



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 10, 2026 – 06:31 PM UTC

PDB ID : 2PPB / pdb\_00002ppb  
Title : Crystal structure of the T. thermophilus RNAP polymerase elongation complex with the ntp substrate analog and antibiotic streptolydigin  
Authors : Vassylyev, D.G.; Vassylyeva, M.N.; Artsimovitch, I.; Landick, R.  
Deposited on : 2007-04-28  
Resolution : 3.00 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.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

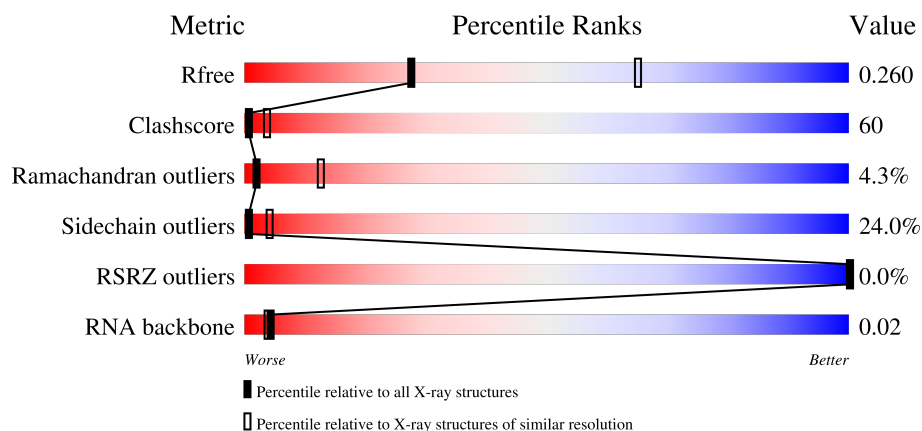
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.00 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.






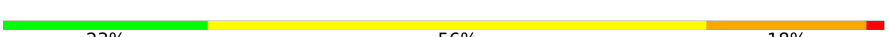

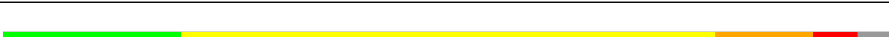
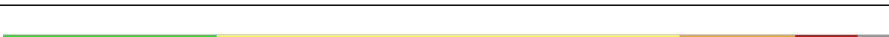
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	180053	2672 (3.00-3.00)
Clashscore	190562	2977 (3.00-3.00)
Ramachandran outliers	187476	2877 (3.00-3.00)
Sidechain outliers	187428	2880 (3.00-3.00)
RSRZ outliers	180081	2671 (3.00-3.00)
RNA backbone	3983	1109 (3.20-2.80)

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

Mol	Chain	Length	Quality of chain
1	G	23	<div> <div>22%</div> <div>48%</div> <div>22%</div> <div>9%</div> </div>
1	X	23	<div> <div>17%</div> <div>52%</div> <div>17%</div> <div>13%</div> </div>
2	H	16	<div> <div>6%</div> <div>44%</div> <div>50%</div> </div>
2	Y	16	<div> <div>6%</div> <div>44%</div> <div>50%</div> </div>

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Mol	Chain	Length	Quality of chain
3	I	14	
3	Z	14	
4	A	315	
4	B	315	
4	K	315	
4	L	315	
5	C	1119	
5	M	1119	
6	D	1524	
6	N	1524	
7	E	99	
7	O	99	

## 2 Entry composition

There are 12 unique types of molecules in this entry. The entry contains 51962 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 DNA chain called DNA (5'-D(P\*CP\*CP\*CP\*TP\*GP\*TP\*CP\*TP\*GP\*GP\*CP\*GP\*TP\*TP\*CP\*GP\*CP\*GP\*CP\*GP\*CP\*CP\*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	G	23	Total	C	N	O	P	0	0	0
			467	220	80	144	23			
1	X	23	Total	C	N	O	P	0	0	0
			467	220	80	144	23			

- Molecule 2 is a RNA chain called RNA (5'-R(P\*GP\*AP\*GP\*UP\*CP\*UP\*GP\*CP\*GP\*GP\*CP\*GP\*CP\*GP\*CP\*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	16	Total	C	N	O	P	0	0	0
			347	153	64	114	16			
2	Y	16	Total	C	N	O	P	0	0	0
			347	153	64	114	16			

- Molecule 3 is a DNA chain called DNA (5'-D(\*AP\*AP\*CP\*GP\*CP\*CP\*AP\*GP\*AP\*CP\*AP\*GP\*GP\*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	I	13	Total	C	N	O	P	0	0	0
			270	126	57	74	13			
3	Z	13	Total	C	N	O	P	0	0	0
			270	126	57	74	13			

- Molecule 4 is a protein called DNA-directed RNA polymerase alpha chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	A	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			
4	B	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	K	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			
4	L	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			

- Molecule 5 is a protein called DNA-directed RNA polymerase beta chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	1119	Total	C	N	O	S	0	0	0
			8829	5581	1577	1647	24			
5	M	1119	Total	C	N	O	S	0	0	0
			8829	5581	1577	1647	24			

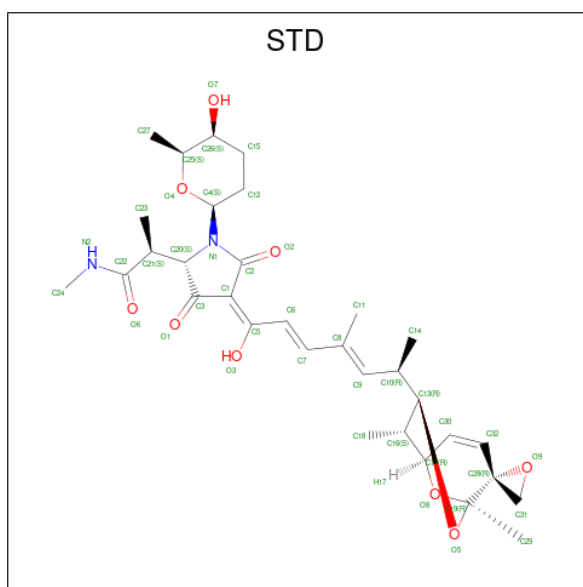
- Molecule 6 is a protein called DNA-directed RNA polymerase beta' chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	1314	Total	C	N	O	S	0	0	0
			10373	6565	1838	1937	33			
6	N	1314	Total	C	N	O	S	0	0	0
			10373	6565	1838	1937	33			

- Molecule 7 is a protein called DNA-directed RNA polymerase omega chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	95	Total	C	N	O	S	0	0	0
			770	491	133	142	4			
7	O	95	Total	C	N	O	S	0	0	0
			770	491	133	142	4			

- Molecule 8 is STREPTOLYDIGIN (CCD ID: STD) (formula: C<sub>32</sub>H<sub>44</sub>N<sub>2</sub>O<sub>9</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
8	D	1	Total	C	N	O	0	0
			43	32	2	9		
8	N	1	Total	C	N	O	0	0
			43	32	2	9		

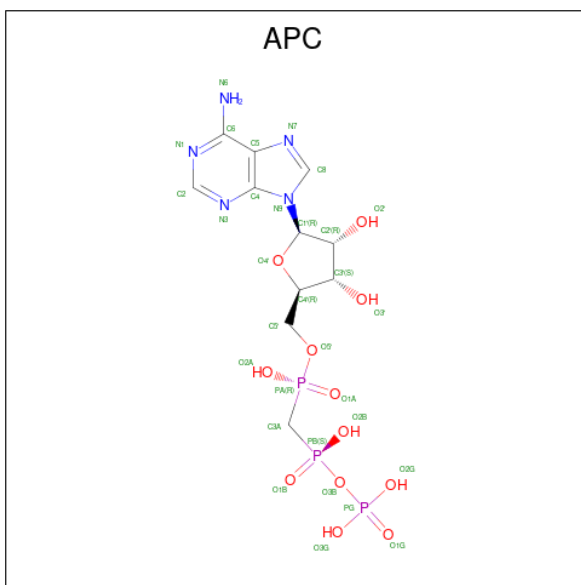
- Molecule 9 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	D	2	Total	Zn	0	0
			2	2		
9	N	2	Total	Zn	0	0
			2	2		

- Molecule 10 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
10	D	2	Total	Mg	0	0
			2	2		
10	N	2	Total	Mg	0	0
			2	2		

- Molecule 11 is DIPHOSPHOMETHYLPHOSPHONIC ACID ADENOSYL ESTER (CCD ID: APC) (formula: C<sub>11</sub>H<sub>18</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
11	D	1	Total 31	C 11	N 5	O 12	P 3	0	0
11	M	1	Total 31	C 11	N 5	O 12	P 3	0	0

- Molecule 12 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
12	G	39	Total O 39 39	0	0
12	H	22	Total O 22 22	0	0
12	I	31	Total O 31 31	0	0
12	X	31	Total O 31 31	0	0
12	Y	26	Total O 26 26	0	0
12	Z	18	Total O 18 18	0	0
12	A	78	Total O 78 78	0	0
12	B	117	Total O 117 117	0	0
12	C	408	Total O 408 408	0	0
12	D	531	Total O 531 531	0	0

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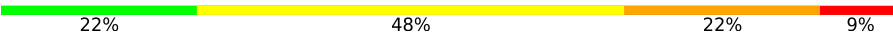
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
12	E	34	Total 34	O 34	0	0
12	K	81	Total 81	O 81	0	0
12	L	95	Total 95	O 95	0	0
12	M	396	Total 396	O 396	0	0
12	N	510	Total 510	O 510	0	0
12	O	53	Total 53	O 53	0	0



### 3 Residue-property plots [i](#)


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

- Molecule 1: DNA (5'-D(P\*CP\*CP\*CP\*TP\*GP\*TP\*CP\*TP\*GP\*GP\*CP\*GP\*TP\*TP\*CP\*GP\*CP\*GP\*CP\*GP\*CP\*CP\*G)-3')

Chain G: 



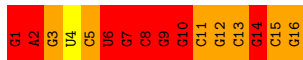
- Molecule 1: DNA (5'-D(P\*CP\*CP\*CP\*TP\*GP\*TP\*CP\*TP\*GP\*GP\*CP\*GP\*TP\*TP\*CP\*GP\*CP\*GP\*CP\*GP\*CP\*CP\*G)-3')

Chain X: 



- Molecule 2: RNA (5'-R(P\*GP\*AP\*GP\*UP\*CP\*UP\*GP\*CP\*GP\*GP\*CP\*GP\*CP\*GP\*CP\*GP\*CP\*G)-3')

Chain H: 

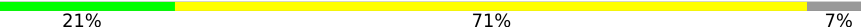


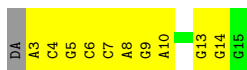
- Molecule 2: RNA (5'-R(P\*GP\*AP\*GP\*UP\*CP\*UP\*GP\*CP\*GP\*GP\*CP\*GP\*CP\*GP\*CP\*GP\*CP\*G)-3')


Chain Y: 

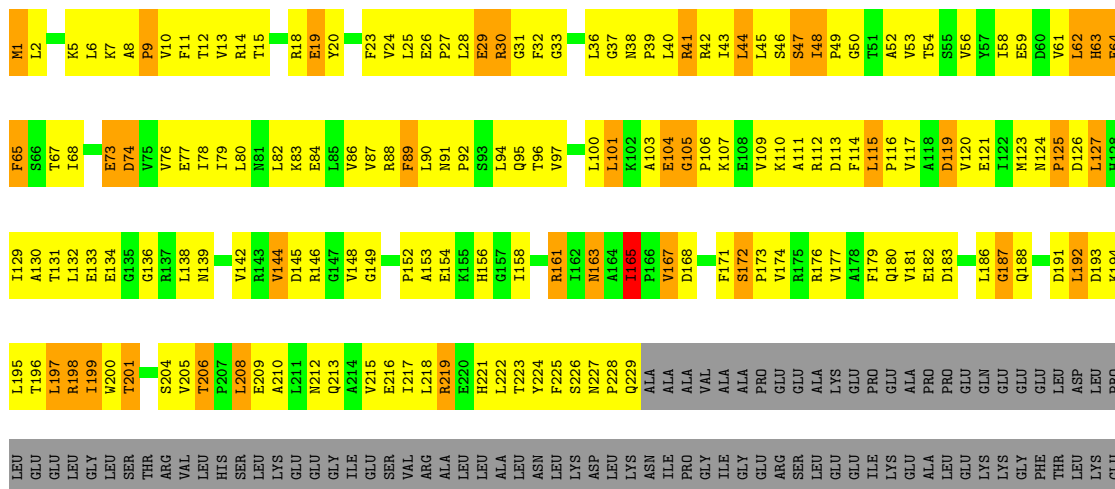


- Molecule 3: DNA (5'-D(\*AP\*AP\*CP\*GP\*CP\*CP\*AP\*GP\*AP\*CP\*AP\*GP\*GP\*G)-3')

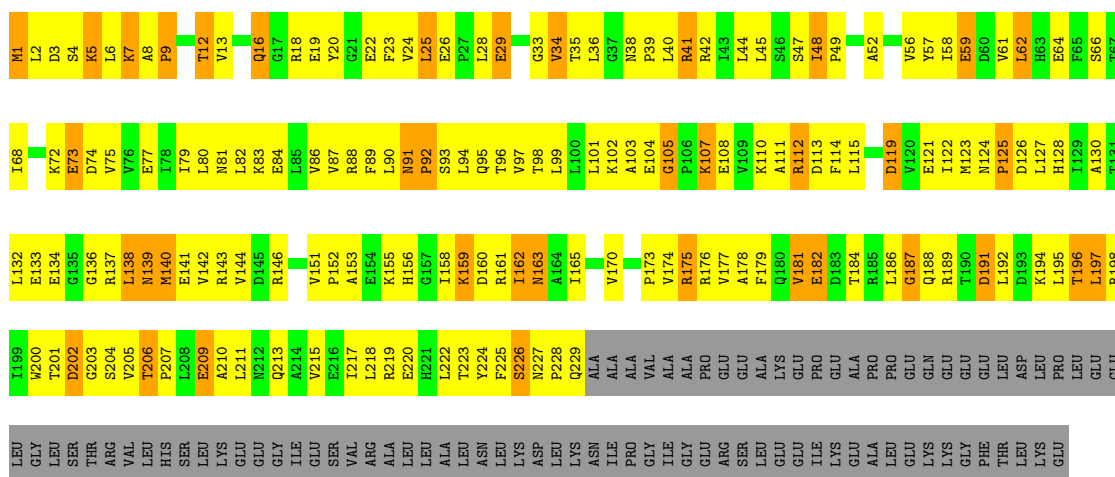
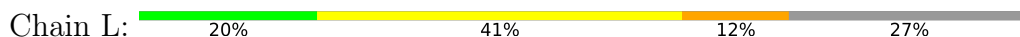
Chain I: 



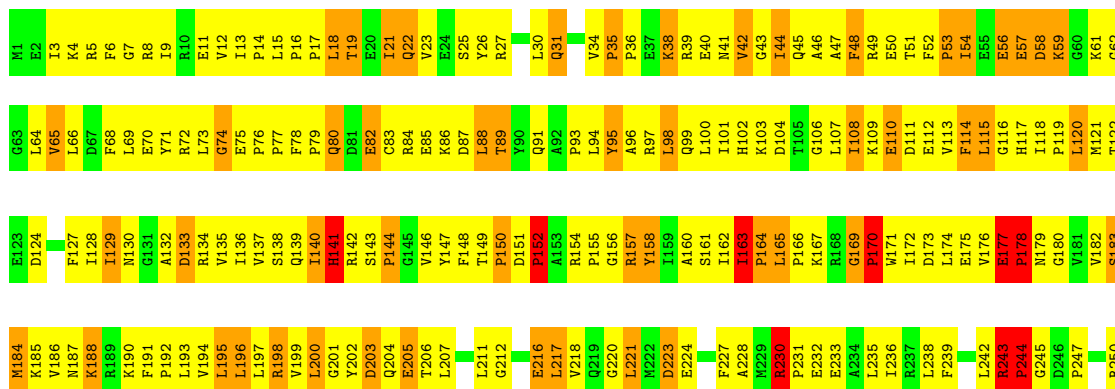
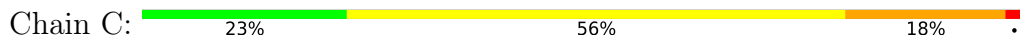
- Chain K: 

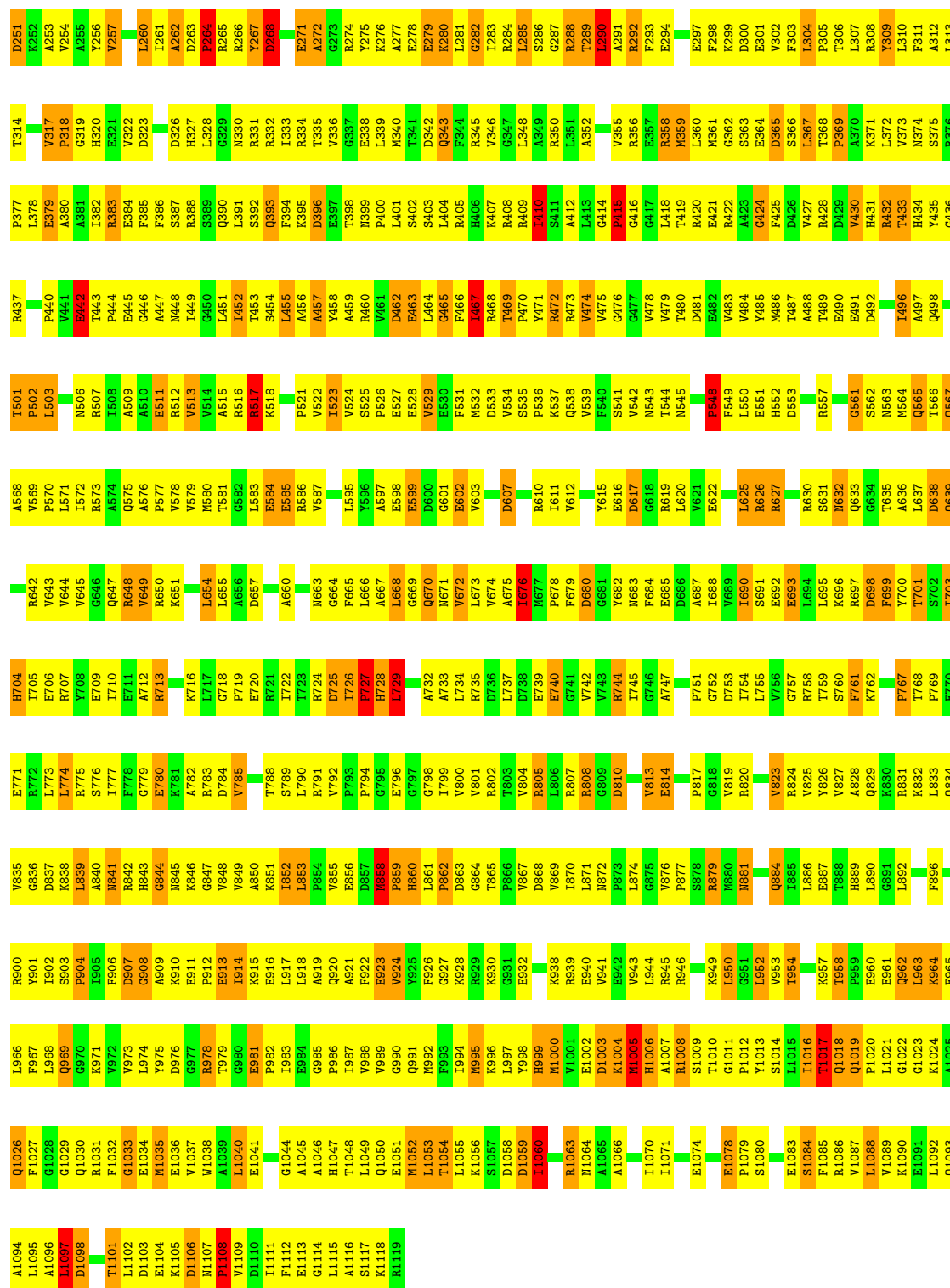


- Molecule 4: DNA-directed RNA polymerase alpha chain



- Molecule 5: DNA-directed RNA polymerase beta chain





# Molecule 5: DNA-directed RNA polymerase beta chain

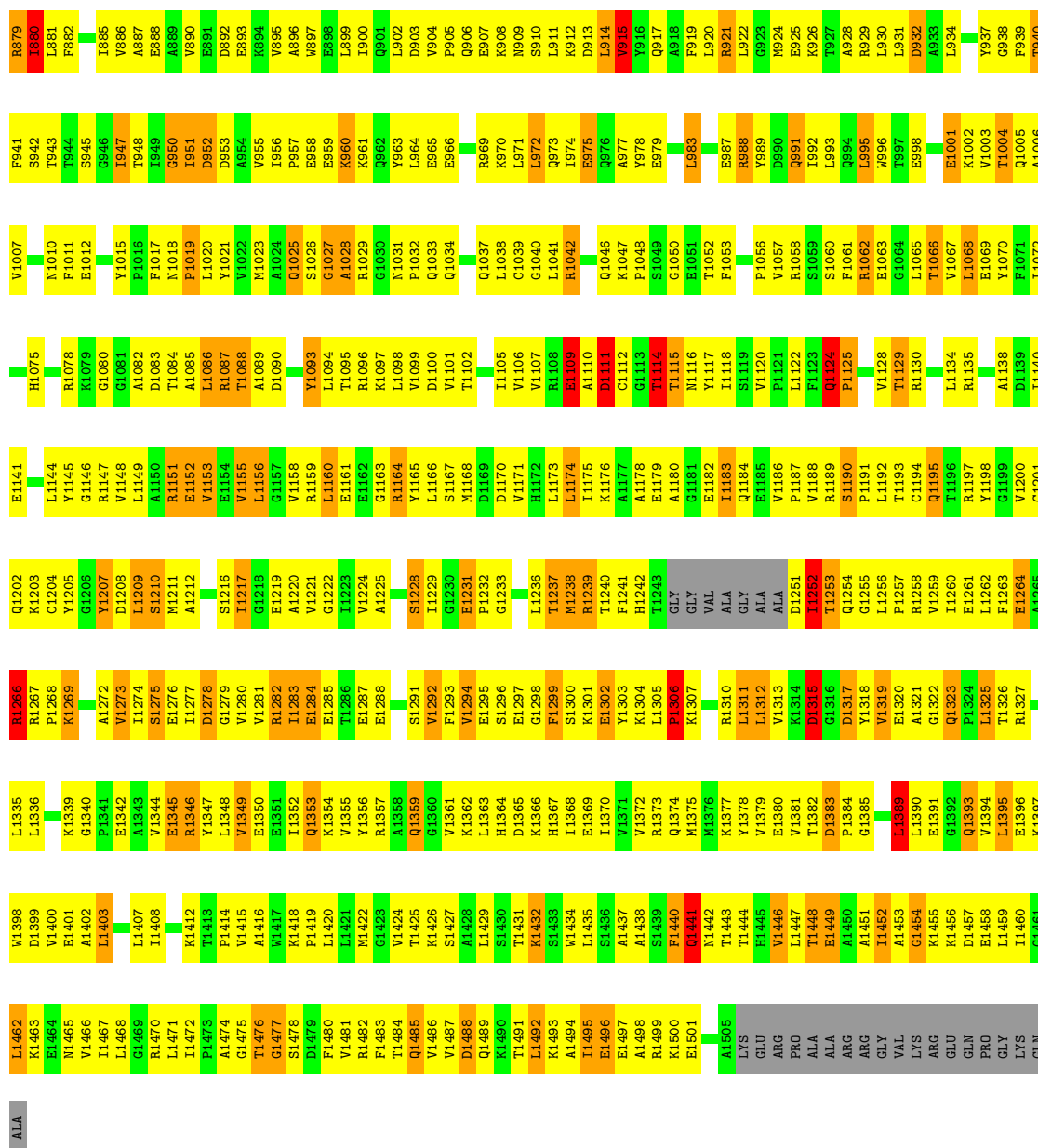
Chain M: 21% 58% 19%



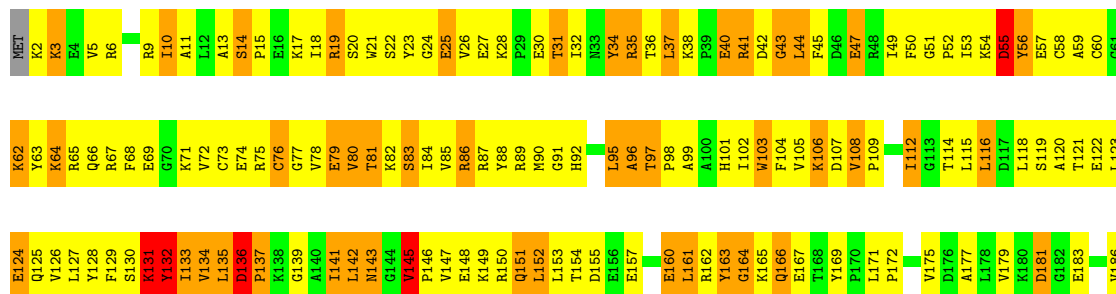
L1015	L1016	L1017	L1018	L1019	L1020	L1021	L1022	L1023	L1024	L1025	L1026	L1027	L1028	L1029	L1030	L1031	L1032	L1033	L1034	L1035	L1036	L1037	L1038	L1039	L1040	L1041	L1042	L1043	L1044	L1045	L1046	L1047	L1048	L1049	L1050	L1051	L1052	L1053	L1054	L1055	L1056	L1057	L1058	L1059	L1060	L1061	L1062	L1063	L1064	L1065	L1066	L1067	L1068	L1069	L1070	L1071	L1072	L1073	L1074	L1075																																																																																																																																																																																																																																																																																																																																																																																																																																																						
L952	L953	L954	L955	L956	L957	L958	L959	L960	L961	L962	L963	L964	L965	L966	L967	L968	L969	L970	L971	L972	L973	L974	L975	L976	L977	L978	L979	L980	L981	L982	L983	L984	L985	L986	L987	L988	L989	L990	L991	L992	L993	L994	L995	L996	L997	L998	L999	M1000	M1001	M1002	M1003	M1004	M1005	M1006	M1007	M1008	M1009	M1010	M1011	M1012	M1013	M1014																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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R820	R821	R822	R823	R824	R825	R826	R827	R828	R829	R830	R831	R832	R833	R834	R835	R836	R837	R838	R839	R840	R841	R842	R843	R844	R845	R846	R847	R848	R849	R850	R851	R852	R853	R854	R855	R856	R857	R858	R859	R860	R861	R862	R863	R864	R865	R866	R867	R868	R869	R870	R871	R872	R873	R874	R875	R876	R877	R878	R879	R880																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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T635	T636	T637	T638	T639	T640	T641	T642	T643	T644	T645	T646	T647	T648	T649	T650	T651	T652	T653	T654	T655	T656	T657	T658	T659	T660	T661	T662	T663	T664	T665	T666	T667	T668	T669	T670	T671	T672	T673	T674	T675	T676	T677	T678	T679	T680	T681	T682	T683	T684	T685	T686	T687	T688	T689	T690	T691	T692	T693	T694	T695	T696	T697	T698	T699	T700																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Q565	Q566	Q567	Q568	Q569	Q570	Q571	Q572	Q573	Q574	Q575	Q576	Q577	Q578	Q579	Q580	Q581	Q582	Q583	Q584	Q585	Q586	Q587	Q588	Q589	Q590	Q591	Q592	Q593	Q594	Q595	Q596	Q597	Q598	Q599	Q600	Q601	Q602	Q603	Q604	Q605	Q606	Q607	Q608	Q609	Q610	Q611	Q612	Q613	Q614	Q615	Q616	Q617	Q618	Q619	Q620	Q621	Q622	Q623	Q624	Q625	Q626	Q627	Q628	Q629	Q630	Q631	Q632	Q633	Q634	Q635	Q636	Q637	Q638	Q639	Q640	Q641	Q642	Q643	Q644	Q645	Q646	Q647	Q648	Q649	Q650	Q651	Q652	Q653	Q654	Q655	Q656	Q657	Q658	Q659	Q660	Q661	Q662	Q663	Q664	Q665	Q666	Q667	Q668	Q669	Q670	Q671	Q672	Q673	Q674	Q675	Q676	Q677	Q678	Q679	Q680	Q681	Q682	Q683	Q684	Q685	Q686	Q687	Q688	Q689	Q690	Q691	Q692	Q693	Q694	Q695	Q696	Q697	Q698	Q699	Q700	Q701	Q702	Q703	Q704	Q705	Q706	Q707	Q708	Q709	Q710	Q711	Q712	Q713	Q714	Q715	Q716	Q717	Q718	Q719	Q720	Q721	Q722	Q723	Q724	Q725	Q726	Q727	Q728	Q729	Q730	Q731	Q732	Q733	Q734	Q735	Q736	Q737	Q738	Q739	Q740	Q741	Q742	Q743	Q744	Q745	Q746	Q747	Q748	Q749	Q750	Q751	Q752	Q753	Q754	Q755	Q756	Q757	Q758	Q759	Q760	Q761	Q762	Q763	Q764	Q765	Q766	Q767	Q768	Q769	Q770	Q771	Q772	Q773	Q774	Q775	Q776	Q777	Q778	Q779	Q780	Q781	Q782	Q783	Q784	Q785	Q786	Q787	Q788	Q789	Q790	Q791	Q792	Q793	Q794	Q795	Q796	Q797	Q798	Q799	Q800	Q801	Q802	Q803	Q804	Q805	Q806	Q807	Q808	Q809	Q810	Q811	Q812	Q813	Q814	Q815	Q816	Q817	Q818	Q819	Q820	Q821	Q822	Q823	Q824	Q825	Q826	Q827	Q828	Q829	Q830	Q831	Q832	Q833	Q834	Q835	Q836	Q837	Q838	Q839	Q840	Q841	Q842	Q843	Q844	Q845	Q846	Q847	Q848	Q849	Q850	Q851	Q852	Q853	Q854	Q855	Q856	Q857	Q858	Q859	Q860	Q861	Q862	Q863	Q864	Q865	Q866	Q867	Q868	Q869	Q870	Q871	Q872	Q873	Q874	Q875	Q876	Q877	Q878	Q879	Q880																																																																																																																																																																																							
V501	V502	V503	V504	V505	V506	V507	V508	V509	V510	V511	V512	V513	V514	V515	V516	V517	V518	V519	V520	V521	V522	V523	V524	V525	V526	V527	V528	V529	V530	V531	V532	V533	V534	V535	V536	V537	V538	V539	V540	V541	V542	V543	V544	V545	V546	V547	V548	V549	V550	V551	V552	V553	V554	V555	V556	V557	V558	V559	V560	V561	V562	V563	V564	V565	V566	V567	V568	V569	V570	V571	V572	V573	V574	V575	V576	V577	V578	V579	V580	V581	V582	V583	V584	V585	V586	V587	V588	V589	V590	V591	V592	V593	V594	V595	V596	V597	V598	V599	V600	V601	V602	V603	V604	V605	V606	V607	V608	V609	V610	V611	V612	V613	V614	V615	V616	V617	V618	V619	V620	V621	V622	V623	V624	V625	V626	V627	V628	V629	V630	V631	V632	V633	V634	V635	V636	V637	V638	V639	V640	V641	V642	V643	V644	V645	V646	V647	V648	V649	V650	V651	V652	V653	V654	V655	V656	V657	V658	V659	V660	V661	V662	V663	V664	V665	V666	V667	V668	V669	V670	V671	V672	V673	V674	V675	V676	V677	V678	V679	V680	V681	V682	V683	V684	V685	V686	V687	V688	V689	V690	V691	V692	V693	V694	V695	V696	V697	V698	V699	V700	V701	V702	V703	V704	V705	V706	V707	V708	V709	V710	V711	V712	V713	V714	V715	V716	V717	V718	V719	V720	V721	V722	V723	V724	V725	V726	V727	V728	V729	V730	V731	V732	V733	V734	V735	V736	V737	V738	V739	V740	V741	V742	V743	V744	V745	V746	V747	V748	V749	V750	V751	V752	V753	V754	V755	V756	V757	V758	V759	V760	V761	V762	V763	V764	V765	V766	V767	V768	V769	V770	V771	V772	V773	V774	V775	V776	V777	V778	V779	V780	V781	V782	V783	V784	V785	V786	V787	V788	V789	V790	V791	V792	V793	V794	V795	V796	V797	V798	V799	V800	V801	V802	V803	V804	V805	V806	V807	V808	V809	V810	V811	V812	V813	V814	V815	V816	V817	V818	V819	V820	V821	V822	V823	V824	V825	V826	V827	V828	V829	V830	V831	V832	V833	V834	V835	V836	V837	V838	V839	V840	V841	V842	V843	V844	V845	V846	V847	V848	V849	V850	V851	V852	V853	V854	V855	V856	V857	V858	V859	V860	V861	V862	V863	V864	V865	V866	V867	V868	V869	V870	V871	V872	V873	V874	V875	V876	V877	V878	V879	V880	V881	V882	V883	V884	V885	V886	V887	V888	V889	V890	V891	V892	V893	V894	V895	V896	V897	V898	V899	V900	V901	V902	V903	V904	V905	V906	V907	V908	V909	V910	V911	V912	V913	V914	V915	V916	V917	V918	V919	V920	V921	V922	V923	V924	V925	V926	V927	V928	V929	V930	V931	V932	V933	V934	V935	V936	V937	V938	V939	V940	V941	V942	V943	V944	V945	V946	V947	V948	V949	V950	V951	V952	V953	V954	V955	V956	V957	V958	V959	V960	V961	V962	V963	V964	V965	V966	V967	V968	V969	V970	V971	V972	V973	V974	V975	V976	V977	V978	V979	V980	V981	V982	V983	V984	V985	V986	V987	V988	V989	V990	V991	V992	V993	V994	V995	V996	V997	V998	V999
L11015	L11016	L11017	L11018	L11019	L11020	L11021	L11022	L11023	L11024	L11025	L11026	L11027	L11028	L11029	L11030	L11031	L11032	L11033	L11034	L11035	L11036	L11037	L11038	L11039	L11040	L11041	L11042	L11043	L11044	L11045	L11046	L11047	L11048	L11049	L11050	L11051	L11052	L11053	L11054	L11055	L11056	L11057	L11058	L11059	L11060	L11061	L11062	L11063	L11064	L11065	L11066	L11067	L11068	L11069	L11070	L11071	L11072	L11073	L11074	L11075																																																																																																																																																																																																																																																																																																																																																																																																																																																						
L1217	L1218	L1219	L1220	L1221	L1222	L1223	L1224	L1225	L1226	L1227	L1228	L1229	L1230	L1231	L1232	L1233	L1234	L1235	L1236	L1237	L1238	L1239	L1240	L1241	L1242	L1243	L1244	L1245	L1246	L1247	L1248	L1249	L1250	L1251	L1252	L1253	L1254	L1255	L1256	L1257	L1258	L1259	L1260	L1261	L1262	L1263	L1264	L1265	L1266	L1267	L1268	L1269	L1270	L1271	L1272	L1273	L1274	L1275	L1276	L1277	L1278	L1279	L1280	L1281	L1282	L1283	L1284	L1285	L1286	L1287	L1288	L1289	L1290	L1291	L1292	L1293	L1294	L1295	L1296	L1297	L1298	L1299	L1300	L1301	L1302	L1303	L1304	L1305	L1306	L1307	L1308	L1309	L1310	L1311	L1312	L1313	L1314	L1315	L1316	L1317	L1318	L1319	L1320	L1321	L1322	L1323	L1324	L1325	L1326	L1327	L1328	L1329	L1330	L1331	L1332	L1333	L1334	L1335	L1336	L1337	L1338	L1339																																																																																																																																																																																																																																																																																																																																																																																								

Chain D:  21% 49% 15% • 14%



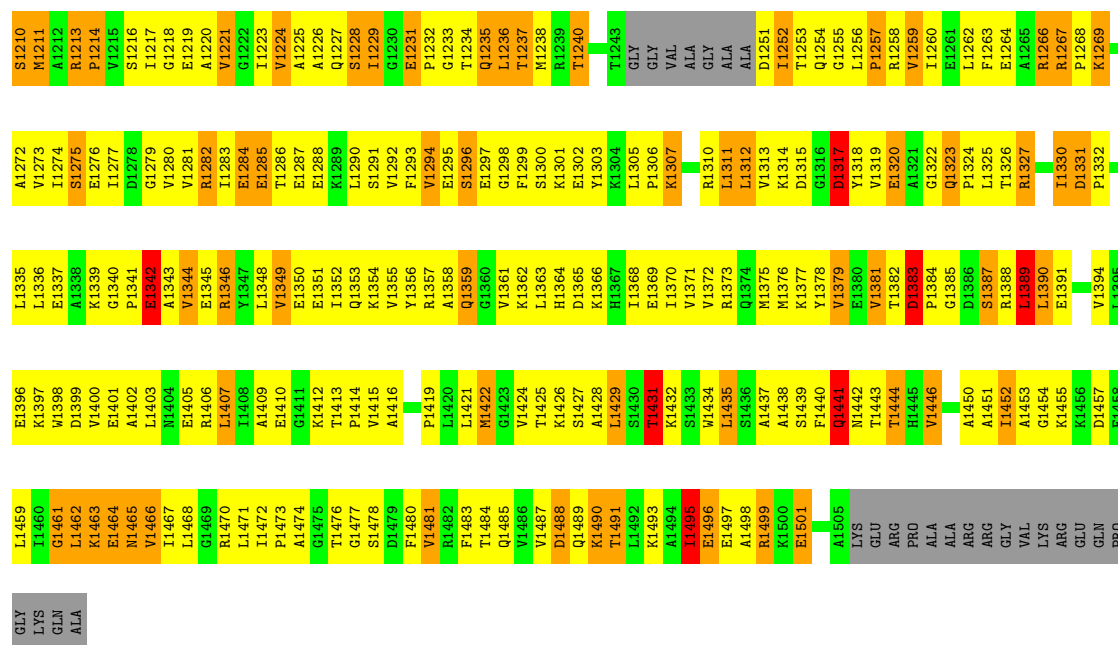


Chain N: 21% 48% 16% 14%





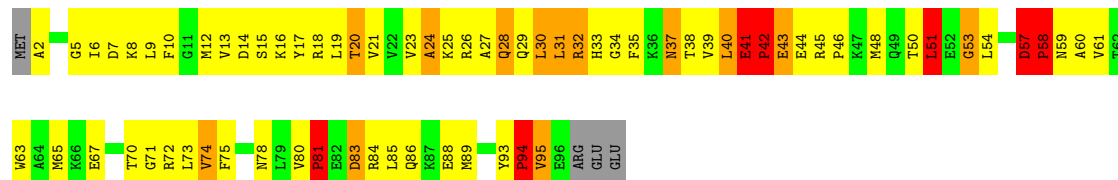




• Molecule 7: DNA-directed RNA polymerase omega chain



• Molecule 7: DNA-directed RNA polymerase omega chain



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 41	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	155.38Å 155.38Å 496.99Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.00 40.00 – 3.00	Depositor EDS
% Data completeness (in resolution range)	87.8 (40.00-3.00) 82.1 (40.00-3.00)	Depositor EDS
$R_{merge}$	0.11	Depositor
$R_{sym}$	0.11	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.84 (at 3.01Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.234 , 0.266 0.234 , 0.260	Depositor DCC
$R_{free}$ test set	10938 reflections (5.70%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	58.4	Xtriage
Anisotropy	0.050	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 122.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.41$ , $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	0.147 for h,-k,-l	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	51962	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.89% 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

### 5.1 Standard geometry

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

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	G	0.52	0/520	1.10	4/798 (0.5%)
1	X	0.53	0/520	1.11	5/798 (0.6%)
2	H	1.06	2/387 (0.5%)	2.31	21/601 (3.5%)
2	Y	1.14	2/387 (0.5%)	2.28	22/601 (3.7%)
3	I	0.47	0/304	0.97	1/467 (0.2%)
3	Z	0.46	0/304	0.89	0/467
4	A	0.82	2/1838 (0.1%)	1.09	4/2498 (0.2%)
4	B	0.81	0/1838	1.06	8/2498 (0.3%)
4	K	0.81	1/1838 (0.1%)	1.11	8/2498 (0.3%)
4	L	0.84	0/1838	1.04	6/2498 (0.2%)
5	C	0.87	8/8997 (0.1%)	1.25	58/12164 (0.5%)
5	M	0.88	9/8997 (0.1%)	1.27	67/12164 (0.6%)
6	D	1.01	32/10547 (0.3%)	1.28	80/14245 (0.6%)
6	N	0.97	18/10547 (0.2%)	1.25	70/14245 (0.5%)
7	E	0.90	1/784 (0.1%)	1.53	13/1057 (1.2%)
7	O	0.98	2/784 (0.3%)	1.57	12/1057 (1.1%)
All	All	0.91	77/50430 (0.2%)	1.27	379/68656 (0.6%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	G	0	6
1	X	0	7
2	H	0	2
2	Y	0	1
6	D	0	1
All	All	0	17

All (77) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	133	ILE	N-CA	21.31	1.70	1.46
6	D	132	TYR	CA-C	18.98	1.78	1.52
6	N	132	TYR	CA-C	16.32	1.70	1.52
6	D	455	ARG	CA-C	14.46	1.72	1.52
6	N	133	ILE	N-CA	13.47	1.61	1.46
6	D	456	MET	N-CA	12.06	1.61	1.45
6	D	134	VAL	N-CA	11.68	1.59	1.46
6	N	455	ARG	CA-C	11.19	1.67	1.52
6	D	133	ILE	CA-C	10.62	1.66	1.52
6	D	134	VAL	CA-C	10.55	1.65	1.52
6	N	1330	ILE	CA-C	10.54	1.62	1.52
6	N	456	MET	N-CA	10.48	1.59	1.45
6	D	455	ARG	N-CA	9.63	1.58	1.46
2	Y	1	G	OP3-P	9.12	1.66	1.48
6	D	131	LYS	CA-C	8.95	1.63	1.52
6	D	454	ALA	CA-C	8.94	1.63	1.52
6	D	132	TYR	N-CA	8.93	1.57	1.46
6	N	134	VAL	N-CA	8.71	1.56	1.46
6	N	134	VAL	CA-C	8.45	1.62	1.52
6	N	132	TYR	N-CA	7.85	1.56	1.46
5	M	163	ILE	CA-CB	7.73	1.61	1.53
7	O	94	PRO	N-CA	7.42	1.57	1.47
7	E	94	PRO	N-CA	7.42	1.57	1.47
2	Y	1	G	C3'-O3'	7.36	1.54	1.43
6	D	454	ALA	N-CA	6.88	1.54	1.45
6	D	453	ASP	CA-C	6.86	1.61	1.52
6	D	633	VAL	CA-CB	6.81	1.60	1.54
6	D	136	ASP	CA-C	6.78	1.61	1.52
6	N	131	LYS	CA-C	6.73	1.61	1.53
6	D	132	TYR	CA-CB	6.65	1.64	1.53
6	N	455	ARG	N-CA	6.47	1.54	1.46
5	C	992	MET	SD-CE	-6.47	1.63	1.79
5	C	54	ILE	CA-CB	6.46	1.60	1.53
6	D	133	ILE	C-O	-6.42	1.15	1.24
4	K	165	ILE	CA-CB	6.38	1.59	1.54
6	N	1431	THR	CA-CB	6.37	1.63	1.53
6	D	135	LEU	CA-C	6.35	1.60	1.52
5	C	1060	ILE	CA-CB	6.28	1.61	1.54
5	C	676	ILE	CA-CB	6.14	1.62	1.54
6	N	1267	ARG	CA-C	6.12	1.60	1.52
6	D	455	ARG	C-N	6.11	1.42	1.33
6	D	131	LYS	N-CA	6.06	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	135	LEU	N-CA	5.90	1.53	1.46
5	M	495	THR	CA-CB	5.84	1.60	1.53
6	N	1379	VAL	CA-C	5.83	1.59	1.52
2	H	1	G	C3'-O3'	5.80	1.51	1.43
5	M	478	VAL	CA-CB	5.77	1.61	1.54
6	D	152	LEU	CA-C	5.72	1.59	1.52
6	N	454	ALA	CA-C	5.68	1.59	1.52
5	C	89	THR	CA-CB	5.64	1.61	1.53
6	N	133	ILE	CA-C	5.50	1.59	1.52
5	C	141	HIS	CA-C	-5.50	1.46	1.52
6	N	133	ILE	C-O	-5.46	1.16	1.24
2	H	1	G	O5'-C5'	5.46	1.51	1.42
5	M	65	VAL	CA-CB	5.42	1.61	1.54
6	D	1114	THR	CA-CB	5.40	1.59	1.52
6	D	456	MET	CA-C	5.38	1.59	1.52
7	O	24	ALA	CA-CB	-5.38	1.44	1.53
5	M	430	VAL	CA-CB	5.37	1.59	1.53
5	M	676	ILE	CA-CB	5.36	1.61	1.54
6	D	145	VAL	CA-C	5.31	1.58	1.52
6	D	880	ILE	CA-CB	5.29	1.61	1.54
6	D	454	ALA	C-N	5.26	1.41	1.33
5	C	163	ILE	CA-CB	5.23	1.59	1.53
6	D	398	ALA	CA-C	-5.23	1.46	1.52
4	A	122	ILE	CA-CB	5.21	1.60	1.53
5	M	645	VAL	CA-CB	5.19	1.60	1.54
5	M	474	VAL	CA-CB	5.16	1.61	1.54
6	N	1495	ILE	CA-CB	5.11	1.61	1.54
6	N	145	VAL	CA-CB	5.11	1.60	1.54
5	M	777	ILE	CA-CB	5.07	1.59	1.54
6	D	452	ILE	CA-CB	5.06	1.60	1.54
6	D	1273	VAL	CA-CB	5.04	1.61	1.54
6	D	133	ILE	CA-CB	5.04	1.61	1.54
5	C	430	VAL	CA-CB	5.02	1.58	1.53
6	D	133	ILE	C-N	5.01	1.41	1.33
4	A	165	ILE	CA-CB	5.01	1.58	1.54

All (379) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	1	G	N9-C1'-C2'	21.66	146.50	114.00
7	O	94	PRO	N-CA-C	18.69	137.02	114.03
2	Y	1	G	N9-C1'-C2'	18.08	141.13	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	177	GLU	CA-C-N	17.47	141.68	119.84
5	C	177	GLU	C-N-CA	17.47	141.68	119.84
5	M	177	GLU	CA-C-N	16.70	140.72	119.84
5	M	177	GLU	C-N-CA	16.70	140.72	119.84
7	E	94	PRO	N-CA-C	15.97	135.73	113.53
2	Y	1	G	P-O3'-C3'	15.19	142.98	120.20
2	H	1	G	P-O3'-C3'	14.88	142.51	120.20
5	M	243	ARG	CA-C-N	14.72	138.25	119.84
5	M	243	ARG	C-N-CA	14.72	138.25	119.84
6	N	1124	GLN	CA-C-N	14.15	137.53	119.84
6	N	1124	GLN	C-N-CA	14.15	137.53	119.84
6	D	1124	GLN	CA-C-N	13.84	137.14	119.84
6	D	1124	GLN	C-N-CA	13.84	137.14	119.84
5	C	726	ILE	CA-C-N	12.73	135.75	119.84
5	C	726	ILE	C-N-CA	12.73	135.75	119.84
5	M	726	ILE	CA-C-N	12.62	135.61	119.84
5	M	726	ILE	C-N-CA	12.62	135.61	119.84
2	H	16	G	C4'-C3'-O3'	12.35	131.53	113.00
6	N	525	ARG	CA-C-N	11.97	134.81	119.84
6	N	525	ARG	C-N-CA	11.97	134.81	119.84
2	Y	2	A	N9-C1'-C2'	-11.97	94.04	112.00
6	D	508	ARG	CA-C-N	11.96	134.79	119.84
6	D	508	ARG	C-N-CA	11.96	134.79	119.84
5	C	243	ARG	CA-C-N	11.96	134.79	119.84
5	C	243	ARG	C-N-CA	11.96	134.79	119.84
6	N	1267	ARG	CA-C-N	11.89	131.81	120.03
6	N	1267	ARG	C-N-CA	11.89	131.81	120.03
6	N	508	ARG	CA-C-N	11.76	134.54	119.84
6	N	508	ARG	C-N-CA	11.76	134.54	119.84
6	D	525	ARG	CA-C-N	11.75	134.53	119.84
6	D	525	ARG	C-N-CA	11.75	134.53	119.84
7	O	94	PRO	CA-N-CD	-11.73	95.57	112.00
2	Y	16	G	C4'-C3'-O3'	11.60	130.40	113.00
7	E	93	TYR	CA-C-N	11.19	131.47	119.05
7	E	93	TYR	C-N-CA	11.19	131.47	119.05
7	E	94	PRO	CA-N-CD	-10.98	96.63	112.00
6	D	705	ALA	CA-C-N	-10.56	106.64	119.84
6	D	705	ALA	C-N-CA	-10.56	106.64	119.84
7	O	93	TYR	CA-C-N	10.05	130.32	119.87
7	O	93	TYR	C-N-CA	10.05	130.32	119.87
5	M	443	THR	CA-C-N	9.97	129.92	119.85
5	M	443	THR	C-N-CA	9.97	129.92	119.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	N	634	GLY	CA-C-N	9.80	132.09	119.84
6	N	634	GLY	C-N-CA	9.80	132.09	119.84
2	Y	1	G	C2'-C3'-O3'	9.75	124.12	109.50
2	H	2	A	N9-C1'-C2'	-9.48	97.78	112.00
6	N	705	ALA	CA-C-N	-9.40	106.65	120.46
6	N	705	ALA	C-N-CA	-9.40	106.65	120.46
6	D	1267	ARG	CA-C-N	9.37	130.61	120.11
6	D	1267	ARG	C-N-CA	9.37	130.61	120.11
6	D	80	VAL	CA-C-N	9.28	134.41	122.16
6	D	80	VAL	C-N-CA	9.28	134.41	122.16
5	M	264	PRO	CA-C-N	-9.06	108.37	122.59
5	M	264	PRO	C-N-CA	-9.06	108.37	122.59
2	Y	1	G	C4'-C3'-O3'	9.02	122.92	109.40
6	D	634	GLY	CA-C-N	8.92	130.99	119.84
6	D	634	GLY	C-N-CA	8.92	130.99	119.84
2	Y	7	G	C4'-C3'-O3'	8.71	126.06	113.00
5	M	230	ARG	CA-C-N	8.71	130.72	119.84
5	M	230	ARG	C-N-CA	8.71	130.72	119.84
6	D	132	TYR	CA-C-N	8.69	138.16	122.43
6	D	132	TYR	C-N-CA	8.69	138.16	122.43
6	D	133	ILE	N-CA-C	8.67	122.82	109.12
2	H	7	G	N9-C1'-C2'	-8.66	99.00	112.00
6	N	1109	GLU	CA-C-N	8.56	137.00	121.94
6	N	1109	GLU	C-N-CA	8.56	137.00	121.94
2	Y	7	G	N9-C1'-C2'	-8.48	99.28	112.00
5	C	1078	GLU	CA-C-N	8.47	130.43	119.84
5	C	1078	GLU	C-N-CA	8.47	130.43	119.84
5	C	230	ARG	CA-C-N	8.41	130.35	119.84
5	C	230	ARG	C-N-CA	8.41	130.35	119.84
6	D	1477	GLY	N-CA-C	-8.36	105.48	114.67
2	Y	2	A	O4'-C1'-N9	8.36	121.03	108.50
2	H	1	G	O4'-C1'-N9	-8.34	95.69	108.20
5	C	169	GLY	CA-C-N	8.31	130.23	119.84
5	C	169	GLY	C-N-CA	8.31	130.23	119.84
5	C	264	PRO	CA-C-N	-8.31	109.54	122.59
5	C	264	PRO	C-N-CA	-8.31	109.54	122.59
5	M	169	GLY	CA-C-N	8.25	130.15	119.84
5	M	169	GLY	C-N-CA	8.25	130.15	119.84
6	D	1109	GLU	CA-C-N	8.18	136.44	122.37
6	D	1109	GLU	C-N-CA	8.18	136.44	122.37
6	D	521	PRO	CA-C-N	8.16	130.05	119.84
6	D	521	PRO	C-N-CA	8.16	130.05	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	133	ILE	CB-CA-C	-8.12	99.58	111.68
4	A	105	GLY	CA-C-N	7.96	129.79	119.84
4	A	105	GLY	C-N-CA	7.96	129.79	119.84
2	H	7	G	C4'-C3'-O3'	7.88	124.83	113.00
5	M	317	VAL	CA-C-N	-7.88	111.60	119.56
5	M	317	VAL	C-N-CA	-7.88	111.60	119.56
5	M	810	ASP	CA-C-N	7.84	129.65	119.84
5	M	810	ASP	C-N-CA	7.84	129.65	119.84
2	H	1	G	O3'-P-O5'	7.75	115.62	104.00
4	K	105	GLY	CA-C-N	7.71	129.48	119.84
4	K	105	GLY	C-N-CA	7.71	129.48	119.84
6	N	1317	ASP	CA-C-N	7.68	132.10	120.82
6	N	1317	ASP	C-N-CA	7.68	132.10	120.82
2	Y	14	G	N9-C1'-C2'	-7.58	100.63	112.00
7	E	95	VAL	N-CA-C	7.57	121.62	111.17
6	N	1383	ASP	CA-C-N	7.56	127.47	120.21
6	N	1383	ASP	C-N-CA	7.56	127.47	120.21
5	M	16	PRO	CA-C-N	-7.48	111.30	119.98
5	M	16	PRO	C-N-CA	-7.48	111.30	119.98
5	M	1078	GLU	CA-C-N	7.48	129.19	119.84
5	M	1078	GLU	C-N-CA	7.48	129.19	119.84
7	E	41	GLU	CA-C-N	7.47	129.18	119.84
7	E	41	GLU	C-N-CA	7.47	129.18	119.84
5	C	58	ASP	CA-C-N	7.43	135.73	121.54
5	C	58	ASP	C-N-CA	7.43	135.73	121.54
5	M	58	ASP	CA-C-N	7.38	135.64	121.54
5	M	58	ASP	C-N-CA	7.38	135.64	121.54
4	B	105	GLY	CA-C-N	7.36	129.04	119.84
4	B	105	GLY	C-N-CA	7.36	129.04	119.84
6	D	1383	ASP	CA-C-N	7.30	127.22	120.21
6	D	1383	ASP	C-N-CA	7.30	127.22	120.21
6	D	1252	ILE	CA-C-O	-7.26	111.71	120.78
2	H	1	G	C2'-C3'-O3'	7.23	120.35	109.50
5	C	318	PRO	CA-C-N	7.20	131.91	121.03
5	C	318	PRO	C-N-CA	7.20	131.91	121.03
5	M	243	ARG	C-N-CD	-7.19	95.53	125.00
6	N	1331	ASP	CA-C-N	7.16	128.78	119.84
6	N	1331	ASP	C-N-CA	7.16	128.78	119.84
5	M	318	PRO	CA-C-N	7.13	131.80	121.03
5	M	318	PRO	C-N-CA	7.13	131.80	121.03
6	D	79	GLU	CA-C-N	-7.12	111.97	122.23
6	D	79	GLU	C-N-CA	-7.12	111.97	122.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	E	50	THR	CA-C-N	7.06	134.74	122.32
7	E	50	THR	C-N-CA	7.06	134.74	122.32
4	L	105	GLY	CA-C-N	7.01	128.60	119.84
4	L	105	GLY	C-N-CA	7.01	128.60	119.84
5	M	165	LEU	CA-C-N	7.00	143.79	127.00
5	M	165	LEU	C-N-CA	7.00	143.79	127.00
5	M	38	LYS	CA-C-N	6.94	129.91	120.54
5	M	38	LYS	C-N-CA	6.94	129.91	120.54
6	D	1317	ASP	CA-C-N	6.89	130.95	120.82
6	D	1317	ASP	C-N-CA	6.89	130.95	120.82
6	N	621	LYS	CA-C-N	-6.88	111.12	121.72
6	N	621	LYS	C-N-CA	-6.88	111.12	121.72
2	H	2	A	P-O3'-C3'	-6.88	109.88	120.20
5	C	165	LEU	CA-C-N	6.88	143.51	127.00
5	C	165	LEU	C-N-CA	6.88	143.51	127.00
7	O	50	THR	CA-C-N	6.85	134.38	122.32
7	O	50	THR	C-N-CA	6.85	134.38	122.32
2	Y	2	A	P-O3'-C3'	-6.85	109.93	120.20
5	C	317	VAL	CA-C-N	-6.81	112.68	119.56
5	C	317	VAL	C-N-CA	-6.81	112.68	119.56
7	O	95	VAL	N-CA-C	6.81	121.97	112.50
6	N	164	GLY	CA-C-N	-6.81	113.67	122.79
6	N	164	GLY	C-N-CA	-6.81	113.67	122.79
6	N	79	GLU	CA-C-N	-6.78	112.94	122.71
6	N	79	GLU	C-N-CA	-6.78	112.94	122.71
6	D	456	MET	CB-CA-C	-6.76	96.92	110.30
1	G	18	DG	N9-C1'-C2'	-6.74	103.39	113.50
6	D	1252	ILE	CA-C-N	-6.70	110.23	121.89
6	D	1252	ILE	C-N-CA	-6.70	110.23	121.89
6	N	132	TYR	CA-C-N	6.70	134.55	122.43
6	N	132	TYR	C-N-CA	6.70	134.55	122.43
7	O	41	GLU	CA-C-N	6.66	128.16	119.84
7	O	41	GLU	C-N-CA	6.66	128.16	119.84
6	D	621	LYS	CA-C-N	-6.63	111.74	121.76
6	D	621	LYS	C-N-CA	-6.63	111.74	121.76
6	D	134	VAL	N-CA-C	6.61	119.03	108.85
5	C	38	LYS	CA-C-N	6.58	129.42	120.54
5	C	38	LYS	C-N-CA	6.58	129.42	120.54
2	H	14	G	N9-C1'-C2'	-6.54	102.19	112.00
6	D	915	VAL	CB-CA-C	-6.53	103.65	111.81
6	N	561	GLY	CA-C-N	-6.52	113.34	122.66
6	N	561	GLY	C-N-CA	-6.52	113.34	122.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	M	1108	PRO	CA-C-N	6.51	131.61	122.23
5	M	1108	PRO	C-N-CA	6.51	131.61	122.23
5	C	7	GLY	N-CA-C	6.50	118.97	111.36
5	M	165	LEU	C-N-CD	-6.46	106.39	120.60
5	C	1019	GLN	CA-C-N	6.35	126.38	119.90
5	C	1019	GLN	C-N-CA	6.35	126.38	119.90
5	C	810	ASP	CA-C-N	6.35	127.78	119.84
5	C	810	ASP	C-N-CA	6.35	127.78	119.84
5	C	1108	PRO	CA-C-N	6.33	131.35	122.23
5	C	1108	PRO	C-N-CA	6.33	131.35	122.23
5	C	728	HIS	CA-C-N	-6.31	109.49	121.54
5	C	728	HIS	C-N-CA	-6.31	109.49	121.54
6	N	1101	VAL	CB-CA-C	-6.30	105.25	111.30
2	Y	9	G	N9-C1'-C2'	-6.30	102.55	112.00
2	H	9	G	C5'-C4'-O4'	-6.30	100.36	109.80
5	M	244	PRO	CA-N-CD	-6.28	103.21	112.00
5	M	728	HIS	CA-C-N	-6.28	109.55	121.54
5	M	728	HIS	C-N-CA	-6.28	109.55	121.54
6	D	1209	LEU	CA-C-O	-6.22	113.71	121.55
5	C	879	ARG	CA-C-N	-6.21	113.76	123.13
5	C	879	ARG	C-N-CA	-6.21	113.76	123.13
5	M	879	ARG	CA-C-N	-6.19	113.78	123.13
5	M	879	ARG	C-N-CA	-6.19	113.78	123.13
6	D	108	VAL	CA-C-N	-6.17	112.77	120.79
6	D	108	VAL	C-N-CA	-6.17	112.77	120.79
5	M	1019	GLN	CA-C-N	6.16	126.10	119.76
5	M	1019	GLN	C-N-CA	6.16	126.10	119.76
4	K	172	SER	CA-C-N	-6.13	114.57	120.83
4	K	172	SER	C-N-CA	-6.13	114.57	120.83
6	D	620	GLY	CA-C-N	-6.13	113.04	122.60
6	D	620	GLY	C-N-CA	-6.13	113.04	122.60
2	H	2	A	O4'-C4'-C3'	-6.13	97.87	104.00
4	B	48	ILE	CA-C-N	6.12	126.03	119.85
4	B	48	ILE	C-N-CA	6.12	126.03	119.85
5	C	410	ILE	CB-CA-C	-6.12	103.92	111.08
1	X	18	DG	N9-C1'-C2'	-6.10	104.35	113.50
6	N	567	ILE	CB-CA-C	-6.08	104.06	112.02
6	N	593	ASN	CA-C-N	6.07	127.42	119.84
6	N	593	ASN	C-N-CA	6.07	127.42	119.84
4	K	48	ILE	CA-C-N	6.07	126.54	119.99
4	K	48	ILE	C-N-CA	6.07	126.54	119.99
6	D	51	GLY	CA-C-N	6.05	127.41	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	51	GLY	C-N-CA	6.05	127.41	119.84
6	D	561	GLY	CA-C-N	-6.05	114.01	122.66
6	D	561	GLY	C-N-CA	-6.05	114.01	122.66
6	N	133	ILE	N-CA-C	5.97	118.55	109.12
2	H	5	C	C4'-C3'-O3'	5.96	121.93	113.00
5	M	729	LEU	CA-C-N	-5.94	111.48	121.75
5	M	729	LEU	C-N-CA	-5.94	111.48	121.75
6	N	1252	ILE	CA-C-O	-5.91	113.39	120.78
1	X	18	DG	C5'-C4'-O4'	-5.91	100.53	109.40
6	N	1252	ILE	CA-C-N	-5.91	112.40	122.33
6	N	1252	ILE	C-N-CA	-5.91	112.40	122.33
5	M	1004	LYS	CA-C-N	5.90	132.81	121.54
5	M	1004	LYS	C-N-CA	5.90	132.81	121.54
6	N	1209	LEU	CA-C-O	-5.90	114.21	121.88
4	A	91	ASN	CA-C-N	5.90	127.21	119.84
4	A	91	ASN	C-N-CA	5.90	127.21	119.84
6	D	621	LYS	CA-C-O	-5.89	112.64	119.59
2	H	9	G	N9-C1'-C2'	-5.89	103.16	112.00
2	H	1	G	C1'-C2'-O2'	-5.87	102.99	111.80
5	C	319	GLY	CA-C-O	-5.85	115.88	121.62
2	Y	9	G	C5'-C4'-O4'	-5.84	101.04	109.80
5	C	165	LEU	C-N-CD	-5.81	107.82	120.60
6	D	593	ASN	CA-C-N	5.79	127.08	119.84
6	D	593	ASN	C-N-CA	5.79	127.08	119.84
5	C	729	LEU	CA-C-N	-5.76	111.79	121.75
5	C	729	LEU	C-N-CA	-5.76	111.79	121.75
7	E	57	ASP	CA-C-N	-5.75	112.65	119.84
7	E	57	ASP	C-N-CA	-5.75	112.65	119.84
6	N	620	GLY	CA-C-N	-5.74	113.46	122.65
6	N	620	GLY	C-N-CA	-5.74	113.46	122.65
5	C	728	HIS	CA-C-O	-5.74	112.75	119.24
1	G	18	DG	C5'-C4'-O4'	-5.74	100.80	109.40
6	N	1107	VAL	CB-CA-C	-5.73	105.72	111.80
6	D	1266	ARG	NE-CZ-NH2	-5.73	114.05	119.20
4	L	91	ASN	CA-C-N	5.70	126.96	119.84
4	L	91	ASN	C-N-CA	5.70	126.96	119.84
6	D	142	LEU	CA-C-N	5.70	131.18	122.24
6	D	142	LEU	C-N-CA	5.70	131.18	122.24
6	N	81	THR	CA-C-N	-5.67	112.78	121.74
6	N	81	THR	C-N-CA	-5.67	112.78	121.74
5	C	1109	VAL	CA-C-N	-5.63	115.06	123.00
5	C	1109	VAL	C-N-CA	-5.63	115.06	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	950	GLY	N-CA-C	-5.62	101.08	111.04
6	D	499	VAL	CB-CA-C	-5.62	104.78	111.97
5	C	57	GLU	CA-C-N	-5.59	114.13	122.74
5	C	57	GLU	C-N-CA	-5.59	114.13	122.74
5	M	981	GLU	CA-C-N	-5.59	114.99	120.52
5	M	981	GLU	C-N-CA	-5.59	114.99	120.52
6	D	131	LYS	N-CA-CB	-5.58	102.35	110.84
6	N	108	VAL	CA-C-N	-5.57	112.87	119.84
6	N	108	VAL	C-N-CA	-5.57	112.87	119.84
2	Y	7	G	C2'-C3'-O3'	-5.57	105.35	113.70
2	Y	11	C	N1-C1'-C2'	-5.57	103.65	112.00
6	D	433	GLY	N-CA-C	5.56	118.49	111.09
5	C	318	PRO	N-CA-C	-5.54	106.94	113.86
6	N	143	ASN	CA-C-O	5.54	124.89	118.97
5	C	761	PHE	CA-C-N	5.53	127.95	120.65
5	C	761	PHE	C-N-CA	5.53	127.95	120.65
6	D	134	VAL	CB-CA-C	-5.53	102.30	110.82
6	D	1109	GLU	CA-C-O	5.53	126.85	121.05
7	O	57	ASP	CA-C-N	-5.52	112.94	119.84
7	O	57	ASP	C-N-CA	-5.52	112.94	119.84
6	D	166	GLN	CA-C-O	5.51	126.83	120.60
6	N	1209	LEU	CA-C-N	-5.49	111.81	120.60
6	N	1209	LEU	C-N-CA	-5.49	111.81	120.60
2	Y	5	C	C4'-C3'-O3'	5.48	121.22	113.00
5	M	421	GLU	CA-C-N	-5.48	113.88	122.65
5	M	421	GLU	C-N-CA	-5.48	113.88	122.65
2	H	1	G	C3'-C2'-C1'	5.47	106.97	101.50
6	N	915	VAL	CB-CA-C	-5.45	105.00	111.81
6	N	1389	LEU	CA-CB-CG	5.44	135.35	116.30
2	H	6	U	C4'-C3'-O3'	5.43	121.15	113.00
2	Y	1	G	C3'-C2'-C1'	5.42	106.92	101.50
3	I	7	DC	O5'-P-OP2	5.42	124.25	108.00
6	N	565	ILE	CB-CA-C	-5.41	104.95	111.88
5	M	256	TYR	CB-CA-C	-5.41	102.36	110.90
6	D	134	VAL	CA-C-N	5.39	130.44	123.00
6	D	134	VAL	C-N-CA	5.39	130.44	123.00
4	K	91	ASN	CA-C-N	5.38	126.56	119.84
4	K	91	ASN	C-N-CA	5.38	126.56	119.84
2	Y	1	G	O3'-P-O5'	5.38	112.07	104.00
1	G	17	DC	N1-C1'-C2'	-5.37	105.44	113.50
6	N	1035	ILE	CA-C-N	5.37	127.74	120.38
6	N	1035	ILE	C-N-CA	5.37	127.74	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	91	ASN	CA-C-N	5.37	126.55	119.84
4	B	91	ASN	C-N-CA	5.37	126.55	119.84
1	X	13	DT	C4'-C3'-O3'	5.37	118.05	110.00
5	M	728	HIS	CA-C-O	-5.37	113.18	119.24
6	D	609	GLY	N-CA-C	5.35	121.95	112.53
5	M	761	PHE	CA-C-N	5.34	127.70	120.65
5	M	761	PHE	C-N-CA	5.34	127.70	120.65
2	Y	4	U	N1-C1'-C2'	5.34	120.01	112.00
6	D	164	GLY	CA-C-N	-5.34	114.07	122.08
6	D	164	GLY	C-N-CA	-5.34	114.07	122.08
6	D	456	MET	N-CA-C	5.33	117.52	109.41
5	C	1017	THR	CA-C-N	-5.33	114.62	122.83
5	C	1017	THR	C-N-CA	-5.33	114.62	122.83
6	N	133	ILE	CB-CA-C	-5.29	103.80	111.68
2	Y	6	U	C4'-C3'-O3'	5.27	120.91	113.00
6	N	81	THR	CA-C-O	-5.25	113.00	120.51
6	D	131	LYS	N-CA-C	5.24	117.35	108.02
6	D	152	LEU	CA-CB-CG	5.24	134.63	116.30
5	C	243	ARG	C-N-CD	-5.24	103.53	125.00
7	E	94	PRO	CA-C-N	5.22	129.19	120.62
7	E	94	PRO	C-N-CA	5.22	129.19	120.62
6	N	621	LYS	CA-C-O	-5.21	113.46	119.56
6	N	143	ASN	N-CA-C	-5.21	107.30	113.97
7	O	51	LEU	CA-C-O	-5.21	115.58	121.05
1	G	12	DG	OP1-P-O3'	-5.21	92.39	108.00
6	N	136	ASP	CA-C-N	-5.21	113.33	119.84
6	N	136	ASP	C-N-CA	-5.21	113.33	119.84
6	N	1251	ASP	CA-C-N	5.20	131.34	121.97
6	N	1251	ASP	C-N-CA	5.20	131.34	121.97
6	D	143	ASN	N-CA-C	-5.20	107.60	114.31
5	M	872	ASN	CA-C-N	5.19	124.51	118.85
5	M	872	ASN	C-N-CA	5.19	124.51	118.85
5	M	1117	SER	CA-C-N	-5.19	115.40	122.93
5	M	1117	SER	C-N-CA	-5.19	115.40	122.93
2	H	2	A	C4'-C3'-C2'	5.19	107.79	102.60
6	N	1461	GLY	N-CA-C	-5.18	105.24	112.18
6	N	892	ASP	CA-C-N	5.17	127.52	120.54
6	N	892	ASP	C-N-CA	5.17	127.52	120.54
5	M	1081	VAL	CA-C-N	5.17	124.93	119.76
5	M	1081	VAL	C-N-CA	5.17	124.93	119.76
6	N	1209	LEU	N-CA-C	-5.16	102.37	110.17
2	H	8	C	C3'-C2'-O2'	5.16	118.44	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	467	ILE	CB-CA-C	-5.15	105.73	111.35
4	L	48	ILE	CA-C-N	5.12	125.03	119.85
4	L	48	ILE	C-N-CA	5.12	125.03	119.85
6	D	80	VAL	N-CA-C	5.12	115.73	108.42
6	D	1109	GLU	N-CA-C	5.11	114.99	108.24
5	M	1073	GLY	N-CA-C	-5.11	106.08	114.76
5	M	1109	VAL	CA-C-N	-5.10	115.81	123.00
5	M	1109	VAL	C-N-CA	-5.10	115.81	123.00
1	X	17	DC	N1-C1'-C2'	-5.09	105.86	113.50
5	M	318	PRO	N-CA-C	-5.09	107.49	113.86
6	N	1109	GLU	O-C-N	5.09	128.57	122.72
5	M	57	GLU	CA-C-N	-5.08	114.92	122.74
5	M	57	GLU	C-N-CA	-5.08	114.92	122.74
5	C	244	PRO	CA-N-CD	-5.08	104.89	112.00
6	D	1340	GLY	CA-C-N	5.08	126.19	119.84
6	D	1340	GLY	C-N-CA	5.08	126.19	119.84
4	B	172	SER	CA-C-N	5.07	125.52	120.04
4	B	172	SER	C-N-CA	5.07	125.52	120.04
5	C	319	GLY	N-CA-C	-5.07	102.27	110.18
2	H	10	G	N9-C1'-C2'	-5.06	104.41	112.00
6	D	1306	PRO	CA-C-N	5.06	127.37	120.54
6	D	1306	PRO	C-N-CA	5.06	127.37	120.54
1	X	14	DT	C5'-C4'-O4'	-5.06	101.82	109.40
6	D	892	ASP	CA-C-N	5.05	127.36	120.54
6	D	892	ASP	C-N-CA	5.05	127.36	120.54
6	D	81	THR	CA-C-O	-5.03	114.59	121.98
6	N	1128	VAL	CA-C-O	-5.03	115.15	120.48
6	D	1109	GLU	O-C-N	5.02	128.50	122.72
5	M	260	LEU	CA-C-N	-5.02	112.93	121.97
5	M	260	LEU	C-N-CA	-5.02	112.93	121.97
6	D	1209	LEU	CA-C-N	-5.02	112.57	120.60
6	D	1209	LEU	C-N-CA	-5.02	112.57	120.60
6	N	1115	THR	CA-C-N	5.02	130.18	122.95
6	N	1115	THR	C-N-CA	5.02	130.18	122.95
2	Y	8	C	C1'-C2'-O2'	-5.01	100.88	108.40
5	C	858	MET	CA-C-N	5.01	126.11	119.84
5	C	858	MET	C-N-CA	5.01	126.11	119.84
2	Y	1	G	C4'-C3'-C2'	-5.01	97.59	102.60
5	C	1004	LYS	CA-C-N	5.00	131.10	121.54
5	C	1004	LYS	C-N-CA	5.00	131.10	121.54

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
6	D	1093	TYR	Sidechain
1	G	1	DC	Sidechain
1	G	13	DT	Sidechain
1	G	15	DC	Sidechain
1	G	16	DG	Sidechain
1	G	17	DC	Sidechain
1	G	18	DG	Sidechain
2	H	1	G	Sidechain
2	H	14	G	Sidechain
1	X	1	DC	Sidechain
1	X	13	DT	Sidechain
1	X	15	DC	Sidechain
1	X	16	DG	Sidechain
1	X	17	DC	Sidechain
1	X	18	DG	Sidechain
1	X	19	DC	Sidechain
2	Y	14	G	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	G	467	0	259	46	0
1	X	467	0	259	45	0
2	H	347	0	174	76	0
2	Y	347	0	174	61	0
3	I	270	0	144	18	0
3	Z	270	0	144	18	0
4	A	1806	0	1861	189	0
4	B	1806	0	1861	183	0
4	K	1806	0	1861	211	0
4	L	1806	0	1861	180	0
5	C	8829	0	8933	1115	0
5	M	8829	0	8933	1105	0
6	D	10373	0	10599	1507	0
6	N	10373	0	10599	1424	0
7	E	770	0	784	125	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	O	770	0	784	108	0
8	D	43	0	34	6	0
8	N	43	0	31	6	0
9	D	2	0	0	0	0
9	N	2	0	0	0	0
10	D	2	0	0	0	0
10	N	2	0	0	0	0
11	D	31	0	14	5	0
11	M	31	0	14	2	0
12	A	78	0	0	13	0
12	B	117	0	0	29	0
12	C	408	0	0	104	0
12	D	531	0	0	108	0
12	E	34	0	0	17	0
12	G	39	0	0	6	0
12	H	22	0	0	6	0
12	I	31	0	0	3	0
12	K	81	0	0	26	0
12	L	95	0	0	12	0
12	M	396	0	0	101	0
12	N	510	0	0	120	0
12	O	53	0	0	16	0
12	X	31	0	0	5	0
12	Y	26	0	0	3	0
12	Z	18	0	0	3	0
All	All	51962	0	49323	5902	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 60.

