



Full wwPDB EM Validation Report ⓘ

Mar 24, 2026 – 03:03 AM UTC

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

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

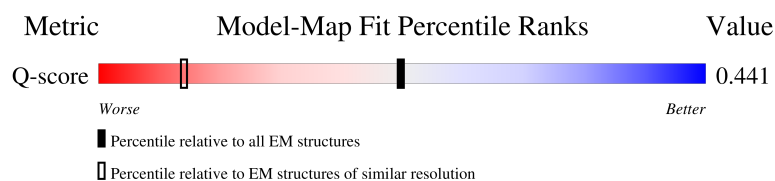
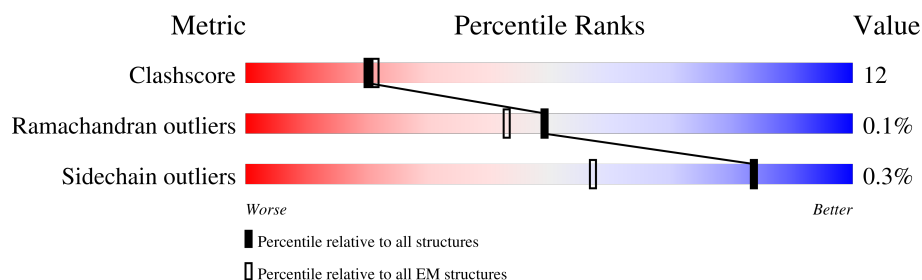
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.63 Å.

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



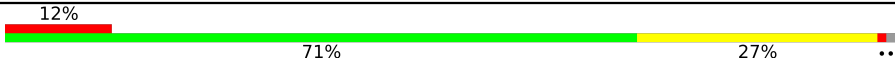
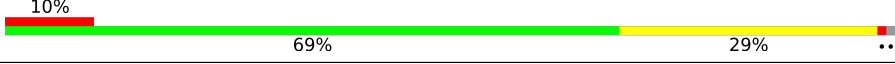
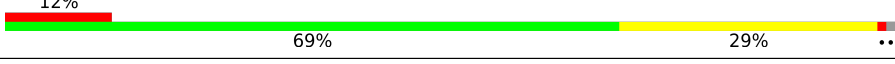
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	8888 (2.13 - 3.13)

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

Mol	Chain	Length	Quality of chain
1	A	5037	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%

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Mol	Chain	Length	Quality of chain
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.

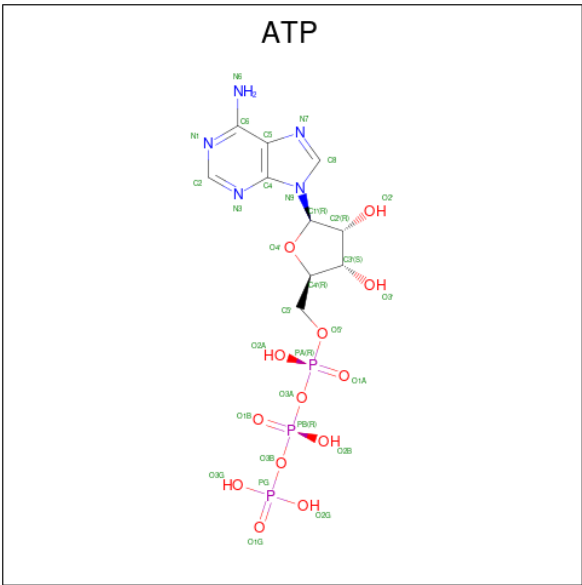
- Molecule 1 is a protein called Ryanodine receptor 1.

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

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

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

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).



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).

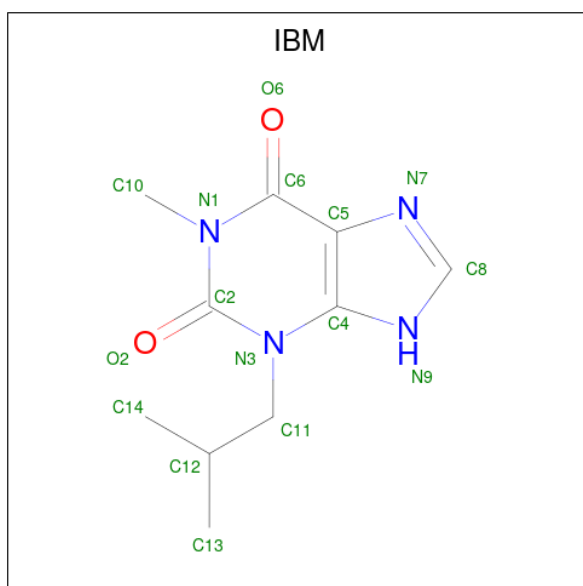
Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	Zn	0
			1	1	

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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-METHYLNANTHINE (CCD ID: IBM) (formula: $C_{10}H_{14}N_4O_2$) (labeled as "Ligand of Interest" by depositor).

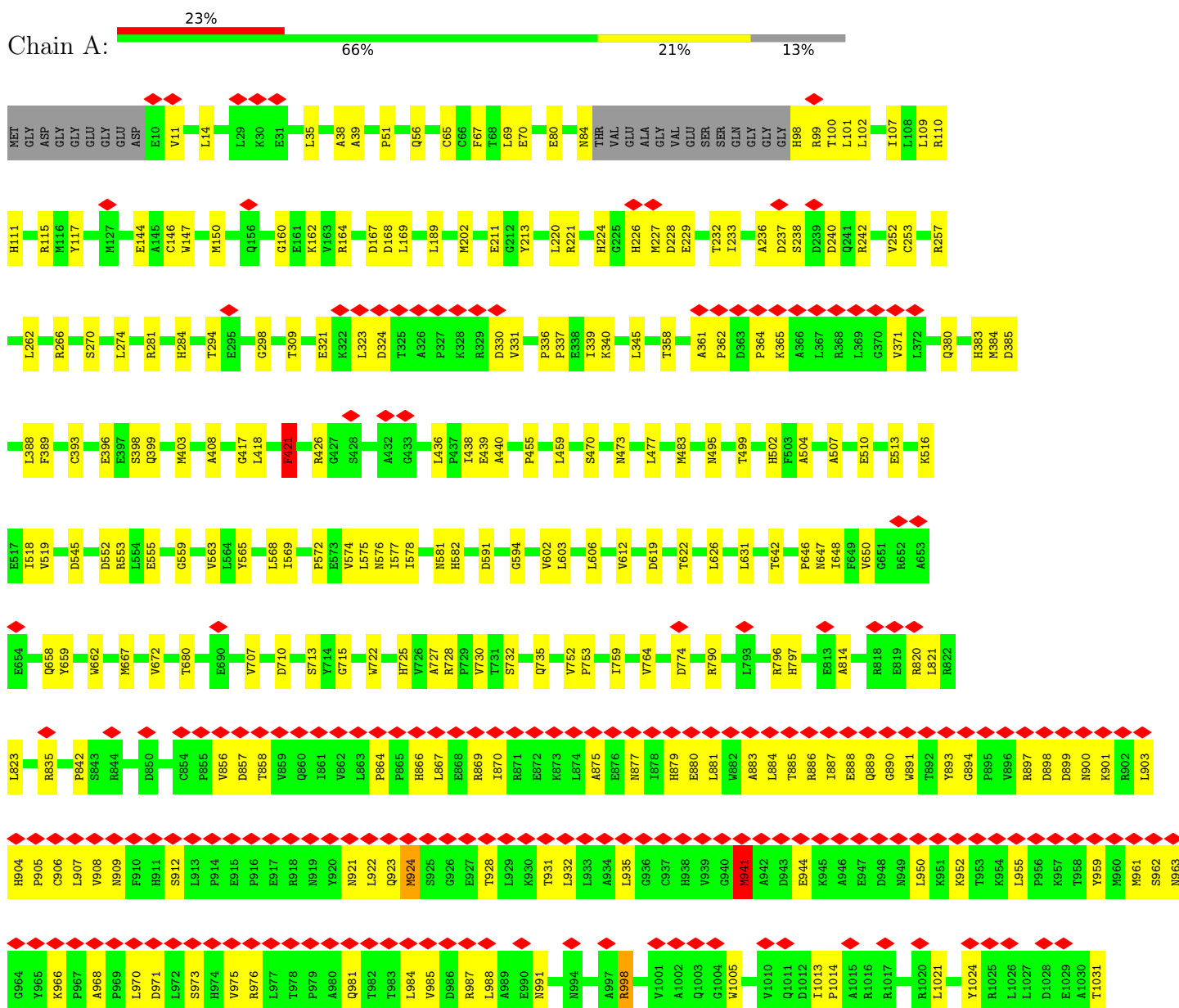


Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			16	10	4	2	
6	B	1	Total	C	N	O	0
			16	10	4	2	
6	D	1	Total	C	N	O	0
			16	10	4	2	
6	C	1	Total	C	N	O	0
			16	10	4	2	

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.

