



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 15, 2017 – 08:04 am GMT

PDB ID : 2O5J
Title : Crystal structure of the T. thermophilus RNAP polymerase elongation complex with the NTP substrate analog
Authors : Vassylyev, D.G.; Vassylyeva, M.N.
Deposited on : 2006-12-06
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

A user guide is available at

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix) : 1.9-1692
EDS : trunk28620
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : recalc28949

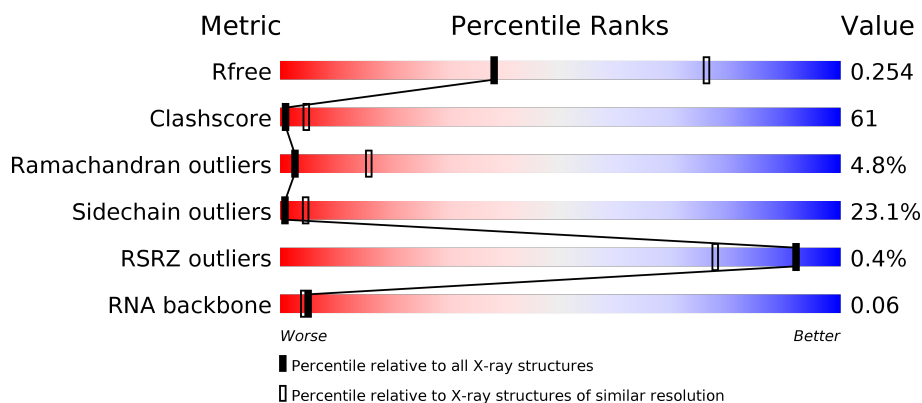
1 Overall quality at a glance

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.



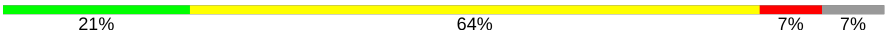
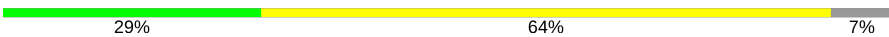
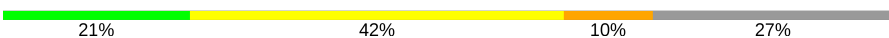


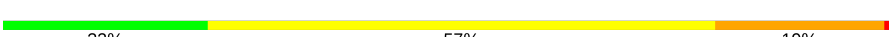


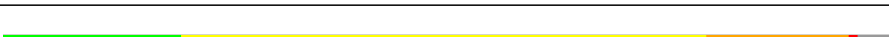
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	100719	1692 (3.00-3.00)
Clashscore	112137	2037 (3.00-3.00)
Ramachandran outliers	110173	1973 (3.00-3.00)
Sidechain outliers	110143	1976 (3.00-3.00)
RSRZ outliers	101464	1716 (3.00-3.00)
RNA backbone	2435	1007 (3.34-2.66)

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

Mol	Chain	Length	Quality of chain
1	G	23	<div> <div>17%</div> <div>57%</div> <div>22%</div> <div>.</div> </div>
1	X	23	<div> <div>17%</div> <div>61%</div> <div>13%</div> <div>9%</div> </div>
2	H	16	<div> <div>25%</div> <div>75%</div> </div>
2	Y	16	<div> <div>38%</div> <div>63%</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 11 unique types of molecules in this entry. The entry contains 51213 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 5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*GP*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 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 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	1264	Total	C	N	O	S	0	0	0
			9960	6302	1773	1852	33			
6	N	1264	Total	C	N	O	S	0	0	0
			9960	6302	1773	1852	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 ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 9 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

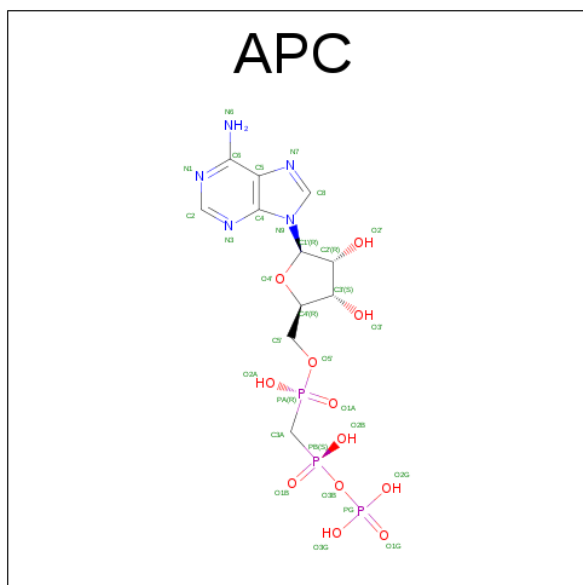
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	D	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	N	2	Total	Mg	0	0
			2	2		

- Molecule 10 is DIPHOSPHOMETHYLPHOSPHONIC ACID ADENOSYL ESTER (three-letter code: APC) (formula: $C_{11}H_{18}N_5O_{12}P_3$).



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

- Molecule 11 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	A	106	Total	O	0	0
			106	106		
11	B	82	Total	O	0	0
			82	82		
11	C	482	Total	O	0	0
			482	482		
11	D	506	Total	O	0	0
			506	506		
11	E	60	Total	O	0	0
			60	60		
11	G	32	Total	O	0	0
			32	32		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	H	37	Total 37	O 37	0	0
11	I	22	Total 22	O 22	0	0
11	K	86	Total 86	O 86	0	0
11	L	104	Total 104	O 104	0	0
11	M	483	Total 483	O 483	0	0
11	N	491	Total 491	O 491	0	0
11	O	39	Total 39	O 39	0	0
11	X	43	Total 43	O 43	0	0
11	Y	30	Total 30	O 30	0	0
11	Z	30	Total 30	O 30	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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: 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: 



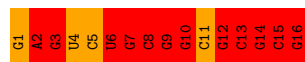
- Molecule 1: 5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3'

Chain X: 



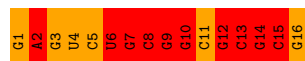
- Molecule 2: 5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3',

Chain H: 



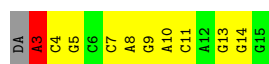
- Molecule 2: 5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3',

Chain Y: 



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

Chain I: 

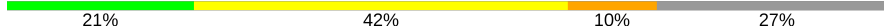


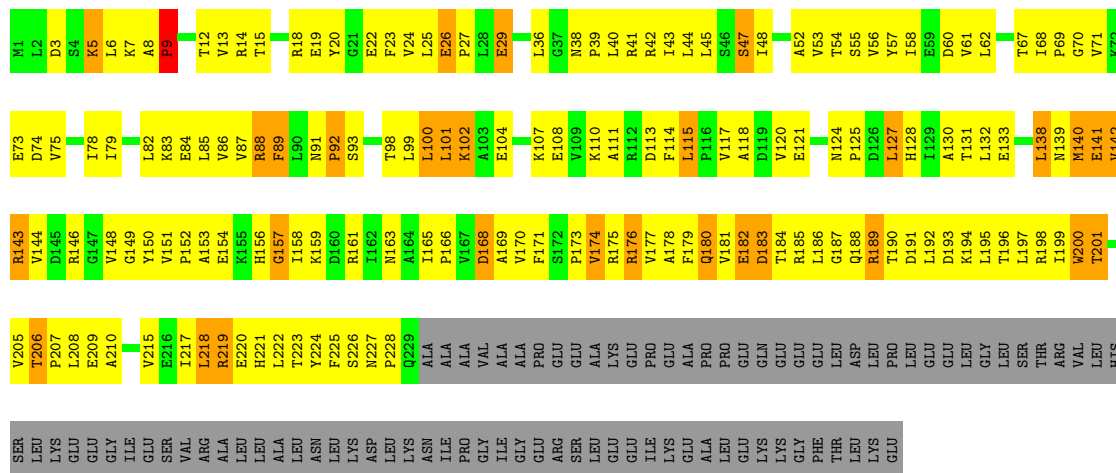
- Molecule 3: 5'-D(*AP*AP*CP*GP*CP*CP*AP*GP*AP*CP*AP*GP*GP*G)-3'

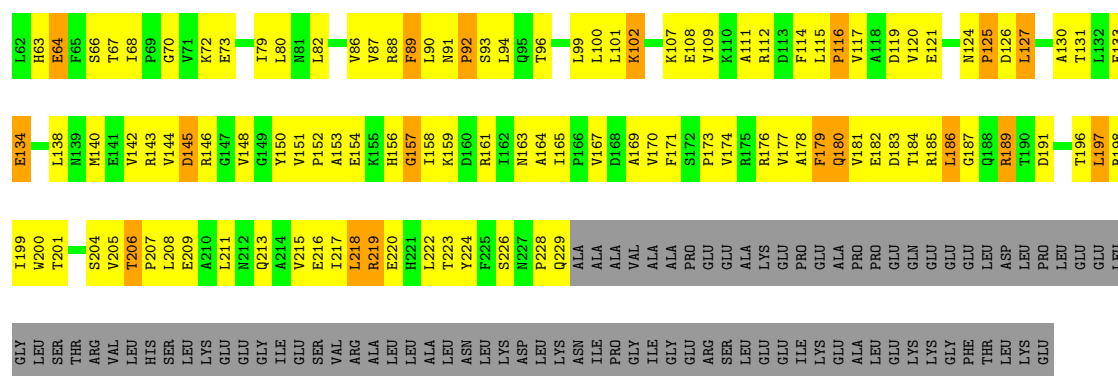
Chain Z: 



• Molecule 4: DNA-directed RNA polymerase alpha chain

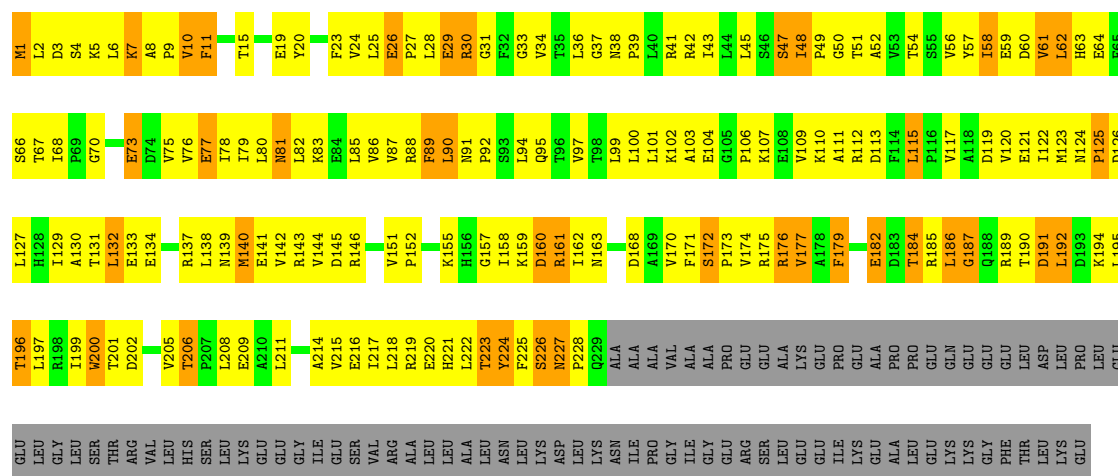
Chain A: 





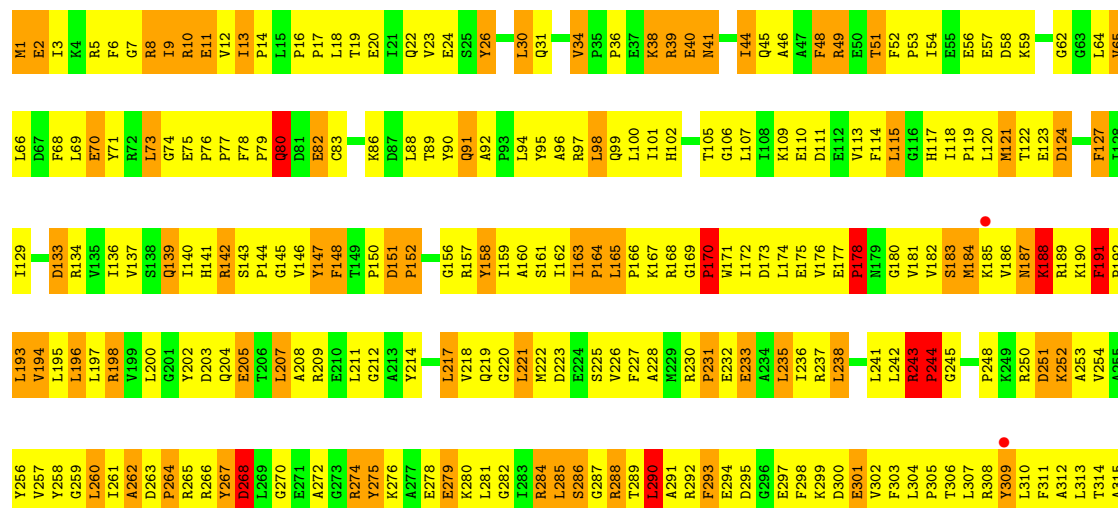
• Molecule 4: DNA-directed RNA polymerase alpha chain

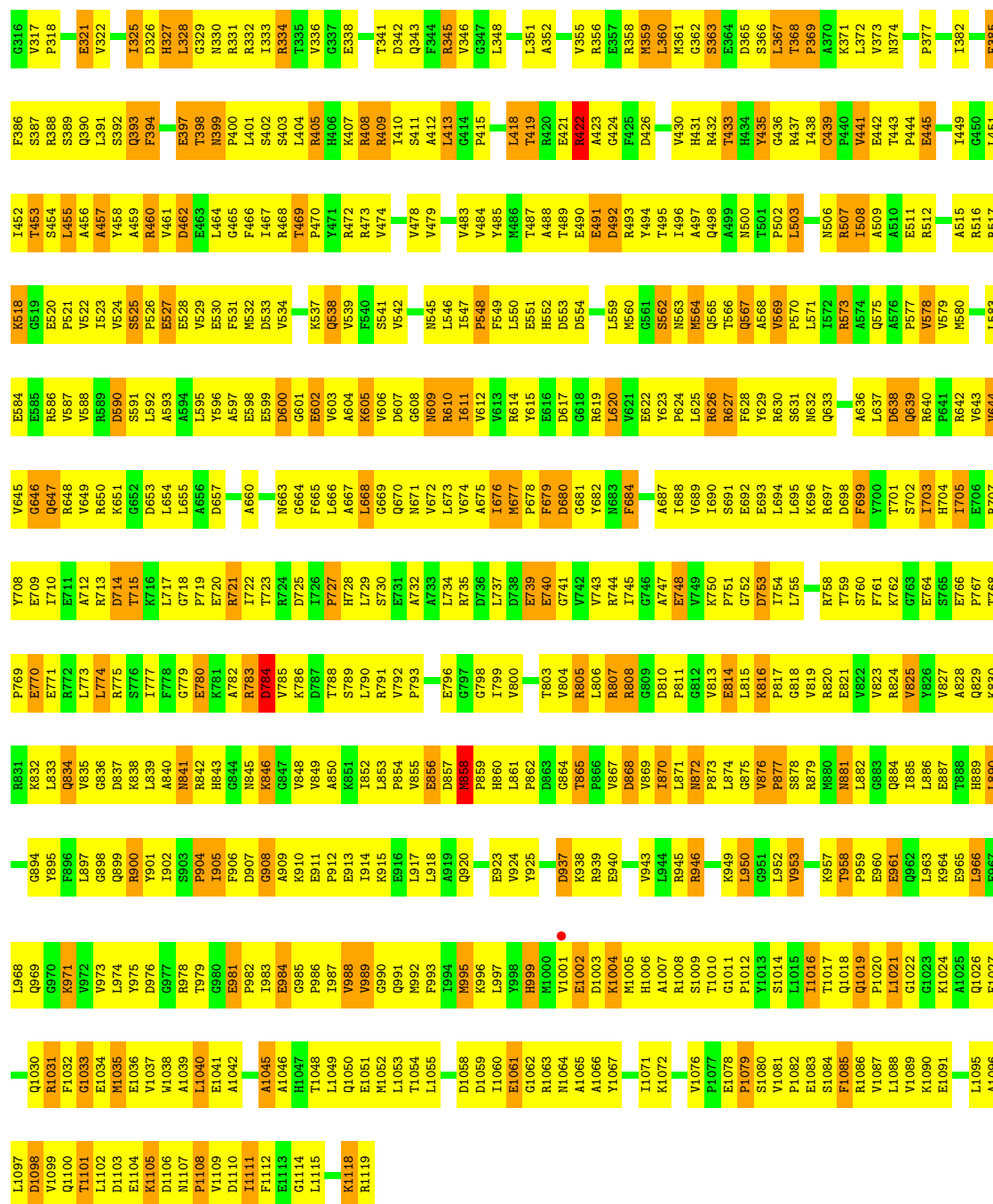
Chain L: 18% 42% 13% 27%



• Molecule 5: DNA-directed RNA polymerase beta chain

Chain C: 23% 57% 19% 1%

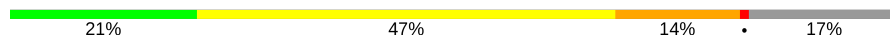




A1096	F1032	K971	Y901	L839	S776	E711	G647	G582	K518	I452	A381	P318	A253	V186	G125
L1097	G1033	Y972	I902	A940	I777	A712	R648	L583	G519	T453	I382	G319	V254	N187	S126
D1098	E1034	Y973	S903	N841	F778	R713	V649	E584	E520	T454	R383	E321	A255	R188	F127
T1101	M1035	L974	P904	R842	G779	D714	R650	E585	P521	T455	R382	E320	V256	R189	I129
L1102	E1036	Y975	F905	G844	E780	T715	K651	E586	I522	L455	E385	D323	V257	K190	N130
D1103	M1037	D976	F906	H843	E781	K716	G652	V587	I523	A456	F386	D324	G259	F191	G131
E1104	M1038	G977	D907	N845	A782	L717	D653	V588	S525	A457	S387	I325	L260	P192	I132
A1039	E1039	R976	G908	K846	R783	G718	L655	R889	S526	A458	R388	I326	L261	L193	A133
K1105	L1040	T979	I909	G947	D784	E720	A656	E594	P526	A459	R388	I327	A262	L194	D133
D1106	E1041	R980	K910	V848	K785	R721	D657	E595	E528	V461	R392	L328	D263	L196	R134
N1107	Y1043	E911	E911	V849	K786	E726	G658	A594	E529	D462	S392	L329	D264	L197	V136
P1108	M1044	P912	P912	A850	D787	L726	P659	L595	V529	E463	R393	G329	P264	R198	I137
V1109	A1045	E913	E913	K851	T788	P727	A680	Y596	E530	E463	R394	R330	R265	L199	S138
D1110	A1046	I914	I914	I852	S789	R728	E680	A597	F531	L464	K395	R331	R266	V199	Q139
I1111	H1047	K915	K915	L853	L790	H728	E681	E598	N532	G465	D396	R332	Y267	L200	I140
F1112	E916	R986	R986	P854	R791	L729	E682	E599	D533	G467	E397	R333	D268	D203	H141
E1113	L1049	N987	L917	V855	F792	S730	G663	D600	V534	I467	T398	R334	L269	Q204	R142
G1114	Q1050	N988	F793	E856	F793	E731	G664	G601	S535	R468	N399	R335	L270	E205	I143
L1115	E1051	D857	F794	D857	F794	A732	F665	E602	P536	T469	P400	V336	E271	R206	P144
T1054	T1054	G990	Q920	M858	G798	A733	L666	V603	K537	P470	L401	G337	A272	T207	G145
K1055	L1055	Q991	F926	H860	L734	L734	A667	Q538	Q538	Y471	S402	E338	G273	A208	G146
L1056	E1061	N992	G927	R861	R735	R735	L688	K605	V539	R472	S403	L339	R274	L216	Y147
S1057	E1062	F993	K928	P862	D736	D736	G669	V606	F540	R473	L404	R340	Y275	E210	I148
D1058	L1063	N994	K928	R863	L737	L737	Q670	D607	S541	V474	R405	T341	K276	L211	T149
L1059	E1064	K995	K929	G864	D738	R744	M671	G608	V542		H406	D342		G212	P150
D1060	L1065	N997	K930	T865	E739	I745	V672	N609	N543	V478	K407	Q343	K280	L281	D151
E1061	E1066	Y998	G931	R866	E740	E740	L673	R610	L546	V479	R408	F344	G282	E216	P152
L1062	L1067	N999	E932	V867	G741	G741	V674	L611	L547	T480	R409	R345	I283	L217	A153
N1064	E1068	M1000	V936	D868	A675	V743	L676	V613	P548	V483	S411	V346	R284	V218	R154
A1065	L1069	V1001	D937	V869	R743	R744	M677	R614	F549	V484	A412	L348	L285	L221	G156
E1070	E1070	E1002	K938	L870	E745	I745	P678	Y615	L550	Y485	L413	L349	S286	M222	G157
L1071	L1071	D1003	R938	L871	E748	E748	F679	E616	G414	M486	G414	R350	G287	D223	I158
E1074	D1075	K939	A946	R877	L754	L754	D680	H552	P415	A488	P415	A352	R288	E224	R159
L1076	P1077	E940	K948	N872	K750	K750	F684	G618	L418	T489	L418	R353	L290	S225	A160
E1077	E1078	H1005	E942	L874	P751	P751	E685	R619	D554	E490	T419	G354	A291	V226	S161
L1079	L1079	H1006	Y943	G875	G752	G752	D686	L620	B557			V355	R292	F227	I162
S1080	E1081	R1008	R946	V876	D753	D753	A687	E622	R493	R493	R422	R358	F293	R230	I163
P1082	L1082	T1010	A947	P877	L754	L754	L688	Y623	M560	Y494	A423	M359	E294	E231	L164
E1083	E1083	G1011	K948	R879	L755	L755	V689	P624	G561	T495	G424	L360	D295	P231	L165
S1084	L1084	P1012	X949	N880	V756	V756	L690	L625	L496	A497	F425	M361	G296	E232	P166
E1078	E1078	Y1013	N881	N881	G757	G757	S691	R626	M564	Q498	D426	G362	K289	E233	G169
L1014	L1014	L882	L882	L882	R758	R758	E692	R627	Q565		V427	C362	K290	A234	
L1015	L1015	G883	G883	G883	T759	T759	E693	F628	T566			S363	D300	L235	
L1016	L1016	Q884	Q884	Q884	K762	K762	L694	Y629	Q567	P502	V430	E364	E301	L235	
T1017	T1017	L1016	P955	R884	G763	G763	L695	N631	Q568	L503	H431	D365	E302	F239	I172
Q1018	Q1018	E1019	K957	L886	E764	E764	K696	S631	V569	N506	R432	S366	F303	T240	L173
L1019	L1019	T958	T958	E887	S765	S765	R697	N632	P570	R507	T433	L367	L241	L240	L174
P1020	P1020	P959	P959	T888	S766	S766	D698	Q633	L571	R507	H434	T368	L242	L242	E175
L1021	L1021	E960	E960	H889	E766	E766	F699	L637	I572	I508	Y435	P369	P243	R243	V176
G1022	G1022	E961	E961	R829	T767	T767	T700	L837	I572	R507	G436	A370	L307	P244	E177
E1023	E1023	R830	R830	R830	T768	T768	T701	L837	R573	A509	G436	A371	L308	R244	
Q1024	Q1024	K831	K831	K831	S702	S702	S702	R640	A574	A510	R437	K371	R308	P178	
L1025	L1025	G894	G894	G894	T703	T703	T703	P641	Q575	E511	I438	L372	D246	N178	
E1026	E1026	R834	R834	R834	H704	H704	H704	R642	P577	R512	C439	V373	L310	G180	
L1027	L1027	Q834	Q834	Q834	E771	E771	I705	V643	V578	V513	V441	M374	F311	P248	V181
F1093	F1093	V835	V835	V835	R772	R772	I705	V644	V579	V513	V441	S375	A312	K249	
Q1030	Q1030	G836	G836	G836	L773	L773	E706	V644	A515	A515	E442	R376	L313	R250	
A1094	A1094	D837	D837	D837	L774	L774	I706	V644	M580	R516	T443	P377	T314	D251	M184
L1095	L1095	R900	R900	R900	R775	R775	I710	G646	T581	R517	P444	L378	K252	K252	K185

● Molecule 6: DNA-directed RNA polymerase beta' chain

Chain D:



MET	K2	K3	E4	V5	R6	K7	V8	R9	G70	K71	A11	L12	A13	S14	P15	E16	K17	I18	R19	S20	E21	V26	E27	G91	H92	P93	E94	T94	T31	I32	N33	Y34	T36	L37	K38	P39	E40	R41	D42	G43	L44	F45	R48	I49	F50	G51	P52	K54	D55	Y56	E57	C58	A59	C60	G61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
K62	T63	R64	E65	Q66	R67	T68	E69	G70	K71	A72	V73	E74	K75	C76	E79	V80	T81	K82	S83	T84	V85	R86	B87	G91	H92	P93	E94	T94	T31	I32	N33	Y34	T36	L37	K38	P39	E40	R41	D42	G43	L44	F45	R48	I49	F50	G51	P52	K54	D55	Y56	E57	C58	A59	C60	G61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Q125	V126	L127	Y128	P129	S130	K131	Y132	I133	V134	K135	L136	D137	K138	G139	A140	I141	L142	N143	G144	V145	P146	V147	E148	K149	R150	Q151	L152	T153	E154	D155	E156	E157	Y158	R159	E160	L161	E162	Y163	F164	K165	Y169	P170	L171	P172	P173	G174	V175	D176	A177	L178	V179	D180	P181	S182	E183	V184	E185	E186	E187	E188	E189	E190	E191	E192	E193	E194	E195	E196	E197	E198	E199	E200	E201	E202	E203	E204	E205	E206	E207	E208	E209	E210	E211	E212	E213	E214	E215	E216	E217	E218	E219	E220	E221	E222	E223	E224	E225	E226	E227	E228	E229	E230	E231	E232	E233	E234	E235	E236	E237	E238	E239	E240	E241	E242	E243	E244	E245	E246	E247	E248	E249	E250	E251	E252	E253	E254	E255	E256	E257	E258	E259	E260	E261	E262	E263	E264	E265	E266	E267	E268	E269	E270	E271	E272	E273	E274	E275	E276	E277	E278	E279	E280	E281	E282	E283	E284	E285	E286	E287	E288	E289	E290	E291	E292	E293	E294	E295	E296	E297	E298	E299	E300	E301	E302	E303	E304	E305	E306	E307	E308	E309	E310	E311	E312	E313	E314	E315	E316	E317	E318	E319	E320	E321	E322	E323	E324	E325	E326	E327	E328	E329	E330	E331	E332	E333	E334	E335	E336	E337	E338	E339	E340	E341	E342	E343	E344	E345	E346	E347	E348	E349	E350	E351	E352	E353	E354	E355	E356	E357	E358	E359	E360	E361	E362	E363	E364	E365	E366	E367	E368	E369	E370	E371	E372	E373	E374	E375	E376	E377	E378	E379	E380	E381	E382	E383	E384	E385	E386	E387	E388	E389	E390	E391	E392	E393	E394	E395	E396	E397	E398	E399	E400	E401	E402	E403	E404	E405	E406	E407	E408	E409	E410	E411	E412	E413	E414	E415	E416	E417	E418	E419	E420	E421	E422	E423	E424	E425	E426	E427	E428	E429	E430	E431	E432	E433	E434	E435	E436	E437	E438	E439	E440	E441	E442	E443	E444	E445	E446	E447	E448	E449	E450	E451	E452	E453	E454	E455	E456	E457	E458	E459	E460	E461	E462	E463	E464	E465	E466	E467	E468	E469	E470	E471	E472	E473	E474	E475	E476	E477	E478	E479	E480	E481	E482	E483	E484	E485	E486	E487	E488	E489	E490	E491	E492	E493	E494	E495	E496	E497	E498	E499	E500	E501	E502	E503	E504	E505	E506	E507	E508	E509	E510	E511	E512	E513	E514	E515	E516	E517	E518	E519	E520	E521	E522	E523	E524	E525	E526	E527	E528	E529	E530	E531	E532	E533	E534	E535	E536	E537	E538	E539	E540	E541	E542	E543	E544	E545	E546	E547	E548	E549	E550	E551	E552	E553	E554	E555	E556	E557	E558	E559	E560	E561	E562	E563	E564	E565	E566	E567	E568	E569	E570	E571	E572	E573	E574	E575	E576	E577	E578	E579	E580	E581	E582	E583	E584	E585	E586	E587	E588	E589	E590	E591	E592	E593	E594	E595	E596	E597	E598	E599	E600	E601	E602	E603	E604	E605	E606	E607	E608	E609	E610	E611	E612	E613	E614	E615	E616	E617	E618	E619	E620	E621	E622	E623	E624	E625	E626	E627	E628	E629	E630	E631	E632	E633	E634	E635	E636	E637	E638	E639	E640	E641	E642	E643	E644	E645	E646	E647	E648	E649	E650	E651	E652	E653	E654	E655	E656	E657	E658	E659	E660	E661	E662	E663	E664	E665	E666	E667	E668	E669	E670	E671	E672	E673	E674	E675	E676	E677	E678	E679	E680	E681	E682	E683	E684	E685	E686	E687	E688	E689	E690	E691	E692	E693	E694	E695	E696	E697	E698	E699	E700	E701	E702	E703	E704	E705	E706	E707	E708	E709	E710	E711	E712	E713	E714	E715	E716	E717	E718	E719	E720	E721	E722	E723	E724	E725	E726	E727	E728	E729	E730	E731	E732	E733	E734	E735	E736	E737	E738	E739	E740	E741	E742	E743	E744	E745	E746	E747	E748	E749	E750	E751	E752	E753	E754	E755	E756	E757	E758	E759	E760	E761	E762	E763	E764	E765	E766	E767	E768	E769	E770	E771	E772	E773	E774	E775	E776	E777	E778	E779	E780	E781	E782	E783	E784	E785	E786	E787	E788	E789	E790	E791	E792	E793	E794	E795	E796	E797	E798	E799	E800	E801	E802	E803	E804	E805	E806	E807	E808	E809	E810	E811	E812	E813	E814	E815	E816	E817	E818	E819	E820	E821	E822	E823	E824	E825	E826	E827	E828	E829	E830	E831	E832	E833	E834	E835	E836	E837	E838	E839	E840	E841	E842	E843	E844	E845	E846	E847	E848	E849	E850	E851	E852	E853	E854	E855	E856	E857	E858	E859	E860	E861	E862	E863	E864	E865	E866	E867	E868	E869	E870	E871	E872	E873	E874	E875	E876	E877	E878	E879	E880	E881	E882	E883	E884	E885	E886	E887	E888	E889	E890	E891	E892	E893	E894	E895	E896	E897	E898	E899	E900	E901	E902	E903	E904	E905	E906	E907	E908	E909	E910	E911	E912	E913	E914	E915	E916	E917	E918	E919	E920	E921	E922	E923	E924	E925	E926	E927	E928	E929	E930	E931	E932	E933	E934	E935	E936	E937	E938	E939	E940	E941	E942	E943	E944	E945	E946	E947	E948	E949	E950	E951	E952	E953	E954	E955	E956	E957	E958	E959	E960	E961	E962	E963	E964	E965	E966	E967	E968	E969	E970	E971	E972	E973	E974	E975	E976	E977	E978	E979	E980	E981	E982	E983	E984	E985	E986	E987	E988	E989	E990	E991	E992	E993	E994	E995	E996	E997	E998	E999	E1000	E1001	E1002	E1003	E1004	E1005	E1006	E1007	E1008	E1009	E1010	E1011	E1012	E1013	E1014	E1015	E1016	E1017	E1018	E1019	E1020	E1021	E1022	E1023	E1024	E1025	E1026	E1027	E1028	E1029	E1030	E1031	E1032	E1033	E1034	E1035	E1036	E1037	E1038	E1039	E1040	E1041	E1042	E1043	E1044	E1045	E1046	E1047	E1048	E1049	E1050	E1051	E1052	E1053	E1054	E1055	E1056	E1057	E1058	E1059	E1060	E1061	E1062	E1063	E1064	E1065	E1066	E1067	E1068	E1069	E1070	E1071	E1072	E1073	E1074	E1075	E1076	E1077	E1078	E1079	E1080	E1081	E1082	E1083	E1084	E1085	E1086	E1087	E1088	E1089	E1090	E1091	E1092	E1093	E1094	E1095	E1096	E1097	E1098	E1099	E1100	E1101	E1102	E1103	E1104	E1105	E1106	E1107	E1108	E1109	E1110	E1111	E1112	E1113	E1114	E1115	E1116	E1117	E1118	E1119	E1120	E1121	E1122	E1123	E1124	E1125	E1126	E1127	E1128	E1129	E1130	E1131	E1132	E1133	E1134	E1135	E1136	E1137	E1138	E1139	E1140	E1141	E1142	E1143	E1144	E1145	E1146	E1147	E1148	E1149	E1150	E1151	E1152	E1153	E1154	E1155	E1156	E1157	E1158	E1159	E1160	E1161	E1162	E1163	E1164	E1165	E1166	E1167	E1168	E1169	E1170	E1171	E1172	E1173	E1174	E1175	E1176	E1177	E1178	E1179	E1180	E1181	E1182	E1183	E1184	E1185	E1186	E1187	E1188	E1189	E1190	E1191	E1192	E1193	E1194	E1195	E1196	E1197	E1198	E1199	E1200	E1201	E1202	E1203	E1204	E1205	E1206	E1207	E1208	E1209	E1210	E1211	E1212	E1213	E1214	E1215	E1216	E1217	E1218	E1219	E1220	E1221	E1222	E1223	E1224	E1225	E1226	E1227	E1228	E1229	E1230	E1231	E1232	E1233	E1234	E1235	E1236	E1237	E1238	E1239	E1240	E1241	E1242	E1243	E1244	E1245	E1246	E1247	E1248	E1249	E1250	E1251	E1252	E1253	E1254	E1255	E1256	E1257	E1258	E1259	E1260	E1261	E1262	E1263	E1264	E1265	E1266	E1267	E1268	E1269	E1270	E1271	E1272	E1273	E1274	E1275	E1276	E1277	E1278	E1279	E1280	E1281	E1282	E1283	E1284	E1285	E1286	E1287	E1288	E1289	E1290	E1291	E1292	E1293	E1294	E1295	E1296	E1297	E1298	E1299	E1300	E1301	E1302	E1303	E1304	E1305	E1306	E1307	E1308	E1309	E1310	E1311	E1312	E1313	E1314	E1315	E1316	E1317	E1318	E1319	E1320	E1321	E1322	E1323	E1324	E1325	E1326	E1327	E1328	E1329	E1330	E1331	E1332	E1333	E1334	E1335	E1336	E1337	E1338	E1339	E1340	E1341	E1342	E1343	E1344	E1345	E1346	E1347	E1348	E1349	E1350	E1351	E1352	E1353	E1354	E1355	E1356	E1357	E1358	E1359	E1360	E1361	E1362	E1363	E1364	E1365	E1366	E1367	E1368	E1369	E1370	E1371	E1372	E1373	E1374	E1375	E1376	E1377	E1378	E1379	E1380	E1381	E1382	E1383	E1384	E1385	E1386	E1387	E1388	E1389	E1390	E1391	E1392	E1393	E1394	E1395	E1396	E1397	E1398	E1399	E1400	E1401	E1402	E1403	E1404	E1405	E1406	E1407	E1408	E1409	E1410	E1411	E1412	E1413	E1414	E1415	E1416	E1417	E1418	E1419	E1420	E1421	E1422	E1423	E1424	E1425	E1426	E1427	E1428	E1429	E1430	E1431	E1432	E1433	E1434	E1435	E1436	E1437	E1438	E1439	E1440	E1441	E1442	E1443	E1444	E1445	E1446	E1447	E1448	E1449	E1450	E1451	E1452	E1453	E1454	E1455	E1456	E1457	E1458	E1459	E1460	E1461	E1462	E1463	E1464	E1465	E1466	E1467	E1468	E1469	E1470	E1471	E1472	E1473	E1474	E1475	E1476	E1477	E1478	E1479	E1480	E1481	E1482

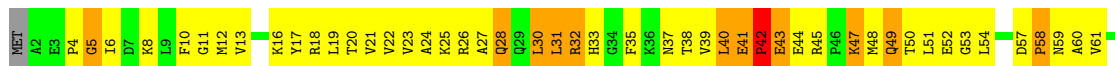






• Molecule 7: DNA-directed RNA polymerase omega chain

Chain E: 22% 49% 23%



• Molecule 7: DNA-directed RNA polymerase omega chain

Chain O: 20% 59% 16%



4 Data and refinement statistics

Property	Value	Source
Space group	P 41	Depositor
Cell constants a, b, c, α , β , γ	152.34Å 152.34Å 524.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.00 38.29 – 3.00	Depositor EDS
% Data completeness (in resolution range)	89.3 (40.00-3.00) 83.5 (38.29-3.00)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.51 (at 3.01Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.225 , 0.257 0.229 , 0.254	Depositor DCC
R_{free} test set	11219 reflections (5.70%)	DCC
Wilson B-factor (Å ²)	64.2	Xtriage
Anisotropy	0.049	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 136.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.40$, $\langle L^2 \rangle = 0.23$	Xtriage
Estimated twinning fraction	0.146 for h,-k,-l	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	51213	wwPDB-VP
Average B, all atoms (Å ²)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.44% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: APC, 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	1.04	1/520 (0.2%)	1.12	1/798 (0.1%)
1	X	1.12	2/520 (0.4%)	1.14	1/798 (0.1%)
2	H	1.39	3/387 (0.8%)	2.45	39/601 (6.5%)
2	Y	1.36	3/387 (0.8%)	2.44	33/601 (5.5%)
3	I	0.72	0/304	0.92	1/467 (0.2%)
3	Z	0.73	0/304	0.91	0/467
4	A	0.69	0/1838	0.76	0/2498
4	B	0.76	0/1838	0.76	2/2498 (0.1%)
4	K	0.73	0/1838	0.82	3/2498 (0.1%)
4	L	0.73	0/1838	0.78	4/2498 (0.2%)
5	C	0.79	1/8997 (0.0%)	0.89	17/12164 (0.1%)
5	M	0.78	1/8997 (0.0%)	0.90	17/12164 (0.1%)
6	D	0.79	1/10128 (0.0%)	0.91	18/13681 (0.1%)
6	N	0.79	2/10128 (0.0%)	0.89	22/13681 (0.2%)
7	E	0.83	1/784 (0.1%)	1.07	3/1057 (0.3%)
7	O	0.78	1/784 (0.1%)	1.07	3/1057 (0.3%)
All	All	0.80	16/49592 (0.0%)	0.95	164/67528 (0.2%)

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	5
2	H	0	2
2	Y	0	1
3	I	0	1
All	All	0	15

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	1	G	OP3-P	10.56	1.73	1.61
1	G	1	DC	OP3-P	-7.74	1.51	1.61
1	X	1	DC	OP3-P	-7.13	1.52	1.61
7	E	94	PRO	N-CA	6.34	1.58	1.47
5	C	439	CYS	CB-SG	-6.08	1.72	1.82
7	O	94	PRO	N-CA	6.07	1.57	1.47
2	Y	7	G	C5-C6	-6.04	1.36	1.42
6	N	1039	CYS	CB-SG	-5.96	1.72	1.81
6	D	1101	VAL	CB-CG2	-5.49	1.41	1.52
2	Y	1	G	OP3-P	5.44	1.67	1.61
2	Y	2	A	O3'-P	-5.32	1.54	1.61
5	M	422	ARG	CG-CD	5.29	1.65	1.51
2	H	9	G	C5-C6	-5.22	1.37	1.42
2	H	2	A	C3'-O3'	-5.17	1.34	1.42
6	N	103	TRP	CB-CG	-5.10	1.41	1.50
1	X	13	DT	O3'-P	5.04	1.67	1.61

All (164) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	Y	2	A	N9-C1'-C2'	-18.09	90.48	114.00
5	M	409	ARG	NE-CZ-NH1	15.09	127.85	120.30
2	Y	7	G	N9-C1'-C2'	-12.29	98.02	114.00
7	E	94	PRO	CA-N-CD	-11.28	95.71	111.50
2	H	1	G	N9-C1'-C2'	11.20	128.56	114.00
7	O	94	PRO	CA-N-CD	-11.13	95.92	111.50
2	H	7	G	N9-C1'-C2'	-11.00	99.70	114.00
5	M	409	ARG	NE-CZ-NH2	-9.94	115.33	120.30
2	H	2	A	N9-C1'-C2'	-9.73	101.29	112.00
2	H	2	A	P-O3'-C3'	-9.28	108.56	119.70
7	O	94	PRO	N-CA-C	9.25	136.15	112.10
7	E	94	PRO	N-CA-C	9.02	135.55	112.10
2	H	9	G	O4'-C1'-N9	9.00	115.40	108.20
2	Y	2	A	O4'-C1'-N9	-8.97	101.03	108.20
2	Y	14	G	O4'-C1'-N9	8.84	115.27	108.20
2	Y	4	U	O4'-C1'-N1	8.73	115.18	108.20
2	Y	9	G	O4'-C1'-N9	8.71	115.17	108.20
5	C	409	ARG	NE-CZ-NH1	8.58	124.59	120.30
2	H	4	U	O4'-C1'-N1	8.56	115.05	108.20
6	N	1389	LEU	CA-CB-CG	8.45	134.74	115.30
2	H	6	U	O4'-C1'-N1	8.40	114.92	108.20
4	K	197	LEU	CA-CB-CG	8.16	134.07	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	243	ARG	C-N-CD	-8.15	102.66	120.60
2	Y	14	G	N9-C1'-C2'	-8.15	103.03	112.00
2	Y	5	C	O4'-C1'-N1	8.11	114.69	108.20
2	H	5	C	O4'-C1'-N1	8.05	114.64	108.20
2	Y	9	G	C5'-C4'-O4'	-7.86	99.66	109.10
2	H	14	G	O4'-C1'-N9	7.86	114.49	108.20
2	H	13	C	N1-C1'-C2'	-7.86	103.36	112.00
2	H	1	G	O4'-C1'-N9	-7.78	101.98	108.20
2	H	9	G	C5'-C4'-O4'	-7.76	99.79	109.10
2	Y	6	U	O4'-C1'-N1	7.69	114.35	108.20
2	Y	9	G	N9-C1'-C2'	-7.67	103.56	112.00
2	H	12	G	O4'-C1'-N9	7.67	114.34	108.20
2	H	14	G	N9-C1'-C2'	-7.52	103.73	112.00
5	M	98	LEU	CA-CB-CG	7.48	132.49	115.30
6	N	1429	LEU	CA-CB-CG	7.42	132.35	115.30
5	M	243	ARG	C-N-CD	-7.36	104.41	120.60
5	C	409	ARG	NE-CZ-NH2	-7.30	116.65	120.30
2	Y	3	G	OP1-P-OP2	-7.28	108.68	119.60
2	H	9	G	N9-C1'-C2'	-7.26	104.01	112.00
2	Y	14	G	O5'-P-OP2	7.21	119.35	110.70
2	Y	12	G	O4'-C1'-N9	7.18	113.95	108.20
6	N	1244	GLY	N-CA-C	7.15	130.97	113.10
6	D	1244	GLY	N-CA-C	7.14	130.96	113.10
6	N	1244	GLY	CA-C-N	7.05	130.29	116.20
6	D	133	ILE	CA-C-N	-7.03	101.73	117.20
5	M	861	LEU	CA-CB-CG	7.02	131.45	115.30
2	H	8	C	O4'-C1'-N1	6.99	113.79	108.20
2	Y	3	G	O4'-C1'-N9	-6.85	102.72	108.20
2	Y	12	G	N9-C1'-C2'	-6.84	104.48	112.00
2	Y	2	A	OP1-P-OP2	-6.83	109.35	119.60
6	D	1244	GLY	CA-C-N	6.80	129.81	116.20
6	D	133	ILE	C-N-CA	6.79	138.68	121.70
5	M	422	ARG	NE-CZ-NH1	6.74	123.67	120.30
6	D	1243	THR	CA-C-N	6.71	129.63	116.20
4	K	218	LEU	CA-CB-CG	6.71	130.74	115.30
6	D	1096	ARG	NE-CZ-NH2	-6.65	116.97	120.30
2	H	12	G	N9-C1'-C2'	-6.58	104.76	112.00
2	Y	1	G	OP1-P-OP2	-6.48	109.87	119.60
2	H	1	G	OP1-P-OP2	-6.47	109.90	119.60
6	N	1243	THR	CA-C-N	6.46	129.12	116.20
2	Y	2	A	C3'-C2'-C1'	-6.45	96.34	101.50
2	H	10	G	O4'-C1'-N9	6.44	113.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	207	LEU	CA-CB-CG	6.41	130.04	115.30
4	B	90	LEU	CA-CB-CG	6.41	130.03	115.30
2	H	2	A	OP1-P-OP2	-6.39	110.02	119.60
2	H	13	C	O4'-C1'-N1	6.36	113.29	108.20
2	Y	13	C	N1-C1'-C2'	-6.34	105.03	112.00
2	Y	8	C	O4'-C1'-N1	6.33	113.26	108.20
2	H	10	G	N9-C1'-C2'	-6.29	105.08	112.00
5	M	207	LEU	CA-CB-CG	6.28	129.75	115.30
2	H	3	G	OP1-P-OP2	-6.28	110.18	119.60
6	D	153	LEU	CA-CB-CG	6.24	129.64	115.30
2	H	2	A	N9-C4-C5	6.18	108.27	105.80
2	H	2	A	C4'-C3'-C2'	6.17	108.77	102.60
2	H	14	G	O5'-P-OP2	6.16	118.09	110.70
2	H	7	G	C4'-C3'-O3'	6.13	125.26	113.00
4	L	90	LEU	CA-CB-CG	6.13	129.39	115.30
6	N	1243	THR	C-N-CA	-6.13	109.44	122.30
2	Y	13	C	O4'-C1'-N1	6.08	113.07	108.20
2	H	11	C	N1-C1'-C2'	-6.08	105.32	112.00
6	N	450	TYR	CA-C-N	-6.04	103.91	117.20
6	D	1429	LEU	CA-CB-CG	5.98	129.06	115.30
2	H	6	U	C3'-C2'-C1'	5.95	106.26	101.50
2	H	11	C	O4'-C1'-N1	5.94	112.95	108.20
2	Y	16	G	O4'-C1'-N9	5.91	112.93	108.20
2	H	15	C	O4'-C1'-N1	5.91	112.92	108.20
2	Y	7	G	C4'-C3'-O3'	5.90	124.81	113.00
6	N	394	LEU	CA-CB-CG	5.90	128.88	115.30
2	Y	6	U	C3'-C2'-C1'	5.89	106.21	101.50
2	H	2	A	C8-N9-C4	-5.87	103.45	105.80
6	D	1363	LEU	CA-CB-CG	5.83	128.71	115.30
2	Y	11	C	O4'-C1'-N1	5.82	112.86	108.20
6	D	1109	GLU	CA-C-N	-5.81	104.43	117.20
6	D	1243	THR	C-N-CA	-5.79	110.14	122.30
6	N	1109	GLU	CA-C-N	-5.78	104.49	117.20
5	C	58	ASP	C-N-CA	5.76	136.09	121.70
6	N	153	LEU	CA-CB-CG	5.75	128.52	115.30
2	Y	10	G	O4'-C1'-N9	5.73	112.79	108.20
5	M	58	ASP	C-N-CA	5.73	136.04	121.70
1	G	18	DG	N9-C1'-C2'	-5.73	101.72	112.60
6	D	1109	GLU	C-N-CA	5.70	135.96	121.70
5	M	304	LEU	CA-CB-CG	5.66	128.31	115.30
2	H	7	G	O4'-C1'-N9	5.64	112.72	108.20
2	Y	11	C	N1-C1'-C2'	-5.63	105.81	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	450	TYR	CA-CB-CG	-5.61	102.75	113.40
6	N	488	ARG	NE-CZ-NH1	5.59	123.09	120.30
4	K	186	LEU	CA-CB-CG	5.58	128.15	115.30
4	L	115	LEU	CA-CB-CG	5.58	128.13	115.30
2	H	1	G	C4'-C3'-C2'	5.57	108.17	102.60
6	N	450	TYR	CA-CB-CG	-5.54	102.88	113.40
5	M	424	GLY	N-CA-C	5.53	126.93	113.10
2	Y	10	G	N9-C1'-C2'	-5.51	105.94	112.00
5	C	422	ARG	NE-CZ-NH1	5.50	123.05	120.30
6	N	619	LEU	CA-CB-CG	5.49	127.92	115.30
2	H	2	A	P-O5'-C5'	-5.48	112.13	120.90
2	Y	1	G	C2'-C3'-O3'	-5.48	97.45	109.50
6	N	1109	GLU	C-N-CA	5.48	135.39	121.70
6	D	619	LEU	CA-CB-CG	5.46	127.86	115.30
6	N	1244	GLY	CA-C-O	-5.46	110.78	120.60
2	Y	7	G	O4'-C1'-N9	5.44	112.56	108.20
5	C	165	LEU	C-N-CD	-5.44	108.63	120.60
5	C	600	ASP	CB-CG-OD1	-5.40	113.44	118.30
4	L	186	LEU	CA-CB-CG	-5.40	102.88	115.30
6	D	764	LEU	CA-CB-CG	5.40	127.71	115.30
5	M	165	LEU	C-N-CD	-5.38	108.75	120.60
1	X	18	DG	N9-C1'-C2'	-5.36	102.42	112.60
5	C	30	LEU	CA-CB-CG	5.36	127.63	115.30
6	D	1101	VAL	CB-CA-C	-5.36	101.23	111.40
4	L	192	LEU	CA-CB-CG	5.34	127.59	115.30
5	C	600	ASP	CB-CG-OD2	5.34	123.11	118.30
5	C	728	HIS	CA-C-N	5.29	128.84	117.20
6	N	488	ARG	NE-CZ-NH2	-5.28	117.66	120.30
2	H	16	G	O4'-C1'-N9	5.27	112.41	108.20
5	M	285	LEU	CA-CB-CG	5.26	127.39	115.30
5	M	728	HIS	CA-C-N	5.25	128.75	117.20
5	M	409	ARG	CA-CB-CG	5.25	124.94	113.40
5	M	409	ARG	CD-NE-CZ	5.22	130.91	123.60
5	M	728	HIS	C-N-CA	-5.21	108.69	121.70
3	I	3	DA	OP1-P-OP2	-5.20	111.80	119.60
5	C	858	MET	CB-CG-SD	-5.20	96.81	112.40
5	C	244	PRO	CA-N-CD	-5.19	104.24	111.50
5	C	191	PHE	C-N-CA	-5.17	100.27	122.00
6	N	621	LYS	CA-C-N	5.16	128.54	117.20
6	N	813	LEU	CA-CB-CG	5.15	127.15	115.30
2	H	16	G	C5'-C4'-O4'	-5.15	102.92	109.10
6	D	813	LEU	CA-CB-CG	5.14	127.13	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	E	50	THR	C-N-CA	5.14	134.56	121.70
5	C	165	LEU	C-N-CA	5.13	143.56	122.00
6	N	1201	CYS	CA-CB-SG	-5.13	104.76	114.00
5	C	328	LEU	CA-CB-CG	-5.11	103.55	115.30
2	Y	15	C	O4'-C1'-N1	5.10	112.28	108.20
5	M	997	LEU	CB-CG-CD2	-5.10	102.34	111.00
2	H	12	G	C4'-C3'-C2'	5.09	107.69	102.60
7	O	50	THR	C-N-CA	5.09	134.43	121.70
2	H	2	A	C3'-C2'-C1'	-5.09	97.43	101.50
6	N	1112	CYS	CA-CB-SG	5.08	123.14	114.00
2	Y	12	G	C4'-C3'-C2'	5.06	107.66	102.60
5	C	728	HIS	C-N-CA	-5.05	109.07	121.70
4	B	115	LEU	CA-CB-CG	5.04	126.90	115.30
6	D	1244	GLY	CA-C-O	-5.04	111.52	120.60
6	N	1039	CYS	CA-CB-SG	-5.03	104.95	114.00
6	N	496	LEU	CA-CB-CG	5.00	126.80	115.30

There are no chirality outliers.

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
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
1	G	19	DC	Sidechain
2	H	14	G	Sidechain
2	H	16	G	Sidechain
3	I	3	DA	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
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	43	0
1	X	467	0	259	43	0
2	H	347	0	174	58	0
2	Y	347	0	174	81	0
3	I	270	0	144	14	0
3	Z	270	0	144	12	0
4	A	1806	0	1861	169	0
4	B	1806	0	1861	174	0
4	K	1806	0	1861	182	0
4	L	1806	0	1861	199	0
5	C	8829	0	8933	1208	0
5	M	8829	0	8933	1204	0
6	D	9960	0	10183	1379	0
6	N	9960	0	10183	1351	0
7	E	770	0	784	108	0
7	O	770	0	784	101	0
8	D	2	0	0	0	0
8	N	2	0	0	0	0
9	D	2	0	0	0	0
9	N	2	0	0	0	0
10	D	31	0	14	2	0
10	N	31	0	14	2	0
11	A	106	0	0	16	0
11	B	82	0	0	21	0
11	C	482	0	0	120	0
11	D	506	0	0	138	0
11	E	60	0	0	6	0
11	G	32	0	0	3	0
11	H	37	0	0	3	0
11	I	22	0	0	3	0
11	K	86	0	0	19	0
11	L	104	0	0	23	0
11	M	483	0	0	129	0
11	N	491	0	0	115	0
11	O	39	0	0	6	0
11	X	43	0	0	4	0
11	Y	30	0	0	6	0
11	Z	30	0	0	4	0
All	All	51213	0	48426	5871	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 61.

