0.42
1:D:866:HIS:HA	1:D:869:ARG:HG2	2.02	0.42
1:D:1758:ARG:HG2	1:D:1759:ARG:N	2.35	0.42
1:D:2650:ARG:HG3	1:D:2651:CYS:SG	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2801:ASP:HA	1:D:2804:ILE:HG12	2.02	0.42
1:D:3905:THR:HA	1:D:3912:THR:OG1	2.20	0.42
1:D:4086:GLY:O	1:D:4125:PHE:CE2	2.73	0.42
1:D:4573:ILE:HG23	1:D:4643:LEU:HD11	2.02	0.42
1:D:4949:GLN:HA	1:D:4952:GLU:HG3	2.02	0.42
1:C:438:ILE:HG23	1:C:518:ILE:HD11	2.02	0.42
1:C:887:ILE:HG13	1:C:907:LEU:CD1	2.50	0.42
1:C:1423:ASP:HB3	1:C:1426:ILE:HD12	2.01	0.42
1:C:1758:ARG:HG2	1:C:1759:ARG:N	2.35	0.42
1:C:2430:ILE:HG22	1:C:2505:PHE:HB2	2.02	0.42
1:C:2821:TRP:CD1	1:C:2939:ARG:O	2.72	0.42
1:C:3107:VAL:HG12	1:C:3175:LEU:HD21	2.02	0.42
1:C:3115:VAL:O	1:C:3116:SER:C	2.63	0.42
1:C:3531:ASP:O	1:C:3535:LEU:HG	2.20	0.42
1:C:3686:GLU:O	1:C:3687:GLU:HB3	2.20	0.42
1:C:3822:ASP:OD1	1:C:3823:LYS:N	2.53	0.42
1:A:886:ARG:HG2	1:A:904:HIS:CD2	2.54	0.42
1:A:1515:VAL:O	1:A:1531:ALA:O	2.38	0.42
1:A:2376:LEU:HD11	1:A:2426:TYR:HB3	2.02	0.42
1:A:2967:MET:HG3	1:A:3042:LEU:HD12	2.02	0.42
1:A:3296:LEU:HB3	1:A:3297:PRO:HD3	2.02	0.42
2:G:24:VAL:HG21	2:G:59:TRP:HZ3	1.85	0.42
1:B:877:ASN:HD21	1:B:970:LEU:HD13	1.85	0.42
1:B:1758:ARG:CZ	1:B:1759:ARG:NH1	2.82	0.42
1:B:1978:ALA:HB1	1:B:1982:ARG:NH1	2.26	0.42
1:B:1984:PHE:CD2	1:B:1984:PHE:C	2.98	0.42
1:B:2440:MET:O	1:B:2444:GLN:OE1	2.38	0.42
1:B:3104:GLU:OE2	1:B:3167:ARG:HB3	2.18	0.42
1:B:3207:GLU:OE1	1:B:3280:TYR:OH	2.31	0.42
1:B:3395:ARG:HB3	1:B:3454:GLU:OE1	2.20	0.42
1:B:3478:MET:O	1:B:3479:ALA:C	2.63	0.42
1:B:4161:ARG:HA	1:B:4164:LEU:HD12	2.01	0.42
1:D:438:ILE:HG23	1:D:518:ILE:HD11	2.02	0.42
1:D:516:LYS:O	1:D:519:VAL:HG22	2.20	0.42
1:D:647:ASN:ND2	1:D:820:ARG:O	2.44	0.42
1:D:3725:TYR:HA	1:D:3728:ILE:HD12	2.01	0.42
1:D:4918:ILE:HD11	1:C:4888:TYR:HA	2.01	0.42
1:C:226:HIS:ND1	1:C:226:HIS:O	2.53	0.42
1:C:364:PRO:O	1:C:365:LYS:HB3	2.19	0.42
1:C:1694:LEU:O	1:C:1698:LEU:HG	2.20	0.42
1:C:2470:ILE:HG22	1:C:2525:GLY:HA3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2608:MET:HE3	1:C:2608:MET:HB3	1.86	0.42
1:C:3294:PRO:HB2	1:C:3297:PRO:HD2	2.02	0.42
1:C:3969:ILE:O	1:C:3972:PRO:HA	2.19	0.42
1:C:4866:SER:OG	1:C:4871:GLU:O	2.31	0.42
1:A:2799:GLU:O	1:A:2803:GLU:OE1	2.38	0.41
1:A:3268:HIS:ND1	1:A:3272:ILE:HD12	2.35	0.41
1:A:4086:GLY:O	1:A:4125:PHE:CE2	2.73	0.41
1:A:4238:CYS:HA	1:A:4989:MET:HE3	2.02	0.41
1:B:1925:GLY:O	1:B:1929:MET:HG3	2.19	0.41
1:B:1978:ALA:C	1:B:1982:ARG:NH2	2.78	0.41
1:B:3249:LEU:HD11	1:B:3273:THR:HG21	2.01	0.41
1:B:3985:LEU:HD11	1:B:4026:MET:CE	2.50	0.41
1:D:1758:ARG:NH2	1:D:1759:ARG:CZ	2.83	0.41
1:D:2044:ILE:HD12	1:D:2044:ILE:H	1.85	0.41
1:D:2434:GLY:O	1:D:2508:ARG:NE	2.36	0.41
1:D:2481:LYS:O	1:D:2482:ASP:CG	2.63	0.41
1:D:3115:VAL:O	1:D:3116:SER:C	2.63	0.41
1:D:3235:SER:OG	1:D:3237:GLU:OE1	2.38	0.41
1:D:4869:GLU:OE2	1:D:4869:GLU:N	2.53	0.41
1:C:516:LYS:O	1:C:519:VAL:HG22	2.20	0.41
1:C:2562:ILE:HG22	1:C:2610:LEU:HD21	2.02	0.41
1:C:3235:SER:OG	1:C:3237:GLU:OE1	2.38	0.41
1:C:3395:ARG:HB3	1:C:3454:GLU:OE1	2.20	0.41
1:C:4086:GLY:O	1:C:4125:PHE:CE2	2.73	0.41
1:A:98:HIS:N	1:A:99:ARG:HH11	2.18	0.41
1:A:294:THR:O	1:A:298:GLY:N	2.50	0.41
1:A:323:LEU:O	1:A:324:ASP:C	2.63	0.41
1:A:1669:LEU:O	1:A:1673:VAL:HG22	2.20	0.41
1:A:1821:ASP:OD1	1:A:1821:ASP:C	2.62	0.41
1:A:3478:MET:O	1:A:3479:ALA:C	2.63	0.41
2:G:59:TRP:O	2:G:60:GLU:C	2.63	0.41
1:B:438:ILE:HG23	1:B:518:ILE:HD11	2.02	0.41
1:B:887:ILE:HG13	1:B:907:LEU:CD1	2.50	0.41
1:B:1157:GLU:OE1	1:B:1157:GLU:N	2.53	0.41
1:B:3725:TYR:HA	1:B:3728:ILE:HD12	2.01	0.41
1:D:1694:LEU:O	1:D:1698:LEU:HG	2.20	0.41
1:D:1984:PHE:CD2	1:D:1984:PHE:C	2.98	0.41
1:D:2470:ILE:HG22	1:D:2525:GLY:HA3	2.01	0.41
1:D:3450:ASN:HA	1:D:3453:ARG:HG2	2.01	0.41
1:D:3478:MET:O	1:D:3478:MET:SD	2.78	0.41
1:C:110:ARG:HH21	1:C:115:ARG:HD2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:877:ASN:HD21	1:C:970:LEU:HD13	1.85	0.41
1:C:1157:GLU:OE1	1:C:1157:GLU:N	2.53	0.41
1:C:1978:ALA:O	1:C:1982:ARG:CZ	2.67	0.41
1:C:2756:ASN:HA	1:C:2806:ARG:HH12	1.83	0.41
1:C:4666:VAL:N	1:C:4667:PRO:CD	2.83	0.41
1:A:1204:LEU:HD12	1:A:1234:VAL:HB	2.03	0.41
1:A:1694:LEU:O	1:A:1698:LEU:HG	2.20	0.41
1:A:1742:THR:HA	1:A:1745:ILE:HD12	2.02	0.41
1:A:1978:ALA:C	1:A:1982:ARG:NH2	2.78	0.41
1:A:1996:ARG:NE	1:A:1999:ARG:NH1	2.61	0.41
1:A:5024:ALA:HB3	1:D:4972:PRO:HB3	2.02	0.41
1:B:14:LEU:CB	1:B:101:LEU:HD12	2.50	0.41
1:B:648:ILE:HD11	1:B:821:LEU:CD1	2.50	0.41
1:B:1758:ARG:NH2	1:B:1759:ARG:CZ	2.83	0.41
1:B:2178:MET:HE3	1:B:2182:ILE:HD11	2.02	0.41
1:B:2233:CYS:HA	1:B:2237:CYS:HB2	2.03	0.41
1:B:3294:PRO:HB2	1:B:3297:PRO:HD2	2.02	0.41
1:B:3891:LEU:O	1:B:3899:PHE:CD2	2.71	0.41
1:D:39:ALA:O	1:D:111:HIS:CE1	2.73	0.41
1:D:224:HIS:HB2	1:D:229:GLU:OE2	2.21	0.41
1:D:364:PRO:O	1:D:365:LYS:HB3	2.19	0.41
1:D:1515:VAL:O	1:D:1531:ALA:O	2.38	0.41
1:D:2138:LEU:O	1:D:2141:ALA:N	2.45	0.41
1:D:2376:LEU:HD11	1:D:2426:TYR:HB3	2.02	0.41
1:D:2440:MET:O	1:D:2444:GLN:OE1	2.38	0.41
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.55	0.41
1:D:3249:LEU:HD11	1:D:3273:THR:HG21	2.01	0.41
1:D:4161:ARG:HA	1:D:4164:LEU:HD12	2.02	0.41
1:C:14:LEU:CB	1:C:101:LEU:HD12	2.51	0.41
1:C:866:HIS:HA	1:C:869:ARG:HG2	2.02	0.41
1:C:1743[B]:ARG:NH2	1:C:1967:ASP:OD2	2.52	0.41
1:C:1758:ARG:NH2	1:C:1759:ARG:NH1	2.69	0.41
1:C:2211:MET:SD	1:C:2272:PRO:HG3	2.60	0.41
1:C:2233:CYS:HA	1:C:2237:CYS:HB2	2.02	0.41
1:C:3874:VAL:O	1:C:3953:LYS:NZ	2.53	0.41
1:A:56:GLN:O	1:A:309:THR:OG1	2.29	0.41
1:A:908:VAL:HG13	1:A:909:ASN:N	2.34	0.41
1:A:1143:TRP:HB2	1:A:1147:ASP:HB2	2.01	0.41
1:A:2233:CYS:HA	1:A:2237:CYS:HB2	2.03	0.41
1:A:2614:ILE:CG2	1:A:2618:MET:HB2	2.51	0.41
1:A:3822:ASP:OD1	1:A:3823:LYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3905:THR:HA	1:A:3912:THR:OG1	2.20	0.41
1:A:4666:VAL:N	1:A:4667:PRO:CD	2.83	0.41
1:A:4949:GLN:HA	1:A:4952:GLU:HG3	2.02	0.41
1:B:224:HIS:HB2	1:B:229:GLU:OE2	2.21	0.41
1:B:866:HIS:HA	1:B:869:ARG:HG2	2.02	0.41
1:B:908:VAL:HG13	1:B:909:ASN:N	2.35	0.41
1:B:1068:ARG:CA	1:B:1071:ARG:HH11	2.32	0.41
1:B:1694:LEU:O	1:B:1698:LEU:HG	2.20	0.41
1:B:1754:GLY:O	1:B:1758:ARG:HB2	2.20	0.41
1:B:2282:ASP:HA	1:B:2341:VAL:HG13	2.02	0.41
1:B:3115:VAL:O	1:B:3116:SER:C	2.63	0.41
1:B:3822:ASP:OD1	1:B:3823:LYS:N	2.53	0.41
1:D:1204:LEU:HD12	1:D:1234:VAL:HB	2.03	0.41
1:D:2211:MET:SD	1:D:2272:PRO:HG3	2.60	0.41
1:D:3268:HIS:ND1	1:D:3272:ILE:HD12	2.35	0.41
1:D:3391:GLU:HG2	1:D:3395:ARG:HH21	1.83	0.41
1:D:3874:VAL:O	1:D:3953:LYS:NZ	2.53	0.41
1:D:4003:LEU:HA	1:D:4009:GLN:OE1	2.20	0.41
1:D:4214:LYS:O	1:D:4218:ILE:HG12	2.20	0.41
1:D:4666:VAL:N	1:D:4667:PRO:CD	2.83	0.41
1:C:98:HIS:N	1:C:99:ARG:HH11	2.18	0.41
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.54	0.41
1:C:3018:LEU:HD21	1:C:3075:LEU:O	2.20	0.41
1:C:3478:MET:O	1:C:3478:MET:SD	2.78	0.41
1:C:3504:SER:HB2	1:C:3507:THR:HG23	2.03	0.41
1:C:3985:LEU:HD11	1:C:4026:MET:CE	2.50	0.41
1:A:39:ALA:O	1:A:111:HIS:CE1	2.73	0.41
1:A:438:ILE:HG23	1:A:518:ILE:HD11	2.02	0.41
1:A:923:GLN:H	1:A:923:GLN:CD	2.28	0.41
1:A:2441:HIS:CE1	1:A:2442:LEU:HG	2.56	0.41
1:A:2625:ARG:NH1	1:A:2629:ASP:OD1	2.51	0.41
1:B:594:GLY:HA2	1:B:1594:ARG:HD2	2.03	0.41
1:B:1425:GLU:OE2	1:B:1425:GLU:N	2.53	0.41
1:B:1669:LEU:O	1:B:1673:VAL:HG22	2.21	0.41
1:B:2470:ILE:HG22	1:B:2525:GLY:HA3	2.01	0.41
1:B:3177:THR:O	1:B:3179:LYS:NZ	2.36	0.41
1:B:3478:MET:O	1:B:3478:MET:SD	2.78	0.41
1:B:4214:LYS:O	1:B:4218:ILE:HG12	2.20	0.41
1:B:4705:VAL:HG13	1:B:4711:PHE:HE1	1.85	0.41
1:D:98:HIS:N	1:D:99:ARG:HH11	2.18	0.41
1:D:648:ILE:HD11	1:D:821:LEU:CD1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1036:ARG:HH11	1:D:1036:ARG:HD3	1.48	0.41
1:D:2614:ILE:CG2	1:D:2618:MET:HB2	2.51	0.41
1:D:3725:TYR:O	1:D:3729:MET:HG3	2.20	0.41