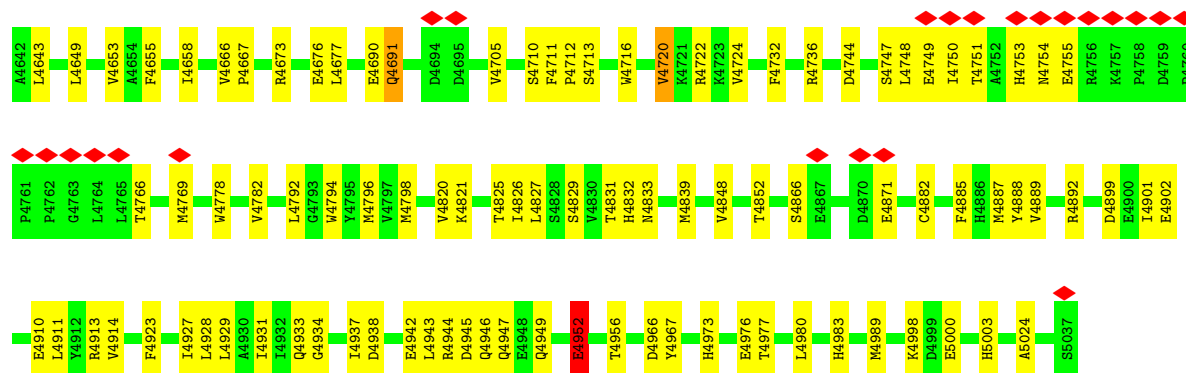
• Molecule 1: Ryanodine receptor 1



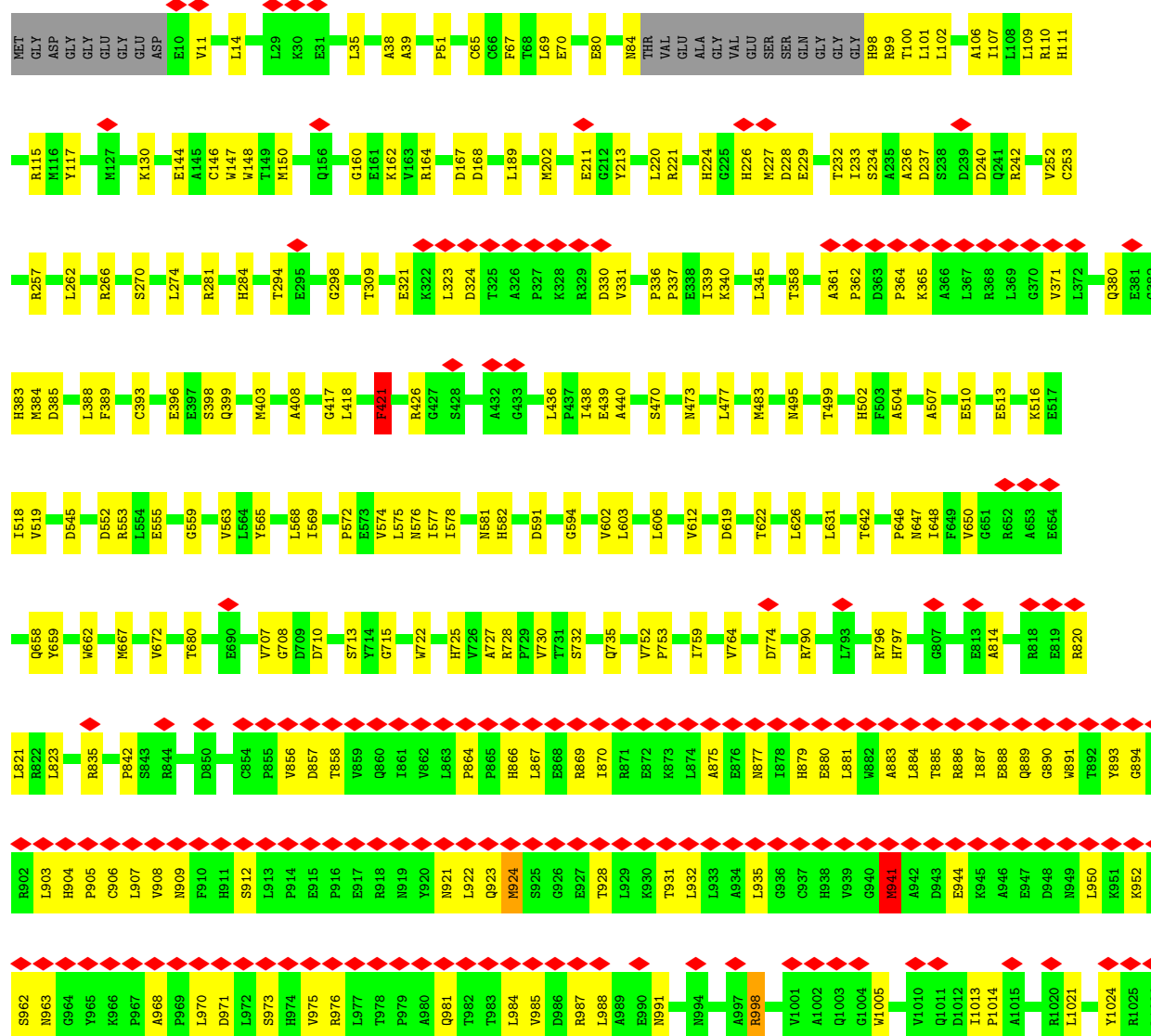


I3323	R3262	A3200	A3135	L3075	H3013	E2952	Q2882	GLU	Q7772	P2712	K2642	I2562
V3324	T3263	M3201	L3136	D3076	C3014	K2963	E2883	ARG	N2773	D2713	L2643	L2568
N3325	T3264	P3202	L3137	A3077	I3015	R2954	L2884	THR	N2774	Y2714	T2644	F2569
N3326	E3265	V3203	P3138	R3078	F3016	F2965	E2885	LYS	N2775	D2715	N2645	A2570
L3327	M3266	A3204	V3139	T3079	L3018	R2957	K2887	LYS	S2776	H2647	H2647	E2573
F3328	P3267	F3205	L3140	V3080	S3019	G2968	G2888	THR	G2778	Y2718	Y2648	H2574
L3329	H3268	L3206	L3143	M3081	T3020	G2969	G2889	ARG	E2779	Y2719	R2649	R2575
D3330	I3270	E3207	F3144	K3082	P3021	F2969	G2890	ILE	I2779	S2720	R2650	A2576
E3331	E3271	S3083	Q3145	S3083	A3022	L2960	T2901	SER	N2781	S2721	A2577	D2577
A3332	I3272	G3084	Q3145	G3084	K3023	L2963	H2902	GLN	D2782	K2722	C2656	H2578
T3333	T3273	F3085	Q3149	F3085	V3024	L2964	P2903	ALA	E2783	A2723	C2657	S2581
N3334	L3274	E3086	H3150	E3086	L3025	R2965	L2904	GLN	E2784	E2724	P2658	N2582
K3335	P3275	I3087	Q3151	I3087	G3026	Y2966	L2905	THR	L2785	K2725	T2659	L2583
K3336	M3276	V3088	G3152	V3088	S3027	M2967	V2906	ASP	T2787	LYS	G2660	H2584
L3337	L3277	K3089	G3153	K3089	G3028	D2968	P2907	PRO	H2788	THR	V2666	T2585
L3338	C3278	G3090	D3154	G3091	G3029	I2969	Y2908	ARG	P2789	ALA	S2668	V2587
A3339	S3279	L3092	D3155	L3092	H3030	S2970	D2909	GLY	H2789	ASP	E2669	R2588
V3340	Y3280	R3093	V3156	S3094	A3031	Q2971	Y2910	GLY	M2790	GLU	S2669	R2591
F3341	L3281	S3094	I3157	F3095	S3032	E2972	T2910	ALA	L2791	GLY	E2669	G2592
A3342	P3282	F3095	L3158	F3095	N3033	F2973	L2911	ALA	R2792	N2734	H2673	G2593
K3343	R3283	G3096	D3159	E3097	K3034	L2974	T2912	THR	P2793	F2735	L2674	S2594
P3344	W3285	E3097	D3160	S3098	E3035	H2976	A2913	ASP	R2794	D2736	T2675	L2595
V3345	W3286	S3098	V3161	S3098	K3036	L2977	K2914	THR	Y2794	P2737	R2676	L2600
S3347	R3287	A3099	V3161	A3099	F3037	L2977	E2915	ARG	K2795	R2738	K2677	R2600
R3348	G3288	S3100	V3166	S3100	H3038	E2978	K2916	GLY	T2796	D2738	L2678	E2604
A3349	R3289	E3101	R3167	E3101	I3039	A2979	A2917	GLY	F2797	P2739	I2682	M2608
R3350	E3290	D3102	R3167	D3102	L3042	V2980	R2918	GLY	S2798	V2740	F2683	A2609
A3351	A3291	I3103	L3168	I3103	F3043	V2981	D2919	ALA	E2799	E2741	D2684	L2610
P3352	P3292	K3105	L3169	K3105	C3044	S2982	R2920	THR	K2800	T2742	S2685	T2614
K3353	P3293	M3106	S3171	M3106	K3045	Q2984	E2921	THR	D2801	L2743	L2686	R2615
N3354	P3294	V3107	I3172	V3107	L3046	G2984	K2922	THR	K2802	N2744	A2687	R2618
A3355	A3295	I3108	I3173	I3108	A3047	R2985	A2923	THR	R2803	V2745	H2688	L2623
L3356	L3296	N3109	S3174	N3109	A3048	Y2986	A2924	THR	I2804	I2746	K2689	R2624
P3357	P3297	L3110	G3176	L3110	L3049	E2987	Q2925	THR	E2805	L2747	L2690	L2625
G3358	A3298	R3111	T3177	R3111	H3052	K2988	L2926	THR	R2806	P2748	Y2691	V2627
K3359	G3299	G3112	T3177	G3112	R3053	S2989	L2927	THR	V2807	K2749	D2692	F2628
L3360	A3300	G3113	K3178	G3113	V3054	P2990	K2928	THR	P2808	E2750	L2693	L2626
R3361	P3301	K3114	K3179	K3114	S3055	H2991	F2929	THR	I2809	L2751	E2694	F2627
L3362	P3302	S3115	N3180	S3115	L3056	E2992	L2930	THR	K2810	D2752	L2695	F2628
G3363	P3303	G3116	T3181	G3116	F3057	Q2993	Q2931	THR	E2811	S2753	R2697	D2629
R3364	C3304	G3117	V3182	G3117	L3056	E2994	M2932	THR	S2812	P2754	M2698	V2630
A3365	T3305	VAL	V3183	VAL	A3061	I2995	N2933	THR	L2813	L2755	A2699	P2631
K3366	A3306	ALA	E3184	ALA	G3058	K2996	Q2934	THR	K2814	M2756	M2700	T2632
R3367	V3307	ARG	K3185	ARG	T3059	F2997	Y2935	THR	A2815	K2757	P2701	L2633
L3368	P3308	THR	K3186	THR	D3060	F2998	V2936	THR	M2816	P2758	C2702	N2634
A3369	S3309	GLN	L3187	GLN	V3065	A2999	A2936	THR	I2817	E2759	L2703	E2635
G3370	V3310	VAL	R3187	VAL	P3062	K3000	V2937	THR	A2818	E2760	C2704	F2636
V3371	L3312	K3123	G3124	K3123	A3063	I3001	T2938	THR	E2820	T2762	A2705	A2637
F3372	N3313	G3125	V3125	G3125	V3066	L3002	T2938	THR	A2821	H2763	I2706	K2638
V3373	H3311	Q3127	Q3127	Q3127	C3067	L3003	Q2934	THR	W2821	E2764	A2707	M2639
K3374	L3316	L3128	C3192	L3128	S3067	P3004	Y2935	THR	T2822	K2765	G2708	P2640
S3375	G3317	L3129	C3193	L3129	H3069	I3006	A2936	THR	T2823	W2766	A2709	L2641
E3376	R3312	T3130	L3194	T3130	T3070	N3007	V2937	THR	K2824	E2767	L2710	
S3377	N3313	T3131	A3195	T3131	L3071	K3008	T2938	THR	A2826	A2767	P2711	
L3378	L3317	T3132	R3196	T3132	A3072	Y3008	T2938	THR	R2827	F2768		
F3379	K3316	T3133	L3197	T3133	R3073	F3010	T2948	THR	E2828	D2769		
V3380	G3317	T3134	A3198	T3134	S3074	T3011	S2950	THR	G2829	I2771		
R3381	N3318	G3252	L3253	G3252		N3012	I2951	THR				
E3382	L3319	A3257	E3258	A3257				THR				
A3383	L3320	S3259	G3260	S3259				THR				
K3384	R3321	A3261		A3261				THR				

[illegible]



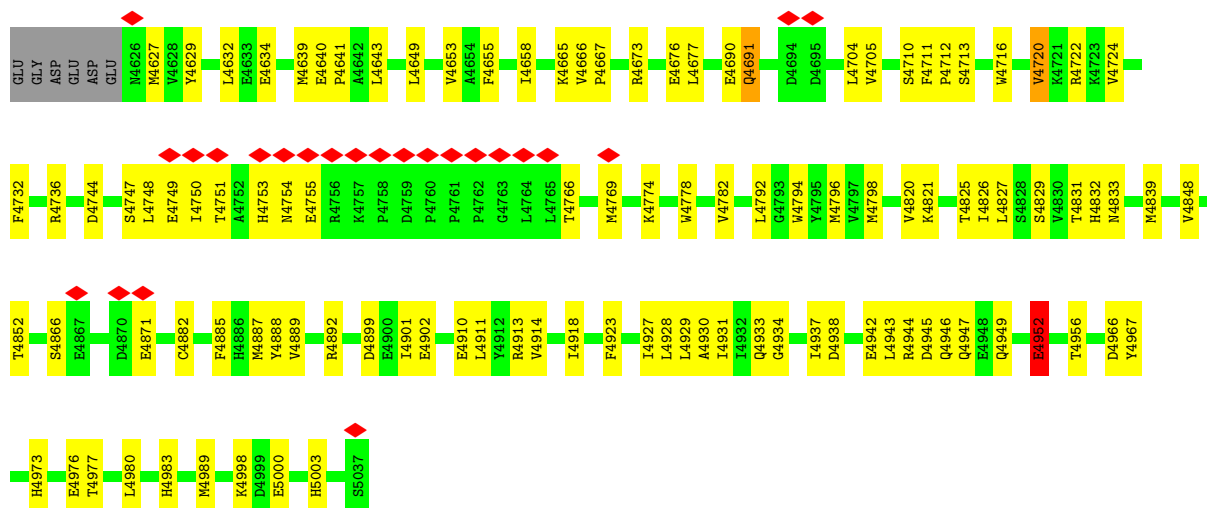
• Molecule 1: Ryanodine receptor 1



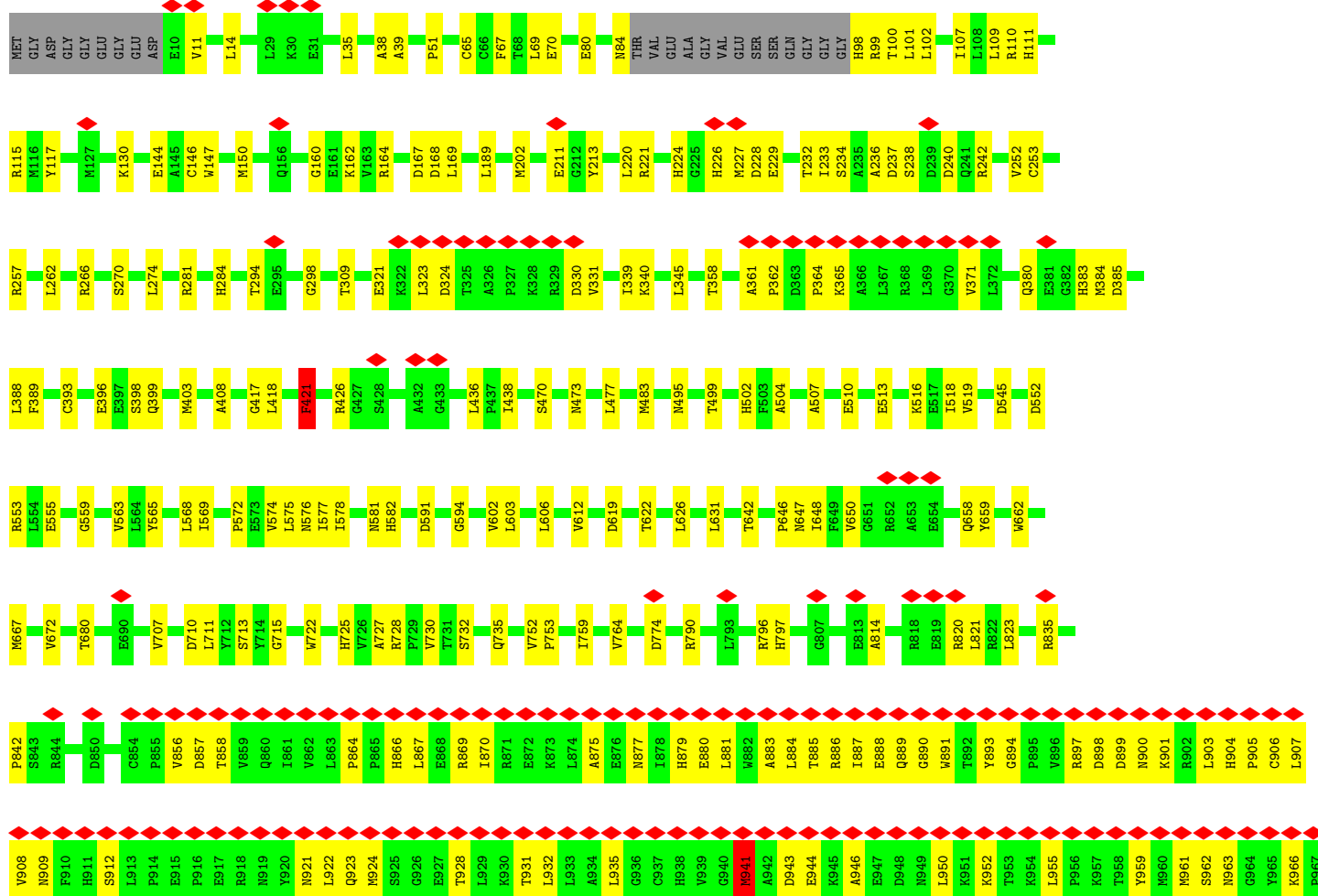


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V3245	L3246	D3247	R3248	L3249	M3250	A3251	D3252	I3253	A3257	E3258	S3259	G3260	A3261	R3262	Y3263	T3264	E3265	M3266	P3267	H3268	V3269	I3270	A3271	L3272	T3273	L3274	P3275	M3276	L3277	C3278	S3279	Y3280	L3281	P3282	R3283	M3284	V3285	E3286	R3287	G3288	P3289	E3290	A3291	P3292	P3293	P3294	A3295	L3296	P3297	G3298	A3299	A3300	P3301	P3302	P3303	C3304	T3305	A3306					
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	T3219	T3220	T3221	K3222	P3223	R3224	R3225	E3226	A3227	T3229	L3230	G3231	L3232	A3295	L3296	P3297	G3298	A3299	A3300	P3301	P3302	P3303	C3304	T3305	A3306					
THR	GLN	VAL	K3123	G3124	V3125	K3126	N3128	L3129	T3130	Y3131	T3132	T3133	V3134	A3135	L3136	L3137	P3138	V3139	L3140	M3081	K3082	S3083	G3084	P3085	E3086	L3087	V3088	K3089	A3090	G3091	L3092	D3155	V3156	L3157	L3158	D3159	D3160	V3161	C3165	Y3166	R3167	T3168	L3169	C3170	S3171	I3172	G3173	S3174	L3175	G3176	T3177	T3178	K3179	N3180	T3181	Y3182	V3183	E3184					
F2997	F2998	A2999	K3000	I3001	L3002	L3003	L3005	L3006	L3007	Q3008	A3007	F3010	T3011	N3012	H3013	C3014	L3015	Y3016	F3017	L3018	S3019	T3020	P3021	A3022	K3023	V3024	L3025	G3026	S3027	G3028	G3029	H3030	A3031	S3032	N3033	K3034	E3035	K3036	E3037	M3038	I3039	L3042	F3043	L3046	A3047	A3048	L3049	H3052	R3053	V3054	S3055	L3056	F3057	G3058	T3059								
A2936	V2937	T2938	R2939	GLY	L2940	L2941	L2942	L2943	L2944	L2945	L2946	L2947	L2948	L2949	L2950	L2951	L2952	K2953	R2954	F2955	A2956	F2957	K2958	F2959	L2960	L2963	L2964	L2965	W2966	M2967	L2968	L2969	S2970	P2907	Q2971	E2972	F2973	L2974	A2975	H2976	L2977	E2978	A2979	V2980	L2980	V2981	S2982	L2983	R2984	L2985	V2986	E2987	L2988	S2989	P2990	H2991	E2992	Q2993	L2994	L2995	K2996		
E2876	Q2877	L2878	A2879	E2880	W2881	Y2882	H2883	N2884	T2885	W2886	G2887	E2888	K2889	K2890	K2891	Q2892	E2893	L2894	E2895	A2896	K2897	G2898	G2899	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					
M2816	L2817	A2818	W2819	E2820	W2821	T2822	H2823	L2824	K2825	E2826	R2827	E2828	G2829	E2830	GLU	GLU	ARG	THR	GLU	L2894	L2895	THR	GLU	L2894	L2895	L2896	GLN	ALA	GLN	THR	E2784	L2785	K2786	VAL	ASP	ALA	H2788	P2789	M2790	L2791	R2792	P2793	K2794	K2795	L2796	F2797	L2798	E2799	K2800	D2801	K2802	E2803	L2804	Y2805	R2806	W2807	P2808	I2809	L2751	D2752	S2753	F2754	L2755
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L2626	V2627	F2628	D2629	V2630	P2631	L2632	L2633	N2634	E2635	F2636	A2637	K2638	M2639	P2640	L2641	L2568	K2642	L2643	L2644	T2645	N2646	H2647	Y2648	E2649	R2650	A2576	C2651	Y2655	C2656	L2657	P2658	L2659	G2660	Y2666	T2667	S2668	ASP	ALA	H2673	L2674	T2675	K2677	L2678	L2682	F2683	L2684	S2685	L2686	A2687	H2688	K2689	K2690	Y2691	D2692	E2694	L2695							
D2529	M2530	T2531	A2534	T2538	S2542	W2546	R2552	L2556	T2562	L2568	F2569	A2570	G2571	T2572	E2573	H2574	R2575	A2576	T2577	N2578	S2581	M2582	L2583	H2584	T2585	Y2586	V2587	R2588	R2591	G2592	S2594	R2600	E2604	K2608	L2609	L2610	L2614	R2615	M2618	L2623	R2624	R2625																					