All (5871) 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)
2:Y:7:G:N1	5:M:1014:SER:HA	1.62	1.13
2:Y:16:G:H21	6:N:705:ALA:HB1	1.11	1.12
6:N:18:ILE:HG23	6:N:518:PRO:HG3	1.33	1.10
5:C:409:ARG:HA	5:C:454:SER:HA	1.27	1.10
6:N:1189:ARG:HB3	6:N:1204:CYS:HA	1.34	1.09
6:D:695:ILE:HD11	6:D:718:PRO:HB2	1.31	1.08
4:K:112:ARG:HE	4:K:125:PRO:HB2	1.15	1.07
6:D:908:LYS:HB2	6:D:1027:GLY:HA3	1.39	1.04
4:B:59:GLU:HB2	4:B:137:ARG:HH12	1.20	1.04
6:N:1220:ALA:HB1	6:N:1223:ILE:HD13	1.39	1.03
6:D:783:ARG:HA	6:D:1028:ALA:HA	1.40	1.03
6:N:1335:LEU:HD23	6:N:1344:VAL:HG22	1.39	1.03
6:D:161:LEU:HD21	6:D:452:ILE:HG21	1.38	1.02
5:C:305:PRO:HG3	5:C:308:ARG:HH22	1.22	1.02
5:C:752:GLY:H	5:C:792:VAL:HB	1.25	1.01
6:D:798:GLU:HB2	6:D:828:LYS:HE3	1.43	1.01
5:M:695:LEU:HD21	5:M:832:LYS:HD3	1.43	1.01
5:C:433:THR:HG21	5:C:488:ALA:HB1	1.42	1.01
5:M:946:ARG:HB3	5:M:946:ARG:HH11	1.22	1.01
6:N:180:LYS:HG2	6:N:183:GLU:HB2	1.42	1.01
2:Y:2:A:H3'	2:Y:2:A:C8	1.94	1.00
5:M:905:ILE:HD12	5:M:905:ILE:H	1.27	1.00
6:N:633:VAL:HG22	6:N:635:PRO:HD3	1.43	1.00
4:L:179:PHE:HB3	4:L:197:LEU:HD12	1.44	0.99
2:Y:7:G:H1	5:M:1014:SER:HA	0.85	0.99
6:D:637:LEU:HD21	6:D:642:CYS:HA	1.45	0.99
6:N:783:ARG:HA	6:N:1028:ALA:HA	1.41	0.98
6:N:1379:VAL:HG12	6:N:1419:PRO:HA	1.40	0.98
2:Y:7:G:H21	5:M:1021:LEU:HB2	1.27	0.98
6:N:95:LEU:HD11	6:N:517:VAL:HG23	1.46	0.97
5:C:578:VAL:HG13	5:C:671:ASN:HB3	1.46	0.97
6:N:1042:ARG:HH21	6:N:1073:SER:HB3	1.28	0.97
6:D:1183:ILE:HG22	6:N:561:GLY:HA2	1.47	0.97
2:Y:7:G:H1	5:M:1014:SER:CA	1.79	0.96
4:A:85:LEU:HA	4:A:124:ASN:HD22	1.28	0.96
6:D:1109:GLU:HG2	6:D:1201:CYS:HA	1.44	0.96
6:D:1112:CYS:HB2	6:D:1195:GLN:HG2	1.45	0.96
5:M:333:ILE:H	5:M:465:GLY:HA3	1.31	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:579:VAL:HG11	5:C:887:GLU:HG3	1.47	0.96
6:N:996:TRP:HA	6:N:999:THR:HG22	1.46	0.96
7:O:45:ARG:HG2	7:O:46:PRO:HD2	1.47	0.96
6:D:455:ARG:HB2	6:D:460:ALA:HA	1.47	0.95
5:M:110:GLU:HG3	5:M:369:PRO:HB3	1.44	0.95
6:N:543:LEU:HD22	6:N:580:ALA:HB1	1.47	0.95
6:N:921:ARG:HH11	6:N:921:ARG:HB3	1.29	0.95
6:N:972:LEU:HG	6:N:976:GLN:HE22	1.31	0.95
5:C:636:ALA:HB3	5:C:703:ILE:HD13	1.46	0.95
4:L:89:PHE:HB3	4:L:94:LEU:HD13	1.47	0.94
6:N:1144:LEU:HD12	6:N:1171:VAL:HG13	1.48	0.94
5:M:478:VAL:HG13	5:M:506:ASN:HB3	1.48	0.94
5:M:120:LEU:HD22	5:M:121:MET:H	1.32	0.94
4:B:64:GLU:HB2	4:B:165:ILE:HG21	1.48	0.94
6:N:1109:GLU:HG2	6:N:1201:CYS:HA	1.48	0.94
5:M:157:ARG:HD3	5:M:314:THR:HB	1.49	0.93
6:N:793:THR:HB	6:N:879:ARG:HD3	1.49	0.93
6:D:136:ASP:HB3	6:D:137:PRO:HD3	1.51	0.93
5:M:304:LEU:HD23	5:M:305:PRO:HD3	1.47	0.93
5:C:39:ARG:H	5:C:39:ARG:HD2	1.31	0.93
5:M:183:SER:HB2	5:M:190:LYS:HG2	1.48	0.93
5:M:939:ARG:HB3	5:M:982:PRO:HG3	1.47	0.93
6:N:1487:VAL:HG11	6:N:1492:LEU:HD23	1.50	0.93
2:Y:12:G:H8	2:Y:12:G:H5'	1.32	0.93
5:C:36:PRO:HG2	5:C:70:GLU:HB3	1.50	0.93
5:M:395:LYS:HE2	5:M:403:SER:HB2	1.49	0.93
5:M:857:ASP:HB2	5:M:978:ARG:HG2	1.49	0.93
4:B:18:ARG:HH12	4:B:123:MET:HE1	1.33	0.93
2:Y:2:A:H5''	6:N:671:LYS:HZ1	1.31	0.92
1:X:18:DG:H2''	1:X:19:DC:H5'	1.51	0.92
6:D:1223:ILE:HG22	6:D:1227:GLN:HE21	1.33	0.92
5:M:313:LEU:HD13	5:M:321:GLU:HB2	1.50	0.92
1:X:14:DT:H5''	6:N:1089:ALA:HA	1.48	0.92
4:B:97:VAL:HG11	4:B:120:VAL:HG21	1.52	0.92
6:D:143:ASN:HD21	6:D:145:VAL:HG12	1.32	0.92
6:N:133:ILE:HD12	6:N:153:LEU:HD13	1.50	0.91
5:M:1097:LEU:H	5:M:1097:LEU:HD22	1.33	0.91
5:M:197:LEU:HD13	5:M:207:LEU:HD11	1.52	0.91
5:C:313:LEU:HB2	11:C:1168:HOH:O	1.70	0.91
11:B:374:HOH:O	6:D:847:ASP:HB3	1.69	0.91
5:C:673:LEU:HD22	5:C:867:VAL:HA	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:6:U:H2'	2:H:7:G:C8	2.06	0.90
2:Y:2:A:C3'	2:Y:2:A:C8	2.51	0.90
2:Y:8:C:O2'	2:Y:9:G:H5'	1.71	0.90
6:D:785:ILE:HD12	6:D:785:ILE:H	1.34	0.90
6:D:1253:THR:O	6:D:1257:PRO:HD2	1.71	0.90
2:H:13:C:H4'	5:C:409:ARG:HH22	1.37	0.90
6:D:145:VAL:HG22	6:D:146:PRO:HD2	1.53	0.90
6:N:52:PRO:HD2	6:N:85:VAL:HG21	1.52	0.90
6:N:890:VAL:HG12	6:N:926:LYS:HD2	1.54	0.90
2:H:12:G:H5'	2:H:12:G:H8	1.38	0.89
5:M:170:PRO:HB3	5:M:186:VAL:HG12	1.52	0.89
5:M:536:PRO:HD2	5:M:537:LYS:HZ2	1.37	0.89
2:Y:6:U:H2'	2:Y:7:G:C8	2.07	0.89
4:L:87:VAL:HG21	4:L:144:VAL:HG11	1.53	0.89
6:N:507:ASN:HD22	6:N:507:ASN:H	1.16	0.89
6:D:785:ILE:HG22	6:D:789:LEU:HD11	1.53	0.89
5:C:1049:LEU:HD23	6:D:1472:ILE:HD12	1.55	0.89
5:C:176:VAL:HG12	5:C:182:VAL:HG13	1.54	0.89
5:C:260:LEU:HB2	5:C:291:ALA:HB1	1.55	0.89
6:N:206:ARG:HG2	6:N:394:LEU:HD22	1.55	0.89
6:D:613:ARG:NH1	6:D:616:GLN:HG2	1.88	0.88
5:M:755:LEU:HD21	5:M:792:VAL:HG22	1.52	0.88
5:C:305:PRO:HG3	5:C:308:ARG:NH2	1.88	0.88
6:D:206:ARG:HG2	6:D:394:LEU:HD22	1.52	0.88
5:M:578:VAL:HG11	5:M:991:GLN:HB3	1.56	0.88
6:D:1468:LEU:HD22	6:D:1470:ARG:HB2	1.52	0.88
5:M:39:ARG:HD2	5:M:39:ARG:H	1.34	0.88
2:Y:14:G:O2'	2:Y:15:C:H5'	1.73	0.88
2:H:14:G:O2'	2:H:15:C:H5'	1.72	0.88
5:M:739:GLU:HG3	5:M:742:VAL:HB	1.52	0.88
6:N:1121:PRO:HD2	6:N:1346:ARG:HH21	1.35	0.88
5:C:148:PHE:HE2	5:C:281:LEU:HD13	1.39	0.88
6:D:204:LEU:HD21	6:D:400:VAL:HB	1.53	0.88
5:C:759:THR:HB	5:C:785:VAL:HG11	1.56	0.88
2:H:8:C:O2'	2:H:9:G:H5'	1.71	0.88
5:M:537:LYS:H	5:M:537:LYS:HD2	1.38	0.88
6:N:1253:THR:O	6:N:1257:PRO:HD2	1.74	0.88
1:X:15:DC:H4'	5:M:1035:MET:SD	2.13	0.87
6:N:786:ILE:HG21	6:N:1027:GLY:H	1.37	0.87
6:N:394:LEU:HD11	6:N:445:ARG:NH1	1.90	0.87
6:D:708:LEU:HB3	6:D:1231:GLU:HB2	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1258:ARG:HH12	6:N:1268:PRO:HB3	1.40	0.87
6:D:786:ILE:HG22	6:D:1026:SER:HB3	1.55	0.87
4:L:59:GLU:HB2	4:L:137:ARG:HH12	1.39	0.87
5:C:1055:LEU:HD22	5:C:1066:ALA:HB2	1.54	0.87
5:M:64:LEU:HB2	5:M:359:MET:SD	2.14	0.87
4:K:117:VAL:HB	4:K:120:VAL:HG12	1.57	0.87
4:B:82:LEU:HA	4:B:85:LEU:HD12	1.57	0.87
5:C:342:ASP:HA	5:C:345:ARG:HD2	1.55	0.87
1:G:18:DG:H2''	1:G:19:DC:H5'	1.57	0.86
5:M:700:TYR:HB3	5:M:833:LEU:HD13	1.55	0.86
6:N:1124:GLN:HE21	6:N:1135:ARG:HA	1.37	0.86
6:N:87:ARG:HB3	6:N:523:ASP:HB3	1.57	0.86
5:C:578:VAL:HG11	5:C:991:GLN:HB3	1.57	0.86
4:B:56:VAL:HG13	4:B:142:VAL:HG12	1.55	0.86
5:C:721:ARG:HG2	5:C:820:ARG:HH22	1.41	0.86
1:G:22:DC:H4'	5:C:388:ARG:HD2	1.56	0.86
2:Y:7:G:H21	5:M:1021:LEU:CB	1.87	0.86
6:N:501:ALA:HB1	6:N:1453:ALA:HB2	1.58	0.86
5:C:573:ARG:HB2	5:C:573:ARG:HH11	1.39	0.86
6:N:1492:LEU:HB3	6:N:1493:LYS:HE2	1.57	0.86
4:A:178:ALA:HB3	4:A:198:ARG:HG3	1.58	0.86
5:C:192:PRO:HD2	5:C:195:LEU:HB2	1.55	0.86
4:L:102:LYS:NZ	4:L:137:ARG:HG2	1.91	0.86
4:B:103:ALA:HB1	4:B:107:LYS:HD3	1.57	0.86
6:D:484:PRO:HB3	6:D:488:ARG:HE	1.38	0.85
4:A:54:THR:HG22	4:A:158:ILE:HG13	1.56	0.85
6:D:1144:LEU:HD11	6:D:1186:VAL:HG21	1.56	0.85
5:M:345:ARG:HA	5:M:348:LEU:HD12	1.57	0.85
5:M:810:ASP:HB3	5:M:813:VAL:HG12	1.57	0.85
2:Y:12:G:C8	2:Y:12:G:H5'	2.11	0.85
5:C:478:VAL:HG13	5:C:506:ASN:HB3	1.56	0.85
6:D:462:GLN:HG3	6:D:513:ILE:HD13	1.59	0.85
2:Y:16:G:N2	6:N:705:ALA:HB1	1.90	0.85
6:N:1036:ARG:NH2	6:N:1042:ARG:HA	1.92	0.85
6:N:1223:ILE:H	6:N:1223:ILE:HD12	1.41	0.85
2:Y:13:C:H4'	5:M:409:ARG:HH22	1.41	0.85
5:C:174:LEU:HD22	5:C:307:LEU:HB2	1.57	0.85
6:N:897:TRP:HA	6:N:900:ILE:HG12	1.58	0.85
5:C:587:VAL:HG11	5:C:666:LEU:HD22	1.56	0.85
6:D:526:PRO:O	6:D:537:THR:HA	1.77	0.85
2:Y:2:A:H5''	6:N:671:LYS:NZ	1.90	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:87:VAL:HG21	4:B:144:VAL:HG11	1.59	0.84
5:C:144:PRO:HG2	5:C:265:ARG:HH21	1.41	0.84
5:C:197:LEU:HD13	5:C:207:LEU:HD11	1.57	0.84
5:M:675:ALA:HB2	5:M:867:VAL:HG11	1.55	0.84
5:M:953:VAL:HG13	5:M:966:LEU:HD13	1.58	0.84
6:D:24:GLY:HA3	6:D:49:ILE:HG12	1.57	0.84
5:M:36:PRO:HG2	5:M:70:GLU:HB3	1.60	0.84
6:N:1259:VAL:HG11	6:N:1356:TYR:OH	1.77	0.84
5:C:409:ARG:HA	5:C:454:SER:CA	2.07	0.84
5:M:141:HIS:HB3	5:M:418:LEU:HD23	1.57	0.84
5:M:5:ARG:HE	5:M:8:ARG:HH22	1.24	0.84
5:C:857:ASP:HB3	5:C:978:ARG:HG2	1.60	0.84
5:C:687:ALA:HB2	6:D:740:PHE:HB2	1.59	0.84
6:D:1271:LYS:NZ	6:D:1331:ASP:HB3	1.92	0.84
6:N:86:ARG:O	6:N:522:PRO:HD2	1.77	0.84
4:L:1:MET:HG2	4:L:5:LYS:HB3	1.58	0.84
5:M:160:ALA:HB2	11:M:1183:HOH:O	1.78	0.84
5:M:467:ILE:HA	11:M:1287:HOH:O	1.76	0.84
5:M:675:ALA:HA	5:M:989:VAL:HG12	1.58	0.84
6:D:486:ARG:HA	6:D:489:ARG:HD3	1.60	0.83
4:K:34:VAL:HB	5:M:939:ARG:NH1	1.93	0.83
5:C:1031:ARG:HA	6:D:621:LYS:O	1.76	0.83
5:M:595:LEU:HG	5:M:655:LEU:HD12	1.59	0.83
4:B:94:LEU:HD11	4:B:119:ASP:HB2	1.59	0.83
6:D:1144:LEU:HB3	6:D:1166:LEU:HD11	1.58	0.83
6:D:853:VAL:HG22	6:D:858:VAL:HG23	1.60	0.83
5:M:436:GLY:HA2	5:M:538:GLN:O	1.79	0.83
4:L:102:LYS:HD3	4:L:139:ASN:HB2	1.59	0.83
5:C:326:ASP:HB3	5:C:431:HIS:HB2	1.60	0.83
6:D:8:VAL:HG23	6:D:1457:ASP:HB3	1.59	0.83
6:D:28:LYS:HB2	6:D:41:ARG:HH11	1.43	0.83
2:H:14:G:H4'	5:C:567:GLN:HE22	1.44	0.83
5:C:987:ILE:HG23	6:D:948:THR:HG21	1.60	0.83
6:N:111:LYS:HE2	6:N:1452:ILE:HD13	1.60	0.83
5:M:1065:ALA:HB1	5:M:1077:PRO:HG2	1.59	0.83
5:C:751:PRO:HG3	5:C:796:GLU:HA	1.58	0.83
6:D:396:VAL:HG12	6:D:447:VAL:HA	1.61	0.83
6:N:1205:TYR:HD2	6:N:1215:VAL:HG21	1.43	0.83
2:Y:5:C:H2'	2:Y:6:U:C6	2.13	0.83
6:D:1228:SER:O	6:D:1232:PRO:HD2	1.78	0.83
5:C:478:VAL:HA	5:C:506:ASN:O	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:12:VAL:HG12	5:M:534:VAL:HG13	1.61	0.82
6:D:521:PRO:HG2	6:D:524:LEU:HD22	1.59	0.82
6:N:119:SER:H	6:N:123:LEU:HD22	1.44	0.82
6:D:1389:LEU:HG	6:D:1390:LEU:H	1.44	0.82
5:C:34:VAL:HB	5:C:38:LYS:HG3	1.60	0.82
6:D:1481:VAL:HG11	7:E:18:ARG:HA	1.59	0.82
6:N:172:PRO:HG3	11:N:9050:HOH:O	1.79	0.82
5:C:512:ARG:HB3	5:C:523:ILE:HD11	1.61	0.82
6:D:1046:GLN:HA	6:D:1052:THR:HA	1.61	0.82
6:D:141:ILE:HD11	6:D:165:LYS:HZ1	1.43	0.82
6:D:455:ARG:CB	6:D:460:ALA:HA	2.09	0.82
7:O:41:GLU:HA	7:O:45:ARG:HG3	1.62	0.82
5:M:732:ALA:HA	5:M:735:ARG:HH21	1.45	0.82
6:D:119:SER:H	6:D:123:LEU:HD22	1.42	0.82
6:D:1449:GLU:HA	6:D:1452:ILE:HD12	1.60	0.82
6:D:434:ARG:H	6:D:447:VAL:HG22	1.42	0.82
5:C:953:VAL:HG13	5:C:966:LEU:HD13	1.60	0.82
6:D:123:LEU:HD11	6:D:152:LEU:HD22	1.61	0.82
4:L:25:LEU:HD23	4:L:28:LEU:HD21	1.62	0.82
5:M:715:THR:HB	5:M:717:LEU:HG	1.60	0.82
5:M:405:ARG:HH22	5:M:566:THR:HG21	1.45	0.82
5:M:701:THR:HG22	5:M:832:LYS:HG2	1.62	0.82
6:N:540:LEU:H	6:N:540:LEU:HD12	1.44	0.82
4:A:117:VAL:HB	4:A:120:VAL:HG12	1.59	0.81
5:C:146:VAL:HG11	5:C:306:THR:HB	1.62	0.81
2:H:12:G:H5'	2:H:12:G:C8	2.14	0.81
7:O:18:ARG:HD3	7:O:75:PHE:HE1	1.44	0.81
4:B:85:LEU:HG	4:B:127:LEU:HD23	1.62	0.81
6:D:1464:GLU:HB3	11:D:8024:HOH:O	1.80	0.81
6:D:81:THR:HG22	6:D:82:LYS:H	1.45	0.81
6:N:543:LEU:HD13	6:N:581:LEU:HA	1.59	0.81
6:D:616:GLN:HE22	6:D:621:LYS:HG2	1.44	0.81
6:N:1108:ARG:HH11	6:N:1108:ARG:HB2	1.45	0.81
5:C:343:GLN:HA	5:C:343:GLN:HE21	1.45	0.81
6:D:618:LEU:HD11	6:D:1463:LYS:HE2	1.62	0.81
2:H:5:C:H2'	2:H:6:U:C6	2.14	0.81
5:M:435:TYR:HE1	5:M:539:VAL:HG22	1.44	0.81
6:N:1046:GLN:HA	6:N:1052:THR:HA	1.62	0.81
4:B:59:GLU:HG3	4:B:139:ASN:ND2	1.94	0.81
6:D:1376:MET:SD	6:D:1421:LEU:HD13	2.20	0.81
6:D:799:LYS:HB3	6:D:826:PRO:HG2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:111:ALA:HB2	4:A:127:LEU:HD23	1.63	0.81
5:C:408:ARG:HG3	5:C:455:LEU:HG	1.62	0.81
5:C:708:TYR:HB2	5:C:825:VAL:HG23	1.62	0.81
5:M:139:GLN:O	5:M:333:ILE:HA	1.81	0.81
6:N:119:SER:HB2	6:N:123:LEU:HB2	1.62	0.81
4:A:58:ILE:HB	4:A:61:VAL:HB	1.63	0.81
5:M:110:GLU:H	5:M:368:THR:HG21	1.45	0.81
5:M:442:GLU:HG2	5:M:454:SER:HB2	1.63	0.81
6:N:400:VAL:HG22	6:N:443:VAL:HG21	1.61	0.81
6:D:793:THR:HG21	6:D:906:GLN:HG2	1.63	0.81
5:M:239:PHE:HE1	5:M:254:VAL:HB	1.44	0.81
5:M:478:VAL:HA	5:M:506:ASN:O	1.81	0.81
6:D:1205:TYR:HD2	6:D:1215:VAL:HG21	1.44	0.81
7:E:47:LYS:HB2	7:E:52:GLU:OE2	1.79	0.81
1:X:13:DT:H5"	6:N:1093:TYR:CE2	2.15	0.81
2:H:13:C:H4'	5:C:409:ARG:NH2	1.96	0.81
6:D:1262:LEU:HD21	6:D:1351:GLU:HG3	1.63	0.80
6:D:772:PRO:HB3	6:D:1224:VAL:HG13	1.61	0.80
5:M:677:MET:HE1	5:M:679:PHE:HD1	1.46	0.80
5:M:585:GLU:HG2	5:M:589:ARG:HH12	1.47	0.80
6:N:73:CYS:HB3	6:N:76:CYS:O	1.82	0.80
5:C:5:ARG:HE	5:C:8:ARG:HH12	1.30	0.80
6:D:1220:ALA:HB1	6:D:1223:ILE:HD12	1.63	0.80
6:D:616:GLN:NE2	6:D:621:LYS:HG2	1.96	0.80
6:N:610:LYS:O	6:N:615:ARG:HD3	1.81	0.80
4:L:97:VAL:HG11	4:L:120:VAL:HG21	1.62	0.80
7:O:40:LEU:HB3	7:O:72:ARG:HH21	1.45	0.80
5:C:703:ILE:HD12	5:C:703:ILE:H	1.46	0.80
6:N:785:ILE:HG12	6:N:935:LYS:HA	1.62	0.80
7:E:13:VAL:HG21	7:E:19:LEU:HB2	1.63	0.80
5:M:736:ASP:HA	5:M:744:ARG:NH1	1.96	0.80
6:N:156:GLU:O	6:N:159:ARG:HG2	1.82	0.80
5:C:677:MET:SD	5:C:987:ILE:HG21	2.22	0.80
5:C:949:LYS:HD3	6:D:796:ARG:HH22	1.44	0.80
6:N:520:LEU:HD12	6:N:521:PRO:HD2	1.64	0.80
5:M:1056:LYS:O	6:N:624:ASP:HB2	1.81	0.80
4:A:206:THR:HG22	4:A:209:GLU:HG3	1.62	0.79
6:D:1196:THR:HG23	11:D:8314:HOH:O	1.82	0.79
6:D:740:PHE:HB3	11:D:8291:HOH:O	1.82	0.79
6:N:481:MET:SD	6:N:1388:ARG:HB3	2.22	0.79
6:D:1153:VAL:HG13	6:N:561:GLY:HA3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:7:G:N2	5:M:1021:LEU:HB2	1.96	0.79
1:G:17:DC:H2''	1:G:18:DG:H5'	1.62	0.79
5:M:1055:LEU:HD22	5:M:1066:ALA:HB2	1.64	0.79
5:M:65:VAL:HB	5:M:101:ILE:HB	1.63	0.79
5:M:854:PRO:HB2	5:M:856:GLU:HG3	1.64	0.79
5:M:915:LYS:HA	11:M:1454:HOH:O	1.83	0.79
5:M:1109:VAL:HG22	6:N:3:LYS:HE3	1.62	0.79
6:N:96:ALA:HB3	6:N:554:LEU:HD23	1.64	0.79
5:C:1017:THR:OG1	5:C:1019:GLN:HG2	1.83	0.79
5:C:139:GLN:HG2	5:C:334:ARG:HB2	1.65	0.79
6:D:1393:GLN:CD	6:D:1394:VAL:H	1.85	0.79
6:D:899:LEU:HD13	6:D:914:LEU:HD21	1.62	0.79
5:M:260:LEU:HB2	5:M:291:ALA:HB1	1.64	0.79
5:M:462:ASP:HB3	5:M:468:ARG:HD2	1.65	0.79
5:M:762:LYS:HD2	5:M:786:LYS:HG3	1.65	0.79
4:B:1:MET:HG2	4:B:5:LYS:HB3	1.65	0.79
5:C:710:ILE:HB	5:C:790:LEU:HD22	1.65	0.79
5:M:597:ALA:HB2	5:M:655:LEU:HD21	1.63	0.79
5:M:732:ALA:HB2	11:M:1476:HOH:O	1.82	0.79
4:L:62:LEU:H	4:L:62:LEU:HD12	1.45	0.79
6:D:1003:VAL:O	6:D:1007:VAL:HG23	1.83	0.79
6:D:1495:ILE:HG12	7:E:80:VAL:HG11	1.63	0.79
5:M:292:ARG:HD2	5:M:299:LYS:HZ3	1.47	0.79
4:K:31:GLY:HA3	4:L:42:ARG:HH21	1.49	0.78
6:N:1459:LEU:HB3	6:N:1465:ASN:HD21	1.47	0.78
6:N:796:ARG:HE	6:N:828:LYS:HZ3	1.30	0.78
5:C:140:ILE:HG22	5:C:333:ILE:HG13	1.64	0.78
5:C:356:ARG:HA	11:C:1191:HOH:O	1.82	0.78
6:D:550:ARG:HA	6:D:550:ARG:HE	1.45	0.78
6:N:887:ALA:HB1	6:N:893:GLU:HG3	1.66	0.78
5:M:141:HIS:O	5:M:331:ARG:HA	1.84	0.78
5:M:66:LEU:HD22	5:M:372:LEU:HD23	1.66	0.78
5:M:1034:GLU:HB3	6:N:619:LEU:HD22	1.65	0.78
5:C:2:GLU:HG3	5:C:899:GLN:HB3	1.64	0.78
6:D:771:SER:HB3	6:D:778:LEU:HD13	1.65	0.78
6:D:782:SER:H	6:D:785:ILE:HD13	1.48	0.78
4:K:87:VAL:HG21	4:K:144:VAL:HG11	1.66	0.78
5:M:360:LEU:HD23	11:M:1129:HOH:O	1.84	0.78
5:M:769:PRO:HD2	6:N:65:ARG:CZ	2.12	0.78
6:N:1204:CYS:HB3	11:N:9238:HOH:O	1.82	0.78
6:N:810:GLU:O	6:N:813:LEU:HG	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:671:ASN:HD22	5:M:671:ASN:N	1.81	0.78
6:N:1036:ARG:HH21	6:N:1042:ARG:HA	1.48	0.78
2:Y:9:G:H2'	2:Y:10:G:C8	2.17	0.78
2:Y:16:G:H21	6:N:705:ALA:CB	1.95	0.78
4:L:85:LEU:HA	4:L:124:ASN:HD22	1.48	0.78
5:M:151:ASP:HB2	5:M:157:ARG:O	1.83	0.78
5:C:625:LEU:HA	5:C:639:GLN:HE21	1.47	0.78
5:C:748:GLU:HB2	5:C:799:ILE:HD12	1.64	0.78
6:D:127:LEU:HD12	6:D:128:TYR:H	1.49	0.78
6:N:1045:MET:HE2	6:N:1073:SER:HB3	1.63	0.78
5:M:1090:LYS:HD2	6:N:90:MET:HG3	1.66	0.78
4:A:87:VAL:HG21	4:A:144:VAL:HG11	1.65	0.78
5:C:198:ARG:HD2	5:C:204:GLN:HE21	1.47	0.78
5:C:752:GLY:N	5:C:792:VAL:HB	1.99	0.77
6:D:1099:VAL:HA	11:D:8257:HOH:O	1.84	0.77
5:M:12:VAL:HB	5:M:472:ARG:CZ	2.15	0.77
5:M:468:ARG:HH21	5:M:487:THR:H	1.32	0.77
6:N:774:SER:HB3	6:N:1362:LYS:O	1.84	0.77
5:M:1050:GLN:HE22	6:N:1471:LEU:N	1.82	0.77
4:A:43:ILE:HG13	4:A:218:LEU:HD12	1.65	0.77
5:C:10:ARG:HA	5:C:10:ARG:HH11	1.47	0.77
5:C:308:ARG:HG2	11:C:1224:HOH:O	1.84	0.77
5:C:577:PRO:HD2	5:C:580:MET:SD	2.24	0.77
5:C:684:PHE:H	5:C:687:ALA:HB3	1.49	0.77
4:L:179:PHE:HB2	4:L:195:LEU:HD11	1.66	0.77
5:M:413:LEU:H	5:M:413:LEU:HD12	1.48	0.77
5:M:684:PHE:H	5:M:687:ALA:HB3	1.48	0.77
2:Y:12:G:H2'	2:Y:13:C:C6	2.20	0.77
4:L:24:VAL:HG13	4:L:196:THR:HG22	1.66	0.77
5:M:516:ARG:HD2	5:M:521:PRO:HA	1.66	0.77
6:N:394:LEU:HD21	6:N:445:ARG:NH2	1.99	0.77
5:C:979:THR:HG23	5:C:981:GLU:H	1.48	0.77
5:C:687:ALA:HB1	11:C:1474:HOH:O	1.83	0.77
5:C:1082:PRO:HG2	6:D:1469:GLY:HA3	1.66	0.77
5:M:905:ILE:H	5:M:905:ILE:CD1	1.96	0.77
5:C:958:THR:HG23	5:C:961:GLU:HB2	1.67	0.77
5:M:64:LEU:HD22	5:M:359:MET:HG3	1.66	0.77
6:N:1266:ARG:HG2	6:N:1267:ARG:H	1.50	0.77
6:N:684:LYS:HB2	6:N:686:GLU:HG3	1.66	0.77
5:C:328:LEU:HB2	5:C:433:THR:HB	1.66	0.77
6:D:699:VAL:H	6:D:756:GLN:NE2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1426:LYS:HA	6:N:1429:LEU:HD13	1.66	0.77
5:C:139:GLN:HE21	5:C:334:ARG:HD3	1.49	0.77
5:C:433:THR:HG22	5:C:437:ARG:NH1	1.99	0.77
6:D:774:SER:HB3	6:D:1362:LYS:O	1.84	0.77
6:D:785:ILE:HG13	6:D:939:PHE:CE2	2.19	0.77
5:M:516:ARG:NE	6:N:1068:LEU:HD13	1.99	0.77
5:M:938:LYS:HB2	5:M:938:LYS:HZ2	1.50	0.77
6:N:397:LYS:O	6:N:448:GLU:HB2	1.84	0.77
5:M:511:GLU:O	5:M:526:PRO:HD3	1.84	0.77
5:M:758:ARG:CZ	5:M:788:THR:HB	2.14	0.77
6:D:136:ASP:CB	6:D:455:ARG:HE	1.99	0.77
6:D:9:ARG:HA	6:D:1455:LYS:O	1.84	0.77
6:D:897:TRP:HA	6:D:900:ILE:HG12	1.65	0.77
6:N:554:LEU:HD13	6:N:570:GLU:HG2	1.67	0.76
5:C:1083:GLU:HG2	5:C:1086:ARG:HH21	1.48	0.76
6:N:1459:LEU:HB3	6:N:1465:ASN:ND2	2.00	0.76
5:C:431:HIS:CD2	5:C:433:THR:H	2.03	0.76
6:D:908:LYS:CB	6:D:1027:GLY:HA3	2.15	0.76
6:N:1003:VAL:O	6:N:1007:VAL:HG23	1.85	0.76
5:C:874:LEU:O	5:C:877:PRO:HD2	1.86	0.76
6:D:1087:ARG:HG3	6:D:1237:THR:HG21	1.67	0.76
6:D:202:VAL:HB	6:D:398:ALA:O	1.86	0.76
6:D:710:ARG:HG2	6:D:772:PRO:HG2	1.68	0.76
5:M:1032:PHE:O	5:M:1036:GLU:HB2	1.86	0.76
6:N:895:VAL:HG11	6:N:922:LEU:HD21	1.65	0.76
6:D:28:LYS:HG3	6:D:29:PRO:HD2	1.68	0.76
5:M:244:PRO:HD2	5:M:245:GLY:H	1.50	0.76
5:M:5:ARG:NE	5:M:8:ARG:HH12	1.83	0.76
6:N:1390:LEU:HD21	11:N:9287:HOH:O	1.86	0.76
11:M:1524:HOH:O	6:N:616:GLN:HA	1.84	0.76
6:D:1271:LYS:HZ2	6:D:1331:ASP:HB3	1.48	0.76
5:C:1032:PHE:O	5:C:1036:GLU:HB2	1.85	0.76
5:M:998:TYR:HE2	5:M:1000:MET:HG3	1.49	0.76
6:N:486:ARG:HA	6:N:489:ARG:HG2	1.68	0.76
6:N:1481:VAL:HG11	7:O:18:ARG:HA	1.68	0.76
5:C:614:ARG:HG3	5:C:620:LEU:HD22	1.68	0.76
6:N:1108:ARG:NH1	6:N:1108:ARG:HB2	2.01	0.76
6:N:1394:VAL:HB	6:N:1397:LYS:HB2	1.68	0.76
4:A:222:LEU:HD21	4:B:218:LEU:HB3	1.68	0.75
4:A:75:VAL:HA	4:A:78:ILE:HD12	1.68	0.75
6:D:131:LYS:HG3	6:D:568:ARG:HG2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:53:ILE:HD12	6:D:86:ARG:HH22	1.51	0.75
6:D:554:LEU:HD21	6:D:571:LYS:HE2	1.66	0.75
6:D:25:GLU:HG3	6:D:93:ILE:HA	1.66	0.75
6:D:455:ARG:O	6:D:460:ALA:HB2	1.87	0.75
6:D:73:CYS:HB3	6:D:76:CYS:O	1.87	0.75
6:N:122:GLU:O	6:N:126:VAL:HG23	1.84	0.75
6:N:399:ARG:HB2	6:N:401:TYR:CZ	2.21	0.75
6:N:47:GLU:HA	11:N:9490:HOH:O	1.85	0.75
5:C:1016:ILE:HD13	5:C:1016:ILE:H	1.50	0.75
5:M:312:ALA:HB1	5:M:318:PRO:HG2	1.67	0.75
4:B:52:ALA:HB2	4:B:170:VAL:O	1.86	0.75
6:D:1103:HIS:CD2	6:D:1463:LYS:H	2.05	0.75
5:M:997:LEU:HD21	11:M:1517:HOH:O	1.87	0.75
6:N:136:ASP:HB3	6:N:137:PRO:HD3	1.67	0.75
5:C:1031:ARG:HE	6:D:621:LYS:HB3	1.50	0.75
5:M:626:ARG:HH12	5:M:637:LEU:HB2	1.51	0.75
1:X:17:DC:H2''	1:X:18:DG:H5'	1.66	0.75
5:M:331:ARG:HH21	5:M:427:VAL:HG13	1.51	0.75
5:M:378:LEU:HG	5:M:382:ILE:HD11	1.69	0.75
5:M:758:ARG:HB3	5:M:788:THR:O	1.87	0.75
6:N:603:LEU:O	6:N:606:ILE:HG22	1.87	0.75
5:C:650:ARG:HG3	5:C:653:ASP:HB2	1.67	0.75
4:L:162:ILE:HA	11:L:316:HOH:O	1.86	0.75
5:M:150:PRO:HA	5:M:158:TYR:HB3	1.69	0.75
6:N:496:LEU:HD12	6:N:500:ARG:HG2	1.69	0.75
6:N:764:LEU:HD12	6:N:765:SER:H	1.52	0.75
4:B:152:PRO:HB2	4:B:155:LYS:HD2	1.69	0.75
6:D:139:GLY:O	6:D:147:VAL:HB	1.87	0.75
6:N:133:ILE:HG12	6:N:456:MET:HE2	1.68	0.75
6:D:1149:LEU:HD12	6:D:1161:GLU:O	1.87	0.75
6:D:148:GLU:HB3	6:D:151:GLN:HB2	1.69	0.75
6:D:651:GLU:HA	6:D:654:LYS:NZ	2.02	0.75
6:N:29:PRO:HD3	6:N:548:ILE:HG21	1.68	0.75
4:B:211:LEU:O	4:B:215:VAL:HG13	1.86	0.74
5:C:169:GLY:HA3	5:C:263:ASP:HB3	1.69	0.74
2:H:12:G:H2'	2:H:13:C:C6	2.22	0.74
6:N:853:VAL:HG22	6:N:858:VAL:HG23	1.69	0.74
4:B:41:ARG:HD2	4:B:177:VAL:HG23	1.69	0.74
1:X:13:DT:H5''	6:N:1093:TYR:HE2	1.51	0.74
6:N:1155:VAL:HA	11:N:9051:HOH:O	1.88	0.74
6:N:1448:THR:O	6:N:1452:ILE:HD12	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:141:HIS:HB3	5:C:418:LEU:HD23	1.67	0.74
5:C:904:PRO:HD2	5:C:908:GLY:HA2	1.67	0.74
2:Y:2:A:H8	2:Y:2:A:H3'	1.48	0.74
4:A:57:TYR:HB3	4:A:141:GLU:HG3	1.67	0.74
6:D:1195:GLN:HG3	6:D:1196:THR:N	2.02	0.74
5:M:1092:LEU:HA	5:M:1095:LEU:HD12	1.68	0.74
6:N:1228:SER:O	6:N:1232:PRO:HD2	1.88	0.74
6:N:139:GLY:O	6:N:147:VAL:HB	1.86	0.74
5:C:186:VAL:HG23	5:C:187:ASN:H	1.51	0.74
5:C:1034:GLU:HB3	6:D:619:LEU:HD22	1.67	0.74
2:H:9:G:H2'	2:H:10:G:C8	2.21	0.74
5:M:443:THR:HG21	6:N:1078:ARG:HE	1.52	0.74
2:Y:10:G:H1'	11:Y:1398:HOH:O	1.86	0.74
2:Y:10:G:H2'	2:Y:11:C:C6	2.23	0.74
5:C:943:VAL:HG11	5:C:973:VAL:HG21	1.70	0.74
5:M:433:THR:HG21	5:M:488:ALA:HB1	1.70	0.74
5:M:807:ARG:H	5:M:807:ARG:HE	1.36	0.74
5:M:5:ARG:HB2	5:M:8:ARG:HH22	1.51	0.74
6:N:1424:VAL:HG13	6:N:1425:THR:H	1.50	0.74
5:C:328:LEU:H	5:C:433:THR:CB	1.99	0.74
5:C:437:ARG:HE	5:C:469:THR:HB	1.52	0.74
5:C:872:ASN:HD21	5:C:874:LEU:HD13	1.51	0.74
6:D:581:LEU:HG	6:D:582:LEU:HG	1.68	0.74
5:M:781:LYS:HD3	5:M:781:LYS:H	1.51	0.74
6:N:409:VAL:HG21	6:N:421:LEU:HD23	1.67	0.74
5:M:673:LEU:HD22	5:M:867:VAL:HA	1.69	0.74
5:C:959:PRO:HB2	11:C:1203:HOH:O	1.85	0.74
6:N:972:LEU:HG	6:N:976:GLN:NE2	2.03	0.74
4:B:59:GLU:HB2	4:B:137:ARG:NH1	1.99	0.74
6:D:65:ARG:HG3	6:D:66:GLN:H	1.53	0.74
6:D:806:PHE:CE1	6:D:813:LEU:HB3	2.23	0.74
5:M:68:PHE:HZ	5:M:71:TYR:HD2	1.36	0.74
6:N:204:LEU:HD13	6:N:445:ARG:NE	2.03	0.74
6:N:786:ILE:HG21	6:N:1027:GLY:N	2.01	0.74
4:K:39:PRO:HG3	11:L:348:HOH:O	1.86	0.73
6:N:1093:TYR:O	6:N:1097:LYS:HG2	1.88	0.73
5:M:1034:GLU:N	6:N:619:LEU:HB3	2.03	0.73
6:D:1098:LEU:HD23	6:D:1226:ALA:HA	1.70	0.73
5:C:1042:ALA:HA	6:D:1220:ALA:HB3	1.68	0.73
6:N:166:GLN:HG3	6:N:447:VAL:HB	1.71	0.73
4:A:194:LYS:HG3	11:A:338:HOH:O	1.86	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:603:LEU:O	6:D:606:ILE:HG22	1.88	0.73
11:D:8449:HOH:O	7:E:28:GLN:HG3	1.88	0.73
5:M:546:LEU:HD12	5:M:565:GLN:HE22	1.50	0.73
6:N:1166:LEU:HD23	6:N:1166:LEU:H	1.53	0.73
5:M:1005:MET:HB2	6:N:648:MET:CE	2.18	0.73
4:A:82:LEU:HD22	4:A:142:VAL:HG11	1.69	0.73
11:A:325:HOH:O	4:B:215:VAL:HG21	1.89	0.73
7:E:54:LEU:HG	7:E:58:PRO:HG2	1.71	0.73
5:C:668:LEU:HD13	5:C:995:MET:SD	2.29	0.73
5:C:722:ILE:HD12	5:C:823:VAL:HG21	1.69	0.73
6:D:483:HIS:HB2	6:D:484:PRO:HD3	1.68	0.73
6:N:1481:VAL:HG13	7:O:18:ARG:HE	1.53	0.73
6:N:959:GLU:HB2	6:N:963:TYR:CE1	2.24	0.73
5:C:810:ASP:HB3	5:C:813:VAL:HG12	1.70	0.73
6:D:1105:ILE:HD12	6:D:1373:ARG:HH21	1.52	0.73
6:D:171:LEU:HD21	6:D:192:ALA:CB	2.18	0.73
4:L:59:GLU:HB2	4:L:137:ARG:NH1	2.03	0.73
5:M:671:ASN:HA	11:M:1511:HOH:O	1.88	0.73
5:C:881:ASN:O	5:C:884:GLN:HG3	1.89	0.73
5:C:946:ARG:HB3	5:C:946:ARG:HH11	1.52	0.73
5:C:516:ARG:NE	6:D:1068:LEU:HD13	2.03	0.73
5:M:290:LEU:HD22	5:M:302:VAL:HG11	1.70	0.73
5:M:52:PHE:CD2	5:M:68:PHE:HB2	2.24	0.73
6:N:541:ASN:O	6:N:545:ARG:HG3	1.89	0.73
5:C:1035:MET:HA	5:C:1038:TRP:CE3	2.24	0.73
5:C:263:ASP:HB2	5:C:264:PRO:HD3	1.69	0.73
5:C:837:ASP:HA	5:C:999:HIS:HE1	1.52	0.73
6:D:1231:GLU:CD	6:D:1232:PRO:HD3	2.09	0.73
6:D:1462:LEU:HD21	6:D:1474:ALA:HB3	1.71	0.73
6:D:171:LEU:HD23	6:D:172:PRO:HD2	1.69	0.73
5:M:758:ARG:NH2	5:M:788:THR:HB	2.04	0.73
6:N:989:TYR:O	6:N:993:LEU:HG	1.87	0.73
6:D:834:THR:HG22	6:D:838:ARG:HH11	1.53	0.73
5:M:132:ALA:HB1	5:M:632:ASN:HD21	1.54	0.73
5:C:479:VAL:HG11	5:C:503:LEU:HD11	1.71	0.73
6:D:1083:ASP:O	6:D:1087:ARG:HG2	1.89	0.73
4:K:189:ARG:HH12	4:L:155:LYS:HE3	1.54	0.73
4:L:218:LEU:O	4:L:222:LEU:HG	1.88	0.73
5:M:313:LEU:HD23	11:M:1189:HOH:O	1.89	0.73
4:K:42:ARG:HH11	5:M:978:ARG:HA	1.53	0.73
6:N:1166:LEU:HD12	6:N:1171:VAL:HG22	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:48:MET:HB2	7:O:54:LEU:HB2	1.70	0.73
7:E:76:GLY:HA3	7:E:79:LEU:HD13	1.69	0.72
5:M:554:ASP:CB	5:M:880:MET:HB2	2.19	0.72
5:M:872:ASN:HD21	5:M:874:LEU:HB2	1.53	0.72
5:C:1095:LEU:HD23	6:D:582:LEU:HD22	1.71	0.72
5:M:756:VAL:O	5:M:789:SER:HB3	1.89	0.72
6:N:643:GLY:HA3	6:N:727:GLN:HB2	1.70	0.72
2:Y:6:U:H2'	2:Y:7:G:N7	2.03	0.72
5:C:768:THR:HB	5:C:771:GLU:HB3	1.72	0.72
5:M:578:VAL:HG23	5:M:579:VAL:HG12	1.71	0.72
5:C:312:ALA:HB1	5:C:318:PRO:HG2	1.70	0.72
5:C:710:ILE:HD12	5:C:790:LEU:HB2	1.70	0.72
5:C:850:ALA:HB2	11:C:1474:HOH:O	1.88	0.72
6:D:486:ARG:HA	6:D:489:ARG:CD	2.19	0.72
2:H:10:G:H2'	2:H:11:C:C6	2.25	0.72
2:Y:13:C:H4'	5:M:409:ARG:NH2	2.05	0.72
6:D:153:LEU:HD11	6:D:158:TYR:HB2	1.72	0.72
6:D:25:GLU:HA	6:D:92:HIS:O	1.89	0.72
6:D:394:LEU:O	6:D:396:VAL:HG23	1.88	0.72
6:D:68:PHE:HB2	11:D:8148:HOH:O	1.89	0.72
6:N:929:ARG:NH1	6:N:929:ARG:HB2	2.05	0.72
6:N:95:LEU:H	6:N:95:LEU:HD12	1.54	0.72
4:B:79:ILE:HA	4:B:82:LEU:HD12	1.70	0.72
5:C:677:MET:HB3	5:C:987:ILE:HD13	1.71	0.72
6:D:1465:ASN:HD21	6:D:1470:ARG:HE	1.36	0.72
5:M:412:ALA:HB1	5:M:419:THR:HG21	1.71	0.72
6:N:116:LEU:HD13	6:N:118:LEU:HD11	1.71	0.72
4:A:226:SER:O	4:A:228:PRO:HD3	1.90	0.72
4:B:218:LEU:O	4:B:222:LEU:HG	1.89	0.72
5:C:464:LEU:HD21	11:C:1308:HOH:O	1.89	0.72
6:N:951:ILE:HG23	6:N:1062:ARG:HE	1.55	0.72
7:O:54:LEU:O	7:O:54:LEU:HD23	1.90	0.72
7:O:46:PRO:HG3	7:O:66:LYS:HD3	1.70	0.72
4:B:186:LEU:HD21	11:B:367:HOH:O	1.87	0.72
6:D:53:ILE:HD12	6:D:86:ARG:NH2	2.04	0.72
4:K:189:ARG:NH1	4:L:155:LYS:HE3	2.04	0.72
6:N:493:ARG:HG2	6:N:1390:LEU:HB2	1.71	0.72
6:D:30:GLU:HB3	6:D:40:GLU:HG2	1.71	0.72
5:C:689:VAL:HB	5:C:870:ILE:HG13	1.71	0.72
6:D:122:GLU:O	6:D:126:VAL:HG23	1.90	0.72
6:D:810:GLU:O	6:D:813:LEU:HG	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:608:GLY:C	5:M:609:ASN:HD22	1.94	0.72
4:K:38:ASN:HB2	5:M:980:GLY:HA3	1.71	0.72
6:N:1205:TYR:CD2	6:N:1215:VAL:HG21	2.25	0.72
6:N:179:VAL:HG13	6:N:183:GLU:HB3	1.72	0.72
4:A:61:VAL:HG23	11:A:319:HOH:O	1.90	0.71
6:D:677:LEU:HD23	6:D:683:ILE:HG13	1.72	0.71
4:K:89:PHE:HD1	4:K:120:VAL:HG23	1.54	0.71
5:M:1060:ILE:HG22	11:M:1405:HOH:O	1.90	0.71
6:N:421:LEU:HD22	6:N:444:VAL:HG11	1.69	0.71
5:C:158:TYR:HD1	5:C:314:THR:HG22	1.54	0.71
5:C:409:ARG:CA	5:C:454:SER:HA	2.16	0.71
5:C:861:LEU:HA	5:C:974:LEU:HD12	1.72	0.71
6:N:133:ILE:HG21	6:N:454:ALA:HB1	1.71	0.71
4:A:179:PHE:HB2	4:A:195:LEU:HD11	1.71	0.71
5:C:129:ILE:HD13	5:C:134:ARG:HB2	1.73	0.71
5:C:436:GLY:O	5:C:459:ALA:HB2	1.90	0.71
5:C:675:ALA:HB2	5:C:867:VAL:HG11	1.71	0.71
6:D:409:VAL:HG23	6:D:421:LEU:HA	1.71	0.71
6:D:646:LYS:HG3	6:D:720:LEU:HD23	1.70	0.71
4:K:153:ALA:HA	4:K:156:HIS:CE1	2.26	0.71
5:M:270:GLY:O	5:M:274:ARG:HB3	1.89	0.71
5:M:704:HIS:O	5:M:828:ALA:HA	1.90	0.71
5:M:874:LEU:HA	6:N:1023:MET:SD	2.31	0.71
5:C:143:SER:HB2	5:C:276:LYS:HZ3	1.55	0.71
5:C:1031:ARG:NE	6:D:621:LYS:HB3	2.06	0.71
4:K:56:VAL:HG22	4:K:142:VAL:HG12	1.70	0.71
5:M:1090:LYS:HE3	5:M:1112:PHE:HE1	1.55	0.71
5:M:1101:THR:HG21	5:M:1111:ILE:HG23	1.71	0.71
5:M:34:VAL:HB	5:M:38:LYS:HG3	1.71	0.71
6:N:1042:ARG:NH2	6:N:1073:SER:HB3	2.05	0.71
6:N:1136:LYS:HB2	6:N:1139:ASP:OD2	1.90	0.71
5:C:355:VAL:HA	5:C:358:ARG:HD3	1.72	0.71
5:C:950:LEU:HB3	5:C:952:LEU:HD23	1.72	0.71
6:D:119:SER:HB2	6:D:123:LEU:HB2	1.72	0.71
5:M:554:ASP:HB2	5:M:880:MET:HB2	1.71	0.71
6:N:145:VAL:HG22	6:N:146:PRO:HD2	1.71	0.71
6:N:792:ILE:HD11	6:N:878:GLY:O	1.91	0.71
6:N:921:ARG:NH1	6:N:921:ARG:HB3	2.05	0.71
5:C:142:ARG:HB3	5:C:142:ARG:HH11	1.55	0.71
5:C:804:VAL:HG11	5:C:824:ARG:HH21	1.56	0.71
5:C:675:ALA:HA	5:C:989:VAL:HG13	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1037:GLN:HG2	6:D:1042:ARG:HB3	1.73	0.71
6:D:185:VAL:HG11	6:D:191:LEU:HD21	1.72	0.71
6:D:421:LEU:HB2	6:D:427:VAL:HG12	1.72	0.71
6:N:521:PRO:HG2	6:N:524:LEU:HD22	1.72	0.71
11:M:1216:HOH:O	6:N:950:GLY:HA3	1.91	0.71
5:C:675:ALA:HB1	5:C:677:MET:SD	2.31	0.71
5:C:837:ASP:HA	5:C:999:HIS:CE1	2.25	0.71
6:D:615:ARG:NH2	6:D:1096:ARG:NH1	2.39	0.71
5:M:1115:LEU:HG	6:N:85:VAL:HG12	1.72	0.71
5:M:376:ARG:HG2	11:M:1395:HOH:O	1.90	0.71
5:M:546:LEU:HD21	11:M:1376:HOH:O	1.90	0.71
6:D:83:SER:O	6:D:86:ARG:HB3	1.90	0.71
5:M:325:ILE:HD11	11:M:1567:HOH:O	1.91	0.71
5:M:584:GLU:CD	5:M:584:GLU:H	1.95	0.71
4:K:178:ALA:HB2	5:M:864:GLY:H	1.55	0.71
6:N:1146:GLY:HA3	6:N:1207:TYR:HB2	1.71	0.71
6:N:50:PHE:CG	6:N:522:PRO:HD3	2.26	0.71
5:M:1019:GLN:NE2	6:N:616:GLN:HE22	1.88	0.71
6:D:1160:LEU:HD11	6:D:1174:LEU:HD21	1.71	0.71
6:D:1332:PRO:HG3	6:D:1347:TYR:HE2	1.54	0.71
6:D:486:ARG:HA	6:D:489:ARG:HG2	1.73	0.71
4:K:178:ALA:HB3	4:K:198:ARG:HG3	1.72	0.71
4:L:89:PHE:HB3	4:L:94:LEU:CD1	2.21	0.71
6:D:1087:ARG:HH21	6:D:1253:THR:HG22	1.56	0.70
6:D:1383:ASP:HB2	6:D:1416:ALA:HB3	1.71	0.70
6:D:1481:VAL:HG22	7:E:18:ARG:HE	1.56	0.70
5:M:609:ASN:HD22	5:M:609:ASN:N	1.86	0.70
6:N:1033:GLN:HE21	6:N:1036:ARG:NH1	1.88	0.70
6:N:1094:LEU:HB2	6:N:1260:ILE:HD11	1.72	0.70
6:N:502:PHE:CE1	6:N:509:PRO:HB3	2.26	0.70
5:C:1046:ALA:HA	6:D:1472:ILE:HG13	1.72	0.70
2:H:12:G:H1'	5:C:393:GLN:HG2	1.73	0.70
6:D:1093:TYR:O	6:D:1097:LYS:HG2	1.91	0.70
4:K:220:GLU:O	4:K:223:THR:HG22	1.89	0.70
6:N:1168:MET:HE3	6:N:1171:VAL:HB	1.72	0.70
6:N:1406:ARG:HG3	6:N:1412:LYS:HG2	1.72	0.70
1:G:13:DT:H5''	6:D:1093:TYR:CE2	2.26	0.70
4:L:102:LYS:HE3	4:L:104:GLU:HG3	1.73	0.70
5:M:1031:ARG:HA	6:N:621:LYS:O	1.92	0.70
5:C:502:PRO:HB2	5:C:509:ALA:HB3	1.73	0.70
5:C:1007:ALA:HB1	6:D:652:LEU:HD13	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:507:ASN:H	6:N:507:ASN:ND2	1.90	0.70
6:N:78:VAL:HG12	6:N:80:VAL:HG22	1.74	0.70
5:C:1017:THR:HB	6:D:613:ARG:HH22	1.56	0.70
6:D:403:PHE:HB2	6:D:423:ASP:OD1	1.91	0.70
2:H:6:U:H2'	2:H:7:G:N7	2.05	0.70
5:M:108:ILE:HB	5:M:368:THR:OG1	1.91	0.70
5:C:1085:PHE:O	5:C:1089:VAL:HG23	1.91	0.70
6:D:177:ALA:HB3	6:D:205:TYR:OH	1.90	0.70
6:D:150:ARG:HH22	6:D:473:LEU:HD21	1.57	0.70
5:M:433:THR:HG22	5:M:437:ARG:HH11	1.56	0.70
6:N:434:ARG:HB3	6:N:434:ARG:NH1	2.07	0.70
2:Y:2:A:OP2	6:N:671:LYS:NZ	2.25	0.70
6:N:786:ILE:HG22	6:N:1026:SER:HB3	1.73	0.70
5:C:244:PRO:HB3	11:C:1256:HOH:O	1.92	0.70
6:D:1090:ASP:HA	6:D:1093:TYR:HB2	1.72	0.70
6:D:1098:LEU:HD21	6:D:1229:ILE:HD12	1.73	0.70
6:D:179:VAL:HG13	6:D:183:GLU:HB3	1.74	0.70
4:K:48:ILE:HB	11:K:973:HOH:O	1.90	0.70
5:M:745:ILE:HD12	5:M:745:ILE:H	1.57	0.70
5:C:144:PRO:HG2	5:C:265:ARG:NH2	2.06	0.70
