



Full wwPDB EM Validation Report ⓘ

Jun 16, 2025 – 05:08 PM EDT

PDB ID : 9E1F / pdb_00009e1f
EMDB ID : EMD-47392
Title : Structure of RyR1 in the primed state in the presence of allopurinol
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2024-10-21
Resolution : 3.03 Å(reported)
Based on initial model : 7TZC

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev118
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0rc1
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) : 2.44

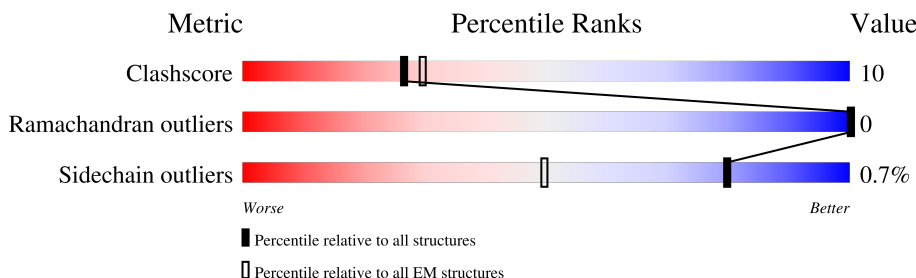
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.03 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	5037	44% 68% 19% 13%
1	B	5037	44% 69% 19% 13%
1	C	5037	44% 69% 19% 13%
1	D	5037	44% 68% 19% 13%
2	E	108	79% 76% 22% ..
2	F	108	78% 75% 24% .
2	G	108	79% 75% 23% ..
2	H	108	78% 78% 20% ..

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 144104 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

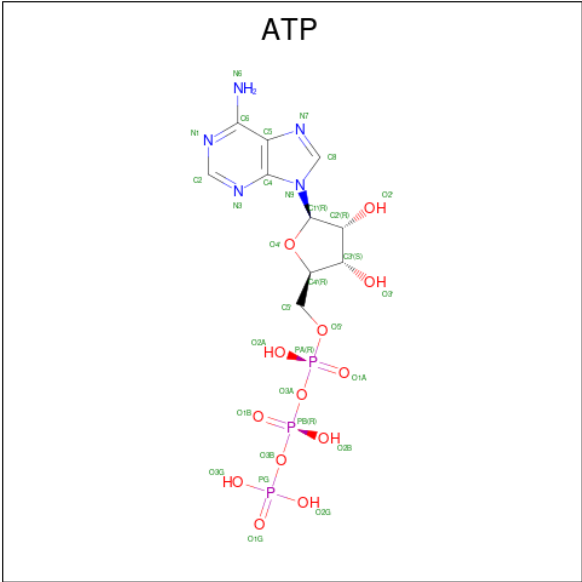
- Molecule 1 is a protein called Ryanodine receptor 1.

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

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

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

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



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

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

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

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

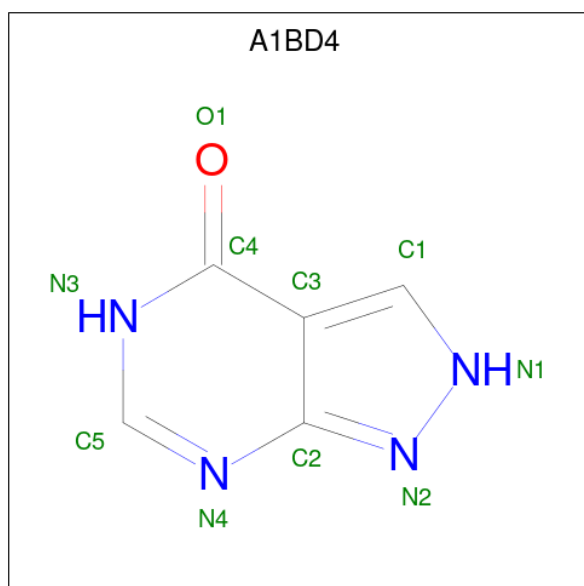
Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	Zn	0
			1	1	

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

- Molecule 6 is allopurinol (CCD ID: A1BD4) (formula: $C_5H_4N_4O$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			10	5	4	1	
6	B	1	Total	C	N	O	0
			10	5	4	1	
6	D	1	Total	C	N	O	0
			10	5	4	1	
6	C	1	Total	C	N	O	0
			10	5	4	1	

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	2	Total	O	0
			2	2	
7	B	2	Total	O	0
			2	2	

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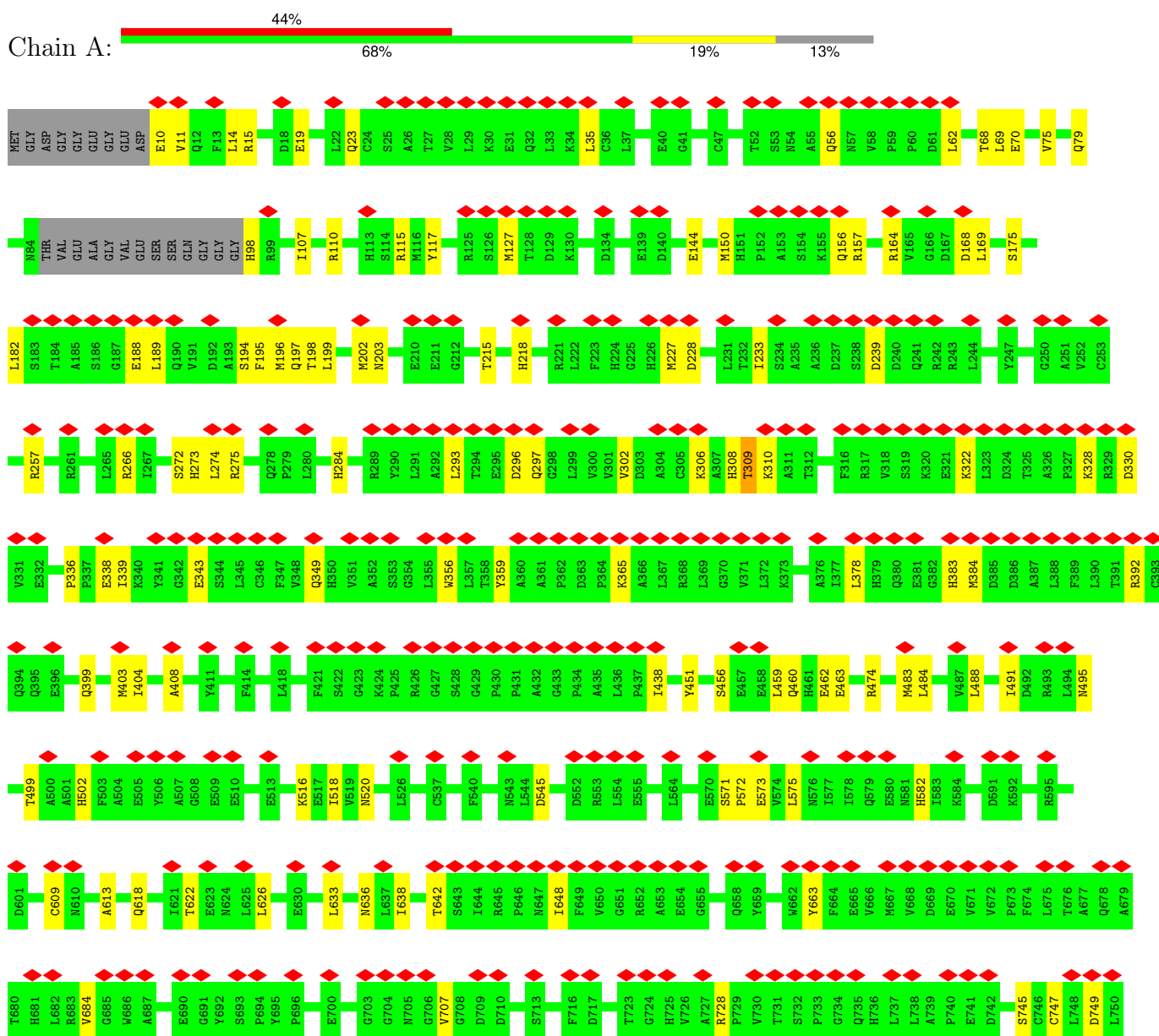
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Mol	Chain	Residues	Atoms		AltConf
7	D	2	Total	O	0
			2	2	
7	C	2	Total	O	0
			2	2	

3 Residue-property plots

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

- Molecule 1: Ryanodine receptor 1





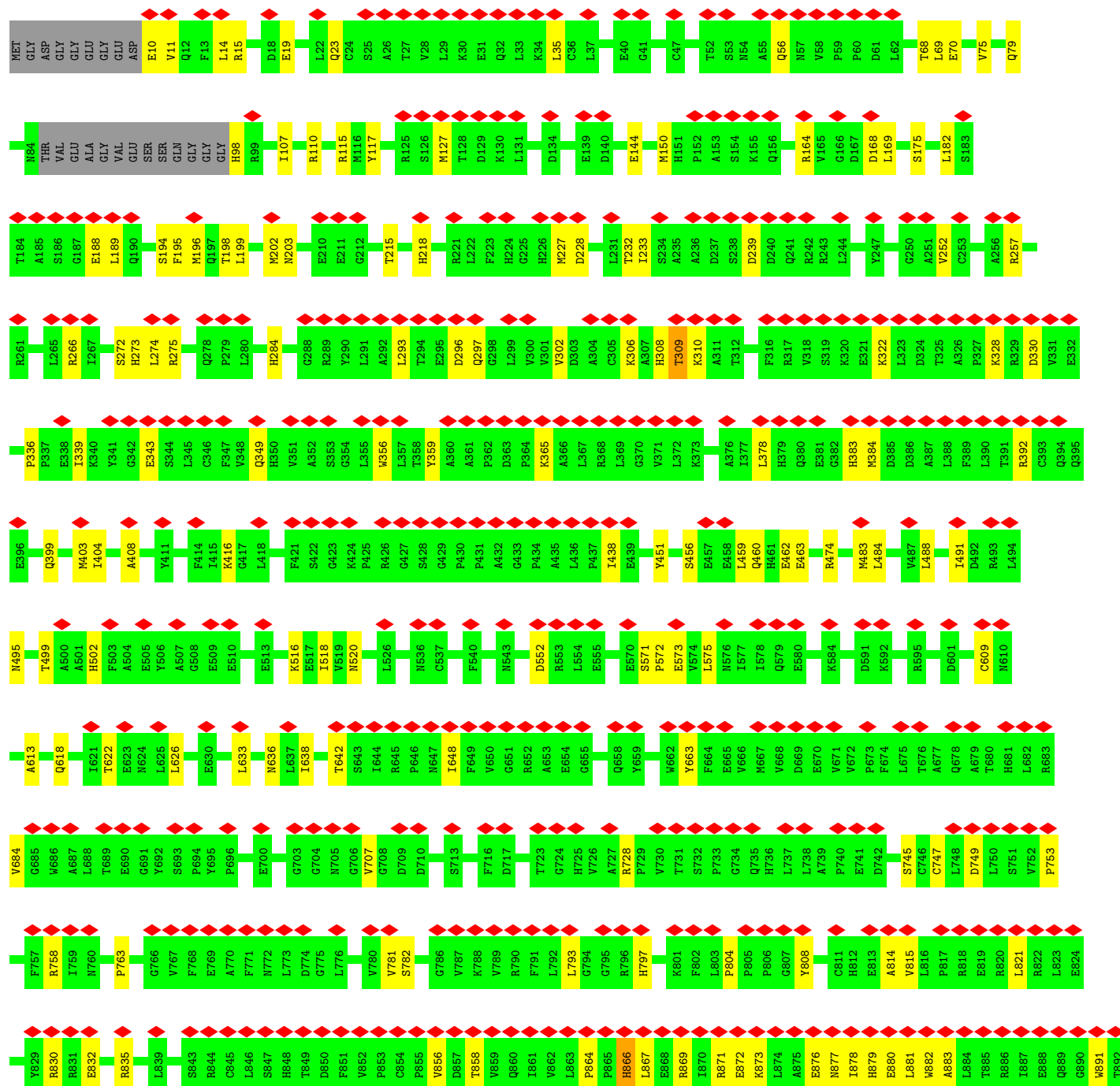
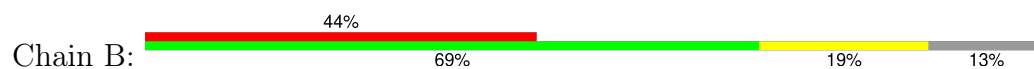


A3431	K3371	H3311	A3251	G3191	V3131	L3071	T3011	I2951	K2891	Q2771	P2711
E3432	V3372	L3312	D3252	E3192	T3132	A3072	N3012	E2952	Q2892	Q2772	P2712
E3433	V3373	L3313	I3253	C3193	T3133	A3073	H3013	K2953	E2893	N2773	D2713
L3434	A3374	S3314	G3254	A3194	V3134	S3074	C3014	R2954	L2894	N2774	V2714
F3435	E3375	L3315	G3255	A3195	A3135	L3075	L3015	F2955	E2895	L2775	V2715
R3436	E3376	L3316	L3256	R3196	L3136	D3076	F3017	A2956	A2896	S2776	D2716
V3437	E3377	L3317	A3257	L3197	L3137	A3077	L3018	F2957	K2897	Y2777	A2717
V3438	Q3378	L3318	E3258	A3198	L3138	R3078	L3019	Q2958	G2898	G2778	S2718
G3439	L3379	L3319	S3259	A3199	V3139	T3079	S3019	Q2959	G2899	E2779	V2719
E3440	R3380	L3320	G3260	A3200	L3140	V3080	T3020	L2960	G2900	N2780	S2720
L3441	L3381	R3321	A3261	M3201	T3141	M3081	F3021	Q2961	T2901	V2781	S2721
F3442	E3382	L3322	R3262	P3202	T3142	K3082	A3022	Q2962	H2902	D2782	K2722
I3443	A3383	I3323	V3263	V3203	L3143	S3083	K3023	L2963	P2903	E2783	A2723
Y3444	K3384	V3324	T3264	A3204	F3144	G3084	V3024	L2964	L2904	E2784	E2724
V3445	A3385	N3325	E3265	F3205	Q3145	P3085	L3025	R2965	L2905	L2785	K2725
S3446	E3386	N3326	M3266	L3206	H3146	E3086	G3026	W2966	V2906	K2786	L2786
K3447	A3387	L3327	F3267	E3207	I3147	I3087	S3027	M2967	P2907	T2787	ALA
S3448	E3388	G3328	H3268	P3208	A3148	V3088	G3028	D2968	Y2908	H2788	THR
H3449	E3389	I3329	V3269	Q3209	Q3149	K3089	G3029	I2969	D2909	P2789	ASP
R3450	G3390	D3330	I3270	L3210	H3150	A3090	H3030	S2970	T2910	M2790	ALA
F3451	E3391	E3331	E3271	N3211	Q3151	G3091	S3031	Q2971	L2911	L2791	GLY
K3452	L3392	A3332	I3272	E3212	L3152	L3092	S3032	E2972	T2912	R2792	N2734
R3453	L3393	V3333	T3273	Y3213	G3153	R3093	N3033	F2973	A2913	P2793	F2735
E3454	V3394	W3334	L3274	N3214	D3154	S3094	K3034	I2974	K2914	Y2794	D2736
F3455	R3395	M3335	P3275	A3215	D3155	F3095	E3035	A2975	E2915	K2795	P2737
K3456	R3396	K3336	M3276	C3216	V3156	F3096	K3036	H2976	K2916	T2796	R2738
N3457	E3397	R3337	L3277	S3217	I3157	E3097	E3037	L2977	A2917	F2797	P2739
F3458	E3397	L3338	C3278	V3218	L3158	S3098	I3038	E2978	R2918	S2798	V2740
V3459	F3398	A3339	S3279	Y3219	D3159	A3099	T3039	A2979	D2919	E2799	E2741
V3460	S3399	V3340	Y3280	T3220	D3160	S3100	T3040	V2980	R2920	K2800	T2742
Q3461	V3400	F3341	L3281	T3221	V3161	E3101	S3041	V2981	E2921	D2801	L2743
N3462	L3401	A3342	P3282	K3222	Q3162	I3103	L3042	S2982	K2922	K2802	L2744
E3463	C3402	Q3343	A3283	S3223	V3163	E3104	F3043	S2983	A2923	E2803	V2745
I3464	R3403	P3344	W3284	P3224	S3164	E3104	C3044	G2984	Q2924	L2804	L2746
N3465	D3404	L3345	W3285	R3225	C3165	K3105	K3045	R2985	E2925	Y2805	P2748
L3405	L3405	V3346	E3286	E3226	V3166	M3106	L3046	V2986	L2926	R2806	L2747
Y3406	Y3406	V3347	E3287	R3227	F3167	V3107	A3047	E2987	L2927	W2807	E2749
A3407	A3407	R3348	G3288	A3228	T3168	E3108	A3048	K2988	K2928	P2808	K2750
L3408	L3408	F3289	P3289	I3229	L3169	N3109	L3049	S2989	F2929	L2809	L2751
V3409	V3409	E3290	E3290	L3230	C3170	L3110	V3050	P2990	L2930	K2810	D2752
P3410	P3410	A3291	A3291	G3231	S3171	R3111	R3051	H2991	Q2931	E2811	S2753
L3411	L3411	P3292	P3292	L3232	T3172	L3112	K3052	E2992	M2932	S2812	F2754
I3413	I3413	P3293	P3293	P3233	Y3173	G3113	R3053	Q2993	M2933	L2813	L2755
R3414	R3414	A3294	A3294	N3234	S3174	K3114	V3054	E2994	G2934	K2814	N2756
V3415	V3415	A3295	A3295	S3235	L3175	V3115	S3055	L2995	Y2935	A2815	K2757
L3416	L3416	L3296	L3296	V3236	G3176	S3116	K2996	K2996	A2936	M2816	F2758
D3417	D3417	F3297	F3297	E3237	T3177	GLN	F3057	F2997	V2937	L2817	A2759
N3418	N3418	A3298	A3298	E3238	T3178	ALA	G3058	F2998	K2938	E2818	E2760
R3419	R3419	G3299	G3299	M3239	K3179	ARG	T3059	A2999	R2939	W2819	Y2761
K3420	K3420	A3300	A3300	G3240	N3180	THR	D3060	K3000	GLY	E2820	T2762
A3421	A3421	F3301	F3301	F3241	T3181	GLN	A3061	I3001	LEU	W2821	H2763
H3422	H3422	P3302	P3302	D3242	Y3182	THR	P3062	L3002	ASP	T2822	E2764
W3423	W3423	C3303	C3303	I3243	V3183	VAL	A3063	L3003	ASP	L2823	K2765
L3424	L3424	G3304	G3304	P3244	E3184	ALA	G3064	P3004	GLU	E2824	N2766
T3425	T3425	T3305	T3305	V3245	K3185	ARG	V3065	L3005	L2946	K2825	A2767
E3426	E3426	A3306	A3306	L3246	Q3127	THR	N3066	I3006	D2947	A2826	F2768
P3427	P3427	V3307	V3307	D3247	R3128	GLN	C3067	N3007	T2948	R2827	D2769
N3428	N3428	T3308	T3308	R3248	L3129	VAL	L3068	Q3008	S2949	G2829	K2770
A3429	A3429	S3309	S3309	L3249	T3130	ALA	H3069	F3009	S2950	E2830	
N3430	N3430	D3310	D3310	M3250	L3190	ARG					





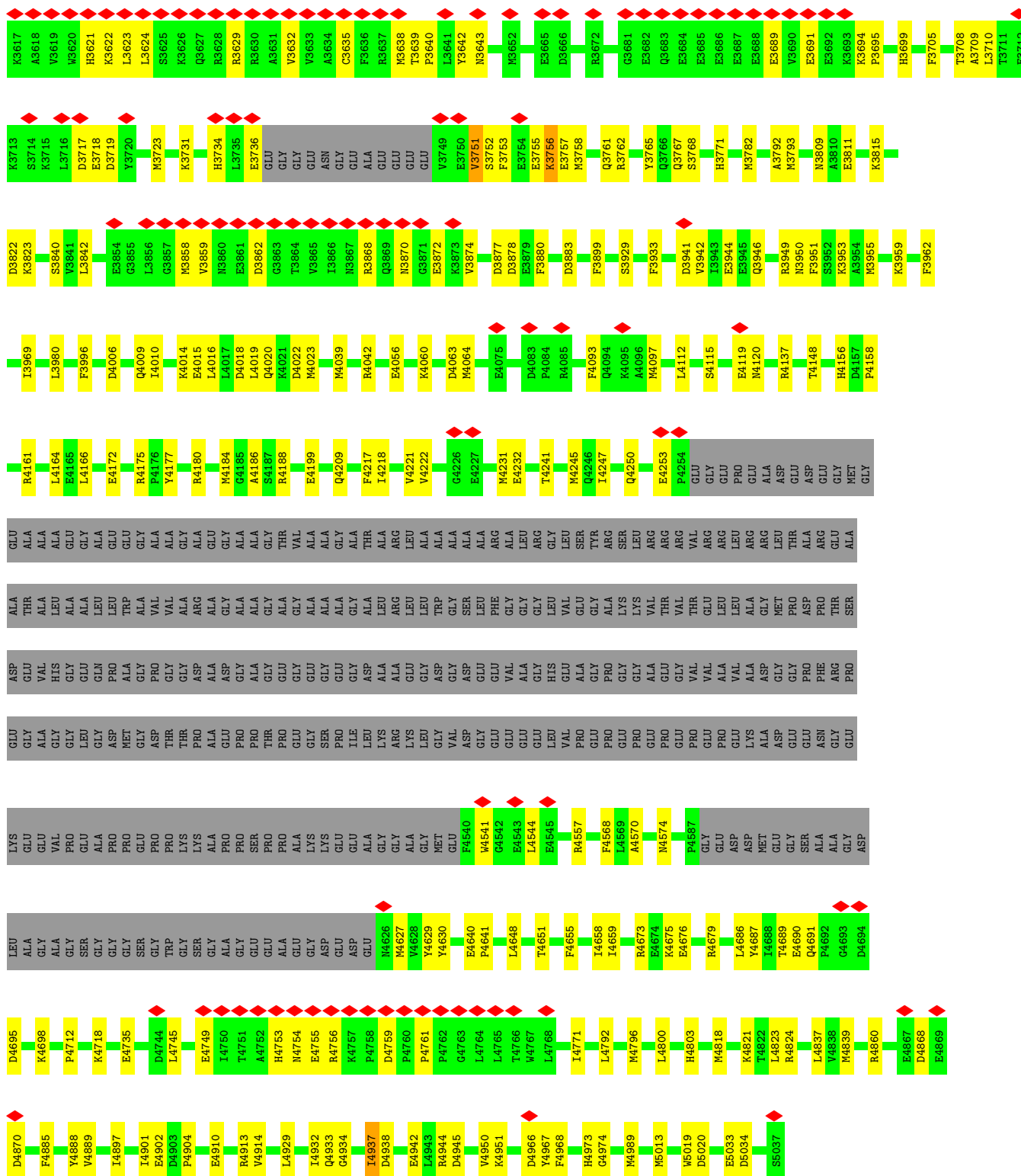
• Molecule 1: Ryanodine receptor 1

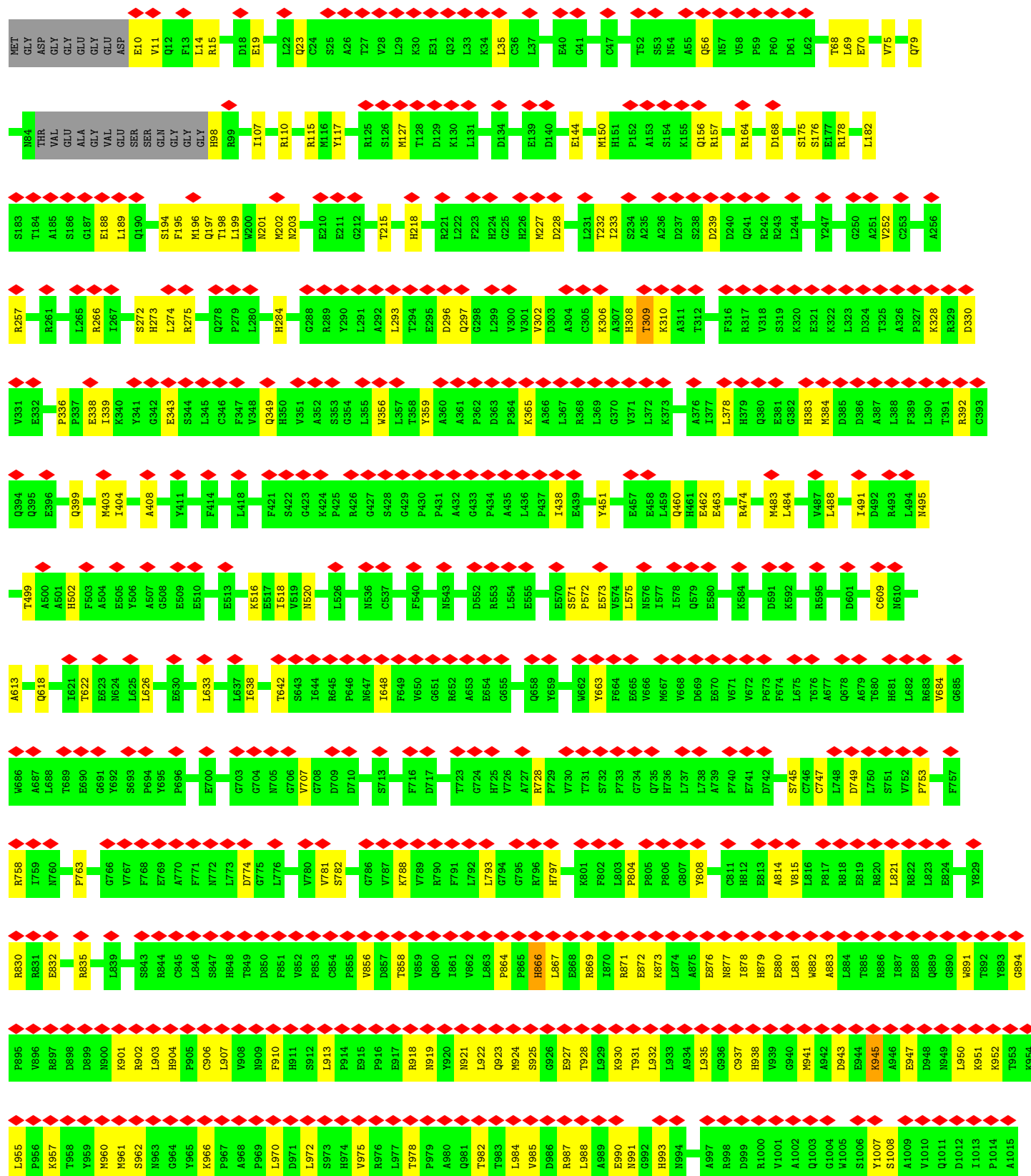








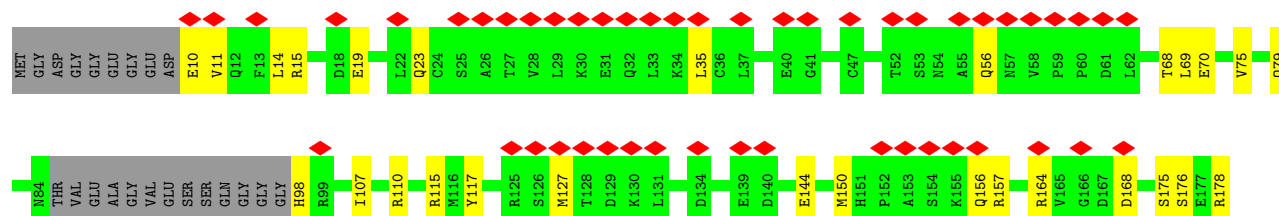


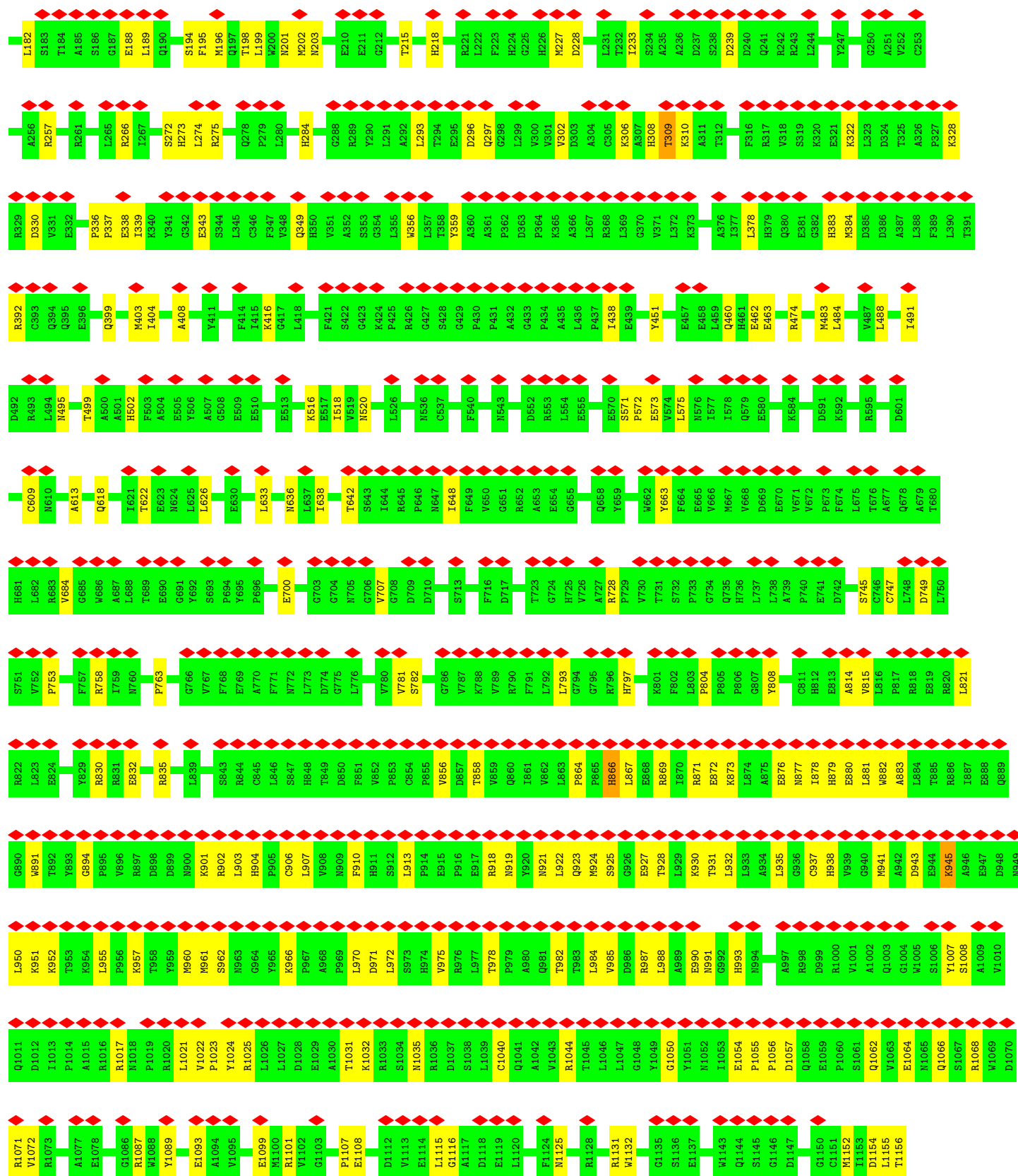






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T3708	E3610	R3550	ASP	G3370	D3310	N3250	L3190	T3130	H3069	Y3009	S2949
A3709	H3611	E3551	GLU	K3371	H3311	A3251	G3191	Y3131	I3070	F3010	S2950
L3710	F3612	F3552	ARG	V3372	L3312	D3252	G3192	T3132	L3071	T3011	I2951
T3711	Y3613	E3553	THR	V3373	N3313	T3253	C3193	T3133	A3072	N3012	E2952
K3712	K3614	Q3554	LYS	A3374	S3314	G3254	L3194	V3134	R3073	H3013	K2953
S3713	S3615	N3555	LYS	E3375	L3315	G3255	A3195	A3135	C3014	C3014	R2954
S3714	K3616	N3556	R3498	E3376	L3316	L3256	L3196	L3136	S3074	L3015	F2955
K3715	K3617	L3557	H3437	E3377	G3317	A3257	L3197	L3137	D3075	F3016	A2956
L3716	A3618	H3558	V3438	Q3378	N3318	E3258	A3198	P3138	A3077	F3017	F2957
D3717	K3619	G3559	G3439	L3379	I3319	S3259	A3199	V3139	R3078	L3018	G2958
E3718	V3620	E3440	E3440	R3380	L3320	G3260	A3200	L3140	F3079	S3019	F2959
D3719	H3501	T3441	T3441	L3381	R3321	A3261	M3201	T3141	V3080	T3020	L2960
Y3720	R3502	F3442	F3442	E3382	I3322	R3262	P3202	T3142	M3081	P3021	Q2961
M3723	S3503	T3443	T3443	A3383	L3323	Y3263	V3203	L3143	K3082	A3022	Q2962
K3731	V3505	Y3444	Y3444	K3384	V3324	T3264	A3204	F3144	S3083	K3023	L2963
H3734	Q3506	V3445	V3445	A3385	N3325	E3265	F3205	Q3145	G3084	V3024	L2964
L3735	T3507	K3446	K3446	E3386	N3326	K3266	L3206	H3146	P3085	L3025	R2965
E3736	S3508	S3447	S3447	E3387	L3327	P3267	E3207	I3147	E3086	G3026	W2966
E3737	L3509	S448	S448	E3388	G3328	H3268	P3208	A3148	F3087	S3027	W2967
E3738	I3510	H3449	H3449	E3389	I3329	V3269	Q3209	Q3149	I3088	G3028	I2968
GLU	R3630	N3450	N3450	G3390	D3330	T3270	L3210	H3150	R3089	G3029	I2969
GLY	A3631	F3451	F3451	E3391	E3331	E3271	N3211	Q3151	A3090	H3030	S2970
ASN	V3632	K3452	K3452	L3392	A3332	T3272	E3212	F3152	G3091	A3031	Q2971
GLY	K3515	R3453	R3453	L3393	T3333	T3273	Y3213	G3153	L3092	S3032	E2972
GLU	K3516	E3454	E3454	V3394	W3334	L3274	N3214	D3154	F2973	N3033	F2973
ALA	M3517	E3455	E3455	R3395	M3335	P3275	A3215	D3155	I2974	N3034	I2974
GLU	M3517	Q3456	Q3456	D3396	K3336	N3276	C3216	I3156	F3096	E3035	A2975
GLU	L3518	N3457	N3457	E3397	R3337	L3277	S3217	I3157	E3097	K3036	H2976
GLU	P3519	F3458	F3458	L3338	L3337	C3278	V3218	L3158	S3098	E3037	L2977
GLU	I3520	V3459	V3459	A3339	A3339	S3279	Y3219	D3159	A3099	M3038	E2978
GLU	G3521	V3460	V3460	S3399	V3340	Y3280	T3220	E3160	S3100	I3039	A2979
GLU	L3522	Q3461	Q3461	V3400	F3341	L3281	T3221	V3161	E3101	T3040	V2980
GLU	N3523	N3462	N3462	L3401	L3281	L3281	T3221	Q3162	D3102	S3041	V2981
GLU	M3524	E3463	E3463	C3402	Q3343	P3282	K3222	V3163	I3103	L3042	S2982
GLU	C3525	I3464	I3464	R3403	P3344	W3284	P3224	S3164	E3104	F3043	S2983
GLU	A3526	N3465	N3465	D3404	I3345	W3285	R3225	C3165	K3105	C3044	G2984
GLU	P3527	N3466	N3466	L3405	I3346	E3286	E3226	Y3166	M3106	K3045	R2985
GLU	T3528	M3467	M3467	Y3406	S3347	E3287	R3227	Y3167	V3107	L3046	V2986
GLU	D3529	S3468	S3468	A3407	R3348	G3288	A3228	T3168	E3108	A3047	E2987
GLU	Q3530	F3469	F3469	L3408	A3349	P3289	I3229	L3169	N3109	A3048	K2988
GLU	D3531	L3470	L3470	P3410	R3350	E3290	L3230	C3170	L3110	L3049	S2989
GLU	L3532	T3471	T3471	F3451	P3351	A3291	G3231	S3171	R3111	V3050	P2990
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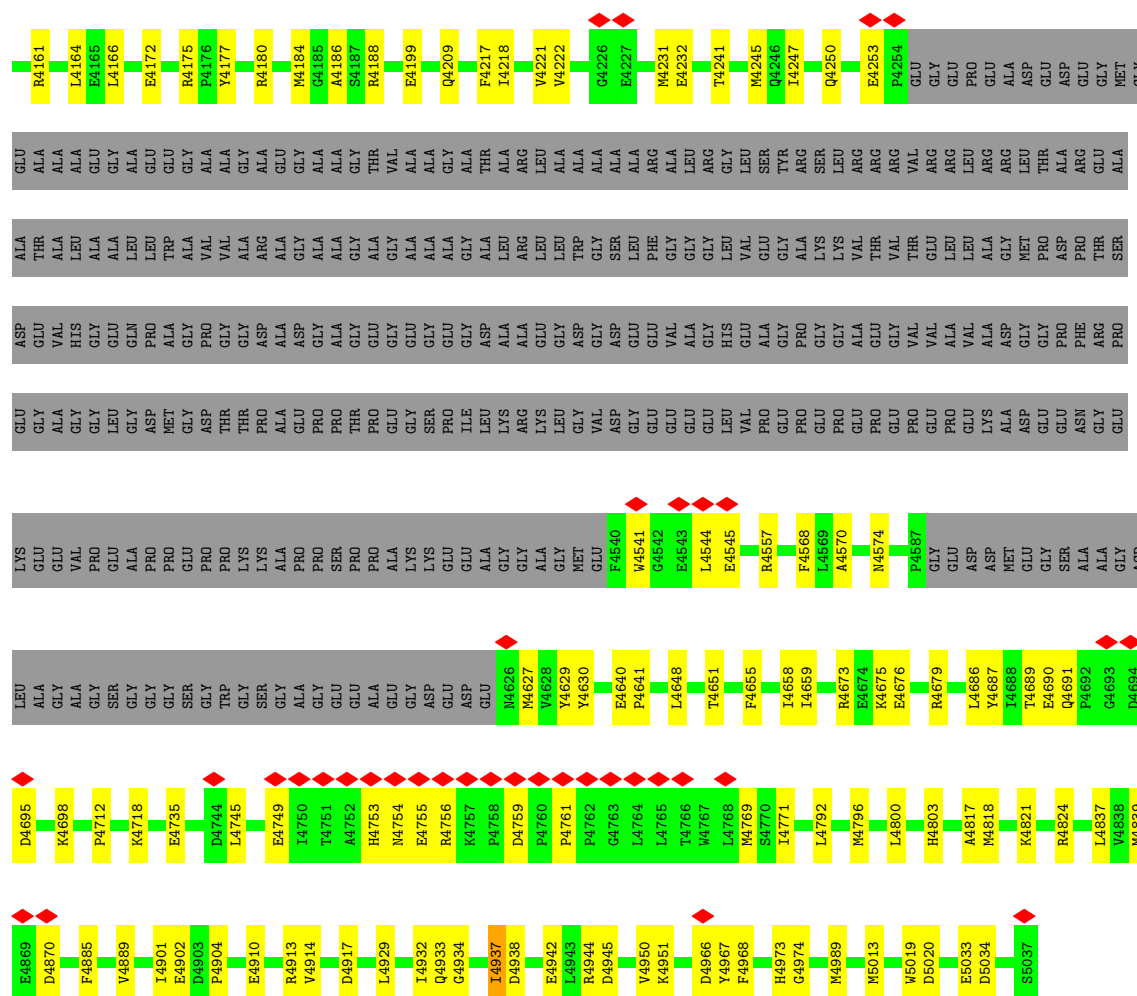




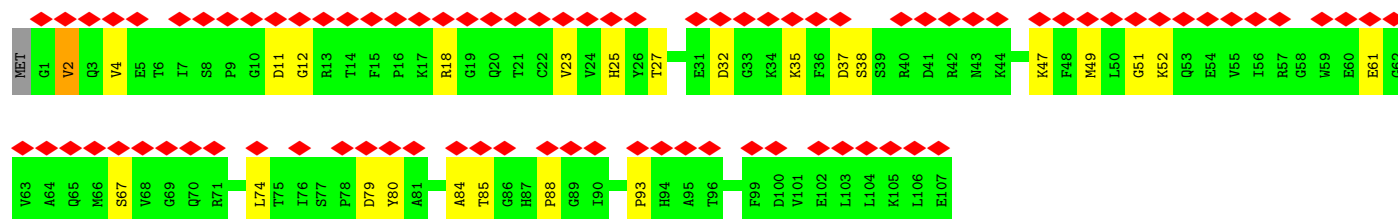
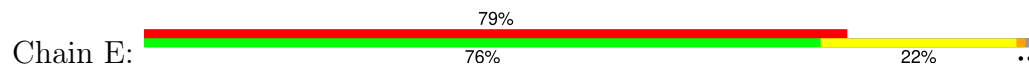


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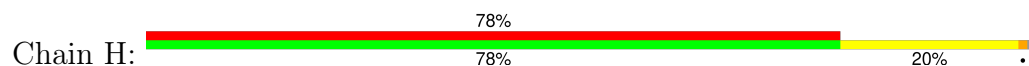
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N3809	A3810	A3709	F3662	F3612	K3815	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	M3723	K3731	H3734	L3735	E3736	GLU	GLY	GLY	ASN	GLY	ALA	GLU	GLU	GLU	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	M3758	Q3761	R3762	Y3765	Q3766	Q3767	S3768	H3771	M3782	A3792	K3793		D4006	Q4009	I4010	K4014	E4015	L4016	L4017	D4018	L4019	Q4020	K4021	D4022	M4023	M4039	R4042	E4056	K4060	D4063	M4064	E4075	D4083	P4084	R4085	P4093	Q4094	K4095	A4096	M4097	E4119	M4120	R4137	T4148	H4156	D4157	P4158				
N3809	A3810	A3709	F3662	F3612	K3815	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	M3723	K3731	H3734	L3735	E3736	GLU	GLY	GLY	ASN	GLY	ALA	GLU	GLU	GLU	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	M3758	Q3761	R3762	Y3765	Q3766	Q3767	S3768	H3771	M3782	A3792	K3793		D4006	Q4009	I4010	K4014	E4015	L4016	L4017	D4018	L4019	Q4020	K4021	D4022	M4023	M4039	R4042	E4056	K4060	D4063	M4064	E4075	D4083	P4084	R4085	P4093	Q4094	K4095	A4096	M4097	E4119	M4120	R4137	T4148	H4156	D4157	P4158				
N3809	A3810	A3709	F3662	F3612	K3815	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	M3723	K3731	H3734	L3735	E3736	GLU	GLY	GLY	ASN	GLY	ALA	GLU	GLU	GLU	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	M3758	Q3761	R3762	Y3765	Q3766	Q3767	S3768	H3771	M3782	A3792	K3793		D4006	Q4009	I4010	K4014	E4015	L4016	L4017	D4018	L4019	Q4020	K4021	D4022	M4023	M4039	R4042	E4056	K4060	D4063	M4064	E4075	D4083	P4084	R4085	P4093	Q4094	K4095	A4096	M4097	E4119	M4120	R4137	T4148	H4156	D4157	P4158				
N3809	A3810	A3709	F3662	F3612	K3815	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	M3723	K3731	H3734	L3735	E3736	GLU	GLY	GLY	ASN	GLY	ALA	GLU	GLU	GLU	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	M3758	Q3761	R3762	Y3765	Q3766	Q3767	S3768	H3771	M3782	A3792	K3793		D4006	Q4009	I4010	K4014	E4015	L4016	L4017	D4018	L4019	Q4020	K4021	D4022	M4023	M4039	R4042	E4056	K4060	D4063	M4064	E4075	D4083	P4084	R4085	P4093	Q4094	K4095	A4096	M4097	E4119	M4120	R4137	T4148	H4156	D4157	P4158				
N3809	A3810	A3709	F3662	F3612	K3815	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	M3723	K3731	H3734	L3735	E3736	GLU	GLY	GLY	ASN	GLY	ALA	GLU	GLU	GLU	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	M3758	Q3761	R3762																																																

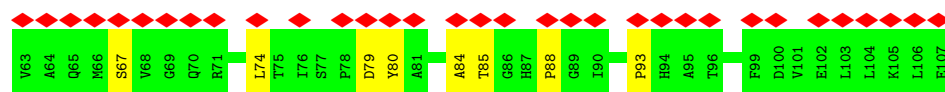


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

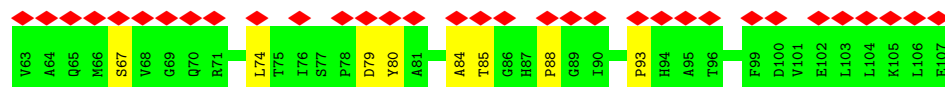
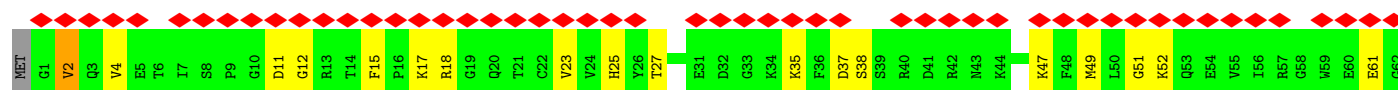
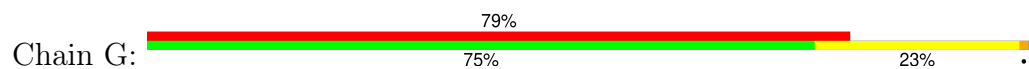