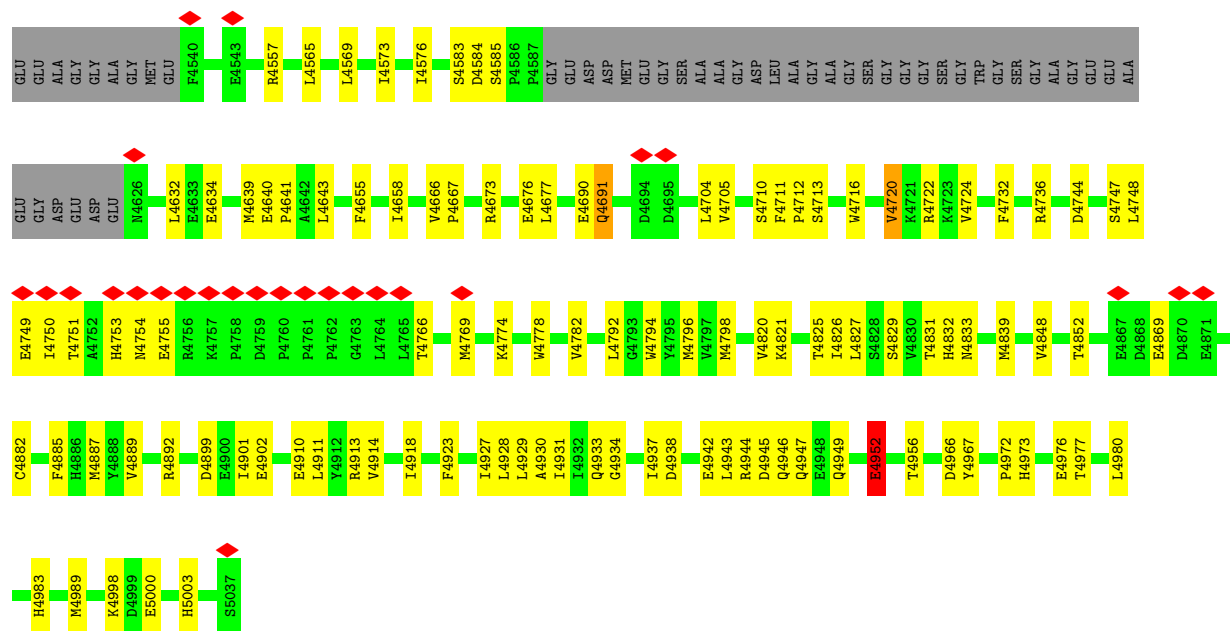




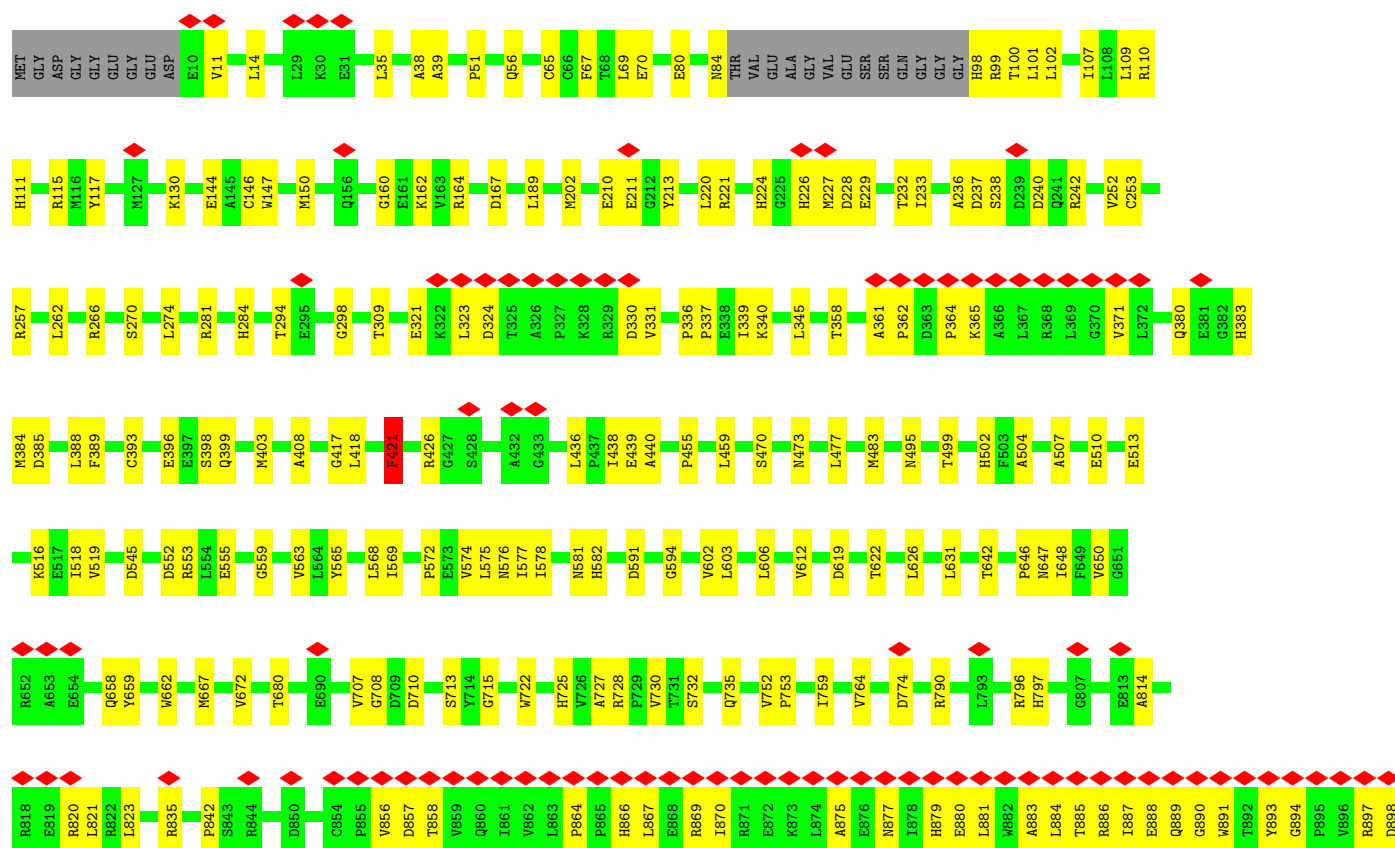
• Molecule 1: Ryanodine receptor 1



D2333	E2227	LEU	E2004	L1786	E1665	G1451	GLU	GLN	E1157	S1038	A968
R2336	M2228	PRO	Q2005	P1787	K1570	T1454	LYS	PRO	D1172	L1039	P969
F2340	V2229	ALA	T2006	A1788	N1571	P1455	ASP	PRO	S1173	C1040	L970
V2341	C2233	GLU	L2010	A1789	I1572	D1456	THR	THR	G1174	Q1041	D971
N2349	R2233	PRO	H2011	G1789	A1577	D1461	THR	ASP	S1175	V1042	L972
V2353	K2089	GLU	D2014	V1791	A1577	M1462	LYS	ALA	E1176	V1043	S973
V2354	K2090	GLY	E2015	A1792	R1584	K1468	ASN	ARG	R1044	R1044	H974
R2355	Q2091	GLU	A2016	E1793	R1594	V1469	LYS	ALA	T1045	T1045	V975
P2366	Q2092	GLU	D2017	A1794	M1599	R1470	ARG	GLU	L1046	L1046	R976
L2368	M2101	ASP	L1922	R1808	V1603	M1476	PHE	ASP	G1048	G1048	L977
R2369	V2111	E1923	E1923	D1821	V1603	G1477	LEU	PRO	Y1049	Y1049	T978
L2376	S2112	E1924	G1925	G1822	L1613	D1478	PHE	ASP	C1192	C1192	P979
E2382	L2123	L1926	L1926	D1828	E1622	E1479	LYS	TRP	S1193	S1193	A980
R2385	R2126	M1929	Q1928	Q1836	R1623	Q1480	LYS	ASN	G1050	G1050	Q981
R2392	Q2127	K1930	F1836	Q1837	W1626	M1482	ALA	LEU	N1052	N1052	T982
G2396	L2135	L1931	F1854	E1873	L1669	V1483	ALA	ARG	I1053	I1053	T983
V2397	L2138	V1935	E1874	GLU	V1673	H1484	MET	ALA	E1054	E1054	L984
ARG	A2141	L1943	GLU	GLU	L1676	C1489	GLN	GLY	P1056	P1056	V985
ARG	E2150	D1948	GLU	GLU	R1680	G1497	THR	GLY	D1057	D1057	P986
ARG	D2151	A1962	GLU	GLU	L1694	V1501	PRO	TRP	Q1058	Q1058	R987
ARG	L2165	Y1965	GLU	GLU	L1694	S1502	ALA	GLY	E1059	E1059	L988
ARG	L2166	V1966	GLU	GLU	L1698	P1503	LEU	GLY	P1060	P1060	F990
ARG	L2167	D1967	GLU	GLU	L1698	G1504	THR	ALA	S1061	S1061	N991
ARG	L2177	K1968	GLU	GLU	G1705	Q1505	PRO	GLY	Q1062	Q1062	N994
ARG	L2178	L1969	GLU	GLU	S1726	Q1506	HIS	THR	V1063	V1063	A997
GLU	M2178	A1978	GLU	GLU	S1729	G1507	ASP	ALA	E1064	E1064	R998
PHE	T2182	L1979	GLU	GLU	E1733	R1508	VAL	LYS	N1065	N1065	A997
GLY	M2196	R1982	GLU	GLU	T1742	I1509	PRO	GLY	Q1066	Q1066	R998
GLU	R2199	A1983	GLU	GLU	R1743	S1510	ALA	THR	R1068	R1068	V1001
GLU	A2200	F1984	GLU	GLU	A1744	H1511	GLY	GLY	Q1003	Q1003	A1002
S2309	L2201	T1985	GLU	GLU	L1745	T1512	VAL	PRO	G1004	G1004	Q1003
C2310	T2206	M1986	GLU	GLU	P1749	D1513	PRO	THR	V1069	V1069	A1005
L2313	M2211	S1987	LYS	LYS	P1750	L1514	GLN	GLY	R1070	R1070	V1005
Y2318	V2212	A1988	GLU	GLU	P1750	V1515	PRO	GLY	R1071	R1071	V1010
P2319	G2217	E1989	GLU	GLU	G1751	V1520	GLY	GLY	R1101	R1101	V1010
D2320	Q2218	E1990	ASP	ASP	R1752	V1527	THR	THR	A1105	A1105	Q1011
G2321	E2219	T1991	GLU	GLU	K1753	A1531	GLY	GLY	D1112	D1112	Q1011
L2322	E2219	A1992	GLU	GLU	G1754	M1537	VAL	VAL	V1113	V1113	D1012
W2323	T2220	R1993	LYS	LYS	G1755	V1552	GLY	GLY	E1114	E1114	P1014
W2324	T2221	T1995	GLU	GLU	N1756	V1553	GLY	GLY	L1115	L1115	A1015
C2325	K2221	R1996	GLU	GLU	A1757	V1554	VAL	VAL	Y1122	Y1122	R1020
C2326	E2222	E1997	LYS	LYS	R1758	V1561	ALA	ALA	V1123	V1123	L1021
G2327	T2223	E1997	ASP	ASP	R1759	I1562	GLY	GLY	G1126	G1126	Y1024
G2328	R2224	F1998	ALA	ALA	R1759	I1562	THR	THR	H1127	H1127	R1025
R2330	F2225	R1999	GLU	GLU	R1759	I1562	PRO	PRO	R1128	R1128	L1026
	P2226	S2000	LYS	LYS	R1759	I1562	GLY	GLY	W1132	W1132	L1027
		P2001	GLU	GLU	R1759	I1562	LEU	LEU	R1141	R1141	D1028
					R1759	I1562	GLY	GLY	P1142	P1142	E1029
					R1759	I1562	LEU	LEU	W1143	W1143	A1030
					R1759	I1562	LEU	LEU	D1147	D1147	T1031
					R1759	I1562	LEU	LEU	T1156	T1156	K1032
					R1759	I1562	LEU	LEU			R1033
					R1759	I1562	LEU	LEU			S1034
					R1759	I1562	LEU	LEU			N1035
					R1759	I1562	LEU	LEU			R1036
					R1759	I1562	LEU	LEU			D1037



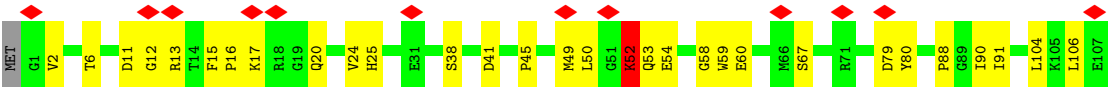
• Molecule 1: Ryanodine receptor 1





R3187	P3188	A3189	L3190	G3191	E3192	C3193	A3195	L3194	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	S3222	S3223	P3224	E3226	R3227	T3229	L3230	G3231	L3232	P3233	N3234	S3235	V3236	E3237	E3238	N3239	C3240	P3241	D3242	L3243	P3244	V3245	L3246																																										
VAL	K3123	G3124	G3125	G3126	Q3127	L3068	H3069	L3070	L3071	A3072	R3073	S3074	L3075	D3076	A3077	R3078	T3079	V3080	N3081	K3082	S3083	G3084	P3085	E3086	L3087	V3088	K3089	A3090	G3091	L3092	R3093	S3094	F3095	T3096	E3097	S3098	A3099	S3100	E3101	D3102	T3103	E3104	K3105	L3106	V3107	E3108	N3109	L3110	R3111	L3112	G3113	K3114	V3115	S3116	GLN	ALA	ARG	THR	GLN																																								
A2999	K3000	T3001	L3002	L3003	P3004	L3005	I3006	N3007	Q3008	F3009	T3010	N3011	N3012	H3013	C3014	L3015	Y3016	F3017	L3018	S3019	T3020	P3021	A3022	K3023	V3024	L3025	G3026	S3027	G3028	G3029	H3030	A3031	S3032	N3033	K3034	E3035	K3036	E3037	M3038	I3039	L3042	F3043	L3046	A3047	A3048	L3049	H3052	R3053	S3054	S3055	L3056	F3057	G3058	T3059	D3060	A3061																																											
T2938	R2939	GLY	LEU	LYS	ASP	MET	GLU	L2946	D2947	T2948	S2949	L2950	T2951	E2952	K2953	R2954	A2955	F2957	G2958	F2959	L2960	L2963	L2964	R2965	V2966	M2967	D2968	L2969	S2970	Q2971	E2972	F2973	T2974	A2975	H2976	L2977	E2978	A2979	V2980	V2981	S2982	S2983	G2984	R2985	V2986	E2987	K2988	S2989	P2990	H2991	E2992	Q2993	E2994	L2995	K2996	F2997	F2998																																										
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	A2922	K2923	Q2924	E2925	L2926	L2927	K2928	F2929	L2930	Q2931	M2932	N2933	G2934	A2935	V2937																																									
A2818	V2819	E2820	V2821	T2822	L2823	E2824	K2825	A2826	R2827	E2828	G2829	E2830	GLU	ARG	THR	GLU	LYS	LYS	THR	ARG	LYS	ILE	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																																											
F2758	A2759	E2760	Y2761	T2762	H2763	E2764	K2765	A2766	A2767	F2768	D2769	K2770	T2771	Q2772	N2773	N2774	W2775	S2776	Y2777	G2778	E2779	N2780	V2781	D2782	E2783	E2784	L2785	K2786	T2787	H2788	P2789	N2790	L2791	R2792	P2793	T2794	K2795	T2796	F2797	S2798	E2799	K2800	D2801	K2802	E2803	L2804	V2805	R2806	W2807	P2808	L2809	K2810	E2811	S2812	L2813	K2814	N2815	N2816	T2817																																								
M2698	A2699	M2700	P2701	C2702	L2703	C2704	A2705	L2706	A2707	G2708	A2709	L2710	P2711	P2712	D2713	L2714	V2715	D2716	A2717	S2718	Y2719	S2720	T2721	K2722	E2723	E2724	LYS	ALA	THR	VAL	ASP	ALA	GLU	GLY	N2734	F2735	D2736	P2737	R2738	P2739	V2740	E2741	T2742	L2743	N2744	V2745	L2746	L2747	P2748	E2749	D2750	K2751	L2752	S2753	L2755	K2756	K2757																																										
F2628	D2629	V2630	T2631	L2632	L2633	N2634	E2635	F2636	A2637	K2638	M2639	P2640	L2641	K2642	L2643	L2644	T2645	H2646	D2647	Y2648	E2649	R2650	C2651	Y2655	C2656	L2657	P2658	T2659	G2660	V2666	T2667	S2668	E2669	H2673	L2674	T2675	K2676	K2677	L2678	L2682	F2683	D2684	S2685	L2686	A2687	H2688	K2689	T2690	Y2691	D2692	K2693	E2694	L2695	Y2696	R2697																																												
R2531	A2534	T2538	S2542	M2546	R2552	L2556	T2562	L2568	F2569	D2570	Q2571	T2572	E2573	H2574	R2575	A2576	L2577	M2578	S2581	M2582	L2583	H2584	T2585	V2586	Y2587	R2588	R2591	Q2592	L2593	S2594	R2600	E2604	M2608	A2609	L2610	L2614	R2615	M2618	L2623	R2624	R2625	L2626	P2627	D2628	V2629	G2630	F2631	P2632	L2633	N2634	E2635	F2636	A2637	K2638	M2639	P2640	L2641	K2642	L2643	L2644	T2645	H2646	D2647	Y2648	E2649	R2650	C2651	Y2655	C2656	L2657	P2658	T2659	G2660	V2666	T2667	S2668	E2669	H2673	L2674	T2675	K2676	K2677	L2678	L2682	F2683	D2684	S2685	L2686	A2687	H2688	K2689	T2690	Y2691	D2692	K2693	E2694	L2695	Y2696	R2697
E2449	R2452	L2463	D2464	D2465	L2466	I2469	L2470	Q2475	L2476	P2477	T2478	L2479	G2480	K2481	D2482	G2483	A2484	L2485	Q2487	P2488	M2490	S2493	F2494	V2495	H2498	K2499	M2502	V2503	L2504	F2505	R2508	E2513	N2514	Q2515	D2516	F2517	L2518	L2519	H2520	C2434	R2435	C2436	A2437	N2440	H2441	L2442	T2443	Q2444																																																			
R2329	R2330	D2333	R2336	F2340	V2341	R2355	L2368	R2369	Q2373	L2376	E2382	R2385	R2392	G2396	V2397	ARG	ASP	ARG	ARG	ARG	GLU	HIS	PHE	GLY	GLU	P2410	P2411	E2412	E2413	N2414	Y2426	I2430	G2434	R2435	C2436	A2437	N2440	H2441	L2442	T2443	Q2444																																																										