5:C:673:LEU:HB3	5:C:868:ASP:OD1	1.92	0.70
6:D:1209:LEU:HD23	6:D:1210:SER:N	2.06	0.70
6:D:1496:GLU:HA	6:D:1499:ARG:NE	2.06	0.70
6:D:117:ASP:H	6:D:150:ARG:NH1	1.90	0.70
6:D:117:ASP:HB2	6:D:495:ARG:NH2	2.07	0.70
4:K:88:ARG:O	4:K:121:GLU:HG2	1.91	0.70
5:M:806:LEU:HD11	5:M:824:ARG:NH2	2.06	0.70
6:N:565:ILE:H	6:N:565:ILE:HD12	1.56	0.70
4:A:227:ASN:O	4:B:11:PHE:HB3	1.91	0.70
5:C:762:LYS:HD3	5:C:784:ASP:O	1.90	0.70
6:D:1005:GLN:HA	6:D:1005:GLN:HE21	1.57	0.70
6:D:496:LEU:O	6:D:500:ARG:HG2	1.92	0.70
6:D:584:ASN:OD1	6:D:590:PRO:HD2	1.91	0.70
5:M:39:ARG:HD2	5:M:39:ARG:N	2.05	0.70
6:N:1042:ARG:O	6:N:1057:VAL:HB	1.92	0.70
2:Y:9:G:H2'	2:Y:10:G:H8	1.56	0.70
4:B:38:ASN:HB3	4:B:39:PRO:HD3	1.74	0.70
6:D:1086:LEU:HD12	11:D:8404:HOH:O	1.91	0.70
6:D:119:SER:HB2	6:D:123:LEU:H	1.57	0.70
4:L:110:LYS:HD3	4:L:126:ASP:HA	1.74	0.70
6:N:871:LYS:HB3	6:N:873:LEU:HD21	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:874:LEU:HD12	5:C:874:LEU:H	1.56	0.69
6:N:462:GLN:HB2	6:N:513:ILE:HD13	1.74	0.69
7:O:54:LEU:HA	7:O:58:PRO:HG2	1.74	0.69
4:B:89:PHE:HB3	4:B:94:LEU:HD12	1.74	0.69
5:C:841:ASN:H	5:C:841:ASN:HD22	1.38	0.69
6:D:105:VAL:HG21	6:D:128:TYR:HE1	1.57	0.69
6:N:760:ARG:HH11	7:O:61:VAL:HG23	1.57	0.69
4:A:56:VAL:HG22	4:A:142:VAL:HG13	1.73	0.69
5:C:547:ILE:HG21	5:C:550:LEU:HD13	1.74	0.69
5:C:886:LEU:HD13	6:D:951:ILE:HG13	1.73	0.69
6:D:546:ARG:HA	11:D:8178:HOH:O	1.91	0.69
6:D:684:LYS:HB3	6:D:686:GLU:HG3	1.72	0.69
5:M:242:LEU:HD13	11:M:1532:HOH:O	1.92	0.69
5:C:159:ILE:HG13	11:C:1362:HOH:O	1.93	0.69
5:C:689:VAL:HG12	5:C:690:ILE:H	1.56	0.69
6:D:38:LYS:HG2	6:D:39:PRO:HD2	1.73	0.69
6:D:786:ILE:HD13	6:D:908:LYS:HB2	1.75	0.69
5:M:872:ASN:ND2	5:M:874:LEU:HB2	2.06	0.69
6:D:1147:ARG:HB3	6:D:1188:VAL:HG21	1.73	0.69
6:D:1192:LEU:HB3	6:D:1345:GLU:OE2	1.92	0.69
6:D:136:ASP:HB2	6:D:455:ARG:HE	1.57	0.69
6:D:1395:LEU:HD23	6:D:1396:GLU:N	2.08	0.69
6:D:141:ILE:HD11	6:D:165:LYS:NZ	2.08	0.69
6:D:756:GLN:HG3	6:D:760:ARG:HH11	1.57	0.69
5:M:333:ILE:N	5:M:465:GLY:HA3	2.05	0.69
5:M:877:PRO:HG2	6:N:1023:MET:SD	2.31	0.69
6:N:41:ARG:HD3	6:N:42:ASP:H	1.57	0.69
6:N:554:LEU:HD21	6:N:571:LYS:HD3	1.75	0.69
7:O:31:LEU:HD21	7:O:60:ALA:HB2	1.73	0.69
5:C:265:ARG:HH11	5:C:267:TYR:HB3	1.55	0.69
5:C:341:THR:HA	11:C:1289:HOH:O	1.91	0.69
5:C:457:ALA:HB3	5:C:538:GLN:HA	1.74	0.69
5:C:69:LEU:HB2	5:C:97:ARG:HB2	1.73	0.69
5:C:1100:GLN:HE21	5:C:1100:GLN:HA	1.57	0.69
5:C:872:ASN:HD21	5:C:874:LEU:CD1	2.04	0.69
6:D:1059:SER:HA	11:D:8349:HOH:O	1.93	0.69
6:D:741:ASP:O	6:D:743:ASP:N	2.25	0.69
6:D:957:PRO:HA	11:D:8083:HOH:O	1.91	0.69
5:M:838:LYS:HG2	11:M:1491:HOH:O	1.93	0.69
5:M:853:LEU:HD23	5:M:858:MET:HB3	1.74	0.69
6:N:130:SER:HB3	6:N:132:TYR:HE1	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:197:LEU:HG	4:A:199:ILE:HD11	1.75	0.69
5:C:134:ARG:HH21	5:C:392:SER:HB2	1.56	0.69
5:C:431:HIS:HD2	5:C:433:THR:H	1.41	0.69
5:C:578:VAL:HG23	5:C:579:VAL:HG12	1.74	0.69
6:D:95:LEU:HD21	6:D:574:LEU:HD21	1.73	0.69
5:M:689:VAL:HG12	5:M:690:ILE:H	1.57	0.69
5:C:511:GLU:O	5:C:526:PRO:HD3	1.93	0.69
6:D:399:ARG:HH11	6:D:430:ASP:HB2	1.57	0.69
6:D:656:PHE:HB3	6:D:694:VAL:HG11	1.73	0.69
7:E:41:GLU:OE1	7:E:42:PRO:HD3	1.93	0.69
4:L:52:ALA:HB2	4:L:170:VAL:O	1.92	0.69
6:N:1124:GLN:HB3	6:N:1135:ARG:HD3	1.74	0.69
6:N:54:LYS:HD2	6:N:55:ASP:H	1.58	0.69
6:N:586:ARG:NH2	6:N:1444:THR:HG21	2.07	0.69
6:N:889:ALA:HB3	6:N:930:LEU:HD12	1.74	0.69
4:B:64:GLU:HA	4:B:165:ILE:HD13	1.75	0.69
6:D:1403:LEU:HD23	6:D:1407:LEU:HD13	1.74	0.69
5:C:1034:GLU:H	6:D:619:LEU:HD13	1.58	0.69
6:D:644:LEU:HD23	6:D:718:PRO:HB3	1.73	0.69
2:H:8:C:H5"	11:H:37:HOH:O	1.93	0.69
5:M:580:MET:SD	5:M:584:GLU:HG3	2.33	0.69
5:M:881:ASN:O	5:M:884:GLN:HG3	1.91	0.69
5:C:411:SER:HA	5:C:451:LEU:O	1.93	0.69
5:C:31:GLN:HB3	5:C:71:TYR:OH	1.92	0.69
6:D:554:LEU:HD11	6:D:571:LYS:HD3	1.75	0.69
11:B:374:HOH:O	6:D:851:LEU:HD21	1.93	0.69
5:M:331:ARG:NH2	5:M:427:VAL:HG13	2.07	0.69
5:M:405:ARG:HH22	5:M:566:THR:CG2	2.05	0.69
1:X:17:DC:H5"	5:M:1030:GLN:HE21	1.58	0.69
5:C:182:VAL:HG21	5:C:220:GLY:O	1.93	0.68
6:D:1046:GLN:HG2	6:D:1052:THR:HG22	1.74	0.68
6:D:10:ILE:HB	6:D:1451:ALA:HA	1.73	0.68
6:D:634:GLY:HA2	6:D:727:GLN:HE21	1.57	0.68
6:D:781:PRO:HG2	6:D:911:LEU:HD23	1.75	0.68
5:M:904:PRO:HD2	5:M:908:GLY:HA2	1.75	0.68
6:N:489:ARG:NH2	6:N:1389:LEU:HD21	2.07	0.68
6:N:834:THR:HG22	6:N:838:ARG:HH11	1.58	0.68
5:C:405:ARG:HG3	5:C:442:GLU:OE1	1.93	0.68
5:C:946:ARG:HH22	6:D:861:GLN:HE22	1.40	0.68
4:K:94:LEU:HD21	4:K:119:ASP:HB3	1.74	0.68
5:M:252:LYS:NZ	5:M:296:GLY:HA3	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:148:PHE:HZ	5:M:281:LEU:HD13	1.57	0.68
5:M:479:VAL:HG11	5:M:503:LEU:HD11	1.75	0.68
4:B:197:LEU:HD21	4:B:199:ILE:HD11	1.74	0.68
6:D:1399:ASP:O	6:D:1403:LEU:HB2	1.93	0.68
6:D:524:LEU:O	6:D:526:PRO:HD3	1.92	0.68
1:G:14:DT:H5'	1:G:14:DT:H6	1.59	0.68
4:L:61:VAL:HG21	4:L:75:VAL:HG21	1.75	0.68
5:M:333:ILE:H	5:M:465:GLY:CA	2.05	0.68
6:N:1492:LEU:HD12	6:N:1493:LYS:NZ	2.09	0.68
6:N:807:ALA:HB2	6:N:833:GLU:OE1	1.93	0.68
4:B:59:GLU:CB	4:B:137:ARG:HH12	2.03	0.68
5:C:158:TYR:O	5:C:310:LEU:HD11	1.93	0.68
6:D:1109:GLU:HG2	6:D:1201:CYS:CA	2.20	0.68
6:D:1196:THR:HG22	11:D:8501:HOH:O	1.94	0.68
6:D:1380:GLU:HG3	6:D:1420:LEU:HD12	1.74	0.68
6:D:868:TYR:HB2	6:D:873:LEU:HD12	1.76	0.68
5:M:343:GLN:HG2	5:M:385:PHE:HB2	1.75	0.68
5:C:5:ARG:CZ	5:C:8:ARG:HH22	2.06	0.68
6:D:964:LEU:HD21	6:D:1058:ARG:HE	1.57	0.68
6:D:409:VAL:CG2	6:D:421:LEU:HA	2.24	0.68
6:D:526:PRO:HA	11:D:8171:HOH:O	1.93	0.68
6:D:800:LYS:HE3	6:D:804:LEU:HD22	1.74	0.68
6:D:98:PRO:HB3	11:D:8058:HOH:O	1.93	0.68
5:M:305:PRO:HG3	5:M:308:ARG:HH22	1.59	0.68
6:N:1161:GLU:HG2	6:N:1164:ARG:HB2	1.74	0.68
6:D:22:SER:HB2	6:D:92:HIS:HB3	1.76	0.68
6:D:988:ARG:O	6:D:992:ILE:HG13	1.94	0.68
4:K:58:ILE:HG21	4:K:68:ILE:HD11	1.75	0.68
6:N:1191:PRO:HG2	6:N:1370:ILE:HD13	1.74	0.68
5:C:435:TYR:HE1	5:C:539:VAL:HG22	1.58	0.68
6:D:1223:ILE:CG2	6:D:1227:GLN:HE21	2.06	0.68
6:D:1252:ILE:HG13	6:D:1253:THR:H	1.59	0.68
6:D:1197:ARG:HB3	6:D:1396:GLU:HG3	1.74	0.68
6:D:650:LEU:HD23	6:D:691:LEU:HD23	1.75	0.68
5:M:874:LEU:O	5:M:877:PRO:HD2	1.93	0.68
6:N:119:SER:HB2	6:N:123:LEU:H	1.59	0.68
6:N:394:LEU:O	6:N:396:VAL:HG23	1.94	0.68
6:N:879:ARG:HH21	6:N:904:VAL:N	1.90	0.68
6:D:455:ARG:HB3	6:D:459:GLU:HG2	1.76	0.68
6:D:984:THR:HG22	6:D:987:GLU:HG3	1.76	0.68
5:M:244:PRO:HG2	5:M:246:ASP:OD2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:510:ALA:HB3	5:M:513:VAL:HG23	1.76	0.68
5:M:536:PRO:HD2	5:M:537:LYS:NZ	2.08	0.68
6:N:1111:ASP:CG	6:N:1203:LYS:HG3	2.14	0.68
4:B:85:LEU:HA	4:B:124:ASN:HD22	1.57	0.68
5:C:408:ARG:HG2	5:C:454:SER:HB3	1.74	0.68
6:D:1032:PRO:HB2	11:D:8254:HOH:O	1.93	0.68
6:N:526:PRO:O	6:N:537:THR:HA	1.94	0.68
5:M:292:ARG:HD2	5:M:299:LYS:NZ	2.08	0.68
5:M:516:ARG:NH1	5:M:521:PRO:HB3	2.09	0.68
7:O:51:LEU:HD23	7:O:52:GLU:H	1.59	0.68
5:C:709:GLU:HG3	5:C:824:ARG:HG2	1.76	0.67
5:M:495:THR:H	5:M:530:GLU:CD	1.96	0.67
5:M:768:THR:HB	5:M:771:GLU:HB3	1.75	0.67
6:N:546:ARG:NH1	6:N:546:ARG:HB3	2.08	0.67
5:C:106:GLY:O	5:C:107:LEU:HD23	1.94	0.67
5:C:610:ARG:HD3	5:C:622:GLU:OE2	1.94	0.67
6:D:1252:ILE:HG13	6:D:1253:THR:N	2.09	0.67
6:D:29:PRO:CG	6:D:549:ASN:HD21	2.07	0.67
6:D:782:SER:N	6:D:785:ILE:HD13	2.08	0.67
2:H:8:C:HO2'	2:H:9:G:H5'	1.58	0.67
4:L:206:THR:HG22	4:L:209:GLU:H	1.59	0.67
5:M:1111:ILE:HG13	5:M:1112:PHE:H	1.57	0.67
5:M:438:ILE:HD11	5:M:467:ILE:HD12	1.75	0.67
5:M:762:LYS:HD3	5:M:784:ASP:O	1.94	0.67
5:M:432:ARG:HH22	6:N:1047:LYS:HD3	1.59	0.67
6:N:402:PRO:HG2	11:N:9030:HOH:O	1.93	0.67
5:C:1:MET:HG2	5:C:900:ARG:HH22	1.60	0.67
5:C:762:LYS:HD2	5:C:786:LYS:HB2	1.75	0.67
5:M:1034:GLU:HB3	6:N:619:LEU:HD13	1.75	0.67
6:N:1412:LYS:O	6:N:1414:PRO:HD3	1.93	0.67
6:N:637:LEU:HD11	6:N:641:GLN:C	2.15	0.67
2:Y:11:C:H2'	2:Y:12:G:C8	2.30	0.67
5:C:1050:GLN:HE22	6:D:1471:LEU:HB2	1.59	0.67
5:C:433:THR:HG22	5:C:437:ARG:HH11	1.58	0.67
5:C:630:ARG:HA	5:C:705:ILE:HD13	1.77	0.67
6:D:786:ILE:HG21	6:D:1027:GLY:H	1.58	0.67
6:D:1101:VAL:CG2	6:D:1424:VAL:HG23	2.23	0.67
6:D:952:ASP:HA	6:D:1062:ARG:HH21	1.60	0.67
6:N:1124:GLN:NE2	6:N:1135:ARG:HA	2.10	0.67
6:N:1434:TRP:CZ3	6:N:1457:ASP:HB2	2.29	0.67
6:N:524:LEU:O	6:N:526:PRO:HD3	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:814:ALA:O	6:N:818:ARG:HG3	1.95	0.67
5:C:909:ALA:HB1	5:C:914:ILE:HD11	1.76	0.67
6:D:455:ARG:HB2	6:D:460:ALA:CA	2.25	0.67
6:D:610:LYS:O	6:D:615:ARG:HD3	1.93	0.67
6:D:654:LYS:HB3	6:D:655:PRO:HD3	1.77	0.67
5:M:549:PHE:CD1	5:M:886:LEU:HD23	2.30	0.67
6:N:483:HIS:HB2	6:N:484:PRO:HD3	1.76	0.67
4:B:58:ILE:HB	4:B:61:VAL:HB	1.76	0.67
5:C:235:LEU:HD21	11:C:1313:HOH:O	1.93	0.67
5:C:898:GLY:HA2	11:C:1408:HOH:O	1.94	0.67
5:M:805:ARG:HD3	5:M:823:VAL:HG22	1.75	0.67
6:N:131:LYS:HD3	6:N:456:MET:SD	2.35	0.67
6:N:520:LEU:HD21	6:N:524:LEU:HD23	1.76	0.67
5:M:252:LYS:HA	11:M:1276:HOH:O	1.95	0.67
6:N:1201:CYS:SG	6:N:1204:CYS:HB2	2.35	0.67
6:N:394:LEU:HD21	6:N:445:ARG:HH22	1.58	0.67
4:B:206:THR:HG22	4:B:209:GLU:H	1.59	0.67
5:C:443:THR:HG22	5:C:453:THR:HB	1.77	0.67
6:D:134:VAL:HB	6:D:464:LEU:HD11	1.75	0.67
6:D:1393:GLN:OE1	6:D:1394:VAL:HG23	1.95	0.67
6:D:396:VAL:O	6:D:398:ALA:N	2.25	0.67
6:D:715:ALA:HB3	6:D:764:LEU:HA	1.76	0.67
5:M:1115:LEU:HB3	6:N:89:ARG:NH1	2.10	0.67
6:N:908:LYS:HB2	6:N:1027:GLY:HA3	1.76	0.67
6:N:971:LEU:O	6:N:975:GLU:HG2	1.94	0.67
5:C:872:ASN:HD22	5:C:872:ASN:C	1.99	0.67
6:D:101:HIS:HD1	6:D:103:TRP:HB2	1.59	0.67
6:D:1498:ALA:HB2	7:E:88:GLU:OE1	1.95	0.67
4:K:1:MET:SD	4:K:5:LYS:HB3	2.35	0.67
5:M:971:LYS:HA	5:M:988:VAL:HA	1.76	0.67
6:N:1340:GLY:O	6:N:1344:VAL:HG23	1.94	0.67
6:N:1480:PHE:HB2	11:N:9408:HOH:O	1.94	0.67
6:D:1465:ASN:ND2	6:D:1470:ARG:HB3	2.09	0.67
1:G:17:DC:H4'	6:D:628:ARG:CZ	2.25	0.67
6:D:963:TYR:CE2	6:D:1002:LYS:HB3	2.29	0.67
6:D:1485:GLN:HE21	7:E:78:ASN:HA	1.60	0.67
5:M:399:ASN:OD1	5:M:401:LEU:HB3	1.95	0.67
5:M:552:HIS:CD2	5:M:886:LEU:HD22	2.30	0.67
6:N:1267:ARG:HG3	6:N:1271:LYS:HZ3	1.59	0.67
1:G:18:DG:O3'	5:C:1001:VAL:HB	1.94	0.66
5:C:244:PRO:HG3	11:C:1490:HOH:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:518:LYS:O	5:C:520:GLU:HG2	1.95	0.66
5:C:5:ARG:NE	5:C:8:ARG:HH22	1.93	0.66
5:C:884:GLN:HB3	5:C:992:MET:HE1	1.75	0.66
6:D:786:ILE:HG21	6:D:1027:GLY:N	2.10	0.66
6:D:1252:ILE:O	6:D:1256:LEU:HD12	1.95	0.66
6:D:127:LEU:HD12	6:D:128:TYR:N	2.10	0.66
6:D:396:VAL:HG12	6:D:398:ALA:HB2	1.77	0.66
6:D:434:ARG:N	6:D:447:VAL:HG22	2.09	0.66
6:D:584:ASN:HB2	6:D:602:SER:HB3	1.78	0.66
6:D:38:LYS:NZ	6:D:59:ALA:HB1	2.09	0.66
2:H:11:C:H2'	2:H:12:G:C8	2.29	0.66
5:M:473:ARG:HA	5:M:531:PHE:HD1	1.60	0.66
6:N:1346:ARG:HD3	11:N:9293:HOH:O	1.95	0.66
4:A:79:ILE:HA	4:A:82:LEU:HD12	1.77	0.66
5:C:270:GLY:O	5:C:274:ARG:HB3	1.96	0.66
6:D:716:PHE:CE1	6:D:765:SER:HB3	2.30	0.66
6:D:977:ALA:HB1	6:D:983:LEU:HD21	1.77	0.66
1:G:14:DT:H2''	1:G:15:DC:H5'	1.76	0.66
4:K:150:TYR:HE2	4:K:152:PRO:HG3	1.60	0.66
5:M:433:THR:HG22	5:M:437:ARG:NH1	2.10	0.66
5:M:45:GLN:HB2	5:M:71:TYR:CE2	2.31	0.66
5:M:561:GLY:O	5:M:564:MET:HG3	1.95	0.66
6:N:1121:PRO:HD2	6:N:1346:ARG:NH2	2.09	0.66
5:M:764:GLU:HB2	6:N:54:LYS:HD3	1.77	0.66
5:C:1103:ASP:HB3	5:C:1105:LYS:HZ1	1.59	0.66
5:C:435:TYR:CE1	5:C:539:VAL:HG22	2.31	0.66
5:C:494:TYR:HB3	11:C:1172:HOH:O	1.96	0.66
6:D:480:GLU:O	6:D:484:PRO:HD2	1.96	0.66
5:M:251:ASP:HB3	5:M:252:LYS:HD2	1.78	0.66
5:M:953:VAL:HB	5:M:962:GLN:NE2	2.10	0.66
6:N:1000:THR:O	6:N:1003:VAL:HG12	1.95	0.66
6:N:119:SER:H	6:N:123:LEU:CD2	2.07	0.66
5:C:315:ALA:HB3	11:C:1454:HOH:O	1.94	0.66
5:C:313:LEU:HB2	5:C:321:GLU:HG3	1.76	0.66
5:M:102:HIS:HB2	5:M:106:GLY:O	1.95	0.66
5:M:288:ARG:HG3	11:M:1542:HOH:O	1.94	0.66
5:M:841:ASN:ND2	5:M:844:GLY:H	1.93	0.66
6:N:1266:ARG:HG2	6:N:1267:ARG:N	2.10	0.66
6:N:800:LYS:NZ	6:N:804:LEU:HD13	2.11	0.66
6:N:813:LEU:O	6:N:817:GLU:HB2	1.96	0.66
5:C:516:ARG:HD2	5:C:521:PRO:HA	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:52:PRO:HG2	6:D:80:VAL:HG13	1.76	0.66
6:N:1111:ASP:HB2	6:N:1203:LYS:HZ1	1.60	0.66
6:N:900:ILE:HG22	6:N:914:LEU:HD11	1.75	0.66
5:C:151:ASP:HB2	5:C:157:ARG:O	1.95	0.66
5:C:987:ILE:HG13	11:C:1149:HOH:O	1.94	0.66
5:C:1118:LYS:HA	6:D:23:TYR:OH	1.95	0.66
4:K:31:GLY:HA3	4:L:42:ARG:NH2	2.09	0.66
4:L:56:VAL:HG13	4:L:142:VAL:HG12	1.78	0.66
5:M:129:ILE:HG12	5:M:386:PHE:O	1.95	0.66
5:M:861:LEU:HD13	5:M:865:THR:CG2	2.25	0.66
6:N:1106:VAL:HG11	6:N:1474:ALA:HB1	1.78	0.66
6:N:796:ARG:NE	6:N:828:LYS:HZ3	1.94	0.66
4:A:14:ARG:HH22	4:A:24:VAL:HG23	1.61	0.66
4:B:125:PRO:HD2	11:B:346:HOH:O	1.94	0.66
5:C:629:TYR:HA	11:C:1337:HOH:O	1.96	0.66
6:D:1462:LEU:HD22	6:D:1472:ILE:HG22	1.77	0.66
5:C:1091:GLU:OE1	6:D:613:ARG:HG2	1.96	0.66
6:D:691:LEU:O	6:D:695:ILE:HG22	1.95	0.66
5:M:689:VAL:HG12	5:M:690:ILE:N	2.11	0.66
5:M:443:THR:HG21	6:N:1078:ARG:NE	2.10	0.66
6:N:1111:ASP:HB2	6:N:1203:LYS:NZ	2.11	0.66
5:C:236:ILE:HG13	11:C:1121:HOH:O	1.96	0.66
5:C:244:PRO:HD2	5:C:245:GLY:H	1.60	0.66
5:C:678:PRO:HD2	11:D:8199:HOH:O	1.95	0.66
6:D:879:ARG:HH21	6:D:903:ASP:HA	1.60	0.66
4:K:124:ASN:HD22	4:K:127:LEU:HD22	1.60	0.66
5:M:473:ARG:HA	5:M:531:PHE:CD1	2.30	0.66
5:M:810:ASP:OD2	5:M:815:LEU:HD22	1.96	0.66
6:N:396:VAL:HG12	6:N:447:VAL:HA	1.76	0.66
6:N:542:ASP:HA	6:N:545:ARG:HE	1.60	0.66
7:O:45:ARG:HG2	7:O:46:PRO:CD	2.24	0.66
5:C:516:ARG:HE	6:D:1068:LEU:HD13	1.60	0.66
5:C:597:ALA:HB2	5:C:655:LEU:HD21	1.78	0.66
5:C:755:LEU:HD21	5:C:792:VAL:HG22	1.75	0.66
5:C:838:LYS:HG3	5:C:997:LEU:HB2	1.78	0.66
6:D:1252:ILE:HA	11:D:8219:HOH:O	1.96	0.66
6:D:1396:GLU:HA	6:D:1399:ASP:OD2	1.96	0.66
6:D:466:LYS:HA	11:D:8320:HOH:O	1.95	0.66
6:D:568:ARG:O	6:D:572:ARG:HG3	1.96	0.66
2:H:6:U:H5'	11:H:45:HOH:O	1.94	0.66
4:L:221:HIS:HB3	11:L:365:HOH:O	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:267:TYR:HB2	5:M:272:ALA:HB1	1.78	0.66
5:M:979:THR:HG23	5:M:981:GLU:H	1.60	0.66
6:N:1044:LEU:HD22	6:N:1052:THR:HG22	1.76	0.66
4:A:117:VAL:HB	4:A:120:VAL:CG1	2.26	0.66
5:C:69:LEU:HD13	5:C:109:LYS:HE3	1.78	0.66
5:C:12:VAL:HG13	5:C:13:ILE:HG12	1.78	0.66
6:D:1089:ALA:HB3	11:D:8250:HOH:O	1.95	0.66
6:D:1189:ARG:HB3	6:D:1204:CYS:HA	1.78	0.66
6:D:481:MET:HE2	6:D:493:ARG:HB2	1.76	0.66
5:M:861:LEU:HD23	5:M:863:ASP:H	1.61	0.66
5:M:553:ASP:HA	5:M:881:ASN:HA	1.78	0.66
5:M:928:LYS:NZ	5:M:932:GLU:HG3	2.10	0.66
6:N:1151:ARG:HG2	6:N:1187:PRO:HB2	1.77	0.66
6:N:468:LEU:HB3	11:N:9068:HOH:O	1.96	0.66
6:N:618:LEU:HB3	6:N:619:LEU:HD23	1.78	0.66
5:C:83:CYS:HA	5:C:88:LEU:HB2	1.78	0.65
6:D:1329:ALA:O	6:D:1330:ILE:HD12	1.96	0.65
6:D:890:VAL:HG11	6:D:922:LEU:HD13	1.78	0.65
4:K:198:ARG:HH22	5:M:932:GLU:HB3	1.61	0.65
5:M:200:LEU:HD13	5:M:300:ASP:CG	2.16	0.65
5:M:502:PRO:HB2	5:M:509:ALA:HB3	1.77	0.65
5:M:690:ILE:CD1	5:M:833:LEU:HD23	2.26	0.65
6:N:413:ASP:O	6:N:435:VAL:HG23	1.96	0.65
6:N:553:ARG:O	6:N:557:LEU:HG	1.96	0.65
7:O:27:ALA:HB2	7:O:61:VAL:HG12	1.77	0.65
5:C:608:GLY:C	5:C:609:ASN:HD22	1.99	0.65
5:C:676:ILE:CG2	5:C:988:VAL:HG13	2.27	0.65
6:D:761:ILE:HG23	7:E:6:ILE:HD11	1.78	0.65
5:M:98:LEU:HD13	5:M:110:GLU:O	1.95	0.65
6:N:1148:VAL:HB	6:N:1203:LYS:O	1.96	0.65
6:N:1342:GLU:HA	11:N:9208:HOH:O	1.96	0.65
6:N:769:LEU:HD12	6:N:770:LEU:HG	1.77	0.65
6:N:917:GLN:O	6:N:921:ARG:HG2	1.96	0.65
5:C:1067:TYR:O	5:C:1071:ILE:HG12	1.96	0.65
5:C:194:VAL:HA	5:C:197:LEU:HD12	1.78	0.65
5:C:52:PHE:CD2	5:C:68:PHE:HB2	2.31	0.65
5:C:937:ASP:HB2	5:C:940:GLU:HG3	1.78	0.65
6:D:796:ARG:HH21	6:D:828:LYS:HE2	1.61	0.65
5:M:689:VAL:HB	5:M:870:ILE:HG13	1.78	0.65
5:M:911:GLU:O	5:M:915:LYS:HG2	1.96	0.65
6:N:788:GLY:O	6:N:792:ILE:HG22	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:213:GLN:O	4:B:217:ILE:HD13	1.96	0.65
6:D:879:ARG:HG3	6:D:879:ARG:HH11	1.60	0.65
6:D:1476:THR:HG23	7:E:21:VAL:HG22	1.77	0.65
1:G:17:DC:O3'	6:D:628:ARG:NH2	2.29	0.65
5:M:129:ILE:HD13	5:M:134:ARG:HB2	1.78	0.65
6:N:150:ARG:HG3	11:N:9044:HOH:O	1.96	0.65
6:N:960:LYS:HB3	11:N:9374:HOH:O	1.96	0.65
11:M:1409:HOH:O	7:O:31:LEU:HD13	1.96	0.65
5:C:22:GLN:HE22	5:C:407:LYS:HG2	1.59	0.65
4:L:102:LYS:HB2	4:L:139:ASN:OD1	1.96	0.65
6:N:1112:CYS:HB2	6:N:1195:GLN:HG2	1.78	0.65
6:N:1437:ALA:O	6:N:1446:VAL:HG21	1.95	0.65
6:N:660:LYS:HD2	6:N:694:VAL:HG22	1.78	0.65
6:N:1490:LYS:HE2	7:O:93:TYR:OH	1.96	0.65
6:D:1231:GLU:HG2	6:D:1235:GLN:CD	2.16	0.65
6:N:1174:LEU:HD22	6:N:1183:ILE:HD13	1.79	0.65
6:N:778:LEU:HA	6:N:780:LYS:HE2	1.78	0.65
4:A:197:LEU:HD23	4:A:197:LEU:H	1.62	0.65
5:C:274:ARG:HG3	5:C:285:LEU:HD22	1.79	0.65
5:C:837:ASP:O	5:C:848:VAL:HG13	1.96	0.65
5:C:841:ASN:N	5:C:841:ASN:HD22	1.91	0.65
5:C:971:LYS:HA	5:C:988:VAL:HA	1.79	0.65
4:K:112:ARG:NE	4:K:125:PRO:HB2	2.00	0.65
5:M:305:PRO:HG3	5:M:308:ARG:NH2	2.12	0.65
5:M:808:ARG:NH2	5:M:820:ARG:HH21	1.95	0.65
5:M:705:ILE:HA	5:M:827:VAL:O	1.97	0.65
6:N:132:TYR:HA	11:N:9432:HOH:O	1.96	0.65
6:N:421:LEU:HB2	6:N:427:VAL:HG12	1.79	0.65
6:N:661:MET:HA	6:N:666:ILE:HD12	1.79	0.65
2:Y:10:G:O2'	2:Y:11:C:H5'	1.96	0.65
4:B:137:ARG:NH1	4:B:139:ASN:HB3	2.11	0.65
5:C:17:PRO:HB2	5:C:20:GLU:HB2	1.77	0.65
5:C:328:LEU:H	5:C:433:THR:HB	1.61	0.65
6:D:131:LYS:HA	6:D:456:MET:HB2	1.77	0.65
6:D:133:ILE:O	6:D:152:LEU:HB2	1.97	0.65
6:D:996:TRP:O	6:D:1000:THR:HG22	1.96	0.65
2:H:12:G:O2'	2:H:13:C:H5'	1.97	0.65
5:M:435:TYR:CE1	5:M:539:VAL:HG22	2.29	0.65
5:M:937:ASP:HB3	5:M:940:GLU:H	1.62	0.65
6:N:637:LEU:HD21	6:N:642:CYS:HA	1.79	0.65
6:N:754:PHE:CE2	6:N:1476:THR:HG21	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:54:THR:HG22	4:B:158:ILE:HG13	1.78	0.65
5:C:1060:ILE:HG23	5:C:1061:GLU:H	1.62	0.65
6:D:50:PHE:HB3	6:D:522:PRO:HG3	1.79	0.65
4:K:27:PRO:HG2	4:K:186:LEU:HD13	1.77	0.65
6:N:74:GLU:HB3	6:N:75:ARG:NH2	2.12	0.65
6:N:876:SER:O	6:N:880:ILE:HG12	1.97	0.65
7:O:28:GLN:HB3	7:O:32:ARG:HH22	1.61	0.65
1:G:16:DG:OP1	5:C:1031:ARG:HD3	1.95	0.65
5:C:290:LEU:HD22	5:C:302:VAL:HG11	1.79	0.65
6:D:1084:THR:OG1	6:D:1238:MET:HA	1.96	0.65
6:D:822:ALA:HB1	11:D:8089:HOH:O	1.97	0.65
7:E:27:ALA:HB2	7:E:61:VAL:HG12	1.79	0.65
5:M:1056:LYS:HB3	6:N:624:ASP:H	1.60	0.65
6:N:131:LYS:HG2	6:N:568:ARG:HG2	1.79	0.65
6:N:948:THR:HB	11:N:9020:HOH:O	1.97	0.65
6:D:882:PHE:HA	6:D:885:ILE:HD12	1.79	0.64
6:D:895:VAL:O	6:D:899:LEU:HG	1.97	0.64
5:M:442:GLU:HG2	5:M:454:SER:CB	2.26	0.64
6:N:1147:ARG:HB3	6:N:1188:VAL:HG21	1.79	0.64
5:C:343:GLN:HA	5:C:343:GLN:NE2	2.11	0.64
5:C:689:VAL:HG12	5:C:690:ILE:N	2.12	0.64
5:M:166:PRO:HG3	11:M:1337:HOH:O	1.97	0.64
5:M:158:TYR:CE1	5:M:313:LEU:HG	2.33	0.64
4:B:25:LEU:O	4:B:28:LEU:HD21	1.97	0.64
5:C:158:TYR:CD1	5:C:313:LEU:HG	2.32	0.64
5:C:525:SER:HB2	5:C:527:GLU:HG3	1.79	0.64
5:C:470:PRO:HB2	5:C:534:VAL:HG21	1.78	0.64
6:D:141:ILE:HD13	6:D:450:TYR:HB3	1.79	0.64
6:D:1101:VAL:HG21	6:D:1424:VAL:HG23	1.78	0.64
6:D:484:PRO:CB	6:D:488:ARG:HE	2.07	0.64
7:E:48:MET:HB2	7:E:54:LEU:HD12	1.80	0.64
2:H:10:G:O2'	2:H:11:C:H5'	1.97	0.64
4:K:52:ALA:HA	11:K:1094:HOH:O	1.96	0.64
5:M:462:ASP:CG	5:M:463:GLU:H	2.01	0.64
5:M:771:GLU:HG3	11:M:1181:HOH:O	1.96	0.64
6:N:996:TRP:O	6:N:1000:THR:HG22	1.96	0.64
6:N:1087:ARG:HB3	6:N:1256:LEU:HD22	1.79	0.64
6:N:762:GLN:HA	11:N:9032:HOH:O	1.97	0.64
6:N:793:THR:HB	6:N:879:ARG:CD	2.25	0.64
4:A:48:ILE:HD12	4:A:174:VAL:HG21	1.78	0.64
5:C:146:VAL:HG22	5:C:162:ILE:HG23	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:609:ASN:N	5:C:609:ASN:HD22	1.94	0.64
6:D:119:SER:OG	6:D:123:LEU:HD13	1.96	0.64
6:D:402:PRO:HA	6:D:443:VAL:HG23	1.80	0.64
6:D:792:ILE:HG23	6:D:793:THR:HG23	1.79	0.64
6:D:804:LEU:HB2	6:D:830:ALA:O	1.98	0.64
6:D:1209:LEU:HD21	7:E:16:LYS:NZ	2.12	0.64
4:K:30:ARG:HH22	5:M:938:LYS:HD2	1.63	0.64
5:M:140:ILE:HA	5:M:332:ARG:O	1.97	0.64
5:M:542:VAL:HG23	11:M:1602:HOH:O	1.96	0.64
4:A:12:THR:OG1	4:A:24:VAL:HB	1.97	0.64
4:A:71:VAL:HG22	4:A:132:LEU:HG	1.78	0.64
4:A:36:LEU:O	4:A:40:LEU:HG	1.97	0.64
4:B:59:GLU:HG3	4:B:139:ASN:HD22	1.61	0.64
4:L:138:LEU:HD12	11:L:362:HOH:O	1.98	0.64
4:L:177:VAL:HG12	4:L:199:ILE:HG12	1.79	0.64
5:M:362:GLY:HA3	5:M:367:LEU:HD23	1.78	0.64
5:M:29:ALA:O	5:M:44:ILE:HG12	1.96	0.64
5:M:836:GLY:HA3	6:N:724:GLN:NE2	2.12	0.64
6:N:15:PRO:HA	6:N:18:ILE:HG12	1.79	0.64
6:N:396:VAL:HG12	6:N:398:ALA:HB2	1.80	0.64
6:N:786:ILE:HD13	6:N:1027:GLY:HA3	1.78	0.64
3:Z:8:DA:H1'	3:Z:9:DG:H5'	1.79	0.64
4:B:212:ASN:O	4:B:215:VAL:HG22	1.97	0.64
5:C:124:ASP:OD2	5:C:592:LEU:HB2	1.97	0.64
5:C:204:GLN:OE1	5:C:221:LEU:HD12	1.97	0.64
11:A:362:HOH:O	5:C:832:LYS:HD2	1.98	0.64
6:D:104:PHE:HB3	6:D:512:MET:SD	2.38	0.64
6:D:613:ARG:HH12	6:D:616:GLN:HG2	1.62	0.64
6:D:813:LEU:HD21	11:D:8233:HOH:O	1.97	0.64
6:D:823:LEU:O	6:D:823:LEU:HD23	1.98	0.64
2:H:9:G:O2'	2:H:10:G:H5'	1.97	0.64
5:M:684:PHE:CD2	5:M:685:GLU:HG2	2.33	0.64
6:N:1422:MET:SD	6:N:1426:LYS:HB3	2.37	0.64
7:O:47:LYS:HA	7:O:54:LEU:HB3	1.80	0.64
5:C:1105:LYS:NZ	5:C:1107:ASN:HD22	1.96	0.64
5:C:839:LEU:HD22	5:C:996:LYS:HA	1.80	0.64
6:D:71:LYS:NZ	6:D:71:LYS:HB2	2.12	0.64
6:D:973:GLN:HB3	11:D:8398:HOH:O	1.96	0.64
4:L:59:GLU:HG3	4:L:137:ARG:HH22	1.63	0.64
5:M:265:ARG:NH2	5:M:332:ARG:HH22	1.95	0.64
6:N:554:LEU:O	6:N:558:LEU:HG	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:91:GLY:O	6:N:519:VAL:N	2.21	0.64
6:D:1087:ARG:HD2	6:D:1256:LEU:HD13	1.78	0.64
6:D:1471:LEU:HD23	11:D:8477:HOH:O	1.98	0.64
6:D:860:LEU:HD23	6:D:877:PRO:HB2	1.79	0.64
6:D:1485:GLN:NE2	7:E:79:LEU:H	1.96	0.64
5:M:100:LEU:HD23	5:M:368:THR:HA	1.80	0.64
6:N:1380:GLU:HG3	6:N:1381:VAL:N	2.13	0.64
6:N:1415:VAL:HB	11:N:9268:HOH:O	1.96	0.64
6:N:17:LYS:HA	6:N:20:SER:HB3	1.80	0.64
6:N:41:ARG:HD3	6:N:42:ASP:N	2.13	0.64
6:N:679:ARG:HB2	6:N:682:ASP:OD2	1.98	0.64
5:C:18:LEU:HD12	5:C:18:LEU:H	1.61	0.64
5:C:194:VAL:HG21	5:C:221:LEU:O	1.97	0.64
5:C:872:ASN:HD22	5:C:873:PRO:N	1.95	0.64
6:D:1044:LEU:HD21	6:D:1053:PHE:O	1.98	0.64
6:D:496:LEU:HD21	6:D:1388:ARG:HG3	1.79	0.64
6:D:18:ILE:HG23	6:D:518:PRO:HG3	1.80	0.64
5:M:1005:MET:HB2	6:N:648:MET:HE1	1.78	0.64
5:M:170:PRO:HG2	11:M:1194:HOH:O	1.98	0.64
5:M:410:ILE:HD11	5:M:455:LEU:HB3	1.79	0.64
5:M:9:ILE:HG21	11:M:1490:HOH:O	1.98	0.64
6:N:29:PRO:HG3	6:N:549:ASN:HD21	1.61	0.64
5:C:9:ILE:HG13	5:C:907:ASP:OD2	1.98	0.64
6:D:136:ASP:CG	6:D:463:GLN:HB3	2.18	0.64
6:D:486:ARG:HA	6:D:489:ARG:CG	2.28	0.64
5:M:314:THR:HG21	11:M:1381:HOH:O	1.97	0.64
5:M:342:ASP:O	5:M:345:ARG:HG2	1.98	0.64
5:M:906:PHE:CD1	6:N:1067:VAL:HG22	2.33	0.64
6:N:1353:GLN:HB3	6:N:1357:ARG:NE	2.12	0.64
4:A:206:THR:HG22	4:A:209:GLU:H	1.63	0.63
5:C:688:ILE:HG21	5:C:871:LEU:HD23	1.80	0.63
6:D:637:LEU:HB2	11:D:8105:HOH:O	1.98	0.63
2:H:11:C:H2'	2:H:12:G:H8	1.63	0.63
4:K:117:VAL:HB	4:K:120:VAL:CG1	2.26	0.63
4:K:226:SER:O	4:K:228:PRO:HD3	1.97	0.63
4:L:175:ARG:O	6:N:851:LEU:HD11	1.98	0.63
5:M:598:GLU:O	5:M:651:LYS:HG3	1.98	0.63
6:N:1491:THR:O	6:N:1495:ILE:HD13	1.98	0.63
6:N:792:ILE:HD13	6:N:793:THR:HG22	1.80	0.63
4:B:42:ARG:HA	4:B:42:ARG:NH1	2.13	0.63
5:C:694:LEU:HD21	5:C:868:ASP:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1169:ASP:O	6:D:1173:LEU:HD13	1.98	0.63
6:D:440:VAL:HB	6:D:441:ARG:HH21	1.61	0.63
5:M:83:CYS:HA	5:M:88:LEU:HB2	1.78	0.63
6:N:1462:LEU:HD22	6:N:1472:ILE:HG22	1.79	0.63
6:N:887:ALA:HB1	6:N:893:GLU:CG	2.27	0.63
6:N:971:LEU:HA	6:N:974:ILE:HD12	1.80	0.63
5:C:1031:ARG:NH2	6:D:621:LYS:HG3	2.13	0.63
5:C:174:LEU:HB3	5:C:307:LEU:HD13	1.79	0.63
5:C:265:ARG:HB3	5:C:267:TYR:CD2	2.34	0.63
6:D:1119:SER:HA	6:D:1186:VAL:O	1.99	0.63
4:K:156:HIS:CD2	4:K:158:ILE:HG12	2.34	0.63
5:M:861:LEU:HD13	5:M:865:THR:HG23	1.79	0.63
6:N:474:GLU:O	6:N:478:LEU:HG	1.98	0.63
7:O:41:GLU:HB2	7:O:45:ARG:CZ	2.27	0.63
6:N:760:ARG:HH11	7:O:61:VAL:CG2	2.11	0.63
5:C:284:ARG:HG3	5:C:285:LEU:H	1.64	0.63
5:C:631:SER:HB3	5:C:637:LEU:HD11	1.79	0.63
6:D:1412:LYS:O	6:D:1414:PRO:HD3	1.99	0.63
6:D:610:LYS:HA	6:D:615:ARG:HD3	1.80	0.63
6:D:632:VAL:HG22	11:D:8291:HOH:O	1.99	0.63
6:D:705:ALA:HB3	6:D:706:PRO:HD3	1.80	0.63
5:M:395:LYS:HD3	5:M:397:GLU:OE2	1.99	0.63
5:M:549:PHE:CD2	5:M:886:LEU:HB3	2.33	0.63
6:N:806:PHE:CE1	6:N:813:LEU:HB3	2.34	0.63
6:N:799:LYS:O	6:N:826:PRO:HD2	1.98	0.63
5:C:143:SER:CB	5:C:276:LYS:HZ3	2.10	0.63
5:C:874:LEU:HG	6:D:1023:MET:SD	2.39	0.63
6:D:1185:GLU:HG2	6:N:559:ALA:HB1	1.80	0.63
5:M:352:ALA:HA	5:M:355:VAL:HG12	1.80	0.63
6:N:1109:GLU:OE1	6:N:1201:CYS:HB2	1.98	0.63
6:N:1402:ALA:HA	11:N:9043:HOH:O	1.98	0.63
6:N:654:LYS:O	6:N:658:LEU:HG	1.98	0.63
5:M:729:LEU:HD13	6:N:675:ARG:CZ	2.29	0.63
6:N:98:PRO:HA	11:N:9070:HOH:O	1.97	0.63
1:X:17:DC:H5''	5:M:1030:GLN:NE2	2.14	0.63
2:Y:12:G:H2'	2:Y:13:C:H6	1.64	0.63
2:Y:12:G:O2'	2:Y:13:C:H5'	1.98	0.63
2:Y:7:G:H2'	2:Y:7:G:N3	2.12	0.63
5:C:100:LEU:HD22	5:C:372:LEU:HD22	1.81	0.63
5:C:410:ILE:HG21	5:C:438:ILE:HD11	1.79	0.63
5:C:437:ARG:HB3	5:C:467:ILE:HB	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:805:ARG:HD3	5:C:807:ARG:HG3	1.81	0.63
6:D:1047:LYS:HG2	6:D:1053:PHE:CZ	2.33	0.63
6:D:657:LEU:HD22	6:D:691:LEU:HD23	1.81	0.63
6:D:82:LYS:HB3	6:D:84:ILE:HG12	1.79	0.63
5:M:146:VAL:HG12	5:M:162:ILE:HG12	1.81	0.63
5:M:759:THR:HB	5:M:785:VAL:CG1	2.28	0.63
5:M:1005:MET:HE1	6:N:724:GLN:HA	1.81	0.63
4:B:123:MET:C	4:B:125:PRO:HD3	2.19	0.63
5:C:157:ARG:HG3	5:C:314:THR:CG2	2.29	0.63
5:C:408:ARG:HG3	5:C:455:LEU:H	1.64	0.63
5:C:600:ASP:OD1	5:C:651:LYS:N	2.32	0.63
5:C:906:PHE:CE1	6:D:1067:VAL:HA	2.34	0.63
6:D:119:SER:H	6:D:123:LEU:CD2	2.11	0.63
6:D:704:ARG:HD3	6:D:738:ALA:HB2	1.79	0.63
7:E:54:LEU:HG	7:E:58:PRO:CG	2.28	0.63
5:M:432:ARG:HG3	11:M:1314:HOH:O	1.99	0.63
5:M:650:ARG:HG3	5:M:653:ASP:HB2	1.81	0.63
4:A:220:GLU:O	4:A:223:THR:HG22	1.99	0.63
5:C:276:LYS:HG2	5:C:280:LYS:NZ	2.14	0.63
5:C:279:GLU:HG3	5:C:280:LYS:HG3	1.79	0.63
5:C:672:VAL:HG12	5:C:699:PHE:CE1	2.34	0.63
5:C:690:ILE:CD1	5:C:833:LEU:HD23	2.29	0.63
5:C:670:GLN:NE2	5:C:699:PHE:O	2.30	0.63
6:D:614:PHE:CZ	6:D:1438:ALA:HB1	2.34	0.63
4:K:12:THR:OG1	4:K:24:VAL:HB	1.99	0.63
5:M:176:VAL:HG12	5:M:182:VAL:HG12	1.80	0.63
5:M:693:GLU:HA	5:M:696:LYS:HD2	1.80	0.63
6:N:1049:SER:O	6:N:1079:LYS:HE3	1.98	0.63
6:N:675:ARG:HA	6:N:678:GLU:HG2	1.80	0.63
6:N:696:HIS:HD2	7:O:59:ASN:HB2	1.64	0.63
5:C:410:ILE:HD12	5:C:438:ILE:CG1	2.29	0.63
5:C:327:HIS:HA	5:C:433:THR:OG1	1.98	0.63
5:C:441:VAL:HG13	5:C:559:LEU:HA	1.81	0.63
6:D:753:SER:HB2	11:D:8449:HOH:O	1.98	0.63
6:D:793:THR:O	6:D:879:ARG:HD3	1.99	0.63
7:E:48:MET:N	7:E:54:LEU:HB2	2.14	0.63
5:M:290:LEU:HD23	5:M:290:LEU:H	1.64	0.63
5:C:1033:GLY:O	5:C:1037:VAL:HG23	1.97	0.62
5:C:10:ARG:NH1	5:C:10:ARG:HA	2.12	0.62
5:C:98:LEU:O	5:C:109:LYS:HD2	1.99	0.62
2:H:4:U:H2'	2:H:5:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:8:DA:H1'	3:I:9:DG:H5'	1.81	0.62
5:M:580:MET:HB3	5:M:584:GLU:OE1	1.99	0.62
6:N:131:LYS:HE2	6:N:564:GLU:OE1	1.98	0.62
6:N:1440:PHE:HB3	11:N:9289:HOH:O	1.99	0.62
5:C:218:VAL:HA	5:C:221:LEU:HD23	1.81	0.62
5:C:710:ILE:HD12	5:C:790:LEU:HD13	1.81	0.62
5:C:882:LEU:HD23	5:C:885:ILE:HB	1.81	0.62
6:D:1267:ARG:HH11	6:D:1267:ARG:HB2	1.64	0.62
6:D:1364:HIS:ND1	6:D:1366:LYS:HG3	2.14	0.62
6:D:455:ARG:CZ	6:D:463:GLN:HG3	2.29	0.62
6:D:891:GLU:HB2	11:D:8407:HOH:O	1.98	0.62
7:E:70:THR:HB	7:E:72:ARG:HG2	1.81	0.62
2:H:6:U:C2'	2:H:7:G:C8	2.82	0.62
5:M:304:LEU:HG	5:M:308:ARG:HH21	1.64	0.62
6:N:165:LYS:HA	6:N:199:LEU:HD22	1.81	0.62
1:X:14:DT:H3'	6:N:610:LYS:NZ	2.14	0.62
4:B:20:TYR:OH	4:B:198:ARG:HD2	1.98	0.62
5:C:1037:VAL:O	5:C:1041:GLU:HG3	1.99	0.62
5:C:750:LYS:HD3	6:D:681:ARG:HD3	1.81	0.62
5:C:775:ARG:HD2	5:C:782:ALA:HB3	1.80	0.62
5:C:840:ALA:HB2	5:C:846:LYS:HG3	1.79	0.62
6:D:1437:ALA:O	6:D:1446:VAL:HG21	1.99	0.62
6:D:143:ASN:ND2	6:D:145:VAL:HG12	2.10	0.62
6:D:175:VAL:HG11	11:D:8081:HOH:O	1.99	0.62
6:D:1029:ARG:HH22	10:D:3999:APC:PG	2.22	0.62
5:M:44:ILE:HG23	5:M:344:PHE:HE1	1.64	0.62
5:M:576:ALA:HB3	5:M:900:ARG:NH1	2.13	0.62
4:K:180:GLN:HE22	5:M:937:ASP:HA	1.65	0.62
5:M:906:PHE:CE1	6:N:1067:VAL:HA	2.35	0.62
6:N:1219:GLU:HG2	6:N:1221:VAL:HG23	1.81	0.62
6:N:95:LEU:HB2	11:N:9070:HOH:O	1.99	0.62
5:C:720:GLU:HG2	5:C:760:SER:HB3	1.82	0.62
6:D:1000:THR:O	6:D:1003:VAL:HG12	1.99	0.62
6:D:574:LEU:O	6:D:578:VAL:HG23	1.98	0.62
7:E:54:LEU:O	7:E:54:LEU:HD23	2.00	0.62
2:H:9:G:H2'	2:H:10:G:H8	1.63	0.62
4:L:211:LEU:O	4:L:215:VAL:HG13	2.00	0.62
5:M:1098:ASP:HB2	6:N:21:TRP:HZ2	1.64	0.62
5:M:307:LEU:HG	5:M:311:PHE:CE2	2.34	0.62
5:M:468:ARG:HE	5:M:487:THR:N	1.98	0.62
5:M:807:ARG:H	5:M:807:ARG:NE	1.96	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1051:GLU:HG3	6:N:1051:GLU:O	2.00	0.62
6:N:895:VAL:O	6:N:899:LEU:HG	2.00	0.62
5:C:144:PRO:HA	5:C:163:ILE:HD11	1.81	0.62
6:D:1083:ASP:OD1	6:D:1252:ILE:HD12	2.00	0.62
6:D:138:LYS:HD3	11:D:8147:HOH:O	2.00	0.62
6:D:660:LYS:HD2	6:D:694:VAL:HG22	1.80	0.62
6:D:853:VAL:HG11	6:D:860:LEU:HG	1.81	0.62
5:M:135:VAL:HG11	5:M:407:LYS:HA	1.81	0.62
5:M:537:LYS:HE3	5:M:905:ILE:HD13	1.81	0.62
5:M:759:THR:HA	5:M:786:LYS:O	2.00	0.62
6:N:1125:PRO:HB3	6:N:1130:ARG:HH22	1.64	0.62
6:N:172:PRO:HG2	6:N:175:VAL:HG21	1.82	0.62
5:C:573:ARG:HB2	5:C:573:ARG:NH1	2.13	0.62
5:C:798:GLY:H	5:C:827:VAL:CG1	2.13	0.62
6:D:396:VAL:C	6:D:398:ALA:H	2.03	0.62
6:D:398:ALA:HB1	6:D:446:VAL:H	1.64	0.62
6:D:1495:ILE:HG21	7:E:80:VAL:HG13	1.82	0.62
4:L:58:ILE:CG2	4:L:61:VAL:HB	2.29	0.62
5:M:1090:LYS:HG2	5:M:1112:PHE:HZ	1.65	0.62
6:N:130:SER:HB3	6:N:132:TYR:CE1	2.34	0.62
6:N:1424:VAL:HG13	6:N:1425:THR:N	2.14	0.62
6:N:166:GLN:CG	6:N:396:VAL:HG13	2.29	0.62
6:N:764:LEU:HD12	6:N:765:SER:N	2.14	0.62
7:O:41:GLU:HG2	7:O:42:PRO:HD3	1.82	0.62
1:X:20:DG:H3'	11:X:610:HOH:O	2.00	0.62
2:Y:6:U:C2'	2:Y:7:G:C8	2.82	0.62
5:C:162:ILE:HD11	5:C:306:THR:HG21	1.82	0.62
5:C:329:GLY:N	5:C:488:ALA:HB3	2.13	0.62
5:C:410:ILE:O	5:C:452:ILE:HA	1.99	0.62
5:C:436:GLY:HA2	5:C:538:GLN:O	1.99	0.62
6:D:792:ILE:O	6:D:878:GLY:HA3	1.99	0.62
5:M:1087:VAL:HG23	6:N:524:LEU:HD11	1.80	0.62
5:M:120:LEU:HD22	5:M:121:MET:N	2.11	0.62
5:M:273:GLY:HA2	5:M:276:LYS:HE3	1.80	0.62
5:M:457:ALA:HB3	5:M:538:GLN:HA	1.80	0.62
5:M:587:VAL:HG12	5:M:588:VAL:N	2.13	0.62
6:N:1146:GLY:O	6:N:1207:TYR:HB2	2.00	0.62
1:X:14:DT:H2''	1:X:15:DC:H5'	1.80	0.62
2:Y:1:G:O6	5:M:773:LEU:HD12	2.00	0.62
5:C:554:ASP:HB2	6:D:1061:PHE:HE2	1.65	0.62
