



Full wwPDB EM Validation Report ⓘ

Oct 22, 2024 – 02:58 PM JST

PDB ID : 8XJI
EMDB ID : EMD-38398
Title : Structure of chimeric RyR complex with flubendiamide
Authors : Lin, L.; Wang, C.; Wang, W.; Jiang, H.; Yuchi, Z.
Deposited on : 2023-12-21
Resolution : 3.91 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

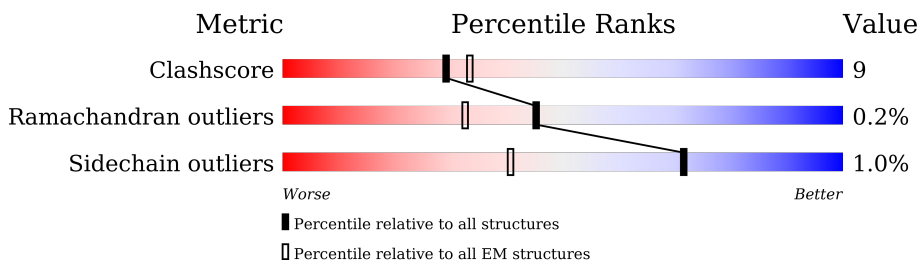
EMDB validation analysis : 0.0.1.dev113
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

1 Overall quality at a glance

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

The reported resolution of this entry is 3.91 Å.

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



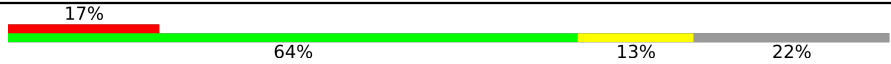
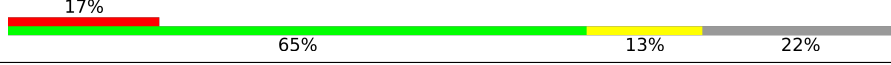
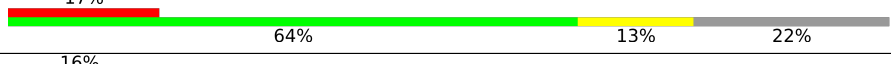

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	E	107	
1	F	107	
1	G	107	
1	H	107	
2	I	148	
2	J	148	
2	K	148	
2	L	148	

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Mol	Chain	Length	Quality of chain				
3	A	5037		17%	64%	13%	22%
3	B	5037		17%	65%	13%	22%
3	C	5037		17%	64%	13%	22%
3	D	5037		16%	64%	13%	22%

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 119704 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	H	107	804	510	144	146	4	0	0
1	G	107	804	510	144	146	4	0	0
1	F	107	804	510	144	146	4	0	0
1	E	107	804	510	144	146	4	0	0

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	L	139	1042	646	174	212	10	0	0
2	K	139	1042	646	174	212	10	0	0
2	J	139	1042	646	174	212	10	0	0
2	I	139	1042	646	174	212	10	0	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	32	ALA	GLU	engineered mutation	UNP P0DP23
L	68	ALA	GLU	engineered mutation	UNP P0DP23
L	105	ALA	GLU	engineered mutation	UNP P0DP23
L	141	ALA	GLU	engineered mutation	UNP P0DP23
K	32	ALA	GLU	engineered mutation	UNP P0DP23
K	68	ALA	GLU	engineered mutation	UNP P0DP23
K	105	ALA	GLU	engineered mutation	UNP P0DP23
K	141	ALA	GLU	engineered mutation	UNP P0DP23
J	32	ALA	GLU	engineered mutation	UNP P0DP23

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Chain	Residue	Modelled	Actual	Comment	Reference
J	68	ALA	GLU	engineered mutation	UNP P0DP23
J	105	ALA	GLU	engineered mutation	UNP P0DP23
J	141	ALA	GLU	engineered mutation	UNP P0DP23
I	32	ALA	GLU	engineered mutation	UNP P0DP23
I	68	ALA	GLU	engineered mutation	UNP P0DP23
I	105	ALA	GLU	engineered mutation	UNP P0DP23
I	141	ALA	GLU	engineered mutation	UNP P0DP23

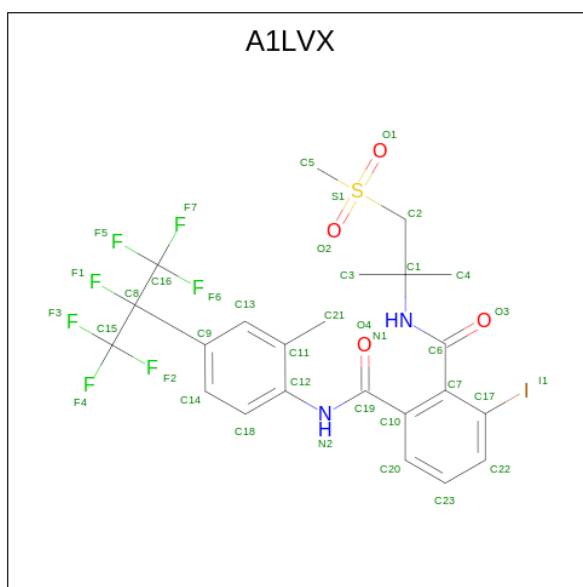
- Molecule 3 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	D	3928	27995	17849	4984	4987	175	1	0
3	A	3928	27995	17849	4984	4987	175	1	0
3	B	3928	27995	17849	4984	4987	175	1	0
3	C	3928	27995	17849	4984	4987	175	1	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	4563	LYS	ARG	engineered mutation	UNP P11716
D	4564	TYR	PHE	engineered mutation	UNP P11716
D	4657	ILE	CYS	engineered mutation	UNP P11716
D	4792	SER	LEU	engineered mutation	UNP P11716
A	4563	LYS	ARG	engineered mutation	UNP P11716
A	4564	TYR	PHE	engineered mutation	UNP P11716
A	4657	ILE	CYS	engineered mutation	UNP P11716
A	4792	SER	LEU	engineered mutation	UNP P11716
B	4563	LYS	ARG	engineered mutation	UNP P11716
B	4564	TYR	PHE	engineered mutation	UNP P11716
B	4657	ILE	CYS	engineered mutation	UNP P11716
B	4792	SER	LEU	engineered mutation	UNP P11716
C	4563	LYS	ARG	engineered mutation	UNP P11716
C	4564	TYR	PHE	engineered mutation	UNP P11716
C	4657	ILE	CYS	engineered mutation	UNP P11716
C	4792	SER	LEU	engineered mutation	UNP P11716

- Molecule 4 is Flubendiamide (three-letter code: A1LVX) (formula: C₂₃H₂₂F₇IN₂O₄S) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms							AltConf
			Total	C	F	I	N	O	S	
4	D	1	Total	C	F	I	N	O	S	0
			38	23	7	1	2	4	1	
4	A	1	Total	C	F	I	N	O	S	0
			38	23	7	1	2	4	1	
4	B	1	Total	C	F	I	N	O	S	0
			38	23	7	1	2	4	1	
4	C	1	Total	C	F	I	N	O	S	0
			38	23	7	1	2	4	1	

- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 6 is CALCIUM ION (three-letter code: CA) (formula: Ca).

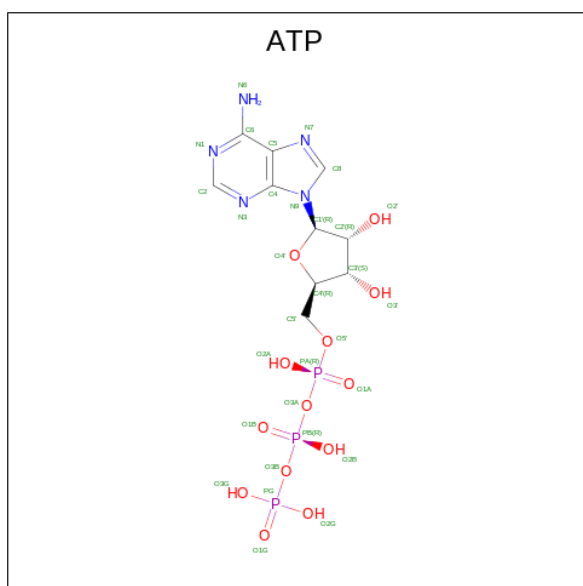
Mol	Chain	Residues	Atoms		AltConf
			Total	Ca	
6	D	1	Total	Ca	0
			1	1	

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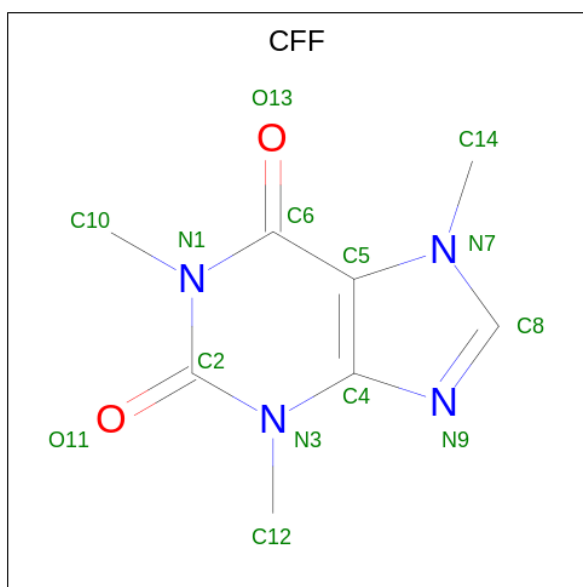
Mol	Chain	Residues	Atoms		AltConf
6	A	1	Total	Ca	0
			1	1	
6	B	1	Total	Ca	0
			1	1	
6	C	1	Total	Ca	0
			1	1	

- Molecule 7 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



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

- Molecule 8 is CAFFEINE (three-letter code: CFF) (formula: $C_8H_{10}N_4O_2$) (labeled as "Ligand of Interest" by depositor).

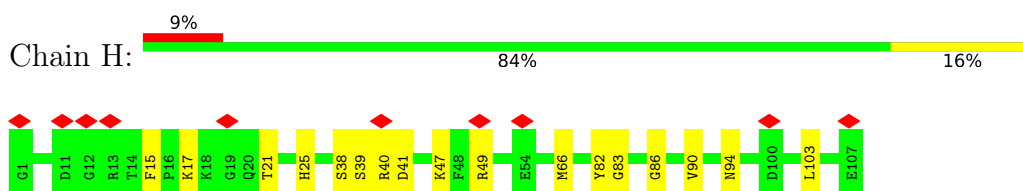


Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
8	D	1	Total 14	8	4	2	0
8	A	1	Total 14	8	4	2	0
8	B	1	Total 14	8	4	2	0
8	C	1	Total 14	8	4	2	0

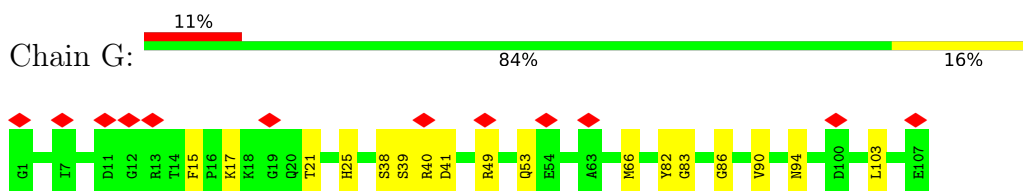
3 Residue-property plots [i](#)

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

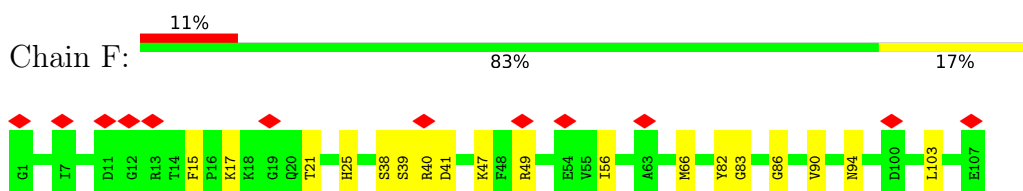
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



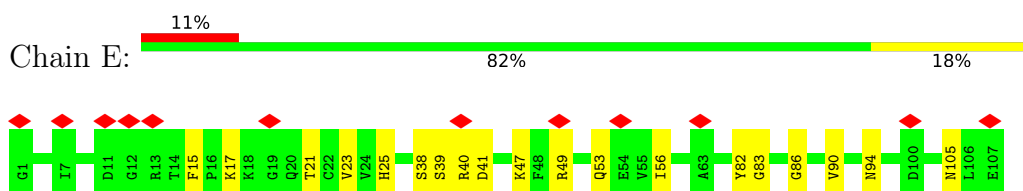
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



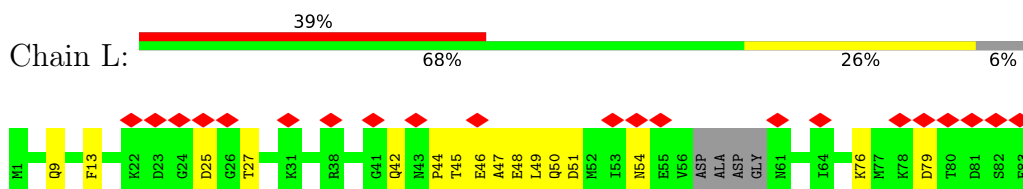
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

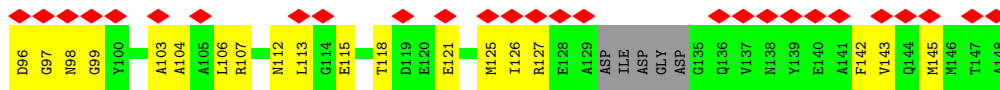


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

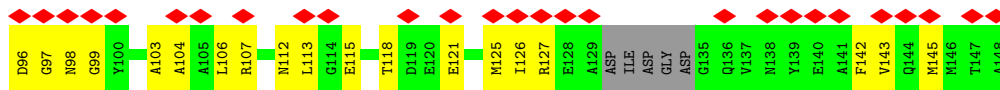
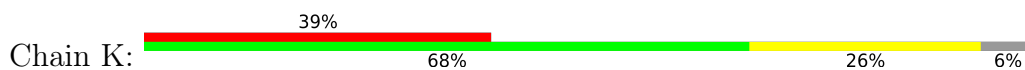


- Molecule 2: Calmodulin-1

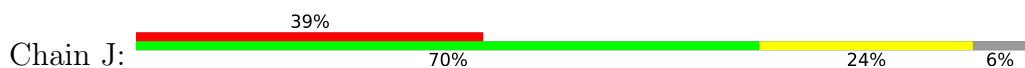




• Molecule 2: Calmodulin-1



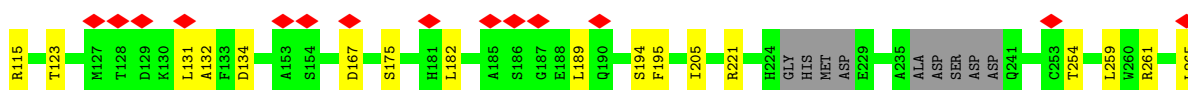
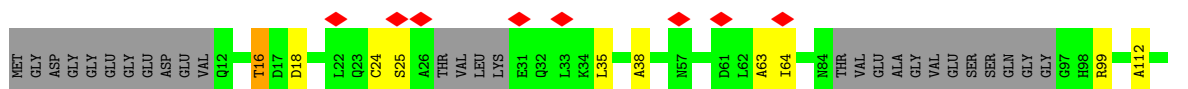
• Molecule 2: Calmodulin-1