1:D:3822:ASP:OD1	1:D:3823:LYS:N	2.53	0.41
1:C:1036:ARG:HH11	1:C:1036:ARG:HD3	1.48	0.41
1:C:3478:MET:O	1:C:3479:ALA:C	2.63	0.41
1:C:3508:SER:O	1:C:3511:VAL:HG22	2.21	0.41
1:C:4923:PHE:HA	1:C:4927:ILE:HD12	2.01	0.41
1:A:887:ILE:HG13	1:A:907:LEU:CD1	2.50	0.41
1:A:1754:GLY:O	1:A:1758:ARG:HB2	2.20	0.41
1:A:1984:PHE:CD2	1:A:1984:PHE:C	2.98	0.41
1:A:2178:MET:HE3	1:A:2182:ILE:HD11	2.02	0.41
1:A:2801:ASP:HA	1:A:2804:ILE:HG12	2.02	0.41
1:A:3478:MET:O	1:A:3478:MET:SD	2.78	0.41
2:F:24:VAL:HG21	2:F:59:TRP:HZ3	1.85	0.41
1:B:39:ALA:O	1:B:111:HIS:CE1	2.73	0.41
1:B:1204:LEU:HD12	1:B:1234:VAL:HB	2.03	0.41
1:B:2441:HIS:CE1	1:B:2442:LEU:HG	2.56	0.41
1:B:2562:ILE:HG22	1:B:2610:LEU:HD21	2.01	0.41
1:B:4000:MET:HG2	1:B:4061:PHE:CD2	2.56	0.41
1:B:4086:GLY:O	1:B:4125:PHE:CE2	2.73	0.41
1:B:4666:VAL:N	1:B:4667:PRO:CD	2.83	0.41
1:D:2946:LEU:O	1:D:2946:LEU:CD2	2.62	0.41
1:D:3107:VAL:HG12	1:D:3175:LEU:HD21	2.02	0.41
1:D:3395:ARG:HB3	1:D:3454:GLU:OE1	2.20	0.41
1:D:4205:TRP:CH2	1:D:4214:LYS:HD3	2.56	0.41
1:C:39:ALA:O	1:C:111:HIS:CE1	2.73	0.41
1:C:594:GLY:HA2	1:C:1594:ARG:HD2	2.03	0.41
1:C:708:GLY:HA3	1:C:722:TRP:HB3	2.02	0.41
1:C:1425:GLU:OE2	1:C:1425:GLU:N	2.53	0.41
1:C:1978:ALA:C	1:C:1982:ARG:NH2	2.78	0.41
1:C:1984:PHE:CD2	1:C:1984:PHE:C	2.98	0.41
1:C:2967:MET:HG3	1:C:3042:LEU:HD12	2.02	0.41
1:C:3450:ASN:HA	1:C:3453:ARG:HG2	2.01	0.41
1:C:4000:MET:HG2	1:C:4061:PHE:CD2	2.56	0.41
1:C:4253:GLU:OE1	1:C:4253:GLU:N	2.52	0.41
1:A:594:GLY:HA2	1:A:1594:ARG:HD2	2.03	0.41
1:A:2000:SER:OG	1:A:2004:GLU:HB2	2.19	0.41
1:A:2969:ILE:O	1:A:2973:PHE:CD1	2.73	0.41
1:A:2978:GLU:HA	1:A:2981:VAL:HG12	2.02	0.41
1:A:3115:VAL:O	1:A:3116:SER:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3249:LEU:HD11	1:A:3273:THR:HG21	2.01	0.41
1:A:3395:ARG:HB3	1:A:3454:GLU:OE1	2.20	0.41
1:A:4161:ARG:HA	1:A:4164:LEU:HD12	2.01	0.41
2:H:24:VAL:HG21	2:H:59:TRP:HZ3	1.85	0.41
1:B:266:ARG:NH2	1:B:330:ASP:OD1	2.52	0.41
1:B:1063:VAL:HG13	1:B:1064:GLU:N	2.36	0.41
1:B:1742:THR:HA	1:B:1745:ILE:HD12	2.02	0.41
1:B:1743[B]:ARG:NH2	1:B:1967:ASP:OD2	2.52	0.41
1:B:2782:ASP:OD1	1:B:2782:ASP:N	2.54	0.41
1:B:3111:ARG:NH2	1:B:3175:LEU:N	2.69	0.41
1:B:3166:TYR:CD1	1:B:3201:MET:HE1	2.56	0.41
1:D:14:LEU:CB	1:D:101:LEU:HD12	2.50	0.41
1:D:1157:GLU:OE1	1:D:1157:GLU:N	2.53	0.41
1:D:1758:ARG:NH2	1:D:1759:ARG:NH1	2.68	0.41
1:D:2233:CYS:HA	1:D:2237:CYS:HB2	2.03	0.41
1:D:2562:ILE:HG22	1:D:2610:LEU:HD21	2.02	0.41
1:D:3018:LEU:HD21	1:D:3075:LEU:O	2.20	0.41
1:D:3111:ARG:NH2	1:D:3175:LEU:N	2.69	0.41
1:D:4716:TRP:CD1	1:D:4716:TRP:H	2.37	0.41
1:D:4942:GLU:O	1:D:4946:GLN:HG3	2.21	0.41
1:C:336:PRO:HA	1:C:337:PRO:HD3	1.87	0.41
1:C:1705:GLY:HA3	1:C:1836:PHE:CG	2.56	0.41
1:C:2441:HIS:CE1	1:C:2442:LEU:HG	2.56	0.41
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.55	0.41
1:C:4003:LEU:HA	1:C:4009:GLN:OE1	2.19	0.41
1:C:4705:VAL:HG13	1:C:4711:PHE:HE1	1.85	0.41
1:A:226:HIS:ND1	1:A:226:HIS:O	2.53	0.41
1:A:439:GLU:HG2	1:A:440:ALA:N	2.36	0.41
1:A:516:LYS:O	1:A:519:VAL:HG22	2.20	0.41
1:A:877:ASN:HD21	1:A:970:LEU:HD13	1.84	0.41
1:A:1705:GLY:HA3	1:A:1836:PHE:CG	2.56	0.41
1:A:1758:ARG:NH2	1:A:1759:ARG:NH1	2.68	0.41
1:A:2150:GLU:HG2	1:A:2151:ASP:N	2.36	0.41
1:A:2869:ARG:HD3	1:A:2947:ASP:CG	2.44	0.41
1:A:3235:SER:OG	1:A:3237:GLU:OE1	2.38	0.41
1:A:4888:TYR:HA	1:B:4918:ILE:HD11	2.03	0.41
1:B:591:ASP:HA	1:B:631:LEU:HD21	2.03	0.41
1:B:898:ASP:HB2	1:B:901:LYS:HB2	2.02	0.41
1:B:923:GLN:CD	1:B:923:GLN:H	2.28	0.41
1:B:924:MET:O	1:B:928:THR:HG23	2.21	0.41
1:B:1423:ASP:O	1:B:1427:ILE:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2044:ILE:HD12	1:B:2044:ILE:H	1.85	0.41
1:B:2967:MET:HG3	1:B:3042:LEU:HD12	2.02	0.41
1:B:3504:SER:HB2	1:B:3507:THR:HG23	2.03	0.41
1:B:3508:SER:O	1:B:3511:VAL:HG22	2.21	0.41
1:B:3879:GLU:HG2	1:B:3880:PHE:N	2.36	0.41
1:B:4061:PHE:CE2	1:B:4065:PHE:HE2	2.39	0.41
1:D:1063:VAL:HG13	1:D:1064:GLU:N	2.36	0.41
1:D:1931:LEU:HD13	1:D:1935:VAL:CG1	2.47	0.41
1:D:2760:GLU:OE2	1:D:2794:TYR:CE1	2.74	0.41
1:D:3508:SER:O	1:D:3511:VAL:HG22	2.21	0.41
1:D:3959:LYS:HG3	1:D:4022:ASP:OD2	2.21	0.41
1:D:4923:PHE:HA	1:D:4927:ILE:HD12	2.01	0.41
1:C:591:ASP:HA	1:C:631:LEU:HD21	2.03	0.41
1:C:924:MET:O	1:C:928:THR:HG23	2.21	0.41
1:C:2178:MET:HE3	1:C:2182:ILE:HD11	2.02	0.41
1:C:2777:TYR:CD1	1:C:2791:LEU:HD12	2.43	0.41
1:C:3268:HIS:ND1	1:C:3272:ILE:HD12	2.35	0.41
1:A:224:HIS:HB2	1:A:229:GLU:OE2	2.21	0.41
1:A:371:VAL:HG13	1:A:371:VAL:O	2.20	0.41
1:A:384:MET:HE1	1:B:168:ASP:H	1.85	0.41
1:A:866:HIS:HA	1:A:869:ARG:HG2	2.02	0.41
1:A:950:LEU:HD12	1:A:950:LEU:O	2.21	0.41
1:A:1063:VAL:HG13	1:A:1064:GLU:N	2.36	0.41
1:A:1423:ASP:O	1:A:1427:ILE:HG22	2.21	0.41
1:A:2430:ILE:HG22	1:A:2505:PHE:HB2	2.02	0.41
1:A:2440:MET:O	1:A:2444:GLN:OE1	2.38	0.41
1:A:2927:LEU:C	1:A:2931:GLN:OE1	2.64	0.41
1:A:3077:ALA:O	1:A:3081:MET:HG2	2.21	0.41
1:A:3281:LEU:HB2	1:A:3282:PRO:HD3	2.03	0.41
1:A:4000:MET:HG2	1:A:4061:PHE:CD2	2.56	0.41
2:E:24:VAL:HG21	2:E:59:TRP:HZ3	1.85	0.41
2:E:100:ASP:OD2	2:E:100:ASP:C	2.64	0.41
1:B:110:ARG:HH21	1:B:115:ARG:HD2	1.85	0.41
1:B:439:GLU:HG2	1:B:440:ALA:N	2.36	0.41
1:B:516:LYS:O	1:B:519:VAL:HG22	2.20	0.41
1:B:647:ASN:ND2	1:B:820:ARG:O	2.44	0.41
1:B:842:PRO:O	1:B:1196:PRO:HA	2.21	0.41
1:B:950:LEU:O	1:B:950:LEU:HD12	2.21	0.41
1:B:1758:ARG:NH2	1:B:1759:ARG:NH1	2.68	0.41
1:B:2777:TYR:CD1	1:B:2791:LEU:HD12	2.43	0.41
1:B:3300:ALA:HB3	1:B:3301:PRO:CD	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3946:GLN:NE2	1:B:3949:ARG:HD3	2.36	0.41
1:B:3959:LYS:HG3	1:B:4022:ASP:OD2	2.21	0.41
1:B:4064:MET:HE1	1:B:4110:PHE:CD2	2.56	0.41
1:B:4952:GLU:O	1:B:4956:THR:OG1	2.33	0.41
1:D:257:ARG:O	1:D:284:HIS:NE2	2.43	0.41
1:D:591:ASP:HA	1:D:631:LEU:HD21	2.03	0.41
1:D:594:GLY:HA2	1:D:1594:ARG:HD2	2.03	0.41
1:D:877:ASN:HD21	1:D:970:LEU:HD13	1.85	0.41
1:D:887:ILE:HG13	1:D:907:LEU:CD1	2.50	0.41
1:D:1423:ASP:HB3	1:D:1426:ILE:HD12	2.01	0.41
1:D:1705:GLY:HA3	1:D:1836:PHE:CG	2.56	0.41
1:D:1948:ASP:OD1	1:D:2126:ARG:NH2	2.45	0.41
1:D:1978:ALA:C	1:D:1982:ARG:NH2	2.78	0.41
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.21	0.41
1:D:2282:ASP:HA	1:D:2341:VAL:HG13	2.02	0.41
1:D:2302:LEU:CD1	1:D:2328:GLY:HA2	2.51	0.41
1:D:2430:ILE:HG22	1:D:2505:PHE:HB2	2.02	0.41
1:D:2608:MET:CE	1:D:2642:LYS:NZ	2.84	0.41
1:D:2699:ALA:O	1:D:2702:CYS:HA	2.21	0.41
1:D:2978:GLU:HA	1:D:2981:VAL:HG12	2.02	0.41
1:D:3054:VAL:HG13	1:D:3055:SER:N	2.36	0.41
1:D:3294:PRO:HB2	1:D:3297:PRO:HD2	2.02	0.41
1:D:3879:GLU:HG2	1:D:3880:PHE:N	2.36	0.41
1:D:4021:LYS:N	1:D:4139:ILE:HD13	2.36	0.41
1:D:4061:PHE:CE2	1:D:4065:PHE:HE2	2.39	0.41
1:D:4209:GLN:H	1:D:4209:GLN:CD	2.28	0.41
1:C:358:THR:OG1	1:C:383:HIS:ND1	2.42	0.41
1:C:371:VAL:O	1:C:371:VAL:HG13	2.20	0.41
1:C:710:ASP:OD1	1:C:713:SER:OG	2.19	0.41
1:C:1063:VAL:HG13	1:C:1064:GLU:N	2.36	0.41
1:C:2044:ILE:H	1:C:2044:ILE:HD12	1.86	0.41
1:C:2282:ASP:HA	1:C:2341:VAL:HG13	2.02	0.41
1:C:2760:GLU:OE2	1:C:2794:TYR:CE1	2.74	0.41
1:C:3166:TYR:CD1	1:C:3201:MET:HE1	2.56	0.41
1:C:3249:LEU:HD11	1:C:3273:THR:HG21	2.01	0.41
1:C:3769:ARG:O	1:C:3773:ARG:NH1	2.48	0.41
1:C:3946:GLN:NE2	1:C:3949:ARG:HD3	2.36	0.41
1:C:4061:PHE:CE2	1:C:4065:PHE:HE2	2.39	0.41
1:C:4942:GLU:O	1:C:4946:GLN:HG3	2.21	0.41
1:A:438:ILE:HD12	1:A:438:ILE:H	1.86	0.41
1:A:1157:GLU:OE1	1:A:1157:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1425:GLU:OE2	1:A:1425:GLU:N	2.53	0.41
1:A:1931:LEU:HD13	1:A:1935:VAL:CG1	2.47	0.41
1:A:3946:GLN:NE2	1:A:3949:ARG:HD3	2.36	0.41
1:A:3959:LYS:HG3	1:A:4022:ASP:OD2	2.21	0.41
2:H:100:ASP:OD2	2:H:100:ASP:C	2.64	0.41
1:B:438:ILE:HD12	1:B:438:ILE:H	1.86	0.41
1:B:2150:GLU:HG2	1:B:2151:ASP:N	2.36	0.41
1:B:2430:ILE:HG22	1:B:2505:PHE:HB2	2.02	0.41
1:B:2760:GLU:OE2	1:B:2794:TYR:CE1	2.74	0.41
