



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 14, 2018 – 04:15 am GMT

PDB ID : 3VKH  
Title : X-ray structure of a functional full-length dynein motor domain  
Authors : Kon, T.; Oyama, T.; Shimo-Kon, R.; Suto, K.; Kurisu, G.  
Deposited on : 2011-11-16  
Resolution : 3.80 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](mailto: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.

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

MolProbity : 4.02b-467  
Mogul : 1.7.3 (157068), CSD as539be (2018)  
Xtriage (Phenix) : 1.13  
EDS : trunk31020  
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)  
Refmac : 5.8.0158  
CCP4 : 7.0 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk31020

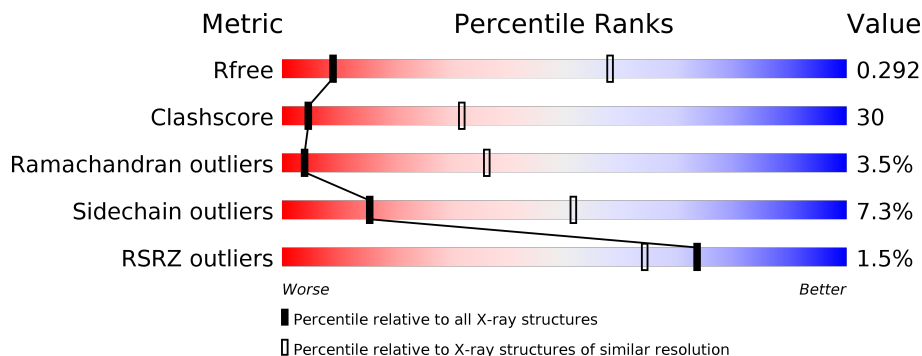
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

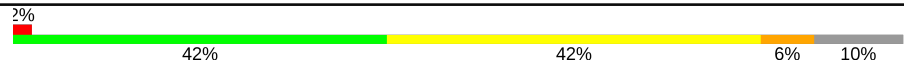
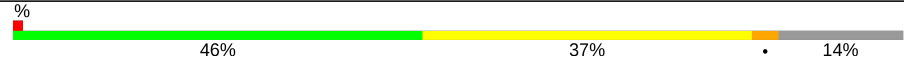
The reported resolution of this entry is 3.80 Å.

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))
$R_{free}$	111664	1028 (4.02-3.58)
Clashscore	122126	1061 (4.00-3.60)
Ramachandran outliers	120053	1025 (4.00-3.60)
Sidechain outliers	120020	1019 (4.00-3.60)
RSRZ outliers	108989	1021 (4.06-3.54)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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	3367	
1	B	3367	

## 2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 45974 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 Dynein heavy chain, cytoplasmic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	3042	23374	14951	3955	4368	100	0	0	0
1	B	2908	22384	14307	3792	4190	95	0	0	0

There are 48 discrepancies between the modelled and reference sequences:

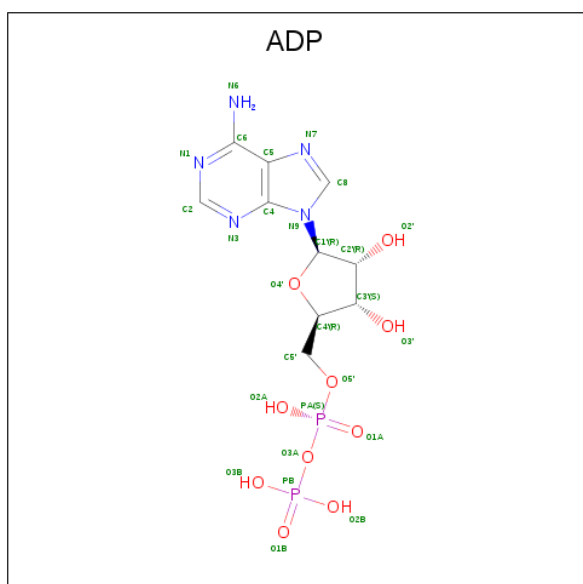
Chain	Residue	Modelled	Actual	Comment	Reference
A	1364	MET	-	EXPRESSION TAG	UNP P34036
A	1365	THR	-	EXPRESSION TAG	UNP P34036
A	1366	ARG	-	EXPRESSION TAG	UNP P34036
A	1367	HIS	-	EXPRESSION TAG	UNP P34036
A	1368	HIS	-	EXPRESSION TAG	UNP P34036
A	1369	HIS	-	EXPRESSION TAG	UNP P34036
A	1370	HIS	-	EXPRESSION TAG	UNP P34036
A	1371	HIS	-	EXPRESSION TAG	UNP P34036
A	1372	HIS	-	EXPRESSION TAG	UNP P34036
A	1373	GLY	-	EXPRESSION TAG	UNP P34036
A	1374	GLY	-	EXPRESSION TAG	UNP P34036
A	1375	GLY	-	EXPRESSION TAG	UNP P34036
A	1376	ASP	-	EXPRESSION TAG	UNP P34036
A	1377	TYR	-	EXPRESSION TAG	UNP P34036
A	1378	LYS	-	EXPRESSION TAG	UNP P34036
A	1379	ASP	-	EXPRESSION TAG	UNP P34036
A	1380	ASP	-	EXPRESSION TAG	UNP P34036
A	1381	ASP	-	EXPRESSION TAG	UNP P34036
A	1382	ASP	-	EXPRESSION TAG	UNP P34036
A	1383	LYS	-	EXPRESSION TAG	UNP P34036
A	1384	GLY	-	EXPRESSION TAG	UNP P34036
A	1385	GLY	-	EXPRESSION TAG	UNP P34036
A	1386	GLY	-	EXPRESSION TAG	UNP P34036
A	1387	LYS	-	EXPRESSION TAG	UNP P34036
B	1364	MET	-	EXPRESSION TAG	UNP P34036

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1365	THR	-	EXPRESSION TAG	UNP P34036
B	1366	ARG	-	EXPRESSION TAG	UNP P34036
B	1367	HIS	-	EXPRESSION TAG	UNP P34036
B	1368	HIS	-	EXPRESSION TAG	UNP P34036
B	1369	HIS	-	EXPRESSION TAG	UNP P34036
B	1370	HIS	-	EXPRESSION TAG	UNP P34036
B	1371	HIS	-	EXPRESSION TAG	UNP P34036
B	1372	HIS	-	EXPRESSION TAG	UNP P34036
B	1373	GLY	-	EXPRESSION TAG	UNP P34036
B	1374	GLY	-	EXPRESSION TAG	UNP P34036
B	1375	GLY	-	EXPRESSION TAG	UNP P34036
B	1376	ASP	-	EXPRESSION TAG	UNP P34036
B	1377	TYR	-	EXPRESSION TAG	UNP P34036
B	1378	LYS	-	EXPRESSION TAG	UNP P34036
B	1379	ASP	-	EXPRESSION TAG	UNP P34036
B	1380	ASP	-	EXPRESSION TAG	UNP P34036
B	1381	ASP	-	EXPRESSION TAG	UNP P34036
B	1382	ASP	-	EXPRESSION TAG	UNP P34036
B	1383	LYS	-	EXPRESSION TAG	UNP P34036
B	1384	GLY	-	EXPRESSION TAG	UNP P34036
B	1385	GLY	-	EXPRESSION TAG	UNP P34036
B	1386	GLY	-	EXPRESSION TAG	UNP P34036
B	1387	LYS	-	EXPRESSION TAG	UNP P34036

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ).



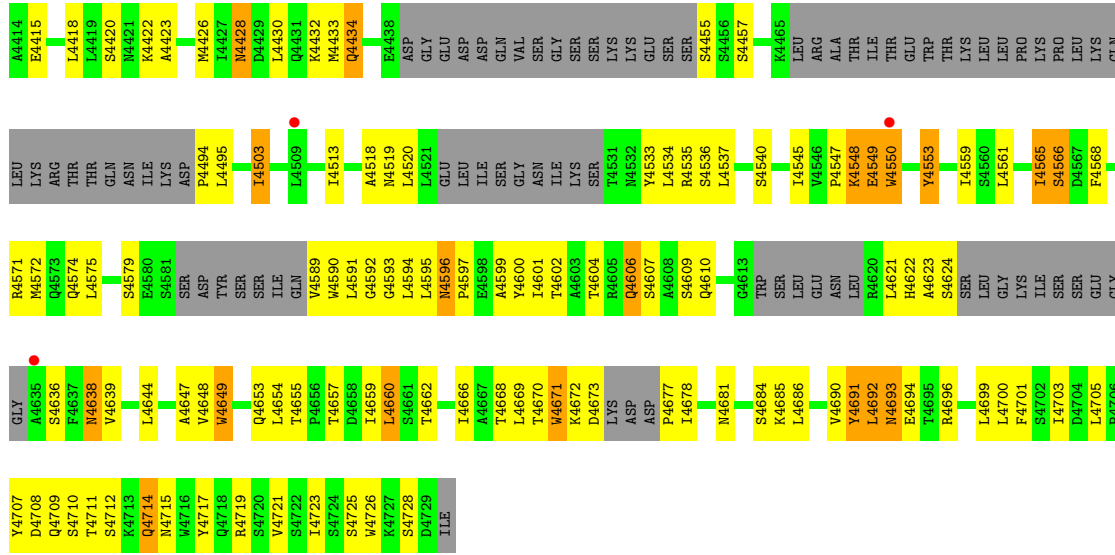
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	B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



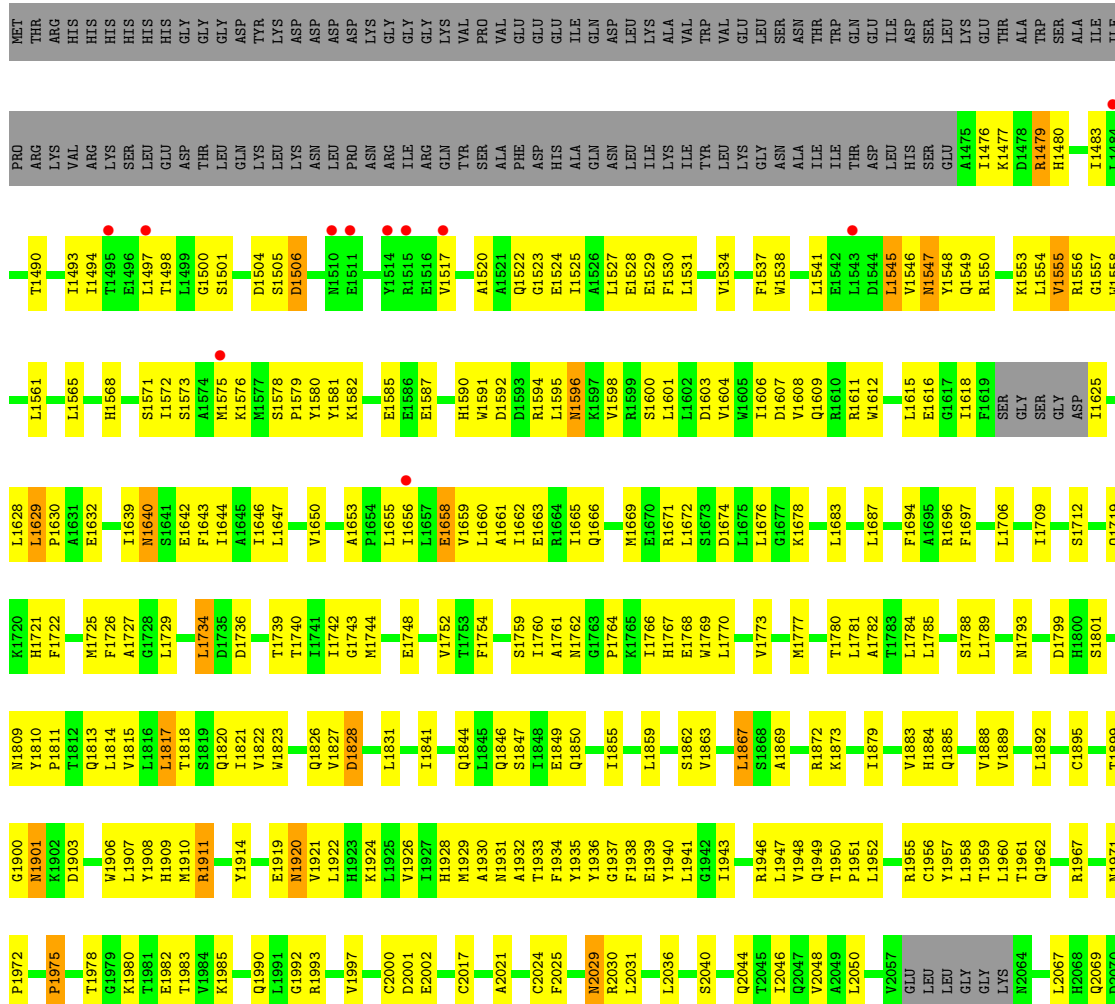








● Molecule 1: Dynein heavy chain, cytoplasmic



L3170	S5082	L2989	F2913	V2759	H2667	G2520	P2380	K2300	G2225	R2150	K2071
D3171	F3063	R3000	Q2914	L2838	H2668	Q2521	M2381	S2301	SER	A2151	F2074
W3172	L3084	L2839	D2915	P2669	R2668	R2522	G2382	H2304	GLN	L2152	F2075
F3173	E3085	P2840	R2916	P2670	L2669	L2528	G2383	V2305	GLN	K2153	T2076
G3174	E3086	N2841	L2917	M2766	L2671	I2525	R2384	P2308	P2230	S2154	G2080
E3175	M3087	L2842	V2918	L2672	L2672	D2526	L2387	P2309	P2231	V2155	Y2081
N3088	N3088	R2843	E2921	W2773	T2603	D2527	L2387	K2309	I2231	L2156	A2082
F3089	F3089	L2849	W2921	R2774	P2604	F2528	V2391	A2310	Q2235	K2163	R2095
L3090	L3090	T2850	W2925	G2677	V2605	F2529	R2392	R2310	R2236	L2164	G2083
Q3183	L3091	T2850	S2776	L2684	L2610	R2530	V2393	I2311	R2237	K2165	R2084
A3092	A3092	M2853	W2779	L2684	P2611	R2531	R2393	T2312	R2238	K2166	S2085
G3093	G3093	M2853	W2780	T2687	L2612	R2532	M2394	K2313	K2238	GLN	M2086
S3186	G3094	E2855	I2781	L2688	L2613	R2533	F2395	D2314	K2239	PRO	L2091
E3187	E3095	F2856	K2929	L2688	L2614	L2540	E2396	Q2315	I2240	PRO	L2091
	VAL	F2856	L2930	F2694	D2614	M2540	V2397	L2320	Q2241	GLN	
	PRO	F2856	D2931	F2694	Y2615	M2541	V2398	L2320	E2242	GLN	
	GLY	Q2861	E2932	V2695	S2616	M2542	D2399	L2320	I2243	LEU	
	LEU	Q2861	E2932	V2695	S2616	M2542	D2399	L2320	A2244	PRO	
	PHE	R2863	A2984	Q2787	W2617		K2401	T2323		PRO	
	GLU	F2864	L2935	F2788			Y2402	W2327		ILE	
	GLY	T2865	L2935	V2789			T2407	L2331		THR	
	GLY	P2866	H2937	F2701			T2408	L2331		ASP	
	ES103	D2867	H2938	M2700			Q2252	L2331		ASP	
	ES104	L2868	F2938	F2701			K2252	L2331		ALA	
	F3105	Q2869	P2794	M2623			E2254	T2335		GLU	
		Q2869	A2704	W2624			R2410	T2335		SER	
	M3109	Y2872	T2706	W2627			M2413	R2338		LYS	
		L2873	L2711	K2630			W2414	I2339		THR	
	ASN	L2873	L2711	K2630			W2414	I2339		THR	
	ASN	L2873	L2711	K2630			W2414	I2339		THR	
	GLY	S2875	F2714	PRO			W2416	M2342		ALA	
	GLY	P2876	Q2802	SER			S2417	E2346		ALA	
	GLY	R2877	L2803	VAL						Q2185	
	ASP	Y2880	R2806	E2635			I2420	R2350		Q2185	
	ASP	R2881	L2806	V2636			L2421	H2351		Q2189	
	ASP	W2882	L2808	E2637			T2422	W2352		Y2190	
	D2967	D2883	R2809	T2638			T2423	I2353		E2191	
	L2968	L2886	H2810	T2638			Q2424	I2354		V2194	
		L2887	L2813	W2641			M2425	M2273		V2194	
		L2887	L2813	A2642			F2427	D2358		L2195	
		L2890	L2814	S2643				V2359		L2196	
		Q2891	L2815	P2644				D2360		M2197	
		Q2891	L2815	D2645				P2361		S2198	
		C2896	D2816	W2646				P2361		I2199	
		T2897	F2818	W2647				E2362		G2127	
		L2898	L2819	L2648				W2363		A2125	
		E2899	P2819	L2648				V2364		G2125	
		G2900	S2820	T2653				G2280		K2127	
		L2901	T2821	T2654				G2281		L2128	
		V2902	S2822	R2655				K2282		V2129	
		R2903	L2824	W2656				T2283		P2130	
		L2904	T2825	V2657				W2286		C2135	
		W2905	Y2828	D2658				Y2289		A2209	
		A2906	G2829	V2659				D2210		D2210	
		H2907	T2930	L2660				L2290		S2140	
		E2908	W2930	H2661				E2291		I2212	
		A2909	F2831	L2662				A2292		I2212	
		A2909	G2755	A2662				W2296		Q2142	
		L2910	N2832	W2663				D2297		S2143	
		L2910	N2832	L2664				D2297		H2144	
		L2998	R2758	S2665				I2299		Y2145	
		L2998	R2758	S2665				I2299		L2149	

R4424	T4341	I4270	L4192	V4105	K4082	I3947	K3889	ASP	D3676	H3585	LEU	PHE	PRO	V3268
K4425	I4342	Y4271	A4193	D4109	L4033	F3948	I3865	PHE	F3677	S3586	ASP	ILE	ALA	I3271
M4426	Y4343	F4272	P4194	F4110	Y4034	S3949	A3866	SER	A3681	T3587	ARG	THR	ILE	N3272
M4428	R4346	L4273	L4197	L4111	D4035	R3954	L3867		A3682	V3588	PRO	ILE	GLU	E3273
D4429	R4347	L4274	L4198	N4112	H4036	R3955	L3868	F3760	E3683	V3592	LEU	ASN	ALA	K3274
L4430	M4349	F4277	L4200	T4113	S4041	T3958	V3869		F3684	A3595	ARG	TYR	GLN	H3284
Q4431	E4350	A4278	E4201	M4118	S4042	L3959	T3872		L3764	A3595	ARG	ASP	ALA	G3288
K4432	D4351	H4279	S4206	A4119	D4043	L3960	K3876		F3765	F3598	GLU	THR	VAL	L3289
Q4434	D4352	I4281	L4207	N4120	K4045	L3961	Q3877		T3766	F3598	VAL	THR	SER	L3290
E4437	L4355	Q4282	S4208	Q4046	F4047	D3962	Q3877		Q3768	Y3601	GLU	LYS	THR	K3290
GLU	E4357	P4209	P4209	F4047	F4047	D3963	E3878		P3769	I3602	GLN	MET	ILE	K3291
ASP	S4358	R4284	R4284	D4051	D4051	L3979	L3879		D3691	G3603	GLU	THR	LYS	L3292
GLY	F4359	L4285	R4213	Q4052	L3965	S3880	S3880		A3771	F3604	GLU	THR	LYS	R3293
GLU	L4360	I4288	R4214	V4053	E3881	E3881	E3881		K3693	A3606	ASN	PRO	LYS	D3294
ASP	E4361	F4216	V4053	V4053	F3967	V3882	V3882		I3694	D3606	ALA	ILE	HIS	T3295
GLN	Q4362	M4217	P4056	P4056	I3973	V3886	V3886		T3774	Q3607	ALA	ILE	LEU	V3299
VAL	L4363	T4218	I4057	I4057	N3877	N3877	N3877		P3775	F3609	ASN	ARG	ASP	V3299
SER	F4364	S4219	I4058	A4067	P3888	P3888	P3888		S3776	F3609	GLU	GLU	GLU	L3302
GLY	T4365	E4220	P4059	Q4068	G3977	G3977	G3977		L3777	R3610	LEU	ALA	ILE	L3302
SER	F4366	I4221	E4060	L4068	C3778	C3778	C3778		F3699	M3614	LEU	LEU	SER	L3306
SER	F4369	H4222	S4136	S4070	T3788	T3788	T3788		S3779	M3614	LEU	LEU	SER	L3306
SER	N4370	P4223	S4136	M4071	V3789	V3789	V3789		D3701	L3525	LEU	GLY	PRO	K3309
LYS	P4371	A4224	V4064	I4063	V3789	V3789	V3789		G3715	Y3586	LEU	TYR	LYS	K3309
LYS	D4372	L4225	V4064	A4067	S3902	S3902	S3902		L3719	Y3586	LEU	TYR	LYS	K3309
GLU	F4373	P4226	A4067	Q4073	L3903	L3903	L3903		L3719	L3539	PRO	GLU	PRO	L3313
SER	P4374	R4227	Q4068	T4075	S3791	S3791	S3791		L3719	L3539	PRO	GLU	PRO	L3313
SER	A4305	M4228	L4089	E4003	S3792	S3792	S3792		D3722	R3541	PRO	ASP	THR	K3316
SER	L4306	L4229	L4089	I4005	L3793	L3793	L3793		P3732	R3541	PRO	ASP	THR	K3316
SER	P4377	S4376	S4070	P4006	T3809	T3809	T3809		F3628	E3542	VAL	GLY	VAL	Q3322
SER	F4378	R4308	M4071	Q4072	R3813	R3813	R3813		F3628	E3542	VAL	GLY	VAL	Q3322
SER	L4379	R4309	R4072	L3789	R3813	R3813	R3813		E3724	E3544	LYS	ASP	LYS	K3323
LEU	G4380	T4310	Q4073	P3790	R3813	R3813	R3813		N3725	E3544	LYS	ASP	LYS	K3323
LEU	L4381	D4147	S4074	S3904	L3904	L3904	L3904		V3729	V3634	TYR	ASP	ALA	L3324
LEU	T4388	Y4312	T4075	S3904	L3904	L3904	L3904		V3729	V3634	TYR	ASP	ALA	L3324
LEU	R4389	M4313	F4236	E4003	L3908	L3908	L3908		V3729	V3634	TYR	ASP	ALA	L3324
ARG	A4390	M4314	S4237	I4005	Y3909	Y3909	Y3909		V3729	V3634	TYR	ASP	ALA	L3324
ALA	H4391	D4315	Y4238	P4006	Q3910	Q3910	Q3910		V3729	V3634	TYR	ASP	ALA	L3324
THR	P4400	S4318	E4239	L4008	F3911	F3911	F3911		V3729	V3634	TYR	ASP	ALA	L3324
THR	E4401	I4244	V4244	L4011	S3912	S3912	S3912		V3729	V3634	TYR	ASP	ALA	L3324
THR	I4402	M4323	T4251	L4012	S3912	S3912	S3912		V3729	V3634	TYR	ASP	ALA	L3324
THR	S4403	I4324	F4252	S4013	L3894	L3894	L3894		V3729	V3634	TYR	ASP	ALA	L3324
LYS	P4405	D4327	G4254	Q4016	N3927	N3927	N3927		V3729	V3634	TYR	ASP	ALA	L3324
LEU	I4406	R4328	I4255	Q4016	N3927	N3927	N3927		V3729	V3634	TYR	ASP	ALA	L3324
LEU	M4407	I4329	P4256	L4020	P3928	P3928	P3928		V3729	V3634	TYR	ASP	ALA	L3324
PRO	L4408	P4330	A4257	L4021	N3929	N3929	N3929		V3729	V3634	TYR	ASP	ALA	L3324
LYS	G4409	M4331	T4258	C4022	L3931	L3931	L3931		V3729	V3634	TYR	ASP	ALA	L3324
PRO	L4410	I4332	R4259	L4022	V3931	V3931	V3931		V3729	V3634	TYR	ASP	ALA	L3324
LEU	P4411	A4333	M4260	L4024	D3935	D3935	D3935		V3729	V3634	TYR	ASP	ALA	L3324
LYS	E4412	V4334	M4260	L4024	D3935	D3935	D3935		V3729	V3634	TYR	ASP	ALA	L3324
GLN	M4413	R4335	Q4263	Q4026	R3939	R3939	R3939		V3729	V3634	TYR	ASP	ALA	L3324
LEU	A4414	T4336	P4264	V4027	L3940	L3940	L3940		V3729	V3634	TYR	ASP	ALA	L3324
LYS	E4415	I4337	A4265	P4028	V3941	V3941	V3941		V3729	V3634	TYR	ASP	ALA	L3324
ARG	K4422	L4338	E4266	F4028	Y3942	Y3942	Y3942		V3729	V3634	TYR	ASP	ALA	L3324
THR	G4423	G4339	R4267	F4030	A4029	A4029	A4029		V3729	V3634	TYR	ASP	ALA	L3324
THR	A4423	S4340	R4267	F4030	A4029	A4029	A4029		V3729	V3634	TYR	ASP	ALA	L3324



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	195.73Å 228.96Å 201.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.79 – 3.80 48.78 – 3.79	Depositor EDS
% Data completeness (in resolution range)	99.3 (48.79-3.80) 99.0 (48.78-3.79)	Depositor EDS
$R_{merge}$	0.08	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	4.52 (at 3.77Å)	Xtrriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.219 , 0.292 0.220 , 0.292	Depositor DCC
$R_{free}$ test set	4469 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	125.1	Xtrriage
Anisotropy	0.144	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 112.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	0.001 for l,-k,h	Xtrriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	45974	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	138.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.61% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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: 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	0.24	0/23866	0.44	1/32482 (0.0%)
1	B	0.24	0/22846	0.43	0/31076
All	All	0.24	0/46712	0.44	1/63558 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	3371	PRO	N-CA-CB	5.32	109.68	103.30

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	23374	0	22545	1559	0
1	B	22384	0	21550	1149	0
2	A	108	0	48	7	0
2	B	108	0	48	3	0
All	All	45974	0	44191	2704	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 30.