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 ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.485	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: IBM, ATP, ZN, 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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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 [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	35150	0	34793	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 [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48	64
1	B	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48	64
1	C	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48	64
1	D	4385/5037 (87%)	4245 (97%)	136 (3%)	4 (0%)	48	64
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%)	49	64

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%)	86	93
1	B	3836/4276 (90%)	3824 (100%)	12 (0%)	86	93
1	C	3836/4276 (90%)	3824 (100%)	12 (0%)	86	93
1	D	3836/4276 (90%)	3824 (100%)	12 (0%)	86	93
2	E	89/90 (99%)	87 (98%)	2 (2%)	45	66
2	F	89/90 (99%)	87 (98%)	2 (2%)	45	66
2	G	89/90 (99%)	87 (98%)	2 (2%)	45	66
2	H	89/90 (99%)	87 (98%)	2 (2%)	45	66
All	All	15700/17464 (90%)	15644 (100%)	56 (0%)	84	91

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 [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
3	ATP	C	5301	-	32,33,33	0.28	0	48,52,52	0.76	1 (2%)
3	ATP	B	5301	-	32,33,33	0.28	0	48,52,52	0.76	1 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ATP	D	5301	-	32,33,33	0.28	0	48,52,52	0.76	1 (2%)
6	IBM	B	5304	-	17,17,17	0.66	0	19,25,25	0.93	1 (5%)
6	IBM	C	5304	-	17,17,17	0.66	0	19,25,25	0.92	1 (5%)
6	IBM	D	5304	-	17,17,17	0.66	0	19,25,25	0.93	1 (5%)
3	ATP	A	5301	-	32,33,33	0.28	0	48,52,52	0.76	1 (2%)
6	IBM	A	5304	-	17,17,17	0.67	0	19,25,25	0.92	1 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	C	5301	-	-	8/22/38/38	0/3/3/3
3	ATP	B	5301	-	-	8/22/38/38	0/3/3/3
3	ATP	D	5301	-	-	8/22/38/38	0/3/3/3
6	IBM	B	5304	-	-	2/4/4/4	0/2/2/2
6	IBM	C	5304	-	-	2/4/4/4	0/2/2/2
6	IBM	D	5304	-	-	2/4/4/4	0/2/2/2
3	ATP	A	5301	-	-	8/22/38/38	0/3/3/3
6	IBM	A	5304	-	-	2/4/4/4	0/2/2/2

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	B	5304	IBM	N9-C4-N3	3.14	132.37	127.81
6	D	5304	IBM	N9-C4-N3	3.14	132.37	127.81
6	C	5304	IBM	N9-C4-N3	3.14	132.37	127.81
6	A	5304	IBM	N9-C4-N3	3.14	132.37	127.81
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 (40) torsion outliers are listed below:

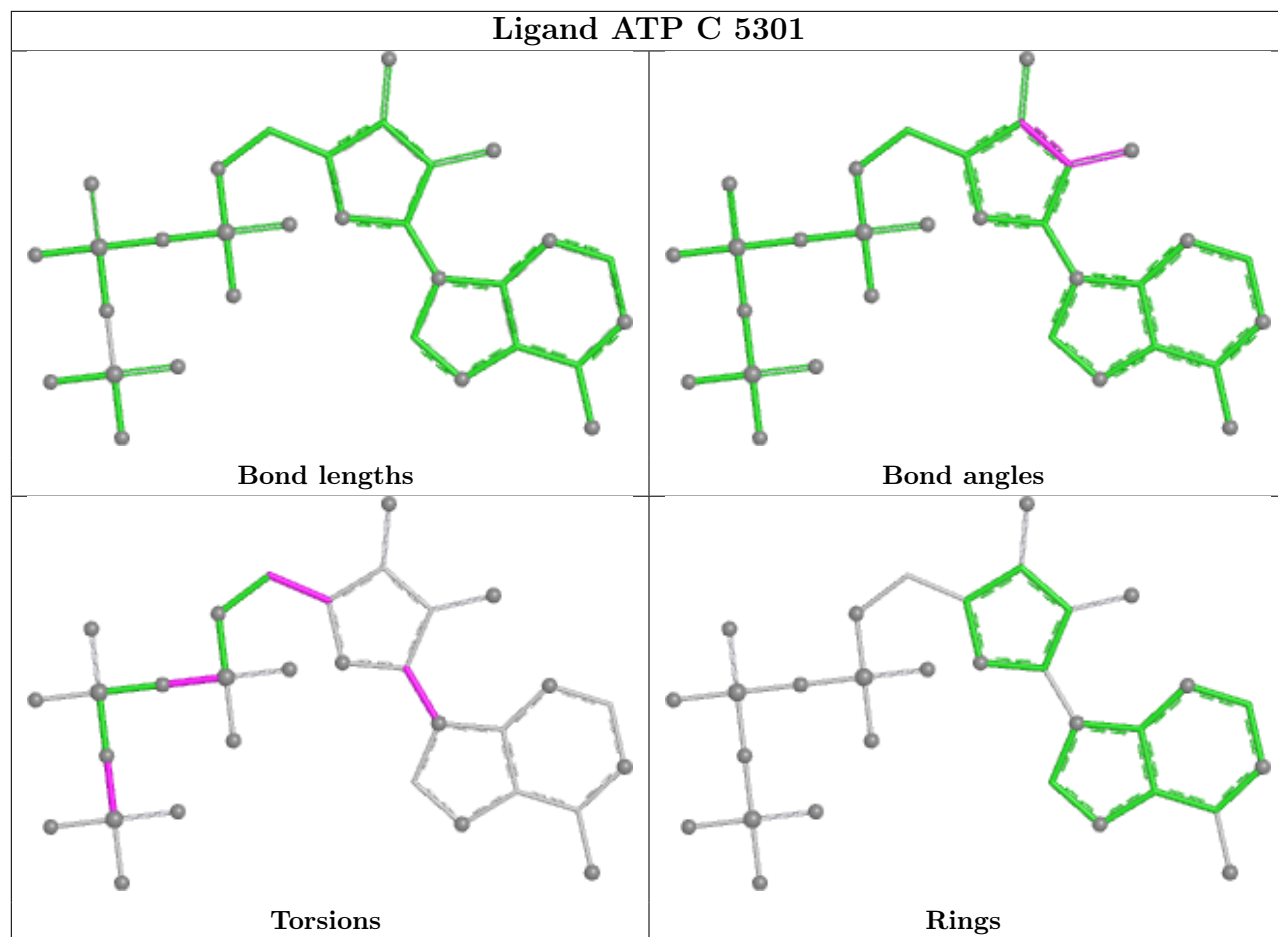
Mol	Chain	Res	Type	Atoms
6	A	5304	IBM	N3-C11-C12-C14
6	B	5304	IBM	N3-C11-C12-C14
6	D	5304	IBM	N3-C11-C12-C14
6	C	5304	IBM	N3-C11-C12-C14
6	A	5304	IBM	N3-C11-C12-C13
6	B	5304	IBM	N3-C11-C12-C13
6	D	5304	IBM	N3-C11-C12-C13
6	C	5304	IBM	N3-C11-C12-C13
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	PB-O3B-PG-O1G
3	B	5301	ATP	PB-O3B-PG-O1G
3	D	5301	ATP	PB-O3B-PG-O1G
3	C	5301	ATP	PB-O3B-PG-O1G
3	A	5301	ATP	PB-O3A-PA-O1A
3	B	5301	ATP	PB-O3A-PA-O1A
3	D	5301	ATP	PB-O3A-PA-O1A
3	C	5301	ATP	PB-O3A-PA-O1A
3	C	5301	ATP	O4'-C1'-N9-C4
3	A	5301	ATP	O4'-C1'-N9-C4
3	B	5301	ATP	O4'-C1'-N9-C4
3	D	5301	ATP	O4'-C1'-N9-C4
3	A	5301	ATP	O4'-C1'-N9-C8
3	B	5301	ATP	O4'-C1'-N9-C8
3	D	5301	ATP	O4'-C1'-N9-C8
3	C	5301	ATP	O4'-C1'-N9-C8
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

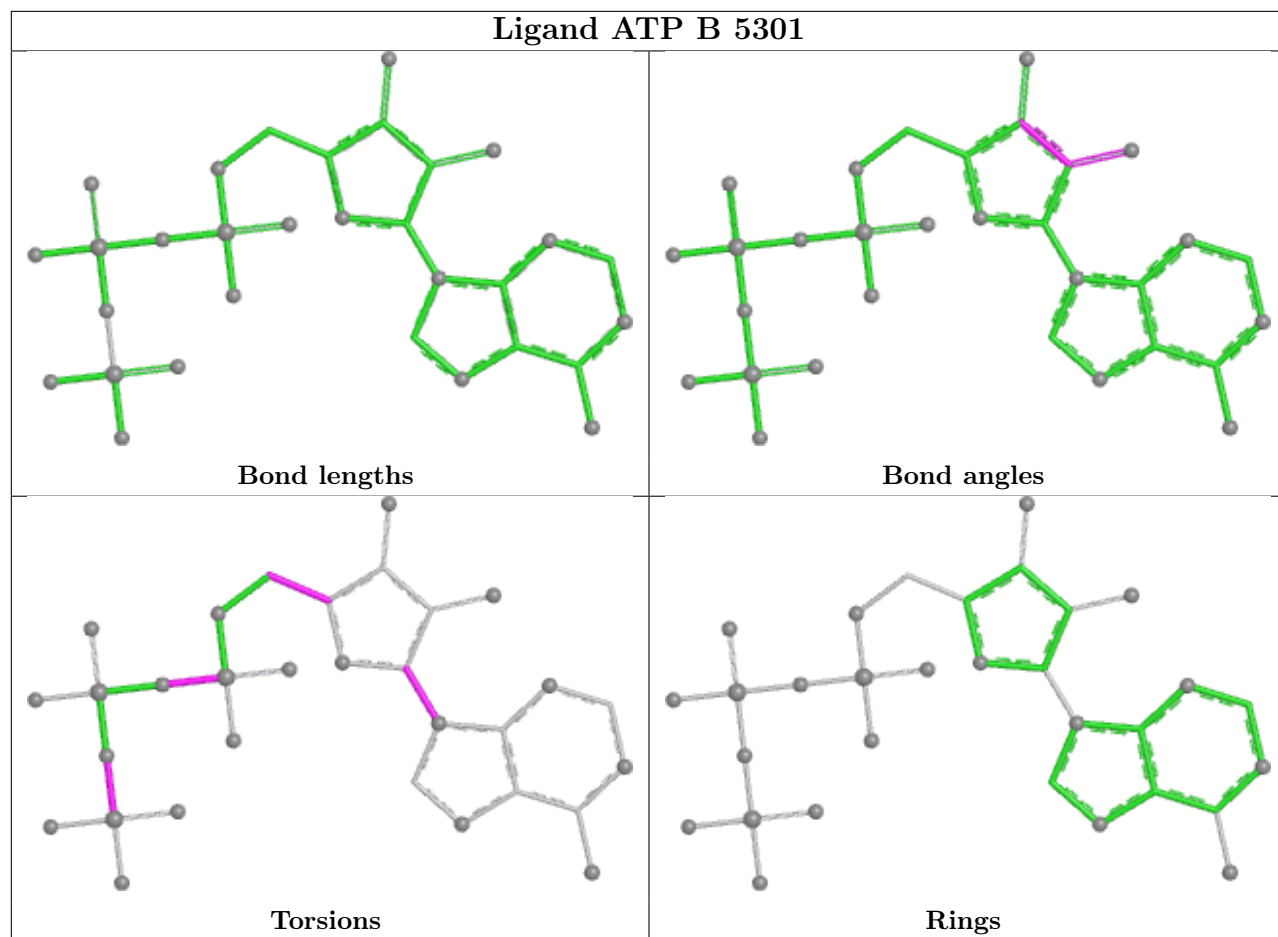
There are no ring outliers.