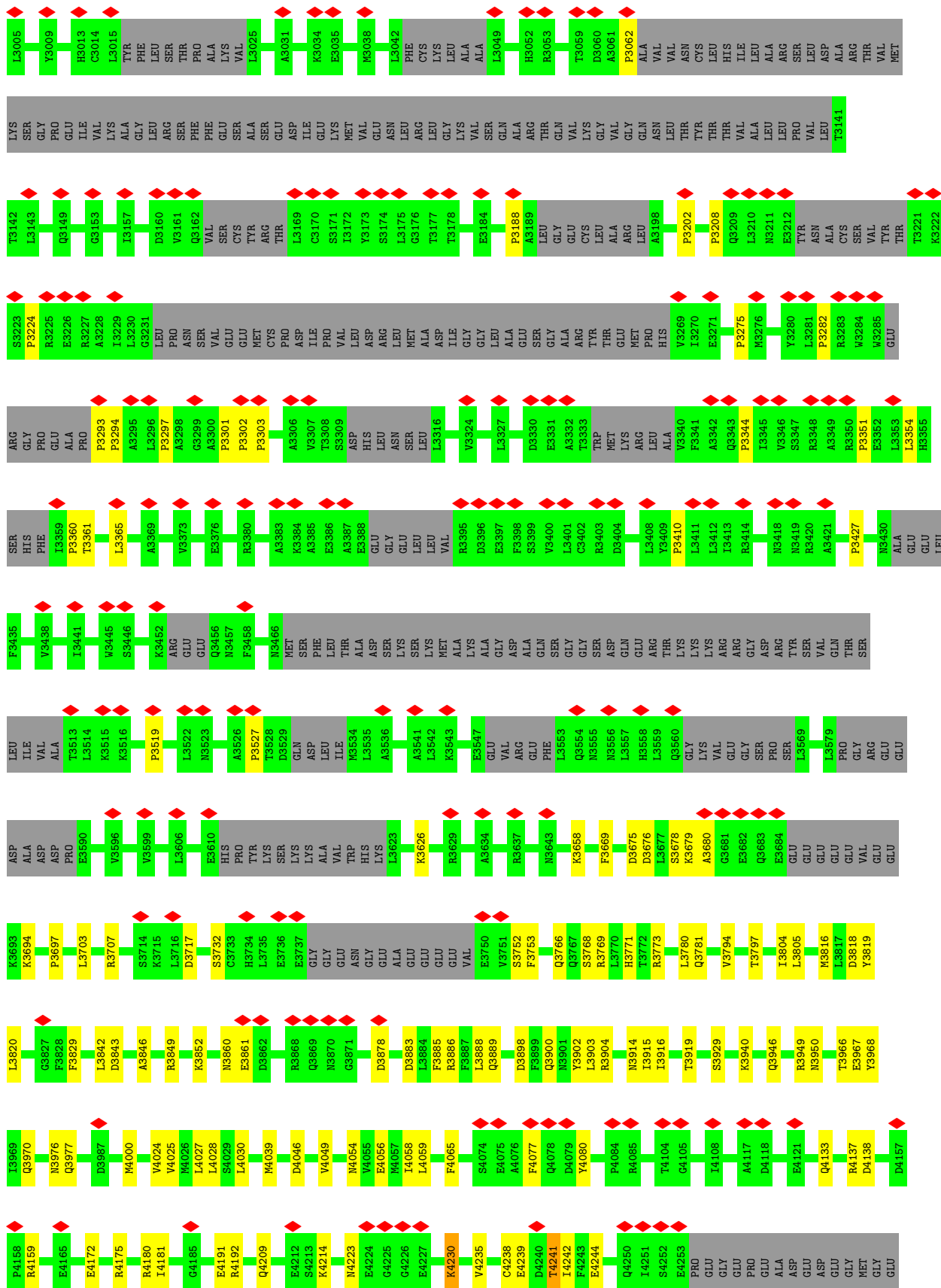


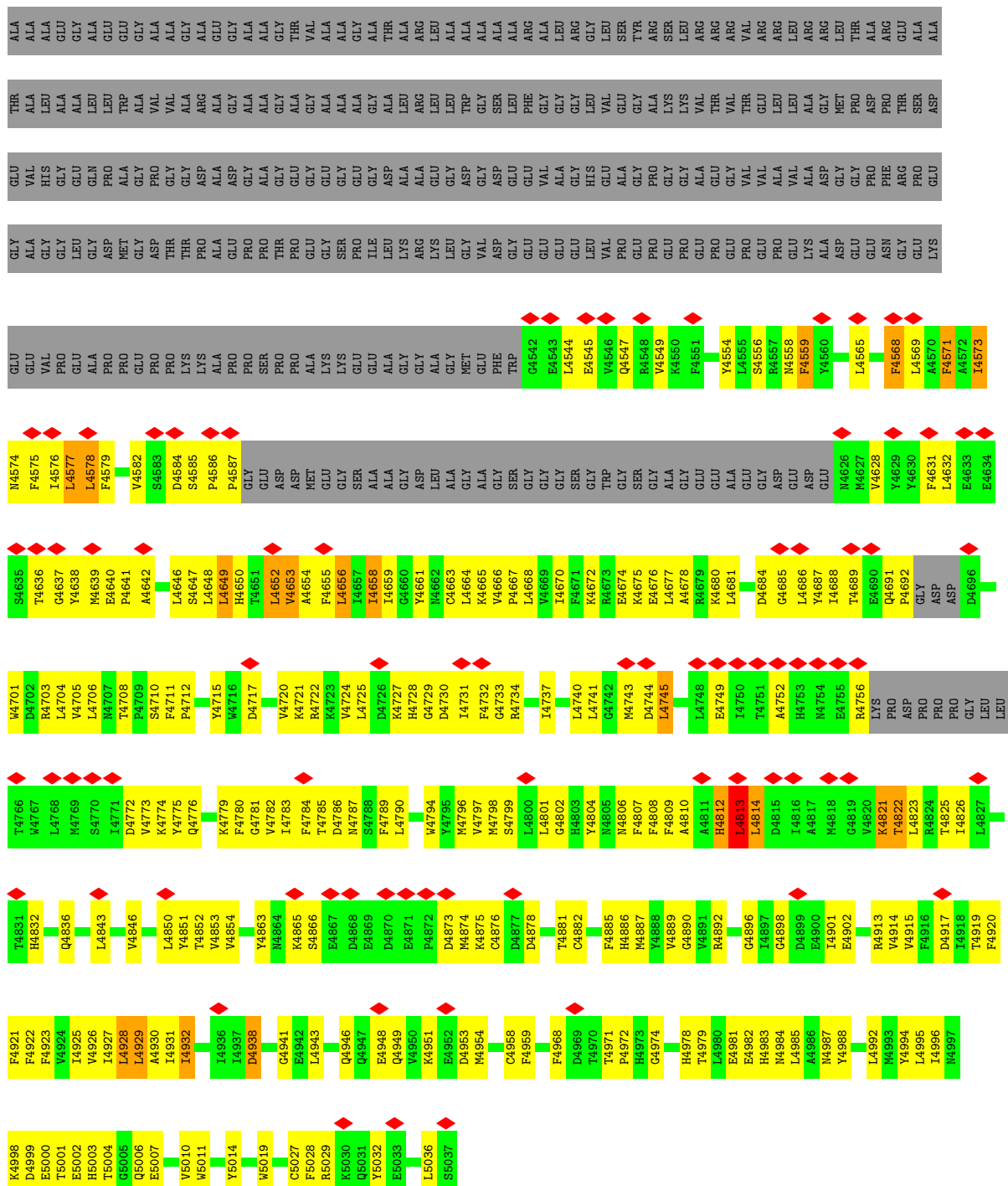
• Molecule 2: Calmodulin-1



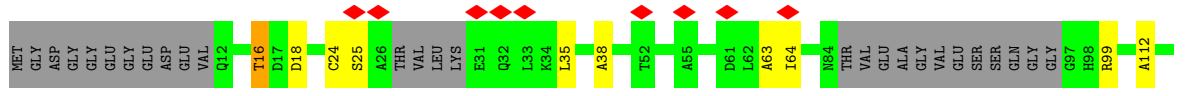
• Molecule 3: Ryanodine receptor 1

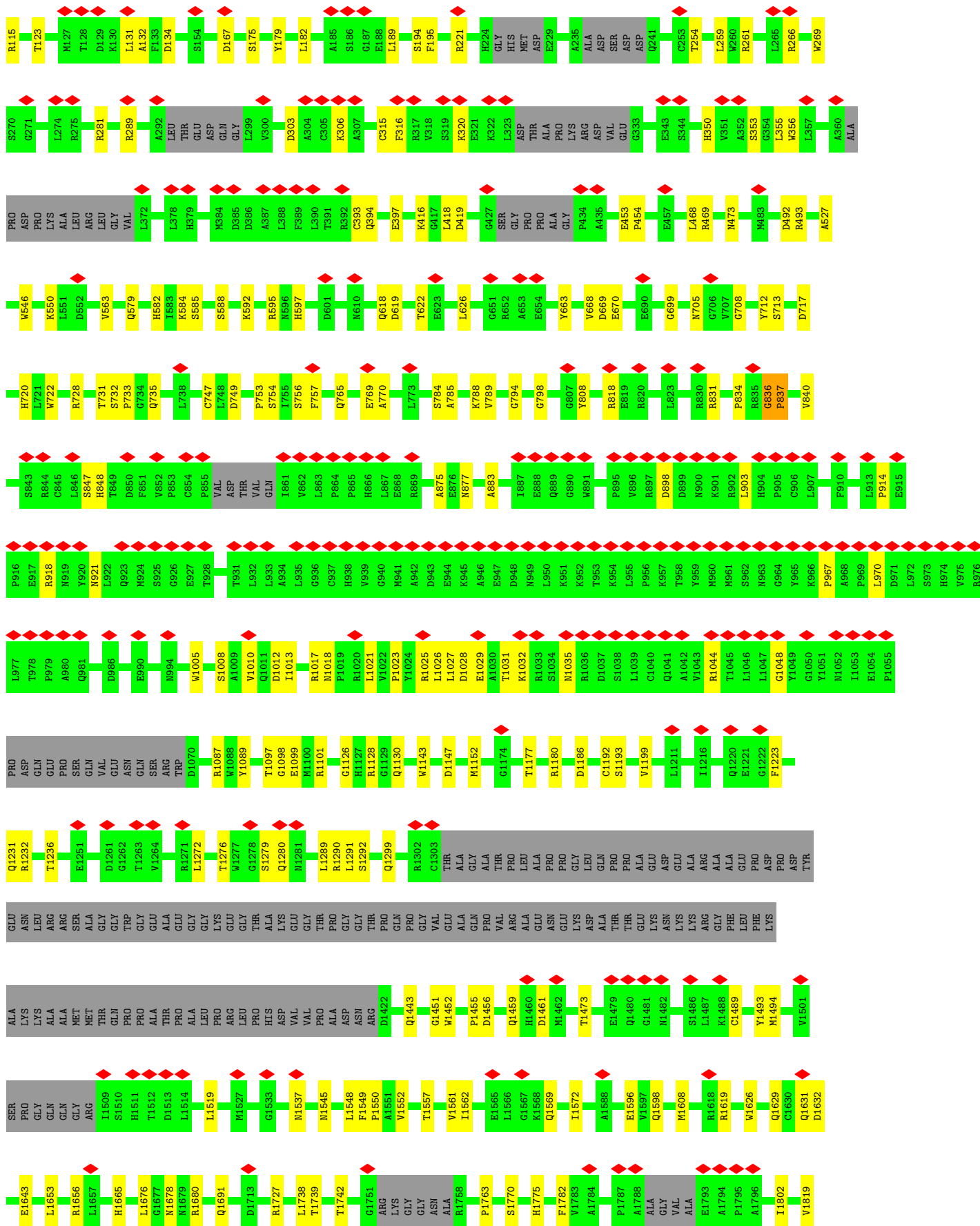


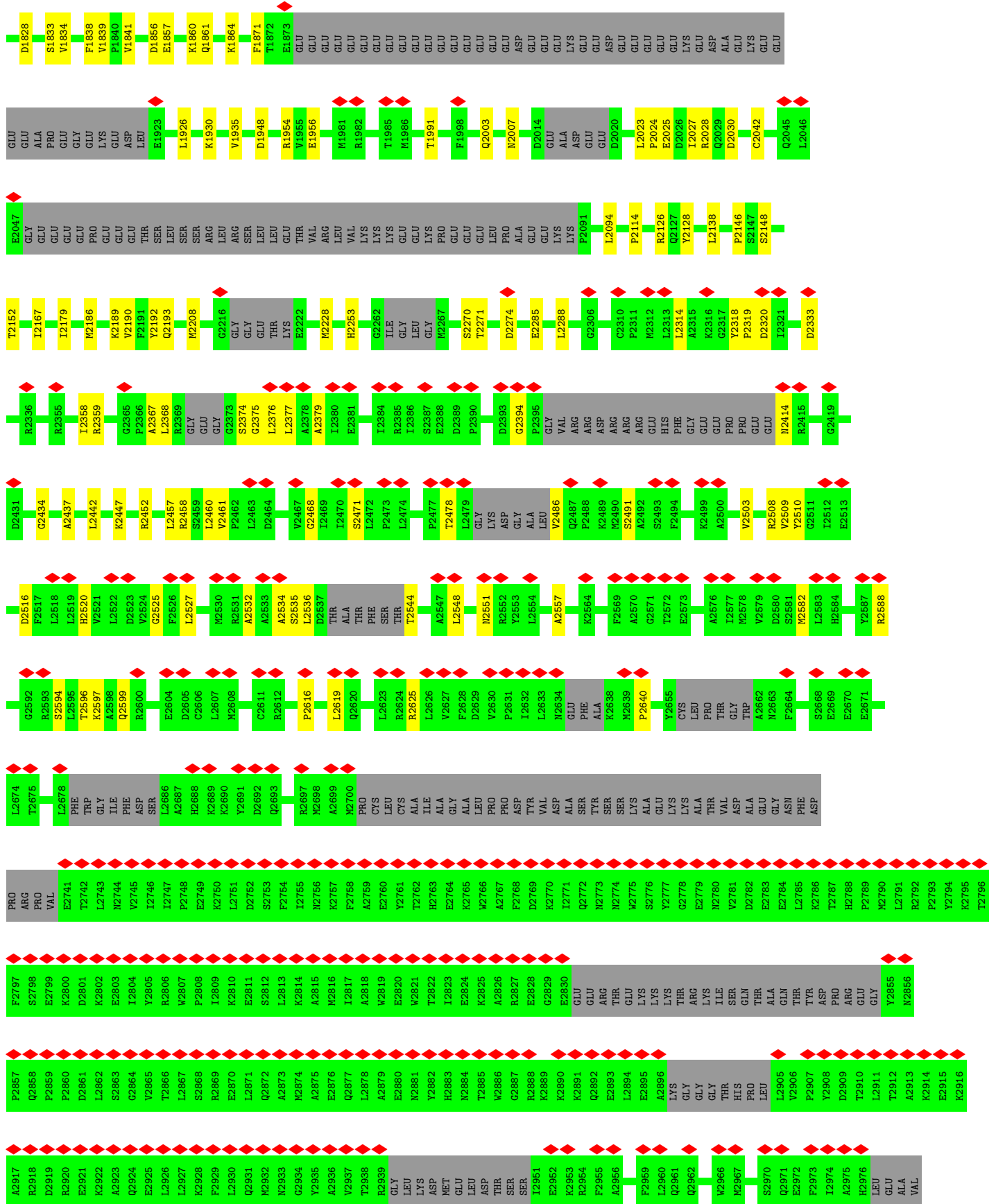


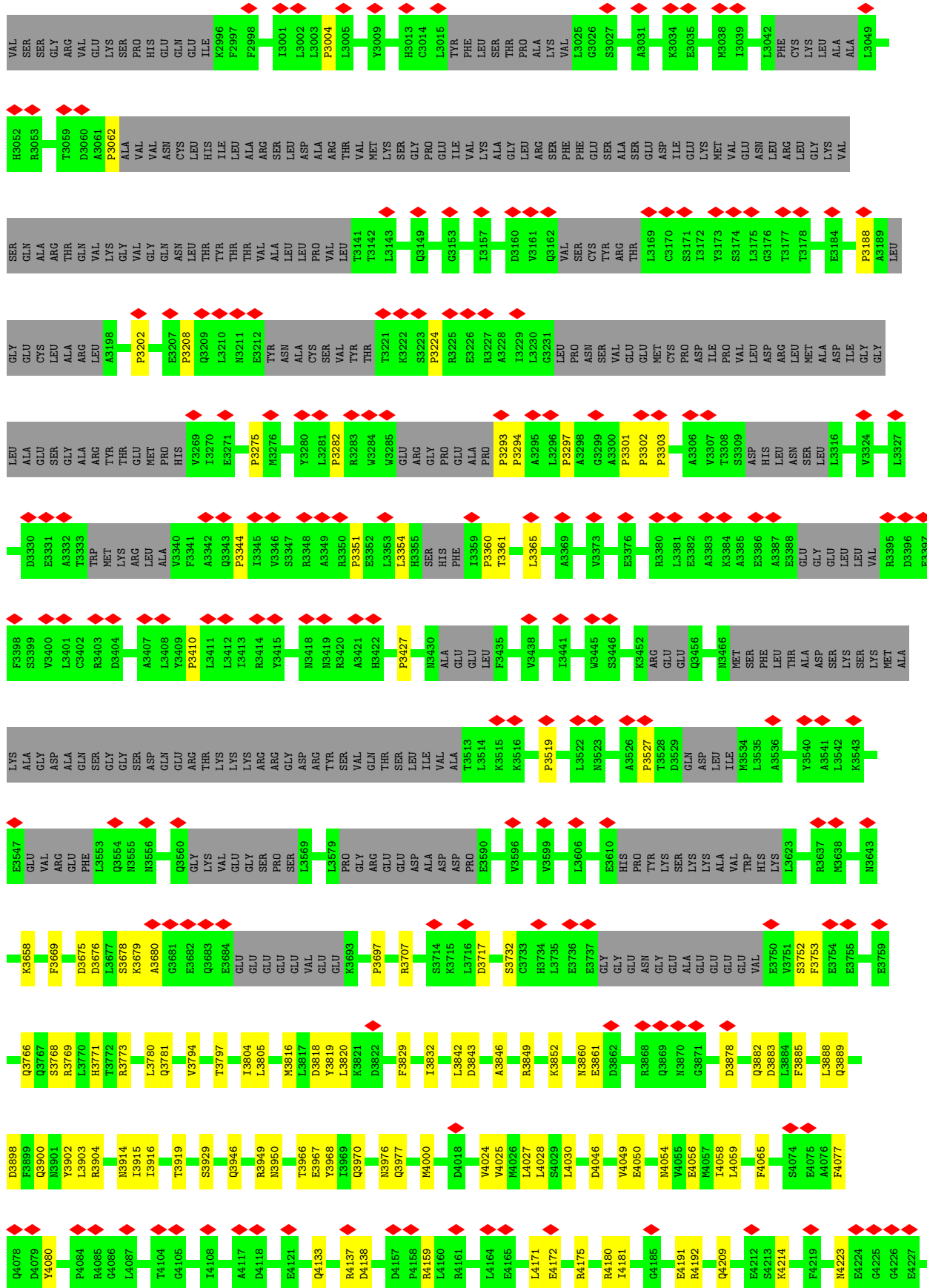


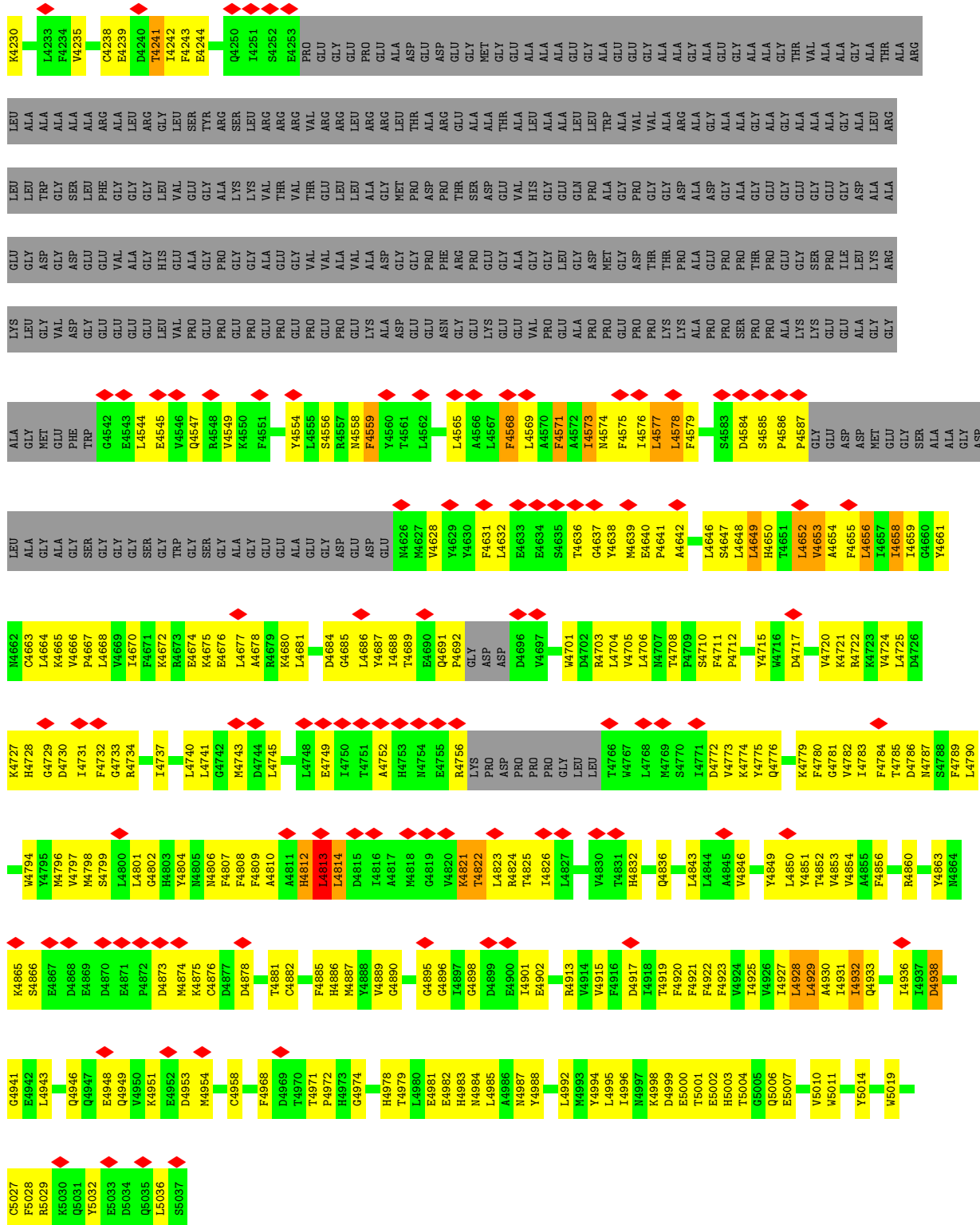
• Molecule 3: Ryanodine receptor 1





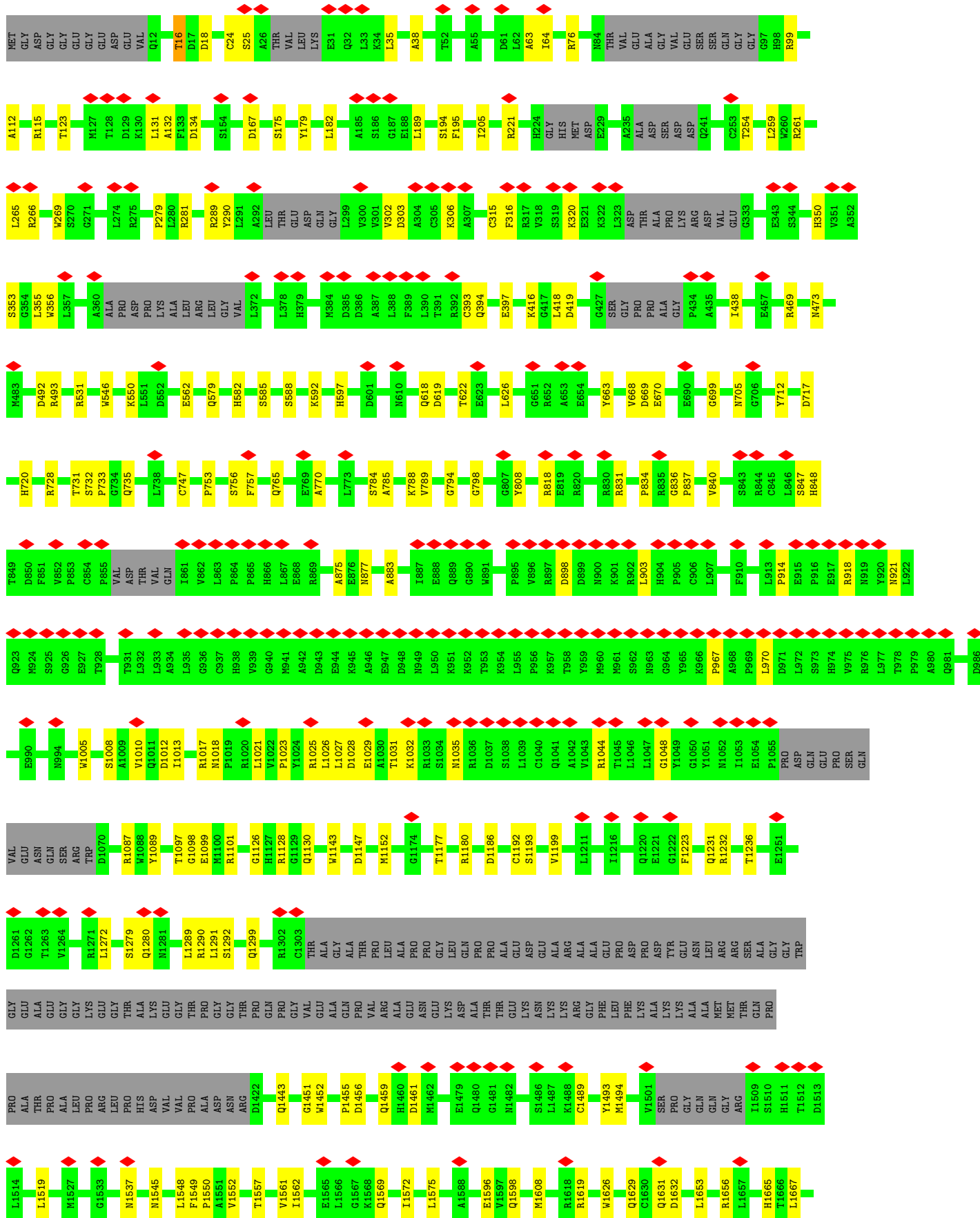




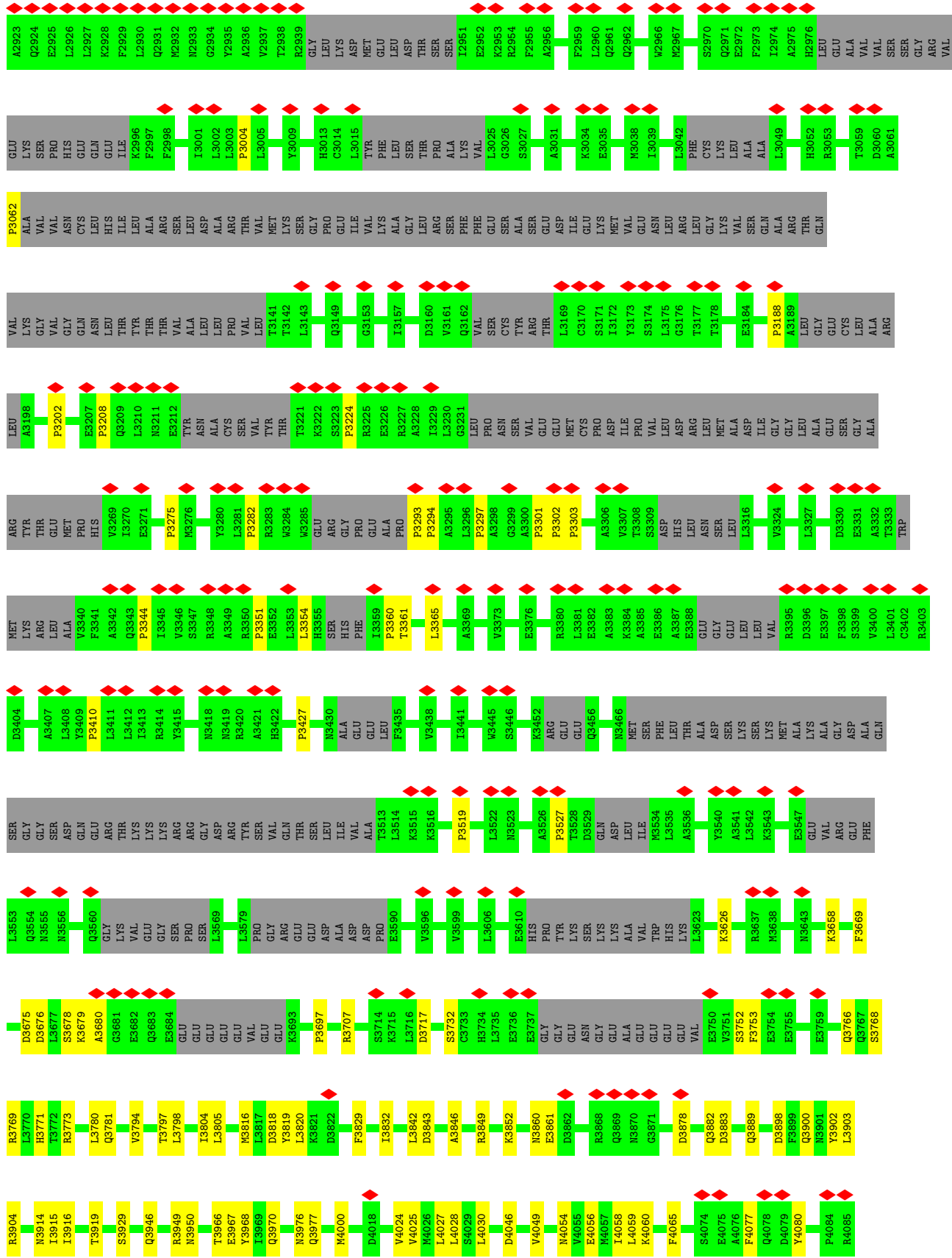


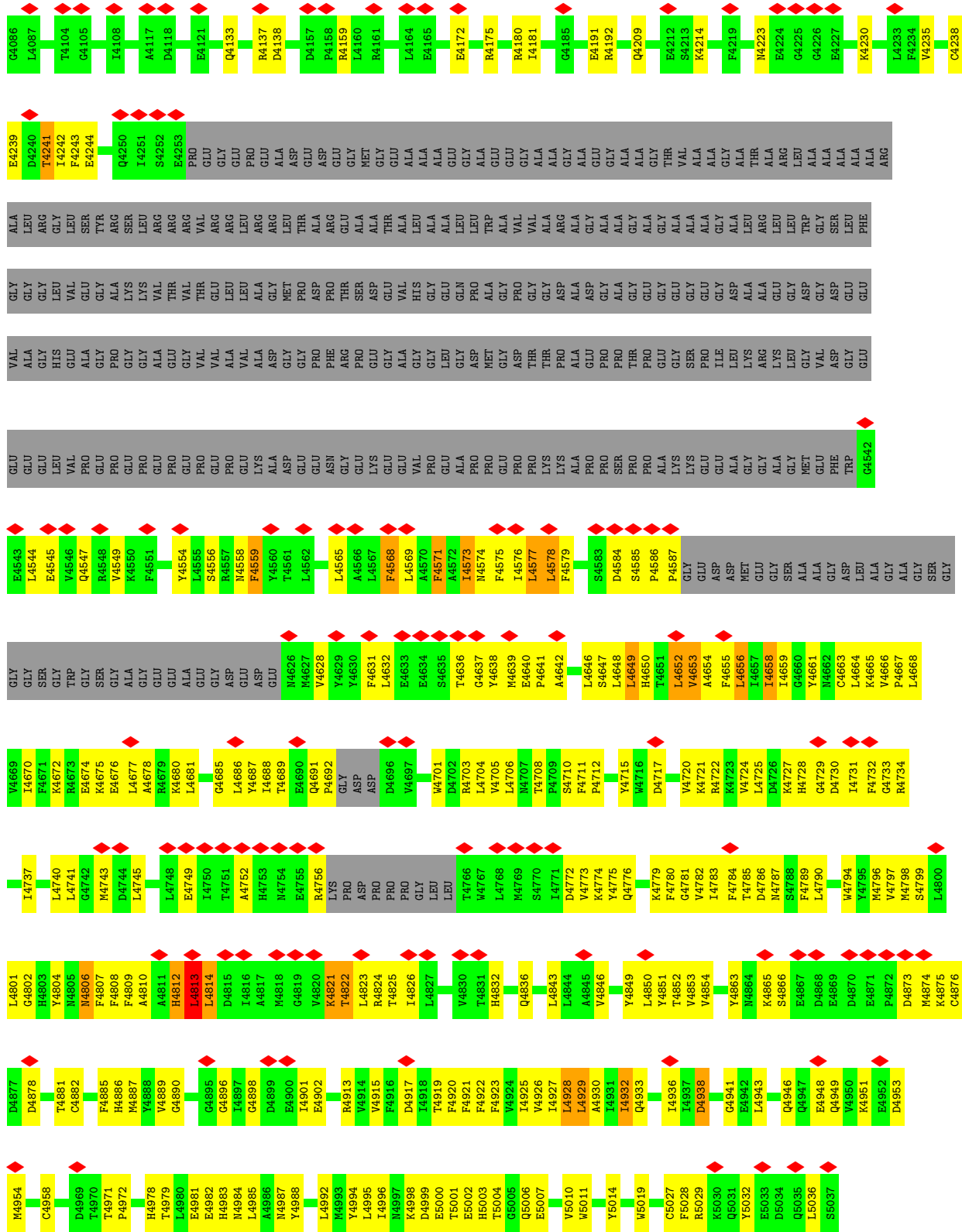
● Molecule 3: Ryanodine receptor 1





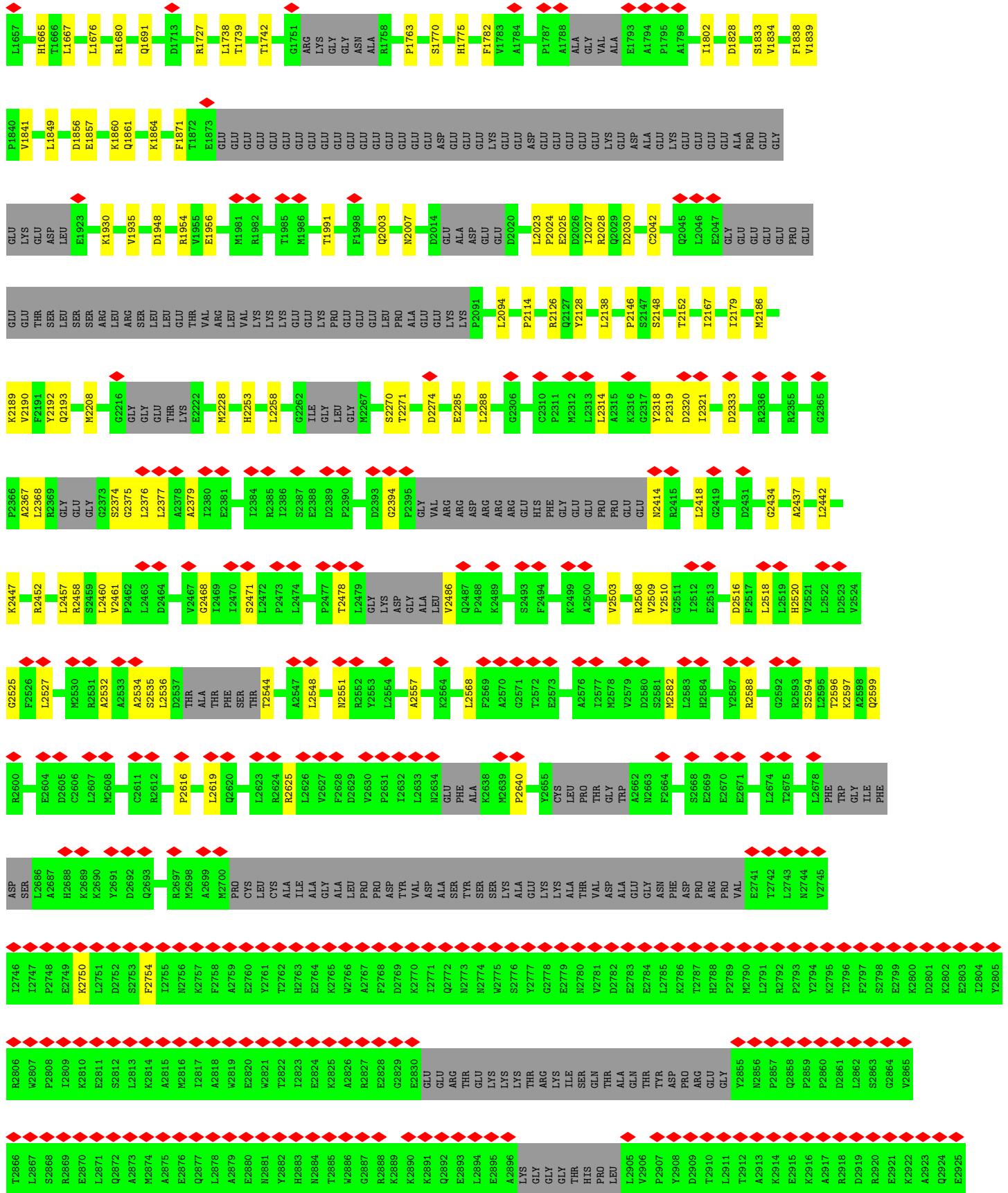
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F1838	V1839	P1840	V1841	L1849	D1856	E1857	K1860	Q1861	K1864	F1871	T1872	E1873	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	ASP	GLU	GLU	LYS	LYS	GLU	GLU	ASP	GLU	GLU	GLU	ALA	ALA	L2023	F2024	E2025	R2028	Q2029	D2030	C2042	Q2045	L2046	E2047	GLY	GLU	GLU	GLU									
GLU	GLY	GLU	LYS	ASP	LEU	E1923	L1926	K1930	V1935	D1948	R1954	V1955	E1956	M1981	R1982	T1985	M1986	T1991	F1998	Q2003	N2007	D2014	GLU	ALA	ASP	GLU	GLU	GLU	GLU	D2020	L2023	F2024	E2025	R2028	Q2029	D2030	C2042	Q2045	L2046	E2047	GLY	GLU	GLU	GLU															
GLU	PRO	GLU	GLU	THR	SER	LEU	SER	SER	ARG	LEU	ARG	SER	LEU	LEU	THR	VAL	ARG	LEU	LYS	LYS	GLU	GLU	PRO	GLU	GLU	ALA	ALA	L2094	P2114	R2126	Q2127	Y2128	L2138	P2146	S2147	S2148	T2152	I2167	I2179	P2091	L2094	P2114	R2126	Q2127	Y2128	L2138	P2146	S2147	S2148	T2152	I2167	I2179							
M2166	K2189	V2190	F2191	Y2192	Q2193	M2208	G2216	GLY	GLY	THR	THR	LYS	E2222	M2228	H2253	G2262	ILE	GLY	LEU	GLY	M2267	S2270	T2271	D2274	E2285	L2288	G2306	C2310	P2311	M2312	L2313	L2314	A2315	K2316	G2317	Y2318	P2319	D2320	I2321	D2333	R2336	R2355																	
L2358	R2359	G2365	P2366	A2367	R2369	GLY	GLY	G2373	S2374	G2375	L2376	L2377	A2378	A2379	I2380	E2381	I2384	R2385	I2386	S2387	E2388	D2389	F2390	D2393	G2394	P2395	GLY	VAL	ARG	ARG	ASP	ARG	ARG	ARG	ARG	HIS	PHE	GLY	GLY	GLU	PRO	PRO	GLU	GLU	M2414	R2415	G2419	D2431	G2434	A2437									
L2442	K2447	R2452	L2457	R2458	L2460	V2461	P2462	L2463	L2464	V2467	Q2468	I2469	L2470	S2471	L2472	P2473	L2474	P2477	T2478	L2479	GLY	LYS	ASP	GLY	ALA	LEU	V2486	Q2487	P2488	K2489	S2493	F2494	K2499	A2500	V2503	R2508	V2509	Y2510	I2512	E2513	D2516	F2517	L2518	L2519	H2520	V2521													
L2522	D2523	V2524	G2525	F2526	L2527	M2530	R2531	A2532	A2533	A2534	S2535	L2536	T2537	THR	ALA	THR	PHE	I2544	A2547	L2548	M2551	L2552	Y2553	L2554	A2557	K2564	F2569	A2570	G2571	T2572	E2573	A2576	I2577	M2578	V2579	D2580	S2581	L2582	H2584	V2587	R2588	G2592	R2593	S2594	L2595	T2596	K2597												
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GLY	ILE	PHE	ASP	SER	L2686	A2687	H2688	K2689	K2690	Y2691	D2692	Q2693	R2697	M2698	A2699	M2700	PRO	CYS	LEU	LEU	ALA	ILE	ALA	ALA	ALA	ALA	ALA	LEU	LEU	PRO	PRO	ASP	TYR	VAL	ASP	ALA	ALA	SER	THR	SER	SER	LYS	LYS	ALA	ALA	GLU	GLU	GLY	ASN	PHE	ASP	PRO	PRO	PRO	VAL	E2741	T2742		
L2743	M2744	V2745	I2746	I2747	P2748	E2749	K2750	L2751	D2752	S2753	F2754	I2755	M2756	K2757	F2758	A2759	E2760	Y2761	T2762	H2763	E2764	K2765	M2766	A2767	F2768	D2769	K2770	I2771	Q2772	M2773	N2774	M2775	S2776	Y2777	G2778	E2779	N2780	V2781	D2782	E2783	E2784	L2785	K2786	T2787	H2788	F2789	M2790	L2791	R2792	P2793	Y2794	K2795	T2796	F2797	S2798	E2799	K2800	D2801	K2802
E2803	I2804	Y2805	R2806	M2807	P2808	I2809	K2810	E2811	S2812	L2813	K2814	A2815	M2816	L2817	A2818	M2819	E2820	M2821	T2822	I2823	E2824	K2825	A2826	R2827	E2828	G2829	E2830	GLU	GLU	THR	ARG	THR	THR	GLU	LYS	LYS	THR	ARG	ILE	SER	GLN	THR	ALA	GLN	THR	THR	ASP	PRO	ARG	GLU	GLY	Y2855	M2856	P2857	Q2858	P2859	K2860	D2861	L2862
S2863	G2864	V2865	T2866	L2867	S2868	R2869	E2870	L2871	D2872	A2873	M2874	A2875	R2876	Q2877	L2878	A2879	E2880	N2881	Y2882	H2883	N2884	T2885	M2886	G2887	R2888	K2889	K2890	K2891	Q2892	E2893	L2894	E2895	A2896	LYS	GLY	GLY	THR	HIS	PRO	LEU	L2905	V2906	P2907	Y2908	D2909	T2910	L2911	T2912	A2913	K2914	E2915	K2916	A2917	R2918	D2919	R2920	E2921	K2922	

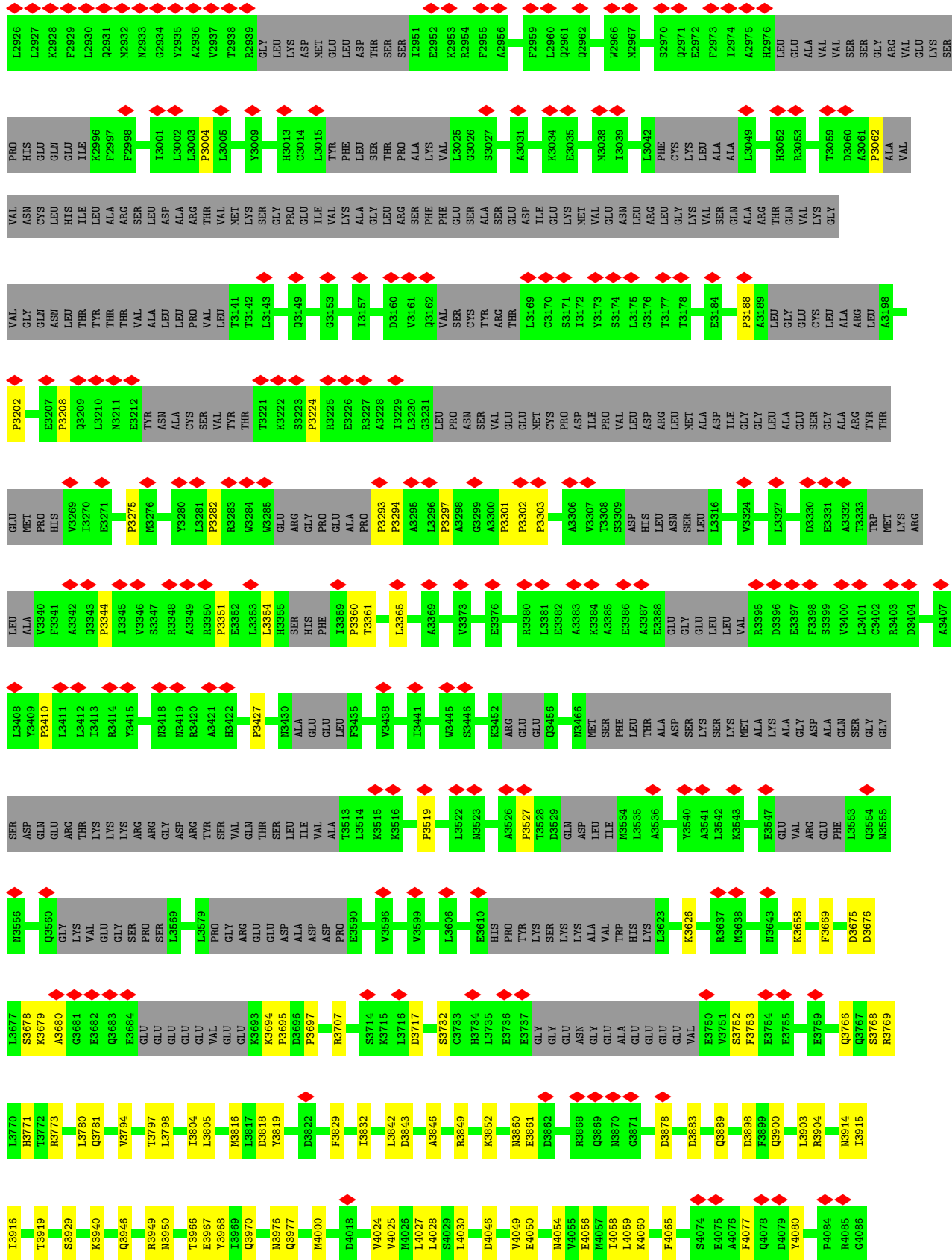


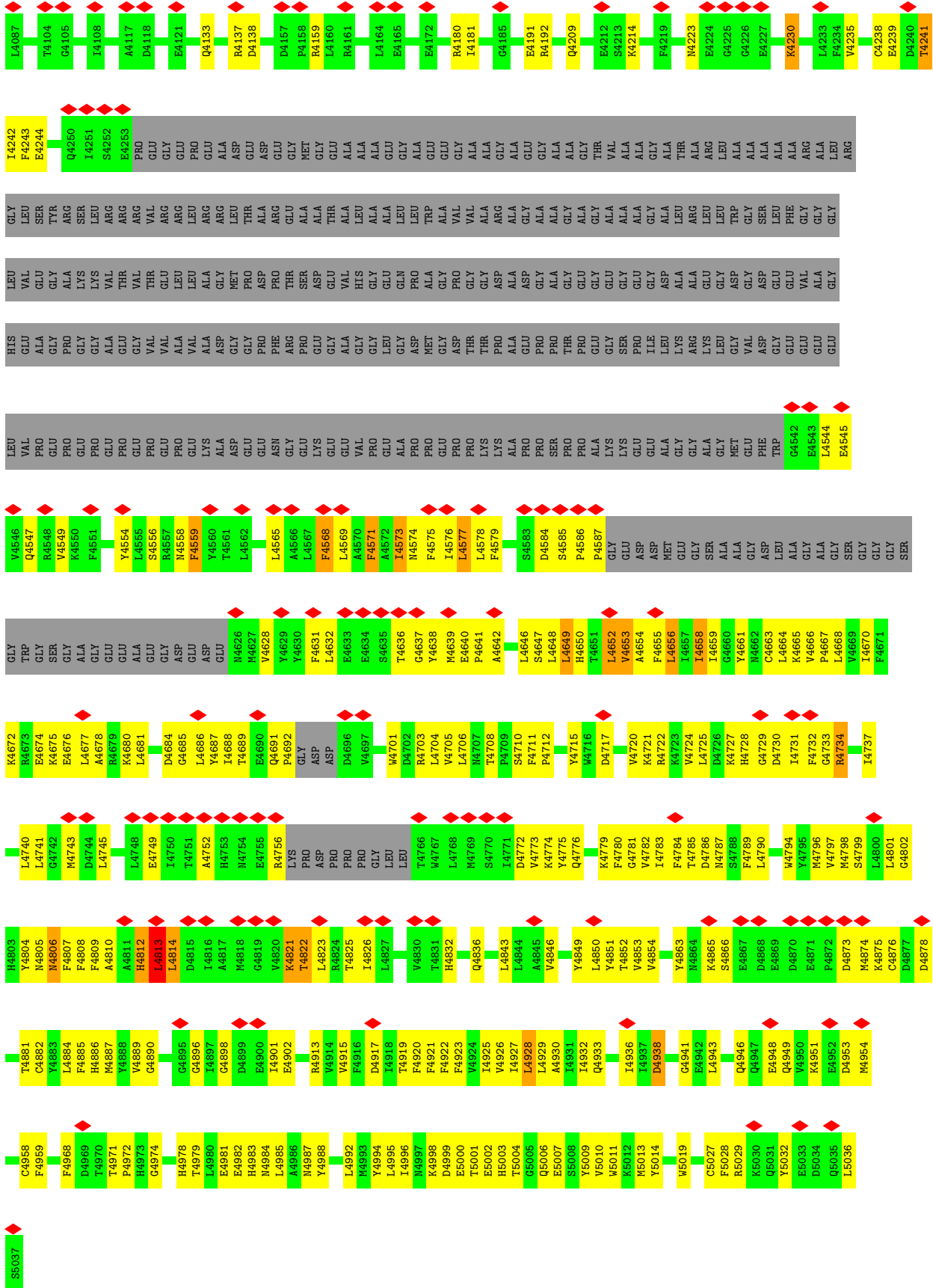


• Molecule 3: Ryanodine receptor 1









4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	35721	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.266	Depositor
Minimum map value	-0.185	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.010	Depositor
Recommended contour level	0.06	Depositor
Map size (\AA)	542.72, 542.72, 542.72	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.06, 1.06, 1.06	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, CA, CFF, ATP, A1LVX

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	E	0.40	0/820	0.54	0/1105
1	F	0.40	0/820	0.54	0/1105
1	G	0.40	0/820	0.54	0/1105
1	H	0.40	0/820	0.54	0/1105
2	I	0.30	0/1052	0.48	0/1416
2	J	0.30	0/1052	0.48	0/1416
2	K	0.30	0/1052	0.48	0/1416
2	L	0.30	0/1052	0.48	0/1416
3	A	0.36	0/28526	0.53	26/38845 (0.1%)
3	B	0.36	0/28526	0.53	26/38845 (0.1%)
3	C	0.36	0/28526	0.53	25/38845 (0.1%)
3	D	0.36	0/28526	0.53	25/38845 (0.1%)
All	All	0.36	0/121592	0.52	102/165464 (0.1%)

There are no bond length outliers.

All (102) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	D	836	GLY	C-N-CD	-8.61	101.67	120.60
3	A	836	GLY	C-N-CD	-8.60	101.68	120.60
3	B	836	GLY	C-N-CD	-8.60	101.68	120.60
3	C	836	GLY	C-N-CD	-8.58	101.73	120.60
3	B	3282	PRO	N-CA-CB	6.32	110.89	103.30
3	A	3224	PRO	N-CA-CB	6.32	110.88	103.30
3	B	3294	PRO	N-CA-CB	6.32	110.88	103.30
3	B	3303	PRO	N-CA-CB	6.32	110.88	103.30
3	D	3282	PRO	N-CA-CB	6.31	110.87	103.30
3	D	3303	PRO	N-CA-CB	6.31	110.87	103.30
3	C	3224	PRO	N-CA-CB	6.31	110.87	103.30
3	A	3303	PRO	N-CA-CB	6.31	110.87	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	3360	PRO	N-CA-CB	6.30	110.86	103.30
3	B	3224	PRO	N-CA-CB	6.30	110.86	103.30
3	D	3224	PRO	N-CA-CB	6.29	110.85	103.30
3	C	3282	PRO	N-CA-CB	6.29	110.85	103.30
3	B	3360	PRO	N-CA-CB	6.29	110.85	103.30
3	C	3303	PRO	N-CA-CB	6.29	110.85	103.30
3	D	3294	PRO	N-CA-CB	6.28	110.84	103.30
3	C	3293	PRO	N-CA-CB	6.28	110.84	103.30
3	A	3294	PRO	N-CA-CB	6.27	110.83	103.30
3	A	3282	PRO	N-CA-CB	6.27	110.82	103.30
3	A	3293	PRO	N-CA-CB	6.27	110.82	103.30
3	D	3360	PRO	N-CA-CB	6.27	110.82	103.30
3	C	3360	PRO	N-CA-CB	6.27	110.82	103.30
3	B	3427	PRO	N-CA-CB	6.27	110.82	103.30
3	C	3427	PRO	N-CA-CB	6.27	110.82	103.30
3	D	3293	PRO	N-CA-CB	6.26	110.81	103.30
3	C	3294	PRO	N-CA-CB	6.25	110.81	103.30
3	A	3427	PRO	N-CA-CB	6.24	110.79	103.30
3	B	3293	PRO	N-CA-CB	6.24	110.78	103.30
3	D	3427	PRO	N-CA-CB	6.23	110.78	103.30
3	B	3208	PRO	N-CA-CB	6.19	110.73	103.30
3	C	3208	PRO	N-CA-CB	6.18	110.71	103.30
3	B	3188	PRO	N-CA-CB	6.17	110.70	103.30
3	D	3208	PRO	N-CA-CB	6.17	110.70	103.30
3	D	3188	PRO	N-CA-CB	6.16	110.70	103.30
3	A	3188	PRO	N-CA-CB	6.16	110.69	103.30
3	C	3188	PRO	N-CA-CB	6.16	110.69	103.30
3	D	3344	PRO	N-CA-CB	6.16	110.69	103.30
3	B	3344	PRO	N-CA-CB	6.15	110.68	103.30
3	A	3208	PRO	N-CA-CB	6.14	110.67	103.30
3	A	3344	PRO	N-CA-CB	6.13	110.66	103.30
3	C	3344	PRO	N-CA-CB	6.13	110.66	103.30
3	C	3302	PRO	N-CA-CB	6.11	110.63	103.30
3	A	3527	PRO	N-CA-CB	6.10	110.62	103.30
3	B	3202	PRO	N-CA-CB	6.10	110.62	103.30
3	C	3202	PRO	N-CA-CB	6.10	110.62	103.30
3	D	3527	PRO	N-CA-CB	6.10	110.62	103.30
3	D	3302	PRO	N-CA-CB	6.10	110.62	103.30
3	A	3302	PRO	N-CA-CB	6.09	110.61	103.30
3	D	3202	PRO	N-CA-CB	6.09	110.61	103.30
3	A	3202	PRO	N-CA-CB	6.09	110.61	103.30
3	C	3527	PRO	N-CA-CB	6.09	110.60	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	3527	PRO	N-CA-CB	6.08	110.60	103.30
3	A	3275	PRO	N-CA-CB	6.07	110.58	103.30
3	D	3410	PRO	N-CA-CB	6.07	110.58	103.30
3	B	3302	PRO	N-CA-CB	6.07	110.58	103.30
3	B	3275	PRO	N-CA-CB	6.06	110.57	103.30
3	C	3410	PRO	N-CA-CB	6.06	110.57	103.30
3	B	3410	PRO	N-CA-CB	6.05	110.56	103.30
3	C	3275	PRO	N-CA-CB	6.05	110.56	103.30
3	D	3275	PRO	N-CA-CB	6.04	110.56	103.30
3	A	3410	PRO	N-CA-CB	6.04	110.54	103.30
3	B	3519	PRO	N-CA-CB	6.03	110.54	103.30
3	D	3519	PRO	N-CA-CB	6.03	110.53	103.30
3	A	3519	PRO	N-CA-CB	6.01	110.51	103.30
3	C	3519	PRO	N-CA-CB	6.01	110.51	103.30
3	C	3297	PRO	N-CA-CB	6.00	110.50	103.30
3	C	3062	PRO	N-CA-CB	5.99	110.49	103.30
3	D	3297	PRO	N-CA-CB	5.98	110.48	103.30
3	D	3062	PRO	N-CA-CB	5.98	110.47	103.30
3	B	3297	PRO	N-CA-CB	5.98	110.47	103.30
3	A	3062	PRO	N-CA-CB	5.97	110.47	103.30
3	B	3062	PRO	N-CA-CB	5.97	110.47	103.30
3	A	3297	PRO	N-CA-CB	5.96	110.45	103.30
3	C	3004	PRO	N-CA-CB	5.93	110.42	103.30
3	D	3004	PRO	N-CA-CB	5.91	110.39	103.30
3	A	3004	PRO	N-CA-CB	5.91	110.39	103.30
3	B	3004	PRO	N-CA-CB	5.88	110.35	103.30
3	D	3301	PRO	N-CA-CB	5.87	110.34	103.30
3	A	3301	PRO	N-CA-CB	5.87	110.34	103.30
3	B	3301	PRO	N-CA-CB	5.87	110.34	103.30
3	C	3301	PRO	N-CA-CB	5.85	110.32	103.30
3	D	2640	PRO	N-CA-CB	5.83	110.30	103.30
3	B	2640	PRO	N-CA-CB	5.81	110.27	103.30
3	A	2640	PRO	N-CA-CB	5.80	110.26	103.30
3	C	2640	PRO	N-CA-CB	5.80	110.26	103.30
3	D	4559	PHE	O-C-N	-5.77	113.47	122.70
3	B	3351	PRO	N-CA-CB	5.77	110.22	103.30
3	B	4559	PHE	O-C-N	-5.77	113.47	122.70
3	A	3351	PRO	N-CA-CB	5.75	110.20	103.30
3	A	4559	PHE	O-C-N	-5.75	113.49	122.70
3	C	3351	PRO	N-CA-CB	5.75	110.19	103.30
3	D	3351	PRO	N-CA-CB	5.74	110.19	103.30
3	C	4559	PHE	O-C-N	-5.73	113.53	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	4656	LEU	O-C-N	-5.63	113.70	122.70
3	B	4656	LEU	O-C-N	-5.61	113.73	122.70
3	D	4656	LEU	O-C-N	-5.60	113.74	122.70
3	A	4656	LEU	O-C-N	-5.59	113.75	122.70
3	A	4824	ARG	NE-CZ-NH2	5.02	122.81	120.30
3	B	4824	ARG	NE-CZ-NH2	5.02	122.81	120.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	E	804	0	812	12	0
1	F	804	0	812	11	0
1	G	804	0	812	10	0
1	H	804	0	812	10	0
2	I	1042	0	972	25	0
2	J	1042	0	972	26	0
2	K	1042	0	972	25	0
2	L	1042	0	972	25	0
3	A	27995	0	25202	490	0
3	B	27995	0	25202	497	0
3	C	27995	0	25202	501	0
3	D	27995	0	25202	504	0
4	A	38	0	0	0	0
4	B	38	0	0	0	0
4	C	38	0	0	0	0
4	D	38	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	1	0	0	0	0
6	B	1	0	0	0	0
6	C	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	D	1	0	0	0	0
7	A	31	0	12	2	0
7	B	31	0	12	2	0
7	C	31	0	12	2	0
7	D	31	0	12	2	0
8	A	14	0	10	2	0
8	B	14	0	10	2	0
8	C	14	0	10	2	0
8	D	14	0	10	2	0
All	All	119704	0	108032	2081	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 9.

