



Full wwPDB EM Validation Report ⓘ

Oct 20, 2024 – 02:43 PM EDT

PDB ID : 7U9T
EMDB ID : EMD-26408
Title : Structure of PKA phosphorylated human RyR2 in the closed state in the presence of Calmodulin
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2022-03-11
Resolution : 2.68 Å (reported)
Based on initial model : 7U9Q

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

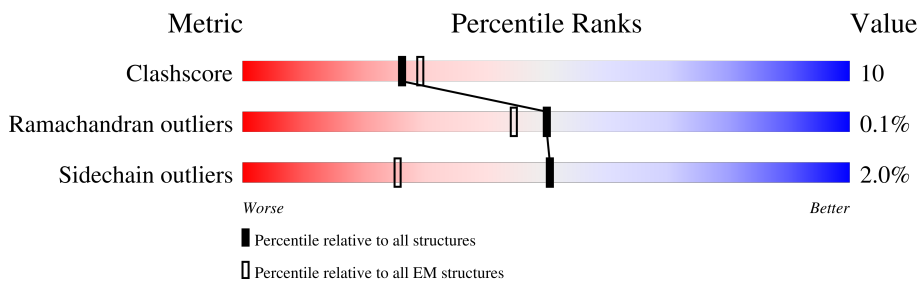
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.68 Å.

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







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

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

Mol	Chain	Length	Quality of chain
1	E	108	
1	F	108	
1	G	108	
1	H	108	
2	A	4967	
2	B	4967	
2	C	4967	
2	D	4967	

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Mol	Chain	Length	Quality of chain
3	I	149	
3	J	149	
3	K	149	
3	L	149	

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 143236 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	H	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	E	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	F	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	G	107	Total 818	C 516	N 144	O 154	S 4	0	0

- Molecule 2 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	A	4229	Total 33816	C 21542	N 5758	O 6286	S 230	2	0
2	D	4229	Total 33816	C 21542	N 5758	O 6286	S 230	2	0
2	B	4229	Total 33816	C 21542	N 5758	O 6286	S 230	2	0
2	C	4229	Total 33816	C 21542	N 5758	O 6286	S 230	2	0

- Molecule 3 is a protein called Calmodulin-1.

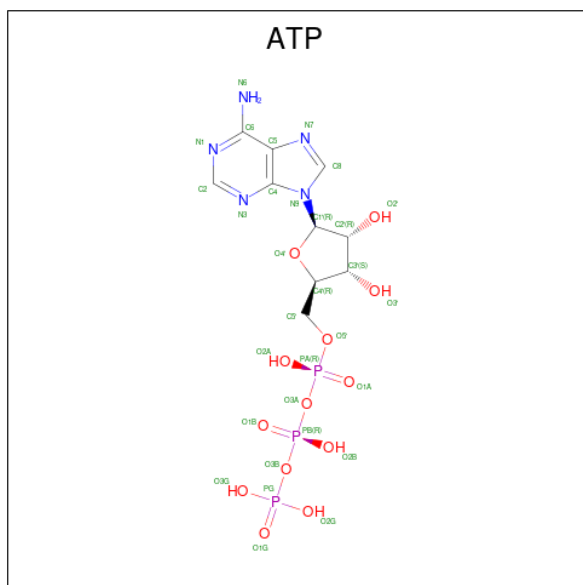
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	I	142	Total 1112	C 687	N 181	O 234	S 10	0	0
3	J	142	Total 1112	C 687	N 181	O 234	S 10	0	0
3	K	142	Total 1112	C 687	N 181	O 234	S 10	0	0
3	L	142	Total 1112	C 687	N 181	O 234	S 10	0	0

- Molecule 4 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Inter-

est" by depositor).

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

- Molecule 5 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



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

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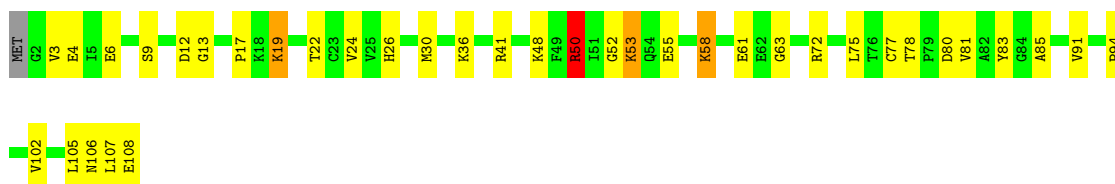
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
5	C	1	31	10	5	13	3	0
5	C	1	31	10	5	13	3	0

3 Residue-property plots [i](#)

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

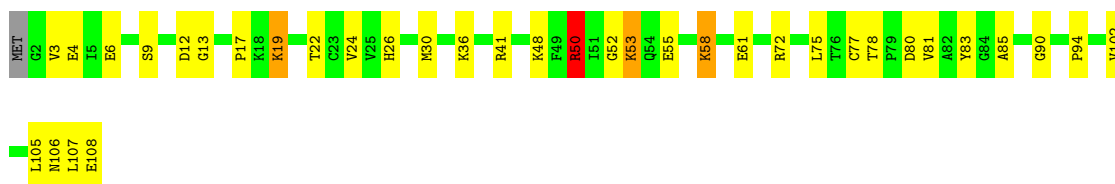
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain H: 



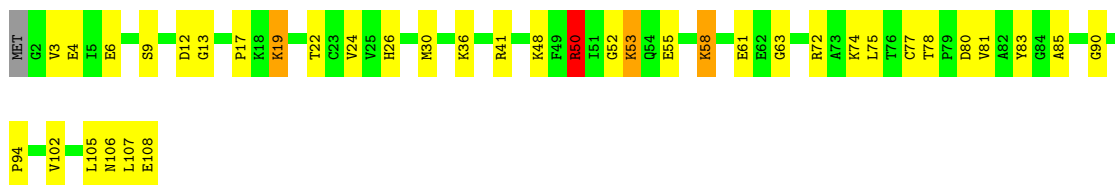
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain E: 



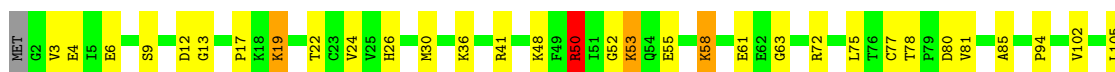
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

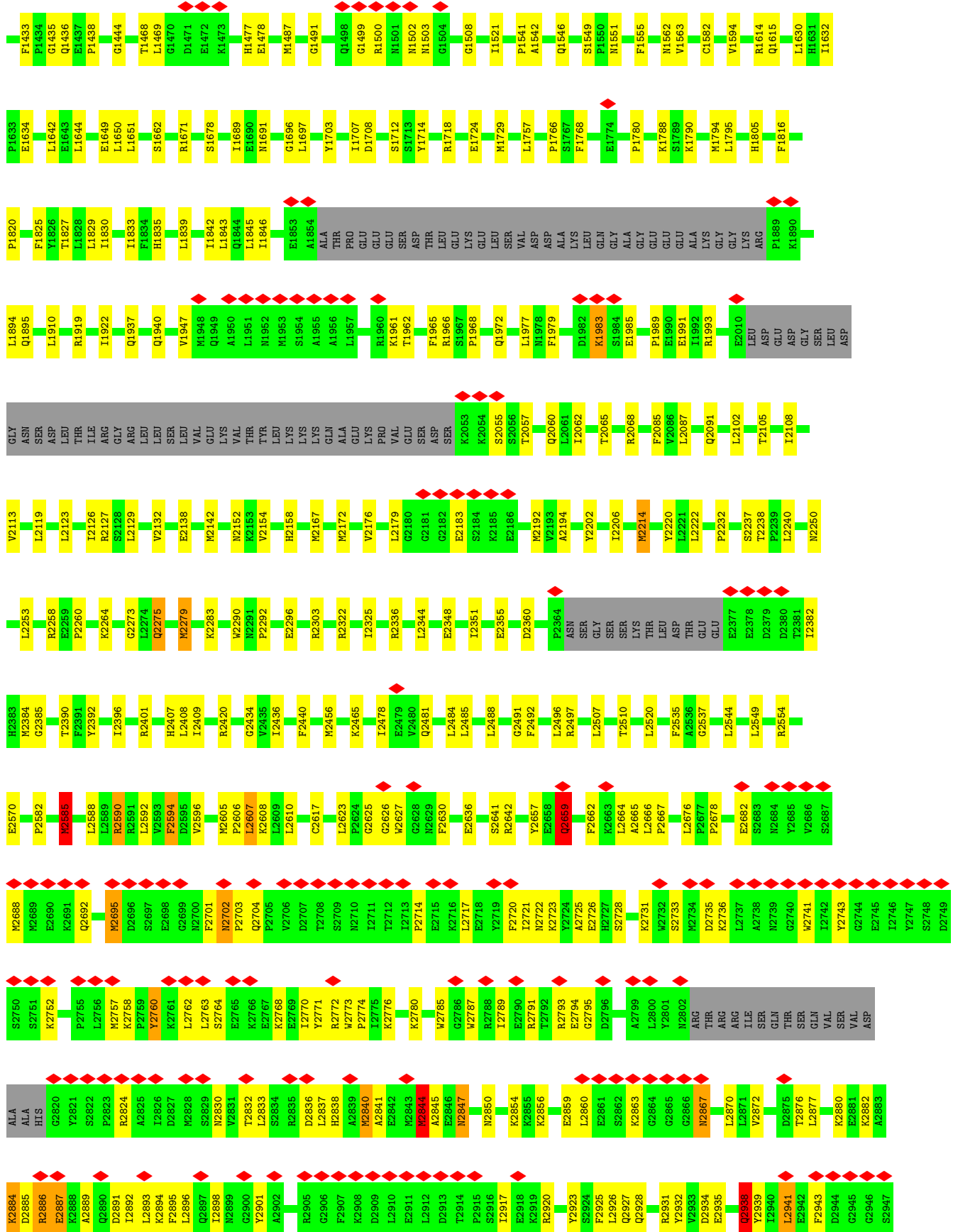
Chain F: 

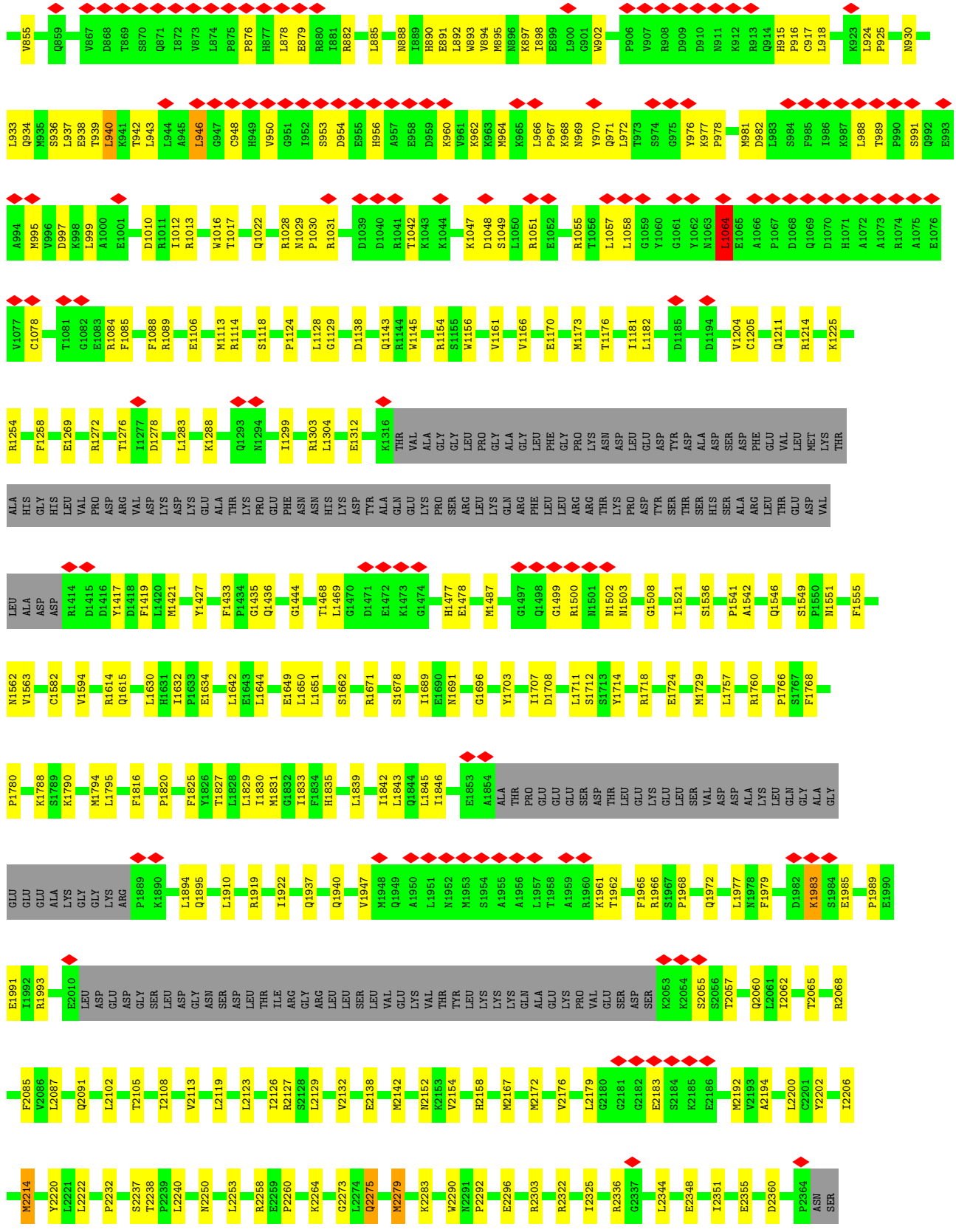


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

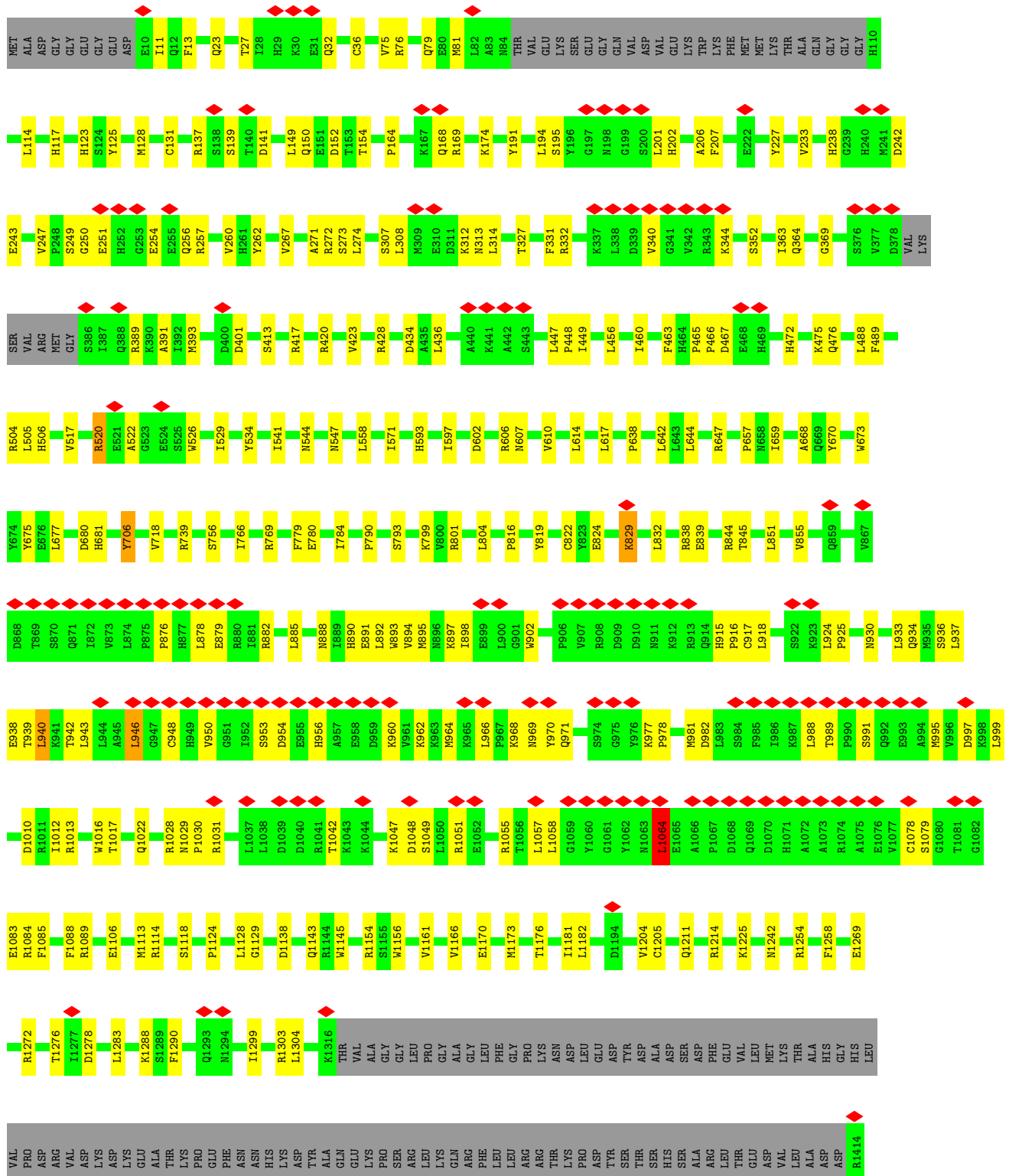
Chain G: 

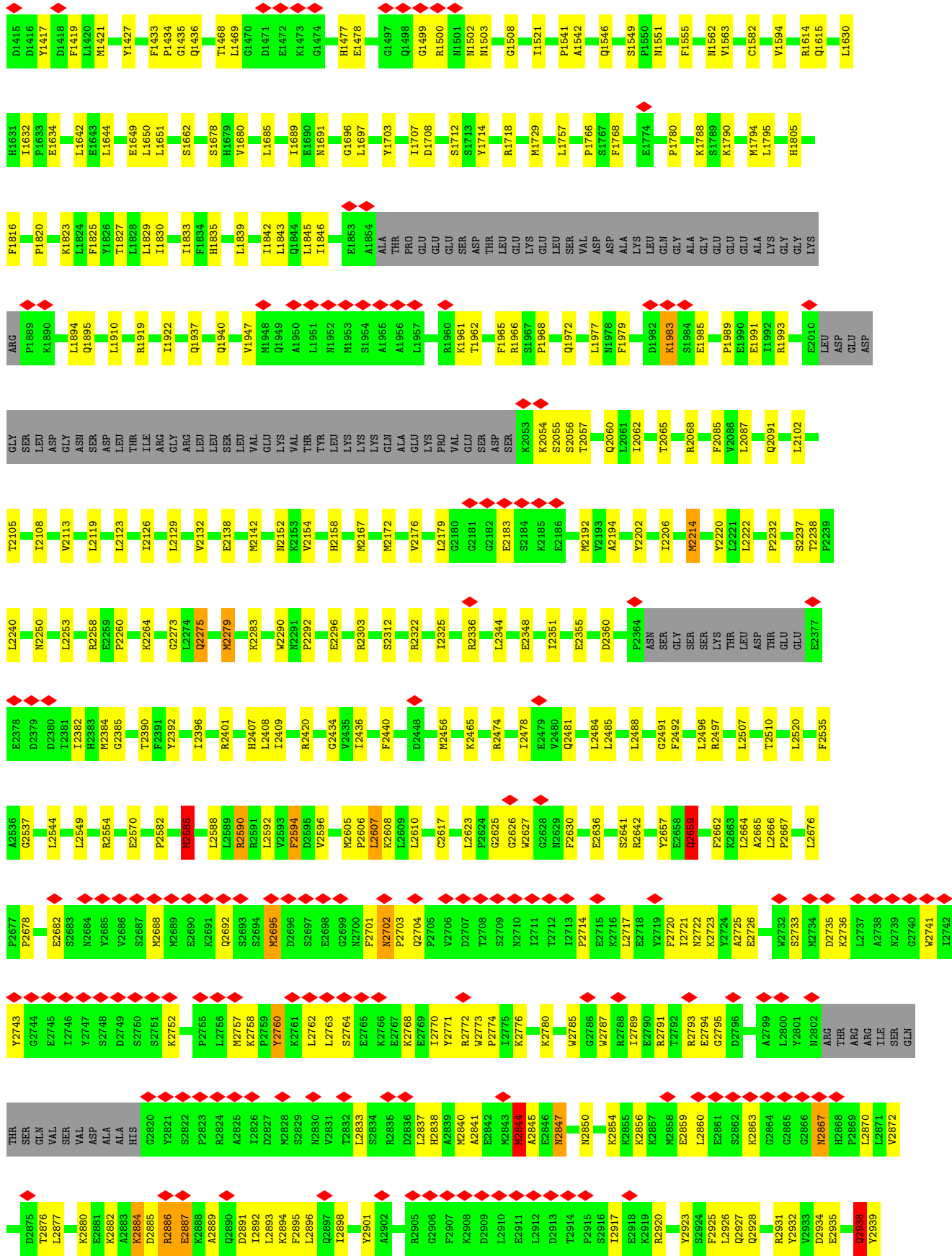


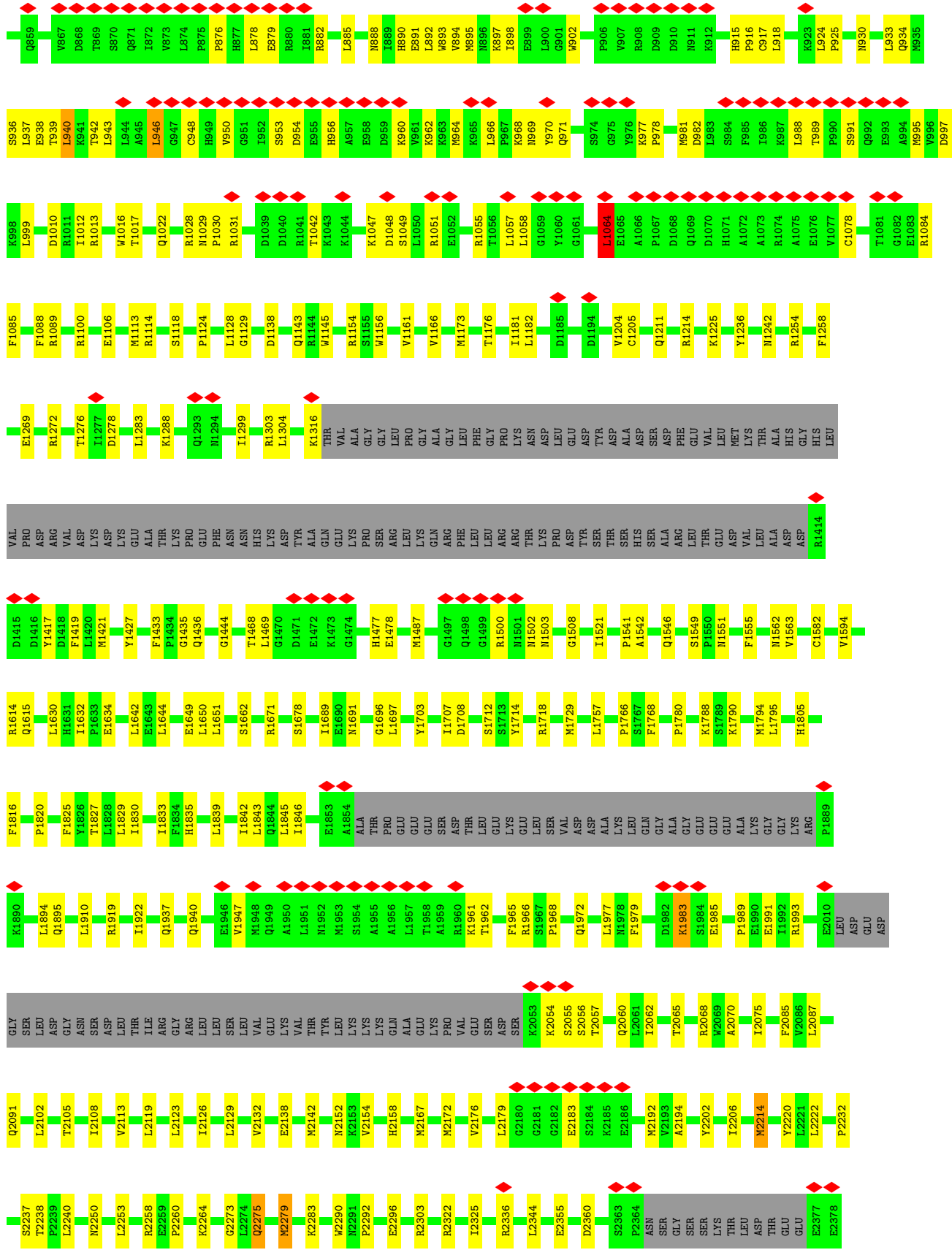




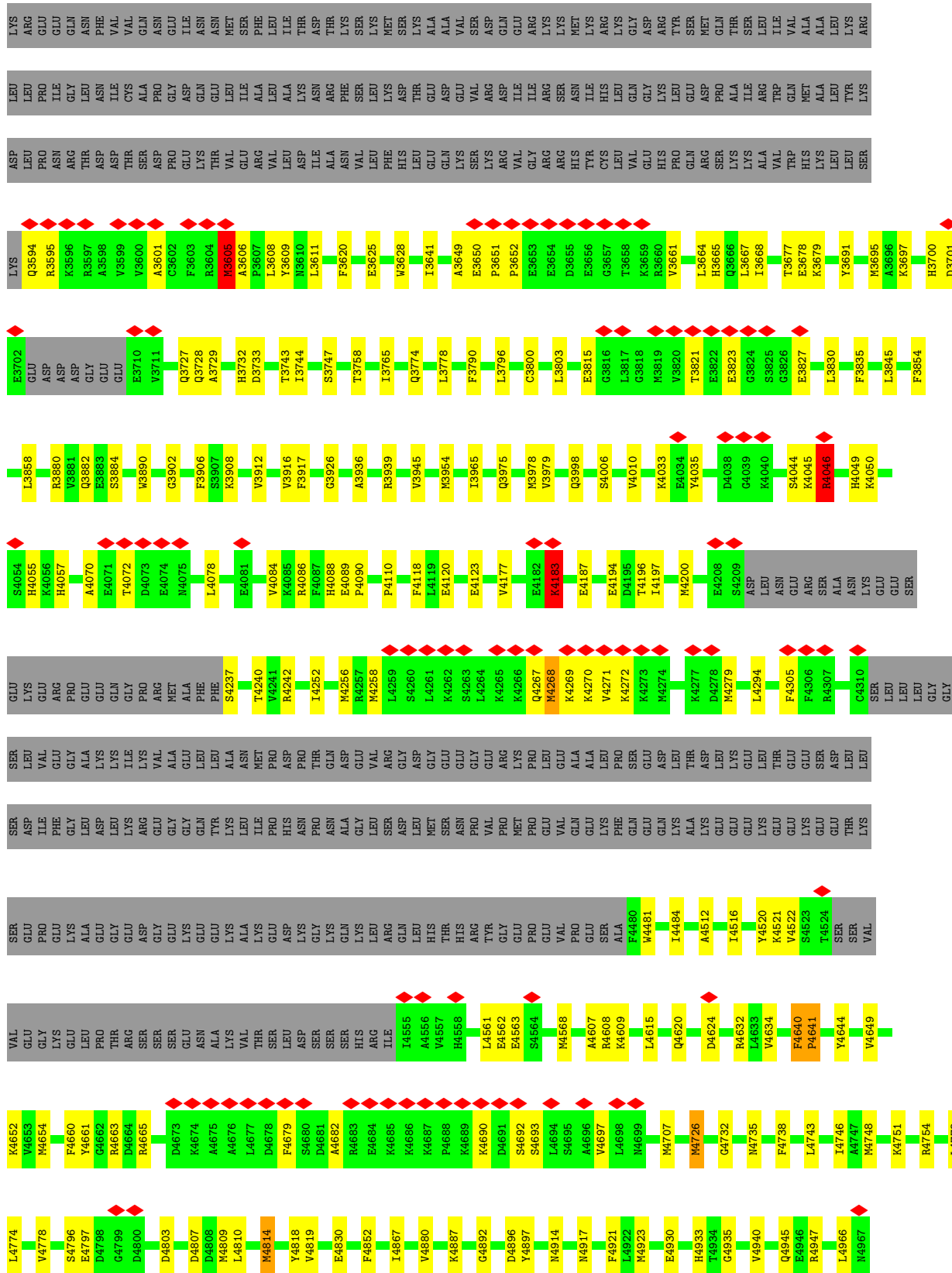
• Molecule 2: Ryanodine receptor 2





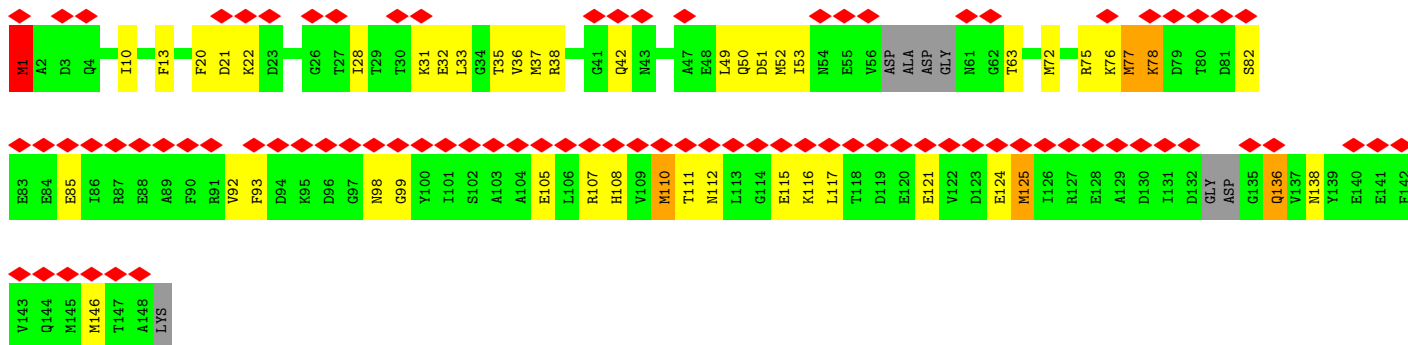


LEU	G3293	G3294	G3295	M3296	M3297	M3298	M3299	A3300	A3301	A3302	A3303	A3304	A3305	A3306	A3307	M3308	M3309	M3310	M3311	M3312	M3313	M3314	M3315	M3316	M3317	M3318	M3319	M3320	M3321	M3322	M3323	M3324	M3325	M3326	M3327	M3328	M3329	M3330	M3331	M3332	M3333	M3334	M3335	M3336	M3337	ASP	HIS	LEU	LYS	SER	HIS	LEU	LYS	ALA	ALA	ARG	GLY	ASP	MET	SER	SER	GLU	GLU	ALA	GLU																																																																						
	T5229	Q3230	M3231	P3232	H3233	V3234	M3235	E3236	V3237	L3238	L3239	M3240	L3241	L3242	M3246	S3247	R3248	M3249	M3250	E3251	H3252	G3253	P3254	E3255	M3256	N3257	P3258	E3259	A3261	E3262	M3263	C3264	C3265	T3266	A3267	L3268	N3269	C3270	M3271	H3272	M3273	L3276	N3279	L3280	L3281	K3282	L3283	L3284	Y3285	N3286	N3287	L3288	G3289	L3290	D3291	E3292																																																																															
	A3165	F3166	P3167	V3168	A3169	F3170	L3171	E3172	T3173	H3174	L3175	D3176	T3177	H3178	M3179	I3180	Y3181	S3182	I3183	Y3184	M3185	T3186	K3187	S3188	S3189	R3190	E3191	R3192	A3193	A3194	L3195	S3196	L3197	F3198	T3199	M3200	L3201	E3202	D3203	V3204	C3205	F3206	M3207	I3208	L3214	M3215	E3216	F3217	I3218	V3219	L3220	L3221	A3222	E3223	S3224	G3225	I3226	Y3228																																																																													
	F3080	T3081	HIS	THR	ARG	ASN	GLN	PRO	G3088	G3089	V3090	T3091	Q3092	L3101	L3102	M3103	M3104	L3105	F3109	Q3114	F3117	G3118	E3119	D3120	L3121	L3122	L3123	V3126	Q3127	Q3128	Y3131	L3134	T3135	S3136	A3139	G3141	T3142	S3143	K3144	S3145	T3146	Y3147	V3148	E3149	R3150	Q3151	R3152	G3156	F3162																																																																																						
	G3012	V3013	L3014	V3015	R3016	H3017	R3018	L3019	S3020	L3021	H3024	D3025	A3026	T3027	S3028	L3029	V3030	L3033	H3034	L3035	L3036	G3037	Q3038	A3042	R3043	F3044	V3045	M3046	K3047	L3050	E3051	S3052	F3053	K3054	L3057	R3058	A3059	F3060	A3064	A3065	E3066	D3067	L3068	E3069	K3070	T3071	M3072	E3073	N3074	L3075	K3076	Q3077	G3078	Q3079																																																																																	
	E2985	Q2986	Y2987	L2988	L2989	L2990	L2991	L2992	L2993	L2994	H2995	E2997	Q2998	E2999	L2998	P2997	R2979	L2980	Y2981	F2982	L2983	S2984	A2985	A2986	S2987	R2988	P2989	L2990	C2991	S2992	G2993	G2994	H2995	M2998	K3001	E3002	M3003	V3004	T3005	S3006	C3009	K3010	L3011																																																																																												
	P2869	L2870	L2871	V2872	D2875	T2876	L2877	K2880	E2881	A2883	K2884	D2885	D2886	E2887	K2888	A2889	Q2890	D2891	L2892	L2893	K2894	F2895	L2896	Q2897	L2898	Y2901	A2902	R2905	G2906	F2907	M2908	A2909	D2909	L2910	E2911	L2912	T2913	P2914	S2915	L2916	L2917	L2918	K2919	R2920	Y2923	S2924	F2925	L2926	Q2927	Q2928	Y2931	Y2932	F2933	G2934	C2935	D2936	L2937	L2938	L2939	L2940	L2941	L2942	L2943	L2944	L2945	L2946	L2947	L2948	L2949	L2950	L2951	L2952	L2953	L2954	L2955	L2956	L2957	L2958	L2959	L2960	L2961	L2962	L2963	L2964	L2965	L2966	L2967	L2968	L2969	L2970	L2971	L2972	L2973	L2974	L2975	L2976	L2977	L2978	L2979	L2980	L2981	L2982	L2983	L2984	L2985	L2986	L2987	L2988	L2989	L2990	L2991	L2992	L2993	L2994	L2995	L2996	L2997	L2998	L2999	L3000	L3001	L3002	L3003	L3004	L3005	L3006	L3007	L3008	L3009	L3010	L3011				
	L2876	F2877	P2878	E2882	M2883	S2884	M2885	Y2886	V2886	S2887	M2888	M2889	E2890	K2891	Q2892	M2893	S2894	M2895	M2896	D2896	S2897	E2898	E2899	M2900	M2901	M2902	P2903	Q2904	F2905	V2906	L2907	M2908	G2909	G2910	G2911	G2912	G2913	G2914	G2915	G2916	G2917	G2918	G2919	G2920	G2921	G2922	G2923	G2924	G2925	G2926	G2927	G2928	G2929	G2930	G2931	G2932	G2933	G2934	G2935	G2936	G2937	G2938	G2939	G2940	G2941	G2942	G2943	G2944	G2945	G2946	G2947	G2948	G2949	G2950	G2951	G2952	G2953	G2954	G2955	G2956	G2957	G2958	G2959	G2960	G2961	G2962	G2963	G2964	G2965	G2966	G2967	G2968	G2969	G2970	G2971	G2972	G2973	G2974	G2975	G2976	G2977	G2978	G2979	G2980	G2981	G2982	G2983	G2984	G2985	G2986	G2987	G2988	G2989	G2990	G2991	G2992	G2993	G2994	G2995	G2996	G2997	G2998	G2999	G3000	G3001	G3002	G3003	G3004	G3005	G3006	G3007	G3008	G3009	G3010	G3011
	G2740	M2741	L2742	Y2743	G2744	E2745	L2746	Y2747	D2748	S2749	S2750	S2751	K2752	P2755	L2756	K2757	K2758	P2759	Y2760	K2761	L2762	L2763	S2764	E2765	K2766	K2768	E2769	L2770	Y2771	R2772	M2773	P2774	L2775	K2776	K2780	M2785	G2786	M2787	R2788	L2789	E2790	R2791	Y2792	R2793	E2794	G2795	D2796	A2799	L2800	Y2801	M2802	ARG	THR	ARG	ARG	ARG	M2739	M2738	M2737	M2736	M2735	M2734	M2733	M2732	M2731	G2674	A2675																																																																				
	L2648	L2649	R2654	E2650	M2654	M2684	M2685	Y2685	V2686	S2687	M2688	M2689	E2690	R2691	L2692	V2693	F2694	D2695	L2696	M2695	D2696	S2697	P2697	L2698	K2698	L2699	M2605	P2606	L2607	K2608	L2610	C2617	L2623	P2624	G2625	G2626	M2627	G2628	N2629	F2630	E2636	E2637	L2638	S2641	R2642	Y2657	E2658	Q2659	F2662	K2663	A2664	A2665	L2666	F2665	K2666	G2667	L2544																																																																														
	D2379	D2380	T2381	L2382	L2383	M2384	G2385	T2390	F2391	Y2392	L2396	L2398	R2401	H2407	L2408	L2409	R2420	G2434	V2435	L2436	F2440	D2448	M2456	K2465	L2478	Q2481	L2484	L2485	L2488	G2491	F2492	L2496	R2497	L2507	T2510	L2520	A2665	F2635	K2636	G2637	L2544																																																																																														

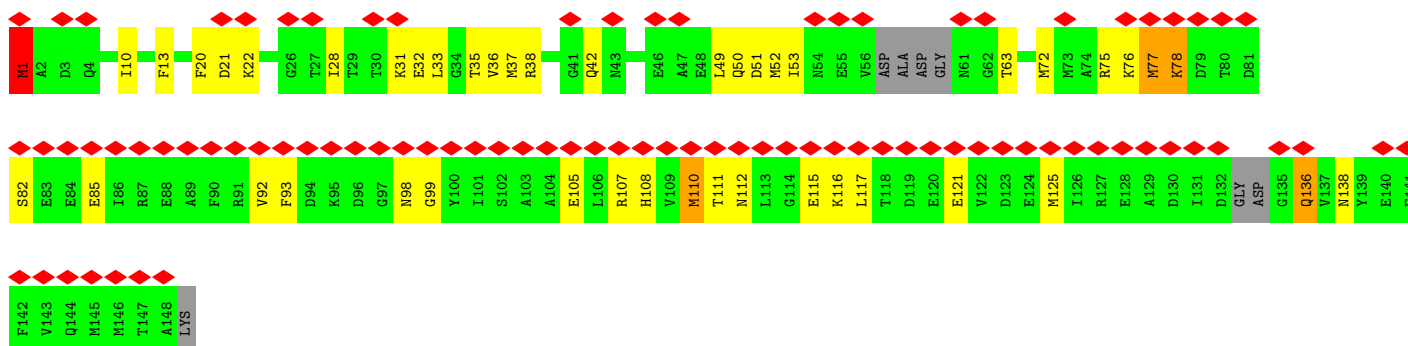


• Molecule 3: Calmodulin-1

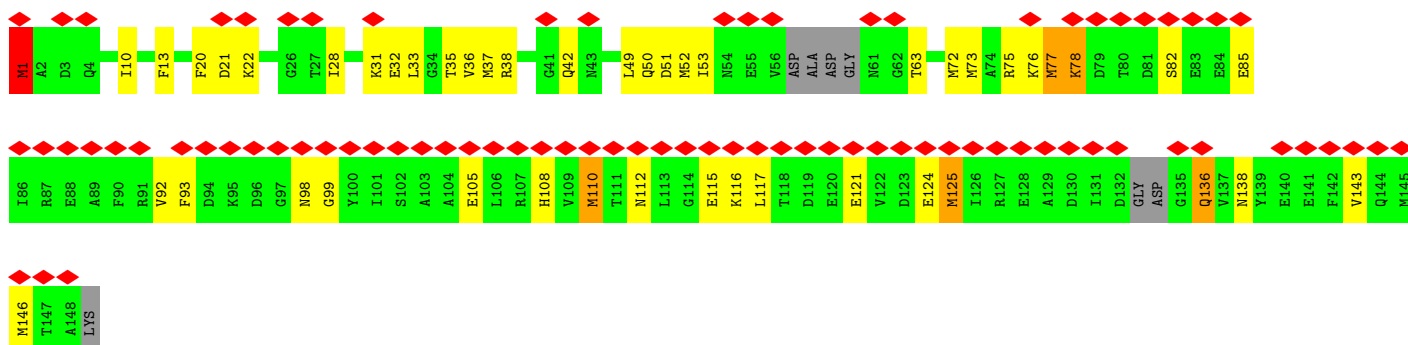




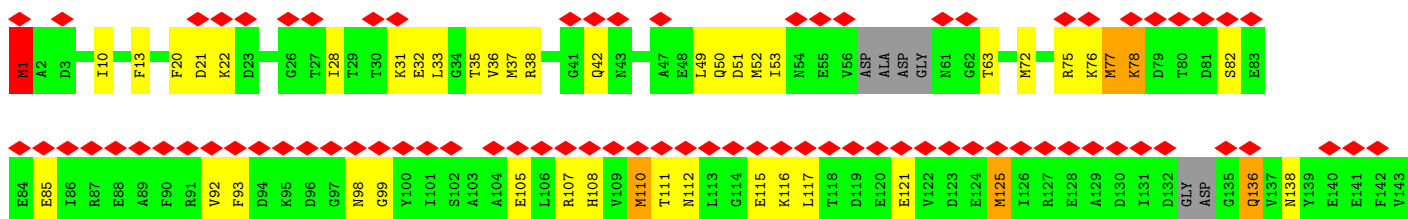
• Molecule 3: Calmodulin-1



• Molecule 3: Calmodulin-1



• Molecule 3: Calmodulin-1





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	38187	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	400	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.728	Depositor
Minimum map value	-0.012	Depositor
Average map value	0.015	Depositor
Map value standard deviation	0.035	Depositor
Recommended contour level	0.14	Depositor
Map size (Å)	425.984, 425.984, 425.984	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.832, 0.832, 0.832	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	E	0.32	0/834	0.67	1/1123 (0.1%)
1	F	0.32	0/834	0.66	1/1123 (0.1%)
1	G	0.32	0/834	0.67	1/1123 (0.1%)
1	H	0.32	0/834	0.66	1/1123 (0.1%)
2	A	0.27	0/34556	0.53	23/46672 (0.0%)
2	B	0.27	0/34556	0.53	23/46672 (0.0%)
2	C	0.27	0/34556	0.53	23/46672 (0.0%)
2	D	0.27	0/34556	0.53	23/46672 (0.0%)
3	I	0.28	0/1122	0.75	7/1504 (0.5%)
3	J	0.28	0/1122	0.75	6/1504 (0.4%)
3	K	0.28	0/1122	0.75	7/1504 (0.5%)
3	L	0.28	0/1122	0.75	7/1504 (0.5%)
All	All	0.27	0/146048	0.54	123/197196 (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
2	A	0	4
2	B	0	4
2	C	0	4
2	D	0	4
All	All	0	16

There are no bond length outliers.