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

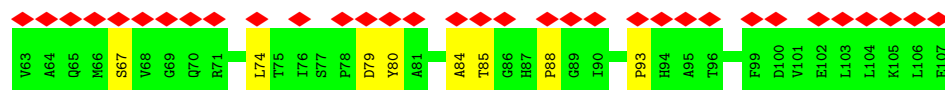
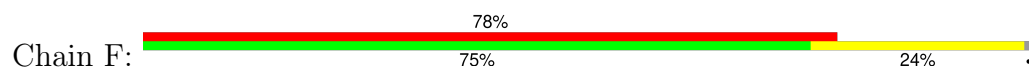




• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



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



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	41370	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.433	Depositor
Minimum map value	-0.213	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.016	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	427.52, 427.52, 427.52	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.835, 0.835, 0.835	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ATP, A1BD4, CA, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.23	0/35977	0.36	1/48726 (0.0%)
1	B	0.23	0/35977	0.36	1/48726 (0.0%)
1	C	0.23	0/35977	0.36	1/48726 (0.0%)
1	D	0.23	0/35977	0.36	1/48726 (0.0%)
2	E	0.21	0/850	0.34	0/1146
2	F	0.21	0/850	0.36	0/1146
2	G	0.21	0/850	0.33	0/1146
2	H	0.21	0/850	0.36	0/1146
All	All	0.23	0/147308	0.36	4/199488 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	3603	LEU	CA-CB-CG	5.27	134.74	116.30
1	A	3603	LEU	CA-CB-CG	5.26	134.71	116.30
1	D	3603	LEU	CA-CB-CG	5.25	134.69	116.30
1	C	3603	LEU	CA-CB-CG	5.25	134.69	116.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	35150	0	34797	698	0
1	B	35150	0	34797	688	0
1	C	35150	0	34797	697	0
1	D	35150	0	34797	697	0
2	E	831	0	831	14	0
2	F	831	0	831	15	0
2	G	831	0	831	14	0
2	H	831	0	831	14	0
3	A	31	0	12	0	0
3	B	31	0	12	0	0
3	C	31	0	12	0	0
3	D	31	0	12	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
6	A	10	0	0	0	0
6	B	10	0	0	0	0
6	C	10	0	0	0	0
6	D	10	0	0	0	0
7	A	2	0	0	0	0
7	B	2	0	0	0	0
7	C	2	0	0	0	0
7	D	2	0	0	0	0
All	All	144104	0	142560	2810	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 (2810) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4860:ARG:NH1	1:D:4630:TYR:OH	1.88	1.06
1:A:4630:TYR:OH	1:B:4860:ARG:NH1	1.92	1.01
1:B:4630:TYR:OH	1:C:4860:ARG:NH1	1.97	0.96
1:D:4860:ARG:NH1	1:C:4630:TYR:OH	1.97	0.95
1:D:2765:LYS:HZ3	1:D:2857:PRO:HB2	1.38	0.89
1:A:2175:GLU:HG3	1:A:2228:MET:HB3	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2175:GLU:HG3	1:D:2228:MET:HB3	1.54	0.89
1:A:2765:LYS:HZ3	1:A:2857:PRO:HB2	1.38	0.88
1:B:2175:GLU:HG3	1:B:2228:MET:HB3	1.54	0.87
1:C:2175:GLU:HG3	1:C:2228:MET:HB3	1.54	0.87
1:B:876:GLU:HG2	1:B:918:ARG:HD3	1.61	0.83
1:C:2765:LYS:HZ3	1:C:2857:PRO:HB2	1.41	0.83
1:A:876:GLU:HG2	1:A:918:ARG:HD3	1.61	0.82
1:B:2765:LYS:HZ3	1:B:2857:PRO:HB2	1.44	0.82
1:D:876:GLU:HG2	1:D:918:ARG:HD3	1.61	0.82
1:C:876:GLU:HG2	1:C:918:ARG:HD3	1.61	0.81
1:B:460:GLN:HE22	1:B:462:GLU:HB3	1.46	0.81
1:C:460:GLN:HE22	1:C:462:GLU:HB3	1.46	0.81
1:A:878:ILE:HD11	1:A:924:MET:HE1	1.64	0.79
1:A:460:GLN:HE22	1:A:462:GLU:HB3	1.46	0.79
1:B:878:ILE:HD11	1:B:924:MET:HE1	1.64	0.79
1:D:460:GLN:HE22	1:D:462:GLU:HB3	1.46	0.79
1:D:878:ILE:HD11	1:D:924:MET:HE1	1.64	0.78
1:D:3577:ARG:HH22	1:D:3582:ARG:HB3	1.48	0.78
1:B:3577:ARG:HH22	1:B:3582:ARG:HB3	1.48	0.78
1:D:2779:GLU:HG3	1:D:2792:ARG:HG2	1.66	0.78
1:C:2779:GLU:HG3	1:C:2792:ARG:HG2	1.66	0.78
1:C:3577:ARG:HH22	1:C:3582:ARG:HB3	1.48	0.77
1:A:3577:ARG:HH22	1:A:3582:ARG:HB3	1.48	0.77
1:B:1759:ARG:HE	1:B:1759:ARG:H	1.30	0.77
1:D:1759:ARG:HE	1:D:1759:ARG:H	1.30	0.77
1:C:1759:ARG:H	1:C:1759:ARG:HE	1.30	0.77
1:A:2779:GLU:HG3	1:A:2792:ARG:HG2	1.66	0.77
1:C:878:ILE:HD11	1:C:924:MET:HE1	1.64	0.77
1:A:4934:GLY:HA3	1:D:4937:ILE:HD12	1.67	0.76
1:A:1759:ARG:HE	1:A:1759:ARG:H	1.30	0.76
1:B:2779:GLU:HG3	1:B:2792:ARG:HG2	1.66	0.76
1:A:4232:GLU:HG2	1:A:5019:TRP:HE1	1.52	0.75
1:D:2642:LYS:HE2	1:D:2642:LYS:HA	1.69	0.75
1:A:2978:GLU:OE2	1:A:3053:ARG:NH1	2.21	0.74
1:A:1280:GLN:O	1:A:1281:ASN:ND2	2.21	0.74
1:A:2642:LYS:HE2	1:A:2642:LYS:HA	1.69	0.74
1:D:2978:GLU:OE2	1:D:3053:ARG:NH1	2.21	0.74
1:C:2978:GLU:OE2	1:C:3053:ARG:NH1	2.20	0.74
1:B:4232:GLU:HG2	1:B:5019:TRP:HE1	1.52	0.74
1:C:3209:GLN:OE1	1:C:3209:GLN:N	2.19	0.74
1:C:3718:GLU:HG2	1:C:3723:MET:HE1	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1280:GLN:O	1:B:1281:ASN:ND2	2.21	0.74
1:C:1280:GLN:O	1:C:1281:ASN:ND2	2.21	0.74
1:A:3209:GLN:N	1:A:3209:GLN:OE1	2.19	0.73
1:D:1280:GLN:O	1:D:1281:ASN:ND2	2.21	0.73
1:C:891:TRP:HA	1:C:902:ARG:HB3	1.70	0.73
1:C:4232:GLU:HG2	1:C:5019:TRP:HE1	1.52	0.73
1:D:3209:GLN:N	1:D:3209:GLN:OE1	2.19	0.73
1:D:3457:ASN:HB3	1:D:3461:GLN:HE22	1.53	0.73
1:C:3623:LEU:HD12	1:C:3624:LEU:HG	1.71	0.73
1:A:3457:ASN:HB3	1:A:3461:GLN:HE22	1.53	0.73
1:A:188:GLU:N	1:A:188:GLU:OE2	2.22	0.73
1:A:3718:GLU:HG2	1:A:3723:MET:HE1	1.70	0.73
1:B:2642:LYS:HE2	1:B:2642:LYS:HA	1.69	0.73
1:B:2978:GLU:OE2	1:B:3053:ARG:NH1	2.21	0.73
1:C:188:GLU:OE2	1:C:188:GLU:N	2.22	0.73
1:B:961:MET:HG2	1:B:962:SER:H	1.53	0.73
1:C:961:MET:HG2	1:C:962:SER:H	1.53	0.73
1:D:4232:GLU:HG2	1:D:5019:TRP:HE1	1.52	0.73
1:C:3457:ASN:HB3	1:C:3461:GLN:HE22	1.54	0.73
1:A:1996:ARG:HH21	1:A:1999:ARG:HE	1.37	0.73
1:B:1996:ARG:HH21	1:B:1999:ARG:HE	1.37	0.73
1:B:3209:GLN:OE1	1:B:3209:GLN:N	2.19	0.73
1:B:3457:ASN:HB3	1:B:3461:GLN:HE22	1.53	0.72
1:D:891:TRP:HA	1:D:902:ARG:HB3	1.70	0.72
1:B:3718:GLU:HG2	1:B:3723:MET:HE1	1.70	0.72
1:A:961:MET:HG2	1:A:962:SER:H	1.53	0.72
1:B:3623:LEU:HD12	1:B:3624:LEU:HG	1.71	0.72
1:B:891:TRP:HA	1:B:902:ARG:HB3	1.70	0.72
1:D:3623:LEU:HD12	1:D:3624:LEU:HG	1.71	0.72
1:B:987:ARG:HH12	1:B:991:ASN:HB2	1.55	0.72
1:D:2191:PHE:HA	1:D:2198:MET:HE3	1.72	0.72
1:D:2258:LEU:HD22	1:D:2297:LYS:HZ3	1.55	0.72
1:C:2191:PHE:HA	1:C:2198:MET:HE3	1.72	0.72
1:A:987:ARG:HH12	1:A:991:ASN:HB2	1.55	0.72
1:A:2191:PHE:HA	1:A:2198:MET:HE3	1.72	0.72
1:B:2191:PHE:HA	1:B:2198:MET:HE3	1.72	0.72
1:B:2258:LEU:HD22	1:B:2297:LYS:HZ3	1.55	0.72
1:D:961:MET:HG2	1:D:962:SER:H	1.53	0.72
1:A:891:TRP:HA	1:A:902:ARG:HB3	1.70	0.71
1:C:2258:LEU:HD22	1:C:2297:LYS:HZ3	1.54	0.71
1:D:1996:ARG:HH21	1:D:1999:ARG:HE	1.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3623:LEU:HD12	1:A:3624:LEU:HG	1.71	0.71
1:C:2642:LYS:HA	1:C:2642:LYS:HE2	1.69	0.71
1:B:188:GLU:N	1:B:188:GLU:OE2	2.22	0.71
1:B:215:THR:HG22	1:B:273:HIS:HA	1.73	0.71
1:D:188:GLU:N	1:D:188:GLU:OE2	2.22	0.71
1:C:1996:ARG:HH21	1:C:1999:ARG:HE	1.37	0.71
1:A:2258:LEU:HD22	1:A:2297:LYS:HZ3	1.56	0.71
1:D:3718:GLU:HG2	1:D:3723:MET:HE1	1.70	0.71
1:C:987:ARG:HH12	1:C:991:ASN:HB2	1.55	0.71
1:C:215:THR:HG22	1:C:273:HIS:HA	1.73	0.71
1:C:4839:MET:HE3	1:C:4839:MET:HA	1.73	0.71
1:D:987:ARG:HH12	1:D:991:ASN:HB2	1.55	0.70
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.24	0.70
1:A:2513:GLU:N	1:A:2513:GLU:OE2	2.24	0.70
1:A:215:THR:HG22	1:A:273:HIS:HA	1.73	0.70
1:A:858:THR:HB	1:A:930:LYS:HD2	1.73	0.70
1:A:14:LEU:HD13	1:A:202:MET:HE2	1.74	0.70
1:C:2737:PRO:HD2	1:C:2891:LYS:HD3	1.74	0.70
1:B:2513:GLU:N	1:B:2513:GLU:OE2	2.24	0.70
1:B:4839:MET:HA	1:B:4839:MET:HE3	1.73	0.70
1:D:14:LEU:HD13	1:D:202:MET:HE2	1.73	0.70
1:D:215:THR:HG22	1:D:273:HIS:HA	1.73	0.70
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.24	0.70
1:B:2812:SER:OG	1:B:2882:TYR:OH	2.10	0.70
1:A:3767:GLN:OE1	1:A:3809:ASN:ND2	2.24	0.70
1:A:2582:MET:HE3	1:A:2610:LEU:HD13	1.74	0.70
1:D:1251:GLU:N	1:D:1251:GLU:OE2	2.24	0.70
1:C:14:LEU:HD13	1:C:202:MET:HE2	1.73	0.70
1:B:2582:MET:HE3	1:B:2610:LEU:HD13	1.74	0.69
1:B:2737:PRO:HD2	1:B:2891:LYS:HD3	1.74	0.69
1:A:4241:THR:HB	1:A:4989:MET:HE1	1.74	0.69
1:D:858:THR:HB	1:D:930:LYS:HD2	1.73	0.69
1:D:4241:THR:HB	1:D:4989:MET:HE1	1.75	0.69
1:B:14:LEU:HD13	1:B:202:MET:HE2	1.74	0.69
1:A:4839:MET:HA	1:A:4839:MET:HE3	1.73	0.69
1:D:2812:SER:OG	1:D:2882:TYR:OH	2.10	0.69
2:G:27:THR:HG23	2:G:38:SER:HB2	1.74	0.69
1:D:925:SER:O	1:D:928:THR:OG1	2.11	0.69
1:D:2513:GLU:N	1:D:2513:GLU:OE2	2.25	0.69
1:C:858:THR:HB	1:C:930:LYS:HD2	1.73	0.69
1:C:2582:MET:HE3	1:C:2610:LEU:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2812:SER:OG	1:A:2882:TYR:OH	2.10	0.69
1:D:2737:PRO:HD2	1:D:2891:LYS:HD3	1.74	0.69
1:C:3366:ARG:NH1	1:C:3440:GLU:OE1	2.25	0.69
1:A:2821:TRP:HH2	1:A:2877:GLN:HB3	1.58	0.69
1:B:858:THR:HB	1:B:930:LYS:HD2	1.73	0.69
1:A:2737:PRO:HD2	1:A:2891:LYS:HD3	1.74	0.68
1:B:2821:TRP:HH2	1:B:2877:GLN:HB3	1.58	0.68
1:B:3366:ARG:NH1	1:B:3440:GLU:OE1	2.25	0.68
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.24	0.68
1:D:4839:MET:HA	1:D:4839:MET:HE3	1.73	0.68
1:C:2513:GLU:N	1:C:2513:GLU:OE2	2.24	0.68
1:B:4937:ILE:HD12	1:C:4934:GLY:HA3	1.73	0.68
1:D:2582:MET:HE3	1:D:2610:LEU:HD13	1.74	0.68
1:C:1251:GLU:OE2	1:C:1251:GLU:N	2.24	0.68
1:C:4241:THR:HB	1:C:4989:MET:HE1	1.74	0.68
1:A:925:SER:O	1:A:928:THR:OG1	2.11	0.68
1:A:3366:ARG:NH1	1:A:3440:GLU:OE1	2.25	0.68
2:E:27:THR:HG23	2:E:38:SER:HB2	1.74	0.68
1:B:4241:THR:HB	1:B:4989:MET:HE1	1.74	0.68
1:D:2490:MET:HA	1:D:2490:MET:HE2	1.76	0.68
1:C:925:SER:O	1:C:928:THR:OG1	2.11	0.68
1:D:2867:LEU:HB2	1:D:2928:LYS:HZ3	1.59	0.68
1:A:2490:MET:HE2	1:A:2490:MET:HA	1.76	0.68
1:B:2490:MET:HE2	1:B:2490:MET:HA	1.76	0.68
1:D:2821:TRP:HH2	1:D:2877:GLN:HB3	1.58	0.68
2:F:27:THR:HG23	2:F:38:SER:HB2	1.76	0.68
1:C:2490:MET:HE2	1:C:2490:MET:HA	1.76	0.68
1:C:2821:TRP:HH2	1:C:2877:GLN:HB3	1.58	0.68
1:B:925:SER:O	1:B:928:THR:OG1	2.11	0.67
2:H:27:THR:HG23	2:H:38:SER:HB2	1.75	0.67
1:D:987:ARG:NH1	1:D:991:ASN:HB2	2.09	0.67
1:D:3114:LYS:HD3	1:D:3116:SER:H	1.58	0.67
1:A:4937:ILE:HD12	1:B:4934:GLY:HA3	1.76	0.67
1:B:987:ARG:NH1	1:B:991:ASN:HB2	2.09	0.67
1:B:3114:LYS:HD3	1:B:3116:SER:H	1.58	0.67
1:D:2309:SER:OG	1:D:2321:ILE:O	2.12	0.67
1:C:3114:LYS:HD3	1:C:3116:SER:H	1.58	0.67
1:C:3723:MET:HE3	1:C:3793:MET:HE3	1.77	0.67
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.76	0.67
1:D:1108:GLU:OE1	1:D:1108:GLU:N	2.21	0.67
1:D:4934:GLY:HA3	1:C:4937:ILE:HD12	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:955:LEU:O	1:A:966:LYS:NZ	2.28	0.67
1:A:987:ARG:NH1	1:A:991:ASN:HB2	2.09	0.67
1:D:3366:ARG:NH1	1:D:3440:GLU:OE1	2.25	0.67
1:A:2309:SER:OG	1:A:2321:ILE:O	2.12	0.66
1:D:3723:MET:HE3	1:D:3793:MET:HE3	1.77	0.66
1:A:1251:GLU:OE2	1:A:1251:GLU:N	2.24	0.66
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.76	0.66
1:B:3723:MET:HE3	1:B:3793:MET:HE3	1.77	0.66
1:B:4060:LYS:O	1:B:4064:MET:HG3	1.95	0.66
1:C:4060:LYS:O	1:C:4064:MET:HG3	1.95	0.66
1:A:2867:LEU:HB2	1:A:2928:LYS:HZ3	1.59	0.66
1:D:2751:LEU:HD13	1:D:2823:ILE:HD13	1.78	0.66
1:A:3114:LYS:HD3	1:A:3116:SER:H	1.58	0.66
1:A:4060:LYS:O	1:A:4064:MET:HG3	1.95	0.66
1:B:2867:LEU:HB2	1:B:2928:LYS:HZ3	1.60	0.66
1:D:4060:LYS:O	1:D:4064:MET:HG3	1.95	0.66
1:C:987:ARG:NH1	1:C:991:ASN:HB2	2.09	0.66
1:A:168:ASP:HB3	1:A:199:LEU:HD12	1.78	0.66
1:B:1023:PRO:HB3	1:B:1025:ARG:HH21	1.61	0.66
1:B:1251:GLU:OE2	1:B:1251:GLU:N	2.24	0.66
1:B:2309:SER:OG	1:B:2321:ILE:O	2.12	0.66
1:A:2751:LEU:HD13	1:A:2823:ILE:HD13	1.78	0.66
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.76	0.66
1:B:955:LEU:O	1:B:966:LYS:NZ	2.28	0.66
1:D:168:ASP:HB3	1:D:199:LEU:HD12	1.78	0.66
1:D:2116:LEU:O	1:D:2120:MET:HG2	1.96	0.66
1:C:2867:LEU:HB2	1:C:2928:LYS:HZ3	1.60	0.66
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.77	0.66
1:C:866:HIS:HD2	1:C:867:LEU:H	1.44	0.66
1:C:955:LEU:O	1:C:966:LYS:NZ	2.28	0.65
1:C:1023:PRO:HB3	1:C:1025:ARG:HH21	1.61	0.65
1:A:3723:MET:HE3	1:A:3793:MET:HE3	1.77	0.65
1:A:2781:VAL:HA	1:A:2789:PRO:HB2	1.79	0.65
1:C:1759:ARG:H	1:C:1759:ARG:NE	1.95	0.65
1:D:11:VAL:HG11	1:D:164:ARG:HD3	1.79	0.65
1:D:2781:VAL:HA	1:D:2789:PRO:HB2	1.79	0.65
1:C:11:VAL:HG11	1:C:164:ARG:HD3	1.79	0.65
1:A:3335:MET:SD	1:A:3403:ARG:NH1	2.70	0.65
1:B:11:VAL:HG11	1:B:164:ARG:HD3	1.79	0.65
1:B:1108:GLU:OE1	1:B:1108:GLU:N	2.21	0.65
1:B:2781:VAL:HA	1:B:2789:PRO:HB2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:866:HIS:HD2	1:D:867:LEU:H	1.45	0.65
1:C:1987:SER:HB2	1:C:1994:ARG:HH22	1.62	0.65
1:A:866:HIS:HD2	1:A:867:LEU:H	1.44	0.65
1:A:1023:PRO:HB3	1:A:1025:ARG:HH21	1.61	0.65
1:A:2116:LEU:O	1:A:2120:MET:HG2	1.96	0.65
1:B:168:ASP:HB3	1:B:199:LEU:HD12	1.78	0.65
1:D:3335:MET:SD	1:D:3403:ARG:NH1	2.70	0.65
1:C:2751:LEU:HD13	1:C:2823:ILE:HD13	1.78	0.65
1:B:2970:SER:HA	1:B:2973:PHE:CE2	2.32	0.65
1:D:3222:LYS:O	1:D:3227:ARG:NH2	2.28	0.65
1:C:2309:SER:OG	1:C:2321:ILE:O	2.12	0.65
1:C:2970:SER:HA	1:C:2973:PHE:CE2	2.32	0.65
1:B:866:HIS:HD2	1:B:867:LEU:H	1.44	0.65
1:B:1759:ARG:H	1:B:1759:ARG:NE	1.95	0.65
1:D:1023:PRO:HB3	1:D:1025:ARG:HH21	1.61	0.65
1:A:11:VAL:HG11	1:A:164:ARG:HD3	1.79	0.64
1:B:2751:LEU:HD13	1:B:2823:ILE:HD13	1.78	0.64
1:D:2970:SER:HA	1:D:2973:PHE:CE2	2.32	0.64
1:C:2116:LEU:O	1:C:2120:MET:HG2	1.96	0.64
1:C:3599:VAL:O	1:C:3603:LEU:HD12	1.98	0.64
1:B:3638:MET:HA	1:B:3638:MET:HE2	1.80	0.64
1:D:3599:VAL:O	1:D:3603:LEU:HD12	1.98	0.64
1:C:2781:VAL:HA	1:C:2789:PRO:HB2	1.79	0.64
1:A:3222:LYS:O	1:A:3227:ARG:NH2	2.28	0.64
1:B:2116:LEU:O	1:B:2120:MET:HG2	1.96	0.64
1:C:1108:GLU:OE1	1:C:1108:GLU:N	2.21	0.64
1:C:3335:MET:SD	1:C:3403:ARG:NH1	2.70	0.64
1:B:3599:VAL:O	1:B:3603:LEU:HD12	1.98	0.64
1:D:1759:ARG:H	1:D:1759:ARG:NE	1.95	0.64
1:B:3335:MET:SD	1:B:3403:ARG:NH1	2.70	0.64
1:A:2970:SER:HA	1:A:2973:PHE:CE2	2.32	0.64
1:A:3638:MET:HE2	1:A:3638:MET:HA	1.80	0.64
1:C:2198:MET:HG2	1:C:2203:MET:HE2	1.79	0.64
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.80	0.64
1:C:168:ASP:HB3	1:C:199:LEU:HD12	1.78	0.64
1:D:2198:MET:HG2	1:D:2203:MET:HE2	1.79	0.64
1:C:3638:MET:HE2	1:C:3638:MET:HA	1.80	0.64
1:A:3599:VAL:O	1:A:3603:LEU:HD12	1.98	0.64
1:B:4929:LEU:O	1:B:4933:GLN:HG2	1.98	0.64
1:A:1987:SER:HB2	1:A:1994:ARG:HH22	1.62	0.63
1:B:1987:SER:HB2	1:B:1994:ARG:HH22	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4929:LEU:O	1:D:4933:GLN:HG2	1.98	0.63
1:A:302:VAL:HB	1:A:306:LYS:HE3	1.81	0.63
1:A:4929:LEU:O	1:A:4933:GLN:HG2	1.98	0.63
1:D:955:LEU:O	1:D:966:LYS:NZ	2.28	0.63
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.81	0.63
1:C:4929:LEU:O	1:C:4933:GLN:HG2	1.98	0.63
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.81	0.63
1:B:2198:MET:HG2	1:B:2203:MET:HE2	1.79	0.63
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.80	0.63
1:D:3638:MET:HE2	1:D:3638:MET:HA	1.80	0.63
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.81	0.63
2:H:88:PRO:HB2	1:D:1680:ARG:HH12	1.63	0.63
1:A:1108:GLU:OE1	1:A:1108:GLU:N	2.21	0.63
1:D:302:VAL:HB	1:D:306:LYS:HE3	1.81	0.63
1:D:2271:THR:OG1	1:D:2330:ARG:NH2	2.32	0.63
1:A:2108:GLU:O	1:A:3694:LYS:NZ	2.32	0.63
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.81	0.63
1:A:2271:THR:OG1	1:A:2330:ARG:NH2	2.32	0.63
2:F:61:GLU:N	2:F:61:GLU:OE1	2.32	0.63
1:C:2271:THR:OG1	1:C:2330:ARG:NH2	2.32	0.63
1:D:1987:SER:HB2	1:D:1994:ARG:HH22	1.62	0.62
1:A:5034:ASP:OD1	1:A:5034:ASP:N	2.32	0.62
1:D:4712:PRO:O	1:D:4718:LYS:NZ	2.29	0.62
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.80	0.62
1:A:3569:LEU:O	1:A:3573:MET:HB2	2.00	0.62
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.14	0.62
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.80	0.62
1:B:3757:GLU:O	1:B:3761:GLN:HG2	1.99	0.62
1:A:2198:MET:HG2	1:A:2203:MET:HE2	1.79	0.62
1:B:2271:THR:OG1	1:B:2330:ARG:NH2	2.32	0.62
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.14	0.62
1:C:302:VAL:HB	1:C:306:LYS:HE3	1.81	0.62
1:C:4039:MET:HA	1:C:4039:MET:HE3	1.82	0.62
1:A:19:GLU:HG2	1:A:68:THR:HG22	1.82	0.62
1:A:1099:GLU:OE2	1:A:1125:ASN:ND2	2.33	0.62
2:G:88:PRO:HB2	1:C:1680:ARG:HH12	1.64	0.62
1:B:1099:GLU:OE2	1:B:1125:ASN:ND2	2.33	0.62
1:D:275:ARG:HH21	1:D:336:PRO:HD2	1.65	0.62
1:D:3757:GLU:O	1:D:3761:GLN:HG2	1.99	0.62
1:C:4231:MET:HA	1:C:4231:MET:HE3	1.82	0.62
1:A:1759:ARG:H	1:A:1759:ARG:NE	1.95	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3811:GLU:OE1	1:D:3811:GLU:N	2.27	0.62
1:C:2108:GLU:O	1:C:3694:LYS:NZ	2.32	0.62
1:D:830:ARG:NH2	1:D:832:GLU:OE2	2.33	0.62
1:D:910:PHE:HA	1:D:913:LEU:HG	1.82	0.62
1:D:5034:ASP:OD1	1:D:5034:ASP:N	2.32	0.62
1:C:2650:ARG:NH1	1:C:2651:CYS:SG	2.73	0.62
2:F:88:PRO:HB2	1:B:1680:ARG:HH12	1.64	0.62
1:B:19:GLU:HG2	1:B:68:THR:HG22	1.82	0.62
1:B:4039:MET:HA	1:B:4039:MET:HE3	1.82	0.62
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.14	0.62
1:D:19:GLU:HG2	1:D:68:THR:HG22	1.82	0.62
1:C:19:GLU:HG2	1:C:68:THR:HG22	1.82	0.62
1:C:972:LEU:HD13	1:C:1044:ARG:HB3	1.81	0.62
1:A:2650:ARG:NH1	1:A:2651:CYS:SG	2.73	0.62
1:A:3757:GLU:O	1:A:3761:GLN:HG2	1.99	0.62
1:B:2650:ARG:NH1	1:B:2651:CYS:SG	2.73	0.62
1:B:3569:LEU:O	1:B:3573:MET:HB2	2.00	0.62
1:D:2650:ARG:NH1	1:D:2651:CYS:SG	2.73	0.62
1:A:4172:GLU:OE1	1:A:4175:ARG:NH1	2.34	0.61
1:B:910:PHE:HA	1:B:913:LEU:HG	1.82	0.61
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.14	0.61
2:G:37:ASP:OD1	2:G:38:SER:N	2.33	0.61
1:B:4231:MET:HE3	1:B:4231:MET:HA	1.82	0.61
1:D:972:LEU:HD13	1:D:1044:ARG:HB3	1.81	0.61
1:C:1099:GLU:OE2	1:C:1125:ASN:ND2	2.33	0.61
2:E:37:ASP:OD1	2:E:38:SER:N	2.32	0.61
1:B:275:ARG:HH21	1:B:336:PRO:HD2	1.65	0.61
1:B:302:VAL:HB	1:B:306:LYS:HE3	1.81	0.61
1:B:919:ASN:HA	1:B:922:LEU:HD23	1.82	0.61
1:B:2291:GLN:OE1	1:B:2292:GLU:N	2.31	0.61
1:B:3523:ASN:O	1:B:3582:ARG:NH2	2.33	0.61
1:D:919:ASN:HA	1:D:922:LEU:HD23	1.82	0.61
1:D:2108:GLU:O	1:D:3694:LYS:NZ	2.32	0.61
1:D:3523:ASN:O	1:D:3582:ARG:NH2	2.33	0.61
1:D:4039:MET:HA	1:D:4039:MET:HE3	1.82	0.61
1:C:3569:LEU:O	1:C:3573:MET:HB2	2.00	0.61
1:C:3757:GLU:O	1:C:3761:GLN:HG2	1.99	0.61
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.18	0.61
1:D:4172:GLU:OE1	1:D:4175:ARG:NH1	2.34	0.61
1:C:3523:ASN:O	1:C:3582:ARG:NH2	2.33	0.61
1:A:830:ARG:NH2	1:A:832:GLU:OE2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:972:LEU:HD13	1:A:1044:ARG:HB3	1.81	0.61
1:A:4231:MET:HA	1:A:4231:MET:HE3	1.82	0.61
1:A:4651:THR:HG23	1:A:4796:MET:HE1	1.83	0.61
1:B:4172:GLU:OE1	1:B:4175:ARG:NH1	2.33	0.61
1:C:275:ARG:HH21	1:C:336:PRO:HD2	1.65	0.61
1:C:3504:SER:HG	1:C:3507:THR:HG1	1.46	0.61
1:A:3523:ASN:O	1:A:3582:ARG:NH2	2.33	0.61
1:C:3590:GLU:O	1:C:3594:ARG:HG2	2.01	0.61
1:C:3811:GLU:OE1	1:C:3811:GLU:N	2.27	0.61
1:A:3590:GLU:O	1:A:3594:ARG:HG2	2.01	0.61
1:B:972:LEU:HD13	1:B:1044:ARG:HB3	1.82	0.61
1:D:4231:MET:HA	1:D:4231:MET:HE3	1.82	0.61
1:A:941:MET:SD	1:A:941:MET:N	2.74	0.61
1:D:941:MET:N	1:D:941:MET:SD	2.74	0.61
1:D:3569:LEU:O	1:D:3573:MET:HB2	2.00	0.61
1:D:4651:THR:HG23	1:D:4796:MET:HE1	1.83	0.61
1:A:4039:MET:HE3	1:A:4039:MET:HA	1.82	0.60
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.83	0.60
1:B:4651:THR:HG23	1:B:4796:MET:HE1	1.83	0.60
1:D:1099:GLU:OE2	1:D:1125:ASN:ND2	2.33	0.60
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.83	0.60
1:C:2777:TYR:HB3	1:C:2791:LEU:HD23	1.83	0.60
1:A:919:ASN:HA	1:A:922:LEU:HD23	1.82	0.60
1:B:4712:PRO:O	1:B:4718:LYS:NZ	2.29	0.60
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.83	0.60
1:A:4796:MET:HE2	1:A:4800:LEU:HG	1.84	0.60
1:B:3590:GLU:O	1:B:3594:ARG:HG2	2.01	0.60
1:D:4796:MET:HE2	1:D:4800:LEU:HG	1.84	0.60
1:C:910:PHE:HA	1:C:913:LEU:HG	1.82	0.60
1:C:4172:GLU:OE1	1:C:4175:ARG:NH1	2.34	0.60
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.83	0.60
1:C:2008:MET:HE1	1:C:2022:PRO:HD3	1.84	0.60
1:A:275:ARG:HH21	1:A:336:PRO:HD2	1.65	0.60
1:B:3400:VAL:HG23	1:B:3403:ARG:HH21	1.67	0.60
1:D:2008:MET:HE1	1:D:2022:PRO:HD3	1.84	0.60
1:D:3590:GLU:O	1:D:3594:ARG:HG2	2.01	0.60
1:C:1062:GLN:NE2	1:C:1064:GLU:OE1	2.32	0.60
1:A:2777:TYR:HB3	1:A:2791:LEU:HD23	1.83	0.60
1:C:941:MET:N	1:C:941:MET:SD	2.74	0.60
1:A:233:ILE:O	1:A:257:ARG:NH1	2.35	0.60
1:C:233:ILE:O	1:C:257:ARG:NH1	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3400:VAL:HG23	1:A:3403:ARG:HH21	1.67	0.60
1:D:233:ILE:O	1:D:257:ARG:NH1	2.35	0.60
1:D:2777:TYR:HB3	1:D:2791:LEU:HD23	1.83	0.60
1:D:3514:LEU:HD21	1:D:3602:VAL:HG13	1.84	0.60
1:A:2291:GLN:OE1	1:A:2292:GLU:N	2.31	0.60
1:B:2777:TYR:HB3	1:B:2791:LEU:HD23	1.83	0.60
1:C:3514:LEU:HD21	1:C:3602:VAL:HG13	1.84	0.60
1:A:107:ILE:HG23	1:A:150:MET:HE2	1.84	0.59
1:A:910:PHE:HA	1:A:913:LEU:HG	1.82	0.59
1:B:4796:MET:HE2	1:B:4800:LEU:HG	1.84	0.59
1:D:1232:ARG:NH2	1:D:1828:ASP:O	2.35	0.59
1:C:4651:THR:HG23	1:C:4796:MET:HE1	1.83	0.59
1:B:830:ARG:NH2	1:B:832:GLU:OE2	2.33	0.59
1:C:3329:ILE:HD11	1:C:3332:ALA:HB2	1.83	0.59
1:B:1753:LYS:HB3	1:B:1758:ARG:HA	1.85	0.59
1:C:919:ASN:HA	1:C:922:LEU:HD23	1.82	0.59
1:A:3514:LEU:HD21	1:A:3602:VAL:HG13	1.84	0.59
1:B:3567:PRO:HA	1:B:3570:ARG:HH12	1.67	0.59
1:B:107:ILE:HG23	1:B:150:MET:HE2	1.84	0.59
1:B:2008:MET:HE1	1:B:2022:PRO:HD3	1.84	0.59
1:B:3329:ILE:HD11	1:B:3332:ALA:HB2	1.83	0.59
1:D:3329:ILE:HD11	1:D:3332:ALA:HB2	1.83	0.59
1:C:4796:MET:HE2	1:C:4800:LEU:HG	1.84	0.59
1:A:2506:LEU:HD21	1:A:2512:ILE:HD11	1.85	0.59
1:D:3400:VAL:HG23	1:D:3403:ARG:HH21	1.67	0.59
1:C:3400:VAL:HG23	1:C:3403:ARG:HH21	1.67	0.59
1:A:1232:ARG:NH2	1:A:1828:ASP:O	2.35	0.59
1:A:2008:MET:HE1	1:A:2022:PRO:HD3	1.84	0.59
1:B:10:GLU:HG2	1:B:11:VAL:H	1.68	0.59
1:B:516:LYS:O	1:B:520:ASN:ND2	2.32	0.59
1:C:1753:LYS:HB3	1:C:1758:ARG:HA	1.85	0.59
1:A:3206:LEU:HD11	1:A:3276:MET:HE3	1.85	0.59
1:D:3206:LEU:HD11	1:D:3276:MET:HE3	1.85	0.59
1:A:1531:ALA:HB3	1:A:1534:LYS:HE2	1.85	0.59
1:A:3567:PRO:HA	1:A:3570:ARG:HH12	1.67	0.59
2:F:37:ASP:OD2	2:F:38:SER:N	2.35	0.59
1:D:2506:LEU:HD21	1:D:2512:ILE:HD11	1.85	0.59
1:B:3514:LEU:HD21	1:B:3602:VAL:HG13	1.84	0.58
1:A:935:LEU:HD21	1:A:987:ARG:HE	1.68	0.58
1:C:10:GLU:HG2	1:C:11:VAL:H	1.68	0.58
1:C:2291:GLN:OE1	1:C:2292:GLU:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1619:ARG:NH2	1:B:1622:GLU:OE1	2.37	0.58
1:D:107:ILE:HG23	1:D:150:MET:HE2	1.84	0.58
1:D:2293:GLN:H	1:D:2293:GLN:CD	2.11	0.58
1:A:2208:MET:HE1	1:A:2253:HIS:HB3	1.85	0.58
1:B:935:LEU:HD21	1:B:987:ARG:HE	1.68	0.58
1:B:2108:GLU:O	1:B:3694:LYS:NZ	2.32	0.58
1:D:1023:PRO:HB3	1:D:1025:ARG:NH2	2.19	0.58
1:C:4712:PRO:O	1:C:4718:LYS:NZ	2.29	0.58
1:A:10:GLU:HG2	1:A:11:VAL:H	1.68	0.58
1:A:3329:ILE:HD11	1:A:3332:ALA:HB2	1.83	0.58
1:B:3206:LEU:HD11	1:B:3276:MET:HE3	1.85	0.58
1:B:4676:GLU:OE2	1:B:4698:LYS:NZ	2.37	0.58
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.18	0.58
1:C:1023:PRO:HB3	1:C:1025:ARG:NH2	2.19	0.58
1:C:3206:LEU:HD11	1:C:3276:MET:HE3	1.85	0.58
1:A:56:GLN:O	1:A:309:THR:OG1	2.22	0.58
1:A:2881:ASN:HA	1:A:2884:ASN:ND2	2.19	0.58
2:H:4:VAL:HG22	2:H:74:LEU:HD22	1.86	0.58
2:H:37:ASP:OD2	2:H:38:SER:N	2.36	0.58
1:D:3567:PRO:HA	1:D:3570:ARG:HH12	1.67	0.58
1:C:107:ILE:HG23	1:C:150:MET:HE2	1.84	0.58
1:C:3567:PRO:HA	1:C:3570:ARG:HH12	1.67	0.58
1:A:1619:ARG:NH2	1:A:1622:GLU:OE1	2.37	0.58
1:A:2794:TYR:H	1:A:2855:TYR:HB2	1.68	0.58
1:B:233:ILE:O	1:B:257:ARG:NH1	2.35	0.58
1:B:941:MET:N	1:B:941:MET:SD	2.74	0.58
1:B:2208:MET:HE1	1:B:2253:HIS:HB3	1.85	0.58
1:B:2881:ASN:HA	1:B:2884:ASN:ND2	2.19	0.58
1:D:1753:LYS:HB3	1:D:1758:ARG:HA	1.85	0.58
1:D:2881:ASN:HA	1:D:2884:ASN:ND2	2.19	0.58
1:C:1531:ALA:HB3	1:C:1534:LYS:HE2	1.85	0.58
1:C:1619:ARG:NH2	1:C:1622:GLU:OE1	2.37	0.58
1:C:2794:TYR:H	1:C:2855:TYR:HB2	1.68	0.58
1:C:3382:GLU:OE2	1:C:3382:GLU:N	2.34	0.58
1:A:516:LYS:O	1:A:520:ASN:ND2	2.32	0.58
1:A:4676:GLU:OE2	1:A:4698:LYS:NZ	2.37	0.58
1:B:1531:ALA:HB3	1:B:1534:LYS:HE2	1.85	0.58
1:B:3020:THR:HG23	1:B:3023:LYS:H	1.69	0.58
1:D:1031:THR:O	1:D:1035:ASN:ND2	2.36	0.58
1:D:935:LEU:HD21	1:D:987:ARG:HE	1.68	0.58
1:D:3020:THR:HG23	1:D:3023:LYS:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1232:ARG:NH2	1:C:1828:ASP:O	2.35	0.58
1:C:2506:LEU:HD21	1:C:2512:ILE:HD11	1.85	0.58
1:A:2293:GLN:H	1:A:2293:GLN:CD	2.12	0.58
1:A:3020:THR:HG23	1:A:3023:LYS:H	1.69	0.58
1:B:2690:LYS:HD3	1:B:2691:TYR:H	1.69	0.58
1:B:4749:GLU:O	1:B:4753:HIS:ND1	2.37	0.58
1:D:10:GLU:HG2	1:D:11:VAL:H	1.68	0.58
1:D:2794:TYR:H	1:D:2855:TYR:HB2	1.68	0.58
1:C:2690:LYS:HD3	1:C:2691:TYR:H	1.69	0.58
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.86	0.57
1:A:4910:GLU:O	1:A:4914:VAL:HG13	2.04	0.57
1:B:2018:GLU:OE1	1:B:2028:ARG:NH1	2.37	0.57
1:B:2506:LEU:HD21	1:B:2512:ILE:HD11	1.85	0.57
1:B:2794:TYR:H	1:B:2855:TYR:HB2	1.68	0.57
1:D:3017:PHE:O	1:D:3036:LYS:NZ	2.37	0.57
1:D:3539:ARG:NH1	1:D:3544:ASP:OD2	2.37	0.57
1:D:4676:GLU:OE2	1:D:4698:LYS:NZ	2.37	0.57
1:C:935:LEU:HD21	1:C:987:ARG:HE	1.68	0.57
1:C:2881:ASN:HA	1:C:2884:ASN:ND2	2.19	0.57
1:D:1531:ALA:HB3	1:D:1534:LYS:HE2	1.85	0.57
1:D:1619:ARG:NH2	1:D:1622:GLU:OE1	2.36	0.57
1:C:2018:GLU:OE1	1:C:2028:ARG:NH1	2.37	0.57
1:C:2812:SER:OG	1:C:2882:TYR:OH	2.10	0.57
1:A:2018:GLU:OE1	1:A:2028:ARG:NH1	2.37	0.57
1:A:4749:GLU:O	1:A:4753:HIS:ND1	2.37	0.57
1:D:2792:ARG:NH2	1:D:2798:SER:OG	2.37	0.57
1:D:4910:GLU:O	1:D:4914:VAL:HG13	2.04	0.57
1:C:2792:ARG:NH2	1:C:2798:SER:OG	2.37	0.57
1:C:3222:LYS:O	1:C:3227:ARG:NH2	2.28	0.57
1:A:1066:GLN:HB2	1:A:1071:ARG:NH1	2.20	0.57
1:A:2679:PHE:HB2	1:A:2706:ILE:HG21	1.86	0.57
1:B:1066:GLN:HB2	1:B:1071:ARG:NH1	2.20	0.57
1:B:2792:ARG:NH2	1:B:2798:SER:OG	2.37	0.57
1:C:3020:THR:HG23	1:C:3023:LYS:H	1.69	0.57
1:A:2690:LYS:HD3	1:A:2691:TYR:H	1.69	0.57
1:B:56:GLN:O	1:B:309:THR:OG1	2.22	0.57
1:B:1062:GLN:NE2	1:B:1064:GLU:OE1	2.32	0.57
1:D:408:ALA:HB2	1:D:483:MET:HE1	1.87	0.57
1:D:4749:GLU:O	1:D:4753:HIS:ND1	2.37	0.57
1:C:830:ARG:NH2	1:C:832:GLU:OE2	2.33	0.57
1:C:3577:ARG:NH1	1:C:3577:ARG:HA	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1023:PRO:HB3	1:A:1025:ARG:NH2	2.19	0.57
1:A:1753:LYS:HB3	1:A:1758:ARG:HA	1.85	0.57
1:B:4910:GLU:O	1:B:4914:VAL:HG13	2.04	0.57
1:D:2208:MET:HE1	1:D:2253:HIS:HB3	1.85	0.57
1:C:56:GLN:O	1:C:309:THR:OG1	2.22	0.57
1:A:110:ARG:NH2	1:A:117:TYR:OH	2.38	0.57
1:A:1680:ARG:HH12	2:E:88:PRO:HB2	1.69	0.57
1:A:3556:ASN:HB3	1:A:3559:LEU:HD13	1.87	0.57
2:F:4:VAL:HG22	2:F:74:LEU:HD22	1.86	0.57
1:B:3271:GLU:OE2	1:B:3337:ARG:NH2	2.33	0.57
1:B:3577:ARG:NH1	1:B:3577:ARG:HA	2.20	0.57
1:D:56:GLN:O	1:D:309:THR:OG1	2.22	0.57
1:A:266:ARG:NH2	1:A:272:SER:OG	2.38	0.57
1:A:2792:ARG:NH2	1:A:2798:SER:OG	2.37	0.57
2:E:4:VAL:HG22	2:E:74:LEU:HD22	1.87	0.57
2:H:61:GLU:OE1	2:H:61:GLU:N	2.32	0.57
1:B:110:ARG:NH2	1:B:117:TYR:OH	2.38	0.57
1:B:266:ARG:NH2	1:B:272:SER:OG	2.38	0.57
1:B:408:ALA:HB2	1:B:483:MET:HE1	1.87	0.57
1:B:2679:PHE:HB2	1:B:2706:ILE:HG21	1.86	0.57
1:B:3556:ASN:HB3	1:B:3559:LEU:HD13	1.87	0.57
1:D:110:ARG:NH2	1:D:117:TYR:OH	2.38	0.57
1:D:2018:GLU:OE1	1:D:2028:ARG:NH1	2.37	0.57
1:C:408:ALA:HB2	1:C:483:MET:HE1	1.87	0.57
1:C:2208:MET:HE1	1:C:2253:HIS:HB3	1.85	0.57
1:C:4676:GLU:OE2	1:C:4698:LYS:NZ	2.37	0.57
1:A:408:ALA:HB2	1:A:483:MET:HE1	1.87	0.57
1:A:3017:PHE:O	1:A:3036:LYS:NZ	2.37	0.57
1:A:4938:ASP:OD1	1:D:4944:ARG:NH2	2.37	0.57
1:B:1023:PRO:HB3	1:B:1025:ARG:NH2	2.19	0.57
1:B:3017:PHE:O	1:B:3036:LYS:NZ	2.37	0.57
1:C:1163:THR:HG22	1:C:1168:VAL:HA	1.87	0.57
1:C:2679:PHE:HB2	1:C:2706:ILE:HG21	1.86	0.57
1:A:571:SER:OG	1:A:573:GLU:OE1	2.19	0.57
1:B:70:GLU:OE2	1:B:110:ARG:NE	2.32	0.57
1:B:1232:ARG:NH2	1:B:1828:ASP:O	2.35	0.57
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.86	0.57
1:B:3540:TYR:CE1	1:B:3549:VAL:HG11	2.40	0.57
1:D:2679:PHE:HB2	1:D:2706:ILE:HG21	1.86	0.57
1:C:3539:ARG:NH1	1:C:3544:ASP:OD2	2.37	0.57
1:C:3556:ASN:HB3	1:C:3559:LEU:HD13	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3382:GLU:OE2	1:A:3382:GLU:N	2.34	0.56
1:D:266:ARG:NH2	1:D:272:SER:OG	2.38	0.56
1:C:622:THR:HG23	1:C:626:LEU:HD12	1.86	0.56
1:C:4910:GLU:O	1:C:4914:VAL:HG13	2.04	0.56
1:A:622:THR:HG23	1:A:626:LEU:HD12	1.86	0.56
1:B:2534:ALA:HA	1:B:2588:ARG:HH21	1.70	0.56
1:B:3539:ARG:NH1	1:B:3544:ASP:OD2	2.37	0.56
1:D:622:THR:HG23	1:D:626:LEU:HD12	1.86	0.56
1:D:1066:GLN:HB2	1:D:1071:ARG:NH1	2.20	0.56
1:C:1031:THR:O	1:C:1035:ASN:ND2	2.36	0.56
1:A:70:GLU:OE2	1:A:110:ARG:NE	2.32	0.56
1:A:2534:ALA:HA	1:A:2588:ARG:HH21	1.70	0.56
1:A:4712:PRO:O	1:A:4718:LYS:NZ	2.29	0.56
1:B:613:ALA:HB2	1:B:1676:LEU:HD12	1.87	0.56
1:B:2293:GLN:H	1:B:2293:GLN:CD	2.12	0.56
1:B:3222:LYS:O	1:B:3227:ARG:NH2	2.28	0.56
1:D:618:GLN:OE1	1:D:1678:ASN:ND2	2.37	0.56
1:D:2449:GLU:OE1	1:D:2449:GLU:N	2.24	0.56
1:C:110:ARG:NH2	1:C:117:TYR:OH	2.38	0.56
1:C:266:ARG:NH2	1:C:272:SER:OG	2.38	0.56
1:C:613:ALA:HB2	1:C:1676:LEU:HD12	1.87	0.56
1:C:3017:PHE:O	1:C:3036:LYS:NZ	2.37	0.56
1:C:3540:TYR:CE1	1:C:3549:VAL:HG11	2.40	0.56
1:C:4186:ALA:O	1:C:4188:ARG:NH2	2.38	0.56
1:C:4749:GLU:O	1:C:4753:HIS:ND1	2.37	0.56
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.39	0.56
1:D:2690:LYS:HD3	1:D:2691:TYR:H	1.69	0.56
1:A:3107:VAL:O	1:A:3111:ARG:NH1	2.39	0.56
1:A:3539:ARG:NH1	1:A:3544:ASP:OD2	2.37	0.56
1:A:3577:ARG:NH1	1:A:3577:ARG:HA	2.20	0.56
1:D:1186:ASP:OD2	1:D:1186:ASP:N	2.35	0.56
1:D:2310:CYS:HB3	1:D:2313:LEU:HB2	1.88	0.56
1:D:3556:ASN:HB3	1:D:3559:LEU:HD13	1.87	0.56
1:D:4904:PRO:HB3	1:D:4913:ARG:HG2	1.88	0.56
1:C:3107:VAL:O	1:C:3111:ARG:NH1	2.39	0.56
1:A:1031:THR:O	1:A:1035:ASN:ND2	2.36	0.56
1:A:3540:TYR:CE1	1:A:3549:VAL:HG11	2.40	0.56
1:A:3762:ARG:NH2	1:A:4755:GLU:OE1	2.39	0.56
1:B:3414:ARG:HE	1:B:3472:ALA:HB3	1.71	0.56
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.86	0.56
1:D:3762:ARG:NH2	1:D:4755:GLU:OE1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:516:LYS:O	1:C:520:ASN:ND2	2.32	0.56
1:C:2534:ALA:HA	1:C:2588:ARG:HH21	1.70	0.56
2:G:4:VAL:HG22	2:G:74:LEU:HD22	1.88	0.56
1:B:622:THR:HG23	1:B:626:LEU:HD12	1.86	0.56
1:B:1163:THR:HG22	1:B:1168:VAL:HA	1.87	0.56
1:B:1947:CYS:SG	1:B:2127:GLN:NE2	2.76	0.56
1:B:3382:GLU:OE2	1:B:3382:GLU:N	2.34	0.56
1:D:4186:ALA:O	1:D:4188:ARG:NH2	2.38	0.56
1:C:1066:GLN:HB2	1:C:1071:ARG:NH1	2.20	0.56
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.86	0.56
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.39	0.56
1:C:3414:ARG:HE	1:C:3472:ALA:HB3	1.71	0.56
1:A:1062:GLN:NE2	1:A:1064:GLU:OE1	2.32	0.56
1:D:1168:VAL:HG11	1:D:1176:GLU:HG2	1.88	0.56
1:D:3533:ILE:HD13	1:D:3596:VAL:HG13	1.88	0.56
1:D:3540:TYR:CE1	1:D:3549:VAL:HG11	2.40	0.56
1:D:3577:ARG:HA	1:D:3577:ARG:NH1	2.20	0.56
1:C:404:ILE:HG23	1:C:483:MET:HE3	1.88	0.56
1:C:1996:ARG:NH2	1:C:1999:ARG:HE	2.03	0.56
1:C:4902:GLU:O	1:C:4913:ARG:NH2	2.37	0.56
1:A:950:LEU:HD12	1:A:970:LEU:HD22	1.88	0.56
1:A:1947:CYS:SG	1:A:2127:GLN:NE2	2.76	0.56
1:A:1996:ARG:NH2	1:A:1999:ARG:HE	2.03	0.56
1:A:3377:GLU:HA	1:A:3380:ARG:HG2	1.88	0.56
1:B:3107:VAL:O	1:B:3111:ARG:NH1	2.39	0.56
1:C:1454:THR:OG1	1:C:1456:ASP:OD1	2.18	0.56
1:B:3762:ARG:NH2	1:B:4755:GLU:OE1	2.39	0.55
1:D:1996:ARG:NH2	1:D:1999:ARG:HE	2.03	0.55
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.39	0.55
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.37	0.55
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	2.19	0.55
1:A:1163:THR:HG22	1:A:1168:VAL:HA	1.87	0.55
1:D:2293:GLN:OE1	1:D:2293:GLN:N	2.29	0.55
1:D:2534:ALA:HA	1:D:2588:ARG:HH21	1.70	0.55
1:C:984:LEU:HD11	1:C:1055:PRO:HA	1.89	0.55
1:C:1168:VAL:HG11	1:C:1176:GLU:HG2	1.88	0.55
1:C:2310:CYS:HB3	1:C:2313:LEU:HB2	1.88	0.55
1:C:3762:ARG:NH2	1:C:4755:GLU:OE1	2.39	0.55
1:C:4966:ASP:OD1	1:C:4967:TYR:N	2.40	0.55
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.39	0.55
1:A:2577:ILE:H	1:A:2577:ILE:HD12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1131:ARG:NH1	1:B:1178:ALA:O	2.39	0.55
1:B:2871:LEU:HD11	1:B:2937:VAL:HG23	1.88	0.55
1:D:1163:THR:HG22	1:D:1168:VAL:HA	1.87	0.55
1:D:3107:VAL:O	1:D:3111:ARG:NH1	2.39	0.55
1:C:2293:GLN:H	1:C:2293:GLN:CD	2.12	0.55
1:A:613:ALA:HB2	1:A:1676:LEU:HD12	1.87	0.55
1:B:950:LEU:HD12	1:B:970:LEU:HD22	1.88	0.55
1:D:950:LEU:HD12	1:D:970:LEU:HD22	1.88	0.55
1:D:4821:LYS:CD	1:D:4821:LYS:H	2.20	0.55
1:C:1131:ARG:NH1	1:C:1178:ALA:O	2.39	0.55
1:C:3533:ILE:HD13	1:C:3596:VAL:HG13	1.88	0.55
1:C:4821:LYS:H	1:C:4821:LYS:CD	2.20	0.55
1:C:4904:PRO:HB3	1:C:4913:ARG:HG2	1.88	0.55
1:A:3533:ILE:HD13	1:A:3596:VAL:HG13	1.88	0.55
1:B:2577:ILE:H	1:B:2577:ILE:HD12	1.72	0.55
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.88	0.55
1:D:404:ILE:HG23	1:D:483:MET:HE3	1.88	0.55
1:D:984:LEU:HD11	1:D:1055:PRO:HA	1.88	0.55
1:D:2165:LEU:HB2	1:D:2178:MET:HE2	1.89	0.55
1:C:4186:ALA:C	1:C:4188:ARG:HH22	2.14	0.55
1:A:1131:ARG:NH1	1:A:1178:ALA:O	2.39	0.55
1:A:1990:GLU:OE2	1:A:1994:ARG:NH2	2.40	0.55
1:B:4186:ALA:O	1:B:4188:ARG:NH2	2.38	0.55
1:B:4821:LYS:CD	1:B:4821:LYS:H	2.20	0.55
1:B:4966:ASP:OD1	1:B:4967:TYR:N	2.39	0.55
1:D:613:ALA:HB2	1:D:1676:LEU:HD12	1.87	0.55
1:D:2902:HIS:HB3	1:D:2905:LEU:HG	1.89	0.55
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.88	0.55
1:A:4904:PRO:HB3	1:A:4913:ARG:HG2	1.88	0.55
1:B:404:ILE:HG23	1:B:483:MET:HE3	1.88	0.55
1:B:1168:VAL:HG11	1:B:1176:GLU:HG2	1.88	0.55
1:B:2165:LEU:HB2	1:B:2178:MET:HE2	1.89	0.55
1:D:2577:ILE:HD12	1:D:2577:ILE:H	1.72	0.55
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.18	0.55
1:A:2310:CYS:HB3	1:A:2313:LEU:HB2	1.88	0.55
1:A:3414:ARG:HE	1:A:3472:ALA:HB3	1.71	0.55
1:A:4186:ALA:C	1:A:4188:ARG:HH22	2.14	0.55
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.88	0.55
1:D:4966:ASP:OD1	1:D:4967:TYR:N	2.39	0.55
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.25	0.55
1:C:2871:LEU:HD11	1:C:2937:VAL:HG23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2902:HIS:HB3	1:C:2905:LEU:HG	1.89	0.55
1:C:3531:ASP:O	1:C:3535:LEU:HG	2.07	0.55
1:A:404:ILE:HG23	1:A:483:MET:HE3	1.88	0.55
1:A:1168:VAL:HG11	1:A:1176:GLU:HG2	1.88	0.55
1:A:2165:LEU:HB2	1:A:2178:MET:HE2	1.89	0.55
1:A:2902:HIS:HB3	1:A:2905:LEU:HG	1.89	0.55