All (2081) 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)
3:A:4802:GLY:HA2	3:A:4808:PHE:HB2	1.52	0.90
3:D:4578:LEU:CD1	3:A:4849:TYR:HE2	1.84	0.90
3:C:4802:GLY:HA2	3:C:4808:PHE:HB2	1.52	0.90
3:D:4802:GLY:HA2	3:D:4808:PHE:HB2	1.52	0.89
3:B:4802:GLY:HA2	3:B:4808:PHE:HB2	1.52	0.89
3:C:4577:LEU:HD21	3:C:4807:PHE:HE1	1.43	0.82
3:D:4577:LEU:HD21	3:D:4807:PHE:HE1	1.43	0.82
3:A:4577:LEU:HD21	3:A:4807:PHE:HE1	1.43	0.82
3:B:4577:LEU:HD21	3:B:4807:PHE:HE1	1.43	0.82
3:C:4874:MET:HA	3:C:4874:MET:HE3	1.62	0.81
3:A:4554:TYR:O	3:A:4558:ASN:ND2	2.14	0.80
3:D:4554:TYR:O	3:D:4558:ASN:ND2	2.14	0.80
3:C:4554:TYR:O	3:C:4558:ASN:ND2	2.14	0.79
3:B:4554:TYR:O	3:B:4558:ASN:ND2	2.14	0.79
3:D:4578:LEU:HD13	3:A:4849:TYR:HE2	1.46	0.78
3:D:4786:ASP:O	3:D:4790:LEU:HD23	1.84	0.78
3:B:4786:ASP:O	3:B:4790:LEU:HD23	1.84	0.78
3:C:4786:ASP:O	3:C:4790:LEU:HD23	1.84	0.77
3:C:4577:LEU:HD21	3:C:4807:PHE:CE1	2.19	0.77
3:A:4786:ASP:O	3:A:4790:LEU:HD23	1.84	0.77
3:B:4577:LEU:HD21	3:B:4807:PHE:CE1	2.19	0.77
3:D:4577:LEU:HD21	3:D:4807:PHE:CE1	2.19	0.76
3:A:4577:LEU:HD21	3:A:4807:PHE:CE1	2.19	0.76
3:C:4235:VAL:HG21	3:C:5019:TRP:CH2	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4235:VAL:HG21	3:D:5019:TRP:CH2	2.22	0.75
3:A:4992:LEU:O	3:A:4996:ILE:HG13	1.88	0.74
3:B:4992:LEU:O	3:B:4996:ILE:HG13	1.88	0.74
3:C:4992:LEU:O	3:C:4996:ILE:HG13	1.88	0.74
3:B:4235:VAL:HG21	3:B:5019:TRP:CH2	2.22	0.74
3:D:4992:LEU:O	3:D:4996:ILE:HG13	1.88	0.74
3:A:4235:VAL:HG21	3:A:5019:TRP:CH2	2.22	0.74
3:B:4874:MET:HA	3:B:4874:MET:HE3	1.68	0.74
3:D:4927:ILE:HD12	3:C:4936:ILE:HG13	1.72	0.72
3:D:4927:ILE:HG23	3:C:4936:ILE:HG21	1.69	0.72
3:D:4874:MET:HA	3:D:4874:MET:HE3	1.71	0.71
3:A:4874:MET:HA	3:A:4874:MET:HE3	1.72	0.71
3:C:4636:THR:HG22	3:C:4637:GLY:H	1.56	0.71
3:A:4783:ILE:HG13	3:A:4784:PHE:HD1	1.56	0.70
3:B:4783:ILE:HG13	3:B:4784:PHE:HD1	1.56	0.70
3:D:4822:THR:HG21	3:A:4836:GLN:CB	2.21	0.70
3:A:4585:SER:O	3:A:4587:PRO:HD3	1.91	0.70
3:A:4636:THR:HG22	3:A:4637:GLY:H	1.56	0.70
3:C:4585:SER:O	3:C:4587:PRO:HD3	1.91	0.70
3:D:4927:ILE:CD1	3:C:4936:ILE:HG13	2.22	0.70
3:B:4585:SER:O	3:B:4587:PRO:HD3	1.91	0.70
3:D:4585:SER:O	3:D:4587:PRO:HD3	1.91	0.69
3:B:4636:THR:HG22	3:B:4637:GLY:H	1.56	0.69
3:A:4721:LYS:C	3:A:4743:MET:HE3	2.13	0.69
3:D:4569:LEU:HD21	3:D:4649:LEU:HB3	1.74	0.69
3:C:4783:ILE:HG13	3:C:4784:PHE:HD1	1.56	0.69
3:D:4578:LEU:CD1	3:A:4849:TYR:CE2	2.73	0.69
3:A:4181:ILE:HD11	3:A:4988:TYR:CG	2.28	0.69
3:A:4569:LEU:HD21	3:A:4649:LEU:HB3	1.74	0.69
3:D:4783:ILE:HG13	3:D:4784:PHE:HD1	1.56	0.69
3:B:4181:ILE:HD11	3:B:4988:TYR:CG	2.28	0.69
3:C:4181:ILE:HD11	3:C:4988:TYR:CG	2.28	0.69
3:C:4223:ASN:HD21	3:C:4946:GLN:HB3	1.58	0.68
3:B:4223:ASN:HD21	3:B:4946:GLN:HB3	1.59	0.68
3:C:4569:LEU:HD21	3:C:4649:LEU:HB3	1.74	0.68
3:A:4752:ALA:O	3:A:4756:ARG:N	2.26	0.68
3:B:4569:LEU:HD21	3:B:4649:LEU:HB3	1.74	0.68
3:D:4181:ILE:HD11	3:D:4988:TYR:CG	2.28	0.68
3:D:4223:ASN:HD21	3:D:4946:GLN:HB3	1.59	0.68
3:D:4636:THR:HG22	3:D:4637:GLY:H	1.56	0.68
3:A:4223:ASN:HD21	3:A:4946:GLN:HB3	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4577:LEU:C	3:A:4579:PHE:H	1.97	0.68
3:C:4577:LEU:C	3:C:4579:PHE:H	1.97	0.68
3:D:4577:LEU:C	3:D:4579:PHE:H	1.97	0.68
3:C:4721:LYS:C	3:C:4743:MET:HE3	2.15	0.67
3:C:4752:ALA:O	3:C:4756:ARG:N	2.26	0.67
3:D:4708:THR:HG21	3:D:4775:TYR:HB2	1.76	0.67
3:D:4926:VAL:O	3:C:4933:GLN:HG3	1.94	0.67
3:D:4752:ALA:O	3:D:4756:ARG:N	2.26	0.67
3:C:4708:THR:HG21	3:C:4775:TYR:HB2	1.76	0.67
3:A:4708:THR:HG21	3:A:4775:TYR:HB2	1.76	0.66
3:D:4721:LYS:C	3:D:4743:MET:HE3	2.16	0.66
3:B:4577:LEU:C	3:B:4579:PHE:H	1.97	0.66
3:B:4708:THR:HG21	3:B:4775:TYR:HB2	1.76	0.66
3:C:4958:CYS:O	7:C:5104:ATP:N6	2.29	0.66
3:B:393:CYS:SG	3:B:394:GLN:N	2.68	0.66
1:G:82:TYR:HB3	1:G:86:GLY:HA2	1.78	0.66
3:A:4578:LEU:CD1	3:B:4849:TYR:HE2	2.09	0.66
3:A:4958:CYS:O	7:A:5104:ATP:N6	2.29	0.65
3:B:4958:CYS:O	7:B:5104:ATP:N6	2.29	0.65
3:D:4958:CYS:O	7:D:5104:ATP:N6	2.29	0.65
1:F:82:TYR:HB3	1:F:86:GLY:HA2	1.78	0.65
3:B:728:ARG:NH2	3:B:1489:CYS:SG	2.69	0.65
3:C:393:CYS:SG	3:C:394:GLN:N	2.68	0.65
3:C:728:ARG:NH2	3:C:1489:CYS:SG	2.69	0.65
3:A:4994:TYR:OH	3:A:4998:LYS:NZ	2.24	0.65
3:A:728:ARG:NH2	3:A:1489:CYS:SG	2.69	0.65
3:D:4668:LEU:HD23	3:D:4668:LEU:O	1.97	0.65
3:B:2368:LEU:HD11	3:B:2376:LEU:HD13	1.79	0.65
3:D:4927:ILE:HD12	3:C:4936:ILE:HG21	1.79	0.64
3:D:1292:SER:HB3	3:D:1598:GLN:HE21	1.63	0.64
3:C:4668:LEU:O	3:C:4668:LEU:HD23	1.97	0.64
1:E:82:TYR:HB3	1:E:86:GLY:HA2	1.78	0.64
3:D:728:ARG:NH2	3:D:1489:CYS:SG	2.69	0.64
3:A:2368:LEU:HD11	3:A:2376:LEU:HD13	1.79	0.64
3:B:4578:LEU:CD1	3:C:4849:TYR:HE2	2.10	0.64
3:A:4578:LEU:HD13	3:B:4849:TYR:HE2	1.61	0.64
3:A:4640:GLU:HB2	3:A:4641:PRO:HD3	1.79	0.64
3:B:4721:LYS:C	3:B:4743:MET:HE3	2.18	0.64
3:B:5000:GLU:HA	3:B:5003:HIS:CE1	2.33	0.64
1:H:82:TYR:HB3	1:H:86:GLY:HA2	1.78	0.64
3:D:2368:LEU:HD11	3:D:2376:LEU:HD13	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4578:LEU:HD13	3:C:4849:TYR:HE2	1.62	0.64
3:B:4780:PHE:HA	3:B:4783:ILE:HG12	1.80	0.64
3:A:5000:GLU:HA	3:A:5003:HIS:CE1	2.33	0.64
3:C:2368:LEU:HD11	3:C:2376:LEU:HD13	1.79	0.64
3:B:1292:SER:HB3	3:B:1598:GLN:HE21	1.63	0.63
3:C:1292:SER:HB3	3:C:1598:GLN:HE21	1.63	0.63
3:B:4668:LEU:O	3:B:4668:LEU:HD23	1.97	0.63
3:A:4780:PHE:HA	3:A:4783:ILE:HG12	1.80	0.63
3:B:4691:GLN:OE1	3:B:4692:PRO:HD2	1.99	0.63
3:C:5000:GLU:HA	3:C:5003:HIS:CE1	2.33	0.63
3:A:4668:LEU:HD23	3:A:4668:LEU:O	1.97	0.63
3:A:4691:GLN:OE1	3:A:4692:PRO:HD2	1.99	0.63
3:C:4691:GLN:OE1	3:C:4692:PRO:HD2	1.99	0.63
3:D:393:CYS:SG	3:D:394:GLN:N	2.68	0.63
3:D:4722:ARG:HH22	3:D:4749:GLU:HA	1.64	0.63
3:B:4715:TYR:CE2	3:B:4717:ASP:HB3	2.34	0.63
3:C:4640:GLU:HB2	3:C:4641:PRO:HD3	1.79	0.63
3:D:5000:GLU:HA	3:D:5003:HIS:CE1	2.33	0.63
3:C:4901:ILE:HB	3:C:4913:ARG:NH2	2.14	0.63
3:A:1954:ARG:NH1	3:A:2042:CYS:SG	2.72	0.63
3:B:4640:GLU:HB2	3:B:4641:PRO:HD3	1.79	0.63
3:C:1954:ARG:NH1	3:C:2042:CYS:SG	2.72	0.63
3:A:4675:LYS:HG3	3:A:4715:TYR:CE1	2.34	0.63
3:A:4715:TYR:CE2	3:A:4717:ASP:HB3	2.34	0.63
3:D:1739:THR:HG23	3:D:1742:THR:H	1.64	0.62
3:B:4901:ILE:HB	3:B:4913:ARG:NH2	2.14	0.62
3:D:4640:GLU:HB2	3:D:4641:PRO:HD3	1.79	0.62
3:D:4691:GLN:OE1	3:D:4692:PRO:HD2	1.99	0.62
3:C:4722:ARG:HH22	3:C:4749:GLU:HA	1.64	0.62
3:A:1292:SER:HB3	3:A:1598:GLN:HE21	1.63	0.62
3:B:4675:LYS:HG3	3:B:4715:TYR:CE1	2.34	0.62
3:D:4901:ILE:HB	3:D:4913:ARG:NH2	2.14	0.62
3:D:4675:LYS:HG3	3:D:4715:TYR:CE1	2.34	0.62
3:D:4784:PHE:O	3:D:4790:LEU:HD21	2.00	0.62
3:A:4703:ARG:O	3:A:4704:LEU:HD12	2.00	0.62
3:B:4545:GLU:O	3:B:4549:VAL:HG23	2.00	0.62
3:B:4722:ARG:HH22	3:B:4749:GLU:HA	1.64	0.62
3:D:4715:TYR:CE2	3:D:4717:ASP:HB3	2.34	0.62
3:A:4722:ARG:HH22	3:A:4749:GLU:HA	1.64	0.62
3:B:4850:LEU:O	3:B:4853:VAL:HG12	2.00	0.62
3:A:1739:THR:HG23	3:A:1742:THR:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4703:ARG:O	3:C:4704:LEU:HD12	2.00	0.62
3:D:4703:ARG:O	3:D:4704:LEU:HD12	2.00	0.62
3:D:4780:PHE:HA	3:D:4783:ILE:HG12	1.80	0.62
3:D:4874:MET:HA	3:D:4874:MET:CE	2.30	0.62
3:A:4874:MET:HA	3:A:4874:MET:CE	2.30	0.62
3:C:4715:TYR:CE2	3:C:4717:ASP:HB3	2.34	0.62
3:D:1954:ARG:NH1	3:D:2042:CYS:SG	2.72	0.62
3:A:4545:GLU:O	3:A:4549:VAL:HG23	2.00	0.62
3:B:1954:ARG:NH1	3:B:2042:CYS:SG	2.72	0.62
3:D:4689:THR:HG22	3:D:4732:PHE:CE1	2.35	0.62
3:A:4689:THR:HG22	3:A:4732:PHE:CE1	2.35	0.62
3:A:4850:LEU:O	3:A:4853:VAL:HG12	2.00	0.62
3:B:4874:MET:HA	3:B:4874:MET:CE	2.30	0.62
3:C:4675:LYS:HG3	3:C:4715:TYR:CE1	2.34	0.62
3:C:4784:PHE:O	3:C:4790:LEU:HD21	2.00	0.62
3:C:4850:LEU:O	3:C:4853:VAL:HG12	2.00	0.62
3:B:4784:PHE:O	3:B:4790:LEU:HD21	2.00	0.61
3:C:4780:PHE:HA	3:C:4783:ILE:HG12	1.80	0.61
3:C:1739:THR:HG23	3:C:1742:THR:H	1.64	0.61
3:C:4874:MET:HA	3:C:4874:MET:CE	2.30	0.61
3:D:2452:ARG:HH11	3:A:175:SER:HA	1.65	0.61
3:A:4981:GLU:OE1	3:A:4981:GLU:HA	2.00	0.61
3:A:4901:ILE:HB	3:A:4913:ARG:NH2	2.14	0.61
3:B:1739:THR:HG23	3:B:1742:THR:H	1.64	0.61
3:B:4703:ARG:O	3:B:4704:LEU:HD12	2.00	0.61
3:C:4545:GLU:O	3:C:4549:VAL:HG23	2.00	0.61
3:C:4876:CYS:HA	3:C:4882:CYS:HB2	1.83	0.61
3:D:4545:GLU:O	3:D:4549:VAL:HG23	2.00	0.61
3:D:4850:LEU:O	3:D:4853:VAL:HG12	2.00	0.61
3:A:4865:LYS:HB3	3:A:4875:LYS:HE2	1.83	0.61
3:B:4901:ILE:HG22	3:B:4902:GLU:H	1.66	0.61
3:C:4689:THR:HG22	3:C:4732:PHE:CE1	2.35	0.61
3:D:1192:CYS:SG	3:D:1193:SER:N	2.74	0.61
3:B:1192:CYS:SG	3:B:1193:SER:N	2.74	0.61
3:B:4752:ALA:O	3:B:4756:ARG:N	2.26	0.61
3:D:4556:SER:OG	3:D:4663:CYS:SG	2.59	0.61
3:D:4981:GLU:OE1	3:D:4981:GLU:HA	2.00	0.61
3:A:1192:CYS:SG	3:A:1193:SER:N	2.74	0.61
3:A:4784:PHE:O	3:A:4790:LEU:HD21	2.00	0.61
3:D:4876:CYS:HA	3:D:4882:CYS:HB2	1.83	0.61
3:C:1192:CYS:SG	3:C:1193:SER:N	2.74	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4994:TYR:OH	3:C:4998:LYS:NZ	2.24	0.61
3:B:4865:LYS:HB3	3:B:4875:LYS:HE2	1.83	0.60
3:B:4981:GLU:OE1	3:B:4981:GLU:HA	2.00	0.60
3:C:4192:ARG:HD3	3:C:5028:PHE:CE2	2.37	0.60
3:A:898:ASP:H	3:A:903:LEU:HB2	1.67	0.60
3:B:4689:THR:HG22	3:B:4732:PHE:CE1	2.35	0.60
3:C:3904:ARG:HB3	3:C:3916:ILE:HD12	1.83	0.60
3:C:4981:GLU:OE1	3:C:4981:GLU:HA	2.00	0.60
3:A:4655:PHE:HD2	3:A:4656:LEU:HD12	1.67	0.60
3:A:4779:LYS:O	3:A:4782:VAL:HG12	2.01	0.60
3:A:4799:SER:HA	3:A:4812:HIS:NE2	2.16	0.60
3:A:4901:ILE:HG22	3:A:4902:GLU:H	1.66	0.60
3:B:4556:SER:OG	3:B:4663:CYS:SG	2.59	0.60
3:D:4192:ARG:HD3	3:D:5028:PHE:CE2	2.37	0.60
3:A:4556:SER:OG	3:A:4663:CYS:SG	2.59	0.60
3:C:4556:SER:OG	3:C:4663:CYS:SG	2.59	0.60
3:C:4865:LYS:HB3	3:C:4875:LYS:HE2	1.83	0.60
3:B:4655:PHE:HD2	3:B:4656:LEU:HD12	1.67	0.60
3:D:4901:ILE:HG22	3:D:4902:GLU:H	1.66	0.60
3:B:1619:ARG:HA	3:B:1626:TRP:HA	1.84	0.60
3:A:733:PRO:HD3	3:A:765:GLN:HE22	1.67	0.60
3:A:3904:ARG:HB3	3:A:3916:ILE:HD12	1.83	0.60
3:A:4568:PHE:O	3:A:4569:LEU:C	2.40	0.60
3:A:4655:PHE:HB2	3:A:4796:MET:HE1	1.83	0.60
3:C:4887:MET:HG3	3:C:4887:MET:O	2.02	0.60
3:D:24:CYS:SG	3:D:25:SER:N	2.75	0.60
3:D:4865:LYS:HB3	3:D:4875:LYS:HE2	1.83	0.60
3:A:4192:ARG:HD3	3:A:5028:PHE:CE2	2.37	0.60
3:B:4568:PHE:O	3:B:4569:LEU:C	2.40	0.60
3:B:4799:SER:HA	3:B:4812:HIS:NE2	2.16	0.60
3:C:24:CYS:SG	3:C:25:SER:N	2.75	0.60
3:C:898:ASP:H	3:C:903:LEU:HB2	1.66	0.59
3:D:4994:TYR:OH	3:D:4998:LYS:NZ	2.24	0.59
3:A:4823:LEU:HA	3:A:4826:ILE:HD12	1.85	0.59
3:B:4192:ARG:HD3	3:B:5028:PHE:CE2	2.37	0.59
3:B:4573:ILE:HD11	3:B:4647:SER:N	2.17	0.59
3:B:4786:ASP:OD1	3:B:4787:ASN:N	2.35	0.59
3:C:4655:PHE:HB2	3:C:4796:MET:HE1	1.84	0.59
3:C:4799:SER:HA	3:C:4812:HIS:NE2	2.16	0.59
2:J:87:ARG:NH1	2:J:87:ARG:O	2.36	0.59
3:D:898:ASP:H	3:D:903:LEU:HB2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4779:LYS:O	3:D:4782:VAL:HG12	2.01	0.59
3:A:24:CYS:SG	3:A:25:SER:N	2.75	0.59
3:A:393:CYS:SG	3:A:394:GLN:N	2.68	0.59
3:A:4573:ILE:HD11	3:A:4647:SER:N	2.17	0.59
3:B:4772:ASP:O	3:B:4776:GLN:HG2	2.03	0.59
3:B:4876:CYS:HA	3:B:4882:CYS:HB2	1.83	0.59
3:D:4655:PHE:HB2	3:D:4796:MET:HE1	1.84	0.59
3:D:4786:ASP:OD1	3:D:4787:ASN:N	2.35	0.59
3:B:4823:LEU:HA	3:B:4826:ILE:HD12	1.85	0.59
3:B:4887:MET:HG3	3:B:4887:MET:O	2.02	0.59
3:C:4901:ILE:HG22	3:C:4902:GLU:H	1.66	0.59
3:A:2437:ALA:O	3:A:2508:ARG:NH2	2.36	0.59
3:B:3904:ARG:HB3	3:B:3916:ILE:HD12	1.83	0.59
3:A:4772:ASP:O	3:A:4776:GLN:HG2	2.03	0.59
3:B:898:ASP:H	3:B:903:LEU:HB2	1.66	0.59
3:B:4779:LYS:O	3:B:4782:VAL:HG12	2.01	0.59
2:I:87:ARG:NH1	2:I:87:ARG:O	2.36	0.59
3:D:733:PRO:HD3	3:D:765:GLN:HE22	1.67	0.59
3:D:4655:PHE:HD2	3:D:4656:LEU:HD12	1.67	0.59
3:D:4799:SER:HA	3:D:4812:HIS:NE2	2.16	0.59
3:A:4786:ASP:OD1	3:A:4787:ASN:N	2.35	0.59
3:A:4876:CYS:HA	3:A:4882:CYS:HB2	1.83	0.59
3:A:4887:MET:O	3:A:4887:MET:HG3	2.02	0.59
3:C:733:PRO:HD3	3:C:765:GLN:HE22	1.67	0.59
3:C:4655:PHE:HD2	3:C:4656:LEU:HD12	1.67	0.59
3:C:4772:ASP:O	3:C:4776:GLN:HG2	2.03	0.59
3:D:4823:LEU:HA	3:D:4826:ILE:HD12	1.85	0.59
3:B:733:PRO:HD3	3:B:765:GLN:HE22	1.67	0.59
3:C:4573:ILE:HD11	3:C:4647:SER:N	2.17	0.59
3:D:3904:ARG:HB3	3:D:3916:ILE:HD12	1.83	0.59
3:D:4568:PHE:O	3:D:4569:LEU:C	2.40	0.59
3:A:1619:ARG:HA	3:A:1626:TRP:HA	1.84	0.59
3:D:4573:ILE:HD11	3:D:4647:SER:N	2.17	0.59
3:C:2437:ALA:O	3:C:2508:ARG:NH2	2.36	0.59
3:C:4786:ASP:OD1	3:C:4787:ASN:N	2.35	0.59
3:B:24:CYS:SG	3:B:25:SER:N	2.75	0.58
3:B:4953:ASP:OD1	3:B:4954:MET:N	2.36	0.58
3:B:4994:TYR:OH	3:B:4998:LYS:NZ	2.24	0.58
3:C:4676:GLU:OE1	3:C:4680:LYS:HE3	2.03	0.58
3:C:4779:LYS:O	3:C:4782:VAL:HG12	2.01	0.58
3:C:4823:LEU:HA	3:C:4826:ILE:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4565:LEU:HD22	3:D:4653:VAL:HG11	1.85	0.58
3:A:4565:LEU:HD22	3:A:4653:VAL:HG11	1.86	0.58
3:B:4676:GLU:OE1	3:B:4680:LYS:HE3	2.04	0.58
3:C:4046:ASP:HA	3:C:4049:VAL:HG22	1.85	0.58
2:K:87:ARG:NH1	2:K:87:ARG:O	2.36	0.58
3:D:2437:ALA:O	3:D:2508:ARG:NH2	2.36	0.58
3:D:4772:ASP:O	3:D:4776:GLN:HG2	2.02	0.58
3:D:4887:MET:HG3	3:D:4887:MET:O	2.02	0.58
3:A:4898:GLY:HA3	3:A:4917:ASP:OD2	2.03	0.58
3:B:4046:ASP:HA	3:B:4049:VAL:HG22	1.85	0.58
3:C:1619:ARG:HA	3:C:1626:TRP:HA	1.84	0.58
3:C:4568:PHE:O	3:C:4569:LEU:C	2.40	0.58
3:C:4898:GLY:HA3	3:C:4917:ASP:OD2	2.03	0.58
3:D:4577:LEU:C	3:D:4579:PHE:N	2.57	0.58
3:A:2271:THR:HG23	3:A:2274:ASP:H	1.69	0.58
3:A:4676:GLU:OE1	3:A:4680:LYS:HE3	2.03	0.58
3:A:4953:ASP:OD1	3:A:4954:MET:N	2.36	0.58
2:J:50:GLN:O	2:J:54:ASN:ND2	2.36	0.58
3:D:4676:GLU:OE1	3:D:4680:LYS:HE3	2.03	0.58
3:D:4953:ASP:OD1	3:D:4954:MET:N	2.36	0.58
3:B:2437:ALA:O	3:B:2508:ARG:NH2	2.36	0.58
3:C:4565:LEU:HD22	3:C:4653:VAL:HG11	1.85	0.58
3:C:4953:ASP:OD1	3:C:4954:MET:N	2.36	0.58
2:K:50:GLN:O	2:K:54:ASN:ND2	2.36	0.58
3:D:4780:PHE:HD1	3:D:4783:ILE:HD11	1.68	0.58
3:A:4780:PHE:HD1	3:A:4783:ILE:HD11	1.68	0.58
3:B:4565:LEU:HD22	3:B:4653:VAL:HG11	1.85	0.58
3:B:4577:LEU:C	3:B:4579:PHE:N	2.57	0.58
3:A:315:CYS:SG	3:A:316:PHE:N	2.77	0.58
3:B:4681:LEU:HD21	3:B:4724:VAL:HG21	1.86	0.58
3:D:4687:TYR:HE2	3:D:4703:ARG:HB2	1.69	0.57
3:A:4577:LEU:C	3:A:4579:PHE:N	2.57	0.57
3:C:289:ARG:NH1	3:C:303:ASP:OD1	2.37	0.57
3:D:289:ARG:NH1	3:D:303:ASP:OD1	2.37	0.57
3:D:315:CYS:SG	3:D:316:PHE:N	2.77	0.57
3:D:1619:ARG:HA	3:D:1626:TRP:HA	1.84	0.57
3:B:2271:THR:HG23	3:B:2274:ASP:H	1.69	0.57
3:C:4681:LEU:HD21	3:C:4724:VAL:HG21	1.86	0.57
2:L:50:GLN:O	2:L:54:ASN:ND2	2.36	0.57
3:D:4046:ASP:HA	3:D:4049:VAL:HG22	1.85	0.57
3:D:4898:GLY:HA3	3:D:4917:ASP:OD2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4822:THR:HG21	3:C:4836:GLN:CB	2.34	0.57
3:B:4898:GLY:HA3	3:B:4917:ASP:OD2	2.03	0.57
3:C:315:CYS:SG	3:C:316:PHE:N	2.77	0.57
3:C:4577:LEU:C	3:C:4579:PHE:N	2.57	0.57
3:C:4780:PHE:HD1	3:C:4783:ILE:HD11	1.68	0.57
3:B:315:CYS:SG	3:B:316:PHE:N	2.77	0.57
3:D:1012:ASP:H	3:D:1017:ARG:HB2	1.69	0.57
3:A:4794:TRP:HA	3:A:4797:VAL:HG12	1.86	0.57
3:B:4687:TYR:HE2	3:B:4703:ARG:HB2	1.69	0.57
3:B:4780:PHE:HD1	3:B:4783:ILE:HD11	1.69	0.57
3:C:2271:THR:HG23	3:C:2274:ASP:H	1.69	0.57
2:L:87:ARG:NH1	2:L:87:ARG:O	2.36	0.57
2:L:91:ARG:NH1	2:L:91:ARG:O	2.37	0.57
2:K:142:PHE:HA	2:K:145:MET:HG2	1.86	0.57
2:I:50:GLN:O	2:I:54:ASN:ND2	2.36	0.57
3:D:818:ARG:NH2	3:D:1027:LEU:O	2.38	0.57
3:A:4046:ASP:HA	3:A:4049:VAL:HG22	1.85	0.57
3:A:4866:SER:HB3	3:A:4873:ASP:OD2	2.05	0.57
3:C:818:ARG:NH2	3:C:1027:LEU:O	2.38	0.57
3:D:546:TRP:O	3:D:550:LYS:NZ	2.37	0.57
3:D:1023:PRO:HG2	3:D:1026:LEU:HD13	1.87	0.57
3:A:4822:THR:HG21	3:B:4836:GLN:CB	2.34	0.57
2:K:103:ALA:O	2:K:107:ARG:NH1	2.38	0.57
2:J:103:ALA:O	2:J:107:ARG:NH1	2.38	0.57
3:D:4902:GLU:OE1	3:D:4902:GLU:N	2.36	0.57
2:I:91:ARG:NH1	2:I:91:ARG:O	2.37	0.57
3:D:4866:SER:HB3	3:D:4873:ASP:OD2	2.05	0.57
3:B:818:ARG:NH2	3:B:1027:LEU:O	2.38	0.57
3:B:4866:SER:HB3	3:B:4873:ASP:OD2	2.05	0.57
3:C:4687:TYR:HE2	3:C:4703:ARG:HB2	1.69	0.57
2:J:142:PHE:HA	2:J:145:MET:HG2	1.86	0.57
3:A:818:ARG:NH2	3:A:1027:LEU:O	2.38	0.57
3:A:4878:ASP:O	3:A:4881:THR:N	2.35	0.57
3:B:1012:ASP:H	3:B:1017:ARG:HB2	1.70	0.57
3:C:4866:SER:HB3	3:C:4873:ASP:OD2	2.05	0.57
3:C:4902:GLU:N	3:C:4902:GLU:OE1	2.36	0.57
2:J:91:ARG:NH1	2:J:91:ARG:O	2.37	0.56
2:I:142:PHE:HA	2:I:145:MET:HG2	1.86	0.56
3:D:1632:ASP:OD1	3:D:1632:ASP:N	2.38	0.56
3:C:4915:VAL:O	3:C:4919:THR:HG22	2.05	0.56
1:G:21:THR:HG22	1:G:49:ARG:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:831:ARG:HH21	3:D:840:VAL:HG11	1.70	0.56
3:A:1023:PRO:HG2	3:A:1026:LEU:HD13	1.87	0.56
3:B:4579:PHE:HB2	3:B:4631:PHE:CE1	2.41	0.56
3:C:831:ARG:HH21	3:C:840:VAL:HG11	1.70	0.56
3:C:1023:PRO:HG2	3:C:1026:LEU:HD13	1.87	0.56
3:C:1128:ARG:HH21	3:C:1130:GLN:HE21	1.53	0.56
2:L:103:ALA:O	2:L:107:ARG:NH1	2.38	0.56
2:K:91:ARG:NH1	2:K:91:ARG:O	2.37	0.56
1:E:15:PHE:O	1:E:17:LYS:NZ	2.39	0.56
1:E:21:THR:HG22	1:E:49:ARG:HG2	1.88	0.56
3:D:669:ASP:N	3:D:669:ASP:OD1	2.38	0.56
3:D:2271:THR:HG23	3:D:2274:ASP:H	1.69	0.56
3:A:831:ARG:HH21	3:A:840:VAL:HG11	1.70	0.56
3:A:2270:SER:OG	3:A:2271:THR:N	2.38	0.56
3:A:4579:PHE:HB2	3:A:4631:PHE:CE1	2.41	0.56
3:B:289:ARG:NH1	3:B:303:ASP:OD1	2.37	0.56
3:B:4655:PHE:HB2	3:B:4796:MET:HE1	1.87	0.56
3:C:1632:ASP:N	3:C:1632:ASP:OD1	2.38	0.56
3:C:4675:LYS:HG3	3:C:4715:TYR:HE1	1.71	0.56
2:L:142:PHE:HA	2:L:145:MET:HG2	1.86	0.56
3:A:18:ASP:OD1	3:A:18:ASP:N	2.39	0.56
3:A:1012:ASP:H	3:A:1017:ARG:HB2	1.70	0.56
3:A:4687:TYR:HE2	3:A:4703:ARG:HB2	1.69	0.56
3:A:4885:PHE:CE1	3:A:4889:VAL:HG21	2.41	0.56
3:B:712:TYR:OH	3:B:1459:GLN:NE2	2.39	0.56
3:B:831:ARG:HH21	3:B:840:VAL:HG11	1.70	0.56
3:B:4885:PHE:CE1	3:B:4889:VAL:HG21	2.41	0.56
3:B:4949:GLN:OE1	3:B:4949:GLN:HA	2.06	0.56
3:C:2270:SER:OG	3:C:2271:THR:N	2.38	0.56
1:F:15:PHE:O	1:F:17:LYS:NZ	2.39	0.56
2:I:103:ALA:O	2:I:107:ARG:NH1	2.38	0.56
3:D:4915:VAL:O	3:D:4919:THR:HG22	2.05	0.56
3:A:1632:ASP:OD1	3:A:1632:ASP:N	2.38	0.56
3:C:4794:TRP:HA	3:C:4797:VAL:HG12	1.86	0.56
3:C:4885:PHE:CE1	3:C:4889:VAL:HG21	2.41	0.56
1:H:21:THR:HG22	1:H:49:ARG:HG2	1.88	0.56
1:F:21:THR:HG22	1:F:49:ARG:HG2	1.88	0.56
3:D:2516:ASP:OD1	3:D:2516:ASP:N	2.39	0.56
3:D:4885:PHE:CE1	3:D:4889:VAL:HG21	2.41	0.56
3:D:4949:GLN:OE1	3:D:4949:GLN:HA	2.06	0.56
3:B:4794:TRP:HA	3:B:4797:VAL:HG12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2270:SER:OG	3:D:2271:THR:N	2.38	0.56
3:A:669:ASP:N	3:A:669:ASP:OD1	2.38	0.56
3:C:4949:GLN:OE1	3:C:4949:GLN:HA	2.06	0.56
1:G:15:PHE:O	1:G:17:LYS:NZ	2.39	0.56
3:D:712:TYR:OH	3:D:1459:GLN:NE2	2.39	0.56
3:D:2358:ILE:HD12	3:A:195:PHE:HE1	1.71	0.56
3:A:289:ARG:NH1	3:A:303:ASP:OD1	2.37	0.56
3:A:4666:VAL:HB	3:A:4667:PRO:HD3	1.88	0.56
3:C:1012:ASP:H	3:C:1017:ARG:HB2	1.70	0.56
3:D:4579:PHE:HB2	3:D:4631:PHE:CE1	2.41	0.56
3:A:2208:MET:SD	3:A:2253:HIS:ND1	2.79	0.56
3:B:4663:CYS:O	3:B:4664:LEU:HD23	2.06	0.56
3:C:3843:ASP:OD2	3:C:3846:ALA:N	2.35	0.56
3:A:4681:LEU:HD21	3:A:4724:VAL:HG21	1.86	0.56
3:B:1023:PRO:HG2	3:B:1026:LEU:HD13	1.87	0.56
3:B:1128:ARG:HH21	3:B:1130:GLN:HE21	1.53	0.56
3:B:4878:ASP:O	3:B:4881:THR:N	2.35	0.56
3:C:2288:LEU:O	3:C:3849:ARG:NH1	2.39	0.56
3:A:4688:ILE:HG13	3:A:4689:THR:HG23	1.88	0.55
3:B:2516:ASP:N	3:B:2516:ASP:OD1	2.39	0.55
3:C:669:ASP:OD1	3:C:669:ASP:N	2.38	0.55
3:C:712:TYR:OH	3:C:1459:GLN:NE2	2.39	0.55
3:C:2516:ASP:OD1	3:C:2516:ASP:N	2.39	0.55
3:D:35:LEU:HD12	3:D:182:LEU:HD11	1.88	0.55
3:D:4675:LYS:HG3	3:D:4715:TYR:HE1	1.71	0.55
3:A:35:LEU:HD12	3:A:182:LEU:HD11	1.88	0.55
3:B:2288:LEU:O	3:B:3849:ARG:NH1	2.39	0.55
3:B:4902:GLU:OE1	3:B:4902:GLU:N	2.36	0.55
3:C:2208:MET:SD	3:C:2253:HIS:ND1	2.79	0.55
3:D:18:ASP:OD1	3:D:18:ASP:N	2.39	0.55
3:D:1456:ASP:OD1	3:D:1456:ASP:N	2.39	0.55
3:D:4681:LEU:HD21	3:D:4724:VAL:HG21	1.86	0.55
3:D:4914:VAL:HG11	3:C:4884:LEU:HD11	1.89	0.55
3:A:4663:CYS:O	3:A:4664:LEU:HD23	2.06	0.55
3:B:4915:VAL:O	3:B:4919:THR:HG22	2.05	0.55
3:C:4579:PHE:HB2	3:C:4631:PHE:CE1	2.41	0.55
1:H:15:PHE:O	1:H:17:LYS:NZ	2.39	0.55
2:I:113:LEU:HD12	2:I:115:GLU:H	1.72	0.55
3:D:221:ARG:NH2	3:D:397:GLU:OE2	2.40	0.55
3:D:4794:TRP:HA	3:D:4797:VAL:HG12	1.87	0.55
3:A:712:TYR:OH	3:A:1459:GLN:NE2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2288:LEU:O	3:A:3849:ARG:NH1	2.39	0.55
3:B:670:GLU:HB3	3:B:788:LYS:HB3	1.88	0.55
3:B:4577:LEU:O	3:B:4579:PHE:N	2.40	0.55
3:C:3946:GLN:HA	3:C:3949:ARG:HE	1.71	0.55
3:C:4577:LEU:O	3:C:4579:PHE:N	2.40	0.55
3:D:1128:ARG:HH21	3:D:1130:GLN:HE21	1.53	0.55
3:D:2288:LEU:O	3:D:3849:ARG:NH1	2.39	0.55
3:D:3843:ASP:OD2	3:D:3846:ALA:N	2.35	0.55
3:D:4865:LYS:O	3:D:4865:LYS:HG3	2.07	0.55
3:A:221:ARG:NH2	3:A:397:GLU:OE2	2.40	0.55
3:B:1232:ARG:NH1	3:B:1828:ASP:O	2.40	0.55
3:B:1857:GLU:HA	3:B:1860:LYS:HD3	1.89	0.55
3:B:3843:ASP:OD2	3:B:3846:ALA:N	2.35	0.55
3:B:3946:GLN:HA	3:B:3949:ARG:HE	1.71	0.55
3:B:4666:VAL:HB	3:B:4667:PRO:HD3	1.88	0.55
3:D:4798:MET:C	3:D:4812:HIS:HE1	2.10	0.55
3:A:4577:LEU:O	3:A:4579:PHE:N	2.40	0.55
3:A:4915:VAL:O	3:A:4919:THR:HG22	2.05	0.55
3:B:2208:MET:SD	3:B:2253:HIS:ND1	2.79	0.55
3:A:1031:THR:O	3:A:1035:ASN:ND2	2.40	0.55
3:A:1232:ARG:NH1	3:A:1828:ASP:O	2.40	0.55
3:A:1857:GLU:HA	3:A:1860:LYS:HD3	1.89	0.55
3:C:731:THR:O	3:C:765:GLN:NE2	2.40	0.55
3:A:818:ARG:NH2	3:A:1025:ARG:O	2.40	0.55
3:C:4663:CYS:O	3:C:4664:LEU:HD23	2.06	0.55
3:C:4978:HIS:HA	3:C:4982:GLU:HG2	1.89	0.55
2:J:113:LEU:HD12	2:J:115:GLU:H	1.71	0.55
3:D:731:THR:O	3:D:765:GLN:NE2	2.40	0.55
3:D:2208:MET:SD	3:D:2253:HIS:ND1	2.79	0.55
3:A:670:GLU:HB3	3:A:788:LYS:HB3	1.88	0.55
3:A:4949:GLN:OE1	3:A:4949:GLN:HA	2.06	0.55
3:B:731:THR:O	3:B:765:GLN:NE2	2.40	0.55
3:B:4688:ILE:HG13	3:B:4689:THR:HG23	1.88	0.55
3:B:4865:LYS:HG3	3:B:4865:LYS:O	2.07	0.55
1:F:41:ASP:OD1	1:F:41:ASP:N	2.39	0.55
3:D:3946:GLN:HA	3:D:3949:ARG:HE	1.71	0.55
3:D:4181:ILE:CD1	3:D:4988:TYR:HA	2.37	0.55
3:A:5014:TYR:OH	8:A:5105:CFF:H141	2.07	0.55
3:B:818:ARG:NH2	3:B:1025:ARG:O	2.40	0.55
3:C:221:ARG:NH2	3:C:397:GLU:OE2	2.40	0.55
3:C:670:GLU:HB3	3:C:788:LYS:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4000:MET:HE1	3:C:4058:ILE:HG13	1.89	0.55
3:C:4798:MET:C	3:C:4812:HIS:HE1	2.10	0.55
3:D:670:GLU:HB3	3:D:788:LYS:HB3	1.88	0.54
3:D:4663:CYS:O	3:D:4664:LEU:HD23	2.06	0.54
3:D:4799:SER:HA	3:D:4812:HIS:CE1	2.43	0.54
3:D:4978:HIS:HA	3:D:4982:GLU:HG2	1.89	0.54
3:A:4675:LYS:HG3	3:A:4715:TYR:HE1	1.71	0.54
3:B:669:ASP:N	3:B:669:ASP:OD1	2.38	0.54
3:C:3676:ASP:HA	3:C:3679:LYS:HG2	1.89	0.54
3:C:4865:LYS:HG3	3:C:4865:LYS:O	2.07	0.54
3:D:4938:ASP:O	3:D:4941:GLY:N	2.40	0.54
3:A:4181:ILE:CD1	3:A:4988:TYR:HA	2.38	0.54
3:B:4655:PHE:CD2	3:B:4656:LEU:HD12	2.42	0.54
3:C:4181:ILE:CD1	3:C:4988:TYR:HA	2.37	0.54
3:C:4711:PHE:HB3	3:C:4712:PRO:HD3	1.90	0.54
3:D:818:ARG:NH2	3:D:1025:ARG:O	2.40	0.54
3:D:4577:LEU:O	3:D:4579:PHE:N	2.40	0.54
3:A:731:THR:O	3:A:765:GLN:NE2	2.40	0.54
3:A:3946:GLN:HA	3:A:3949:ARG:HE	1.71	0.54
3:B:1031:THR:O	3:B:1035:ASN:ND2	2.40	0.54
3:B:4711:PHE:HB3	3:B:4712:PRO:HD3	1.90	0.54
3:B:4798:MET:C	3:B:4812:HIS:HE1	2.10	0.54
3:B:5014:TYR:OH	8:B:5105:CFF:H141	2.08	0.54
3:C:1857:GLU:HA	3:C:1860:LYS:HD3	1.89	0.54
3:C:4666:VAL:HB	3:C:4667:PRO:HD3	1.88	0.54
3:C:4688:ILE:HG13	3:C:4689:THR:HG23	1.88	0.54
1:H:41:ASP:N	1:H:41:ASP:OD1	2.39	0.54
1:E:41:ASP:N	1:E:41:ASP:OD1	2.39	0.54
3:D:4666:VAL:HB	3:D:4667:PRO:HD3	1.88	0.54
3:A:1128:ARG:HH21	3:A:1130:GLN:HE21	1.53	0.54
3:A:4678:ALA:HB1	3:A:4720:VAL:HG21	1.90	0.54
3:B:35:LEU:HD12	3:B:182:LEU:HD11	1.88	0.54
3:A:4000:MET:HE1	3:A:4058:ILE:HG13	1.89	0.54
3:A:4798:MET:C	3:A:4812:HIS:HE1	2.10	0.54
3:C:1291:LEU:HB2	3:C:1550:PRO:HG2	1.90	0.54
3:C:2548:LEU:HD21	3:C:2594:SER:HB2	1.90	0.54
2:L:104:ALA:HA	2:L:107:ARG:HH22	1.73	0.54
2:I:104:ALA:HA	2:I:107:ARG:HH22	1.73	0.54
3:D:1031:THR:O	3:D:1035:ASN:ND2	2.40	0.54
3:A:4655:PHE:CD2	3:A:4656:LEU:HD12	2.42	0.54
3:B:1008:SER:HB3	3:B:1017:ARG:HH11	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4678:ALA:HB1	3:B:4720:VAL:HG21	1.90	0.54
3:D:732:SER:HB3	3:D:735:GLN:HB3	1.89	0.54
3:D:1857:GLU:HA	3:D:1860:LYS:HD3	1.89	0.54
3:D:4688:ILE:HG13	3:D:4689:THR:HG23	1.88	0.54
3:A:4865:LYS:O	3:A:4865:LYS:HG3	2.07	0.54
3:A:4978:HIS:HA	3:A:4982:GLU:HG2	1.89	0.54
3:B:18:ASP:N	3:B:18:ASP:OD1	2.39	0.54
3:B:1632:ASP:OD1	3:B:1632:ASP:N	2.38	0.54
3:B:2548:LEU:HD21	3:B:2594:SER:HB2	1.90	0.54
3:B:3676:ASP:HA	3:B:3679:LYS:HG2	1.89	0.54
3:B:4181:ILE:CD1	3:B:4988:TYR:HA	2.38	0.54
3:B:4675:LYS:HG3	3:B:4715:TYR:HE1	1.71	0.54
3:C:1008:SER:HB3	3:C:1017:ARG:HH11	1.72	0.54
3:C:1031:THR:O	3:C:1035:ASN:ND2	2.40	0.54
3:C:4655:PHE:CD2	3:C:4656:LEU:HD12	2.42	0.54
3:D:1008:SER:HB3	3:D:1017:ARG:HH11	1.72	0.54
3:D:1232:ARG:NH1	3:D:1828:ASP:O	2.40	0.54
3:D:1291:LEU:HB2	3:D:1550:PRO:HG2	1.90	0.54
3:D:3676:ASP:HA	3:D:3679:LYS:HG2	1.89	0.54
3:D:4000:MET:HE1	3:D:4058:ILE:HG13	1.89	0.54
3:D:5014:TYR:OH	8:D:5105:CFF:H141	2.08	0.54
3:A:1008:SER:HB3	3:A:1017:ARG:HH11	1.72	0.54
3:B:4000:MET:HE1	3:B:4058:ILE:HG13	1.89	0.54
3:B:4799:SER:HA	3:B:4812:HIS:CE1	2.43	0.54
3:C:818:ARG:NH2	3:C:1025:ARG:O	2.40	0.54
3:C:5014:TYR:OH	8:C:5105:CFF:H141	2.08	0.54
2:L:113:LEU:HD12	2:L:115:GLU:H	1.71	0.54
3:A:4938:ASP:O	3:A:4941:GLY:N	2.40	0.54
3:B:1676:LEU:HD12	3:B:2167:ILE:HD12	1.90	0.54
3:B:3818:ASP:N	3:B:3818:ASP:OD1	2.41	0.54
3:C:35:LEU:HD12	3:C:182:LEU:HD11	1.88	0.54
3:C:1676:LEU:HD12	3:C:2167:ILE:HD12	1.90	0.54
3:C:4678:ALA:HB1	3:C:4720:VAL:HG21	1.90	0.54
3:C:4799:SER:HA	3:C:4812:HIS:CE1	2.42	0.54
3:D:4678:ALA:HB1	3:D:4720:VAL:HG21	1.90	0.54
3:D:4780:PHE:CD1	3:D:4783:ILE:HD11	2.43	0.54
3:A:546:TRP:O	3:A:550:LYS:NZ	2.38	0.54
3:A:1099:GLU:OE2	3:A:1101:ARG:NH1	2.41	0.54
3:A:2377:LEU:HD22	3:A:2468:GLY:HA3	1.90	0.54
3:C:18:ASP:OD1	3:C:18:ASP:N	2.39	0.54
2:K:113:LEU:HD12	2:K:115:GLU:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4655:PHE:CD2	3:D:4656:LEU:HD12	2.42	0.53
3:A:4799:SER:HA	3:A:4812:HIS:CE1	2.42	0.53
3:B:1099:GLU:OE2	3:B:1101:ARG:NH1	2.41	0.53
3:B:2179:ILE:HD11	3:B:2228:MET:HA	1.90	0.53
3:B:2270:SER:OG	3:B:2271:THR:N	2.38	0.53
3:B:4209:GLN:HE21	3:B:4665:LYS:NZ	2.07	0.53
3:C:1099:GLU:OE2	3:C:1101:ARG:NH1	2.41	0.53
3:C:3818:ASP:N	3:C:3818:ASP:OD1	2.41	0.53
3:A:1291:LEU:HB2	3:A:1550:PRO:HG2	1.90	0.53
3:A:4902:GLU:OE1	3:A:4902:GLU:N	2.36	0.53
3:B:2377:LEU:HD22	3:B:2468:GLY:HA3	1.90	0.53
3:C:4687:TYR:CE2	3:C:4703:ARG:HB2	2.44	0.53
3:D:4181:ILE:HD11	3:D:4988:TYR:HA	1.90	0.53
3:D:4711:PHE:HB3	3:D:4712:PRO:HD3	1.90	0.53
3:A:732:SER:HB3	3:A:735:GLN:HB3	1.89	0.53
3:A:2179:ILE:HD11	3:A:2228:MET:HA	1.90	0.53
3:C:4181:ILE:HD11	3:C:4988:TYR:HA	1.90	0.53
3:C:4780:PHE:CD1	3:C:4783:ILE:HD11	2.43	0.53
3:D:2377:LEU:HD22	3:D:2468:GLY:HA3	1.90	0.53
3:A:1948:ASP:OD1	3:A:2126:ARG:NH2	2.42	0.53
3:A:4556:SER:OG	3:A:4664:LEU:HD21	2.09	0.53
3:B:221:ARG:NH2	3:B:397:GLU:OE2	2.40	0.53
3:B:732:SER:HB3	3:B:735:GLN:HB3	1.89	0.53
3:B:4978:HIS:HA	3:B:4982:GLU:HG2	1.89	0.53
3:C:1232:ARG:NH1	3:C:1828:ASP:O	2.40	0.53
3:C:2148:SER:O	3:C:2152:THR:OG1	2.26	0.53
3:C:4209:GLN:HE21	3:C:4665:LYS:NZ	2.07	0.53
2:K:104:ALA:HA	2:K:107:ARG:HH22	1.73	0.53
2:J:104:ALA:HA	2:J:107:ARG:HH22	1.73	0.53
3:D:1948:ASP:OD1	3:D:2126:ARG:NH2	2.42	0.53
3:D:2548:LEU:HD21	3:D:2594:SER:HB2	1.90	0.53
3:A:4568:PHE:O	3:A:4571:PHE:N	2.42	0.53
3:A:4711:PHE:HB3	3:A:4712:PRO:HD3	1.90	0.53
3:B:1948:ASP:OD1	3:B:2126:ARG:NH2	2.42	0.53
3:B:4780:PHE:CD1	3:B:4783:ILE:HD11	2.43	0.53
3:C:1948:ASP:OD1	3:C:2126:ARG:NH2	2.42	0.53
3:D:1099:GLU:OE2	3:D:1101:ARG:NH1	2.41	0.53
3:D:3818:ASP:OD1	3:D:3818:ASP:N	2.41	0.53
3:A:1299:GLN:OE1	3:A:1545:ASN:ND2	2.42	0.53
3:A:4209:GLN:HE21	3:A:4665:LYS:NZ	2.07	0.53
3:B:1456:ASP:OD1	3:B:1456:ASP:N	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4687:TYR:CE2	3:B:4703:ARG:HB2	2.44	0.53
3:C:2478:THR:O	3:C:2486:VAL:N	2.42	0.53
3:D:1236:THR:OG1	3:D:1608:MET:SD	2.64	0.53
3:D:2478:THR:O	3:D:2486:VAL:N	2.42	0.53
3:D:4209:GLN:HE21	3:D:4665:LYS:NZ	2.07	0.53
3:D:4773:VAL:HG23	3:D:4774:LYS:N	2.24	0.53
3:A:2516:ASP:OD1	3:A:2516:ASP:N	2.39	0.53
3:A:2548:LEU:HD21	3:A:2594:SER:HB2	1.90	0.53
3:B:4568:PHE:O	3:B:4571:PHE:N	2.42	0.53
3:C:4688:ILE:HD11	3:C:4728:HIS:CG	2.44	0.53
3:D:1299:GLN:OE1	3:D:1545:ASN:ND2	2.42	0.53
3:D:2359:ARG:HD3	3:A:179:TYR:OH	2.09	0.53
3:D:4688:ILE:HD11	3:D:4728:HIS:CG	2.44	0.53
3:D:5001:THR:OG1	3:D:5002:GLU:OE2	2.20	0.53
3:A:4812:HIS:O	3:A:4813:LEU:C	2.47	0.53
3:B:4138:ASP:OD1	3:B:4138:ASP:N	2.42	0.53
3:B:4812:HIS:O	3:B:4813:LEU:C	2.47	0.53
3:C:1299:GLN:OE1	3:C:1545:ASN:ND2	2.42	0.53
3:C:3680:ALA:HB3	3:C:3697:PRO:HG2	1.91	0.53
3:D:4556:SER:OG	3:D:4664:LEU:HD21	2.09	0.53
3:D:4636:THR:HG22	3:D:4637:GLY:N	2.23	0.53
3:D:4892:ARG:NH1	3:A:4895:GLY:O	2.42	0.53
3:A:3676:ASP:HA	3:A:3679:LYS:HG2	1.89	0.53
3:A:4138:ASP:OD1	3:A:4138:ASP:N	2.42	0.53
3:A:4780:PHE:CD1	3:A:4783:ILE:HD11	2.43	0.53
3:B:1291:LEU:HB2	3:B:1550:PRO:HG2	1.89	0.53
3:B:4938:ASP:O	3:B:4941:GLY:N	2.40	0.53
3:C:4773:VAL:HG23	3:C:4774:LYS:N	2.24	0.53
1:G:41:ASP:OD1	1:G:41:ASP:N	2.39	0.53
3:A:1456:ASP:OD1	3:A:1456:ASP:N	2.39	0.53
3:B:1087:ARG:HG3	3:B:1223:PHE:HA	1.91	0.53
3:C:546:TRP:O	3:C:550:LYS:NZ	2.37	0.53
3:C:2377:LEU:HD22	3:C:2468:GLY:HA3	1.90	0.53
3:C:4138:ASP:N	3:C:4138:ASP:OD1	2.42	0.53
3:C:4886:HIS:O	3:C:4890:GLY:N	2.42	0.53
3:D:2358:ILE:HD12	3:A:195:PHE:CE1	2.43	0.52
3:D:4687:TYR:CE2	3:D:4703:ARG:HB2	2.44	0.52
3:A:2478:THR:O	3:A:2486:VAL:N	2.42	0.52
3:A:4688:ILE:HD11	3:A:4728:HIS:CG	2.44	0.52
3:B:4181:ILE:HD11	3:B:4988:TYR:HA	1.90	0.52
3:C:732:SER:HB3	3:C:735:GLN:HB3	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2288:LEU:HD21	3:D:3852:LYS:HE2	1.91	0.52
3:D:4568:PHE:O	3:D:4571:PHE:N	2.42	0.52
3:A:1676:LEU:HD12	3:A:2167:ILE:HD12	1.90	0.52
3:A:4773:VAL:HG23	3:A:4774:LYS:N	2.24	0.52
3:B:2503:VAL:HG11	3:B:2557:ALA:HB1	1.92	0.52
3:B:4688:ILE:HD11	3:B:4728:HIS:CG	2.44	0.52
3:D:2179:ILE:HD11	3:D:2228:MET:HA	1.90	0.52
3:A:1087:ARG:HG3	3:A:1223:PHE:HA	1.91	0.52
3:A:3680:ALA:HB3	3:A:3697:PRO:HG2	1.91	0.52
3:A:4731:ILE:HG23	3:A:4732:PHE:HD1	1.75	0.52
3:C:3752:SER:OG	3:C:3753:PHE:N	2.43	0.52
3:D:1676:LEU:HD12	3:D:2167:ILE:HD12	1.90	0.52
3:D:3752:SER:OG	3:D:3753:PHE:N	2.43	0.52
3:A:2288:LEU:HD21	3:A:3852:LYS:HE2	1.91	0.52
3:A:2503:VAL:HG11	3:A:2557:ALA:HB1	1.91	0.52
3:A:4687:TYR:CE2	3:A:4703:ARG:HB2	2.44	0.52
3:B:4556:SER:OG	3:B:4664:LEU:HD21	2.09	0.52
3:D:3717:ASP:OD1	3:D:3717:ASP:N	2.42	0.52
3:A:4181:ILE:HD11	3:A:4988:TYR:HA	1.90	0.52
3:B:663:TYR:HB2	3:B:808:TYR:HB3	1.92	0.52
3:B:1299:GLN:OE1	3:B:1545:ASN:ND2	2.42	0.52
3:C:4556:SER:OG	3:C:4664:LEU:HD21	2.09	0.52
3:C:4878:ASP:O	3:C:4881:THR:N	2.35	0.52
3:D:1008:SER:OG	3:D:1010:VAL:O	2.28	0.52
3:D:2503:VAL:HG11	3:D:2557:ALA:HB1	1.92	0.52
3:A:4636:THR:HG22	3:A:4637:GLY:N	2.23	0.52
3:A:4725:LEU:O	3:A:4729:GLY:N	2.43	0.52
3:B:2478:THR:O	3:B:2486:VAL:N	2.42	0.52
3:B:3752:SER:OG	3:B:3753:PHE:N	2.43	0.52
3:C:2179:ILE:HD11	3:C:2228:MET:HA	1.90	0.52
1:H:83:GLY:O	1:H:94:ASN:ND2	2.43	0.52
2:L:96:ASP:OD2	2:L:98:ASN:ND2	2.43	0.52
3:D:1186:ASP:OD1	3:D:1186:ASP:N	2.42	0.52
3:A:132:ALA:HA	3:A:194:SER:HB2	1.92	0.52
3:A:875:ALA:O	3:A:921:ASN:ND2	2.43	0.52
3:A:1008:SER:OG	3:A:1010:VAL:O	2.28	0.52
3:B:1186:ASP:OD1	3:B:1186:ASP:N	2.42	0.52
3:C:875:ALA:O	3:C:921:ASN:ND2	2.43	0.52
3:C:4568:PHE:O	3:C:4571:PHE:N	2.42	0.52
3:C:4938:ASP:O	3:C:4941:GLY:N	2.40	0.52
2:J:112:ASN:HD22	3:B:1991:THR:HG23	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:875:ALA:O	3:D:921:ASN:ND2	2.43	0.52
3:D:1087:ARG:HG3	3:D:1223:PHE:HA	1.91	0.52
3:A:1629:GLN:OE1	3:A:1631:GLN:NE2	2.43	0.52
3:B:4636:THR:HG22	3:B:4637:GLY:N	2.23	0.52
3:C:1087:ARG:HG3	3:C:1223:PHE:HA	1.91	0.52
3:C:1236:THR:OG1	3:C:1608:MET:SD	2.64	0.52
3:C:1629:GLN:OE1	3:C:1631:GLN:NE2	2.43	0.52
2:K:96:ASP:OD2	2:K:98:ASN:ND2	2.43	0.52
2:I:112:ASN:HD22	3:C:1991:THR:HG23	1.75	0.52
3:D:2023:LEU:O	3:D:2028:ARG:NH2	2.43	0.52
3:A:1186:ASP:OD1	3:A:1186:ASP:N	2.42	0.52
3:A:1596:GLU:OE1	3:A:1598:GLN:NE2	2.43	0.52
3:B:4731:ILE:HG23	3:B:4732:PHE:HD1	1.75	0.52
3:B:4773:VAL:HG23	3:B:4774:LYS:N	2.24	0.52
3:C:1008:SER:OG	3:C:1010:VAL:O	2.28	0.52
3:C:2288:LEU:HD21	3:C:3852:LYS:HE2	1.91	0.52
3:C:2503:VAL:HG11	3:C:2557:ALA:HB1	1.92	0.52
3:C:3977:GLN:NE2	3:C:4030:LEU:O	2.43	0.52
3:D:1629:GLN:OE1	3:D:1631:GLN:NE2	2.43	0.52
3:B:3680:ALA:HB3	3:B:3697:PRO:HG2	1.91	0.52
3:C:2025:GLU:HA	3:C:2028:ARG:HG2	1.92	0.52
3:C:4544:LEU:HA	3:C:4547:GLN:NE2	2.25	0.52
2:I:96:ASP:OD2	2:I:98:ASN:ND2	2.43	0.51
3:D:3680:ALA:HB3	3:D:3697:PRO:HG2	1.91	0.51
3:A:2025:GLU:HA	3:A:2028:ARG:HG2	1.92	0.51
3:B:875:ALA:O	3:B:921:ASN:ND2	2.43	0.51
3:B:1691:GLN:HE21	3:B:1802:ILE:HG13	1.76	0.51
3:C:663:TYR:HB2	3:C:808:TYR:HB3	1.92	0.51
3:C:1596:GLU:OE1	3:C:1598:GLN:NE2	2.43	0.51
3:D:3889:GLN:HG3	3:D:3967:GLU:HG3	1.92	0.51
3:A:3717:ASP:OD1	3:A:3717:ASP:N	2.42	0.51
3:A:3843:ASP:OD2	3:A:3846:ALA:N	2.35	0.51
3:A:3977:GLN:NE2	3:A:4030:LEU:O	2.43	0.51
3:A:4544:LEU:HA	3:A:4547:GLN:NE2	2.25	0.51
3:B:132:ALA:HA	3:B:194:SER:HB2	1.92	0.51
3:B:3977:GLN:NE2	3:B:4030:LEU:O	2.43	0.51
3:B:4725:LEU:O	3:B:4729:GLY:N	2.43	0.51
2:J:96:ASP:OD2	2:J:98:ASN:ND2	2.43	0.51
3:A:2442:LEU:HD22	3:A:2447:LYS:HG3	1.92	0.51
3:A:3752:SER:OG	3:A:3753:PHE:N	2.43	0.51
3:A:5001:THR:OG1	3:A:5002:GLU:OE2	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1596:GLU:OE1	3:B:1598:GLN:NE2	2.43	0.51
3:C:4725:LEU:O	3:C:4729:GLY:N	2.43	0.51
2:L:112:ASN:HD22	3:D:1991:THR:HG23	1.75	0.51
1:G:83:GLY:O	1:G:94:ASN:ND2	2.43	0.51
3:D:4677:LEU:HD23	3:D:4711:PHE:CE1	2.46	0.51
3:A:2023:LEU:O	3:A:2028:ARG:NH2	2.43	0.51
3:A:3818:ASP:OD1	3:A:3818:ASP:N	2.41	0.51
3:A:4638:TYR:C	3:A:4641:PRO:HD2	2.31	0.51
3:B:1629:GLN:OE1	3:B:1631:GLN:NE2	2.43	0.51
3:B:2023:LEU:O	3:B:2028:ARG:NH2	2.43	0.51
3:C:194:SER:OG	3:C:195:PHE:N	2.44	0.51
2:K:94:ASP:OD1	2:K:94:ASP:N	2.44	0.51
3:D:1596:GLU:OE1	3:D:1598:GLN:NE2	2.43	0.51
3:D:2025:GLU:HA	3:D:2028:ARG:HG2	1.92	0.51
3:D:3977:GLN:NE2	3:D:4030:LEU:O	2.43	0.51
3:A:4655:PHE:HD2	3:A:4656:LEU:CD1	2.24	0.51
3:B:2442:LEU:HD22	3:B:2447:LYS:HG3	1.92	0.51
3:B:4638:TYR:C	3:B:4641:PRO:HD2	2.31	0.51
2:J:94:ASP:OD1	2:J:94:ASP:N	2.44	0.51
3:D:1089:TYR:HD1	3:D:1152:MET:HB3	1.76	0.51
3:D:4065:PHE:O	3:D:4133:GLN:NE2	2.44	0.51
3:D:4239:GLU:HG2	8:D:5105:CFF:H142	1.93	0.51
3:B:1008:SER:OG	3:B:1010:VAL:O	2.28	0.51
3:C:4638:TYR:C	3:C:4641:PRO:HD2	2.31	0.51
3:C:4812:HIS:O	3:C:4813:LEU:C	2.47	0.51
1:E:83:GLY:O	1:E:94:ASN:ND2	2.43	0.51
3:A:4065:PHE:O	3:A:4133:GLN:NE2	2.44	0.51
3:A:4239:GLU:HG2	8:A:5105:CFF:H142	1.93	0.51
3:B:2534:ALA:HB1	3:B:2588:ARG:HD2	1.93	0.51
3:C:1089:TYR:HD1	3:C:1152:MET:HB3	1.76	0.51
3:C:3889:GLN:HG3	3:C:3967:GLU:HG3	1.92	0.51
3:C:4731:ILE:HG23	3:C:4732:PHE:HD1	1.75	0.51
2:K:112:ASN:HD22	3:A:1991:THR:HG23	1.75	0.51
1:F:83:GLY:O	1:F:94:ASN:ND2	2.43	0.51
3:D:4655:PHE:HD2	3:D:4656:LEU:CD1	2.24	0.51
3:D:4725:LEU:O	3:D:4729:GLY:N	2.43	0.51
3:D:4731:ILE:HG23	3:D:4732:PHE:HD1	1.75	0.51
3:A:1089:TYR:HD1	3:A:1152:MET:HB3	1.76	0.51
3:B:1089:TYR:HD1	3:B:1152:MET:HB3	1.76	0.51
3:B:4544:LEU:HA	3:B:4547:GLN:NE2	2.25	0.51
3:B:4886:HIS:O	3:B:4890:GLY:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:132:ALA:HA	3:C:194:SER:HB2	1.92	0.51
3:C:4677:LEU:HD23	3:C:4711:PHE:CE1	2.46	0.51
3:D:4544:LEU:HA	3:D:4547:GLN:NE2	2.25	0.51
3:D:4565:LEU:CD2	3:D:4653:VAL:HG21	2.41	0.51
3:D:4901:ILE:HG22	3:D:4902:GLU:N	2.25	0.51
3:B:4655:PHE:HD2	3:B:4656:LEU:CD1	2.24	0.51
3:B:4928:LEU:C	3:B:4930:ALA:H	2.14	0.51
3:C:2023:LEU:O	3:C:2028:ARG:NH2	2.43	0.51
3:C:4065:PHE:O	3:C:4133:GLN:NE2	2.44	0.51
3:C:4655:PHE:HD2	3:C:4656:LEU:CD1	2.24	0.51
3:C:4901:ILE:HG22	3:C:4902:GLU:N	2.25	0.51
3:D:663:TYR:HB2	3:D:808:TYR:HB3	1.92	0.51
3:B:4239:GLU:HG2	8:B:5105:CFF:H142	1.93	0.51
3:C:2442:LEU:HD22	3:C:2447:LYS:HG3	1.92	0.51
3:C:2534:ALA:HB1	3:C:2588:ARG:HD2	1.93	0.51
3:C:4565:LEU:CD2	3:C:4653:VAL:HG21	2.41	0.51
3:A:4708:THR:HG22	3:A:4710:SER:H	1.76	0.50
3:B:1126:GLY:HA3	3:B:1143:TRP:CE2	2.47	0.50
3:B:2025:GLU:HA	3:B:2028:ARG:HG2	1.92	0.50
3:B:2288:LEU:HD21	3:B:3852:LYS:HE2	1.91	0.50
3:B:2359:ARG:HD3	3:C:179:TYR:OH	2.11	0.50
3:B:3717:ASP:N	3:B:3717:ASP:OD1	2.42	0.50
3:B:4556:SER:CB	3:B:4664:LEU:HD21	2.42	0.50
3:B:4565:LEU:CD2	3:B:4653:VAL:HG21	2.41	0.50
3:B:4843:LEU:HA	3:B:4846:VAL:HG22	1.93	0.50
3:C:4636:THR:HG22	3:C:4637:GLY:N	2.23	0.50
3:C:4843:LEU:HA	3:C:4846:VAL:HG22	1.93	0.50
3:D:469:ARG:O	3:D:473:ASN:ND2	2.45	0.50
3:D:2442:LEU:HD22	3:D:2447:LYS:HG3	1.92	0.50
3:D:4138:ASP:OD1	3:D:4138:ASP:N	2.42	0.50
3:D:4658:ILE:HG22	3:D:4659:ILE:N	2.26	0.50
3:B:4677:LEU:HD23	3:B:4711:PHE:CE1	2.46	0.50
3:C:469:ARG:O	3:C:473:ASN:ND2	2.45	0.50
3:C:3968:TYR:O	3:C:3976:ASN:ND2	2.45	0.50
3:C:4054:ASN:OD1	3:C:4054:ASN:N	2.44	0.50
3:C:4556:SER:CB	3:C:4664:LEU:HD21	2.42	0.50
3:D:132:ALA:HA	3:D:194:SER:HB2	1.92	0.50
3:D:1126:GLY:HA3	3:D:1143:TRP:CE2	2.47	0.50
3:D:2003:GLN:HE21	3:D:2007:ASN:HD21	1.60	0.50
3:D:4812:HIS:O	3:D:4813:LEU:C	2.47	0.50
3:A:1691:GLN:HE21	3:A:1802:ILE:HG13	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1833:SER:OG	3:B:1834:VAL:N	2.45	0.50
3:B:3889:GLN:HG3	3:B:3967:GLU:HG3	1.92	0.50
3:C:4239:GLU:HG2	8:C:5105:CFF:H142	1.93	0.50
3:C:4708:THR:HG22	3:C:4710:SER:H	1.76	0.50
3:D:1691:GLN:HE21	3:D:1802:ILE:HG13	1.75	0.50
3:D:3829:PHE:HD1	3:D:3915:ILE:HD11	1.76	0.50
3:A:2148:SER:O	3:A:2152:THR:OG1	2.26	0.50
3:A:3829:PHE:HD1	3:A:3915:ILE:HD11	1.77	0.50
3:A:4565:LEU:CD2	3:A:4653:VAL:HG21	2.41	0.50
3:B:2189:LYS:O	3:B:2193:GLN:NE2	2.45	0.50
3:B:4885:PHE:O	3:B:4889:VAL:HG22	2.11	0.50
3:B:5032:TYR:O	3:B:5036:LEU:HG	2.12	0.50
3:C:182:LEU:HD21	3:C:189:LEU:HB3	1.94	0.50
3:C:4658:ILE:HG22	3:C:4659:ILE:N	2.26	0.50
3:C:5032:TYR:O	3:C:5036:LEU:HG	2.12	0.50
3:D:2534:ALA:HB1	3:D:2588:ARG:HD2	1.93	0.50
3:D:3732:SER:OG	3:D:3769:ARG:NH2	2.45	0.50
3:A:469:ARG:O	3:A:473:ASN:ND2	2.45	0.50
3:A:663:TYR:HB2	3:A:808:TYR:HB3	1.92	0.50
3:A:2003:GLN:HE21	3:A:2007:ASN:HD21	1.60	0.50
3:A:4677:LEU:HD23	3:A:4711:PHE:CE1	2.46	0.50
3:B:2452:ARG:HE	3:C:175:SER:HA	1.77	0.50
3:A:3732:SER:OG	3:A:3769:ARG:NH2	2.45	0.50
3:A:3889:GLN:HG3	3:A:3967:GLU:HG3	1.92	0.50
3:A:4658:ILE:HG22	3:A:4659:ILE:N	2.26	0.50
3:A:4901:ILE:HG22	3:A:4902:GLU:N	2.25	0.50
3:B:546:TRP:O	3:B:550:LYS:NZ	2.37	0.50
3:C:1177:THR:OG1	3:C:1180:ARG:NH1	2.40	0.50
3:D:182:LEU:HD21	3:D:189:LEU:HB3	1.94	0.50
3:D:747:CYS:HB2	3:D:756:SER:HB3	1.94	0.50
3:A:2189:LYS:O	3:A:2193:GLN:NE2	2.45	0.50
3:A:4652:LEU:C	3:A:4654:ALA:H	2.15	0.50
3:C:1126:GLY:HA3	3:C:1143:TRP:CE2	2.46	0.50
3:C:4652:LEU:C	3:C:4654:ALA:H	2.15	0.50
3:D:4638:TYR:C	3:D:4641:PRO:HD2	2.31	0.50
3:A:582:HIS:O	3:A:585:SER:OG	2.29	0.50
3:A:5032:TYR:O	3:A:5036:LEU:HG	2.12	0.50
3:B:4982:GLU:OE1	3:B:4982:GLU:HA	2.12	0.50
3:B:5004:THR:OG1	3:B:5007:GLU:HG3	2.12	0.50
3:C:753:PRO:HB2	3:C:770:ALA:H	1.77	0.50
3:C:3717:ASP:N	3:C:3717:ASP:OD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4928:LEU:C	3:C:4930:ALA:H	2.14	0.50
3:C:4982:GLU:OE1	3:C:4982:GLU:HA	2.12	0.50
3:D:1833:SER:OG	3:D:1834:VAL:N	2.45	0.50
3:D:4668:LEU:HD23	3:D:4672:LYS:HZ2	1.77	0.50
3:D:4812:HIS:C	3:D:4814:LEU:N	2.65	0.50
3:D:4928:LEU:C	3:D:4930:ALA:H	2.14	0.50
3:A:1126:GLY:HA3	3:A:1143:TRP:CE2	2.47	0.50
3:A:4885:PHE:O	3:A:4889:VAL:HG22	2.11	0.50
3:A:4982:GLU:HA	3:A:4982:GLU:OE1	2.12	0.50
3:B:3732:SER:OG	3:B:3769:ARG:NH2	2.45	0.50
3:B:3968:TYR:O	3:B:3976:ASN:ND2	2.45	0.50
3:C:1147:ASP:OD1	3:C:1147:ASP:N	2.40	0.50
3:C:3829:PHE:HD1	3:C:3915:ILE:HD11	1.76	0.50
3:C:4885:PHE:O	3:C:4889:VAL:HG22	2.11	0.50
2:J:87:ARG:NH2	2:J:97:GLY:O	2.45	0.49
3:D:194:SER:OG	3:D:195:PHE:N	2.44	0.49
3:D:753:PRO:HB2	3:D:770:ALA:H	1.77	0.49
3:A:1236:THR:OG1	3:A:1608:MET:SD	2.64	0.49
3:A:2359:ARG:HD3	3:B:179:TYR:OH	2.12	0.49
3:A:5004:THR:OG1	3:A:5007:GLU:HG3	2.12	0.49
3:B:194:SER:OG	3:B:195:PHE:N	2.44	0.49
3:B:753:PRO:HB2	3:B:770:ALA:H	1.77	0.49
3:B:4813:LEU:O	3:B:4813:LEU:HD22	2.12	0.49
3:B:4901:ILE:HG22	3:B:4902:GLU:N	2.25	0.49
3:C:1186:ASP:N	3:C:1186:ASP:OD1	2.42	0.49
3:C:1691:GLN:HE21	3:C:1802:ILE:HG13	1.76	0.49
3:C:1833:SER:OG	3:C:1834:VAL:N	2.45	0.49
3:C:3732:SER:OG	3:C:3769:ARG:NH2	2.45	0.49
2:I:87:ARG:NH2	2:I:97:GLY:O	2.45	0.49
3:D:1147:ASP:OD1	3:D:1147:ASP:N	2.40	0.49
3:D:4192:ARG:HD3	3:D:5028:PHE:CD2	2.47	0.49
3:D:4843:LEU:HA	3:D:4846:VAL:HG22	1.93	0.49
3:D:4885:PHE:O	3:D:4889:VAL:HG22	2.11	0.49
3:D:5032:TYR:O	3:D:5036:LEU:HG	2.12	0.49
3:A:16:THR:OG1	3:A:99:ARG:O	2.31	0.49
3:A:112:ALA:O	3:A:115:ARG:NH2	2.44	0.49
3:A:303:ASP:OD2	3:A:306:LYS:NZ	2.44	0.49
3:A:2318:TYR:HH	3:A:2414:ASN:N	2.10	0.49
3:A:2536:LEU:HD13	3:A:2544:THR:HG21	1.94	0.49
3:A:4843:LEU:HA	3:A:4846:VAL:HG22	1.93	0.49
3:B:182:LEU:HD21	3:B:189:LEU:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2536:LEU:HD13	3:B:2544:THR:HG21	1.94	0.49
3:B:4722:ARG:HA	3:B:4743:MET:HE1	1.93	0.49
3:C:2003:GLN:HE21	3:C:2007:ASN:HD21	1.60	0.49
3:C:4650:HIS:CE1	3:C:4812:HIS:CD2	3.00	0.49
3:C:4812:HIS:C	3:C:4814:LEU:N	2.65	0.49
3:D:303:ASP:OD2	3:D:306:LYS:NZ	2.44	0.49
3:A:2434:GLY:O	3:A:2508:ARG:NE	2.37	0.49
3:A:4813:LEU:O	3:A:4813:LEU:HD22	2.12	0.49
3:A:4886:HIS:O	3:A:4890:GLY:N	2.42	0.49
3:B:2003:GLN:HE21	3:B:2007:ASN:HD21	1.60	0.49
2:K:87:ARG:NH2	2:K:97:GLY:O	2.45	0.49
3:D:2189:LYS:O	3:D:2193:GLN:NE2	2.45	0.49
3:D:4556:SER:CB	3:D:4664:LEU:HD21	2.42	0.49
3:D:4813:LEU:O	3:D:4813:LEU:HD22	2.12	0.49
3:D:4982:GLU:OE1	3:D:4982:GLU:HA	2.12	0.49
3:D:4995:LEU:HD13	3:D:5011:TRP:HB2	1.95	0.49
3:A:747:CYS:HB2	3:A:756:SER:HB3	1.94	0.49
3:A:2534:ALA:HB1	3:A:2588:ARG:HD2	1.93	0.49
3:A:4928:LEU:C	3:A:4930:ALA:H	2.14	0.49
3:B:3829:PHE:HD1	3:B:3915:ILE:HD11	1.76	0.49
3:C:303:ASP:OD2	3:C:306:LYS:NZ	2.44	0.49
3:C:2536:LEU:HD13	3:C:2544:THR:HG21	1.95	0.49
3:C:4631:PHE:CE2	3:C:4639:MET:HB2	2.48	0.49
3:D:2318:TYR:HH	3:D:2414:ASN:N	2.10	0.49
3:D:3781:GLN:NE2	3:D:3819:TYR:OH	2.45	0.49
3:D:4652:LEU:C	3:D:4654:ALA:H	2.15	0.49
3:A:3794:VAL:HA	3:A:3797:THR:HG22	1.94	0.49
3:B:2318:TYR:HH	3:B:2414:ASN:N	2.10	0.49
3:B:4631:PHE:CE2	3:B:4639:MET:HB2	2.48	0.49
3:C:588:SER:OG	3:C:592:LYS:NZ	2.46	0.49
3:C:2189:LYS:O	3:C:2193:GLN:NE2	2.45	0.49
3:C:3781:GLN:NE2	3:C:3819:TYR:OH	2.45	0.49
3:C:4192:ARG:HD3	3:C:5028:PHE:CD2	2.47	0.49
3:C:5004:THR:OG1	3:C:5007:GLU:HG3	2.12	0.49
2:L:87:ARG:NH2	2:L:97:GLY:O	2.45	0.49
2:I:46:GLU:HA	2:I:49:LEU:HB2	1.94	0.49
3:A:194:SER:OG	3:A:195:PHE:N	2.44	0.49
3:A:4631:PHE:CE2	3:A:4639:MET:HB2	2.48	0.49
3:B:16:THR:OG1	3:B:99:ARG:O	2.31	0.49
3:B:3781:GLN:NE2	3:B:3819:TYR:OH	2.45	0.49
3:C:4670:ILE:HG21	3:C:4779:LYS:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:5004:THR:OG1	3:D:5007:GLU:HG3	2.12	0.49
3:A:4556:SER:CB	3:A:4664:LEU:HD21	2.42	0.49
3:B:4658:ILE:HG22	3:B:4659:ILE:N	2.26	0.49
3:C:2314:LEU:HD21	3:C:2320:ASP:HA	1.95	0.49
3:C:4813:LEU:O	3:C:4813:LEU:HD22	2.13	0.49
3:C:4995:LEU:HD13	3:C:5011:TRP:HB2	1.95	0.49
3:D:16:THR:OG1	3:D:99:ARG:O	2.31	0.49
3:D:2148:SER:O	3:D:2152:THR:OG1	2.26	0.49
3:A:3781:GLN:NE2	3:A:3819:TYR:OH	2.45	0.49
3:A:4191:GLU:HG3	3:A:5006:GLN:OE1	2.13	0.49
3:A:4999:ASP:O	3:A:5003:HIS:NE2	2.46	0.49
3:B:469:ARG:O	3:B:473:ASN:ND2	2.45	0.49
3:B:2148:SER:O	3:B:2152:THR:OG1	2.26	0.49
3:B:4650:HIS:CE1	3:B:4812:HIS:CD2	3.00	0.49
3:B:4708:THR:HG22	3:B:4710:SER:H	1.76	0.49
3:B:4999:ASP:O	3:B:5003:HIS:NE2	2.46	0.49
2:L:118:THR:N	2:L:121:GLU:OE1	2.46	0.49
3:D:2314:LEU:HD21	3:D:2320:ASP:HA	1.95	0.49
3:D:4650:HIS:CE1	3:D:4812:HIS:CD2	3.00	0.49
3:D:4670:ILE:HG21	3:D:4779:LYS:HG3	1.94	0.49
3:D:4999:ASP:O	3:D:5003:HIS:NE2	2.46	0.49
3:A:1833:SER:OG	3:A:1834:VAL:N	2.45	0.49
3:A:2314:LEU:HD21	3:A:2320:ASP:HA	1.95	0.49
3:A:4642:ALA:O	3:A:4646:LEU:HD13	2.13	0.49
3:B:134:ASP:OD1	3:B:134:ASP:N	2.40	0.49
3:B:4192:ARG:HD3	3:B:5028:PHE:CD2	2.47	0.49
3:B:4948:GLU:OE1	3:B:4948:GLU:HA	2.13	0.49
3:C:847:SER:OG	3:C:848:HIS:N	2.46	0.49
3:C:4948:GLU:HA	3:C:4948:GLU:OE1	2.13	0.49
3:D:1452:TRP:N	3:D:1493:TYR:O	2.42	0.49
3:D:4642:ALA:O	3:D:4646:LEU:HD13	2.13	0.49
3:D:5027:CYS:O	3:D:5029:ARG:N	2.46	0.49
3:A:4631:PHE:HZ	3:A:4639:MET:SD	2.36	0.49
3:B:619:ASP:OD2	3:B:1680:ARG:NH2	2.46	0.49
3:C:619:ASP:OD2	3:C:1680:ARG:NH2	2.46	0.49
2:I:94:ASP:OD1	2:I:94:ASP:N	2.44	0.48
3:D:2536:LEU:HD13	3:D:2544:THR:HG21	1.94	0.48
3:A:182:LEU:HD21	3:A:189:LEU:HB3	1.94	0.48
3:A:4653:VAL:O	3:A:4653:VAL:HG12	2.13	0.48
3:A:4951:LYS:HB2	3:A:4951:LYS:HZ3	1.78	0.48
3:B:705:ASN:N	3:B:705:ASN:OD1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1451:GLY:HA3	3:B:1494:MET:HA	1.94	0.48
3:B:4065:PHE:O	3:B:4133:GLN:NE2	2.44	0.48
3:B:4191:GLU:HG3	3:B:5006:GLN:OE1	2.13	0.48
3:B:5027:CYS:O	3:B:5029:ARG:N	2.46	0.48
3:C:4999:ASP:O	3:C:5003:HIS:NE2	2.46	0.48
3:D:4238:CYS:O	3:D:4242:ILE:HD13	2.14	0.48
3:D:4708:THR:HG22	3:D:4710:SER:H	1.76	0.48
3:D:4851:TYR:HD2	3:D:4920:PHE:HD2	1.60	0.48
3:A:619:ASP:OD2	3:A:1680:ARG:NH2	2.46	0.48
3:A:1177:THR:OG1	3:A:1180:ARG:NH1	2.40	0.48
3:A:2452:ARG:HE	3:B:175:SER:HA	1.78	0.48
3:A:4238:CYS:O	3:A:4242:ILE:HD13	2.14	0.48
3:A:4670:ILE:HG21	3:A:4779:LYS:HG3	1.94	0.48
3:A:4851:TYR:HD2	3:A:4920:PHE:HD2	1.60	0.48
3:A:5007:GLU:O	3:A:5010:VAL:HG12	2.13	0.48
3:B:3794:VAL:HA	3:B:3797:THR:HG22	1.94	0.48
3:C:747:CYS:HB2	3:C:756:SER:HB3	1.94	0.48
3:C:2318:TYR:HH	3:C:2414:ASN:N	2.10	0.48
3:C:5001:THR:OG1	3:C:5002:GLU:OE2	2.20	0.48
2:J:46:GLU:HA	2:J:49:LEU:HB2	1.94	0.48
3:D:134:ASP:OD1	3:D:134:ASP:N	2.40	0.48
3:D:705:ASN:N	3:D:705:ASN:OD1	2.46	0.48
3:D:4578:LEU:HD13	3:A:4849:TYR:CE2	2.37	0.48
3:D:4951:LYS:HB2	3:D:4951:LYS:HZ3	1.78	0.48
3:A:847:SER:OG	3:A:848:HIS:N	2.46	0.48
3:A:3968:TYR:O	3:A:3976:ASN:ND2	2.45	0.48
3:A:4650:HIS:CE1	3:A:4812:HIS:CD2	3.00	0.48
3:B:4652:LEU:C	3:B:4654:ALA:H	2.15	0.48
3:B:4722:ARG:NH2	3:B:4749:GLU:HA	2.28	0.48
3:C:914:PRO:O	3:C:918:ARG:N	2.46	0.48
3:C:5027:CYS:O	3:C:5029:ARG:N	2.46	0.48
2:K:25:ASP:HB3	2:K:27:THR:HG22	1.96	0.48
2:K:46:GLU:HA	2:K:49:LEU:HB2	1.94	0.48
3:D:1451:GLY:HA3	3:D:1494:MET:HA	1.94	0.48
3:D:3794:VAL:HA	3:D:3797:THR:HG22	1.94	0.48
3:D:4631:PHE:CE2	3:D:4639:MET:HB2	2.48	0.48
3:A:753:PRO:HB2	3:A:770:ALA:H	1.77	0.48
3:A:1856:ASP:N	3:A:1856:ASP:OD1	2.46	0.48
3:A:4192:ARG:HD3	3:A:5028:PHE:CD2	2.47	0.48
3:B:588:SER:OG	3:B:592:LYS:NZ	2.46	0.48
3:B:4642:ALA:O	3:B:4646:LEU:HD13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4670:ILE:HG21	3:B:4779:LYS:HG3	1.94	0.48
3:C:16:THR:OG1	3:C:99:ARG:O	2.31	0.48
3:D:4836:GLN:CB	3:C:4822:THR:HG21	2.44	0.48
3:A:588:SER:OG	3:A:592:LYS:NZ	2.46	0.48
3:B:747:CYS:HB2	3:B:756:SER:HB3	1.94	0.48
3:B:2333:ASP:OD1	3:B:2333:ASP:N	2.46	0.48
3:B:4936:ILE:HG21	3:C:4927:ILE:HG23	1.96	0.48
3:B:4995:LEU:HD13	3:B:5011:TRP:HB2	1.95	0.48
3:C:1452:TRP:N	3:C:1493:TYR:O	2.42	0.48
3:C:3878:ASP:N	3:C:3878:ASP:OD1	2.46	0.48
1:H:38:SER:OG	1:H:39:SER:N	2.47	0.48
2:L:46:GLU:HA	2:L:49:LEU:HB2	1.94	0.48
2:I:118:THR:N	2:I:121:GLU:OE1	2.46	0.48
3:D:588:SER:OG	3:D:592:LYS:NZ	2.46	0.48
3:D:619:ASP:OD2	3:D:1680:ARG:NH2	2.46	0.48
3:D:4948:GLU:OE1	3:D:4948:GLU:HA	2.13	0.48
3:A:1028:ASP:OD1	3:A:1028:ASP:N	2.47	0.48
3:C:4642:ALA:O	3:C:4646:LEU:HD13	2.13	0.48
3:C:4851:TYR:HD2	3:C:4920:PHE:HD2	1.60	0.48
2:L:25:ASP:HB3	2:L:27:THR:HG22	1.96	0.48
1:G:38:SER:OG	1:G:39:SER:N	2.47	0.48
2:J:118:THR:N	2:J:121:GLU:OE1	2.46	0.48
2:I:25:ASP:HB3	2:I:27:THR:HG22	1.96	0.48
3:D:847:SER:OG	3:D:848:HIS:N	2.46	0.48
3:D:4565:LEU:CD2	3:D:4653:VAL:HG11	2.44	0.48
3:D:4886:HIS:O	3:D:4890:GLY:N	2.42	0.48
3:A:266:ARG:NH1	3:A:269:TRP:O	2.44	0.48
3:A:2030:ASP:N	3:A:2030:ASP:OD1	2.46	0.48
3:A:4948:GLU:OE1	3:A:4948:GLU:HA	2.13	0.48
3:A:5027:CYS:O	3:A:5029:ARG:N	2.46	0.48
3:C:2030:ASP:N	3:C:2030:ASP:OD1	2.46	0.48
3:C:3794:VAL:HA	3:C:3797:THR:HG22	1.94	0.48
3:C:4077:PHE:HA	3:C:4080:TYR:HB2	1.95	0.48
2:L:9:GLN:O	2:L:13:PHE:N	2.43	0.48
3:D:4631:PHE:HZ	3:D:4639:MET:SD	2.36	0.48
3:A:705:ASN:N	3:A:705:ASN:OD1	2.46	0.48
3:A:1451:GLY:HA3	3:A:1494:MET:HA	1.94	0.48
3:A:4731:ILE:HG13	3:A:4732:PHE:CD1	2.49	0.48
3:B:4077:PHE:HA	3:B:4080:TYR:HB2	1.95	0.48
3:B:4631:PHE:HZ	3:B:4639:MET:SD	2.36	0.48