All (123) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	2659	GLN	CA-CB-CG	9.01	133.23	113.40
2	B	2659	GLN	CA-CB-CG	9.00	133.21	113.40
2	A	2659	GLN	CA-CB-CG	8.99	133.19	113.40
2	C	2659	GLN	CA-CB-CG	8.99	133.18	113.40
2	C	2840	MET	CB-CG-SD	8.84	138.93	112.40
2	D	2840	MET	CB-CG-SD	8.84	138.92	112.40
2	B	2840	MET	CB-CG-SD	8.83	138.90	112.40
2	A	2840	MET	CB-CG-SD	8.83	138.88	112.40
2	A	2938	GLN	CA-CB-CG	8.82	132.81	113.40
2	D	2938	GLN	CA-CB-CG	8.80	132.77	113.40
2	C	2938	GLN	CA-CB-CG	8.79	132.74	113.40
2	B	2938	GLN	CA-CB-CG	8.78	132.72	113.40
2	A	2941	LEU	CA-CB-CG	8.01	133.71	115.30
2	C	2941	LEU	CA-CB-CG	7.99	133.68	115.30
2	B	2941	LEU	CA-CB-CG	7.98	133.66	115.30
2	D	2941	LEU	CA-CB-CG	7.97	133.64	115.30
2	C	2844	MET	CA-CB-CG	7.85	126.65	113.30
2	A	2844	MET	CA-CB-CG	7.84	126.62	113.30
2	D	2844	MET	CA-CB-CG	7.83	126.61	113.30
2	B	2844	MET	CA-CB-CG	7.82	126.58	113.30
3	K	77	MET	CA-CB-CG	7.77	126.51	113.30
3	I	77	MET	CA-CB-CG	7.77	126.50	113.30
3	J	77	MET	CA-CB-CG	7.76	126.50	113.30
3	L	77	MET	CA-CB-CG	7.75	126.47	113.30
1	G	50	ARG	CG-CD-NE	7.62	127.80	111.80
1	F	50	ARG	CG-CD-NE	7.60	127.77	111.80
1	E	50	ARG	CG-CD-NE	7.60	127.75	111.80
1	H	50	ARG	CG-CD-NE	7.57	127.70	111.80
2	C	1064	LEU	CA-CB-CG	7.26	132.01	115.30
2	B	1064	LEU	CA-CB-CG	7.26	132.00	115.30
2	D	2585	MET	CA-CB-CG	7.25	125.63	113.30
2	A	1064	LEU	CA-CB-CG	7.24	131.95	115.30
2	D	1064	LEU	CA-CB-CG	7.24	131.94	115.30
2	A	2585	MET	CA-CB-CG	7.24	125.60	113.30
2	B	2585	MET	CA-CB-CG	7.24	125.60	113.30
2	C	2585	MET	CA-CB-CG	7.22	125.57	113.30
2	C	940	LEU	CA-CB-CG	6.77	130.86	115.30
2	A	940	LEU	CA-CB-CG	6.76	130.85	115.30
2	B	940	LEU	CA-CB-CG	6.76	130.85	115.30
2	C	2585	MET	CB-CG-SD	6.76	132.69	112.40
2	A	2585	MET	CB-CG-SD	6.76	132.68	112.40
2	D	940	LEU	CA-CB-CG	6.76	130.84	115.30
2	B	2585	MET	CB-CG-SD	6.75	132.66	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	2585	MET	CB-CG-SD	6.75	132.65	112.40
2	B	2844	MET	CB-CG-SD	6.69	132.48	112.40
2	A	2844	MET	CB-CG-SD	6.69	132.47	112.40
3	I	1	MET	CB-CG-SD	6.68	132.43	112.40
2	D	2844	MET	CB-CG-SD	6.67	132.43	112.40
3	L	1	MET	CB-CG-SD	6.67	132.41	112.40
2	C	2844	MET	CB-CG-SD	6.67	132.40	112.40
3	J	1	MET	CB-CG-SD	6.67	132.40	112.40
3	K	1	MET	CB-CG-SD	6.67	132.41	112.40
2	B	3123	LEU	CA-CB-CG	6.50	130.24	115.30
2	A	3123	LEU	CA-CB-CG	6.48	130.21	115.30
2	D	3123	LEU	CA-CB-CG	6.48	130.21	115.30
2	C	3123	LEU	CA-CB-CG	6.48	130.21	115.30
2	C	3263	MET	CA-CB-CG	6.42	124.21	113.30
2	A	3263	MET	CA-CB-CG	6.40	124.18	113.30
2	B	3263	MET	CA-CB-CG	6.40	124.18	113.30
2	D	3263	MET	CA-CB-CG	6.39	124.16	113.30
2	B	3605	MET	CA-CB-CG	5.88	123.30	113.30
2	C	3605	MET	CA-CB-CG	5.88	123.29	113.30
2	D	3605	MET	CA-CB-CG	5.87	123.28	113.30
2	A	3605	MET	CA-CB-CG	5.87	123.28	113.30
3	I	77	MET	CB-CG-SD	5.80	129.81	112.40
3	L	77	MET	CB-CG-SD	5.80	129.81	112.40
3	J	77	MET	CB-CG-SD	5.80	129.80	112.40
3	K	77	MET	CB-CG-SD	5.79	129.76	112.40
2	D	3263	MET	CB-CG-SD	5.76	129.69	112.40
2	A	3263	MET	CB-CG-SD	5.76	129.68	112.40
2	B	3263	MET	CB-CG-SD	5.75	129.66	112.40
2	C	3263	MET	CB-CG-SD	5.75	129.65	112.40
2	C	2590	ARG	CB-CG-CD	5.75	126.55	111.60
2	B	2590	ARG	CB-CG-CD	5.75	126.54	111.60
2	D	2590	ARG	CB-CG-CD	5.74	126.53	111.60
2	A	2590	ARG	CB-CG-CD	5.74	126.51	111.60
3	L	136	GLN	CA-CB-CG	5.54	125.60	113.40
3	K	136	GLN	CA-CB-CG	5.54	125.58	113.40
3	I	136	GLN	CA-CB-CG	5.53	125.57	113.40
3	J	136	GLN	CA-CB-CG	5.52	125.55	113.40
2	C	4726	MET	CB-CG-SD	5.50	128.89	112.40
2	A	4726	MET	CB-CG-SD	5.50	128.88	112.40
2	B	4726	MET	CB-CG-SD	5.49	128.88	112.40
2	D	4726	MET	CB-CG-SD	5.49	128.87	112.40
2	C	3215	MET	CB-CG-SD	5.44	128.72	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	3605	MET	CB-CG-SD	5.44	128.72	112.40
2	C	3605	MET	CB-CG-SD	5.44	128.72	112.40
2	D	3605	MET	CB-CG-SD	5.44	128.71	112.40
2	B	3605	MET	CB-CG-SD	5.43	128.70	112.40
2	D	3215	MET	CB-CG-SD	5.43	128.69	112.40
2	A	3215	MET	CB-CG-SD	5.43	128.68	112.40
2	B	3215	MET	CB-CG-SD	5.42	128.66	112.40
3	K	1	MET	CG-SD-CE	5.36	108.77	100.20
3	I	1	MET	CG-SD-CE	5.36	108.77	100.20
2	A	4183	LYS	CD-CE-NZ	5.35	124.01	111.70
3	J	1	MET	CG-SD-CE	5.35	108.76	100.20
2	B	2938	GLN	N-CA-CB	5.35	120.23	110.60
2	B	4183	LYS	CD-CE-NZ	5.34	123.99	111.70
3	L	1	MET	CG-SD-CE	5.34	108.74	100.20
2	D	4183	LYS	CD-CE-NZ	5.34	123.97	111.70
2	C	4183	LYS	CD-CE-NZ	5.33	123.96	111.70
2	C	2938	GLN	N-CA-CB	5.33	120.19	110.60
2	D	2938	GLN	N-CA-CB	5.31	120.16	110.60
2	A	2938	GLN	N-CA-CB	5.30	120.14	110.60
2	B	3239	LEU	CB-CG-CD2	-5.29	102.01	111.00
2	D	3239	LEU	CB-CG-CD2	-5.28	102.02	111.00
2	C	3239	LEU	CB-CG-CD2	-5.26	102.05	111.00
2	A	3239	LEU	CB-CG-CD2	-5.25	102.08	111.00
2	B	4046	ARG	CG-CD-NE	5.12	122.56	111.80
2	C	4046	ARG	CG-CD-NE	5.12	122.54	111.80
2	D	4046	ARG	CG-CD-NE	5.11	122.53	111.80
2	A	4046	ARG	CG-CD-NE	5.10	122.50	111.80
3	K	1	MET	CA-CB-CG	5.07	121.92	113.30
3	L	1	MET	CA-CB-CG	5.07	121.91	113.30
2	A	2590	ARG	CG-CD-NE	5.06	122.43	111.80
2	B	2590	ARG	CG-CD-NE	5.05	122.41	111.80
3	J	1	MET	CA-CB-CG	5.05	121.89	113.30
2	C	2590	ARG	CG-CD-NE	5.05	122.41	111.80
3	I	1	MET	CA-CB-CG	5.05	121.88	113.30
2	D	2590	ARG	CG-CD-NE	5.05	122.40	111.80
3	K	125	MET	CA-CB-CG	5.03	121.86	113.30
3	I	125	MET	CA-CB-CG	5.02	121.84	113.30
3	L	125	MET	CA-CB-CG	5.01	121.82	113.30

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	2886	ARG	Sidechain
2	A	2995	HIS	Peptide
2	A	4640	PHE	Peptide
2	A	520	ARG	Sidechain
2	B	2886	ARG	Sidechain
2	B	2995	HIS	Peptide
2	B	4640	PHE	Peptide
2	B	520	ARG	Sidechain
2	C	2886	ARG	Sidechain
2	C	2995	HIS	Peptide
2	C	4640	PHE	Peptide
2	C	520	ARG	Sidechain
2	D	2886	ARG	Sidechain
2	D	2995	HIS	Peptide
2	D	4640	PHE	Peptide
2	D	520	ARG	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	E	818	0	821	26	0
1	F	818	0	821	29	0
1	G	818	0	821	25	0
1	H	818	0	821	27	0
2	A	33816	0	33507	667	0
2	B	33816	0	33507	664	0
2	C	33816	0	33507	666	0
2	D	33816	0	33507	675	0
3	I	1112	0	1053	31	0
3	J	1112	0	1053	27	0
3	K	1112	0	1053	28	0
3	L	1112	0	1053	30	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	62	0	24	0	0
5	B	62	0	24	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	C	62	0	24	0	0
5	D	62	0	24	0	0
All	All	143236	0	141620	2829	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 10.