All (5902) 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)
6:D:133:ILE:N	6:D:133:ILE:CA	1.70	1.55
6:D:132:TYR:C	6:D:132:TYR:CA	1.78	1.54
7:E:92:LEU:HD23	12:E:113:HOH:O	1.25	1.32
2:Y:2:A:OP2	6:N:671:LYS:NZ	1.72	1.21
6:D:87:ARG:HD3	6:D:524:LEU:HD11	1.30	1.12
6:N:165:LYS:HB2	6:N:397:LYS:HB2	1.20	1.11
2:H:7:G:H21	5:C:1021:LEU:HB2	1.13	1.11
2:H:16:G:H21	6:D:705:ALA:HB1	1.03	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:478:LEU:HD22	6:N:1388:ARG:HE	1.16	1.09
5:M:554:ASP:HB2	5:M:880:MET:HB2	1.32	1.08
5:C:162:ILE:HD11	5:C:306:THR:HG21	1.36	1.06
6:D:501:ALA:HB1	6:D:1453:ALA:HB2	1.37	1.06
5:M:1034:GLU:HB3	6:N:619:LEU:HD22	1.37	1.06
1:G:21:DC:H4'	5:C:134:ARG:HH21	1.18	1.06
1:X:14:DT:H2''	1:X:15:DC:H5'	1.37	1.06
7:E:92:LEU:CD2	12:E:113:HOH:O	1.88	1.06
1:G:14:DT:H2''	1:G:15:DC:H5'	1.33	1.05
6:N:432:TYR:HB3	6:N:450:TYR:HB2	1.37	1.05
6:D:398:ALA:HB2	6:D:447:VAL:HA	1.37	1.04
5:M:1011:GLY:HA2	5:M:1026:GLN:HE21	1.21	1.03
6:D:165:LYS:HB2	6:D:397:LYS:HB2	1.37	1.03
7:E:45:ARG:HG2	7:E:46:PRO:HD2	1.38	1.03
4:B:94:LEU:HD11	4:B:119:ASP:HB2	1.35	1.03
6:N:204:LEU:HB3	6:N:441:ARG:HH22	1.22	1.02
7:E:62:THR:HA	7:E:65:MET:HE2	1.41	1.02
6:D:32:ILE:HD12	6:D:527:MET:HG2	1.40	1.01
6:D:1300:SER:HB2	6:N:60:CYS:HB3	1.42	1.00
5:C:987:ILE:HG23	6:D:948:THR:HG21	1.44	1.00
7:E:23:VAL:CG1	7:E:61:VAL:HG13	1.92	1.00
5:M:874:LEU:HD11	6:N:787:LEU:HD22	1.43	1.00
2:H:16:G:N2	6:D:705:ALA:HB1	1.76	1.00
6:D:521:PRO:HB2	6:D:524:LEU:HD13	1.41	1.00
6:D:908:LYS:HB3	6:D:1027:GLY:HA3	1.43	1.00
5:M:334:ARG:HD2	5:M:418:LEU:HD21	1.41	0.99
6:D:1284:GLU:HB2	6:N:75:ARG:HE	1.24	0.99
5:C:86:LYS:HG2	5:C:813:VAL:HB	1.39	0.98
5:C:1034:GLU:HB3	6:D:619:LEU:HD22	1.44	0.98
6:D:136:ASP:HB3	6:D:137:PRO:HD3	1.45	0.98
1:G:23:DG:H2'	6:D:534:ARG:HH21	1.26	0.98
6:D:928:ALA:HA	6:D:931:LEU:HD12	1.44	0.98
5:C:626:ARG:HB2	5:C:639:GLN:HE22	1.28	0.98
6:D:115:LEU:HD13	6:D:499:VAL:HG22	1.45	0.98
4:L:22:GLU:HG2	4:L:198:ARG:HG2	1.42	0.98
6:N:51:GLY:HA3	6:N:86:ARG:HA	1.41	0.98
6:D:1284:GLU:HB2	6:N:75:ARG:NE	1.79	0.97
6:N:1406:ARG:HG3	6:N:1412:LYS:HG3	1.46	0.97
2:Y:1:G:O2'	2:Y:2:A:H5''	1.63	0.97
5:C:775:ARG:HH21	5:C:782:ALA:HB1	1.27	0.96
7:O:23:VAL:HG12	7:O:61:VAL:HG13	1.44	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:979:THR:HG23	5:C:981:GLU:H	1.26	0.96
6:D:116:LEU:HD13	6:D:118:LEU:HD21	1.46	0.96
6:D:1281:VAL:HG23	6:D:1319:VAL:HG21	1.45	0.96
5:C:516:ARG:HD2	5:C:521:PRO:HA	1.45	0.96
6:D:145:VAL:HG22	6:D:146:PRO:HD2	1.46	0.96
6:N:1144:LEU:HD22	6:N:1166:LEU:HD11	1.48	0.96
5:M:979:THR:HG23	5:M:981:GLU:H	1.29	0.96
6:D:1282:ARG:HB3	6:N:75:ARG:C	1.90	0.96
5:M:711:GLU:HG2	5:M:822:VAL:HG12	1.47	0.96
5:M:636:ALA:HB3	5:M:703:ILE:HD13	1.48	0.96
6:D:1240:THR:HG23	6:D:1253:THR:HB	1.44	0.96
6:D:1468:LEU:HD22	6:D:1470:ARG:HB2	1.45	0.96
2:Y:6:U:H2'	2:Y:7:G:C8	2.01	0.95
5:C:115:LEU:HD22	5:C:373:VAL:HG11	1.48	0.95
6:D:1485:GLN:HE21	7:E:80:VAL:H	1.04	0.95
6:D:1297:GLU:O	6:N:52:PRO:HA	1.65	0.95
6:D:409:VAL:HG21	6:D:421:LEU:HD23	1.48	0.95
6:D:1281:VAL:HG11	6:D:1313:VAL:HG13	1.46	0.95
6:D:148:GLU:HB3	6:D:151:GLN:HB2	1.48	0.95
7:O:23:VAL:CG1	7:O:61:VAL:HG13	1.97	0.95
6:D:165:LYS:H	6:D:397:LYS:H	1.11	0.95
6:D:1153:VAL:HG13	6:N:561:GLY:HA3	1.46	0.94
6:N:525:ARG:HB2	6:N:538:SER:HB3	1.47	0.94
2:H:7:G:N2	5:C:1021:LEU:HB2	1.81	0.94
5:M:135:VAL:HG11	5:M:407:LYS:HA	1.47	0.94
6:N:438:ASP:HB2	6:N:445:ARG:HH12	1.32	0.94
4:A:64:GLU:HG3	4:A:165:ILE:HD13	1.49	0.94
5:C:274:ARG:HG3	5:C:285:LEU:HD22	1.49	0.94
5:M:10:ARG:NH1	5:M:10:ARG:HA	1.83	0.94
2:H:6:U:H2'	2:H:7:G:C8	2.02	0.94
6:D:1240:THR:HG21	6:D:1355:VAL:HG13	1.49	0.94
5:C:889:HIS:HE1	6:D:951:ILE:H	1.12	0.93
6:N:701:LEU:HD21	6:N:763:MET:HE3	1.49	0.93
6:D:1261:GLU:HA	6:D:1266:ARG:HD2	1.51	0.93
6:D:525:ARG:HB2	6:D:538:SER:HB3	1.50	0.93
4:K:224:TYR:HB3	4:L:9:PRO:HB2	1.51	0.93
5:M:409:ARG:HA	5:M:454:SER:HA	1.51	0.93
6:N:540:LEU:HA	6:N:543:LEU:HD12	1.51	0.93
6:N:637:LEU:HD21	6:N:642:CYS:HA	1.47	0.93
5:M:847:GLY:HA2	6:N:741:ASP:HA	1.51	0.92
1:G:18:DG:H2''	1:G:19:DC:H5'	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:12:G:H8	2:Y:12:G:H5'	1.33	0.92
6:D:890:VAL:HG11	6:D:922:LEU:HD13	1.50	0.92
6:D:1481:VAL:HG11	7:E:18:ARG:HA	1.50	0.92
4:L:57:TYR:HB3	4:L:141:GLU:HG3	1.49	0.91
6:D:799:LYS:HB3	6:D:826:PRO:HG2	1.53	0.91
6:N:1220:ALA:HB1	6:N:1223:ILE:HD13	1.52	0.91
5:M:1054:THR:HG22	5:M:1059:ASP:HB2	1.51	0.91
6:N:977:ALA:HB1	6:N:983:LEU:HD21	1.50	0.91
6:N:990:ASP:HA	6:N:993:LEU:HD12	1.52	0.91
5:C:1031:ARG:HA	6:D:621:LYS:O	1.69	0.91
6:N:1281:VAL:HG11	6:N:1313:VAL:HG13	1.51	0.91
5:C:292:ARG:HE	5:C:294:GLU:HG2	1.33	0.91
5:M:512:ARG:HB3	5:M:523:ILE:HD11	1.52	0.91
6:N:1382:THR:HA	6:N:1389:LEU:HD13	1.52	0.91
4:A:117:VAL:HB	4:A:120:VAL:HG12	1.53	0.91
6:N:161:LEU:HD21	6:N:452:ILE:HG21	1.53	0.91
6:N:1440:PHE:HB3	12:N:9281:HOH:O	1.69	0.90
5:M:626:ARG:H	5:M:639:GLN:HE21	1.14	0.90
5:M:478:VAL:HA	5:M:506:ASN:O	1.72	0.90
6:N:1472:ILE:HG22	6:N:1474:ALA:H	1.33	0.90
5:C:64:LEU:HD22	5:C:359:MET:HG3	1.52	0.90
6:N:119:SER:HB2	6:N:123:LEU:H	1.37	0.90
5:M:762:LYS:HA	5:M:786:LYS:HD2	1.53	0.90
6:N:526:PRO:O	6:N:537:THR:HA	1.72	0.90
6:D:785:ILE:H	6:D:785:ILE:HD12	1.35	0.90
4:K:54:THR:HG22	4:K:158:ILE:HG13	1.54	0.90
4:K:117:VAL:HB	4:K:120:VAL:HG12	1.54	0.89
6:N:24:GLY:HA3	6:N:49:ILE:HG12	1.50	0.89
6:N:1232:PRO:HB3	6:N:1361:VAL:HG21	1.51	0.89
6:D:1042:ARG:HH11	6:D:1042:ARG:HB2	1.38	0.89
2:H:7:G:H1	5:C:1014:SER:HA	1.38	0.89
5:M:953:VAL:HG13	5:M:966:LEU:HD13	1.52	0.89
4:L:56:VAL:HG13	4:L:142:VAL:HG12	1.55	0.88
4:A:186:LEU:HD13	4:A:192:LEU:HD13	1.55	0.88
4:B:56:VAL:HG13	4:B:142:VAL:HG12	1.55	0.88
1:X:17:DC:H2''	1:X:18:DG:H5'	1.56	0.88
5:M:567:GLN:HB2	5:M:997:LEU:HD22	1.55	0.88
6:N:1236:LEU:HB3	6:N:1359:GLN:HB3	1.54	0.88
6:N:478:LEU:HD13	6:N:1388:ARG:HH21	1.38	0.88
6:N:799:LYS:HB3	6:N:826:PRO:HG2	1.54	0.88
6:D:165:LYS:HE2	6:D:199:LEU:HD13	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:477:LEU:HD21	6:D:495:ARG:HD3	1.55	0.88
3:I:9:DG:H4'	6:D:108:VAL:HG12	1.55	0.88
6:D:133:ILE:HB	6:D:153:LEU:O	1.73	0.88
6:N:478:LEU:HD22	6:N:1388:ARG:NE	1.87	0.88
5:C:579:VAL:HB	5:C:890:LEU:HD22	1.52	0.88
6:D:165:LYS:H	6:D:397:LYS:N	1.72	0.87
7:E:41:GLU:HA	7:E:45:ARG:HG3	1.55	0.87
6:D:164:GLY:CA	6:D:447:VAL:HB	2.03	0.87
6:D:543:LEU:HD22	6:D:580:ALA:HB1	1.56	0.87
6:D:1225:ALA:HA	6:D:1367:HIS:ND1	1.89	0.87
6:N:169:TYR:HB3	6:N:195:VAL:HG11	1.57	0.87
6:N:1213:ARG:HH22	7:O:10:PHE:HB3	1.39	0.87
2:Y:14:G:O2'	2:Y:15:C:H5'	1.75	0.86
4:B:109:VAL:HG21	4:B:138:LEU:HD21	1.55	0.86
5:C:395:LYS:HE2	5:C:403:SER:HB2	1.56	0.86
6:D:6:ARG:HG3	6:D:1470:ARG:HH12	1.40	0.86
2:H:12:G:H5'	2:H:12:G:H8	1.38	0.86
1:X:18:DG:H2''	1:X:19:DC:H5'	1.58	0.86
4:B:87:VAL:HG21	4:B:144:VAL:HG11	1.56	0.86
5:C:227:PHE:HA	5:C:230:ARG:HE	1.40	0.86
6:D:1375:MET:HA	12:D:9224:HOH:O	1.74	0.86
5:M:724:ARG:HH21	5:M:734:LEU:HB3	1.41	0.86
5:M:729:LEU:HD22	6:N:675:ARG:HD2	1.57	0.86
2:Y:12:G:H5'	2:Y:12:G:C8	2.09	0.86
5:C:597:ALA:HB2	5:C:655:LEU:HD21	1.57	0.86
2:H:12:G:H5'	2:H:12:G:C8	2.11	0.86
4:B:58:ILE:HD13	4:B:140:MET:HB3	1.55	0.86
5:M:1056:LYS:O	6:N:624:ASP:HB2	1.76	0.86
5:C:66:LEU:HD22	5:C:372:LEU:HD23	1.57	0.86
5:C:737:LEU:HD11	5:C:754:ILE:HB	1.58	0.86
4:A:143:ARG:HE	4:A:158:ILE:HG21	1.40	0.86
6:D:119:SER:HB2	6:D:123:LEU:HB2	1.58	0.86
6:D:133:ILE:HA	6:D:456:MET:CB	2.06	0.86
6:D:432:TYR:HB3	6:D:450:TYR:HB2	1.57	0.86
6:N:871:LYS:HD2	6:N:873:LEU:HD21	1.55	0.86
5:C:612:VAL:HG22	5:C:622:GLU:HG3	1.57	0.85
5:M:841:ASN:ND2	5:M:843:HIS:H	1.74	0.85
6:N:1037:GLN:HG2	6:N:1042:ARG:HB2	1.59	0.85
5:C:279:GLU:HG3	5:C:280:LYS:HD2	1.57	0.85
5:C:409:ARG:HA	5:C:454:SER:HA	1.55	0.85
6:D:486:ARG:HA	6:D:489:ARG:HG2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:690:ILE:HG13	5:M:694:LEU:HD12	1.56	0.85
3:Z:6:DC:H3'	6:N:1266:ARG:NH2	1.91	0.85
5:C:89:THR:HG21	5:C:383:ARG:HH22	1.41	0.85
5:C:1056:LYS:HD3	6:D:623:VAL:HG13	1.56	0.85
6:N:806:PHE:CE1	6:N:813:LEU:HB3	2.11	0.85
5:C:244:PRO:HD2	5:C:245:GLY:H	1.40	0.85
5:C:587:VAL:HG11	5:C:666:LEU:HD22	1.56	0.85
6:D:164:GLY:HA3	6:D:447:VAL:HB	1.57	0.85
5:C:276:LYS:HA	5:C:280:LYS:HD3	1.59	0.85
5:C:1054:THR:HG22	5:C:1059:ASP:HB2	1.58	0.85
6:D:1426:LYS:HA	6:D:1429:LEU:HD22	1.55	0.85
4:L:94:LEU:HD23	4:L:97:VAL:HG21	1.58	0.85
5:M:722:ILE:HD12	5:M:823:VAL:HG21	1.58	0.85
1:X:19:DC:H4'	5:M:1000:MET:HE2	1.57	0.85
5:M:328:LEU:HD13	5:M:433:THR:HB	1.57	0.85
2:H:5:C:H2'	2:H:6:U:C6	2.11	0.85
5:M:654:LEU:HD23	5:M:654:LEU:H	1.40	0.85
2:H:7:G:H21	5:C:1021:LEU:CB	1.88	0.84
7:E:27:ALA:HB2	7:E:61:VAL:HG22	1.59	0.84
2:Y:8:C:O2'	2:Y:9:G:H5'	1.77	0.84
5:C:428:ARG:HH21	5:C:451:LEU:HD11	1.42	0.84
6:N:9:ARG:HE	6:N:11:ALA:HB2	1.42	0.84
7:E:23:VAL:HG12	7:E:61:VAL:HG13	1.57	0.84
6:N:475:LYS:HA	6:N:478:LEU:HG	1.58	0.84
5:M:890:LEU:HA	5:M:914:ILE:HD11	1.57	0.84
4:L:87:VAL:HG21	4:L:144:VAL:HG11	1.59	0.84
5:C:478:VAL:HA	5:C:506:ASN:O	1.78	0.84
5:M:710:ILE:HB	5:M:790:LEU:HD22	1.59	0.84
5:M:545:ASN:HD22	5:M:583:LEU:HD21	1.41	0.84
2:H:14:G:O2'	2:H:15:C:H5'	1.76	0.84
2:Y:12:G:H2'	2:Y:13:C:C6	2.13	0.84
6:N:1274:ILE:HD12	6:N:1322:GLY:HA2	1.60	0.84
5:C:966:LEU:HD11	5:C:986:PRO:HG2	1.60	0.83
6:N:1342:GLU:H	6:N:1342:GLU:CD	1.85	0.83
6:N:695:ILE:HG21	6:N:720:LEU:HD11	1.61	0.83
6:N:1481:VAL:HG11	7:O:18:ARG:HA	1.60	0.83
6:D:1063:GLU:HB2	12:D:9306:HOH:O	1.79	0.83
6:D:1232:PRO:HB3	6:D:1361:VAL:HG21	1.60	0.83
5:C:183:SER:HB2	5:C:190:LYS:HD3	1.60	0.83
6:D:1145:TYR:HB2	6:D:1168:MET:HE1	1.58	0.83
4:L:186:LEU:HB2	4:L:192:LEU:HD11	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:24:VAL:HG13	4:B:196:THR:HG22	1.60	0.83
5:C:367:LEU:HA	5:C:371:LYS:HD3	1.60	0.83
6:D:493:ARG:HD3	6:D:1390:LEU:HB3	1.61	0.83
6:D:907:GLU:HG2	6:D:909:ASN:H	1.42	0.83
4:K:9:PRO:HB2	4:L:224:TYR:HB3	1.61	0.83
1:G:17:DC:H2''	1:G:18:DG:H5'	1.61	0.83
2:H:8:C:O2'	2:H:9:G:H5'	1.78	0.83
5:C:755:LEU:HD22	5:C:825:VAL:HG11	1.59	0.83
6:D:47:GLU:CD	6:D:53:ILE:HB	2.04	0.83
5:C:212:GLY:HA3	5:C:218:VAL:HG21	1.59	0.83
5:C:1018:GLN:HG3	5:C:1060:ILE:HD13	1.61	0.83
6:D:433:GLY:HA2	6:D:449:SER:C	2.04	0.82
6:D:783:ARG:HD2	6:D:1029:ARG:HG2	1.59	0.82
4:A:220:GLU:O	4:A:223:THR:HG22	1.79	0.82
6:D:1379:VAL:HG12	6:D:1419:PRO:HA	1.60	0.82
4:A:9:PRO:HB2	4:B:224:TYR:HB3	1.59	0.82
6:D:526:PRO:O	6:D:537:THR:HA	1.80	0.82
6:N:522:PRO:HA	6:N:525:ARG:HH11	1.43	0.82
6:D:1209:LEU:HD23	6:D:1211:MET:H	1.45	0.82
4:L:59:GLU:HG3	4:L:139:ASN:ND2	1.94	0.82
6:D:165:LYS:N	6:D:397:LYS:H	1.76	0.82
2:H:16:G:H21	6:D:705:ALA:CB	1.88	0.82
2:Y:5:C:H2'	2:Y:6:U:C6	2.15	0.82
6:D:906:GLN:HB3	6:D:911:LEU:HD11	1.62	0.82
6:D:1111:ASP:HB3	6:D:1203:LYS:HE3	1.60	0.82
5:M:851:LYS:HE3	5:M:853:LEU:HA	1.60	0.82
6:N:810:GLU:O	6:N:813:LEU:HG	1.79	0.82
6:D:97:THR:HG23	6:D:459:GLU:HB2	1.60	0.82
6:D:127:LEU:HD11	6:D:461:ILE:HD11	1.62	0.82
5:M:1096:ALA:O	6:N:13:ALA:HB2	1.80	0.82
5:M:974:LEU:HD13	5:M:987:ILE:HB	1.62	0.81
5:M:877:PRO:HG3	6:N:1023:MET:SD	2.20	0.81
2:H:9:G:H2'	2:H:10:G:C8	2.16	0.81
5:M:12:VAL:HG11	12:M:7276:HOH:O	1.79	0.81
4:A:109:VAL:HG21	4:A:138:LEU:HD21	1.62	0.81
5:C:136:ILE:HD13	5:C:392:SER:HB3	1.62	0.81
5:C:304:LEU:HD23	5:C:305:PRO:HD3	1.62	0.81
5:M:83:CYS:HA	5:M:88:LEU:HB3	1.62	0.81
5:M:987:ILE:HG23	6:N:948:THR:HG21	1.61	0.81
6:D:1189:ARG:HD2	6:D:1203:LYS:HB3	1.62	0.81
7:E:23:VAL:CG1	7:E:61:VAL:CG1	2.58	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:720:LEU:H	6:N:720:LEU:HD12	1.46	0.81
6:N:90:MET:HE3	6:N:521:PRO:HD3	1.63	0.81
6:N:172:PRO:HG2	6:N:175:VAL:HG21	1.61	0.81
6:N:398:ALA:HB2	6:N:447:VAL:HA	1.61	0.81
5:M:472:ARG:HB3	12:M:7276:HOH:O	1.80	0.81
6:N:1100:ASP:HB3	6:N:1428:ALA:HB1	1.61	0.81
6:N:846:PRO:HA	12:N:9216:HOH:O	1.79	0.81
7:E:40:LEU:HB3	7:E:72:ARG:CZ	2.11	0.81
4:B:47:SER:HB3	4:B:217:ILE:HD13	1.63	0.80
5:C:15:LEU:H	5:C:586:ARG:NH2	1.80	0.80
4:L:206:THR:HG22	4:L:209:GLU:H	1.45	0.80
6:N:28:LYS:HB2	6:N:41:ARG:HD2	1.63	0.80
6:N:493:ARG:HG2	6:N:1390:LEU:HD12	1.61	0.80
6:N:1465:ASN:HD21	6:N:1470:ARG:HD2	1.46	0.80
4:A:25:LEU:HD23	4:A:28:LEU:HD21	1.63	0.80
4:B:22:GLU:HG2	4:B:198:ARG:HG2	1.63	0.80
5:C:110:GLU:H	5:C:368:THR:HG21	1.45	0.80
5:M:579:VAL:HB	5:M:890:LEU:HD22	1.63	0.80
6:N:660:LYS:HB2	12:N:9248:HOH:O	1.81	0.80
6:N:83:SER:O	6:N:86:ARG:HB3	1.81	0.80
4:A:62:LEU:HD12	4:A:62:LEU:H	1.43	0.80
6:N:785:ILE:H	6:N:785:ILE:HD12	1.44	0.80
5:C:79:PRO:HG2	5:C:82:GLU:HB2	1.64	0.80
5:C:362:GLY:HA3	5:C:367:LEU:HD23	1.64	0.80
6:D:814:ALA:HB1	6:D:818:ARG:HH21	1.47	0.80
4:K:146:ARG:HB2	12:K:1714:HOH:O	1.81	0.80
6:N:1471:LEU:HD12	6:N:1472:ILE:H	1.47	0.80
6:D:650:LEU:HA	6:D:691:LEU:HD21	1.64	0.80
5:C:110:GLU:HG3	5:C:369:PRO:HG3	1.62	0.80
5:C:535:SER:H	5:C:538:GLN:NE2	1.79	0.80
5:M:1115:LEU:H	5:M:1115:LEU:HD12	1.44	0.80
5:C:196:LEU:HA	12:C:1255:HOH:O	1.81	0.80
7:E:30:LEU:O	7:E:35:PHE:HA	1.82	0.80
5:C:557:ARG:HB3	12:C:1341:HOH:O	1.80	0.79
4:K:52:ALA:HA	12:K:1273:HOH:O	1.81	0.79
4:K:129:ILE:HG12	12:K:661:HOH:O	1.82	0.79
6:N:774:SER:HB3	6:N:1362:LYS:O	1.83	0.79
5:C:927:GLY:HA2	5:C:930:LYS:HD3	1.65	0.79
5:M:494:TYR:HB3	12:M:7105:HOH:O	1.81	0.79
6:N:470:LEU:HD23	6:N:470:LEU:H	1.47	0.79
2:H:1:G:O2'	2:H:2:A:H5''	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:102:LYS:HE2	4:B:139:ASN:HB2	1.64	0.79
6:N:87:ARG:HD3	6:N:523:ASP:HB2	1.65	0.79
5:C:516:ARG:HE	6:D:1068:LEU:HD13	1.46	0.79
5:C:1050:GLN:HG2	5:C:1079:PRO:HG2	1.63	0.79
6:D:690:ALA:O	6:D:694:VAL:HG23	1.82	0.79
6:D:786:ILE:HG22	6:D:1026:SER:HB3	1.62	0.79
6:N:145:VAL:HG22	6:N:146:PRO:HD2	1.64	0.79
2:Y:12:G:H2'	2:Y:13:C:H6	1.45	0.79
6:D:1291:SER:HB2	6:N:75:ARG:NE	1.98	0.79
7:E:43:GLU:HG3	7:E:44:GLU:H	1.46	0.79
5:M:292:ARG:HB2	5:M:299:LYS:HE2	1.65	0.79
6:N:710:ARG:HD2	6:N:768:ASN:HD21	1.47	0.79
4:B:186:LEU:HB2	4:B:192:LEU:HD11	1.63	0.79
2:Y:9:G:H2'	2:Y:10:G:C8	2.18	0.79
5:C:847:GLY:HA2	6:D:741:ASP:HA	1.64	0.79
6:D:551:ASN:HD21	6:D:555:LYS:HZ3	1.29	0.79
5:M:79:PRO:HG2	5:M:82:GLU:HB2	1.64	0.79
6:N:1020:LEU:HD21	6:N:1035:ILE:HG23	1.65	0.79
7:O:25:LYS:HA	7:O:28:GLN:HE21	1.46	0.79
6:D:525:ARG:HG2	6:D:541:ASN:HD21	1.49	0.78
4:B:182:GLU:HG3	4:B:194:LYS:HD2	1.63	0.78
6:N:1240:THR:HG21	6:N:1355:VAL:HG13	1.65	0.78
7:O:40:LEU:HD21	7:O:67:GLU:HA	1.66	0.78
6:D:204:LEU:HD13	6:D:441:ARG:HH22	1.48	0.78
6:D:1144:LEU:HD11	6:D:1186:VAL:HG21	1.64	0.78
6:N:619:LEU:HD12	6:N:621:LYS:NZ	1.99	0.78
5:M:801:VAL:HG23	5:M:802:ARG:HG3	1.65	0.78
6:N:520:LEU:HD21	6:N:524:LEU:HB3	1.65	0.78
6:N:1294:VAL:HG22	6:N:1325:LEU:HD21	1.65	0.78
6:D:1295:GLU:HB3	6:N:76:CYS:HB2	1.66	0.78
5:M:142:ARG:NH1	5:M:325:ILE:HA	1.99	0.78
5:M:516:ARG:HD3	5:M:521:PRO:HA	1.64	0.78
5:M:675:ALA:HA	5:M:989:VAL:HG12	1.63	0.78
6:N:1389:LEU:HG	6:N:1390:LEU:HD23	1.65	0.78
5:C:630:ARG:HH21	5:C:706:GLU:HA	1.49	0.78
6:D:456:MET:O	6:D:459:GLU:HB3	1.84	0.78
4:L:80:LEU:HG	6:N:844:ALA:HA	1.63	0.78
2:H:12:G:H2'	2:H:13:C:C6	2.17	0.78
5:C:36:PRO:HG2	5:C:70:GLU:HB3	1.66	0.78
6:D:28:LYS:HB3	6:D:41:ARG:HD2	1.66	0.78
6:D:783:ARG:HA	6:D:1028:ALA:HA	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:557:ARG:HG2	5:M:879:ARG:HB3	1.64	0.78
6:N:693:GLU:HA	7:O:48:MET:HE1	1.66	0.78
6:D:5:VAL:HB	6:D:1468:LEU:HD11	1.64	0.78
6:D:584:ASN:HB2	6:D:602:SER:HB3	1.65	0.78
5:M:584:GLU:HB2	12:M:7223:HOH:O	1.82	0.78
6:N:970:LYS:HG2	6:N:995:LEU:HD13	1.64	0.78
6:N:1149:LEU:HD11	6:N:1160:LEU:HD13	1.65	0.78
7:O:27:ALA:HB2	7:O:61:VAL:HG22	1.64	0.78
6:D:52:PRO:HA	12:D:9054:HOH:O	1.84	0.77
6:D:1342:GLU:CD	6:D:1342:GLU:H	1.92	0.77
6:N:1379:VAL:HG12	6:N:1419:PRO:HA	1.66	0.77
5:C:437:ARG:HG2	5:C:467:ILE:HB	1.67	0.77
6:D:1233:GLY:O	6:D:1237:THR:HB	1.84	0.77
5:M:952:LEU:HB3	5:M:966:LEU:HD11	1.66	0.77
5:C:65:VAL:HG23	5:C:101:ILE:HB	1.64	0.77
5:C:312:ALA:HB1	5:C:318:PRO:HG2	1.65	0.77
4:K:89:PHE:HD1	4:K:120:VAL:HG23	1.49	0.77
6:N:1493:LYS:O	6:N:1497:GLU:HG2	1.84	0.77
5:C:636:ALA:HB3	5:C:703:ILE:HD13	1.67	0.77
5:M:810:ASP:HB3	5:M:813:VAL:HG22	1.65	0.77
4:L:59:GLU:HB2	4:L:137:ARG:HH12	1.49	0.77
5:M:10:ARG:HA	5:M:10:ARG:HH11	1.47	0.77
5:C:88:LEU:HD12	5:C:89:THR:H	1.47	0.77
5:C:1116:ALA:HB3	12:C:1130:HOH:O	1.84	0.77
6:D:169:TYR:HB3	6:D:195:VAL:HG11	1.67	0.77
6:D:637:LEU:HD21	6:D:642:CYS:HA	1.64	0.77
6:D:1282:ARG:NH2	6:N:72:VAL:HG21	1.99	0.77
6:N:73:CYS:HB3	6:N:76:CYS:O	1.84	0.77
6:D:396:VAL:HB	6:D:447:VAL:HG12	1.67	0.77
4:K:221:HIS:HB3	4:L:36:LEU:HD11	1.64	0.77
6:N:164:GLY:HA3	6:N:447:VAL:HB	1.67	0.77
7:O:35:PHE:HZ	7:O:60:ALA:HA	1.49	0.77
5:C:1105:LYS:HG3	5:C:1107:ASN:HD22	1.49	0.77
7:E:25:LYS:HA	7:E:28:GLN:HE21	1.48	0.77
5:M:703:ILE:H	5:M:703:ILE:HD12	1.50	0.77
5:M:1009:SER:HB2	6:N:651:GLU:O	1.85	0.77
6:N:204:LEU:HB3	6:N:441:ARG:NH2	1.98	0.77
6:N:827:ILE:HB	6:N:828:LYS:HE3	1.67	0.77
6:D:838:ARG:HH21	6:D:863:VAL:HG11	1.50	0.77
7:E:36:LYS:NZ	7:E:45:ARG:HH22	1.83	0.77
4:B:89:PHE:HB3	4:B:94:LEU:HD12	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:73:CYS:HB3	6:D:76:CYS:O	1.84	0.76
6:D:133:ILE:HG12	6:D:456:MET:HB3	1.68	0.76
6:D:396:VAL:HG21	6:D:445:ARG:HD3	1.65	0.76
6:D:1046:GLN:HA	6:D:1052:THR:HA	1.68	0.76
6:D:1291:SER:HB3	6:D:1293:PHE:HE1	1.49	0.76
6:N:136:ASP:HB3	6:N:137:PRO:HD3	1.65	0.76
5:C:478:VAL:HG13	5:C:506:ASN:HB3	1.65	0.76
5:M:203:ASP:OD1	5:M:205:GLU:HG3	1.85	0.76
5:M:941:VAL:HA	5:M:944:LEU:HD12	1.67	0.76
6:N:544:TYR:O	6:N:548:ILE:HG12	1.86	0.76
6:D:1236:LEU:HA	6:D:1359:GLN:HE21	1.49	0.76
6:N:520:LEU:HD11	6:N:524:LEU:HD13	1.68	0.76
6:N:1383:ASP:HB2	6:N:1416:ALA:HB3	1.65	0.76
6:N:1438:ALA:O	6:N:1443:THR:HG22	1.86	0.76
1:G:17:DC:H5''	5:C:1030:GLN:HE21	1.48	0.76
5:C:904:PRO:HD2	5:C:908:GLY:HA2	1.68	0.76
5:C:939:ARG:HB3	5:C:982:PRO:HG3	1.67	0.76
5:M:579:VAL:HG11	5:M:887:GLU:HG3	1.66	0.76
5:M:971:LYS:HA	5:M:988:VAL:HA	1.66	0.76
6:N:403:PHE:HA	12:N:9471:HOH:O	1.84	0.76
6:N:1223:ILE:H	6:N:1223:ILE:HD12	1.50	0.76
6:D:789:LEU:HD13	6:D:934:LEU:HD22	1.68	0.76
6:D:1382:THR:HG21	6:D:1418:LYS:HE3	1.65	0.76
4:L:58:ILE:HD13	4:L:140:MET:HB3	1.68	0.76
5:M:862:PRO:HB3	5:M:929:ARG:HH22	1.50	0.76
6:N:11:ALA:HB1	6:N:507:ASN:OD1	1.84	0.76
5:C:284:ARG:HG2	5:C:285:LEU:H	1.51	0.76
5:M:889:HIS:HE1	6:N:951:ILE:H	1.33	0.76
6:D:136:ASP:HB2	6:D:455:ARG:HH22	1.51	0.76
5:M:312:ALA:HB1	5:M:318:PRO:HG2	1.68	0.76
5:C:794:PRO:HB2	5:C:1027:PHE:CZ	2.21	0.76
6:D:1427:SER:HB2	12:D:9224:HOH:O	1.86	0.76
6:N:30:GLU:HG3	6:N:41:ARG:HG2	1.68	0.76
6:N:51:GLY:HA3	6:N:86:ARG:CA	2.14	0.76
6:N:1042:ARG:O	6:N:1057:VAL:HB	1.86	0.76
2:H:12:G:H2'	2:H:13:C:H6	1.51	0.75
6:D:1476:THR:HG22	7:E:21:VAL:HG22	1.67	0.75
5:M:578:VAL:HG11	5:M:991:GLN:HB3	1.67	0.75
6:N:699:VAL:H	6:N:756:GLN:NE2	1.82	0.75
4:A:58:ILE:HD13	4:A:140:MET:HB3	1.67	0.75
6:D:773:ALA:HA	6:D:1228:SER:HB3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:900:ILE:HG22	6:D:914:LEU:HD21	1.66	0.75
5:M:965:GLU:HA	5:M:968:LEU:HD12	1.67	0.75
5:M:1007:ALA:HB1	6:N:652:LEU:HD13	1.69	0.75
6:N:1406:ARG:HD2	6:N:1412:LYS:HE3	1.67	0.75
6:D:760:ARG:O	6:D:764:LEU:HD23	1.87	0.75
6:D:1353:GLN:HE21	6:D:1357:ARG:NE	1.83	0.75
4:K:95:GLN:HA	12:K:1714:HOH:O	1.85	0.75
5:M:367:LEU:O	5:M:372:LEU:HD13	1.86	0.75
5:M:753:ASP:O	5:M:792:VAL:HG23	1.86	0.75
6:N:1101:VAL:HG21	6:N:1424:VAL:HG22	1.67	0.75
7:O:30:LEU:O	7:O:35:PHE:HA	1.85	0.75
6:D:415:VAL:HG13	6:D:419:ASP:HB3	1.69	0.75
6:D:567:ILE:HG22	6:D:571:LYS:NZ	2.00	0.75
6:N:143:ASN:HD21	6:N:145:VAL:HG12	1.51	0.75
2:H:10:G:O2'	2:H:11:C:H5'	1.87	0.75
6:N:1046:GLN:HA	6:N:1052:THR:HA	1.69	0.75
4:B:38:ASN:HB2	12:B:368:HOH:O	1.85	0.75
5:C:1054:THR:HG21	5:C:1079:PRO:HB3	1.67	0.75
4:A:228:PRO:HG3	12:A:318:HOH:O	1.86	0.75
6:D:131:LYS:HG3	6:D:456:MET:HE1	1.67	0.75
6:D:455:ARG:HA	12:D:9294:HOH:O	1.86	0.75
4:K:103:ALA:HB3	12:K:672:HOH:O	1.87	0.75
5:M:195:LEU:HD11	5:M:238:LEU:HB2	1.68	0.75
6:N:1129:THR:HG23	6:N:1130:ARG:H	1.51	0.75
6:D:785:ILE:HG22	6:D:789:LEU:HD11	1.68	0.75
6:D:895:VAL:HG11	6:D:922:LEU:HD21	1.69	0.75
6:D:1189:ARG:HB3	6:D:1204:CYS:HA	1.68	0.75
5:M:904:PRO:HD2	5:M:908:GLY:HA2	1.68	0.75
4:A:79:ILE:HG21	4:A:165:ILE:HD11	1.68	0.75
4:A:80:LEU:HA	4:A:83:LYS:HE3	1.67	0.75
5:C:636:ALA:HA	12:C:1463:HOH:O	1.86	0.75
5:M:69:LEU:HD22	5:M:70:GLU:HG3	1.69	0.75
7:O:54:LEU:HD23	7:O:58:PRO:HD2	1.67	0.75
5:C:176:VAL:HG12	5:C:182:VAL:HG13	1.67	0.74
6:D:952:ASP:HA	6:D:1062:ARG:NH2	2.00	0.74
7:E:27:ALA:CB	7:E:61:VAL:HG22	2.16	0.74
5:M:1011:GLY:HA2	5:M:1026:GLN:NE2	2.01	0.74
5:C:141:HIS:HB3	5:C:418:LEU:HG	1.67	0.74
6:D:203:ALA:HB2	12:D:9157:HOH:O	1.86	0.74
6:D:1353:GLN:HE21	6:D:1357:ARG:HE	1.34	0.74
6:N:557:LEU:HD11	6:N:566:ILE:HG22	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:13:C:H4'	5:C:409:ARG:NH2	2.02	0.74
6:D:678:GLU:HG2	6:D:679:ARG:HG3	1.68	0.74
6:N:486:ARG:HA	6:N:489:ARG:HG2	1.70	0.74
12:G:1182:HOH:O	6:D:706:PRO:HA	1.87	0.74
4:A:12:THR:HG23	4:A:24:VAL:HB	1.68	0.74
5:C:383:ARG:HB2	5:C:383:ARG:NH1	2.02	0.74
5:C:810:ASP:HB3	5:C:813:VAL:HG13	1.68	0.74
6:D:696:HIS:ND1	7:E:48:MET:HE3	2.03	0.74
6:D:842:VAL:HG22	12:D:9048:HOH:O	1.87	0.74
4:L:179:PHE:HB2	4:L:195:LEU:HD11	1.69	0.74
4:B:92:PRO:HA	4:B:146:ARG:NH1	2.01	0.74
5:C:1052:MET:SD	5:C:1056:LYS:HD2	2.28	0.74
6:D:1025:GLN:HA	6:D:1025:GLN:HE21	1.52	0.74
5:M:677:MET:HB3	5:M:987:ILE:HD13	1.68	0.74
4:A:57:TYR:HB3	4:A:141:GLU:HG2	1.69	0.74
5:C:998:TYR:HB3	12:C:1158:HOH:O	1.88	0.74
6:D:676:MET:HE3	6:D:684:LYS:HG3	1.69	0.74
12:L:865:HOH:O	6:N:848:GLU:HB3	1.87	0.74
5:M:274:ARG:HH22	5:M:284:ARG:HG3	1.53	0.74
6:N:780:LYS:HD3	6:N:912:LYS:HE2	1.70	0.74
6:N:118:LEU:HB3	6:N:123:LEU:HD23	1.68	0.74
6:N:690:ALA:O	6:N:694:VAL:HG23	1.88	0.74
6:D:1153:VAL:CG1	6:N:561:GLY:HA3	2.16	0.74
6:N:729:HIS:HD1	6:N:731:LEU:H	1.32	0.74
6:N:1147:ARG:HB3	6:N:1188:VAL:HG21	1.67	0.74
7:E:28:GLN:O	7:E:32:ARG:HG3	1.88	0.74
5:M:575:GLN:HA	5:M:662:GLU:OE2	1.88	0.74
6:N:1426:LYS:HA	6:N:1429:LEU:HD22	1.69	0.74
2:Y:10:G:O2'	2:Y:11:C:H5'	1.88	0.73
5:M:611:ILE:HD11	5:M:641:PRO:HG3	1.70	0.73
6:N:699:VAL:H	6:N:756:GLN:HE22	1.35	0.73
5:C:141:HIS:HB3	5:C:418:LEU:CG	2.18	0.73
5:C:839:LEU:HB3	12:C:1441:HOH:O	1.87	0.73
6:D:1282:ARG:HH22	6:N:72:VAL:HG21	1.53	0.73
6:D:1283:ILE:N	6:N:75:ARG:HA	2.02	0.73
2:H:9:G:H2'	2:H:10:G:H8	1.54	0.73
4:A:53:VAL:HG11	4:A:82:LEU:HD13	1.70	0.73
5:C:83:CYS:HA	5:C:88:LEU:HB3	1.69	0.73
5:C:88:LEU:HB2	5:C:814:GLU:OE1	1.87	0.73
6:D:808:THR:HB	6:D:809:PRO:HD3	1.71	0.73
6:N:483:HIS:HB2	6:N:484:PRO:HD3	1.68	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1077:ALA:HA	12:N:9042:HOH:O	1.88	0.73
12:H:272:HOH:O	5:C:1012:PRO:HB3	1.87	0.73
3:I:5:DG:H1'	3:I:6:DC:H5'	1.69	0.73
6:D:477:LEU:HB3	6:D:496:LEU:HD12	1.70	0.73
4:K:67:THR:HG21	5:M:609:ASN:ND2	2.02	0.73
4:L:201:THR:HG22	4:L:203:GLY:H	1.53	0.73
5:M:1051:GLU:HG2	5:M:1056:LYS:HZ3	1.53	0.73
5:C:683:ASN:HA	5:C:687:ALA:HB3	1.69	0.73
5:C:690:ILE:HD12	5:C:833:LEU:HD23	1.71	0.73
4:K:50:GLY:HA3	4:K:173:PRO:HG3	1.68	0.73
6:N:758:GLU:O	6:N:762:GLN:HG3	1.89	0.73
2:H:10:G:H2'	2:H:11:C:C6	2.23	0.73
4:A:36:LEU:HD11	4:B:221:HIS:HB3	1.69	0.73
5:M:139:GLN:O	5:M:333:ILE:HA	1.87	0.73
6:N:25:GLU:HG2	6:N:92:HIS:O	1.88	0.73
6:N:1115:THR:HG21	6:N:1151:ARG:HH21	1.53	0.73
6:N:1363:LEU:HD23	6:N:1363:LEU:H	1.54	0.73
5:C:437:ARG:CZ	5:C:488:ALA:HA	2.16	0.73
6:D:133:ILE:HA	6:D:456:MET:HB2	1.69	0.73
6:D:1175:ILE:HD11	12:D:9440:HOH:O	1.89	0.73
4:K:87:VAL:HG21	4:K:144:VAL:HG11	1.71	0.73
6:N:133:ILE:HA	6:N:456:MET:CB	2.19	0.73
5:C:575:GLN:HB2	5:C:670:GLN:HG2	1.71	0.73
6:D:704:ARG:HD2	6:D:705:ALA:H	1.54	0.73
6:D:1298:GLY:N	6:N:47:GLU:HB2	2.03	0.73
5:M:833:LEU:HD11	5:M:839:LEU:HD21	1.68	0.73
5:M:1031:ARG:HA	6:N:621:LYS:O	1.89	0.73
6:N:610:LYS:O	6:N:615:ARG:HG2	1.88	0.73
6:N:1240:THR:HG23	6:N:1253:THR:HB	1.71	0.73
6:D:703:ASN:HD21	6:D:707:THR:HG23	1.54	0.73
4:L:59:GLU:CB	4:L:137:ARG:HH12	2.01	0.73
5:M:325:ILE:HG22	5:M:331:ARG:NH1	2.04	0.73
4:B:99:LEU:HD22	4:B:144:VAL:HG21	1.71	0.72
6:D:141:ILE:HG12	6:D:448:GLU:O	1.88	0.72
6:N:133:ILE:HG12	6:N:456:MET:HB3	1.70	0.72
6:N:171:LEU:HD11	6:N:393:ILE:HD11	1.71	0.72
6:N:703:ASN:HD22	6:N:704:ARG:N	1.87	0.72
5:C:492:ASP:HB3	5:C:518:LYS:HE2	1.71	0.72
5:C:579:VAL:HB	5:C:890:LEU:CD2	2.19	0.72
5:C:861:LEU:HD23	5:C:863:ASP:H	1.53	0.72
6:D:30:GLU:OE2	6:D:40:GLU:HG2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:119:SER:H	6:D:123:LEU:HD22	1.54	0.72
6:D:917:GLN:O	6:D:921:ARG:HG2	1.88	0.72
6:D:1114:THR:HB	6:D:1195:GLN:HE21	1.54	0.72
4:L:210:ALA:HB2	12:L:1413:HOH:O	1.88	0.72
6:N:44:LEU:H	6:N:44:LEU:HD23	1.54	0.72
6:N:877:PRO:O	6:N:880:ILE:HG22	1.89	0.72
6:N:1416:ALA:HB1	12:N:9011:HOH:O	1.89	0.72
6:N:1166:LEU:H	6:N:1166:LEU:HD23	1.52	0.72
2:H:12:G:O2'	2:H:13:C:H5'	1.89	0.72
6:D:143:ASN:HD21	6:D:145:VAL:HG12	1.54	0.72
6:D:947:ILE:HG22	6:D:1019:PRO:HG3	1.70	0.72
5:M:710:ILE:HD12	5:M:790:LEU:HB2	1.70	0.72
6:N:163:TYR:HB2	6:N:166:GLN:HG3	1.70	0.72
6:N:708:LEU:HD22	6:N:1231:GLU:HA	1.69	0.72
1:X:18:DG:O3'	5:M:1001:VAL:HB	1.88	0.72
6:N:1018:ASN:HB3	6:N:1021:TYR:HB3	1.70	0.72
5:C:473:ARG:HD2	5:C:475:VAL:HG22	1.72	0.72
5:C:971:LYS:HA	5:C:988:VAL:HA	1.70	0.72
6:D:436:GLU:HB2	6:D:445:ARG:HH11	1.55	0.72
4:K:27:PRO:HB3	4:K:186:LEU:HD11	1.71	0.72
5:M:534:VAL:H	5:M:538:GLN:NE2	1.88	0.72
4:A:105:GLY:O	4:A:132:LEU:HB3	1.90	0.72
5:C:146:VAL:HG22	5:C:162:ILE:HG12	1.72	0.72
6:D:1465:ASN:HD21	6:D:1470:ARG:HB3	1.55	0.72
5:M:395:LYS:HE3	5:M:403:SER:HB2	1.70	0.72
6:N:796:ARG:NH1	6:N:861:GLN:HB2	2.04	0.72
5:M:754:ILE:HG12	5:M:791:ARG:HD3	1.69	0.72
5:M:896:PHE:O	5:M:924:VAL:HG11	1.90	0.72
6:N:18:ILE:HG23	6:N:518:PRO:HG3	1.69	0.72
4:K:18:ARG:HD3	4:K:123:MET:HE3	1.70	0.72
4:K:41:ARG:HH21	4:K:45:LEU:HD21	1.54	0.72
6:D:1293:PHE:HB2	6:N:75:ARG:O	1.89	0.71
5:M:683:ASN:HA	5:M:687:ALA:HB3	1.71	0.71
5:M:874:LEU:HA	6:N:1023:MET:SD	2.30	0.71
6:N:799:LYS:HZ3	6:N:824:ASN:HA	1.53	0.71
6:N:1098:LEU:HD12	6:N:1424:VAL:HG21	1.72	0.71
6:D:202:VAL:HG21	6:D:400:VAL:HB	1.72	0.71
6:D:544:TYR:O	6:D:548:ILE:HG12	1.90	0.71
6:D:639:LEU:HD11	12:E:102:HOH:O	1.89	0.71
4:B:116:PRO:HA	12:B:336:HOH:O	1.90	0.71
6:D:1188:VAL:HB	12:D:9531:HOH:O	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:716:LYS:HE2	12:M:7334:HOH:O	1.91	0.71
5:M:762:LYS:HG3	5:M:784:ASP:O	1.90	0.71
5:M:853:LEU:HB2	5:M:858:MET:HE3	1.72	0.71
6:N:1442:ASN:OD1	6:N:1444:THR:HB	1.89	0.71
1:X:18:DG:O4'	5:M:1002:GLU:HB3	1.89	0.71
4:A:212:ASN:O	4:A:216:GLU:HG2	1.89	0.71
5:M:962:GLN:HG2	12:M:7146:HOH:O	1.87	0.71
6:N:1291:SER:HB2	6:N:1293:PHE:HE1	1.56	0.71
5:C:383:ARG:HB2	5:C:383:ARG:HH11	1.54	0.71
5:C:579:VAL:HG11	5:C:887:GLU:HG3	1.71	0.71
5:C:1034:GLU:HG2	6:D:619:LEU:HD13	1.72	0.71
6:D:444:VAL:HG13	12:D:9150:HOH:O	1.89	0.71
6:D:676:MET:HE1	6:D:683:ILE:HA	1.71	0.71
5:M:502:PRO:HB2	5:M:509:ALA:HB3	1.71	0.71
6:N:1106:VAL:HG11	6:N:1474:ALA:HB2	1.71	0.71
6:N:1399:ASP:O	6:N:1403:LEU:HB2	1.91	0.71
5:C:264:PRO:HA	12:C:1174:HOH:O	1.89	0.71
4:K:206:THR:HG22	4:K:209:GLU:H	1.56	0.71
6:N:615:ARG:HH11	6:N:615:ARG:HB2	1.56	0.71
6:N:1476:THR:HG23	7:O:21:VAL:HG22	1.71	0.71
5:C:84:ARG:NH2	5:C:128:ILE:HD11	2.06	0.71
6:D:517:VAL:HG21	6:D:547:LEU:HD21	1.73	0.71
6:D:618:LEU:HB3	6:D:619:LEU:HD23	1.73	0.71
5:M:36:PRO:HG2	5:M:70:GLU:HB3	1.70	0.71
5:M:78:PHE:HB2	5:M:88:LEU:HD21	1.73	0.71
5:M:580:MET:SD	5:M:584:GLU:HG3	2.30	0.71
5:C:137:VAL:O	5:C:391:LEU:HD21	1.91	0.71
6:D:1485:GLN:HE21	7:E:80:VAL:N	1.85	0.71
5:M:685:GLU:HG2	6:N:739:ASP:HB3	1.73	0.71
5:M:757:GLY:HA2	5:M:789:SER:HB3	1.72	0.71
4:B:92:PRO:HA	4:B:146:ARG:HH12	1.56	0.71
4:B:224:TYR:HA	12:B:408:HOH:O	1.91	0.71
5:C:976:ASP:HB2	5:C:979:THR:HG22	1.72	0.71
6:D:30:GLU:HB3	6:D:40:GLU:HB3	1.72	0.71
11:M:6999:APC:H8	11:M:6999:APC:H5'1	1.73	0.71
3:I:6:DC:C5'	6:D:1266:ARG:HH22	2.03	0.70
4:A:88:ARG:HB2	4:A:204:SER:HA	1.73	0.70
5:C:283:ILE:HB	12:C:1220:HOH:O	1.91	0.70
5:C:290:LEU:HB3	5:C:302:VAL:CG1	2.21	0.70
6:D:788:GLY:O	6:D:792:ILE:HG22	1.91	0.70
6:D:1148:VAL:HB	6:D:1203:LYS:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:768:THR:HB	5:M:771:GLU:HB3	1.73	0.70
5:M:1008:ARG:HG3	5:M:1028:GLY:H	1.53	0.70
5:M:1055:LEU:HD22	5:M:1066:ALA:HB2	1.72	0.70
5:C:470:PRO:HB2	5:C:534:VAL:HG21	1.73	0.70
5:C:1097:LEU:HD22	5:C:1097:LEU:H	1.53	0.70
6:D:414:ARG:HG2	6:D:451:ASP:N	2.06	0.70
6:D:775:GLY:HA3	6:D:1145:TYR:HE1	1.55	0.70
6:D:1240:THR:HG22	6:D:1254:GLN:C	2.16	0.70
6:N:676:MET:HE1	6:N:683:ILE:HA	1.73	0.70
5:C:139:GLN:HE22	5:C:415:PRO:HD2	1.57	0.70
5:C:420:ARG:HA	12:C:1154:HOH:O	1.90	0.70
5:C:966:LEU:HD21	5:C:986:PRO:HG3	1.70	0.70
6:D:54:LYS:HG2	6:D:57:GLU:HB3	1.74	0.70
6:D:550:ARG:HE	6:D:553:ARG:NH1	1.89	0.70
11:D:5999:APC:H8	11:D:5999:APC:H5'1	1.73	0.70
4:K:179:PHE:HB2	4:K:195:LEU:HD11	1.72	0.70
6:N:633:VAL:HB	6:N:740:PHE:CE1	2.26	0.70
6:N:1425:THR:O	6:N:1429:LEU:HD13	1.91	0.70
6:D:112:ILE:HG12	6:D:128:TYR:OH	1.90	0.70
6:D:166:GLN:CD	6:D:394:LEU:HD13	2.16	0.70
5:M:241:LEU:HD21	12:M:7332:HOH:O	1.92	0.70
5:M:762:LYS:HG2	5:M:786:LYS:HG3	1.73	0.70
2:H:7:G:N1	5:C:1014:SER:HA	2.06	0.70
5:C:342:ASP:O	5:C:346:VAL:HG23	1.91	0.70
6:D:87:ARG:HG3	6:D:88:TYR:CD2	2.25	0.70
4:K:73:GLU:H	4:K:73:GLU:CD	1.98	0.70
5:M:479:VAL:HG21	5:M:503:LEU:HD21	1.72	0.70
2:H:6:U:H2'	2:H:7:G:N7	2.06	0.70
5:C:672:VAL:HG23	5:C:868:ASP:HB2	1.72	0.70
5:C:996:LYS:HG2	12:C:1441:HOH:O	1.91	0.70
5:M:428:ARG:CZ	5:M:428:ARG:HA	2.20	0.70
5:M:1054:THR:HG21	5:M:1079:PRO:HB3	1.71	0.70
5:M:1060:ILE:HD12	5:M:1063:ARG:HH12	1.55	0.70
6:N:491:LYS:HE2	6:N:495:ARG:NH1	2.05	0.70
6:N:860:LEU:H	6:N:860:LEU:HD12	1.55	0.70
6:N:1047:LYS:HZ2	6:N:1053:PHE:HA	1.56	0.70
6:N:1273:VAL:HG22	6:N:1326:THR:OG1	1.91	0.70
6:D:125:GLN:NE2	6:D:587:ARG:HE	1.90	0.70
6:D:162:ARG:HA	12:D:9260:HOH:O	1.90	0.70
6:D:202:VAL:HG23	6:D:398:ALA:O	1.92	0.70
6:D:970:LYS:HA	6:D:973:GLN:CD	2.15	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1465:ASN:ND2	6:D:1470:ARG:HB3	2.07	0.70
6:N:2:LYS:HB2	12:N:9093:HOH:O	1.90	0.70
6:N:618:LEU:HB3	6:N:619:LEU:HD23	1.72	0.70
5:C:449:ILE:O	5:C:451:LEU:HG	1.91	0.70
5:M:752:GLY:H	5:M:792:VAL:HB	1.55	0.70
6:D:657:LEU:HB2	6:D:691:LEU:HD13	1.72	0.70
5:M:410:ILE:HD11	5:M:455:LEU:HB3	1.73	0.70
6:N:781:PRO:HG2	6:N:911:LEU:HD23	1.72	0.70
2:H:7:G:H3'	12:H:1604:HOH:O	1.91	0.70
6:D:547:LEU:HD23	6:D:581:LEU:HD21	1.73	0.70
6:D:1280:VAL:HG22	6:D:1318:TYR:N	2.07	0.70
5:M:399:ASN:O	5:M:402:SER:HB3	1.92	0.70
6:N:165:LYS:HD3	12:N:9447:HOH:O	1.91	0.70
1:G:21:DC:H4'	5:C:134:ARG:NH2	2.02	0.69
6:D:787:LEU:HD11	6:D:947:ILE:HG12	1.72	0.69
2:Y:13:C:H5''	5:M:409:ARG:HH22	1.57	0.69
4:A:161:ARG:NH1	4:A:161:ARG:HB2	2.06	0.69
4:B:63:HIS:HB3	12:B:395:HOH:O	1.91	0.69
5:C:626:ARG:HB2	5:C:639:GLN:NE2	2.03	0.69
6:D:988:ARG:HH11	6:D:992:ILE:HD11	1.57	0.69
6:D:1493:LYS:O	6:D:1497:GLU:HG2	1.92	0.69
7:E:23:VAL:HG12	7:E:61:VAL:CG1	2.20	0.69
5:M:1111:ILE:HG13	5:M:1112:PHE:H	1.57	0.69
6:N:1176:LYS:HA	6:N:1179:GLU:OE1	1.92	0.69
6:N:1281:VAL:HG23	6:N:1319:VAL:HG21	1.73	0.69
5:C:421:GLU:HG2	12:C:1233:HOH:O	1.92	0.69
6:D:93:ILE:O	6:D:516:ALA:HA	1.92	0.69
6:D:117:ASP:CG	6:D:495:ARG:HE	2.00	0.69
6:D:1018:ASN:HB3	6:D:1021:TYR:HB3	1.75	0.69
6:N:710:ARG:HH11	6:N:768:ASN:ND2	1.89	0.69
6:N:1236:LEU:HB3	6:N:1359:GLN:CB	2.22	0.69
7:O:17:TYR:O	7:O:20:THR:HG22	1.92	0.69
7:O:23:VAL:CG1	7:O:61:VAL:CG1	2.70	0.69
5:C:841:ASN:C	5:C:841:ASN:HD22	2.00	0.69
5:C:1059:ASP:OD1	5:C:1080:SER:HB3	1.92	0.69
6:D:1087:ARG:HG2	6:D:1238:MET:HA	1.73	0.69
6:D:1153:VAL:HG13	6:N:561:GLY:CA	2.23	0.69
5:M:1032:PHE:O	5:M:1036:GLU:HB2	1.92	0.69
6:N:179:VAL:HG13	6:N:183:GLU:HB3	1.73	0.69
6:N:900:ILE:HD11	6:N:902:LEU:HD23	1.75	0.69
6:N:1144:LEU:HD11	6:N:1186:VAL:HG11	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1405:GLU:CD	6:N:1413:THR:HB	2.18	0.69
2:Y:10:G:H2'	2:Y:11:C:C6	2.27	0.69
3:Z:5:DG:H1'	3:Z:6:DC:H5'	1.74	0.69
6:D:662:GLU:HG3	12:D:9068:HOH:O	1.92	0.69
6:D:850:LEU:HD12	6:D:850:LEU:H	1.57	0.69
6:D:1281:VAL:HG11	6:D:1313:VAL:CG1	2.20	0.69
5:M:922:PHE:HZ	5:M:963:LEU:HB3	1.58	0.69
7:O:23:VAL:HG12	7:O:61:VAL:CG1	2.19	0.69
5:C:129:ILE:HD13	5:C:134:ARG:HB2	1.73	0.69
5:C:195:LEU:HD21	5:C:238:LEU:HG	1.75	0.69
5:C:1005:MET:HB2	6:D:648:MET:HE3	1.74	0.69
5:C:1016:ILE:HG21	6:D:526:PRO:HG3	1.73	0.69
6:D:13:ALA:O	6:D:511:TRP:HB3	1.93	0.69
6:D:148:GLU:HG2	6:D:151:GLN:HE21	1.58	0.69
6:D:1281:VAL:HG23	6:D:1319:VAL:CG2	2.22	0.69
6:N:45:PHE:HD1	6:N:522:PRO:HB3	1.57	0.69
4:A:23:PHE:HE1	4:A:208:LEU:HD12	1.58	0.69
6:D:610:LYS:HA	6:D:615:ARG:NH2	2.08	0.69
7:E:40:LEU:HD21	7:E:67:GLU:HA	1.73	0.69
5:M:183:SER:HB2	5:M:190:LYS:HG2	1.75	0.69
6:N:421:LEU:HD12	6:N:427:VAL:HG12	1.74	0.69
4:A:58:ILE:HG21	4:A:68:ILE:HD11	1.75	0.69
4:B:44:LEU:HD23	4:B:48:ILE:HD11	1.73	0.69
4:B:97:VAL:HB	12:B:403:HOH:O	1.92	0.69
4:B:179:PHE:HB3	4:B:197:LEU:HD12	1.75	0.69
5:C:314:THR:HA	12:C:1396:HOH:O	1.92	0.69
6:D:32:ILE:HB	6:D:527:MET:HE2	1.75	0.69
6:D:63:TYR:CE1	6:D:73:CYS:HA	2.28	0.69
6:D:615:ARG:NH2	6:D:1096:ARG:HH12	1.91	0.69
6:D:817:GLU:O	6:D:821:VAL:HG23	1.93	0.69
6:D:1299:PHE:C	6:N:59:ALA:HB1	2.18	0.69
4:L:16:GLN:HA	4:L:16:GLN:HE21	1.58	0.69
5:M:142:ARG:NH2	5:M:325:ILE:HG12	2.07	0.69
5:M:162:ILE:HD11	5:M:306:THR:HG21	1.75	0.69
5:M:537:LYS:HB3	5:M:545:ASN:HD21	1.58	0.69
6:N:481:MET:HE1	6:N:1389:LEU:HB3	1.74	0.69
5:C:99:GLN:HB3	5:C:109:LYS:HG3	1.75	0.69
5:C:162:ILE:O	5:C:164:PRO:HD3	1.93	0.69
6:D:614:PHE:CE2	6:D:1438:ALA:HB1	2.28	0.69
6:D:794:GLN:O	6:D:861:GLN:HB3	1.93	0.69
5:M:724:ARG:CZ	5:M:724:ARG:HB2	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:851:LYS:HG3	5:M:853:LEU:HD12	1.75	0.69
6:N:1272:ALA:HA	6:N:1326:THR:HB	1.74	0.69
6:N:1429:LEU:HG	6:N:1441:GLN:CG	2.21	0.69
2:Y:6:U:H2'	2:Y:7:G:N7	2.07	0.69
4:B:52:ALA:HB2	4:B:170:VAL:O	1.93	0.69
5:C:84:ARG:HH21	5:C:128:ILE:HD11	1.57	0.69
6:D:877:PRO:O	6:D:880:ILE:HG22	1.92	0.69
5:M:17:PRO:O	5:M:20:GLU:HB3	1.92	0.69
5:M:841:ASN:HD21	5:M:843:HIS:CD2	2.11	0.69
5:M:1092:LEU:HA	5:M:1095:LEU:HD12	1.73	0.69
6:D:639:LEU:HD12	6:D:640:HIS:H	1.56	0.68
5:M:200:LEU:HD13	5:M:300:ASP:CG	2.17	0.68
5:M:878:SER:HB3	6:N:1029:ARG:HD2	1.75	0.68
6:D:139:GLY:O	6:D:147:VAL:HB	1.92	0.68
6:D:989:TYR:O	6:D:993:LEU:HG	1.93	0.68
6:N:796:ARG:HH11	6:N:861:GLN:HB2	1.58	0.68
5:C:139:GLN:OE1	5:C:414:GLY:HA3	1.93	0.68
5:C:198:ARG:NH1	5:C:198:ARG:HB3	2.08	0.68
5:C:511:GLU:O	5:C:526:PRO:HD3	1.94	0.68
6:D:65:ARG:HG3	6:D:66:GLN:H	1.58	0.68
6:D:105:VAL:HB	12:D:9087:HOH:O	1.94	0.68
6:D:163:TYR:CD1	6:D:166:GLN:HB2	2.27	0.68
6:D:524:LEU:H	6:D:524:LEU:HD12	1.59	0.68
6:D:1305:LEU:HD21	6:D:1326:THR:OG1	1.91	0.68
4:K:20:TYR:HE2	4:K:198:ARG:HB3	1.59	0.68
5:M:190:LYS:HE3	12:M:7048:HOH:O	1.93	0.68
5:C:562:SER:O	5:C:565:GLN:HG3	1.93	0.68
5:C:1032:PHE:O	5:C:1036:GLU:HB2	1.93	0.68
6:D:470:LEU:HD12	6:D:503:LEU:HD21	1.74	0.68
6:D:1345:GLU:O	6:D:1349:VAL:HG23	1.92	0.68
6:D:1422:MET:HE3	6:D:1426:LYS:HD3	1.74	0.68
6:N:1109:GLU:OE2	6:N:1217:ILE:HD11	1.93	0.68
6:D:396:VAL:O	6:D:398:ALA:N	2.27	0.68
6:D:1019:PRO:O	6:D:1023:MET:HG3	1.94	0.68
5:M:274:ARG:HB2	5:M:285:LEU:HD13	1.73	0.68
6:N:19:ARG:HH21	6:N:516:ALA:HB2	1.57	0.68
6:N:444:VAL:HG21	12:N:9209:HOH:O	1.94	0.68
1:G:21:DC:H3'	12:G:1612:HOH:O	1.94	0.68
5:C:212:GLY:HA3	5:C:218:VAL:CG2	2.24	0.68
6:D:1048:PRO:HG3	6:D:1075:HIS:ND1	2.09	0.68
4:K:53:VAL:HG12	4:K:167:VAL:HG21	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:145:GLY:H	5:M:163:ILE:HG13	1.58	0.68
5:M:511:GLU:O	5:M:526:PRO:HD3	1.93	0.68
5:M:534:VAL:H	5:M:538:GLN:HE22	1.41	0.68
5:M:682:TYR:HB3	5:M:689:VAL:HG13	1.76	0.68
6:N:133:ILE:O	6:N:152:LEU:HB2	1.93	0.68
6:N:522:PRO:HA	6:N:525:ARG:NH1	2.09	0.68
6:N:787:LEU:HD21	6:N:947:ILE:HD11	1.76	0.68
6:N:1047:LYS:NZ	6:N:1053:PHE:HA	2.08	0.68
7:O:39:VAL:HB	12:O:2451:HOH:O	1.93	0.68
5:C:202:TYR:OH	5:C:304:LEU:HD22	1.94	0.68
5:C:964:LYS:O	5:C:968:LEU:HG	1.93	0.68
5:C:1096:ALA:O	6:D:13:ALA:HB2	1.93	0.68
6:D:530:VAL:HB	6:D:534:ARG:HB2	1.74	0.68
5:M:203:ASP:O	5:M:207:LEU:HB2	1.94	0.68
5:M:264:PRO:HB3	5:M:289:THR:CB	2.23	0.68
6:N:82:LYS:C	6:N:84:ILE:H	2.01	0.68
6:N:572:ARG:HB3	12:N:9115:HOH:O	1.92	0.68
6:N:642:CYS:SG	6:N:716:PHE:HB2	2.33	0.68
6:N:777:PRO:O	6:N:780:LYS:HG2	1.93	0.68
5:C:328:LEU:HD13	5:C:433:THR:HB	1.74	0.68
5:C:538:GLN:HB2	12:C:1361:HOH:O	1.94	0.68
6:D:62:LYS:HB2	6:D:73:CYS:SG	2.34	0.68
6:D:98:PRO:O	6:D:458:ALA:HB3	1.93	0.68
6:D:562:ALA:HB1	6:D:567:ILE:HD11	1.74	0.68
6:D:584:ASN:OD1	6:D:590:PRO:HD2	1.94	0.68
5:M:443:THR:O	5:M:559:LEU:HD21	1.93	0.68
6:N:165:LYS:HB2	6:N:397:LYS:CB	2.11	0.68
1:G:22:DC:H4'	5:C:388:ARG:HG3	1.75	0.68
4:A:94:LEU:HG	4:A:97:VAL:HG22	1.75	0.68
5:C:798:GLY:H	5:C:827:VAL:CG1	2.07	0.68
6:D:477:LEU:HD22	6:D:492:ALA:HB1	1.76	0.68
6:N:135:LEU:HD21	6:N:452:ILE:HG13	1.76	0.68
2:Y:12:G:O2'	2:Y:13:C:H5'	1.93	0.68
5:C:88:LEU:HD22	5:C:814:GLU:OE2	1.94	0.68
5:C:184:MET:HB2	5:C:193:LEU:HG	1.76	0.68
5:C:479:VAL:HG21	5:C:503:LEU:HD11	1.74	0.68
5:C:545:ASN:HD22	5:C:583:LEU:CD2	2.07	0.68
6:D:853:VAL:HG22	6:D:858:VAL:HG23	1.77	0.68
6:D:1256:LEU:O	6:D:1260:ILE:HG12	1.94	0.68
2:Y:9:G:H2'	2:Y:10:G:H8	1.57	0.67
4:A:153:ALA:HA	4:A:156:HIS:NE2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:472:ARG:HD3	12:C:1386:HOH:O	1.93	0.67
6:D:28:LYS:HG3	6:D:29:PRO:HD2	1.76	0.67
6:D:87:ARG:HG3	6:D:88:TYR:HD2	1.58	0.67
4:B:144:VAL:HB	12:B:403:HOH:O	1.93	0.67
5:C:18:LEU:HD21	5:C:542:VAL:HG21	1.75	0.67
5:C:120:LEU:HD23	5:C:121:MET:H	1.58	0.67
5:C:516:ARG:NH1	5:C:521:PRO:HB3	2.08	0.67
5:C:983:ILE:HG21	5:C:987:ILE:HD11	1.74	0.67
5:C:1036:GLU:HG3	6:D:707:THR:HG21	1.76	0.67
6:D:703:ASN:HD21	6:D:707:THR:CG2	2.06	0.67
4:K:123:MET:C	4:K:125:PRO:HD3	2.19	0.67
5:M:198:ARG:HB3	5:M:198:ARG:NH1	2.08	0.67
5:M:758:ARG:HB3	5:M:788:THR:O	1.95	0.67
6:N:761:ILE:HG22	12:N:9085:HOH:O	1.94	0.67
5:C:232:GLU:HA	5:C:235:LEU:HD12	1.76	0.67
5:C:462:ASP:HB3	5:C:468:ARG:HD2	1.76	0.67
5:C:758:ARG:NH2	5:C:788:THR:HB	2.09	0.67
5:C:851:LYS:HG2	5:C:853:LEU:HD12	1.77	0.67
5:C:874:LEU:HD21	6:D:1028:ALA:HB1	1.77	0.67
5:C:1016:ILE:CG2	6:D:526:PRO:HG3	2.25	0.67
6:D:602:SER:O	6:D:606:ILE:HG13	1.95	0.67
4:K:44:LEU:HD23	4:K:48:ILE:HD11	1.74	0.67
7:O:27:ALA:CB	7:O:61:VAL:HG22	2.23	0.67
4:B:123:MET:C	4:B:125:PRO:HD3	2.18	0.67
5:C:432:ARG:HD3	6:D:1048:PRO:HG2	1.75	0.67
5:C:569:VAL:HG11	5:C:996:LYS:NZ	2.09	0.67
5:C:768:THR:HB	5:C:771:GLU:HB3	1.75	0.67
6:D:1042:ARG:O	6:D:1057:VAL:HB	1.94	0.67
4:K:100:LEU:HB2	4:K:115:LEU:HD11	1.75	0.67
5:C:195:LEU:HD11	5:C:238:LEU:HB2	1.75	0.67
6:D:1237:THR:HG21	6:D:1256:LEU:HD22	1.76	0.67
5:M:12:VAL:HB	5:M:472:ARG:NH1	2.09	0.67
5:M:630:ARG:HH21	5:M:707:ARG:H	1.41	0.67
6:N:162:ARG:HH12	6:N:414:ARG:CZ	2.08	0.67
6:N:1281:VAL:HG11	6:N:1313:VAL:CG1	2.23	0.67
5:C:139:GLN:HG2	5:C:418:LEU:HD22	1.77	0.67
7:E:18:ARG:O	7:E:22:VAL:HG23	1.94	0.67
5:M:332:ARG:CZ	5:M:464:LEU:HD11	2.25	0.67
5:M:362:GLY:HA3	5:M:367:LEU:HD23	1.75	0.67
5:M:678:PRO:O	6:N:943:THR:HA	1.95	0.67
5:M:950:LEU:HD12	5:M:952:LEU:HD13	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:866:VAL:HG11	6:N:880:ILE:HD11	1.77	0.67
6:N:1209:LEU:HD23	6:N:1210:SER:N	2.10	0.67
6:N:1382:THR:HA	6:N:1389:LEU:CD1	2.24	0.67
6:N:1394:VAL:HB	6:N:1397:LYS:HD2	1.77	0.67
2:H:13:C:H4'	5:C:409:ARG:HH22	1.58	0.67
5:C:58:ASP:O	5:C:59:LYS:HG3	1.94	0.67
6:D:864:VAL:HG12	6:D:865:THR:H	1.60	0.67
4:L:123:MET:C	4:L:125:PRO:HD3	2.18	0.67
5:M:610:ARG:HD3	5:M:622:GLU:OE1	1.94	0.67
5:M:874:LEU:HG	6:N:1023:MET:SD	2.35	0.67
5:M:986:PRO:HB3	12:M:7135:HOH:O	1.95	0.67
5:M:1046:ALA:HB3	6:N:1476:THR:HB	1.76	0.67
5:C:921:ALA:HB1	12:C:1371:HOH:O	1.95	0.67
6:D:87:ARG:HD3	6:D:524:LEU:CD1	2.18	0.67
6:D:514:LEU:HB2	12:D:9387:HOH:O	1.94	0.67
6:D:1109:GLU:HA	12:D:9273:HOH:O	1.95	0.67
5:M:264:PRO:HB3	5:M:289:THR:HB	1.75	0.67
6:N:119:SER:HB2	6:N:123:LEU:N	2.09	0.67
1:G:17:DC:H5''	5:C:1030:GLN:NE2	2.08	0.67
6:D:678:GLU:HB2	12:D:9364:HOH:O	1.95	0.67
6:N:1057:VAL:HG13	6:N:1069:GLU:HB3	1.77	0.67
6:N:1206:GLY:HA3	6:N:1366:LYS:HZ1	1.58	0.67
5:C:19:THR:HG21	5:C:124:ASP:O	1.95	0.67
5:C:533:ASP:HB3	5:C:538:GLN:NE2	2.10	0.67
6:D:204:LEU:HG	6:D:394:LEU:O	1.95	0.67
6:D:639:LEU:HD13	6:D:766:ALA:HB2	1.77	0.67
5:C:516:ARG:HH21	6:D:1068:LEU:HB3	1.60	0.66
6:D:639:LEU:HB2	12:D:9297:HOH:O	1.95	0.66
5:M:18:LEU:HD23	5:M:404:LEU:HD21	1.76	0.66
5:M:679:PHE:C	6:N:943:THR:HG22	2.20	0.66
12:C:1481:HOH:O	6:D:622:ARG:HD3	1.95	0.66
6:D:550:ARG:HD2	6:D:573:MET:HB3	1.77	0.66
6:D:988:ARG:O	6:D:992:ILE:HG13	1.95	0.66
6:N:710:ARG:HG2	6:N:772:PRO:HG2	1.78	0.66
6:N:1262:LEU:HD23	6:N:1352:ILE:HG13	1.76	0.66
2:Y:8:C:H5'	12:Y:707:HOH:O	1.95	0.66
5:C:732:ALA:HB1	5:C:735:ARG:NH2	2.10	0.66
6:D:941:PHE:HB3	12:D:9052:HOH:O	1.95	0.66
6:D:1192:LEU:HD13	6:D:1345:GLU:HG2	1.77	0.66
4:K:30:ARG:HB3	12:L:1657:HOH:O	1.93	0.66
7:O:51:LEU:HD21	12:O:1656:HOH:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:302:VAL:C	5:C:305:PRO:HD2	2.20	0.66
6:D:885:ILE:HB	12:D:9263:HOH:O	1.94	0.66
6:D:1146:GLY:HA3	6:D:1207:TYR:HB2	1.75	0.66
6:D:1160:LEU:HD22	6:D:1164:ARG:HH12	1.59	0.66
5:M:1097:LEU:H	5:M:1097:LEU:HD22	1.60	0.66
6:N:165:LYS:HG2	6:N:199:LEU:HD13	1.77	0.66
6:N:412:GLY:HA2	6:N:434:ARG:HD3	1.77	0.66
4:B:102:LYS:HD2	4:B:139:ASN:OD1	1.96	0.66
5:C:835:VAL:HG13	6:D:725:SER:HG	1.60	0.66
6:D:550:ARG:HB3	6:D:574:LEU:HD12	1.78	0.66
7:E:23:VAL:HG13	7:E:61:VAL:HG13	1.77	0.66
4:K:47:SER:HB2	4:K:217:ILE:HD13	1.78	0.66
1:G:14:DT:C2'	1:G:15:DC:H5'	2.19	0.66
1:G:18:DG:H5''	6:D:628:ARG:NH1	2.10	0.66
4:A:23:PHE:HB2	4:A:197:LEU:HD23	1.78	0.66
4:A:133:GLU:HG2	4:A:134:GLU:N	2.11	0.66
5:C:573:ARG:HD2	5:C:698:ASP:O	1.95	0.66
5:C:732:ALA:HB1	5:C:735:ARG:HH22	1.60	0.66
6:D:28:LYS:CB	6:D:41:ARG:HD2	2.26	0.66
6:D:202:VAL:CG2	6:D:400:VAL:HB	2.25	0.66
6:D:1273:VAL:HG22	6:D:1326:THR:OG1	1.96	0.66
6:D:1335:LEU:HD23	6:D:1344:VAL:HG22	1.77	0.66
5:M:189:ARG:HG3	12:M:7100:HOH:O	1.94	0.66
6:N:781:PRO:HB2	6:N:786:ILE:HD12	1.77	0.66
4:B:153:ALA:HB3	12:B:359:HOH:O	1.95	0.66
5:C:173:ASP:OD2	5:C:185:LYS:HB2	1.96	0.66
5:C:839:LEU:HD21	5:C:849:VAL:HG23	1.76	0.66
6:D:1264:GLU:O	6:D:1266:ARG:HG3	1.96	0.66
6:N:455:ARG:HB3	6:N:459:GLU:CG	2.26	0.66
6:N:1221:VAL:O	6:N:1224:VAL:HG12	1.96	0.66
6:N:1293:PHE:CZ	6:N:1302:GLU:HG2	2.31	0.66
7:O:75:PHE:HB3	12:O:1760:HOH:O	1.96	0.66
4:A:7:LYS:NZ	4:A:186:LEU:HD23	2.11	0.66
5:C:922:PHE:HB3	5:C:964:LYS:NZ	2.11	0.66
6:D:172:PRO:HG2	6:D:175:VAL:HG21	1.77	0.66
4:K:186:LEU:HD13	4:K:192:LEU:HD13	1.77	0.66
5:M:428:ARG:HD3	5:M:451:LEU:HD22	1.76	0.66
5:M:530:GLU:HG3	12:M:7124:HOH:O	1.94	0.66
5:M:625:LEU:HD11	5:M:641:PRO:HG3	1.76	0.66
5:M:854:PRO:HB3	12:M:7363:HOH:O	1.96	0.66
5:C:437:ARG:NH1	5:C:488:ALA:HA	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:166:GLN:HG3	6:D:396:VAL:HG12	1.77	0.66
5:M:1015:LEU:HG	5:M:1016:ILE:HG23	1.77	0.66
6:N:454:ALA:N	6:N:455:ARG:HE	1.94	0.66
6:N:478:LEU:CD2	6:N:1388:ARG:HE	2.02	0.66
6:N:619:LEU:HD12	6:N:621:LYS:HZ1	1.61	0.66
6:N:1384:PRO:HB2	12:N:9117:HOH:O	1.96	0.66
6:N:1434:TRP:CZ3	6:N:1457:ASP:HB2	2.31	0.66
7:O:51:LEU:HD11	12:O:1282:HOH:O	1.96	0.66
4:A:44:LEU:HD23	4:A:48:ILE:HD11	1.77	0.66
4:A:73:GLU:OE1	4:A:130:ALA:HA	1.95	0.66
5:C:889:HIS:CE1	6:D:951:ILE:H	2.04	0.66
6:D:906:GLN:HB3	6:D:911:LEU:CD1	2.26	0.66
6:D:1408:ILE:O	5:M:370:ALA:HB1	1.96	0.66
1:G:18:DG:H5''	6:D:628:ARG:HH12	1.61	0.65
4:B:38:ASN:HB3	4:B:39:PRO:HD3	1.78	0.65
4:B:80:LEU:HD21	6:D:867:ARG:HB2	1.77	0.65
7:E:45:ARG:HG2	7:E:46:PRO:CD	2.20	0.65
4:L:92:PRO:HA	4:L:146:ARG:NH1	2.11	0.65
5:M:21:ILE:H	5:M:21:ILE:HD12	1.58	0.65
5:M:565:GLN:HE21	5:M:995:MET:HE1	1.60	0.65
6:N:1240:THR:HG22	6:N:1254:GLN:C	2.21	0.65
4:A:112:ARG:HH21	4:A:125:PRO:HB2	1.59	0.65
4:B:206:THR:HG22	4:B:209:GLU:HB2	1.78	0.65
5:C:487:THR:HB	5:C:490:GLU:HG3	1.78	0.65
5:C:703:ILE:HD12	5:C:703:ILE:H	1.60	0.65
6:D:1412:LYS:O	6:D:1414:PRO:HD3	1.96	0.65
5:M:290:LEU:HD21	12:M:7062:HOH:O	1.96	0.65
5:M:937:ASP:HA	12:M:7238:HOH:O	1.96	0.65
6:N:715:ALA:HB3	6:N:764:LEU:HA	1.79	0.65
1:G:12:DG:H2'	1:G:13:DT:H71	1.77	0.65
2:Y:13:C:H4'	5:M:409:ARG:HH22	1.61	0.65
5:C:15:LEU:N	5:C:586:ARG:NH2	2.44	0.65
5:C:200:LEU:HD13	5:C:300:ASP:CG	2.21	0.65
5:C:263:ASP:HB2	5:C:264:PRO:HD3	1.76	0.65
5:C:844:GLY:HA3	12:C:1341:HOH:O	1.95	0.65
5:C:1101:THR:HG21	5:C:1111:ILE:HG23	1.78	0.65
6:N:507:ASN:HA	12:N:9024:HOH:O	1.96	0.65
6:N:1209:LEU:HD23	6:N:1211:MET:H	1.61	0.65
5:C:264:PRO:HB3	5:C:289:THR:CB	2.27	0.65
5:C:740:GLU:H	5:C:740:GLU:CD	2.05	0.65
5:C:775:ARG:NH2	5:C:782:ALA:HB1	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:889:HIS:HB2	12:C:1179:HOH:O	1.97	0.65
6:D:96:ALA:HB3	6:D:554:LEU:HD23	1.77	0.65
6:D:1109:GLU:HG2	6:D:1201:CYS:HA	1.77	0.65
4:K:58:ILE:HB	4:K:61:VAL:HB	1.78	0.65
5:M:186:VAL:HG23	5:M:187:ASN:H	1.59	0.65
5:M:775:ARG:HG3	12:M:7073:HOH:O	1.95	0.65
6:N:808:THR:OG1	6:N:809:PRO:HD3	1.97	0.65
6:N:1209:LEU:HD21	7:O:16:LYS:HD3	1.78	0.65
6:N:1275:SER:HB2	6:N:1294:VAL:HG11	1.77	0.65
12:I:1102:HOH:O	5:C:422:ARG:HD3	1.95	0.65
4:A:132:LEU:HD13	4:A:138:LEU:HD23	1.79	0.65
4:A:219:ARG:HD2	12:B:358:HOH:O	1.95	0.65
5:C:428:ARG:CZ	5:C:451:LEU:HD21	2.26	0.65
5:C:576:ALA:HB3	5:C:900:ARG:NH2	2.11	0.65
6:D:52:PRO:HD2	6:D:85:VAL:HG23	1.79	0.65
6:D:204:LEU:HB3	6:D:441:ARG:NH2	2.12	0.65
5:M:799:ILE:HB	12:M:7116:HOH:O	1.96	0.65
6:N:531:ASP:HA	12:N:9426:HOH:O	1.95	0.65
6:N:915:VAL:HG13	6:N:931:LEU:HD21	1.77	0.65
2:H:1:G:C2'	2:H:2:A:H5''	2.27	0.65
1:X:14:DT:C2'	1:X:15:DC:H5'	2.22	0.65
4:B:20:TYR:OH	4:B:22:GLU:HG3	1.97	0.65
5:C:537:LYS:HB3	5:C:545:ASN:HD21	1.62	0.65
5:C:561:GLY:O	5:C:564:MET:HG2	1.95	0.65
6:D:481:MET:HE2	6:D:1389:LEU:HD12	1.78	0.65
6:D:1281:VAL:HG22	12:D:9442:HOH:O	1.95	0.65
6:D:1429:LEU:HG	6:D:1441:GLN:HG3	1.76	0.65
6:N:127:LEU:HA	6:N:132:TYR:HD1	1.61	0.65
6:N:818:ARG:HD3	12:N:9061:HOH:O	1.97	0.65
5:C:473:ARG:HH11	5:C:475:VAL:HG22	1.62	0.65
5:C:487:THR:HG22	5:C:489:THR:H	1.61	0.65
5:C:1083:GLU:OE1	5:C:1083:GLU:HA	1.95	0.65
6:D:470:LEU:HD12	6:D:503:LEU:CD2	2.27	0.65
6:N:728:LEU:HD23	6:N:740:PHE:HE2	1.61	0.65
6:N:770:LEU:HG	6:N:919:PHE:CE1	2.32	0.65
6:N:774:SER:HB2	6:N:776:GLU:HG2	1.79	0.65
2:H:11:C:H2'	2:H:12:G:C8	2.32	0.65
4:B:54:THR:HB	4:B:143:ARG:HD3	1.79	0.65
5:C:603:VAL:HG21	5:C:643:VAL:HG11	1.78	0.65
5:C:627:ARG:O	5:C:638:ASP:HB2	1.96	0.65
6:D:794:GLN:HB3	6:D:1017:PHE:CZ	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1485:GLN:NE2	7:E:80:VAL:H	1.87	0.65
5:M:130:ASN:HD21	5:M:383:ARG:NH2	1.95	0.65
6:N:615:ARG:HD2	6:N:619:LEU:HG	1.76	0.65
2:Y:11:C:H2'	2:Y:12:G:C8	2.32	0.65
5:C:399:ASN:HB3	5:C:568:ALA:O	1.97	0.65
5:C:1016:ILE:HD13	5:C:1016:ILE:H	1.61	0.65
6:D:865:THR:HG22	6:D:874:GLU:HG2	1.78	0.65
6:D:957:PRO:HG2	6:D:1007:VAL:HA	1.78	0.65
4:K:176:ARG:HD2	5:M:864:GLY:C	2.21	0.65
5:M:342:ASP:O	5:M:346:VAL:HG23	1.96	0.65
5:M:573:ARG:HB3	5:M:670:GLN:OE1	1.97	0.65
2:H:9:G:H5'	2:H:9:G:C8	2.32	0.65
6:D:436:GLU:OE1	6:D:447:VAL:HG11	1.97	0.65
6:D:1284:GLU:OE1	6:D:1285:GLU:HG2	1.96	0.65
6:D:1296:SER:HB2	6:N:47:GLU:HG3	1.77	0.65
4:K:20:TYR:CE2	4:K:198:ARG:HB3	2.31	0.65
4:L:79:ILE:HA	4:L:82:LEU:HD12	1.79	0.65
5:M:263:ASP:HB2	5:M:264:PRO:HD3	1.77	0.65
5:M:567:GLN:CB	5:M:997:LEU:HD22	2.27	0.65
6:N:32:ILE:HD12	6:N:527:MET:HG2	1.79	0.65
4:A:9:PRO:HB3	4:A:25:LEU:HG	1.78	0.64
5:C:896:PHE:O	5:C:924:VAL:HG11	1.97	0.64
7:E:27:ALA:CB	7:E:61:VAL:CG2	2.75	0.64
4:L:57:TYR:HB3	4:L:141:GLU:CG	2.24	0.64
5:M:292:ARG:NH1	5:M:299:LYS:HD3	2.11	0.64
7:O:8:LYS:O	7:O:12:MET:HG3	1.95	0.64
5:C:675:ALA:HB2	5:C:867:VAL:HG11	1.79	0.64
6:D:904:VAL:HG13	12:D:9113:HOH:O	1.97	0.64
6:D:1481:VAL:HG13	7:E:18:ARG:HE	1.62	0.64
6:D:1498:ALA:HB2	7:E:88:GLU:OE1	1.97	0.64
4:L:201:THR:HG21	4:L:205:VAL:O	1.97	0.64
5:M:437:ARG:NH1	5:M:488:ALA:HA	2.12	0.64
5:M:861:LEU:HD23	5:M:863:ASP:H	1.62	0.64
5:M:1033:GLY:O	5:M:1037:VAL:HG23	1.97	0.64
6:N:591:VAL:HB	12:N:9357:HOH:O	1.96	0.64
4:A:224:TYR:HB3	4:B:9:PRO:HB2	1.77	0.64
5:C:328:LEU:HD11	5:C:434:HIS:HD2	1.63	0.64
5:C:831:ARG:HH12	5:C:1004:LYS:HE3	1.61	0.64
6:D:1109:GLU:OE1	6:D:1201:CYS:HB2	1.96	0.64
6:D:1434:TRP:CZ3	6:D:1457:ASP:HB2	2.33	0.64
4:K:14:ARG:HH22	4:K:24:VAL:CG2	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:134:VAL:HG22	6:N:460:ALA:HA	1.79	0.64
6:N:136:ASP:OD2	6:N:463:GLN:HB3	1.97	0.64
6:N:480:GLU:O	6:N:484:PRO:HD2	1.97	0.64
6:N:700:VAL:HG12	6:N:749:VAL:HG13	1.79	0.64
6:N:837:GLY:HA2	12:N:9212:HOH:O	1.97	0.64
3:I:6:DC:H3'	6:D:1266:ARG:NH2	2.12	0.64
5:C:154:ARG:HH12	5:C:177:GLU:HG3	1.61	0.64
5:C:492:ASP:OD1	5:C:518:LYS:HG3	1.97	0.64
5:C:943:VAL:HG23	5:C:985:GLY:H	1.63	0.64
6:D:806:PHE:CE1	6:D:813:LEU:HB3	2.33	0.64
6:D:1083:ASP:HB3	6:D:1242:HIS:HE1	1.62	0.64
4:K:25:LEU:HD22	4:L:225:PHE:CE2	2.33	0.64
5:M:1:MET:HE1	5:M:900:ARG:HH12	1.61	0.64
5:M:837:ASP:HA	5:M:999:HIS:HE1	1.61	0.64
6:N:486:ARG:HA	6:N:489:ARG:HD3	1.78	0.64
6:N:1149:LEU:HD12	6:N:1160:LEU:HD22	1.78	0.64
6:N:1199:GLY:HA3	12:N:9128:HOH:O	1.98	0.64
5:C:198:ARG:HB3	5:C:198:ARG:HH11	1.63	0.64
5:C:367:LEU:O	5:C:372:LEU:HD13	1.97	0.64
5:C:1071:ILE:O	6:D:659:LYS:HG2	1.96	0.64
6:D:115:LEU:CD1	6:D:499:VAL:HG22	2.26	0.64
6:D:398:ALA:HB2	6:D:447:VAL:CA	2.22	0.64
6:D:1398:TRP:HA	6:D:1398:TRP:CE3	2.32	0.64
5:M:394:PHE:CE1	5:M:632:ASN:HB3	2.31	0.64
5:M:462:ASP:OD2	5:M:468:ARG:HD2	1.96	0.64
5:M:684:PHE:HD1	6:N:784:ASP:HB2	1.63	0.64
6:N:164:GLY:CA	6:N:447:VAL:HB	2.27	0.64
6:N:181:ASP:HB3	6:N:441:ARG:HD3	1.80	0.64
6:N:456:MET:O	6:N:459:GLU:HB3	1.97	0.64
6:N:1236:LEU:HA	6:N:1359:GLN:NE2	2.13	0.64
6:N:1462:LEU:HD22	6:N:1472:ILE:HG23	1.78	0.64
1:G:23:DG:H2'	6:D:534:ARG:NH2	2.06	0.64
5:C:166:PRO:HD3	5:C:265:ARG:HD2	1.79	0.64
5:C:705:ILE:HD12	12:C:1463:HOH:O	1.98	0.64
6:D:414:ARG:HG2	6:D:451:ASP:CA	2.28	0.64
6:D:952:ASP:HA	6:D:1062:ARG:HH21	1.63	0.64
6:D:1353:GLN:NE2	6:D:1357:ARG:HE	1.96	0.64
4:L:44:LEU:HD23	4:L:48:ILE:HD11	1.80	0.64
5:M:687:ALA:C	5:M:688:ILE:HD12	2.23	0.64
6:N:704:ARG:HD3	6:N:738:ALA:HB2	1.77	0.64
3:Z:3:DA:H2''	3:Z:4:DC:H5''	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:198:ARG:HH21	5:C:203:ASP:HA	1.63	0.64
5:C:979:THR:HG23	5:C:981:GLU:N	2.08	0.64
5:M:139:GLN:HG2	5:M:418:LEU:HD22	1.79	0.64
3:I:6:DC:C3'	6:D:1266:ARG:NH2	2.60	0.64
5:C:227:PHE:HA	5:C:230:ARG:NE	2.11	0.64
5:C:284:ARG:HG2	5:C:285:LEU:N	2.12	0.64
5:C:1009:SER:HB2	6:D:651:GLU:O	1.98	0.64
6:D:484:PRO:HB3	6:D:488:ARG:HE	1.63	0.64
6:D:1090:ASP:HB3	6:D:1256:LEU:HD21	1.78	0.64
6:D:1205:TYR:O	6:D:1366:LYS:HE3	1.97	0.64
6:D:1488:ASP:OD2	7:E:89:MET:HE1	1.98	0.64
6:N:754:PHE:CZ	7:O:21:VAL:HA	2.33	0.64
6:N:813:LEU:O	6:N:817:GLU:HB2	1.96	0.64
5:C:113:VAL:O	5:C:115:LEU:HD23	1.97	0.64
5:C:460:ARG:HH21	5:C:485:TYR:HB2	1.63	0.64
6:D:489:ARG:HG3	6:D:490:ALA:N	2.12	0.64
12:D:9474:HOH:O	7:E:15:SER:HB2	1.96	0.64
5:M:545:ASN:HD22	5:M:583:LEU:CD2	2.10	0.64
6:N:689:ASP:HB3	12:N:9135:HOH:O	1.97	0.64
7:O:43:GLU:HG3	7:O:44:GLU:H	1.63	0.64
4:A:58:ILE:HB	4:A:61:VAL:HB	1.80	0.64
6:D:785:ILE:H	6:D:785:ILE:CD1	2.08	0.64
7:E:41:GLU:HB2	7:E:45:ARG:CZ	2.28	0.64
4:K:176:ARG:HD2	5:M:865:THR:N	2.13	0.64
5:M:13:ILE:HB	12:M:7012:HOH:O	1.98	0.64
5:M:334:ARG:NH1	5:M:415:PRO:HG2	2.13	0.64
6:N:41:ARG:HD3	6:N:42:ASP:H	1.63	0.64
6:N:150:ARG:NH1	6:N:468:LEU:HD22	2.12	0.64
6:N:761:ILE:HG23	7:O:6:ILE:HD11	1.78	0.64
6:N:1490:LYS:HE3	12:O:859:HOH:O	1.97	0.64
4:B:107:LYS:HD2	12:B:319:HOH:O	1.96	0.63
5:C:271:GLU:OE1	5:C:271:GLU:HA	1.97	0.63
6:D:731:LEU:HD13	6:D:779:ALA:HB1	1.80	0.63
6:D:1232:PRO:HB3	6:D:1361:VAL:HG11	1.79	0.63
4:K:83:LYS:HD2	12:M:7286:HOH:O	1.98	0.63
5:M:478:VAL:HG22	5:M:506:ASN:HB3	1.78	0.63
5:M:668:LEU:O	5:M:995:MET:HG2	1.98	0.63
6:N:657:LEU:HD22	6:N:691:LEU:HD13	1.80	0.63
5:C:264:PRO:HB3	5:C:289:THR:HB	1.79	0.63
6:D:1298:GLY:H	6:N:47:GLU:HB2	1.63	0.63
6:D:1397:LYS:NZ	6:D:1432:LYS:HZ1	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:130:ALA:HB3	12:K:2221:HOH:O	1.97	0.63
5:M:937:ASP:O	5:M:941:VAL:HG23	1.98	0.63
6:N:415:VAL:HG13	6:N:419:ASP:HB2	1.80	0.63
4:B:59:GLU:HG2	4:B:139:ASN:HD22	1.62	0.63
5:C:48:PHE:O	5:C:52:PHE:HB2	1.98	0.63
5:C:139:GLN:NE2	5:C:415:PRO:HD2	2.13	0.63
5:C:798:GLY:H	5:C:827:VAL:HG11	1.63	0.63
5:C:1008:ARG:NH1	5:C:1011:GLY:N	2.47	0.63
6:D:1153:VAL:HG22	6:N:561:GLY:HA3	1.81	0.63
4:K:226:SER:O	4:K:228:PRO:HD3	1.99	0.63
5:M:91:GLN:NE2	5:M:117:HIS:HB3	2.13	0.63
5:M:437:ARG:CZ	5:M:488:ALA:HA	2.28	0.63
6:N:703:ASN:HD22	6:N:704:ARG:H	1.46	0.63
5:C:545:ASN:HD22	5:C:583:LEU:HD22	1.62	0.63
6:D:134:VAL:HG22	6:D:455:ARG:O	1.99	0.63
5:M:18:LEU:HB2	5:M:590:ASP:HB3	1.80	0.63
6:N:160:GLU:O	6:N:164:GLY:O	2.16	0.63
6:N:205:TYR:HE1	12:N:9033:HOH:O	1.81	0.63
7:O:25:LYS:HA	7:O:28:GLN:NE2	2.13	0.63
3:I:3:DA:H2''	3:I:4:DC:H5''	1.81	0.63
5:C:54:ILE:HD11	5:C:356:ARG:HG2	1.80	0.63
5:C:194:VAL:HG21	5:C:221:LEU:O	1.99	0.63
5:C:470:PRO:HB3	5:C:485:TYR:CE2	2.33	0.63
6:D:138:LYS:HB2	12:D:9456:HOH:O	1.98	0.63
6:D:996:TRP:CE2	6:D:1056:PRO:HG2	2.33	0.63
6:D:1167:SER:O	6:D:1171:VAL:HG23	1.98	0.63
4:K:9:PRO:HB3	4:K:25:LEU:HG	1.81	0.63
4:K:42:ARG:HH12	4:L:34:VAL:HB	1.63	0.63
4:K:229:GLN:HB3	4:L:12:THR:HG22	1.80	0.63
5:M:576:ALA:HB1	5:M:580:MET:SD	2.38	0.63
6:N:136:ASP:CB	6:N:137:PRO:HD3	2.29	0.63
6:N:777:PRO:HG2	6:N:915:VAL:HB	1.80	0.63
6:N:996:TRP:O	6:N:1000:THR:HG22	1.99	0.63
6:N:1465:ASN:ND2	6:N:1470:ARG:HD2	2.13	0.63
2:H:2:A:C2'	2:H:3:G:O5'	2.46	0.63
5:C:44:ILE:HD11	5:C:340:MET:HE1	1.79	0.63
5:C:437:ARG:HB3	5:C:467:ILE:HD12	1.79	0.63
5:C:580:MET:HB3	5:C:584:GLU:CD	2.24	0.63
6:D:465:LEU:HD22	6:D:510:GLU:HA	1.81	0.63
6:D:508:ARG:HB3	6:D:510:GLU:OE2	1.97	0.63
6:D:524:LEU:HD12	6:D:524:LEU:N	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:677:LEU:HD21	6:D:687:VAL:HG11	1.80	0.63
6:D:1293:PHE:CE1	6:N:75:ARG:HD3	2.34	0.63
4:K:30:ARG:NH1	4:K:191:ASP:HB2	2.13	0.63
4:L:91:ASN:OD1	4:L:93:SER:HB2	1.98	0.63
6:N:148:GLU:HB3	6:N:151:GLN:HB2	1.80	0.63
6:N:1412:LYS:O	6:N:1414:PRO:HD3	1.98	0.63
4:B:97:VAL:HG22	12:B:388:HOH:O	1.98	0.63
5:C:601:GLY:HA2	5:C:616:GLU:HG2	1.80	0.63
5:C:922:PHE:HZ	5:C:963:LEU:HB3	1.63	0.63
6:D:814:ALA:HB1	6:D:818:ARG:HE	1.63	0.63
4:K:25:LEU:HD22	4:L:225:PHE:HE2	1.64	0.63
5:M:217:LEU:HD12	5:M:311:PHE:HA	1.80	0.63
5:M:428:ARG:HA	5:M:428:ARG:NH1	2.14	0.63
5:M:672:VAL:HG23	5:M:868:ASP:HB2	1.81	0.63
6:N:1031:ASN:OD1	6:N:1034:GLN:HG3	1.98	0.63
6:N:1280:VAL:HG13	6:N:1317:ASP:C	2.24	0.63
6:N:1341:PRO:HD2	6:N:1342:GLU:OE2	1.99	0.63
5:C:227:PHE:HD2	5:C:230:ARG:HH21	1.45	0.63
5:C:1050:GLN:CG	5:C:1079:PRO:HG2	2.29	0.63
7:E:25:LYS:HA	7:E:28:GLN:NE2	2.14	0.63
6:N:951:ILE:O	6:N:951:ILE:HD13	1.99	0.63
4:B:124:ASN:OD1	4:B:127:LEU:HB2	1.99	0.63
5:C:607:ASP:HB3	5:C:610:ARG:H	1.64	0.63
5:C:839:LEU:HD12	5:C:994:ILE:HG21	1.81	0.63
6:D:1297:GLU:HB2	6:N:51:GLY:C	2.24	0.63
5:M:428:ARG:HD3	5:M:451:LEU:CD2	2.28	0.63
6:N:1345:GLU:O	6:N:1349:VAL:HG23	1.99	0.63
1:G:6:DT:H2''	1:G:7:DC:C6	2.34	0.62
1:G:18:DG:H2''	1:G:19:DC:C5'	2.26	0.62
2:H:8:C:H2'	2:H:9:G:C8	2.34	0.62
5:C:1013:TYR:CE1	5:C:1020:PRO:HG3	2.33	0.62
6:D:97:THR:HB	6:D:571:LYS:HD3	1.81	0.62
6:D:501:ALA:CB	6:D:1453:ALA:HB2	2.23	0.62
6:D:660:LYS:HE2	6:D:694:VAL:HA	1.80	0.62
5:M:48:PHE:O	5:M:52:PHE:HB2	1.99	0.62
5:M:971:LYS:HB3	5:M:988:VAL:HG12	1.80	0.62
6:N:119:SER:HB2	6:N:123:LEU:HB2	1.80	0.62
6:N:581:LEU:HD23	6:N:581:LEU:H	1.63	0.62
6:N:615:ARG:HG3	12:N:9306:HOH:O	1.98	0.62
6:N:981:GLY:HA2	12:N:9185:HOH:O	1.99	0.62
6:N:1273:VAL:HB	6:N:1303:TYR:CD2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1312:LEU:HD23	12:N:9120:HOH:O	1.97	0.62
6:D:93:ILE:HD11	6:D:519:VAL:HG22	1.81	0.62
6:D:1083:ASP:HB3	6:D:1242:HIS:CE1	2.34	0.62
6:D:1295:GLU:CB	6:N:76:CYS:HB2	2.28	0.62
6:D:1354:LYS:HE3	6:D:1357:ARG:NH1	2.14	0.62
6:D:1481:VAL:HG12	7:E:21:VAL:HG21	1.81	0.62
5:M:313:LEU:HD13	5:M:321:GLU:HB2	1.80	0.62
5:M:444:PRO:HG2	5:M:452:ILE:HD11	1.81	0.62
6:N:432:TYR:HB3	6:N:450:TYR:CB	2.21	0.62
2:H:16:G:H4'	6:D:743:ASP:OD2	1.99	0.62
5:C:512:ARG:HD3	5:C:523:ILE:HD11	1.81	0.62
5:C:1111:ILE:HG13	5:C:1112:PHE:H	1.64	0.62
6:D:433:GLY:HA3	6:D:447:VAL:O	1.99	0.62
6:D:480:GLU:HG2	6:D:492:ALA:HB2	1.81	0.62
6:D:1085:ALA:C	8:D:7001:STD:H32	2.24	0.62
6:D:1239:ARG:HG3	6:D:1239:ARG:HH11	1.64	0.62
6:D:1263:PHE:O	6:D:1424:VAL:HG12	1.97	0.62
5:M:134:ARG:NH2	5:M:393:GLN:HA	2.14	0.62
5:M:203:ASP:OD1	5:M:206:THR:HG22	1.99	0.62
5:M:462:ASP:CG	5:M:468:ARG:HD2	2.24	0.62
5:M:674:VAL:HG21	5:M:871:LEU:CD1	2.29	0.62
5:M:997:LEU:HG	12:M:7228:HOH:O	1.99	0.62
6:N:202:VAL:HG21	6:N:400:VAL:HB	1.82	0.62
6:N:1372:VAL:O	6:N:1375:MET:HB2	1.99	0.62
1:G:20:DG:H4'	5:C:394:PHE:CD2	2.34	0.62
3:Z:5:DG:H4'	8:N:8001:STD:O1	1.99	0.62
5:C:726:ILE:HD13	5:C:734:LEU:HD11	1.82	0.62
6:D:1440:PHE:C	6:D:1440:PHE:CD2	2.76	0.62
4:K:222:LEU:HG	4:L:215:VAL:HB	1.81	0.62
5:M:30:LEU:HA	12:M:7092:HOH:O	2.00	0.62
5:M:437:ARG:HG2	5:M:467:ILE:O	1.98	0.62
6:N:566:ILE:O	6:N:570:GLU:HG2	1.99	0.62
6:D:546:ARG:HH21	6:D:550:ARG:HH22	1.46	0.62
4:K:64:GLU:HB2	4:K:165:ILE:HG21	1.82	0.62
4:L:58:ILE:HB	4:L:61:VAL:HB	1.81	0.62
5:M:427:VAL:HG12	5:M:428:ARG:HH21	1.62	0.62
5:M:905:ILE:HD12	5:M:905:ILE:N	2.15	0.62
6:N:1240:THR:HG23	6:N:1253:THR:CB	2.29	0.62
5:C:326:ASP:OD1	5:C:427:VAL:HA	1.98	0.62
5:C:398:THR:O	5:C:635:THR:HG21	1.99	0.62
5:C:512:ARG:HB3	5:C:523:ILE:HD11	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:918:LEU:HD23	5:C:968:LEU:HA	1.80	0.62
5:C:971:LYS:HD2	5:C:986:PRO:HB2	1.82	0.62
6:D:89:ARG:O	6:D:521:PRO:HG3	2.00	0.62
4:K:136:GLY:HA3	12:K:1785:HOH:O	1.99	0.62
5:M:92:ALA:HB2	5:M:120:LEU:HD21	1.82	0.62
6:N:96:ALA:HB3	6:N:554:LEU:HD23	1.81	0.62
4:B:2:LEU:HD12	4:B:3:ASP:N	2.14	0.62
6:D:706:PRO:HG2	11:D:5999:APC:H2	1.81	0.62
4:K:18:ARG:HG2	12:K:1775:HOH:O	1.98	0.62
6:N:1272:ALA:CA	6:N:1326:THR:HB	2.29	0.62
2:Y:13:C:H2'	2:Y:14:G:C8	2.34	0.62
4:B:62:LEU:H	4:B:62:LEU:HD12	1.64	0.62
5:C:52:PHE:CD2	5:C:68:PHE:HB2	2.35	0.62
6:D:1117:TYR:HE1	6:N:560:GLN:HE22	1.45	0.62
5:M:775:ARG:HD2	5:M:782:ALA:CB	2.29	0.62
5:M:815:LEU:HD21	12:M:7270:HOH:O	1.99	0.62
4:A:59:GLU:HG3	4:A:139:ASN:HB3	1.82	0.62
5:C:548:PRO:HA	5:C:581:THR:HG22	1.80	0.62
5:C:587:VAL:CG1	5:C:666:LEU:HD22	2.29	0.62
5:C:941:VAL:HA	5:C:944:LEU:HD12	1.82	0.62
6:D:48:ARG:HB3	6:D:48:ARG:HH11	1.63	0.62
6:D:133:ILE:O	6:D:153:LEU:N	2.32	0.62
6:D:133:ILE:HD11	12:D:9302:HOH:O	2.00	0.62
6:D:400:VAL:HG22	6:D:443:VAL:CG2	2.30	0.62
6:D:631:ILE:HG12	6:D:743:ASP:O	1.99	0.62
6:D:1498:ALA:HB1	7:E:84:ARG:NH2	2.15	0.62
6:N:45:PHE:CD1	6:N:522:PRO:HB3	2.34	0.62
6:N:398:ALA:CB	6:N:447:VAL:HA	2.30	0.62
6:N:409:VAL:HG23	6:N:421:LEU:HA	1.82	0.62
6:N:501:ALA:HB1	6:N:1453:ALA:HB2	1.82	0.62
6:N:866:VAL:HG11	6:N:880:ILE:CD1	2.30	0.62
5:C:15:LEU:H	5:C:15:LEU:HD12	1.65	0.62
5:C:457:ALA:HB3	5:C:538:GLN:HA	1.82	0.62
5:C:462:ASP:CG	5:C:463:GLU:H	2.07	0.62
5:C:768:THR:HG22	5:C:771:GLU:H	1.65	0.62
5:C:911:GLU:OE2	6:D:951:ILE:HD12	2.00	0.62
5:C:1063:ARG:HG2	5:C:1064:ASN:N	2.15	0.62
6:D:192:ALA:HB1	6:D:193:PRO:HD2	1.81	0.62
6:D:474:GLU:O	6:D:478:LEU:HG	2.00	0.62
6:D:524:LEU:O	6:D:526:PRO:HD3	2.00	0.62
6:D:551:ASN:HD21	6:D:555:LYS:NZ	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:639:LEU:HD12	6:D:640:HIS:N	2.14	0.62
5:M:194:VAL:HG21	5:M:221:LEU:O	2.00	0.62
5:M:806:LEU:HG	5:M:822:VAL:HG23	1.81	0.62
6:N:36:THR:C	6:N:38:LYS:H	2.08	0.62
6:N:678:GLU:HG3	6:N:679:ARG:HG3	1.82	0.62
3:Z:8:DA:H1'	3:Z:9:DG:H5'	1.82	0.61
6:D:50:PHE:O	6:D:86:ARG:HA	1.99	0.61
6:D:1266:ARG:O	6:D:1268:PRO:HD3	2.00	0.61
4:K:56:VAL:HG13	4:K:142:VAL:HG12	1.81	0.61
5:M:237:ARG:CB	5:M:237:ARG:HH11	2.13	0.61
6:N:179:VAL:HG13	6:N:183:GLU:CD	2.25	0.61
6:N:1101:VAL:HG13	6:N:1428:ALA:N	2.15	0.61
5:C:704:HIS:O	5:C:828:ALA:HA	2.00	0.61
6:D:567:ILE:HG22	6:D:571:LYS:HZ3	1.63	0.61
6:D:670:VAL:HG23	6:D:671:LYS:H	1.64	0.61
6:D:758:GLU:O	6:D:762:GLN:HG2	1.99	0.61
6:D:1262:LEU:HD23	6:D:1352:ILE:HG12	1.81	0.61
5:M:198:ARG:HB3	5:M:198:ARG:HH11	1.65	0.61
5:M:1118:LYS:HG3	5:M:1119:ARG:HG3	1.82	0.61
6:N:108:VAL:HB	6:N:109:PRO:HD3	1.82	0.61
6:N:447:VAL:HG23	12:N:9198:HOH:O	2.01	0.61
6:N:875:THR:HG21	6:N:902:LEU:HD13	1.82	0.61
1:G:12:DG:OP1	6:D:1441:GLN:O	2.17	0.61
4:A:27:PRO:CG	4:A:186:LEU:HD11	2.31	0.61
4:A:57:TYR:HB3	4:A:141:GLU:CG	2.30	0.61
5:C:290:LEU:HB3	5:C:302:VAL:HG11	1.81	0.61
5:C:752:GLY:H	5:C:792:VAL:HB	1.65	0.61
5:C:759:THR:HG21	5:C:783:ARG:NH1	2.15	0.61
6:D:133:ILE:N	6:D:133:ILE:HA	2.02	0.61
4:L:59:GLU:HG3	4:L:139:ASN:HD21	1.63	0.61
4:L:88:ARG:HD3	4:L:121:GLU:OE1	2.00	0.61
5:M:166:PRO:HD3	5:M:265:ARG:HD2	1.80	0.61
5:M:574:ALA:O	5:M:662:GLU:HG3	1.99	0.61
5:M:650:ARG:HG2	5:M:653:ASP:HB2	1.80	0.61
6:N:1232:PRO:HB3	6:N:1361:VAL:HG11	1.82	0.61
6:N:1281:VAL:HG23	6:N:1319:VAL:HG11	1.82	0.61
4:A:23:PHE:CE1	4:A:208:LEU:HD12	2.35	0.61
5:C:183:SER:HB2	5:C:190:LYS:CD	2.28	0.61
6:D:133:ILE:CG1	6:D:456:MET:HB3	2.30	0.61
6:D:1282:ARG:C	6:N:75:ARG:HA	2.25	0.61
7:E:36:LYS:HZ2	7:E:45:ARG:HH22	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:225:PHE:CE2	4:L:211:LEU:HD11	2.36	0.61
5:M:137:VAL:O	5:M:391:LEU:HD21	2.01	0.61
5:M:497:ALA:HA	5:M:515:ALA:HA	1.83	0.61
5:M:713:ARG:HB3	5:M:720:GLU:OE2	2.00	0.61
6:N:15:PRO:HB3	6:N:19:ARG:HH22	1.63	0.61
4:B:159:LYS:HZ2	4:B:159:LYS:H	1.47	0.61
5:C:437:ARG:HG2	5:C:467:ILE:O	2.00	0.61
5:C:771:GLU:O	5:C:775:ARG:HG2	2.01	0.61
6:D:480:GLU:HB2	12:D:9200:HOH:O	2.01	0.61
6:D:845:ASN:HA	6:D:867:ARG:NH2	2.15	0.61
6:D:955:VAL:HG11	6:D:1015:TYR:HE2	1.65	0.61
6:D:977:ALA:HB3	6:D:983:LEU:HD11	1.81	0.61
6:N:15:PRO:O	6:N:19:ARG:HG2	2.00	0.61
6:N:756:GLN:HG3	6:N:760:ARG:HD2	1.81	0.61
6:N:820:GLU:HG3	6:N:836:VAL:HG11	1.82	0.61
6:N:1175:ILE:O	6:N:1179:GLU:HG3	2.00	0.61
4:A:56:VAL:HG13	4:A:142:VAL:HG12	1.81	0.61
4:A:112:ARG:HH21	4:A:126:ASP:N	1.98	0.61
5:C:464:LEU:HD21	12:C:1279:HOH:O	2.01	0.61
5:C:752:GLY:O	6:D:679:ARG:HG2	2.00	0.61
5:M:966:LEU:HA	5:M:969:GLN:HG3	1.81	0.61
6:N:841:TYR:HA	12:N:9409:HOH:O	2.00	0.61
4:A:189:ARG:HH22	4:B:155:LYS:HG2	1.65	0.61
6:D:97:THR:CG2	6:D:459:GLU:HB2	2.31	0.61
6:D:553:ARG:HD3	6:D:570:GLU:OE1	2.00	0.61
6:D:773:ALA:HA	6:D:1228:SER:CB	2.31	0.61
6:D:917:GLN:HE21	6:D:921:ARG:HE	1.49	0.61
6:D:1053:PHE:CE1	6:D:1072:ILE:HD12	2.36	0.61
4:K:219:ARG:HE	4:L:219:ARG:HD2	1.65	0.61
5:M:139:GLN:NE2	5:M:418:LEU:HD22	2.15	0.61
6:N:10:ILE:HD11	6:N:1434:TRP:CE2	2.36	0.61
4:B:36:LEU:O	4:B:40:LEU:HG	2.00	0.61
6:D:52:PRO:HD2	6:D:85:VAL:CG2	2.30	0.61
6:D:454:ALA:C	6:D:455:ARG:HE	2.08	0.61
6:D:462:GLN:HA	6:D:513:ILE:HD13	1.83	0.61
6:D:882:PHE:HA	6:D:885:ILE:HD12	1.83	0.61
7:E:27:ALA:HB2	7:E:61:VAL:CG2	2.28	0.61
4:K:173:PRO:HB2	4:K:205:VAL:HG22	1.82	0.61
4:L:16:GLN:HE21	4:L:16:GLN:CA	2.13	0.61
6:N:27:GLU:O	6:N:28:LYS:HD2	2.01	0.61
6:N:525:ARG:HG2	6:N:541:ASN:HD21	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1277:ILE:O	6:N:1294:VAL:HG11	2.01	0.61
1:X:17:DC:H2''	1:X:18:DG:C5'	2.28	0.61
2:Y:13:C:H2'	2:Y:14:G:H8	1.65	0.61
4:B:81:ASN:ND2	4:B:127:LEU:HD11	2.16	0.61
5:C:139:GLN:OE1	5:C:415:PRO:HD2	2.01	0.61
5:C:211:LEU:HD13	5:C:308:ARG:HG2	1.82	0.61
5:C:580:MET:O	5:C:902:ILE:HA	2.01	0.61
5:C:660:ALA:HB1	5:C:667:ALA:O	2.00	0.61
5:C:710:ILE:HG23	5:C:823:VAL:HG23	1.83	0.61
6:D:1083:ASP:CG	6:D:1241:PHE:HE2	2.09	0.61
7:E:54:LEU:HG	7:E:58:PRO:HG2	1.83	0.61
5:M:19:THR:HG21	5:M:124:ASP:O	2.01	0.61
5:M:876:VAL:HG22	5:M:884:GLN:HE21	1.66	0.61
6:N:770:LEU:HG	6:N:919:PHE:CD1	2.36	0.61
6:N:786:ILE:HD11	6:N:908:LYS:HA	1.83	0.61
6:N:1473:PRO:O	6:N:1478:SER:HA	2.00	0.61
5:C:42:VAL:HG12	5:C:43:GLY:H	1.66	0.61
5:C:409:ARG:NH1	5:C:452:ILE:HD12	2.16	0.61
6:D:522:PRO:HA	6:D:525:ARG:NH1	2.15	0.61
6:D:1425:THR:O	6:D:1429:LEU:HD13	2.01	0.61
5:M:93:PRO:HG3	5:M:117:HIS:HE1	1.65	0.61
5:M:142:ARG:NE	5:M:325:ILE:HG23	2.16	0.61
5:M:185:LYS:HB3	5:M:188:LYS:O	2.01	0.61
6:N:15:PRO:HB3	6:N:19:ARG:NH2	2.16	0.61
6:N:153:LEU:HD21	12:N:9025:HOH:O	2.00	0.61
5:C:684:PHE:HE1	6:D:782:SER:HB3	1.66	0.60
5:C:835:VAL:HG21	12:D:9317:HOH:O	1.99	0.60
6:D:104:PHE:HB3	6:D:512:MET:HE2	1.82	0.60
6:D:456:MET:C	6:D:459:GLU:HB3	2.26	0.60
6:D:1397:LYS:HZ3	6:D:1432:LYS:HG3	1.64	0.60
4:L:226:SER:HA	12:L:1298:HOH:O	2.01	0.60
5:M:248:PRO:HG2	12:M:7185:HOH:O	1.99	0.60
5:M:853:LEU:CB	5:M:858:MET:HE3	2.30	0.60
5:M:922:PHE:CZ	5:M:963:LEU:HB3	2.36	0.60
6:N:31:THR:HG23	6:N:44:LEU:HD11	1.82	0.60
6:N:972:LEU:HD23	6:N:973:GLN:N	2.16	0.60
6:N:1342:GLU:CD	6:N:1342:GLU:N	2.59	0.60
4:A:117:VAL:HB	4:A:120:VAL:CG1	2.28	0.60
4:B:62:LEU:HD13	4:B:63:HIS:HD2	1.67	0.60
5:C:366:SER:HB2	12:C:1203:HOH:O	2.01	0.60
5:C:534:VAL:N	5:C:538:GLN:HE22	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:659:LYS:C	6:D:659:LYS:HD3	2.27	0.60
6:D:1114:THR:HB	6:D:1195:GLN:NE2	2.15	0.60
6:D:1198:TYR:HE2	6:D:1377:LYS:HZ1	1.48	0.60
6:D:1297:GLU:OE1	6:N:52:PRO:HD3	2.01	0.60
4:K:8:ALA:HB1	4:L:224:TYR:CE1	2.36	0.60
4:K:182:GLU:C	5:M:938:LYS:HZ2	2.09	0.60
4:L:80:LEU:HD21	6:N:867:ARG:HB2	1.82	0.60
5:M:564:MET:HE3	5:M:997:LEU:HD21	1.83	0.60
5:M:636:ALA:CB	5:M:703:ILE:HD13	2.27	0.60
6:N:131:LYS:HG3	6:N:568:ARG:HG2	1.82	0.60
4:A:176:ARG:HG3	4:A:200:TRP:CE3	2.37	0.60
4:A:179:PHE:HB2	4:A:195:LEU:HD11	1.83	0.60
5:C:141:HIS:CE1	5:C:332:ARG:HH11	2.17	0.60
6:D:799:LYS:HB3	6:D:826:PRO:CG	2.30	0.60
4:L:99:LEU:HD13	4:L:144:VAL:HG21	1.83	0.60
5:M:52:PHE:CD2	5:M:68:PHE:HB2	2.36	0.60
5:M:444:PRO:HG2	5:M:452:ILE:CD1	2.32	0.60
5:M:730:SER:O	5:M:734:LEU:HD13	2.01	0.60
5:M:839:LEU:HA	12:M:7228:HOH:O	2.00	0.60
6:N:792:ILE:HD11	6:N:878:GLY:O	2.00	0.60
6:N:972:LEU:HD23	6:N:973:GLN:HG3	1.83	0.60
6:N:1268:PRO:HB3	12:N:9094:HOH:O	2.01	0.60
6:N:1350:GLU:O	6:N:1354:LYS:HG2	2.01	0.60
4:A:123:MET:C	4:A:125:PRO:HD3	2.26	0.60
4:A:224:TYR:CD1	4:B:9:PRO:HD2	2.37	0.60
6:D:85:VAL:O	6:D:89:ARG:HD2	2.01	0.60