1:B:2790:MET:HA	1:B:2792:ARG:NH1	2.36	0.41
1:B:2801:ASP:HA	1:B:2804:ILE:HG12	2.02	0.41
1:B:4021:LYS:N	1:B:4139:ILE:HD13	2.36	0.41
1:D:380:GLN:OE1	1:D:380:GLN:N	2.47	0.41
1:D:1425:GLU:OE2	1:D:1425:GLU:N	2.53	0.41
1:D:2178:MET:HE3	1:D:2182:ILE:HD11	2.02	0.41
1:D:2323:TRP:NE1	1:D:2366:PRO:HG3	2.36	0.41
1:D:2486:VAL:O	1:D:2486:VAL:HG13	2.21	0.41
1:D:2799:GLU:O	1:D:2803:GLU:OE1	2.38	0.41
1:D:3166:TYR:CD1	1:D:3201:MET:HE1	2.56	0.41
1:D:3281:LEU:HB2	1:D:3282:PRO:HD3	2.03	0.41
1:D:4253:GLU:OE1	1:D:4253:GLU:N	2.52	0.41
1:C:323:LEU:O	1:C:324:ASP:C	2.63	0.41
1:C:923:GLN:H	1:C:923:GLN:CD	2.28	0.41
1:C:1013:ILE:N	1:C:1014:PRO:CD	2.84	0.41
1:C:2978:GLU:HA	1:C:2981:VAL:HG12	2.02	0.41
1:C:3054:VAL:HG13	1:C:3055:SER:N	2.36	0.41
1:C:3111:ARG:NH2	1:C:3175:LEU:N	2.69	0.41
1:C:3905:THR:HA	1:C:3912:THR:OG1	2.20	0.41
1:C:4205:TRP:CH2	1:C:4214:LYS:HD3	2.56	0.41
1:C:4949:GLN:HA	1:C:4952:GLU:HG3	2.02	0.41
1:A:14:LEU:CB	1:A:101:LEU:HD12	2.50	0.40
1:A:924:MET:O	1:A:928:THR:HG23	2.21	0.40
1:A:2233:CYS:HB3	1:A:2237:CYS:HB3	1.67	0.40
1:A:2302:LEU:CD1	1:A:2328:GLY:HA2	2.51	0.40
1:A:2608:MET:CE	1:A:2642:LYS:NZ	2.84	0.40
1:A:2790:MET:HA	1:A:2792:ARG:NH1	2.36	0.40
1:A:3018:LEU:HD21	1:A:3075:LEU:O	2.20	0.40
1:A:3508:SER:O	1:A:3511:VAL:HG22	2.21	0.40
1:A:4021:LYS:N	1:A:4139:ILE:HD13	2.36	0.40
1:A:4064:MET:HE1	1:A:4110:PHE:CD2	2.56	0.40
1:B:294:THR:O	1:B:298:GLY:N	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2212:VAL:HG23	1:B:2213:ASN:N	2.37	0.40
1:B:2608:MET:CE	1:B:2642:LYS:NZ	2.84	0.40
1:B:2773:ASN:OD1	1:B:2774:ASN:N	2.55	0.40
1:B:3018:LEU:HD21	1:B:3075:LEU:O	2.20	0.40
1:B:3542:LEU:O	1:B:3543:LYS:HB2	2.21	0.40
1:B:3905:THR:HA	1:B:3912:THR:OG1	2.20	0.40
1:D:168:ASP:C	1:D:169:LEU:HD12	2.47	0.40
1:D:421:PHE:HE2	1:D:507:ALA:HB2	1.79	0.40
1:D:950:LEU:HD12	1:D:950:LEU:O	2.21	0.40
1:D:1126:GLY:HA3	1:D:1143:TRP:CE3	2.57	0.40
1:D:3680:ALA:HB1	1:D:3683:GLN:NE2	2.37	0.40
1:D:3946:GLN:NE2	1:D:3949:ARG:HD3	2.36	0.40
1:C:1033:ARG:HA	1:C:1036:ARG:NH2	2.36	0.40
1:C:1754:GLY:O	1:C:1758:ARG:HB2	2.20	0.40
1:C:3891:LEU:O	1:C:3899:PHE:CD2	2.71	0.40
1:C:4064:MET:HE1	1:C:4110:PHE:CD2	2.56	0.40
1:A:455:PRO:HB2	1:A:459:LEU:HD12	2.03	0.40
1:A:2699:ALA:O	1:A:2702:CYS:HA	2.21	0.40
1:A:2810:LYS:O	1:A:2814:LYS:HG3	2.22	0.40
1:A:3071:LEU:O	1:A:3075:LEU:HG	2.21	0.40
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.21	0.40
1:A:3166:TYR:CD1	1:A:3201:MET:HE1	2.56	0.40
1:A:3414:ARG:NH1	1:A:3472:ALA:HB3	2.37	0.40
1:A:4061:PHE:CE2	1:A:4065:PHE:HE2	2.39	0.40
1:A:4649:LEU:O	1:A:4653:VAL:HG23	2.22	0.40
2:F:59:TRP:O	2:F:60:GLU:C	2.63	0.40
1:B:2376:LEU:HD11	1:B:2426:TYR:HB3	2.02	0.40
1:B:2978:GLU:HA	1:B:2981:VAL:HG12	2.02	0.40
1:B:3077:ALA:O	1:B:3081:MET:HG2	2.21	0.40
1:B:3235:SER:OG	1:B:3237:GLU:OE1	2.38	0.40
1:B:4205:TRP:CH2	1:B:4214:LYS:HD3	2.56	0.40
1:B:4649:LEU:O	1:B:4653:VAL:HG23	2.21	0.40
1:D:438:ILE:HD12	1:D:438:ILE:H	1.86	0.40
1:D:955:LEU:HD12	1:D:966:LYS:HB3	2.03	0.40
1:D:1742:THR:HA	1:D:1745:ILE:HD12	2.02	0.40
1:D:2150:GLU:HG2	1:D:2151:ASP:N	2.36	0.40
1:D:3504:SER:HB2	1:D:3507:THR:HG23	2.03	0.40
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.22	0.40
1:D:3628:ARG:HB2	1:D:3631:ALA:HB3	2.03	0.40
1:D:4000:MET:HG2	1:D:4061:PHE:CD2	2.56	0.40
1:D:4704:LEU:O	1:D:4774:LYS:NZ	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:455:PRO:HB2	1:C:459:LEU:HD12	2.03	0.40
1:C:1204:LEU:HD12	1:C:1234:VAL:HB	2.03	0.40
1:C:1705:GLY:N	1:C:1706:PRO:CD	2.85	0.40
1:C:2150:GLU:HG2	1:C:2151:ASP:N	2.36	0.40
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.21	0.40
1:C:2376:LEU:HD11	1:C:2426:TYR:HB3	2.02	0.40
1:A:168:ASP:C	1:A:169:LEU:HD12	2.46	0.40
1:A:418:LEU:HD23	1:A:421:PHE:HZ	1.86	0.40
1:A:591:ASP:HA	1:A:631:LEU:HD21	2.03	0.40
1:A:955:LEU:HD12	1:A:966:LYS:HB3	2.03	0.40
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.54	0.40
1:A:2871:LEU:HD13	1:A:2874:MET:HE3	2.04	0.40
1:A:2949:SER:OG	1:A:2952:GLU:OE1	2.25	0.40
1:A:3111:ARG:NH2	1:A:3175:LEU:N	2.69	0.40
1:A:3542:LEU:O	1:A:3543:LYS:HB2	2.21	0.40
1:A:4205:TRP:CH2	1:A:4214:LYS:HD3	2.56	0.40
2:H:74:LEU:HD13	2:H:101:VAL:CG2	2.51	0.40
1:B:708:GLY:HA3	1:B:722:TRP:HB3	2.02	0.40
1:B:1013:ILE:N	1:B:1014:PRO:CD	2.84	0.40
1:B:1033:ARG:HA	1:B:1036:ARG:NH2	2.36	0.40
1:B:1123:VAL:HG23	1:B:1132:TRP:HB2	2.04	0.40
1:B:1126:GLY:HA3	1:B:1143:TRP:CE3	2.57	0.40
1:B:2699:ALA:O	1:B:2702:CYS:HA	2.21	0.40
1:B:3281:LEU:HB2	1:B:3282:PRO:HD3	2.03	0.40
1:B:4949:GLN:HA	1:B:4952:GLU:HG3	2.02	0.40
1:D:711:LEU:HD23	1:D:711:LEU:HA	1.97	0.40
1:D:842:PRO:O	1:D:1196:PRO:HA	2.21	0.40
1:D:943:ASP:CG	1:D:946:ALA:HB3	2.47	0.40
1:D:1123:VAL:HG23	1:D:1132:TRP:HB2	2.04	0.40
1:D:2349:ASN:O	1:D:2353:VAL:HG23	2.22	0.40
1:D:2782:ASP:OD1	1:D:2782:ASP:N	2.54	0.40
1:D:3622:LYS:HB3	1:D:3625:SER:OG	2.21	0.40
1:D:3891:LEU:O	1:D:3899:PHE:CD2	2.71	0.40
1:C:439:GLU:HG2	1:C:440:ALA:N	2.36	0.40
1:C:2799:GLU:O	1:C:2803:GLU:OE1	2.38	0.40
1:C:3725:TYR:O	1:C:3729:MET:HG3	2.20	0.40
1:A:908:VAL:HG23	1:A:963:ASN:HD22	1.86	0.40
1:A:1013:ILE:N	1:A:1014:PRO:CD	2.84	0.40
1:A:1126:GLY:HA3	1:A:1143:TRP:CE3	2.57	0.40
1:A:1979:LEU:CA	1:A:1982:ARG:NH2	2.84	0.40
1:A:2282:ASP:HA	1:A:2341:VAL:HG13	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3454:GLU:HA	1:A:3454:GLU:OE2	2.22	0.40
1:A:4942:GLU:O	1:A:4946:GLN:HG3	2.21	0.40
2:G:74:LEU:HD13	2:G:101:VAL:CG2	2.51	0.40
1:B:106:ALA:HA	1:B:148:TRP:O	2.22	0.40
1:B:371:VAL:O	1:B:371:VAL:HG13	2.20	0.40
1:B:869:ARG:HH22	1:B:941:MET:HE1	1.85	0.40
1:B:1705:GLY:HA3	1:B:1836:PHE:CG	2.56	0.40
1:B:2323:TRP:NE1	1:B:2366:PRO:HG3	2.36	0.40
1:B:2349:ASN:O	1:B:2353:VAL:HG23	2.21	0.40
1:B:2614:ILE:CG2	1:B:2618:MET:HB2	2.51	0.40
1:B:3054:VAL:HG13	1:B:3055:SER:N	2.36	0.40
1:B:3454:GLU:HA	1:B:3454:GLU:OE2	2.22	0.40
1:B:4627:MET:HG2	1:B:4629:TYR:CZ	2.57	0.40
1:D:371:VAL:O	1:D:371:VAL:HG13	2.20	0.40
1:D:1669:LEU:O	1:D:1673:VAL:HG22	2.21	0.40
1:D:2441:HIS:CE1	1:D:2442:LEU:HG	2.56	0.40
1:D:3686:GLU:O	1:D:3687:GLU:HB3	2.20	0.40
1:C:210:GLU:HB2	1:C:213:TYR:HD2	1.86	0.40
1:C:224:HIS:HB2	1:C:229:GLU:OE2	2.21	0.40
1:C:1126:GLY:HA3	1:C:1143:TRP:CE3	2.57	0.40
1:C:2614:ILE:CG2	1:C:2618:MET:HB2	2.51	0.40
1:C:3071:LEU:O	1:C:3075:LEU:HG	2.21	0.40
1:C:3622:LYS:HB3	1:C:3625:SER:OG	2.21	0.40
1:A:842:PRO:O	1:A:1196:PRO:HA	2.21	0.40
1:A:1461:ASP:OD2	1:A:1468:LYS:NZ	2.49	0.40
1:A:2233:CYS:C	1:A:2235:PHE:N	2.79	0.40
1:A:2486:VAL:O	1:A:2486:VAL:HG13	2.21	0.40
1:A:2768:PHE:O	1:A:2772:GLN:OE1	2.40	0.40
1:A:2773:ASN:OD1	1:A:2774:ASN:N	2.55	0.40
1:A:2792:ARG:HB3	1:A:2796:THR:OG1	2.22	0.40
1:A:3680:ALA:HB1	1:A:3683:GLN:NE2	2.37	0.40
2:F:2:VAL:HG22	2:F:58:GLY:HA2	2.03	0.40
2:F:90:ILE:HD11	1:B:1684:ALA:HA	2.03	0.40
1:B:1705:GLY:N	1:B:1706:PRO:CD	2.84	0.40
1:B:1979:LEU:CA	1:B:1982:ARG:NH2	2.84	0.40
1:B:2243:SER:HB2	1:B:3861:GLU:OE2	2.22	0.40
1:B:4942:GLU:O	1:B:4946:GLN:HG3	2.21	0.40
1:D:168:ASP:H	1:C:384:MET:HE1	1.87	0.40
1:D:923:GLN:H	1:D:923:GLN:CD	2.29	0.40
1:D:1013:ILE:N	1:D:1014:PRO:CD	2.84	0.40
1:D:1978:ALA:CA	1:D:1982:ARG:HH12	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2243:SER:HB2	1:D:3861:GLU:OE2	2.22	0.40
1:D:2513:GLU:N	1:D:2513:GLU:OE1	2.55	0.40
1:D:2790:MET:HA	1:D:2792:ARG:NH1	2.36	0.40
1:D:4064:MET:HE1	1:D:4110:PHE:CD2	2.56	0.40
1:C:438:ILE:HD12	1:C:438:ILE:H	1.87	0.40
1:C:842:PRO:O	1:C:1196:PRO:HA	2.21	0.40
1:C:1948:ASP:OD1	1:C:2126:ARG:NH2	2.45	0.40
1:C:1978:ALA:CA	1:C:1982:ARG:HH12	2.35	0.40
1:C:2212:VAL:HG23	1:C:2213:ASN:N	2.37	0.40
1:C:2302:LEU:CD1	1:C:2328:GLY:HA2	2.51	0.40
1:C:2486:VAL:HG13	1:C:2486:VAL:O	2.21	0.40
1:C:2773:ASN:OD1	1:C:2774:ASN:N	2.55	0.40
1:C:2790:MET:HA	1:C:2792:ARG:NH1	2.36	0.40
1:C:4851:TYR:HD1	1:C:4916:PHE:CE1	2.40	0.40