5:C:674:VAL:HG23	5:C:869:VAL:HG13	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:702:SER:HB3	5:C:996:LYS:HZ2	1.63	0.62
5:M:113:VAL:HG11	5:M:373:VAL:CG1	2.30	0.62
5:M:194:VAL:HA	5:M:197:LEU:HD12	1.82	0.62
5:M:194:VAL:HG11	5:M:221:LEU:O	2.00	0.62
6:N:741:ASP:O	6:N:743:ASP:N	2.29	0.62
5:C:862:PRO:HD2	5:C:925:TYR:OH	2.00	0.62
6:D:81:THR:HG22	6:D:82:LYS:N	2.14	0.62
2:Y:7:G:C2	5:M:1014:SER:HA	2.33	0.62
6:N:471:GLU:O	6:N:474:GLU:HB3	2.00	0.62
6:N:490:ALA:O	6:N:493:ARG:HG3	1.99	0.62
6:N:639:LEU:HB3	11:N:9466:HOH:O	1.98	0.62
11:N:9137:HOH:O	7:O:17:TYR:HB2	1.99	0.62
7:O:86:GLN:O	7:O:90:GLU:HG3	2.00	0.62
5:C:830:LYS:HD3	5:C:832:LYS:HE2	1.82	0.62
4:L:102:LYS:HZ1	4:L:137:ARG:HG2	1.64	0.62
5:M:629:TYR:HB3	11:M:1373:HOH:O	1.99	0.62
6:N:1121:PRO:HD3	6:N:1346:ARG:HE	1.63	0.62
2:Y:10:G:H2'	2:Y:11:C:H6	1.64	0.62
4:B:78:ILE:O	4:B:82:LEU:HG	2.00	0.61
5:C:101:ILE:HG23	5:C:107:LEU:HD22	1.82	0.61
6:D:550:ARG:HE	6:D:550:ARG:CA	2.11	0.61
4:K:58:ILE:HB	4:K:61:VAL:HB	1.82	0.61
5:M:23:VAL:HA	5:M:121:MET:HE1	1.81	0.61
5:M:265:ARG:HB3	5:M:267:TYR:CE2	2.35	0.61
5:M:928:LYS:HZ2	5:M:932:GLU:HG3	1.65	0.61
6:N:41:ARG:HD3	6:N:42:ASP:HB2	1.80	0.61
6:N:626:SER:HB2	6:N:748:HIS:CE1	2.34	0.61
6:N:902:LEU:HD23	6:N:902:LEU:H	1.65	0.61
4:B:102:LYS:NZ	4:B:139:ASN:HB2	2.14	0.61
5:C:343:GLN:HB2	5:C:385:PHE:CE2	2.34	0.61
5:M:1030:GLN:NE2	6:N:628:ARG:HD3	2.15	0.61
5:M:198:ARG:NH1	5:M:231:PRO:HG3	2.15	0.61
6:N:1036:ARG:HB3	6:N:1036:ARG:NH1	2.15	0.61
6:N:583:ASP:OD2	6:N:604:THR:HG21	1.99	0.61
5:C:456:ALA:HB1	5:C:538:GLN:O	1.99	0.61
6:D:440:VAL:HB	6:D:441:ARG:HE	1.63	0.61
6:D:544:TYR:O	6:D:548:ILE:HG12	2.00	0.61
6:D:762:GLN:HB2	7:E:16:LYS:HE2	1.82	0.61
5:M:83:CYS:HG	5:M:90:TYR:HD2	1.47	0.61
4:A:41:ARG:O	4:A:45:LEU:HD13	2.00	0.61
5:C:436:GLY:HA3	5:C:538:GLN:OE1	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:7:GLY:C	5:C:8:ARG:HD2	2.20	0.61
6:D:101:HIS:ND1	6:D:103:TRP:HB2	2.15	0.61
6:D:559:ALA:HB2	11:D:8141:HOH:O	1.98	0.61
6:D:707:THR:HG23	6:D:712:GLY:HA3	1.81	0.61
5:M:30:LEU:HA	5:M:44:ILE:HG12	1.80	0.61
11:M:1524:HOH:O	6:N:621:LYS:HE3	2.00	0.61
4:B:47:SER:OG	4:B:48:ILE:HD12	1.99	0.61
5:C:1076:VAL:HG21	11:D:8371:HOH:O	1.99	0.61
5:C:400:PRO:HG2	5:C:593:ALA:HB2	1.82	0.61
5:C:672:VAL:HG12	5:C:699:PHE:HE1	1.65	0.61
6:D:1219:GLU:HA	7:E:17:TYR:HE2	1.65	0.61
6:D:1267:ARG:HH11	6:D:1267:ARG:CB	2.13	0.61
6:D:1101:VAL:HG13	6:D:1427:SER:OG	2.00	0.61
6:D:135:LEU:HA	6:D:453:ASP:O	2.01	0.61
6:D:677:LEU:HD21	6:D:687:VAL:HG11	1.81	0.61
2:H:13:C:H2'	2:H:14:G:H8	1.65	0.61
5:M:909:ALA:HB1	5:M:914:ILE:HD11	1.81	0.61
4:A:181:VAL:HG11	11:A:382:HOH:O	2.01	0.61
4:A:182:GLU:O	4:A:194:LYS:HB3	2.00	0.61
5:C:464:LEU:O	5:C:466:PHE:N	2.34	0.61
5:C:79:PRO:HG2	5:C:82:GLU:HB2	1.80	0.61
6:D:10:ILE:HD12	6:D:1450:ALA:HB3	1.82	0.61
6:D:1493:LYS:O	6:D:1497:GLU:HG2	2.01	0.61
4:K:90:LEU:HB2	4:K:119:ASP:OD2	2.01	0.61
5:M:759:THR:HB	5:M:785:VAL:CG2	2.31	0.61
6:N:584:ASN:ND2	6:N:590:PRO:HD2	2.16	0.61
4:B:133:GLU:HA	4:B:133:GLU:OE1	2.00	0.61
5:C:857:ASP:CB	5:C:978:ARG:HG2	2.31	0.61
5:C:99:GLN:HB3	5:C:109:LYS:HD3	1.81	0.61
6:D:724:GLN:HG3	6:D:725:SER:N	2.14	0.61
6:D:955:VAL:HG11	6:D:1015:TYR:HE2	1.66	0.61
4:L:78:ILE:O	4:L:82:LEU:HG	2.00	0.61
5:M:110:GLU:N	5:M:368:THR:HG21	2.14	0.61
2:Y:4:U:H2'	2:Y:5:C:C6	2.36	0.61
5:C:198:ARG:HD2	5:C:204:GLN:NE2	2.15	0.61
5:C:398:THR:HG21	5:C:567:GLN:HA	1.83	0.61
6:D:123:LEU:HG	6:D:152:LEU:HD13	1.82	0.61
6:D:1346:ARG:HH12	6:D:1349:VAL:HG11	1.66	0.61
5:M:408:ARG:NE	5:M:455:LEU:HD11	2.15	0.61
5:M:694:LEU:HD21	5:M:868:ASP:HB3	1.83	0.61
6:N:50:PHE:CD2	6:N:522:PRO:HD3	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:N:9036:HOH:O	7:O:89:MET:HE1	1.99	0.61
5:C:1060:ILE:HG22	5:C:1086:ARG:NH2	2.15	0.61
5:C:318:PRO:HD2	5:C:321:GLU:OE1	2.01	0.61
5:C:431:HIS:CG	5:C:432:ARG:N	2.69	0.61
5:C:988:VAL:HG23	11:C:1330:HOH:O	2.00	0.61
6:D:393:ILE:HD13	11:D:8118:HOH:O	2.01	0.61
6:D:615:ARG:HH22	6:D:1096:ARG:HD2	1.64	0.61
6:D:633:VAL:HB	6:D:740:PHE:CE1	2.36	0.61
5:M:232:GLU:HB3	11:M:1516:HOH:O	1.99	0.61
5:M:113:VAL:HG11	5:M:373:VAL:HG11	1.81	0.61
5:M:524:VAL:CG1	5:M:528:GLU:HB2	2.31	0.61
5:M:676:ILE:CG2	5:M:988:VAL:HG13	2.31	0.61
6:N:135:LEU:HA	6:N:453:ASP:O	2.01	0.61
6:N:1105:ILE:HD11	6:N:1374:GLN:OE1	2.01	0.61
6:N:507:ASN:HD22	6:N:507:ASN:N	1.90	0.61
4:A:39:PRO:O	4:A:43:ILE:HG12	1.99	0.61
5:C:267:TYR:HB2	5:C:272:ALA:HB1	1.82	0.61
5:C:252:LYS:HB3	5:C:298:PHE:HZ	1.65	0.61
5:C:578:VAL:HG21	5:C:991:GLN:O	2.01	0.61
5:C:911:GLU:O	5:C:915:LYS:HG2	2.00	0.61
6:D:19:ARG:HH21	6:D:516:ALA:HB2	1.64	0.61
2:H:12:G:H2'	2:H:13:C:H6	1.66	0.61
5:M:554:ASP:HB3	5:M:880:MET:O	2.01	0.61
5:M:816:LYS:HB2	5:M:819:VAL:HG21	1.83	0.61
4:K:41:ARG:HH21	5:M:977:GLY:HA2	1.65	0.61
5:M:983:ILE:HG21	5:M:987:ILE:HD12	1.80	0.61
7:O:30:LEU:O	7:O:35:PHE:HA	2.01	0.61
4:A:124:ASN:ND2	4:A:127:LEU:HD22	2.16	0.60
4:A:225:PHE:CE1	4:B:40:LEU:HD11	2.35	0.60
6:D:153:LEU:CD1	6:D:158:TYR:HB2	2.31	0.60
6:D:8:VAL:HB	6:D:1434:TRP:CH2	2.36	0.60
5:M:464:LEU:O	5:M:466:PHE:N	2.33	0.60
6:N:619:LEU:HD12	6:N:621:LYS:HZ3	1.66	0.60
6:N:780:LYS:HD3	6:N:912:LYS:HE3	1.82	0.60
4:B:115:LEU:HB3	11:B:371:HOH:O	2.01	0.60
5:C:597:ALA:HA	5:C:655:LEU:HD11	1.83	0.60
5:C:626:ARG:H	5:C:639:GLN:NE2	1.98	0.60
6:D:1166:LEU:HD23	6:D:1166:LEU:H	1.65	0.60
6:D:873:LEU:HD11	11:D:8072:HOH:O	2.01	0.60
6:N:1045:MET:HG3	6:N:1073:SER:OG	2.00	0.60
6:N:1145:TYR:O	6:N:1147:ARG:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1243:THR:HG22	11:N:9395:HOH:O	2.01	0.60
6:N:1350:GLU:O	6:N:1354:LYS:HG2	2.02	0.60
6:N:489:ARG:CZ	6:N:1389:LEU:HD21	2.31	0.60
6:N:699:VAL:HG22	6:N:756:GLN:HE22	1.64	0.60
5:C:136:ILE:HG21	5:C:336:VAL:HG13	1.81	0.60
5:C:806:LEU:HD13	5:C:813:VAL:HG21	1.83	0.60
5:C:798:GLY:H	5:C:827:VAL:HG11	1.66	0.60
5:C:881:ASN:HD22	5:C:881:ASN:N	1.99	0.60
6:D:136:ASP:CB	6:D:137:PRO:HD3	2.30	0.60
6:D:592:THR:N	6:D:600:LEU:HD11	2.16	0.60
2:H:1:G:N2	5:C:770:GLU:HB3	2.17	0.60
4:K:111:ALA:HB2	4:K:127:LEU:HD23	1.82	0.60
4:K:209:GLU:HB3	11:K:1765:HOH:O	2.00	0.60
5:M:537:LYS:N	5:M:537:LYS:HD2	2.12	0.60
6:N:1007:VAL:HG12	6:N:1011:PHE:CE2	2.35	0.60
6:N:1109:GLU:HG2	6:N:1201:CYS:CA	2.29	0.60
6:N:1268:PRO:HD2	6:N:1271:LYS:NZ	2.15	0.60
6:N:804:LEU:HB2	6:N:830:ALA:O	2.02	0.60
2:Y:13:C:H2'	2:Y:14:G:H8	1.64	0.60
4:A:85:LEU:HA	4:A:124:ASN:ND2	2.08	0.60
5:C:575:GLN:HB2	5:C:670:GLN:OE1	2.02	0.60
5:C:56:GLU:HB3	5:C:64:LEU:HD23	1.82	0.60
6:D:1216:SER:HB3	7:E:16:LYS:H	1.67	0.60
6:D:754:PHE:CD1	7:E:24:ALA:HB1	2.36	0.60
4:K:42:ARG:NH2	4:L:34:VAL:HB	2.15	0.60
6:N:118:LEU:HD13	6:N:124:GLU:OE2	2.01	0.60
11:N:9248:HOH:O	7:O:16:LYS:HB2	2.02	0.60
5:C:627:ARG:O	5:C:638:ASP:HB2	2.00	0.60
5:C:86:LYS:HB3	11:C:1560:HOH:O	2.02	0.60
5:C:764:GLU:HG3	6:D:54:LYS:NZ	2.15	0.60
6:D:853:VAL:HG13	6:D:858:VAL:O	2.01	0.60
4:K:112:ARG:HE	4:K:125:PRO:CB	2.03	0.60
5:M:110:GLU:H	5:M:368:THR:CG2	2.12	0.60
5:M:751:PRO:HA	5:M:792:VAL:HB	1.83	0.60
5:M:805:ARG:HG2	5:M:823:VAL:HG13	1.84	0.60
6:N:1228:SER:HB2	11:N:9308:HOH:O	2.00	0.60
5:M:1007:ALA:HB1	6:N:652:LEU:HD13	1.84	0.60
6:N:929:ARG:HB2	6:N:929:ARG:HH11	1.65	0.60
6:D:1371:VAL:HG12	6:D:1375:MET:CE	2.32	0.60
6:D:28:LYS:HA	11:D:8201:HOH:O	2.01	0.60
6:D:480:GLU:HB2	11:D:8139:HOH:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:764:LEU:HD11	6:D:766:ALA:HB3	1.84	0.60
6:D:829:VAL:HA	11:D:8279:HOH:O	2.01	0.60
7:E:54:LEU:HA	7:E:58:PRO:HG2	1.83	0.60
5:M:671:ASN:N	5:M:671:ASN:ND2	2.50	0.60
6:N:1109:GLU:CD	6:N:1202:GLN:H	2.03	0.60
6:N:1438:ALA:N	6:N:1446:VAL:HG11	2.16	0.60
5:C:326:ASP:HB2	5:C:431:HIS:ND1	2.17	0.60
5:C:65:VAL:HG23	5:C:101:ILE:HB	1.83	0.60
5:C:660:ALA:HB1	5:C:667:ALA:O	2.02	0.60
6:D:1042:ARG:HH21	6:D:1061:PHE:HZ	1.50	0.60
6:D:952:ASP:HA	6:D:1062:ARG:NH2	2.16	0.60
6:D:1336:LEU:HD11	6:D:1341:PRO:HG3	1.82	0.60
6:D:1263:PHE:HB3	6:D:1424:VAL:HG11	1.83	0.60
6:D:762:GLN:HE22	7:E:20:THR:CG2	2.15	0.60
5:M:759:THR:HG21	5:M:783:ARG:HH21	1.67	0.60
6:N:1438:ALA:O	6:N:1443:THR:HG22	2.01	0.60
6:N:399:ARG:HE	6:N:431:VAL:HG23	1.65	0.60
5:C:19:THR:O	5:C:23:VAL:HG23	2.01	0.60
5:C:573:ARG:CG	5:C:670:GLN:HE22	2.14	0.60
5:C:859:PRO:HB3	5:C:974:LEU:HD23	1.83	0.60
5:C:910:LYS:HB2	11:C:1325:HOH:O	2.01	0.60
5:C:943:VAL:HG11	5:C:973:VAL:CG2	2.31	0.60
6:D:109:PRO:O	6:D:111:LYS:HD3	2.01	0.60
6:D:127:LEU:HD22	6:D:460:ALA:CB	2.32	0.60
6:D:54:LYS:HD2	6:D:55:ASP:H	1.66	0.60
6:D:896:ALA:HB2	11:D:8341:HOH:O	2.02	0.60
5:M:1033:GLY:O	5:M:1037:VAL:HG23	2.02	0.60
5:M:52:PHE:CG	5:M:68:PHE:HB2	2.36	0.60
5:M:637:LEU:HD22	5:M:659:PRO:HG2	1.83	0.60
6:N:522:PRO:O	6:N:525:ARG:HD3	2.02	0.60
6:N:29:PRO:HD3	6:N:548:ILE:CG2	2.32	0.60
5:C:843:HIS:HA	11:C:1257:HOH:O	2.01	0.60
6:D:119:SER:CB	6:D:123:LEU:HD13	2.31	0.60
6:D:1495:ILE:HG22	6:D:1499:ARG:HH21	1.66	0.60
6:D:8:VAL:HB	6:D:1434:TRP:HH2	1.67	0.60
6:D:963:TYR:CD2	6:D:1002:LYS:HB3	2.37	0.60
1:G:18:DG:H2''	1:G:19:DC:C5'	2.32	0.60
5:M:267:TYR:HB2	5:M:272:ALA:CB	2.32	0.60
6:N:398:ALA:HB2	6:N:447:VAL:HA	1.82	0.60
6:N:610:LYS:HA	11:N:9272:HOH:O	2.01	0.60
6:D:1205:TYR:CD2	6:D:1215:VAL:HG21	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1255:GLY:O	6:D:1259:VAL:HG23	2.02	0.60
6:D:1376:MET:HE3	6:D:1421:LEU:HB2	1.83	0.60
6:D:521:PRO:CG	6:D:524:LEU:HD22	2.29	0.60
5:C:1099:VAL:HA	6:D:9:ARG:O	2.02	0.60
5:M:143:SER:C	5:M:276:LYS:HZ3	2.05	0.60
5:M:144:PRO:HG3	5:M:265:ARG:NH1	2.16	0.60
6:N:1267:ARG:HG3	6:N:1271:LYS:NZ	2.17	0.60
6:N:633:VAL:HG22	6:N:635:PRO:CD	2.25	0.60
6:N:76:CYS:HB3	11:N:9086:HOH:O	2.01	0.60
4:A:83:LYS:NZ	4:A:168:ASP:HB2	2.17	0.59
5:C:45:GLN:HG2	5:C:49:ARG:CZ	2.32	0.59
5:C:461:VAL:HG12	11:C:1351:HOH:O	2.02	0.59
5:C:721:ARG:HG3	5:C:820:ARG:HH12	1.66	0.59
6:D:116:LEU:CD2	6:D:150:ARG:HD3	2.32	0.59
6:D:1259:VAL:HG11	6:D:1356:TYR:OH	2.02	0.59
6:D:1485:GLN:NE2	7:E:78:ASN:HA	2.17	0.59
4:K:151:VAL:HB	4:K:169:ALA:HB3	1.84	0.59
5:M:127:PHE:HB3	11:M:1483:HOH:O	2.01	0.59
5:M:409:ARG:HA	5:M:454:SER:HA	1.84	0.59
6:N:1192:LEU:HD13	6:N:1345:GLU:HG2	1.83	0.59
6:N:185:VAL:HG21	6:N:203:ALA:HB2	1.84	0.59
5:M:1005:MET:CE	6:N:724:GLN:HA	2.32	0.59
4:A:159:LYS:NZ	4:A:166:PRO:HD3	2.17	0.59
5:C:218:VAL:HG22	5:C:221:LEU:HD21	1.84	0.59
5:C:148:PHE:CE2	5:C:281:LEU:HD13	2.28	0.59
6:D:456:MET:HG2	6:D:459:GLU:OE1	2.02	0.59
6:D:970:LYS:HD3	6:D:995:LEU:HD13	1.84	0.59
6:N:1106:VAL:HG11	6:N:1474:ALA:CB	2.31	0.59
6:N:478:LEU:HD23	6:N:496:LEU:HD21	1.84	0.59
6:N:477:LEU:HD11	6:N:495:ARG:HD3	1.84	0.59
6:N:495:ARG:O	6:N:499:VAL:HG23	2.02	0.59
6:N:761:ILE:HB	7:O:20:THR:HG23	1.83	0.59
4:A:8:ALA:HB1	4:B:224:TYR:HE1	1.65	0.59
5:C:26:TYR:HD2	5:C:121:MET:HB2	1.66	0.59
6:D:1080:GLY:O	6:D:1083:ASP:HB3	2.02	0.59
6:D:1231:GLU:O	6:D:1235:GLN:HG3	2.02	0.59
6:D:1335:LEU:HD23	6:D:1344:VAL:HG22	1.84	0.59
6:D:436:GLU:CD	6:D:445:ARG:HG3	2.22	0.59
6:D:99:ALA:O	6:D:514:LEU:N	2.33	0.59
2:H:7:G:N3	2:H:7:G:H2'	2.17	0.59
4:K:89:PHE:HB3	4:K:94:LEU:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:876:VAL:HG13	5:M:881:ASN:ND2	2.16	0.59
6:N:1268:PRO:HD2	6:N:1271:LYS:HZ2	1.67	0.59
6:N:480:GLU:O	6:N:484:PRO:HD2	2.02	0.59
5:C:252:LYS:HB3	5:C:298:PHE:CZ	2.38	0.59
5:C:583:LEU:HB3	11:C:1190:HOH:O	2.01	0.59
6:D:1438:ALA:N	6:D:1446:VAL:HG11	2.17	0.59
4:K:67:THR:CG2	5:M:609:ASN:HD21	2.15	0.59
5:M:1051:GLU:OE1	5:M:1056:LYS:HE2	2.03	0.59
5:M:149:THR:HG21	11:M:1567:HOH:O	2.01	0.59
5:M:18:LEU:H	5:M:18:LEU:HD12	1.67	0.59
4:K:133:GLU:OE1	5:M:605:LYS:HB3	2.02	0.59
6:N:794:GLN:HG2	6:N:1017:PHE:CZ	2.38	0.59
6:N:1375:MET:HB3	6:N:1422:MET:O	2.02	0.59
6:N:161:LEU:O	6:N:161:LEU:HD23	2.03	0.59
6:N:23:TYR:O	6:N:49:ILE:HG23	2.01	0.59
5:M:1056:LYS:HD3	6:N:625:TYR:HD1	1.67	0.59
6:N:966:GLU:HA	6:N:969:ARG:NH2	2.18	0.59
6:N:983:LEU:HD13	6:N:991:GLN:OE1	2.02	0.59
4:A:89:PHE:CZ	4:A:146:ARG:HB2	2.37	0.59
4:A:38:ASN:HB3	4:A:39:PRO:HD3	1.85	0.59
5:C:318:PRO:HG3	11:C:1342:HOH:O	2.01	0.59
5:C:352:ALA:HA	5:C:355:VAL:HG12	1.85	0.59
5:C:73:LEU:HD22	5:C:94:LEU:HD13	1.84	0.59
6:D:135:LEU:H	6:D:135:LEU:HD12	1.67	0.59
6:D:172:PRO:HG2	6:D:175:VAL:HG21	1.84	0.59
6:D:769:LEU:HD12	6:D:919:PHE:HE1	1.68	0.59
6:D:803:GLY:HA3	11:D:8427:HOH:O	2.00	0.59
4:K:209:GLU:O	4:K:213:GLN:HG3	2.02	0.59
4:K:31:GLY:CA	4:L:42:ARG:HH21	2.15	0.59
4:L:68:ILE:HD13	11:L:362:HOH:O	2.01	0.59
6:N:1209:LEU:HD23	6:N:1210:SER:H	1.66	0.59
6:N:1412:LYS:HD2	6:N:1414:PRO:HG3	1.83	0.59
6:N:615:ARG:HG3	6:N:619:LEU:HD21	1.84	0.59
2:Y:6:U:H1'	11:Y:2617:HOH:O	2.03	0.59
4:A:91:ASN:OD1	4:A:92:PRO:HD2	2.03	0.59
6:D:1209:LEU:HD23	6:D:1210:SER:H	1.65	0.59
4:K:79:ILE:HA	4:K:82:LEU:HD12	1.84	0.59
5:M:468:ARG:HH21	5:M:487:THR:N	2.00	0.59
5:M:854:PRO:HB2	5:M:856:GLU:CG	2.32	0.59
6:N:1389:LEU:HG	6:N:1390:LEU:HG	1.84	0.59
6:N:156:GLU:HB2	6:N:157:GLU:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:54:THR:HB	4:A:143:ARG:HG2	1.85	0.59
5:C:260:LEU:HD22	11:C:1406:HOH:O	2.00	0.59
5:C:274:ARG:HB2	5:C:285:LEU:HD13	1.85	0.59
5:C:516:ARG:NH1	5:C:521:PRO:HB3	2.17	0.59
5:C:627:ARG:HG3	5:C:628:PHE:H	1.67	0.59
5:C:835:VAL:HG12	11:C:1129:HOH:O	2.03	0.59
6:D:106:LYS:HG2	11:D:8237:HOH:O	2.01	0.59
6:N:1009:LYS:HG2	11:N:9338:HOH:O	2.03	0.59
6:N:1059:SER:OG	6:N:1065:LEU:HD12	2.03	0.59
5:C:193:LEU:HD21	11:C:1142:HOH:O	2.02	0.59
5:C:692:GLU:HG2	5:C:696:LYS:HE2	1.83	0.59
6:D:1465:ASN:HD21	6:D:1470:ARG:HB3	1.68	0.59
4:K:5:LYS:HE3	4:K:5:LYS:HA	1.85	0.59
5:M:1055:LEU:CD2	5:M:1066:ALA:HB2	2.31	0.59
5:M:119:PRO:HG2	5:M:386:PHE:CG	2.37	0.59
5:M:575:GLN:HB2	5:M:670:GLN:HG2	1.85	0.59
6:N:787:LEU:HD13	6:N:1023:MET:HA	1.84	0.59
6:N:422:ALA:HA	11:N:9357:HOH:O	2.01	0.59
6:N:455:ARG:HB3	6:N:460:ALA:HA	1.83	0.59
6:N:481:MET:CE	6:N:493:ARG:HA	2.32	0.59
6:N:584:ASN:OD1	6:N:590:PRO:HD2	2.03	0.59
6:D:1440:PHE:CG	6:D:1441:GLN:N	2.71	0.59
6:D:161:LEU:CD2	6:D:452:ILE:HD13	2.33	0.59
6:D:462:GLN:O	6:D:466:LYS:HE3	2.03	0.59
6:D:93:ILE:HG13	6:D:519:VAL:HG22	1.85	0.59
7:E:17:TYR:O	7:E:21:VAL:HG23	2.03	0.59
4:A:225:PHE:HE1	4:B:40:LEU:HD11	1.68	0.59
4:B:94:LEU:HD11	4:B:119:ASP:CB	2.32	0.59
5:C:492:ASP:CG	5:C:518:LYS:HB3	2.24	0.59
5:C:833:LEU:HD21	5:C:839:LEU:HD11	1.84	0.59
4:L:94:LEU:HD11	4:L:119:ASP:CB	2.33	0.59
4:K:224:TYR:HB3	4:L:9:PRO:HB2	1.83	0.59
5:M:1000:MET:HB3	5:M:1002:GLU:HG2	1.84	0.59
5:M:1081:VAL:HG23	5:M:1086:ARG:HH21	1.67	0.59
5:M:140:ILE:HB	5:M:331:ARG:HG2	1.83	0.59
5:M:498:GLN:HA	5:M:533:ASP:OD2	2.03	0.59
6:N:396:VAL:O	6:N:398:ALA:N	2.31	0.59
6:N:86:ARG:HD3	6:N:523:ASP:OD2	2.02	0.59
6:N:860:LEU:HD23	6:N:877:PRO:HB2	1.85	0.59
6:N:970:LYS:HA	6:N:973:GLN:CD	2.23	0.59
5:C:218:VAL:HG22	5:C:221:LEU:CD2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:342:ASP:O	5:C:346:VAL:HG23	2.03	0.58
5:C:488:ALA:HA	11:C:1287:HOH:O	2.02	0.58
5:C:48:PHE:O	5:C:52:PHE:HB2	2.02	0.58
6:D:401:TYR:CZ	6:D:429:SER:HA	2.38	0.58
6:D:582:LEU:HA	6:D:603:LEU:HD12	1.85	0.58
6:D:799:LYS:O	6:D:826:PRO:HD2	2.02	0.58
1:G:2:DC:H2''	1:G:3:DC:C6	2.38	0.58
4:L:173:PRO:HB2	11:L:366:HOH:O	2.02	0.58
5:M:755:LEU:HD12	5:M:790:LEU:HG	1.85	0.58
6:N:191:LEU:HB3	6:N:393:ILE:HD12	1.85	0.58
2:Y:11:C:O2'	2:Y:12:G:H5''	2.02	0.58
4:A:54:THR:CG2	4:A:158:ILE:HG13	2.30	0.58
4:A:5:LYS:HE3	4:A:5:LYS:HA	1.84	0.58
4:B:20:TYR:HE2	4:B:198:ARG:HB3	1.68	0.58
5:C:1009:SER:HB2	6:D:651:GLU:O	2.03	0.58
5:C:913:GLU:O	5:C:917:LEU:HG	2.03	0.58
5:C:983:ILE:HG21	5:C:987:ILE:HD11	1.85	0.58
6:D:693:GLU:HA	11:D:8294:HOH:O	2.03	0.58
6:D:918:ALA:O	6:D:922:LEU:HG	2.02	0.58
2:H:9:G:C8	2:H:9:G:H5'	2.38	0.58
4:L:174:VAL:HG23	11:L:366:HOH:O	2.02	0.58
5:M:701:THR:HG21	5:M:830:LYS:HE2	1.84	0.58
5:M:946:ARG:CB	5:M:946:ARG:HH11	2.08	0.58
6:N:464:LEU:O	6:N:468:LEU:HG	2.02	0.58
6:N:567:ILE:O	6:N:571:LYS:HG2	2.03	0.58
6:N:728:LEU:HD21	6:N:733:CYS:SG	2.43	0.58
7:O:18:ARG:HD3	7:O:75:PHE:CE1	2.33	0.58
1:X:18:DG:H5'	1:X:18:DG:H8	1.68	0.58
4:B:99:LEU:HB3	4:B:114:PHE:CD2	2.38	0.58
5:C:398:THR:HA	11:C:1367:HOH:O	2.03	0.58
6:D:1236:LEU:CD1	6:D:1359:GLN:HB3	2.33	0.58
6:D:752:SER:HB2	11:D:8371:HOH:O	2.03	0.58
6:D:835:SER:N	6:D:838:ARG:HD3	2.18	0.58
5:M:861:LEU:HA	5:M:974:LEU:HD12	1.85	0.58
6:N:15:PRO:O	6:N:18:ILE:HB	2.03	0.58
6:N:815:ALA:HA	6:N:818:ARG:HD2	1.84	0.58
7:O:48:MET:N	7:O:54:LEU:HB2	2.18	0.58
7:O:40:LEU:CB	7:O:72:ARG:HH21	2.15	0.58
2:Y:8:C:HO2'	2:Y:9:G:H5'	1.66	0.58
4:A:44:LEU:O	4:A:174:VAL:HG21	2.04	0.58
6:D:1084:THR:HB	6:D:1241:PHE:CD2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1238:MET:HG3	11:D:8018:HOH:O	2.03	0.58
6:D:124:GLU:O	6:D:127:LEU:HD12	2.02	0.58
5:M:102:HIS:NE2	5:M:365:ASP:HA	2.18	0.58
5:M:252:LYS:HZ3	5:M:296:GLY:HA3	1.69	0.58
2:Y:13:C:C4'	5:M:409:ARG:HH22	2.13	0.58
6:N:1146:GLY:CA	6:N:1207:TYR:HB2	2.33	0.58
6:N:522:PRO:HG2	6:N:523:ASP:H	1.68	0.58
6:N:695:ILE:HD11	6:N:718:PRO:HB2	1.84	0.58
4:A:9:PRO:HB3	4:A:25:LEU:HG	1.84	0.58
6:D:957:PRO:HG2	6:D:1007:VAL:HG22	1.85	0.58
6:D:101:HIS:O	6:D:105:VAL:HG23	2.02	0.58
6:D:23:TYR:O	6:D:49:ILE:HG23	2.03	0.58
4:L:59:GLU:CB	4:L:137:ARG:HH22	2.16	0.58
5:M:497:ALA:HA	5:M:515:ALA:HA	1.85	0.58
6:N:1112:CYS:HB2	6:N:1195:GLN:CG	2.34	0.58
6:N:711:LEU:HD21	6:N:768:ASN:CB	2.33	0.58
6:N:962:GLN:HG2	6:N:966:GLU:OE1	2.03	0.58
6:N:989:TYR:HA	6:N:992:ILE:HD12	1.83	0.58
5:C:1100:GLN:HA	5:C:1100:GLN:NE2	2.18	0.58
6:D:426:LYS:HE3	6:D:427:VAL:HG23	1.85	0.58
6:D:50:PHE:CD2	6:D:522:PRO:HD3	2.38	0.58
7:E:48:MET:HG2	7:E:49:GLN:H	1.69	0.58
5:M:938:LYS:HB2	5:M:938:LYS:NZ	2.18	0.58
5:M:99:GLN:HG2	5:M:109:LYS:HG3	1.85	0.58
6:N:136:ASP:CB	6:N:137:PRO:HD3	2.33	0.58
4:B:177:VAL:HG12	4:B:199:ILE:HG23	1.86	0.58
5:C:1014:SER:HB2	5:C:1017:THR:HG23	1.85	0.58
5:C:211:LEU:CD1	5:C:308:ARG:HA	2.34	0.58
5:C:548:PRO:HD3	5:C:842:ARG:HD2	1.86	0.58
5:C:580:MET:SD	5:C:584:GLU:HG3	2.44	0.58
5:C:712:ALA:O	5:C:820:ARG:HB3	2.04	0.58
5:C:841:ASN:H	5:C:841:ASN:ND2	2.02	0.58
6:D:1271:LYS:HZ1	6:D:1331:ASP:HB3	1.69	0.58
1:G:6:DT:H2''	1:G:7:DC:C6	2.39	0.58
5:M:347:GLY:HA2	11:M:1457:HOH:O	2.02	0.58
5:M:831:ARG:HA	11:M:1437:HOH:O	2.04	0.58
5:M:841:ASN:HD21	5:M:844:GLY:H	1.51	0.58
6:N:1486:VAL:HG23	11:N:9307:HOH:O	2.03	0.58
6:N:584:ASN:HD21	6:N:589:ALA:HA	1.67	0.58
5:C:573:ARG:HB3	11:C:1209:HOH:O	2.03	0.58
5:C:693:GLU:OE1	5:C:696:LYS:HD2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:871:LYS:HE2	6:D:873:LEU:HD21	1.86	0.58
7:E:26:ARG:O	7:E:30:LEU:HD12	2.04	0.58
5:M:34:VAL:HG12	11:M:1176:HOH:O	2.04	0.58
5:M:54:ILE:CG2	5:M:66:LEU:HB3	2.34	0.58
5:M:549:PHE:HB3	5:M:552:HIS:HD2	1.67	0.58
5:M:701:THR:CG2	5:M:832:LYS:HG2	2.32	0.58
6:N:996:TRP:HA	6:N:999:THR:CG2	2.25	0.58
4:B:54:THR:CG2	4:B:158:ILE:HG13	2.33	0.58
5:C:358:ARG:HH22	5:C:373:VAL:C	2.06	0.58
6:D:1017:PHE:HE1	11:D:8095:HOH:O	1.87	0.58
6:D:1373:ARG:HE	6:D:1374:GLN:NE2	2.02	0.58
6:D:206:ARG:HB3	6:D:206:ARG:HH11	1.68	0.58
6:D:465:LEU:HD22	6:D:510:GLU:HA	1.86	0.58
4:K:211:LEU:O	4:K:215:VAL:HG23	2.04	0.58
5:M:1094:ALA:HA	6:N:90:MET:HE1	1.86	0.58
5:M:91:GLN:CD	5:M:383:ARG:HH22	2.08	0.58
5:M:431:HIS:H	5:M:434:HIS:CE1	2.22	0.58
5:M:444:PRO:HD2	5:M:452:ILE:O	2.04	0.58
5:M:874:LEU:HD12	5:M:874:LEU:H	1.69	0.58
6:N:1081:GLY:O	6:N:1084:THR:HG22	2.04	0.58
6:N:1119:SER:O	6:N:1121:PRO:HD3	2.04	0.58
6:N:134:VAL:HG12	6:N:152:LEU:HD22	1.86	0.58
5:M:1056:LYS:HD3	6:N:751:LEU:HD11	1.86	0.58
6:N:966:GLU:HA	6:N:969:ARG:HH22	1.67	0.58
2:Y:13:C:H2'	2:Y:14:G:C8	2.39	0.58
4:B:99:LEU:HG	11:B:336:HOH:O	2.03	0.58
5:C:775:ARG:NH1	5:C:782:ALA:HB1	2.18	0.58
6:D:116:LEU:HD22	6:D:118:LEU:HD21	1.86	0.58
3:I:7:DC:H5''	6:D:1264:GLU:OE2	2.04	0.58
6:D:182:GLY:HA3	6:D:400:VAL:HG11	1.85	0.58
6:D:396:VAL:C	6:D:398:ALA:N	2.56	0.58
6:D:616:GLN:HG3	11:D:8092:HOH:O	2.03	0.58
6:D:786:ILE:HD11	6:D:908:LYS:HD3	1.85	0.58
5:M:310:LEU:HB2	11:M:1183:HOH:O	2.03	0.58
5:M:452:ILE:HD12	5:M:452:ILE:H	1.69	0.58
5:M:464:LEU:HB2	11:M:1525:HOH:O	2.03	0.58
5:M:549:PHE:HB3	5:M:552:HIS:CD2	2.39	0.58
6:N:161:LEU:HD21	11:N:9092:HOH:O	2.02	0.58
6:N:930:LEU:O	6:N:934:LEU:HG	2.04	0.58
6:N:970:LYS:HG3	6:N:973:GLN:OE1	2.04	0.58
5:C:1101:THR:OG1	6:D:5:VAL:HG12	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:211:LEU:HD11	5:C:308:ARG:HA	1.86	0.57
5:C:495:THR:HG23	11:C:1226:HOH:O	2.03	0.57
5:C:626:ARG:H	5:C:639:GLN:HE21	1.50	0.57
5:C:959:PRO:HG2	11:C:1413:HOH:O	2.03	0.57
6:D:1171:VAL:O	6:D:1175:ILE:HG13	2.04	0.57
6:D:810:GLU:HB3	11:D:8233:HOH:O	2.03	0.57
6:D:890:VAL:HG23	11:D:8341:HOH:O	2.03	0.57
5:M:1030:GLN:HB2	6:N:626:SER:OG	2.04	0.57
5:M:1032:PHE:O	5:M:1033:GLY:O	2.21	0.57
5:M:134:ARG:HH11	5:M:392:SER:CB	2.17	0.57
5:M:470:PRO:HD3	5:M:485:TYR:CE2	2.39	0.57
5:M:546:LEU:CD1	5:M:565:GLN:HE22	2.17	0.57
5:M:715:THR:HG21	11:M:1222:HOH:O	2.03	0.57
5:M:875:GLY:O	5:M:879:ARG:HD2	2.03	0.57
6:N:1397:LYS:HE3	6:N:1432:LYS:HD2	1.85	0.57
1:X:6:DT:H2'	1:X:7:DC:C6	2.39	0.57
5:C:573:ARG:HB3	5:C:670:GLN:HE22	1.69	0.57
6:D:30:GLU:HB3	6:D:40:GLU:CB	2.34	0.57
6:D:400:VAL:HG22	6:D:443:VAL:HG21	1.85	0.57
5:M:535:SER:HB3	5:M:537:LYS:NZ	2.19	0.57
6:N:149:LYS:HD2	6:N:150:ARG:H	1.69	0.57
6:N:677:LEU:HD23	6:N:683:ILE:HG13	1.86	0.57
6:N:62:LYS:HG3	6:N:75:ARG:NH1	2.19	0.57
7:O:32:ARG:HB2	7:O:32:ARG:CZ	2.34	0.57
5:C:264:PRO:HG3	11:C:1383:HOH:O	2.04	0.57
5:C:577:PRO:HB3	5:C:842:ARG:NH2	2.18	0.57
5:C:99:GLN:HB3	5:C:109:LYS:CD	2.34	0.57
6:D:1418:LYS:HD3	6:D:1419:PRO:HD2	1.85	0.57
6:D:30:GLU:HB3	6:D:40:GLU:CG	2.34	0.57
6:D:444:VAL:HB	11:D:8164:HOH:O	2.04	0.57
6:D:614:PHE:CE2	6:D:1438:ALA:HB1	2.39	0.57
6:D:959:GLU:CD	6:D:959:GLU:H	2.04	0.57
2:H:10:G:H2'	2:H:11:C:H6	1.66	0.57
2:H:13:C:H2'	2:H:14:G:C8	2.39	0.57
4:K:145:ASP:HB3	11:K:1799:HOH:O	2.03	0.57
4:K:49:PRO:HB3	4:K:148:VAL:HG22	1.86	0.57
4:K:42:ARG:HH21	4:L:31:GLY:C	2.08	0.57
4:L:123:MET:C	4:L:125:PRO:HD3	2.24	0.57
5:M:205:GLU:HA	5:M:209:ARG:NH1	2.20	0.57
11:Y:1707:HOH:O	5:M:777:ILE:HG21	2.03	0.57
5:M:79:PRO:HG2	5:M:82:GLU:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:399:ARG:HE	6:N:431:VAL:CG2	2.18	0.57
6:N:510:GLU:HB2	6:N:511:TRP:CZ3	2.39	0.57
6:N:637:LEU:HD11	6:N:641:GLN:HB2	1.86	0.57
7:O:33:HIS:HB2	7:O:37:ASN:ND2	2.18	0.57
2:Y:14:G:H4'	11:Y:1734:HOH:O	2.03	0.57
5:C:1030:GLN:NE2	6:D:628:ARG:HD3	2.20	0.57
6:D:155:ASP:O	6:D:159:ARG:HG3	2.04	0.57
6:D:793:THR:HG21	6:D:906:GLN:CG	2.33	0.57
4:L:58:ILE:HG21	4:L:68:ILE:HD11	1.85	0.57
5:M:1031:ARG:HG3	6:N:621:LYS:HB3	1.86	0.57
6:N:394:LEU:HG	6:N:396:VAL:HG23	1.85	0.57
5:C:468:ARG:HE	5:C:487:THR:N	2.02	0.57
5:C:584:GLU:H	5:C:584:GLU:CD	2.07	0.57
6:D:501:ALA:HB1	6:D:1453:ALA:HB2	1.87	0.57
6:D:525:ARG:HB2	6:D:538:SER:HB3	1.86	0.57
4:B:170:VAL:HG11	6:D:848:GLU:OE1	2.04	0.57
6:D:879:ARG:HG3	6:D:879:ARG:NH1	2.17	0.57
5:M:166:PRO:HB3	11:M:1157:HOH:O	2.03	0.57
5:M:452:ILE:N	5:M:452:ILE:HD12	2.19	0.57
5:M:841:ASN:HD22	5:M:841:ASN:C	2.07	0.57
4:K:181:VAL:HG21	5:M:939:ARG:HH11	1.70	0.57
5:M:975:TYR:HE1	11:M:1220:HOH:O	1.86	0.57
6:N:28:LYS:HG3	6:N:29:PRO:HD2	1.87	0.57
2:Y:9:G:O2'	2:Y:10:G:H5'	2.04	0.57
4:A:43:ILE:HG13	4:A:218:LEU:CD1	2.33	0.57
1:G:20:DG:H4'	5:C:394:PHE:CE1	2.39	0.57
6:D:772:PRO:HB3	6:D:1224:VAL:CG1	2.34	0.57
5:M:205:GLU:HA	5:M:209:ARG:CZ	2.34	0.57
6:N:1083:ASP:O	6:N:1087:ARG:HG2	2.05	0.57
6:N:1191:PRO:HG3	11:N:9238:HOH:O	2.03	0.57
6:N:1336:LEU:HA	6:N:1344:VAL:CG2	2.34	0.57
6:N:583:ASP:CG	6:N:586:ARG:HG3	2.25	0.57
6:N:758:GLU:HA	7:O:20:THR:HG21	1.86	0.57
4:A:100:LEU:HD22	4:A:102:LYS:HE2	1.87	0.57
4:A:221:HIS:HB3	4:B:36:LEU:HD21	1.86	0.57
4:B:85:LEU:HG	4:B:127:LEU:CD2	2.32	0.57
5:C:971:LYS:HD2	5:C:986:PRO:HG2	1.87	0.57
6:D:1020:LEU:HD21	6:D:1038:LEU:HD12	1.86	0.57
1:G:13:DT:H5''	6:D:1093:TYR:HE2	1.68	0.57
6:D:1103:HIS:CD2	6:D:1463:LYS:HB2	2.40	0.57
6:D:1263:PHE:HE2	6:D:1371:VAL:HG11	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:214:ALA:O	4:L:217:ILE:HG22	2.04	0.57
5:M:567:GLN:O	5:M:997:LEU:HD12	2.05	0.57
6:N:1129:THR:HG23	6:N:1130:ARG:H	1.69	0.57
6:N:139:GLY:HA2	6:N:451:ASP:O	2.05	0.57
2:Y:11:C:H2'	2:Y:12:G:H8	1.66	0.57
4:A:68:ILE:HD12	4:A:68:ILE:H	1.69	0.57
5:C:188:LYS:HD3	11:C:1301:HOH:O	2.03	0.57
5:C:834:GLN:HB2	11:C:1129:HOH:O	2.04	0.57
6:D:1224:VAL:HA	6:D:1227:GLN:OE1	2.05	0.57
6:D:1335:LEU:HD22	6:D:1344:VAL:HG13	1.86	0.57
6:D:1332:PRO:HG3	6:D:1347:TYR:CE2	2.37	0.57
6:D:1216:SER:CB	7:E:16:LYS:H	2.18	0.57
6:D:1485:GLN:HE21	7:E:79:LEU:H	1.51	0.57
4:K:138:LEU:HD11	4:K:140:MET:SD	2.44	0.57
4:L:124:ASN:OD1	4:L:127:LEU:HB2	2.05	0.57
5:M:1046:ALA:HB2	11:N:9022:HOH:O	2.03	0.57
5:M:121:MET:HE3	5:M:125:GLY:HA2	1.87	0.57
5:M:208:ALA:HB3	5:M:209:ARG:HH21	1.70	0.57
5:M:693:GLU:HA	5:M:696:LYS:CD	2.34	0.57
6:N:1023:MET:O	6:N:1028:ALA:HB3	2.05	0.57
5:M:498:GLN:OE1	6:N:1067:VAL:HB	2.05	0.57
6:N:1153:VAL:HG12	6:N:1155:VAL:HG13	1.86	0.57
5:C:1049:LEU:HD11	5:C:1053:LEU:HD11	1.87	0.57
5:C:1103:ASP:OD1	6:D:3:LYS:HD3	2.05	0.57
5:C:1105:LYS:HZ3	5:C:1107:ASN:HB2	1.70	0.57
5:C:192:PRO:HD2	5:C:195:LEU:CB	2.32	0.57
5:C:144:PRO:CG	5:C:265:ARG:HH21	2.13	0.57
5:C:472:ARG:HG3	5:C:534:VAL:HG22	1.85	0.57
1:X:19:DC:H5''	5:M:1001:VAL:HB	1.87	0.57
5:M:162:ILE:O	5:M:164:PRO:HD3	2.05	0.57
5:M:691:SER:OG	5:M:694:LEU:HG	2.04	0.57
6:N:434:ARG:HH11	6:N:434:ARG:HB3	1.70	0.57
4:B:88:ARG:HG3	11:B:365:HOH:O	2.04	0.57
5:C:51:THR:OG1	5:C:348:LEU:HG	2.05	0.57
5:C:531:PHE:HB2	11:C:1172:HOH:O	2.05	0.57
5:C:975:TYR:HA	5:C:982:PRO:HA	1.86	0.57
6:D:1406:ARG:HD2	6:D:1412:LYS:HZ3	1.70	0.57
6:D:455:ARG:C	6:D:460:ALA:HB2	2.25	0.57
6:D:65:ARG:CG	6:D:66:GLN:H	2.18	0.57
6:D:657:LEU:HD22	6:D:691:LEU:CD2	2.35	0.57
4:K:42:ARG:CZ	4:L:34:VAL:HB	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:79:ILE:HA	4:L:82:LEU:HD12	1.87	0.57
5:M:1085:PHE:O	5:M:1089:VAL:HG23	2.05	0.57
5:M:174:LEU:HD22	5:M:307:LEU:HD13	1.87	0.57
5:M:400:PRO:HG2	5:M:593:ALA:HB2	1.87	0.57
6:N:1025:GLN:NE2	6:N:1025:GLN:HA	2.20	0.57
6:N:161:LEU:HD13	6:N:452:ILE:HD13	1.87	0.57
6:N:54:LYS:CD	6:N:55:ASP:H	2.17	0.57
7:O:17:TYR:O	7:O:21:VAL:HG23	2.05	0.57
2:Y:7:G:C8	2:Y:7:G:C5'	2.88	0.57
5:C:949:LYS:HA	11:C:1221:HOH:O	2.05	0.56
5:M:1050:GLN:OE1	6:N:1471:LEU:HA	2.04	0.56
5:M:286:SER:HB3	11:M:1441:HOH:O	2.05	0.56
5:M:578:VAL:CG2	5:M:579:VAL:HG12	2.34	0.56
5:M:716:LYS:HZ1	6:N:36:THR:HG23	1.69	0.56
5:M:871:LEU:HD11	5:M:992:MET:SD	2.44	0.56
6:N:1045:MET:HB3	6:N:1073:SER:HA	1.87	0.56
6:N:1057:VAL:HG13	6:N:1069:GLU:HB3	1.87	0.56
7:O:41:GLU:HB2	7:O:45:ARG:NE	2.19	0.56
4:A:225:PHE:HB2	11:A:325:HOH:O	2.05	0.56
4:A:52:ALA:HB2	4:A:170:VAL:O	2.04	0.56
5:C:338:GLU:O	5:C:341:THR:HG22	2.05	0.56
6:D:1436:SER:HB3	11:D:8024:HOH:O	2.05	0.56
7:E:19:LEU:O	7:E:23:VAL:HG23	2.05	0.56
1:G:22:DC:H4'	5:C:388:ARG:CD	2.33	0.56
4:L:43:ILE:O	4:L:47:SER:HB3	2.05	0.56
5:M:292:ARG:HH11	5:M:299:LYS:HD3	1.70	0.56
5:M:805:ARG:HB3	5:M:805:ARG:HH11	1.70	0.56
6:N:1091:SER:OG	6:N:1234:THR:HG23	2.04	0.56
6:N:714:GLN:NE2	6:N:765:SER:HA	2.20	0.56
6:N:824:ASN:HD22	6:N:824:ASN:C	2.09	0.56
2:Y:8:C:H5'	11:Y:1683:HOH:O	2.04	0.56
4:B:201:THR:HG21	4:B:205:VAL:HG23	1.87	0.56
5:C:186:VAL:HG11	11:C:1130:HOH:O	2.05	0.56
5:C:148:PHE:CZ	5:C:281:LEU:HB3	2.39	0.56
5:C:943:VAL:HG23	5:C:985:GLY:H	1.70	0.56
6:D:1226:ALA:HB2	11:D:8257:HOH:O	2.05	0.56
6:D:136:ASP:HB3	6:D:455:ARG:HE	1.70	0.56
6:D:703:ASN:ND2	6:D:704:ARG:H	2.03	0.56
7:E:41:GLU:HG2	7:E:42:PRO:HD3	1.87	0.56
7:E:59:ASN:N	7:E:59:ASN:HD22	2.02	0.56
4:L:92:PRO:HA	4:L:146:ARG:NH2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1054:THR:HG21	5:M:1079:PRO:HB3	1.87	0.56
5:M:121:MET:CE	5:M:125:GLY:HA2	2.34	0.56
5:M:257:VAL:HA	11:M:1334:HOH:O	2.04	0.56
6:N:1189:ARG:HD2	6:N:1204:CYS:SG	2.46	0.56
6:N:1238:MET:HA	6:N:1241:PHE:CE2	2.40	0.56
6:N:36:THR:C	6:N:38:LYS:H	2.07	0.56
6:N:794:GLN:HG3	6:N:795:VAL:N	2.20	0.56
6:N:80:VAL:HG12	6:N:81:THR:O	2.05	0.56
6:N:799:LYS:HE2	6:N:824:ASN:O	2.04	0.56
6:N:828:LYS:HG2	6:N:863:VAL:HG22	1.86	0.56
5:M:886:LEU:HD12	6:N:951:ILE:HG13	1.87	0.56
5:C:159:ILE:HD13	11:C:1523:HOH:O	2.06	0.56
5:C:412:ALA:HB1	5:C:419:THR:HG21	1.87	0.56
6:D:1042:ARG:O	6:D:1057:VAL:HB	2.04	0.56
6:D:1236:LEU:HD11	6:D:1361:VAL:HG23	1.88	0.56
6:D:758:GLU:HA	6:D:762:GLN:NE2	2.20	0.56
5:C:676:ILE:HD13	6:D:948:THR:HB	1.88	0.56
6:D:696:HIS:NE2	7:E:54:LEU:HD11	2.20	0.56
7:E:80:VAL:HG22	11:E:151:HOH:O	2.06	0.56
4:L:92:PRO:HA	4:L:146:ARG:CZ	2.35	0.56
5:M:39:ARG:HG3	5:M:39:ARG:HH11	1.68	0.56
5:M:546:LEU:HD12	5:M:565:GLN:NE2	2.18	0.56
6:N:1493:LYS:O	6:N:1496:GLU:HG2	2.04	0.56
6:N:806:PHE:HE1	6:N:813:LEU:HB3	1.69	0.56
7:O:13:VAL:HG21	7:O:19:LEU:HB2	1.88	0.56
7:O:84:ARG:HD3	11:O:1385:HOH:O	2.05	0.56
1:X:2:DC:H2"	1:X:3:DC:C6	2.40	0.56
4:B:160:ASP:HB3	11:B:345:HOH:O	2.05	0.56
4:A:42:ARG:NH2	4:B:34:VAL:HB	2.20	0.56
5:C:333:ILE:HD13	5:C:467:ILE:HG13	1.86	0.56
5:C:577:PRO:HA	5:C:671:ASN:ND2	2.20	0.56
5:C:838:LYS:O	5:C:839:LEU:HD23	2.06	0.56
6:D:116:LEU:HD11	6:D:464:LEU:HB3	1.86	0.56
6:D:117:ASP:N	6:D:150:ARG:NH1	2.53	0.56
6:D:36:THR:C	6:D:38:LYS:H	2.09	0.56
6:D:65:ARG:H	6:D:68:PHE:HE1	1.51	0.56
6:D:700:VAL:HG22	6:D:718:PRO:HG3	1.87	0.56
6:D:754:PHE:HE1	7:E:28:GLN:HE22	1.53	0.56
6:D:847:ASP:O	6:D:851:LEU:HG	2.06	0.56
4:L:187:GLY:HA3	11:L:397:HOH:O	2.05	0.56
5:M:48:PHE:O	5:M:52:PHE:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:532:MET:HB3	11:M:1310:HOH:O	2.04	0.56
5:M:611:ILE:HG13	5:M:625:LEU:HD21	1.87	0.56
5:M:668:LEU:HD13	5:M:995:MET:HE2	1.87	0.56
6:N:1271:LYS:NZ	6:N:1331:ASP:HB2	2.20	0.56
6:N:481:MET:HE3	6:N:1388:ARG:HG3	1.88	0.56
6:N:47:GLU:OE1	6:N:53:ILE:HB	2.06	0.56
6:N:704:ARG:HD3	6:N:738:ALA:HB2	1.87	0.56
6:N:988:ARG:O	6:N:992:ILE:HG13	2.05	0.56
4:A:54:THR:HB	4:A:143:ARG:CG	2.35	0.56
4:B:16:GLN:HG3	11:B:397:HOH:O	2.05	0.56
1:G:16:DG:H5''	5:C:1031:ARG:HB3	1.88	0.56
5:C:284:ARG:HG3	5:C:285:LEU:N	2.19	0.56
6:D:117:ASP:HB2	6:D:495:ARG:HH21	1.69	0.56
6:D:1267:ARG:HG2	6:D:1267:ARG:O	2.05	0.56
6:D:29:PRO:HG3	6:D:549:ASN:HD21	1.69	0.56
5:M:457:ALA:N	5:M:540:PHE:O	2.36	0.56
5:M:577:PRO:HG3	5:M:993:PHE:CE1	2.41	0.56
6:N:119:SER:HB2	6:N:123:LEU:CB	2.33	0.56
6:N:1336:LEU:HA	6:N:1344:VAL:HG21	1.86	0.56
6:N:792:ILE:O	6:N:878:GLY:HA3	2.04	0.56
4:B:117:VAL:HG22	11:B:392:HOH:O	2.06	0.56
5:C:12:VAL:HG13	5:C:13:ILE:CG1	2.36	0.56
5:C:232:GLU:O	5:C:235:LEU:HB3	2.05	0.56
5:C:451:LEU:C	5:C:452:ILE:HD12	2.26	0.56