6:D:881:LEU:O	6:D:885:ILE:HG13	2.01	0.60
4:K:7:LYS:NZ	4:K:186:LEU:HD23	2.16	0.60
4:L:152:PRO:HD2	4:L:155:LYS:HG3	1.83	0.60
5:M:1036:GLU:HA	6:N:707:THR:HG21	1.83	0.60
11:M:6999:APC:H5'1	11:M:6999:APC:C8	2.31	0.60
6:N:758:GLU:HB2	6:N:762:GLN:NE2	2.17	0.60
6:N:1281:VAL:HG21	6:N:1313:VAL:HG11	1.81	0.60
1:G:18:DG:H5'	1:G:18:DG:H8	1.65	0.60
2:H:13:C:H2'	2:H:14:G:C8	2.35	0.60
4:B:1:MET:O	4:B:6:LEU:HD22	2.00	0.60
5:C:69:LEU:HD12	5:C:97:ARG:HB3	1.84	0.60
5:C:102:HIS:HE1	12:C:1135:HOH:O	1.84	0.60
5:C:198:ARG:HD3	5:C:228:ALA:HA	1.81	0.60
5:C:203:ASP:O	5:C:207:LEU:HB2	2.01	0.60
6:D:62:LYS:HE2	12:D:9457:HOH:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1090:ASP:HB3	6:D:1256:LEU:CD2	2.30	0.60
7:E:41:GLU:HG2	7:E:42:PRO:N	2.16	0.60
4:K:42:ARG:HD2	5:M:977:GLY:O	2.01	0.60
5:M:611:ILE:CD1	5:M:625:LEU:HD11	2.32	0.60
5:M:905:ILE:CD1	5:M:905:ILE:H	2.14	0.60
6:N:557:LEU:HB3	12:N:9268:HOH:O	2.01	0.60
6:N:804:LEU:HB2	6:N:830:ALA:O	2.01	0.60
6:N:868:TYR:HB3	12:N:9504:HOH:O	2.01	0.60
6:N:1191:PRO:HG3	6:N:1200:VAL:HG11	1.83	0.60
4:A:87:VAL:HG21	4:A:144:VAL:HG11	1.82	0.60
5:C:773:LEU:O	5:C:777:ILE:HG13	2.01	0.60
6:D:199:LEU:HD11	12:D:9219:HOH:O	2.02	0.60
6:D:603:LEU:HA	6:D:606:ILE:HD12	1.82	0.60
6:D:804:LEU:HB2	6:D:830:ALA:O	2.01	0.60
6:D:814:ALA:HB1	6:D:818:ARG:NH2	2.16	0.60
6:D:1138:ALA:HB1	6:D:1362:LYS:HE2	1.82	0.60
5:M:52:PHE:HE1	5:M:66:LEU:HG	1.65	0.60
5:M:626:ARG:N	5:M:639:GLN:HE21	1.94	0.60
5:M:1005:MET:HB2	6:N:648:MET:HE1	1.84	0.60
6:N:784:ASP:HB3	6:N:939:PHE:HE2	1.67	0.60
6:N:787:LEU:HD21	6:N:947:ILE:CD1	2.30	0.60
6:N:799:LYS:NZ	6:N:824:ASN:HA	2.15	0.60
6:N:1148:VAL:HG13	6:N:1163:GLY:O	2.00	0.60
6:N:1274:ILE:HD11	12:N:9314:HOH:O	2.00	0.60
1:X:17:DC:H5"	5:M:1030:GLN:HE22	1.67	0.60
4:B:228:PRO:O	4:B:229:GLN:HG3	2.02	0.60
6:D:133:ILE:HA	6:D:456:MET:HB3	1.83	0.60
4:K:39:PRO:HG3	4:L:39:PRO:HG3	1.83	0.60
5:M:979:THR:HG23	5:M:981:GLU:N	2.10	0.60
6:N:154:THR:HG23	6:N:157:GLU:H	1.67	0.60
1:X:6:DT:H2"	1:X:7:DC:C6	2.36	0.60
4:A:42:ARG:NH1	5:C:978:ARG:HA	2.16	0.60
4:B:206:THR:CG2	4:B:209:GLU:H	2.14	0.60
5:C:151:ASP:HB2	5:C:157:ARG:O	2.01	0.60
5:C:195:LEU:HG	5:C:238:LEU:HD12	1.84	0.60
6:D:95:LEU:HB3	12:D:9119:HOH:O	2.00	0.60
6:D:97:THR:CB	6:D:571:LYS:HD3	2.32	0.60
6:D:133:ILE:CA	6:D:456:MET:HB3	2.31	0.60
6:D:679:ARG:HB2	6:D:682:ASP:OD1	2.01	0.60
6:D:820:GLU:HB2	6:D:836:VAL:HG11	1.82	0.60
5:M:162:ILE:O	5:M:164:PRO:HD3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:174:LEU:HB3	5:M:310:LEU:HD22	1.84	0.60
6:N:101:HIS:O	6:N:105:VAL:HG23	2.02	0.60
6:N:456:MET:HA	6:N:460:ALA:HB2	1.83	0.60
6:N:1197:ARG:HB3	6:N:1396:GLU:HG3	1.82	0.60
1:G:6:DT:H2'	12:G:84:HOH:O	2.00	0.60
5:C:285:LEU:HD23	5:C:285:LEU:O	2.02	0.60
5:C:601:GLY:HA3	5:C:615:TYR:HA	1.83	0.60
5:C:1032:PHE:O	5:C:1033:GLY:O	2.20	0.60
6:D:505:SER:HB2	6:D:1454:GLY:N	2.16	0.60
6:D:623:VAL:HG21	6:D:748:HIS:NE2	2.15	0.60
6:D:676:MET:HE1	6:D:684:LYS:H	1.66	0.60
6:D:793:THR:HG21	6:D:906:GLN:HG2	1.84	0.60
5:M:305:PRO:HA	5:M:308:ARG:HB3	1.84	0.60
6:N:833:GLU:HB3	12:N:9227:HOH:O	2.01	0.60
6:N:1216:SER:HB3	7:O:15:SER:OG	2.01	0.60
2:H:2:A:O2'	2:H:3:G:O5'	2.20	0.60
5:C:192:PRO:HB2	5:C:195:LEU:HB3	1.84	0.60
5:C:447:ALA:O	8:D:7001:STD:H291	2.01	0.60
5:C:1031:ARG:HG2	6:D:621:LYS:HB3	1.84	0.60
12:C:1148:HOH:O	6:D:8:VAL:HG12	2.02	0.60
6:D:163:TYR:CG	6:D:166:GLN:HB2	2.37	0.60
6:D:455:ARG:HB3	6:D:459:GLU:CD	2.26	0.60
6:D:610:LYS:HA	6:D:615:ARG:CZ	2.32	0.60
4:K:111:ALA:HB2	4:K:127:LEU:HG	1.84	0.60
4:K:117:VAL:HB	4:K:120:VAL:CG1	2.28	0.60
4:K:219:ARG:HH21	4:L:219:ARG:HD2	1.67	0.60
5:M:368:THR:HB	5:M:369:PRO:HD3	1.84	0.60
5:M:1104:GLU:H	5:M:1104:GLU:CD	2.10	0.60
6:N:1240:THR:OG1	6:N:1359:GLN:HG3	2.02	0.60
7:O:19:LEU:O	7:O:23:VAL:HG23	2.02	0.60
2:H:11:C:H2'	2:H:12:G:H8	1.67	0.59
4:A:143:ARG:HE	4:A:158:ILE:CG2	2.14	0.59
4:B:105:GLY:O	4:B:132:LEU:HB3	2.02	0.59
5:C:402:SER:HA	5:C:566:THR:HG23	1.83	0.59
5:C:516:ARG:NH2	6:D:1068:LEU:HD22	2.16	0.59
5:C:549:PHE:CD1	5:C:886:LEU:HD23	2.37	0.59
5:C:751:PRO:HB2	6:D:680:GLN:HG3	1.84	0.59
5:C:773:LEU:HD13	12:C:1288:HOH:O	2.01	0.59
5:C:881:ASN:O	5:C:884:GLN:HG3	2.02	0.59
6:N:87:ARG:HD3	6:N:523:ASP:CB	2.30	0.59
6:N:1044:LEU:HD21	6:N:1056:PRO:HG3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:13:C:H2'	2:H:14:G:H8	1.66	0.59
3:I:6:DC:P	6:D:1266:ARG:HH12	2.25	0.59
5:C:50:GLU:HG3	5:C:266:ARG:HD2	1.83	0.59
5:C:301:GLU:O	5:C:305:PRO:HG2	2.02	0.59
5:C:881:ASN:HD22	5:C:881:ASN:N	2.00	0.59
6:D:455:ARG:HB3	6:D:459:GLU:CG	2.32	0.59
6:D:1156:LEU:HD11	12:D:9058:HOH:O	2.02	0.59
5:M:625:LEU:HB3	5:M:639:GLN:HB2	1.84	0.59
5:M:708:TYR:HA	12:M:7161:HOH:O	2.02	0.59
6:N:50:PHE:O	6:N:86:ARG:HA	2.01	0.59
6:N:758:GLU:HB2	6:N:762:GLN:HE21	1.66	0.59
6:N:955:VAL:HB	6:N:1011:PHE:HE1	1.67	0.59
6:N:988:ARG:O	6:N:992:ILE:HG13	2.01	0.59
5:C:141:HIS:CD2	5:C:334:ARG:HD2	2.36	0.59
5:C:394:PHE:CE1	5:C:632:ASN:HB3	2.37	0.59
5:C:569:VAL:HG11	5:C:996:LYS:HZ2	1.65	0.59
5:C:800:VAL:HB	12:C:1408:HOH:O	2.01	0.59
6:D:133:ILE:O	6:D:152:LEU:HB2	2.02	0.59
6:D:972:LEU:HD23	6:D:973:GLN:N	2.17	0.59
5:M:660:ALA:HB1	5:M:667:ALA:O	2.02	0.59
5:M:804:VAL:HB	5:M:824:ARG:HB2	1.83	0.59
6:N:700:VAL:HG22	6:N:718:PRO:HG3	1.85	0.59
6:N:817:GLU:O	6:N:821:VAL:HG23	2.02	0.59
5:C:52:PHE:HE1	5:C:66:LEU:HG	1.66	0.59
6:D:546:ARG:HH21	6:D:550:ARG:NH2	2.00	0.59
6:D:643:GLY:HA3	6:D:727:GLN:HB2	1.84	0.59
6:D:772:PRO:HB3	6:D:1224:VAL:HG13	1.84	0.59
6:D:1296:SER:O	6:N:59:ALA:HB2	2.02	0.59
4:L:102:LYS:HD2	4:L:139:ASN:HB2	1.85	0.59
5:M:217:LEU:HD13	12:M:7064:HOH:O	2.01	0.59
5:M:260:LEU:HA	5:M:291:ALA:CB	2.33	0.59
5:M:606:VAL:CG2	5:M:645:VAL:HG22	2.33	0.59
6:N:162:ARG:HH12	6:N:414:ARG:NH1	2.00	0.59
6:N:1109:GLU:HG2	6:N:1201:CYS:HA	1.83	0.59
6:N:1233:GLY:O	6:N:1237:THR:HB	2.02	0.59
6:N:1273:VAL:O	6:N:1325:LEU:HB2	2.02	0.59
4:A:9:PRO:HD2	4:B:224:TYR:CD1	2.37	0.59
4:B:143:ARG:HD2	4:B:158:ILE:HG21	1.84	0.59
5:C:472:ARG:NH2	5:C:532:MET:HE3	2.18	0.59
5:C:516:ARG:CZ	6:D:1068:LEU:HD22	2.32	0.59
5:C:881:ASN:HD22	5:C:881:ASN:H	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:15:PRO:O	6:D:19:ARG:HG3	2.02	0.59
6:D:774:SER:HB3	6:D:1362:LYS:O	2.01	0.59
5:M:119:PRO:HB3	12:M:7068:HOH:O	2.02	0.59
5:M:1004:LYS:HD3	6:N:724:GLN:NE2	2.17	0.59
5:M:1032:PHE:O	5:M:1033:GLY:O	2.21	0.59
6:N:17:LYS:HG2	6:N:21:TRP:NE1	2.18	0.59
6:N:1147:ARG:HB3	6:N:1188:VAL:CG2	2.31	0.59
7:O:48:MET:N	7:O:54:LEU:HB2	2.17	0.59
1:X:12:DG:H2'	1:X:13:DT:H71	1.83	0.59
5:C:424:GLY:HA3	5:C:428:ARG:NH1	2.17	0.59
5:C:734:LEU:HD12	5:C:737:LEU:HD22	1.84	0.59
5:C:837:ASP:O	5:C:848:VAL:HG13	2.02	0.59
5:C:855:VAL:HG23	12:C:1209:HOH:O	2.01	0.59
6:D:175:VAL:HG13	12:D:9137:HOH:O	2.03	0.59
4:L:132:LEU:HD11	4:L:138:LEU:HD13	1.84	0.59
5:M:237:ARG:HH11	5:M:237:ARG:HB2	1.67	0.59
5:M:1007:ALA:HB2	6:N:648:MET:HG3	1.85	0.59
6:N:646:LYS:HE2	6:N:722:GLU:OE2	2.03	0.59
6:N:1128:VAL:O	6:N:1129:THR:C	2.46	0.59
1:X:18:DG:H5'	1:X:18:DG:H8	1.67	0.59
5:C:167:LYS:HG2	12:C:1525:HOH:O	2.02	0.59
5:C:569:VAL:HG23	5:C:635:THR:HG22	1.85	0.59
6:D:181:ASP:CG	6:D:441:ARG:HG2	2.28	0.59
6:D:698:LYS:HE3	12:E:125:HOH:O	2.01	0.59
6:D:799:LYS:O	6:D:826:PRO:HD2	2.02	0.59
6:D:1149:LEU:HD22	6:D:1151:ARG:O	2.03	0.59
6:D:1380:GLU:HB2	6:D:1420:LEU:HD11	1.83	0.59
6:D:1438:ALA:O	6:D:1443:THR:HG22	2.02	0.59
7:E:54:LEU:HD21	12:E:114:HOH:O	2.02	0.59
5:M:309:TYR:HE1	12:M:7321:HOH:O	1.85	0.59
5:M:374:ASN:ND2	5:M:377:PRO:HD3	2.17	0.59
6:N:598:ARG:CB	6:N:598:ARG:HH11	2.16	0.59
6:N:875:THR:HG22	6:N:879:ARG:HB2	1.85	0.59
2:H:9:G:O2'	2:H:10:G:H5'	2.03	0.59
6:D:647:ARG:HE	6:D:723:GLY:H	1.51	0.59
6:D:1295:GLU:CD	6:N:77:GLY:H	2.10	0.59
4:K:145:ASP:O	4:K:171:PHE:HE1	1.86	0.59
5:M:775:ARG:HD2	5:M:782:ALA:HB3	1.85	0.59
5:M:884:GLN:HB2	5:M:992:MET:HE1	1.85	0.59
6:N:63:TYR:HB3	6:N:68:PHE:CE1	2.38	0.59
6:N:1020:LEU:CD2	6:N:1035:ILE:HG23	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1284:GLU:CD	6:N:1285:GLU:H	2.11	0.59
3:Z:5:DG:H5''	12:Z:970:HOH:O	2.01	0.59
5:C:831:ARG:NH1	5:C:1004:LYS:HE3	2.18	0.59
6:D:133:ILE:CA	6:D:456:MET:CB	2.81	0.59
5:M:577:PRO:HD2	5:M:580:MET:SD	2.43	0.59
5:M:726:ILE:HG12	5:M:754:ILE:CD1	2.33	0.59
5:M:862:PRO:HB2	5:M:929:ARG:HH12	1.67	0.59
6:N:1047:LYS:HE3	6:N:1053:PHE:CD2	2.38	0.59
6:N:1223:ILE:HD12	6:N:1223:ILE:N	2.18	0.59
4:A:42:ARG:HH11	5:C:978:ARG:HA	1.66	0.59
5:C:305:PRO:HA	5:C:308:ARG:HB2	1.85	0.59
5:C:603:VAL:HG21	5:C:643:VAL:CG1	2.33	0.59
6:D:782:SER:H	6:D:785:ILE:HD13	1.67	0.59
6:D:843:PHE:CE1	6:D:864:VAL:HG11	2.37	0.59
6:D:964:LEU:HD11	6:D:1041:LEU:HD13	1.83	0.59
6:D:1115:THR:CG2	6:D:1151:ARG:HH21	2.16	0.59
7:E:47:LYS:HA	7:E:54:LEU:HB3	1.85	0.59
4:K:54:THR:CG2	4:K:158:ILE:HG13	2.32	0.59
4:L:110:LYS:HD2	4:L:112:ARG:HH11	1.67	0.59
6:N:1429:LEU:HG	6:N:1441:GLN:HG3	1.84	0.59
2:Y:8:C:H2'	2:Y:9:G:C8	2.38	0.58
5:C:877:PRO:HB3	6:D:1020:LEU:CD1	2.33	0.58
5:C:911:GLU:O	5:C:915:LYS:HG2	2.03	0.58
6:D:5:VAL:HG21	6:D:1468:LEU:HD21	1.85	0.58
6:D:166:GLN:HA	6:D:395:VAL:O	2.03	0.58
6:D:475:LYS:HA	6:D:478:LEU:HG	1.84	0.58
6:D:660:LYS:CD	6:D:694:VAL:HG22	2.33	0.58
4:K:129:ILE:HG22	12:K:2221:HOH:O	2.01	0.58
4:L:186:LEU:HB2	4:L:192:LEU:CD1	2.31	0.58
5:M:141:HIS:HB3	5:M:418:LEU:HD23	1.85	0.58
5:M:196:LEU:HD12	5:M:238:LEU:HD11	1.83	0.58
5:M:428:ARG:HG3	5:M:428:ARG:HH11	1.67	0.58
6:N:628:ARG:NH1	6:N:744:GLN:HE22	2.01	0.58
6:N:708:LEU:HD22	6:N:1231:GLU:CA	2.33	0.58
6:N:813:LEU:HD11	12:N:9308:HOH:O	2.03	0.58
7:O:54:LEU:HD23	7:O:54:LEU:O	2.03	0.58
1:X:20:DG:H4'	5:M:394:PHE:CZ	2.38	0.58
4:A:82:LEU:HD11	4:A:142:VAL:HG11	1.85	0.58
5:C:77:PRO:HB2	5:C:78:PHE:CD1	2.38	0.58
5:C:116:GLY:HA3	5:C:378:LEU:HD23	1.84	0.58
5:C:116:GLY:HA2	5:C:379:GLU:OE1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:1085:PHE:O	5:C:1089:VAL:HG23	2.03	0.58
6:D:1272:ALA:HA	6:D:1326:THR:HB	1.85	0.58
4:K:206:THR:CG2	4:K:209:GLU:H	2.14	0.58
5:M:141:HIS:O	5:M:331:ARG:HA	2.03	0.58
5:M:754:ILE:HG12	5:M:791:ARG:CD	2.32	0.58
5:M:1101:THR:HB	6:N:5:VAL:HG13	1.84	0.58
6:N:959:GLU:CD	6:N:959:GLU:H	2.11	0.58
6:N:1106:VAL:HG12	6:N:1108:ARG:HD3	1.84	0.58
6:N:1441:GLN:NE2	6:N:1442:ASN:HB2	2.18	0.58
2:H:11:C:C2'	2:H:12:G:H5''	2.33	0.58
5:C:94:LEU:HB3	12:C:1296:HOH:O	2.02	0.58
5:C:197:LEU:HB3	5:C:202:TYR:HB2	1.85	0.58
5:C:247:PRO:HD2	5:C:250:ARG:NH1	2.18	0.58
5:C:570:PRO:HD2	5:C:635:THR:HB	1.85	0.58
5:C:692:GLU:HG2	5:C:696:LYS:HE2	1.84	0.58
6:D:36:THR:C	6:D:38:LYS:H	2.09	0.58
6:D:136:ASP:HB2	6:D:455:ARG:NH2	2.17	0.58
6:D:1128:VAL:O	6:D:1129:THR:C	2.46	0.58
4:K:213:GLN:O	4:K:217:ILE:HG13	2.03	0.58
5:M:611:ILE:HD11	5:M:625:LEU:HD11	1.84	0.58
5:M:1046:ALA:HB1	6:N:1471:LEU:CD1	2.34	0.58
6:N:166:GLN:HG2	6:N:396:VAL:HG12	1.84	0.58
6:N:817:GLU:HG3	6:N:839:LEU:HD23	1.85	0.58
7:O:26:ARG:HH22	7:O:38:THR:HA	1.67	0.58
4:B:115:LEU:HD12	4:B:115:LEU:O	2.02	0.58
5:C:352:ALA:HA	5:C:355:VAL:HG12	1.85	0.58
5:C:922:PHE:CD2	5:C:964:LYS:HD2	2.38	0.58
6:D:496:LEU:O	6:D:500:ARG:HG2	2.04	0.58
6:D:1364:HIS:CE1	6:D:1366:LYS:HG3	2.37	0.58
7:E:35:PHE:HB2	12:E:133:HOH:O	2.03	0.58
5:M:204:GLN:HA	12:M:7206:HOH:O	2.02	0.58
5:M:1007:ALA:HB2	6:N:648:MET:SD	2.43	0.58
5:M:1060:ILE:HA	5:M:1063:ARG:NH1	2.18	0.58
5:M:1103:ASP:CG	5:M:1104:GLU:H	2.10	0.58
6:N:1144:LEU:HD11	6:N:1186:VAL:HG21	1.83	0.58
2:Y:8:C:HO2'	2:Y:9:G:H5'	1.68	0.58
4:A:169:ALA:HB1	4:A:171:PHE:CE2	2.39	0.58
4:B:56:VAL:HG11	12:B:379:HOH:O	2.03	0.58
5:C:712:ALA:O	5:C:820:ARG:HB3	2.03	0.58
5:C:1017:THR:OG1	5:C:1019:GLN:HG3	2.03	0.58
5:C:1078:GLU:OE1	5:C:1078:GLU:HA	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:10:ILE:HD11	6:D:1434:TRP:NE1	2.18	0.58
6:D:23:TYR:CG	6:D:89:ARG:HG2	2.39	0.58
6:D:104:PHE:CD2	6:D:1448:THR:HG23	2.38	0.58
6:D:116:LEU:O	6:D:118:LEU:HG	2.03	0.58
6:D:483:HIS:HB2	6:D:484:PRO:HD3	1.85	0.58
6:D:607:LEU:O	6:D:614:PHE:HB2	2.04	0.58
4:K:64:GLU:HA	4:K:165:ILE:HD13	1.84	0.58
5:M:87:ASP:HA	12:M:7233:HOH:O	2.04	0.58
5:M:579:VAL:CG1	5:M:887:GLU:HG3	2.33	0.58
5:M:675:ALA:HB2	5:M:867:VAL:HG11	1.86	0.58
5:M:860:HIS:CE1	5:M:975:TYR:HB2	2.38	0.58
5:M:1004:LYS:NZ	6:N:724:GLN:HE22	2.01	0.58
5:M:1074:GLU:HG2	5:M:1075:ASP:H	1.69	0.58
6:N:82:LYS:C	6:N:84:ILE:N	2.59	0.58
6:N:455:ARG:HB3	6:N:459:GLU:HG3	1.85	0.58
6:N:756:GLN:O	6:N:760:ARG:HG2	2.03	0.58
4:A:206:THR:CG2	4:A:209:GLU:H	2.15	0.58
4:B:117:VAL:HG23	4:B:120:VAL:HB	1.86	0.58
5:C:232:GLU:O	5:C:235:LEU:HB2	2.02	0.58
5:C:260:LEU:HA	5:C:291:ALA:CB	2.34	0.58
6:D:9:ARG:HH21	6:D:507:ASN:ND2	2.00	0.58
6:D:1361:VAL:HG22	12:D:9062:HOH:O	2.03	0.58
6:N:970:LYS:HB2	12:N:9095:HOH:O	2.03	0.58
6:N:1001:GLU:O	6:N:1004:THR:HB	2.04	0.58
1:G:13:DT:H2''	5:C:422:ARG:NH2	2.17	0.58
1:G:22:DC:OP1	5:C:387:SER:HB2	2.03	0.58
5:C:129:ILE:HG13	5:C:386:PHE:HB3	1.86	0.58
5:C:859:PRO:O	5:C:867:VAL:HG22	2.03	0.58
6:D:619:LEU:HD12	6:D:621:LYS:NZ	2.18	0.58
6:D:1440:PHE:C	6:D:1440:PHE:HD2	2.10	0.58
4:L:33:GLY:O	4:L:195:LEU:HD22	2.04	0.58
5:M:285:LEU:HD23	5:M:285:LEU:O	2.02	0.58
5:M:752:GLY:N	5:M:792:VAL:HB	2.18	0.58
5:M:793:PRO:HB2	12:M:7015:HOH:O	2.04	0.58
6:N:141:ILE:HG21	6:N:449:SER:OG	2.04	0.58
6:N:403:PHE:CE2	6:N:444:VAL:HG23	2.39	0.58
7:O:41:GLU:O	7:O:45:ARG:HD2	2.02	0.58
7:O:54:LEU:CD2	7:O:63:TRP:HE1	2.17	0.58
1:G:14:DT:H6	1:G:14:DT:H5'	1.69	0.58
3:I:5:DG:H4'	8:D:7001:STD:O1	2.03	0.58
5:C:86:LYS:CG	5:C:813:VAL:HB	2.23	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:497:ALA:HA	5:C:515:ALA:HA	1.85	0.58
5:C:758:ARG:HB3	5:C:788:THR:O	2.03	0.58
5:C:874:LEU:CD2	6:D:1028:ALA:HB1	2.34	0.58
6:D:644:LEU:HD12	6:D:645:PRO:HD2	1.86	0.58
6:D:1147:ARG:HB3	6:D:1188:VAL:CG2	2.34	0.58
4:L:105:GLY:O	4:L:132:LEU:HB3	2.03	0.58
5:M:195:LEU:O	5:M:199:VAL:HG23	2.04	0.58
5:M:499:ALA:HA	5:M:532:MET:HE1	1.84	0.58
5:M:773:LEU:O	5:M:777:ILE:HG13	2.03	0.58
5:M:926:PHE:O	5:M:930:LYS:HG3	2.03	0.58
6:N:493:ARG:HD3	6:N:1390:LEU:O	2.03	0.58
2:Y:13:C:C5'	5:M:409:ARG:HH22	2.17	0.58
4:A:127:LEU:HD12	4:A:128:HIS:N	2.18	0.58
4:A:221:HIS:HA	4:A:224:TYR:HD2	1.68	0.58
6:D:531:ASP:C	6:D:533:GLY:H	2.12	0.58
6:D:804:LEU:HD13	6:D:830:ALA:O	2.04	0.58
6:D:1472:ILE:HB	12:D:9209:HOH:O	2.03	0.58
5:M:681:GLY:HA3	6:N:939:PHE:CE1	2.39	0.58
6:N:133:ILE:HA	6:N:456:MET:CA	2.34	0.58
6:N:896:ALA:O	6:N:900:ILE:HG23	2.03	0.58
3:I:6:DC:H5''	6:D:1266:ARG:HH22	1.66	0.58
3:Z:6:DC:P	6:N:1266:ARG:HH22	2.27	0.58
4:A:57:TYR:CD2	4:A:161:ARG:HD2	2.39	0.58
5:C:1095:LEU:HG	6:D:603:LEU:HD22	1.85	0.58
6:D:621:LYS:O	6:D:622:ARG:HG3	2.04	0.58
6:D:1084:THR:HG22	6:D:1238:MET:HG2	1.86	0.58
7:E:54:LEU:HA	7:E:58:PRO:HG2	1.85	0.58
4:K:195:LEU:HD12	4:K:196:THR:N	2.19	0.58
4:K:225:PHE:HE2	4:L:211:LEU:HD11	1.69	0.58
5:M:550:LEU:HG	6:N:1070:TYR:HE1	1.67	0.58
6:N:486:ARG:HA	6:N:489:ARG:CG	2.32	0.58
6:N:592:THR:HA	12:N:9040:HOH:O	2.04	0.58
2:H:6:U:C2'	2:H:7:G:C8	2.85	0.57
4:A:14:ARG:NH2	4:A:22:GLU:HB3	2.19	0.57
4:A:151:VAL:HB	4:A:169:ALA:HB3	1.85	0.57
6:D:615:ARG:O	6:D:619:LEU:HG	2.04	0.57
4:K:44:LEU:HA	4:K:48:ILE:HD11	1.86	0.57
5:M:41:ASN:O	5:M:46:ALA:HB2	2.04	0.57
5:M:499:ALA:HA	5:M:532:MET:SD	2.43	0.57
5:M:744:ARG:NE	5:M:747:ALA:HB2	2.19	0.57
6:N:101:HIS:ND1	6:N:103:TRP:HB2	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:927:THR:O	6:N:931:LEU:HG	2.04	0.57
2:H:10:G:H2'	2:H:11:C:H6	1.69	0.57
2:Y:11:C:C2'	2:Y:12:G:H5''	2.33	0.57
4:B:132:LEU:HG	4:B:136:GLY:HA3	1.86	0.57
5:C:292:ARG:NE	5:C:294:GLU:HG2	2.14	0.57
5:C:564:MET:HE2	5:C:995:MET:HG3	1.86	0.57
5:C:1006:HIS:O	6:D:627:GLY:HA2	2.04	0.57
6:D:117:ASP:HB2	6:D:495:ARG:HH21	1.67	0.57
6:D:520:LEU:HD12	6:D:521:PRO:HD2	1.86	0.57
6:D:551:ASN:ND2	6:D:555:LYS:HZ3	2.00	0.57
6:D:875:THR:HG22	6:D:879:ARG:HB2	1.86	0.57
6:D:1149:LEU:HD23	6:D:1187:PRO:O	2.03	0.57
4:K:11:PHE:HD1	4:K:25:LEU:HD13	1.68	0.57
4:K:106:PRO:HG3	4:K:134:GLU:OE1	2.03	0.57
5:M:601:GLY:HA3	5:M:615:TYR:HA	1.86	0.57
5:M:685:GLU:CG	6:N:739:ASP:HB3	2.34	0.57
6:N:1226:ALA:HA	6:N:1229:ILE:HD12	1.85	0.57
6:N:1236:LEU:HD21	6:N:1361:VAL:CB	2.34	0.57
4:B:34:VAL:HG12	12:B:368:HOH:O	2.03	0.57
5:C:533:ASP:HB3	5:C:538:GLN:HE22	1.68	0.57
5:C:1051:GLU:OE2	6:D:751:LEU:HB2	2.03	0.57
6:D:63:TYR:HE1	6:D:73:CYS:HA	1.67	0.57
6:D:1278:ASP:HB3	6:D:1320:GLU:HA	1.86	0.57
6:D:1472:ILE:HG22	6:D:1474:ALA:H	1.69	0.57
4:K:23:PHE:CE1	4:K:208:LEU:HD13	2.39	0.57
5:M:252:LYS:HA	12:M:7260:HOH:O	2.02	0.57
5:M:329:GLY:HA3	5:M:489:THR:HG23	1.87	0.57
5:M:1105:LYS:HG3	5:M:1107:ASN:HD22	1.69	0.57
6:N:177:ALA:HB3	6:N:205:TYR:OH	2.04	0.57
6:N:181:ASP:OD1	6:N:205:TYR:HB2	2.05	0.57
6:N:493:ARG:HD2	6:N:493:ARG:C	2.28	0.57
6:N:977:ALA:CB	6:N:983:LEU:HD21	2.30	0.57
2:Y:7:G:H2'	2:Y:7:G:N3	2.20	0.57
5:C:118:ILE:HG22	5:C:382:ILE:HD13	1.85	0.57
6:D:676:MET:CE	6:D:684:LYS:HG3	2.34	0.57
6:D:1491:THR:HA	12:D:9274:HOH:O	2.04	0.57
5:M:142:ARG:O	5:M:163:ILE:HD11	2.04	0.57
5:M:175:GLU:HB3	5:M:183:SER:OG	2.04	0.57
5:M:861:LEU:HD21	5:M:925:TYR:HE2	1.69	0.57
5:M:1115:LEU:HA	12:N:9264:HOH:O	2.03	0.57
6:N:438:ASP:HB2	6:N:445:ARG:NH1	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:142:ARG:HD3	5:C:163:ILE:HG21	1.87	0.57
5:C:395:LYS:HE3	5:C:407:LYS:HE2	1.86	0.57
5:C:713:ARG:HB2	5:C:720:GLU:OE1	2.04	0.57
6:D:789:LEU:CD1	6:D:934:LEU:HD22	2.34	0.57
6:D:1282:ARG:HB3	6:N:76:CYS:N	2.20	0.57
5:M:8:ARG:HD2	5:M:10:ARG:HH21	1.68	0.57
5:M:464:LEU:O	5:M:466:PHE:N	2.37	0.57
6:N:116:LEU:HD13	6:N:118:LEU:HD11	1.87	0.57
6:N:453:ASP:HA	6:N:455:ARG:HH21	1.69	0.57
6:N:574:LEU:HG	6:N:575:GLN:N	2.18	0.57
6:N:760:ARG:O	6:N:764:LEU:HD23	2.05	0.57
6:N:992:ILE:HD12	6:N:1054:GLU:OE2	2.05	0.57
6:N:1033:GLN:HE21	6:N:1036:ARG:NH1	2.03	0.57
6:N:1320:GLU:O	6:N:1323:GLN:HB3	2.03	0.57
6:D:119:SER:H	6:D:123:LEU:HB2	1.69	0.57
6:D:502:PHE:CE1	6:D:509:PRO:HB3	2.39	0.57
6:D:542:ASP:O	6:D:546:ARG:HG3	2.04	0.57
6:D:917:GLN:HE21	6:D:921:ARG:NE	2.02	0.57
6:D:957:PRO:CG	6:D:1007:VAL:HA	2.35	0.57
6:D:1106:VAL:HG11	6:D:1474:ALA:CB	2.33	0.57
5:M:352:ALA:HA	5:M:355:VAL:HG12	1.85	0.57
6:N:80:VAL:HG12	6:N:81:THR:O	2.04	0.57
6:N:127:LEU:HA	6:N:132:TYR:CD1	2.38	0.57
6:N:793:THR:O	6:N:879:ARG:HD3	2.05	0.57
6:N:963:TYR:HD1	6:N:963:TYR:H	1.50	0.57
6:N:1213:ARG:HG3	6:N:1214:PRO:N	2.19	0.57
6:N:1253:THR:CG2	6:N:1358:ALA:HB1	2.34	0.57
2:H:9:G:H5''	12:H:1047:HOH:O	2.05	0.57
2:H:16:G:C2	6:D:705:ALA:HB1	2.39	0.57
5:C:6:PHE:CE1	5:C:901:TYR:HB3	2.40	0.57
5:C:38:LYS:HG2	12:C:1187:HOH:O	2.05	0.57
6:D:95:LEU:N	6:D:515:GLU:O	2.38	0.57
6:D:645:PRO:HD3	6:D:726:ILE:HG12	1.87	0.57
6:D:1037:GLN:HG2	6:D:1042:ARG:HB3	1.86	0.57
6:D:1262:LEU:HD23	6:D:1352:ILE:CG1	2.35	0.57
4:L:4:SER:HA	4:L:7:LYS:NZ	2.19	0.57
5:M:147:TYR:HB3	5:M:323:ASP:HB2	1.87	0.57
5:M:173:ASP:O	5:M:184:MET:HA	2.05	0.57
5:M:440:PRO:C	6:N:1078:ARG:HH21	2.13	0.57
5:M:1034:GLU:HB3	6:N:619:LEU:CD2	2.25	0.57
6:N:119:SER:CB	6:N:123:LEU:HB2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:470:LEU:HD21	6:N:508:ARG:NH1	2.18	0.57
5:C:276:LYS:CA	5:C:280:LYS:HD3	2.33	0.57
5:C:517:ARG:HH12	5:C:524:VAL:HG23	1.70	0.57
5:C:695:LEU:HD22	5:C:832:LYS:HD3	1.86	0.57
5:C:817:PRO:O	6:D:532:GLY:HA2	2.04	0.57
6:D:1403:LEU:HD11	12:D:9065:HOH:O	2.04	0.57
5:M:22:GLN:HG2	12:M:7098:HOH:O	2.04	0.57
5:M:38:LYS:HE2	5:M:38:LYS:HA	1.87	0.57
5:M:971:LYS:HD3	5:M:986:PRO:HB2	1.86	0.57
6:N:165:LYS:CG	6:N:199:LEU:HD13	2.33	0.57
6:N:199:LEU:HD21	12:N:9407:HOH:O	2.05	0.57
6:N:799:LYS:O	6:N:829:VAL:HG13	2.05	0.57
6:N:875:THR:HG21	6:N:902:LEU:CD1	2.35	0.57
6:N:947:ILE:O	6:N:947:ILE:HD12	2.04	0.57
2:Y:9:G:H5'	2:Y:9:G:C8	2.39	0.57
4:A:25:LEU:HD11	4:B:224:TYR:O	2.05	0.57
5:C:88:LEU:HD12	5:C:89:THR:N	2.18	0.57
5:C:136:ILE:HG21	5:C:336:VAL:HG13	1.86	0.57
6:D:775:GLY:HA3	6:D:1145:TYR:CE1	2.39	0.57
6:D:1082:ALA:O	8:D:7001:STD:H312	2.05	0.57
5:M:474:VAL:HG11	5:M:529:VAL:HG12	1.86	0.57
5:M:572:ILE:HD11	5:M:701:THR:HB	1.87	0.57
6:N:51:GLY:O	6:N:86:ARG:HD2	2.04	0.57
6:N:633:VAL:HG22	6:N:635:PRO:HD3	1.87	0.57
1:G:17:DC:H2''	1:G:18:DG:C5'	2.35	0.57
3:I:8:DA:H1'	3:I:9:DG:H5'	1.85	0.57
4:A:112:ARG:NH2	4:A:125:PRO:HB2	2.19	0.57
5:C:6:PHE:HE1	5:C:901:TYR:HB3	1.70	0.57
5:C:78:PHE:CD1	5:C:88:LEU:HD21	2.39	0.57
5:C:455:LEU:HD12	5:C:456:ALA:O	2.05	0.57
5:C:1040:LEU:HD21	5:C:1048:THR:HG22	1.87	0.57
6:D:1312:LEU:HG	6:D:1327:ARG:NH1	2.20	0.57
7:E:40:LEU:HB3	7:E:72:ARG:NH1	2.20	0.57
4:L:74:ASP:HB3	6:N:872:ARG:HH22	1.70	0.57
5:M:147:TYR:HA	5:M:323:ASP:OD2	2.05	0.57
5:M:395:LYS:HE2	5:M:397:GLU:HG2	1.87	0.57
6:N:804:LEU:HD23	6:N:804:LEU:H	1.70	0.57
6:N:824:ASN:HB3	12:N:9083:HOH:O	2.04	0.57
1:X:17:DC:H5''	5:M:1030:GLN:NE2	2.20	0.56
2:Y:9:G:O2'	2:Y:10:G:H5'	2.05	0.56
4:A:206:THR:HG22	4:A:209:GLU:HG3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:184:THR:O	4:B:192:LEU:HD12	2.05	0.56
4:B:221:HIS:HA	4:B:224:TYR:CD2	2.40	0.56
5:C:65:VAL:O	5:C:101:ILE:HG12	2.06	0.56
5:C:394:PHE:CZ	5:C:632:ASN:HB3	2.40	0.56
5:C:496:ILE:HA	5:C:531:PHE:O	2.05	0.56
5:C:710:ILE:O	5:C:823:VAL:HG23	2.05	0.56
6:D:42:ASP:O	6:D:43:GLY:O	2.23	0.56
6:D:141:ILE:CD1	6:D:432:TYR:HB2	2.35	0.56
6:D:163:TYR:O	6:D:166:GLN:HG3	2.05	0.56
6:D:1291:SER:HB3	6:D:1293:PHE:CE1	2.37	0.56
6:D:1403:LEU:O	6:D:1407:LEU:HB2	2.04	0.56
4:L:175:ARG:HB2	12:N:9429:HOH:O	2.05	0.56
5:M:19:THR:O	5:M:23:VAL:HG23	2.03	0.56
5:M:165:LEU:HD12	5:M:166:PRO:C	2.29	0.56
5:M:500:ASN:HD21	6:N:1067:VAL:CG2	2.18	0.56
5:M:722:ILE:HG21	5:M:821:GLU:OE2	2.05	0.56
5:M:795:GLY:O	5:M:796:GLU:HG2	2.04	0.56
5:M:837:ASP:HA	5:M:999:HIS:CE1	2.40	0.56
6:N:30:GLU:HB3	6:N:40:GLU:HB3	1.86	0.56
6:N:478:LEU:HD13	6:N:1388:ARG:NH2	2.13	0.56
6:N:771:SER:HB3	6:N:778:LEU:HD22	1.86	0.56
4:A:49:PRO:HB3	4:A:148:VAL:HG22	1.87	0.56
5:C:473:ARG:HD2	5:C:475:VAL:CG2	2.35	0.56
6:D:809:PRO:HB2	6:D:812:ALA:HB2	1.87	0.56
6:D:1441:GLN:NE2	6:D:1442:ASN:H	2.02	0.56
5:M:99:GLN:HB3	5:M:109:LYS:HG3	1.86	0.56
6:N:90:MET:HE2	6:N:519:VAL:O	2.05	0.56
6:N:526:PRO:HD2	6:N:538:SER:HB2	1.86	0.56
6:N:1100:ASP:HB3	6:N:1428:ALA:CB	2.32	0.56
6:N:1102:THR:HG21	6:N:1371:VAL:HG22	1.86	0.56
6:N:1216:SER:CB	7:O:16:LYS:H	2.17	0.56
7:O:27:ALA:CB	7:O:61:VAL:CG2	2.83	0.56
2:H:11:C:O2'	5:C:390:GLN:HG2	2.05	0.56
4:A:143:ARG:NE	4:A:158:ILE:HG21	2.15	0.56
5:C:132:ALA:HB1	5:C:394:PHE:CE1	2.41	0.56
5:C:141:HIS:O	5:C:331:ARG:HA	2.04	0.56
5:C:314:THR:HG22	12:C:1391:HOH:O	2.05	0.56
5:C:719:PRO:HD3	12:C:1333:HOH:O	2.05	0.56
5:C:758:ARG:HH21	5:C:788:THR:HB	1.69	0.56
5:C:767:PRO:HB3	12:C:1474:HOH:O	2.04	0.56
6:D:4:GLU:HG2	6:D:1470:ARG:NH2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:185:VAL:HG21	6:D:203:ALA:HB2	1.88	0.56
6:D:523:ASP:HB2	12:D:9338:HOH:O	2.03	0.56
6:D:795:VAL:HG22	6:D:876:SER:OG	2.05	0.56
6:D:1446:VAL:HG12	6:D:1447:LEU:HD12	1.87	0.56
5:M:9:ILE:H	5:M:9:ILE:HD12	1.71	0.56
5:M:54:ILE:HG22	5:M:66:LEU:HB3	1.86	0.56
5:M:182:VAL:HG23	12:M:7385:HOH:O	2.05	0.56
5:M:296:GLY:HA3	12:M:7298:HOH:O	2.04	0.56
5:M:433:THR:HG21	5:M:488:ALA:HB1	1.87	0.56
5:M:580:MET:HB3	5:M:584:GLU:CD	2.30	0.56
5:M:691:SER:HB2	5:M:858:MET:SD	2.45	0.56
5:M:704:HIS:CD2	5:M:831:ARG:HH21	2.24	0.56
6:N:114:THR:HG22	6:N:498:VAL:HG21	1.87	0.56
6:N:520:LEU:CD1	6:N:524:LEU:HD13	2.35	0.56
6:N:1324:PRO:HG3	6:N:1330:ILE:HD11	1.87	0.56
7:O:27:ALA:HB2	7:O:61:VAL:CG2	2.33	0.56
2:H:14:G:HO2'	2:H:15:C:H5'	1.70	0.56
4:A:163:ASN:HD22	4:A:163:ASN:N	2.04	0.56
5:C:118:ILE:HG22	5:C:382:ILE:HG21	1.85	0.56
5:C:690:ILE:HD12	5:C:833:LEU:CD2	2.35	0.56
5:C:835:VAL:HA	5:C:849:VAL:HG12	1.87	0.56
6:D:114:THR:HG22	6:D:495:ARG:HA	1.86	0.56
6:D:136:ASP:CB	6:D:455:ARG:HH22	2.18	0.56
6:D:160:GLU:O	6:D:164:GLY:O	2.23	0.56
6:D:182:GLY:O	6:D:400:VAL:HG11	2.04	0.56
6:D:414:ARG:HG2	6:D:451:ASP:HA	1.87	0.56
6:D:1493:LYS:HG3	12:D:9421:HOH:O	2.04	0.56
4:K:14:ARG:HH22	4:K:24:VAL:HG23	1.70	0.56
4:K:49:PRO:HB2	12:K:602:HOH:O	2.05	0.56
6:N:23:TYR:O	6:N:49:ILE:HG23	2.04	0.56
6:N:103:TRP:CD1	6:N:1444:THR:HG23	2.41	0.56
6:N:181:ASP:HA	6:N:205:TYR:CD1	2.41	0.56
6:N:639:LEU:HD13	6:N:766:ALA:HB2	1.87	0.56
6:N:880:ILE:HB	12:N:9106:HOH:O	2.05	0.56
6:N:957:PRO:HG2	6:N:1007:VAL:HG22	1.86	0.56
6:N:1170:ASP:O	6:N:1174:LEU:HG	2.06	0.56
4:A:201:THR:HG21	4:A:205:VAL:O	2.06	0.56
4:B:186:LEU:HB2	4:B:192:LEU:CD1	2.33	0.56
5:C:110:GLU:HG3	5:C:369:PRO:CG	2.33	0.56
5:C:430:VAL:HA	5:C:434:HIS:CE1	2.40	0.56
5:C:1088:LEU:HD23	5:C:1089:VAL:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:111:LYS:HZ2	6:D:1448:THR:HG22	1.69	0.56
6:D:394:LEU:O	6:D:394:LEU:HD12	2.05	0.56
6:D:1015:TYR:HB3	12:D:9167:HOH:O	2.05	0.56
4:K:133:GLU:N	12:K:1785:HOH:O	2.39	0.56
4:L:88:ARG:O	4:L:121:GLU:HG2	2.05	0.56
5:M:135:VAL:CG1	5:M:407:LYS:HA	2.28	0.56
5:M:139:GLN:CD	5:M:418:LEU:HD22	2.30	0.56
5:M:274:ARG:HD2	5:M:285:LEU:HD22	1.87	0.56
5:M:315:ALA:HB2	12:M:7326:HOH:O	2.06	0.56
5:M:905:ILE:HD12	5:M:905:ILE:H	1.71	0.56
5:M:1005:MET:SD	6:N:724:GLN:HG3	2.46	0.56
6:N:95:LEU:HD21	6:N:574:LEU:HD11	1.87	0.56
6:N:114:THR:O	6:N:495:ARG:HG3	2.05	0.56
6:N:721:VAL:HG11	6:N:727:GLN:OE1	2.05	0.56
6:N:894:LYS:O	6:N:898:GLU:HG3	2.06	0.56
2:Y:12:G:H8	2:Y:12:G:C5'	2.14	0.56
5:C:52:PHE:HB3	5:C:53:PRO:HD3	1.88	0.56
5:C:206:THR:HG23	5:C:207:LEU:N	2.21	0.56
5:C:572:ILE:HG23	5:C:703:ILE:HD11	1.88	0.56
5:C:886:LEU:CD1	6:D:951:ILE:HG13	2.35	0.56
5:C:1037:VAL:O	5:C:1041:GLU:HG3	2.06	0.56
6:D:101:HIS:O	6:D:105:VAL:HG23	2.04	0.56
6:D:165:LYS:HB2	6:D:397:LYS:CB	2.26	0.56
6:D:169:TYR:HD1	6:D:191:LEU:HD12	1.70	0.56
6:D:714:GLN:NE2	6:D:765:SER:HA	2.21	0.56
6:D:1291:SER:O	6:N:75:ARG:HG2	2.06	0.56
7:E:67:GLU:OE1	7:E:73:LEU:HD21	2.05	0.56
4:L:86:VAL:HG12	4:L:124:ASN:HB2	1.86	0.56
4:L:92:PRO:HA	4:L:146:ARG:CZ	2.35	0.56
5:M:537:LYS:HG3	5:M:905:ILE:CD1	2.35	0.56
5:M:1034:GLU:H	6:N:619:LEU:HD13	1.70	0.56
6:N:436:GLU:OE2	6:N:445:ARG:HD2	2.06	0.56
6:N:583:ASP:HB2	6:N:604:THR:OG1	2.05	0.56
6:N:591:VAL:HG11	6:N:597:ASP:HA	1.87	0.56
6:N:615:ARG:HD2	6:N:619:LEU:CG	2.34	0.56
6:N:1335:LEU:HD22	12:N:9123:HOH:O	2.05	0.56
4:A:59:GLU:HG3	4:A:139:ASN:HD22	1.69	0.56
6:D:22:SER:HA	6:D:90:MET:O	2.05	0.56
6:D:525:ARG:HG2	6:D:541:ASN:ND2	2.17	0.56
6:D:820:GLU:OE1	6:D:840:LYS:HD2	2.05	0.56
6:D:1189:ARG:CB	6:D:1204:CYS:HA	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:557:ARG:HE	5:M:879:ARG:HD3	1.71	0.56
6:N:582:LEU:HA	6:N:603:LEU:HD12	1.86	0.56
6:N:631:ILE:HG12	6:N:743:ASP:O	2.05	0.56
5:C:577:PRO:HA	5:C:671:ASN:HD21	1.70	0.56
5:C:697:ARG:O	5:C:699:PHE:N	2.39	0.56
5:C:862:PRO:HA	5:C:975:TYR:CE1	2.41	0.56
6:D:41:ARG:HD3	6:D:42:ASP:N	2.21	0.56
6:D:52:PRO:HG2	6:D:80:VAL:HG12	1.87	0.56
6:D:465:LEU:HD11	6:D:509:PRO:O	2.06	0.56
6:D:521:PRO:CB	6:D:524:LEU:HD13	2.26	0.56
6:D:1296:SER:HB2	6:N:47:GLU:CG	2.36	0.56
6:D:1297:GLU:HB2	6:N:47:GLU:O	2.05	0.56
4:K:174:VAL:HG22	4:K:201:THR:HG23	1.88	0.56
12:K:974:HOH:O	4:L:28:LEU:HD21	2.06	0.56
5:M:129:ILE:HG22	5:M:130:ASN:N	2.21	0.56
5:M:467:ILE:HD11	12:M:7162:HOH:O	2.06	0.56
1:X:13:DT:OP1	6:N:1096:ARG:NH2	2.38	0.56
4:A:146:ARG:HG3	12:A:338:HOH:O	2.05	0.56
4:A:156:HIS:HD2	4:A:157:GLY:H	1.54	0.56
4:B:40:LEU:HD21	12:B:392:HOH:O	2.05	0.56
5:C:564:MET:HA	5:C:567:GLN:OE1	2.05	0.56
5:C:976:ASP:CB	5:C:979:THR:HG22	2.35	0.56
6:D:102:ILE:HG21	6:D:583:ASP:HB3	1.87	0.56
6:D:770:LEU:HB2	12:D:9443:HOH:O	2.05	0.56
6:D:1476:THR:HB	12:D:9080:HOH:O	2.05	0.56
4:K:90:LEU:HD12	4:K:119:ASP:O	2.05	0.56
5:M:697:ARG:O	5:M:699:PHE:N	2.39	0.56
5:M:1005:MET:CE	6:N:724:GLN:HA	2.36	0.56
3:I:3:DA:H5"	12:I:1827:HOH:O	2.05	0.56
4:A:9:PRO:HB3	4:A:25:LEU:CG	2.36	0.56
4:A:89:PHE:HD1	4:A:120:VAL:HG23	1.70	0.56
6:D:204:LEU:HD22	6:D:441:ARG:HH12	1.71	0.56
6:D:562:ALA:HB1	6:D:567:ILE:CD1	2.34	0.56
6:D:773:ALA:CA	6:D:1228:SER:HB3	2.33	0.56
6:D:1118:ILE:HG13	6:D:1192:LEU:HB2	1.87	0.56
7:E:48:MET:N	7:E:54:LEU:HB2	2.21	0.56
4:K:50:GLY:O	4:K:146:ARG:HA	2.06	0.56
5:M:732:ALA:HA	5:M:735:ARG:NH1	2.21	0.56
5:M:767:PRO:HB2	12:M:7021:HOH:O	2.05	0.56
6:N:735:ALA:HB2	12:N:9048:HOH:O	2.06	0.56
6:N:996:TRP:CE2	6:N:1056:PRO:HG2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:59:GLU:HG2	4:B:139:ASN:ND2	2.21	0.55
5:C:192:PRO:HD2	5:C:195:LEU:HD23	1.87	0.55
6:D:480:GLU:O	6:D:484:PRO:HD2	2.05	0.55
6:D:989:TYR:CE1	6:D:993:LEU:HD21	2.41	0.55
6:D:1147:ARG:HB3	6:D:1188:VAL:HG21	1.87	0.55
6:D:1292:VAL:O	6:D:1303:TYR:HB2	2.06	0.55
5:M:80:GLN:HG3	12:M:7315:HOH:O	2.05	0.55
5:M:479:VAL:CG2	5:M:503:LEU:HD21	2.36	0.55
5:M:674:VAL:HG12	5:M:990:GLY:O	2.06	0.55
5:M:710:ILE:CB	5:M:790:LEU:HD22	2.34	0.55
6:N:65:ARG:HG3	6:N:66:GLN:H	1.71	0.55
6:N:945:SER:OG	6:N:947:ILE:HG23	2.06	0.55
1:X:22:DC:H4'	5:M:388:ARG:HD3	1.88	0.55
4:A:27:PRO:CB	4:A:186:LEU:HD11	2.35	0.55
5:C:35:PRO:HD2	12:C:1187:HOH:O	2.05	0.55
5:C:876:VAL:H	5:C:877:PRO:HD2	1.72	0.55
6:D:1093:TYR:CE1	6:D:1097:LYS:HE3	2.42	0.55
4:L:73:GLU:OE1	4:L:130:ALA:HA	2.06	0.55
5:M:510:ALA:HB3	5:M:513:VAL:HG23	1.87	0.55
6:N:6:ARG:O	6:N:1459:LEU:HG	2.07	0.55
6:N:571:LYS:O	6:N:574:LEU:HD23	2.06	0.55
6:N:1471:LEU:HD12	6:N:1472:ILE:N	2.16	0.55
2:H:8:C:H5'	12:H:1604:HOH:O	2.05	0.55
3:I:6:DC:OP1	6:D:1266:ARG:NH1	2.37	0.55
4:A:91:ASN:OD1	4:A:92:PRO:HD2	2.06	0.55
4:A:161:ARG:HB2	4:A:161:ARG:HH11	1.72	0.55
5:C:54:ILE:HG22	5:C:66:LEU:HB3	1.88	0.55
5:C:274:ARG:HB2	5:C:285:LEU:HD13	1.88	0.55
5:C:737:LEU:HD21	5:C:754:ILE:HG21	1.88	0.55
5:C:923:GLU:OE1	5:C:923:GLU:HA	2.06	0.55
6:D:550:ARG:HE	6:D:553:ARG:HH12	1.53	0.55
6:D:715:ALA:HB3	6:D:764:LEU:HA	1.86	0.55
6:D:1207:TYR:HB3	12:D:9158:HOH:O	2.07	0.55
7:E:54:LEU:HG	7:E:58:PRO:CG	2.35	0.55
4:K:49:PRO:HD2	4:K:213:GLN:OE1	2.07	0.55
4:K:146:ARG:HG2	12:K:602:HOH:O	2.05	0.55
6:N:405:ASP:HB2	6:N:423:ASP:OD1	2.06	0.55
6:N:1267:ARG:HG2	12:N:9241:HOH:O	2.04	0.55
6:N:1425:THR:HG22	6:N:1429:LEU:HD21	1.87	0.55
7:O:31:LEU:HA	7:O:35:PHE:HD1	1.72	0.55
1:G:23:DG:H5'	12:G:61:HOH:O	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:10:VAL:HG13	4:B:229:GLN:NE2	2.22	0.55
4:B:5:LYS:O	4:B:8:ALA:HB2	2.06	0.55
4:B:170:VAL:HG11	6:D:848:GLU:CD	2.32	0.55
5:C:276:LYS:O	5:C:280:LYS:HB2	2.06	0.55
5:C:290:LEU:HB3	5:C:302:VAL:HG12	1.89	0.55
5:C:375:SER:HA	12:C:1459:HOH:O	2.05	0.55
5:C:958:THR:HG23	5:C:961:GLU:HB2	1.87	0.55
6:D:133:ILE:O	6:D:152:LEU:CA	2.55	0.55
6:D:1496:GLU:CD	6:D:1500:LYS:HE3	2.31	0.55
4:K:40:LEU:O	4:K:44:LEU:HD12	2.06	0.55
5:M:880:MET:HE2	6:N:1034:GLN:HG2	1.86	0.55
6:N:433:GLY:HA3	6:N:447:VAL:O	2.06	0.55
6:N:433:GLY:HA2	6:N:449:SER:O	2.07	0.55
6:N:574:LEU:O	6:N:578:VAL:HG23	2.06	0.55
6:N:617:ASN:HB3	6:N:1467:ILE:HG23	1.88	0.55
6:N:847:ASP:O	6:N:851:LEU:HG	2.06	0.55
6:N:1063:GLU:HG2	6:N:1064:GLY:N	2.21	0.55
6:N:1290:LEU:HD11	12:N:9339:HOH:O	2.06	0.55
4:A:10:VAL:HG13	4:B:229:GLN:CD	2.32	0.55
4:B:67:THR:HB	4:B:74:ASP:OD1	2.06	0.55
5:C:224:GLU:HB2	12:C:1133:HOH:O	2.05	0.55
5:C:440:PRO:HD3	12:C:1247:HOH:O	2.06	0.55
6:D:473:LEU:H	6:D:473:LEU:HD12	1.70	0.55
6:D:1152:GLU:HG2	6:D:1160:LEU:O	2.07	0.55
7:E:67:GLU:HB3	7:E:73:LEU:HD11	1.88	0.55
4:L:123:MET:HE1	4:L:204:SER:HA	1.88	0.55
5:M:755:LEU:HD22	5:M:825:VAL:HG11	1.88	0.55
5:M:876:VAL:H	5:M:877:PRO:HD2	1.71	0.55
6:N:792:ILE:HA	6:N:861:GLN:NE2	2.21	0.55
6:N:799:LYS:O	6:N:826:PRO:HD2	2.06	0.55
6:N:955:VAL:HG11	6:N:1015:TYR:HE2	1.71	0.55
6:N:1240:THR:HB	6:N:1255:GLY:HA3	1.87	0.55
6:N:1464:GLU:HA	6:N:1467:ILE:HD12	1.87	0.55
2:Y:11:C:O2'	2:Y:12:G:H5''	2.06	0.55
3:Z:10:DA:H2'	12:Z:759:HOH:O	2.07	0.55
4:B:169:ALA:HB2	12:B:322:HOH:O	2.05	0.55
5:C:41:ASN:O	5:C:46:ALA:HB2	2.06	0.55
6:D:54:LYS:HE2	6:D:57:GLU:OE1	2.07	0.55
6:D:107:ASP:O	6:D:108:VAL:C	2.50	0.55
6:D:662:GLU:CD	6:D:669:ASN:HA	2.31	0.55
6:D:1176:LYS:O	6:D:1176:LYS:HD3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:516:ARG:CZ	5:M:521:PRO:HB3	2.37	0.55
5:M:537:LYS:HG3	5:M:905:ILE:HD13	1.88	0.55
5:M:1013:TYR:CE1	5:M:1020:PRO:HG3	2.42	0.55
6:N:31:THR:HA	6:N:44:LEU:HD11	1.88	0.55
6:N:414:ARG:HG2	6:N:451:ASP:OD1	2.06	0.55
6:N:421:LEU:HD21	6:N:429:SER:HB2	1.87	0.55
6:N:1047:LYS:HD2	6:N:1051:GLU:OE2	2.07	0.55
2:H:7:G:N3	2:H:7:G:H2'	2.22	0.55
4:B:29:GLU:HG3	12:B:324:HOH:O	2.07	0.55
4:B:99:LEU:HB3	4:B:114:PHE:CD2	2.41	0.55
5:C:118:ILE:HD12	5:C:118:ILE:O	2.06	0.55
5:C:796:GLU:HG3	5:C:1004:LYS:NZ	2.22	0.55
5:C:850:ALA:HA	6:D:632:VAL:HG13	1.89	0.55
5:C:1007:ALA:HB2	6:D:648:MET:HG3	1.88	0.55
6:D:676:MET:CE	6:D:684:LYS:H	2.18	0.55
6:D:820:GLU:HA	6:D:825:ALA:O	2.07	0.55
4:K:153:ALA:HA	4:K:156:HIS:NE2	2.22	0.55
4:L:105:GLY:HA3	12:L:1250:HOH:O	2.06	0.55
5:M:115:LEU:H	5:M:115:LEU:HD12	1.72	0.55
5:M:147:TYR:HB3	5:M:323:ASP:CB	2.37	0.55
5:M:301:GLU:O	5:M:305:PRO:HG2	2.07	0.55
5:M:601:GLY:O	5:M:648:ARG:HA	2.06	0.55
5:M:681:GLY:O	6:N:633:VAL:HG11	2.07	0.55
6:N:58:CYS:SG	6:N:59:ALA:N	2.80	0.55
6:N:97:THR:HG21	6:N:571:LYS:HD3	1.89	0.55
6:N:118:LEU:HD12	6:N:124:GLU:OE2	2.07	0.55
6:N:179:VAL:CG1	6:N:183:GLU:HB3	2.36	0.55
1:X:20:DG:H3'	12:X:665:HOH:O	2.06	0.55
4:A:27:PRO:HB3	4:A:186:LEU:HD11	1.89	0.55
4:B:78:ILE:HD11	4:B:130:ALA:HB2	1.89	0.55
5:C:405:ARG:HD3	5:C:566:THR:OG1	2.07	0.55
5:C:728:HIS:O	5:C:729:LEU:HG	2.07	0.55
5:C:754:ILE:HD13	5:C:791:ARG:CD	2.36	0.55
6:D:206:ARG:HH11	6:D:206:ARG:HG3	1.71	0.55
6:D:537:THR:OG1	6:D:541:ASN:ND2	2.39	0.55
6:D:619:LEU:HD12	6:D:621:LYS:CE	2.36	0.55
6:D:1297:GLU:C	6:N:52:PRO:HA	2.31	0.55
5:M:269:LEU:HB2	5:M:288:ARG:NE	2.22	0.55
5:M:498:GLN:HG2	6:N:1068:LEU:HD12	1.88	0.55
6:N:820:GLU:HA	6:N:825:ALA:O	2.07	0.55
6:N:955:VAL:N	6:N:1039:CYS:SG	2.79	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1256:LEU:O	6:N:1260:ILE:HG12	2.07	0.55
2:H:14:G:P	5:C:409:ARG:HH12	2.30	0.55
5:C:171:TRP:HB2	12:C:1250:HOH:O	2.06	0.55
5:C:312:ALA:HB2	12:C:1388:HOH:O	2.07	0.55
5:C:687:ALA:C	5:C:688:ILE:HD12	2.31	0.55
5:C:688:ILE:CD1	5:C:847:GLY:HA3	2.37	0.55
6:D:119:SER:N	6:D:123:LEU:HB2	2.22	0.55
6:D:143:ASN:ND2	6:D:145:VAL:H	2.04	0.55
6:D:400:VAL:HG22	6:D:443:VAL:HG21	1.88	0.55
6:D:675:ARG:HG3	6:D:678:GLU:OE2	2.07	0.55
6:D:1481:VAL:CG1	7:E:21:VAL:HG21	2.36	0.55
4:K:9:PRO:HB3	4:K:25:LEU:CG	2.37	0.55
5:M:564:MET:HG3	5:M:565:GLN:N	2.22	0.55
5:M:971:LYS:CD	5:M:986:PRO:HB2	2.37	0.55
6:N:397:LYS:O	6:N:448:GLU:HB2	2.07	0.55
6:N:531:ASP:C	6:N:533:GLY:H	2.14	0.55
6:N:762:GLN:HB3	12:N:9085:HOH:O	2.06	0.55
6:N:782:SER:H	6:N:785:ILE:HD13	1.71	0.55
6:N:1340:GLY:O	6:N:1343:ALA:HB3	2.07	0.55
4:A:221:HIS:HA	4:A:224:TYR:CD2	2.41	0.55
5:C:1102:LEU:HD11	6:D:9:ARG:HB3	1.89	0.55
6:D:829:VAL:H	6:D:835:SER:HB3	1.72	0.55
7:E:48:MET:HB2	7:E:54:LEU:HD12	1.89	0.55
4:K:116:PRO:HA	12:K:2457:HOH:O	2.06	0.55
5:M:1004:LYS:HD3	6:N:724:GLN:HE22	1.72	0.55
5:M:1046:ALA:HB1	6:N:1471:LEU:HD11	1.87	0.55
6:N:770:LEU:HD23	6:N:777:PRO:HA	1.89	0.55
6:N:996:TRP:CD2	6:N:1056:PRO:HG2	2.42	0.55
6:N:1003:VAL:O	6:N:1007:VAL:HG23	2.07	0.55
6:N:1292:VAL:HG23	6:N:1305:LEU:HD12	1.89	0.55
4:B:169:ALA:HB1	4:B:171:PHE:CE2	2.42	0.54
4:B:221:HIS:HA	4:B:224:TYR:HD2	1.71	0.54
5:C:102:HIS:HB2	5:C:106:GLY:O	2.06	0.54
5:C:205:GLU:HG3	5:C:206:THR:H	1.72	0.54
5:C:496:ILE:H	5:C:496:ILE:HD12	1.72	0.54
5:C:693:GLU:HG2	5:C:855:VAL:HB	1.89	0.54
6:D:659:LYS:HD3	6:D:659:LYS:O	2.07	0.54
6:D:1363:LEU:HD12	6:D:1363:LEU:O	2.08	0.54
7:E:51:LEU:HG	7:E:52:GLU:N	2.22	0.54
7:E:96:GLU:HA	12:E:120:HOH:O	2.07	0.54
5:M:190:LYS:HD2	12:M:7100:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:428:ARG:NH1	5:M:450:GLY:C	2.65	0.54
5:M:724:ARG:NH2	5:M:734:LEU:HB3	2.17	0.54
5:M:1096:ALA:C	6:N:13:ALA:HB2	2.32	0.54
6:N:135:LEU:HA	6:N:453:ASP:O	2.07	0.54
6:N:619:LEU:HD23	6:N:619:LEU:N	2.21	0.54
6:N:754:PHE:O	6:N:758:GLU:HG2	2.07	0.54
6:N:800:LYS:HD2	6:N:804:LEU:HD22	1.89	0.54
6:N:1462:LEU:HD22	6:N:1472:ILE:CG2	2.37	0.54
2:Y:11:C:H2'	2:Y:12:G:H8	1.70	0.54
2:Y:13:C:H4'	5:M:409:ARG:NH2	2.23	0.54
4:A:162:ILE:HD12	4:A:163:ASN:HD21	1.71	0.54
5:C:290:LEU:HD23	5:C:290:LEU:H	1.73	0.54
5:C:334:ARG:HD2	5:C:418:LEU:HD21	1.89	0.54
5:C:358:ARG:HA	5:C:361:MET:HB2	1.89	0.54
5:C:412:ALA:HB1	5:C:419:THR:OG1	2.07	0.54
5:C:636:ALA:CB	5:C:703:ILE:HD13	2.36	0.54
6:D:522:PRO:HA	6:D:525:ARG:HH11	1.71	0.54
6:D:734:GLU:HB2	12:D:9253:HOH:O	2.07	0.54
6:D:1114:THR:CG2	6:D:1195:GLN:HB3	2.37	0.54
7:E:26:ARG:O	7:E:30:LEU:HD12	2.07	0.54
4:K:46:SER:HB3	5:M:856:GLU:CD	2.32	0.54
4:K:186:LEU:HD11	4:K:192:LEU:HD22	1.88	0.54
4:L:159:LYS:H	4:L:159:LYS:HD3	1.71	0.54
5:M:150:PRO:HA	5:M:158:TYR:HB3	1.90	0.54
5:M:392:SER:C	5:M:393:GLN:HG3	2.33	0.54
5:M:537:LYS:HE2	5:M:905:ILE:HD13	1.87	0.54
5:M:952:LEU:HB3	5:M:966:LEU:CD1	2.37	0.54
5:M:1005:MET:HE1	6:N:724:GLN:HA	1.89	0.54
5:M:1051:GLU:HG2	5:M:1056:LYS:NZ	2.22	0.54
6:N:447:VAL:HG22	12:N:9019:HOH:O	2.06	0.54
6:N:510:GLU:O	6:N:513:ILE:HD12	2.07	0.54
6:N:584:ASN:OD1	6:N:590:PRO:HD2	2.07	0.54
7:O:54:LEU:HA	7:O:58:PRO:HG2	1.88	0.54
3:Z:3:DA:H2''	3:Z:4:DC:C5'	2.38	0.54
5:C:428:ARG:NH2	5:C:451:LEU:HD11	2.19	0.54
5:C:879:ARG:H	5:C:879:ARG:HD2	1.71	0.54
6:D:161:LEU:HD12	12:D:9475:HOH:O	2.07	0.54
6:D:562:ALA:HB3	12:D:9040:HOH:O	2.06	0.54
6:D:649:ALA:CB	6:D:720:LEU:HD11	2.37	0.54
6:D:1106:VAL:HG11	6:D:1474:ALA:HB1	1.89	0.54
4:K:107:LYS:HE2	4:K:113:ASP:OD2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:571:LEU:HD21	5:M:700:TYR:CD2	2.42	0.54
5:M:674:VAL:HG21	5:M:871:LEU:HD11	1.89	0.54
5:M:717:LEU:HD21	5:M:764:GLU:O	2.07	0.54
5:M:1057:SER:HB2	6:N:622:ARG:O	2.08	0.54
6:N:814:ALA:O	6:N:818:ARG:HG3	2.07	0.54
6:N:1082:ALA:O	8:N:8001:STD:H312	2.06	0.54
6:N:1280:VAL:HB	12:N:9324:HOH:O	2.06	0.54
6:N:1280:VAL:HG12	6:N:1281:VAL:N	2.22	0.54
6:N:1394:VAL:HG12	6:N:1397:LYS:H	1.72	0.54
6:N:1432:LYS:HE3	12:N:9166:HOH:O	2.07	0.54
2:Y:4:U:H2'	2:Y:5:C:C6	2.42	0.54
4:A:206:THR:HG22	4:A:209:GLU:H	1.72	0.54
5:C:142:ARG:HA	5:C:330:ASN:O	2.07	0.54
5:C:573:ARG:HB3	5:C:670:GLN:OE1	2.07	0.54
5:C:598:GLU:HB2	5:C:615:TYR:HE1	1.72	0.54
5:C:617:ASP:CG	5:C:619:ARG:HE	2.16	0.54
6:D:14:SER:OG	6:D:16:GLU:HG3	2.06	0.54
6:D:454:ALA:O	6:D:455:ARG:HG3	2.08	0.54
6:D:660:LYS:NZ	6:D:694:VAL:HG13	2.22	0.54
6:D:1034:GLN:O	6:D:1038:LEU:HD12	2.08	0.54
6:D:1298:GLY:N	6:N:47:GLU:CB	2.70	0.54
6:D:1365:ASP:O	6:D:1369:GLU:HG3	2.08	0.54
6:D:1384:PRO:HG3	6:D:1389:LEU:HA	1.89	0.54
4:K:24:VAL:HG22	4:K:196:THR:CG2	2.38	0.54
5:M:141:HIS:HB3	5:M:418:LEU:CG	2.37	0.54
5:M:496:ILE:N	5:M:496:ILE:HD12	2.23	0.54
6:N:481:MET:CE	6:N:1389:LEU:HB3	2.38	0.54
6:N:793:THR:HG21	6:N:906:GLN:HG2	1.89	0.54
6:N:844:ALA:HB3	6:N:848:GLU:OE2	2.08	0.54
6:N:1053:PHE:CZ	6:N:1072:ILE:HD12	2.43	0.54
4:A:20:TYR:HE2	4:A:198:ARG:HB3	1.73	0.54
4:A:52:ALA:HB2	4:A:170:VAL:O	2.08	0.54
4:B:217:ILE:HG23	12:B:341:HOH:O	2.07	0.54
5:C:302:VAL:O	5:C:305:PRO:HD2	2.07	0.54
5:C:374:ASN:O	5:C:377:PRO:HD2	2.07	0.54
5:C:379:GLU:O	5:C:383:ARG:HB3	2.08	0.54
5:C:516:ARG:CD	5:C:521:PRO:HA	2.29	0.54
6:D:470:LEU:HB2	6:D:503:LEU:HD21	1.88	0.54
6:D:1129:THR:HG23	6:D:1130:ARG:H	1.72	0.54
6:D:1275:SER:HB2	6:D:1294:VAL:HG21	1.90	0.54
4:K:32:PHE:HZ	4:L:47:SER:HG	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:174:VAL:HG13	4:K:200:TRP:O	2.07	0.54
4:L:47:SER:HB3	4:L:217:ILE:HD13	1.90	0.54
5:M:600:ASP:OD1	5:M:651:LYS:N	2.40	0.54
5:M:672:VAL:CG2	5:M:868:ASP:HB2	2.38	0.54
6:N:49:ILE:HA	12:N:9497:HOH:O	2.05	0.54
6:N:107:ASP:O	6:N:108:VAL:C	2.50	0.54
6:N:455:ARG:HD3	6:N:463:GLN:NE2	2.22	0.54
6:N:486:ARG:HA	6:N:489:ARG:CD	2.37	0.54
6:N:761:ILE:HD11	7:O:23:VAL:HG11	1.89	0.54
6:N:800:LYS:HA	12:N:9502:HOH:O	2.06	0.54
6:N:996:TRP:HE3	12:N:9282:HOH:O	1.91	0.54
4:B:86:VAL:HG21	4:B:202:ASP:OD2	2.07	0.54
4:B:213:GLN:O	4:B:217:ILE:HG13	2.08	0.54
5:C:185:LYS:CE	5:C:190:LYS:HE2	2.38	0.54
5:C:804:VAL:HB	5:C:824:ARG:HB2	1.90	0.54
5:C:861:LEU:HD23	5:C:863:ASP:N	2.23	0.54
6:D:6:ARG:C	6:D:1459:LEU:HD12	2.32	0.54
6:D:101:HIS:CE1	6:D:582:LEU:HD22	2.42	0.54
6:D:161:LEU:HG	6:D:449:SER:OG	2.07	0.54
6:D:409:VAL:HG23	6:D:421:LEU:HA	1.88	0.54
6:D:562:ALA:C	6:D:567:ILE:HD11	2.32	0.54
6:D:646:LYS:HA	6:D:720:LEU:HG	1.89	0.54
6:D:647:ARG:HE	6:D:723:GLY:N	2.05	0.54
6:D:652:LEU:HG	6:D:749:VAL:HG21	1.90	0.54
6:D:911:LEU:HD23	6:D:934:LEU:HD13	1.89	0.54
6:D:1147:ARG:O	6:D:1165:TYR:HA	2.08	0.54
12:D:9274:HOH:O	7:E:92:LEU:HD12	2.07	0.54
4:L:4:SER:HA	4:L:7:LYS:HZ3	1.73	0.54
5:M:233:GLU:HG2	12:M:7193:HOH:O	2.08	0.54
6:N:104:PHE:HB3	6:N:512:MET:HE3	1.89	0.54
6:N:1236:LEU:HD11	6:N:1361:VAL:HB	1.90	0.54
5:C:502:PRO:HB2	5:C:509:ALA:HB3	1.88	0.54
6:D:65:ARG:CG	6:D:66:GLN:H	2.20	0.54
6:D:148:GLU:CG	6:D:151:GLN:HE21	2.21	0.54
6:D:185:VAL:HG21	12:D:9157:HOH:O	2.07	0.54
6:D:470:LEU:HB2	6:D:503:LEU:HD11	1.89	0.54
6:D:895:VAL:O	6:D:899:LEU:HG	2.08	0.54
6:D:951:ILE:O	6:D:951:ILE:HD13	2.07	0.54
6:D:1042:ARG:HB2	6:D:1042:ARG:NH1	2.17	0.54
6:D:1440:PHE:O	6:D:1441:GLN:O	2.25	0.54
5:M:264:PRO:HB3	5:M:289:THR:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:474:VAL:HG23	5:M:478:VAL:C	2.32	0.54
5:M:802:ARG:HB3	5:M:802:ARG:CZ	2.38	0.54
5:M:861:LEU:HD21	5:M:925:TYR:CE2	2.42	0.54
6:N:1148:VAL:HG21	12:N:9462:HOH:O	2.07	0.54
6:N:1258:ARG:HG2	6:N:1262:LEU:HD13	1.90	0.54
6:N:1276:GLU:HB2	6:N:1301:LYS:HG2	1.89	0.54
6:N:1410:GLU:HG2	12:N:9214:HOH:O	2.08	0.54
1:X:14:DT:H6	1:X:14:DT:H5'	1.72	0.54
5:C:74:GLY:O	5:C:76:PRO:HD3	2.07	0.54
5:C:517:ARG:HH22	5:C:528:GLU:CD	2.16	0.54
6:D:96:ALA:CB	6:D:554:LEU:HD23	2.38	0.54
6:D:524:LEU:H	6:D:524:LEU:CD1	2.21	0.54
6:D:987:GLU:O	6:D:991:GLN:HB2	2.08	0.54
6:D:1041:LEU:HD12	6:D:1058:ARG:HA	1.89	0.54
6:D:1066:THR:HG23	6:D:1069:GLU:H	1.72	0.54
6:D:1197:ARG:HG3	6:D:1198:TYR:H	1.72	0.54
6:D:1240:THR:HB	6:D:1255:GLY:HA3	1.89	0.54
6:D:1378:TYR:OH	6:D:1431:THR:HA	2.08	0.54
4:K:218:LEU:HD11	4:L:218:LEU:HD21	1.89	0.54
5:M:546:LEU:C	5:M:581:THR:HG21	2.33	0.54
5:M:751:PRO:HB2	6:N:680:GLN:HG3	1.88	0.54
5:M:831:ARG:HH12	5:M:1004:LYS:HE3	1.73	0.54
6:N:204:LEU:HA	6:N:441:ARG:NH1	2.23	0.54
6:N:603:LEU:HA	6:N:606:ILE:HD12	1.90	0.54
6:N:631:ILE:HG21	6:N:745:MET:SD	2.47	0.54
6:N:656:PHE:HB3	6:N:694:VAL:HG11	1.90	0.54
6:N:1237:THR:CG2	6:N:1256:LEU:HB2	2.38	0.54
6:N:1422:MET:HE3	6:N:1426:LYS:HD3	1.89	0.54
2:H:8:C:H2'	2:H:9:G:N7	2.22	0.54
1:X:18:DG:H2''	1:X:19:DC:C5'	2.35	0.54
2:Y:8:C:H2'	2:Y:9:G:N7	2.22	0.54
5:C:290:LEU:HD23	5:C:290:LEU:N	2.22	0.54
5:C:346:VAL:O	5:C:350:ARG:HG3	2.07	0.54
5:C:1049:LEU:HD23	6:D:1472:ILE:HD11	1.89	0.54
6:D:441:ARG:NH2	6:D:445:ARG:NH2	2.56	0.54
6:D:502:PHE:CZ	6:D:1452:ILE:HG12	2.42	0.54
6:D:676:MET:CE	6:D:683:ILE:HA	2.38	0.54
6:D:1168:MET:HA	6:D:1168:MET:HE3	1.90	0.54
6:D:1276:GLU:HB2	6:D:1301:LYS:HG2	1.89	0.54
5:M:106:GLY:O	5:M:107:LEU:HD23	2.07	0.54
5:M:139:GLN:CG	5:M:418:LEU:HD22	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:598:GLU:O	5:M:651:LYS:HG3	2.08	0.54
5:M:762:LYS:HG2	5:M:786:LYS:CG	2.37	0.54
5:M:880:MET:HE2	6:N:1034:GLN:HE21	1.73	0.54
6:N:179:VAL:HG12	12:N:9033:HOH:O	2.08	0.54
6:N:433:GLY:HA2	6:N:449:SER:C	2.33	0.54
6:N:778:LEU:HD12	6:N:780:LYS:HE3	1.90	0.54
6:N:788:GLY:HA3	6:N:938:GLY:O	2.08	0.54
6:N:1103:HIS:HD2	6:N:1463:LYS:H	1.56	0.54
6:N:1236:LEU:CD2	6:N:1359:GLN:HB3	2.37	0.54
6:N:1237:THR:HG23	6:N:1256:LEU:HB2	1.90	0.54
6:N:1485:GLN:HB3	12:N:9440:HOH:O	2.06	0.54
4:A:18:ARG:O	4:A:207:PRO:HD3	2.08	0.54
5:C:56:GLU:HB2	5:C:64:LEU:HD23	1.88	0.54
5:C:140:ILE:O	5:C:418:LEU:HD23	2.08	0.54
5:C:462:ASP:CB	5:C:468:ARG:HD2	2.38	0.54
5:C:1018:GLN:OE1	5:C:1018:GLN:HA	2.06	0.54
6:D:119:SER:CB	6:D:123:LEU:HB2	2.36	0.54
6:D:133:ILE:O	6:D:152:LEU:HA	2.08	0.54
6:D:546:ARG:NH2	6:D:550:ARG:HH22	2.05	0.54
6:D:1398:TRP:HA	6:D:1398:TRP:HE3	1.71	0.54
4:K:29:GLU:HB2	4:K:32:PHE:CE1	2.43	0.54
4:K:89:PHE:HB3	4:K:94:LEU:HD22	1.90	0.54
4:L:36:LEU:O	4:L:39:PRO:HD2	2.07	0.54
5:M:198:ARG:HD3	5:M:228:ALA:HA	1.89	0.54
5:M:430:VAL:HG21	5:M:440:PRO:HB3	1.89	0.54
5:M:1047:HIS:NE2	6:N:1476:THR:HG21	2.22	0.54
6:N:957:PRO:HG3	6:N:1007:VAL:HA	1.90	0.54
5:C:146:VAL:CG2	5:C:162:ILE:HG12	2.36	0.53
5:C:428:ARG:NE	5:C:451:LEU:HD21	2.23	0.53
5:C:642:ARG:HG3	5:C:657:ASP:OD2	2.08	0.53
6:D:145:VAL:CG2	6:D:146:PRO:HD2	2.30	0.53
6:D:403:PHE:CE2	6:D:444:VAL:HG23	2.43	0.53
6:D:525:ARG:CB	6:D:538:SER:HB3	2.31	0.53
6:D:1040:GLY:O	6:D:1060:SER:HB3	2.08	0.53
6:D:1116:ASN:O	6:D:1193:THR:HB	2.08	0.53
5:M:625:LEU:O	5:M:627:ARG:N	2.41	0.53
5:M:984:GLU:HG2	6:N:944:THR:O	2.08	0.53
6:N:520:LEU:HG	6:N:521:PRO:HD2	1.89	0.53
6:D:165:LYS:CB	6:D:397:LYS:H	2.21	0.53
6:D:191:LEU:HD11	12:D:9157:HOH:O	2.07	0.53
6:D:1148:VAL:HG13	6:D:1163:GLY:HA2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1153:VAL:CG2	6:N:561:GLY:HA3	2.38	0.53
6:D:1194:CYS:HB3	6:D:1373:ARG:HH22	1.73	0.53
7:E:36:LYS:HZ3	7:E:45:ARG:HH22	1.55	0.53
4:K:109:VAL:HG23	4:K:132:LEU:HD13	1.89	0.53
5:M:190:LYS:CD	5:M:190:LYS:H	2.20	0.53
5:M:217:LEU:CD1	5:M:311:PHE:HA	2.38	0.53
5:M:889:HIS:CE1	6:N:951:ILE:H	2.20	0.53
6:N:28:LYS:O	6:N:43:GLY:HA2	2.09	0.53
6:N:133:ILE:CG1	6:N:456:MET:HB3	2.38	0.53
6:N:1236:LEU:HD21	6:N:1361:VAL:HG23	1.90	0.53
6:N:1273:VAL:HG21	6:N:1303:TYR:HB3	1.89	0.53
2:Y:6:U:C2'	2:Y:7:G:C8	2.85	0.53
2:Y:10:G:H2'	2:Y:11:C:H6	1.71	0.53
2:Y:16:G:H21	6:N:705:ALA:HB1	1.73	0.53
4:A:206:THR:HG22	4:A:209:GLU:CG	2.38	0.53
5:C:12:VAL:HG21	12:C:1386:HOH:O	2.08	0.53
5:C:927:GLY:HA2	5:C:930:LYS:CD	2.36	0.53
5:C:1053:LEU:HD11	6:D:1466:VAL:HG13	1.90	0.53
5:C:1054:THR:CG2	5:C:1059:ASP:HB2	2.35	0.53
6:D:1237:THR:OG1	6:D:1256:LEU:HB2	2.07	0.53
6:D:1281:VAL:CG1	6:D:1282:ARG:N	2.72	0.53
6:D:1326:THR:HG22	6:D:1327:ARG:H	1.72	0.53
7:E:36:LYS:NZ	7:E:45:ARG:HH12	2.06	0.53
7:E:54:LEU:HD23	7:E:54:LEU:O	2.07	0.53
4:K:5:LYS:O	4:K:8:ALA:HB2	2.09	0.53
5:M:274:ARG:NH1	5:M:285:LEU:H	2.06	0.53
5:M:302:VAL:C	5:M:305:PRO:HD2	2.34	0.53
5:M:341:THR:O	5:M:345:ARG:HG2	2.08	0.53
5:M:606:VAL:HG22	5:M:645:VAL:HG22	1.90	0.53
5:M:831:ARG:NH1	5:M:1004:LYS:HE3	2.24	0.53
6:N:10:ILE:O	6:N:1451:ALA:HA	2.09	0.53
6:N:699:VAL:HB	6:N:716:PHE:O	2.09	0.53
6:N:1114:THR:HG23	6:N:1114:THR:O	2.09	0.53
6:N:1145:TYR:HA	6:N:1171:VAL:HG21	1.88	0.53
2:H:8:C:O5'	2:H:8:C:H6	1.91	0.53
3:I:3:DA:H2''	3:I:4:DC:C5'	2.38	0.53
4:B:83:LYS:HZ3	4:B:168:ASP:CG	2.16	0.53
5:C:190:LYS:HB2	12:C:1145:HOH:O	2.07	0.53
5:C:274:ARG:NH1	5:C:285:LEU:HD22	2.23	0.53
5:C:436:GLY:HA2	5:C:538:GLN:O	2.08	0.53
6:D:648:MET:SD	6:D:726:ILE:HD11	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:658:LEU:HD22	6:D:673:ALA:HB3	1.90	0.53
6:D:1161:GLU:HG2	6:D:1164:ARG:HB2	1.90	0.53
6:D:1258:ARG:NE	6:D:1262:LEU:HD11	2.23	0.53
4:L:137:ARG:HH11	4:L:139:ASN:HB3	1.72	0.53
5:M:524:VAL:HG22	5:M:528:GLU:OE2	2.08	0.53
6:N:477:LEU:HD13	6:N:492:ALA:O	2.08	0.53
6:N:809:PRO:HB2	6:N:812:ALA:HB2	1.89	0.53
6:N:1236:LEU:HD21	6:N:1361:VAL:HB	1.90	0.53
6:N:1405:GLU:OE2	6:N:1413:THR:HB	2.08	0.53
6:N:1406:ARG:HB2	12:N:9309:HOH:O	2.08	0.53
6:N:1496:GLU:HA	6:N:1499:ARG:HG3	1.90	0.53
5:C:395:LYS:CE	5:C:407:LYS:HE2	2.38	0.53
5:C:501:THR:HG22	5:C:513:VAL:HG22	1.90	0.53
5:C:676:ILE:O	5:C:676:ILE:CG2	2.57	0.53
5:C:1016:ILE:H	5:C:1016:ILE:CD1	2.22	0.53
6:D:400:VAL:HG12	12:D:9188:HOH:O	2.09	0.53
6:D:662:GLU:OE2	6:D:669:ASN:HA	2.08	0.53
6:D:701:LEU:C	6:D:702:LEU:HD12	2.33	0.53
6:D:785:ILE:HG13	6:D:939:PHE:CE2	2.44	0.53
6:D:864:VAL:HG13	12:D:9335:HOH:O	2.08	0.53
6:D:950:GLY:H	6:D:953:ASP:HB2	1.73	0.53
6:D:1160:LEU:HD22	6:D:1164:ARG:NH1	2.23	0.53
6:D:1399:ASP:O	6:D:1403:LEU:HB2	2.09	0.53
12:D:9206:HOH:O	6:N:54:LYS:HB3	2.08	0.53
5:M:47:ALA:O	5:M:50:GLU:HB3	2.08	0.53
5:M:100:LEU:HD22	5:M:372:LEU:HD22	1.91	0.53
5:M:151:ASP:HB2	5:M:157:ARG:O	2.09	0.53
5:M:190:LYS:HD2	5:M:190:LYS:H	1.73	0.53
5:M:264:PRO:HB3	5:M:289:THR:CG2	2.38	0.53
5:M:747:ALA:C	5:M:799:ILE:HG22	2.32	0.53
6:N:454:ALA:O	6:N:455:ARG:HG3	2.07	0.53
6:N:475:LYS:CA	6:N:478:LEU:HG	2.35	0.53
4:A:100:LEU:HD23	4:A:101:LEU:N	2.23	0.53
4:B:127:LEU:HD12	4:B:128:HIS:H	1.74	0.53
5:C:65:VAL:CG2	5:C:101:ILE:HB	2.34	0.53
5:C:108:ILE:HB	5:C:368:THR:OG1	2.08	0.53
5:C:726:ILE:HD13	5:C:734:LEU:CD1	2.38	0.53
6:D:29:PRO:HA	12:D:9360:HOH:O	2.09	0.53
6:D:122:GLU:HG3	12:D:9139:HOH:O	2.08	0.53
6:D:200:ASP:O	6:D:397:LYS:HA	2.09	0.53
6:D:204:LEU:HD13	6:D:441:ARG:NH2	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:843:PHE:CZ	6:D:864:VAL:HG11	2.43	0.53
6:D:972:LEU:HD23	6:D:973:GLN:HG3	1.90	0.53
4:L:74:ASP:HB3	6:N:872:ARG:NH2	2.24	0.53
4:L:205:VAL:HG23	12:L:1413:HOH:O	2.07	0.53
4:L:218:LEU:O	4:L:222:LEU:HG	2.09	0.53
5:M:177:GLU:N	12:M:7250:HOH:O	2.40	0.53
5:M:535:SER:O	5:M:538:GLN:HG2	2.08	0.53
5:M:881:ASN:N	5:M:881:ASN:HD22	2.07	0.53
6:N:42:ASP:O	6:N:43:GLY:O	2.25	0.53
6:N:51:GLY:CA	6:N:86:ARG:HA	2.29	0.53
6:N:187:LYS:HD2	6:N:198:ARG:O	2.09	0.53
6:N:584:ASN:CG	6:N:590:PRO:HD2	2.34	0.53
6:N:819:GLY:HA3	12:N:9083:HOH:O	2.08	0.53
6:N:868:TYR:HB2	6:N:873:LEU:HD12	1.89	0.53
6:N:1103:HIS:CG	6:N:1104:GLU:N	2.77	0.53
1:X:11:DC:H5"	6:N:1442:ASN:ND2	2.24	0.53
5:C:444:PRO:HG2	5:C:452:ILE:CD1	2.39	0.53
5:C:647:GLN:OE1	5:C:649:VAL:HG13	2.09	0.53
5:C:966:LEU:HD11	5:C:986:PRO:CG	2.35	0.53
5:C:1003:ASP:CG	5:C:1004:LYS:N	2.66	0.53
5:C:1115:LEU:HD12	5:C:1115:LEU:N	2.23	0.53
6:D:701:LEU:HD21	6:D:763:MET:HE3	1.90	0.53
6:D:1118:ILE:HB	6:D:1190:SER:HB3	1.90	0.53
6:D:1487:VAL:HG21	7:E:79:LEU:HG	1.90	0.53
4:L:90:LEU:HD23	12:L:611:HOH:O	2.08	0.53
5:M:274:ARG:NH2	5:M:284:ARG:HG3	2.20	0.53
5:M:442:GLU:HG2	5:M:454:SER:HB2	1.91	0.53
5:M:499:ALA:HA	5:M:532:MET:CE	2.39	0.53
5:M:518:LYS:HB3	5:M:518:LYS:NZ	2.23	0.53
5:M:1016:ILE:HG21	6:N:524:LEU:O	2.09	0.53
5:M:1085:PHE:O	5:M:1089:VAL:HG23	2.08	0.53
6:N:165:LYS:CB	6:N:397:LYS:HB2	2.14	0.53
6:N:485:SER:HB2	12:N:9386:HOH:O	2.08	0.53
6:N:1101:VAL:HG21	6:N:1424:VAL:CG2	2.37	0.53
4:A:123:MET:HE3	4:A:203:GLY:C	2.34	0.53
4:A:132:LEU:CD1	4:A:138:LEU:HD23	2.39	0.53
4:B:32:PHE:O	4:B:36:LEU:HG	2.08	0.53
4:B:156:HIS:HE1	4:B:166:PRO:HB3	1.72	0.53
5:C:98:LEU:HD12	5:C:98:LEU:N	2.24	0.53
4:L:82:LEU:HB2	12:L:644:HOH:O	2.08	0.53
5:M:403:SER:OG	5:M:404:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:773:LEU:HD11	12:M:7309:HOH:O	2.07	0.53
6:N:471:GLU:O	6:N:475:LYS:HG3	2.08	0.53
6:N:784:ASP:HB3	6:N:939:PHE:CE2	2.44	0.53
6:N:1121:PRO:HG2	12:N:9073:HOH:O	2.09	0.53
6:N:1209:LEU:CD2	6:N:1211:MET:H	2.21	0.53
6:N:1219:GLU:HB2	7:O:17:TYR:HE2	1.74	0.53
6:N:1232:PRO:HB3	6:N:1361:VAL:CG2	2.32	0.53
7:O:40:LEU:HD21	7:O:67:GLU:HG2	1.91	0.53
5:C:244:PRO:CD	5:C:245:GLY:H	2.17	0.53
5:C:524:VAL:HG22	5:C:528:GLU:HB2	1.89	0.53
5:C:838:LYS:HB3	5:C:848:VAL:HG22	1.90	0.53
6:D:93:ILE:O	6:D:517:VAL:N	2.35	0.53
4:K:28:LEU:O	4:K:192:LEU:HD23	2.08	0.53
4:L:153:ALA:HA	4:L:156:HIS:NE2	2.23	0.53
5:M:626:ARG:HB3	5:M:629:TYR:HD1	1.74	0.53
5:M:851:LYS:CG	5:M:853:LEU:HD12	2.38	0.53
6:N:24:GLY:HA3	6:N:49:ILE:CG1	2.31	0.53
6:N:652:LEU:HG	12:N:9431:HOH:O	2.08	0.53
6:N:975:GLU:HA	12:N:9081:HOH:O	2.09	0.53
6:N:1314:LYS:HA	12:N:9270:HOH:O	2.08	0.53
5:C:401:LEU:CD2	5:C:565:GLN:HB2	2.39	0.53
5:C:745:ILE:H	5:C:745:ILE:HD12	1.73	0.53
5:C:1022:GLY:HA3	5:C:1026:GLN:O	2.09	0.53
6:D:111:LYS:HZ2	6:D:1448:THR:CG2	2.22	0.53
6:D:867:ARG:HD2	6:D:867:ARG:C	2.33	0.53
6:D:1277:ILE:HD12	6:D:1301:LYS:N	2.24	0.53
6:D:1350:GLU:O	6:D:1354:LYS:HG2	2.09	0.53
4:K:37:GLY:HA3	4:K:179:PHE:CD1	2.44	0.53
4:L:102:LYS:HG3	4:L:139:ASN:HB2	1.91	0.53
5:M:192:PRO:HB2	5:M:195:LEU:HB3	1.91	0.53
5:M:498:GLN:CG	6:N:1068:LEU:HD12	2.39	0.53
5:M:536:PRO:HA	12:M:7028:HOH:O	2.09	0.53
5:M:943:VAL:HG23	5:M:985:GLY:H	1.73	0.53
5:M:1030:GLN:OE1	6:N:628:ARG:HD3	2.08	0.53
6:N:101:HIS:CE1	6:N:103:TRP:HB2	2.43	0.53
6:N:767:HIS:HE1	7:O:2:ALA:HB1	1.72	0.53
6:N:1045:MET:O	6:N:1053:PHE:HD1	1.92	0.53
6:N:1327:ARG:HB3	6:N:1327:ARG:HH11	1.73	0.53
6:N:1381:VAL:O	6:N:1389:LEU:HD12	2.08	0.53
5:C:684:PHE:O	5:C:872:ASN:ND2	2.42	0.52
5:C:837:ASP:HA	5:C:999:HIS:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:1093:GLN:NE2	5:C:1098:ASP:HA	2.25	0.52
6:D:788:GLY:HA3	6:D:938:GLY:O	2.09	0.52
6:D:1470:ARG:HG2	6:D:1471:LEU:N	2.23	0.52
7:E:43:GLU:HG3	7:E:44:GLU:N	2.19	0.52
5:M:332:ARG:NH2	5:M:464:LEU:HD11	2.23	0.52
5:M:378:LEU:HB2	12:M:7272:HOH:O	2.08	0.52
5:M:438:ILE:CD1	5:M:467:ILE:HD12	2.39	0.52
5:M:890:LEU:HA	5:M:914:ILE:CD1	2.36	0.52
6:N:165:LYS:H	6:N:397:LYS:H	1.57	0.52
6:N:638:LYS:HA	6:N:932:ASP:OD1	2.09	0.52
6:N:703:ASN:ND2	6:N:704:ARG:N	2.57	0.52
6:N:887:ALA:HB1	6:N:893:GLU:HG3	1.91	0.52
6:N:1223:ILE:H	6:N:1223:ILE:CD1	2.21	0.52
6:N:1487:VAL:HB	7:O:74:VAL:HG23	1.89	0.52
2:H:4:U:O2'	2:H:5:C:H5'	2.09	0.52
1:X:13:DT:H72	12:X:1946:HOH:O	2.09	0.52
4:B:165:ILE:HB	12:B:376:HOH:O	2.09	0.52
5:C:113:VAL:HG11	5:C:373:VAL:HB	1.91	0.52
5:C:139:GLN:CD	5:C:415:PRO:HD2	2.34	0.52
5:C:160:ALA:O	5:C:173:ASP:HA	2.09	0.52
5:C:598:GLU:HB2	5:C:615:TYR:CE1	2.44	0.52
5:C:710:ILE:HG23	5:C:823:VAL:CG2	2.39	0.52
12:C:1176:HOH:O	6:D:520:LEU:HD11	2.08	0.52
6:D:1209:LEU:HD23	6:D:1210:SER:N	2.25	0.52
12:K:974:HOH:O	4:L:25:LEU:HD11	2.09	0.52
4:L:228:PRO:O	4:L:229:GLN:HG3	2.09	0.52
5:M:36:PRO:HB2	5:M:70:GLU:OE2	2.08	0.52
5:M:69:LEU:HD21	12:M:7033:HOH:O	2.09	0.52
5:M:191:PHE:HD2	5:M:195:LEU:HD23	1.74	0.52
6:N:792:ILE:HD13	6:N:793:THR:HG22	1.90	0.52
6:N:1003:VAL:O	6:N:1006:ALA:HB3	2.10	0.52
6:N:1085:ALA:C	8:N:8001:STD:H32	2.33	0.52
6:N:1101:VAL:CG2	6:N:1424:VAL:HG22	2.38	0.52
6:N:1495:ILE:HG12	7:O:80:VAL:CG1	2.40	0.52
2:H:7:G:C8	2:H:7:G:C5'	2.92	0.52
4:B:12:THR:OG1	4:B:24:VAL:HB	2.09	0.52
4:B:43:ILE:HG21	4:B:214:ALA:HA	1.91	0.52
4:B:83:LYS:HE3	4:B:168:ASP:HB2	1.90	0.52
4:B:156:HIS:CE1	4:B:166:PRO:HB3	2.45	0.52
5:C:317:VAL:HG22	5:C:320:HIS:CE1	2.44	0.52
5:C:328:LEU:HD11	5:C:434:HIS:CD2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:378:LEU:HG	5:C:382:ILE:CD1	2.40	0.52
5:C:836:GLY:HA3	6:D:724:GLN:HG2	1.91	0.52
6:D:510:GLU:O	6:D:513:ILE:HD12	2.09	0.52
6:D:568:ARG:HE	6:D:572:ARG:HG2	1.73	0.52
6:D:1396:GLU:O	6:D:1400:VAL:HG23	2.09	0.52
4:K:177:VAL:HG22	4:K:199:ILE:HG23	1.92	0.52
5:M:15:LEU:O	5:M:586:ARG:NH1	2.43	0.52
5:M:516:ARG:HG3	6:N:1068:LEU:HD13	1.91	0.52
5:M:557:ARG:HA	5:M:560:MET:HG3	1.89	0.52
5:M:732:ALA:HB1	5:M:735:ARG:NH2	2.24	0.52
5:M:1000:MET:HB3	5:M:1002:GLU:CG	2.39	0.52
12:M:7241:HOH:O	6:N:524:LEU:HD22	2.09	0.52
6:N:415:VAL:O	6:N:432:TYR:HA	2.10	0.52
6:N:525:ARG:HB2	6:N:538:SER:CB	2.31	0.52
6:N:654:LYS:HB3	6:N:655:PRO:HD3	1.92	0.52
6:N:658:LEU:HD13	6:N:670:VAL:HG12	1.91	0.52
6:N:728:LEU:HD23	6:N:740:PHE:CE2	2.43	0.52
6:N:1232:PRO:CB	6:N:1361:VAL:HG11	2.39	0.52
7:O:54:LEU:HG	7:O:58:PRO:HG2	1.91	0.52
7:O:65:MET:HB3	12:O:1688:HOH:O	2.10	0.52
7:O:72:ARG:HD3	12:O:2451:HOH:O	2.09	0.52
4:A:67:THR:HG23	5:C:627:ARG:NH2	2.24	0.52
5:C:115:LEU:HD22	5:C:373:VAL:CG1	2.31	0.52
5:C:146:VAL:HG11	5:C:281:LEU:HD13	1.92	0.52
5:C:164:PRO:HD2	5:C:170:PRO:O	2.09	0.52
5:C:247:PRO:HD2	5:C:250:ARG:CZ	2.39	0.52
5:C:304:LEU:HG	5:C:308:ARG:HD3	1.91	0.52
5:C:516:ARG:HG3	6:D:1068:LEU:HD13	1.90	0.52
5:C:675:ALA:HA	5:C:989:VAL:HG12	1.91	0.52
6:D:102:ILE:HA	12:D:9087:HOH:O	2.08	0.52
6:D:701:LEU:O	6:D:702:LEU:HD12	2.10	0.52
6:D:955:VAL:HA	12:D:9332:HOH:O	2.09	0.52
4:K:20:TYR:OH	4:K:198:ARG:HG2	2.09	0.52
4:K:186:LEU:CD1	4:K:192:LEU:HD22	2.39	0.52
6:N:115:LEU:HD22	6:N:502:PHE:HE1	1.74	0.52
6:N:771:SER:HB3	6:N:778:LEU:HD13	1.91	0.52
6:N:1237:THR:HG21	6:N:1256:LEU:HD22	1.91	0.52
6:N:1398:TRP:HZ3	6:N:1401:GLU:HG3	1.75	0.52
6:N:1472:ILE:O	6:N:1477:GLY:HA3	2.09	0.52
4:B:170:VAL:O	4:B:170:VAL:HG23	2.10	0.52
5:C:148:PHE:HB3	5:C:313:LEU:HD22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:151:ASP:OD1	5:C:152:PRO:HD2	2.10	0.52
5:C:173:ASP:O	5:C:184:MET:HA	2.10	0.52
5:C:228:ALA:HA	12:C:1266:HOH:O	2.09	0.52
5:C:654:LEU:HD21	12:C:1240:HOH:O	2.09	0.52
5:C:820:ARG:HB2	12:C:1252:HOH:O	2.08	0.52
6:D:434:ARG:HB3	6:D:434:ARG:HH11	1.73	0.52
6:D:631:ILE:HG21	6:D:745:MET:SD	2.50	0.52
6:D:1380:GLU:OE2	6:D:1390:LEU:HD23	2.09	0.52
7:E:62:THR:HA	7:E:65:MET:CE	2.26	0.52
4:L:58:ILE:HG21	4:L:68:ILE:HD11	1.92	0.52
4:L:98:THR:HG21	12:L:596:HOH:O	2.09	0.52
5:M:126:SER:HB3	5:M:407:LYS:NZ	2.25	0.52
5:M:333:ILE:HG21	12:M:7162:HOH:O	2.09	0.52
5:M:395:LYS:HE2	5:M:397:GLU:CG	2.39	0.52
1:G:13:DT:H2"	5:C:422:ARG:HH22	1.72	0.52
2:H:12:G:H8	2:H:12:G:C5'	2.16	0.52
4:A:189:ARG:NH2	4:B:155:LYS:HG2	2.24	0.52
4:B:212:ASN:HA	12:B:348:HOH:O	2.09	0.52
5:C:516:ARG:NE	6:D:1068:LEU:HD13	2.21	0.52
5:C:578:VAL:HG21	5:C:991:GLN:HB2	1.91	0.52
5:C:732:ALA:O	5:C:735:ARG:CZ	2.57	0.52
5:C:926:PHE:O	5:C:930:LYS:HG3	2.10	0.52
6:D:104:PHE:CE2	6:D:1448:THR:HG23	2.43	0.52
6:D:191:LEU:HD21	12:D:9157:HOH:O	2.09	0.52
6:D:1382:THR:HG21	6:D:1418:LYS:CE	2.36	0.52
5:M:15:LEU:HG	5:M:458:TYR:CZ	2.44	0.52
5:M:595:LEU:HG	5:M:655:LEU:HD12	1.92	0.52
6:N:1063:GLU:HG2	6:N:1064:GLY:H	1.74	0.52
6:N:1472:ILE:HG22	6:N:1474:ALA:N	2.15	0.52
4:A:23:PHE:CE2	4:A:199:ILE:HD12	2.45	0.52
4:A:218:LEU:O	4:A:222:LEU:HD13	2.10	0.52
5:C:89:THR:HA	5:C:129:ILE:O	2.10	0.52
5:C:146:VAL:HG11	5:C:281:LEU:CD1	2.40	0.52
5:C:751:PRO:HA	5:C:792:VAL:HB	1.92	0.52
5:C:796:GLU:HG3	5:C:1004:LYS:HZ1	1.74	0.52
5:C:981:GLU:HA	5:C:981:GLU:OE1	2.09	0.52
6:D:54:LYS:HG3	6:D:55:ASP:N	2.25	0.52
6:D:179:VAL:HG13	6:D:183:GLU:HB3	1.90	0.52
6:D:397:LYS:O	6:D:448:GLU:HB2	2.10	0.52
6:D:465:LEU:HD13	6:D:513:ILE:HD11	1.92	0.52
6:D:661:MET:HA	6:D:666:ILE:HD12	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:764:LEU:HD21	6:D:767:HIS:CE1	2.45	0.52
6:D:804:LEU:HD12	6:D:831:GLY:HA2	1.91	0.52
6:D:1194:CYS:HB3	6:D:1373:ARG:HH12	1.75	0.52
6:D:1298:GLY:HA2	6:N:53:ILE:H	1.75	0.52
6:D:1480:PHE:HB2	12:D:9337:HOH:O	2.10	0.52
7:E:74:VAL:HB	7:E:79:LEU:HD21	1.91	0.52
5:M:280:LYS:HE2	12:M:7317:HOH:O	2.09	0.52
5:M:281:LEU:CD1	5:M:306:THR:HA	2.40	0.52
5:M:882:LEU:HD11	6:N:1038:LEU:HB3	1.91	0.52
6:N:204:LEU:HG	6:N:394:LEU:O	2.10	0.52
6:N:1211:MET:HE1	6:N:1213:ARG:NH1	2.24	0.52
6:N:1465:ASN:OD1	6:N:1473:PRO:HG3	2.09	0.52
4:A:20:TYR:CE2	4:A:198:ARG:HB3	2.45	0.52
4:A:186:LEU:HG	12:A:364:HOH:O	2.10	0.52
5:C:169:GLY:HA2	5:C:263:ASP:HB3	1.91	0.52
5:C:724:ARG:O	5:C:734:LEU:HD11	2.10	0.52
6:D:114:THR:O	6:D:495:ARG:HG3	2.10	0.52
6:D:800:LYS:HD2	6:D:804:LEU:HD22	1.91	0.52
6:D:1275:SER:HB2	6:D:1294:VAL:CG2	2.40	0.52
6:D:1318:TYR:OH	6:N:42:ASP:HB2	2.10	0.52
11:D:5999:APC:H5'1	11:D:5999:APC:C8	2.37	0.52
4:K:67:THR:HG21	5:M:609:ASN:HD21	1.73	0.52
4:L:197:LEU:O	4:L:197:LEU:HD23	2.10	0.52
5:M:2:GLU:O	5:M:3:ILE:HD13	2.09	0.52
5:M:976:ASP:CB	5:M:979:THR:HG22	2.40	0.52
6:N:1481:VAL:HG13	7:O:18:ARG:HE	1.74	0.52
6:N:1495:ILE:HG12	7:O:80:VAL:HG11	1.92	0.52
4:A:167:VAL:HA	12:A:333:HOH:O	2.08	0.52
4:B:83:LYS:CE	4:B:168:ASP:HB2	2.40	0.52
5:C:198:ARG:HD3	12:C:1266:HOH:O	2.10	0.52
5:C:444:PRO:HG2	5:C:452:ILE:HG13	1.92	0.52
6:D:204:LEU:HD21	6:D:445:ARG:HD3	1.90	0.52
5:M:25:SER:OG	5:M:335:THR:HB	2.10	0.52
5:M:325:ILE:HG22	5:M:331:ARG:HH11	1.74	0.52
5:M:358:ARG:HG3	5:M:361:MET:HE2	1.91	0.52
5:M:367:LEU:HB3	5:M:371:LYS:HG2	1.92	0.52
5:M:473:ARG:HG3	5:M:474:VAL:N	2.24	0.52
5:M:1050:GLN:NE2	6:N:1471:LEU:N	2.57	0.52
6:N:591:VAL:CG1	6:N:597:ASP:HA	2.40	0.52
6:N:625:TYR:HB3	6:N:749:VAL:HG23	1.92	0.52
6:N:1330:ILE:HG22	6:N:1331:ASP:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1396:GLU:O	6:N:1400:VAL:HG23	2.09	0.52
6:N:1440:PHE:O	6:N:1441:GLN:O	2.28	0.52
7:O:41:GLU:HG3	7:O:42:PRO:HD3	1.90	0.52
7:O:57:ASP:H	7:O:58:PRO:HD3	1.74	0.52
4:A:101:LEU:HD23	4:A:102:LYS:N	2.24	0.52
4:A:132:LEU:HG	4:A:136:GLY:HA3	1.92	0.52
5:C:279:GLU:HG3	5:C:280:LYS:CD	2.37	0.52
5:C:580:MET:HB3	5:C:584:GLU:OE2	2.08	0.52
5:C:617:ASP:HB2	5:C:619:ARG:HD3	1.92	0.52
6:D:69:GLU:HB2	12:D:9407:HOH:O	2.09	0.52
6:D:438:ASP:HB3	6:D:445:ARG:HH22	1.74	0.52
6:D:470:LEU:CB	6:D:503:LEU:HD11	2.40	0.52
6:D:766:ALA:HA	12:D:9297:HOH:O	2.10	0.52
6:D:1240:THR:HG23	6:D:1253:THR:CB	2.30	0.52
6:D:1278:ASP:OD2	6:N:41:ARG:HA	2.10	0.52
7:E:17:TYR:O	7:E:21:VAL:HG23	2.10	0.52
4:K:176:ARG:NH1	5:M:865:THR:HB	2.24	0.52
5:M:163:ILE:HG13	5:M:163:ILE:O	2.10	0.52
5:M:176:VAL:C	5:M:178:PRO:HD3	2.35	0.52
5:M:310:LEU:O	5:M:314:THR:HG23	2.10	0.52
5:M:530:GLU:HB2	12:M:7105:HOH:O	2.09	0.52
6:N:491:LYS:HE2	6:N:495:ARG:HH12	1.72	0.52
4:A:71:VAL:HG22	4:A:132:LEU:CD1	2.39	0.51
4:B:50:GLY:HA3	4:B:171:PHE:O	2.10	0.51
5:C:278:GLU:HA	5:C:282:GLY:O	2.11	0.51
5:C:501:THR:HG22	5:C:513:VAL:CG2	2.40	0.51
6:D:185:VAL:HG13	6:D:189:GLN:NE2	2.25	0.51
6:D:660:LYS:HD3	6:D:694:VAL:HG22	1.91	0.51
6:D:897:TRP:HA	6:D:900:ILE:HG13	1.91	0.51
6:D:1232:PRO:HB3	6:D:1361:VAL:CG2	2.36	0.51
7:E:95:VAL:CG1	12:E:117:HOH:O	2.59	0.51
4:L:80:LEU:HD12	4:L:83:LYS:HZ2	1.74	0.51
4:L:124:ASN:OD1	4:L:127:LEU:HB2	2.10	0.51
5:M:52:PHE:O	5:M:54:ILE:N	2.43	0.51
5:M:83:CYS:HA	5:M:88:LEU:HD23	1.91	0.51
5:M:126:SER:CB	5:M:395:LYS:HZ2	2.22	0.51
5:M:160:ALA:O	5:M:173:ASP:HA	2.11	0.51
5:M:260:LEU:HA	5:M:291:ALA:HB2	1.92	0.51
6:N:139:GLY:O	6:N:147:VAL:HB	2.10	0.51
6:N:152:LEU:HD21	12:N:9148:HOH:O	2.10	0.51
6:N:581:LEU:HD23	6:N:581:LEU:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1087:ARG:HD2	6:N:1087:ARG:N	2.25	0.51
1:G:22:DC:H4'	5:C:388:ARG:HD2	1.92	0.51
4:B:106:PRO:HG3	4:B:134:GLU:CD	2.34	0.51
6:D:415:VAL:HG13	6:D:419:ASP:CB	2.38	0.51
4:L:1:MET:HE2	4:L:1:MET:N	2.25	0.51
4:L:159:LYS:HD3	4:L:159:LYS:N	2.25	0.51
5:M:164:PRO:HD2	5:M:170:PRO:O	2.10	0.51
5:M:194:VAL:HG21	5:M:221:LEU:HA	1.92	0.51
5:M:751:PRO:HA	5:M:792:VAL:CG1	2.40	0.51
5:M:798:GLY:H	5:M:827:VAL:HG11	1.76	0.51
5:M:863:ASP:O	5:M:865:THR:N	2.43	0.51
5:M:905:ILE:N	5:M:905:ILE:CD1	2.74	0.51
6:N:1440:PHE:C	6:N:1440:PHE:CD2	2.87	0.51
7:O:94:PRO:CG	12:O:1341:HOH:O	2.57	0.51
4:A:38:ASN:HB3	4:A:39:PRO:HD3	1.93	0.51
4:A:209:GLU:O	4:A:213:GLN:HG3	2.10	0.51
5:C:54:ILE:HG23	5:C:54:ILE:O	2.10	0.51
5:C:118:ILE:CG2	5:C:382:ILE:HD13	2.39	0.51
5:C:810:ASP:CB	5:C:813:VAL:HG13	2.39	0.51
6:D:50:PHE:C	6:D:86:ARG:HA	2.36	0.51
6:D:470:LEU:HD13	12:D:9127:HOH:O	2.10	0.51
6:D:606:ILE:O	6:D:613:ARG:N	2.40	0.51
6:D:860:LEU:HB2	6:D:861:GLN:NE2	2.25	0.51
6:D:902:LEU:HB3	12:D:9499:HOH:O	2.10	0.51
6:D:1414:PRO:HA	12:D:9161:HOH:O	2.08	0.51
4:L:94:LEU:HD21	4:L:119:ASP:OD1	2.11	0.51
6:N:607:LEU:HA	6:N:613:ARG:HB3	1.92	0.51
6:N:843:PHE:CE1	6:N:864:VAL:HG11	2.46	0.51
6:N:1011:PHE:HB3	6:N:1021:TYR:CD1	2.45	0.51
6:N:1094:LEU:HD13	6:N:1260:ILE:HD13	1.91	0.51
6:N:1106:VAL:HB	6:N:1108:ARG:NE	2.24	0.51
6:N:1114:THR:CG2	6:N:1195:GLN:HB2	2.41	0.51
2:H:11:C:O2'	2:H:12:G:H5''	2.10	0.51
5:C:73:LEU:HD12	5:C:73:LEU:O	2.10	0.51
5:C:80:GLN:O	5:C:83:CYS:HB2	2.11	0.51
5:C:129:ILE:HG12	5:C:386:PHE:O	2.09	0.51
5:C:517:ARG:HB3	12:C:1211:HOH:O	2.09	0.51
5:C:906:PHE:CD1	6:D:1067:VAL:HG22	2.46	0.51
5:C:960:GLU:HA	12:C:1124:HOH:O	2.09	0.51
5:C:1092:LEU:HD21	6:D:607:LEU:HD21	1.91	0.51
6:D:396:VAL:CB	6:D:447:VAL:HG12	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:619:LEU:HD23	6:D:619:LEU:N	2.26	0.51
6:D:929:ARG:HG2	12:D:9142:HOH:O	2.10	0.51
6:D:1145:TYR:CD2	6:D:1168:MET:SD	3.03	0.51
6:D:1300:SER:N	6:N:59:ALA:HB1	2.25	0.51
7:E:48:MET:CB	7:E:54:LEU:HB2	2.39	0.51
4:L:5:LYS:O	4:L:8:ALA:HB2	2.10	0.51
4:L:18:ARG:HD2	12:L:889:HOH:O	2.09	0.51
5:M:395:LYS:CE	5:M:403:SER:HB2	2.38	0.51
5:M:684:PHE:CE2	5:M:685:GLU:HB2	2.46	0.51
6:N:161:LEU:O	6:N:449:SER:HB2	2.10	0.51
6:N:702:LEU:HD23	6:N:745:MET:HE2	1.92	0.51
6:N:843:PHE:CD1	6:N:849:ALA:HA	2.45	0.51
6:N:1262:LEU:HD21	6:N:1351:GLU:HG3	1.91	0.51
4:A:7:LYS:HZ1	4:A:186:LEU:HD23	1.75	0.51
4:A:191:ASP:C	4:A:192:LEU:HG	2.36	0.51
5:C:267:TYR:HB2	5:C:272:ALA:HB1	1.93	0.51
5:C:472:ARG:CZ	5:C:532:MET:HE3	2.41	0.51
5:C:564:MET:HE1	5:C:840:ALA:O	2.09	0.51
5:C:753:ASP:HA	6:D:679:ARG:NH1	2.26	0.51
6:D:792:ILE:HD12	6:D:941:PHE:CE1	2.45	0.51
6:D:805:GLU:HB2	12:D:9063:HOH:O	2.10	0.51
6:D:1463:LYS:O	6:D:1467:ILE:HD12	2.10	0.51
6:D:1468:LEU:O	6:D:1468:LEU:HD23	2.10	0.51
4:K:222:LEU:HD21	4:L:215:VAL:O	2.10	0.51
4:L:101:LEU:HB2	4:L:114:PHE:CD2	2.46	0.51
5:M:146:VAL:HG22	5:M:162:ILE:HA	1.91	0.51
5:M:690:ILE:HG13	5:M:694:LEU:CD1	2.34	0.51
5:M:987:ILE:HD11	6:N:946:GLY:HA2	1.93	0.51
5:M:1059:ASP:HA	12:M:7288:HOH:O	2.10	0.51
6:N:50:PHE:O	6:N:89:ARG:HB2	2.10	0.51
6:N:130:SER:HB3	6:N:132:TYR:HE1	1.75	0.51
6:N:900:ILE:HG22	6:N:914:LEU:HD11	1.92	0.51
6:N:1276:GLU:OE2	6:N:1301:LYS:HE2	2.10	0.51
1:X:10:DG:H3'	6:N:586:ARG:HH21	1.76	0.51
5:C:31:GLN:NE2	5:C:71:TYR:OH	2.44	0.51
5:C:52:PHE:CE1	5:C:66:LEU:HG	2.45	0.51
5:C:198:ARG:HH21	5:C:203:ASP:HB3	1.76	0.51
6:D:415:VAL:O	6:D:432:TYR:HA	2.11	0.51
6:D:502:PHE:CD2	6:D:509:PRO:HD3	2.46	0.51
4:K:48:ILE:HD13	4:K:210:ALA:HB1	1.92	0.51
4:K:224:TYR:CD1	4:L:9:PRO:HD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:176:ARG:HH11	6:N:884:ARG:NH1	2.07	0.51
5:M:515:ALA:C	5:M:516:ARG:HG2	2.34	0.51
5:M:964:LYS:O	5:M:968:LEU:HG	2.11	0.51
6:N:796:ARG:HG3	6:N:828:LYS:HD2	1.93	0.51
6:N:1236:LEU:HD13	6:N:1356:TYR:HA	1.93	0.51
1:X:19:DC:H5''	5:M:1001:VAL:HG23	1.93	0.51
2:Y:16:G:H5'	12:Y:777:HOH:O	2.10	0.51
4:A:33:GLY:O	4:A:195:LEU:HD22	2.10	0.51
5:C:243:ARG:HG3	12:C:1426:HOH:O	2.11	0.51
5:C:630:ARG:HE	5:C:705:ILE:HG22	1.76	0.51
5:C:759:THR:HB	5:C:785:VAL:CG1	2.41	0.51
5:C:944:LEU:HD22	5:C:962:GLN:OE1	2.11	0.51
6:D:729:HIS:CE1	6:D:731:LEU:HB2	2.46	0.51
6:D:767:HIS:CD2	7:E:6:ILE:HG12	2.45	0.51
6:D:926:LYS:HA	6:D:929:ARG:HG3	1.93	0.51
6:D:956:ILE:HG12	6:D:1039:CYS:HA	1.93	0.51
6:D:1037:GLN:CG	6:D:1042:ARG:HB3	2.40	0.51
4:K:19:GLU:HB3	12:K:909:HOH:O	2.11	0.51
4:K:173:PRO:O	4:K:201:THR:HG22	2.10	0.51
5:M:29:ALA:O	5:M:44:ILE:HG12	2.11	0.51
5:M:496:ILE:HD12	5:M:496:ILE:H	1.76	0.51
5:M:545:ASN:HB3	5:M:583:LEU:HD22	1.93	0.51
5:M:552:HIS:HB3	6:N:1061:PHE:O	2.10	0.51
5:M:881:ASN:HD22	5:M:881:ASN:H	1.59	0.51
5:M:1094:ALA:O	6:N:518:PRO:HB2	2.11	0.51
6:N:1235:GLN:HG3	6:N:1236:LEU:N	2.24	0.51
6:N:1283:ILE:HG12	6:N:1311:LEU:CD1	2.41	0.51
2:H:10:G:H1'	12:H:505:HOH:O	2.10	0.51
5:C:300:ASP:OD2	5:C:303:PHE:HB2	2.10	0.51
5:C:433:THR:HG21	5:C:488:ALA:HB1	1.92	0.51
