



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 12, 2023 – 05:20 pm GMT

PDB ID : 4AKG
Title : Dynein Motor Domain - ATP complex
Authors : Schmidt, H.; Gleave, E.S.; Carter, A.P.
Deposited on : 2012-02-22
Resolution : 3.30 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

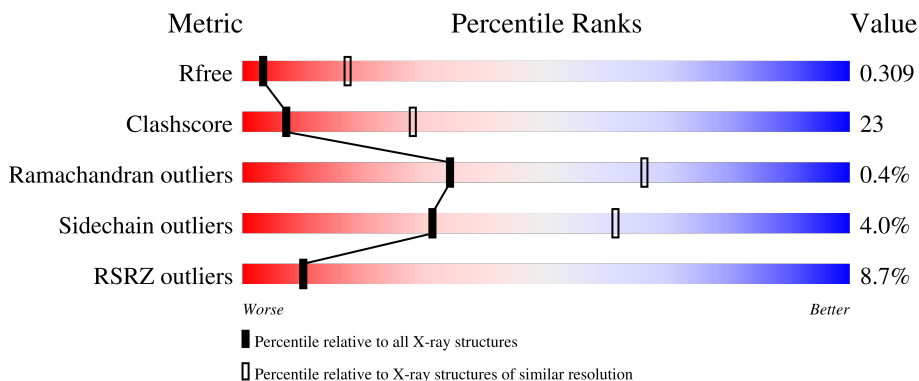
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2695	
1	B	2695	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	ATP	A	5093	-	-	X	-
2	ATP	B	5093	-	-	X	-
5	SO4	A	5097	-	-	X	-
5	SO4	B	5096	-	-	X	-
5	SO4	B	5097	-	-	X	-

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 41634 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 GLUTATHIONE S-TRANSFERASE CLASS-MU 26 KDA ISOZYME, DYNEIN HEAVY CHAIN CYTOPLASMIC.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	2650	20748	13268	3472	3915	93	0	0	0
1	B	2650	20748	13268	3472	3915	93	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

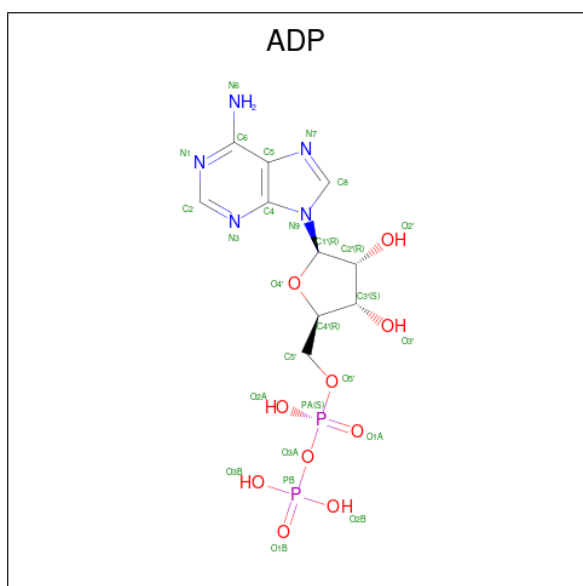
Chain	Residue	Modelled	Actual	Comment	Reference
A	218	SER	-	linker	UNP P36022
A	219	ASP	-	linker	UNP P36022
A	1630	ILE	LEU	conflict	UNP P36022
A	3782	ASP	GLU	conflict	UNP P36022
B	218	SER	-	linker	UNP P36022
B	219	ASP	-	linker	UNP P36022
B	1630	ILE	LEU	conflict	UNP P36022
B	3782	ASP	GLU	conflict	UNP P36022

- Molecule 2 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).



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

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
3	A	1	27	10	5	10	2	0	0

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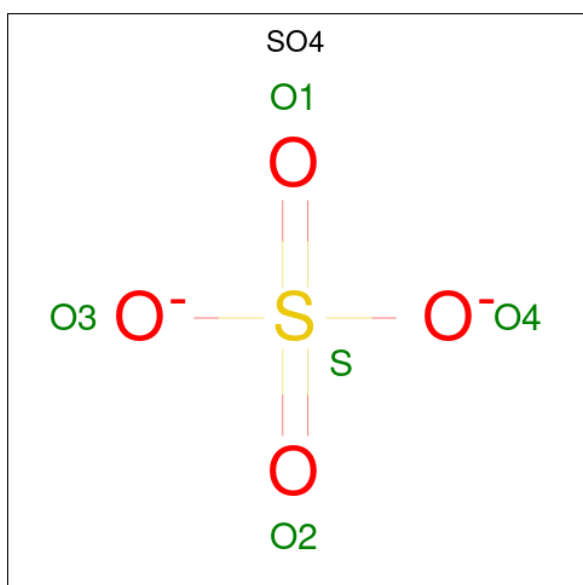
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
3	B	1	27	10	5	10	2	0	0

- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
4	A	1	1	1	0	0
4	B	1	1	1	0	0

- Molecule 5 is SULFATE ION (three-letter code: SO4) (formula: O₄S).

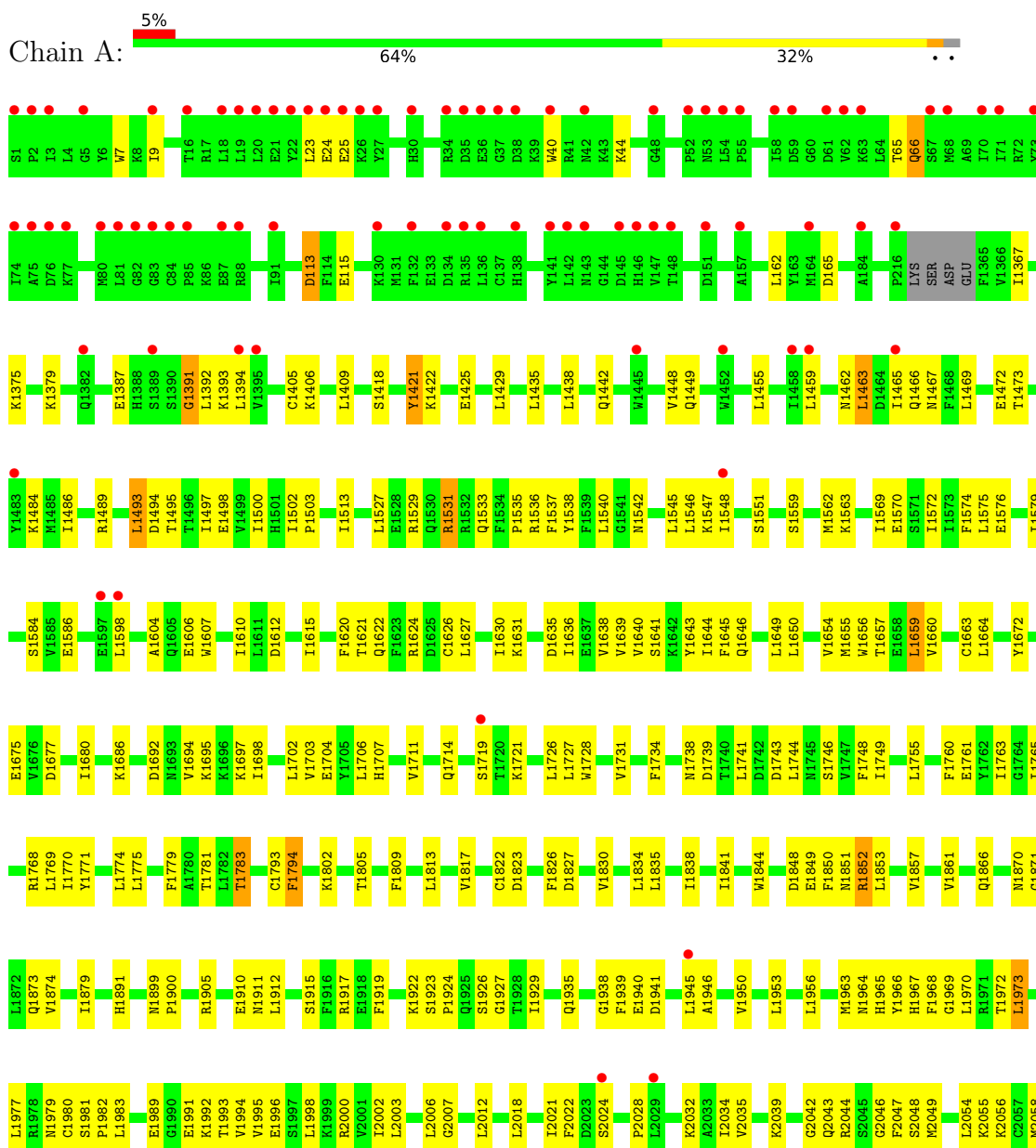


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
5	A	1	5	4	1	0	0
5	A	1	5	4	1	0	0
5	B	1	5	4	1	0	0
5	B	1	5	4	1	0	0

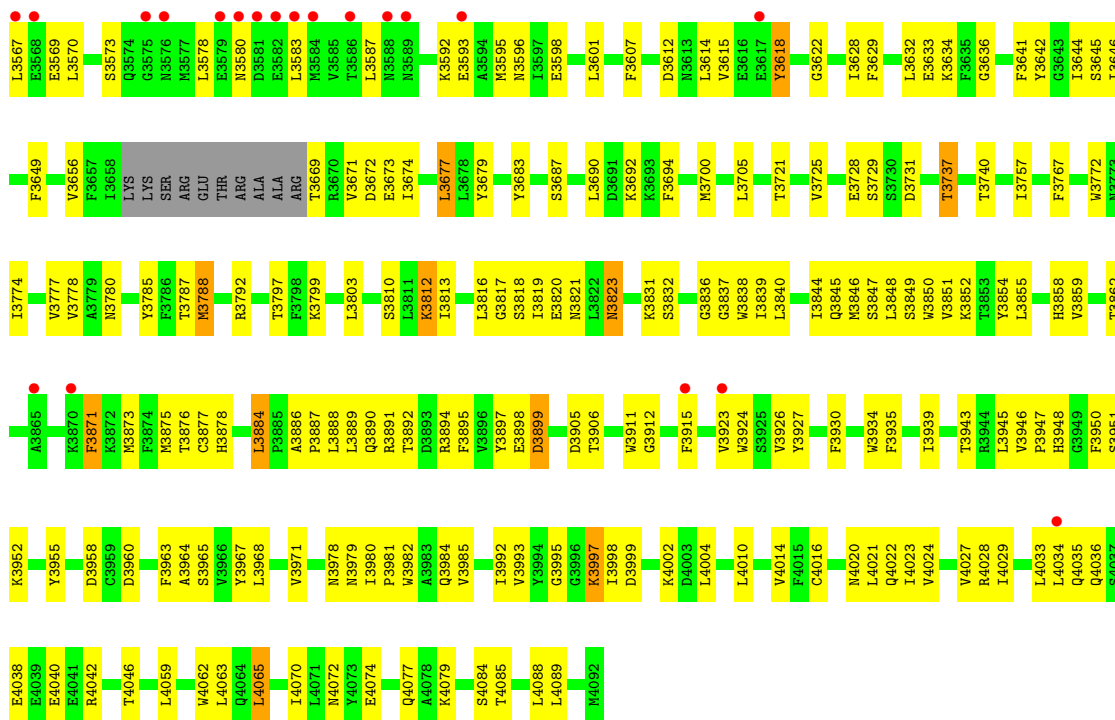
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

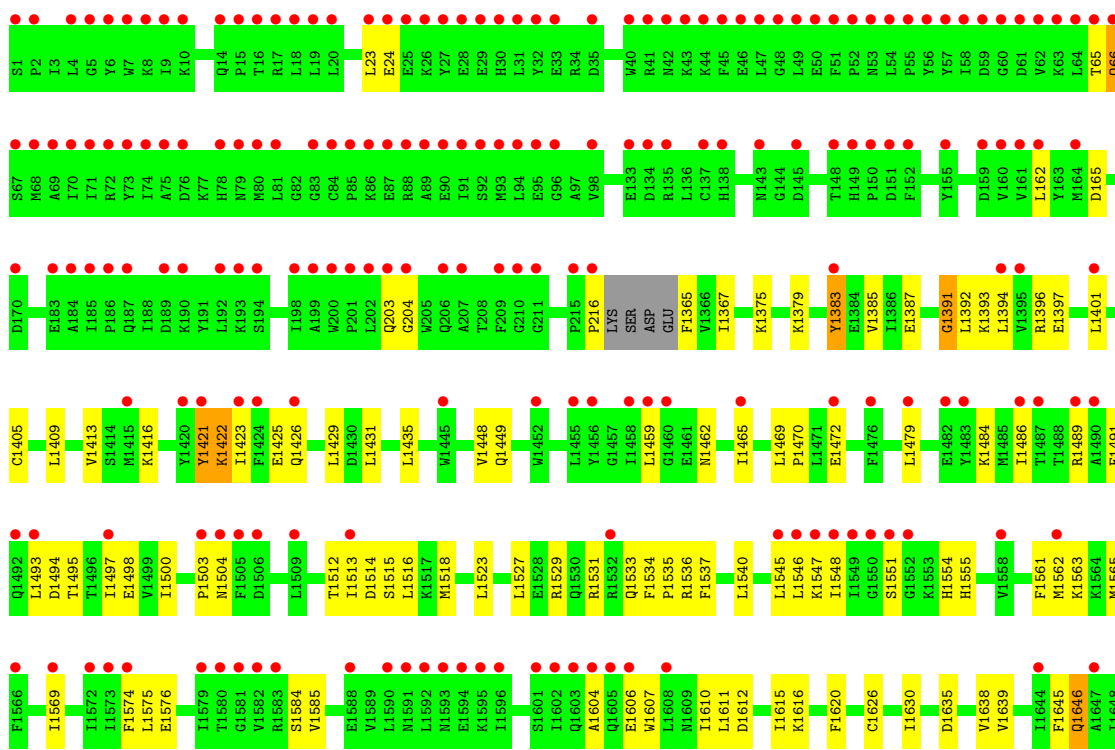
- Molecule 1: GLUTATHIONE S-TRANSFERASE CLASS-MU 26 KDA ISOZYME, DYNEIN HEAVY CHAIN CYTOPLASMIC



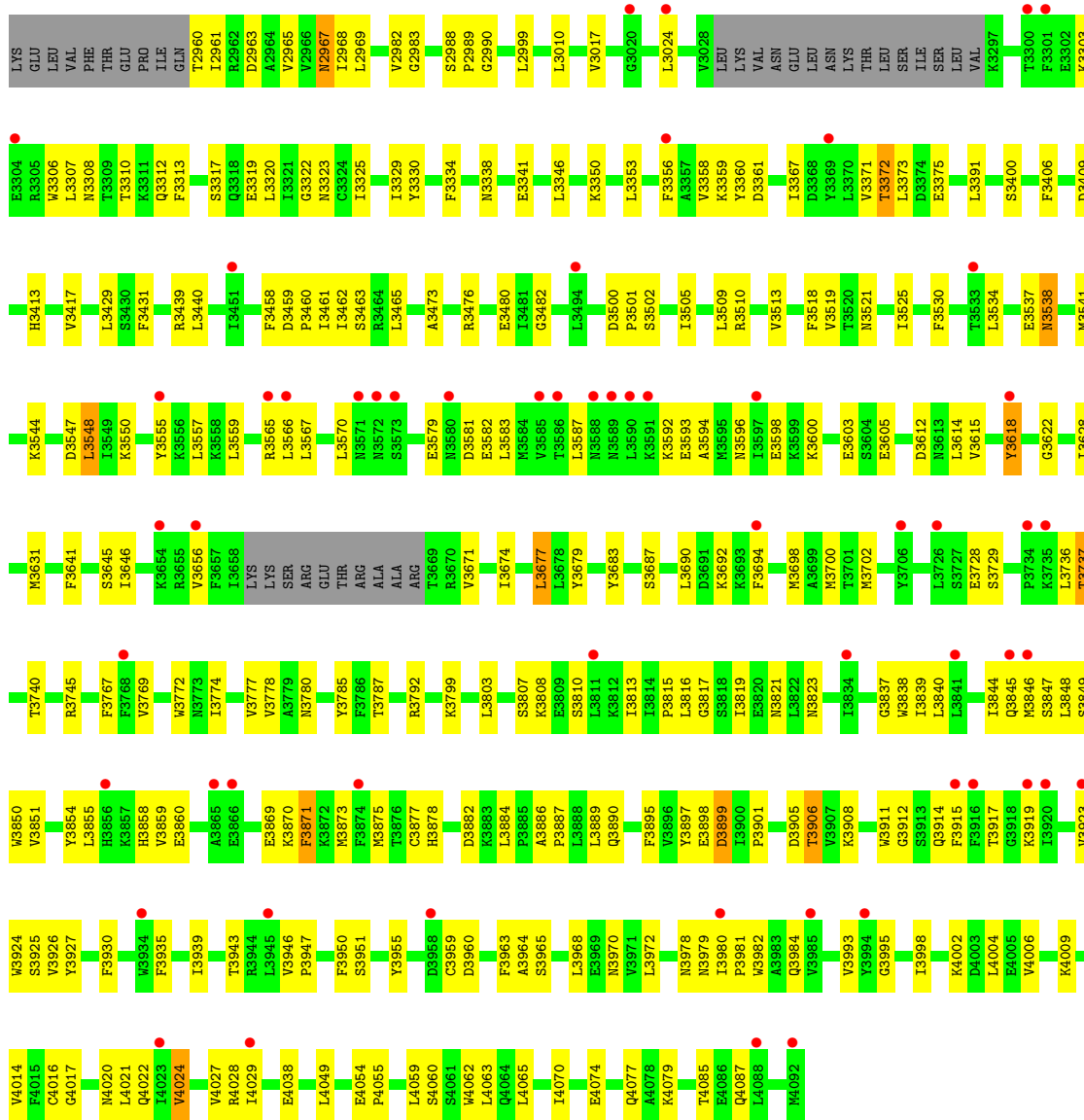
K3359	K3471	K3472	A3473	R3476	V3477	T3478	T3372	I3481	G3482	D3483	K3483	K3483	D3500	P3501	I3505	F3508	L3509	R3510	S3511	R3512	V3513	F3518	V3519	T3520	K3521	I3525	F3530	L3534	E3537	M3541	Q3542	R3543	K3544	D3547	L3548	I3549	K3550	Y3555	L3559	K3560	I3561	S3562	E3563	K3564	R3565	S3567	L3566																																																																				
E3026	S3027	V3028	LEU	VAL	ASN	GLU	LEU	ASN	ASN	LYS	THR	LEU	SER	ILE	PRO	SER	LEU	VAL	VAL	ASN	LYS	GLU	PRO	ILE	GLN	T2960	I2961	R2962	Q2963	A2964	V2965	S2966	N2967	K2979	V2984	N2985	P2986	R2987	S2988	P2989	G2990	L3010	G3011	E3012	V3017	K3018	V3019	L3020	L3021	L3024	N3025	K3311	Q3312	F3313	S3317	S3318	E3319	L3320	N3323	C3324	I3325	I3329	Y3330	E3331	F3334	L3346	K3350	R3351	L3352	L3353	F3356	K3357	V3358																																										
S2891	V2707	N2708	K2709	T2710	D2711	R2711	L2712	V2713	E2727	L2728	N2732	S2737	M2738	H2741	R2744	I2745	D2746	R2747	F2748	A2748	L2749	H2755	M2756	M2757	L2758	I2759	G2760	A2761	S2762	R2763	T2764	G2765	K2766	T2767	V2773	L2779	K2780	Q2783	P2784	K2785	L2786	H2787	R2788	F2795	L2799	L2808	R2812	T2813	I2816	I2817	N2821	T2822	L2823	E2829	T2833	L2834	L2835	D2839	I2840	P2841	D2842	PHE	L2843	F2844	Q2845	G2846	Y2849	T2960	I2961	R2962	D2963	A2964	V2965	S2966	N2967	K2979	V2984	N2985	P2986	R2987	S2988	P2989	G2990	L3010	G3011	E3012	V3017	K3018	V3019	L3020	L3021	L3024	N3025	K3311	Q3312	F3313	S3317	S3318	E3319	L3320	N3323	C3324	I3325	I3329	Y3330	E3331	F3334	L3346	K3350	R3351	L3352	L3353	F3356	K3357	V3358
S2566	L2567	S2568	Q2569	I2570	Y2571	V2574	Y2575	G2576	K2577	L2578	L2581	V2582	T2609	Q2612	S2613	R2620	E2621	L2622	T2623	V2626	R2627	Y2630	T2631	A2632	L2633	I2634	G2636	T2637	R2638	Q2639	T2640	S2643	L2647	W2653	R2654	L2655	D2658	L2673	T2676	V2677	L2686	L2689	L2699	S2680	R2812	T2813	I2816	I2817	N2821	T2822	L2823	E2829	T2833	L2834	L2835	D2839	I2840	P2841	D2842	PHE	L2843	F2844	Q2845	G2846	Y2849	T2960	I2961	R2962	D2963	A2964	V2965	S2966	N2967	K2979	V2984	N2985	P2986	R2987	S2988	P2989	G2990	L3010	G3011	E3012	V3017	K3018	V3019	L3020	L3021	L3024	N3025	K3311	Q3312	F3313	S3317	S3318	E3319	L3320	N3323	C3324	I3325	I3329	Y3330	E3331	F3334	L3346	K3350	R3351	L3352	L3353	F3356	K3357	V3358		
R2626	R2627	Y2630	T2631	A2632	L2633	I2634	G2636	T2637	R2638	Q2639	T2640	S2643	L2647	W2653	R2654	L2655	D2658	L2673	T2676	V2677	L2686	L2689	L2699	S2680	R2812	T2813	I2816	I2817	N2821	T2822	L2823	E2829	T2833	L2834	L2835	D2839	I2840	P2841	D2842	PHE	L2843	F2844	Q2845	G2846	Y2849	T2960	I2961	R2962	D2963	A2964	V2965	S2966	N2967	K2979	V2984	N2985	P2986	R2987	S2988	P2989	G2990	L3010	G3011	E3012	V3017	K3018	V3019	L3020	L3021	L3024	N3025	K3311	Q3312	F3313	S3317	S3318	E3319	L3320	N3323	C3324	I3325	I3329	Y3330	E3331	F3334	L3346	K3350	R3351	L3352	L3353	F3356	K3357	V3358																						
S2375	R2376	S2377	V2378	L2379	E2381	A2382	H2383	E2384	M2385	M2386	F2387	F2388	D2389	L2390	H2393	L2394	E2395	I2396	D2397	V2398	T2399	L2401	E2401	K2402	L2403	D2404	E2405	L2406	H2407	L2408	N2409	S2410	K2411	R2412	G2413	I2414	L2415	L2416	G2417	L2418	F2419	G2420	D2421	K2424	T2425	M2426	I2427	M2428	N2429	N2430	A2431	L2432	R2433	L2437	V2441	F2445	S2446	D2448	S2449	T2450	T2451	L2455	N2463	G2470	L2471	L2472	L2473	L2474	P2475	K2476	S2477	M2546	S2547	E2548	R2549	F2550	T2551	R2552	L2556	P2562	S2563	G2564	K2565																																
L2129	F2130	T2131	S2132	L2133	L2134	K2135	V2137	N2138	L2141	F2145	R2149	L2150	C2151	G2152	R2153	K2154	D2155	E2161	Y2162	V2163	M2166	M2169	L2175	L2176	L2177	L2178	G2181	E2182	R2183	L2184	P2185	L2186	L2193	F2194	E2195	K2196	E2197	S2198	L2199	H2201	T2202	F2203	P2204	A2205	L2212	F2215	C2220	S2221	I2222	S2223	K2224	K2225	H2228	L2229	L2241	L2252	F2257	L2262	L2265	F2266	V2273	H2274	L2275	L2276	G2277	V2278	T2279	T2280	F2281	N2282	K2283	E2285	Q2289	L2290	H2293	L2294	I2295	L2296	P2297	R2299	F2302	L2310	K2311	L2312	D2313	S2314	L2315	G2316	S2317	P2318	A2319	R2320	S2321	L2322	L2323																				
Q2069	F2060	Y2061	S2062	L2063	Q2064	K2065	T2066	L2070	L2071	G2074	K2075	A2076	G2077	C2078	G2079	K2080	T2081	A2082	T2083	K2085	L2088	M2091	A2092	L2093	F2094	D2095	A2098	N2099	V2100	Y2101	Y2102	V2103	D2105	L2106	T2107	K2108	V2109	T2110	K2111	E2112	S2113	L2114	Y2115	G2116	S2117	K2120	W2125	R2126	D2127	G2128																																																																	



• Molecule 1: GLUTATHIONE S-TRANSFERASE CLASS-MU 26 KDA ISOZYME, DYNEIN HEAVY CHAIN CYTOPLASMIC



L1649	L1650	M1655	M1656	M1657	L1664	F1669	H1672	H1673	K1674	E1675	V1676	M1677	M1678	K1679	L1680	K1681	G1682	L1683	L1684	D1685	K1686	D1692	L1702	V1703	E1704	Y1705	H1707	V1711	L1712	G1713	Q1714	L1715	L1726	L1727	K1730	V1731	Q1732	K1733	F1734	K1737	M1738	D1739								
T1740	L1741	D1742	D1743	L1744	M1745	F1748	I1749	S1750	G1753	H1754	L1755	Y1758	K1759	F1760	E1761	Y1762	I1763	F1764	I1765	F1766	L1767	E1767	R1768	L1769	I1770	Y1771	Y1772	P1773	L1774	L1775	L1776	T1781	G1789	G1792	C1793	F1794	G1801	K1802	T1803	E1804	M1805	K1806	L1813	C1822	D1823	F1826	D1827	Y1828	Q1829	V1830
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M1937	G1938	F1939	E1940	D1941	L1945	A1946	V1949	K2032	V1950	L1953	L1956	M1963	N1964	H1965	Y1966	H1967	F1968	G1969	L1970	L1973	K1974	G1975	V1976	S1981	P1982	L1983	I1984	E1989	G1990	E1991	K1992	T1993	V1994	V1995	S1997	L1998	R2000	V2001	K1922	L2003	L2006	G2007	D2008	E2011	F2014	F2022				
S2023	S2024	A2025	G2026	T2027	P2028	L2029	M2030	S2031	K2032	A2033	V2035	Q2036	C2037	Q2047	S2048	H2058	F2060	Y2061	Q2064	Q2068	L2070	L2071	L2072	V2073	G2074	A2076	K2080	T2081	A2082	W2083	W2084	K2085	L2088	R2091	F2094	D2095	N2099	V2100	V2101	Y2102	V2103	L2104	D2105	T2106	K2107	V2108				
L2109	T2110	K2111	E2112	S2117	K2121	W2125	R2126	G2127	G2128	L2129	F2130	T2131	L2133	V2137	I2141	F2145	R2149	I2150	L2151	F2154	D2155	S2156	P2160	E2161	V2163	E2164	V2169	L2170	W2173	K2174	L2175	L2176	L2177	L2178	P2179	M2180	G2181	E2182	R2183	L2186	R2191	L2192	K2193	F2194						
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K2411	L2415	C2417	P2420	G2421	T2425	M2426	L2427	T2428	M2429	N2430	L2437	F2445	S2446	K2447	D2448	T2449	E2452	L2455	L2458	R2460	N2463	Y2464	T2467	S2468	G2469	G2470	L2471	T2472	L2473	L2474	P2475	K2476	S2477	D2478	L2479	K2480	N2481	L2484	E2488	L2489	Y2490	L2491	P2492	K2493	L2494					
D2495	K2496	Y2497	G2498	S2499	V2503	L2506	R2507	M2510	E2511	K2512	Q2513	K2517	T2518	P2519	E2520	V2524	T2525	L2526	F2527	R2528	C2535	N2536	R2543	R2549	F2550	R2552	T2551	L2556	P2562	S2563	G2564	K2565	S2566	Y2571	E2572	L2573	Y2574	L2578	F2579	K2580	L2581	V2582	R2586	E2590						
S2613	L2616	R2620	T2623	R2627	Y2630	T2631	A2632	T2635	G2636	P2637	R2638	Q2639	T2640	S2643	L2647	W2653	R2654	L2655	F2669	L2681	Q2684	L2689	S2690	S2691	D2703	V2707	N2708	K2709	L2712	V2713	E2727	L2728	S2737	H2741	R2744	L2745	D2746	R2747	A2748											
Q2751	V2752	H2755	M2756	K2757	L2758	L2759	G2760	A2761	S2762	R2763	T2764	G2765	L2766	R2771	L2779	K2780	Q2783	P2784	K2785	L2786	H2787	R2788	L2792	F2795	L2799	L2808	R2812	T2813	I2816	I2817	N2821	L2822	L2823	E2824	T2825	A2826	E2829	T2833	L2834	L2835	A2838	P2841	L2842							
L2843	F2844	G2846	Y2849	L2853	L2856	T2860	L2863	L2864	G2864	L2865	L2866	L2867	E2870	Q2871	E2872	L2873	Y2878	K2883	V2888	F2889	T2890	L2891	C2892	L2908	F2909	N2910	R2911	C2912	N2915	W2920	T2924	V2935	E2936	P2937	W2938	T2941	D2942	F2943	ILE	VAL	PRO	GLU	VAL	ASN						



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	175.33Å 117.92Å 202.76Å 90.00° 90.21° 90.00°	Depositor
Resolution (Å)	50.00 – 3.30 48.81 – 3.30	Depositor EDS
% Data completeness (in resolution range)	95.9 (50.00-3.30) 96.1 (48.81-3.30)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.83 (at 3.33Å)	Xtrriage
Refinement program	REFMAC NULL	Depositor
R, R_{free}	0.239 , 0.305 0.239 , 0.309	Depositor DCC
R_{free} test set	5980 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å ²)	113.9	Xtrriage
Anisotropy	0.327	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 102.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	0.045 for h,-k,-l	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	41634	wwPDB-VP
Average B, all atoms (Å ²)	169.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.27% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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: MG, ATP, SO4, ADP

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.62	7/21146 (0.0%)	0.85	21/28618 (0.1%)
1	B	0.51	2/21146 (0.0%)	0.72	4/28618 (0.0%)
All	All	0.57	9/42292 (0.0%)	0.79	25/57236 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	1
All	All	0	4

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	2064	GLN	CA-C	-8.38	1.31	1.52
1	B	2841	PRO	N-CD	-7.95	1.36	1.47
1	A	2495	ASP	C-N	-7.35	1.17	1.34
1	B	1759	LYS	C-O	6.47	1.35	1.23
1	A	2488	GLU	CD-OE1	5.63	1.31	1.25
1	A	3459	ASP	CB-CG	-5.33	1.40	1.51
1	A	2412	ARG	CA-C	-5.27	1.39	1.52
1	A	2412	ARG	CZ-NH2	-5.20	1.26	1.33
1	A	1783	THR	CB-CG2	-5.10	1.35	1.52

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2412	ARG	NE-CZ-NH2	9.64	125.12	120.30
1	B	2471	LEU	CA-CB-CG	8.90	135.76	115.30
1	A	3459	ASP	CB-CG-OD2	-8.07	111.03	118.30
1	A	2012	LEU	CA-CB-CG	7.53	132.62	115.30
1	A	2212	LEU	CB-CG-CD1	-7.18	98.80	111.00
1	A	1769	LEU	CA-CB-CG	6.83	131.00	115.30
1	A	2064	GLN	O-C-N	6.68	133.39	122.70
1	A	2487	ASP	CB-CG-OD1	6.48	124.14	118.30
1	A	2412	ARG	NH1-CZ-NH2	-6.29	112.48	119.40
1	A	1741	LEU	CB-CG-CD1	6.08	121.34	111.00
1	A	1973	LEU	CB-CG-CD1	-6.01	100.78	111.00
1	A	2220	CYS	CA-CB-SG	-5.99	103.22	114.00
1	A	2336	ARG	NE-CZ-NH1	5.97	123.29	120.30
1	A	1463	LEU	CA-CB-CG	5.85	128.75	115.30
1	A	1659	LEU	CB-CG-CD2	-5.73	101.27	111.00
1	A	2078	CYS	CA-CB-SG	-5.69	103.76	114.00
1	B	2999	LEU	CA-CB-CG	5.66	128.31	115.30
1	A	2176	LEU	CA-CB-CG	5.43	127.79	115.30
1	A	4065	LEU	CB-CG-CD1	-5.34	101.92	111.00
1	A	1973	LEU	CA-CB-CG	5.22	127.31	115.30
1	A	2866	LEU	CA-CB-CG	5.22	127.30	115.30
1	A	2012	LEU	CB-CG-CD2	-5.18	102.19	111.00
1	A	1531	ARG	NE-CZ-NH2	-5.07	117.76	120.30
1	B	1938	GLY	N-CA-C	-5.07	100.42	113.10
1	B	2460	ARG	NE-CZ-NH2	-5.04	117.78	120.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	113	ASP	Peptide
1	A	2007	GLY	Peptide
1	A	2521	ASN	Peptide
1	B	2727	GLU	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	20748	0	20205	957	0
1	B	20748	0	20206	896	0
2	A	31	0	12	10	0
2	B	31	0	12	24	0
3	A	27	0	12	2	0
3	B	27	0	12	6	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
5	A	10	0	0	2	0
5	B	10	0	0	4	0
All	All	41634	0	40459	1855	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 23.