3:B:5007:GLU:O	3:B:5010:VAL:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:784:SER:OG	3:C:785:ALA:N	2.47	0.48
3:C:3842:LEU:O	3:C:3929:SER:OG	2.32	0.48
3:C:4191:GLU:HG3	3:C:5006:GLN:OE1	2.13	0.48
3:D:877:ASN:HD22	3:D:970:LEU:H	1.62	0.48
3:D:2333:ASP:N	3:D:2333:ASP:OD1	2.46	0.48
3:D:3878:ASP:N	3:D:3878:ASP:OD1	2.46	0.48
3:D:4582:VAL:HG13	3:A:4856:PHE:CZ	2.48	0.48
3:D:4653:VAL:O	3:D:4653:VAL:HG12	2.13	0.48
3:D:4681:LEU:CD2	3:D:4724:VAL:HG21	2.44	0.48
3:D:4722:ARG:HA	3:D:4743:MET:HE1	1.96	0.48
3:A:2333:ASP:N	3:A:2333:ASP:OD1	2.46	0.48
3:A:4722:ARG:HD3	3:A:4743:MET:HE1	1.96	0.48
3:A:4995:LEU:HD13	3:A:5011:TRP:HB2	1.95	0.48
3:B:588:SER:O	3:B:592:LYS:NZ	2.43	0.48
3:B:2030:ASP:OD1	3:B:2030:ASP:N	2.46	0.48
3:B:2375:GLY:O	3:B:2379:ALA:N	2.45	0.48
3:B:4653:VAL:O	3:B:4653:VAL:HG12	2.14	0.48
3:C:2333:ASP:OD1	3:C:2333:ASP:N	2.46	0.48
3:C:4681:LEU:CD2	3:C:4724:VAL:HG21	2.44	0.48
3:C:4731:ILE:HG13	3:C:4732:PHE:CD1	2.49	0.48
3:D:3898:ASP:OD1	3:D:3898:ASP:N	2.46	0.48
3:D:4191:GLU:HG3	3:D:5006:GLN:OE1	2.13	0.48
3:D:4241:THR:HA	3:D:4244:GLU:CG	2.44	0.48
3:D:5007:GLU:O	3:D:5010:VAL:HG12	2.13	0.48
3:A:784:SER:OG	3:A:785:ALA:N	2.47	0.48
3:A:4668:LEU:HD23	3:A:4672:LYS:HZ2	1.79	0.48
3:B:2314:LEU:HD21	3:B:2320:ASP:HA	1.95	0.48
3:C:582:HIS:O	3:C:585:SER:OG	2.29	0.48
3:C:836:GLY:HA3	3:C:837:PRO:HD2	1.78	0.48
3:C:1451:GLY:HA3	3:C:1494:MET:HA	1.94	0.48
3:D:4722:ARG:NH2	3:D:4749:GLU:HA	2.28	0.47
3:A:877:ASN:HD22	3:A:970:LEU:H	1.62	0.47
3:B:4812:HIS:C	3:B:4814:LEU:N	2.65	0.47
3:B:4851:TYR:HD2	3:B:4920:PHE:HD2	1.60	0.47
3:B:4901:ILE:HD12	3:B:4913:ARG:NH2	2.30	0.47
2:J:25:ASP:HB3	2:J:27:THR:HG22	1.96	0.47
3:D:4731:ILE:HG13	3:D:4732:PHE:CD1	2.49	0.47
3:A:3842:LEU:O	3:A:3929:SER:OG	2.32	0.47
3:A:3898:ASP:OD1	3:A:3898:ASP:N	2.46	0.47
3:A:4681:LEU:CD2	3:A:4724:VAL:HG21	2.44	0.47
3:B:4802:GLY:CA	3:B:4808:PHE:HB2	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1443:GLN:OE1	3:C:1557:THR:N	2.47	0.47
3:C:4631:PHE:HZ	3:C:4639:MET:SD	2.36	0.47
2:K:79:ASP:OD1	2:K:79:ASP:N	2.47	0.47
3:D:3946:GLN:O	3:D:3950:ASN:ND2	2.43	0.47
3:D:3968:TYR:O	3:D:3976:ASN:ND2	2.45	0.47
3:A:4901:ILE:HD12	3:A:4913:ARG:NH2	2.30	0.47
3:B:784:SER:OG	3:B:785:ALA:N	2.47	0.47
3:B:1147:ASP:OD1	3:B:1147:ASP:N	2.40	0.47
3:B:4686:LEU:HD23	3:B:4687:TYR:CE1	2.49	0.47
3:C:2596:THR:OG1	3:C:2597:LYS:N	2.48	0.47
3:C:3898:ASP:N	3:C:3898:ASP:OD1	2.46	0.47
3:C:4653:VAL:O	3:C:4653:VAL:HG12	2.13	0.47
3:C:4686:LEU:HD23	3:C:4687:TYR:CE1	2.49	0.47
3:D:622:THR:HG23	3:D:626:LEU:HD12	1.97	0.47
3:D:1861:GLN:HA	3:D:1864:LYS:HD3	1.96	0.47
3:A:622:THR:HG23	3:A:626:LEU:HD12	1.97	0.47
3:A:836:GLY:HA3	3:A:837:PRO:HD2	1.78	0.47
3:A:4674:GLU:OE2	3:A:4775:TYR:OH	2.29	0.47
3:B:112:ALA:O	3:B:115:ARG:NH2	2.44	0.47
3:B:2596:THR:OG1	3:B:2597:LYS:N	2.48	0.47
3:B:4238:CYS:O	3:B:4242:ILE:HD13	2.14	0.47
3:C:622:THR:HG23	3:C:626:LEU:HD12	1.97	0.47
3:C:4722:ARG:NH2	3:C:4749:GLU:HA	2.28	0.47
3:D:668:VAL:HA	3:D:789:VAL:HG23	1.97	0.47
3:D:784:SER:OG	3:D:785:ALA:N	2.47	0.47
3:D:3842:LEU:O	3:D:3929:SER:OG	2.32	0.47
3:D:4685:GLY:O	3:D:4689:THR:OG1	2.32	0.47
3:D:4901:ILE:HD12	3:D:4913:ARG:NH2	2.30	0.47
3:A:2375:GLY:O	3:A:2379:ALA:N	2.45	0.47
3:A:4077:PHE:HA	3:A:4080:TYR:HB2	1.95	0.47
3:A:4686:LEU:HD23	3:A:4687:TYR:CE1	2.49	0.47
3:B:668:VAL:HA	3:B:789:VAL:HG23	1.97	0.47
3:B:847:SER:OG	3:B:848:HIS:N	2.46	0.47
3:B:1028:ASP:N	3:B:1028:ASP:OD1	2.47	0.47
3:B:4681:LEU:CD2	3:B:4724:VAL:HG21	2.44	0.47
3:B:4731:ILE:HG13	3:B:4732:PHE:CD1	2.49	0.47
3:B:4794:TRP:O	3:B:4797:VAL:HG12	2.15	0.47
3:C:4565:LEU:CD2	3:C:4653:VAL:HG11	2.44	0.47
3:C:4685:GLY:O	3:C:4689:THR:OG1	2.32	0.47
3:C:4863:TYR:OH	3:C:4886:HIS:NE2	2.46	0.47
3:D:4794:TRP:O	3:D:4797:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4241:THR:HA	3:A:4244:GLU:CG	2.44	0.47
3:C:2458:ARG:O	3:C:2510:TYR:OH	2.32	0.47
3:C:4238:CYS:O	3:C:4242:ILE:HD13	2.14	0.47
3:C:4794:TRP:O	3:C:4797:VAL:HG12	2.15	0.47
3:C:4901:ILE:HD12	3:C:4913:ARG:NH2	2.30	0.47
1:H:25:HIS:CE1	1:H:40:ARG:HG2	2.49	0.47
2:L:79:ASP:N	2:L:79:ASP:OD1	2.47	0.47
1:G:25:HIS:CE1	1:G:40:ARG:HG2	2.49	0.47
2:J:79:ASP:OD1	2:J:79:ASP:N	2.47	0.47
1:E:38:SER:OG	1:E:39:SER:N	2.47	0.47
3:D:914:PRO:O	3:D:918:ARG:N	2.46	0.47
3:D:2030:ASP:N	3:D:2030:ASP:OD1	2.46	0.47
3:D:4077:PHE:HA	3:D:4080:TYR:HB2	1.95	0.47
3:D:4686:LEU:HD23	3:D:4687:TYR:CE1	2.49	0.47
3:A:4241:THR:HA	3:A:4244:GLU:HG2	1.97	0.47
3:A:4722:ARG:NH2	3:A:4749:GLU:HA	2.28	0.47
3:B:3898:ASP:OD1	3:B:3898:ASP:N	2.46	0.47
3:B:4241:THR:HA	3:B:4244:GLU:HG2	1.97	0.47
3:B:4668:LEU:HD23	3:B:4672:LYS:HZ2	1.80	0.47
3:B:4685:GLY:O	3:B:4689:THR:OG1	2.32	0.47
3:B:5001:THR:OG1	3:B:5002:GLU:OE2	2.20	0.47
3:C:4241:THR:HA	3:C:4244:GLU:CG	2.44	0.47
3:C:4556:SER:HB3	3:C:4664:LEU:HD21	1.96	0.47
3:C:5007:GLU:O	3:C:5010:VAL:HG12	2.13	0.47
3:D:175:SER:HA	3:C:2452:ARG:HE	1.80	0.47
3:D:1537:ASN:OD1	3:D:1537:ASN:N	2.48	0.47
3:A:4685:GLY:O	3:A:4689:THR:OG1	2.32	0.47
3:A:4794:TRP:O	3:A:4797:VAL:HG12	2.15	0.47
3:B:582:HIS:O	3:B:585:SER:OG	2.29	0.47
3:B:622:THR:HG23	3:B:626:LEU:HD12	1.97	0.47
3:B:1236:THR:OG1	3:B:1608:MET:SD	2.64	0.47
3:C:668:VAL:HA	3:C:789:VAL:HG23	1.97	0.47
3:C:1101:ARG:HB2	3:C:1193:SER:HB3	1.97	0.47
3:C:3804:ILE:HG22	3:C:3805:LEU:HD12	1.97	0.47
1:E:25:HIS:CE1	1:E:40:ARG:HG2	2.49	0.47
3:D:1279:SER:OG	3:D:1280:GLN:N	2.48	0.47
3:A:134:ASP:OD1	3:A:134:ASP:N	2.40	0.47
3:A:4675:LYS:HA	3:A:4715:TYR:CD1	2.50	0.47
3:B:1101:ARG:HB2	3:B:1193:SER:HB3	1.97	0.47
3:B:4556:SER:HB3	3:B:4664:LEU:HD21	1.96	0.47
3:B:4565:LEU:CD2	3:B:4653:VAL:HG11	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2616:PRO:HA	3:C:2619:LEU:HD13	1.97	0.47
2:K:118:THR:N	2:K:121:GLU:OE1	2.46	0.47
3:D:582:HIS:O	3:D:585:SER:OG	2.29	0.47
3:D:3804:ILE:HG22	3:D:3805:LEU:HD12	1.97	0.47
3:D:4574:ASN:O	3:D:4575:PHE:C	2.54	0.47
3:A:668:VAL:HA	3:A:789:VAL:HG23	1.97	0.47
3:A:1279:SER:OG	3:A:1280:GLN:N	2.48	0.47
3:A:1727:ARG:HE	3:A:1775:HIS:CE1	2.33	0.47
3:A:4565:LEU:CD2	3:A:4653:VAL:HG11	2.44	0.47
3:A:4812:HIS:C	3:A:4814:LEU:N	2.65	0.47
3:B:2616:PRO:HA	3:B:2619:LEU:HD13	1.97	0.47
3:B:3878:ASP:OD1	3:B:3878:ASP:N	2.46	0.47
3:C:4951:LYS:HZ3	3:C:4951:LYS:HB2	1.79	0.47
3:A:1537:ASN:N	3:A:1537:ASN:OD1	2.48	0.46
3:A:4680:LYS:HG2	3:A:4680:LYS:O	2.15	0.46
3:B:3842:LEU:O	3:B:3929:SER:OG	2.32	0.46
3:C:877:ASN:HD22	3:C:970:LEU:H	1.62	0.46
3:C:1856:ASP:N	3:C:1856:ASP:OD1	2.46	0.46
1:F:38:SER:OG	1:F:39:SER:N	2.47	0.46
3:D:1856:ASP:OD1	3:D:1856:ASP:N	2.46	0.46
3:D:4799:SER:N	3:D:4812:HIS:CE1	2.84	0.46
3:A:794:GLY:O	3:A:798:GLY:N	2.49	0.46
3:A:4814:LEU:O	3:A:4814:LEU:HD22	2.15	0.46
3:C:4680:LYS:HG2	3:C:4680:LYS:O	2.15	0.46
2:K:45:THR:N	2:K:48:GLU:OE1	2.49	0.46
2:J:45:THR:N	2:J:48:GLU:OE1	2.49	0.46
3:D:2359:ARG:NH1	3:A:179:TYR:OH	2.34	0.46
3:D:3766:GLN:HG2	3:D:3769:ARG:HH12	1.80	0.46
3:D:4680:LYS:O	3:D:4680:LYS:HG2	2.15	0.46
3:A:4054:ASN:N	3:A:4054:ASN:OD1	2.44	0.46
3:A:4722:ARG:N	3:A:4743:MET:HE3	2.30	0.46
3:B:794:GLY:O	3:B:798:GLY:N	2.49	0.46
3:B:877:ASN:HD22	3:B:970:LEU:H	1.62	0.46
3:B:1727:ARG:HE	3:B:1775:HIS:CE1	2.33	0.46
3:B:4241:THR:HA	3:B:4244:GLU:CG	2.44	0.46
3:B:4674:GLU:OE2	3:B:4775:TYR:OH	2.29	0.46
3:B:4727:LYS:HZ2	3:B:4728:HIS:CE1	2.33	0.46
3:C:794:GLY:O	3:C:798:GLY:N	2.49	0.46
3:C:1537:ASN:OD1	3:C:1537:ASN:N	2.48	0.46
3:C:4584:ASP:O	3:C:4586:PRO:HD3	2.16	0.46
3:D:1290:ARG:HH21	3:D:1598:GLN:HG3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2616:PRO:HA	3:D:2619:LEU:HD13	1.97	0.46
3:D:4724:VAL:HG13	3:D:4725:LEU:N	2.31	0.46
3:D:4878:ASP:O	3:D:4881:THR:N	2.35	0.46
3:A:2616:PRO:HA	3:A:2619:LEU:HD13	1.97	0.46
3:A:3804:ILE:HG22	3:A:3805:LEU:HD12	1.97	0.46
3:B:3766:GLN:HG2	3:B:3769:ARG:HH12	1.80	0.46
3:C:123:THR:OG1	3:C:134:ASP:OD2	2.34	0.46
3:C:1861:GLN:HA	3:C:1864:LYS:HD3	1.97	0.46
3:C:4801:LEU:O	3:C:4804:TYR:HB3	2.16	0.46
3:D:4556:SER:HB3	3:D:4664:LEU:HD21	1.96	0.46
3:D:4648:LEU:O	3:D:4649:LEU:C	2.53	0.46
3:A:1290:ARG:HH21	3:A:1598:GLN:HG3	1.81	0.46
3:A:1861:GLN:HA	3:A:1864:LYS:HD3	1.96	0.46
3:A:4556:SER:HB3	3:A:4664:LEU:HD21	1.96	0.46
3:A:4724:VAL:HG13	3:A:4725:LEU:N	2.31	0.46
3:B:303:ASP:OD2	3:B:306:LYS:NZ	2.44	0.46
3:B:3804:ILE:HG22	3:B:3805:LEU:HD12	1.97	0.46
3:B:4054:ASN:OD1	3:B:4054:ASN:N	2.44	0.46
3:B:4724:VAL:HG13	3:B:4725:LEU:N	2.31	0.46
3:B:4801:LEU:O	3:B:4804:TYR:HB3	2.16	0.46
3:C:4648:LEU:O	3:C:4649:LEU:C	2.53	0.46
1:F:25:HIS:CE1	1:F:40:ARG:HG2	2.49	0.46
3:D:2186:MET:O	3:D:2192:TYR:OH	2.32	0.46
3:D:4801:LEU:O	3:D:4804:TYR:HB3	2.16	0.46
3:A:588:SER:O	3:A:592:LYS:NZ	2.43	0.46
3:A:1443:GLN:OE1	3:A:1557:THR:N	2.47	0.46
3:A:4936:ILE:HG21	3:B:4927:ILE:HG23	1.97	0.46
3:B:4814:LEU:O	3:B:4814:LEU:HD22	2.15	0.46
3:C:4928:LEU:C	3:C:4930:ALA:N	2.69	0.46
3:D:2596:THR:OG1	3:D:2597:LYS:N	2.48	0.46
3:D:4241:THR:HA	3:D:4244:GLU:HG2	1.97	0.46
3:D:4802:GLY:CA	3:D:4808:PHE:HB2	2.36	0.46
3:A:4799:SER:N	3:A:4812:HIS:CE1	2.84	0.46
3:A:4801:LEU:O	3:A:4804:TYR:HB3	2.16	0.46
3:B:1290:ARG:HH21	3:B:1598:GLN:HG3	1.81	0.46
3:B:1856:ASP:OD1	3:B:1856:ASP:N	2.46	0.46
3:C:112:ALA:O	3:C:115:ARG:NH2	2.44	0.46
3:D:1101:ARG:HB2	3:D:1193:SER:HB3	1.97	0.46
3:D:4558:ASN:O	3:D:4559:PHE:C	2.54	0.46
3:D:4814:LEU:O	3:D:4814:LEU:HD22	2.15	0.46
3:A:4571:PHE:HD1	3:A:4571:PHE:HA	1.70	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1861:GLN:HA	3:B:1864:LYS:HD3	1.96	0.46
3:C:1727:ARG:HE	3:C:1775:HIS:CE1	2.33	0.46
3:C:1738:LEU:HB2	3:C:2146:PRO:HD3	1.98	0.46
3:C:4799:SER:N	3:C:4812:HIS:CE1	2.84	0.46
2:K:9:GLN:O	2:K:13:PHE:N	2.43	0.46
2:I:45:THR:N	2:I:48:GLU:OE1	2.49	0.46
3:D:4863:TYR:OH	3:D:4886:HIS:NE2	2.46	0.46
3:C:266:ARG:NH1	3:C:269:TRP:O	2.44	0.46
3:C:1290:ARG:HH21	3:C:1598:GLN:HG3	1.81	0.46
3:C:4783:ILE:HG13	3:C:4784:PHE:CD1	2.45	0.46
2:L:45:THR:N	2:L:48:GLU:OE1	2.49	0.46
2:J:9:GLN:O	2:J:13:PHE:N	2.43	0.46
3:D:1461:ASP:OD1	3:D:1461:ASP:N	2.49	0.46
3:D:1727:ARG:HE	3:D:1775:HIS:CE1	2.33	0.46
3:D:4675:LYS:HA	3:D:4715:TYR:CD1	2.50	0.46
3:D:4928:LEU:C	3:D:4930:ALA:N	2.69	0.46
3:B:1653:LEU:HA	3:B:1656:ARG:HB2	1.98	0.46
3:B:2527:LEU:HD11	3:B:2582:MET:HB2	1.98	0.46
3:C:2375:GLY:O	3:C:2379:ALA:N	2.45	0.46
3:D:4584:ASP:O	3:D:4586:PRO:HD3	2.16	0.45
3:A:1452:TRP:N	3:A:1493:TYR:O	2.42	0.45
3:A:1653:LEU:HA	3:A:1656:ARG:HB2	1.98	0.45
3:A:3766:GLN:HG2	3:A:3769:ARG:HH12	1.80	0.45
3:A:4574:ASN:O	3:A:4575:PHE:C	2.54	0.45
3:B:1537:ASN:OD1	3:B:1537:ASN:N	2.48	0.45
3:B:4558:ASN:O	3:B:4559:PHE:C	2.54	0.45
3:B:4648:LEU:O	3:B:4649:LEU:C	2.53	0.45
3:C:1044:ARG:O	3:C:1048:GLY:N	2.49	0.45
3:C:4675:LYS:HA	3:C:4715:TYR:CD1	2.50	0.45
3:D:112:ALA:O	3:D:115:ARG:NH2	2.44	0.45
3:D:1028:ASP:OD1	3:D:1028:ASP:N	2.47	0.45
3:A:3878:ASP:N	3:A:3878:ASP:OD1	2.46	0.45
3:B:2532:ALA:O	3:B:2535:SER:OG	2.31	0.45
3:C:1461:ASP:OD1	3:C:1461:ASP:N	2.49	0.45
3:C:4724:VAL:HG13	3:C:4725:LEU:N	2.31	0.45
3:D:2532:ALA:O	3:D:2535:SER:OG	2.31	0.45
3:D:4638:TYR:CB	3:D:4641:PRO:HG2	2.47	0.45
3:A:2596:THR:OG1	3:A:2597:LYS:N	2.48	0.45
3:A:4558:ASN:O	3:A:4559:PHE:C	2.54	0.45
3:B:883:ALA:HB3	3:B:967:PRO:HG3	1.99	0.45
3:B:4799:SER:N	3:B:4812:HIS:CE1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:788:LYS:HG3	3:C:1629:GLN:HB3	1.98	0.45
3:C:3766:GLN:HG2	3:C:3769:ARG:HH12	1.80	0.45
3:C:4241:THR:HA	3:C:4244:GLU:HG2	1.97	0.45
3:C:4780:PHE:HA	3:C:4783:ILE:CG1	2.46	0.45
3:A:1101:ARG:HB2	3:A:1193:SER:HB3	1.97	0.45
3:A:1839:VAL:HG23	3:A:1935:VAL:HG22	1.98	0.45
3:B:4680:LYS:O	3:B:4680:LYS:HG2	2.15	0.45
3:C:1279:SER:OG	3:C:1280:GLN:N	2.48	0.45
3:C:2527:LEU:HD11	3:C:2582:MET:HB2	1.98	0.45
3:D:531:ARG:NH2	3:D:562:GLU:OE1	2.43	0.45
3:D:1653:LEU:HA	3:D:1656:ARG:HB2	1.98	0.45
3:D:2527:LEU:HD11	3:D:2582:MET:HB2	1.98	0.45
3:D:4898:GLY:HA3	3:D:4917:ASP:CG	2.37	0.45
3:A:1738:LEU:HB2	3:A:2146:PRO:HD3	1.98	0.45
3:A:4584:ASP:O	3:A:4586:PRO:HD3	2.16	0.45
3:A:4638:TYR:CB	3:A:4641:PRO:HG2	2.47	0.45
3:A:4928:LEU:C	3:A:4930:ALA:N	2.69	0.45
3:B:699:GLY:HA3	3:B:705:ASN:HD21	1.81	0.45
3:B:3900:GLN:NE2	3:B:3967:GLU:O	2.50	0.45
3:B:4928:LEU:C	3:B:4930:ALA:N	2.69	0.45
3:B:4929:LEU:HD13	3:B:4929:LEU:HA	1.72	0.45
3:C:531:ARG:NH2	3:C:562:GLU:OE1	2.43	0.45
3:C:1839:VAL:HG23	3:C:1935:VAL:HG22	1.98	0.45
3:C:4814:LEU:O	3:C:4814:LEU:HD22	2.15	0.45
2:L:94:ASP:N	2:L:94:ASP:OD1	2.44	0.45
2:I:9:GLN:O	2:I:13:PHE:N	2.43	0.45
3:D:699:GLY:HA3	3:D:705:ASN:HD21	1.81	0.45
3:A:468:LEU:HD23	3:A:468:LEU:HA	1.84	0.45
3:B:579:GLN:OE1	3:B:582:HIS:NE2	2.50	0.45
3:B:1044:ARG:O	3:B:1048:GLY:N	2.48	0.45
3:B:1279:SER:OG	3:B:1280:GLN:N	2.48	0.45
3:B:1452:TRP:N	3:B:1493:TYR:O	2.42	0.45
3:B:4584:ASP:O	3:B:4586:PRO:HD3	2.16	0.45
3:C:699:GLY:HA3	3:C:705:ASN:HD21	1.81	0.45
3:C:3900:GLN:NE2	3:C:3967:GLU:O	2.50	0.45
3:C:4574:ASN:O	3:C:4575:PHE:C	2.54	0.45
3:C:4638:TYR:CB	3:C:4641:PRO:HG2	2.47	0.45
3:C:4652:LEU:O	3:C:4654:ALA:N	2.50	0.45
3:C:4808:PHE:C	3:C:4810:ALA:H	2.19	0.45
3:C:4983:HIS:CE1	3:C:5027:CYS:HG	2.35	0.45
3:D:266:ARG:NH1	3:D:269:TRP:O	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:618:GLN:OE1	3:D:1678:ASN:ND2	2.35	0.45
3:D:794:GLY:O	3:D:798:GLY:N	2.49	0.45
3:D:1738:LEU:HB2	3:D:2146:PRO:HD3	1.98	0.45
3:D:4638:TYR:O	3:D:4641:PRO:HD2	2.17	0.45
3:A:3780:LEU:HD22	3:A:3816:MET:HG2	1.99	0.45
3:B:1177:THR:OG1	3:B:1180:ARG:NH1	2.40	0.45
3:C:579:GLN:OE1	3:C:582:HIS:NE2	2.50	0.45
3:C:1653:LEU:HA	3:C:1656:ARG:HB2	1.98	0.45
3:C:4727:LYS:HZ2	3:C:4728:HIS:CE1	2.34	0.45
3:D:597:HIS:HD2	3:D:1665:HIS:CE1	2.35	0.45
3:D:788:LYS:HG3	3:D:1629:GLN:HB3	1.98	0.45
3:D:4851:TYR:HD2	3:D:4920:PHE:CD2	2.35	0.45
3:A:699:GLY:HA3	3:A:705:ASN:HD21	1.81	0.45
3:A:1461:ASP:OD1	3:A:1461:ASP:N	2.49	0.45
3:A:4648:LEU:O	3:A:4649:LEU:C	2.53	0.45
3:B:3675:ASP:OD1	3:B:3675:ASP:N	2.49	0.45
3:B:4740:LEU:HG	3:B:4741:LEU:HD22	1.99	0.45
3:D:1443:GLN:OE1	3:D:1557:THR:N	2.47	0.45
3:D:2375:GLY:O	3:D:2379:ALA:N	2.45	0.45
3:D:3966:THR:O	3:D:3970:GLN:N	2.50	0.45
3:D:4808:PHE:C	3:D:4810:ALA:H	2.19	0.45
3:A:579:GLN:OE1	3:A:582:HIS:NE2	2.50	0.45
3:A:4638:TYR:O	3:A:4641:PRO:HD2	2.17	0.45
3:A:4851:TYR:HD2	3:A:4920:PHE:CD2	2.35	0.45
3:B:1097:THR:OG1	3:B:1098:GLY:N	2.50	0.45
3:B:1738:LEU:HB2	3:B:2146:PRO:HD3	1.98	0.45
3:B:4638:TYR:CB	3:B:4641:PRO:HG2	2.47	0.45
3:C:221:ARG:NH2	3:C:254:THR:O	2.50	0.45
3:C:1008:SER:HB3	3:C:1017:ARG:HD2	1.99	0.45
3:C:3798:LEU:HD23	3:C:3798:LEU:HA	1.87	0.45
3:C:4558:ASN:O	3:C:4559:PHE:C	2.54	0.45
3:D:595:ARG:NH1	3:D:1643:GLU:OE2	2.45	0.45
3:D:1839:VAL:HG23	3:D:1935:VAL:HG22	1.98	0.45
3:D:4054:ASN:OD1	3:D:4054:ASN:N	2.44	0.45
3:D:4652:LEU:O	3:D:4654:ALA:N	2.50	0.45
3:A:1097:THR:OG1	3:A:1098:GLY:N	2.50	0.45
3:A:4655:PHE:HB2	3:A:4796:MET:CE	2.47	0.45
3:A:4984:ASN:O	3:A:4987:ASN:HB2	2.17	0.45
3:B:167:ASP:N	3:B:167:ASP:OD1	2.50	0.45
3:B:4675:LYS:HA	3:B:4715:TYR:CD1	2.50	0.45
3:C:597:HIS:HD2	3:C:1665:HIS:CE1	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:45:THR:HG23	2:I:47:ALA:H	1.83	0.44
3:D:836:GLY:HA3	3:D:837:PRO:HD2	1.78	0.44
3:D:4779:LYS:HB3	3:D:4779:LYS:HE2	1.70	0.44
3:A:597:HIS:HD2	3:A:1665:HIS:CE1	2.35	0.44
3:A:2527:LEU:HD11	3:A:2582:MET:HB2	1.98	0.44
3:A:4780:PHE:HA	3:A:4783:ILE:CG1	2.46	0.44
3:B:3966:THR:O	3:B:3970:GLN:N	2.50	0.44
3:B:4863:TYR:OH	3:B:4886:HIS:NE2	2.46	0.44
3:C:4898:GLY:HA3	3:C:4917:ASP:CG	2.37	0.44
3:C:4984:ASN:O	3:C:4987:ASN:HB2	2.17	0.44
3:D:221:ARG:NH2	3:D:254:THR:O	2.50	0.44
3:D:2434:GLY:O	3:D:2508:ARG:NE	2.37	0.44
3:D:3780:LEU:HD22	3:D:3816:MET:HG2	1.99	0.44
3:A:4898:GLY:HA3	3:A:4917:ASP:CG	2.37	0.44
3:B:123:THR:OG1	3:B:134:ASP:OD2	2.34	0.44
3:B:1008:SER:HB3	3:B:1017:ARG:HD2	1.99	0.44
3:B:2442:LEU:HD23	3:B:2442:LEU:HA	1.88	0.44
3:C:883:ALA:HB3	3:C:967:PRO:HG3	1.98	0.44
2:L:45:THR:HG23	2:L:47:ALA:H	1.83	0.44
3:D:3361:THR:O	3:D:3365:LEU:N	2.51	0.44
3:D:4780:PHE:HA	3:D:4783:ILE:CG1	2.46	0.44
3:D:4995:LEU:HD23	3:D:4995:LEU:HA	1.84	0.44
3:A:123:THR:OG1	3:A:134:ASP:OD2	2.34	0.44
3:A:3361:THR:O	3:A:3365:LEU:N	2.51	0.44
3:B:4779:LYS:HE2	3:B:4779:LYS:HB3	1.70	0.44
3:B:4936:ILE:HG13	3:C:4927:ILE:HD12	1.98	0.44
3:B:4984:ASN:O	3:B:4987:ASN:HB2	2.17	0.44
3:C:3966:THR:O	3:C:3970:GLN:N	2.50	0.44
3:C:4708:THR:CG2	3:C:4775:TYR:HB2	2.47	0.44
3:D:468:LEU:HD23	3:D:468:LEU:HA	1.84	0.44
3:D:3900:GLN:NE2	3:D:3967:GLU:O	2.50	0.44
3:D:4655:PHE:HB2	3:D:4796:MET:CE	2.47	0.44
3:A:708:GLY:H	3:A:713:SER:HG	1.61	0.44
3:A:3675:ASP:N	3:A:3675:ASP:OD1	2.49	0.44
3:A:4172:GLU:OE2	3:A:4175:ARG:NH2	2.44	0.44
3:B:531:ARG:NH2	3:B:562:GLU:OE1	2.43	0.44
3:B:4638:TYR:O	3:B:4641:PRO:HD2	2.17	0.44
3:C:705:ASN:OD1	3:C:705:ASN:N	2.46	0.44
3:C:2442:LEU:HD23	3:C:2442:LEU:HA	1.88	0.44
3:C:4638:TYR:O	3:C:4641:PRO:HD2	2.17	0.44
3:C:4851:TYR:HD2	3:C:4920:PHE:CD2	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:579:GLN:OE1	3:D:582:HIS:NE2	2.50	0.44
3:D:1770:SER:N	3:D:1956:GLU:OE2	2.51	0.44
3:D:4740:LEU:HG	3:D:4741:LEU:HD22	1.99	0.44
3:A:4652:LEU:O	3:A:4654:ALA:N	2.50	0.44
3:A:4812:HIS:O	3:A:4814:LEU:N	2.51	0.44
3:B:266:ARG:NH1	3:B:269:TRP:O	2.44	0.44
3:B:3946:GLN:O	3:B:3950:ASN:ND2	2.43	0.44
3:B:4172:GLU:OE2	3:B:4175:ARG:NH2	2.44	0.44
3:C:4650:HIS:O	3:C:4650:HIS:ND1	2.51	0.44
3:C:4722:ARG:N	3:C:4743:MET:HE3	2.33	0.44
3:C:4802:GLY:CA	3:C:4808:PHE:HB2	2.36	0.44
2:K:106:LEU:HD22	2:K:126:ILE:HD11	2.00	0.44
3:D:131:LEU:HD22	3:C:2460:LEU:HA	2.00	0.44
3:D:4024:VAL:HA	3:D:4027:LEU:HD12	2.00	0.44
3:A:788:LYS:HG3	3:A:1629:GLN:HB3	1.98	0.44
3:A:3966:THR:O	3:A:3970:GLN:N	2.50	0.44
3:B:788:LYS:HG3	3:B:1629:GLN:HB3	1.98	0.44
3:B:1849:LEU:HD12	3:B:1849:LEU:HA	1.86	0.44
3:B:4808:PHE:C	3:B:4810:ALA:H	2.19	0.44
3:B:4898:GLY:HA3	3:B:4917:ASP:CG	2.37	0.44
3:C:2186:MET:O	3:C:2192:TYR:OH	2.33	0.44
3:C:4674:GLU:OE2	3:C:4775:TYR:OH	2.29	0.44
3:C:4812:HIS:O	3:C:4814:LEU:N	2.51	0.44
3:D:1097:THR:OG1	3:D:1098:GLY:N	2.50	0.44
3:D:2596:THR:HG23	3:D:2599:GLN:H	1.83	0.44
3:D:4650:HIS:ND1	3:D:4650:HIS:O	2.51	0.44
3:D:4674:GLU:OE2	3:D:4775:TYR:OH	2.29	0.44
3:A:4971:THR:OG1	3:A:4972:PRO:HD2	2.18	0.44
3:B:350:HIS:HB3	3:B:353:SER:HB3	1.99	0.44
3:B:597:HIS:HD2	3:B:1665:HIS:CE1	2.35	0.44
3:B:1443:GLN:OE1	3:B:1557:THR:N	2.47	0.44
3:B:1839:VAL:HG23	3:B:1935:VAL:HG22	1.98	0.44
3:B:2367:ALA:O	3:B:2374:SER:N	2.51	0.44
3:B:4951:LYS:NZ	3:B:4951:LYS:HB2	2.33	0.44
3:C:1770:SER:N	3:C:1956:GLU:OE2	2.51	0.44
3:C:3675:ASP:N	3:C:3675:ASP:OD1	2.49	0.44
3:C:4235:VAL:HG11	3:C:5019:TRP:CZ3	2.53	0.44
1:F:47:LYS:HB3	1:F:47:LYS:HE2	1.80	0.44
3:D:756:SER:OG	3:D:757:PHE:N	2.51	0.44
3:D:4705:VAL:HG23	3:D:4708:THR:OG1	2.18	0.44
3:A:1552:VAL:HG11	3:A:1562:ILE:HD13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1838:PHE:HA	3:A:1841:VAL:HG12	1.99	0.44
3:A:4808:PHE:C	3:A:4810:ALA:H	2.19	0.44
3:B:221:ARG:NH2	3:B:254:THR:O	2.50	0.44
3:B:4235:VAL:HG21	3:B:5019:TRP:CZ2	2.53	0.44
3:B:4574:ASN:O	3:B:4575:PHE:C	2.54	0.44
3:B:4650:HIS:ND1	3:B:4650:HIS:O	2.51	0.44
3:B:4652:LEU:O	3:B:4654:ALA:N	2.50	0.44
3:B:4688:ILE:HG21	3:B:4737:ILE:HD12	1.99	0.44
3:C:4740:LEU:HG	3:C:4741:LEU:HD22	1.99	0.44
3:C:4951:LYS:HB2	3:C:4951:LYS:NZ	2.33	0.44
2:J:51:ASP:N	2:J:51:ASP:OD1	2.51	0.44
3:D:883:ALA:HB3	3:D:967:PRO:HG3	1.98	0.44
3:D:1177:THR:OG1	3:D:1180:ARG:NH1	2.40	0.44
3:D:4927:ILE:HD11	3:C:4936:ILE:HG13	1.96	0.44
3:A:618:GLN:OE1	3:A:1678:ASN:ND2	2.35	0.44
3:A:756:SER:OG	3:A:757:PHE:N	2.51	0.44
3:A:2186:MET:O	3:A:2192:TYR:OH	2.33	0.44
3:A:3900:GLN:NE2	3:A:3967:GLU:O	2.50	0.44
3:A:4706:LEU:H	3:A:4706:LEU:HD12	1.83	0.44
3:B:756:SER:OG	3:B:757:PHE:N	2.51	0.44
3:B:1552:VAL:HG11	3:B:1562:ILE:HD13	2.00	0.44
3:B:2460:LEU:HA	3:C:131:LEU:HD22	2.00	0.44
3:B:4812:HIS:O	3:B:4814:LEU:N	2.51	0.44
2:J:106:LEU:HD22	2:J:126:ILE:HD11	2.00	0.43
2:I:79:ASP:N	2:I:79:ASP:OD1	2.47	0.43
2:I:106:LEU:HD22	2:I:126:ILE:HD11	2.00	0.43
3:D:123:THR:OG1	3:D:134:ASP:OD2	2.34	0.43
3:D:4979:THR:HG23	7:D:5104:ATP:C6	2.53	0.43
3:A:221:ARG:NH2	3:A:254:THR:O	2.50	0.43
3:A:717:ASP:OD2	3:A:722:TRP:NE1	2.46	0.43
3:A:883:ALA:HB3	3:A:967:PRO:HG3	1.99	0.43
3:A:4863:TYR:OH	3:A:4886:HIS:NE2	2.46	0.43
3:B:4235:VAL:HG11	3:B:5019:TRP:CZ3	2.53	0.43
3:B:4706:LEU:H	3:B:4706:LEU:HD12	1.83	0.43
3:B:4971:THR:OG1	3:B:4972:PRO:HD2	2.18	0.43
3:B:4995:LEU:HD23	3:B:4995:LEU:HA	1.84	0.43
3:C:4235:VAL:HG21	3:C:5019:TRP:CZ2	2.53	0.43
3:D:63:ALA:HB2	3:D:261:ARG:HH22	1.83	0.43
3:D:1008:SER:HB3	3:D:1017:ARG:HD2	1.99	0.43
3:D:4984:ASN:O	3:D:4987:ASN:HB2	2.17	0.43
3:A:492:ASP:OD1	3:A:493:ARG:NH1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4936:ILE:HG13	3:B:4927:ILE:HD12	1.99	0.43
3:C:1028:ASP:OD1	3:C:1028:ASP:N	2.47	0.43
3:C:4979:THR:HG23	7:C:5104:ATP:C6	2.53	0.43
2:K:45:THR:HG23	2:K:47:ALA:H	1.83	0.43
2:K:70:LEU:HD12	2:K:70:LEU:HA	1.88	0.43
2:J:45:THR:HG23	2:J:47:ALA:H	1.83	0.43
3:D:1838:PHE:HA	3:D:1841:VAL:HG12	1.99	0.43
3:A:1008:SER:HB3	3:A:1017:ARG:HD2	1.99	0.43
3:A:3820:LEU:O	3:A:3902:TYR:OH	2.37	0.43
3:A:4650:HIS:ND1	3:A:4650:HIS:O	2.51	0.43
3:A:4832:HIS:ND1	3:A:4943:LEU:HD11	2.33	0.43
3:B:717:ASP:OD1	3:B:720:HIS:N	2.52	0.43
3:B:4809:PHE:HA	3:B:4812:HIS:CD2	2.53	0.43
3:B:4851:TYR:HD2	3:B:4920:PHE:CD2	2.35	0.43
3:B:4933:GLN:HG3	3:C:4926:VAL:O	2.18	0.43
3:C:551:LEU:HD23	3:C:551:LEU:HA	1.86	0.43
3:C:756:SER:OG	3:C:757:PHE:N	2.51	0.43
3:C:1097:THR:OG1	3:C:1098:GLY:N	2.50	0.43
3:C:4715:TYR:HE2	3:C:4717:ASP:HB3	1.82	0.43
3:C:4971:THR:OG1	3:C:4972:PRO:HD2	2.18	0.43
3:D:4172:GLU:OE2	3:D:4175:ARG:NH2	2.44	0.43
3:D:4209:GLN:HE21	3:D:4665:LYS:HZ2	1.67	0.43
3:A:2458:ARG:O	3:A:2510:TYR:OH	2.32	0.43
3:A:3946:GLN:O	3:A:3950:ASN:ND2	2.43	0.43
3:B:4056:GLU:HA	3:B:4059:LEU:HB2	2.01	0.43
3:C:63:ALA:HB2	3:C:261:ARG:HH22	1.83	0.43
3:C:1838:PHE:HA	3:C:1841:VAL:HG12	1.99	0.43
3:C:2596:THR:HG23	3:C:2599:GLN:H	1.83	0.43
3:C:4705:VAL:HG23	3:C:4708:THR:OG1	2.18	0.43
3:C:4706:LEU:H	3:C:4706:LEU:HD12	1.83	0.43
3:C:4809:PHE:HA	3:C:4812:HIS:CD2	2.53	0.43
3:D:3675:ASP:OD1	3:D:3675:ASP:N	2.49	0.43
3:D:4235:VAL:HA	3:D:4238:CYS:HB2	2.00	0.43
3:D:4812:HIS:O	3:D:4814:LEU:N	2.51	0.43
3:D:4971:THR:OG1	3:D:4972:PRO:HD2	2.18	0.43
3:A:2367:ALA:O	3:A:2374:SER:N	2.51	0.43
3:A:4705:VAL:HG23	3:A:4708:THR:OG1	2.18	0.43
3:A:4979:THR:HG23	7:A:5104:ATP:C6	2.53	0.43
3:B:914:PRO:O	3:B:918:ARG:N	2.46	0.43
3:B:4544:LEU:HA	3:B:4547:GLN:HG2	2.01	0.43
3:C:3780:LEU:HD22	3:C:3816:MET:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4060:LYS:HE2	3:C:4060:LYS:HB3	1.85	0.43
3:C:4235:VAL:HA	3:C:4238:CYS:HB2	2.00	0.43
3:C:4896:GLY:HA2	3:C:4925:ILE:CD1	2.49	0.43
3:C:4923:PHE:O	3:C:4927:ILE:HB	2.19	0.43
3:D:350:HIS:HB3	3:D:353:SER:HB3	1.99	0.43
3:D:4235:VAL:HG11	3:D:5019:TRP:CZ3	2.53	0.43
3:D:4929:LEU:HD13	3:D:4929:LEU:HA	1.72	0.43
3:D:4951:LYS:HB2	3:D:4951:LYS:NZ	2.33	0.43
3:A:1044:ARG:O	3:A:1048:GLY:N	2.49	0.43
3:A:4235:VAL:HG11	3:A:5019:TRP:CZ3	2.53	0.43
3:A:4544:LEU:O	3:A:4547:GLN:HG2	2.18	0.43
3:B:1770:SER:N	3:B:1956:GLU:OE2	2.51	0.43
3:B:2548:LEU:HD23	3:B:2551:ASN:HD22	1.84	0.43
3:C:1452:TRP:HB3	3:C:1548:LEU:HD22	2.01	0.43
2:K:51:ASP:N	2:K:51:ASP:OD1	2.51	0.43
3:D:3903:LEU:HG	3:D:3915:ILE:HD12	2.01	0.43
3:D:4706:LEU:HD12	3:D:4706:LEU:H	1.83	0.43
3:D:4832:HIS:ND1	3:D:4943:LEU:HD11	2.33	0.43
3:A:1569:GLN:HB2	3:A:1572:ILE:HD11	2.00	0.43
3:A:2460:LEU:HA	3:B:131:LEU:HD22	2.00	0.43
3:A:4730:ASP:O	3:A:4731:ILE:C	2.56	0.43
3:A:4809:PHE:HA	3:A:4812:HIS:CD2	2.53	0.43
3:B:3798:LEU:HD23	3:B:3798:LEU:HA	1.87	0.43
3:B:3903:LEU:HG	3:B:3915:ILE:HD12	2.01	0.43
3:B:4730:ASP:O	3:B:4731:ILE:C	2.57	0.43
3:B:4979:THR:HG23	7:B:5104:ATP:C6	2.53	0.43
3:B:4983:HIS:CE1	3:B:5027:CYS:SG	3.12	0.43
3:C:350:HIS:HB3	3:C:353:SER:HB3	1.99	0.43
3:C:4056:GLU:HA	3:C:4059:LEU:HB2	2.01	0.43
3:C:4668:LEU:HD23	3:C:4672:LYS:HZ2	1.83	0.43
3:C:4983:HIS:CE1	3:C:5027:CYS:SG	3.12	0.43
3:D:1548:LEU:HD23	3:D:1548:LEU:HA	1.89	0.43
3:D:1552:VAL:HG11	3:D:1562:ILE:HD13	2.00	0.43
3:D:4896:GLY:HA2	3:D:4925:ILE:CD1	2.49	0.43
3:A:38:ALA:HB1	3:A:64:ILE:HG13	2.00	0.43
3:A:914:PRO:O	3:A:918:ARG:N	2.46	0.43
3:A:2190:VAL:HA	3:A:2193:GLN:HE21	1.84	0.43
3:A:2532:ALA:O	3:A:2535:SER:OG	2.31	0.43
3:A:4923:PHE:O	3:A:4927:ILE:HB	2.19	0.43
3:B:1838:PHE:HA	3:B:1841:VAL:HG12	1.99	0.43
3:B:2128:TYR:HB3	3:B:3669:PHE:HD2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3780:LEU:HD22	3:B:3816:MET:HG2	1.99	0.43
3:B:4235:VAL:HA	3:B:4238:CYS:HB2	2.00	0.43
3:B:4780:PHE:HA	3:B:4783:ILE:CG1	2.46	0.43
3:C:1552:VAL:HG11	3:C:1562:ILE:HD13	2.00	0.43
3:C:4655:PHE:HB2	3:C:4796:MET:CE	2.47	0.43
1:H:90:VAL:HG21	3:D:1782:PHE:CE1	2.54	0.43
2:L:106:LEU:HD22	2:L:126:ILE:HD11	2.00	0.43
2:J:87:ARG:HA	2:J:87:ARG:HD2	1.90	0.43
3:D:4688:ILE:HG21	3:D:4737:ILE:HD12	1.99	0.43
3:D:4783:ILE:HG13	3:D:4784:PHE:CD1	2.45	0.43
3:A:63:ALA:HB2	3:A:261:ARG:HH22	1.83	0.43
3:A:1561:VAL:HG12	3:A:1562:ILE:HG23	2.01	0.43
3:A:4640:GLU:CB	3:A:4641:PRO:HD3	2.47	0.43
3:A:4688:ILE:HG21	3:A:4737:ILE:HD12	1.99	0.43
3:B:1561:VAL:HG12	3:B:1562:ILE:HG23	2.01	0.43
3:B:2596:THR:HG23	3:B:2599:GLN:H	1.83	0.43
3:B:3915:ILE:O	3:B:3919:THR:N	2.52	0.43
3:B:4578:LEU:CD1	3:C:4849:TYR:CE2	2.98	0.43
3:C:320:LYS:HG3	3:C:356:TRP:CZ2	2.54	0.43
3:C:1561:VAL:HG12	3:C:1562:ILE:HG23	2.01	0.43
3:D:1569:GLN:HB2	3:D:1572:ILE:HD11	2.00	0.43
3:D:4544:LEU:O	3:D:4547:GLN:HG2	2.18	0.43
3:D:4661:TYR:CE2	3:D:4789:PHE:HD2	2.37	0.43
3:D:4809:PHE:HA	3:D:4812:HIS:CD2	2.53	0.43
3:A:350:HIS:HB3	3:A:353:SER:HB3	1.99	0.43
3:A:1770:SER:N	3:A:1956:GLU:OE2	2.51	0.43
3:A:3903:LEU:HG	3:A:3915:ILE:HD12	2.01	0.43
3:A:4544:LEU:HA	3:A:4547:GLN:HG2	2.01	0.43
3:A:4740:LEU:HG	3:A:4741:LEU:HD22	1.99	0.43
3:B:1452:TRP:HB3	3:B:1548:LEU:HD22	2.01	0.43
3:B:1812:LEU:HD23	3:B:1812:LEU:HA	1.86	0.43
3:B:4024:VAL:HA	3:B:4027:LEU:HD12	2.00	0.43
3:B:4705:VAL:HG23	3:B:4708:THR:OG1	2.18	0.43
3:B:4923:PHE:O	3:B:4927:ILE:HB	2.19	0.43
3:C:38:ALA:HB1	3:C:64:ILE:HG13	2.01	0.43
3:C:2258:LEU:HD12	3:C:2258:LEU:HA	1.90	0.43
3:C:2434:GLY:O	3:C:2508:ARG:NE	2.37	0.43
1:F:90:VAL:HG21	3:B:1782:PHE:CE1	2.54	0.42
2:I:51:ASP:OD1	2:I:51:ASP:N	2.51	0.42
3:D:717:ASP:OD1	3:D:720:HIS:N	2.52	0.42
3:D:1044:ARG:O	3:D:1048:GLY:N	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2367:ALA:O	3:D:2374:SER:N	2.51	0.42
3:A:2128:TYR:HB3	3:A:3669:PHE:HD2	1.84	0.42
3:A:4046:ASP:O	3:A:4050:GLU:N	2.43	0.42
3:A:4661:TYR:CE2	3:A:4789:PHE:HD2	2.37	0.42
3:A:4851:TYR:CD2	3:A:4920:PHE:HD2	2.36	0.42
3:B:1461:ASP:N	3:B:1461:ASP:OD1	2.49	0.42
3:B:1569:GLN:HB2	3:B:1572:ILE:HD11	2.00	0.42
3:B:4571:PHE:HD1	3:B:4571:PHE:HA	1.69	0.42
3:B:4832:HIS:ND1	3:B:4943:LEU:HD11	2.33	0.42
3:C:4024:VAL:HA	3:C:4027:LEU:HD12	2.00	0.42
3:C:4661:TYR:CE2	3:C:4789:PHE:HD2	2.37	0.42
1:E:90:VAL:HG21	3:C:1782:PHE:CE1	2.54	0.42
3:D:717:ASP:OD2	3:D:722:TRP:NE1	2.46	0.42
3:D:1561:VAL:HG12	3:D:1562:ILE:HG23	2.01	0.42
3:D:1763:PRO:HG3	3:D:2094:LEU:HD22	2.01	0.42
3:D:4730:ASP:O	3:D:4731:ILE:C	2.57	0.42
3:D:4851:TYR:CD2	3:D:4920:PHE:HD2	2.36	0.42
3:A:167:ASP:OD1	3:A:167:ASP:N	2.50	0.42
3:A:1763:PRO:HG3	3:A:2094:LEU:HD22	2.01	0.42
3:A:1930:LYS:HE3	3:A:1930:LYS:HB3	1.79	0.42
3:A:2319:PRO:HD2	3:A:2394:GLY:HA2	2.01	0.42
3:A:4024:VAL:HA	3:A:4027:LEU:HD12	2.00	0.42
3:A:4235:VAL:HA	3:A:4238:CYS:HB2	2.00	0.42
3:A:4586:PRO:HB3	3:A:4628:VAL:CB	2.49	0.42
3:B:1231:GLN:HG2	3:B:1232:ARG:HG3	2.01	0.42
3:B:1455:PRO:HG3	3:B:1549:PHE:HE2	1.84	0.42
3:B:3820:LEU:O	3:B:3902:TYR:OH	2.37	0.42
3:B:4853:VAL:HG13	3:B:4854:VAL:N	2.34	0.42
3:B:4896:GLY:HA2	3:B:4925:ILE:CD1	2.49	0.42
3:C:492:ASP:OD1	3:C:493:ARG:NH1	2.51	0.42
3:C:1763:PRO:HG3	3:C:2094:LEU:HD22	2.01	0.42
3:C:2548:LEU:HD23	3:C:2551:ASN:HD22	1.84	0.42
3:C:4544:LEU:HA	3:C:4547:GLN:HG2	2.01	0.42
1:G:53:GLN:HE21	1:G:53:GLN:HB2	1.69	0.42
3:D:38:ALA:HB1	3:D:64:ILE:HG13	2.01	0.42
3:D:1452:TRP:HB3	3:D:1548:LEU:HD22	2.01	0.42
3:D:1868:PRO:O	3:D:1872:THR:OG1	2.29	0.42
3:D:2190:VAL:HA	3:D:2193:GLN:HE21	1.84	0.42
3:D:4059:LEU:HD23	3:D:4059:LEU:HA	1.88	0.42
3:D:4586:PRO:HB3	3:D:4628:VAL:CB	2.49	0.42
3:D:4983:HIS:CE1	3:D:5027:CYS:SG	3.12	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:131:LEU:HD12	3:A:131:LEU:HA	1.86	0.42
3:A:1231:GLN:HG2	3:A:1232:ARG:HG3	2.01	0.42
3:A:1455:PRO:HG3	3:A:1549:PHE:HE2	1.84	0.42
3:A:4056:GLU:HA	3:A:4059:LEU:HB2	2.01	0.42
3:A:4951:LYS:HB2	3:A:4951:LYS:NZ	2.33	0.42
3:C:4688:ILE:HG21	3:C:4737:ILE:HD12	1.99	0.42
3:C:4722:ARG:HA	3:C:4743:MET:HE1	1.99	0.42
3:C:4832:HIS:ND1	3:C:4943:LEU:HD11	2.33	0.42
1:G:90:VAL:HG21	3:A:1782:PHE:CE1	2.54	0.42
2:I:44:PRO:HB2	2:I:48:GLU:HB2	2.02	0.42
3:D:492:ASP:OD1	3:D:493:ARG:NH1	2.51	0.42
3:D:840:VAL:HG12	3:D:1199:VAL:HG22	2.02	0.42
3:D:3915:ILE:O	3:D:3919:THR:N	2.52	0.42
3:A:840:VAL:HG12	3:A:1199:VAL:HG22	2.02	0.42
3:A:2457:LEU:HB2	3:A:2509:VAL:HG21	2.01	0.42
3:A:2548:LEU:HD23	3:A:2551:ASN:HD22	1.84	0.42
3:A:4853:VAL:HG13	3:A:4854:VAL:N	2.34	0.42
3:A:4896:GLY:HA2	3:A:4925:ILE:HD12	2.01	0.42
3:A:4983:HIS:CE1	3:A:5027:CYS:SG	3.12	0.42
3:B:320:LYS:HG3	3:B:356:TRP:CZ2	2.54	0.42
3:B:492:ASP:OD1	3:B:493:ARG:NH1	2.51	0.42
3:B:1763:PRO:HG3	3:B:2094:LEU:HD22	2.01	0.42
3:B:4544:LEU:O	3:B:4547:GLN:HG2	2.18	0.42
3:B:4655:PHE:HB2	3:B:4796:MET:CE	2.47	0.42
3:B:4688:ILE:HD11	3:B:4728:HIS:CD2	2.54	0.42
3:C:1455:PRO:HG3	3:C:1549:PHE:HE2	1.84	0.42
3:C:4722:ARG:HD3	3:C:4743:MET:HE1	2.00	0.42
3:C:4853:VAL:HG13	3:C:4854:VAL:N	2.34	0.42
3:C:4921:PHE:CD2	3:C:4922[B]:PHE:HD1	2.38	0.42
2:L:121:GLU:O	2:L:125:MET:N	2.48	0.42
3:D:1942:LEU:HD12	3:D:1942:LEU:HA	1.90	0.42
3:D:2610:LEU:HD12	3:D:2610:LEU:HA	1.88	0.42
3:D:3915:ILE:H	3:D:3915:ILE:HG13	1.58	0.42
3:D:4544:LEU:HA	3:D:4547:GLN:HG2	2.01	0.42
3:D:4853:VAL:HG13	3:D:4854:VAL:N	2.34	0.42
3:D:4923:PHE:O	3:D:4927:ILE:HB	2.19	0.42
3:A:2596:THR:HG23	3:A:2599:GLN:H	1.83	0.42
3:B:2319:PRO:HD2	3:B:2394:GLY:HA2	2.01	0.42
3:B:3832:ILE:HD13	3:B:3832:ILE:HA	1.92	0.42
3:B:4801:LEU:O	3:B:4808:PHE:HD2	2.03	0.42
3:C:2532:ALA:O	3:C:2535:SER:OG	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3903:LEU:HG	3:C:3915:ILE:HD12	2.01	0.42
3:C:4688:ILE:HD11	3:C:4728:HIS:CD2	2.54	0.42
3:C:4851:TYR:CD2	3:C:4920:PHE:HD2	2.36	0.42
1:H:47:LYS:HB3	1:H:47:LYS:HE2	1.80	0.42
2:L:44:PRO:HB2	2:L:48:GLU:HB2	2.02	0.42
1:G:66:MET:HE2	1:G:103:LEU:HG	2.02	0.42
2:J:70:LEU:HD12	2:J:70:LEU:HA	1.88	0.42
1:E:53:GLN:HE21	1:E:53:GLN:HB2	1.69	0.42
3:D:2319:PRO:HD2	3:D:2394:GLY:HA2	2.01	0.42
3:D:3694:LYS:HE3	3:D:3694:LYS:HB2	1.91	0.42
3:D:3860:ASN:OD1	3:D:3861:GLU:N	2.53	0.42
3:D:4056:GLU:HA	3:D:4059:LEU:HB2	2.01	0.42
3:D:4688:ILE:HD11	3:D:4728:HIS:CD2	2.54	0.42
3:A:3904:ARG:HA	3:A:3914:ASN:HA	2.02	0.42
3:A:4779:LYS:HE2	3:A:4779:LYS:HB3	1.70	0.42
3:A:4896:GLY:HA2	3:A:4925:ILE:CD1	2.49	0.42
3:B:2190:VAL:HA	3:B:2193:GLN:HE21	1.84	0.42
3:B:4715:TYR:HE2	3:B:4717:ASP:HB3	1.82	0.42
3:C:2367:ALA:O	3:C:2374:SER:N	2.51	0.42
3:C:3626:LYS:HE2	3:C:3626:LYS:HB2	1.89	0.42
2:L:51:ASP:OD1	2:L:51:ASP:N	2.51	0.42
3:D:320:LYS:HG3	3:D:356:TRP:CZ2	2.54	0.42
3:D:1291:LEU:HD23	3:D:1291:LEU:HA	1.90	0.42
3:D:4821:LYS:O	3:D:4825:THR:HG23	2.20	0.42
3:A:4978:HIS:O	3:A:4982:GLU:HB2	2.20	0.42
3:C:1569:GLN:HB2	3:C:1572:ILE:HD11	2.00	0.42
3:C:4586:PRO:HB3	3:C:4628:VAL:CB	2.49	0.42
3:C:4821:LYS:O	3:C:4825:THR:HG23	2.20	0.42
2:K:121:GLU:O	2:K:125:MET:N	2.48	0.42
1:E:47:LYS:HE2	1:E:47:LYS:HB3	1.80	0.42
3:D:552:ASP:OD1	3:D:552:ASP:N	2.47	0.42
3:D:1005:TRP:HH2	3:D:1013:ILE:HG23	1.84	0.42
3:D:4807:PHE:O	3:D:4810:ALA:HB3	2.20	0.42
3:A:1005:TRP:HH2	3:A:1013:ILE:HG23	1.84	0.42
3:B:840:VAL:HG12	3:B:1199:VAL:HG22	2.02	0.42
3:B:4661:TYR:CE2	3:B:4789:PHE:HD2	2.37	0.42
3:B:4983:HIS:CE1	3:B:5027:CYS:HG	2.37	0.42
3:C:205:ILE:HD12	3:C:205:ILE:HA	1.92	0.42
3:C:290:TYR:O	3:C:302:VAL:N	2.47	0.42
3:C:4978:HIS:O	3:C:4982:GLU:HB2	2.20	0.42
3:C:5013:MET:HE2	3:C:5013:MET:HB2	1.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1455:PRO:HG3	3:D:1549:PHE:HE2	1.84	0.42
3:D:2128:TYR:HB3	3:D:3669:PHE:HD2	1.84	0.42
3:D:4235:VAL:HG21	3:D:5019:TRP:CZ2	2.53	0.42
3:D:4978:HIS:O	3:D:4982:GLU:HB2	2.20	0.42
3:A:453:GLU:HA	3:A:454:PRO:HD3	1.95	0.42
3:A:584:LYS:HE2	3:A:584:LYS:HB3	1.94	0.42
3:A:1276:THR:O	3:A:1276:THR:OG1	2.32	0.42
3:B:38:ALA:HB1	3:B:64:ILE:HG13	2.01	0.42
3:B:63:ALA:HB2	3:B:261:ARG:HH22	1.83	0.42
3:B:1685:LEU:HD23	3:B:1685:LEU:HA	1.87	0.42
3:B:2186:MET:O	3:B:2192:TYR:OH	2.32	0.42
3:B:2358:ILE:HD12	3:C:195:PHE:HE1	1.84	0.42
3:B:4576:ILE:HG23	3:B:4639:MET:HB3	2.02	0.42
3:B:4701:TRP:CZ2	3:B:4781:GLY:HA3	2.55	0.42
3:B:4722:ARG:HD3	3:B:4743:MET:CE	2.50	0.42
3:B:4896:GLY:HA2	3:B:4925:ILE:HD12	2.01	0.42
3:B:4921:PHE:CD2	3:B:4922[B]:PHE:HD1	2.38	0.42
3:C:840:VAL:HG12	3:C:1199:VAL:HG22	2.02	0.42
3:C:2128:TYR:HB3	3:C:3669:PHE:HD2	1.84	0.42
3:C:4046:ASP:O	3:C:4050:GLU:N	2.43	0.42
3:C:4544:LEU:O	3:C:4547:GLN:HG2	2.18	0.42
3:C:4649:LEU:O	3:C:4652:LEU:N	2.52	0.42
3:D:3703:LEU:HD23	3:D:3703:LEU:HA	1.95	0.42
3:D:4715:TYR:HE2	3:D:4717:ASP:HB3	1.83	0.42
3:D:4722:ARG:N	3:D:4743:MET:HE3	2.35	0.42
3:A:3832:ILE:HD13	3:A:3832:ILE:HA	1.92	0.42
3:A:4235:VAL:HG21	3:A:5019:TRP:CZ2	2.53	0.42
3:A:4807:PHE:O	3:A:4810:ALA:HB3	2.20	0.42
3:A:4985:LEU:HD23	3:A:4985:LEU:H	1.85	0.42
3:B:1272:LEU:HD13	3:B:1289:LEU:HD11	2.02	0.42
3:B:1575:LEU:HD12	3:B:1575:LEU:HA	1.91	0.42
3:B:4821:LYS:O	3:B:4825:THR:HG23	2.20	0.42
3:C:418:LEU:HD23	3:C:493:ARG:HB3	2.02	0.42
3:C:1272:LEU:HD13	3:C:1289:LEU:HD11	2.02	0.42
3:C:4684:ASP:O	3:C:4684:ASP:OD1	2.38	0.42
3:C:4807:PHE:O	3:C:4810:ALA:HB3	2.20	0.42
2:J:94:ASP:OD2	2:J:99:GLY:N	2.53	0.41
3:D:2548:LEU:HD23	3:D:2551:ASN:HD22	1.84	0.41
3:D:4582:VAL:HG11	3:A:4860:ARG:NH1	2.34	0.41
3:A:769:GLU:N	3:A:1473:THR:O	2.50	0.41
3:A:1871:PHE:HZ	3:A:2094:LEU:HD13	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2114:PRO:HB3	3:A:3707:ARG:HH12	1.85	0.41
3:A:4821:LYS:O	3:A:4825:THR:HG23	2.20	0.41
3:C:1005:TRP:HH2	3:C:1013:ILE:HG23	1.84	0.41
3:C:2457:LEU:HB2	3:C:2509:VAL:HG21	2.01	0.41
3:C:2750:LYS:O	3:C:2754:PHE:N	2.53	0.41
3:C:3361:THR:O	3:C:3365:LEU:N	2.51	0.41
3:C:4576:ILE:HG23	3:C:4639:MET:HB3	2.02	0.41
3:C:4672:LYS:HZ2	3:C:4672:LYS:HG3	1.70	0.41
3:C:4896:GLY:HA2	3:C:4925:ILE:HD12	2.01	0.41
3:C:5009:TYR:CZ	3:C:5013:MET:HE3	2.55	0.41
3:D:167:ASP:N	3:D:167:ASP:OD1	2.50	0.41
3:D:1231:GLN:HG2	3:D:1232:ARG:HG3	2.01	0.41
3:D:1272:LEU:HD13	3:D:1289:LEU:HD11	2.02	0.41
3:D:2516:ASP:O	3:D:2520:HIS:N	2.53	0.41
3:D:4921:PHE:CD2	3:D:4922[B]:PHE:HD1	2.38	0.41
3:A:320:LYS:HG3	3:A:356:TRP:CZ2	2.54	0.41
3:A:3768:SER:HA	3:A:3771:HIS:CE1	2.55	0.41
3:A:4801:LEU:O	3:A:4808:PHE:HD2	2.03	0.41
3:B:1029:GLU:HA	3:B:1032:LYS:HB2	2.02	0.41
3:B:1871:PHE:HZ	3:B:2094:LEU:HD13	1.85	0.41
3:B:2461:VAL:O	3:B:2510:TYR:OH	2.38	0.41
3:B:3361:THR:O	3:B:3365:LEU:N	2.51	0.41
3:B:3860:ASN:OD1	3:B:3861:GLU:N	2.53	0.41
3:B:4851:TYR:CD2	3:B:4920:PHE:HD2	2.36	0.41
3:C:1029:GLU:HA	3:C:1032:LYS:HB2	2.02	0.41
3:C:4722:ARG:HD3	3:C:4743:MET:CE	2.50	0.41
3:C:4985:LEU:HD23	3:C:4985:LEU:H	1.85	0.41
2:K:94:ASP:OD2	2:K:99:GLY:N	2.53	0.41
3:D:1667:LEU:HD23	3:D:1667:LEU:HA	1.89	0.41
3:D:2457:LEU:HB2	3:D:2509:VAL:HG21	2.01	0.41
3:D:4632:LEU:HD23	3:D:4632:LEU:C	2.41	0.41
3:A:1452:TRP:HB3	3:A:1548:LEU:HD22	2.01	0.41
3:A:2358:ILE:HD12	3:B:195:PHE:HE1	1.85	0.41
3:B:2457:LEU:HB2	3:B:2509:VAL:HG21	2.01	0.41
3:B:2610:LEU:HD12	3:B:2610:LEU:HA	1.88	0.41
3:B:3768:SER:HA	3:B:3771:HIS:CE1	2.55	0.41
3:B:3904:ARG:HA	3:B:3914:ASN:HA	2.02	0.41
3:B:4806:ASN:O	3:B:4807:PHE:C	2.59	0.41
3:C:2319:PRO:HD2	3:C:2394:GLY:HA2	2.01	0.41
2:I:70:LEU:HD12	2:I:70:LEU:HA	1.88	0.41
3:D:205:ILE:HD12	3:D:205:ILE:HA	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:595:ARG:NH1	3:A:1643:GLU:OE2	2.45	0.41
3:A:717:ASP:OD1	3:A:720:HIS:N	2.51	0.41
3:A:1272:LEU:HD13	3:A:1289:LEU:HD11	2.02	0.41
3:A:4933:GLN:HG3	3:B:4926:VAL:O	2.19	0.41
3:B:76:ARG:HD3	3:B:76:ARG:HA	1.88	0.41
3:B:418:LEU:HD23	3:B:493:ARG:HB3	2.02	0.41
3:B:2458:ARG:O	3:B:2510:TYR:OH	2.32	0.41
3:B:4586:PRO:HB3	3:B:4628:VAL:CB	2.49	0.41
3:B:4978:HIS:O	3:B:4982:GLU:HB2	2.20	0.41
3:B:4985:LEU:HD23	3:B:4985:LEU:H	1.85	0.41
3:C:805:PRO:HA	3:C:806:PRO:HD3	1.93	0.41
3:C:2285:GLU:N	3:C:2285:GLU:OE1	2.54	0.41
2:L:94:ASP:OD2	2:L:99:GLY:N	2.53	0.41
2:K:44:PRO:HB2	2:K:48:GLU:HB2	2.02	0.41
1:F:56:ILE:H	1:F:56:ILE:HG12	1.66	0.41
3:D:2114:PRO:HB3	3:D:3707:ARG:HH12	1.85	0.41
3:D:2491:SER:O	3:D:2491:SER:OG	2.32	0.41
3:D:3904:ARG:HA	3:D:3914:ASN:HA	2.02	0.41
3:D:4785:THR:HG22	3:D:4785:THR:O	2.20	0.41
3:D:4801:LEU:O	3:D:4808:PHE:HD2	2.03	0.41
3:A:1018:ASN:HB3	3:A:1021:LEU:HG	2.03	0.41
3:A:2285:GLU:OE1	3:A:2285:GLU:N	2.54	0.41
3:A:2516:ASP:O	3:A:2520:HIS:N	2.53	0.41
3:A:4632:LEU:HD23	3:A:4632:LEU:C	2.41	0.41
3:A:4722:ARG:HD3	3:A:4743:MET:CE	2.50	0.41
3:B:205:ILE:HD12	3:B:205:ILE:HA	1.92	0.41
3:B:1667:LEU:HD23	3:B:1667:LEU:HA	1.89	0.41
3:B:2114:PRO:HB3	3:B:3707:ARG:HH12	1.86	0.41
3:B:3882:GLN:HE21	3:B:3882:GLN:HB3	1.67	0.41
3:B:4785:THR:O	3:B:4785:THR:HG22	2.20	0.41
3:C:221:ARG:HH21	3:C:259:LEU:HD21	1.85	0.41
3:C:717:ASP:OD1	3:C:720:HIS:N	2.52	0.41
3:C:721:LEU:HD23	3:C:721:LEU:HA	1.91	0.41
3:C:3768:SER:HA	3:C:3771:HIS:CE1	2.55	0.41
3:C:3832:ILE:HD13	3:C:3832:ILE:HA	1.92	0.41
3:C:4632:LEU:HD23	3:C:4632:LEU:C	2.41	0.41
3:C:4640:GLU:CB	3:C:4641:PRO:HD3	2.47	0.41
3:C:4779:LYS:HE2	3:C:4779:LYS:HB3	1.70	0.41
3:D:2285:GLU:N	3:D:2285:GLU:OE1	2.54	0.41
3:D:2321:ILE:HD12	3:D:2418:LEU:HD12	2.03	0.41
3:D:2471:SER:HA	3:D:2525:GLY:HA2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4576:ILE:HG23	3:D:4639:MET:HB3	2.02	0.41
3:D:4733:GLY:O	3:D:4737:ILE:HG12	2.21	0.41
3:D:4896:GLY:HA2	3:D:4925:ILE:HD12	2.01	0.41
3:A:4701:TRP:CZ2	3:A:4781:GLY:HA3	2.55	0.41
3:A:4929:LEU:HD13	3:A:4929:LEU:HA	1.72	0.41
3:B:4574:ASN:OD1	3:B:4813:LEU:HB2	2.21	0.41
3:B:4807:PHE:O	3:B:4810:ALA:HB3	2.20	0.41
3:C:595:ARG:NH1	3:C:1643:GLU:OE2	2.45	0.41
3:C:728:ARG:HA	3:C:728:ARG:HD3	1.91	0.41
3:C:3860:ASN:OD1	3:C:3861:GLU:N	2.53	0.41
3:C:3940:LYS:HE2	3:C:3940:LYS:HB3	1.77	0.41
3:C:4701:TRP:CZ2	3:C:4781:GLY:HA3	2.55	0.41
3:C:4733:GLY:O	3:C:4737:ILE:HG12	2.21	0.41
3:C:4995:LEU:HD23	3:C:4995:LEU:HA	1.84	0.41
2:J:126:ILE:HD13	2:J:126:ILE:HA	1.90	0.41
3:D:1871:PHE:HZ	3:D:2094:LEU:HD13	1.85	0.41
3:D:2024:PRO:HG2	3:D:2027:ILE:HG12	2.02	0.41
3:D:2461:VAL:O	3:D:2510:TYR:OH	2.38	0.41
3:D:3768:SER:HA	3:D:3771:HIS:CE1	2.55	0.41
3:D:4039:MET:H	3:D:4039:MET:HG3	1.67	0.41
3:A:2442:LEU:HD23	3:A:2442:LEU:HA	1.88	0.41
3:A:2491:SER:O	3:A:2491:SER:OG	2.32	0.41
3:A:3860:ASN:OD1	3:A:3861:GLU:N	2.53	0.41
3:A:3915:ILE:O	3:A:3919:THR:N	2.52	0.41
3:A:4578:LEU:CD1	3:B:4849:TYR:CE2	2.97	0.41
3:A:4687:TYR:O	3:A:4691:GLN:NE2	2.54	0.41
3:A:4688:ILE:HD11	3:A:4728:HIS:CD2	2.54	0.41
3:A:4921:PHE:CD2	3:A:4922[B]:PHE:HD1	2.38	0.41
3:B:1005:TRP:HH2	3:B:1013:ILE:HG23	1.84	0.41
3:B:4180:ARG:HD3	3:B:4192:ARG:NH1	2.36	0.41
3:B:4798:MET:C	3:B:4812:HIS:CE1	2.93	0.41
3:C:1231:GLN:HG2	3:C:1232:ARG:HG3	2.01	0.41
3:C:2190:VAL:HA	3:C:2193:GLN:HE21	1.84	0.41
2:K:86:ILE:HG12	2:K:143:VAL:HG12	2.03	0.41
2:J:10:ILE:H	2:J:10:ILE:HG13	1.69	0.41
3:D:221:ARG:HH21	3:D:259:LEU:HD21	1.85	0.41
3:D:4025:VAL:HA	3:D:4028:LEU:HD12	2.03	0.41
3:D:4708:THR:CG2	3:D:4775:TYR:HB2	2.47	0.41
3:D:4985:LEU:HD23	3:D:4985:LEU:H	1.85	0.41
3:A:2461:VAL:O	3:A:2510:TYR:OH	2.38	0.41
3:A:4727:LYS:HZ2	3:A:4728:HIS:CE1	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2516:ASP:O	3:B:2520:HIS:N	2.53	0.41
3:C:2003:GLN:O	3:C:2007:ASN:ND2	2.54	0.41
3:C:2471:SER:HA	3:C:2525:GLY:HA2	2.02	0.41
1:H:66:MET:HE2	1:H:103:LEU:HG	2.03	0.41
2:L:86:ILE:HG12	2:L:143:VAL:HG12	2.03	0.41
2:J:44:PRO:HB2	2:J:48:GLU:HB2	2.02	0.41
3:D:4640:GLU:CB	3:D:4641:PRO:HD3	2.47	0.41
3:D:4684:ASP:OD1	3:D:4684:ASP:O	2.38	0.41
3:D:4722:ARG:HD3	3:D:4743:MET:HE1	2.03	0.41
3:D:4722:ARG:HD3	3:D:4743:MET:CE	2.50	0.41
3:D:4727:LYS:NZ	3:D:4728:HIS:CE1	2.89	0.41
3:D:4968:PHE:O	3:D:4974:GLY:HA3	2.21	0.41
3:A:221:ARG:HH21	3:A:259:LEU:HD21	1.85	0.41
3:A:1029:GLU:HA	3:A:1032:LYS:HB2	2.02	0.41
3:A:2024:PRO:HG2	3:A:2027:ILE:HG12	2.02	0.41
3:A:4180:ARG:HD3	3:A:4192:ARG:NH1	2.36	0.41
3:A:4243:PHE:O	3:A:4244:GLU:C	2.59	0.41
3:A:4576:ILE:HG23	3:A:4639:MET:HB3	2.02	0.41
3:A:4684:ASP:OD1	3:A:4684:ASP:O	2.38	0.41
3:A:4727:LYS:NZ	3:A:4728:HIS:CE1	2.89	0.41
3:A:4733:GLY:O	3:A:4737:ILE:HG12	2.21	0.41
3:A:4983:HIS:CE1	3:A:5027:CYS:HG	2.39	0.41
3:B:265:LEU:HD23	3:B:279:PRO:HB2	2.03	0.41
3:B:290:TYR:O	3:B:302:VAL:N	2.47	0.41
3:B:1018:ASN:HB3	3:B:1021:LEU:HG	2.03	0.41
3:B:1519:LEU:HD23	3:B:1519:LEU:HA	1.92	0.41
3:B:1930:LYS:HE3	3:B:1930:LYS:HB3	1.79	0.41
3:B:2285:GLU:OE1	3:B:2285:GLU:N	2.54	0.41
3:B:2434:GLY:O	3:B:2508:ARG:NE	2.37	0.41
3:B:2471:SER:HA	3:B:2525:GLY:HA2	2.02	0.41
3:B:4632:LEU:HD23	3:B:4632:LEU:C	2.41	0.41
3:B:4649:LEU:O	3:B:4652:LEU:N	2.52	0.41
3:B:4687:TYR:O	3:B:4691:GLN:NE2	2.54	0.41
3:B:4708:THR:CG2	3:B:4775:TYR:HB2	2.47	0.41
3:C:468:LEU:HD23	3:C:468:LEU:HA	1.84	0.41
3:C:1871:PHE:HZ	3:C:2094:LEU:HD13	1.85	0.41
3:C:2321:ILE:HD12	3:C:2418:LEU:HD12	2.03	0.41
3:C:2461:VAL:O	3:C:2510:TYR:OH	2.38	0.41
3:C:3769:ARG:HH11	3:C:3769:ARG:HD3	1.75	0.41
3:C:4209:GLN:HE21	3:C:4665:LYS:HZ2	1.67	0.41
3:C:4243:PHE:O	3:C:4244:GLU:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4574:ASN:OD1	3:C:4813:LEU:HB2	2.21	0.41
3:C:4727:LYS:NZ	3:C:4728:HIS:CE1	2.89	0.41
3:C:4785:THR:O	3:C:4785:THR:HG22	2.20	0.41
3:C:4968:PHE:O	3:C:4974:GLY:HA3	2.21	0.41
3:D:584:LYS:HE2	3:D:584:LYS:HB3	1.94	0.41
3:D:1018:ASN:HB3	3:D:1021:LEU:HG	2.03	0.41
3:D:2442:LEU:HD23	3:D:2442:LEU:HA	1.88	0.41
3:D:2750:LYS:O	3:D:2754:PHE:N	2.53	0.41
3:D:3626:LYS:HE2	3:D:3626:LYS:HB2	1.89	0.41
3:D:3820:LEU:O	3:D:3902:TYR:OH	2.37	0.41
3:D:4574:ASN:OD1	3:D:4813:LEU:HB2	2.21	0.41
3:D:4919:THR:HG23	3:D:4920:PHE:N	2.36	0.41
3:A:2471:SER:HA	3:A:2525:GLY:HA2	2.02	0.41
3:A:4025:VAL:HA	3:A:4028:LEU:HD12	2.03	0.41
3:B:221:ARG:HH21	3:B:259:LEU:HD21	1.85	0.41
3:B:4722:ARG:N	3:B:4743:MET:HE3	2.36	0.41
3:B:4727:LYS:NZ	3:B:4728:HIS:CE1	2.89	0.41
3:C:1849:LEU:HD12	3:C:1849:LEU:HA	1.86	0.41
3:C:1930:LYS:HB3	3:C:1930:LYS:HE3	1.79	0.41
3:C:3946:GLN:O	3:C:3950:ASN:ND2	2.43	0.41
3:C:4025:VAL:HA	3:C:4028:LEU:HD12	2.03	0.41
3:C:4806:ASN:O	3:C:4807:PHE:C	2.59	0.41
3:D:418:LEU:HD23	3:D:493:ARG:HB3	2.02	0.40
3:D:527:ALA:HB2	3:D:563:VAL:HG22	2.03	0.40
3:D:1519:LEU:HD23	3:D:1519:LEU:HA	1.92	0.40
3:D:1651:LEU:O	3:D:1654:SER:OG	2.34	0.40
3:D:2003:GLN:O	3:D:2007:ASN:ND2	2.54	0.40
3:D:4180:ARG:HD3	3:D:4192:ARG:NH1	2.36	0.40
3:D:4192:ARG:H	3:D:4192:ARG:HG2	1.64	0.40
3:A:2138:LEU:HD23	3:A:3658:LYS:HD3	2.03	0.40
3:A:4574:ASN:OD1	3:A:4813:LEU:HB2	2.21	0.40
3:A:4785:THR:HG22	3:A:4785:THR:O	2.20	0.40
3:A:4931:ILE:O	3:A:4932:ILE:C	2.60	0.40
3:B:618:GLN:OE1	3:B:1678:ASN:ND2	2.35	0.40
3:C:1667:LEU:HD23	3:C:1667:LEU:HA	1.89	0.40
3:C:2516:ASP:O	3:C:2520:HIS:N	2.53	0.40
3:C:3904:ARG:HA	3:C:3914:ASN:HA	2.02	0.40
3:C:4687:TYR:O	3:C:4691:GLN:NE2	2.54	0.40
3:C:4730:ASP:O	3:C:4731:ILE:C	2.57	0.40
3:C:4799:SER:CA	3:C:4812:HIS:CE1	3.04	0.40
3:C:4801:LEU:O	3:C:4808:PHE:HD2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4822:THR:O	3:C:4826:ILE:HD12	2.21	0.40
2:I:94:ASP:OD2	2:I:99:GLY:N	2.54	0.40
3:D:615:ARG:NH2	3:D:1676:LEU:O	2.51	0.40
3:D:2138:LEU:HD23	3:D:3658:LYS:HD3	2.03	0.40
3:D:3678:SER:OG	3:D:3773:ARG:NH2	2.54	0.40
3:D:3940:LYS:HB3	3:D:3940:LYS:HE2	1.77	0.40
3:D:4822:THR:O	3:D:4826:ILE:HD12	2.22	0.40
3:A:416:LYS:HA	3:A:419:ASP:HB2	2.03	0.40
3:A:4171:LEU:HD23	3:A:4171:LEU:HA	1.95	0.40
3:A:4919:THR:HG23	3:A:4920:PHE:N	2.37	0.40
3:B:438:ILE:HD13	3:B:438:ILE:HA	1.97	0.40
3:B:1819:VAL:HG12	3:B:1926:LEU:HD13	2.03	0.40
3:B:2138:LEU:HD23	3:B:3658:LYS:HD3	2.03	0.40
3:B:3626:LYS:HE2	3:B:3626:LYS:HB2	1.89	0.40
3:B:4192:ARG:H	3:B:4192:ARG:HG2	1.64	0.40
3:C:1018:ASN:HB3	3:C:1021:LEU:HG	2.03	0.40
3:C:2138:LEU:HD23	3:C:3658:LYS:HD3	2.03	0.40
3:C:3915:ILE:O	3:C:3919:THR:N	2.52	0.40
3:C:4734:ARG:H	3:C:4734:ARG:HG2	1.62	0.40
1:F:66:MET:HE2	1:F:103:LEU:HG	2.03	0.40
1:E:23:VAL:HG23	1:E:105:ASN:H	1.86	0.40
2:I:28:ILE:HG13	2:I:64:ILE:HB	2.04	0.40
3:D:265:LEU:HD23	3:D:279:PRO:HB2	2.03	0.40
3:D:4687:TYR:O	3:D:4691:GLN:NE2	2.54	0.40
3:D:4780:PHE:CA	3:D:4783:ILE:HG12	2.50	0.40
3:D:4931:ILE:O	3:D:4932:ILE:C	2.60	0.40
3:A:418:LEU:HD23	3:A:493:ARG:HB3	2.02	0.40
3:A:1519:LEU:HD23	3:A:1519:LEU:HA	1.92	0.40
3:A:1819:VAL:HG12	3:A:1926:LEU:HD13	2.03	0.40
3:A:2358:ILE:HB	3:B:195:PHE:CE1	2.56	0.40
3:A:4953:ASP:OD1	3:A:4953:ASP:C	2.60	0.40
3:B:416:LYS:HA	3:B:419:ASP:HB2	2.03	0.40
3:B:3678:SER:OG	3:B:3773:ARG:NH2	2.54	0.40
3:B:4060:LYS:HE2	3:B:4060:LYS:HB3	1.85	0.40
3:B:4728:HIS:O	3:B:4729:GLY:C	2.60	0.40
3:B:4783:ILE:HG13	3:B:4784:PHE:CD1	2.45	0.40
3:B:4783:ILE:HG13	3:B:4784:PHE:N	2.37	0.40
3:B:4951:LYS:HB2	3:B:4951:LYS:HZ3	1.85	0.40
3:C:2025:GLU:HA	3:C:2028:ARG:HE	1.86	0.40
3:C:3678:SER:OG	3:C:3773:ARG:NH2	2.54	0.40
3:C:4805:ASN:O	3:C:4807:PHE:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:416:LYS:HA	3:D:419:ASP:HB2	2.03	0.40
3:D:1029:GLU:HA	3:D:1032:LYS:HB2	2.02	0.40
3:D:2025:GLU:HA	3:D:2028:ARG:HE	1.87	0.40
3:D:3886:ARG:NH2	3:D:3889:GLN:OE1	2.50	0.40
3:D:4230:LYS:HD2	3:D:4959:PHE:CE1	2.57	0.40
3:D:4744:ASP:O	3:D:4745:LEU:C	2.60	0.40
3:D:4783:ILE:HG13	3:D:4784:PHE:N	2.37	0.40
3:A:1147:ASP:OD1	3:A:1147:ASP:N	2.40	0.40
3:A:3882:GLN:HE21	3:A:3882:GLN:HB3	1.67	0.40
3:A:3885:PHE:HA	3:A:3888:LEU:HB2	2.04	0.40
3:A:4725:LEU:HD23	3:A:4725:LEU:C	2.42	0.40
3:A:4728:HIS:O	3:A:4729:GLY:C	2.60	0.40
3:A:4968:PHE:O	3:A:4974:GLY:HA3	2.21	0.40
3:B:131:LEU:HD12	3:B:131:LEU:HA	1.86	0.40
3:B:4025:VAL:HA	3:B:4028:LEU:HD12	2.03	0.40
3:B:4241:THR:HA	3:B:4244:GLU:OE1	2.21	0.40
3:B:4243:PHE:O	3:B:4244:GLU:C	2.59	0.40
3:B:4573:ILE:O	3:B:4573:ILE:HG22	2.22	0.40
3:B:4725:LEU:HD23	3:B:4725:LEU:C	2.42	0.40
3:B:4953:ASP:OD1	3:B:4953:ASP:C	2.60	0.40
3:C:416:LYS:HA	3:C:419:ASP:HB2	2.03	0.40
3:C:1260:MET:N	3:C:1269:CYS:O	2.52	0.40
3:C:1456:ASP:N	3:C:1456:ASP:OD1	2.39	0.40
3:C:1575:LEU:HD12	3:C:1575:LEU:HA	1.91	0.40
3:C:2518:LEU:HD22	3:C:2568:LEU:HD23	2.04	0.40
3:C:4648:LEU:HD12	3:C:4648:LEU:HA	1.92	0.40
2:L:42:GLN:HE22	2:L:76:LYS:HD2	1.87	0.40
1:E:56:ILE:H	1:E:56:ILE:HG12	1.66	0.40
2:I:126:ILE:HD13	2:I:126:ILE:HA	1.90	0.40
3:D:2518:LEU:HD22	3:D:2568:LEU:HD23	2.04	0.40
3:D:3885:PHE:HA	3:D:3888:LEU:HB2	2.04	0.40
3:D:4701:TRP:CZ2	3:D:4781:GLY:HA3	2.55	0.40
3:A:527:ALA:HB2	3:A:563:VAL:HG22	2.03	0.40
3:A:749:ASP:HB3	3:A:754:SER:HB3	2.04	0.40
3:A:2189:LYS:NZ	3:A:2193:GLN:HE22	2.20	0.40
3:A:3678:SER:OG	3:A:3773:ARG:NH2	2.54	0.40
3:B:2358:ILE:HB	3:C:195:PHE:CE1	2.55	0.40
3:B:4640:GLU:CB	3:B:4641:PRO:HD3	2.47	0.40
3:B:4733:GLY:O	3:B:4737:ILE:HG12	2.21	0.40
3:B:4925:ILE:HG22	3:B:4925:ILE:O	2.21	0.40
3:B:4932:ILE:O	3:B:4933:GLN:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:749:ASP:HB3	3:C:754:SER:HB3	2.04	0.40
3:C:2024:PRO:HG2	3:C:2027:ILE:HG12	2.02	0.40
3:C:2114:PRO:HB3	3:C:3707:ARG:HH12	1.86	0.40
3:C:3694:LYS:HA	3:C:3695:PRO:HD3	1.95	0.40
3:C:4180:ARG:HD3	3:C:4192:ARG:NH1	2.36	0.40
3:C:4230:LYS:HD2	3:C:4959:PHE:CE1	2.57	0.40
3:C:4953:ASP:OD1	3:C:4953:ASP:C	2.60	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	105/107 (98%)	99 (94%)	6 (6%)	0	100	100
1	F	105/107 (98%)	99 (94%)	6 (6%)	0	100	100
1	G	105/107 (98%)	99 (94%)	6 (6%)	0	100	100
1	H	105/107 (98%)	99 (94%)	6 (6%)	0	100	100
2	I	133/148 (90%)	128 (96%)	5 (4%)	0	100	100
2	J	133/148 (90%)	128 (96%)	5 (4%)	0	100	100
2	K	133/148 (90%)	128 (96%)	5 (4%)	0	100	100
2	L	133/148 (90%)	128 (96%)	5 (4%)	0	100	100
3	A	3813/5037 (76%)	3598 (94%)	205 (5%)	10 (0%)	37	70
3	B	3813/5037 (76%)	3597 (94%)	206 (5%)	10 (0%)	37	70
3	C	3813/5037 (76%)	3597 (94%)	206 (5%)	10 (0%)	37	70
3	D	3813/5037 (76%)	3597 (94%)	206 (5%)	10 (0%)	37	70
All	All	16204/21168 (76%)	15297 (94%)	867 (5%)	40 (0%)	45	75