All (2704) 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:3689:TYR:HB2	1:A:3694:ILE:HD11	1.29	1.14
1:A:3337:LYS:HB3	1:A:3525:LEU:HD13	1.35	1.07
1:B:3841:ALA:O	1:B:3842:SER:HB2	1.54	1.04
1:A:4242:PRO:HA	1:A:4286:ARG:HH12	1.22	1.03
1:A:4109:ASP:HA	1:A:4112:ASN:HD22	1.22	1.00
1:A:3373:ILE:HD13	1:A:3373:ILE:H	1.29	0.98
1:A:3673:LEU:HB2	1:A:3781:VAL:HG11	1.45	0.97
1:B:1959:THR:HG22	1:B:4341:THR:HA	1.46	0.96
1:B:1554:LEU:HB3	1:B:1609:GLN:HE22	1.29	0.95
1:B:4251:THR:HG23	1:B:4303:LEU:HD21	1.46	0.95
1:B:1928:HIS:CD2	1:B:1933:THR:HG22	2.02	0.95
1:A:4375:LEU:HD11	1:A:4383:VAL:HG23	1.48	0.95
1:B:3673:LEU:HB2	1:B:3781:VAL:HG11	1.44	0.95
1:A:3425:LYS:HD2	1:A:3428:GLU:HG3	1.49	0.94
1:B:2533:VAL:HB	1:B:2581:LEU:HD22	1.51	0.93
1:B:1655:LEU:HB2	1:B:1658:GLU:HB2	1.45	0.93
1:B:4574:GLN:HE22	1:B:4590:TRP:H	1.15	0.93
1:B:4121:ILE:HA	1:B:4125:GLU:HG3	1.48	0.93
1:A:2274:MET:HE3	1:A:2286:TRP:HB3	1.50	0.92
1:B:1972:PRO:HG2	1:B:2076:THR:HG22	1.52	0.92
1:A:4270:ILE:HA	1:A:4273:LEU:HD12	1.52	0.90
1:B:1789:LEU:HD23	1:B:1818:THR:HG23	1.50	0.90
1:A:3837:ALA:HB1	1:A:3850:SER:HB3	1.53	0.89
1:A:1639:ILE:HG23	1:A:1672:LEU:HD22	1.53	0.89
1:A:2313:LYS:HE3	1:A:2366:ASN:HD21	1.36	0.89
1:A:3018:SER:HB2	1:A:3256:THR:HG21	1.52	0.89
1:A:4495:LEU:H	1:A:4495:LEU:HD12	1.38	0.89
1:A:2890:ILE:HA	1:A:2893:MET:HE2	1.55	0.89
1:B:3930:LEU:HB3	1:B:3939:ARG:HH21	1.37	0.89
1:A:2200:ASN:HD22	1:A:2228:LEU:HD13	1.36	0.88
1:B:1813:GLN:HE22	1:B:1940:TYR:HA	1.37	0.88
1:B:2603:THR:HG22	1:B:2604:PRO:HD2	1.54	0.88
1:A:1690:GLN:HE22	1:A:1766:ILE:HG21	1.38	0.88
1:A:4046:GLN:HE22	1:A:4057:ILE:H	1.19	0.88
1:A:2447:GLN:HA	1:A:2450:ASN:HD22	1.39	0.88
1:B:4270:ILE:HG22	1:B:4310:ILE:HD13	1.55	0.88
1:B:1524:GLU:HG2	1:B:1580:TYR:HB3	1.57	0.87
1:A:3552:LYS:HA	1:A:3555:ASN:HD22	1.40	0.87
1:A:2570:THR:HG21	1:A:2603:THR:HG21	1.57	0.86
1:A:2914:GLN:HB2	1:A:2926:THR:HG21	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2381:ASN:HD21	1:B:2383:GLU:HB2	1.40	0.86
1:A:2200:ASN:HB2	1:A:2228:LEU:HD22	1.56	0.86
1:B:4604:THR:HG23	1:B:4671:TRP:HE1	1.40	0.86
1:A:4621:LEU:HD21	1:A:4669:LEU:HD23	1.55	0.86
1:B:3271:ILE:HG13	1:B:3592:VAL:HG11	1.57	0.86
1:A:2293:ILE:HG22	1:A:2350:ARG:HH22	1.41	0.85
1:B:4109:ASP:HA	1:B:4112:ASN:ND2	1.92	0.85
1:A:4686:LEU:HD21	1:A:4721:VAL:HG11	1.59	0.85
1:A:3809:THR:HA	1:A:3812:LYS:HE2	1.59	0.84
1:A:2560:MET:HG3	1:A:2561:SER:H	1.42	0.84
1:A:4251:THR:HG23	1:A:4303:LEU:HD21	1.58	0.84
1:B:2525:ILE:HD11	1:B:2815:LEU:HB2	1.58	0.84
1:A:4648:VAL:HG12	1:A:4662:THR:HG21	1.60	0.83
1:B:2841:ASN:ND2	1:B:2842:LEU:H	1.75	0.83
1:A:2910:LEU:HD23	1:A:2930:ILE:HD12	1.59	0.83
1:B:3930:LEU:HD11	1:B:3943:LEU:HD21	1.59	0.83
1:B:4548:LYS:HD2	1:B:4549:GLU:N	1.93	0.83
1:A:3718:LEU:HG	1:A:3719:LEU:H	1.42	0.83
1:B:4402:ILE:HD12	1:B:4402:ILE:H	1.42	0.83
1:A:4109:ASP:HA	1:A:4112:ASN:ND2	1.95	0.82
1:A:4190:ILE:HG12	1:A:4219:SER:HB3	1.61	0.82
1:A:3981:ASN:HD22	1:A:4076:ILE:HB	1.44	0.82
1:B:3785:ASN:HD21	1:B:3787:THR:HG23	1.43	0.82
1:B:2250:VAL:HB	1:B:2425:MET:HG3	1.60	0.82
1:B:1926:VAL:HG22	1:B:1935:TYR:CE2	2.15	0.82
1:A:3652:LEU:HD12	1:A:3653:PRO:HD2	1.62	0.82
1:B:1781:LEU:HG	1:B:1814:LEU:HD11	1.61	0.81
1:A:2651:VAL:HG13	1:A:2652:ASP:H	1.44	0.81
1:B:4657:THR:HG22	1:B:4659:ILE:H	1.45	0.81
1:A:3788:VAL:HG21	1:A:3913:LEU:HD22	1.61	0.81
1:A:4185:VAL:HG12	1:A:4186:LEU:H	1.44	0.81
1:B:2129:VAL:HG22	1:B:2130:PRO:HD3	1.62	0.81
1:B:4335:ARG:HH21	1:B:4365:THR:HG22	1.46	0.81
1:A:2371:LEU:CB	1:A:2410:ARG:HG3	2.10	0.81
1:A:3238:ILE:HG12	1:A:3601:TYR:CD2	2.16	0.81
1:A:3700:LEU:HD22	1:A:3701:ASP:H	1.43	0.80
1:A:3789:THR:HB	1:A:3790:PRO:HD2	1.63	0.80
1:A:2140:SER:HB2	1:A:2142:GLN:HE22	1.45	0.80
1:A:2857:TYR:HA	1:A:2913:PHE:HE1	1.46	0.80
1:A:2370:LEU:HD21	1:A:2387:LEU:HD13	1.64	0.80
1:A:4654:LEU:HD11	1:A:4705:LEU:HB2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1660:LEU:HA	1:B:1665:ILE:HD11	1.63	0.80
1:A:2236:LEU:HD21	1:A:2293:ILE:HD13	1.63	0.80
1:A:3694:ILE:HG12	1:A:3717:PRO:HB2	1.63	0.80
1:A:4654:LEU:HD13	1:A:4686:LEU:HD23	1.62	0.79
1:A:2110:GLN:HG3	1:A:2122:GLU:HA	1.64	0.79
1:B:3607:GLN:HG2	1:B:3657:LEU:HD22	1.65	0.79
1:B:4270:ILE:HD11	1:B:4329:ILE:HD13	1.65	0.79
1:A:4086:MET:HG3	1:A:4093:ARG:HB2	1.65	0.79
1:A:4349:ASN:HD21	1:A:4351:PHE:HB2	1.46	0.79
1:A:2300:LYS:O	1:A:2349:LYS:HB2	1.81	0.79
1:B:4189:ASN:H	1:B:4218:THR:HG22	1.47	0.79
1:B:3844:ASN:O	1:B:3848:ASP:HB3	1.81	0.79
1:A:4353:MET:HE3	1:A:4356:LEU:HD23	1.64	0.78
1:A:2283:THR:HA	1:A:2286:TRP:HE1	1.48	0.78
1:A:2706:THR:HB	1:A:2707:PRO:HD2	1.65	0.78
1:A:2886:LEU:O	1:A:2890:ILE:HG12	1.84	0.78
1:B:2106:GLU:OE1	1:B:2129:VAL:HG21	1.82	0.78
1:B:4264:PRO:HB3	1:B:4323:ASN:HA	1.64	0.78
1:A:3673:LEU:HB2	1:A:3781:VAL:CG1	2.14	0.78
1:B:2657:VAL:HG13	1:B:2687:THR:HG23	1.64	0.78
1:B:3338:GLN:HG2	1:B:3525:LEU:HD13	1.65	0.78
1:A:1823:TRP:O	1:A:1827:VAL:HG23	1.84	0.78
1:A:2204:ILE:HA	1:A:2207:LEU:HD12	1.65	0.78
1:A:2705:THR:HA	1:A:2709:LEU:HD12	1.66	0.78
1:A:1796:ASP:HB3	1:A:1799:ASP:HB3	1.65	0.77
1:A:4575:LEU:H	1:A:4575:LEU:HD12	1.49	0.77
1:B:2578:MET:HB3	1:B:2597:ILE:HD12	1.65	0.77
1:B:4332:ILE:HD12	1:B:4332:ILE:H	1.48	0.77
1:B:4121:ILE:O	1:B:4125:GLU:HB2	1.85	0.77
1:B:3219:ILE:CB	1:B:3220:PRO:HD3	2.15	0.77
1:A:2766:MET:HB3	1:A:2783:LEU:HD11	1.67	0.76
1:A:4318:SER:HA	1:A:4321:ARG:HH21	1.50	0.76
1:A:3058:LEU:HD21	1:A:3141:LEU:HD11	1.67	0.76
1:A:3384:LYS:HD3	1:A:3386:LYS:HD3	1.66	0.76
1:B:3230:SER:HA	1:B:3620:ARG:HE	1.51	0.76
1:B:3313:LEU:HD13	1:B:3550:SER:HA	1.65	0.76
1:A:2505:TYR:O	1:A:2512:VAL:HG23	1.85	0.76
1:A:1959:THR:HA	1:A:4341:THR:OG1	1.85	0.76
1:B:3671:TYR:O	1:B:3781:VAL:HG13	1.86	0.76
1:B:4046:GLN:HG3	1:B:4047:PHE:N	2.00	0.76
1:B:4531:THR:O	1:B:4535:ARG:HG3	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2863:ARG:O	1:A:2863:ARG:HD3	1.84	0.76
1:B:4067:ALA:HB1	1:B:4073:GLN:HG3	1.65	0.76
1:B:3639:SER:HB3	1:B:3663:ILE:HD11	1.68	0.76
1:A:1813:GLN:HE22	1:A:1940:TYR:HA	1.50	0.75
1:A:3927:ASN:HB3	1:A:3930:LEU:HB2	1.68	0.75
1:B:1822:VAL:HG22	1:B:1826:GLN:HE21	1.50	0.75
1:A:3731:ASN:H	1:A:3731:ASN:HD22	1.35	0.75
1:A:4122:VAL:HG21	1:A:4216:PHE:CZ	2.20	0.75
1:B:4011:LEU:HD11	1:B:4041:SER:HB2	1.68	0.75
1:A:2273:MET:HB2	1:A:2395:PHE:HB2	1.68	0.75
1:B:3027:ARG:HA	1:B:3037:ILE:HD11	1.68	0.75
1:B:3966:THR:HG22	1:B:4426:MET:HG3	1.68	0.75
1:B:2426:ILE:HD12	1:B:2426:ILE:H	1.51	0.75
1:A:3358:GLN:HA	1:A:3361:LYS:HE2	1.69	0.75
1:A:3443:MET:HG3	1:A:3449:ARG:HG3	1.68	0.75
1:A:3039:THR:HG22	1:A:3040:ILE:H	1.50	0.75
1:A:4622:HIS:HE2	1:A:4678:ILE:HG21	1.50	0.75
1:A:4648:VAL:HG13	1:A:4657:THR:HG21	1.68	0.75
1:B:3766:THR:HG22	1:B:3768:ASP:H	1.52	0.75
1:B:3035:LEU:HD22	1:B:3068:LYS:HB3	1.68	0.75
1:A:2586:GLY:HA2	1:A:2815:LEU:HD13	1.67	0.75
1:B:1950:THR:HB	1:B:1951:PRO:HD2	1.68	0.75
1:A:3015:ILE:HD13	1:A:3147:MET:HG3	1.68	0.74
1:B:2315:GLN:HB3	1:B:2775:THR:HG21	1.69	0.74
1:A:2397:VAL:HG21	1:A:2400:LEU:HD21	1.68	0.74
1:A:3696:LYS:HZ2	1:A:4206:SER:HB3	1.52	0.74
1:B:2638:THR:HG21	1:B:2838:LEU:HD21	1.68	0.74
1:A:1547:ASN:HA	1:A:1553:LYS:HG2	1.70	0.74
1:B:1476:ILE:HG23	1:B:1480:HIS:HB2	1.68	0.74
1:A:2105:ARG:HG2	1:A:2105:ARG:HH11	1.53	0.74
1:A:3774:THR:HB	1:A:3775:PRO:HD2	1.70	0.73
1:A:4122:VAL:HG21	1:A:4216:PHE:HZ	1.53	0.73
1:B:4278:HIS:HD2	1:B:4343:TYR:OH	1.71	0.73
1:A:2309:LYS:HE2	1:A:2756:THR:HG21	1.68	0.73
1:A:4053:VAL:O	1:A:4053:VAL:HG12	1.86	0.73
1:A:3388:LEU:HD23	1:A:3473:ALA:HB1	1.68	0.73
1:A:2793:ASN:HD22	1:A:2793:ASN:N	1.85	0.73
1:A:3725:ASN:HD22	1:A:3725:ASN:H	1.35	0.73
1:A:3281:GLU:HB3	1:A:3581:PHE:HE1	1.54	0.73
1:A:1886:ARG:HG3	1:A:1887:ASP:N	2.04	0.73
1:B:3700:LEU:HD13	1:B:3701:ASP:N	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3202:PRO:HD2	1:A:3624:VAL:O	1.88	0.73
1:B:3602:ILE:HG23	1:B:3610:ARG:HG2	1.70	0.73
1:A:2675:PRO:HD2	1:A:2816:VAL:O	1.88	0.73
1:A:3453:THR:HA	1:A:3457:LEU:HB2	1.70	0.73
1:B:2572:ARG:HG2	1:B:2617:VAL:HG11	1.69	0.73
1:B:2309:LYS:NZ	1:B:2756:THR:HG21	2.04	0.73
1:B:4157:TYR:HB3	1:B:4184:TRP:HB2	1.71	0.73
1:A:2080:GLY:HA3	1:A:2084:ARG:O	1.89	0.73
1:B:3789:THR:HB	1:B:3790:PRO:HD2	1.70	0.73
1:B:4189:ASN:HD22	1:B:4189:ASN:N	1.85	0.73
1:A:3475:GLY:O	1:A:3478:VAL:HG12	1.88	0.73
1:A:4024:ARG:HD3	1:A:4034:VAL:HG21	1.71	0.73
1:B:3584:GLN:O	1:B:3588:VAL:HG23	1.87	0.73
1:B:2514:LYS:HE2	1:B:2600:ILE:HD11	1.71	0.72
1:A:1655:LEU:HB2	1:A:1658:GLU:HB2	1.69	0.72
1:A:1883:VAL:HG11	1:A:2111:VAL:HG22	1.70	0.72
1:A:3281:GLU:HB3	1:A:3581:PHE:CE1	2.24	0.72
1:A:3724:GLU:OE2	1:A:3766:THR:HG23	1.88	0.72
1:B:4136:SER:HB3	1:B:4238:TYR:HB2	1.72	0.72
1:B:1899:THR:HB	1:B:1903:ASP:HB2	1.72	0.72
1:B:2938:PHE:O	1:B:2941:VAL:HG12	1.88	0.72
1:B:4005:ILE:HD13	1:B:4020:LEU:HD23	1.70	0.72
1:A:2042:GLN:HE21	1:A:2059:LEU:HD11	1.54	0.72
1:B:2841:ASN:HD22	1:B:2842:LEU:H	1.37	0.72
1:A:1763:GLY:N	1:A:1764:PRO:HD3	2.04	0.72
1:A:2626:LEU:HD12	1:A:2626:LEU:H	1.55	0.71
1:A:2587:LEU:HG	1:A:2817:ASP:HB2	1.72	0.71
1:A:3700:LEU:HD13	1:A:3701:ASP:N	2.04	0.71
1:B:3292:LEU:HD13	1:B:3571:ARG:HA	1.72	0.71
1:B:4601:ILE:O	1:B:4604:THR:HG22	1.90	0.71
1:A:2042:GLN:NE2	1:A:2059:LEU:HD11	2.06	0.71
1:A:1742:ILE:HG22	1:A:1753:THR:HG22	1.71	0.71
1:A:3555:ASN:HB3	1:A:3559:ARG:NH1	2.04	0.71
1:A:4347:ILE:HG21	1:A:4353:MET:HG2	1.72	0.71
1:B:2839:LEU:HD13	1:B:2842:LEU:HD12	1.70	0.71
1:B:4506:GLY:O	1:B:4510:VAL:HG23	1.91	0.71
1:A:2371:LEU:HB3	1:A:2410:ARG:HG3	1.71	0.71
1:B:3700:LEU:HD22	1:B:3701:ASP:H	1.54	0.71
1:A:1807:VAL:HG13	1:A:1815:VAL:HG11	1.73	0.71
1:A:2208:VAL:HA	1:A:2415:TRP:CD1	2.24	0.71
1:A:2283:THR:HA	1:A:2286:TRP:NE1	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3674:VAL:HG22	1:B:3784:VAL:HB	1.71	0.71
1:A:4242:PRO:HA	1:A:4286:ARG:NH1	2.01	0.71
1:A:4553:TYR:H	1:A:4553:TYR:HD1	1.38	0.71
1:B:3234:ILE:HG23	1:B:3617:TRP:NE1	2.06	0.71
1:A:2176:ASP:N	1:A:2179:SER:HG	1.87	0.71
1:A:2258:LYS:HA	1:A:2261:GLN:HG3	1.71	0.71
1:A:3859:LYS:O	1:A:3862:THR:HG22	1.90	0.71
1:A:4533:TYR:O	1:A:4537:LEU:HG	1.90	0.71
1:B:4157:TYR:CB	1:B:4184:TRP:HB2	2.21	0.71
1:A:3037:ILE:H	1:A:3037:ILE:HD13	1.56	0.71
1:A:4591:LEU:HD21	1:A:4601:ILE:HD11	1.72	0.71
1:A:2942:ASN:O	1:A:2944:ASP:N	2.24	0.71
1:A:4029:SER:HB2	1:A:4081:ARG:HH12	1.56	0.71
1:B:4703:ILE:HD12	1:B:4705:LEU:HD21	1.71	0.71
1:B:2282:LYS:HA	1:B:2416:PHE:CD1	2.26	0.71
1:A:4494:PRO:HG2	1:A:4607:SER:HA	1.73	0.70
1:B:2124:LEU:HD22	1:B:2195:LEU:HD22	1.71	0.70
1:B:4574:GLN:HE22	1:B:4590:TRP:N	1.89	0.70
1:B:1823:TRP:CD1	1:B:1885:GLN:HB3	2.26	0.70
1:A:1879:ILE:O	1:A:1883:VAL:HG23	1.91	0.70
1:A:2006:LEU:HD23	1:A:2035:ILE:HG23	1.73	0.70
1:A:2371:LEU:HB2	1:A:2410:ARG:HG3	1.71	0.70
1:A:4540:SER:HB2	1:A:4545:ILE:O	1.91	0.70
1:B:1879:ILE:O	1:B:1883:VAL:HG23	1.91	0.70
1:B:3238:ILE:CG2	1:B:3255:VAL:HG11	2.20	0.70
1:A:2113:LEU:HD21	1:A:2156:LEU:HD22	1.74	0.70
1:A:2788:PHE:O	1:A:2789:VAL:HG23	1.90	0.70
1:A:3153:ASP:HA	1:A:3156:ASN:ND2	2.06	0.70
1:A:3677:PRO:HG3	1:A:3787:THR:HG22	1.72	0.70
1:A:4095:LEU:HD11	1:A:4422:LYS:HB3	1.73	0.70
1:A:4649:TRP:HA	1:A:4649:TRP:CE3	2.27	0.70
1:A:2106:GLU:CD	1:A:2106:GLU:H	1.95	0.70
1:A:2954:ASN:HD22	1:A:2954:ASN:H	1.39	0.70
1:A:2308:PRO:HD2	1:A:2357:GLY:HA3	1.74	0.70
1:A:4179:ALA:HB1	1:A:4209:PRO:HB3	1.73	0.70
1:A:3380:VAL:HG11	1:A:3435:ILE:HG21	1.72	0.70
1:A:3812:LYS:O	1:A:3816:LEU:HB3	1.91	0.70
1:B:1928:HIS:NE2	1:B:1933:THR:HG22	2.06	0.70
1:A:3331:GLN:HE22	1:A:3533:LYS:HG3	1.56	0.69
1:A:4086:MET:CG	1:A:4093:ARG:HB2	2.21	0.69
1:B:2850:THR:O	1:B:2854:VAL:HG23	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3433:THR:HG22	1:A:3437:ASN:ND2	2.06	0.69
1:B:1687:LEU:HD21	1:B:1706:LEU:HD23	1.74	0.69
1:B:2540:LEU:HD23	1:B:2576:SER:HA	1.72	0.69
1:A:1846:GLN:HA	1:A:1893:GLN:NE2	2.08	0.69
1:A:4128:SER:HB2	1:A:4213:PHE:HB3	1.74	0.69
1:B:1739:THR:HB	1:B:1761:ALA:HB2	1.74	0.69
1:B:3700:LEU:HD12	1:B:3700:LEU:H	1.58	0.69
1:B:2235:GLN:NE2	1:B:2296:VAL:HG13	2.06	0.69
1:A:3912:SER:HB3	1:A:4231:ARG:HG2	1.75	0.69
1:B:1846:GLN:O	1:B:1850:GLN:HG2	1.92	0.69
1:B:3238:ILE:HG12	1:B:3601:TYR:CG	2.28	0.69
1:A:2028:PHE:HB3	1:A:2075:VAL:HG13	1.72	0.69
1:B:1534:VAL:HG13	1:B:1568:HIS:HD2	1.58	0.69
1:B:3238:ILE:HG21	1:B:3255:VAL:HG11	1.73	0.69
1:B:3256:THR:HB	1:B:3257:PRO:HD2	1.74	0.69
1:B:3768:ASP:HB3	1:B:3771:ALA:HB2	1.73	0.69
1:A:1746:SER:OG	1:A:1750:GLU:HB3	1.93	0.69
1:A:2202:THR:HG22	1:A:2265:ILE:HG12	1.74	0.69
1:B:2200:ASN:HB2	1:B:2228:LEU:HD22	1.75	0.69
1:B:2282:LYS:HA	1:B:2416:PHE:HD1	1.57	0.69
1:A:4623:ALA:HB2	1:A:4703:ILE:HD11	1.75	0.69
1:A:1770:LEU:O	1:A:1773:VAL:HG22	1.93	0.69
1:B:4005:ILE:CD1	1:B:4020:LEU:HD23	2.24	0.68
1:A:2748:LEU:HD21	1:A:2800:ARG:NH1	2.09	0.68
1:B:3724:GLU:OE2	1:B:3766:THR:HG23	1.93	0.68
1:B:4362:GLN:HB2	1:B:4714:GLN:NE2	2.08	0.68
1:B:2865:THR:H	1:B:2868:ILE:HD12	1.58	0.68
1:B:4574:GLN:NE2	1:B:4590:TRP:H	1.87	0.68
1:A:1886:ARG:NH1	1:A:1890:ARG:HH22	1.91	0.68
1:B:3652:LEU:HD12	1:B:3653:PRO:HD2	1.74	0.68
1:A:3210:GLU:HG3	1:A:3211:ILE:H	1.57	0.68
1:B:1545:LEU:H	1:B:1545:LEU:HD12	1.57	0.68
1:B:3043:ASN:ND2	1:B:3046:TYR:HB2	2.07	0.68
1:A:1554:LEU:HB3	1:A:1609:GLN:HE21	1.59	0.68
1:A:2010:SER:HB3	1:A:2060:LEU:HD21	1.75	0.68
1:B:1743:GLY:HA2	1:B:1754:PHE:CD1	2.29	0.68
1:B:2320:LEU:HD23	1:B:2320:LEU:O	1.93	0.68
1:A:4200:LEU:HD22	1:A:4204:LEU:HD11	1.75	0.68
1:A:1715:ILE:HD11	1:A:1760:ILE:HD13	1.74	0.68
1:A:1931:ASN:OD1	1:A:1962:GLN:NE2	2.25	0.68
1:A:2293:ILE:CG2	1:A:2350:ARG:HH22	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2400:LEU:HD13	1:B:2408:ILE:HD11	1.76	0.68
1:A:1846:GLN:HA	1:A:1893:GLN:HE22	1.59	0.67
1:A:2742:PHE:HA	1:A:2789:VAL:O	1.94	0.67
1:A:3961:ASN:O	1:A:3964:LYS:HB2	1.94	0.67
1:A:2699:LEU:HD11	1:A:2713:THR:HG21	1.77	0.67
1:A:3013:LEU:HD12	1:A:3145:PHE:HB3	1.74	0.67
1:B:2231:ILE:HG21	1:B:2264:GLN:NE2	2.09	0.67
1:A:2212:ILE:HG22	1:A:2213:PRO:HD3	1.77	0.67
1:B:4251:THR:HG23	1:B:4303:LEU:CD2	2.23	0.67
1:A:3563:LEU:HD11	1:A:3851:VAL:HG22	1.77	0.67
1:B:2793:ASN:HB3	1:B:2794:PRO:HD2	1.76	0.67
1:A:1963:ALA:HB1	1:A:2096:ARG:HG3	1.76	0.67
1:A:2447:GLN:HE22	1:A:2492:LEU:HD23	1.58	0.67
1:A:3397:PRO:HG2	1:A:3419:TRP:CZ2	2.29	0.67
1:B:4189:ASN:H	1:B:4218:THR:CG2	2.08	0.67
1:B:2815:LEU:HD23	1:B:2816:VAL:N	2.09	0.67
1:B:4189:ASN:H	1:B:4189:ASN:HD22	1.40	0.67
1:B:4184:TRP:CD1	1:B:4214:ARG:HB2	2.30	0.67
1:A:4210:HIS:ND1	1:A:4211:PRO:HD2	2.09	0.67
1:A:4259:ARG:HD3	1:A:4271:TYR:OH	1.95	0.67
1:A:2014:VAL:HG13	1:A:2065:ILE:HG21	1.78	0.66
1:A:4548:LYS:HG3	1:A:4549:GLU:H	1.60	0.66
1:B:1719:GLN:HA	1:B:1722:PHE:CD2	2.29	0.66
1:B:3078:VAL:HG23	1:B:3083:PHE:HB2	1.76	0.66
1:B:3958:THR:HG23	1:B:4235:VAL:HB	1.76	0.66
1:B:2297:ASP:O	1:B:2299:ILE:HG13	1.94	0.66
1:B:2361:PRO:HD3	1:B:2402:TYR:O	1.96	0.66
1:A:2595:LYS:HE3	1:A:2611:PRO:HG3	1.75	0.66
1:A:4270:ILE:HD13	1:A:4314:VAL:HG21	1.78	0.66
1:B:2423:THR:HG23	1:B:2530:ARG:HD2	1.76	0.66
1:B:2766:MET:HB3	1:B:2783:LEU:HD11	1.75	0.66
1:A:2108:ILE:O	1:A:2112:MET:HB2	1.96	0.66
1:A:3875:VAL:O	1:A:3879:ILE:HG12	1.95	0.66
1:A:3925:ASN:N	1:A:3925:ASN:HD22	1.93	0.66
1:B:2861:GLN:HG3	1:B:2874:TYR:HB2	1.75	0.66
1:A:3245:LEU:HD12	1:A:3249:GLN:HB2	1.78	0.66
1:A:4572:MET:HE1	1:A:4575:LEU:HD11	1.77	0.66
1:A:2124:LEU:HD22	1:A:2195:LEU:HD22	1.78	0.66
1:A:2125:ALA:HA	1:A:2128:ILE:HG22	1.78	0.66
1:B:2113:LEU:HD21	1:B:2156:LEU:HD22	1.78	0.66
1:A:2315:GLN:HB3	1:A:2775:THR:HG21	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2910:LEU:CD2	1:A:2930:ILE:HD12	2.25	0.66
1:A:3309:LYS:O	1:A:3313:LEU:HG	1.96	0.66
1:B:1769:TRP:O	1:B:1773:VAL:HG23	1.96	0.66
1:B:2984:LEU:HD22	1:B:2986:VAL:HG22	1.78	0.66
1:A:3989:ASP:O	1:A:3993:LYS:HB2	1.96	0.66
1:B:1885:GLN:O	1:B:1889:VAL:HG23	1.96	0.66
1:B:3785:ASN:ND2	1:B:3787:THR:HG23	2.11	0.66
1:A:3410:LEU:HD22	1:A:3452:ILE:HD11	1.78	0.65
1:A:3647:TRP:HB3	1:A:3652:LEU:HD23	1.78	0.65
1:A:3965:LEU:HG	1:A:4426:MET:HE3	1.77	0.65
1:A:4230:LEU:H	1:A:4230:LEU:HD12	1.61	0.65
1:A:2289:TYR:O	1:A:2293:ILE:HG12	1.95	0.65
1:A:3285:LEU:HD13	1:A:3578:SER:HA	1.78	0.65
1:A:2535:ASN:HD22	1:A:2668:ARG:HH12	1.45	0.65
1:A:3271:ILE:HG13	1:A:3592:VAL:HG11	1.78	0.65
1:A:4186:LEU:C	1:A:4187:LEU:HD12	2.17	0.65
1:B:1901:ASN:HD22	1:B:1901:ASN:H	1.43	0.65
1:B:2498:CYS:HA	1:B:2501:ILE:HD12	1.77	0.65
1:B:3639:SER:HB3	1:B:3663:ILE:CD1	2.25	0.65
1:A:2552:ASN:HD21	1:A:2560:MET:HB2	1.59	0.65
1:A:3700:LEU:CD2	1:A:3701:ASP:H	2.09	0.65
1:A:4054:GLY:O	1:A:4055:GLU:C	2.34	0.65
1:B:2359:VAL:HG13	1:B:2364:VAL:HG21	1.79	0.65
1:B:3813:ARG:O	1:B:3817:LEU:HD13	1.97	0.65
1:A:2975:ARG:HE	1:A:2975:ARG:HA	1.61	0.65
1:B:2339:ILE:HA	1:B:2346:GLU:HG2	1.76	0.65
1:A:1537:PHE:O	1:A:1541:LEU:HB2	1.97	0.65
1:A:2948:ARG:HG2	1:A:2948:ARG:HH11	1.62	0.65
1:A:3015:ILE:HG22	1:A:3149:PRO:HG3	1.77	0.65
1:A:3242:ASN:OD1	1:A:3253:ASN:HB3	1.96	0.65
1:A:4024:ARG:HG3	1:A:4031:SER:HA	1.78	0.65
1:A:4622:HIS:ND1	1:A:4623:ALA:N	2.45	0.65
1:A:2120:THR:O	1:A:2121:ALA:C	2.33	0.65
1:A:3255:VAL:HA	1:A:3259:HIS:HD2	1.61	0.65
1:B:1920:ASN:HD22	1:B:1921:VAL:H	1.44	0.65
1:B:3949:SER:HA	1:B:4110:PHE:HE1	1.62	0.65
1:A:1748:GLU:HG2	1:A:1943:ILE:HB	1.79	0.65
1:A:2305:VAL:HG21	1:A:2769:LYS:HE2	1.79	0.65
1:A:4553:TYR:HB3	1:A:4595:LEU:HD23	1.79	0.65
1:A:4649:TRP:HA	1:A:4649:TRP:HE3	1.60	0.65
1:B:3109:MET:HB3	1:B:3129:LEU:HD23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4389:ARG:HG2	1:B:4389:ARG:HH11	1.62	0.65
1:A:2127:LYS:C	1:A:2130:PRO:HD2	2.17	0.64
1:A:2129:VAL:HB	1:A:2130:PRO:HD3	1.78	0.64
1:A:2968:LEU:O	1:A:2972:VAL:HG23	1.97	0.64
1:A:3270:LEU:HB2	1:A:3592:VAL:HG13	1.77	0.64
1:A:4221:ILE:H	1:A:4221:ILE:HD12	1.62	0.64
1:B:3063:GLY:HA2	1:B:3136:GLN:HB3	1.78	0.64
1:B:4063:ILE:H	1:B:4063:ILE:HD12	1.62	0.64
1:B:1931:ASN:HB2	1:B:4312:TYR:CZ	2.32	0.64
1:A:2704:ALA:HB3	1:A:3085:GLU:HG3	1.77	0.64
1:B:4288:ILE:HG23	1:B:4292:TRP:O	1.97	0.64
1:A:2606:PRO:HD3	1:A:2624:TRP:CD1	2.32	0.64
1:A:3700:LEU:H	1:A:3700:LEU:HD12	1.62	0.64
1:A:1921:VAL:HG23	1:A:1922:LEU:HD22	1.79	0.64
1:A:2525:ILE:HG13	1:A:2584:SER:O	1.98	0.64
1:A:2651:VAL:HG13	1:A:2652:ASP:N	2.12	0.64
1:A:3387:HIS:CB	1:A:3473:ALA:HB2	2.27	0.64
1:B:1811:PRO:O	1:B:1815:VAL:HG23	1.98	0.64
1:B:2866:PRO:HG3	1:B:2873:ILE:HG22	1.78	0.64
1:A:1811:PRO:HD2	1:A:1814:LEU:HD12	1.78	0.64
1:A:3528:SER:O	1:A:3531:THR:HG22	1.98	0.64
1:B:4188:LYS:HA	1:B:4218:THR:HG22	1.80	0.64
1:A:3602:ILE:HG23	1:A:3610:ARG:HG2	1.80	0.64
1:A:4349:ASN:HD22	1:A:4352:ASP:N	1.95	0.64
1:A:2199:ILE:O	1:A:2203:MET:HB2	1.98	0.64
1:A:2273:MET:CB	1:A:2395:PHE:HB2	2.27	0.64
1:A:2506:PHE:CD1	1:A:2512:VAL:HG21	2.33	0.64
1:A:4050:LYS:O	1:A:4052:GLN:N	2.30	0.64
1:B:3991:LEU:O	1:B:4427:ILE:HD12	1.98	0.64
1:A:1545:LEU:HB3	1:A:1553:LYS:HE2	1.80	0.64
1:A:2979:PHE:CE2	1:A:3028:PHE:HA	2.33	0.64
1:A:3696:LYS:NZ	1:A:4206:SER:HB3	2.13	0.64
1:A:3897:TYR:HE1	1:A:3913:LEU:HA	1.63	0.64
1:A:4296:PHE:CE2	1:A:4347:ILE:HD13	2.33	0.64
1:B:3299:VAL:HG11	1:B:3564:LEU:HG	1.78	0.64
1:A:3114:GLU:HG2	1:A:3118:ARG:NH1	2.13	0.64
1:A:4693:ASN:N	1:A:4693:ASN:HD22	1.95	0.64
1:B:1694:PHE:HB3	1:B:1697:PHE:CD2	2.33	0.64
1:B:1554:LEU:HD12	1:B:2323:THR:HG22	1.79	0.64
1:B:4548:LYS:HD2	1:B:4549:GLU:H	1.59	0.64
1:A:1611:ARG:HH11	1:A:1611:ARG:HG3	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2051:LYS:O	1:A:2051:LYS:HD3	1.96	0.64
1:A:2163:LYS:HB2	1:A:2194:VAL:HG11	1.79	0.64
1:A:2207:LEU:HD13	1:A:2215:ILE:HG21	1.79	0.64
1:A:3293:ARG:HG3	1:A:3293:ARG:HH11	1.63	0.64
1:A:3785:ASN:HD22	1:A:3786:PHE:N	1.95	0.64
1:A:3804:THR:O	1:A:3807:PRO:HD3	1.98	0.64
1:A:4362:GLN:HG3	1:A:4714:GLN:OE1	1.97	0.64
1:B:1557:GLY:O	1:B:1561:LEU:HD23	1.98	0.64
1:B:4351:PHE:CE2	1:B:4689:PRO:HG3	2.32	0.64
1:A:2490:ALA:O	1:A:2494:VAL:HG23	1.97	0.63
1:A:4296:PHE:CE2	1:A:4347:ILE:HA	2.33	0.63
1:A:4396:ILE:O	1:A:4399:LEU:HB2	1.98	0.63
1:B:3043:ASN:HD22	1:B:3046:TYR:HB2	1.63	0.63
1:B:3087:MET:CE	1:B:3090:LEU:HD23	2.28	0.63
1:A:3387:HIS:HB3	1:A:3473:ALA:HB2	1.80	0.63
1:B:4607:SER:O	1:B:4611:LEU:HG	1.98	0.63
1:A:1811:PRO:O	1:A:1815:VAL:HG23	1.98	0.63
1:A:3416:LYS:HE3	1:A:3418:GLU:HB3	1.80	0.63
1:A:3711:ALA:HA	1:A:3716:CYS:SG	2.39	0.63
1:A:4277:PHE:HB2	1:A:4363:LEU:HD12	1.79	0.63
1:B:1525:ILE:HA	1:B:1528:GLU:HB3	1.80	0.63
1:B:1607:ASP:O	1:B:1611:ARG:HG2	1.97	0.63
1:B:1780:THR:HG22	1:B:1784:LEU:HD12	1.80	0.63
1:B:3563:LEU:HD11	1:B:3845:ILE:HD11	1.79	0.63
1:A:3985:GLU:O	1:A:3989:ASP:HB2	1.97	0.63
1:A:4571:ARG:HA	1:A:4590:TRP:HZ3	1.63	0.63
1:A:2995:LEU:HA	1:A:2998:ILE:HD11	1.80	0.63
1:B:1523:GLY:HA3	1:B:1580:TYR:CE2	2.33	0.63
1:B:3238:ILE:HD11	1:B:3617:TRP:HZ2	1.63	0.63
1:A:2938:PHE:HB3	1:A:2941:VAL:HG23	1.80	0.63
1:A:2972:VAL:O	1:A:2976:LEU:HB2	1.98	0.63
1:A:3482:THR:O	1:A:3486:TYR:HB2	1.99	0.63
1:A:3994:GLY:HA3	1:A:4087:LYS:CE	2.29	0.63
1:A:4310:ILE:O	1:A:4314:VAL:HB	1.99	0.63
1:A:2995:LEU:HD23	1:A:2998:ILE:HD11	1.80	0.63
1:A:3063:GLY:HA2	1:A:3136:GLN:HB3	1.81	0.63
1:B:3841:ALA:O	1:B:3842:SER:CB	2.35	0.63
1:A:2000:CYS:SG	1:A:2031:LEU:HD11	2.37	0.63
1:A:3255:VAL:HA	1:A:3259:HIS:CD2	2.33	0.63
1:A:3445:THR:HG23	1:A:3449:ARG:NH1	2.14	0.63
1:A:4269:ARG:CZ	1:A:4383:VAL:HG11	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1592:ASP:O	1:B:1596:ASN:HB2	1.99	0.63
1:B:3035:LEU:CD2	1:B:3068:LYS:HB3	2.28	0.63
1:B:4133:LEU:HD23	1:B:4230:LEU:HD23	1.79	0.63
1:B:2711:LEU:HD12	1:B:2714:PHE:HD2	1.63	0.63
1:B:2751:THR:HB	1:B:2756:THR:H	1.63	0.63
1:A:2250:VAL:HB	1:A:2425:MET:HE2	1.80	0.62
1:A:3300:LYS:HA	1:A:3564:LEU:HD11	1.81	0.62
1:A:3647:TRP:CH2	1:A:3663:ILE:HD12	2.34	0.62
1:A:3725:ASN:H	1:A:3725:ASN:ND2	1.96	0.62
1:A:4049:GLY:O	1:A:4050:LYS:O	2.17	0.62
1:B:2841:ASN:HD22	1:B:2841:ASN:N	1.97	0.62
1:A:1922:LEU:HD13	1:A:1938:PHE:HD1	1.63	0.62
1:B:3865:ILE:O	1:B:3869:VAL:HG23	1.98	0.62
1:B:4194:PRO:O	1:B:4197:LEU:HB2	1.99	0.62
1:A:2247:ARG:HB2	1:A:2249:LEU:HG	1.81	0.62
1:A:2542:ASN:O	1:A:2546:VAL:HG23	1.99	0.62
1:A:3599:LEU:HD11	1:A:3638:LEU:HD13	1.80	0.62
1:B:2877:ARG:HB3	1:B:2881:ARG:HH12	1.63	0.62
1:A:1695:ALA:HB1	1:A:2019:CYS:SG	2.39	0.62
1:A:2205:PRO:HG2	1:A:2265:ILE:HD11	1.81	0.62
1:A:1743:GLY:HA3	1:A:1753:THR:HA	1.81	0.62
1:A:1975:PRO:HD2	1:A:2101:ILE:HA	1.80	0.62
1:A:2546:VAL:HA	1:A:2549:ILE:HD12	1.80	0.62
1:A:2793:ASN:ND2	1:A:2793:ASN:N	2.44	0.62
1:B:2080:GLY:HA2	1:B:2086:ASN:ND2	2.14	0.62
1:A:1927:ILE:HD13	1:A:1991:LEU:HD22	1.79	0.62
1:A:3011:HIS:ND1	1:A:3143:VAL:HG23	2.15	0.62
1:B:2277:PRO:HA	1:B:2398:GLN:HG3	1.81	0.62
1:B:3844:ASN:O	1:B:3848:ASP:CB	2.47	0.62
1:B:2584:SER:HB3	1:B:2813:ILE:HB	1.82	0.62
1:A:1957:TYR:CD2	1:A:1987:LEU:HD13	2.35	0.62
1:A:2645:ASP:O	1:A:2647:VAL:HG23	1.98	0.62
1:A:3557:VAL:O	1:A:3561:ILE:HG13	2.00	0.62
1:B:2199:ILE:HG23	1:B:2203:MET:HG3	1.81	0.62
1:B:2206:LYS:HB3	1:B:2413:MET:HB3	1.81	0.62
1:A:3408:VAL:HG11	1:A:3477:LEU:HG	1.82	0.62
1:A:3452:ILE:HG21	1:A:3485:THR:HG21	1.82	0.62
1:A:3634:VAL:HB	1:A:3635:PRO:HD3	1.82	0.62
1:A:3812:LYS:HB3	1:A:3875:VAL:HG22	1.81	0.62
1:A:4389:ARG:HG2	1:A:4389:ARG:HH11	1.65	0.62
1:A:3566:ASN:HB3	1:A:3855:LEU:HD22	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4568:PHE:O	1:A:4572:MET:HG2	2.00	0.62
1:B:1726:PHE:CD2	1:B:1729:LEU:HD22	2.35	0.62
1:B:4410:LEU:HD22	1:B:4411:PRO:HD2	1.81	0.62
1:A:1967:ARG:HH22	1:A:2069:GLN:HG3	1.63	0.61
1:A:2151:ALA:O	1:A:2155:VAL:HG12	1.99	0.61
1:A:4402:ILE:HD12	1:A:4402:ILE:H	1.65	0.61
1:A:2357:GLY:O	1:A:2397:VAL:HG12	2.00	0.61
1:A:2954:ASN:H	1:A:2954:ASN:ND2	1.97	0.61
1:A:3445:THR:N	1:A:3446:PRO:HD2	2.16	0.61
1:B:2275:VAL:HG13	1:B:2397:VAL:HG13	1.82	0.61
1:A:2090:ASN:HD22	1:A:2090:ASN:C	2.02	0.61
1:A:2912:LEU:C	1:A:2913:PHE:HD2	2.04	0.61
1:A:3909:TYR:CE1	1:A:3959:LEU:HA	2.35	0.61
1:B:2212:ILE:N	1:B:2213:PRO:HD2	2.15	0.61
1:A:2239:LYS:HA	1:A:2239:LYS:HE3	1.81	0.61
1:A:2243:ILE:HD12	1:A:2292:ALA:HB2	1.82	0.61
1:A:2670:LEU:HG	1:A:2789:VAL:HG22	1.83	0.61
1:A:3271:ILE:O	1:A:3275:ARG:HB2	2.00	0.61
1:B:2208:VAL:HG23	1:B:2211:ASP:HB2	1.81	0.61
1:B:2704:ALA:HB2	1:B:3085:GLU:OE2	1.98	0.61
1:B:3664:MET:O	1:B:3668:PHE:HB3	1.99	0.61
1:B:4402:ILE:HD12	1:B:4402:ILE:N	2.14	0.61
1:A:3260:TYR:O	1:A:3264:ILE:HG12	2.01	0.61
1:A:3731:ASN:N	1:A:3731:ASN:HD22	1.97	0.61
1:A:2258:LYS:HD3	1:A:2261:GLN:HG3	1.83	0.61
1:A:2262:LEU:HD11	1:A:2274:MET:HE2	1.81	0.61
1:A:2272:VAL:O	1:A:2394:MET:HA	2.00	0.61
1:A:2791:ALA:O	1:A:2792:CYS:HB3	2.00	0.61
1:A:2869:GLN:HB3	1:A:2872:TYR:CD1	2.36	0.61
1:A:4329:ILE:HD12	1:A:4331:TRP:CZ2	2.35	0.61
1:B:2140:SER:O	1:B:2142:GLN:HG2	1.99	0.61
1:B:3673:LEU:HB2	1:B:3781:VAL:CG1	2.26	0.61
1:A:2948:ARG:HD3	1:A:2950:ILE:HG13	1.82	0.61
1:A:4076:ILE:HD11	1:A:4104:SER:O	2.00	0.61
1:A:4589:VAL:HG12	1:A:4638:ASN:O	2.01	0.61
1:A:2088:PRO:HB2	1:A:2090:ASN:ND2	2.15	0.61
1:A:3474:CYS:HA	1:A:3477:LEU:HD22	1.83	0.61
1:A:3686:MET:HE2	1:A:3696:LYS:HD2	1.81	0.61
1:A:4600:TYR:O	1:A:4604:THR:HG23	2.01	0.61
1:B:2305:VAL:HG22	1:B:2354:ILE:HB	1.83	0.61
1:B:2732:PRO:HG3	1:B:2739:LEU:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3587:THR:HB	1:A:3628:PHE:HA	1.82	0.61
1:B:2586:GLY:HA2	1:B:2815:LEU:HD13	1.81	0.61
1:B:3291:LYS:HD2	1:B:3835:LEU:HG	1.81	0.61
1:B:4189:ASN:N	1:B:4218:THR:HG22	2.14	0.61
1:A:2190:TYR:O	1:A:2194:VAL:HG23	2.01	0.61
1:A:2985:ASP:O	1:A:2987:PRO:HD3	2.01	0.61
1:A:4624:SER:HB2	1:A:4668:THR:HB	1.83	0.61
1:B:3650:ASN:OD1	1:B:3688:GLN:HA	2.00	0.61
1:A:2152:LEU:O	1:A:2156:LEU:HG	2.01	0.60
1:A:3385:LYS:O	1:A:3389:ASP:HB2	2.00	0.60
1:A:4396:ILE:HA	1:A:4399:LEU:HD12	1.83	0.60
1:A:4503:ILE:HG23	1:A:4575:LEU:HB3	1.82	0.60
1:B:2582:GLY:HA2	1:B:2585:MET:HE3	1.81	0.60
1:B:2869:GLN:HB2	1:B:2872:TYR:CG	2.36	0.60
1:B:4135:CYS:HA	1:B:4219:SER:O	2.00	0.60
1:A:1687:LEU:HD22	1:A:1705:LEU:HD23	1.83	0.60
1:A:3137:VAL:HG13	1:A:3141:LEU:HD23	1.82	0.60
1:A:3994:GLY:HA3	1:A:4087:LYS:HE2	1.83	0.60
1:A:4590:TRP:CE3	1:A:4593:GLY:HA3	2.36	0.60
1:B:3559:ARG:NE	1:B:3846:LEU:O	2.35	0.60
1:A:3239:GLY:O	1:A:3243:ILE:HG13	2.00	0.60
1:A:4536:SER:HB2	1:A:4548:LYS:NZ	2.16	0.60
1:A:4636:SER:HB3	1:A:4670:THR:HA	1.83	0.60
1:A:2144:HIS:HB2	1:A:2413:MET:SD	2.40	0.60
1:A:2408:ILE:O	1:A:2409:SER:C	2.38	0.60
1:A:2903:ARG:NH2	1:A:2950:ILE:HA	2.16	0.60
1:B:2231:ILE:HG21	1:B:2264:GLN:HE22	1.64	0.60
1:B:2364:VAL:HB	1:B:2407:THR:HG21	1.82	0.60
1:B:3219:ILE:O	1:B:3221:PRO:HD3	2.00	0.60
1:A:2118:PHE:CE1	1:A:2163:LYS:HD2	2.37	0.60
1:A:2309:LYS:HG3	1:A:2358:ASP:HB2	1.84	0.60
1:A:3345:GLN:O	1:A:3349:ASP:HB2	2.01	0.60
1:A:4690:VAL:O	1:A:4700:LEU:HB2	2.01	0.60
1:A:1763:GLY:H	1:A:1764:PRO:HD3	1.65	0.60
1:A:2250:VAL:HB	1:A:2425:MET:CE	2.31	0.60
1:A:2532:ARG:HG3	1:A:2808:LEU:O	2.01	0.60
1:A:2917:LEU:HD12	1:A:2923:LYS:HA	1.84	0.60
1:A:3075:GLU:O	1:A:3078:VAL:HG12	2.01	0.60
1:A:3562:ALA:O	1:A:3566:ASN:HB2	2.02	0.60
1:A:3718:LEU:HD23	1:A:3762:ILE:HG13	1.84	0.60
1:A:4092:ASP:OD2	1:A:4093:ARG:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4182:GLY:HA3	1:A:4212:SER:OG	2.02	0.60
1:B:1820:GLN:HE22	1:B:1990:GLN:NE2	1.99	0.60
1:B:2976:LEU:HD12	1:B:2990:LEU:HD11	1.84	0.60
1:B:3813:ARG:HB3	1:B:3879:ILE:HD13	1.83	0.60
1:A:3598:PHE:CD2	1:A:3634:VAL:HG11	2.36	0.60
1:A:3994:GLY:HA3	1:A:4087:LYS:NZ	2.17	0.60
1:A:4503:ILE:HA	1:A:4575:LEU:HD23	1.84	0.60
1:B:1752:VAL:HG22	1:B:1811:PRO:HG3	1.84	0.60
1:B:1908:TYR:CE1	1:B:1958:LEU:HD22	2.37	0.60
1:A:2239:LYS:HD3	1:A:2295:GLN:NE2	2.16	0.60
1:A:2730:LEU:HD23	1:A:2783:LEU:HD23	1.83	0.60
1:A:4574:GLN:NE2	1:A:4590:TRP:HB3	2.17	0.60
1:B:2129:VAL:HG22	1:B:2130:PRO:CD	2.30	0.60
1:B:2522:ARG:HD3	1:B:2585:MET:SD	2.42	0.60
1:B:4153:LEU:HB2	1:B:4155:LYS:HG2	1.83	0.60
1:B:4541:ILE:HA	1:B:4561:LEU:HD11	1.83	0.60
1:A:1921:VAL:HG23	1:A:1922:LEU:CD2	2.32	0.60
1:A:3040:ILE:HG22	1:A:3042:VAL:HG13	1.82	0.60
1:A:3803:LYS:HE3	1:A:3810:HIS:NE2	2.17	0.60
1:B:1608:VAL:HG21	1:B:1669:MET:HG3	1.83	0.60
1:B:3559:ARG:O	1:B:3563:LEU:HB2	2.02	0.60
1:B:4060:GLU:O	1:B:4064:VAL:HG23	2.02	0.60
1:A:2091:LEU:HD22	1:A:2095:PHE:CE1	2.37	0.60
1:A:2439:PHE:H	1:A:2495:GLN:HE22	1.48	0.60
1:A:3262:ASP:HB2	1:A:3670:ARG:HE	1.67	0.60
1:A:1604:VAL:HG11	1:A:1670:GLU:HA	1.84	0.59
1:A:3922:ASN:HD22	1:A:3922:ASN:N	2.00	0.59
1:A:4004:THR:OG1	1:A:4006:PRO:HD3	2.01	0.59
1:A:3969:LEU:HD12	1:A:4426:MET:HE2	1.82	0.59
1:B:3017:VAL:HG13	1:B:3174:GLY:O	2.02	0.59
1:A:4691:TYR:CD2	1:A:4696:ARG:HG2	2.36	0.59
1:B:1948:VAL:O	1:B:1950:THR:HG23	2.02	0.59
1:B:3671:TYR:HD2	1:B:3734:LEU:HA	1.67	0.59
1:B:4499:PHE:O	1:B:4503:ILE:HB	2.01	0.59
1:A:2864:PHE:HB3	1:A:2872:TYR:CD2	2.38	0.59
1:A:3785:ASN:HD22	1:A:3786:PHE:H	1.49	0.59
1:A:4644:LEU:HD12	1:A:4723:ILE:HG12	1.85	0.59
1:B:2494:VAL:HG11	1:B:2548:VAL:HB	1.84	0.59
1:A:2273:MET:SD	1:A:2408:ILE:HG22	2.42	0.59
1:A:3923:LEU:HD22	1:A:3947:ILE:HG12	1.83	0.59
1:A:4545:ILE:O	1:A:4561:LEU:HD21	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4715:ASN:O	1:A:4719:ARG:HB2	2.02	0.59
1:B:2377:LEU:O	1:B:2384:ARG:HA	2.02	0.59
1:B:2616:SER:HB3	1:B:2627:TRP:CE2	2.37	0.59
1:B:3673:LEU:HD22	1:B:3783:PHE:HE1	1.66	0.59
1:B:4124:LYS:O	1:B:4125:GLU:HG2	2.01	0.59
1:B:4137:VAL:HB	1:B:4138:PRO:HD2	1.85	0.59
1:B:4131:PRO:HD2	1:B:4232:MET:O	2.03	0.59
1:A:3672:PRO:HA	1:A:3782:THR:HG23	1.84	0.59
1:A:4190:ILE:HB	1:A:4197:LEU:HD11	1.83	0.59
1:A:4371:PRO:HA	1:A:4385:GLU:OE1	2.03	0.59
1:B:1612:TRP:O	1:B:1616:GLU:HB2	2.02	0.59
1:B:2000:CYS:HB3	1:B:2031:LEU:HD13	1.83	0.59
1:A:2528:PHE:CE1	1:A:2533:VAL:HG11	2.38	0.59
1:A:3730:LEU:HD11	1:A:3762:ILE:CD1	2.33	0.59
1:A:3731:ASN:HB2	1:A:3732:PRO:HD3	1.84	0.59
1:A:4157:TYR:OH	1:A:4186:LEU:HD22	2.03	0.59
1:A:4597:PRO:HB2	1:A:4700:LEU:HD21	1.85	0.59
1:B:3809:THR:HG21	1:B:3882:VAL:HG11	1.84	0.59
1:B:3897:TYR:HE1	1:B:3913:LEU:HA	1.67	0.59
1:B:4273:LEU:HD13	1:B:4363:LEU:O	2.02	0.59
1:B:3024:VAL:HG11	2:B:9010:ADP:H3'	1.83	0.59
1:A:2293:ILE:HG22	1:A:2350:ARG:NH2	2.12	0.59
1:A:2648:ILE:HG21	1:A:2827:ILE:HA	1.84	0.59
1:A:2938:PHE:HB3	1:A:2941:VAL:CG2	2.33	0.59
1:A:3924:LEU:HD23	1:A:3943:LEU:CD2	2.32	0.59
1:A:3951:THR:O	1:A:3955:VAL:HG23	2.02	0.59
1:B:1625:ILE:HD12	1:B:1628:LEU:HB2	1.83	0.59
1:B:2863:ARG:O	1:B:2863:ARG:HD3	2.02	0.59
1:A:3190:ARG:HA	1:A:3224:ARG:HH12	1.66	0.59
1:A:4494:PRO:HD3	1:A:4610:GLN:HE22	1.67	0.59
1:B:1546:VAL:HG22	1:B:1556:ARG:CZ	2.33	0.59
1:B:4207:LEU:O	1:B:4209:PRO:HD3	2.02	0.59
1:B:4424:ARG:NH2	1:B:4558:THR:HG21	2.17	0.59
1:A:2863:ARG:HD2	1:A:2864:PHE:CE1	2.36	0.59
1:A:3313:LEU:HD13	1:A:3550:SER:OG	2.03	0.59
1:A:4136:SER:O	1:A:4221:ILE:HD12	2.03	0.59
1:B:1477:LYS:H	1:B:1480:HIS:HD2	1.50	0.59
1:B:2273:MET:HG2	1:B:2395:PHE:HB2	1.84	0.59
1:B:2598:GLN:HG2	1:B:2612:LEU:HD23	1.85	0.59
1:B:4332:ILE:O	1:B:4336:THR:HG23	2.02	0.59
1:A:1538:TRP:HZ3	1:A:1656:ILE:HD13	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1978:THR:CG2	1:A:2103:PRO:HD3	2.33	0.59
1:A:2598:GLN:CG	1:A:2612:LEU:HB2	2.33	0.59
1:A:2991:PHE:HE1	1:A:2993:GLU:HB2	1.67	0.59
1:A:4572:MET:HA	1:A:4575:LEU:HD13	1.85	0.59
1:B:3788:VAL:HG11	1:B:3913:LEU:HD22	1.85	0.59
1:A:1763:GLY:N	1:A:1764:PRO:CD	2.65	0.58
1:A:1797:VAL:CG1	1:A:1855:ILE:HD11	2.33	0.58
1:A:1973:PHE:CE1	1:A:2099:ALA:HA	2.38	0.58
1:A:2278:SER:HA	1:A:2806:ARG:HH11	1.68	0.58
1:A:4066:GLN:NE2	1:A:4081:ARG:HD3	2.18	0.58
1:B:3233:TYR:CD2	1:B:3620:ARG:HG3	2.38	0.58
1:B:4109:ASP:HA	1:B:4112:ASN:HD22	1.67	0.58
1:A:1735:ASP:OD2	1:A:1737:GLU:HB2	2.03	0.58
1:B:2375:LYS:HB3	1:B:2387:LEU:HB3	1.84	0.58
1:B:4349:ASN:HB3	1:B:4352:ASP:OD2	2.03	0.58