5:C:437:ARG:HA	5:C:467:ILE:HG21	1.86	0.56
5:C:693:GLU:HA	5:C:696:LYS:HG3	1.88	0.56
5:C:697:ARG:O	5:C:699:PHE:N	2.39	0.56
5:C:804:VAL:HG11	5:C:824:ARG:NH2	2.19	0.56
6:D:136:ASP:OD1	6:D:463:GLN:HB3	2.05	0.56
6:D:964:LEU:HD22	6:D:1058:ARG:HH21	1.70	0.56
2:H:11:C:O2'	2:H:12:G:H5''	2.05	0.56
4:K:178:ALA:HB2	5:M:864:GLY:N	2.21	0.56
4:K:206:THR:HG23	4:K:207:PRO:HD2	1.88	0.56
4:K:92:PRO:HD3	11:K:1047:HOH:O	2.05	0.56
5:M:307:LEU:HD12	5:M:310:LEU:HD23	1.87	0.56
5:M:626:ARG:HH22	5:M:637:LEU:HD13	1.70	0.56
5:M:600:ASP:OD1	5:M:651:LYS:HB2	2.05	0.56
6:N:180:LYS:HD2	6:N:180:LYS:H	1.69	0.56
11:M:1366:HOH:O	6:N:6:ARG:HB2	2.04	0.56
6:N:853:VAL:HG11	6:N:860:LEU:HG	1.88	0.56
6:N:960:LYS:NZ	6:N:1041:LEU:HD13	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:46:PRO:C	7:O:47:LYS:HG2	2.25	0.56
1:X:14:DT:H5'	1:X:14:DT:H6	1.70	0.56
5:C:265:ARG:NH1	5:C:267:TYR:HB3	2.20	0.56
6:D:1124:GLN:HG2	6:D:1133:ARG:HG3	1.88	0.56
5:M:516:ARG:HE	6:N:1068:LEU:HD13	1.69	0.56
5:M:516:ARG:HH21	6:N:1068:LEU:HB3	1.71	0.56
6:N:24:GLY:HA3	6:N:49:ILE:HG12	1.87	0.56
5:M:1070:ILE:HG21	6:N:655:PRO:HB2	1.88	0.56
5:C:162:ILE:HD12	5:C:172:ILE:HB	1.86	0.56
5:C:265:ARG:HD2	5:C:267:TYR:HB3	1.88	0.56
5:C:654:LEU:HD13	5:C:664:GLY:N	2.21	0.56
6:D:1102:THR:HB	11:D:8257:HOH:O	2.04	0.56
6:D:116:LEU:HD13	6:D:118:LEU:HD11	1.87	0.56
6:D:1091:SER:HB3	6:D:1234:THR:OG1	2.05	0.56
6:D:703:ASN:HD22	6:D:704:ARG:H	1.53	0.56
6:D:906:GLN:HB3	6:D:911:LEU:HD11	1.88	0.56
7:E:30:LEU:O	7:E:35:PHE:HA	2.06	0.56
4:L:101:LEU:HA	11:L:368:HOH:O	2.06	0.56
5:M:172:ILE:HG23	5:M:184:MET:HE3	1.87	0.56
5:M:260:LEU:HB2	11:M:1400:HOH:O	2.05	0.56
5:M:695:LEU:HD11	11:M:1250:HOH:O	2.05	0.56
6:N:883:ALA:HB2	11:N:9040:HOH:O	2.04	0.56
4:B:124:ASN:ND2	4:B:127:LEU:HD22	2.21	0.56
5:C:410:ILE:HD12	5:C:438:ILE:HG13	1.88	0.56
5:C:439:CYS:HB2	5:C:541:SER:HB2	1.87	0.56
5:C:897:LEU:HD23	5:C:924:VAL:HG21	1.88	0.56
6:D:28:LYS:HB2	6:D:41:ARG:NH1	2.19	0.56
6:D:137:PRO:HD2	6:D:453:ASP:CG	2.27	0.56
6:D:714:GLN:NE2	6:D:765:SER:HA	2.20	0.56
7:E:27:ALA:CB	7:E:61:VAL:HG12	2.35	0.56
7:E:40:LEU:HB3	7:E:72:ARG:HH21	1.68	0.56
3:I:3:DA:H3'	11:I:500:HOH:O	2.05	0.56
4:L:197:LEU:HD23	4:L:199:ILE:HG13	1.87	0.56
5:M:290:LEU:HB3	5:M:302:VAL:HG12	1.88	0.56
6:N:1353:GLN:HB3	6:N:1357:ARG:HE	1.70	0.56
6:N:150:ARG:HD3	6:N:464:LEU:HD21	1.88	0.56
6:N:482:LYS:HE2	6:N:1384:PRO:HG2	1.88	0.56
5:M:1034:GLU:H	6:N:619:LEU:HD13	1.71	0.56
4:A:102:LYS:HZ2	4:A:139:ASN:HD21	1.54	0.56
5:C:233:GLU:HB3	11:C:1182:HOH:O	2.06	0.56
5:C:358:ARG:HA	5:C:361:MET:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:474:VAL:HG12	5:C:531:PHE:HA	1.88	0.56
5:C:578:VAL:HG13	5:C:671:ASN:CB	2.29	0.56
5:C:680:ASP:HB2	5:C:682:TYR:CE2	2.40	0.56
6:D:1222:GLY:O	6:D:1225:ALA:HB3	2.06	0.56
5:M:1057:SER:HB2	6:N:622:ARG:O	2.05	0.56
5:M:569:VAL:HG12	5:M:996:LYS:O	2.07	0.56
6:N:783:ARG:CA	6:N:1028:ALA:HA	2.26	0.56
5:M:1050:GLN:HE22	6:N:1470:ARG:C	2.09	0.56
7:O:13:VAL:HG13	7:O:75:PHE:CZ	2.41	0.56
7:O:27:ALA:CB	7:O:61:VAL:HG12	2.35	0.56
7:O:54:LEU:HG	7:O:58:PRO:HG2	1.88	0.56
2:Y:8:C:O5'	2:Y:8:C:H6	1.89	0.56
5:C:150:PRO:HA	5:C:158:TYR:HB3	1.89	0.55
5:C:166:PRO:HD2	5:C:263:ASP:O	2.06	0.55
6:D:1336:LEU:HD22	6:D:1421:LEU:HB2	1.87	0.55
6:D:1197:ARG:HB3	6:D:1396:GLU:CG	2.36	0.55
6:D:710:ARG:CG	6:D:772:PRO:HG2	2.34	0.55
6:D:957:PRO:CG	6:D:1007:VAL:HA	2.36	0.55
6:D:1209:LEU:HD11	7:E:16:LYS:HD2	1.88	0.55
7:E:31:LEU:HD21	7:E:60:ALA:HB2	1.88	0.55
4:K:32:PHE:O	4:K:36:LEU:HG	2.05	0.55
4:K:94:LEU:HD11	4:K:119:ASP:CG	2.25	0.55
4:L:101:LEU:HD11	4:L:113:ASP:HB3	1.89	0.55
4:L:59:GLU:CG	4:L:137:ARG:HH22	2.18	0.55
5:M:697:ARG:O	5:M:699:PHE:N	2.38	0.55
6:N:1121:PRO:CD	6:N:1346:ARG:HH21	2.14	0.55
6:N:165:LYS:HG2	6:N:448:GLU:OE2	2.06	0.55
5:C:1016:ILE:CD1	5:C:1016:ILE:H	2.16	0.55
5:C:1020:PRO:O	5:C:1021:LEU:HD12	2.07	0.55
5:C:267:TYR:HB2	5:C:272:ALA:CB	2.37	0.55
5:C:850:ALA:HA	6:D:632:VAL:HG11	1.87	0.55
5:C:965:GLU:O	5:C:969:GLN:HG2	2.05	0.55
5:C:676:ILE:HG21	5:C:988:VAL:HG13	1.88	0.55
6:D:462:GLN:HG2	6:D:466:LYS:NZ	2.21	0.55
6:D:114:THR:HG22	6:D:495:ARG:HA	1.87	0.55
6:D:700:VAL:HG12	6:D:749:VAL:HG12	1.88	0.55
6:D:804:LEU:HD23	6:D:804:LEU:H	1.71	0.55
4:K:112:ARG:HG2	4:K:125:PRO:CB	2.37	0.55
5:M:946:ARG:HB3	5:M:946:ARG:NH1	2.07	0.55
6:N:1016:PRO:HB3	11:N:9351:HOH:O	2.04	0.55
6:N:120:ALA:HB2	11:N:9298:HOH:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1258:ARG:NH1	6:N:1268:PRO:HB3	2.16	0.55
6:N:834:THR:HG22	6:N:838:ARG:NH1	2.21	0.55
2:Y:9:G:C8	2:Y:9:G:H5'	2.41	0.55
4:B:30:ARG:HH22	5:C:854:PRO:CG	2.20	0.55
4:B:48:ILE:HG13	11:B:331:HOH:O	2.07	0.55
5:C:472:ARG:HG2	5:C:483:VAL:HG22	1.88	0.55
5:C:759:THR:HB	5:C:785:VAL:CG1	2.33	0.55
5:C:92:ALA:HB2	5:C:120:LEU:HD11	1.87	0.55
6:D:473:LEU:O	6:D:477:LEU:HG	2.06	0.55
6:D:808:THR:OG1	6:D:809:PRO:HD3	2.07	0.55
4:L:58:ILE:HG22	4:L:61:VAL:H	1.71	0.55
5:M:134:ARG:HD3	5:M:392:SER:HB3	1.86	0.55
5:M:173:ASP:HB2	5:M:185:LYS:NZ	2.22	0.55
5:M:943:VAL:HG23	5:M:985:GLY:H	1.72	0.55
6:N:1165:TYR:CE2	6:N:1214:PRO:HB3	2.42	0.55
6:N:402:PRO:HA	6:N:443:VAL:HG23	1.88	0.55
4:A:183:ASP:HB3	11:A:321:HOH:O	2.07	0.55
5:C:136:ILE:CG2	5:C:336:VAL:HG22	2.36	0.55
5:C:401:LEU:HD21	5:C:565:GLN:HE21	1.71	0.55
5:C:527:GLU:OE1	5:C:528:GLU:HG3	2.06	0.55
5:C:780:GLU:HG2	11:C:1242:HOH:O	2.06	0.55
4:B:30:ARG:HH22	5:C:854:PRO:HG2	1.72	0.55
6:D:1007:VAL:HG12	6:D:1011:PHE:CE2	2.40	0.55
6:D:887:ALA:HB3	11:D:8116:HOH:O	2.06	0.55
4:K:57:TYR:CE2	4:K:59:GLU:HA	2.41	0.55
5:M:115:LEU:HD12	5:M:115:LEU:O	2.06	0.55
5:M:265:ARG:HB3	5:M:267:TYR:CD2	2.42	0.55
5:M:138:SER:HB3	5:M:333:ILE:HG23	1.88	0.55
4:K:72:LYS:HE3	5:M:641:PRO:O	2.06	0.55
5:M:975:TYR:HA	5:M:982:PRO:HA	1.89	0.55
5:C:139:GLN:O	5:C:333:ILE:HA	2.07	0.55
5:C:5:ARG:NE	5:C:8:ARG:HH12	2.00	0.55
6:D:117:ASP:H	6:D:150:ARG:HH12	1.55	0.55
5:M:285:LEU:O	5:M:285:LEU:HD23	2.06	0.55
5:M:987:ILE:HG12	6:N:948:THR:HG21	1.88	0.55
6:N:1209:LEU:HG	6:N:1219:GLU:OE1	2.07	0.55
6:N:1335:LEU:CD2	6:N:1344:VAL:HG22	2.27	0.55
4:A:153:ALA:HA	4:A:156:HIS:NE2	2.22	0.55
4:B:41:ARG:HD2	4:B:177:VAL:CG2	2.37	0.55
5:C:1045:ALA:HB1	5:C:1048:THR:HB	1.89	0.55
5:C:431:HIS:NE2	5:C:432:ARG:HB2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:794:GLN:HB3	6:D:1017:PHE:HZ	1.72	0.55
6:D:112:ILE:HB	6:D:512:MET:SD	2.46	0.55
6:D:1481:VAL:HG12	6:D:1481:VAL:O	2.07	0.55
6:D:801:GLY:HA2	11:D:8362:HOH:O	2.06	0.55
5:M:433:THR:CG2	5:M:488:ALA:HB1	2.35	0.55
5:M:626:ARG:HH12	5:M:637:LEU:CB	2.17	0.55
6:N:957:PRO:HG2	6:N:1007:VAL:HG22	1.87	0.55
6:N:1027:GLY:HA2	11:N:9239:HOH:O	2.06	0.55
6:N:1105:ILE:HD13	11:N:9367:HOH:O	2.05	0.55
6:N:119:SER:N	6:N:123:LEU:HD22	2.17	0.55
6:N:161:LEU:HD22	6:N:452:ILE:HG21	1.87	0.55
6:N:116:LEU:HD21	6:N:464:LEU:HD22	1.88	0.55
6:N:52:PRO:HD2	6:N:85:VAL:CG2	2.32	0.55
6:N:827:ILE:H	6:N:827:ILE:HD12	1.72	0.55
1:X:17:DC:H2''	1:X:18:DG:C5'	2.37	0.55
5:C:140:ILE:CG2	5:C:333:ILE:HG13	2.34	0.55
5:C:141:HIS:HA	11:C:1222:HOH:O	2.06	0.55
5:C:411:SER:OG	5:C:413:LEU:HD12	2.07	0.55
5:C:949:LYS:HD3	6:D:796:ARG:NH2	2.19	0.55
6:D:554:LEU:HD21	6:D:571:LYS:CE	2.36	0.55
1:G:18:DG:H8	1:G:18:DG:H5'	1.72	0.55
4:K:177:VAL:O	5:M:864:GLY:CA	2.55	0.55
4:L:205:VAL:HG11	11:L:322:HOH:O	2.05	0.55
5:M:1067:TYR:CE1	5:M:1071:ILE:HD11	2.41	0.55
5:M:176:VAL:C	5:M:178:PRO:HD3	2.27	0.55
5:M:141:HIS:CB	5:M:418:LEU:HD23	2.33	0.55
4:K:72:LYS:HG3	5:M:641:PRO:HB2	1.87	0.55
5:M:660:ALA:HB1	5:M:667:ALA:O	2.06	0.55
5:M:719:PRO:HB2	11:M:1137:HOH:O	2.07	0.55
5:M:730:SER:O	5:M:734:LEU:HD13	2.07	0.55
5:M:752:GLY:O	6:N:679:ARG:HG2	2.06	0.55
4:K:181:VAL:HG21	5:M:939:ARG:NH1	2.20	0.55
6:N:137:PRO:HB2	6:N:138:LYS:HD3	1.89	0.55
6:N:43:GLY:N	11:N:9087:HOH:O	2.40	0.55
6:N:18:ILE:CG2	6:N:518:PRO:HG3	2.22	0.55
4:A:206:THR:HG23	4:A:208:LEU:H	1.72	0.55
4:B:55:SER:OG	4:B:143:ARG:HD3	2.06	0.55
5:C:290:LEU:HB3	5:C:302:VAL:HG12	1.88	0.55
5:C:437:ARG:NE	5:C:469:THR:HB	2.20	0.55
5:C:397:GLU:OE2	5:C:633:GLN:HG2	2.07	0.55
5:C:753:ASP:O	5:C:792:VAL:HG23	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1147:ARG:HB3	6:D:1188:VAL:CG2	2.37	0.55
6:D:119:SER:N	6:D:123:LEU:HD22	2.18	0.55
6:D:1495:ILE:HG22	6:D:1499:ARG:HE	1.72	0.55
4:K:150:TYR:CE2	4:K:152:PRO:HG3	2.42	0.55
4:K:161:ARG:HA	11:K:728:HOH:O	2.07	0.55
4:K:5:LYS:O	4:K:8:ALA:HB2	2.07	0.55
5:M:1022:GLY:HA3	5:M:1026:GLN:O	2.07	0.55
5:M:1098:ASP:HB2	6:N:21:TRP:CZ2	2.42	0.55
5:M:535:SER:HB3	5:M:537:LYS:HZ2	1.71	0.55
6:N:1097:LYS:O	6:N:1101:VAL:HG23	2.07	0.55
6:N:123:LEU:O	6:N:126:VAL:HB	2.07	0.55
6:N:1425:THR:HG22	6:N:1429:LEU:CD1	2.36	0.55
6:N:183:GLU:HG2	6:N:184:GLU:N	2.21	0.55
6:N:737:ASN:ND2	10:N:4999:APC:O3'	2.37	0.55
6:N:840:LYS:HE2	6:N:841:TYR:CE2	2.42	0.55
4:B:154:GLU:CD	4:B:155:LYS:HZ1	2.10	0.55
5:C:182:VAL:HG12	5:C:193:LEU:CD1	2.37	0.55
5:C:194:VAL:HG12	5:C:204:GLN:HE22	1.72	0.55
5:C:374:ASN:ND2	5:C:377:PRO:HD3	2.21	0.55
6:D:1105:ILE:HD12	6:D:1373:ARG:NH2	2.19	0.55
6:D:1266:ARG:HG2	6:D:1267:ARG:N	2.20	0.55
6:D:1389:LEU:HG	6:D:1390:LEU:HG	1.89	0.55
6:D:30:GLU:HB3	6:D:40:GLU:HB3	1.89	0.55
6:D:57:GLU:HG2	6:D:58:CYS:N	2.21	0.55
6:D:899:LEU:HD12	6:D:900:ILE:HG23	1.88	0.55
5:M:12:VAL:HB	5:M:472:ARG:NH2	2.22	0.55
5:M:139:GLN:HE21	5:M:418:LEU:HD22	1.72	0.55
5:M:239:PHE:CE1	5:M:254:VAL:HB	2.33	0.55
5:M:609:ASN:ND2	5:M:609:ASN:N	2.54	0.55
4:K:30:ARG:HH12	5:M:938:LYS:HD2	1.70	0.55
6:N:1393:GLN:HB2	6:N:1398:TRP:CZ2	2.42	0.55
6:N:1457:ASP:O	6:N:1459:LEU:HD12	2.07	0.55
6:N:696:HIS:CD2	7:O:59:ASN:HB2	2.41	0.55
4:B:181:VAL:HB	11:B:355:HOH:O	2.06	0.55
4:B:7:LYS:HG2	11:B:368:HOH:O	2.07	0.55
5:C:751:PRO:HA	5:C:792:VAL:HB	1.89	0.55
6:D:119:SER:HB2	6:D:123:LEU:CB	2.37	0.55
6:D:403:PHE:CD2	6:D:444:VAL:HG23	2.41	0.55
6:D:474:GLU:O	6:D:478:LEU:HG	2.06	0.55
6:D:618:LEU:HB3	6:D:619:LEU:HD23	1.89	0.55
6:D:630:VAL:HA	6:D:744:GLN:CG	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:12:DG:H2''	1:G:13:DT:O5'	2.06	0.55
2:H:3:G:H1'	11:C:1128:HOH:O	2.06	0.55
4:K:73:GLU:OE1	4:K:130:ALA:HA	2.06	0.55
5:M:173:ASP:O	5:M:184:MET:HA	2.06	0.55
5:M:700:TYR:CB	5:M:833:LEU:HD22	2.37	0.55
4:A:53:VAL:HG13	4:A:142:VAL:HG12	1.89	0.54
4:B:24:VAL:HG22	4:B:196:THR:HB	1.90	0.54
5:C:1:MET:CG	5:C:900:ARG:HH22	2.19	0.54
5:C:20:GLU:O	5:C:24:GLU:HG2	2.07	0.54
5:C:313:LEU:CB	5:C:321:GLU:HG3	2.37	0.54
5:C:714:ASP:HB2	5:C:818:GLY:O	2.07	0.54
6:D:1425:THR:HG21	11:D:8492:HOH:O	2.06	0.54
6:D:447:VAL:HG23	6:D:448:GLU:N	2.21	0.54
6:D:675:ARG:HA	6:D:678:GLU:CD	2.27	0.54
6:D:630:VAL:HA	6:D:744:GLN:HG2	1.89	0.54
6:D:827:ILE:HG22	6:D:837:GLY:HA2	1.88	0.54
6:D:890:VAL:HG11	6:D:922:LEU:CD1	2.37	0.54
2:H:7:G:C5'	2:H:7:G:C8	2.91	0.54
4:L:219:ARG:HB2	11:L:344:HOH:O	2.06	0.54
5:M:587:VAL:HG11	5:M:666:LEU:HD22	1.88	0.54
5:M:716:LYS:NZ	6:N:36:THR:HA	2.21	0.54
6:N:1125:PRO:C	6:N:1130:ARG:HH12	2.11	0.54
6:N:1192:LEU:HD22	6:N:1345:GLU:HG2	1.89	0.54
6:N:1263:PHE:O	6:N:1424:VAL:HG12	2.07	0.54
6:N:1500:LYS:HB3	11:N:9412:HOH:O	2.07	0.54
6:N:482:LYS:HB2	6:N:1388:ARG:NH2	2.21	0.54
6:N:520:LEU:CD1	6:N:521:PRO:HD2	2.35	0.54
6:N:584:ASN:CG	6:N:590:PRO:HD2	2.27	0.54
7:O:13:VAL:HG11	7:O:18:ARG:HB3	1.89	0.54
2:Y:7:G:H8	2:Y:7:G:O5'	1.90	0.54
5:C:1032:PHE:O	5:C:1033:GLY:O	2.26	0.54
5:C:814:GLU:HB3	11:C:1562:HOH:O	2.06	0.54
5:C:842:ARG:HH21	5:C:993:PHE:HB3	1.73	0.54
6:D:1087:ARG:HD2	6:D:1256:LEU:HD22	1.89	0.54
6:D:445:ARG:HG2	6:D:445:ARG:HH11	1.71	0.54
6:D:115:LEU:HD13	6:D:502:PHE:CD1	2.42	0.54
6:D:967:ALA:HA	11:D:8411:HOH:O	2.06	0.54
5:M:244:PRO:CD	5:M:245:GLY:H	2.20	0.54
5:M:15:LEU:HG	5:M:458:TYR:CE1	2.43	0.54
5:M:607:ASP:HB2	5:M:610:ARG:O	2.06	0.54
5:M:666:LEU:HD11	5:M:668:LEU:HD21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:171:LEU:HD21	6:N:192:ALA:CB	2.37	0.54
6:N:141:ILE:HD13	6:N:450:TYR:O	2.07	0.54
4:A:83:LYS:HZ3	4:A:168:ASP:HB2	1.72	0.54
5:C:1046:ALA:HB2	6:D:1476:THR:H	1.72	0.54
5:C:200:LEU:HD13	5:C:300:ASP:CG	2.27	0.54
5:C:367:LEU:O	5:C:371:LYS:HB3	2.06	0.54
5:C:413:LEU:HD11	5:C:452:ILE:HD11	1.89	0.54
5:C:508:ILE:HG13	5:C:526:PRO:HB3	1.89	0.54
5:C:526:PRO:HG2	11:C:1239:HOH:O	2.06	0.54
5:C:715:THR:HG22	5:C:717:LEU:HG	1.90	0.54
6:D:119:SER:HB2	6:D:123:LEU:HD13	1.88	0.54
6:D:133:ILE:HG12	6:D:153:LEU:O	2.07	0.54
6:D:165:LYS:HD3	6:D:448:GLU:CD	2.27	0.54
6:D:685:ASP:HA	6:D:688:TRP:CD1	2.41	0.54
4:K:152:PRO:HB3	4:K:154:GLU:OE2	2.07	0.54
4:L:59:GLU:CG	4:L:139:ASN:HD22	2.20	0.54
5:M:1060:ILE:HG23	5:M:1061:GLU:H	1.73	0.54
5:M:250:ARG:HG2	5:M:253:ALA:HB3	1.90	0.54
5:M:674:VAL:HG12	5:M:990:GLY:O	2.07	0.54
5:M:851:LYS:HE2	5:M:852:ILE:O	2.08	0.54
6:N:111:LYS:HG2	6:N:1452:ILE:HD11	1.89	0.54
6:N:1120:VAL:O	6:N:1185:GLU:HA	2.08	0.54
6:N:98:PRO:C	6:N:458:ALA:HB3	2.27	0.54
4:A:149:GLY:O	4:A:171:PHE:HB2	2.08	0.54
5:C:1060:ILE:HG23	5:C:1061:GLU:N	2.23	0.54
5:C:12:VAL:HG12	5:C:534:VAL:HG13	1.89	0.54
5:C:198:ARG:HH11	5:C:204:GLN:HG2	1.71	0.54
5:C:289:THR:O	5:C:291:ALA:N	2.40	0.54
5:C:292:ARG:HD2	5:C:299:LYS:HE2	1.90	0.54
5:C:432:ARG:HH22	6:D:1053:PHE:HZ	1.55	0.54
6:D:137:PRO:HD2	6:D:453:ASP:OD2	2.07	0.54
6:D:204:LEU:HD12	6:D:396:VAL:HB	1.88	0.54
6:D:971:LEU:HG	6:D:972:LEU:HD22	1.89	0.54
4:L:54:THR:HG22	4:L:158:ILE:HG13	1.89	0.54
4:L:81:ASN:ND2	4:L:127:LEU:HD11	2.22	0.54
5:M:1008:ARG:NH2	5:M:1012:PRO:O	2.41	0.54
5:M:598:GLU:HG3	5:M:623:TYR:OH	2.08	0.54
5:M:983:ILE:HG21	5:M:987:ILE:CD1	2.37	0.54
6:N:28:LYS:HB3	6:N:41:ARG:HD2	1.89	0.54
7:O:28:GLN:CB	7:O:32:ARG:HH22	2.21	0.54
7:O:51:LEU:CD2	7:O:52:GLU:H	2.19	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:5:C:H5'	5:M:764:GLU:OE2	2.06	0.54
4:B:99:LEU:HD13	4:B:144:VAL:HG21	1.90	0.54
5:C:897:LEU:O	5:C:899:GLN:HG2	2.08	0.54
6:D:1485:GLN:NE2	7:E:79:LEU:N	2.55	0.54
6:D:38:LYS:HG2	6:D:39:PRO:CD	2.37	0.54
6:D:622:ARG:HD2	11:D:8134:HOH:O	2.07	0.54
6:D:731:LEU:CD1	6:D:931:LEU:HB3	2.37	0.54
5:M:1008:ARG:NH1	5:M:1011:GLY:N	2.56	0.54
5:M:1060:ILE:HD12	5:M:1064:ASN:HD21	1.72	0.54
5:M:1067:TYR:CZ	5:M:1071:ILE:HD11	2.43	0.54
5:M:554:ASP:HB3	5:M:880:MET:HB2	1.87	0.54
6:N:1054:GLU:HB3	11:N:9098:HOH:O	2.07	0.54
6:N:1192:LEU:HD21	6:N:1372:VAL:HG13	1.89	0.54
6:N:1255:GLY:O	6:N:1259:VAL:HG23	2.08	0.54
5:M:1085:PHE:HE2	6:N:1468:LEU:HG	1.72	0.54
6:N:132:TYR:O	6:N:456:MET:HB3	2.06	0.54
6:N:462:GLN:CB	6:N:513:ILE:HD13	2.37	0.54
11:N:9184:HOH:O	7:O:80:VAL:HG21	2.08	0.54
4:B:33:GLY:O	4:B:195:LEU:HD13	2.08	0.54
5:C:16:PRO:HD2	5:C:458:TYR:HA	1.89	0.54
5:C:182:VAL:HG21	5:C:220:GLY:C	2.28	0.54
5:C:310:LEU:O	5:C:314:THR:HG23	2.07	0.54
5:C:479:VAL:HG23	11:C:1232:HOH:O	2.08	0.54
5:C:607:ASP:HB3	5:C:610:ARG:H	1.71	0.54
5:C:806:LEU:CD1	5:C:813:VAL:HG21	2.37	0.54
5:C:869:VAL:HA	11:C:1453:HOH:O	2.08	0.54
6:D:1373:ARG:HE	6:D:1374:GLN:HE21	1.56	0.54
6:D:135:LEU:HD13	6:D:148:GLU:HB2	1.89	0.54
6:D:203:ALA:HB1	11:D:8118:HOH:O	2.06	0.54
6:D:394:LEU:H	6:D:394:LEU:HD23	1.73	0.54
6:D:989:TYR:O	6:D:993:LEU:HG	2.08	0.54
4:L:92:PRO:HA	4:L:146:ARG:NH1	2.23	0.54
5:M:132:ALA:HB1	5:M:632:ASN:ND2	2.20	0.54
5:M:164:PRO:HB2	11:M:1226:HOH:O	2.07	0.54
5:M:89:THR:HG21	5:M:383:ARG:NH2	2.23	0.54
5:M:332:ARG:HA	5:M:465:GLY:O	2.07	0.54
5:M:943:VAL:HG11	5:M:973:VAL:HG21	1.90	0.54
6:N:141:ILE:H	6:N:141:ILE:HD12	1.73	0.54
6:N:754:PHE:HE2	6:N:1476:THR:HG21	1.72	0.54
4:A:115:LEU:HD22	11:A:317:HOH:O	2.07	0.54
4:A:6:LEU:HD11	11:A:387:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:577:PRO:HA	5:C:671:ASN:HD21	1.71	0.54
5:C:861:LEU:HD12	5:C:865:THR:HG23	1.88	0.54
6:D:133:ILE:CG2	6:D:454:ALA:HB1	2.37	0.54
6:D:62:LYS:HD2	6:D:75:ARG:HD2	1.90	0.54
6:D:685:ASP:HA	6:D:688:TRP:NE1	2.22	0.54
5:M:248:PRO:HA	11:M:1493:HOH:O	2.07	0.54
5:M:304:LEU:CD2	5:M:305:PRO:HD3	2.29	0.54
5:M:461:VAL:HA	11:M:1287:HOH:O	2.07	0.54
5:M:837:ASP:O	5:M:848:VAL:HG13	2.06	0.54
6:N:1246:VAL:HB	11:N:9392:HOH:O	2.07	0.54
7:O:41:GLU:HG2	7:O:42:PRO:CD	2.37	0.54
4:A:101:LEU:HB3	4:A:114:PHE:CD2	2.43	0.54
4:A:24:VAL:HG13	4:A:196:THR:HG22	1.89	0.54
5:C:496:ILE:HD12	5:C:496:ILE:N	2.23	0.54
5:C:833:LEU:HD11	5:C:839:LEU:HD21	1.89	0.54
5:C:668:LEU:O	5:C:995:MET:HB3	2.08	0.54
6:D:111:LYS:HG2	6:D:1452:ILE:HD11	1.90	0.54
6:D:165:LYS:HA	6:D:199:LEU:CD1	2.38	0.54
6:D:470:LEU:H	6:D:470:LEU:HD23	1.73	0.54
5:C:1017:THR:HB	6:D:613:ARG:NH2	2.22	0.54
11:B:382:HOH:O	6:D:685:ASP:HB3	2.08	0.54
6:D:708:LEU:HB3	6:D:1231:GLU:CB	2.35	0.54
6:D:926:LYS:HA	6:D:929:ARG:HD2	1.88	0.54
7:E:47:LYS:HA	7:E:54:LEU:HB3	1.88	0.54
4:K:14:ARG:HH22	4:K:24:VAL:HG23	1.73	0.54
4:L:159:LYS:HB2	11:L:316:HOH:O	2.08	0.54
5:M:1097:LEU:HD22	5:M:1097:LEU:N	2.13	0.54
6:N:90:MET:HE1	6:N:518:PRO:HB2	1.89	0.54
6:N:583:ASP:OD1	6:N:586:ARG:HG3	2.07	0.54
5:C:1101:THR:OG1	5:C:1109:VAL:HB	2.08	0.54
5:C:100:LEU:HD22	5:C:372:LEU:CD2	2.38	0.54
5:C:397:GLU:OE1	5:C:631:SER:HB2	2.08	0.54
6:D:1209:LEU:HD21	7:E:16:LYS:HZ1	1.73	0.54
6:D:471:GLU:O	6:D:474:GLU:HB3	2.08	0.54
6:D:799:LYS:O	6:D:829:VAL:HG22	2.08	0.54
5:M:620:LEU:H	5:M:620:LEU:HD12	1.72	0.54
6:N:776:GLU:HB3	6:N:912:LYS:HE2	1.90	0.54
4:A:91:ASN:ND2	4:A:93:SER:H	2.06	0.54
4:A:42:ARG:HH12	4:B:34:VAL:HG11	1.72	0.54
5:C:684:PHE:N	5:C:687:ALA:HB3	2.19	0.54
6:D:1003:VAL:HG11	6:D:1041:LEU:HD23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:565:ILE:HB	6:D:566:ILE:HD12	1.90	0.54
11:B:374:HOH:O	6:D:851:LEU:HD11	2.07	0.54
6:D:964:LEU:HD21	6:D:1058:ARG:NE	2.22	0.54
4:L:137:ARG:C	4:L:137:ARG:HD3	2.28	0.54
4:L:5:LYS:O	4:L:8:ALA:HB2	2.07	0.54
5:M:1095:LEU:HB2	5:M:1097:LEU:HD23	1.89	0.54
5:M:225:SER:HB2	11:M:1245:HOH:O	2.08	0.54
5:M:468:ARG:HE	5:M:487:THR:CA	2.21	0.54
6:N:177:ALA:HB3	6:N:205:TYR:OH	2.08	0.54
6:N:436:GLU:HB2	6:N:445:ARG:HG3	1.89	0.54
6:N:131:LYS:HZ3	6:N:568:ARG:HB2	1.72	0.54
6:N:868:TYR:HB2	6:N:873:LEU:HD12	1.89	0.54
6:N:996:TRP:HB2	11:N:9079:HOH:O	2.07	0.54
4:A:22:GLU:OE2	4:A:198:ARG:HB3	2.08	0.53
5:C:497:ALA:HA	5:C:515:ALA:HA	1.90	0.53
5:C:758:ARG:HH22	5:C:788:THR:HB	1.73	0.53
5:C:911:GLU:HB3	5:C:912:PRO:HD3	1.90	0.53
6:D:127:LEU:HD22	6:D:460:ALA:HB3	1.90	0.53
6:D:32:ILE:HB	6:D:527:MET:HE3	1.90	0.53
6:D:600:LEU:HD12	6:D:600:LEU:H	1.72	0.53
6:D:754:PHE:CG	7:E:24:ALA:HB1	2.43	0.53
6:D:53:ILE:HA	6:D:86:ARG:NE	2.23	0.53
5:M:510:ALA:HB3	5:M:513:VAL:CG2	2.37	0.53
5:M:57:GLU:O	5:M:62:GLY:HA3	2.07	0.53
6:N:1122:LEU:HB3	11:N:9164:HOH:O	2.09	0.53
6:N:1462:LEU:O	6:N:1466:VAL:HG23	2.08	0.53
6:N:478:LEU:O	6:N:1388:ARG:NH2	2.42	0.53
5:C:157:ARG:NH1	5:C:217:LEU:HD22	2.23	0.53
5:C:285:LEU:HD12	5:C:288:ARG:O	2.07	0.53
2:H:13:C:C4'	5:C:409:ARG:HH22	2.13	0.53
6:D:22:SER:CB	6:D:92:HIS:HB3	2.37	0.53
3:I:11:DC:H5	11:I:331:HOH:O	1.91	0.53
4:L:73:GLU:HB3	4:L:77:GLU:CG	2.38	0.53
5:M:259:GLY:HA3	11:M:1270:HOH:O	2.08	0.53
5:M:34:VAL:HB	5:M:38:LYS:CG	2.38	0.53
4:K:72:LYS:HD2	5:M:606:VAL:HG11	1.90	0.53
6:N:1168:MET:CE	6:N:1171:VAL:HB	2.37	0.53
6:N:1262:LEU:HD21	6:N:1351:GLU:HG3	1.91	0.53
6:N:1191:PRO:HG2	6:N:1370:ILE:CD1	2.38	0.53
6:N:168:THR:CG2	6:N:206:ARG:HH12	2.21	0.53
6:N:462:GLN:HA	6:N:513:ILE:HD13	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:875:THR:HB	6:N:880:ILE:HD11	1.90	0.53
3:Z:10:DA:H5"	6:N:121:THR:HG21	1.89	0.53
5:C:1049:LEU:CD1	5:C:1053:LEU:HD11	2.39	0.53
5:C:1054:THR:HG22	5:C:1082:PRO:HG3	1.89	0.53
5:C:1105:LYS:HZ2	5:C:1107:ASN:HD22	1.55	0.53
5:C:134:ARG:HE	5:C:392:SER:HB3	1.72	0.53
5:C:136:ILE:HG22	5:C:336:VAL:HG22	1.88	0.53
5:C:438:ILE:HG23	5:C:453:THR:OG1	2.08	0.53
5:C:462:ASP:OD1	5:C:462:ASP:N	2.41	0.53
5:C:577:PRO:HG3	5:C:993:PHE:CE1	2.42	0.53
6:D:1063:GLU:HG3	6:D:1064:GLY:N	2.24	0.53
6:D:1184:GLN:HB2	6:N:559:ALA:HA	1.90	0.53
6:D:126:VAL:HG21	11:D:8125:HOH:O	2.07	0.53
6:D:955:VAL:HG11	6:D:1015:TYR:CE2	2.42	0.53
1:G:17:DC:H2"	1:G:18:DG:C5'	2.36	0.53
4:K:171:PHE:O	4:K:173:PRO:HD3	2.08	0.53
4:L:201:THR:HG21	4:L:205:VAL:HG23	1.90	0.53
4:L:94:LEU:HD11	4:L:119:ASP:HB3	1.91	0.53
5:M:512:ARG:HD3	5:M:523:ILE:HD11	1.90	0.53
6:N:1114:THR:CG2	6:N:1195:GLN:HB3	2.38	0.53
6:N:394:LEU:HG	6:N:396:VAL:CG2	2.38	0.53
6:N:473:LEU:O	6:N:477:LEU:HG	2.08	0.53
6:N:619:LEU:HD23	6:N:619:LEU:N	2.23	0.53
6:N:817:GLU:O	6:N:821:VAL:HG23	2.08	0.53
7:O:91:ARG:HG2	11:O:2238:HOH:O	2.08	0.53
4:A:62:LEU:HD13	11:A:334:HOH:O	2.08	0.53
4:B:5:LYS:O	4:B:8:ALA:HB2	2.08	0.53
5:C:274:ARG:HB2	5:C:285:LEU:CD1	2.38	0.53
6:D:1010:ASN:ND2	11:D:8083:HOH:O	2.41	0.53
6:D:781:PRO:O	6:D:786:ILE:HD11	2.07	0.53
6:D:957:PRO:HG2	6:D:1007:VAL:HA	1.89	0.53
5:M:1045:ALA:HB1	5:M:1048:THR:HB	1.90	0.53
5:M:205:GLU:HB2	11:M:1398:HOH:O	2.07	0.53
5:M:334:ARG:O	5:M:339:LEU:HD11	2.09	0.53
5:M:344:PHE:HE2	5:M:378:LEU:HD21	1.74	0.53
5:M:642:ARG:HD2	11:M:1230:HOH:O	2.08	0.53
6:N:1078:ARG:HH11	6:N:1078:ARG:HG3	1.72	0.53
6:N:878:GLY:HA2	6:N:881:LEU:HD23	1.90	0.53
6:N:95:LEU:HD13	6:N:515:GLU:C	2.28	0.53
4:A:102:LYS:NZ	4:A:139:ASN:HD21	2.06	0.53
4:A:159:LYS:HZ1	4:A:166:PRO:HD3	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:175:ARG:CZ	4:A:176:ARG:HD3	2.37	0.53
4:B:159:LYS:N	4:B:159:LYS:HD3	2.24	0.53
5:C:167:LYS:HE3	11:C:1598:HOH:O	2.08	0.53
5:C:309:TYR:HA	5:C:312:ALA:HB3	1.90	0.53
5:C:872:ASN:ND2	5:C:874:LEU:H	2.06	0.53
5:C:905:ILE:HG22	5:C:906:PHE:N	2.23	0.53
6:D:1376:MET:HE1	6:D:1421:LEU:HD22	1.90	0.53
6:D:152:LEU:HD11	11:D:8125:HOH:O	2.09	0.53
6:D:191:LEU:HD11	6:D:395:VAL:CG2	2.38	0.53
6:D:643:GLY:O	6:D:726:ILE:HG23	2.08	0.53
6:D:758:GLU:O	6:D:762:GLN:HG2	2.08	0.53
4:K:176:ARG:HG3	4:K:200:TRP:CE3	2.44	0.53
4:K:20:TYR:HD2	4:K:21:GLY:N	2.07	0.53
4:K:57:TYR:CZ	4:K:59:GLU:HA	2.43	0.53
4:K:9:PRO:HB3	4:K:25:LEU:CG	2.38	0.53
4:L:121:GLU:OE2	4:L:123:MET:HG2	2.09	0.53
4:L:58:ILE:HB	4:L:61:VAL:CG1	2.39	0.53
5:M:1019:GLN:HG2	5:M:1058:ASP:OD1	2.08	0.53
5:M:140:ILE:HD11	5:M:412:ALA:HB2	1.91	0.53
5:M:224:GLU:HB2	5:M:227:PHE:CD1	2.44	0.53
6:N:1148:VAL:HG13	6:N:1163:GLY:HA2	1.90	0.53
6:N:1231:GLU:HB3	6:N:1232:PRO:CD	2.38	0.53
1:X:17:DC:H4'	6:N:628:ARG:CD	2.38	0.53
6:N:800:LYS:HZ1	6:N:804:LEU:HD22	1.73	0.53
6:N:814:ALA:HB1	6:N:818:ARG:NH2	2.24	0.53
6:N:769:LEU:HD11	6:N:919:PHE:CZ	2.43	0.53
6:N:886:VAL:HG13	6:N:930:LEU:HD11	1.89	0.53
5:C:1006:HIS:HA	5:C:1027:PHE:CD1	2.43	0.53
6:D:806:PHE:HE1	6:D:813:LEU:HD23	1.72	0.53
6:D:864:VAL:HG12	6:D:865:THR:H	1.74	0.53
4:K:20:TYR:HD2	4:K:21:GLY:H	1.55	0.53
5:M:532:MET:HG2	5:M:533:ASP:O	2.08	0.53
11:K:1782:HOH:O	5:M:640:ARG:HG2	2.08	0.53
6:N:1112:CYS:SG	6:N:1195:GLN:HG2	2.49	0.53
6:N:700:VAL:HG22	6:N:718:PRO:HG3	1.91	0.53
6:N:996:TRP:CA	6:N:999:THR:HG22	2.29	0.53
1:X:22:DC:H4'	5:M:388:ARG:HG3	1.90	0.53
4:B:99:LEU:HD13	4:B:144:VAL:CG2	2.39	0.53
5:C:218:VAL:HG23	5:C:311:PHE:HE1	1.72	0.53
5:C:257:VAL:HG21	11:C:1481:HOH:O	2.08	0.53
5:C:329:GLY:HA3	5:C:489:THR:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:326:ASP:CB	5:C:431:HIS:HB2	2.37	0.53
6:D:1041:LEU:HD12	6:D:1058:ARG:HA	1.90	0.53
6:D:1221:VAL:HG12	6:D:1222:GLY:N	2.24	0.53
6:D:132:TYR:C	6:D:133:ILE:HD13	2.29	0.53
6:D:960:LYS:HE2	6:D:1041:LEU:HD22	1.91	0.53
7:E:25:LYS:HA	7:E:28:GLN:HE21	1.74	0.53
4:L:33:GLY:O	4:L:195:LEU:HD22	2.09	0.53
5:M:463:GLU:HB3	11:M:1525:HOH:O	2.09	0.53
5:M:515:ALA:HB3	5:M:524:VAL:CG2	2.39	0.53
6:N:679:ARG:HB2	6:N:682:ASP:CG	2.29	0.53
4:B:50:GLY:HA3	4:B:171:PHE:O	2.08	0.53
5:C:217:LEU:HD23	5:C:217:LEU:N	2.24	0.53
6:D:43:GLY:N	11:D:8160:HOH:O	2.41	0.53
6:D:592:THR:H	6:D:600:LEU:HD11	1.74	0.53
6:D:995:LEU:HD11	11:D:8411:HOH:O	2.08	0.53
7:E:18:ARG:HD3	11:E:116:HOH:O	2.09	0.53
2:Y:7:G:O6	5:M:1015:LEU:HB2	2.09	0.53
5:M:769:PRO:HG2	6:N:65:ARG:HD3	1.90	0.53
6:N:1271:LYS:HZ1	6:N:1331:ASP:HB2	1.72	0.53
5:C:305:PRO:HA	5:C:308:ARG:HB3	1.90	0.53
5:C:545:ASN:OD1	5:C:583:LEU:HD13	2.08	0.53
5:C:679:PHE:C	6:D:943:THR:HG22	2.29	0.53
5:C:881:ASN:HD22	5:C:881:ASN:H	1.55	0.53
6:D:1258:ARG:HG2	11:D:8324:HOH:O	2.09	0.53
6:D:1435:LEU:HD23	6:D:1467:ILE:HD12	1.91	0.53
6:D:181:ASP:O	6:D:204:LEU:HA	2.08	0.53
6:D:161:LEU:HD22	6:D:452:ILE:HD13	1.91	0.53
4:K:47:SER:HB3	4:K:217:ILE:HD13	1.90	0.53
4:K:218:LEU:HG	11:K:1711:HOH:O	2.09	0.53
5:M:142:ARG:HA	5:M:330:ASN:O	2.09	0.53
5:M:549:PHE:CG	5:M:886:LEU:HD23	2.43	0.53
5:M:644:VAL:HG22	5:M:647:GLN:OE1	2.08	0.53
6:N:1128:VAL:O	6:N:1129:THR:C	2.47	0.53
6:N:1200:VAL:HG22	6:N:1373:ARG:HH12	1.73	0.53
6:N:808:THR:OG1	6:N:809:PRO:HD3	2.09	0.53
7:O:73:LEU:HD12	7:O:73:LEU:N	2.24	0.53
4:B:206:THR:CG2	4:B:209:GLU:H	2.20	0.53
5:C:195:LEU:HG	5:C:238:LEU:CD1	2.38	0.53
5:C:442:GLU:HA	11:C:1416:HOH:O	2.08	0.53
5:C:798:GLY:HA3	5:C:828:ALA:O	2.09	0.53
5:C:957:LYS:HD3	5:C:961:GLU:OE1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1037:GLN:OE1	6:D:1042:ARG:HD3	2.09	0.53
6:D:1176:LYS:HA	6:D:1179:GLU:OE1	2.09	0.53
6:D:1441:GLN:NE2	6:D:1442:ASN:HB2	2.25	0.53
6:D:695:ILE:HG21	6:D:720:LEU:HD11	1.89	0.53
6:D:827:ILE:O	6:D:837:GLY:HA3	2.09	0.53
6:D:971:LEU:HG	6:D:972:LEU:N	2.22	0.53
4:K:100:LEU:HG	4:K:101:LEU:N	2.22	0.53
4:K:49:PRO:HG3	11:K:867:HOH:O	2.09	0.53
4:L:10:VAL:HG23	4:L:26:GLU:O	2.09	0.53
5:M:1101:THR:HG21	5:M:1111:ILE:CG2	2.38	0.53
5:M:1101:THR:OG1	5:M:1109:VAL:HB	2.08	0.53
5:M:172:ILE:H	5:M:172:ILE:HD12	1.73	0.53
5:M:264:PRO:HB3	5:M:289:THR:HB	1.90	0.53
5:M:264:PRO:HB3	5:M:289:THR:CB	2.38	0.53
5:M:394:PHE:HD1	5:M:633:GLN:HE22	1.56	0.53
5:M:759:THR:HB	5:M:785:VAL:HG13	1.90	0.53
6:N:1086:LEU:HB2	6:N:1087:ARG:NH1	2.23	0.53
6:N:482:LYS:HB2	6:N:1388:ARG:HH21	1.73	0.53
6:N:792:ILE:HG13	6:N:881:LEU:HD21	1.91	0.53
1:X:12:DG:H2''	1:X:13:DT:H5'	1.90	0.53
4:A:186:LEU:HB3	4:A:192:LEU:CD1	2.39	0.52
4:B:28:LEU:HG	4:B:193:ASP:O	2.08	0.52
1:G:20:DG:H4'	5:C:394:PHE:CZ	2.44	0.52
5:C:443:THR:HA	5:C:452:ILE:O	2.09	0.52
5:C:1:MET:HG2	5:C:900:ARG:NH2	2.23	0.52
6:D:1269:LYS:NZ	6:D:1269:LYS:HB3	2.24	0.52
6:D:1465:ASN:ND2	6:D:1470:ARG:HE	2.05	0.52
5:C:1031:ARG:HH21	6:D:621:LYS:HG3	1.73	0.52
4:L:37:GLY:HA3	4:L:179:PHE:CD1	2.45	0.52
5:M:1008:ARG:HB2	5:M:1027:PHE:HB2	1.91	0.52
5:M:367:LEU:HB3	5:M:371:LYS:HG2	1.90	0.52
5:M:69:LEU:HB2	5:M:97:ARG:HB2	1.91	0.52
5:M:821:GLU:HB3	11:M:1453:HOH:O	2.08	0.52
5:M:953:VAL:HG22	5:M:966:LEU:HD11	1.90	0.52
6:N:1058:ARG:HG2	11:N:9214:HOH:O	2.08	0.52
11:Z:1999:HOH:O	6:N:1426:LYS:HG3	2.08	0.52
6:N:1503:VAL:HG21	11:N:9060:HOH:O	2.07	0.52
6:N:166:GLN:HG2	6:N:396:VAL:HG13	1.91	0.52
6:N:496:LEU:CD1	6:N:500:ARG:HG2	2.39	0.52
6:N:705:ALA:CB	6:N:706:PRO:HD3	2.39	0.52
5:M:949:LYS:HD3	6:N:796:ARG:HH22	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:882:PHE:O	6:N:886:VAL:HG23	2.08	0.52
5:C:1105:LYS:O	5:C:1107:ASN:N	2.42	0.52
5:C:251:ASP:HB3	5:C:252:LYS:HD2	1.91	0.52
5:C:260:LEU:HG	5:C:261:ILE:HG13	1.91	0.52
5:C:143:SER:HB2	5:C:276:LYS:NZ	2.24	0.52
6:D:610:LYS:HA	6:D:615:ARG:CD	2.39	0.52
7:E:32:ARG:HB2	7:E:32:ARG:HH11	1.74	0.52
4:L:43:ILE:HG21	4:L:214:ALA:HA	1.91	0.52
5:M:89:THR:HA	5:M:129:ILE:O	2.08	0.52
5:M:134:ARG:HH11	5:M:392:SER:HB3	1.74	0.52
5:M:260:LEU:CB	5:M:291:ALA:HB1	2.36	0.52
5:M:305:PRO:HA	5:M:308:ARG:HB3	1.91	0.52
5:M:456:ALA:HB1	5:M:538:GLN:O	2.09	0.52
4:K:70:GLY:H	5:M:607:ASP:CG	2.12	0.52
5:M:74:GLY:O	5:M:76:PRO:HD3	2.09	0.52
6:N:1053:PHE:CE1	6:N:1072:ILE:HD12	2.44	0.52
6:N:1236:LEU:HD11	6:N:1361:VAL:HG23	1.90	0.52
6:N:204:LEU:HD13	6:N:445:ARG:HE	1.72	0.52
6:N:520:LEU:HG	6:N:521:PRO:N	2.24	0.52
6:D:1081:GLY:HA2	6:D:1241:PHE:CD1	2.45	0.52
6:D:426:LYS:CE	6:D:427:VAL:HG23	2.40	0.52
6:D:975:GLU:OE1	6:D:975:GLU:HA	2.08	0.52
2:H:8:C:H6	2:H:8:C:O5'	1.92	0.52
4:K:163:ASN:HA	11:K:2179:HOH:O	2.10	0.52
4:K:180:GLN:HA	5:M:937:ASP:OD1	2.08	0.52
4:L:7:LYS:HE3	4:L:186:LEU:HD13	1.90	0.52
5:M:1092:LEU:HA	5:M:1095:LEU:CD1	2.39	0.52
5:M:218:VAL:HG22	5:M:221:LEU:CD2	2.39	0.52
5:M:432:ARG:NH2	6:N:1047:LYS:HD3	2.22	0.52
6:N:496:LEU:O	6:N:496:LEU:HD12	2.09	0.52
6:N:104:PHE:HD1	6:N:512:MET:HG2	1.74	0.52
6:N:789:LEU:O	6:N:793:THR:HG23	2.08	0.52
6:N:899:LEU:HD12	6:N:900:ILE:HG23	1.91	0.52
7:O:80:VAL:HG13	11:O:1385:HOH:O	2.09	0.52
4:B:12:THR:OG1	4:B:24:VAL:HB	2.10	0.52
4:B:43:ILE:HG23	4:B:47:SER:CB	2.40	0.52
5:C:1105:LYS:HD2	5:C:1107:ASN:ND2	2.25	0.52
5:C:110:GLU:HG3	5:C:369:PRO:HB3	1.92	0.52
5:C:230:ARG:HG2	5:C:230:ARG:HH11	1.73	0.52
5:C:290:LEU:HB3	5:C:302:VAL:CG1	2.39	0.52
5:C:487:THR:HB	5:C:490:GLU:HG3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1248:GLY:HA2	6:D:1251:ASP:OD2	2.09	0.52
6:D:202:VAL:HG11	6:D:400:VAL:HG12	1.91	0.52
6:D:434:ARG:HB2	6:D:447:VAL:CG2	2.40	0.52
6:D:557:LEU:HD11	11:D:8469:HOH:O	2.08	0.52
6:D:628:ARG:HB2	11:D:8067:HOH:O	2.08	0.52
6:D:64:LYS:HD2	11:D:8441:HOH:O	2.09	0.52
4:L:43:ILE:HG23	4:L:47:SER:CB	2.39	0.52
5:M:1001:VAL:HG22	11:M:1555:HOH:O	2.09	0.52
2:Y:7:G:H22	5:M:1014:SER:CA	2.23	0.52
5:M:1105:LYS:O	5:M:1107:ASN:N	2.42	0.52
5:M:674:VAL:HG23	5:M:869:VAL:HG13	1.92	0.52
5:M:690:ILE:HD11	5:M:833:LEU:HD23	1.91	0.52
5:M:807:ARG:N	5:M:807:ARG:HE	2.05	0.52
5:M:850:ALA:HA	6:N:632:VAL:HG11	1.92	0.52
5:M:860:HIS:CE1	5:M:975:TYR:HB2	2.45	0.52
6:N:1118:ILE:HD12	11:N:9016:HOH:O	2.09	0.52
6:N:119:SER:CB	6:N:123:LEU:HB2	2.38	0.52
6:N:1121:PRO:CD	6:N:1346:ARG:HE	2.22	0.52
6:N:192:ALA:HB1	6:N:193:PRO:HD2	1.92	0.52
6:N:584:ASN:HD22	6:N:585:GLY:N	2.08	0.52
6:N:644:LEU:HD12	6:N:645:PRO:HD2	1.91	0.52
4:A:190:THR:HA	11:A:369:HOH:O	2.08	0.52
5:C:1062:GLY:HA2	11:C:1284:HOH:O	2.10	0.52
5:C:173:ASP:O	5:C:184:MET:HA	2.09	0.52
5:C:327:HIS:HA	5:C:431:HIS:CD2	2.44	0.52
5:C:538:GLN:HG3	5:C:539:VAL:N	2.24	0.52
5:C:559:LEU:HD23	5:C:563:ASN:OD1	2.10	0.52
5:C:816:LYS:HZ3	5:C:816:LYS:H	1.57	0.52
6:D:1118:ILE:HD11	11:D:8142:HOH:O	2.09	0.52
6:D:1112:CYS:CB	6:D:1195:GLN:HG2	2.29	0.52
6:D:1232:PRO:HA	6:D:1235:GLN:OE1	2.10	0.52
6:D:52:PRO:CG	6:D:80:VAL:HG13	2.39	0.52
6:D:600:LEU:HD12	6:D:600:LEU:N	2.25	0.52
6:D:820:GLU:HB2	6:D:836:VAL:HG11	1.92	0.52
6:D:95:LEU:HB3	6:D:515:GLU:O	2.09	0.52
6:D:989:TYR:CE1	6:D:993:LEU:HD21	2.44	0.52
4:L:27:PRO:HB3	4:L:192:LEU:HD22	1.91	0.52
5:M:328:LEU:HD13	5:M:433:THR:HB	1.90	0.52
5:M:470:PRO:HB2	5:M:534:VAL:HG21	1.92	0.52
5:M:5:ARG:HE	5:M:8:ARG:NH2	2.02	0.52
5:M:684:PHE:N	5:M:687:ALA:HB3	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:754:ILE:HG12	5:M:791:ARG:NH1	2.25	0.52
5:M:839:LEU:HD23	5:M:996:LYS:HA	1.92	0.52