5:C:753:ASP:HA	6:D:679:ARG:CZ	2.41	0.51
6:D:133:ILE:CB	6:D:456:MET:HB3	2.41	0.51
6:D:637:LEU:HD11	6:D:642:CYS:CA	2.41	0.51
6:D:1117:TYR:CD1	6:D:1187:PRO:HA	2.46	0.51
6:D:1280:VAL:HA	6:D:1318:TYR:HA	1.92	0.51
6:D:1281:VAL:HB	6:D:1313:VAL:HG22	1.91	0.51
6:D:1313:VAL:HG21	6:D:1319:VAL:HG11	1.92	0.51
6:D:1366:LYS:O	6:D:1370:ILE:HG12	2.11	0.51
4:K:154:GLU:HB3	12:K:1920:HOH:O	2.10	0.51
5:M:290:LEU:HD13	12:M:7044:HOH:O	2.09	0.51
5:M:427:VAL:HB	5:M:428:ARG:HE	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1020:PRO:HD2	6:N:622:ARG:O	2.11	0.51
6:N:450:TYR:CG	6:N:451:ASP:N	2.79	0.51
6:N:460:ALA:O	6:N:464:LEU:HG	2.11	0.51
6:N:482:LYS:HD2	12:N:9158:HOH:O	2.10	0.51
6:N:686:GLU:HA	6:N:689:ASP:OD2	2.11	0.51
6:N:780:LYS:CD	6:N:912:LYS:HE2	2.41	0.51
6:N:1209:LEU:HD22	6:N:1211:MET:HB2	1.91	0.51
6:N:1236:LEU:HD22	6:N:1359:GLN:HB3	1.93	0.51
6:N:1425:THR:HG22	6:N:1429:LEU:CD2	2.39	0.51
1:X:14:DT:H5'	1:X:14:DT:C6	2.45	0.51
2:Y:5:C:O5'	2:Y:5:C:H6	1.94	0.51
4:A:56:VAL:HG21	4:A:82:LEU:HD12	1.92	0.51
4:B:211:LEU:O	4:B:215:VAL:HG13	2.10	0.51
5:C:95:TYR:CD2	5:C:114:PHE:HB3	2.45	0.51
5:C:254:VAL:HG13	12:C:1450:HOH:O	2.09	0.51
5:C:418:LEU:N	5:C:418:LEU:HD12	2.26	0.51
5:C:1050:GLN:HG2	12:C:1306:HOH:O	2.11	0.51
5:C:1106:ASP:CG	6:D:1456:LYS:HD3	2.36	0.51
6:D:409:VAL:HG11	6:D:435:VAL:HG21	1.93	0.51
6:D:647:ARG:HH21	6:D:723:GLY:H	1.58	0.51
6:D:922:LEU:HD23	12:D:9115:HOH:O	2.10	0.51
7:E:36:LYS:NZ	7:E:45:ARG:NH2	2.58	0.51
4:K:111:ALA:N	12:K:661:HOH:O	2.43	0.51
4:L:2:LEU:HD12	4:L:3:ASP:N	2.26	0.51
4:L:111:ALA:O	4:L:114:PHE:HD1	1.93	0.51
5:M:100:LEU:HD22	5:M:372:LEU:CD2	2.40	0.51
5:M:276:LYS:O	5:M:280:LYS:HB2	2.09	0.51
5:M:772:ARG:HA	12:M:7352:HOH:O	2.11	0.51
5:M:1111:ILE:HG13	5:M:1112:PHE:N	2.25	0.51
6:N:57:GLU:HG2	6:N:58:CYS:N	2.26	0.51
6:N:139:GLY:HA2	6:N:451:ASP:O	2.11	0.51
6:N:610:LYS:HA	6:N:615:ARG:NH2	2.26	0.51
6:N:911:LEU:O	6:N:915:VAL:HG23	2.11	0.51
6:N:1156:LEU:HD13	12:N:9239:HOH:O	2.11	0.51
6:N:1280:VAL:HG13	6:N:1317:ASP:O	2.11	0.51
6:N:1281:VAL:CG2	6:N:1319:VAL:HG11	2.39	0.51
5:C:328:LEU:HD12	5:C:328:LEU:N	2.25	0.51
5:C:611:ILE:HG13	5:C:625:LEU:HD21	1.92	0.51
5:C:835:VAL:HG13	6:D:725:SER:OG	2.11	0.51
5:C:1008:ARG:O	6:D:625:TYR:HA	2.11	0.51
6:D:679:ARG:HB2	6:D:682:ASP:CG	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1001:GLU:O	6:D:1004:THR:HB	2.09	0.51
6:D:1017:PHE:C	12:D:9167:HOH:O	2.54	0.51
5:M:427:VAL:CG1	5:M:428:ARG:HH21	2.23	0.51
5:M:1035:MET:HB3	6:N:707:THR:HB	1.92	0.51
6:N:18:ILE:HD13	6:N:21:TRP:CH2	2.46	0.51
6:N:36:THR:HB	6:N:38:LYS:HD3	1.92	0.51
6:N:710:ARG:CD	6:N:768:ASN:HD21	2.20	0.51
6:N:899:LEU:HD12	6:N:900:ILE:HG23	1.92	0.51
6:N:1012:GLU:OE1	6:N:1013:GLU:HG3	2.11	0.51
6:N:1357:ARG:HG2	12:N:9071:HOH:O	2.10	0.51
6:N:1409:ALA:HB1	12:N:9113:HOH:O	2.10	0.51
5:C:135:VAL:O	5:C:392:SER:HA	2.10	0.50
5:C:211:LEU:HD12	5:C:211:LEU:O	2.11	0.50
5:C:302:VAL:O	5:C:306:THR:HG23	2.12	0.50
5:C:760:SER:O	5:C:785:VAL:HG22	2.11	0.50
5:C:922:PHE:CZ	5:C:963:LEU:HB3	2.43	0.50
6:D:21:TRP:HA	12:D:9333:HOH:O	2.10	0.50
6:D:165:LYS:HD3	6:D:199:LEU:HD22	1.93	0.50
6:D:584:ASN:CG	6:D:590:PRO:HD2	2.36	0.50
6:D:988:ARG:HD3	6:D:992:ILE:HD11	1.93	0.50
6:D:1180:ALA:HB2	12:D:9058:HOH:O	2.12	0.50
6:D:1232:PRO:CB	6:D:1361:VAL:HG11	2.41	0.50
6:D:1318:TYR:HE2	6:N:42:ASP:OD1	1.94	0.50
5:M:193:LEU:O	5:M:197:LEU:HG	2.11	0.50
5:M:690:ILE:HG23	5:M:852:ILE:HA	1.92	0.50
5:M:961:GLU:HA	5:M:961:GLU:OE2	2.10	0.50
5:M:1043:TYR:CZ	6:N:710:ARG:HD3	2.47	0.50
6:N:924:MET:HB3	7:O:7:ASP:OD1	2.11	0.50
6:N:927:THR:O	6:N:930:LEU:HB3	2.11	0.50
6:N:994:GLN:NE2	6:N:994:GLN:HA	2.25	0.50
7:O:33:HIS:HB2	7:O:37:ASN:ND2	2.26	0.50
3:I:4:DC:H2''	3:I:5:DG:O5'	2.10	0.50
2:Y:16:G:H4'	6:N:743:ASP:OD2	2.11	0.50
4:B:92:PRO:HG3	12:B:332:HOH:O	2.11	0.50
4:B:103:ALA:O	4:B:138:LEU:HD23	2.10	0.50
4:B:143:ARG:CD	4:B:158:ILE:HG21	2.42	0.50
5:C:80:GLN:OE1	5:C:128:ILE:HD12	2.10	0.50
5:C:260:LEU:HA	5:C:291:ALA:HB2	1.92	0.50
5:C:356:ARG:HA	12:C:1263:HOH:O	2.11	0.50
5:C:403:SER:OG	5:C:404:LEU:N	2.42	0.50
5:C:464:LEU:O	5:C:466:PHE:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:578:VAL:HG11	5:C:991:GLN:CD	2.36	0.50
5:C:996:LYS:HA	12:C:1441:HOH:O	2.12	0.50
5:C:1034:GLU:CB	6:D:619:LEU:HD22	2.30	0.50
5:C:1056:LYS:O	6:D:624:ASP:HB2	2.11	0.50
5:C:1059:ASP:CG	5:C:1080:SER:HB3	2.35	0.50
6:D:119:SER:HB2	6:D:123:LEU:CB	2.35	0.50
6:D:477:LEU:O	6:D:481:MET:HB2	2.10	0.50
6:D:774:SER:C	6:D:776:GLU:H	2.19	0.50
6:D:1297:GLU:HA	6:N:78:VAL:HG22	1.92	0.50
6:D:1307:LYS:HG3	12:D:9301:HOH:O	2.12	0.50
6:D:1347:TYR:HD2	6:D:1348:LEU:HD22	1.75	0.50
6:D:1481:VAL:HG12	6:D:1481:VAL:O	2.11	0.50
5:M:437:ARG:HE	5:M:469:THR:HG22	1.76	0.50
6:N:67:ARG:HB2	12:N:9177:HOH:O	2.10	0.50
6:N:181:ASP:CB	6:N:441:ARG:HD3	2.41	0.50
6:N:409:VAL:CG2	6:N:421:LEU:HA	2.41	0.50
6:N:478:LEU:CD1	6:N:1388:ARG:HH21	2.19	0.50
6:N:581:LEU:O	6:N:603:LEU:HG	2.11	0.50
6:N:676:MET:HE1	6:N:684:LYS:H	1.76	0.50
6:N:1090:ASP:HB3	6:N:1256:LEU:CD2	2.40	0.50
6:N:1106:VAL:HG21	6:N:1462:LEU:HD21	1.93	0.50
6:N:1358:ALA:HB1	12:N:9142:HOH:O	2.12	0.50
6:N:1368:ILE:O	6:N:1372:VAL:HG12	2.10	0.50
4:B:104:GLU:HA	4:B:136:GLY:O	2.11	0.50
5:C:21:ILE:HG22	5:C:335:THR:HG22	1.92	0.50
5:C:120:LEU:CD2	5:C:121:MET:H	2.24	0.50
5:C:603:VAL:HG23	5:C:647:GLN:O	2.11	0.50
6:D:23:TYR:CD1	6:D:89:ARG:HG2	2.46	0.50
6:D:657:LEU:HB2	6:D:691:LEU:CD1	2.41	0.50
6:D:714:GLN:CD	6:D:765:SER:HA	2.36	0.50
6:D:789:LEU:HD13	6:D:911:LEU:HD21	1.94	0.50
6:D:1147:ARG:HH12	6:D:1190:SER:HB2	1.76	0.50
6:D:1346:ARG:HA	6:D:1346:ARG:HH11	1.76	0.50
4:K:10:VAL:HG12	4:K:12:THR:HG23	1.92	0.50
4:L:19:GLU:O	4:L:200:TRP:HA	2.11	0.50
5:M:1:MET:SD	5:M:900:ARG:NH1	2.84	0.50
5:M:32:ALA:HA	12:M:7240:HOH:O	2.10	0.50
6:N:143:ASN:HA	12:N:9476:HOH:O	2.10	0.50
6:N:402:PRO:HA	6:N:443:VAL:HG23	1.93	0.50
6:N:524:LEU:O	6:N:526:PRO:HD3	2.11	0.50
6:N:771:SER:CB	6:N:778:LEU:HD13	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:809:PRO:O	6:N:812:ALA:HB3	2.11	0.50
6:N:1353:GLN:HB3	6:N:1357:ARG:NE	2.26	0.50
8:N:8001:STD:H2O	12:N:9065:HOH:O	2.11	0.50
4:B:47:SER:CB	4:B:217:ILE:HD13	2.38	0.50
4:B:86:VAL:HG12	4:B:124:ASN:HB2	1.93	0.50
6:D:165:LYS:HG2	6:D:199:LEU:HD22	1.94	0.50
6:D:403:PHE:CE1	6:D:407:VAL:HG22	2.46	0.50
6:D:705:ALA:CB	6:D:706:PRO:HD3	2.41	0.50
6:D:761:ILE:HD11	7:E:23:VAL:HG11	1.92	0.50
6:D:993:LEU:HD22	6:D:1052:THR:HG23	1.94	0.50
6:D:1062:ARG:HG3	6:D:1062:ARG:NH1	2.26	0.50
6:D:1128:VAL:HG23	12:D:9178:HOH:O	2.11	0.50
6:D:1372:VAL:HA	6:D:1375:MET:HG3	1.93	0.50
5:M:136:ILE:HG21	5:M:336:VAL:HG13	1.93	0.50
5:M:278:GLU:HA	5:M:282:GLY:O	2.12	0.50
5:M:918:LEU:HD23	5:M:967:PHE:O	2.11	0.50
5:M:1041:GLU:OE1	6:N:1462:LEU:HB2	2.11	0.50
6:N:106:LYS:HB3	6:N:586:ARG:HD2	1.94	0.50
6:N:163:TYR:O	6:N:166:GLN:HG3	2.12	0.50
6:N:520:LEU:HD22	6:N:540:LEU:CD2	2.41	0.50
6:N:705:ALA:CB	6:N:706:PRO:HD3	2.41	0.50
6:N:962:GLN:HB3	6:N:966:GLU:OE1	2.11	0.50
6:N:1047:LYS:HG2	6:N:1053:PHE:CZ	2.46	0.50
6:N:1363:LEU:H	6:N:1363:LEU:CD2	2.23	0.50
5:C:52:PHE:O	5:C:54:ILE:N	2.45	0.50
5:C:95:TYR:HD2	5:C:114:PHE:HB3	1.77	0.50
5:C:674:VAL:HG12	5:C:990:GLY:O	2.11	0.50
6:D:96:ALA:HB2	6:D:555:LYS:HD2	1.94	0.50
6:D:112:ILE:O	6:D:116:LEU:HB2	2.12	0.50
6:D:112:ILE:HG13	6:D:124:GLU:OE2	2.10	0.50
6:D:450:TYR:CG	6:D:451:ASP:N	2.76	0.50
6:D:477:LEU:HD11	6:D:495:ARG:HG2	1.93	0.50
6:D:1062:ARG:HG3	6:D:1062:ARG:HH11	1.75	0.50
6:D:1087:ARG:HG3	6:D:1237:THR:HG23	1.93	0.50
6:D:1145:TYR:HA	6:D:1171:VAL:HG21	1.92	0.50
7:E:13:VAL:HA	12:E:116:HOH:O	2.12	0.50
4:K:15:THR:HG22	12:K:829:HOH:O	2.11	0.50
4:K:179:PHE:HB2	4:K:195:LEU:CD1	2.42	0.50
5:M:91:GLN:HB3	5:M:118:ILE:C	2.37	0.50
5:M:287:GLY:O	5:M:288:ARG:C	2.54	0.50
5:M:343:GLN:HG2	5:M:385:PHE:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:496:ILE:HA	5:M:531:PHE:O	2.11	0.50
5:M:744:ARG:N	12:M:7095:HOH:O	2.45	0.50
6:N:87:ARG:HB2	6:N:523:ASP:OD2	2.12	0.50
6:N:133:ILE:HB	6:N:153:LEU:O	2.11	0.50
6:N:771:SER:OG	6:N:778:LEU:HD13	2.11	0.50
6:N:1236:LEU:HD21	6:N:1361:VAL:H	1.75	0.50
1:X:18:DG:H5''	6:N:628:ARG:NH2	2.26	0.50
4:A:171:PHE:O	4:A:173:PRO:HD3	2.11	0.50
4:B:92:PRO:HA	4:B:146:ARG:CZ	2.41	0.50
5:C:216:GLU:OE1	5:C:217:LEU:HG	2.12	0.50
5:C:350:ARG:HG2	5:C:350:ARG:HH11	1.77	0.50
5:C:435:TYR:CE1	5:C:539:VAL:HG22	2.46	0.50
5:C:474:VAL:HG23	5:C:478:VAL:C	2.36	0.50
5:C:1030:GLN:HB2	6:D:626:SER:HB2	1.93	0.50
6:D:664:LYS:HG2	12:D:9090:HOH:O	2.11	0.50
6:D:706:PRO:HG2	11:D:5999:APC:C2	2.41	0.50
6:D:860:LEU:HA	6:D:877:PRO:HB2	1.94	0.50
6:D:912:LYS:HD2	6:D:913:ASP:OD2	2.12	0.50
6:D:1205:TYR:CZ	6:D:1366:LYS:HD3	2.47	0.50
6:D:1440:PHE:CD2	6:D:1441:GLN:N	2.80	0.50
6:D:1442:ASN:OD1	6:D:1444:THR:HB	2.12	0.50
7:E:25:LYS:O	7:E:28:GLN:HB2	2.10	0.50
4:K:48:ILE:HG23	4:K:213:GLN:OE1	2.11	0.50
4:L:18:ARG:O	4:L:207:PRO:HD3	2.12	0.50
4:L:104:GLU:HA	4:L:136:GLY:O	2.11	0.50
4:L:162:ILE:HG13	4:L:163:ASN:N	2.25	0.50
5:M:218:VAL:HA	5:M:221:LEU:HD23	1.93	0.50
5:M:751:PRO:HG3	5:M:796:GLU:HA	1.93	0.50
5:M:971:LYS:HB3	5:M:988:VAL:CG1	2.42	0.50
5:M:1005:MET:SD	6:N:724:GLN:HA	2.52	0.50
5:M:1018:GLN:OE1	5:M:1018:GLN:HA	2.11	0.50
6:N:493:ARG:CD	6:N:1390:LEU:HB2	2.41	0.50
6:N:1127:GLU:HB3	6:N:1133:ARG:CZ	2.41	0.50
1:G:18:DG:H5'	1:G:18:DG:C8	2.46	0.50
4:A:82:LEU:HD11	4:A:142:VAL:CG1	2.41	0.50
4:A:155:LYS:HA	4:A:155:LYS:HE3	1.92	0.50
5:C:47:ALA:O	5:C:50:GLU:HB3	2.11	0.50
5:C:119:PRO:HG2	5:C:386:PHE:CD2	2.47	0.50
5:C:176:VAL:HG23	12:C:1232:HOH:O	2.12	0.50
5:C:290:LEU:HD21	12:C:1356:HOH:O	2.12	0.50
5:C:342:ASP:HA	5:C:345:ARG:CZ	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:639:GLN:N	5:C:639:GLN:HE21	2.10	0.50
5:C:690:ILE:HG23	5:C:852:ILE:HA	1.93	0.50
5:C:910:LYS:H	5:C:913:GLU:HG3	1.77	0.50
6:D:6:ARG:HA	6:D:1470:ARG:NH1	2.26	0.50
6:D:98:PRO:C	6:D:458:ALA:HB3	2.37	0.50
6:D:481:MET:SD	6:D:493:ARG:HB2	2.52	0.50
6:D:1465:ASN:HD21	6:D:1470:ARG:HD3	1.77	0.50
4:L:80:LEU:HD12	4:L:83:LYS:NZ	2.27	0.50
4:L:143:ARG:NH2	4:L:158:ILE:HD12	2.26	0.50
5:M:328:LEU:HD22	5:M:433:THR:O	2.12	0.50
5:M:414:GLY:C	5:M:416:GLY:N	2.69	0.50
5:M:597:ALA:HB2	5:M:655:LEU:HD21	1.92	0.50
5:M:1103:ASP:CG	6:N:3:LYS:HZ1	2.19	0.50
6:N:1236:LEU:HD21	6:N:1361:VAL:CG2	2.42	0.50
6:N:1281:VAL:HA	6:N:1293:PHE:O	2.12	0.50
7:O:51:LEU:HG	7:O:53:GLY:H	1.76	0.50
1:G:14:DT:H5'	1:G:14:DT:C6	2.46	0.50
4:A:24:VAL:HG22	4:A:196:THR:CG2	2.41	0.50
5:C:601:GLY:O	5:C:648:ARG:HA	2.12	0.50
6:D:18:ILE:HG22	6:D:92:HIS:HB3	1.94	0.50
6:D:762:GLN:NE2	7:E:20:THR:HG21	2.26	0.50
6:D:989:TYR:HA	6:D:992:ILE:HD12	1.92	0.50
6:D:1101:VAL:HG21	6:D:1424:VAL:HG23	1.94	0.50
6:D:1102:THR:HG22	6:D:1222:GLY:CA	2.42	0.50
6:D:1369:GLU:HA	6:D:1372:VAL:HG12	1.93	0.50
6:D:1397:LYS:CE	6:D:1432:LYS:HZ1	2.24	0.50
5:M:50:GLU:CD	5:M:345:ARG:HH11	2.19	0.50
5:M:274:ARG:CB	5:M:285:LEU:HD13	2.41	0.50
5:M:474:VAL:HG23	5:M:478:VAL:O	2.12	0.50
5:M:703:ILE:H	5:M:703:ILE:CD1	2.15	0.50
5:M:756:VAL:HG23	5:M:825:VAL:HG21	1.93	0.50
6:N:820:GLU:HG3	6:N:836:VAL:CG1	2.40	0.50
4:B:30:ARG:NH1	4:B:30:ARG:HG2	2.27	0.50
4:B:201:THR:HG21	4:B:205:VAL:HG23	1.94	0.50
5:C:449:ILE:C	5:C:451:LEU:H	2.20	0.50
5:C:524:VAL:HG22	5:C:525:SER:H	1.77	0.50
6:D:510:GLU:OE2	6:D:510:GLU:N	2.44	0.50
6:D:1255:GLY:O	6:D:1258:ARG:N	2.44	0.50
6:D:1435:LEU:HG	6:D:1467:ILE:HD13	1.94	0.50
4:L:62:LEU:HA	4:L:163:ASN:CG	2.36	0.50
5:M:21:ILE:O	5:M:25:SER:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:118:ILE:O	5:M:118:ILE:HD12	2.12	0.50
5:M:242:LEU:HD23	5:M:243:ARG:H	1.75	0.50
5:M:728:HIS:NE2	5:M:775:ARG:NH2	2.60	0.50
6:N:31:THR:N	6:N:44:LEU:HD21	2.27	0.50
6:N:858:VAL:HG12	6:N:859:ASP:O	2.11	0.50
6:N:1115:THR:CG2	6:N:1151:ARG:HH21	2.23	0.50
6:N:1402:ALA:HB2	6:N:1415:VAL:CG2	2.41	0.50
6:N:1497:GLU:HB3	12:N:9257:HOH:O	2.11	0.50
2:H:13:C:OP1	5:C:452:ILE:HD13	2.11	0.49
2:Y:15:C:O2'	2:Y:16:G:H5'	2.11	0.49
3:Z:9:DG:H2''	3:Z:10:DA:C8	2.47	0.49
4:A:58:ILE:HD11	4:A:140:MET:HE2	1.93	0.49
4:A:74:ASP:OD1	4:A:76:VAL:HB	2.12	0.49
5:C:185:LYS:HD3	5:C:190:LYS:HG2	1.94	0.49
5:C:678:PRO:O	6:D:943:THR:HA	2.12	0.49
5:C:890:LEU:HD21	5:C:901:TYR:CD1	2.47	0.49
5:C:913:GLU:O	5:C:916:GLU:HB3	2.12	0.49
5:C:950:LEU:HB3	5:C:952:LEU:HD22	1.94	0.49
6:D:91:GLY:O	6:D:518:PRO:HA	2.12	0.49
6:D:1146:GLY:CA	6:D:1207:TYR:HB2	2.42	0.49
6:D:1442:ASN:CG	6:D:1444:THR:HB	2.37	0.49
4:K:197:LEU:CD2	4:K:199:ILE:HD11	2.42	0.49
4:L:57:TYR:CZ	4:L:161:ARG:HG2	2.46	0.49
5:M:139:GLN:OE1	5:M:415:PRO:HD2	2.12	0.49
5:M:285:LEU:HD12	12:M:7143:HOH:O	2.12	0.49
5:M:338:GLU:HA	5:M:341:THR:HG22	1.94	0.49
5:M:468:ARG:HE	5:M:487:THR:N	2.10	0.49
5:M:714:ASP:HB2	12:M:7055:HOH:O	2.12	0.49
6:N:192:ALA:HB1	6:N:193:PRO:HD2	1.94	0.49
6:N:789:LEU:HD13	6:N:934:LEU:HD22	1.94	0.49
6:N:957:PRO:CG	6:N:1007:VAL:HG22	2.42	0.49
6:N:999:THR:HG22	12:N:9282:HOH:O	2.11	0.49
6:N:1147:ARG:O	6:N:1165:TYR:HA	2.12	0.49
6:N:1346:ARG:HB2	6:N:1346:ARG:HH11	1.77	0.49
3:Z:6:DC:C3'	6:N:1266:ARG:NH2	2.68	0.49
4:A:41:ARG:HH11	4:A:41:ARG:HG3	1.76	0.49
4:B:109:VAL:HG12	4:B:129:ILE:HB	1.93	0.49
5:C:201:GLY:HA2	12:C:1283:HOH:O	2.11	0.49
5:C:904:PRO:CD	5:C:908:GLY:HA2	2.41	0.49
6:D:8:VAL:C	6:D:1434:TRP:HH2	2.21	0.49
6:D:163:TYR:HB3	6:D:434:ARG:NH2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:610:LYS:O	6:D:615:ARG:HG2	2.12	0.49
6:D:781:PRO:O	6:D:786:ILE:HD11	2.13	0.49
6:D:958:GLU:O	6:D:961:LYS:HG2	2.12	0.49
6:D:1184:GLN:HG2	12:D:9250:HOH:O	2.12	0.49
4:L:57:TYR:CE2	4:L:161:ARG:HG2	2.47	0.49
5:M:58:ASP:C	5:M:59:LYS:HG2	2.36	0.49
5:M:62:GLY:HA2	5:M:359:MET:HE2	1.94	0.49
5:M:1044:GLY:HA3	7:O:17:TYR:CD1	2.47	0.49
5:M:1088:LEU:CD2	5:M:1092:LEU:HD12	2.42	0.49
5:M:1103:ASP:CG	5:M:1104:GLU:N	2.70	0.49
6:N:455:ARG:HB3	6:N:459:GLU:CD	2.37	0.49
6:N:598:ARG:HH11	6:N:598:ARG:HB3	1.76	0.49
1:G:15:DC:H5''	5:C:1035:MET:SD	2.53	0.49
2:Y:7:G:C8	2:Y:7:G:C5'	2.95	0.49
5:C:167:LYS:N	12:C:1362:HOH:O	2.46	0.49
5:C:861:LEU:HD13	5:C:865:THR:OG1	2.12	0.49
6:D:14:SER:OG	6:D:17:LYS:HB2	2.12	0.49
6:D:54:LYS:CG	6:D:57:GLU:HB3	2.42	0.49
6:D:190:GLU:HG2	6:D:196:VAL:HG22	1.94	0.49
6:D:615:ARG:HG3	6:D:619:LEU:HG	1.94	0.49
6:D:1310:ARG:HG3	6:D:1327:ARG:HD3	1.94	0.49
6:D:1312:LEU:HG	6:D:1327:ARG:CZ	2.41	0.49
6:D:1397:LYS:NZ	6:D:1432:LYS:NZ	2.59	0.49
6:D:1472:ILE:O	6:D:1477:GLY:HA3	2.13	0.49
7:E:54:LEU:HA	7:E:58:PRO:CG	2.43	0.49
4:K:39:PRO:O	4:K:43:ILE:HG12	2.12	0.49
4:K:111:ALA:O	4:K:114:PHE:HD1	1.96	0.49
4:L:20:TYR:OH	4:L:198:ARG:HD3	2.12	0.49
4:L:99:LEU:HD13	4:L:144:VAL:CG2	2.42	0.49
5:M:195:LEU:HD21	5:M:238:LEU:HG	1.93	0.49
5:M:374:ASN:O	5:M:377:PRO:HD2	2.11	0.49
6:N:141:ILE:HD11	6:N:448:GLU:CD	2.37	0.49
6:N:777:PRO:O	6:N:780:LYS:HE3	2.12	0.49
6:N:900:ILE:HG21	12:N:9373:HOH:O	2.12	0.49
6:N:959:GLU:HA	6:N:962:GLN:OE1	2.12	0.49
6:N:1103:HIS:CD2	6:N:1463:LYS:H	2.29	0.49
6:N:1353:GLN:HA	6:N:1353:GLN:HE21	1.77	0.49
5:C:572:ILE:HG13	5:C:573:ARG:N	2.27	0.49
5:C:1023:GLY:HA2	12:C:1137:HOH:O	2.11	0.49
5:C:1066:ALA:O	5:C:1070:ILE:HG13	2.11	0.49
6:D:5:VAL:CG2	6:D:1468:LEU:HD21	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:403:PHE:CD2	6:D:444:VAL:HG23	2.48	0.49
6:D:764:LEU:HD12	6:D:766:ALA:N	2.28	0.49
6:D:1093:TYR:CZ	6:D:1097:LYS:HE3	2.47	0.49
7:E:4:PRO:HA	12:E:128:HOH:O	2.12	0.49
7:E:34:GLY:HA2	12:E:117:HOH:O	2.13	0.49
5:M:35:PRO:HB2	5:M:37:GLU:HG3	1.94	0.49
5:M:139:GLN:HE21	5:M:334:ARG:CD	2.26	0.49
5:M:218:VAL:HG22	5:M:221:LEU:CD2	2.43	0.49
5:M:414:GLY:O	5:M:416:GLY:N	2.45	0.49
6:N:10:ILE:HD12	6:N:1450:ALA:HB3	1.95	0.49
6:N:23:TYR:HB3	12:N:9497:HOH:O	2.13	0.49
6:N:133:ILE:HA	6:N:456:MET:HA	1.95	0.49
6:N:137:PRO:HD2	6:N:453:ASP:CG	2.37	0.49
6:N:190:GLU:HG2	6:N:196:VAL:HG22	1.94	0.49
6:N:470:LEU:HG	12:N:9059:HOH:O	2.12	0.49
6:N:694:VAL:HG22	12:N:9248:HOH:O	2.12	0.49
6:N:1129:THR:HG23	6:N:1130:ARG:N	2.25	0.49
6:N:1371:VAL:HG12	6:N:1375:MET:HE3	1.94	0.49
4:B:159:LYS:H	4:B:159:LYS:NZ	2.10	0.49
5:C:442:GLU:HG2	5:C:454:SER:OG	2.12	0.49
5:C:632:ASN:HB2	5:C:633:GLN:HE21	1.77	0.49
5:C:666:LEU:HG	5:C:668:LEU:HD11	1.94	0.49
5:C:890:LEU:HD23	5:C:890:LEU:C	2.37	0.49
6:D:115:LEU:HD12	6:D:115:LEU:O	2.12	0.49
6:D:919:PHE:HE2	6:D:1212:ALA:HB2	1.78	0.49
6:D:1080:GLY:O	6:D:1084:THR:HG23	2.11	0.49
6:D:1097:LYS:HG2	6:D:1440:PHE:HE1	1.77	0.49
6:D:1161:GLU:CD	6:D:1164:ARG:HB2	2.37	0.49
4:K:1:MET:O	4:K:6:LEU:HD22	2.11	0.49
4:L:75:VAL:O	4:L:79:ILE:HG23	2.12	0.49
5:M:217:LEU:HD11	5:M:314:THR:OG1	2.12	0.49
5:M:689:VAL:HG23	5:M:870:ILE:O	2.13	0.49
5:M:853:LEU:HD22	5:M:858:MET:HB3	1.94	0.49
5:M:1110:ASP:HB2	12:M:7031:HOH:O	2.11	0.49
6:N:133:ILE:O	6:N:152:LEU:CA	2.61	0.49
6:N:774:SER:C	6:N:776:GLU:H	2.21	0.49
6:N:827:ILE:O	6:N:837:GLY:HA3	2.12	0.49
6:N:1213:ARG:NH2	7:O:10:PHE:HB3	2.19	0.49
4:B:206:THR:HG23	4:B:209:GLU:H	1.77	0.49
5:C:139:GLN:O	5:C:333:ILE:HA	2.13	0.49
5:C:185:LYS:CD	5:C:190:LYS:HG2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:254:VAL:HA	5:C:257:VAL:HG23	1.94	0.49
5:C:260:LEU:HD12	5:C:260:LEU:O	2.12	0.49
5:C:597:ALA:CB	5:C:655:LEU:HD21	2.38	0.49
5:C:713:ARG:O	5:C:720:GLU:HG3	2.13	0.49
5:C:860:HIS:CD2	5:C:975:TYR:HB2	2.48	0.49
5:C:1005:MET:SD	6:D:724:GLN:HA	2.52	0.49
5:C:1008:ARG:NH1	6:D:624:ASP:OD2	2.45	0.49
6:D:37:LEU:HD22	6:D:535:PHE:CZ	2.46	0.49
6:D:165:LYS:HG2	6:D:199:LEU:CB	2.43	0.49
6:D:506:GLY:O	6:D:507:ASN:C	2.55	0.49
6:D:868:TYR:CG	6:D:869:MET:N	2.80	0.49
6:D:970:LYS:HA	6:D:973:GLN:NE2	2.26	0.49
6:D:1275:SER:HB2	6:D:1294:VAL:HG11	1.95	0.49
4:K:42:ARG:HH12	4:L:34:VAL:CG1	2.26	0.49
5:M:626:ARG:H	5:M:639:GLN:NE2	1.95	0.49
5:M:798:GLY:H	5:M:827:VAL:CG1	2.25	0.49
5:M:1008:ARG:HG3	5:M:1028:GLY:N	2.24	0.49
5:M:1092:LEU:HA	5:M:1095:LEU:CD1	2.42	0.49
5:M:1108:PRO:HG3	12:M:7061:HOH:O	2.12	0.49
6:N:51:GLY:C	6:N:86:ARG:HB2	2.38	0.49
6:N:136:ASP:HB3	6:N:137:PRO:CD	2.38	0.49
6:N:415:VAL:HG13	6:N:419:ASP:CB	2.43	0.49
6:N:506:GLY:O	6:N:507:ASN:C	2.56	0.49
6:N:598:ARG:HB3	6:N:598:ARG:NH1	2.28	0.49
6:N:829:VAL:O	6:N:835:SER:HB2	2.11	0.49
6:N:1364:HIS:CE1	6:N:1366:LYS:HG3	2.48	0.49
4:A:58:ILE:HG21	4:A:68:ILE:CD1	2.40	0.49
5:C:244:PRO:HD2	5:C:245:GLY:N	2.19	0.49
5:C:517:ARG:HH11	5:C:522:VAL:HG11	1.77	0.49
6:D:185:VAL:HG22	6:D:189:GLN:NE2	2.27	0.49
6:D:660:LYS:CG	6:D:694:VAL:HG22	2.42	0.49
6:D:737:ASN:ND2	11:D:5999:APC:O3'	2.46	0.49
6:D:875:THR:HG23	6:D:879:ARG:HE	1.78	0.49
4:K:42:ARG:HH12	4:L:34:VAL:CB	2.25	0.49
5:M:126:SER:HB3	5:M:407:LYS:HZ3	1.78	0.49
5:M:205:GLU:HA	5:M:209:ARG:NH2	2.27	0.49
5:M:516:ARG:CD	6:N:1068:LEU:HD13	2.43	0.49
5:M:551:GLU:HG2	5:M:906:PHE:HA	1.94	0.49
6:N:52:PRO:HG2	6:N:80:VAL:HG13	1.94	0.49
6:N:162:ARG:HH22	6:N:414:ARG:CZ	2.25	0.49
6:N:201:GLY:HA3	6:N:396:VAL:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:525:ARG:HG2	6:N:541:ASN:ND2	2.26	0.49
6:N:575:GLN:CA	6:N:575:GLN:HE21	2.25	0.49
6:N:619:LEU:HB2	6:N:621:LYS:HD3	1.94	0.49
6:N:814:ALA:HB2	12:N:9131:HOH:O	2.13	0.49
4:A:156:HIS:CD2	4:A:157:GLY:H	2.30	0.49
6:D:169:TYR:CE1	6:D:197:SER:HA	2.47	0.49
6:D:591:VAL:HB	12:D:9428:HOH:O	2.11	0.49
6:D:700:VAL:HG22	6:D:718:PRO:HG3	1.94	0.49
6:D:764:LEU:CD1	6:D:766:ALA:HB3	2.43	0.49
6:D:781:PRO:HG2	6:D:911:LEU:HD23	1.95	0.49
5:M:59:LYS:HG3	12:M:7296:HOH:O	2.13	0.49
5:M:143:SER:O	5:M:144:PRO:C	2.55	0.49
5:M:676:ILE:O	5:M:676:ILE:CG2	2.60	0.49
5:M:838:LYS:H	5:M:838:LYS:HD2	1.78	0.49
6:N:119:SER:H	6:N:123:LEU:HB2	1.77	0.49
6:N:864:VAL:HG12	6:N:865:THR:H	1.77	0.49
6:N:1109:GLU:HG2	6:N:1202:GLN:H	1.77	0.49
6:N:1114:THR:HG21	6:N:1195:GLN:HB2	1.94	0.49
6:N:1253:THR:HG22	6:N:1358:ALA:HB1	1.95	0.49
4:B:99:LEU:HD22	4:B:144:VAL:CG2	2.40	0.49
5:C:89:THR:O	5:C:91:GLN:HG3	2.13	0.49
5:C:100:LEU:HD12	5:C:101:ILE:N	2.28	0.49
5:C:174:LEU:HG	5:C:184:MET:SD	2.53	0.49
5:C:335:THR:O	5:C:339:LEU:HD12	2.13	0.49
5:C:949:LYS:HZ2	6:D:796:ARG:NH2	2.10	0.49
6:D:181:ASP:O	6:D:441:ARG:HD3	2.13	0.49
6:D:396:VAL:HG23	6:D:398:ALA:HB3	1.95	0.49
6:D:1086:LEU:HB3	6:D:1087:ARG:NH1	2.28	0.49
4:K:44:LEU:HA	4:K:48:ILE:CD1	2.43	0.49
4:L:72:LYS:HB2	12:L:1676:HOH:O	2.12	0.49
5:M:328:LEU:HD21	5:M:434:HIS:HA	1.94	0.49
5:M:440:PRO:HA	6:N:1078:ARG:NH2	2.28	0.49
5:M:549:PHE:HB3	5:M:552:HIS:CD2	2.48	0.49
6:N:129:PHE:HZ	12:N:9171:HOH:O	1.95	0.49
6:N:704:ARG:HB2	6:N:736:PHE:HD2	1.77	0.49
6:N:845:ASN:HB3	6:N:848:GLU:HG3	1.93	0.49
7:O:54:LEU:HD21	12:O:1249:HOH:O	2.12	0.49
1:G:16:DG:OP1	6:D:621:LYS:HE2	2.13	0.49
2:H:2:A:H2'	2:H:3:G:O5'	2.13	0.49
2:H:7:G:C8	2:H:7:G:H5''	2.47	0.49
4:A:43:ILE:HG21	4:A:214:ALA:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:23:PHE:O	4:B:196:THR:HA	2.12	0.49
5:C:718:GLY:HA2	12:C:1333:HOH:O	2.12	0.49
5:C:732:ALA:HA	5:C:735:ARG:NH1	2.28	0.49
5:C:886:LEU:HD13	6:D:951:ILE:HG13	1.95	0.49
6:D:19:ARG:O	6:D:22:SER:HB3	2.13	0.49
6:D:47:GLU:OE2	6:D:53:ILE:HB	2.13	0.49
6:D:465:LEU:HD21	6:D:509:PRO:O	2.12	0.49
6:D:1111:ASP:CB	6:D:1203:LYS:HE3	2.37	0.49
7:E:95:VAL:HG11	12:E:117:HOH:O	2.13	0.49
4:L:173:PRO:HA	4:L:202:ASP:OD2	2.13	0.49
5:M:103:LYS:HB2	12:M:7017:HOH:O	2.12	0.49
5:M:143:SER:O	5:M:145:GLY:N	2.46	0.49
5:M:244:PRO:HD2	5:M:245:GLY:H	1.77	0.49
5:M:272:ALA:HB1	12:M:7209:HOH:O	2.13	0.49
5:M:517:ARG:CZ	5:M:522:VAL:HG11	2.43	0.49
5:M:744:ARG:HG3	5:M:747:ALA:HB2	1.94	0.49
5:M:750:LYS:HB2	6:N:681:ARG:HD3	1.95	0.49
5:M:780:GLU:HG3	5:M:781:LYS:N	2.26	0.49
5:M:877:PRO:HG2	5:M:878:SER:H	1.77	0.49
5:M:1071:ILE:O	6:N:659:LYS:HB2	2.13	0.49
6:N:19:ARG:HA	6:N:92:HIS:ND1	2.28	0.49
6:N:26:VAL:N	12:N:9328:HOH:O	2.46	0.49
6:N:860:LEU:HA	6:N:877:PRO:HB2	1.95	0.49
6:N:1231:GLU:OE1	6:N:1232:PRO:HD3	2.13	0.49
6:N:1389:LEU:CG	6:N:1390:LEU:HD23	2.40	0.49
5:C:433:THR:CG2	5:C:488:ALA:HB1	2.43	0.48
5:C:598:GLU:O	5:C:651:LYS:HG3	2.13	0.48
5:C:954:THR:HG22	12:C:1155:HOH:O	2.12	0.48
5:C:971:LYS:HB3	5:C:988:VAL:HG12	1.94	0.48
6:D:41:ARG:HD3	6:D:43:GLY:H	1.78	0.48
6:D:74:GLU:HG3	12:D:9216:HOH:O	2.13	0.48
6:D:181:ASP:OD2	6:D:441:ARG:HG2	2.13	0.48
6:D:654:LYS:HB3	6:D:655:PRO:HD3	1.95	0.48
6:D:787:LEU:HD12	6:D:787:LEU:O	2.13	0.48
6:D:861:GLN:CD	6:D:861:GLN:H	2.21	0.48
6:D:1152:GLU:CD	6:D:1159:ARG:HE	2.21	0.48
6:D:1171:VAL:O	6:D:1175:ILE:HG13	2.13	0.48
6:D:1263:PHE:HA	6:D:1375:MET:HE1	1.94	0.48
5:M:196:LEU:O	5:M:199:VAL:HB	2.13	0.48
5:M:432:ARG:CZ	6:N:1048:PRO:HD2	2.43	0.48
5:M:749:VAL:HG23	5:M:749:VAL:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:817:PRO:O	6:N:532:GLY:HA2	2.13	0.48
5:M:1104:GLU:CD	5:M:1104:GLU:N	2.71	0.48
6:N:57:GLU:HG3	6:N:64:LYS:CG	2.42	0.48
6:N:618:LEU:HD21	6:N:1439:SER:OG	2.13	0.48
6:N:758:GLU:HA	7:O:20:THR:OG1	2.13	0.48
6:N:1375:MET:HE2	6:N:1424:VAL:HB	1.95	0.48
5:C:21:ILE:HG22	5:C:335:THR:CG2	2.43	0.48
5:C:191:PHE:CZ	5:C:196:LEU:HD12	2.48	0.48
5:C:599:GLU:HG3	5:C:651:LYS:HE3	1.95	0.48
5:C:602:GLU:OE1	5:C:648:ARG:HB3	2.12	0.48
5:C:610:ARG:NH2	12:C:1504:HOH:O	2.44	0.48
5:C:776:SER:HA	5:C:780:GLU:HB3	1.94	0.48
5:C:909:ALA:HA	5:C:913:GLU:OE1	2.13	0.48
6:D:51:GLY:N	6:D:86:ARG:HG3	2.28	0.48
6:D:125:GLN:NE2	6:D:587:ARG:NE	2.57	0.48
6:D:137:PRO:HD2	6:D:453:ASP:CG	2.38	0.48
6:D:432:TYR:HB3	6:D:450:TYR:CB	2.37	0.48
6:D:656:PHE:HB3	6:D:694:VAL:HG11	1.95	0.48
6:D:704:ARG:CD	6:D:705:ALA:H	2.26	0.48
6:D:1011:PHE:CD2	6:D:1021:TYR:HB2	2.48	0.48
6:D:1110:ALA:O	6:D:1111:ASP:C	2.56	0.48
6:D:1176:LYS:O	6:D:1179:GLU:HB3	2.12	0.48
6:D:1197:ARG:HB3	6:D:1396:GLU:HG3	1.95	0.48
6:D:1237:THR:CG2	6:D:1256:LEU:HD22	2.43	0.48
6:D:1277:ILE:HG13	6:D:1301:LYS:HB2	1.94	0.48
6:D:1281:VAL:O	6:D:1282:ARG:HD3	2.13	0.48
6:D:1297:GLU:HB3	6:N:52:PRO:N	2.28	0.48
6:D:1498:ALA:HB1	7:E:84:ARG:HH21	1.76	0.48
4:K:13:VAL:HG22	4:K:23:PHE:CD1	2.48	0.48
4:L:101:LEU:HD11	4:L:113:ASP:HB2	1.94	0.48
4:L:124:ASN:N	4:L:125:PRO:HD3	2.28	0.48
6:N:699:VAL:HG22	6:N:756:GLN:NE2	2.28	0.48
6:N:764:LEU:HD21	6:N:767:HIS:CE1	2.48	0.48
6:N:963:TYR:N	6:N:963:TYR:CD1	2.81	0.48
6:N:1166:LEU:HD23	6:N:1166:LEU:N	2.24	0.48
6:N:1206:GLY:HA3	6:N:1366:LYS:NZ	2.28	0.48
6:N:1275:SER:HA	6:N:1294:VAL:HG21	1.94	0.48
6:N:1296:SER:C	6:N:1298:GLY:H	2.21	0.48
6:N:1314:LYS:HE3	12:N:9483:HOH:O	2.12	0.48
6:N:1429:LEU:HG	6:N:1441:GLN:HG2	1.94	0.48
1:X:23:DG:OP1	5:M:388:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:874:LEU:HA	6:D:1023:MET:SD	2.53	0.48
5:C:1093:GLN:HE22	5:C:1098:ASP:HA	1.78	0.48
5:C:1105:LYS:O	5:C:1107:ASN:N	2.46	0.48
6:D:783:ARG:HA	6:D:1028:ALA:CA	2.41	0.48
6:D:1205:TYR:CE1	6:D:1366:LYS:HD3	2.48	0.48
6:D:1292:VAL:CG2	6:D:1325:LEU:HD23	2.44	0.48
6:D:1300:SER:OG	6:N:59:ALA:HB3	2.12	0.48
5:M:146:VAL:HG13	5:M:161:SER:O	2.13	0.48
5:M:324:ASP:OD2	5:M:431:HIS:HE1	1.96	0.48
5:M:517:ARG:HD3	5:M:522:VAL:HG21	1.96	0.48
5:M:861:LEU:HD23	5:M:862:PRO:N	2.28	0.48
6:N:457:GLY:C	6:N:459:GLU:N	2.71	0.48
6:N:493:ARG:HD3	6:N:1390:LEU:HB2	1.95	0.48
6:N:630:VAL:HA	6:N:744:GLN:HG2	1.93	0.48
6:N:639:LEU:HD21	6:N:928:ALA:HB1	1.94	0.48
6:N:662:GLU:OE1	6:N:670:VAL:HG22	2.14	0.48
6:N:693:GLU:HA	7:O:48:MET:CE	2.41	0.48
6:N:767:HIS:CE1	7:O:2:ALA:HB1	2.47	0.48
6:N:954:ALA:C	6:N:1039:CYS:SG	2.96	0.48
6:N:1256:LEU:HB3	6:N:1257:PRO:HD3	1.96	0.48
6:N:1292:VAL:O	6:N:1303:TYR:HB2	2.13	0.48
6:N:1435:LEU:HD13	6:N:1457:ASP:CG	2.38	0.48
1:X:18:DG:H5'	1:X:18:DG:C8	2.48	0.48
4:A:162:ILE:HD12	4:A:163:ASN:ND2	2.28	0.48
5:C:19:THR:O	5:C:23:VAL:HG23	2.13	0.48
5:C:57:GLU:O	5:C:62:GLY:HA3	2.13	0.48
5:C:112:GLU:OE1	5:C:112:GLU:HA	2.12	0.48
5:C:432:ARG:HH22	6:D:1047:LYS:HD3	1.78	0.48
5:C:1046:ALA:HB1	6:D:1471:LEU:HD11	1.96	0.48
6:D:165:LYS:CG	6:D:199:LEU:HD22	2.43	0.48
6:D:1026:SER:C	6:D:1028:ALA:H	2.22	0.48
6:D:1197:ARG:HD3	6:D:1396:GLU:OE1	2.13	0.48
5:M:42:VAL:HG12	5:M:43:GLY:H	1.78	0.48
5:M:612:VAL:HG22	5:M:622:GLU:HA	1.93	0.48
5:M:1019:GLN:HE22	6:N:616:GLN:HG3	1.78	0.48
6:N:28:LYS:HD3	6:N:41:ARG:NH1	2.28	0.48
6:N:453:ASP:OD2	6:N:453:ASP:N	2.45	0.48
6:N:486:ARG:CA	6:N:489:ARG:HG2	2.42	0.48
6:N:1319:VAL:HG12	6:N:1323:GLN:CD	2.39	0.48
7:O:9:LEU:HD13	7:O:19:LEU:HD11	1.95	0.48
5:C:217:LEU:CD1	5:C:311:PHE:HA	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:545:ASN:HD22	5:C:583:LEU:HD21	1.78	0.48
6:D:737:ASN:ND2	6:D:737:ASN:O	2.46	0.48
6:D:792:ILE:O	6:D:878:GLY:HA3	2.13	0.48
6:D:1194:CYS:HB3	6:D:1373:ARG:NH2	2.28	0.48
6:D:1233:GLY:C	6:D:1237:THR:HB	2.38	0.48
6:D:1277:ILE:O	6:D:1294:VAL:HG11	2.14	0.48
7:E:70:THR:CB	7:E:72:ARG:HE	2.26	0.48
4:K:86:VAL:HG12	4:K:124:ASN:HB2	1.95	0.48
5:M:127:PHE:HE1	5:M:386:PHE:HE2	1.61	0.48
5:M:303:PHE:HA	12:M:7156:HOH:O	2.13	0.48
5:M:476:GLY:C	5:M:478:VAL:H	2.21	0.48
5:M:492:ASP:HB3	5:M:518:LYS:HG3	1.95	0.48
5:M:668:LEU:H	5:M:668:LEU:HD12	1.78	0.48
5:M:876:VAL:N	5:M:877:PRO:HD2	2.29	0.48
6:N:721:VAL:HB	12:N:9034:HOH:O	2.14	0.48
7:O:39:VAL:HG22	7:O:67:GLU:OE2	2.13	0.48
4:A:141:GLU:HG3	4:A:161:ARG:NH1	2.29	0.48
5:C:26:TYR:HE1	5:C:340:MET:HG3	1.79	0.48
5:C:334:ARG:NH1	5:C:418:LEU:HD11	2.29	0.48
5:C:564:MET:HE1	5:C:840:ALA:HB3	1.96	0.48
5:C:892:LEU:HD11	5:C:967:PHE:CZ	2.48	0.48
5:C:1030:GLN:HE22	6:D:628:ARG:HD3	1.78	0.48
6:D:23:TYR:O	6:D:49:ILE:HG23	2.14	0.48
6:D:117:ASP:CB	6:D:495:ARG:HH21	2.27	0.48
6:D:477:LEU:HD11	6:D:495:ARG:HD3	1.96	0.48
6:D:1105:ILE:HD11	6:D:1374:GLN:NE2	2.28	0.48
6:D:1492:LEU:O	6:D:1492:LEU:HD13	2.14	0.48
4:L:36:LEU:C	4:L:39:PRO:HD2	2.38	0.48
5:M:380:ALA:O	5:M:384:GLU:HB2	2.13	0.48
5:M:516:ARG:HG3	6:N:1068:LEU:CD1	2.43	0.48
6:N:112:ILE:HG12	6:N:128:TYR:OH	2.14	0.48
6:N:137:PRO:HD2	6:N:453:ASP:OD1	2.14	0.48
6:N:782:SER:HA	12:N:9058:HOH:O	2.13	0.48
6:N:1090:ASP:HB3	6:N:1256:LEU:HD23	1.94	0.48
6:N:1216:SER:HB3	7:O:16:LYS:H	1.77	0.48
4:B:158:ILE:HG22	12:B:343:HOH:O	2.13	0.48
5:C:115:LEU:HB2	12:C:1459:HOH:O	2.12	0.48
5:C:175:GLU:O	5:C:183:SER:N	2.42	0.48
5:C:405:ARG:HD2	5:C:543:ASN:ND2	2.29	0.48
5:C:435:TYR:C	5:C:437:ARG:H	2.21	0.48
5:C:562:SER:HA	5:C:565:GLN:OE1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:841:ASN:C	5:C:841:ASN:ND2	2.67	0.48
6:D:567:ILE:HG22	6:D:571:LYS:HZ1	1.75	0.48
6:D:917:GLN:NE2	6:D:921:ARG:HE	2.10	0.48
6:D:955:VAL:N	6:D:1039:CYS:SG	2.87	0.48
6:D:1047:LYS:HG2	6:D:1053:PHE:CE1	2.49	0.48
6:D:1094:LEU:HG	6:D:1098:LEU:HD13	1.95	0.48
6:D:1183:ILE:O	6:D:1183:ILE:HD12	2.13	0.48
4:K:177:VAL:O	5:M:864:GLY:HA3	2.12	0.48
12:K:2157:HOH:O	4:L:215:VAL:HG21	2.14	0.48
4:L:87:VAL:HG21	4:L:144:VAL:CG1	2.38	0.48
4:L:182:GLU:OE1	4:L:194:LYS:HD3	2.13	0.48
5:M:130:ASN:HD21	5:M:383:ARG:HH22	1.59	0.48
5:M:219:GLN:HG2	12:M:7197:HOH:O	2.13	0.48
5:M:244:PRO:HG2	5:M:246:ASP:OD2	2.14	0.48
5:M:1101:THR:OG1	5:M:1109:VAL:HG13	2.14	0.48
6:N:1281:VAL:HB	6:N:1313:VAL:CG2	2.44	0.48
2:H:6:U:O5'	2:H:6:U:H6	1.96	0.48
4:A:24:VAL:HG13	4:A:196:THR:HG22	1.95	0.48
5:C:18:LEU:HD22	5:C:404:LEU:HD21	1.94	0.48
5:C:110:GLU:N	5:C:368:THR:HG21	2.23	0.48
5:C:139:GLN:HE22	5:C:415:PRO:CD	2.25	0.48
5:C:150:PRO:HA	5:C:158:TYR:HB3	1.94	0.48
5:C:327:HIS:HA	5:C:431:HIS:CD2	2.49	0.48
6:D:36:THR:O	6:D:38:LYS:N	2.46	0.48
6:D:62:LYS:HG3	12:D:9344:HOH:O	2.14	0.48
6:D:135:LEU:HD13	6:D:148:GLU:HB2	1.94	0.48
6:D:1003:VAL:O	6:D:1006:ALA:HB3	2.13	0.48
4:K:53:VAL:HG21	4:K:82:LEU:HB3	1.96	0.48
4:K:183:ASP:N	5:M:938:LYS:HZ2	2.12	0.48
4:L:25:LEU:HD23	4:L:25:LEU:O	2.14	0.48
5:M:523:ILE:HG23	5:M:523:ILE:O	2.14	0.48
5:M:550:LEU:HG	6:N:1070:TYR:CE1	2.48	0.48
5:M:553:ASP:HA	5:M:881:ASN:HA	1.95	0.48
6:N:400:VAL:HG22	6:N:443:VAL:CG2	2.44	0.48
6:N:699:VAL:HG22	6:N:756:GLN:HE22	1.77	0.48
6:N:983:LEU:HA	6:N:987:GLU:OE2	2.13	0.48
6:N:1135:ARG:HB3	6:N:1140:ILE:HD11	1.94	0.48
1:X:16:DG:H3'	5:M:1031:ARG:HD2	1.94	0.48
5:C:56:GLU:HA	12:C:1329:HOH:O	2.12	0.48
5:C:191:PHE:CE2	5:C:196:LEU:HB2	2.49	0.48
5:C:745:ILE:HD12	5:C:745:ILE:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:881:ASN:N	5:C:881:ASN:ND2	2.60	0.48
6:D:131:LYS:O	6:D:132:TYR:CG	2.67	0.48
6:D:551:ASN:HA	6:D:574:LEU:HD11	1.95	0.48
6:D:682:ASP:OD1	6:D:682:ASP:N	2.45	0.48
6:D:861:GLN:CD	6:D:861:GLN:N	2.71	0.48
6:D:1209:LEU:HD23	6:D:1211:MET:N	2.23	0.48
6:D:1284:GLU:HG3	6:N:62:LYS:HE2	1.96	0.48
4:K:14:ARG:HH22	4:K:24:VAL:HG21	1.76	0.48
4:K:97:VAL:O	4:K:144:VAL:HG23	2.13	0.48
5:M:142:ARG:CD	5:M:325:ILE:HG23	2.44	0.48
5:M:274:ARG:HD2	5:M:285:LEU:HB3	1.96	0.48
5:M:435:TYR:C	5:M:437:ARG:H	2.22	0.48
5:M:442:GLU:HG2	5:M:454:SER:CB	2.43	0.48
5:M:475:VAL:HB	12:M:7304:HOH:O	2.13	0.48
5:M:578:VAL:HG23	5:M:579:VAL:HG12	1.96	0.48
5:M:859:PRO:O	5:M:867:VAL:HG22	2.14	0.48
6:N:91:GLY:HA3	12:N:9328:HOH:O	2.13	0.48
6:N:880:ILE:HD13	12:N:9216:HOH:O	2.14	0.48
6:N:971:LEU:HD12	6:N:971:LEU:O	2.14	0.48
6:N:1403:LEU:O	6:N:1407:LEU:HB2	2.14	0.48
6:N:1499:ARG:HB3	12:N:9215:HOH:O	2.13	0.48
2:Y:12:G:HI'	5:M:393:GLN:HG2	1.96	0.48
4:A:23:PHE:HE2	4:A:199:ILE:HD12	1.78	0.48
5:C:5:ARG:NH1	5:C:902:ILE:HD13	2.29	0.48
5:C:39:ARG:HA	12:C:1121:HOH:O	2.14	0.48
5:C:42:VAL:HG12	5:C:43:GLY:N	2.28	0.48
5:C:137:VAL:HG13	5:C:393:GLN:HE22	1.78	0.48
5:C:328:LEU:HD13	5:C:433:THR:CB	2.42	0.48
5:C:408:ARG:CZ	5:C:455:LEU:HG	2.43	0.48
5:C:476:GLY:C	5:C:478:VAL:H	2.22	0.48
5:C:575:GLN:HB2	5:C:670:GLN:CG	2.43	0.48
5:C:577:PRO:HD2	5:C:580:MET:HG2	1.96	0.48
5:C:861:LEU:HG	5:C:862:PRO:HD2	1.95	0.48
6:D:481:MET:O	6:D:489:ARG:HB2	2.14	0.48
6:D:814:ALA:HB1	6:D:818:ARG:NE	2.29	0.48
6:D:1102:THR:HG22	6:D:1102:THR:O	2.14	0.48
6:D:1122:LEU:HD13	6:D:1178:ALA:HB2	1.96	0.48
6:D:1299:PHE:HA	6:N:59:ALA:HA	1.96	0.48
4:K:44:LEU:HD23	4:K:48:ILE:CD1	2.42	0.48
4:K:112:ARG:HE	4:K:125:PRO:CB	2.26	0.48
5:M:713:ARG:HB3	5:M:720:GLU:CD	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1000:MET:HB3	5:M:1002:GLU:HG2	1.95	0.48
5:M:1054:THR:HG22	5:M:1059:ASP:CB	2.33	0.48
6:N:454:ALA:HB2	12:N:9025:HOH:O	2.14	0.48
6:N:1106:VAL:HG11	6:N:1474:ALA:CB	2.42	0.48
6:N:1191:PRO:O	6:N:1373:ARG:HD2	2.14	0.48
6:N:1253:THR:HG21	6:N:1358:ALA:HB1	1.95	0.48
2:Y:12:G:C8	2:Y:12:G:C5'	2.91	0.47
4:A:5:LYS:O	4:A:8:ALA:HB2	2.14	0.47
4:A:11:PHE:O	4:B:228:PRO:HA	2.14	0.47
4:A:24:VAL:HG22	4:A:196:THR:HG22	1.95	0.47
4:A:99:LEU:HD21	4:A:122:ILE:HD11	1.96	0.47
4:A:191:ASP:O	4:A:192:LEU:HG	2.14	0.47
4:B:170:VAL:HG11	6:D:848:GLU:OE2	2.14	0.47
5:C:21:ILE:O	5:C:25:SER:HB2	2.13	0.47
5:C:579:VAL:CG1	5:C:887:GLU:HG3	2.41	0.47
5:C:683:ASN:HB2	5:C:872:ASN:HB2	1.95	0.47
5:C:697:ARG:HD2	5:C:699:PHE:CE1	2.49	0.47
5:C:886:LEU:HA	12:C:1179:HOH:O	2.14	0.47
6:D:28:LYS:O	6:D:43:GLY:HA2	2.14	0.47
6:D:101:HIS:HB3	6:D:104:PHE:HD1	1.79	0.47
6:D:119:SER:N	6:D:123:LEU:HD22	2.27	0.47
6:D:134:VAL:HG21	6:D:463:GLN:HB2	1.96	0.47
6:D:834:THR:HG22	6:D:874:GLU:OE1	2.14	0.47
6:D:1061:PHE:CE1	6:D:1065:LEU:HD22	2.49	0.47
6:D:1238:MET:O	6:D:1242:HIS:ND1	2.47	0.47
5:M:351:LEU:HD22	12:M:7272:HOH:O	2.13	0.47
5:M:879:ARG:HD3	12:M:7263:HOH:O	2.13	0.47
6:N:54:LYS:HG2	6:N:57:GLU:OE1	2.13	0.47
6:N:1031:ASN:HD22	6:N:1032:PRO:HD2	1.79	0.47
6:N:1332:PRO:HB2	6:N:1421:LEU:HD21	1.96	0.47
7:O:29:GLN:HB2	7:O:33:HIS:CD2	2.48	0.47
1:X:17:DC:O3'	6:N:628:ARG:NH2	2.47	0.47
3:Z:4:DC:H2''	3:Z:5:DG:O5'	2.14	0.47
4:A:103:ALA:HB2	12:A:344:HOH:O	2.14	0.47
5:C:194:VAL:HG11	5:C:204:GLN:NE2	2.29	0.47
5:C:211:LEU:HD13	5:C:308:ARG:CG	2.44	0.47
6:D:133:ILE:HG23	6:D:455:ARG:C	2.39	0.47
6:D:702:LEU:HD12	6:D:747:VAL:HG23	1.96	0.47
6:D:882:PHE:O	6:D:886:VAL:HG23	2.15	0.47
6:D:956:ILE:HG12	6:D:1039:CYS:O	2.14	0.47
6:D:1353:GLN:HB3	6:D:1357:ARG:NE	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:109:VAL:CG2	4:K:132:LEU:HD13	2.44	0.47
4:K:181:VAL:HG12	5:M:938:LYS:HZ3	1.79	0.47
5:M:64:LEU:HD12	5:M:65:VAL:N	2.29	0.47
5:M:89:THR:HA	5:M:129:ILE:O	2.14	0.47
5:M:142:ARG:HD3	5:M:325:ILE:HG23	1.95	0.47
5:M:405:ARG:HD2	5:M:442:GLU:OE1	2.13	0.47
5:M:437:ARG:C	5:M:438:ILE:HD12	2.38	0.47
5:M:577:PRO:HA	5:M:671:ASN:HD21	1.80	0.47
6:N:10:ILE:HD11	6:N:1434:TRP:NE1	2.29	0.47
6:N:459:GLU:O	6:N:463:GLN:HG2	2.13	0.47
6:N:483:HIS:ND1	6:N:483:HIS:N	2.62	0.47
6:N:793:THR:HB	6:N:879:ARG:HD3	1.96	0.47
6:N:893:GLU:O	6:N:896:ALA:HB3	2.14	0.47
6:N:1232:PRO:CB	6:N:1361:VAL:HG21	2.35	0.47
6:N:1273:VAL:HG22	6:N:1326:THR:HG1	1.80	0.47
4:A:47:SER:CB	4:A:217:ILE:HD13	2.44	0.47
4:A:226:SER:O	4:A:228:PRO:HD3	2.14	0.47
5:C:45:GLN:HB2	5:C:71:TYR:CZ	2.49	0.47
5:C:154:ARG:NH1	5:C:177:GLU:HG3	2.28	0.47
5:C:362:GLY:HA3	5:C:367:LEU:CD2	2.39	0.47
5:C:480:THR:HG22	5:C:481:ASP:N	2.29	0.47
5:C:940:GLU:O	5:C:944:LEU:HG	2.14	0.47
5:C:946:ARG:HH12	6:D:861:GLN:HE22	1.62	0.47
5:C:981:GLU:HB3	12:C:1406:HOH:O	2.13	0.47
5:C:1044:GLY:HA3	7:E:17:TYR:CD1	2.49	0.47
6:D:122:GLU:O	6:D:126:VAL:HG23	2.14	0.47
6:D:571:LYS:NZ	6:D:571:LYS:HB2	2.29	0.47
6:D:876:SER:HB2	6:D:879:ARG:HG3	1.97	0.47
6:D:911:LEU:O	6:D:915:VAL:HG23	2.14	0.47
6:D:1138:ALA:CB	6:D:1362:LYS:HE2	2.43	0.47
7:E:31:LEU:HD23	7:E:35:PHE:HD1	1.79	0.47
4:L:23:PHE:O	4:L:196:THR:HA	2.13	0.47
5:M:31:GLN:HB3	5:M:71:TYR:OH	2.15	0.47
5:M:195:LEU:HG	5:M:238:LEU:HD12	1.96	0.47
5:M:397:GLU:O	5:M:398:THR:C	2.58	0.47
5:M:436:GLY:HA2	5:M:538:GLN:O	2.14	0.47
6:N:82:LYS:HB2	6:N:84:ILE:HG23	1.95	0.47
6:N:115:LEU:CD1	6:N:499:VAL:HG22	2.44	0.47
6:N:799:LYS:HZ3	6:N:824:ASN:CA	2.22	0.47
6:N:1437:ALA:O	6:N:1446:VAL:HG21	2.14	0.47
4:B:159:LYS:HD3	4:B:159:LYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:143:SER:O	5:C:144:PRO:C	2.56	0.47
5:C:260:LEU:HD13	5:C:291:ALA:HB1	1.96	0.47
6:D:206:ARG:NH2	6:D:394:LEU:HD22	2.30	0.47
6:D:1231:GLU:HB3	6:D:1232:PRO:HD3	1.96	0.47
6:D:1325:LEU:HD21	12:D:9442:HOH:O	2.15	0.47
6:D:1441:GLN:CD	6:D:1442:ASN:H	2.21	0.47
7:E:33:HIS:HB2	7:E:37:ASN:ND2	2.29	0.47
5:M:19:THR:HG21	5:M:125:GLY:HA3	1.96	0.47
5:M:131:GLY:HA2	12:M:7233:HOH:O	2.12	0.47
5:M:906:PHE:CZ	6:N:1067:VAL:HA	2.49	0.47
6:N:78:VAL:HG12	6:N:80:VAL:HG22	1.96	0.47
6:N:756:GLN:HE21	6:N:760:ARG:HD2	1.79	0.47
6:N:1101:VAL:HG13	6:N:1428:ALA:CA	2.43	0.47
6:N:1101:VAL:HG11	6:N:1427:SER:HB3	1.96	0.47
1:G:12:DG:H2''	1:G:13:DT:O5'	2.14	0.47
1:G:14:DT:OP2	6:D:1089:ALA:HB1	2.14	0.47
1:G:20:DG:H4'	5:C:394:PHE:CE2	2.50	0.47
2:H:4:U:H2'	2:H:5:C:C6	2.50	0.47
2:Y:10:G:C2'	2:Y:11:C:H5'	2.44	0.47
4:B:117:VAL:CG2	4:B:120:VAL:HB	2.44	0.47
5:C:110:GLU:HB2	5:C:368:THR:HB	1.96	0.47
5:C:165:LEU:HD12	5:C:166:PRO:C	2.39	0.47
5:C:286:SER:HB2	5:C:299:LYS:HE2	1.95	0.47
5:C:804:VAL:HG23	5:C:826:TYR:HE1	1.78	0.47
6:D:119:SER:HB2	6:D:123:LEU:H	1.79	0.47
6:D:400:VAL:HG22	6:D:443:VAL:HG22	1.95	0.47
6:D:577:ALA:O	6:D:580:ALA:HB3	2.15	0.47
6:D:1377:LYS:HA	6:D:1395:LEU:HD23	1.95	0.47
7:E:70:THR:HG21	7:E:72:ARG:NE	2.29	0.47
4:K:89:PHE:CD1	4:K:120:VAL:HG23	2.40	0.47
4:K:181:VAL:O	5:M:938:LYS:HD3	2.15	0.47
4:L:73:GLU:CD	4:L:130:ALA:HA	2.40	0.47
5:M:208:ALA:O	5:M:218:VAL:HG21	2.15	0.47
5:M:238:LEU:O	5:M:241:LEU:HB3	2.13	0.47
5:M:334:ARG:HD2	5:M:418:LEU:CD2	2.29	0.47
5:M:937:ASP:HB3	5:M:939:ARG:HG2	1.96	0.47
5:M:1007:ALA:HB2	6:N:648:MET:CG	2.44	0.47
6:N:1305:LEU:HD21	6:N:1326:THR:OG1	2.14	0.47
6:N:1336:LEU:HB2	6:N:1344:VAL:HG21	1.96	0.47
7:O:70:THR:HG22	7:O:71:GLY:H	1.78	0.47
7:O:95:VAL:CG1	12:O:884:HOH:O	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:28:LEU:HB2	4:A:193:ASP:HB2	1.97	0.47
5:C:68:PHE:HZ	5:C:71:TYR:HD2	1.62	0.47
5:C:211:LEU:HD11	5:C:308:ARG:HA	1.96	0.47
5:C:304:LEU:CD2	5:C:305:PRO:HD3	2.40	0.47
6:D:441:ARG:HH22	6:D:445:ARG:CZ	2.28	0.47
6:D:899:LEU:HD12	6:D:900:ILE:HG23	1.96	0.47
4:L:41:ARG:HG2	4:L:42:ARG:N	2.29	0.47
5:M:83:CYS:SG	5:M:90:TYR:HB2	2.54	0.47
5:M:289:THR:O	5:M:291:ALA:N	2.48	0.47
5:M:315:ALA:HB3	12:M:7160:HOH:O	2.13	0.47
5:M:326:ASP:HA	5:M:331:ARG:CZ	2.45	0.47
5:M:347:GLY:HA2	5:M:350:ARG:HD2	1.95	0.47
5:M:438:ILE:HD11	5:M:467:ILE:HD12	1.96	0.47
5:M:571:LEU:HD23	5:M:699:PHE:O	2.14	0.47
5:M:676:ILE:HG22	5:M:988:VAL:HG22	1.94	0.47
5:M:1000:MET:HA	5:M:1000:MET:HE3	1.97	0.47
5:M:1034:GLU:OE1	6:N:619:LEU:HD21	2.15	0.47
6:N:477:LEU:HD21	6:N:495:ARG:NH2	2.30	0.47
6:N:507:ASN:HD22	6:N:507:ASN:H	1.61	0.47
6:N:543:LEU:O	6:N:546:ARG:HB2	2.14	0.47
6:N:625:TYR:CE1	6:N:751:LEU:HD11	2.50	0.47
6:N:863:VAL:HG21	12:N:9437:HOH:O	2.14	0.47
6:N:969:ARG:O	6:N:972:LEU:HB3	2.14	0.47
6:N:1240:THR:HA	6:N:1253:THR:OG1	2.14	0.47
2:Y:6:U:H6	2:Y:6:U:O5'	1.98	0.47
4:A:85:LEU:HD11	4:A:87:VAL:HG13	1.97	0.47
4:B:58:ILE:HB	4:B:61:VAL:HB	1.96	0.47
4:B:102:LYS:CE	4:B:139:ASN:HB2	2.39	0.47
4:B:127:LEU:HD12	4:B:128:HIS:N	2.30	0.47
5:C:332:ARG:HH22	5:C:338:GLU:CD	2.22	0.47
5:C:625:LEU:O	5:C:627:ARG:N	2.48	0.47
5:C:761:PHE:N	5:C:761:PHE:CD1	2.83	0.47
5:C:769:PRO:HG2	12:D:9120:HOH:O	2.14	0.47
5:C:892:LEU:HG	5:C:918:LEU:HD11	1.96	0.47
6:D:93:ILE:N	6:D:517:VAL:O	2.46	0.47
6:D:632:VAL:O	6:D:727:GLN:HA	2.15	0.47
6:D:772:PRO:O	6:D:1367:HIS:NE2	2.47	0.47
6:D:853:VAL:HG13	6:D:858:VAL:O	2.15	0.47
6:D:864:VAL:HG12	6:D:865:THR:N	2.27	0.47
6:D:896:ALA:O	6:D:900:ILE:HG23	2.14	0.47
6:D:1047:LYS:HB3	6:D:1048:PRO:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1372:VAL:O	6:D:1375:MET:HB2	2.15	0.47
6:D:1476:THR:C	6:D:1478:SER:N	2.71	0.47
4:K:9:PRO:HD2	4:L:224:TYR:CE1	2.49	0.47
4:K:36:LEU:O	4:K:39:PRO:HD2	2.14	0.47
4:L:101:LEU:HD22	4:L:140:MET:CE	2.45	0.47
4:L:143:ARG:HH11	4:L:160:ASP:CG	2.23	0.47
5:M:54:ILE:O	5:M:54:ILE:HG23	2.14	0.47
5:M:54:ILE:HD13	5:M:64:LEU:HD21	1.96	0.47
5:M:92:ALA:CB	5:M:120:LEU:HD21	2.45	0.47
5:M:97:ARG:HA	5:M:111:ASP:O	2.15	0.47
5:M:144:PRO:HA	5:M:163:ILE:CD1	2.44	0.47
5:M:191:PHE:CZ	5:M:196:LEU:HB2	2.50	0.47
5:M:395:LYS:HG2	5:M:397:GLU:HG3	1.97	0.47
5:M:424:GLY:O	5:M:425:PHE:C	2.56	0.47
5:M:594:ALA:HB3	5:M:596:TYR:HE1	1.79	0.47
5:M:820:ARG:HA	12:M:7091:HOH:O	2.15	0.47
5:M:1010:THR:HG22	5:M:1011:GLY:N	2.30	0.47
5:M:1090:LYS:HD3	5:M:1090:LYS:HA	1.70	0.47
5:M:1103:ASP:HA	12:N:9050:HOH:O	2.15	0.47
6:N:41:ARG:HD3	6:N:42:ASP:N	2.28	0.47
6:N:42:ASP:OD1	6:N:49:ILE:HD11	2.14	0.47
6:N:56:TYR:HE2	6:N:69:GLU:HB3	1.79	0.47
6:N:115:LEU:HD22	6:N:502:PHE:CE1	2.49	0.47
6:N:399:ARG:HB2	6:N:401:TYR:CE1	2.50	0.47
6:N:480:GLU:OE2	6:N:484:PRO:HG2	2.15	0.47
6:N:584:ASN:HB2	6:N:602:SER:HB3	1.96	0.47
6:N:754:PHE:CG	7:O:24:ALA:HB1	2.48	0.47
6:N:1031:ASN:ND2	6:N:1032:PRO:HD2	2.30	0.47
6:N:1148:VAL:O	6:N:1188:VAL:HG23	2.14	0.47
7:O:80:VAL:HG22	12:O:1400:HOH:O	2.14	0.47
7:O:83:ASP:O	7:O:86:GLN:HG2	2.14	0.47
7:O:84:ARG:HB2	12:O:907:HOH:O	2.14	0.47
2:H:9:G:C8	2:H:9:G:C5'	2.98	0.47
1:X:20:DG:H4'	5:M:394:PHE:CE2	2.50	0.47
4:A:27:PRO:HG2	12:A:364:HOH:O	2.14	0.47
5:C:36:PRO:CG	5:C:70:GLU:HB3	2.40	0.47
5:C:141:HIS:HB3	5:C:418:LEU:CD2	2.45	0.47
5:C:728:HIS:CE1	5:C:775:ARG:HH12	2.32	0.47
5:C:1090:LYS:HZ3	6:D:90:MET:HG3	1.78	0.47
5:C:1096:ALA:N	12:C:1246:HOH:O	2.48	0.47
6:D:2:LYS:HG2	12:D:9286:HOH:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:37:LEU:HD22	6:D:535:PHE:HZ	1.80	0.47
6:D:179:VAL:HG21	6:D:191:LEU:HD23	1.97	0.47
6:D:581:LEU:C	6:D:603:LEU:HD12	2.39	0.47
6:D:785:ILE:HG22	6:D:789:LEU:CD1	2.43	0.47
6:D:908:LYS:HB3	6:D:1027:GLY:CA	2.29	0.47
6:D:1280:VAL:HG22	6:D:1317:ASP:C	2.40	0.47
6:D:1402:ALA:HB2	6:D:1415:VAL:CG2	2.45	0.47
4:K:24:VAL:HG22	4:K:196:THR:HG22	1.97	0.47
5:M:606:VAL:O	5:M:606:VAL:HG23	2.14	0.47
5:M:665:PHE:CE1	5:M:900:ARG:NH2	2.83	0.47
5:M:1118:LYS:NZ	5:M:1118:LYS:HB3	2.30	0.47
6:N:974:ILE:O	6:N:983:LEU:HD11	2.15	0.47
6:N:984:THR:HG22	6:N:986:ARG:H	1.80	0.47
6:N:984:THR:HB	6:N:987:GLU:HG3	1.97	0.47
6:N:1149:LEU:CD1	6:N:1160:LEU:HD22	2.44	0.47
6:N:1263:PHE:HA	6:N:1375:MET:HE1	1.96	0.47
6:N:1307:LYS:H	6:N:1307:LYS:HD2	1.80	0.47
6:N:1335:LEU:HD12	6:N:1339:LYS:HB2	1.97	0.47
2:H:8:C:C2'	2:H:9:G:C8	2.98	0.47
2:H:12:G:C8	2:H:12:G:C5'	2.92	0.47
4:B:75:VAL:O	4:B:79:ILE:HG23	2.14	0.47
5:C:378:LEU:HG	5:C:382:ILE:HD11	1.97	0.47
5:C:496:ILE:HD12	5:C:496:ILE:N	2.29	0.47
5:C:632:ASN:N	5:C:632:ASN:OD1	2.48	0.47
5:C:672:VAL:CG2	5:C:868:ASP:HB2	2.43	0.47
5:C:774:LEU:HD23	12:C:1328:HOH:O	2.14	0.47
6:D:141:ILE:CG1	6:D:448:GLU:O	2.61	0.47
6:D:455:ARG:HB3	6:D:459:GLU:HG2	1.96	0.47
6:D:704:ARG:HD3	6:D:738:ALA:HB2	1.96	0.47
6:D:895:VAL:CG1	6:D:922:LEU:HD21	2.43	0.47
6:D:1197:ARG:HB3	6:D:1396:GLU:CG	2.45	0.47
6:D:1263:PHE:HB3	6:D:1424:VAL:HG11	1.96	0.47
6:D:1313:VAL:HG21	6:D:1319:VAL:CG1	2.45	0.47
4:K:46:SER:HB3	5:M:856:GLU:HG2	1.97	0.47
4:L:34:VAL:HG22	4:L:181:VAL:HG21	1.97	0.47
5:M:80:GLN:O	5:M:83:CYS:HB2	2.15	0.47
5:M:206:THR:HG23	5:M:207:LEU:N	2.30	0.47
5:M:364:GLU:O	5:M:367:LEU:HG	2.15	0.47
5:M:622:GLU:O	5:M:624:PRO:HD3	2.15	0.47
5:M:714:ASP:HB3	5:M:818:GLY:O	2.15	0.47
5:M:1008:ARG:NH1	5:M:1011:GLY:N	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1047:LYS:HG2	6:N:1053:PHE:CE2	2.50	0.47
7:O:94:PRO:HG2	12:O:820:HOH:O	2.14	0.47
2:H:7:G:C5'	2:H:7:G:H8	2.28	0.47
2:H:9:G:C5'	2:H:9:G:H8	2.28	0.47
2:Y:8:C:H5''	12:Y:578:HOH:O	2.14	0.47
4:A:121:GLU:HG3	4:A:123:MET:SD	2.55	0.47
4:B:18:ARG:O	4:B:207:PRO:HD3	2.16	0.47
4:B:29:GLU:HB2	4:B:32:PHE:CE1	2.50	0.47
5:C:64:LEU:HB2	5:C:359:MET:SD	2.55	0.47
5:C:334:ARG:CD	5:C:418:LEU:HD21	2.45	0.47
5:C:364:GLU:O	5:C:367:LEU:HG	2.15	0.47
5:C:660:ALA:O	5:C:667:ALA:HB3	2.15	0.47
5:C:877:PRO:HB3	6:D:1020:LEU:HD11	1.97	0.47
6:D:462:GLN:HA	6:D:513:ILE:CD1	2.44	0.47
6:D:574:LEU:O	6:D:578:VAL:HG23	2.15	0.47
6:D:938:GLY:O	6:D:942:SER:HB3	2.15	0.47
6:D:1118:ILE:O	6:D:1188:VAL:HG12	2.15	0.47
6:D:1326:THR:HG22	6:D:1327:ARG:N	2.29	0.47
4:K:88:ARG:HB2	4:K:204:SER:HA	1.97	0.47
5:M:260:LEU:HB2	5:M:291:ALA:HB1	1.97	0.47
5:M:396:ASP:C	5:M:396:ASP:OD2	2.58	0.47
5:M:470:PRO:HD3	5:M:485:TYR:CE2	2.50	0.47
5:M:520:GLU:O	5:M:522:VAL:HG23	2.14	0.47
5:M:874:LEU:HD11	6:N:787:LEU:CD2	2.31	0.47
5:M:881:ASN:O	5:M:884:GLN:HG2	2.13	0.47
5:M:958:THR:HG23	5:M:961:GLU:H	1.79	0.47
5:M:1032:PHE:HZ	5:M:1040:LEU:HD13	1.80	0.47
5:M:1036:GLU:OE1	6:N:707:THR:HB	2.15	0.47
6:N:161:LEU:HD23	6:N:162:ARG:H	1.80	0.47
6:N:202:VAL:HG12	6:N:204:LEU:HD23	1.96	0.47
6:N:470:LEU:HD11	6:N:508:ARG:CZ	2.46	0.47
6:N:1071:PHE:O	6:N:1071:PHE:HD1	1.97	0.47
2:H:5:C:H6	2:H:5:C:O5'	1.98	0.46
1:X:6:DT:H2'	12:X:1642:HOH:O	2.15	0.46
4:A:154:GLU:H	4:A:154:GLU:CD	2.22	0.46
5:C:127:PHE:O	5:C:133:ASP:HA	2.15	0.46
5:C:139:GLN:CG	5:C:418:LEU:HD22	2.43	0.46
5:C:342:ASP:HA	5:C:345:ARG:HG2	1.97	0.46
5:C:420:ARG:HG3	12:C:1136:HOH:O	2.15	0.46
5:C:473:ARG:HH11	5:C:475:VAL:CG2	2.27	0.46
5:C:492:ASP:CG	5:C:518:LYS:HG3	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:57:GLU:HB2	6:D:64:LYS:HG3	1.96	0.46
6:D:394:LEU:HD12	6:D:394:LEU:C	2.40	0.46
6:D:591:VAL:HG12	6:D:592:THR:O	2.15	0.46
6:D:893:GLU:O	6:D:896:ALA:HB3	2.15	0.46
6:D:1191:PRO:O	6:D:1373:ARG:HD2	2.15	0.46
5:M:243:ARG:HG2	5:M:243:ARG:HH11	1.79	0.46
5:M:688:ILE:HD13	5:M:847:GLY:HA3	1.96	0.46
5:M:694:LEU:O	5:M:699:PHE:HB2	2.15	0.46
5:M:835:VAL:HA	5:M:849:VAL:HG12	1.98	0.46
6:N:704:ARG:NH1	6:N:705:ALA:CB	2.78	0.46
6:N:736:PHE:O	6:N:738:ALA:N	2.48	0.46
6:N:1236:LEU:CD2	6:N:1361:VAL:H	2.27	0.46
2:H:10:G:C2'	2:H:11:C:H5'	2.44	0.46
4:B:97:VAL:HG12	4:B:99:LEU:HD13	1.98	0.46
4:B:182:GLU:O	4:B:194:LYS:HB3	2.16	0.46
5:C:18:LEU:CD2	5:C:404:LEU:HD21	2.45	0.46
5:C:147:TYR:HB3	5:C:323:ASP:HB2	1.96	0.46
5:C:185:LYS:NZ	5:C:190:LYS:HE2	2.29	0.46
5:C:253:ALA:O	5:C:256:TYR:HB2	2.14	0.46
5:C:274:ARG:HB2	12:C:1392:HOH:O	2.16	0.46
5:C:910:LYS:HB3	5:C:912:PRO:HD2	1.97	0.46
6:D:9:ARG:HA	6:D:1455:LYS:O	2.14	0.46
6:D:412:GLY:HA2	6:D:434:ARG:HD3	1.96	0.46
6:D:457:GLY:O	6:D:460:ALA:HB3	2.14	0.46
6:D:551:ASN:ND2	6:D:555:LYS:NZ	2.60	0.46
6:D:564:GLU:HA	6:D:567:ILE:HD12	1.97	0.46
6:D:646:LYS:HG3	6:D:647:ARG:N	2.30	0.46
6:D:1453:ALA:O	6:D:1455:LYS:N	2.47	0.46
7:E:67:GLU:CB	7:E:73:LEU:HD11	2.45	0.46
4:K:9:PRO:HD2	4:L:224:TYR:CD1	2.51	0.46
4:K:43:ILE:HD11	4:L:35:THR:HG21	1.96	0.46
4:L:101:LEU:HD23	4:L:101:LEU:C	2.41	0.46
5:M:100:LEU:HD23	5:M:368:THR:HA	1.96	0.46
5:M:408:ARG:NH1	5:M:542:VAL:HG23	2.30	0.46
5:M:534:VAL:N	5:M:538:GLN:NE2	2.61	0.46
6:N:397:LYS:NZ	6:N:448:GLU:OE2	2.48	0.46
6:N:660:LYS:HD2	12:N:9393:HOH:O	2.15	0.46
6:N:1094:LEU:HD13	6:N:1260:ILE:CD1	2.45	0.46
4:B:25:LEU:HA	12:B:411:HOH:O	2.14	0.46
4:B:165:ILE:HD11	12:B:321:HOH:O	2.15	0.46
5:C:47:ALA:HA	5:C:50:GLU:OE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:122:THR:HB	5:C:124:ASP:OD1	2.15	0.46
5:C:166:PRO:HG2	12:C:1363:HOH:O	2.15	0.46
5:C:550:LEU:HG	6:D:1070:TYR:HE1	1.79	0.46
5:C:654:LEU:HD13	5:C:664:GLY:N	2.30	0.46
5:C:710:ILE:HB	5:C:790:LEU:HD22	1.97	0.46
6:D:148:GLU:HG2	6:D:151:GLN:NE2	2.26	0.46
6:D:399:ARG:HB2	6:D:401:TYR:OH	2.15	0.46
6:D:613:ARG:HH11	6:D:616:GLN:HG2	1.79	0.46
6:D:728:LEU:HG	6:D:729:HIS:N	2.30	0.46
6:D:1020:LEU:HA	6:D:1023:MET:HE3	1.96	0.46
6:D:1494:ALA:HB1	7:E:88:GLU:OE2	2.16	0.46
4:K:76:VAL:O	4:K:79:ILE:HG13	2.15	0.46
4:L:40:LEU:O	4:L:44:LEU:HG	2.14	0.46
5:M:706:GLU:HG2	5:M:708:TYR:CE2	2.50	0.46
5:M:1045:ALA:HB1	5:M:1048:THR:HB	1.97	0.46
5:M:1069:ALA:O	5:M:1072:LYS:HB3	2.15	0.46
6:N:398:ALA:HB2	6:N:447:VAL:HG12	1.98	0.46
6:N:637:LEU:HD11	6:N:642:CYS:N	2.31	0.46
6:N:1401:GLU:CD	6:N:1401:GLU:C	2.84	0.46
3:I:10:DA:H5"	6:D:121:THR:HG23	1.97	0.46
4:A:143:ARG:NH1	4:A:145:ASP:OD1	2.49	0.46
5:C:85:GLU:OE1	5:C:804:VAL:HG21	2.16	0.46
5:C:414:GLY:C	5:C:416:GLY:N	2.71	0.46
5:C:551:GLU:O	6:D:1065:LEU:HB3	2.14	0.46
5:C:1055:LEU:HD11	12:C:1200:HOH:O	2.15	0.46
5:C:1103:ASP:N	5:C:1107:ASN:O	2.48	0.46
6:D:458:ALA:HA	6:D:461:ILE:HG12	1.98	0.46
6:D:1061:PHE:HE1	6:D:1065:LEU:HD22	1.80	0.46
6:D:1297:GLU:N	6:N:47:GLU:HB2	2.30	0.46
7:E:2:ALA:HB2	12:E:102:HOH:O	2.14	0.46
4:K:221:HIS:HA	4:K:224:TYR:CD2	2.50	0.46
4:L:91:ASN:C	4:L:146:ARG:HH22	2.23	0.46
5:M:260:LEU:CB	5:M:291:ALA:HB1	2.46	0.46
5:M:309:TYR:HA	5:M:312:ALA:HB3	1.97	0.46
5:M:557:ARG:NE	5:M:879:ARG:HG2	2.31	0.46
5:M:911:GLU:HB3	5:M:912:PRO:HD3	1.98	0.46
5:M:1030:GLN:HG2	6:N:746:ALA:HB1	1.98	0.46
5:M:1084:SER:O	5:M:1087:VAL:HG12	2.15	0.46
6:N:133:ILE:CA	6:N:456:MET:HB3	2.46	0.46
6:N:731:LEU:HD23	6:N:731:LEU:HA	1.77	0.46
6:N:828:LYS:HA	12:N:9437:HOH:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1207:TYR:H	6:N:1366:LYS:HZ1	1.63	0.46
6:N:1489:GLN:O	6:N:1493:LYS:HG2	2.15	0.46
4:A:79:ILE:HD12	4:A:80:LEU:N	2.31	0.46
4:B:83:LYS:NZ	4:B:168:ASP:H	2.13	0.46
4:B:124:ASN:N	4:B:125:PRO:HD3	2.30	0.46
4:B:138:LEU:HG	12:B:334:HOH:O	2.14	0.46
5:C:69:LEU:HB2	5:C:97:ARG:HB2	1.98	0.46
5:C:185:LYS:CG	5:C:190:LYS:HG2	2.46	0.46
5:C:901:TYR:C	5:C:902:ILE:HG13	2.40	0.46
5:C:906:PHE:CE1	6:D:1067:VAL:HA	2.50	0.46
5:C:949:LYS:NZ	6:D:828:LYS:NZ	2.64	0.46
6:D:72:VAL:CG2	6:D:77:GLY:HA2	2.46	0.46
6:D:76:CYS:SG	6:D:78:VAL:HG23	2.55	0.46
6:D:181:ASP:C	6:D:441:ARG:HD3	2.40	0.46
6:D:705:ALA:HB1	6:D:706:PRO:HD3	1.97	0.46
6:D:919:PHE:HE1	6:D:924:MET:HG3	1.81	0.46
6:D:1236:LEU:CD2	6:D:1361:VAL:HB	2.46	0.46
6:D:1284:GLU:HG2	6:N:74:GLU:HB2	1.97	0.46
4:K:23:PHE:O	4:K:196:THR:HA	2.16	0.46
4:K:182:GLU:HG2	4:K:194:LYS:HD3	1.98	0.46
5:M:185:LYS:HD3	12:M:7048:HOH:O	2.15	0.46
5:M:337:GLY:O	5:M:341:THR:HG22	2.16	0.46
5:M:557:ARG:CG	5:M:879:ARG:HB3	2.41	0.46
5:M:1038:TRP:HA	5:M:1041:GLU:HG3	1.96	0.46
6:N:134:VAL:HG12	6:N:152:LEU:HB3	1.96	0.46
6:N:145:VAL:HB	12:N:9320:HOH:O	2.14	0.46
6:N:478:LEU:HD22	6:N:1388:ARG:CD	2.46	0.46
6:N:512:MET:SD	6:N:1452:ILE:HD11	2.56	0.46
3:I:9:DG:H2"	3:I:10:DA:C8	2.50	0.46
4:A:23:PHE:O	4:A:196:THR:HA	2.16	0.46
4:B:107:LYS:HD3	12:B:382:HOH:O	2.14	0.46
5:C:129:ILE:CG1	5:C:386:PHE:HB3	2.45	0.46
5:C:139:GLN:NE2	5:C:418:LEU:HD22	2.31	0.46
5:C:191:PHE:HZ	5:C:196:LEU:HD12	1.80	0.46
5:C:433:THR:C	5:C:435:TYR:H	2.22	0.46
5:C:1005:MET:HB3	6:D:629:SER:OG	2.16	0.46
5:C:1045:ALA:HB1	5:C:1048:THR:HB	1.97	0.46
6:D:1083:ASP:O	6:D:1087:ARG:HD2	2.16	0.46
6:D:1194:CYS:HB3	6:D:1373:ARG:NH1	2.30	0.46
6:D:1281:VAL:HG12	6:D:1282:ARG:N	2.30	0.46
6:D:1487:VAL:HG12	6:D:1488:ASP:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:94:LEU:HD11	4:L:119:ASP:CG	2.41	0.46
4:L:159:LYS:HG2	4:L:159:LYS:O	2.15	0.46
5:M:65:VAL:HB	5:M:101:ILE:HB	1.97	0.46
5:M:114:PHE:O	5:M:114:PHE:CG	2.68	0.46
5:M:142:ARG:CZ	5:M:325:ILE:HG23	2.45	0.46
5:M:279:GLU:HG2	12:M:7102:HOH:O	2.15	0.46
5:M:280:LYS:HE3	12:M:7102:HOH:O	2.15	0.46
5:M:410:ILE:CD1	5:M:455:LEU:HB3	2.43	0.46
5:M:442:GLU:HG2	5:M:454:SER:H	1.81	0.46
5:M:611:ILE:HD12	5:M:611:ILE:N	2.30	0.46
6:N:470:LEU:HD12	6:N:503:LEU:HG	1.96	0.46
6:N:838:ARG:NE	6:N:863:VAL:HB	2.31	0.46
6:N:1110:ALA:O	6:N:1111:ASP:C	2.57	0.46
4:B:87:VAL:HG21	4:B:144:VAL:CG1	2.37	0.46
5:C:96:ALA:HB2	12:C:1219:HOH:O	2.14	0.46
5:C:751:PRO:HD2	6:D:680:GLN:OE1	2.16	0.46
5:C:966:LEU:O	5:C:969:GLN:HB2	2.14	0.46
5:C:1030:GLN:OE1	6:D:628:ARG:HG2	2.16	0.46
6:D:531:ASP:O	6:D:534:ARG:HG3	2.15	0.46
6:D:955:VAL:HG11	6:D:1015:TYR:CE2	2.49	0.46
6:D:1083:ASP:OD1	6:D:1241:PHE:HE2	1.98	0.46
6:D:1122:LEU:O	6:D:1122:LEU:HD23	2.15	0.46
6:D:1161:GLU:CG	6:D:1164:ARG:HB2	2.46	0.46
6:D:1191:PRO:HG2	6:D:1370:ILE:HD13	1.98	0.46
6:D:1256:LEU:N	12:D:9193:HOH:O	2.49	0.46
6:D:1275:SER:HB2	6:D:1294:VAL:CG1	2.46	0.46
6:D:1480:PHE:O	7:E:18:ARG:NH2	2.49	0.46
6:D:1487:VAL:HG11	6:D:1492:LEU:HD23	1.98	0.46
4:K:23:PHE:HB2	4:K:197:LEU:HD23	1.97	0.46
5:M:57:GLU:O	5:M:62:GLY:HA3	2.16	0.46
5:M:140:ILE:HB	5:M:331:ARG:HG2	1.97	0.46
5:M:141:HIS:HB3	5:M:418:LEU:CD2	2.44	0.46
5:M:250:ARG:NH1	12:M:7148:HOH:O	2.49	0.46
5:M:418:LEU:N	5:M:418:LEU:HD12	2.30	0.46
5:M:437:ARG:HA	5:M:467:ILE:HG21	1.97	0.46
5:M:500:ASN:HD21	6:N:1067:VAL:HG23	1.81	0.46
5:M:524:VAL:HG13	5:M:525:SER:N	2.30	0.46
5:M:684:PHE:CD1	6:N:784:ASP:HB2	2.46	0.46
5:M:1022:GLY:HA3	5:M:1026:GLN:O	2.16	0.46
6:N:1026:SER:C	6:N:1028:ALA:H	2.24	0.46
7:O:34:GLY:HA2	12:O:884:HOH:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:76:VAL:O	4:A:79:ILE:HG13	2.15	0.46
5:C:191:PHE:O	5:C:193:LEU:HD12	2.15	0.46
5:C:402:SER:HB2	5:C:566:THR:O	2.15	0.46
5:C:966:LEU:HD21	5:C:986:PRO:CG	2.42	0.46
5:C:996:LYS:NZ	12:C:1442:HOH:O	2.49	0.46
6:D:116:LEU:HD21	6:D:468:LEU:HD11	1.98	0.46
6:D:1187:PRO:HB3	6:N:560:GLN:OE1	2.16	0.46
6:D:1297:GLU:H	6:N:47:GLU:C	2.23	0.46
6:D:1481:VAL:HG11	7:E:18:ARG:CA	2.34	0.46
4:K:11:PHE:CD1	4:L:225:PHE:HA	2.51	0.46
4:L:72:LYS:HB3	4:L:73:GLU:OE2	2.16	0.46
4:L:86:VAL:CG1	4:L:124:ASN:HB2	2.45	0.46
5:M:22:GLN:O	5:M:121:MET:HE1	2.16	0.46
5:M:142:ARG:HA	5:M:330:ASN:O	2.16	0.46
5:M:207:LEU:HD13	12:M:7206:HOH:O	2.15	0.46
5:M:552:HIS:CD2	5:M:886:LEU:HD13	2.51	0.46
5:M:707:ARG:HG3	5:M:826:TYR:CZ	2.51	0.46
5:M:904:PRO:CD	5:M:908:GLY:HA2	2.43	0.46
5:M:1060:ILE:HG23	5:M:1061:GLU:N	2.31	0.46
5:M:1087:VAL:HG22	5:M:1091:GLU:OE2	2.16	0.46
6:N:126:VAL:O	6:N:132:TYR:HE1	1.98	0.46
6:N:133:ILE:CA	6:N:456:MET:CB	2.90	0.46
6:N:141:ILE:CG2	6:N:161:LEU:HD12	2.46	0.46
6:N:157:GLU:HA	6:N:160:GLU:OE1	2.15	0.46
6:N:463:GLN:O	6:N:467:GLU:HG3	2.16	0.46
6:N:619:LEU:HB2	6:N:621:LYS:HE2	1.97	0.46
6:N:1018:ASN:HB3	6:N:1021:TYR:CB	2.41	0.46
6:N:1283:ILE:HG21	6:N:1311:LEU:HD11	1.98	0.46
7:O:17:TYR:O	7:O:21:VAL:HG23	2.16	0.46
7:O:26:ARG:NH1	7:O:29:GLN:HE21	2.14	0.46
2:H:7:G:H2'	2:H:8:C:OP1	2.16	0.46
4:A:116:PRO:HA	12:A:378:HOH:O	2.15	0.46
4:B:76:VAL:O	4:B:79:ILE:HG13	2.16	0.46
5:C:191:PHE:HE2	5:C:196:LEU:HB2	1.81	0.46
5:C:274:ARG:CB	5:C:285:LEU:HD13	2.45	0.46
6:D:117:ASP:CG	6:D:495:ARG:NE	2.72	0.46
6:D:676:MET:HE2	6:D:682:ASP:O	2.15	0.46
6:D:963:TYR:CE2	6:D:1002:LYS:HE2	2.50	0.46
6:D:1011:PHE:HD1	6:D:1015:TYR:HB2	1.81	0.46
7:E:26:ARG:C	7:E:30:LEU:HD12	2.41	0.46
4:K:104:GLU:HA	4:K:136:GLY:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:181:VAL:HA	4:K:194:LYS:O	2.15	0.46
4:L:173:PRO:HB2	4:L:205:VAL:HG22	1.97	0.46
5:M:89:THR:O	5:M:91:GLN:HG3	2.16	0.46
5:M:769:PRO:HB3	12:M:7112:HOH:O	2.16	0.46
5:M:1103:ASP:N	5:M:1107:ASN:O	2.49	0.46
6:N:19:ARG:O	6:N:22:SER:HB3	2.16	0.46
6:N:36:THR:O	6:N:38:LYS:N	2.48	0.46
6:N:421:LEU:HD21	6:N:429:SER:CB	2.46	0.46
6:N:678:GLU:HG3	6:N:679:ARG:CG	2.46	0.46
6:N:1398:TRP:CZ3	6:N:1401:GLU:HG3	2.50	0.46
6:N:1401:GLU:OE2	6:N:1405:GLU:HB2	2.16	0.46
3:Z:3:DA:H1'	5:M:423:ALA:HA	1.98	0.46
4:A:19:GLU:O	4:A:200:TRP:HA	2.15	0.46
4:B:125:PRO:HA	12:B:399:HOH:O	2.15	0.46
5:C:405:ARG:HA	12:C:1122:HOH:O	2.16	0.46
5:C:663:ASN:C	5:C:665:PHE:H	2.24	0.46
5:C:943:VAL:HG22	12:C:1225:HOH:O	2.16	0.46
5:C:1030:GLN:O	6:D:622:ARG:HA	2.16	0.46
6:D:136:ASP:HB3	6:D:137:PRO:CD	2.30	0.46
6:D:433:GLY:HA2	6:D:450:TYR:N	2.30	0.46
6:D:666:ILE:HD11	12:D:9408:HOH:O	2.16	0.46
6:D:926:LYS:HZ1	6:D:929:ARG:NH2	2.13	0.46
6:D:1336:LEU:HB2	6:D:1344:VAL:HG21	1.97	0.46
4:K:41:ARG:O	4:K:45:LEU:HD13	2.16	0.46
4:K:198:ARG:NH1	12:K:762:HOH:O	2.49	0.46
4:L:124:ASN:HD21	4:L:127:LEU:HD13	1.81	0.46
5:M:430:VAL:HG13	5:M:430:VAL:O	2.16	0.46
5:M:474:VAL:HA	5:M:478:VAL:O	2.16	0.46
5:M:557:ARG:O	5:M:560:MET:HG3	2.16	0.46
5:M:598:GLU:HG3	5:M:623:TYR:OH	2.16	0.46
6:N:52:PRO:CG	6:N:80:VAL:HG13	2.46	0.46
6:N:400:VAL:HG22	6:N:443:VAL:HG21	1.97	0.46
6:N:1117:TYR:N	6:N:1117:TYR:CD2	2.84	0.46
6:N:1280:VAL:O	6:N:1294:VAL:HA	2.15	0.46
3:Z:6:DC:H3'	6:N:1266:ARG:CZ	2.44	0.45
5:C:140:ILE:C	5:C:418:LEU:HD23	2.41	0.45
5:C:202:TYR:HB3	5:C:207:LEU:HD12	1.97	0.45
5:C:408:ARG:NH1	5:C:456:ALA:O	2.47	0.45
5:C:462:ASP:CG	5:C:463:GLU:N	2.74	0.45
5:C:693:GLU:CD	5:C:855:VAL:HB	2.41	0.45
5:C:734:LEU:HA	5:C:737:LEU:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:850:ALA:HA	6:D:632:VAL:CG1	2.45	0.45
5:C:906:PHE:CZ	6:D:1067:VAL:HA	2.51	0.45
6:D:184:GLU:HB2	12:D:9238:HOH:O	2.15	0.45
6:D:514:LEU:CD2	6:D:517:VAL:HG22	2.46	0.45
6:D:1047:LYS:HG2	6:D:1053:PHE:CD1	2.51	0.45
6:D:1189:ARG:CZ	6:D:1203:LYS:HD2	2.46	0.45
6:D:1241:PHE:HD1	6:D:1257:PRO:HG2	1.80	0.45
6:D:1475:GLY:O	6:D:1478:SER:HB3	2.16	0.45
6:D:1496:GLU:HA	6:D:1499:ARG:HG3	1.97	0.45
5:M:198:ARG:HE	5:M:203:ASP:HA	1.80	0.45
5:M:218:VAL:HG22	5:M:221:LEU:HD23	1.97	0.45
5:M:302:VAL:O	5:M:306:THR:HG23	2.16	0.45
5:M:367:LEU:HA	5:M:371:LYS:HE2	1.98	0.45
5:M:707:ARG:HD2	5:M:826:TYR:OH	2.16	0.45
6:N:452:ILE:HD11	12:N:9025:HOH:O	2.17	0.45
6:N:614:PHE:O	6:N:618:LEU:HD13	2.16	0.45
6:N:705:ALA:HB3	6:N:706:PRO:HD3	1.97	0.45
6:N:978:TYR:HB2	6:N:983:LEU:HD12	1.98	0.45
6:N:1154:GLU:HG2	6:N:1159:ARG:HG3	1.98	0.45
6:N:1291:SER:HB2	6:N:1293:PHE:CE1	2.45	0.45
7:O:9:LEU:HD22	7:O:19:LEU:CD1	2.46	0.45
3:I:3:DA:N6	12:I:1102:HOH:O	2.49	0.45
4:B:165:ILE:HG13	4:B:165:ILE:O	2.16	0.45
5:C:3:ILE:CD1	5:C:900:ARG:HB2	2.46	0.45
5:C:88:LEU:HD22	5:C:814:GLU:CD	2.41	0.45
5:C:176:VAL:CG1	5:C:182:VAL:HG13	2.42	0.45
5:C:242:LEU:HD12	12:C:1489:HOH:O	2.16	0.45
5:C:292:ARG:HH21	5:C:294:GLU:CD	2.25	0.45
5:C:292:ARG:HD2	5:C:299:LYS:HD2	1.97	0.45
5:C:359:MET:HE2	5:C:359:MET:O	2.16	0.45
5:C:688:ILE:HD13	5:C:847:GLY:HA3	1.99	0.45
5:C:706:GLU:CD	5:C:707:ARG:H	2.24	0.45
5:C:906:PHE:CG	6:D:1067:VAL:HG22	2.52	0.45
6:D:9:ARG:HB2	6:D:1456:LYS:HA	1.98	0.45
6:D:177:ALA:HB3	6:D:205:TYR:OH	2.17	0.45
6:D:550:ARG:CZ	6:D:573:MET:HG2	2.45	0.45
6:D:728:LEU:HD13	6:D:745:MET:HE1	1.97	0.45
6:D:786:ILE:HG21	6:D:1027:GLY:N	2.31	0.45
6:D:987:GLU:HG3	12:D:9282:HOH:O	2.16	0.45
6:D:1239:ARG:HG3	6:D:1239:ARG:NH1	2.29	0.45
4:K:149:GLY:O	4:K:171:PHE:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:222:LEU:CD1	4:L:218:LEU:HD23	2.46	0.45
5:M:47:ALA:HA	5:M:50:GLU:OE2	2.15	0.45
5:M:267:TYR:HB2	5:M:272:ALA:HB1	1.97	0.45
5:M:549:PHE:HE2	5:M:887:GLU:HA	1.81	0.45
5:M:966:LEU:O	5:M:969:GLN:HB2	2.16	0.45
6:N:602:SER:O	6:N:606:ILE:HG13	2.16	0.45
6:N:699:VAL:N	6:N:756:GLN:HE22	2.10	0.45
6:N:773:ALA:HA	6:N:1228:SER:HB2	1.98	0.45
6:N:799:LYS:HD3	6:N:826:PRO:HD3	1.99	0.45
6:N:954:ALA:HB1	6:N:1039:CYS:SG	2.56	0.45
6:N:1137:ARG:HG2	6:N:1141:GLU:OE1	2.15	0.45
1:G:23:DG:H1'	12:G:1601:HOH:O	2.17	0.45
2:H:1:G:O6	5:C:773:LEU:HD23	2.15	0.45
1:X:2:DC:H2''	1:X:3:DC:C6	2.51	0.45
2:Y:14:G:HO2'	2:Y:15:C:H5'	1.75	0.45
4:A:32:PHE:HE2	4:B:43:ILE:HD13	1.82	0.45
5:C:184:MET:CB	5:C:193:LEU:HG	2.46	0.45
5:C:442:GLU:OE2	5:C:543:ASN:HB3	2.16	0.45
5:C:647:GLN:NE2	5:C:648:ARG:O	2.49	0.45
5:C:669:GLY:HA3	5:C:995:MET:HA	1.99	0.45
5:C:922:PHE:HE1	5:C:963:LEU:HD22	1.82	0.45
6:D:99:ALA:HB1	6:D:575:GLN:OE1	2.16	0.45
6:D:794:GLN:NE2	6:D:905:PRO:HG2	2.32	0.45
6:D:957:PRO:CD	6:D:1007:VAL:HG22	2.47	0.45
6:D:1189:ARG:NH1	6:D:1203:LYS:HD2	2.32	0.45
6:D:1236:LEU:CD2	6:D:1356:TYR:HA	2.47	0.45
6:D:1415:VAL:O	6:D:1415:VAL:HG23	2.16	0.45
5:M:191:PHE:CD2	5:M:195:LEU:HD23	2.50	0.45
5:M:603:VAL:HG22	5:M:613:VAL:HG12	1.97	0.45
5:M:1030:GLN:HE22	6:N:628:ARG:HD3	1.82	0.45
5:M:1109:VAL:HG23	6:N:3:LYS:HG3	1.99	0.45
6:N:162:ARG:HH22	6:N:414:ARG:HD2	1.80	0.45
6:N:396:VAL:C	6:N:398:ALA:N	2.74	0.45
6:N:788:GLY:O	6:N:792:ILE:HG22	2.16	0.45
6:N:1273:VAL:O	6:N:1273:VAL:HG23	2.15	0.45
6:N:1281:VAL:HG23	6:N:1319:VAL:CG2	2.44	0.45
6:N:1331:ASP:OD2	6:N:1332:PRO:N	2.50	0.45
6:N:1464:GLU:H	6:N:1464:GLU:HG2	1.45	0.45
2:Y:4:U:O2'	2:Y:5:C:H5'	2.17	0.45
4:B:57:TYR:CZ	4:B:161:ARG:HG2	2.51	0.45
5:C:45:GLN:HB2	5:C:71:TYR:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:289:THR:O	5:C:291:ALA:N	2.49	0.45
5:C:414:GLY:O	5:C:416:GLY:N	2.49	0.45
5:C:874:LEU:CD2	6:D:1029:ARG:HB2	2.47	0.45
5:C:1095:LEU:O	5:C:1096:ALA:C	2.60	0.45
6:D:9:ARG:HG3	6:D:1455:LYS:O	2.16	0.45
6:D:204:LEU:HD11	6:D:445:ARG:CD	2.46	0.45
6:D:1105:ILE:HG23	6:D:1200:VAL:HG23	1.97	0.45
4:K:105:GLY:O	4:K:132:LEU:HB3	2.16	0.45
5:M:95:TYR:HD2	5:M:114:PHE:HB2	1.80	0.45
5:M:410:ILE:HB	5:M:453:THR:O	2.16	0.45
5:M:432:ARG:H	5:M:432:ARG:HG2	1.41	0.45
5:M:433:THR:CG2	5:M:488:ALA:HB1	2.46	0.45
5:M:861:LEU:CD2	5:M:863:ASP:H	2.28	0.45
5:M:1039:ALA:HA	6:N:1227:GLN:HE22	1.81	0.45
6:N:906:GLN:HB3	6:N:911:LEU:CD1	2.46	0.45
6:N:1197:ARG:HG3	6:N:1198:TYR:H	1.81	0.45
6:N:1258:ARG:HG3	6:N:1258:ARG:NH1	2.31	0.45
6:N:1341:PRO:C	6:N:1343:ALA:N	2.74	0.45
6:N:1401:GLU:HA	12:N:9382:HOH:O	2.17	0.45
2:Y:7:G:C8	2:Y:7:G:H5"	2.51	0.45
3:Z:6:DC:OP1	6:N:1266:ARG:NH2	2.49	0.45
4:A:181:VAL:HA	4:A:194:LYS:O	2.16	0.45
4:B:86:VAL:O	4:B:86:VAL:HG13	2.17	0.45
5:C:64:LEU:HD13	5:C:359:MET:CG	2.46	0.45
5:C:94:LEU:HG	5:C:116:GLY:O	2.17	0.45
5:C:172:ILE:HD12	5:C:172:ILE:N	2.32	0.45
5:C:238:LEU:O	5:C:238:LEU:HD23	2.17	0.45
5:C:309:TYR:HA	5:C:312:ALA:HB3	1.97	0.45
5:C:333:ILE:N	5:C:465:GLY:O	2.44	0.45
5:C:401:LEU:HD21	5:C:565:GLN:HB2	1.98	0.45
5:C:498:GLN:OE1	6:D:1068:LEU:HB2	2.16	0.45
5:C:863:ASP:O	5:C:865:THR:N	2.49	0.45
6:D:45:PHE:HB3	6:D:86:ARG:NH2	2.31	0.45
6:D:162:ARG:HE	6:D:434:ARG:HE	1.63	0.45
6:D:165:LYS:CA	6:D:397:LYS:H	2.29	0.45
6:D:414:ARG:HB3	6:D:450:TYR:CD1	2.52	0.45
6:D:1031:ASN:HB3	6:D:1034:GLN:HG3	1.98	0.45
6:D:1153:VAL:HG22	6:N:561:GLY:CA	2.45	0.45
6:D:1297:GLU:CD	6:N:89:ARG:HH11	2.25	0.45
6:D:1451:ALA:O	6:D:1452:ILE:C	2.59	0.45
6:D:1462:LEU:N	6:D:1462:LEU:HD23	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1486:VAL:HG22	7:E:22:VAL:HG13	1.98	0.45
7:E:47:LYS:C	7:E:54:LEU:HD13	2.42	0.45
4:K:31:GLY:N	4:K:193:ASP:OD1	2.48	0.45
5:M:224:GLU:H	5:M:224:GLU:HG2	1.50	0.45
6:N:26:VAL:HG13	6:N:43:GLY:C	2.42	0.45
6:N:531:ASP:C	6:N:533:GLY:N	2.75	0.45
6:N:710:ARG:HD2	6:N:768:ASN:ND2	2.24	0.45
6:N:959:GLU:CD	6:N:959:GLU:N	2.75	0.45
6:N:1115:THR:CG2	6:N:1151:ARG:NH2	2.80	0.45
6:N:1171:VAL:O	6:N:1175:ILE:HG13	2.17	0.45
1:X:12:DG:H2''	1:X:13:DT:O5'	2.15	0.45
4:A:14:ARG:HH21	4:A:22:GLU:HB3	1.82	0.45
4:B:146:ARG:HG3	4:B:146:ARG:O	2.16	0.45
5:C:176:VAL:C	5:C:178:PRO:HD3	2.42	0.45
5:C:486:MET:HE2	5:C:486:MET:HB3	1.72	0.45
5:C:754:ILE:HD13	5:C:791:ARG:NE	2.31	0.45
5:C:1095:LEU:HG	6:D:603:LEU:HD13	1.99	0.45
6:D:10:ILE:CD1	6:D:1447:LEU:HG	2.47	0.45
6:D:133:ILE:C	6:D:152:LEU:HB2	2.41	0.45
6:D:202:VAL:HG21	6:D:399:ARG:C	2.42	0.45
6:D:471:GLU:O	6:D:474:GLU:HB3	2.17	0.45
6:D:672:ALA:HB2	12:D:9135:HOH:O	2.17	0.45
6:D:974:ILE:HD11	6:D:995:LEU:HD13	1.99	0.45
7:E:41:GLU:HG2	7:E:42:PRO:CD	2.46	0.45
7:E:57:ASP:H	7:E:58:PRO:HD3	1.82	0.45
4:K:44:LEU:HD22	4:K:199:ILE:HG21	1.99	0.45
4:K:194:LYS:HE2	4:K:196:THR:CG2	2.46	0.45
5:M:1096:ALA:HB1	6:N:13:ALA:HB3	1.99	0.45
6:N:133:ILE:HG23	6:N:455:ARG:C	2.42	0.45
6:N:146:PRO:HG3	12:N:9111:HOH:O	2.16	0.45
6:N:477:LEU:HB3	6:N:496:LEU:HD22	1.99	0.45
6:N:965:GLU:HA	6:N:968:ASP:OD2	2.17	0.45
4:A:1:MET:O	4:A:6:LEU:HB2	2.17	0.45
5:C:64:LEU:CD2	5:C:359:MET:HG3	2.37	0.45
5:C:287:GLY:O	5:C:288:ARG:C	2.59	0.45
5:C:751:PRO:HB2	6:D:680:GLN:CD	2.42	0.45
6:D:136:ASP:CB	6:D:137:PRO:HD3	2.30	0.45
6:D:150:ARG:HH12	6:D:468:LEU:CD2	2.30	0.45
6:D:546:ARG:HB2	12:D:9041:HOH:O	2.15	0.45
6:D:660:LYS:CE	6:D:694:VAL:HA	2.47	0.45
6:D:783:ARG:NH2	6:D:1029:ARG:CZ	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:932:ASP:N	6:D:932:ASP:OD1	2.49	0.45
6:D:957:PRO:O	6:D:960:LYS:HB3	2.17	0.45
6:D:1141:GLU:HG2	6:D:1168:MET:HE2	1.99	0.45
6:D:1263:PHE:HA	6:D:1375:MET:CE	2.47	0.45
6:D:1407:LEU:HA	12:D:9390:HOH:O	2.16	0.45
7:E:90:GLU:HA	12:E:115:HOH:O	2.16	0.45
4:K:124:ASN:N	4:K:125:PRO:HD3	2.31	0.45
5:M:86:LYS:NZ	5:M:813:VAL:HG12	2.32	0.45
5:M:119:PRO:HG2	5:M:386:PHE:CD2	2.52	0.45
5:M:437:ARG:HA	5:M:467:ILE:CG2	2.47	0.45
5:M:486:MET:HE3	5:M:490:GLU:HB3	1.99	0.45
5:M:551:GLU:O	6:N:1065:LEU:HB3	2.17	0.45
5:M:1065:ALA:HB1	5:M:1077:PRO:HG2	1.98	0.45
6:N:82:LYS:O	6:N:84:ILE:N	2.50	0.45
6:N:133:ILE:O	6:N:152:LEU:HA	2.17	0.45
6:N:1047:LYS:HB3	6:N:1048:PRO:HD2	1.99	0.45
6:N:1047:LYS:HA	6:N:1053:PHE:CE1	2.52	0.45
6:N:1174:LEU:O	6:N:1183:ILE:HD11	2.16	0.45
6:N:1197:ARG:HB3	6:N:1396:GLU:CG	2.47	0.45
6:N:1237:THR:OG1	6:N:1256:LEU:HB2	2.16	0.45
7:O:54:LEU:HG	7:O:58:PRO:CG	2.47	0.45
2:Y:7:G:H2'	2:Y:8:C:OP1	2.17	0.45
5:C:85:GLU:HA	5:C:85:GLU:OE2	2.17	0.45
5:C:137:VAL:HG22	5:C:391:LEU:HG	1.99	0.45
5:C:630:ARG:NH2	5:C:706:GLU:HA	2.25	0.45
5:C:843:HIS:CD2	5:C:884:GLN:HA	2.51	0.45
5:C:874:LEU:HD23	6:D:1029:ARG:HB2	1.98	0.45
5:C:914:ILE:HA	5:C:917:LEU:HD12	1.99	0.45
5:C:1054:THR:HG21	5:C:1079:PRO:CB	2.40	0.45
12:C:1190:HOH:O	6:D:651:GLU:HG3	2.16	0.45
6:D:195:VAL:HG23	12:D:9368:HOH:O	2.17	0.45
6:D:447:VAL:O	6:D:449:SER:N	2.49	0.45
6:D:629:SER:HB2	6:D:648:MET:HE1	1.98	0.45
6:D:826:PRO:HD2	6:D:829:VAL:HG22	1.99	0.45
6:D:844:ALA:O	6:D:867:ARG:HB3	2.17	0.45
6:D:969:ARG:O	6:D:972:LEU:HB3	2.17	0.45
6:D:1109:GLU:HG2	6:D:1202:GLN:H	1.81	0.45
6:D:1209:LEU:CD2	6:D:1211:MET:H	2.21	0.45
6:D:1311:LEU:HD12	6:D:1311:LEU:O	2.16	0.45
6:D:1346:ARG:HG3	12:D:9099:HOH:O	2.16	0.45
5:M:17:PRO:O	5:M:18:LEU:C	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:226:VAL:HG13	5:M:227:PHE:CD1	2.51	0.45
5:M:352:ALA:HA	5:M:355:VAL:CG1	2.47	0.45
5:M:365:ASP:O	5:M:367:LEU:N	2.50	0.45
5:M:367:LEU:HD23	5:M:371:LYS:HE3	1.99	0.45
5:M:676:ILE:O	5:M:676:ILE:HG23	2.17	0.45
5:M:710:ILE:HG23	5:M:823:VAL:HB	1.98	0.45
5:M:1008:ARG:CZ	5:M:1011:GLY:HA3	2.47	0.45
6:N:131:LYS:HG3	6:N:568:ARG:CG	2.47	0.45
6:N:399:ARG:HB2	6:N:401:TYR:HE1	1.82	0.45
6:N:844:ALA:HB3	6:N:848:GLU:CD	2.42	0.45
6:N:895:VAL:O	6:N:899:LEU:HG	2.16	0.45
6:N:1196:THR:HG21	12:N:9128:HOH:O	2.17	0.45
6:N:1273:VAL:HG22	6:N:1305:LEU:HD21	1.98	0.45
1:X:11:DC:H5'	12:X:877:HOH:O	2.17	0.45
4:A:59:GLU:HG3	4:A:139:ASN:ND2	2.32	0.45
5:C:39:ARG:O	5:C:41:ASN:N	2.50	0.45
5:C:95:TYR:HE1	12:C:1214:HOH:O	2.00	0.45
5:C:119:PRO:HG2	5:C:386:PHE:CG	2.52	0.45
5:C:572:ILE:HG13	5:C:573:ARG:H	1.82	0.45
5:C:670:GLN:HE22	5:C:699:PHE:HA	1.82	0.45
5:C:922:PHE:HB3	5:C:964:LYS:HZ1	1.81	0.45
5:C:949:LYS:HZ2	6:D:828:LYS:HZ2	1.64	0.45
5:C:1096:ALA:O	6:D:21:TRP:HH2	2.00	0.45
6:D:14:SER:O	6:D:17:LYS:N	2.50	0.45
6:D:107:ASP:OD1	6:D:109:PRO:HD2	2.17	0.45
6:D:439:LEU:HD12	6:D:439:LEU:H	1.81	0.45
6:D:660:LYS:HZ3	6:D:694:VAL:HA	1.82	0.45
6:D:879:ARG:NH2	6:D:903:ASP:HA	2.31	0.45
6:D:947:ILE:H	6:D:947:ILE:HD12	1.82	0.45
6:D:1021:TYR:CE2	6:D:1025:GLN:HG3	2.52	0.45
6:D:1098:LEU:HD21	6:D:1229:ILE:CG2	2.47	0.45
6:D:1098:LEU:HD21	6:D:1229:ILE:HG21	1.99	0.45
6:D:1384:PRO:HG3	6:D:1389:LEU:CA	2.47	0.45
6:D:1478:SER:C	6:D:1480:PHE:N	2.74	0.45
7:E:41:GLU:HB2	7:E:45:ARG:NE	2.31	0.45
4:K:33:GLY:O	4:K:195:LEU:HD22	2.16	0.45
4:K:42:ARG:NH1	4:L:34:VAL:HB	2.29	0.45
4:K:58:ILE:HG21	4:K:68:ILE:HD11	1.97	0.45