1:B:2638:LYS:HA	1:B:2698:MET:HE3	1.89	0.55
1:B:2902:HIS:HB3	1:B:2905:LEU:HG	1.89	0.55
1:D:1990:GLU:OE2	1:D:1994:ARG:NH2	2.40	0.55
1:D:3377:GLU:HA	1:D:3380:ARG:HG2	1.88	0.55
1:D:3414:ARG:HE	1:D:3472:ALA:HB3	1.71	0.55
1:C:5034:ASP:N	1:C:5034:ASP:OD1	2.32	0.55
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.25	0.55
1:A:4966:ASP:OD1	1:A:4967:TYR:N	2.39	0.55
1:B:1990:GLU:OE2	1:B:1994:ARG:NH2	2.40	0.55
1:B:2967:MET:O	1:B:2970:SER:OG	2.19	0.55
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.25	0.55
1:C:70:GLU:OE2	1:C:110:ARG:NE	2.32	0.55
1:C:2577:ILE:H	1:C:2577:ILE:HD12	1.72	0.55
1:A:2244:ARG:NH1	1:A:3858:MET:HE3	2.22	0.54
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.88	0.54
1:A:4006:ASP:N	1:A:4006:ASP:OD1	2.41	0.54
1:B:2210:VAL:O	1:B:2214:VAL:HG23	2.07	0.54
1:B:3533:ILE:HD13	1:B:3596:VAL:HG13	1.88	0.54
1:D:516:LYS:O	1:D:520:ASN:ND2	2.32	0.54
1:C:1990:GLU:OE2	1:C:1994:ARG:NH2	2.40	0.54
1:C:3271:GLU:OE2	1:C:3337:ARG:NH2	2.33	0.54
1:A:984:LEU:HD11	1:A:1055:PRO:HA	1.89	0.54
1:A:3271:GLU:OE2	1:A:3337:ARG:NH2	2.33	0.54
1:D:1131:ARG:NH1	1:D:1178:ALA:O	2.39	0.54
1:D:4186:ALA:C	1:D:4188:ARG:HH22	2.14	0.54
1:C:2244:ARG:NH1	1:C:3858:MET:HE3	2.22	0.54
1:C:2765:LYS:NZ	1:C:2859:PRO:O	2.39	0.54
1:B:196:MET:N	1:B:196:MET:HE3	2.23	0.54
1:B:2244:ARG:NH1	1:B:3858:MET:HE3	2.23	0.54
1:B:2310:CYS:HB3	1:B:2313:LEU:HB2	1.88	0.54
1:B:2765:LYS:NZ	1:B:2859:PRO:O	2.39	0.54
1:B:3377:GLU:HA	1:B:3380:ARG:HG2	1.88	0.54
1:B:4186:ALA:C	1:B:4188:ARG:HH22	2.14	0.54
1:D:2244:ARG:NH1	1:D:3858:MET:HE3	2.22	0.54
1:D:3271:GLU:OE2	1:D:3337:ARG:NH2	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:950:LEU:HD12	1:C:970:LEU:HD22	1.88	0.54
1:C:2165:LEU:HB2	1:C:2178:MET:HE2	1.89	0.54
1:C:3377:GLU:HA	1:C:3380:ARG:HG2	1.88	0.54
1:C:3563:VAL:HA	1:C:3569:LEU:HD23	1.90	0.54
1:B:571:SER:OG	1:B:573:GLU:OE1	2.19	0.54
1:B:3550:ARG:NE	1:B:3597:GLN:OE1	2.41	0.54
1:D:1062:GLN:NE2	1:D:1064:GLU:OE1	2.32	0.54
1:C:993:HIS:NE2	1:C:1022:VAL:O	2.39	0.54
1:A:993:HIS:NE2	1:A:1022:VAL:O	2.39	0.54
1:A:2210:VAL:O	1:A:2214:VAL:HG23	2.07	0.54
1:A:4821:LYS:CD	1:A:4821:LYS:H	2.20	0.54
1:B:984:LEU:HD11	1:B:1055:PRO:HA	1.88	0.54
1:B:1154:ASP:OD1	1:B:1156:THR:OG1	2.25	0.54
1:B:2449:GLU:OE1	1:B:2449:GLU:N	2.24	0.54
1:B:2736:ASP:OD1	1:B:2736:ASP:N	2.41	0.54
1:D:3563:VAL:HA	1:D:3569:LEU:HD23	1.90	0.54
1:C:2875:ALA:HB2	1:C:2927:LEU:HD22	1.90	0.54
1:A:2871:LEU:HD11	1:A:2937:VAL:HG23	1.89	0.54
1:B:1031:THR:O	1:B:1035:ASN:ND2	2.36	0.54
1:B:2736:ASP:O	1:B:2738:ARG:NH1	2.41	0.54
1:B:5034:ASP:N	1:B:5034:ASP:OD1	2.32	0.54
1:D:293:LEU:HD13	1:D:378:LEU:HD12	1.89	0.54
1:D:2638:LYS:HA	1:D:2698:MET:HE3	1.89	0.54
1:C:196:MET:N	1:C:196:MET:HE3	2.23	0.54
1:C:4006:ASP:N	1:C:4006:ASP:OD1	2.41	0.54
1:A:2736:ASP:OD1	1:A:2736:ASP:N	2.41	0.54
1:A:3563:VAL:HA	1:A:3569:LEU:HD23	1.90	0.54
1:A:4186:ALA:O	1:A:4188:ARG:NH2	2.38	0.54
1:D:4938:ASP:OD1	1:C:4944:ARG:NH2	2.41	0.54
1:B:384:MET:SD	1:B:384:MET:N	2.75	0.54
1:B:1996:ARG:NH2	1:B:1999:ARG:HE	2.03	0.54
1:B:4006:ASP:OD1	1:B:4006:ASP:N	2.40	0.54
1:B:4904:PRO:HB3	1:B:4913:ARG:HG2	1.88	0.54
1:D:3531:ASP:O	1:D:3535:LEU:HG	2.07	0.54
1:C:4039:MET:SD	1:C:4042:ARG:NH2	2.81	0.54
1:A:2638:LYS:HA	1:A:2698:MET:HE3	1.89	0.54
1:A:3768:SER:HA	1:A:3771:HIS:CD2	2.43	0.54
1:B:993:HIS:NE2	1:B:1022:VAL:O	2.39	0.54
1:B:3531:ASP:O	1:B:3535:LEU:HG	2.07	0.54
1:D:4039:MET:SD	1:D:4042:ARG:NH2	2.81	0.54
1:C:1977:TYR:CZ	1:C:1981:MET:HE3	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3201:MET:HE3	1:C:3203:VAL:HG22	1.90	0.54
1:A:2967:MET:O	1:A:2970:SER:OG	2.19	0.54
1:A:3550:ARG:NE	1:A:3597:GLN:OE1	2.41	0.54
1:A:3719:ASP:H	1:A:3793:MET:HE3	1.73	0.54
1:A:4039:MET:SD	1:A:4042:ARG:NH2	2.81	0.54
1:B:3768:SER:HA	1:B:3771:HIS:CD2	2.43	0.54
1:D:2871:LEU:HD11	1:D:2937:VAL:HG23	1.88	0.54
1:A:196:MET:HE3	1:A:196:MET:N	2.23	0.53
1:A:384:MET:SD	1:A:384:MET:N	2.75	0.53
1:A:2751:LEU:O	1:A:2755:ILE:HG12	2.09	0.53
1:A:3201:MET:HE3	1:A:3203:VAL:HG22	1.90	0.53
1:A:3840:SER:OG	1:A:3877:ASP:OD1	2.24	0.53
1:B:4944:ARG:NH2	1:C:4938:ASP:OD1	2.40	0.53
1:D:2291:GLN:OE1	1:D:2292:GLU:N	2.31	0.53
1:D:2751:LEU:O	1:D:2755:ILE:HG12	2.09	0.53
1:D:3768:SER:HA	1:D:3771:HIS:CD2	2.43	0.53
1:C:1068:ARG:HH21	1:C:1071:ARG:HG3	1.73	0.53
1:C:1820:ARG:HA	1:C:1820:ARG:CZ	2.39	0.53
1:C:2638:LYS:HA	1:C:2698:MET:HE3	1.89	0.53
1:C:2736:ASP:O	1:C:2738:ARG:NH1	2.41	0.53
1:B:2875:ALA:HB2	1:B:2927:LEU:HD22	1.90	0.53
1:D:1116:GLY:HA3	1:D:1132:TRP:HB3	1.90	0.53
1:D:2736:ASP:O	1:D:2738:ARG:NH1	2.41	0.53
1:D:2827:ARG:NH2	1:D:2935:TYR:OH	2.42	0.53
1:D:2875:ALA:HB2	1:D:2927:LEU:HD22	1.90	0.53
1:B:293:LEU:HD13	1:B:378:LEU:HD12	1.89	0.53
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.37	0.53
1:C:2210:VAL:O	1:C:2214:VAL:HG23	2.07	0.53
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.37	0.53
1:A:1116:GLY:HA3	1:A:1132:TRP:HB3	1.90	0.53
1:A:2827:ARG:NH2	1:A:2935:TYR:OH	2.42	0.53
1:A:2924:GLN:O	1:A:2928:LYS:HG2	2.09	0.53
1:A:3822:ASP:OD1	1:A:3823:LYS:NZ	2.39	0.53
1:B:1820:ARG:CZ	1:B:1820:ARG:HA	2.38	0.53
1:B:2827:ARG:NH2	1:B:2935:TYR:OH	2.42	0.53
1:D:196:MET:N	1:D:196:MET:HE3	2.23	0.53
1:D:993:HIS:NE2	1:D:1022:VAL:O	2.39	0.53
1:D:1820:ARG:CZ	1:D:1820:ARG:HA	2.39	0.53
1:D:1947:CYS:SG	1:D:2127:GLN:NE2	2.76	0.53
1:D:2924:GLN:O	1:D:2928:LYS:HG2	2.09	0.53
1:C:23:GLN:NE2	1:C:203:ASN:OD1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:921:ASN:HB3	1:C:924:MET:HE2	1.90	0.53
1:A:2736:ASP:O	1:A:2738:ARG:NH1	2.41	0.53
1:A:3110:LEU:HD23	1:A:3183:VAL:HG22	1.91	0.53
1:A:3531:ASP:O	1:A:3535:LEU:HG	2.07	0.53
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.91	0.53
1:B:3201:MET:HE3	1:B:3203:VAL:HG22	1.90	0.53
1:B:3384:LYS:HD2	1:B:3386:GLU:HB3	1.91	0.53
1:B:3719:ASP:H	1:B:3793:MET:HE3	1.73	0.53
1:B:4039:MET:SD	1:B:4042:ARG:NH2	2.81	0.53
1:D:921:ASN:HB3	1:D:924:MET:HE2	1.90	0.53
1:D:2194:HIS:O	1:D:2198:MET:HE2	2.09	0.53
1:C:293:LEU:HD13	1:C:378:LEU:HD12	1.89	0.53
1:A:2194:HIS:O	1:A:2198:MET:HE2	2.09	0.53
1:A:3384:LYS:HD2	1:A:3386:GLU:HB3	1.91	0.53
1:B:866:HIS:CG	1:B:941:MET:HE3	2.44	0.53
1:B:1977:TYR:CZ	1:B:1981:MET:HE3	2.43	0.53
1:B:2873:ALA:O	1:B:2876:GLU:HG3	2.09	0.53
1:D:2210:VAL:O	1:D:2214:VAL:HG23	2.07	0.53
1:D:3201:MET:HE3	1:D:3203:VAL:HG22	1.90	0.53
1:D:3550:ARG:NE	1:D:3597:GLN:OE1	2.41	0.53
1:D:4006:ASP:N	1:D:4006:ASP:OD1	2.40	0.53
1:C:4686:LEU:HD12	1:C:4690:GLU:HG3	1.91	0.53
1:A:23:GLN:NE2	1:A:203:ASN:OD1	2.41	0.53
1:B:3563:VAL:HA	1:B:3569:LEU:HD23	1.90	0.53
1:B:4759:ASP:O	1:B:4761:PRO:HD3	2.08	0.53
1:C:257:ARG:O	1:C:284:HIS:NE2	2.31	0.53
1:C:2827:ARG:NH2	1:C:2935:TYR:OH	2.42	0.53
1:C:3768:SER:HA	1:C:3771:HIS:CD2	2.43	0.53
1:C:3771:HIS:O	1:C:3815:LYS:NZ	2.38	0.53
1:A:293:LEU:HD13	1:A:378:LEU:HD12	1.89	0.53
1:A:1977:TYR:CZ	1:A:1981:MET:HE3	2.43	0.53
1:A:4818:MET:N	1:A:4818:MET:SD	2.82	0.53
1:B:2751:LEU:O	1:B:2755:ILE:HG12	2.09	0.53
1:B:3110:LEU:HD23	1:B:3183:VAL:HG22	1.91	0.53
1:B:3771:HIS:O	1:B:3815:LYS:NZ	2.38	0.53
1:B:4818:MET:N	1:B:4818:MET:SD	2.82	0.53
1:D:2873:ALA:O	1:D:2876:GLU:HG3	2.09	0.53
1:D:4759:ASP:O	1:D:4761:PRO:HD3	2.08	0.53
1:C:866:HIS:CG	1:C:941:MET:HE3	2.44	0.53
1:C:3840:SER:OG	1:C:3877:ASP:OD1	2.24	0.53
1:A:1820:ARG:HA	1:A:1820:ARG:CZ	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2293:GLN:OE1	1:A:2293:GLN:N	2.29	0.53
1:B:2661:TRP:HB3	1:B:2664:PHE:HB2	1.91	0.53
1:B:4686:LEU:HD12	1:B:4690:GLU:HG3	1.91	0.53
1:D:1977:TYR:CZ	1:D:1981:MET:HE3	2.43	0.53
1:C:1116:GLY:HA3	1:C:1132:TRP:HB3	1.90	0.53
1:C:4818:MET:SD	1:C:4818:MET:N	2.82	0.53
1:B:1116:GLY:HA3	1:B:1132:TRP:HB3	1.90	0.53
1:D:866:HIS:CG	1:D:941:MET:HE3	2.44	0.53
1:D:960:MET:HG3	1:D:961:MET:O	2.09	0.53
1:C:349:GLN:HB2	1:C:356:TRP:CZ3	2.44	0.53
1:C:2736:ASP:OD1	1:C:2736:ASP:N	2.41	0.53
1:C:2924:GLN:O	1:C:2928:LYS:HG2	2.09	0.53
1:C:3719:ASP:H	1:C:3793:MET:HE3	1.73	0.53
1:C:4759:ASP:O	1:C:4761:PRO:HD3	2.08	0.53
1:A:2986:VAL:HG22	1:A:2988:LYS:H	1.74	0.52
1:A:4759:ASP:O	1:A:4761:PRO:HD3	2.08	0.52
1:B:4627:MET:HE1	1:B:4629:TYR:CE2	2.45	0.52
1:D:23:GLN:NE2	1:D:203:ASN:OD1	2.41	0.52
1:D:3840:SER:OG	1:D:3877:ASP:OD1	2.24	0.52
1:D:4627:MET:HE1	1:D:4629:TYR:CE2	2.45	0.52
1:D:4818:MET:N	1:D:4818:MET:SD	2.82	0.52
1:C:2194:HIS:O	1:C:2198:MET:HE2	2.09	0.52
1:C:2641:LEU:HD12	1:C:2698:MET:HE1	1.91	0.52
1:C:2751:LEU:O	1:C:2755:ILE:HG12	2.08	0.52
1:C:3110:LEU:HD23	1:C:3183:VAL:HG22	1.91	0.52
1:C:4241:THR:HG22	1:C:4245:MET:HE3	1.91	0.52
1:C:4627:MET:HE1	1:C:4629:TYR:CE2	2.45	0.52
1:A:960:MET:HG3	1:A:961:MET:O	2.09	0.52
1:A:2694:GLU:HG2	1:A:2697:ARG:HH22	1.75	0.52
1:A:2875:ALA:HB2	1:A:2927:LEU:HD22	1.90	0.52
1:B:257:ARG:O	1:B:284:HIS:NE2	2.31	0.52
1:D:349:GLN:HB2	1:D:356:TRP:CZ3	2.45	0.52
1:D:3719:ASP:H	1:D:3793:MET:HE3	1.73	0.52
1:A:684:VAL:HG22	1:A:781:VAL:HG12	1.92	0.52
1:A:4241:THR:HG22	1:A:4245:MET:HE3	1.91	0.52
1:B:1068:ARG:HH21	1:B:1071:ARG:HG3	1.73	0.52
1:D:1068:ARG:HH21	1:D:1071:ARG:HG3	1.74	0.52
1:D:4686:LEU:HD12	1:D:4690:GLU:HG3	1.91	0.52
1:C:2873:ALA:O	1:C:2876:GLU:HG3	2.09	0.52
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.91	0.52
1:A:3811:GLU:OE1	1:A:3811:GLU:N	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4627:MET:HE1	1:A:4629:TYR:CE2	2.45	0.52
1:A:4944:ARG:NH2	1:B:4938:ASP:OD1	2.42	0.52
1:B:960:MET:HG3	1:B:961:MET:O	2.09	0.52
1:D:2736:ASP:OD1	1:D:2736:ASP:N	2.41	0.52
1:D:3110:LEU:HD23	1:D:3183:VAL:HG22	1.91	0.52
1:D:4241:THR:HG22	1:D:4245:MET:HE3	1.91	0.52
1:C:960:MET:HG3	1:C:961:MET:O	2.09	0.52
1:A:349:GLN:HB2	1:A:356:TRP:CZ3	2.45	0.52
1:A:4686:LEU:HD12	1:A:4690:GLU:HG3	1.91	0.52
1:A:4745:LEU:H	1:A:4745:LEU:HD12	1.73	0.52
1:B:23:GLN:NE2	1:B:203:ASN:OD1	2.41	0.52
1:B:349:GLN:HB2	1:B:356:TRP:CZ3	2.44	0.52
1:B:2641:LEU:HD12	1:B:2698:MET:HE1	1.91	0.52
1:D:684:VAL:HG22	1:D:781:VAL:HG12	1.92	0.52
1:B:921:ASN:HB3	1:B:924:MET:HE2	1.90	0.52
1:B:2694:GLU:HG2	1:B:2697:ARG:HH22	1.75	0.52
1:C:3709:ALA:HB2	1:C:3782:MET:HE2	1.91	0.52
1:A:866:HIS:CG	1:A:941:MET:HE3	2.44	0.52
1:A:2449:GLU:OE1	1:A:2449:GLU:N	2.24	0.52
1:A:2661:TRP:HB3	1:A:2664:PHE:HB2	1.91	0.52
1:A:2873:ALA:O	1:A:2876:GLU:HG3	2.09	0.52
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.91	0.52
1:D:2986:VAL:HG22	1:D:2988:LYS:H	1.74	0.52
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.91	0.52
2:F:11:ASP:OD2	2:F:12:GLY:N	2.43	0.52
1:B:684:VAL:HG22	1:B:781:VAL:HG12	1.92	0.52
1:B:4745:LEU:H	1:B:4745:LEU:HD12	1.73	0.52
1:D:228:ASP:OD1	1:D:228:ASP:N	2.43	0.52
1:D:3384:LYS:HD2	1:D:3386:GLU:HB3	1.91	0.52
1:D:3709:ALA:HB2	1:D:3782:MET:HE2	1.91	0.52
1:C:2967:MET:O	1:C:2970:SER:OG	2.19	0.52
1:C:4754:ASN:HB3	1:C:4756:ARG:HH21	1.75	0.52
1:A:1068:ARG:HH21	1:A:1071:ARG:HG3	1.73	0.52
1:B:2924:GLN:O	1:B:2928:LYS:HG2	2.09	0.52
1:D:1057:ASP:OD2	1:D:1057:ASP:N	2.43	0.52
1:D:2661:TRP:HB3	1:D:2664:PHE:HB2	1.91	0.52
1:D:4754:ASN:HB3	1:D:4756:ARG:HH21	1.75	0.52
1:A:921:ASN:HB3	1:A:924:MET:HE2	1.90	0.52
1:A:3226:GLU:C	1:A:3228:ALA:H	2.18	0.52
1:B:195:PHE:C	1:B:196:MET:HE3	2.35	0.52
1:B:2194:HIS:O	1:B:2198:MET:HE2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2986:VAL:HG22	1:B:2988:LYS:H	1.74	0.52
1:B:3709:ALA:HB2	1:B:3782:MET:HE2	1.91	0.52
1:D:2694:GLU:HG2	1:D:2697:ARG:HH22	1.75	0.52
1:D:3382:GLU:OE2	1:D:3382:GLU:N	2.34	0.52
1:C:195:PHE:C	1:C:196:MET:HE3	2.35	0.52
2:G:2:VAL:HG11	2:G:61:GLU:HB2	1.92	0.51
1:B:182:LEU:HB3	1:B:198:THR:HG21	1.92	0.51
1:B:4241:THR:HG22	1:B:4245:MET:HE3	1.91	0.51
1:D:3130:THR:HA	1:D:3133:THR:HG22	1.91	0.51
1:C:2739:PRO:HG3	1:C:2888:ARG:HG2	1.92	0.51
1:C:4745:LEU:HD12	1:C:4745:LEU:H	1.73	0.51
1:A:195:PHE:C	1:A:196:MET:HE3	2.35	0.51
1:B:1289:LEU:HD12	1:B:1562:ILE:HD11	1.92	0.51
1:B:3811:GLU:OE1	1:B:3811:GLU:N	2.27	0.51
1:C:182:LEU:HB3	1:C:198:THR:HG21	1.92	0.51
1:C:684:VAL:HG22	1:C:781:VAL:HG12	1.92	0.51
1:C:3384:LYS:HD2	1:C:3386:GLU:HB3	1.91	0.51
1:A:2765:LYS:NZ	1:A:2859:PRO:O	2.39	0.51
1:B:2704:CYS:O	1:B:3008:GLN:NE2	2.44	0.51
1:D:195:PHE:C	1:D:196:MET:HE3	2.35	0.51
1:D:359:TYR:CZ	1:D:383:HIS:HD2	2.29	0.51
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.19	0.51
1:D:4570:ALA:O	1:D:4574:ASN:ND2	2.41	0.51
1:C:2615:ARG:HB2	1:C:2618:MET:HE3	1.93	0.51
1:C:2694:GLU:HG2	1:C:2697:ARG:HH22	1.75	0.51
1:A:2641:LEU:HD12	1:A:2698:MET:HE1	1.91	0.51
1:A:4754:ASN:HB3	1:A:4756:ARG:HH21	1.75	0.51
1:B:4754:ASN:HB3	1:B:4756:ARG:HH21	1.75	0.51
1:D:961:MET:HG2	1:D:962:SER:N	2.25	0.51
1:D:1861:GLN:O	1:D:1865:MET:HE3	2.10	0.51
1:D:2690:LYS:HD3	1:D:2691:TYR:N	2.26	0.51
1:D:2739:PRO:HG3	1:D:2888:ARG:HG2	1.92	0.51
1:C:228:ASP:OD1	1:C:228:ASP:N	2.43	0.51
1:C:2293:GLN:OE1	1:C:2293:GLN:N	2.29	0.51
1:C:3550:ARG:NE	1:C:3597:GLN:OE1	2.41	0.51
1:C:3751:VAL:HG23	1:C:3755:GLU:HG2	1.93	0.51
1:A:3235:SER:OG	1:A:3237:GLU:OE1	2.29	0.51
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.84	0.51
1:C:359:TYR:CZ	1:C:383:HIS:HD2	2.29	0.51
1:C:990:GLU:HG3	1:C:1025:ARG:NH1	2.25	0.51
1:C:3235:SER:OG	1:C:3237:GLU:OE1	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1289:LEU:HD12	1:A:1562:ILE:HD11	1.92	0.51
1:B:3751:VAL:HG23	1:B:3755:GLU:HG2	1.93	0.51
1:C:1057:ASP:OD2	1:C:1057:ASP:N	2.43	0.51
1:B:1847:THR:O	1:B:1851:MET:HG3	2.11	0.51
1:D:1847:THR:O	1:D:1851:MET:HG3	2.11	0.51
1:D:2641:LEU:HD12	1:D:2698:MET:HE1	1.91	0.51
1:D:4745:LEU:H	1:D:4745:LEU:HD12	1.73	0.51
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.84	0.51
1:A:1861:GLN:O	1:A:1865:MET:HE3	2.10	0.51
1:A:2615:ARG:HB2	1:A:2618:MET:HE3	1.93	0.51
1:A:3130:THR:HA	1:A:3133:THR:HG22	1.91	0.51
1:A:4902:GLU:O	1:A:4913:ARG:NH2	2.37	0.51
1:B:990:GLU:HG3	1:B:1025:ARG:NH1	2.26	0.51
1:B:3130:THR:HA	1:B:3133:THR:HG22	1.91	0.51
1:D:633:LEU:HD13	1:D:1639:LEU:HD21	1.93	0.51
1:C:1847:THR:O	1:C:1851:MET:HG3	2.11	0.51
1:C:2660:GLY:HA3	1:C:2666:VAL:HG22	1.92	0.51
1:A:228:ASP:OD1	1:A:228:ASP:N	2.43	0.51
1:A:1847:THR:O	1:A:1851:MET:HG3	2.11	0.51
1:B:228:ASP:OD1	1:B:228:ASP:N	2.43	0.51
1:B:883:ALA:HB1	1:B:907:LEU:HD12	1.93	0.51
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	2.19	0.51
1:B:1861:GLN:O	1:B:1865:MET:HE3	2.10	0.51
1:B:3226:GLU:C	1:B:3228:ALA:H	2.18	0.51
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.84	0.51
1:C:2690:LYS:HD3	1:C:2691:TYR:N	2.26	0.51
1:C:2986:VAL:HG22	1:C:2988:LYS:H	1.74	0.51
1:A:2173:GLN:OE1	1:A:2173:GLN:N	2.27	0.51
1:A:3709:ALA:HB2	1:A:3782:MET:HE2	1.91	0.51
2:H:11:ASP:OD2	2:H:12:GLY:N	2.44	0.51
1:B:1024:TYR:HB3	1:B:1025:ARG:NH1	2.26	0.51
1:B:2660:GLY:HA3	1:B:2666:VAL:HG22	1.92	0.51
1:D:1289:LEU:HD12	1:D:1562:ILE:HD11	1.92	0.51
1:D:3235:SER:OG	1:D:3237:GLU:OE1	2.29	0.51
1:C:1861:GLN:O	1:C:1865:MET:HE3	2.10	0.51
1:A:182:LEU:HB3	1:A:198:THR:HG21	1.92	0.50
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.84	0.50
1:A:2704:CYS:O	1:A:3008:GLN:NE2	2.44	0.50
1:A:4570:ALA:O	1:A:4574:ASN:ND2	2.41	0.50
1:D:990:GLU:HG3	1:D:1025:ARG:NH1	2.26	0.50
1:D:2660:GLY:HA3	1:D:2666:VAL:HG22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2704:CYS:O	1:C:3008:GLN:NE2	2.44	0.50
1:C:3130:THR:HA	1:C:3133:THR:HG22	1.91	0.50
1:C:3226:GLU:C	1:C:3228:ALA:H	2.18	0.50
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.93	0.50
1:A:2660:GLY:HA3	1:A:2666:VAL:HG22	1.92	0.50
1:A:2739:PRO:HG3	1:A:2888:ARG:HG2	1.92	0.50
1:A:2858:GLN:HB2	1:A:2859:PRO:HD3	1.94	0.50
1:B:359:TYR:CZ	1:B:383:HIS:HD2	2.29	0.50
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.44	0.50
1:D:943:ASP:OD2	1:D:945:LYS:NZ	2.42	0.50
1:D:3226:GLU:C	1:D:3228:ALA:H	2.18	0.50
1:D:4902:GLU:O	1:D:4913:ARG:NH2	2.37	0.50
1:D:4967:TYR:OH	1:D:5033:GLU:OE2	2.24	0.50
1:C:1252:HIS:O	1:C:1275:ARG:NH1	2.45	0.50
1:C:2661:TRP:HB3	1:C:2664:PHE:HB2	1.91	0.50
1:C:4687:TYR:O	1:C:4691:GLN:NE2	2.45	0.50
1:A:633:LEU:HD13	1:A:1639:LEU:HD21	1.93	0.50
1:A:2690:LYS:HD3	1:A:2691:TYR:N	2.26	0.50
1:A:3765:TYR:CE2	1:A:4753:HIS:HA	2.46	0.50
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.44	0.50
1:A:4934:GLY:HA3	1:D:4937:ILE:CD1	2.39	0.50
1:B:2858:GLN:HB2	1:B:2859:PRO:HD3	1.94	0.50
1:B:4968:PHE:O	1:B:4974:GLY:HA3	2.12	0.50
1:C:2858:GLN:HB2	1:C:2859:PRO:HD3	1.93	0.50
1:A:359:TYR:CZ	1:A:383:HIS:HD2	2.29	0.50
1:A:883:ALA:HB1	1:A:907:LEU:HD12	1.93	0.50
1:A:1252:HIS:O	1:A:1275:ARG:NH1	2.45	0.50
2:G:11:ASP:OD2	2:G:12:GLY:N	2.45	0.50
1:B:872:GLU:HG2	1:B:922:LEU:HD11	1.94	0.50
1:B:1726:SER:O	1:B:1729:SER:OG	2.30	0.50
1:B:2615:ARG:HB2	1:B:2618:MET:HE3	1.93	0.50
1:B:3840:SER:OG	1:B:3877:ASP:OD1	2.24	0.50
1:D:182:LEU:HB3	1:D:198:THR:HG21	1.92	0.50
1:D:864:PRO:HB2	1:D:866:HIS:CD2	2.47	0.50
1:A:990:GLU:HG3	1:A:1025:ARG:NH1	2.26	0.50
1:B:3235:SER:OG	1:B:3237:GLU:OE1	2.29	0.50
1:D:3751:VAL:HG23	1:D:3755:GLU:HG2	1.93	0.50
1:D:3765:TYR:CE2	1:D:4753:HIS:HA	2.47	0.50
1:C:2907:PRO:O	1:C:2910:THR:OG1	2.29	0.50
1:A:864:PRO:HB2	1:A:866:HIS:CD2	2.47	0.50
1:A:2102:VAL:HG13	1:A:2120:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3182:TYR:HA	1:A:3185:LYS:HE3	1.94	0.50
1:A:4687:TYR:O	1:A:4691:GLN:NE2	2.45	0.50
1:A:4968:PHE:O	1:A:4974:GLY:HA3	2.12	0.50
1:B:864:PRO:HB2	1:B:866:HIS:CD2	2.47	0.50
1:B:2410:PRO:HB3	1:B:2415:ARG:HB3	1.93	0.50
1:B:2739:PRO:HG3	1:B:2888:ARG:HG2	1.92	0.50
1:B:3261:ALA:HB3	1:B:3266:MET:HE2	1.94	0.50
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.94	0.50
1:D:883:ALA:HB1	1:D:907:LEU:HD12	1.93	0.50
1:D:1252:HIS:O	1:D:1275:ARG:NH1	2.45	0.50
1:D:3105:LYS:O	1:D:3108:GLU:HG3	2.12	0.50
1:D:4687:TYR:O	1:D:4691:GLN:NE2	2.45	0.50
1:D:5013:MET:HE1	1:D:5020:ASP:HB2	1.93	0.50
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.93	0.50
1:C:864:PRO:HB2	1:C:866:HIS:CD2	2.47	0.50
1:A:1024:TYR:HB3	1:A:1025:ARG:NH1	2.26	0.50
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.12	0.50
1:B:633:LEU:HD13	1:B:1639:LEU:HD21	1.93	0.50
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.93	0.50
1:B:3765:TYR:CE2	1:B:4753:HIS:HA	2.47	0.50
1:B:4630:TYR:HH	1:C:4860:ARG:NH1	2.08	0.50
1:D:2704:CYS:O	1:D:3008:GLN:NE2	2.44	0.50
1:D:3182:TYR:HA	1:D:3185:LYS:HE3	1.94	0.50
1:C:872:GLU:HG2	1:C:922:LEU:HD11	1.94	0.50
1:C:943:ASP:OD2	1:C:945:LYS:NZ	2.42	0.50
1:C:1031:THR:HG22	1:C:1035:ASN:HD21	1.77	0.50
1:C:5013:MET:HE1	1:C:5020:ASP:HB2	1.93	0.50
1:A:2967:MET:O	1:A:2971:GLN:HG2	2.12	0.50
1:A:3261:ALA:HB3	1:A:3266:MET:HE2	1.94	0.50
1:A:3751:VAL:HG23	1:A:3755:GLU:HG2	1.93	0.50
2:E:18:ARG:NE	2:E:51:GLY:HA3	2.27	0.50
1:B:2967:MET:O	1:B:2971:GLN:HG2	2.12	0.50
1:B:3955:MET:HE3	1:B:4015:GLU:HG2	1.94	0.50
1:B:5013:MET:HE1	1:B:5020:ASP:HB2	1.93	0.50
1:D:2587:TYR:O	1:D:2590:SER:OG	2.24	0.50
1:D:2765:LYS:NZ	1:D:2859:PRO:O	2.39	0.50
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.44	0.50
1:D:4689:THR:OG1	1:D:4690:GLU:OE1	2.26	0.50
1:C:883:ALA:HB1	1:C:907:LEU:HD12	1.93	0.50
1:C:1024:TYR:HB3	1:C:1025:ARG:NH1	2.26	0.50
1:C:2102:VAL:HG13	1:C:2120:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3955:MET:HE3	1:C:4015:GLU:HG2	1.94	0.50
1:D:2102:VAL:HG13	1:D:2120:MET:HB2	1.93	0.50
1:D:2632:ILE:HD12	1:D:2633:LEU:N	2.27	0.50
1:C:975:VAL:HG12	1:C:1044:ARG:HH11	1.77	0.50
1:C:1289:LEU:HD12	1:C:1562:ILE:HD11	1.92	0.50
1:C:2173:GLN:OE1	1:C:2173:GLN:N	2.27	0.50
1:C:2632:ILE:HD12	1:C:2633:LEU:N	2.27	0.50
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.44	0.50
1:B:943:ASP:OD2	1:B:945:LYS:NZ	2.42	0.49
1:B:1057:ASP:OD2	1:B:1057:ASP:N	2.43	0.49
1:B:3182:TYR:HA	1:B:3185:LYS:HE3	1.94	0.49
1:D:1024:TYR:HB3	1:D:1025:ARG:NH1	2.26	0.49
1:D:1031:THR:HG22	1:D:1035:ASN:HD21	1.77	0.49
1:D:2173:GLN:OE1	1:D:2173:GLN:N	2.27	0.49
1:D:3880:PHE:HA	1:D:3883:ASP:OD2	2.12	0.49
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.12	0.49
1:C:3946:GLN:OE1	1:C:3949:ARG:NH1	2.30	0.49
2:E:2:VAL:HG11	2:E:61:GLU:HB2	1.93	0.49
1:B:4821:LYS:H	1:B:4821:LYS:HD3	1.77	0.49
1:D:2588:ARG:HH21	1:D:2589:LEU:HD23	1.78	0.49
1:D:2967:MET:O	1:D:2970:SER:OG	2.19	0.49
1:D:3822:ASP:OD1	1:D:3823:LYS:NZ	2.39	0.49
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.13	0.49
1:C:2386:ILE:O	1:C:2393:ASP:HB2	2.12	0.49
1:C:2588:ARG:HH21	1:C:2589:LEU:HD23	1.78	0.49
1:A:961:MET:HG2	1:A:962:SER:N	2.24	0.49
1:A:975:VAL:HG12	1:A:1044:ARG:HH11	1.77	0.49
1:A:2410:PRO:HB3	1:A:2415:ARG:HB3	1.93	0.49
1:A:3771:HIS:O	1:A:3815:LYS:NZ	2.38	0.49
1:A:3959:LYS:NZ	1:A:4022:ASP:OD2	2.43	0.49
1:A:4818:MET:O	1:A:4824:ARG:NH1	2.46	0.49
1:B:975:VAL:HG12	1:B:1044:ARG:HH11	1.77	0.49
1:B:3880:PHE:HA	1:B:3883:ASP:OD2	2.12	0.49
1:D:2615:ARG:HB2	1:D:2618:MET:HE3	1.93	0.49
1:D:2858:GLN:HB2	1:D:2859:PRO:HD3	1.94	0.49
1:D:3955:MET:HE3	1:D:4015:GLU:HG2	1.94	0.49
1:C:1947:CYS:SG	1:C:2127:GLN:NE2	2.76	0.49
1:C:2449:GLU:OE1	1:C:2449:GLU:N	2.24	0.49
1:A:2419:GLY:C	1:A:2423:MET:HE3	2.38	0.49
1:A:3862:ASP:OD1	1:A:3862:ASP:N	2.46	0.49
2:E:49:MET:HG2	2:E:52:LYS:HG2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:2:VAL:HG11	2:F:61:GLU:HB2	1.94	0.49
1:D:257:ARG:O	1:D:284:HIS:NE2	2.31	0.49
1:D:1447:CYS:HB3	1:D:1555:LEU:HB3	1.94	0.49
1:D:2419:GLY:C	1:D:2423:MET:HE3	2.38	0.49
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.12	0.49
1:C:2244:ARG:HH12	1:C:3858:MET:HE3	1.78	0.49
1:C:2440:MET:HA	1:C:2440:MET:HE2	1.94	0.49
1:C:3261:ALA:HB3	1:C:3266:MET:HE2	1.94	0.49
1:C:3453:ARG:NH1	1:C:3453:ARG:HA	2.28	0.49
1:A:872:GLU:HG2	1:A:922:LEU:HD11	1.94	0.49
1:A:3390:GLY:O	1:A:3393:LEU:HD12	2.12	0.49
1:B:2386:ILE:O	1:B:2393:ASP:HB2	2.12	0.49
1:D:2440:MET:HE2	1:D:2440:MET:HA	1.95	0.49
1:D:3261:ALA:HB3	1:D:3266:MET:HE2	1.94	0.49
1:C:3434:LEU:HD23	1:C:3517:MET:HE1	1.95	0.49
1:C:3765:TYR:CE2	1:C:4753:HIS:HA	2.47	0.49
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.13	0.49
1:C:4821:LYS:H	1:C:4821:LYS:HD3	1.77	0.49
1:A:3442:PHE:CD1	1:A:3514:LEU:HD22	2.48	0.49
1:A:3453:ARG:NH1	1:A:3453:ARG:HA	2.28	0.49
1:A:4967:TYR:OH	1:A:5033:GLU:OE2	2.24	0.49
1:B:1252:HIS:O	1:B:1275:ARG:NH1	2.45	0.49
1:B:3183:VAL:O	1:B:3187:ARG:HG3	2.13	0.49
1:D:2386:ILE:O	1:D:2393:ASP:HB2	2.12	0.49
1:D:2967:MET:O	1:D:2971:GLN:HG2	2.12	0.49
1:C:274:LEU:HB3	1:C:339:ILE:HD12	1.95	0.49
1:C:2967:MET:O	1:C:2971:GLN:HG2	2.12	0.49
1:C:3182:TYR:HA	1:C:3185:LYS:HE3	1.94	0.49
1:B:1089:TYR:HD2	1:B:1152:MET:HG2	1.78	0.49
1:B:1447:CYS:HB3	1:B:1555:LEU:HB3	1.94	0.49
1:B:1668:ARG:HG3	1:B:1671:ARG:NH2	2.28	0.49
1:B:2440:MET:HE2	1:B:2440:MET:HA	1.95	0.49
1:B:2690:LYS:HD3	1:B:2691:TYR:N	2.26	0.49
1:B:3105:LYS:O	1:B:3108:GLU:HG3	2.12	0.49
1:B:4687:TYR:O	1:B:4691:GLN:NE2	2.45	0.49
1:D:872:GLU:HG2	1:D:922:LEU:HD11	1.94	0.49
1:D:2907:PRO:O	1:D:2910:THR:OG1	2.29	0.49
1:D:3159:ASP:OD1	1:D:3159:ASP:N	2.45	0.49
1:D:3604:TYR:O	1:D:3607:GLU:HG3	2.13	0.49
1:C:633:LEU:HD13	1:C:1639:LEU:HD21	1.93	0.49
1:C:2410:PRO:HB3	1:C:2415:ARG:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2419:GLY:C	1:C:2423:MET:HE3	2.38	0.49
1:C:3105:LYS:O	1:C:3108:GLU:HG3	2.12	0.49
1:C:3183:VAL:O	1:C:3187:ARG:HG3	2.13	0.49
1:C:4818:MET:O	1:C:4824:ARG:NH1	2.46	0.49
1:A:3288:GLY:HA2	1:A:3303:PRO:HB3	1.94	0.49
1:B:1864:LYS:HE3	1:B:1872:THR:HG22	1.94	0.49
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.12	0.49
1:B:2632:ILE:HD12	1:B:2633:LEU:N	2.27	0.49
1:B:3434:LEU:HD23	1:B:3517:MET:HE1	1.95	0.49
1:B:3535:LEU:O	1:B:3539:ARG:HG2	2.12	0.49
1:B:3862:ASP:N	1:B:3862:ASP:OD1	2.46	0.49
1:D:1864:LYS:HE3	1:D:1872:THR:HG22	1.94	0.49
1:D:3054:VAL:HG12	1:D:3127:GLN:HE22	1.78	0.49
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.13	0.49
1:D:3453:ARG:HA	1:D:3453:ARG:NH1	2.27	0.49
1:D:4818:MET:O	1:D:4824:ARG:NH1	2.46	0.49
1:D:4868:ASP:OD1	1:D:4870:ASP:N	2.46	0.49
1:C:3880:PHE:HA	1:C:3883:ASP:OD2	2.12	0.49
1:C:4570:ALA:O	1:C:4574:ASN:ND2	2.41	0.49
1:A:1031:THR:HG22	1:A:1035:ASN:HD21	1.77	0.49
1:A:1186:ASP:OD2	1:A:1186:ASP:N	2.35	0.49
1:A:2244:ARG:HH12	1:A:3858:MET:HE3	1.78	0.49
1:A:3183:VAL:O	1:A:3187:ARG:HG3	2.13	0.49
1:A:3880:PHE:HA	1:A:3883:ASP:OD2	2.12	0.49
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.13	0.49
1:B:1031:THR:HG22	1:B:1035:ASN:HD21	1.77	0.49
1:B:1286:MET:HE1	1:B:1553:PHE:HB3	1.95	0.49
1:B:2102:VAL:HG13	1:B:2120:MET:HB2	1.94	0.49
1:B:3390:GLY:O	1:B:3393:LEU:HD12	2.12	0.49
1:D:975:VAL:HG12	1:D:1044:ARG:HH11	1.77	0.49
1:D:2330:ARG:HB3	1:D:2330:ARG:NH1	2.28	0.49
1:C:571:SER:OG	1:C:573:GLU:OE1	2.19	0.49
1:C:1286:MET:HE1	1:C:1553:PHE:HB3	1.95	0.49
1:A:1057:ASP:OD2	1:A:1057:ASP:N	2.43	0.49
1:A:2588:ARG:HH21	1:A:2589:LEU:HD23	1.78	0.49
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.13	0.49
1:B:274:LEU:HB3	1:B:339:ILE:HD12	1.95	0.49
1:B:3264:THR:OG1	1:B:3265:GLU:OE1	2.31	0.49
1:B:4570:ALA:O	1:B:4574:ASN:ND2	2.41	0.49
1:B:4818:MET:O	1:B:4824:ARG:NH1	2.46	0.49
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2244:ARG:HH12	1:D:3858:MET:HE3	1.78	0.49
1:D:3208:PRO:HB2	1:D:3237:GLU:HG3	1.95	0.49
1:D:3390:GLY:O	1:D:3393:LEU:HD12	2.12	0.49
1:D:4968:PHE:O	1:D:4974:GLY:HA3	2.12	0.49
1:C:2297:LYS:O	1:C:2300:SER:OG	2.24	0.49
1:C:3390:GLY:O	1:C:3393:LEU:HD12	2.12	0.49
1:C:4968:PHE:O	1:C:4974:GLY:HA3	2.12	0.49
1:A:1089:TYR:HD2	1:A:1152:MET:HG2	1.78	0.48
1:A:1668:ARG:HG3	1:A:1671:ARG:NH2	2.28	0.48
1:A:1864:LYS:HE3	1:A:1872:THR:HG22	1.94	0.48
1:A:2330:ARG:HB3	1:A:2330:ARG:NH1	2.28	0.48
1:A:2632:ILE:HD12	1:A:2633:LEU:N	2.27	0.48
1:A:3159:ASP:OD1	1:A:3159:ASP:N	2.45	0.48
1:B:2588:ARG:HH21	1:B:2589:LEU:HD23	1.78	0.48
1:D:1025:ARG:NE	1:D:1025:ARG:H	2.11	0.48
1:D:1286:MET:HE1	1:D:1553:PHE:HB3	1.95	0.48
1:D:2690:LYS:HA	1:D:2690:LYS:HE2	1.95	0.48
1:D:3288:GLY:HA2	1:D:3303:PRO:HB3	1.94	0.48
1:C:1025:ARG:H	1:C:1025:ARG:NE	2.11	0.48
1:C:1447:CYS:HB3	1:C:1555:LEU:HB3	1.94	0.48
1:C:1820:ARG:HA	1:C:1820:ARG:NE	2.28	0.48
1:B:877:ASN:O	1:B:881:LEU:HG	2.13	0.48
1:B:2757:LYS:O	1:B:2761:TYR:HB2	2.13	0.48
1:D:70:GLU:OE2	1:D:110:ARG:NE	2.33	0.48
1:D:1668:ARG:HG3	1:D:1671:ARG:NH2	2.28	0.48
1:D:3434:LEU:HD23	1:D:3517:MET:HE1	1.95	0.48
1:C:961:MET:HG2	1:C:962:SER:N	2.24	0.48
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.12	0.48
1:A:3955:MET:HE3	1:A:4015:GLU:HG2	1.94	0.48
1:A:5013:MET:HE1	1:A:5020:ASP:HB2	1.93	0.48
2:H:2:VAL:HG11	2:H:61:GLU:HB2	1.95	0.48
2:F:49:MET:HG2	2:F:52:LYS:HG2	1.95	0.48
1:B:2419:GLY:C	1:B:2423:MET:HE3	2.38	0.48
1:D:384:MET:SD	1:D:384:MET:N	2.75	0.48
1:D:2410:PRO:HB3	1:D:2415:ARG:HB3	1.93	0.48
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.96	0.48
1:D:4188:ARG:HG2	1:D:4188:ARG:HH11	1.78	0.48
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.13	0.48
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.96	0.48
1:C:4015:GLU:HA	1:C:4018:ASP:OD2	2.14	0.48
1:A:1260:MET:HE2	1:A:1260:MET:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1820:ARG:HA	1:A:1820:ARG:NE	2.28	0.48
1:A:2198:MET:CG	1:A:2203:MET:HE2	2.43	0.48
1:A:2298:VAL:HG21	1:A:2334:PHE:HE2	1.79	0.48
1:A:2386:ILE:O	1:A:2393:ASP:HB2	2.12	0.48
1:A:2757:LYS:O	1:A:2761:TYR:HB2	2.13	0.48
1:B:961:MET:HG2	1:B:962:SER:N	2.24	0.48
1:B:2293:GLN:OE1	1:B:2293:GLN:N	2.29	0.48
1:B:2298:VAL:HG21	1:B:2334:PHE:HE2	1.79	0.48
1:B:3453:ARG:NH1	1:B:3453:ARG:HA	2.28	0.48
1:B:4868:ASP:OD1	1:B:4870:ASP:N	2.46	0.48
1:D:3183:VAL:O	1:D:3187:ARG:HG3	2.13	0.48
1:D:3261:ALA:HB1	1:D:3265:GLU:HG3	1.96	0.48
1:D:3539:ARG:HH11	1:D:3539:ARG:HA	1.79	0.48
1:C:2330:ARG:HB3	1:C:2330:ARG:NH1	2.28	0.48
1:C:3264:THR:OG1	1:C:3265:GLU:OE1	2.31	0.48
1:A:943:ASP:OD2	1:A:945:LYS:NZ	2.42	0.48
1:A:2440:MET:HE2	1:A:2440:MET:HA	1.95	0.48
1:A:4868:ASP:OD1	1:A:4870:ASP:N	2.46	0.48
2:E:11:ASP:OD2	2:E:12:GLY:N	2.46	0.48
1:B:2330:ARG:NH1	1:B:2330:ARG:HB3	2.28	0.48
1:B:3442:PHE:CD1	1:B:3514:LEU:HD22	2.48	0.48
1:D:1820:ARG:HA	1:D:1820:ARG:NE	2.28	0.48
1:D:4015:GLU:HA	1:D:4018:ASP:OD2	2.14	0.48
1:C:3288:GLY:HA2	1:C:3303:PRO:HB3	1.94	0.48
1:C:3535:LEU:O	1:C:3539:ARG:HG2	2.12	0.48
1:C:3604:TYR:O	1:C:3607:GLU:HG3	2.13	0.48
1:A:3535:LEU:O	1:A:3539:ARG:HG2	2.12	0.48
1:B:1025:ARG:H	1:B:1025:ARG:NE	2.12	0.48
1:B:2907:PRO:O	1:B:2910:THR:OG1	2.29	0.48
1:B:3288:GLY:HA2	1:B:3303:PRO:HB3	1.94	0.48
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.13	0.48
1:B:4188:ARG:HG2	1:B:4188:ARG:HH11	1.78	0.48
1:B:4937:ILE:CD1	1:C:4934:GLY:HA3	2.43	0.48
1:D:2020:ASP:OD1	1:D:2020:ASP:N	2.46	0.48
1:D:2298:VAL:HG21	1:D:2334:PHE:HE2	1.79	0.48
1:D:2967:MET:HE3	1:D:2970:SER:OG	2.14	0.48
1:D:3442:PHE:CD1	1:D:3514:LEU:HD22	2.48	0.48
1:C:1089:TYR:HD2	1:C:1152:MET:HG2	1.78	0.48
1:A:308:HIS:CE1	1:A:310:LYS:HB3	2.49	0.48
1:A:3371:LYS:NZ	1:A:3371:LYS:HB2	2.29	0.48
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4188:ARG:HG2	1:A:4188:ARG:HH11	1.78	0.48
1:B:3959:LYS:NZ	1:B:4022:ASP:OD2	2.43	0.48
1:D:3734:HIS:O	1:D:3736:GLU:HG3	2.14	0.48
1:D:3862:ASP:OD1	1:D:3862:ASP:N	2.46	0.48
1:D:4821:LYS:H	1:D:4821:LYS:HD3	1.77	0.48
1:C:227:MET:HA	1:C:227:MET:HE2	1.96	0.48
1:C:308:HIS:CE1	1:C:310:LYS:HB3	2.49	0.48
1:C:499:THR:HG23	1:C:502:HIS:H	1.79	0.48
1:C:3539:ARG:HA	1:C:3539:ARG:HH11	1.79	0.48
1:A:274:LEU:HB3	1:A:339:ILE:HD12	1.95	0.48
1:A:1447:CYS:HB3	1:A:1555:LEU:HB3	1.94	0.48
1:A:2273:LEU:HG	1:A:2330:ARG:HH12	1.79	0.48
1:A:3261:ALA:HB1	1:A:3265:GLU:HG3	1.95	0.48
1:A:3434:LEU:HD23	1:A:3517:MET:HE1	1.95	0.48
1:A:3604:TYR:O	1:A:3607:GLU:HG3	2.13	0.48
1:B:3208:PRO:HB2	1:B:3237:GLU:HG3	1.95	0.48
1:D:1260:MET:HE2	1:D:1260:MET:HA	1.95	0.48
1:D:2757:LYS:O	1:D:2761:TYR:HB2	2.13	0.48
1:C:1668:ARG:HG3	1:C:1671:ARG:NH2	2.28	0.48
1:C:2690:LYS:HE2	1:C:2690:LYS:HA	1.94	0.48
1:C:2757:LYS:O	1:C:2761:TYR:HB2	2.13	0.48
1:C:3054:VAL:HG12	1:C:3127:GLN:HE22	1.78	0.48
1:C:3261:ALA:HB1	1:C:3265:GLU:HG3	1.96	0.48
1:C:3442:PHE:CD1	1:C:3514:LEU:HD22	2.48	0.48
1:C:4868:ASP:OD1	1:C:4870:ASP:N	2.46	0.48
1:B:2244:ARG:HH12	1:B:3858:MET:HE3	1.78	0.48
1:B:2690:LYS:HE2	1:B:2690:LYS:HA	1.95	0.48
1:B:3371:LYS:HB2	1:B:3371:LYS:NZ	2.29	0.48
1:B:3604:TYR:O	1:B:3607:GLU:HG3	2.13	0.48
1:D:227:MET:HE2	1:D:227:MET:HA	1.96	0.48
1:D:308:HIS:CE1	1:D:310:LYS:HB3	2.49	0.48
1:C:815:VAL:O	1:C:1007:TYR:OH	2.27	0.48
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.49	0.48
1:C:4967:TYR:OH	1:C:5033:GLU:OE2	2.24	0.48
1:A:257:ARG:O	1:A:284:HIS:NE2	2.31	0.48
1:A:399:GLN:O	1:A:403:MET:HG3	2.14	0.48
1:A:1025:ARG:H	1:A:1025:ARG:NE	2.11	0.48
1:A:1286:MET:HE1	1:A:1553:PHE:HB3	1.95	0.48
1:A:1820:ARG:NH2	1:A:1922:LEU:O	2.47	0.48
1:A:2690:LYS:HA	1:A:2690:LYS:HE2	1.95	0.48
1:A:3539:ARG:HH11	1:A:3539:ARG:HA	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4821:LYS:H	1:A:4821:LYS:HD3	1.77	0.48
1:B:1260:MET:HA	1:B:1260:MET:HE2	1.95	0.48
1:B:2587:TYR:O	1:B:2590:SER:OG	2.24	0.48
1:B:3054:VAL:HG12	1:B:3127:GLN:HE22	1.78	0.48
1:B:3260:GLY:HA2	1:B:3325:ASN:ND2	2.29	0.48
1:B:4015:GLU:HA	1:B:4018:ASP:OD2	2.14	0.48
1:D:399:GLN:O	1:D:403:MET:HG3	2.14	0.48
1:D:815:VAL:O	1:D:1007:TYR:OH	2.27	0.48
1:D:2224:ARG:HG2	1:D:2225:PHE:CE2	2.49	0.48
1:C:275:ARG:HD2	1:C:328:LYS:HE2	1.96	0.48
1:C:3208:PRO:HB2	1:C:3237:GLU:HG3	1.95	0.48
1:A:499:THR:HG23	1:A:502:HIS:H	1.79	0.47
1:A:745:SER:HB2	1:A:758:ARG:HB2	1.96	0.47
1:A:2538:THR:HG23	1:A:2541:PHE:H	1.79	0.47
1:A:3054:VAL:HG12	1:A:3127:GLN:HE22	1.78	0.47
1:A:3208:PRO:HB2	1:A:3237:GLU:HG3	1.95	0.47
1:A:3260:GLY:HA2	1:A:3325:ASN:ND2	2.29	0.47
1:A:3623:LEU:O	1:A:3624:LEU:HD23	2.14	0.47
1:A:3734:HIS:O	1:A:3736:GLU:HG3	2.14	0.47
1:B:815:VAL:O	1:B:1007:TYR:OH	2.27	0.47
1:B:2298:VAL:HG21	1:B:2334:PHE:CE2	2.50	0.47
1:D:274:LEU:HB3	1:D:339:ILE:HD12	1.95	0.47
1:D:1089:TYR:HD2	1:D:1152:MET:HG2	1.78	0.47
1:D:1820:ARG:NH2	1:D:1922:LEU:O	2.47	0.47
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.49	0.47
1:D:2912:THR:OG1	1:D:2913:ALA:N	2.47	0.47
1:D:3623:LEU:O	1:D:3624:LEU:HD23	2.14	0.47
1:C:3260:GLY:HA2	1:C:3325:ASN:ND2	2.29	0.47
1:C:3755:GLU:HA	1:C:3758:MET:HB2	1.96	0.47
1:A:866:HIS:CD2	1:A:867:LEU:H	2.30	0.47
1:A:2912:THR:OG1	1:A:2913:ALA:N	2.47	0.47
1:B:499:THR:HG23	1:B:502:HIS:H	1.79	0.47
1:B:1820:ARG:HA	1:B:1820:ARG:NE	2.28	0.47
1:B:2912:THR:OG1	1:B:2913:ALA:N	2.47	0.47
1:B:3705:PHE:HA	1:B:3708:THR:HG22	1.97	0.47
1:D:275:ARG:HD2	1:D:328:LYS:HE2	1.96	0.47
1:D:877:ASN:O	1:D:881:LEU:HG	2.13	0.47
1:D:3593:VAL:O	1:D:3597:GLN:HG2	2.15	0.47
1:C:877:ASN:O	1:C:881:LEU:HG	2.14	0.47
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	2.19	0.47
1:A:877:ASN:O	1:A:881:LEU:HG	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.49	0.47
1:A:2867:LEU:HD21	1:A:2871:LEU:HB3	1.96	0.47
1:B:2198:MET:CG	1:B:2203:MET:HE2	2.43	0.47
1:B:3539:ARG:HA	1:B:3539:ARG:HH11	1.79	0.47
1:D:1726:SER:O	1:D:1729:SER:OG	2.30	0.47
1:C:1864:LYS:HE3	1:C:1872:THR:HG22	1.94	0.47
1:C:2867:LEU:HD21	1:C:2871:LEU:HB3	1.97	0.47
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.96	0.47
1:A:2298:VAL:HG21	1:A:2334:PHE:CE2	2.49	0.47
1:A:2967:MET:HE3	1:A:2970:SER:OG	2.14	0.47
1:A:3723:MET:HE2	1:A:3792:ALA:HB3	1.97	0.47
1:A:4015:GLU:HA	1:A:4018:ASP:OD2	2.14	0.47
1:A:4177:TYR:CE1	1:A:4199:GLU:HG3	2.49	0.47
1:B:308:HIS:CE1	1:B:310:LYS:HB3	2.49	0.47
1:B:399:GLN:O	1:B:403:MET:HG3	2.14	0.47
1:B:835:ARG:NH1	1:B:1093:GLU:OE1	2.48	0.47
1:B:2224:ARG:HG2	1:B:2225:PHE:CE2	2.49	0.47
1:B:2297:LYS:O	1:B:2300:SER:OG	2.24	0.47
1:B:2967:MET:HE3	1:B:2970:SER:OG	2.14	0.47
1:B:3946:GLN:OE1	1:B:3949:ARG:NH1	2.30	0.47
1:D:15:ARG:HH21	1:D:98:HIS:HB2	1.80	0.47