All (1855) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2380:LEU:CD2	1:A:2390:ILE:HD11	1.55	1.33
1:B:1826:PHE:CE2	1:B:1831:LEU:HB2	1.66	1.29
1:B:1620:PHE:HD1	1:B:1760:PHE:CZ	1.55	1.24
1:B:216:PRO:O	1:B:1365:PHE:HD1	1.21	1.22
1:B:216:PRO:O	1:B:1365:PHE:CD1	1.94	1.20
1:B:3458:PHE:CE1	1:B:3459:ASP:O	1.96	1.19
1:B:1421:TYR:O	1:B:1425:GLU:HB2	1.42	1.18
1:B:2707:VAL:HB	1:B:2712:LEU:HD11	1.24	1.18
1:B:1416:LYS:HA	1:B:1421:TYR:CZ	1.77	1.18
1:A:4033:LEU:CD1	1:A:4035:GLN:HB2	1.76	1.16
1:B:1826:PHE:CZ	1:B:1831:LEU:HB2	1.78	1.16
1:B:2354:SER:OG	1:B:2357:SER:HB2	1.43	1.16
1:A:3777:VAL:HG11	1:A:3895:PHE:CE1	1.82	1.15
1:B:2988:SER:HB3	1:B:2989:PRO:CD	1.77	1.14
1:A:3777:VAL:HG11	1:A:3895:PHE:HE1	0.97	1.13
1:B:1726:LEU:HD12	1:B:3984:GLN:HB3	1.30	1.13
1:B:2488:GLU:HB3	1:B:2491:LEU:HD12	1.17	1.13
1:A:2289:GLN:OE1	1:A:2412:ARG:HG2	1.49	1.13
1:A:1926:SER:HB2	1:A:1970:LEU:HD13	1.28	1.12
1:A:2111:LYS:HD3	1:A:2161:GLU:HG3	1.23	1.12
1:A:2707:VAL:HB	1:A:2712:LEU:HD11	1.19	1.12
1:A:3303:LYS:HA	1:A:3306:TRP:CD1	1.83	1.12
1:B:3534:LEU:CD1	1:B:3618:TYR:HE2	1.62	1.12
1:A:2757:MET:HG2	1:A:2889:PHE:HB2	1.29	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2488:GLU:HB3	1:A:2491:LEU:HD12	1.16	1.12
1:B:2822:ILE:HG13	1:B:2822:ILE:O	1.51	1.11
1:B:2380:LEU:HD13	1:B:2390:ILE:HD11	1.33	1.10
1:B:2111:LYS:HD3	1:B:2161:GLU:HG3	1.23	1.10
1:B:1645:PHE:HB3	1:B:1765:ILE:HG22	1.33	1.09
1:B:1409:LEU:HD21	1:B:1435:LEU:HB3	1.17	1.09
1:B:2380:LEU:HD22	1:B:2384:GLU:OE1	1.49	1.09
1:B:3777:VAL:HG11	1:B:3895:PHE:HE1	0.99	1.08
1:B:1645:PHE:HB3	1:B:1765:ILE:CG2	1.84	1.08
1:A:2988:SER:HB3	1:A:2989:PRO:CD	1.84	1.08
1:B:1992:LYS:HG3	1:B:2024:SER:HB2	1.24	1.08
1:B:2920:TRP:HB2	1:B:2989:PRO:HG3	1.33	1.07
1:B:3303:LYS:O	1:B:3306:TRP:HD1	1.37	1.07
1:A:3534:LEU:CD1	1:A:3618:TYR:HE2	1.67	1.06
1:A:1992:LYS:HG3	1:A:2024:SER:HB2	1.32	1.06
1:A:2494:LEU:HD13	1:A:2498:GLY:HA2	1.11	1.06
1:B:3303:LYS:HA	1:B:3306:TRP:CD1	1.90	1.06
1:A:1562:MET:HB3	1:A:1569:ILE:HD11	1.32	1.05
1:B:2112:GLU:HB3	1:B:2117:SER:HB2	1.32	1.05
1:B:1983:LEU:HG	1:B:1993:THR:HG23	1.08	1.05
1:B:3777:VAL:HG11	1:B:3895:PHE:CE1	1.92	1.05
1:A:3946:VAL:HG12	1:A:3950:PHE:O	1.57	1.04
1:B:1416:LYS:HG2	1:B:1421:TYR:OH	1.57	1.04
1:B:1620:PHE:CD1	1:B:1760:PHE:CZ	2.45	1.04
1:B:2988:SER:HB3	1:B:2989:PRO:HD2	1.05	1.04
1:A:1421:TYR:O	1:A:1425:GLU:HB2	1.58	1.03
1:A:2380:LEU:HD21	1:A:2390:ILE:CD1	1.86	1.03
1:B:2494:LEU:HD13	1:B:2498:GLY:HA2	1.04	1.03
1:A:3303:LYS:HD2	1:A:3306:TRP:CD1	1.92	1.03
1:A:2745:ILE:HG23	1:A:2756:MET:HE1	1.37	1.03
1:A:2476:LYS:N	1:A:2476:LYS:HD2	1.69	1.03
1:A:1645:PHE:HB3	1:A:1765:ILE:CG2	1.89	1.02
1:B:2494:LEU:HD13	1:B:2498:GLY:CA	1.88	1.02
1:A:2060:PHE:CZ	1:A:2064:GLN:NE2	2.27	1.02
1:B:1866:GLN:OE1	1:B:1911:ASN:HB2	1.59	1.02
1:B:3525:ILE:HD11	1:B:3646:ILE:HG22	1.40	1.01
1:A:2707:VAL:CB	1:A:2712:LEU:HD11	1.90	1.01
1:A:2920:TRP:HB2	1:A:2989:PRO:HG3	1.04	1.01
1:A:2988:SER:CB	1:A:2989:PRO:HD2	1.90	1.01
1:B:2728:LEU:HD12	1:B:2771:ARG:NH2	1.76	1.01
1:A:1421:TYR:CE2	1:A:1425:GLU:CG	2.43	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2494:LEU:CD1	1:B:2498:GLY:HA2	1.91	1.01
1:A:1645:PHE:HB3	1:A:1765:ILE:HG22	1.42	1.00
1:B:1983:LEU:CG	1:B:1993:THR:HG23	1.90	1.00
1:B:1620:PHE:CD1	1:B:1760:PHE:HZ	1.76	1.00
1:A:3024:LEU:HD11	1:A:3303:LYS:HG3	1.39	1.00
1:A:1620:PHE:HD2	1:A:1760:PHE:CZ	1.80	1.00
1:A:1630:ILE:HG22	1:A:1655:MET:SD	2.01	0.99
1:A:1992:LYS:CG	1:A:2024:SER:HB2	1.92	0.99
1:B:1422:LYS:O	1:B:1425:GLU:HB3	1.63	0.99
1:B:1822:CYS:HB2	1:B:1853:LEU:HD21	1.39	0.99
1:B:1645:PHE:CB	1:B:1765:ILE:HG22	1.92	0.99
1:A:3460:PRO:O	1:A:3463:SER:HB2	1.60	0.99
1:A:3525:ILE:HD11	1:A:3646:ILE:HG22	1.45	0.99
1:B:3024:LEU:HD11	1:B:3303:LYS:HG3	1.45	0.98
1:A:2378:VAL:HG22	1:A:2380:LEU:HD13	1.43	0.98
1:A:2494:LEU:CD1	1:A:2498:GLY:HA2	1.92	0.98
1:B:2471:LEU:O	1:B:2473:LEU:HD13	1.63	0.98
1:A:2920:TRP:CB	1:A:2989:PRO:HG3	1.93	0.98
1:A:1970:LEU:HD12	1:A:1973:LEU:HG	1.46	0.97
1:B:2386:MET:HB2	1:B:2627:ARG:HD3	1.45	0.97
1:A:3777:VAL:CG1	1:A:3895:PHE:HE1	1.76	0.97
1:A:3530:PHE:CD1	1:A:3618:TYR:HD2	1.82	0.97
1:B:1744:LEU:HA	1:B:1760:PHE:CE2	1.99	0.97
1:A:2988:SER:HB3	1:A:2989:PRO:HD2	0.97	0.97
1:B:1726:LEU:CD1	1:B:3984:GLN:HB3	1.94	0.97
1:B:2470:GLY:CA	1:B:2473:LEU:HD11	1.96	0.96
1:B:2988:SER:CB	1:B:2989:PRO:HD2	1.95	0.96
1:A:3303:LYS:O	1:A:3306:TRP:HD1	1.47	0.96
1:B:1823:ASP:HB2	1:B:1852:ARG:O	1.66	0.96
1:B:2470:GLY:HA3	1:B:2473:LEU:HD11	1.47	0.96
1:B:1616:LYS:NZ	1:B:1759:LYS:HE3	1.78	0.96
1:A:3534:LEU:HD12	1:A:3618:TYR:HE2	1.30	0.96
1:A:1421:TYR:CE2	1:A:1425:GLU:HG3	1.98	0.96
1:B:3460:PRO:O	1:B:3463:SER:HB2	1.65	0.96
1:B:2787:HIS:HA	1:B:3460:PRO:HD2	1.45	0.95
1:A:2064:GLN:NE2	1:A:2151:TRP:CZ3	2.35	0.95
1:A:2378:VAL:CG2	1:A:2380:LEU:HD13	1.96	0.95
1:B:3946:VAL:HG12	1:B:3950:PHE:O	1.66	0.95
1:A:2787:HIS:HA	1:A:3460:PRO:HD2	1.50	0.94
1:A:3406:PHE:HB2	1:A:3513:VAL:CG1	1.97	0.94
1:B:3534:LEU:CD1	1:B:3618:TYR:CE2	2.51	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3534:LEU:HD12	1:B:3618:TYR:HE2	1.32	0.94
1:B:2064:GLN:NE2	1:B:2070:LEU:HG	1.82	0.94
1:B:2080:LYS:HD2	1:B:2195:GLU:HB2	1.48	0.94
1:B:2707:VAL:CB	1:B:2712:LEU:HD11	1.97	0.93
1:A:2378:VAL:CG2	1:A:2380:LEU:CD1	2.46	0.93
1:B:3737:THR:HB	1:B:3740:THR:OG1	1.69	0.93
1:A:2488:GLU:CB	1:A:2491:LEU:HD12	1.96	0.93
1:B:1826:PHE:HE2	1:B:1831:LEU:HB2	1.27	0.93
1:A:4033:LEU:HD11	1:A:4035:GLN:HB2	1.48	0.93
1:B:1630:ILE:HG22	1:B:1655:MET:SD	2.09	0.93
1:A:3656:VAL:HG13	1:A:3677:LEU:HB3	1.50	0.93
1:B:2488:GLU:CB	1:B:2491:LEU:HD12	1.98	0.93
1:A:1421:TYR:CZ	1:A:1425:GLU:HG3	2.04	0.92
1:A:2060:PHE:CE2	1:A:2064:GLN:NE2	2.37	0.92
1:B:3777:VAL:CG1	1:B:3895:PHE:HE1	1.82	0.92
1:B:2755:HIS:HB2	1:B:2911:ARG:O	1.68	0.92
1:B:3303:LYS:O	1:B:3306:TRP:CD1	2.22	0.92
1:A:1535:PRO:HB2	1:A:1841:ILE:HG13	1.52	0.92
1:A:1924:PRO:HB2	1:A:1929:ILE:HD11	1.51	0.91
1:A:2493:LYS:HG3	1:A:2494:LEU:H	1.36	0.91
1:A:2494:LEU:HD13	1:A:2498:GLY:CA	2.00	0.91
1:A:2920:TRP:HB2	1:A:2989:PRO:CG	1.98	0.91
1:B:2472:THR:C	1:B:2473:LEU:HD12	1.89	0.91
1:B:3303:LYS:HD2	1:B:3306:TRP:CD1	2.06	0.91
1:B:1992:LYS:CG	1:B:2024:SER:HB2	2.01	0.91
1:A:1726:LEU:HD12	1:A:3984:GLN:HB3	1.51	0.91
1:B:2380:LEU:CD1	1:B:2390:ILE:HD11	2.00	0.91
1:B:2386:MET:CB	1:B:2627:ARG:HD3	2.01	0.91
1:B:3530:PHE:CD1	1:B:3618:TYR:HD2	1.88	0.91
1:A:3534:LEU:CD1	1:A:3618:TYR:CE2	2.53	0.91
1:A:3737:THR:HB	1:A:3740:THR:OG1	1.70	0.91
1:A:1983:LEU:HG	1:A:1993:THR:HG23	1.49	0.90
1:A:3303:LYS:O	1:A:3306:TRP:CD1	2.23	0.90
1:A:2757:MET:HG2	1:A:2889:PHE:CB	2.01	0.90
1:B:3406:PHE:HB2	1:B:3513:VAL:CG1	2.01	0.90
1:B:2112:GLU:HB3	1:B:2117:SER:CB	2.01	0.90
1:A:1940:GLU:HB2	1:A:1989:GLU:O	1.70	0.90
1:B:1774:LEU:HD21	1:B:1922:LYS:O	1.72	0.90
1:B:1956:LEU:HB3	1:B:1968:PHE:HE2	1.37	0.90
1:A:2380:LEU:HD21	1:A:2390:ILE:HD11	0.92	0.89
1:B:1983:LEU:CD2	1:B:1993:THR:O	2.20	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1939:PHE:CD2	1:A:1940:GLU:O	2.25	0.89
1:B:1983:LEU:HD23	1:B:1993:THR:O	1.72	0.89
1:A:1822:CYS:SG	1:A:1850:PHE:HA	2.13	0.89
1:B:2488:GLU:HB3	1:B:2491:LEU:CD1	2.02	0.89
1:A:3458:PHE:CE1	1:A:3459:ASP:O	2.26	0.88
1:A:2106:THR:OG1	1:A:2154:PHE:HB3	1.74	0.88
1:B:1535:PRO:HB2	1:B:1841:ILE:HG13	1.54	0.88
1:B:2225:LYS:HA	2:B:5093:ATP:C2	2.09	0.88
1:B:2563:SER:HB3	1:B:2566:SER:H	1.39	0.88
1:B:2080:LYS:HE2	1:B:2195:GLU:OE1	1.73	0.88
1:A:1425:GLU:OE2	1:A:1429:LEU:CG	2.21	0.88
1:A:1823:ASP:HB2	1:A:1853:LEU:HD23	1.56	0.88
1:A:2137:VAL:O	1:A:2141:ILE:HG23	1.74	0.88
1:A:2378:VAL:HG22	1:A:2380:LEU:CD1	2.03	0.88
1:A:2512:LYS:O	1:A:2513:GLN:HB2	1.74	0.88
1:B:1744:LEU:HA	1:B:1760:PHE:CD2	2.09	0.87
1:A:4033:LEU:HD13	1:A:4035:GLN:HB2	1.54	0.87
1:A:3303:LYS:HA	1:A:3306:TRP:NE1	1.89	0.87
1:A:2380:LEU:CD2	1:A:2390:ILE:CD1	2.47	0.87
1:B:1409:LEU:HD21	1:B:1435:LEU:CB	2.04	0.87
1:B:1939:PHE:CD2	1:B:1940:GLU:O	2.28	0.87
1:A:1425:GLU:OE2	1:A:1429:LEU:HG	1.74	0.87
1:A:1822:CYS:HB2	1:A:1853:LEU:HD21	1.55	0.87
1:A:1421:TYR:CE2	1:A:1425:GLU:HG2	2.08	0.87
1:A:1866:GLN:OE1	1:A:1911:ASN:HB2	1.75	0.87
1:A:1983:LEU:CG	1:A:1993:THR:HG23	2.04	0.87
1:B:1535:PRO:C	1:B:1841:ILE:HD11	1.94	0.87
1:A:3534:LEU:HD12	1:A:3618:TYR:CE2	2.09	0.87
1:B:2332:GLY:HA2	1:B:2335:GLN:HB2	1.57	0.86
1:A:3303:LYS:CA	1:A:3306:TRP:CD1	2.58	0.86
1:A:3509:LEU:CD1	1:A:3513:VAL:HG21	2.05	0.86
1:A:3530:PHE:CD1	1:A:3618:TYR:CD2	2.64	0.86
1:B:1992:LYS:HE2	1:B:2024:SER:O	1.75	0.86
1:B:3998:ILE:HG21	1:B:4004:LEU:HG	1.57	0.86
1:B:1956:LEU:HB3	1:B:1968:PHE:CE2	2.11	0.86
1:B:1604:ALA:HA	1:B:1607:TRP:CD1	2.11	0.86
1:A:2787:HIS:HA	1:A:3460:PRO:CD	2.06	0.86
1:B:2853:LEU:HD21	1:B:2870:GLU:HG3	1.58	0.86
1:A:1409:LEU:HD21	1:A:1435:LEU:HB3	1.58	0.85
1:A:1707:HIS:O	1:A:1711:VAL:HG23	1.76	0.85
1:B:3534:LEU:HD13	1:B:3618:TYR:HE2	1.37	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2472:THR:O	1:B:2473:LEU:HD12	1.76	0.85
1:A:2787:HIS:HA	1:A:3460:PRO:HG2	1.59	0.85
1:B:2141:ILE:HG22	1:B:2145:PHE:HB2	1.58	0.85
1:A:1970:LEU:HD12	1:A:1973:LEU:CG	2.07	0.84
1:A:2332:GLY:HA2	1:A:2335:GLN:HB2	1.59	0.84
1:A:2631:THR:O	1:A:2635:THR:HG22	1.76	0.84
1:A:2755:HIS:HB2	1:A:2911:ARG:O	1.77	0.84
1:A:1645:PHE:CB	1:A:1765:ILE:HG22	2.07	0.84
1:B:3303:LYS:HA	1:B:3306:TRP:NE1	1.91	0.84
1:A:1621:THR:HA	1:A:1624:ARG:NH1	1.92	0.84
1:B:2787:HIS:HA	1:B:3460:PRO:CD	2.07	0.84
1:B:1924:PRO:HB2	1:B:1929:ILE:HD11	1.59	0.84
1:B:3024:LEU:CD1	1:B:3303:LYS:HG3	2.07	0.83
1:B:1940:GLU:HB2	1:B:1989:GLU:O	1.78	0.83
1:A:2787:HIS:HA	1:A:3460:PRO:CG	2.07	0.83
1:A:3566:LEU:HD23	1:A:3587:LEU:HD11	1.61	0.83
1:A:2563:SER:HB3	1:A:2566:SER:H	1.42	0.83
1:A:2941:THR:HG22	1:A:2942:ASP:H	1.42	0.83
1:A:2274:HIS:HE1	1:A:2326:LEU:O	1.61	0.82
1:A:3946:VAL:CG1	1:A:3950:PHE:O	2.28	0.82
1:B:3534:LEU:HD12	1:B:3618:TYR:CE2	2.13	0.82
1:A:2107:LYS:HE2	1:A:2499:SER:HB3	1.61	0.82
1:B:2512:LYS:O	1:B:2513:GLN:HB2	1.77	0.82
1:A:2488:GLU:HB3	1:A:2491:LEU:CD1	2.07	0.82
1:B:2274:HIS:HE1	1:B:2326:LEU:O	1.62	0.82
1:A:2745:ILE:HG23	1:A:2756:MET:CE	2.09	0.82
1:A:2757:MET:HG2	1:A:2889:PHE:CD2	2.14	0.82
1:A:1992:LYS:HE2	1:A:2024:SER:O	1.78	0.82
1:A:3534:LEU:HD13	1:A:3618:TYR:HE2	1.44	0.82
1:A:1387:GLU:HB3	1:A:1393:LYS:HG2	1.61	0.81
1:B:3656:VAL:HG13	1:B:3677:LEU:HB3	1.60	0.81
1:A:1783:THR:HG22	1:A:1809:PHE:HZ	1.44	0.81
1:B:1409:LEU:CD2	1:B:1435:LEU:HB3	2.06	0.81
1:A:1562:MET:CB	1:A:1569:ILE:HD11	2.09	0.81
1:A:1569:ILE:HA	1:A:1584:SER:HA	1.59	0.81
1:A:2112:GLU:HB3	1:A:2117:SER:HB2	1.60	0.81
1:B:3566:LEU:HA	1:B:3583:LEU:HD21	1.62	0.81
1:A:2386:MET:HB2	1:A:2627:ARG:HD3	1.62	0.81
1:A:3024:LEU:CD1	1:A:3303:LYS:HG3	2.11	0.81
1:A:2476:LYS:N	1:A:2476:LYS:CD	2.40	0.80
1:B:1802:LYS:HG2	1:B:1921:MET:HG3	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2111:LYS:HD3	1:B:2161:GLU:CG	2.08	0.80
1:A:2111:LYS:HD3	1:A:2161:GLU:CG	2.10	0.80
1:A:2707:VAL:HB	1:A:2712:LEU:CD1	2.07	0.80
1:A:4021:LEU:HD23	1:A:4023:ILE:HG12	1.61	0.80
1:B:1392:LEU:HD13	1:B:1393:LYS:N	1.97	0.80
1:B:2048:SER:H	2:B:5093:ATP:HN62	1.29	0.80
1:A:2175:ILE:HG12	1:A:2183:ARG:HB3	1.62	0.80
1:B:1983:LEU:HG	1:B:1993:THR:CG2	2.03	0.80
1:A:3525:ILE:CD1	1:A:3646:ILE:HG22	2.10	0.80
1:B:1823:ASP:CB	1:B:1852:ARG:O	2.30	0.79
1:B:2471:LEU:O	1:B:2473:LEU:CD1	2.31	0.79
1:A:1604:ALA:HA	1:A:1607:TRP:NE1	1.97	0.79
1:B:2728:LEU:HD12	1:B:2771:ARG:HH22	1.44	0.79
1:A:3534:LEU:HD11	1:A:3614:LEU:HD23	1.63	0.79
1:B:1996:GLU:O	1:B:2000:ARG:HG3	1.81	0.79
1:B:2354:SER:OG	1:B:2357:SER:CB	2.28	0.79
1:A:1620:PHE:CE1	1:A:1624:ARG:HD3	2.18	0.79
1:B:3303:LYS:C	1:B:3306:TRP:HD1	1.86	0.79
1:B:1970:LEU:CD2	1:B:1974:LYS:HE2	2.13	0.79
1:B:2745:ILE:HG12	1:B:2756:MET:HE3	1.65	0.79
1:B:216:PRO:C	1:B:1365:PHE:CD1	2.56	0.79
1:B:2106:THR:OG1	1:B:2154:PHE:HB3	1.82	0.79
1:A:1604:ALA:HA	1:A:1607:TRP:CD1	2.18	0.78
1:A:2003:LEU:HA	1:A:2006:LEU:HD12	1.62	0.78
1:A:2048:SER:H	2:A:5093:ATP:HN62	1.31	0.78
1:A:1462:ASN:HB2	1:A:1465:ILE:HG22	1.64	0.78
1:A:3406:PHE:HB2	1:A:3513:VAL:HG11	1.65	0.78
1:A:2220:CYS:SG	1:A:2224:SER:HB2	2.23	0.78
1:A:1630:ILE:CG2	1:A:1655:MET:SD	2.71	0.78
1:B:1616:LYS:HZ1	1:B:1759:LYS:HE3	1.47	0.78
1:B:1416:LYS:CG	1:B:1421:TYR:OH	2.31	0.78
1:B:2224:SER:O	2:B:5093:ATP:H2	1.66	0.78
1:A:1783:THR:HG22	1:A:1809:PHE:CZ	2.19	0.78
1:B:3645:SER:HB3	1:B:3890:GLN:NE2	1.99	0.78
1:A:2446:SER:H	1:A:2449:THR:HG23	1.49	0.78
1:A:4033:LEU:CD1	1:A:4035:GLN:CB	2.62	0.78
1:A:1392:LEU:HD13	1:A:1393:LYS:N	1.99	0.77
1:A:2380:LEU:HG	1:A:2384:GLU:OE1	1.84	0.77
1:B:1826:PHE:CZ	1:B:1831:LEU:CB	2.66	0.77
1:B:3946:VAL:CG1	1:B:3950:PHE:O	2.32	0.77
1:A:2176:LEU:O	1:A:2183:ARG:HA	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2152:VAL:HG12	1:A:2154:PHE:HE1	1.49	0.77
1:A:2289:GLN:OE1	1:A:2412:ARG:CG	2.32	0.77
1:A:3777:VAL:CG1	1:A:3895:PHE:CE1	2.57	0.77
1:A:3618:TYR:CD1	1:A:3618:TYR:N	2.51	0.77
1:B:3303:LYS:CA	1:B:3306:TRP:CD1	2.66	0.77
1:A:2446:SER:H	1:A:2449:THR:CG2	1.97	0.77
1:B:1421:TYR:O	1:B:1425:GLU:CB	2.28	0.77
1:B:4065:LEU:HD11	1:B:4070:ILE:HD11	1.65	0.77
1:A:1626:CYS:SG	1:A:1639:VAL:HG11	2.24	0.77
1:A:3700:MET:HB3	1:A:4085:THR:HG21	1.67	0.77
1:B:1604:ALA:HA	1:B:1607:TRP:NE1	1.99	0.77
1:B:1826:PHE:CE2	1:B:1831:LEU:CB	2.60	0.77
1:B:3998:ILE:CG2	1:B:4004:LEU:HG	2.13	0.77
1:A:3458:PHE:HE1	1:A:3462:ILE:HB	1.50	0.77
1:B:1616:LYS:NZ	1:B:1759:LYS:CE	2.48	0.77
1:B:3406:PHE:HB2	1:B:3513:VAL:HG11	1.67	0.77
1:A:1463:LEU:HA	1:A:1466:GLN:HG2	1.66	0.76
1:A:1535:PRO:C	1:A:1841:ILE:HD11	2.05	0.76
1:B:1616:LYS:HZ2	1:B:1759:LYS:HE3	1.47	0.76
1:B:1645:PHE:CB	1:B:1765:ILE:CG2	2.58	0.76
1:A:1531:ARG:HG2	1:A:1537:PHE:HB3	1.67	0.76
1:B:1759:LYS:CE	1:B:1761:GLU:OE2	2.33	0.76
1:B:2111:LYS:NZ	1:B:2161:GLU:HG2	2.01	0.76
1:B:2779:LEU:HD23	1:B:2812:ARG:O	1.84	0.76
1:A:1645:PHE:CB	1:A:1765:ILE:CG2	2.62	0.76
1:A:1649:LEU:CD1	1:A:1704:GLU:HG3	2.16	0.76
1:A:2111:LYS:NZ	1:A:2161:GLU:HG2	2.01	0.76
1:B:2787:HIS:HA	1:B:3460:PRO:CG	2.15	0.76
1:A:3566:LEU:HA	1:A:3583:LEU:CD2	2.16	0.76
1:A:2197:ASP:HB3	1:A:2549:ARG:HD2	1.67	0.76
1:B:1940:GLU:HG3	1:B:1941:ASP:H	1.50	0.76
1:A:3774:ILE:O	1:A:3778:VAL:HG23	1.86	0.75
1:A:2107:LYS:HE3	1:A:2495:ASP:OD2	1.85	0.75
1:B:3566:LEU:HA	1:B:3583:LEU:CD2	2.16	0.75
1:B:3792:ARG:HB2	1:B:3955:TYR:CD2	2.21	0.75
1:A:2757:MET:CG	1:A:2889:PHE:HB2	2.14	0.75
1:A:3509:LEU:HD12	1:A:3513:VAL:CG2	2.16	0.75
1:A:1620:PHE:HE1	1:A:1624:ARG:HD3	1.50	0.75
1:A:2779:LEU:HD23	1:A:2812:ARG:O	1.86	0.75
1:B:216:PRO:C	1:B:1365:PHE:HA	2.06	0.75
1:B:1421:TYR:O	1:B:1421:TYR:CG	2.37	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1562:MET:HB3	1:B:1569:ILE:HD11	1.69	0.75
1:B:3792:ARG:HB2	1:B:3955:TYR:CE2	2.22	0.75
1:B:3530:PHE:CD1	1:B:3618:TYR:CD2	2.74	0.75
1:B:3799:LYS:O	1:B:3803:LEU:HG	1.86	0.75
1:B:1574:PHE:HB3	1:B:1576:GLU:H	1.51	0.74
1:B:2137:VAL:O	1:B:2141:ILE:HG23	1.86	0.74
1:A:1965:HIS:HD2	1:A:2212:LEU:HD21	1.52	0.74
1:B:1405:CYS:O	1:B:1409:LEU:HG	1.86	0.74
1:B:2080:LYS:NZ	2:B:5093:ATP:O3G	2.21	0.74
1:B:2203:THR:HG22	1:B:2205:ALA:H	1.51	0.74
1:B:2707:VAL:CG1	1:B:2712:LEU:CD1	2.65	0.74
1:B:2920:TRP:CB	1:B:2989:PRO:HG3	2.14	0.74
1:A:3645:SER:HB3	1:A:3890:GLN:NE2	2.03	0.74
1:A:4033:LEU:HD13	1:A:4035:GLN:CB	2.18	0.74
1:B:2425:THR:HB	3:B:5094:ADP:O1A	1.85	0.74
1:B:1929:ILE:HD13	1:B:1970:LEU:CD1	2.18	0.74
1:B:3871:PHE:CZ	1:B:3873:MET:HB2	2.22	0.74
1:A:1409:LEU:HD21	1:A:1435:LEU:CB	2.18	0.74
1:A:2411:LYS:HG2	1:A:2530:HIS:HE1	1.53	0.74
1:B:1939:PHE:HD2	1:B:1940:GLU:O	1.69	0.74
1:B:2420:PRO:HD3	1:B:2536:ASN:HD21	1.51	0.74
1:A:2707:VAL:CG1	1:A:2712:LEU:CD1	2.66	0.73
1:B:3534:LEU:HD13	1:B:3618:TYR:CE2	2.18	0.73
1:A:1939:PHE:HD2	1:A:1940:GLU:O	1.68	0.73
1:B:3728:GLU:HG3	1:B:4079:LYS:HE2	1.69	0.73
1:B:3774:ILE:O	1:B:3778:VAL:HG23	1.88	0.73
1:B:4020:ASN:HB3	1:B:4028:ARG:HH11	1.51	0.73
1:A:3923:VAL:HG23	1:A:4038:GLU:HA	1.70	0.73
1:B:3458:PHE:CD1	1:B:3459:ASP:O	2.41	0.73
1:A:2386:MET:HB3	1:A:2627:ARG:NE	2.04	0.73
1:B:2175:ILE:HG12	1:B:2183:ARG:HB3	1.71	0.73
1:A:2048:SER:N	2:A:5093:ATP:HN62	1.86	0.73
1:A:3303:LYS:C	1:A:3306:TRP:HD1	1.90	0.73
1:A:3566:LEU:HA	1:A:3583:LEU:HD21	1.71	0.73
1:A:2064:GLN:NE2	1:A:2151:TRP:HZ3	1.86	0.73
1:B:1616:LYS:HZ1	1:B:1759:LYS:CE	2.02	0.73
1:B:2080:LYS:HG2	2:B:5093:ATP:O1B	1.89	0.73
1:B:2155:ASP:OD1	1:B:2549:ARG:NH2	2.22	0.73
1:B:2745:ILE:HG23	1:B:2756:MET:CE	2.18	0.73
1:A:1983:LEU:CD2	1:A:1993:THR:HG23	2.19	0.72
1:B:2787:HIS:HA	1:B:3460:PRO:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1620:PHE:CD2	1:A:1760:PHE:CZ	2.72	0.72
1:A:2757:MET:HG2	1:A:2889:PHE:CG	2.24	0.72
1:B:1726:LEU:HD12	1:B:3984:GLN:CB	2.14	0.72
1:B:1879:ILE:HG12	1:B:1888:LEU:HB2	1.68	0.72
1:B:2631:THR:O	1:B:2635:THR:HG22	1.88	0.72
1:B:1929:ILE:HD13	1:B:1970:LEU:HD11	1.72	0.72
1:B:2220:CYS:SG	1:B:2224:SER:CB	2.77	0.72
1:A:2386:MET:CB	1:A:2627:ARG:HD3	2.20	0.72
1:A:3303:LYS:CA	1:A:3306:TRP:HD1	2.00	0.72
1:A:1394:LEU:HD22	1:A:1449:GLN:HE22	1.53	0.72
1:A:1421:TYR:O	1:A:1425:GLU:CB	2.34	0.72
1:A:1938:GLY:O	1:A:1989:GLU:HB3	1.88	0.72
1:A:4065:LEU:HD11	1:A:4070:ILE:HD11	1.70	0.72
1:B:2572:GLU:CD	1:B:2590:GLU:HG3	2.09	0.72
1:B:1953:LEU:CD1	1:B:1973:LEU:HB3	2.19	0.72
1:A:3799:LYS:O	1:A:3803:LEU:HG	1.90	0.72
1:B:1926:SER:CB	1:B:1970:LEU:HD12	2.19	0.72
1:A:2080:LYS:HG2	1:A:2215:PHE:CE1	2.25	0.72
1:A:2745:ILE:HG12	1:A:2756:MET:HE3	1.72	0.71
1:B:1630:ILE:CG2	1:B:1655:MET:SD	2.77	0.71
1:A:1466:GLN:CB	1:A:1473:THR:HG21	2.20	0.71
1:B:1620:PHE:HD1	1:B:1760:PHE:HZ	0.84	0.71
1:A:3998:ILE:CG2	1:A:4004:LEU:HG	2.21	0.71
1:B:3458:PHE:CZ	1:B:3459:ASP:O	2.43	0.71
1:A:2106:THR:HG1	1:A:2154:PHE:HB3	1.53	0.71
1:A:2302:PHE:HA	1:A:2310:LEU:HD11	1.71	0.71
1:B:2220:CYS:SG	1:B:2224:SER:HB2	2.31	0.71
1:B:2513:GLN:O	1:B:2526:ILE:HG13	1.91	0.71
1:B:3618:TYR:N	1:B:3618:TYR:CD1	2.53	0.71
1:A:1849:GLU:OE2	1:A:1899:ASN:ND2	2.23	0.71
1:B:2446:SER:H	1:B:2449:THR:HG23	1.56	0.71
1:A:3024:LEU:HD11	1:A:3303:LYS:CG	2.19	0.71
1:A:1738:ASN:O	1:A:1739:ASP:OD1	2.09	0.71
1:A:1781:THR:HG21	1:A:1919:PHE:CD1	2.26	0.71
1:A:2549:ARG:HE	2:A:5093:ATP:PG	2.14	0.71
1:A:2846:GLY:O	1:A:2849:TYR:HB3	1.90	0.71
1:A:3839:ILE:HG23	1:A:3873:MET:HG3	1.73	0.71
1:A:1493:LEU:HD23	1:A:1498:GLU:HB3	1.72	0.71
1:A:2787:HIS:CA	1:A:3460:PRO:HD2	2.21	0.71
1:A:3566:LEU:O	1:A:3570:LEU:HG	1.91	0.71
1:A:3618:TYR:N	1:A:3618:TYR:HD1	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1425:GLU:OE2	1:B:1429:LEU:HD11	1.90	0.71
1:B:2476:LYS:NZ	1:B:2528:ARG:HD2	2.05	0.71
1:A:3330:TYR:OH	1:A:3346:LEU:HD22	1.91	0.71
1:B:1540:LEU:CD1	1:B:1548:ILE:HD11	2.21	0.71
1:B:1970:LEU:HD21	1:B:1974:LYS:HE2	1.72	0.71
1:A:3406:PHE:HB2	1:A:3513:VAL:HG12	1.72	0.70
1:B:1965:HIS:HD2	1:B:2212:LEU:HD21	1.55	0.70
1:B:2476:LYS:H	1:B:2476:LYS:HD2	1.56	0.70
1:A:3303:LYS:HD2	1:A:3306:TRP:HD1	1.53	0.70
1:A:1462:ASN:CB	1:A:1465:ILE:HG22	2.20	0.70
1:A:3353:LEU:HD23	1:A:3358:VAL:HG11	1.73	0.70
1:B:2446:SER:H	1:B:2449:THR:CG2	2.03	0.70
1:A:1726:LEU:CD1	1:A:3984:GLN:HB3	2.22	0.70
1:B:1535:PRO:HB2	1:B:1841:ILE:CG1	2.21	0.70
1:A:1620:PHE:CZ	1:A:1743:ASP:HB3	2.27	0.70
1:A:1826:PHE:CE1	1:A:1853:LEU:HD22	2.26	0.70
1:B:2476:LYS:HG2	1:B:2478:ASP:O	1.91	0.70
1:A:2728:LEU:HD12	1:A:2771:ARG:NH2	2.07	0.70
1:B:1698:ILE:O	1:B:1702:LEU:HG	1.91	0.70
1:A:1744:LEU:HA	1:A:1760:PHE:CE1	2.25	0.70
1:B:2787:HIS:CA	1:B:3460:PRO:HD2	2.21	0.70
1:B:3303:LYS:CA	1:B:3306:TRP:HD1	2.05	0.70
1:A:2563:SER:HB2	1:A:2566:SER:OG	1.92	0.70
1:A:2707:VAL:CG1	1:A:2712:LEU:HD11	2.21	0.70
1:B:2131:THR:HG22	1:B:2176:LEU:HD21	1.72	0.70
1:B:2476:LYS:H	1:B:2476:LYS:CD	2.04	0.70
1:A:2048:SER:H	2:A:5093:ATP:N6	1.88	0.70
1:B:1392:LEU:HD13	1:B:1392:LEU:C	2.13	0.70
1:B:3631:MET:CE	1:B:3698:MET:HG3	2.21	0.70
1:A:3534:LEU:HD13	1:A:3618:TYR:CE2	2.22	0.69
1:A:7:TRP:O	1:A:9:ILE:N	2.25	0.69
1:A:2112:GLU:HB3	1:A:2117:SER:CB	2.21	0.69
1:A:2891:ILE:HD11	1:A:2903:ILE:HD11	1.74	0.69
1:A:3509:LEU:HD12	1:A:3513:VAL:HG21	1.74	0.69
1:B:1822:CYS:SG	1:B:1849:GLU:O	2.50	0.69
1:B:1489:ARG:HH12	1:B:1503:PRO:HG2	1.57	0.69
1:A:3787:THR:HG22	1:A:3875:MET:HB2	1.73	0.69
1:A:1983:LEU:CD2	1:A:1993:THR:O	2.40	0.69
1:A:2064:GLN:NE2	1:A:2151:TRP:CH2	2.61	0.69
1:A:2181:GLY:O	1:A:2182:GLU:HG3	1.92	0.69
1:A:3871:PHE:CZ	1:A:3873:MET:HB2	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2032:LYS:O	1:B:2035:VAL:HG12	1.92	0.69
1:B:3024:LEU:HD11	1:B:3303:LYS:CG	2.20	0.69
1:B:3837:GLY:O	1:B:3871:PHE:HD1	1.75	0.69
1:A:1495:THR:HG22	1:A:1497:ILE:HG22	1.74	0.69
1:A:1823:ASP:CB	1:A:1852:ARG:O	2.41	0.69
1:A:3473:ALA:HB3	1:A:3476:ARG:O	1.93	0.69
1:B:3566:LEU:O	1:B:3570:LEU:HG	1.93	0.68
1:B:3850:TRP:NE1	1:B:3854:TYR:HB3	2.09	0.68
1:A:2709:LYS:O	1:A:2713:VAL:HG23	1.93	0.68
1:B:1569:ILE:HA	1:B:1584:SER:HA	1.73	0.68
1:A:3010:LEU:HD21	1:A:3317:SER:HB3	1.76	0.68
1:B:2176:LEU:O	1:B:2183:ARG:HA	1.93	0.68
1:B:3618:TYR:N	1:B:3618:TYR:HD1	1.91	0.68
1:A:1418:SER:HB2	1:A:3446:PHE:HB3	1.73	0.68
1:B:1540:LEU:CD1	1:B:1548:ILE:CD1	2.71	0.68
1:B:1759:LYS:HE2	1:B:1761:GLU:OE2	1.92	0.68
1:A:1922:LYS:NZ	1:A:4004:LEU:HD12	2.08	0.68
1:A:1956:LEU:HB3	1:A:1968:PHE:CE2	2.28	0.68
1:A:1995:VAL:HG22	1:A:2022:PHE:CE2	2.29	0.68
1:B:1387:GLU:HB3	1:B:1393:LYS:HG2	1.74	0.68
1:B:2489:ILE:HG22	1:B:2535:CYS:HB3	1.76	0.68
1:B:3566:LEU:CD1	1:B:3570:LEU:HD11	2.24	0.68
1:A:3886:ALA:N	1:A:3887:PRO:HD2	2.09	0.68
1:B:1826:PHE:HE2	1:B:1831:LEU:CB	2.04	0.68
1:B:2941:THR:HG22	1:B:2942:ASP:H	1.57	0.68
1:B:2111:LYS:CD	1:B:2161:GLU:HG3	2.12	0.68
1:A:1849:GLU:HG2	1:A:1899:ASN:HD22	1.59	0.68
1:A:2276:LEU:HD23	1:A:2556:ILE:HD13	1.76	0.68
1:B:3871:PHE:HZ	1:B:3873:MET:HB2	1.59	0.68