All (40) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	D	837	PRO
3	D	4653	VAL
3	D	4745	LEU
3	A	837	PRO
3	A	4653	VAL
3	A	4745	LEU
3	B	837	PRO
3	B	4653	VAL
3	B	4745	LEU
3	C	837	PRO
3	C	4653	VAL
3	C	4745	LEU
3	D	4821	LYS
3	A	4821	LYS
3	B	4821	LYS
3	C	4821	LYS
3	D	4578	LEU
3	A	4578	LEU
3	B	4578	LEU
3	C	4578	LEU
3	A	834	PRO
3	B	834	PRO
3	D	834	PRO
3	D	3354	LEU
3	D	4568	PHE
3	D	4806	ASN
3	D	4813	LEU
3	A	3354	LEU
3	A	4568	PHE
3	A	4806	ASN
3	A	4813	LEU
3	B	3354	LEU
3	B	4568	PHE
3	B	4806	ASN
3	B	4813	LEU
3	C	834	PRO
3	C	3354	LEU
3	C	4568	PHE
3	C	4806	ASN
3	C	4813	LEU

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	84/88 (96%)	84 (100%)	0	100	100
1	F	84/88 (96%)	84 (100%)	0	100	100
1	G	84/88 (96%)	84 (100%)	0	100	100
1	H	84/88 (96%)	84 (100%)	0	100	100
2	I	104/122 (85%)	103 (99%)	1 (1%)	73	81
2	J	104/122 (85%)	103 (99%)	1 (1%)	73	81
2	K	104/122 (85%)	103 (99%)	1 (1%)	73	81
2	L	104/122 (85%)	103 (99%)	1 (1%)	73	81
3	A	2475/4276 (58%)	2449 (99%)	26 (1%)	70	79
3	B	2475/4276 (58%)	2449 (99%)	26 (1%)	70	79
3	C	2475/4276 (58%)	2449 (99%)	26 (1%)	70	79
3	D	2475/4276 (58%)	2449 (99%)	26 (1%)	70	79
All	All	10652/17944 (59%)	10544 (99%)	108 (1%)	71	81