1:D:2302:LEU:HG	1:D:2363:CYS:HB3	1.96	0.47
1:D:3260:GLY:HA2	1:D:3325:ASN:ND2	2.29	0.47
1:D:3717:ASP:OD1	1:D:3717:ASP:N	2.47	0.47
1:D:3946:GLN:OE1	1:D:3949:ARG:NH1	2.30	0.47
1:C:745:SER:HB2	1:C:758:ARG:HB2	1.96	0.47
1:C:2273:LEU:HG	1:C:2330:ARG:HH12	1.79	0.47
1:C:3593:VAL:O	1:C:3597:GLN:HG2	2.14	0.47
1:C:3862:ASP:N	1:C:3862:ASP:OD1	2.46	0.47
1:C:4188:ARG:HH11	1:C:4188:ARG:HG2	1.78	0.47
1:A:15:ARG:HH21	1:A:98:HIS:HB2	1.80	0.47
1:A:747:CYS:HB3	1:A:808:TYR:CE2	2.49	0.47
1:A:2907:PRO:O	1:A:2910:THR:OG1	2.29	0.47
1:A:3263:TYR:N	1:A:3326:ASN:OD1	2.48	0.47
1:B:275:ARG:HD2	1:B:328:LYS:HE2	1.96	0.47
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.96	0.47
1:C:1820:ARG:NH2	1:C:1922:LEU:O	2.47	0.47
1:C:2198:MET:CG	1:C:2203:MET:HE2	2.43	0.47
1:C:2228:MET:HE2	1:C:2228:MET:HB2	1.67	0.47
1:C:2298:VAL:HG21	1:C:2334:PHE:HE2	1.79	0.47
1:A:923:GLN:O	1:A:927:GLU:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:35:LYS:HE2	1:B:636:ASN:HD21	1.79	0.47
1:B:745:SER:HB2	1:B:758:ARG:HB2	1.96	0.47
1:B:2273:LEU:HG	1:B:2330:ARG:HH12	1.79	0.47
1:D:2538:THR:HG23	1:D:2541:PHE:H	1.79	0.47
1:D:2867:LEU:HD21	1:D:2871:LEU:HB3	1.97	0.47
1:C:1186:ASP:OD2	1:C:1186:ASP:N	2.35	0.47
1:C:4177:TYR:CE1	1:C:4199:GLU:HG3	2.50	0.47
1:A:275:ARG:HD2	1:A:328:LYS:HE2	1.96	0.47
1:A:758:ARG:HG2	1:A:763:PRO:HA	1.97	0.47
1:A:2302:LEU:HG	1:A:2363:CYS:HB3	1.96	0.47
1:A:3504:SER:OG	1:A:3507:THR:OG1	2.29	0.47
1:A:3593:VAL:O	1:A:3597:GLN:HG2	2.14	0.47
1:A:3705:PHE:HA	1:A:3708:THR:HG22	1.97	0.47
1:B:227:MET:HE2	1:B:227:MET:HA	1.96	0.47
1:B:747:CYS:HB3	1:B:808:TYR:CE2	2.49	0.47
1:B:2020:ASP:OD1	1:B:2020:ASP:N	2.46	0.47
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.49	0.47
1:B:3261:ALA:HB1	1:B:3265:GLU:HG3	1.96	0.47
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.13	0.47
1:B:3623:LEU:O	1:B:3624:LEU:HD23	2.14	0.47
1:B:3755:GLU:HA	1:B:3758:MET:HB2	1.96	0.47
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.97	0.47
1:D:923:GLN:O	1:D:927:GLU:HG2	2.15	0.47
1:D:2273:LEU:HG	1:D:2330:ARG:HH12	1.79	0.47
1:D:2298:VAL:HG21	1:D:2334:PHE:CE2	2.49	0.47
1:D:3376:GLU:OE1	1:D:3448:SER:OG	2.30	0.47
1:D:3962:PHE:CZ	1:D:4023:MET:HG3	2.50	0.47
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.97	0.47
1:C:399:GLN:O	1:C:403:MET:HG3	2.14	0.47
1:C:835:ARG:NH1	1:C:1093:GLU:OE1	2.48	0.47
1:C:1260:MET:HE2	1:C:1260:MET:HA	1.95	0.47
1:C:2967:MET:HE3	1:C:2970:SER:OG	2.14	0.47
1:C:3263:TYR:N	1:C:3326:ASN:OD1	2.48	0.47
1:A:835:ARG:NH1	1:A:1093:GLU:OE1	2.48	0.47
1:A:950:LEU:HD13	1:A:951:LYS:O	2.15	0.47
1:A:2534:ALA:HA	1:A:2588:ARG:NH2	2.30	0.47
1:A:3962:PHE:CZ	1:A:4023:MET:HG3	2.50	0.47
2:G:15:PHE:C	2:G:17:LYS:HZ3	2.23	0.47
1:B:923:GLN:O	1:B:927:GLU:HG2	2.15	0.47
1:D:984:LEU:HD21	1:D:1056:PRO:HD2	1.96	0.47
1:D:2228:MET:HE2	1:D:2228:MET:HB2	1.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2768:PHE:O	1:D:2771:ILE:HG22	2.15	0.47
1:D:3371:LYS:HB2	1:D:3371:LYS:NZ	2.29	0.47
1:D:3723:MET:HE2	1:D:3792:ALA:HB3	1.97	0.47
1:D:4177:TYR:CE1	1:D:4199:GLU:HG3	2.49	0.47
1:C:984:LEU:HD21	1:C:1056:PRO:HD2	1.97	0.47
1:C:2020:ASP:OD1	1:C:2020:ASP:N	2.46	0.47
1:C:2265:LEU:HD23	1:C:2330:ARG:HH11	1.80	0.47
1:C:2298:VAL:HG21	1:C:2334:PHE:CE2	2.50	0.47
1:C:3623:LEU:O	1:C:3624:LEU:HD23	2.14	0.47
1:A:227:MET:HE2	1:A:227:MET:HA	1.96	0.47
1:B:950:LEU:HD13	1:B:951:LYS:O	2.15	0.47
1:B:2867:LEU:HD21	1:B:2871:LEU:HB3	1.97	0.47
1:B:3723:MET:HE2	1:B:3792:ALA:HB3	1.97	0.47
1:B:3962:PHE:CZ	1:B:4023:MET:HG3	2.50	0.47
1:D:745:SER:HB2	1:D:758:ARG:HB2	1.96	0.47
1:D:747:CYS:HB3	1:D:808:TYR:CE2	2.49	0.47
1:D:758:ARG:HG2	1:D:763:PRO:HA	1.97	0.47
1:D:3264:THR:OG1	1:D:3265:GLU:OE1	2.31	0.47
1:C:2285:GLU:HG2	1:C:3858:MET:HE2	1.97	0.47
1:C:2302:LEU:HG	1:C:2363:CYS:HB3	1.96	0.47
1:C:3705:PHE:HA	1:C:3708:THR:HG22	1.97	0.47
1:C:3734:HIS:O	1:C:3736:GLU:HG3	2.14	0.47
1:A:1107:PRO:HD2	1:A:1186:ASP:OD1	2.14	0.47
1:A:1297:PHE:CE2	1:A:1525:GLY:HA2	2.50	0.47
1:A:2768:PHE:O	1:A:2771:ILE:HG22	2.15	0.47
2:H:32:ASP:OD1	2:H:34:LYS:HG3	2.15	0.47
1:B:1297:PHE:CE2	1:B:1525:GLY:HA2	2.50	0.47
1:B:1465:ASP:OD1	1:B:1468:LYS:HG2	2.15	0.47
1:B:2768:PHE:O	1:B:2771:ILE:HG22	2.15	0.47
1:D:950:LEU:HD13	1:D:951:LYS:O	2.15	0.47
1:C:747:CYS:HB3	1:C:808:TYR:CE2	2.49	0.47
1:C:1107:PRO:HD2	1:C:1186:ASP:OD1	2.14	0.47
1:C:2534:ALA:HA	1:C:2588:ARG:NH2	2.30	0.47
1:C:3371:LYS:HB2	1:C:3371:LYS:NZ	2.29	0.47
1:C:3545:THR:HG22	1:C:3548:GLU:HG3	1.97	0.47
1:C:3723:MET:HE2	1:C:3792:ALA:HB3	1.97	0.47
1:A:2224:ARG:HG2	1:A:2225:PHE:CE2	2.49	0.46
1:A:3539:ARG:NH1	1:A:3542:LEU:HD12	2.30	0.46
1:B:758:ARG:HG2	1:B:763:PRO:HA	1.97	0.46
1:B:957:LYS:HD3	1:B:957:LYS:H	1.81	0.46
1:B:4177:TYR:CE1	1:B:4199:GLU:HG3	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4902:GLU:O	1:B:4913:ARG:NH2	2.37	0.46
1:D:499:THR:HG23	1:D:502:HIS:H	1.79	0.46
1:D:3545:THR:HG22	1:D:3548:GLU:HG3	1.97	0.46
1:C:923:GLN:O	1:C:927:GLU:HG2	2.15	0.46
1:A:957:LYS:H	1:A:957:LYS:HD3	1.81	0.46
1:A:3755:GLU:HA	1:A:3758:MET:HB2	1.96	0.46
2:H:18:ARG:NE	2:H:51:GLY:HA3	2.30	0.46
1:B:1107:PRO:HD2	1:B:1186:ASP:OD1	2.14	0.46
1:B:1820:ARG:NH2	1:B:1922:LEU:O	2.47	0.46
1:B:2538:THR:HG23	1:B:2541:PHE:H	1.79	0.46
1:B:3593:VAL:O	1:B:3597:GLN:HG2	2.15	0.46
1:D:957:LYS:HD3	1:D:957:LYS:H	1.81	0.46
1:D:1107:PRO:HD2	1:D:1186:ASP:OD1	2.15	0.46
1:D:2285:GLU:HG2	1:D:3858:MET:HE2	1.97	0.46
1:D:3263:TYR:N	1:D:3326:ASN:OD1	2.48	0.46
1:D:3541:ALA:HA	1:D:3604:TYR:HE1	1.80	0.46
1:D:3547:GLU:HA	1:D:3550:ARG:NH1	2.31	0.46
1:D:3638:MET:SD	1:D:3639:THR:N	2.88	0.46
1:C:758:ARG:HG2	1:C:763:PRO:HA	1.97	0.46
1:C:2224:ARG:HG2	1:C:2225:PHE:CE2	2.49	0.46
1:A:328:LYS:HE3	1:A:328:LYS:HB3	1.72	0.46
1:A:1024:TYR:CZ	1:A:1032:LYS:HG3	2.51	0.46
1:A:1929:MET:HE2	1:A:1929:MET:HB3	1.75	0.46
1:A:3376:GLU:OE1	1:A:3448:SER:OG	2.30	0.46
1:A:3541:ALA:HA	1:A:3604:TYR:HE1	1.80	0.46
1:B:984:LEU:HD21	1:B:1056:PRO:HD2	1.97	0.46
1:B:3541:ALA:HA	1:B:3604:TYR:HE1	1.80	0.46
1:B:3547:GLU:HA	1:B:3550:ARG:NH1	2.31	0.46
1:D:835:ARG:NH1	1:D:1093:GLU:OE1	2.48	0.46
1:D:3535:LEU:O	1:D:3538:THR:OG1	2.29	0.46
1:D:3629:ARG:HA	1:D:3632:VAL:HG22	1.98	0.46
1:D:3755:GLU:HA	1:D:3758:MET:HB2	1.96	0.46
1:D:3955:MET:HG2	1:D:4019:LEU:HD22	1.97	0.46
1:C:957:LYS:H	1:C:957:LYS:HD3	1.81	0.46
1:C:3962:PHE:CZ	1:C:4023:MET:HG3	2.50	0.46
1:A:3629:ARG:HA	1:A:3632:VAL:HG22	1.98	0.46
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.96	0.46
1:D:3705:PHE:HA	1:D:3708:THR:HG22	1.97	0.46
1:C:2238:TYR:HD1	1:C:2238:TYR:O	1.99	0.46
1:C:3959:LYS:NZ	1:C:4022:ASP:OD2	2.43	0.46
1:A:1465:ASP:OD1	1:A:1468:LYS:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3547:GLU:HA	1:A:3550:ARG:NH1	2.31	0.46
1:B:1024:TYR:CZ	1:B:1032:LYS:HG3	2.51	0.46
1:D:144:GLU:HG3	1:D:175:SER:HB3	1.97	0.46
1:D:2238:TYR:O	1:D:2238:TYR:HD1	1.99	0.46
1:D:2265:LEU:HD23	1:D:2330:ARG:HH11	1.80	0.46
1:C:144:GLU:HG3	1:C:175:SER:HB3	1.97	0.46
1:C:866:HIS:CD2	1:C:941:MET:HE3	2.51	0.46
1:C:2538:THR:HG23	1:C:2541:PHE:H	1.79	0.46
1:C:2587:TYR:O	1:C:2590:SER:OG	2.24	0.46
1:C:3638:MET:SD	1:C:3639:THR:N	2.88	0.46
1:A:877:ASN:OD1	1:A:970:LEU:HG	2.16	0.46
1:A:2238:TYR:O	1:A:2238:TYR:HD1	1.99	0.46
1:A:3638:MET:SD	1:A:3639:THR:N	2.88	0.46
1:B:2238:TYR:O	1:B:2238:TYR:HD1	1.99	0.46
1:B:2302:LEU:HG	1:B:2363:CYS:HB3	1.97	0.46
1:B:3638:MET:SD	1:B:3639:THR:N	2.88	0.46
1:B:4967:TYR:OH	1:B:5033:GLU:OE2	2.24	0.46
1:D:877:ASN:OD1	1:D:970:LEU:HG	2.16	0.46
1:C:663:TYR:CD2	1:C:804:PRO:HB3	2.51	0.46
1:C:877:ASN:OD1	1:C:970:LEU:HG	2.16	0.46
1:C:3547:GLU:HA	1:C:3550:ARG:NH1	2.31	0.46
1:C:3717:ASP:N	1:C:3717:ASP:OD1	2.47	0.46
1:A:2285:GLU:HG2	1:A:3858:MET:HE2	1.97	0.46
1:B:2285:GLU:HG2	1:B:3858:MET:HE2	1.97	0.46
1:B:2534:ALA:HA	1:B:2588:ARG:NH2	2.30	0.46
1:B:3263:TYR:N	1:B:3326:ASN:OD1	2.48	0.46
1:B:3539:ARG:NH1	1:B:3542:LEU:HD12	2.30	0.46
1:B:4241:THR:O	1:B:4245:MET:HG3	2.16	0.46
1:D:990:GLU:HG3	1:D:1025:ARG:HH11	1.80	0.46
1:D:1297:PHE:CE2	1:D:1525:GLY:HA2	2.50	0.46
1:D:3082:LYS:HE2	1:D:3082:LYS:HB2	1.63	0.46
1:D:4934:GLY:HA3	1:C:4937:ILE:CD1	2.44	0.46
1:C:2912:THR:OG1	1:C:2913:ALA:N	2.47	0.46
1:C:3541:ALA:HA	1:C:3604:TYR:HE1	1.80	0.46
1:A:932:LEU:HD21	1:A:988:LEU:HD11	1.98	0.46
2:F:18:ARG:NE	2:F:51:GLY:HA3	2.31	0.46
1:B:3734:HIS:O	1:B:3736:GLU:HG3	2.14	0.46
1:D:2419:GLY:O	1:D:2423:MET:HE3	2.16	0.46
1:D:2668:SER:C	1:D:2670:GLU:H	2.24	0.46
1:D:2932:MET:HE3	1:D:2932:MET:HB2	1.84	0.46
1:C:950:LEU:HD13	1:C:951:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2992:GLU:OE2	1:C:2996:LYS:NZ	2.42	0.46
1:C:3955:MET:HG2	1:C:4019:LEU:HD22	1.97	0.46
1:A:984:LEU:HD21	1:A:1056:PRO:HD2	1.96	0.46
1:A:990:GLU:HG3	1:A:1025:ARG:HH11	1.80	0.46
2:F:32:ASP:OD1	2:F:34:LYS:HG3	2.15	0.46
1:B:1648:MET:HE2	1:B:1648:MET:HB3	1.85	0.46
1:B:3224:PRO:HA	1:B:3227:ARG:NH1	2.31	0.46
1:D:663:TYR:CD2	1:D:804:PRO:HB3	2.51	0.46
1:D:1155:LEU:HD22	1:D:1184:ILE:HG12	1.98	0.46
1:D:3959:LYS:NZ	1:D:4022:ASP:OD2	2.43	0.46
1:C:2419:GLY:O	1:C:2423:MET:HE3	2.16	0.46
1:C:2768:PHE:O	1:C:2771:ILE:HG22	2.15	0.46
1:C:4241:THR:O	1:C:4245:MET:HG3	2.16	0.46
1:A:866:HIS:CD2	1:A:941:MET:HE3	2.51	0.46
2:G:18:ARG:NE	2:G:51:GLY:HA3	2.31	0.46
1:B:990:GLU:HG3	1:B:1025:ARG:HH11	1.81	0.46
1:B:2668:SER:C	1:B:2670:GLU:H	2.24	0.46
1:B:3765:TYR:CD2	1:B:4753:HIS:HA	2.51	0.46
1:B:3955:MET:HG2	1:B:4019:LEU:HD22	1.97	0.46
1:D:866:HIS:CD2	1:D:867:LEU:H	2.30	0.46
1:D:1423:ASP:OD1	1:D:1425:GLU:HG3	2.16	0.46
1:C:2101:MET:HE2	1:C:2101:MET:HB3	1.76	0.46
1:A:663:TYR:CD2	1:A:804:PRO:HB3	2.51	0.45
1:A:3285:TRP:HZ2	1:A:3348:ARG:HH21	1.64	0.45
1:B:144:GLU:HG3	1:B:175:SER:HB3	1.97	0.45
1:B:904:HIS:NE2	1:B:906:CYS:HB3	2.32	0.45
1:B:932:LEU:HD21	1:B:988:LEU:HD11	1.98	0.45
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.98	0.45
1:B:3285:TRP:HZ2	1:B:3348:ARG:HH21	1.64	0.45
1:D:932:LEU:HD21	1:D:988:LEU:HD11	1.98	0.45
1:D:1864:LYS:NZ	1:D:1871:PHE:O	2.45	0.45
1:D:3765:TYR:CD2	1:D:4753:HIS:HA	2.51	0.45
1:D:4769:MET:SD	1:D:4769:MET:N	2.79	0.45
1:C:990:GLU:HG3	1:C:1025:ARG:HH11	1.80	0.45
1:C:1475:THR:HG23	1:C:1483:VAL:HG13	1.98	0.45
1:A:2265:LEU:HD23	1:A:2330:ARG:HH11	1.80	0.45
1:A:2297:LYS:O	1:A:2300:SER:OG	2.24	0.45
1:A:3545:THR:HG22	1:A:3548:GLU:HG3	1.97	0.45
1:A:3717:ASP:OD1	1:A:3717:ASP:N	2.47	0.45
1:B:2228:MET:HB2	1:B:2228:MET:HE2	1.67	0.45
1:B:2265:LEU:HD23	1:B:2330:ARG:HH11	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2419:GLY:O	1:B:2423:MET:HE3	2.16	0.45
1:B:3545:THR:HG22	1:B:3548:GLU:HG3	1.97	0.45
1:D:866:HIS:CD2	1:D:941:MET:HE3	2.51	0.45
1:D:904:HIS:NE2	1:D:906:CYS:HB3	2.32	0.45
1:D:2765:LYS:HD3	1:D:2765:LYS:HA	1.81	0.45
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.98	0.45
1:C:460:GLN:N	1:C:463:GLU:OE2	2.41	0.45
1:C:1465:ASP:OD1	1:C:1468:LYS:HG2	2.15	0.45
1:C:3449:HIS:O	1:C:3453:ARG:HG2	2.17	0.45
1:C:3629:ARG:HA	1:C:3632:VAL:HG22	1.98	0.45
1:C:4186:ALA:C	1:C:4188:ARG:NH2	2.74	0.45
1:C:4675:LYS:HD2	1:C:4679:ARG:HH21	1.82	0.45
1:A:1648:MET:HE2	1:A:1648:MET:HB3	1.85	0.45
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.98	0.45
1:A:3872:GLU:HG3	1:A:3874:VAL:H	1.82	0.45
1:A:3955:MET:HG2	1:A:4019:LEU:HD22	1.97	0.45
1:A:4689:THR:OG1	1:A:4690:GLU:OE1	2.26	0.45
1:B:15:ARG:HH21	1:B:98:HIS:HB2	1.79	0.45
1:B:663:TYR:CD2	1:B:804:PRO:HB3	2.51	0.45
1:B:793:LEU:HD12	1:B:821:LEU:HD21	1.97	0.45
1:B:877:ASN:OD1	1:B:970:LEU:HG	2.16	0.45
1:B:3159:ASP:OD1	1:B:3159:ASP:N	2.45	0.45
1:B:3573:MET:CE	1:B:3577:ARG:HD3	2.46	0.45
1:B:3944:GLU:OE1	1:B:3946:GLN:N	2.48	0.45
1:D:1024:TYR:CZ	1:D:1032:LYS:HG3	2.51	0.45
1:D:1465:ASP:OD1	1:D:1468:LYS:HG2	2.15	0.45
1:D:2198:MET:CG	1:D:2203:MET:HE2	2.43	0.45
1:D:2534:ALA:HA	1:D:2588:ARG:NH2	2.30	0.45
1:D:3285:TRP:HZ2	1:D:3348:ARG:HH21	1.64	0.45
1:D:4186:ALA:C	1:D:4188:ARG:NH2	2.74	0.45
1:C:15:ARG:HH21	1:C:98:HIS:HB2	1.80	0.45
1:C:904:HIS:NE2	1:C:906:CYS:HB3	2.32	0.45
1:C:1297:PHE:CE2	1:C:1525:GLY:HA2	2.50	0.45
1:A:144:GLU:HG3	1:A:175:SER:HB3	1.97	0.45
1:A:1423:ASP:OD1	1:A:1425:GLU:HG3	2.16	0.45
1:A:3224:PRO:HA	1:A:3227:ARG:NH1	2.31	0.45
1:B:866:HIS:CD2	1:B:941:MET:HE3	2.51	0.45
1:B:943:ASP:HB2	1:B:1050:GLY:HA3	1.98	0.45
1:D:985:VAL:HG11	1:D:1040:CYS:HB2	1.98	0.45
1:D:3811:GLU:H	1:D:3811:GLU:CD	2.21	0.45
1:C:297:GLN:OE1	1:C:297:GLN:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:127:MET:CE	1:A:127:MET:H	2.30	0.45
1:A:904:HIS:NE2	1:A:906:CYS:HB3	2.32	0.45
1:A:2668:SER:C	1:A:2670:GLU:H	2.24	0.45
1:A:3552:PHE:C	1:A:3552:PHE:CD2	2.95	0.45
1:B:127:MET:CE	1:B:127:MET:H	2.30	0.45
1:B:202:MET:HE3	1:B:202:MET:HB3	1.83	0.45
1:B:985:VAL:HG11	1:B:1040:CYS:HB2	1.98	0.45
1:B:1155:LEU:HD22	1:B:1184:ILE:HG12	1.98	0.45
1:B:4675:LYS:HD2	1:B:4679:ARG:HH21	1.82	0.45
1:D:2902:HIS:CE1	1:D:2904:LEU:HB2	2.52	0.45
1:D:3162:GLN:NE2	1:D:3216:CYS:O	2.48	0.45
1:C:793:LEU:HD12	1:C:821:LEU:HD21	1.97	0.45
1:C:1024:TYR:CZ	1:C:1032:LYS:HG3	2.51	0.45
1:C:1726:SER:O	1:C:1729:SER:OG	2.30	0.45
1:C:3765:TYR:CD2	1:C:4753:HIS:HA	2.51	0.45
1:A:1726:SER:O	1:A:1729:SER:OG	2.30	0.45
1:A:3071:LEU:O	1:A:3075:LEU:HG	2.17	0.45
1:A:3765:TYR:CD2	1:A:4753:HIS:HA	2.51	0.45
1:A:4186:ALA:C	1:A:4188:ARG:NH2	2.74	0.45
1:B:169:LEU:HD23	1:B:169:LEU:HA	1.82	0.45
1:B:1423:ASP:OD1	1:B:1425:GLU:HG3	2.16	0.45
1:B:3376:GLU:OE1	1:B:3448:SER:OG	2.30	0.45
1:B:3629:ARG:HA	1:B:3632:VAL:HG22	1.98	0.45
1:D:2608:MET:HE3	1:D:2608:MET:HB3	1.84	0.45
1:D:3539:ARG:NH1	1:D:3542:LEU:HD12	2.31	0.45
1:D:3552:PHE:C	1:D:3552:PHE:CD2	2.95	0.45
1:D:3996:PHE:CD2	1:D:4020:GLN:HG2	2.52	0.45
1:C:274:LEU:HD23	1:C:274:LEU:HA	1.72	0.45
1:C:1423:ASP:OD1	1:C:1425:GLU:HG3	2.16	0.45
1:C:2902:HIS:CE1	1:C:2904:LEU:HB2	2.52	0.45
1:C:3224:PRO:HA	1:C:3227:ARG:NH1	2.31	0.45
1:C:3573:MET:CE	1:C:3577:ARG:HD3	2.46	0.45
1:C:3822:ASP:OD1	1:C:3823:LYS:NZ	2.39	0.45
1:A:943:ASP:HB2	1:A:1050:GLY:HA3	1.98	0.45
1:A:950:LEU:HD22	1:A:951:LYS:H	1.82	0.45
1:A:3996:PHE:CD2	1:A:4020:GLN:HG2	2.52	0.45
1:B:460:GLN:N	1:B:463:GLU:OE2	2.41	0.45
1:B:1299:GLN:NE2	1:B:1545:ASN:OD1	2.50	0.45
1:B:1547:LYS:NZ	1:B:1642:PRO:O	2.50	0.45
1:D:1087:ARG:HB3	1:D:1223:PHE:CD2	2.52	0.45
1:D:1299:GLN:NE2	1:D:1545:ASN:OD1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3449:HIS:O	1:D:3453:ARG:HG2	2.17	0.45
1:D:3872:GLU:HG3	1:D:3874:VAL:H	1.82	0.45
1:C:2224:ARG:H	1:C:2224:ARG:HD2	1.81	0.45
1:C:3062:PRO:HA	1:C:3065:VAL:HG22	1.99	0.45
1:C:3285:TRP:HZ2	1:C:3348:ARG:HH21	1.64	0.45
1:C:4232:GLU:HG2	1:C:5019:TRP:NE1	2.28	0.45
1:A:985:VAL:HG11	1:A:1040:CYS:HB2	1.98	0.45
1:A:2224:ARG:H	1:A:2224:ARG:HD2	1.81	0.45
1:A:3449:HIS:O	1:A:3453:ARG:HG2	2.17	0.45
1:A:3573:MET:CE	1:A:3577:ARG:HD3	2.46	0.45
1:A:3695:PRO:HB3	1:A:3699:HIS:HB3	1.99	0.45
1:B:274:LEU:HA	1:B:274:LEU:HD23	1.72	0.45
1:B:1087:ARG:HB3	1:B:1223:PHE:CD2	2.52	0.45
1:B:1186:ASP:OD2	1:B:1186:ASP:N	2.35	0.45
1:B:2224:ARG:H	1:B:2224:ARG:HD2	1.82	0.45
1:B:2258:LEU:HB3	1:B:2297:LYS:NZ	2.32	0.45
1:D:793:LEU:HD12	1:D:821:LEU:HD21	1.98	0.45
1:D:2258:LEU:HB3	1:D:2297:LYS:NZ	2.32	0.45
1:D:3573:MET:CE	1:D:3577:ARG:HD3	2.46	0.45
1:C:127:MET:CE	1:C:127:MET:H	2.30	0.45
1:C:328:LYS:HE3	1:C:328:LYS:HB3	1.72	0.45
1:C:2371:GLU:OE1	1:C:2371:GLU:HA	2.17	0.45
1:C:2577:ILE:HD12	1:C:2577:ILE:N	2.32	0.45
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.98	0.45
1:A:308:HIS:ND1	1:A:310:LYS:HB3	2.32	0.45
1:A:866:HIS:O	1:A:869:ARG:HG3	2.17	0.45
1:A:1808:ARG:HD3	1:A:1853:ILE:HG22	1.99	0.45
1:A:3062:PRO:HA	1:A:3065:VAL:HG22	1.99	0.45
1:A:4241:THR:O	1:A:4245:MET:HG3	2.16	0.45
1:B:451:TYR:CZ	1:B:474:ARG:HD2	2.52	0.45
1:B:866:HIS:O	1:B:869:ARG:HG3	2.17	0.45
1:B:1475:THR:HG23	1:B:1483:VAL:HG13	1.98	0.45
1:B:2902:HIS:CE1	1:B:2904:LEU:HB2	2.52	0.45
1:B:3062:PRO:HA	1:B:3065:VAL:HG22	1.99	0.45
1:B:3717:ASP:N	1:B:3717:ASP:OD1	2.47	0.45
1:B:3872:GLU:HG3	1:B:3874:VAL:H	1.82	0.45
1:B:4056:GLU:HG2	1:B:4166:LEU:HD13	1.99	0.45
1:D:1475:THR:HG23	1:D:1483:VAL:HG13	1.98	0.45
1:D:2371:GLU:OE1	1:D:2371:GLU:HA	2.17	0.45
1:D:3224:PRO:HA	1:D:3227:ARG:NH1	2.31	0.45
1:D:4241:THR:O	1:D:4245:MET:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:322:LYS:HA	1:C:322:LYS:HD2	1.77	0.45
1:C:451:TYR:CZ	1:C:474:ARG:HD2	2.52	0.45
1:C:879:HIS:NE2	1:C:921:ASN:HB2	2.32	0.45
1:C:932:LEU:HD21	1:C:988:LEU:HD11	1.98	0.45
1:C:938:HIS:H	1:C:1054:GLU:HB3	1.82	0.45
1:C:985:VAL:HG11	1:C:1040:CYS:HB2	1.98	0.45
1:C:3082:LYS:HB2	1:C:3082:LYS:HE2	1.63	0.45
1:C:3539:ARG:NH1	1:C:3542:LEU:HD12	2.30	0.45
1:A:879:HIS:NE2	1:A:921:ASN:HB2	2.32	0.45
1:A:938:HIS:H	1:A:1054:GLU:HB3	1.82	0.45
1:A:1155:LEU:HD22	1:A:1184:ILE:HG12	1.98	0.45
1:A:1170:MET:HE3	1:A:1170:MET:HB2	1.81	0.45
1:A:1475:THR:HG23	1:A:1483:VAL:HG13	1.98	0.45
1:A:1973:GLN:HG2	1:A:3642:TYR:HD2	1.82	0.45
1:A:2419:GLY:O	1:A:2423:MET:HE3	2.16	0.45
1:A:3756:LYS:HE3	1:A:3756:LYS:HB2	1.79	0.45
1:B:938:HIS:H	1:B:1054:GLU:HB3	1.82	0.45
1:D:274:LEU:HA	1:D:274:LEU:HD23	1.73	0.45
1:D:438:ILE:HG23	1:D:518:ILE:HD11	1.99	0.45
1:D:451:TYR:CZ	1:D:474:ARG:HD2	2.52	0.45
1:D:3062:PRO:HA	1:D:3065:VAL:HG22	1.99	0.45
1:D:3695:PRO:HB3	1:D:3699:HIS:HB3	1.99	0.45
1:D:3771:HIS:O	1:D:3815:LYS:NZ	2.38	0.45
1:C:438:ILE:HG23	1:C:518:ILE:HD11	1.99	0.45
1:C:1087:ARG:HB3	1:C:1223:PHE:CD2	2.52	0.45
1:C:1155:LEU:HD22	1:C:1184:ILE:HG12	1.98	0.45
1:C:1299:GLN:NE2	1:C:1545:ASN:OD1	2.50	0.45
1:C:3552:PHE:CD2	1:C:3552:PHE:C	2.95	0.45
1:C:4060:LYS:HD2	1:C:4060:LYS:HA	1.84	0.45
1:A:1087:ARG:HB3	1:A:1223:PHE:CD2	2.52	0.44
1:A:2902:HIS:CE1	1:A:2904:LEU:HB2	2.52	0.44
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.18	0.44
1:B:950:LEU:HD22	1:B:951:LYS:H	1.82	0.44
1:B:2577:ILE:HD12	1:B:2577:ILE:N	2.32	0.44
1:B:3449:HIS:O	1:B:3453:ARG:HG2	2.17	0.44
1:D:127:MET:H	1:D:127:MET:CE	2.30	0.44
1:D:950:LEU:HD22	1:D:951:LYS:H	1.82	0.44
1:C:2668:SER:C	1:C:2670:GLU:H	2.24	0.44
1:C:3872:GLU:HG3	1:C:3874:VAL:H	1.82	0.44
1:A:2186:MET:O	1:A:2192:TYR:OH	2.18	0.44
1:A:3579:LEU:HB2	1:A:3582:ARG:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:438:ILE:HG23	1:B:518:ILE:HD11	1.99	0.44
1:B:1078:GLU:OE2	1:B:1654:SER:OG	2.28	0.44
1:B:1973:GLN:HG2	1:B:3642:TYR:HD2	1.82	0.44
1:B:2173:GLN:OE1	1:B:2173:GLN:N	2.27	0.44
1:B:3535:LEU:O	1:B:3538:THR:OG1	2.29	0.44
1:B:3996:PHE:CD2	1:B:4020:GLN:HG2	2.51	0.44
1:B:4186:ALA:C	1:B:4188:ARG:NH2	2.74	0.44
1:D:575:LEU:HD22	1:D:609:CYS:HB2	1.99	0.44
1:D:1808:ARG:HD3	1:D:1853:ILE:HG22	2.00	0.44
1:A:935:LEU:HD21	1:A:987:ARG:NE	2.33	0.44
1:A:2384:ILE:O	1:A:2387:SER:OG	2.30	0.44
1:A:2624:ARG:CZ	1:A:2910:THR:HA	2.48	0.44
1:B:879:HIS:NE2	1:B:921:ASN:HB2	2.32	0.44
1:B:931:THR:O	1:B:935:LEU:HD13	2.17	0.44
1:B:1066:GLN:HB2	1:B:1071:ARG:HH12	1.81	0.44
1:B:3695:PRO:HB3	1:B:3699:HIS:HB3	1.99	0.44
1:B:4188:ARG:H	1:B:4188:ARG:CZ	2.31	0.44
1:D:873:LYS:HA	1:D:873:LYS:HD2	1.82	0.44
1:D:879:HIS:NE2	1:D:921:ASN:HB2	2.32	0.44
1:D:938:HIS:H	1:D:1054:GLU:HB3	1.82	0.44
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.48	0.44
1:D:2224:ARG:H	1:D:2224:ARG:HD2	1.81	0.44
1:D:2624:ARG:CZ	1:D:2910:THR:HA	2.48	0.44
1:C:894:GLY:HA3	1:C:903:LEU:HB3	2.00	0.44
1:C:950:LEU:HD22	1:C:951:LYS:H	1.82	0.44
1:C:2258:LEU:HB3	1:C:2297:LYS:NZ	2.32	0.44
1:C:3162:GLN:NE2	1:C:3216:CYS:O	2.48	0.44
1:C:4188:ARG:H	1:C:4188:ARG:CZ	2.31	0.44
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.18	0.44
1:A:194:SER:OG	1:A:195:PHE:N	2.51	0.44
1:A:1299:GLN:NE2	1:A:1545:ASN:OD1	2.50	0.44
1:A:1864:LYS:NZ	1:A:1871:PHE:O	2.45	0.44
1:B:3110:LEU:C	1:B:3112:LEU:H	2.26	0.44
1:B:3110:LEU:HD21	1:B:3186:LEU:HD12	2.00	0.44
1:D:571:SER:OG	1:D:573:GLU:OE1	2.19	0.44
1:D:2577:ILE:HD12	1:D:2577:ILE:N	2.32	0.44
1:C:202:MET:HE3	1:C:202:MET:HB3	1.83	0.44
1:C:308:HIS:ND1	1:C:310:LYS:HB3	2.32	0.44
1:C:866:HIS:O	1:C:869:ARG:HG3	2.17	0.44
1:C:1808:ARG:HD3	1:C:1853:ILE:HG22	1.99	0.44
1:C:1864:LYS:NZ	1:C:1871:PHE:O	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3996:PHE:CD2	1:C:4020:GLN:HG2	2.51	0.44
1:A:793:LEU:HD12	1:A:821:LEU:HD21	1.97	0.44
1:A:872:GLU:O	1:A:876:GLU:HG3	2.17	0.44
1:A:4156:HIS:HA	1:A:4161:ARG:HH22	1.83	0.44
1:A:4675:LYS:HD2	1:A:4679:ARG:HH21	1.81	0.44
1:B:894:GLY:HA3	1:B:903:LEU:HB3	2.00	0.44
1:B:3552:PHE:C	1:B:3552:PHE:CD2	2.95	0.44
1:D:943:ASP:HB2	1:D:1050:GLY:HA3	1.98	0.44
1:D:3233:PRO:HB2	1:D:3238:GLU:HB2	1.99	0.44
1:D:3579:LEU:HB2	1:D:3582:ARG:HG2	1.99	0.44
1:D:4056:GLU:HG2	1:D:4166:LEU:HD13	1.99	0.44
1:C:2527:LEU:HD12	1:C:2527:LEU:HA	1.87	0.44
1:C:3110:LEU:HD21	1:C:3186:LEU:HD12	2.00	0.44
1:C:4689:THR:OG1	1:C:4690:GLU:OE1	2.26	0.44
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.18	0.44
1:A:2173:GLN:O	1:A:2177:LEU:HD22	2.18	0.44
1:A:2258:LEU:HB3	1:A:2297:LYS:NZ	2.32	0.44
1:A:2371:GLU:HA	1:A:2371:GLU:OE1	2.17	0.44
1:A:3264:THR:OG1	1:A:3265:GLU:OE1	2.31	0.44
1:B:3071:LEU:O	1:B:3075:LEU:HG	2.17	0.44
1:B:3762:ARG:NH2	1:B:4755:GLU:HB2	2.33	0.44
1:D:866:HIS:O	1:D:869:ARG:HG3	2.17	0.44
1:D:2244:ARG:HH22	1:D:2283:ASN:HA	1.83	0.44
1:D:2477:PRO:HD3	1:D:2546:MET:HG2	2.00	0.44
1:D:2912:THR:HG23	1:D:2914:LYS:HG3	2.00	0.44
1:D:3110:LEU:HD21	1:D:3186:LEU:HD12	2.00	0.44
1:D:4675:LYS:HD2	1:D:4679:ARG:HH21	1.82	0.44
1:C:168:ASP:OD1	1:C:201:ASN:ND2	2.50	0.44
1:C:931:THR:O	1:C:935:LEU:HD13	2.17	0.44
1:C:1066:GLN:HB2	1:C:1071:ARG:HH12	1.81	0.44
1:C:1547:LYS:NZ	1:C:1642:PRO:O	2.50	0.44
1:C:2186:MET:O	1:C:2192:TYR:OH	2.18	0.44
1:A:438:ILE:HG23	1:A:518:ILE:HD11	2.00	0.44
1:A:3110:LEU:HD21	1:A:3186:LEU:HD12	2.00	0.44
1:A:3762:ARG:NH2	1:A:4755:GLU:HB2	2.33	0.44
2:H:84:ALA:O	2:H:93:PRO:HB3	2.18	0.44
1:B:872:GLU:O	1:B:876:GLU:HG3	2.17	0.44
1:B:2371:GLU:OE1	1:B:2371:GLU:HA	2.17	0.44
1:B:3941:ASP:OD1	1:B:3942:VAL:N	2.51	0.44
1:D:1547:LYS:NZ	1:D:1642:PRO:O	2.50	0.44
1:D:2297:LYS:O	1:D:2300:SER:OG	2.24	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3071:LEU:O	1:D:3075:LEU:HG	2.17	0.44
1:D:3941:ASP:OD1	1:D:3942:VAL:N	2.51	0.44
1:D:4156:HIS:HA	1:D:4161:ARG:HH22	1.83	0.44
1:C:416:LYS:HB2	1:C:416:LYS:HE3	1.83	0.44
1:C:943:ASP:HB2	1:C:1050:GLY:HA3	1.98	0.44
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.18	0.44
1:C:2244:ARG:HH22	1:C:2283:ASN:HA	1.83	0.44
1:C:3941:ASP:OD1	1:C:3942:VAL:N	2.51	0.44
1:A:950:LEU:HD22	1:A:951:LYS:N	2.33	0.44
1:A:1072:VAL:HG13	1:A:1193:SER:HB2	2.00	0.44
1:A:1547:LYS:NZ	1:A:1642:PRO:O	2.50	0.44
1:A:2020:ASP:OD1	1:A:2020:ASP:N	2.46	0.44
1:A:2462:PRO:HB2	1:A:2464:ASP:OD1	2.18	0.44
1:A:2823:ILE:HA	1:A:2937:VAL:HG12	2.00	0.44
1:A:3941:ASP:OD1	1:A:3942:VAL:N	2.51	0.44
1:A:4006:ASP:OD1	1:A:4009:GLN:NE2	2.51	0.44
1:A:4056:GLU:HG2	1:A:4166:LEU:HD13	1.99	0.44
1:B:2001:PRO:O	1:B:2005:GLN:HG3	2.18	0.44
1:B:2823:ILE:HA	1:B:2937:VAL:HG12	2.00	0.44
1:D:961:MET:HE3	1:D:961:MET:HB3	1.69	0.44
1:D:1072:VAL:HG13	1:D:1193:SER:HB2	2.00	0.44
1:D:2101:MET:HB3	1:D:2101:MET:HE2	1.76	0.44
1:D:2173:GLN:O	1:D:2177:LEU:HD22	2.18	0.44
1:D:2186:MET:O	1:D:2192:TYR:OH	2.18	0.44
1:C:749:ASP:O	1:C:753:PRO:HA	2.18	0.44
1:C:2477:PRO:HD3	1:C:2546:MET:HG2	2.00	0.44
1:C:3535:LEU:O	1:C:3538:THR:OG1	2.29	0.44
1:C:3695:PRO:HB3	1:C:3699:HIS:HB3	1.99	0.44
1:A:491:ILE:O	1:A:495:ASN:HB2	2.18	0.44
1:A:3852:LYS:HE3	1:A:3852:LYS:HB3	1.89	0.44
1:B:297:GLN:OE1	1:B:297:GLN:N	2.49	0.44
1:B:866:HIS:CD2	1:B:867:LEU:H	2.30	0.44
1:B:3087:ILE:HD13	1:B:3087:ILE:HA	1.88	0.44
1:B:3933:PHE:HD2	1:B:3951:PHE:CE2	2.36	0.44
1:D:297:GLN:OE1	1:D:297:GLN:N	2.49	0.44
1:D:308:HIS:ND1	1:D:310:LYS:HB3	2.32	0.44
1:D:2390:PRO:C	1:D:2392:ARG:H	2.26	0.44
1:D:3388:GLU:O	1:D:3392:LEU:HD22	2.18	0.44
1:D:4655:PHE:CZ	1:D:4659:ILE:HD11	2.53	0.44
1:C:1072:VAL:HG13	1:C:1193:SER:HB2	2.00	0.44
1:C:1973:GLN:HG2	1:C:3642:TYR:HD2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2173:GLN:O	1:C:2177:LEU:HD22	2.18	0.44
1:A:636:ASN:HD21	2:E:35:LYS:HE2	1.83	0.43
1:A:931:THR:O	1:A:935:LEU:HD13	2.17	0.43
1:A:3162:GLN:NE2	1:A:3216:CYS:O	2.48	0.43
1:A:3233:PRO:HB2	1:A:3238:GLU:HB2	1.99	0.43
1:B:194:SER:OG	1:B:195:PHE:N	2.51	0.43
1:B:1808:ARG:HD3	1:B:1853:ILE:HG22	1.99	0.43
1:D:931:THR:O	1:D:935:LEU:HD13	2.17	0.43
1:D:935:LEU:HD21	1:D:987:ARG:NE	2.33	0.43
1:D:1973:GLN:HG2	1:D:3642:TYR:HD2	1.82	0.43
1:D:2462:PRO:HB2	1:D:2464:ASP:OD1	2.18	0.43
1:C:194:SER:OG	1:C:195:PHE:N	2.51	0.43
1:C:950:LEU:HD22	1:C:951:LYS:N	2.33	0.43
1:C:1695:LEU:HB3	1:C:1810:LYS:NZ	2.33	0.43
1:C:1773:PRO:HA	1:C:1774:PRO:HD3	1.90	0.43
1:C:3388:GLU:O	1:C:3392:LEU:HD22	2.18	0.43
1:A:169:LEU:HD23	1:A:169:LEU:HA	1.82	0.43
1:A:451:TYR:CZ	1:A:474:ARG:HD2	2.52	0.43
1:A:1695:LEU:HB3	1:A:1810:LYS:NZ	2.33	0.43
1:A:1986:MET:N	1:A:1986:MET:SD	2.91	0.43
1:B:873:LYS:HA	1:B:873:LYS:HD2	1.82	0.43
1:B:935:LEU:HD21	1:B:987:ARG:NE	2.33	0.43
1:B:1008:SER:HB3	1:B:1017:ARG:HB3	2.00	0.43
1:B:1986:MET:N	1:B:1986:MET:SD	2.91	0.43
1:B:2390:PRO:C	1:B:2392:ARG:H	2.26	0.43
1:B:2462:PRO:HB2	1:B:2464:ASP:OD1	2.18	0.43
1:D:2001:PRO:O	1:D:2005:GLN:HG3	2.18	0.43
1:D:2290:LEU:HD12	1:D:2291:GLN:N	2.33	0.43
1:D:3538:THR:O	1:D:3542:LEU:HG	2.19	0.43
1:D:3756:LYS:HE3	1:D:3756:LYS:HB2	1.79	0.43
1:D:4722:ARG:HD3	1:D:4722:ARG:HA	1.89	0.43
1:C:218:HIS:HB3	1:C:392:ARG:NH1	2.33	0.43
1:C:491:ILE:O	1:C:495:ASN:HB2	2.17	0.43
1:C:876:GLU:OE2	1:C:918:ARG:NH1	2.51	0.43
1:C:1008:SER:HB3	1:C:1017:ARG:HB3	2.00	0.43
1:C:1923:GLU:OE2	1:C:1923:GLU:N	2.46	0.43
1:C:1970:GLN:HG2	1:C:3642:TYR:HA	2.00	0.43
1:C:2390:PRO:C	1:C:2392:ARG:H	2.26	0.43
1:C:3112:LEU:HD23	1:C:3112:LEU:HA	1.84	0.43
1:A:75:VAL:O	1:A:79:GLN:HG2	2.19	0.43
1:A:218:HIS:HB3	1:A:392:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:322:LYS:HA	1:A:322:LYS:HD2	1.77	0.43
1:A:575:LEU:HD22	1:A:609:CYS:HB2	1.99	0.43
1:A:876:GLU:OE2	1:A:918:ARG:NH1	2.51	0.43
1:A:2577:ILE:HD12	1:A:2577:ILE:N	2.32	0.43
1:A:3082:LYS:HE2	1:A:3082:LYS:HB2	1.63	0.43
1:A:3538:THR:O	1:A:3542:LEU:HG	2.19	0.43
1:A:3933:PHE:HD2	1:A:3951:PHE:CE2	2.36	0.43
2:E:84:ALA:O	2:E:93:PRO:HB3	2.19	0.43
1:B:75:VAL:O	1:B:79:GLN:HG2	2.19	0.43
1:B:491:ILE:O	1:B:495:ASN:HB2	2.17	0.43
1:B:749:ASP:O	1:B:753:PRO:HA	2.18	0.43
1:B:4156:HIS:HA	1:B:4161:ARG:HH22	1.83	0.43
1:B:4232:GLU:HG2	1:B:5019:TRP:NE1	2.28	0.43
1:B:4888:TYR:OH	1:C:4917:ASP:OD2	2.27	0.43
1:D:218:HIS:HB3	1:D:392:ARG:NH1	2.33	0.43
1:D:2258:LEU:O	1:D:2261:SER:OG	2.30	0.43
1:D:4006:ASP:OD1	1:D:4009:GLN:NE2	2.51	0.43
1:D:4188:ARG:H	1:D:4188:ARG:CZ	2.30	0.43
1:C:1986:MET:N	1:C:1986:MET:SD	2.91	0.43
1:C:3071:LEU:O	1:C:3075:LEU:HG	2.17	0.43
1:C:3110:LEU:C	1:C:3112:LEU:H	2.26	0.43
1:C:3453:ARG:HA	1:C:3453:ARG:CZ	2.49	0.43
1:A:749:ASP:O	1:A:753:PRO:HA	2.18	0.43
1:A:2001:PRO:O	1:A:2005:GLN:HG3	2.18	0.43
1:A:2244:ARG:HH22	1:A:2283:ASN:HA	1.83	0.43
1:A:3723:MET:HE3	1:A:3793:MET:CE	2.48	0.43
1:A:3944:GLU:OE1	1:A:3946:GLN:N	2.48	0.43
1:B:308:HIS:ND1	1:B:310:LYS:HB3	2.32	0.43
1:B:322:LYS:HA	1:B:322:LYS:HD2	1.77	0.43
1:B:1072:VAL:HG13	1:B:1193:SER:HB2	2.00	0.43
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.18	0.43
1:B:1488:LYS:HE3	1:B:1488:LYS:HB2	1.83	0.43
1:B:2477:PRO:HD3	1:B:2546:MET:HG2	2.00	0.43
1:B:2519:LEU:HD13	1:B:2575:ARG:HG3	2.00	0.43
1:D:872:GLU:O	1:D:876:GLU:HG3	2.17	0.43
1:D:876:GLU:OE2	1:D:918:ARG:NH1	2.51	0.43
1:D:950:LEU:HD22	1:D:951:LYS:N	2.33	0.43
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.18	0.43
1:D:1986:MET:N	1:D:1986:MET:SD	2.91	0.43
1:D:3110:LEU:C	1:D:3112:LEU:H	2.26	0.43
1:C:866:HIS:CD2	1:C:867:LEU:H	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:872:GLU:O	1:C:876:GLU:HG3	2.17	0.43
1:C:879:HIS:HA	1:C:882:TRP:NE1	2.34	0.43
1:C:2823:ILE:HA	1:C:2937:VAL:HG12	2.00	0.43
1:C:2912:THR:HG23	1:C:2914:LYS:HG3	2.00	0.43
1:C:3233:PRO:HB2	1:C:3238:GLU:HB2	1.99	0.43
1:C:4769:MET:SD	1:C:4769:MET:N	2.79	0.43
1:A:460:GLN:N	1:A:463:GLU:OE2	2.41	0.43
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.48	0.43
1:A:1970:GLN:HG2	1:A:3642:TYR:HA	2.00	0.43
1:A:4655:PHE:CZ	1:A:4659:ILE:HD11	2.53	0.43
1:B:1805:GLU:H	1:B:1805:GLU:CD	2.27	0.43
1:B:3233:PRO:HB2	1:B:3238:GLU:HB2	1.99	0.43
1:D:75:VAL:O	1:D:79:GLN:HG2	2.19	0.43
1:D:879:HIS:HA	1:D:882:TRP:NE1	2.34	0.43
1:D:894:GLY:HA3	1:D:903:LEU:HB3	2.00	0.43
1:D:1422:ASP:OD2	1:D:1568:LYS:NZ	2.39	0.43
1:D:2191:PHE:CE2	1:D:2242:ILE:HD11	2.54	0.43
1:C:1424:PRO:HA	1:C:1427:ILE:HG22	2.01	0.43
1:C:2462:PRO:HB2	1:C:2464:ASP:OD1	2.18	0.43
1:C:4056:GLU:HG2	1:C:4166:LEU:HD13	1.99	0.43
1:A:894:GLY:HA3	1:A:903:LEU:HB3	2.00	0.43
1:A:2290:LEU:HD12	1:A:2291:GLN:H	1.83	0.43
1:A:2390:PRO:C	1:A:2392:ARG:H	2.26	0.43
1:A:3528:THR:HG22	1:A:3569:LEU:HD21	2.00	0.43
1:A:3823:LYS:HA	1:A:3823:LYS:HD3	1.79	0.43
1:B:1983:ALA:O	1:B:1987:SER:OG	2.22	0.43
1:B:2290:LEU:HD12	1:B:2291:GLN:H	1.83	0.43
1:B:2624:ARG:CZ	1:B:2910:THR:HA	2.48	0.43
1:B:2637:ALA:C	1:B:2640:PRO:HD2	2.43	0.43
1:B:3538:THR:O	1:B:3542:LEU:HG	2.19	0.43
1:B:4006:ASP:OD1	1:B:4009:GLN:NE2	2.51	0.43
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.18	0.43
1:D:491:ILE:O	1:D:495:ASN:HB2	2.17	0.43
1:D:1695:LEU:HB3	1:D:1810:LYS:NZ	2.33	0.43
1:D:2823:ILE:HA	1:D:2937:VAL:HG12	2.00	0.43
1:D:4093:PHE:CE2	1:D:4097:MET:HG3	2.54	0.43
1:C:575:LEU:HD22	1:C:609:CYS:HB2	1.99	0.43
1:C:880:GLU:CD	1:C:910:PHE:HB3	2.44	0.43
1:C:2290:LEU:HD12	1:C:2291:GLN:N	2.33	0.43
1:C:2637:ALA:C	1:C:2640:PRO:HD2	2.44	0.43
1:C:3233:PRO:HG2	1:C:3239:MET:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3762:ARG:NH2	1:C:4755:GLU:HB2	2.33	0.43
1:C:3933:PHE:HD2	1:C:3951:PHE:CE2	2.36	0.43
1:C:4156:HIS:HA	1:C:4161:ARG:HH22	1.83	0.43
1:A:1066:GLN:HB2	1:A:1071:ARG:HH12	1.81	0.43
1:A:1078:GLU:OE2	1:A:1654:SER:OG	2.28	0.43
1:A:2191:PHE:CE2	1:A:2242:ILE:HD11	2.54	0.43
1:A:3388:GLU:O	1:A:3392:LEU:HD22	2.18	0.43
1:B:1695:LEU:HB3	1:B:1810:LYS:NZ	2.33	0.43
1:B:2173:GLN:O	1:B:2177:LEU:HD22	2.18	0.43
1:B:3106:MET:HE3	1:B:3110:LEU:HD22	2.01	0.43
1:B:3388:GLU:O	1:B:3392:LEU:HD22	2.18	0.43
1:B:4689:THR:OG1	1:B:4690:GLU:OE1	2.26	0.43
1:D:1820:ARG:O	1:D:1824:GLN:HG2	2.19	0.43
1:C:330:ASP:N	1:C:330:ASP:OD1	2.52	0.43
1:C:2624:ARG:CZ	1:C:2910:THR:HA	2.48	0.43
1:C:4006:ASP:OD1	1:C:4009:GLN:NE2	2.51	0.43
1:A:330:ASP:N	1:A:330:ASP:OD1	2.52	0.43
1:A:365:LYS:HE3	1:A:365:LYS:HB3	1.82	0.43
1:A:707:VAL:HG23	1:A:782:SER:HB3	2.01	0.43
1:A:2477:PRO:HD3	1:A:2546:MET:HG2	2.00	0.43
1:A:3087:ILE:HD13	1:A:3087:ILE:HA	1.88	0.43
1:B:950:LEU:HD22	1:B:951:LYS:N	2.33	0.43
1:B:2574:HIS:CD2	1:B:2574:HIS:H	2.36	0.43
1:B:2912:THR:HG23	1:B:2914:LYS:HG3	2.00	0.43
1:B:3528:THR:HG22	1:B:3569:LEU:HD21	2.00	0.43
1:B:4093:PHE:CE2	1:B:4097:MET:HG3	2.54	0.43
1:D:194:SER:OG	1:D:195:PHE:N	2.51	0.43
1:D:707:VAL:HG23	1:D:782:SER:HB3	2.01	0.43
1:D:1773:PRO:HA	1:D:1774:PRO:HD3	1.90	0.43
1:D:2519:LEU:HD13	1:D:2575:ARG:HG3	2.00	0.43
1:D:3944:GLU:OE1	1:D:3946:GLN:N	2.48	0.43
1:D:3969:ILE:HG21	1:D:3980:LEU:HD12	2.01	0.43
1:D:4184:MET:HE2	1:D:4184:MET:HA	2.01	0.43
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.18	0.43
1:C:384:MET:H	1:C:384:MET:CE	2.32	0.43
1:C:384:MET:SD	1:C:384:MET:N	2.75	0.43
1:C:1999:ARG:HG2	1:C:3635:CYS:HB3	2.01	0.43
1:C:2519:LEU:HD13	1:C:2575:ARG:HG3	2.00	0.43
1:C:2574:HIS:CD2	1:C:2574:HIS:H	2.36	0.43
1:C:3689:GLU:C	1:C:3691:GLU:H	2.27	0.43
1:C:4093:PHE:CE2	1:C:4097:MET:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4184:MET:HA	1:C:4184:MET:HE2	2.01	0.43
1:A:1739:THR:O	1:A:1743[B]:ARG:HG3	2.19	0.43
1:A:2256:TYR:O	1:A:2256:TYR:HD2	2.02	0.43
1:A:2290:LEU:HD12	1:A:2291:GLN:N	2.33	0.43
1:A:2449:GLU:H	1:A:2449:GLU:CD	2.14	0.43
1:A:2637:ALA:C	1:A:2640:PRO:HD2	2.44	0.43
1:A:3110:LEU:C	1:A:3112:LEU:H	2.26	0.43
1:B:218:HIS:HB3	1:B:392:ARG:NH1	2.33	0.43
1:B:876:GLU:OE2	1:B:918:ARG:NH1	2.51	0.43
1:B:1999:ARG:HG2	1:B:3635:CYS:HB3	2.01	0.43
1:B:3234:ASN:OD1	1:B:3234:ASN:C	2.62	0.43
1:B:3689:GLU:C	1:B:3691:GLU:H	2.27	0.43
1:D:384:MET:H	1:D:384:MET:CE	2.32	0.43
1:D:462:GLU:OE1	1:D:3710:LEU:HD22	2.19	0.43
1:D:2209:GLU:C	1:D:2209:GLU:OE1	2.62	0.43
1:D:2973:PHE:CE1	1:D:2995:ILE:HG12	2.54	0.43
1:D:3233:PRO:HG2	1:D:3239:MET:HA	2.00	0.43
1:D:3933:PHE:HD2	1:D:3951:PHE:CE2	2.36	0.43
1:C:707:VAL:HG23	1:C:782:SER:HB3	2.01	0.43
1:C:3234:ASN:C	1:C:3234:ASN:OD1	2.62	0.43
1:A:879:HIS:HA	1:A:882:TRP:NE1	2.34	0.43
1:A:3234:ASN:OD1	1:A:3234:ASN:C	2.62	0.43
1:A:4093:PHE:CE2	1:A:4097:MET:HG3	2.54	0.43
1:A:4188:ARG:CZ	1:A:4188:ARG:H	2.31	0.43
1:B:1424:PRO:HA	1:B:1427:ILE:HG22	2.01	0.43
1:B:3082:LYS:HB2	1:B:3082:LYS:HE2	1.64	0.43
1:B:3969:ILE:HG21	1:B:3980:LEU:HD12	2.01	0.43
1:D:572:PRO:HA	1:D:575:LEU:HD13	2.01	0.43
1:D:749:ASP:O	1:D:753:PRO:HA	2.18	0.43
1:D:2173:GLN:H	1:D:2173:GLN:CD	2.22	0.43
1:D:2694:GLU:HA	1:D:2697:ARG:NH2	2.34	0.43
1:D:2992:GLU:OE2	1:D:2996:LYS:NZ	2.42	0.43
1:D:3234:ASN:C	1:D:3234:ASN:OD1	2.62	0.43
1:D:3762:ARG:NH2	1:D:4755:GLU:HB2	2.33	0.43
1:D:3940:LYS:O	1:D:4002:LYS:NZ	2.34	0.43
1:D:4232:GLU:HG2	1:D:5019:TRP:NE1	2.28	0.43
1:C:2191:PHE:CE2	1:C:2242:ILE:HD11	2.54	0.43
1:C:2514:ASN:OD1	1:C:2514:ASN:N	2.52	0.43
1:C:2677:LYS:HB3	1:C:2677:LYS:HE2	1.83	0.43
1:A:110:ARG:NH1	1:A:115:ARG:HB3	2.34	0.42
1:A:871:ARG:CZ	1:A:922:LEU:HD12	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1024:TYR:OH	1:A:1032:LYS:HG3	2.19	0.42
1:A:3246:LEU:O	1:A:3250:MET:HG2	2.19	0.42
1:A:4937:ILE:CD1	1:B:4934:GLY:HA3	2.46	0.42
1:B:707:VAL:HG23	1:B:782:SER:HB3	2.01	0.42