1:A:2173:ASN:HB3	1:A:2175:ILE:HG22	1.75	0.67
1:B:2707:VAL:CG1	1:B:2712:LEU:HD11	2.24	0.67
1:B:3645:SER:HB3	1:B:3890:GLN:HE21	1.57	0.67
1:B:3683:TYR:O	1:B:3687:SER:HB2	1.95	0.67
1:A:1965:HIS:HD2	1:A:2212:LEU:CD2	2.08	0.67
1:A:2391:VAL:HG22	1:A:2430:ASN:OD1	1.95	0.67
1:A:2762:SER:O	1:A:2763:ARG:HB2	1.95	0.67
1:B:1612:ASP:HA	1:B:1615:ILE:CD1	2.24	0.67
1:B:2177:THR:HG22	1:B:2183:ARG:HG2	1.76	0.67
1:B:3816:LEU:HD23	1:B:3847:SER:OG	1.95	0.67
1:A:1620:PHE:HD1	1:A:1624:ARG:NH1	1.93	0.67
1:B:2467:THR:HB	1:B:2473:LEU:HD22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2463:ASN:HB2	1:A:2477:SER:HA	1.77	0.67
1:B:2081:THR:HB	2:B:5093:ATP:O1A	1.93	0.67
1:A:2760:GLY:HA3	1:A:2766:LYS:HD3	1.77	0.67
1:B:1620:PHE:HB2	1:B:1760:PHE:CE1	2.30	0.67
1:B:2224:SER:O	2:B:5093:ATP:C2	2.47	0.67
1:B:2472:THR:CG2	1:B:2524:VAL:HG22	2.25	0.67
1:B:3473:ALA:HB3	1:B:3476:ARG:O	1.94	0.67
1:B:3923:VAL:HG23	1:B:4038:GLU:HA	1.77	0.67
1:B:4017:GLY:HA3	1:B:4021:LEU:HD12	1.76	0.67
1:B:3919:LYS:NZ	1:B:4038:GLU:CD	2.48	0.67
1:A:1991:GLU:O	1:A:1995:VAL:HG23	1.95	0.66
1:B:1645:PHE:CG	1:B:1765:ILE:HG22	2.29	0.66
1:B:3350:LYS:HA	1:B:3353:LEU:HD12	1.77	0.66
1:B:1611:LEU:O	1:B:1615:ILE:HG23	1.95	0.66
1:B:1967:HIS:C	1:B:1968:PHE:HD1	1.97	0.66
1:B:1536:ARG:N	1:B:1841:ILE:HD11	2.09	0.66
1:B:1849:GLU:OE2	1:B:1899:ASN:ND2	2.28	0.66
1:B:2517:LYS:HE3	1:B:2519:PRO:HD2	1.76	0.66
1:B:2552:ARG:NH2	2:B:5093:ATP:O2G	2.28	0.66
1:B:3919:LYS:HZ2	1:B:4038:GLU:CD	1.98	0.66
1:A:2220:CYS:SG	1:A:2224:SER:CB	2.83	0.66
1:A:3460:PRO:O	1:A:3463:SER:CB	2.40	0.66
1:A:3530:PHE:HD1	1:A:3618:TYR:HD2	1.43	0.66
1:B:1970:LEU:CD2	1:B:1974:LYS:CE	2.73	0.66
1:B:2448:ASP:HB2	1:B:2829:GLU:OE1	1.95	0.66
1:A:1995:VAL:HG21	1:A:2024:SER:HB3	1.78	0.66
1:A:3816:LEU:HD23	1:A:3847:SER:OG	1.96	0.66
1:B:2106:THR:HG1	1:B:2154:PHE:HB3	1.59	0.66
1:B:2107:LYS:HE2	1:B:2499:SER:HB3	1.78	0.66
1:B:2745:ILE:HG23	1:B:2756:MET:HE1	1.77	0.66
1:A:2677:VAL:HG11	1:A:2686:LEU:HD21	1.77	0.66
1:B:3566:LEU:HD13	1:B:3570:LEU:HD11	1.77	0.66
1:A:3459:ASP:OD2	1:A:3461:ILE:HG12	1.95	0.66
1:B:3566:LEU:HD13	1:B:3570:LEU:CD1	2.25	0.66
1:A:3979:ASN:C	1:A:3981:PRO:HD2	2.16	0.66
1:A:1983:LEU:HD23	1:A:1993:THR:O	1.96	0.66
1:A:1392:LEU:HD13	1:A:1392:LEU:C	2.16	0.65
1:A:1489:ARG:HH12	1:A:1503:PRO:HG2	1.61	0.65
1:A:1823:ASP:HB3	1:A:1852:ARG:O	1.95	0.65
1:A:1922:LYS:HZ1	1:A:4004:LEU:HD12	1.60	0.65
1:A:2034:ILE:HD12	1:A:2061:TYR:CZ	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3837:GLY:O	1:A:3871:PHE:HD1	1.79	0.65
1:B:2076:ALA:HA	2:B:5093:ATP:O1G	1.96	0.65
1:B:3592:LYS:O	1:B:3596:ASN:HB2	1.96	0.65
1:A:1622:GLN:HE22	1:A:1644:ILE:H	1.44	0.65
1:A:1983:LEU:HD23	1:A:1993:THR:CG2	2.26	0.65
1:A:3792:ARG:HB2	1:A:3955:TYR:CD2	2.30	0.65
1:B:2141:ILE:CG2	1:B:2145:PHE:HB2	2.25	0.65
1:B:3839:ILE:HG23	1:B:3873:MET:HG3	1.77	0.65
1:A:1405:CYS:O	1:A:1409:LEU:HG	1.96	0.65
1:A:1536:ARG:HD3	1:A:1841:ILE:HD13	1.77	0.65
1:A:3877:CYS:SG	1:A:3884:LEU:HD22	2.37	0.65
1:A:2394:THR:H	1:A:2397:THR:HB	1.62	0.65
1:A:3998:ILE:HG21	1:A:4004:LEU:HG	1.79	0.65
1:A:1922:LYS:HE2	1:A:3999:ASP:O	1.97	0.65
1:A:3737:THR:OG1	1:A:3740:THR:HB	1.97	0.65
1:B:3777:VAL:CG1	1:B:3895:PHE:CE1	2.68	0.65
1:B:1620:PHE:HA	1:B:1760:PHE:HE1	1.61	0.65
1:B:1983:LEU:HD21	1:B:1993:THR:O	1.94	0.65
1:A:1783:THR:CG2	1:A:1809:PHE:CZ	2.80	0.64
1:B:1540:LEU:HD12	1:B:1548:ILE:CD1	2.27	0.64
1:B:2563:SER:HB2	1:B:2566:SER:OG	1.97	0.64
1:B:2637:PRO:O	1:B:2639:GLN:NE2	2.30	0.64
1:B:3459:ASP:OD2	1:B:3461:ILE:HG12	1.97	0.64
1:A:113:ASP:O	1:A:115:GLU:N	2.31	0.64
1:B:1826:PHE:HZ	1:B:1831:LEU:HB2	1.53	0.64
1:B:2655:ILE:HD11	1:B:2747:ARG:HH22	1.62	0.64
1:B:3509:LEU:CD1	1:B:3513:VAL:HG21	2.27	0.64
1:A:1645:PHE:CG	1:A:1765:ILE:HG22	2.31	0.64
1:A:2203:THR:HG22	1:A:2205:ALA:H	1.62	0.64
1:A:2362:ALA:HB3	1:A:2365:LYS:O	1.97	0.64
1:B:2282:ASN:HB3	1:B:2552:ARG:HG3	1.80	0.64
1:A:1425:GLU:OE2	1:A:1429:LEU:CD1	2.45	0.64
1:A:1645:PHE:CD2	1:A:1765:ILE:HG22	2.32	0.64
1:A:2293:HIS:CE1	1:A:2409:ASN:HB3	2.33	0.64
1:A:2134:LEU:CD1	1:A:2138:ASN:ND2	2.60	0.64
1:A:3797:THR:HG23	1:A:3840:LEU:HD21	1.79	0.64
1:B:2574:TYR:HE2	3:B:5094:ADP:C2	2.16	0.64
1:A:2336:ARG:HD2	1:A:2355:ASP:OD2	1.97	0.64
1:A:2475:PRO:C	1:A:2476:LYS:HD2	2.18	0.64
1:B:2755:HIS:NE2	1:B:2835:LEU:HG	2.13	0.64
1:B:2765:GLY:HA2	5:B:5096:SO4:O2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1953:LEU:CD1	1:A:1973:LEU:HB3	2.28	0.64
1:B:2080:LYS:CD	1:B:2195:GLU:HB2	2.25	0.64
1:A:1774:LEU:HD21	1:A:1922:LYS:O	1.97	0.64
1:B:1391:GLY:HA3	1:B:1484:LYS:NZ	2.13	0.64
1:B:1493:LEU:O	1:B:1494:ASP:HB2	1.96	0.64
1:B:1495:THR:HG22	1:B:1497:ILE:HG22	1.80	0.64
1:B:2458:LEU:HD11	1:B:2484:LEU:HD11	1.79	0.64
1:B:1852:ARG:O	1:B:1852:ARG:HG3	1.98	0.63
1:A:1871:GLY:HA3	1:A:1879:ILE:HG21	1.79	0.63
1:B:2225:LYS:HA	2:B:5093:ATP:N3	2.13	0.63
1:B:3964:ALA:HB2	1:B:3993:VAL:HG11	1.80	0.63
1:B:1991:GLU:O	1:B:1995:VAL:HG23	1.98	0.63
1:B:2064:GLN:OE1	1:B:2191:ARG:HD2	1.98	0.63
1:B:2141:ILE:HG22	1:B:2145:PHE:CB	2.26	0.63
1:B:2336:ARG:HD3	1:B:2355:ASP:OD2	1.97	0.63
1:B:3851:VAL:HG13	1:B:3855:LEU:HD23	1.80	0.63
1:B:4020:ASN:HB3	1:B:4028:ARG:NH1	2.14	0.63
1:A:1425:GLU:OE2	1:A:1429:LEU:HD11	1.98	0.63
1:A:1965:HIS:CD2	1:A:2212:LEU:HD21	2.33	0.63
1:A:2095:ASP:CG	1:A:2149:ARG:NH2	2.51	0.63
1:B:2111:LYS:HZ2	1:B:2161:GLU:HG2	1.63	0.63
1:B:3460:PRO:O	1:B:3463:SER:CB	2.44	0.63
1:A:1536:ARG:N	1:A:1841:ILE:HD11	2.13	0.63
1:A:2426:MET:HG3	1:A:2427:ILE:N	2.11	0.63
1:A:2266:PHE:HD1	1:A:2326:LEU:HD21	1.64	0.63
1:A:2757:MET:CG	1:A:2889:PHE:CD2	2.80	0.63
1:A:3810:SER:O	1:A:3838:TRP:HB2	1.97	0.63
1:B:1849:GLU:HG2	1:B:1899:ASN:ND2	2.14	0.63
1:B:3886:ALA:N	1:B:3887:PRO:HD2	2.13	0.63
1:A:1704:GLU:OE2	1:A:1768:ARG:NH1	2.32	0.63
1:A:1706:LEU:HD22	1:A:1935:GLN:HG2	1.81	0.63
1:A:2054:LEU:O	1:A:2058:MET:HG2	1.99	0.62
1:A:3979:ASN:O	1:A:3981:PRO:HD2	1.99	0.62
1:B:3810:SER:O	1:B:3838:TRP:HB2	1.97	0.62
1:A:2620:ARG:NH1	1:A:2910:ASN:ND2	2.47	0.62
1:B:1750:SER:HB2	1:B:1755:LEU:CD2	2.29	0.62
1:B:2293:HIS:NE2	1:B:2409:ASN:HB3	2.14	0.62
1:B:2788:ARG:HB2	1:B:3459:ASP:HB3	1.80	0.62
1:B:3530:PHE:CE1	1:B:3618:TYR:CD2	2.87	0.62
1:A:1540:LEU:HD11	1:A:1548:ILE:HD11	1.82	0.62
1:A:3641:PHE:HA	1:A:3889:LEU:HD21	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1803:THR:HG21	1:B:1848:ASP:OD1	2.00	0.62
1:B:2426:MET:HG3	1:B:2427:ILE:H	1.64	0.62
1:A:2578:ILE:HG21	1:A:2630:TYR:HB2	1.79	0.62
1:B:2741:HIS:HA	1:B:2744:ARG:HD2	1.81	0.62
1:B:3330:TYR:OH	1:B:3346:LEU:HD22	1.98	0.62
1:A:2840:ILE:HB	1:A:2843:LEU:HD22	1.81	0.62
1:A:3541:MET:HA	1:A:3544:LYS:HG2	1.81	0.62
1:A:3819:ILE:O	1:A:3823:ASN:HB2	1.99	0.62
1:A:2163:VAL:HA	1:A:2166:MET:HG2	1.82	0.62
1:A:3951:SER:HB2	1:A:4002:LYS:HD2	1.81	0.62
1:B:162:LEU:HA	1:B:165:ASP:O	1.98	0.62
1:B:2003:LEU:HA	1:B:2006:LEU:HD12	1.82	0.62
1:B:2362:ALA:HB3	1:B:2365:LYS:O	2.00	0.62
1:B:3912:GLY:O	1:B:3915:PHE:CZ	2.53	0.62
1:B:2080:LYS:HZ3	2:B:5093:ATP:PG	2.22	0.62
1:A:1849:GLU:HG2	1:A:1899:ASN:ND2	2.15	0.62
1:A:2728:LEU:HD12	1:A:2771:ARG:CZ	2.30	0.62
1:A:2940:PHE:HZ	1:A:2943:PHE:HE2	1.48	0.62
1:A:1646:GLN:NE2	1:A:1761:GLU:O	2.24	0.61
1:A:1559:SER:HB3	1:A:1572:ILE:HG22	1.81	0.61
1:A:2536:ASN:HB2	1:A:2543:ARG:HE	1.65	0.61
1:B:3819:ILE:O	1:B:3823:ASN:HB2	2.01	0.61
1:A:3871:PHE:HZ	1:A:3873:MET:HB2	1.64	0.61
1:B:1531:ARG:HG2	1:B:1537:PHE:HB3	1.81	0.61
1:B:2410:SER:C	1:B:2411:LYS:HG3	2.20	0.61
1:A:1645:PHE:CZ	1:A:1649:LEU:HD22	2.35	0.61
1:B:1534:PHE:CE2	1:B:1536:ARG:HB2	2.35	0.61
1:B:2276:LEU:HD23	1:B:2556:ILE:HG21	1.83	0.61
1:B:3308:ASN:O	1:B:3312:GLN:HB2	2.00	0.61
1:A:1540:LEU:CD1	1:A:1548:ILE:CD1	2.78	0.61
1:A:2640:THR:HG23	1:A:2643:SER:H	1.66	0.61
1:A:3566:LEU:CD2	1:A:3587:LEU:HD11	2.29	0.61
1:B:1706:LEU:HD22	1:B:1935:GLN:HG2	1.83	0.61
1:B:1914:LYS:HD3	1:B:3959:CYS:SG	2.40	0.61
1:B:2426:MET:HG3	1:B:2427:ILE:N	2.15	0.61
1:A:1391:GLY:HA3	1:A:1484:LYS:NZ	2.15	0.61
1:B:2386:MET:CB	1:B:2627:ARG:CD	2.77	0.61
1:B:3912:GLY:O	1:B:3915:PHE:CE2	2.54	0.61
1:A:1802:LYS:NZ	5:A:5097:SO4:O2	2.34	0.61
1:A:2378:VAL:HG11	1:A:2392:ILE:HD12	1.81	0.61
1:B:1649:LEU:CD1	1:B:1704:GLU:HG3	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2048:SER:H	2:B:5093:ATP:N6	1.97	0.61
1:B:3702:MET:HB3	1:B:3767:PHE:HZ	1.64	0.61
1:A:1563:LYS:HD2	1:A:1570:GLU:HG3	1.82	0.61
1:A:1783:THR:CG2	1:A:1809:PHE:CE1	2.83	0.61
1:A:2032:LYS:O	1:A:2035:VAL:HG12	2.00	0.61
1:A:2421:GLY:HA2	3:A:5094:ADP:O5'	2.00	0.61
1:A:2578:ILE:CG2	1:A:2630:TYR:HB2	2.31	0.61
1:A:3737:THR:HB	1:A:3740:THR:CB	2.31	0.61
1:A:3839:ILE:CG2	1:A:3873:MET:HG3	2.30	0.61
1:B:2201:HIS:NE2	1:B:2497:TYR:O	2.34	0.61
1:B:2293:HIS:CE1	1:B:2409:ASN:HB3	2.36	0.61
1:B:2336:ARG:HA	1:B:2339:ILE:HD12	1.82	0.61
1:B:2472:THR:HG21	1:B:2524:VAL:HG22	1.82	0.61
1:B:2707:VAL:CG1	1:B:2712:LEU:HD12	2.31	0.61
1:B:3303:LYS:HA	1:B:3306:TRP:HE1	1.62	0.61
1:A:1900:PRO:HB3	1:A:1905:ARG:HA	1.82	0.61
1:A:2064:GLN:CD	1:A:2151:TRP:CH2	2.74	0.61
1:B:2380:LEU:CD2	1:B:2384:GLU:OE1	2.37	0.61
1:B:2481:ASN:HD21	1:B:2528:ARG:HD3	1.64	0.61
1:B:2386:MET:HB3	1:B:2627:ARG:HD3	1.82	0.60
1:B:2835:LEU:HD23	1:B:2911:ARG:HB2	1.83	0.60
1:A:3583:LEU:O	1:A:3587:LEU:HG	2.00	0.60
1:A:3964:ALA:HB2	1:A:3993:VAL:HG11	1.84	0.60
1:A:3592:LYS:O	1:A:3596:ASN:HB2	2.01	0.60
1:B:2112:GLU:CB	1:B:2117:SER:HB2	2.20	0.60
1:B:3541:MET:HA	1:B:3544:LYS:HG2	1.82	0.60
1:A:1911:ASN:OD1	1:A:1912:LEU:HG	2.01	0.60
1:A:2563:SER:CB	1:A:2566:SER:OG	2.49	0.60
1:B:1375:LYS:HE3	1:B:1431:LEU:HD13	1.83	0.60
1:B:2064:GLN:HE22	1:B:2070:LEU:HG	1.61	0.60
1:B:3911:TRP:HH2	1:B:3926:VAL:HG12	1.66	0.60
1:B:1748:PHE:CD2	1:B:1755:LEU:HD22	2.37	0.60
1:B:1940:GLU:HG3	1:B:1941:ASP:N	2.16	0.60
1:B:2252:LEU:HD21	1:B:2310:LEU:HD23	1.83	0.60
1:B:2280:THR:HA	1:B:2283:LYS:HD2	1.84	0.60
1:B:2785:LYS:HD3	1:B:3482:GLY:O	2.01	0.60
1:A:1827:ASP:HB3	1:A:1830:VAL:HG12	1.84	0.60
1:A:3683:TYR:O	1:A:3687:SER:HB2	2.02	0.60
1:B:1536:ARG:HD2	1:B:1565:MET:O	2.00	0.60
1:A:2071:ILE:HB	1:A:2212:LEU:HD12	1.84	0.60
1:A:3690:LEU:HD23	1:A:3694:PHE:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3440:LEU:HD23	1:B:3462:ILE:HD12	1.83	0.60
1:A:2784:PRO:HG2	1:A:2817:ILE:HD13	1.83	0.60
1:B:1416:LYS:CB	1:B:1421:TYR:OH	2.50	0.60
1:B:3737:THR:OG1	1:B:3740:THR:HB	2.01	0.60
1:A:2081:THR:O	1:A:2085:LYS:HB2	2.01	0.59
1:A:2795:PHE:CE2	1:A:2799:LEU:HD11	2.37	0.59
1:A:3656:VAL:CG1	1:A:3677:LEU:HB3	2.30	0.59
1:A:3850:TRP:NE1	1:A:3854:TYR:HB3	2.17	0.59
1:A:4033:LEU:HD12	1:A:4036:GLN:H	1.67	0.59
1:B:3692:LYS:HE3	1:B:3898:GLU:HB3	1.83	0.59
1:A:2282:ASN:HB3	1:A:2552:ARG:HG3	1.84	0.59
1:A:1612:ASP:HA	1:A:1615:ILE:CD1	2.32	0.59
1:A:2378:VAL:HG11	1:A:2392:ILE:CD1	2.32	0.59
1:A:3530:PHE:CE1	1:A:3618:TYR:CD2	2.90	0.59
1:B:2833:THR:HG21	1:B:2841:PRO:HD2	1.83	0.59
1:A:1462:ASN:HB2	1:A:1465:ILE:CG2	2.32	0.59
1:B:1744:LEU:HD22	1:B:1760:PHE:CG	2.38	0.59
1:B:2394:THR:H	1:B:2397:THR:HB	1.66	0.59
1:A:1620:PHE:CD1	1:A:1624:ARG:NH1	2.70	0.59
1:A:1826:PHE:HE1	1:A:1853:LEU:HD22	1.68	0.59
1:A:1995:VAL:HG22	1:A:2022:PHE:HE2	1.67	0.59
1:A:3818:SER:O	1:A:3821:ASN:N	2.35	0.59
1:B:2127:ASP:O	1:B:2131:THR:OG1	2.21	0.59
1:B:2536:ASN:HB2	1:B:2543:ARG:HE	1.67	0.59
1:A:3813:ILE:HG22	1:A:3840:LEU:HD23	1.83	0.59
1:B:1616:LYS:NZ	1:B:1759:LYS:NZ	2.49	0.59
1:B:2072:LEU:HD23	1:B:2215:PHE:CE1	2.37	0.59
1:A:2111:LYS:HZ3	1:A:2161:GLU:HG2	1.67	0.59
1:A:1421:TYR:O	1:A:1425:GLU:N	2.36	0.59
1:A:1626:CYS:SG	1:A:1639:VAL:CG1	2.90	0.59
1:A:1917:ARG:HD2	1:A:3963:PHE:CE2	2.37	0.59
1:A:2064:GLN:OE1	1:A:2151:TRP:HH2	1.85	0.59
1:A:2620:ARG:HH12	1:A:2910:ASN:ND2	1.99	0.59
1:A:3440:LEU:CD2	1:A:3462:ILE:HD12	2.32	0.59
1:B:1683:LEU:HB3	1:B:1702:LEU:HD21	1.84	0.59
1:A:1998:LEU:HD11	1:A:2022:PHE:HZ	1.68	0.59
1:B:1422:LYS:HA	1:B:1425:GLU:HB2	1.85	0.59
1:B:2386:MET:HB3	1:B:2627:ARG:NE	2.18	0.59
1:B:1416:LYS:HA	1:B:1421:TYR:OH	2.01	0.59
1:A:1996:GLU:O	1:A:2000:ARG:HG3	2.03	0.58
1:A:2293:HIS:NE2	1:A:2409:ASN:HB3	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2476:LYS:HZ1	1:B:2528:ARG:HD2	1.68	0.58
1:B:3017:VAL:HG21	1:B:3313:PHE:CE2	2.38	0.58
1:B:3353:LEU:HD23	1:B:3358:VAL:HG11	1.84	0.58
1:B:3671:VAL:O	1:B:3674:ILE:HG22	2.03	0.58
1:A:4024:VAL:HG11	1:A:4062:TRP:CD2	2.37	0.58
1:B:3700:MET:HB3	1:B:4085:THR:HG21	1.83	0.58
1:B:1620:PHE:HA	1:B:1760:PHE:CE1	2.37	0.58
1:B:2766:LYS:HE2	1:B:2890:THR:HB	1.85	0.58
1:A:3303:LYS:C	1:A:3306:TRP:CD1	2.72	0.58
1:B:1939:PHE:O	1:B:1940:GLU:HB3	2.03	0.58
1:A:3350:LYS:HA	1:A:3353:LEU:HD12	1.86	0.58
1:B:2274:HIS:CE1	1:B:2326:LEU:O	2.52	0.58
1:B:2708:ASN:O	1:B:2712:LEU:HD13	2.04	0.58
1:B:2967:ASN:HB3	1:B:3356:PHE:CE2	2.38	0.58
1:A:1983:LEU:HD23	1:A:1993:THR:HG23	1.84	0.58
1:A:2002:ILE:HG22	1:A:2006:LEU:HD11	1.86	0.58
1:A:2107:LYS:CE	1:A:2495:ASP:OD2	2.51	0.58
1:A:3017:VAL:HG21	1:A:3313:PHE:CE2	2.39	0.58
1:A:3458:PHE:CZ	1:A:3459:ASP:O	2.57	0.58
1:A:1706:LEU:CD2	1:A:1935:GLN:HG2	2.34	0.58
1:A:2225:LYS:HG2	1:A:2229:LEU:HD12	1.85	0.58
1:A:2336:ARG:HA	1:A:2339:ILE:HD12	1.84	0.58
1:A:162:LEU:HA	1:A:165:ASP:O	2.03	0.58
1:A:1929:ILE:H	1:A:1929:ILE:HD12	1.69	0.58
1:A:1992:LYS:HG2	1:A:2024:SER:HB2	1.85	0.58
1:A:2741:HIS:HA	1:A:2744:ARG:HD2	1.83	0.58
1:B:23:LEU:O	1:B:24:GLU:CB	2.52	0.58
1:A:1469:LEU:HB3	1:A:1472:GLU:HB2	1.84	0.58
1:A:3636:GLY:HA2	1:A:3642:TYR:O	2.04	0.58
1:B:3839:ILE:CG2	1:B:3873:MET:HG3	2.32	0.58
1:A:2111:LYS:HZ2	1:A:2161:GLU:HG2	1.69	0.58
1:B:2160:PRO:O	1:B:2164:GLU:HG3	2.04	0.58
1:A:2295:ILE:HG12	1:A:2314:ILE:HD12	1.85	0.57
1:A:3912:GLY:O	1:A:3915:PHE:CZ	2.57	0.57
1:B:2081:THR:HB	2:B:5093:ATP:PA	2.44	0.57
1:A:1493:LEU:HD23	1:A:1498:GLU:CB	2.33	0.57
1:A:3728:GLU:HG3	1:A:4079:LYS:HE2	1.85	0.57
1:B:1926:SER:HA	1:B:1970:LEU:HD12	1.84	0.57
1:B:1953:LEU:HD11	1:B:1973:LEU:HB3	1.84	0.57
1:B:2080:LYS:CG	2:B:5093:ATP:O1B	2.51	0.57
1:A:2047:PHE:HB3	2:A:5093:ATP:N6	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2386:MET:CB	1:A:2627:ARG:CD	2.82	0.57
1:A:2445:PHE:HA	1:A:2449:THR:HG21	1.86	0.57
1:A:3671:VAL:HA	1:A:3674:ILE:HG22	1.86	0.57
1:A:3817:GLY:H	1:A:3821:ASN:HB2	1.69	0.57
1:A:3851:VAL:HG13	1:A:3855:LEU:HD23	1.86	0.57
1:B:1967:HIS:O	1:B:1968:PHE:HD1	1.87	0.57
1:B:2391:VAL:CG2	1:B:2426:MET:HE3	2.34	0.57
1:B:2745:ILE:HG23	1:B:2756:MET:HE3	1.85	0.57
1:B:3547:ASP:HA	1:B:3550:LYS:HB3	1.86	0.57
1:A:2737:SER:HB2	1:A:2924:THR:HG21	1.87	0.57
1:B:2095:ASP:CG	1:B:2149:ARG:NH2	2.58	0.57
1:B:2856:LEU:HD23	1:B:2873:LEU:HB3	1.86	0.57
1:A:3877:CYS:SG	1:A:3884:LEU:CD2	2.92	0.57
1:A:3945:LEU:O	1:A:3948:HIS:O	2.23	0.57
1:B:1421:TYR:O	1:B:1421:TYR:CD1	2.58	0.57
1:B:1965:HIS:CD2	1:B:2212:LEU:HD21	2.39	0.57
1:B:2571:TYR:HA	1:B:2574:TYR:HB2	1.85	0.57
1:B:3845:GLN:OE1	1:B:3878:HIS:HB2	2.04	0.57
1:A:1779:PHE:O	1:A:1783:THR:HG23	2.04	0.57
1:A:1849:GLU:CG	1:A:1899:ASN:HD22	2.17	0.57
1:A:2064:GLN:CD	1:A:2151:TRP:HH2	2.08	0.57
1:A:2127:ASP:O	1:A:2131:THR:OG1	2.23	0.57
1:A:2490:ASN:HB3	1:A:2546:MET:CE	2.35	0.57
1:A:3725:VAL:HG22	1:A:3731:ASP:HA	1.86	0.57
1:B:2563:SER:CB	1:B:2566:SER:OG	2.52	0.57
1:B:3979:ASN:C	1:B:3981:PRO:HD2	2.25	0.57
1:A:2368:PHE:O	1:A:2369:SER:OG	2.16	0.57
1:B:1534:PHE:HD2	1:B:1537:PHE:CE1	2.23	0.57
1:B:2707:VAL:HB	1:B:2712:LEU:CD1	2.16	0.57
1:A:1794:PHE:CZ	1:A:1805:THR:HG21	2.39	0.57
1:B:1416:LYS:HA	1:B:1421:TYR:CE1	2.34	0.57
1:B:1612:ASP:HA	1:B:1615:ILE:HD11	1.85	0.57
1:B:2072:LEU:HD23	1:B:2215:PHE:HE1	1.68	0.57
1:B:3737:THR:HB	1:B:3740:THR:CB	2.34	0.57
1:A:1621:THR:CA	1:A:1624:ARG:NH1	2.66	0.57
1:A:2293:HIS:CE1	1:A:2409:ASN:CB	2.88	0.57
1:A:3449:VAL:HG22	1:A:3493:LYS:HB2	1.86	0.57
1:B:1911:ASN:OD1	1:B:1912:LEU:N	2.38	0.57
1:A:2280:THR:HA	1:A:2283:LYS:HD2	1.85	0.57
1:A:65:THR:O	1:A:66:GLN:CB	2.53	0.56
1:A:2060:PHE:HZ	1:A:2064:GLN:NE2	1.99	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1469:LEU:HB3	1:B:1472:GLU:HB2	1.86	0.56
1:A:1497:ILE:O	1:A:1500:ILE:HG12	2.06	0.56
1:A:2201:HIS:CE1	1:A:2497:TYR:HA	2.39	0.56
1:A:2581:LEU:HD13	1:A:2633:ILE:HG22	1.86	0.56
1:A:2758:LEU:HD23	1:A:2915:ASN:HB3	1.86	0.56
1:A:3530:PHE:HD1	1:A:3618:TYR:CD2	2.14	0.56
1:A:3559:LEU:O	1:A:3563:GLU:HG3	2.06	0.56
1:B:2060:PHE:CZ	1:B:2064:GLN:NE2	2.73	0.56
1:B:2320:ARG:NH1	1:B:2406:ASP:OD2	2.33	0.56
1:B:3631:MET:HE3	1:B:3698:MET:HG3	1.86	0.56
1:A:1459:LEU:HD22	1:A:1473:THR:CG2	2.35	0.56
1:A:2707:VAL:CG1	1:A:2712:LEU:HD12	2.35	0.56
1:A:3519:VAL:HG13	1:A:3521:ASN:ND2	2.20	0.56
1:A:1392:LEU:HD13	1:A:1393:LYS:C	2.26	0.56
1:A:2332:GLY:HA2	1:A:2335:GLN:CB	2.34	0.56
1:B:3690:LEU:HD23	1:B:3694:PHE:HB3	1.88	0.56
1:B:3925:SER:HB2	1:B:3972:LEU:HD13	1.86	0.56
1:A:1463:LEU:HA	1:A:1466:GLN:CG	2.36	0.56
1:A:1794:PHE:HZ	1:A:1805:THR:HG21	1.71	0.56
1:A:1922:LYS:HZ2	1:A:4004:LEU:CD1	2.19	0.56
1:A:2755:HIS:HB3	1:A:2912:CYS:SG	2.45	0.56
1:A:3636:GLY:CA	1:A:3642:TYR:O	2.53	0.56
1:B:1416:LYS:CA	1:B:1421:TYR:CZ	2.71	0.56
1:B:1692:ASP:O	1:B:1695:LYS:HB3	2.05	0.56
1:B:1741:LEU:O	1:B:1742:ASP:HB2	2.05	0.56
1:B:2452:GLU:HA	1:B:2455:LEU:HD12	1.86	0.56
1:A:2389:ASP:HB3	1:A:2433:ARG:NH1	2.20	0.56
1:B:3995:GLY:HA2	1:B:3998:ILE:HD13	1.87	0.56
1:B:1781:THR:HG21	1:B:1919:PHE:CE1	2.40	0.56
1:B:1823:ASP:HB2	1:B:1853:LEU:HD23	1.88	0.56
1:B:2489:ILE:HD11	1:B:2506:LEU:HD13	1.87	0.56
1:B:2707:VAL:HG12	1:B:2712:LEU:CD1	2.36	0.56
1:B:2755:HIS:CB	1:B:2911:ARG:O	2.48	0.56
1:B:2838:ALA:HB3	1:B:2878:VAL:HG13	1.86	0.56
1:A:2387:ARG:O	1:A:2390:ILE:HG22	2.06	0.56
1:A:3537:GLU:OE1	1:A:3618:TYR:OH	2.24	0.56
1:A:3679:TYR:HB3	1:A:3767:PHE:HE1	1.71	0.56
1:B:1726:LEU:CD1	1:B:3984:GLN:CB	2.77	0.56
1:B:1802:LYS:NZ	5:B:5097:SO4:O3	2.39	0.56
1:A:3481:ILE:O	1:A:3483:ASP:N	2.38	0.56
1:A:3566:LEU:CD1	1:A:3570:LEU:HD11	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1649:LEU:HD11	1:B:1704:GLU:HG3	1.87	0.56
1:A:1744:LEU:HA	1:A:1760:PHE:CD1	2.41	0.55
1:A:3303:LYS:CD	1:A:3306:TRP:CD1	2.80	0.55
1:A:3810:SER:HB3	1:A:3837:GLY:HA2	1.86	0.55
1:B:1416:LYS:HG2	1:B:1421:TYR:CZ	2.40	0.55
1:B:3322:GLY:HA2	1:B:3325:ILE:HD12	1.88	0.55
1:A:1963:MET:HB3	1:A:1966:TYR:CD2	2.42	0.55
1:A:2856:LEU:HD23	1:A:2873:LEU:HB3	1.88	0.55
1:B:2391:VAL:HG23	1:B:2426:MET:HE1	1.88	0.55
1:B:3919:LYS:NZ	1:B:4038:GLU:CG	2.69	0.55
1:A:1612:ASP:HA	1:A:1615:ILE:HD11	1.88	0.55
1:A:1646:GLN:CD	1:A:1763:ILE:HG12	2.27	0.55
1:A:3569:GLU:O	1:A:3573:SER:OG	2.20	0.55
1:B:2391:VAL:CG2	1:B:2426:MET:CE	2.84	0.55
1:A:1559:SER:HB2	1:A:1572:ILE:H	1.71	0.55
1:A:1660:VAL:HG13	1:A:1728:TRP:CH2	2.41	0.55
1:A:2318:ILE:O	1:A:2322:LEU:HB2	2.07	0.55
1:A:2339:ILE:HG23	1:A:2353:LEU:HB3	1.88	0.55
1:A:2757:MET:CE	1:A:2908:LEU:HB3	2.37	0.55
1:A:3628:ILE:HG22	1:A:3649:PHE:HE2	1.72	0.55
1:B:1983:LEU:CG	1:B:1993:THR:CG2	2.75	0.55
1:B:2002:ILE:HB	1:B:2014:PHE:CE2	2.42	0.55
1:B:2391:VAL:HG23	1:B:2426:MET:CE	2.36	0.55
1:B:3583:LEU:O	1:B:3587:LEU:HG	2.06	0.55
1:A:1493:LEU:CD2	1:A:1498:GLU:HB3	2.36	0.55
1:A:2229:LEU:HD11	1:A:2285:GLU:HG3	1.88	0.55
1:B:1396:ARG:HG3	1:B:1397:GLU:H	1.71	0.55
1:B:1744:LEU:HD22	1:B:1760:PHE:CD2	2.41	0.55
1:A:1851:ASN:ND2	1:A:1899:ASN:O	2.39	0.55
1:A:2152:VAL:HG12	1:A:2154:PHE:CE1	2.35	0.55
1:A:2163:VAL:HA	1:A:2166:MET:CG	2.36	0.55
1:B:1392:LEU:HD13	1:B:1393:LYS:C	2.27	0.55
1:B:1394:LEU:HD22	1:B:1449:GLN:NE2	2.21	0.55
1:B:2481:ASN:ND2	1:B:2528:ARG:HD3	2.22	0.55
1:A:1826:PHE:O	1:A:1826:PHE:CG	2.60	0.55
1:A:2095:ASP:CG	1:A:2149:ARG:HH22	2.10	0.55
1:A:2252:LEU:HD21	1:A:2310:LEU:HD23	1.89	0.55
1:A:2420:PRO:HD3	1:A:2536:ASN:HD21	1.72	0.55
1:B:3645:SER:CB	1:B:3890:GLN:NE2	2.69	0.55
1:A:3323:ASN:HD21	1:A:3361:ASP:H	1.54	0.55
1:A:3555:TYR:HE1	1:A:3593:GLU:HG2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3566:LEU:HD13	1:A:3570:LEU:CD1	2.37	0.55
1:A:3612:ASP:O	1:A:3615:VAL:HG22	2.06	0.55
1:B:1826:PHE:HZ	1:B:1831:LEU:CB	2.15	0.55
1:B:1575:LEU:O	1:B:1576:GLU:HB3	2.06	0.55
1:B:2380:LEU:HD13	1:B:2390:ILE:CD1	2.21	0.55
1:A:1660:VAL:CG1	1:A:1728:TRP:CH2	2.90	0.55
1:A:3785:TYR:HE2	1:A:3859:VAL:HG22	1.72	0.55
1:A:3911:TRP:HH2	1:A:3926:VAL:CG1	2.20	0.55
1:B:2391:VAL:HG21	1:B:2426:MET:HE3	1.88	0.55
1:B:1707:HIS:O	1:B:1711:VAL:HG23	2.07	0.54
1:B:2470:GLY:C	1:B:2473:LEU:HD11	2.27	0.54
1:B:3330:TYR:CE1	1:B:3334:PHE:CD2	2.96	0.54
1:B:3440:LEU:CD2	1:B:3462:ILE:HD12	2.36	0.54
1:B:3951:SER:HB2	1:B:4002:LYS:HD2	1.87	0.54
1:A:2786:ILE:HG12	1:A:2821:ASN:HA	1.89	0.54
1:B:1527:LEU:HD21	1:B:1546:LEU:HD21	1.89	0.54
1:B:2109:LEU:CD1	1:B:2129:LEU:HD23	2.37	0.54
1:B:2173:ASN:HB3	1:B:2175:ILE:HG22	1.89	0.54
1:B:2266:PHE:HD1	1:B:2326:LEU:HD21	1.71	0.54
1:A:2081:THR:OG1	1:A:2195:GLU:OE2	2.26	0.54
1:A:2637:PRO:O	1:A:2639:GLN:NE2	2.40	0.54
1:B:1995:VAL:HG21	1:B:2024:SER:HB3	1.89	0.54
1:B:2786:ILE:O	1:B:3460:PRO:HB2	2.06	0.54
1:B:3010:LEU:HD21	1:B:3317:SER:HB3	1.90	0.54
1:A:2475:PRO:O	1:A:2476:LYS:C	2.46	0.54
1:A:2842:ASP:O	1:A:2845:GLN:HG2	2.08	0.54
1:B:3612:ASP:O	1:B:3615:VAL:HG22	2.05	0.54
1:A:2786:ILE:O	1:A:3460:PRO:HB2	2.07	0.54
1:B:1620:PHE:CB	1:B:1760:PHE:CE1	2.91	0.54
1:B:3406:PHE:HB2	1:B:3513:VAL:HG12	1.85	0.54
1:B:3924:TRP:O	1:B:3927:TYR:HB3	2.07	0.54
1:A:1649:LEU:HD13	1:A:1704:GLU:HG3	1.87	0.54
1:A:3406:PHE:CZ	1:A:3505:ILE:HG21	2.42	0.54
1:A:3912:GLY:O	1:A:3915:PHE:CE2	2.61	0.54
1:B:2472:THR:HG22	1:B:2524:VAL:HG13	1.88	0.54
1:A:1540:LEU:CD1	1:A:1548:ILE:HD11	2.38	0.54
1:A:1649:LEU:HD11	1:A:1704:GLU:HG3	1.87	0.54
1:A:3995:GLY:HA2	1:A:3998:ILE:HD13	1.90	0.54
1:B:1416:LYS:HA	1:B:1421:TYR:CE2	2.36	0.54
1:B:1748:PHE:HD2	1:B:1755:LEU:HD22	1.73	0.54
1:B:2787:HIS:HB3	1:B:3461:ILE:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3930:PHE:HE2	1:B:4029:ILE:HD13	1.71	0.54