There are no symmetry-related clashes.

5.3　Torsion angles ⓘ

5.3.1　Protein backbone ⓘ

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

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

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

All (16) Ramachandran outliers are listed below:

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

5.3.2   Protein sidechains ⓘ

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%)	3824 (100%)	12 (0%)	91	96
1	B	3836/4276 (90%)	3824 (100%)	12 (0%)	91	96
1	C	3836/4276 (90%)	3824 (100%)	12 (0%)	91	96
1	D	3836/4276 (90%)	3824 (100%)	12 (0%)	91	96
2	E	89/90 (99%)	87 (98%)	2 (2%)	47	67
2	F	89/90 (99%)	87 (98%)	2 (2%)	47	67
2	G	89/90 (99%)	87 (98%)	2 (2%)	47	67
2	H	89/90 (99%)	87 (98%)	2 (2%)	47	67
All	All	15700/17464 (90%)	15644 (100%)	56 (0%)	90	95

All (56) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	331	VAL
1	A	421	PHE
1	A	941	MET
1	A	998	ARG
1	A	1036	ARG
1	A	2870[A]	GLU
1	A	2870[B]	GLU
1	A	3758	MET
1	A	3951	PHE
1	A	4223	ASN
1	A	4720	VAL
1	A	4952	GLU
2	E	13	ARG
2	E	52	LYS
2	H	13	ARG
2	H	52	LYS
2	G	13	ARG
2	G	52	LYS
2	F	13	ARG
2	F	52	LYS
1	B	331	VAL
1	B	421	PHE
1	B	941	MET
1	B	998	ARG
1	B	1036	ARG
1	B	2870[A]	GLU
1	B	2870[B]	GLU
1	B	3758	MET
1	B	3951	PHE
1	B	4223	ASN
1	B	4720	VAL
1	B	4952	GLU
1	D	331	VAL
1	D	421	PHE
1	D	941	MET
1	D	998	ARG
1	D	1036	ARG
1	D	2870[A]	GLU
1	D	2870[B]	GLU
1	D	3758	MET
1	D	3951	PHE
1	D	4223	ASN
1	D	4720	VAL

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Mol	Chain	Res	Type
1	D	4952	GLU
1	C	331	VAL
1	C	421	PHE
1	C	941	MET
1	C	998	ARG
1	C	1036	ARG
1	C	2870[A]	GLU
1	C	2870[B]	GLU
1	C	3758	MET
1	C	3951	PHE
1	C	4223	ASN
1	C	4720	VAL
1	C	4952	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (162) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	113	HIS
1	A	138	GLN
1	A	241	GLN
1	A	255	HIS
1	A	308	HIS
1	A	461	HIS
1	A	658	GLN
1	A	879	HIS
1	A	889	GLN
1	A	904	HIS
1	A	919	ASN
1	A	1484	HIS
1	A	1545	ASN
1	A	1563	GLN
1	A	1571	ASN
1	A	1631	GLN
1	A	1691	GLN
1	A	1824	GLN
1	A	1938	GLN
1	A	2646	ASN
1	A	2902	HIS
1	A	2991	HIS
1	A	3109	ASN
1	A	3127	GLN
1	A	3313	ASN

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Mol	Chain	Res	Type
1	A	3325	ASN
1	A	3449	HIS
1	A	3683	GLN
1	A	3766	GLN
1	A	3994	HIS
1	A	4043	GLN
1	A	4100	GLN
1	A	4162	ASN
1	A	4946	GLN
1	A	4973	HIS
1	A	5003	HIS
2	E	20	GLN
2	E	25	HIS
2	H	20	GLN
2	H	25	HIS
2	G	20	GLN
2	G	25	HIS
2	F	20	GLN
2	F	25	HIS
1	B	57	ASN
1	B	113	HIS
1	B	138	GLN
1	B	241	GLN
1	B	255	HIS
1	B	308	HIS
1	B	461	HIS
1	B	658	GLN
1	B	838	HIS
1	B	877	ASN
1	B	879	HIS
1	B	889	GLN
1	B	904	HIS
1	B	919	ASN
1	B	1299	GLN
1	B	1300	HIS
1	B	1484	HIS
1	B	1545	ASN
1	B	1563	GLN
1	B	1571	ASN
1	B	1631	GLN
1	B	1691	GLN
1	B	1824	GLN

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Mol	Chain	Res	Type
1	B	1938	GLN
1	B	2646	ASN
1	B	2902	HIS
1	B	2991	HIS
1	B	3109	ASN
1	B	3127	GLN
1	B	3313	ASN
1	B	3449	HIS
1	B	3683	GLN
1	B	3766	GLN
1	B	3994	HIS
1	B	4043	GLN
1	B	4100	GLN
1	B	4162	ASN
1	B	4946	GLN
1	B	4973	HIS
1	B	5003	HIS
1	D	57	ASN
1	D	105	HIS
1	D	113	HIS
1	D	138	GLN
1	D	241	GLN
1	D	255	HIS
1	D	308	HIS
1	D	461	HIS
1	D	634	GLN
1	D	658	GLN
1	D	877	ASN
1	D	879	HIS
1	D	889	GLN
1	D	904	HIS
1	D	919	ASN
1	D	1484	HIS
1	D	1545	ASN
1	D	1563	GLN
1	D	1571	ASN
1	D	1631	GLN
1	D	1691	GLN
1	D	1824	GLN
1	D	1938	GLN
1	D	2646	ASN
1	D	2902	HIS