4:L:42:ARG:HG2	4:L:42:ARG:HH11	1.82	0.45
5:M:1:MET:CE	5:M:900:ARG:HH12	2.27	0.45
5:M:101:ILE:HG22	5:M:102:HIS:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:820:ARG:HB2	12:M:7055:HOH:O	2.17	0.45
6:N:28:LYS:CB	6:N:41:ARG:HD2	2.40	0.45
6:N:56:TYR:CE2	6:N:66:GLN:HA	2.52	0.45
6:N:131:LYS:C	6:N:132:TYR:CD1	2.95	0.45
6:N:704:ARG:HB2	6:N:736:PHE:CD2	2.52	0.45
5:C:136:ILE:CD1	5:C:392:SER:HB3	2.42	0.45
5:C:455:LEU:HD11	12:C:1429:HOH:O	2.16	0.45
5:C:580:MET:SD	5:C:584:GLU:HG3	2.57	0.45
5:C:638:ASP:C	5:C:639:GLN:HE21	2.25	0.45
5:C:725:ASP:O	5:C:727:PRO:HD3	2.17	0.45
5:C:858:MET:SD	5:C:867:VAL:HG23	2.56	0.45
5:C:962:GLN:NE2	12:C:1264:HOH:O	2.50	0.45
6:D:48:ARG:HB3	6:D:48:ARG:NH1	2.32	0.45
6:D:97:THR:HG21	6:D:571:LYS:HD3	1.99	0.45
6:D:161:LEU:CD2	6:D:452:ILE:HG21	2.47	0.45
6:D:770:LEU:HD11	6:D:919:PHE:CE2	2.52	0.45
6:D:928:ALA:HB1	12:E:102:HOH:O	2.17	0.45
6:D:956:ILE:HA	6:D:1039:CYS:HB3	1.98	0.45
6:D:1272:ALA:CA	6:D:1326:THR:HB	2.46	0.45
7:E:48:MET:HG2	7:E:49:GLN:N	2.31	0.45
4:L:142:VAL:HG23	4:L:142:VAL:O	2.17	0.45
5:M:94:LEU:C	5:M:94:LEU:HD12	2.42	0.45
5:M:141:HIS:HD2	5:M:332:ARG:O	2.00	0.45
5:M:578:VAL:HG11	5:M:991:GLN:CB	2.42	0.45
6:N:423:ASP:HB3	6:N:426:LYS:HB3	1.99	0.45
5:C:220:GLY:HA2	5:C:223:ASP:OD1	2.16	0.44
5:C:267:TYR:HD2	5:C:267:TYR:O	2.00	0.44
5:C:275:TYR:CD2	5:C:276:LYS:HG3	2.53	0.44
5:C:334:ARG:O	5:C:339:LEU:HD11	2.16	0.44
5:C:399:ASN:ND2	5:C:402:SER:HB3	2.32	0.44
5:C:422:ARG:O	8:D:7001:STD:H143	2.18	0.44
5:C:492:ASP:CB	5:C:518:LYS:HE2	2.42	0.44
5:C:744:ARG:O	5:C:800:VAL:HG21	2.17	0.44
5:C:1008:ARG:HA	6:D:651:GLU:OE2	2.17	0.44
5:C:1084:SER:HA	5:C:1087:VAL:HG12	1.99	0.44
6:D:397:LYS:O	6:D:448:GLU:N	2.40	0.44
6:D:409:VAL:CG2	6:D:421:LEU:HA	2.47	0.44
6:D:1114:THR:HG23	6:D:1114:THR:O	2.16	0.44
6:D:1118:ILE:HG13	6:D:1190:SER:OG	2.17	0.44
4:L:64:GLU:HA	4:L:165:ILE:HD13	1.99	0.44
5:M:93:PRO:HG3	5:M:117:HIS:CE1	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:139:GLN:HE21	5:M:334:ARG:HD3	1.81	0.44
5:M:270:GLY:O	5:M:274:ARG:HB3	2.17	0.44
5:M:428:ARG:NH1	5:M:450:GLY:O	2.49	0.44
5:M:862:PRO:HD3	5:M:973:VAL:O	2.17	0.44
5:M:1001:VAL:O	5:M:1001:VAL:HG12	2.17	0.44
6:N:398:ALA:HB2	6:N:447:VAL:CA	2.41	0.44
6:N:519:VAL:HG22	6:N:544:TYR:CE1	2.52	0.44
6:N:704:ARG:NH1	6:N:705:ALA:HB2	2.33	0.44
6:N:710:ARG:HH11	6:N:768:ASN:HD21	1.58	0.44
6:N:996:TRP:HB3	12:N:9282:HOH:O	2.16	0.44
6:N:1044:LEU:HB2	12:N:9330:HOH:O	2.16	0.44
6:N:1148:VAL:HG12	6:N:1163:GLY:HA2	1.98	0.44
2:Y:8:C:H6	2:Y:8:C:O5'	2.00	0.44
4:A:62:LEU:HD13	4:A:63:HIS:ND1	2.32	0.44
5:C:93:PRO:HB3	5:C:117:HIS:HE1	1.81	0.44
5:C:682:TYR:CE1	5:C:851:LYS:HD2	2.52	0.44
5:C:839:LEU:N	5:C:839:LEU:HD23	2.31	0.44
5:C:988:VAL:HG11	6:D:950:GLY:HA2	1.99	0.44
5:C:1018:GLN:HG3	5:C:1060:ILE:CD1	2.39	0.44
6:D:28:LYS:CG	6:D:29:PRO:HD2	2.45	0.44
6:D:809:PRO:O	6:D:812:ALA:HB3	2.16	0.44
7:E:41:GLU:N	7:E:42:PRO:CD	2.79	0.44
4:L:52:ALA:HB2	4:L:170:VAL:O	2.17	0.44
4:L:94:LEU:HD23	4:L:97:VAL:CG2	2.37	0.44
4:L:176:ARG:NH1	6:N:884:ARG:HD3	2.32	0.44
5:M:195:LEU:O	5:M:195:LEU:HD12	2.17	0.44
5:M:332:ARG:NE	5:M:464:LEU:HD11	2.31	0.44
5:M:411:SER:HA	5:M:452:ILE:HG22	1.99	0.44
5:M:499:ALA:HB3	5:M:536:PRO:HD3	1.98	0.44
5:M:906:PHE:CE2	6:N:1067:VAL:HA	2.53	0.44
5:M:1005:MET:HB2	6:N:648:MET:CE	2.47	0.44
6:N:6:ARG:NH1	6:N:6:ARG:HB3	2.31	0.44
6:N:72:VAL:CG2	6:N:77:GLY:HA2	2.47	0.44
6:N:104:PHE:HB3	6:N:512:MET:CE	2.47	0.44
6:N:157:GLU:HG2	12:N:9472:HOH:O	2.16	0.44
6:N:616:GLN:HA	12:N:9306:HOH:O	2.17	0.44
6:N:643:GLY:HA3	6:N:727:GLN:HB2	2.00	0.44
6:N:728:LEU:HD21	6:N:733:CYS:SG	2.57	0.44
6:N:799:LYS:HB3	6:N:826:PRO:CG	2.37	0.44
6:N:1105:ILE:HG21	6:N:1370:ILE:HG23	2.00	0.44
6:N:1255:GLY:O	6:N:1256:LEU:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1259:VAL:HG22	6:N:1355:VAL:HG21	1.99	0.44
6:N:1301:LYS:HA	6:N:1301:LYS:HD2	1.75	0.44
1:X:17:DC:P	5:M:1031:ARG:HG3	2.57	0.44
4:A:50:GLY:O	4:A:146:ARG:HA	2.17	0.44
4:A:186:LEU:HD22	4:A:192:LEU:CD1	2.47	0.44
4:B:22:GLU:N	12:B:393:HOH:O	2.48	0.44
4:B:80:LEU:HG	6:D:844:ALA:HA	1.97	0.44
5:C:15:LEU:N	5:C:586:ARG:HH22	2.13	0.44
5:C:198:ARG:NH2	5:C:203:ASP:HA	2.30	0.44
5:C:393:GLN:HE21	5:C:393:GLN:H	1.63	0.44
5:C:553:ASP:OD1	5:C:843:HIS:ND1	2.50	0.44
5:C:578:VAL:HG11	5:C:991:GLN:HB3	1.99	0.44
5:C:860:HIS:CD2	5:C:860:HIS:H	2.35	0.44
6:D:134:VAL:HG21	6:D:463:GLN:CB	2.47	0.44
6:D:141:ILE:HD13	6:D:432:TYR:HB2	1.97	0.44
6:D:206:ARG:HG3	6:D:206:ARG:NH1	2.32	0.44
6:D:434:ARG:O	6:D:447:VAL:HG22	2.17	0.44
6:D:619:LEU:O	6:D:620:GLY:O	2.35	0.44
6:D:701:LEU:HD21	6:D:763:MET:CE	2.47	0.44
6:D:963:TYR:CD2	6:D:1002:LYS:HB3	2.53	0.44
6:D:975:GLU:O	6:D:979:GLU:HG3	2.17	0.44
6:D:1085:ALA:O	6:D:1088:THR:HG22	2.17	0.44
6:D:1274:ILE:HB	6:D:1322:GLY:HA2	1.99	0.44
6:D:1383:ASP:HB3	6:D:1416:ALA:HB3	1.98	0.44
7:E:59:ASN:HB3	7:E:62:THR:OG1	2.17	0.44
7:E:87:LYS:O	7:E:91:ARG:HG3	2.17	0.44
4:K:61:VAL:HG22	12:K:1349:HOH:O	2.16	0.44
4:K:64:GLU:O	4:K:64:GLU:HG2	2.18	0.44
4:K:172:SER:C	4:K:174:VAL:H	2.26	0.44
4:K:206:THR:HG22	4:K:209:GLU:HG3	1.98	0.44
5:M:92:ALA:HB2	5:M:120:LEU:HD11	2.00	0.44
5:M:258:TYR:CD1	5:M:258:TYR:N	2.85	0.44
5:M:502:PRO:O	5:M:503:LEU:HD12	2.16	0.44
5:M:1032:PHE:HZ	5:M:1040:LEU:CD1	2.30	0.44
5:M:1070:ILE:HG23	6:N:656:PHE:CE2	2.52	0.44
5:M:1090:LYS:HE2	5:M:1112:PHE:CE1	2.52	0.44
5:M:1105:LYS:O	5:M:1107:ASN:N	2.49	0.44
6:N:163:TYR:HB2	6:N:166:GLN:CG	2.44	0.44
6:N:179:VAL:HA	6:N:183:GLU:OE1	2.18	0.44
6:N:728:LEU:HD11	6:N:732:VAL:HG23	1.98	0.44
6:N:1144:LEU:HD11	6:N:1186:VAL:CG1	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1191:PRO:HD3	6:N:1204:CYS:O	2.16	0.44
6:N:1236:LEU:HD23	6:N:1359:GLN:O	2.18	0.44
6:N:1281:VAL:HB	6:N:1313:VAL:HG22	1.99	0.44
6:N:1295:GLU:CB	6:N:1300:SER:HB3	2.48	0.44
2:Y:15:C:H2'	2:Y:16:G:C8	2.52	0.44
4:A:32:PHE:CE2	4:B:43:ILE:HD13	2.52	0.44
4:A:48:ILE:HD12	4:A:174:VAL:HG21	1.99	0.44
4:A:71:VAL:HG22	4:A:132:LEU:HD11	1.98	0.44
4:B:108:GLU:CD	4:B:128:HIS:HE2	2.25	0.44
5:C:53:PRO:HG3	12:C:1281:HOH:O	2.17	0.44
5:C:141:HIS:HE1	5:C:332:ARG:HH11	1.63	0.44
5:C:260:LEU:CB	5:C:291:ALA:HB1	2.47	0.44
5:C:469:THR:OG1	5:C:470:PRO:HD2	2.18	0.44
5:C:747:ALA:O	5:C:800:VAL:HG22	2.17	0.44
6:D:529:GLN:HG3	6:D:535:PHE:CE1	2.52	0.44
6:D:646:LYS:CA	6:D:720:LEU:HG	2.47	0.44
6:D:695:ILE:C	12:D:9064:HOH:O	2.60	0.44
6:D:704:ARG:HH21	6:D:737:ASN:HD22	1.65	0.44
6:D:794:GLN:HB3	6:D:1017:PHE:HZ	1.81	0.44
6:D:1078:ARG:HG2	6:D:1078:ARG:HH11	1.81	0.44
6:D:1310:ARG:HG2	6:D:1310:ARG:HH11	1.83	0.44
6:D:1383:ASP:HA	12:D:9485:HOH:O	2.16	0.44
4:K:59:GLU:HG3	4:K:139:ASN:O	2.18	0.44
4:K:74:ASP:O	4:K:78:ILE:HG13	2.18	0.44
4:L:194:LYS:HE2	12:L:689:HOH:O	2.18	0.44
5:M:51:THR:HB	5:M:348:LEU:HG	1.99	0.44
5:M:175:GLU:O	5:M:183:SER:N	2.47	0.44
5:M:290:LEU:HB3	5:M:302:VAL:CG1	2.48	0.44
5:M:625:LEU:CD1	5:M:641:PRO:HG3	2.44	0.44
5:M:660:ALA:O	5:M:667:ALA:O	2.35	0.44
5:M:668:LEU:HB2	5:M:995:MET:SD	2.57	0.44
5:M:725:ASP:O	5:M:727:PRO:HD3	2.16	0.44
5:M:805:ARG:C	5:M:806:LEU:HD23	2.42	0.44
5:M:838:LYS:HD2	5:M:838:LYS:N	2.33	0.44
5:M:1032:PHE:HE2	5:M:1037:VAL:HA	1.82	0.44
5:M:1082:PRO:HD3	12:M:7137:HOH:O	2.16	0.44
12:M:7189:HOH:O	6:N:940:THR:HG23	2.16	0.44
6:N:130:SER:O	6:N:568:ARG:NH2	2.47	0.44
6:N:619:LEU:O	6:N:620:GLY:C	2.61	0.44
6:N:720:LEU:H	6:N:720:LEU:CD1	2.24	0.44
6:N:860:LEU:HB2	6:N:861:GLN:NE2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:928:ALA:HA	6:N:931:LEU:HD12	1.99	0.44
6:N:995:LEU:O	6:N:999:THR:HB	2.17	0.44
6:N:1093:TYR:CE1	6:N:1097:LYS:HE3	2.53	0.44
6:N:1141:GLU:HG2	6:N:1168:MET:HE2	1.99	0.44
7:O:67:GLU:OE1	7:O:73:LEU:HD11	2.17	0.44
4:A:26:GLU:HB3	4:A:194:LYS:HG3	2.00	0.44
5:C:630:ARG:HH21	5:C:706:GLU:CA	2.25	0.44
5:C:744:ARG:HD2	5:C:747:ALA:HB2	1.99	0.44
5:C:757:GLY:HA2	5:C:789:SER:HB3	2.00	0.44
5:C:923:GLU:O	5:C:927:GLY:HA3	2.18	0.44
6:D:7:LYS:HA	6:D:1457:ASP:O	2.18	0.44
6:D:951:ILE:HD13	6:D:951:ILE:C	2.43	0.44
6:D:1258:ARG:NH2	12:D:9088:HOH:O	2.50	0.44
6:D:1281:VAL:CG2	6:D:1319:VAL:HG11	2.48	0.44
6:D:1321:ALA:O	6:D:1339:LYS:HD2	2.17	0.44
7:E:54:LEU:O	7:E:63:TRP:HZ2	1.99	0.44
4:L:48:ILE:HA	4:L:49:PRO:HD3	1.89	0.44
4:L:52:ALA:CB	4:L:170:VAL:H	2.31	0.44
4:L:59:GLU:HB3	4:L:137:ARG:HH12	1.78	0.44
4:L:173:PRO:CB	4:L:205:VAL:HG22	2.48	0.44
5:M:629:TYR:CB	5:M:637:LEU:HD12	2.47	0.44
6:N:161:LEU:CD2	6:N:452:ILE:HD13	2.48	0.44
6:N:844:ALA:O	6:N:867:ARG:HB3	2.18	0.44
7:O:48:MET:CB	7:O:54:LEU:HB2	2.48	0.44
1:G:22:DC:H4'	5:C:388:ARG:CG	2.44	0.44
2:H:16:G:OP1	5:C:846:LYS:HD3	2.17	0.44
3:I:13:DG:H2''	3:I:14:DG:C8	2.52	0.44
4:A:88:ARG:HB3	4:A:123:MET:SD	2.58	0.44
4:B:61:VAL:HG11	4:B:75:VAL:HG21	1.98	0.44
4:B:111:ALA:HB3	4:B:124:ASN:O	2.17	0.44
5:C:174:LEU:HB3	5:C:310:LEU:HD22	1.99	0.44
5:C:175:GLU:HB3	5:C:183:SER:OG	2.17	0.44
5:C:187:ASN:O	5:C:188:LYS:HG3	2.17	0.44
5:C:470:PRO:HD2	12:C:1361:HOH:O	2.17	0.44
5:C:859:PRO:HD2	5:C:870:ILE:HD11	2.00	0.44
5:C:928:LYS:HG2	5:C:932:GLU:CD	2.43	0.44
12:C:1387:HOH:O	6:D:5:VAL:HG12	2.16	0.44
6:D:4:GLU:HG2	6:D:1470:ARG:HH21	1.82	0.44
6:D:204:LEU:HD11	6:D:445:ARG:HD2	2.00	0.44
6:D:441:ARG:CZ	6:D:445:ARG:NH2	2.80	0.44
6:D:525:ARG:HG2	6:D:525:ARG:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:547:LEU:CD2	6:D:581:LEU:HD21	2.42	0.44
6:D:611:GLN:HE21	6:D:611:GLN:HB2	1.68	0.44
6:D:704:ARG:HB2	6:D:736:PHE:HB3	1.98	0.44
6:D:704:ARG:CZ	6:D:737:ASN:O	2.66	0.44
6:D:794:GLN:CD	6:D:905:PRO:HG2	2.42	0.44
6:D:1296:SER:C	6:D:1298:GLY:H	2.25	0.44
4:K:7:LYS:HZ3	4:K:186:LEU:HD23	1.82	0.44
4:K:41:ARG:HG2	4:K:177:VAL:CG1	2.47	0.44
5:M:21:ILE:HA	12:M:7145:HOH:O	2.16	0.44
5:M:261:ILE:N	5:M:261:ILE:HD12	2.32	0.44
5:M:317:VAL:C	5:M:319:GLY:N	2.73	0.44
5:M:329:GLY:HA3	5:M:489:THR:CG2	2.48	0.44
5:M:408:ARG:NH1	5:M:455:LEU:HD12	2.33	0.44
5:M:691:SER:HB3	5:M:868:ASP:HA	2.00	0.44
5:M:876:VAL:HG22	5:M:884:GLN:NE2	2.31	0.44
5:M:1004:LYS:HZ3	6:N:724:GLN:HE22	1.65	0.44
6:N:50:PHE:CB	6:N:522:PRO:HG2	2.47	0.44
6:N:57:GLU:HG3	6:N:64:LYS:HG3	1.99	0.44
6:N:162:ARG:HH22	6:N:414:ARG:NE	2.16	0.44
6:N:396:VAL:O	6:N:398:ALA:N	2.44	0.44
6:N:557:LEU:HD23	6:N:557:LEU:O	2.18	0.44
6:N:577:ALA:HB3	12:N:9173:HOH:O	2.16	0.44
6:N:647:ARG:NH1	12:N:9284:HOH:O	2.48	0.44
6:N:756:GLN:HG3	6:N:760:ARG:CD	2.48	0.44
6:N:1086:LEU:HB3	6:N:1087:ARG:HH11	1.83	0.44
6:N:1397:LYS:NZ	6:N:1432:LYS:HD2	2.32	0.44
6:N:1429:LEU:HD11	6:N:1440:PHE:CE1	2.53	0.44
7:O:39:VAL:HG22	7:O:67:GLU:CD	2.42	0.44
2:H:8:C:C2'	2:H:9:G:H5'	2.47	0.44
4:A:144:VAL:HG11	12:A:360:HOH:O	2.17	0.44
4:A:191:ASP:O	4:A:191:ASP:CG	2.60	0.44
5:C:544:THR:HG22	5:C:550:LEU:HD22	1.99	0.44
5:C:862:PRO:HA	5:C:975:TYR:HE1	1.83	0.44
5:C:1047:HIS:CD2	12:D:9080:HOH:O	2.71	0.44
6:D:477:LEU:CD2	6:D:495:ARG:HD3	2.37	0.44
6:D:502:PHE:CZ	6:D:509:PRO:HB3	2.53	0.44
6:D:553:ARG:O	6:D:557:LEU:HG	2.17	0.44
6:D:616:GLN:HA	12:D:9218:HOH:O	2.18	0.44
6:D:795:VAL:HG11	6:D:863:VAL:HG13	1.99	0.44
6:D:799:LYS:HZ3	6:D:824:ASN:HA	1.82	0.44
6:D:1174:LEU:O	6:D:1183:ILE:HD11	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1176:LYS:NZ	6:N:411:THR:HG22	2.33	0.44
6:D:1258:ARG:O	6:D:1262:LEU:HD13	2.18	0.44
6:D:1448:THR:HG22	6:D:1449:GLU:N	2.33	0.44
4:K:79:ILE:HD12	4:K:80:LEU:N	2.32	0.44
4:K:100:LEU:O	4:K:115:LEU:HG	2.18	0.44
4:K:101:LEU:O	4:K:101:LEU:HD23	2.17	0.44
4:K:112:ARG:HE	4:K:125:PRO:HB3	1.83	0.44
4:L:107:LYS:HG2	4:L:108:GLU:N	2.32	0.44
5:M:61:LYS:HG2	12:M:7213:HOH:O	2.17	0.44
5:M:203:ASP:CG	5:M:206:THR:HG22	2.43	0.44
5:M:654:LEU:HD13	5:M:664:GLY:N	2.32	0.44
5:M:729:LEU:CD2	6:N:675:ARG:HD2	2.38	0.44
5:M:733:ALA:HB1	6:N:679:ARG:HH12	1.82	0.44
5:M:798:GLY:HA3	5:M:828:ALA:O	2.18	0.44
5:M:1092:LEU:CA	5:M:1095:LEU:HD12	2.47	0.44
6:N:22:SER:CB	6:N:92:HIS:ND1	2.80	0.44
6:N:569:ASN:O	6:N:572:ARG:HB2	2.18	0.44
6:N:619:LEU:O	6:N:620:GLY:O	2.34	0.44
6:N:1101:VAL:HG13	6:N:1428:ALA:HB2	1.98	0.44
6:N:1183:ILE:HD12	6:N:1183:ILE:O	2.18	0.44
6:N:1283:ILE:N	6:N:1283:ILE:HD12	2.33	0.44
6:N:1453:ALA:O	6:N:1455:LYS:N	2.50	0.44
1:G:5:DG:C2'	1:G:6:DT:H71	2.48	0.44
4:A:9:PRO:CB	4:B:224:TYR:HB3	2.40	0.44
4:B:162:ILE:HG13	4:B:163:ASN:N	2.33	0.44
5:C:101:ILE:HG22	5:C:102:HIS:N	2.32	0.44
5:C:262:ALA:O	5:C:264:PRO:O	2.35	0.44
5:C:368:THR:N	5:C:369:PRO:CD	2.81	0.44
5:C:403:SER:O	5:C:407:LYS:HG3	2.18	0.44
5:C:416:GLY:HA2	12:C:1136:HOH:O	2.17	0.44
5:C:728:HIS:HB3	5:C:729:LEU:HD12	2.00	0.44
5:C:742:VAL:HG23	5:C:805:ARG:NH2	2.33	0.44
5:C:837:ASP:CG	5:C:999:HIS:NE2	2.75	0.44
6:D:168:THR:HG23	6:D:206:ARG:NH1	2.33	0.44
6:D:1216:SER:HB3	12:D:9474:HOH:O	2.17	0.44
6:D:1394:VAL:HG12	6:D:1397:LYS:H	1.82	0.44
4:K:63:HIS:ND1	4:K:63:HIS:N	2.65	0.44
4:L:176:ARG:HG3	4:L:200:TRP:CE3	2.53	0.44
5:M:78:PHE:CB	5:M:88:LEU:HD21	2.46	0.44
5:M:193:LEU:HD23	5:M:307:LEU:HD13	2.00	0.44
5:M:313:LEU:HD13	5:M:321:GLU:CB	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:421:GLU:HG2	12:M:7290:HOH:O	2.17	0.44
5:M:732:ALA:HB1	5:M:735:ARG:HH22	1.83	0.44
5:M:733:ALA:HB1	6:N:679:ARG:NH1	2.33	0.44
6:N:47:GLU:H	6:N:47:GLU:HG2	1.35	0.44
6:N:502:PHE:CZ	6:N:509:PRO:HB3	2.53	0.44
6:N:613:ARG:NH1	6:N:616:GLN:HG2	2.32	0.44
6:N:639:LEU:HD13	6:N:766:ALA:CB	2.48	0.44
6:N:711:LEU:HB3	6:N:714:GLN:HE21	1.82	0.44
6:N:764:LEU:HD12	6:N:767:HIS:H	1.82	0.44
6:N:939:PHE:O	6:N:943:THR:HG23	2.18	0.44
6:N:1194:CYS:SG	6:N:1200:VAL:HG13	2.58	0.44
6:N:1274:ILE:HG21	6:N:1330:ILE:HG23	2.00	0.44
6:N:1279:GLY:O	6:N:1318:TYR:HA	2.16	0.44
6:N:1311:LEU:HD11	12:N:9292:HOH:O	2.18	0.44
6:N:1327:ARG:HH11	6:N:1327:ARG:CB	2.31	0.44
6:N:1353:GLN:HE22	6:N:1363:LEU:CD2	2.31	0.44
6:N:1438:ALA:N	6:N:1446:VAL:HG11	2.33	0.44
1:G:2:DC:H2''	1:G:3:DC:C6	2.53	0.44
1:G:22:DC:H4'	5:C:388:ARG:CD	2.47	0.44
4:B:52:ALA:HB2	4:B:170:VAL:C	2.42	0.44
5:C:21:ILE:HD12	5:C:22:GLN:H	1.83	0.44
5:C:147:TYR:HB3	5:C:323:ASP:CB	2.47	0.44
5:C:292:ARG:NH2	5:C:294:GLU:OE1	2.50	0.44
5:C:676:ILE:O	6:D:948:THR:HG22	2.18	0.44
5:C:805:ARG:HG3	5:C:823:VAL:HG13	1.99	0.44
5:C:889:HIS:O	5:C:892:LEU:HB3	2.18	0.44
5:C:902:ILE:O	5:C:904:PRO:HD3	2.17	0.44
5:C:1047:HIS:HD2	12:D:9080:HOH:O	2.01	0.44
12:C:1357:HOH:O	7:E:31:LEU:HD13	2.17	0.44
6:D:97:THR:CG2	6:D:571:LYS:HD3	2.48	0.44
6:D:148:GLU:CB	6:D:151:GLN:HB2	2.33	0.44
6:D:642:CYS:SG	6:D:716:PHE:HB2	2.57	0.44
6:D:661:MET:HA	6:D:666:ILE:CD1	2.48	0.44
6:D:786:ILE:HG21	6:D:1027:GLY:H	1.83	0.44
6:D:937:TYR:HA	6:D:940:THR:OG1	2.17	0.44
6:D:1120:VAL:HG23	6:D:1188:VAL:HG11	2.00	0.44
6:D:1258:ARG:HE	6:D:1262:LEU:HD11	1.83	0.44
6:D:1275:SER:HB3	6:D:1325:LEU:HD13	2.00	0.44
7:E:25:LYS:O	7:E:29:GLN:HG2	2.18	0.44
4:K:199:ILE:N	4:K:199:ILE:HD12	2.31	0.44
5:M:212:GLY:HA3	5:M:218:VAL:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:524:VAL:HG13	5:M:525:SER:O	2.18	0.44
5:M:604:ALA:HB3	5:M:612:VAL:O	2.17	0.44
5:M:897:LEU:HD11	5:M:920:GLN:NE2	2.32	0.44
5:M:969:GLN:HE21	5:M:969:GLN:HB3	1.53	0.44
5:M:1059:ASP:O	5:M:1063:ARG:HG2	2.17	0.44
6:N:800:LYS:HD2	6:N:804:LEU:HB3	1.99	0.44
6:N:900:ILE:HG22	6:N:914:LEU:CD1	2.47	0.44
6:N:975:GLU:O	6:N:979:GLU:HG3	2.18	0.44
6:N:1145:TYR:CD2	6:N:1168:MET:SD	3.11	0.44
1:G:18:DG:H2'	1:G:19:DC:C6	2.51	0.43
4:A:105:GLY:HA3	12:A:356:HOH:O	2.17	0.43
4:A:152:PRO:HB3	4:A:154:GLU:OE1	2.18	0.43
5:C:480:THR:HG22	5:C:481:ASP:H	1.83	0.43
5:C:584:GLU:CD	5:C:584:GLU:H	2.25	0.43
5:C:745:ILE:HA	12:C:1408:HOH:O	2.17	0.43
5:C:1078:GLU:HA	5:C:1079:PRO:HD3	1.78	0.43
6:D:10:ILE:O	6:D:1451:ALA:HA	2.18	0.43
6:D:41:ARG:CD	6:D:42:ASP:H	2.31	0.43
6:D:41:ARG:CD	6:D:42:ASP:N	2.81	0.43
6:D:93:ILE:HD12	6:D:517:VAL:HB	2.00	0.43
6:D:153:LEU:HD11	6:D:158:TYR:N	2.33	0.43
6:D:396:VAL:O	6:D:396:VAL:HG23	2.18	0.43
6:D:524:LEU:CD1	6:D:524:LEU:N	2.81	0.43
6:D:801:GLY:HA3	12:D:9235:HOH:O	2.17	0.43
6:D:908:LYS:CB	6:D:1027:GLY:HA3	2.30	0.43
6:D:996:TRP:HA	6:D:996:TRP:CE3	2.53	0.43
6:D:1109:GLU:HG2	6:D:1201:CYS:CA	2.46	0.43
6:D:1277:ILE:CD1	6:D:1301:LYS:HB2	2.48	0.43
6:D:1434:TRP:CD1	6:D:1434:TRP:C	2.95	0.43
4:K:86:VAL:CG1	4:K:124:ASN:HB2	2.49	0.43
4:L:103:ALA:H	4:L:138:LEU:HD23	1.82	0.43
5:M:18:LEU:CD2	5:M:404:LEU:HD21	2.45	0.43
5:M:127:PHE:O	5:M:133:ASP:HA	2.18	0.43
5:M:585:GLU:HG2	5:M:665:PHE:CD2	2.52	0.43
5:M:874:LEU:HD21	6:N:1028:ALA:HB1	1.99	0.43
6:N:500:ARG:NH2	6:N:1387:SER:HA	2.33	0.43
6:N:520:LEU:HG	6:N:521:PRO:CD	2.47	0.43
6:N:525:ARG:HG2	6:N:525:ARG:O	2.18	0.43
6:N:583:ASP:OD1	6:N:586:ARG:HB2	2.17	0.43
6:N:1205:TYR:HE2	6:N:1208:ASP:O	2.00	0.43
6:N:1240:THR:HB	6:N:1255:GLY:CA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1498:ALA:HB2	7:O:88:GLU:OE1	2.18	0.43
2:Y:13:C:C4'	5:M:409:ARG:HH22	2.30	0.43
4:A:227:ASN:HB2	12:A:326:HOH:O	2.18	0.43
4:B:69:PRO:O	4:B:71:VAL:HG23	2.18	0.43
5:C:61:LYS:HD3	5:C:61:LYS:C	2.43	0.43
5:C:474:VAL:HA	5:C:478:VAL:O	2.18	0.43
5:C:1085:PHE:O	5:C:1088:LEU:HB3	2.18	0.43
6:D:165:LYS:CD	6:D:199:LEU:HD22	2.48	0.43
6:D:591:VAL:CG1	6:D:597:ASP:HA	2.47	0.43
6:D:731:LEU:HA	6:D:731:LEU:HD23	1.78	0.43
6:D:767:HIS:NE2	7:E:6:ILE:HG12	2.34	0.43
6:D:1102:THR:HG22	6:D:1222:GLY:HA2	1.99	0.43
6:D:1424:VAL:HG13	6:D:1425:THR:N	2.33	0.43
7:E:54:LEU:HG	7:E:58:PRO:HB2	2.00	0.43
4:L:38:ASN:HB3	4:L:39:PRO:HD3	2.00	0.43
5:M:292:ARG:CZ	5:M:299:LYS:HD3	2.48	0.43
5:M:579:VAL:HB	5:M:890:LEU:CD2	2.42	0.43
5:M:665:PHE:HA	12:M:7223:HOH:O	2.18	0.43
5:M:674:VAL:HG23	5:M:869:VAL:HG13	1.99	0.43
5:M:684:PHE:CE1	6:N:782:SER:HB3	2.53	0.43
5:M:838:LYS:C	5:M:839:LEU:HD23	2.43	0.43
5:M:1036:GLU:HG3	6:N:707:THR:OG1	2.18	0.43
5:M:1117:SER:O	6:N:23:TYR:OH	2.37	0.43
6:N:119:SER:HA	12:N:9418:HOH:O	2.18	0.43
6:N:206:ARG:NE	6:N:394:LEU:HD23	2.33	0.43
6:N:911:LEU:HD21	6:N:934:LEU:HD22	2.00	0.43
6:N:1048:PRO:HG3	6:N:1075:HIS:CE1	2.53	0.43
6:N:1371:VAL:HG13	6:N:1424:VAL:HG23	1.99	0.43
7:O:57:ASP:N	7:O:58:PRO:HD3	2.33	0.43
4:B:99:LEU:CD2	4:B:144:VAL:HG21	2.46	0.43
5:C:150:PRO:HG3	5:C:158:TYR:HD2	1.83	0.43
5:C:200:LEU:HD22	5:C:300:ASP:OD1	2.18	0.43
5:C:265:ARG:HD3	5:C:267:TYR:CD1	2.52	0.43
5:C:343:GLN:OE1	5:C:346:VAL:HG21	2.18	0.43
5:C:352:ALA:HA	5:C:355:VAL:CG1	2.48	0.43
5:C:435:TYR:O	5:C:437:ARG:HD2	2.18	0.43
5:C:536:PRO:HB3	5:C:906:PHE:HD1	1.83	0.43
5:C:577:PRO:HB3	5:C:842:ARG:NH2	2.33	0.43
5:C:716:LYS:HD2	12:D:9254:HOH:O	2.18	0.43
5:C:729:LEU:HD13	6:D:675:ARG:NE	2.31	0.43
5:C:861:LEU:HA	5:C:974:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:946:ARG:HG3	12:C:1210:HOH:O	2.18	0.43
5:C:1050:GLN:HB3	12:C:1306:HOH:O	2.18	0.43
6:D:806:PHE:O	6:D:807:ALA:C	2.61	0.43
6:D:926:LYS:NZ	6:D:929:ARG:CZ	2.81	0.43
6:D:1279:GLY:O	6:D:1318:TYR:HA	2.18	0.43
6:D:1301:LYS:HD2	6:D:1301:LYS:HA	1.85	0.43
6:D:1496:GLU:HA	6:D:1499:ARG:NE	2.33	0.43
4:K:131:THR:HG21	12:K:1287:HOH:O	2.17	0.43
5:M:73:LEU:HD12	5:M:73:LEU:O	2.18	0.43
5:M:437:ARG:HH22	5:M:491:GLU:HB2	1.83	0.43
5:M:607:ASP:HB3	5:M:609:ASN:H	1.83	0.43
5:M:684:PHE:HD2	6:N:740:PHE:CE1	2.36	0.43
6:N:134:VAL:HA	6:N:152:LEU:HA	2.00	0.43
6:N:453:ASP:CA	6:N:455:ARG:HH21	2.31	0.43
6:N:541:ASN:O	6:N:545:ARG:HG3	2.18	0.43
6:N:684:LYS:O	6:N:687:VAL:HG23	2.18	0.43
6:N:781:PRO:HB2	6:N:786:ILE:CD1	2.47	0.43
6:N:1031:ASN:O	6:N:1035:ILE:HG12	2.17	0.43
6:N:1048:PRO:HG3	6:N:1075:HIS:ND1	2.33	0.43
6:N:1428:ALA:O	6:N:1431:THR:HG22	2.19	0.43
3:Z:12:DA:H3'	12:Z:1652:HOH:O	2.19	0.43
4:A:99:LEU:CD2	4:A:122:ILE:HD11	2.48	0.43
4:B:97:VAL:HG11	4:B:120:VAL:HG21	2.00	0.43
5:C:166:PRO:HB3	12:C:1362:HOH:O	2.19	0.43
5:C:408:ARG:NH1	5:C:542:VAL:HG23	2.33	0.43
5:C:663:ASN:C	5:C:665:PHE:N	2.77	0.43
5:C:759:THR:HB	5:C:785:VAL:CG2	2.48	0.43
5:C:1029:GLY:HA3	6:D:623:VAL:O	2.18	0.43
6:D:26:VAL:HG13	6:D:43:GLY:C	2.43	0.43
6:D:141:ILE:HG21	6:D:448:GLU:O	2.18	0.43
6:D:820:GLU:CD	6:D:840:LYS:HD2	2.43	0.43
6:D:1124:GLN:HA	6:D:1125:PRO:HD3	1.54	0.43
6:D:1403:LEU:HD23	6:D:1407:LEU:HD22	2.00	0.43
6:D:1460:ILE:O	6:D:1460:ILE:HG13	2.16	0.43
7:E:24:ALA:O	7:E:28:GLN:HG3	2.18	0.43
4:K:19:GLU:O	4:K:200:TRP:HA	2.18	0.43
4:L:48:ILE:HD13	4:L:210:ALA:HB1	1.98	0.43
4:L:174:VAL:HG13	4:L:200:TRP:O	2.19	0.43
5:M:20:GLU:OE2	5:M:460:ARG:HB2	2.18	0.43
5:M:243:ARG:HD2	5:M:243:ARG:O	2.19	0.43
5:M:395:LYS:HE2	5:M:397:GLU:CD	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:409:ARG:HB3	5:M:454:SER:OG	2.18	0.43
5:M:573:ARG:HD3	5:M:699:PHE:CE1	2.53	0.43
5:M:718:GLY:HA3	5:M:761:PHE:CE1	2.53	0.43
5:M:789:SER:O	5:M:791:ARG:HG2	2.18	0.43
6:N:806:PHE:O	6:N:806:PHE:CG	2.70	0.43
6:N:1093:TYR:HD2	6:N:1093:TYR:HA	1.65	0.43
6:N:1262:LEU:HD23	6:N:1352:ILE:CG1	2.46	0.43
2:Y:8:C:C2'	2:Y:9:G:C8	3.01	0.43
4:A:14:ARG:CZ	4:A:22:GLU:HB3	2.49	0.43
4:B:14:ARG:HH11	4:B:14:ARG:HG3	1.82	0.43
5:C:143:SER:C	5:C:276:LYS:HE2	2.44	0.43
5:C:185:LYS:HE2	5:C:190:LYS:HE2	2.00	0.43
5:C:564:MET:CE	5:C:840:ALA:HB3	2.48	0.43
5:C:571:LEU:HD21	5:C:700:TYR:HD2	1.83	0.43
5:C:581:THR:C	5:C:902:ILE:HG23	2.43	0.43
5:C:617:ASP:HB2	5:C:619:ARG:CD	2.48	0.43
5:C:1086:ARG:HD3	5:C:1112:PHE:HD2	1.84	0.43
6:D:130:SER:HA	6:D:572:ARG:NE	2.34	0.43
6:D:793:THR:OG1	6:D:905:PRO:HA	2.18	0.43
6:D:814:ALA:O	6:D:818:ARG:HG3	2.19	0.43
6:D:880:ILE:HD13	6:D:880:ILE:O	2.19	0.43
6:D:911:LEU:HD23	6:D:934:LEU:CD1	2.48	0.43
6:D:1005:GLN:HG2	12:D:9051:HOH:O	2.17	0.43
6:D:1146:GLY:O	6:D:1207:TYR:N	2.51	0.43
4:K:62:LEU:HG	4:K:163:ASN:OD1	2.18	0.43
5:M:168:ARG:NH2	12:M:7365:HOH:O	2.51	0.43
5:M:325:ILE:HG22	5:M:331:ARG:HH12	1.83	0.43
5:M:749:VAL:HG22	5:M:798:GLY:O	2.18	0.43
5:M:958:THR:CG2	5:M:961:GLU:HG2	2.48	0.43
6:N:525:ARG:HA	6:N:526:PRO:HD3	1.62	0.43
6:N:1280:VAL:C	6:N:1319:VAL:HG22	2.43	0.43
6:N:1305:LEU:HD12	12:N:9055:HOH:O	2.17	0.43
6:N:1481:VAL:HG11	7:O:18:ARG:CA	2.41	0.43
4:A:73:GLU:H	4:A:73:GLU:HG2	1.52	0.43
4:B:50:GLY:O	4:B:146:ARG:HA	2.19	0.43
5:C:398:THR:O	5:C:570:PRO:HD3	2.18	0.43
5:C:524:VAL:CG2	5:C:528:GLU:HB2	2.49	0.43
5:C:754:ILE:H	6:D:679:ARG:HH22	1.64	0.43
12:C:1246:HOH:O	6:D:518:PRO:HD2	2.18	0.43
6:D:505:SER:CB	6:D:1454:GLY:N	2.81	0.43
6:D:827:ILE:O	6:D:837:GLY:HA3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1107:VAL:HG12	6:D:1217:ILE:HG23	2.01	0.43
6:D:1310:ARG:HG2	6:D:1310:ARG:NH1	2.33	0.43
6:D:1488:ASP:OD1	7:E:26:ARG:CZ	2.66	0.43
7:E:8:LYS:O	7:E:12:MET:HG3	2.18	0.43
4:K:12:THR:OG1	4:K:24:VAL:HB	2.19	0.43
4:K:50:GLY:CA	4:K:173:PRO:HG3	2.44	0.43
5:M:449:ILE:C	5:M:451:LEU:H	2.27	0.43
5:M:478:VAL:HG22	5:M:506:ASN:CB	2.48	0.43
5:M:649:VAL:HA	12:M:7333:HOH:O	2.18	0.43
5:M:674:VAL:O	5:M:989:VAL:HA	2.19	0.43
5:M:710:ILE:CD1	5:M:790:LEU:HB2	2.43	0.43
5:M:1045:ALA:N	6:N:762:GLN:HE22	2.17	0.43
6:N:954:ALA:O	6:N:1062:ARG:NH2	2.51	0.43
6:N:1040:GLY:O	6:N:1060:SER:HB3	2.18	0.43
6:N:1292:VAL:HG11	6:N:1325:LEU:HG	2.01	0.43
6:N:1400:VAL:HG21	12:N:9363:HOH:O	2.17	0.43
6:N:1435:LEU:HD13	6:N:1457:ASP:OD2	2.17	0.43
6:N:1485:GLN:O	7:O:75:PHE:HA	2.18	0.43
2:Y:9:G:C8	2:Y:9:G:C5'	3.02	0.43
4:A:111:ALA:HB3	4:A:124:ASN:O	2.18	0.43
4:B:1:MET:HE2	4:B:1:MET:N	2.33	0.43
4:B:7:LYS:HD3	12:B:317:HOH:O	2.19	0.43
4:B:132:LEU:HD21	4:B:136:GLY:O	2.18	0.43
4:B:155:LYS:HA	12:B:401:HOH:O	2.18	0.43
4:B:178:ALA:O	4:B:198:ARG:N	2.45	0.43
5:C:140:ILE:HA	5:C:332:ARG:O	2.18	0.43
5:C:396:ASP:O	5:C:396:ASP:CG	2.62	0.43
5:C:515:ALA:O	5:C:516:ARG:HD3	2.18	0.43
5:C:680:ASP:HB2	5:C:682:TYR:CD2	2.53	0.43
5:C:838:LYS:HG3	5:C:997:LEU:HB2	2.01	0.43
6:D:36:THR:C	6:D:38:LYS:N	2.76	0.43
6:D:52:PRO:CG	6:D:80:VAL:HG12	2.49	0.43
6:D:87:ARG:HG3	6:D:88:TYR:CE2	2.54	0.43
6:D:204:LEU:CD1	6:D:394:LEU:HD11	2.48	0.43
6:D:521:PRO:O	6:D:525:ARG:HD2	2.19	0.43
6:D:553:ARG:HD3	6:D:570:GLU:CD	2.44	0.43
6:D:1020:LEU:HA	6:D:1023:MET:CE	2.49	0.43
6:D:1236:LEU:HB2	6:D:1359:GLN:HG3	2.00	0.43
7:E:70:THR:HG21	7:E:72:ARG:HE	1.83	0.43
4:K:65:PHE:HE1	12:M:7116:HOH:O	2.01	0.43
5:M:12:VAL:HB	5:M:472:ARG:HH12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:134:ARG:HH21	5:M:393:GLN:HA	1.84	0.43
5:M:352:ALA:O	5:M:355:VAL:HG12	2.19	0.43
5:M:401:LEU:HD12	5:M:401:LEU:O	2.18	0.43
5:M:582:GLY:C	5:M:583:LEU:HD12	2.43	0.43
5:M:1047:HIS:CD2	6:N:1476:THR:HG21	2.54	0.43
6:N:133:ILE:O	6:N:153:LEU:N	2.51	0.43
6:N:155:ASP:OD1	6:N:456:MET:HE1	2.19	0.43
6:N:719:VAL:HG22	12:N:9124:HOH:O	2.19	0.43
6:N:799:LYS:HZ3	6:N:824:ASN:C	2.27	0.43
6:N:932:ASP:HA	6:N:935:LYS:HE2	2.00	0.43
6:N:1257:PRO:HG3	8:N:8001:STD:O6	2.19	0.43
6:N:1281:VAL:HG13	6:N:1292:VAL:HG13	2.00	0.43
6:N:1353:GLN:OE1	6:N:1368:ILE:HD12	2.19	0.43
7:O:41:GLU:CG	7:O:42:PRO:HD3	2.49	0.43
7:O:54:LEU:HA	7:O:58:PRO:CG	2.48	0.43
7:O:54:LEU:HG	7:O:58:PRO:HB2	2.01	0.43
4:B:54:THR:C	4:B:167:VAL:HG23	2.44	0.43
5:C:13:ILE:HG13	5:C:458:TYR:HE2	1.84	0.43
5:C:26:TYR:CE1	5:C:340:MET:HG3	2.54	0.43
5:C:405:ARG:NH1	5:C:563:ASN:HA	2.34	0.43
5:C:626:ARG:O	5:C:638:ASP:HA	2.18	0.43
5:C:684:PHE:CE1	6:D:782:SER:HB3	2.49	0.43
5:C:727:PRO:HG3	5:C:783:ARG:HD3	2.00	0.43
6:D:87:ARG:HA	12:D:9338:HOH:O	2.19	0.43
6:D:403:PHE:HD1	6:D:405:ASP:O	2.02	0.43
6:D:477:LEU:HD21	6:D:495:ARG:CD	2.39	0.43
6:D:477:LEU:HD13	6:D:492:ALA:O	2.18	0.43
6:D:1106:VAL:HG11	6:D:1474:ALA:HB2	2.01	0.43
6:D:1282:ARG:HA	6:D:1315:ASP:HA	2.00	0.43
6:D:1300:SER:HB2	6:N:60:CYS:CB	2.31	0.43
6:D:1344:VAL:HG12	6:D:1348:LEU:HD23	2.01	0.43
6:D:1495:ILE:HG12	7:E:80:VAL:CG1	2.49	0.43
4:K:206:THR:HG23	4:K:208:LEU:N	2.33	0.43
4:L:111:ALA:HB3	4:L:124:ASN:O	2.18	0.43
5:M:262:ALA:O	5:M:264:PRO:O	2.37	0.43
5:M:462:ASP:CG	5:M:463:GLU:H	2.26	0.43
5:M:516:ARG:CD	5:M:521:PRO:HA	2.40	0.43
5:M:597:ALA:CA	5:M:655:LEU:HD21	2.49	0.43
5:M:1006:HIS:O	6:N:627:GLY:HA2	2.18	0.43
6:N:17:LYS:HA	6:N:20:SER:HB3	2.00	0.43
6:N:122:GLU:O	6:N:126:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:729:HIS:HD1	6:N:731:LEU:N	2.10	0.43
6:N:754:PHE:CE2	7:O:21:VAL:HA	2.53	0.43
6:N:1124:GLN:HE21	6:N:1135:ARG:HG3	1.83	0.43
6:N:1282:ARG:NH2	12:N:9013:HOH:O	2.51	0.43
5:C:580:MET:O	5:C:903:SER:N	2.51	0.43
5:C:680:ASP:HB2	5:C:682:TYR:CE2	2.53	0.43
5:C:747:ALA:H	5:C:800:VAL:CG2	2.32	0.43
6:D:28:LYS:HB2	6:D:41:ARG:HH11	1.84	0.43
6:D:102:ILE:HD12	6:D:579:ASP:HB3	2.01	0.43
6:D:421:LEU:HD11	6:D:446:VAL:HG21	2.01	0.43
6:D:601:ARG:NH2	6:D:611:GLN:O	2.52	0.43
6:D:1047:LYS:HB3	6:D:1048:PRO:CD	2.48	0.43
4:K:218:LEU:HG	4:L:222:LEU:HD11	2.01	0.43
5:M:52:PHE:CZ	5:M:98:LEU:HD23	2.53	0.43
5:M:346:VAL:O	5:M:350:ARG:HD2	2.19	0.43
5:M:580:MET:HE1	5:M:665:PHE:CD1	2.54	0.43
5:M:602:GLU:HA	5:M:647:GLN:O	2.19	0.43
5:M:724:ARG:O	5:M:726:ILE:HD12	2.19	0.43
5:M:862:PRO:HG2	5:M:925:TYR:OH	2.18	0.43
6:N:13:ALA:HB1	6:N:18:ILE:HD11	2.01	0.43
6:N:528:VAL:HG12	6:N:529:GLN:N	2.34	0.43
6:N:645:PRO:HB2	6:N:648:MET:HB2	2.01	0.43
6:N:683:ILE:HD12	6:N:683:ILE:N	2.33	0.43
7:O:26:ARG:NH2	7:O:38:THR:HA	2.33	0.43
1:X:20:DG:O3'	5:M:394:PHE:CE2	2.72	0.43
4:B:227:ASN:HA	4:B:228:PRO:HD3	1.91	0.43
5:C:38:LYS:HD3	5:C:38:LYS:HA	1.82	0.43
5:C:97:ARG:HA	5:C:111:ASP:O	2.19	0.43
5:C:456:ALA:HA	5:C:541:SER:HA	2.00	0.43
5:C:679:PHE:HA	6:D:943:THR:HG22	2.01	0.43
5:C:762:LYS:NZ	5:C:771:GLU:OE1	2.51	0.43
5:C:1116:ALA:C	6:D:23:TYR:OH	2.62	0.43
6:D:15:PRO:C	6:D:19:ARG:NH1	2.77	0.43
6:D:206:ARG:HB2	6:D:392:SER:O	2.18	0.43
6:D:875:THR:CG2	6:D:879:ARG:HB2	2.49	0.43
6:D:1058:ARG:HB3	12:D:9528:HOH:O	2.19	0.43
6:D:1295:GLU:HB2	6:D:1300:SER:OG	2.19	0.43
6:D:1302:GLU:OE2	6:D:1304:LYS:HE3	2.19	0.43
6:D:1353:GLN:HE21	6:D:1357:ARG:CZ	2.32	0.43
7:E:31:LEU:HD23	7:E:35:PHE:CD1	2.54	0.43
7:E:39:VAL:O	7:E:72:ARG:NH1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:224:TYR:CD2	4:L:9:PRO:HG2	2.53	0.43
4:K:225:PHE:CE2	4:L:211:LEU:HD21	2.54	0.43
5:M:73:LEU:HB2	5:M:93:PRO:O	2.19	0.43
5:M:260:LEU:HD12	5:M:260:LEU:O	2.19	0.43
5:M:414:GLY:C	5:M:416:GLY:H	2.26	0.43
5:M:435:TYR:HA	6:N:1071:PHE:HE2	1.83	0.43
5:M:643:VAL:HG13	5:M:647:GLN:CD	2.44	0.43
5:M:1000:MET:C	5:M:1002:GLU:H	2.26	0.43
6:N:99:ALA:O	6:N:514:LEU:HB2	2.19	0.43
6:N:1120:VAL:HA	6:N:1121:PRO:HD3	1.80	0.43
7:O:39:VAL:HG23	7:O:72:ARG:HD2	2.00	0.43
1:G:13:DT:H5'	6:D:1093:TYR:CE1	2.54	0.42
5:C:95:TYR:HB2	5:C:112:GLU:OE1	2.19	0.42
5:C:113:VAL:HG11	5:C:373:VAL:CG1	2.49	0.42
5:C:265:ARG:HB3	5:C:267:TYR:CD1	2.54	0.42
5:C:305:PRO:O	5:C:308:ARG:HB2	2.19	0.42
5:C:829:GLN:HB2	12:C:1461:HOH:O	2.19	0.42
5:C:863:ASP:OD1	5:C:865:THR:HG23	2.18	0.42
6:D:139:GLY:H	6:D:147:VAL:HG21	1.84	0.42
6:D:699:VAL:HA	6:D:718:PRO:HD3	2.00	0.42
6:D:806:PHE:O	6:D:806:PHE:CG	2.72	0.42
6:D:1219:GLU:O	6:D:1221:VAL:HG23	2.19	0.42
6:D:1257:PRO:HG3	8:D:7001:STD:O6	2.19	0.42
6:D:1437:ALA:O	6:D:1446:VAL:HG21	2.19	0.42
4:K:191:ASP:OD1	4:K:191:ASP:O	2.37	0.42
5:M:30:LEU:O	5:M:30:LEU:HD12	2.18	0.42
5:M:44:ILE:HD13	5:M:340:MET:HE1	2.01	0.42
5:M:251:ASP:HB3	5:M:252:LYS:HG3	2.00	0.42
5:M:264:PRO:CB	5:M:289:THR:HB	2.45	0.42
5:M:498:GLN:O	5:M:501:THR:HG23	2.19	0.42
5:M:603:VAL:HG21	5:M:643:VAL:HG11	1.99	0.42
5:M:660:ALA:O	5:M:667:ALA:HB3	2.19	0.42
5:M:946:ARG:HD3	5:M:984:GLU:HB2	2.01	0.42
5:M:1014:SER:HB3	5:M:1017:THR:O	2.19	0.42
5:M:1017:THR:OG1	5:M:1019:GLN:HG3	2.19	0.42
6:N:125:GLN:NE2	6:N:129:PHE:HD1	2.17	0.42
6:N:403:PHE:CD2	6:N:444:VAL:HG23	2.54	0.42
6:N:616:GLN:NE2	12:N:9306:HOH:O	2.51	0.42
6:N:970:LYS:O	6:N:974:ILE:HG13	2.19	0.42
6:N:1037:GLN:HB3	6:N:1061:PHE:CE2	2.54	0.42
6:N:1462:LEU:N	6:N:1462:LEU:HD23	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1481:VAL:O	6:N:1481:VAL:HG12	2.18	0.42
2:H:9:G:H5'	2:H:9:G:H8	1.79	0.42
2:Y:7:G:H22	5:M:1014:SER:HA	1.83	0.42
4:A:39:PRO:HG3	4:B:39:PRO:CG	2.48	0.42
4:A:71:VAL:HG22	4:A:132:LEU:HD12	2.01	0.42
4:B:41:ARG:HG3	4:B:177:VAL:CG2	2.49	0.42
5:C:172:ILE:HA	5:C:185:LYS:O	2.18	0.42
5:C:194:VAL:HG11	5:C:204:GLN:HE21	1.84	0.42
5:C:290:LEU:H	5:C:290:LEU:CD2	2.32	0.42
5:C:552:HIS:CD2	5:C:886:LEU:HD22	2.54	0.42
5:C:693:GLU:OE1	5:C:855:VAL:HB	2.19	0.42
5:C:1046:ALA:HB2	12:D:9209:HOH:O	2.18	0.42
5:C:1083:GLU:CD	6:D:87:ARG:HH12	2.27	0.42
5:C:1095:LEU:HD21	6:D:603:LEU:HB3	2.01	0.42
5:C:1111:ILE:H	5:C:1111:ILE:HG12	1.51	0.42
5:C:1115:LEU:N	5:C:1115:LEU:CD1	2.82	0.42
6:D:110:SER:OG	6:D:112:ILE:HG23	2.19	0.42
6:D:133:ILE:HG23	6:D:456:MET:N	2.34	0.42
6:D:202:VAL:HG21	6:D:400:VAL:N	2.35	0.42
6:D:583:ASP:HB2	6:D:604:THR:OG1	2.19	0.42
6:D:619:LEU:HD12	6:D:621:LYS:HE3	2.00	0.42
6:D:796:ARG:HB2	6:D:828:LYS:HD2	2.01	0.42
6:D:800:LYS:NZ	6:D:804:LEU:HD22	2.33	0.42
6:D:1057:VAL:HG13	6:D:1069:GLU:HB3	2.01	0.42
6:D:1255:GLY:O	6:D:1259:VAL:HG23	2.19	0.42
6:D:1291:SER:HB2	6:N:75:ARG:CZ	2.48	0.42
7:E:59:ASN:ND2	12:E:125:HOH:O	2.52	0.42
4:K:27:PRO:CB	4:K:186:LEU:HD11	2.44	0.42
4:K:152:PRO:HG2	12:K:1303:HOH:O	2.19	0.42
4:L:123:MET:CE	4:L:204:SER:HA	2.48	0.42
5:M:39:ARG:O	5:M:41:ASN:N	2.52	0.42
5:M:181:VAL:HG12	5:M:182:VAL:N	2.33	0.42
5:M:292:ARG:NH2	5:M:299:LYS:HZ2	2.16	0.42
5:M:460:ARG:NH1	5:M:462:ASP:HA	2.34	0.42
5:M:758:ARG:HG2	5:M:758:ARG:HH11	1.84	0.42
5:M:1063:ARG:HG3	5:M:1064:ASN:N	2.33	0.42
6:N:619:LEU:HD12	6:N:621:LYS:HZ3	1.78	0.42
6:N:1127:GLU:HB3	6:N:1133:ARG:NH2	2.34	0.42
6:N:1209:LEU:HD23	6:N:1210:SER:H	1.82	0.42
6:N:1488:ASP:OD2	7:O:89:MET:HE1	2.20	0.42
7:O:41:GLU:N	7:O:42:PRO:CD	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:81:PRO:HB2	12:O:907:HOH:O	2.18	0.42
1:X:16:DG:H4'	12:X:729:HOH:O	2.19	0.42
4:A:42:ARG:CZ	4:B:34:VAL:HB	2.49	0.42
4:B:176:ARG:HG3	4:B:200:TRP:HB2	2.01	0.42
5:C:113:VAL:HG11	5:C:373:VAL:CB	2.49	0.42
5:C:118:ILE:H	5:C:118:ILE:HG13	1.72	0.42
5:C:242:LEU:HA	12:C:1134:HOH:O	2.19	0.42
5:C:332:ARG:HA	5:C:465:GLY:O	2.18	0.42
5:C:424:GLY:O	5:C:425:PHE:C	2.62	0.42
5:C:733:ALA:HB1	6:D:679:ARG:NH2	2.34	0.42
6:D:133:ILE:HG22	6:D:134:VAL:N	2.34	0.42
6:D:161:LEU:HD23	6:D:449:SER:HB3	2.01	0.42
6:D:465:LEU:O	6:D:465:LEU:HD23	2.19	0.42
6:D:475:LYS:HA	6:D:478:LEU:CG	2.50	0.42
6:D:817:GLU:HA	6:D:836:VAL:HG21	2.00	0.42
6:D:1209:LEU:HD22	6:D:1211:MET:HB3	2.02	0.42
6:D:1275:SER:CB	6:D:1294:VAL:HG11	2.49	0.42
4:L:123:MET:H	4:L:123:MET:HG2	1.64	0.42
5:M:141:HIS:CE1	5:M:165:LEU:HD23	2.54	0.42
5:M:173:ASP:OD1	5:M:185:LYS:HB2	2.19	0.42
5:M:265:ARG:HB3	5:M:267:TYR:CD2	2.53	0.42
5:M:565:GLN:HE21	5:M:995:MET:CE	2.30	0.42
6:N:478:LEU:HB3	6:N:1388:ARG:NH2	2.34	0.42
6:N:481:MET:O	6:N:489:ARG:HB2	2.18	0.42
6:N:567:ILE:HG22	6:N:571:LYS:HZ2	1.84	0.42
6:N:645:PRO:HG3	6:N:725:SER:O	2.19	0.42
6:N:704:ARG:HD2	6:N:705:ALA:H	1.84	0.42
6:N:958:GLU:O	6:N:962:GLN:OE1	2.37	0.42
6:N:970:LYS:O	6:N:970:LYS:HG3	2.20	0.42
6:N:1295:GLU:HB2	6:N:1300:SER:HB3	2.02	0.42
6:N:1397:LYS:HZ1	6:N:1432:LYS:HB2	1.84	0.42
1:X:16:DG:H5''	5:M:1031:ARG:HB2	2.01	0.42
4:B:48:ILE:HD12	4:B:174:VAL:HG21	2.01	0.42
4:B:71:VAL:HG22	4:B:132:LEU:CD1	2.49	0.42
5:C:267:TYR:HB2	5:C:272:ALA:CB	2.49	0.42
5:C:901:TYR:O	5:C:902:ILE:HG13	2.19	0.42
5:C:909:ALA:HB1	5:C:914:ILE:HD13	2.01	0.42
6:D:19:ARG:HA	6:D:22:SER:HB3	2.01	0.42
6:D:48:ARG:HH11	6:D:48:ARG:CB	2.30	0.42
6:D:436:GLU:HB2	6:D:445:ARG:NH1	2.30	0.42
6:D:502:PHE:CG	6:D:509:PRO:HD3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1295:GLU:HG3	6:N:76:CYS:SG	2.59	0.42
6:D:1453:ALA:HB1	12:D:9151:HOH:O	2.19	0.42
4:L:92:PRO:HA	4:L:146:ARG:NH2	2.34	0.42
5:M:300:ASP:OD2	5:M:303:PHE:HB2	2.19	0.42
5:M:352:ALA:C	5:M:355:VAL:HG12	2.45	0.42
5:M:446:GLY:O	5:M:447:ALA:C	2.63	0.42
5:M:770:GLU:H	5:M:770:GLU:HG2	1.44	0.42
5:M:1004:LYS:HD3	5:M:1004:LYS:HA	1.81	0.42
5:M:1109:VAL:HB	6:N:3:LYS:HD3	2.01	0.42
6:N:521:PRO:HA	6:N:522:PRO:HD3	1.92	0.42
6:N:549:ASN:HD22	6:N:549:ASN:HA	1.61	0.42
6:N:629:SER:HB3	6:N:726:ILE:HG13	2.02	0.42
6:N:1236:LEU:HD21	6:N:1361:VAL:N	2.34	0.42
6:N:1294:VAL:HG22	6:N:1325:LEU:CD2	2.40	0.42
6:N:1480:PHE:HB2	12:N:9424:HOH:O	2.19	0.42
1:G:1:DC:H2'	12:G:1552:HOH:O	2.20	0.42
2:Y:7:G:C5'	2:Y:7:G:H8	2.32	0.42
5:C:87:ASP:O	5:C:814:GLU:HG3	2.19	0.42
5:C:474:VAL:HG23	5:C:478:VAL:O	2.19	0.42
5:C:631:SER:HB3	5:C:635:THR:O	2.19	0.42
5:C:690:ILE:HG12	5:C:691:SER:N	2.34	0.42
5:C:752:GLY:N	5:C:792:VAL:HB	2.33	0.42
5:C:1008:ARG:HD2	6:D:624:ASP:O	2.19	0.42
6:D:8:VAL:O	6:D:1457:ASP:N	2.42	0.42
6:D:127:LEU:CD1	6:D:461:ILE:HD11	2.41	0.42
6:D:517:VAL:HG11	6:D:547:LEU:HD21	2.00	0.42
6:D:791:TYR:CD2	6:D:945:SER:HB2	2.55	0.42
6:D:796:ARG:HH22	6:D:859:ASP:CG	2.26	0.42
6:D:831:GLY:O	6:D:832:ARG:C	2.63	0.42
6:D:977:ALA:CB	6:D:983:LEU:HD11	2.49	0.42
6:D:1148:VAL:CG1	6:D:1163:GLY:HA2	2.48	0.42
4:K:83:LYS:HE2	4:K:168:ASP:OD2	2.19	0.42
5:M:516:ARG:CG	6:N:1068:LEU:HD13	2.49	0.42
5:M:520:GLU:OE1	6:N:1047:LYS:HE2	2.19	0.42
5:M:743:VAL:HG13	5:M:800:VAL:HG11	2.01	0.42
5:M:804:VAL:HG12	5:M:806:LEU:HD21	2.02	0.42
5:M:976:ASP:HB3	5:M:979:THR:HG22	2.02	0.42
5:M:1003:ASP:O	5:M:1005:MET:N	2.53	0.42
6:N:14:SER:O	6:N:15:PRO:C	2.62	0.42
6:N:127:LEU:C	6:N:127:LEU:HD12	2.45	0.42
6:N:141:ILE:HD12	6:N:141:ILE:HA	1.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:162:ARG:HH12	6:N:414:ARG:NH2	2.16	0.42
6:N:778:LEU:C	6:N:780:LYS:H	2.26	0.42
6:N:891:GLU:HG2	12:N:9132:HOH:O	2.18	0.42
6:N:960:LYS:O	6:N:964:LEU:HB2	2.19	0.42
6:N:1225:ALA:O	6:N:1229:ILE:HG13	2.19	0.42
6:N:1465:ASN:HD22	6:N:1465:ASN:HA	1.55	0.42
6:N:1491:THR:O	6:N:1495:ILE:HD13	2.19	0.42
1:X:3:DC:H2'	1:X:4:DT:H72	2.01	0.42
2:Y:16:G:N2	6:N:705:ALA:HB1	2.35	0.42
5:C:263:ASP:C	5:C:264:PRO:O	2.60	0.42
5:C:446:GLY:O	5:C:447:ALA:C	2.63	0.42
5:C:801:VAL:HG23	5:C:802:ARG:N	2.34	0.42
5:C:862:PRO:HD3	5:C:973:VAL:O	2.19	0.42
5:C:1038:TRP:O	5:C:1041:GLU:HB2	2.19	0.42
6:D:169:TYR:CD1	6:D:191:LEU:HD12	2.52	0.42
6:D:202:VAL:HG12	6:D:204:LEU:CD2	2.50	0.42
6:D:202:VAL:HG11	6:D:400:VAL:CG2	2.49	0.42
6:D:592:THR:OG1	6:D:600:LEU:HD21	2.19	0.42
6:D:656:PHE:HB3	6:D:694:VAL:CG1	2.50	0.42
6:D:847:ASP:O	6:D:851:LEU:HG	2.20	0.42
6:D:939:PHE:O	6:D:943:THR:HG23	2.19	0.42
6:D:1191:PRO:HG2	6:D:1370:ILE:CD1	2.50	0.42
4:K:58:ILE:HG21	4:K:68:ILE:CD1	2.49	0.42
4:K:161:ARG:HB2	4:K:161:ARG:HH11	1.83	0.42
4:K:174:VAL:HG22	4:K:201:THR:CG2	2.49	0.42
4:L:72:LYS:HD3	4:L:73:GLU:N	2.35	0.42
5:M:6:PHE:HE1	5:M:901:TYR:HB3	1.84	0.42
5:M:72:ARG:HD2	5:M:95:TYR:CE1	2.54	0.42
5:M:369:PRO:HB2	5:M:370:ALA:H	1.52	0.42
5:M:650:ARG:HB2	12:M:7040:HOH:O	2.19	0.42
5:M:685:GLU:OE1	6:N:783:ARG:NH2	2.48	0.42
5:M:850:ALA:HA	6:N:632:VAL:HG13	2.02	0.42
5:M:874:LEU:H	5:M:874:LEU:HD12	1.83	0.42
5:M:997:LEU:N	12:M:7228:HOH:O	2.52	0.42
5:M:1038:TRP:CH2	6:N:1099:VAL:HG21	2.55	0.42
5:M:1088:LEU:HD23	5:M:1088:LEU:C	2.45	0.42
6:N:55:ASP:HB3	6:N:56:TYR:H	1.69	0.42
6:N:431:VAL:HG12	6:N:432:TYR:N	2.34	0.42
6:N:632:VAL:O	6:N:727:GLN:HA	2.19	0.42
6:N:704:ARG:NE	6:N:737:ASN:O	2.51	0.42
6:N:710:ARG:NH1	6:N:768:ASN:ND2	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:764:LEU:HD12	6:N:764:LEU:C	2.44	0.42
6:N:796:ARG:NH2	12:N:9311:HOH:O	2.53	0.42
7:O:29:GLN:HB2	7:O:33:HIS:HD2	1.83	0.42
4:A:46:SER:HB3	5:C:856:GLU:HG2	2.02	0.42
4:A:142:VAL:HG23	4:A:142:VAL:O	2.19	0.42
4:B:84:GLU:HB3	4:B:127:LEU:HD21	2.00	0.42
4:B:206:THR:HG22	4:B:209:GLU:H	1.83	0.42
5:C:578:VAL:HG13	5:C:671:ASN:CG	2.45	0.42
6:D:108:VAL:HB	6:D:109:PRO:HD3	2.01	0.42
6:D:401:TYR:HE1	6:D:446:VAL:HB	1.85	0.42
6:D:519:VAL:HG12	6:D:525:ARG:HH21	1.85	0.42
6:D:703:ASN:ND2	6:D:707:THR:HG23	2.26	0.42
6:D:1281:VAL:HB	6:D:1313:VAL:CG2	2.49	0.42
7:E:41:GLU:HA	7:E:45:ARG:CG	2.39	0.42
4:K:133:GLU:HG2	4:K:134:GLU:N	2.33	0.42
4:K:228:PRO:HB3	4:L:13:VAL:CG2	2.49	0.42
5:M:437:ARG:O	5:M:438:ILE:HD12	2.20	0.42
5:M:611:ILE:HD11	5:M:641:PRO:CG	2.45	0.42
5:M:690:ILE:CG2	5:M:852:ILE:HG12	2.49	0.42
5:M:863:ASP:OD1	5:M:865:THR:HG22	2.20	0.42
5:M:865:THR:HA	5:M:866:PRO:HD3	1.90	0.42
5:M:928:LYS:HG3	12:M:7107:HOH:O	2.19	0.42
6:N:831:GLY:O	6:N:832:ARG:C	2.62	0.42
6:N:1213:ARG:HG3	6:N:1214:PRO:CD	2.50	0.42
6:N:1213:ARG:NH1	12:N:9283:HOH:O	2.53	0.42
6:N:1341:PRO:O	6:N:1344:VAL:HG23	2.19	0.42
6:N:1498:ALA:HA	6:N:1501:GLU:OE2	2.20	0.42
4:A:82:LEU:O	4:A:85:LEU:HB3	2.20	0.42
4:A:156:HIS:HA	12:A:365:HOH:O	2.19	0.42
4:B:178:ALA:O	4:B:197:LEU:HA	2.20	0.42
5:C:50:GLU:HA	5:C:266:ARG:HE	1.85	0.42
5:C:108:ILE:HD11	5:C:365:ASP:OD2	2.19	0.42
5:C:129:ILE:HG21	5:C:387:SER:HB3	2.02	0.42
5:C:585:GLU:H	5:C:585:GLU:HG3	1.60	0.42
5:C:841:ASN:ND2	5:C:844:GLY:H	2.18	0.42
5:C:907:ASP:O	5:C:908:GLY:O	2.37	0.42
5:C:1054:THR:HG22	5:C:1059:ASP:CB	2.39	0.42
5:C:1084:SER:O	5:C:1087:VAL:HG12	2.19	0.42
6:D:15:PRO:HA	6:D:18:ILE:CG1	2.50	0.42
6:D:457:GLY:C	6:D:459:GLU:N	2.76	0.42
6:D:477:LEU:HD11	6:D:495:ARG:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:950:GLY:O	6:D:951:ILE:C	2.59	0.42
4:K:45:LEU:HD23	5:M:855:VAL:HG22	2.02	0.42
4:K:206:THR:HG23	4:K:208:LEU:H	1.84	0.42
5:M:487:THR:HG22	5:M:489:THR:H	1.84	0.42
5:M:518:LYS:C	5:M:520:GLU:N	2.77	0.42
5:M:578:VAL:HG13	5:M:671:ASN:CG	2.44	0.42
5:M:676:ILE:O	6:N:948:THR:HG22	2.19	0.42
5:M:1000:MET:C	5:M:1002:GLU:N	2.78	0.42
6:N:10:ILE:HD11	6:N:1434:TRP:CD1	2.54	0.42
6:N:409:VAL:HG11	6:N:435:VAL:HG21	2.01	0.42
6:N:584:ASN:HB2	6:N:602:SER:CB	2.49	0.42
6:N:702:LEU:HD23	6:N:745:MET:CE	2.49	0.42
6:N:760:ARG:HH11	6:N:760:ARG:HG3	1.84	0.42
6:N:992:ILE:O	6:N:995:LEU:HB3	2.19	0.42
6:N:1119:SER:HB2	6:N:1185:GLU:OE1	2.20	0.42
6:N:1147:ARG:CB	6:N:1188:VAL:HG21	2.44	0.42
6:N:1165:TYR:HB3	6:N:1207:TYR:CE2	2.55	0.42
6:N:1235:GLN:HG3	6:N:1236:LEU:HG	2.01	0.42
6:N:1281:VAL:CG1	6:N:1282:ARG:N	2.82	0.42
1:X:13:DT:OP1	6:N:1093:TYR:CE2	2.73	0.42
1:X:19:DC:H4'	5:M:1000:MET:CE	2.39	0.42
5:C:21:ILE:CD1	5:C:22:GLN:H	2.33	0.42
5:C:395:LYS:NZ	5:C:407:LYS:HE2	2.35	0.42
5:C:435:TYR:HD2	5:C:471:TYR:HH	1.65	0.42
6:D:436:GLU:OE2	6:D:445:ARG:HD2	2.20	0.42
6:D:521:PRO:HA	6:D:522:PRO:HD3	1.77	0.42
6:D:531:ASP:C	6:D:533:GLY:N	2.73	0.42
6:D:664:LYS:HD2	12:D:9408:HOH:O	2.18	0.42
6:D:978:TYR:HA	12:D:9391:HOH:O	2.19	0.42
6:D:1144:LEU:HD13	6:D:1174:LEU:HD13	2.01	0.42
6:D:1379:VAL:HA	6:D:1420:LEU:HB2	2.02	0.42
6:D:1485:GLN:O	7:E:75:PHE:HA	2.20	0.42
4:K:18:ARG:NH2	4:K:88:ARG:HH21	2.18	0.42
4:K:86:VAL:HG12	4:K:124:ASN:HD22	1.85	0.42
4:K:186:LEU:O	4:K:187:GLY:C	2.63	0.42
4:L:84:GLU:HB3	4:L:127:LEU:HD21	2.02	0.42
4:L:181:VAL:HA	4:L:194:LYS:O	2.20	0.42
5:M:663:ASN:C	5:M:665:PHE:H	2.28	0.42
5:M:684:PHE:HB3	6:N:740:PHE:HE1	1.83	0.42
5:M:1095:LEU:O	5:M:1096:ALA:C	2.61	0.42
6:N:17:LYS:HD3	6:N:21:TRP:HE1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:18:ILE:HA	6:N:21:TRP:CZ3	2.54	0.42
6:N:126:VAL:O	6:N:130:SER:HB3	2.19	0.42
6:N:766:ALA:HA	6:N:769:LEU:HD21	2.02	0.42
6:N:794:GLN:O	6:N:861:GLN:HB3	2.20	0.42
6:N:1041:LEU:HD13	6:N:1058:ARG:O	2.19	0.42
6:N:1231:GLU:HG2	6:N:1232:PRO:N	2.34	0.42
6:N:1282:ARG:HB2	6:N:1295:GLU:OE2	2.19	0.42
6:N:1301:LYS:HD3	12:N:9369:HOH:O	2.19	0.42
5:C:196:LEU:O	5:C:199:VAL:HB	2.20	0.42
5:C:276:LYS:HA	5:C:280:LYS:CD	2.39	0.42
5:C:535:SER:N	5:C:538:GLN:NE2	2.58	0.42
5:C:698:ASP:OD2	5:C:698:ASP:N	2.48	0.42
5:C:817:PRO:C	5:C:819:VAL:H	2.28	0.42
5:C:1000:MET:C	5:C:1002:GLU:H	2.27	0.42
5:C:1040:LEU:HD21	5:C:1048:THR:CG2	2.49	0.42
6:D:619:LEU:HB2	6:D:621:LYS:HE3	2.01	0.42
6:D:704:ARG:HD2	6:D:705:ALA:N	2.29	0.42
6:D:838:ARG:HH21	6:D:863:VAL:CG1	2.27	0.42
6:D:849:ALA:O	6:D:853:VAL:HG23	2.19	0.42
6:D:1101:VAL:CG2	6:D:1424:VAL:HG23	2.50	0.42
6:D:1232:PRO:HB3	6:D:1361:VAL:CG1	2.49	0.42
6:D:1275:SER:HA	6:D:1294:VAL:HG21	2.02	0.42
6:D:1353:GLN:HG2	6:D:1368:ILE:HD11	2.02	0.42
4:K:126:ASP:O	4:K:127:LEU:C	2.63	0.42
4:K:146:ARG:HD3	12:K:712:HOH:O	2.19	0.42
4:L:23:PHE:HD2	4:L:197:LEU:HD23	1.84	0.42
5:M:14:PRO:HD2	12:M:7012:HOH:O	2.19	0.42
5:M:23:VAL:HA	5:M:121:MET:SD	2.60	0.42
5:M:59:LYS:HB2	12:M:7296:HOH:O	2.19	0.42
5:M:263:ASP:C	5:M:264:PRO:O	2.61	0.42
5:M:267:TYR:HD1	12:M:7209:HOH:O	2.02	0.42
5:M:288:ARG:C	12:M:7337:HOH:O	2.63	0.42
5:M:355:VAL:HG13	5:M:356:ARG:N	2.35	0.42
5:M:798:GLY:HA3	5:M:829:GLN:HB2	2.02	0.42
6:N:162:ARG:HH22	6:N:414:ARG:CD	2.32	0.42
6:N:616:GLN:HA	6:N:616:GLN:NE2	2.35	0.42
3:Z:5:DG:H4'	8:N:8001:STD:C3	2.50	0.41
4:B:30:ARG:HG2	4:B:30:ARG:HH11	1.83	0.41
4:B:181:VAL:HA	4:B:194:LYS:O	2.19	0.41
5:C:77:PRO:HD3	5:C:91:GLN:O	2.19	0.41
5:C:172:ILE:CG2	5:C:173:ASP:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:275:TYR:HD2	5:C:276:LYS:HG3	1.84	0.41
5:C:278:GLU:N	12:C:1120:HOH:O	2.53	0.41
6:D:10:ILE:HG13	6:D:1434:TRP:CZ2	2.55	0.41
6:D:179:VAL:CG1	6:D:183:GLU:HB3	2.50	0.41
6:D:510:GLU:H	6:D:510:GLU:CD	2.27	0.41
6:D:700:VAL:HB	6:D:748:HIS:O	2.19	0.41
6:D:917:GLN:HE21	6:D:921:ARG:CD	2.33	0.41
6:D:957:PRO:HG2	6:D:1007:VAL:HG22	2.00	0.41
6:D:1152:GLU:HG3	6:D:1161:GLU:HA	2.02	0.41
6:D:1482:ARG:HB2	6:D:1483:PHE:HD1	1.85	0.41
4:K:138:LEU:HD22	12:K:2221:HOH:O	2.19	0.41
5:M:172:ILE:HA	5:M:185:LYS:O	2.19	0.41
5:M:243:ARG:N	5:M:244:PRO:HD3	2.30	0.41
5:M:443:THR:HG23	5:M:449:ILE:HG13	2.01	0.41
5:M:551:GLU:HB2	5:M:552:HIS:CE1	2.55	0.41
5:M:571:LEU:HD22	5:M:669:GLY:HA2	2.02	0.41
5:M:668:LEU:HD12	5:M:668:LEU:N	2.35	0.41
5:M:1039:ALA:O	5:M:1043:TYR:HD1	2.03	0.41
5:M:1072:LYS:HD3	5:M:1074:GLU:HB2	2.01	0.41
6:N:62:LYS:HB2	6:N:73:CYS:SG	2.60	0.41
6:N:633:VAL:HG22	6:N:635:PRO:CD	2.49	0.41
6:N:702:LEU:O	6:N:713:ILE:HA	2.20	0.41
6:N:1219:GLU:O	6:N:1221:VAL:N	2.53	0.41
4:B:175:ARG:HE	4:B:202:ASP:HB3	1.84	0.41
5:C:238:LEU:HD12	12:C:1255:HOH:O	2.18	0.41
5:C:310:LEU:O	5:C:314:THR:HG23	2.20	0.41
5:C:455:LEU:CD1	5:C:459:ALA:HB3	2.50	0.41
6:D:685:ASP:HA	6:D:688:TRP:CD1	2.55	0.41
6:D:691:LEU:HD12	6:D:691:LEU:HA	1.93	0.41
6:D:704:ARG:HH21	6:D:737:ASN:ND2	2.18	0.41
6:D:815:ALA:HA	6:D:818:ARG:HD2	2.02	0.41
6:D:841:TYR:HB3	6:D:843:PHE:CE2	2.55	0.41
6:D:945:SER:OG	6:D:947:ILE:HG13	2.20	0.41
6:D:1095:THR:O	6:D:1099:VAL:HG23	2.19	0.41
6:D:1110:ALA:O	6:D:1112:CYS:N	2.54	0.41
6:D:1149:LEU:CD2	6:D:1187:PRO:HG2	2.49	0.41
6:D:1269:LYS:N	12:D:9341:HOH:O	2.53	0.41
6:D:1298:GLY:HA3	6:N:47:GLU:CG	2.51	0.41
4:K:14:ARG:NH2	4:K:24:VAL:HG23	2.34	0.41
4:K:134:GLU:HA	4:K:134:GLU:OE2	2.19	0.41
4:K:219:ARG:O	4:K:223:THR:HG23	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:86:LYS:HE2	5:M:813:VAL:HG12	2.03	0.41
5:M:118:ILE:H	5:M:118:ILE:HG13	1.77	0.41
5:M:142:ARG:O	5:M:143:SER:C	2.63	0.41
5:M:569:VAL:HA	5:M:570:PRO:HD3	1.92	0.41
5:M:676:ILE:CG2	5:M:988:VAL:HG22	2.50	0.41
5:M:1054:THR:HG23	5:M:1082:PRO:HG3	2.02	0.41
6:N:102:ILE:HG13	12:N:9171:HOH:O	2.19	0.41
6:N:402:PRO:CA	6:N:443:VAL:HG23	2.50	0.41
6:N:625:TYR:OH	6:N:655:PRO:HG2	2.20	0.41
6:N:639:LEU:HD12	6:N:640:HIS:H	1.84	0.41
6:N:710:ARG:HG3	6:N:711:LEU:N	2.36	0.41
6:N:1158:VAL:HG12	6:N:1159:ARG:N	2.35	0.41
6:N:1258:ARG:HG3	6:N:1258:ARG:HH11	1.84	0.41
6:N:1364:HIS:ND1	6:N:1365:ASP:N	2.67	0.41
1:G:13:DT:OP1	6:D:1093:TYR:CE2	2.73	0.41
1:X:19:DC:P	5:M:1001:VAL:HB	2.60	0.41
4:A:6:LEU:O	4:A:6:LEU:HG	2.19	0.41
4:A:133:GLU:CG	4:A:134:GLU:N	2.77	0.41
4:A:156:HIS:CD2	4:A:156:HIS:H	2.39	0.41
4:A:188:GLN:HG3	4:A:189:ARG:H	1.84	0.41
4:B:214:ALA:HA	4:B:217:ILE:HD12	2.02	0.41
5:C:155:PRO:HA	12:C:1141:HOH:O	2.19	0.41
5:C:277:ALA:HB1	12:C:1120:HOH:O	2.20	0.41
5:C:358:ARG:HB3	5:C:371:LYS:O	2.19	0.41
5:C:486:MET:HE1	5:C:491:GLU:HA	2.01	0.41
5:C:1016:ILE:HG12	5:C:1017:THR:N	2.36	0.41
5:C:1093:GLN:HB3	6:D:90:MET:SD	2.60	0.41
5:C:1116:ALA:O	6:D:23:TYR:OH	2.38	0.41
6:D:23:TYR:CD2	6:D:89:ARG:HG2	2.55	0.41
6:D:129:PHE:CD2	6:D:587:ARG:NH1	2.88	0.41
6:D:1118:ILE:CG1	6:D:1192:LEU:HB2	2.51	0.41
4:L:189:ARG:NH2	4:L:191:ASP:O	2.54	0.41
5:M:52:PHE:HZ	5:M:98:LEU:HD23	1.85	0.41
5:M:68:PHE:CZ	5:M:71:TYR:HB3	2.55	0.41
5:M:624:PRO:C	5:M:625:LEU:HD23	2.44	0.41
5:M:890:LEU:HD21	5:M:901:TYR:CD1	2.56	0.41
5:M:941:VAL:O	5:M:944:LEU:HB2	2.20	0.41
5:M:1073:GLY:HA3	12:M:7025:HOH:O	2.20	0.41
6:N:187:LYS:HE2	12:N:9087:HOH:O	2.19	0.41
6:N:457:GLY:O	6:N:460:ALA:N	2.53	0.41
6:N:646:LYS:HD2	6:N:688:TRP:CE3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:977:ALA:HB3	6:N:983:LEU:HD11	2.02	0.41
6:N:1135:ARG:HD3	6:N:1139:ASP:HB3	2.02	0.41
6:N:1255:GLY:O	6:N:1258:ARG:N	2.47	0.41
6:N:1484:THR:O	7:O:25:LYS:HD2	2.20	0.41
1:G:17:DC:H2''	1:G:18:DG:H8	1.85	0.41
2:H:16:G:H5''	6:D:741:ASP:OD1	2.20	0.41
1:X:17:DC:H2''	1:X:18:DG:H8	1.85	0.41
1:X:18:DG:H2'	1:X:19:DC:C6	2.56	0.41
4:A:43:ILE:HG23	4:A:47:SER:OG	2.20	0.41
4:A:219:ARG:HG2	4:B:222:LEU:HD12	2.02	0.41
4:B:23:PHE:HE2	4:B:199:ILE:HD12	1.84	0.41
4:B:123:MET:HG3	12:B:404:HOH:O	2.20	0.41
5:C:365:ASP:O	5:C:367:LEU:N	2.53	0.41
5:C:380:ALA:O	5:C:384:GLU:HB2	2.21	0.41
5:C:384:GLU:O	5:C:388:ARG:HB2	2.20	0.41
5:C:837:ASP:HA	5:C:999:HIS:HE1	1.82	0.41
5:C:871:LEU:HA	5:C:871:LEU:HD23	1.86	0.41
5:C:1019:GLN:NE2	5:C:1058:ASP:OD1	2.53	0.41
5:C:1094:ALA:HB2	6:D:520:LEU:HD13	2.02	0.41
6:D:44:LEU:HD22	6:D:525:ARG:NH2	2.35	0.41
6:D:483:HIS:CB	6:D:484:PRO:HD3	2.50	0.41
6:D:800:LYS:HD2	6:D:804:LEU:CD2	2.51	0.41
6:D:1292:VAL:HB	6:D:1325:LEU:CD2	2.50	0.41
6:D:1318:TYR:CE2	6:N:42:ASP:OD1	2.72	0.41
6:D:1462:LEU:HD22	6:D:1472:ILE:CG2	2.50	0.41
7:E:36:LYS:HD3	7:E:36:LYS:HA	1.71	0.41
5:M:198:ARG:HG3	12:M:7010:HOH:O	2.20	0.41
5:M:557:ARG:HA	5:M:560:MET:CG	2.51	0.41
5:M:568:ALA:HB1	5:M:668:LEU:HB3	2.02	0.41
5:M:679:PHE:HE2	5:M:853:LEU:HD21	1.85	0.41
5:M:923:GLU:O	5:M:927:GLY:HA3	2.20	0.41
5:M:983:ILE:HG21	5:M:987:ILE:HD11	2.03	0.41
6:N:65:ARG:CG	6:N:66:GLN:H	2.31	0.41
6:N:126:VAL:O	6:N:132:TYR:CE1	2.73	0.41
6:N:696:HIS:ND1	7:O:48:MET:HE3	2.36	0.41
6:N:704:ARG:HB2	6:N:736:PHE:HB3	2.02	0.41
6:N:813:LEU:HD12	6:N:814:ALA:N	2.35	0.41
6:N:965:GLU:O	6:N:969:ARG:HG2	2.21	0.41
6:N:1079:LYS:O	6:N:1083:ASP:N	2.53	0.41
7:O:32:ARG:C	7:O:34:GLY:H	2.27	0.41
2:H:5:C:H2'	2:H:6:U:C5	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:113:VAL:HG11	5:C:373:VAL:HG11	2.03	0.41
5:C:142:ARG:O	5:C:143:SER:C	2.61	0.41
5:C:162:ILE:HB	5:C:172:ILE:HB	2.02	0.41
5:C:174:LEU:HD23	5:C:307:LEU:HD13	2.02	0.41
5:C:267:TYR:O	5:C:268:ASP:C	2.62	0.41
5:C:394:PHE:CE1	5:C:632:ASN:ND2	2.87	0.41
5:C:548:PRO:HD3	5:C:842:ARG:NH1	2.36	0.41
5:C:739:GLU:O	5:C:740:GLU:C	2.63	0.41
5:C:775:ARG:HH21	5:C:782:ALA:CB	2.15	0.41
5:C:789:SER:O	5:C:791:ARG:HG2	2.20	0.41
5:C:1090:LYS:NZ	6:D:90:MET:HG3	2.34	0.41
6:D:30:GLU:HB2	6:D:41:ARG:HG3	2.02	0.41
6:D:65:ARG:NH1	12:D:9479:HOH:O	2.53	0.41
6:D:162:ARG:NE	6:D:434:ARG:HE	2.19	0.41
6:D:166:GLN:CG	6:D:394:LEU:HD13	2.51	0.41
6:D:409:VAL:HG21	6:D:421:LEU:CD2	2.34	0.41
6:D:786:ILE:HD13	6:D:908:LYS:CB	2.50	0.41
6:D:1094:LEU:O	6:D:1098:LEU:HD13	2.20	0.41
6:D:1176:LYS:HZ3	6:N:411:THR:HG22	1.85	0.41
4:K:38:ASN:O	4:K:42:ARG:HG3	2.20	0.41
5:M:183:SER:HB2	5:M:190:LYS:CG	2.47	0.41
5:M:216:GLU:CD	5:M:216:GLU:H	2.27	0.41
5:M:281:LEU:O	5:M:281:LEU:HD23	2.21	0.41
5:M:281:LEU:HD11	5:M:306:THR:HA	2.02	0.41
5:M:433:THR:C	5:M:435:TYR:H	2.28	0.41
5:M:557:ARG:C	5:M:560:MET:HG3	2.44	0.41
5:M:691:SER:C	5:M:693:GLU:N	2.77	0.41
5:M:1115:LEU:HD22	6:N:88:TYR:CD1	2.56	0.41
6:N:141:ILE:HG21	6:N:449:SER:CB	2.51	0.41
6:N:656:PHE:HB3	6:N:694:VAL:CG1	2.50	0.41
6:N:1020:LEU:HG	6:N:1035:ILE:HD12	2.02	0.41
6:N:1237:THR:OG1	6:N:1256:LEU:HD13	2.21	0.41
6:N:1376:MET:C	6:N:1378:TYR:H	2.27	0.41
6:N:1426:LYS:HA	6:N:1429:LEU:CD2	2.46	0.41
4:A:116:PRO:HG3	12:A:392:HOH:O	2.20	0.41
4:A:162:ILE:HG21	12:A:376:HOH:O	2.20	0.41
4:B:73:GLU:OE1	4:B:130:ALA:HA	2.20	0.41
5:C:58:ASP:HB3	12:C:1238:HOH:O	2.19	0.41
5:C:1105:LYS:CG	5:C:1107:ASN:HD22	2.27	0.41
6:D:65:ARG:HA	6:D:65:ARG:HD2	1.80	0.41
6:D:166:GLN:HG2	6:D:394:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:470:LEU:N	6:D:470:LEU:HD23	2.35	0.41
6:D:505:SER:HB2	6:D:1454:GLY:H	1.82	0.41
7:E:28:GLN:OE1	7:E:32:ARG:NH1	2.53	0.41
7:E:48:MET:HB3	7:E:54:LEU:HB2	2.01	0.41
4:L:6:LEU:O	4:L:8:ALA:N	2.52	0.41
5:M:21:ILE:HG13	12:M:7145:HOH:O	2.19	0.41
5:M:114:PHE:CD2	5:M:114:PHE:C	2.98	0.41
5:M:157:ARG:HG2	5:M:158:TYR:N	2.35	0.41
5:M:487:THR:HG22	5:M:488:ALA:N	2.36	0.41
5:M:627:ARG:O	5:M:638:ASP:HB3	2.21	0.41
5:M:805:ARG:NH1	12:M:7047:HOH:O	2.53	0.41
6:N:95:LEU:HD21	6:N:574:LEU:CD1	2.49	0.41
6:N:130:SER:O	6:N:568:ARG:NE	2.52	0.41
6:N:529:GLN:O	6:N:529:GLN:HG3	2.20	0.41
6:N:637:LEU:O	6:N:935:LYS:NZ	2.54	0.41
6:N:1046:GLN:HG3	6:N:1052:THR:HB	2.02	0.41
6:N:1107:VAL:O	6:N:1218:GLY:N	2.47	0.41
6:N:1189:ARG:HB3	6:N:1204:CYS:HA	2.01	0.41
6:N:1296:SER:C	6:N:1298:GLY:N	2.77	0.41
7:O:33:HIS:HB2	7:O:37:ASN:HD21	1.84	0.41
2:H:15:C:O2'	2:H:16:G:H5'	2.21	0.41
1:X:10:DG:C3'	6:N:586:ARG:HH21	2.33	0.41
3:Z:9:DG:H5''	6:N:108:VAL:HG11	2.03	0.41
4:A:1:MET:SD	4:A:1:MET:N	2.92	0.41
4:A:69:PRO:O	4:A:71:VAL:HG23	2.19	0.41
4:A:123:MET:SD	4:A:123:MET:N	2.94	0.41
5:C:17:PRO:O	5:C:18:LEU:C	2.62	0.41
5:C:69:LEU:HD12	5:C:97:ARG:CB	2.49	0.41
5:C:129:ILE:HG22	5:C:130:ASN:N	2.35	0.41
5:C:279:GLU:HG3	5:C:280:LYS:N	2.36	0.41
5:C:569:VAL:HG23	5:C:635:THR:CG2	2.51	0.41
5:C:639:GLN:NE2	5:C:639:GLN:N	2.68	0.41
5:C:945:ARG:O	5:C:949:LYS:HG3	2.20	0.41
5:C:957:LYS:HG2	12:C:1339:HOH:O	2.20	0.41
5:C:1008:ARG:NH2	5:C:1020:PRO:HB3	2.36	0.41
6:D:126:VAL:O	6:D:130:SER:HB3	2.21	0.41
6:D:1135:ARG:HH22	6:D:1350:GLU:CD	2.28	0.41
6:D:1283:ILE:O	6:N:74:GLU:HB3	2.21	0.41
6:D:1323:GLN:HE21	6:D:1323:GLN:HB2	1.66	0.41
6:D:1380:GLU:CD	6:D:1390:LEU:HD23	2.46	0.41
4:K:2:LEU:HA	4:K:6:LEU:HD22	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:194:VAL:CG2	5:M:221:LEU:HA	2.50	0.41
5:M:567:GLN:OE1	5:M:997:LEU:HD13	2.20	0.41
5:M:572:ILE:CD1	5:M:701:THR:HB	2.50	0.41
5:M:630:ARG:HH21	5:M:707:ARG:N	2.14	0.41
5:M:688:ILE:CD1	5:M:847:GLY:HA3	2.51	0.41
5:M:881:ASN:N	5:M:881:ASN:ND2	2.69	0.41
5:M:984:GLU:HG3	6:N:791:TYR:OH	2.21	0.41
6:N:34:TYR:CD2	6:N:35:ARG:N	2.87	0.41
6:N:131:LYS:CG	6:N:568:ARG:HG2	2.51	0.41
6:N:179:VAL:CG2	6:N:189:GLN:HE22	2.34	0.41
6:N:436:GLU:OE1	6:N:447:VAL:HG11	2.20	0.41
6:N:785:ILE:H	6:N:785:ILE:CD1	2.17	0.41
6:N:827:ILE:HB	6:N:828:LYS:CE	2.45	0.41
6:N:1047:LYS:HG2	6:N:1053:PHE:CE1	2.56	0.41
6:N:1148:VAL:CG1	6:N:1163:GLY:HA2	2.50	0.41
6:N:1263:PHE:CE1	6:N:1352:ILE:HG12	2.56	0.41
6:N:1378:TYR:O	6:N:1379:VAL:HG13	2.20	0.41
7:O:13:VAL:HG12	7:O:75:PHE:CE1	2.56	0.41
7:O:54:LEU:O	7:O:58:PRO:HD2	2.21	0.41
4:A:48:ILE:HD13	4:A:210:ALA:HB1	2.00	0.41
4:A:66:SER:O	4:A:75:VAL:HG23	2.21	0.41
4:A:123:MET:HE2	4:A:123:MET:HB2	1.67	0.41
4:B:6:LEU:O	4:B:8:ALA:N	2.53	0.41
4:B:142:VAL:O	4:B:142:VAL:HG23	2.20	0.41
5:C:14:PRO:HB3	5:C:586:ARG:NH2	2.36	0.41
5:C:141:HIS:HB3	5:C:418:LEU:HD23	2.02	0.41
5:C:343:GLN:HG2	5:C:385:PHE:HB2	2.03	0.41
5:C:537:LYS:HB3	5:C:545:ASN:ND2	2.33	0.41
5:C:751:PRO:HB2	6:D:680:GLN:CG	2.48	0.41
5:C:877:PRO:HG3	6:D:1023:MET:CE	2.50	0.41
5:C:910:LYS:O	5:C:913:GLU:HG3	2.21	0.41
5:C:916:GLU:O	5:C:919:ALA:HB3	2.21	0.41
6:D:153:LEU:HB3	12:D:9243:HOH:O	2.19	0.41
6:D:695:ILE:CD1	6:D:718:PRO:HB2	2.51	0.41
6:D:806:PHE:O	6:D:806:PHE:CD1	2.74	0.41
6:D:1170:ASP:O	6:D:1173:LEU:HB3	2.21	0.41
6:D:1263:PHE:N	6:D:1263:PHE:CD1	2.88	0.41
6:D:1487:VAL:O	7:E:73:LEU:HA	2.21	0.41
7:E:45:ARG:HG2	12:E:104:HOH:O	2.20	0.41
7:E:57:ASP:N	7:E:58:PRO:HD3	2.36	0.41
7:E:70:THR:HG21	7:E:72:ARG:NH2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:49:PRO:HA	4:K:148:VAL:HG22	2.03	0.41
4:L:178:ALA:O	4:L:197:LEU:HA	2.20	0.41
5:M:172:ILE:HG23	5:M:184:MET:HE3	2.01	0.41
5:M:202:TYR:HB3	5:M:207:LEU:HG	2.03	0.41
5:M:243:ARG:HG2	5:M:243:ARG:NH1	2.35	0.41
5:M:265:ARG:CZ	5:M:267:TYR:HB3	2.51	0.41
5:M:334:ARG:HH11	5:M:415:PRO:HG2	1.81	0.41
5:M:433:THR:HG22	5:M:437:ARG:HH11	1.85	0.41
5:M:841:ASN:HD21	5:M:843:HIS:H	1.63	0.41
5:M:916:GLU:O	5:M:919:ALA:HB3	2.21	0.41
6:N:103:TRP:NE1	6:N:1444:THR:HA	2.36	0.41
6:N:496:LEU:O	6:N:500:ARG:HG2	2.20	0.41
6:N:564:GLU:HA	6:N:567:ILE:HD12	2.01	0.41
6:N:711:LEU:HB3	6:N:714:GLN:NE2	2.36	0.41
6:N:1104:GLU:HA	6:N:1461:GLY:HA2	2.02	0.41
6:N:1109:GLU:HG2	6:N:1202:GLN:N	2.35	0.41
6:N:1361:VAL:HG12	6:N:1363:LEU:HD22	2.02	0.41
7:O:40:LEU:HD11	7:O:67:GLU:HG2	2.03	0.41
7:O:95:VAL:HG11	12:O:884:HOH:O	2.19	0.41
2:H:3:G:O2'	2:H:4:U:O4'	2.35	0.41
2:H:12:G:H4'	12:H:110:HOH:O	2.21	0.41
4:A:56:VAL:CG2	4:A:82:LEU:HD12	2.51	0.41
4:A:163:ASN:N	4:A:163:ASN:ND2	2.68	0.41
4:B:143:ARG:NH1	4:B:143:ARG:HG3	2.36	0.41
4:B:186:LEU:O	4:B:187:GLY:C	2.64	0.41
5:C:79:PRO:CG	5:C:82:GLU:HB2	2.41	0.41
5:C:139:GLN:HB3	5:C:334:ARG:HD3	2.03	0.41
5:C:174:LEU:CB	5:C:310:LEU:HD22	2.51	0.41
5:C:277:ALA:O	5:C:278:GLU:C	2.64	0.41
5:C:410:ILE:H	5:C:410:ILE:HG13	1.77	0.41
5:C:860:HIS:HD2	5:C:975:TYR:O	2.04	0.41
5:C:874:LEU:HD11	6:D:784:ASP:HA	2.03	0.41
5:C:877:PRO:HB3	6:D:1020:LEU:HD12	2.02	0.41
5:C:1086:ARG:HD3	5:C:1112:PHE:CD2	2.56	0.41
5:C:1095:LEU:CD1	6:D:603:LEU:HD22	2.51	0.41
6:D:18:ILE:HG23	6:D:518:PRO:HG3	2.02	0.41
6:D:33:ASN:HB3	6:D:35:ARG:NH1	2.35	0.41
6:D:35:ARG:HA	12:D:9285:HOH:O	2.21	0.41
6:D:130:SER:C	6:D:572:ARG:HH21	2.29	0.41
6:D:197:SER:OG	6:D:395:VAL:HG21	2.21	0.41
6:D:514:LEU:HD13	6:D:578:VAL:CG1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:736:PHE:O	6:D:738:ALA:N	2.53	0.41
6:D:764:LEU:HD11	6:D:766:ALA:HB3	2.02	0.41
6:D:885:ILE:HG13	6:D:885:ILE:H	1.62	0.41
6:D:887:ALA:HB1	6:D:893:GLU:HG3	2.02	0.41
6:D:1297:GLU:OE1	6:N:51:GLY:HA2	2.21	0.41
6:D:1369:GLU:O	6:D:1372:VAL:HG12	2.21	0.41
6:D:1393:GLN:OE1	6:D:1394:VAL:HB	2.21	0.41
6:D:1489:GLN:O	6:D:1493:LYS:HG2	2.21	0.41
7:E:54:LEU:HG	7:E:58:PRO:CB	2.51	0.41
4:K:173:PRO:HB3	4:K:204:SER:HB3	2.03	0.41
4:K:224:TYR:HB3	4:L:9:PRO:CB	2.36	0.41
4:L:77:GLU:O	4:L:77:GLU:CD	2.64	0.41
4:L:80:LEU:HG	6:N:844:ALA:CA	2.43	0.41
4:L:88:ARG:HB2	4:L:123:MET:SD	2.60	0.41
4:L:186:LEU:O	4:L:187:GLY:C	2.64	0.41
5:M:21:ILE:HG12	5:M:455:LEU:HD21	2.02	0.41
5:M:142:ARG:CZ	5:M:325:ILE:HG12	2.51	0.41
5:M:176:VAL:HG12	5:M:182:VAL:HG13	2.03	0.41
5:M:184:MET:SD	5:M:191:PHE:HE1	2.44	0.41
5:M:424:GLY:O	5:M:427:VAL:N	2.54	0.41
5:M:554:ASP:CB	5:M:880:MET:HB2	2.24	0.41
5:M:637:LEU:HA	5:M:659:PRO:HG3	2.03	0.41
5:M:654:LEU:H	5:M:654:LEU:CD2	2.17	0.41
5:M:666:LEU:HD21	5:M:668:LEU:HD11	2.03	0.41
5:M:811:PRO:HD2	5:M:813:VAL:CG1	2.51	0.41
5:M:912:PRO:O	5:M:915:LYS:HB2	2.20	0.41
6:N:133:ILE:O	6:N:152:LEU:CB	2.66	0.41
6:N:520:LEU:HD22	6:N:540:LEU:HD23	2.02	0.41
6:N:540:LEU:HD13	6:N:606:ILE:HD11	2.02	0.41
6:N:613:ARG:O	6:N:613:ARG:HD3	2.21	0.41
6:N:792:ILE:O	6:N:878:GLY:HA3	2.21	0.41
6:N:917:GLN:HE21	6:N:921:ARG:NH1	2.19	0.41
6:N:951:ILE:HD13	6:N:951:ILE:C	2.45	0.41
6:N:953:ASP:O	6:N:955:VAL:HG23	2.21	0.41
4:A:54:THR:HG22	4:A:158:ILE:HG13	2.02	0.41
4:B:109:VAL:O	4:B:129:ILE:HB	2.21	0.41
5:C:72:ARG:HD2	12:C:1214:HOH:O	2.21	0.41
5:C:93:PRO:C	12:C:1296:HOH:O	2.64	0.41
5:C:102:HIS:HE2	5:C:365:ASP:HA	1.86	0.41
5:C:148:PHE:CB	5:C:313:LEU:HD22	2.51	0.41
5:C:549:PHE:HB3	5:C:552:HIS:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:102:ILE:HD12	6:D:579:ASP:OD1	2.20	0.41
6:D:201:GLY:HA3	6:D:396:VAL:O	2.21	0.41
6:D:496:LEU:HD23	6:D:500:ARG:HG2	2.03	0.41
6:D:619:LEU:O	6:D:620:GLY:C	2.63	0.41
6:D:838:ARG:HD3	6:D:874:GLU:OE1	2.20	0.41
6:D:1135:ARG:HB3	6:D:1140:ILE:CG1	2.51	0.41
6:D:1219:GLU:O	6:D:1221:VAL:N	2.54	0.41
6:D:1297:GLU:HA	6:N:78:VAL:CG2	2.51	0.41
5:M:18:LEU:HG	5:M:408:ARG:NH2	2.36	0.41
5:M:141:HIS:C	5:M:331:ARG:HG3	2.45	0.41
5:M:351:LEU:HD13	5:M:374:ASN:O	2.21	0.41
5:M:398:THR:O	5:M:635:THR:HG21	2.21	0.41
5:M:1018:GLN:HG3	5:M:1083:GLU:HG3	2.03	0.41
6:N:133:ILE:HG23	6:N:456:MET:N	2.36	0.41
6:N:885:ILE:HD13	6:N:937:TYR:CG	2.56	0.41
6:N:1162:GLU:C	6:N:1164:ARG:H	2.29	0.41
6:N:1480:PHE:O	7:O:18:ARG:NH2	2.54	0.41
1:G:17:DC:H4'	6:D:628:ARG:HD3	2.03	0.40
4:B:132:LEU:HD22	4:B:138:LEU:HD22	2.02	0.40
5:C:437:ARG:NH1	5:C:491:GLU:OE2	2.54	0.40
5:C:473:ARG:HA	5:C:531:PHE:CD1	2.56	0.40
5:C:698:ASP:HB3	5:C:701:THR:OG1	2.21	0.40
5:C:745:ILE:HG13	12:C:1408:HOH:O	2.22	0.40
5:C:840:ALA:HB2	5:C:846:LYS:HA	2.03	0.40
6:D:42:ASP:OD2	6:D:49:ILE:HD11	2.21	0.40
6:D:85:VAL:HB	6:D:89:ARG:NH1	2.37	0.40
6:D:414:ARG:HB3	6:D:450:TYR:CE1	2.56	0.40
6:D:760:ARG:O	6:D:760:ARG:HG3	2.20	0.40
6:D:995:LEU:HA	6:D:998:GLU:OE1	2.21	0.40
6:D:1147:ARG:HH12	6:D:1190:SER:HA	1.86	0.40
6:D:1161:GLU:OE1	6:D:1164:ARG:HB2	2.21	0.40
6:D:1273:VAL:O	6:D:1273:VAL:HG23	2.20	0.40
7:E:95:VAL:H	7:E:95:VAL:HG23	1.60	0.40
4:L:77:GLU:CB	6:N:872:ARG:HH21	2.33	0.40
4:L:163:ASN:HD22	4:L:163:ASN:HA	1.70	0.40
5:M:140:ILE:HA	5:M:332:ARG:O	2.20	0.40
5:M:157:ARG:HE	5:M:314:THR:HB	1.86	0.40
5:M:227:PHE:HB3	12:M:7046:HOH:O	2.21	0.40
5:M:577:PRO:HG3	5:M:993:PHE:CE2	2.57	0.40
5:M:937:ASP:HB2	5:M:940:GLU:HG3	2.02	0.40
5:M:1049:LEU:HD23	6:N:1472:ILE:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:148:GLU:CD	6:N:148:GLU:N	2.79	0.40
6:N:409:VAL:HG12	6:N:410:SER:N	2.35	0.40
6:N:493:ARG:CG	6:N:1390:LEU:HD12	2.42	0.40
6:N:792:ILE:HG13	6:N:941:PHE:CE1	2.56	0.40
4:A:143:ARG:HH21	4:A:158:ILE:HD12	1.85	0.40
5:C:71:TYR:HD2	5:C:71:TYR:H	1.67	0.40
5:C:200:LEU:HD23	5:C:298:PHE:C	2.47	0.40
5:C:305:PRO:HA	5:C:308:ARG:HD3	2.03	0.40
5:C:569:VAL:HA	5:C:570:PRO:HD3	1.82	0.40
5:C:835:VAL:HG23	5:C:849:VAL:O	2.21	0.40
5:C:949:LYS:HZ2	6:D:828:LYS:NZ	2.19	0.40
6:D:434:ARG:N	6:D:449:SER:O	2.54	0.40
6:D:520:LEU:CD1	6:D:521:PRO:HD2	2.50	0.40
6:D:660:LYS:HZ2	6:D:694:VAL:HG13	1.86	0.40
6:D:1176:LYS:HE2	12:D:9058:HOH:O	2.22	0.40
6:D:1260:ILE:O	6:D:1264:GLU:HB2	2.21	0.40
6:D:1380:GLU:CD	6:D:1381:VAL:H	2.29	0.40
7:E:41:GLU:HG2	7:E:42:PRO:HD3	2.02	0.40
7:E:54:LEU:O	7:E:58:PRO:HD2	2.21	0.40
7:E:61:VAL:O	7:E:65:MET:HG3	2.21	0.40
4:L:102:LYS:CD	4:L:139:ASN:HB2	2.50	0.40
4:L:173:PRO:O	4:L:202:ASP:CG	2.64	0.40
5:M:358:ARG:HG2	5:M:371:LYS:O	2.21	0.40
5:M:461:VAL:CG2	12:M:7145:HOH:O	2.69	0.40
5:M:504:GLU:HG3	5:M:507:ARG:HB3	2.03	0.40
5:M:683:ASN:HB2	5:M:872:ASN:HB2	2.02	0.40
5:M:739:GLU:O	5:M:740:GLU:C	2.64	0.40
5:M:861:LEU:O	5:M:862:PRO:C	2.64	0.40
5:M:896:PHE:HB3	5:M:924:VAL:HB	2.03	0.40
5:M:928:LYS:HG2	5:M:932:GLU:HG3	2.04	0.40
5:M:1053:LEU:CD1	6:N:1466:VAL:HG13	2.51	0.40
6:N:394:LEU:HD12	6:N:396:VAL:HG13	2.03	0.40
6:N:493:ARG:CG	6:N:1390:LEU:HB2	2.51	0.40
6:N:641:GLN:HB3	6:N:717:GLN:O	2.21	0.40
6:N:783:ARG:H	6:N:783:ARG:HG2	1.59	0.40
6:N:789:LEU:HD13	6:N:934:LEU:CD2	2.51	0.40
6:N:846:PRO:HG2	12:N:9070:HOH:O	2.20	0.40
6:N:970:LYS:HA	6:N:973:GLN:NE2	2.35	0.40
6:N:1280:VAL:HA	6:N:1318:TYR:HA	2.02	0.40
6:N:1292:VAL:CG1	6:N:1325:LEU:HG	2.51	0.40
6:N:1351:GLU:OE1	6:N:1354:LYS:HG3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1381:VAL:HG23	6:N:1391:GLU:O	2.22	0.40
6:N:1442:ASN:O	6:N:1446:VAL:HG23	2.21	0.40
7:O:13:VAL:HG21	7:O:19:LEU:HB2	2.03	0.40
4:A:47:SER:HB2	4:A:217:ILE:HD13	2.02	0.40
4:A:133:GLU:CG	4:A:134:GLU:H	2.34	0.40
4:B:79:ILE:HA	4:B:82:LEU:HD12	2.04	0.40
5:C:300:ASP:CG	5:C:300:ASP:O	2.64	0.40
5:C:630:ARG:HH21	5:C:707:ARG:N	2.18	0.40
5:C:663:ASN:O	5:C:665:PHE:N	2.54	0.40
5:C:700:TYR:CD1	5:C:833:LEU:HD22	2.57	0.40
5:C:976:ASP:OD2	5:C:983:ILE:HG12	2.20	0.40
6:D:7:LYS:NZ	6:D:1458:GLU:OE1	2.49	0.40
6:D:179:VAL:HG22	6:D:183:GLU:OE2	2.21	0.40
6:D:204:LEU:HB2	6:D:394:LEU:HG	2.03	0.40
6:D:494:LYS:NZ	12:D:9006:HOH:O	2.49	0.40
6:D:829:VAL:O	6:D:831:GLY:N	2.54	0.40
6:D:950:GLY:O	6:D:953:ASP:N	2.54	0.40
6:D:1192:LEU:HD22	6:D:1345:GLU:CG	2.52	0.40
6:D:1233:GLY:O	6:D:1237:THR:N	2.38	0.40
6:D:1281:VAL:HG23	6:D:1319:VAL:HG11	2.02	0.40
5:M:191:PHE:HZ	5:M:196:LEU:HB2	1.86	0.40
5:M:229:MET:HA	12:M:7258:HOH:O	2.22	0.40
5:M:510:ALA:HB3	5:M:513:VAL:CG2	2.50	0.40
5:M:564:MET:HE1	5:M:995:MET:HB2	2.03	0.40
5:M:631:SER:HB3	5:M:635:THR:O	2.21	0.40
5:M:648:ARG:H	5:M:648:ARG:HG2	1.43	0.40
6:N:603:LEU:HD23	6:N:606:ILE:HD12	2.04	0.40
6:N:754:PHE:CE2	6:N:1476:THR:HG21	2.56	0.40
6:N:792:ILE:HG22	6:N:792:ILE:H	1.69	0.40
6:N:829:VAL:O	6:N:831:GLY:N	2.53	0.40
6:N:960:LYS:HE2	6:N:1041:LEU:HD22	2.02	0.40
6:N:1108:ARG:HG2	12:N:9128:HOH:O	2.20	0.40
6:N:1256:LEU:HA	6:N:1259:VAL:HG23	2.03	0.40
6:N:1397:LYS:HG2	12:N:9363:HOH:O	2.21	0.40
7:O:70:THR:HG22	7:O:71:GLY:N	2.36	0.40
2:Y:9:G:C5'	2:Y:9:G:H8	2.33	0.40
4:A:104:GLU:HA	4:A:136:GLY:O	2.22	0.40
4:B:100:LEU:O	4:B:115:LEU:HG	2.20	0.40
4:B:156:HIS:ND1	4:B:157:GLY:N	2.69	0.40
5:C:15:LEU:N	5:C:15:LEU:HD12	2.35	0.40
5:C:129:ILE:HD12	5:C:129:ILE:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:414:GLY:C	5:C:416:GLY:H	2.30	0.40
5:C:437:ARG:CG	5:C:467:ILE:HB	2.44	0.40
5:C:448:ASN:HA	5:C:451:LEU:HD12	2.03	0.40
5:C:470:PRO:CB	5:C:534:VAL:HG21	2.48	0.40
5:C:941:VAL:O	5:C:944:LEU:HB2	2.22	0.40
5:C:1016:ILE:HD13	5:C:1016:ILE:N	2.34	0.40
5:C:1118:LYS:HD3	6:D:20:SER:O	2.22	0.40
6:D:37:LEU:HD11	6:D:529:GLN:OE1	2.22	0.40
6:D:87:ARG:NH1	6:D:88:TYR:CE2	2.89	0.40
6:D:202:VAL:HG21	6:D:400:VAL:CB	2.48	0.40
6:D:636:GLN:H	6:D:636:GLN:HG2	1.78	0.40
6:D:897:TRP:HA	6:D:900:ILE:CG1	2.50	0.40
6:D:1084:THR:HA	6:D:1238:MET:CG	2.51	0.40
6:D:1344:VAL:O	6:D:1348:LEU:HD23	2.20	0.40
6:D:1443:THR:O	6:D:1447:LEU:HD13	2.22	0.40
4:K:27:PRO:O	4:K:28:LEU:HD23	2.21	0.40
4:L:101:LEU:HD22	4:L:140:MET:HE1	2.03	0.40
5:M:76:PRO:HA	5:M:77:PRO:HD3	1.82	0.40
5:M:118:ILE:HA	5:M:119:PRO:HD3	1.93	0.40
5:M:140:ILE:HG22	5:M:333:ILE:HG13	2.03	0.40
5:M:218:VAL:O	5:M:221:LEU:HG	2.22	0.40
5:M:313:LEU:HD13	5:M:321:GLU:O	2.21	0.40
5:M:352:ALA:CA	5:M:355:VAL:HG12	2.50	0.40
5:M:584:GLU:CD	5:M:584:GLU:H	2.29	0.40
5:M:762:LYS:HE3	5:M:784:ASP:O	2.20	0.40
5:M:1011:GLY:HA3	5:M:1026:GLN:HG2	2.03	0.40
6:N:18:ILE:HD13	6:N:21:TRP:CZ3	2.57	0.40
6:N:557:LEU:HD11	6:N:566:ILE:CG2	2.43	0.40
6:N:615:ARG:HD2	6:N:619:LEU:CD1	2.51	0.40
6:N:676:MET:HE2	6:N:684:LYS:HG3	2.04	0.40
6:N:806:PHE:O	6:N:806:PHE:CD1	2.74	0.40
6:N:1155:VAL:CG1	6:N:1177:ALA:HB1	2.52	0.40
6:N:1213:ARG:HG3	6:N:1214:PRO:HD2	2.04	0.40
6:N:1280:VAL:CG1	6:N:1281:VAL:N	2.84	0.40
4:B:206:THR:HG22	4:B:209:GLU:CD	2.46	0.40
5:C:91:GLN:HB3	5:C:118:ILE:C	2.46	0.40
5:C:464:LEU:HD11	12:C:1524:HOH:O	2.20	0.40
5:C:626:ARG:O	5:C:639:GLN:NE2	2.54	0.40
5:C:674:VAL:HG23	5:C:869:VAL:HG13	2.03	0.40
5:C:794:PRO:HG3	12:C:1273:HOH:O	2.22	0.40
5:C:1108:PRO:HG3	12:C:1227:HOH:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:593:ASN:HB3	6:D:594:PRO:HD2	2.04	0.40
6:D:658:LEU:HD22	6:D:673:ALA:CB	2.51	0.40
6:D:1236:LEU:HB2	6:D:1359:GLN:HB3	2.02	0.40
6:D:1281:VAL:HG21	6:D:1313:VAL:HG11	2.03	0.40
6:D:1434:TRP:CG	6:D:1435:LEU:N	2.90	0.40
6:D:1484:THR:O	7:E:25:LYS:HD2	2.21	0.40
4:K:11:PHE:CD1	4:K:25:LEU:HD13	2.53	0.40
4:K:94:LEU:HD23	4:K:97:VAL:HG21	2.03	0.40
4:L:103:ALA:HB3	4:L:138:LEU:CD2	2.51	0.40
5:M:42:VAL:HG12	5:M:43:GLY:N	2.37	0.40
5:M:332:ARG:NH1	12:M:7209:HOH:O	2.52	0.40
5:M:362:GLY:HA3	5:M:367:LEU:CD2	2.46	0.40
5:M:433:THR:O	5:M:437:ARG:HD2	2.21	0.40
5:M:545:ASN:CB	5:M:583:LEU:HD22	2.52	0.40
5:M:565:GLN:CD	5:M:842:ARG:HG2	2.46	0.40
5:M:585:GLU:N	12:M:7223:HOH:O	2.53	0.40
5:M:671:ASN:N	5:M:671:ASN:HD22	2.19	0.40
5:M:676:ILE:HD13	5:M:885:ILE:CD1	2.51	0.40
5:M:1043:TYR:HE1	6:N:710:ARG:O	2.04	0.40
5:M:1054:THR:CG2	5:M:1059:ASP:HB2	2.35	0.40
6:N:142:LEU:HD23	12:N:9079:HOH:O	2.20	0.40
6:N:179:VAL:HG22	6:N:189:GLN:HE22	1.87	0.40
6:N:614:PHE:N	12:N:9399:HOH:O	2.54	0.40
6:N:767:HIS:CD2	7:O:6:ILE:HG12	2.57	0.40
6:N:1072:ILE:HD13	6:N:1072:ILE:HA	1.90	0.40
6:N:1209:LEU:HD12	6:N:1216:SER:H	1.86	0.40
6:N:1294:VAL:HG13	6:N:1319:VAL:HG21	2.04	0.40
6:N:1312:LEU:O	6:N:1312:LEU:HG	2.21	0.40
6:N:1451:ALA:O	6:N:1452:ILE:C	2.64	0.40
6:N:1481:VAL:HG12	7:O:21:VAL:HG21	2.04	0.40
7:O:54:LEU:HD21	7:O:63:TRP:HE1	1.86	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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	
4	A	227/315 (72%)	208 (92%)	16 (7%)	3 (1%)	9	38
4	B	227/315 (72%)	208 (92%)	15 (7%)	4 (2%)	6	31
4	K	227/315 (72%)	208 (92%)	16 (7%)	3 (1%)	9	38
4	L	227/315 (72%)	206 (91%)	18 (8%)	3 (1%)	9	38
5	C	1117/1119 (100%)	922 (82%)	136 (12%)	59 (5%)	1	9
5	M	1117/1119 (100%)	919 (82%)	137 (12%)	61 (6%)	1	8
6	D	1308/1524 (86%)	1104 (84%)	145 (11%)	59 (4%)	2	12
6	N	1308/1524 (86%)	1099 (84%)	158 (12%)	51 (4%)	2	14
7	E	93/99 (94%)	73 (78%)	13 (14%)	7 (8%)	1	4
7	O	93/99 (94%)	73 (78%)	12 (13%)	8 (9%)	0	3
All	All	5944/6744 (88%)	5020 (84%)	666 (11%)	258 (4%)	2	12