1:A:1425:GLU:OE2	1:A:1429:LEU:CD2	2.56	0.54
1:A:1956:LEU:HB3	1:A:1968:PHE:HE2	1.72	0.54
1:A:3935:PHE:HB2	1:A:4014:VAL:HG11	1.89	0.54
1:B:1813:LEU:HD12	1:B:1844:TRP:HH2	1.73	0.54
1:B:2074:GLY:O	1:B:2197:ASP:HA	2.08	0.54
1:B:2447:LYS:HE3	1:B:2493:LYS:HD3	1.90	0.54
1:A:1698:ILE:O	1:A:1702:LEU:HG	2.08	0.54
1:A:2354:SER:OG	1:A:2357:SER:HB2	2.08	0.54
1:A:3757:ILE:HD11	1:A:4074:GLU:HG2	1.90	0.54
1:B:3537:GLU:OE1	1:B:3618:TYR:OH	2.25	0.54
1:B:3935:PHE:HB2	1:B:4014:VAL:HG11	1.90	0.54
1:A:2513:GLN:O	1:A:2526:ILE:HG13	2.09	0.53
1:B:2728:LEU:HD12	1:B:2771:ARG:CZ	2.37	0.53
1:B:2737:SER:HB2	1:B:2924:THR:HG21	1.90	0.53
1:A:1743:ASP:HA	1:A:1746:SER:HB3	1.90	0.53
1:A:4074:GLU:HA	1:A:4077:GLN:HE21	1.73	0.53
1:B:2755:HIS:CE1	1:B:2835:LEU:HG	2.43	0.53
1:B:2758:LEU:HD23	1:B:2915:ASN:HB3	1.89	0.53
1:A:1911:ASN:OD1	1:A:1912:LEU:N	2.41	0.53
1:A:1939:PHE:HD1	1:A:1939:PHE:H	1.56	0.53
1:A:2437:LEU:H	1:A:2437:LEU:HD12	1.73	0.53
1:A:2451:THR:O	1:A:2455:LEU:HD12	2.08	0.53
1:B:1540:LEU:HD11	1:B:1561:PHE:HB3	1.91	0.53
1:B:2131:THR:HG22	1:B:2176:LEU:CD2	2.38	0.53
1:A:3845:GLN:OE1	1:A:3878:HIS:HB2	2.08	0.53
1:B:1421:TYR:CD1	1:B:1421:TYR:C	2.82	0.53
1:A:1783:THR:HG23	1:A:1809:PHE:CE1	2.44	0.53
1:B:2842:ASP:O	1:B:2845:GLN:HG2	2.08	0.53
1:A:1922:LYS:NZ	1:A:4004:LEU:CD1	2.71	0.53
1:A:2177:THR:HG22	1:A:2183:ARG:HG2	1.89	0.53
1:A:2222:ILE:HG23	1:A:2284:LEU:HD11	1.90	0.53
1:A:2336:ARG:CD	1:A:2355:ASP:OD2	2.57	0.53
1:A:2358:THR:HG22	1:A:2359:ILE:N	2.22	0.53
1:B:2047:PHE:CE2	1:B:2082:ALA:HB1	2.44	0.53
1:B:3566:LEU:CA	1:B:3583:LEU:HD21	2.36	0.53
1:A:1394:LEU:HD22	1:A:1449:GLN:NE2	2.23	0.53
1:B:1620:PHE:CA	1:B:1760:PHE:CE1	2.91	0.53
1:B:2220:CYS:SG	1:B:2224:SER:HB3	2.49	0.53
1:B:2437:LEU:H	1:B:2437:LEU:HD12	1.74	0.53
1:B:2780:LYS:HD3	1:B:2813:THR:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3303:LYS:C	1:B:3306:TRP:CD1	2.74	0.53
1:A:1748:PHE:CD2	1:A:1755:LEU:HD22	2.44	0.53
1:B:3525:ILE:HD11	1:B:3646:ILE:CG2	2.26	0.53
1:A:1367:ILE:H	1:A:1367:ILE:HD12	1.73	0.53
1:A:1620:PHE:CE2	1:A:1743:ASP:HB3	2.43	0.53
1:A:1970:LEU:HD12	1:A:1973:LEU:CD1	2.38	0.53
1:A:2655:ILE:HD11	1:A:2747:ARG:HH22	1.74	0.53
1:B:1396:ARG:HG3	1:B:1397:GLU:N	2.24	0.53
1:B:1612:ASP:HA	1:B:1615:ILE:HG12	1.91	0.53
1:B:1926:SER:CA	1:B:1970:LEU:HD12	2.39	0.53
1:B:3534:LEU:HD11	1:B:3614:LEU:HD23	1.90	0.53
1:B:3785:TYR:CE2	1:B:3859:VAL:HG22	2.43	0.53
1:A:1387:GLU:HA	1:A:1393:LYS:HA	1.91	0.52
1:A:2060:PHE:HZ	1:A:2064:GLN:HE21	1.51	0.52
1:A:2137:VAL:O	1:A:2141:ILE:CG2	2.55	0.52
1:A:2967:ASN:HB3	1:A:3356:PHE:CE2	2.44	0.52
1:A:1967:HIS:C	1:A:1968:PHE:HD1	2.13	0.52
1:A:2084:TRP:HE3	1:A:2088:ILE:HD12	1.74	0.52
1:A:2463:ASN:CB	1:A:2477:SER:HA	2.39	0.52
1:A:3547:ASP:HA	1:A:3550:LYS:HB3	1.90	0.52
1:B:2111:LYS:HZ3	1:B:2161:GLU:HG2	1.75	0.52
1:B:2620:ARG:NH1	1:B:2910:ASN:ND2	2.56	0.52
1:B:3429:LEU:HD21	1:B:3439:ARG:HB3	1.90	0.52
1:A:2421:GLY:N	3:A:5094:ADP:O2B	2.35	0.52
1:A:2494:LEU:HD12	1:A:2495:ASP:O	2.08	0.52
1:B:2034:ILE:HD12	1:B:2061:TYR:CZ	2.45	0.52
1:B:2081:THR:O	1:B:2085:LYS:HB2	2.09	0.52
1:B:2276:LEU:HD21	1:B:2415:ILE:HG21	1.91	0.52
1:B:2386:MET:HB3	1:B:2627:ARG:CD	2.37	0.52
1:A:2441:VAL:HG21	1:A:2482:LEU:HD21	1.91	0.52
1:B:1422:LYS:O	1:B:1425:GLU:CB	2.48	0.52
1:B:1531:ARG:HG2	1:B:1537:PHE:CB	2.39	0.52
1:B:2788:ARG:HG3	1:B:3459:ASP:HA	1.90	0.52
1:A:2151:TRP:HE3	1:A:2193:LEU:HD11	1.75	0.52
1:B:2332:GLY:HA2	1:B:2335:GLN:CB	2.35	0.52
1:B:3306:TRP:HH2	1:B:3594:ALA:HB1	1.73	0.52
1:B:3330:TYR:CD1	1:B:3334:PHE:CD2	2.98	0.52
1:B:3919:LYS:NZ	1:B:4038:GLU:HG3	2.25	0.52
1:B:1563:LYS:HE2	1:B:1585:VAL:HG12	1.90	0.52
1:B:1616:LYS:HZ1	1:B:1759:LYS:NZ	2.07	0.52
1:B:1635:ASP:HB2	1:B:1638:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1965:HIS:HD2	1:B:2212:LEU:CD2	2.21	0.52
1:B:3736:LEU:HD11	1:B:3745:ARG:HG3	1.92	0.52
1:A:1535:PRO:HB2	1:A:1841:ILE:CG1	2.33	0.52
1:A:2476:LYS:HD2	1:A:2476:LYS:H	1.64	0.52
1:B:1703:VAL:HG13	1:B:1770:ILE:HD13	1.91	0.52
1:B:1706:LEU:CD1	1:B:1936:ILE:HG12	2.40	0.52
1:B:2293:HIS:CE1	1:B:2409:ASN:CB	2.92	0.52
1:A:2382:ALA:O	1:A:2385:VAL:HG12	2.10	0.52
1:A:2448:ASP:O	1:A:2829:GLU:OE2	2.27	0.52
1:A:2489:ILE:HD11	1:A:2506:LEU:HD13	1.92	0.52
1:A:3978:ASN:O	1:A:3981:PRO:CD	2.57	0.52
1:B:1493:LEU:HD23	1:B:1498:GLU:CB	2.39	0.52
1:B:1900:PRO:HB3	1:B:1905:ARG:HA	1.92	0.52
1:B:2476:LYS:HZ2	1:B:2528:ARG:HD2	1.72	0.52
1:A:1991:GLU:O	1:A:1994:VAL:HB	2.10	0.52
1:A:2320:ARG:NH1	1:A:2406:ASP:OD2	2.32	0.52
1:A:3303:LYS:HA	1:A:3306:TRP:HE1	1.68	0.52
1:B:1448:VAL:HG22	1:B:1513:ILE:HB	1.92	0.52
1:B:1926:SER:HB2	1:B:1970:LEU:HD12	1.92	0.52
1:B:2640:THR:HG23	1:B:2643:SER:H	1.75	0.52
1:B:2846:GLY:O	1:B:2849:TYR:HB3	2.10	0.52
1:B:2941:THR:HG22	1:B:2942:ASP:N	2.24	0.52
1:B:1970:LEU:HD23	1:B:1974:LYS:HE3	1.92	0.52
1:B:2305:LEU:HB3	1:B:2310:LEU:HD12	1.92	0.52
1:A:1502:ILE:HG23	1:A:1503:PRO:HD2	1.91	0.51
1:A:1559:SER:CB	1:A:1572:ILE:HG22	2.39	0.51
1:A:2181:GLY:O	1:A:2182:GLU:CG	2.58	0.51
1:A:3737:THR:CB	1:A:3740:THR:CB	2.87	0.51
1:B:1493:LEU:HD23	1:B:1498:GLU:HB2	1.91	0.51
1:B:3372:THR:HG23	1:B:3375:GLU:HB2	1.91	0.51
1:A:1493:LEU:O	1:A:1494:ASP:HB2	2.10	0.51
1:A:1995:VAL:CG1	1:A:2018:LEU:HD21	2.40	0.51
1:B:1771:TYR:HA	1:B:1775:LEU:HD13	1.92	0.51
1:B:2228:HIS:HB3	2:B:5093:ATP:C2	2.44	0.51
1:A:1983:LEU:HD23	1:A:1993:THR:HG22	1.92	0.51
1:A:2078:CYS:N	2:A:5093:ATP:O2B	2.41	0.51
1:A:3330:TYR:CE2	1:A:3346:LEU:HD13	2.45	0.51
1:A:3737:THR:CB	1:A:3740:THR:HB	2.40	0.51
1:A:3911:TRP:HH2	1:A:3926:VAL:HG12	1.76	0.51
1:B:1983:LEU:HD21	1:B:1996:GLU:HB2	1.92	0.51
1:B:2494:LEU:HB2	1:B:2499:SER:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2792:LEU:HD13	1:B:2826:ALA:HB3	1.92	0.51
1:A:1536:ARG:HD3	1:A:1841:ILE:CD1	2.40	0.51
1:A:1771:TYR:HA	1:A:1775:LEU:HD13	1.92	0.51
1:A:3458:PHE:CD1	1:A:3459:ASP:O	2.63	0.51
1:A:3509:LEU:HD11	1:A:3513:VAL:HG21	1.89	0.51
1:B:2225:LYS:HA	2:B:5093:ATP:H2	1.71	0.51
1:A:2386:MET:HB3	1:A:2627:ARG:CD	2.40	0.51
1:A:2494:LEU:O	1:A:2495:ASP:O	2.29	0.51
1:A:3541:MET:HB2	1:A:3607:PHE:HE1	1.74	0.51
1:A:3566:LEU:CA	1:A:3583:LEU:HD21	2.39	0.51
1:B:2276:LEU:HD23	1:B:2556:ILE:CG2	2.41	0.51
1:B:3923:VAL:CG2	1:B:4038:GLU:HA	2.39	0.51
1:A:1574:PHE:HB3	1:A:1576:GLU:H	1.75	0.51
1:A:2055:LYS:HE3	1:A:2056:LYS:HE2	1.93	0.51
1:A:2965:VAL:HG13	1:A:3325:ILE:HD11	1.92	0.51
1:A:1394:LEU:CD2	1:A:1449:GLN:HE22	2.22	0.51
1:A:1650:LEU:O	1:A:1654:VAL:HG23	2.11	0.51
1:A:1849:GLU:CD	1:A:1899:ASN:HD22	2.14	0.51
1:A:3728:GLU:CG	1:A:4079:LYS:HE2	2.40	0.51
1:A:3998:ILE:HG22	1:A:4004:LEU:HG	1.92	0.51
1:B:1917:ARG:HD2	1:B:3963:PHE:CE2	2.46	0.51
1:B:2064:GLN:NE2	1:B:2070:LEU:CG	2.67	0.51
1:B:4024:VAL:HG11	1:B:4062:TRP:CD2	2.46	0.51
1:A:1744:LEU:HD22	1:A:1760:PHE:CD1	2.45	0.51
1:A:1826:PHE:O	1:A:1826:PHE:CD1	2.63	0.51
1:A:1940:GLU:HG3	1:A:1941:ASP:H	1.76	0.51
1:A:2102:TYR:HB2	1:A:2152:VAL:HG22	1.93	0.51
1:A:2378:VAL:HG21	1:A:2380:LEU:HD13	1.89	0.51
1:B:1514:ASP:O	1:B:1518:MET:HG2	2.11	0.51
1:A:3737:THR:OG1	1:A:3740:THR:CB	2.58	0.51
1:B:1826:PHE:HZ	1:B:1831:LEU:CA	2.24	0.51
1:A:1703:VAL:HG13	1:A:1770:ILE:HD13	1.91	0.50
1:A:2039:LYS:HG2	1:A:2049:MET:HG3	1.93	0.50
1:A:2425:THR:HG22	1:A:2485:PHE:HE2	1.77	0.50
1:A:2446:SER:H	1:A:2449:THR:HG21	1.76	0.50
1:A:3817:GLY:H	1:A:3821:ASN:CB	2.24	0.50
1:B:3530:PHE:CE1	1:B:3618:TYR:HD2	2.26	0.50
1:A:2762:SER:O	1:A:2763:ARG:CB	2.60	0.50
1:A:3924:TRP:O	1:A:3927:TYR:HB3	2.11	0.50
1:B:1606:GLU:O	1:B:1610:ILE:HG12	2.11	0.50
1:B:2262:LEU:HA	1:B:2265:ILE:HD12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2378:VAL:HG22	1:B:2380:LEU:HG	1.92	0.50
1:B:2517:LYS:HG2	1:B:2520:GLU:HB2	1.93	0.50
1:B:2578:ILE:CG2	1:B:2630:TYR:HB2	2.41	0.50
1:A:1425:GLU:OE2	1:A:1429:LEU:HD21	2.12	0.50
1:A:4059:LEU:HA	1:A:4063:LEU:HD13	1.94	0.50
1:B:1469:LEU:HD13	1:B:1523:LEU:CD2	2.41	0.50
1:B:1803:THR:HG21	1:B:1848:ASP:CG	2.32	0.50
1:B:1849:GLU:CD	1:B:1899:ASN:HD22	2.15	0.50
1:B:1998:LEU:HD11	1:B:2022:PHE:HZ	1.76	0.50
1:B:2860:THR:HG22	1:B:2865:LEU:O	2.11	0.50
1:A:2257:PHE:HD1	1:A:2262:LEU:HD11	1.77	0.50
1:A:2488:GLU:CG	1:A:2491:LEU:HD12	2.42	0.50
1:A:3010:LEU:HD22	1:A:3320:LEU:HD12	1.94	0.50
1:A:3429:LEU:HD21	1:A:3439:ARG:HB3	1.93	0.50
1:B:1750:SER:HB2	1:B:1755:LEU:HD23	1.93	0.50
1:B:2382:ALA:O	1:B:2385:VAL:HG12	2.11	0.50
1:B:2493:LYS:HG3	1:B:2494:LEU:H	1.76	0.50
1:A:1645:PHE:HB3	1:A:1765:ILE:HG21	1.90	0.50
1:A:2380:LEU:HD23	1:A:2384:GLU:HB3	1.94	0.50
1:A:3509:LEU:CD1	1:A:3513:VAL:CG2	2.76	0.50
1:B:1910:GLU:HB2	1:B:3846:MET:CB	2.42	0.50
1:B:3338:ASN:HD22	1:B:3341:GLU:HG2	1.76	0.50
1:B:3461:ILE:C	1:B:3463:SER:H	2.14	0.50
1:B:3612:ASP:O	1:B:3615:VAL:CG2	2.60	0.50
1:A:1826:PHE:CE1	1:A:1853:LEU:CD2	2.94	0.50
1:A:2755:HIS:CE1	1:A:2835:LEU:HG	2.47	0.50
1:B:1646:GLN:NE2	1:B:1758:TYR:OH	2.45	0.50
1:B:1744:LEU:HA	1:B:1760:PHE:HE2	1.68	0.50
1:B:1849:GLU:HG2	1:B:1899:ASN:HD22	1.76	0.50
1:B:1981:SER:HB3	1:B:1982:PRO:HD3	1.93	0.50
1:A:1969:GLY:O	1:A:1972:THR:HB	2.11	0.50
1:A:1995:VAL:HG22	1:A:2022:PHE:CD2	2.47	0.50
1:A:2228:HIS:HB3	2:A:5093:ATP:C2	2.47	0.50
1:A:4023:ILE:HD11	1:A:4029:ILE:HD12	1.93	0.50
1:A:4065:LEU:HD12	1:A:4065:LEU:C	2.32	0.50
1:B:2428:MET:SD	1:B:2428:MET:C	2.90	0.50
1:B:2448:ASP:HB2	1:B:2829:GLU:CD	2.32	0.50
1:B:3459:ASP:OD2	1:B:3461:ILE:CG1	2.60	0.50
1:A:2201:HIS:NE2	1:A:2497:TYR:O	2.45	0.50
1:A:3628:ILE:HG22	1:A:3649:PHE:CE2	2.47	0.50
1:A:3848:LEU:HD21	1:A:3852:LYS:HE3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3330:TYR:CE1	1:B:3334:PHE:CE2	2.99	0.50
1:A:2654:ARG:NH1	1:A:2658:ASP:OD1	2.44	0.50
1:A:2788:ARG:HB2	1:A:3459:ASP:HB3	1.94	0.50
1:B:2761:ALA:O	1:B:2892:CYS:SG	2.70	0.50
1:B:2960:THR:HB	1:B:2963:ASP:HB2	1.93	0.50
1:B:2002:ILE:HG22	1:B:2006:LEU:HD11	1.94	0.49
1:B:2252:LEU:HD22	1:B:2314:ILE:HG13	1.94	0.49
1:B:2786:ILE:HG12	1:B:2821:ASN:HA	1.94	0.49
1:B:3787:THR:HG22	1:B:3875:MET:HB2	1.94	0.49
1:A:1604:ALA:HA	1:A:1607:TRP:HE1	1.75	0.49
1:A:2109:LEU:HB3	1:A:2113:SER:HB2	1.94	0.49
1:A:2339:ILE:HG12	1:A:2353:LEU:HD23	1.94	0.49
1:A:3818:SER:O	1:A:3820:GLU:N	2.45	0.49
1:B:3323:ASN:HD21	1:B:3361:ASP:H	1.60	0.49
1:A:2758:LEU:HD22	1:A:2917:MET:SD	2.52	0.49
1:A:3566:LEU:HD13	1:A:3570:LEU:HD11	1.94	0.49
1:B:1394:LEU:CD2	1:B:1449:GLN:HE22	2.25	0.49
1:B:1929:ILE:H	1:B:1929:ILE:HD12	1.77	0.49
1:B:2467:THR:CB	1:B:2473:LEU:HD22	2.40	0.49
1:B:3854:TYR:O	1:B:3858:HIS:HB2	2.11	0.49
1:A:1645:PHE:HZ	1:A:1768:ARG:HD2	1.76	0.49
1:B:1616:LYS:HZ2	1:B:1759:LYS:CE	2.19	0.49
1:B:2476:LYS:CD	1:B:2476:LYS:N	2.74	0.49
1:B:2822:ILE:O	1:B:2822:ILE:CG1	2.38	0.49
1:A:23:LEU:O	1:A:25:GLU:N	2.45	0.49
1:A:1940:GLU:CB	1:A:1989:GLU:O	2.53	0.49
1:A:3930:PHE:HE2	1:A:4029:ILE:CD1	2.26	0.49
1:B:1540:LEU:HD11	1:B:1548:ILE:HD11	1.95	0.49
1:B:2181:GLY:O	1:B:2182:GLU:HG3	2.12	0.49
1:B:2574:TYR:CE2	3:B:5094:ADP:C2	2.98	0.49
1:B:3737:THR:CB	1:B:3740:THR:CB	2.90	0.49
1:A:2575:TYR:HD1	1:A:2578:ILE:HD11	1.78	0.49
1:A:3844:ILE:HG12	1:A:3851:VAL:HG21	1.93	0.49
1:A:1448:VAL:HG22	1:A:1513:ILE:HB	1.95	0.49
1:A:2476:LYS:O	1:A:2476:LYS:HD3	2.11	0.49
1:A:2582:VAL:O	1:A:2582:VAL:HG23	2.13	0.49
1:A:3671:VAL:O	1:A:3674:ILE:HG22	2.12	0.49
1:A:3785:TYR:CE2	1:A:3859:VAL:HG22	2.46	0.49
1:B:1620:PHE:CZ	1:B:1743:ASP:HB3	2.48	0.49
1:B:2080:LYS:CE	2:B:5093:ATP:O3G	2.60	0.49
1:B:3409:ASP:HB3	1:B:3518:PHE:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3579:GLU:O	1:B:3582:GLU:N	2.44	0.49
1:B:3785:TYR:HE2	1:B:3859:VAL:HG22	1.77	0.49
1:B:3897:TYR:CZ	1:B:3899:ASP:HB3	2.48	0.49
3:B:5094:ADP:H2'	3:B:5094:ADP:N3	2.27	0.49
1:A:1459:LEU:HD22	1:A:1473:THR:HG22	1.95	0.49
1:A:2076:ALA:HB2	1:A:2549:ARG:HG2	1.94	0.49
1:A:2960:THR:HB	1:A:2963:ASP:HB2	1.94	0.49
2:B:5093:ATP:O3G	2:B:5093:ATP:O1B	2.30	0.49
1:A:2084:TRP:CH2	1:A:2153:VAL:HG21	2.48	0.49
1:A:4034:LEU:O	1:A:4036:GLN:HG3	2.13	0.49
1:B:2339:ILE:HG23	1:B:2353:LEU:HB3	1.94	0.49
1:B:1422:LYS:CA	1:B:1425:GLU:HB2	2.43	0.49
1:B:1749:ILE:HD13	1:B:1813:LEU:HD22	1.94	0.49
1:B:1822:CYS:SG	1:B:1849:GLU:C	2.91	0.49
1:B:1963:MET:HB3	1:B:1966:TYR:CD2	2.48	0.49
1:B:2107:LYS:CE	1:B:2499:SER:HB3	2.42	0.49
1:B:2495:ASP:O	1:B:2498:GLY:N	2.46	0.49
1:B:3509:LEU:HD12	1:B:3513:VAL:CG2	2.42	0.49
1:B:4065:LEU:HD11	1:B:4070:ILE:CD1	2.39	0.49
1:A:1714:GLN:HB3	1:A:1727:LEU:HD11	1.95	0.48
1:A:1823:ASP:CG	1:A:1823:ASP:O	2.51	0.48
1:A:2134:LEU:HD12	1:A:2138:ASN:ND2	2.28	0.48
1:A:2920:TRP:CG	1:A:2989:PRO:HG3	2.47	0.48
1:B:2290:LEU:HD23	1:B:2321:SER:HA	1.94	0.48
1:A:2034:ILE:HD12	1:A:2061:TYR:CE2	2.48	0.48
1:A:4022:GLN:HA	1:A:4027:VAL:O	2.12	0.48
1:B:3656:VAL:CG1	1:B:3677:LEU:HB3	2.36	0.48
1:B:3979:ASN:O	1:B:3981:PRO:HD2	2.13	0.48
1:A:1466:GLN:HB2	1:A:1473:THR:HG21	1.95	0.48
1:A:3409:ASP:HB3	1:A:3518:PHE:HB2	1.94	0.48
1:B:1394:LEU:HD22	1:B:1449:GLN:HE22	1.78	0.48
1:B:1425:GLU:OE2	1:B:1429:LEU:CD1	2.60	0.48
1:B:2080:LYS:HE2	2:B:5093:ATP:O3G	2.13	0.48
1:B:2476:LYS:HE3	1:B:2528:ARG:HB3	1.95	0.48
1:B:2763:ARG:HA	5:B:5096:SO4:O3	2.13	0.48
1:B:3519:VAL:HG13	1:B:3521:ASN:ND2	2.29	0.48
1:A:2154:PHE:N	1:A:2154:PHE:HD1	2.10	0.48
1:A:2175:ILE:HG13	1:A:2184:LEU:C	2.34	0.48
1:A:2475:PRO:O	1:A:2476:LYS:O	2.30	0.48
1:A:2627:ARG:NH1	1:A:2630:TYR:CE2	2.81	0.48
1:A:3461:ILE:C	1:A:3463:SER:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1956:LEU:CB	1:B:1968:PHE:CE2	2.92	0.48
1:B:2109:LEU:HD13	1:B:2129:LEU:HD23	1.96	0.48
1:B:2467:THR:HG22	1:B:2468:SER:N	2.29	0.48
1:B:3618:TYR:O	1:B:3622:GLY:N	2.42	0.48
1:B:3737:THR:CB	1:B:3740:THR:HB	2.44	0.48
1:A:1677:ASP:HA	1:A:1680:ILE:HD12	1.95	0.48
1:A:3365:ARG:HD2	1:A:3368:ASP:OD2	2.14	0.48
1:A:3618:TYR:O	1:A:3622:GLY:N	2.38	0.48
1:A:2109:LEU:CD1	1:A:2129:LEU:HD23	2.42	0.48
1:A:2942:ASP:HB3	1:A:3357:ALA:HB1	1.95	0.48
1:A:3462:ILE:HD13	1:A:3462:ILE:N	2.28	0.48
1:B:65:THR:O	1:B:66:GLN:CB	2.61	0.48
1:B:2084:TRP:HE3	1:B:2088:ILE:HD12	1.79	0.48
1:B:2467:THR:HB	1:B:2473:LEU:CD2	2.42	0.48
1:A:1692:ASP:O	1:A:1695:LYS:HB3	2.13	0.48
1:A:2154:PHE:N	1:A:2154:PHE:CD1	2.79	0.48
1:A:2494:LEU:HD12	1:A:2494:LEU:O	2.14	0.48
1:B:1645:PHE:CD2	1:B:1765:ILE:HG22	2.48	0.48
1:B:1750:SER:CB	1:B:1755:LEU:HD23	2.44	0.48
1:B:2109:LEU:HD11	1:B:2129:LEU:CD2	2.43	0.48
1:B:4074:GLU:HA	1:B:4077:GLN:HE21	1.79	0.48
1:A:1620:PHE:HD2	1:A:1760:PHE:HZ	1.49	0.48
1:A:2099:ASN:HA	1:A:2149:ARG:O	2.14	0.48
1:B:1423:ILE:C	1:B:1425:GLU:N	2.66	0.48
1:B:1773:PRO:HA	1:B:1776:LEU:HD12	1.96	0.48
1:B:3406:PHE:CZ	1:B:3505:ILE:HG21	2.49	0.48
1:A:1531:ARG:HG2	1:A:1537:PHE:CB	2.40	0.48
1:A:2105:ASP:OD2	1:A:2508:GLN:HB2	2.13	0.48
1:A:2354:SER:OG	1:A:2357:SER:CB	2.61	0.48
1:A:3934:TRP:CG	1:A:4023:ILE:HD12	2.49	0.48
1:B:1392:LEU:HD23	1:B:1484:LYS:HA	1.96	0.48
1:B:1844:TRP:CD1	1:B:1893:ALA:HB3	2.48	0.48
1:B:3459:ASP:HB2	1:B:3460:PRO:HD2	1.96	0.48
1:A:1531:ARG:HD3	1:A:1537:PHE:O	2.14	0.48
1:A:2426:MET:HG3	1:A:2427:ILE:H	1.79	0.48
1:A:3307:LEU:O	1:A:3311:LYS:HB3	2.14	0.48
1:B:3538:ASN:HB3	1:B:3541:MET:HG2	1.95	0.48
1:B:3628:ILE:HD11	1:B:3679:TYR:CZ	2.49	0.48
1:B:3817:GLY:H	1:B:3821:ASN:HB2	1.79	0.48
1:A:1421:TYR:CD2	1:A:1425:GLU:CG	2.97	0.47
1:A:1466:GLN:HB3	1:A:1473:THR:HG21	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2473:LEU:HD23	1:A:2525:THR:HB	1.96	0.47
1:A:2565:LYS:O	1:A:2569:GLN:HG3	2.14	0.47
1:A:2257:PHE:CD1	1:A:2262:LEU:HD11	2.49	0.47
1:B:4024:VAL:HG23	1:B:4027:VAL:H	1.79	0.47
1:A:2034:ILE:CD1	1:A:2061:TYR:CE2	2.96	0.47
1:A:2385:VAL:O	1:A:2574:TYR:HE1	1.96	0.47
1:A:2493:LYS:HG3	1:A:2494:LEU:N	2.16	0.47
1:A:2707:VAL:HG12	1:A:2712:LEU:CD1	2.44	0.47
1:B:3530:PHE:HD1	1:B:3618:TYR:CD2	2.29	0.47
1:B:3869:GLU:O	1:B:3870:LYS:C	2.52	0.47
1:A:2134:LEU:HD11	1:A:2138:ASN:HD21	1.79	0.47
1:A:3978:ASN:O	1:A:3981:PRO:HD3	2.14	0.47
1:A:3979:ASN:C	1:A:3981:PRO:CD	2.83	0.47
1:B:2491:LEU:HD23	1:B:2491:LEU:HA	1.71	0.47
1:B:2653:TRP:HB3	1:B:2654:ARG:NH1	2.30	0.47
1:A:1636:ILE:O	1:A:1640:VAL:HG23	2.14	0.47
1:A:2441:VAL:CG2	1:A:2482:LEU:HD21	2.43	0.47
1:A:3772:TRP:HZ3	1:A:3780:ASN:HD22	1.62	0.47
1:B:1645:PHE:HB2	1:B:1697:LYS:HG3	1.95	0.47
1:B:2060:PHE:CE1	1:B:2064:GLN:NE2	2.81	0.47
1:B:3461:ILE:C	1:B:3463:SER:N	2.67	0.47
1:A:1645:PHE:CB	1:A:1765:ILE:HG21	2.41	0.47
1:A:2127:ASP:HB3	1:A:2132:SER:HB3	1.96	0.47
1:A:2378:VAL:CG1	1:A:2392:ILE:HD12	2.44	0.47
1:A:2563:SER:C	1:A:2565:LYS:H	2.17	0.47
1:A:2761:ALA:O	1:A:2892:CYS:HB3	2.15	0.47
1:A:4020:ASN:ND2	1:A:4028:ARG:HD3	2.29	0.47
1:A:1646:GLN:OE1	1:A:1763:ILE:N	2.42	0.47
1:A:2354:SER:H	1:A:2357:SER:HB2	1.80	0.47
1:A:2760:GLY:HA2	1:A:2917:MET:HB2	1.96	0.47
1:A:3471:ASN:HB2	1:A:3478:THR:HG23	1.97	0.47
1:B:1387:GLU:HA	1:B:1393:LYS:HA	1.96	0.47
1:B:1744:LEU:CD2	1:B:1760:PHE:CD2	2.98	0.47
1:B:1789:LYS:HD3	1:B:1872:LEU:O	2.14	0.47
1:B:1968:PHE:N	1:B:1968:PHE:CD1	2.83	0.47
1:B:2318:ILE:O	1:B:2322:LEU:HB2	2.14	0.47
1:B:2755:HIS:HB3	1:B:2912:CYS:SG	2.55	0.47
1:B:2780:LYS:HB3	1:B:2813:THR:HG22	1.96	0.47
1:B:3566:LEU:HD11	1:B:3570:LEU:HD11	1.95	0.47
1:B:3813:ILE:HG22	1:B:3840:LEU:HD23	1.97	0.47
1:A:2252:LEU:HD22	1:A:2314:ILE:HG13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2967:ASN:HB3	1:A:3356:PHE:CZ	2.49	0.47
1:B:1612:ASP:HA	1:B:1615:ILE:CG1	2.45	0.47
1:B:2470:GLY:O	1:B:2471:LEU:HB2	2.15	0.47
1:B:2473:LEU:HD12	1:B:2473:LEU:N	2.28	0.47
1:B:4060:SER:HB3	1:B:4070:ILE:HG13	1.96	0.47
1:A:1540:LEU:HD23	1:A:1540:LEU:HA	1.66	0.47
1:A:2109:LEU:HD11	1:A:2129:LEU:CD2	2.44	0.47
1:A:2358:THR:CG2	1:A:2359:ILE:N	2.78	0.47
1:A:2383:HIS:CE1	1:A:2384:GLU:HG3	2.50	0.47
1:B:1715:LEU:HG	1:B:1727:LEU:HD22	1.96	0.47
1:B:3367:ILE:O	1:B:3371:VAL:HG22	2.15	0.47
1:B:3855:LEU:HD12	1:B:3859:VAL:HG23	1.97	0.47
1:A:1744:LEU:HD22	1:A:1760:PHE:CG	2.50	0.47
1:A:1802:LYS:NZ	5:A:5097:SO4:S	2.88	0.47
1:A:2112:GLU:CB	1:A:2117:SER:HB2	2.39	0.47
1:A:2241:LEU:HD13	1:A:2299:ARG:HH11	1.80	0.47
1:B:1934:LEU:HD22	1:B:1945:LEU:HD12	1.97	0.47
1:B:2125:TRP:CZ2	1:B:2178:LEU:HD13	2.51	0.47
1:B:2446:SER:H	1:B:2449:THR:HG21	1.79	0.47
1:B:2761:ALA:O	1:B:2892:CYS:CB	2.63	0.47
1:B:2787:HIS:CA	1:B:3460:PRO:HG2	2.44	0.46
1:B:2920:TRP:CG	1:B:2989:PRO:HG3	2.50	0.46
1:B:3641:PHE:HA	1:B:3889:LEU:HD21	1.97	0.46
1:B:3737:THR:OG1	1:B:3740:THR:CB	2.62	0.46
1:A:2063:MET:HB3	1:A:2070:LEU:HD11	1.97	0.46
1:A:2111:LYS:CD	1:A:2161:GLU:HG3	2.17	0.46
1:A:2517:LYS:NZ	1:A:2520:GLU:OE1	2.46	0.46
1:A:3927:TYR:HE1	1:A:4029:ILE:HG22	1.80	0.46
1:B:1949:ILE:HD11	1:B:1994:VAL:HG11	1.96	0.46
1:B:2421:GLY:N	3:B:5094:ADP:O2B	2.39	0.46
1:B:2709:LYS:O	1:B:2713:VAL:HG23	2.15	0.46
1:A:1563:LYS:HA	1:A:1569:ILE:O	2.15	0.46
1:A:1781:THR:HG21	1:A:1919:PHE:CE1	2.50	0.46
1:A:2507:ARG:HG3	1:A:2550:PHE:HA	1.97	0.46
1:B:1657:THR:HG21	1:B:1734:PHE:O	2.15	0.46
1:B:1714:GLN:HB3	1:B:1727:LEU:HD11	1.98	0.46
1:B:1826:PHE:CE1	1:B:1830:VAL:HG13	2.51	0.46
1:B:1938:GLY:O	1:B:1989:GLU:HB3	2.15	0.46
1:B:2225:LYS:HG3	2:B:5093:ATP:H1'	1.96	0.46
1:B:2503:VAL:HA	1:B:2506:LEU:HD12	1.97	0.46
1:B:2761:ALA:O	1:B:2892:CYS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1835:LEU:O	1:A:1838:ILE:HG22	2.15	0.46
1:A:1953:LEU:HA	1:A:1956:LEU:HD12	1.98	0.46
1:A:2411:LYS:HG2	1:A:2530:HIS:CE1	2.42	0.46
1:A:3692:LYS:HE3	1:A:3898:GLU:HB3	1.97	0.46
1:A:3818:SER:O	1:A:3819:ILE:C	2.54	0.46
1:B:1626:CYS:SG	1:B:1639:VAL:HG11	2.56	0.46
1:B:2620:ARG:HH11	1:B:2910:ASN:ND2	2.13	0.46
1:B:4059:LEU:HA	1:B:4063:LEU:HD13	1.96	0.46
1:A:1559:SER:HB3	1:A:1572:ILE:CG2	2.44	0.46
1:A:2141:ILE:HG22	1:A:2145:PHE:HB2	1.97	0.46
1:A:3431:PHE:CZ	1:A:3458:PHE:HD1	2.33	0.46
1:B:203:GLN:O	1:B:204:GLY:C	2.54	0.46
1:B:1422:LYS:C	1:B:1425:GLU:HB3	2.33	0.46
1:B:1497:ILE:O	1:B:1500:ILE:HG12	2.16	0.46
1:B:1604:ALA:HA	1:B:1607:TRP:HE1	1.78	0.46
1:B:3978:ASN:O	1:B:3981:PRO:CD	2.62	0.46
1:A:2151:TRP:CE3	1:A:2193:LEU:HD11	2.51	0.46
1:A:2905:SER:HA	1:A:2906:PRO:HD2	1.70	0.46
1:B:1911:ASN:OD1	1:B:1912:LEU:HG	2.16	0.46
1:B:2305:LEU:HB3	1:B:2310:LEU:CD1	2.45	0.46
1:B:2795:PHE:CE2	1:B:2799:LEU:HD11	2.51	0.46
1:A:1981:SER:HB3	1:A:1982:PRO:HD3	1.97	0.46
1:A:2654:ARG:HH22	1:A:2691:SER:HB2	1.80	0.46
1:A:2749:LEU:HD12	1:A:2773:VAL:HG12	1.97	0.46
1:A:3461:ILE:C	1:A:3463:SER:N	2.67	0.46
1:B:1462:ASN:HB2	1:B:1465:ILE:HG22	1.98	0.46
1:B:1939:PHE:H	1:B:1939:PHE:HD1	1.61	0.46
1:B:2752:VAL:HG13	1:B:2883:LYS:CB	2.46	0.46
1:B:3462:ILE:O	1:B:3465:LEU:N	2.49	0.46
1:B:3555:TYR:HE1	1:B:3593:GLU:HG2	1.80	0.46
1:B:3845:GLN:NE2	1:B:3882:ASP:O	2.49	0.46
1:B:4022:GLN:O	1:B:4022:GLN:HG2	2.15	0.46
1:A:1672:TYR:O	1:A:1675:GLU:HB3	2.15	0.46
1:A:1977:LEU:O	1:A:1980:CYS:HB3	2.16	0.46
1:A:2860:THR:HG21	1:A:2867:LEU:HD12	1.97	0.46
1:B:1762:TYR:CZ	1:B:1764:GLY:HA2	2.51	0.46
1:B:1967:HIS:C	1:B:1968:PHE:CD1	2.85	0.46
1:B:2099:ASN:HA	1:B:2149:ARG:O	2.16	0.46
1:B:2170:LEU:HB3	1:B:2209:ARG:HD3	1.98	0.46
1:B:2336:ARG:CD	1:B:2355:ASP:OD2	2.62	0.46
1:A:2104:ILE:O	1:A:2154:PHE:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2228:HIS:HD2	2:A:5093:ATP:O2'	1.99	0.46
1:A:2385:VAL:HG23	1:A:2574:TYR:HD1	1.81	0.46
1:A:2787:HIS:HB3	1:A:3461:ILE:HG23	1.96	0.46
1:B:1611:LEU:O	1:B:1615:ILE:HG12	2.15	0.46
1:B:2204:PRO:HA	1:B:2207:ILE:HD12	1.97	0.46
1:B:2563:SER:C	1:B:2565:LYS:H	2.19	0.46
1:B:3807:SER:O	1:B:3808:LYS:HB2	2.16	0.46
1:A:23:LEU:O	1:A:24:GLU:C	2.50	0.46
1:A:1848:ASP:O	1:A:1849:GLU:HB2	2.16	0.46
1:A:2475:PRO:HB3	1:A:2527:GLU:HB2	1.98	0.46
1:A:2849:TYR:O	1:A:2853:LEU:HB2	2.16	0.46
1:A:3509:LEU:HD12	1:A:3513:VAL:HG23	1.97	0.46
1:A:3854:TYR:O	1:A:3858:HIS:HB2	2.16	0.46
1:B:3687:SER:HA	1:B:3698:MET:HE1	1.98	0.46
1:A:1621:THR:HA	1:A:1624:ARG:CZ	2.44	0.45
1:A:1645:PHE:HB2	1:A:1697:LYS:HG3	1.97	0.45
1:A:1656:TRP:O	1:A:1660:VAL:HG12	2.17	0.45