1:B:880:GLU:CD	1:B:910:PHE:HB3	2.44	0.42
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.48	0.42
1:B:4655:PHE:CZ	1:B:4659:ILE:HD11	2.53	0.42
1:C:462:GLU:OE1	1:C:3710:LEU:HD22	2.19	0.42
1:C:1805:GLU:CD	1:C:1805:GLU:H	2.27	0.42
1:C:2001:PRO:O	1:C:2005:GLN:HG3	2.18	0.42
1:C:3106:MET:HE3	1:C:3110:LEU:HD22	2.01	0.42
1:C:3538:THR:O	1:C:3542:LEU:HG	2.19	0.42
1:C:3695:PRO:HB3	1:C:3699:HIS:CG	2.54	0.42
1:C:4010:ILE:O	1:C:4014:LYS:HG3	2.19	0.42
1:A:1805:GLU:CD	1:A:1805:GLU:H	2.27	0.42
1:A:1820:ARG:O	1:A:1824:GLN:HG2	2.19	0.42
1:A:2519:LEU:HD13	1:A:2575:ARG:HG3	2.00	0.42
1:A:2538:THR:O	1:A:2542:SER:HB2	2.19	0.42
1:A:2574:HIS:CD2	1:A:2574:HIS:H	2.36	0.42
1:A:3946:GLN:OE1	1:A:3949:ARG:NH1	2.30	0.42
1:A:4184:MET:HE2	1:A:4184:MET:HA	2.01	0.42
1:B:330:ASP:OD1	1:B:330:ASP:N	2.52	0.42
1:B:879:HIS:HA	1:B:882:TRP:NE1	2.34	0.42
1:B:1970:GLN:HG2	1:B:3642:TYR:HA	2.00	0.42
1:B:2256:TYR:HD2	1:B:2256:TYR:O	2.02	0.42
1:B:2502:MET:H	1:B:2502:MET:HG2	1.71	0.42
1:B:2765:LYS:HZ1	1:B:2860:PRO:HA	1.84	0.42
1:B:3246:LEU:O	1:B:3250:MET:HG2	2.19	0.42
1:D:871:ARG:CZ	1:D:922:LEU:HD12	2.49	0.42
1:D:880:GLU:CD	1:D:910:PHE:HB3	2.44	0.42
1:D:901:LYS:HA	1:D:901:LYS:HD2	1.84	0.42
1:D:1970:GLN:HG2	1:D:3642:TYR:HA	2.00	0.42
1:D:2637:ALA:C	1:D:2640:PRO:HD2	2.44	0.42
1:C:75:VAL:O	1:C:79:GLN:HG2	2.18	0.42
1:C:176:SER:OG	1:C:178:ARG:NH1	2.48	0.42
1:C:1024:TYR:OH	1:C:1032:LYS:HG3	2.19	0.42
1:C:2538:THR:O	1:C:2542:SER:HB2	2.20	0.42
1:C:2694:GLU:HA	1:C:2697:ARG:NH2	2.35	0.42
1:C:3123:LYS:HG3	1:C:3125:VAL:H	1.84	0.42
1:C:4648:LEU:HD22	1:C:4803:HIS:CE1	2.54	0.42
1:A:572:PRO:HA	1:A:575:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:788:LYS:HE3	1:A:788:LYS:HB2	1.78	0.42
1:A:2256:TYR:O	1:A:2259:GLU:HG3	2.19	0.42
1:A:2912:THR:HG23	1:A:2914:LYS:HG3	2.00	0.42
1:A:3367:LYS:HE3	1:A:3367:LYS:HB2	1.85	0.42
1:A:3453:ARG:HA	1:A:3453:ARG:CZ	2.49	0.42
1:A:4010:ILE:O	1:A:4014:LYS:HG3	2.19	0.42
1:B:871:ARG:CZ	1:B:922:LEU:HD12	2.50	0.42
1:B:2191:PHE:CE2	1:B:2242:ILE:HD11	2.54	0.42
1:B:2244:ARG:HH22	1:B:2283:ASN:HA	1.83	0.42
1:B:2615:ARG:HG2	1:B:2664:PHE:HE1	1.85	0.42
1:B:3453:ARG:HA	1:B:3453:ARG:CZ	2.49	0.42
1:B:3465:ASN:C	1:B:3467:MET:H	2.28	0.42
1:B:3524:MET:H	1:B:3524:MET:HG3	1.69	0.42
1:B:3579:LEU:HB2	1:B:3582:ARG:HG2	1.99	0.42
1:B:4010:ILE:O	1:B:4014:LYS:HG3	2.19	0.42
1:D:110:ARG:NH1	1:D:115:ARG:HB3	2.34	0.42
1:D:856:VAL:H	1:D:991:ASN:ND2	2.17	0.42
1:D:947:GLU:OE1	1:D:1051:TYR:OH	2.37	0.42
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.19	0.42
1:D:2538:THR:O	1:D:2542:SER:HB2	2.19	0.42
1:D:3453:ARG:HA	1:D:3453:ARG:CZ	2.49	0.42
1:C:871:ARG:CZ	1:C:922:LEU:HD12	2.49	0.42
1:C:1739:THR:O	1:C:1743[B]:ARG:HG3	2.19	0.42
1:C:2516:ASP:OD1	1:C:2516:ASP:N	2.52	0.42
1:C:2973:PHE:CE1	1:C:2995:ILE:HG12	2.54	0.42
1:C:3246:LEU:O	1:C:3250:MET:HG2	2.19	0.42
1:C:3579:LEU:HB2	1:C:3582:ARG:HG2	1.99	0.42
1:C:3868:ARG:HH11	1:C:3870:ASN:HB3	1.85	0.42
1:C:4655:PHE:CZ	1:C:4659:ILE:HD11	2.53	0.42
1:A:2228:MET:HE2	1:A:2228:MET:HB2	1.67	0.42
1:A:2694:GLU:HA	1:A:2697:ARG:NH2	2.34	0.42
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.52	0.42
1:A:2973:PHE:CE1	1:A:2995:ILE:HG12	2.54	0.42
1:A:3201:MET:HE3	1:A:3203:VAL:CG2	2.49	0.42
1:A:3858:MET:HG3	1:A:3859:VAL:N	2.35	0.42
1:A:4161:ARG:CD	1:A:4161:ARG:H	2.33	0.42
1:A:4673:ARG:NH2	1:A:4698:LYS:HG3	2.35	0.42
2:G:84:ALA:O	2:G:93:PRO:HB3	2.18	0.42
1:B:462:GLU:OE1	1:B:3710:LEU:HD22	2.19	0.42
1:B:575:LEU:HD22	1:B:609:CYS:HB2	1.99	0.42
1:B:3137:LEU:HD23	1:B:3137:LEU:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3263:TYR:HD1	1:B:3270:ILE:HD12	1.84	0.42
1:B:3822:ASP:OD1	1:B:3823:LYS:NZ	2.39	0.42
1:B:4161:ARG:CD	1:B:4161:ARG:H	2.33	0.42
1:B:4673:ARG:NH2	1:B:4698:LYS:HG3	2.35	0.42
1:D:1008:SER:HB3	1:D:1017:ARG:HB3	2.00	0.42
1:D:3201:MET:HE3	1:D:3203:VAL:CG2	2.49	0.42
1:D:3858:MET:HG3	1:D:3859:VAL:N	2.35	0.42
1:D:3868:ARG:HH11	1:D:3870:ASN:HB3	1.85	0.42
1:C:336:PRO:HA	1:C:337:PRO:HD3	1.90	0.42
1:C:797:HIS:CG	1:C:821:LEU:HD23	2.54	0.42
1:C:3540:TYR:CE1	1:C:3549:VAL:HG21	2.55	0.42
1:A:462:GLU:OE1	1:A:3710:LEU:HD22	2.19	0.42
1:A:1575:LEU:HD23	1:A:1575:LEU:HA	1.90	0.42
1:A:2282:ASP:HA	1:A:2341:VAL:HG13	2.01	0.42
1:A:3540:TYR:CE1	1:A:3549:VAL:HG21	2.55	0.42
1:A:3562:LYS:HE2	1:A:3562:LYS:HB2	1.92	0.42
2:F:84:ALA:O	2:F:93:PRO:HB3	2.18	0.42
1:B:110:ARG:NH1	1:B:115:ARG:HB3	2.34	0.42
1:B:384:MET:H	1:B:384:MET:CE	2.32	0.42
1:B:572:PRO:HA	1:B:575:LEU:HD13	2.01	0.42
1:B:1739:THR:O	1:B:1743[B]:ARG:HG3	2.19	0.42
1:B:1929:MET:HE2	1:B:1929:MET:HB3	1.76	0.42
1:B:2538:THR:O	1:B:2542:SER:HB2	2.20	0.42
1:B:2815:ALA:HB1	1:B:2881:ASN:ND2	2.35	0.42
1:D:69:LEU:HD21	1:D:202:MET:HE1	2.01	0.42
1:D:774:ASP:OD1	1:D:774:ASP:N	2.46	0.42
1:D:1024:TYR:OH	1:D:1032:LYS:HG3	2.19	0.42
1:D:2290:LEU:HD12	1:D:2291:GLN:H	1.83	0.42
1:D:2516:ASP:OD1	1:D:2516:ASP:N	2.52	0.42
1:D:3137:LEU:HD23	1:D:3137:LEU:HA	1.85	0.42
1:C:2290:LEU:HD12	1:C:2291:GLN:H	1.83	0.42
1:C:2318:TYR:HD2	1:C:2319:PRO:HD2	1.85	0.42
1:C:3263:TYR:HD1	1:C:3270:ILE:HD12	1.84	0.42
1:A:296:ASP:HB2	1:A:297:GLN:OE1	2.20	0.42
1:A:2209:GLU:C	1:A:2209:GLU:OE1	2.62	0.42
1:A:3106:MET:HE3	1:A:3110:LEU:HD22	2.01	0.42
1:A:3695:PRO:HB3	1:A:3699:HIS:CG	2.54	0.42
1:A:4060:LYS:HD2	1:A:4060:LYS:HA	1.84	0.42
2:E:11:ASP:OD2	2:E:11:ASP:C	2.62	0.42
1:B:638:ILE:HD11	1:B:1636:MET:HE3	2.01	0.42
1:B:1024:TYR:OH	1:B:1032:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2290:LEU:HD12	1:B:2291:GLN:N	2.33	0.42
1:B:4184:MET:HE2	1:B:4184:MET:HA	2.01	0.42
1:D:1805:GLU:H	1:D:1805:GLU:CD	2.27	0.42
1:D:2742:THR:HB	1:D:2814:LYS:HB3	2.01	0.42
1:D:3123:LYS:HG3	1:D:3125:VAL:H	1.84	0.42
1:D:3270:ILE:HA	1:D:3274:LEU:HD12	2.02	0.42
1:D:3695:PRO:HB3	1:D:3699:HIS:CG	2.54	0.42
1:C:1821:ASP:HB3	1:C:1837:GLN:HE22	1.85	0.42
1:C:2815:ALA:HB1	1:C:2881:ASN:ND2	2.35	0.42
1:A:638:ILE:HD11	1:A:1636:MET:HE3	2.01	0.42
1:A:950:LEU:HD11	1:A:970:LEU:HB3	2.01	0.42
2:E:79:ASP:OD1	2:E:80:TYR:HD1	2.02	0.42
1:B:1820:ARG:O	1:B:1824:GLN:HG2	2.19	0.42
1:B:2514:ASN:OD1	1:B:2514:ASN:N	2.52	0.42
1:B:3823:LYS:HA	1:B:3823:LYS:HD3	1.79	0.42
1:D:168:ASP:OD1	1:D:201:ASN:ND2	2.50	0.42
1:D:978:THR:O	1:D:982:THR:HG23	2.20	0.42
1:D:1066:GLN:HB2	1:D:1071:ARG:HH12	1.81	0.42
1:D:3540:TYR:CE1	1:D:3549:VAL:HG21	2.55	0.42
1:D:4158:PRO:HA	1:D:4161:ARG:HD3	2.01	0.42
1:D:4648:LEU:HD22	1:D:4803:HIS:CE1	2.54	0.42
1:C:937:CYS:N	1:C:1056:PRO:HG3	2.35	0.42
1:C:1820:ARG:O	1:C:1824:GLN:HG2	2.19	0.42
1:C:2256:TYR:HD2	1:C:2256:TYR:O	2.02	0.42
1:C:2615:ARG:HG2	1:C:2664:PHE:HE1	1.85	0.42
1:C:3376:GLU:OE1	1:C:3448:SER:OG	2.30	0.42
1:C:3400:VAL:HG23	1:C:3403:ARG:NH2	2.34	0.42
1:C:3823:LYS:HA	1:C:3823:LYS:HD3	1.79	0.42
1:C:4161:ARG:H	1:C:4161:ARG:CD	2.33	0.42
1:C:4541:TRP:HA	1:C:4544:LEU:HG	2.01	0.42
1:A:873:LYS:NZ	1:A:877:ASN:HB2	2.35	0.42
1:A:880:GLU:CD	1:A:910:PHE:HB3	2.44	0.42
1:A:2101:MET:HB3	1:A:2101:MET:HE2	1.76	0.42
1:A:2990:PRO:HG2	1:A:2991:HIS:CE1	2.55	0.42
2:G:49:MET:HG2	2:G:52:LYS:HG2	2.02	0.42
2:G:79:ASP:OD1	2:G:80:TYR:HD1	2.02	0.42
1:B:797:HIS:CG	1:B:821:LEU:HD23	2.54	0.42
1:B:2282:ASP:HA	1:B:2341:VAL:HG13	2.02	0.42
1:B:3023:LYS:HG3	1:B:3023:LYS:O	2.20	0.42
1:B:3107:VAL:HB	1:B:3111:ARG:HH22	1.85	0.42
1:B:3695:PRO:HB3	1:B:3699:HIS:CG	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3756:LYS:HE3	1:B:3756:LYS:HB2	1.79	0.42
1:B:4942:GLU:HA	1:B:4945:ASP:OD2	2.20	0.42
1:D:950:LEU:HD11	1:D:970:LEU:HB3	2.01	0.42
1:D:1739:THR:O	1:D:1743[B]:ARG:HG3	2.19	0.42
1:D:2514:ASN:N	1:D:2514:ASN:OD1	2.52	0.42
1:D:3528:THR:HG22	1:D:3569:LEU:HD21	2.00	0.42
1:C:572:PRO:HA	1:C:575:LEU:HD13	2.01	0.42
1:C:1926:LEU:O	1:C:1931:LEU:HD11	2.20	0.42
1:C:2209:GLU:C	1:C:2209:GLU:OE1	2.62	0.42
1:C:4673:ARG:NH2	1:C:4698:LYS:HG3	2.35	0.42
1:A:642:THR:OG1	1:A:1613:LEU:HD12	2.20	0.42
1:A:866:HIS:HD2	1:A:867:LEU:N	2.16	0.42
1:A:1008:SER:HB3	1:A:1017:ARG:HB3	2.00	0.42
1:A:1424:PRO:HA	1:A:1427:ILE:HG22	2.01	0.42
1:A:2765:LYS:NZ	1:A:2860:PRO:HA	2.35	0.42
1:A:2815:ALA:HB1	1:A:2881:ASN:ND2	2.35	0.42
1:A:3233:PRO:HG2	1:A:3239:MET:HA	2.00	0.42
1:A:4942:GLU:HA	1:A:4945:ASP:OD2	2.20	0.42
1:B:328:LYS:HE3	1:B:328:LYS:HB3	1.72	0.42
1:B:642:THR:OG1	1:B:1613:LEU:HD12	2.20	0.42
1:B:2186:MET:O	1:B:2192:TYR:OH	2.18	0.42
1:B:2256:TYR:O	1:B:2259:GLU:HG3	2.19	0.42
1:B:3036:LYS:O	1:B:3039:ILE:HG22	2.20	0.42
1:B:3621:HIS:C	1:B:3622:LYS:HG3	2.45	0.42
1:B:3723:MET:HE3	1:B:3793:MET:CE	2.48	0.42
1:D:197:GLN:H	1:D:197:GLN:HG3	1.74	0.42
1:D:642:THR:OG1	1:D:1613:LEU:HD12	2.20	0.42
1:D:797:HIS:CG	1:D:821:LEU:HD23	2.54	0.42
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.53	0.42
1:D:3723:MET:HE3	1:D:3793:MET:CE	2.48	0.42
1:C:700:GLU:OE2	1:C:1458:HIS:NE2	2.33	0.42
1:C:950:LEU:HD11	1:C:970:LEU:HB3	2.01	0.42
1:C:1648:MET:HE2	1:C:1648:MET:HB3	1.85	0.42
1:C:2229:VAL:HB	1:C:2267:MET:HE1	2.02	0.42
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.19	0.42
1:C:2282:ASP:HA	1:C:2341:VAL:HG13	2.01	0.42
1:A:69:LEU:HD21	1:A:202:MET:HE1	2.01	0.42
1:A:202:MET:HE3	1:A:202:MET:HB3	1.83	0.42
1:A:2229:VAL:HB	1:A:2267:MET:HE1	2.02	0.42
1:A:2871:LEU:HG	1:A:2927:LEU:HD21	2.02	0.42
1:A:3036:LYS:O	1:A:3039:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3123:LYS:HG3	1:A:3125:VAL:H	1.84	0.42
1:A:3969:ILE:HG21	1:A:3980:LEU:HD12	2.01	0.42
1:A:4816:ILE:HD12	1:A:4816:ILE:HA	1.95	0.42
2:G:11:ASP:OD2	2:G:11:ASP:C	2.63	0.42
2:F:11:ASP:OD2	2:F:11:ASP:C	2.63	0.42
1:B:2229:VAL:HB	1:B:2267:MET:HE1	2.02	0.42
1:B:2782:ASP:OD1	1:B:2782:ASP:N	2.52	0.42
1:B:2973:PHE:CE1	1:B:2995:ILE:HG12	2.54	0.42
1:B:3270:ILE:HA	1:B:3274:LEU:HD12	2.01	0.42
1:D:330:ASP:N	1:D:330:ASP:OD1	2.52	0.42
1:D:937:CYS:N	1:D:1056:PRO:HG3	2.35	0.42
1:D:1231[B]:GLN:H	1:D:1231[B]:GLN:HG3	1.61	0.42
1:D:1926:LEU:O	1:D:1931:LEU:HD11	2.20	0.42
1:D:1999:ARG:HG2	1:D:3635:CYS:HB3	2.01	0.42
1:D:2318:TYR:HD2	1:D:2319:PRO:HD2	1.85	0.42
1:D:3023:LYS:O	1:D:3023:LYS:HG3	2.20	0.42
1:D:3106:MET:HE3	1:D:3110:LEU:HD22	2.01	0.42
1:D:3689:GLU:C	1:D:3691:GLU:H	2.27	0.42
1:C:69:LEU:HD21	1:C:202:MET:HE1	2.01	0.42
1:C:296:ASP:HB2	1:C:297:GLN:OE1	2.20	0.42
1:C:638:ILE:HD11	1:C:1636:MET:HE3	2.01	0.42
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.52	0.42
1:C:3291:ALA:O	1:C:3293:PRO:HD3	2.20	0.42
1:C:3528:THR:HG22	1:C:3569:LEU:HD21	2.00	0.42
1:C:3868:ARG:NH1	1:C:3870:ASN:HB3	2.35	0.42
1:C:3950:ASN:HA	1:C:3953:LYS:HG2	2.02	0.42
1:A:274:LEU:HD23	1:A:274:LEU:HA	1.72	0.41
1:A:797:HIS:CG	1:A:821:LEU:HD23	2.54	0.41
1:A:1926:LEU:O	1:A:1931:LEU:HD11	2.20	0.41
1:A:1999:ARG:HG2	1:A:3635:CYS:HB3	2.01	0.41
1:A:2318:TYR:HD2	1:A:2319:PRO:HD2	1.85	0.41
1:A:3689:GLU:C	1:A:3691:GLU:H	2.27	0.41
1:A:3868:ARG:HH11	1:A:3870:ASN:HB3	1.85	0.41
1:A:4648:LEU:HD22	1:A:4803:HIS:CE1	2.54	0.41
1:B:296:ASP:HB2	1:B:297:GLN:OE1	2.20	0.41
1:B:950:LEU:HD11	1:B:970:LEU:HB3	2.01	0.41
1:B:1821:ASP:HB3	1:B:1837:GLN:HE22	1.85	0.41
1:B:1923:GLU:OE2	1:B:1923:GLU:N	2.46	0.41
1:B:2318:TYR:HD2	1:B:2319:PRO:HD2	1.85	0.41
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.53	0.41
1:B:3123:LYS:HG3	1:B:3125:VAL:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3640:PRO:HG2	1:B:3643:ASN:HB2	2.02	0.41
1:B:3950:ASN:HA	1:B:3953:LYS:HG2	2.02	0.41
1:D:296:ASP:HB2	1:D:297:GLN:OE1	2.20	0.41
1:D:2765:LYS:NZ	1:D:2860:PRO:HA	2.35	0.41
1:D:2990:PRO:HG2	1:D:2991:HIS:CE1	2.55	0.41
1:D:4161:ARG:H	1:D:4161:ARG:CD	2.33	0.41
1:D:4161:ARG:H	1:D:4161:ARG:HD2	1.85	0.41
1:D:4541:TRP:HA	1:D:4544:LEU:HG	2.01	0.41
1:D:4673:ARG:NH2	1:D:4698:LYS:HG3	2.35	0.41
1:D:4837:LEU:HD22	1:D:4932:ILE:HG23	2.02	0.41
1:C:110:ARG:NH1	1:C:115:ARG:HB3	2.34	0.41
1:C:879:HIS:HD2	1:C:882:TRP:HE1	1.68	0.41
1:C:935:LEU:HD21	1:C:987:ARG:NE	2.33	0.41
1:C:2819:TRP:C	1:C:2820:GLU:HG3	2.45	0.41
1:C:2871:LEU:HG	1:C:2927:LEU:HD21	2.02	0.41
1:C:3640:PRO:HG2	1:C:3643:ASN:HB2	2.02	0.41
1:C:4161:ARG:H	1:C:4161:ARG:HD2	1.85	0.41
1:A:937:CYS:N	1:A:1056:PRO:HG3	2.35	0.41
1:A:1180:ARG:C	1:A:1181:GLU:HG2	2.45	0.41
1:A:1690:ASP:OD2	1:A:1693:GLN:NE2	2.54	0.41
1:A:1821:ASP:HB3	1:A:1837:GLN:HE22	1.85	0.41
1:A:1997:GLU:O	1:A:2000:SER:OG	2.34	0.41
1:A:2615:ARG:HG2	1:A:2664:PHE:HE1	1.85	0.41
1:A:2742:THR:HB	1:A:2814:LYS:HB3	2.01	0.41
1:A:4158:PRO:HA	1:A:4161:ARG:HD3	2.01	0.41
1:A:4253:GLU:HG3	1:A:4557:ARG:NH2	2.36	0.41
2:H:79:ASP:OD1	2:H:80:TYR:HD1	2.03	0.41
2:G:35:LYS:HE2	1:C:636:ASN:HD21	1.85	0.41
1:B:69:LEU:HD21	1:B:202:MET:HE1	2.01	0.41
1:B:856:VAL:H	1:B:991:ASN:ND2	2.17	0.41
1:B:879:HIS:HD2	1:B:882:TRP:HE1	1.68	0.41
1:B:1180:ARG:C	1:B:1181:GLU:HG2	2.45	0.41
1:B:2209:GLU:OE1	1:B:2209:GLU:C	2.62	0.41
1:B:3868:ARG:NH1	1:B:3870:ASN:HB3	2.35	0.41
1:B:4137:ARG:NH2	1:B:4199:GLU:OE2	2.53	0.41
1:D:365:LYS:HB3	1:D:365:LYS:HE3	1.82	0.41
1:D:1658:ASP:OD1	1:D:1658:ASP:N	2.53	0.41
1:D:2256:TYR:O	1:D:2256:TYR:HD2	2.02	0.41
1:D:2782:ASP:N	1:D:2782:ASP:OD1	2.52	0.41
1:D:2871:LEU:HG	1:D:2927:LEU:HD21	2.02	0.41
1:D:3036:LYS:O	1:D:3039:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3263:TYR:HD1	1:D:3270:ILE:HD12	1.84	0.41
1:C:1488:LYS:HB2	1:C:1488:LYS:HE3	1.83	0.41
1:C:2008:MET:HE1	1:C:2022:PRO:CD	2.50	0.41
1:C:3604:TYR:CD2	1:C:3604:TYR:C	2.98	0.41
1:A:1180:ARG:O	1:A:1181:GLU:HG2	2.20	0.41
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.53	0.41
1:A:2527:LEU:HD12	1:A:2527:LEU:HA	1.86	0.41
1:A:2537:ASP:OD2	1:A:2588:ARG:NH1	2.51	0.41
1:A:2587:TYR:O	1:A:2590:SER:OG	2.24	0.41
1:A:4735:GLU:H	1:A:4735:GLU:CD	2.28	0.41
2:H:23:VAL:HG22	2:H:47:LYS:HG2	2.03	0.41
1:B:873:LYS:NZ	1:B:877:ASN:HB2	2.35	0.41
1:B:2326:CYS:O	1:B:2330:ARG:HG3	2.20	0.41
1:B:2871:LEU:HG	1:B:2927:LEU:HD21	2.02	0.41
1:B:3233:PRO:HG2	1:B:3239:MET:HA	2.00	0.41
1:B:3367:LYS:HB2	1:B:3367:LYS:HE3	1.85	0.41
1:B:3390:GLY:HA2	1:B:3393:LEU:HG	2.03	0.41
1:B:3540:TYR:CE1	1:B:3549:VAL:HG21	2.55	0.41
1:B:4148:THR:HG21	1:B:4180:ARG:HH21	1.85	0.41
1:D:873:LYS:NZ	1:D:877:ASN:HB2	2.35	0.41
1:D:1249:PRO:HA	1:D:1250:PRO:HD3	1.99	0.41
1:D:2008:MET:HE1	1:D:2022:PRO:CD	2.50	0.41
1:D:2282:ASP:HA	1:D:2341:VAL:HG13	2.01	0.41
1:D:2574:HIS:CD2	1:D:2574:HIS:H	2.36	0.41
1:D:2785:LEU:C	1:D:2786:LYS:HG3	2.45	0.41
1:D:3107:VAL:HB	1:D:3111:ARG:HH22	1.85	0.41
1:D:3950:ASN:HA	1:D:3953:LYS:HG2	2.02	0.41
1:D:4047:MET:HE3	1:D:4047:MET:HB3	1.90	0.41
1:C:239:ASP:OD1	1:C:239:ASP:N	2.53	0.41
1:C:642:THR:OG1	1:C:1613:LEU:HD12	2.20	0.41
1:C:1180:ARG:C	1:C:1181:GLU:HG2	2.45	0.41
1:C:2608:MET:HB3	1:C:2608:MET:HE3	1.84	0.41
1:C:4253:GLU:HG3	1:C:4557:ARG:NH2	2.36	0.41
1:A:197:GLN:H	1:A:197:GLN:HG3	1.74	0.41
1:A:239:ASP:N	1:A:239:ASP:OD1	2.53	0.41
1:A:2516:ASP:OD1	1:A:2516:ASP:N	2.52	0.41
1:A:2871:LEU:HD11	1:A:2937:VAL:CG2	2.51	0.41
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.86	0.41
1:A:3270:ILE:HA	1:A:3274:LEU:HD12	2.02	0.41
1:A:3868:ARG:NH1	1:A:3870:ASN:HB3	2.35	0.41
1:A:4541:TRP:HA	1:A:4544:LEU:HG	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4917:ASP:OD2	1:D:4888:TYR:OH	2.28	0.41
1:B:239:ASP:OD1	1:B:239:ASP:N	2.53	0.41
1:B:921:ASN:O	1:B:924:MET:HE3	2.20	0.41
1:B:2694:GLU:HA	1:B:2697:ARG:NH2	2.35	0.41
1:B:4158:PRO:HA	1:B:4161:ARG:HD3	2.01	0.41
1:B:4950:VAL:HG12	1:B:4951:LYS:HE2	2.03	0.41
1:D:1424:PRO:HA	1:D:1427:ILE:HG22	2.01	0.41
1:D:1821:ASP:HB3	1:D:1837:GLN:HE22	1.85	0.41
1:D:2615:ARG:HG2	1:D:2664:PHE:HE1	1.85	0.41
1:D:2815:ALA:HB1	1:D:2881:ASN:ND2	2.35	0.41
1:D:3114:LYS:HD2	1:D:3125:VAL:HG11	2.02	0.41
1:D:3390:GLY:HA2	1:D:3393:LEU:HG	2.03	0.41
1:D:3594:ARG:CZ	1:D:3594:ARG:HB3	2.51	0.41
1:D:4010:ILE:O	1:D:4014:LYS:HG3	2.19	0.41
1:D:4148:THR:HG21	1:D:4180:ARG:HH21	1.86	0.41
1:C:856:VAL:H	1:C:991:ASN:ND2	2.17	0.41
1:C:3107:VAL:HB	1:C:3111:ARG:HH22	1.85	0.41
1:C:4119:GLU:HG2	1:C:4120:ASN:OD1	2.21	0.41
1:C:4148:THR:HG21	1:C:4180:ARG:HH21	1.85	0.41
1:A:297:GLN:OE1	1:A:297:GLN:N	2.49	0.41
1:A:3263:TYR:HD1	1:A:3270:ILE:HD12	1.84	0.41
1:A:3291:ALA:O	1:A:3293:PRO:HD3	2.21	0.41
1:A:3762:ARG:HH21	1:A:4755:GLU:HB2	1.85	0.41
1:B:935:LEU:HD11	1:B:987:ARG:NH2	2.36	0.41
1:B:1575:LEU:HD23	1:B:1575:LEU:HA	1.90	0.41
1:B:2516:ASP:N	1:B:2516:ASP:OD1	2.52	0.41
1:B:2990:PRO:HG2	1:B:2991:HIS:CE1	2.55	0.41
1:B:3201:MET:HE3	1:B:3203:VAL:CG2	2.49	0.41
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.86	0.41
1:B:3604:TYR:CD2	1:B:3604:TYR:C	2.99	0.41
1:B:4119:GLU:HG2	1:B:4120:ASN:OD1	2.20	0.41
1:B:4541:TRP:HA	1:B:4544:LEU:HG	2.01	0.41
1:B:4735:GLU:H	1:B:4735:GLU:CD	2.28	0.41
1:B:4885:PHE:O	1:B:4889:VAL:HG22	2.21	0.41
1:D:638:ILE:HD11	1:D:1636:MET:HE3	2.01	0.41
1:D:2482:ASP:OD1	1:D:2482:ASP:C	2.64	0.41
1:D:3246:LEU:O	1:D:3250:MET:HG2	2.19	0.41
1:D:3465:ASN:C	1:D:3467:MET:H	2.28	0.41
1:D:3621:HIS:C	1:D:3622:LYS:HG3	2.45	0.41
1:D:4119:GLU:HG2	1:D:4120:ASN:OD1	2.21	0.41
1:C:343:GLU:N	1:C:343:GLU:OE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:873:LYS:NZ	1:C:877:ASN:HB2	2.35	0.41
1:C:978:THR:O	1:C:982:THR:HG23	2.20	0.41
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.48	0.41
1:C:2418:LEU:HD23	1:C:2418:LEU:HA	1.92	0.41
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.53	0.41
1:C:2881:ASN:HA	1:C:2884:ASN:HD21	1.85	0.41
1:C:3501:ASP:OD1	1:C:3501:ASP:N	2.54	0.41
1:C:4158:PRO:HA	1:C:4161:ARG:HD3	2.01	0.41
1:A:924:MET:O	1:A:928:THR:HG23	2.21	0.41
1:A:935:LEU:HD11	1:A:987:ARG:NH2	2.36	0.41
1:A:2383:ALA:O	1:A:2386:ILE:HG13	2.20	0.41
1:A:3114:LYS:HD2	1:A:3125:VAL:HG11	2.02	0.41
1:A:3390:GLY:HA2	1:A:3393:LEU:HG	2.03	0.41
1:A:4137:ARG:NH2	1:A:4199:GLU:OE2	2.53	0.41
1:A:4933:GLN:HG2	1:A:4933:GLN:H	1.72	0.41
1:B:343:GLU:OE1	1:B:343:GLU:N	2.54	0.41
1:B:1180:ARG:O	1:B:1181:GLU:HG2	2.20	0.41
1:B:1469:VAL:HG13	1:B:1492:CYS:HB3	2.03	0.41
1:B:2224:ARG:H	1:B:2224:ARG:CD	2.34	0.41
1:B:2263:ILE:HD12	1:B:2263:ILE:HA	1.96	0.41
1:B:2383:ALA:O	1:B:2386:ILE:HG13	2.20	0.41
1:B:2482:ASP:OD1	1:B:2482:ASP:C	2.64	0.41
1:B:3757:GLU:N	1:B:3757:GLU:OE2	2.54	0.41
1:D:788:LYS:HE3	1:D:788:LYS:HB2	1.78	0.41
1:D:2326:CYS:O	1:D:2330:ARG:HG3	2.20	0.41
1:D:2819:TRP:C	1:D:2820:GLU:HG3	2.45	0.41
1:D:3501:ASP:OD1	1:D:3501:ASP:N	2.54	0.41
1:D:4186:ALA:O	1:D:4188:ARG:NH1	2.53	0.41
1:D:4942:GLU:HA	1:D:4945:ASP:OD2	2.20	0.41
1:C:275:ARG:HG3	1:C:338:GLU:CD	2.46	0.41
1:C:957:LYS:HB2	1:C:957:LYS:HE2	1.90	0.41
1:C:2326:CYS:O	1:C:2330:ARG:HG3	2.20	0.41
1:C:2742:THR:HB	1:C:2814:LYS:HB3	2.01	0.41
1:C:3201:MET:HE3	1:C:3203:VAL:CG2	2.49	0.41
1:C:3270:ILE:HA	1:C:3274:LEU:HD12	2.01	0.41
1:C:3547:GLU:HA	1:C:3550:ARG:HH12	1.85	0.41
1:C:3621:HIS:O	1:C:3622:LYS:HG3	2.21	0.41
1:C:3858:MET:HG3	1:C:3859:VAL:N	2.35	0.41
1:C:4137:ARG:NH2	1:C:4199:GLU:OE2	2.53	0.41
1:C:4837:LEU:HD22	1:C:4932:ILE:HG23	2.02	0.41
1:A:343:GLU:OE1	1:A:343:GLU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:952:LYS:HD3	1:A:970:LEU:HA	2.03	0.41
1:A:978:THR:O	1:A:982:THR:HG23	2.20	0.41
1:A:2482:ASP:OD1	1:A:2482:ASP:C	2.64	0.41
1:A:2627:VAL:HG22	1:A:2678:LEU:HB2	2.02	0.41
1:A:3269:VAL:HA	1:A:3273:THR:HB	2.03	0.41
1:A:4218:ILE:O	1:A:4222:VAL:HG23	2.21	0.41
1:B:416:LYS:HE3	1:B:416:LYS:HB2	1.84	0.41
1:B:937:CYS:N	1:B:1056:PRO:HG3	2.35	0.41
1:B:2586:VAL:HG13	1:B:2607:LEU:HD13	2.03	0.41
1:B:2627:VAL:HG22	1:B:2678:LEU:HB2	2.02	0.41
1:B:2742:THR:HB	1:B:2814:LYS:HB3	2.01	0.41
1:B:2785:LEU:C	1:B:2786:LYS:HG3	2.45	0.41
1:B:2859:PRO:HA	1:B:2860:PRO:HD3	1.95	0.41
1:B:2932:MET:HE3	1:B:2932:MET:HB2	1.83	0.41
1:B:3731:LYS:HA	1:B:3734:HIS:NE2	2.36	0.41
1:B:4253:GLU:HG3	1:B:4557:ARG:NH2	2.36	0.41
1:B:4658:ILE:HD11	1:B:4792:LEU:O	2.21	0.41
1:D:2527:LEU:HA	1:D:2527:LEU:HD12	1.87	0.41
1:D:2859:PRO:HA	1:D:2860:PRO:HD3	1.95	0.41
1:D:3621:HIS:O	1:D:3622:LYS:HG3	2.21	0.41
1:D:3823:LYS:HD3	1:D:3823:LYS:HA	1.79	0.41
1:D:3868:ARG:NH1	1:D:3870:ASN:HB3	2.35	0.41
1:C:1733:GLU:HG2	1:C:2201:LEU:HD23	2.03	0.41
1:C:2990:PRO:HG2	1:C:2991:HIS:CE1	2.55	0.41
1:C:3465:ASN:C	1:C:3467:MET:H	2.28	0.41
1:C:3621:HIS:C	1:C:3622:LYS:HG3	2.45	0.41
1:C:4209:GLN:H	1:C:4209:GLN:CD	2.29	0.41
1:C:4658:ILE:HD11	1:C:4792:LEU:O	2.21	0.41
1:C:4950:VAL:HG12	1:C:4951:LYS:HE2	2.03	0.41
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.42	0.41
1:A:796:ARG:O	1:A:1619:ARG:NH2	2.53	0.41
1:A:1658:ASP:OD1	1:A:1658:ASP:N	2.53	0.41
1:A:1999:ARG:HG3	1:A:3635:CYS:O	2.21	0.41
1:A:2530:MET:HE3	1:A:2559:LEU:HD21	2.03	0.41
1:A:2677:LYS:HE2	1:A:2677:LYS:HB3	1.83	0.41
1:A:3950:ASN:HA	1:A:3953:LYS:HG2	2.02	0.41
1:A:4161:ARG:H	1:A:4161:ARG:HD2	1.85	0.41
1:A:4232:GLU:HG2	1:A:5019:TRP:NE1	2.28	0.41
1:B:2520:HIS:O	1:B:2524:VAL:HG22	2.21	0.41
1:B:2765:LYS:NZ	1:B:2860:PRO:HA	2.35	0.41
1:B:3621:HIS:O	1:B:3622:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3842:LEU:HB2	1:B:3929:SER:HB2	2.03	0.41
1:B:3868:ARG:HH11	1:B:3870:ASN:HB3	1.85	0.41
1:B:4218:ILE:O	1:B:4222:VAL:HG23	2.21	0.41
1:B:4648:LEU:HD22	1:B:4803:HIS:CE1	2.54	0.41
1:B:4904:PRO:CB	1:B:4913:ARG:HG2	2.51	0.41
1:D:176:SER:OG	1:D:178:ARG:NH1	2.48	0.41
1:D:343:GLU:OE1	1:D:343:GLU:N	2.54	0.41
1:D:921:ASN:O	1:D:924:MET:HE3	2.20	0.41
1:D:2530:MET:HE3	1:D:2559:LEU:HD21	2.03	0.41
1:D:2586:VAL:HG13	1:D:2607:LEU:HD13	2.03	0.41
1:D:2625:ARG:HH12	1:D:2629:ASP:CG	2.29	0.41
1:D:2627:VAL:HG22	1:D:2678:LEU:HB2	2.02	0.41
1:D:3230:LEU:H	1:D:3230:LEU:HD23	1.86	0.41
1:D:3547:GLU:HA	1:D:3550:ARG:HH12	1.85	0.41
1:D:3604:TYR:CD2	1:D:3604:TYR:C	2.98	0.41
1:D:3640:PRO:HG2	1:D:3643:ASN:HB2	2.02	0.41
1:D:3852:LYS:HE3	1:D:3852:LYS:HB3	1.89	0.41
1:C:951:LYS:HB3	1:C:971:ASP:HB3	2.03	0.41
1:C:961:MET:HB3	1:C:961:MET:HE3	1.69	0.41
1:C:1287:LEU:HD11	1:C:1599:MET:HE3	2.03	0.41
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.56	0.41
1:C:3158:LEU:HD23	1:C:3158:LEU:HA	1.92	0.41
1:C:4568:PHE:CD1	1:C:4568:PHE:C	2.99	0.41
1:C:4885:PHE:O	1:C:4889:VAL:HG22	2.21	0.41
1:A:1469:VAL:HG13	1:A:1492:CYS:HB3	2.03	0.41
1:A:2173:GLN:H	1:A:2173:GLN:CD	2.22	0.41
1:A:2326:CYS:O	1:A:2330:ARG:HG3	2.21	0.41
1:A:2514:ASN:OD1	1:A:2514:ASN:N	2.52	0.41
1:A:2520:HIS:O	1:A:2524:VAL:HG22	2.21	0.41
1:A:2586:VAL:HG13	1:A:2607:LEU:HD13	2.03	0.41
1:A:2785:LEU:C	1:A:2786:LYS:HG3	2.45	0.41
1:A:2932:MET:HE3	1:A:2932:MET:HB2	1.84	0.41
1:A:3158:LEU:HD23	1:A:3158:LEU:HA	1.91	0.41
1:A:3547:GLU:HA	1:A:3550:ARG:HH12	1.85	0.41
1:A:3594:ARG:CZ	1:A:3594:ARG:HB3	2.51	0.41
1:A:3621:HIS:C	1:A:3622:LYS:HG3	2.45	0.41
1:A:3842:LEU:HB2	1:A:3929:SER:HB2	2.03	0.41
1:A:4148:THR:HG21	1:A:4180:ARG:HH21	1.86	0.41
1:A:4186:ALA:O	1:A:4188:ARG:NH1	2.53	0.41
1:A:4931:ILE:HG23	1:D:4940:PHE:HE1	1.86	0.41
1:A:4950:VAL:HG12	1:A:4951:LYS:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:11:ASP:OD2	2:H:11:ASP:C	2.63	0.41
1:B:365:LYS:HB3	1:B:365:LYS:HE3	1.82	0.41
1:B:978:THR:O	1:B:982:THR:HG23	2.20	0.41
1:B:1231[B]:GLN:H	1:B:1231[B]:GLN:HG3	1.61	0.41
1:B:1287:LEU:HD11	1:B:1599:MET:HE3	2.03	0.41
1:B:1926:LEU:O	1:B:1931:LEU:HD11	2.20	0.41
1:B:1999:ARG:HG3	1:B:3635:CYS:O	2.21	0.41
1:B:2412:GLU:C	1:B:2414:ASN:H	2.29	0.41
1:B:2819:TRP:C	1:B:2820:GLU:HG3	2.45	0.41
1:B:3501:ASP:OD1	1:B:3501:ASP:N	2.54	0.41
1:B:3858:MET:HG3	1:B:3859:VAL:N	2.35	0.41
1:B:4112:LEU:O	1:B:4115:SER:OG	2.36	0.41
1:B:4823:LEU:HD23	1:B:4823:LEU:HA	1.94	0.41
1:B:4897:ILE:HD12	1:B:4897:ILE:HA	1.96	0.41
1:D:156:GLN:HG2	1:D:157:ARG:NH1	2.36	0.41
1:D:275:ARG:HG3	1:D:338:GLU:CD	2.46	0.41
1:D:460:GLN:N	1:D:463:GLU:OE2	2.41	0.41
1:D:924:MET:O	1:D:928:THR:HG23	2.21	0.41
1:D:952:LYS:HD3	1:D:970:LEU:HA	2.03	0.41
1:D:1170:MET:HE3	1:D:1170:MET:HB2	1.81	0.41
1:D:1180:ARG:O	1:D:1181:GLU:HG2	2.20	0.41
1:D:1180:ARG:C	1:D:1181:GLU:HG2	2.45	0.41
1:D:2224:ARG:H	1:D:2224:ARG:CD	2.34	0.41
1:D:2881:ASN:HA	1:D:2884:ASN:HD21	1.85	0.41
1:D:3227:ARG:O	1:D:3232:LEU:HB2	2.21	0.41
1:D:3762:ARG:HH21	1:D:4755:GLU:HB2	1.85	0.41
1:D:4240:ASP:OD2	1:D:4672:LYS:NZ	2.49	0.41
1:D:4950:VAL:HG12	1:D:4951:LYS:HE2	2.03	0.41
1:C:156:GLN:HG2	1:C:157:ARG:NH1	2.36	0.41
1:C:484:LEU:O	1:C:488:LEU:HG	2.21	0.41
1:C:901:LYS:HD2	1:C:901:LYS:HA	1.84	0.41
1:C:1055:PRO:HA	1:C:1056:PRO:HD3	1.98	0.41
1:C:1180:ARG:O	1:C:1181:GLU:HG2	2.20	0.41
1:C:1469:VAL:HG13	1:C:1492:CYS:HB3	2.03	0.41
1:C:2625:ARG:HH12	1:C:2629:ASP:CG	2.29	0.41
1:C:2632:ILE:HD12	1:C:2633:LEU:H	1.86	0.41
1:C:2765:LYS:NZ	1:C:2860:PRO:HA	2.35	0.41
1:C:2785:LEU:C	1:C:2786:LYS:HG3	2.45	0.41
1:C:3114:LYS:HD2	1:C:3125:VAL:HG11	2.02	0.41
1:C:3623:LEU:HG	1:C:3624:LEU:H	1.86	0.41
1:C:3756:LYS:HE3	1:C:3756:LYS:HB2	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3762:ARG:HH21	1:C:4755:GLU:HB2	1.85	0.41
1:C:4735:GLU:H	1:C:4735:GLU:CD	2.28	0.41
1:C:4942:GLU:HA	1:C:4945:ASP:OD2	2.20	0.41
1:A:2008:MET:HE1	1:A:2022:PRO:CD	2.50	0.41
1:A:3501:ASP:N	1:A:3501:ASP:OD1	2.54	0.41
1:A:3621:HIS:O	1:A:3622:LYS:HG3	2.21	0.41
2:G:23:VAL:HG22	2:G:47:LYS:HG2	2.03	0.41
1:B:2881:ASN:HA	1:B:2884:ASN:HD21	1.85	0.41
1:B:3547:GLU:HA	1:B:3550:ARG:HH12	1.85	0.41
1:D:239:ASP:N	1:D:239:ASP:OD1	2.53	0.41
1:D:1943:LEU:HB2	1:D:2123:LEU:HD21	2.03	0.41
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.56	0.41
1:D:2520:HIS:O	1:D:2524:VAL:HG22	2.21	0.41
1:D:2867:LEU:CD2	1:D:2871:LEU:HB3	2.51	0.41
1:D:2871:LEU:HD11	1:D:2937:VAL:CG2	2.50	0.41
1:D:4218:ILE:O	1:D:4222:VAL:HG23	2.21	0.41
1:D:4253:GLU:HG3	1:D:4557:ARG:NH2	2.35	0.41
1:D:4658:ILE:HD11	1:D:4792:LEU:O	2.21	0.41
1:C:1099:GLU:CD	1:C:1125:ASN:HD21	2.29	0.41
1:C:2224:ARG:H	1:C:2224:ARG:CD	2.34	0.41
1:C:2482:ASP:OD1	1:C:2482:ASP:C	2.64	0.41
1:C:2586:VAL:HG13	1:C:2607:LEU:HD13	2.03	0.41
1:C:3227:ARG:O	1:C:3232:LEU:HB2	2.21	0.41
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.86	0.41
1:C:3390:GLY:HA2	1:C:3393:LEU:HG	2.03	0.41
1:C:3757:GLU:N	1:C:3757:GLU:OE2	2.54	0.41
1:C:3969:ILE:HG21	1:C:3980:LEU:HD12	2.01	0.41
1:A:1287:LEU:HD11	1:A:1599:MET:HE3	2.03	0.40
1:A:1634:LEU:HD23	1:A:1634:LEU:HA	1.91	0.40
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.56	0.40
1:A:2608:MET:HE3	1:A:2608:MET:HB3	1.84	0.40
1:A:2632:ILE:HD12	1:A:2633:LEU:H	1.86	0.40
1:A:3023:LYS:O	1:A:3023:LYS:HG3	2.20	0.40
1:A:3227:ARG:O	1:A:3232:LEU:HB2	2.21	0.40
1:A:3400:VAL:HG23	1:A:3403:ARG:NH2	2.34	0.40
1:A:3465:ASN:C	1:A:3467:MET:H	2.28	0.40
1:A:3604:TYR:CD2	1:A:3604:TYR:C	2.98	0.40
1:A:3757:GLU:OE2	1:A:3757:GLU:N	2.54	0.40
1:A:4209:GLN:H	1:A:4209:GLN:CD	2.29	0.40
1:A:4769:MET:SD	1:A:4769:MET:N	2.79	0.40
1:A:4837:LEU:HD22	1:A:4932:ILE:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1733:GLU:HG2	1:B:2201:LEU:HD23	2.03	0.40
1:B:1980:LEU:O	1:B:1980:LEU:HD13	2.21	0.40
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.56	0.40
1:B:3277:LEU:HD23	1:B:3277:LEU:HA	1.92	0.40
1:B:3623:LEU:HG	1:B:3624:LEU:H	1.86	0.40
1:B:4209:GLN:H	1:B:4209:GLN:CD	2.29	0.40
1:D:110:ARG:HD3	1:D:115:ARG:HH21	1.86	0.40
1:D:1287:LEU:HD11	1:D:1599:MET:HE3	2.03	0.40
1:D:2229:VAL:HB	1:D:2267:MET:HE1	2.02	0.40
1:D:2523:ASP:HB3	1:D:2578:MET:SD	2.62	0.40
1:D:3011:THR:OG1	1:D:3070:ILE:HD13	2.21	0.40
1:D:3291:ALA:O	1:D:3293:PRO:HD3	2.21	0.40
1:D:4568:PHE:CD1	1:D:4568:PHE:C	2.99	0.40
1:C:921:ASN:O	1:C:924:MET:HE3	2.20	0.40
1:C:2330:ARG:HA	1:C:2333:ASP:OD2	2.22	0.40
1:C:3036:LYS:O	1:C:3039:ILE:HG22	2.20	0.40
1:A:156:GLN:HG2	1:A:157:ARG:NH1	2.36	0.40
1:A:856:VAL:H	1:A:991:ASN:ND2	2.17	0.40
1:A:1031:THR:HG22	1:A:1035:ASN:ND2	2.36	0.40
1:A:1674:CYS:HA	1:A:1678:ASN:HB3	2.04	0.40
1:A:1943:LEU:HB2	1:A:2123:LEU:HD21	2.03	0.40
1:A:1983:ALA:O	1:A:1987:SER:OG	2.22	0.40
1:A:3107:VAL:HB	1:A:3111:ARG:HH22	1.85	0.40
1:A:3171:SER:O	1:A:3174:SER:OG	2.36	0.40
1:A:3640:PRO:HG2	1:A:3643:ASN:HB2	2.02	0.40
2:H:32:ASP:OD1	2:H:32:ASP:C	2.64	0.40
2:F:79:ASP:OD1	2:F:80:TYR:HD1	2.04	0.40
1:B:456:SER:O	1:B:459:LEU:HD12	2.22	0.40
1:B:484:LEU:O	1:B:488:LEU:HG	2.21	0.40
1:B:921:ASN:HB3	1:B:924:MET:CE	2.52	0.40
1:B:1773:PRO:HA	1:B:1774:PRO:HD3	1.90	0.40
1:B:2608:MET:HE3	1:B:2608:MET:HB3	1.84	0.40
1:B:2625:ARG:HH12	1:B:2629:ASP:CG	2.29	0.40
1:B:3291:ALA:O	1:B:3293:PRO:HD3	2.20	0.40
1:B:3400:VAL:HG23	1:B:3403:ARG:NH2	2.34	0.40
1:B:3878:ASP:N	1:B:3878:ASP:OD1	2.55	0.40
1:B:4837:LEU:HD22	1:B:4932:ILE:HG23	2.02	0.40
1:D:484:LEU:O	1:D:488:LEU:HG	2.21	0.40
1:D:1733:GLU:HG2	1:D:2201:LEU:HD23	2.03	0.40
1:D:2383:ALA:O	1:D:2386:ILE:HG13	2.20	0.40
1:D:3604:TYR:O	1:D:3608:GLN:HG2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3842:LEU:HB2	1:D:3929:SER:HB2	2.03	0.40
1:D:4137:ARG:NH2	1:D:4199:GLU:OE2	2.53	0.40
1:D:4735:GLU:H	1:D:4735:GLU:CD	2.28	0.40
1:C:891:TRP:HD1	1:C:902:ARG:HE	1.69	0.40
1:C:2967:MET:HE3	1:C:2967:MET:HA	2.03	0.40
1:C:3087:ILE:HD13	1:C:3087:ILE:HA	1.89	0.40
1:C:3731:LYS:HA	1:C:3734:HIS:NE2	2.36	0.40
1:C:4218:ILE:O	1:C:4222:VAL:HG23	2.21	0.40
1:C:4817:ALA:HB3	1:C:4818:MET:SD	2.62	0.40
1:A:62:LEU:HD12	1:A:62:LEU:HA	1.83	0.40
1:A:110:ARG:HD3	1:A:115:ARG:HH21	1.86	0.40
1:A:275:ARG:HG3	1:A:338:GLU:CD	2.46	0.40
1:A:384:MET:H	1:A:384:MET:CE	2.32	0.40
1:A:484:LEU:O	1:A:488:LEU:HG	2.21	0.40
1:A:2625:ARG:HH12	1:A:2629:ASP:CG	2.29	0.40
1:A:2819:TRP:C	1:A:2820:GLU:HG3	2.45	0.40
1:A:3535:LEU:O	1:A:3538:THR:OG1	2.29	0.40
1:A:4119:GLU:HG2	1:A:4120:ASN:OD1	2.21	0.40
1:B:879:HIS:HA	1:B:882:TRP:CE2	2.56	0.40
1:B:951:LYS:HB3	1:B:971:ASP:HB3	2.03	0.40
1:B:2173:GLN:H	1:B:2173:GLN:CD	2.22	0.40
1:B:2523:ASP:HB3	1:B:2578:MET:SD	2.62	0.40
1:B:2527:LEU:HD12	1:B:2527:LEU:HA	1.87	0.40
1:B:2530:MET:HE3	1:B:2559:LEU:HD21	2.03	0.40
1:B:4247:ILE:HA	1:B:4250:GLN:OE1	2.22	0.40
1:B:4568:PHE:CD1	1:B:4568:PHE:C	2.99	0.40
1:D:879:HIS:HA	1:D:882:TRP:CE2	2.56	0.40
1:D:935:LEU:HD11	1:D:987:ARG:NH2	2.36	0.40
1:D:1674:CYS:HA	1:D:1678:ASN:HB3	2.03	0.40
1:D:2412:GLU:C	1:D:2414:ASN:H	2.29	0.40
1:D:2754:PHE:HE2	1:D:2813:LEU:HD11	1.87	0.40
1:C:110:ARG:HD3	1:C:115:ARG:HH21	1.86	0.40
1:C:460:GLN:CD	1:C:462:GLU:H	2.29	0.40
1:C:1031:THR:HG22	1:C:1035:ASN:ND2	2.36	0.40
1:C:2383:ALA:O	1:C:2386:ILE:HG13	2.20	0.40
1:C:2520:HIS:O	1:C:2524:VAL:HG22	2.21	0.40
1:C:2599:GLN:O	1:C:2603:ILE:HG13	2.22	0.40
1:C:2867:LEU:CD2	1:C:2871:LEU:HB3	2.51	0.40
1:C:3457:ASN:HA	1:C:3460:VAL:HG22	2.03	0.40
1:C:3842:LEU:HB2	1:C:3929:SER:HB2	2.03	0.40
1:A:456:SER:O	1:A:459:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2888:ARG:O	1:A:2892:GLN:HG2	2.22	0.40
1:A:4247:ILE:HA	1:A:4250:GLN:OE1	2.22	0.40
1:A:4583:SER:HB3	1:A:4631:PHE:HE2	1.87	0.40
1:B:2867:LEU:CD2	1:B:2871:LEU:HB3	2.51	0.40
1:B:3011:THR:OG1	1:B:3070:ILE:HD13	2.21	0.40
1:D:1999:ARG:HG3	1:D:3635:CYS:O	2.21	0.40
1:D:2138:LEU:HD23	1:D:2138:LEU:HA	1.89	0.40
1:D:2330:ARG:HA	1:D:2333:ASP:OD2	2.22	0.40
1:D:2888:ARG:O	1:D:2892:GLN:HG2	2.22	0.40
1:D:3688:GLU:C	1:D:3690:VAL:H	2.29	0.40
1:C:952:LYS:HD3	1:C:970:LEU:HA	2.03	0.40
1:C:1943:LEU:HB2	1:C:2123:LEU:HD21	2.03	0.40
1:C:2198:MET:HE2	1:C:2198:MET:HB2	1.92	0.40
1:C:3594:ARG:HB3	1:C:3594:ARG:CZ	2.51	0.40
1:C:4247:ILE:HA	1:C:4250:GLN:OE1	2.22	0.40
1:A:879:HIS:HD2	1:A:882:TRP:HE1	1.68	0.40
1:A:921:ASN:O	1:A:924:MET:HE3	2.20	0.40
1:A:3011:THR:OG1	1:A:3070:ILE:HD13	2.21	0.40
1:A:3194:LEU:HD12	1:A:3194:LEU:HA	1.93	0.40
1:A:4544:LEU:HD12	1:A:4545:GLU:N	2.37	0.40
1:A:4658:ILE:HD11	1:A:4792:LEU:O	2.21	0.40
2:E:23:VAL:HG22	2:E:47:LYS:HG2	2.03	0.40
2:E:32:ASP:OD1	2:E:32:ASP:C	2.64	0.40
2:F:15:PHE:C	2:F:17:LYS:HZ3	2.29	0.40
1:B:232:THR:HG21	1:B:252:VAL:HG21	2.03	0.40
1:B:552:ASP:OD1	1:B:552:ASP:N	2.54	0.40
1:B:924:MET:O	1:B:928:THR:HG23	2.21	0.40
1:B:952:LYS:HD3	1:B:970:LEU:HA	2.03	0.40
1:B:2393:ASP:OD1	1:B:2418:LEU:N	2.55	0.40
1:B:3227:ARG:O	1:B:3232:LEU:HB2	2.21	0.40
1:D:232:THR:HG21	1:D:252:VAL:HG21	2.03	0.40
1:D:460:GLN:CD	1:D:462:GLU:H	2.29	0.40
1:D:1099:GLU:CD	1:D:1125:ASN:HD21	2.29	0.40
1:D:1648:MET:HE2	1:D:1648:MET:HB3	1.85	0.40
1:D:3269:VAL:HA	1:D:3273:THR:HB	2.03	0.40
1:D:3731:LYS:HA	1:D:3734:HIS:NE2	2.36	0.40
1:D:4209:GLN:H	1:D:4209:GLN:CD	2.29	0.40
1:C:935:LEU:HD11	1:C:987:ARG:NH2	2.36	0.40
1:C:1690:ASP:OD2	1:C:1693:GLN:NE2	2.54	0.40
1:C:2627:VAL:HG22	1:C:2678:LEU:HB2	2.02	0.40
1:C:2765:LYS:HA	1:C:2765:LYS:HD3	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2856:ASN:ND2	1:C:2858:GLN:OE1	2.49	0.40
1:C:2888:ARG:O	1:C:2892:GLN:HG2	2.22	0.40
1:C:3011:THR:OG1	1:C:3070:ILE:HD13	2.21	0.40
1:C:3023:LYS:O	1:C:3023:LYS:HG3	2.20	0.40
1:C:3688:GLU:C	1:C:3690:VAL:H	2.29	0.40
1:C:3723:MET:HE3	1:C:3793:MET:CE	2.48	0.40
1:C:3878:ASP:OD1	1:C:3878:ASP:N	2.55	0.40
1:C:4544:LEU:HD12	1:C:4545:GLU:N	2.37	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	4385/5037 (87%)	4235 (97%)	150 (3%)	0	100	100
1	B	4385/5037 (87%)	4235 (97%)	150 (3%)	0	100	100
1	C	4385/5037 (87%)	4236 (97%)	149 (3%)	0	100	100
1	D	4385/5037 (87%)	4235 (97%)	150 (3%)	0	100	100
2	E	105/108 (97%)	104 (99%)	1 (1%)	0	100	100
2	F	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	G	105/108 (97%)	104 (99%)	1 (1%)	0	100	100
2	H	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
All	All	17960/20580 (87%)	17355 (97%)	605 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3836/4276 (90%)	3813 (99%)	23 (1%)	84	92
1	B	3836/4276 (90%)	3813 (99%)	23 (1%)	84	92
1	C	3836/4276 (90%)	3813 (99%)	23 (1%)	84	92
1	D	3836/4276 (90%)	3813 (99%)	23 (1%)	84	92
2	E	89/90 (99%)	85 (96%)	4 (4%)	23	54
2	F	89/90 (99%)	86 (97%)	3 (3%)	32	63
2	G	89/90 (99%)	85 (96%)	4 (4%)	23	54
2	H	89/90 (99%)	85 (96%)	4 (4%)	23	54
All	All	15700/17464 (90%)	15593 (99%)	107 (1%)	80	90