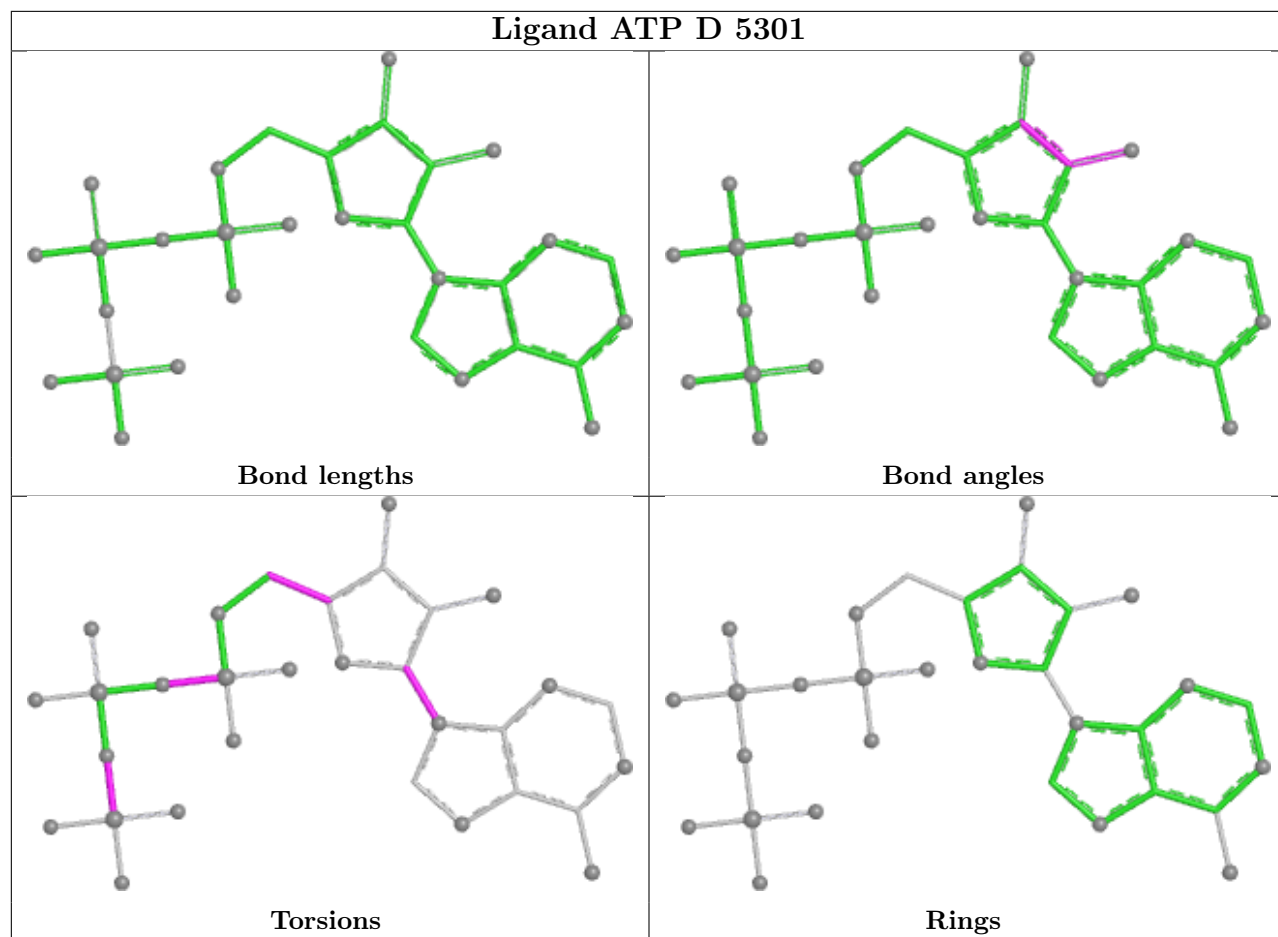
8 monomers are involved in 12 short contacts:

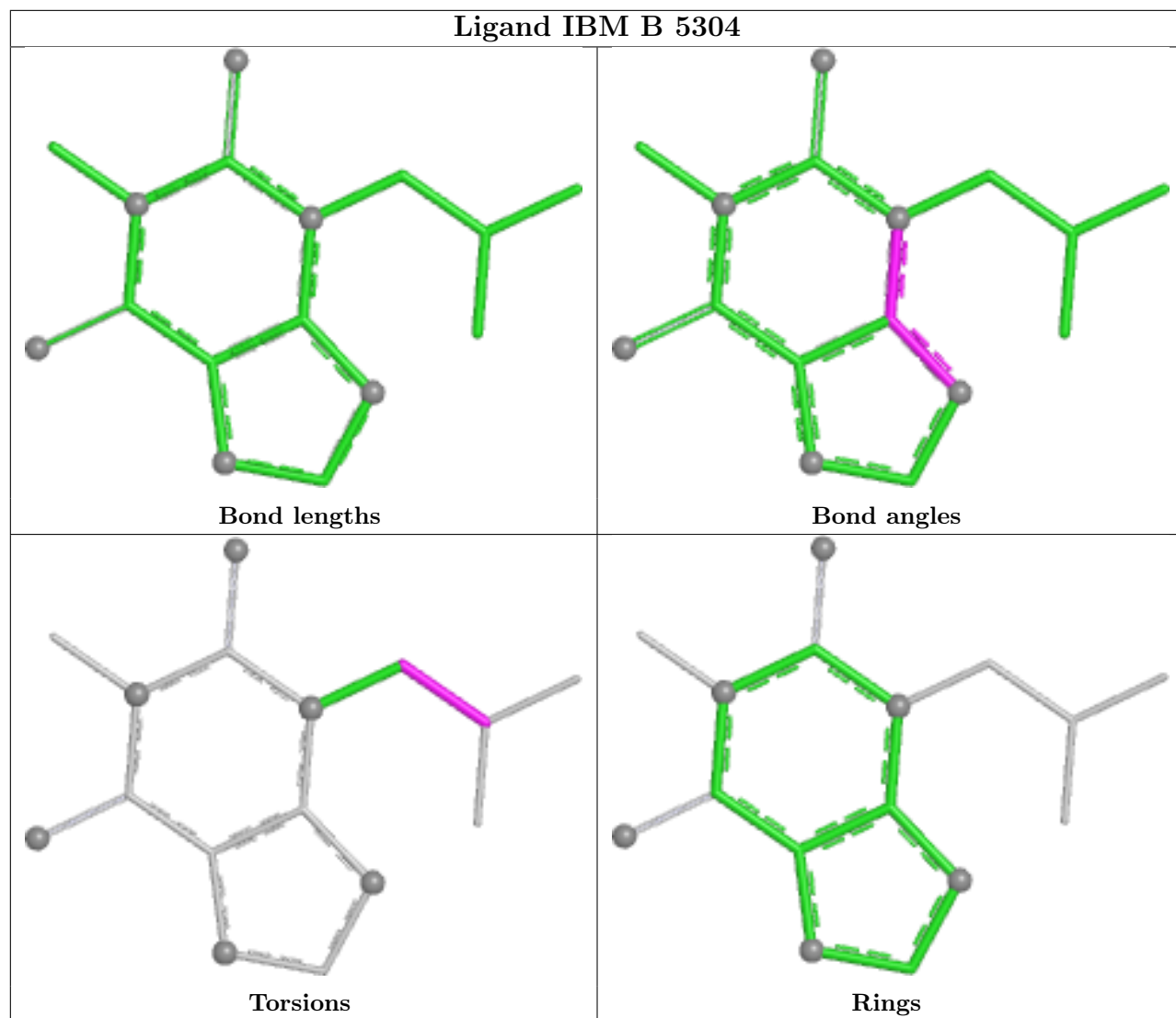
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	5301	ATP	1	0
3	B	5301	ATP	1	0
3	D	5301	ATP	1	0
6	B	5304	IBM	2	0
6	C	5304	IBM	2	0
6	D	5304	IBM	2	0
3	A	5301	ATP	1	0
6	A	5304	IBM	2	0

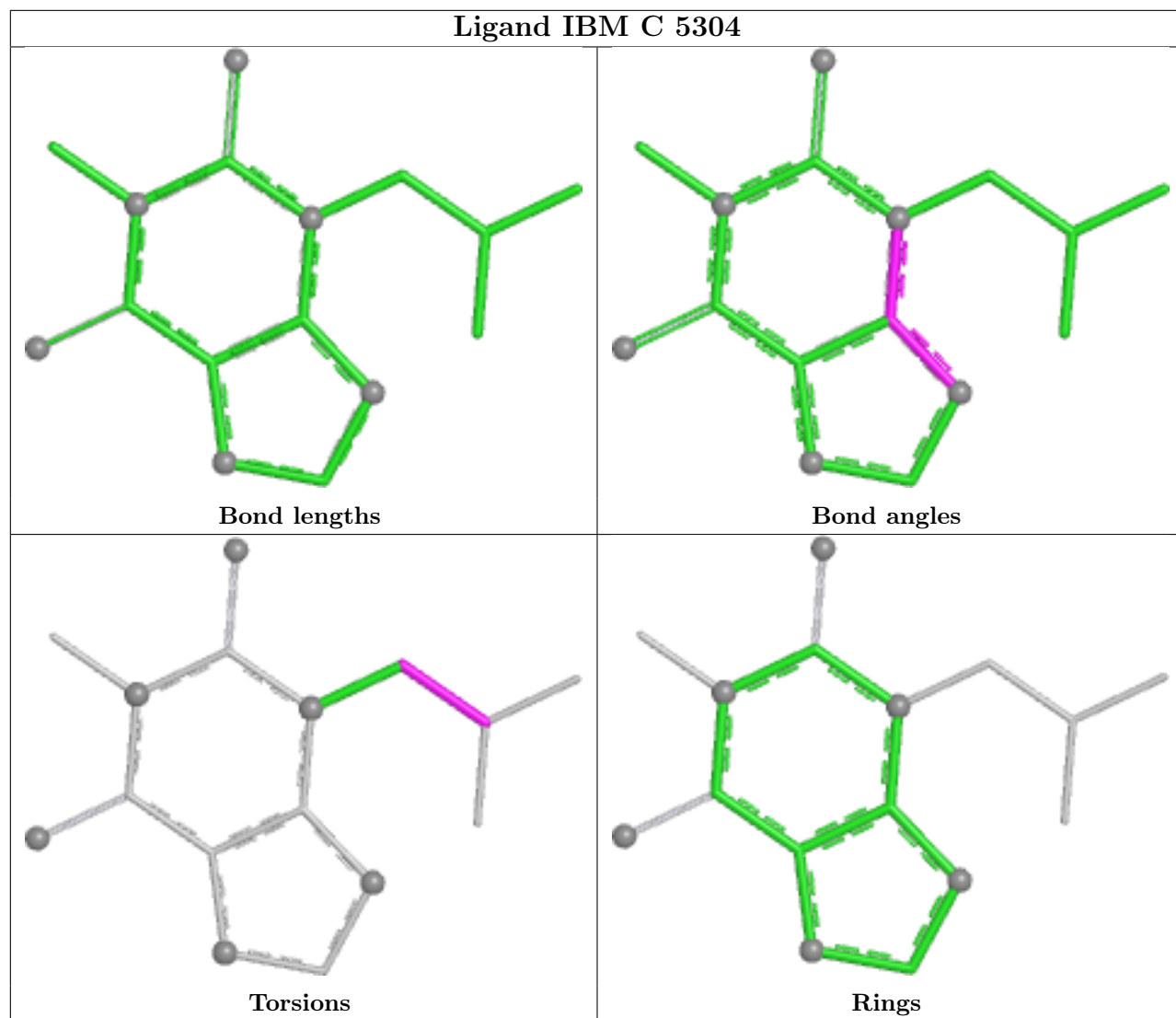
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