All (2829) 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)
2:A:2841:ALA:HA	2:A:2844:MET:HG3	1.35	1.09
2:B:2841:ALA:HA	2:B:2844:MET:HG3	1.35	1.08
2:C:2841:ALA:HA	2:C:2844:MET:HG3	1.34	1.06
2:D:2841:ALA:HA	2:D:2844:MET:HG3	1.35	1.04
1:F:50:ARG:HH11	1:F:50:ARG:HB2	1.34	0.93
1:H:50:ARG:HH11	1:H:50:ARG:HB2	1.35	0.91
1:G:50:ARG:HB2	1:G:50:ARG:HH11	1.34	0.89
1:E:50:ARG:HB2	1:E:50:ARG:HH11	1.34	0.89
3:L:75:ARG:O	3:L:78:LYS:NZ	2.10	0.85
3:K:75:ARG:O	3:K:78:LYS:NZ	2.10	0.84
3:J:75:ARG:O	3:J:78:LYS:NZ	2.10	0.84
3:I:75:ARG:O	3:I:78:LYS:NZ	2.10	0.83
2:C:1703:TYR:HD2	2:C:1820:PRO:HB2	1.44	0.83
2:D:1703:TYR:HD2	2:D:1820:PRO:HB2	1.44	0.82
2:C:3264:CYS:SG	2:C:3265:CYS:N	2.53	0.81
2:B:1703:TYR:HD2	2:B:1820:PRO:HB2	1.44	0.81
2:D:3264:CYS:SG	2:D:3265:CYS:N	2.53	0.81
2:A:3264:CYS:SG	2:A:3265:CYS:N	2.53	0.81
2:B:3264:CYS:SG	2:B:3265:CYS:N	2.53	0.80
3:I:52:MET:SD	3:I:76:LYS:NZ	2.55	0.80
2:A:1703:TYR:HD2	2:A:1820:PRO:HB2	1.44	0.80
3:J:52:MET:SD	3:J:76:LYS:NZ	2.55	0.80
3:K:52:MET:SD	3:K:76:LYS:NZ	2.55	0.80
2:C:3131:TYR:HE1	2:C:3166:PHE:HZ	1.29	0.80
2:D:2607:LEU:HD21	2:D:2665:ALA:HA	1.64	0.79
2:B:2590:ARG:NH1	2:B:2636:GLU:OE2	2.15	0.79
2:B:2607:LEU:HD21	2:B:2665:ALA:HA	1.65	0.79
3:L:52:MET:SD	3:L:76:LYS:NZ	2.55	0.79
2:A:878:LEU:HD11	2:A:950:VAL:HG21	1.64	0.79
2:B:878:LEU:HD11	2:B:950:VAL:HG21	1.64	0.79
2:C:2590:ARG:NH1	2:C:2636:GLU:OE2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2607:LEU:HD21	2:A:2665:ALA:HA	1.65	0.79
2:B:4183:LYS:HB2	2:B:4183:LYS:NZ	1.98	0.79
2:C:2592:LEU:HD11	2:C:2606:PRO:HB3	1.65	0.79
2:D:2590:ARG:NH1	2:D:2636:GLU:OE2	2.15	0.79
2:D:4183:LYS:HB2	2:D:4183:LYS:NZ	1.98	0.79
2:A:3131:TYR:HE1	2:A:3166:PHE:HZ	1.29	0.78
2:C:2607:LEU:HD21	2:C:2665:ALA:HA	1.65	0.78
2:C:4183:LYS:HB2	2:C:4183:LYS:NZ	1.98	0.78
2:C:878:LEU:HD11	2:C:950:VAL:HG21	1.64	0.78
2:A:936:SER:O	2:A:940:LEU:HD12	1.84	0.78
2:D:3131:TYR:HE1	2:D:3166:PHE:HZ	1.29	0.78
2:B:3131:TYR:HE1	2:B:3166:PHE:HZ	1.29	0.78
2:A:2590:ARG:NH1	2:A:2636:GLU:OE2	2.15	0.78
2:C:2887:GLU:O	2:C:2891:ASP:HB2	1.84	0.78
2:B:2592:LEU:HD11	2:B:2606:PRO:HB3	1.65	0.77
2:A:4183:LYS:HB2	2:A:4183:LYS:NZ	1.98	0.77
2:B:2887:GLU:O	2:B:2891:ASP:HB2	1.84	0.77
2:D:2592:LEU:HD11	2:D:2606:PRO:HB3	1.65	0.77
2:D:2623:LEU:HD22	2:D:2626:GLY:H	1.49	0.77
2:B:936:SER:O	2:B:940:LEU:HD12	1.84	0.77
2:C:2623:LEU:HD22	2:C:2626:GLY:H	1.49	0.77
2:D:878:LEU:HD11	2:D:950:VAL:HG21	1.64	0.77
2:A:2623:LEU:HD22	2:A:2626:GLY:H	1.49	0.77
2:D:936:SER:O	2:D:940:LEU:HD12	1.84	0.77
2:B:3236:GLU:O	2:B:3298:ARG:NH2	2.18	0.77
2:D:2887:GLU:O	2:D:2891:ASP:HB2	1.84	0.77
2:C:981:MET:SD	2:C:1055:ARG:NH1	2.58	0.77
2:C:3236:GLU:O	2:C:3298:ARG:NH2	2.18	0.77
2:A:2887:GLU:O	2:A:2891:ASP:HB2	1.84	0.76
2:D:3236:GLU:O	2:D:3298:ARG:NH2	2.18	0.76
2:A:2860:LEU:HD23	2:A:2863:LYS:HZ1	1.49	0.76
2:B:3261:ALA:O	2:B:3262:GLU:HG3	1.85	0.76
2:D:981:MET:SD	2:D:1055:ARG:NH1	2.58	0.76
2:A:2592:LEU:HD11	2:A:2606:PRO:HB3	1.65	0.76
2:A:3261:ALA:O	2:A:3262:GLU:HG3	1.85	0.76
2:D:3261:ALA:O	2:D:3262:GLU:HG3	1.85	0.76
2:B:981:MET:SD	2:B:1055:ARG:NH1	2.58	0.76
2:A:3236:GLU:O	2:A:3298:ARG:NH2	2.18	0.76
2:C:3261:ALA:O	2:C:3262:GLU:HG3	1.85	0.76
2:A:981:MET:SD	2:A:1055:ARG:NH1	2.58	0.76
2:C:936:SER:O	2:C:940:LEU:HD12	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4707:MET:HG3	2:C:4252:ILE:HG21	1.68	0.76
2:D:11:ILE:HG23	2:D:13:PHE:HE2	1.52	0.75
2:B:1795:LEU:HD23	2:B:1842:ILE:HD11	1.69	0.75
2:B:2623:LEU:HD22	2:B:2626:GLY:H	1.49	0.75
1:G:19:LYS:HA	1:G:19:LYS:HE3	1.68	0.75
2:A:1795:LEU:HD23	2:A:1842:ILE:HD11	1.69	0.75
2:D:1795:LEU:HD23	2:D:1842:ILE:HD11	1.69	0.75
1:E:19:LYS:HA	1:E:19:LYS:HE3	1.68	0.75
2:C:11:ILE:HG23	2:C:13:PHE:HE2	1.52	0.74
1:H:19:LYS:HA	1:H:19:LYS:HE3	1.68	0.74
2:C:1795:LEU:HD23	2:C:1842:ILE:HD11	1.69	0.74
2:A:3926:GLY:HA2	2:A:4935:GLY:HA3	1.69	0.74
2:C:3214:LEU:O	2:C:3218:ILE:HG22	1.88	0.74
2:A:4640:PHE:CD2	2:A:4641:PRO:HD3	2.23	0.74
1:F:19:LYS:HA	1:F:19:LYS:HE3	1.68	0.74
2:B:4640:PHE:CD2	2:B:4641:PRO:HD3	2.23	0.74
2:C:3926:GLY:HA2	2:C:4935:GLY:HA3	1.69	0.74
2:A:11:ILE:HG23	2:A:13:PHE:HE2	1.52	0.74
2:D:3214:LEU:O	2:D:3218:ILE:HG22	1.88	0.73
2:C:4640:PHE:CD2	2:C:4641:PRO:HD3	2.23	0.73
2:D:4640:PHE:CD2	2:D:4641:PRO:HD3	2.23	0.73
2:B:11:ILE:HG23	2:B:13:PHE:HE2	1.52	0.73
2:B:3926:GLY:HA2	2:B:4935:GLY:HA3	1.69	0.73
2:D:3926:GLY:HA2	2:D:4935:GLY:HA3	1.69	0.73
2:C:930:ASN:O	2:C:934:GLN:NE2	2.22	0.73
2:A:930:ASN:O	2:A:934:GLN:NE2	2.22	0.72
2:D:930:ASN:O	2:D:934:GLN:NE2	2.22	0.72
2:B:844:ARG:NH1	2:B:845:THR:OG1	2.23	0.72
2:D:844:ARG:NH1	2:D:845:THR:OG1	2.23	0.72
2:B:3214:LEU:O	2:B:3218:ILE:HG22	1.88	0.72
2:A:844:ARG:NH1	2:A:845:THR:OG1	2.22	0.72
2:A:3214:LEU:O	2:A:3218:ILE:HG22	1.88	0.72
2:A:3134:LEU:HD12	2:A:3162:PHE:HE2	1.55	0.72
2:C:844:ARG:NH1	2:C:845:THR:OG1	2.23	0.72
2:D:2123:LEU:HD13	2:D:2167:MET:HG2	1.71	0.72
2:B:2123:LEU:HD13	2:B:2167:MET:HG2	1.71	0.72
2:D:3134:LEU:HD12	2:D:3162:PHE:HE2	1.55	0.71
2:C:3284:ILE:O	2:C:3288:LEU:HB2	1.90	0.71
2:B:930:ASN:O	2:B:934:GLN:NE2	2.22	0.71
2:B:3134:LEU:HD12	2:B:3162:PHE:HE2	1.55	0.71
2:C:2123:LEU:HD13	2:C:2167:MET:HG2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:885:LEU:HD11	2:D:1057:LEU:HD13	1.73	0.71
2:D:3284:ILE:O	2:D:3288:LEU:HB2	1.90	0.71
2:B:449:ILE:HD13	2:B:522:ALA:HA	1.73	0.71
2:A:3284:ILE:O	2:A:3288:LEU:HB2	1.90	0.71
2:D:3595:ARG:HD3	3:L:146:MET:HG3	1.71	0.71
2:C:885:LEU:HD11	2:C:1057:LEU:HD13	1.73	0.71
2:B:2129:LEU:HD22	2:B:2132:VAL:HG21	1.73	0.71
2:A:2129:LEU:HD22	2:A:2132:VAL:HG21	1.73	0.71
2:D:1499:GLY:HA3	2:C:2824:ARG:HH21	1.56	0.71
2:B:3284:ILE:O	2:B:3288:LEU:HB2	1.90	0.71
2:C:449:ILE:HD13	2:C:522:ALA:HA	1.73	0.71
2:C:3134:LEU:HD12	2:C:3162:PHE:HE2	1.55	0.71
2:D:2129:LEU:HD22	2:D:2132:VAL:HG21	1.73	0.70
2:A:2123:LEU:HD13	2:A:2167:MET:HG2	1.71	0.70
2:D:4484:ILE:HG22	2:C:4279:MET:SD	2.31	0.70
2:B:2703:PRO:HB2	2:B:2854:LYS:HD3	1.74	0.70
2:C:2129:LEU:HD22	2:C:2132:VAL:HG21	1.73	0.70
2:B:1979:PHE:CD1	2:B:1993:ARG:HG2	2.26	0.70
2:C:1979:PHE:CD1	2:C:1993:ARG:HG2	2.27	0.70
2:A:2703:PRO:HB2	2:A:2854:LYS:HD3	1.74	0.70
2:A:2702:ASN:ND2	2:A:2702:ASN:O	2.24	0.70
2:D:3266:THR:HB	2:D:3268:LEU:HD13	1.74	0.70
2:B:885:LEU:HD11	2:B:1057:LEU:HD13	1.73	0.70
2:C:756:SER:HB2	2:C:769:ARG:HB2	1.74	0.70
2:C:1129:GLY:HA3	2:C:1145:TRP:HB3	1.74	0.70
2:B:756:SER:HB2	2:B:769:ARG:HB2	1.74	0.70
2:B:3266:THR:HB	2:B:3268:LEU:HD13	1.74	0.70
2:A:3266:THR:HB	2:A:3268:LEU:HD13	1.74	0.69
2:C:3183:ILE:HG12	2:C:3192:ARG:HH22	1.57	0.69
2:A:449:ILE:HD13	2:A:522:ALA:HA	1.73	0.69
2:D:756:SER:HB2	2:D:769:ARG:HB2	1.74	0.69
2:D:1979:PHE:CD1	2:D:1993:ARG:HG2	2.27	0.69
2:B:2702:ASN:O	2:B:2702:ASN:ND2	2.24	0.69
2:C:3266:THR:HB	2:C:3268:LEU:HD13	1.74	0.69
2:A:4930:GLU:HA	2:A:4933:HIS:CE1	2.27	0.69
2:D:449:ILE:HD13	2:D:522:ALA:HA	1.73	0.69
2:D:2627:TRP:HB3	2:D:2630:PHE:HB2	1.75	0.69
2:C:1979:PHE:HB2	2:C:3628:TRP:HZ2	1.58	0.69
2:C:4930:GLU:HA	2:C:4933:HIS:CE1	2.28	0.69
2:A:885:LEU:HD11	2:A:1057:LEU:HD13	1.73	0.69
2:A:3183:ILE:HG12	2:A:3192:ARG:HH22	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2703:PRO:HB2	2:D:2854:LYS:HD3	1.74	0.69
2:B:1129:GLY:HA3	2:B:1145:TRP:HB3	1.74	0.69
2:B:2917:ILE:HG22	2:B:2920:ARG:HH21	1.58	0.69
2:C:2860:LEU:HD23	2:C:2863:LYS:HZ1	1.55	0.69
2:D:3183:ILE:HG12	2:D:3192:ARG:HH22	1.58	0.69
2:B:4930:GLU:HA	2:B:4933:HIS:CE1	2.27	0.69
2:A:756:SER:HB2	2:A:769:ARG:HB2	1.74	0.69
2:A:2917:ILE:HG22	2:A:2920:ARG:HH21	1.58	0.69
2:D:2702:ASN:O	2:D:2702:ASN:ND2	2.24	0.69
2:B:2833:LEU:HD11	2:B:2894:LYS:HG3	1.75	0.69
2:C:2627:TRP:HB3	2:C:2630:PHE:HB2	1.75	0.69
2:C:2702:ASN:O	2:C:2702:ASN:ND2	2.24	0.69
2:C:2703:PRO:HB2	2:C:2854:LYS:HD3	1.74	0.69
2:A:1979:PHE:CD1	2:A:1993:ARG:HG2	2.27	0.69
2:A:2627:TRP:HB3	2:A:2630:PHE:HB2	1.75	0.69
2:B:2860:LEU:HD23	2:B:2863:LYS:HZ1	1.58	0.68
2:A:2833:LEU:HD11	2:A:2894:LYS:HG3	1.75	0.68
2:D:1979:PHE:HB2	2:D:3628:TRP:HZ2	1.58	0.68
2:D:2917:ILE:HG22	2:D:2920:ARG:HH21	1.58	0.68
2:A:1129:GLY:HA3	2:A:1145:TRP:HB3	1.74	0.68
2:A:1979:PHE:HB2	2:A:3628:TRP:HZ2	1.58	0.68
2:D:1129:GLY:HA3	2:D:1145:TRP:HB3	1.74	0.68
2:B:2627:TRP:HB3	2:B:2630:PHE:HB2	1.75	0.68
2:B:3131:TYR:CE1	2:B:3166:PHE:HZ	2.11	0.68
2:B:3183:ILE:HG12	2:B:3192:ARG:HH22	1.58	0.68
2:D:3701:ASP:OD2	2:D:3727:GLN:NE2	2.24	0.68
2:B:2887:GLU:O	2:B:2891:ASP:CB	2.42	0.68
2:A:1299:ILE:HD13	2:A:1546:GLN:HB2	1.75	0.68
2:A:3131:TYR:CE1	2:A:3166:PHE:HZ	2.11	0.68
1:G:52:GLY:N	1:G:61:GLU:OE2	2.24	0.68
2:C:2917:ILE:HG22	2:C:2920:ARG:HH21	1.57	0.68
3:J:112:ASN:ND2	3:J:117:LEU:O	2.27	0.68
2:D:2833:LEU:HD11	2:D:2894:LYS:HG3	1.75	0.68
2:D:2887:GLU:O	2:D:2891:ASP:CB	2.42	0.68
2:C:2882:LYS:HD2	2:C:2886:ARG:HH12	1.59	0.68
2:A:1703:TYR:CD2	2:A:1820:PRO:HB2	2.29	0.67
2:B:1979:PHE:HB2	2:B:3628:TRP:HZ2	1.58	0.67
2:B:2692:GLN:HA	2:B:2695:MET:HB2	1.77	0.67
2:C:1299:ILE:HD13	2:C:1546:GLN:HB2	1.75	0.67
2:C:1962:THR:HG23	2:C:1966:ARG:HE	1.59	0.67
2:A:308:LEU:HD13	2:A:393:MET:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:52:GLY:N	1:E:61:GLU:OE2	2.24	0.67
2:C:2692:GLN:HA	2:C:2695:MET:HB2	1.77	0.67
2:A:2882:LYS:HD2	2:A:2886:ARG:HH12	1.59	0.67
2:A:2887:GLU:O	2:A:2891:ASP:CB	2.42	0.67
2:D:3131:TYR:CE1	2:D:3166:PHE:HZ	2.11	0.67
2:B:1703:TYR:CD2	2:B:1820:PRO:HB2	2.29	0.67
2:C:308:LEU:HD13	2:C:393:MET:HG3	1.76	0.67
2:C:2833:LEU:HD11	2:C:2894:LYS:HG3	1.75	0.67
2:C:2887:GLU:O	2:C:2891:ASP:CB	2.42	0.67
2:A:3601:ALA:O	2:A:3605:MET:HB2	1.95	0.67
2:D:2882:LYS:HD2	2:D:2886:ARG:HH12	1.59	0.67
2:C:943:LEU:HD21	2:C:999:LEU:HD22	1.76	0.67
2:C:3131:TYR:CE1	2:C:3166:PHE:HZ	2.11	0.67
3:I:112:ASN:ND2	3:I:117:LEU:O	2.27	0.67
2:D:3601:ALA:O	2:D:3605:MET:HB2	1.95	0.67
2:D:1962:THR:HG23	2:D:1966:ARG:HE	1.59	0.67
3:K:112:ASN:ND2	3:K:117:LEU:O	2.27	0.67
2:D:308:LEU:HD13	2:D:393:MET:HG3	1.76	0.67
2:B:1962:THR:HG23	2:B:1966:ARG:HE	1.60	0.67
2:A:3270:SER:HA	2:A:3273:MET:SD	2.35	0.67
2:B:1299:ILE:HD13	2:B:1546:GLN:HB2	1.76	0.67
1:H:24:VAL:HG22	1:H:48:LYS:HG2	1.76	0.67
2:D:1299:ILE:HD13	2:D:1546:GLN:HB2	1.75	0.67
2:A:2692:GLN:HA	2:A:2695:MET:HB2	1.77	0.66
2:B:2882:LYS:HD2	2:B:2886:ARG:HH12	1.59	0.66
2:A:943:LEU:HD21	2:A:999:LEU:HD22	1.76	0.66
2:D:1703:TYR:CD2	2:D:1820:PRO:HB2	2.29	0.66
2:B:1662:SER:OG	2:B:1708:ASP:OD2	2.14	0.66
2:D:2692:GLN:HA	2:D:2695:MET:HB2	1.77	0.66
2:B:2102:LEU:HD23	2:B:3625:GLU:HB2	1.78	0.66
2:C:3270:SER:HA	2:C:3273:MET:SD	2.35	0.66
2:B:3270:SER:HA	2:B:3273:MET:SD	2.35	0.66
2:C:1662:SER:OG	2:C:1708:ASP:OD2	2.14	0.66
2:C:1703:TYR:CD2	2:C:1820:PRO:HB2	2.29	0.66
2:A:1962:THR:HG23	2:A:1966:ARG:HE	1.59	0.66
2:D:1662:SER:OG	2:D:1708:ASP:OD2	2.13	0.66
2:B:308:LEU:HD13	2:B:393:MET:HG3	1.76	0.66
3:L:112:ASN:ND2	3:L:117:LEU:O	2.27	0.66
1:G:24:VAL:HG22	1:G:48:LYS:HG2	1.76	0.66
2:D:943:LEU:HD21	2:D:999:LEU:HD22	1.76	0.66
2:B:1766:PRO:HG3	2:B:1780:PRO:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3601:ALA:O	2:B:3605:MET:HB2	1.95	0.66
2:A:1766:PRO:HG3	2:A:1780:PRO:HB3	1.78	0.66
2:A:2102:LEU:HD23	2:A:3625:GLU:HB2	1.78	0.66
2:C:3601:ALA:O	2:C:3605:MET:HB2	1.95	0.66
2:A:3250:TRP:HE1	2:A:3273:MET:CE	2.09	0.66
2:D:2860:LEU:HD23	2:D:2863:LYS:HZ1	1.61	0.66
2:C:2102:LEU:HD23	2:C:3625:GLU:HB2	1.78	0.66
2:A:915:HIS:HD2	2:A:916:PRO:HD2	1.62	0.65
2:A:1662:SER:OG	2:A:1708:ASP:OD2	2.14	0.65
1:F:24:VAL:HG22	1:F:48:LYS:HG2	1.76	0.65
2:D:3250:TRP:HE1	2:D:3273:MET:CE	2.09	0.65
2:B:3050:LEU:HD23	2:B:3052:SER:H	1.61	0.65
2:B:943:LEU:HD21	2:B:999:LEU:HD22	1.76	0.65
2:B:3250:TRP:HE1	2:B:3273:MET:CE	2.09	0.65
2:D:1979:PHE:HB2	2:D:3628:TRP:CZ2	2.32	0.65
2:D:3050:LEU:HD23	2:D:3052:SER:H	1.61	0.65
2:A:2549:LEU:HB3	2:A:2588:LEU:HD22	1.79	0.65
2:D:3270:SER:HA	2:D:3273:MET:SD	2.35	0.65
2:A:1979:PHE:HB2	2:A:3628:TRP:CZ2	2.32	0.65
2:D:2102:LEU:HD23	2:D:3625:GLU:HB2	1.78	0.65
2:C:915:HIS:HD2	2:C:916:PRO:HD2	1.61	0.65
2:A:2623:LEU:HD23	2:A:2625:GLY:H	1.62	0.65
2:D:1766:PRO:HG3	2:D:1780:PRO:HB3	1.78	0.65
2:D:2623:LEU:HD23	2:D:2625:GLY:H	1.62	0.65
2:D:3166:PHE:HE2	2:D:3168:VAL:HB	1.61	0.65
2:B:2129:LEU:HD12	2:B:2142:MET:HE2	1.78	0.65
2:C:1766:PRO:HG3	2:C:1780:PRO:HB3	1.78	0.65
2:A:3166:PHE:HE2	2:A:3168:VAL:HB	1.61	0.65
2:A:3050:LEU:HD23	2:A:3052:SER:H	1.61	0.64
1:E:24:VAL:HG22	1:E:48:LYS:HG2	1.76	0.64
2:B:982:ASP:O	2:B:1055:ARG:NH1	2.27	0.64
2:D:878:LEU:HB3	2:D:940:LEU:CD2	2.28	0.64
2:C:1979:PHE:HB2	2:C:3628:TRP:CZ2	2.32	0.64
2:C:3250:TRP:HE1	2:C:3273:MET:CE	2.09	0.64
2:A:878:LEU:HB3	2:A:940:LEU:CD2	2.27	0.64
2:B:2549:LEU:HB3	2:B:2588:LEU:HD22	1.79	0.64
2:A:2296:GLU:HG3	2:A:2390:THR:HG22	1.80	0.64
2:B:2623:LEU:HD23	2:B:2625:GLY:H	1.62	0.64
2:B:3173:THR:HB	2:B:3201:VAL:HG12	1.79	0.64
2:C:3701:ASP:OD2	2:C:3727:GLN:NE2	2.24	0.64
2:D:2296:GLU:HG3	2:D:2390:THR:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2623:LEU:HD23	2:C:2625:GLY:H	1.62	0.64
2:C:3166:PHE:HE2	2:C:3168:VAL:HB	1.61	0.64
1:F:52:GLY:N	1:F:61:GLU:OE2	2.24	0.64
2:D:3173:THR:HB	2:D:3201:VAL:HG12	1.79	0.64
2:B:915:HIS:HD2	2:B:916:PRO:HD2	1.62	0.64
2:C:3050:LEU:HD23	2:C:3052:SER:H	1.61	0.64
1:H:50:ARG:HB2	1:H:50:ARG:NH1	2.10	0.64
2:B:1910:LEU:HD13	2:B:2062:ILE:HG12	1.80	0.64
2:C:1910:LEU:HD13	2:C:2062:ILE:HG12	1.80	0.64
2:D:915:HIS:HD2	2:D:916:PRO:HD2	1.62	0.64
2:D:1842:ILE:HD12	2:D:1845:LEU:HD12	1.80	0.64
2:B:4690:LYS:HD3	2:B:4692:SER:H	1.63	0.64
2:A:3219:VAL:HG12	2:A:3279:ASN:HD22	1.63	0.64
1:F:36:LYS:HB2	2:B:647:ARG:HH12	1.62	0.64
2:D:2549:LEU:HB3	2:D:2588:LEU:HD22	1.79	0.64
2:A:1842:ILE:HD12	2:A:1845:LEU:HD12	1.80	0.64
2:D:3295:TRP:HA	2:D:3298:ARG:HG2	1.80	0.64
2:D:4690:LYS:HD3	2:D:4692:SER:H	1.63	0.64
2:C:878:LEU:HB3	2:C:940:LEU:CD2	2.27	0.64
2:C:2760:TYR:HA	2:C:2763:LEU:HD13	1.80	0.64
2:A:1010:ASP:OD1	2:A:1013:ARG:NH2	2.32	0.63
2:B:878:LEU:HB3	2:B:940:LEU:CD2	2.28	0.63
2:C:1154:ARG:H	2:C:1182:LEU:HD22	1.63	0.63
2:A:3030:VAL:HG22	2:A:3034:HIS:CE1	2.34	0.63
2:A:3173:THR:HB	2:A:3201:VAL:HG12	1.79	0.63
2:A:3250:TRP:HE1	2:A:3273:MET:HE1	1.63	0.63
2:D:1154:ARG:H	2:D:1182:LEU:HD22	1.63	0.63
2:B:1842:ILE:HD12	2:B:1845:LEU:HD12	1.80	0.63
2:B:2760:TYR:HA	2:B:2763:LEU:HD13	1.80	0.63
1:E:50:ARG:HB2	1:E:50:ARG:NH1	2.10	0.63
2:D:4177:VAL:HG11	2:D:4880:VAL:HA	1.81	0.63
2:B:1979:PHE:HB2	2:B:3628:TRP:CZ2	2.32	0.63
2:B:2296:GLU:HG3	2:B:2390:THR:HG22	1.80	0.63
2:B:3166:PHE:HE2	2:B:3168:VAL:HB	1.61	0.63
2:C:3295:TRP:HA	2:C:3298:ARG:HG2	1.80	0.63
2:A:1154:ARG:H	2:A:1182:LEU:HD22	1.63	0.63
2:A:4177:VAL:HG11	2:A:4880:VAL:HA	1.81	0.63
2:D:4864:GLY:HA2	2:C:4867:ILE:HG12	1.80	0.63
2:B:3030:VAL:HG22	2:B:3034:HIS:CE1	2.34	0.63
2:A:3295:TRP:HA	2:A:3298:ARG:HG2	1.80	0.63
2:A:4690:LYS:HD3	2:A:4692:SER:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3219:VAL:HG12	2:D:3279:ASN:HD22	1.63	0.63
2:B:1010:ASP:OD1	2:B:1013:ARG:NH2	2.32	0.63
2:B:3192:ARG:HB3	2:B:3199:THR:HG22	1.81	0.63
2:C:982:ASP:O	2:C:1055:ARG:NH1	2.27	0.63
2:C:3173:THR:HB	2:C:3201:VAL:HG12	1.79	0.63
2:A:824:GLU:OE1	2:A:1028:ARG:NH1	2.32	0.63
2:A:3192:ARG:HB3	2:A:3199:THR:HG22	1.81	0.63
2:A:4796:SER:HB3	2:A:4803:ASP:HB2	1.80	0.63
2:C:1842:ILE:HD12	2:C:1845:LEU:HD12	1.80	0.63
2:C:4690:LYS:HD3	2:C:4692:SER:H	1.63	0.63
2:C:2549:LEU:HB3	2:C:2588:LEU:HD22	1.79	0.63
2:C:3030:VAL:HG22	2:C:3034:HIS:CE1	2.34	0.63
2:A:1910:LEU:HD13	2:A:2062:ILE:HG12	1.80	0.63
2:A:2760:TYR:HA	2:A:2763:LEU:HD13	1.80	0.63
2:D:3030:VAL:HG22	2:D:3034:HIS:CE1	2.34	0.63
2:D:4796:SER:HB3	2:D:4803:ASP:HB2	1.80	0.63
2:C:824:GLU:OE1	2:C:1028:ARG:NH1	2.32	0.63
2:C:2296:GLU:HG3	2:C:2390:THR:HG22	1.80	0.63
2:C:3192:ARG:HB3	2:C:3199:THR:HG22	1.81	0.63
2:B:824:GLU:OE1	2:B:1028:ARG:NH1	2.32	0.63
1:H:52:GLY:N	1:H:61:GLU:OE2	2.24	0.62
2:A:2785:TRP:HE3	2:A:2787:TRP:CZ2	2.17	0.62
2:D:824:GLU:OE1	2:D:1028:ARG:NH1	2.32	0.62
2:B:2785:TRP:HE3	2:B:2787:TRP:CZ2	2.17	0.62
2:B:3219:VAL:HG12	2:B:3279:ASN:HD22	1.63	0.62
2:B:4183:LYS:HB2	2:B:4183:LYS:HZ2	1.63	0.62
2:A:891:GLU:HB3	2:A:895:MET:HE1	1.80	0.62
2:A:2126:ILE:HA	2:A:2142:MET:CE	2.30	0.62
2:A:3595:ARG:HD3	3:I:146:MET:HG3	1.80	0.62
2:D:1010:ASP:OD1	2:D:1013:ARG:NH2	2.32	0.62
2:B:2126:ILE:HA	2:B:2142:MET:CE	2.30	0.62
2:B:3295:TRP:HA	2:B:3298:ARG:HG2	1.80	0.62
2:C:4177:VAL:HG11	2:C:4880:VAL:HA	1.81	0.62
2:D:1910:LEU:HD13	2:D:2062:ILE:HG12	1.79	0.62
2:D:2785:TRP:HE3	2:D:2787:TRP:CZ2	2.17	0.62
2:D:3135:THR:HA	2:D:3208:ILE:HD11	1.82	0.62
2:D:3192:ARG:HB3	2:D:3199:THR:HG22	1.81	0.62
2:D:114:LEU:HB2	2:D:117:HIS:CD2	2.35	0.62
2:D:2129:LEU:HD12	2:D:2142:MET:HE2	1.81	0.62
2:C:2837:LEU:HD11	2:C:2893:LEU:HD12	1.82	0.62
2:C:4796:SER:HB3	2:C:4803:ASP:HB2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2585:MET:H	2:A:2585:MET:HE2	1.64	0.62
2:D:2760:TYR:HA	2:D:2763:LEU:HD13	1.80	0.62
2:B:114:LEU:HB2	2:B:117:HIS:CD2	2.35	0.62
2:B:4796:SER:HB3	2:B:4803:ASP:HB2	1.80	0.62
2:C:2785:TRP:HE3	2:C:2787:TRP:CZ2	2.17	0.62
2:D:1166:VAL:HG23	2:D:1173:MET:HG2	1.82	0.62
2:B:2837:LEU:HD11	2:B:2893:LEU:HD12	1.82	0.62
2:B:4177:VAL:HG11	2:B:4880:VAL:HA	1.81	0.62
2:C:1010:ASP:OD1	2:C:1013:ARG:NH2	2.32	0.62
2:C:1283:LEU:HB2	2:C:1555:PHE:HB2	1.82	0.62
2:C:114:LEU:HB2	2:C:117:HIS:CD2	2.35	0.62
2:C:3219:VAL:HG12	2:C:3279:ASN:HD22	1.63	0.62
2:A:982:ASP:O	2:A:1055:ARG:NH1	2.27	0.62
2:B:2496:LEU:HD23	2:B:2520:LEU:HD13	1.82	0.62
2:A:1166:VAL:HG23	2:A:1173:MET:HG2	1.82	0.61
2:D:2126:ILE:HA	2:D:2142:MET:CE	2.30	0.61
2:C:2126:ILE:HA	2:C:2142:MET:CE	2.30	0.61
2:C:2496:LEU:HD23	2:C:2520:LEU:HD13	1.82	0.61
2:D:76:ARG:NE	2:C:3890:TRP:O	2.33	0.61
2:D:1283:LEU:HB2	2:D:1555:PHE:HB2	1.82	0.61
2:B:1154:ARG:H	2:B:1182:LEU:HD22	1.63	0.61
2:B:3965:ILE:HD12	2:B:4086:ARG:HD2	1.82	0.61
2:A:114:LEU:HB2	2:A:117:HIS:CD2	2.35	0.61
2:A:2126:ILE:HA	2:A:2142:MET:HE3	1.82	0.61
2:D:2837:LEU:HD11	2:D:2893:LEU:HD12	1.82	0.61
2:D:891:GLU:HB3	2:D:895:MET:HE1	1.82	0.61
2:D:3250:TRP:HE1	2:D:3273:MET:HE1	1.64	0.61
2:C:2129:LEU:HD12	2:C:2142:MET:HE2	1.81	0.61
2:C:3311:LYS:HZ2	2:C:3313:GLN:HB2	1.65	0.61
2:A:1283:LEU:HB2	2:A:1555:PHE:HB2	1.82	0.61
1:G:50:ARG:HH11	1:G:50:ARG:CB	2.12	0.61
2:D:4110:PRO:HG3	2:D:4966:LEU:HD23	1.83	0.61
2:C:4187:GLU:OE2	2:C:4947:ARG:NH2	2.34	0.61
2:A:670:TYR:O	2:A:673:TRP:NE1	2.34	0.61
2:A:3135:THR:HA	2:A:3208:ILE:HD11	1.81	0.61
2:B:3183:ILE:HG12	2:B:3192:ARG:NH2	2.16	0.61
2:B:4110:PRO:HG3	2:B:4966:LEU:HD23	1.83	0.61
2:B:3701:ASP:OD2	2:B:3727:GLN:NE2	2.24	0.61
2:A:2837:LEU:HD11	2:A:2893:LEU:HD12	1.82	0.61
2:D:436:LEU:HD22	2:D:517:VAL:HG12	1.83	0.61
2:D:2496:LEU:HD23	2:D:2520:LEU:HD13	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:2867:ASN:O	2:D:2867:ASN:ND2	2.32	0.61
2:B:4187:GLU:OE2	2:B:4947:ARG:NH2	2.33	0.61
2:C:436:LEU:HD22	2:C:517:VAL:HG12	1.83	0.61
2:C:3965:ILE:HD12	2:C:4086:ARG:HD2	1.82	0.61
2:D:3183:ILE:HG12	2:D:3192:ARG:NH2	2.16	0.61
2:B:670:TYR:O	2:B:673:TRP:NE1	2.34	0.61
2:A:3178:HIS:HB3	2:A:3263:MET:O	2.01	0.60
2:A:3183:ILE:HG12	2:A:3192:ARG:NH2	2.16	0.60
1:G:50:ARG:HB2	1:G:50:ARG:NH1	2.10	0.60
2:D:670:TYR:O	2:D:673:TRP:NE1	2.34	0.60
2:B:3135:THR:HA	2:B:3208:ILE:HD11	1.82	0.60
2:B:1166:VAL:HG23	2:B:1173:MET:HG2	1.82	0.60
2:C:1166:VAL:HG23	2:C:1173:MET:HG2	1.82	0.60
2:A:1966:ARG:NH1	3:I:111:THR:OG1	2.34	0.60
2:C:3135:THR:HA	2:C:3208:ILE:HD11	1.81	0.60
2:A:2496:LEU:HD23	2:A:2520:LEU:HD13	1.82	0.60
2:A:3246:MET:HG3	2:A:3268:LEU:HD23	1.84	0.60
1:F:50:ARG:HB2	1:F:50:ARG:NH1	2.10	0.60
2:D:1979:PHE:HD1	2:D:1993:ARG:HG2	1.66	0.60
2:D:3178:HIS:HB3	2:D:3263:MET:O	2.01	0.60
2:B:3246:MET:HG3	2:B:3268:LEU:HD23	1.84	0.60
2:A:1979:PHE:HD1	2:A:1993:ARG:HG2	1.66	0.60
1:E:106:ASN:OD1	1:E:107:LEU:N	2.35	0.60
2:B:2409:ILE:HD13	2:B:2420:ARG:HD3	1.84	0.60
2:B:2585:MET:HE2	2:B:2585:MET:H	1.65	0.60
2:C:670:TYR:O	2:C:673:TRP:NE1	2.34	0.60
2:C:3246:MET:HG3	2:C:3268:LEU:HD23	1.84	0.60
2:A:2194:ALA:HA	2:A:2237:SER:HB3	1.84	0.60
2:A:3965:ILE:HD12	2:A:4086:ARG:HD2	1.82	0.60
2:D:1983:LYS:HE2	2:D:1985:GLU:OE1	2.01	0.60
2:B:3178:HIS:HB3	2:B:3263:MET:O	2.02	0.60
2:D:1788:LYS:HD2	2:D:1833:ILE:HG22	1.84	0.60
2:D:3965:ILE:HD12	2:D:4086:ARG:HD2	1.82	0.60
2:B:1283:LEU:HB2	2:B:1555:PHE:HB2	1.82	0.60
2:B:1788:LYS:HD2	2:B:1833:ILE:HG22	1.84	0.60
2:B:3311:LYS:HZ2	2:B:3313:GLN:HB2	1.66	0.60
2:C:3183:ILE:HG12	2:C:3192:ARG:NH2	2.16	0.60
2:D:982:ASP:O	2:D:1055:ARG:NH1	2.27	0.60
2:D:2585:MET:HE2	2:D:2585:MET:H	1.66	0.60
2:C:1788:LYS:HD2	2:C:1833:ILE:HG22	1.84	0.60
2:A:436:LEU:HD22	2:A:517:VAL:HG12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1058:LEU:HD21	2:A:1064:LEU:HB3	1.84	0.60
2:A:1788:LYS:HD2	2:A:1833:ILE:HG22	1.84	0.60
2:A:1983:LYS:HE2	2:A:1985:GLU:OE1	2.01	0.60
2:D:3246:MET:HG3	2:D:3268:LEU:HD23	1.84	0.60
2:C:2194:ALA:HA	2:C:2237:SER:HB3	1.84	0.60
2:A:2867:ASN:O	2:A:2867:ASN:ND2	2.32	0.59
2:D:2194:ALA:HA	2:D:2237:SER:HB3	1.84	0.59
2:B:1058:LEU:HD21	2:B:1064:LEU:HB3	1.84	0.59
2:B:3030:VAL:HG22	2:B:3034:HIS:HE1	1.68	0.59
1:H:106:ASN:OD1	1:H:107:LEU:N	2.35	0.59
2:A:4110:PRO:HG3	2:A:4966:LEU:HD23	1.83	0.59
2:D:1922:ILE:HD11	2:D:2105:THR:OG1	2.02	0.59
2:B:1983:LYS:HE2	2:B:1985:GLU:OE1	2.01	0.59
2:B:436:LEU:HD22	2:B:517:VAL:HG12	1.83	0.59
2:B:2481:GLN:NE2	2:B:2537:GLY:O	2.33	0.59
2:C:1058:LEU:HD21	2:C:1064:LEU:HB3	1.84	0.59
2:C:1922:ILE:HD11	2:C:2105:THR:OG1	2.02	0.59
2:C:2409:ILE:HD13	2:C:2420:ARG:HD3	1.84	0.59
2:C:3298:ARG:HA	2:C:3301:VAL:HG22	1.85	0.59
2:A:2409:ILE:HD13	2:A:2420:ARG:HD3	1.84	0.59
2:B:2194:ALA:HA	2:B:2237:SER:HB3	1.84	0.59
2:B:2845:ALA:HB1	2:B:2885:ASP:HB3	1.84	0.59
2:B:4252:ILE:HG21	2:C:4707:MET:HG3	1.85	0.59
2:C:1983:LYS:HE2	2:C:1985:GLU:OE1	2.01	0.59
2:C:2845:ALA:HB1	2:C:2885:ASP:HB3	1.84	0.59
2:C:3178:HIS:HB3	2:C:3263:MET:O	2.02	0.59
2:A:1922:ILE:HD11	2:A:2105:THR:OG1	2.02	0.59
2:A:2833:LEU:HD11	2:A:2894:LYS:CG	2.32	0.59
2:B:476:GLN:NE2	2:B:3678:GLU:OE1	2.35	0.59
2:B:1922:ILE:HD11	2:B:2105:THR:OG1	2.02	0.59
2:B:2833:LEU:HD11	2:B:2894:LYS:CG	2.32	0.59
2:B:3298:ARG:HA	2:B:3301:VAL:HG22	1.85	0.59
2:C:3605:MET:HE3	2:C:3605:MET:C	2.22	0.59
2:C:4197:ILE:HG12	2:C:4923:MET:HE3	1.84	0.59
1:F:50:ARG:N	1:F:55:GLU:OE1	2.35	0.59
2:C:4110:PRO:HG3	2:C:4966:LEU:HD23	1.83	0.59
2:A:476:GLN:NE2	2:A:3678:GLU:OE1	2.35	0.59
2:A:3298:ARG:HA	2:A:3301:VAL:HG22	1.85	0.59
2:D:924:LEU:HD12	2:D:925:PRO:HD2	1.85	0.59
2:B:924:LEU:HD12	2:B:925:PRO:HD2	1.85	0.59
2:B:2935:GLU:HA	2:B:2938:GLN:OE1	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3728:GLN:HG2	2:B:3765:ILE:HA	1.84	0.59
2:C:2833:LEU:HD11	2:C:2894:LYS:CG	2.32	0.59
2:C:2859:GLU:OE1	2:C:2863:LYS:NZ	2.32	0.59
2:A:924:LEU:HD12	2:A:925:PRO:HD2	1.85	0.59
2:A:3315:LEU:HG	2:A:3319:PHE:HB2	1.85	0.59
2:C:476:GLN:NE2	2:C:3678:GLU:OE1	2.35	0.59
2:C:780:GLU:OE2	2:C:1468:THR:OG1	2.20	0.59
2:A:3004:VAL:HG13	2:A:3036:LEU:HD11	1.85	0.59
2:D:3030:VAL:O	2:D:3034:HIS:ND1	2.33	0.59
2:B:238:HIS:HE1	2:B:401:ASP:HA	1.68	0.59
2:C:2935:GLU:HA	2:C:2938:GLN:OE1	2.03	0.59
2:C:3030:VAL:HG22	2:C:3034:HIS:HE1	1.68	0.59
3:K:110:MET:HB3	3:K:121:GLU:HB3	1.85	0.59
1:E:50:ARG:N	1:E:55:GLU:OE1	2.35	0.59
2:D:238:HIS:HE1	2:D:401:ASP:HA	1.68	0.59
2:D:247:VAL:O	2:D:272:ARG:NH1	2.36	0.59
2:D:968:LYS:HA	2:D:971:GLN:HB3	1.85	0.59
2:D:3004:VAL:HG13	2:D:3036:LEU:HD11	1.85	0.59
2:D:3298:ARG:HA	2:D:3301:VAL:HG22	1.85	0.59
2:B:1979:PHE:HD1	2:B:1993:ARG:HG2	1.66	0.59
2:B:2478:ILE:HG21	2:B:2484:LEU:HD13	1.85	0.59
2:C:238:HIS:HE1	2:C:401:ASP:HA	1.68	0.59
3:L:110:MET:HB3	3:L:121:GLU:HB3	1.85	0.59
2:A:238:HIS:HE1	2:A:401:ASP:HA	1.68	0.58
2:A:4751:LYS:HG2	2:A:4754:ARG:HH12	1.68	0.58
1:F:106:ASN:OD1	1:F:107:LEU:N	2.35	0.58
1:G:106:ASN:OD1	1:G:107:LEU:N	2.35	0.58
2:D:2833:LEU:HD11	2:D:2894:LYS:CG	2.32	0.58
2:D:2935:GLU:HA	2:D:2938:GLN:OE1	2.03	0.58
2:B:247:VAL:O	2:B:272:ARG:NH1	2.36	0.58
2:B:4010:VAL:HG11	2:B:4118:PHE:HZ	1.69	0.58
2:A:2129:LEU:HD12	2:A:2142:MET:HE2	1.84	0.58
2:A:4010:VAL:HG11	2:A:4118:PHE:HZ	1.68	0.58
1:F:50:ARG:HH11	1:F:50:ARG:CB	2.12	0.58
2:D:2085:PHE:HB3	2:D:3691:TYR:HE2	1.69	0.58
2:D:2409:ILE:HD13	2:D:2420:ARG:HD3	1.84	0.58
2:B:312:LYS:HD2	2:B:312:LYS:O	2.03	0.58
2:C:247:VAL:O	2:C:272:ARG:NH1	2.36	0.58
2:C:829:LYS:HD3	2:C:829:LYS:N	2.18	0.58
2:C:2867:ASN:ND2	2:C:2867:ASN:O	2.32	0.58
2:A:2478:ILE:HG21	2:A:2484:LEU:HD13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3803:LEU:HB2	2:A:3884:SER:HB3	1.85	0.58
2:A:4187:GLU:OE2	2:A:4947:ARG:NH2	2.33	0.58
2:A:4773:LEU:HD13	2:D:4753:LEU:HD21	1.85	0.58
2:D:3728:GLN:HG2	2:D:3765:ILE:HA	1.84	0.58
2:D:4867:ILE:HD12	2:C:4867:ILE:HD13	1.85	0.58
2:B:829:LYS:HD3	2:B:829:LYS:N	2.18	0.58
2:C:312:LYS:O	2:C:312:LYS:HD2	2.03	0.58
2:A:2770:ILE:HG13	2:A:2771:TYR:HD1	1.67	0.58
2:D:1058:LEU:HD21	2:D:1064:LEU:HB3	1.84	0.58
2:D:2770:ILE:HG13	2:D:2771:TYR:HD1	1.68	0.58
2:D:3030:VAL:HG22	2:D:3034:HIS:HE1	1.67	0.58
2:D:3315:LEU:HG	2:D:3319:PHE:HB2	1.85	0.58
2:C:924:LEU:HD12	2:C:925:PRO:HD2	1.85	0.58
2:C:1979:PHE:HD1	2:C:1993:ARG:HG2	1.66	0.58
2:C:4010:VAL:HG11	2:C:4118:PHE:HZ	1.68	0.58
2:A:2923:TYR:O	2:A:2927:GLN:HG3	2.04	0.58
2:D:2845:ALA:HB1	2:D:2885:ASP:HB3	1.84	0.58
2:D:4010:VAL:HG11	2:D:4118:PHE:HZ	1.69	0.58
2:B:3315:LEU:HG	2:B:3319:PHE:HB2	1.85	0.58
2:B:3803:LEU:HB2	2:B:3884:SER:HB3	1.85	0.58
2:C:2129:LEU:HD13	2:C:2138:GLU:HB3	1.85	0.58
2:D:2481:GLN:NE2	2:D:2537:GLY:O	2.33	0.58
2:D:2923:TYR:O	2:D:2927:GLN:HG3	2.04	0.58
2:C:2923:TYR:O	2:C:2927:GLN:HG3	2.04	0.58
2:A:895:MET:HB3	2:A:970:TYR:CE1	2.39	0.58
2:A:968:LYS:HA	2:A:971:GLN:HB3	1.85	0.58
2:A:2129:LEU:HD13	2:A:2138:GLU:HB3	1.85	0.58
2:A:3701:ASP:OD2	2:A:3727:GLN:NE2	2.24	0.58
2:A:4661:TYR:HB3	2:A:4665:ARG:HH21	1.69	0.58
2:D:476:GLN:NE2	2:D:3678:GLU:OE1	2.35	0.58
2:D:895:MET:HB3	2:D:970:TYR:CE1	2.39	0.58
2:B:2436:ILE:HA	2:B:2465:LYS:HD2	1.86	0.58
2:C:968:LYS:HA	2:C:971:GLN:HB3	1.85	0.58
2:A:3311:LYS:HZ2	2:A:3313:GLN:HB2	1.67	0.58
2:D:312:LYS:HD2	2:D:312:LYS:O	2.03	0.58
2:D:2126:ILE:HA	2:D:2142:MET:HE3	1.85	0.58
2:C:2154:VAL:HG13	2:C:2158:HIS:HD2	1.69	0.58
2:A:312:LYS:HD2	2:A:312:LYS:O	2.03	0.58
2:D:4654:MET:HE1	2:D:4663:ARG:HG2	1.85	0.58
2:C:2770:ILE:HG13	2:C:2771:TYR:HD1	1.67	0.58
2:A:2935:GLU:HA	2:A:2938:GLN:OE1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:110:MET:HB3	3:I:121:GLU:HB3	1.85	0.58
2:D:2478:ILE:HG21	2:D:2484:LEU:HD13	1.85	0.58
2:C:3728:GLN:HG2	2:C:3765:ILE:HA	1.84	0.58
2:A:2845:ALA:HB1	2:A:2885:ASP:HB3	1.84	0.57
2:D:332:ARG:HH12	2:D:340:VAL:HB	1.68	0.57
2:D:2859:GLU:OE1	2:D:2863:LYS:NZ	2.32	0.57
2:B:895:MET:HB3	2:B:970:TYR:CE1	2.39	0.57
2:B:968:LYS:HA	2:B:971:GLN:HB3	1.85	0.57
2:B:2867:ASN:O	2:B:2867:ASN:ND2	2.32	0.57
2:C:3043:ARG:HH21	2:C:3120:ASP:HB2	1.69	0.57
2:A:247:VAL:O	2:A:272:ARG:NH1	2.36	0.57
2:A:1614:ARG:NH2	2:A:1615:GLN:OE1	2.37	0.57
2:B:4751:LYS:HG2	2:B:4754:ARG:HH12	1.68	0.57
2:C:2085:PHE:HB3	2:C:3691:TYR:HE2	1.69	0.57
2:C:2126:ILE:HA	2:C:2142:MET:HE3	1.85	0.57
2:C:3004:VAL:HG13	2:C:3036:LEU:HD11	1.85	0.57
2:A:1894:LEU:HD22	2:A:2065:THR:HG21	1.87	0.57
2:A:2859:GLU:OE1	2:A:2863:LYS:NZ	2.32	0.57
2:B:897:LYS:HB2	2:B:918:LEU:HD21	1.86	0.57
2:B:1894:LEU:HD22	2:B:2065:THR:HG21	1.87	0.57
2:B:3043:ARG:HH21	2:B:3120:ASP:HB2	1.69	0.57
2:C:3030:VAL:O	2:C:3034:HIS:ND1	2.33	0.57
3:J:110:MET:HB3	3:J:121:GLU:HB3	1.85	0.57
2:A:332:ARG:HH12	2:A:340:VAL:HB	1.68	0.57
2:A:829:LYS:N	2:A:829:LYS:HD3	2.18	0.57
2:A:2085:PHE:HB3	2:A:3691:TYR:HE2	1.69	0.57
2:D:1614:ARG:NH2	2:D:1615:GLN:OE1	2.37	0.57
2:B:3004:VAL:HG13	2:B:3036:LEU:HD11	1.85	0.57
2:C:332:ARG:HH12	2:C:340:VAL:HB	1.68	0.57
2:C:2882:LYS:O	2:C:2886:ARG:HD3	2.05	0.57
2:C:3315:LEU:HG	2:C:3319:PHE:HB2	1.85	0.57
1:H:26:HIS:HB2	1:H:105:LEU:HD11	1.87	0.57
2:A:647:ARG:HH12	1:E:36:LYS:HB2	1.70	0.57
2:D:271:ALA:HB2	2:D:488:LEU:HD22	1.86	0.57
2:D:4751:LYS:HG2	2:D:4754:ARG:HH12	1.68	0.57
2:B:271:ALA:HB2	2:B:488:LEU:HD22	1.86	0.57
2:B:2923:TYR:O	2:B:2927:GLN:HG3	2.03	0.57
2:C:1614:ARG:NH2	2:C:1615:GLN:OE1	2.37	0.57
2:C:2758:LYS:HB2	2:C:2762:LEU:HD23	1.86	0.57
3:J:10:ILE:HA	3:J:13:PHE:HD2	1.70	0.57
2:A:2882:LYS:O	2:A:2886:ARG:HD3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3728:GLN:HG2	2:A:3765:ILE:HA	1.84	0.57
1:F:26:HIS:HB2	1:F:105:LEU:HD11	1.86	0.57
1:G:26:HIS:CD2	1:G:41:ARG:HG2	2.40	0.57
2:D:544:ASN:HB3	2:D:547:ASN:HB2	1.87	0.57
2:D:829:LYS:HD3	2:D:829:LYS:N	2.18	0.57
2:D:2758:LYS:HB2	2:D:2762:LEU:HD23	1.86	0.57
2:D:2882:LYS:O	2:D:2886:ARG:HD3	2.05	0.57
2:D:3043:ARG:HH21	2:D:3120:ASP:HB2	1.69	0.57
2:B:606:ARG:HH22	2:B:1632:ILE:HG23	1.70	0.57
2:B:2770:ILE:HG13	2:B:2771:TYR:HD1	1.67	0.57
2:B:4661:TYR:HB3	2:B:4665:ARG:HH21	1.69	0.57
2:C:706:TYR:HE1	2:C:1254:ARG:HD2	1.70	0.57
3:K:105:GLU:O	3:K:108:HIS:ND1	2.38	0.57
2:A:13:PHE:CD1	2:A:174:LYS:HD2	2.39	0.57
2:A:544:ASN:HB3	2:A:547:ASN:HB2	1.87	0.57
2:A:1436:GLN:NE2	2:A:1546:GLN:O	2.38	0.57
2:A:2154:VAL:HG13	2:A:2158:HIS:HD2	1.69	0.57
2:A:2436:ILE:HA	2:A:2465:LYS:HD2	1.86	0.57
1:G:50:ARG:N	1:G:55:GLU:OE1	2.35	0.57
3:I:105:GLU:O	3:I:108:HIS:ND1	2.38	0.57
2:D:3803:LEU:HB2	2:D:3884:SER:HB3	1.85	0.57
2:B:1436:GLN:NE2	2:B:1546:GLN:O	2.38	0.57
2:B:1614:ARG:NH2	2:B:1615:GLN:OE1	2.37	0.57
2:B:2773:TRP:HE3	2:B:2776:LYS:HE3	1.70	0.57
2:B:4654:MET:HE1	2:B:4663:ARG:HG2	1.85	0.57
2:C:606:ARG:HH22	2:C:1632:ILE:HG23	1.70	0.57
2:C:2773:TRP:HE3	2:C:2776:LYS:HE3	1.70	0.57
3:J:105:GLU:O	3:J:108:HIS:ND1	2.38	0.57
1:H:50:ARG:HH11	1:H:50:ARG:CB	2.12	0.57
2:A:2920:ARG:HG3	2:A:2923:TYR:H	1.70	0.57
2:A:4654:MET:HE1	2:A:4663:ARG:HG2	1.86	0.57
1:F:26:HIS:CD2	1:F:41:ARG:HG2	2.40	0.57
2:D:1436:GLN:NE2	2:D:1546:GLN:O	2.38	0.57
2:D:2154:VAL:HG13	2:D:2158:HIS:HD2	1.69	0.57
2:D:2920:ARG:HG3	2:D:2923:TYR:H	1.70	0.57
2:B:2129:LEU:HD13	2:B:2138:GLU:HB3	1.85	0.57
2:B:2920:ARG:HG3	2:B:2923:TYR:H	1.70	0.57
2:C:897:LYS:HB2	2:C:918:LEU:HD21	1.87	0.57
2:C:1436:GLN:NE2	2:C:1546:GLN:O	2.38	0.57
2:C:2478:ILE:HG21	2:C:2484:LEU:HD13	1.85	0.57
2:C:2920:ARG:HG3	2:C:2923:TYR:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:10:ILE:HA	3:K:13:PHE:HD2	1.70	0.57
1:H:26:HIS:CD2	1:H:41:ARG:HG2	2.40	0.57
2:D:3595:ARG:CD	3:L:146:MET:HG3	2.34	0.57
2:B:706:TYR:HE1	2:B:1254:ARG:HD2	1.70	0.57
2:B:780:GLU:OE2	2:B:1468:THR:OG1	2.20	0.57
2:B:2859:GLU:OE1	2:B:2863:LYS:NZ	2.32	0.57
2:B:3030:VAL:O	2:B:3034:HIS:ND1	2.33	0.57
2:C:839:GLU:HB3	2:C:851:LEU:HD12	1.87	0.57
2:C:3803:LEU:HB2	2:C:3884:SER:HB3	1.85	0.57
2:C:4654:MET:HE1	2:C:4663:ARG:HG2	1.85	0.57
1:H:50:ARG:N	1:H:55:GLU:OE1	2.35	0.57
2:A:897:LYS:HB2	2:A:918:LEU:HD21	1.86	0.57
2:A:3030:VAL:HG22	2:A:3034:HIS:HE1	1.67	0.57
1:F:83:TYR:OH	2:B:1768:PHE:O	2.16	0.57
3:I:10:ILE:HA	3:I:13:PHE:HD2	1.70	0.57
2:D:13:PHE:CD1	2:D:174:LYS:HD2	2.40	0.57
2:B:332:ARG:HH12	2:B:340:VAL:HB	1.68	0.57
2:C:2436:ILE:HA	2:C:2465:LYS:HD2	1.86	0.57
3:L:105:GLU:O	3:L:108:HIS:ND1	2.38	0.57
2:A:606:ARG:HH22	2:A:1632:ILE:HG23	1.70	0.56
2:A:2758:LYS:HB2	2:A:2762:LEU:HD23	1.86	0.56
1:E:26:HIS:CD2	1:E:41:ARG:HG2	2.40	0.56
2:D:2202:TYR:O	2:D:2206:ILE:HG12	2.05	0.56
2:D:2736:LYS:HD2	2:D:2757:MET:SD	2.45	0.56
2:D:4661:TYR:HB3	2:D:4665:ARG:HH21	1.69	0.56
2:B:3800:CYS:O	2:B:3880:ARG:NH2	2.38	0.56
2:C:13:PHE:CD1	2:C:174:LYS:HD2	2.39	0.56
2:C:271:ALA:HB2	2:C:488:LEU:HD22	1.86	0.56
2:C:4751:LYS:HG2	2:C:4754:ARG:HH12	1.68	0.56
2:D:1894:LEU:HD22	2:D:2065:THR:HG21	1.87	0.56
2:B:544:ASN:HB3	2:B:547:ASN:HB2	1.87	0.56
2:B:2085:PHE:HB3	2:B:3691:TYR:HE2	1.69	0.56
2:B:2154:VAL:HG13	2:B:2158:HIS:HD2	1.69	0.56
2:B:2882:LYS:O	2:B:2886:ARG:HD3	2.05	0.56
2:C:4661:TYR:HB3	2:C:4665:ARG:HH21	1.69	0.56
2:A:271:ALA:HB2	2:A:488:LEU:HD22	1.86	0.56
2:A:706:TYR:HE1	2:A:1254:ARG:HD2	1.70	0.56
2:A:1843:LEU:HD23	2:A:1846:ILE:HD12	1.88	0.56
2:A:2736:LYS:HD2	2:A:2757:MET:SD	2.45	0.56
2:A:2764:SER:O	2:A:2768:LYS:HG3	2.05	0.56
2:A:2773:TRP:HE3	2:A:2776:LYS:HE3	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3800:CYS:O	2:A:3880:ARG:NH2	2.38	0.56
2:D:606:ARG:HH22	2:D:1632:ILE:HG23	1.70	0.56
2:D:2436:ILE:HA	2:D:2465:LYS:HD2	1.86	0.56
2:D:2764:SER:O	2:D:2768:LYS:HG3	2.05	0.56
2:B:839:GLU:HB3	2:B:851:LEU:HD12	1.87	0.56
2:B:2202:TYR:O	2:B:2206:ILE:HG12	2.05	0.56
2:B:2764:SER:O	2:B:2768:LYS:HG3	2.05	0.56
2:C:895:MET:HB3	2:C:970:TYR:CE1	2.39	0.56
2:C:2202:TYR:O	2:C:2206:ILE:HG12	2.05	0.56
2:C:2764:SER:O	2:C:2768:LYS:HG3	2.05	0.56
3:L:10:ILE:HA	3:L:13:PHE:HD2	1.70	0.56
2:A:3043:ARG:HH21	2:A:3120:ASP:HB2	1.69	0.56
2:D:1947:VAL:HG21	2:D:1961:LYS:HG2	1.88	0.56
2:D:2773:TRP:HE3	2:D:2776:LYS:HE3	1.70	0.56
2:B:13:PHE:CD1	2:B:174:LYS:HD2	2.39	0.56
2:C:1947:VAL:HG21	2:C:1961:LYS:HG2	1.88	0.56
2:A:2222:LEU:HB3	2:A:2264:LYS:HD2	1.87	0.56
2:B:2860:LEU:HD23	2:B:2863:LYS:NZ	2.21	0.56
2:C:3677:THR:O	2:C:3679:LYS:NZ	2.39	0.56
2:A:3605:MET:C	2:A:3605:MET:HE3	2.26	0.56
2:C:1894:LEU:HD22	2:C:2065:THR:HG21	1.87	0.56
2:A:1303:ARG:HA	2:A:1542:ALA:HA	1.87	0.56
2:D:2129:LEU:HD13	2:D:2138:GLU:HB3	1.85	0.56
2:D:4187:GLU:OE2	2:D:4947:ARG:NH2	2.33	0.56
2:B:2701:PHE:CE2	2:B:2703:PRO:HG3	2.41	0.56
2:B:2714:PRO:HD2	2:B:2717:LEU:HD12	1.87	0.56
2:C:2736:LYS:HD2	2:C:2757:MET:SD	2.45	0.56
3:J:82:SER:HA	3:J:85:GLU:HB3	1.88	0.56
2:A:2714:PRO:HD2	2:A:2717:LEU:HD12	1.87	0.56
2:A:3677:THR:O	2:A:3679:LYS:NZ	2.39	0.56
1:E:75:LEU:HD22	1:E:102:VAL:HG21	1.88	0.56
2:D:897:LYS:HB2	2:D:918:LEU:HD21	1.87	0.56
2:D:2939:TYR:O	2:D:2943:PHE:HD1	1.89	0.56
2:D:3800:CYS:O	2:D:3880:ARG:NH2	2.38	0.56
2:C:2703:PRO:O	2:C:2854:LYS:HD3	2.06	0.56
2:A:2860:LEU:HD23	2:A:2863:LYS:NZ	2.21	0.56
1:E:26:HIS:HB2	1:E:105:LEU:HD11	1.87	0.56
2:D:706:TYR:HE1	2:D:1254:ARG:HD2	1.70	0.56
2:D:839:GLU:HB3	2:D:851:LEU:HD12	1.87	0.56
2:B:1947:VAL:HG21	2:B:1961:LYS:HG2	1.88	0.56
2:B:2238:THR:HG22	2:B:2240:LEU:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1303:ARG:HA	2:C:1542:ALA:HA	1.88	0.56
2:C:1843:LEU:HD23	2:C:1846:ILE:HD12	1.88	0.56
2:C:2222:LEU:HB3	2:C:2264:LYS:HD2	1.87	0.56
2:C:2860:LEU:HD23	2:C:2863:LYS:NZ	2.21	0.56
2:A:2126:ILE:HG12	2:A:2142:MET:SD	2.46	0.56
2:A:2481:GLN:NE2	2:A:2537:GLY:O	2.33	0.56
1:E:50:ARG:HH11	1:E:50:ARG:CB	2.12	0.56
2:A:2939:TYR:O	2:A:2943:PHE:HD1	1.89	0.55
2:A:3131:TYR:CE1	2:A:3166:PHE:CZ	2.93	0.55
2:D:1843:LEU:HD23	2:D:1846:ILE:HD12	1.88	0.55
2:D:2126:ILE:HG12	2:D:2142:MET:SD	2.46	0.55
2:D:2860:LEU:HD23	2:D:2863:LYS:NZ	2.21	0.55
2:D:4930:GLU:HA	2:D:4933:HIS:CD2	2.41	0.55
2:B:2126:ILE:HG12	2:B:2142:MET:SD	2.46	0.55
2:B:2222:LEU:HB3	2:B:2264:LYS:HD2	1.87	0.55
2:B:2736:LYS:HD2	2:B:2757:MET:SD	2.45	0.55
2:B:2758:LYS:HB2	2:B:2762:LEU:HD23	1.86	0.55
2:C:3800:CYS:O	2:C:3880:ARG:NH2	2.38	0.55
2:A:839:GLU:HB3	2:A:851:LEU:HD12	1.88	0.55
2:A:1790:LYS:O	2:A:1794:MET:HG3	2.06	0.55
2:A:2824:ARG:NH2	2:B:1499:GLY:HA3	2.21	0.55
1:G:75:LEU:HD22	1:G:102:VAL:HG21	1.88	0.55
2:D:1790:LYS:O	2:D:1794:MET:HG3	2.06	0.55
2:D:2222:LEU:HB3	2:D:2264:LYS:HD2	1.87	0.55
2:D:2703:PRO:O	2:D:2854:LYS:HD3	2.06	0.55
2:A:1947:VAL:HG21	2:A:1961:LYS:HG2	1.88	0.55
2:D:3677:THR:O	2:D:3679:LYS:NZ	2.39	0.55
2:C:544:ASN:HB3	2:C:547:ASN:HB2	1.87	0.55
2:A:2238:THR:HG22	2:A:2240:LEU:H	1.71	0.55
2:D:1977:LEU:HD23	2:D:1979:PHE:HE2	1.72	0.55
2:D:2701:PHE:CE2	2:D:2703:PRO:HG3	2.41	0.55
2:B:1303:ARG:HA	2:B:1542:ALA:HA	1.87	0.55
2:B:2703:PRO:O	2:B:2854:LYS:HD3	2.06	0.55
2:C:2238:THR:HG22	2:C:2240:LEU:H	1.71	0.55
2:C:2982:PHE:O	2:C:3001:LYS:NZ	2.40	0.55
2:A:4252:ILE:HG21	2:B:4707:MET:HG3	1.88	0.55
2:B:2126:ILE:HA	2:B:2142:MET:HE3	1.88	0.55
2:C:2126:ILE:HG12	2:C:2142:MET:SD	2.46	0.55
2:C:3601:ALA:O	2:C:3605:MET:CB	2.55	0.55
3:L:82:SER:HA	3:L:85:GLU:HB3	1.88	0.55
2:A:2982:PHE:O	2:A:3001:LYS:NZ	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3601:ALA:O	2:D:3605:MET:CB	2.55	0.55
2:B:1843:LEU:HD23	2:B:1846:ILE:HD12	1.88	0.55
2:B:2939:TYR:O	2:B:2943:PHE:HD1	1.89	0.55
2:C:2481:GLN:NE2	2:C:2537:GLY:O	2.33	0.55
2:C:2701:PHE:CE2	2:C:2703:PRO:HG3	2.41	0.55
2:A:3184:TYR:HD1	2:A:3192:ARG:NH2	2.05	0.55
2:A:3601:ALA:O	2:A:3605:MET:CB	2.55	0.55
3:I:82:SER:HA	3:I:85:GLU:HB3	1.88	0.55
2:A:1977:LEU:HD23	2:A:1979:PHE:HE2	1.72	0.55
2:A:2202:TYR:O	2:A:2206:ILE:HG12	2.05	0.55
2:A:2701:PHE:CE2	2:A:2703:PRO:HG3	2.41	0.55
1:G:26:HIS:HB2	1:G:105:LEU:HD11	1.87	0.55
2:D:2238:THR:HG22	2:D:2240:LEU:H	1.72	0.55
2:C:2714:PRO:HD2	2:C:2717:LEU:HD12	1.87	0.55
2:D:780:GLU:OE2	2:D:1468:THR:OG1	2.21	0.55
2:D:2982:PHE:O	2:D:3001:LYS:NZ	2.40	0.55
2:D:3184:TYR:HD1	2:D:3192:ARG:NH2	2.05	0.55
2:D:3311:LYS:HZ2	2:D:3313:GLN:HB2	1.72	0.55
2:B:4607:ALA:HB1	2:B:4649:VAL:HG21	1.89	0.55
2:A:2258:ARG:HB3	2:A:2260:PRO:HD2	1.89	0.55
1:F:75:LEU:HD22	1:F:102:VAL:HG21	1.88	0.55
2:D:1303:ARG:HA	2:D:1542:ALA:HA	1.87	0.55
2:D:2714:PRO:HD2	2:D:2717:LEU:HD12	1.87	0.55
2:B:1790:LYS:O	2:B:1794:MET:HG3	2.06	0.55
2:B:3184:TYR:HD1	2:B:3192:ARG:NH2	2.05	0.55
2:C:878:LEU:HB3	2:C:940:LEU:HD23	1.89	0.55
2:C:1790:LYS:O	2:C:1794:MET:HG3	2.06	0.55
2:C:1977:LEU:HD23	2:C:1979:PHE:HE2	1.72	0.55
2:A:4607:ALA:HB1	2:A:4649:VAL:HG21	1.89	0.54
2:B:2982:PHE:O	2:B:3001:LYS:NZ	2.40	0.54
2:B:3250:TRP:HE1	2:B:3273:MET:HE1	1.70	0.54
2:B:3677:THR:O	2:B:3679:LYS:NZ	2.39	0.54
2:C:784:ILE:O	2:C:784:ILE:HG13	2.07	0.54
2:C:2258:ARG:HB3	2:C:2260:PRO:HD2	1.89	0.54
2:C:2275:GLN:OE1	2:C:2275:GLN:HA	2.08	0.54
2:D:878:LEU:HB3	2:D:940:LEU:HD23	1.89	0.54
2:D:2275:GLN:OE1	2:D:2275:GLN:HA	2.08	0.54
2:A:780:GLU:OE2	2:A:1468:THR:OG1	2.20	0.54
2:A:3890:TRP:O	2:B:76:ARG:NE	2.38	0.54
2:B:2275:GLN:OE1	2:B:2275:GLN:HA	2.08	0.54
2:C:456:LEU:O	2:C:460:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:456:LEU:O	2:A:460:ILE:HG13	2.07	0.54
2:A:878:LEU:HB3	2:A:940:LEU:HD23	1.89	0.54
2:A:2275:GLN:HA	2:A:2275:GLN:OE1	2.08	0.54
2:A:2570:GLU:HG2	2:A:2605:MET:HG3	1.90	0.54
2:D:3131:TYR:CE1	2:D:3166:PHE:CZ	2.93	0.54
2:D:3605:MET:C	2:D:3605:MET:HE3	2.27	0.54
2:D:4921:PHE:HE2	2:D:4940:VAL:HG11	1.72	0.54
2:B:2258:ARG:HB3	2:B:2260:PRO:HD2	1.89	0.54
2:B:3131:TYR:CE1	2:B:3166:PHE:CZ	2.93	0.54
2:C:4652:LYS:NZ	2:C:4945:GLN:OE1	2.25	0.54
1:H:75:LEU:HD22	1:H:102:VAL:HG21	1.88	0.54
2:A:784:ILE:HG13	2:A:784:ILE:O	2.07	0.54
2:B:456:LEU:O	2:B:460:ILE:HG13	2.08	0.54
2:C:4607:ALA:HB1	2:C:4649:VAL:HG21	1.89	0.54
2:A:4660:PHE:CE1	2:D:4056:LYS:HB2	2.43	0.54
2:D:456:LEU:O	2:D:460:ILE:HG13	2.08	0.54
2:D:4197:ILE:HG12	2:D:4923:MET:HE3	1.88	0.54
2:B:644:LEU:HD13	2:B:1630:LEU:HD21	1.90	0.54
2:C:2585:MET:H	2:C:2585:MET:HE2	1.73	0.54
2:A:2176:VAL:HG22	2:A:2220:TYR:CZ	2.43	0.54
2:A:3142:THR:HA	2:A:3233:HIS:NE2	2.23	0.54
1:F:90:GLY:HA2	2:B:638:PRO:HD3	1.89	0.54
2:D:644:LEU:HD13	2:D:1630:LEU:HD21	1.90	0.54
2:D:2570:GLU:HG2	2:D:2605:MET:HG3	1.90	0.54
2:D:4607:ALA:HB1	2:D:4649:VAL:HG21	1.89	0.54
2:B:1977:LEU:HD23	2:B:1979:PHE:HE2	1.72	0.54
2:B:2176:VAL:HG22	2:B:2220:TYR:CZ	2.43	0.54
2:B:3945:VAL:HG23	2:B:4006:SER:HB3	1.89	0.54
2:A:2703:PRO:O	2:A:2854:LYS:HD3	2.06	0.54
2:A:4921:PHE:HE2	2:A:4940:VAL:HG11	1.72	0.54
2:D:76:ARG:HD3	2:C:3890:TRP:HB3	1.88	0.54
2:B:784:ILE:O	2:B:784:ILE:HG13	2.08	0.54
2:B:878:LEU:HB3	2:B:940:LEU:HD23	1.89	0.54
2:B:3605:MET:C	2:B:3605:MET:HE3	2.28	0.54
2:C:2570:GLU:HG2	2:C:2605:MET:HG3	1.90	0.54
2:C:2939:TYR:O	2:C:2943:PHE:HD1	1.89	0.54
2:C:3945:VAL:HG23	2:C:4006:SER:HB3	1.89	0.54
3:K:82:SER:HA	3:K:85:GLU:HB3	1.88	0.54
2:D:2725:ALA:CB	2:D:2760:TYR:HE1	2.21	0.54
2:C:2344:LEU:HD22	2:C:2434:GLY:HA3	1.90	0.54
2:C:3184:TYR:HD1	2:C:3192:ARG:NH2	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:644:LEU:HD13	2:A:1630:LEU:HD21	1.90	0.54
2:D:434:ASP:OD1	2:D:504:ARG:NE	2.40	0.54
2:B:3142:THR:HA	2:B:3233:HIS:NE2	2.23	0.54
2:B:3601:ALA:O	2:B:3605:MET:CB	2.55	0.54
2:D:890:HIS:CE1	2:D:924:LEU:HD22	2.43	0.53
2:D:2258:ARG:HB3	2:D:2260:PRO:HD2	1.89	0.53
2:B:472:HIS:O	2:B:476:GLN:HG2	2.08	0.53
2:B:2570:GLU:HG2	2:B:2605:MET:HG3	1.90	0.53
2:C:2725:ALA:CB	2:C:2760:TYR:HE1	2.21	0.53
2:A:3945:VAL:HG23	2:A:4006:SER:HB3	1.89	0.53
2:D:2344:LEU:HD22	2:D:2434:GLY:HA3	1.90	0.53
2:B:3187:LYS:HB2	2:B:3192:ARG:NH1	2.24	0.53
2:C:2176:VAL:HG22	2:C:2220:TYR:CZ	2.43	0.53
2:C:3120:ASP:HA	2:C:3123:LEU:HD21	1.90	0.53
2:C:3823:GLU:OE1	2:C:3827:GLU:N	2.41	0.53
2:A:472:HIS:O	2:A:476:GLN:HG2	2.08	0.53
2:D:4046:ARG:HB3	2:D:4050:LYS:NZ	2.24	0.53
2:B:890:HIS:CE1	2:B:924:LEU:HD22	2.43	0.53
2:B:2657:TYR:HA	2:B:2662:PHE:CE2	2.44	0.53
2:C:890:HIS:CE1	2:C:924:LEU:HD22	2.43	0.53
1:H:83:TYR:OH	2:D:1768:PHE:O	2.14	0.53
2:A:4521:LYS:HE2	2:A:4562:GLU:HB3	1.91	0.53
2:B:1549:SER:OG	2:B:1551:ASN:O	2.27	0.53
2:B:2344:LEU:HD22	2:B:2434:GLY:HA3	1.90	0.53
2:C:3187:LYS:HB2	2:C:3192:ARG:NH1	2.24	0.53
2:C:4072:THR:HG22	2:C:4078:LEU:HB3	1.91	0.53
2:D:1549:SER:OG	2:D:1551:ASN:O	2.27	0.53
2:B:2725:ALA:CB	2:B:2760:TYR:HE1	2.21	0.53
2:B:4197:ILE:HG12	2:B:4923:MET:HE3	1.90	0.53
2:B:4521:LYS:HE2	2:B:4562:GLU:HB3	1.91	0.53
2:C:472:HIS:O	2:C:476:GLN:HG2	2.08	0.53
2:C:1549:SER:OG	2:C:1551:ASN:O	2.27	0.53
2:C:2657:TYR:HA	2:C:2662:PHE:CE2	2.43	0.53
2:A:1549:SER:OG	2:A:1551:ASN:O	2.27	0.53
2:D:3120:ASP:HA	2:D:3123:LEU:HD21	1.90	0.53
2:D:4609:LYS:HD2	2:D:4615:LEU:HD22	1.91	0.53
2:A:890:HIS:CE1	2:A:924:LEU:HD22	2.43	0.53
2:A:2360:ASP:OD1	2:A:2385:GLY:N	2.41	0.53
2:A:2725:ALA:CB	2:A:2760:TYR:HE1	2.21	0.53
2:A:4197:ILE:HG12	2:A:4923:MET:HE3	1.90	0.53
2:A:4609:LYS:HD2	2:A:4615:LEU:HD22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4819:VAL:HG12	2:A:4830:GLU:HG3	1.91	0.53
2:D:2791:ARG:CZ	2:D:2795:GLY:HA3	2.39	0.53
2:D:3142:THR:HA	2:D:3233:HIS:NE2	2.23	0.53
2:B:4072:THR:HG22	2:B:4078:LEU:HB3	1.90	0.53
2:C:644:LEU:HD13	2:C:1630:LEU:HD21	1.90	0.53
2:C:3131:TYR:CE1	2:C:3166:PHE:CZ	2.93	0.53
2:A:558:LEU:HG	2:A:571:ILE:HG23	1.91	0.53
2:A:882:ARG:NH1	2:A:937:LEU:HD21	2.24	0.53
2:A:2657:TYR:HA	2:A:2662:PHE:CE2	2.43	0.53
2:A:3025:ASP:O	2:A:3029:ILE:HD12	2.09	0.53
2:D:784:ILE:HG13	2:D:784:ILE:O	2.08	0.53
2:C:3142:THR:HA	2:C:3233:HIS:NE2	2.23	0.53
2:C:4609:LYS:HD2	2:C:4615:LEU:HD22	1.91	0.53
2:C:4819:VAL:HG12	2:C:4830:GLU:HG3	1.91	0.53
2:A:3030:VAL:O	2:A:3034:HIS:ND1	2.33	0.53
2:A:3105:LEU:O	2:A:3109:PHE:HD2	1.92	0.53
2:A:3187:LYS:HB2	2:A:3192:ARG:NH1	2.24	0.53
2:D:882:ARG:NH1	2:D:937:LEU:HD21	2.24	0.53
2:D:3187:LYS:HB2	2:D:3192:ARG:NH1	2.24	0.53
2:D:3945:VAL:HG23	2:D:4006:SER:HB3	1.89	0.53
2:C:558:LEU:HG	2:C:571:ILE:HG23	1.91	0.53
2:C:4046:ARG:HB3	2:C:4050:LYS:NZ	2.24	0.53
3:K:33:LEU:HD11	3:K:53:ILE:HD11	1.91	0.53
2:A:11:ILE:HG23	2:A:13:PHE:CE2	2.39	0.52
2:A:995:MET:CE	2:A:1064:LEU:HD21	2.39	0.52
2:A:2824:ARG:HH21	2:B:1499:GLY:HA3	1.74	0.52
2:A:3120:ASP:HA	2:A:3123:LEU:HD21	1.90	0.52
2:A:4046:ARG:HB3	2:A:4050:LYS:NZ	2.24	0.52
2:D:2176:VAL:HG22	2:D:2220:TYR:CZ	2.43	0.52
2:B:2360:ASP:OD1	2:B:2385:GLY:N	2.41	0.52
2:B:3774:GLN:NE2	2:B:3845:LEU:O	2.42	0.52
2:C:995:MET:CE	2:C:1064:LEU:HD21	2.40	0.52
2:A:964:MET:O	2:A:977:LYS:NZ	2.34	0.52
2:B:164:PRO:HB3	2:B:169:ARG:HB2	1.91	0.52
2:B:882:ARG:NH1	2:B:937:LEU:HD21	2.24	0.52
2:B:995:MET:CE	2:B:1064:LEU:HD21	2.39	0.52
2:B:2585:MET:H	2:B:2585:MET:CE	2.22	0.52
2:C:882:ARG:NH1	2:C:937:LEU:HD21	2.24	0.52
2:D:1979:PHE:CE1	2:D:1993:ARG:HG2	2.44	0.52
2:D:3025:ASP:O	2:D:3029:ILE:HD12	2.09	0.52
2:D:3119:GLU:OE2	2:D:3248:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:3823:GLU:OE1	2:D:3827:GLU:N	2.41	0.52
2:D:4521:LYS:HE2	2:D:4562:GLU:HB3	1.91	0.52
2:D:4819:VAL:HG12	2:D:4830:GLU:HG3	1.91	0.52
2:B:558:LEU:HG	2:B:571:ILE:HG23	1.92	0.52
2:B:1979:PHE:CE1	2:B:1993:ARG:HG2	2.44	0.52
2:B:4679:PHE:O	2:B:4682:ALA:C	2.48	0.52
2:A:164:PRO:HB3	2:A:169:ARG:HB2	1.91	0.52
2:A:2344:LEU:HD22	2:A:2434:GLY:HA3	1.90	0.52
2:A:4072:THR:HG22	2:A:4078:LEU:HB3	1.91	0.52