1:B:4351:PHE:CD2	1:B:4689:PRO:HG3	2.38	0.58
1:A:2043:ILE:HG23	1:A:2073:ILE:HD12	1.84	0.58
1:A:3331:GLN:NE2	1:A:3533:LYS:HG3	2.18	0.58
1:A:3723:VAL:HG12	1:A:3766:THR:OG1	2.03	0.58
1:A:4193:ALA:O	1:A:4197:LEU:HD23	2.03	0.58
1:B:3027:ARG:HG2	1:B:3037:ILE:HD12	1.85	0.58
1:B:3170:LEU:HD21	1:B:3172:TRP:HE3	1.67	0.58
1:B:4030:PHE:HD1	1:B:4033:LEU:HD22	1.68	0.58
1:A:2153:LYS:O	1:A:2157:VAL:HG23	2.03	0.58
1:A:3830:LEU:HB3	1:A:3858:LEU:HD13	1.86	0.58
1:A:4251:THR:HG23	1:A:4303:LEU:CD2	2.30	0.58
1:A:4349:ASN:HD22	1:A:4352:ASP:H	1.51	0.58
1:A:4368:ALA:HA	1:A:4373:PHE:CE1	2.38	0.58
1:B:1901:ASN:HD22	1:B:1901:ASN:N	2.01	0.58
1:B:2166:CYS:HA	1:B:2190:TYR:OH	2.03	0.58
1:B:3182:PHE:O	1:B:3186:SER:HB2	2.03	0.58
1:A:2087:LEU:HB2	1:A:2092:LYS:HG3	1.86	0.58
1:A:2361:PRO:HD3	1:A:2402:TYR:O	2.03	0.58
1:A:3803:LYS:HG3	1:A:3810:HIS:CD2	2.39	0.58
1:A:4003:GLU:HG3	1:B:2842:LEU:CD2	2.34	0.58
1:A:4032:LYS:HG3	1:A:4069:LEU:HD11	1.83	0.58
1:B:1884:HIS:O	1:B:1888:VAL:HG23	2.03	0.58
1:B:3620:ARG:HH11	1:B:3620:ARG:HG2	1.69	0.58
1:A:1950:THR:HB	1:A:1951:PRO:HD2	1.84	0.58
1:A:2212:ILE:N	1:A:2213:PRO:HD2	2.18	0.58
1:B:1821:ILE:HG21	1:B:1914:TYR:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2338:ARG:HD2	1:B:2346:GLU:OE1	2.04	0.58
1:A:1849:GLU:HG3	1:A:1893:GLN:OE1	2.03	0.58
1:B:1719:GLN:HA	1:B:1722:PHE:CE2	2.38	0.58
1:B:2997:HIS:O	1:B:3001:ILE:HG13	2.03	0.58
1:B:3013:LEU:HD22	1:B:3164:LEU:HD12	1.85	0.58
1:B:4388:THR:HG23	1:B:4391:HIS:HD2	1.68	0.58
1:A:3615:ARG:O	1:A:3619:ILE:HG13	2.03	0.58
1:A:4572:MET:HA	1:A:4575:LEU:CD1	2.34	0.58
1:B:1855:ILE:HG22	1:B:1859:LEU:HD12	1.85	0.58
1:B:3923:LEU:HD22	1:B:3947:ILE:HG23	1.85	0.58
1:A:1863:VAL:HG21	1:A:2115:SER:O	2.04	0.58
1:A:2135:CYS:HB3	1:A:2147:PHE:CZ	2.38	0.58
1:B:1748:GLU:HB3	1:B:1943:ILE:HD12	1.85	0.58
1:A:1995:VAL:HA	1:A:2022:TRP:HB2	1.84	0.58
1:B:1643:PHE:CE2	1:B:1647:LEU:HD11	2.39	0.58
1:B:1926:VAL:HG12	1:B:1928:HIS:CD2	2.39	0.58
1:B:3192:LEU:HD11	1:B:3268:VAL:HA	1.84	0.58
1:B:3263:PHE:O	1:B:3267:VAL:HG23	2.03	0.58
1:B:4648:VAL:HA	1:B:4662:THR:HG21	1.85	0.58
1:A:2838:LEU:O	1:A:2839:LEU:HD23	2.04	0.57
1:A:3255:VAL:O	1:A:3255:VAL:HG13	2.03	0.57
1:A:3337:LYS:HA	1:A:3341:ALA:HB3	1.86	0.57
1:A:3595:ALA:HB1	1:A:3638:LEU:HD11	1.85	0.57
1:A:4559:ILE:HG23	1:A:4559:ILE:O	2.04	0.57
1:B:1939:GLU:O	1:B:1941:LEU:HG	2.03	0.57
1:B:1813:GLN:NE2	1:B:1941:LEU:H	2.02	0.57
1:B:2863:ARG:HG3	1:B:2925:TRP:CE2	2.39	0.57
1:B:3785:ASN:HD21	1:B:3787:THR:CG2	2.16	0.57
1:A:3274:LYS:O	1:A:3278:LEU:HD23	2.04	0.57
1:A:3487:TYR:O	1:A:3490:ILE:HG12	2.04	0.57
1:A:4284:ARG:HG3	1:A:4408:LEU:HB3	1.86	0.57
1:A:1982:GLU:HG3	2:A:9001:ADP:H3'	1.86	0.57
1:B:1554:LEU:HD22	1:B:1609:GLN:OE1	2.03	0.57
1:B:4189:ASN:ND2	1:B:4189:ASN:N	2.53	0.57
1:A:2739:LEU:HD23	1:A:2740:VAL:N	2.19	0.57
1:B:2869:GLN:HB2	1:B:2872:TYR:CD2	2.39	0.57
1:B:3674:VAL:HG13	1:B:3786:PHE:HD2	1.68	0.57
1:B:3897:TYR:CE1	1:B:3913:LEU:HA	2.38	0.57
1:B:4255:ILE:HD11	1:B:4307:LEU:HD11	1.85	0.57
1:A:2560:MET:HG3	1:A:2561:SER:N	2.16	0.57
1:A:2839:LEU:HD11	1:A:2890:ILE:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3668:PHE:CD1	1:A:3672:PRO:HD3	2.39	0.57
1:A:4277:PHE:HB2	1:A:4363:LEU:CD1	2.34	0.57
1:B:1888:VAL:O	1:B:1892:LEU:HD12	2.04	0.57
1:B:2533:VAL:HB	1:B:2581:LEU:CD2	2.30	0.57
1:A:3909:TYR:OH	1:A:3960:LEU:HG	2.04	0.57
1:A:4313:TRP:HB3	1:A:4330:PRO:HG2	1.86	0.57
1:B:1687:LEU:HD21	1:B:1706:LEU:CD2	2.33	0.57
1:B:1889:VAL:HA	1:B:1892:LEU:HD13	1.86	0.57
1:B:2219:LEU:CD1	1:B:2228:LEU:HD11	2.35	0.57
1:B:2235:GLN:HE22	1:B:2296:VAL:HG13	1.68	0.57
1:B:2417:SER:O	1:B:2420:ILE:HG12	2.03	0.57
1:B:2578:MET:HE1	1:B:2612:LEU:HD12	1.86	0.57
1:B:4379:ILE:O	1:B:4379:ILE:HG13	2.05	0.57
1:A:2053:ASN:O	1:A:2054:SER:C	2.42	0.57
1:A:2195:LEU:O	1:A:2199:ILE:HG12	2.04	0.57
1:A:2252:LYS:O	1:A:2256:VAL:HG23	2.05	0.57
1:A:2873:ILE:HD12	1:A:2873:ILE:H	1.68	0.57
1:A:3863:THR:O	1:A:3867:LEU:HB3	2.04	0.57
1:B:2835:LEU:HD11	1:B:2890:ILE:HD12	1.85	0.57
1:B:2841:ASN:HD22	1:B:2842:LEU:N	2.02	0.57
1:B:3638:LEU:HD12	1:B:3663:ILE:HG21	1.86	0.57
1:B:4318:SER:HB3	1:B:4324:ILE:HD11	1.85	0.57
1:A:2616:SER:HB3	1:A:2627:TRP:CE2	2.40	0.57
1:A:4288:ILE:HG23	1:A:4292:TRP:O	2.04	0.57
1:B:2270:HIS:HA	1:B:2392:ARG:HH11	1.70	0.57
1:B:1591:TRP:O	1:B:1595:LEU:HB2	2.05	0.57
1:A:1718:ILE:HG22	1:A:1722:PHE:CE2	2.40	0.57
1:A:4245:LYS:HD2	1:A:4399:LEU:O	2.04	0.57
1:B:2540:LEU:HD12	1:B:2662:ALA:HB3	1.85	0.57
1:B:3238:ILE:HG12	1:B:3601:TYR:CD2	2.40	0.57
1:B:3793:LEU:HD23	1:B:3894:SER:HA	1.86	0.57
1:A:1681:LYS:O	1:A:1685:GLU:HG3	2.04	0.57
1:A:1978:THR:HG22	1:A:2103:PRO:HD3	1.87	0.57
1:A:4050:LYS:O	1:A:4051:ASP:C	2.42	0.57
1:A:4415:GLU:OE2	1:A:4415:GLU:HA	2.05	0.57
1:B:2586:GLY:HA2	1:B:2815:LEU:CD1	2.34	0.57
1:B:3912:SER:HB3	1:B:4231:ARG:HG2	1.86	0.57
1:B:4313:TRP:HB3	1:B:4330:PRO:HG2	1.87	0.57
1:A:2989:VAL:HG13	1:A:3187:GLU:CD	2.25	0.56
1:A:3266:GLN:HE21	1:A:3270:LEU:CD2	2.18	0.56
1:A:3439:ASP:HB3	1:A:3442:LYS:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3571:ARG:HB3	1:A:3571:ARG:HH11	1.69	0.56
1:A:3291:LYS:HG3	1:A:3835:LEU:HD22	1.86	0.56
1:A:4132:LEU:HD23	1:A:4236:PHE:HE2	1.70	0.56
1:A:4375:LEU:HD11	1:A:4383:VAL:CG2	2.30	0.56
1:B:1537:PHE:O	1:B:1541:LEU:HB2	2.05	0.56
1:B:3274:LYS:HE3	1:B:3637:PHE:CE2	2.39	0.56
1:B:3614:MET:O	1:B:3618:MET:HG3	2.04	0.56
1:B:4043:ASP:HB3	1:B:4059:PRO:HB3	1.87	0.56
1:B:4543:LYS:HD2	1:B:4545:ILE:HD13	1.87	0.56
1:A:1978:THR:HG21	1:A:2101:ILE:O	2.05	0.56
1:A:1927:ILE:HD13	1:A:1991:LEU:CD2	2.35	0.56
1:A:2121:ALA:O	1:A:2122:GLU:C	2.43	0.56
1:A:4132:LEU:HD13	1:A:4216:PHE:CE1	2.40	0.56
1:A:4432:LYS:C	1:A:4434:GLN:H	2.08	0.56
1:B:4618:ASN:N	1:B:4618:ASN:HD22	2.02	0.56
1:A:2675:PRO:HG2	1:A:2678:SER:HB3	1.88	0.56
1:A:2979:PHE:HE2	1:A:3028:PHE:HA	1.70	0.56
1:A:3195:GLU:OE1	1:A:3224:ARG:HB2	2.04	0.56
1:B:1554:LEU:HB3	1:B:1609:GLN:NE2	2.09	0.56
1:B:3893:CYS:SG	1:B:3947:ILE:HG21	2.44	0.56
1:A:2560:MET:CE	1:A:2564:ASN:HD22	2.18	0.56
1:A:3299:VAL:HG21	1:A:3563:LEU:HD23	1.87	0.56
1:A:3567:LEU:CD2	1:A:3855:LEU:HD11	2.36	0.56
1:A:3813:ARG:HB2	1:A:3813:ARG:CZ	2.34	0.56
1:A:3813:ARG:HB3	1:A:3879:ILE:HD11	1.88	0.56
1:B:1531:LEU:HD13	1:B:1587:GLU:OE2	2.05	0.56
1:B:1956:CYS:SG	1:B:1983:THR:HG21	2.45	0.56
1:A:2229:GLN:HB3	1:A:2230:PRO:HD2	1.86	0.56
1:A:3584:GLN:O	1:A:3588:VAL:HG23	2.06	0.56
1:A:3598:PHE:HA	1:A:3602:ILE:HG12	1.88	0.56
1:A:3682:MET:SD	1:A:3696:LYS:HE2	2.46	0.56
1:A:4277:PHE:O	1:A:4281:ILE:HG12	2.06	0.56
1:A:2806:ARG:HH12	2:A:9002:ADP:PB	2.28	0.56
1:B:2660:LEU:HD21	1:B:2672:LEU:HD21	1.87	0.56
1:B:4213:PHE:CZ	1:B:4215:LEU:HB2	2.40	0.56
1:A:1752:VAL:HG22	1:A:1811:PRO:HG3	1.86	0.56
1:A:1947:LEU:HD11	1:A:1982:GLU:HB3	1.87	0.56
1:A:4117:ASP:OD1	1:A:4119:ALA:HB3	2.06	0.56
1:B:2144:HIS:HB3	1:B:2400:LEU:HD12	1.86	0.56
1:B:2739:LEU:HB3	1:B:2786:ILE:HG12	1.87	0.56
1:A:2087:LEU:O	1:A:2092:LYS:HD2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1948:VAL:O	1:A:1950:THR:HG23	2.06	0.56
1:A:2284:THR:O	1:A:2288:VAL:HG23	2.06	0.56
1:A:4534:LEU:HA	1:A:4537:LEU:HD12	1.88	0.56
1:B:2560:MET:HG3	1:B:2564:ASN:HB2	1.88	0.56
1:B:2670:LEU:HD11	1:B:2789:VAL:HG13	1.88	0.56
1:B:2841:ASN:ND2	1:B:2841:ASN:N	2.54	0.56
1:A:2954:ASN:N	1:A:2954:ASN:ND2	2.53	0.56
1:A:3445:THR:HA	1:A:3449:ARG:HD3	1.87	0.56
1:A:3848:ASP:HB3	1:A:3851:VAL:HG12	1.88	0.56
1:A:3887:ASN:HB3	1:A:3888:PRO:HD3	1.88	0.56
1:B:2841:ASN:ND2	1:B:2842:LEU:N	2.52	0.56
1:B:3043:ASN:H	1:B:3043:ASN:HD22	1.54	0.56
1:B:3758:PRO:HG2	1:B:3759:SER:H	1.71	0.56
1:A:1687:LEU:HD21	1:A:1706:LEU:HD23	1.88	0.56
1:A:1862:SER:O	1:A:1865:GLN:HG2	2.06	0.56
1:A:2748:LEU:N	1:A:2749:PRO:CD	2.69	0.56
1:A:2906:ALA:O	1:A:2910:LEU:HG	2.05	0.56
1:A:2941:VAL:HG12	1:A:2942:ASN:N	2.20	0.56
1:A:3376:ALA:O	1:A:3380:VAL:HG23	2.06	0.56
1:A:3813:ARG:HH22	1:A:3817:LEU:CD1	2.18	0.56
1:A:4622:HIS:HE2	1:A:4678:ILE:CG2	2.16	0.56
1:B:1479:ARG:HB2	1:B:1479:ARG:CZ	2.35	0.56
1:B:2081:TYR:O	1:B:2084:ARG:HD2	2.06	0.56
1:B:2163:LYS:HB2	1:B:2194:VAL:HG11	1.87	0.56
1:A:2381:ASN:OD1	1:A:2383:GLU:HB2	2.06	0.56
1:A:3404:ALA:HA	1:A:3462:PHE:HE1	1.71	0.56
1:A:4589:VAL:HG12	1:A:4639:VAL:HA	1.88	0.56
1:B:2276:GLY:O	1:B:2398:GLN:HA	2.06	0.56
1:B:3729:VAL:HG22	1:B:3729:VAL:O	2.05	0.56
1:A:1957:TYR:O	1:A:1961:THR:HG23	2.07	0.55
1:A:3292:LEU:HD22	1:A:3567:LEU:HD22	1.89	0.55
1:B:3908:LEU:HD22	1:B:4221:ILE:HG23	1.87	0.55
1:B:4147:ASP:HA	1:B:4157:TYR:OH	2.06	0.55
1:B:4190:ILE:HG12	1:B:4219:SER:HB2	1.86	0.55
1:B:4389:ARG:HG2	1:B:4389:ARG:NH1	2.21	0.55
1:B:4535:ARG:HG2	1:B:4535:ARG:HH11	1.71	0.55
1:A:1800:HIS:HB2	1:A:1858:ASN:HD22	1.71	0.55
1:A:2910:LEU:HD23	1:A:2930:ILE:CD1	2.33	0.55
1:A:3673:LEU:HD13	1:A:3783:PHE:CE1	2.40	0.55
1:A:4005:ILE:HG22	1:A:4008:LEU:HB2	1.87	0.55
1:B:2829:GLY:HA2	1:B:2850:THR:OG1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3700:LEU:CD2	1:B:3701:ASP:H	2.18	0.55
1:B:4388:THR:O	1:B:4391:HIS:HB2	2.07	0.55
1:A:1699:PHE:HE1	1:A:2015:GLY:HA3	1.71	0.55
1:A:1926:VAL:HG12	1:A:1928:HIS:CD2	2.41	0.55
1:A:2615:TYR:HD1	1:A:2624:TRP:HB3	1.72	0.55
1:A:2650:THR:H	1:A:2653:THR:HB	1.71	0.55
1:A:2991:PHE:CE1	1:A:2993:GLU:HB2	2.40	0.55
1:A:4590:TRP:CD2	1:A:4593:GLY:HA3	2.42	0.55
1:B:2101:ILE:O	1:B:2103:PRO:HD3	2.07	0.55
1:B:2440:ASP:OD1	1:B:2441:PRO:HD2	2.06	0.55
1:B:2603:THR:O	1:B:2605:VAL:HG13	2.06	0.55
1:A:3066:GLU:HG2	1:A:3136:GLN:HE21	1.71	0.55
1:A:3368:LYS:C	1:A:3374:ILE:HD11	2.26	0.55
1:A:3419:TRP:CE3	1:A:3422:ILE:HD11	2.42	0.55
1:B:2369:SER:HA	1:B:2372:ASP:OD2	2.07	0.55
1:A:1625:ILE:HG23	1:A:1626:ASN:H	1.70	0.55
1:A:2606:PRO:HG2	1:A:2615:TYR:CE1	2.42	0.55
1:A:3555:ASN:HB3	1:A:3559:ARG:HH11	1.71	0.55
1:B:2774:ARG:HB2	1:B:2781:ILE:CD1	2.37	0.55
1:A:1763:GLY:H	1:A:1764:PRO:CD	2.19	0.55
1:A:1875:PHE:O	1:A:1879:ILE:HG12	2.07	0.55
1:A:3471:SER:HB3	1:A:3474:CYS:SG	2.47	0.55
1:A:3930:LEU:HG	1:A:3939:ARG:NH1	2.21	0.55
1:A:3991:LEU:O	1:A:3991:LEU:HD12	2.07	0.55
1:A:4094:VAL:HB	1:A:4423:ALA:HB1	1.88	0.55
1:B:1872:ARG:HH12	1:B:2164:ARG:HD3	1.71	0.55
1:A:1608:VAL:HG13	1:A:1676:LEU:CD1	2.37	0.55
1:A:1797:VAL:HG13	1:A:1855:ILE:HD11	1.89	0.55
1:A:2274:MET:CE	1:A:2286:TRP:HB3	2.30	0.55
1:A:2765:GLN:O	1:A:2769:LYS:HB2	2.07	0.55
1:A:3453:THR:O	1:A:3458:GLU:HG2	2.06	0.55
1:A:4319:LYS:H	1:A:4321:ARG:NH2	2.04	0.55
1:B:1555:VAL:HG23	1:B:1609:GLN:HE21	1.70	0.55
1:B:3018:SER:O	1:B:3256:THR:HB	2.06	0.55
1:B:3306:LEU:HD22	1:B:3553:VAL:HG13	1.89	0.55
1:B:4132:LEU:HD13	1:B:4216:PHE:CE1	2.42	0.55
1:B:4644:LEU:HG	1:B:4664:ILE:HD11	1.88	0.55
1:B:4624:SER:HB2	1:B:4668:THR:HB	1.87	0.55
1:B:4685:LYS:HE2	1:B:4706:PRO:HD3	1.88	0.55
1:A:2262:LEU:HD11	1:A:2274:MET:CE	2.37	0.55
1:A:2446:GLN:O	1:A:2450:ASN:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4571:ARG:O	1:A:4574:GLN:HB3	2.07	0.55
1:A:1907:LEU:HA	1:A:1911:ARG:NH1	2.21	0.55
1:A:2439:PHE:H	1:A:2495:GLN:NE2	2.05	0.55
1:A:3647:TRP:HH2	1:A:3663:ILE:HD12	1.71	0.55
1:B:2000:CYS:C	1:B:2002:GLU:H	2.10	0.55
1:B:2612:LEU:HD11	1:B:2624:TRP:CH2	2.42	0.55
1:B:2779:THR:O	1:B:2781:ILE:HD12	2.06	0.55
1:B:2863:ARG:HD2	1:B:2864:PHE:CE1	2.42	0.55
1:B:2918:VAL:HG13	1:B:3172:TRP:NE1	2.22	0.55
1:B:4095:LEU:HD11	1:B:4422:LYS:CB	2.37	0.55
1:A:3965:LEU:HG	1:A:4426:MET:CE	2.37	0.55
1:A:4495:LEU:CD1	1:A:4495:LEU:H	2.16	0.55
1:B:4024:ARG:HA	1:B:4030:PHE:O	2.07	0.55
1:A:1755:LYS:HG2	1:A:1780:THR:HG23	1.89	0.54
1:A:2648:ILE:HD13	1:A:2831:PHE:CZ	2.42	0.54
1:A:3253:ASN:HB2	1:A:3604:PHE:CE2	2.42	0.54
1:A:3373:ILE:CD1	1:A:3373:ILE:H	2.06	0.54
1:B:2898:LEU:O	1:B:2902:VAL:HG23	2.06	0.54
1:B:4101:PHE:O	1:B:4105:VAL:HG23	2.07	0.54
1:B:4571:ARG:HD3	1:B:4593:GLY:O	2.06	0.54
1:A:1908:TYR:CE1	1:A:1958:LEU:HD13	2.42	0.54
1:A:2204:ILE:N	1:A:2205:PRO:CD	2.69	0.54
1:A:2196:LEU:HD21	1:A:2219:LEU:HD22	1.89	0.54
1:A:2275:VAL:HG13	1:A:2415:TRP:CE3	2.42	0.54
1:A:3266:GLN:HE21	1:A:3270:LEU:HD21	1.71	0.54
1:A:3390:GLU:O	1:A:3394:LEU:HG	2.07	0.54
1:A:4413:ASN:ND2	1:A:4660:LEU:HG	2.22	0.54
1:B:1694:PHE:CE1	1:B:1770:LEU:HD13	2.42	0.54
1:B:2832:ASN:HA	1:B:2835:LEU:HB3	1.89	0.54
1:B:3652:LEU:HB2	1:B:3684:PHE:CD1	2.43	0.54
1:A:1890:ARG:O	1:A:1894:LYS:HG3	2.07	0.54
1:A:2431:LEU:HD11	1:A:2506:PHE:CD2	2.42	0.54
1:A:3647:TRP:HB3	1:A:3652:LEU:CD2	2.37	0.54
1:A:3830:LEU:HB3	1:A:3858:LEU:CD1	2.37	0.54
1:B:2200:ASN:HA	1:B:2204:ILE:HG12	1.89	0.54
1:B:2968:LEU:O	1:B:2972:VAL:HG23	2.07	0.54
1:A:3086:ARG:HH11	1:A:3096:VAL:CG1	2.20	0.54
1:A:4319:LYS:N	1:A:4321:ARG:NH2	2.55	0.54
1:B:2283:THR:HA	1:B:2286:TRP:NE1	2.22	0.54
1:B:2331:LEU:HD21	1:B:2773:TRP:CD1	2.43	0.54
1:B:4013:SER:H	1:B:4016:GLN:HE21	1.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1691:ARG:HD3	1:A:1698:TYR:CD1	2.41	0.54
1:A:3336:ILE:O	1:A:3340:ASP:HB3	2.08	0.54
1:A:3700:LEU:CG	1:A:3701:ASP:H	2.20	0.54
1:A:4121:ILE:O	1:A:4126:VAL:HG12	2.06	0.54
1:A:4553:TYR:CD1	1:A:4553:TYR:N	2.75	0.54
1:B:1548:TYR:CD1	1:B:1549:GLN:HG2	2.43	0.54
1:B:1655:LEU:HD22	1:B:1655:LEU:H	1.72	0.54
1:B:2024:CYS:HA	1:B:2074:PHE:O	2.06	0.54
1:B:2498:CYS:SG	1:B:2569:ILE:HG13	2.47	0.54
1:B:2803:LEU:HD12	1:B:2808:LEU:HD21	1.90	0.54
1:B:2990:LEU:HD23	1:B:2994:VAL:HG11	1.90	0.54
1:B:4323:ASN:ND2	1:B:4323:ASN:N	2.54	0.54
1:A:1951:PRO:HG2	1:A:2104:ASP:OD1	2.08	0.54
1:A:2014:VAL:HG22	1:A:2065:ILE:HD13	1.90	0.54
1:A:2766:MET:HB3	1:A:2783:LEU:CD1	2.36	0.54
1:A:3602:ILE:O	1:A:3604:PHE:N	2.40	0.54
1:A:4122:VAL:HG23	1:A:4214:ARG:HD2	1.89	0.54
1:B:1782:ALA:HA	1:B:1938:PHE:CE1	2.42	0.54
1:B:2603:THR:CG2	1:B:2604:PRO:HD2	2.31	0.54
1:B:2874:TYR:OH	1:B:2916:ARG:HD2	2.08	0.54
1:A:2121:ALA:O	1:A:2124:LEU:N	2.41	0.54
1:A:3423:ARG:O	1:A:3426:ILE:HG22	2.07	0.54
1:A:4254:GLY:O	1:A:4256:PRO:HD3	2.07	0.54
1:B:2519:ALA:HB2	1:B:2593:PHE:CZ	2.43	0.54
1:B:2516:LEU:HD12	1:B:2581:LEU:HD13	1.90	0.54
1:B:4080:PHE:HB2	1:B:4101:PHE:CE1	2.43	0.54
1:A:2031:LEU:HD23	1:A:2035:ILE:HG22	1.89	0.54
1:A:2751:THR:HB	1:A:2755:GLY:HA2	1.90	0.54
1:A:3263:PHE:O	1:A:3267:VAL:HG23	2.07	0.54
1:A:3399:THR:N	1:A:3400:PRO:HD2	2.23	0.54
1:A:4013:SER:H	1:A:4016:GLN:HB3	1.73	0.54
1:A:4348:ASP:OD2	1:A:4349:ASN:N	2.40	0.54
1:B:2641:VAL:HG12	1:B:2642:ALA:N	2.23	0.54
1:B:4058:ILE:HD12	1:B:4082:LYS:HG2	1.89	0.54
1:A:1724:LYS:HD3	1:A:2382:GLY:O	2.07	0.54
1:A:2266:LEU:HD21	1:A:2394:MET:HE3	1.89	0.54
1:A:2447:GLN:HE22	1:A:2492:LEU:CD2	2.21	0.54
1:A:3043:ASN:N	1:A:3043:ASN:HD22	2.05	0.54
1:A:4547:PRO:HB2	1:A:4550:TRP:CE3	2.43	0.54
1:B:1982:GLU:HA	1:B:1982:GLU:OE1	2.08	0.54
1:B:1975:PRO:HD2	1:B:2100:MET:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2500:ALA:HA	1:B:2503:SER:OG	2.08	0.54
1:B:2636:VAL:HG21	1:B:2648:ILE:HD11	1.89	0.54
1:B:2929:LYS:O	1:B:2933:VAL:HG23	2.07	0.54
1:B:4336:THR:O	1:B:4340:SER:HB3	2.08	0.54
1:A:1822:VAL:HG12	1:A:1826:GLN:OE1	2.07	0.54
1:A:2128:ILE:HG13	1:A:2152:LEU:HD21	1.90	0.54
1:A:2689:ARG:C	1:A:2691:PHE:H	2.12	0.54
1:A:2819:PRO:HD2	1:A:2876:PRO:HG2	1.89	0.54
1:A:3109:MET:O	1:A:3112:CYS:HB2	2.08	0.54
1:A:3373:ILE:HD13	1:A:3373:ILE:N	2.12	0.54
1:A:3760:PHE:CG	1:A:3761:MET:N	2.75	0.54
1:A:3827:LEU:O	1:A:3831:GLU:HG3	2.08	0.54
1:A:4318:SER:CA	1:A:4321:ARG:HH21	2.19	0.54
1:B:2653:THR:O	1:B:2657:VAL:HG23	2.08	0.54
1:B:3255:VAL:HA	1:B:3259:HIS:CD2	2.43	0.54
1:B:3677:PRO:CD	1:B:3787:THR:HG22	2.38	0.54
1:B:4257:ALA:HB2	1:B:4389:ARG:HD3	1.90	0.54
1:A:2653:THR:O	1:A:2657:VAL:HG23	2.07	0.53
1:B:1910:MET:CA	1:B:1929:MET:HG3	2.39	0.53
1:B:4639:VAL:O	1:B:4666:ILE:HD12	2.08	0.53
1:A:2969:ARG:HG3	1:A:2970:GLU:N	2.23	0.53
1:A:3218:ALA:O	1:A:3219:ILE:C	2.47	0.53
1:A:3698:SER:HB2	1:A:3721:GLN:HB2	1.90	0.53
1:A:4375:LEU:CD1	1:A:4383:VAL:HG23	2.32	0.53
1:A:4553:TYR:N	1:A:4553:TYR:HD1	2.05	0.53
1:B:1581:TYR:O	1:B:1585:GLU:HB2	2.08	0.53
1:B:1646:ILE:O	1:B:1650:VAL:HG23	2.08	0.53
1:B:1831:LEU:HD13	1:B:1900:GLY:O	2.07	0.53
1:B:2863:ARG:HG3	1:B:2925:TRP:CZ2	2.44	0.53
1:B:3342:ARG:O	1:B:3345:GLN:HB3	2.07	0.53
1:A:2825:THR:O	1:A:2829:GLY:HA3	2.08	0.53
1:A:3418:GLU:O	1:A:3422:ILE:HG23	2.08	0.53
1:A:4012:LEU:N	1:A:4012:LEU:HD12	2.23	0.53
1:B:1655:LEU:HB2	1:B:1658:GLU:CB	2.31	0.53
1:B:1920:ASN:HD22	1:B:1921:VAL:N	2.06	0.53
1:B:2050:LEU:HG	1:B:2067:LEU:HD21	1.89	0.53
1:A:1699:PHE:HD1	1:A:1699:PHE:N	2.06	0.53
1:A:1803:TYR:HE1	1:A:1855:ILE:HD13	1.74	0.53
1:A:1827:VAL:O	1:A:1831:LEU:HG	2.08	0.53
1:A:4376:VAL:HG12	1:A:4379:ILE:HG22	1.90	0.53
1:A:4596:ASN:C	1:A:4596:ASN:HD22	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2118:PHE:CE1	1:B:2163:LYS:HG3	2.44	0.53
1:B:2309:LYS:CE	1:B:2756:THR:HG21	2.39	0.53
1:B:3677:PRO:HG3	1:B:3787:THR:HG22	1.89	0.53
1:B:3700:LEU:HD13	1:B:3701:ASP:H	1.71	0.53
1:A:1650:VAL:HG13	1:A:1659:VAL:HG11	1.91	0.53
1:A:2704:ALA:O	1:A:2706:THR:HG23	2.08	0.53
1:A:2994:VAL:O	1:A:2998:ILE:HG12	2.08	0.53
1:B:4671:TRP:C	1:B:4672:LYS:HG2	2.29	0.53
1:A:2016:LEU:HD21	1:A:2023:GLY:HA3	1.89	0.53
1:A:2274:MET:HE1	1:A:2286:TRP:HD1	1.73	0.53
1:A:2341:ASP:O	1:A:2343:VAL:N	2.40	0.53
1:B:2515:VAL:HG11	1:B:2577:LEU:HD13	1.90	0.53
1:B:2540:LEU:HD12	1:B:2662:ALA:CB	2.39	0.53
1:B:3067:GLU:O	1:B:3069:ILE:HG13	2.08	0.53
1:B:3109:MET:O	1:B:3129:LEU:HD21	2.09	0.53
1:B:4098:SER:O	1:B:4102:VAL:HG23	2.09	0.53
1:A:1709:ILE:HA	1:A:1766:ILE:HG12	1.90	0.53
1:A:1820:GLN:HB3	1:A:1912:TYR:CD2	2.44	0.53
1:A:2397:VAL:HG21	1:A:2400:LEU:CD2	2.38	0.53
1:A:2745:GLU:HB3	1:A:2748:LEU:HD12	1.91	0.53
1:A:2863:ARG:HD3	1:A:2863:ARG:C	2.29	0.53
1:B:1948:VAL:O	1:B:1950:THR:N	2.41	0.53
1:B:4260:MET:HG3	1:B:4271:TYR:CD1	2.43	0.53
1:B:4693:ASN:ND2	1:B:4693:ASN:H	2.06	0.53
1:A:2274:MET:HE1	1:A:2286:TRP:CD1	2.44	0.53
1:A:2548:VAL:HG11	1:A:2565:GLN:HE21	1.73	0.53
1:A:3700:LEU:HD13	1:A:3701:ASP:H	1.73	0.53
1:A:4036:HIS:HD2	1:A:4044:TRP:HE1	1.56	0.53
1:B:1558:TRP:CZ3	1:B:1606:ILE:HB	2.44	0.53
1:B:1541:LEU:HD23	1:B:1656:ILE:HG21	1.91	0.53
1:B:1932:ALA:HB1	1:B:1934:PHE:CE2	2.44	0.53
1:B:4278:HIS:CD2	1:B:4303:LEU:HB2	2.44	0.53
1:B:4597:PRO:HG2	1:B:4692:LEU:HD13	1.90	0.53
1:A:2701:PHE:CG	1:A:2705:THR:HG21	2.43	0.53
1:A:3821:GLY:O	1:A:3825:VAL:HG23	2.08	0.53
1:A:4207:LEU:O	1:A:4209:PRO:HD3	2.08	0.53
1:B:2280:GLY:O	1:B:2420:ILE:HD11	2.08	0.53
1:B:2497:GLU:O	1:B:2501:ILE:HG13	2.08	0.53
1:A:1538:TRP:CH2	1:A:1565:LEU:HG	2.44	0.53
1:A:2142:GLN:HE21	1:A:2208:VAL:HG11	1.75	0.53
1:A:2359:VAL:CG2	1:A:2397:VAL:HG11	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3802:LEU:CD2	1:A:3882:VAL:HG12	2.39	0.53
1:A:4122:VAL:HG22	1:A:4122:VAL:O	2.08	0.53
1:A:4188:LYS:HA	1:A:4218:THR:HB	1.90	0.53
1:B:1538:TRP:HZ3	1:B:1656:ILE:HD13	1.73	0.53
1:B:3895:ARG:HH12	1:B:3977:LYS:HG2	1.73	0.53
1:A:2598:GLN:HG2	1:A:2612:LEU:HD22	1.90	0.52
1:A:3956:THR:OG1	1:A:3964:LYS:HE3	2.08	0.52
1:A:2017:CYS:HB3	1:A:2067:LEU:HD12	1.90	0.52
1:A:3555:ASN:O	1:A:3559:ARG:HD3	2.09	0.52
1:A:3776:ASP:O	1:A:3780:ARG:HG2	2.09	0.52
1:A:3927:ASN:HB3	1:A:3930:LEU:CB	2.39	0.52
1:B:1525:ILE:HG13	1:B:1529:GLU:HG2	1.91	0.52
1:B:1612:TRP:CZ2	1:B:1644:ILE:HD11	2.44	0.52
1:B:1863:VAL:HG21	1:B:2115:SER:O	2.09	0.52
1:B:2205:PRO:HA	1:B:2261:GLN:OE1	2.09	0.52
1:B:2661:HIS:O	1:B:2665:SER:HB3	2.09	0.52
1:B:2818:PHE:HD1	1:B:2876:PRO:HD3	1.74	0.52
1:B:2704:ALA:HB2	1:B:3085:GLU:CD	2.29	0.52
1:A:2142:GLN:HE21	1:A:2208:VAL:CG1	2.22	0.52
1:A:2297:ASP:C	1:A:2299:ILE:H	2.12	0.52
1:A:2275:VAL:HB	1:A:2413:MET:HE2	1.90	0.52
1:A:2431:LEU:HD21	1:A:2506:PHE:CE2	2.44	0.52
1:A:2578:MET:CE	1:A:2613:LEU:HA	2.39	0.52
1:A:3233:TYR:O	1:A:3237:THR:HG23	2.10	0.52
1:A:3878:GLU:O	1:A:3882:VAL:HG23	2.10	0.52
1:A:4693:ASN:N	1:A:4693:ASN:ND2	2.57	0.52
1:B:3023:SER:HB2	2:B:9010:ADP:O1A	2.09	0.52
1:B:3059:LEU:HD23	1:B:3137:VAL:HG11	1.92	0.52
1:B:4118:MET:O	1:B:4122:VAL:HG22	2.08	0.52
1:A:2956:LEU:HD21	1:A:2971:TYR:CG	2.44	0.52
1:B:2838:LEU:O	1:B:2840:PRO:HD3	2.10	0.52
1:A:3439:ASP:C	1:A:3441:LYS:H	2.13	0.52
1:A:4048:PHE:HD1	1:A:4048:PHE:H	1.58	0.52
1:B:1930:ALA:HB2	1:B:1958:LEU:HD11	1.91	0.52
1:B:2036:LEU:HD23	1:B:2040:SER:HB3	1.90	0.52
1:B:2532:ARG:HH11	1:B:2532:ARG:HG2	1.74	0.52
1:B:3017:VAL:HG11	1:B:3175:GLU:CD	2.30	0.52
1:B:3082:SER:HA	1:B:3085:GLU:OE1	2.09	0.52
1:B:3681:ALA:HB2	1:B:3786:PHE:CG	2.45	0.52
1:A:1690:GLN:HE22	1:A:1766:ILE:CG2	2.17	0.52
1:A:2258:LYS:HE3	1:A:2415:TRP:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2857:TYR:HA	1:A:2913:PHE:CE1	2.36	0.52
1:A:3225:ASP:O	1:A:3229:SER:HB3	2.08	0.52
1:A:3415:LYS:O	1:A:3417:LEU:HD12	2.09	0.52
1:A:4103:CYS:SG	1:A:4108:GLU:HA	2.50	0.52
1:A:4371:PRO:O	1:A:4372:ASP:HB2	2.09	0.52
1:B:2144:HIS:HB3	1:B:2400:LEU:CD1	2.40	0.52
1:B:2907:HIS:HA	1:B:2910:LEU:HD12	1.92	0.52
1:B:4323:ASN:HD22	1:B:4323:ASN:N	2.06	0.52
1:A:2139:LEU:O	1:A:2140:SER:C	2.48	0.52
1:A:2142:GLN:HG2	1:A:2208:VAL:HG11	1.91	0.52
1:A:2531:LEU:HD12	1:A:2809:ARG:HD2	1.91	0.52
1:A:2708:GLU:O	1:A:2711:LEU:HB2	2.10	0.52
1:A:2793:ASN:HD22	1:A:2793:ASN:H	1.57	0.52
1:A:4006:PRO:C	1:A:4008:LEU:H	2.11	0.52
1:A:4413:ASN:HD21	1:A:4660:LEU:HG	1.74	0.52
1:B:1600:SER:O	1:B:1604:VAL:HG23	2.10	0.52
1:B:2282:LYS:NZ	1:B:2282:LYS:HB2	2.25	0.52
1:B:2748:LEU:N	1:B:2749:PRO:CD	2.73	0.52
1:B:4156:GLN:O	1:B:4183:THR:HB	2.10	0.52
1:A:1629:LEU:HD11	1:A:1686:TYR:CD2	2.44	0.52
1:A:2003:GLY:O	1:A:2004:PHE:C	2.49	0.52
1:A:2105:ARG:HG2	1:A:2105:ARG:NH1	2.23	0.52
1:A:2528:PHE:HE1	1:A:2533:VAL:HG11	1.73	0.52
1:A:3373:ILE:HG12	1:A:3374:ILE:H	1.74	0.52
1:A:3653:PRO:HB2	1:A:3658:CYS:SG	2.50	0.52
1:A:4288:ILE:CG2	1:A:4289:PRO:HA	2.40	0.52
1:B:1565:LEU:HD23	1:B:1595:LEU:CD1	2.39	0.52
1:B:1873:LYS:HB3	1:B:1943:ILE:HG21	1.90	0.52
1:B:2231:ILE:HD11	1:B:2260:LEU:HG	1.91	0.52
1:B:2506:PHE:CE1	1:B:2512:VAL:HG21	2.43	0.52
1:B:2531:LEU:HD13	1:B:2809:ARG:NH2	2.24	0.52
1:B:3233:TYR:O	1:B:3237:THR:HG23	2.09	0.52
1:B:4270:ILE:CG2	1:B:4310:ILE:HD13	2.34	0.52
1:A:2408:ILE:O	1:A:2410:ARG:N	2.43	0.52
1:A:3698:SER:C	1:A:3700:LEU:H	2.13	0.52
1:A:3256:THR:OG1	1:A:3779:SER:HB3	2.09	0.52
1:A:3924:LEU:HD23	1:A:3943:LEU:HD21	1.91	0.52
1:A:3988:TRP:NE1	1:A:3992:LEU:HD11	2.25	0.52
1:B:2741:VAL:HB	1:B:2788:PHE:CD2	2.44	0.52
1:B:2906:ALA:O	1:B:2909:ALA:HB3	2.10	0.52
1:B:4157:TYR:HB2	1:B:4184:TRP:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1964:LEU:HD12	1:A:2074:PHE:HZ	1.75	0.52
1:A:2641:VAL:HG12	1:A:2831:PHE:HB3	1.92	0.52
1:A:2893:MET:HE3	1:A:2896:CYS:HB2	1.92	0.52
1:A:3813:ARG:HG3	1:A:3814:SER:N	2.24	0.52
1:A:4033:LEU:HD13	1:A:4062:TRP:CE2	2.45	0.52
1:B:4423:ALA:O	1:B:4427:ILE:HG12	2.10	0.52
1:A:1715:ILE:HD11	1:A:1760:ILE:HG21	1.92	0.51
1:A:2561:SER:OG	1:A:2564:ASN:HB3	2.09	0.51
1:B:1957:TYR:O	1:B:1961:THR:HG23	2.10	0.51
1:B:2820:SER:OG	1:B:2823:SER:HB2	2.09	0.51
1:B:2910:LEU:O	1:B:2914:GLN:HB3	2.10	0.51
1:B:3843:GLY:O	1:B:3845:ILE:N	2.35	0.51
1:B:3563:LEU:HD11	1:B:3845:ILE:CD1	2.40	0.51
1:A:2898:LEU:CD1	1:A:2941:VAL:HG22	2.40	0.51
1:A:4213:PHE:CZ	1:A:4215:LEU:HB2	2.45	0.51
1:A:4269:ARG:HG2	1:A:4369:PHE:CE1	2.45	0.51
1:B:1817:LEU:O	1:B:1821:ILE:HG13	2.10	0.51
1:B:2764:ARG:HD2	1:B:2806:ARG:O	2.10	0.51
1:B:4690:VAL:HG21	1:B:4701:PHE:CE1	2.45	0.51
1:A:2271:GLY:O	1:A:2411:CYS:HA	2.10	0.51
1:A:2535:ASN:ND2	1:A:2668:ARG:HH12	2.08	0.51
1:A:3567:LEU:HD23	1:A:3855:LEU:HD11	1.92	0.51
1:A:4136:SER:O	1:A:4220:GLU:HA	2.10	0.51
1:B:1937:GLY:HA3	1:B:1992:GLY:O	2.10	0.51
1:B:1975:PRO:HG2	1:B:1978:THR:HG21	1.91	0.51
1:B:2549:ILE:O	1:B:2553:GLN:HB2	2.09	0.51
1:B:3595:ALA:O	1:B:3598:PHE:HB3	2.11	0.51
1:B:3682:MET:SD	1:B:3696:LYS:HE2	2.49	0.51
1:B:4671:TRP:O	1:B:4672:LYS:HG2	2.11	0.51
1:B:4690:VAL:HG11	1:B:4701:PHE:CZ	2.44	0.51
1:A:1959:THR:HG21	1:A:2098:MET:HB2	1.92	0.51
1:A:2144:HIS:O	1:A:2413:MET:HG2	2.10	0.51
1:A:2732:PRO:CG	1:A:2739:LEU:HB2	2.40	0.51
1:A:2918:VAL:HG13	1:A:3172:TRP:NE1	2.26	0.51
1:A:3366:LEU:O	1:A:3366:LEU:HD12	2.10	0.51
1:A:3730:LEU:HD13	1:A:3734:LEU:HD21	1.91	0.51
1:A:3969:LEU:HD12	1:A:4426:MET:CE	2.41	0.51
1:B:2311:ILE:HB	1:B:2315:GLN:HE21	1.76	0.51
1:B:3902:GLU:C	1:B:3904:SER:H	2.13	0.51
1:B:4636:SER:HA	1:B:4670:THR:HG22	1.91	0.51
1:B:4592:GLY:HA3	1:B:4725:SER:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1611:ARG:NH1	1:A:1611:ARG:HG3	2.23	0.51
1:A:2370:LEU:HD12	1:A:2377:LEU:CB	2.41	0.51
1:A:2586:GLY:HA2	1:A:2815:LEU:CD1	2.37	0.51
1:A:3114:GLU:HG2	1:A:3118:ARG:HH12	1.74	0.51
1:A:3353:LYS:O	1:A:3357:VAL:HG23	2.10	0.51
1:A:3452:ILE:CG2	1:A:3485:THR:HG21	2.39	0.51
1:A:3670:ARG:O	1:A:3782:THR:HG22	2.10	0.51
1:A:3768:ASP:HB3	1:A:3771:ALA:HB2	1.93	0.51
1:A:4025:GLN:HG3	1:B:2899:GLU:OE2	2.10	0.51
1:A:4240:ASN:OD1	1:A:4240:ASN:N	2.38	0.51
1:B:1920:ASN:ND2	1:B:1921:VAL:H	2.09	0.51
1:B:2238:LYS:HA	1:B:2241:GLN:HE21	1.74	0.51
1:B:3843:GLY:C	1:B:3845:ILE:H	2.13	0.51
1:A:1625:ILE:HG23	1:A:1626:ASN:OD1	2.11	0.51
1:A:2738:TRP:CE2	1:A:2785:LYS:HG2	2.46	0.51
1:A:4200:LEU:HD22	1:A:4204:LEU:CD1	2.41	0.51
1:B:1662:ILE:HB	1:B:1665:ILE:CG2	2.40	0.51
1:B:1971:ASN:O	1:B:2097:SER:HA	2.11	0.51
1:B:2815:LEU:HD23	1:B:2815:LEU:C	2.31	0.51
1:B:3889:MET:CE	1:B:3943:LEU:HB3	2.41	0.51
1:B:4086:MET:HG3	1:B:4097:TYR:CD2	2.45	0.51
1:B:4222:HIS:CG	1:B:4223:PRO:HD2	2.45	0.51
1:B:4340:SER:HB2	1:B:4357:TYR:OH	2.10	0.51
1:B:2638:THR:O	1:B:2641:VAL:HG23	2.10	0.51
1:B:3306:LEU:HD13	1:B:3557:VAL:HG22	1.92	0.51
1:A:2732:PRO:HG3	1:A:2739:LEU:HB2	1.93	0.51
1:A:3289:LEU:HD13	1:A:3293:ARG:NH2	2.25	0.51
1:A:3721:GLN:NE2	1:A:4205:HIS:NE2	2.58	0.51
1:A:4384:PRO:HB3	1:A:4395:TRP:CD1	2.45	0.51
1:B:1556:ARG:HG2	1:B:1557:GLY:N	2.25	0.51
1:B:2219:LEU:HD13	1:B:2228:LEU:HD11	1.93	0.51
1:B:2643:SER:HB3	1:B:2646:VAL:HG23	1.93	0.51
1:B:2801:VAL:HG12	1:B:2802:GLN:N	2.25	0.51
1:B:2877:ARG:HB3	1:B:2881:ARG:NH1	2.26	0.51
1:B:2931:ASP:O	1:B:2935:LEU:HG	2.11	0.51
1:B:3063:GLY:HA2	1:B:3136:GLN:CB	2.41	0.51
1:B:3566:ASN:ND2	1:B:3859:LYS:NZ	2.59	0.51
1:B:4121:ILE:HA	1:B:4125:GLU:CG	2.32	0.51
1:B:4550:TRP:O	1:B:4552:TRP:N	2.40	0.51
1:A:1713:LYS:O	1:A:1715:ILE:N	2.44	0.51
1:A:2138:GLN:NE2	1:A:2218:LEU:HD21	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2327:TRP:CZ3	1:A:2380:PRO:HD2	2.46	0.51
1:A:2619:ILE:O	1:A:2619:ILE:HG13	2.11	0.51
1:A:2540:LEU:HD23	1:A:2662:ALA:HB3	1.92	0.51
1:A:4299:ASN:OD1	1:A:4301:ALA:HB3	2.11	0.51
1:A:4389:ARG:HH12	1:A:4393:MET:CE	2.24	0.51
1:A:4428:ASN:O	1:A:4432:LYS:HG2	2.10	0.51
1:B:1520:ALA:HA	1:B:1580:TYR:CE1	2.46	0.51
1:B:1639:ILE:HG21	1:B:1676:LEU:HG	1.93	0.51
1:B:2283:THR:HA	1:B:2286:TRP:HE1	1.76	0.51
1:B:2542:ASN:O	1:B:2546:VAL:HG23	2.10	0.51
1:B:2849:LEU:HD21	1:B:2886:LEU:HD13	1.93	0.51
1:B:2921:GLU:H	1:B:2921:GLU:CD	2.13	0.51
1:B:2968:LEU:CD2	1:B:2999:LEU:HD11	2.41	0.51
1:B:3219:ILE:CB	1:B:3220:PRO:CD	2.89	0.51
1:A:2204:ILE:HG13	1:A:2205:PRO:HD3	1.92	0.51
1:A:3032:MET:C	1:A:3034:GLY:H	2.15	0.51
1:A:3425:LYS:HA	1:A:3428:GLU:CG	2.41	0.51
1:A:4222:HIS:ND1	1:A:4223:PRO:HD2	2.26	0.51
1:B:1578:SER:C	1:B:1580:TYR:H	2.14	0.51
1:B:1823:TRP:O	1:B:1827:VAL:HG23	2.10	0.51
1:B:1892:LEU:HA	1:B:1895:CYS:SG	2.51	0.51
1:B:2199:ILE:O	1:B:2203:MET:HB2	2.11	0.51
1:B:3583:THR:O	1:B:3587:THR:HG23	2.11	0.51
1:B:3618:MET:HB3	1:B:3628:PHE:CZ	2.46	0.51
1:B:3790:PRO:HA	1:B:3898:PHE:CE2	2.46	0.51
1:A:2582:GLY:O	1:A:2585:MET:HB2	2.11	0.50
1:A:2839:LEU:HD22	1:A:2896:CYS:HB3	1.93	0.50
1:A:3116:ALA:HB1	1:A:3121:LEU:O	2.12	0.50
1:B:1573:SER:HA	1:B:1576:LYS:HE2	1.93	0.50
1:B:1527:LEU:HD22	1:B:1575:MET:HB2	1.92	0.50
1:B:1687:LEU:HD11	1:B:1706:LEU:HD21	1.93	0.50
1:B:4288:ILE:HG23	1:B:4289:PRO:HA	1.92	0.50
1:B:4644:LEU:HD13	1:B:4647:ALA:HB3	1.92	0.50
1:A:1776:GLU:HA	1:A:1779:SER:HB3	1.93	0.50
1:A:1963:ALA:HB1	1:A:2096:ARG:CG	2.41	0.50
1:A:2212:ILE:N	1:A:2213:PRO:CD	2.75	0.50
1:A:2856:PHE:CE1	1:A:2930:ILE:HG12	2.46	0.50
1:A:3923:LEU:HD11	1:A:3943:LEU:HA	1.94	0.50
1:B:1479:ARG:O	1:B:1483:ILE:HG13	2.11	0.50
1:B:1534:VAL:HG13	1:B:1568:HIS:CD2	2.42	0.50
1:B:2729:VAL:HG12	1:B:2782:LYS:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3038:TYR:CD2	1:B:3058:LEU:HD13	2.46	0.50
1:B:4267:ARG:NH2	1:B:4315:ASP:OD1	2.43	0.50
1:A:1719:GLN:HA	1:A:1722:PHE:CD2	2.46	0.50
1:A:4285:LEU:O	1:A:4288:ILE:HG13	2.10	0.50
1:B:1951:PRO:HG2	1:B:2104:ASP:OD2	2.10	0.50
1:B:4170:LEU:HD12	1:B:4171:ALA:N	2.26	0.50
1:B:4686:LEU:HD12	1:B:4687:SER:N	2.27	0.50
1:A:2049:ALA:O	1:A:2054:SER:HB3	2.12	0.50
1:A:2586:GLY:O	1:A:2590:ARG:HB2	2.10	0.50
1:A:3067:GLU:O	1:A:3069:ILE:HD12	2.12	0.50
1:A:4044:TRP:CE3	1:A:4048:PHE:HE1	2.29	0.50
1:A:4122:VAL:HA	1:A:4126:VAL:HG11	1.91	0.50
1:A:4326:PRO:HB3	1:A:4369:PHE:CD2	2.46	0.50
1:B:1907:LEU:HA	1:B:1911:ARG:NH1	2.26	0.50
1:B:1967:ARG:HG2	1:B:1967:ARG:HH11	1.75	0.50
1:B:2135:CYS:HB3	1:B:2139:LEU:HD12	1.92	0.50
1:B:2142:GLN:HB2	1:B:2145:TYR:CD1	2.46	0.50
1:A:2533:VAL:HB	1:A:2581:LEU:HA	1.94	0.50
1:A:2954:ASN:HD22	1:A:2954:ASN:N	2.02	0.50
1:A:3380:VAL:HG11	1:A:3435:ILE:CG2	2.41	0.50
1:A:3834:LEU:HA	1:A:3854:THR:HG21	1.93	0.50
1:A:4028:PRO:C	1:A:4030:PHE:H	2.15	0.50
1:A:4118:MET:HB3	1:A:4149:LEU:HD22	1.94	0.50
1:B:2865:THR:N	1:B:2868:ILE:HD12	2.26	0.50
1:A:2720:TYR:HE1	1:A:2781:ILE:HG21	1.76	0.50
1:A:4052:GLN:C	1:A:4054:GLY:H	2.14	0.50
1:B:1862:SER:O	1:B:1867:LEU:HD21	2.12	0.50
1:B:1926:VAL:HG22	1:B:1935:TYR:HE2	1.75	0.50
1:B:2367:LEU:HD12	1:B:2367:LEU:N	2.26	0.50
1:B:3691:ASP:C	1:B:3693:LYS:H	2.15	0.50
1:B:4111:LEU:N	1:B:4111:LEU:HD12	2.26	0.50
1:A:1971:ASN:ND2	1:A:2087:LEU:HD11	2.26	0.50
1:A:2197:ASN:O	1:A:2201:ASP:HB2	2.12	0.50
1:A:2627:TRP:O	1:A:2629:ASN:N	2.45	0.50
1:A:2913:PHE:CD2	1:A:2913:PHE:N	2.79	0.50
1:A:4388:THR:O	1:A:4391:HIS:HB2	2.12	0.50
1:A:4518:ALA:C	1:A:4520:LEU:H	2.15	0.50
1:B:1662:ILE:HB	1:B:1665:ILE:HG23	1.93	0.50
1:B:2723:THR:CG2	1:B:2727:GLU:HB2	2.42	0.50
1:B:4020:LEU:HD11	1:B:4033:LEU:HG	1.93	0.50
1:B:3105:PHE:O	1:B:3109:MET:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2918:VAL:HG22	1:B:3172:TRP:CD2	2.47	0.50
1:A:1639:ILE:HD11	1:A:1675:LEU:HB3	1.94	0.50
1:A:1889:VAL:HA	1:A:1892:LEU:HD12	1.94	0.50
1:A:3410:LEU:HA	1:A:3414:GLY:O	2.12	0.50
1:A:3433:THR:HG22	1:A:3437:ASN:HD22	1.75	0.50
1:A:3583:THR:O	1:A:3587:THR:HG23	2.11	0.50
1:A:3977:LYS:O	1:A:3979:THR:HG23	2.12	0.50
1:A:4078:SER:HA	1:A:4081:ARG:HD2	1.94	0.50
1:A:4185:VAL:HG12	1:A:4186:LEU:N	2.19	0.50
1:B:2989:VAL:HG13	1:B:3187:GLU:OE2	2.12	0.50
1:B:4644:LEU:O	1:B:4661:SER:HB2	2.11	0.50
1:A:1926:VAL:HG12	1:A:1928:HIS:NE2	2.26	0.49
1:A:2798:ALA:C	1:A:2800:ARG:H	2.14	0.49
1:A:4278:HIS:CD2	1:A:4343:TYR:OH	2.64	0.49
1:A:3992:LEU:HD22	1:A:4430:LEU:CB	2.41	0.49
1:B:1522:GLN:O	1:B:1525:ILE:HG22	2.11	0.49
1:B:1781:LEU:O	1:B:1814:LEU:HD21	2.12	0.49
1:B:2504:GLN:HA	1:B:2507:GLU:OE2	2.12	0.49
1:B:2976:LEU:HD11	1:B:2990:LEU:HD21	1.94	0.49
1:B:3061:ARG:HB3	1:B:3067:GLU:OE2	2.12	0.49
1:B:3181:LEU:CB	1:B:3232:VAL:HG13	2.42	0.49
1:B:4132:LEU:HD13	1:B:4216:PHE:CZ	2.47	0.49
1:B:4259:ARG:NH2	1:B:4307:LEU:HB3	2.27	0.49
1:B:4339:GLY:HA3	1:B:4360:LEU:HD11	1.93	0.49
1:A:2511:LEU:HD11	1:A:2574:LEU:HD21	1.94	0.49
1:A:3011:HIS:CE1	1:A:3143:VAL:HG23	2.47	0.49
1:A:3059:LEU:HD21	1:A:3090:LEU:HD13	1.94	0.49
1:A:3337:LYS:CB	1:A:3525:LEU:HD13	2.24	0.49
1:A:3919:ILE:HG21	1:A:3951:THR:HA	1.94	0.49
1:A:4055:GLU:HG3	1:A:4093:ARG:NH1	2.27	0.49
1:A:4054:GLY:O	1:A:4055:GLU:O	2.30	0.49
1:B:1494:ILE:HA	1:B:1497:LEU:HD12	1.93	0.49
1:B:3935:ASP:O	1:B:3939:ARG:HG3	2.12	0.49
1:B:4060:GLU:HA	1:B:4063:ILE:HD13	1.94	0.49
1:B:4402:ILE:CD1	1:B:4402:ILE:H	2.21	0.49
1:B:4596:ASN:HD22	1:B:4596:ASN:C	2.15	0.49
1:B:4642:MET:HG2	1:B:4725:SER:HA	1.94	0.49