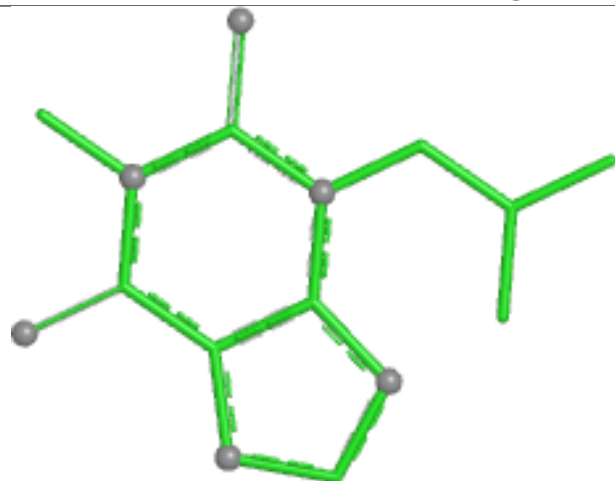




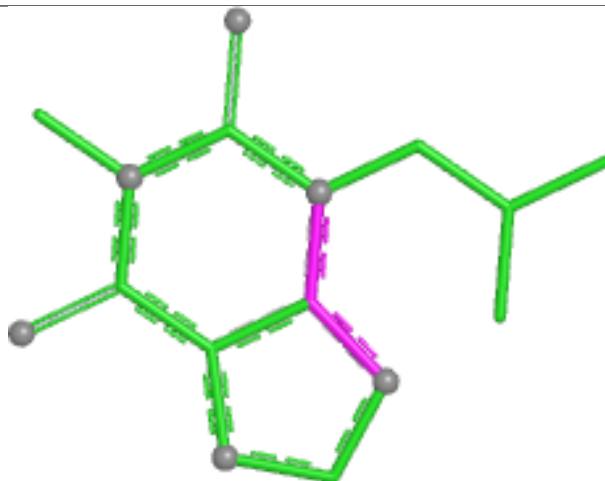




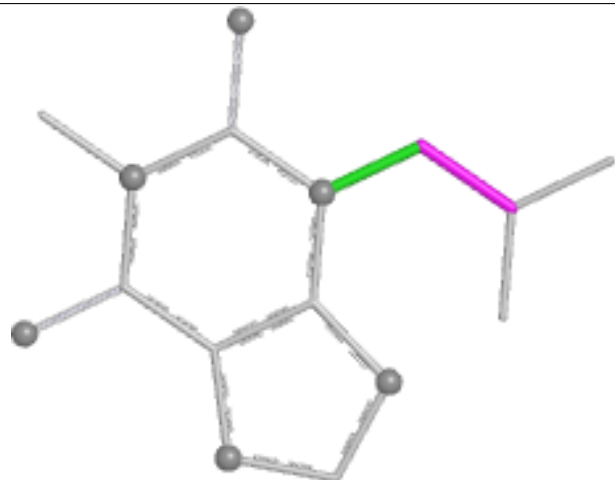
Ligand IBM D 5304



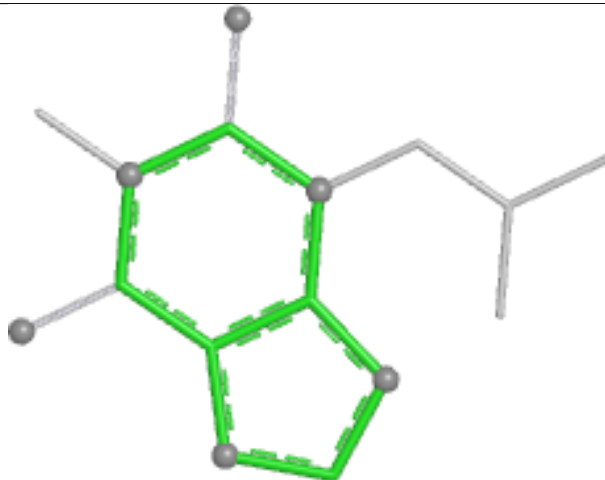
Bond lengths



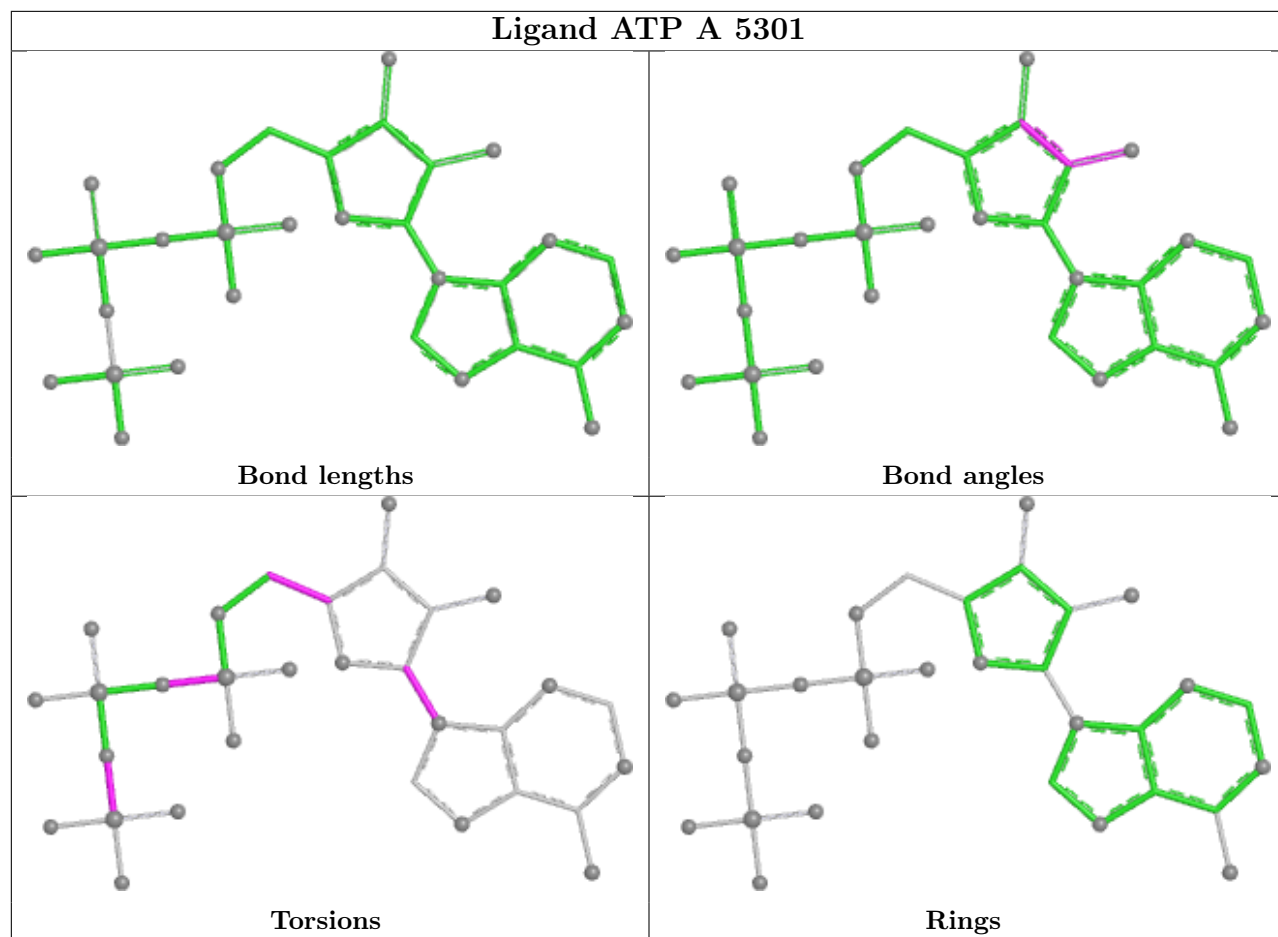
Bond angles

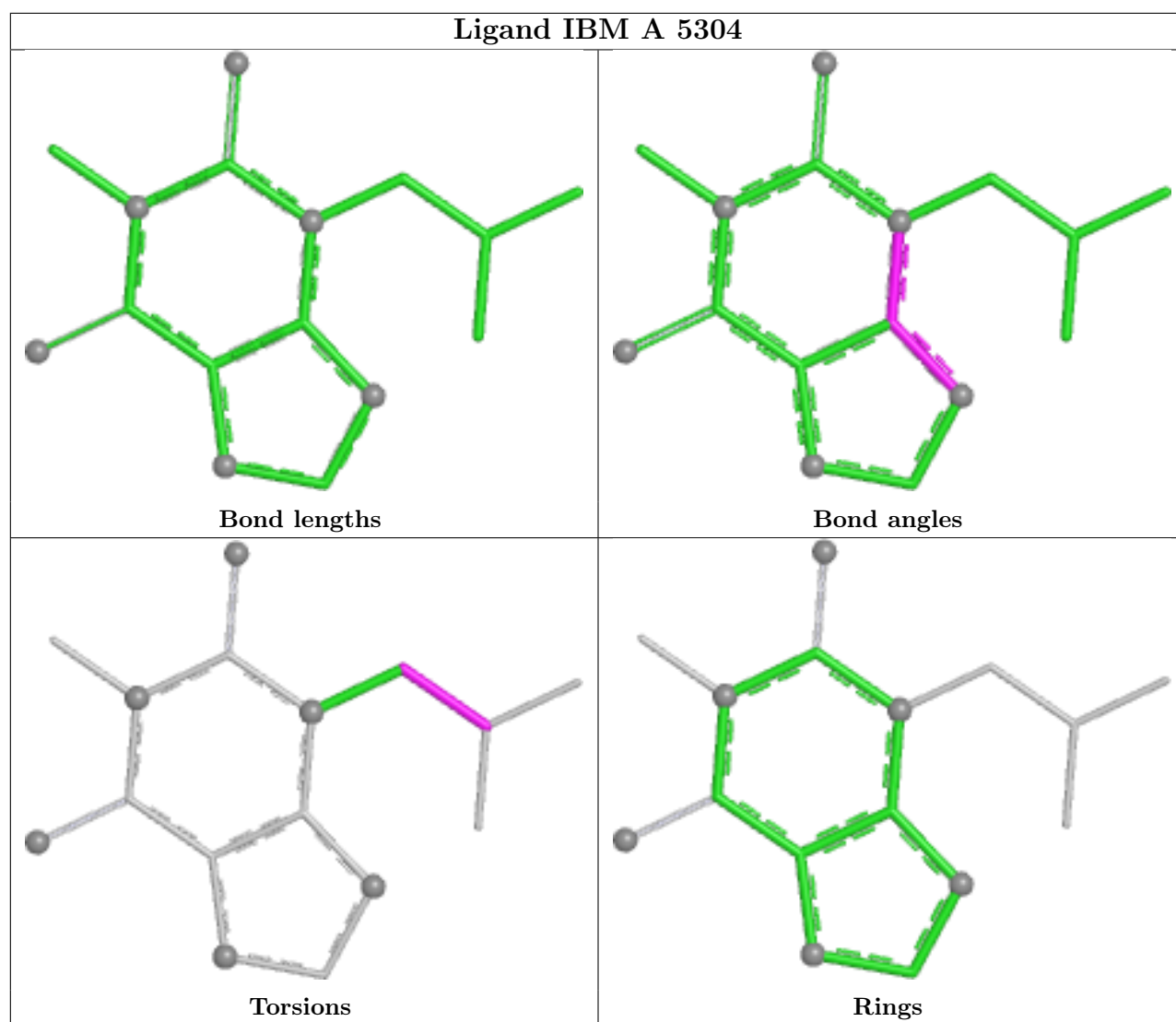


Torsions



Rings





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

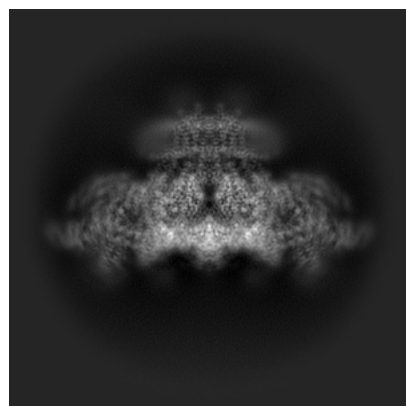
6 Map visualisation [i](#)

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

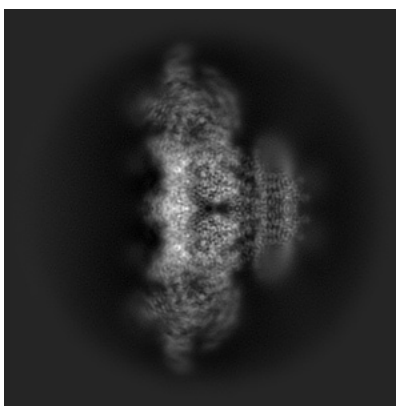
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

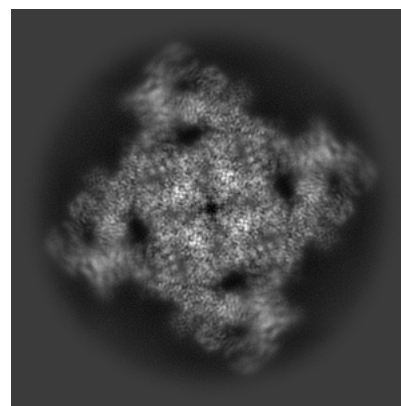
6.1.1 Primary map



X

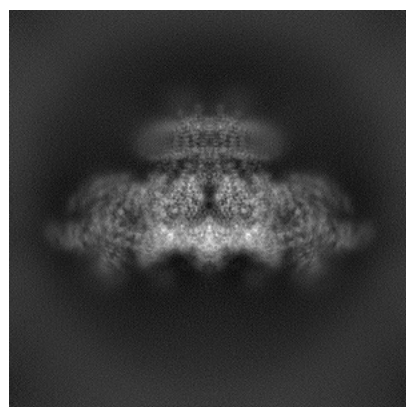


Y

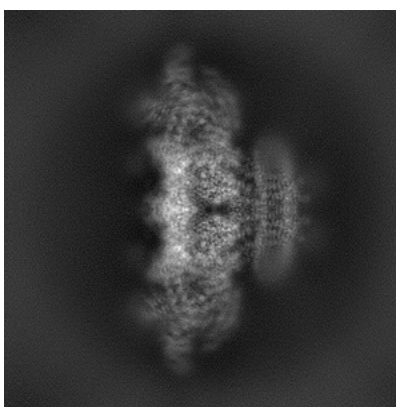


Z

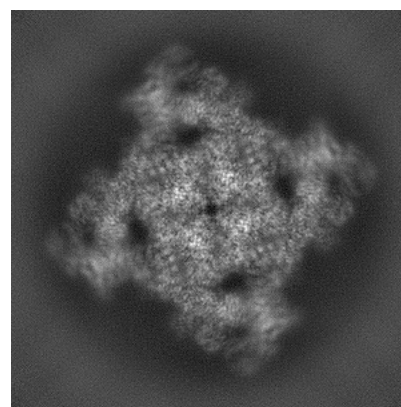
6.1.2 Raw map



X



Y

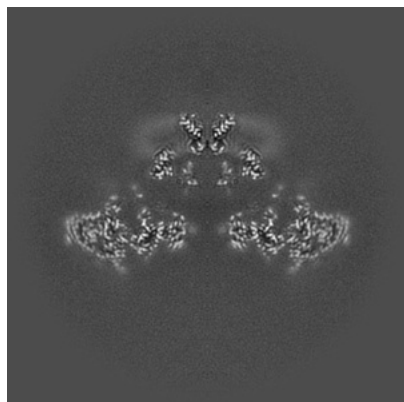


Z

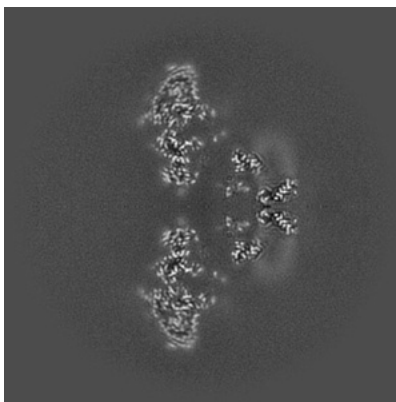
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

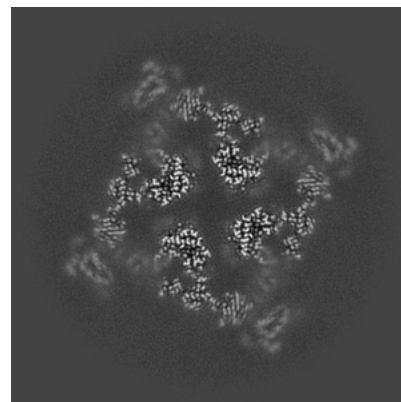
6.2.1 Primary map



X Index: 256

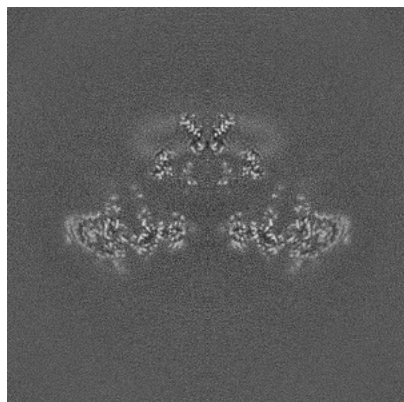


Y Index: 256

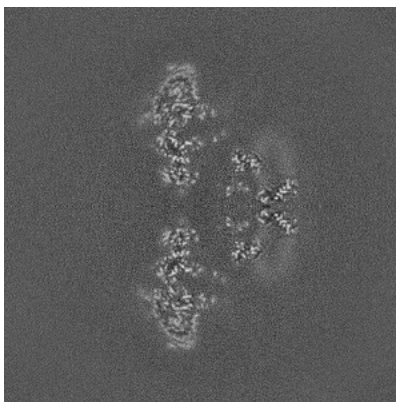


Z Index: 256

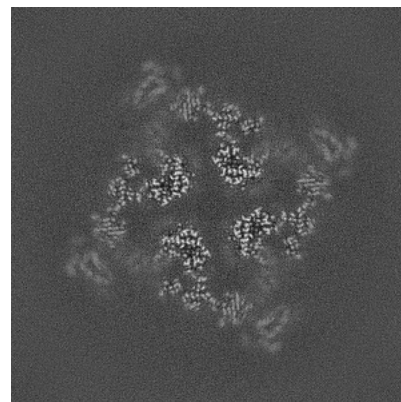
6.2.2 Raw map



X Index: 256



Y Index: 256

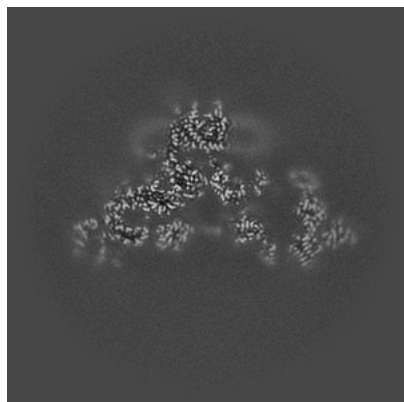


Z Index: 256

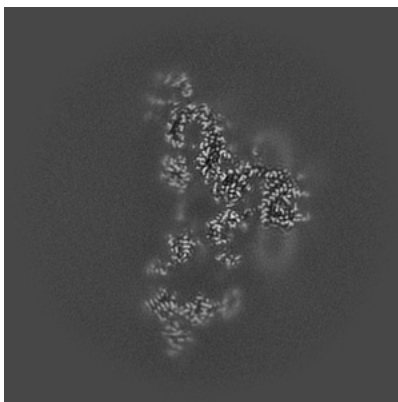
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

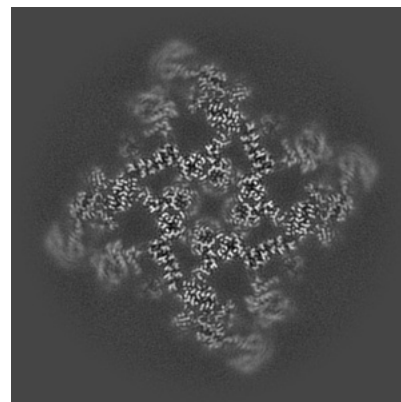
6.3.1 Primary map



X Index: 239

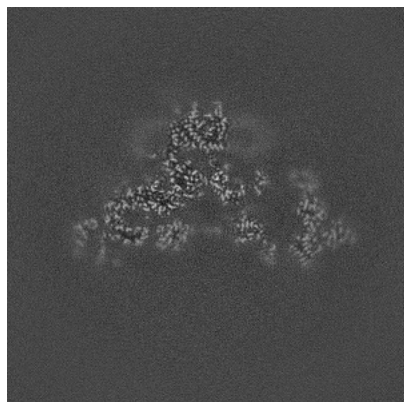


Y Index: 239

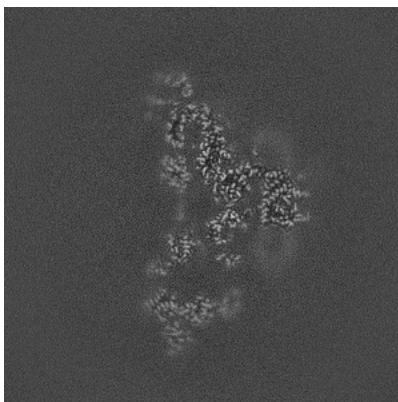


Z Index: 229

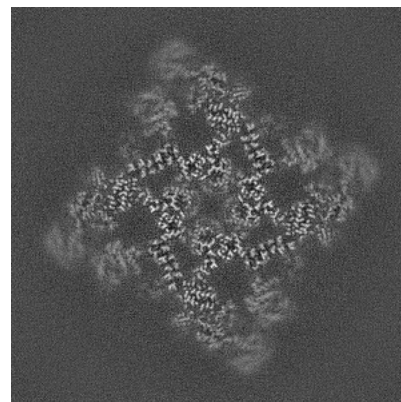
6.3.2 Raw map



X Index: 239



Y Index: 239

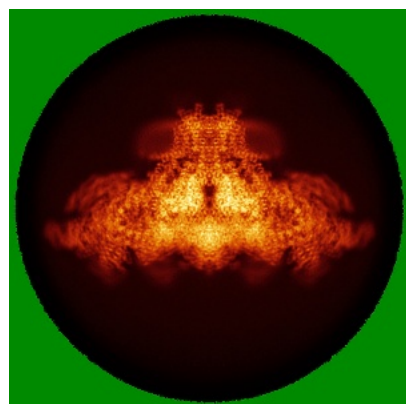


Z Index: 229

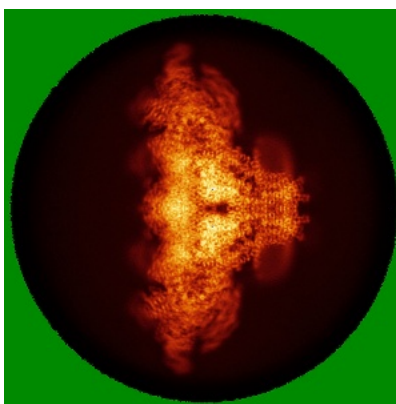
The images above show the largest variance slices of the map in three orthogonal directions.