All (108) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	L	127	ARG
2	K	127	ARG
2	J	127	ARG
2	I	127	ARG
3	D	16	THR
3	D	281	ARG
3	D	355	LEU
3	D	2625	ARG
3	D	3883	ASP
3	D	4137	ARG
3	D	4159	ARG
3	D	4214	LYS
3	D	4230	LYS
3	D	4241	THR

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Mol	Chain	Res	Type
3	D	4571	PHE
3	D	4573	ILE
3	D	4577	LEU
3	D	4649	LEU
3	D	4652	LEU
3	D	4658	ILE
3	D	4734	ARG
3	D	4812	HIS
3	D	4813	LEU
3	D	4814	LEU
3	D	4822	THR
3	D	4852	THR
3	D	4928	LEU
3	D	4929	LEU
3	D	4932	ILE
3	D	4938	ASP
3	A	16	THR
3	A	281	ARG
3	A	355	LEU
3	A	2625	ARG
3	A	3883	ASP
3	A	4137	ARG
3	A	4159	ARG
3	A	4214	LYS
3	A	4230	LYS
3	A	4241	THR
3	A	4571	PHE
3	A	4573	ILE
3	A	4577	LEU
3	A	4649	LEU
3	A	4652	LEU
3	A	4658	ILE
3	A	4734	ARG
3	A	4812	HIS
3	A	4813	LEU
3	A	4814	LEU
3	A	4822	THR
3	A	4852	THR
3	A	4928	LEU
3	A	4929	LEU
3	A	4932	ILE
3	A	4938	ASP

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Mol	Chain	Res	Type
3	B	16	THR
3	B	281	ARG
3	B	355	LEU
3	B	2625	ARG
3	B	3883	ASP
3	B	4137	ARG
3	B	4159	ARG
3	B	4214	LYS
3	B	4230	LYS
3	B	4241	THR
3	B	4571	PHE
3	B	4573	ILE
3	B	4577	LEU
3	B	4649	LEU
3	B	4652	LEU
3	B	4658	ILE
3	B	4734	ARG
3	B	4812	HIS
3	B	4813	LEU
3	B	4814	LEU
3	B	4822	THR
3	B	4852	THR
3	B	4928	LEU
3	B	4929	LEU
3	B	4932	ILE
3	B	4938	ASP
3	C	16	THR
3	C	281	ARG
3	C	355	LEU
3	C	2625	ARG
3	C	3883	ASP
3	C	4137	ARG
3	C	4159	ARG
3	C	4214	LYS
3	C	4230	LYS
3	C	4241	THR
3	C	4571	PHE
3	C	4573	ILE
3	C	4577	LEU
3	C	4649	LEU
3	C	4652	LEU
3	C	4658	ILE

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Mol	Chain	Res	Type
3	C	4734	ARG
3	C	4812	HIS
3	C	4813	LEU
3	C	4814	LEU
3	C	4822	THR
3	C	4852	THR
3	C	4928	LEU
3	C	4929	LEU
3	C	4932	ILE
3	C	4938	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (203) such sidechains are listed below:

Mol	Chain	Res	Type
1	H	20	GLN
1	H	25	HIS
1	H	53	GLN
1	H	94	ASN
2	L	42	GLN
1	G	20	GLN
1	G	25	HIS
1	G	32	ASN
1	G	53	GLN
1	G	94	ASN
2	K	42	GLN
1	F	20	GLN
1	F	25	HIS
1	F	53	GLN
1	F	94	ASN
2	J	42	GLN
1	E	20	GLN
1	E	25	HIS
1	E	53	GLN
1	E	94	ASN
2	I	42	GLN
3	D	71	GLN
3	D	383	HIS
3	D	473	ASN
3	D	597	HIS
3	D	765	GLN
3	D	838	HIS
3	D	877	ASN

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Mol	Chain	Res	Type
3	D	994	ASN
3	D	1035	ASN
3	D	1130	GLN
3	D	1299	GLN
3	D	1429	ASN
3	D	1459	GLN
3	D	1460	HIS
3	D	1491	ASN
3	D	1545	ASN
3	D	1560	ASN
3	D	1598	GLN
3	D	1665	HIS
3	D	1679	ASN
3	D	1719	HIS
3	D	1861	GLN
3	D	1938	GLN
3	D	1972	ASN
3	D	2007	ASN
3	D	2107	GLN
3	D	2193	GLN
3	D	2213	ASN
3	D	2247	GLN
3	D	2284	ASN
3	D	2551	ASN
3	D	3767	GLN
3	D	3781	GLN
3	D	3837	GLN
3	D	3851	ASN
3	D	3882	GLN
3	D	3900	GLN
3	D	3977	GLN
3	D	4020	GLN
3	D	4043	GLN
3	D	4209	GLN
3	D	4216	GLN
3	D	4223	ASN
3	D	4250	GLN
3	D	4812	HIS
3	D	5003	HIS
3	D	5006	GLN
3	A	71	GLN
3	A	383	HIS

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Mol	Chain	Res	Type
3	A	473	ASN
3	A	597	HIS
3	A	765	GLN
3	A	838	HIS
3	A	877	ASN
3	A	994	ASN
3	A	1035	ASN
3	A	1130	GLN
3	A	1299	GLN
3	A	1429	ASN
3	A	1459	GLN
3	A	1460	HIS
3	A	1545	ASN
3	A	1560	ASN
3	A	1598	GLN
3	A	1665	HIS
3	A	1679	ASN
3	A	1719	HIS
3	A	1861	GLN
3	A	1938	GLN
3	A	1972	ASN
3	A	2007	ASN
3	A	2107	GLN
3	A	2193	GLN
3	A	2213	ASN
3	A	2247	GLN
3	A	2284	ASN
3	A	2551	ASN
3	A	3767	GLN
3	A	3781	GLN
3	A	3837	GLN
3	A	3851	ASN
3	A	3882	GLN
3	A	3900	GLN
3	A	3977	GLN
3	A	4020	GLN
3	A	4043	GLN
3	A	4204	GLN
3	A	4209	GLN
3	A	4223	ASN
3	A	4250	GLN
3	A	4812	HIS

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Mol	Chain	Res	Type
3	A	5003	HIS
3	B	71	GLN
3	B	383	HIS
3	B	473	ASN
3	B	597	HIS
3	B	765	GLN
3	B	838	HIS
3	B	877	ASN
3	B	994	ASN
3	B	1035	ASN
3	B	1130	GLN
3	B	1299	GLN
3	B	1429	ASN
3	B	1459	GLN
3	B	1460	HIS
3	B	1491	ASN
3	B	1545	ASN
3	B	1560	ASN
3	B	1598	GLN
3	B	1679	ASN
3	B	1719	HIS
3	B	1861	GLN
3	B	1938	GLN
3	B	1972	ASN
3	B	2007	ASN
3	B	2107	GLN
3	B	2193	GLN
3	B	2213	ASN
3	B	2247	GLN
3	B	2284	ASN
3	B	2551	ASN
3	B	3767	GLN
3	B	3781	GLN
3	B	3837	GLN
3	B	3851	ASN
3	B	3882	GLN
3	B	3900	GLN
3	B	3977	GLN
3	B	4020	GLN
3	B	4043	GLN
3	B	4209	GLN
3	B	4223	ASN

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Mol	Chain	Res	Type
3	B	4250	GLN
3	B	4812	HIS
3	B	5006	GLN
3	C	71	GLN
3	C	383	HIS
3	C	473	ASN
3	C	597	HIS
3	C	765	GLN
3	C	838	HIS
3	C	877	ASN
3	C	994	ASN
3	C	1035	ASN
3	C	1130	GLN
3	C	1299	GLN
3	C	1429	ASN
3	C	1459	GLN
3	C	1460	HIS
3	C	1491	ASN
3	C	1545	ASN
3	C	1560	ASN
3	C	1598	GLN
3	C	1665	HIS
3	C	1679	ASN
3	C	1719	HIS
3	C	1861	GLN
3	C	1938	GLN
3	C	1972	ASN
3	C	2007	ASN
3	C	2107	GLN
3	C	2193	GLN
3	C	2213	ASN
3	C	2247	GLN
3	C	2284	ASN
3	C	2551	ASN
3	C	3767	GLN
3	C	3781	GLN
3	C	3837	GLN
3	C	3851	ASN
3	C	3882	GLN
3	C	3900	GLN
3	C	3977	GLN
3	C	4020	GLN

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Mol	Chain	Res	Type
3	C	4043	GLN
3	C	4209	GLN
3	C	4223	ASN
3	C	4250	GLN
3	C	4812	HIS
3	C	5003	HIS
3	C	5006	GLN

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 20 ligands modelled in this entry, 8 are monoatomic - leaving 12 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
8	CFF	A	5105	-	8,15,15	2.31	3 (37%)	8,23,23	1.19	1 (12%)
4	A1LVX	C	5101	-	37,39,39	0.87	1 (2%)	55,63,63	1.01	4 (7%)
8	CFF	B	5105	-	8,15,15	2.31	3 (37%)	8,23,23	1.21	1 (12%)
8	CFF	D	5105	-	8,15,15	2.31	3 (37%)	8,23,23	1.20	1 (12%)
7	ATP	A	5104	-	26,33,33	3.07	7 (26%)	31,52,52	1.46	5 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	A1LVX	B	5101	-	37,39,39	0.87	1 (2%)	55,63,63	1.02	4 (7%)
8	CFE	C	5105	-	8,15,15	2.32	3 (37%)	8,23,23	1.20	1 (12%)
4	A1LVX	A	5101	-	37,39,39	0.87	1 (2%)	55,63,63	1.02	4 (7%)
7	ATP	D	5104	-	26,33,33	3.07	7 (26%)	31,52,52	1.46	5 (16%)
7	ATP	B	5104	-	26,33,33	3.06	7 (26%)	31,52,52	1.46	5 (16%)
4	A1LVX	D	5101	-	37,39,39	0.87	1 (2%)	55,63,63	1.02	4 (7%)
7	ATP	C	5104	-	26,33,33	3.08	7 (26%)	31,52,52	1.46	5 (16%)

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
8	CFE	A	5105	-	-	-	0/2/2/2
4	A1LVX	C	5101	-	-	1/47/47/47	0/2/2/2
8	CFE	B	5105	-	-	-	0/2/2/2
8	CFE	D	5105	-	-	-	0/2/2/2
7	ATP	A	5104	-	-	12/18/38/38	0/3/3/3
4	A1LVX	B	5101	-	-	1/47/47/47	0/2/2/2
8	CFE	C	5105	-	-	-	0/2/2/2
4	A1LVX	A	5101	-	-	1/47/47/47	0/2/2/2
7	ATP	D	5104	-	-	12/18/38/38	0/3/3/3
7	ATP	B	5104	-	-	12/18/38/38	0/3/3/3
4	A1LVX	D	5101	-	-	1/47/47/47	0/2/2/2
7	ATP	C	5104	-	-	12/18/38/38	0/3/3/3

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	5104	ATP	C2'-C3'	-8.56	1.29	1.53
7	C	5104	ATP	C2'-C3'	-8.56	1.29	1.53
7	B	5104	ATP	C2'-C3'	-8.55	1.29	1.53
7	D	5104	ATP	C2'-C3'	-8.55	1.29	1.53
7	C	5104	ATP	O4'-C1'	-8.27	1.29	1.41
7	D	5104	ATP	O4'-C1'	-8.23	1.29	1.41
7	A	5104	ATP	O4'-C1'	-8.19	1.29	1.41
7	B	5104	ATP	O4'-C1'	-8.19	1.29	1.41
7	C	5104	ATP	C2'-C1'	5.71	1.62	1.53
7	D	5104	ATP	C2'-C1'	5.65	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	5104	ATP	C2'-C1'	5.64	1.62	1.53
7	B	5104	ATP	C2'-C1'	5.63	1.62	1.53
7	A	5104	ATP	O4'-C4'	4.33	1.54	1.45
7	B	5104	ATP	O4'-C4'	4.32	1.54	1.45
8	A	5105	CFF	C5-C4	4.31	1.45	1.39
8	C	5105	CFF	C5-C4	4.31	1.45	1.39
7	D	5104	ATP	O4'-C4'	4.31	1.54	1.45
7	C	5104	ATP	O4'-C4'	4.31	1.54	1.45
8	B	5105	CFF	C5-C6	4.29	1.48	1.41
8	C	5105	CFF	C5-C6	4.27	1.48	1.41
8	D	5105	CFF	C5-C6	4.27	1.48	1.41
8	D	5105	CFF	C5-C4	4.26	1.45	1.39
7	B	5104	ATP	C6-N6	4.24	1.49	1.34
7	D	5104	ATP	C6-N6	4.24	1.49	1.34
7	A	5104	ATP	C6-N6	4.24	1.49	1.34
7	C	5104	ATP	C6-N6	4.24	1.49	1.34
8	B	5105	CFF	C5-C4	4.22	1.45	1.39
8	A	5105	CFF	C5-C6	4.22	1.48	1.41
7	C	5104	ATP	C5'-C4'	-3.35	1.41	1.51
7	A	5104	ATP	C5'-C4'	-3.34	1.41	1.51
7	D	5104	ATP	C5'-C4'	-3.34	1.41	1.51
7	B	5104	ATP	C5'-C4'	-3.32	1.41	1.51
7	A	5104	ATP	O3'-C3'	2.96	1.50	1.43
7	C	5104	ATP	O3'-C3'	2.96	1.50	1.43
7	D	5104	ATP	O3'-C3'	2.95	1.49	1.43
7	B	5104	ATP	O3'-C3'	2.94	1.49	1.43
4	C	5101	A1LVX	C17-I1	-2.93	2.03	2.10
4	D	5101	A1LVX	C17-I1	-2.92	2.03	2.10
4	A	5101	A1LVX	C17-I1	-2.92	2.03	2.10
4	B	5101	A1LVX	C17-I1	-2.92	2.03	2.10
8	A	5105	CFF	C6-N1	2.14	1.41	1.38
8	B	5105	CFF	C6-N1	2.12	1.41	1.38
8	C	5105	CFF	C6-N1	2.12	1.41	1.38
8	D	5105	CFF	C6-N1	2.11	1.41	1.38

All (40) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	5104	ATP	N3-C2-N1	-4.60	121.48	128.68
7	C	5104	ATP	N3-C2-N1	-4.60	121.48	128.68
7	A	5104	ATP	N3-C2-N1	-4.59	121.50	128.68
7	D	5104	ATP	N3-C2-N1	-4.59	121.51	128.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	A	5104	ATP	PA-O3A-PB	-3.13	122.10	132.83
7	B	5104	ATP	PA-O3A-PB	-3.12	122.11	132.83
7	D	5104	ATP	PA-O3A-PB	-3.12	122.13	132.83
7	C	5104	ATP	PA-O3A-PB	-3.11	122.16	132.83
4	B	5101	A1LVX	O1-S1-C2	2.98	111.28	108.38
4	A	5101	A1LVX	O1-S1-C2	2.96	111.26	108.38
4	D	5101	A1LVX	O1-S1-C2	2.95	111.25	108.38
4	C	5101	A1LVX	O1-S1-C2	2.91	111.21	108.38
4	A	5101	A1LVX	O2-S1-C5	-2.84	106.05	108.91
4	B	5101	A1LVX	O2-S1-C5	-2.82	106.07	108.91
4	D	5101	A1LVX	O2-S1-C5	-2.82	106.07	108.91
4	C	5101	A1LVX	O2-S1-C5	-2.77	106.12	108.91
7	D	5104	ATP	C3'-C2'-C1'	2.57	104.84	100.98
7	B	5104	ATP	C3'-C2'-C1'	2.56	104.83	100.98
7	A	5104	ATP	C3'-C2'-C1'	2.55	104.82	100.98
7	C	5104	ATP	C3'-C2'-C1'	2.55	104.81	100.98
8	B	5105	CFF	C5-C6-N1	-2.52	115.51	118.20
8	C	5105	CFF	C5-C6-N1	-2.51	115.53	118.20
8	D	5105	CFF	C5-C6-N1	-2.50	115.53	118.20
8	A	5105	CFF	C5-C6-N1	-2.47	115.57	118.20
7	A	5104	ATP	PB-O3B-PG	-2.41	124.55	132.83
7	C	5104	ATP	PB-O3B-PG	-2.41	124.55	132.83
7	B	5104	ATP	PB-O3B-PG	-2.41	124.56	132.83
7	D	5104	ATP	PB-O3B-PG	-2.41	124.57	132.83
4	B	5101	A1LVX	C7-C17-I1	-2.31	117.22	122.94
4	D	5101	A1LVX	C7-C17-I1	-2.30	117.24	122.94
4	A	5101	A1LVX	C7-C17-I1	-2.29	117.25	122.94
4	C	5101	A1LVX	C7-C17-I1	-2.28	117.29	122.94
4	A	5101	A1LVX	O1-S1-C5	-2.20	106.69	108.91
4	C	5101	A1LVX	O1-S1-C5	-2.19	106.70	108.91
7	B	5104	ATP	C4-C5-N7	-2.19	107.12	109.40
4	D	5101	A1LVX	O1-S1-C5	-2.18	106.71	108.91
4	B	5101	A1LVX	O1-S1-C5	-2.18	106.72	108.91
7	D	5104	ATP	C4-C5-N7	-2.17	107.14	109.40
7	A	5104	ATP	C4-C5-N7	-2.15	107.16	109.40
7	C	5104	ATP	C4-C5-N7	-2.15	107.16	109.40

There are no chirality outliers.