6:N:109:PRO:HB3	6:N:494:LYS:NZ	2.25	0.52
6:N:1165:TYR:OH	6:N:1202:GLN:HG2	2.09	0.52
6:N:44:LEU:H	6:N:44:LEU:HD12	1.75	0.52
6:D:1184:GLN:HB2	6:N:559:ALA:CB	2.39	0.52
6:N:568:ARG:O	6:N:572:ARG:HG3	2.08	0.52
6:N:654:LYS:HB3	6:N:655:PRO:HD3	1.91	0.52
5:M:1071:ILE:O	6:N:659:LYS:HD3	2.09	0.52
6:N:787:LEU:CD1	6:N:1023:MET:HA	2.39	0.52
6:N:832:ARG:HB3	6:N:833:GLU:OE1	2.09	0.52
1:X:13:DT:OP1	6:N:1093:TYR:HE2	1.93	0.52
5:C:258:TYR:HB3	11:C:1335:HOH:O	2.08	0.52
6:D:142:LEU:CD2	6:D:146:PRO:HA	2.40	0.52
6:D:660:LYS:HD2	6:D:694:VAL:CG2	2.40	0.52
6:D:834:THR:HA	6:D:838:ARG:NH1	2.24	0.52
7:E:45:ARG:HG2	11:E:129:HOH:O	2.09	0.52
4:K:64:GLU:HA	4:K:165:ILE:HD13	1.91	0.52
4:L:109:VAL:O	4:L:129:ILE:HG12	2.09	0.52
5:M:1009:SER:OG	6:N:654:LYS:HD2	2.09	0.52
5:M:218:VAL:O	5:M:221:LEU:HG	2.10	0.52
5:M:18:LEU:HD22	5:M:404:LEU:HD21	1.91	0.52
5:M:516:ARG:NH2	6:N:1068:LEU:HB3	2.25	0.52
5:M:5:ARG:CZ	5:M:8:ARG:HH12	2.22	0.52
5:M:971:LYS:HG2	5:M:988:VAL:CB	2.40	0.52
6:N:1034:GLN:NE2	6:N:1243:THR:HB	2.25	0.52
6:N:1045:MET:HE2	6:N:1073:SER:CB	2.35	0.52
6:N:1440:PHE:O	6:N:1441:GLN:O	2.28	0.52
7:O:36:LYS:HA	7:O:36:LYS:HE2	1.90	0.52
4:A:14:ARG:HH22	4:A:24:VAL:CG2	2.23	0.52
5:C:22:GLN:C	5:C:121:MET:HE1	2.30	0.52
5:C:39:ARG:H	5:C:39:ARG:CD	2.03	0.52
5:C:13:ILE:HD11	5:C:483:VAL:HG21	1.92	0.52
5:C:9:ILE:HD12	5:C:9:ILE:H	1.75	0.52
6:D:615:ARG:HH22	6:D:1096:ARG:CD	2.22	0.52
6:D:1498:ALA:HB1	7:E:84:ARG:NH2	2.25	0.52
6:D:82:LYS:HD2	11:D:8499:HOH:O	2.08	0.52
7:E:48:MET:CB	7:E:54:LEU:HB2	2.39	0.52
4:K:73:GLU:CD	4:K:130:ALA:HA	2.30	0.52
4:L:206:THR:HG23	4:L:208:LEU:H	1.73	0.52
4:K:8:ALA:HB1	4:L:224:TYR:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1008:ARG:HH12	5:M:1011:GLY:H	1.58	0.52
5:M:1019:GLN:HE22	6:N:616:GLN:HE22	1.58	0.52
5:M:589:ARG:HH11	5:M:589:ARG:HB2	1.73	0.52
5:M:757:GLY:HA2	5:M:789:SER:OG	2.10	0.52
6:N:1492:LEU:HD12	6:N:1493:LYS:HZ1	1.73	0.52
1:X:12:DG:H2''	1:X:13:DT:C5'	2.40	0.52
4:A:178:ALA:HB3	4:A:198:ARG:CG	2.37	0.52
4:A:222:LEU:HD13	4:B:218:LEU:HD23	1.90	0.52
5:C:65:VAL:CG2	5:C:101:ILE:HB	2.40	0.52
5:C:564:MET:SD	5:C:995:MET:HG3	2.50	0.52
5:C:748:GLU:CB	5:C:799:ILE:HD12	2.39	0.52
5:C:859:PRO:O	5:C:867:VAL:HG22	2.09	0.52
5:C:983:ILE:HB	11:C:1149:HOH:O	2.10	0.52
6:D:684:LYS:HD3	6:D:686:GLU:OE1	2.10	0.52
5:M:1032:PHE:HZ	5:M:1040:LEU:HD13	1.74	0.52
5:M:157:ARG:HG2	11:M:1381:HOH:O	2.09	0.52
5:M:352:ALA:HA	5:M:355:VAL:CG1	2.39	0.52
5:M:91:GLN:NE2	5:M:383:ARG:NH2	2.57	0.52
6:N:141:ILE:HD12	6:N:141:ILE:N	2.25	0.52
6:N:452:ILE:HG22	11:N:9064:HOH:O	2.10	0.52
6:N:610:LYS:HG3	11:N:9272:HOH:O	2.09	0.52
6:N:619:LEU:HD12	6:N:621:LYS:NZ	2.25	0.52
6:N:756:GLN:NE2	6:N:760:ARG:HD2	2.24	0.52
5:C:102:HIS:HB2	5:C:106:GLY:O	2.10	0.52
5:C:774:LEU:HD23	5:C:775:ARG:N	2.25	0.52
5:C:996:LYS:HE3	11:C:1151:HOH:O	2.10	0.52
6:D:543:LEU:O	6:D:546:ARG:HB2	2.10	0.52
6:D:651:GLU:HA	6:D:654:LYS:HZ2	1.73	0.52
6:D:731:LEU:HD13	6:D:931:LEU:HB3	1.91	0.52
4:K:156:HIS:CD2	4:K:157:GLY:N	2.77	0.52
4:L:216:GLU:HG3	4:L:220:GLU:OE1	2.10	0.52
5:M:212:GLY:HA3	5:M:218:VAL:HG21	1.91	0.52
5:M:565:GLN:OE1	5:M:842:ARG:HG2	2.10	0.52
6:N:1270:ALA:O	6:N:1329:ALA:HB3	2.09	0.52
6:N:204:LEU:HD12	6:N:396:VAL:CG2	2.40	0.52
6:N:656:PHE:HB3	6:N:694:VAL:HG11	1.92	0.52
7:O:54:LEU:HA	7:O:58:PRO:CG	2.39	0.52
4:B:124:ASN:N	4:B:125:PRO:HD3	2.23	0.52
5:C:1018:GLN:C	5:C:1019:GLN:HE21	2.14	0.52
5:C:1037:VAL:HG12	5:C:1041:GLU:OE2	2.10	0.52
5:C:20:GLU:OE2	5:C:460:ARG:NH1	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1267:ARG:NH1	6:D:1267:ARG:HB2	2.24	0.52
6:D:399:ARG:HD3	6:D:430:ASP:OD2	2.09	0.52
6:D:525:ARG:HB2	6:D:538:SER:CB	2.40	0.52
6:D:820:GLU:HA	6:D:825:ALA:O	2.10	0.52
4:K:1:MET:O	4:K:6:LEU:HD22	2.10	0.52
5:M:353:ARG:HA	11:M:1274:HOH:O	2.09	0.52
6:N:1403:LEU:O	6:N:1407:LEU:HD13	2.10	0.52
6:N:1440:PHE:CG	6:N:1441:GLN:N	2.78	0.52
6:N:616:GLN:NE2	11:N:9292:HOH:O	2.43	0.52
6:N:642:CYS:SG	6:N:716:PHE:HB2	2.50	0.52
5:M:1094:ALA:HA	6:N:90:MET:CE	2.39	0.52
7:O:67:GLU:HB3	7:O:73:LEU:HD11	1.91	0.52
4:A:163:ASN:HD21	5:C:744:ARG:NH2	2.08	0.51
4:A:67:THR:CG2	5:C:609:ASN:HD21	2.23	0.51
4:A:9:PRO:HD2	4:B:224:TYR:CE1	2.45	0.51
5:C:286:SER:HB3	5:C:299:LYS:HE3	1.92	0.51
6:D:206:ARG:CG	6:D:394:LEU:HD22	2.33	0.51
6:D:396:VAL:CG1	6:D:447:VAL:HA	2.36	0.51
5:M:1109:VAL:HA	6:N:3:LYS:HE3	1.92	0.51
5:M:576:ALA:HB3	5:M:900:ARG:HH11	1.75	0.51
5:M:557:ARG:NH1	5:M:879:ARG:HD3	2.25	0.51
6:N:1020:LEU:HD21	6:N:1035:ILE:CG2	2.40	0.51
6:N:396:VAL:CG1	6:N:447:VAL:HA	2.41	0.51
6:N:461:ILE:O	6:N:465:LEU:HB2	2.09	0.51
6:N:632:VAL:HG23	6:N:725:SER:HB2	1.92	0.51
6:N:709:HIS:CD2	6:N:709:HIS:H	2.28	0.51
6:N:95:LEU:H	6:N:95:LEU:CD1	2.20	0.51
6:N:960:LYS:HZ1	6:N:1041:LEU:HD13	1.75	0.51
4:A:138:LEU:O	4:A:138:LEU:HD23	2.10	0.51
4:A:188:GLN:HG3	4:A:189:ARG:H	1.74	0.51
5:C:144:PRO:N	5:C:276:LYS:NZ	2.58	0.51
5:C:157:ARG:HG3	5:C:314:THR:HG21	1.92	0.51
5:C:176:VAL:C	5:C:178:PRO:HD3	2.31	0.51
5:C:198:ARG:CZ	5:C:203:ASP:HA	2.39	0.51
5:C:843:HIS:CB	5:C:884:GLN:HG2	2.40	0.51
6:D:1098:LEU:CD2	6:D:1226:ALA:HA	2.38	0.51
6:D:1118:ILE:HG13	6:D:1192:LEU:HD13	1.92	0.51
6:D:831:GLY:HA3	11:D:8198:HOH:O	2.09	0.51
4:K:102:LYS:NZ	4:K:115:LEU:HD22	2.24	0.51
4:K:41:ARG:O	4:K:45:LEU:HD12	2.10	0.51
4:L:182:GLU:OE1	4:L:194:LYS:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:110:GLU:HG3	5:M:369:PRO:CB	2.29	0.51
5:M:97:ARG:HA	5:M:111:ASP:O	2.10	0.51
5:M:139:GLN:NE2	5:M:418:LEU:HD22	2.25	0.51
5:M:557:ARG:HD3	5:M:560:MET:SD	2.50	0.51
5:M:787:ASP:HB3	11:M:1300:HOH:O	2.09	0.51
6:N:1121:PRO:HA	6:N:1185:GLU:HG2	1.90	0.51
6:N:1248:GLY:O	6:N:1252:ILE:HG12	2.10	0.51
6:N:1267:ARG:HA	6:N:1271:LYS:HZ1	1.75	0.51
6:N:1496:GLU:HA	6:N:1499:ARG:CZ	2.40	0.51
6:N:35:ARG:HG3	6:N:35:ARG:HH11	1.75	0.51
6:N:50:PHE:CB	6:N:522:PRO:HG3	2.40	0.51
6:N:52:PRO:CG	6:N:80:VAL:HG13	2.39	0.51
6:N:754:PHE:O	6:N:758:GLU:HG2	2.10	0.51
4:A:26:GLU:HG3	4:A:184:THR:HG21	1.91	0.51
4:B:206:THR:HG23	4:B:208:LEU:H	1.75	0.51
5:C:141:HIS:C	5:C:331:ARG:HG2	2.31	0.51
5:C:194:VAL:CG1	5:C:204:GLN:HE22	2.22	0.51
5:C:841:ASN:HD21	5:C:845:ASN:N	2.08	0.51
6:D:813:LEU:HD12	6:D:814:ALA:N	2.26	0.51
7:E:39:VAL:HG22	7:E:67:GLU:HG2	1.92	0.51
1:G:19:DC:OP1	5:C:1001:VAL:HG11	2.10	0.51
4:L:102:LYS:HZ2	4:L:137:ARG:HG2	1.72	0.51
5:M:211:LEU:CD1	5:M:308:ARG:HA	2.40	0.51
5:M:771:GLU:O	5:M:775:ARG:HG2	2.11	0.51
5:M:841:ASN:HD21	5:M:845:ASN:H	1.58	0.51
6:N:703:ASN:ND2	6:N:704:ARG:N	2.58	0.51
6:N:879:ARG:NH1	6:N:879:ARG:HG3	2.25	0.51
6:N:889:ALA:CB	6:N:930:LEU:HD12	2.39	0.51
1:X:18:DG:H2''	1:X:19:DC:C5'	2.31	0.51
4:B:216:GLU:HA	4:B:219:ARG:NH1	2.25	0.51
5:C:163:ILE:HG13	5:C:163:ILE:O	2.08	0.51
5:C:547:ILE:HD13	5:C:550:LEU:HD13	1.91	0.51
5:C:605:LYS:HD2	5:C:612:VAL:HB	1.92	0.51
5:C:598:GLU:HG3	5:C:623:TYR:OH	2.10	0.51
5:C:946:ARG:HB3	5:C:946:ARG:NH1	2.25	0.51
5:C:552:HIS:CD2	6:D:1064:GLY:HA2	2.46	0.51
6:D:1464:GLU:HA	6:D:1467:ILE:CD1	2.40	0.51
6:D:483:HIS:ND1	6:D:483:HIS:N	2.59	0.51
6:D:690:ALA:O	6:D:694:VAL:HG23	2.10	0.51
6:D:762:GLN:HE22	7:E:20:THR:HG21	1.75	0.51
4:K:9:PRO:HB3	4:K:25:LEU:HG	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:36:LEU:O	4:L:39:PRO:HD2	2.10	0.51
5:M:173:ASP:OD1	5:M:185:LYS:HG3	2.11	0.51
5:M:804:VAL:HB	5:M:824:ARG:HB2	1.93	0.51
5:M:79:PRO:HD2	5:M:82:GLU:OE1	2.10	0.51
5:M:976:ASP:HB2	11:M:1439:HOH:O	2.10	0.51
6:N:1377:LYS:HE3	6:N:1394:VAL:HG13	1.92	0.51
6:N:172:PRO:HG2	6:N:175:VAL:CG2	2.41	0.51
5:M:1087:VAL:HG23	6:N:524:LEU:HD21	1.92	0.51
6:N:871:LYS:HB3	6:N:873:LEU:CD2	2.40	0.51
6:N:793:THR:CB	6:N:879:ARG:HD3	2.31	0.51
6:N:977:ALA:HB1	6:N:983:LEU:HD21	1.91	0.51
4:A:98:THR:HG22	11:A:364:HOH:O	2.09	0.51
4:B:102:LYS:NZ	4:B:137:ARG:NE	2.59	0.51
5:C:195:LEU:HG	5:C:238:LEU:HD12	1.91	0.51
5:C:343:GLN:HB2	5:C:385:PHE:CD2	2.46	0.51
5:C:328:LEU:HB3	5:C:488:ALA:HB2	1.93	0.51
5:C:640:ARG:O	5:C:642:ARG:HG2	2.10	0.51
5:C:678:PRO:O	6:D:943:THR:HA	2.10	0.51
6:D:145:VAL:CG2	6:D:146:PRO:HD2	2.33	0.51
6:D:1491:THR:O	6:D:1495:ILE:HD13	2.11	0.51
6:D:394:LEU:O	6:D:396:VAL:N	2.43	0.51
6:D:582:LEU:HD23	6:D:603:LEU:CD1	2.41	0.51
2:H:8:C:H2'	2:H:9:G:C8	2.46	0.51
4:K:158:ILE:O	4:K:159:LYS:HE2	2.11	0.51
4:L:124:ASN:HD21	4:L:127:LEU:HD22	1.74	0.51
4:L:202:ASP:HA	11:L:321:HOH:O	2.10	0.51
5:M:23:VAL:N	5:M:121:MET:HE1	2.25	0.51
5:M:351:LEU:HD22	5:M:377:PRO:HB2	1.92	0.51
5:M:855:VAL:HG11	11:M:1481:HOH:O	2.11	0.51
6:N:1090:ASP:HA	6:N:1093:TYR:HB2	1.91	0.51
6:N:701:LEU:HD12	6:N:701:LEU:H	1.74	0.51
4:A:88:ARG:HD2	4:A:121:GLU:OE1	2.10	0.51
4:A:5:LYS:O	4:A:8:ALA:HB2	2.10	0.51
4:B:40:LEU:O	4:B:44:LEU:HG	2.11	0.51
5:C:334:ARG:HG2	5:C:338:GLU:CD	2.31	0.51
5:C:432:ARG:HH12	6:D:1072:ILE:HD11	1.75	0.51
5:C:564:MET:HE1	5:C:995:MET:HB2	1.92	0.51
5:C:603:VAL:H	5:C:647:GLN:H	1.57	0.51
5:C:612:VAL:HG12	11:C:1460:HOH:O	2.10	0.51
5:C:835:VAL:HG13	5:C:836:GLY:N	2.25	0.51
6:D:1101:VAL:HG21	6:D:1424:VAL:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:31:THR:HB	6:D:527:MET:HE1	1.92	0.51
6:D:540:LEU:HA	6:D:543:LEU:CD1	2.40	0.51
6:D:705:ALA:CB	6:D:706:PRO:HD3	2.40	0.51
7:E:58:PRO:C	7:E:59:ASN:HD22	2.13	0.51
4:L:24:VAL:HG13	4:L:196:THR:CG2	2.39	0.51
4:L:29:GLU:OE2	4:L:29:GLU:HA	2.10	0.51
5:M:549:PHE:HA	11:M:1469:HOH:O	2.10	0.51
5:M:879:ARG:HH21	6:N:1029:ARG:NH2	2.08	0.51
5:M:913:GLU:O	5:M:917:LEU:HG	2.11	0.51
6:N:1094:LEU:HB2	6:N:1260:ILE:CD1	2.38	0.51
6:N:1100:ASP:HB3	6:N:1428:ALA:HB1	1.92	0.51
6:N:1107:VAL:HA	6:N:1200:VAL:O	2.11	0.51
6:N:1129:THR:O	6:N:1130:ARG:HD2	2.11	0.51
6:N:1366:LYS:HA	6:N:1369:GLU:OE1	2.11	0.51
6:N:153:LEU:HD22	6:N:158:TYR:HB2	1.93	0.51
6:N:864:VAL:HB	11:N:9142:HOH:O	2.10	0.51
6:N:879:ARG:HH21	6:N:903:ASP:C	2.13	0.51
4:A:221:HIS:HA	4:A:224:TYR:HD2	1.76	0.51
4:B:40:LEU:HD21	4:B:215:VAL:HG12	1.93	0.51
5:C:1088:LEU:HD23	5:C:1089:VAL:N	2.26	0.51
5:C:217:LEU:HD23	5:C:217:LEU:H	1.76	0.51
5:C:52:PHE:CG	5:C:68:PHE:HB2	2.46	0.51
6:D:129:PHE:C	6:D:568:ARG:HH21	2.14	0.51
6:D:631:ILE:HG21	6:D:745:MET:SD	2.50	0.51
6:D:903:ASP:O	6:D:904:VAL:HG13	2.11	0.51
6:D:933:ALA:O	6:D:937:TYR:HD1	1.93	0.51
4:L:102:LYS:HD3	4:L:139:ASN:CB	2.35	0.51
5:M:1090:LYS:HE3	5:M:1112:PHE:CE1	2.42	0.51
5:M:163:ILE:HG13	5:M:163:ILE:O	2.09	0.51
5:M:64:LEU:HD13	5:M:359:MET:HG3	1.93	0.51
5:M:710:ILE:HD12	5:M:790:LEU:HB2	1.91	0.51
5:M:892:LEU:HD11	5:M:967:PHE:CE1	2.45	0.51
6:N:1033:GLN:O	6:N:1037:GLN:HG3	2.10	0.51
6:N:1042:ARG:HH21	6:N:1045:MET:HE2	1.76	0.51
6:N:1117:TYR:CE2	6:N:1151:ARG:HD3	2.45	0.51
6:N:1191:PRO:HB2	11:N:9021:HOH:O	2.10	0.51
6:N:1452:ILE:HG22	6:N:1453:ALA:N	2.25	0.51
6:N:415:VAL:O	6:N:432:TYR:HA	2.11	0.51
6:N:634:GLY:O	6:N:637:LEU:HB3	2.11	0.51
6:N:828:LYS:HD3	6:N:862:ASP:OD2	2.11	0.51
6:N:1476:THR:HG23	7:O:21:VAL:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:1008:ARG:NH2	5:C:1011:GLY:H	2.09	0.51
5:C:80:GLN:HE22	5:C:122:THR:HG23	1.76	0.51
5:C:147:TYR:HB3	11:C:1186:HOH:O	2.10	0.51
5:C:158:TYR:CE1	5:C:314:THR:HA	2.46	0.51
5:C:352:ALA:HA	5:C:355:VAL:CG1	2.41	0.51
5:C:573:ARG:CB	5:C:670:GLN:HE22	2.23	0.51
5:C:957:LYS:HD3	5:C:961:GLU:CD	2.30	0.51
5:C:878:SER:HA	6:D:1034:GLN:OE1	2.11	0.51
6:D:1347:TYR:CD2	6:D:1348:LEU:HD12	2.46	0.51
6:D:1101:VAL:HG23	6:D:1424:VAL:HG23	1.93	0.51
6:D:566:ILE:HD12	6:D:566:ILE:H	1.76	0.51
6:D:582:LEU:HD23	6:D:603:LEU:HD12	1.92	0.51
4:K:26:GLU:HG2	4:K:27:PRO:CA	2.40	0.51
4:L:160:ASP:HB3	4:L:161:ARG:HD2	1.92	0.51
5:M:169:GLY:HA2	5:M:263:ASP:OD1	2.11	0.51
5:M:550:LEU:HD12	5:M:550:LEU:O	2.10	0.51
5:M:5:ARG:HB2	5:M:8:ARG:NH2	2.21	0.51
6:N:542:ASP:O	6:N:546:ARG:HG3	2.10	0.51
6:N:62:LYS:HB2	6:N:73:CYS:SG	2.51	0.51
4:B:7:LYS:O	4:B:7:LYS:HD2	2.11	0.51
5:C:604:ALA:HB3	5:C:612:VAL:O	2.10	0.51
6:D:1040:GLY:O	6:D:1060:SER:HB3	2.11	0.51
6:D:1379:VAL:HG12	6:D:1419:PRO:HA	1.93	0.51
6:D:1441:GLN:CD	6:D:1442:ASN:HB2	2.31	0.51
6:D:154:THR:HG22	6:D:157:GLU:OE2	2.10	0.51
6:D:393:ILE:HG21	11:D:8118:HOH:O	2.11	0.51
6:D:413:ASP:O	6:D:435:VAL:HG23	2.11	0.51
6:D:671:LYS:HG3	11:D:8106:HOH:O	2.11	0.51
7:E:41:GLU:CG	7:E:42:PRO:HD3	2.41	0.51
5:M:1047:HIS:H	5:M:1047:HIS:CD2	2.28	0.51
5:M:160:ALA:HB3	5:M:174:LEU:HB2	1.93	0.51
6:N:1023:MET:HG2	6:N:1029:ARG:HB2	1.93	0.51
6:N:481:MET:SD	6:N:493:ARG:HA	2.51	0.51
7:O:10:PHE:CZ	7:O:16:LYS:HE3	2.46	0.51
4:A:14:ARG:HG3	4:A:14:ARG:HH11	1.75	0.51
4:B:48:ILE:HD12	4:B:48:ILE:H	1.76	0.51
4:B:89:PHE:HB3	4:B:94:LEU:CD1	2.39	0.51
5:C:1019:GLN:HE22	5:C:1058:ASP:CB	2.24	0.51
5:C:288:ARG:HB2	5:C:288:ARG:NH1	2.26	0.51
5:C:552:HIS:ND1	5:C:886:LEU:HD22	2.26	0.51
5:C:730:SER:O	5:C:734:LEU:HD13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:3:ILE:HA	5:C:900:ARG:O	2.11	0.51
6:D:1151:ARG:HG2	6:D:1187:PRO:HB2	1.92	0.51
6:D:181:ASP:HA	6:D:205:TYR:CD1	2.46	0.51
6:D:785:ILE:HG13	6:D:939:PHE:HE2	1.74	0.51
7:E:27:ALA:HA	7:E:30:LEU:HD13	1.93	0.51
7:E:48:MET:HG2	7:E:49:GLN:N	2.26	0.51
7:E:33:HIS:CD2	7:E:89:MET:HG2	2.45	0.51
5:M:1016:ILE:HG12	5:M:1017:THR:N	2.26	0.51
5:M:628:PHE:HA	11:M:1256:HOH:O	2.10	0.51
5:M:660:ALA:HA	11:M:1443:HOH:O	2.11	0.51
5:M:571:LEU:HD21	5:M:700:TYR:HA	1.93	0.51
6:N:1087:ARG:HB3	6:N:1256:LEU:CD2	2.41	0.51
6:N:1379:VAL:HA	6:N:1420:LEU:HB2	1.92	0.51
6:N:155:ASP:N	11:N:9432:HOH:O	2.43	0.51
6:N:133:ILE:HD13	6:N:158:TYR:CD2	2.45	0.51
6:N:409:VAL:CG1	6:N:435:VAL:HG11	2.41	0.51
5:M:1007:ALA:HB2	6:N:648:MET:HG2	1.91	0.51
4:B:160:ASP:HA	11:B:363:HOH:O	2.09	0.50
5:C:1034:GLU:HG2	6:D:619:LEU:HD13	1.93	0.50
5:C:978:ARG:NH1	11:C:1599:HOH:O	2.44	0.50
6:D:1023:MET:O	6:D:1028:ALA:HB3	2.11	0.50
6:D:133:ILE:HG21	6:D:454:ALA:HB1	1.93	0.50
6:D:550:ARG:HA	6:D:550:ARG:NE	2.20	0.50
6:D:719:VAL:O	6:D:721:VAL:HG23	2.10	0.50
6:D:978:TYR:HB2	6:D:983:LEU:HD12	1.93	0.50
7:E:16:LYS:HA	11:E:128:HOH:O	2.10	0.50
5:M:1046:ALA:HB3	5:M:1047:HIS:HD2	1.76	0.50
5:M:15:LEU:H	5:M:15:LEU:HD12	1.77	0.50
5:M:692:GLU:O	5:M:696:LYS:HG3	2.10	0.50
5:M:773:LEU:O	5:M:777:ILE:HG13	2.11	0.50
6:N:1222:GLY:O	6:N:1225:ALA:HB3	2.11	0.50
6:N:50:PHE:HB3	6:N:522:PRO:HG3	1.92	0.50
6:N:710:ARG:C	6:N:712:GLY:H	2.14	0.50
5:C:148:PHE:HB2	5:C:313:LEU:CD2	2.41	0.50
5:C:338:GLU:HA	5:C:341:THR:HG22	1.93	0.50
5:C:468:ARG:CZ	5:C:485:TYR:O	2.59	0.50
5:C:328:LEU:C	5:C:488:ALA:HB3	2.30	0.50
5:C:51:THR:HG23	5:C:348:LEU:HD23	1.93	0.50
5:C:920:GLN:O	5:C:924:VAL:HG23	2.11	0.50
6:D:133:ILE:HG13	6:D:153:LEU:HD12	1.93	0.50
6:D:151:GLN:HA	11:D:8479:HOH:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:611:GLN:HG3	6:D:611:GLN:O	2.11	0.50
4:K:92:PRO:HG3	4:K:146:ARG:HH12	1.76	0.50
5:M:144:PRO:HB2	11:M:1136:HOH:O	2.11	0.50
5:M:289:THR:O	5:M:291:ALA:N	2.44	0.50
5:M:439:CYS:HB2	5:M:541:SER:HB3	1.92	0.50
5:M:888:THR:HG21	11:M:1248:HOH:O	2.10	0.50
5:M:916:GLU:HG3	5:M:917:LEU:HD23	1.93	0.50
5:M:943:VAL:HG11	5:M:973:VAL:CG2	2.41	0.50
6:N:1101:VAL:HG22	6:N:1428:ALA:HB2	1.94	0.50
6:N:1146:GLY:HA3	6:N:1207:TYR:CB	2.39	0.50
10:N:4999:APC:H8	10:N:4999:APC:H5'1	1.93	0.50
6:N:643:GLY:O	6:N:726:ILE:HG23	2.09	0.50
6:N:633:VAL:HB	6:N:740:PHE:CE1	2.46	0.50
6:N:937:TYR:N	6:N:937:TYR:CD1	2.79	0.50
4:A:111:ALA:HB3	4:A:124:ASN:O	2.11	0.50
1:G:18:DG:O4'	5:C:1002:GLU:HB3	2.11	0.50
5:C:1021:LEU:HD23	11:C:1374:HOH:O	2.11	0.50
5:C:1105:LYS:NZ	5:C:1107:ASN:HB2	2.26	0.50
5:C:436:GLY:HA2	5:C:456:ALA:CB	2.41	0.50
6:D:134:VAL:O	6:D:134:VAL:HG23	2.11	0.50
6:D:1403:LEU:O	6:D:1407:LEU:HB2	2.11	0.50
6:D:657:LEU:HB2	6:D:691:LEU:HD22	1.93	0.50
6:D:926:LYS:HA	6:D:929:ARG:CD	2.41	0.50
5:M:364:GLU:HB2	11:M:1318:HOH:O	2.10	0.50
5:M:589:ARG:HG3	5:M:596:TYR:CZ	2.46	0.50
5:M:702:SER:OG	5:M:831:ARG:HB2	2.11	0.50
5:M:726:ILE:HB	11:M:1385:HOH:O	2.10	0.50
5:M:852:ILE:N	5:M:852:ILE:HD12	2.26	0.50
5:M:537:LYS:HG3	5:M:905:ILE:CD1	2.42	0.50
6:N:1424:VAL:CG1	6:N:1425:THR:H	2.22	0.50
5:M:1115:LEU:CG	6:N:85:VAL:HG12	2.40	0.50
4:B:20:TYR:CE2	4:B:198:ARG:HB3	2.45	0.50
5:C:1019:GLN:N	5:C:1019:GLN:HE21	2.08	0.50
5:C:433:THR:C	5:C:435:TYR:H	2.15	0.50
5:C:610:ARG:HG3	5:C:622:GLU:HG3	1.94	0.50
5:C:737:LEU:HD21	5:C:741:GLY:CA	2.42	0.50
6:D:131:LYS:HG3	6:D:568:ARG:CG	2.41	0.50
6:D:434:ARG:H	6:D:447:VAL:CG2	2.20	0.50
6:D:150:ARG:HG3	6:D:464:LEU:HD22	1.93	0.50
6:D:87:ARG:HB2	6:D:523:ASP:HB3	1.93	0.50
1:G:18:DG:H5''	6:D:628:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1087:VAL:HG22	5:M:1091:GLU:OE1	2.10	0.50
5:M:22:GLN:C	5:M:121:MET:HE1	2.32	0.50
5:M:218:VAL:HA	5:M:221:LEU:HD23	1.93	0.50
5:M:141:HIS:C	5:M:331:ARG:HG3	2.32	0.50
5:M:5:ARG:NE	5:M:8:ARG:NH1	2.57	0.50
5:M:862:PRO:HA	5:M:975:TYR:CE2	2.47	0.50
3:Z:10:DA:H5''	6:N:121:THR:CG2	2.41	0.50
2:Y:7:G:OP1	6:N:530:VAL:HG13	2.11	0.50
11:N:9174:HOH:O	7:O:81:PRO:HG2	2.11	0.50
2:Y:2:A:C3'	2:Y:2:A:H8	2.12	0.50
4:B:43:ILE:HG21	4:B:214:ALA:HA	1.94	0.50
5:C:1006:HIS:HD1	5:C:1027:PHE:HD1	1.60	0.50
5:C:185:LYS:HE2	5:C:190:LYS:HZ3	1.75	0.50
5:C:460:ARG:HB3	11:C:1158:HOH:O	2.11	0.50
5:C:597:ALA:CA	5:C:655:LEU:HD11	2.41	0.50
5:C:721:ARG:HA	5:C:820:ARG:NH2	2.26	0.50
5:C:732:ALA:HA	5:C:735:ARG:NH1	2.26	0.50
6:D:171:LEU:HD21	6:D:192:ALA:HB1	1.91	0.50
6:D:29:PRO:CB	6:D:549:ASN:HD21	2.23	0.50
11:C:1228:HOH:O	6:D:2:LYS:HA	2.11	0.50
6:D:542:ASP:OD2	6:D:542:ASP:N	2.42	0.50
4:K:177:VAL:O	5:M:864:GLY:HA2	2.12	0.50
4:K:24:VAL:HG22	4:K:196:THR:CG2	2.41	0.50
4:L:62:LEU:HD12	4:L:62:LEU:N	2.22	0.50
5:M:1055:LEU:HD11	5:M:1076:VAL:HB	1.94	0.50
5:M:395:LYS:HE3	5:M:407:LYS:HE2	1.92	0.50
5:M:757:GLY:HA2	5:M:789:SER:CB	2.42	0.50
5:M:807:ARG:N	5:M:807:ARG:NE	2.59	0.50
6:N:1020:LEU:HD21	6:N:1035:ILE:HG23	1.93	0.50
6:N:1195:GLN:HG3	6:N:1196:THR:N	2.27	0.50
2:Y:6:U:OP1	6:N:528:VAL:HG13	2.12	0.50
6:N:637:LEU:CD2	6:N:642:CYS:HA	2.41	0.50
6:N:896:ALA:O	6:N:900:ILE:HG23	2.12	0.50
7:O:54:LEU:HG	7:O:58:PRO:CG	2.42	0.50
5:C:275:TYR:HA	11:C:1297:HOH:O	2.11	0.50
5:C:22:GLN:NE2	5:C:407:LYS:HG2	2.26	0.50
2:H:14:G:P	5:C:409:ARG:HH12	2.35	0.50
5:C:630:ARG:HA	5:C:705:ILE:CD1	2.41	0.50
5:C:713:ARG:NH2	6:D:532:GLY:H	2.09	0.50
5:C:690:ILE:HD12	5:C:833:LEU:HD23	1.94	0.50
6:D:108:VAL:HG23	6:D:109:PRO:HD3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:155:ASP:O	6:D:159:ARG:N	2.41	0.50
6:D:470:LEU:HD12	6:D:503:LEU:CD2	2.42	0.50
5:M:1005:MET:HB2	6:N:648:MET:HE3	1.92	0.50
5:M:158:TYR:HE1	5:M:314:THR:HA	1.76	0.50
5:M:410:ILE:CD1	5:M:455:LEU:HB3	2.42	0.50
5:M:754:ILE:HG12	5:M:791:ARG:HH12	1.77	0.50
5:M:810:ASP:HB3	5:M:813:VAL:CG1	2.36	0.50
5:M:836:GLY:HA3	6:N:724:GLN:HE21	1.76	0.50
6:N:1240:THR:HB	6:N:1252:ILE:HD13	1.92	0.50
6:N:1267:ARG:HA	6:N:1331:ASP:HB2	1.94	0.50
6:N:613:ARG:HH11	6:N:616:GLN:HG2	1.76	0.50
6:N:758:GLU:HA	7:O:20:THR:CG2	2.42	0.50
6:N:890:VAL:HG23	6:N:890:VAL:O	2.11	0.50
7:O:28:GLN:HB3	7:O:32:ARG:NH2	2.25	0.50
4:B:174:VAL:HG13	4:B:200:TRP:O	2.12	0.50
4:B:26:GLU:HB3	4:B:194:LYS:HG3	1.93	0.50
5:C:301:GLU:O	5:C:305:PRO:HG2	2.12	0.50
5:C:580:MET:HB3	5:C:584:GLU:OE1	2.11	0.50
5:C:627:ARG:CG	5:C:628:PHE:H	2.25	0.50
5:C:702:SER:HB3	5:C:996:LYS:NZ	2.27	0.50
5:C:820:ARG:HB2	11:C:1271:HOH:O	2.12	0.50
6:D:1103:HIS:NE2	6:D:1463:LYS:HB2	2.27	0.50
6:D:1440:PHE:O	6:D:1441:GLN:O	2.30	0.50
6:D:902:LEU:H	6:D:902:LEU:HD23	1.75	0.50
7:E:68:LEU:CD1	7:E:73:LEU:HD22	2.41	0.50
5:M:120:LEU:HD13	5:M:121:MET:O	2.12	0.50
5:M:192:PRO:HB2	5:M:195:LEU:HB2	1.93	0.50
5:M:622:GLU:O	5:M:624:PRO:HD3	2.11	0.50
5:M:837:ASP:HA	5:M:999:HIS:CE1	2.46	0.50
5:M:876:VAL:O	5:M:879:ARG:O	2.30	0.50
6:N:1037:GLN:HG2	6:N:1042:ARG:HB2	1.93	0.50
6:N:1192:LEU:HD21	6:N:1372:VAL:CG1	2.42	0.50
6:N:1394:VAL:HG11	6:N:1397:LYS:HE2	1.94	0.50
6:N:150:ARG:CD	6:N:464:LEU:HD21	2.41	0.50
6:N:619:LEU:HB2	6:N:621:LYS:HD3	1.92	0.50
6:N:690:ALA:O	6:N:694:VAL:HG23	2.12	0.50
6:N:845:ASN:N	6:N:848:GLU:HG3	2.26	0.50
5:C:999:HIS:HD2	5:C:1004:LYS:NZ	2.10	0.50
5:C:290:LEU:H	5:C:290:LEU:HD23	1.75	0.50
5:C:564:MET:HE2	5:C:565:GLN:HA	1.93	0.50
5:C:57:GLU:O	5:C:62:GLY:HA3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:397:LYS:O	6:D:448:GLU:HB2	2.12	0.50
6:D:54:LYS:CD	6:D:55:ASP:H	2.25	0.50
6:D:562:ALA:HB1	6:D:567:ILE:HD11	1.94	0.50
6:D:634:GLY:CA	6:D:727:GLN:HE21	2.23	0.50
5:M:1020:PRO:O	5:M:1021:LEU:HD12	2.11	0.50
5:M:1034:GLU:HB3	6:N:619:LEU:CD2	2.40	0.50
5:M:5:ARG:NE	5:M:8:ARG:HH22	2.00	0.50
6:N:1237:THR:N	11:N:9434:HOH:O	2.45	0.50
6:N:1139:ASP:HB3	6:N:1357:ARG:NH2	2.27	0.50
6:N:475:LYS:HA	6:N:478:LEU:HG	1.94	0.50
6:N:52:PRO:HG2	6:N:80:VAL:HG13	1.93	0.50
6:N:79:GLU:HG3	11:N:9414:HOH:O	2.12	0.50
6:N:982:PHE:HB3	6:N:983:LEU:HD23	1.92	0.50
1:X:8:DT:H2"	1:X:9:DG:C8	2.46	0.50
4:B:62:LEU:HD12	4:B:62:LEU:H	1.77	0.50
5:C:265:ARG:HD2	5:C:267:TYR:CB	2.41	0.50
5:C:842:ARG:HG3	5:C:995:MET:HE1	1.93	0.50
6:D:1021:TYR:HA	11:D:8152:HOH:O	2.11	0.50
5:C:906:PHE:CZ	6:D:1067:VAL:HA	2.46	0.50
6:D:127:LEU:HD23	6:D:134:VAL:HG22	1.93	0.50
6:D:133:ILE:HG13	6:D:153:LEU:CD1	2.41	0.50
6:D:477:LEU:HD13	6:D:496:LEU:HA	1.94	0.50
6:D:510:GLU:O	6:D:513:ILE:HD12	2.12	0.50
6:D:100:ALA:HA	6:D:514:LEU:H	1.76	0.50
6:D:683:ILE:HG23	6:D:687:VAL:HG21	1.94	0.50
6:D:721:VAL:HG12	6:D:722:GLU:N	2.26	0.50
6:D:739:ASP:O	6:D:741:ASP:N	2.45	0.50
7:E:18:ARG:O	7:E:22:VAL:HG23	2.12	0.50
5:M:17:PRO:HG3	11:M:1503:HOH:O	2.12	0.50
5:M:22:GLN:OE1	5:M:407:LYS:HB3	2.12	0.50
5:M:290:LEU:HB3	5:M:302:VAL:CG1	2.41	0.50
5:M:32:ALA:HB2	11:M:1235:HOH:O	2.12	0.50
5:M:432:ARG:HH21	6:N:1048:PRO:HD2	1.77	0.50
6:N:1087:ARG:HE	6:N:1253:THR:HG23	1.77	0.50
6:N:1236:LEU:HD11	6:N:1361:VAL:CG2	2.42	0.50
6:N:637:LEU:HD12	6:N:641:GLN:OE1	2.12	0.50
6:N:714:GLN:CD	6:N:765:SER:HA	2.33	0.50
4:A:163:ASN:HD21	5:C:744:ARG:HH22	1.59	0.49
5:C:97:ARG:HA	5:C:111:ASP:O	2.12	0.49
5:C:113:VAL:O	5:C:115:LEU:HG	2.11	0.49
5:C:119:PRO:HG2	5:C:386:PHE:CD2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:408:ARG:CG	5:C:455:LEU:H	2.24	0.49
5:C:73:LEU:N	5:C:73:LEU:HD23	2.27	0.49
6:D:1128:VAL:O	6:D:1129:THR:C	2.50	0.49
6:D:1144:LEU:HD11	6:D:1186:VAL:CG2	2.37	0.49
6:D:1402:ALA:HB3	11:D:8309:HOH:O	2.11	0.49
6:D:1443:THR:O	6:D:1447:LEU:HD13	2.11	0.49
6:D:82:LYS:CB	6:D:84:ILE:HG12	2.42	0.49
6:D:926:LYS:HG3	11:D:8014:HOH:O	2.11	0.49
6:D:977:ALA:CB	6:D:983:LEU:HD21	2.42	0.49
2:H:7:G:H8	2:H:7:G:O5'	1.95	0.49
5:M:134:ARG:CD	5:M:392:SER:HB3	2.42	0.49
5:M:139:GLN:HE21	5:M:418:LEU:CD2	2.25	0.49
5:M:616:GLU:OE1	5:M:616:GLU:HA	2.11	0.49
5:M:77:PRO:HG2	5:M:117:HIS:NE2	2.27	0.49
6:N:1020:LEU:HD23	6:N:1021:TYR:N	2.27	0.49
6:N:1042:ARG:NH2	11:N:9443:HOH:O	2.45	0.49
6:N:1364:HIS:CE1	6:N:1366:LYS:HG3	2.47	0.49
6:N:143:ASN:OD1	6:N:145:VAL:HG12	2.11	0.49
6:N:1459:LEU:HD21	6:N:1468:LEU:HD22	1.93	0.49
6:N:1489:GLN:O	6:N:1493:LYS:HG2	2.12	0.49
6:N:502:PHE:CZ	6:N:509:PRO:HB3	2.46	0.49
6:N:787:LEU:HD21	6:N:1023:MET:HE2	1.94	0.49
6:N:838:ARG:NH1	6:N:838:ARG:HG2	2.26	0.49
6:N:864:VAL:HB	11:N:9057:HOH:O	2.11	0.49
3:Z:9:DG:H2''	3:Z:10:DA:C8	2.47	0.49
4:B:86:VAL:HG12	4:B:124:ASN:HB2	1.94	0.49
5:C:264:PRO:HD2	11:C:1410:HOH:O	2.12	0.49
5:C:577:PRO:HB2	5:C:580:MET:HG2	1.93	0.49
6:D:185:VAL:HG21	6:D:203:ALA:HB2	1.93	0.49
6:D:29:PRO:HB3	6:D:549:ASN:HD21	1.77	0.49
6:D:547:LEU:HB3	11:D:8068:HOH:O	2.11	0.49
6:D:634:GLY:CA	6:D:727:GLN:HG2	2.43	0.49
6:D:709:HIS:CD2	6:D:709:HIS:N	2.80	0.49
7:E:83:ASP:O	7:E:86:GLN:HG3	2.13	0.49
1:G:12:DG:H2''	1:G:13:DT:C5'	2.43	0.49
5:M:198:ARG:HE	5:M:198:ARG:HA	1.77	0.49
5:M:21:ILE:HD12	5:M:21:ILE:H	1.77	0.49
5:M:415:PRO:HD2	5:M:418:LEU:HD13	1.94	0.49
5:M:583:LEU:N	5:M:584:GLU:OE2	2.45	0.49
5:M:676:ILE:O	5:M:676:ILE:HG23	2.11	0.49
5:M:959:PRO:O	5:M:963:LEU:HG	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1010:ASN:HB3	11:N:9288:HOH:O	2.12	0.49
6:N:522:PRO:HG2	6:N:523:ASP:N	2.26	0.49
5:M:1019:GLN:CD	6:N:616:GLN:HE22	2.15	0.49
5:C:260:LEU:HA	5:C:291:ALA:CB	2.42	0.49
5:C:64:LEU:HD22	5:C:359:MET:HG3	1.93	0.49
5:C:54:ILE:HG22	5:C:66:LEU:HB3	1.95	0.49
5:C:881:ASN:N	5:C:881:ASN:ND2	2.60	0.49
6:D:1143:GLY:O	6:D:1147:ARG:NE	2.45	0.49
6:D:1495:ILE:HG12	7:E:80:VAL:CG1	2.39	0.49
6:D:836:VAL:O	6:D:840:LYS:HG3	2.12	0.49
6:D:762:GLN:NE2	7:E:20:THR:OG1	2.45	0.49
4:L:103:ALA:HB1	4:L:107:LYS:CE	2.42	0.49
4:L:47:SER:HB2	4:L:217:ILE:HD13	1.95	0.49
5:M:276:LYS:O	5:M:280:LYS:HB3	2.12	0.49
6:N:957:PRO:HG3	6:N:1007:VAL:HA	1.94	0.49
6:N:996:TRP:CE2	6:N:1056:PRO:HG2	2.47	0.49
6:N:1189:ARG:NH1	6:N:1203:LYS:HB2	2.28	0.49
6:N:437:VAL:HG13	6:N:444:VAL:HG22	1.94	0.49
6:N:133:ILE:CG2	6:N:454:ALA:HB1	2.41	0.49
7:O:18:ARG:O	7:O:22:VAL:HG23	2.12	0.49
7:O:68:LEU:HD12	7:O:73:LEU:HD22	1.93	0.49
4:A:190:THR:HG23	11:A:369:HOH:O	2.12	0.49
4:A:68:ILE:HD12	4:A:68:ILE:N	2.27	0.49
4:A:83:LYS:HE2	4:A:170:VAL:HG13	1.93	0.49
4:B:62:LEU:HD13	4:B:63:HIS:CE1	2.47	0.49
5:C:1022:GLY:HA3	5:C:1026:GLN:O	2.12	0.49
5:C:674:VAL:CG2	5:C:869:VAL:HG13	2.42	0.49
5:C:689:VAL:HG11	5:C:870:ILE:HD11	1.94	0.49
5:C:876:VAL:O	5:C:879:ARG:O	2.30	0.49
5:C:8:ARG:N	5:C:907:ASP:OD2	2.45	0.49
6:D:1124:GLN:HG2	6:D:1133:ARG:CG	2.42	0.49
6:D:1258:ARG:HA	6:D:1261:GLU:OE2	2.12	0.49
6:D:1384:PRO:HG3	6:D:1389:LEU:HA	1.92	0.49
6:D:172:PRO:HG2	6:D:175:VAL:CG2	2.42	0.49
6:D:17:LYS:O	6:D:20:SER:HB3	2.12	0.49
6:D:519:VAL:HG12	6:D:544:TYR:CE2	2.48	0.49
6:D:737:ASN:O	6:D:737:ASN:CG	2.50	0.49
5:M:689:VAL:HG11	5:M:870:ILE:HD11	1.93	0.49
5:M:897:LEU:HD12	11:M:1461:HOH:O	2.12	0.49
4:A:199:ILE:HD12	4:A:199:ILE:N	2.26	0.49
5:C:1001:VAL:O	5:C:1001:VAL:HG12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:304:LEU:HA	11:C:1215:HOH:O	2.12	0.49
5:C:490:GLU:HB3	5:C:493:ARG:CZ	2.42	0.49
5:C:496:ILE:HA	5:C:531:PHE:O	2.11	0.49
5:C:432:ARG:HH12	6:D:1072:ILE:CD1	2.25	0.49
6:D:1125:PRO:HB3	6:D:1130:ARG:NH1	2.27	0.49
6:D:1168:MET:HE3	6:D:1171:VAL:HG21	1.94	0.49
6:D:1374:GLN:OE1	6:D:1377:LYS:HD3	2.12	0.49
6:D:118:LEU:HD21	6:D:464:LEU:HD13	1.94	0.49
6:D:465:LEU:HD13	6:D:513:ILE:HD11	1.95	0.49
6:D:638:LYS:HD2	6:D:932:ASP:CG	2.33	0.49
2:H:16:G:H21	6:D:705:ALA:HB1	1.78	0.49
4:K:218:LEU:O	4:K:222:LEU:HD13	2.12	0.49
5:M:1016:ILE:HD13	5:M:1017:THR:H	1.78	0.49
5:M:340:MET:HG2	5:M:386:PHE:HE1	1.78	0.49
5:M:574:ALA:HB2	11:M:1443:HOH:O	2.12	0.49
5:M:736:ASP:HA	5:M:744:ARG:HH11	1.77	0.49
4:K:30:ARG:NH2	5:M:938:LYS:HD2	2.25	0.49
6:N:10:ILE:HG13	6:N:1434:TRP:CZ2	2.47	0.49
6:N:516:ALA:O	6:N:518:PRO:HD3	2.13	0.49
5:M:1009:SER:HB3	6:N:651:GLU:O	2.13	0.49
7:O:33:HIS:HB2	7:O:37:ASN:HD21	1.77	0.49
5:C:127:PHE:O	5:C:133:ASP:HA	2.12	0.49
5:C:150:PRO:HG3	5:C:158:TYR:HD2	1.78	0.49
5:C:165:LEU:HD11	11:C:1123:HOH:O	2.13	0.49
5:C:409:ARG:HD2	5:C:452:ILE:CG2	2.42	0.49
5:C:437:ARG:O	5:C:467:ILE:HD13	2.12	0.49
5:C:449:ILE:C	5:C:451:LEU:H	2.15	0.49
5:C:537:LYS:HD2	5:C:537:LYS:H	1.78	0.49
6:D:1087:ARG:HG3	6:D:1237:THR:CG2	2.40	0.49
6:D:108:VAL:CB	6:D:109:PRO:HD3	2.42	0.49
6:D:1263:PHE:O	6:D:1424:VAL:HG12	2.12	0.49
6:D:1418:LYS:HD3	6:D:1419:PRO:CD	2.42	0.49
6:D:138:LYS:HD2	6:D:450:TYR:OH	2.13	0.49
6:D:610:LYS:CA	6:D:615:ARG:HD3	2.42	0.49
6:D:926:LYS:HA	6:D:929:ARG:HH11	1.78	0.49
5:M:23:VAL:CA	5:M:121:MET:HE1	2.43	0.49
5:M:127:PHE:O	5:M:133:ASP:HA	2.13	0.49
5:M:319:GLY:HA3	11:M:1388:HOH:O	2.11	0.49
5:M:265:ARG:HH22	5:M:332:ARG:HH22	1.60	0.49
5:M:471:TYR:HB2	11:M:1201:HOH:O	2.11	0.49
5:M:561:GLY:HA2	5:M:564:MET:HG3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:837:ASP:HA	5:M:999:HIS:HE1	1.78	0.49
6:N:1139:ASP:O	6:N:1142:ALA:HB3	2.13	0.49
6:N:137:PRO:HD2	6:N:453:ASP:OD1	2.12	0.49
6:N:641:GLN:HB3	6:N:717:GLN:O	2.12	0.49
6:N:800:LYS:HE3	6:N:804:LEU:HB3	1.93	0.49
6:N:897:TRP:HA	6:N:900:ILE:CG1	2.37	0.49
6:N:947:ILE:HG23	11:N:9083:HOH:O	2.11	0.49
4:A:73:GLU:OE1	4:A:130:ALA:HA	2.12	0.49
4:B:102:LYS:HZ1	4:B:137:ARG:NE	2.11	0.49
5:C:101:ILE:HG22	5:C:102:HIS:N	2.27	0.49
5:C:1111:ILE:HD12	5:C:1112:PHE:H	1.78	0.49
5:C:162:ILE:HD12	5:C:172:ILE:CB	2.43	0.49
5:C:192:PRO:HB2	5:C:195:LEU:H	1.78	0.49
5:C:264:PRO:HB3	5:C:289:THR:CB	2.43	0.49
5:C:270:GLY:O	5:C:274:ARG:HD2	2.12	0.49
5:C:596:TYR:HB2	11:C:1524:HOH:O	2.12	0.49
5:C:841:ASN:N	5:C:841:ASN:ND2	2.60	0.49
5:C:89:THR:HA	5:C:129:ILE:O	2.12	0.49
6:D:108:VAL:HB	6:D:109:PRO:HD3	1.94	0.49
6:D:1211:MET:SD	6:D:1213:ARG:HG2	2.52	0.49
6:D:191:LEU:HG	6:D:197:SER:OG	2.13	0.49
6:D:613:ARG:O	6:D:616:GLN:HB3	2.13	0.49
6:D:899:LEU:HD13	6:D:914:LEU:CD2	2.37	0.49
6:D:957:PRO:O	6:D:960:LYS:HB3	2.13	0.49
7:E:38:THR:HG23	7:E:41:GLU:OE2	2.13	0.49
4:K:63:HIS:CD2	4:K:66:SER:HB2	2.48	0.49
5:M:1065:ALA:HB1	5:M:1077:PRO:CG	2.36	0.49
5:M:146:VAL:HG12	5:M:162:ILE:HA	1.93	0.49
5:M:250:ARG:HG3	5:M:250:ARG:HH11	1.78	0.49
5:M:31:GLN:NE2	5:M:71:TYR:OH	2.45	0.49
5:M:25:SER:CB	5:M:335:THR:HB	2.42	0.49
5:M:403:SER:O	5:M:407:LYS:HG3	2.13	0.49
5:M:902:ILE:O	5:M:904:PRO:HD3	2.12	0.49
6:N:1101:VAL:HG21	6:N:1424:VAL:HG23	1.95	0.49
6:N:1338:ALA:HB2	11:N:9199:HOH:O	2.12	0.49
6:N:151:GLN:HG3	6:N:152:LEU:H	1.78	0.49
5:C:141:HIS:CE1	5:C:334:ARG:HG3	2.47	0.49
5:C:150:PRO:HG3	5:C:158:TYR:CD2	2.47	0.49
5:C:162:ILE:O	5:C:164:PRO:HD3	2.12	0.49
5:C:265:ARG:O	5:C:288:ARG:HD2	2.13	0.49
5:C:537:LYS:HG3	5:C:545:ASN:HD21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:918:LEU:HD23	5:C:968:LEU:HA	1.93	0.49
5:C:98:LEU:N	5:C:98:LEU:HD12	2.28	0.49
6:D:1000:THR:HG23	6:D:1001:GLU:N	2.28	0.49
6:D:1087:ARG:CG	6:D:1237:THR:HG21	2.41	0.49
6:D:1192:LEU:HD22	6:D:1345:GLU:CG	2.43	0.49
6:D:204:LEU:O	6:D:394:LEU:HD23	2.13	0.49
6:D:754:PHE:CE2	6:D:1476:THR:HG21	2.48	0.49
4:L:111:ALA:HB3	4:L:124:ASN:O	2.13	0.49
5:M:136:ILE:HD11	11:M:1417:HOH:O	2.12	0.49
5:M:374:ASN:HD22	5:M:377:PRO:HD3	1.76	0.49
6:N:116:LEU:HD22	6:N:118:LEU:HG	1.95	0.49
6:N:1156:LEU:HG	6:N:1177:ALA:HB2	1.94	0.49
6:N:1213:ARG:NH2	7:O:15:SER:HA	2.27	0.49
6:N:1487:VAL:HA	11:N:9036:HOH:O	2.11	0.49
6:N:1488:ASP:OD1	6:N:1488:ASP:N	2.46	0.49
6:N:827:ILE:O	6:N:837:GLY:HA3	2.12	0.49
4:A:173:PRO:HB2	4:A:205:VAL:HG22	1.94	0.49
4:B:176:ARG:HG3	4:B:200:TRP:CE3	2.47	0.49
5:C:1040:LEU:HD21	5:C:1048:THR:HG22	1.95	0.49
5:C:190:LYS:HB2	11:C:1219:HOH:O	2.13	0.49
5:C:313:LEU:HA	5:C:321:GLU:HG3	1.94	0.49
5:C:368:THR:N	5:C:369:PRO:HD2	2.28	0.49
5:C:433:THR:CG2	5:C:488:ALA:HB1	2.28	0.49
5:C:575:GLN:HG2	5:C:671:ASN:OD1	2.11	0.49
5:C:689:VAL:O	5:C:869:VAL:HG23	2.13	0.49
5:C:677:MET:HE1	5:C:974:LEU:HD23	1.94	0.49