All (258) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	29	GLU
4	B	29	GLU
4	B	187	GLY
5	C	152	PRO
5	C	156	GLY
5	C	170	PRO
5	C	223	ASP
5	C	231	PRO
5	C	244	PRO
5	C	288	ARG
5	C	290	LEU
5	C	369	PRO
5	C	465	GLY
5	C	680	ASP
5	C	698	ASP
5	C	727	PRO
5	C	908	GLY
5	C	1005	MET
5	C	1033	GLY
6	D	40	GLU
6	D	43	GLY
6	D	55	ASP

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Mol	Chain	Res	Type
6	D	96	ALA
6	D	137	PRO
6	D	448	GLU
6	D	610	LYS
6	D	705	ALA
6	D	832	ARG
6	D	844	ALA
6	D	1028	ALA
6	D	1129	THR
6	D	1252	ILE
6	D	1389	LEU
6	D	1441	GLN
7	E	42	PRO
4	K	29	GLU
4	K	187	GLY
4	L	29	GLU
4	L	187	GLY
5	M	59	LYS
5	M	152	PRO
5	M	156	GLY
5	M	170	PRO
5	M	231	PRO
5	M	244	PRO
5	M	288	ARG
5	M	290	LEU
5	M	369	PRO
5	M	465	GLY
5	M	627	ARG
5	M	680	ASP
5	M	698	ASP
5	M	727	PRO
5	M	908	GLY
5	M	1005	MET
5	M	1033	GLY
6	N	40	GLU
6	N	43	GLY
6	N	55	ASP
6	N	137	PRO
6	N	705	ALA
6	N	803	GLY
6	N	832	ARG
6	N	844	ALA