2:D:558:LEU:HG	2:D:571:ILE:HG23	1.91	0.52
2:D:3105:LEU:O	2:D:3109:PHE:HD2	1.92	0.52
2:B:4819:VAL:HG12	2:B:4830:GLU:HG3	1.91	0.52
2:B:4921:PHE:HE2	2:B:4940:VAL:HG11	1.72	0.52
2:C:2791:ARG:CZ	2:C:2795:GLY:HA3	2.39	0.52
2:C:3250:TRP:HE1	2:C:3273:MET:HE3	1.72	0.52
2:C:4679:PHE:O	2:C:4682:ALA:C	2.48	0.52
2:A:2791:ARG:CZ	2:A:2795:GLY:HA3	2.39	0.52
2:D:1435:GLY:H	2:D:1500:ARG:HH21	1.58	0.52
2:B:434:ASP:OD1	2:B:504:ARG:NE	2.40	0.52
2:B:2642:ARG:NH2	2:B:2682:GLU:OE1	2.43	0.52
2:B:3025:ASP:O	2:B:3029:ILE:HD12	2.09	0.52
2:B:3796:LEU:HD22	2:B:3835:PHE:HZ	1.75	0.52
2:B:4609:LYS:HD2	2:B:4615:LEU:HD22	1.91	0.52
2:C:2882:LYS:HD2	2:C:2886:ARG:NH1	2.25	0.52
3:L:33:LEU:HD11	3:L:53:ILE:HD11	1.91	0.52
2:A:27:THR:OG1	2:A:32:GLN:OE1	2.28	0.52
2:A:1435:GLY:H	2:A:1500:ARG:HH21	1.58	0.52
2:A:2273:GLY:O	2:A:2336:ARG:NH2	2.42	0.52
2:D:472:HIS:O	2:D:476:GLN:HG2	2.08	0.52
2:D:995:MET:CE	2:D:1064:LEU:HD21	2.40	0.52
2:B:3074:ASN:HB2	2:B:3090:VAL:HG22	1.91	0.52
2:C:3729:ALA:HA	2:C:3732:HIS:CD2	2.45	0.52
2:A:3823:GLU:OE1	2:A:3827:GLU:N	2.41	0.52
2:D:11:ILE:HG23	2:D:13:PHE:CE2	2.39	0.52
2:D:2984:SER:OG	2:D:2994:GLY:O	2.27	0.52
2:D:4714:PHE:CD1	2:C:4294:LEU:HD12	2.45	0.52
2:C:888:ASN:HA	2:C:891:GLU:OE1	2.10	0.52
2:C:1435:GLY:H	2:C:1500:ARG:HH21	1.58	0.52
2:C:3174:HIS:ND1	2:C:3175:LEU:HG	2.25	0.52
2:C:3250:TRP:HE1	2:C:3273:MET:HE1	1.75	0.52
2:A:3054:LYS:HB3	2:A:3058:ARG:NH2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3152:ARG:HH22	2:A:3233:HIS:CD2	2.28	0.52
2:A:4679:PHE:O	2:A:4682:ALA:C	2.48	0.52
2:D:2657:TYR:HA	2:D:2662:PHE:CE2	2.43	0.52
2:D:3152:ARG:HH22	2:D:3233:HIS:CD2	2.28	0.52
2:B:2214:MET:HA	2:B:2214:MET:HE3	1.92	0.52
2:B:3823:GLU:OE1	2:B:3827:GLU:N	2.41	0.52
2:C:2585:MET:H	2:C:2585:MET:CE	2.22	0.52
2:C:3025:ASP:O	2:C:3029:ILE:HD12	2.09	0.52
2:A:888:ASN:HA	2:A:891:GLU:OE1	2.10	0.52
2:A:1979:PHE:CE1	2:A:1993:ARG:HG2	2.44	0.52
2:A:3774:GLN:NE2	2:A:3845:LEU:O	2.42	0.52
2:D:3074:ASN:HB2	2:D:3090:VAL:HG22	1.91	0.52
2:B:1435:GLY:H	2:B:1500:ARG:HH21	1.58	0.52
2:B:3120:ASP:HA	2:B:3123:LEU:HD21	1.90	0.52
2:B:3152:ARG:HH22	2:B:3233:HIS:CD2	2.28	0.52
2:C:11:ILE:HG23	2:C:13:PHE:CE2	2.39	0.52
2:C:164:PRO:HB3	2:C:169:ARG:HB2	1.91	0.52
2:A:2770:ILE:HG13	2:A:2771:TYR:CD1	2.44	0.52
2:D:3729:ALA:HA	2:D:3732:HIS:CD2	2.45	0.52
2:D:4072:THR:HG22	2:D:4078:LEU:HB3	1.91	0.52
2:B:11:ILE:HG23	2:B:13:PHE:CE2	2.39	0.52
2:B:2791:ARG:CZ	2:B:2795:GLY:HA3	2.39	0.52
2:B:2882:LYS:HD2	2:B:2886:ARG:NH1	2.25	0.52
2:B:3054:LYS:HB3	2:B:3058:ARG:HH22	1.75	0.52
2:B:4046:ARG:HB3	2:B:4050:LYS:NZ	2.24	0.52
2:C:1979:PHE:CE1	2:C:1993:ARG:HG2	2.44	0.52
2:C:2273:GLY:O	2:C:2336:ARG:NH2	2.42	0.52
2:C:2717:LEU:O	2:C:2721:ILE:HG13	2.10	0.52
2:C:3218:ILE:HD11	2:C:3239:LEU:HD21	1.92	0.52
2:A:434:ASP:OD1	2:A:504:ARG:NE	2.40	0.51
2:A:2585:MET:H	2:A:2585:MET:CE	2.22	0.51
2:A:3174:HIS:ND1	2:A:3175:LEU:HG	2.25	0.51
2:A:3796:LEU:HD22	2:A:3835:PHE:HZ	1.75	0.51
3:I:33:LEU:HD11	3:I:53:ILE:HD11	1.91	0.51
2:D:3054:LYS:HB3	2:D:3058:ARG:NH2	2.25	0.51
2:B:2984:SER:OG	2:B:2994:GLY:O	2.27	0.51
2:B:3054:LYS:HB3	2:B:3058:ARG:NH2	2.25	0.51
2:B:3105:LEU:O	2:B:3109:PHE:HD2	1.92	0.51
2:B:3174:HIS:ND1	2:B:3175:LEU:HG	2.25	0.51
2:C:891:GLU:HB3	2:C:895:MET:HE1	1.92	0.51
2:C:2770:ILE:HG13	2:C:2771:TYR:CD1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3105:LEU:O	2:C:3109:PHE:HD2	1.93	0.51
2:C:4521:LYS:HE2	2:C:4562:GLU:HB3	1.91	0.51
2:C:4921:PHE:HE2	2:C:4940:VAL:HG11	1.73	0.51
3:K:1:MET:HA	3:K:1:MET:CE	2.40	0.51
3:L:33:LEU:O	3:L:36:VAL:HG22	2.10	0.51
2:A:638:PRO:HD3	1:E:90:GLY:HA2	1.91	0.51
2:A:2642:ARG:NH2	2:A:2682:GLU:OE1	2.43	0.51
2:A:3119:GLU:OE2	2:A:3248:ARG:NH2	2.43	0.51
2:A:3729:ALA:HA	2:A:3732:HIS:CD2	2.45	0.51
3:I:1:MET:CE	3:I:1:MET:HA	2.40	0.51
2:D:27:THR:OG1	2:D:32:GLN:OE1	2.28	0.51
2:D:3218:ILE:HD11	2:D:3239:LEU:HD21	1.92	0.51
2:D:3774:GLN:NE2	2:D:3845:LEU:O	2.42	0.51
2:B:2717:LEU:O	2:B:2721:ILE:HG13	2.10	0.51
2:B:3119:GLU:OE2	2:B:3248:ARG:NH2	2.43	0.51
3:K:33:LEU:O	3:K:36:VAL:HG22	2.11	0.51
2:A:541:ILE:HG22	2:A:547:ASN:HB3	1.92	0.51
2:A:3054:LYS:HB3	2:A:3058:ARG:HH22	1.75	0.51
2:A:3074:ASN:HB2	2:A:3090:VAL:HG22	1.91	0.51
3:I:33:LEU:O	3:I:36:VAL:HG22	2.10	0.51
2:D:888:ASN:HA	2:D:891:GLU:OE1	2.10	0.51
2:D:2585:MET:H	2:D:2585:MET:CE	2.22	0.51
2:D:2770:ILE:HG13	2:D:2771:TYR:CD1	2.44	0.51
2:B:27:THR:OG1	2:B:32:GLN:OE1	2.28	0.51
2:C:27:THR:OG1	2:C:32:GLN:OE1	2.28	0.51
2:C:2214:MET:HA	2:C:2214:MET:HE3	1.92	0.51
2:C:2642:ARG:NH2	2:C:2682:GLU:OE1	2.43	0.51
2:C:3054:LYS:HB3	2:C:3058:ARG:NH2	2.25	0.51
2:C:3074:ASN:HB2	2:C:3090:VAL:HG22	1.91	0.51
2:C:3119:GLU:OE2	2:C:3248:ARG:NH2	2.43	0.51
3:I:1:MET:HA	3:I:1:MET:HE2	1.93	0.51
2:D:541:ILE:HG22	2:D:547:ASN:HB3	1.92	0.51
2:D:4679:PHE:O	2:D:4682:ALA:C	2.48	0.51
2:B:191:TYR:N	2:B:206:ALA:O	2.44	0.51
2:C:3796:LEU:HD22	2:C:3835:PHE:HZ	1.75	0.51
2:A:2703:PRO:HB2	2:A:2854:LYS:CD	2.40	0.51
1:E:78:THR:OG1	1:E:80:ASP:OD1	2.24	0.51
2:D:942:THR:O	2:D:946:LEU:HG	2.10	0.51
2:D:3054:LYS:HB3	2:D:3058:ARG:HH22	1.75	0.51
2:D:3174:HIS:ND1	2:D:3175:LEU:HG	2.25	0.51
2:B:2273:GLY:O	2:B:2336:ARG:NH2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4622:SER:OG	2:B:4624:ASP:OD1	2.23	0.51
2:C:3054:LYS:HB3	2:C:3058:ARG:HH22	1.75	0.51
3:J:33:LEU:O	3:J:36:VAL:HG22	2.11	0.51
3:J:33:LEU:HD11	3:J:53:ILE:HD11	1.91	0.51
2:A:2666:LEU:HD11	2:A:2969:PRO:HB2	1.92	0.51
2:A:4809:MET:HG2	2:D:4517:LEU:O	2.10	0.51
2:D:1508:GLY:N	2:D:1521:ILE:O	2.44	0.51
2:B:942:THR:O	2:B:946:LEU:HG	2.10	0.51
2:B:2055:SER:HB3	2:B:2060:GLN:HB2	1.93	0.51
2:B:2279:MET:O	2:B:2283:LYS:HG3	2.11	0.51
2:C:152:ASP:OD2	2:C:154:THR:OG1	2.25	0.51
2:C:191:TYR:N	2:C:206:ALA:O	2.44	0.51
2:A:191:TYR:N	2:A:206:ALA:O	2.44	0.51
2:A:3068:LEU:HD21	2:A:3136:SER:OG	2.11	0.51
2:A:4867:ILE:HG12	2:B:4864:GLY:HA2	1.92	0.51
2:A:4867:ILE:HD13	2:B:4867:ILE:HD12	1.93	0.51
2:D:164:PRO:HB3	2:D:169:ARG:HB2	1.91	0.51
2:D:915:HIS:CE1	2:D:917:CYS:HG	2.28	0.51
2:D:3796:LEU:HD22	2:D:3835:PHE:HZ	1.75	0.51
2:D:4183:LYS:HB2	2:D:4183:LYS:HZ3	1.76	0.51
2:B:891:GLU:HB3	2:B:895:MET:HE1	1.92	0.51
2:B:3025:ASP:O	2:B:3028:SER:OG	2.20	0.51
2:B:3729:ALA:HA	2:B:3732:HIS:CD2	2.45	0.51
2:C:888:ASN:O	2:C:892:LEU:HD13	2.11	0.51
2:C:942:THR:O	2:C:946:LEU:HG	2.10	0.51
3:J:1:MET:HA	3:J:1:MET:CE	2.40	0.51
2:A:942:THR:O	2:A:946:LEU:HG	2.10	0.51
2:A:2440:PHE:CZ	2:A:2465:LYS:HE2	2.46	0.51
1:E:50:ARG:HB3	1:E:53:LYS:HE3	1.93	0.51
2:D:888:ASN:O	2:D:892:LEU:HD13	2.11	0.51
2:B:2770:ILE:HG13	2:B:2771:TYR:CD1	2.44	0.51
2:B:3068:LEU:HD21	2:B:3136:SER:OG	2.11	0.51
2:C:434:ASP:OD1	2:C:504:ARG:NE	2.40	0.51
2:C:3068:LEU:HD21	2:C:3136:SER:OG	2.11	0.51
2:C:3152:ARG:HH22	2:C:3233:HIS:CD2	2.28	0.51
2:A:4622:SER:OG	2:A:4624:ASP:OD1	2.23	0.51
2:D:191:TYR:N	2:D:206:ALA:O	2.44	0.51
2:B:888:ASN:HA	2:B:891:GLU:OE1	2.10	0.51
3:L:1:MET:CE	3:L:1:MET:HA	2.40	0.51
2:A:888:ASN:O	2:A:892:LEU:HD13	2.11	0.51
2:A:2279:MET:O	2:A:2283:LYS:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2984:SER:OG	2:A:2994:GLY:O	2.27	0.51
1:G:50:ARG:HB3	1:G:53:LYS:HE3	1.93	0.51
2:D:3297:LYS:HD3	2:D:3334:VAL:HG13	1.93	0.51
2:B:964:MET:O	2:B:977:LYS:NZ	2.34	0.51
2:B:3285:TYR:CE1	2:B:3322:LEU:HB2	2.46	0.51
2:C:541:ILE:HG22	2:C:547:ASN:HB3	1.92	0.51
2:C:1937:GLN:HG2	2:C:3609:TYR:HA	1.92	0.51
2:C:3297:LYS:HD3	2:C:3334:VAL:HG13	1.93	0.51
2:D:2214:MET:HA	2:D:2214:MET:HE3	1.92	0.50
2:D:2642:ARG:NH2	2:D:2682:GLU:OE1	2.43	0.50
2:D:3902:GLY:O	2:D:3906:PHE:HD2	1.94	0.50
2:B:3046:MET:HE1	2:B:3057:LEU:HD23	1.93	0.50
2:A:2760:TYR:HD2	2:A:2760:TYR:O	1.94	0.50
2:A:3297:LYS:HD3	2:A:3334:VAL:HG13	1.93	0.50
2:D:680:ASP:OD1	2:D:801:ARG:NH2	2.44	0.50
2:D:2703:PRO:HB2	2:D:2854:LYS:CD	2.40	0.50
2:D:2717:LEU:O	2:D:2721:ILE:HG13	2.10	0.50
2:D:3285:TYR:CE1	2:D:3322:LEU:HB2	2.46	0.50
2:B:2440:PHE:CZ	2:B:2465:LYS:HE2	2.46	0.50
2:B:3650:GLU:HB2	2:B:3651:PRO:HD3	1.94	0.50
2:C:680:ASP:OD1	2:C:801:ARG:NH2	2.44	0.50
2:A:2717:LEU:O	2:A:2721:ILE:HG13	2.10	0.50
2:A:2833:LEU:HD23	2:A:2837:LEU:HD23	1.93	0.50
2:A:3255:GLU:OE2	2:A:3270:SER:N	2.45	0.50
2:A:3285:TYR:CE1	2:A:3322:LEU:HB2	2.46	0.50
2:A:3650:GLU:HB2	2:A:3651:PRO:HD3	1.93	0.50
2:B:3297:LYS:HD3	2:B:3334:VAL:HG13	1.93	0.50
2:C:706:TYR:CE1	2:C:1254:ARG:HD2	2.46	0.50
2:C:2055:SER:HB3	2:C:2060:GLN:HB2	1.93	0.50
2:C:2984:SER:OG	2:C:2994:GLY:O	2.27	0.50
2:A:680:ASP:OD1	2:A:801:ARG:NH2	2.44	0.50
2:A:2882:LYS:HD2	2:A:2886:ARG:NH1	2.25	0.50
2:A:3926:GLY:CA	2:A:4935:GLY:HA3	2.41	0.50
2:D:3068:LEU:HD21	2:D:3136:SER:OG	2.11	0.50
2:B:888:ASN:O	2:B:892:LEU:HD13	2.11	0.50
2:C:3902:GLY:O	2:C:3906:PHE:HD2	1.94	0.50
2:A:2232:PRO:HG3	2:A:2382:ILE:HD11	1.94	0.50
2:D:3012:GLY:O	2:D:3016:ARG:HG2	2.12	0.50
2:D:4481:TRP:CE3	2:D:4484:ILE:HD11	2.47	0.50
2:C:2232:PRO:HG3	2:C:2382:ILE:HD11	1.94	0.50
2:C:2279:MET:O	2:C:2283:LYS:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2055:SER:HB3	2:A:2060:GLN:HB2	1.93	0.50
2:A:3068:LEU:O	2:A:3072:MET:HG2	2.12	0.50
2:D:2273:GLY:O	2:D:2336:ARG:NH2	2.42	0.50
2:D:4035:TYR:HE1	2:D:4050:LYS:HB2	1.76	0.50
2:D:4810:LEU:HG	2:D:4814:MET:HE1	1.92	0.50
2:B:541:ILE:HG22	2:B:547:ASN:HB3	1.92	0.50
2:B:2582:PRO:HG3	2:B:2617:CYS:SG	2.52	0.50
2:B:2666:LEU:HD11	2:B:2969:PRO:HB2	1.92	0.50
2:B:2703:PRO:HB2	2:B:2854:LYS:CD	2.40	0.50
2:B:4481:TRP:CE3	2:B:4484:ILE:HD11	2.47	0.50
2:C:964:MET:O	2:C:977:LYS:NZ	2.34	0.50
2:C:3069:GLU:OE2	2:C:3136:SER:HB3	2.12	0.50
2:A:2214:MET:HA	2:A:2214:MET:HE3	1.92	0.50
2:A:2582:PRO:HG3	2:A:2617:CYS:SG	2.52	0.50
2:D:3069:GLU:OE2	2:D:3136:SER:HB3	2.12	0.50
2:B:1937:GLN:HG2	2:B:3609:TYR:HA	1.92	0.50
2:A:4035:TYR:HE1	2:A:4050:LYS:HB2	1.76	0.50
2:A:4481:TRP:CE3	2:A:4484:ILE:HD11	2.47	0.50
2:D:964:MET:O	2:D:977:LYS:NZ	2.34	0.50
2:D:1048:ASP:OD1	2:D:1049:SER:N	2.45	0.50
2:D:2440:PHE:CZ	2:D:2465:LYS:HE2	2.46	0.50
2:D:2760:TYR:O	2:D:2760:TYR:HD2	1.94	0.50
2:D:3255:GLU:OE2	2:D:3270:SER:N	2.45	0.50
2:B:804:LEU:HD13	2:B:832:LEU:HD21	1.94	0.50
2:C:2760:TYR:HD2	2:C:2760:TYR:O	1.94	0.50
2:C:3046:MET:HE1	2:C:3057:LEU:HD23	1.93	0.50
1:H:50:ARG:HB3	1:H:53:LYS:HE3	1.93	0.50
2:A:1937:GLN:HG2	2:A:3609:TYR:HA	1.92	0.50
2:D:2087:LEU:O	2:D:2091:GLN:HG2	2.12	0.50
2:D:2758:LYS:HG3	2:D:2763:LEU:HD12	1.94	0.50
2:D:3068:LEU:O	2:D:3072:MET:HG2	2.12	0.50
2:B:2232:PRO:HG3	2:B:2382:ILE:HD11	1.94	0.50
2:B:2758:LYS:HG3	2:B:2763:LEU:HD12	1.94	0.50
2:B:3068:LEU:O	2:B:3072:MET:HG2	2.12	0.50
2:B:3134:LEU:HD12	2:B:3162:PHE:CE2	2.43	0.50
2:B:4035:TYR:HE1	2:B:4050:LYS:HB2	1.76	0.50
2:B:4070:ALA:HB1	2:B:4078:LEU:HD13	1.94	0.50
2:C:2582:PRO:HG3	2:C:2617:CYS:SG	2.52	0.50
2:C:3012:GLY:O	2:C:3016:ARG:HG2	2.12	0.50
2:A:706:TYR:CE1	2:A:1254:ARG:HD2	2.46	0.49
1:F:50:ARG:HB3	1:F:53:LYS:HE3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1499:GLY:HA3	2:C:2824:ARG:NH2	2.23	0.49
2:D:2232:PRO:HG3	2:D:2382:ILE:HD11	1.94	0.49
2:D:2666:LEU:HD11	2:D:2969:PRO:HB2	1.92	0.49
2:D:3608:LEU:HD12	2:D:3611:LEU:HD12	1.94	0.49
2:B:1508:GLY:N	2:B:1521:ILE:O	2.44	0.49
2:B:2760:TYR:O	2:B:2760:TYR:HD2	1.94	0.49
2:B:3255:GLU:OE2	2:B:3270:SER:N	2.45	0.49
2:B:3608:LEU:HD12	2:B:3611:LEU:HD12	1.94	0.49
2:C:1048:ASP:OD1	2:C:1049:SER:N	2.45	0.49
2:C:2087:LEU:O	2:C:2091:GLN:HG2	2.12	0.49
2:C:2833:LEU:HD23	2:C:2837:LEU:HD23	1.93	0.49
2:C:3650:GLU:HB2	2:C:3651:PRO:HD3	1.94	0.49
2:C:4481:TRP:CE3	2:C:4484:ILE:HD11	2.47	0.49
2:A:3218:ILE:HD11	2:A:3239:LEU:HD21	1.92	0.49
2:D:2055:SER:HB3	2:D:2060:GLN:HB2	1.93	0.49
2:B:2833:LEU:HD23	2:B:2837:LEU:HD23	1.93	0.49
2:B:2920:ARG:HG2	2:B:2923:TYR:HB2	1.95	0.49
2:B:3012:GLY:O	2:B:3016:ARG:HG2	2.12	0.49
2:B:3218:ILE:HD11	2:B:3239:LEU:HD21	1.92	0.49
2:C:804:LEU:HD13	2:C:832:LEU:HD21	1.94	0.49
2:C:2440:PHE:CZ	2:C:2465:LYS:HE2	2.46	0.49
2:A:3012:GLY:O	2:A:3016:ARG:HG2	2.12	0.49
2:D:706:TYR:CE1	2:D:1254:ARG:HD2	2.46	0.49
2:D:1937:GLN:HG2	2:D:3609:TYR:HA	1.92	0.49
2:D:3650:GLU:HB2	2:D:3651:PRO:HD3	1.94	0.49
2:B:1919:ARG:HA	2:B:1922:ILE:HG22	1.94	0.49
2:C:2736:LYS:HB2	2:C:2741:TRP:CG	2.47	0.49
2:C:3285:TYR:CE1	2:C:3322:LEU:HB2	2.46	0.49
2:C:3608:LEU:HD12	2:C:3611:LEU:HD12	1.94	0.49
2:A:1272:ARG:NH2	2:A:1582:CYS:SG	2.86	0.49
2:A:2920:ARG:HG2	2:A:2923:TYR:HB2	1.95	0.49
2:D:2279:MET:O	2:D:2283:LYS:HG3	2.11	0.49
2:D:2882:LYS:HD2	2:D:2886:ARG:NH1	2.25	0.49
2:D:3012:GLY:HA2	2:D:3015:VAL:HG12	1.93	0.49
2:D:3926:GLY:CA	2:D:4935:GLY:HA3	2.41	0.49
2:B:3902:GLY:O	2:B:3906:PHE:HD2	1.94	0.49
2:C:4035:TYR:HE1	2:C:4050:LYS:HB2	1.76	0.49
2:A:882:ARG:HH11	2:A:937:LEU:HD21	1.78	0.49
2:A:4070:ALA:HB1	2:A:4078:LEU:HD13	1.94	0.49
2:D:2582:PRO:HG3	2:D:2617:CYS:SG	2.52	0.49
2:B:706:TYR:CE1	2:B:1254:ARG:HD2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1138:ASP:HB3	2:B:1143:GLN:HB2	1.95	0.49
2:B:3221:LEU:HD11	2:B:3226:ILE:HG12	1.95	0.49
2:C:1272:ARG:NH2	2:C:1582:CYS:SG	2.86	0.49
2:C:1919:ARG:HA	2:C:1922:ILE:HG22	1.94	0.49
2:C:2666:LEU:HD11	2:C:2969:PRO:HB2	1.92	0.49
2:C:3255:GLU:OE2	2:C:3270:SER:N	2.45	0.49
2:C:3774:GLN:NE2	2:C:3845:LEU:O	2.42	0.49
2:A:1048:ASP:OD1	2:A:1049:SER:N	2.45	0.49
2:A:1089:ARG:HB3	2:A:1204:VAL:HG23	1.95	0.49
2:A:2758:LYS:HG3	2:A:2763:LEU:HD12	1.94	0.49
2:A:3304:GLN:HB3	2:A:3305:PRO:HD3	1.95	0.49
2:A:3902:GLY:O	2:A:3906:PHE:HD2	1.94	0.49
2:D:152:ASP:OD2	2:D:154:THR:OG1	2.25	0.49
2:D:251:GLU:HB2	2:D:256:GLN:HE21	1.78	0.49
2:D:1089:ARG:HB3	2:D:1204:VAL:HG23	1.95	0.49
2:D:1138:ASP:HB3	2:D:1143:GLN:HB2	1.95	0.49
2:D:1272:ARG:NH2	2:D:1582:CYS:SG	2.86	0.49
2:D:2360:ASP:OD1	2:D:2385:GLY:N	2.41	0.49
2:D:2736:LYS:HB2	2:D:2741:TRP:CG	2.47	0.49
2:D:4652:LYS:NZ	2:D:4945:GLN:OE1	2.25	0.49
2:B:2087:LEU:O	2:B:2091:GLN:HG2	2.12	0.49
2:C:2627:TRP:CB	2:C:2630:PHE:HB2	2.43	0.49
2:C:2703:PRO:HB2	2:C:2854:LYS:CD	2.40	0.49
2:C:2920:ARG:HG2	2:C:2923:TYR:HB2	1.94	0.49
2:C:3068:LEU:O	2:C:3072:MET:HG2	2.12	0.49
2:C:3221:LEU:HD11	2:C:3226:ILE:HG12	1.95	0.49
2:A:4268:MET:HA	2:A:4271:VAL:HG12	1.95	0.49
1:H:12:ASP:OD1	1:H:13:GLY:N	2.46	0.49
2:A:364:GLN:NE2	2:A:369:GLY:O	2.45	0.49
2:A:1508:GLY:N	2:A:1521:ILE:O	2.44	0.49
2:A:3641:ILE:HD12	2:A:3695:MET:HG2	1.95	0.49
1:F:12:ASP:OD1	1:F:13:GLY:N	2.46	0.49
2:D:1549:SER:HB2	2:C:2830:ASN:OD1	2.13	0.49
2:D:1895:GLN:NE2	2:D:2068:ARG:HH22	2.11	0.49
2:D:1966:ARG:NH1	3:L:111:THR:OG1	2.46	0.49
2:B:1048:ASP:OD1	2:B:1049:SER:N	2.45	0.49
2:B:2736:LYS:HB2	2:B:2741:TRP:CG	2.47	0.49
2:C:251:GLU:HB2	2:C:256:GLN:HE21	1.78	0.49
2:C:1138:ASP:HB3	2:C:1143:GLN:HB2	1.95	0.49
2:C:3012:GLY:HA2	2:C:3015:VAL:HG12	1.93	0.49
2:C:4810:LEU:HG	2:C:4814:MET:HE1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:804:LEU:HD13	2:A:832:LEU:HD21	1.94	0.49
2:B:1272:ARG:NH2	2:B:1582:CYS:SG	2.86	0.49
2:B:1962:THR:HG23	2:B:1966:ARG:HH21	1.77	0.49
2:B:3012:GLY:HA2	2:B:3015:VAL:HG12	1.93	0.49
2:C:2928:GLN:O	2:C:2932:TYR:HD2	1.96	0.49
2:A:3045:VAL:O	2:A:3054:LYS:NZ	2.46	0.49
2:A:3069:GLU:OE2	2:A:3136:SER:HB3	2.12	0.49
2:D:804:LEU:HD13	2:D:832:LEU:HD21	1.94	0.49
2:D:4252:ILE:O	2:D:4256:MET:HG3	2.13	0.49
2:C:1895:GLN:NE2	2:C:2068:ARG:HH22	2.11	0.49
2:C:3269:ASN:O	2:C:3272:HIS:N	2.46	0.49
2:C:4070:ALA:HB1	2:C:4078:LEU:HD13	1.94	0.49
2:C:4183:LYS:HB2	2:C:4183:LYS:HZ3	1.73	0.49
2:A:2736:LYS:HB2	2:A:2741:TRP:CG	2.47	0.48
2:A:2830:ASN:O	2:B:1549:SER:HB2	2.13	0.48
2:A:3608:LEU:HD12	2:A:3611:LEU:HD12	1.94	0.48
2:A:4183:LYS:HB2	2:A:4183:LYS:HZ3	1.76	0.48
2:A:4923:MET:HE3	2:A:4923:MET:HB2	1.63	0.48
1:G:12:ASP:OD1	1:G:13:GLY:N	2.46	0.48
2:D:2920:ARG:HG2	2:D:2923:TYR:HB2	1.95	0.48
2:D:2928:GLN:O	2:D:2932:TYR:HD2	1.96	0.48
2:B:2497:ARG:HD3	2:B:2876:THR:HG22	1.95	0.48
2:B:2928:GLN:O	2:B:2932:TYR:HD2	1.96	0.48
2:B:3043:ARG:O	2:B:3047:LYS:HG2	2.13	0.48
2:B:3122:ILE:HG23	2:B:3126:VAL:HG12	1.95	0.48
2:A:1895:GLN:NE2	2:A:2068:ARG:HH22	2.11	0.48
2:A:3046:MET:HE1	2:A:3057:LEU:HD23	1.94	0.48
2:A:4252:ILE:O	2:A:4256:MET:HG3	2.13	0.48
2:D:1919:ARG:HA	2:D:1922:ILE:HG22	1.94	0.48
2:D:2833:LEU:HD23	2:D:2837:LEU:HD23	1.93	0.48
2:D:3641:ILE:HD12	2:D:3695:MET:HG2	1.95	0.48
2:D:4070:ALA:HB1	2:D:4078:LEU:HD13	1.94	0.48
2:B:4268:MET:HA	2:B:4271:VAL:HG12	1.95	0.48
2:C:1508:GLY:N	2:C:1521:ILE:O	2.44	0.48
2:C:2497:ARG:HD3	2:C:2876:THR:HG22	1.95	0.48
2:A:1962:THR:HG23	2:A:1966:ARG:HH21	1.78	0.48
2:D:1962:THR:HG23	2:D:1966:ARG:HH21	1.77	0.48
2:D:2882:LYS:HB3	2:D:2886:ARG:NH1	2.29	0.48
2:D:3046:MET:HE1	2:D:3057:LEU:HD23	1.95	0.48
2:D:3122:ILE:HG23	2:D:3126:VAL:HG12	1.95	0.48
2:D:3304:GLN:HB3	2:D:3305:PRO:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4797:GLU:N	2:D:4797:GLU:OE1	2.46	0.48
2:B:4810:LEU:HG	2:B:4814:MET:HE1	1.95	0.48
2:C:1829:LEU:HD11	2:C:1839:LEU:HD13	1.95	0.48
2:C:2758:LYS:HG3	2:C:2763:LEU:HD12	1.94	0.48
2:A:988:LEU:HD21	2:A:1055:ARG:HG3	1.96	0.48
2:A:1919:ARG:HA	2:A:1922:ILE:HG22	1.94	0.48
2:A:2087:LEU:O	2:A:2091:GLN:HG2	2.12	0.48
2:A:2882:LYS:HB3	2:A:2886:ARG:NH1	2.29	0.48
2:A:3012:GLY:HA2	2:A:3015:VAL:HG12	1.93	0.48
2:A:4660:PHE:HE1	2:D:4056:LYS:HB2	1.78	0.48
2:D:1829:LEU:HD11	2:D:1839:LEU:HD13	1.95	0.48
2:B:1689:ILE:HA	2:B:1703:TYR:HE1	1.79	0.48
2:B:1829:LEU:HD11	2:B:1839:LEU:HD13	1.95	0.48
2:B:1895:GLN:NE2	2:B:2068:ARG:HH22	2.11	0.48
2:B:3069:GLU:OE2	2:B:3136:SER:HB3	2.12	0.48
2:B:3304:GLN:HB3	2:B:3305:PRO:HD3	1.95	0.48
2:D:882:ARG:HH11	2:D:937:LEU:HD21	1.77	0.48
2:D:3043:ARG:O	2:D:3047:LYS:HG2	2.13	0.48
2:D:3221:LEU:HD11	2:D:3226:ILE:HG12	1.95	0.48
2:D:3815:GLU:HG2	2:D:3821:THR:HG22	1.96	0.48
2:D:4620:GLN:OE1	2:D:4632:ARG:NH2	2.35	0.48
2:B:3177:LYS:HZ3	2:B:3201:VAL:CG2	2.26	0.48
2:B:3641:ILE:HD12	2:B:3695:MET:HG2	1.95	0.48
2:C:988:LEU:HD21	2:C:1055:ARG:HG3	1.95	0.48
2:C:1977:LEU:HD21	2:C:3620:PHE:HE1	1.78	0.48
2:C:3304:GLN:HB3	2:C:3305:PRO:HD3	1.95	0.48
2:C:3641:ILE:HD12	2:C:3695:MET:HG2	1.95	0.48
2:A:1689:ILE:HA	2:A:1703:TYR:HE1	1.79	0.48
2:A:1829:LEU:HD11	2:A:1839:LEU:HD13	1.95	0.48
2:A:4495:PHE:HE2	2:D:4283:PHE:HE2	1.62	0.48
1:E:12:ASP:OD1	1:E:13:GLY:N	2.46	0.48
2:D:988:LEU:HD21	2:D:1055:ARG:HG3	1.96	0.48
2:D:1977:LEU:HD21	2:D:3620:PHE:HE1	1.78	0.48
2:B:882:ARG:HH11	2:B:937:LEU:HD21	1.78	0.48
2:B:1644:LEU:HD23	2:B:1651:LEU:HA	1.95	0.48
2:A:1895:GLN:OE1	2:A:2068:ARG:NH1	2.46	0.48
2:A:2596:VAL:HG21	2:A:2610:LEU:HD11	1.96	0.48
2:A:3595:ARG:CD	3:I:146:MET:HG3	2.43	0.48
2:D:934:GLN:O	2:D:938:GLU:OE1	2.32	0.48
2:D:3269:ASN:O	2:D:3272:HIS:N	2.46	0.48
2:D:4268:MET:HA	2:D:4271:VAL:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:506:HIS:NE2	2:B:534:TYR:OH	2.40	0.48
2:B:1089:ARG:HB3	2:B:1204:VAL:HG23	1.95	0.48
2:B:3926:GLY:CA	2:B:4935:GLY:HA3	2.41	0.48
2:C:249:SER:OG	2:C:250:GLY:N	2.47	0.48
2:C:668:ALA:HB2	2:C:1012:ILE:HD11	1.96	0.48
2:C:882:ARG:HH11	2:C:937:LEU:HD21	1.78	0.48
2:C:2773:TRP:HB3	2:C:2774:PRO:HD3	1.96	0.48
2:A:251:GLU:HB2	2:A:256:GLN:HE21	1.78	0.48
2:A:2928:GLN:O	2:A:2932:TYR:HD2	1.96	0.48
1:E:50:ARG:NH1	1:E:53:LYS:HD2	2.29	0.48
2:D:997:ASP:HA	2:D:1047:LYS:HZ1	1.78	0.48
2:B:934:GLN:O	2:B:938:GLU:OE1	2.32	0.48
2:C:3189:SER:HA	2:C:3192:ARG:HB2	1.96	0.48
2:A:888:ASN:O	2:A:891:GLU:HB2	2.14	0.48
2:A:1138:ASP:HB3	2:A:1143:GLN:HB2	1.95	0.48
2:D:1644:LEU:HD23	2:D:1651:LEU:HA	1.95	0.48
2:D:2760:TYR:OH	2:D:2772:ARG:NH2	2.29	0.48
2:D:2773:TRP:HB3	2:D:2774:PRO:HD3	1.96	0.48
2:B:152:ASP:OD2	2:B:154:THR:OG1	2.25	0.48
2:B:249:SER:OG	2:B:250:GLY:N	2.47	0.48
2:B:251:GLU:HB2	2:B:256:GLN:HE21	1.78	0.48
2:B:988:LEU:HD21	2:B:1055:ARG:HG3	1.96	0.48
2:B:2596:VAL:HG21	2:B:2610:LEU:HD11	1.96	0.48
2:B:3189:SER:HA	2:B:3192:ARG:HB2	1.96	0.48
2:B:3269:ASN:O	2:B:3272:HIS:N	2.46	0.48
2:B:3281:LEU:HB3	2:B:3285:TYR:CZ	2.49	0.48
2:B:4044:SER:OG	2:B:4045:LYS:N	2.47	0.48
2:C:1962:THR:HG23	2:C:1966:ARG:HH21	1.78	0.48
2:C:3815:GLU:HG2	2:C:3821:THR:HG22	1.96	0.48
2:C:4252:ILE:O	2:C:4256:MET:HG3	2.13	0.48
2:A:1644:LEU:HD23	2:A:1651:LEU:HA	1.95	0.48
2:A:3043:ARG:O	2:A:3047:LYS:HG2	2.13	0.48
2:A:3122:ILE:HG23	2:A:3126:VAL:HG12	1.95	0.48
2:A:3189:SER:HA	2:A:3192:ARG:HB2	1.96	0.48
2:A:3221:LEU:HD11	2:A:3226:ILE:HG12	1.95	0.48
1:G:50:ARG:NH1	1:G:53:LYS:HD2	2.29	0.48
2:D:364:GLN:NE2	2:D:369:GLY:O	2.45	0.48
2:D:966:LEU:HB2	2:D:978:PRO:HB2	1.96	0.48
2:D:4807:ASP:O	2:C:4522:VAL:HG12	2.14	0.48
2:B:895:MET:HA	2:B:898:ILE:HG22	1.96	0.48
2:B:2054:LYS:NZ	2:B:2056:SER:OG	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3281:LEU:HB3	2:C:3285:TYR:CZ	2.49	0.48
2:C:4268:MET:HA	2:C:4271:VAL:HG12	1.95	0.48
1:E:58:LYS:HB3	1:E:81:VAL:HB	1.96	0.47
1:F:78:THR:OG1	1:F:80:ASP:OD1	2.24	0.47
2:B:668:ALA:HB2	2:B:1012:ILE:HD11	1.96	0.47
2:B:680:ASP:OD1	2:B:801:ARG:NH2	2.44	0.47
2:B:4914:ASN:HB3	2:B:4917:ASN:HB2	1.96	0.47
2:C:3122:ILE:HG23	2:C:3126:VAL:HG12	1.95	0.47
2:A:934:GLN:O	2:A:938:GLU:OE1	2.32	0.47
2:A:2497:ARG:HD3	2:A:2876:THR:HG22	1.95	0.47
1:E:9:SER:HB2	1:E:72:ARG:HB3	1.97	0.47
2:D:3145:SER:O	2:D:3149:GLU:HG2	2.14	0.47
2:B:1977:LEU:HD21	2:B:3620:PHE:HE1	1.78	0.47
2:B:2882:LYS:HB3	2:B:2886:ARG:NH1	2.29	0.47
2:C:934:GLN:O	2:C:938:GLU:OE1	2.32	0.47
2:C:1089:ARG:HB3	2:C:1204:VAL:HG23	1.95	0.47
2:A:895:MET:HA	2:A:898:ILE:HG22	1.96	0.47
2:A:939:THR:O	2:A:943:LEU:HG	2.15	0.47
2:A:966:LEU:H	2:A:977:LYS:HZ3	1.62	0.47
2:A:1977:LEU:HD21	2:A:3620:PHE:HE1	1.78	0.47
2:A:3269:ASN:O	2:A:3272:HIS:N	2.46	0.47
2:A:4797:GLU:OE1	2:A:4797:GLU:N	2.46	0.47
2:A:4914:ASN:HB3	2:A:4917:ASN:HB2	1.96	0.47
1:E:58:LYS:HD2	1:E:81:VAL:HG12	1.96	0.47
1:F:9:SER:HB2	1:F:72:ARG:HB3	1.97	0.47
2:D:249:SER:OG	2:D:250:GLY:N	2.47	0.47
2:D:2627:TRP:CB	2:D:2630:PHE:HB2	2.43	0.47
2:B:855:VAL:HG13	2:B:1078:CYS:HB2	1.96	0.47
2:B:939:THR:O	2:B:943:LEU:HG	2.15	0.47
2:B:4252:ILE:O	2:B:4256:MET:HG3	2.13	0.47
2:C:1689:ILE:HA	2:C:1703:TYR:HE1	1.78	0.47
2:C:4044:SER:OG	2:C:4045:LYS:N	2.47	0.47
1:H:58:LYS:HB3	1:H:81:VAL:HB	1.96	0.47
2:A:2484:LEU:HD21	2:A:2535:PHE:HE1	1.80	0.47
2:A:3145:SER:O	2:A:3149:GLU:HG2	2.14	0.47
2:A:3281:LEU:HB3	2:A:3285:TYR:CZ	2.49	0.47
2:A:4078:LEU:HD23	2:A:4078:LEU:H	1.79	0.47
1:G:9:SER:HB2	1:G:72:ARG:HB3	1.97	0.47
2:D:2497:ARG:HD3	2:D:2876:THR:HG22	1.95	0.47
2:D:4044:SER:OG	2:D:4045:LYS:N	2.47	0.47
2:B:2733:SER:HA	2:B:2736:LYS:HZ2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4797:GLU:OE1	2:B:4797:GLU:N	2.46	0.47
2:C:2485:LEU:HD22	2:C:2544:LEU:HD23	1.97	0.47
2:C:2882:LYS:HB3	2:C:2886:ARG:NH1	2.29	0.47
2:A:915:HIS:CD2	2:A:917:CYS:HG	2.32	0.47
2:A:3815:GLU:HG2	2:A:3821:THR:HG22	1.96	0.47
2:A:4810:LEU:HG	2:A:4814:MET:HE1	1.96	0.47
2:D:3218:ILE:O	2:D:3218:ILE:HG13	2.15	0.47
2:B:888:ASN:O	2:B:891:GLU:HB2	2.14	0.47
2:B:4652:LYS:NZ	2:B:4945:GLN:OE1	2.25	0.47
2:C:2360:ASP:OD1	2:C:2385:GLY:N	2.41	0.47
2:A:1031:ARG:HE	2:A:1042:THR:HG21	1.79	0.47
2:A:3178:HIS:ND1	2:A:3178:HIS:N	2.63	0.47
1:E:17:PRO:HG3	1:E:107:LEU:HD21	1.97	0.47
2:D:668:ALA:HB2	2:D:1012:ILE:HD11	1.96	0.47
2:D:1689:ILE:HA	2:D:1703:TYR:HE1	1.79	0.47
2:D:3281:LEU:HB3	2:D:3285:TYR:CZ	2.49	0.47
2:D:3912:VAL:O	2:D:3916:VAL:HG23	2.15	0.47
2:D:4078:LEU:HD23	2:D:4078:LEU:H	1.79	0.47
2:B:364:GLN:NE2	2:B:369:GLY:O	2.45	0.47
2:C:891:GLU:HA	2:C:894:VAL:HG22	1.96	0.47
2:C:895:MET:HA	2:C:898:ILE:HG22	1.96	0.47
2:C:1084:ARG:HG3	2:C:1085:PHE:CD1	2.50	0.47
2:C:1113:MET:HB2	2:C:1156:TRP:HZ2	1.80	0.47
2:C:1161:VAL:HG21	2:C:1225:LYS:HD2	1.97	0.47
2:C:1644:LEU:HD23	2:C:1651:LEU:HA	1.96	0.47
2:C:1968:PRO:O	2:C:1972:GLN:HG3	2.15	0.47
2:C:3936:ALA:O	2:C:3998:GLN:NE2	2.48	0.47
1:H:58:LYS:HD2	1:H:81:VAL:HG12	1.96	0.47
2:A:668:ALA:HB2	2:A:1012:ILE:HD11	1.96	0.47
2:A:855:VAL:HG13	2:A:1078:CYS:HB2	1.96	0.47
2:A:1113:MET:HB2	2:A:1156:TRP:HZ2	1.80	0.47
2:A:1968:PRO:O	2:A:1972:GLN:HG3	2.15	0.47
2:A:2126:ILE:HA	2:A:2142:MET:SD	2.55	0.47
2:A:2773:TRP:HB3	2:A:2774:PRO:HD3	1.96	0.47
2:A:3072:MET:SD	2:A:3140:LEU:HB2	2.55	0.47
2:A:4652:LYS:NZ	2:A:4945:GLN:OE1	2.25	0.47
1:F:50:ARG:NH1	1:F:53:LYS:HD2	2.29	0.47
1:F:58:LYS:HB3	1:F:81:VAL:HB	1.96	0.47
2:D:661:LEU:O	2:D:788:PHE:N	2.41	0.47
2:D:888:ASN:O	2:D:891:GLU:HB2	2.14	0.47
2:D:891:GLU:HA	2:D:894:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:895:MET:HA	2:D:898:ILE:HG22	1.96	0.47
2:D:915:HIS:CD2	2:D:917:CYS:HG	2.33	0.47
2:D:939:THR:O	2:D:943:LEU:HG	2.15	0.47
2:D:1031:ARG:HE	2:D:1042:THR:HG21	1.79	0.47
2:D:2605:MET:HA	2:D:2608:LYS:HE2	1.97	0.47
2:D:4641:PRO:HB3	2:D:4644:TYR:HB3	1.97	0.47
2:B:1729:MET:N	2:B:2108:ILE:O	2.45	0.47
2:B:2484:LEU:HD21	2:B:2535:PHE:HE1	1.80	0.47
2:B:3250:TRP:HE1	2:B:3273:MET:HE3	1.77	0.47
2:B:3815:GLU:HG2	2:B:3821:THR:HG22	1.96	0.47
2:B:3912:VAL:O	2:B:3916:VAL:HG23	2.15	0.47
2:C:254:GLU:HA	2:C:257:ARG:HB2	1.97	0.47
2:C:915:HIS:CD2	2:C:917:CYS:HG	2.32	0.47
2:C:939:THR:O	2:C:943:LEU:HG	2.15	0.47
2:C:966:LEU:HB2	2:C:978:PRO:HB2	1.96	0.47
2:C:1031:ARG:HE	2:C:1042:THR:HG21	1.79	0.47
2:C:3043:ARG:O	2:C:3047:LYS:HG2	2.13	0.47
2:C:3178:HIS:ND1	2:C:3178:HIS:N	2.63	0.47
3:K:115:GLU:HB3	3:K:117:LEU:HG	1.97	0.47
1:H:50:ARG:NH1	1:H:53:LYS:HD2	2.29	0.47
2:A:966:LEU:HB2	2:A:978:PRO:HB2	1.96	0.47
2:A:2605:MET:HA	2:A:2608:LYS:HE2	1.97	0.47
2:A:3912:VAL:O	2:A:3916:VAL:HG23	2.15	0.47
3:I:115:GLU:HB3	3:I:117:LEU:HG	1.97	0.47
2:D:657:PRO:HB2	2:D:659:ILE:HG12	1.97	0.47
2:D:2743:TYR:CD1	2:D:2757:MET:HB2	2.50	0.47
2:D:4640:PHE:CG	2:D:4641:PRO:HD3	2.50	0.47
2:B:2743:TYR:CD1	2:B:2757:MET:HB2	2.50	0.47
2:C:888:ASN:O	2:C:891:GLU:HB2	2.14	0.47
3:J:32:GLU:O	3:J:35:THR:OG1	2.31	0.47
3:J:115:GLU:HB3	3:J:117:LEU:HG	1.97	0.47
1:H:9:SER:HB2	1:H:72:ARG:HB3	1.97	0.47
1:H:17:PRO:HG3	1:H:107:LEU:HD21	1.97	0.47
2:A:1768:PHE:O	1:E:83:TYR:OH	2.24	0.47
2:A:2743:TYR:CD1	2:A:2757:MET:HB2	2.50	0.47
2:A:3936:ALA:O	2:A:3998:GLN:NE2	2.48	0.47
2:B:254:GLU:HA	2:B:257:ARG:HB2	1.97	0.47
2:B:891:GLU:HA	2:B:894:VAL:HG22	1.97	0.47
2:B:1968:PRO:O	2:B:1972:GLN:HG3	2.15	0.47
2:B:2279:MET:HE3	2:B:2279:MET:HB3	1.87	0.47
2:B:2773:TRP:HB3	2:B:2774:PRO:HD3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2854:LYS:HD2	2:B:2854:LYS:HA	1.66	0.47
2:B:3072:MET:SD	2:B:3140:LEU:HB2	2.55	0.47
2:C:997:ASP:HA	2:C:1047:LYS:HZ1	1.79	0.47
2:C:2844:MET:SD	2:C:2889:ALA:HB1	2.55	0.47
2:C:3072:MET:SD	2:C:3140:LEU:HB2	2.55	0.47
2:C:3145:SER:O	2:C:3149:GLU:HG2	2.15	0.47
2:A:2939:TYR:O	2:A:2943:PHE:CD1	2.68	0.47
1:F:58:LYS:HD2	1:F:81:VAL:HG12	1.96	0.47
1:G:36:LYS:HB2	2:C:647:ARG:HH12	1.80	0.47
2:D:467:ASP:O	2:D:475:LYS:NZ	2.37	0.47
2:D:1161:VAL:HG21	2:D:1225:LYS:HD2	1.97	0.47
2:D:4867:ILE:HD12	2:C:4867:ILE:CD1	2.45	0.47
2:B:2126:ILE:HA	2:B:2142:MET:SD	2.55	0.47
2:B:2844:MET:SD	2:B:2889:ALA:HB1	2.55	0.47
2:C:267:VAL:HG12	2:C:273:SER:HB3	1.97	0.47
2:C:1642:LEU:HD21	2:C:1691:ASN:ND2	2.30	0.47
2:C:2126:ILE:HA	2:C:2142:MET:SD	2.55	0.47
2:A:606:ARG:NH1	2:A:1634:GLU:OE2	2.49	0.46
2:A:657:PRO:HB2	2:A:659:ILE:HG12	1.97	0.46
2:A:1084:ARG:HG3	2:A:1085:PHE:CD1	2.50	0.46
2:A:1114:ARG:NH1	2:A:1128:LEU:O	2.42	0.46
1:G:17:PRO:HG3	1:G:107:LEU:HD21	1.97	0.46
2:D:267:VAL:HG12	2:D:273:SER:HB3	1.97	0.46
2:D:876:PRO:HA	2:D:879:GLU:HG3	1.98	0.46
2:D:2485:LEU:HD22	2:D:2544:LEU:HD23	1.97	0.46
2:D:3778:LEU:HB2	2:D:3854:PHE:CE2	2.50	0.46
2:B:966:LEU:H	2:B:977:LYS:HZ3	1.62	0.46
2:B:3778:LEU:HB2	2:B:3854:PHE:CE2	2.50	0.46
2:B:3936:ALA:O	2:B:3998:GLN:NE2	2.48	0.46
2:C:2983:LEU:HD13	2:C:2983:LEU:HA	1.81	0.46
2:C:3778:LEU:HB2	2:C:3854:PHE:CE2	2.50	0.46
2:C:3917:PHE:CZ	2:C:3978:MET:HG3	2.51	0.46
2:C:3975:GLN:O	2:C:3979:VAL:HG23	2.16	0.46
2:C:4797:GLU:OE1	2:C:4797:GLU:N	2.46	0.46
2:C:4914:ASN:HB3	2:C:4917:ASN:HB2	1.96	0.46
1:H:78:THR:OG1	1:H:80:ASP:OD1	2.24	0.46
2:A:267:VAL:HG12	2:A:273:SER:HB3	1.97	0.46
2:A:4183:LYS:HB2	2:A:4183:LYS:HZ2	1.75	0.46
1:G:58:LYS:HD2	1:G:81:VAL:HG12	1.96	0.46
1:G:58:LYS:HB3	1:G:81:VAL:HB	1.96	0.46
2:D:1084:ARG:HG3	2:D:1085:PHE:CD1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1113:MET:HB2	2:D:1156:TRP:HZ2	1.80	0.46
2:D:1419:PHE:HE2	2:D:1562:ASN:HB3	1.81	0.46
2:D:2484:LEU:HD21	2:D:2535:PHE:HE1	1.80	0.46
2:D:3189:SER:HA	2:D:3192:ARG:HB2	1.96	0.46
2:B:75:VAL:O	2:B:79:GLN:HG2	2.16	0.46
2:B:267:VAL:HG12	2:B:273:SER:HB3	1.97	0.46
2:B:966:LEU:HB2	2:B:978:PRO:HB2	1.96	0.46
2:B:1084:ARG:HG3	2:B:1085:PHE:CD1	2.50	0.46
2:B:2725:ALA:HB1	2:B:2760:TYR:HE1	1.80	0.46
2:C:2596:VAL:HG21	2:C:2610:LEU:HD11	1.96	0.46
2:C:4033:LYS:HA	2:C:4033:LYS:HD2	1.76	0.46
2:C:4641:PRO:HB3	2:C:4644:TYR:HB3	1.97	0.46
2:A:2355:GLU:OE1	2:A:2355:GLU:N	2.49	0.46
2:A:4634:VAL:HG22	2:A:4640:PHE:HD1	1.80	0.46
1:F:17:PRO:HG3	1:F:107:LEU:HD21	1.97	0.46
2:D:606:ARG:NH1	2:D:1634:GLU:OE2	2.49	0.46
2:D:1968:PRO:O	2:D:1972:GLN:HG3	2.15	0.46
2:D:3178:HIS:N	2:D:3178:HIS:ND1	2.63	0.46
2:D:4914:ASN:HB3	2:D:4917:ASN:HB2	1.96	0.46
2:B:3148:VAL:O	2:B:3152:ARG:HG3	2.15	0.46
2:B:4640:PHE:CG	2:B:4641:PRO:HD3	2.50	0.46
2:C:75:VAL:O	2:C:79:GLN:HG2	2.16	0.46
2:C:1502:ASN:OD1	2:C:1503:ASN:N	2.48	0.46
2:C:2725:ALA:HB1	2:C:2760:TYR:HE1	1.80	0.46
2:C:4078:LEU:HD23	2:C:4078:LEU:H	1.79	0.46
2:C:4923:MET:HE3	2:C:4923:MET:HB2	1.64	0.46
2:A:75:VAL:O	2:A:79:GLN:HG2	2.16	0.46
2:A:249:SER:OG	2:A:250:GLY:N	2.47	0.46
2:A:1433:PHE:CD2	2:A:1551:ASN:HB3	2.51	0.46
2:A:2627:TRP:CB	2:A:2630:PHE:HB2	2.43	0.46
2:A:2733:SER:HA	2:A:2736:LYS:HZ2	1.80	0.46
2:A:3975:GLN:O	2:A:3979:VAL:HG23	2.16	0.46
2:A:4044:SER:OG	2:A:4045:LYS:N	2.47	0.46
2:A:4194:GLU:CD	2:A:4608:ARG:HH22	2.19	0.46
2:D:2596:VAL:HG21	2:D:2610:LEU:HD11	1.96	0.46
2:B:876:PRO:HA	2:B:879:GLU:HG3	1.98	0.46
2:B:1031:ARG:HE	2:B:1042:THR:HG21	1.80	0.46
2:B:3218:ILE:O	2:B:3218:ILE:HG13	2.15	0.46
2:B:4078:LEU:HD23	2:B:4078:LEU:H	1.79	0.46
2:C:876:PRO:HA	2:C:879:GLU:HG3	1.98	0.46
2:C:1419:PHE:HE2	2:C:1562:ASN:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3148:VAL:O	2:C:3152:ARG:HG3	2.15	0.46
2:C:3926:GLY:CA	2:C:4935:GLY:HA3	2.41	0.46
2:A:2844:MET:SD	2:A:2889:ALA:HB1	2.55	0.46
2:A:3218:ILE:O	2:A:3218:ILE:HG13	2.15	0.46
2:D:2392:TYR:O	2:D:2396:ILE:HD13	2.16	0.46
2:D:2725:ALA:HB1	2:D:2760:TYR:HE1	1.80	0.46
2:D:3072:MET:SD	2:D:3140:LEU:HB2	2.55	0.46
2:D:3218:ILE:CD1	2:D:3239:LEU:HD21	2.46	0.46
2:D:3917:PHE:CZ	2:D:3978:MET:HG3	2.50	0.46
2:D:3936:ALA:O	2:D:3998:GLN:NE2	2.48	0.46
2:B:2485:LEU:HD22	2:B:2544:LEU:HD23	1.96	0.46
2:B:3074:ASN:OD1	2:B:3075:LEU:N	2.49	0.46
2:B:3145:SER:O	2:B:3149:GLU:HG2	2.15	0.46
2:C:2484:LEU:HD21	2:C:2535:PHE:HE1	1.80	0.46
2:C:2939:TYR:O	2:C:2943:PHE:CD1	2.68	0.46
2:C:3183:ILE:HD11	2:C:3187:LYS:NZ	2.30	0.46
2:C:3218:ILE:O	2:C:3218:ILE:HG13	2.15	0.46
2:C:3912:VAL:O	2:C:3916:VAL:HG23	2.15	0.46
2:A:254:GLU:HA	2:A:257:ARG:HB2	1.97	0.46
2:A:661:LEU:O	2:A:788:PHE:N	2.41	0.46
2:A:1642:LEU:HD21	2:A:1691:ASN:ND2	2.31	0.46
2:A:2392:TYR:O	2:A:2396:ILE:HD13	2.16	0.46
2:A:3917:PHE:CZ	2:A:3978:MET:HG3	2.51	0.46
2:D:4183:LYS:HB2	2:D:4183:LYS:HZ2	1.75	0.46
2:D:4194:GLU:CD	2:D:4608:ARG:HH22	2.19	0.46
2:C:2720:PHE:HA	2:C:2723:LYS:HZ3	1.80	0.46
3:L:115:GLU:HB3	3:L:117:LEU:HG	1.97	0.46
2:A:152:ASP:OD2	2:A:154:THR:OG1	2.25	0.46
2:A:766:ILE:HB	2:A:779:PHE:HB2	1.98	0.46
2:A:3183:ILE:HD11	2:A:3187:LYS:NZ	2.30	0.46
2:A:3778:LEU:HB2	2:A:3854:PHE:CE2	2.50	0.46
2:A:4620:GLN:OE1	2:A:4632:ARG:NH2	2.35	0.46
2:D:75:VAL:O	2:D:79:GLN:HG2	2.16	0.46
2:D:2582:PRO:HD2	2:D:2630:PHE:HD1	1.81	0.46
2:D:2844:MET:SD	2:D:2889:ALA:HB1	2.55	0.46
2:B:2062:ILE:HG21	2:B:2087:LEU:HG	1.97	0.46
2:B:3178:HIS:ND1	2:B:3178:HIS:N	2.63	0.46
2:B:3975:GLN:O	2:B:3979:VAL:HG23	2.16	0.46
2:C:449:ILE:HG13	2:C:529:ILE:HD11	1.98	0.46
2:C:2488:LEU:HD12	2:C:2492:PHE:HB2	1.98	0.46
2:A:1161:VAL:HG21	2:A:1225:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2703:PRO:HB3	2:A:2850:ASN:OD1	2.16	0.46
2:A:4481:TRP:CD1	2:A:4692:SER:HA	2.51	0.46
2:A:4640:PHE:CG	2:A:4641:PRO:HD3	2.50	0.46
2:D:254:GLU:HA	2:D:257:ARG:HB2	1.97	0.46
2:D:2126:ILE:HA	2:D:2142:MET:SD	2.55	0.46
2:D:3148:VAL:O	2:D:3152:ARG:HG3	2.15	0.46
2:D:3237:VAL:O	2:D:3240:PRO:HD2	2.15	0.46
2:D:4481:TRP:CD1	2:D:4692:SER:HA	2.51	0.46
2:B:4634:VAL:HG22	2:B:4640:PHE:HD1	1.80	0.46
2:C:657:PRO:HB2	2:C:659:ILE:HG12	1.97	0.46
2:C:3218:ILE:CD1	2:C:3239:LEU:HD21	2.46	0.46
2:A:2485:LEU:HD22	2:A:2544:LEU:HD23	1.97	0.46
2:A:3148:VAL:O	2:A:3152:ARG:HG3	2.15	0.46
2:A:4624:ASP:HB3	2:D:4238:ILE:HG12	1.97	0.46
3:I:32:GLU:O	3:I:35:THR:OG1	2.31	0.46
2:D:449:ILE:HG13	2:D:529:ILE:HD11	1.98	0.46
2:D:966:LEU:H	2:D:977:LYS:HZ3	1.64	0.46
2:D:2895:PHE:HA	2:D:2898:ILE:HG12	1.98	0.46
2:B:1433:PHE:CD2	2:B:1551:ASN:HB3	2.51	0.46
2:B:2392:TYR:O	2:B:2396:ILE:HD13	2.16	0.46
2:B:2627:TRP:CB	2:B:2630:PHE:HB2	2.43	0.46
2:C:364:GLN:NE2	2:C:369:GLY:O	2.45	0.46
2:C:606:ARG:NH1	2:C:1634:GLU:OE2	2.48	0.46
2:C:2355:GLU:OE1	2:C:2355:GLU:N	2.49	0.46
2:C:2743:TYR:CD1	2:C:2757:MET:HB2	2.50	0.46
2:C:3045:VAL:O	2:C:3054:LYS:NZ	2.46	0.46
2:C:3074:ASN:OD1	2:C:3075:LEU:N	2.49	0.46
2:A:891:GLU:HA	2:A:894:VAL:HG22	1.96	0.46
2:A:2659:GLN:C	2:A:2659:GLN:OE1	2.54	0.46
2:A:2854:LYS:HA	2:A:2854:LYS:HD2	1.66	0.46
2:A:3006:SER:O	2:A:3010:LYS:HE2	2.16	0.46
2:A:3237:VAL:O	2:A:3240:PRO:HD2	2.15	0.46
2:A:4641:PRO:HB3	2:A:4644:TYR:HB3	1.97	0.46
2:D:855:VAL:HG13	2:D:1078:CYS:HB2	1.97	0.46
2:D:1642:LEU:HD21	2:D:1691:ASN:ND2	2.31	0.46
2:D:2355:GLU:OE1	2:D:2355:GLU:N	2.49	0.46
2:D:3074:ASN:OD1	2:D:3075:LEU:N	2.49	0.46
2:D:3183:ILE:HD11	2:D:3187:LYS:NZ	2.30	0.46
2:B:607:ASN:HB3	2:B:610:VAL:HG23	1.98	0.46
2:B:1419:PHE:HE2	2:B:1562:ASN:HB3	1.81	0.46
2:B:1642:LEU:HD21	2:B:1691:ASN:ND2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2605:MET:HA	2:B:2608:LYS:HE2	1.97	0.46
2:B:2895:PHE:HA	2:B:2898:ILE:HG12	1.98	0.46
2:B:3071:THR:HG22	2:B:3075:LEU:HD23	1.97	0.46
2:B:3183:ILE:HD11	2:B:3187:LYS:NZ	2.30	0.46
2:B:3218:ILE:CD1	2:B:3239:LEU:HD21	2.46	0.46
2:B:4641:PRO:HB3	2:B:4644:TYR:HB3	1.97	0.46
2:C:766:ILE:HB	2:C:779:PHE:HB2	1.98	0.46
2:C:1962:THR:HG23	2:C:1966:ARG:NE	2.30	0.46
2:A:1106:GLU:HB3	2:A:1214:ARG:HB2	1.98	0.45
2:A:3218:ILE:CD1	2:A:3239:LEU:HD21	2.46	0.45
2:D:766:ILE:HB	2:D:779:PHE:HB2	1.98	0.45
2:D:2659:GLN:C	2:D:2659:GLN:OE1	2.54	0.45
2:D:3006:SER:O	2:D:3010:LYS:HE2	2.16	0.45
2:D:3975:GLN:O	2:D:3979:VAL:HG23	2.16	0.45
2:B:467:ASP:O	2:B:475:LYS:NZ	2.37	0.45
2:B:606:ARG:NH1	2:B:1634:GLU:OE2	2.48	0.45
2:B:915:HIS:CD2	2:B:917:CYS:HG	2.32	0.45
2:B:1113:MET:HB2	2:B:1156:TRP:HZ2	1.80	0.45
2:B:1161:VAL:HG21	2:B:1225:LYS:HD2	1.97	0.45
2:B:2703:PRO:HB3	2:B:2850:ASN:OD1	2.16	0.45
2:B:3219:VAL:O	2:B:3223:GLU:OE1	2.35	0.45
2:B:3917:PHE:CZ	2:B:3978:MET:HG3	2.50	0.45
2:C:855:VAL:HG13	2:C:1078:CYS:HB2	1.97	0.45
3:J:92:VAL:HG23	3:J:93:PHE:CD1	2.51	0.45
2:A:876:PRO:HA	2:A:879:GLU:HG3	1.98	0.45
2:A:1419:PHE:HE2	2:A:1562:ASN:HB3	1.81	0.45
2:A:4120:GLU:HA	2:A:4123:GLU:HG2	1.98	0.45
2:D:816:PRO:HB2	2:D:819:TYR:CD1	2.52	0.45
2:D:1433:PHE:CD2	2:D:1551:ASN:HB3	2.51	0.45
2:D:2703:PRO:HB3	2:D:2850:ASN:OD1	2.16	0.45
2:B:436:LEU:HD11	2:B:447:LEU:HD11	1.98	0.45
2:B:816:PRO:HB2	2:B:819:TYR:CD1	2.52	0.45
2:B:2488:LEU:HD12	2:B:2492:PHE:HB2	1.98	0.45
2:B:2870:LEU:HD22	2:B:2877:LEU:HG	1.99	0.45
2:C:2303:ARG:HG2	2:C:2401:ARG:HD2	1.98	0.45
2:C:2582:PRO:HD2	2:C:2630:PHE:HD1	1.81	0.45
2:C:4634:VAL:HG22	2:C:4640:PHE:HD1	1.80	0.45
2:A:13:PHE:CE1	2:A:174:LYS:HD2	2.52	0.45
2:A:242:ASP:OD1	2:A:243:GLU:N	2.49	0.45
2:A:816:PRO:HB2	2:A:819:TYR:CD1	2.52	0.45
2:A:1502:ASN:OD1	2:A:1503:ASN:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2791:ARG:HD2	2:A:2901:TYR:CE1	2.52	0.45
2:A:3071:THR:HG22	2:A:3075:LEU:HD23	1.97	0.45
2:D:3316:LYS:O	2:D:3317:THR:OG1	2.31	0.45
2:B:242:ASP:OD1	2:B:243:GLU:N	2.49	0.45
2:B:2659:GLN:OE1	2:B:2659:GLN:C	2.54	0.45
2:B:4194:GLU:CD	2:B:4608:ARG:HH22	2.19	0.45
2:C:13:PHE:CE1	2:C:174:LYS:HD2	2.52	0.45
2:C:891:GLU:HB3	2:C:895:MET:CE	2.46	0.45
2:C:1433:PHE:CD2	2:C:1551:ASN:HB3	2.51	0.45
2:C:3025:ASP:O	2:C:3028:SER:OG	2.20	0.45
2:C:3071:THR:HG22	2:C:3075:LEU:HD23	1.97	0.45
2:C:3134:LEU:HD12	2:C:3162:PHE:CE2	2.43	0.45
2:C:3605:MET:HE3	2:C:3606:ALA:N	2.32	0.45
2:D:1312:GLU:OE1	2:D:1536:SER:OG	2.30	0.45
2:D:3071:THR:HG22	2:D:3075:LEU:HD23	1.97	0.45
2:B:657:PRO:HB2	2:B:659:ILE:HG12	1.97	0.45
2:B:2355:GLU:N	2:B:2355:GLU:OE1	2.49	0.45
2:B:2594:PHE:HD2	2:B:2594:PHE:O	2.00	0.45
2:C:123:HIS:N	2:C:128:MET:O	2.43	0.45
2:C:3131:TYR:HE1	2:C:3166:PHE:CZ	2.19	0.45
2:C:3237:VAL:O	2:C:3240:PRO:HD2	2.16	0.45
3:L:51:ASP:OD1	3:L:52:MET:N	2.50	0.45
2:D:1114:ARG:NH1	2:D:1128:LEU:O	2.42	0.45
2:B:3006:SER:O	2:B:3010:LYS:HE2	2.16	0.45
2:B:3043:ARG:NH1	2:B:3117:PHE:HA	2.32	0.45
2:B:3697:LYS:HA	2:B:3700:HIS:CD2	2.52	0.45
2:B:4033:LYS:HA	2:B:4033:LYS:HD2	1.76	0.45
2:C:966:LEU:HD13	2:C:970:TYR:CD2	2.52	0.45
2:A:1696:GLY:HA3	2:A:1816:PHE:CD2	2.51	0.45
2:A:2062:ILE:HG21	2:A:2087:LEU:HG	1.97	0.45
2:A:3074:ASN:OD1	2:A:3075:LEU:N	2.49	0.45
2:D:2554:ARG:NH1	2:D:2554:ARG:O	2.50	0.45
2:D:2870:LEU:HD22	2:D:2877:LEU:HG	1.99	0.45
2:D:4923:MET:HE3	2:D:4923:MET:HB2	1.63	0.45
2:B:966:LEU:HD13	2:B:970:TYR:CD2	2.52	0.45
2:B:1502:ASN:OD1	2:B:1503:ASN:N	2.48	0.45
2:B:1696:GLY:HA3	2:B:1816:PHE:CD2	2.51	0.45
2:B:2664:LEU:O	2:B:2667:PRO:HD2	2.17	0.45
2:B:2791:ARG:HD2	2:B:2901:TYR:CE1	2.52	0.45
2:C:125:TYR:CE1	2:C:417:ARG:HD3	2.52	0.45
2:C:2392:TYR:O	2:C:2396:ILE:HD13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:3043:ARG:NH1	2:C:3117:PHE:HA	2.32	0.45
2:C:3219:VAL:O	2:C:3223:GLU:OE1	2.35	0.45
3:K:51:ASP:OD1	3:K:52:MET:N	2.50	0.45
2:A:307:SER:HB3	2:A:327:THR:HG22	1.99	0.45
2:A:449:ILE:HG13	2:A:529:ILE:HD11	1.98	0.45
2:A:739:ARG:HB3	2:A:1469:LEU:HD11	1.99	0.45
2:A:1689:ILE:HG23	2:A:1703:TYR:CE1	2.52	0.45
2:A:2488:LEU:HD12	2:A:2492:PHE:HB2	1.98	0.45
2:A:2582:PRO:HD2	2:A:2630:PHE:HD1	1.81	0.45
2:D:891:GLU:HB3	2:D:895:MET:CE	2.46	0.45
2:D:966:LEU:HD13	2:D:970:TYR:CD2	2.52	0.45
2:D:1895:GLN:OE1	2:D:2068:ARG:NH1	2.46	0.45
2:D:3697:LYS:HA	2:D:3700:HIS:CD2	2.52	0.45
2:D:3790:PHE:HE1	2:D:3858:LEU:HD23	1.82	0.45
2:B:2303:ARG:HG2	2:B:2401:ARG:HD2	1.98	0.45
2:B:2436:ILE:HG22	2:B:2491:GLY:HA3	1.99	0.45
2:B:3167:PRO:HA	2:B:3248:ARG:NH1	2.32	0.45
2:C:242:ASP:OD1	2:C:243:GLU:N	2.49	0.45
2:C:607:ASN:HB3	2:C:610:VAL:HG23	1.98	0.45
2:C:2062:ILE:HG21	2:C:2087:LEU:HG	1.97	0.45
2:C:2436:ILE:HG22	2:C:2491:GLY:HA3	1.99	0.45
2:C:2605:MET:HA	2:C:2608:LYS:HE2	1.97	0.45
2:C:4194:GLU:CD	2:C:4608:ARG:HH22	2.19	0.45
2:C:4481:TRP:CD1	2:C:4692:SER:HA	2.51	0.45
3:K:32:GLU:O	3:K:35:THR:OG1	2.31	0.45
2:A:125:TYR:CE1	2:A:417:ARG:HD3	2.52	0.45
2:A:1276:THR:OG1	2:A:1278:ASP:OD1	2.33	0.45
2:A:2959:GLU:OE1	2:A:2959:GLU:N	2.49	0.45
2:A:3072:MET:O	2:A:3076:LYS:HD3	2.17	0.45
2:A:3166:PHE:CE2	2:A:3168:VAL:HB	2.48	0.45
2:A:3219:VAL:O	2:A:3223:GLU:OE1	2.35	0.45
3:I:51:ASP:OD1	3:I:52:MET:N	2.50	0.45
2:D:1696:GLY:HA3	2:D:1816:PHE:CD2	2.51	0.45
2:D:2303:ARG:HG2	2:D:2401:ARG:HD2	1.98	0.45
2:D:2488:LEU:HD12	2:D:2492:PHE:HB2	1.98	0.45
2:D:4563:GLU:OE1	2:D:4568:MET:HB2	2.17	0.45
2:B:123:HIS:N	2:B:128:MET:O	2.43	0.45
2:B:125:TYR:CE1	2:B:417:ARG:HD3	2.52	0.45
2:B:739:ARG:HB3	2:B:1469:LEU:HD11	1.99	0.45
2:B:1276:THR:OG1	2:B:1278:ASP:OD1	2.33	0.45
2:B:1895:GLN:OE1	2:B:2068:ARG:NH1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2641:SER:HB3	2:B:2676:LEU:HD21	1.99	0.45
2:B:2959:GLU:OE1	2:B:2959:GLU:N	2.49	0.45
2:B:3237:VAL:O	2:B:3240:PRO:HD2	2.16	0.45
2:C:2659:GLN:C	2:C:2659:GLN:OE1	2.54	0.45
2:C:3205:CYS:HB3	2:C:3208:ILE:HD13	1.99	0.45
3:J:51:ASP:OD1	3:J:52:MET:N	2.50	0.45
2:A:2664:LEU:O	2:A:2667:PRO:HD2	2.17	0.45
2:A:3043:ARG:NH1	2:A:3117:PHE:HA	2.32	0.45
2:D:307:SER:HB3	2:D:327:THR:HG22	1.99	0.45
2:D:1689:ILE:HG23	2:D:1703:TYR:CE1	2.52	0.45
2:D:2664:LEU:O	2:D:2667:PRO:HD2	2.17	0.45
2:D:4634:VAL:HG22	2:D:4640:PHE:HD1	1.80	0.45
2:B:13:PHE:CE1	2:B:174:LYS:HD2	2.52	0.45
2:B:4120:GLU:HA	2:B:4123:GLU:HG2	1.98	0.45
2:B:4620:GLN:OE1	2:B:4632:ARG:NH2	2.35	0.45
2:C:1696:GLY:HA3	2:C:1816:PHE:CD2	2.51	0.45
2:C:2594:PHE:HD2	2:C:2594:PHE:O	2.00	0.45
2:C:2666:LEU:HB3	2:C:2667:PRO:HD3	1.99	0.45
2:C:2703:PRO:HB3	2:C:2850:ASN:OD1	2.16	0.45
2:C:3072:MET:O	2:C:3076:LYS:HD3	2.17	0.45
3:K:49:LEU:O	3:K:52:MET:HG2	2.17	0.45
2:A:3167:PRO:HA	2:A:3248:ARG:NH1	2.32	0.45
2:A:3744:ILE:O	2:A:3747:SER:OG	2.30	0.45
2:A:4809:MET:HG3	2:D:4518:LEU:HA	1.98	0.45
3:I:92:VAL:HG23	3:I:93:PHE:CD1	2.51	0.45
2:D:607:ASN:HB3	2:D:610:VAL:HG23	1.98	0.45
2:D:2666:LEU:HB3	2:D:2667:PRO:HD3	1.99	0.45
2:D:2791:ARG:HD2	2:D:2901:TYR:CE1	2.52	0.45
2:D:3131:TYR:HE1	2:D:3166:PHE:CZ	2.19	0.45
2:D:3167:PRO:HA	2:D:3248:ARG:NH1	2.32	0.45
2:B:1689:ILE:HG23	2:B:1703:TYR:CE1	2.52	0.45
2:B:3790:PHE:HE1	2:B:3858:LEU:HD23	1.82	0.45
2:C:428:ARG:NH2	2:C:448:PRO:HG3	2.32	0.45
2:C:1106:GLU:HB3	2:C:1214:ARG:HB2	1.98	0.45
2:C:2554:ARG:NH1	2:C:2554:ARG:O	2.50	0.45
2:C:2870:LEU:HD22	2:C:2877:LEU:HG	1.99	0.45
2:C:2979:ARG:HH12	2:C:3038:GLN:HB3	1.82	0.45
2:C:3006:SER:O	2:C:3010:LYS:HE2	2.16	0.45
2:C:4640:PHE:CG	2:C:4641:PRO:HD3	2.50	0.45
3:J:49:LEU:O	3:J:52:MET:HG2	2.17	0.45
3:K:92:VAL:HG23	3:K:93:PHE:CD1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:36:LYS:HB2	2:B:647:ARG:NH1	2.28	0.44
2:B:428:ARG:NH2	2:B:448:PRO:HG3	2.32	0.44
2:B:3205:CYS:HB3	2:B:3208:ILE:HD13	1.99	0.44
2:B:4481:TRP:CD1	2:B:4692:SER:HA	2.51	0.44
2:C:893:TRP:O	2:C:897:LYS:HG2	2.17	0.44
2:C:2664:LEU:O	2:C:2667:PRO:HD2	2.17	0.44
2:C:2959:GLU:OE1	2:C:2959:GLU:N	2.49	0.44
2:A:436:LEU:HD11	2:A:447:LEU:HD11	1.98	0.44
2:A:966:LEU:HD13	2:A:970:TYR:CD2	2.52	0.44
2:A:2303:ARG:HG2	2:A:2401:ARG:HD2	1.98	0.44
2:A:4563:GLU:OE1	2:A:4568:MET:HB2	2.17	0.44
2:D:13:PHE:CE1	2:D:174:LYS:HD2	2.52	0.44
2:D:428:ARG:NH2	2:D:448:PRO:HG3	2.33	0.44
2:D:2062:ILE:HG21	2:D:2087:LEU:HG	1.97	0.44
2:D:3280:ILE:O	2:D:3284:ILE:HG23	2.17	0.44
2:B:766:ILE:HB	2:B:779:PHE:HB2	1.98	0.44
2:B:891:GLU:HB3	2:B:895:MET:CE	2.46	0.44
2:C:1114:ARG:NH1	2:C:1128:LEU:O	2.42	0.44
2:C:2895:PHE:HA	2:C:2898:ILE:HG12	1.98	0.44
2:A:2279:MET:HE3	2:A:2279:MET:HB3	1.92	0.44
2:A:2594:PHE:O	2:A:2594:PHE:HD2	2.00	0.44
2:A:2895:PHE:HA	2:A:2898:ILE:HG12	1.98	0.44
2:A:3205:CYS:HB3	2:A:3208:ILE:HD13	1.99	0.44
2:A:3605:MET:HE3	2:A:3606:ALA:N	2.32	0.44
2:D:1649:GLU:HG2	2:D:1650:LEU:N	2.33	0.44
2:D:2641:SER:HB3	2:D:2676:LEU:HD21	1.99	0.44
2:D:2728:SER:HA	2:D:2731:LYS:HZ2	1.81	0.44
2:D:3219:VAL:O	2:D:3223:GLU:OE1	2.35	0.44
2:B:988:LEU:HG	2:B:1051:ARG:HH21	1.83	0.44
2:B:1079:SER:OG	2:B:1083:GLU:O	2.26	0.44
2:B:3072:MET:O	2:B:3076:LYS:HD3	2.17	0.44
2:B:4563:GLU:OE1	2:B:4568:MET:HB2	2.17	0.44
2:C:307:SER:HB3	2:C:327:THR:HG22	1.99	0.44
2:C:2733:SER:HA	2:C:2736:LYS:HZ2	1.82	0.44
2:C:2791:ARG:HD2	2:C:2901:TYR:CE1	2.52	0.44
2:C:3167:PRO:HA	2:C:3248:ARG:NH1	2.32	0.44
3:L:49:LEU:O	3:L:52:MET:HG2	2.17	0.44
2:A:607:ASN:HB3	2:A:610:VAL:HG23	1.98	0.44
2:A:4707:MET:HG3	2:D:4252:ILE:HG21	2.00	0.44
1:G:22:THR:HB	1:G:108:GLU:HG3	2.00	0.44
3:I:49:LEU:O	3:I:52:MET:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:739:ARG:HB3	2:D:1469:LEU:HD11	1.99	0.44
2:D:1106:GLU:HB3	2:D:1214:ARG:HB2	1.98	0.44
2:D:2860:LEU:HA	2:D:2863:LYS:HZ3	1.82	0.44
2:D:2939:TYR:O	2:D:2943:PHE:CD1	2.68	0.44
2:D:2983:LEU:HD13	2:D:2983:LEU:HA	1.81	0.44
2:D:3134:LEU:HD12	2:D:3162:PHE:CE2	2.43	0.44
2:D:3166:PHE:CE2	2:D:3168:VAL:HB	2.48	0.44
2:D:3205:CYS:HB3	2:D:3208:ILE:HD13	1.99	0.44
2:B:307:SER:HB3	2:B:327:THR:HG22	1.99	0.44
2:B:449:ILE:HG13	2:B:529:ILE:HD11	1.98	0.44
2:B:2666:LEU:HB3	2:B:2667:PRO:HD3	1.99	0.44
2:B:3183:ILE:C	2:B:3192:ARG:HH22	2.21	0.44
2:B:3605:MET:HE3	2:B:3606:ALA:N	2.32	0.44
2:C:506:HIS:NE2	2:C:534:TYR:OH	2.40	0.44
3:J:37:MET:HG3	3:J:42:GLN:HE21	1.83	0.44
2:A:891:GLU:HB3	2:A:895:MET:CE	2.46	0.44