All (52) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	D	5104	ATP	PB-O3B-PG-O3G

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Mol	Chain	Res	Type	Atoms
7	D	5104	ATP	C5'-O5'-PA-O3A
7	A	5104	ATP	PB-O3B-PG-O3G
7	A	5104	ATP	C5'-O5'-PA-O3A
7	B	5104	ATP	PB-O3B-PG-O3G
7	B	5104	ATP	C5'-O5'-PA-O3A
7	C	5104	ATP	PB-O3B-PG-O3G
7	C	5104	ATP	C5'-O5'-PA-O3A
7	D	5104	ATP	PB-O3B-PG-O2G
7	A	5104	ATP	PB-O3B-PG-O2G
7	B	5104	ATP	PB-O3B-PG-O2G
7	C	5104	ATP	PB-O3B-PG-O2G
7	D	5104	ATP	PB-O3A-PA-O2A
7	A	5104	ATP	PB-O3A-PA-O2A
7	B	5104	ATP	PB-O3A-PA-O2A
7	C	5104	ATP	PB-O3A-PA-O2A
7	D	5104	ATP	C4'-C5'-O5'-PA
7	A	5104	ATP	C4'-C5'-O5'-PA
7	B	5104	ATP	C4'-C5'-O5'-PA
7	C	5104	ATP	C4'-C5'-O5'-PA
7	D	5104	ATP	C5'-O5'-PA-O1A
7	D	5104	ATP	C5'-O5'-PA-O2A
7	A	5104	ATP	C5'-O5'-PA-O1A
7	B	5104	ATP	C5'-O5'-PA-O1A
7	B	5104	ATP	C5'-O5'-PA-O2A
7	C	5104	ATP	C5'-O5'-PA-O1A
7	D	5104	ATP	PG-O3B-PB-O3A
7	A	5104	ATP	PG-O3B-PB-O3A
7	B	5104	ATP	PG-O3B-PB-O3A
7	C	5104	ATP	PG-O3B-PB-O3A
7	D	5104	ATP	O4'-C4'-C5'-O5'
7	A	5104	ATP	O4'-C4'-C5'-O5'
7	B	5104	ATP	O4'-C4'-C5'-O5'
7	C	5104	ATP	O4'-C4'-C5'-O5'
7	D	5104	ATP	C3'-C4'-C5'-O5'
7	A	5104	ATP	C3'-C4'-C5'-O5'
7	B	5104	ATP	C3'-C4'-C5'-O5'
7	C	5104	ATP	C3'-C4'-C5'-O5'
7	D	5104	ATP	PB-O3B-PG-O1G
7	A	5104	ATP	PB-O3B-PG-O1G
7	B	5104	ATP	PB-O3B-PG-O1G
7	C	5104	ATP	PB-O3B-PG-O1G
4	D	5101	A1LVX	C11-C12-N2-C19

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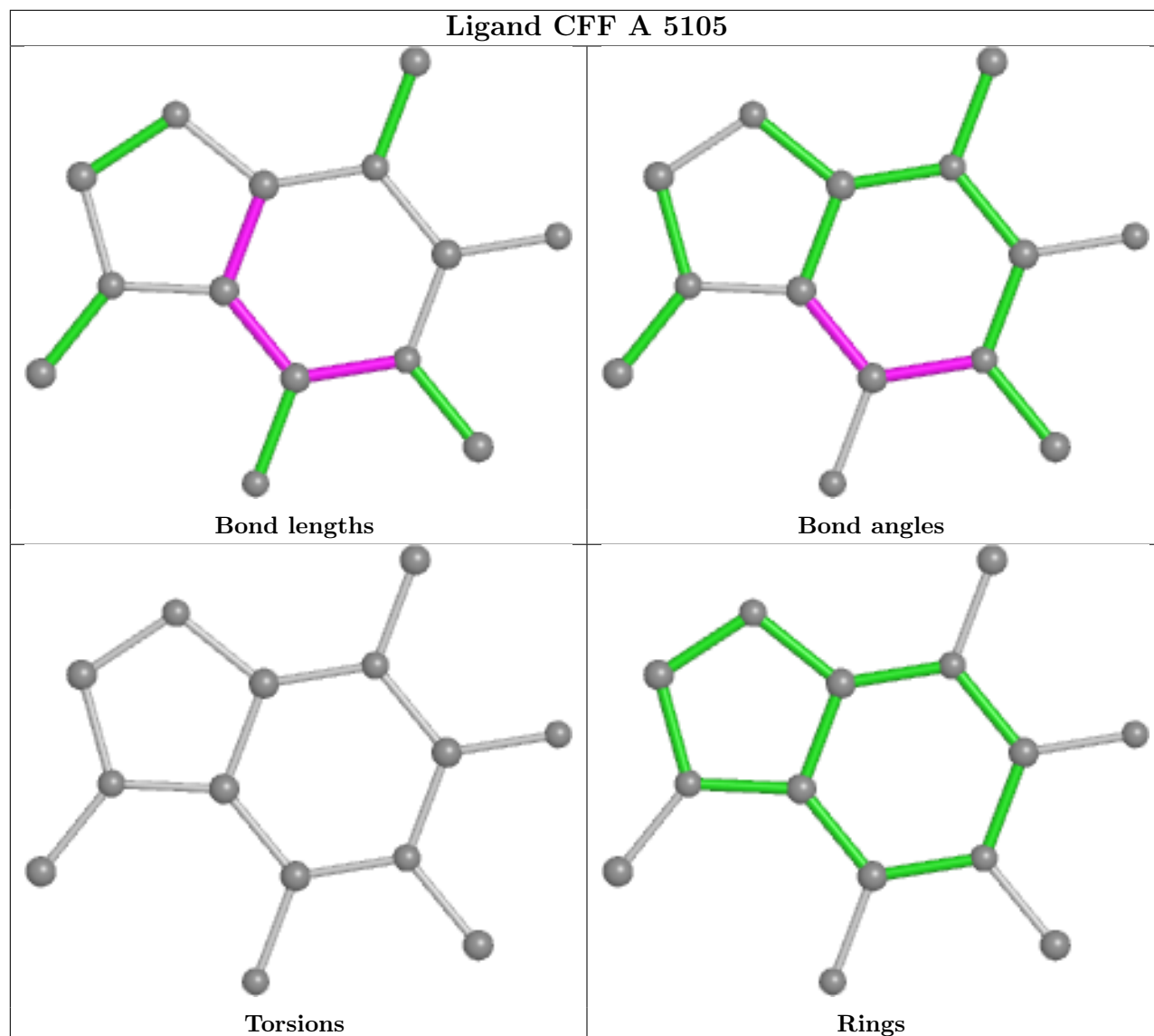
Mol	Chain	Res	Type	Atoms
4	B	5101	A1LVX	C11-C12-N2-C19
4	A	5101	A1LVX	C11-C12-N2-C19
4	C	5101	A1LVX	C11-C12-N2-C19
7	D	5104	ATP	PG-O3B-PB-O1B
7	A	5104	ATP	PG-O3B-PB-O1B
7	B	5104	ATP	PG-O3B-PB-O1B
7	C	5104	ATP	PG-O3B-PB-O1B
7	A	5104	ATP	C5'-O5'-PA-O2A
7	C	5104	ATP	C5'-O5'-PA-O2A

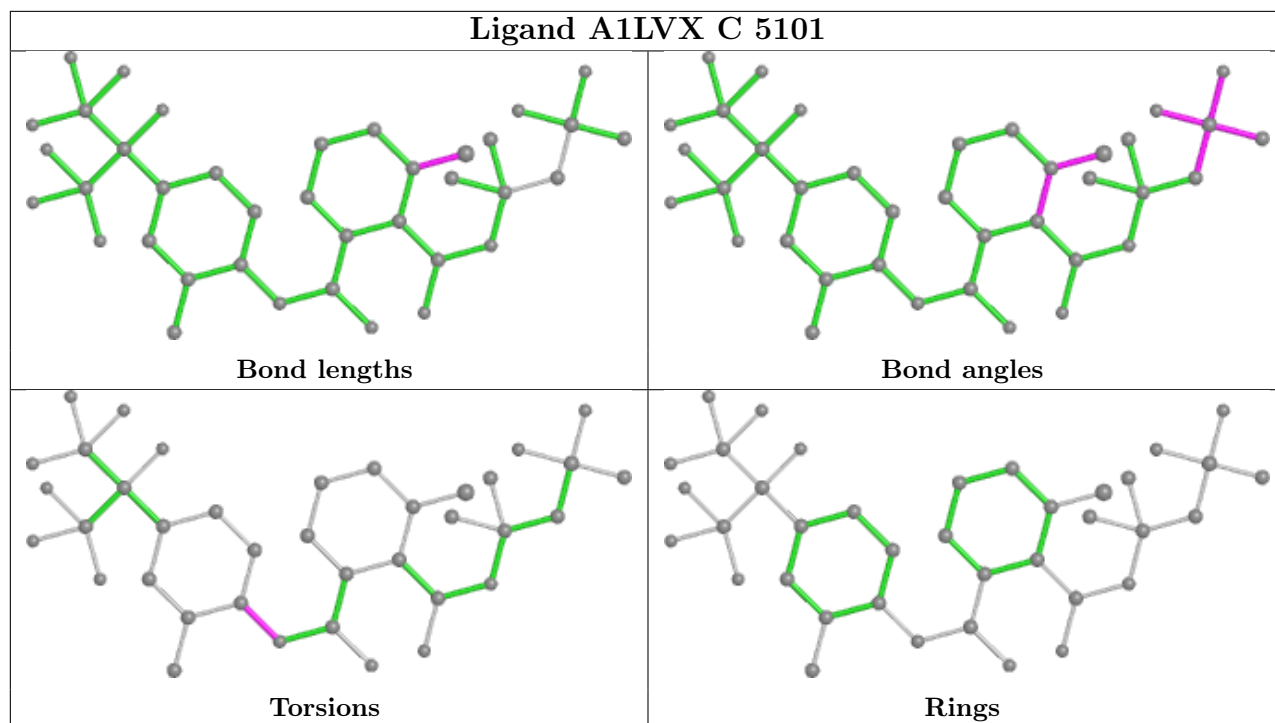
There are no ring outliers.

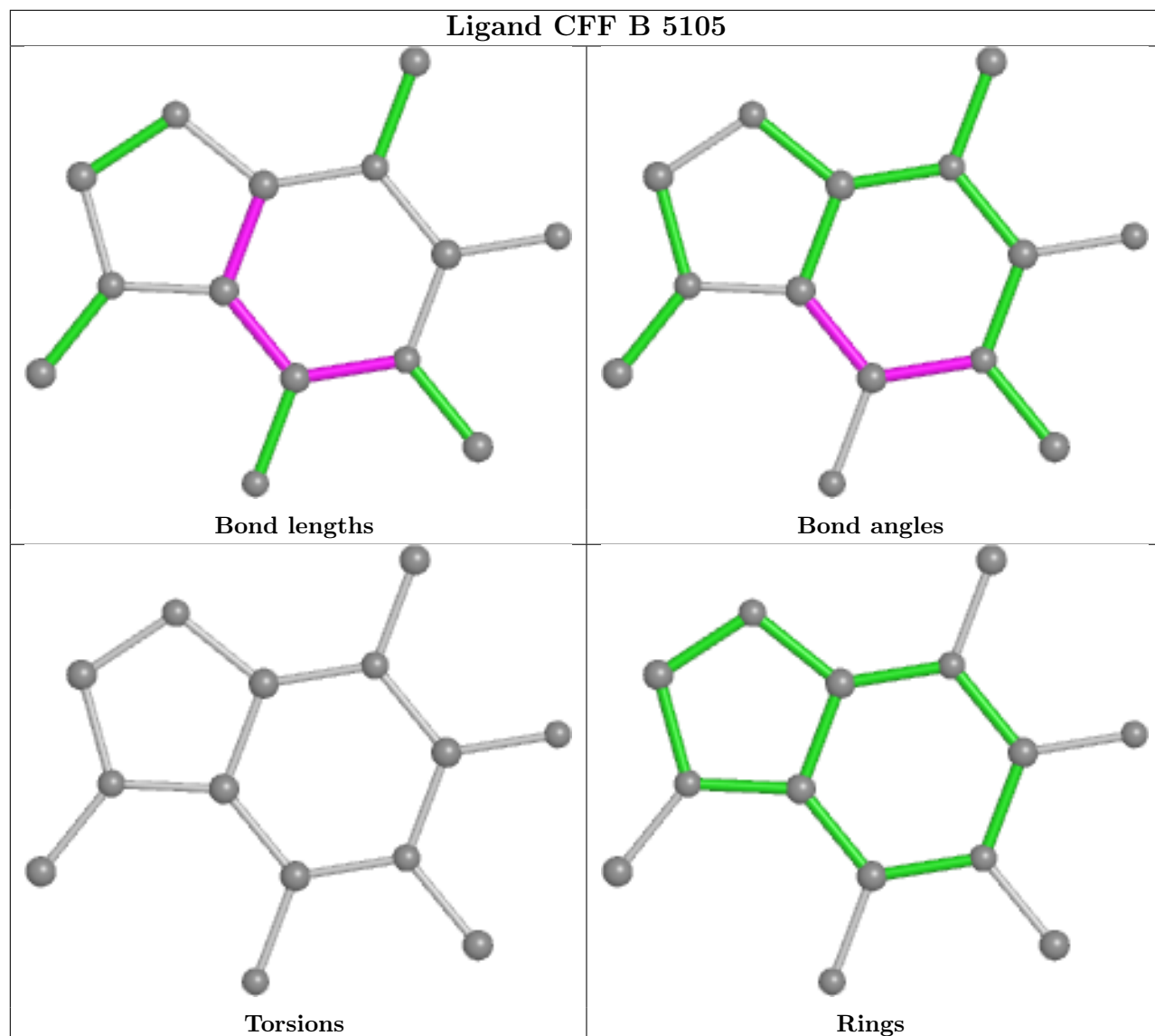
8 monomers are involved in 16 short contacts:

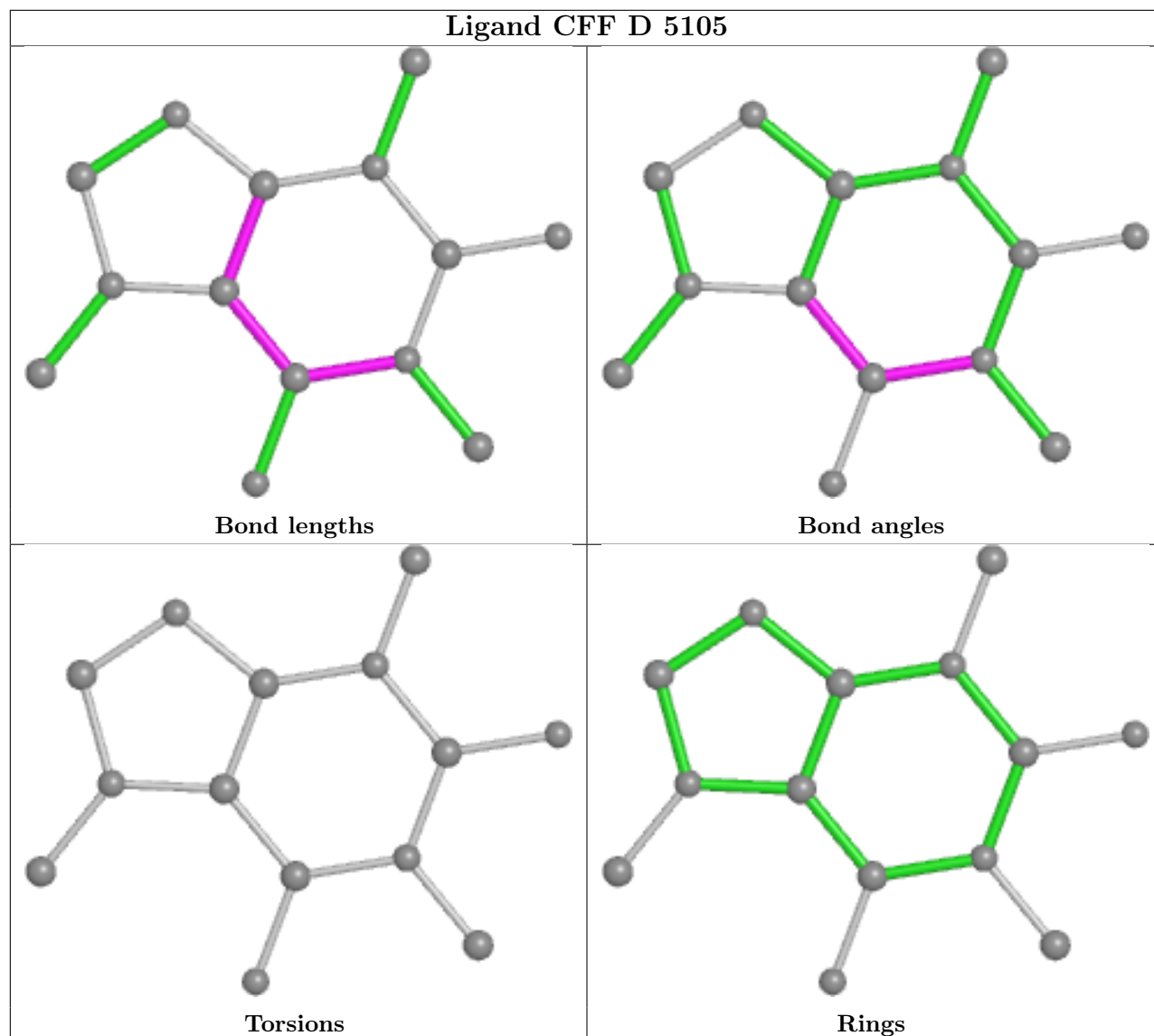
Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	A	5105	CFF	2	0
8	B	5105	CFF	2	0
8	D	5105	CFF	2	0
7	A	5104	ATP	2	0
8	C	5105	CFF	2	0
7	D	5104	ATP	2	0
7	B	5104	ATP	2	0
7	C	5104	ATP	2	0

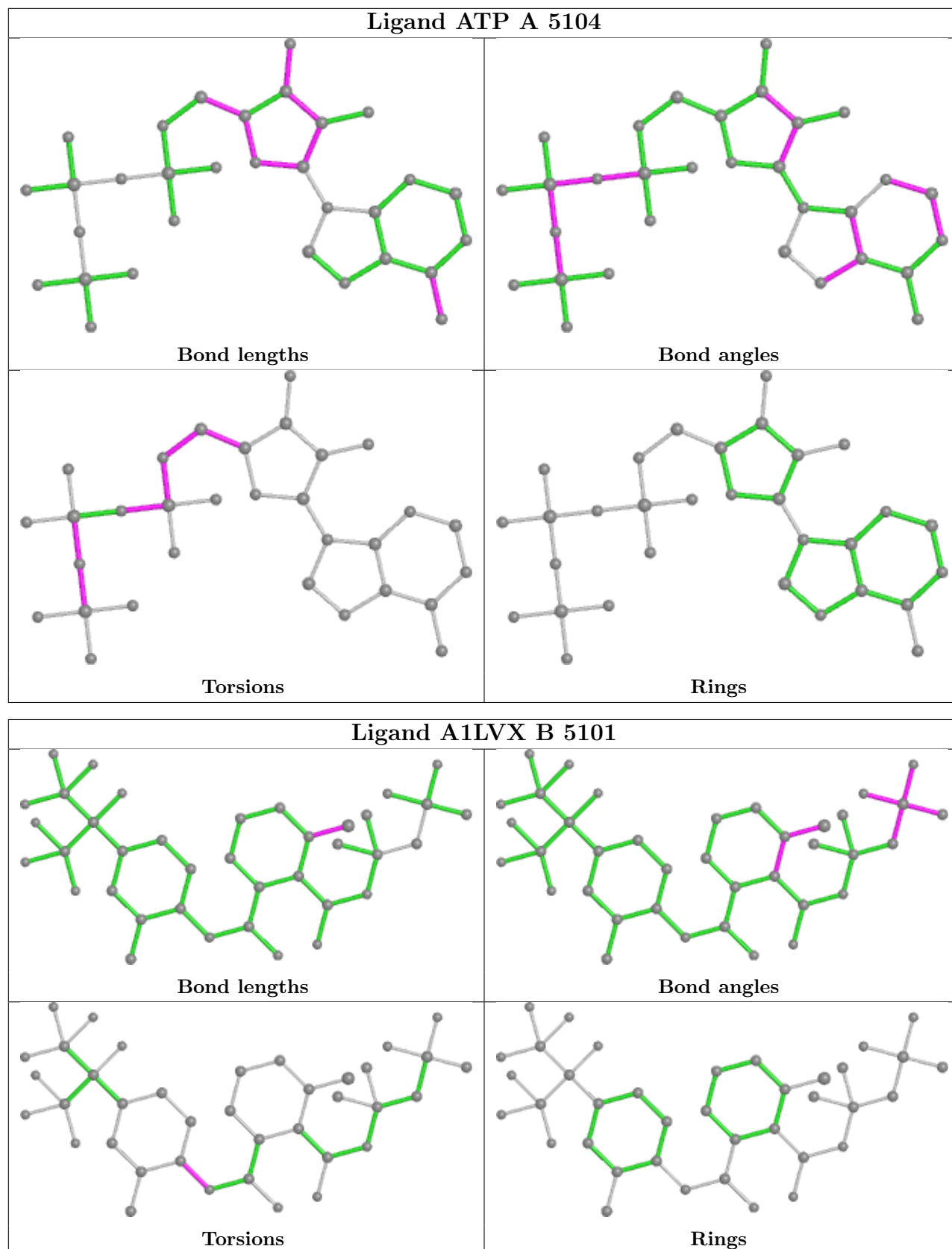
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

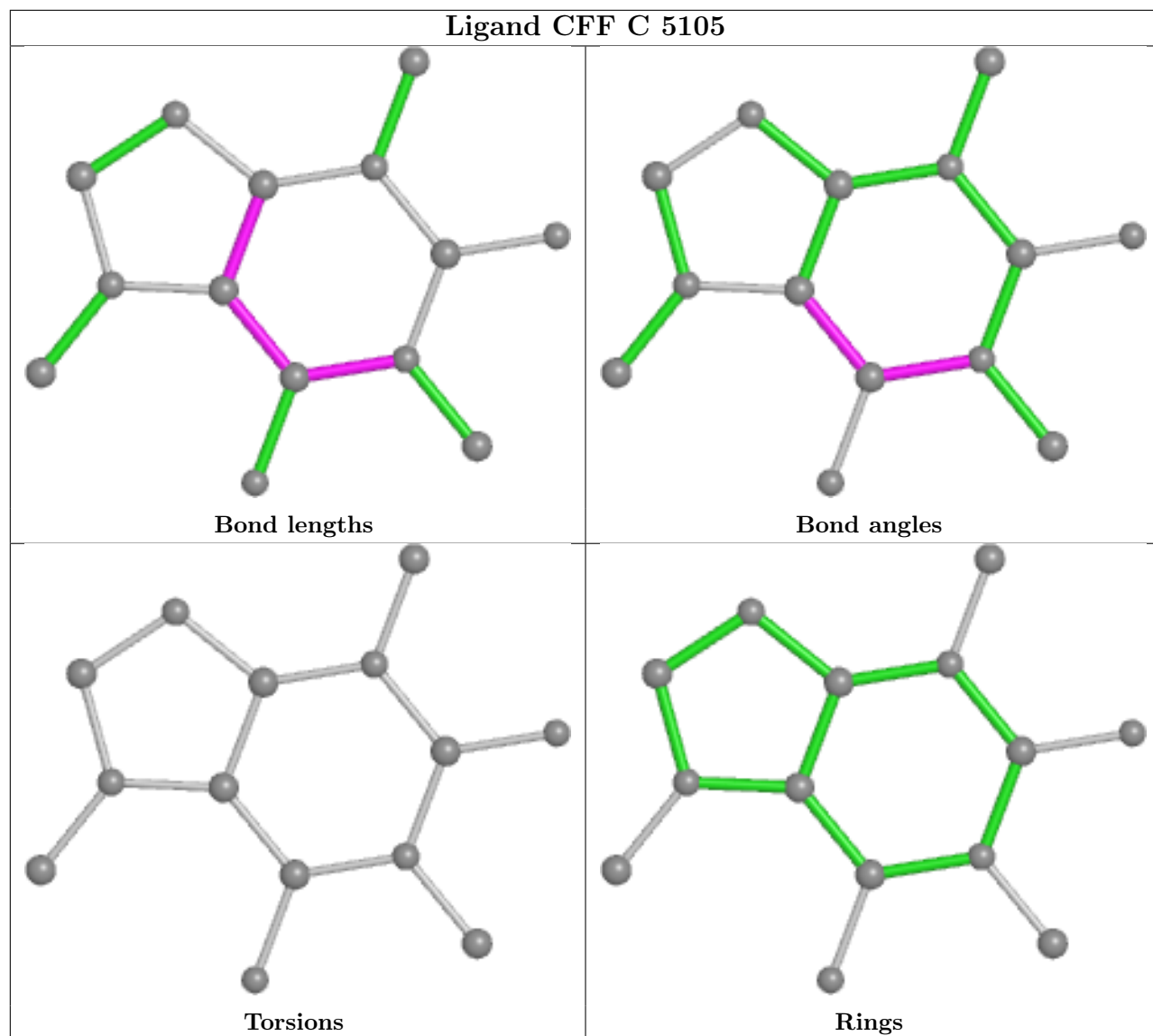


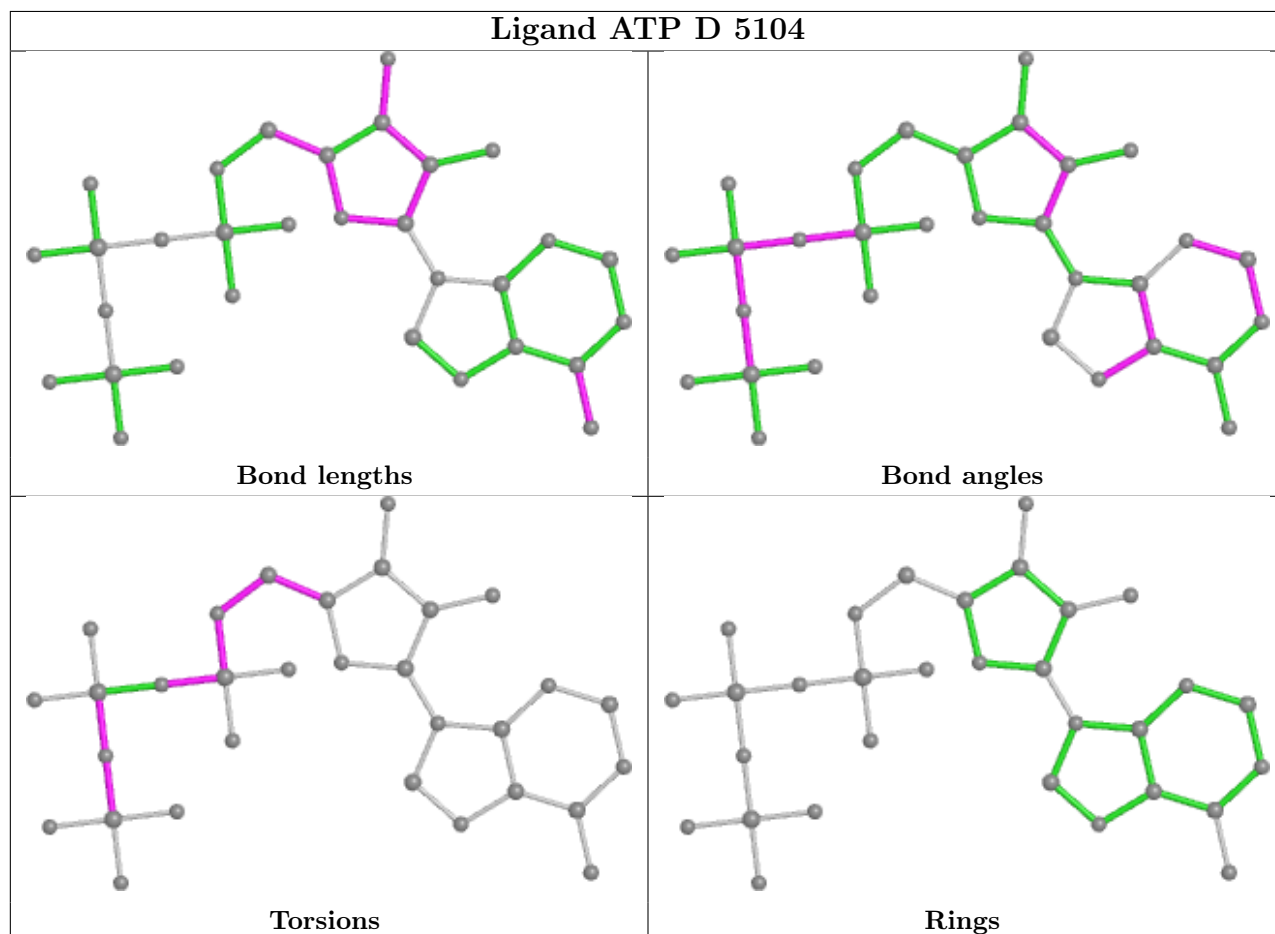
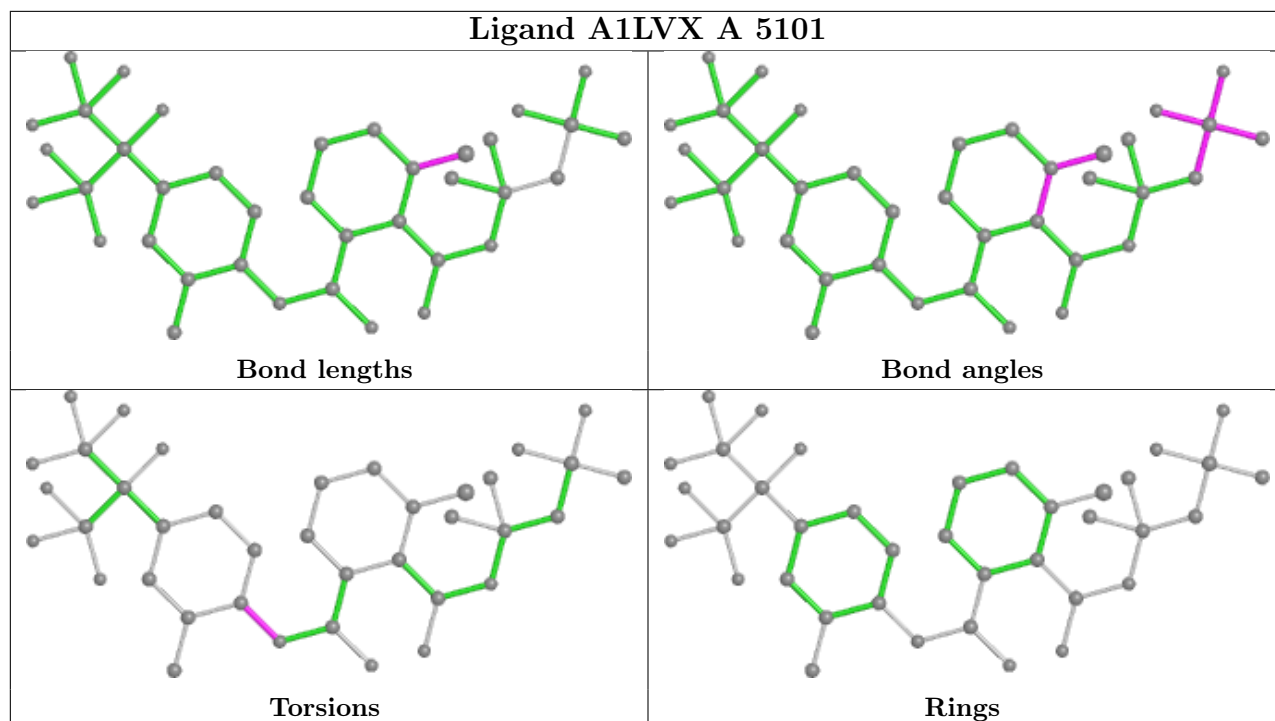


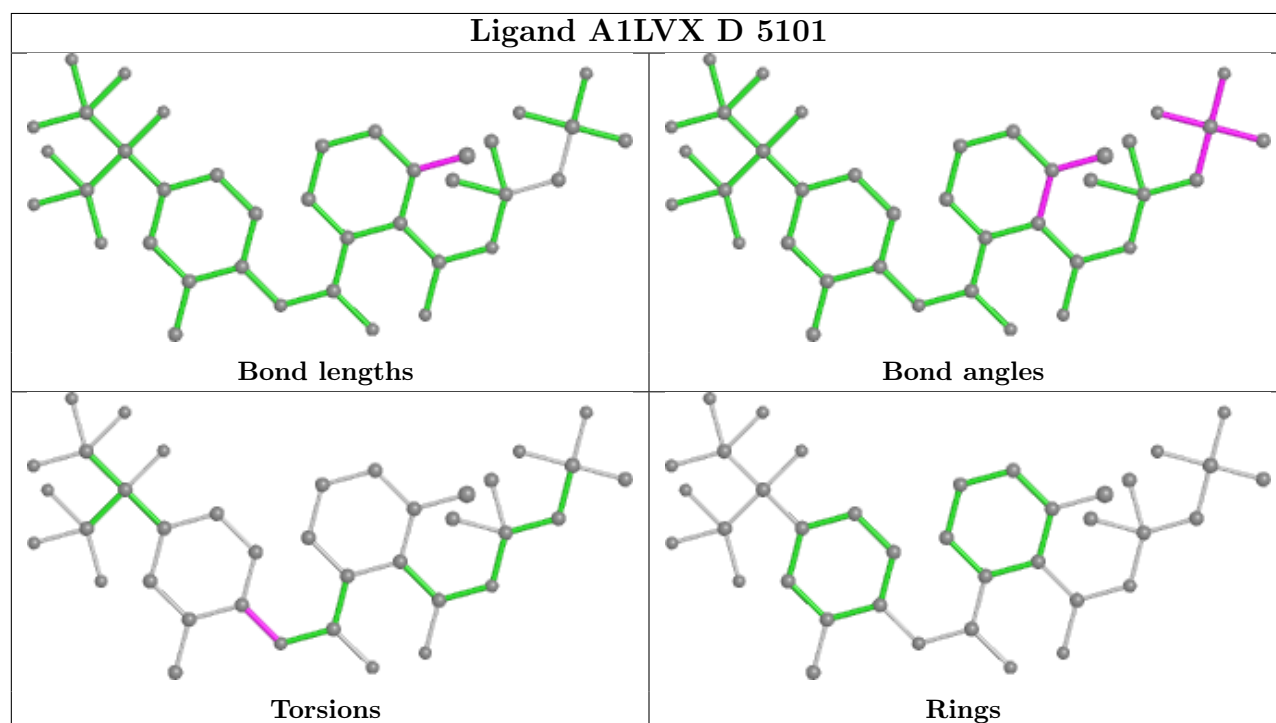
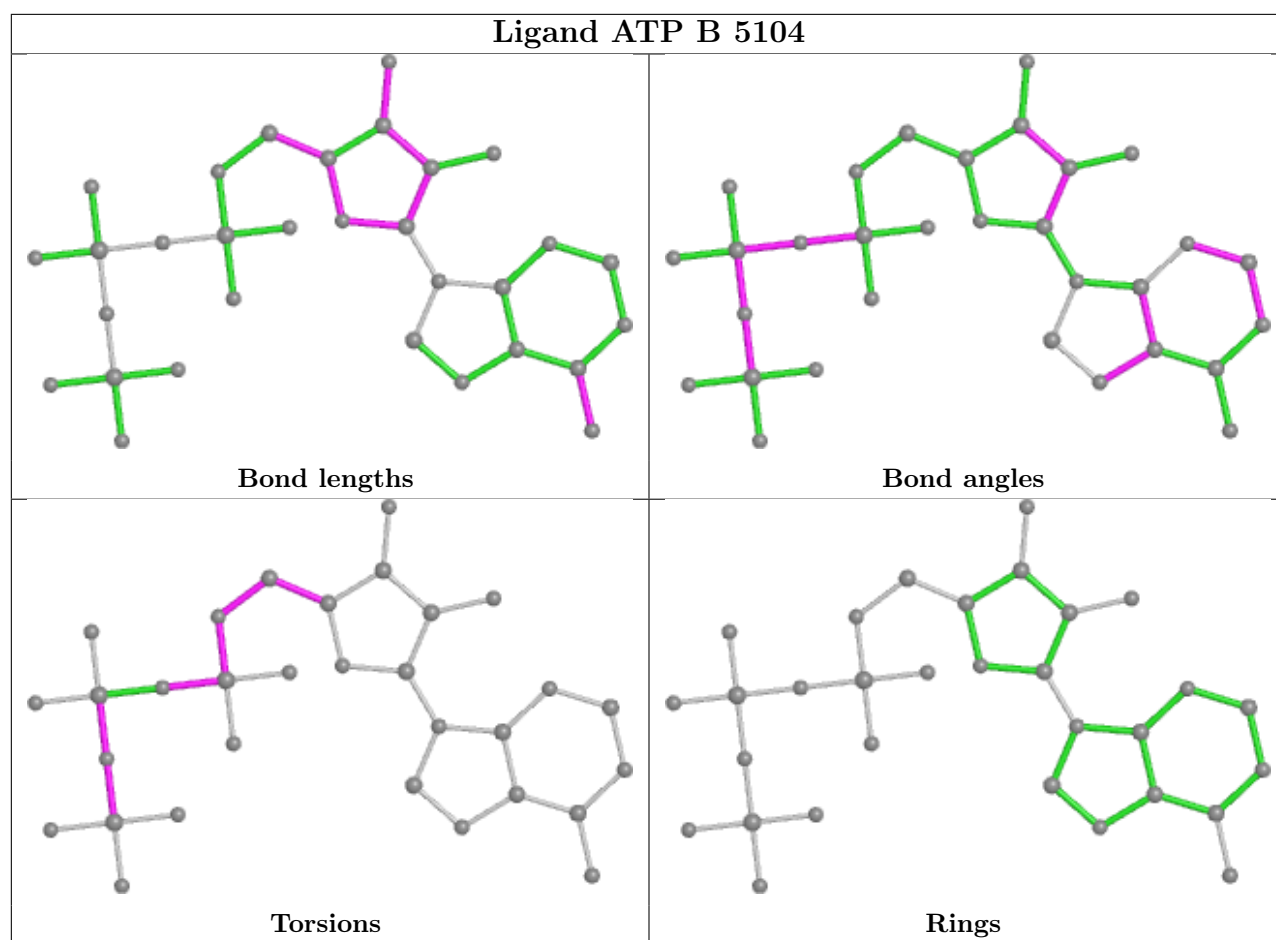


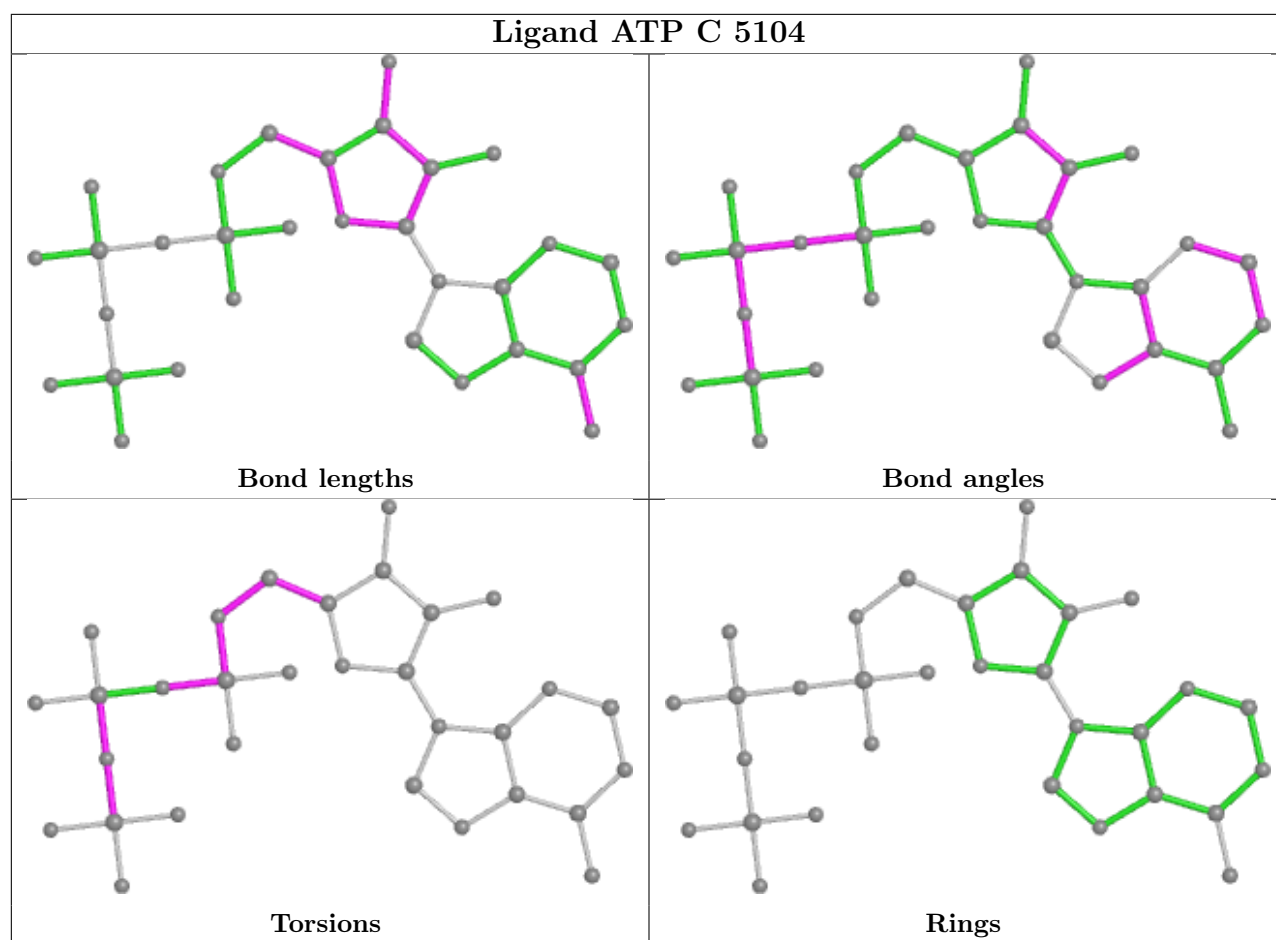












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

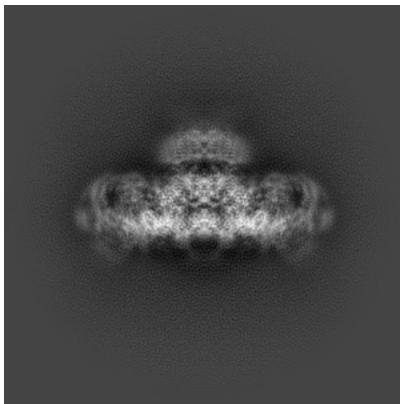
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38398. These allow visual inspection of the internal detail of the map and identification of artifacts.