All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	309	THR
1	A	866	HIS
1	A	945	LYS
1	A	1021	LEU
1	A	1636	MET
1	A	1929	MET
1	A	1931	LEU
1	A	1966	VAL
1	A	2169	GLN
1	A	2485	LEU
1	A	2862	LEU
1	A	2977	LEU
1	A	3569	LEU
1	A	3623	LEU
1	A	3751	VAL
1	A	3753	PHE
1	A	3756	LYS
1	A	3899	PHE
1	A	4164	LEU

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Mol	Chain	Res	Type
1	A	4695	ASP
1	A	4771	ILE
1	A	4937	ILE
1	A	4973	HIS
2	E	2	VAL
2	E	25	HIS
2	E	67	SER
2	E	85	THR
2	H	2	VAL
2	H	25	HIS
2	H	67	SER
2	H	85	THR
2	G	2	VAL
2	G	25	HIS
2	G	67	SER
2	G	85	THR
2	F	25	HIS
2	F	67	SER
2	F	85	THR
1	B	309	THR
1	B	866	HIS
1	B	945	LYS
1	B	1021	LEU
1	B	1636	MET
1	B	1929	MET
1	B	1931	LEU
1	B	1966	VAL
1	B	2169	GLN
1	B	2485	LEU
1	B	2862	LEU
1	B	2977	LEU
1	B	3569	LEU
1	B	3751	VAL
1	B	3752	SER
1	B	3753	PHE
1	B	3756	LYS
1	B	3899	PHE
1	B	4164	LEU
1	B	4695	ASP
1	B	4771	ILE
1	B	4937	ILE
1	B	4973	HIS