1:B:2877:ARG:HG2	2:B:9009:ADP:H4'	1.94	0.49
1:A:1739:THR:O	1:A:1760:ILE:HG12	2.12	0.49
1:A:2057:VAL:HG22	1:A:2058:GLU:H	1.78	0.49
1:A:2018:GLN:HE21	1:A:2066:SER:HB3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2133:LYS:HD3	1:A:2133:LYS:O	2.12	0.49
1:A:2869:GLN:HG2	1:A:2871:HIS:CE1	2.47	0.49
1:A:3192:LEU:O	1:A:3224:ARG:NH2	2.46	0.49
1:A:3398:PRO:C	1:A:3400:PRO:HD2	2.33	0.49
1:A:3723:VAL:HG23	1:A:3764:LEU:HD22	1.94	0.49
1:A:4068:GLN:C	1:A:4070:SER:H	2.15	0.49
1:A:4365:THR:HB	1:A:4366:PRO:HD2	1.93	0.49
1:A:4574:GLN:HE22	1:A:4590:TRP:H	1.60	0.49
1:B:3135:SER:HA	1:B:3138:ARG:HG2	1.95	0.49
1:B:3700:LEU:CG	1:B:3701:ASP:H	2.23	0.49
1:A:1887:ASP:O	1:A:1891:GLN:HG3	2.12	0.49
1:A:2029:ASN:HD22	1:A:2030:ARG:N	2.11	0.49
1:A:2302:GLU:HG2	1:A:2304:HIS:CE1	2.46	0.49
1:A:2374:ASN:O	1:A:2375:LYS:HB2	2.11	0.49
1:A:3338:GLN:HA	1:A:3342:ARG:CB	2.42	0.49
1:A:3725:ASN:N	1:A:3725:ASN:ND2	2.58	0.49
1:A:4075:THR:HG23	1:A:4076:ILE:N	2.27	0.49
1:A:4122:VAL:HA	1:A:4126:VAL:CG1	2.42	0.49
1:A:4244:VAL:HG23	1:A:4403:SER:CB	2.42	0.49
1:B:3192:LEU:HD11	1:B:3268:VAL:HG22	1.94	0.49
1:A:1934:PHE:N	1:A:1934:PHE:CD2	2.81	0.49
1:A:2370:LEU:HD23	1:A:2387:LEU:HD22	1.95	0.49
1:A:3116:ALA:HB1	1:A:3123:LEU:HD12	1.94	0.49
1:A:3947:ILE:CG2	1:A:3948:PHE:N	2.76	0.49
1:B:2021:ALA:O	1:B:2071:MET:HA	2.13	0.49
1:B:3316:LYS:HD2	1:B:3546:ILE:HD12	1.94	0.49
1:A:1629:LEU:N	1:A:1630:PRO:HD3	2.28	0.49
1:A:1699:PHE:N	1:A:1699:PHE:CD1	2.77	0.49
1:A:1907:LEU:HA	1:A:1911:ARG:HH11	1.77	0.49
1:A:2029:ASN:HD22	1:A:2029:ASN:N	2.10	0.49
1:A:3217:MET:O	1:A:3218:ALA:C	2.50	0.49
1:A:3655:ASP:O	1:A:3659:ILE:HG13	2.13	0.49
1:A:3674:VAL:HG13	1:A:3786:PHE:HD2	1.78	0.49
1:B:2315:GLN:HB3	1:B:2775:THR:CG2	2.41	0.49
1:B:2832:ASN:HD22	1:B:2835:LEU:HD23	1.77	0.49
1:B:2839:LEU:HD22	1:B:2896:CYS:HB3	1.95	0.49
1:B:4012:LEU:N	1:B:4012:LEU:HD23	2.27	0.49
1:B:4313:TRP:HB3	1:B:4330:PRO:CG	2.42	0.49
1:A:2272:VAL:HA	1:A:2412:GLY:H	1.77	0.49
1:A:2848:ASN:HB3	1:A:2938:PHE:HE1	1.77	0.49
1:A:3039:THR:HG22	1:A:3040:ILE:N	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2612:LEU:HD11	1:B:2624:TRP:CZ3	2.48	0.49
1:B:4167:GLY:HA2	1:B:4170:LEU:HD11	1.93	0.49
1:A:2941:VAL:CG1	1:A:2942:ASN:N	2.76	0.49
1:A:2948:ARG:NH1	1:A:2948:ARG:HG2	2.28	0.49
1:A:3262:ASP:CB	1:A:3670:ARG:HE	2.25	0.49
1:A:3997:ASN:HD21	1:A:4001:ILE:HD11	1.77	0.49
1:A:4068:GLN:N	1:A:4073:GLN:HE21	2.11	0.49
1:A:4072:GLN:OE1	1:A:4077:VAL:HG21	2.11	0.49
1:A:4295:PHE:C	1:A:4295:PHE:CD2	2.86	0.49
1:B:2000:CYS:CB	1:B:2031:LEU:HD13	2.42	0.49
1:B:2517:GLU:O	1:B:2521:GLN:HG2	2.13	0.49
1:B:2677:GLY:HA3	1:B:2875:SER:OG	2.12	0.49
1:B:3991:LEU:HG	1:B:3992:LEU:HD23	1.94	0.49
1:B:4109:ASP:HA	1:B:4112:ASN:HD21	1.72	0.49
1:A:2208:VAL:HG22	1:A:2211:ASP:HB2	1.95	0.49
1:A:2610:ILE:HD12	1:A:2615:TYR:OH	2.13	0.49
1:A:3069:ILE:O	1:A:3141:LEU:O	2.30	0.49
1:A:3981:ASN:HD22	1:A:4076:ILE:CB	2.20	0.49
1:A:4230:LEU:HB3	1:A:4235:VAL:HG21	1.94	0.49
1:A:4536:SER:HB2	1:A:4548:LYS:HZ1	1.77	0.49
1:A:4548:LYS:O	1:A:4550:TRP:N	2.46	0.49
1:A:4596:ASN:ND2	1:A:4599:ALA:H	2.11	0.49
1:B:2723:THR:OG1	1:B:2724:PRO:HD2	2.13	0.49
1:B:4618:ASN:H	1:B:4618:ASN:ND2	2.11	0.49
1:A:1565:LEU:HD11	1:A:1598:VAL:HG12	1.94	0.49
1:A:1603:ASP:O	1:A:1606:ILE:HG22	2.13	0.49
1:A:1639:ILE:HG21	1:A:1676:LEU:HG	1.94	0.49
1:A:1800:HIS:HB2	1:A:1858:ASN:ND2	2.28	0.49
1:A:3180:ALA:O	1:A:3184:VAL:HG23	2.12	0.49
1:A:3370:GLU:O	1:A:3372:ALA:N	2.46	0.49
1:A:3689:TYR:CB	1:A:3694:ILE:HD11	2.21	0.49
1:A:4402:ILE:HD12	1:A:4402:ILE:N	2.26	0.49
1:B:1823:TRP:NE1	1:B:1885:GLN:HB3	2.27	0.49
1:B:1934:PHE:CD2	1:B:1934:PHE:N	2.81	0.49
1:B:1959:THR:HG21	1:B:2098:MET:SD	2.53	0.49
1:B:2241:GLN:HA	1:B:2244:ALA:HB3	1.93	0.49
1:B:2655:ARG:O	1:B:2659:VAL:HG23	2.13	0.49
1:B:3929:ASN:HB3	1:B:3942:TYR:CD1	2.47	0.49
1:B:4693:ASN:HD22	1:B:4693:ASN:N	2.09	0.49
1:A:1820:GLN:HE22	1:A:1990:GLN:HE22	1.60	0.48
1:A:2572:ARG:O	1:A:2575:TYR:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3017:VAL:HG22	1:A:3018:SER:N	2.27	0.48
1:A:3048:SER:HB2	1:A:3080:GLU:OE1	2.13	0.48
1:A:3457:LEU:HD11	1:A:3482:THR:HA	1.95	0.48
1:A:3598:PHE:O	1:A:3602:ILE:HB	2.11	0.48
1:B:1926:VAL:HG12	1:B:1928:HIS:NE2	2.28	0.48
1:B:2616:SER:HB3	1:B:2627:TRP:CD2	2.47	0.48
1:B:3540:ILE:O	1:B:3544:GLU:HG3	2.13	0.48
1:A:2720:TYR:CE1	1:A:2781:ILE:HG21	2.48	0.48
1:A:3150:ALA:O	1:A:3151:SER:C	2.51	0.48
1:A:3238:ILE:HG12	1:A:3601:TYR:HD2	1.69	0.48
1:A:4043:ASP:HB3	1:A:4059:PRO:HB3	1.95	0.48
1:A:4083:ILE:HD11	1:A:4098:SER:HA	1.94	0.48
1:A:4589:VAL:CG1	1:A:4639:VAL:HA	2.43	0.48
1:B:1934:PHE:HB3	1:B:1993:ARG:HH22	1.78	0.48
1:B:1813:GLN:NE2	1:B:1940:TYR:HA	2.17	0.48
1:B:2229:GLN:O	1:B:2230:PRO:O	2.30	0.48
1:B:2276:GLY:O	1:B:2282:LYS:HE2	2.13	0.48
1:A:4003:GLU:HG3	1:B:2842:LEU:HD23	1.95	0.48
1:B:2968:LEU:HG	1:B:2995:LEU:HD22	1.95	0.48
1:B:3295:THR:O	1:B:3299:VAL:HG23	2.12	0.48
1:B:4263:GLN:HA	1:B:4264:PRO:C	2.34	0.48
1:B:4513:ILE:HD12	1:B:4568:PHE:CE2	2.47	0.48
1:A:2088:PRO:C	1:A:2090:ASN:H	2.16	0.48
1:A:3007:GLN:NE2	1:A:3008:PRO:HD2	2.29	0.48
1:A:4133:LEU:HD21	1:A:4225:LEU:HD13	1.94	0.48
1:A:4604:THR:OG1	1:A:4671:TRP:HZ3	1.96	0.48
1:B:2604:PRO:O	1:B:2624:TRP:NE1	2.46	0.48
1:B:2720:TYR:CE1	1:B:2730:LEU:HD13	2.48	0.48
1:B:4306:ALA:HB1	1:B:4338:LEU:HD13	1.94	0.48
1:A:3145:PHE:CE2	1:A:3164:LEU:HD21	2.48	0.48
1:A:3920:PHE:O	1:A:3923:LEU:HB3	2.13	0.48
1:A:4133:LEU:HA	1:A:4217:MET:HB2	1.94	0.48
1:A:4335:ARG:HD3	1:A:4361:GLU:HA	1.96	0.48
1:B:1910:MET:HA	1:B:1929:MET:HG3	1.95	0.48
1:B:2080:GLY:HA3	1:B:2084:ARG:O	2.13	0.48
1:B:2621:ASP:C	1:B:2623:ASN:H	2.16	0.48
1:B:2782:LYS:HB2	1:B:2782:LYS:NZ	2.28	0.48
1:B:3673:LEU:HD13	1:B:3783:PHE:CE1	2.48	0.48
1:A:2273:MET:HG3	1:A:2413:MET:CE	2.44	0.48
1:A:2752:ASP:C	1:A:2754:TYR:H	2.17	0.48
1:A:3042:VAL:HB	1:A:3079:LEU:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3289:LEU:HD13	1:A:3293:ARG:HH22	1.77	0.48
1:A:3425:LYS:HA	1:A:3428:GLU:HG2	1.95	0.48
1:A:4047:PHE:HD2	1:A:4048:PHE:CD1	2.32	0.48
1:A:4190:ILE:HB	1:A:4197:LEU:HD21	1.94	0.48
1:A:4684:SER:O	1:A:4707:TYR:CE2	2.67	0.48
1:B:2025:PHE:HB2	1:B:2075:VAL:HG22	1.94	0.48
1:B:2641:VAL:CG2	1:B:2887:LEU:HD22	2.43	0.48
1:B:2774:ARG:HB2	1:B:2781:ILE:HD13	1.94	0.48
1:B:3677:PRO:HG3	1:B:3769:PRO:HB3	1.94	0.48
1:B:4024:ARG:HG3	1:B:4031:SER:O	2.14	0.48
1:A:2204:ILE:CG1	1:A:2205:PRO:HD3	2.44	0.48
1:A:2902:VAL:HG21	1:A:2941:VAL:HG21	1.95	0.48
1:A:2952:TYR:CE1	1:A:2962:PRO:HG3	2.48	0.48
1:A:3238:ILE:HD12	1:A:3238:ILE:N	2.28	0.48
1:A:3371:PRO:O	1:A:3372:ALA:C	2.52	0.48
1:A:3408:VAL:HG11	1:A:3477:LEU:CG	2.43	0.48
1:A:3487:TYR:O	1:A:3489:GLU:N	2.47	0.48
1:A:3664:MET:O	1:A:3668:PHE:HB3	2.13	0.48
1:A:3924:LEU:C	1:A:3925:ASN:HD22	2.15	0.48
1:A:4029:SER:CB	1:A:4081:ARG:HH12	2.25	0.48
1:A:4384:PRO:HB3	1:A:4395:TRP:CG	2.48	0.48
1:B:3196:ASN:ND2	1:B:3199:TYR:HB2	2.28	0.48
1:B:3911:PHE:CZ	1:B:3955:VAL:HG13	2.49	0.48
1:B:3990:PHE:CE2	1:B:4023:LEU:HD13	2.48	0.48
1:B:4410:LEU:CD2	1:B:4411:PRO:HD2	2.43	0.48
1:B:4653:GLN:OE1	1:B:4708:ASP:HA	2.14	0.48
1:A:1960:LEU:O	1:A:1964:LEU:N	2.39	0.48
1:A:1974:GLY:C	1:A:2079:PRO:HD3	2.34	0.48
1:A:1973:PHE:HE1	1:A:2099:ALA:CB	2.27	0.48
1:A:3323:LYS:HE3	1:A:3539:LEU:HG	1.95	0.48
1:A:3865:ILE:HA	1:A:3869:VAL:HG23	1.94	0.48
1:A:3891:LEU:HD21	1:A:3895:ARG:NH2	2.28	0.48
1:B:1525:ILE:HD12	1:B:1528:GLU:HB3	1.96	0.48
1:B:1694:PHE:CE1	1:B:1770:LEU:HB3	2.48	0.48
1:B:3011:HIS:ND1	1:B:3091:LEU:HD22	2.28	0.48
1:B:3677:PRO:HB3	1:B:3769:PRO:HD3	1.94	0.48
1:B:3887:ASN:N	1:B:3888:PRO:CD	2.77	0.48
1:B:4400:PRO:HG2	1:B:4407:TRP:CH2	2.49	0.48
1:B:4540:SER:HB2	1:B:4545:ILE:O	2.13	0.48
1:A:1974:GLY:CA	1:A:2079:PRO:HD3	2.44	0.48
1:A:3863:THR:O	1:A:3863:THR:HG22	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3987:GLU:HG3	1:A:4027:VAL:CG1	2.44	0.48
1:A:4184:TRP:CD1	1:A:4184:TRP:N	2.82	0.48
1:A:4406:ILE:HB	1:A:4412:GLU:OE2	2.14	0.48
1:A:4591:LEU:CD2	1:A:4601:ILE:HD11	2.42	0.48
1:B:2084:ARG:HH11	1:B:2084:ARG:HG2	1.79	0.48
1:B:3955:VAL:HG12	1:B:3959:LEU:HG	1.96	0.48
1:B:4070:SER:O	1:B:4071:ASN:C	2.52	0.48
1:A:1800:HIS:CB	1:A:1858:ASN:HD22	2.26	0.48
1:A:1701:GLY:HA2	1:A:2011:ARG:NH1	2.29	0.48
1:A:3397:PRO:HG2	1:A:3419:TRP:CE2	2.48	0.48
1:A:3473:ALA:O	1:A:3476:PRO:HD2	2.13	0.48
1:A:4132:LEU:HB2	1:A:4216:PHE:HD1	1.79	0.48
1:A:4655:THR:HG22	1:A:4708:ASP:HB2	1.96	0.48
1:B:3273:GLU:OE1	1:B:3667:ARG:NH2	2.47	0.48
1:B:3585:MET:HA	1:B:3588:VAL:HG23	1.96	0.48
1:B:3638:LEU:HB2	1:B:3663:ILE:HD12	1.96	0.48
1:B:3731:ASN:HB2	1:B:3732:PRO:HD3	1.94	0.48
1:B:1962:GLN:HB3	1:B:4341:THR:HG21	1.96	0.48
1:B:4407:TRP:CD1	1:B:4407:TRP:N	2.82	0.48
1:A:1535:ARG:HA	1:A:1591:TRP:CZ2	2.49	0.48
1:A:2299:ILE:CG2	1:A:2349:LYS:HA	2.44	0.48
1:A:2375:LYS:HG2	1:A:2387:LEU:HD23	1.95	0.48
1:A:2208:VAL:HA	1:A:2415:TRP:HD1	1.74	0.48
1:A:2704:ALA:HB3	1:A:3085:GLU:CG	2.44	0.48
1:A:2813:ILE:HG22	1:A:2814:LEU:N	2.28	0.48
1:A:3145:PHE:CD1	1:A:3164:LEU:HD11	2.48	0.48
1:A:3695:THR:HG21	1:A:3707:ASN:OD1	2.14	0.48
1:A:4201:GLU:HG3	1:A:4228:ASN:HB2	1.94	0.48
1:B:2532:ARG:NH1	1:B:2532:ARG:HG2	2.29	0.48
1:B:3232:VAL:O	1:B:3236:GLN:HG3	2.14	0.48
1:B:3350:VAL:HG12	1:B:3354:GLU:OE2	2.13	0.48
1:B:4083:ILE:CD1	1:B:4098:SER:HA	2.44	0.48
1:B:4288:ILE:CG2	1:B:4289:PRO:HA	2.44	0.48
1:B:4360:LEU:C	1:B:4362:GLN:H	2.17	0.48
1:A:3078:VAL:O	1:A:3078:VAL:HG13	2.13	0.47
1:A:3699:PHE:CZ	1:A:3726:ILE:HG13	2.49	0.47
1:A:4048:PHE:N	1:A:4048:PHE:CD1	2.82	0.47
1:A:4296:PHE:CZ	1:A:4347:ILE:HD13	2.49	0.47
1:B:2397:VAL:HG22	1:B:2398:GLN:N	2.29	0.47
1:B:2613:LEU:HD22	1:B:2655:ARG:NH1	2.29	0.47
1:B:2886:LEU:HD23	1:B:2904:LEU:CD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3960:LEU:HD23	1:B:4237:SER:HB2	1.96	0.47
1:A:2128:ILE:HG23	1:A:2129:VAL:N	2.29	0.47
1:A:2207:LEU:CD1	1:A:2215:ILE:HG21	2.43	0.47
1:A:2497:GLU:O	1:A:2501:ILE:HG13	2.13	0.47
1:A:3074:ASP:H	1:A:3077:ASN:HD22	1.62	0.47
1:A:3408:VAL:HG23	1:A:3409:CYS:H	1.80	0.47
1:A:3930:LEU:HD11	1:A:3939:ARG:HG2	1.95	0.47
1:A:4268:SER:OG	1:A:4387:THR:HA	2.14	0.47
1:A:4335:ARG:HD3	1:A:4360:LEU:C	2.35	0.47
1:A:3992:LEU:HD22	1:A:4430:LEU:HB2	1.96	0.47
1:A:3903:LEU:HD23	1:A:4433:MET:SD	2.54	0.47
1:B:1568:HIS:O	1:B:1572:ILE:HG13	2.14	0.47
1:B:1910:MET:HB2	1:B:1929:MET:HG3	1.95	0.47
1:B:2212:ILE:N	1:B:2213:PRO:CD	2.77	0.47
1:B:2918:VAL:HG22	1:B:3172:TRP:CE2	2.49	0.47
1:B:4568:PHE:O	1:B:4572:MET:HG2	2.14	0.47
1:A:1639:ILE:CD1	1:A:1675:LEU:HB3	2.44	0.47
1:A:1934:PHE:HE1	1:A:1964:LEU:HD22	1.78	0.47
1:A:2313:LYS:CE	1:A:2366:ASN:HD21	2.17	0.47
1:A:3781:VAL:HG12	1:A:3782:THR:N	2.29	0.47
1:A:3897:TYR:CE1	1:A:3913:LEU:HA	2.47	0.47
1:A:3997:ASN:O	1:A:3999:THR:N	2.47	0.47
1:A:3997:ASN:ND2	1:A:4001:ILE:HD11	2.27	0.47
1:B:1628:LEU:HD13	1:B:1709:ILE:HG22	1.95	0.47
1:B:1659:VAL:C	1:B:1661:ALA:H	2.18	0.47
1:B:3013:LEU:O	1:B:3013:LEU:HG	2.13	0.47
1:A:2368:ASN:HB3	1:A:2410:ARG:NH1	2.29	0.47
1:A:2598:GLN:HG3	1:A:2612:LEU:HB2	1.96	0.47
1:A:2616:SER:OG	1:A:2617:VAL:N	2.47	0.47
1:A:3219:ILE:CB	1:A:3220:PRO:CD	2.93	0.47
1:A:3480:TRP:HE1	1:A:3484:GLN:HE21	1.62	0.47
1:A:3338:GLN:HG3	1:A:3529:ILE:HD12	1.96	0.47
1:A:3804:THR:C	1:A:3806:ARG:H	2.18	0.47
1:B:1591:TRP:HA	1:B:1591:TRP:CE3	2.49	0.47
1:B:1811:PRO:HB2	1:B:1814:LEU:HD12	1.95	0.47
1:B:1971:ASN:HA	1:B:2075:VAL:O	2.14	0.47
1:B:2309:LYS:O	1:B:2758:ARG:HD2	2.14	0.47
1:B:2363:TRP:CH2	1:B:2395:PHE:HE1	2.32	0.47
1:B:2427:PHE:O	1:B:2431:LEU:HG	2.14	0.47
1:B:2595:LYS:HE3	1:B:2611:PRO:HG3	1.96	0.47
1:B:2754:TYR:O	1:B:2755:GLY:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3966:THR:N	1:B:4426:MET:HE2	2.29	0.47
1:A:1592:ASP:O	1:A:1596:ASN:HB2	2.14	0.47
1:A:1628:LEU:C	1:A:1630:PRO:HD3	2.35	0.47
1:A:2010:SER:O	1:A:2060:LEU:HD11	2.14	0.47
1:A:2282:LYS:HB2	2:A:9002:ADP:O3B	2.15	0.47
1:A:3648:HIS:CE1	1:A:3654:SER:HA	2.49	0.47
1:A:3730:LEU:CD2	1:A:3733:VAL:HB	2.44	0.47
1:A:4200:LEU:HD22	1:A:4204:LEU:CG	2.45	0.47
1:A:4313:TRP:HB3	1:A:4330:PRO:CG	2.45	0.47
1:B:1603:ASP:O	1:B:1606:ILE:HG22	2.15	0.47
1:B:1920:ASN:ND2	1:B:1921:VAL:N	2.62	0.47
1:B:3605:PHE:HB3	1:B:3609:PHE:HB3	1.95	0.47
1:A:1831:LEU:HD23	1:A:1841:ILE:CG2	2.45	0.47
1:A:1831:LEU:HD23	1:A:1841:ILE:HG23	1.96	0.47
1:A:2204:ILE:HA	1:A:2207:LEU:CD1	2.42	0.47
1:A:2250:VAL:HG21	1:A:2425:MET:HA	1.97	0.47
1:A:3794:GLN:HG3	1:A:3891:LEU:HA	1.96	0.47
1:A:4326:PRO:HB3	1:A:4369:PHE:HD2	1.79	0.47
1:B:1766:ILE:HG23	1:B:1767:HIS:N	2.30	0.47
1:B:2667:HIS:HA	1:B:2787:GLN:OE1	2.14	0.47
1:B:2532:ARG:CZ	1:B:2813:ILE:HD12	2.45	0.47
1:B:4596:ASN:ND2	1:B:4596:ASN:C	2.68	0.47
1:B:4618:ASN:H	1:B:4618:ASN:HD22	1.60	0.47
1:A:3032:MET:O	1:A:3034:GLY:N	2.47	0.47
1:A:3036:SER:N	1:A:3068:LYS:O	2.48	0.47
1:A:3370:GLU:O	1:A:3371:PRO:C	2.51	0.47
1:A:4043:ASP:N	1:A:4043:ASP:OD2	2.45	0.47
1:A:4430:LEU:O	1:A:4434:GLN:HB2	2.15	0.47
1:B:1611:ARG:O	1:B:1615:LEU:HD23	2.14	0.47
1:B:2125:ALA:O	1:B:2129:VAL:HG13	2.14	0.47
1:B:2540:LEU:HB3	1:B:2576:SER:OG	2.14	0.47
1:B:2676:PRO:HG3	1:B:2873:ILE:HD12	1.96	0.47
1:B:4119:ALA:HA	1:B:4149:LEU:HD11	1.96	0.47
1:B:4359:PHE:O	1:B:4362:GLN:HB3	2.15	0.47
1:A:1927:ILE:C	1:A:1928:HIS:HD2	2.18	0.47
1:A:2088:PRO:HB2	1:A:2090:ASN:HD21	1.80	0.47
1:A:2196:LEU:HA	1:A:2199:ILE:HG12	1.97	0.47
1:A:2273:MET:HB3	1:A:2395:PHE:CD1	2.50	0.47
1:A:2990:LEU:HD23	1:A:2994:VAL:HG11	1.97	0.47
1:A:3074:ASP:H	1:A:3077:ASN:ND2	2.13	0.47
1:A:4109:ASP:O	1:A:4112:ASN:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4344:GLY:HA2	1:A:4347:ILE:HG13	1.95	0.47
1:A:4690:VAL:HG21	1:A:4701:PHE:CE1	2.50	0.47
1:B:1547:ASN:HD21	1:B:1550:ARG:H	1.63	0.47
1:B:1782:ALA:HB2	1:B:1922:LEU:HD23	1.96	0.47
1:B:2231:ILE:HG12	1:B:2260:LEU:HD23	1.96	0.47
1:B:2335:THR:O	1:B:2339:ILE:HG13	2.14	0.47
1:B:2512:VAL:HA	1:B:2515:VAL:HG12	1.95	0.47
1:B:2882:TRP:CZ2	1:B:2909:ALA:HB2	2.48	0.47
1:B:3650:ASN:O	1:B:3651:SER:HB2	2.15	0.47
1:B:3698:SER:HB3	1:B:3700:LEU:CD1	2.44	0.47
1:B:4059:PRO:O	1:B:4063:ILE:HD12	2.15	0.47
1:B:4429:ASP:O	1:B:4433:MET:HG3	2.15	0.47
1:B:4673:ASP:C	1:B:4675:ASP:H	2.18	0.47
1:A:2127:LYS:HB3	1:A:2222:VAL:HG13	1.97	0.47
1:A:2641:VAL:O	1:A:2646:VAL:HG11	2.15	0.47
1:A:2766:MET:CB	1:A:2783:LEU:HD11	2.42	0.47
1:A:3563:LEU:O	1:A:3567:LEU:HG	2.14	0.47
1:A:3988:TRP:O	1:A:3992:LEU:HG	2.14	0.47
1:A:4162:ILE:HG13	1:A:4187:LEU:HD23	1.97	0.47
1:A:4244:VAL:HG23	1:A:4403:SER:HB3	1.96	0.47
1:A:4269:ARG:HA	1:A:4392:PHE:CZ	2.50	0.47
1:A:4331:TRP:CD1	1:A:4366:PRO:HD3	2.49	0.47
1:B:3043:ASN:HD22	1:B:3043:ASN:N	2.10	0.47
1:B:3849:ASP:HA	1:B:3852:ILE:HG22	1.97	0.47
1:A:1868:SER:O	1:A:1872:ARG:HB2	2.15	0.47
1:A:2370:LEU:CD2	1:A:2387:LEU:HD22	2.45	0.47
1:A:3776:ASP:HB3	1:A:3780:ARG:HH12	1.80	0.47
1:A:4295:PHE:C	1:A:4295:PHE:HD2	2.18	0.47
1:B:2252:LYS:HE2	1:B:2254:GLU:HG2	1.96	0.47
1:B:2556:SER:C	1:B:2558:PHE:H	2.17	0.47
1:B:2587:LEU:HD12	1:B:2817:ASP:HB3	1.96	0.47
1:B:3601:TYR:O	1:B:3602:ILE:C	2.53	0.47
1:B:4005:ILE:HG21	1:B:4008:LEU:HD12	1.96	0.47
1:A:2316:LEU:HD23	1:A:2363:TRP:HB2	1.97	0.47
1:A:2424:GLN:HG3	1:A:2508:PRO:HG3	1.97	0.47
1:A:2905:TRP:CZ3	1:A:2934:ALA:HB2	2.50	0.47
1:A:4376:VAL:HB	1:A:4381:LEU:HB2	1.97	0.47
1:B:2660:LEU:O	1:B:2664:LEU:HB2	2.15	0.47
1:B:2669:PRO:HG2	1:B:2810:HIS:O	2.14	0.47
1:B:2701:PHE:CE2	1:B:2759:VAL:HG11	2.50	0.47
1:B:2309:LYS:HE2	1:B:2756:THR:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3677:PRO:CG	1:B:3787:THR:HG22	2.45	0.47
1:B:3930:LEU:O	1:B:3931:VAL:C	2.53	0.47
1:B:4157:TYR:HB2	1:B:4184:TRP:C	2.35	0.47
1:B:4136:SER:O	1:B:4220:GLU:HA	2.15	0.47
1:B:4650:ASN:O	1:B:4653:GLN:HG3	2.15	0.47
1:A:2065:ILE:HG22	1:A:2066:SER:N	2.30	0.46
1:A:2651:VAL:CG1	1:A:2652:ASP:H	2.23	0.46
1:A:3040:ILE:HG22	1:A:3040:ILE:O	2.14	0.46
1:A:3285:LEU:HD22	1:A:3578:SER:HB2	1.97	0.46
1:A:3452:ILE:O	1:A:3457:LEU:HD23	2.15	0.46
1:A:3270:LEU:CB	1:A:3592:VAL:HG13	2.44	0.46
1:A:3639:SER:HB2	1:A:3643:GLU:OE1	2.15	0.46
1:A:4099:HIS:ND1	1:A:4111:LEU:HD12	2.30	0.46
1:A:4537:LEU:HD23	1:A:4548:LYS:HE3	1.97	0.46
1:A:4599:ALA:O	1:A:4602:THR:HG22	2.15	0.46
1:B:1576:LYS:HG2	1:B:1585:GLU:OE2	2.14	0.46
1:B:1642:GLU:O	1:B:1646:ILE:HG12	2.16	0.46
1:B:1788:SER:HA	1:B:1810:TYR:CZ	2.49	0.46
1:B:2270:HIS:HB3	1:B:2392:ARG:NH1	2.29	0.46
1:B:2774:ARG:HG2	1:B:2776:SER:OG	2.15	0.46
1:B:3973:ILE:HG13	1:B:3988:TRP:CZ3	2.50	0.46
1:A:1886:ARG:CZ	1:A:1890:ARG:HH22	2.28	0.46
1:A:1969:GLY:N	1:A:2047:GLN:NE2	2.64	0.46
1:A:2101:ILE:HD13	1:A:2101:ILE:N	2.30	0.46
1:A:4067:ALA:C	1:A:4073:GLN:HE21	2.19	0.46
1:B:1555:VAL:H	1:B:1609:GLN:NE2	2.12	0.46
1:B:1788:SER:HA	1:B:1810:TYR:CE2	2.50	0.46
1:B:2532:ARG:HG3	1:B:2808:LEU:O	2.14	0.46
1:B:3027:ARG:HA	1:B:3037:ILE:CD1	2.43	0.46
1:B:4128:SER:HB2	1:B:4213:PHE:HB3	1.96	0.46
1:B:4604:THR:HG23	1:B:4671:TRP:NE1	2.21	0.46
1:A:1809:ASN:HD22	1:A:1809:ASN:HA	1.60	0.46
1:A:2415:TRP:HA	1:A:2415:TRP:CE3	2.51	0.46
1:A:2720:TYR:CE1	1:A:2730:LEU:HD13	2.50	0.46
1:A:2956:LEU:HD21	1:A:2971:TYR:CD2	2.50	0.46
1:A:3021:GLY:O	1:A:3025:LEU:HB2	2.14	0.46
1:A:3283:LEU:C	1:A:3283:LEU:HD23	2.36	0.46
1:A:3975:SER:C	1:A:3977:LYS:H	2.18	0.46
1:A:4220:GLU:O	1:A:4222:HIS:N	2.49	0.46
1:B:1601:LEU:HA	1:B:1666:GLN:OE1	2.16	0.46
1:B:4030:PHE:HE1	1:B:4085:LEU:HG	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4190:ILE:HG12	1:B:4219:SER:CB	2.44	0.46
1:A:1630:PRO:O	1:A:1634:THR:HG23	2.15	0.46
1:A:2492:LEU:HG	1:A:2496:LYS:NZ	2.31	0.46
1:A:2882:TRP:CZ2	1:A:2905:TRP:NE1	2.83	0.46
1:A:2903:ARG:HB2	1:A:2945:ALA:O	2.15	0.46
1:A:3071:PHE:HE2	1:A:3087:MET:HE3	1.79	0.46
1:A:3219:ILE:CB	1:A:3220:PRO:HD3	2.46	0.46
1:A:4087:LYS:HG2	1:A:4087:LYS:O	2.15	0.46
1:A:4589:VAL:HG22	1:A:4590:TRP:N	2.29	0.46
1:B:2191:GLU:HA	1:B:2194:VAL:HG23	1.98	0.46
1:B:2529:THR:OG1	1:B:2532:ARG:HB2	2.15	0.46
1:B:2937:HIS:C	1:B:2939:PRO:HD3	2.35	0.46
1:B:3288:GLY:HA3	1:B:3574:TRP:CZ3	2.49	0.46
1:B:3773:PHE:HB3	1:B:3777:LEU:HD23	1.98	0.46
1:A:1948:VAL:O	1:A:1950:THR:N	2.49	0.46
1:A:2257:GLU:O	1:A:2261:GLN:HG2	2.16	0.46
1:A:2856:PHE:CZ	1:A:2930:ILE:HG12	2.49	0.46
1:A:3324:LEU:HD12	1:A:3539:LEU:CD2	2.46	0.46
1:A:3733:VAL:C	1:A:3735:ASN:H	2.19	0.46
1:A:3998:LEU:O	1:A:3998:LEU:HD13	2.15	0.46
1:B:1555:VAL:H	1:B:1609:GLN:HE22	1.64	0.46
1:B:1846:GLN:O	1:B:1849:GLU:HB3	2.16	0.46
1:B:2127:LYS:C	1:B:2130:PRO:HD2	2.35	0.46
1:B:2907:HIS:HB2	1:B:2950:ILE:HG21	1.96	0.46
1:A:1786:SER:HB2	1:A:1914:TYR:OH	2.16	0.46
1:A:2101:ILE:HG13	1:A:4348:ASP:HB2	1.98	0.46
1:A:2376:LEU:HA	1:A:2385:LEU:O	2.15	0.46
1:A:2435:SER:HB3	1:A:2496:LYS:HG2	1.97	0.46
1:A:2832:ASN:ND2	1:A:2883:ASP:OD2	2.49	0.46
1:A:3113:LYS:HG3	1:A:3123:LEU:O	2.15	0.46
1:A:3007:GLN:O	1:A:3142:HIS:HE1	1.99	0.46
1:A:3387:HIS:HB2	1:A:3473:ALA:HB2	1.95	0.46
1:A:3725:ASN:N	1:A:3725:ASN:HD22	1.99	0.46
1:A:4044:TRP:HE3	1:A:4048:PHE:HE1	1.62	0.46
1:A:4044:TRP:CE2	1:A:4059:PRO:HG3	2.51	0.46
1:B:1721:HIS:C	1:B:1725:MET:HE2	2.36	0.46
1:B:1799:ASP:OD1	1:B:1801:SER:HB3	2.15	0.46
1:B:2748:LEU:HD11	1:B:3162:PRO:HG2	1.97	0.46
1:B:3891:LEU:HD21	1:B:3895:ARG:NH2	2.31	0.46
1:B:4296:PHE:HB3	1:B:4346:ARG:HD2	1.98	0.46
1:A:2243:ILE:HG21	1:A:2288:VAL:HG13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2578:MET:HE1	1:A:2613:LEU:HA	1.96	0.46
1:A:3830:LEU:HD12	1:A:3858:LEU:HD13	1.96	0.46
1:A:3990:PHE:HD2	1:A:4084:LEU:HD22	1.81	0.46
1:A:4318:SER:HA	1:A:4321:ARG:NH2	2.23	0.46
1:B:2749:PRO:O	1:B:2757:GLN:HG2	2.16	0.46
1:B:2532:ARG:NH1	1:B:2813:ILE:HD12	2.31	0.46
1:B:2841:ASN:ND2	1:B:2842:LEU:HG	2.31	0.46
1:B:3788:VAL:HG11	1:B:3913:LEU:CD2	2.46	0.46
1:B:4020:LEU:HG	1:B:4034:VAL:HG22	1.98	0.46
1:B:4222:HIS:ND1	1:B:4223:PRO:HD2	2.31	0.46
1:B:4281:ILE:HG13	1:B:4282:GLN:N	2.31	0.46
1:B:1962:GLN:CB	1:B:4341:THR:HG21	2.46	0.46
1:B:4645:GLU:HG3	1:B:4722:SER:OG	2.15	0.46
1:A:1904:PHE:C	1:A:1906:TRP:H	2.17	0.46
1:A:2059:LEU:HG	1:A:2060:LEU:HG	1.97	0.46
1:A:2205:PRO:HG3	1:A:2261:GLN:OE1	2.16	0.46
1:A:2360:ASP:HB2	1:A:2361:PRO:HD2	1.96	0.46
1:A:2443:GLU:OE2	1:A:2489:PRO:HB2	2.15	0.46
1:A:2603:THR:HG22	1:A:2604:PRO:HD2	1.97	0.46
1:A:2829:GLY:HA2	1:A:2850:THR:OG1	2.16	0.46
1:A:4022:CYS:O	1:A:4026:GLN:HB2	2.16	0.46
1:A:4681:ASN:ND2	1:A:4685:LYS:HE3	2.30	0.46
1:A:4719:ARG:HG3	1:A:4719:ARG:HH11	1.81	0.46
1:B:3993:LYS:O	1:B:3994:GLY:C	2.54	0.46
1:B:4597:PRO:HG2	1:B:4692:LEU:CD1	2.46	0.46
1:A:1530:PHE:CZ	1:A:1571:SER:HB2	2.51	0.46
1:A:1745:SER:OG	1:A:1751:THR:HG22	2.16	0.46
1:A:3925:ASN:N	1:A:3925:ASN:ND2	2.63	0.46
1:A:4395:TRP:CZ3	1:A:4399:LEU:HD11	2.51	0.46
1:A:4596:ASN:ND2	1:A:4596:ASN:C	2.69	0.46
1:B:1683:LEU:O	1:B:1683:LEU:HD12	2.16	0.46
1:B:3715:GLY:HA3	1:B:3758:PRO:HG2	1.98	0.46
1:B:4331:TRP:CZ2	1:B:4369:PHE:HE2	2.34	0.46
1:B:4284:ARG:NH2	1:B:4355:LEU:HD21	2.31	0.46
1:A:1662:ILE:HG22	1:A:1663:GLU:N	2.32	0.46
1:A:1911:ARG:HD3	1:A:1911:ARG:H	1.81	0.46
1:A:2641:VAL:O	1:A:2643:SER:N	2.49	0.46
1:A:2864:PHE:HB3	1:A:2872:TYR:HD2	1.81	0.46
1:A:2952:TYR:CZ	1:A:2962:PRO:HG3	2.51	0.46
1:A:3017:VAL:HG21	1:A:3257:PRO:HD3	1.98	0.46
1:A:4263:GLN:NE2	1:A:4322:SER:HA	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4278:HIS:HD2	1:A:4343:TYR:OH	1.99	0.46
1:A:4402:ILE:CD1	1:A:4402:ILE:H	2.28	0.46
1:B:2044:GLN:O	1:B:2048:VAL:HG23	2.16	0.46
1:B:3789:THR:H	1:B:3792:SER:HB3	1.81	0.46
1:B:4095:LEU:HD11	1:B:4422:LYS:HB3	1.97	0.46
1:B:4274:LEU:HD11	1:B:4306:ALA:HB1	1.98	0.46
1:B:4400:PRO:HG2	1:B:4407:TRP:HH2	1.81	0.46
1:A:1642:GLU:O	1:A:1646:ILE:HG13	2.16	0.45
1:A:2338:ARG:HH11	1:A:2338:ARG:HG2	1.81	0.45
1:A:2851:ASP:HB3	1:A:2937:HIS:CE1	2.51	0.45
1:A:2980:TYR:OH	1:A:2987:PRO:HA	2.15	0.45
1:A:4726:TRP:CH2	1:A:4728:SER:HB2	2.51	0.45
1:A:2249:LEU:HB3	2:A:9002:ADP:N6	2.30	0.45
1:B:1534:VAL:HG22	1:B:1568:HIS:CD2	2.50	0.45
1:B:1604:VAL:O	1:B:1608:VAL:HG23	2.16	0.45
1:B:1822:VAL:HG13	1:B:1823:TRP:N	2.31	0.45
1:B:1985:LYS:HD3	1:B:1997:VAL:HG21	1.98	0.45
1:B:2275:VAL:HG11	1:B:2400:LEU:HG	1.97	0.45
1:B:2873:ILE:O	1:B:2873:ILE:HG13	2.14	0.45
1:B:3912:SER:HB3	1:B:4231:ARG:CG	2.45	0.45
1:B:4122:VAL:HG11	1:B:4216:PHE:HZ	1.81	0.45
1:B:4434:GLN:HE21	1:B:4434:GLN:HB3	1.55	0.45
1:B:4574:GLN:NE2	1:B:4590:TRP:HB3	2.31	0.45
1:A:3015:ILE:CG2	1:A:3149:PRO:HG3	2.45	0.45
1:A:3271:ILE:HG12	1:A:3592:VAL:HG21	1.97	0.45
1:A:3551:SER:O	1:A:3554:LYS:HB2	2.16	0.45
1:A:4039:GLN:HB3	1:A:4040:ASN:H	1.57	0.45
1:A:4309:SER:O	1:A:4312:TYR:HB3	2.16	0.45
1:A:3023:SER:HB2	2:A:9004:ADP:O1A	2.16	0.45
1:B:1931:ASN:HD21	1:B:1962:GLN:HE22	1.64	0.45
1:B:2723:THR:HG22	1:B:2727:GLU:O	2.16	0.45
1:B:2309:LYS:HZ3	1:B:2756:THR:HG21	1.77	0.45
1:B:2331:LEU:HD21	1:B:2773:TRP:CG	2.51	0.45
1:B:4379:ILE:HG23	1:B:4381:LEU:HG	1.98	0.45
1:A:3190:ARG:C	1:A:3192:LEU:H	2.20	0.45
1:A:3481:ALA:O	1:A:3485:THR:HG23	2.16	0.45
1:A:3798:LEU:O	1:A:3802:LEU:HG	2.17	0.45
1:A:3814:SER:C	1:A:3818:LYS:HD3	2.37	0.45
1:A:4026:GLN:HB3	1:A:4027:VAL:H	1.60	0.45
1:A:4281:ILE:HG13	1:A:4282:GLN:N	2.31	0.45
1:A:4337:ILE:O	1:A:4341:THR:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4653:GLN:O	1:A:4655:THR:HG23	2.17	0.45
1:B:2745:GLU:HG2	1:B:2748:LEU:HD11	1.98	0.45
1:B:4431:GLN:HG2	1:B:4431:GLN:O	2.16	0.45
1:A:2323:THR:O	1:A:2324:THR:HG23	2.16	0.45
1:A:2738:TRP:CZ3	1:A:2785:LYS:HA	2.51	0.45
1:A:2398:GLN:NE2	1:A:2806:ARG:HG2	2.31	0.45
1:A:2845:PHE:O	1:A:2848:ASN:HB2	2.16	0.45
1:A:2896:CYS:SG	1:A:2897:THR:N	2.90	0.45
1:A:2976:LEU:HD12	1:A:3028:PHE:CE1	2.51	0.45
1:A:3792:SER:OG	1:A:3793:LEU:N	2.50	0.45
1:A:3893:CYS:HB3	1:A:3916:PHE:HZ	1.81	0.45
1:B:2849:LEU:HD13	1:B:2901:LEU:HD11	1.99	0.45
1:B:3015:ILE:HD12	1:B:3170:LEU:HD11	1.98	0.45
1:B:3536:TYR:O	1:B:3540:ILE:HD13	2.16	0.45
1:B:3306:LEU:HD13	1:B:3557:VAL:CG2	2.46	0.45
1:B:3990:PHE:HD2	1:B:4084:LEU:HD22	1.82	0.45
1:B:4047:PHE:HE1	1:B:4086:MET:HE1	1.81	0.45
1:B:4335:ARG:NH2	1:B:4365:THR:HG22	2.22	0.45
1:A:3459:ASP:HB3	1:A:3462:PHE:CB	2.47	0.45
1:A:3549:GLU:O	1:A:3553:VAL:HG23	2.17	0.45
1:A:3686:MET:CE	1:A:3696:LYS:HB2	2.46	0.45
1:A:4279:ALA:O	1:A:4283:GLU:HB2	2.17	0.45
1:A:4349:ASN:O	1:A:4352:ASP:HB2	2.16	0.45
1:A:4648:VAL:HG23	1:A:4655:THR:OG1	2.16	0.45
1:B:2630:LYS:CB	1:B:2654:THR:HG21	2.47	0.45
1:B:3930:LEU:HD22	1:B:3939:ARG:HE	1.81	0.45
1:B:4012:LEU:HA	1:B:4016:GLN:NE2	2.31	0.45
1:A:1726:PHE:HB2	1:A:1729:LEU:HB3	1.98	0.45
1:A:1784:LEU:HB3	1:A:1814:LEU:HD13	1.99	0.45
1:A:1842:GLN:OE1	1:A:1893:GLN:HG2	2.17	0.45
1:A:1968:MET:HB3	1:A:2094:LEU:O	2.16	0.45
1:A:1973:PHE:C	1:A:1973:PHE:CD1	2.89	0.45
1:A:1964:LEU:HD12	1:A:2074:PHE:CZ	2.51	0.45
1:A:2603:THR:CB	1:A:2604:PRO:HD2	2.46	0.45
1:A:3011:HIS:C	1:A:3168:CYS:HB3	2.36	0.45
1:A:3350:VAL:O	1:A:3350:VAL:HG12	2.15	0.45
1:A:3897:TYR:HD2	1:A:3898:PHE:CD2	2.34	0.45
1:A:3919:ILE:HD13	1:A:3951:THR:HA	1.98	0.45
1:B:2819:PRO:HB2	1:B:2824:LEU:CD2	2.46	0.45
1:B:3673:LEU:HD22	1:B:3783:PHE:CE1	2.48	0.45
1:B:4404:THR:HB	1:B:4405:PRO:HD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4693:ASN:ND2	1:B:4693:ASN:N	2.64	0.45
1:B:4714:GLN:O	1:B:4718:GLN:HG3	2.16	0.45
1:A:1907:LEU:HD22	1:A:1911:ARG:NH1	2.31	0.45
1:A:2124:LEU:HD22	1:A:2195:LEU:CD2	2.46	0.45
1:A:2435:SER:CB	1:A:2496:LYS:HG2	2.47	0.45
1:A:3022:LYS:HA	1:A:3173:PHE:CE1	2.52	0.45
1:A:3234:ILE:O	1:A:3238:ILE:HD13	2.17	0.45
1:A:3463:ASP:O	1:A:3467:VAL:HG23	2.17	0.45
1:A:3388:LEU:CD2	1:A:3473:ALA:HB1	2.44	0.45
1:A:4249:LEU:O	1:A:4253:ILE:HG13	2.17	0.45
1:B:2825:THR:HG23	1:B:2854:VAL:HG21	1.98	0.45
1:B:3004:VAL:O	1:B:3010:GLY:HA3	2.17	0.45
1:B:3542:GLU:O	1:B:3546:ILE:HG12	2.16	0.45
1:B:3696:LYS:HG3	1:B:3719:LEU:HD23	1.99	0.45
1:B:4666:ILE:HG13	1:B:4667:ALA:N	2.32	0.45
1:A:1800:HIS:CD2	1:A:1858:ASN:HB3	2.52	0.45
1:A:1922:LEU:HD13	1:A:1938:PHE:CD1	2.48	0.45
1:A:2902:VAL:HG21	1:A:2941:VAL:CG2	2.47	0.45
1:A:3911:PHE:CZ	1:A:3955:VAL:HG13	2.52	0.45
1:A:4329:ILE:HB	1:A:4331:TRP:CE2	2.51	0.45
1:A:4384:PRO:HG2	1:A:4392:PHE:CD1	2.51	0.45
1:A:4668:THR:C	1:A:4669:LEU:HD12	2.37	0.45
1:B:1618:ILE:HD13	1:B:1683:LEU:HD21	1.99	0.45
1:B:1740:THR:HG22	1:B:1759:SER:HA	1.98	0.45
1:B:2091:LEU:HD22	1:B:2095:PHE:CE2	2.51	0.45
1:B:3990:PHE:CZ	1:B:4023:LEU:HD13	2.52	0.45
1:B:4197:LEU:HB3	1:B:4226:PRO:HG2	1.98	0.45
1:B:4618:ASN:N	1:B:4618:ASN:ND2	2.65	0.45
1:A:1925:LEU:HD23	1:A:1936:TYR:HB2	1.98	0.45
1:A:2052:GLU:O	1:A:2053:ASN:CB	2.64	0.45
1:A:2140:SER:HB2	1:A:2211:ASP:OD2	2.15	0.45
1:A:2196:LEU:HA	1:A:2199:ILE:CG1	2.46	0.45
1:A:2526:MET:O	1:A:2527:ASP:C	2.55	0.45
1:A:3145:PHE:CG	1:A:3164:LEU:HD11	2.52	0.45
1:A:3218:ALA:O	1:A:3220:PRO:N	2.49	0.45
1:A:3602:ILE:O	1:A:3603:GLY:C	2.54	0.45
1:A:3639:SER:OG	1:A:3663:ILE:HD11	2.17	0.45
1:A:4032:LYS:HA	1:A:4032:LYS:HE2	1.97	0.45
1:A:4046:GLN:NE2	1:A:4057:ILE:HG22	2.32	0.45
1:A:4311:ASP:O	1:A:4315:ASP:HB3	2.17	0.45
1:A:4347:ILE:CG2	1:A:4353:MET:HG2	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2204:ILE:N	1:B:2205:PRO:CD	2.80	0.45
1:B:2270:HIS:HB3	1:B:2392:ARG:HH11	1.82	0.45
1:B:3254:TYR:CD2	1:B:3775:PRO:HA	2.52	0.45
1:B:4095:LEU:HD11	1:B:4422:LYS:HB2	1.99	0.45
1:B:3992:LEU:HD12	1:B:4434:GLN:NE2	2.31	0.45
1:B:4621:LEU:HG	1:B:4622:HIS:H	1.82	0.45
1:B:4657:THR:HG22	1:B:4658:ASP:N	2.32	0.45
1:A:2272:VAL:HB	1:A:2394:MET:HE2	1.97	0.45
1:A:3027:ARG:HH11	1:A:3027:ARG:HB2	1.81	0.45
1:A:3540:ILE:N	1:A:3540:ILE:HD12	2.32	0.45
1:A:3542:GLU:O	1:A:3546:ILE:HG13	2.17	0.45
1:A:3696:LYS:HZ3	1:A:3721:GLN:CD	2.21	0.45
1:A:3813:ARG:HA	1:A:3875:VAL:HG11	1.99	0.45
1:A:3908:LEU:HD21	1:A:4237:SER:OG	2.16	0.45
1:A:3912:SER:HB3	1:A:4231:ARG:CG	2.45	0.45
1:A:3903:LEU:HD13	1:A:3959:LEU:HD21	1.99	0.45
1:A:4116:LEU:HB3	1:A:4117:ASP:H	1.52	0.45
1:A:4455:SER:C	1:A:4457:SER:H	2.20	0.45
1:B:1548:TYR:HD2	1:B:1554:LEU:HD11	1.82	0.45
1:B:1764:PRO:HB2	1:B:1768:GLU:CB	2.47	0.45
1:B:2641:VAL:HG13	1:B:2831:PHE:HB3	1.98	0.45
1:B:2998:ILE:CG2	1:B:3025:LEU:HD22	2.47	0.45
1:B:3078:VAL:O	1:B:3078:VAL:HG13	2.16	0.45
1:B:4220:GLU:O	1:B:4222:HIS:N	2.50	0.45
1:B:4197:LEU:HD13	1:B:4226:PRO:HD3	1.99	0.45
1:B:4253:ILE:HG22	1:B:4253:ILE:O	2.17	0.45
1:A:1777:MET:CE	1:A:1939:GLU:HA	2.48	0.44
1:A:1958:LEU:O	1:A:1962:GLN:HB2	2.16	0.44
1:A:2730:LEU:HD22	1:A:2772:PHE:CZ	2.52	0.44
1:A:3682:MET:CE	1:A:3721:GLN:HE21	2.31	0.44
1:A:3776:ASP:HB3	1:A:3780:ARG:NH1	2.31	0.44
1:A:3825:VAL:HA	1:A:3828:ARG:HD3	1.99	0.44
1:A:4076:ILE:HD12	1:A:4105:VAL:HG22	1.99	0.44
1:B:1629:LEU:HD22	1:B:1632:GLU:HG2	1.98	0.44
1:B:1869:ALA:HA	1:B:1872:ARG:HB3	1.99	0.44
1:B:2381:ASN:ND2	1:B:2383:GLU:HB2	2.20	0.44
1:B:2705:THR:HG22	1:B:2759:VAL:HG21	1.98	0.44
1:B:2774:ARG:C	1:B:2776:SER:H	2.20	0.44
1:A:1609:GLN:O	1:A:1613:VAL:HG23	2.17	0.44
1:A:1748:GLU:HB3	1:A:1943:ILE:HD12	1.99	0.44
1:A:2142:GLN:NE2	1:A:2208:VAL:HG21	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2302:GLU:HG2	1:A:2304:HIS:HE1	1.81	0.44
1:A:2359:VAL:HG11	1:A:2400:LEU:HD22	1.99	0.44
1:A:2433:THR:HG23	1:A:2437:GLU:HG3	1.99	0.44
1:A:2898:LEU:HD13	1:A:2898:LEU:O	2.17	0.44
1:A:3408:VAL:HG23	1:A:3409:CYS:N	2.32	0.44
1:A:3490:ILE:O	1:A:3490:ILE:HG13	2.18	0.44
1:A:3974:ILE:O	1:A:3977:LYS:HB2	2.17	0.44
1:A:4121:ILE:HG22	1:A:4122:VAL:N	2.32	0.44
1:B:2263:HIS:HB2	1:B:2289:TYR:CE1	2.52	0.44
1:B:2955:TRP:HZ2	1:B:3002:ASP:OD1	2.00	0.44
1:B:3088:ASN:OD1	1:B:3163:ALA:HB3	2.17	0.44
1:B:3233:TYR:CG	1:B:3620:ARG:HG3	2.52	0.44
1:B:4192:LEU:C	1:B:4194:PRO:HD3	2.38	0.44
1:A:2016:LEU:HD21	1:A:2023:GLY:CA	2.47	0.44
1:A:2056:GLU:O	1:A:2056:GLU:HG3	2.17	0.44
1:A:2340:ILE:HD11	1:A:2386:ALA:O	2.17	0.44
1:A:2502:ILE:HD12	1:A:2506:PHE:HE2	1.82	0.44
1:A:3055:LEU:O	1:A:3059:LEU:HD23	2.17	0.44
1:A:3361:LYS:HE2	1:A:3361:LYS:HB3	1.84	0.44
1:A:3809:THR:HG22	1:A:3812:LYS:NZ	2.32	0.44
1:A:4691:TYR:HA	1:A:4699:LEU:HA	1.99	0.44
1:B:2660:LEU:HD21	1:B:2672:LEU:CD2	2.48	0.44
1:B:4266:GLU:HG3	1:B:4369:PHE:CE1	2.52	0.44
1:B:4686:LEU:HD12	1:B:4687:SER:H	1.83	0.44
1:A:2046:ILE:HD11	1:A:2059:LEU:HD22	2.00	0.44
1:A:2399:ASP:O	1:A:2400:LEU:HD23	2.16	0.44
1:A:2641:VAL:HG21	1:A:2887:LEU:HD13	1.99	0.44
1:A:2742:PHE:HD1	1:A:2789:VAL:HG12	1.83	0.44
1:A:2902:VAL:HG22	1:A:2938:PHE:CD2	2.53	0.44
1:A:3670:ARG:NH1	1:A:3781:VAL:O	2.51	0.44
1:A:3675:ILE:O	1:A:3675:ILE:HG22	2.17	0.44
1:A:3731:ASN:H	1:A:3731:ASN:ND2	2.09	0.44
1:A:3805:GLU:HB3	1:A:3886:TYR:OH	2.17	0.44
1:B:1640:ASN:ND2	1:B:1644:ILE:HG12	2.32	0.44
1:B:2381:ASN:ND2	1:B:2381:ASN:C	2.71	0.44
1:B:3011:HIS:CE1	1:B:3091:LEU:HA	2.53	0.44
1:B:3316:LYS:HD2	1:B:3546:ILE:CD1	2.47	0.44
1:B:3601:TYR:O	1:B:3603:GLY:N	2.50	0.44
1:B:4087:LYS:HG2	1:B:4087:LYS:O	2.17	0.44
1:B:3958:THR:CG2	1:B:4235:VAL:HB	2.47	0.44
1:B:4244:VAL:HG23	1:B:4403:SER:OG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4405:PRO:HD3	1:B:4415:GLU:HG2	1.98	0.44
1:B:4693:ASN:HD22	1:B:4693:ASN:H	1.64	0.44
1:A:1719:GLN:OE1	1:A:1732:LEU:N	2.50	0.44
1:A:2200:ASN:O	1:A:2204:ILE:HG12	2.18	0.44
1:A:2200:ASN:ND2	1:A:2228:LEU:HD13	2.18	0.44
1:A:2339:ILE:HG21	1:A:2391:VAL:CG2	2.48	0.44
1:A:3154:PHE:C	1:A:3156:ASN:H	2.21	0.44
1:A:3274:LYS:HD3	1:A:3274:LYS:HA	1.77	0.44
1:A:3293:ARG:HG3	1:A:3293:ARG:NH1	2.27	0.44
1:A:3338:GLN:NE2	1:A:3525:LEU:HB2	2.32	0.44
1:A:3727:ASP:CB	1:A:3729:VAL:HG12	2.48	0.44
1:A:3902:GLU:O	1:A:3905:GLN:HG2	2.17	0.44
1:A:4513:ILE:HA	1:A:4550:TRP:HE1	1.82	0.44
1:A:4673:ASP:O	1:A:4677:PRO:HD2	2.18	0.44
1:B:1828:ASP:OD2	1:B:1901:ASN:HB2	2.17	0.44
1:B:2301:SER:HA	1:B:2350:ARG:O	2.18	0.44
1:B:2886:LEU:O	1:B:2890:ILE:HG13	2.18	0.44
1:B:2976:LEU:CD1	1:B:2990:LEU:HD11	2.48	0.44
1:B:3602:ILE:HG23	1:B:3610:ARG:CG	2.43	0.44