2:A:1649:GLU:HG2	2:A:1650:LEU:N	2.33	0.44
2:A:1729:MET:N	2:A:2108:ILE:O	2.45	0.44
2:A:3280:ILE:O	2:A:3284:ILE:HG23	2.17	0.44
2:D:1477:HIS:ND1	2:D:1478:GLU:HG2	2.33	0.44
2:D:3043:ARG:NH1	2:D:3117:PHE:HA	2.32	0.44
2:D:3227:ARG:HD3	2:D:3290:ILE:HG21	2.00	0.44
2:D:3605:MET:HE3	2:D:3606:ALA:N	2.32	0.44
2:D:4120:GLU:HA	2:D:4123:GLU:HG2	1.98	0.44
2:B:1114:ARG:NH1	2:B:1128:LEU:O	2.42	0.44
2:B:1477:HIS:ND1	2:B:1478:GLU:HG2	2.33	0.44
2:B:2979:ARG:HH12	2:B:3038:GLN:HB3	1.82	0.44
2:C:1989:PRO:O	2:C:1993:ARG:HG3	2.18	0.44
2:A:2725:ALA:HB1	2:A:2760:TYR:HE1	1.80	0.44
2:A:2926:LEU:HD22	2:A:3003:MET:HG3	2.00	0.44
2:A:3134:LEU:HD12	2:A:3162:PHE:CE2	2.43	0.44
2:A:3697:LYS:HA	2:A:3700:HIS:CD2	2.52	0.44
2:A:3790:PHE:HE1	2:A:3858:LEU:HD23	1.82	0.44
2:A:4818:TYR:OH	2:B:4847:ASP:OD2	2.29	0.44
3:I:37:MET:HG3	3:I:42:GLN:HE21	1.83	0.44
2:D:1940:GLN:OE1	2:D:3608:LEU:HB3	2.18	0.44
2:D:2594:PHE:O	2:D:2594:PHE:HD2	2.00	0.44
2:B:195:SER:HB3	2:B:202:HIS:HB2	1.99	0.44
2:B:893:TRP:O	2:B:897:LYS:HG2	2.17	0.44
2:B:969:ASN:OD1	2:B:970:TYR:N	2.50	0.44
2:B:4520:TYR:HD1	2:B:4561:LEU:HD13	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4743:LEU:O	2:B:4746:ILE:HG12	2.18	0.44
2:C:436:LEU:HD11	2:C:447:LEU:HD11	1.98	0.44
2:C:463:PHE:HZ	2:C:489:PHE:HD2	1.66	0.44
2:C:816:PRO:HB2	2:C:819:TYR:CD1	2.52	0.44
2:C:1316:LYS:HA	2:C:1316:LYS:HD2	1.84	0.44
2:C:2179:LEU:O	2:C:2183:GLU:HB2	2.18	0.44
2:C:2657:TYR:CZ	2:C:2659:GLN:HB2	2.53	0.44
2:C:3134:LEU:HB2	2:C:3162:PHE:CE2	2.53	0.44
2:C:3183:ILE:C	2:C:3192:ARG:HH22	2.21	0.44
2:C:3215:MET:CE	2:C:3215:MET:HA	2.48	0.44
2:C:3227:ARG:HD3	2:C:3290:ILE:HG21	2.00	0.44
2:C:3697:LYS:HA	2:C:3700:HIS:CD2	2.52	0.44
2:C:4520:TYR:HD1	2:C:4561:LEU:HD13	1.83	0.44
1:H:22:THR:HB	1:H:108:GLU:HG3	2.00	0.44
2:A:2436:ILE:HG22	2:A:2491:GLY:HA3	1.99	0.44
2:A:2830:ASN:HB3	2:B:1434:PRO:O	2.17	0.44
2:A:3183:ILE:C	2:A:3192:ARG:HH22	2.21	0.44
2:A:4055:HIS:CE1	2:A:4057:HIS:HB2	2.53	0.44
2:D:463:PHE:HZ	2:D:489:PHE:HD2	1.66	0.44
2:D:953:SER:OG	2:D:954:ASP:N	2.51	0.44
2:D:2926:LEU:HD22	2:D:3003:MET:HG3	2.00	0.44
2:B:1649:GLU:HG2	2:B:1650:LEU:N	2.33	0.44
2:B:3227:ARG:HD3	2:B:3290:ILE:HG21	2.00	0.44
2:B:4735:ASN:HB3	2:B:4738:PHE:CD2	2.53	0.44
2:C:739:ARG:HB3	2:C:1469:LEU:HD11	1.99	0.44
2:C:1427:TYR:HB2	2:C:1563:VAL:HG11	2.00	0.44
2:C:3594:GLN:HB3	2:C:3595:ARG:H	1.54	0.44
2:C:4735:ASN:HB3	2:C:4738:PHE:CD2	2.53	0.44
2:A:893:TRP:O	2:A:897:LYS:HG2	2.17	0.44
2:A:1477:HIS:ND1	2:A:1478:GLU:HG2	2.33	0.44
2:A:1940:GLN:OE1	2:A:3608:LEU:HB3	2.18	0.44
2:A:3250:TRP:HZ3	2:A:3256:ASN:HD21	1.66	0.44
1:F:22:THR:HB	1:F:108:GLU:HG3	2.00	0.44
2:D:195:SER:HB3	2:D:202:HIS:HB2	1.99	0.44
2:D:436:LEU:HD11	2:D:447:LEU:HD11	1.98	0.44
2:D:3072:MET:O	2:D:3076:LYS:HD3	2.17	0.44
2:D:3250:TRP:HZ3	2:D:3256:ASN:HD21	1.66	0.44
2:D:4743:LEU:O	2:D:4746:ILE:HG12	2.18	0.44
2:B:706:TYR:HE2	2:B:838:ARG:NH1	2.16	0.44
2:B:1106:GLU:HB3	2:B:1214:ARG:HB2	1.98	0.44
2:B:2657:TYR:CZ	2:B:2659:GLN:HB2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2926:LEU:HD22	2:B:3003:MET:HG3	2.00	0.44
2:B:3054:LYS:HB3	2:B:3058:ARG:NH1	2.33	0.44
2:B:3134:LEU:HB2	2:B:3162:PHE:CE2	2.53	0.44
2:B:3183:ILE:HA	2:B:3186:THR:OG1	2.18	0.44
2:B:3280:ILE:O	2:B:3284:ILE:HG23	2.17	0.44
2:B:4046:ARG:NH2	2:B:4049:HIS:HB3	2.33	0.44
2:B:4055:HIS:CE1	2:B:4057:HIS:HB2	2.53	0.44
2:C:262:TYR:HB2	2:C:389:ARG:HB3	2.00	0.44
3:L:92:VAL:HG23	3:L:93:PHE:CD1	2.51	0.44
2:A:953:SER:OG	2:A:954:ASP:N	2.51	0.44
2:A:3134:LEU:HB2	2:A:3162:PHE:CE2	2.53	0.44
1:E:22:THR:HB	1:E:108:GLU:HG3	2.00	0.44
2:D:1427:TYR:HB2	2:D:1563:VAL:HG11	2.00	0.44
2:D:1708:ASP:HA	2:D:1712:SER:HB2	2.00	0.44
2:D:1729:MET:N	2:D:2108:ILE:O	2.45	0.44
2:D:2436:ILE:HG22	2:D:2491:GLY:HA3	1.99	0.44
2:D:2733:SER:HA	2:D:2736:LYS:HZ2	1.83	0.44
2:D:3664:LEU:O	2:D:3668:ILE:HG13	2.18	0.44
2:B:139:SER:O	2:B:141:ASP:N	2.51	0.44
2:B:262:TYR:HB2	2:B:389:ARG:HB3	2.00	0.44
2:C:1707:ILE:HG23	2:C:1827:THR:HG21	2.00	0.44
2:C:2833:LEU:HD23	2:C:2837:LEU:CD2	2.48	0.44
2:C:4183:LYS:HB2	2:C:4183:LYS:HZ2	1.78	0.44
2:C:4563:GLU:OE1	2:C:4568:MET:HB2	2.17	0.44
2:A:313:ASN:OD1	2:A:314:LEU:N	2.51	0.43
2:A:463:PHE:HZ	2:A:489:PHE:HD2	1.66	0.43
2:A:988:LEU:HG	2:A:1051:ARG:HH21	1.83	0.43
2:A:2325:ILE:HB	2:B:207:PHE:CE1	2.53	0.43
2:A:2961:LYS:HD3	2:A:2961:LYS:HA	1.79	0.43
2:D:313:ASN:OD1	2:D:314:LEU:N	2.51	0.43
2:D:2979:ARG:HH12	2:D:3038:GLN:HB3	1.82	0.43
2:D:3101:LEU:HG	2:D:3105:LEU:HD12	2.00	0.43
2:D:3325:LYS:HG2	2:D:3329:LYS:HE2	2.00	0.43
2:B:2554:ARG:NH1	2:B:2554:ARG:O	2.50	0.43
2:B:3045:VAL:O	2:B:3054:LYS:NZ	2.46	0.43
2:C:706:TYR:HE2	2:C:838:ARG:NH1	2.16	0.43
2:C:1124:PRO:HD2	2:C:1594:VAL:HG13	2.00	0.43
2:C:1477:HIS:ND1	2:C:1478:GLU:HG2	2.33	0.43
2:C:1649:GLU:HG2	2:C:1650:LEU:N	2.33	0.43
2:C:1689:ILE:HG23	2:C:1703:TYR:CE1	2.52	0.43
2:C:1895:GLN:OE1	2:C:2068:ARG:NH1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1940:GLN:OE1	2:C:3608:LEU:HB3	2.18	0.43
3:L:50:GLN:HA	3:L:53:ILE:HG13	2.00	0.43
2:A:428:ARG:NH2	2:A:448:PRO:HG3	2.33	0.43
2:A:1757:LEU:HD21	2:A:2113:VAL:HG13	2.00	0.43
2:A:2657:TYR:CZ	2:A:2659:GLN:HB2	2.53	0.43
2:A:2979:ARG:HH12	2:A:3038:GLN:HB3	1.82	0.43
2:A:3183:ILE:HA	2:A:3186:THR:OG1	2.18	0.43
2:A:3215:MET:HA	2:A:3215:MET:CE	2.48	0.43
2:D:3183:ILE:HA	2:D:3186:THR:OG1	2.18	0.43
2:B:1427:TYR:HB2	2:B:1563:VAL:HG11	2.00	0.43
2:B:1966:ARG:NH1	3:J:111:THR:OG1	2.51	0.43
2:B:3254:PRO:HD3	2:B:3266:THR:O	2.18	0.43
2:C:313:ASN:OD1	2:C:314:LEU:N	2.51	0.43
2:C:2892:ILE:HG23	2:C:2893:LEU:HD22	2.01	0.43
2:C:3054:LYS:HB3	2:C:3058:ARG:NH1	2.33	0.43
2:C:4046:ARG:NH2	2:C:4049:HIS:HB3	2.33	0.43
2:A:2833:LEU:HD23	2:A:2837:LEU:CD2	2.48	0.43
2:A:2870:LEU:HD22	2:A:2877:LEU:HG	1.98	0.43
2:A:3060:PHE:HZ	2:A:3104:MET:CE	2.31	0.43
2:A:3254:PRO:HD3	2:A:3266:THR:O	2.18	0.43
2:A:4046:ARG:NH2	2:A:4049:HIS:HB3	2.33	0.43
2:A:4520:TYR:HD1	2:A:4561:LEU:HD13	1.83	0.43
3:I:20:PHE:O	3:I:22:LYS:HG2	2.19	0.43
3:I:112:ASN:HB3	3:I:116:LYS:H	1.83	0.43
2:D:125:TYR:CE1	2:D:417:ARG:HD3	2.52	0.43
2:D:1962:THR:HG23	2:D:1966:ARG:NE	2.30	0.43
2:D:2833:LEU:HD23	2:D:2837:LEU:CD2	2.48	0.43
2:D:4520:TYR:HD1	2:D:4561:LEU:HD13	1.83	0.43
2:D:4848:ILE:HD11	2:C:4818:TYR:HA	2.00	0.43
2:B:1940:GLN:OE1	2:B:3608:LEU:HB3	2.18	0.43
2:B:2582:PRO:HD2	2:B:2630:PHE:HD1	1.81	0.43
2:B:2892:ILE:HG23	2:B:2893:LEU:HD22	2.00	0.43
2:C:966:LEU:H	2:C:977:LYS:HZ3	1.65	0.43
2:C:1022:GLN:HA	2:C:1030:PRO:HD3	2.00	0.43
2:C:2934:ASP:O	2:C:2938:GLN:OE1	2.37	0.43
2:C:3182:SER:O	2:C:3186:THR:HG23	2.19	0.43
3:K:28:ILE:O	3:K:63:THR:HA	2.19	0.43
3:L:32:GLU:O	3:L:35:THR:OG1	2.31	0.43
2:A:2666:LEU:HB3	2:A:2667:PRO:HD3	1.99	0.43
2:A:3227:ARG:HD3	2:A:3290:ILE:HG21	2.00	0.43
2:A:3324:GLU:HG2	2:A:3328:LYS:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3325:LYS:HG2	2:A:3329:LYS:HE2	2.00	0.43
2:D:893:TRP:O	2:D:897:LYS:HG2	2.17	0.43
2:D:988:LEU:HG	2:D:1051:ARG:HH21	1.83	0.43
2:D:1176:THR:HG22	2:D:1181:ILE:HG13	2.01	0.43
2:D:1989:PRO:O	2:D:1993:ARG:HG3	2.18	0.43
2:D:2179:LEU:O	2:D:2183:GLU:HB2	2.18	0.43
2:D:2934:ASP:O	2:D:2938:GLN:OE1	2.37	0.43
2:D:3215:MET:HA	2:D:3215:MET:CE	2.48	0.43
2:D:3311:LYS:NZ	2:D:3313:GLN:HB2	2.33	0.43
2:D:3324:GLU:HG2	2:D:3328:LYS:HE2	1.99	0.43
2:D:4735:ASN:HB3	2:D:4738:PHE:CD2	2.53	0.43
2:B:1118:SER:HB3	2:B:1204:VAL:HG11	2.01	0.43
2:B:1176:THR:HG22	2:B:1181:ILE:HG13	2.01	0.43
2:B:1417:TYR:O	2:B:1421:MET:HG2	2.18	0.43
2:B:2833:LEU:HD23	2:B:2837:LEU:CD2	2.48	0.43
2:B:2939:TYR:O	2:B:2943:PHE:CD1	2.68	0.43
2:B:3131:TYR:HE1	2:B:3166:PHE:CZ	2.19	0.43
2:B:3664:LEU:O	2:B:3668:ILE:HG13	2.18	0.43
2:B:3890:TRP:O	2:C:76:ARG:NE	2.49	0.43
2:C:195:SER:HB3	2:C:202:HIS:HB2	1.99	0.43
2:C:988:LEU:HG	2:C:1051:ARG:HH21	1.83	0.43
2:C:1118:SER:HB3	2:C:1204:VAL:HG11	2.01	0.43
2:C:2641:SER:HB3	2:C:2676:LEU:HD21	1.99	0.43
2:C:3324:GLU:HG2	2:C:3328:LYS:HE2	1.99	0.43
3:L:20:PHE:O	3:L:22:LYS:HG2	2.19	0.43
1:H:36:LYS:HB2	2:D:647:ARG:HH12	1.84	0.43
2:A:195:SER:HB3	2:A:202:HIS:HB2	1.99	0.43
2:A:1962:THR:HA	2:A:1965:PHE:HD2	1.84	0.43
2:A:1989:PRO:O	2:A:1993:ARG:HG3	2.18	0.43
2:A:2554:ARG:NH1	2:A:2554:ARG:O	2.50	0.43
2:A:2678:PRO:HB2	2:A:2981:TYR:CD2	2.54	0.43
2:A:2728:SER:HA	2:A:2731:LYS:HZ2	1.83	0.43
2:A:3239:LEU:HA	2:A:3239:LEU:HD23	1.85	0.43
2:D:139:SER:O	2:D:141:ASP:N	2.51	0.43
2:D:1417:TYR:O	2:D:1421:MET:HG2	2.18	0.43
2:D:2678:PRO:HB2	2:D:2981:TYR:CD2	2.54	0.43
2:D:3060:PHE:HZ	2:D:3104:MET:CE	2.31	0.43
2:B:463:PHE:HZ	2:B:489:PHE:HD2	1.66	0.43
2:C:2926:LEU:HD22	2:C:3003:MET:HG3	2.00	0.43
2:C:3060:PHE:HZ	2:C:3104:MET:CE	2.31	0.43
2:C:4620:GLN:OE1	2:C:4632:ARG:NH2	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:20:PHE:O	3:L:22:LYS:NZ	2.49	0.43
2:A:2179:LEU:O	2:A:2183:GLU:HB2	2.18	0.43
2:A:3743:THR:HB	2:A:3758:THR:HG21	2.01	0.43
2:A:4046:ARG:HH22	2:A:4049:HIS:CG	2.36	0.43
3:I:20:PHE:O	3:I:22:LYS:NZ	2.49	0.43
2:D:242:ASP:OD1	2:D:243:GLU:N	2.49	0.43
2:D:1689:ILE:HG23	2:D:1703:TYR:HE1	1.84	0.43
2:D:1962:THR:HA	2:D:1965:PHE:HD2	1.84	0.43
2:D:2720:PHE:HA	2:D:2723:LYS:HZ3	1.83	0.43
2:D:2776:LYS:O	2:D:2780:LYS:HG2	2.18	0.43
2:D:3134:LEU:HB2	2:D:3162:PHE:CE2	2.53	0.43
2:D:4055:HIS:CE1	2:D:4057:HIS:HB2	2.53	0.43
2:B:313:ASN:OD1	2:B:314:LEU:N	2.51	0.43
2:B:681:HIS:HB3	2:B:799:LYS:HB2	2.01	0.43
2:B:1962:THR:HA	2:B:1965:PHE:HD2	1.84	0.43
2:B:2179:LEU:O	2:B:2183:GLU:HB2	2.18	0.43
2:B:2678:PRO:HB2	2:B:2981:TYR:CD2	2.54	0.43
2:B:3215:MET:HA	2:B:3215:MET:CE	2.47	0.43
2:B:4238:ILE:HG12	2:C:4624:ASP:HB3	2.01	0.43
2:B:4757:LEU:HD23	2:B:4757:LEU:HA	1.90	0.43
2:C:681:HIS:HB3	2:C:799:LYS:HB2	2.01	0.43
2:C:1962:THR:HA	2:C:1965:PHE:HD2	1.84	0.43
2:C:2854:LYS:HA	2:C:2854:LYS:HD2	1.66	0.43
2:C:3254:PRO:HD3	2:C:3266:THR:O	2.18	0.43
2:C:3280:ILE:O	2:C:3284:ILE:HG23	2.18	0.43
2:C:3743:THR:HB	2:C:3758:THR:HG21	2.01	0.43
2:C:3790:PHE:HE1	2:C:3858:LEU:HD23	1.82	0.43
2:C:4046:ARG:HH22	2:C:4049:HIS:CG	2.36	0.43
2:C:4120:GLU:HA	2:C:4123:GLU:HG2	1.98	0.43
2:A:137:ARG:NH1	2:A:202:HIS:HD1	2.17	0.43
2:A:467:ASP:O	2:A:475:LYS:NZ	2.37	0.43
2:A:706:TYR:HE2	2:A:838:ARG:NH1	2.16	0.43
2:A:1118:SER:HB3	2:A:1204:VAL:HG11	2.01	0.43
2:A:1269:GLU:HB2	2:A:1288:LYS:HG3	2.01	0.43
2:A:1707:ILE:HG23	2:A:1827:THR:HG21	2.00	0.43
2:D:227:TYR:CG	2:D:352:SER:HB2	2.54	0.43
2:D:1022:GLN:HA	2:D:1030:PRO:HD3	2.00	0.43
2:D:2322:ARG:HA	2:D:2325:ILE:HG12	2.01	0.43
2:D:2638:LEU:HD23	2:D:2638:LEU:HA	1.86	0.43
2:D:3183:ILE:C	2:D:3192:ARG:HH22	2.21	0.43
2:D:3830:LEU:HD23	2:D:3908:LYS:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:137:ARG:NH1	2:B:202:HIS:HD1	2.17	0.43
2:B:1757:LEU:HD21	2:B:2113:VAL:HG13	2.00	0.43
2:B:3060:PHE:HZ	2:B:3104:MET:CE	2.31	0.43
2:B:3101:LEU:HG	2:B:3105:LEU:HD12	2.00	0.43
2:C:227:TYR:CG	2:C:352:SER:HB2	2.54	0.43
2:C:953:SER:OG	2:C:954:ASP:N	2.51	0.43
2:C:1689:ILE:HG23	2:C:1703:TYR:HE1	1.84	0.43
2:C:2776:LYS:O	2:C:2780:LYS:HG2	2.18	0.43
2:C:2884:LYS:HD3	2:C:2885:ASP:OD1	2.19	0.43
2:C:3325:LYS:HG2	2:C:3329:LYS:HE2	2.01	0.43
3:J:50:GLN:HA	3:J:53:ILE:HG13	2.00	0.43
2:A:2776:LYS:O	2:A:2780:LYS:HG2	2.18	0.43
2:A:2934:ASP:O	2:A:2938:GLN:OE1	2.37	0.43
2:A:3664:LEU:O	2:A:3668:ILE:HG13	2.18	0.43
2:D:706:TYR:HE2	2:D:838:ARG:NH1	2.16	0.43
2:D:1124:PRO:HD2	2:D:1594:VAL:HG13	2.00	0.43
2:D:3311:LYS:HG3	2:D:3314:LEU:H	1.84	0.43
2:D:4046:ARG:HH22	2:D:4049:HIS:CG	2.36	0.43
2:D:4046:ARG:NH2	2:D:4049:HIS:HB3	2.33	0.43
2:D:4270:LYS:HE2	2:D:4270:LYS:HB2	1.83	0.43
2:B:1707:ILE:HG23	2:B:1827:THR:HG21	2.00	0.43
2:B:1714:TYR:OH	2:B:1718:ARG:NH1	2.52	0.43
2:B:4046:ARG:HH22	2:B:4049:HIS:CG	2.36	0.43
2:C:137:ARG:NH1	2:C:202:HIS:HD1	2.17	0.43
3:J:20:PHE:O	3:J:22:LYS:HG2	2.19	0.43
3:K:37:MET:HG3	3:K:42:GLN:HE21	1.83	0.43
3:L:37:MET:HG3	3:L:42:GLN:HE21	1.83	0.43
2:A:4270:LYS:HE2	2:A:4270:LYS:HB2	1.83	0.43
2:A:4861:ILE:HG21	2:D:4756:ILE:HG23	2.00	0.43
2:D:1724:GLU:OE2	2:D:2127:ARG:NH2	2.40	0.43
2:D:1757:LEU:HD21	2:D:2113:VAL:HG13	2.00	0.43
2:D:2657:TYR:CZ	2:D:2659:GLN:HB2	2.53	0.43
2:D:2847:ASN:O	2:D:2847:ASN:ND2	2.51	0.43
2:D:3045:VAL:O	2:D:3054:LYS:NZ	2.46	0.43
2:B:1124:PRO:HD2	2:B:1594:VAL:HG13	2.00	0.43
2:B:2847:ASN:O	2:B:2847:ASN:ND2	2.51	0.43
2:B:3009:CYS:O	2:B:3013:VAL:HG23	2.19	0.43
2:B:3182:SER:O	2:B:3186:THR:HG23	2.19	0.43
2:C:1417:TYR:O	2:C:1421:MET:HG2	2.18	0.43
2:C:2322:ARG:HA	2:C:2325:ILE:HG12	2.01	0.43
2:C:4089:GLU:HB2	2:C:4090:PRO:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4743:LEU:O	2:C:4746:ILE:HG12	2.18	0.43
3:J:112:ASN:HB3	3:J:116:LYS:H	1.84	0.43
2:A:114:LEU:HB2	2:A:117:HIS:HD2	1.83	0.43
2:A:1499:GLY:HA3	2:D:2824:ARG:NH2	2.34	0.43
2:A:1718:ARG:HD3	2:A:1830:ILE:O	2.19	0.43
2:A:1962:THR:HG23	2:A:1966:ARG:NE	2.30	0.43
2:A:2856:LYS:O	2:A:2860:LEU:HG	2.19	0.43
2:A:4862:ILE:HD13	2:B:4852:PHE:HE1	1.84	0.43
3:I:50:GLN:HA	3:I:53:ILE:HG13	2.00	0.43
2:D:2961:LYS:HD3	2:D:2961:LYS:HA	1.79	0.43
2:D:3009:CYS:O	2:D:3013:VAL:HG23	2.19	0.43
2:D:3054:LYS:HB3	2:D:3058:ARG:NH1	2.33	0.43
2:B:227:TYR:CG	2:B:352:SER:HB2	2.54	0.43
2:B:1022:GLN:HA	2:B:1030:PRO:HD3	2.00	0.43
2:B:2776:LYS:O	2:B:2780:LYS:HG2	2.18	0.43
2:C:3014:LEU:O	2:C:3018:ARG:HD2	2.19	0.43
2:C:3183:ILE:HA	2:C:3186:THR:OG1	2.18	0.43
2:C:3664:LEU:O	2:C:3668:ILE:HG13	2.18	0.43
1:H:85:ALA:O	1:H:94:PRO:HB3	2.19	0.42
2:A:227:TYR:CG	2:A:352:SER:HB2	2.54	0.42
2:A:681:HIS:HB3	2:A:799:LYS:HB2	2.01	0.42
2:A:930:ASN:HA	2:A:933:LEU:HD12	2.01	0.42
2:A:1427:TYR:HB2	2:A:1563:VAL:HG11	2.00	0.42
2:A:2250:ASN:HB3	2:A:2253:LEU:HB2	2.01	0.42
2:A:3054:LYS:HB3	2:A:3058:ARG:NH1	2.33	0.42
2:A:3830:LEU:HD23	2:A:3908:LYS:HB3	2.00	0.42
2:A:4735:ASN:HB3	2:A:4738:PHE:CD2	2.53	0.42
2:A:4743:LEU:O	2:A:4746:ILE:HG12	2.18	0.42
1:E:80:ASP:OD1	1:E:81:VAL:N	2.52	0.42
3:I:33:LEU:HD21	3:I:53:ILE:HD13	2.01	0.42
2:D:262:TYR:HB2	2:D:389:ARG:HB3	2.00	0.42
2:D:695:VAL:O	2:D:727:PHE:N	2.51	0.42
2:D:706:TYR:HE1	2:D:1254:ARG:HH11	1.67	0.42
2:D:1118:SER:HB3	2:D:1204:VAL:HG11	2.01	0.42
2:D:1276:THR:OG1	2:D:1278:ASP:OD1	2.33	0.42
2:D:1707:ILE:HG23	2:D:1827:THR:HG21	2.00	0.42
2:D:1718:ARG:HD3	2:D:1830:ILE:O	2.19	0.42
2:D:1989:PRO:HB2	2:D:1991:GLU:OE1	2.19	0.42
2:D:4864:GLY:CA	2:C:4867:ILE:HG12	2.48	0.42
2:B:953:SER:OG	2:B:954:ASP:N	2.51	0.42
2:B:1708:ASP:HA	2:B:1712:SER:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2741:TRP:CD1	2:B:2752:LYS:HE2	2.54	0.42
2:B:4269:LYS:HA	2:B:4272:LYS:HG2	2.01	0.42
2:B:4753:LEU:HD21	2:C:4773:LEU:HD13	2.00	0.42
2:C:1714:TYR:OH	2:C:1718:ARG:NH1	2.52	0.42
2:C:3101:LEU:HG	2:C:3105:LEU:HD12	2.00	0.42
2:C:3830:LEU:HD23	2:C:3908:LYS:HB3	2.00	0.42
2:C:4055:HIS:CE1	2:C:4057:HIS:HB2	2.53	0.42
2:A:969:ASN:OD1	2:A:970:TYR:N	2.50	0.42
2:A:1088:PHE:HB2	2:A:1205:CYS:SG	2.59	0.42
2:A:1714:TYR:OH	2:A:1718:ARG:NH1	2.52	0.42
2:A:2290:TRP:CZ2	2:A:2292:PRO:HG3	2.54	0.42
2:A:2832:THR:HG21	2:B:1290:PHE:CE2	2.54	0.42
2:A:3009:CYS:O	2:A:3013:VAL:HG23	2.19	0.42
2:A:3109:PHE:O	2:A:3165:ALA:HB2	2.19	0.42
2:A:4774:LEU:O	2:A:4778:VAL:HG23	2.20	0.42
2:D:26:ALA:O	2:D:33:GLN:N	2.51	0.42
2:D:173:GLU:HA	2:C:3939:ARG:HH22	1.84	0.42
2:D:614:LEU:HD23	2:D:617:LEU:HD12	2.01	0.42
2:D:681:HIS:HB3	2:D:799:LYS:HB2	2.01	0.42
2:D:2722:ASN:O	2:D:2726:GLU:OE1	2.37	0.42
2:D:3594:GLN:HB3	2:D:3595:ARG:H	1.54	0.42
2:D:4269:LYS:HA	2:D:4272:LYS:HG2	2.01	0.42
2:D:4774:LEU:O	2:D:4778:VAL:HG23	2.19	0.42
2:B:3014:LEU:O	2:B:3018:ARG:HD2	2.19	0.42
2:B:3325:LYS:HG2	2:B:3329:LYS:HE2	2.01	0.42
2:B:4089:GLU:HB2	2:B:4090:PRO:HD3	2.01	0.42
2:C:946:LEU:HD12	2:C:948:CYS:SG	2.60	0.42
2:C:1697:LEU:HD23	2:C:1697:LEU:HA	1.87	0.42
2:C:4774:LEU:O	2:C:4778:VAL:HG23	2.20	0.42
2:A:706:TYR:HE1	2:A:1254:ARG:HH11	1.67	0.42
2:A:882:ARG:HG3	2:A:937:LEU:HD23	2.02	0.42
2:A:1499:GLY:HA3	2:D:2824:ARG:HH21	1.83	0.42
2:A:2884:LYS:HD3	2:A:2885:ASP:OD1	2.19	0.42
3:I:28:ILE:O	3:I:63:THR:HA	2.19	0.42
2:D:675:TYR:CE1	2:D:790:PRO:HB3	2.54	0.42
2:D:2290:TRP:CZ2	2:D:2292:PRO:HG3	2.55	0.42
2:D:2892:ILE:HG23	2:D:2893:LEU:HD22	2.01	0.42
2:D:3182:SER:O	2:D:3186:THR:HG23	2.19	0.42
2:D:3242:LEU:HB3	2:D:3276:LEU:HD11	2.01	0.42
2:B:930:ASN:HA	2:B:933:LEU:HD12	2.00	0.42
2:B:946:LEU:HD12	2:B:948:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2856:LYS:O	2:B:2860:LEU:HG	2.19	0.42
2:B:2884:LYS:HD3	2:B:2885:ASP:OD1	2.19	0.42
2:B:3109:PHE:O	2:B:3165:ALA:HB2	2.19	0.42
2:B:3830:LEU:HD23	2:B:3908:LYS:HB3	2.00	0.42
2:C:131:CYS:SG	2:C:150:GLN:HB2	2.60	0.42
2:C:251:GLU:HB2	2:C:256:GLN:NE2	2.35	0.42
2:C:614:LEU:HD23	2:C:617:LEU:HD12	2.01	0.42
2:C:891:GLU:O	2:C:895:MET:HE2	2.19	0.42
2:C:1269:GLU:HB2	2:C:1288:LYS:HG3	2.01	0.42
2:C:1718:ARG:HD3	2:C:1830:ILE:O	2.19	0.42
2:C:1989:PRO:HB2	2:C:1991:GLU:OE1	2.19	0.42
2:C:2290:TRP:CZ2	2:C:2292:PRO:HG3	2.54	0.42
2:C:2722:ASN:O	2:C:2726:GLU:OE1	2.37	0.42
2:C:2856:LYS:O	2:C:2860:LEU:HG	2.19	0.42
2:C:2968:LEU:HB2	2:C:2969:PRO:HD3	2.02	0.42
2:C:3102:LEU:HB2	2:C:3103:PRO:HD3	2.02	0.42
2:C:3311:LYS:HG3	2:C:3314:LEU:H	1.84	0.42
3:J:20:PHE:O	3:J:22:LYS:NZ	2.49	0.42
3:J:72:MET:O	3:J:75:ARG:HG2	2.19	0.42
2:A:251:GLU:HB2	2:A:256:GLN:NE2	2.35	0.42
2:A:915:HIS:CE1	2:A:917:CYS:HG	2.37	0.42
2:A:1304:LEU:HD12	2:A:1541:PRO:HB2	2.01	0.42
2:A:1689:ILE:HG23	2:A:1703:TYR:HE1	1.84	0.42
2:A:2057:THR:HB	2:A:2060:GLN:HG3	2.01	0.42
2:A:2641:SER:HB3	2:A:2676:LEU:HD21	1.99	0.42
2:A:3101:LEU:HG	2:A:3105:LEU:HD12	2.00	0.42
1:F:80:ASP:OD1	1:F:81:VAL:N	2.52	0.42
1:F:85:ALA:O	1:F:94:PRO:HB3	2.19	0.42
2:D:137:ARG:NH1	2:D:202:HIS:HD1	2.17	0.42
2:D:233:VAL:HG21	2:D:413:SER:HB2	2.01	0.42
2:D:882:ARG:HG3	2:D:937:LEU:HD23	2.02	0.42
2:D:930:ASN:HA	2:D:933:LEU:HD12	2.00	0.42
2:D:997:ASP:HA	2:D:1047:LYS:NZ	2.35	0.42
2:D:1258:PHE:CD1	2:D:1303:ARG:HG2	2.55	0.42
2:D:3014:LEU:O	2:D:3018:ARG:HD2	2.19	0.42
2:B:891:GLU:O	2:B:895:MET:HE2	2.19	0.42
2:B:1269:GLU:HB2	2:B:1288:LYS:HG3	2.01	0.42
2:B:1689:ILE:HG23	2:B:1703:TYR:HE1	1.84	0.42
2:B:1989:PRO:O	2:B:1993:ARG:HG3	2.18	0.42
2:B:3102:LEU:HB2	2:B:3103:PRO:HD3	2.02	0.42
2:B:4887:LYS:HZ3	2:B:4892:GLY:HA2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:882:ARG:HG3	2:C:937:LEU:HD23	2.02	0.42
2:C:1258:PHE:CD1	2:C:1303:ARG:HG2	2.55	0.42
2:C:1708:ASP:HA	2:C:1712:SER:HB2	2.00	0.42
2:C:2741:TRP:CD1	2:C:2752:LYS:HE2	2.54	0.42
1:H:91:VAL:HG21	2:D:1768:PHE:CE1	2.54	0.42
2:A:262:TYR:HB2	2:A:389:ARG:HB3	2.00	0.42
2:A:1417:TYR:O	2:A:1421:MET:HG2	2.18	0.42
2:A:1708:ASP:HA	2:A:1712:SER:HB2	2.00	0.42
1:E:85:ALA:O	1:E:94:PRO:HB3	2.19	0.42
1:G:78:THR:OG1	1:G:80:ASP:OD1	2.24	0.42
1:G:80:ASP:OD1	1:G:81:VAL:N	2.52	0.42
3:I:72:MET:O	3:I:75:ARG:HG2	2.19	0.42
2:D:131:CYS:SG	2:D:150:GLN:HB2	2.60	0.42
2:D:173:GLU:HA	2:C:3939:ARG:NH2	2.35	0.42
2:D:251:GLU:HB2	2:D:256:GLN:NE2	2.35	0.42
2:D:2250:ASN:HB3	2:D:2253:LEU:HB2	2.01	0.42
2:D:2657:TYR:CE2	2:D:2659:GLN:HB2	2.55	0.42
2:D:2773:TRP:CE3	2:D:2773:TRP:HA	2.55	0.42
2:D:3109:PHE:O	2:D:3165:ALA:HB2	2.19	0.42
2:B:1304:LEU:HD12	2:B:1541:PRO:HB2	2.02	0.42
2:B:1718:ARG:HD3	2:B:1830:ILE:O	2.19	0.42
2:B:2057:THR:HB	2:B:2060:GLN:HG3	2.01	0.42
2:B:2085:PHE:HB3	2:B:3691:TYR:CE2	2.53	0.42
2:B:2934:ASP:O	2:B:2938:GLN:OE1	2.37	0.42
2:B:3242:LEU:HB3	2:B:3276:LEU:HD11	2.01	0.42
2:B:3324:GLU:HG2	2:B:3328:LYS:HE2	1.99	0.42
2:B:3743:THR:HB	2:B:3758:THR:HG21	2.01	0.42
2:C:997:ASP:HA	2:C:1047:LYS:NZ	2.34	0.42
2:C:2607:LEU:HD22	2:C:2664:LEU:HG	2.01	0.42
2:C:3166:PHE:CE2	2:C:3168:VAL:HB	2.48	0.42
3:K:143:VAL:HA	3:K:146:MET:HE1	2.02	0.42
1:H:80:ASP:OD1	1:H:81:VAL:N	2.52	0.42
2:A:614:LEU:HD23	2:A:617:LEU:HD12	2.02	0.42
2:A:675:TYR:CE1	2:A:790:PRO:HB3	2.54	0.42
2:A:1176:THR:HG22	2:A:1181:ILE:HG13	2.01	0.42
2:A:2741:TRP:CD1	2:A:2752:LYS:HE2	2.54	0.42
2:A:3014:LEU:O	2:A:3018:ARG:HD2	2.19	0.42
2:A:3127:GLN:HG3	2:A:3183:ILE:HB	2.02	0.42
2:A:3131:TYR:HE1	2:A:3166:PHE:CZ	2.19	0.42
1:G:85:ALA:O	1:G:94:PRO:HB3	2.19	0.42
2:D:989:THR:HG22	2:D:991:SER:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1088:PHE:HB2	2:D:1205:CYS:SG	2.60	0.42
2:D:1833:ILE:O	2:D:1835:HIS:ND1	2.53	0.42
2:D:3729:ALA:O	2:D:3733:ASP:HB2	2.19	0.42
2:B:233:VAL:HG21	2:B:413:SER:HB2	2.01	0.42
2:B:614:LEU:HD23	2:B:617:LEU:HD12	2.01	0.42
2:B:956:HIS:O	2:B:960:LYS:HG3	2.20	0.42
2:B:1989:PRO:HB2	2:B:1991:GLU:OE1	2.19	0.42
2:B:2264:LYS:HE2	2:B:2264:LYS:HB2	1.79	0.42
2:B:2407:HIS:ND1	2:B:2408:LEU:HG	2.35	0.42
2:B:3010:LYS:O	2:B:3014:LEU:HD23	2.20	0.42
2:B:3311:LYS:NZ	2:B:3313:GLN:HB2	2.33	0.42
2:C:1176:THR:HG22	2:C:1181:ILE:HG13	2.01	0.42
2:C:2407:HIS:ND1	2:C:2408:LEU:HG	2.35	0.42
2:C:2678:PRO:HB2	2:C:2981:TYR:CD2	2.54	0.42
2:C:3009:CYS:O	2:C:3013:VAL:HG23	2.19	0.42
2:C:4269:LYS:HA	2:C:4272:LYS:HG2	2.01	0.42
3:K:50:GLN:HA	3:K:53:ILE:HG13	2.00	0.42
2:A:946:LEU:HD12	2:A:948:CYS:SG	2.60	0.42
2:A:989:THR:HG22	2:A:991:SER:H	1.85	0.42
2:A:1124:PRO:HD2	2:A:1594:VAL:HG13	2.00	0.42
2:A:1304:LEU:HD23	2:A:1304:LEU:HA	1.91	0.42
2:A:1825:PHE:CE1	2:A:1842:ILE:HG12	2.55	0.42
2:A:1833:ILE:O	2:A:1835:HIS:ND1	2.53	0.42
2:A:1989:PRO:HB2	2:A:1991:GLU:OE1	2.19	0.42
2:A:2892:ILE:HG23	2:A:2893:LEU:HD22	2.01	0.42
2:A:4269:LYS:HA	2:A:4272:LYS:HG2	2.01	0.42
2:D:2968:LEU:HB2	2:D:2969:PRO:HD3	2.02	0.42
2:B:251:GLU:HB2	2:B:256:GLN:NE2	2.35	0.42
2:B:718:VAL:HG23	2:B:793:SER:HB3	2.01	0.42
2:B:882:ARG:HG3	2:B:937:LEU:HD23	2.02	0.42
2:B:3166:PHE:CE2	2:B:3168:VAL:HB	2.48	0.42
2:B:3311:LYS:HG3	2:B:3314:LEU:H	1.84	0.42
2:C:675:TYR:CE1	2:C:790:PRO:HB3	2.54	0.42
2:C:969:ASN:OD1	2:C:970:TYR:N	2.50	0.42
2:C:1757:LEU:HD21	2:C:2113:VAL:HG13	2.00	0.42
2:C:2773:TRP:HA	2:C:2773:TRP:CE3	2.55	0.42
2:C:3239:LEU:HD22	2:C:3280:ILE:HG12	2.01	0.42
2:C:3320:LEU:HD23	2:C:3320:LEU:HA	1.91	0.42
3:K:20:PHE:O	3:K:22:LYS:NZ	2.49	0.42
2:A:194:LEU:HD11	2:A:201:LEU:HD23	2.02	0.42
2:A:3182:SER:O	2:A:3186:THR:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:4634:VAL:HG22	2:A:4640:PHE:CD1	2.55	0.42
2:D:946:LEU:HD12	2:D:948:CYS:SG	2.60	0.42
2:D:956:HIS:O	2:D:960:LYS:HG3	2.20	0.42
2:D:1714:TYR:OH	2:D:1718:ARG:NH1	2.52	0.42
2:D:2407:HIS:ND1	2:D:2408:LEU:HG	2.35	0.42
2:D:2726:GLU:HA	2:D:2760:TYR:HD1	1.85	0.42
2:D:2884:LYS:HD3	2:D:2885:ASP:OD1	2.19	0.42
2:D:3254:PRO:HD3	2:D:3266:THR:O	2.18	0.42
2:D:3667:LEU:HD21	2:D:3691:TYR:CD2	2.55	0.42
2:B:675:TYR:CE1	2:B:790:PRO:HB3	2.54	0.42
2:B:2607:LEU:HD22	2:B:2664:LEU:HG	2.01	0.42
2:B:2726:GLU:HA	2:B:2760:TYR:HD1	1.85	0.42
2:C:915:HIS:CE1	2:C:917:CYS:HG	2.36	0.42
2:C:1729:MET:N	2:C:2108:ILE:O	2.45	0.42
2:C:1825:PHE:CE1	2:C:1842:ILE:HG12	2.55	0.42
2:C:2847:ASN:O	2:C:2847:ASN:ND2	2.51	0.42
3:J:33:LEU:HD21	3:J:53:ILE:HD13	2.01	0.42
3:K:20:PHE:O	3:K:22:LYS:HG2	2.19	0.42
3:K:112:ASN:HB3	3:K:116:LYS:H	1.84	0.42
3:L:28:ILE:O	3:L:63:THR:HA	2.19	0.42
2:A:997:ASP:HA	2:A:1047:LYS:HZ1	1.84	0.42
2:A:3242:LEU:HB3	2:A:3276:LEU:HD11	2.01	0.42
2:A:3661:VAL:HB	2:A:3665:HIS:HB3	2.01	0.42
2:A:4748:MET:N	2:A:4748:MET:SD	2.93	0.42
2:A:4887:LYS:HZ3	2:A:4887:LYS:HG2	1.72	0.42
2:D:3102:LEU:HB2	2:D:3103:PRO:HD3	2.02	0.42
2:D:3239:LEU:HD22	2:D:3280:ILE:HG12	2.01	0.42
2:B:1258:PHE:CD1	2:B:1303:ARG:HG2	2.55	0.42
2:B:1678:SER:HB2	2:B:1768:PHE:CE2	2.55	0.42
2:B:1825:PHE:CE1	2:B:1842:ILE:HG12	2.55	0.42
2:B:2250:ASN:HB3	2:B:2253:LEU:HB2	2.01	0.42
2:B:2290:TRP:CZ2	2:B:2292:PRO:HG3	2.54	0.42
2:B:2793:ARG:HG3	2:B:2794:GLU:N	2.35	0.42
2:B:2860:LEU:HA	2:B:2863:LYS:HZ3	1.85	0.42
2:B:4056:LYS:HB2	2:C:4660:PHE:CE1	2.55	0.42
2:B:4774:LEU:O	2:B:4778:VAL:HG23	2.19	0.42
2:B:4867:ILE:HD13	2:C:4867:ILE:HD12	2.02	0.42
2:C:930:ASN:HA	2:C:933:LEU:HD12	2.00	0.42
2:C:2726:GLU:HA	2:C:2760:TYR:HD1	1.85	0.42
2:C:3010:LYS:O	2:C:3014:LEU:HD23	2.20	0.42
2:C:3109:PHE:O	2:C:3165:ALA:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4270:LYS:HE2	2:C:4270:LYS:HB2	1.83	0.42
3:K:33:LEU:HD21	3:K:53:ILE:HD13	2.01	0.42
3:L:33:LEU:HD21	3:L:53:ILE:HD13	2.02	0.42
3:L:112:ASN:HB3	3:L:116:LYS:H	1.84	0.42
2:A:695:VAL:O	2:A:727:PHE:N	2.51	0.42
2:A:1022:GLN:HA	2:A:1030:PRO:HD3	2.00	0.42
2:A:1697:LEU:HD23	2:A:1697:LEU:HA	1.87	0.42
2:A:2407:HIS:ND1	2:A:2408:LEU:HG	2.35	0.42
2:A:2735:ASP:OD1	2:A:2736:LYS:N	2.53	0.42
2:A:3010:LYS:O	2:A:3014:LEU:HD23	2.20	0.42
2:A:4033:LYS:HA	2:A:4033:LYS:HD2	1.76	0.42
2:D:718:VAL:HG23	2:D:793:SER:HB3	2.01	0.42
2:D:966:LEU:HA	2:D:967:PRO:HD3	1.94	0.42
2:D:2793:ARG:HG3	2:D:2794:GLU:N	2.35	0.42
2:D:3010:LYS:O	2:D:3014:LEU:HD23	2.20	0.42
2:D:3029:ILE:O	2:D:3033:LEU:HD23	2.20	0.42
2:D:3743:THR:HB	2:D:3758:THR:HG21	2.01	0.42
2:B:1113:MET:SD	2:B:1211:GLN:HB3	2.60	0.42
2:B:2968:LEU:HB2	2:B:2969:PRO:HD3	2.02	0.42
2:B:3016:ARG:HH12	2:B:3064:ALA:HA	1.85	0.42
2:B:3029:ILE:O	2:B:3033:LEU:HD23	2.20	0.42
2:C:1276:THR:OG1	2:C:1278:ASP:OD1	2.33	0.42
2:C:3242:LEU:HB3	2:C:3276:LEU:HD11	2.01	0.42
3:J:28:ILE:O	3:J:63:THR:HA	2.19	0.42
3:K:72:MET:O	3:K:75:ARG:HG2	2.19	0.42
3:L:1:MET:HA	3:L:1:MET:HE2	2.02	0.42
2:A:23:GLN:HG2	2:A:36:CYS:SG	2.60	0.41
2:A:233:VAL:HG21	2:A:413:SER:HB2	2.01	0.41
2:A:1258:PHE:CD1	2:A:1303:ARG:HG2	2.55	0.41
2:A:2657:TYR:CE2	2:A:2659:GLN:HB2	2.55	0.41
2:A:2726:GLU:HA	2:A:2760:TYR:HD1	1.85	0.41
2:A:2793:ARG:HG3	2:A:2794:GLU:N	2.35	0.41
2:A:3029:ILE:O	2:A:3033:LEU:HD23	2.20	0.41
2:D:1269:GLU:HB2	2:D:1288:LYS:HG3	2.01	0.41
2:D:2856:LYS:O	2:D:2860:LEU:HG	2.19	0.41
2:D:3127:GLN:HG3	2:D:3183:ILE:HB	2.02	0.41
2:D:4258:MET:H	2:D:4258:MET:HG3	1.60	0.41
2:B:677:LEU:HD12	2:B:801:ARG:O	2.20	0.41
2:B:2722:ASN:O	2:B:2726:GLU:OE1	2.37	0.41
2:B:4237:SER:HB3	2:B:4240:THR:HG23	2.02	0.41
2:C:233:VAL:HG21	2:C:413:SER:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:2735:ASP:OD1	2:C:2736:LYS:N	2.53	0.41
2:C:3667:LEU:HD21	2:C:3691:TYR:CD2	2.55	0.41
2:C:4887:LYS:HZ3	2:C:4892:GLY:HA2	1.84	0.41
2:A:131:CYS:SG	2:A:150:GLN:HB2	2.60	0.41
2:A:1316:LYS:HD2	2:A:1316:LYS:HA	1.84	0.41
2:A:1678:SER:HB2	2:A:1768:PHE:CE2	2.55	0.41
2:A:2322:ARG:HA	2:A:2325:ILE:HG12	2.01	0.41
2:A:3311:LYS:HG3	2:A:3314:LEU:H	1.84	0.41
2:A:3729:ALA:O	2:A:3733:ASP:HB2	2.19	0.41
2:D:2741:TRP:CD1	2:D:2752:LYS:HE2	2.54	0.41
2:D:4089:GLU:HB2	2:D:4090:PRO:HD3	2.01	0.41
2:D:4634:VAL:HG22	2:D:4640:PHE:CD1	2.55	0.41
2:B:23:GLN:HG2	2:B:36:CYS:SG	2.60	0.41
2:B:706:TYR:HE1	2:B:1254:ARG:HH11	1.67	0.41
2:B:3234:VAL:HA	2:B:3238:ILE:HG12	2.02	0.41
2:B:3661:VAL:HB	2:B:3665:HIS:HB3	2.02	0.41
2:C:718:VAL:HG23	2:C:793:SER:HB3	2.01	0.41
2:C:1304:LEU:HD12	2:C:1541:PRO:HB2	2.02	0.41
2:C:3285:TYR:O	2:C:3325:LYS:NZ	2.53	0.41
2:A:915:HIS:CD2	2:A:916:PRO:HD2	2.50	0.41
2:A:2720:PHE:HA	2:A:2723:LYS:HZ3	1.84	0.41
2:A:3234:VAL:HA	2:A:3238:ILE:HG12	2.02	0.41
2:A:3285:TYR:O	2:A:3325:LYS:NZ	2.53	0.41
2:A:3649:ALA:C	2:A:3652:PRO:HD2	2.41	0.41
2:A:4084:VAL:O	2:A:4088:HIS:HB3	2.21	0.41
2:A:4930:GLU:HA	2:A:4933:HIS:ND1	2.35	0.41
2:D:194:LEU:HD11	2:D:201:LEU:HD23	2.02	0.41
2:D:1113:MET:SD	2:D:1211:GLN:HB3	2.60	0.41
2:D:1678:SER:HB2	2:D:1768:PHE:CE2	2.55	0.41
2:D:3285:TYR:O	2:D:3325:LYS:NZ	2.53	0.41
2:D:3967:LEU:HD12	2:D:3967:LEU:HA	1.90	0.41
2:D:4748:MET:N	2:D:4748:MET:SD	2.93	0.41
2:B:168:GLN:HG2	2:B:169:ARG:HG2	2.03	0.41
2:B:1017:THR:HB	2:B:1028:ARG:HG2	2.02	0.41
2:B:2789:ILE:HD11	2:B:2901:TYR:HB3	2.02	0.41
2:B:3594:GLN:HB3	2:B:3595:ARG:H	1.54	0.41
2:B:3667:LEU:HD21	2:B:3691:TYR:CD2	2.55	0.41
2:B:4084:VAL:O	2:B:4088:HIS:HB3	2.21	0.41
2:C:139:SER:O	2:C:140:THR:OG1	2.36	0.41
2:C:593:HIS:O	2:C:597:ILE:HG13	2.21	0.41
2:C:675:TYR:HB3	2:C:822:CYS:SG	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:677:LEU:HD12	2:C:801:ARG:O	2.20	0.41
2:C:706:TYR:HE1	2:C:1254:ARG:HH11	1.67	0.41
3:L:72:MET:O	3:L:75:ARG:HG2	2.19	0.41
2:A:168:GLN:HG2	2:A:169:ARG:HG2	2.03	0.41
2:A:1017:THR:HB	2:A:1028:ARG:HG2	2.02	0.41
2:A:2789:ILE:HD11	2:A:2901:TYR:HB3	2.02	0.41
2:A:2928:GLN:O	2:A:2931:ARG:HG2	2.21	0.41
2:A:3102:LEU:HB2	2:A:3103:PRO:HD3	2.02	0.41
2:A:3311:LYS:NZ	2:A:3313:GLN:HB2	2.33	0.41
2:A:4089:GLU:HB2	2:A:4090:PRO:HD3	2.01	0.41
2:A:4237:SER:HB3	2:A:4240:THR:HG23	2.02	0.41
1:F:3:VAL:HG22	1:F:77:CYS:HA	2.02	0.41
1:G:63:GLY:HA3	1:G:75:LEU:HD21	2.03	0.41
2:D:260:VAL:HG23	2:D:391:ALA:HB3	2.03	0.41
2:B:131:CYS:SG	2:B:150:GLN:HB2	2.60	0.41
2:B:675:TYR:HB3	2:B:822:CYS:SG	2.60	0.41
2:B:2497:ARG:HD2	2:B:2872:VAL:HG21	2.02	0.41
2:B:3127:GLN:HG3	2:B:3183:ILE:HB	2.02	0.41
2:C:139:SER:O	2:C:141:ASP:N	2.51	0.41
2:C:1016:TRP:CE3	2:C:1029:ASN:HB2	2.56	0.41
2:C:1088:PHE:HB2	2:C:1205:CYS:SG	2.59	0.41
2:C:1678:SER:HB2	2:C:1768:PHE:CE2	2.55	0.41
2:C:2657:TYR:CE2	2:C:2659:GLN:HB2	2.55	0.41
2:C:3026:ALA:HA	2:C:3029:ILE:HD13	2.03	0.41
2:C:3311:LYS:NZ	2:C:3313:GLN:HB2	2.33	0.41
2:C:3661:VAL:HB	2:C:3665:HIS:HB3	2.02	0.41
2:C:3744:ILE:O	2:C:3747:SER:OG	2.30	0.41
3:L:98:ASN:OD1	3:L:99:GLY:N	2.53	0.41
2:A:1113:MET:SD	2:A:1211:GLN:HB3	2.60	0.41
2:A:2722:ASN:O	2:A:2726:GLU:OE1	2.37	0.41
2:A:2925:PHE:HZ	2:A:2970:LEU:HD13	1.86	0.41
2:A:2968:LEU:HB2	2:A:2969:PRO:HD3	2.02	0.41
1:E:3:VAL:HG22	1:E:77:CYS:HA	2.02	0.41
2:D:1444:GLY:HA3	2:D:1487:MET:HA	2.03	0.41
2:D:2057:THR:HB	2:D:2060:GLN:HG3	2.01	0.41
2:D:2264:LYS:HE2	2:D:2264:LYS:HB2	1.79	0.41
2:D:2847:ASN:HA	2:D:2850:ASN:HB2	2.03	0.41
2:D:3054:LYS:HB3	2:D:3058:ARG:HH12	1.86	0.41
2:D:3069:GLU:O	2:D:3072:MET:HB2	2.21	0.41
2:B:1128:LEU:HD23	2:B:1128:LEU:HA	1.95	0.41
2:B:2322:ARG:HA	2:B:2325:ILE:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2657:TYR:CE2	2:B:2659:GLN:HB2	2.55	0.41
2:B:2720:PHE:HA	2:B:2723:LYS:HZ3	1.84	0.41
2:B:2735:ASP:OD1	2:B:2736:LYS:N	2.53	0.41
2:B:2760:TYR:C	2:B:2760:TYR:CD2	2.94	0.41
2:B:4196:THR:O	2:B:4200:MET:HG3	2.21	0.41
2:B:4693:SER:O	2:B:4697:VAL:HG23	2.21	0.41
2:B:4748:MET:N	2:B:4748:MET:SD	2.93	0.41
2:B:4862:ILE:HD13	2:C:4852:PHE:HE1	1.84	0.41
2:B:4896:ASP:OD1	2:B:4897:TYR:N	2.54	0.41
2:C:602:ASP:HA	2:C:642:LEU:HD21	2.03	0.41
2:C:1113:MET:SD	2:C:1211:GLN:HB3	2.60	0.41
2:C:1833:ILE:O	2:C:1835:HIS:ND1	2.53	0.41
2:C:2119:LEU:HB2	2:C:2152:ASN:ND2	2.36	0.41
2:C:2250:ASN:HB3	2:C:2253:LEU:HB2	2.01	0.41
2:C:2793:ARG:HG3	2:C:2794:GLU:N	2.35	0.41
2:C:3050:LEU:HD23	2:C:3051:GLU:N	2.36	0.41
2:C:4748:MET:N	2:C:4748:MET:SD	2.93	0.41
3:J:98:ASN:OD1	3:J:99:GLY:N	2.53	0.41
2:A:139:SER:O	2:A:141:ASP:N	2.51	0.41
2:A:260:VAL:HG23	2:A:391:ALA:HB3	2.03	0.41
2:A:643:LEU:O	2:A:645:GLN:NE2	2.54	0.41
2:A:2607:LEU:HD22	2:A:2664:LEU:HG	2.01	0.41
2:A:2773:TRP:CE3	2:A:2773:TRP:HA	2.55	0.41
2:A:3050:LEU:HD23	2:A:3051:GLU:N	2.36	0.41
2:A:3250:TRP:CD1	2:A:3309:LYS:HG2	2.56	0.41
2:A:3667:LEU:HD21	2:A:3691:TYR:CD2	2.55	0.41
2:D:675:TYR:HB3	2:D:822:CYS:SG	2.60	0.41
2:D:3661:VAL:HB	2:D:3665:HIS:HB3	2.02	0.41
2:D:4887:LYS:HZ3	2:D:4892:GLY:HA2	1.84	0.41
2:B:2773:TRP:HA	2:B:2773:TRP:CE3	2.55	0.41
2:B:2928:GLN:O	2:B:2931:ARG:HG2	2.21	0.41
2:B:3054:LYS:HB3	2:B:3058:ARG:HH12	1.86	0.41
2:B:4522:VAL:HG12	2:C:4807:ASP:O	2.20	0.41
2:B:4923:MET:HE3	2:B:4923:MET:HB2	1.63	0.41
2:B:4930:GLU:HA	2:B:4933:HIS:ND1	2.35	0.41
2:C:897:LYS:HD2	2:C:902:TRP:CD1	2.56	0.41
2:C:2057:THR:HB	2:C:2060:GLN:HG3	2.01	0.41
2:C:2129:LEU:HD12	2:C:2142:MET:CE	2.50	0.41
2:C:2728:SER:HA	2:C:2731:LYS:HZ2	1.86	0.41
2:C:3054:LYS:HB3	2:C:3058:ARG:HH12	1.86	0.41
2:C:3729:ALA:O	2:C:3733:ASP:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:98:ASN:OD1	3:K:99:GLY:N	2.53	0.41
2:A:593:HIS:O	2:A:597:ILE:HG13	2.21	0.41
2:A:675:TYR:HB3	2:A:822:CYS:SG	2.60	0.41
2:A:718:VAL:HG23	2:A:793:SER:HB3	2.01	0.41
2:A:2847:ASN:HA	2:A:2850:ASN:HB2	2.03	0.41
2:A:3239:LEU:HD22	2:A:3280:ILE:HG12	2.01	0.41
2:A:3830:LEU:HD12	2:A:3830:LEU:HA	1.88	0.41
2:D:23:GLN:HG2	2:D:36:CYS:SG	2.60	0.41
2:D:420:ARG:HA	2:D:423:VAL:HG12	2.02	0.41
2:D:602:ASP:HA	2:D:642:LEU:HD21	2.02	0.41
2:D:1016:TRP:CE3	2:D:1029:ASN:HB2	2.56	0.41
2:D:2760:TYR:C	2:D:2760:TYR:CD2	2.94	0.41
2:D:3026:ALA:HA	2:D:3029:ILE:HD13	2.03	0.41
2:D:3234:VAL:HA	2:D:3238:ILE:HG12	2.02	0.41
2:B:465:PRO:HA	2:B:466:PRO:HD3	1.98	0.41
2:B:1088:PHE:HB2	2:B:1205:CYS:SG	2.60	0.41
2:B:1242:ASN:ND2	2:B:1805:HIS:O	2.54	0.41
2:B:2760:TYR:HD2	2:B:2760:TYR:C	2.24	0.41
2:B:2983:LEU:HD13	2:B:2983:LEU:HA	1.81	0.41
2:B:3050:LEU:HD23	2:B:3051:GLU:N	2.36	0.41
2:B:3250:TRP:CD1	2:B:3309:LYS:HG2	2.56	0.41
2:C:23:GLN:HG2	2:C:36:CYS:SG	2.60	0.41
2:C:2085:PHE:HB3	2:C:3691:TYR:CE2	2.53	0.41
2:C:2724:TYR:OH	2:C:2891:ASP:OD2	2.36	0.41
2:C:2760:TYR:C	2:C:2760:TYR:CD2	2.94	0.41
2:C:3649:ALA:C	2:C:3652:PRO:HD2	2.41	0.41
2:C:4896:ASP:OD1	2:C:4897:TYR:N	2.54	0.41
2:A:677:LEU:HD12	2:A:801:ARG:O	2.20	0.41
2:A:997:ASP:HA	2:A:1047:LYS:NZ	2.34	0.41
2:A:1724:GLU:OE2	2:A:2127:ARG:NH2	2.40	0.41
2:A:2497:ARG:HD2	2:A:2872:VAL:HG21	2.02	0.41
2:A:3016:ARG:HH12	2:A:3064:ALA:HA	1.85	0.41
1:F:63:GLY:HA3	1:F:75:LEU:HD21	2.03	0.41
2:D:593:HIS:O	2:D:597:ILE:HG13	2.21	0.41
2:D:878:LEU:HD23	2:D:940:LEU:HD23	2.03	0.41
2:D:1304:LEU:HD12	2:D:1541:PRO:HB2	2.01	0.41
2:D:2348:GLU:O	2:D:2351:ILE:HG22	2.21	0.41
2:D:2497:ARG:HD2	2:D:2872:VAL:HG21	2.02	0.41
2:D:2724:TYR:OH	2:D:2891:ASP:OD2	2.36	0.41
2:D:2928:GLN:O	2:D:2931:ARG:HG2	2.21	0.41
2:D:3250:TRP:CD1	2:D:3309:LYS:HG2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4732:GLY:HA2	2:D:4735:ASN:O	2.21	0.41
2:B:420:ARG:HA	2:B:423:VAL:HG12	2.02	0.41
2:B:2348:GLU:O	2:B:2351:ILE:HG22	2.21	0.41
2:B:2867:ASN:C	2:B:2867:ASN:HD22	2.13	0.41
2:B:3069:GLU:O	2:B:3072:MET:HB2	2.21	0.41
2:B:3285:TYR:O	2:B:3325:LYS:NZ	2.53	0.41
2:C:878:LEU:HD23	2:C:940:LEU:HD23	2.03	0.41
2:C:2928:GLN:O	2:C:2931:ARG:HG2	2.21	0.41
2:C:3069:GLU:O	2:C:3072:MET:HB2	2.21	0.41
2:C:3250:TRP:CD1	2:C:3309:LYS:HG2	2.56	0.41
3:K:13:PHE:CE1	3:K:73:MET:HE1	2.56	0.41
1:H:63:GLY:HA3	1:H:75:LEU:HD21	2.03	0.41
2:A:1444:GLY:HA3	2:A:1487:MET:HA	2.03	0.41
2:A:2348:GLU:O	2:A:2351:ILE:HG22	2.21	0.41
2:A:2507:LEU:HA	2:A:2510:THR:HG23	2.03	0.41
2:A:2760:TYR:HD2	2:A:2760:TYR:C	2.24	0.41
2:A:2836:ASP:O	2:A:2840:MET:HG2	2.21	0.41
2:A:3069:GLU:O	2:A:3072:MET:HB2	2.21	0.41
2:A:3840:PHE:CE1	2:A:3874:THR:HG23	2.56	0.41
2:A:4255:LEU:O	2:A:4258:MET:HG3	2.21	0.41
2:A:4693:SER:O	2:A:4697:VAL:HG23	2.21	0.41
2:A:4732:GLY:HA2	2:A:4735:ASN:O	2.21	0.41
2:A:4757:LEU:HD23	2:A:4757:LEU:HA	1.90	0.41
2:D:897:LYS:HD2	2:D:902:TRP:CD1	2.56	0.41
2:D:969:ASN:OD1	2:D:970:TYR:N	2.50	0.41
2:D:972:LEU:HD21	2:D:976:TYR:HB3	2.03	0.41
2:D:1170:GLU:OE1	2:D:1170:GLU:N	2.54	0.41
2:D:1502:ASN:OD1	2:D:1503:ASN:N	2.48	0.41
2:D:1825:PHE:CE1	2:D:1842:ILE:HG12	2.55	0.41
2:D:2735:ASP:OD1	2:D:2736:LYS:N	2.53	0.41
2:D:2836:ASP:O	2:D:2840:MET:HG2	2.21	0.41
2:D:2980:LEU:HA	2:D:2983:LEU:HB2	2.03	0.41
2:D:3025:ASP:O	2:D:3028:SER:OG	2.20	0.41
2:D:4033:LYS:HA	2:D:4033:LYS:HD2	1.76	0.41
2:D:4084:VAL:O	2:D:4088:HIS:HB3	2.21	0.41
2:D:4512:ALA:O	2:D:4516:ILE:HG13	2.21	0.41
2:D:4693:SER:O	2:D:4697:VAL:HG23	2.21	0.41
2:B:194:LEU:HD11	2:B:201:LEU:HD23	2.02	0.41
2:B:997:ASP:HA	2:B:1047:LYS:NZ	2.34	0.41
2:B:1697:LEU:HD23	2:B:1697:LEU:HA	1.87	0.41
2:B:1833:ILE:O	2:B:1835:HIS:ND1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2119:LEU:HB2	2:B:2152:ASN:ND2	2.36	0.41
2:B:2407:HIS:CE1	2:B:2408:LEU:HG	2.56	0.41
2:B:2507:LEU:HA	2:B:2510:THR:HG23	2.03	0.41
2:B:2847:ASN:HA	2:B:2850:ASN:HB2	2.03	0.41
2:B:3729:ALA:O	2:B:3733:ASP:HB2	2.20	0.41
2:B:4268:MET:O	2:B:4272:LYS:HG2	2.21	0.41
2:B:4848:ILE:HD13	2:B:4848:ILE:HA	1.92	0.41
2:C:128:MET:HB3	2:C:149:LEU:HB3	2.03	0.41
2:C:233:VAL:HG12	2:C:274:LEU:HD22	2.03	0.41
2:C:695:VAL:O	2:C:727:PHE:N	2.52	0.41
2:C:956:HIS:O	2:C:960:LYS:HG3	2.20	0.41
2:C:1128:LEU:HD23	2:C:1128:LEU:HA	1.95	0.41
2:C:1242:ASN:ND2	2:C:1805:HIS:O	2.54	0.41
2:C:1444:GLY:HA3	2:C:1487:MET:HA	2.03	0.41
2:C:2054:LYS:NZ	2:C:2056:SER:OG	2.34	0.41
2:C:2497:ARG:HD2	2:C:2872:VAL:HG21	2.02	0.41
2:C:2638:LEU:HD23	2:C:2638:LEU:HA	1.86	0.41
2:C:2693:SER:O	2:C:2702:ASN:ND2	2.54	0.41
2:C:3016:ARG:HH12	2:C:3064:ALA:HA	1.85	0.41
2:C:3234:VAL:HA	2:C:3238:ILE:HG12	2.02	0.41
2:C:4196:THR:O	2:C:4200:MET:HG3	2.21	0.41
2:C:4237:SER:HB3	2:C:4240:THR:HG23	2.02	0.41
2:C:4693:SER:O	2:C:4697:VAL:HG23	2.21	0.41
2:C:4930:GLU:HA	2:C:4933:HIS:ND1	2.35	0.41
2:A:956:HIS:O	2:A:960:LYS:HG3	2.20	0.41
2:A:2760:TYR:C	2:A:2760:TYR:CD2	2.94	0.41
2:A:2987:SER:O	2:A:2988:ARG:HB2	2.21	0.41
2:A:3027:THR:HA	2:A:3030:VAL:HG12	2.03	0.41
2:A:4196:THR:O	2:A:4200:MET:HG3	2.21	0.41
2:A:4810:LEU:HG	2:A:4814:MET:CE	2.51	0.41
1:G:3:VAL:HG22	1:G:77:CYS:HA	2.02	0.41
3:I:38:ARG:CZ	3:I:38:ARG:HA	2.51	0.41
2:D:762:SER:OG	2:D:763:ALA:N	2.54	0.41
2:D:2607:LEU:HD22	2:D:2664:LEU:HG	2.01	0.41
2:D:3239:LEU:HA	2:D:3239:LEU:HD23	1.85	0.41
2:B:505:LEU:HG	2:B:526:TRP:NE1	2.36	0.41
2:B:989:THR:HG22	2:B:991:SER:H	1.85	0.41
2:B:1016:TRP:CE3	2:B:1029:ASN:HB2	2.56	0.41
2:B:2123:LEU:CD1	2:B:2167:MET:HG2	2.47	0.41
2:B:3239:LEU:HD22	2:B:3280:ILE:HG12	2.01	0.41
2:B:4634:VAL:HG22	2:B:4640:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:260:VAL:HG23	2:C:391:ALA:HB3	2.03	0.41
2:C:630:HIS:CE1	2:C:1671:ARG:HE	2.40	0.41
2:C:2674:GLY:HA3	2:C:2977:ASN:HD22	1.86	0.41
2:C:2836:ASP:O	2:C:2840:MET:HG2	2.21	0.41
2:C:2847:ASN:HA	2:C:2850:ASN:HB2	2.03	0.41
2:C:2980:LEU:HA	2:C:2983:LEU:HB2	2.03	0.41
2:C:2987:SER:O	2:C:2988:ARG:HB2	2.21	0.41
2:C:3127:GLN:HG3	2:C:3183:ILE:HB	2.02	0.41
2:C:4084:VAL:O	2:C:4088:HIS:HB3	2.21	0.41
2:C:4268:MET:O	2:C:4272:LYS:HG2	2.21	0.41
2:C:4512:ALA:O	2:C:4516:ILE:HG13	2.21	0.41
2:C:4634:VAL:HG22	2:C:4640:PHE:CD1	2.55	0.41
2:A:878:LEU:HD23	2:A:940:LEU:HD23	2.03	0.40
2:A:1290:PHE:HE2	2:D:2832:THR:OG1	2.03	0.40
2:A:4026:LEU:HD13	2:A:4055:HIS:CD2	2.56	0.40
2:A:4268:MET:O	2:A:4272:LYS:HG2	2.21	0.40
2:D:331:PHE:HE1	2:D:363:ILE:HG13	1.86	0.40
2:D:505:LEU:HG	2:D:526:TRP:NE1	2.37	0.40
2:D:630:HIS:CE1	2:D:1671:ARG:HE	2.40	0.40
2:D:1760:ARG:HE	2:D:1760:ARG:HB3	1.71	0.40
2:D:2119:LEU:HB2	2:D:2152:ASN:ND2	2.36	0.40
2:D:2200:LEU:HD23	2:D:2200:LEU:HA	1.96	0.40
2:D:3109:PHE:CE1	2:D:3162:PHE:HD1	2.40	0.40
2:D:3840:PHE:CE1	2:D:3874:THR:HG23	2.56	0.40
2:B:233:VAL:HG12	2:B:274:LEU:HD22	2.03	0.40
2:B:260:VAL:HG23	2:B:391:ALA:HB3	2.03	0.40
2:B:3026:ALA:HA	2:B:3029:ILE:HD13	2.03	0.40
2:B:4026:LEU:HD13	2:B:4055:HIS:CD2	2.56	0.40
2:C:168:GLN:HG2	2:C:169:ARG:HG2	2.03	0.40
2:C:2488:LEU:HD21	2:C:2548:LEU:HD22	2.03	0.40
2:C:2789:ILE:HD11	2:C:2901:TYR:HB3	2.02	0.40
2:C:3029:ILE:O	2:C:3033:LEU:HD23	2.20	0.40
2:C:4732:GLY:HA2	2:C:4735:ASN:O	2.21	0.40
3:K:38:ARG:CZ	3:K:38:ARG:HA	2.51	0.40
2:A:26:ALA:O	2:A:33:GLN:N	2.51	0.40
2:A:420:ARG:HA	2:A:423:VAL:HG12	2.02	0.40
2:A:505:LEU:HG	2:A:526:TRP:NE1	2.36	0.40
2:A:630:HIS:CE1	2:A:1671:ARG:HE	2.40	0.40
2:A:879:GLU:HA	2:A:882:ARG:HB2	2.04	0.40
2:A:1242:ASN:ND2	2:A:1805:HIS:O	2.54	0.40
2:A:2264:LYS:HE2	2:A:2264:LYS:HB2	1.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2407:HIS:CE1	2:A:2408:LEU:HG	2.56	0.40
2:A:2847:ASN:O	2:A:2847:ASN:ND2	2.51	0.40
2:A:3025:ASP:O	2:A:3028:SER:OG	2.20	0.40
2:A:4044:SER:HB3	2:A:4047:ASP:OD2	2.21	0.40
1:F:74:LYS:HB3	1:F:74:LYS:HE2	1.93	0.40
3:I:98:ASN:OD1	3:I:99:GLY:N	2.53	0.40
3:I:107:ARG:O	3:I:110:MET:SD	2.80	0.40
2:D:168:GLN:HG2	2:D:169:ARG:HG2	2.03	0.40
2:D:2507:LEU:HA	2:D:2510:THR:HG23	2.03	0.40
2:D:3016:ARG:HH12	2:D:3064:ALA:HA	1.85	0.40
2:D:4810:LEU:HG	2:D:4814:MET:CE	2.51	0.40
2:B:593:HIS:O	2:B:597:ILE:HG13	2.21	0.40
2:B:878:LEU:HD23	2:B:940:LEU:HD23	2.03	0.40
2:B:2925:PHE:HZ	2:B:2970:LEU:HD13	1.86	0.40
2:B:2980:LEU:HA	2:B:2983:LEU:HB2	2.03	0.40
2:C:505:LEU:HG	2:C:526:TRP:NE1	2.36	0.40
2:C:762:SER:OG	2:C:763:ALA:N	2.54	0.40
2:C:2760:TYR:HD2	2:C:2760:TYR:C	2.24	0.40
2:C:3027:THR:HA	2:C:3030:VAL:HG12	2.03	0.40
3:J:38:ARG:HA	3:J:38:ARG:CZ	2.51	0.40
3:J:107:ARG:O	3:J:110:MET:SD	2.80	0.40
1:H:3:VAL:HG22	1:H:77:CYS:HA	2.02	0.40
2:A:762:SER:OG	2:A:763:ALA:N	2.54	0.40
2:A:3054:LYS:HB3	2:A:3058:ARG:HH12	1.86	0.40
2:D:233:VAL:HG12	2:D:274:LEU:HD22	2.03	0.40
2:D:423:VAL:HG23	2:D:497:LEU:HD22	2.04	0.40
2:D:677:LEU:HD12	2:D:801:ARG:O	2.20	0.40
2:D:1711:LEU:HD22	2:D:1831:MET:HE1	2.02	0.40
2:D:2129:LEU:HD12	2:D:2142:MET:CE	2.49	0.40
2:D:2925:PHE:HZ	2:D:2970:LEU:HD13	1.86	0.40
2:D:2987:SER:O	2:D:2988:ARG:HB2	2.21	0.40
2:D:3037:GLY:HA2	2:D:3040:LEU:HG	2.03	0.40
2:D:3924:ILE:HG22	2:D:3931:ASN:HB3	2.04	0.40
2:B:897:LYS:HD2	2:B:902:TRP:CD1	2.56	0.40
2:B:915:HIS:CE1	2:B:917:CYS:HG	2.36	0.40
2:B:1170:GLU:N	2:B:1170:GLU:OE1	2.54	0.40
2:B:3109:PHE:CE1	2:B:3162:PHE:HD1	2.40	0.40
2:B:3649:ALA:C	2:B:3652:PRO:HD2	2.41	0.40
2:B:3840:PHE:CE1	2:B:3874:THR:HG23	2.56	0.40
2:C:194:LEU:HD11	2:C:201:LEU:HD23	2.02	0.40
2:C:2925:PHE:HZ	2:C:2970:LEU:HD13	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4242:ARG:HA	2:C:4242:ARG:HD2	1.88	0.40
3:L:38:ARG:CZ	3:L:38:ARG:HA	2.51	0.40
2:A:1438:PRO:HB2	2:A:1491:GLY:HA2	2.03	0.40
2:A:2119:LEU:HB2	2:A:2152:ASN:ND2	2.36	0.40
2:A:2980:LEU:HA	2:A:2983:LEU:HB2	2.03	0.40
2:A:4242:ARG:HD2	2:A:4242:ARG:HA	1.88	0.40
3:I:121:GLU:O	3:I:124:GLU:HB2	2.21	0.40
2:D:114:LEU:HB2	2:D:117:HIS:HD2	1.84	0.40
2:D:1017:THR:HB	2:D:1028:ARG:HG2	2.02	0.40
2:D:1895:GLN:HE22	2:D:2068:ARG:HH22	1.69	0.40
2:D:2760:TYR:HD2	2:D:2760:TYR:C	2.24	0.40
2:D:3649:ALA:C	2:D:3652:PRO:HD2	2.41	0.40
2:D:4255:LEU:O	2:D:4258:MET:HG3	2.21	0.40
2:B:331:PHE:HE1	2:B:363:ILE:HG13	1.86	0.40
2:B:602:ASP:HA	2:B:642:LEU:HD21	2.02	0.40
2:B:1680:VAL:HG12	2:B:1685:LEU:HG	2.04	0.40
2:B:1823:LYS:HB3	2:B:1823:LYS:HE3	1.97	0.40
2:B:1962:THR:HG23	2:B:1966:ARG:NE	2.30	0.40
2:B:2943:PHE:HE2	2:B:2954:PHE:HB3	1.87	0.40
2:B:2987:SER:O	2:B:2988:ARG:HB2	2.21	0.40
2:B:3114:GLN:HG2	2:B:3115:HIS:N	2.37	0.40
2:B:3744:ILE:O	2:B:3747:SER:OG	2.30	0.40
2:B:4255:LEU:O	2:B:4258:MET:HG3	2.21	0.40
2:C:331:PHE:HE1	2:C:363:ILE:HG13	1.86	0.40
2:C:1017:THR:HB	2:C:1028:ARG:HG2	2.02	0.40
2:C:2070:ALA:HA	2:C:2075:ILE:HD11	2.04	0.40
2:C:2507:LEU:HA	2:C:2510:THR:HG23	2.03	0.40
2:C:2849:HIS:HB2	2:C:2885:ASP:OD2	2.22	0.40
3:K:121:GLU:O	3:K:124:GLU:HB2	2.22	0.40
2:A:128:MET:HB3	2:A:149:LEU:HB3	2.03	0.40
2:A:897:LYS:HD2	2:A:902:TRP:CD1	2.56	0.40
2:A:972:LEU:HD21	2:A:976:TYR:HB3	2.03	0.40
2:A:3026:ALA:HA	2:A:3029:ILE:HD13	2.03	0.40
2:D:879:GLU:HA	2:D:882:ARG:HB2	2.03	0.40
2:D:2232:PRO:HB2	2:D:2379:ASP:HA	2.03	0.40
2:D:2824:ARG:NH1	2:D:2826:ILE:HD11	2.37	0.40
2:D:3027:THR:HA	2:D:3030:VAL:HG12	2.04	0.40
2:D:4237:SER:HB3	2:D:4240:THR:HG23	2.02	0.40
2:B:128:MET:HB3	2:B:149:LEU:HB3	2.03	0.40
2:B:2312:SER:OG	2:B:2474:ARG:NH2	2.55	0.40
2:B:2999:LYS:HG3	2:B:3003:MET:CE	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3037:GLY:HA2	2:B:3040:LEU:HG	2.03	0.40
2:B:4044:SER:HB3	2:B:4047:ASP:OD2	2.21	0.40
2:C:420:ARG:HA	2:C:423:VAL:HG12	2.03	0.40
2:C:765:SER:HA	2:C:779:PHE:O	2.22	0.40
2:C:989:THR:HG22	2:C:991:SER:H	1.85	0.40
2:C:1100:ARG:HB3	2:C:1236:TYR:CD1	2.57	0.40
2:C:2407:HIS:CE1	2:C:2408:LEU:HG	2.56	0.40
2:C:2582:PRO:HA	2:C:2585:MET:HE1	2.04	0.40
2:C:3109:PHE:CE1	2:C:3162:PHE:HD1	2.40	0.40
3:L:107:ARG:O	3:L:110:MET:SD	2.80	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	E	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
1	F	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
1	G	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
1	H	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
2	A	4203/4967 (85%)	4057 (96%)	144 (3%)	2 (0%)	100	100
2	B	4203/4967 (85%)	4057 (96%)	144 (3%)	2 (0%)	100	100
2	C	4203/4967 (85%)	4057 (96%)	144 (3%)	2 (0%)	100	100
2	D	4203/4967 (85%)	4057 (96%)	144 (3%)	2 (0%)	100	100
3	I	136/149 (91%)	126 (93%)	9 (7%)	1 (1%)	19	38
3	J	136/149 (91%)	126 (93%)	9 (7%)	1 (1%)	19	38
3	K	136/149 (91%)	126 (93%)	9 (7%)	1 (1%)	19	38
3	L	136/149 (91%)	126 (93%)	9 (7%)	1 (1%)	19	38