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

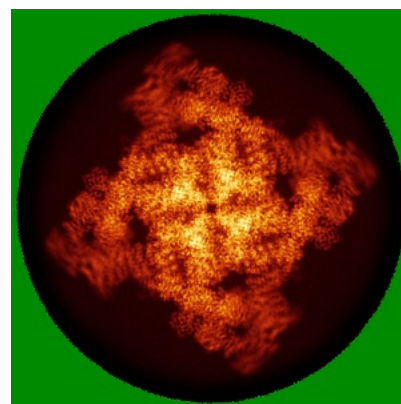
6.4.1 Primary map



X

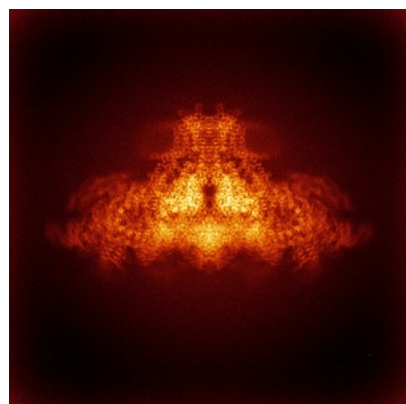


Y

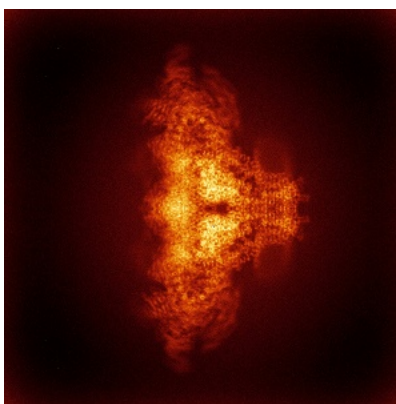


Z

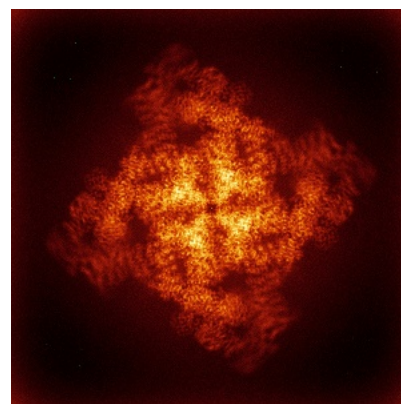
6.4.2 Raw map



X



Y

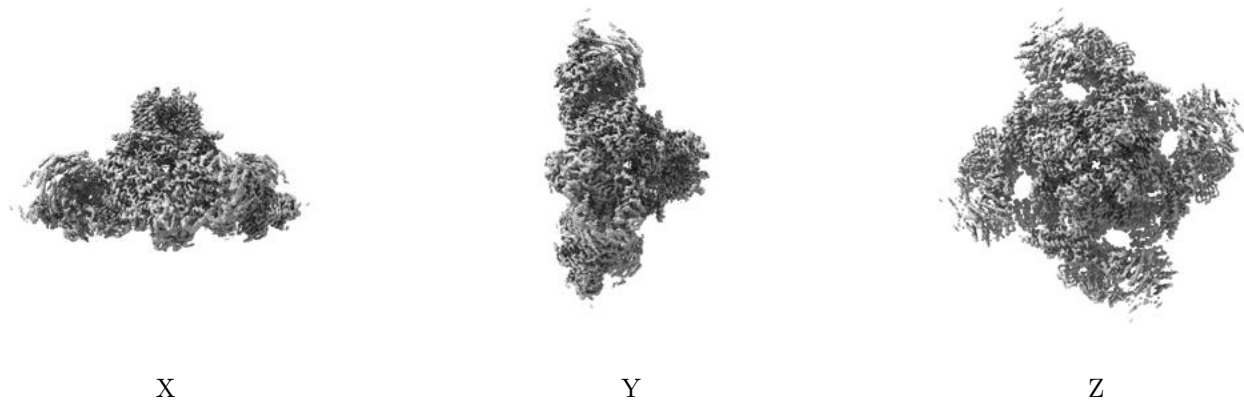


Z

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

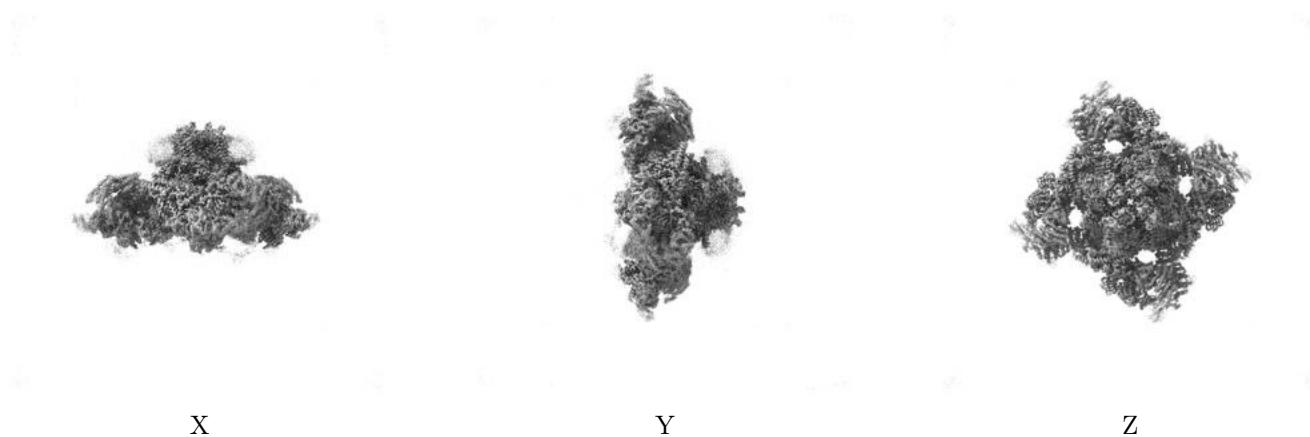
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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

6.5.2 Raw map



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

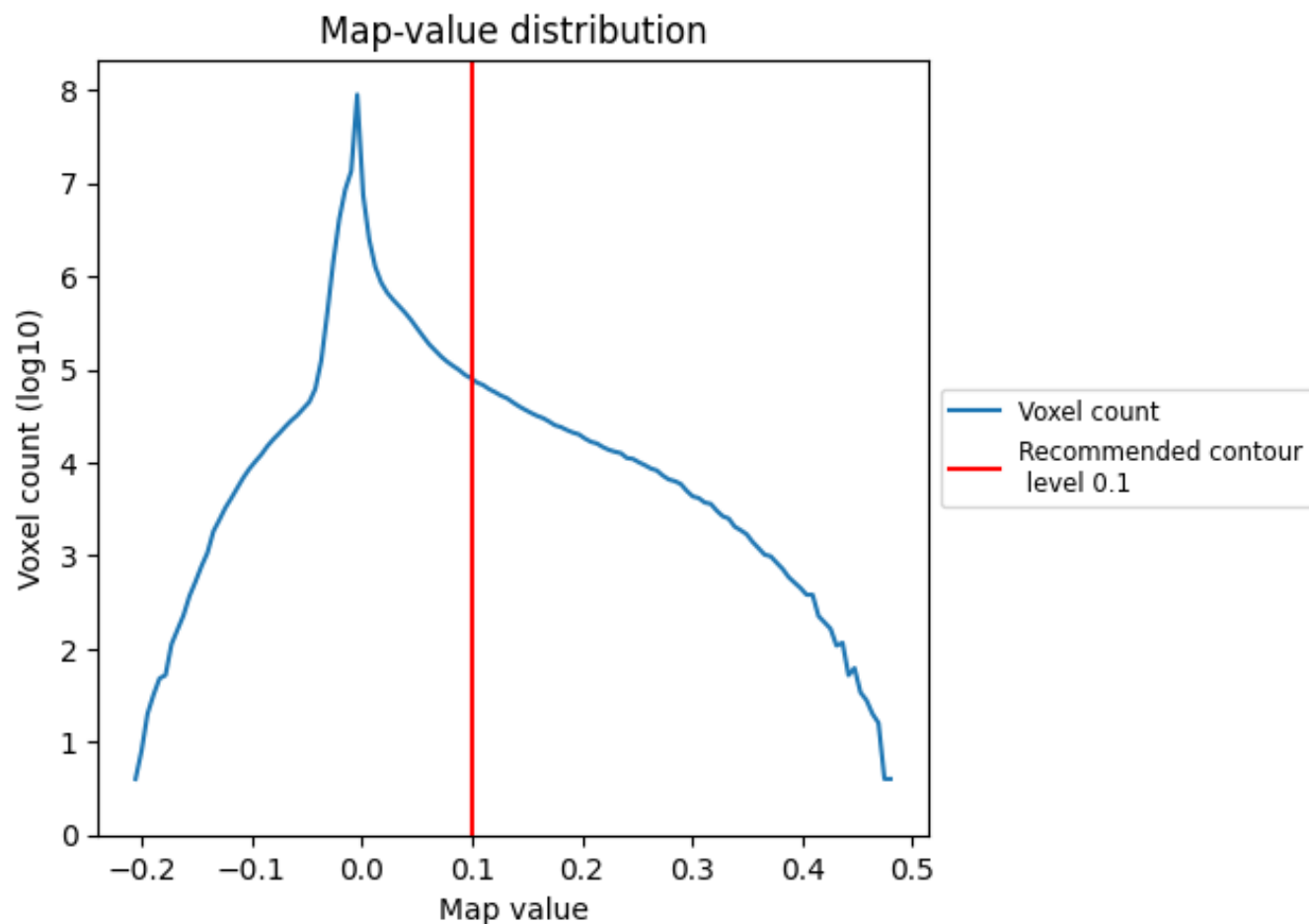
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

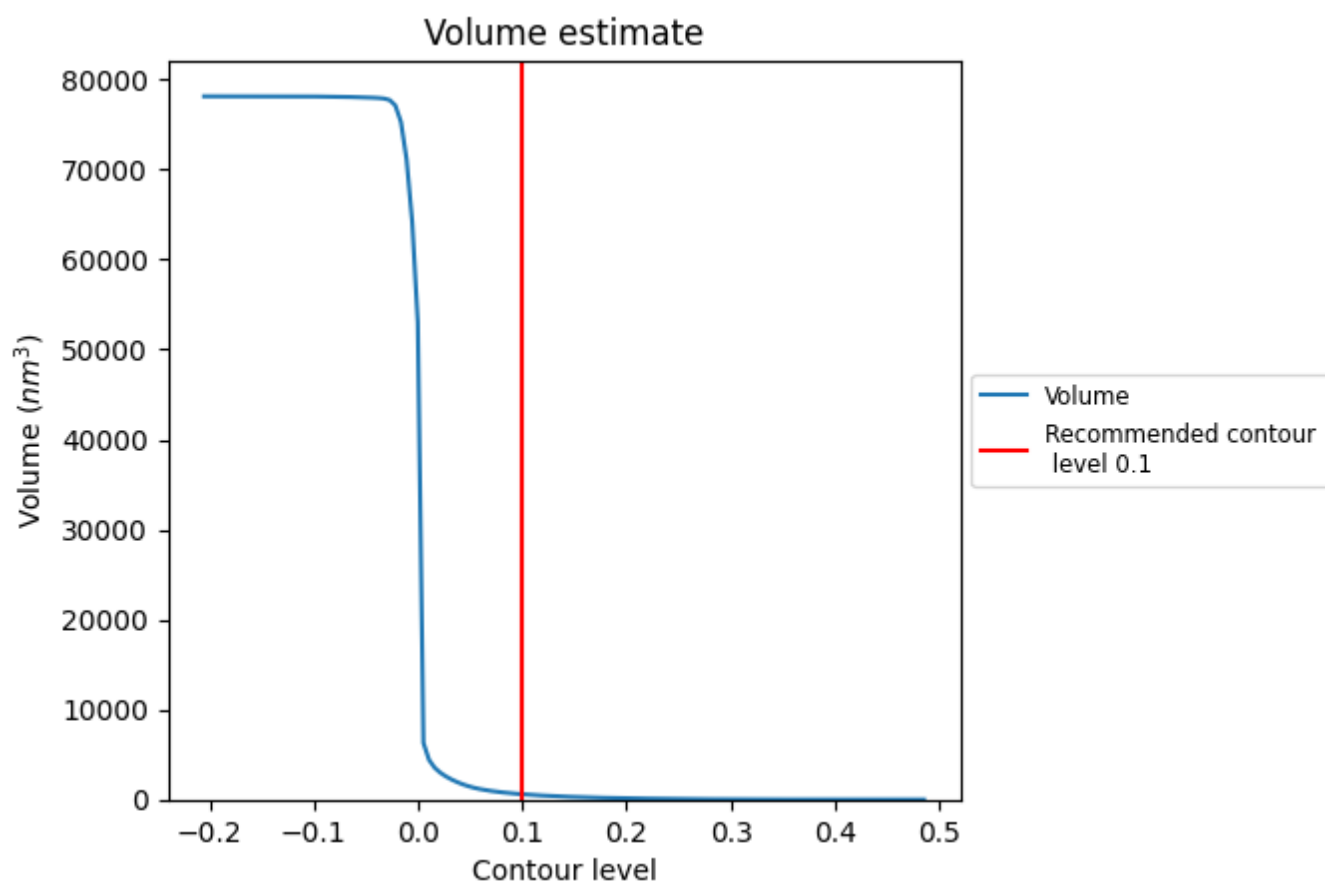
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