1:A:1628:LEU:HD23	1:A:1628:LEU:O	2.18	0.44
1:A:2125:ALA:HA	1:A:2128:ILE:CG2	2.46	0.44
1:A:2152:LEU:O	1:A:2152:LEU:HD13	2.18	0.44
1:A:3410:LEU:HD23	1:A:3410:LEU:C	2.38	0.44
1:A:4075:THR:HG23	1:A:4076:ILE:H	1.82	0.44
1:A:4296:PHE:HE2	1:A:4347:ILE:HA	1.77	0.44
1:B:2986:VAL:O	1:B:2988:LEU:HG	2.17	0.44
1:B:4304:ARG:HA	1:B:4307:LEU:HD12	1.99	0.44
1:B:4265:ALA:H	1:B:4323:ASN:HB3	1.83	0.44
1:B:4330:PRO:O	1:B:4333:ALA:HB3	2.17	0.44
1:A:1674:ASP:OD1	1:A:1678:LYS:HE2	2.17	0.44
1:A:1904:PHE:C	1:A:1906:TRP:N	2.71	0.44
1:A:2056:GLU:HB2	1:A:2065:ILE:O	2.18	0.44
1:A:2077:MET:HE2	1:A:2077:MET:HB3	1.81	0.44
1:A:2991:PHE:O	1:A:2992:ASN:C	2.55	0.44
1:A:3521:THR:O	1:A:3525:LEU:HD12	2.18	0.44
1:A:3603:GLY:HA2	1:A:3664:MET:CE	2.48	0.44
1:B:1530:PHE:CZ	1:B:1571:SER:HB2	2.53	0.44
1:B:2694:PHE:HA	1:B:2738:TRP:O	2.18	0.44
1:B:3013:LEU:HD13	1:B:3145:PHE:HB3	2.00	0.44
1:B:3164:LEU:C	1:B:3166:ASN:H	2.22	0.44
1:B:3715:GLY:HA2	1:B:3760:PHE:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4374:PRO:HB3	1:B:4377:PRO:HG3	1.98	0.44
1:B:4686:LEU:HD22	1:B:4716:TRP:HB3	2.00	0.44
1:A:1535:ARG:HA	1:A:1591:TRP:HZ2	1.83	0.44
1:A:1973:PHE:HE1	1:A:2099:ALA:HA	1.81	0.44
1:A:1695:ALA:CB	1:A:2019:CYS:SG	3.06	0.44
1:A:2289:TYR:CE1	1:A:2293:ILE:HD11	2.53	0.44
1:A:2376:LEU:HD12	1:A:2385:LEU:C	2.38	0.44
1:A:2903:ARG:HD2	1:A:2945:ALA:O	2.18	0.44
1:A:2926:THR:O	1:A:2930:ILE:HG13	2.18	0.44
1:A:3205:PHE:CE2	1:A:3221:PRO:HB3	2.52	0.44
1:A:3812:LYS:HB3	1:A:3875:VAL:CG2	2.47	0.44
1:A:3813:ARG:HH22	1:A:3817:LEU:HD13	1.83	0.44
1:A:3869:VAL:O	1:A:3869:VAL:HG12	2.18	0.44
1:B:2612:LEU:O	1:B:2612:LEU:HD13	2.18	0.44
1:B:2766:MET:HB3	1:B:2783:LEU:CD1	2.43	0.44
1:B:2828:TYR:HE1	1:B:2880:SER:HA	1.83	0.44
1:B:3552:LYS:NZ	1:B:3552:LYS:HB2	2.33	0.44
1:B:3553:VAL:O	1:B:3557:VAL:HG23	2.18	0.44
1:B:3872:THR:O	1:B:3876:MET:HG2	2.18	0.44
1:B:4289:PRO:HB2	1:B:4696:ARG:HD2	2.00	0.44
1:B:4689:PRO:HD2	1:B:4721:VAL:O	2.18	0.44
1:A:1973:PHE:HE1	1:A:2099:ALA:HB2	1.83	0.44
1:A:2361:PRO:HD2	1:A:2754:TYR:CE1	2.53	0.44
1:A:2913:PHE:HD2	1:A:2913:PHE:N	2.15	0.44
1:A:2903:ARG:HH22	1:A:2950:ILE:HA	1.82	0.44
1:A:3190:ARG:HA	1:A:3224:ARG:NH1	2.32	0.44
1:A:3700:LEU:CD1	1:A:3701:ASP:H	2.31	0.44
1:A:4257:ALA:C	1:A:4259:ARG:H	2.21	0.44
1:B:1869:ALA:O	1:B:1872:ARG:HB3	2.17	0.44
1:B:2112:MET:O	1:B:2116:GLN:HG2	2.17	0.44
1:B:2839:LEU:CD2	1:B:2896:CYS:HB3	2.48	0.44
1:B:2965:ARG:HG3	1:B:2965:ARG:HH11	1.82	0.44
1:B:3903:LEU:HD11	1:B:3967:PHE:CD1	2.53	0.44
1:A:1591:TRP:CE3	1:A:1591:TRP:HA	2.53	0.43
1:A:1756:LYS:HB2	1:A:1756:LYS:NZ	2.32	0.43
1:A:2091:LEU:HD22	1:A:2095:PHE:HE1	1.80	0.43
1:A:2255:TRP:CH2	1:A:2259:ILE:HD11	2.53	0.43
1:A:2560:MET:HE3	1:A:2564:ASN:HD22	1.81	0.43
1:A:2617:VAL:HG13	1:A:2617:VAL:O	2.18	0.43
1:A:3585:MET:HA	1:A:3588:VAL:HG23	2.00	0.43
1:A:3652:LEU:HD12	1:A:3653:PRO:CD	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4690:VAL:HG11	1:A:4701:PHE:CE2	2.53	0.43
1:A:2249:LEU:HD22	2:A:9002:ADP:C5	2.53	0.43
1:B:2426:ILE:H	1:B:2426:ILE:CD1	2.27	0.43
1:B:2714:PHE:HE1	1:B:2741:VAL:HG21	1.83	0.43
1:B:2902:VAL:HG21	1:B:2941:VAL:HG21	2.00	0.43
1:B:3046:TYR:CE1	1:B:3050:ASP:HB2	2.53	0.43
1:B:3038:TYR:HE2	1:B:3058:LEU:HD22	1.82	0.43
1:B:3961:ASN:HA	1:B:3964:LYS:HE2	2.00	0.43
1:A:2547:ASN:O	1:A:2551:TYR:HB2	2.17	0.43
1:A:2650:THR:OG1	1:A:2651:VAL:N	2.50	0.43
1:A:3462:PHE:CE2	1:A:3478:VAL:HG23	2.53	0.43
1:B:1674:ASP:O	1:B:1678:LYS:HG3	2.18	0.43
1:B:2265:ILE:HD12	1:B:2414:VAL:HG22	1.99	0.43
1:B:2522:ARG:NH1	1:B:2593:PHE:HD1	2.16	0.43
1:B:4024:ARG:O	1:B:4024:ARG:HG2	2.17	0.43
1:B:4153:LEU:HB2	1:B:4155:LYS:CG	2.46	0.43
1:B:4691:TYR:HA	1:B:4698:GLU:O	2.18	0.43
1:A:1755:LYS:HA	1:A:1755:LYS:HD2	1.80	0.43
1:A:1922:LEU:CD1	1:A:1938:PHE:HD1	2.31	0.43
1:A:2053:ASN:N	1:A:2053:ASN:ND2	2.65	0.43
1:A:2400:LEU:HB3	1:A:2403:ALA:HB3	2.00	0.43
1:A:2408:ILE:HG13	1:A:2409:SER:H	1.83	0.43
1:A:3019:GLY:HA2	2:A:9004:ADP:H5'2	2.00	0.43
1:A:3470:ALA:O	1:A:3471:SER:HB2	2.17	0.43
1:A:4319:LYS:O	1:A:4321:ARG:NH1	2.52	0.43
1:A:1958:LEU:HD23	1:A:4341:THR:HB	1.99	0.43
1:A:4091:SER:O	1:A:4420:SER:HA	2.18	0.43
1:B:1497:LEU:HD22	1:B:1501:SER:HB2	1.99	0.43
1:B:2282:LYS:HZ2	1:B:2282:LYS:HB2	1.83	0.43
1:B:2773:TRP:CZ3	1:B:2780:TRP:HB2	2.53	0.43
1:B:3686:MET:HA	1:B:3694:ILE:HG21	2.00	0.43
1:B:4225:LEU:HD23	1:B:4230:LEU:HD21	2.00	0.43
1:A:1604:VAL:O	1:A:1608:VAL:HG23	2.18	0.43
1:A:1835:THR:O	1:A:1836:LEU:CB	2.67	0.43
1:A:2359:VAL:HB	1:A:2397:VAL:HG11	2.00	0.43
1:A:3062:ALA:HB2	1:A:3069:ILE:HD13	1.99	0.43
1:A:3681:ALA:HB2	1:A:3786:PHE:CD2	2.53	0.43
1:A:3933:LYS:HB3	1:A:3933:LYS:HZ3	1.84	0.43
1:A:3990:PHE:CE2	1:A:4023:LEU:HG	2.54	0.43
1:A:4052:GLN:O	1:A:4054:GLY:N	2.43	0.43
1:A:4182:GLY:HA3	1:A:4212:SER:HG	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1831:LEU:HA	1:B:1841:ILE:HG23	1.99	0.43
1:B:1975:PRO:HG2	1:B:1978:THR:CG2	2.48	0.43
1:B:2964:ASN:HD21	1:B:2967:ASP:CG	2.22	0.43
1:B:3041:LYS:N	1:B:3041:LYS:HD2	2.33	0.43
1:B:3192:LEU:HD22	1:B:3271:ILE:HG21	2.00	0.43
1:B:3635:PRO:C	1:B:3637:PHE:H	2.21	0.43
1:B:3634:VAL:HB	1:B:3635:PRO:HD3	1.99	0.43
1:B:4012:LEU:HD11	1:B:4020:LEU:HD22	2.01	0.43
1:B:4022:CYS:HB3	1:B:4026:GLN:HE21	1.84	0.43
1:A:1830:ALA:O	1:A:1841:ILE:HG23	2.18	0.43
1:A:3096:VAL:HB	1:A:3099:LEU:HB2	2.00	0.43
1:A:3445:THR:HA	1:A:3449:ARG:HB2	2.00	0.43
1:A:4132:LEU:HB2	1:A:4216:PHE:CD1	2.52	0.43
1:B:1639:ILE:HG23	1:B:1672:LEU:HD22	2.01	0.43
1:B:2352:TRP:CD1	1:B:2392:ARG:HB2	2.54	0.43
1:B:3234:ILE:HG23	1:B:3617:TRP:CD1	2.54	0.43
1:B:3289:LEU:HA	1:B:3292:LEU:HD12	1.99	0.43
1:B:4574:GLN:HE22	1:B:4590:TRP:HB3	1.82	0.43
1:A:1955:ARG:HB2	1:A:1955:ARG:NH1	2.33	0.43
1:A:2012:ILE:HG22	1:A:2016:LEU:CD1	2.49	0.43
1:A:2057:VAL:HG22	1:A:2058:GLU:N	2.34	0.43
1:A:2200:ASN:ND2	1:A:2228:LEU:HB3	2.33	0.43
1:A:3015:ILE:HG21	1:A:3172:TRP:CH2	2.54	0.43
1:A:3078:VAL:O	1:A:3078:VAL:HG22	2.19	0.43
1:A:3357:VAL:O	1:A:3357:VAL:HG12	2.18	0.43
1:A:3638:LEU:HD22	1:A:3667:ARG:HD3	2.01	0.43
1:A:4066:GLN:HE22	1:A:4081:ARG:HD3	1.81	0.43
1:A:4337:ILE:HG22	1:A:4338:LEU:HD12	1.99	0.43
1:B:1653:ALA:HB1	1:B:1658:GLU:HG2	2.01	0.43
1:B:1744:MET:SD	1:B:1777:MET:HG3	2.59	0.43
1:B:2882:TRP:O	1:B:2886:LEU:HG	2.18	0.43
1:B:3160:THR:O	1:B:3162:PRO:HD3	2.18	0.43
1:B:3181:LEU:HB3	1:B:3232:VAL:HG13	2.00	0.43
1:B:3902:GLU:C	1:B:3904:SER:N	2.71	0.43
1:B:4407:TRP:H	1:B:4407:TRP:HD1	1.64	0.43
1:B:3993:LYS:HG3	1:B:4431:GLN:HG3	1.99	0.43
1:B:4728:SER:OG	1:B:4729:ASP:N	2.51	0.43
1:A:1906:TRP:CZ2	1:A:1911:ARG:HG2	2.54	0.43
1:A:2145:TYR:OH	1:A:2207:LEU:HA	2.18	0.43
1:A:2270:HIS:ND1	1:A:2270:HIS:N	2.66	0.43
1:A:2263:HIS:HB2	1:A:2289:TYR:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2678:SER:HB2	1:A:2817:ASP:O	2.18	0.43
1:A:2748:LEU:HD21	1:A:2800:ARG:CZ	2.48	0.43
1:A:3451:ALA:O	1:A:3455:GLY:N	2.51	0.43
1:A:4179:ALA:HA	1:A:4213:PHE:CD1	2.53	0.43
1:A:4280:ILE:HG21	1:A:4359:PHE:CE1	2.53	0.43
1:A:4288:ILE:HG23	1:A:4289:PRO:HA	2.01	0.43
1:A:4389:ARG:NH1	1:A:4389:ARG:HG2	2.32	0.43
1:A:4648:VAL:HG13	1:A:4657:THR:CG2	2.44	0.43
1:B:1546:VAL:O	1:B:1553:LYS:HA	2.19	0.43
1:B:1766:ILE:HD12	1:B:1769:TRP:HE1	1.84	0.43
1:B:2968:LEU:HD22	1:B:2999:LEU:HD11	2.00	0.43
1:B:3238:ILE:HD11	1:B:3617:TRP:CZ2	2.48	0.43
1:B:4293:THR:HG23	1:B:4352:ASP:OD1	2.19	0.43
1:A:1658:GLU:O	1:A:1661:ALA:HB3	2.19	0.43
1:A:2290:LEU:HD23	1:A:2301:SER:O	2.19	0.43
1:A:2327:TRP:CZ2	1:A:2379:LEU:HD22	2.54	0.43
1:A:2304:HIS:N	1:A:2352:TRP:O	2.51	0.43
1:A:3197:PRO:HG2	1:A:3198:GLN:OE1	2.18	0.43
1:A:3324:LEU:HD12	1:A:3539:LEU:HD23	2.00	0.43
1:A:3416:LYS:HE3	1:A:3418:GLU:CB	2.48	0.43
1:A:3681:ALA:HB2	1:A:3786:PHE:CG	2.54	0.43
1:A:3862:THR:C	1:A:3864:GLU:H	2.22	0.43
1:A:4379:ILE:HG23	1:A:4381:LEU:HD13	2.00	0.43
1:B:1606:ILE:HG23	1:B:1607:ASP:N	2.33	0.43
1:B:1780:THR:HG22	1:B:1784:LEU:CD1	2.48	0.43
1:B:2840:PRO:O	1:B:2843:ARG:HB2	2.19	0.43
1:B:3065:LYS:O	1:B:3066:GLU:C	2.57	0.43
1:B:3139:ARG:HH11	1:B:3139:ARG:HG3	1.84	0.43
1:B:3289:LEU:O	1:B:3293:ARG:HG3	2.19	0.43
1:B:3675:ILE:HG22	1:B:3675:ILE:O	2.19	0.43
1:B:3725:ASN:ND2	1:B:3725:ASN:N	2.67	0.43
1:B:4028:PRO:O	1:B:4031:SER:N	2.52	0.43
1:B:4058:ILE:CD1	1:B:4082:LYS:HG2	2.48	0.43
1:B:4331:TRP:HZ2	1:B:4369:PHE:CE2	2.37	0.43
1:A:1578:SER:HA	1:A:1579:PRO:HD3	1.92	0.43
1:A:1892:LEU:C	1:A:1894:LYS:H	2.22	0.43
1:A:2269:ASN:O	1:A:2272:VAL:HG23	2.19	0.43
1:A:2645:ASP:O	1:A:2646:VAL:C	2.57	0.43
1:A:2774:ARG:CZ	1:A:2781:ILE:HD11	2.48	0.43
1:A:3588:VAL:O	1:A:3592:VAL:HG23	2.18	0.43
1:A:3859:LYS:C	1:A:3859:LYS:HD3	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3902:GLU:HB3	1:A:4433:MET:HG2	2.00	0.43
1:A:4565:ILE:HG22	1:A:4566:SER:N	2.34	0.43
1:B:2304:HIS:NE2	1:B:2351:HIS:HD2	2.17	0.43
1:B:2339:ILE:HG21	1:B:2391:VAL:CG2	2.49	0.43
1:B:3202:PRO:HG3	1:B:3623:SER:O	2.19	0.43
1:B:3272:ASN:HD22	1:B:3272:ASN:HA	1.61	0.43
1:B:3620:ARG:NH1	1:B:3620:ARG:HG2	2.34	0.43
1:B:3895:ARG:NH1	1:B:3977:LYS:HG2	2.34	0.43
1:B:4023:LEU:O	1:B:4027:VAL:HB	2.18	0.43
1:B:4079:ASN:O	1:B:4082:LYS:HB2	2.18	0.43
1:B:4185:VAL:O	1:B:4215:LEU:HD12	2.19	0.43
1:B:4282:GLN:O	1:B:4285:LEU:HB2	2.19	0.43
1:A:1927:ILE:O	1:A:1928:HIS:HD2	2.01	0.43
1:A:2211:ASP:C	1:A:2213:PRO:HD2	2.38	0.43
1:A:2362:GLU:C	1:A:2364:VAL:H	2.22	0.43
1:A:3391:ILE:HD11	1:A:3471:SER:OG	2.19	0.43
1:A:3953:ASN:O	1:A:3956:THR:HG22	2.19	0.43
1:A:4335:ARG:HG2	1:A:4360:LEU:HG	2.01	0.43
1:A:4432:LYS:C	1:A:4434:GLN:N	2.72	0.43
1:A:4659:ILE:HD12	1:A:4659:ILE:N	2.34	0.43
1:A:4708:ASP:C	1:A:4710:SER:H	2.22	0.43
1:B:4075:THR:HG23	1:B:4076:ILE:N	2.34	0.43
1:B:4324:ILE:HG13	1:B:4324:ILE:H	1.52	0.43
1:B:4617:GLU:HG2	1:B:4618:ASN:N	2.34	0.43
1:B:4638:ASN:HB3	1:B:4666:ILE:HD11	2.00	0.43
1:A:1963:ALA:HA	1:A:2096:ARG:HH11	1.83	0.42
1:A:1967:ARG:NH1	1:A:2053:ASN:HA	2.34	0.42
1:A:3716:CYS:H	1:A:3760:PHE:HB2	1.84	0.42
1:A:4024:ARG:HA	1:A:4030:PHE:O	2.19	0.42
1:A:4354:ARG:HD3	1:A:4717:TYR:CD2	2.53	0.42
1:B:2196:LEU:HD11	1:B:2223:PHE:CD2	2.54	0.42
1:B:2368:ASN:O	1:B:2410:ARG:NH1	2.52	0.42
1:B:2271:GLY:HA2	1:B:2393:VAL:O	2.19	0.42
1:B:2849:LEU:CD1	1:B:2901:LEU:HD11	2.49	0.42
1:B:3722:ASP:HA	1:B:3724:GLU:OE1	2.19	0.42
1:B:3723:VAL:HG23	1:B:3764:LEU:HD22	2.01	0.42
1:A:1554:LEU:HD22	1:A:1609:GLN:HG3	2.00	0.42
1:A:1907:LEU:HD22	1:A:1911:ARG:CZ	2.49	0.42
1:A:2425:MET:HE2	1:A:2425:MET:HB3	1.81	0.42
1:A:2560:MET:CG	1:A:2565:GLN:HB2	2.49	0.42
1:A:3782:THR:HG23	1:A:3782:THR:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4358:SER:O	1:A:4362:GLN:HB2	2.19	0.42
1:A:3992:LEU:CD1	1:A:4434:GLN:HG3	2.48	0.42
1:A:4596:ASN:OD1	1:A:4599:ALA:HB2	2.18	0.42
1:A:4678:ILE:O	1:A:4678:ILE:HG22	2.19	0.42
1:B:2109:ALA:HA	1:B:2156:LEU:CD1	2.49	0.42
1:B:2423:THR:HA	1:B:2426:ILE:HD13	2.00	0.42
1:B:2886:LEU:HD23	1:B:2904:LEU:HD22	2.01	0.42
1:B:2991:PHE:CE1	1:B:2993:GLU:HB2	2.54	0.42
1:B:3234:ILE:HG23	1:B:3617:TRP:CE2	2.54	0.42
1:B:3598:PHE:CD2	1:B:3634:VAL:HG11	2.55	0.42
1:B:3647:TRP:HB3	1:B:3652:LEU:CD2	2.49	0.42
1:B:3676:ASP:CB	1:B:3681:ALA:HB3	2.49	0.42
1:B:4673:ASP:OD1	1:B:4674:LYS:N	2.52	0.42
1:A:1816:LEU:HD23	1:A:1878:LEU:CD1	2.49	0.42
1:A:2259:ILE:HG23	1:A:2289:TYR:HB2	2.02	0.42
1:A:2525:ILE:HD12	1:A:2526:MET:N	2.33	0.42
1:A:2832:ASN:CG	1:A:2849:LEU:HD23	2.39	0.42
1:A:2870:ALA:C	1:A:2872:TYR:H	2.21	0.42
1:A:3067:GLU:HG2	1:A:3068:LYS:N	2.34	0.42
1:A:3096:VAL:HB	1:A:3099:LEU:HD22	2.01	0.42
1:A:3156:ASN:C	1:A:3158:SER:H	2.21	0.42
1:A:3718:LEU:HG	1:A:3719:LEU:N	2.21	0.42
1:B:1505:SER:O	1:B:1506:ASP:C	2.57	0.42
1:B:1960:LEU:HD13	1:B:2074:PHE:CE1	2.54	0.42
1:B:2017:CYS:SG	1:B:2046:ILE:HD13	2.59	0.42
1:B:2129:VAL:N	1:B:2130:PRO:CD	2.82	0.42
1:B:2669:PRO:HA	1:B:2788:PHE:O	2.19	0.42
1:A:4000:SER:O	1:B:2940:SER:HB3	2.19	0.42
1:B:3030:ALA:HB3	1:B:3037:ILE:HD11	2.00	0.42
1:B:3078:VAL:O	1:B:3078:VAL:HG22	2.18	0.42
1:B:3698:SER:HB3	1:B:3700:LEU:HD12	2.00	0.42
1:B:3962:ASP:C	1:B:3964:LYS:H	2.23	0.42
1:A:1639:ILE:HG12	1:A:1675:LEU:HD23	2.01	0.42
1:A:1732:LEU:HD13	1:A:1741:ILE:HD12	2.01	0.42
1:A:1752:VAL:CG2	1:A:1811:PRO:HG3	2.48	0.42
1:A:1816:LEU:O	1:A:1820:GLN:HG3	2.19	0.42
1:A:1973:PHE:HD1	1:A:1973:PHE:O	2.02	0.42
1:A:2142:GLN:HB2	1:A:2145:TYR:CD1	2.54	0.42
1:A:2266:LEU:HD21	1:A:2394:MET:CE	2.49	0.42
1:A:2615:TYR:CD2	1:A:2615:TYR:N	2.87	0.42
1:A:2819:PRO:HB2	1:A:2824:LEU:CD2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3018:SER:O	1:A:3257:PRO:HD2	2.18	0.42
1:A:3209:ALA:CB	1:A:3221:PRO:HG3	2.49	0.42
1:A:3700:LEU:CD1	1:A:3701:ASP:N	2.80	0.42
1:A:3993:LYS:O	1:A:3995:GLY:N	2.53	0.42
1:A:4109:ASP:CA	1:A:4112:ASN:HD22	2.11	0.42
1:A:4134:LEU:HD23	1:A:4236:PHE:HB2	2.01	0.42
1:A:4168:PHE:O	1:A:4172:GLU:HG3	2.19	0.42
1:A:4289:PRO:HA	1:A:4292:TRP:O	2.20	0.42
1:B:1811:PRO:HB2	1:B:1814:LEU:CD1	2.49	0.42
1:B:2125:ALA:C	1:B:2127:LYS:H	2.21	0.42
1:B:2272:VAL:HG12	1:B:2273:MET:N	2.34	0.42
1:B:2591:GLU:HA	1:B:2613:LEU:HD12	2.01	0.42
1:B:3057:MET:O	1:B:3061:ARG:HG3	2.19	0.42
1:B:3039:THR:HG22	1:B:3072:ILE:HB	2.01	0.42
1:B:3181:LEU:HB2	1:B:3232:VAL:HG13	2.01	0.42
1:B:3960:LEU:CD2	1:B:4237:SER:HB2	2.50	0.42
1:A:1708:ILE:HD11	1:A:1721:HIS:HB3	2.01	0.42
1:A:2051:LYS:C	1:A:2051:LYS:HD3	2.39	0.42
1:A:1967:ARG:CB	1:A:2051:LYS:HA	2.50	0.42
1:A:2408:ILE:O	1:A:2411:CYS:HB2	2.20	0.42
1:A:2502:ILE:CG2	1:A:2573:LEU:HD12	2.48	0.42
1:A:2534:LEU:HB3	1:A:2538:PHE:CE2	2.55	0.42
1:A:2587:LEU:CG	1:A:2817:ASP:HB2	2.45	0.42
1:A:2905:TRP:HZ3	1:A:2934:ALA:HB2	1.83	0.42
1:A:3262:ASP:OD2	1:A:3670:ARG:NE	2.52	0.42
1:A:3192:LEU:HD11	1:A:3271:ILE:HG22	2.01	0.42
1:A:3536:TYR:O	1:A:3540:ILE:HD13	2.20	0.42
1:A:4373:PHE:CD1	1:A:4374:PRO:HD2	2.54	0.42
1:B:2112:MET:SD	1:B:2153:LYS:HG2	2.59	0.42
1:B:2528:PHE:HE1	1:B:2533:VAL:HG11	1.85	0.42
1:B:2706:THR:HA	1:B:2759:VAL:HG22	2.01	0.42
1:B:3084:LEU:O	1:B:3087:MET:N	2.52	0.42
1:B:3598:PHE:O	1:B:3602:ILE:HB	2.20	0.42
1:A:1766:ILE:HG23	1:A:1767:HIS:N	2.35	0.42
1:A:1777:MET:HE3	1:A:1939:GLU:HA	2.02	0.42
1:A:1979:GLY:O	1:A:1980:LYS:C	2.58	0.42
1:A:2106:GLU:CD	1:A:2106:GLU:N	2.69	0.42
1:A:2370:LEU:HD23	1:A:2370:LEU:O	2.19	0.42
1:A:2415:TRP:HA	1:A:2415:TRP:HE3	1.83	0.42
1:A:2910:LEU:HB3	1:A:2911:ARG:HH12	1.85	0.42
1:A:3009:GLN:HG2	1:A:3138:ARG:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3061:ARG:O	1:A:3067:GLU:HB3	2.18	0.42
1:A:3108:LEU:HD11	1:A:3133:PHE:CZ	2.54	0.42
1:A:3915:ALA:O	1:A:3918:ASP:HB2	2.19	0.42
1:A:3954:ARG:HD3	1:A:3954:ARG:O	2.19	0.42
1:A:4178:ALA:HA	1:A:4183:THR:OG1	2.20	0.42
1:A:4128:SER:CB	1:A:4213:PHE:HB3	2.48	0.42
1:B:1598:VAL:HG22	1:B:1660:LEU:HD22	2.01	0.42
1:B:1914:TYR:CZ	1:B:1924:LYS:HB3	2.54	0.42
1:B:2230:PRO:HB3	1:B:2237:ARG:HH22	1.84	0.42
1:B:2327:TRP:CH2	1:B:2380:PRO:HD2	2.55	0.42
1:B:2610:ILE:HD12	1:B:2615:TYR:OH	2.20	0.42
1:B:3043:ASN:N	1:B:3043:ASN:ND2	2.68	0.42
1:B:3160:THR:C	1:B:3162:PRO:HD3	2.40	0.42
1:A:2126:GLY:O	1:A:2130:PRO:HG2	2.19	0.42
1:A:2269:ASN:O	1:A:2271:GLY:N	2.53	0.42
1:A:2270:HIS:HB2	1:A:2392:ARG:HD2	2.02	0.42
1:A:2426:ILE:CD1	1:A:2530:ARG:HD3	2.50	0.42
1:A:2573:LEU:C	1:A:2573:LEU:HD23	2.40	0.42
1:A:2701:PHE:HB2	1:A:2745:GLU:O	2.20	0.42
1:A:3457:LEU:HD12	1:A:3486:TYR:CE1	2.55	0.42
1:B:2290:LEU:HD22	1:B:2352:TRP:CZ3	2.55	0.42
1:B:2588:VAL:HG23	1:B:2589:GLU:N	2.34	0.42
1:B:2773:TRP:CH2	1:B:2780:TRP:HB2	2.54	0.42
1:B:3061:ARG:O	1:B:3067:GLU:HB3	2.19	0.42
1:B:3990:PHE:CD2	1:B:4084:LEU:HD22	2.55	0.42
1:A:1791:HIS:HD2	1:A:1806:TRP:HD1	1.66	0.42
1:A:2057:VAL:HB	1:A:2067:LEU:HD13	2.01	0.42
1:A:1952:LEU:HD22	1:A:2103:PRO:HA	2.01	0.42
1:A:2561:SER:HA	1:A:2562:PRO:HD3	1.95	0.42
1:A:2849:LEU:HA	1:A:2938:PHE:HZ	1.85	0.42
1:A:3268:VAL:HG13	1:A:3269:LEU:N	2.35	0.42
1:A:3602:ILE:HG22	1:A:3603:GLY:N	2.34	0.42
1:A:4313:TRP:CD1	1:A:4334:VAL:HG22	2.55	0.42
1:B:1608:VAL:HG13	1:B:1676:LEU:CD1	2.50	0.42
1:B:1907:LEU:HD22	1:B:1911:ARG:NH2	2.34	0.42
1:B:2084:ARG:CZ	1:B:4295:PHE:CD2	3.03	0.42
1:B:2513:HIS:O	1:B:2517:GLU:HG3	2.19	0.42
1:B:2528:PHE:CE1	1:B:2533:VAL:HG11	2.54	0.42
1:B:2825:THR:CG2	1:B:2854:VAL:HG21	2.50	0.42
1:B:3259:HIS:NE2	1:B:3779:SER:HA	2.34	0.42
1:B:4036:HIS:CD2	1:B:4044:TRP:HE1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4280:ILE:HG23	1:B:4408:LEU:HA	2.01	0.42
1:B:4284:ARG:CG	1:B:4408:LEU:HB3	2.49	0.42
1:A:1792:PHE:CD2	1:A:1792:PHE:C	2.92	0.42
1:A:2009:MET:HE3	1:A:2012:ILE:HB	2.02	0.42
1:A:2071:MET:HG3	1:A:2071:MET:O	2.20	0.42
1:A:2585:MET:O	1:A:2815:LEU:HD13	2.19	0.42
1:A:2842:LEU:HD11	1:A:2897:THR:C	2.40	0.42
1:A:2989:VAL:HG13	1:A:3187:GLU:OE2	2.20	0.42
1:A:3075:GLU:C	1:A:3077:ASN:H	2.23	0.42
1:A:3224:ARG:HB2	1:A:3224:ARG:HE	1.73	0.42
1:A:3449:ARG:NH1	1:A:3449:ARG:HB3	2.35	0.42
1:B:2540:LEU:HB3	1:B:2576:SER:CB	2.49	0.42
1:B:2856:PHE:HE2	1:B:2913:PHE:CD2	2.37	0.42
1:B:3039:THR:CG2	1:B:3072:ILE:HB	2.50	0.42
1:B:2989:VAL:HG21	1:B:3184:VAL:HA	2.02	0.42
1:B:3235:HIS:CE1	1:B:3260:TYR:HB2	2.55	0.42
1:B:3256:THR:CG2	1:B:3779:SER:HB3	2.50	0.42
1:B:3976:VAL:O	1:B:3979:THR:HG23	2.20	0.42
1:A:1556:ARG:HG2	1:A:1557:GLY:N	2.35	0.42
1:A:1746:SER:HB3	1:A:1940:TYR:CZ	2.55	0.42
1:A:1818:THR:O	1:A:1822:VAL:HG23	2.20	0.42
1:A:1929:MET:O	1:A:1930:ALA:HB3	2.20	0.42
1:A:1973:PHE:HE1	1:A:2099:ALA:CA	2.33	0.42
1:A:2833:ARG:HA	1:A:2846:ALA:HB1	2.02	0.42
1:A:3148:ASN:HA	1:A:3149:PRO:HD3	1.93	0.42
1:A:3315:VAL:O	1:A:3319:GLN:HB2	2.19	0.42
1:A:4065:ALA:O	1:A:4069:LEU:HB2	2.20	0.42
1:A:4070:SER:C	1:A:4072:GLN:N	2.72	0.42
1:A:4418:LEU:HD11	1:A:4422:LYS:HZ3	1.84	0.42
1:A:4575:LEU:H	1:A:4575:LEU:CD1	2.26	0.42
1:B:1615:LEU:HD13	1:B:1618:ILE:HD12	2.01	0.42
1:B:1952:LEU:HA	1:B:1955:ARG:NH2	2.35	0.42
1:B:2684:LEU:HD13	1:B:2684:LEU:C	2.40	0.42
1:B:3017:VAL:HG11	1:B:3175:GLU:HA	2.01	0.42
1:B:4070:SER:O	1:B:4072:GLN:N	2.53	0.42
1:B:4434:GLN:O	1:B:4434:GLN:HG2	2.19	0.42
1:A:2140:SER:HB2	1:A:2142:GLN:NE2	2.23	0.41
1:A:2204:ILE:HG13	1:A:2205:PRO:CD	2.50	0.41
1:A:2898:LEU:HD11	1:A:2941:VAL:HG22	2.01	0.41
1:A:3889:MET:SD	1:A:3889:MET:C	2.99	0.41
1:A:4370:ASN:N	1:A:4370:ASN:HD22	2.16	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1565:LEU:HD23	1:B:1595:LEU:HD12	2.00	0.41
1:B:2272:VAL:O	1:B:2394:MET:HA	2.20	0.41
1:B:2292:ALA:O	1:B:2296:VAL:HG23	2.20	0.41
1:B:2370:LEU:HD12	1:B:2377:LEU:HB2	2.02	0.41
1:B:2579:TRP:HZ2	1:B:2655:ARG:HD2	1.84	0.41
1:B:3923:LEU:HD22	1:B:3947:ILE:CG2	2.47	0.41
1:B:4191:HIS:CD2	1:B:4220:GLU:HG2	2.54	0.41
1:A:1831:LEU:HA	1:A:1841:ILE:HG12	2.02	0.41
1:A:1973:PHE:HD1	1:A:1973:PHE:C	2.23	0.41
1:A:2258:LYS:HA	1:A:2261:GLN:CG	2.44	0.41
1:A:2370:LEU:HA	1:A:2375:LYS:HA	2.02	0.41
1:A:2745:GLU:CB	1:A:2748:LEU:HD12	2.50	0.41
1:A:2783:LEU:HD22	1:A:2786:ILE:HB	2.01	0.41
1:A:3256:THR:HB	1:A:3257:PRO:HD2	2.01	0.41
1:A:3808:ASP:CG	1:A:3809:THR:N	2.73	0.41
1:A:3990:PHE:O	1:A:3994:GLY:HA2	2.20	0.41
1:A:4337:ILE:O	1:A:4341:THR:CG2	2.68	0.41
1:A:4623:ALA:HB2	1:A:4703:ILE:CD1	2.48	0.41
1:A:4684:SER:O	1:A:4707:TYR:HE2	2.02	0.41
1:B:1785:LEU:HB2	1:B:1814:LEU:HD23	2.00	0.41
1:B:1960:LEU:HD13	1:B:2074:PHE:HE1	1.85	0.41
1:B:3573:ARG:HH11	1:B:3573:ARG:HG2	1.84	0.41
1:B:3700:LEU:CD1	1:B:3701:ASP:H	2.30	0.41
1:B:3877:GLN:O	1:B:3881:GLU:HB2	2.20	0.41
1:B:4277:PHE:HZ	1:B:4356:LEU:HD21	1.84	0.41
1:A:1625:ILE:HG23	1:A:1626:ASN:N	2.33	0.41
1:A:1719:GLN:HA	1:A:1722:PHE:CE2	2.56	0.41
1:A:1959:THR:O	1:A:1963:ALA:CB	2.69	0.41
1:A:2893:MET:O	1:A:2895:GLY:N	2.46	0.41
1:A:3148:ASN:OD1	1:A:3150:ALA:N	2.45	0.41
1:A:3206:ILE:HA	1:A:3221:PRO:HG2	2.03	0.41
1:A:3443:MET:HE3	1:A:3449:ARG:HA	2.02	0.41
1:A:3994:GLY:O	1:A:3995:GLY:C	2.58	0.41
1:A:4278:HIS:O	1:A:4282:GLN:HB2	2.20	0.41
1:B:1590:HIS:NE2	1:B:1594:ARG:NH1	2.68	0.41
1:B:1872:ARG:NH2	1:B:2164:ARG:NE	2.68	0.41
1:B:2208:VAL:HG12	1:B:2415:TRP:NE1	2.36	0.41
1:B:2231:ILE:CG2	1:B:2264:GLN:HE22	2.31	0.41
1:B:2578:MET:O	1:B:2582:GLY:HA3	2.19	0.41
1:B:2670:LEU:HD12	1:B:2670:LEU:O	2.20	0.41
1:B:3563:LEU:CD1	1:B:3845:ILE:HD11	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3566:ASN:HD21	1:B:3859:LYS:HZ2	1.69	0.41
1:B:3910:GLN:HB3	1:B:4231:ARG:HD3	2.03	0.41
1:B:3886:TYR:CE2	1:B:3940:LEU:HD23	2.56	0.41
1:B:3960:LEU:HB3	1:B:4239:GLU:OE2	2.21	0.41
1:B:4201:GLU:HG3	1:B:4228:ASN:HB2	2.03	0.41
1:B:4284:ARG:HG2	1:B:4408:LEU:HB3	2.02	0.41
1:A:1697:PHE:CD2	1:A:1705:LEU:HD11	2.55	0.41
1:A:1701:GLY:HA2	1:A:2011:ARG:CZ	2.50	0.41
1:A:2127:LYS:O	1:A:2130:PRO:HD2	2.20	0.41
1:A:2376:LEU:HD12	1:A:2386:ALA:N	2.35	0.41
1:A:2612:LEU:HD12	1:A:2612:LEU:O	2.21	0.41
1:A:2749:PRO:HG2	1:A:2759:VAL:HG11	2.01	0.41
1:A:2774:ARG:HH21	1:A:2779:THR:HB	1.85	0.41
1:A:2586:GLY:CA	1:A:2815:LEU:HD13	2.43	0.41
1:A:2868:ILE:HG21	1:A:2922:GLU:OE2	2.21	0.41
1:A:3164:LEU:HA	1:A:3164:LEU:HD12	1.81	0.41
1:A:3013:LEU:HD23	1:A:3170:LEU:HD12	2.01	0.41
1:A:3553:VAL:O	1:A:3557:VAL:HG23	2.21	0.41
1:A:3652:LEU:HD21	1:A:3662:ALA:HB2	2.02	0.41
1:A:3819:ILE:C	1:A:3821:GLY:H	2.23	0.41
1:A:4012:LEU:H	1:A:4012:LEU:HD12	1.84	0.41
1:A:4270:ILE:HG22	1:A:4310:ILE:HD13	2.01	0.41
1:A:4314:VAL:O	1:A:4314:VAL:CG1	2.68	0.41
1:A:4349:ASN:ND2	1:A:4352:ASP:N	2.65	0.41
1:A:4648:VAL:CG1	1:A:4662:THR:HG21	2.41	0.41
1:A:4692:LEU:HD12	1:A:4700:LEU:HD21	2.02	0.41
1:B:2036:LEU:O	1:B:2036:LEU:HD23	2.20	0.41
1:B:2556:SER:C	1:B:2558:PHE:N	2.73	0.41
1:B:3602:ILE:O	1:B:3603:GLY:C	2.59	0.41
1:B:4068:GLN:C	1:B:4070:SER:H	2.24	0.41
1:B:4371:PRO:O	1:B:4372:ASP:HB2	2.20	0.41
1:A:1782:ALA:HA	1:A:1938:PHE:CZ	2.55	0.41
1:A:2204:ILE:CA	1:A:2207:LEU:HD12	2.44	0.41
1:A:2222:VAL:C	1:A:2224:PRO:HD3	2.40	0.41
1:A:2376:LEU:HD21	1:A:2384:ARG:HB3	2.02	0.41
1:A:2606:PRO:HG2	1:A:2615:TYR:CD1	2.56	0.41
1:A:2832:ASN:HA	1:A:2835:LEU:HB3	2.01	0.41
1:A:4012:LEU:HD21	1:A:4020:LEU:HD22	2.02	0.41
1:A:4283:GLU:OE2	1:A:4286:ARG:NH1	2.54	0.41
1:A:4289:PRO:HB2	1:A:4696:ARG:HD2	2.01	0.41
1:A:4401:GLU:HB2	1:A:4402:ILE:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1493:ILE:O	1:B:1497:LEU:HG	2.21	0.41
1:B:1817:LEU:HD11	1:B:1936:TYR:CD2	2.55	0.41
1:B:2223:PHE:C	1:B:2225:GLY:H	2.23	0.41
1:B:3606:ASP:O	1:B:3610:ARG:HG3	2.21	0.41
1:B:4006:PRO:C	1:B:4008:LEU:H	2.24	0.41
1:B:4553:TYR:O	1:B:4555:VAL:HG22	2.20	0.41
1:A:1766:ILE:HG23	1:A:1767:HIS:H	1.84	0.41
1:A:1888:VAL:HG22	1:A:1909:HIS:CE1	2.56	0.41
1:A:2275:VAL:HG23	1:A:2397:VAL:HG23	2.03	0.41
1:A:2579:TRP:HZ2	1:A:2655:ARG:HD2	1.85	0.41
1:A:2694:PHE:CD2	1:A:2738:TRP:HB2	2.56	0.41
1:A:2748:LEU:CD2	1:A:2800:ARG:HD3	2.51	0.41
1:A:3439:ASP:OD2	1:A:3442:LYS:HE2	2.21	0.41
1:A:3571:ARG:NH1	1:A:3571:ARG:HB3	2.35	0.41
1:A:4001:ILE:HB	1:A:4018:LYS:HD3	2.02	0.41
1:A:4006:PRO:O	1:A:4008:LEU:N	2.52	0.41
1:A:4240:ASN:HA	1:A:4241:PRO:HD2	1.89	0.41
1:A:4278:HIS:HD2	1:A:4343:TYR:CE1	2.39	0.41
1:A:4247:ASN:HD21	1:A:4282:GLN:HE21	1.67	0.41
1:A:4535:ARG:HG2	1:A:4535:ARG:HH11	1.84	0.41
1:A:4537:LEU:CD2	1:A:4548:LYS:HE3	2.50	0.41
1:A:4670:THR:HG22	1:A:4671:TRP:N	2.36	0.41
1:B:1910:MET:CB	1:B:1929:MET:HG3	2.50	0.41
1:B:2670:LEU:C	1:B:2670:LEU:HD12	2.41	0.41
1:B:2711:LEU:HD12	1:B:2711:LEU:HA	1.89	0.41
1:B:3087:MET:HE2	1:B:3090:LEU:HD23	2.03	0.41
1:B:4184:TRP:NE1	1:B:4214:ARG:HB2	2.35	0.41
1:A:2057:VAL:HG13	1:A:2059:LEU:H	1.86	0.41
1:A:2615:TYR:HD2	1:A:2615:TYR:N	2.18	0.41
1:A:2696:VAL:HG22	1:A:2697:VAL:N	2.36	0.41
1:A:2855:GLU:OE2	1:A:2933:VAL:HG22	2.21	0.41
1:B:1497:LEU:HB3	1:B:1501:SER:CB	2.51	0.41
1:B:1500:GLY:O	1:B:1504:ASP:N	2.50	0.41
1:B:1483:ILE:HG22	1:B:1517:VAL:HG22	2.02	0.41
1:B:2239:LYS:O	1:B:2243:ILE:HG13	2.21	0.41
1:B:2278:SER:H	1:B:2398:GLN:NE2	2.17	0.41
1:B:2363:TRP:C	1:B:2365:GLU:H	2.24	0.41
1:B:2400:LEU:HD13	1:B:2408:ILE:CD1	2.48	0.41
1:B:2853:MET:HA	1:B:2882:TRP:CZ3	2.56	0.41
1:B:3567:LEU:HD23	1:B:3567:LEU:HA	1.94	0.41
1:B:3903:LEU:O	1:B:3909:TYR:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4023:LEU:HG	1:B:4030:PHE:CD1	2.56	0.41
1:B:4509:LEU:HD23	1:B:4568:PHE:CE1	2.55	0.41
1:B:4535:ARG:HG2	1:B:4535:ARG:NH1	2.34	0.41
1:B:4644:LEU:HD23	1:B:4723:ILE:HG12	2.02	0.41
1:A:2000:CYS:O	1:A:2001:ASP:C	2.58	0.41
1:A:2028:PHE:CB	1:A:2075:VAL:HG13	2.44	0.41
1:A:2269:ASN:C	1:A:2271:GLY:H	2.24	0.41
1:A:2579:TRP:CE3	1:A:2659:VAL:HG21	2.56	0.41
1:A:3567:LEU:HD23	1:A:3567:LEU:HA	1.91	0.41
1:A:3652:LEU:HB2	1:A:3684:PHE:CD1	2.55	0.41
1:A:4033:LEU:HD13	1:A:4062:TRP:CZ2	2.55	0.41
1:A:4426:MET:O	1:A:4430:LEU:HG	2.21	0.41
1:B:3258:ARG:HD2	1:B:3779:SER:HB2	2.01	0.41
1:B:3781:VAL:HG12	1:B:3782:THR:N	2.34	0.41
1:B:3930:LEU:O	1:B:3932:ASP:N	2.54	0.41
1:A:1712:SER:HB3	1:A:1766:ILE:HB	2.03	0.41
1:A:1726:PHE:CD2	1:A:1729:LEU:HD22	2.55	0.41
1:A:2848:ASN:HB3	1:A:2938:PHE:CE1	2.55	0.41
1:A:2890:ILE:HD13	1:A:2893:MET:CE	2.51	0.41
1:A:3078:VAL:HG23	1:A:3083:PHE:HB2	2.02	0.41
1:A:3597:ALA:O	1:A:3601:TYR:HD1	2.04	0.41
1:A:4060:GLU:O	1:A:4064:VAL:HG23	2.21	0.41
1:A:4592:GLY:CA	1:A:4725:SER:HB2	2.50	0.41
1:B:1844:GLN:O	1:B:1847:SER:HB2	2.21	0.41
1:B:2029:ASN:N	1:B:2029:ASN:HD22	2.18	0.41
1:B:2151:ALA:O	1:B:2154:SER:N	2.52	0.41
1:B:2236:LEU:O	1:B:2240:ILE:HG13	2.21	0.41
1:B:2270:HIS:CA	1:B:2392:ARG:HH11	2.33	0.41
1:B:2420:ILE:HG13	1:B:2421:LEU:N	2.36	0.41
1:B:2492:LEU:O	1:B:2493:LYS:C	2.59	0.41
1:B:2578:MET:HB3	1:B:2597:ILE:CD1	2.43	0.41
1:B:3228:VAL:HA	1:B:3231:LEU:HD12	2.03	0.41
1:B:3647:TRP:HB3	1:B:3652:LEU:HD22	2.02	0.41
1:B:4056:PRO:HD2	1:B:4093:ARG:NH2	2.36	0.41
1:B:4157:TYR:HB2	1:B:4184:TRP:CB	2.50	0.41
1:B:4162:ILE:HG22	1:B:4163:GLY:N	2.35	0.41
1:B:4306:ALA:HA	1:B:4338:LEU:HD22	2.03	0.41
1:B:4277:PHE:HB2	1:B:4363:LEU:HD12	2.03	0.41
1:B:4094:VAL:HB	1:B:4423:ALA:HB1	2.02	0.41
1:B:4503:ILE:HD11	1:B:4575:LEU:O	2.21	0.41
1:A:1886:ARG:HG3	1:A:1887:ASP:H	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2088:PRO:C	1:A:2090:ASN:N	2.75	0.41
1:A:3093:GLY:O	1:A:3095:GLU:N	2.54	0.41
1:A:3230:SER:HA	1:A:3620:ARG:HE	1.86	0.41
1:A:3844:ASN:O	1:A:3848:ASP:HB2	2.20	0.41
1:A:4024:ARG:CG	1:A:4031:SER:HA	2.49	0.41
1:B:1739:THR:O	1:B:1760:ILE:N	2.54	0.41
1:B:1734:LEU:HA	1:B:1742:ILE:HG12	2.03	0.41
1:B:1831:LEU:HB3	1:B:1900:GLY:HA2	2.02	0.41
1:B:2084:ARG:HG2	1:B:2084:ARG:NH1	2.36	0.41
1:B:2381:ASN:HD22	1:B:2381:ASN:C	2.25	0.41
1:B:2887:LEU:O	1:B:2891:GLN:HG3	2.21	0.41
1:B:3539:LEU:HA	1:B:3539:LEU:HD12	1.92	0.41
1:B:3571:ARG:O	1:B:3575:GLU:HG3	2.19	0.41
1:B:4022:CYS:HB3	1:B:4026:GLN:NE2	2.36	0.41
1:B:4141:ASP:OD2	1:B:4143:SER:HB2	2.21	0.41
1:B:4145:LYS:HE2	1:B:4238:TYR:CE1	2.55	0.41
1:B:4509:LEU:O	1:B:4513:ILE:HG13	2.20	0.41
1:B:4649:TRP:HA	1:B:4649:TRP:CE3	2.55	0.41
1:B:4413:ASN:ND2	1:B:4660:LEU:HD23	2.36	0.41
1:A:1939:GLU:O	1:A:1941:LEU:HG	2.21	0.41
1:A:2332:PHE:HA	1:A:2335:THR:OG1	2.20	0.41
1:A:2359:VAL:HG23	1:A:2397:VAL:HG11	2.03	0.41
1:A:3606:ASP:O	1:A:3610:ARG:HG3	2.21	0.41
1:A:3698:SER:C	1:A:3700:LEU:HD12	2.41	0.41
1:A:4063:ILE:HD13	1:A:4082:LYS:NZ	2.36	0.41
1:A:4122:VAL:HB	1:A:4132:LEU:CD2	2.51	0.41
1:A:4606:GLN:HA	1:A:4609:SER:OG	2.21	0.41
1:B:1909:HIS:O	1:B:1911:ARG:HD3	2.22	0.41
1:B:1947:LEU:HD21	1:B:1982:GLU:CG	2.51	0.41
1:B:2260:LEU:O	1:B:2263:HIS:HB3	2.21	0.41
1:B:3015:ILE:O	1:B:3173:PHE:N	2.51	0.41
1:B:3017:VAL:HG13	1:B:3174:GLY:C	2.41	0.41
1:B:3685:LEU:O	1:B:3689:TYR:HB2	2.20	0.41
1:B:4711:THR:OG1	1:B:4716:TRP:NE1	2.54	0.41
1:A:1633:SER:O	1:A:1637:LYS:HG2	2.21	0.40
1:A:2269:ASN:C	1:A:2271:GLY:N	2.74	0.40
1:A:2439:PHE:HZ	1:A:2542:ASN:OD1	2.03	0.40
1:A:2877:ARG:HD2	1:A:2881:ARG:NH2	2.36	0.40
1:A:2935:LEU:C	1:A:2935:LEU:HD23	2.41	0.40
1:A:3022:LYS:HB2	1:A:3022:LYS:NZ	2.36	0.40
1:A:3025:LEU:HD23	1:A:3025:LEU:HA	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3199:TYR:OH	1:A:3226:ALA:HB2	2.21	0.40
1:A:3237:THR:OG1	1:A:3238:ILE:HD12	2.21	0.40
1:A:3720:VAL:HG21	1:A:3762:ILE:HD11	2.03	0.40
1:A:4090:HIS:C	1:A:4092:ASP:H	2.24	0.40
1:A:4086:MET:HG2	1:A:4093:ARG:HB2	1.99	0.40
1:A:4647:ALA:HA	1:A:4657:THR:HG22	2.02	0.40
1:B:2120:THR:HB	1:B:2124:LEU:HG	2.03	0.40
1:B:2754:TYR:O	1:B:2756:THR:HG22	2.21	0.40
1:B:3046:TYR:CZ	1:B:3050:ASP:HB2	2.55	0.40
1:B:3234:ILE:O	1:B:3238:ILE:HD13	2.21	0.40
1:B:3976:VAL:HG13	1:B:4105:VAL:HG11	2.01	0.40
1:B:4499:PHE:HA	1:B:4502:GLU:HB2	2.03	0.40
1:A:2005:ASP:OD1	1:A:2006:LEU:N	2.55	0.40
1:A:2212:ILE:O	1:A:2215:ILE:HG22	2.22	0.40
1:A:3225:ASP:O	1:A:3229:SER:CB	2.69	0.40
1:A:3698:SER:O	1:A:3704:PHE:HB2	2.22	0.40
1:A:3727:ASP:C	1:A:3729:VAL:H	2.25	0.40
1:A:3997:ASN:O	1:A:3998:LEU:C	2.60	0.40
1:A:4117:ASP:C	1:A:4119:ALA:H	2.25	0.40
1:B:1546:VAL:HG12	1:B:1547:ASN:N	2.36	0.40
1:B:1928:HIS:CG	1:B:1933:THR:HG22	2.52	0.40
1:B:1820:GLN:NE2	1:B:1990:GLN:NE2	2.66	0.40
1:B:2081:TYR:O	1:B:2082:ALA:HB3	2.21	0.40
1:B:3218:ALA:O	1:B:3219:ILE:C	2.60	0.40
1:B:4083:ILE:HD11	1:B:4098:SER:HA	2.03	0.40
1:B:4264:PRO:HA	1:B:4322:SER:O	2.21	0.40
1:B:4493:ASP:OD1	1:B:4494:PRO:HD2	2.21	0.40
1:A:1726:PHE:CB	1:A:1729:LEU:HB3	2.51	0.40
1:A:2793:ASN:HB3	1:A:2794:PRO:HD2	2.04	0.40
1:A:2986:VAL:O	1:A:2988:LEU:HG	2.20	0.40
1:A:2995:LEU:CD2	1:A:2998:ILE:HD11	2.48	0.40
1:A:3256:THR:HB	1:A:3257:PRO:CD	2.51	0.40
1:A:4130:SER:HA	1:A:4131:PRO:HD3	1.88	0.40
1:A:4189:ASN:HA	1:A:4191:HIS:CD2	2.57	0.40
1:A:4245:LYS:HE2	1:A:4249:LEU:HD11	2.03	0.40
1:A:4418:LEU:HD11	1:A:4422:LYS:NZ	2.36	0.40
1:B:1696:ARG:HH21	1:B:1726:PHE:HA	1.86	0.40
1:B:2379:LEU:HD12	1:B:2383:GLU:HG2	2.03	0.40
1:B:3256:THR:N	1:B:3259:HIS:HD2	2.19	0.40
1:B:3700:LEU:CD1	1:B:3701:ASP:N	2.80	0.40
1:B:4402:ILE:N	1:B:4402:ILE:CD1	2.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4403:SER:HB2	1:B:4407:TRP:CD2	2.56	0.40
1:B:3966:THR:HG23	1:B:4426:MET:HE3	2.02	0.40
1:B:4428:ASN:O	1:B:4432:LYS:HG3	2.21	0.40
1:B:4703:ILE:CD1	1:B:4705:LEU:HD21	2.45	0.40
1:A:1853:GLN:HE22	1:A:1886:ARG:HH11	1.68	0.40
1:A:1898:LEU:HA	1:A:1898:LEU:HD23	1.89	0.40
1:A:2529:THR:O	1:A:2530:ARG:C	2.60	0.40
1:A:2536:SER:HB2	1:A:2580:GLY:O	2.21	0.40
1:A:3947:ILE:O	1:A:3947:ILE:HD13	2.21	0.40
1:A:4247:ASN:HD21	1:A:4282:GLN:NE2	2.19	0.40
1:B:1867:LEU:H	1:B:1867:LEU:HD12	1.86	0.40
1:B:2029:ASN:HD22	1:B:2030:ARG:N	2.20	0.40
1:B:2135:CYS:O	1:B:2139:LEU:HB2	2.21	0.40
1:B:2258:LYS:HD3	1:B:2261:GLN:OE1	2.21	0.40
1:B:2688:LEU:HD13	1:B:2696:VAL:HB	2.04	0.40
1:B:3002:ASP:HA	1:B:3029:VAL:HG11	2.04	0.40
1:A:1778:LYS:HB3	1:A:1922:LEU:HD11	2.04	0.40
1:A:1831:LEU:HD22	1:A:1898:LEU:HD13	2.04	0.40
1:A:2036:LEU:HD12	1:A:2036:LEU:O	2.21	0.40
1:A:2236:LEU:HD21	1:A:2293:ILE:CD1	2.44	0.40
1:A:2591:GLU:OE1	1:A:2611:PRO:HG2	2.22	0.40
1:A:2710:LEU:HD23	1:A:2762:PHE:CE2	2.57	0.40
1:A:3066:GLU:HG2	1:A:3136:GLN:NE2	2.36	0.40
1:A:3459:ASP:HA	1:A:3460:PRO:HD3	1.97	0.40
1:A:3296:GLU:HG3	1:A:3567:LEU:HD13	2.04	0.40
1:A:3845:ILE:HG13	1:A:3845:ILE:H	1.57	0.40
1:A:4057:ILE:HD12	1:A:4057:ILE:HA	1.96	0.40
1:A:4284:ARG:CG	1:A:4408:LEU:HB3	2.49	0.40
1:B:1906:TRP:CZ2	1:B:1911:ARG:HG2	2.57	0.40
1:B:1928:HIS:NE2	1:B:1933:THR:CG2	2.81	0.40
1:B:1813:GLN:HE22	1:B:1941:LEU:H	1.69	0.40
1:B:2309:LYS:HG3	1:B:2358:ASP:HB2	2.02	0.40
1:B:2270:HIS:CB	1:B:2392:ARG:HH11	2.34	0.40
1:B:2519:ALA:HB2	1:B:2593:PHE:CE1	2.57	0.40
1:B:2645:ASP:OD2	1:B:2645:ASP:N	2.54	0.40
1:B:2745:GLU:HG2	1:B:2748:LEU:CD1	2.51	0.40
1:B:2799:GLY:HA3	1:B:3159:ALA:HB1	2.04	0.40
1:B:3271:ILE:HA	1:B:3592:VAL:HG21	2.03	0.40
1:B:3927:ASN:HB3	1:B:3930:LEU:HD12	2.02	0.40
1:B:4432:LYS:C	1:B:4434:GLN:H	2.25	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	3010/3367 (89%)	2424 (80%)	448 (15%)	138 (5%)	2	29
1	B	2870/3367 (85%)	2476 (86%)	327 (11%)	67 (2%)	7	44
All	All	5880/6734 (87%)	4900 (83%)	775 (13%)	205 (4%)	4	36