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	17776/20896 (85%)	17136 (96%)	628 (4%)	12 (0%)	50 71

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	2988	ARG
2	A	4641	PRO
2	D	2988	ARG
2	D	4641	PRO
2	B	2988	ARG
2	B	4641	PRO
2	C	2988	ARG
2	C	4641	PRO
3	I	21	ASP
3	J	21	ASP
3	K	21	ASP
3	L	21	ASP

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	E	88/89 (99%)	81 (92%)	7 (8%)	10 22
1	F	88/89 (99%)	81 (92%)	7 (8%)	10 22
1	G	88/89 (99%)	81 (92%)	7 (8%)	10 22
1	H	88/89 (99%)	81 (92%)	7 (8%)	10 22
2	A	3712/4358 (85%)	3646 (98%)	66 (2%)	54 78
2	B	3712/4358 (85%)	3646 (98%)	66 (2%)	54 78
2	C	3712/4358 (85%)	3646 (98%)	66 (2%)	54 78
2	D	3712/4358 (85%)	3646 (98%)	66 (2%)	54 78
3	I	119/127 (94%)	111 (93%)	8 (7%)	13 30
3	J	119/127 (94%)	111 (93%)	8 (7%)	13 30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	K	119/127 (94%)	111 (93%)	8 (7%)	13	30
3	L	119/127 (94%)	111 (93%)	8 (7%)	13	30
All	All	15676/18296 (86%)	15352 (98%)	324 (2%)	50	74