1:A:1940:GLU:HG3	1:A:1941:ASP:N	2.31	0.45
1:A:2129:LEU:O	1:A:2133:ILE:HG12	2.16	0.45
1:A:3505:ILE:O	1:A:3510:ARG:NH1	2.49	0.45
1:A:3721:THR:O	1:A:3725:VAL:HG23	2.16	0.45
1:A:3816:LEU:HD21	1:A:3850:TRP:HZ3	1.81	0.45
1:B:1536:ARG:HD3	1:B:1536:ARG:HA	1.66	0.45
1:B:2707:VAL:HG12	1:B:2712:LEU:HD12	1.97	0.45
1:A:1694:VAL:HG23	1:A:1697:LYS:HE2	1.98	0.45
1:A:1702:LEU:HD23	1:A:1702:LEU:HA	1.81	0.45
1:A:1927:GLY:HA2	1:A:1950:VAL:HG21	1.97	0.45
1:B:2385:VAL:O	1:B:2574:TYR:HE1	1.99	0.45
1:B:3017:VAL:HG21	1:B:3313:PHE:HE2	1.81	0.45
1:B:3500:ASP:HA	1:B:3501:PRO:HD3	1.88	0.45
1:A:3629:PHE:O	1:A:3633:GLU:HB2	2.17	0.45
1:B:1392:LEU:C	1:B:1392:LEU:CD1	2.84	0.45
1:B:1620:PHE:HB2	1:B:1760:PHE:CZ	2.51	0.45
1:B:1995:VAL:HG22	1:B:2022:PHE:CE2	2.51	0.45
1:A:1527:LEU:CD2	1:A:1545:LEU:HD22	2.46	0.45
1:A:2567:LEU:HD22	1:A:2622:LEU:HD13	1.98	0.45
1:A:3785:TYR:CE2	1:A:3859:VAL:HG13	2.51	0.45
1:B:1781:THR:HG21	1:B:1919:PHE:CD1	2.51	0.45
1:B:2201:HIS:CE1	1:B:2497:TYR:HA	2.51	0.45
1:B:3330:TYR:CE2	1:B:3346:LEU:HD13	2.51	0.45
1:A:1575:LEU:HD12	1:A:1575:LEU:HA	1.87	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1852:ARG:O	1:A:1852:ARG:HG3	2.17	0.45
1:A:1967:HIS:C	1:A:1968:PHE:CD1	2.90	0.45
1:A:2163:VAL:O	1:A:2166:MET:HG3	2.16	0.45
1:A:2316:LEU:HD13	1:A:2351:GLN:HB3	1.98	0.45
1:B:2464:TYR:HE1	1:B:2524:VAL:HG11	1.81	0.45
1:A:1967:HIS:O	1:A:1968:PHE:HD1	1.98	0.45
1:A:2112:GLU:HB3	1:A:2117:SER:OG	2.15	0.45
1:A:2425:THR:HG22	1:A:2485:PHE:CE2	2.51	0.45
1:A:2761:ALA:O	1:A:2892:CYS:CB	2.64	0.45
1:A:3799:LYS:HG3	1:A:3803:LEU:HD11	1.98	0.45
1:A:3891:ARG:HA	1:A:3891:ARG:HD2	1.79	0.45
1:B:1646:GLN:OE1	1:B:1763:ILE:HG12	2.16	0.45
1:B:3612:ASP:C	1:B:3615:VAL:HG22	2.37	0.45
1:A:1657:THR:HG21	1:A:1734:PHE:O	2.17	0.45
1:A:2088:ILE:HG12	1:A:2151:TRP:CZ2	2.52	0.45
1:A:2727:GLU:O	1:A:2728:LEU:C	2.55	0.45
1:B:2037:CYS:SG	1:B:2094:PHE:HB2	2.56	0.45
1:B:2276:LEU:CD2	1:B:2556:ILE:HG21	2.45	0.45
1:B:2491:LEU:HD21	1:B:2543:ARG:CZ	2.47	0.45
1:A:1409:LEU:CD2	1:A:1435:LEU:HB3	2.39	0.45
1:A:1946:ALA:O	1:A:1950:VAL:HG23	2.17	0.45
1:A:1998:LEU:CD1	1:A:2022:PHE:HZ	2.28	0.45
1:A:2115:TYR:O	1:A:2131:THR:CG2	2.65	0.45
1:A:2134:LEU:CD1	1:A:2138:ASN:HD21	2.28	0.45
1:B:1375:LYS:O	1:B:1379:LYS:HG2	2.16	0.45
1:B:3330:TYR:OH	1:B:3346:LEU:HD13	2.16	0.45
1:A:1640:VAL:CG1	1:A:1686:LYS:NZ	2.79	0.45
1:A:2891:ILE:CD1	1:A:2903:ILE:HD11	2.43	0.45
1:B:1391:GLY:HA3	1:B:1484:LYS:HZ3	1.81	0.45
1:B:1459:LEU:HD23	1:B:1465:ILE:HG13	1.99	0.45
1:B:1941:ASP:O	1:B:1945:LEU:HG	2.17	0.45
1:B:2563:SER:CB	1:B:2566:SER:H	2.20	0.45
1:B:3939:ILE:HG23	1:B:3950:PHE:HE2	1.80	0.45
1:A:2474:LEU:N	1:A:2475:PRO:HD3	2.32	0.45
1:A:2632:ALA:HB3	1:A:2647:LEU:HD21	1.99	0.45
1:A:2788:ARG:HG3	1:A:3459:ASP:HA	1.98	0.45
1:A:3304:GLU:C	1:A:3306:TRP:H	2.21	0.45
1:A:4033:LEU:HD12	1:A:4035:GLN:N	2.32	0.45
1:B:1753:GLY:HA3	1:B:3970:ASN:HD21	1.81	0.45
1:B:2467:THR:O	1:B:2471:LEU:N	2.50	0.45
1:A:2100:VAL:N	1:A:2149:ARG:O	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2412:ARG:HG3	1:A:2412:ARG:HH11	1.82	0.44
1:A:3645:SER:CB	1:A:3890:GLN:NE2	2.78	0.44
1:A:3812:LYS:HB2	1:A:3839:ILE:HD12	1.99	0.44
1:B:2580:LYS:HG2	1:B:2586:ARG:HH22	1.82	0.44
1:B:2752:VAL:HG13	1:B:2883:LYS:HB3	1.98	0.44
1:B:2867:LEU:HB3	1:B:2872:GLU:HB3	1.98	0.44
1:B:2960:THR:HG22	1:B:2961:ILE:N	2.32	0.44
1:A:2169:VAL:HG13	1:A:2186:ILE:HG12	1.98	0.44
1:A:2941:THR:CG2	1:A:2942:ASP:H	2.20	0.44
1:A:2021:ILE:HG22	1:A:2022:PHE:HD1	1.82	0.44
1:A:2220:CYS:SG	1:A:2221:SER:N	2.91	0.44
1:A:2356:TYR:CE1	1:A:2395:ILE:HG22	2.53	0.44
1:A:2755:HIS:CB	1:A:2912:CYS:HA	2.47	0.44
1:B:1367:ILE:H	1:B:1367:ILE:HD12	1.83	0.44
1:B:1392:LEU:HD22	1:B:1393:LYS:H	1.82	0.44
1:B:3600:LYS:HA	1:B:3603:GLU:HG2	1.99	0.44
1:A:2386:MET:HB2	1:A:2627:ARG:CD	2.39	0.44
1:B:1469:LEU:HD13	1:B:1523:LEU:HD21	1.98	0.44
1:B:2091:MET:CE	1:B:2149:ARG:NH1	2.80	0.44
1:B:2982:VAL:HG12	1:B:2983:GLY:N	2.32	0.44
1:B:2988:SER:CB	1:B:2989:PRO:CD	2.62	0.44
1:B:3319:GLU:HA	1:B:3359:LYS:O	2.16	0.44
1:B:3810:SER:HB3	1:B:3838:TRP:H	1.83	0.44
1:A:3440:LEU:HD22	1:A:3462:ILE:HD12	1.98	0.44
1:A:3459:ASP:HB2	1:A:3460:PRO:HD2	1.98	0.44
1:A:3464:ARG:O	1:A:3467:SER:O	2.35	0.44
1:A:3792:ARG:HB2	1:A:3955:TYR:CE2	2.53	0.44
1:A:3845:GLN:O	1:A:3848:LEU:HB2	2.18	0.44
1:A:3889:LEU:HG	1:A:3894:ARG:HD3	1.99	0.44
1:A:3897:TYR:CZ	1:A:3899:ASP:HB3	2.53	0.44
1:A:3965:SER:HA	1:A:3968:LEU:HD12	1.99	0.44
1:A:4020:ASN:HB3	1:A:4028:ARG:HH11	1.81	0.44
1:B:1385:VAL:HG21	1:B:1491:PHE:CD1	2.53	0.44
1:B:1851:ASN:HD21	1:B:1899:ASN:HB2	1.81	0.44
1:B:2178:LEU:HD12	1:B:2182:GLU:HB2	1.99	0.44
1:B:3509:LEU:CD1	1:B:3513:VAL:CG2	2.95	0.44
1:B:3509:LEU:O	1:B:3513:VAL:HG23	2.17	0.44
1:B:3911:TRP:HH2	1:B:3926:VAL:CG1	2.28	0.44
1:A:1646:GLN:CG	1:A:1763:ILE:HG12	2.47	0.44
1:A:1706:LEU:HD23	1:A:1706:LEU:HA	1.85	0.44
1:A:2424:LYS:HZ3	1:A:2424:LYS:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2673:LEU:O	1:A:2677:VAL:HG23	2.17	0.44
1:A:2755:HIS:CB	1:A:2911:ARG:O	2.58	0.44
1:A:3330:TYR:CD1	1:A:3334:PHE:CD2	3.06	0.44
1:A:3372:THR:HG23	1:A:3375:GLU:HB2	2.00	0.44
1:B:1527:LEU:HD22	1:B:1545:LEU:HD22	1.98	0.44
1:B:3462:ILE:O	1:B:3465:LEU:HB3	2.17	0.44
1:B:3737:THR:HB	1:B:3740:THR:HG1	1.78	0.44
1:B:4006:VAL:HA	1:B:4009:LYS:HG2	2.00	0.44
1:A:1664:LEU:O	1:A:1721:LYS:HE3	2.18	0.44
1:A:1983:LEU:HD21	1:A:1993:THR:O	2.16	0.44
1:A:2141:ILE:HG22	1:A:2145:PHE:CB	2.48	0.44
1:A:2428:MET:SD	1:A:2428:MET:C	2.96	0.44
1:A:3788:MET:O	1:A:3788:MET:HG3	2.18	0.44
1:B:1536:ARG:HE	1:B:1841:ILE:HD13	1.82	0.44
1:B:1970:LEU:CD2	1:B:1974:LYS:HE3	2.47	0.44
1:B:2084:TRP:CZ3	1:B:2085:LYS:HG3	2.53	0.44
1:B:2276:LEU:HD13	1:B:2417:CYS:SG	2.58	0.44
1:B:2387:ARG:O	1:B:2390:ILE:HG22	2.18	0.44
1:B:2967:ASN:HB3	1:B:3356:PHE:HE2	1.80	0.44
1:A:2095:ASP:OD1	1:A:2149:ARG:NH2	2.50	0.44
1:A:2446:SER:N	1:A:2449:THR:CG2	2.75	0.44
1:A:2571:TYR:HA	1:A:2574:TYR:HB2	2.00	0.44
1:A:2940:PHE:CE1	1:A:2941:THR:O	2.71	0.44
1:B:1910:GLU:HB2	1:B:3846:MET:HB3	2.00	0.44
1:B:2464:TYR:CZ	1:B:2474:LEU:HD12	2.53	0.44
1:B:3373:LEU:HD13	1:B:3557:LEU:CD1	2.48	0.44
1:A:1438:LEU:O	1:A:1442:GLN:HB2	2.18	0.44
1:A:1749:ILE:O	1:A:1755:LEU:HA	2.17	0.44
1:A:2125:TRP:CZ2	1:A:2178:LEU:HD13	2.53	0.44
1:A:2141:ILE:CG2	1:A:2145:PHE:HB2	2.48	0.44
1:A:3319:GLU:HA	1:A:3359:LYS:O	2.17	0.44
1:B:1540:LEU:HD23	1:B:1540:LEU:HA	1.70	0.44
1:B:1554:HIS:O	1:B:1555:HIS:HB2	2.18	0.44
1:B:2169:VAL:HG13	1:B:2186:ILE:HG12	1.99	0.44
1:A:1535:PRO:O	1:A:1841:ILE:HD11	2.18	0.43
1:A:1968:PHE:CD1	1:A:1968:PHE:N	2.85	0.43
1:A:2120:LYS:H	1:A:2120:LYS:HG3	1.64	0.43
1:A:2361:ILE:HG22	1:A:2367:SER:O	2.18	0.43
1:B:1512:THR:HG22	1:B:1516:LEU:HD12	1.98	0.43
1:B:1849:GLU:CG	1:B:1899:ASN:ND2	2.81	0.43
1:B:2137:VAL:O	1:B:2141:ILE:CG2	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2420:PRO:HA	3:B:5094:ADP:O2B	2.17	0.43
1:B:2445:PHE:HA	1:B:2449:THR:HG21	1.99	0.43
1:B:2578:ILE:HG21	1:B:2630:TYR:HB2	1.99	0.43
1:B:3815:PRO:O	1:B:3821:ASN:HB3	2.17	0.43
1:A:2042:GLY:HA3	1:A:2049:MET:CE	2.48	0.43
1:A:2228:HIS:CD2	2:A:5093:ATP:O2'	2.71	0.43
1:A:2410:SER:O	1:A:2411:LYS:HB2	2.18	0.43
1:A:2904:SER:O	1:A:2905:SER:C	2.56	0.43
1:A:3886:ALA:N	1:A:3887:PRO:CD	2.79	0.43
1:B:3024:LEU:HD13	1:B:3303:LYS:HG3	1.96	0.43
1:B:3817:GLY:H	1:B:3821:ASN:CB	2.31	0.43
1:A:1622:GLN:NE2	1:A:1644:ILE:H	2.15	0.43
1:A:1983:LEU:CD2	1:A:1993:THR:CG2	2.88	0.43
1:A:2755:HIS:O	1:A:2913:ILE:N	2.49	0.43
1:B:1612:ASP:CA	1:B:1615:ILE:HG12	2.48	0.43
1:B:1813:LEU:HD12	1:B:1844:TRP:CH2	2.52	0.43
1:B:2112:GLU:HB3	1:B:2117:SER:OG	2.16	0.43
1:A:1529:ARG:O	1:A:1533:GLN:HG2	2.17	0.43
1:A:2391:VAL:CG2	1:A:2430:ASN:OD1	2.65	0.43
1:A:2418:GLY:CA	1:A:2424:LYS:HE3	2.47	0.43
1:A:2708:ASN:ND2	1:A:2710:THR:OG1	2.52	0.43
1:B:1849:GLU:CG	1:B:1899:ASN:HD22	2.31	0.43
1:B:2833:THR:HG21	1:B:2841:PRO:CD	2.49	0.43
1:B:2935:VAL:C	1:B:2937:PRO:HD3	2.39	0.43
1:B:3544:LYS:O	1:B:3548:LEU:HB2	2.18	0.43
1:B:3767:PHE:HB3	1:B:3769:VAL:HG23	1.99	0.43
1:B:3772:TRP:HZ3	1:B:3780:ASN:HD22	1.64	0.43
1:A:1392:LEU:CD1	1:A:1393:LYS:O	2.67	0.43
1:A:1970:LEU:CD1	1:A:1973:LEU:HD11	2.48	0.43
1:A:2047:PHE:CE2	1:A:2082:ALA:HB1	2.52	0.43
1:A:2064:GLN:OE1	1:A:2091:MET:SD	2.77	0.43
1:B:1392:LEU:N	1:B:1484:LYS:HE2	2.33	0.43
1:B:1422:LYS:C	1:B:1425:GLU:CB	2.87	0.43
1:B:2100:VAL:HG12	1:B:2102:TYR:CE2	2.53	0.43
1:B:3930:PHE:CE2	1:B:4029:ILE:HD13	2.52	0.43
1:A:1620:PHE:HA	1:A:1760:PHE:CE2	2.53	0.43
1:A:2526:ILE:HG13	1:A:2526:ILE:O	2.18	0.43
1:A:3948:HIS:NE2	1:A:4072:ASN:CG	2.71	0.43
1:B:1677:ASP:HA	1:B:1680:ILE:HD12	2.01	0.43
1:B:2027:THR:HA	1:B:2028:PRO:HD3	1.55	0.43
1:B:3979:ASN:C	1:B:3981:PRO:CD	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2109:LEU:HD11	1:A:2129:LEU:HD23	1.99	0.43
1:A:2708:ASN:O	1:A:2712:LEU:HD13	2.18	0.43
1:A:3436:PHE:HE2	1:A:3462:ILE:HD11	1.82	0.43
1:A:3443:ALA:HB1	1:A:3450:VAL:HG21	2.00	0.43
1:B:1984:ILE:HG21	1:B:1989:GLU:HG3	2.00	0.43
1:B:2463:ASN:O	1:B:2475:PRO:HD2	2.18	0.43
1:B:2745:ILE:HA	1:B:2756:MET:SD	2.58	0.43
1:B:2785:LYS:HE2	1:B:3480:GLU:OE1	2.18	0.43
1:B:3307:LEU:HA	1:B:3310:THR:HB	2.00	0.43
1:B:3946:VAL:HA	1:B:3947:PRO:C	2.38	0.43
1:A:1409:LEU:CD2	1:A:1435:LEU:CB	2.93	0.43
1:A:1794:PHE:HZ	1:A:1805:THR:CG2	2.31	0.43
1:A:1870:ASN:O	1:A:1874:VAL:HG23	2.18	0.43
1:A:2266:PHE:CD1	1:A:2326:LEU:HD21	2.48	0.43
1:A:2960:THR:HG22	1:A:2961:ILE:N	2.33	0.43
1:B:1527:LEU:HD21	1:B:1546:LEU:CD2	2.48	0.43
1:B:2106:THR:H	1:B:2156:SER:HB2	1.83	0.43
1:B:2361:ILE:HG22	1:B:2367:SER:O	2.19	0.43
1:A:2197:ASP:CB	1:A:2549:ARG:HD2	2.45	0.43
1:A:3352:LEU:O	1:A:3356:PHE:HD1	2.02	0.43
1:B:1495:THR:CG2	1:B:1497:ILE:HG22	2.48	0.43
1:B:1664:LEU:HD23	1:B:1669:PHE:HZ	1.84	0.43
1:B:1706:LEU:HD22	1:B:1935:GLN:CG	2.48	0.43
1:B:2420:PRO:HD3	1:B:2536:ASN:ND2	2.28	0.43
1:A:1463:LEU:O	1:A:1467:ASN:HB2	2.19	0.43
1:A:2074:GLY:O	1:A:2197:ASP:HA	2.19	0.43
1:A:2839:ASP:O	1:A:2841:PRO:HD3	2.18	0.43
1:A:3500:ASP:HA	1:A:3501:PRO:HD3	1.82	0.43
1:A:4033:LEU:HD13	1:A:4035:GLN:CG	2.48	0.43
1:B:2748:ALA:O	1:B:2751:GLN:HG3	2.19	0.43
1:A:1542:ASN:O	1:A:1546:LEU:HG	2.19	0.42
1:A:2783:GLN:HG2	1:A:2816:ILE:HB	2.00	0.42
1:A:3592:LYS:O	1:A:3596:ASN:N	2.52	0.42
1:B:1416:LYS:CA	1:B:1421:TYR:OH	2.65	0.42
1:B:2494:LEU:HD12	1:B:2494:LEU:O	2.19	0.42
1:B:3525:ILE:CD1	1:B:3646:ILE:HG22	2.29	0.42
1:A:1547:LYS:O	1:A:1551:SER:HB3	2.19	0.42
1:A:1926:SER:HA	1:A:1929:ILE:CD1	2.49	0.42
1:A:2418:GLY:N	1:A:2424:LYS:HE3	2.34	0.42
1:A:4084:SER:O	1:A:4088:LEU:HG	2.19	0.42
1:B:1383:TYR:CE2	1:B:1401:LEU:HD13	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1976:VAL:HG11	1:B:1998:LEU:HD23	2.01	0.42
1:B:2747:ARG:O	1:B:2751:GLN:HG2	2.19	0.42
1:B:3979:ASN:OD1	1:B:3979:ASN:N	2.52	0.42
1:B:4054:GLU:HA	1:B:4055:PRO:HD3	1.90	0.42
1:A:2178:LEU:HD12	1:A:2182:GLU:HB2	2.01	0.42
1:A:2395:ILE:H	1:A:2395:ILE:HD12	1.83	0.42
1:A:2808:LEU:HD21	1:A:2856:LEU:HD12	2.01	0.42
1:B:1910:GLU:CB	1:B:3846:MET:HB3	2.49	0.42
1:B:2707:VAL:HG11	1:B:2712:LEU:HD12	1.99	0.42
1:B:3010:LEU:HD22	1:B:3320:LEU:HD12	2.01	0.42
1:A:1660:VAL:HG11	1:A:1728:TRP:CH2	2.54	0.42
1:A:2262:LEU:HA	1:A:2265:ILE:HD12	2.02	0.42
1:A:3466:ILE:HD13	1:A:3509:LEU:HD13	2.01	0.42
1:B:1527:LEU:CD2	1:B:1545:LEU:HD22	2.49	0.42
1:B:2109:LEU:HD11	1:B:2129:LEU:HD23	2.00	0.42
1:B:2383:HIS:CE1	1:B:2384:GLU:HG3	2.53	0.42
1:B:2788:ARG:H	1:B:3459:ASP:CB	2.32	0.42
1:B:3848:LEU:O	1:B:3851:VAL:N	2.52	0.42
1:A:1540:LEU:CD1	1:A:1548:ILE:HD12	2.50	0.42
1:A:1748:PHE:CE2	1:A:1755:LEU:HD22	2.54	0.42
1:A:3436:PHE:CE2	1:A:3462:ILE:HD11	2.54	0.42
1:A:3832:SER:O	1:A:3836:GLY:N	2.46	0.42
1:B:1656:TRP:HE1	1:B:1712:ILE:HD11	1.85	0.42
1:B:1704:GLU:OE2	1:B:1768:ARG:NH1	2.53	0.42
1:B:1759:LYS:CD	1:B:1761:GLU:OE2	2.67	0.42
1:B:2080:LYS:HG2	2:B:5093:ATP:PB	2.60	0.42
1:B:2380:LEU:HD11	1:B:2390:ILE:HD11	1.97	0.42
1:B:2428:MET:SD	1:B:2429:ASN:N	2.93	0.42
1:B:2488:GLU:CG	1:B:2491:LEU:HD12	2.48	0.42
1:A:2354:SER:OG	1:A:2357:SER:CA	2.68	0.42
1:A:2385:VAL:HG13	1:A:2386:MET:N	2.33	0.42
1:A:2416:LEU:HB3	1:A:2424:LYS:CD	2.50	0.42
1:A:3945:LEU:HD21	1:A:4059:LEU:HD22	2.02	0.42
1:A:3946:VAL:HA	1:A:3947:PRO:C	2.39	0.42
1:B:1827:ASP:HB3	1:B:1830:VAL:HG12	2.02	0.42
1:B:2048:SER:N	2:B:5093:ATP:HN62	2.08	0.42
1:B:2151:TRP:HE3	1:B:2193:LEU:HD11	1.85	0.42
1:B:2866:LEU:HD12	1:B:2867:LEU:H	1.85	0.42
1:B:3846:MET:HG3	1:B:3847:SER:N	2.34	0.42
1:A:1527:LEU:HD21	1:A:1546:LEU:CD2	2.50	0.42
1:A:1626:CYS:HB2	1:A:1643:TYR:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1627:LEU:HD11	1:A:1631:LYS:HE3	2.01	0.42
1:A:1873:GLN:HE22	1:A:1915:SER:HA	1.84	0.42
1:A:2312:ASP:HB3	1:A:2351:GLN:HG3	2.01	0.42
1:A:3997:LYS:H	1:A:3997:LYS:HG3	1.53	0.42
1:A:4023:ILE:HD11	1:A:4029:ILE:CD1	2.50	0.42
1:B:1742:ASP:HB3	1:B:1745:ASN:HD22	1.85	0.42
1:B:1940:GLU:CG	1:B:1941:ASP:H	2.19	0.42
1:B:2368:PHE:CD1	1:B:2368:PHE:O	2.72	0.42
1:B:2437:LEU:HA	1:B:2480:LYS:HD3	2.02	0.42
1:B:2549:ARG:HG2	2:B:5093:ATP:O1G	2.19	0.42
1:B:3631:MET:HE1	1:B:3698:MET:HG3	2.00	0.42
1:A:1406:LYS:HE2	1:A:1406:LYS:HB3	1.84	0.42
1:A:1606:GLU:O	1:A:1610:ILE:HG12	2.20	0.42
1:A:1945:LEU:HD13	1:A:1994:VAL:HG21	2.02	0.42
1:A:2324:TYR:CD1	1:A:2403:ILE:HG12	2.55	0.42
1:A:2984:VAL:C	1:A:2986:PRO:HD3	2.40	0.42
1:A:4021:LEU:CD2	1:A:4023:ILE:HG12	2.41	0.42
1:B:1769:LEU:HD11	1:B:1804:GLU:HB3	2.01	0.42
1:A:1579:ILE:HG13	1:A:1598:LEU:HD11	2.00	0.42
1:A:2044:ARG:HH21	1:A:2093:ILE:HD11	1.85	0.42
1:A:2224:SER:O	2:A:5093:ATP:H2	2.03	0.42
1:A:2389:ASP:O	1:A:2389:ASP:OD1	2.37	0.42
1:B:1946:ALA:O	1:B:1950:VAL:HG23	2.20	0.42
1:B:2129:LEU:O	1:B:2133:ILE:HG12	2.20	0.42
1:B:2756:MET:O	1:B:2888:VAL:HA	2.20	0.42
1:B:2965:VAL:HA	1:B:2968:ILE:HD12	2.01	0.42
1:A:1635:ASP:HB2	1:A:1638:VAL:HG23	2.02	0.42
1:A:1749:ILE:HD13	1:A:1813:LEU:HD22	2.02	0.42
1:A:2134:LEU:HD11	1:A:2138:ASN:ND2	2.34	0.42
1:A:2153:VAL:C	1:A:2154:PHE:HD1	2.24	0.42
1:A:2278:VAL:O	1:A:2283:LYS:HE2	2.19	0.42
1:A:2386:MET:HB3	1:A:2627:ARG:HD3	1.98	0.42
1:A:3669:THR:HA	1:A:3672:ASP:HB2	2.00	0.42
1:A:3888:LEU:O	1:A:3892:THR:HG22	2.19	0.42
1:A:3939:ILE:HG13	1:A:4010:LEU:CD2	2.50	0.42
1:B:1392:LEU:HD13	1:B:1393:LYS:CA	2.50	0.42
1:B:1801:GLY:N	5:B:5097:SO4:O3	2.52	0.42
1:B:2081:THR:OG1	2:B:5093:ATP:O2A	2.37	0.42
1:B:2104:ILE:O	1:B:2154:PHE:HA	2.20	0.42
1:B:2107:LYS:HE3	1:B:2495:ASP:OD2	2.19	0.42
1:B:2278:VAL:O	1:B:2283:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2512:LYS:O	1:B:2513:GLN:CB	2.55	0.42
1:B:3965:SER:HA	1:B:3968:LEU:HD12	2.02	0.42
1:A:1391:GLY:HA3	1:A:1484:LYS:HZ3	1.84	0.41
1:A:1586:GLU:HG3	1:A:1765:ILE:H	1.84	0.41
1:A:1910:GLU:HB2	1:A:3846:MET:HA	2.01	0.41
1:A:2707:VAL:HG12	1:A:2708:ASN:N	2.35	0.41
1:A:3411:SER:O	1:A:3413:HIS:N	2.50	0.41
1:A:3628:ILE:HD11	1:A:3679:TYR:CZ	2.54	0.41
1:A:4033:LEU:CD1	1:A:4035:GLN:N	2.83	0.41
1:B:1758:TYR:CD1	1:B:1759:LYS:O	2.73	0.41
1:B:2155:ASP:O	1:B:2549:ARG:NH1	2.53	0.41
1:B:2627:ARG:NH1	1:B:2630:TYR:CE2	2.87	0.41
1:B:3702:MET:CB	1:B:3767:PHE:HZ	2.32	0.41
1:A:1392:LEU:HD23	1:A:1484:LYS:HA	2.02	0.41
1:A:2401:GLU:HG2	1:A:2431:ALA:HB2	2.02	0.41
1:A:2571:TYR:HD1	1:A:2626:VAL:HG21	1.85	0.41
1:A:3570:LEU:HD23	1:A:3580:ASN:CG	2.41	0.41
1:B:1645:PHE:CZ	1:B:1649:LEU:HD22	2.55	0.41
1:B:2908:LEU:O	1:B:2912:CYS:HB2	2.20	0.41
1:B:3505:ILE:O	1:B:3510:ARG:NH1	2.54	0.41
1:A:1391:GLY:HA3	1:A:1484:LYS:HZ1	1.85	0.41
1:A:1659:LEU:O	1:A:1663:CYS:HB2	2.20	0.41
1:A:1830:VAL:O	1:A:1834:LEU:HG	2.20	0.41
1:A:2503:VAL:HA	1:A:2506:LEU:HD12	2.02	0.41
1:A:3967:TYR:HE2	1:A:3985:VAL:HA	1.85	0.41
1:B:1479:LEU:HD11	1:B:1515:SER:HB3	2.03	0.41
1:B:2464:TYR:CE1	1:B:2524:VAL:HG11	2.55	0.41
1:A:1422:LYS:O	1:A:1425:GLU:HB3	2.21	0.41
1:A:1495:THR:HB	1:A:1498:GLU:CG	2.51	0.41
1:A:1926:SER:HA	1:A:1929:ILE:HD13	2.02	0.41
1:A:2412:ARG:HG3	1:A:2412:ARG:NH1	2.34	0.41
1:A:4033:LEU:CD1	1:A:4035:GLN:H	2.33	0.41
1:B:1802:LYS:O	1:B:1806:VAL:HG23	2.20	0.41
1:B:2783:GLN:HG2	1:B:2816:ILE:HB	2.02	0.41
1:A:1748:PHE:HD2	1:A:1755:LEU:HD22	1.85	0.41
1:A:1979:ASN:OD1	1:A:2066:THR:HG21	2.20	0.41
1:A:2098:ALA:O	1:A:2149:ARG:N	2.50	0.41
1:A:2225:LYS:HD2	1:A:2281:PHE:CZ	2.55	0.41
1:A:2375:ILE:HG22	1:A:2376:PRO:O	2.20	0.41
1:A:2397:THR:HG22	1:A:2398:ILE:HD13	2.03	0.41
1:A:2757:MET:HG2	1:A:2889:PHE:HD2	1.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3308:ASN:O	1:A:3312:GLN:HB2	2.21	0.41
1:B:1998:LEU:CD1	1:B:2022:PHE:HZ	2.34	0.41
1:B:2491:LEU:HD21	1:B:2543:ARG:NH1	2.35	0.41
1:B:2786:ILE:H	1:B:2786:ILE:HG13	1.68	0.41
1:B:3353:LEU:HD23	1:B:3358:VAL:CG1	2.50	0.41
1:A:40:TRP:O	1:A:44:LYS:N	2.53	0.41
1:A:2415:ILE:O	1:A:2556:ILE:HA	2.21	0.41
1:A:2428:MET:SD	1:A:2429:ASN:N	2.94	0.41
1:A:3642:TYR:N	1:A:3642:TYR:CD1	2.87	0.41
1:A:4085:THR:O	1:A:4089:LEU:HG	2.21	0.41
1:B:1970:LEU:HD23	1:B:1974:LYS:CE	2.46	0.41
1:B:2632:ALA:HB3	1:B:2647:LEU:HD21	2.01	0.41
1:B:2757:MET:HB2	1:B:2889:PHE:HB2	2.01	0.41
1:B:3303:LYS:HD2	1:B:3306:TRP:HD1	1.76	0.41
1:B:3431:PHE:CE1	1:B:3458:PHE:HD1	2.37	0.41
1:A:1765:ILE:HG21	1:A:1765:ILE:HD13	1.72	0.41
1:A:2707:VAL:HG12	1:A:2712:LEU:HD12	2.02	0.41
1:A:2761:ALA:O	1:A:2892:CYS:SG	2.78	0.41
1:B:2464:TYR:CE1	1:B:2474:LEU:HD12	2.56	0.41
1:B:2784:PRO:HG2	1:B:2817:ILE:HD13	2.01	0.41
1:B:2824:GLU:HG2	1:B:2825:THR:H	1.86	0.41
1:B:3901:PRO:HB2	1:B:3906:THR:HG23	2.02	0.41
1:A:2039:LYS:O	1:A:2043:GLN:HG2	2.21	0.41
1:A:2046:GLY:O	1:A:2228:HIS:HB2	2.20	0.41
1:A:2475:PRO:HB3	1:A:2527:GLU:CB	2.50	0.41
1:A:2609:THR:HA	1:A:2612:GLN:O	2.20	0.41
1:A:2765:GLY:HA2	1:A:2768:ILE:HG22	2.02	0.41
1:B:1535:PRO:O	1:B:1841:ILE:CD1	2.69	0.41
1:B:3330:TYR:CZ	1:B:3346:LEU:HD13	2.55	0.41
1:B:3850:TRP:NE1	1:B:3854:TYR:CB	2.82	0.41
1:A:1462:ASN:HB3	1:A:1465:ILE:HG22	2.00	0.41
1:A:2201:HIS:CE1	1:A:2497:TYR:CA	3.04	0.41
1:A:2455:LEU:HD21	1:A:2515:PHE:CE2	2.56	0.41
1:A:2780:LYS:HB3	1:A:2813:THR:HG22	2.02	0.41
1:A:2835:LEU:HD23	1:A:2911:ARG:HB2	2.03	0.41
1:A:3331:GLU:HA	1:A:3396:ILE:HG12	2.03	0.41
1:A:3628:ILE:HG13	1:A:3705:LEU:HD23	2.02	0.41
1:A:3632:LEU:HD13	1:A:3644:ILE:HD13	2.02	0.41
1:A:4022:GLN:HA	1:A:4028:ARG:HA	2.03	0.41
1:B:216:PRO:C	1:B:1365:PHE:CA	2.82	0.41
1:B:1409:LEU:CD2	1:B:1435:LEU:CB	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1945:LEU:HD21	1:B:1991:GLU:HB3	2.03	0.41
1:B:2391:VAL:CG2	1:B:2426:MET:HE1	2.49	0.41
1:B:2481:ASN:ND2	1:B:2528:ARG:HB3	2.36	0.41
1:B:2654:ARG:HH22	1:B:2691:SER:HB2	1.84	0.41
1:B:2760:GLY:O	1:B:2761:ALA:HB3	2.21	0.41
1:B:2788:ARG:H	1:B:3459:ASP:HB2	1.86	0.41
1:B:3413:HIS:O	1:B:3417:VAL:HG23	2.21	0.41
1:B:3978:ASN:O	1:B:3981:PRO:HD2	2.21	0.41
1:A:1838:ILE:HD13	1:A:1838:ILE:HG21	1.81	0.41
1:A:2412:ARG:HA	1:A:2412:ARG:HD2	1.86	0.41
1:A:2426:MET:CG	1:A:2427:ILE:N	2.81	0.41
1:A:2492:PRO:CB	1:A:2502:VAL:HG11	2.50	0.41
1:A:2502:VAL:O	1:A:2505:PHE:HB3	2.20	0.41
1:A:4034:LEU:HD23	1:A:4034:LEU:C	2.41	0.41
1:B:1391:GLY:HA3	1:B:1484:LYS:HZ1	1.86	0.41
1:B:2354:SER:OG	1:B:2357:SER:CA	2.68	0.41
1:B:2494:LEU:HD12	1:B:2494:LEU:C	2.41	0.41
1:B:2808:LEU:HD21	1:B:2856:LEU:HD12	2.03	0.41
1:A:1817:VAL:HG22	1:A:1844:TRP:CB	2.51	0.40
1:A:2290:LEU:HD23	1:A:2321:SER:HA	2.02	0.40
1:A:2407:LEU:HB2	1:A:2414:ILE:HD11	2.03	0.40
1:A:2416:LEU:O	1:A:2534:ALA:HA	2.22	0.40
1:A:2707:VAL:HG11	1:A:2712:LEU:CD1	2.49	0.40
1:B:1547:LYS:O	1:B:1551:SER:HB3	2.21	0.40
1:B:2368:PHE:O	1:B:2369:SER:OG	2.28	0.40
1:B:2637:PRO:HD3	1:B:2703:ASP:HB3	2.03	0.40
1:A:2060:PHE:CZ	1:A:2193:LEU:HD21	2.57	0.40
1:A:2141:ILE:HG22	1:A:2145:PHE:CG	2.55	0.40
1:A:2653:TRP:HB3	1:A:2654:ARG:NH1	2.35	0.40
1:A:3848:LEU:O	1:A:3849:SER:C	2.59	0.40
1:B:1822:CYS:SG	1:B:1850:PHE:HA	2.61	0.40
1:B:2302:PHE:HA	1:B:2310:LEU:HD11	2.02	0.40
1:B:2507:ARG:HG3	1:B:2550:PHE:HA	2.03	0.40
1:B:3877:CYS:SG	1:B:3884:LEU:HD22	2.61	0.40
1:A:1375:LYS:O	1:A:1379:LYS:HG2	2.21	0.40
1:A:1531:ARG:HD3	1:A:1538:TYR:HA	2.03	0.40
1:A:1939:PHE:O	1:A:1940:GLU:HB3	2.22	0.40
1:A:2488:GLU:O	1:A:2491:LEU:HB2	2.21	0.40
1:A:2514:GLY:HA3	1:A:2525:THR:HA	2.03	0.40
1:A:2787:HIS:CA	1:A:3460:PRO:HG2	2.40	0.40
1:A:3379:TRP:CD2	1:A:3394:MET:HG3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3508:PHE:O	1:A:3512:ARG:HG2	2.21	0.40
1:A:3566:LEU:HD13	1:A:3570:LEU:HD12	2.03	0.40
1:A:3968:LEU:HA	1:A:3971:VAL:HG12	2.02	0.40
1:B:1534:PHE:CD2	1:B:1537:PHE:CE1	3.05	0.40
1:B:2745:ILE:CG1	1:B:2756:MET:HE3	2.43	0.40
1:B:3848:LEU:O	1:B:3849:SER:C	2.59	0.40
1:A:23:LEU:C	1:A:25:GLU:N	2.74	0.40
1:A:1421:TYR:O	1:A:1425:GLU:CA	2.69	0.40
1:A:1857:VAL:O	1:A:1861:VAL:HG23	2.21	0.40
1:A:2516:TRP:CZ3	1:A:2523:TRP:HB2	2.56	0.40
1:B:1409:LEU:O	1:B:1413:VAL:HG23	2.22	0.40
1:B:1529:ARG:O	1:B:1533:GLN:HG2	2.21	0.40
1:B:1531:ARG:HD3	1:B:1537:PHE:O	2.20	0.40
1:B:1794:PHE:HB3	1:B:1919:PHE:HB3	2.03	0.40
1:B:1826:PHE:CZ	1:B:1831:LEU:CA	3.04	0.40
1:B:2008:ASP:HA	1:B:2011:GLU:HB2	2.03	0.40
1:B:2160:PRO:HA	1:B:2163:VAL:HG22	2.04	0.40
1:B:2474:LEU:HB3	1:B:2526:ILE:HG22	2.02	0.40
1:B:3908:LYS:HG2	1:B:4049:LEU:HD13	2.03	0.40
1:A:1392:LEU:HD13	1:A:1393:LYS:CA	2.51	0.40
1:A:1392:LEU:C	1:A:1392:LEU:CD1	2.86	0.40
1:A:1421:TYR:CD2	1:A:1425:GLU:HG2	2.55	0.40
1:A:1727:LEU:O	1:A:1731:VAL:HG23	2.22	0.40
1:A:3671:VAL:HA	1:A:3674:ILE:CG2	2.49	0.40
1:B:2582:VAL:O	1:B:2582:VAL:HG23	2.21	0.40
1:B:3924:TRP:O	1:B:3924:TRP:CD1	2.75	0.40
1:B:3930:PHE:HE2	1:B:4029:ILE:CD1	2.33	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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	2640/2695 (98%)	2511 (95%)	118 (4%)	11 (0%)	34 66
1	B	2640/2695 (98%)	2525 (96%)	107 (4%)	8 (0%)	41 71
All	All	5280/5390 (98%)	5036 (95%)	225 (4%)	19 (0%)	34 66