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Mol	Chain	Res	Type
1	D	2991	HIS
1	D	3109	ASN
1	D	3127	GLN
1	D	3313	ASN
1	D	3449	HIS
1	D	3560	GLN
1	D	3683	GLN
1	D	3766	GLN
1	D	3994	HIS
1	D	4043	GLN
1	D	4100	GLN
1	D	4162	ASN
1	D	4946	GLN
1	D	4973	HIS
1	D	5003	HIS
1	C	57	ASN
1	C	113	HIS
1	C	138	GLN
1	C	241	GLN
1	C	255	HIS
1	C	308	HIS
1	C	461	HIS
1	C	658	GLN
1	C	838	HIS
1	C	877	ASN
1	C	879	HIS
1	C	889	GLN
1	C	904	HIS
1	C	919	ASN
1	C	1300	HIS
1	C	1484	HIS
1	C	1545	ASN
1	C	1571	ASN
1	C	1631	GLN
1	C	1691	GLN
1	C	1824	GLN
1	C	1938	GLN
1	C	2646	ASN
1	C	2883	HIS
1	C	2902	HIS
1	C	2991	HIS
1	C	3109	ASN

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Mol	Chain	Res	Type
1	C	3127	GLN
1	C	3313	ASN
1	C	3449	HIS
1	C	3683	GLN
1	C	3766	GLN
1	C	3994	HIS
1	C	4043	GLN
1	C	4100	GLN
1	C	4162	ASN
1	C	4946	GLN
1	C	5003	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 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	$\#|Z| > 2$
6	IBM	B	5304	-	8,17,17	0.80	0	11,25,25	2.30	4 (36%)
3	ATP	B	5301	-	28,33,33	0.61	0	34,52,52	1.00	3 (8%)

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

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

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

There are no bond length outliers.

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	D	5304	IBM	C5-C6-N1	-4.77	113.36	118.20
6	B	5304	IBM	C5-C6-N1	-4.77	113.36	118.20
6	C	5304	IBM	C5-C6-N1	-4.75	113.37	118.20
6	A	5304	IBM	C5-C6-N1	-4.74	113.39	118.20
6	B	5304	IBM	C11-N3-C4	4.02	121.87	118.46
6	C	5304	IBM	C11-N3-C4	4.02	121.87	118.46
6	A	5304	IBM	C11-N3-C4	4.01	121.86	118.46
6	D	5304	IBM	C11-N3-C4	3.98	121.83	118.46
6	D	5304	IBM	C4-C5-C6	3.12	122.33	119.96
6	B	5304	IBM	C4-C5-C6	3.11	122.33	119.96
6	C	5304	IBM	C4-C5-C6	3.07	122.30	119.96
6	A	5304	IBM	C4-C5-C6	3.05	122.28	119.96
3	B	5301	ATP	O4'-C1'-N9	-2.45	105.49	108.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	5301	ATP	O4'-C1'-N9	-2.43	105.52	108.75
3	A	5301	ATP	O4'-C1'-N9	-2.42	105.53	108.75
6	A	5304	IBM	C5-C4-N9	-2.42	105.90	110.87
6	B	5304	IBM	C5-C4-N9	-2.41	105.92	110.87
6	C	5304	IBM	C5-C4-N9	-2.41	105.92	110.87
3	C	5301	ATP	C5-C6-N6	2.40	123.97	120.31
6	D	5304	IBM	C5-C4-N9	-2.40	105.93	110.87
3	B	5301	ATP	C5-C6-N6	2.40	123.97	120.31
3	C	5301	ATP	O4'-C1'-N9	-2.39	105.58	108.75
3	A	5301	ATP	C5-C6-N6	2.38	123.94	120.31
3	D	5301	ATP	C5-C6-N6	2.37	123.92	120.31
3	D	5301	ATP	O2'-C2'-C3'	-2.26	104.57	111.82
3	A	5301	ATP	O2'-C2'-C3'	-2.26	104.59	111.82
3	C	5301	ATP	O2'-C2'-C3'	-2.25	104.60	111.82
3	B	5301	ATP	O2'-C2'-C3'	-2.25	104.61	111.82

There are no chirality outliers.

All (36) torsion outliers are listed below:

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

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Mol	Chain	Res	Type	Atoms
3	D	5301	ATP	PB-O3A-PA-O1A
3	C	5301	ATP	PB-O3A-PA-O1A
3	A	5301	ATP	PB-O3B-PG-O2G
3	A	5301	ATP	PB-O3B-PG-O3G
3	B	5301	ATP	PB-O3B-PG-O2G
3	B	5301	ATP	PB-O3B-PG-O3G
3	D	5301	ATP	PB-O3B-PG-O2G
3	D	5301	ATP	PB-O3B-PG-O3G
3	C	5301	ATP	PB-O3B-PG-O2G
3	C	5301	ATP	PB-O3B-PG-O3G
3	A	5301	ATP	PB-O3A-PA-O2A
3	B	5301	ATP	PB-O3A-PA-O2A
3	D	5301	ATP	PB-O3A-PA-O2A
3	C	5301	ATP	PB-O3A-PA-O2A

There are no ring outliers.

8 monomers are involved in 12 short contacts:

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

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

Ligand IBM B 5304

Bond lengths

Bond angles

Torsions

Rings

Ligand ATP B 5301

Bond lengths

Bond angles

Torsions

Rings

Ligand ATP A 5301

Bond lengths

Bond angles

Torsions

Rings

Ligand ATP D 5301

Bond lengths

Bond angles

Torsions

Rings

Ligand IBM A 5304

Bond lengths

Bond angles

Torsions

Rings

Ligand IBM C 5304

Bond lengths

Bond angles

Torsions

Rings

Ligand IBM D 5304

Bond lengths

Bond angles

Torsions

Rings

Ligand ATP C 5301

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

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

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

6.1 Orthogonal projections ⓘ
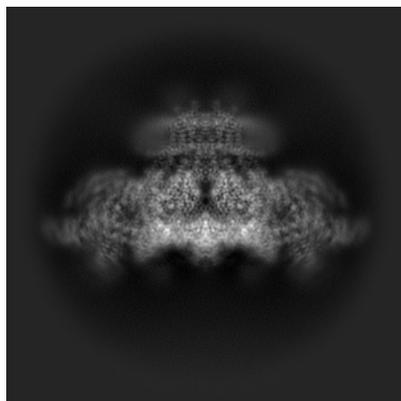
6.1.1 Primary map

X
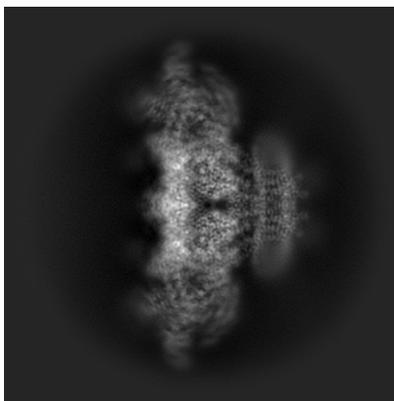
Y
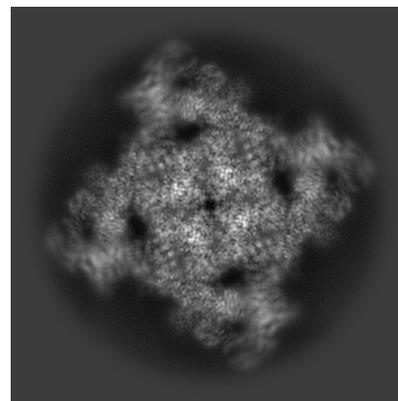
Z

6.1.2 Raw map

X

Y

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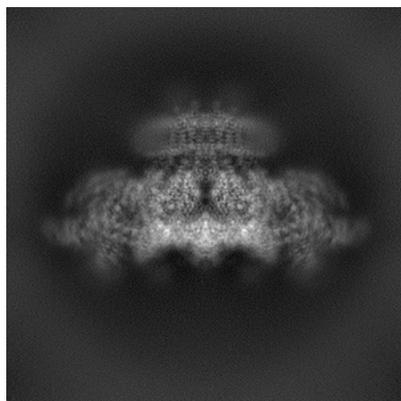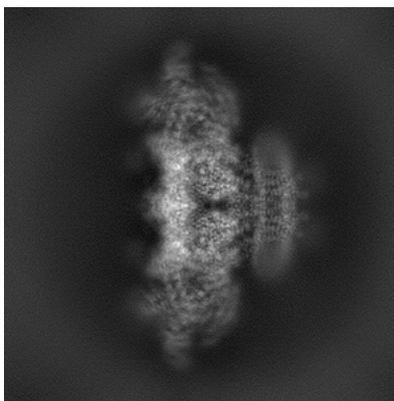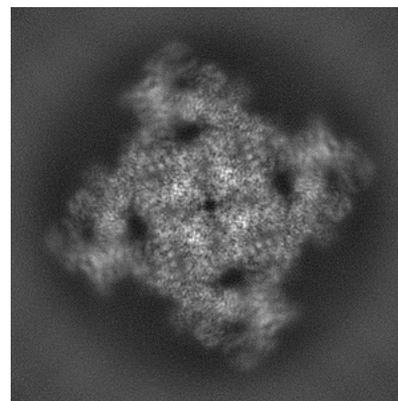
The images above show the map projected in three orthogonal directions.

6.2　Central slices ⓘ
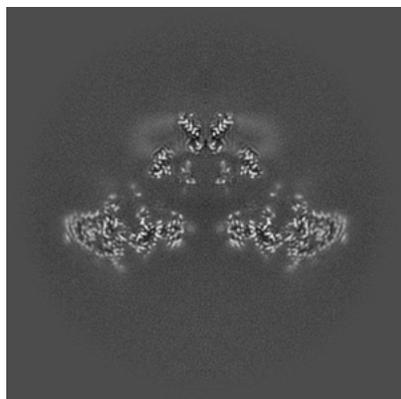
6.2.1　Primary map
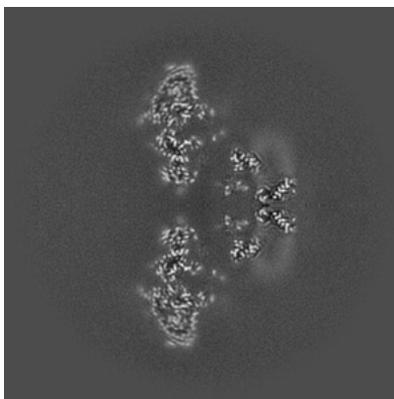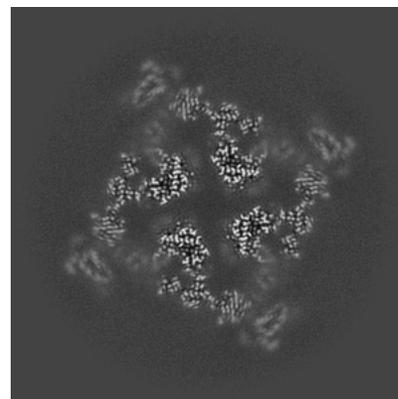
| X Index: 256 | Y Index: 256 | Z Index: 256 |

6.2.2　Raw map
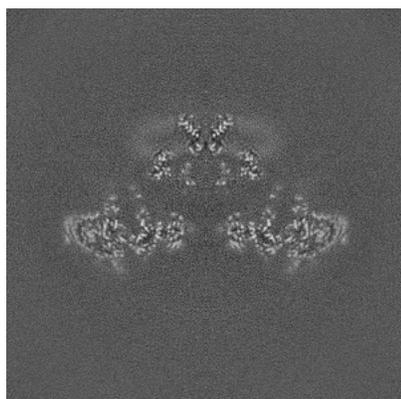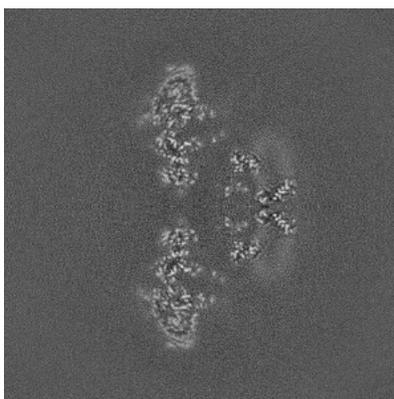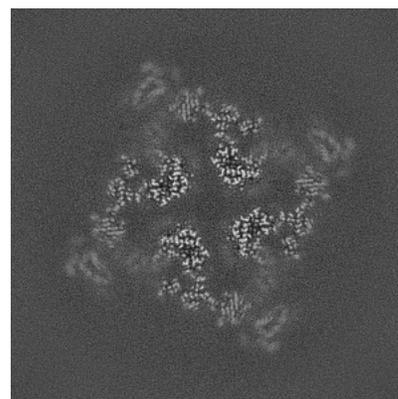
| X Index: 256 | Y Index: 256 | Z Index: 256 |