6:D:184:GLU:HG3	11:D:8384:HOH:O	2.13	0.49
6:D:38:LYS:HZ1	6:D:59:ALA:HB1	1.77	0.49
6:D:883:ALA:HB2	11:D:8066:HOH:O	2.12	0.49
6:D:915:VAL:HG11	6:D:931:LEU:HD21	1.94	0.49
5:M:301:GLU:O	5:M:305:PRO:HG2	2.13	0.49
5:M:328:LEU:N	5:M:328:LEU:HD12	2.28	0.49
5:M:328:LEU:HD11	5:M:434:HIS:CD2	2.47	0.49
5:M:524:VAL:HG12	5:M:528:GLU:HB2	1.95	0.49
5:M:68:PHE:CZ	5:M:71:TYR:HD2	2.24	0.49
5:M:971:LYS:HE2	11:M:1216:HOH:O	2.13	0.49
6:N:1498:ALA:HB2	7:O:88:GLU:OE1	2.13	0.49
6:N:92:HIS:HA	6:N:517:VAL:O	2.13	0.49
6:N:538:SER:O	6:N:541:ASN:ND2	2.45	0.49
6:N:565:ILE:HD12	6:N:565:ILE:N	2.26	0.49
6:N:703:ASN:ND2	6:N:704:ARG:H	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:173:PRO:HA	4:B:202:ASP:OD2	2.13	0.49
4:B:57:TYR:CE2	4:B:161:ARG:HG2	2.48	0.49
5:C:46:ALA:O	5:C:49:ARG:HG2	2.13	0.49
5:C:722:ILE:O	5:C:722:ILE:HG23	2.13	0.49
5:C:762:LYS:HD2	5:C:786:LYS:CB	2.42	0.49
5:C:860:HIS:CE1	5:C:975:TYR:HB2	2.48	0.49
5:C:906:PHE:CD1	6:D:1067:VAL:HG13	2.48	0.49
6:D:192:ALA:HB1	6:D:193:PRO:HD2	1.94	0.49
6:D:737:ASN:ND2	10:D:3999:APC:O3'	2.38	0.49
6:D:396:VAL:CG1	6:D:447:VAL:HG12	2.42	0.49
6:D:508:ARG:HD2	6:D:509:PRO:HD2	1.94	0.49
6:D:729:HIS:CE1	6:D:731:LEU:HB2	2.48	0.49
4:L:176:ARG:HE	6:N:847:ASP:CG	2.17	0.49
5:M:433:THR:O	5:M:437:ARG:HD2	2.12	0.49
5:M:498:GLN:NE2	6:N:1068:LEU:HG	2.28	0.49
5:M:759:THR:HB	5:M:785:VAL:HG22	1.95	0.49
5:M:893:ALA:HB2	5:M:918:LEU:HD12	1.95	0.49
5:M:981:GLU:HG3	5:M:982:PRO:HD2	1.94	0.49
6:N:545:ARG:HB2	6:N:545:ARG:CZ	2.42	0.49
5:M:687:ALA:HB2	6:N:740:PHE:HB2	1.95	0.49
6:N:829:VAL:O	6:N:835:SER:HB3	2.12	0.49
5:C:18:LEU:HD22	5:C:404:LEU:CD2	2.43	0.48
5:C:276:LYS:O	5:C:280:LYS:HB2	2.12	0.48
5:C:439:CYS:SG	5:C:442:GLU:N	2.75	0.48
5:C:439:CYS:SG	5:C:442:GLU:HB2	2.52	0.48
5:C:853:LEU:HB2	5:C:858:MET:CE	2.42	0.48
5:C:579:VAL:CG1	5:C:887:GLU:HG3	2.33	0.48
6:D:1026:SER:C	6:D:1028:ALA:H	2.17	0.48
6:D:1033:GLN:N	11:D:8254:HOH:O	2.46	0.48
6:D:1102:THR:CG2	6:D:1370:ILE:HG22	2.42	0.48
6:D:1136:LYS:HB2	6:D:1139:ASP:OD1	2.13	0.48
6:D:1231:GLU:CG	6:D:1232:PRO:HD3	2.43	0.48
11:C:1216:HOH:O	6:D:606:ILE:HD11	2.12	0.48
6:D:675:ARG:HA	6:D:678:GLU:HG2	1.94	0.48
6:D:699:VAL:H	6:D:756:GLN:HE22	1.55	0.48
4:K:1:MET:O	4:K:6:LEU:HD13	2.12	0.48
4:L:89:PHE:CD1	4:L:120:VAL:HG13	2.48	0.48
4:L:124:ASN:ND2	4:L:127:LEU:HB2	2.28	0.48
4:L:24:VAL:HG12	4:L:26:GLU:OE2	2.13	0.48
5:M:127:PHE:HZ	5:M:336:VAL:HG11	1.78	0.48
5:M:250:ARG:HG2	5:M:253:ALA:CB	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:262:ALA:HB3	11:M:1334:HOH:O	2.13	0.48
5:M:174:LEU:HD13	5:M:307:LEU:HD13	1.94	0.48
5:M:376:ARG:NH1	5:M:376:ARG:HG3	2.28	0.48
5:M:490:GLU:HG2	5:M:493:ARG:CZ	2.42	0.48
5:M:630:ARG:HA	11:M:1247:HOH:O	2.12	0.48
5:M:642:ARG:HG3	5:M:657:ASP:OD2	2.13	0.48
5:M:673:LEU:HB3	5:M:868:ASP:OD1	2.13	0.48
5:M:95:TYR:CD2	5:M:114:PHE:HB2	2.47	0.48
6:N:1114:THR:O	6:N:1114:THR:HG23	2.13	0.48
6:N:470:LEU:CD2	6:N:470:LEU:H	2.24	0.48
6:N:729:HIS:CE1	6:N:731:LEU:H	2.31	0.48
6:N:739:ASP:O	6:N:741:ASP:N	2.45	0.48
2:Y:2:A:C4'	2:Y:2:A:C8	2.95	0.48
4:A:108:GLU:OE2	4:A:131:THR:HG22	2.13	0.48
4:A:180:GLN:HB3	4:A:182:GLU:OE2	2.11	0.48
4:B:111:ALA:HB3	4:B:124:ASN:O	2.12	0.48
5:C:1102:LEU:N	6:D:7:LYS:O	2.46	0.48
5:C:723:THR:HG23	5:C:725:ASP:H	1.78	0.48
6:D:1366:LYS:HA	6:D:1369:GLU:OE2	2.13	0.48
5:C:1049:LEU:CD2	6:D:1472:ILE:HD12	2.37	0.48
6:D:1217:ILE:HD12	6:D:1480:PHE:CE2	2.48	0.48
6:D:1483:PHE:CD1	6:D:1483:PHE:N	2.81	0.48
6:D:522:PRO:HG2	6:D:523:ASP:H	1.78	0.48
6:D:689:ASP:O	6:D:693:GLU:HG3	2.12	0.48
4:L:30:ARG:HB2	4:L:30:ARG:HH11	1.78	0.48
5:M:19:THR:HG22	5:M:404:LEU:CD1	2.41	0.48
5:M:217:LEU:HD12	5:M:311:PHE:CD2	2.48	0.48
5:M:302:VAL:O	5:M:306:THR:HG23	2.14	0.48
5:M:39:ARG:CD	5:M:39:ARG:H	2.18	0.48
5:M:642:ARG:NH1	11:M:1230:HOH:O	2.45	0.48
5:M:1043:TYR:CE1	6:N:710:ARG:HG3	2.48	0.48
6:N:646:LYS:NZ	6:N:722:GLU:HG2	2.28	0.48
4:A:150:TYR:OH	5:C:696:LYS:HA	2.12	0.48
4:B:115:LEU:O	4:B:115:LEU:HD12	2.13	0.48
5:C:119:PRO:HB2	11:C:1174:HOH:O	2.12	0.48
5:C:398:THR:HB	5:C:399:ASN:HD22	1.79	0.48
5:C:674:VAL:HG23	5:C:869:VAL:O	2.13	0.48
5:C:548:PRO:HG3	5:C:842:ARG:NH1	2.28	0.48
5:C:981:GLU:HG3	5:C:982:PRO:CD	2.43	0.48
6:D:164:GLY:O	6:D:199:LEU:HD12	2.13	0.48
6:D:764:LEU:HD12	6:D:766:ALA:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:174:VAL:HG13	4:L:200:TRP:O	2.13	0.48
5:M:98:LEU:HD21	5:M:373:VAL:HG21	1.95	0.48
5:M:736:ASP:HA	5:M:744:ARG:HH12	1.75	0.48
5:M:842:ARG:NH2	5:M:887:GLU:CD	2.66	0.48
6:N:1026:SER:C	6:N:1028:ALA:H	2.16	0.48
6:N:1220:ALA:O	6:N:1224:VAL:HG23	2.14	0.48
6:N:202:VAL:HB	6:N:398:ALA:O	2.13	0.48
6:N:543:LEU:HA	6:N:546:ARG:HG3	1.96	0.48
6:N:678:GLU:HB3	11:N:9222:HOH:O	2.13	0.48
6:N:959:GLU:O	6:N:963:TYR:HD1	1.96	0.48
6:N:757:ALA:CB	7:O:24:ALA:HB2	2.42	0.48
1:X:16:DG:N2	11:X:2005:HOH:O	2.46	0.48
5:C:1083:GLU:HA	5:C:1086:ARG:HE	1.79	0.48
5:C:98:LEU:HD13	5:C:110:GLU:O	2.13	0.48
5:C:622:GLU:O	5:C:624:PRO:HD3	2.14	0.48
6:D:1147:ARG:O	6:D:1166:LEU:HD23	2.12	0.48
6:D:1213:ARG:HH12	7:E:11:GLY:HA2	1.78	0.48
6:D:139:GLY:HA2	6:D:451:ASP:O	2.13	0.48
6:D:50:PHE:CB	6:D:522:PRO:HG3	2.43	0.48
6:D:827:ILE:H	6:D:827:ILE:HD12	1.77	0.48
6:D:881:LEU:HA	11:D:8376:HOH:O	2.13	0.48
4:L:73:GLU:OE1	4:L:130:ALA:HA	2.13	0.48
5:M:368:THR:N	5:M:369:PRO:HD2	2.29	0.48
5:M:52:PHE:HB3	5:M:53:PRO:HD3	1.95	0.48
5:M:880:MET:HE1	6:N:1243:THR:O	2.13	0.48
5:M:959:PRO:HB2	11:M:1487:HOH:O	2.13	0.48
6:N:1238:MET:HA	6:N:1241:PHE:HE2	1.76	0.48
6:N:119:SER:N	6:N:123:LEU:HB2	2.28	0.48
6:N:155:ASP:O	6:N:159:ARG:HB3	2.13	0.48
6:N:181:ASP:O	6:N:204:LEU:HA	2.13	0.48
6:N:606:ILE:HG23	11:N:9149:HOH:O	2.12	0.48
6:N:619:LEU:HG	6:N:621:LYS:HE2	1.94	0.48
6:N:759:ALA:O	6:N:763:MET:HB3	2.14	0.48
7:O:73:LEU:HD12	7:O:73:LEU:H	1.79	0.48
1:X:8:DT:H2"	1:X:9:DG:H8	1.77	0.48
5:C:415:PRO:HD2	5:C:418:LEU:HD13	1.95	0.48
5:C:601:GLY:HA3	5:C:615:TYR:HA	1.95	0.48
5:C:688:ILE:CG2	5:C:871:LEU:HD23	2.43	0.48
5:C:675:ALA:CA	5:C:989:VAL:HG13	2.43	0.48
6:D:1495:ILE:HG22	6:D:1499:ARG:NH2	2.28	0.48
6:D:133:ILE:HG13	6:D:153:LEU:HG	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:785:ILE:O	6:D:789:LEU:HG	2.14	0.48
5:M:1103:ASP:OD1	6:N:3:LYS:HD2	2.13	0.48
5:M:342:ASP:HA	5:M:345:ARG:CD	2.43	0.48
6:N:1378:TYR:O	6:N:1379:VAL:HG13	2.13	0.48
6:N:15:PRO:HB3	11:N:9303:HOH:O	2.12	0.48
6:N:399:ARG:HH21	6:N:431:VAL:HG22	1.78	0.48
6:N:584:ASN:HD21	6:N:590:PRO:HD2	1.77	0.48
6:N:92:HIS:CA	6:N:519:VAL:HG23	2.43	0.48
6:N:939:PHE:O	6:N:943:THR:HG23	2.13	0.48
1:X:12:DG:H2''	1:X:13:DT:O5'	2.14	0.48
2:Y:7:G:H5''	2:Y:7:G:C8	2.49	0.48
4:B:18:ARG:NH1	4:B:123:MET:HE1	2.14	0.48
4:B:23:PHE:HZ	4:B:207:PRO:HB2	1.78	0.48
5:C:1034:GLU:HA	5:C:1037:VAL:CG2	2.43	0.48
5:C:159:ILE:HD11	11:C:1246:HOH:O	2.13	0.48
5:C:168:ARG:HB2	11:C:1136:HOH:O	2.13	0.48
5:C:326:ASP:HB2	5:C:431:HIS:CG	2.49	0.48
5:C:409:ARG:NH1	5:C:444:PRO:HG2	2.28	0.48
6:D:110:SER:HB3	6:D:113:GLY:H	1.77	0.48
2:H:11:C:C2'	2:H:12:G:H5''	2.44	0.48
5:M:1012:PRO:HB2	5:M:1021:LEU:O	2.13	0.48
5:M:95:TYR:HD2	5:M:114:PHE:HB2	1.79	0.48
5:M:21:ILE:HD11	11:M:1541:HOH:O	2.13	0.48
5:M:218:VAL:HG22	5:M:221:LEU:HD21	1.94	0.48
5:M:260:LEU:HG	5:M:261:ILE:HG12	1.95	0.48
5:M:44:ILE:HD12	5:M:344:PHE:CD1	2.48	0.48
5:M:16:PRO:HG2	5:M:485:TYR:OH	2.14	0.48
5:M:607:ASP:HB3	5:M:609:ASN:H	1.79	0.48
5:M:61:LYS:HD3	5:M:61:LYS:O	2.14	0.48
6:N:1066:THR:HG22	6:N:1069:GLU:OE1	2.12	0.48
6:N:1441:GLN:OE1	6:N:1442:ASN:HB2	2.13	0.48
6:N:42:ASP:O	6:N:43:GLY:O	2.32	0.48
6:N:500:ARG:HG3	11:N:9399:HOH:O	2.14	0.48
6:N:95:LEU:HA	6:N:551:ASN:ND2	2.28	0.48
6:N:583:ASP:HB2	6:N:604:THR:OG1	2.14	0.48
6:N:613:ARG:HD3	6:N:613:ARG:HA	1.62	0.48
6:N:902:LEU:HB3	11:N:9040:HOH:O	2.13	0.48
7:O:41:GLU:N	7:O:42:PRO:CD	2.76	0.48
5:C:1103:ASP:OD1	5:C:1109:VAL:HG22	2.14	0.48
5:C:176:VAL:HG13	11:C:1142:HOH:O	2.14	0.48
5:C:205:GLU:O	5:C:209:ARG:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:691:SER:HB2	5:C:858:MET:SD	2.53	0.48
5:C:758:ARG:NH2	5:C:788:THR:HB	2.29	0.48
6:D:963:TYR:HE2	6:D:1002:LYS:HB3	1.78	0.48
6:D:1381:VAL:HG13	11:D:8400:HOH:O	2.14	0.48
6:D:42:ASP:O	6:D:43:GLY:O	2.31	0.48
6:D:462:GLN:HA	6:D:513:ILE:HD13	1.94	0.48
6:D:762:GLN:CB	7:E:16:LYS:HE2	2.44	0.48
7:E:23:VAL:HG22	7:E:68:LEU:HD23	1.96	0.48
4:K:224:TYR:HD1	11:K:1342:HOH:O	1.96	0.48
4:L:124:ASN:N	4:L:125:PRO:HD3	2.29	0.48
4:L:173:PRO:HG3	11:L:367:HOH:O	2.14	0.48
5:M:260:LEU:HA	5:M:291:ALA:CB	2.43	0.48
5:M:626:ARG:HB3	5:M:626:ARG:HH11	1.79	0.48
5:M:767:PRO:HD3	11:M:1522:HOH:O	2.14	0.48
5:M:845:ASN:ND2	11:M:1407:HOH:O	2.46	0.48
6:N:1152:GLU:OE2	6:N:1154:GLU:HG3	2.13	0.48
6:N:1102:THR:HG22	6:N:1222:GLY:HA3	1.95	0.48
6:N:1378:TYR:HA	6:N:1395:LEU:H	1.78	0.48
6:N:490:ALA:HA	6:N:1390:LEU:CD1	2.44	0.48
2:Y:7:G:H8	2:Y:7:G:C5'	2.27	0.48
4:A:215:VAL:HG21	4:B:225:PHE:CD1	2.49	0.48
4:B:102:LYS:HZ2	4:B:139:ASN:HB2	1.78	0.48
5:C:265:ARG:H	5:C:289:THR:HG21	1.78	0.48
5:C:317:VAL:HG23	11:C:1254:HOH:O	2.14	0.48
5:C:562:SER:HB3	11:C:1416:HOH:O	2.12	0.48
5:C:405:ARG:NE	5:C:566:THR:HG21	2.28	0.48
5:C:587:VAL:HG23	11:C:1190:HOH:O	2.12	0.48
6:D:1112:CYS:HB2	6:D:1195:GLN:CG	2.32	0.48
6:D:119:SER:N	6:D:123:LEU:HB2	2.29	0.48
6:D:1381:VAL:HB	6:D:1389:LEU:O	2.14	0.48
6:D:562:ALA:HB1	6:D:567:ILE:CD1	2.44	0.48
6:D:644:LEU:HD23	6:D:718:PRO:CB	2.43	0.48
6:D:671:LYS:O	6:D:675:ARG:HG3	2.14	0.48
6:D:792:ILE:O	6:D:792:ILE:HG12	2.13	0.48
6:D:81:THR:HB	6:D:85:VAL:HG22	1.95	0.48
4:K:38:ASN:CB	5:M:980:GLY:HA3	2.40	0.48
4:L:23:PHE:O	4:L:196:THR:HA	2.14	0.48
4:L:226:SER:O	4:L:228:PRO:HD3	2.14	0.48
5:M:172:ILE:HG23	5:M:184:MET:SD	2.54	0.48
6:N:1098:LEU:HD23	6:N:1371:VAL:HG21	1.96	0.48
6:N:1336:LEU:CD1	6:N:1341:PRO:HG3	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1383:ASP:HB2	6:N:1416:ALA:HB3	1.96	0.48
6:N:1499:ARG:HB2	6:N:1499:ARG:HH11	1.78	0.48
5:M:716:LYS:HZ1	6:N:36:THR:HA	1.78	0.48
6:N:394:LEU:HD21	6:N:445:ARG:CZ	2.43	0.48
6:N:93:ILE:HB	6:N:517:VAL:HB	1.96	0.48
5:M:1095:LEU:HD21	6:N:603:LEU:HB3	1.95	0.48
6:N:804:LEU:HD23	6:N:804:LEU:H	1.79	0.48
6:N:1484:THR:H	7:O:25:LYS:NZ	2.11	0.48
7:O:57:ASP:H	7:O:58:PRO:HD3	1.79	0.48
4:A:156:HIS:CD2	4:A:157:GLY:N	2.82	0.48
5:C:260:LEU:CD1	5:C:261:ILE:HG13	2.43	0.48
5:C:774:LEU:HD11	11:D:8351:HOH:O	2.14	0.48
5:C:833:LEU:HD13	5:C:996:LYS:HD2	1.96	0.48
6:D:1094:LEU:O	6:D:1098:LEU:HD13	2.14	0.48
6:D:1120:VAL:HB	6:D:1144:LEU:HD21	1.96	0.48
6:D:1221:VAL:O	6:D:1224:VAL:HB	2.14	0.48
6:D:153:LEU:HB3	11:D:8252:HOH:O	2.14	0.48
6:D:581:LEU:H	6:D:581:LEU:HD23	1.77	0.48
6:D:727:GLN:NE2	11:D:8105:HOH:O	2.46	0.48
7:E:5:GLY:HA3	7:E:8:LYS:HD2	1.96	0.48
1:G:23:DG:N2	11:G:185:HOH:O	2.46	0.48
4:K:36:LEU:O	4:K:39:PRO:HD2	2.14	0.48
5:M:129:ILE:HG22	5:M:130:ASN:N	2.29	0.48
5:M:21:ILE:HD12	5:M:21:ILE:N	2.29	0.48
5:M:256:TYR:HB2	11:M:1408:HOH:O	2.13	0.48
6:N:1109:GLU:CG	6:N:1201:CYS:HA	2.34	0.48
6:N:1223:ILE:H	6:N:1223:ILE:CD1	2.19	0.48
6:N:546:ARG:HH11	6:N:546:ARG:HB3	1.78	0.48
6:N:786:ILE:HD13	6:N:1027:GLY:CA	2.44	0.48
6:N:974:ILE:HD11	6:N:995:LEU:HD22	1.95	0.48
7:O:22:VAL:CG1	7:O:68:LEU:HD21	2.44	0.48
2:Y:7:G:H2'	2:Y:8:C:OP1	2.14	0.48
2:Y:9:G:C8	2:Y:9:G:C5'	2.97	0.48
4:B:153:ALA:HA	4:B:156:HIS:CE1	2.49	0.48
4:A:36:LEU:HD11	4:B:221:HIS:CD2	2.49	0.48
5:C:322:VAL:HG23	5:C:322:VAL:O	2.14	0.48
6:D:1097:LYS:O	6:D:1101:VAL:HG23	2.13	0.48
6:D:1105:ILE:HG23	6:D:1373:ARG:NH2	2.28	0.48
6:D:1462:LEU:HD21	6:D:1474:ALA:CB	2.42	0.48
6:D:93:ILE:HG13	6:D:519:VAL:CG2	2.43	0.48
5:C:681:GLY:O	6:D:633:VAL:HG11	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:675:ARG:HB3	6:D:675:ARG:CZ	2.43	0.48
6:D:650:LEU:HD23	6:D:691:LEU:CD2	2.43	0.48
6:D:769:LEU:HB2	6:D:919:PHE:CE1	2.49	0.48
3:I:4:DC:H2''	3:I:5:DG:O5'	2.14	0.48
4:L:7:LYS:HD2	4:L:7:LYS:O	2.14	0.48
5:M:1013:TYR:HB3	5:M:1018:GLN:OE1	2.13	0.48
5:M:101:ILE:HG22	5:M:102:HIS:N	2.29	0.48
5:M:1040:LEU:N	5:M:1040:LEU:HD12	2.29	0.48
5:M:91:GLN:NE2	5:M:383:ARG:HH22	2.12	0.48
5:M:684:PHE:HD2	11:N:9180:HOH:O	1.97	0.48
6:N:9:ARG:HA	6:N:1455:LYS:O	2.13	0.48
5:M:1030:GLN:HE22	6:N:628:ARG:HD3	1.78	0.48
4:A:150:TYR:CE1	5:C:696:LYS:HA	2.49	0.47
5:C:144:PRO:HA	5:C:163:ILE:CD1	2.44	0.47
5:C:193:LEU:N	5:C:193:LEU:HD12	2.29	0.47
5:C:433:THR:O	5:C:437:ARG:HD2	2.14	0.47
5:C:715:THR:CG2	5:C:717:LEU:HG	2.43	0.47
6:D:117:ASP:N	6:D:150:ARG:HH11	2.12	0.47
6:D:796:ARG:O	6:D:797:LYS:HD2	2.14	0.47
6:D:932:ASP:O	6:D:935:LYS:HB3	2.14	0.47
1:G:18:DG:H5''	6:D:628:ARG:HH22	1.79	0.47
4:K:213:GLN:O	4:K:217:ILE:HG13	2.13	0.47
5:M:152:PRO:HB2	11:M:1160:HOH:O	2.14	0.47
5:M:257:VAL:HG22	11:M:1151:HOH:O	2.13	0.47
5:M:129:ILE:HG13	5:M:386:PHE:HB3	1.96	0.47
5:M:503:LEU:HD23	5:M:507:ARG:O	2.14	0.47
5:M:604:ALA:HB3	5:M:612:VAL:O	2.14	0.47
5:M:571:LEU:HD21	5:M:700:TYR:CD2	2.49	0.47
5:M:780:GLU:HG3	5:M:781:LYS:HD3	1.96	0.47
5:M:833:LEU:HD21	5:M:839:LEU:HD11	1.96	0.47
5:M:969:GLN:CD	5:M:971:LYS:HE3	2.34	0.47
6:N:783:ARG:HH12	6:N:1029:ARG:NH2	2.12	0.47
6:N:1378:TYR:OH	6:N:1431:THR:HA	2.14	0.47
6:N:525:ARG:HB2	6:N:538:SER:CB	2.43	0.47
6:N:84:ILE:O	6:N:87:ARG:HG3	2.13	0.47
6:N:94:GLU:O	6:N:551:ASN:ND2	2.45	0.47
1:X:14:DT:H3'	6:N:610:LYS:HZ1	1.79	0.47
5:C:185:LYS:HB3	5:C:188:LYS:O	2.13	0.47
5:C:158:TYR:CD1	5:C:314:THR:HG22	2.44	0.47
5:C:31:GLN:HB3	5:C:71:TYR:HH	1.78	0.47
6:D:1124:GLN:HA	6:D:1125:PRO:HD3	1.65	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1147:ARG:HB2	6:D:1166:LEU:HD21	1.96	0.47
6:D:1147:ARG:HD2	6:D:1188:VAL:HG21	1.96	0.47
6:D:1228:SER:HA	11:D:8193:HOH:O	2.14	0.47
6:D:1087:ARG:NH2	6:D:1253:THR:HG22	2.27	0.47
6:D:1429:LEU:HG	6:D:1441:GLN:HG3	1.96	0.47
6:D:42:ASP:CG	6:D:48:ARG:HH22	2.18	0.47
6:D:440:VAL:CB	6:D:441:ARG:HH21	2.26	0.47
6:D:756:GLN:CG	6:D:760:ARG:HH11	2.25	0.47
6:D:796:ARG:NE	6:D:828:LYS:HZ2	2.12	0.47
6:D:902:LEU:HD13	11:D:8066:HOH:O	2.12	0.47
3:I:9:DG:H2"	3:I:10:DA:C8	2.50	0.47
4:K:111:ALA:HB3	4:K:124:ASN:O	2.13	0.47
4:K:2:LEU:HA	4:K:6:LEU:HD22	1.96	0.47
5:M:252:LYS:HZ2	5:M:296:GLY:HA3	1.77	0.47
5:M:487:THR:OG1	5:M:490:GLU:HG3	2.13	0.47
6:N:47:GLU:O	6:N:51:GLY:N	2.47	0.47
6:N:573:MET:HE2	11:N:9331:HOH:O	2.14	0.47
6:N:58:CYS:HA	6:N:78:VAL:HG11	1.96	0.47
6:N:838:ARG:HG2	6:N:838:ARG:HH11	1.79	0.47
6:N:861:GLN:H	6:N:861:GLN:NE2	2.12	0.47
7:O:57:ASP:N	7:O:58:PRO:HD3	2.30	0.47
4:A:171:PHE:O	4:A:173:PRO:HD3	2.15	0.47
4:A:26:GLU:HG2	4:A:27:PRO:HG3	1.96	0.47
4:A:73:GLU:H	4:A:73:GLU:CD	2.17	0.47
5:C:1102:LEU:HB2	6:D:7:LYS:HB2	1.96	0.47
5:C:31:GLN:HG2	5:C:31:GLN:O	2.14	0.47
5:C:77:PRO:HB2	5:C:78:PHE:CD1	2.49	0.47
6:D:1101:VAL:HG21	6:D:1424:VAL:CA	2.44	0.47
6:D:1441:GLN:OE1	6:D:1442:ASN:HB2	2.13	0.47
6:D:520:LEU:HD12	6:D:521:PRO:HD2	1.97	0.47
6:D:583:ASP:OD2	6:D:604:THR:HG21	2.14	0.47
6:D:619:LEU:N	6:D:619:LEU:HD23	2.29	0.47
5:M:287:GLY:O	5:M:288:ARG:C	2.52	0.47
5:M:620:LEU:N	5:M:620:LEU:HD12	2.29	0.47
5:M:734:LEU:HD11	11:M:1385:HOH:O	2.14	0.47
6:N:1130:ARG:HD3	11:N:9173:HOH:O	2.13	0.47
6:N:628:ARG:HG3	6:N:628:ARG:NH1	2.30	0.47
2:Y:7:G:O6	5:M:1015:LEU:N	2.45	0.47
3:Z:4:DC:H4'	11:Z:1418:HOH:O	2.15	0.47
4:A:101:LEU:HD22	4:A:114:PHE:CZ	2.49	0.47
4:B:64:GLU:HG2	4:B:64:GLU:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:158:TYR:HE1	5:C:314:THR:HA	1.79	0.47
5:C:18:LEU:HD22	5:C:404:LEU:HD21	1.95	0.47
5:C:244:PRO:CD	5:C:245:GLY:H	2.26	0.47
5:C:148:PHE:HZ	5:C:281:LEU:HB3	1.78	0.47
5:C:361:MET:HG3	5:C:371:LYS:HD2	1.96	0.47
5:C:437:ARG:HH21	5:C:469:THR:HG22	1.80	0.47
5:C:398:THR:HG21	5:C:567:GLN:C	2.34	0.47
4:A:67:THR:HG23	5:C:609:ASN:HD21	1.79	0.47
5:C:625:LEU:O	5:C:627:ARG:N	2.47	0.47
6:D:1033:GLN:O	6:D:1037:GLN:HG3	2.14	0.47
6:D:1200:VAL:N	11:D:8286:HOH:O	2.47	0.47
6:D:1262:LEU:HD23	6:D:1352:ILE:CG1	2.44	0.47
6:D:147:VAL:HG12	11:D:8415:HOH:O	2.14	0.47
6:D:159:ARG:HB3	6:D:163:TYR:OH	2.14	0.47
7:E:16:LYS:HD3	7:E:17:TYR:CE1	2.49	0.47
4:K:64:GLU:HG3	4:K:64:GLU:O	2.13	0.47
4:K:9:PRO:HB3	4:K:25:LEU:HD21	1.95	0.47
5:M:1067:TYR:HB3	11:M:1303:HOH:O	2.13	0.47
5:M:474:VAL:HG12	5:M:531:PHE:HA	1.96	0.47
5:M:610:ARG:NH1	5:M:612:VAL:HG23	2.30	0.47
5:M:65:VAL:HG12	5:M:67:ASP:OD2	2.14	0.47
5:M:734:LEU:HD21	11:M:1385:HOH:O	2.14	0.47
5:M:798:GLY:H	5:M:827:VAL:CG1	2.28	0.47
5:M:675:ALA:CA	5:M:989:VAL:HG12	2.38	0.47
6:N:1231:GLU:HB3	6:N:1232:PRO:HD3	1.96	0.47
5:M:1049:LEU:HD23	6:N:1472:ILE:HD12	1.95	0.47
6:N:394:LEU:O	6:N:396:VAL:N	2.47	0.47
5:M:764:GLU:HG3	6:N:54:LYS:HD3	1.96	0.47
6:N:610:LYS:HB2	11:N:9190:HOH:O	2.15	0.47
6:N:756:GLN:HE22	6:N:760:ARG:HB3	1.80	0.47
6:N:820:GLU:HA	6:N:825:ALA:O	2.15	0.47
6:N:95:LEU:N	6:N:95:LEU:HD12	2.24	0.47
7:O:26:ARG:NH1	7:O:29:GLN:HE21	2.13	0.47
4:B:154:GLU:HB3	4:B:155:LYS:HZ2	1.78	0.47
4:B:40:LEU:HD22	4:B:211:LEU:CD1	2.43	0.47
5:C:144:PRO:N	5:C:276:LYS:HZ2	2.12	0.47
5:C:759:THR:HG21	5:C:783:ARG:NH2	2.30	0.47
6:D:1220:ALA:HB1	6:D:1223:ILE:CD1	2.40	0.47
6:D:683:ILE:N	6:D:683:ILE:HD12	2.29	0.47
6:D:783:ARG:HA	6:D:1028:ALA:CA	2.29	0.47
6:D:876:SER:O	6:D:880:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:884:ARG:HG2	11:D:8116:HOH:O	2.14	0.47
5:M:310:LEU:O	5:M:314:THR:HG23	2.14	0.47
5:M:537:LYS:H	5:M:537:LYS:CD	2.20	0.47
6:N:1023:MET:HG2	6:N:1029:ARG:H	1.80	0.47
6:N:1268:PRO:HD3	6:N:1331:ASP:HB2	1.96	0.47
6:N:493:ARG:CZ	6:N:1391:GLU:HA	2.45	0.47
7:O:8:LYS:O	7:O:12:MET:HG3	2.14	0.47
7:O:13:VAL:HG12	7:O:14:ASP:N	2.29	0.47
4:A:79:ILE:HG21	4:A:165:ILE:HD11	1.94	0.47
4:B:45:LEU:HD21	6:D:855:HIS:NE2	2.30	0.47
5:C:260:LEU:C	5:C:260:LEU:HD12	2.34	0.47
5:C:626:ARG:N	5:C:639:GLN:HE21	2.13	0.47
5:C:722:ILE:CD1	5:C:823:VAL:HG21	2.39	0.47
5:C:874:LEU:HD11	6:D:787:LEU:HD23	1.97	0.47
6:D:1107:VAL:HA	6:D:1200:VAL:O	2.14	0.47
6:D:1160:LEU:CD1	6:D:1174:LEU:HD21	2.42	0.47
6:D:1223:ILE:HG22	6:D:1227:GLN:NE2	2.16	0.47
6:D:138:LYS:HE2	11:D:8030:HOH:O	2.14	0.47
6:D:401:TYR:HB2	11:D:8164:HOH:O	2.14	0.47
6:D:634:GLY:HA3	6:D:727:GLN:HG2	1.97	0.47
6:D:23:TYR:O	6:D:91:GLY:HA2	2.14	0.47
5:M:68:PHE:HZ	5:M:71:TYR:CD2	2.23	0.47
5:M:86:LYS:HD2	11:M:1208:HOH:O	2.14	0.47
5:M:7:GLY:O	5:M:8:ARG:NE	2.48	0.47
6:N:1220:ALA:CB	6:N:1223:ILE:HD13	2.27	0.47
6:N:119:SER:H	6:N:123:LEU:HB2	1.79	0.47
6:N:493:ARG:NH2	6:N:1391:GLU:HA	2.29	0.47
6:N:1432:LYS:HA	11:N:9333:HOH:O	2.13	0.47
6:N:520:LEU:HD11	6:N:524:LEU:HD23	1.96	0.47
5:M:764:GLU:CB	6:N:54:LYS:HD3	2.44	0.47
5:M:1090:LYS:CD	6:N:90:MET:HG3	2.40	0.47
4:B:117:VAL:HG11	11:B:324:HOH:O	2.14	0.47
6:D:638:LYS:HD2	6:D:932:ASP:OD1	2.14	0.47
5:M:172:ILE:HG23	5:M:184:MET:CE	2.45	0.47
5:M:27:ARG:HD3	5:M:28:ARG:N	2.29	0.47
5:M:331:ARG:CB	5:M:331:ARG:HH11	2.27	0.47
5:M:430:VAL:HG13	6:N:1075:HIS:ND1	2.30	0.47
5:M:462:ASP:CG	5:M:463:GLU:N	2.67	0.47
5:M:589:ARG:HG3	5:M:596:TYR:CE1	2.50	0.47
6:N:1197:ARG:HB2	6:N:1197:ARG:HH11	1.80	0.47
6:N:127:LEU:HD13	6:N:128:TYR:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:204:LEU:O	6:N:394:LEU:HD23	2.14	0.47
6:N:666:ILE:HG13	6:N:666:ILE:H	1.41	0.47
2:Y:8:C:H2'	2:Y:9:G:N7	2.30	0.47
4:A:101:LEU:HD23	4:A:140:MET:HG2	1.95	0.47
4:B:124:ASN:HD21	4:B:127:LEU:HD22	1.78	0.47
5:C:1008:ARG:NH2	5:C:1011:GLY:N	2.62	0.47
5:C:1030:GLN:NE2	5:C:1030:GLN:HA	2.29	0.47
5:C:1115:LEU:HG	6:D:85:VAL:HG12	1.97	0.47
5:C:287:GLY:O	5:C:288:ARG:C	2.53	0.47
5:C:322:VAL:HB	11:C:1379:HOH:O	2.15	0.47
5:C:564:MET:HG3	5:C:565:GLN:N	2.29	0.47
4:A:69:PRO:HA	5:C:607:ASP:OD1	2.14	0.47
5:C:874:LEU:HD11	6:D:787:LEU:CD2	2.44	0.47
6:D:137:PRO:HD3	6:D:455:ARG:HH21	1.80	0.47
6:D:1496:GLU:HA	6:D:1499:ARG:CZ	2.44	0.47
6:D:206:ARG:HB2	6:D:392:SER:O	2.14	0.47
6:D:398:ALA:HA	6:D:446:VAL:O	2.15	0.47
6:D:455:ARG:CB	6:D:460:ALA:CA	2.86	0.47
6:D:800:LYS:HE3	6:D:804:LEU:HD13	1.96	0.47
6:D:97:THR:HG21	6:D:571:LYS:HZ3	1.80	0.47
4:K:177:VAL:O	5:M:864:GLY:HA3	2.15	0.47
4:L:161:ARG:HD2	4:L:161:ARG:N	2.30	0.47
4:L:43:ILE:HG23	4:L:47:SER:HB3	1.97	0.47
4:L:81:ASN:O	4:L:127:LEU:HD21	2.15	0.47
5:M:1056:LYS:HD3	6:N:625:TYR:CD1	2.50	0.47
5:M:1090:LYS:HG2	5:M:1112:PHE:CZ	2.48	0.47
5:M:119:PRO:HG2	5:M:386:PHE:CD2	2.49	0.47
5:M:162:ILE:HB	5:M:172:ILE:HB	1.96	0.47
5:M:437:ARG:C	5:M:438:ILE:HD12	2.35	0.47
5:M:689:VAL:HG11	5:M:870:ILE:CD1	2.44	0.47
5:M:45:GLN:HE21	5:M:68:PHE:HE2	1.62	0.47
5:M:769:PRO:HG2	6:N:65:ARG:CD	2.45	0.47
5:M:926:PHE:HD2	5:M:930:LYS:HE3	1.80	0.47
6:N:1204:CYS:C	11:N:9238:HOH:O	2.51	0.47
6:N:1353:GLN:HG2	6:N:1368:ILE:CD1	2.45	0.47
6:N:634:GLY:HA2	6:N:727:GLN:HE21	1.79	0.47
4:B:58:ILE:HD13	4:B:140:MET:HB3	1.96	0.47
5:C:204:GLN:OE1	5:C:222:MET:HA	2.15	0.47
5:C:26:TYR:CD2	5:C:121:MET:HB2	2.49	0.47
5:C:573:ARG:HG2	5:C:670:GLN:OE1	2.15	0.47
5:C:688:ILE:N	11:C:1474:HOH:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:964:LYS:NZ	5:C:968:LEU:HD21	2.29	0.47
6:D:135:LEU:HB2	6:D:148:GLU:O	2.15	0.47
6:D:1384:PRO:HG3	6:D:1389:LEU:CA	2.45	0.47
6:D:1462:LEU:HD23	6:D:1473:PRO:HD2	1.96	0.47
6:D:173:PRO:HB2	11:D:8270:HOH:O	2.13	0.47
6:D:720:LEU:H	6:D:720:LEU:HD12	1.80	0.47
6:D:53:ILE:HA	6:D:86:ARG:CZ	2.44	0.47
7:E:64:ALA:O	7:E:68:LEU:HD13	2.14	0.47
2:H:10:G:C2'	2:H:11:C:H5'	2.45	0.47
5:M:1031:ARG:NH1	6:N:621:LYS:HZ2	2.13	0.47
5:M:376:ARG:HH11	5:M:376:ARG:HG3	1.80	0.47
5:M:603:VAL:H	5:M:647:GLN:H	1.63	0.47
5:M:78:PHE:HB3	5:M:82:GLU:OE1	2.14	0.47
5:M:996:LYS:HE3	11:M:1161:HOH:O	2.14	0.47
6:N:519:VAL:HA	6:N:544:TYR:OH	2.15	0.47
5:M:1070:ILE:HG23	6:N:656:PHE:CD1	2.50	0.47
4:L:152:PRO:HG2	6:N:857:ILE:HD12	1.96	0.47
4:A:89:PHE:HZ	4:A:146:ARG:HB2	1.80	0.47
4:A:73:GLU:CD	4:A:130:ALA:HA	2.35	0.47
4:B:162:ILE:HD12	4:B:163:ASN:N	2.29	0.47
1:G:19:DC:P	5:C:1001:VAL:HB	2.55	0.47
5:C:1016:ILE:HG12	5:C:1017:THR:N	2.29	0.47
5:C:1036:GLU:O	5:C:1039:ALA:HB3	2.14	0.47
5:C:470:PRO:HD3	5:C:485:TYR:HE2	1.79	0.47
5:C:769:PRO:HB3	11:D:8366:HOH:O	2.15	0.47
5:C:553:ASP:OD1	5:C:843:HIS:HB3	2.14	0.47
5:C:937:ASP:HB2	5:C:940:GLU:CG	2.43	0.47
6:D:116:LEU:HD22	6:D:118:LEU:CD2	2.45	0.47
6:D:1472:ILE:HD13	6:D:1472:ILE:N	2.29	0.47
6:D:704:ARG:HH12	6:D:743:ASP:CB	2.28	0.47
2:H:7:G:H5''	2:H:7:G:C8	2.50	0.47
4:K:112:ARG:HG2	4:K:125:PRO:CA	2.45	0.47
4:L:140:MET:HG2	4:L:141:GLU:N	2.28	0.47
4:L:222:LEU:HA	4:L:225:PHE:CE1	2.50	0.47
5:M:625:LEU:O	5:M:627:ARG:N	2.48	0.47
5:M:688:ILE:CD1	5:M:847:GLY:HA3	2.45	0.47
5:M:69:LEU:HD21	5:M:99:GLN:HG3	1.97	0.47
6:N:1156:LEU:HD21	6:N:1177:ALA:HA	1.97	0.47
6:N:1221:VAL:HG12	6:N:1222:GLY:N	2.30	0.47
6:N:1476:THR:C	6:N:1478:SER:N	2.67	0.47
6:N:26:VAL:HG21	6:N:519:VAL:HG11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:439:LEU:HG	11:N:9125:HOH:O	2.15	0.47
6:N:756:GLN:O	6:N:756:GLN:NE2	2.48	0.47
6:N:711:LEU:HD21	6:N:768:ASN:HB2	1.95	0.47
6:N:845:ASN:ND2	6:N:846:PRO:HD2	2.30	0.47
6:N:884:ARG:HG2	11:N:9101:HOH:O	2.14	0.47
7:O:38:THR:HG21	7:O:63:TRP:CZ3	2.50	0.47
1:X:21:DC:H3'	11:X:589:HOH:O	2.14	0.47
4:A:48:ILE:CD1	4:A:210:ALA:HB1	2.44	0.47
4:B:110:LYS:HD3	4:B:112:ARG:HG2	1.97	0.47
4:B:51:THR:HG23	11:B:316:HOH:O	2.15	0.47
5:C:1095:LEU:HD22	6:D:101:HIS:CE1	2.49	0.47
5:C:146:VAL:CG2	5:C:162:ILE:HG23	2.43	0.47
5:C:437:ARG:HG2	5:C:467:ILE:O	2.15	0.47
5:C:674:VAL:HG11	5:C:992:MET:HB3	1.97	0.47
6:D:1191:PRO:HB3	6:D:1370:ILE:HD13	1.95	0.47
6:D:130:SER:HB3	6:D:132:TYR:CE1	2.50	0.47
6:D:710:ARG:C	6:D:712:GLY:H	2.18	0.47
6:D:796:ARG:HH21	6:D:828:LYS:CE	2.27	0.47
6:D:896:ALA:O	6:D:899:LEU:HD12	2.15	0.47
2:H:8:C:H2'	2:H:9:G:N7	2.30	0.47
4:L:34:VAL:HA	4:L:179:PHE:HE1	1.79	0.47
5:M:151:ASP:OD1	5:M:154:ARG:HB3	2.15	0.47
5:M:806:LEU:HD11	5:M:824:ARG:HH22	1.79	0.47
5:M:822:VAL:CB	5:M:824:ARG:HH21	2.28	0.47
5:M:876:VAL:HG13	5:M:881:ASN:HD21	1.79	0.47
6:N:1118:ILE:HG12	6:N:1193:THR:HG23	1.97	0.47
6:N:1442:ASN:CG	6:N:1444:THR:HB	2.36	0.47
6:N:1462:LEU:HD21	6:N:1474:ALA:HB3	1.97	0.47
4:A:175:ARG:NH2	4:A:176:ARG:HD3	2.30	0.46
4:A:88:ARG:NH1	4:A:89:PHE:O	2.47	0.46
4:B:27:PRO:C	4:B:28:LEU:HD23	2.35	0.46
5:C:1103:ASP:N	5:C:1107:ASN:O	2.44	0.46
5:C:265:ARG:HD2	5:C:267:TYR:CG	2.50	0.46
5:C:292:ARG:HB2	5:C:299:LYS:HG2	1.97	0.46
5:C:580:MET:HB3	5:C:584:GLU:CD	2.35	0.46
4:A:133:GLU:OE1	5:C:605:LYS:HB3	2.16	0.46
5:C:394:PHE:CE1	5:C:632:ASN:HB3	2.49	0.46
5:C:69:LEU:C	5:C:70:GLU:HG2	2.35	0.46
5:C:737:LEU:HD21	5:C:741:GLY:C	2.36	0.46
5:C:872:ASN:ND2	5:C:874:LEU:N	2.63	0.46
5:C:900:ARG:NH1	11:C:1210:HOH:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:999:HIS:HB2	11:C:1358:HOH:O	2.15	0.46
5:C:1098:ASP:O	6:D:10:ILE:HA	2.15	0.46
6:D:1198:TYR:HE2	6:D:1377:LYS:HD2	1.80	0.46
6:D:161:LEU:HD21	6:D:452:ILE:CG2	2.27	0.46
6:D:118:LEU:HD13	6:D:461:ILE:HD12	1.97	0.46
6:D:502:PHE:HA	11:D:8084:HOH:O	2.14	0.46
6:D:502:PHE:CZ	6:D:509:PRO:HB3	2.50	0.46
6:D:843:PHE:CE1	6:D:864:VAL:HG11	2.50	0.46
7:E:54:LEU:HA	7:E:58:PRO:CG	2.44	0.46
2:H:4:U:O2'	2:H:5:C:H5'	2.15	0.46
4:K:111:ALA:HB2	4:K:127:LEU:CD2	2.45	0.46
4:K:177:VAL:HG13	4:K:199:ILE:CD1	2.45	0.46
4:L:94:LEU:HD11	4:L:119:ASP:HB2	1.97	0.46
5:M:2:GLU:O	5:M:3:ILE:HD13	2.15	0.46
5:M:678:PRO:HD2	11:N:9146:HOH:O	2.14	0.46
5:M:498:GLN:HE22	6:N:1067:VAL:CG1	2.28	0.46
6:N:1121:PRO:HB2	6:N:1135:ARG:HH12	1.79	0.46
6:N:1122:LEU:HD11	6:N:1186:VAL:HG23	1.97	0.46
6:N:1149:LEU:HD23	6:N:1187:PRO:O	2.15	0.46
6:N:1389:LEU:HG	6:N:1390:LEU:H	1.79	0.46
6:N:10:ILE:HD11	6:N:1434:TRP:NE1	2.30	0.46
6:N:134:VAL:CG1	6:N:152:LEU:HD22	2.45	0.46
6:N:462:GLN:O	6:N:466:LYS:HG3	2.15	0.46
6:N:481:MET:CE	6:N:1388:ARG:HG3	2.44	0.46
6:N:493:ARG:HD2	6:N:494:LYS:N	2.30	0.46
7:O:91:ARG:HH11	7:O:92:LEU:HD21	1.80	0.46
2:Y:15:C:H2'	2:Y:16:G:C8	2.50	0.46
4:A:7:LYS:HE3	4:A:186:LEU:HD22	1.97	0.46
4:A:42:ARG:HH12	4:B:34:VAL:CG1	2.28	0.46
5:C:172:ILE:H	5:C:172:ILE:HD12	1.80	0.46
5:C:193:LEU:N	5:C:193:LEU:CD1	2.78	0.46
5:C:207:LEU:HD22	5:C:221:LEU:HD13	1.97	0.46
5:C:292:ARG:HD2	5:C:299:LYS:CE	2.46	0.46
5:C:713:ARG:HH22	6:D:532:GLY:H	1.62	0.46
5:C:718:GLY:HA3	5:C:761:PHE:CE1	2.50	0.46
5:C:859:PRO:HB3	5:C:974:LEU:CD2	2.44	0.46
6:D:1100:ASP:HB3	6:D:1428:ALA:HB1	1.97	0.46
6:D:136:ASP:OD2	6:D:464:LEU:HD23	2.15	0.46
6:D:1468:LEU:HD23	6:D:1468:LEU:O	2.15	0.46
6:D:540:LEU:HA	6:D:543:LEU:HD11	1.97	0.46
6:D:647:ARG:HA	6:D:650:LEU:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:66:GLN:O	6:D:69:GLU:HB3	2.16	0.46
6:D:69:GLU:HG2	6:D:70:GLY:N	2.30	0.46
6:D:871:LYS:NZ	6:N:442:ASN:HD22	2.13	0.46
5:C:1100:GLN:HB3	6:D:9:ARG:HH21	1.80	0.46
7:E:48:MET:HB2	7:E:54:LEU:HB2	1.96	0.46
2:H:9:G:C5'	2:H:9:G:C8	2.98	0.46
4:K:181:VAL:H	5:M:937:ASP:CG	2.19	0.46
4:L:124:ASN:HD21	4:L:127:LEU:HB2	1.80	0.46
5:M:512:ARG:HB3	5:M:523:ILE:HD11	1.97	0.46
5:M:689:VAL:CG1	5:M:690:ILE:H	2.25	0.46
5:M:751:PRO:HB2	6:N:680:GLN:NE2	2.30	0.46
5:M:79:PRO:HA	5:M:90:TYR:HE2	1.80	0.46
5:M:897:LEU:HD11	5:M:920:GLN:HB3	1.97	0.46
5:M:911:GLU:HB2	5:M:912:PRO:HD3	1.97	0.46
5:M:940:GLU:HG3	11:M:1220:HOH:O	2.15	0.46
5:M:862:PRO:HD3	5:M:973:VAL:O	2.14	0.46
5:M:668:LEU:HD13	5:M:995:MET:CE	2.44	0.46
6:N:1381:VAL:HB	6:N:1389:LEU:O	2.14	0.46
5:M:1050:GLN:NE2	6:N:1471:LEU:N	2.58	0.46
6:N:133:ILE:HB	6:N:153:LEU:CD1	2.45	0.46
6:N:33:ASN:O	6:N:36:THR:O	2.33	0.46
6:N:434:ARG:NH2	6:N:447:VAL:HG11	2.29	0.46
6:N:452:ILE:HB	11:N:9092:HOH:O	2.14	0.46
6:N:92:HIS:HA	6:N:519:VAL:HG23	1.96	0.46
4:B:170:VAL:HG23	4:B:170:VAL:O	2.16	0.46
4:B:206:THR:HG23	4:B:208:LEU:N	2.29	0.46
5:C:212:GLY:HA3	5:C:218:VAL:HG21	1.96	0.46
5:C:456:ALA:HA	5:C:541:SER:HA	1.97	0.46
5:C:494:TYR:HD2	5:C:530:GLU:HB3	1.81	0.46
5:C:600:ASP:OD1	5:C:651:LYS:HB2	2.15	0.46
6:D:119:SER:HB2	6:D:123:LEU:N	2.29	0.46
6:D:164:GLY:HA3	11:D:8094:HOH:O	2.15	0.46
4:K:26:GLU:HG3	4:K:184:THR:HG21	1.95	0.46
4:K:200:TRP:HZ2	11:M:1430:HOH:O	1.97	0.46
5:M:677:MET:HB3	5:M:987:ILE:HD13	1.96	0.46
5:M:798:GLY:HA3	5:M:828:ALA:O	2.15	0.46
5:M:831:ARG:NH1	5:M:999:HIS:HB3	2.31	0.46
6:N:1252:ILE:HA	11:N:9048:HOH:O	2.14	0.46
6:N:133:ILE:HG22	6:N:455:ARG:N	2.30	0.46
6:N:1369:GLU:HA	6:N:1372:VAL:HG12	1.97	0.46
6:N:396:VAL:C	6:N:398:ALA:N	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:564:GLU:O	6:N:567:ILE:HG13	2.16	0.46
6:N:799:LYS:HB3	6:N:826:PRO:HG2	1.97	0.46
6:N:890:VAL:HG12	6:N:926:LYS:CD	2.35	0.46
6:N:793:THR:OG1	6:N:905:PRO:HA	2.14	0.46
4:A:156:HIS:CD2	4:A:157:GLY:H	2.32	0.46
4:A:18:ARG:O	4:A:207:PRO:HD3	2.15	0.46
5:C:159:ILE:CG2	5:C:175:GLU:HB2	2.45	0.46
5:C:197:LEU:HB3	5:C:202:TYR:HB2	1.97	0.46
5:C:75:GLU:HA	5:C:76:PRO:HD3	1.79	0.46
6:D:116:LEU:HG	6:D:468:LEU:CD1	2.46	0.46
6:D:117:ASP:O	6:D:150:ARG:HD2	2.16	0.46
6:D:1394:VAL:HB	6:D:1397:LYS:HB2	1.97	0.46
6:D:407:VAL:HG13	6:D:422:ALA:HB2	1.97	0.46
6:D:844:ALA:O	6:D:867:ARG:HB3	2.15	0.46
5:C:889:HIS:CE1	6:D:951:ILE:HG22	2.50	0.46
2:H:5:C:H6	2:H:5:C:O5'	1.98	0.46
4:L:102:LYS:HD2	4:L:138:LEU:O	2.15	0.46
4:L:184:THR:CG2	4:L:194:LYS:HB2	2.45	0.46
4:L:43:ILE:HD12	4:L:217:ILE:CG2	2.45	0.46
4:L:39:PRO:HD3	11:L:348:HOH:O	2.16	0.46
5:M:286:SER:OG	5:M:299:LYS:HE3	2.15	0.46
5:M:381:ALA:HB2	11:M:1457:HOH:O	2.15	0.46
5:M:401:LEU:HG	5:M:402:SER:N	2.29	0.46
5:M:611:ILE:HD11	5:M:641:PRO:HG3	1.97	0.46
5:M:739:GLU:OE2	5:M:744:ARG:HA	2.14	0.46
5:M:948:GLU:OE1	5:M:955:PRO:HA	2.16	0.46
6:N:1335:LEU:HD13	6:N:1347:TYR:CE2	2.50	0.46
6:N:18:ILE:HG23	6:N:518:PRO:CG	2.23	0.46
6:N:204:LEU:HB3	6:N:445:ARG:HH21	1.81	0.46
6:N:792:ILE:HD13	6:N:793:THR:CG2	2.44	0.46
6:N:820:GLU:CB	6:N:836:VAL:HG21	2.45	0.46
6:N:911:LEU:O	6:N:915:VAL:HG23	2.14	0.46
5:M:984:GLU:HG3	6:N:944:THR:O	2.15	0.46
1:X:15:DC:H2''	1:X:16:DG:H8	1.80	0.46
4:A:101:LEU:HD22	4:A:114:PHE:CE2	2.49	0.46
4:A:173:PRO:O	4:A:201:THR:HG22	2.16	0.46
5:C:1046:ALA:HB3	6:D:1476:THR:HB	1.98	0.46
5:C:198:ARG:HD3	5:C:228:ALA:HA	1.98	0.46
5:C:605:LYS:CD	5:C:612:VAL:HB	2.45	0.46
6:D:123:LEU:HD11	6:D:152:LEU:CD2	2.39	0.46
6:D:399:ARG:HH11	6:D:430:ASP:CB	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:434:ARG:HB2	6:D:447:VAL:HG22	1.98	0.46
4:K:52:ALA:HB2	4:K:170:VAL:O	2.15	0.46
5:M:109:LYS:HE2	5:M:111:ASP:HA	1.97	0.46
5:M:217:LEU:HD12	5:M:311:PHE:HA	1.96	0.46
5:M:326:ASP:OD1	5:M:427:VAL:HG22	2.14	0.46
5:M:468:ARG:HB3	5:M:486:MET:O	2.14	0.46
5:M:61:LYS:NZ	11:M:1290:HOH:O	2.48	0.46
4:K:30:ARG:NH1	5:M:938:LYS:HD2	2.31	0.46
6:N:1146:GLY:O	6:N:1207:TYR:N	2.48	0.46
6:N:1221:VAL:O	6:N:1224:VAL:HB	2.15	0.46