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Mol	Chain	Res	Type
1	D	309	THR
1	D	866	HIS
1	D	945	LYS
1	D	1021	LEU
1	D	1636	MET
1	D	1929	MET
1	D	1931	LEU
1	D	1966	VAL
1	D	2169	GLN
1	D	2485	LEU
1	D	2862	LEU
1	D	2977	LEU
1	D	3569	LEU
1	D	3623	LEU
1	D	3751	VAL
1	D	3753	PHE
1	D	3756	LYS
1	D	3899	PHE
1	D	4164	LEU
1	D	4695	ASP
1	D	4771	ILE
1	D	4937	ILE
1	D	4973	HIS
1	C	309	THR
1	C	866	HIS
1	C	945	LYS
1	C	1021	LEU
1	C	1636	MET
1	C	1929	MET
1	C	1931	LEU
1	C	1966	VAL
1	C	2169	GLN
1	C	2485	LEU
1	C	2862	LEU
1	C	2977	LEU
1	C	3569	LEU
1	C	3623	LEU
1	C	3751	VAL
1	C	3753	PHE
1	C	3756	LYS
1	C	3899	PHE
1	C	4164	LEU

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Mol	Chain	Res	Type
1	C	4695	ASP
1	C	4771	ILE
1	C	4937	ILE
1	C	4973	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (140) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	32	GLN
1	A	113	HIS
1	A	197	GLN
1	A	255	HIS
1	A	461	HIS
1	A	479	GLN
1	A	495	ASN
1	A	636	ASN
1	A	866	HIS
1	A	909	ASN
1	A	981	GLN
1	A	991	ASN
1	A	994	ASN
1	A	1229	ASN
1	A	1660	GLN
1	A	1760	HIS
1	A	1938	GLN
1	A	2169	GLN
1	A	2284	ASN
1	A	2933	ASN
1	A	2962	GLN
1	A	2971	GLN
1	A	3180	ASN
1	A	3214	ASN
1	A	3355	HIS
1	A	3461	GLN
1	A	3704	HIS
1	A	3766	GLN
1	A	3914	ASN
1	A	4009	GLN
1	A	4156	HIS
1	A	4223	ASN
1	A	4728	HIS
2	E	53	GLN

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Mol	Chain	Res	Type
2	E	94	HIS
2	H	65	GLN
2	G	94	HIS
2	F	94	HIS
1	B	32	GLN
1	B	113	HIS
1	B	197	GLN
1	B	255	HIS
1	B	461	HIS
1	B	495	ASN
1	B	533	ASN
1	B	636	ASN
1	B	866	HIS
1	B	909	ASN
1	B	981	GLN
1	B	991	ASN
1	B	1229	ASN
1	B	1300	HIS
1	B	1420	ASN
1	B	1660	GLN
1	B	1760	HIS
1	B	2003	GLN
1	B	2169	GLN
1	B	2253	HIS
1	B	2284	ASN
1	B	2933	ASN
1	B	2962	GLN
1	B	2971	GLN
1	B	3180	ASN
1	B	3214	ASN
1	B	3355	HIS
1	B	3461	GLN
1	B	3704	HIS
1	B	3766	GLN
1	B	3914	ASN
1	B	4009	GLN
1	B	4156	HIS
1	B	4223	ASN
1	B	4728	HIS
1	D	113	HIS
1	D	197	GLN
1	D	255	HIS

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Mol	Chain	Res	Type
1	D	461	HIS
1	D	479	GLN
1	D	495	ASN
1	D	636	ASN
1	D	866	HIS
1	D	909	ASN
1	D	991	ASN
1	D	994	ASN
1	D	1229	ASN
1	D	1300	HIS
1	D	1420	ASN
1	D	1660	GLN
1	D	1760	HIS
1	D	1938	GLN
1	D	2003	GLN
1	D	2029	GLN
1	D	2169	GLN
1	D	2284	ASN
1	D	2933	ASN
1	D	2962	GLN
1	D	2971	GLN
1	D	3180	ASN
1	D	3214	ASN
1	D	3355	HIS
1	D	3461	GLN
1	D	3704	HIS
1	D	3766	GLN
1	D	3914	ASN
1	D	4009	GLN
1	D	4156	HIS
1	D	4223	ASN
1	D	4728	HIS
1	C	113	HIS
1	C	197	GLN
1	C	255	HIS
1	C	461	HIS
1	C	479	GLN
1	C	495	ASN
1	C	636	ASN
1	C	866	HIS
1	C	909	ASN
1	C	991	ASN

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Mol	Chain	Res	Type
1	C	1229	ASN
1	C	1300	HIS
1	C	1660	GLN
1	C	1760	HIS
1	C	1938	GLN
1	C	2169	GLN
1	C	2253	HIS
1	C	2284	ASN
1	C	2933	ASN
1	C	2962	GLN
1	C	2971	GLN
1	C	3180	ASN
1	C	3355	HIS
1	C	3461	GLN
1	C	3704	HIS
1	C	3766	GLN
1	C	3914	ASN
1	C	4009	GLN
1	C	4156	HIS
1	C	4223	ASN
1	C	4547	GLN
1	C	4728	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ATP	D	5301	-	28,33,33	0.66	0	34,52,52	0.74	2 (5%)
6	A1BD4	D	5304	-	9,11,11	1.18	1 (11%)	6,15,15	1.31	1 (16%)
6	A1BD4	C	5304	-	9,11,11	1.18	1 (11%)	6,15,15	1.31	1 (16%)
3	ATP	C	5301	-	28,33,33	0.66	0	34,52,52	0.75	2 (5%)
3	ATP	A	5301	-	28,33,33	0.66	0	34,52,52	0.74	2 (5%)
6	A1BD4	B	5304	-	9,11,11	1.16	1 (11%)	6,15,15	1.32	1 (16%)
6	A1BD4	A	5304	-	9,11,11	1.17	1 (11%)	6,15,15	1.33	1 (16%)
3	ATP	B	5301	-	28,33,33	0.66	0	34,52,52	0.74	2 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	D	5301	-	-	3/18/38/38	0/3/3/3
6	A1BD4	D	5304	-	-	-	0/2/2/2
6	A1BD4	C	5304	-	-	-	0/2/2/2
3	ATP	C	5301	-	-	3/18/38/38	0/3/3/3
3	ATP	A	5301	-	-	3/18/38/38	0/3/3/3
6	A1BD4	B	5304	-	-	-	0/2/2/2
6	A1BD4	A	5304	-	-	-	0/2/2/2
3	ATP	B	5301	-	-	3/18/38/38	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	5304	A1BD4	C3-C4	-3.07	1.42	1.47
6	C	5304	A1BD4	C3-C4	-3.07	1.42	1.47
6	A	5304	A1BD4	C3-C4	-3.06	1.42	1.47
6	B	5304	A1BD4	C3-C4	-2.99	1.42	1.47

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	5301	ATP	C4'-O4'-C1'	-2.38	107.74	109.92
3	A	5301	ATP	C4'-O4'-C1'	-2.37	107.76	109.92
3	C	5301	ATP	C5-C6-N6	2.36	123.91	120.31
3	D	5301	ATP	C4'-O4'-C1'	-2.35	107.78	109.92
3	A	5301	ATP	C5-C6-N6	2.34	123.88	120.31
3	C	5301	ATP	C4'-O4'-C1'	-2.34	107.78	109.92
3	D	5301	ATP	C5-C6-N6	2.33	123.86	120.31
3	B	5301	ATP	C5-C6-N6	2.32	123.84	120.31
6	A	5304	A1BD4	O1-C4-C3	2.27	127.32	123.27
6	D	5304	A1BD4	O1-C4-C3	2.26	127.30	123.27
6	C	5304	A1BD4	O1-C4-C3	2.26	127.30	123.27
6	B	5304	A1BD4	O1-C4-C3	2.25	127.28	123.27

There are no chirality outliers.

All (12) torsion outliers are listed below:

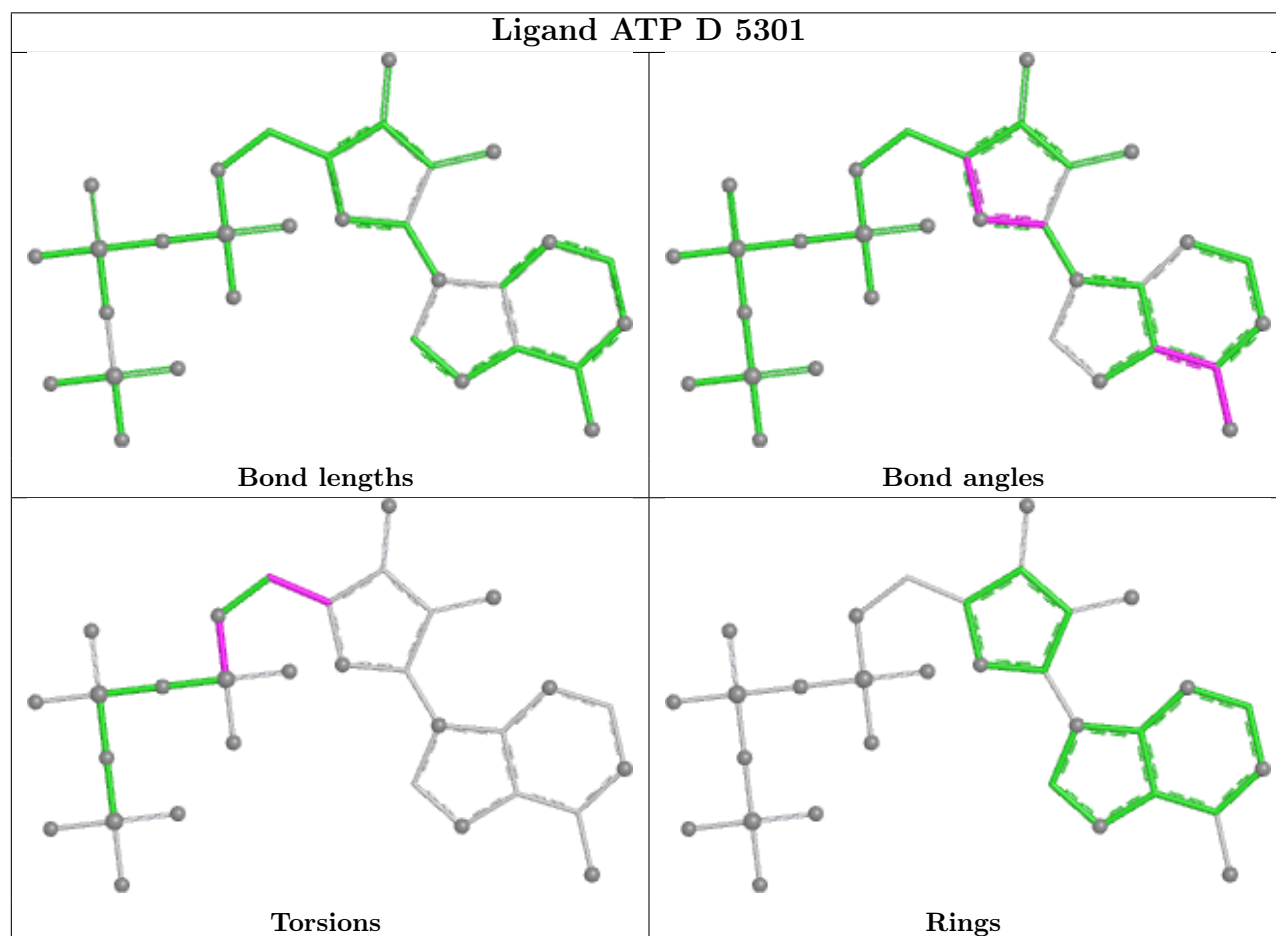
Mol	Chain	Res	Type	Atoms
3	A	5301	ATP	C5'-O5'-PA-O2A
3	A	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	C5'-O5'-PA-O2A
3	B	5301	ATP	C5'-O5'-PA-O3A
3	D	5301	ATP	C5'-O5'-PA-O2A
3	D	5301	ATP	C5'-O5'-PA-O3A
3	C	5301	ATP	C5'-O5'-PA-O2A
3	C	5301	ATP	C5'-O5'-PA-O3A
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'

There are no ring outliers.

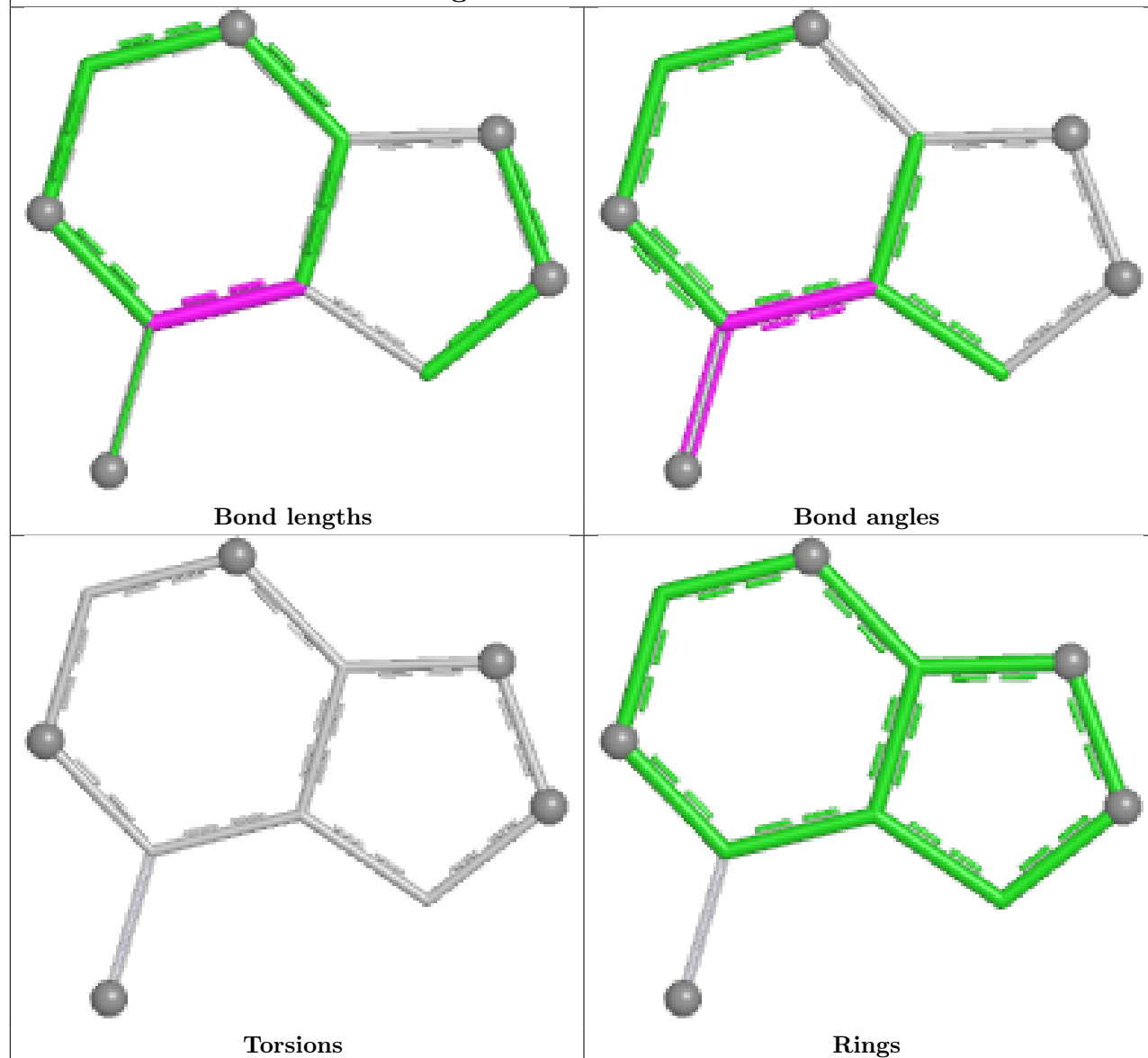
No monomer is involved in short contacts.

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.

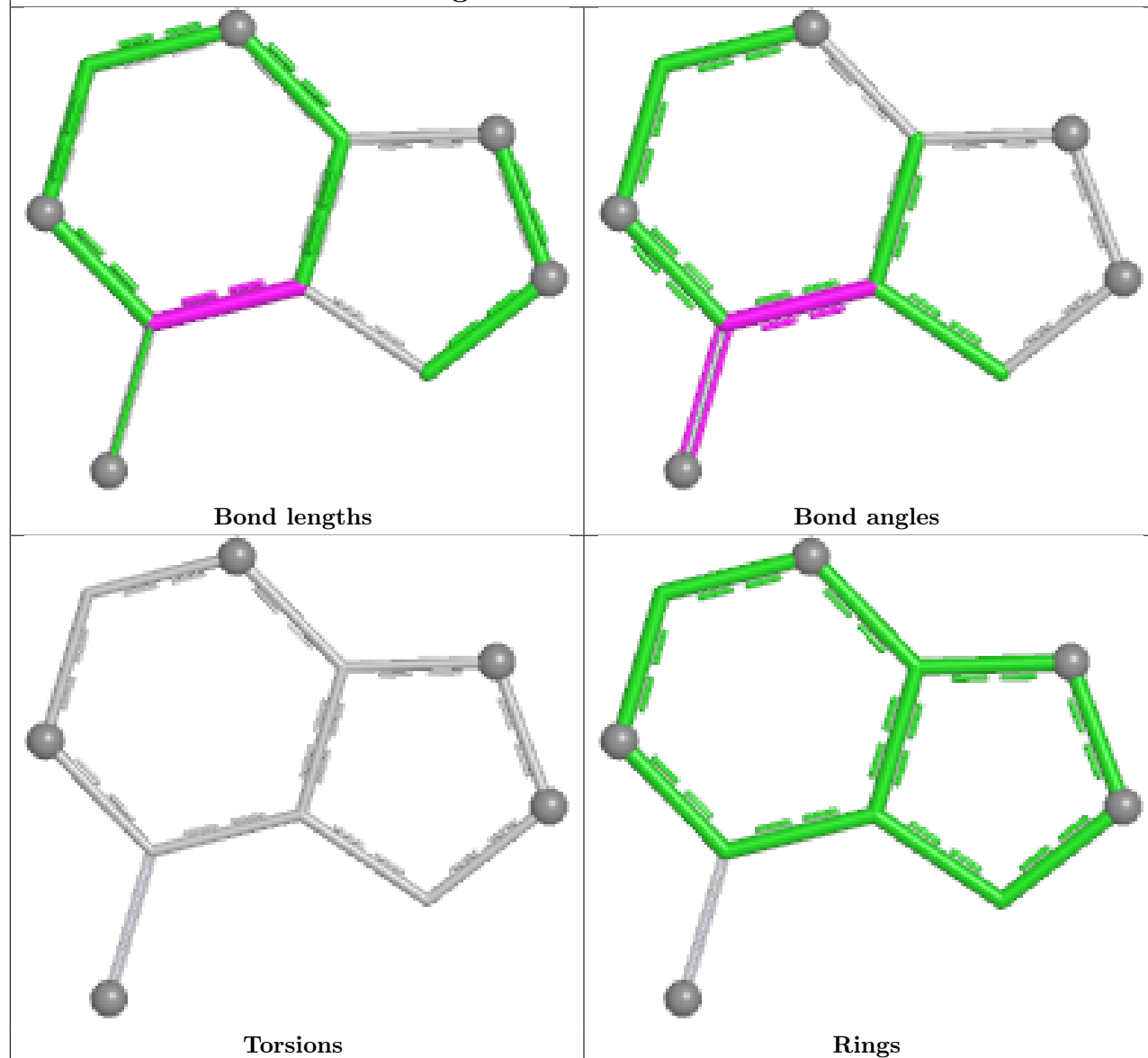
The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

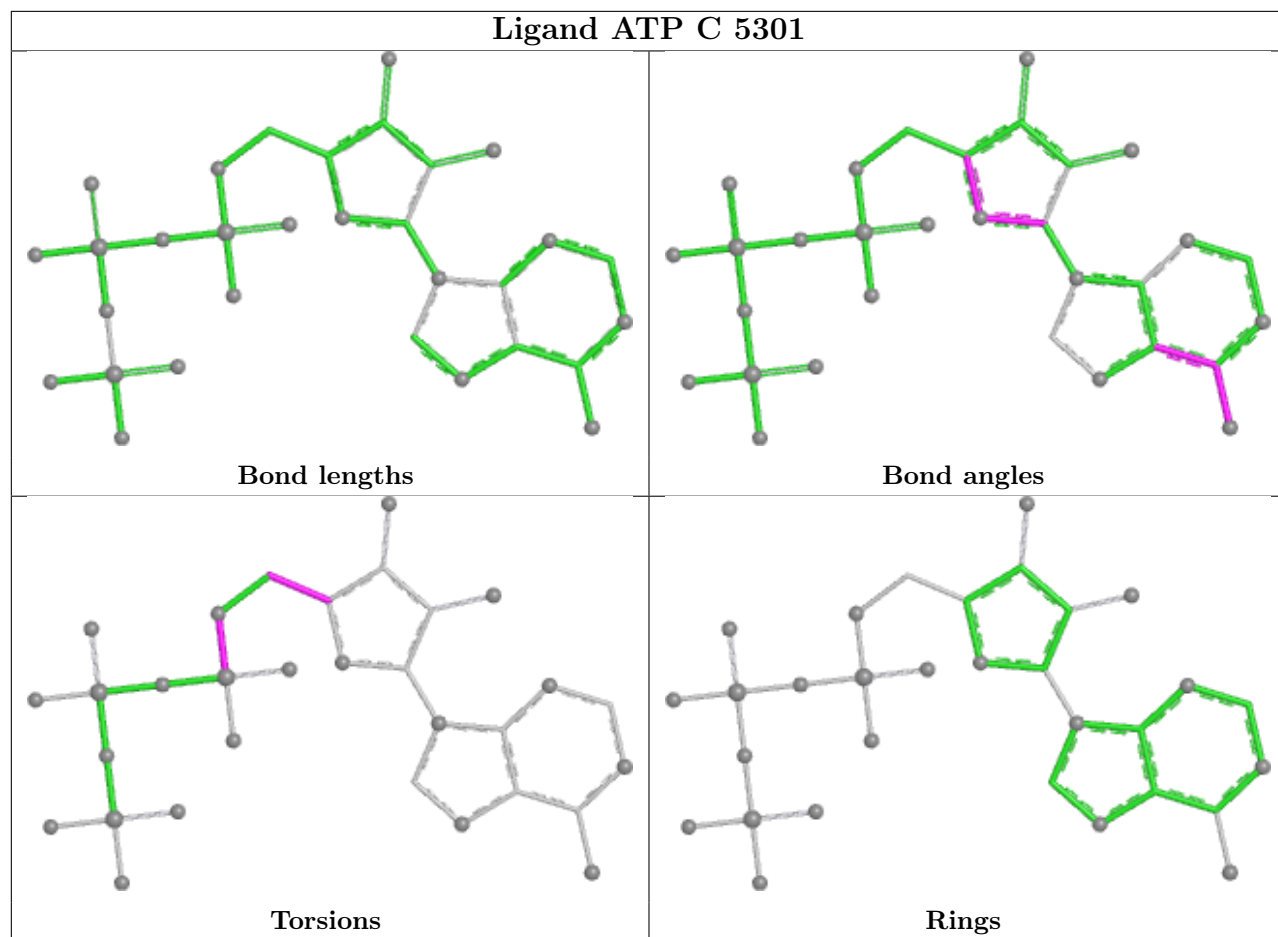


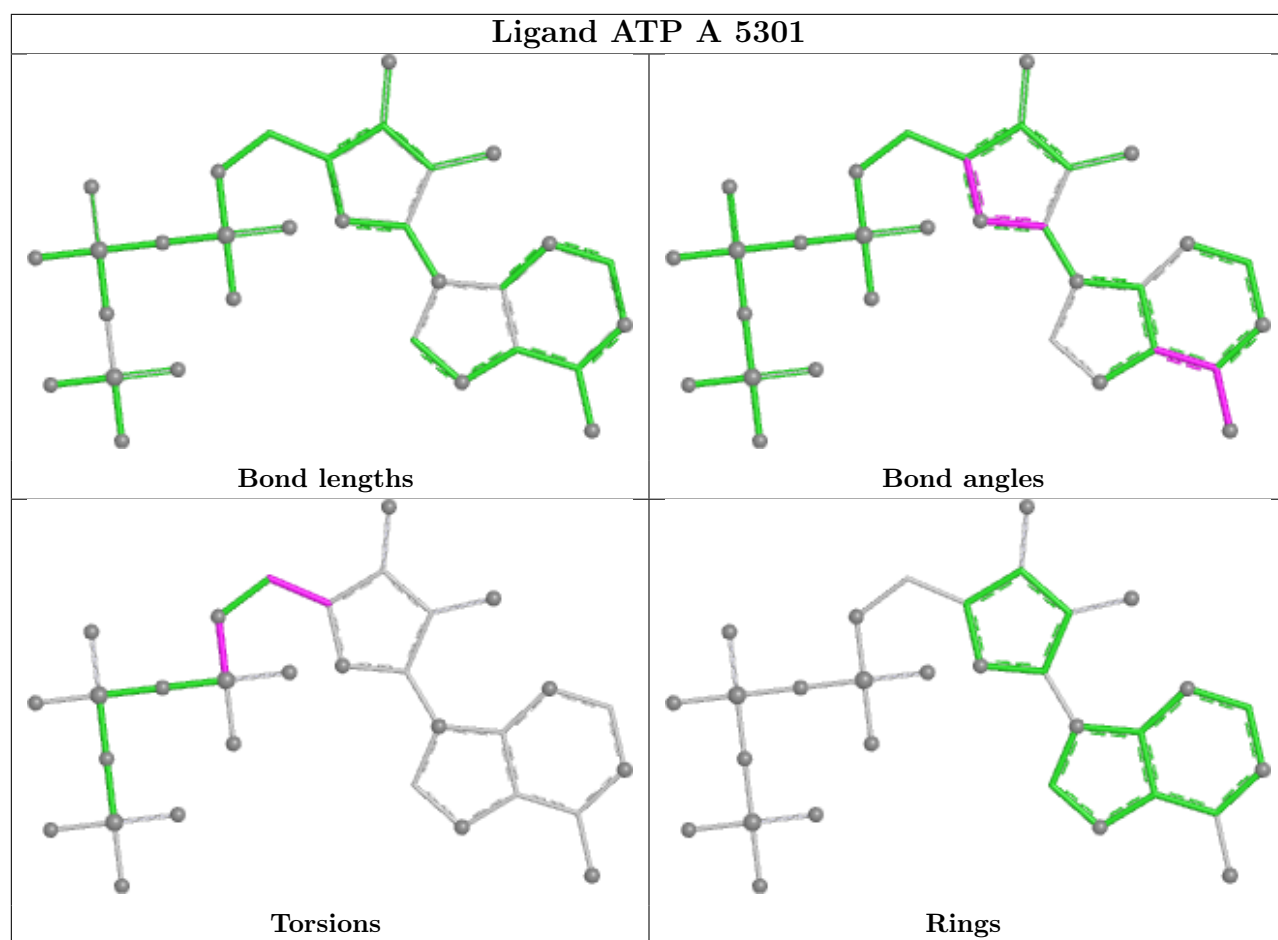
Ligand A1BD4 D 5304



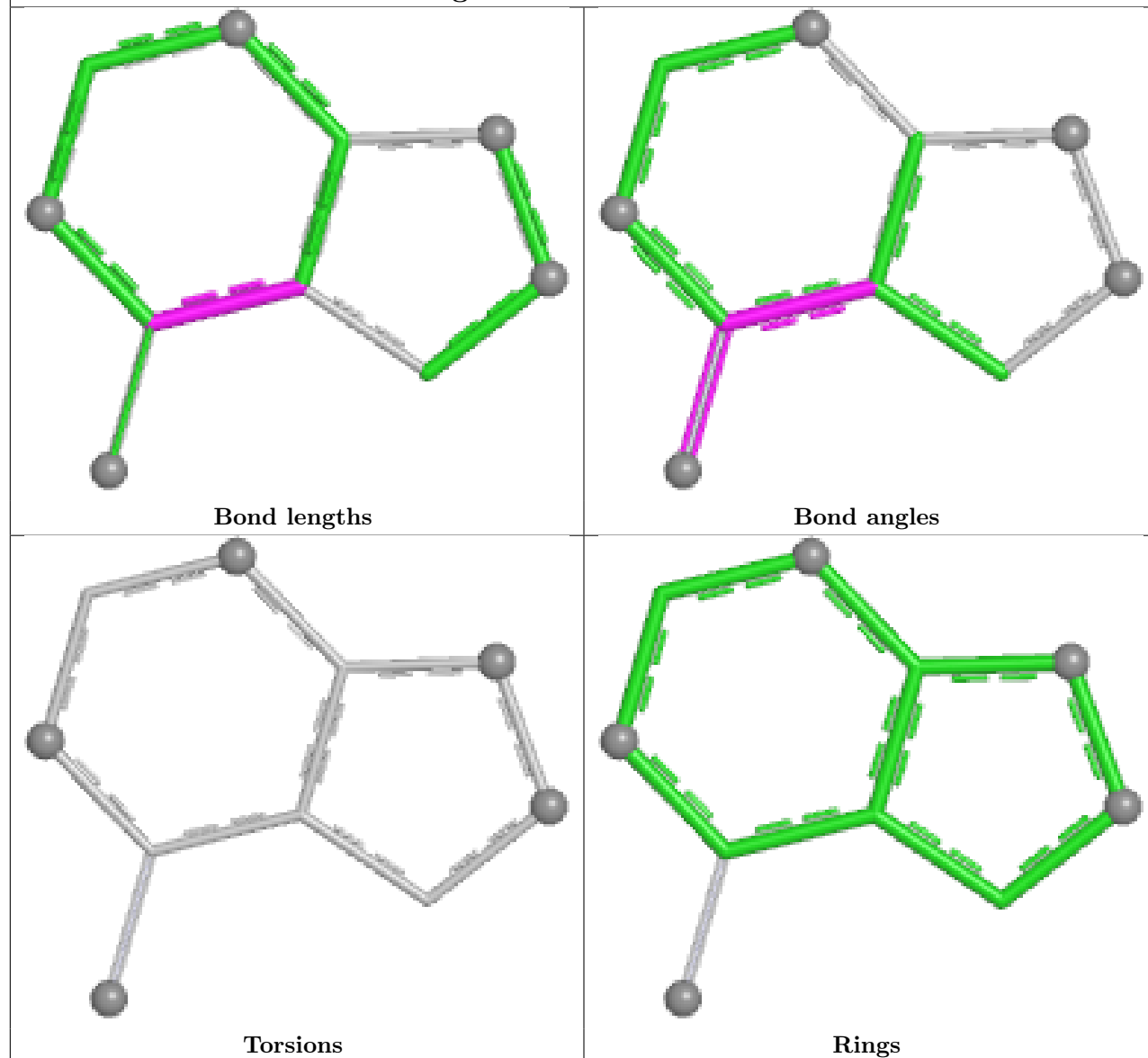
Ligand A1BD4 C 5304



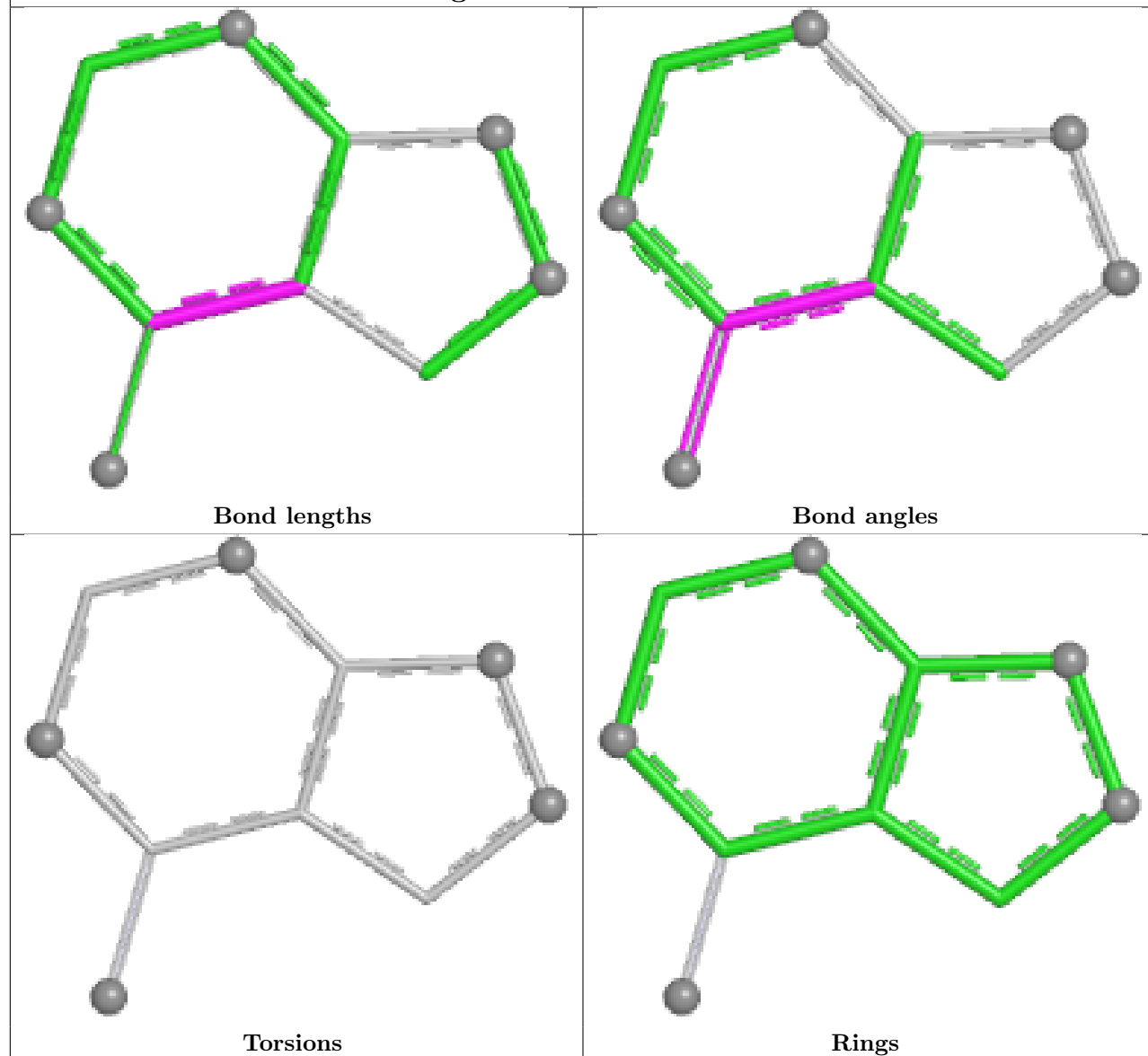


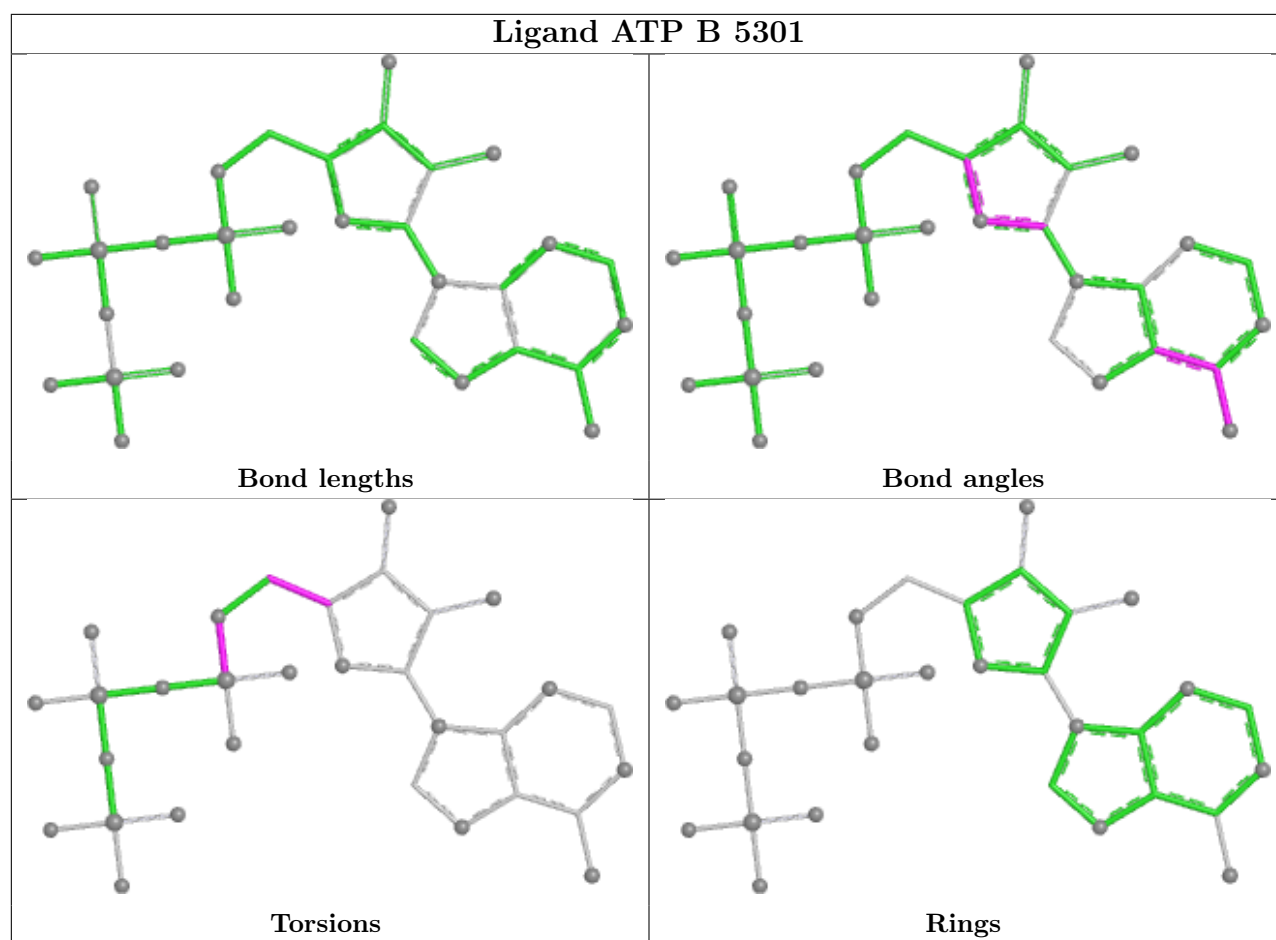


Ligand A1BD4 B 5304



Ligand A1BD4 A 5304





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.