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

6.3 Largest variance slices ⓘ

6.3.1 Primary map
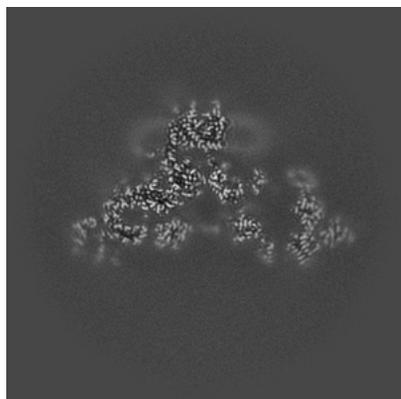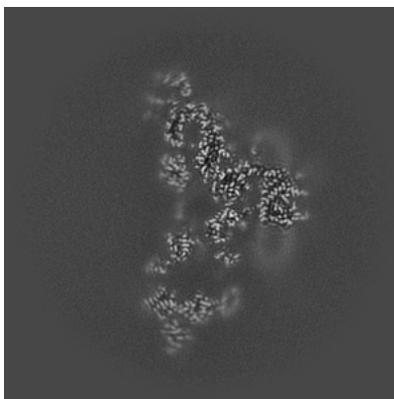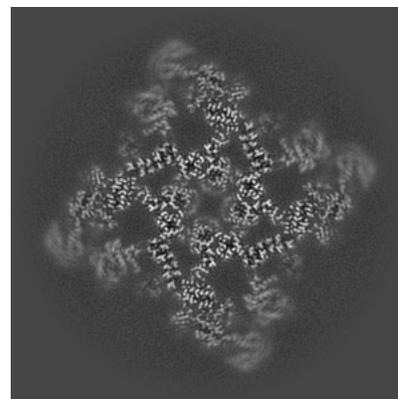
| X Index: 239 | Y Index: 239 | Z Index: 229 |

6.3.2 Raw map
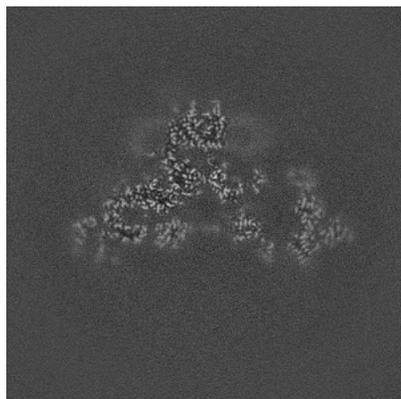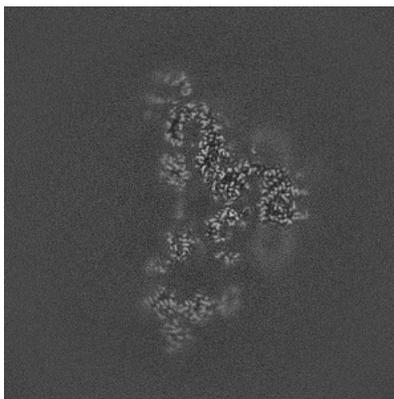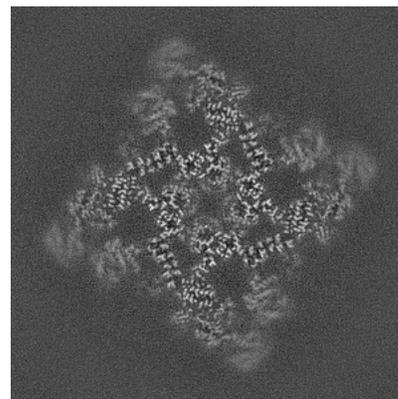
| X Index: 239 | Y Index: 239 | Z Index: 229 |

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

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

6.4.1 Primary map
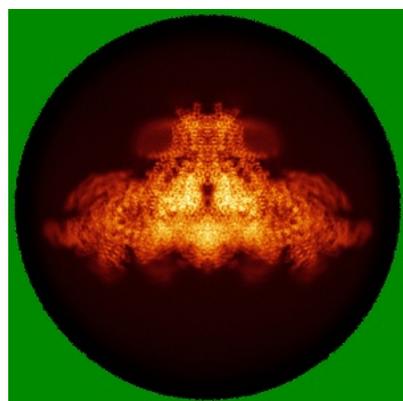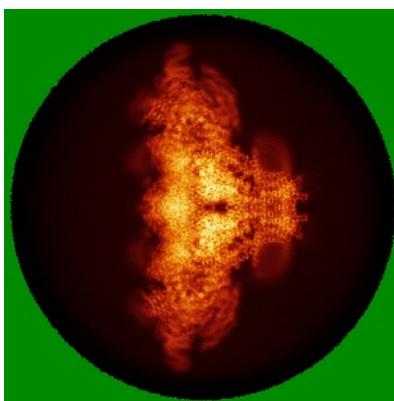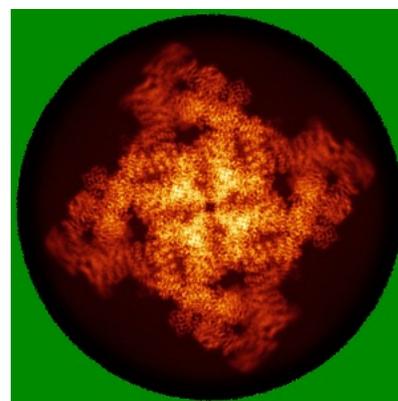
| X | Y | Z |

6.4.2 Raw map

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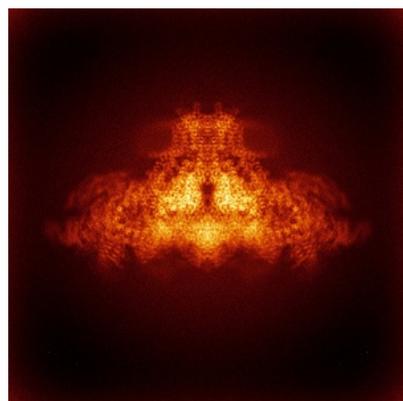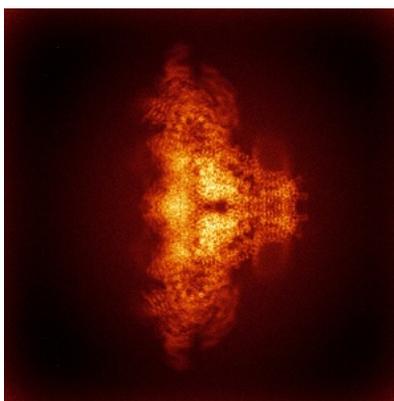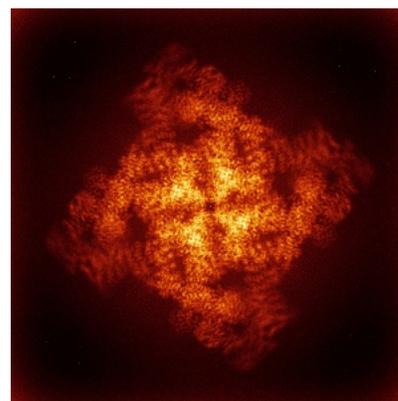
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views ⓘ

6.5.1 Primary map

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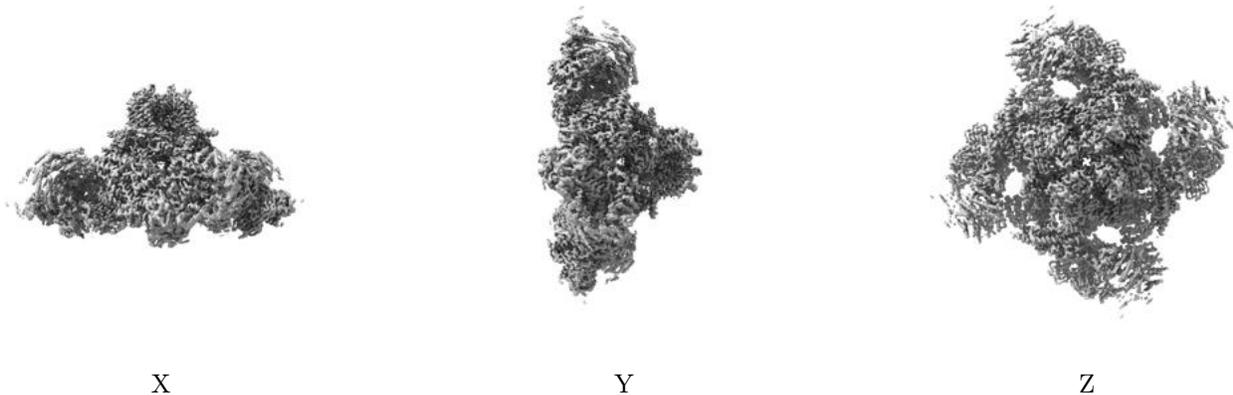
The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

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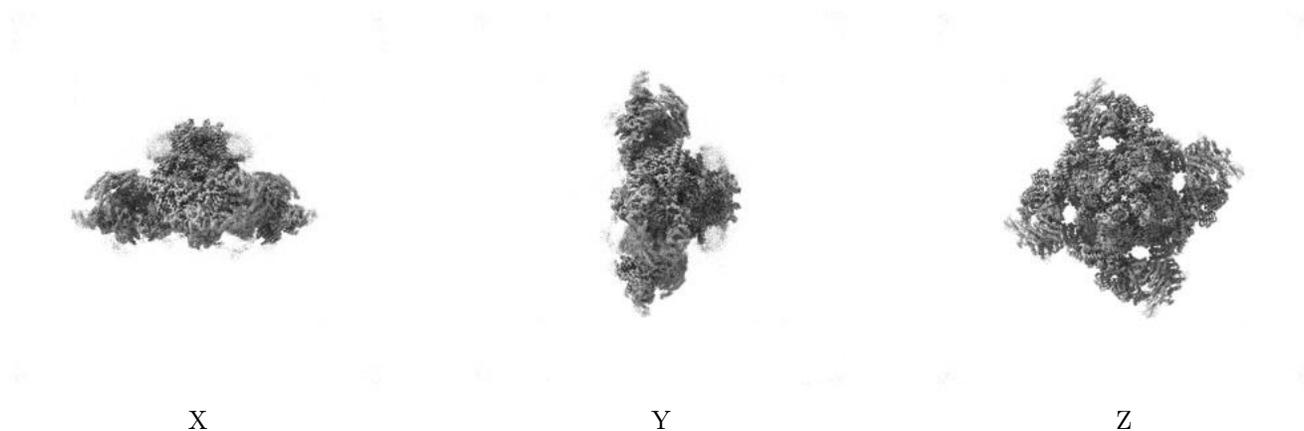
These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