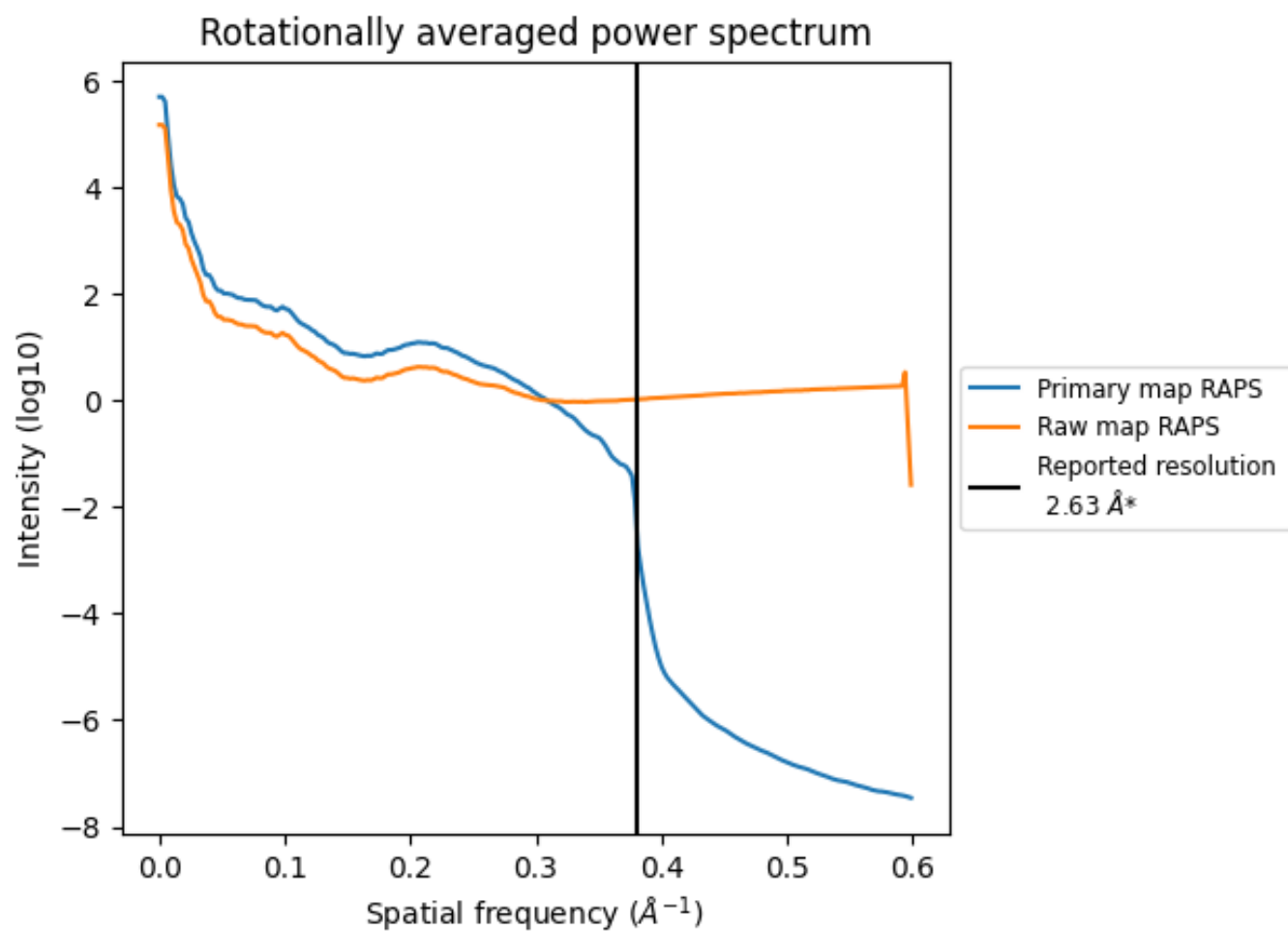
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 594 nm³; 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 ⓘ

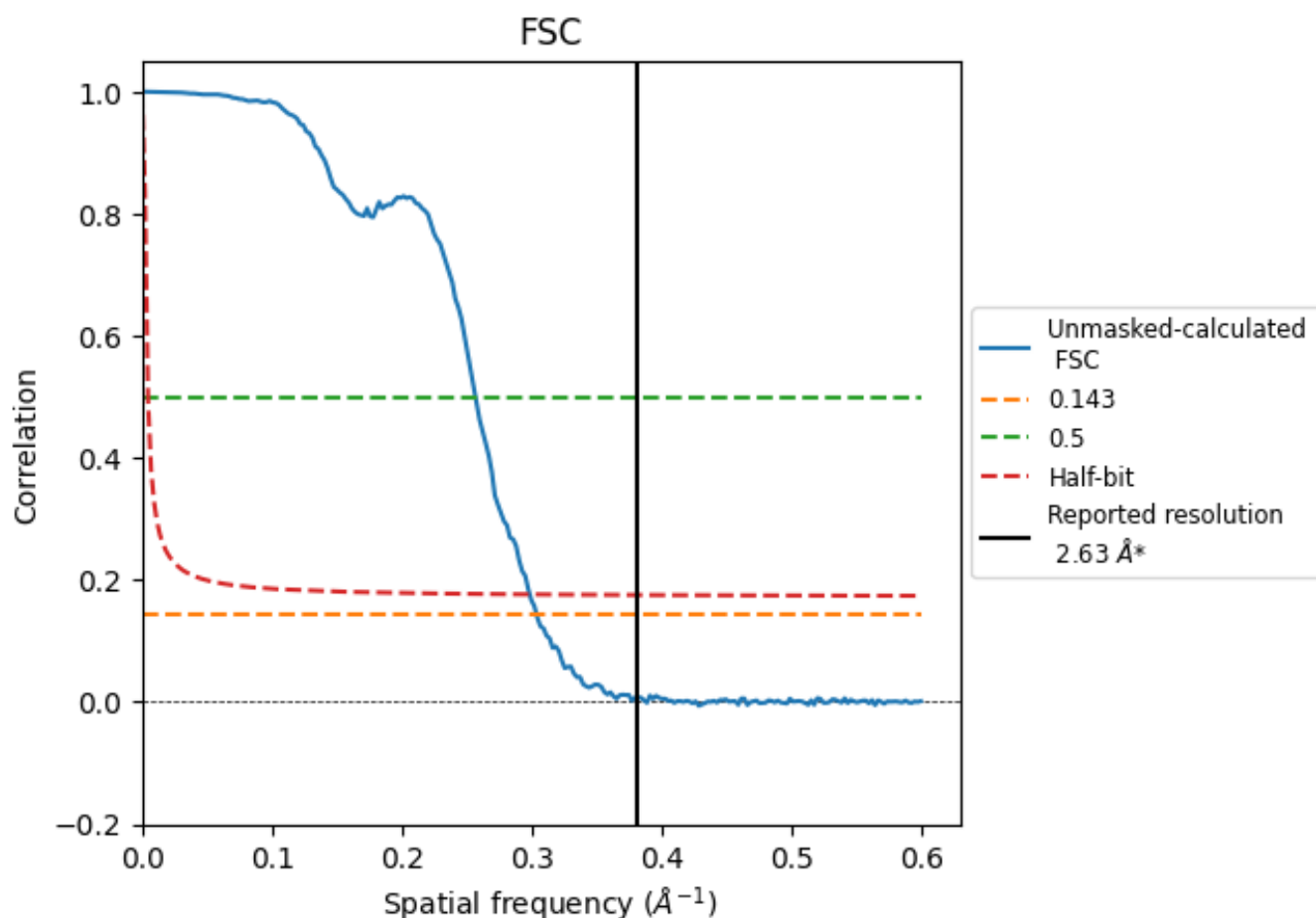


*Reported resolution corresponds to spatial frequency of 0.380 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.380 Å⁻¹

8.2 Resolution estimates [i](#)

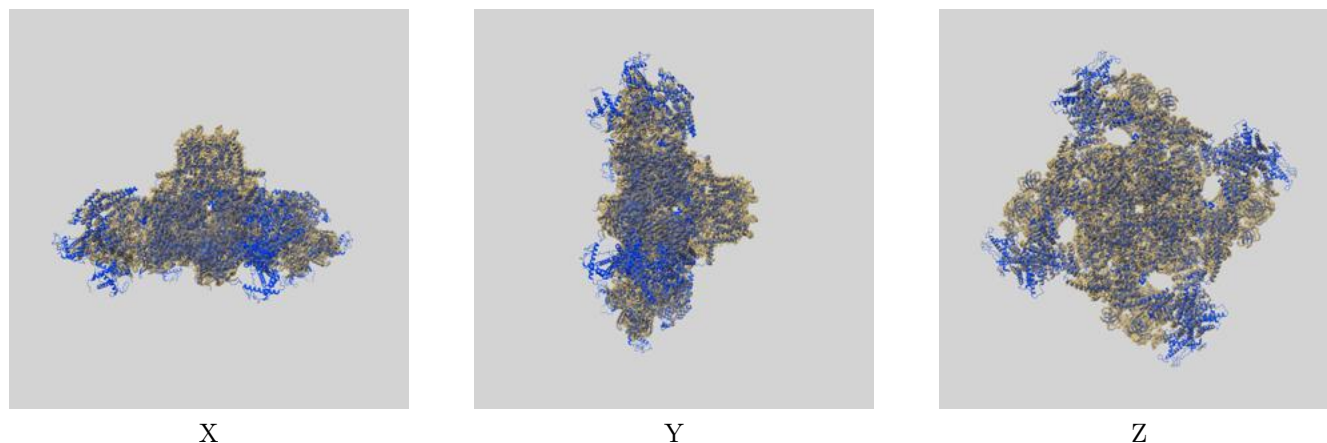
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.63	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.30	3.90	3.35

*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 [i](#)

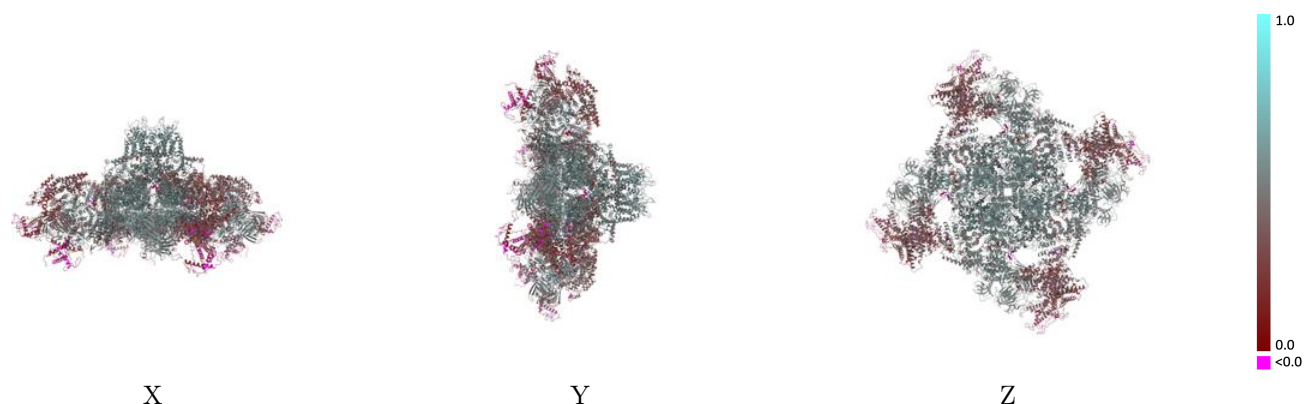
This section contains information regarding the fit between EMDB map EMD-47389 and PDB model 9E1C. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



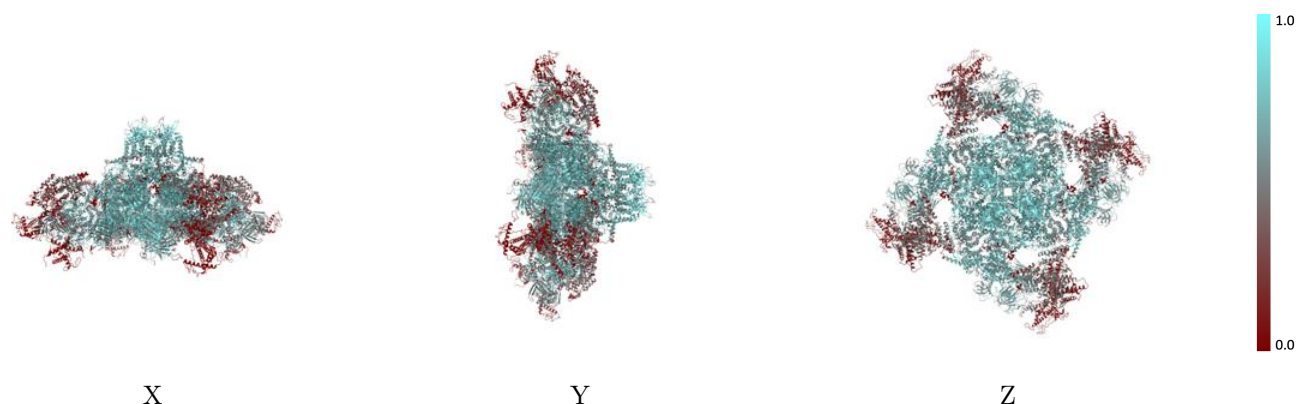
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



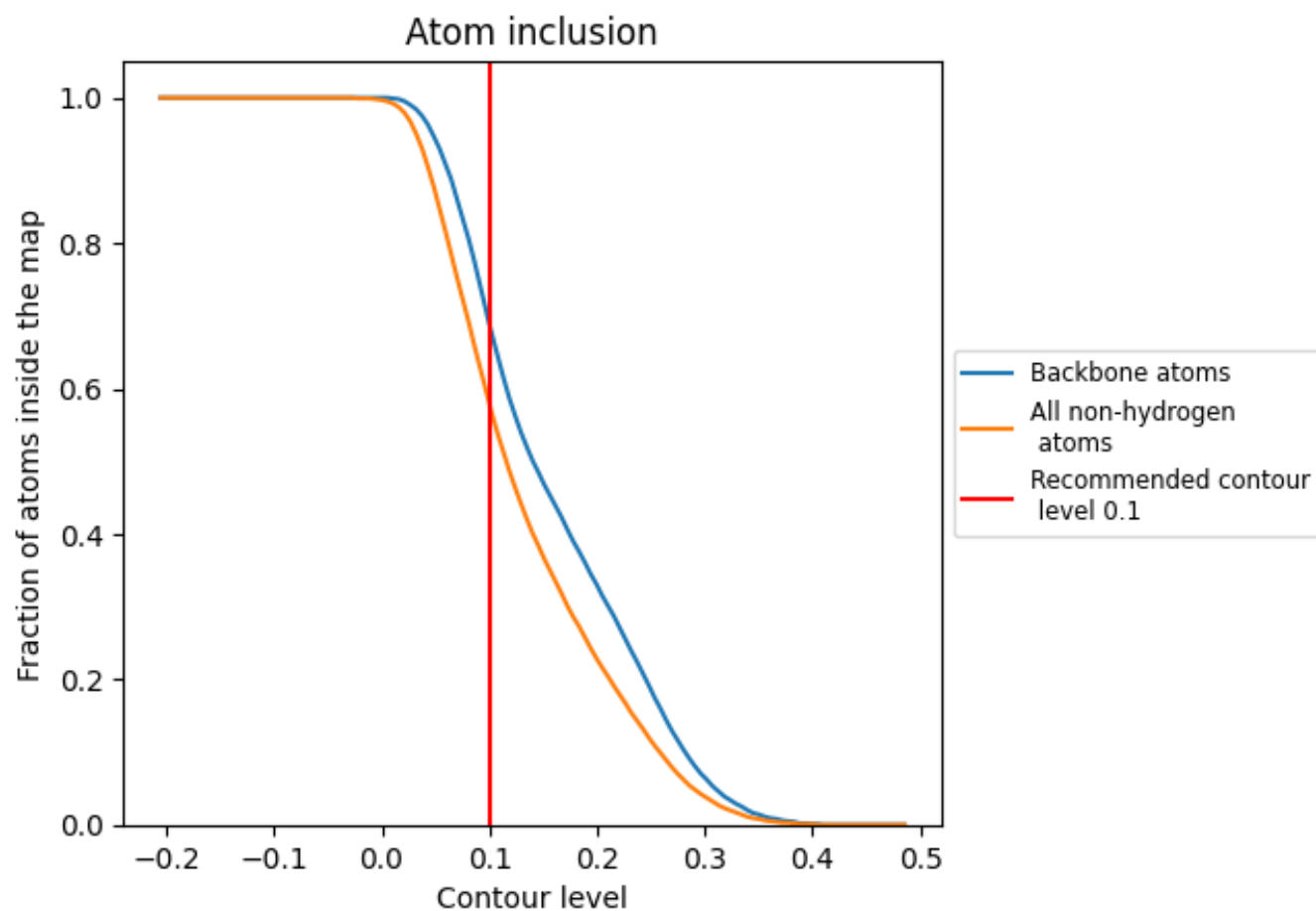
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



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

9.4 Atom inclusion [i](#)



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

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

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

1.0

0.0

<0.0