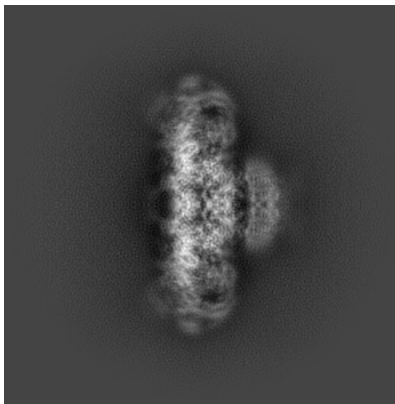
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

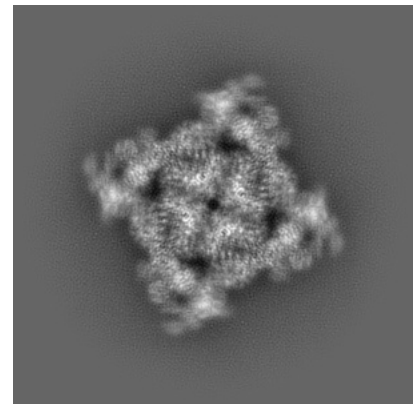
6.1.1 Primary map



X

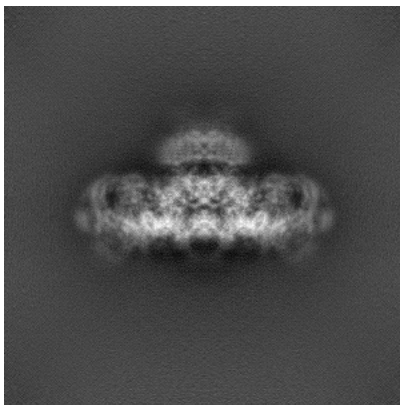


Y

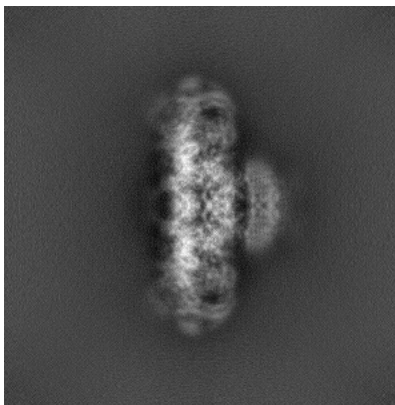


Z

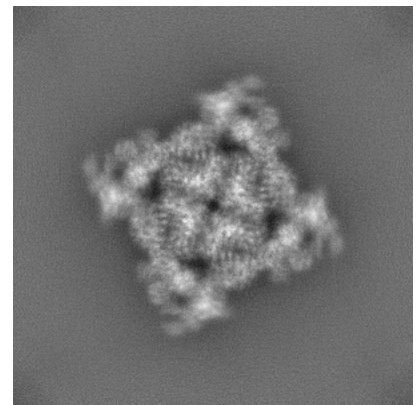
6.1.2 Raw map



X



Y

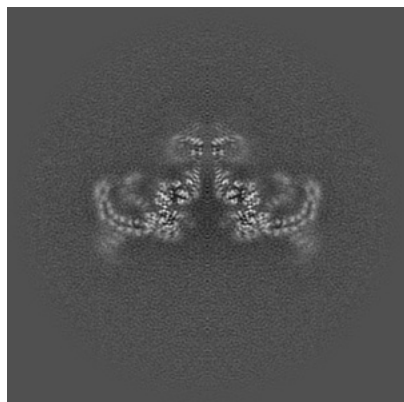


Z

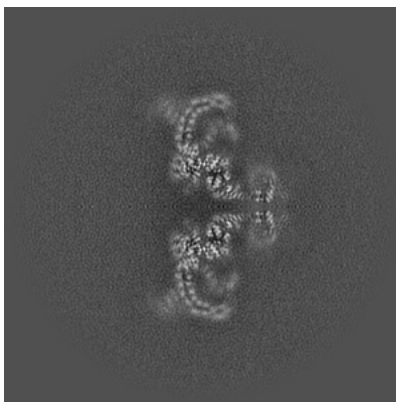
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

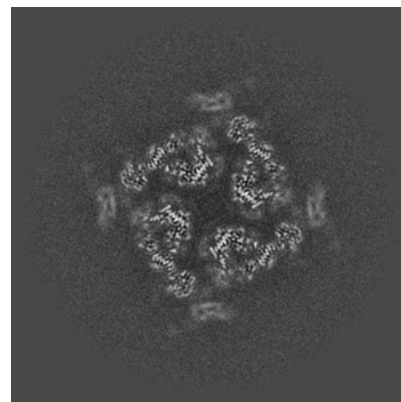
6.2.1 Primary map



X Index: 256

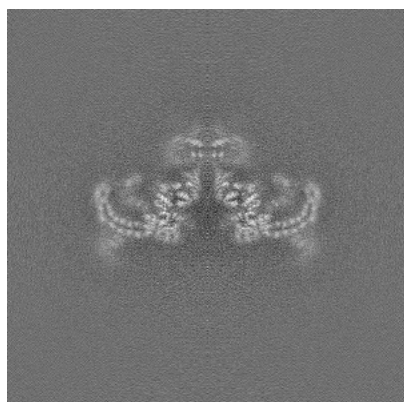


Y Index: 256

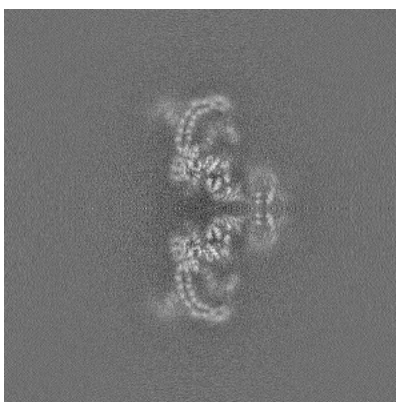


Z Index: 256

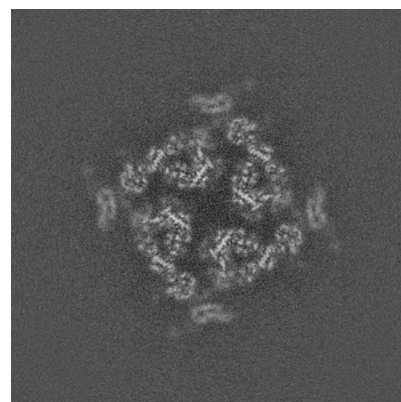
6.2.2 Raw map



X Index: 256



Y Index: 256

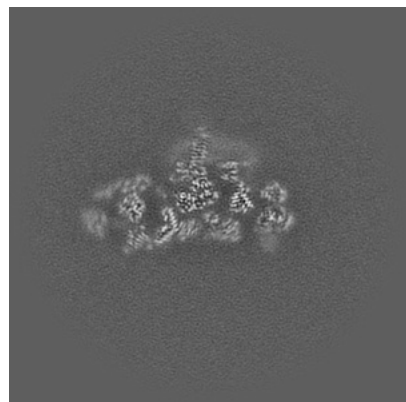


Z Index: 256

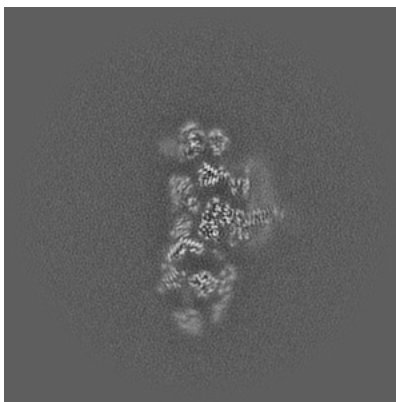
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

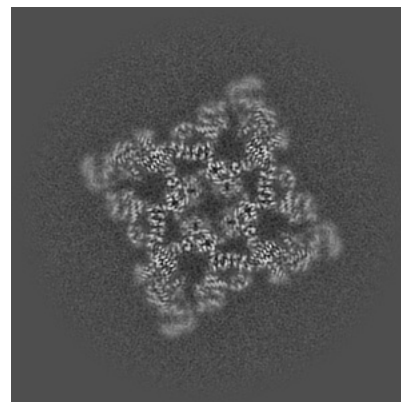
6.3.1 Primary map



X Index: 221

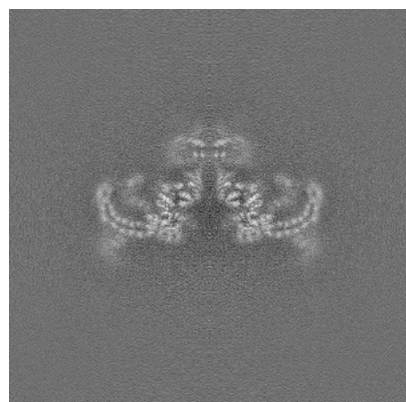


Y Index: 291

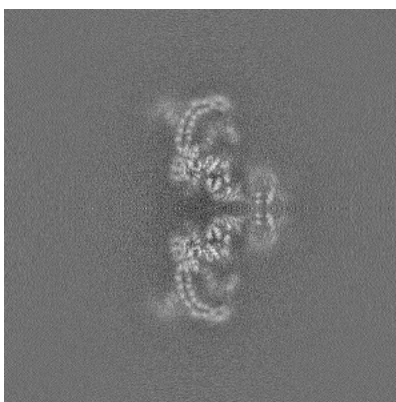


Z Index: 236

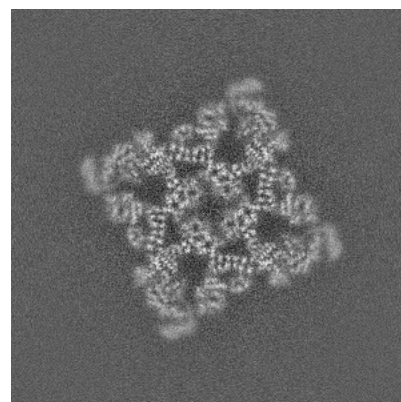
6.3.2 Raw map



X Index: 256



Y Index: 256

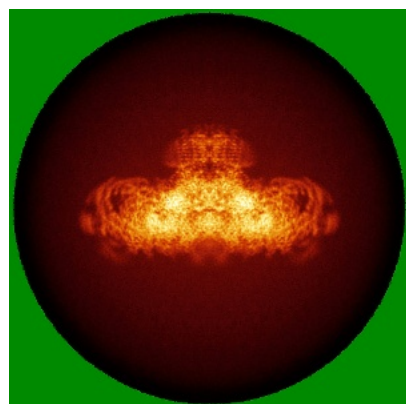


Z Index: 236

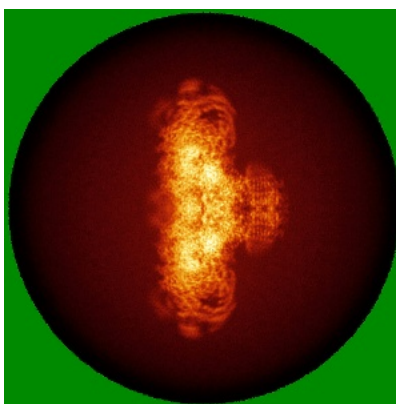
The images above show the largest variance slices of the map in three orthogonal directions.

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

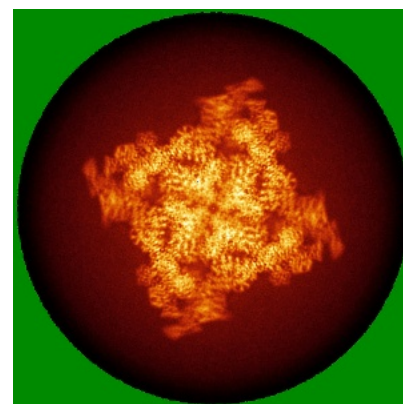
6.4.1 Primary map



X

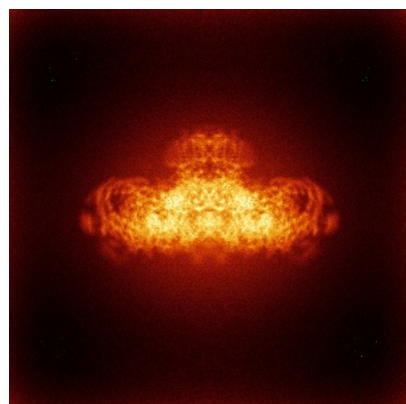


Y

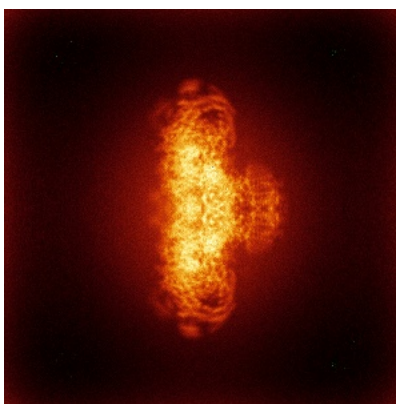


Z

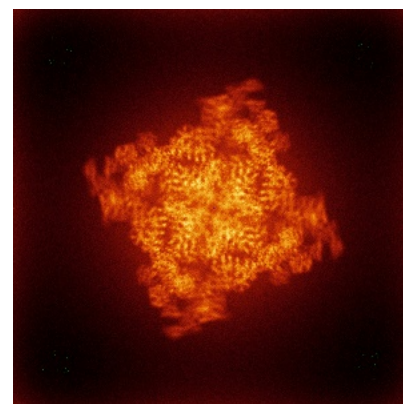
6.4.2 Raw map



X



Y

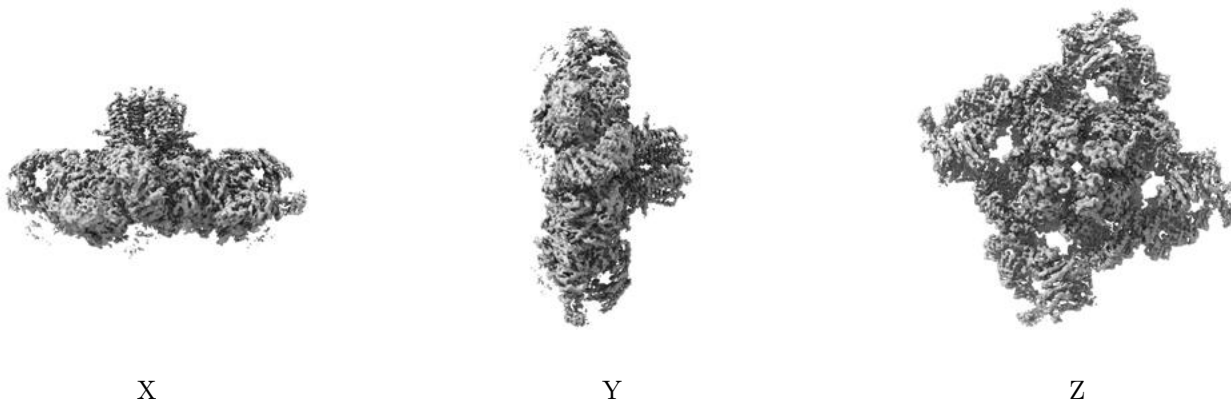


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.06. 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.

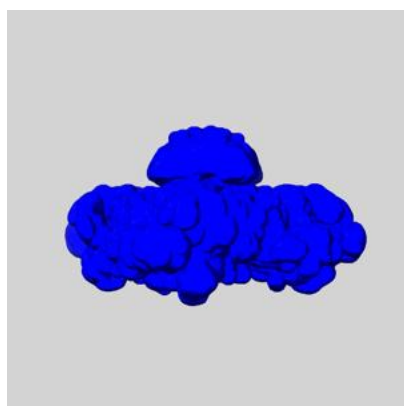
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

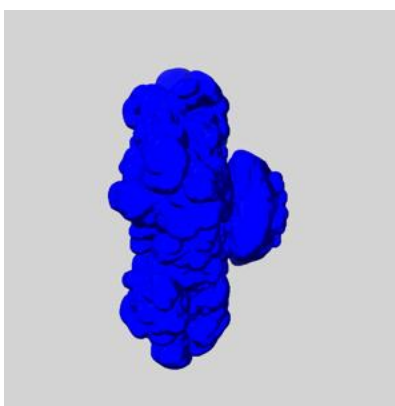
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

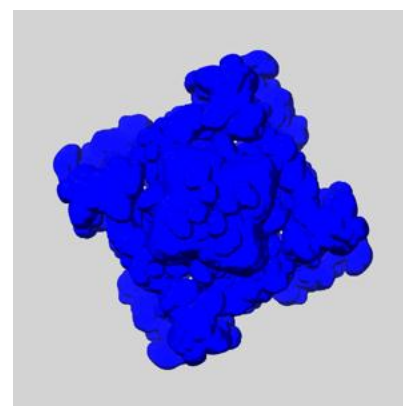
6.6.1 emd_38398_msk_1.map [i](#)



X



Y

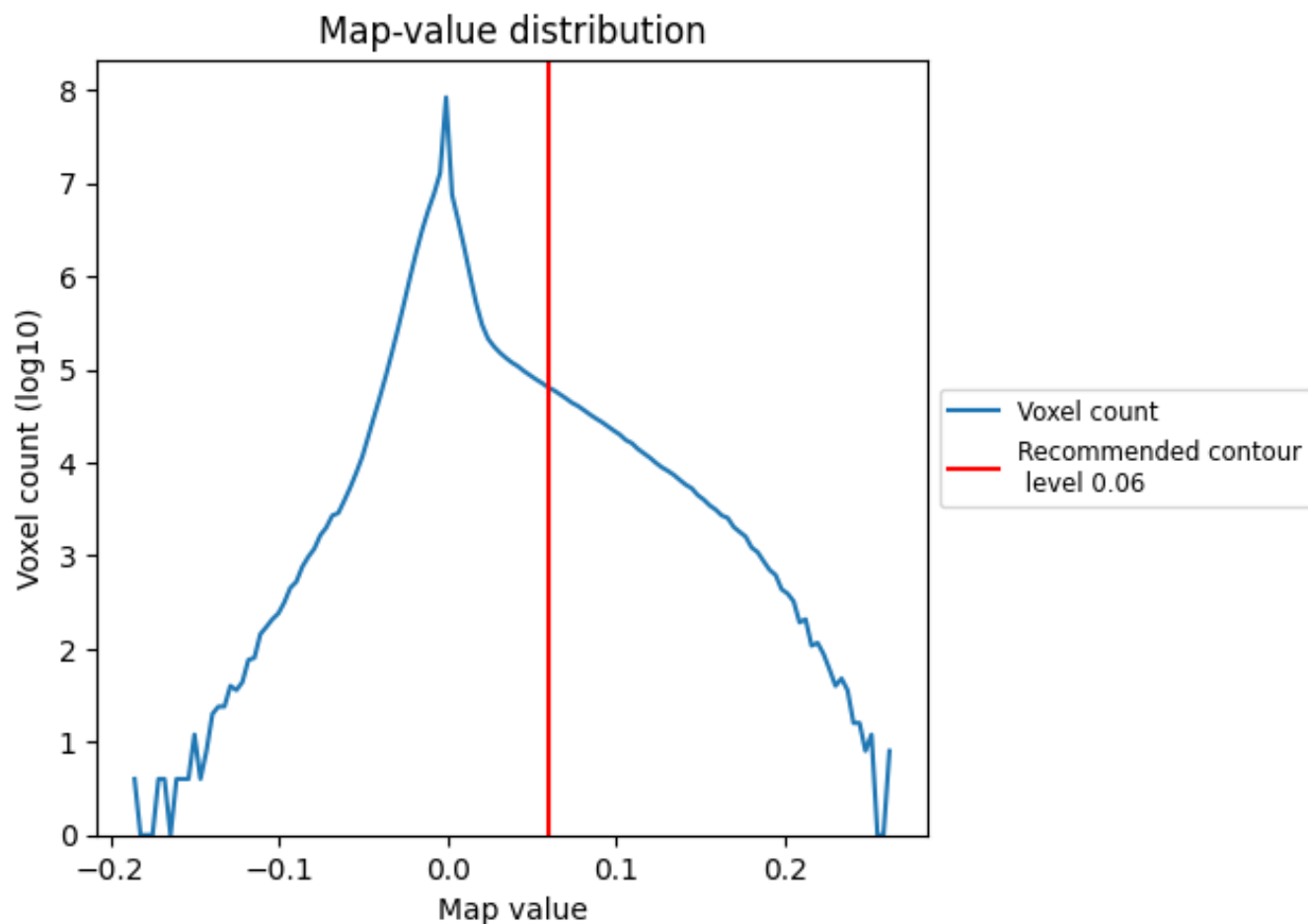


Z

7 Map analysis [i](#)

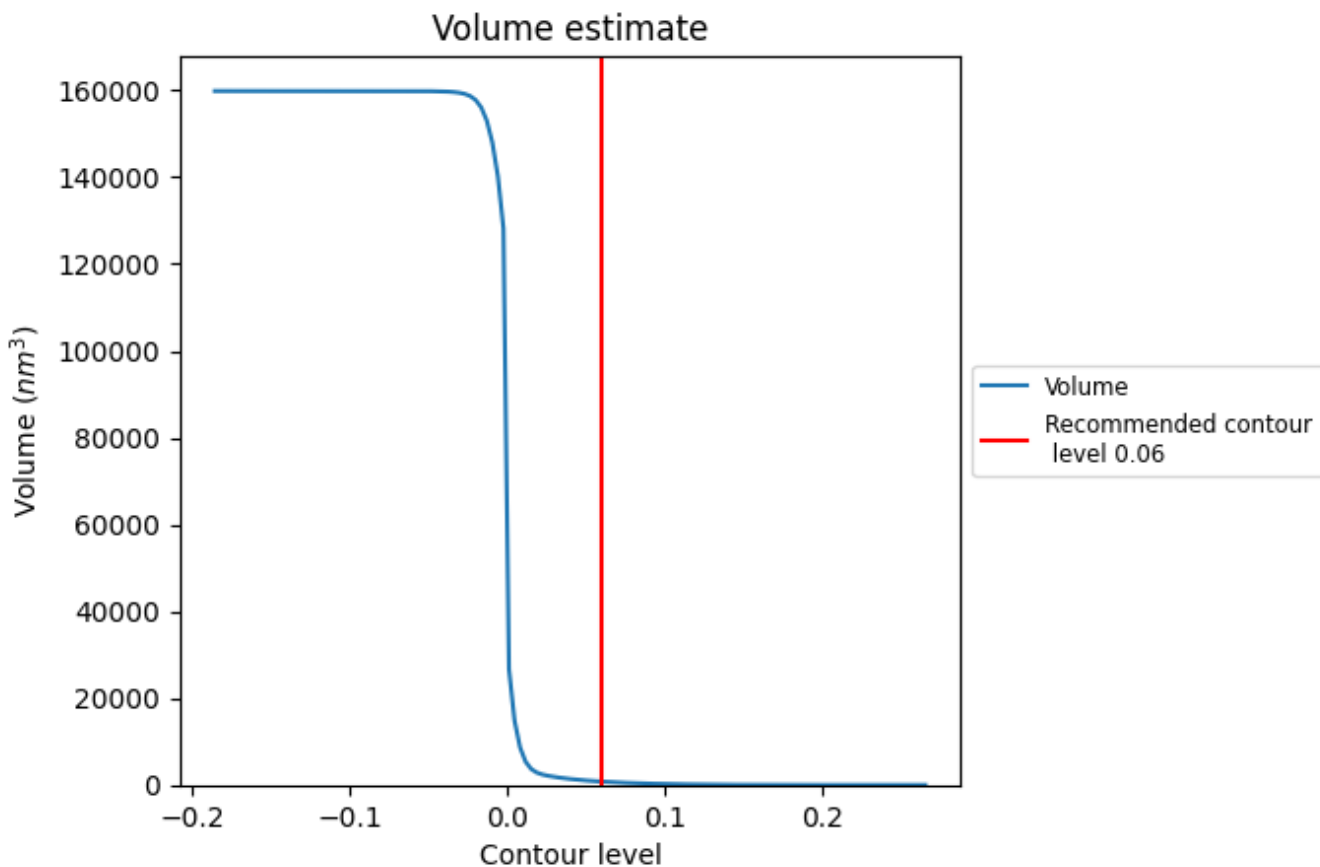
This section contains the results of statistical analysis of the map.

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.

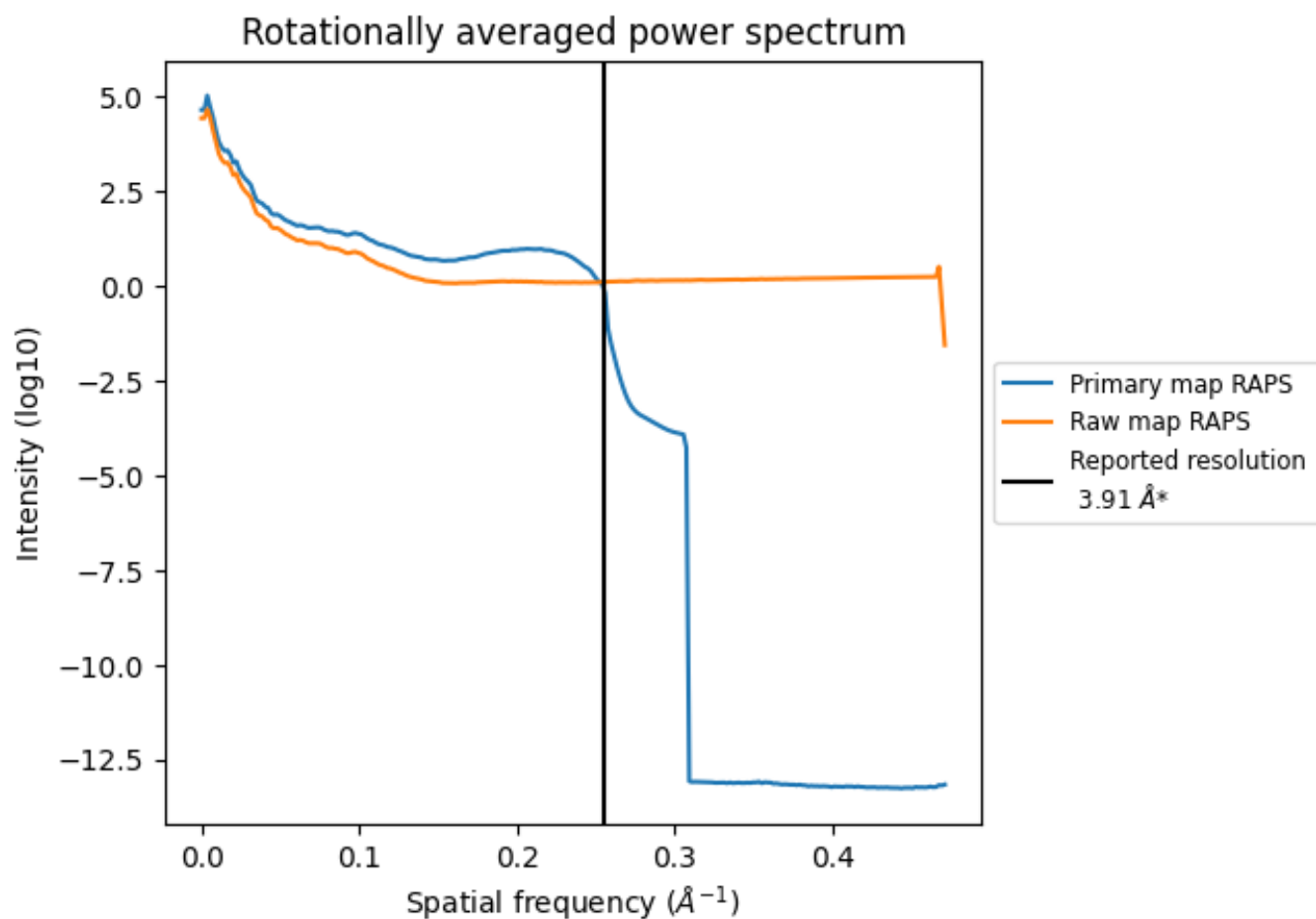
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 783 nm³; this corresponds to an approximate mass of 707 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

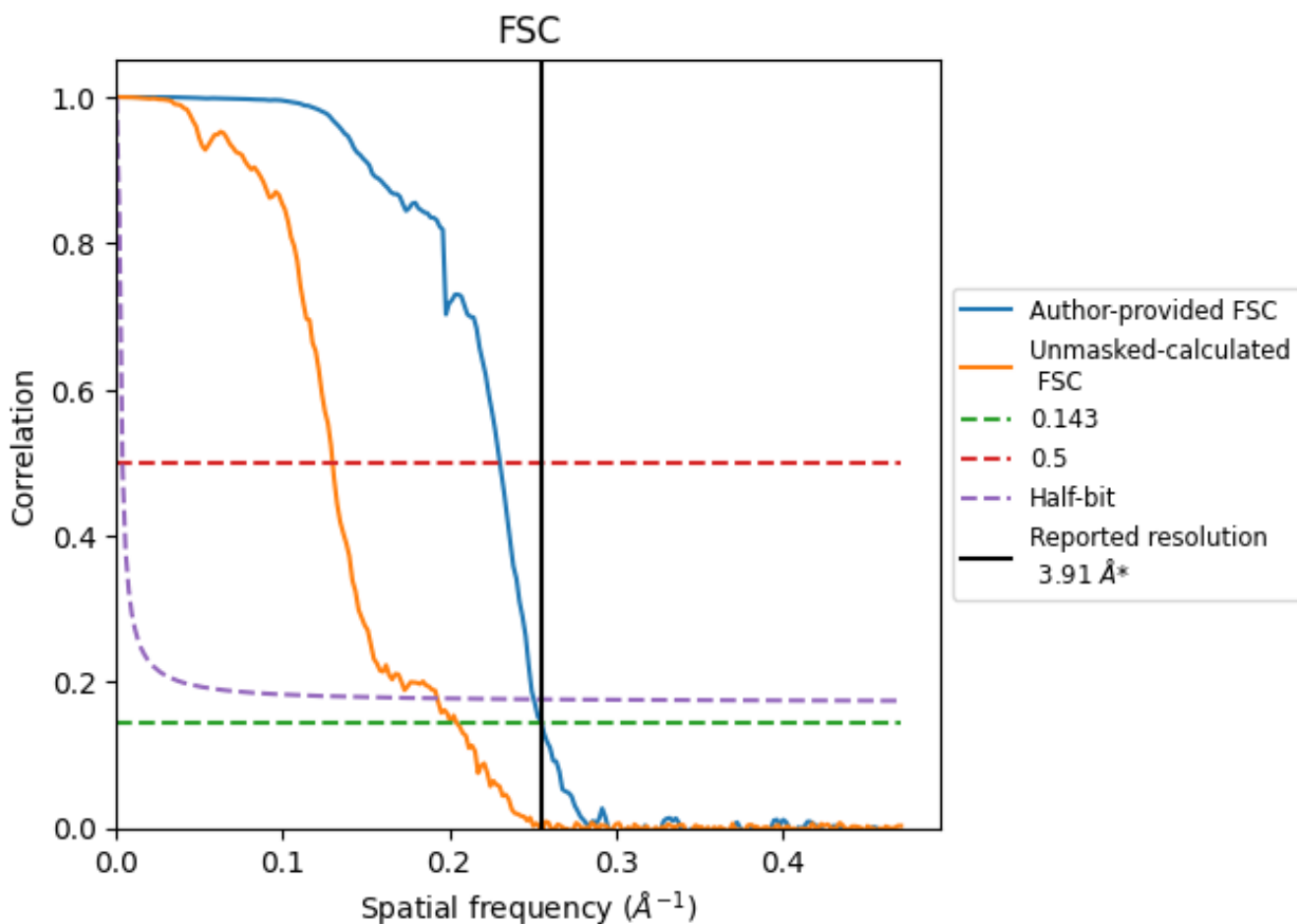


*Reported resolution corresponds to spatial frequency of 0.256 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.256 Å⁻¹

8.2 Resolution estimates [i](#)

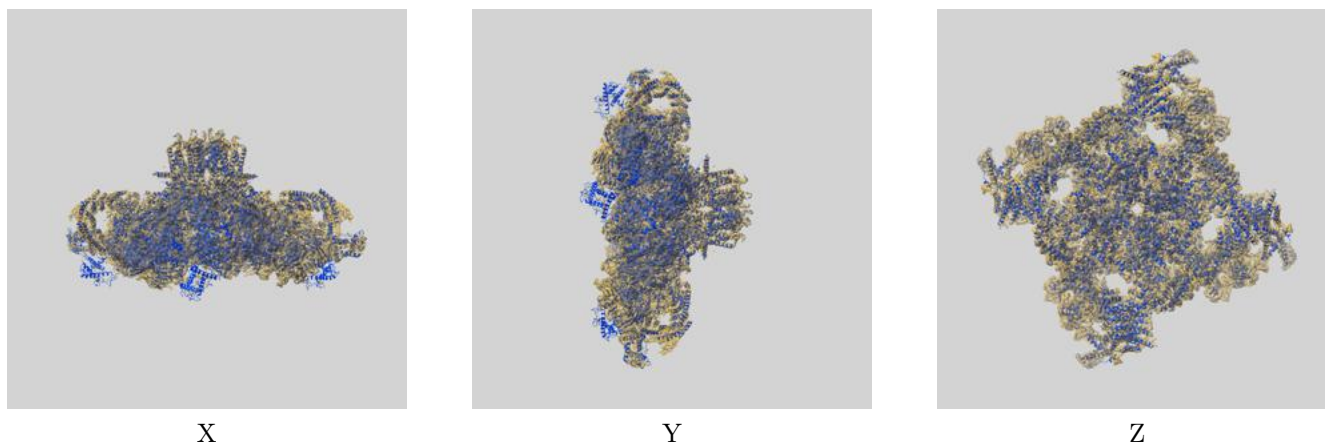
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.91	-	-
Author-provided FSC curve	3.91	4.34	3.99
Unmasked-calculated*	4.89	7.70	5.19

*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 4.89 differs from the reported value 3.91 by more than 10 %

9 Map-model fit [i](#)

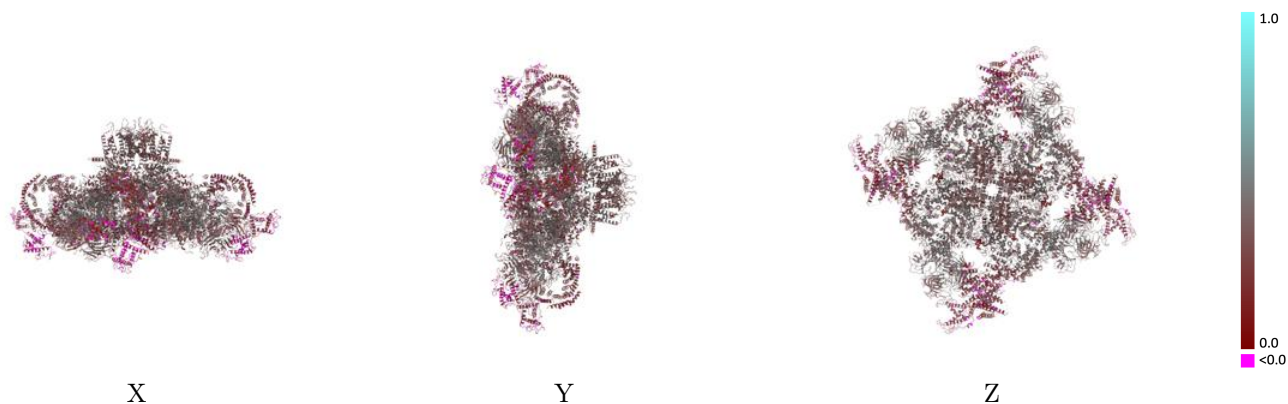
This section contains information regarding the fit between EMDB map EMD-38398 and PDB model 8XJI. Per-residue inclusion information can be found in section 3 on page 9.

9.1 Map-model overlay [i](#)



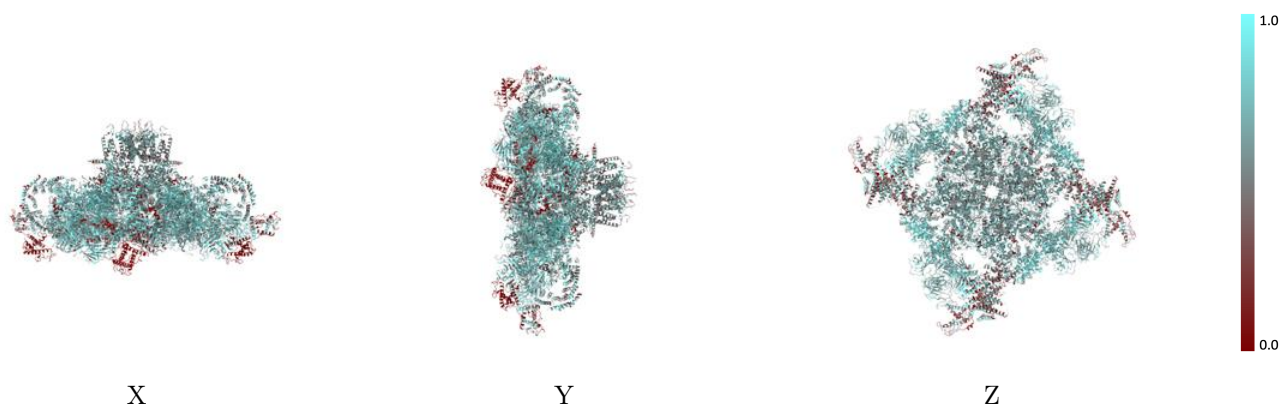
The images above show the 3D surface view of the map at the recommended contour level 0.06 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



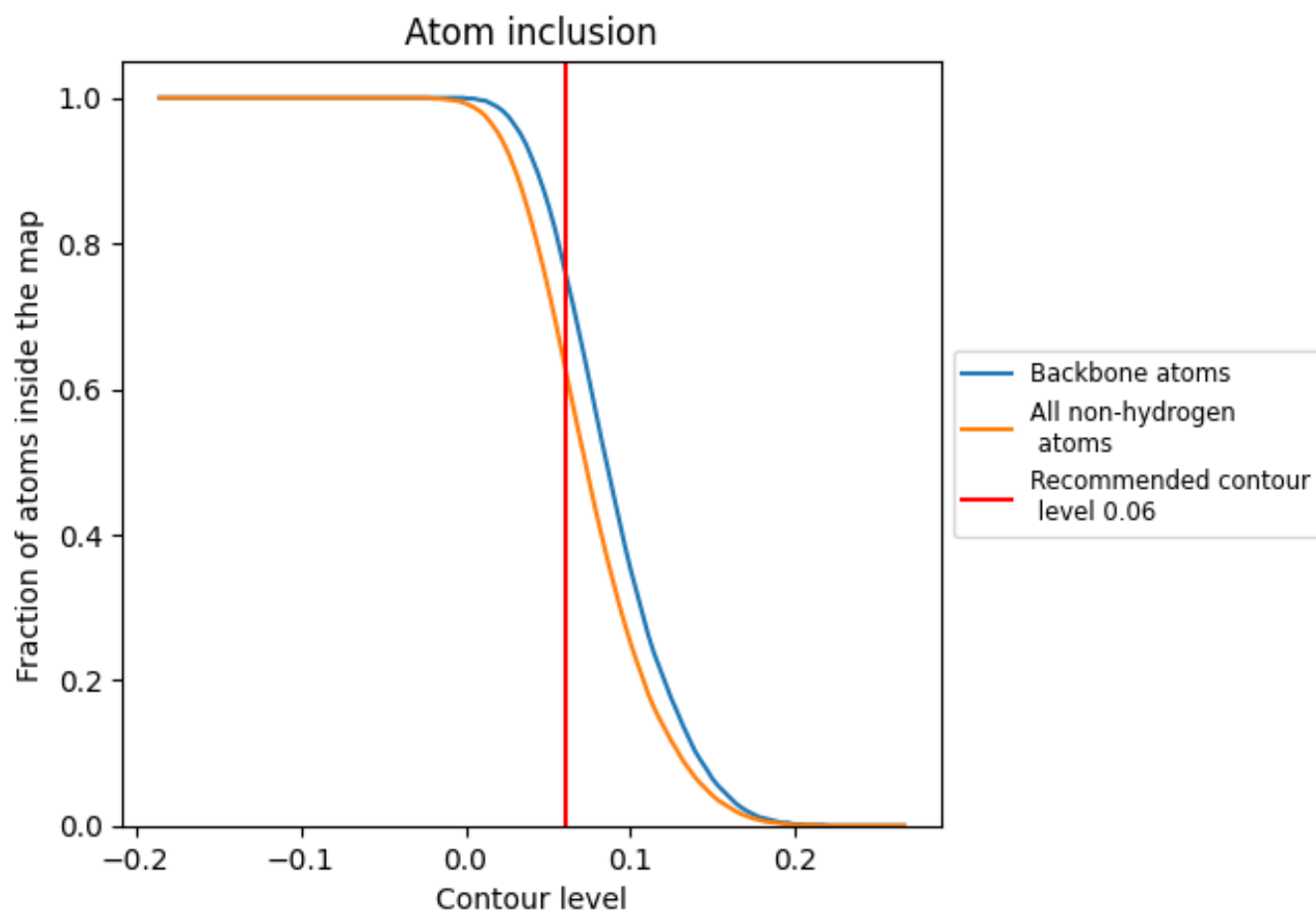
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.06).



























9.4 Atom inclusion [i](#)



At the recommended contour level, 76% of all backbone atoms, 63% 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 (0.06) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6320	 0.3400
A	 0.6360	 0.3410
B	 0.6370	 0.3410
C	 0.6370	 0.3410
D	 0.6430	 0.3490
E	 0.6620	 0.3580
F	 0.6600	 0.3580
G	 0.6600	 0.3630
H	 0.6630	 0.3690
I	 0.4580	 0.2340
J	 0.4570	 0.2330
K	 0.4550	 0.2350
L	 0.4490	 0.2300