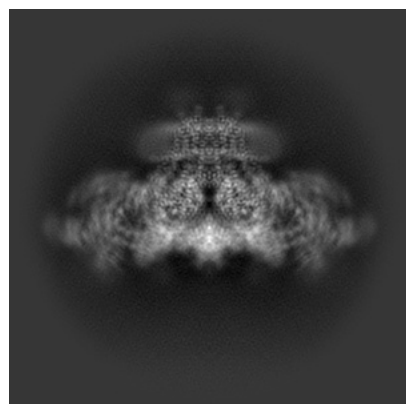
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47392. These allow visual inspection of the internal detail of the map and identification of artifacts.

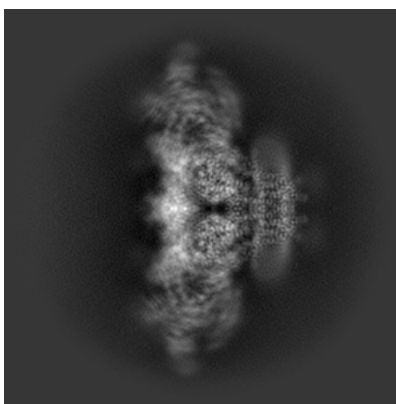
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

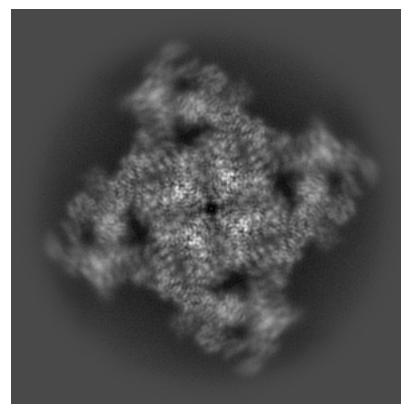
6.1.1 Primary map



X

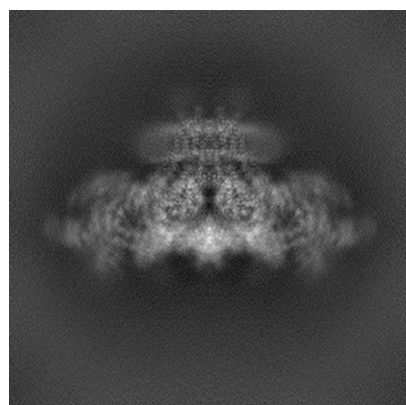


Y

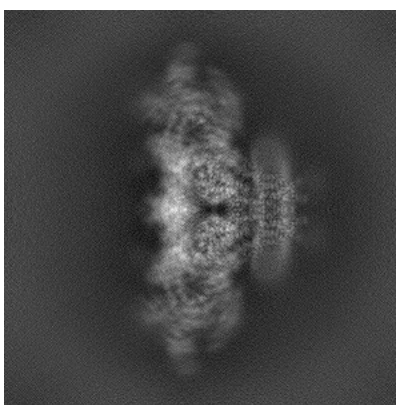


Z

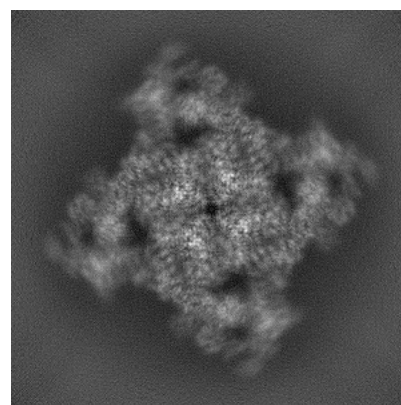
6.1.2 Raw map



X



Y

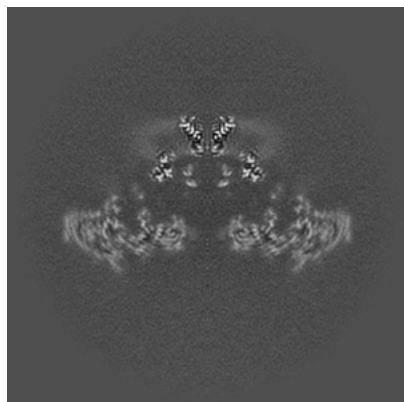


Z

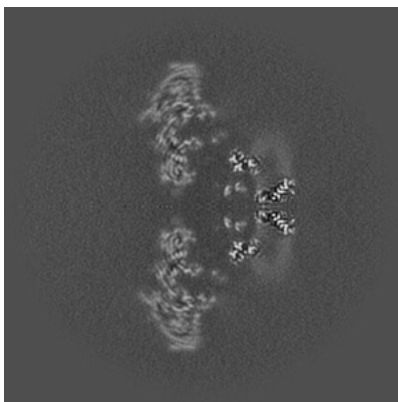
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

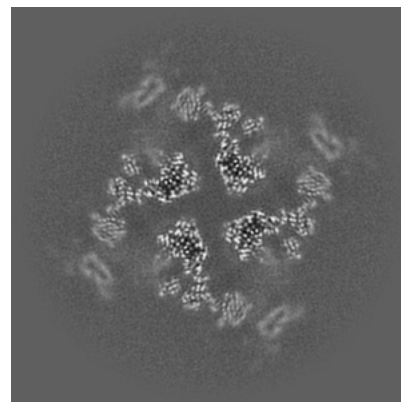
6.2.1 Primary map



X Index: 256

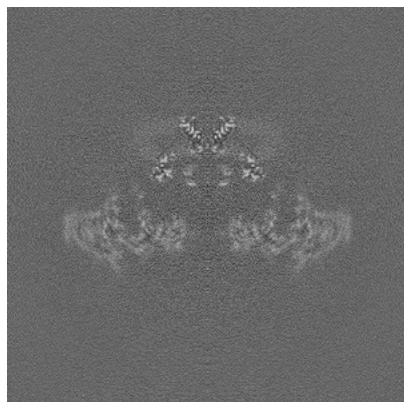


Y Index: 256

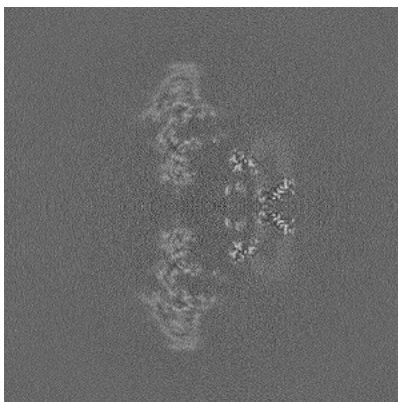


Z Index: 256

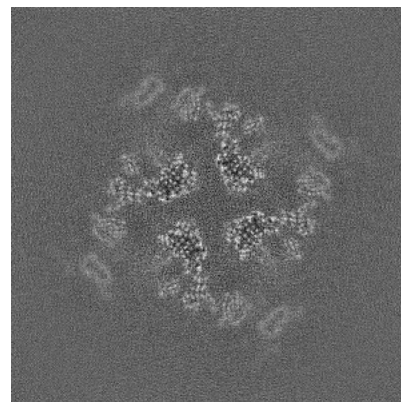
6.2.2 Raw map



X Index: 256



Y Index: 256

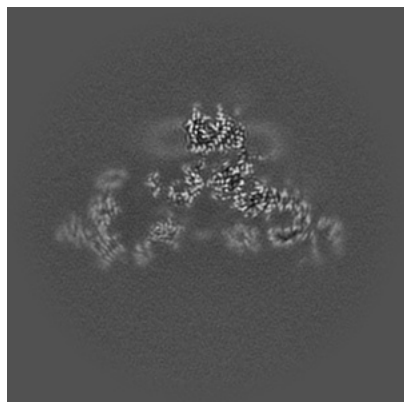


Z Index: 256

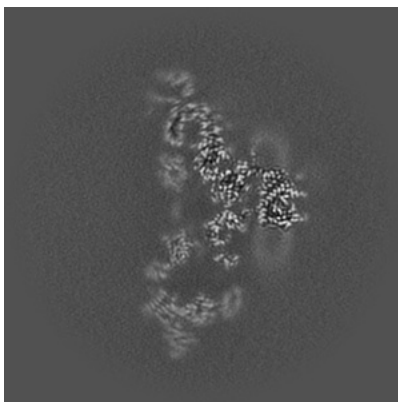
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

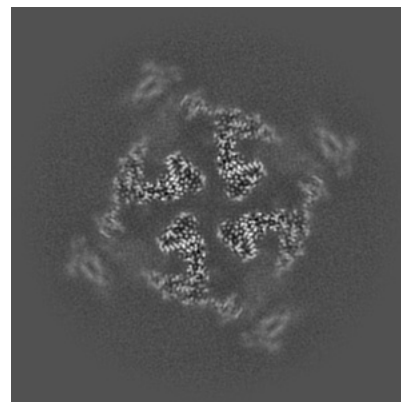
6.3.1 Primary map



X Index: 273

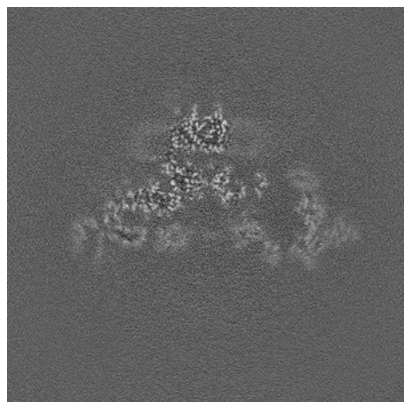


Y Index: 239

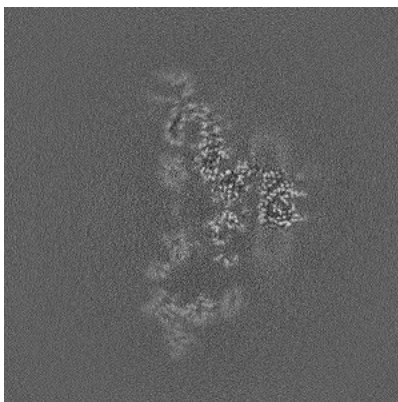


Z Index: 264

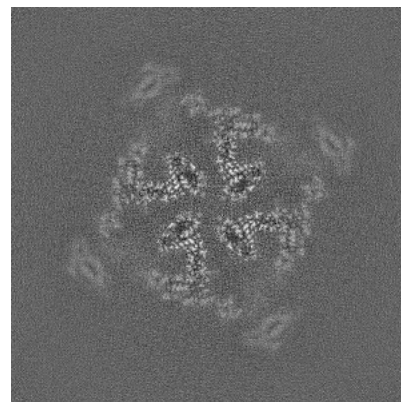
6.3.2 Raw map



X Index: 239



Y Index: 239

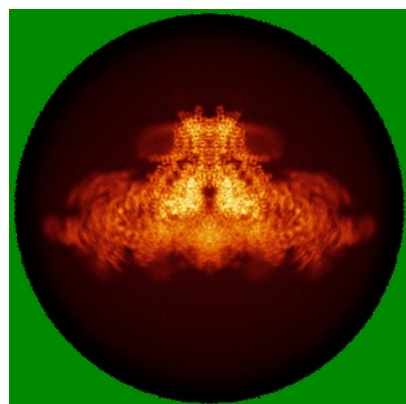


Z Index: 266

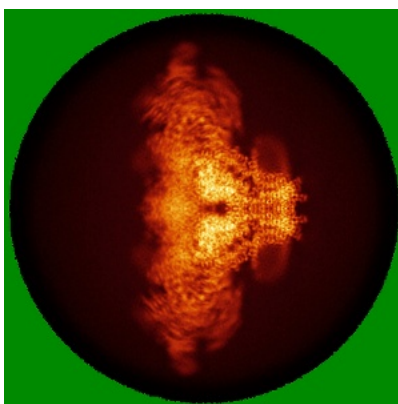
The images above show the largest variance slices of the map in three orthogonal directions.

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

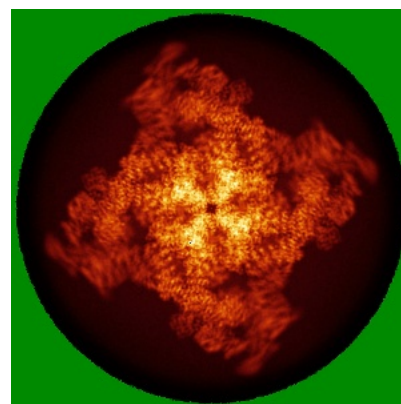
6.4.1 Primary map



X

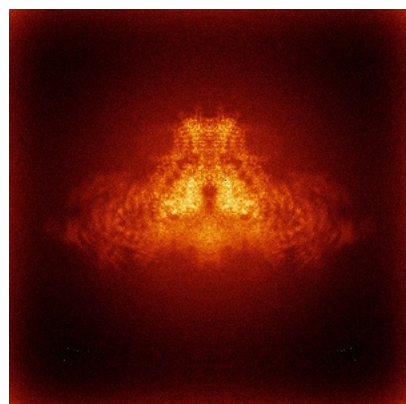


Y

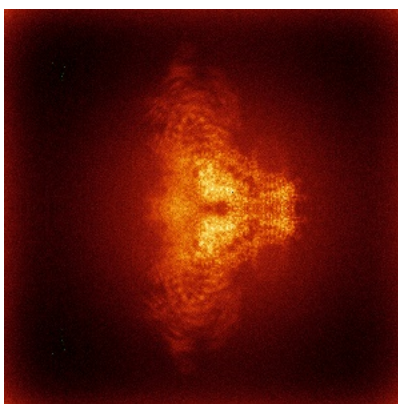


Z

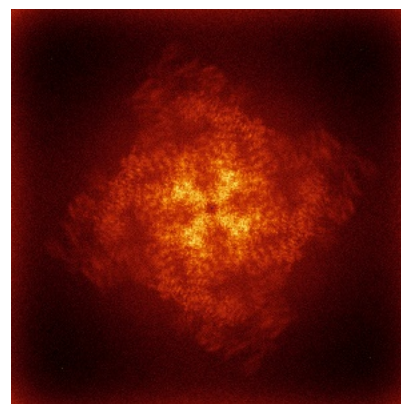
6.4.2 Raw map



X



Y

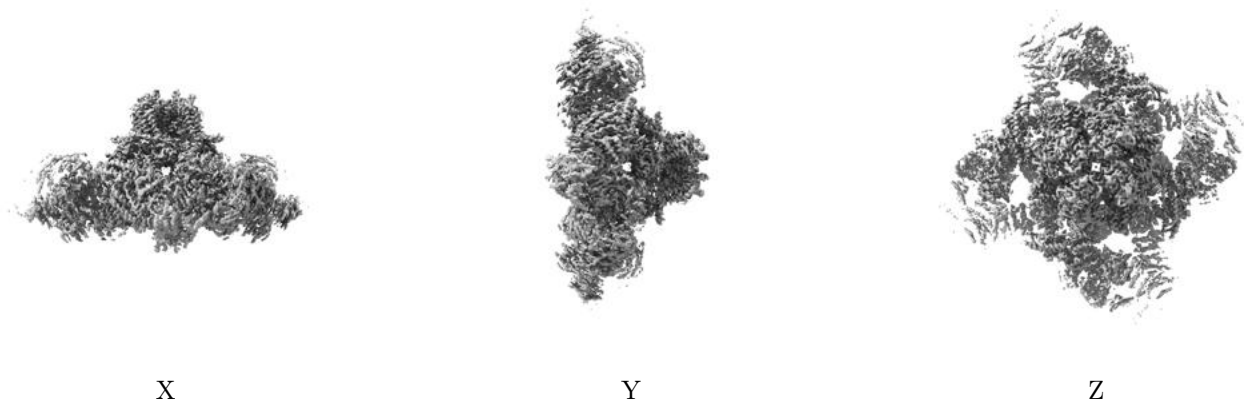


Z

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

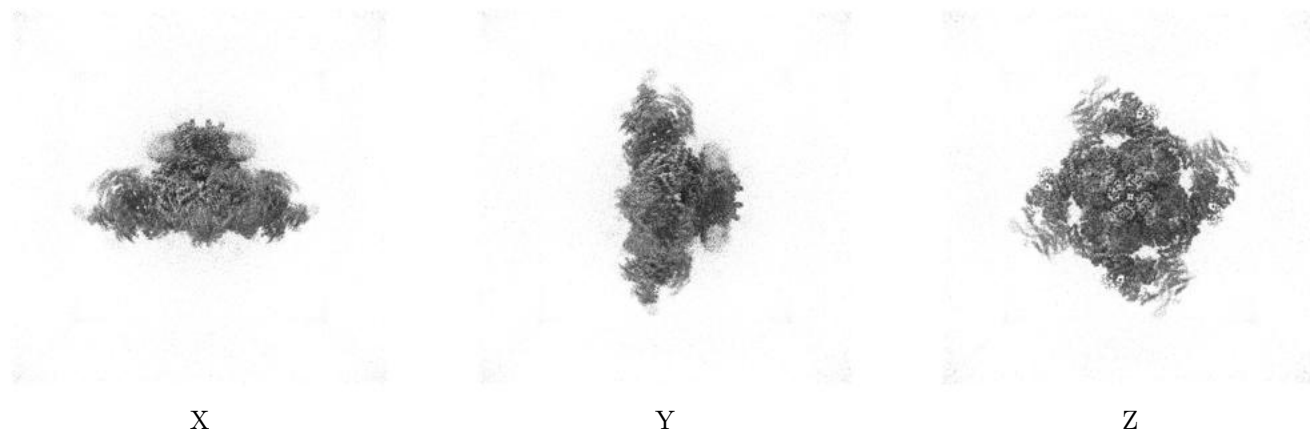
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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

6.5.2 Raw map



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

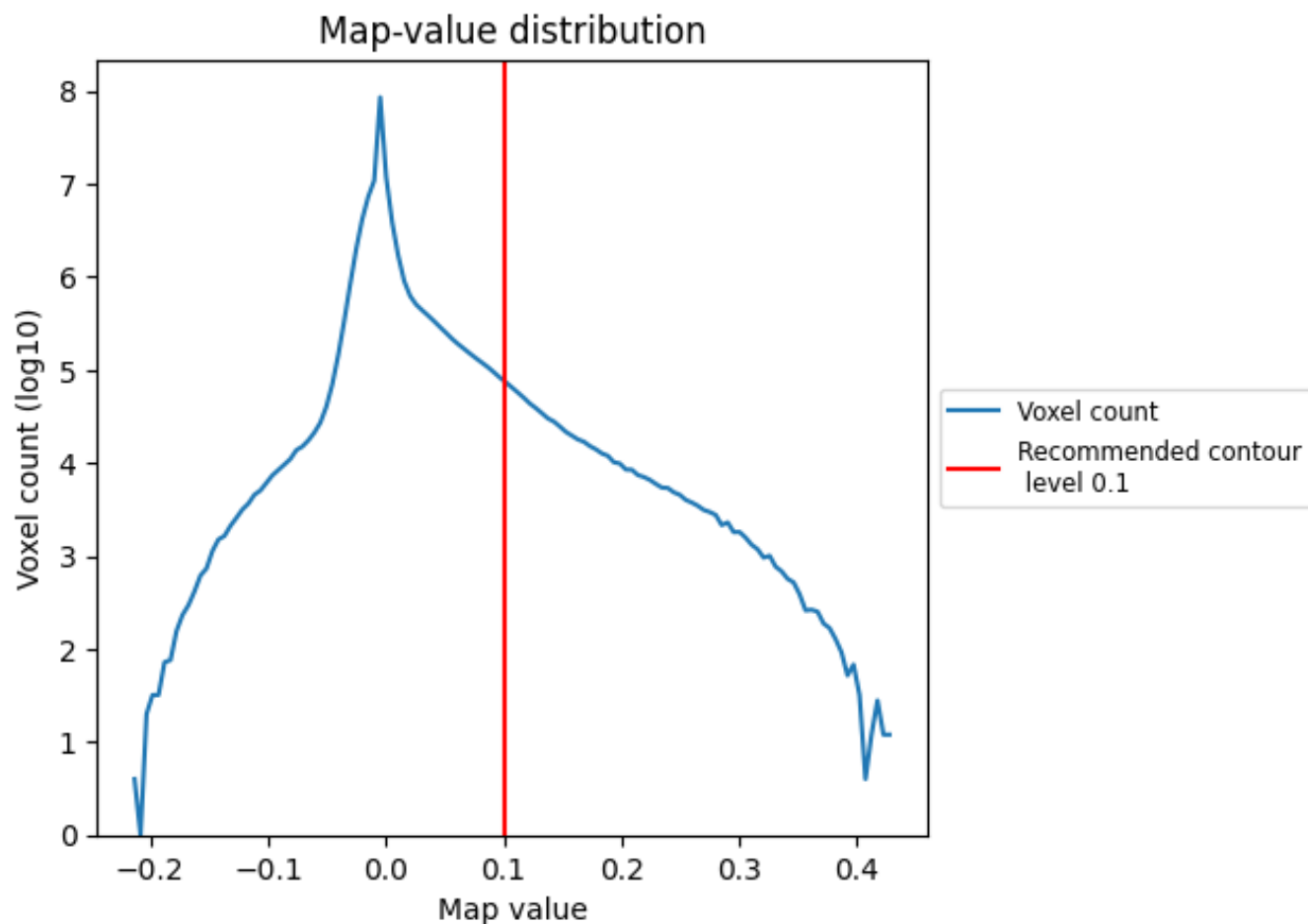
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

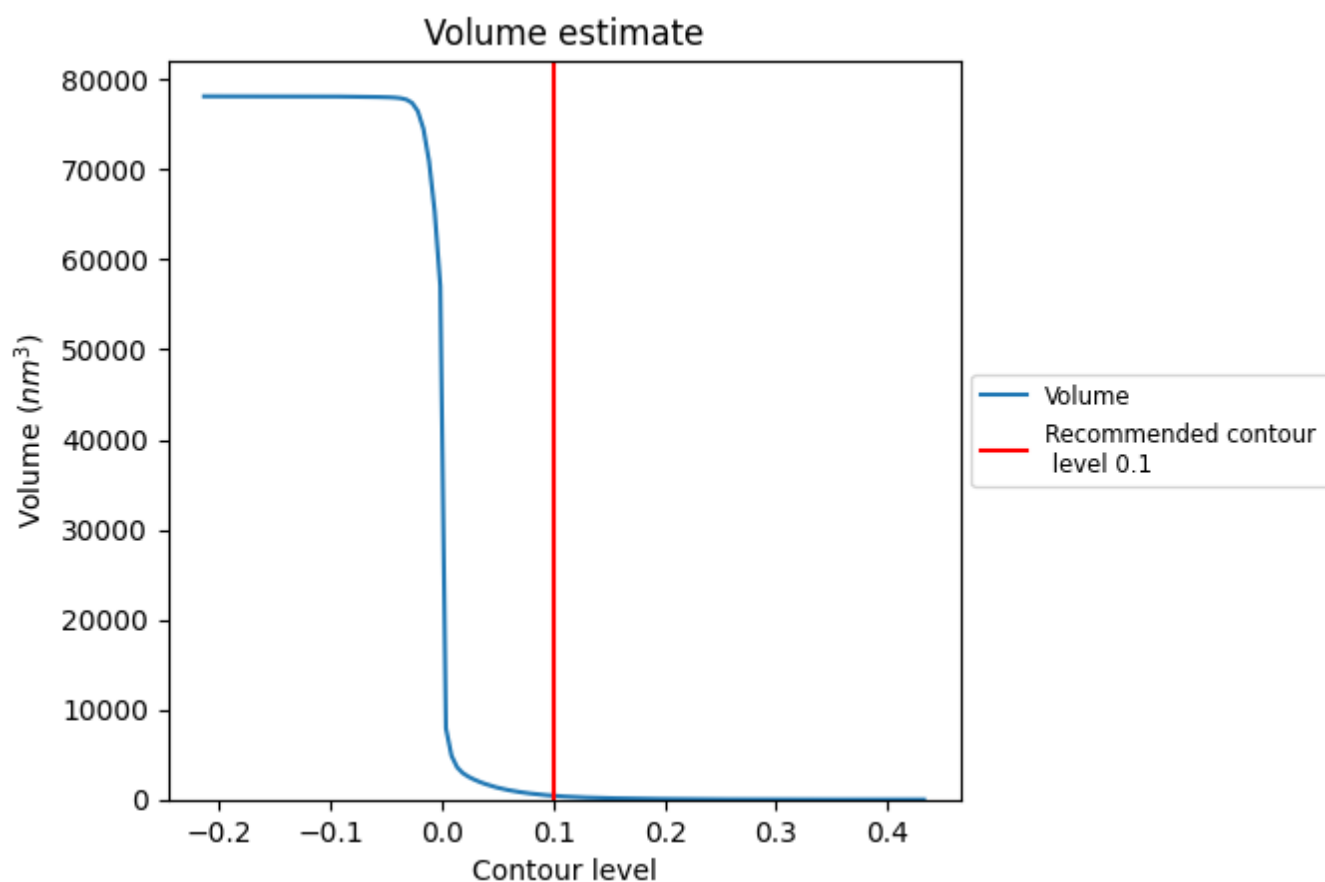
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

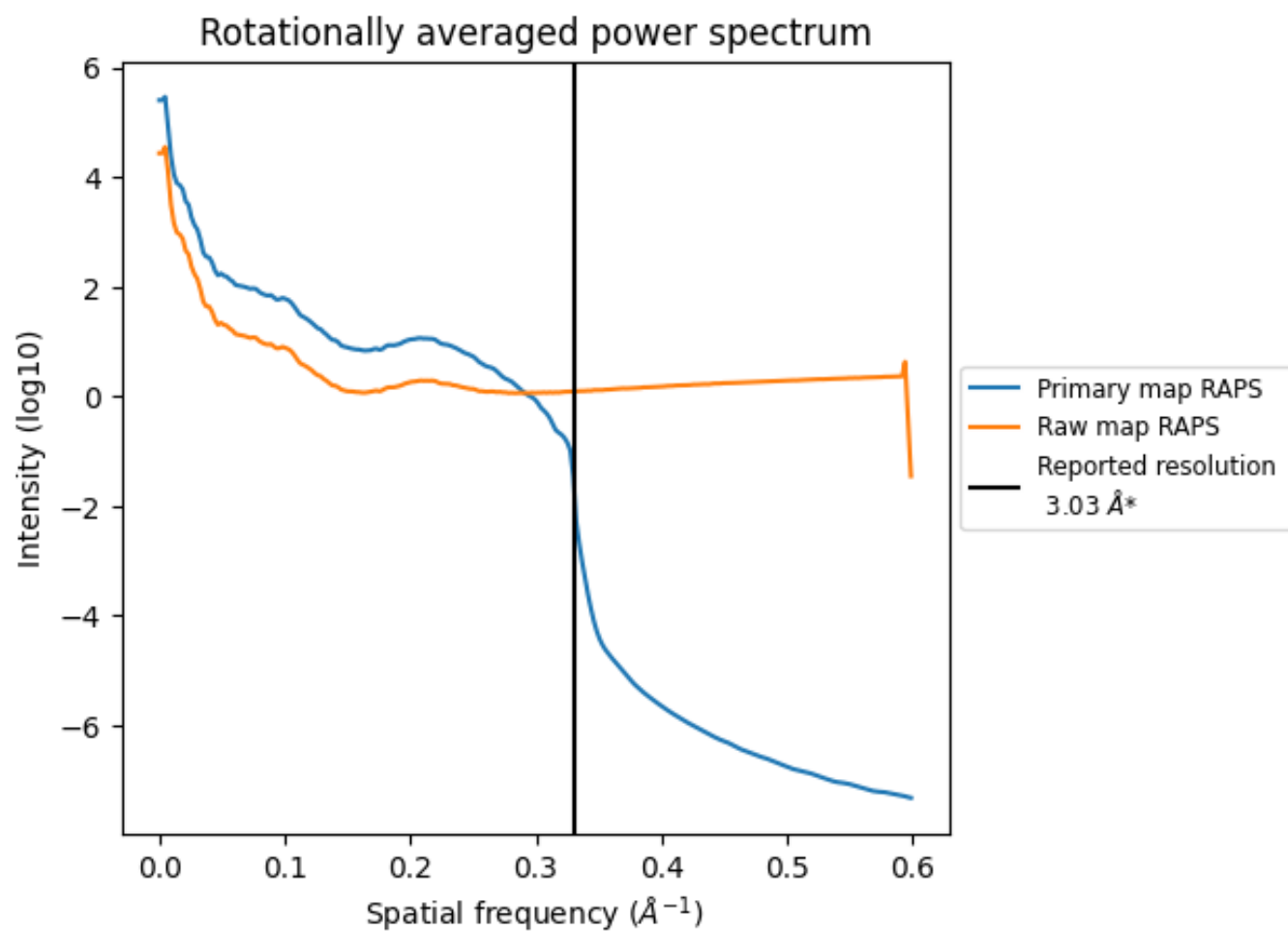
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 424 nm³; this corresponds to an approximate mass of 383 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

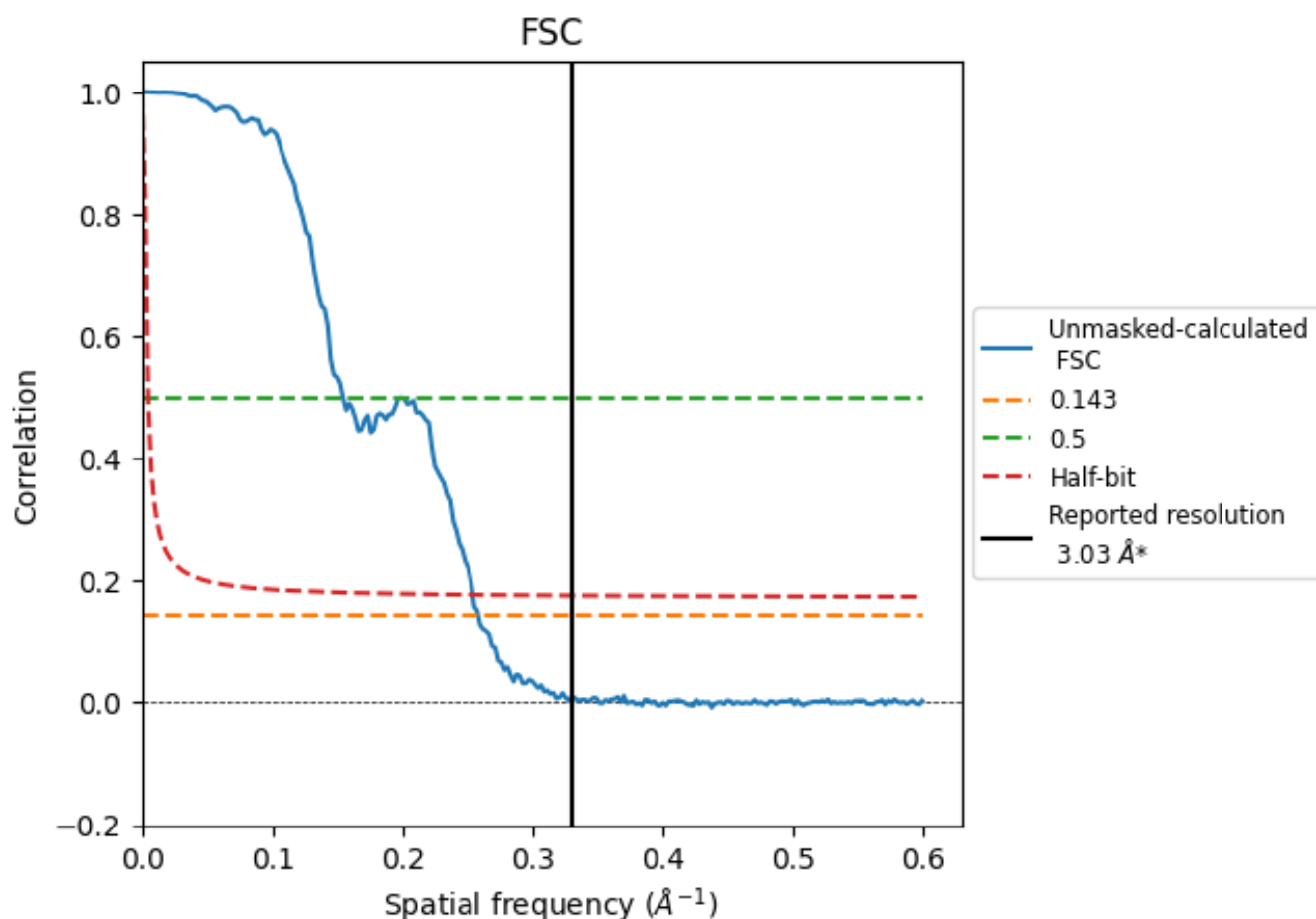


*Reported resolution corresponds to spatial frequency of 0.330 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.330 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

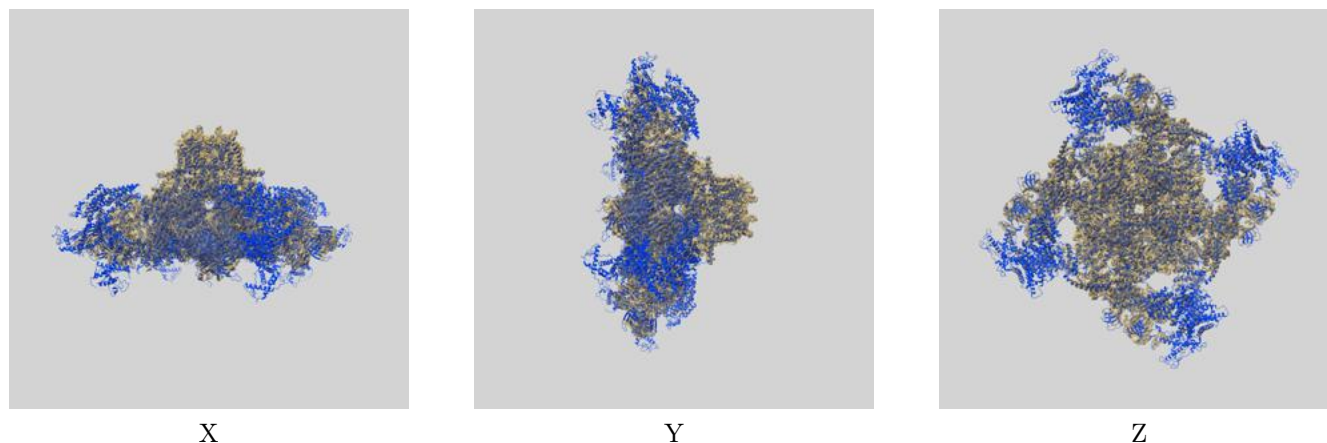
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.03	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.87	6.49	3.94

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.87 differs from the reported value 3.03 by more than 10 %

9 Map-model fit [i](#)

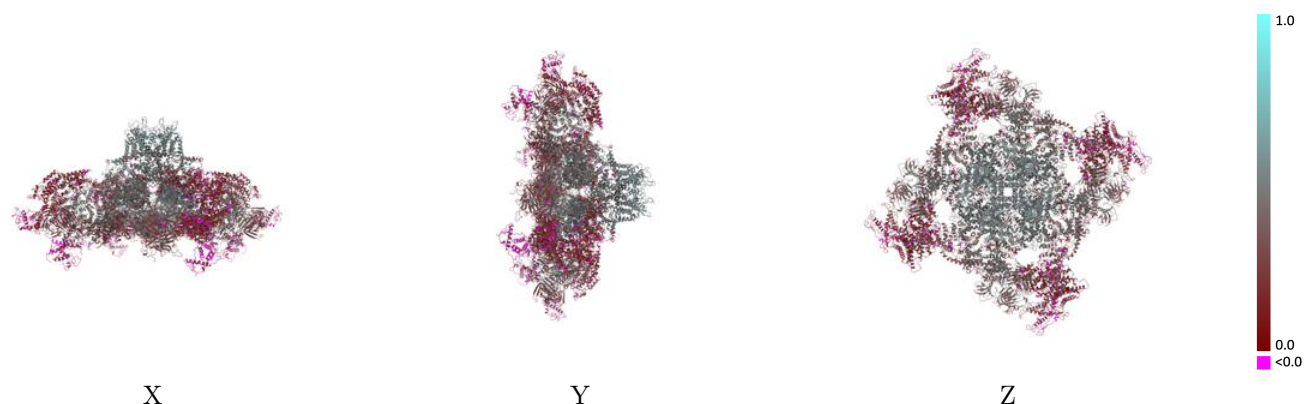
This section contains information regarding the fit between EMDB map EMD-47392 and PDB model 9E1F. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



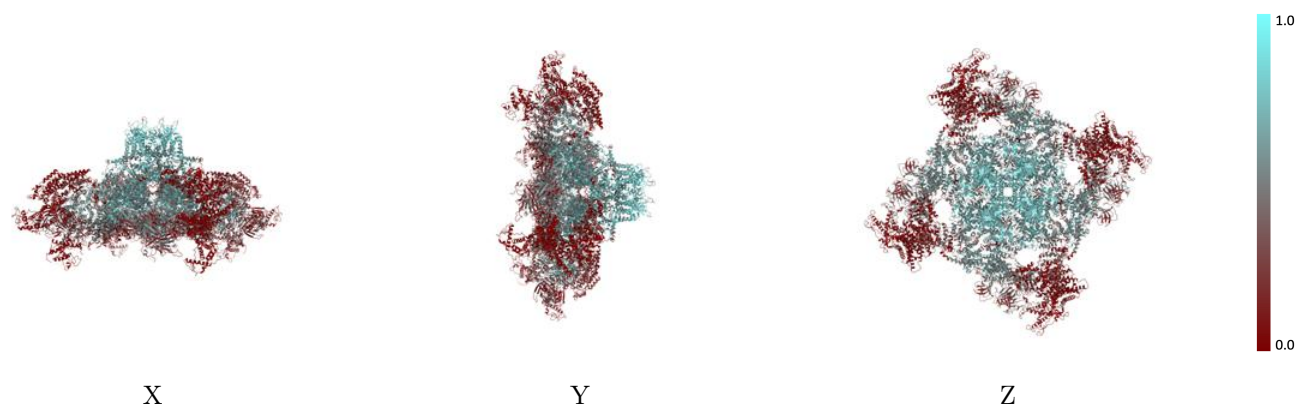
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



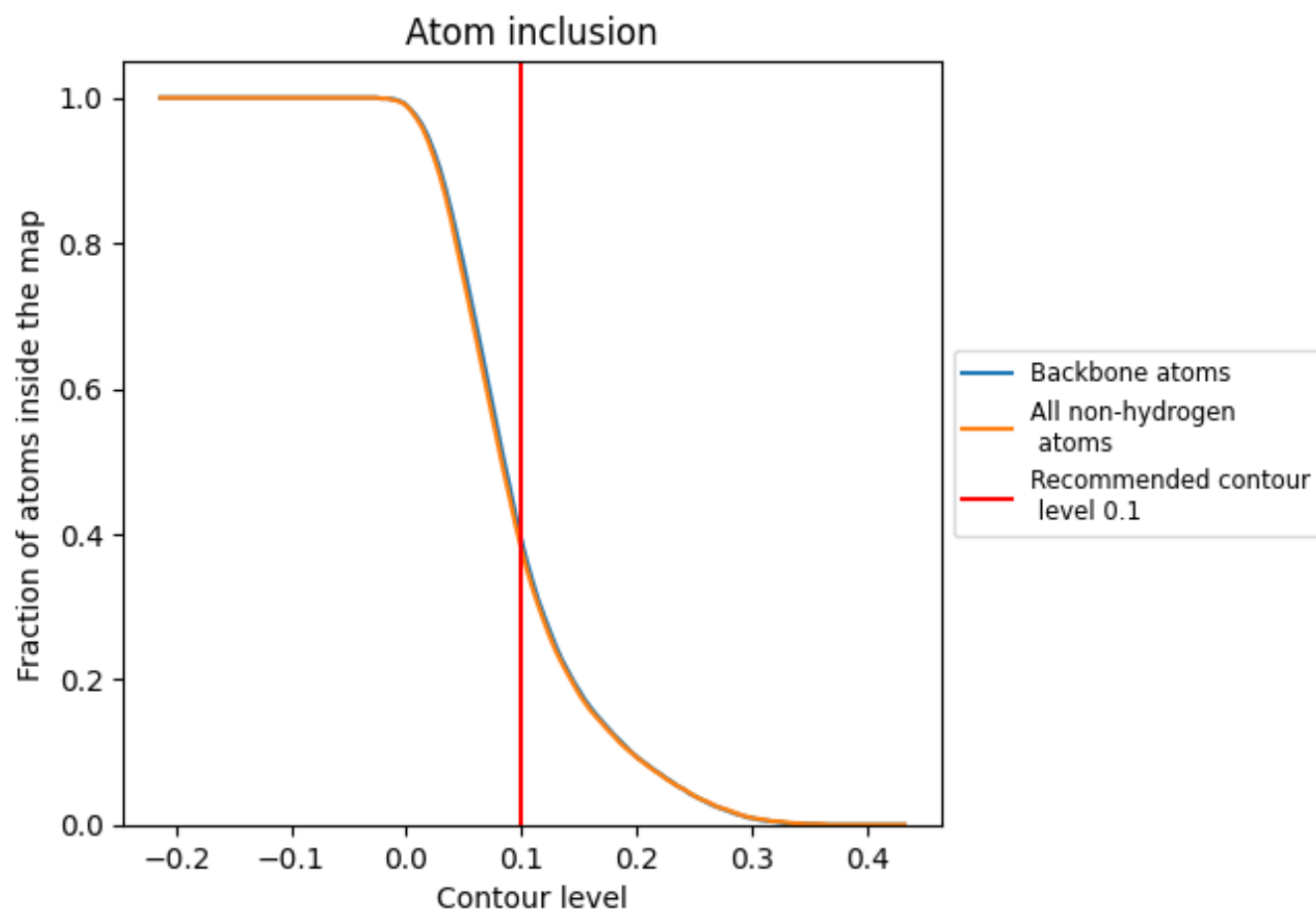
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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

9.4 Atom inclusion [i](#)



At the recommended contour level, 39% of all backbone atoms, 38% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

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

Chain	Atom inclusion	Q-score
All	0.3790	0.3300
A	0.3890	0.3290
B	0.3890	0.3290
C	0.3890	0.3290
D	0.3890	0.3290
E	0.2370	0.3640
F	0.2380	0.3570
G	0.2380	0.3570
H	0.2400	0.3580

1.0

0.0

<0.0