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Mol	Chain	Res	Type
6	N	1028	ALA
6	N	1129	THR
6	N	1252	ILE
6	N	1441	GLN
7	O	42	PRO
4	A	187	GLY
5	C	40	GLU
5	C	59	LYS
5	C	144	PRO
5	C	164	PRO
5	C	251	ASP
5	C	363	SER
5	C	442	GLU
5	C	457	ALA
5	C	529	VAL
5	C	548	PRO
5	C	626	ARG
5	C	627	ARG
5	C	808	ARG
5	C	864	GLY
5	C	1097	LEU
6	D	31	THR
6	D	37	LEU
6	D	82	LYS
6	D	397	LYS
6	D	451	ASP
6	D	594	PRO
6	D	620	GLY
6	D	766	ALA
6	D	803	GLY
6	D	822	ALA
6	D	869	MET
6	D	1208	ASP
6	D	1287	GLU
6	D	1288	GLU
6	D	1315	ASP
6	D	1385	GLY
6	D	1454	GLY
7	E	5	GLY
7	E	53	GLY
7	E	58	PRO
5	M	40	GLU

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Mol	Chain	Res	Type
5	M	144	PRO
5	M	164	PRO
5	M	178	PRO
5	M	223	ASP
5	M	251	ASP
5	M	363	SER
5	M	424	GLY
5	M	457	ALA
5	M	548	PRO
5	M	626	ARG
5	M	808	ARG
5	M	864	GLY
5	M	1106	ASP
6	N	31	THR
6	N	37	LEU
6	N	96	ALA
6	N	594	PRO
6	N	620	GLY
6	N	822	ALA
6	N	1269	LYS
6	N	1287	GLU
6	N	1288	GLU
6	N	1385	GLY
6	N	1389	LEU
6	N	1454	GLY
7	O	5	GLY
7	O	53	GLY
7	O	58	PRO
5	C	74	GLY
5	C	178	PRO
5	C	262	ALA
5	C	462	ASP
5	C	517	ARG
5	C	1106	ASP
6	D	98	PRO
6	D	120	ALA
6	D	136	ASP
6	D	140	ALA
6	D	507	ASN
6	D	1125	PRO
6	D	1220	ALA
6	D	1269	LYS