All (205) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1836	LEU
1	A	2121	ALA
1	A	2409	SER
1	A	2560	MET
1	A	2617	VAL
1	A	2641	VAL
1	A	2646	VAL
1	A	2943	LEU
1	A	2992	ASN
1	A	3033	ASN
1	A	3219	ILE
1	A	3370	GLU
1	A	3371	PRO
1	A	3372	ALA
1	A	3603	GLY
1	A	4050	LYS
1	A	4051	ASP
1	A	4117	ASP
1	A	4121	ILE
1	A	4207	LEU
1	A	4548	LYS
1	A	4549	GLU
1	A	4660	LEU
1	B	1949	GLN
1	B	1975	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	1980	LYS
1	B	2071	MET
1	B	3602	ILE
1	B	3931	VAL
1	B	4207	LEU
1	A	1714	ASP
1	A	1949	GLN
1	A	2004	PHE
1	A	2080	GLY
1	A	2101	ILE
1	A	2342	ASN
1	A	2527	ASP
1	A	2530	ARG
1	A	2628	LYS
1	A	2642	ALA
1	A	2645	ASP
1	A	2727	GLU
1	A	2776	SER
1	A	2789	VAL
1	A	2792	CYS
1	A	3218	ALA
1	A	3430	ASN
1	A	3440	THR
1	A	3488	SER
1	A	3715	GLY
1	A	3719	LEU
1	A	3841	ALA
1	A	3926	ASN
1	A	3994	GLY
1	A	3998	LEU
1	A	4000	SER
1	A	4014	THR
1	A	4053	VAL
1	A	4116	LEU
1	A	4123	GLU
1	A	4125	GLU
1	A	4158	LYS
1	A	4221	ILE
1	A	4342	ILE
1	A	4594	LEU
1	A	4666	ILE
1	A	4672	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	4709	GLN
1	B	1919	GLU
1	B	2141	ALA
1	B	2230	PRO
1	B	2384	ARG
1	B	2600	ILE
1	B	2641	VAL
1	B	2755	GLY
1	B	2775	THR
1	B	3092	ALA
1	B	3603	GLY
1	B	3842	SER
1	B	3844	ASN
1	B	4113	THR
1	B	4221	ILE
1	B	4297	GLU
1	B	4340	SER
1	B	4464	ALA
1	B	4551	LYS
1	A	1663	GLU
1	A	1697	PHE
1	A	1703	GLU
1	A	1727	ALA
1	A	1923	HIS
1	A	2001	ASP
1	A	2089	ASP
1	A	2140	SER
1	A	2282	LYS
1	A	2329	ASP
1	A	2374	ASN
1	A	2705	THR
1	A	2871	HIS
1	A	2990	LEU
1	A	3082	SER
1	A	3671	TYR
1	A	3693	LYS
1	A	3843	GLY
1	A	3933	LYS
1	A	4007	GLN
1	A	4055	GLU
1	A	4118	MET
1	A	4131	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	4163	GLY
1	A	4168	PHE
1	A	4318	SER
1	A	4401	GLU
1	A	4412	GLU
1	B	1663	GLU
1	B	2001	ASP
1	B	2527	ASP
1	B	2915	ASP
1	B	3080	GLU
1	B	3094	GLY
1	B	3248	ARG
1	B	3692	LYS
1	B	4071	ASN
1	B	4692	LEU
1	A	1799	ASP
1	A	1837	GLN
1	A	2002	GLU
1	A	2054	SER
1	A	2122	GLU
1	A	2177	ALA
1	A	2270	HIS
1	A	2370	LEU
1	A	2653	THR
1	A	2690	ALA
1	A	2744	ASP
1	A	2891	GLN
1	A	3094	GLY
1	A	3166	ASN
1	A	3444	MET
1	A	3699	PHE
1	A	3907	HIS
1	A	4026	GLN
1	A	4029	SER
1	A	4259	ARG
1	A	4519	ASN
1	B	1506	ASP
1	B	2165	LYS
1	B	2308	PRO
1	B	2401	LYS
1	B	2749	PRO
1	B	2947	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	3932	ASP
1	B	4003	GLU
1	B	4051	ASP
1	B	4053	VAL
1	B	4189	ASN
1	B	4674	LYS
1	A	2363	TRP
1	A	2601	ALA
1	A	2987	PRO
1	A	3140	ASN
1	A	3142	HIS
1	A	3471	SER
1	A	3712	LEU
1	A	3999	THR
1	A	4011	LEU
1	A	4169	GLU
1	A	4579	SER
1	A	4691	TYR
1	A	4712	SER
1	B	1498	THR
1	B	2069	GLN
1	B	2140	SER
1	B	2210	ASP
1	B	2558	PHE
1	B	3693	LYS
1	B	3849	ASP
1	B	3963	ASP
1	B	4412	GLU
1	A	1868	SER
1	A	1944	GLY
1	A	2966	SER
1	A	3164	LEU
1	A	3716	CYS
1	A	3845	ILE
1	B	1582	LYS
1	B	1630	PRO
1	B	1727	ALA
1	B	4459	GLU
1	B	4621	LEU
1	A	3395	PRO
1	A	3806	ARG
1	A	3976	VAL