All (324) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	4	GLU
1	H	6	GLU
1	H	19	LYS
1	H	30	MET
1	H	50	ARG
1	H	53	LYS
1	H	58	LYS
2	A	81	MET
2	A	344	LYS
2	A	520	ARG
2	A	706	TYR
2	A	829	LYS
2	A	946	LEU
2	A	962	LYS
2	A	1064	LEU
2	A	1983	LYS
2	A	2172	MET
2	A	2192	MET
2	A	2214	MET
2	A	2275	GLN
2	A	2279	MET
2	A	2384	MET
2	A	2456	MET
2	A	2585	MET
2	A	2594	PHE
2	A	2607	LEU
2	A	2659	GLN
2	A	2688	MET
2	A	2695	MET
2	A	2702	ASN
2	A	2704	GLN
2	A	2760	TYR
2	A	2772	ARG
2	A	2838[A]	HIS

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Mol	Chain	Res	Type
2	A	2838[B]	HIS
2	A	2844	MET
2	A	2847	ASN
2	A	2867	ASN
2	A	2880	LYS
2	A	2884	LYS
2	A	2887	GLU
2	A	2896	LEU
2	A	2938	GLN
2	A	2941	LEU
2	A	2983	LEU
2	A	2995	HIS
2	A	2998	ASN
2	A	3068	LEU
2	A	3114	GLN
2	A	3123	LEU
2	A	3150	ARG
2	A	3178	HIS
2	A	3181	TYR
2	A	3215	MET
2	A	3218	ILE
2	A	3242	LEU
2	A	3252	HIS
2	A	3263	MET
2	A	3273	MET
2	A	3296	MET
2	A	3299	LEU
2	A	3605	MET
2	A	3882	GLN
2	A	3954	MET
2	A	4046	ARG
2	A	4183	LYS
2	A	4258	MET
2	A	4267	GLN
2	A	4268	MET
2	A	4305	PHE
2	A	4726	MET
2	A	4809	MET
2	A	4814	MET
1	E	4	GLU
1	E	6	GLU
1	E	19	LYS

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Mol	Chain	Res	Type
1	E	30	MET
1	E	50	ARG
1	E	53	LYS
1	E	58	LYS
1	F	4	GLU
1	F	6	GLU
1	F	19	LYS
1	F	30	MET
1	F	50	ARG
1	F	53	LYS
1	F	58	LYS
1	G	4	GLU
1	G	6	GLU
1	G	19	LYS
1	G	30	MET
1	G	50	ARG
1	G	53	LYS
1	G	58	LYS
3	I	1	MET
3	I	31	LYS
3	I	77	MET
3	I	78	LYS
3	I	110	MET
3	I	125	MET
3	I	136	GLN
3	I	138	ASN
2	D	81	MET
2	D	344	LYS
2	D	520	ARG
2	D	706	TYR
2	D	829	LYS
2	D	946	LEU
2	D	962	LYS
2	D	1064	LEU
2	D	1983	LYS
2	D	2172	MET
2	D	2192	MET
2	D	2214	MET
2	D	2275	GLN
2	D	2279	MET
2	D	2384	MET
2	D	2456	MET

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Mol	Chain	Res	Type
2	D	2585	MET
2	D	2594	PHE
2	D	2607	LEU
2	D	2659	GLN
2	D	2688	MET
2	D	2695	MET
2	D	2702	ASN
2	D	2704	GLN
2	D	2760	TYR
2	D	2772	ARG
2	D	2838[A]	HIS
2	D	2838[B]	HIS
2	D	2844	MET
2	D	2847	ASN
2	D	2867	ASN
2	D	2880	LYS
2	D	2884	LYS
2	D	2887	GLU
2	D	2896	LEU
2	D	2938	GLN
2	D	2941	LEU
2	D	2983	LEU
2	D	2995	HIS
2	D	2998	ASN
2	D	3068	LEU
2	D	3114	GLN
2	D	3123	LEU
2	D	3150	ARG
2	D	3178	HIS
2	D	3181	TYR
2	D	3215	MET
2	D	3218	ILE
2	D	3242	LEU
2	D	3252	HIS
2	D	3263	MET
2	D	3273	MET
2	D	3296	MET
2	D	3299	LEU
2	D	3605	MET
2	D	3882	GLN
2	D	3954	MET
2	D	4046	ARG

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Mol	Chain	Res	Type
2	D	4183	LYS
2	D	4258	MET
2	D	4267	GLN
2	D	4268	MET
2	D	4305	PHE
2	D	4726	MET
2	D	4809	MET
2	D	4814	MET
2	B	81	MET
2	B	344	LYS
2	B	520	ARG
2	B	706	TYR
2	B	829	LYS
2	B	946	LEU
2	B	962	LYS
2	B	1064	LEU
2	B	1983	LYS
2	B	2172	MET
2	B	2192	MET
2	B	2214	MET
2	B	2275	GLN
2	B	2279	MET
2	B	2384	MET
2	B	2456	MET
2	B	2585	MET
2	B	2594	PHE
2	B	2607	LEU
2	B	2659	GLN
2	B	2688	MET
2	B	2695	MET
2	B	2702	ASN
2	B	2704	GLN
2	B	2760	TYR
2	B	2772	ARG
2	B	2838[A]	HIS
2	B	2838[B]	HIS
2	B	2844	MET
2	B	2847	ASN
2	B	2867	ASN
2	B	2880	LYS
2	B	2884	LYS
2	B	2887	GLU

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Mol	Chain	Res	Type
2	B	2896	LEU
2	B	2938	GLN
2	B	2941	LEU
2	B	2983	LEU
2	B	2995	HIS
2	B	2998	ASN
2	B	3068	LEU
2	B	3114	GLN
2	B	3123	LEU
2	B	3150	ARG
2	B	3178	HIS
2	B	3181	TYR
2	B	3215	MET
2	B	3218	ILE
2	B	3242	LEU
2	B	3252	HIS
2	B	3263	MET
2	B	3273	MET
2	B	3296	MET
2	B	3299	LEU
2	B	3605	MET
2	B	3882	GLN
2	B	3954	MET
2	B	4046	ARG
2	B	4183	LYS
2	B	4258	MET
2	B	4267	GLN
2	B	4268	MET
2	B	4305	PHE
2	B	4726	MET
2	B	4809	MET
2	B	4814	MET
2	C	81	MET
2	C	344	LYS
2	C	520	ARG
2	C	706	TYR
2	C	829	LYS
2	C	946	LEU
2	C	962	LYS
2	C	1064	LEU
2	C	1983	LYS
2	C	2172	MET

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Mol	Chain	Res	Type
2	C	2192	MET
2	C	2214	MET
2	C	2275	GLN
2	C	2279	MET
2	C	2384	MET
2	C	2456	MET
2	C	2585	MET
2	C	2594	PHE
2	C	2607	LEU
2	C	2659	GLN
2	C	2688	MET
2	C	2695	MET
2	C	2702	ASN
2	C	2704	GLN
2	C	2760	TYR
2	C	2772	ARG
2	C	2838[A]	HIS
2	C	2838[B]	HIS
2	C	2844	MET
2	C	2847	ASN
2	C	2867	ASN
2	C	2880	LYS
2	C	2884	LYS
2	C	2887	GLU
2	C	2896	LEU
2	C	2938	GLN
2	C	2941	LEU
2	C	2983	LEU
2	C	2995	HIS
2	C	2998	ASN
2	C	3068	LEU
2	C	3114	GLN
2	C	3123	LEU
2	C	3150	ARG
2	C	3178	HIS
2	C	3181	TYR
2	C	3215	MET
2	C	3218	ILE
2	C	3242	LEU
2	C	3252	HIS
2	C	3263	MET
2	C	3273	MET

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Mol	Chain	Res	Type
2	C	3296	MET
2	C	3299	LEU
2	C	3605	MET
2	C	3882	GLN
2	C	3954	MET
2	C	4046	ARG
2	C	4183	LYS
2	C	4258	MET
2	C	4267	GLN
2	C	4268	MET
2	C	4305	PHE
2	C	4726	MET
2	C	4809	MET
2	C	4814	MET
3	J	1	MET
3	J	31	LYS
3	J	77	MET
3	J	78	LYS
3	J	110	MET
3	J	125	MET
3	J	136	GLN
3	J	138	ASN
3	K	1	MET
3	K	31	LYS
3	K	77	MET
3	K	78	LYS
3	K	110	MET
3	K	125	MET
3	K	136	GLN
3	K	138	ASN
3	L	1	MET
3	L	31	LYS
3	L	77	MET
3	L	78	LYS
3	L	110	MET
3	L	125	MET
3	L	136	GLN
3	L	138	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	2217	HIS
2	D	2217	HIS
2	D	4933	HIS
2	B	2217	HIS
2	B	2702	ASN
2	C	1905	GLN
2	C	2217	HIS
2	C	2702	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 4 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	$\# Z > 2$
5	ATP	B	5003	-	28,33,33	0.62	0	34,52,52	0.58	1 (2%)
5	ATP	C	5003	-	28,33,33	0.63	0	34,52,52	0.59	1 (2%)
5	ATP	C	5002	-	28,33,33	0.63	0	34,52,52	0.66	1 (2%)
5	ATP	B	5002	-	28,33,33	0.62	0	34,52,52	0.66	1 (2%)
5	ATP	D	5003	-	28,33,33	0.63	0	34,52,52	0.58	1 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	ATP	A	5003	-	28,33,33	0.64	0	34,52,52	0.58	1 (2%)
5	ATP	A	5002	-	28,33,33	0.64	0	34,52,52	0.66	1 (2%)
5	ATP	D	5002	-	28,33,33	0.63	0	34,52,52	0.66	1 (2%)

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
5	ATP	B	5003	-	-	9/18/38/38	0/3/3/3
5	ATP	C	5003	-	-	9/18/38/38	0/3/3/3
5	ATP	C	5002	-	-	11/18/38/38	0/3/3/3
5	ATP	B	5002	-	-	11/18/38/38	0/3/3/3
5	ATP	D	5003	-	-	9/18/38/38	0/3/3/3
5	ATP	A	5003	-	-	9/18/38/38	0/3/3/3
5	ATP	A	5002	-	-	11/18/38/38	0/3/3/3
5	ATP	D	5002	-	-	11/18/38/38	0/3/3/3

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	5003	ATP	C5-C6-N6	2.34	123.88	120.31
5	D	5002	ATP	C5-C6-N6	2.34	123.87	120.31
5	A	5003	ATP	C5-C6-N6	2.33	123.86	120.31
5	A	5002	ATP	C5-C6-N6	2.32	123.85	120.31
5	C	5002	ATP	C5-C6-N6	2.32	123.85	120.31
5	B	5003	ATP	C5-C6-N6	2.30	123.81	120.31
5	D	5003	ATP	C5-C6-N6	2.30	123.81	120.31
5	B	5002	ATP	C5-C6-N6	2.29	123.81	120.31

There are no chirality outliers.

All (80) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	5002	ATP	PB-O3B-PG-O3G
5	A	5002	ATP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
5	A	5002	ATP	C5'-O5'-PA-O2A
5	A	5002	ATP	C5'-O5'-PA-O3A
5	A	5002	ATP	O4'-C4'-C5'-O5'
5	A	5003	ATP	C5'-O5'-PA-O1A
5	A	5003	ATP	C5'-O5'-PA-O2A
5	A	5003	ATP	C5'-O5'-PA-O3A
5	D	5002	ATP	PB-O3B-PG-O3G
5	D	5002	ATP	C5'-O5'-PA-O1A
5	D	5002	ATP	C5'-O5'-PA-O2A
5	D	5002	ATP	C5'-O5'-PA-O3A
5	D	5002	ATP	O4'-C4'-C5'-O5'
5	D	5003	ATP	C5'-O5'-PA-O1A
5	D	5003	ATP	C5'-O5'-PA-O2A
5	D	5003	ATP	C5'-O5'-PA-O3A
5	B	5002	ATP	PB-O3B-PG-O3G
5	B	5002	ATP	C5'-O5'-PA-O1A
5	B	5002	ATP	C5'-O5'-PA-O2A
5	B	5002	ATP	C5'-O5'-PA-O3A
5	B	5002	ATP	O4'-C4'-C5'-O5'
5	B	5003	ATP	C5'-O5'-PA-O1A
5	B	5003	ATP	C5'-O5'-PA-O2A
5	B	5003	ATP	C5'-O5'-PA-O3A
5	C	5002	ATP	PB-O3B-PG-O3G
5	C	5002	ATP	C5'-O5'-PA-O1A
5	C	5002	ATP	C5'-O5'-PA-O2A
5	C	5002	ATP	C5'-O5'-PA-O3A
5	C	5002	ATP	O4'-C4'-C5'-O5'
5	C	5003	ATP	C5'-O5'-PA-O1A
5	C	5003	ATP	C5'-O5'-PA-O2A
5	C	5003	ATP	C5'-O5'-PA-O3A
5	A	5002	ATP	C3'-C4'-C5'-O5'
5	D	5002	ATP	C3'-C4'-C5'-O5'
5	B	5002	ATP	C3'-C4'-C5'-O5'
5	C	5002	ATP	C3'-C4'-C5'-O5'
5	A	5003	ATP	O4'-C4'-C5'-O5'
5	D	5003	ATP	O4'-C4'-C5'-O5'
5	B	5003	ATP	O4'-C4'-C5'-O5'
5	C	5003	ATP	O4'-C4'-C5'-O5'
5	A	5003	ATP	C3'-C4'-C5'-O5'
5	D	5003	ATP	C3'-C4'-C5'-O5'
5	B	5003	ATP	C3'-C4'-C5'-O5'
5	C	5003	ATP	C3'-C4'-C5'-O5'

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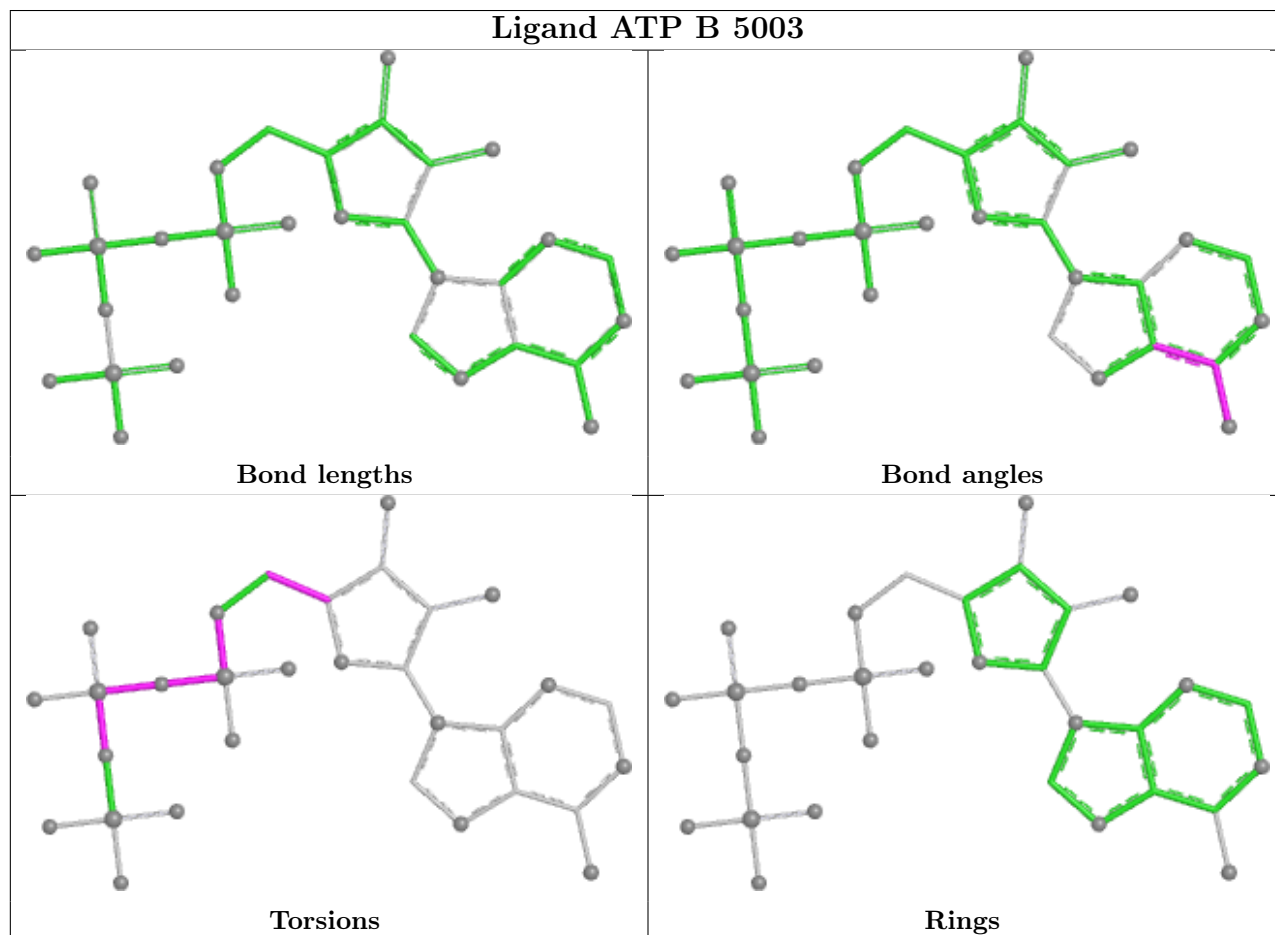
Mol	Chain	Res	Type	Atoms
5	A	5003	ATP	PG-O3B-PB-O1B
5	D	5003	ATP	PG-O3B-PB-O1B
5	B	5003	ATP	PG-O3B-PB-O1B
5	C	5003	ATP	PG-O3B-PB-O1B
5	A	5002	ATP	PA-O3A-PB-O1B
5	D	5002	ATP	PA-O3A-PB-O1B
5	B	5002	ATP	PA-O3A-PB-O1B
5	C	5002	ATP	PA-O3A-PB-O1B
5	A	5002	ATP	PG-O3B-PB-O3A
5	D	5002	ATP	PG-O3B-PB-O3A
5	B	5002	ATP	PG-O3B-PB-O3A
5	C	5002	ATP	PG-O3B-PB-O3A
5	A	5002	ATP	PG-O3B-PB-O1B
5	A	5003	ATP	PA-O3A-PB-O2B
5	A	5003	ATP	PB-O3A-PA-O1A
5	A	5003	ATP	PB-O3A-PA-O2A
5	D	5002	ATP	PG-O3B-PB-O1B
5	D	5003	ATP	PA-O3A-PB-O2B
5	D	5003	ATP	PB-O3A-PA-O1A
5	D	5003	ATP	PB-O3A-PA-O2A
5	B	5002	ATP	PG-O3B-PB-O1B
5	B	5003	ATP	PA-O3A-PB-O2B
5	B	5003	ATP	PB-O3A-PA-O1A
5	B	5003	ATP	PB-O3A-PA-O2A
5	C	5002	ATP	PG-O3B-PB-O1B
5	C	5003	ATP	PA-O3A-PB-O2B
5	C	5003	ATP	PB-O3A-PA-O1A
5	C	5003	ATP	PB-O3A-PA-O2A
5	A	5002	ATP	PG-O3B-PB-O2B
5	A	5002	ATP	PA-O3A-PB-O2B
5	D	5002	ATP	PG-O3B-PB-O2B
5	D	5002	ATP	PA-O3A-PB-O2B
5	B	5002	ATP	PG-O3B-PB-O2B
5	B	5002	ATP	PA-O3A-PB-O2B
5	C	5002	ATP	PG-O3B-PB-O2B
5	C	5002	ATP	PA-O3A-PB-O2B

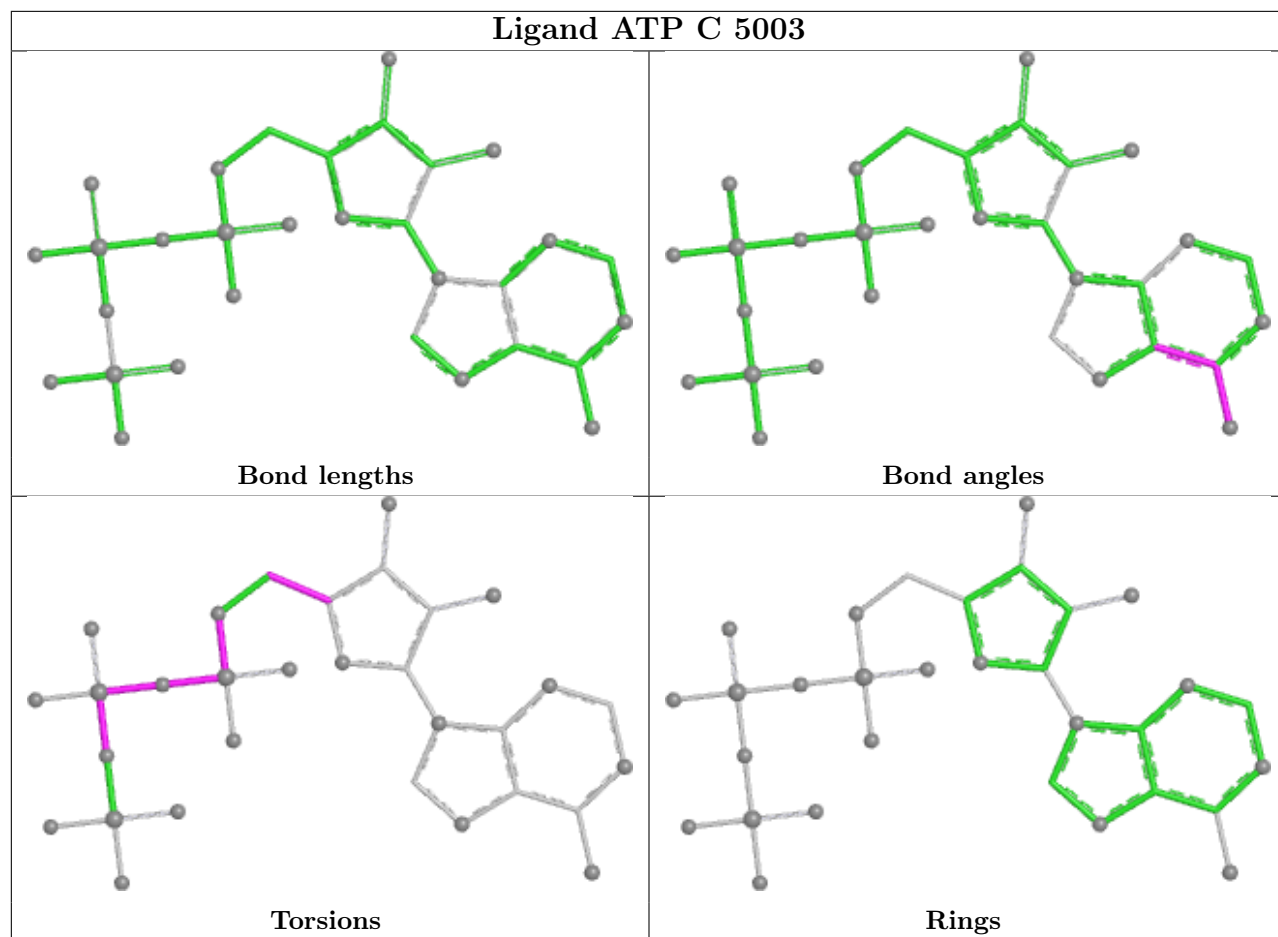
There are no ring outliers.

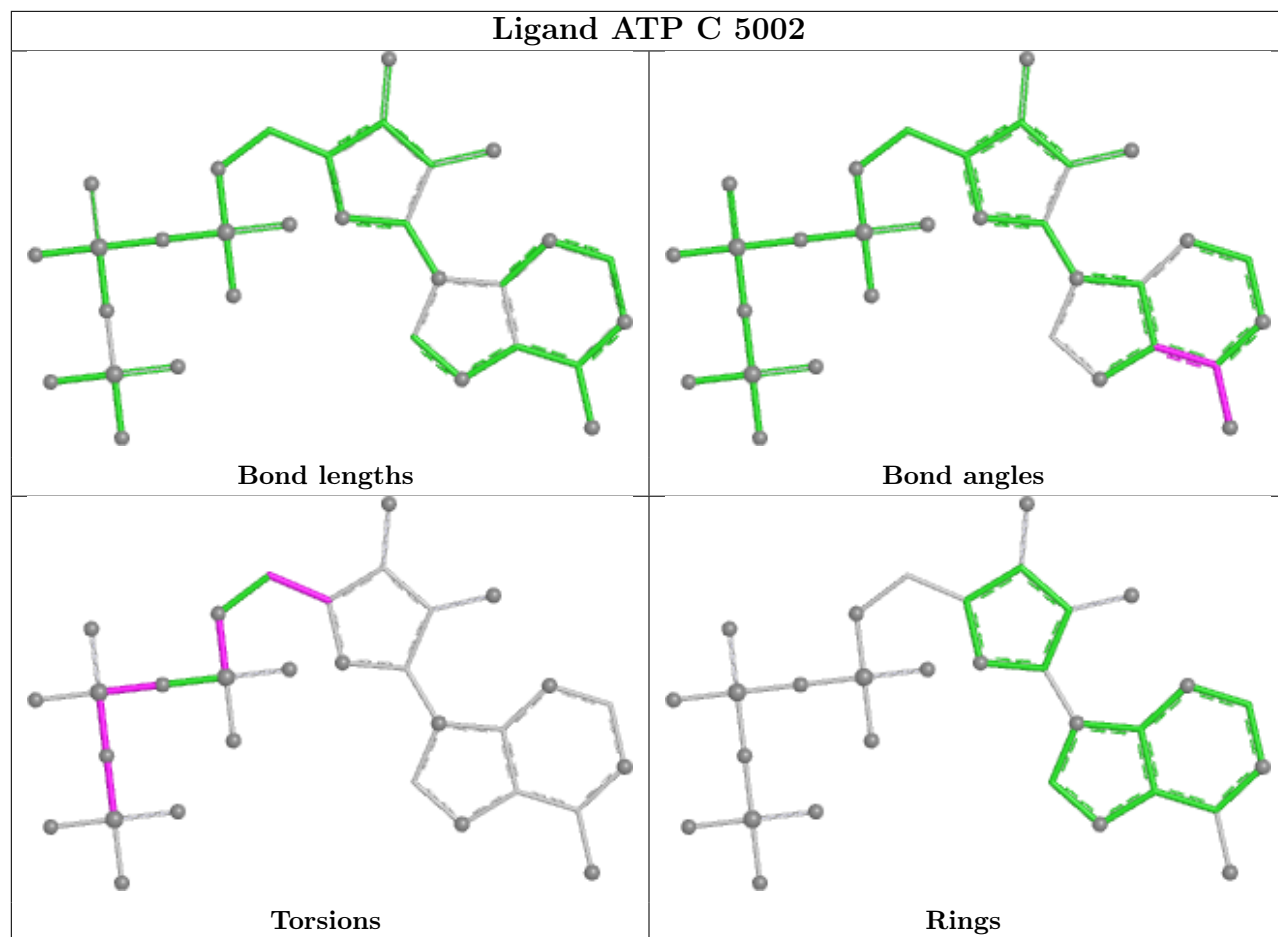
No monomer is involved in short contacts.