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Mol	Chain	Res	Type
5	M	262	ALA
5	M	292	ARG
5	M	390	GLN
5	M	462	ASP
5	M	517	ARG
5	M	1004	LYS
5	M	1059	ASP
6	N	98	PRO
6	N	120	ALA
6	N	507	ASN
6	N	737	ASN
6	N	869	MET
6	N	1125	PRO
6	N	1208	ASP
6	N	1342	GLU
7	O	43	GLU
5	C	180	GLY
5	C	188	LYS
5	C	292	ARG
5	C	424	GLY
5	C	1059	ASP
6	D	601	ARG
6	D	737	ASN
6	D	1004	THR
6	D	1111	ASP
7	E	32	ARG
5	M	74	GLY
5	M	180	GLY
5	M	188	LYS
5	M	272	ALA
5	M	282	GLY
5	M	366	SER
5	M	447	ALA
5	M	529	VAL
5	M	783	ARG
5	M	1024	LYS
6	N	83	SER
6	N	696	HIS
6	N	830	ALA
6	N	1446	VAL
4	B	133	GLU
5	C	44	ILE

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Mol	Chain	Res	Type
5	C	80	GLN
5	C	268	ASP
5	C	272	ALA
5	C	740	GLU
5	C	1024	LYS
6	D	500	ARG
6	D	808	THR
6	D	830	ALA
6	D	1066	THR
6	D	1349	VAL
5	M	10	ARG
5	M	53	PRO
5	M	277	ALA
5	M	767	PRO
5	M	1097	LEU
6	N	136	ASP
6	N	448	GLU
6	N	451	ASP
6	N	500	ARG
6	N	808	THR
6	N	1004	THR
6	N	1306	PRO
6	N	1349	VAL
7	O	32	ARG
7	O	37	ASN
7	O	81	PRO
5	C	11	GLU
5	C	282	GLY
5	C	767	PRO
6	D	525	ARG
6	D	530	VAL
6	D	1027	GLY
6	D	1446	VAL
7	E	43	GLU
5	M	268	ASP
6	N	530	VAL
6	N	601	ARG
5	C	53	PRO
5	C	561	GLY
6	D	595	GLY
6	D	1306	PRO
7	E	81	PRO

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Mol	Chain	Res	Type
4	L	125	PRO
6	N	595	GLY
5	C	129	ILE
5	C	415	PRO
5	C	1114	GLY
5	M	35	PRO
5	M	44	ILE
5	M	561	GLY
5	M	1114	GLY
6	N	521	PRO
6	N	1027	GLY
4	A	125	PRO
5	C	779	GLY
5	C	844	GLY
5	M	415	PRO
5	M	844	GLY
4	B	125	PRO
5	C	16	PRO
6	D	1050	GLY
6	D	1155	VAL
4	K	125	PRO
5	M	779	GLY
6	N	1050	GLY
6	D	521	PRO
6	D	1452	ILE
6	N	1155	VAL

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
4	A	202/273 (74%)	158 (78%)	44 (22%)	1	6
4	B	202/273 (74%)	161 (80%)	41 (20%)	1	7
4	K	202/273 (74%)	157 (78%)	45 (22%)	1	5
4	L	202/273 (74%)	147 (73%)	55 (27%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	C	941/941 (100%)	707 (75%)	234 (25%)	0	4
5	M	941/941 (100%)	708 (75%)	233 (25%)	1	3
6	D	1111/1279 (87%)	855 (77%)	256 (23%)	1	5
6	N	1111/1279 (87%)	839 (76%)	272 (24%)	1	4
7	E	84/88 (96%)	66 (79%)	18 (21%)	1	6
7	O	84/88 (96%)	65 (77%)	19 (23%)	1	5
All	All	5080/5708 (89%)	3863 (76%)	1217 (24%)	1	4

All (1217) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	2	LEU
4	A	3	ASP
4	A	4	SER
4	A	5	LYS
4	A	9	PRO
4	A	12	THR
4	A	18	ARG
4	A	19	GLU
4	A	26	GLU
4	A	29	GLU
4	A	30	ARG
4	A	35	THR
4	A	47	SER
4	A	60	ASP
4	A	62	LEU
4	A	66	SER
4	A	67	THR
4	A	73	GLU
4	A	84	GLU
4	A	87	VAL
4	A	89	PHE
4	A	92	PRO
4	A	94	LEU
4	A	97	VAL
4	A	115	LEU
4	A	126	ASP
4	A	127	LEU
4	A	132	LEU
4	A	138	LEU

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Mol	Chain	Res	Type
4	A	143	ARG
4	A	145	ASP
4	A	155	LYS
4	A	156	HIS
4	A	161	ARG
4	A	175	ARG
4	A	180	GLN
4	A	183	ASP
4	A	184	THR
4	A	185	ARG
4	A	190	THR
4	A	197	LEU
4	A	207	PRO
4	A	208	LEU
4	A	227	ASN
4	B	4	SER
4	B	5	LYS
4	B	7	LYS
4	B	9	PRO
4	B	25	LEU
4	B	34	VAL
4	B	35	THR
4	B	45	LEU
4	B	62	LEU
4	B	64	GLU
4	B	71	VAL
4	B	73	GLU
4	B	81	ASN
4	B	85	LEU
4	B	89	PHE
4	B	95	GLN
4	B	99	LEU
4	B	104	GLU
4	B	107	LYS
4	B	117	VAL
4	B	119	ASP
4	B	123	MET
4	B	128	HIS
4	B	138	LEU
4	B	143	ARG
4	B	152	PRO
4	B	154	GLU

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Mol	Chain	Res	Type
4	B	159	LYS
4	B	162	ILE
4	B	163	ASN
4	B	167	VAL
4	B	172	SER
4	B	176	ARG
4	B	177	VAL
4	B	186	LEU
4	B	194	LYS
4	B	197	LEU
4	B	201	THR
4	B	209	GLU
4	B	211	LEU
4	B	213	GLN
5	C	4	LYS
5	C	8	ARG
5	C	9	ILE
5	C	18	LEU
5	C	19	THR
5	C	21	ILE
5	C	22	GLN
5	C	27	ARG
5	C	30	LEU
5	C	31	GLN
5	C	34	VAL
5	C	35	PRO
5	C	42	VAL
5	C	48	PHE
5	C	49	ARG
5	C	51	THR
5	C	56	GLU
5	C	65	VAL
5	C	75	GLU
5	C	82	GLU
5	C	88	LEU
5	C	95	TYR
5	C	98	LEU
5	C	103	LYS
5	C	104	ASP
5	C	107	LEU
5	C	108	ILE
5	C	110	GLU

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Mol	Chain	Res	Type
5	C	114	PHE
5	C	115	LEU
5	C	120	LEU
5	C	133	ASP
5	C	138	SER
5	C	140	ILE
5	C	141	HIS
5	C	149	THR
5	C	150	PRO
5	C	152	PRO
5	C	157	ARG
5	C	158	TYR
5	C	161	SER
5	C	163	ILE
5	C	170	PRO
5	C	177	GLU
5	C	178	PRO
5	C	179	ASN
5	C	183	SER
5	C	184	MET
5	C	186	VAL
5	C	195	LEU
5	C	196	LEU
5	C	198	ARG
5	C	200	LEU
5	C	203	ASP
5	C	205	GLU
5	C	216	GLU
5	C	217	LEU
5	C	221	LEU
5	C	230	ARG
5	C	233	GLU
5	C	236	ILE
5	C	239	PHE
5	C	243	ARG
5	C	251	ASP
5	C	257	VAL
5	C	260	LEU
5	C	261	ILE
5	C	264	PRO
5	C	267	TYR
5	C	268	ASP

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Mol	Chain	Res	Type
5	C	271	GLU
5	C	279	GLU
5	C	280	LYS
5	C	285	LEU
5	C	289	THR
5	C	290	LEU
5	C	293	PHE
5	C	297	GLU
5	C	304	LEU
5	C	309	TYR
5	C	322	VAL
5	C	343	GLN
5	C	348	LEU
5	C	358	ARG
5	C	359	MET
5	C	360	LEU
5	C	365	ASP
5	C	367	LEU
5	C	379	GLU
5	C	383	ARG
5	C	393	GLN
5	C	396	ASP
5	C	400	PRO
5	C	410	ILE
5	C	415	PRO
5	C	432	ARG
5	C	433	THR
5	C	442	GLU
5	C	443	THR
5	C	445	GLU
5	C	452	ILE
5	C	453	THR
5	C	455	LEU
5	C	463	GLU
5	C	467	ILE
5	C	469	THR
5	C	472	ARG
5	C	474	VAL
5	C	483	VAL
5	C	484	VAL
5	C	496	ILE
5	C	501	THR

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Mol	Chain	Res	Type
5	C	502	PRO
5	C	503	LEU
5	C	507	ARG
5	C	511	GLU
5	C	513	VAL
5	C	517	ARG
5	C	523	ILE
5	C	527	GLU
5	C	529	VAL
5	C	548	PRO
5	C	565	GLN
5	C	567	GLN
5	C	584	GLU
5	C	585	GLU
5	C	595	LEU
5	C	599	GLU
5	C	602	GLU
5	C	607	ASP
5	C	617	ASP
5	C	620	LEU
5	C	625	LEU
5	C	632	ASN
5	C	637	LEU
5	C	638	ASP
5	C	639	GLN
5	C	644	VAL
5	C	645	VAL
5	C	648	ARG
5	C	649	VAL
5	C	650	ARG
5	C	654	LEU
5	C	668	LEU
5	C	670	GLN
5	C	672	VAL
5	C	673	LEU
5	C	676	ILE
5	C	685	GLU
5	C	690	ILE
5	C	693	GLU
5	C	699	PHE
5	C	701	THR
5	C	703	ILE

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Mol	Chain	Res	Type
5	C	704	HIS
5	C	709	GLU
5	C	713	ARG
5	C	722	ILE
5	C	725	ASP
5	C	727	PRO
5	C	729	LEU
5	C	744	ARG
5	C	774	LEU
5	C	780	GLU
5	C	784	ASP
5	C	785	VAL
5	C	799	ILE
5	C	805	ARG
5	C	807	ARG
5	C	808	ARG
5	C	813	VAL
5	C	814	GLU
5	C	823	VAL
5	C	834	GLN
5	C	839	LEU
5	C	841	ASN
5	C	845	ASN
5	C	852	ILE
5	C	853	LEU
5	C	858	MET
5	C	859	PRO
5	C	860	HIS
5	C	862	PRO
5	C	881	ASN
5	C	884	GLN
5	C	904	PRO
5	C	907	ASP
5	C	913	GLU
5	C	914	ILE
5	C	920	GLN
5	C	923	GLU
5	C	924	VAL
5	C	938	LYS
5	C	950	LEU
5	C	952	LEU
5	C	953	VAL

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Mol	Chain	Res	Type
5	C	954	THR
5	C	958	THR
5	C	962	GLN
5	C	963	LEU
5	C	964	LYS
5	C	965	GLU
5	C	969	GLN
5	C	978	ARG
5	C	981	GLU
5	C	995	MET
5	C	999	HIS
5	C	1000	MET
5	C	1003	ASP
5	C	1005	MET
5	C	1006	HIS
5	C	1008	ARG
5	C	1010	THR
5	C	1016	ILE
5	C	1017	THR
5	C	1018	GLN
5	C	1026	GLN
5	C	1035	MET
5	C	1040	LEU
5	C	1052	MET
5	C	1053	LEU
5	C	1054	THR
5	C	1060	ILE
5	C	1063	ARG
5	C	1074	GLU
5	C	1084	SER
5	C	1088	LEU
5	C	1097	LEU
5	C	1098	ASP
5	C	1101	THR
5	C	1104	GLU
5	C	1108	PRO
5	C	1113	GLU
5	C	1117	SER
6	D	3	LYS
6	D	4	GLU
6	D	5	VAL
6	D	8	VAL

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Mol	Chain	Res	Type
6	D	12	LEU
6	D	15	PRO
6	D	16	GLU
6	D	17	LYS
6	D	21	TRP
6	D	25	GLU
6	D	31	THR
6	D	34	TYR
6	D	35	ARG
6	D	36	THR
6	D	41	ARG
6	D	42	ASP
6	D	48	ARG
6	D	56	TYR
6	D	66	GLN
6	D	68	PHE
6	D	69	GLU
6	D	76	CYS
6	D	80	VAL
6	D	85	VAL
6	D	87	ARG
6	D	90	MET
6	D	101	HIS
6	D	108	VAL
6	D	112	ILE
6	D	116	LEU
6	D	118	LEU
6	D	123	LEU
6	D	125	GLN
6	D	127	LEU
6	D	138	LYS
6	D	141	ILE
6	D	142	LEU
6	D	143	ASN
6	D	145	VAL
6	D	149	LYS
6	D	152	LEU
6	D	153	LEU
6	D	157	GLU
6	D	161	LEU
6	D	162	ARG
6	D	163	TYR

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Mol	Chain	Res	Type
6	D	197	SER
6	D	199	LEU
6	D	200	ASP
6	D	204	LEU
6	D	207	PHE
6	D	395	VAL
6	D	404	GLU
6	D	407	VAL
6	D	419	ASP
6	D	423	ASP
6	D	428	LYS
6	D	431	VAL
6	D	434	ARG
6	D	439	LEU
6	D	441	ARG
6	D	445	ARG
6	D	451	ASP
6	D	456	MET
6	D	462	GLN
6	D	466	LYS
6	D	470	LEU
6	D	479	GLU
6	D	481	MET
6	D	493	ARG
6	D	499	VAL
6	D	505	SER
6	D	513	ILE
6	D	514	LEU
6	D	517	VAL
6	D	521	PRO
6	D	525	ARG
6	D	529	GLN
6	D	531	ASP
6	D	549	ASN
6	D	552	ASN
6	D	553	ARG
6	D	565	ILE
6	D	566	ILE
6	D	571	LYS
6	D	573	MET
6	D	574	LEU
6	D	576	GLU

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Mol	Chain	Res	Type
6	D	581	LEU
6	D	590	PRO
6	D	594	PRO
6	D	597	ASP
6	D	598	ARG
6	D	605	ASP
6	D	607	LEU
6	D	608	SER
6	D	611	GLN
6	D	614	PHE
6	D	615	ARG
6	D	618	LEU
6	D	619	LEU
6	D	624	ASP
6	D	628	ARG
6	D	636	GLN
6	D	639	LEU
6	D	641	GLN
6	D	651	GLU
6	D	654	LYS
6	D	659	LYS
6	D	661	MET
6	D	666	ILE
6	D	670	VAL
6	D	678	GLU
6	D	679	ARG
6	D	682	ASP
6	D	701	LEU
6	D	703	ASN
6	D	707	THR
6	D	709	HIS
6	D	710	ARG
6	D	711	LEU
6	D	720	LEU
6	D	724	GLN
6	D	725	SER
6	D	727	GLN
6	D	728	LEU
6	D	731	LEU
6	D	734	GLU
6	D	739	ASP
6	D	754	PHE

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Mol	Chain	Res	Type
6	D	760	ARG
6	D	784	ASP
6	D	785	ILE
6	D	792	ILE
6	D	804	LEU
6	D	811	GLU
6	D	813	LEU
6	D	833	GLU
6	D	835	SER
6	D	851	LEU
6	D	860	LEU
6	D	863	VAL
6	D	864	VAL
6	D	872	ARG
6	D	879	ARG
6	D	880	ILE
6	D	888	GLU
6	D	910	SER
6	D	914	LEU
6	D	915	VAL
6	D	920	LEU
6	D	921	ARG
6	D	925	GLU
6	D	930	LEU
6	D	932	ASP
6	D	940	THR
6	D	947	ILE
6	D	951	ILE
6	D	952	ASP
6	D	959	GLU
6	D	960	LYS
6	D	965	GLU
6	D	966	GLU
6	D	971	LEU
6	D	972	LEU
6	D	975	GLU
6	D	983	LEU
6	D	988	ARG
6	D	991	GLN
6	D	995	LEU
6	D	1001	GLU
6	D	1010	ASN

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Mol	Chain	Res	Type
6	D	1012	GLU
6	D	1019	PRO
6	D	1025	GLN
6	D	1032	PRO
6	D	1033	GLN
6	D	1042	ARG
6	D	1062	ARG
6	D	1068	LEU
6	D	1086	LEU
6	D	1087	ARG
6	D	1088	THR
6	D	1100	ASP
6	D	1109	GLU
6	D	1111	ASP
6	D	1114	THR
6	D	1115	THR
6	D	1124	GLN
6	D	1134	LEU
6	D	1151	ARG
6	D	1152	GLU
6	D	1153	VAL
6	D	1155	VAL
6	D	1156	LEU
6	D	1158	VAL
6	D	1160	LEU
6	D	1164	ARG
6	D	1166	LEU
6	D	1174	LEU
6	D	1182	GLU
6	D	1183	ILE
6	D	1190	SER
6	D	1195	GLN
6	D	1207	TYR
6	D	1210	SER
6	D	1217	ILE
6	D	1228	SER
6	D	1231	GLU
6	D	1237	THR
6	D	1238	MET
6	D	1239	ARG
6	D	1251	ASP
6	D	1252	ILE

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Mol	Chain	Res	Type
6	D	1253	THR
6	D	1264	GLU
6	D	1266	ARG
6	D	1275	SER
6	D	1278	ASP
6	D	1282	ARG
6	D	1283	ILE
6	D	1284	GLU
6	D	1292	VAL
6	D	1294	VAL
6	D	1299	PHE
6	D	1302	GLU
6	D	1306	PRO
6	D	1311	LEU
6	D	1312	LEU
6	D	1315	ASP
6	D	1319	VAL
6	D	1323	GLN
6	D	1325	LEU
6	D	1345	GLU
6	D	1346	ARG
6	D	1353	GLN
6	D	1359	GLN
6	D	1389	LEU
6	D	1391	GLU
6	D	1393	GLN
6	D	1395	LEU
6	D	1401	GLU
6	D	1403	LEU
6	D	1432	LYS
6	D	1440	PHE
6	D	1441	GLN
6	D	1448	THR
6	D	1449	GLU
6	D	1462	LEU
6	D	1476	THR
6	D	1485	GLN
6	D	1488	ASP
6	D	1492	LEU
6	D	1495	ILE
6	D	1496	GLU
6	D	1501	GLU

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Mol	Chain	Res	Type
7	E	29	GLN
7	E	30	LEU
7	E	32	ARG
7	E	40	LEU
7	E	41	GLU
7	E	42	PRO
7	E	46	PRO
7	E	51	LEU
7	E	57	ASP
7	E	58	PRO
7	E	68	LEU
7	E	69	LEU
7	E	70	THR
7	E	74	VAL
7	E	81	PRO
7	E	83	ASP
7	E	85	LEU
7	E	94	PRO
4	K	1	MET
4	K	9	PRO
4	K	19	GLU
4	K	26	GLU
4	K	30	ARG
4	K	41	ARG
4	K	44	LEU
4	K	47	SER
4	K	62	LEU
4	K	63	HIS
4	K	64	GLU
4	K	65	PHE
4	K	73	GLU
4	K	74	ASP
4	K	77	GLU
4	K	84	GLU
4	K	89	PHE
4	K	92	PRO
4	K	96	THR
4	K	101	LEU
4	K	104	GLU
4	K	110	LYS
4	K	115	LEU
4	K	119	ASP

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Mol	Chain	Res	Type
4	K	121	GLU
4	K	127	LEU
4	K	144	VAL
4	K	161	ARG
4	K	163	ASN
4	K	165	ILE
4	K	167	VAL
4	K	180	GLN
4	K	188	GLN
4	K	192	LEU
4	K	197	LEU
4	K	198	ARG
4	K	199	ILE
4	K	201	THR
4	K	206	THR
4	K	208	LEU
4	K	212	ASN
4	K	215	VAL
4	K	216	GLU
4	K	219	ARG
4	K	227	ASN
4	L	1	MET
4	L	5	LYS
4	L	7	LYS
4	L	9	PRO
4	L	12	THR
4	L	16	GLN
4	L	24	VAL
4	L	25	LEU
4	L	26	GLU
4	L	29	GLU
4	L	34	VAL
4	L	41	ARG
4	L	45	LEU
4	L	59	GLU
4	L	62	LEU
4	L	66	SER
4	L	73	GLU
4	L	81	ASN
4	L	89	PHE
4	L	92	PRO
4	L	95	GLN

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Mol	Chain	Res	Type
4	L	96	THR
4	L	107	LYS
4	L	112	ARG
4	L	115	LEU
4	L	119	ASP
4	L	122	ILE
4	L	126	ASP
4	L	128	HIS
4	L	133	GLU
4	L	134	GLU
4	L	138	LEU
4	L	139	ASN
4	L	140	MET
4	L	151	VAL
4	L	159	LYS
4	L	162	ILE
4	L	163	ASN
4	L	175	ARG
4	L	177	VAL
4	L	181	VAL
4	L	182	GLU
4	L	184	THR
4	L	188	GLN
4	L	191	ASP
4	L	196	THR
4	L	197	LEU
4	L	202	ASP
4	L	206	THR
4	L	209	GLU
4	L	213	GLN
4	L	220	GLU
4	L	223	THR
4	L	226	SER
4	L	227	ASN
5	M	5	ARG
5	M	9	ILE
5	M	10	ARG
5	M	13	ILE
5	M	20	GLU
5	M	22	GLN
5	M	26	TYR
5	M	31	GLN

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Mol	Chain	Res	Type
5	M	37	GLU
5	M	41	ASN
5	M	48	PHE
5	M	49	ARG
5	M	51	THR
5	M	59	LYS
5	M	65	VAL
5	M	69	LEU
5	M	89	THR
5	M	91	GLN
5	M	94	LEU
5	M	98	LEU
5	M	100	LEU
5	M	104	ASP
5	M	105	THR
5	M	108	ILE
5	M	110	GLU
5	M	114	PHE
5	M	115	LEU
5	M	117	HIS
5	M	124	ASP
5	M	135	VAL
5	M	144	PRO
5	M	148	PHE
5	M	152	PRO
5	M	158	TYR
5	M	163	ILE
5	M	168	ARG
5	M	171	TRP
5	M	173	ASP
5	M	176	VAL
5	M	178	PRO
5	M	187	ASN
5	M	190	LYS
5	M	195	LEU
5	M	196	LEU
5	M	198	ARG
5	M	205	GLU
5	M	207	LEU
5	M	211	LEU
5	M	218	VAL
5	M	221	LEU

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Mol	Chain	Res	Type
5	M	222	MET
5	M	223	ASP
5	M	224	GLU
5	M	225	SER
5	M	230	ARG
5	M	233	GLU
5	M	235	LEU
5	M	237	ARG
5	M	241	LEU
5	M	242	LEU
5	M	243	ARG
5	M	251	ASP
5	M	252	LYS
5	M	263	ASP
5	M	267	TYR
5	M	271	GLU
5	M	275	TYR
5	M	278	GLU
5	M	279	GLU
5	M	281	LEU
5	M	285	LEU
5	M	289	THR
5	M	290	LEU
5	M	297	GLU
5	M	308	ARG
5	M	309	TYR
5	M	321	GLU
5	M	327	HIS
5	M	331	ARG
5	M	335	THR
5	M	342	ASP
5	M	359	MET
5	M	365	ASP
5	M	367	LEU
5	M	379	GLU
5	M	383	ARG
5	M	388	ARG
5	M	391	LEU
5	M	392	SER
5	M	393	GLN
5	M	394	PHE
5	M	400	PRO

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Mol	Chain	Res	Type
5	M	407	LYS
5	M	409	ARG
5	M	413	LEU
5	M	425	PHE
5	M	426	ASP
5	M	427	VAL
5	M	428	ARG
5	M	429	ASP
5	M	432	ARG
5	M	433	THR
5	M	438	ILE
5	M	443	THR
5	M	451	LEU
5	M	452	ILE
5	M	453	THR
5	M	461	VAL
5	M	469	THR
5	M	474	VAL
5	M	478	VAL
5	M	480	THR
5	M	482	GLU
5	M	491	GLU
5	M	498	GLN
5	M	500	ASN
5	M	503	LEU
5	M	504	GLU
5	M	514	VAL
5	M	518	LYS
5	M	524	VAL
5	M	525	SER
5	M	527	GLU
5	M	528	GLU
5	M	532	MET
5	M	535	SER
5	M	537	LYS
5	M	547	ILE
5	M	548	PRO
5	M	560	MET
5	M	562	SER
5	M	564	MET
5	M	572	ILE
5	M	584	GLU

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Mol	Chain	Res	Type
5	M	586	ARG
5	M	607	ASP
5	M	623	TYR
5	M	627	ARG
5	M	635	THR
5	M	637	LEU
5	M	640	ARG
5	M	642	ARG
5	M	644	VAL
5	M	645	VAL
5	M	648	ARG
5	M	654	LEU
5	M	655	LEU
5	M	666	LEU
5	M	668	LEU
5	M	672	VAL
5	M	673	LEU
5	M	676	ILE
5	M	679	PHE
5	M	680	ASP
5	M	689	VAL
5	M	691	SER
5	M	692	GLU
5	M	693	GLU
5	M	699	PHE
5	M	701	THR
5	M	703	ILE
5	M	705	ILE
5	M	714	ASP
5	M	715	THR
5	M	722	ILE
5	M	724	ARG
5	M	727	PRO
5	M	736	ASP
5	M	737	LEU
5	M	739	GLU
5	M	740	GLU
5	M	744	ARG
5	M	750	LYS
5	M	759	THR
5	M	766	GLU
5	M	770	GLU

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Mol	Chain	Res	Type
5	M	773	LEU
5	M	780	GLU
5	M	783	ARG
5	M	785	VAL
5	M	794	PRO
5	M	799	ILE
5	M	806	LEU
5	M	807	ARG
5	M	813	VAL
5	M	814	GLU
5	M	821	GLU
5	M	838	LYS
5	M	839	LEU
5	M	841	ASN
5	M	853	LEU
5	M	857	ASP
5	M	858	MET
5	M	862	PRO
5	M	865	THR
5	M	870	ILE
5	M	881	ASN
5	M	886	LEU
5	M	888	THR
5	M	899	GLN
5	M	904	PRO
5	M	905	ILE
5	M	907	ASP
5	M	937	ASP
5	M	938	LYS
5	M	950	LEU
5	M	953	VAL
5	M	959	PRO
5	M	960	GLU
5	M	963	LEU
5	M	966	LEU
5	M	969	GLN
5	M	976	ASP
5	M	981	GLU
5	M	999	HIS
5	M	1002	GLU
5	M	1003	ASP
5	M	1008	ARG

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Mol	Chain	Res	Type
5	M	1015	LEU
5	M	1017	THR
5	M	1026	GLN
5	M	1035	MET
5	M	1041	GLU
5	M	1051	GLU
5	M	1054	THR
5	M	1055	LEU
5	M	1060	ILE
5	M	1075	ASP
5	M	1092	LEU
5	M	1095	LEU
5	M	1099	VAL
5	M	1115	LEU
5	M	1118	LYS
6	N	3	LYS
6	N	10	ILE
6	N	14	SER
6	N	19	ARG
6	N	25	GLU
6	N	34	TYR
6	N	35	ARG
6	N	37	LEU
6	N	41	ARG
6	N	44	LEU
6	N	47	GLU
6	N	55	ASP
6	N	56	TYR
6	N	62	LYS
6	N	64	LYS
6	N	71	LYS
6	N	76	CYS
6	N	79	GLU
6	N	80	VAL
6	N	85	VAL
6	N	86	ARG
6	N	95	LEU
6	N	97	THR
6	N	103	TRP
6	N	106	LYS
6	N	112	ILE
6	N	116	LEU

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Mol	Chain	Res	Type
6	N	121	THR
6	N	124	GLU
6	N	131	LYS
6	N	132	TYR
6	N	135	LEU
6	N	141	ILE
6	N	142	LEU
6	N	145	VAL
6	N	149	LYS
6	N	151	GLN
6	N	152	LEU
6	N	160	GLU
6	N	161	LEU
6	N	163	TYR
6	N	166	GLN
6	N	167	GLU
6	N	181	ASP
6	N	186	VAL
6	N	204	LEU
6	N	393	ILE
6	N	394	LEU
6	N	396	VAL
6	N	397	LYS
6	N	413	ASP
6	N	421	LEU
6	N	430	ASP
6	N	452	ILE
6	N	453	ASP
6	N	455	ARG
6	N	459	GLU
6	N	465	LEU
6	N	468	LEU
6	N	470	LEU
6	N	481	MET
6	N	483	HIS
6	N	488	ARG
6	N	489	ARG
6	N	491	LYS
6	N	493	ARG
6	N	498	VAL
6	N	503	LEU
6	N	513	ILE

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Mol	Chain	Res	Type
6	N	520	LEU
6	N	524	LEU
6	N	525	ARG
6	N	529	GLN
6	N	537	THR
6	N	542	ASP
6	N	547	LEU
6	N	549	ASN
6	N	564	GLU
6	N	574	LEU
6	N	575	GLN
6	N	576	GLU
6	N	581	LEU
6	N	586	ARG
6	N	590	PRO
6	N	591	VAL
6	N	593	ASN
6	N	594	PRO
6	N	596	SER
6	N	597	ASP
6	N	600	LEU
6	N	615	ARG
6	N	616	GLN
6	N	618	LEU
6	N	619	LEU
6	N	639	LEU
6	N	641	GLN
6	N	644	LEU
6	N	650	LEU
6	N	652	LEU
6	N	660	LYS
6	N	662	GLU
6	N	666	ILE
6	N	670	VAL
6	N	671	LYS
6	N	676	MET
6	N	678	GLU
6	N	698	LYS
6	N	709	HIS
6	N	711	LEU
6	N	728	LEU
6	N	732	VAL

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Mol	Chain	Res	Type
6	N	737	ASN
6	N	739	ASP
6	N	749	VAL
6	N	758	GLU
6	N	760	ARG
6	N	762	GLN
6	N	765	SER
6	N	771	SER
6	N	774	SER
6	N	776	GLU
6	N	778	LEU
6	N	780	LYS
6	N	782	SER
6	N	786	ILE
6	N	792	ILE
6	N	796	ARG
6	N	805	GLU
6	N	808	THR
6	N	810	GLU
6	N	811	GLU
6	N	820	GLU
6	N	823	LEU
6	N	824	ASN
6	N	826	PRO
6	N	828	LYS
6	N	832	ARG
6	N	834	THR
6	N	839	LEU
6	N	842	VAL
6	N	846	PRO
6	N	847	ASP
6	N	850	LEU
6	N	863	VAL
6	N	864	VAL
6	N	867	ARG
6	N	897	TRP
6	N	902	LEU
6	N	903	ASP
6	N	913	ASP
6	N	921	ARG
6	N	929	ARG
6	N	935	LYS

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Mol	Chain	Res	Type
6	N	949	ILE
6	N	951	ILE
6	N	952	ASP
6	N	955	VAL
6	N	959	GLU
6	N	964	LEU
6	N	972	LEU
6	N	983	LEU
6	N	986	ARG
6	N	990	ASP
6	N	999	THR
6	N	1012	GLU
6	N	1031	ASN
6	N	1033	GLN
6	N	1038	LEU
6	N	1041	LEU
6	N	1048	PRO
6	N	1052	THR
6	N	1054	GLU
6	N	1062	ARG
6	N	1068	LEU
6	N	1086	LEU
6	N	1087	ARG
6	N	1093	TYR
6	N	1098	LEU
6	N	1101	VAL
6	N	1108	ARG
6	N	1109	GLU
6	N	1116	ASN
6	N	1118	ILE
6	N	1119	SER
6	N	1122	LEU
6	N	1125	PRO
6	N	1127	GLU
6	N	1131	SER
6	N	1151	ARG
6	N	1156	LEU
6	N	1160	LEU
6	N	1161	GLU
6	N	1166	LEU
6	N	1167	SER
6	N	1183	ILE

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Mol	Chain	Res	Type
6	N	1191	PRO
6	N	1195	GLN
6	N	1207	TYR
6	N	1210	SER
6	N	1211	MET
6	N	1213	ARG
6	N	1214	PRO
6	N	1221	VAL
6	N	1224	VAL
6	N	1228	SER
6	N	1229	ILE
6	N	1231	GLU
6	N	1234	THR
6	N	1235	GLN
6	N	1236	LEU
6	N	1237	THR
6	N	1238	MET
6	N	1240	THR
6	N	1257	PRO
6	N	1259	VAL
6	N	1264	GLU
6	N	1266	ARG
6	N	1269	LYS
6	N	1275	SER
6	N	1282	ARG
6	N	1284	GLU
6	N	1285	GLU
6	N	1286	THR
6	N	1294	VAL
6	N	1296	SER
6	N	1297	GLU
6	N	1299	PHE
6	N	1307	LYS
6	N	1310	ARG
6	N	1311	LEU
6	N	1312	LEU
6	N	1315	ASP
6	N	1317	ASP
6	N	1320	GLU
6	N	1323	GLN
6	N	1327	ARG
6	N	1337	GLU

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Mol	Chain	Res	Type
6	N	1342	GLU
6	N	1344	VAL
6	N	1346	ARG
6	N	1348	LEU
6	N	1359	GLN
6	N	1369	GLU
6	N	1377	LYS
6	N	1381	VAL
6	N	1383	ASP
6	N	1387	SER
6	N	1389	LEU
6	N	1390	LEU
6	N	1407	LEU
6	N	1422	MET
6	N	1429	LEU
6	N	1431	THR
6	N	1435	LEU
6	N	1441	GLN
6	N	1444	THR
6	N	1452	ILE
6	N	1462	LEU
6	N	1463	LYS
6	N	1464	GLU
6	N	1465	ASN
6	N	1466	VAL
6	N	1468	LEU
6	N	1481	VAL
6	N	1483	PHE
6	N	1488	ASP
6	N	1490	LYS
6	N	1491	THR
6	N	1495	ILE
6	N	1496	GLU
6	N	1499	ARG
6	N	1501	GLU
7	O	14	ASP
7	O	20	THR
7	O	28	GLN
7	O	30	LEU
7	O	31	LEU
7	O	40	LEU
7	O	41	GLU

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Mol	Chain	Res	Type
7	O	42	PRO
7	O	46	PRO
7	O	51	LEU
7	O	57	ASP
7	O	58	PRO
7	O	59	ASN
7	O	74	VAL
7	O	78	ASN
7	O	81	PRO
7	O	83	ASP
7	O	85	LEU
7	O	94	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (165) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	81	ASN
4	A	128	HIS
4	A	139	ASN
4	A	156	HIS
4	A	163	ASN
4	A	180	GLN
4	A	188	GLN
4	A	227	ASN
4	A	229	GLN
4	B	16	GLN
4	B	63	HIS
4	B	81	ASN
4	B	95	GLN
4	B	212	ASN
4	B	213	GLN
4	B	227	ASN
5	C	22	GLN
5	C	31	GLN
5	C	99	GLN
5	C	102	HIS
5	C	117	HIS
5	C	141	HIS
5	C	320	HIS
5	C	390	GLN
5	C	393	GLN
5	C	431	HIS

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Mol	Chain	Res	Type
5	C	538	GLN
5	C	543	ASN
5	C	545	ASN
5	C	552	HIS
5	C	609	ASN
5	C	633	GLN
5	C	670	GLN
5	C	671	ASN
5	C	834	GLN
5	C	841	ASN
5	C	845	ASN
5	C	881	ASN
5	C	889	HIS
5	C	969	GLN
5	C	1100	GLN
5	C	1107	ASN
6	D	125	GLN
6	D	143	ASN
6	D	151	GLN
6	D	166	GLN
6	D	189	GLN
6	D	507	ASN
6	D	529	GLN
6	D	541	ASN
6	D	549	ASN
6	D	569	ASN
6	D	611	GLN
6	D	703	ASN
6	D	724	GLN
6	D	737	ASN
6	D	762	GLN
6	D	824	ASN
6	D	909	ASN
6	D	917	GLN
6	D	994	GLN
6	D	1005	GLN
6	D	1025	GLN
6	D	1103	HIS
6	D	1116	ASN
6	D	1195	GLN
6	D	1202	GLN
6	D	1235	GLN

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Mol	Chain	Res	Type
6	D	1334	GLN
6	D	1353	GLN
6	D	1359	GLN
6	D	1441	GLN
6	D	1485	GLN
7	E	29	GLN
7	E	59	ASN
7	E	86	GLN
4	K	38	ASN
4	K	128	HIS
4	K	180	GLN
4	K	212	ASN
4	K	227	ASN
4	K	229	GLN
4	L	16	GLN
4	L	139	ASN
4	L	163	ASN
4	L	188	GLN
4	L	213	GLN
4	L	227	ASN
5	M	31	GLN
5	M	45	GLN
5	M	91	GLN
5	M	117	HIS
5	M	130	ASN
5	M	139	GLN
5	M	179	ASN
5	M	320	HIS
5	M	343	GLN
5	M	393	GLN
5	M	399	ASN
5	M	431	HIS
5	M	538	GLN
5	M	545	ASN
5	M	552	HIS
5	M	556	ASN
5	M	565	GLN
5	M	567	GLN
5	M	609	ASN
5	M	633	GLN
5	M	639	GLN
5	M	671	ASN

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Mol	Chain	Res	Type
5	M	704	HIS
5	M	834	GLN
5	M	841	ASN
5	M	845	ASN
5	M	860	HIS
5	M	881	ASN
5	M	889	HIS
5	M	969	GLN
5	M	991	GLN
5	M	1026	GLN
5	M	1050	GLN
5	M	1100	GLN
5	M	1107	ASN
6	N	33	ASN
6	N	143	ASN
6	N	151	GLN
6	N	166	GLN
6	N	189	GLN
6	N	507	ASN
6	N	529	GLN
6	N	549	ASN
6	N	616	GLN
6	N	703	ASN
6	N	724	GLN
6	N	737	ASN
6	N	744	GLN
6	N	748	HIS
6	N	756	GLN
6	N	767	HIS
6	N	768	ASN
6	N	816	HIS
6	N	824	ASN
6	N	845	ASN
6	N	861	GLN
6	N	917	GLN
6	N	973	GLN
6	N	991	GLN
6	N	1005	GLN
6	N	1033	GLN
6	N	1034	GLN
6	N	1046	GLN
6	N	1116	ASN

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Mol	Chain	Res	Type
6	N	1124	GLN
6	N	1254	GLN
6	N	1323	GLN
6	N	1334	GLN
6	N	1353	GLN
6	N	1359	GLN
6	N	1441	GLN
7	O	28	GLN
7	O	29	GLN
7	O	33	HIS
7	O	59	ASN
7	O	78	ASN
7	O	86	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	H	16/16 (100%)	11 (68%)	6 (37%)
2	Y	16/16 (100%)	11 (68%)	7 (43%)
All	All	32/32 (100%)	22 (68%)	13 (40%)

All (22) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	H	2	A
2	H	3	G
2	H	6	U
2	H	7	G
2	H	8	C
2	H	9	G
2	H	10	G
2	H	11	C
2	H	12	G
2	H	13	C
2	H	15	C
2	Y	2	A
2	Y	3	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G

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Mol	Chain	Res	Type
2	Y	10	G
2	Y	11	C
2	Y	12	G
2	Y	13	C
2	Y	15	C

All (13) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	H	1	G
2	H	6	U
2	H	7	G
2	H	8	C
2	H	9	G
2	H	12	G
2	Y	1	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G
2	Y	12	G
2	Y	13	C

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
8	STD	N	8001	-	41,47,47	7.04	24 (58%)	50,73,73	2.94	14 (28%)
11	APC	D	5999	10	29,33,33	1.22	3 (10%)	44,52,52	1.48	8 (18%)
8	STD	D	7001	-	41,47,47	7.18	25 (60%)	50,73,73	2.92	14 (28%)
11	APC	M	6999	10	29,33,33	1.11	3 (10%)	44,52,52	1.43	8 (18%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	STD	N	8001	-	-	11/31/101/101	0/6/5/5
11	APC	D	5999	10	-	4/19/38/38	0/3/3/3
8	STD	D	7001	-	-	11/31/101/101	0/6/5/5
11	APC	M	6999	10	-	4/19/38/38	0/3/3/3

All (55) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	D	7001	STD	O5-C19	-27.87	1.19	1.43
8	N	8001	STD	O5-C19	-27.19	1.19	1.43
8	D	7001	STD	C23-C21	-16.31	1.18	1.53
8	N	8001	STD	C23-C21	-15.64	1.20	1.53
8	N	8001	STD	C18-C16	-13.57	1.25	1.53
8	N	8001	STD	C15-C12	-13.44	1.20	1.52
8	D	7001	STD	C18-C16	-13.35	1.26	1.53
8	D	7001	STD	C15-C12	-13.20	1.21	1.52
8	N	8001	STD	O5-C13	11.17	1.60	1.44
8	D	7001	STD	O5-C13	10.40	1.59	1.44
8	D	7001	STD	C17-C30	10.02	1.65	1.49
8	D	7001	STD	O8-C19	9.62	1.51	1.43
8	N	8001	STD	C17-C30	9.52	1.64	1.49
8	N	8001	STD	O8-C19	8.73	1.50	1.43
8	D	7001	STD	C22-N2	8.30	1.44	1.33
8	D	7001	STD	C16-C13	8.01	1.70	1.53
8	N	8001	STD	C22-N2	7.46	1.43	1.33
8	N	8001	STD	C16-C13	7.36	1.68	1.53
8	D	7001	STD	O8-C17	6.87	1.52	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	D	7001	STD	C21-C22	6.64	1.62	1.52
8	N	8001	STD	O8-C17	6.60	1.51	1.44
8	N	8001	STD	C15-C26	6.55	1.62	1.52
8	D	7001	STD	C15-C26	6.53	1.62	1.52
8	N	8001	STD	C6-C5	-5.39	1.37	1.45
8	N	8001	STD	C30-C32	4.74	1.39	1.32
8	D	7001	STD	C6-C5	-4.72	1.38	1.45
8	D	7001	STD	C30-C32	4.46	1.38	1.32
11	D	5999	APC	PB-O3B	4.33	1.63	1.58
8	N	8001	STD	C21-C22	4.31	1.59	1.52
8	D	7001	STD	C4-N1	4.28	1.51	1.45
8	N	8001	STD	O4-C4	4.14	1.47	1.42
8	N	8001	STD	C4-N1	4.08	1.51	1.45
8	D	7001	STD	C7-C8	-3.88	1.37	1.46
8	N	8001	STD	C7-C8	-3.76	1.37	1.46
11	M	6999	APC	PB-O3B	3.60	1.62	1.58
8	D	7001	STD	O9-C31	3.30	1.52	1.44
8	N	8001	STD	O9-C31	3.25	1.52	1.44
8	D	7001	STD	O4-C4	3.17	1.46	1.42
8	D	7001	STD	C12-C4	3.09	1.63	1.50
8	N	8001	STD	C29-C19	3.09	1.56	1.51
11	M	6999	APC	PA-O2A	-3.01	1.49	1.56
8	N	8001	STD	C28-C32	2.74	1.54	1.50
8	N	8001	STD	C12-C4	2.74	1.62	1.50
8	N	8001	STD	C1-C2	-2.69	1.38	1.46
11	D	5999	APC	PA-O2A	-2.66	1.49	1.56
11	D	5999	APC	PB-O2B	-2.64	1.49	1.56
11	M	6999	APC	PB-O2B	-2.58	1.50	1.56
8	D	7001	STD	C11-C8	2.50	1.55	1.50
8	N	8001	STD	C11-C8	2.22	1.55	1.50
8	D	7001	STD	C1-C2	-2.21	1.40	1.46
8	D	7001	STD	O7-C26	2.09	1.47	1.43
8	N	8001	STD	O4-C25	2.09	1.49	1.44
8	D	7001	STD	C29-C19	2.04	1.54	1.51
8	D	7001	STD	O3-C5	2.02	1.39	1.33
8	D	7001	STD	O4-C25	2.02	1.49	1.44

All (44) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	7001	STD	C20-N1-C2	-11.89	101.66	113.06
8	N	8001	STD	C20-N1-C2	-11.54	102.00	113.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	7001	STD	C19-O5-C13	9.43	122.53	112.81
8	N	8001	STD	C19-O5-C13	9.06	122.15	112.81
8	N	8001	STD	C2-C1-C3	-6.53	101.57	107.81
8	N	8001	STD	O8-C17-C30	-6.28	105.96	111.68
8	D	7001	STD	O8-C17-C30	-6.08	106.15	111.68
8	D	7001	STD	C2-C1-C3	-5.29	102.76	107.81
8	N	8001	STD	C15-C12-C4	4.30	116.19	109.06
8	D	7001	STD	C15-C12-C4	4.18	116.00	109.06
11	M	6999	APC	PB-O3B-PG	-3.99	118.17	132.45
11	D	5999	APC	PB-O3B-PG	-3.88	118.56	132.45
8	N	8001	STD	O4-C4-N1	3.75	109.97	105.83
11	M	6999	APC	C1'-N9-C8	3.66	135.22	127.09
11	D	5999	APC	C1'-N9-C8	3.62	135.14	127.09
8	N	8001	STD	O2-C2-N1	-3.61	118.73	126.39
8	D	7001	STD	O2-C2-C1	-3.60	121.78	130.65
8	N	8001	STD	C7-C6-C5	3.58	128.23	122.49
8	D	7001	STD	O2-C2-N1	-3.56	118.83	126.39
8	D	7001	STD	C10-C13-C16	3.48	121.19	115.56
8	D	7001	STD	C11-C8-C7	3.41	123.29	118.09
8	N	8001	STD	O2-C2-C1	-3.33	122.45	130.65
11	M	6999	APC	C4-N9-C1'	-3.26	119.01	126.63
11	D	5999	APC	O2B-PB-O1B	3.21	120.41	109.95
8	N	8001	STD	C10-C13-C16	3.17	120.69	115.56
11	D	5999	APC	C4-N9-C1'	-3.16	119.24	126.63
8	D	7001	STD	O4-C4-N1	3.09	109.24	105.83
11	M	6999	APC	O2B-PB-O1B	3.08	119.97	109.95
11	D	5999	APC	O2A-PA-O1A	3.06	119.92	109.95
8	N	8001	STD	C11-C8-C7	3.04	122.74	118.09
11	D	5999	APC	C2'-C1'-N9	-2.93	106.03	113.30
11	M	6999	APC	O2A-PA-O1A	2.88	119.33	109.95
8	D	7001	STD	C21-C22-N2	2.86	120.42	116.27
8	N	8001	STD	C12-C15-C26	2.83	115.93	111.76
8	D	7001	STD	C12-C15-C26	2.77	115.84	111.76
11	D	5999	APC	O4'-C1'-N9	2.71	113.29	108.09
11	D	5999	APC	C2'-C3'-C4'	2.50	107.44	102.61
8	D	7001	STD	O3-C5-C6	2.46	119.06	115.70
11	M	6999	APC	C2'-C1'-N9	-2.39	107.37	113.30
8	D	7001	STD	C7-C6-C5	2.29	126.16	122.49
8	N	8001	STD	C21-C22-N2	2.26	119.54	116.27
11	M	6999	APC	C2'-C3'-C4'	2.23	106.91	102.61
11	M	6999	APC	O4'-C1'-N9	2.19	112.30	108.09
8	N	8001	STD	O3-C5-C6	2.07	118.53	115.70

There are no chirality outliers.

All (30) torsion outliers are listed below:

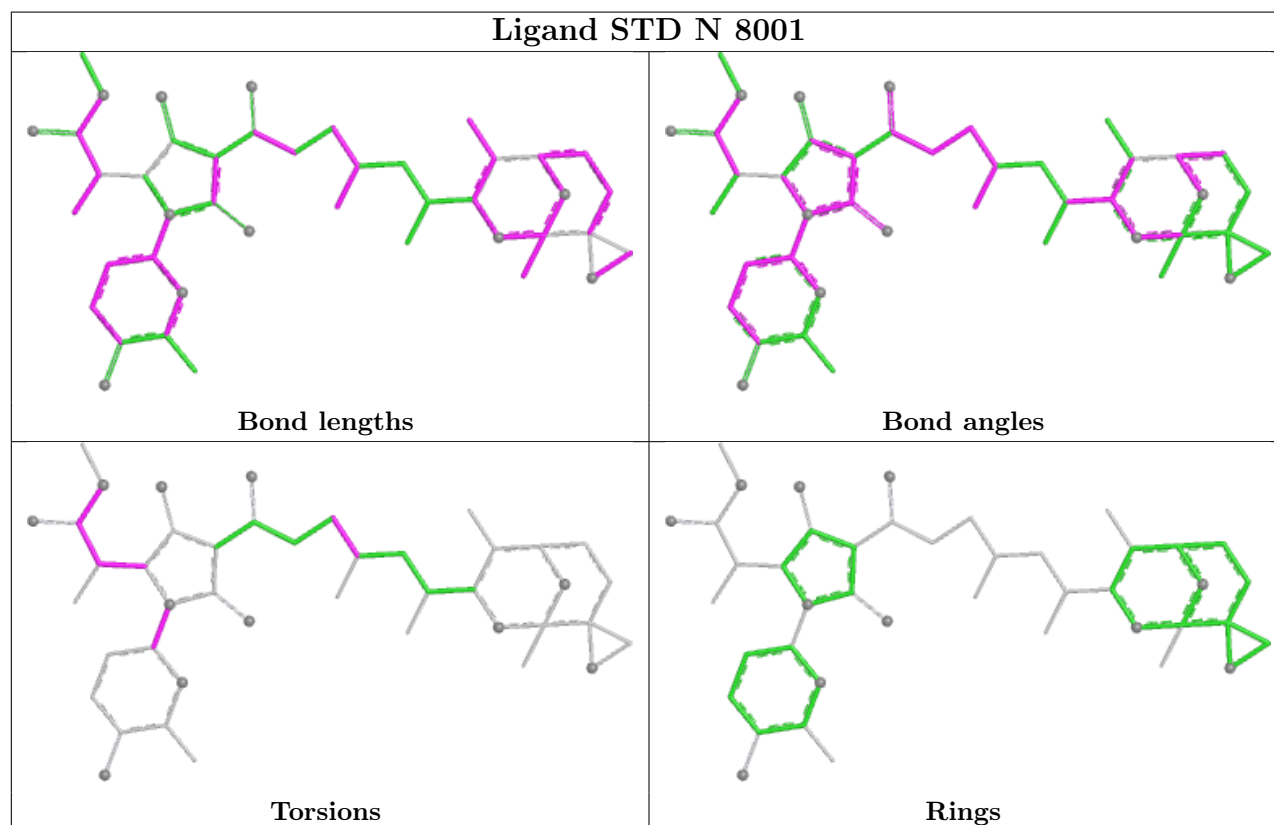
Mol	Chain	Res	Type	Atoms
8	D	7001	STD	O4-C4-N1-C20
8	D	7001	STD	C6-C7-C8-C9
8	D	7001	STD	C6-C7-C8-C11
8	D	7001	STD	N1-C20-C21-C23
8	D	7001	STD	C3-C20-C21-C22
8	D	7001	STD	C3-C20-C21-C23
8	D	7001	STD	C21-C22-N2-C24
8	D	7001	STD	O6-C22-N2-C24
8	N	8001	STD	O4-C4-N1-C20
8	N	8001	STD	C6-C7-C8-C9
8	N	8001	STD	C3-C20-C21-C22
8	N	8001	STD	C21-C22-N2-C24
8	N	8001	STD	O6-C22-N2-C24
11	D	5999	APC	C5'-O5'-PA-O2A
11	M	6999	APC	PA-C3A-PB-O1B
11	M	6999	APC	C5'-O5'-PA-O2A
8	N	8001	STD	C6-C7-C8-C11
11	D	5999	APC	O4'-C4'-C5'-O5'
11	M	6999	APC	O4'-C4'-C5'-O5'
8	N	8001	STD	N1-C20-C21-C23
8	N	8001	STD	C3-C20-C21-C23
8	D	7001	STD	O4-C4-N1-C2
8	N	8001	STD	O4-C4-N1-C2
8	D	7001	STD	C9-C10-C13-O5
11	D	5999	APC	C4'-C5'-O5'-PA
8	D	7001	STD	C14-C10-C13-O5
11	M	6999	APC	C4'-C5'-O5'-PA
8	N	8001	STD	C23-C21-C22-O6
11	D	5999	APC	PA-C3A-PB-O1B
8	N	8001	STD	C12-C4-N1-C20

There are no ring outliers.

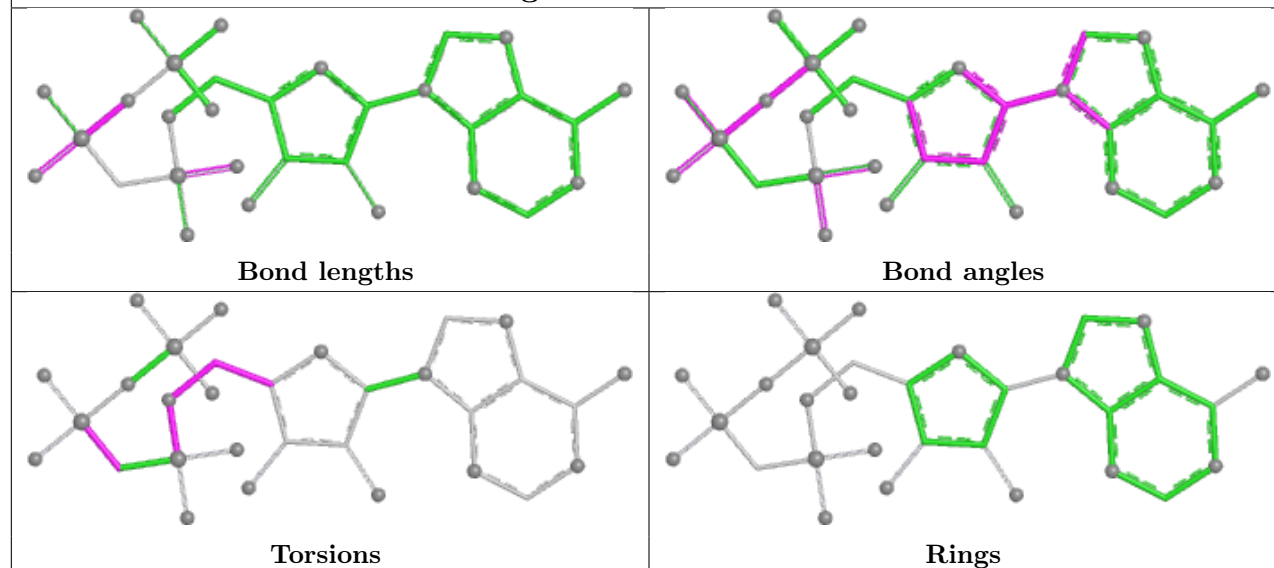
4 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	N	8001	STD	6	0
11	D	5999	APC	5	0
8	D	7001	STD	6	0
11	M	6999	APC	2	0

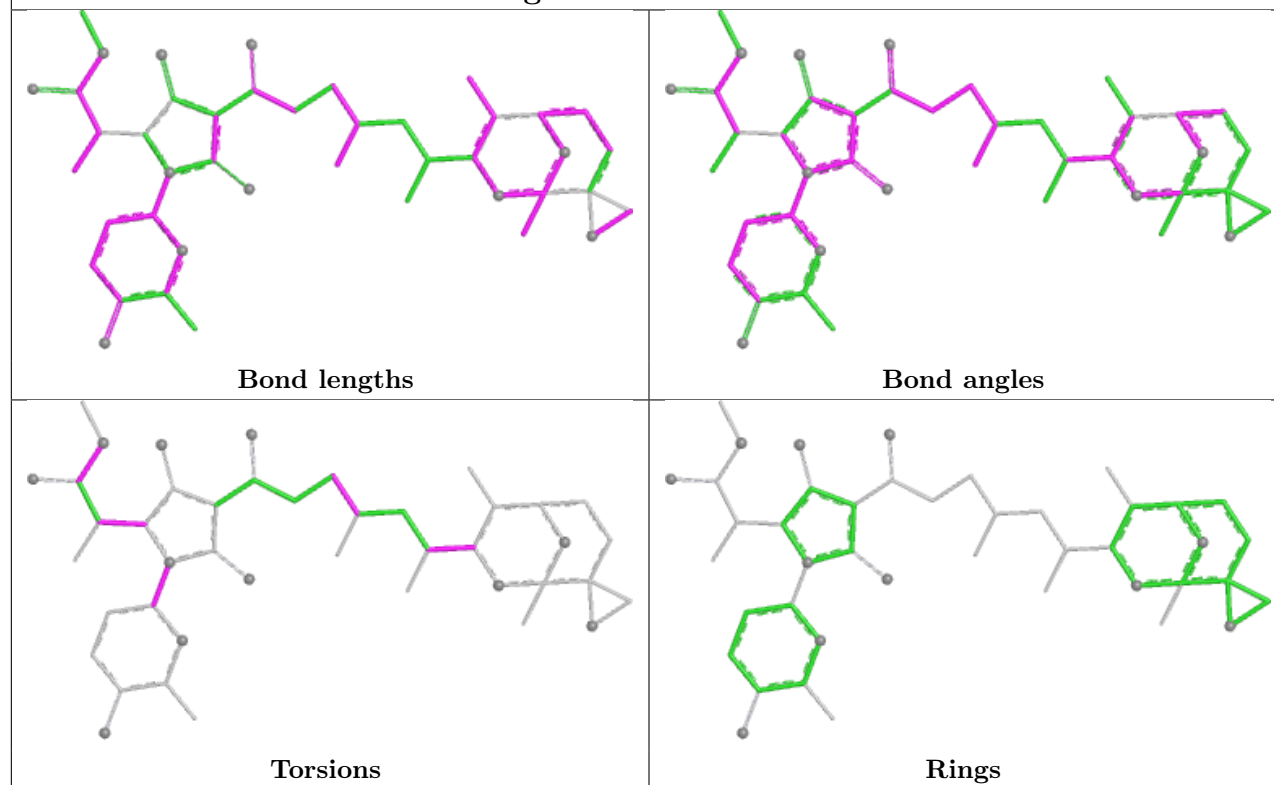
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

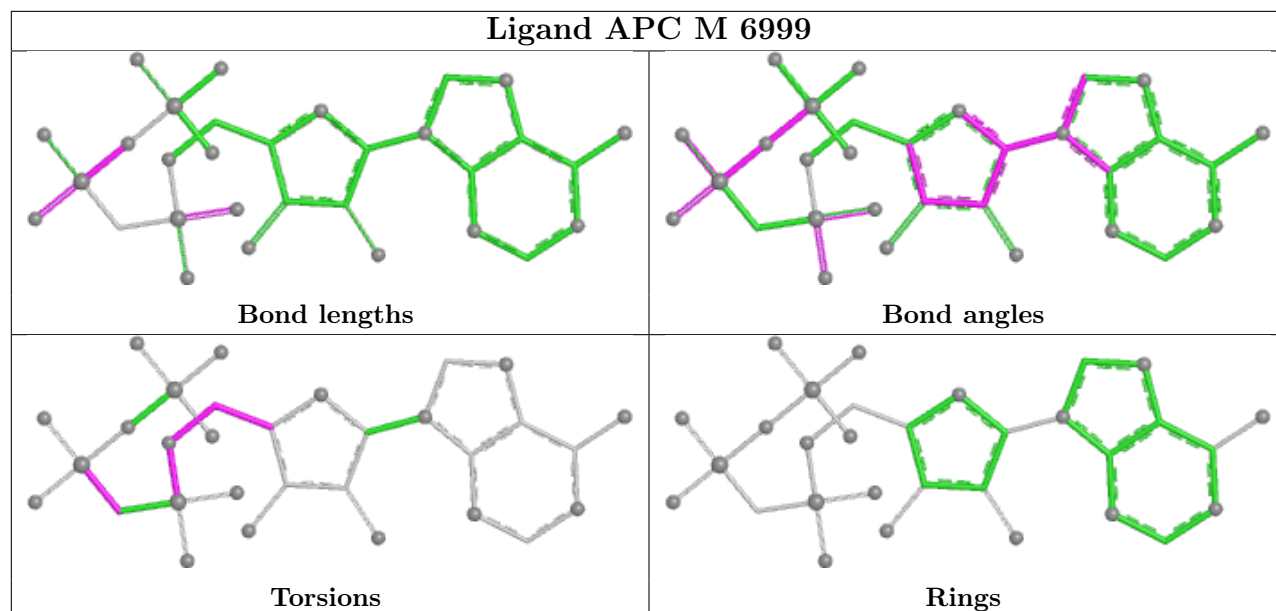


## Ligand APC D 5999



## Ligand STD D 7001





## 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 [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

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	G	23/23 (100%)	-1.77	0 100 100	23, 43, 66, 69	0
1	X	23/23 (100%)	-1.79	0 100 100	9, 37, 77, 92	0
2	H	16/16 (100%)	-1.90	0 100 100	24, 52, 92, 93	0
2	Y	16/16 (100%)	-1.98	0 100 100	25, 43, 96, 99	0
3	I	13/14 (92%)	-1.79	0 100 100	39, 55, 76, 77	0
3	Z	13/14 (92%)	-1.71	0 100 100	50, 61, 75, 79	0
4	A	229/315 (72%)	-1.54	0 100 100	31, 58, 73, 77	0
4	B	229/315 (72%)	-1.53	0 100 100	34, 62, 75, 82	0
4	K	229/315 (72%)	-1.56	0 100 100	30, 57, 71, 76	0
4	L	229/315 (72%)	-1.56	0 100 100	37, 62, 76, 87	0
5	C	1119/1119 (100%)	-1.55	0 100 100	7, 54, 77, 90	0
5	M	1119/1119 (100%)	-1.54	0 100 100	18, 54, 76, 90	0
6	D	1314/1524 (86%)	-1.51	1 (0%) 92 86	11, 56, 79, 89	0
6	N	1314/1524 (86%)	-1.51	0 100 100	8, 56, 76, 91	0
7	E	95/99 (95%)	-1.56	0 100 100	42, 58, 67, 71	0
7	O	95/99 (95%)	-1.53	0 100 100	33, 59, 75, 80	0
All	All	6076/6850 (88%)	-1.54	1 (0%) 100 100	7, 56, 77, 99	0

All (1) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
6	D	188	GLY	2.3

### 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 ⓘ

There are no oligosaccharides in this entry.

### 6.4 Ligands ⓘ

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.

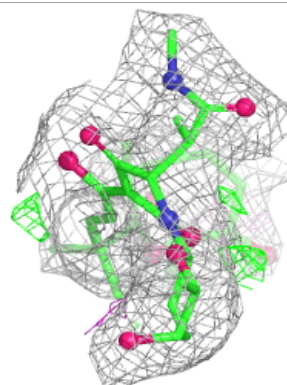
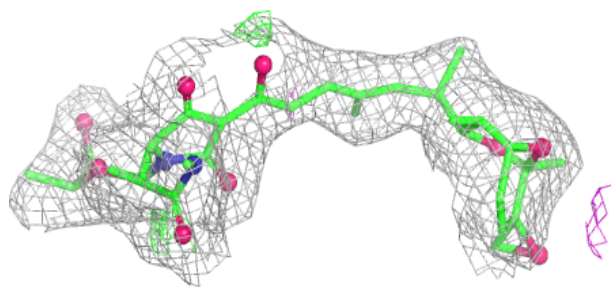
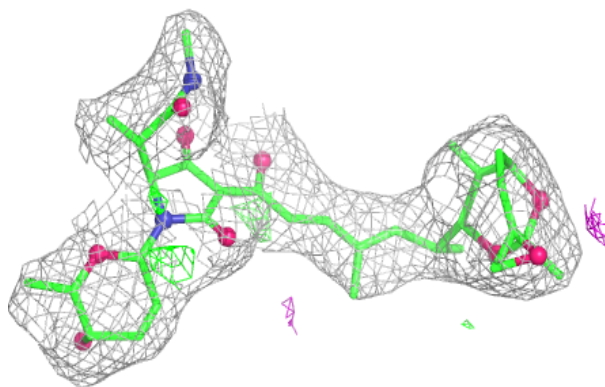
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
8	STD	N	8001	43/43	0.99	0.04	14,32,53,55	0
11	APC	D	5999	31/31	0.99	0.03	30,38,64,65	0
11	APC	M	6999	31/31	0.99	0.03	35,45,57,58	0
9	ZN	D	8112	1/1	1.00	0.02	58,58,58,58	0
9	ZN	N	7158	1/1	1.00	0.05	70,70,70,70	0
9	ZN	N	8212	1/1	1.00	0.02	54,54,54,54	0
10	MG	D	9001	1/1	1.00	0.01	22,22,22,22	0
10	MG	D	9002	1/1	1.00	0.01	25,25,25,25	0
10	MG	N	9003	1/1	1.00	0.01	21,21,21,21	0
10	MG	N	9004	1/1	1.00	0.01	27,27,27,27	0
8	STD	D	7001	43/43	1.00	0.03	11,24,27,28	0
9	ZN	D	7058	1/1	1.00	0.06	87,87,87,87	0

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

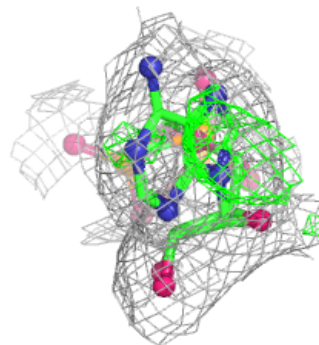
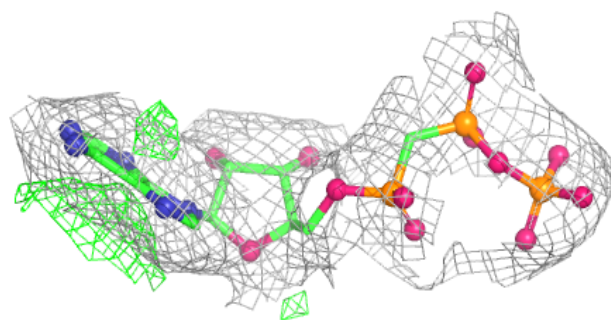
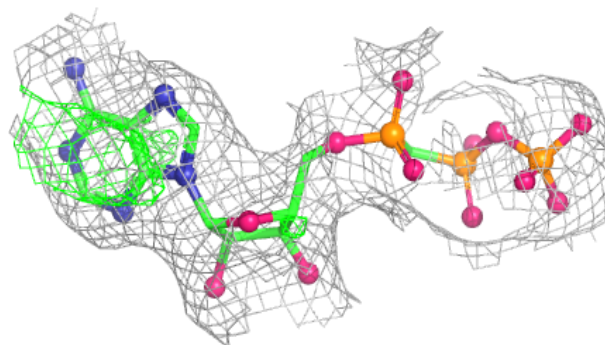


**Electron density around STD N 8001:**

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

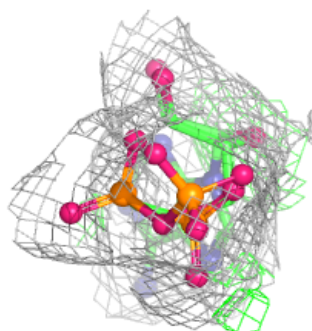
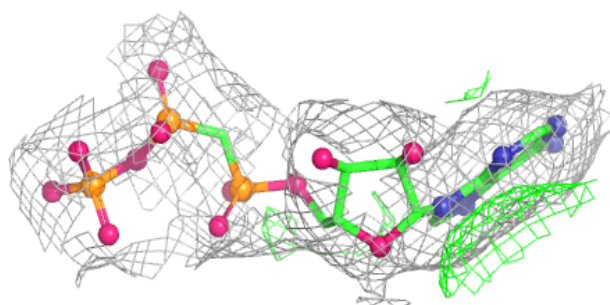
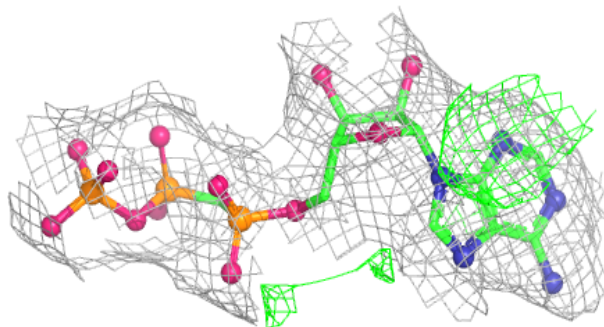
**Electron density around APC D 5999:**

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

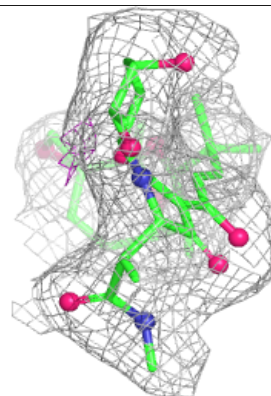
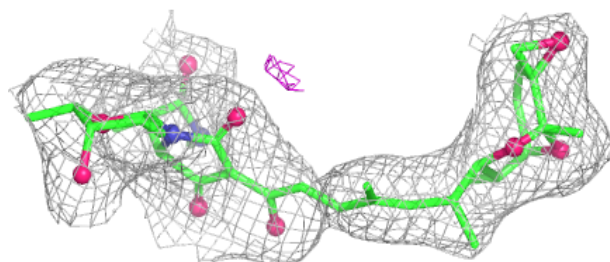
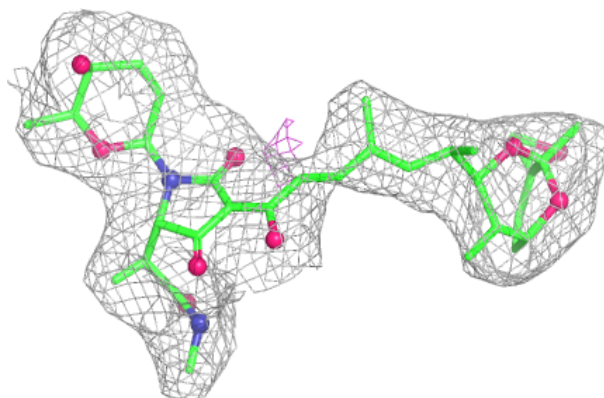


**Electron density around APC M 6999:**

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

**Electron density around STD D 7001:**

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



## 6.5 Other polymers [i](#)

There are no such residues in this entry.