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Mol	Chain	Res	Type
1	B	4131	PRO
1	A	4056	PRO
1	B	3093	GLY
1	B	4556	PRO
1	A	2644	PRO
1	A	2755	GLY
1	A	3602	ILE
1	A	3677	PRO
1	B	1579	PRO
1	B	2380	PRO
1	A	2208	VAL
1	B	4094	VAL

### 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	2457/3028 (81%)	2249 (92%)	208 (8%)	12 46
1	B	2353/3028 (78%)	2210 (94%)	143 (6%)	20 57
All	All	4810/6056 (79%)	4459 (93%)	351 (7%)	15 51

All (351) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1516	GLU
1	A	1559	ASP
1	A	1593	ASP
1	A	1594	ARG
1	A	1665	ILE
1	A	1699	PHE
1	A	1719	GLN
1	A	1744	MET
1	A	1753	THR
1	A	1756	LYS
1	A	1803	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1809	ASN
1	A	1844	GLN
1	A	1849	GLU
1	A	1865	GLN
1	A	1874	LYS
1	A	1882	LEU
1	A	1911	ARG
1	A	1922	LEU
1	A	1934	PHE
1	A	1962	GLN
1	A	1973	PHE
1	A	1978	THR
1	A	2006	LEU
1	A	2029	ASN
1	A	2051	LYS
1	A	2053	ASN
1	A	2069	GLN
1	A	2071	MET
1	A	2073	ILE
1	A	2090	ASN
1	A	2096	ARG
1	A	2105	ARG
1	A	2107	MET
1	A	2120	THR
1	A	2136	GLN
1	A	2142	GLN
1	A	2149	LEU
1	A	2152	LEU
1	A	2221	ASP
1	A	2234	ASP
1	A	2239	LYS
1	A	2274	MET
1	A	2297	ASP
1	A	2324	THR
1	A	2329	ASP
1	A	2346	GLU
1	A	2350	ARG
1	A	2359	VAL
1	A	2369	SER
1	A	2384	ARG
1	A	2392	ARG
1	A	2408	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2409	SER
1	A	2415	TRP
1	A	2424	GLN
1	A	2435	SER
1	A	2442	GLN
1	A	2450	ASN
1	A	2511	LEU
1	A	2512	VAL
1	A	2527	ASP
1	A	2529	THR
1	A	2572	ARG
1	A	2587	LEU
1	A	2603	THR
1	A	2613	LEU
1	A	2614	ASP
1	A	2615	TYR
1	A	2626	LEU
1	A	2645	ASP
1	A	2650	THR
1	A	2685	THR
1	A	2694	PHE
1	A	2728	THR
1	A	2747	ASN
1	A	2761	THR
1	A	2793	ASN
1	A	2809	ARG
1	A	2817	ASP
1	A	2863	ARG
1	A	2873	ILE
1	A	2880	SER
1	A	2883	ASP
1	A	2897	THR
1	A	2926	THR
1	A	2944	ASP
1	A	2954	ASN
1	A	2998	ILE
1	A	3007	GLN
1	A	3026	SER
1	A	3027	ARG
1	A	3037	ILE
1	A	3043	ASN
1	A	3052	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	3084	LEU
1	A	3123	LEU
1	A	3141	LEU
1	A	3143	VAL
1	A	3145	PHE
1	A	3158	SER
1	A	3168	CYS
1	A	3175	GLU
1	A	3179	GLU
1	A	3186	SER
1	A	3195	GLU
1	A	3200	ILE
1	A	3216	LEU
1	A	3240	GLU
1	A	3269	LEU
1	A	3278	LEU
1	A	3330	ASP
1	A	3337	LYS
1	A	3365	ASP
1	A	3366	LEU
1	A	3373	ILE
1	A	3381	SER
1	A	3399	THR
1	A	3405	MET
1	A	3432	ILE
1	A	3457	LEU
1	A	3468	ASN
1	A	3516	ASP
1	A	3536	TYR
1	A	3564	LEU
1	A	3566	ASN
1	A	3569	SER
1	A	3571	ARG
1	A	3583	THR
1	A	3584	GLN
1	A	3612	ASP
1	A	3623	SER
1	A	3630	SER
1	A	3663	ILE
1	A	3676	ASP
1	A	3678	SER
1	A	3691	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	3695	THR
1	A	3700	LEU
1	A	3707	ASN
1	A	3719	LEU
1	A	3725	ASN
1	A	3730	LEU
1	A	3731	ASN
1	A	3759	SER
1	A	3760	PHE
1	A	3776	ASP
1	A	3785	ASN
1	A	3791	SER
1	A	3799	HIS
1	A	3806	ARG
1	A	3813	ARG
1	A	3817	LEU
1	A	3830	LEU
1	A	3865	ILE
1	A	3867	LEU
1	A	3887	ASN
1	A	3922	ASN
1	A	3925	ASN
1	A	3947	ILE
1	A	3974	ILE
1	A	3998	LEU
1	A	4007	GLN
1	A	4023	LEU
1	A	4026	GLN
1	A	4034	VAL
1	A	4039	GLN
1	A	4043	ASP
1	A	4048	PHE
1	A	4055	GLU
1	A	4069	LEU
1	A	4079	ASN
1	A	4100	SER
1	A	4200	LEU
1	A	4206	SER
1	A	4232	MET
1	A	4240	ASN
1	A	4259	ARG
1	A	4267	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	4282	GLN
1	A	4286	ARG
1	A	4290	LEU
1	A	4295	PHE
1	A	4321	ARG
1	A	4337	ILE
1	A	4353	MET
1	A	4360	LEU
1	A	4362	GLN
1	A	4385	GLU
1	A	4388	THR
1	A	4404	THR
1	A	4428	ASN
1	A	4434	GLN
1	A	4503	ILE
1	A	4550	TRP
1	A	4553	TYR
1	A	4565	ILE
1	A	4566	SER
1	A	4596	ASN
1	A	4606	GLN
1	A	4638	ASN
1	A	4649	TRP
1	A	4671	TRP
1	A	4692	LEU
1	A	4693	ASN
1	A	4694	GLU
1	A	4711	THR
1	A	4714	GLN
1	B	1479	ARG
1	B	1490	THR
1	B	1545	LEU
1	B	1547	ASN
1	B	1555	VAL
1	B	1596	ASN
1	B	1629	LEU
1	B	1640	ASN
1	B	1658	GLU
1	B	1671	ARG
1	B	1712	SER
1	B	1734	LEU
1	B	1736	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	1762	ASN
1	B	1793	ASN
1	B	1809	ASN
1	B	1817	LEU
1	B	1828	ASP
1	B	1867	LEU
1	B	1901	ASN
1	B	1911	ARG
1	B	1920	ASN
1	B	1946	ARG
1	B	2029	ASN
1	B	2071	MET
1	B	2106	GLU
1	B	2129	VAL
1	B	2149	LEU
1	B	2166	CYS
1	B	2185	GLN
1	B	2189	GLN
1	B	2197	ASN
1	B	2211	ASP
1	B	2235	GLN
1	B	2236	LEU
1	B	2239	LYS
1	B	2253	GLN
1	B	2254	GLU
1	B	2260	LEU
1	B	2290	LEU
1	B	2313	LYS
1	B	2320	LEU
1	B	2342	ASN
1	B	2352	TRP
1	B	2374	ASN
1	B	2381	ASN
1	B	2423	THR
1	B	2425	MET
1	B	2432	ASP
1	B	2504	GLN
1	B	2541	MET
1	B	2550	GLU
1	B	2581	LEU
1	B	2587	LEU
1	B	2603	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	2612	LEU
1	B	2613	LEU
1	B	2699	LEU
1	B	2745	GLU
1	B	2797	ASP
1	B	2821	THR
1	B	2825	THR
1	B	2841	ASN
1	B	2843	ARG
1	B	2883	ASP
1	B	2897	THR
1	B	2899	GLU
1	B	2927	ASP
1	B	2928	LYS
1	B	2929	LYS
1	B	2946	LEU
1	B	2966	SER
1	B	2977	LYS
1	B	2984	LEU
1	B	2996	ASP
1	B	3018	SER
1	B	3026	SER
1	B	3043	ASN
1	B	3050	ASP
1	B	3059	LEU
1	B	3087	MET
1	B	3140	ASN
1	B	3151	SER
1	B	3164	LEU
1	B	3195	GLU
1	B	3284	HIS
1	B	3302	LEU
1	B	3322	GLN
1	B	3560	SER
1	B	3563	LEU
1	B	3566	ASN
1	B	3619	ILE
1	B	3620	ARG
1	B	3623	SER
1	B	3676	ASP
1	B	3700	LEU
1	B	3725	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	3780	ARG
1	B	3833	SER
1	B	3867	LEU
1	B	3954	ARG
1	B	3998	LEU
1	B	4005	ILE
1	B	4012	LEU
1	B	4029	SER
1	B	4046	GLN
1	B	4091	SER
1	B	4105	VAL
1	B	4157	TYR
1	B	4185	VAL
1	B	4189	ASN
1	B	4200	LEU
1	B	4206	SER
1	B	4218	THR
1	B	4219	SER
1	B	4232	MET
1	B	4258	THR
1	B	4309	SER
1	B	4318	SER
1	B	4323	ASN
1	B	4324	ILE
1	B	4327	ASP
1	B	4334	VAL
1	B	4356	LEU
1	B	4402	ILE
1	B	4413	ASN
1	B	4425	LYS
1	B	4434	GLN
1	B	4500	GLU
1	B	4503	ILE
1	B	4548	LYS
1	B	4555	VAL
1	B	4558	THR
1	B	4573	GLN
1	B	4576	SER
1	B	4596	ASN
1	B	4607	SER
1	B	4618	ASN
1	B	4644	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	4693	ASN
1	B	4698	GLU
1	B	4709	GLN
1	B	4715	ASN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (198) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1512	ASN
1	A	1522	GLN
1	A	1549	GLN
1	A	1563	ASN
1	A	1609	GLN
1	A	1690	GLN
1	A	1791	HIS
1	A	1798	ASN
1	A	1809	ASN
1	A	1813	GLN
1	A	1844	GLN
1	A	1853	GLN
1	A	1857	ASN
1	A	1858	ASN
1	A	1865	GLN
1	A	1877	HIS
1	A	1971	ASN
1	A	1990	GLN
1	A	2018	GLN
1	A	2029	ASN
1	A	2042	GLN
1	A	2044	GLN
1	A	2047	GLN
1	A	2053	ASN
1	A	2086	ASN
1	A	2090	ASN
1	A	2136	GLN
1	A	2138	GLN
1	A	2142	GLN
1	A	2167	GLN
1	A	2197	ASN
1	A	2200	ASN
1	A	2295	GLN
1	A	2351	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2366	ASN
1	A	2368	ASN
1	A	2428	GLN
1	A	2436	ASN
1	A	2447	GLN
1	A	2450	ASN
1	A	2495	GLN
1	A	2535	ASN
1	A	2552	ASN
1	A	2553	GLN
1	A	2564	ASN
1	A	2565	GLN
1	A	2598	GLN
1	A	2656	HIS
1	A	2747	ASN
1	A	2787	GLN
1	A	2793	ASN
1	A	2810	HIS
1	A	2826	GLN
1	A	2869	GLN
1	A	2907	HIS
1	A	2942	ASN
1	A	2954	ASN
1	A	2961	GLN
1	A	3007	GLN
1	A	3009	GLN
1	A	3033	ASN
1	A	3043	ASN
1	A	3077	ASN
1	A	3156	ASN
1	A	3223	HIS
1	A	3253	ASN
1	A	3266	GLN
1	A	3277	GLN
1	A	3286	ASN
1	A	3331	GLN
1	A	3338	GLN
1	A	3377	GLN
1	A	3437	ASN
1	A	3555	ASN
1	A	3566	ASN
1	A	3607	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	3646	ASN
1	A	3687	ASN
1	A	3721	GLN
1	A	3725	ASN
1	A	3731	ASN
1	A	3785	ASN
1	A	3794	GLN
1	A	3820	GLN
1	A	3887	ASN
1	A	3922	ASN
1	A	3925	ASN
1	A	3981	ASN
1	A	4017	GLN
1	A	4046	GLN
1	A	4066	GLN
1	A	4073	GLN
1	A	4079	ASN
1	A	4112	ASN
1	A	4191	HIS
1	A	4210	HIS
1	A	4234	ASN
1	A	4263	GLN
1	A	4278	HIS
1	A	4282	GLN
1	A	4349	ASN
1	A	4362	GLN
1	A	4370	ASN
1	A	4413	ASN
1	A	4573	GLN
1	A	4574	GLN
1	A	4596	ASN
1	A	4610	GLN
1	A	4653	GLN
1	A	4693	ASN
1	A	4715	ASN
1	A	4718	GLN
1	B	1480	HIS
1	B	1522	GLN
1	B	1547	ASN
1	B	1568	HIS
1	B	1589	ASN
1	B	1609	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	1640	ASN
1	B	1690	GLN
1	B	1793	ASN
1	B	1813	GLN
1	B	1820	GLN
1	B	1826	GLN
1	B	1857	ASN
1	B	1891	GLN
1	B	1901	ASN
1	B	1920	ASN
1	B	1931	ASN
1	B	1990	GLN
1	B	2029	ASN
1	B	2044	GLN
1	B	2086	ASN
1	B	2110	GLN
1	B	2235	GLN
1	B	2241	GLN
1	B	2264	GLN
1	B	2315	GLN
1	B	2342	ASN
1	B	2351	HIS
1	B	2368	ASN
1	B	2381	ASN
1	B	2398	GLN
1	B	2504	GLN
1	B	2542	ASN
1	B	2547	ASN
1	B	2564	ASN
1	B	2571	ASN
1	B	2793	ASN
1	B	2826	GLN
1	B	2832	ASN
1	B	2841	ASN
1	B	2861	GLN
1	B	2937	HIS
1	B	2992	ASN
1	B	3043	ASN
1	B	3196	ASN
1	B	3223	HIS
1	B	3235	HIS
1	B	3272	ASN