6.6 Mask visualisation ⓘ

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

7 Map analysis ⓘ

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

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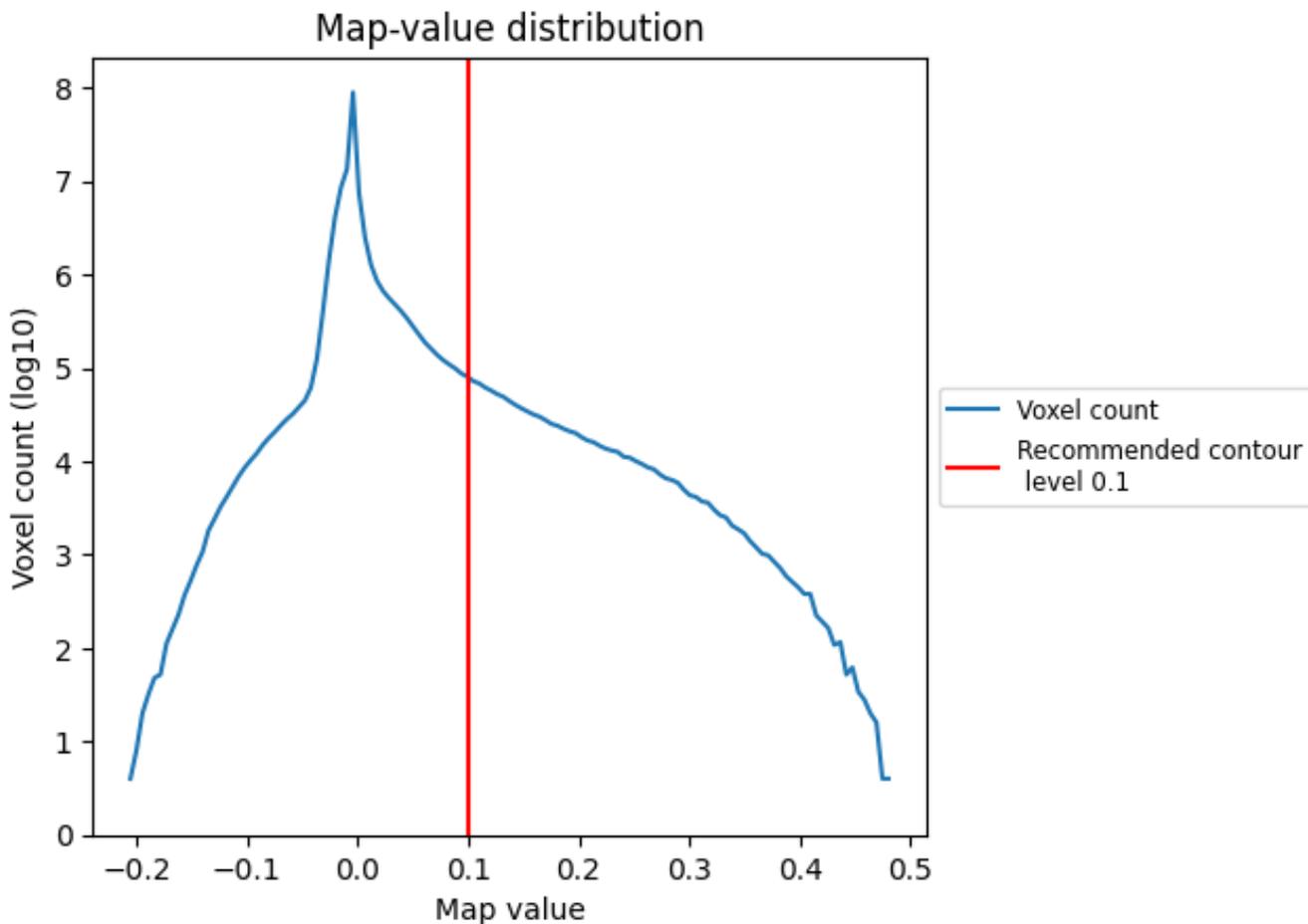
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
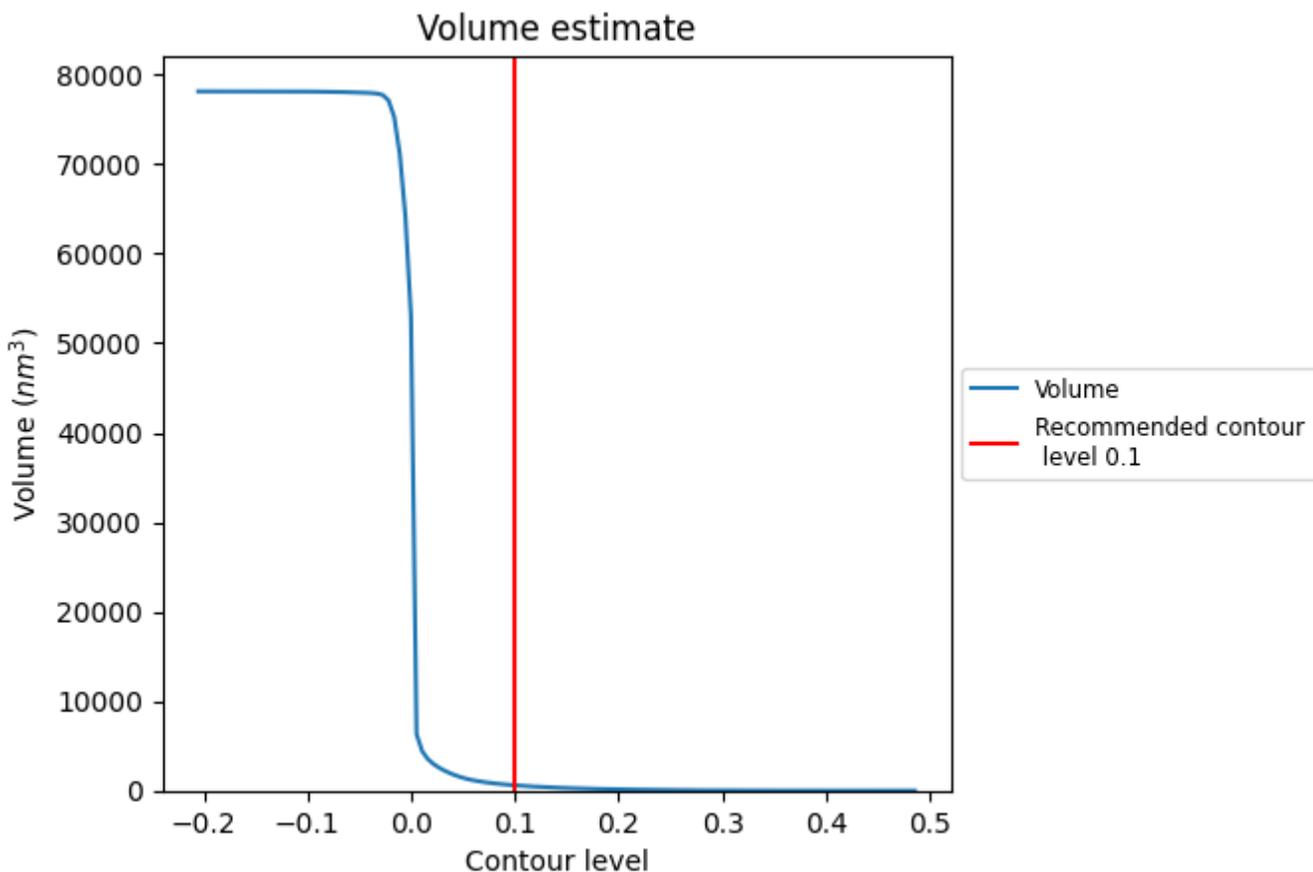
The volume at the recommended contour level is 594 nm^3; this corresponds to an approximate mass of 536 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ
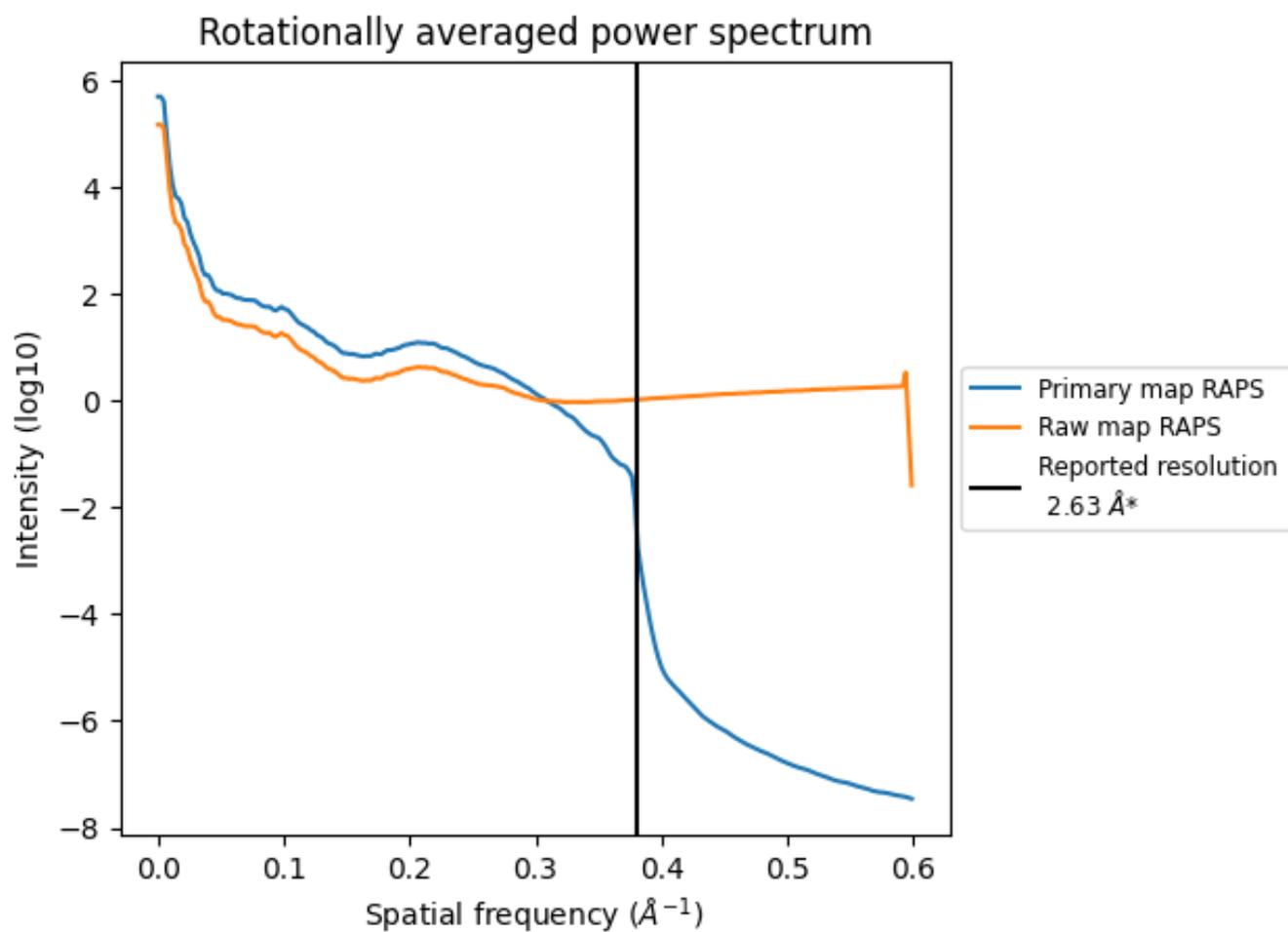
*Reported resolution corresponds to spatial frequency of 0.380 Å^{-1}