All (19) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1391	GLY
1	A	2495	ASP
1	B	1391	GLY
1	A	2476	LYS
1	A	2728	LEU
1	B	66	GLN
1	A	2519	PRO
1	B	2519	PRO
1	B	2990	GLY
1	B	3914	GLN
1	A	66	GLN
1	A	2990	GLY
1	A	3980	ILE
1	A	2562	PRO
1	B	2562	PRO
1	B	3980	ILE
1	A	3462	ILE
1	B	1470	PRO
1	A	2028	PRO

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	2218/2453 (90%)	2115 (95%)	103 (5%)	27 58
1	B	2218/2453 (90%)	2145 (97%)	73 (3%)	38 66
All	All	4436/4906 (90%)	4260 (96%)	176 (4%)	31 61

All (176) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1421	TYR
1	A	1455	LEU
1	A	1486	ILE
1	A	1493	LEU
1	A	1641	SER
1	A	1719	SER
1	A	1793	CYS
1	A	1794	PHE
1	A	1852	ARG
1	A	1891	HIS
1	A	1923	SER
1	A	1964	ASN
1	A	2081	THR
1	A	2109	LEU
1	A	2141	ILE
1	A	2154	PHE
1	A	2155	ASP
1	A	2202	THR
1	A	2228	HIS
1	A	2229	LEU
1	A	2273	VAL
1	A	2320	ARG
1	A	2351	GLN
1	A	2357	SER
1	A	2387	ARG
1	A	2390	ILE
1	A	2397	THR
1	A	2425	THR
1	A	2428	MET
1	A	2430	ASN
1	A	2472	THR
1	A	2476	LYS
1	A	2482	LEU
1	A	2510	MET
1	A	2522	LYS
1	A	2526	ILE
1	A	2535	CYS
1	A	2547	SER
1	A	2548	GLU
1	A	2563	SER
1	A	2566	SER
1	A	2574	TYR