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Mol	Chain	Res	Type
1	B	3322	GLN
1	B	3338	GLN
1	B	3555	ASN
1	B	3566	ASN
1	B	3577	GLN
1	B	3687	ASN
1	B	3725	ASN
1	B	3731	ASN
1	B	3785	ASN
1	B	3794	GLN
1	B	3799	HIS
1	B	3925	ASN
1	B	3926	ASN
1	B	3953	ASN
1	B	3981	ASN
1	B	4016	GLN
1	B	4026	GLN
1	B	4036	HIS
1	B	4038	GLN
1	B	4040	ASN
1	B	4052	GLN
1	B	4112	ASN
1	B	4152	GLN
1	B	4189	ASN
1	B	4199	GLN
1	B	4263	GLN
1	B	4278	HIS
1	B	4323	ASN
1	B	4391	HIS
1	B	4413	ASN
1	B	4434	GLN
1	B	4573	GLN
1	B	4574	GLN
1	B	4596	ASN
1	B	4618	ASN
1	B	4651	ASN
1	B	4693	ASN
1	B	4709	GLN

### 5.3.3 RNA ⓘ

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 carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

8 ligands are modelled in this entry.

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	ADP	A	9001	-	25,29,29	1.29	3 (12%)	25,45,45	2.08	5 (20%)
2	ADP	A	9002	-	25,29,29	1.26	2 (8%)	25,45,45	2.07	5 (20%)
2	ADP	A	9003	-	25,29,29	1.30	3 (12%)	25,45,45	2.08	5 (20%)
2	ADP	A	9004	-	25,29,29	1.27	2 (8%)	25,45,45	2.09	5 (20%)
2	ADP	B	9007	-	25,29,29	1.28	2 (8%)	25,45,45	2.07	5 (20%)
2	ADP	B	9008	-	25,29,29	1.26	2 (8%)	25,45,45	2.06	5 (20%)
2	ADP	B	9009	-	25,29,29	1.29	3 (12%)	25,45,45	2.07	5 (20%)
2	ADP	B	9010	-	25,29,29	1.28	2 (8%)	25,45,45	2.08	6 (24%)

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	ADP	A	9001	-	-	0/12/32/32	0/3/3/3
2	ADP	A	9002	-	-	0/12/32/32	0/3/3/3
2	ADP	A	9003	-	-	0/12/32/32	0/3/3/3
2	ADP	A	9004	-	-	0/12/32/32	0/3/3/3
2	ADP	B	9007	-	-	0/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	ADP	B	9008	-	-	0/12/32/32	0/3/3/3
2	ADP	B	9009	-	-	0/12/32/32	0/3/3/3
2	ADP	B	9010	-	-	0/12/32/32	0/3/3/3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	9009	ADP	O4'-C1'	2.10	1.44	1.41
2	A	9003	ADP	O4'-C1'	2.13	1.44	1.41
2	A	9001	ADP	O4'-C1'	2.22	1.44	1.41
2	A	9004	ADP	C2-N3	2.65	1.36	1.32
2	B	9007	ADP	C2-N3	2.68	1.36	1.32
2	A	9003	ADP	C2-N3	2.71	1.36	1.32
2	B	9009	ADP	C2-N3	2.72	1.36	1.32
2	B	9010	ADP	C2-N3	2.72	1.36	1.32
2	A	9002	ADP	C2-N3	2.72	1.36	1.32
2	B	9008	ADP	C2-N3	2.73	1.36	1.32
2	A	9001	ADP	C2-N3	2.79	1.36	1.32
2	A	9001	ADP	C5-C4	3.59	1.48	1.40
2	B	9007	ADP	C5-C4	3.60	1.48	1.40
2	B	9010	ADP	C5-C4	3.61	1.48	1.40
2	A	9004	ADP	C5-C4	3.61	1.48	1.40
2	A	9003	ADP	C5-C4	3.62	1.48	1.40
2	B	9009	ADP	C5-C4	3.63	1.48	1.40
2	B	9008	ADP	C5-C4	3.65	1.48	1.40
2	A	9002	ADP	C5-C4	3.70	1.48	1.40

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	9004	ADP	N3-C2-N1	-8.13	121.91	128.86
2	A	9003	ADP	N3-C2-N1	-8.07	121.96	128.86
2	B	9007	ADP	N3-C2-N1	-8.05	121.97	128.86
2	B	9010	ADP	N3-C2-N1	-8.02	122.00	128.86
2	A	9001	ADP	N3-C2-N1	-8.02	122.00	128.86
2	B	9009	ADP	N3-C2-N1	-7.98	122.03	128.86
2	A	9002	ADP	N3-C2-N1	-7.89	122.11	128.86
2	B	9008	ADP	N3-C2-N1	-7.86	122.14	128.86
2	A	9002	ADP	PA-O3A-PB	-3.23	121.77	132.63
2	B	9008	ADP	PA-O3A-PB	-3.16	122.01	132.63
2	A	9001	ADP	PA-O3A-PB	-3.13	122.11	132.63
2	B	9009	ADP	PA-O3A-PB	-3.02	122.49	132.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	9003	ADP	PA-O3A-PB	-2.98	122.61	132.63
2	B	9010	ADP	PA-O3A-PB	-2.98	122.61	132.63
2	A	9004	ADP	PA-O3A-PB	-2.95	122.73	132.63
2	B	9007	ADP	PA-O3A-PB	-2.84	123.08	132.63
2	B	9007	ADP	C4-C5-N7	-2.82	106.68	109.41
2	B	9010	ADP	C4-C5-N7	-2.82	106.69	109.41
2	A	9001	ADP	C4-C5-N7	-2.80	106.71	109.41
2	A	9004	ADP	C4-C5-N7	-2.79	106.71	109.41
2	A	9002	ADP	C4-C5-N7	-2.79	106.71	109.41
2	B	9009	ADP	C4-C5-N7	-2.79	106.71	109.41
2	A	9003	ADP	C4-C5-N7	-2.79	106.72	109.41
2	B	9008	ADP	C4-C5-N7	-2.79	106.72	109.41
2	B	9010	ADP	C2'-C3'-C4'	2.01	106.47	102.62
2	A	9001	ADP	C4'-O4'-C1'	2.04	111.96	109.83
2	A	9004	ADP	C4'-O4'-C1'	2.08	112.00	109.83
2	B	9008	ADP	C4'-O4'-C1'	2.10	112.02	109.83
2	B	9010	ADP	C4'-O4'-C1'	2.11	112.03	109.83
2	A	9002	ADP	C2-N1-C6	2.20	122.49	118.75
2	A	9002	ADP	C4'-O4'-C1'	2.20	112.13	109.83
2	B	9007	ADP	C4'-O4'-C1'	2.21	112.13	109.83
2	A	9003	ADP	C4'-O4'-C1'	2.21	112.14	109.83
2	B	9008	ADP	C2-N1-C6	2.22	122.53	118.75
2	B	9009	ADP	C2-N1-C6	2.23	122.54	118.75
2	B	9010	ADP	C2-N1-C6	2.24	122.56	118.75
2	A	9003	ADP	C2-N1-C6	2.24	122.56	118.75
2	A	9001	ADP	C2-N1-C6	2.25	122.57	118.75
2	B	9007	ADP	C2-N1-C6	2.26	122.58	118.75
2	B	9009	ADP	C4'-O4'-C1'	2.28	112.20	109.83
2	A	9004	ADP	C2-N1-C6	2.30	122.66	118.75

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	9001	ADP	1	0
2	A	9002	ADP	4	0
2	A	9004	ADP	2	0
2	B	9009	ADP	1	0
2	B	9010	ADP	2	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	3042/3367 (90%)	-0.14	61 (2%) 65 55	64, 130, 209, 322	0
1	B	2908/3367 (86%)	-0.18	29 (0%) 82 75	72, 136, 208, 335	0
All	All	5950/6734 (88%)	-0.16	90 (1%) 73 64	64, 133, 209, 335	0

All (90) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1543	LEU	5.7
1	B	1517	VAL	4.8
1	A	1652	GLY	4.7
1	A	4187	LEU	4.5
1	A	1651	SER	4.1
1	A	3516	ASP	4.0
1	A	1555	VAL	4.0
1	A	3718	LEU	3.8
1	A	4122	VAL	3.8
1	A	4550	TRP	3.7
1	A	1545	LEU	3.6
1	B	1484	LEU	3.6
1	A	1650	VAL	3.6
1	A	4165	PRO	3.4
1	A	4509	LEU	3.4
1	A	3512	LYS	3.4
1	A	4217	MET	3.4
1	A	4162	ILE	3.3
1	A	3842	SER	3.3
1	A	3515	GLN	3.2
1	A	3518	ILE	3.2
1	A	1657	LEU	3.1
1	B	3356	ALA	3.0
1	A	3328	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	A	3334	ALA	3.0
1	B	2304	HIS	3.0
1	B	2720	TYR	2.9
1	B	2335	THR	2.9
1	A	4215	LEU	2.9
1	B	4517	LEU	2.9
1	A	4185	VAL	2.9
1	A	4168	PHE	2.9
1	A	3513	LEU	2.8
1	A	1575	MET	2.8
1	A	3846	LEU	2.8
1	A	1554	LEU	2.8
1	A	1656	ILE	2.7
1	A	1538	TRP	2.7
1	B	4541	ILE	2.7
1	A	1584	PHE	2.7
1	A	3866	ALA	2.6
1	B	1495	THR	2.6
1	A	3536	TYR	2.6
1	A	3360	VAL	2.6
1	A	1639	ILE	2.5
1	B	1575	MET	2.5
1	A	4118	MET	2.5
1	A	3359	LYS	2.5
1	B	2620	ASP	2.4
1	B	1543	LEU	2.4
1	B	2574	LEU	2.4
1	A	1527	LEU	2.4
1	A	3330	ASP	2.4
1	A	4131	PRO	2.3
1	A	1565	LEU	2.3
1	A	3762	ILE	2.3
1	A	3764	LEU	2.3
1	B	1656	ILE	2.3
1	A	4186	LEU	2.3
1	A	2060	LEU	2.3
1	B	1511	GLU	2.3
1	A	4192	LEU	2.3
1	A	1549	GLN	2.3
1	B	1514	TYR	2.3
1	A	1551	LYS	2.3
1	A	2353	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	4635	ALA	2.2
1	A	1544	ASP	2.2
1	A	3341	ALA	2.2
1	A	4142	ALA	2.2
1	B	3112	CYS	2.2
1	B	4550	TRP	2.2
1	A	2452	ASN	2.2
1	B	4215	LEU	2.2
1	B	1497	LEU	2.2
1	A	3319	GLN	2.2
1	A	3346	VAL	2.2
1	A	3533	LYS	2.2
1	B	1515	ARG	2.1
1	B	3341	ALA	2.1
1	A	3388	LEU	2.1
1	B	3544	GLU	2.1
1	B	3324	LEU	2.1
1	B	3842	SER	2.1
1	B	1510	ASN	2.1
1	A	3763	PHE	2.0
1	B	4537	LEU	2.0
1	B	3309	LYS	2.0
1	A	4183	THR	2.0
1	B	2597	ILE	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 carbohydrates 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, 95<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
2	ADP	B	9008	27/27	0.85	0.40	129,129,129,129	0
2	ADP	B	9010	27/27	0.86	0.31	129,129,129,129	0
2	ADP	A	9002	27/27	0.90	0.30	129,129,129,129	0
2	ADP	B	9007	27/27	0.90	0.37	129,129,129,129	0
2	ADP	A	9004	27/27	0.91	0.30	129,129,129,129	0
2	ADP	A	9003	27/27	0.91	0.33	129,129,129,129	0
2	ADP	A	9001	27/27	0.94	0.38	129,129,129,129	0
2	ADP	B	9009	27/27	0.95	0.31	129,129,129,129	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.