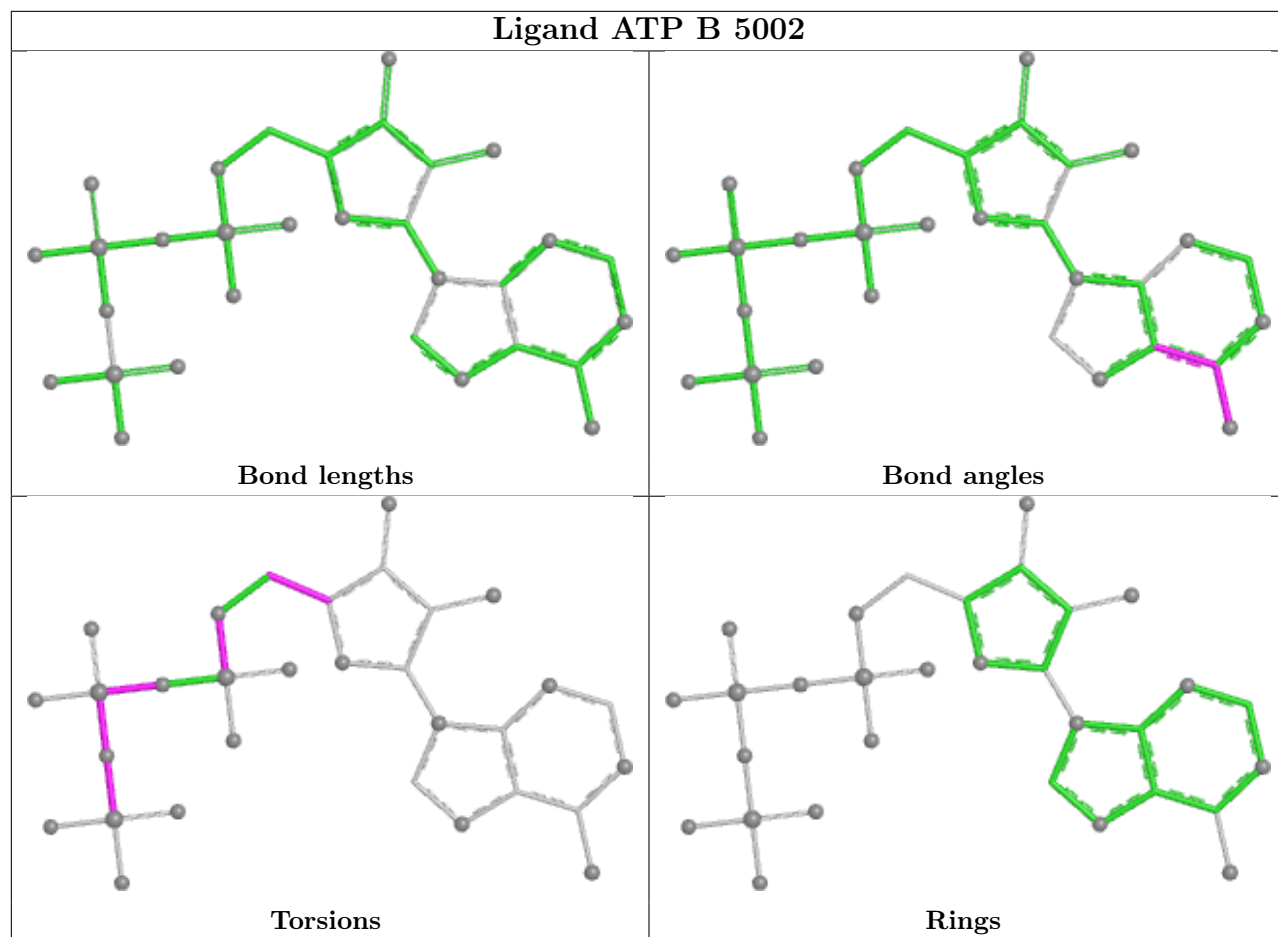
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will

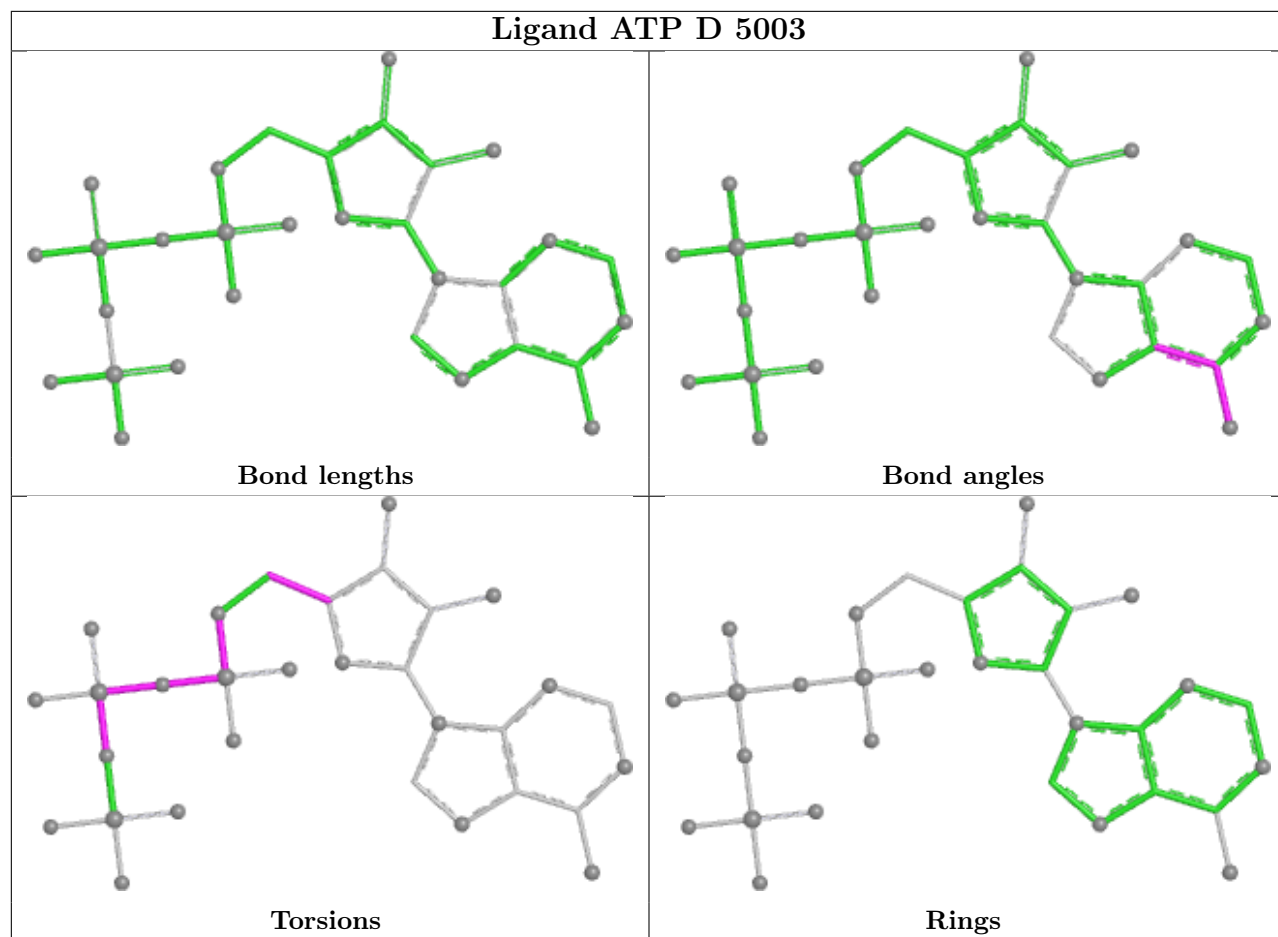
also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

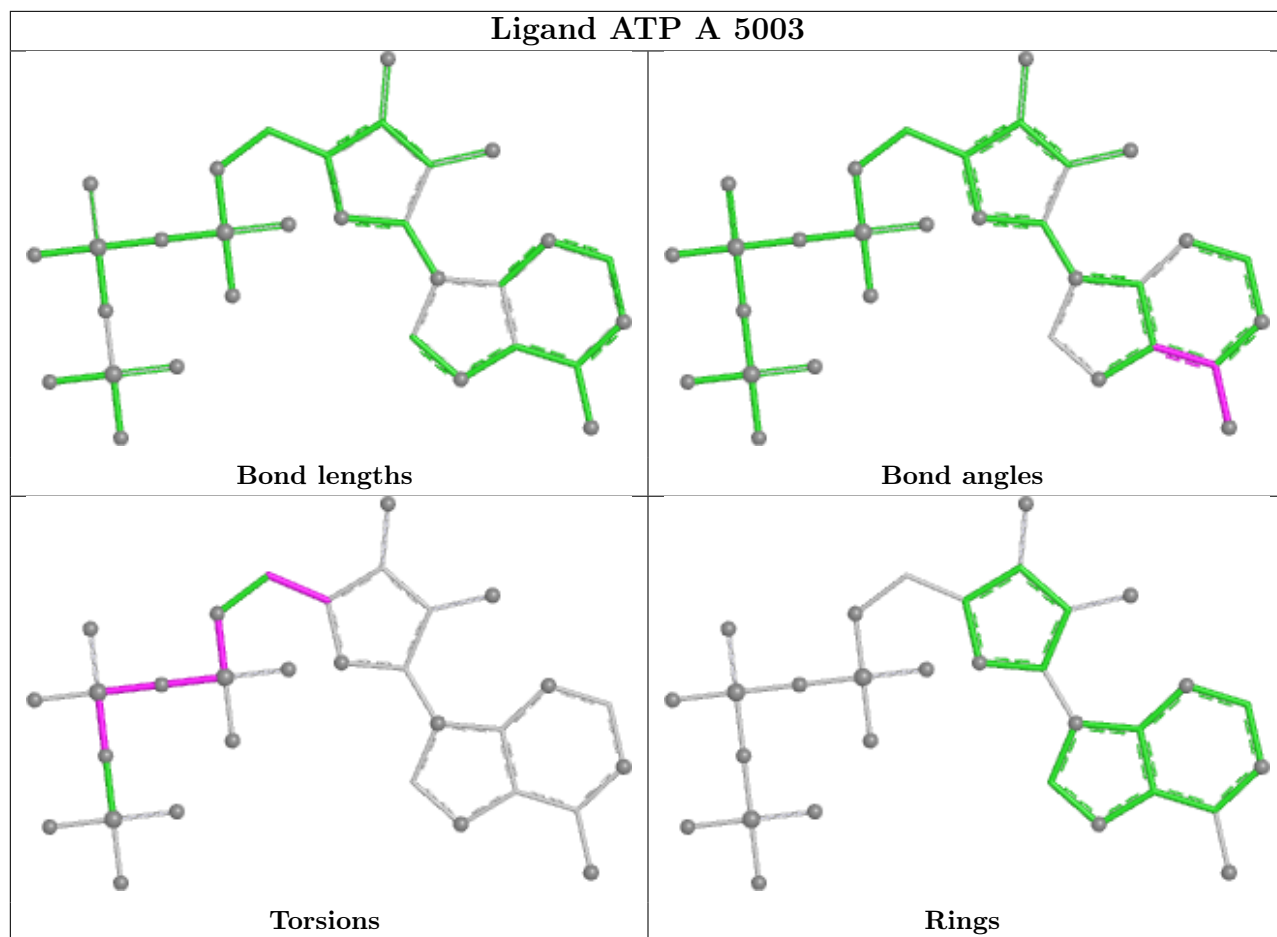


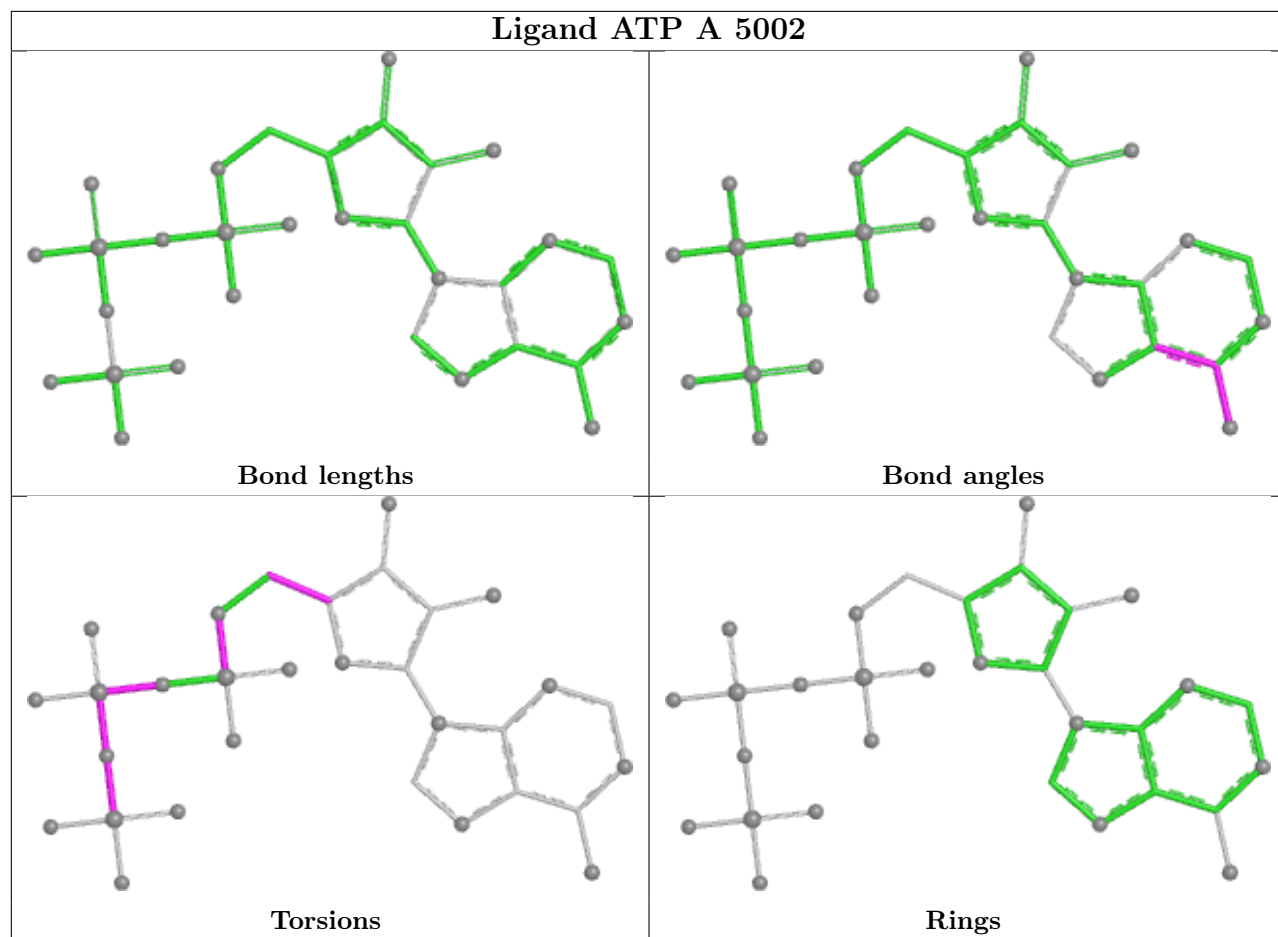


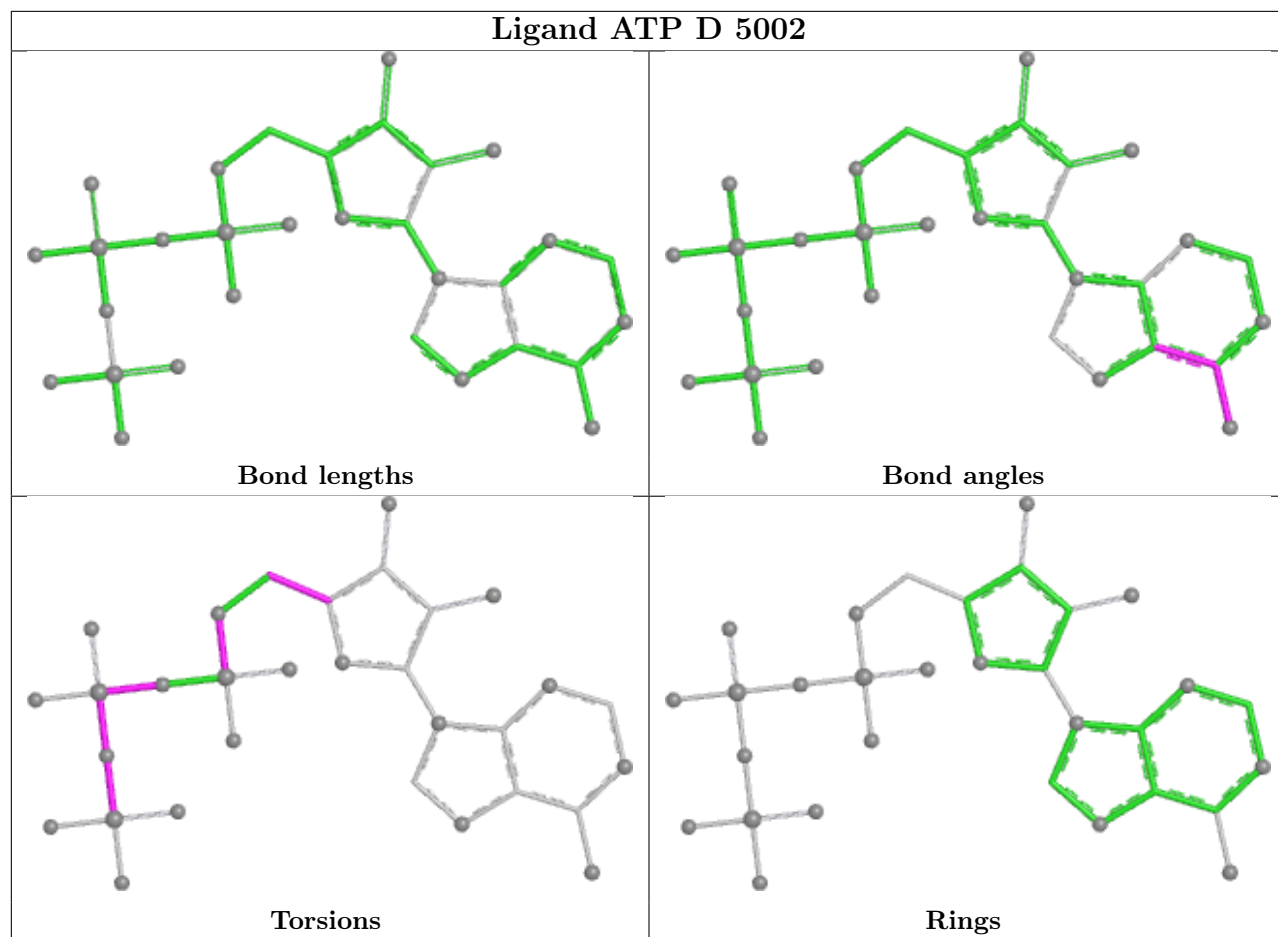












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

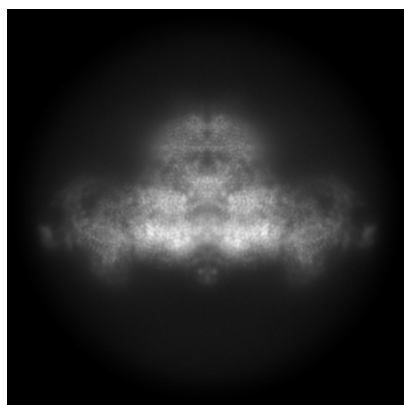
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-26408. These allow visual inspection of the internal detail of the map and identification of artifacts.

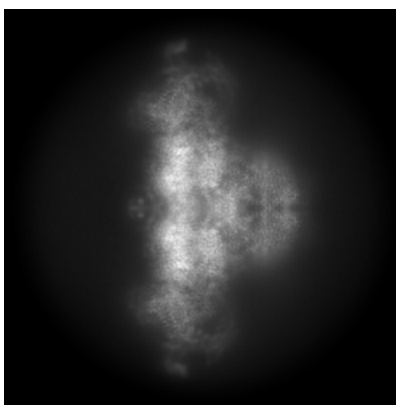
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

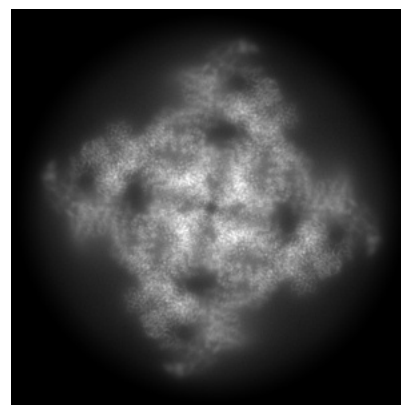
6.1.1 Primary map



X



Y

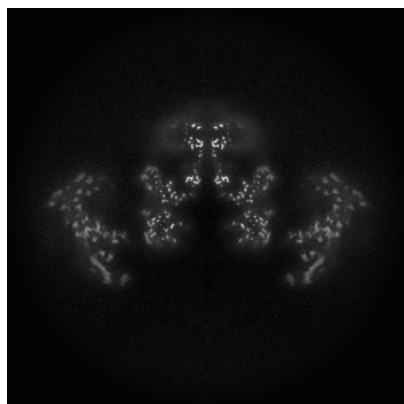


Z

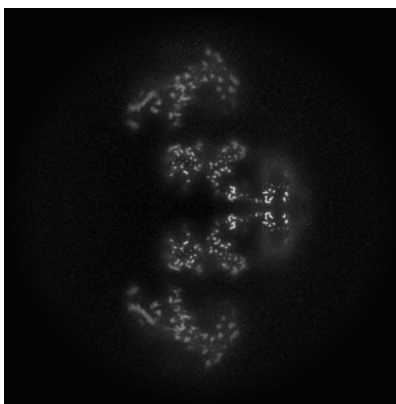
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

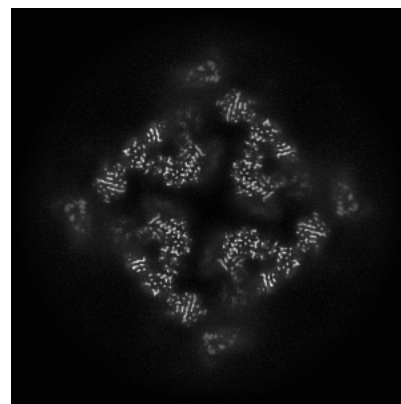
6.2.1 Primary map



X Index: 256



Y Index: 256

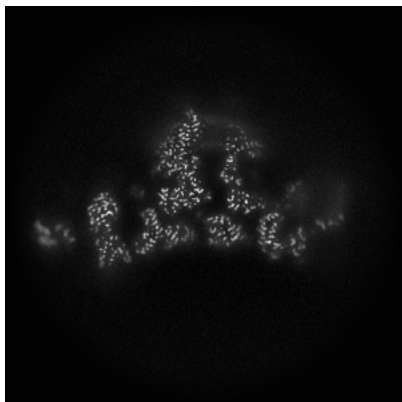


Z Index: 256

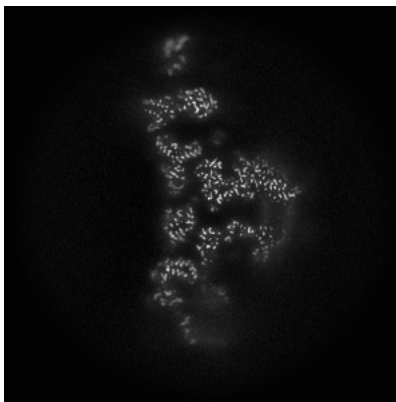
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

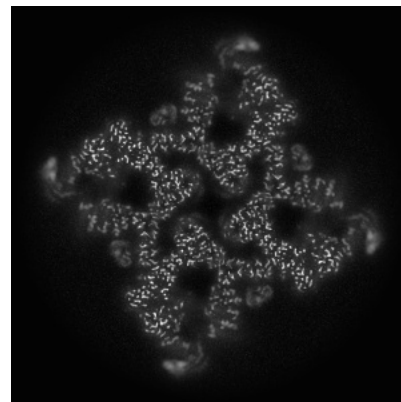
6.3.1 Primary map



X Index: 220



Y Index: 220

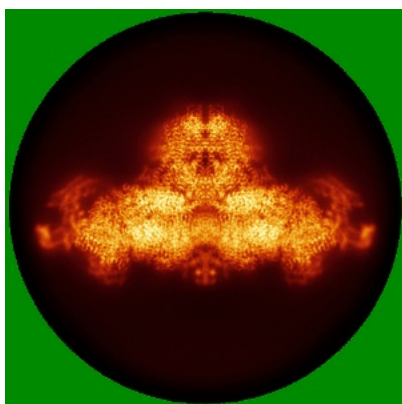


Z Index: 223

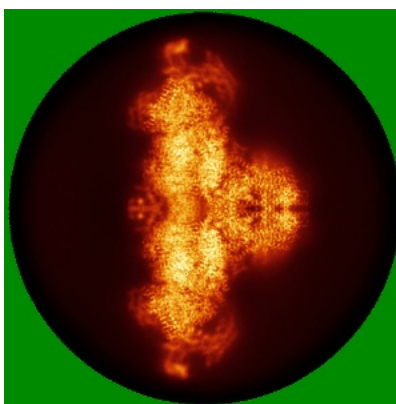
The images above show the largest variance slices of the map in three orthogonal directions.

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

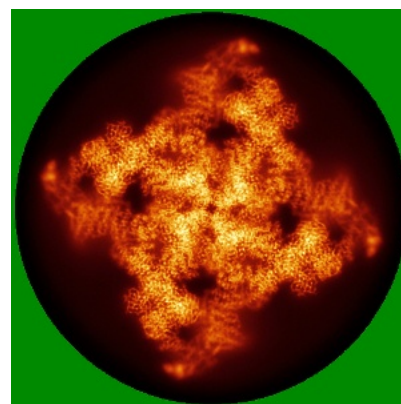
6.4.1 Primary map



X



Y

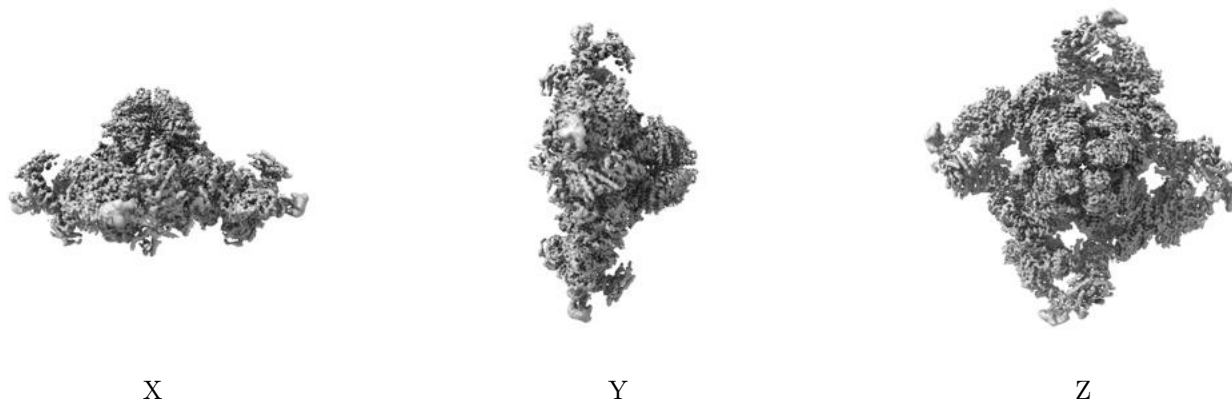


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.14. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

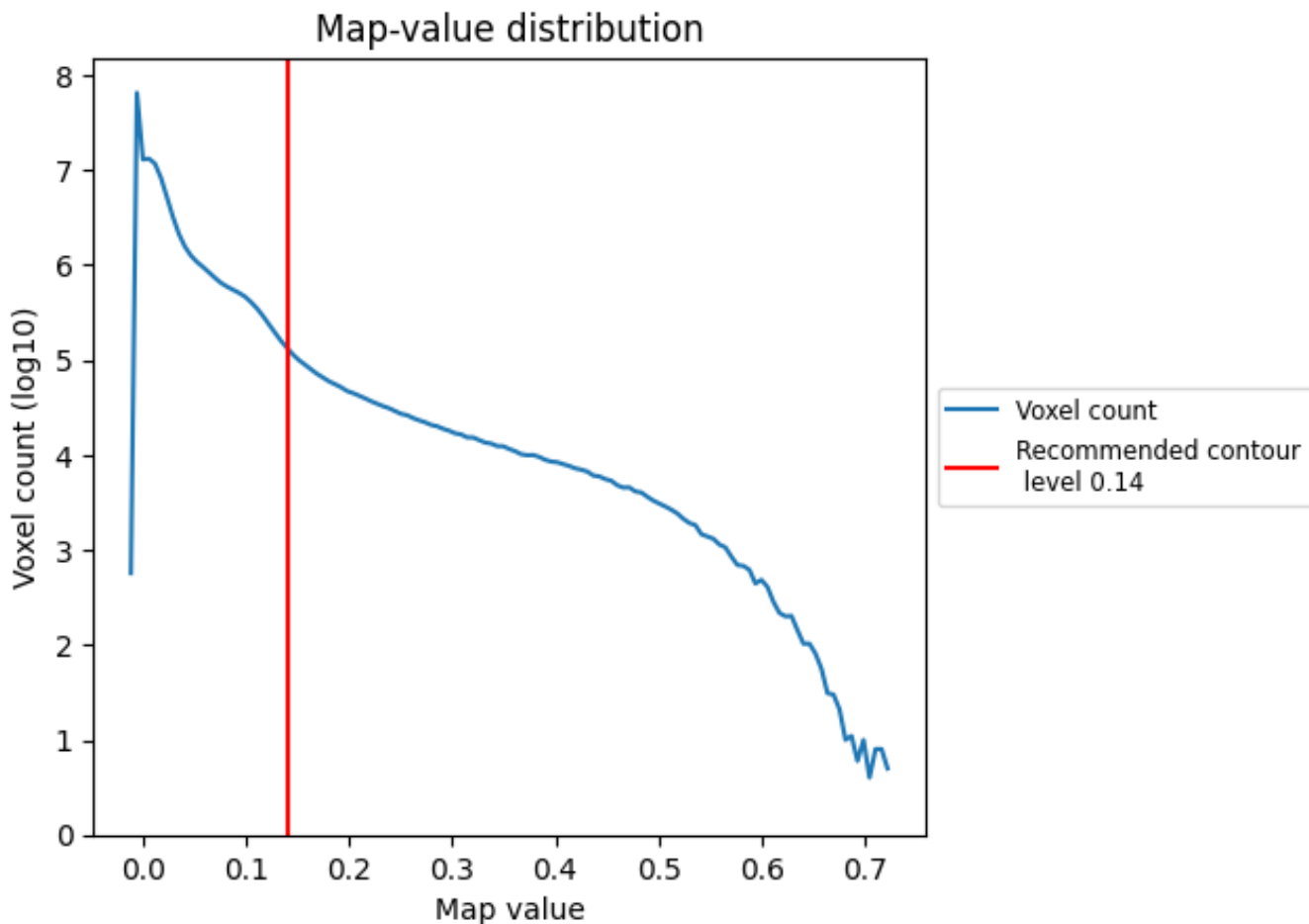
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

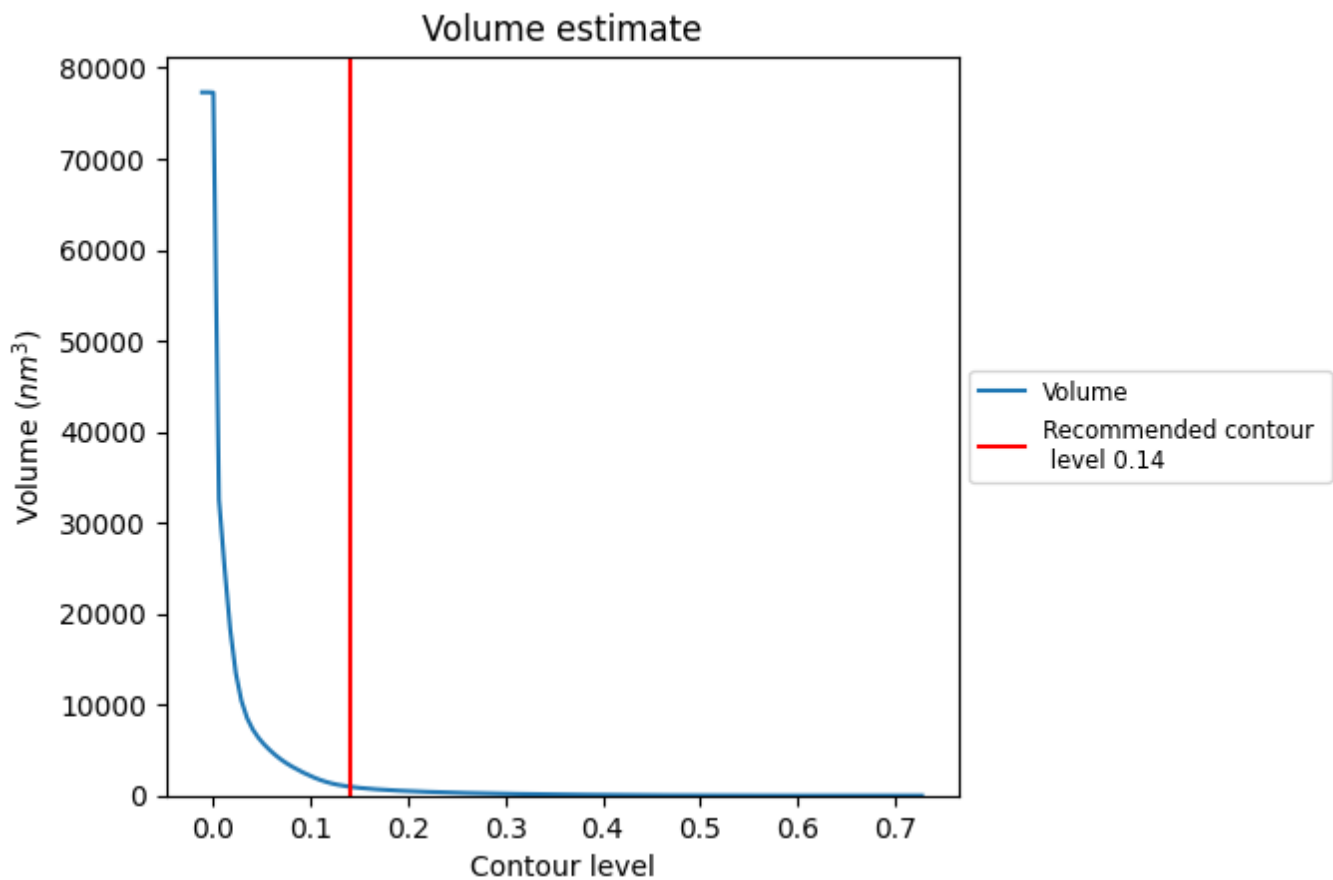
This section contains the results of statistical analysis of the map.

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.

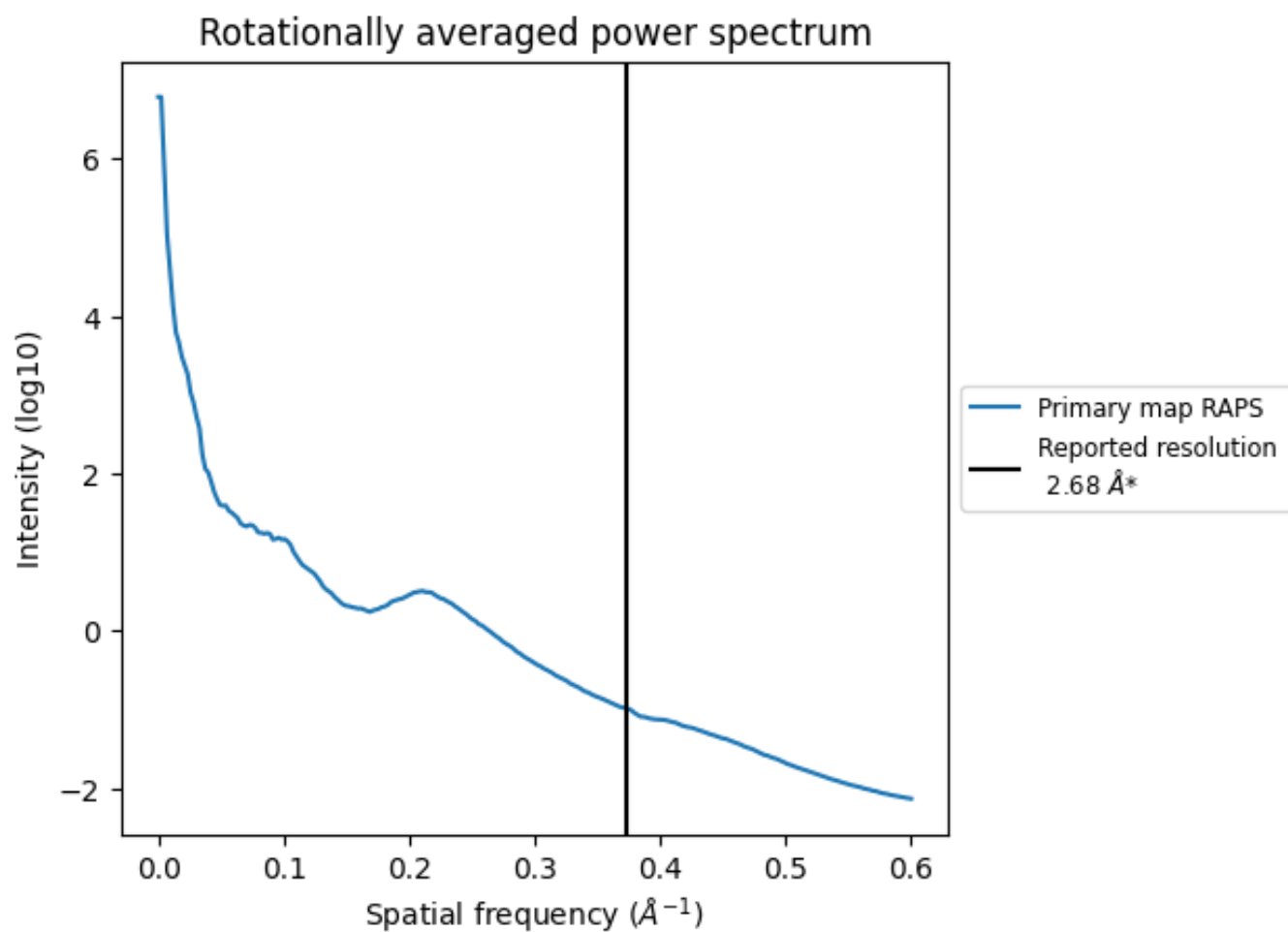
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 973 nm³; this corresponds to an approximate mass of 879 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.373 Å⁻¹

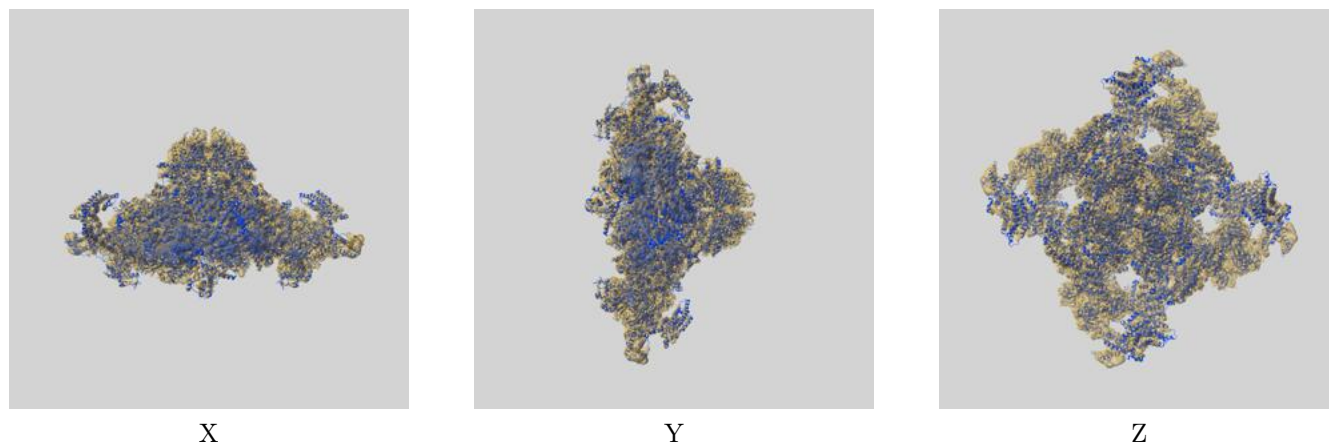
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

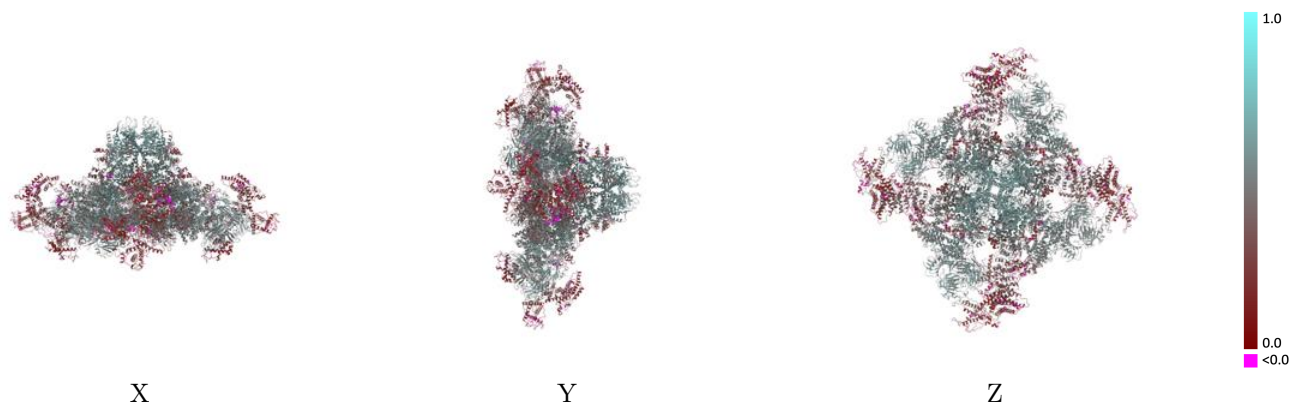
This section contains information regarding the fit between EMDB map EMD-26408 and PDB model 7U9T. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)



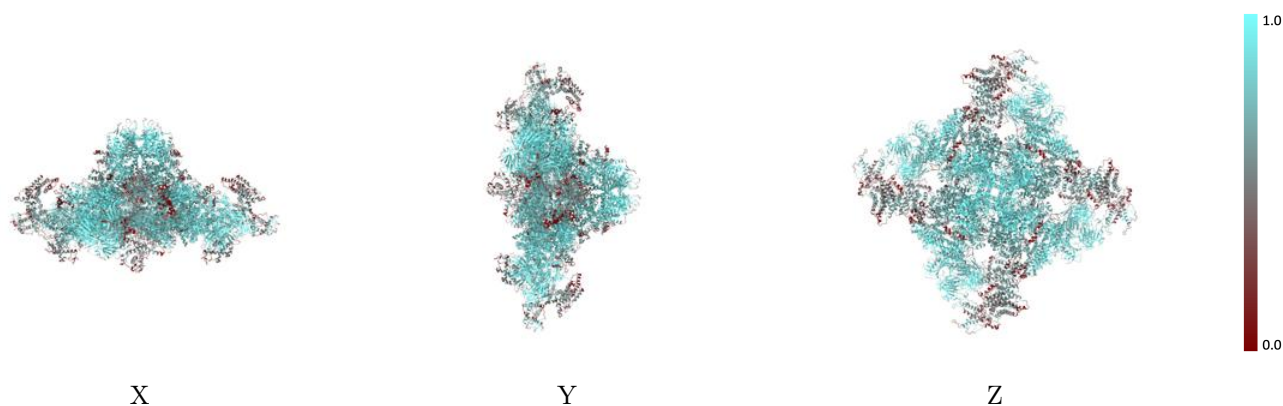
The images above show the 3D surface view of the map at the recommended contour level 0.14 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



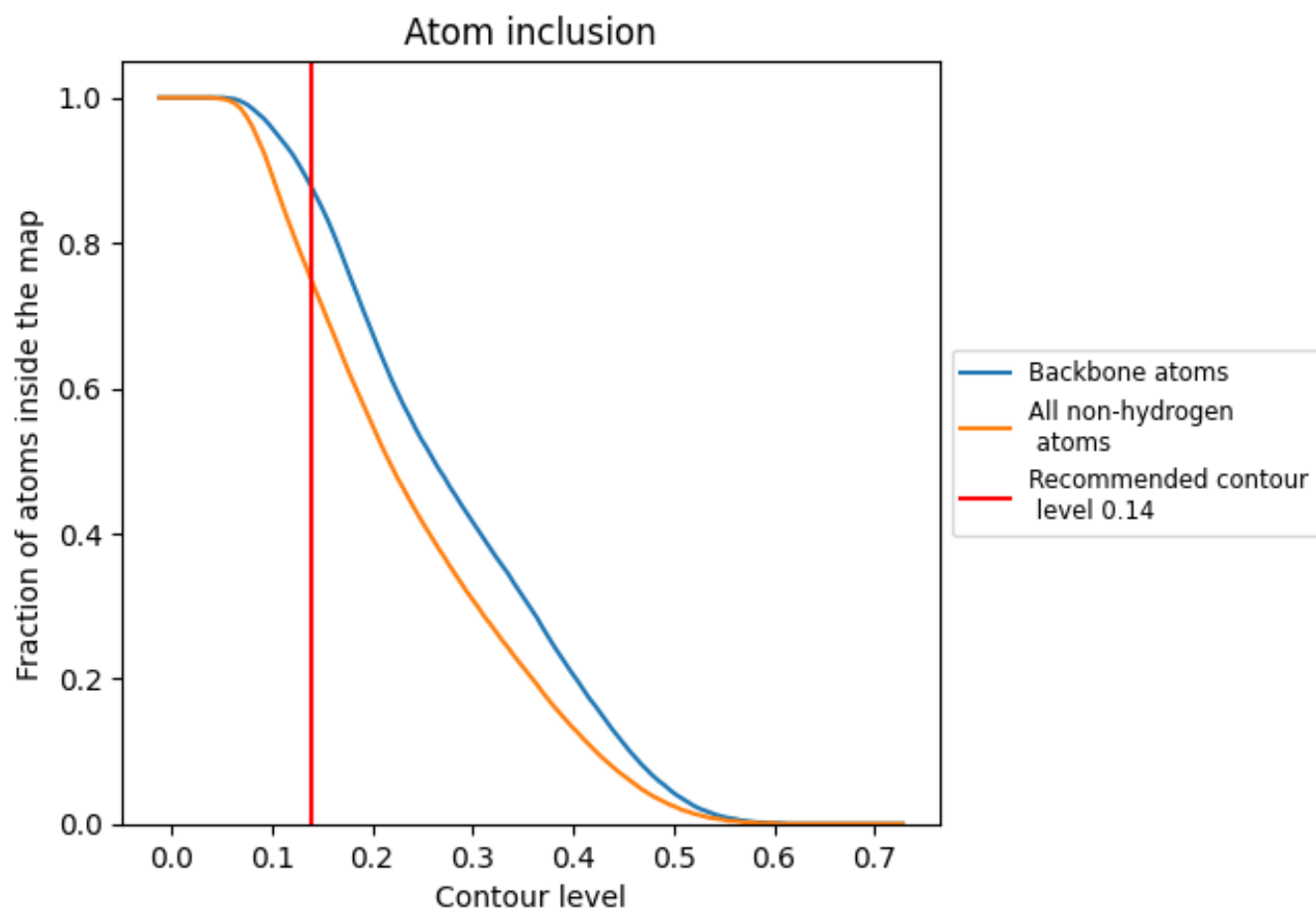
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.14).



























9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 75% 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 (0.14) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7470	 0.4270
A	 0.7580	 0.4290
B	 0.7570	 0.4370
C	 0.7560	 0.4270
D	 0.7570	 0.4350
E	 0.8940	 0.5320
F	 0.8900	 0.5210
G	 0.9020	 0.5370
H	 0.9130	 0.5530
I	 0.3320	 0.1940
J	 0.3090	 0.1570
K	 0.3330	 0.1800
L	 0.3360	 0.1990