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Mol	Chain	Res	Type
1	A	2576	LYS
1	A	2613	SER
1	A	2623	THR
1	A	2689	ILE
1	A	2738	MET
1	A	2769	LEU
1	A	2785	LYS
1	A	2822	ILE
1	A	2823	LEU
1	A	2833	THR
1	A	2843	LEU
1	A	2856	LEU
1	A	2863	LEU
1	A	2911	ARG
1	A	2967	ASN
1	A	2979	LYS
1	A	3012	GLU
1	A	3019	VAL
1	A	3301	PHE
1	A	3329	ILE
1	A	3372	THR
1	A	3391	LEU
1	A	3400	SER
1	A	3401	GLN
1	A	3512	ARG
1	A	3543	ARG
1	A	3548	LEU
1	A	3560	LYS
1	A	3567	LEU
1	A	3578	LEU
1	A	3595	MET
1	A	3598	GLU
1	A	3601	LEU
1	A	3618	TYR
1	A	3634	LYS
1	A	3673	GLU
1	A	3677	LEU
1	A	3729	SER
1	A	3737	THR
1	A	3788	MET
1	A	3812	LYS
1	A	3823	ASN

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Mol	Chain	Res	Type
1	A	3831	LYS
1	A	3862	THR
1	A	3871	PHE
1	A	3876	THR
1	A	3884	LEU
1	A	3899	ASP
1	A	3905	ASP
1	A	3906	THR
1	A	3943	THR
1	A	3952	LYS
1	A	3958	ASP
1	A	3960	ASP
1	A	3982	TRP
1	A	3992	ILE
1	A	3997	LYS
1	A	4016	CYS
1	A	4040	GLU
1	A	4042	ARG
1	A	4046	THR
1	B	1383	TYR
1	B	1421	TYR
1	B	1422	LYS
1	B	1426	GLN
1	B	1486	ILE
1	B	1504	ASN
1	B	1646	GLN
1	B	1694	VAL
1	B	1767	GLU
1	B	1794	PHE
1	B	1936	ILE
1	B	2027	THR
1	B	2068	GLN
1	B	2141	ILE
1	B	2285	GLU
1	B	2295	ILE
1	B	2307	ASP
1	B	2351	GLN
1	B	2381	GLU
1	B	2386	MET
1	B	2390	ILE
1	B	2395	ILE
1	B	2428	MET

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Mol	Chain	Res	Type
1	B	2430	ASN
1	B	2474	LEU
1	B	2476	LYS
1	B	2510	MET
1	B	2566	SER
1	B	2574	TYR
1	B	2613	SER
1	B	2616	LEU
1	B	2623	THR
1	B	2681	LEU
1	B	2689	ILE
1	B	2747	ARG
1	B	2829	GLU
1	B	2835	LEU
1	B	2853	LEU
1	B	2856	LEU
1	B	2920	TRP
1	B	2967	ASN
1	B	2969	LEU
1	B	3329	ILE
1	B	3360	TYR
1	B	3372	THR
1	B	3391	LEU
1	B	3400	SER
1	B	3502	SER
1	B	3538	ASN
1	B	3548	LEU
1	B	3559	LEU
1	B	3565	ARG
1	B	3567	LEU
1	B	3581	ASP
1	B	3598	GLU
1	B	3605	GLU
1	B	3618	TYR
1	B	3677	LEU
1	B	3729	SER
1	B	3737	THR
1	B	3844	ILE
1	B	3860	GLU
1	B	3871	PHE
1	B	3899	ASP
1	B	3905	ASP

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Mol	Chain	Res	Type
1	B	3906	THR
1	B	3917	THR
1	B	3943	THR
1	B	3960	ASP
1	B	3982	TRP
1	B	4016	CYS
1	B	4024	VAL
1	B	4087	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1605	GLN
1	A	1622	GLN
1	A	1745	ASN
1	A	1864	ASN
1	A	1873	GLN
1	A	1899	ASN
1	A	1965	HIS
1	A	2064	GLN
1	A	2068	GLN
1	A	2099	ASN
1	A	2138	ASN
1	A	2228	HIS
1	A	2274	HIS
1	A	2282	ASN
1	A	2293	HIS
1	A	2383	HIS
1	A	2409	ASN
1	A	2459	HIS
1	A	2481	ASN
1	A	2530	HIS
1	A	2536	ASN
1	A	2634	ASN
1	A	2688	ASN
1	A	2896	ASN
1	A	2910	ASN
1	A	2927	GLN
1	A	3323	ASN
1	A	3497	HIS
1	A	3521	ASN
1	A	3624	HIS

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Mol	Chain	Res	Type
1	A	3780	ASN
1	A	3842	GLN
1	A	3890	GLN
1	A	4020	ASN
1	A	4077	GLN
1	B	1501	HIS
1	B	1622	GLN
1	B	1646	GLN
1	B	1707	HIS
1	B	1736	GLN
1	B	1745	ASN
1	B	1851	ASN
1	B	1864	ASN
1	B	1873	GLN
1	B	1899	ASN
1	B	1951	HIS
1	B	2068	GLN
1	B	2228	HIS
1	B	2274	HIS
1	B	2282	ASN
1	B	2293	HIS
1	B	2335	GLN
1	B	2351	GLN
1	B	2383	HIS
1	B	2409	ASN
1	B	2481	ASN
1	B	2536	ASN
1	B	2753	GLN
1	B	2910	ASN
1	B	3308	ASN
1	B	3338	ASN
1	B	3471	ASN
1	B	3497	HIS
1	B	3521	ASN
1	B	3542	GLN
1	B	3624	HIS
1	B	3685	GLN
1	B	3780	ASN
1	B	3783	ASN
1	B	3890	GLN
1	B	3962	GLN
1	B	3970	ASN

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Mol	Chain	Res	Type
1	B	4020	ASN
1	B	4031	GLN
1	B	4077	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 10 ligands modelled in this entry, 2 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	ATP	A	5093	4	26,33,33	0.93	1 (3%)	31,52,52	1.61	5 (16%)
3	ADP	B	5094	-	24,29,29	1.26	2 (8%)	29,45,45	1.67	5 (17%)
5	SO4	A	5097	-	4,4,4	0.37	0	6,6,6	0.59	0
5	SO4	B	5097	-	4,4,4	0.38	0	6,6,6	0.43	0
5	SO4	A	5096	-	4,4,4	1.03	1 (25%)	6,6,6	1.46	1 (16%)
5	SO4	B	5096	-	4,4,4	0.93	0	6,6,6	1.19	0
3	ADP	A	5094	-	24,29,29	1.15	1 (4%)	29,45,45	1.62	5 (17%)
2	ATP	B	5093	4	26,33,33	1.05	2 (7%)	31,52,52	1.64	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
2	ATP	A	5093	4	-	6/18/38/38	0/3/3/3
3	ADP	B	5094	-	-	5/12/32/32	0/3/3/3
3	ADP	A	5094	-	-	7/12/32/32	0/3/3/3
2	ATP	B	5093	4	-	4/18/38/38	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	5094	ADP	C5-C4	2.96	1.48	1.40
3	A	5094	ADP	C5-C4	2.95	1.48	1.40
2	B	5093	ATP	C5-C4	2.75	1.48	1.40
3	B	5094	ADP	C4-N3	2.70	1.39	1.35
2	A	5093	ATP	C5-C4	2.50	1.47	1.40
2	B	5093	ATP	C2-N3	2.13	1.35	1.32
5	A	5096	SO4	O1-S	2.04	1.57	1.46

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	5094	ADP	N3-C2-N1	-4.82	121.14	128.68
3	B	5094	ADP	N3-C2-N1	-4.44	121.73	128.68
3	B	5094	ADP	C3'-C2'-C1'	4.05	107.07	100.98
2	B	5093	ATP	C3'-C2'-C1'	3.77	106.65	100.98
2	B	5093	ATP	PA-O3A-PB	-3.61	120.43	132.83
2	B	5093	ATP	PB-O3B-PG	-3.60	120.47	132.83
2	A	5093	ATP	PA-O3A-PB	-3.59	120.51	132.83
2	A	5093	ATP	PB-O3B-PG	-3.58	120.53	132.83
2	A	5093	ATP	C3'-C2'-C1'	3.53	106.29	100.98
2	B	5093	ATP	C4-C5-N7	-3.16	106.11	109.40
2	A	5093	ATP	N3-C2-N1	-3.14	123.77	128.68
3	A	5094	ADP	PA-O3A-PB	-3.08	122.24	132.83
3	A	5094	ADP	C2-N1-C6	3.01	123.91	118.75
3	B	5094	ADP	PA-O3A-PB	-2.94	122.74	132.83
2	A	5093	ATP	C4-C5-N7	-2.68	106.60	109.40
3	B	5094	ADP	C5'-C4'-C3'	-2.65	105.26	115.18
2	B	5093	ATP	N3-C2-N1	-2.61	124.60	128.68
3	A	5094	ADP	C2'-C3'-C4'	2.60	107.69	102.64
5	A	5096	SO4	O4-S-O1	2.41	121.86	109.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	5094	ADP	C2-N1-C6	2.36	122.80	118.75
3	A	5094	ADP	C3'-C2'-C1'	2.28	104.41	100.98

There are no chirality outliers.

All (22) torsion outliers are listed below:

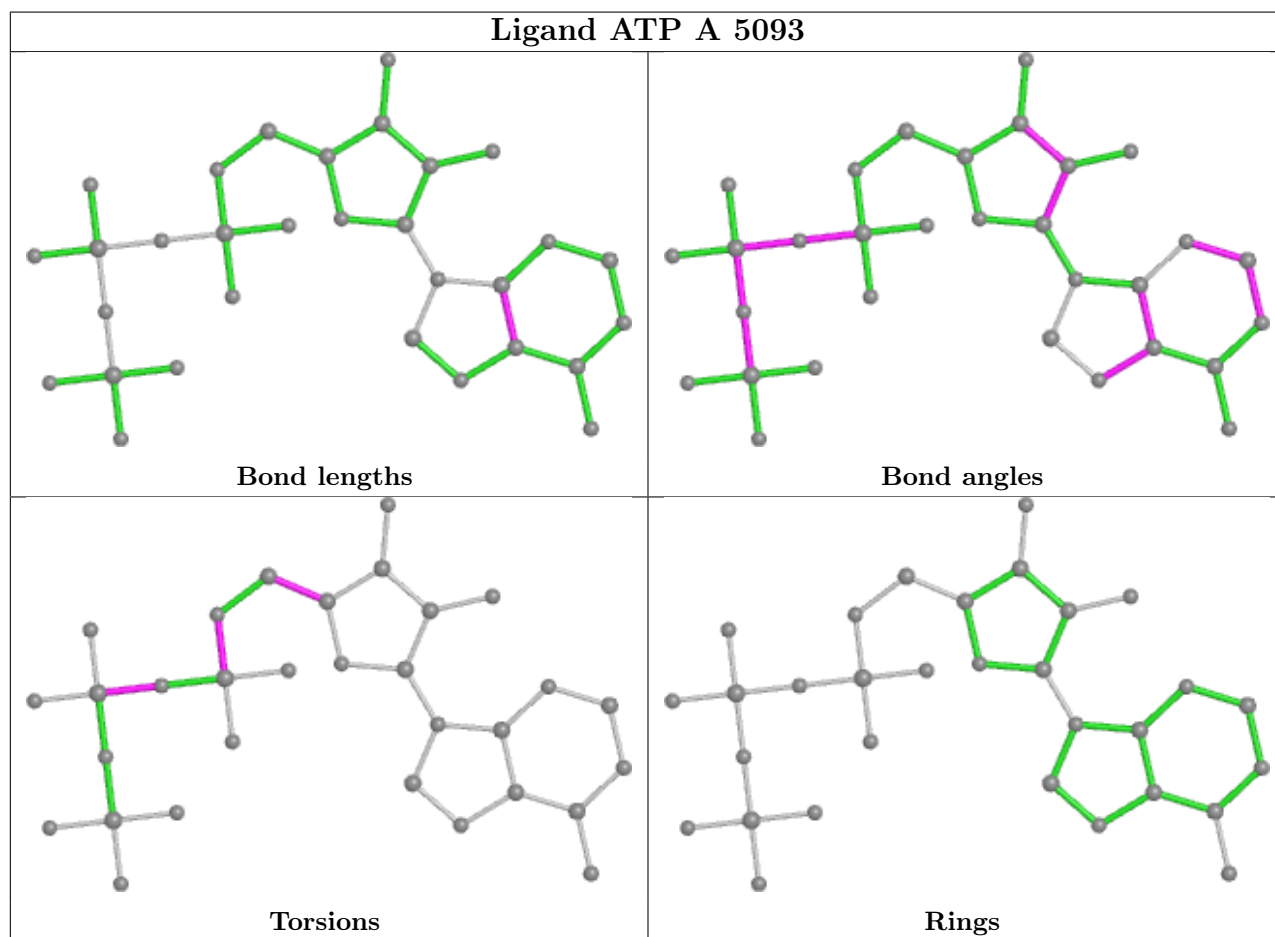
Mol	Chain	Res	Type	Atoms
2	A	5093	ATP	C5'-O5'-PA-O1A
2	B	5093	ATP	PB-O3B-PG-O2G
2	B	5093	ATP	PB-O3B-PG-O3G
3	A	5094	ADP	C5'-O5'-PA-O1A
3	B	5094	ADP	C5'-O5'-PA-O1A
3	B	5094	ADP	C3'-C4'-C5'-O5'
2	A	5093	ATP	O4'-C4'-C5'-O5'
2	A	5093	ATP	C3'-C4'-C5'-O5'
2	B	5093	ATP	O4'-C4'-C5'-O5'
2	B	5093	ATP	C3'-C4'-C5'-O5'
3	A	5094	ADP	O4'-C4'-C5'-O5'
3	A	5094	ADP	C3'-C4'-C5'-O5'
3	B	5094	ADP	O4'-C4'-C5'-O5'
3	B	5094	ADP	C4'-C5'-O5'-PA
2	A	5093	ATP	C5'-O5'-PA-O3A
3	A	5094	ADP	C5'-O5'-PA-O3A
2	A	5093	ATP	PA-O3A-PB-O1B
3	A	5094	ADP	PB-O3A-PA-O2A
3	A	5094	ADP	PB-O3A-PA-O1A
3	B	5094	ADP	C5'-O5'-PA-O3A
2	A	5093	ATP	PA-O3A-PB-O2B
3	A	5094	ADP	C5'-O5'-PA-O2A

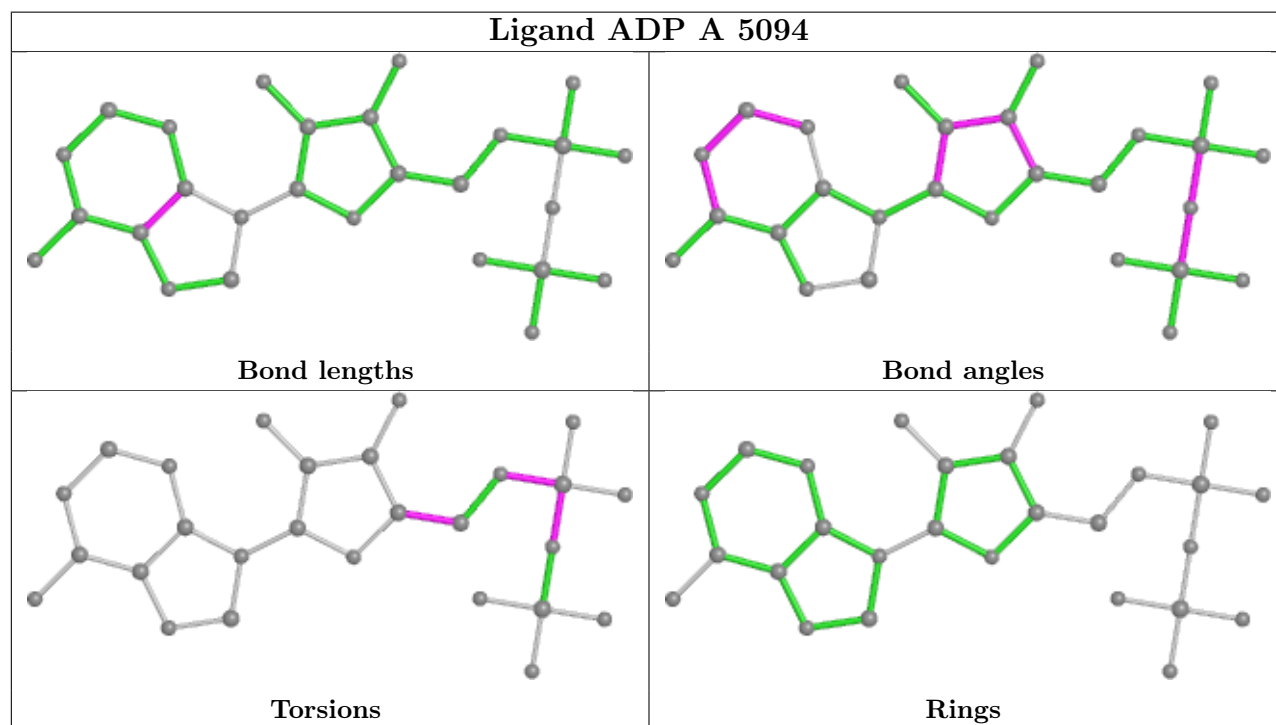
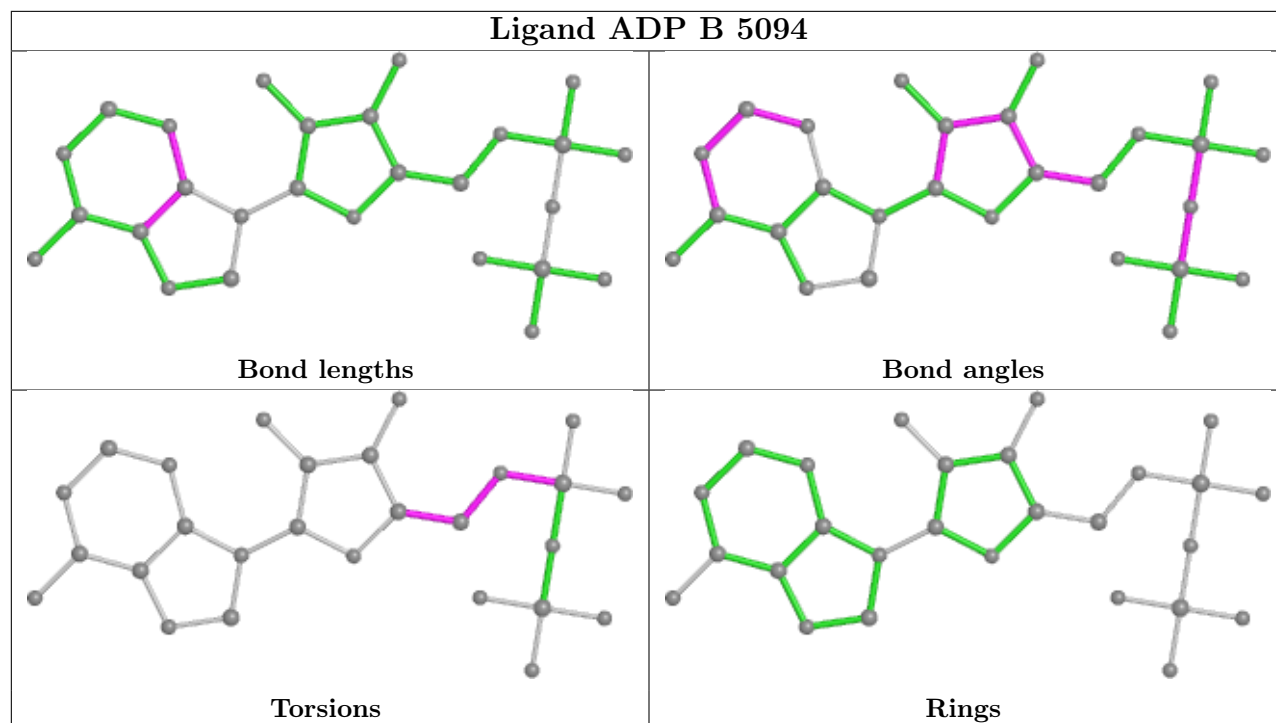
There are no ring outliers.