8   Fourier-Shell correlation ⓘ

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

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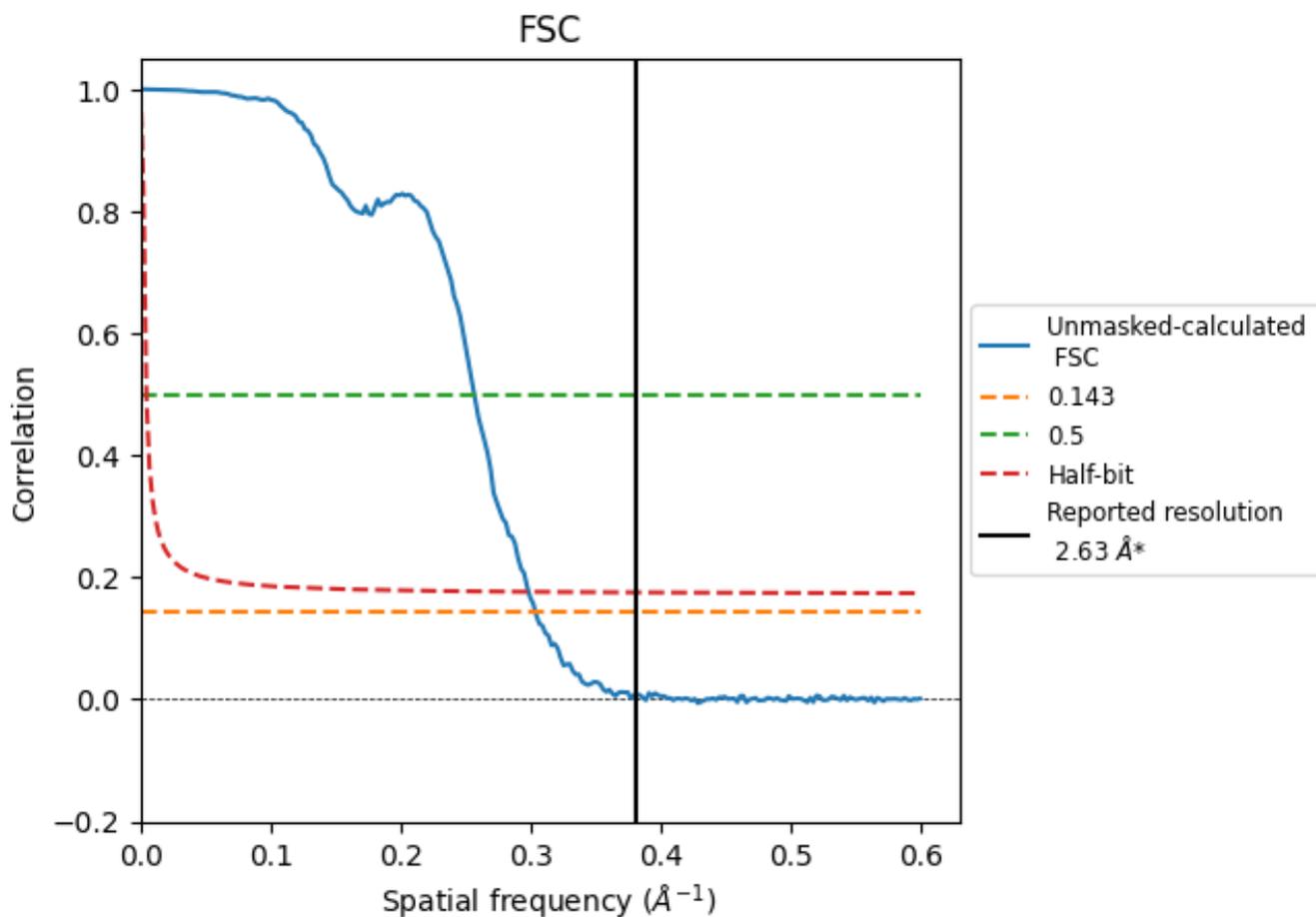
*Reported resolution corresponds to spatial frequency of 0.380 Å^{-1}

8.2 Resolution estimates (i)

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

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

9　Map-model fit ⓘ

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

9.1　Map-model overlay ⓘ

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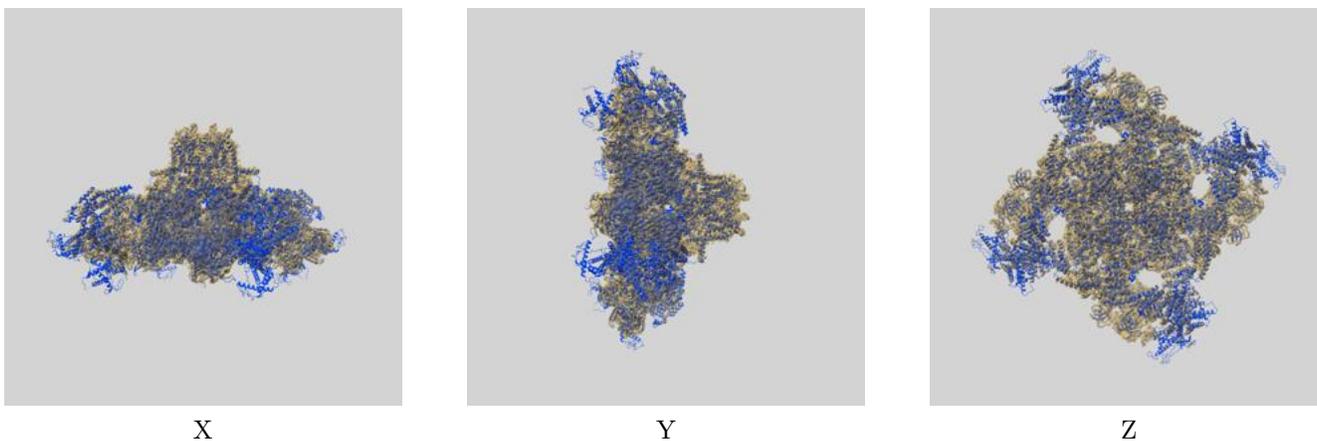
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2　Q-score mapped to coordinate model ⓘ

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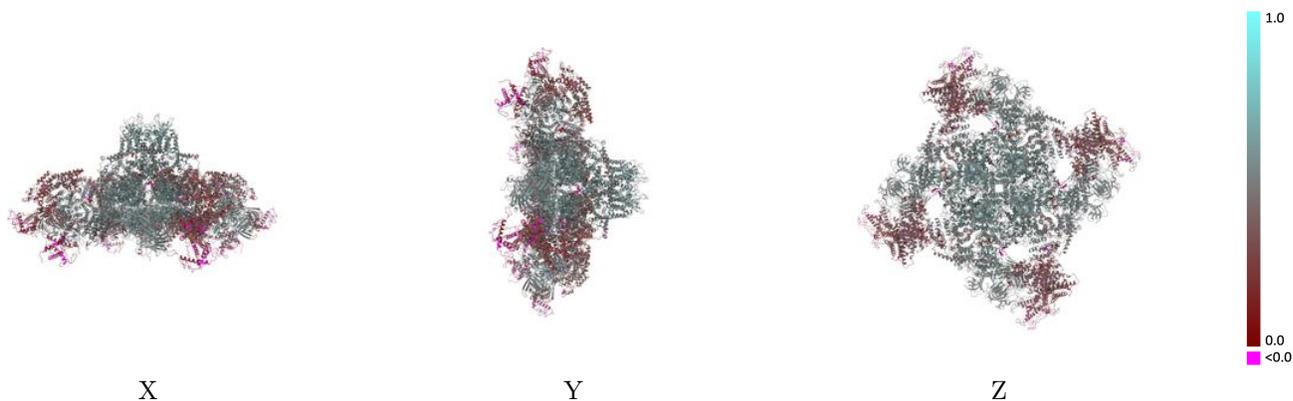
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3　Atom inclusion mapped to coordinate model ⓘ

X　　　　　　　　　　Y　　　　　　　　　　Z
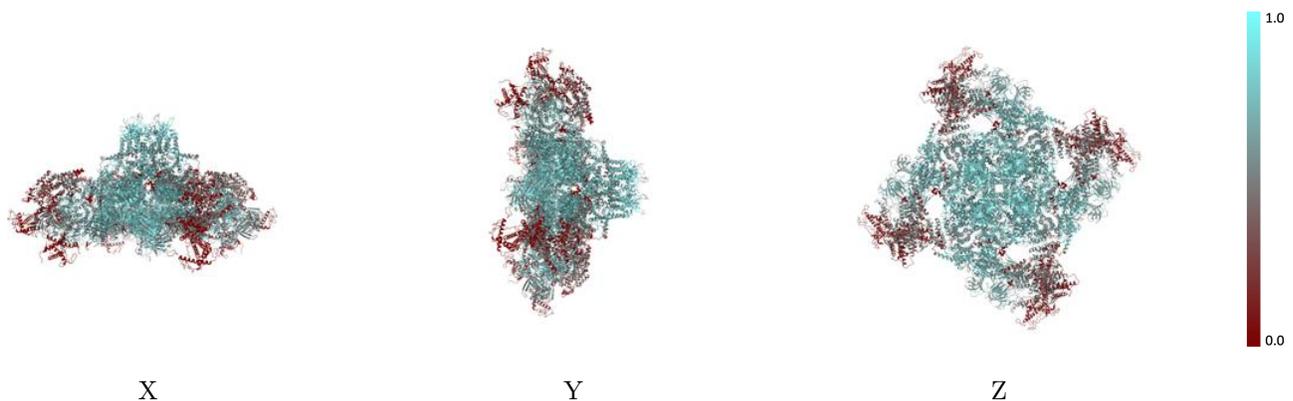
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).

9.4 Atom inclusion ⓘ
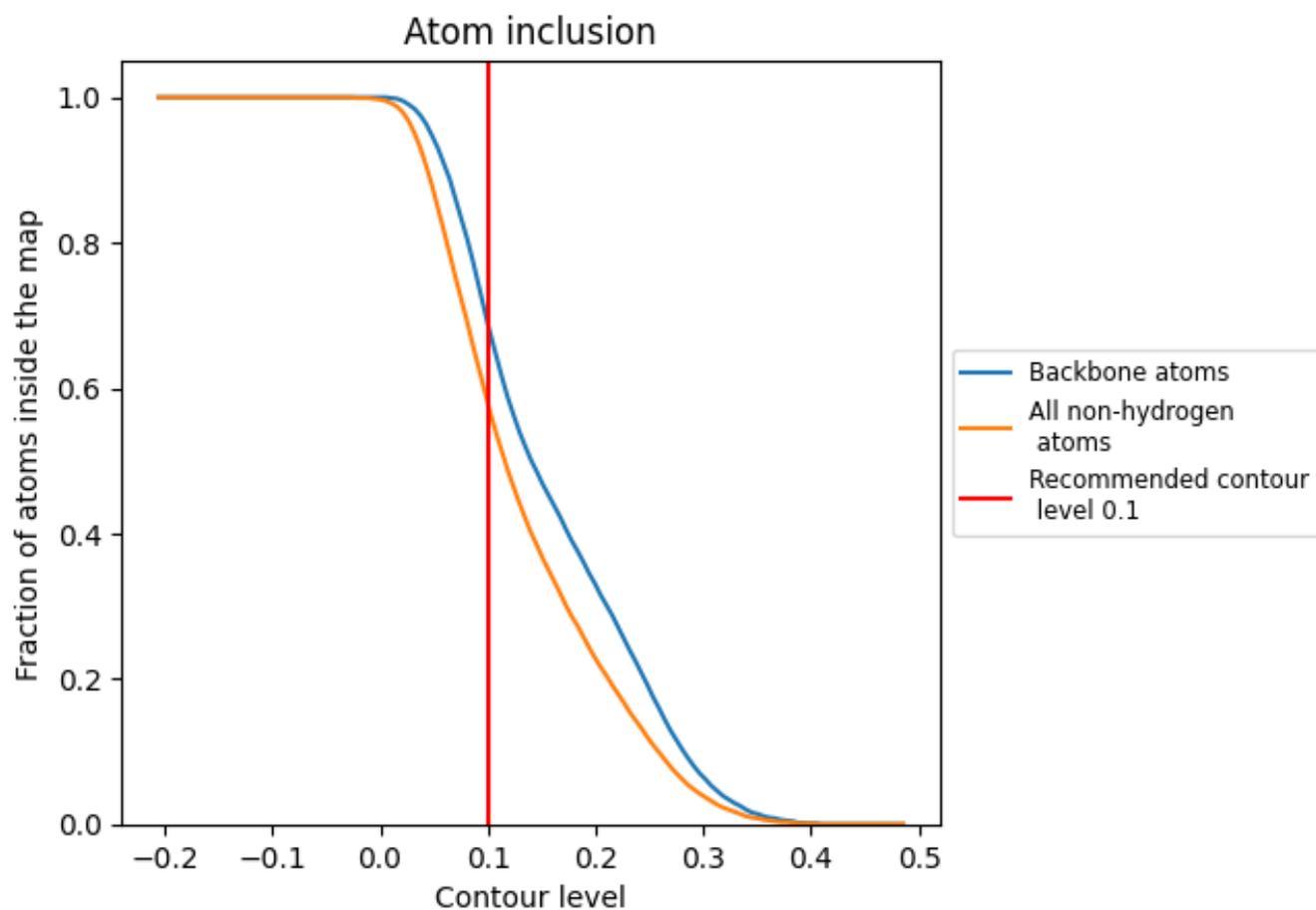
At the recommended contour level, 69% of all backbone atoms, 58% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (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	0.5780	0.4410
A	0.5780	0.4390
B	0.5780	0.4400
C	0.5780	0.4390
D	0.5780	0.4390
E	0.5880	0.5100
F	0.5930	0.5090
G	0.5930	0.5050
H	0.5890	0.5050

1.0

0.0
<0.0