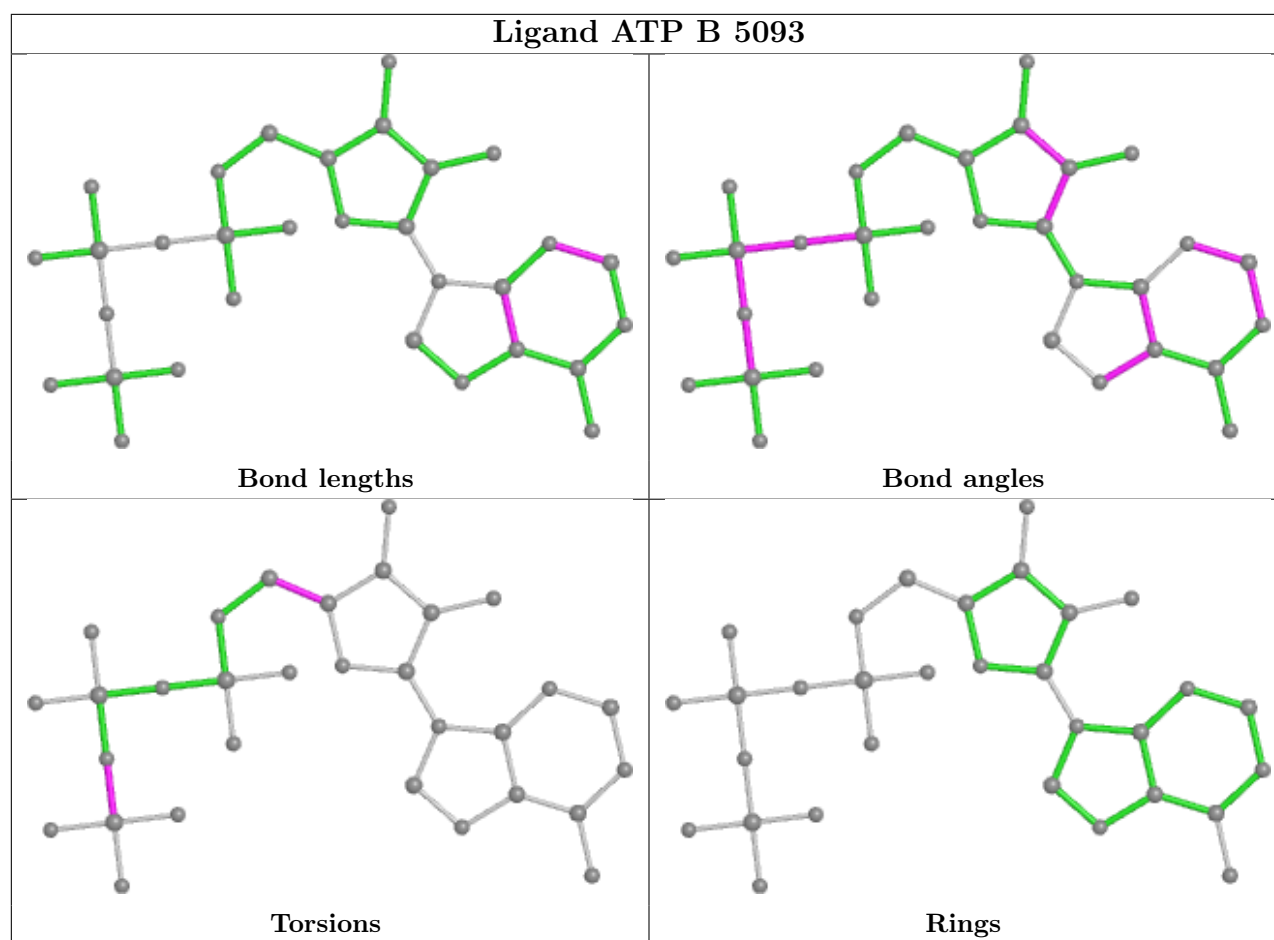
7 monomers are involved in 48 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	5093	ATP	10	0
3	B	5094	ADP	6	0
5	A	5097	SO4	2	0
5	B	5097	SO4	2	0
5	B	5096	SO4	2	0
3	A	5094	ADP	2	0
2	B	5093	ATP	24	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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	2495:ASP	C	2496:LYS	N	1.17

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	2650/2695 (98%)	0.18	139 (5%) 27 25	62, 134, 265, 480	1 (0%)
1	B	2650/2695 (98%)	0.66	323 (12%) 4 3	83, 185, 334, 500	1 (0%)
All	All	5300/5390 (98%)	0.42	462 (8%) 10 10	62, 158, 302, 500	2 (0%)

All (462) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	1	SER	20.3
1	B	69	ALA	17.4
1	B	59	ASP	17.2
1	B	31	LEU	16.8
1	B	60	GLY	15.0
1	B	70	ILE	14.7
1	B	52	PRO	14.7
1	B	46	GLU	14.7
1	B	1572	ILE	13.8
1	B	94	LEU	13.8
1	B	18	LEU	13.4
1	B	1549	ILE	13.4
1	B	61	ASP	13.0
1	B	58	ILE	12.2
1	B	47	LEU	11.9
1	B	1550	GLY	11.4
1	B	87	GLU	10.9
1	B	71	ILE	10.6
1	B	95	GLU	10.5
1	A	147	VAL	10.3
1	A	2	PRO	10.1
1	A	20	LEU	9.8
1	B	30	HIS	9.6
1	B	1581	GLY	9.4

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Mol	Chain	Res	Type	RSRZ
1	A	63	LYS	9.1
1	B	1592	LEU	9.0
1	B	2	PRO	8.8
1	B	1582	VAL	8.8
1	B	8	LYS	8.7
1	B	1459	LEU	8.4
1	B	1596	ILE	8.3
1	B	1680	ILE	8.1
1	B	1546	LEU	8.1
1	B	27	TYR	8.1
1	A	148	THR	8.0
1	B	17	ARG	8.0
1	B	1669	PHE	8.0
1	A	216	PRO	7.9
1	B	19	LEU	7.9
1	B	149	HIS	7.8
1	B	184	ALA	7.8
1	B	1452	TRP	7.7
1	B	1683	LEU	7.7
1	B	199	ALA	7.6
1	B	155	TYR	7.4
1	B	186	PRO	7.4
1	B	3915	PHE	7.4
1	B	1845	GLY	7.2
1	B	63	LYS	7.2
1	B	79	ASN	7.2
1	B	1602	ILE	7.2
1	B	151	ASP	7.1
1	B	148	THR	7.1
1	B	55	PRO	6.8
1	A	74	ILE	6.7
1	B	16	THR	6.7
1	B	1394	LEU	6.7
1	B	49	LEU	6.7
1	A	76	ASP	6.6
1	B	45	PHE	6.6
1	B	1483	TYR	6.6
1	B	86	LYS	6.6
1	A	71	ILE	6.4
1	A	1	SER	6.3
1	A	1483	TYR	6.3
1	A	84	CYS	6.3

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Mol	Chain	Res	Type	RSRZ
1	B	1601	SER	6.3
1	B	1684	LEU	6.3
1	B	1574	PHE	6.3
1	B	73	TYR	6.2
1	B	193	LYS	6.2
1	B	88	ARG	6.1
1	B	96	GLY	6.1
1	B	1647	ALA	6.1
1	A	27	TYR	6.0
1	A	54	LEU	6.0
1	B	1603	GLN	6.0
1	B	3919	LYS	6.0
1	B	44	LYS	5.9
1	B	78	HIS	5.8
1	B	72	ARG	5.8
1	B	1579	ILE	5.8
1	B	91	ILE	5.8
1	B	62	VAL	5.8
1	B	202	LEU	5.8
1	A	59	ASP	5.8
1	A	135	ARG	5.7
1	B	93	MET	5.7
1	B	1460	GLY	5.7
1	B	187	GLN	5.6
1	B	1456	TYR	5.6
1	B	67	SER	5.6
1	B	3580	ASN	5.5
1	B	92	SER	5.5
1	A	73	TYR	5.5
1	B	84	CYS	5.3
1	B	1545	LEU	5.2
1	B	134	ASP	5.2
1	B	7	TRP	5.1
1	B	1573	ILE	5.1
1	B	85	PRO	5.0
1	B	161	VAL	5.0
1	B	43	LYS	5.0
1	B	1644	ILE	5.0
1	B	28	GLU	5.0
1	B	54	LEU	5.0
1	B	143	ASN	5.0
1	B	42	ASN	5.0

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Mol	Chain	Res	Type	RSRZ
1	B	1730	LYS	5.0
1	B	1894	VAL	4.9
1	A	23	LEU	4.9
1	B	80	MET	4.9
1	B	1760	PHE	4.9
1	B	1551	SER	4.9
1	B	26	LYS	4.8
1	B	1606	GLU	4.8
1	A	3575	GLY	4.8
1	B	1476	PHE	4.7
1	B	1458	ILE	4.7
1	B	3916	PHE	4.7
1	B	1590	LEU	4.7
1	B	1679	LYS	4.7
1	B	1937	MET	4.7
1	B	1767	GLU	4.7
1	B	1497	ILE	4.6
1	A	48	GLY	4.6
1	B	1580	THR	4.6
1	B	3304	GLU	4.6
1	B	3566	LEU	4.6
1	B	3555	TYR	4.6
1	B	210	GLY	4.5
1	B	2353	LEU	4.5
1	B	89	ALA	4.5
1	B	1492	GLN	4.5
1	B	3588	ASN	4.5
1	B	216	PRO	4.4
1	A	61	ASP	4.4
1	B	1605	GLN	4.4
1	A	62	VAL	4.4
1	A	83	GLY	4.4
1	B	64	LEU	4.3
1	A	3567	LEU	4.3
1	B	183	GLU	4.3
1	A	77	LYS	4.3
1	B	25	GLU	4.3
1	B	1505	PHE	4.2
1	B	1506	ASP	4.2
1	A	3566	LEU	4.2
1	B	3572	ASN	4.2
1	B	32	TYR	4.1

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Mol	Chain	Res	Type	RSRZ
1	B	20	LEU	4.1
1	B	74	ILE	4.1
1	B	150	PRO	4.1
1	A	3568	GLU	4.1
1	B	1682	GLY	4.0
1	A	81	LEU	4.0
1	A	143	ASN	4.0
1	A	151	ASP	4.0
1	A	25	GLU	4.0
1	B	66	GLN	3.9
1	B	1445	TRP	3.9
1	B	1675	GLU	3.9
1	B	1792	GLY	3.9
1	B	2938	MET	3.9
1	B	75	ALA	3.9
1	B	1465	ILE	3.9
1	A	142	LEU	3.9
1	B	3585	VAL	3.9
1	A	19	LEU	3.8
1	A	88	ARG	3.8
1	B	2363	ASN	3.8
1	B	198	ILE	3.8
1	B	48	GLY	3.8
1	B	1486	ILE	3.8
1	B	192	LEU	3.8
1	B	3571	ASN	3.8
1	B	152	PHE	3.8
1	B	3734	PRO	3.8
1	A	75	ALA	3.7
1	A	184	ALA	3.7
1	B	215	PRO	3.7
1	B	3934	TRP	3.6
1	A	2364	ASP	3.6
1	B	138	HIS	3.6
1	A	3580	ASN	3.6
1	B	1893	ALA	3.6
1	B	24	GLU	3.6
1	A	91	ILE	3.6
1	B	1395	VAL	3.6
1	A	85	PRO	3.6
1	B	1594	GLU	3.6
1	B	50	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
1	B	68	MET	3.5
1	B	5	GLY	3.5
1	A	3555	TYR	3.5
1	B	1595	LYS	3.5
1	B	2121	ALA	3.5
1	A	132	PHE	3.5
1	B	1604	ALA	3.5
1	A	80	MET	3.5
1	B	1676	VAL	3.5
1	B	51	PHE	3.5
1	A	3564	LYS	3.4
1	B	53	ASN	3.4
1	B	1566	PHE	3.4
1	B	201	PRO	3.4
1	B	1835	LEU	3.4
1	B	1994	VAL	3.4
1	B	209	PHE	3.3
1	B	1562	MET	3.3
1	A	67	SER	3.3
1	B	133	GLU	3.3
1	B	1472	GLU	3.3
1	B	1532	ARG	3.3
1	B	1711	VAL	3.3
1	B	1732	GLN	3.3
1	B	3020	GLY	3.3
1	A	2029	LEU	3.3
1	B	1489	ARG	3.2
1	A	35	ASP	3.2
1	A	18	LEU	3.2
1	B	1423	ILE	3.2
1	B	200	TRP	3.2
1	B	6	TYR	3.2
1	A	22	TYR	3.1
1	A	82	GLY	3.1
1	B	3920	ILE	3.1
1	B	3811	LEU	3.1
1	B	1608	LEU	3.1
1	A	2676	THR	3.1
1	A	55	PRO	3.1
1	A	1458	ILE	3.1
1	B	1737	LYS	3.1
1	B	1828	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	3583	LEU	3.1
1	B	162	LEU	3.1
1	B	3024	LEU	3.0
1	B	1591	ASN	3.0
1	A	68	MET	3.0
1	A	2470	GLY	3.0
1	B	2863	LEU	3.0
1	A	3418	ILE	3.0
1	B	170	ASP	3.0
1	B	1552	GLY	3.0
1	B	189	ASP	3.0
1	B	1487	THR	3.0
1	A	145	ASP	3.0
1	A	1445	TRP	3.0
1	B	3301	PHE	3.0
1	B	194	SER	2.9
1	A	3	ILE	2.9
1	A	52	PRO	2.9
1	B	3694	PHE	2.9
1	B	3300	THR	2.9
1	B	83	GLY	2.9
1	B	2058	MET	2.9
1	A	146	HIS	2.9
1	A	2361	ILE	2.9
1	B	1705	TYR	2.9
1	A	3865	ALA	2.9
1	B	1490	ALA	2.9
1	B	2364	ASP	2.9
1	B	1479	LEU	2.9
1	B	2370	SER	2.8
1	B	3866	GLU	2.8
1	B	2856	LEU	2.8
1	A	2302	PHE	2.8
1	B	135	ARG	2.8
1	A	26	LYS	2.8
1	B	2064	GLN	2.8
1	A	138	HIS	2.8
1	A	130	LYS	2.8
1	A	3301	PHE	2.8
1	B	159	ASP	2.8
1	A	34	ARG	2.8
1	B	76	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	40	TRP	2.8
1	B	3590	LEU	2.8
1	B	1424	PHE	2.8
1	B	1583	ARG	2.8
1	B	56	TYR	2.8
1	A	2940	PHE	2.8
1	B	1768	ARG	2.8
1	B	1762	TYR	2.8
1	B	2025	ALA	2.8
1	B	2179	PRO	2.8
1	B	1734	PHE	2.8
1	A	2757	MET	2.8
1	B	164	MET	2.8
1	A	3300	THR	2.8
1	B	211	GLY	2.8
1	B	3846	MET	2.8
1	B	3726	LEU	2.7
1	A	3923	VAL	2.7
1	B	1593	ASN	2.7
1	A	58	ILE	2.7
1	B	15	PRO	2.7
1	B	1401	LEU	2.7
1	A	1597	GLU	2.7
1	A	2064	GLN	2.7
1	B	1672	TYR	2.7
1	A	1719	SER	2.7
1	B	2844	PHE	2.7
1	A	9	ILE	2.7
1	A	1382	GLN	2.7
1	B	35	ASP	2.7
1	B	1739	ASP	2.7
1	A	3021	LEU	2.7
1	B	190	LYS	2.7
1	B	3735	LYS	2.7
1	B	3768	PHE	2.7
1	B	4023	ILE	2.7
1	A	3617	GLU	2.7
1	B	206	GLN	2.7
1	A	87	GLU	2.7
1	B	2241	LEU	2.6
1	B	1421	TYR	2.6
1	A	21	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	3561	ASN	2.6
1	A	3589	ASN	2.6
1	B	207	ALA	2.6
1	A	30	HIS	2.6
1	A	37	GLY	2.6
1	B	1881	LEU	2.6
1	B	145	ASP	2.6
1	B	3618	TYR	2.6
1	B	1715	LEU	2.6
1	B	4088	LEU	2.6
1	B	81	LEU	2.6
1	B	3654	LYS	2.6
1	B	3656	VAL	2.6
1	A	3025	ASN	2.6
1	A	16	THR	2.6
1	B	9	ILE	2.6
1	B	3451	ILE	2.6
1	A	2310	LEU	2.5
1	B	1991	GLU	2.5
1	B	41	ARG	2.5
1	A	3582	GLU	2.5
1	A	141	TYR	2.5
1	B	1493	LEU	2.5
1	A	38	ASP	2.5
1	B	1383	TYR	2.5
1	B	3586	THR	2.5
1	B	3591	LYS	2.5
1	B	3845	GLN	2.5
1	B	1740	THR	2.5
1	B	1547	LYS	2.5
1	B	204	GLY	2.5
1	B	3573	SER	2.5
1	B	3356	PHE	2.5
1	B	3533	THR	2.5
1	B	3589	ASN	2.5
1	A	4034	LEU	2.5
1	B	1650	LEU	2.5
1	A	134	ASP	2.5
1	A	3020	GLY	2.4
1	A	3586	THR	2.4
1	A	3581	ASP	2.4
1	A	3563	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	157	ALA	2.4
1	A	2363	ASN	2.4
1	B	2022	PHE	2.4
1	A	2942	ASP	2.4
1	B	160	VAL	2.4
1	B	2684	GLN	2.4
1	B	3865	ALA	2.4
1	B	23	LEU	2.4
1	A	3305	ARG	2.4
1	B	203	GLN	2.4
1	B	1513	ILE	2.4
1	B	1548	ILE	2.4
1	B	1482	GLU	2.3
1	A	1465	ILE	2.3
1	B	1771	TYR	2.3
1	B	3856	HIS	2.3
1	A	3584	MET	2.3
1	B	57	TYR	2.3
1	A	2941	THR	2.3
1	A	70	ILE	2.3
1	B	2669	PHE	2.3
1	B	1905	ARG	2.3
1	B	4092	MET	2.3
1	B	185	ILE	2.3
1	B	3945	LEU	2.3
1	B	90	GLU	2.3
1	A	3870	LYS	2.3
1	B	3994	TYR	2.3
1	B	1509	LEU	2.3
1	A	42	ASN	2.3
1	B	1420	TYR	2.3
1	B	3980	ILE	2.3
1	A	1459	LEU	2.3
1	A	1389	SER	2.3
1	A	1452	TRP	2.2
1	B	1933	ILE	2.2
1	A	36	GLU	2.2
1	A	1598	LEU	2.2
1	A	1945	LEU	2.2
1	B	1415	MET	2.2
1	B	2125	TRP	2.2
1	A	136	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	1394	LEU	2.2
1	B	1673	TRP	2.2
1	B	1882	LEU	2.2
1	B	2808	LEU	2.2
1	B	1558	VAL	2.2
1	B	1426	GLN	2.2
1	B	1649	LEU	2.2
1	B	3706	TYR	2.2
1	A	3299	LEU	2.2
1	B	3841	LEU	2.2
1	A	1548	ILE	2.2
1	B	10	LYS	2.2
1	B	137	CYS	2.2
1	A	3593	GLU	2.2
1	A	3019	VAL	2.2
1	B	1588	GLU	2.2
1	A	5	GLY	2.2
1	B	1686	LYS	2.2
1	B	2024	SER	2.2
1	A	3915	PHE	2.2
1	B	3985	VAL	2.2
1	A	40	TRP	2.1
1	A	3026	GLU	2.1
1	B	98	VAL	2.1
1	B	3923	VAL	2.1
1	B	4029	ILE	2.1
1	A	1395	VAL	2.1
1	B	1503	PRO	2.1
1	A	3576	ASN	2.1
1	B	3565	ARG	2.1
1	B	33	GLU	2.1
1	A	2024	SER	2.1
1	A	3419	SER	2.1
1	B	4	LEU	2.1
1	B	1455	LEU	2.1
1	B	3597	ILE	2.1
1	B	29	GLU	2.1
1	A	3588	ASN	2.1
1	B	65	THR	2.1
1	B	3834	ILE	2.1
1	B	3494	LEU	2.1
1	B	2030	ASN	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	24	GLU	2.1
1	A	2852	LEU	2.1
1	B	1827	ASP	2.1
1	A	164	MET	2.1
1	A	3027	SER	2.1
1	B	3369	TYR	2.1
1	A	2916	TRP	2.0
1	B	3958	ASP	2.0
1	B	1504	ASN	2.0
1	B	1698	ILE	2.0
1	B	3874	PHE	2.0
1	A	3579	GLU	2.0
1	B	1569	ILE	2.0
1	A	2732	MET	2.0
1	A	53	ASN	2.0
1	B	1864	ASN	2.0
1	B	14	GLN	2.0
1	B	2000	ARG	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

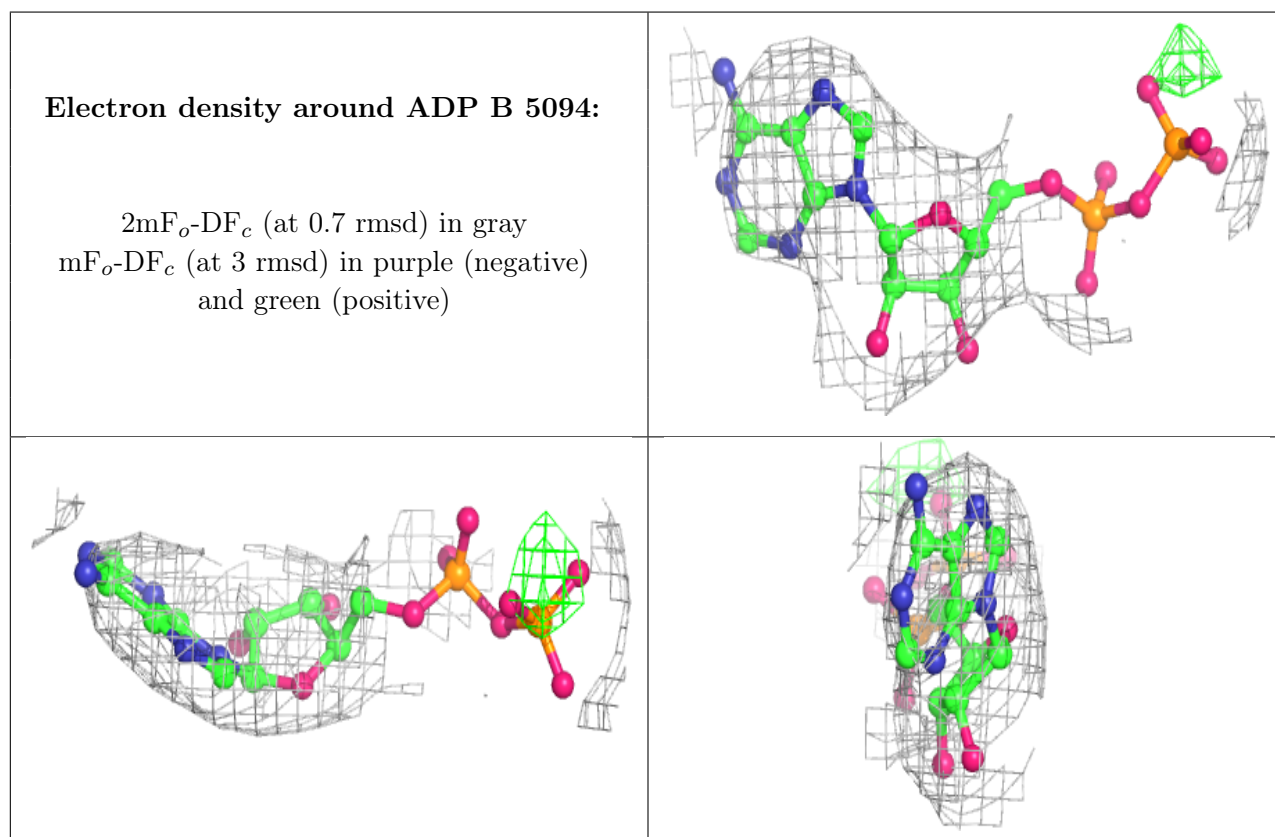
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
5	SO4	B	5096	5/5	0.87	0.53	86,103,146,179	0
4	MG	A	5095	1/1	0.89	0.40	76,76,76,76	0
3	ADP	B	5094	27/27	0.90	0.27	81,114,155,168	0
5	SO4	A	5096	5/5	0.92	0.45	77,106,130,132	0
2	ATP	B	5093	31/31	0.92	0.26	93,138,174,217	0

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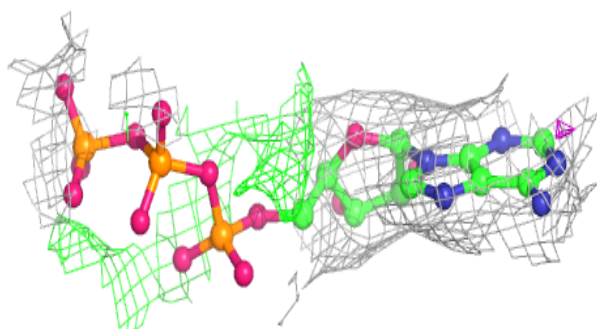
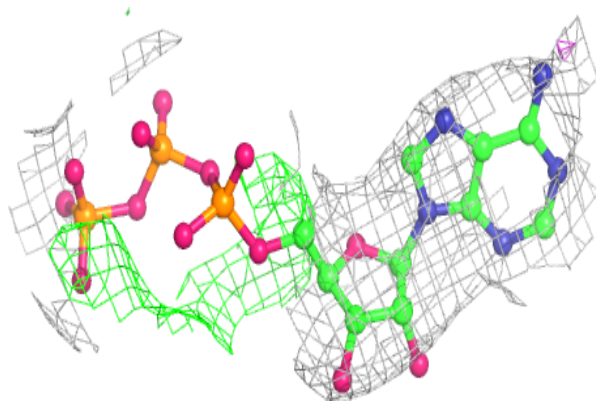
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	ATP	A	5093	31/31	0.93	0.29	78,92,129,144	0
3	ADP	A	5094	27/27	0.94	0.25	91,101,113,131	0
5	SO4	A	5097	5/5	0.97	0.22	82,93,104,115	0
4	MG	B	5095	1/1	0.97	0.34	86,86,86,86	0
5	SO4	B	5097	5/5	0.97	0.17	157,162,176,183	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

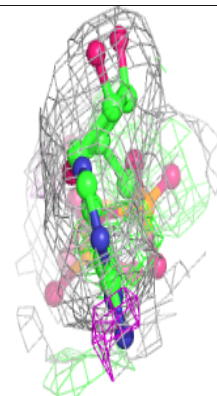
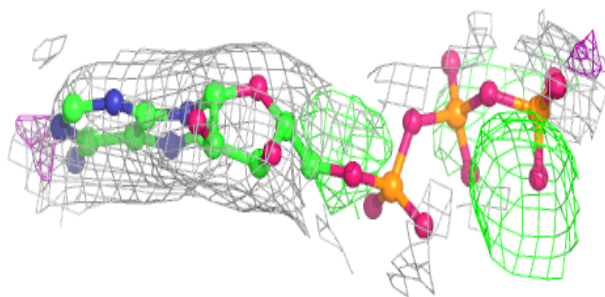
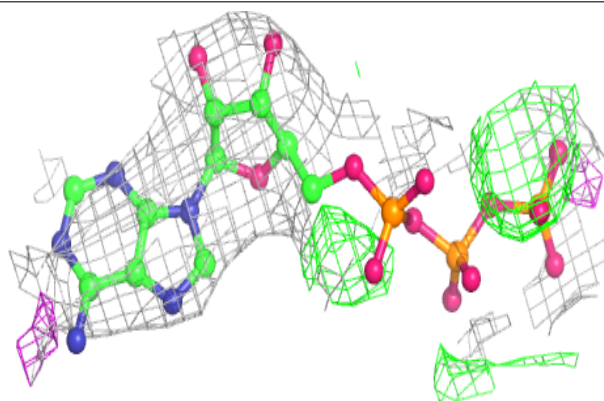


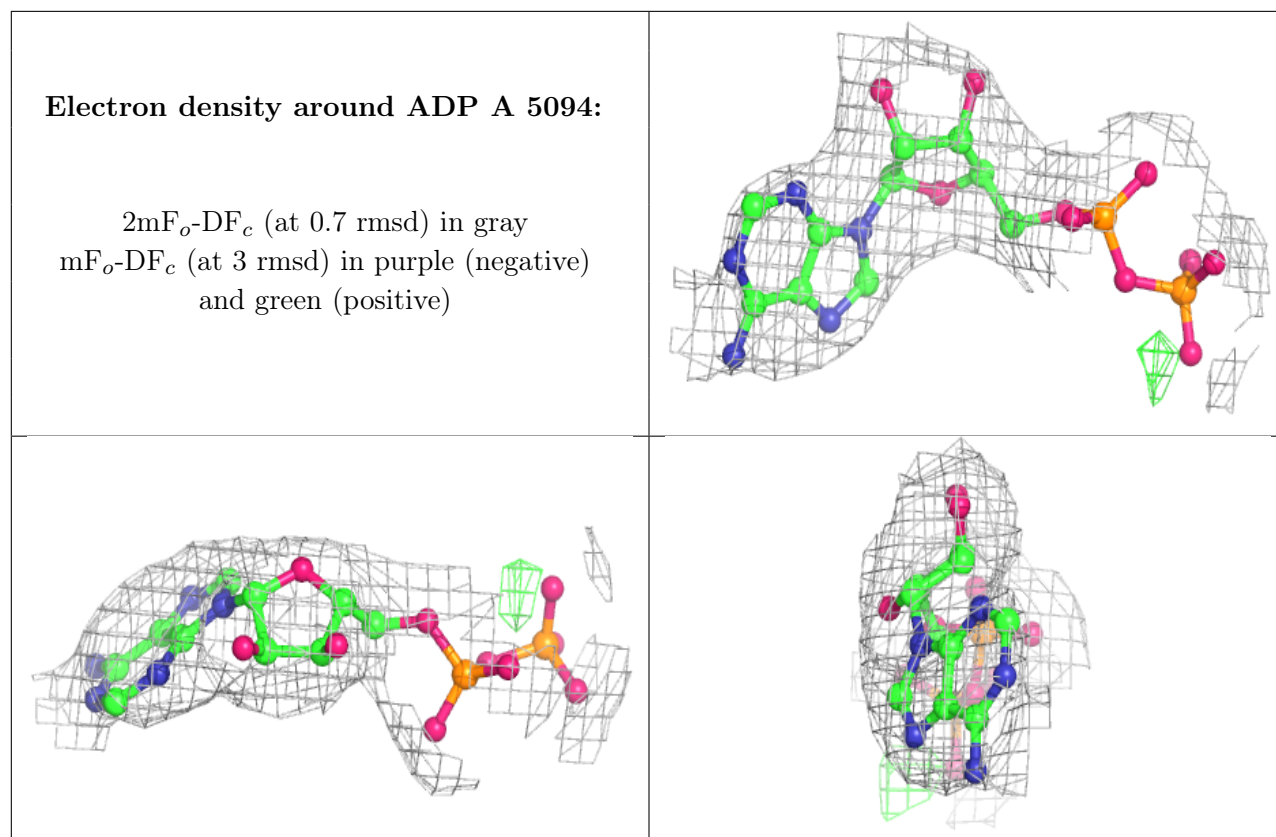
Electron density around ATP B 5093:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around ATP A 5093:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.