6:D:1184:GLN:N	6:N:559:ALA:O	2.47	0.46
6:N:637:LEU:CD1	6:N:641:GLN:HB2	2.45	0.46
5:C:1083:GLU:CG	5:C:1086:ARG:HH21	2.25	0.46
5:C:181:VAL:HG12	5:C:182:VAL:N	2.30	0.46
5:C:226:VAL:HG13	5:C:227:PHE:CD1	2.51	0.46
5:C:732:ALA:HA	5:C:735:ARG:CZ	2.45	0.46
5:C:737:LEU:HD21	5:C:741:GLY:N	2.30	0.46
6:D:1002:LYS:HA	11:D:8149:HOH:O	2.16	0.46
6:D:1335:LEU:CD2	6:D:1344:VAL:HG22	2.46	0.46
6:D:785:ILE:HG22	6:D:789:LEU:CD1	2.36	0.46
4:K:23:PHE:O	4:K:196:THR:HA	2.16	0.46
4:K:224:TYR:HB3	4:L:9:PRO:CB	2.45	0.46
5:M:1047:HIS:N	5:M:1047:HIS:CD2	2.83	0.46
5:M:689:VAL:O	5:M:869:VAL:HG23	2.15	0.46
5:M:937:ASP:O	5:M:941:VAL:HG23	2.16	0.46
5:M:939:ARG:CB	5:M:982:PRO:HG3	2.33	0.46
6:N:400:VAL:O	6:N:400:VAL:HG13	2.16	0.46
6:N:654:LYS:NZ	6:N:654:LYS:HB2	2.31	0.46
6:N:880:ILE:O	6:N:883:ALA:HB3	2.15	0.46
5:M:1093:GLN:HB3	6:N:90:MET:SD	2.55	0.46
4:A:86:VAL:HG12	4:A:124:ASN:HB2	1.97	0.46
5:C:445:GLU:HA	5:C:449:ILE:HD12	1.97	0.46
5:C:902:ILE:O	5:C:904:PRO:HD3	2.15	0.46
5:C:971:LYS:HB2	5:C:986:PRO:HB2	1.97	0.46
6:D:1042:ARG:NH2	6:D:1061:PHE:HZ	2.12	0.46
6:D:1213:ARG:HH12	7:E:10:PHE:C	2.19	0.46
6:D:1393:GLN:HE22	6:D:1394:VAL:HB	1.80	0.46
6:D:618:LEU:HD12	6:D:1439:SER:HB3	1.96	0.46
5:C:1082:PRO:HD2	6:D:1468:LEU:O	2.15	0.46
6:D:436:GLU:HB2	6:D:445:ARG:CG	2.45	0.46
6:D:987:GLU:O	6:D:991:GLN:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:68:ILE:HG21	11:L:362:HOH:O	2.15	0.46
5:M:146:VAL:CG2	5:M:281:LEU:HD11	2.46	0.46
5:M:260:LEU:HA	5:M:291:ALA:HB2	1.98	0.46
5:M:467:ILE:HG23	11:M:1287:HOH:O	2.15	0.46
5:M:748:GLU:HA	5:M:799:ILE:HD13	1.97	0.46
6:N:30:GLU:HB3	6:N:40:GLU:HB3	1.96	0.46
6:N:611:GLN:O	6:N:611:GLN:HG3	2.14	0.46
5:C:1081:VAL:HG23	11:C:1198:HOH:O	2.16	0.46
5:C:1101:THR:HG23	5:C:1109:VAL:O	2.16	0.46
5:C:218:VAL:O	5:C:221:LEU:HG	2.16	0.46
5:C:232:GLU:O	5:C:236:ILE:HD12	2.16	0.46
5:C:522:VAL:HG21	11:C:1425:HOH:O	2.15	0.46
5:C:524:VAL:HG13	5:C:528:GLU:HB2	1.98	0.46
5:C:545:ASN:OD1	5:C:583:LEU:HD22	2.16	0.46
5:C:834:GLN:HE21	5:C:834:GLN:HB2	1.58	0.46
6:D:786:ILE:CG2	6:D:1026:SER:HB3	2.37	0.46
6:D:1031:ASN:HB3	6:D:1034:GLN:CD	2.36	0.46
6:D:1101:VAL:HG12	6:D:1374:GLN:HB3	1.97	0.46
6:D:31:THR:HB	6:D:527:MET:CE	2.46	0.46
6:D:438:ASP:HB2	6:D:445:ARG:NH1	2.31	0.46
6:D:785:ILE:H	6:D:785:ILE:CD1	2.13	0.46
6:D:939:PHE:O	6:D:943:THR:HG23	2.16	0.46
5:M:1036:GLU:O	5:M:1039:ALA:HB3	2.16	0.46
5:M:567:GLN:HG2	11:M:1537:HOH:O	2.15	0.46
5:M:694:LEU:HD21	5:M:868:ASP:OD2	2.15	0.46
5:M:906:PHE:CZ	6:N:1067:VAL:HA	2.51	0.46
6:N:1145:TYR:HD2	6:N:1168:MET:SD	2.39	0.46
6:N:1209:LEU:CD2	6:N:1210:SER:H	2.28	0.46
6:N:1402:ALA:HB2	6:N:1415:VAL:CG2	2.46	0.46
6:N:403:PHE:CE2	6:N:444:VAL:HG23	2.51	0.46
6:N:397:LYS:HB3	6:N:448:GLU:CB	2.46	0.46
6:N:62:LYS:HG3	6:N:75:ARG:HD2	1.98	0.46
6:N:960:LYS:HD3	11:N:9374:HOH:O	2.15	0.46
6:N:984:THR:CG2	6:N:987:GLU:H	2.29	0.46
1:X:15:DC:H2"	1:X:16:DG:C8	2.51	0.46
5:C:231:PRO:HD2	11:C:1261:HOH:O	2.16	0.46
5:C:401:LEU:CD2	5:C:565:GLN:HE21	2.29	0.46
5:C:418:LEU:HD12	5:C:418:LEU:N	2.31	0.46
5:C:437:ARG:HG2	5:C:467:ILE:HB	1.98	0.46
5:C:516:ARG:HH21	6:D:1068:LEU:HB3	1.81	0.46
5:C:404:LEU:HD22	5:C:591:SER:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1228:SER:O	6:D:1232:PRO:CD	2.58	0.46
6:D:783:ARG:HH22	6:D:1239:ARG:HH22	1.64	0.46
6:D:33:ASN:HB2	6:D:40:GLU:OE1	2.16	0.46
6:D:749:VAL:HA	6:D:750:PRO:HD3	1.82	0.46
6:D:800:LYS:CE	6:D:804:LEU:HD22	2.43	0.46
6:D:951:ILE:HD13	6:D:951:ILE:O	2.16	0.46
4:K:185:ARG:O	4:K:185:ARG:HD2	2.15	0.46
5:M:1008:ARG:HH12	5:M:1011:GLY:N	2.14	0.46
5:M:745:ILE:CD1	5:M:745:ILE:H	2.22	0.46
5:M:864:GLY:O	5:M:866:PRO:HD3	2.15	0.46
5:M:674:VAL:HG21	5:M:871:LEU:HG	1.98	0.46
5:M:91:GLN:NE2	5:M:117:HIS:O	2.49	0.46
6:N:1112:CYS:CB	6:N:1195:GLN:HG2	2.44	0.46
6:N:1349:VAL:HA	6:N:1368:ILE:HG21	1.98	0.46
6:N:543:LEU:CD1	6:N:581:LEU:HA	2.38	0.46
6:N:707:THR:HG22	6:N:712:GLY:HA3	1.96	0.46
6:N:968:ASP:O	6:N:971:LEU:HB3	2.16	0.46
6:N:974:ILE:CD1	6:N:995:LEU:HD22	2.45	0.46
6:N:760:ARG:NH1	7:O:61:VAL:HG23	2.27	0.46
5:C:124:ASP:OD1	5:C:124:ASP:N	2.48	0.46
5:C:169:GLY:CA	5:C:263:ASP:HB3	2.44	0.46
5:C:217:LEU:HD11	5:C:314:THR:OG1	2.16	0.46
5:C:322:VAL:HG13	11:C:1193:HOH:O	2.14	0.46
5:C:333:ILE:HD12	5:C:333:ILE:N	2.31	0.46
5:C:737:LEU:HD21	5:C:741:GLY:H	1.81	0.46
5:C:758:ARG:HG2	5:C:758:ARG:HH11	1.81	0.46
6:D:1166:LEU:HD12	6:D:1171:VAL:HG22	1.98	0.46
6:D:19:ARG:H	6:D:19:ARG:HG2	1.51	0.46
6:D:407:VAL:HA	6:D:422:ALA:CB	2.46	0.46
6:D:443:VAL:CG1	6:D:445:ARG:HH22	2.29	0.46
6:D:617:ASN:HA	11:D:8092:HOH:O	2.15	0.46
6:D:638:LYS:NZ	11:D:8121:HOH:O	2.48	0.46
6:D:71:LYS:HB2	6:D:71:LYS:HZ3	1.79	0.46
6:D:899:LEU:HB3	6:D:921:ARG:NH1	2.31	0.46
6:D:926:LYS:HG2	6:D:929:ARG:NH1	2.30	0.46
7:E:37:ASN:HD22	7:E:89:MET:CE	2.29	0.46
1:G:6:DT:H71	11:G:2394:HOH:O	2.16	0.46
4:L:175:ARG:HD3	4:L:202:ASP:HB3	1.98	0.46
5:M:1019:GLN:NE2	11:N:9292:HOH:O	2.48	0.46
5:M:1060:ILE:CD1	5:M:1064:ASN:HD21	2.29	0.46
5:M:342:ASP:O	5:M:346:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:433:THR:C	5:M:435:TYR:H	2.18	0.46
5:M:568:ALA:HB3	11:M:1233:HOH:O	2.15	0.46
6:N:1002:LYS:HA	11:N:9185:HOH:O	2.15	0.46
6:N:115:LEU:HB2	6:N:498:VAL:HG11	1.98	0.46
6:N:1353:GLN:HG2	6:N:1368:ILE:HD11	1.98	0.46
6:N:1366:LYS:O	6:N:1370:ILE:HG12	2.15	0.46
6:N:1394:VAL:HB	6:N:1397:LYS:CB	2.43	0.46
6:N:30:GLU:HB3	6:N:40:GLU:CB	2.45	0.46
6:N:481:MET:HE3	6:N:496:LEU:HD23	1.98	0.46
6:N:491:LYS:O	6:N:491:LYS:HD2	2.16	0.46
5:M:1031:ARG:HE	6:N:621:LYS:HB3	1.80	0.46
6:N:644:LEU:HD12	6:N:645:PRO:CD	2.46	0.46
6:N:65:ARG:HA	6:N:65:ARG:HD2	1.70	0.46
6:N:902:LEU:HD13	11:N:9040:HOH:O	2.14	0.46
6:N:959:GLU:O	6:N:963:TYR:CD1	2.70	0.46
5:C:219:GLN:HA	5:C:222:MET:HE2	1.98	0.45
5:C:5:ARG:HB2	5:C:5:ARG:HE	1.65	0.45
5:C:950:LEU:HB3	5:C:952:LEU:CD2	2.44	0.45
5:C:430:VAL:HG12	6:D:1078:ARG:HG3	1.98	0.45
6:D:1123:PHE:CZ	6:D:1178:ALA:HB1	2.51	0.45
6:D:1218:GLY:HA2	11:D:8043:HOH:O	2.15	0.45
6:D:496:LEU:HD21	6:D:1388:ARG:CG	2.44	0.45
6:D:14:SER:O	6:D:17:LYS:N	2.49	0.45
6:D:639:LEU:HD12	6:D:640:HIS:H	1.81	0.45
5:M:100:LEU:HD12	5:M:101:ILE:O	2.16	0.45
5:M:1043:TYR:HA	6:N:710:ARG:NH1	2.30	0.45
5:M:195:LEU:O	5:M:199:VAL:HG23	2.16	0.45
5:M:352:ALA:CA	5:M:355:VAL:HG12	2.44	0.45
4:K:198:ARG:NH2	5:M:932:GLU:HB3	2.30	0.45
6:N:1051:GLU:HB3	11:N:9122:HOH:O	2.15	0.45
6:N:1262:LEU:HD21	6:N:1351:GLU:CG	2.46	0.45
6:N:1192:LEU:HD22	6:N:1345:GLU:CG	2.46	0.45
6:N:631:ILE:HG21	6:N:745:MET:HG3	1.97	0.45
6:N:783:ARG:NH1	6:N:1029:ARG:CZ	2.79	0.45
6:N:770:LEU:HD11	6:N:919:PHE:HE2	1.80	0.45
5:C:146:VAL:HG13	5:C:162:ILE:HA	1.97	0.45
5:C:189:ARG:HD3	5:C:190:LYS:H	1.81	0.45
5:C:203:ASP:O	5:C:207:LEU:HB2	2.16	0.45
5:C:573:ARG:CB	5:C:573:ARG:HH11	2.19	0.45
5:C:669:GLY:HA3	5:C:995:MET:HA	1.98	0.45
6:D:1098:LEU:CD2	6:D:1229:ILE:HD12	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:114:THR:HB	6:D:498:VAL:HG21	1.98	0.45
3:I:8:DA:H1'	3:I:9:DG:C5'	2.46	0.45
4:K:39:PRO:O	4:K:43:ILE:HG12	2.17	0.45
4:L:121:GLU:OE1	4:L:123:MET:HG2	2.16	0.45
5:M:192:PRO:HD2	5:M:195:LEU:HD22	1.98	0.45
5:M:211:LEU:HD22	11:M:1152:HOH:O	2.17	0.45
5:M:146:VAL:HG21	5:M:281:LEU:HD11	1.98	0.45
5:M:30:LEU:HD12	5:M:30:LEU:O	2.17	0.45
5:M:44:ILE:HG23	5:M:344:PHE:CE1	2.47	0.45
5:M:688:ILE:HD12	5:M:847:GLY:HA3	1.99	0.45
4:K:198:ARG:HH22	5:M:932:GLU:CB	2.26	0.45
6:N:1136:LYS:O	6:N:1140:ILE:HG13	2.15	0.45
6:N:119:SER:OG	6:N:123:LEU:HD13	2.16	0.45
6:N:1380:GLU:OE2	6:N:1390:LEU:HA	2.15	0.45
6:N:206:ARG:HG3	6:N:206:ARG:HH11	1.81	0.45
6:N:409:VAL:HG11	6:N:435:VAL:HG21	1.98	0.45
6:N:470:LEU:HD23	6:N:470:LEU:H	1.81	0.45
6:N:772:PRO:HB2	11:N:9024:HOH:O	2.15	0.45
7:O:41:GLU:HG2	7:O:42:PRO:N	2.31	0.45
5:C:10:ARG:HH11	5:C:11:GLU:H	1.63	0.45
5:C:398:THR:HG21	5:C:567:GLN:CA	2.46	0.45
5:C:640:ARG:HA	11:C:1183:HOH:O	2.16	0.45
5:C:832:LYS:HE3	11:C:1519:HOH:O	2.15	0.45
6:D:1135:ARG:HD2	6:D:1139:ASP:OD2	2.17	0.45
6:D:1207:TYR:HA	6:D:1214:PRO:HA	1.97	0.45
6:D:1402:ALA:HB2	6:D:1415:VAL:CG2	2.46	0.45
6:D:508:ARG:NH1	11:D:8038:HOH:O	2.50	0.45
6:D:530:VAL:HB	6:D:534:ARG:HB2	1.99	0.45
6:D:884:ARG:HA	11:D:8116:HOH:O	2.16	0.45
6:D:896:ALA:O	6:D:900:ILE:HG23	2.17	0.45
4:K:16:GLN:NE2	11:K:788:HOH:O	2.47	0.45
4:L:112:ARG:H	4:L:112:ARG:HG2	1.48	0.45
4:L:50:GLY:HA3	4:L:171:PHE:O	2.16	0.45
4:L:59:GLU:HG2	4:L:139:ASN:HD22	1.80	0.45
5:M:350:ARG:HB3	5:M:377:PRO:HB3	1.97	0.45
5:M:479:VAL:HG22	5:M:506:ASN:HA	1.98	0.45
5:M:577:PRO:HB3	5:M:842:ARG:NH1	2.31	0.45
5:M:801:VAL:HG23	5:M:802:ARG:N	2.31	0.45
6:N:169:TYR:HB3	6:N:195:VAL:HG11	1.99	0.45
6:N:31:THR:OG1	6:N:32:ILE:N	2.49	0.45
6:N:465:LEU:HD22	6:N:510:GLU:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:756:GLN:HE21	6:N:760:ARG:HD2	1.82	0.45
6:N:796:ARG:NE	6:N:828:LYS:NZ	2.61	0.45
5:M:1115:LEU:O	6:N:89:ARG:CZ	2.64	0.45
6:N:907:GLU:O	6:N:911:LEU:HG	2.15	0.45
6:N:95:LEU:HA	6:N:551:ASN:HD21	1.81	0.45
6:N:963:TYR:H	6:N:963:TYR:HD1	1.63	0.45
4:A:186:LEU:HB2	11:A:361:HOH:O	2.17	0.45
4:A:206:THR:HG23	4:A:208:LEU:N	2.31	0.45
5:C:1008:ARG:HB2	5:C:1027:PHE:HB2	1.99	0.45
5:C:1055:LEU:HD22	5:C:1066:ALA:CB	2.37	0.45
5:C:1063:ARG:O	5:C:1066:ALA:HB3	2.16	0.45
5:C:265:ARG:HB3	5:C:267:TYR:CE2	2.51	0.45
5:C:385:PHE:O	5:C:389:SER:HB2	2.16	0.45
5:C:403:SER:O	5:C:407:LYS:HD3	2.16	0.45
5:C:431:HIS:CD2	5:C:432:ARG:N	2.85	0.45
5:C:523:ILE:HG23	5:C:523:ILE:O	2.17	0.45
5:C:401:LEU:HD22	5:C:546:LEU:HD13	1.99	0.45
5:C:569:VAL:HA	5:C:570:PRO:HD3	1.85	0.45
5:C:625:LEU:HA	5:C:639:GLN:NE2	2.24	0.45
5:C:810:ASP:HA	5:C:811:PRO:HD3	1.68	0.45
6:D:136:ASP:HB3	6:D:137:PRO:CD	2.33	0.45
6:D:1376:MET:CE	6:D:1421:LEU:HD22	2.46	0.45
6:D:165:LYS:HA	6:D:199:LEU:HD13	1.97	0.45
6:D:396:VAL:CG1	6:D:398:ALA:HB2	2.46	0.45
6:D:44:LEU:O	6:D:525:ARG:NH2	2.49	0.45
6:D:606:ILE:O	6:D:613:ARG:HB2	2.16	0.45
6:D:819:GLY:HA2	11:D:8465:HOH:O	2.17	0.45
4:K:158:ILE:HA	11:K:1352:HOH:O	2.15	0.45
4:K:41:ARG:HA	4:K:44:LEU:HD12	1.97	0.45
5:M:1007:ALA:HB1	6:N:652:LEU:CD1	2.46	0.45
5:M:310:LEU:HD11	11:M:1381:HOH:O	2.15	0.45
5:M:468:ARG:NE	5:M:487:THR:HG23	2.32	0.45
5:M:479:VAL:HG21	5:M:503:LEU:CD1	2.46	0.45
5:M:601:GLY:HA3	5:M:615:TYR:HA	1.97	0.45
5:M:77:PRO:HG2	5:M:117:HIS:CE1	2.51	0.45
5:M:9:ILE:HD11	5:M:537:LYS:HZ3	1.81	0.45
6:N:106:LYS:CE	6:N:125:GLN:HE22	2.30	0.45
5:M:817:PRO:O	6:N:532:GLY:HA2	2.15	0.45
6:N:781:PRO:O	6:N:786:ILE:HD11	2.17	0.45
6:N:800:LYS:HE3	6:N:804:LEU:HD22	1.98	0.45
4:A:9:PRO:HB3	4:A:25:LEU:CG	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:48:ILE:HG22	4:B:173:PRO:HD2	1.99	0.45
5:C:146:VAL:HG11	5:C:306:THR:CB	2.41	0.45
5:C:168:ARG:HH11	5:C:168:ARG:HG3	1.82	0.45
5:C:260:LEU:HA	5:C:291:ALA:HB2	1.97	0.45
6:D:1344:VAL:HG12	6:D:1348:LEU:CD1	2.46	0.45
6:D:1476:THR:O	6:D:1482:ARG:HA	2.17	0.45
6:D:618:LEU:CD1	6:D:1439:SER:HB3	2.47	0.45
6:D:68:PHE:HZ	11:D:8399:HOH:O	1.98	0.45
6:D:794:GLN:OE1	6:D:905:PRO:HG3	2.15	0.45
7:E:45:ARG:HB2	7:E:45:ARG:HE	1.62	0.45
1:G:15:DC:H2''	1:G:16:DG:H8	1.82	0.45
4:K:13:VAL:HG22	4:K:23:PHE:HD1	1.82	0.45
4:K:94:LEU:HD11	4:K:119:ASP:HB3	1.98	0.45
4:L:2:LEU:O	4:L:6:LEU:HD23	2.16	0.45
5:M:1105:LYS:C	5:M:1107:ASN:HD22	2.19	0.45
5:M:122:THR:HB	5:M:124:ASP:OD1	2.17	0.45
5:M:165:LEU:HA	5:M:166:PRO:O	2.16	0.45
5:M:250:ARG:NH1	5:M:250:ARG:HG3	2.31	0.45
5:M:43:GLY:HA2	5:M:341:THR:HG21	1.96	0.45
5:M:375:SER:HA	11:M:1564:HOH:O	2.14	0.45
5:M:769:PRO:HD2	6:N:65:ARG:NE	2.32	0.45
6:N:1476:THR:C	6:N:1478:SER:H	2.19	0.45
6:N:152:LEU:HD23	6:N:152:LEU:N	2.31	0.45
6:N:204:LEU:HD12	6:N:396:VAL:HG21	1.97	0.45
6:N:41:ARG:CD	6:N:42:ASP:H	2.28	0.45
6:N:497:GLU:O	6:N:500:ARG:HB2	2.16	0.45
3:Z:4:DC:H2''	3:Z:5:DG:O5'	2.16	0.45
5:C:1016:ILE:HD13	5:C:1016:ILE:N	2.24	0.45
5:C:329:GLY:CA	5:C:489:THR:HG23	2.46	0.45
5:C:51:THR:CG2	5:C:348:LEU:HD23	2.46	0.45
5:C:833:LEU:CD1	5:C:996:LYS:HD2	2.47	0.45
5:C:567:GLN:HB2	5:C:997:LEU:HD12	1.98	0.45
6:D:1057:VAL:HG13	6:D:1069:GLU:HB3	1.98	0.45
6:D:1135:ARG:HB3	6:D:1140:ILE:CG1	2.47	0.45
6:D:1198:TYR:N	11:D:8501:HOH:O	2.48	0.45
6:D:1389:LEU:HD13	11:D:8087:HOH:O	2.17	0.45
6:D:36:THR:O	6:D:38:LYS:N	2.49	0.45
6:D:32:ILE:HD12	6:D:527:MET:HG2	1.97	0.45
6:D:1213:ARG:NH2	7:E:10:PHE:O	2.44	0.45
3:I:3:DA:H4'	5:C:423:ALA:HB1	1.97	0.45
4:L:73:GLU:HB3	4:L:77:GLU:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:139:GLN:HA	5:M:411:SER:O	2.17	0.45
5:M:31:GLN:CD	5:M:34:VAL:HG23	2.36	0.45
5:M:662:GLU:HG2	5:M:663:ASN:CG	2.37	0.45
5:M:695:LEU:O	5:M:695:LEU:HD23	2.16	0.45
5:M:690:ILE:CG2	5:M:852:ILE:HG13	2.47	0.45
5:M:876:VAL:HG12	5:M:876:VAL:O	2.17	0.45
6:N:1031:ASN:HB3	6:N:1034:GLN:OE1	2.15	0.45
5:M:516:ARG:CZ	6:N:1068:LEU:HD13	2.44	0.45
1:X:13:DT:OP1	6:N:1093:TYR:CE2	2.70	0.45
6:N:1412:LYS:NZ	6:N:1414:PRO:HG3	2.32	0.45
6:N:1475:GLY:O	6:N:1478:SER:HB3	2.16	0.45
6:N:168:THR:OG1	6:N:206:ARG:NH2	2.49	0.45
6:N:179:VAL:HG21	6:N:191:LEU:HD23	1.99	0.45
6:D:1153:VAL:CG1	6:N:561:GLY:HA3	2.41	0.45
6:N:618:LEU:HD22	6:N:619:LEU:HD22	1.98	0.45
6:N:682:ASP:N	6:N:682:ASP:OD1	2.49	0.45
6:N:701:LEU:N	6:N:701:LEU:HD12	2.32	0.45
6:N:845:ASN:H	6:N:848:GLU:HG3	1.81	0.45
6:N:945:SER:OG	6:N:947:ILE:HG13	2.16	0.45
7:O:28:GLN:HB3	7:O:32:ARG:HH12	1.82	0.45
4:A:41:ARG:HH11	4:A:177:VAL:HB	1.82	0.45
5:C:160:ALA:HB3	5:C:174:LEU:HB2	1.97	0.45
5:C:570:PRO:O	5:C:702:SER:HB2	2.16	0.45
5:C:603:VAL:O	5:C:646:GLY:HA2	2.16	0.45
5:C:56:GLU:CB	5:C:64:LEU:HD23	2.46	0.45
5:C:837:ASP:OD1	5:C:999:HIS:NE2	2.50	0.45
5:C:551:GLU:HB3	5:C:906:PHE:CD2	2.52	0.45
5:C:910:LYS:HG3	5:C:912:PRO:HD2	1.99	0.45
6:D:1102:THR:HG23	6:D:1370:ILE:HG22	1.99	0.45
6:D:1406:ARG:HB2	6:D:1412:LYS:HZ3	1.82	0.45
6:D:10:ILE:HD11	6:D:1434:TRP:CE2	2.51	0.45
6:D:576:GLU:HA	6:D:579:ASP:OD2	2.17	0.45
6:D:992:ILE:HG21	11:D:8500:HOH:O	2.16	0.45
6:D:1484:THR:O	7:E:25:LYS:HD3	2.17	0.45
2:H:9:G:C5'	2:H:9:G:H8	2.30	0.45
4:K:58:ILE:HG21	4:K:68:ILE:CD1	2.46	0.45
5:M:615:TYR:HB3	5:M:617:ASP:OD1	2.16	0.45
5:M:829:GLN:NE2	5:M:831:ARG:HH21	2.15	0.45
5:M:899:GLN:HG3	5:M:901:TYR:CZ	2.51	0.45
5:M:987:ILE:HG12	6:N:948:THR:CG2	2.46	0.45
6:N:1232:PRO:O	6:N:1236:LEU:HG	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:515:GLU:HG3	11:N:9303:HOH:O	2.16	0.45
6:N:587:ARG:HG2	6:N:587:ARG:HH11	1.81	0.45
5:M:1034:GLU:CB	6:N:619:LEU:HD13	2.45	0.45
6:N:784:ASP:HB3	6:N:939:PHE:CE2	2.51	0.45
4:A:13:VAL:HG22	4:A:23:PHE:CD1	2.51	0.45
4:B:97:VAL:HG13	11:B:325:HOH:O	2.17	0.45
5:C:1060:ILE:O	5:C:1063:ARG:HG2	2.15	0.45
6:D:998:GLU:O	6:D:1002:LYS:HG3	2.17	0.45
5:C:906:PHE:CE1	6:D:1067:VAL:HG13	2.52	0.45
6:D:1225:ALA:HB2	6:D:1367:HIS:ND1	2.32	0.45
6:D:1261:GLU:O	6:D:1264:GLU:O	2.35	0.45
6:D:1492:LEU:HD22	6:D:1492:LEU:O	2.16	0.45
6:D:407:VAL:HA	6:D:422:ALA:HB2	1.99	0.45
6:D:633:VAL:HG22	6:D:635:PRO:HD3	1.98	0.45
6:D:974:ILE:O	6:D:983:LEU:HD11	2.16	0.45
7:E:80:VAL:HG11	7:E:85:LEU:HD23	1.98	0.45
5:M:806:LEU:O	5:M:821:GLU:HB2	2.17	0.45
5:M:844:GLY:O	5:M:846:LYS:HG3	2.16	0.45
5:M:860:HIS:CE1	5:M:977:GLY:HA2	2.52	0.45
6:N:1262:LEU:HD23	6:N:1352:ILE:HA	1.99	0.45
6:N:36:THR:O	6:N:38:LYS:N	2.49	0.45
6:N:777:PRO:HG2	6:N:916:TYR:HB2	1.98	0.45
6:N:954:ALA:HB1	6:N:1039:CYS:SG	2.57	0.45
6:N:969:ARG:O	6:N:973:GLN:HG3	2.17	0.45
6:N:987:GLU:O	6:N:991:GLN:HG3	2.16	0.45
6:N:993:LEU:HA	11:N:9079:HOH:O	2.17	0.45
11:A:316:HOH:O	4:B:148:VAL:HG23	2.17	0.45
4:B:213:GLN:HG2	11:B:331:HOH:O	2.17	0.45
5:C:14:PRO:HB2	11:C:1307:HOH:O	2.17	0.45
5:C:22:GLN:OE1	5:C:407:LYS:HB3	2.16	0.45
5:C:76:PRO:HA	5:C:77:PRO:HD3	1.89	0.45
5:C:855:VAL:HG13	5:C:856:GLU:OE2	2.17	0.45
6:D:1345:GLU:O	6:D:1349:VAL:HG23	2.16	0.45
5:C:1046:ALA:O	6:D:1472:ILE:HD11	2.16	0.45
6:D:33:ASN:O	6:D:36:THR:O	2.34	0.45
6:D:525:ARG:HB2	6:D:538:SER:OG	2.17	0.45
11:C:1135:HOH:O	6:D:750:PRO:HB3	2.16	0.45
1:G:15:DC:H2"	1:G:16:DG:C8	2.52	0.45
4:K:189:ARG:HG3	4:K:191:ASP:OD1	2.17	0.45
4:L:19:GLU:N	4:L:19:GLU:OE2	2.49	0.45
4:L:1:MET:HB2	11:L:357:HOH:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:243:ARG:HB3	11:M:1168:HOH:O	2.16	0.45
5:M:265:ARG:H	5:M:289:THR:HG21	1.80	0.45
5:M:358:ARG:HB3	5:M:371:LYS:O	2.17	0.45
5:M:564:MET:SD	5:M:565:GLN:N	2.90	0.45
5:M:689:VAL:CG1	5:M:690:ILE:N	2.79	0.45
5:M:882:LEU:HD23	5:M:882:LEU:N	2.32	0.45
6:N:1147:ARG:CB	6:N:1188:VAL:HG21	2.44	0.45
6:N:1209:LEU:O	6:N:1210:SER:C	2.54	0.45
6:N:1336:LEU:HD11	6:N:1341:PRO:HG3	1.99	0.45
6:N:28:LYS:CG	6:N:29:PRO:HD2	2.47	0.45
6:N:542:ASP:HA	6:N:545:ARG:NE	2.30	0.45
6:N:634:GLY:N	6:N:635:PRO:HD3	2.32	0.45
6:N:837:GLY:O	6:N:841:TYR:CD1	2.70	0.45
4:L:45:LEU:HD22	6:N:851:LEU:CD2	2.47	0.45
7:O:84:ARG:HB3	11:O:1385:HOH:O	2.15	0.45
5:C:248:PRO:HG3	11:C:1252:HOH:O	2.17	0.45
5:C:54:ILE:CG2	5:C:66:LEU:HB3	2.47	0.45
5:C:703:ILE:CD1	5:C:703:ILE:H	2.17	0.45
5:C:813:VAL:HG22	5:C:814:GLU:N	2.32	0.45
5:C:899:GLN:NE2	5:C:901:TYR:OH	2.50	0.45
6:D:1010:ASN:HB3	11:D:8019:HOH:O	2.17	0.45
6:D:1102:THR:HG22	6:D:1222:GLY:HA3	1.99	0.45
6:D:1369:GLU:HA	6:D:1372:VAL:HG12	1.98	0.45
6:D:1426:LYS:HA	6:D:1429:LEU:HD13	1.99	0.45
6:D:1465:ASN:ND2	6:D:1471:LEU:O	2.50	0.45
6:D:484:PRO:HB3	6:D:488:ARG:NE	2.17	0.45
5:C:1095:LEU:CD2	6:D:582:LEU:HD22	2.43	0.45
6:D:761:ILE:HG12	7:E:65:MET:HE1	1.99	0.45
5:M:36:PRO:HB2	5:M:70:GLU:HG2	1.98	0.45
5:M:817:PRO:C	5:M:819:VAL:H	2.20	0.45
5:M:798:GLY:H	5:M:827:VAL:HG11	1.82	0.45
6:N:127:LEU:HD12	6:N:127:LEU:H	1.82	0.45
6:N:675:ARG:O	6:N:678:GLU:HG2	2.17	0.45
6:N:777:PRO:CG	6:N:916:TYR:HB2	2.47	0.45
6:N:876:SER:HB3	11:N:9301:HOH:O	2.17	0.45
5:M:678:PRO:HG2	6:N:943:THR:HA	1.99	0.45
1:X:14:DT:H3'	6:N:610:LYS:HZ3	1.81	0.45
1:X:6:DT:H2''	1:X:7:DC:C5	2.52	0.45
2:Y:8:C:H2'	2:Y:9:G:C8	2.52	0.45
4:A:179:PHE:HB2	4:A:195:LEU:CD1	2.45	0.44
4:A:20:TYR:HE2	4:A:198:ARG:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:83:LYS:HG3	4:A:170:VAL:HG21	1.98	0.44
5:C:1008:ARG:HH12	5:C:1010:THR:HA	1.81	0.44
5:C:1084:SER:HA	5:C:1087:VAL:HG12	1.99	0.44
5:C:689:VAL:HG21	5:C:870:ILE:HD12	1.99	0.44
6:D:1119:SER:O	6:D:1121:PRO:HD3	2.16	0.44
6:D:1147:ARG:O	6:D:1165:TYR:HA	2.18	0.44
6:D:1487:VAL:HG12	6:D:1488:ASP:N	2.31	0.44
6:D:112:ILE:HD11	6:D:461:ILE:CG2	2.47	0.44
6:D:6:ARG:HH11	6:D:6:ARG:HG2	1.82	0.44
6:D:950:GLY:O	6:D:953:ASP:HB2	2.16	0.44
4:L:102:LYS:HE3	4:L:104:GLU:CG	2.43	0.44
5:M:1003:ASP:OD1	5:M:1004:LYS:HG2	2.16	0.44
5:M:199:VAL:HG13	5:M:235:LEU:HG	1.99	0.44
5:M:265:ARG:HB3	5:M:267:TYR:CZ	2.52	0.44
5:M:334:ARG:HG3	11:M:1156:HOH:O	2.17	0.44
5:M:461:VAL:HG13	5:M:465:GLY:HA2	1.98	0.44
5:M:490:GLU:HG2	5:M:493:ARG:NH2	2.32	0.44
5:M:400:PRO:HG2	5:M:593:ALA:CB	2.47	0.44
5:M:80:GLN:HE21	5:M:84:ARG:NH2	2.15	0.44
6:N:1151:ARG:HG2	6:N:1187:PRO:CB	2.45	0.44
6:N:1231:GLU:HA	6:N:1234:THR:OG1	2.17	0.44
6:N:1425:THR:O	6:N:1429:LEU:HD12	2.16	0.44
6:N:754:PHE:CZ	6:N:1476:THR:HG21	2.52	0.44
6:N:700:VAL:HG13	6:N:718:PRO:HG2	2.00	0.44
6:N:793:THR:O	6:N:879:ARG:HD3	2.17	0.44
6:N:999:THR:HA	6:N:1002:LYS:HD2	1.98	0.44
4:B:84:GLU:OE1	4:B:127:LEU:HD11	2.17	0.44
5:C:1038:TRP:HA	5:C:1041:GLU:OE1	2.17	0.44
5:C:422:ARG:HB2	11:C:1579:HOH:O	2.17	0.44
5:C:532:MET:HG2	5:C:533:ASP:N	2.32	0.44
5:C:674:VAL:HG12	5:C:990:GLY:O	2.18	0.44
5:C:783:ARG:HG2	5:C:785:VAL:HB	1.98	0.44
5:C:817:PRO:C	5:C:819:VAL:H	2.20	0.44
6:D:1014:ASN:O	6:D:1016:PRO:HD3	2.17	0.44
6:D:116:LEU:HD11	6:D:464:LEU:CB	2.46	0.44
6:D:1183:ILE:O	6:D:1183:ILE:HG13	2.16	0.44
6:D:1184:GLN:HB2	6:N:559:ALA:CA	2.47	0.44
6:D:1271:LYS:HD3	6:D:1331:ASP:N	2.32	0.44
6:D:1232:PRO:HB3	6:D:1361:VAL:HG21	1.99	0.44
6:D:1377:LYS:O	6:D:1395:LEU:HB3	2.18	0.44
6:D:1486:VAL:CG1	7:E:22:VAL:HG13	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:15:PRO:O	6:D:19:ARG:HG2	2.18	0.44
6:D:584:ASN:CG	6:D:590:PRO:HD2	2.37	0.44
6:D:783:ARG:HH12	6:D:1239:ARG:NH2	2.15	0.44
5:C:676:ILE:O	6:D:948:THR:HB	2.17	0.44
4:K:26:GLU:HG2	4:K:27:PRO:N	2.32	0.44
4:L:94:LEU:HD21	4:L:119:ASP:HB2	1.99	0.44
5:M:13:ILE:HD12	5:M:13:ILE:O	2.17	0.44
5:M:670:GLN:NE2	5:M:699:PHE:O	2.51	0.44
5:M:853:LEU:HB3	5:M:858:MET:HE2	2.00	0.44
5:M:676:ILE:HG21	5:M:988:VAL:HG13	1.99	0.44
5:M:9:ILE:O	5:M:9:ILE:HD12	2.18	0.44
6:N:1472:ILE:O	6:N:1477:GLY:HA3	2.17	0.44
6:N:400:VAL:HG22	6:N:443:VAL:CG2	2.41	0.44
6:N:434:ARG:H	6:N:447:VAL:HG22	1.82	0.44
6:N:470:LEU:HD12	6:N:503:LEU:HD21	1.99	0.44
6:N:54:LYS:HE3	6:N:55:ASP:HB2	1.99	0.44
6:N:705:ALA:HB3	6:N:706:PRO:HD3	1.99	0.44
2:Y:4:U:O2'	2:Y:5:C:H5'	2.16	0.44
4:B:30:ARG:HB3	4:B:30:ARG:CZ	2.47	0.44
5:C:97:ARG:HB3	5:C:109:LYS:HE3	1.99	0.44
5:C:352:ALA:CA	5:C:355:VAL:HG12	2.47	0.44
5:C:44:ILE:HG22	5:C:45:GLN:N	2.31	0.44
5:C:595:LEU:HD22	5:C:625:LEU:HD23	2.00	0.44
5:C:748:GLU:HA	5:C:799:ILE:HD12	1.99	0.44
6:D:10:ILE:O	6:D:1451:ALA:HA	2.18	0.44
6:D:1432:LYS:HB3	6:D:1432:LYS:NZ	2.32	0.44
6:D:156:GLU:O	6:D:159:ARG:HB2	2.18	0.44
6:D:396:VAL:HB	6:D:398:ALA:HB3	1.98	0.44
6:D:420:VAL:O	6:D:421:LEU:HD23	2.17	0.44
6:D:471:GLU:H	6:D:471:GLU:HG2	1.52	0.44
6:D:525:ARG:HG2	6:D:525:ARG:O	2.17	0.44
6:D:593:ASN:HB2	11:D:8122:HOH:O	2.18	0.44
4:L:19:GLU:O	4:L:200:TRP:HA	2.18	0.44
4:L:201:THR:HG21	4:L:205:VAL:O	2.17	0.44
4:L:73:GLU:CD	4:L:130:ALA:HA	2.38	0.44
5:M:1013:TYR:CZ	5:M:1063:ARG:HD2	2.52	0.44
5:M:208:ALA:O	5:M:218:VAL:HG21	2.17	0.44
5:M:405:ARG:NH2	5:M:566:THR:CG2	2.79	0.44
5:M:780:GLU:HG3	5:M:781:LYS:H	1.83	0.44
5:M:859:PRO:HB3	5:M:974:LEU:HD23	1.99	0.44
6:N:35:ARG:HG3	6:N:35:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1043:TYR:CE2	6:N:763:MET:HA	2.53	0.44
6:N:784:ASP:HB3	6:N:939:PHE:HE2	1.82	0.44
6:N:85:VAL:HG23	6:N:86:ARG:N	2.33	0.44
1:X:18:DG:P	6:N:628:ARG:HH21	2.40	0.44
2:Y:11:C:C2'	2:Y:12:G:H5''	2.47	0.44
3:Z:6:DC:P	6:N:1266:ARG:HH12	2.41	0.44
4:A:150:TYR:CZ	5:C:696:LYS:HA	2.53	0.44
4:A:47:SER:HB3	4:A:217:ILE:HD13	2.00	0.44
4:B:95:GLN:HA	4:B:146:ARG:HD2	1.99	0.44
4:A:219:ARG:HD3	4:B:219:ARG:HG3	1.99	0.44
5:C:172:ILE:HG12	11:C:1177:HOH:O	2.17	0.44
5:C:189:ARG:NH1	5:C:190:LYS:HD2	2.33	0.44
5:C:503:LEU:HD23	5:C:507:ARG:O	2.17	0.44
5:C:479:VAL:HG22	5:C:506:ASN:HA	1.99	0.44
5:C:52:PHE:O	5:C:54:ILE:N	2.50	0.44
5:C:553:ASP:OD1	5:C:881:ASN:HB2	2.17	0.44
5:C:721:ARG:CG	5:C:820:ARG:HH12	2.29	0.44
5:C:957:LYS:NZ	5:C:957:LYS:HB2	2.33	0.44
5:C:952:LEU:HB3	5:C:966:LEU:HD11	2.00	0.44
6:D:1000:THR:HG23	6:D:1001:GLU:H	1.82	0.44
6:D:651:GLU:HG2	11:D:8181:HOH:O	2.17	0.44
6:D:654:LYS:O	6:D:658:LEU:HG	2.17	0.44
2:H:7:G:C5'	2:H:7:G:H8	2.29	0.44
4:L:124:ASN:ND2	4:L:127:LEU:HD22	2.32	0.44
5:M:1084:SER:HA	5:M:1087:VAL:HG12	1.98	0.44
5:M:252:LYS:HD2	5:M:252:LYS:N	2.32	0.44
5:M:94:LEU:HD12	5:M:95:TYR:N	2.32	0.44
6:N:1262:LEU:HA	6:N:1262:LEU:HD12	1.77	0.44
6:N:436:GLU:OE2	6:N:445:ARG:HD3	2.18	0.44
6:N:530:VAL:HB	6:N:534:ARG:HB2	1.99	0.44
5:M:949:LYS:CD	6:N:796:ARG:HH22	2.29	0.44
6:N:1213:ARG:HH22	7:O:15:SER:HA	1.83	0.44
7:O:24:ALA:O	7:O:28:GLN:HG3	2.17	0.44
2:Y:16:G:H3'	11:Y:968:HOH:O	2.17	0.44
4:A:165:ILE:O	4:A:165:ILE:HG13	2.18	0.44
4:B:47:SER:OG	4:B:48:ILE:N	2.49	0.44
5:C:106:GLY:C	5:C:107:LEU:HD23	2.38	0.44
5:C:170:PRO:HB2	11:C:1335:HOH:O	2.17	0.44
5:C:189:ARG:HD3	5:C:190:LYS:N	2.33	0.44
5:C:393:GLN:HE21	5:C:393:GLN:HB2	1.62	0.44
5:C:492:ASP:OD2	5:C:518:LYS:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:566:THR:O	5:C:566:THR:HG22	2.18	0.44
5:C:689:VAL:CG1	5:C:853:LEU:HD13	2.47	0.44
5:C:673:LEU:HD21	5:C:867:VAL:HG12	2.00	0.44
6:D:1344:VAL:HG11	6:D:1421:LEU:CD2	2.48	0.44
6:D:1380:GLU:HA	6:D:1391:GLU:O	2.18	0.44
6:D:15:PRO:HD3	6:D:511:TRP:CE3	2.52	0.44
6:D:554:LEU:HD12	6:D:570:GLU:HB3	2.00	0.44
6:D:550:ARG:NH1	6:D:573:MET:SD	2.88	0.44
6:D:800:LYS:HD3	6:D:800:LYS:O	2.18	0.44
6:D:875:THR:HG22	6:D:879:ARG:HB2	2.00	0.44
6:D:95:LEU:HD23	6:D:96:ALA:H	1.82	0.44
7:E:13:VAL:HG11	7:E:18:ARG:HB3	2.00	0.44
1:G:12:DG:H1'	1:G:13:DT:H5'	1.99	0.44
4:L:121:GLU:CD	4:L:123:MET:HG2	2.37	0.44
4:L:38:ASN:HB3	4:L:39:PRO:HD3	2.00	0.44
5:M:140:ILE:HG22	5:M:333:ILE:CD1	2.48	0.44
5:M:15:LEU:HD12	5:M:15:LEU:N	2.31	0.44
5:M:18:LEU:HD23	5:M:542:VAL:HG21	2.00	0.44
5:M:548:PRO:HB2	5:M:843:HIS:HE1	1.83	0.44
5:M:69:LEU:HD12	5:M:97:ARG:HB3	1.98	0.44
6:N:1149:LEU:HD22	6:N:1187:PRO:HG2	2.00	0.44
6:N:1139:ASP:HB3	6:N:1357:ARG:CZ	2.48	0.44
6:N:1336:LEU:CD2	6:N:1421:LEU:HB2	2.48	0.44
6:N:50:PHE:HB3	6:N:522:PRO:CD	2.47	0.44
5:M:1034:GLU:CB	6:N:619:LEU:HD22	2.44	0.44
6:N:899:LEU:CB	6:N:917:GLN:HG2	2.48	0.44
7:O:62:THR:HB	11:O:844:HOH:O	2.18	0.44
4:A:132:LEU:N	4:A:132:LEU:HD12	2.32	0.44
4:A:151:VAL:HB	4:A:169:ALA:HB3	2.00	0.44
4:B:48:ILE:N	4:B:48:ILE:HD12	2.32	0.44
5:C:69:LEU:CD1	5:C:109:LYS:HE3	2.45	0.44
5:C:148:PHE:HB2	5:C:313:LEU:HD22	1.99	0.44
5:C:235:LEU:C	5:C:235:LEU:HD23	2.37	0.44
5:C:41:ASN:O	5:C:46:ALA:HB2	2.17	0.44
5:C:473:ARG:HA	5:C:531:PHE:CD1	2.53	0.44
5:C:524:VAL:CG1	5:C:528:GLU:HB2	2.48	0.44
5:C:579:VAL:HB	5:C:890:LEU:HD21	1.98	0.44
5:C:650:ARG:CG	5:C:653:ASP:HB2	2.44	0.44
5:C:690:ILE:HG23	5:C:852:ILE:HA	1.99	0.44
5:C:549:PHE:CD2	5:C:886:LEU:HB3	2.52	0.44
6:D:1080:GLY:O	6:D:1083:ASP:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:119:SER:H	6:D:123:LEU:HB2	1.83	0.44
6:D:1201:CYS:SG	6:D:1204:CYS:HB2	2.57	0.44
6:D:1367:HIS:O	6:D:1371:VAL:HG23	2.17	0.44
6:D:33:ASN:HB2	6:D:40:GLU:OE2	2.18	0.44
4:L:7:LYS:HD2	4:L:7:LYS:C	2.37	0.44
5:M:1034:GLU:HB3	6:N:619:LEU:CD1	2.46	0.44
5:M:198:ARG:HG2	5:M:204:GLN:HE22	1.82	0.44
5:M:23:VAL:HA	5:M:121:MET:CE	2.48	0.44
5:M:496:ILE:HA	5:M:531:PHE:O	2.18	0.44
6:N:1147:ARG:O	6:N:1166:LEU:HD23	2.17	0.44
6:N:644:LEU:HD12	6:N:645:PRO:N	2.33	0.44
7:O:5:GLY:HA3	7:O:8:LYS:HD2	1.99	0.44
4:B:19:GLU:O	4:B:200:TRP:HA	2.18	0.44
4:B:58:ILE:HG21	4:B:61:VAL:HG23	2.00	0.44
5:C:329:GLY:CA	5:C:488:ALA:HB3	2.48	0.44
5:C:546:LEU:HD13	5:C:565:GLN:HE22	1.82	0.44
5:C:862:PRO:HD3	5:C:973:VAL:O	2.18	0.44
6:D:115:LEU:HD12	6:D:499:VAL:HG22	2.00	0.44
6:D:1432:LYS:HG2	6:D:1433:SER:N	2.33	0.44
6:D:1463:LYS:O	6:D:1467:ILE:HG13	2.18	0.44
6:D:123:LEU:CD1	6:D:152:LEU:HD22	2.41	0.44
4:L:143:ARG:NE	4:L:145:ASP:OD1	2.51	0.44
4:L:73:GLU:OE1	4:L:131:THR:N	2.51	0.44
5:M:284:ARG:O	5:M:301:GLU:HB2	2.18	0.44
5:M:728:HIS:C	5:M:729:LEU:HG	2.38	0.44
5:M:728:HIS:O	5:M:729:LEU:HG	2.17	0.44
6:N:1192:LEU:HD23	11:N:9021:HOH:O	2.17	0.44
6:N:121:THR:HB	11:N:9300:HOH:O	2.17	0.44
6:N:1259:VAL:HG11	6:N:1356:TYR:HH	1.81	0.44
6:N:124:GLU:O	6:N:127:LEU:HD12	2.18	0.44
6:N:131:LYS:NZ	6:N:568:ARG:HB2	2.32	0.44
6:N:637:LEU:HD11	6:N:642:CYS:N	2.33	0.44
6:N:711:LEU:HD22	6:N:714:GLN:NE2	2.33	0.44
6:N:884:ARG:CZ	6:N:884:ARG:HB3	2.45	0.44
6:N:955:VAL:HG11	6:N:1015:TYR:CE2	2.52	0.44
6:N:95:LEU:HA	6:N:551:ASN:OD1	2.17	0.44
1:X:13:DT:OP2	6:N:1096:ARG:NH2	2.45	0.44
5:C:288:ARG:HH11	5:C:288:ARG:CB	2.31	0.44
5:C:137:VAL:HG22	5:C:391:LEU:HG	2.00	0.44
5:C:964:LYS:O	5:C:968:LEU:HG	2.17	0.44
6:D:1098:LEU:HD21	6:D:1229:ILE:CD1	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:128:TYR:O	6:D:457:GLY:HA2	2.17	0.44
6:D:418:GLY:O	6:D:428:LYS:HB3	2.18	0.44
6:D:489:ARG:NH1	11:D:8508:HOH:O	2.49	0.44
6:D:554:LEU:CD1	6:D:571:LYS:HD3	2.45	0.44
6:D:615:ARG:NH2	6:D:1096:ARG:CZ	2.81	0.44
6:D:8:VAL:HG23	6:D:1457:ASP:CB	2.37	0.44
6:D:95:LEU:HD23	6:D:96:ALA:N	2.32	0.44
6:D:1481:VAL:HG22	7:E:18:ARG:HH21	1.83	0.44
7:E:41:GLU:HB2	7:E:45:ARG:CZ	2.48	0.44
4:K:185:ARG:HB2	11:K:1437:HOH:O	2.17	0.44
4:K:26:GLU:HG2	4:K:27:PRO:HA	1.99	0.44
4:K:34:VAL:HG23	4:K:179:PHE:HZ	1.82	0.44
4:K:44:LEU:HD13	4:K:177:VAL:HG11	2.00	0.44
5:M:1060:ILE:HG21	5:M:1083:GLU:OE1	2.17	0.44
5:M:12:VAL:HG13	5:M:13:ILE:HG13	2.00	0.44
5:M:165:LEU:HD12	5:M:166:PRO:C	2.38	0.44
5:M:41:ASN:O	5:M:46:ALA:HB2	2.18	0.44
5:M:479:VAL:HG21	5:M:503:LEU:HD11	1.98	0.44
5:M:721:ARG:HH21	5:M:783:ARG:NH1	2.15	0.44
5:M:808:ARG:NH2	5:M:820:ARG:NH2	2.65	0.44
5:M:84:ARG:HG2	5:M:131:GLY:O	2.18	0.44
5:M:854:PRO:HB2	5:M:856:GLU:CD	2.38	0.44
5:M:971:LYS:HG2	5:M:988:VAL:HB	2.00	0.44
6:N:493:ARG:HG2	6:N:1390:LEU:CB	2.43	0.44
6:N:578:VAL:O	6:N:581:LEU:HD23	2.17	0.44
6:N:984:THR:HG22	6:N:987:GLU:HG3	1.99	0.44
2:Y:10:G:C2'	2:Y:11:C:H5'	2.47	0.44
4:A:26:GLU:HG2	4:A:27:PRO:N	2.33	0.44
4:A:5:LYS:HE2	4:B:224:TYR:OH	2.18	0.44
5:C:1055:LEU:CD2	5:C:1066:ALA:HB2	2.37	0.44
5:C:127:PHE:CE1	5:C:136:ILE:HG12	2.53	0.44
5:C:355:VAL:CG2	5:C:372:LEU:HG	2.48	0.44
5:C:573:ARG:HD2	5:C:699:PHE:HA	2.00	0.44
5:C:874:LEU:C	5:C:877:PRO:HD2	2.38	0.44
6:D:1045:MET:O	6:D:1053:PHE:HD1	2.01	0.44
6:D:18:ILE:HD12	6:D:518:PRO:HG3	1.99	0.44
6:D:569:ASN:HA	6:D:572:ARG:NE	2.33	0.44
6:D:675:ARG:HA	6:D:678:GLU:CG	2.48	0.44
6:D:81:THR:HB	6:D:85:VAL:CG2	2.48	0.44
6:D:19:ARG:NE	6:D:94:GLU:OE1	2.51	0.44
3:I:4:DC:H3'	11:I:2461:HOH:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:102:LYS:HZ1	4:K:115:LEU:HD22	1.82	0.44
4:L:101:LEU:HD23	4:L:101:LEU:C	2.38	0.44
4:L:43:ILE:HD12	4:L:217:ILE:HG21	2.00	0.44
5:M:140:ILE:HD12	5:M:140:ILE:O	2.18	0.44
5:M:198:ARG:HG2	5:M:204:GLN:NE2	2.33	0.44
5:M:486:MET:HG3	5:M:490:GLU:HB2	2.00	0.44
6:N:1037:GLN:OE1	6:N:1042:ARG:HD2	2.17	0.44
6:N:1100:ASP:HB3	6:N:1428:ALA:CB	2.47	0.44
6:N:1102:THR:O	6:N:1102:THR:HG22	2.18	0.44
6:N:1221:VAL:O	6:N:1224:VAL:N	2.50	0.44
6:N:1478:SER:O	6:N:1482:ARG:N	2.51	0.44
6:N:1481:VAL:O	6:N:1481:VAL:HG12	2.18	0.44
6:N:163:TYR:HE1	6:N:198:ARG:HH12	1.66	0.44
6:N:486:ARG:CA	6:N:489:ARG:HG2	2.45	0.44
6:N:639:LEU:HD23	6:N:639:LEU:H	1.83	0.44
6:N:646:LYS:HG2	6:N:720:LEU:HB3	1.99	0.44
6:N:962:GLN:O	6:N:966:GLU:HG3	2.18	0.44
4:A:222:LEU:HD22	4:B:218:LEU:HD23	2.00	0.43
4:B:40:LEU:HD22	4:B:211:LEU:HD12	1.99	0.43
5:C:22:GLN:O	5:C:121:MET:HE1	2.17	0.43
5:C:279:GLU:HG3	5:C:280:LYS:N	2.33	0.43
5:C:285:LEU:HD23	5:C:285:LEU:O	2.18	0.43
5:C:409:ARG:HB3	5:C:454:SER:OG	2.17	0.43
5:C:563:ASN:O	5:C:567:GLN:HG2	2.18	0.43
5:C:703:ILE:HD11	11:C:1597:HOH:O	2.17	0.43
5:C:745:ILE:HD11	5:C:803:THR:OG1	2.18	0.43
1:G:11:DC:H5"	6:D:1442:ASN:ND2	2.33	0.43
6:D:26:VAL:HG11	6:D:44:LEU:HD23	2.00	0.43
6:D:393:ILE:HD12	11:D:8204:HOH:O	2.18	0.43
6:D:60:CYS:SG	6:D:62:LYS:HG3	2.58	0.43
6:D:632:VAL:O	6:D:727:GLN:HA	2.18	0.43
6:D:675:ARG:O	6:D:678:GLU:HG2	2.17	0.43
6:D:834:THR:CG2	6:D:838:ARG:HH11	2.27	0.43
7:E:28:GLN:HB2	7:E:28:GLN:HE21	1.56	0.43
5:M:177:GLU:N	5:M:178:PRO:HD3	2.32	0.43
5:M:52:PHE:O	5:M:54:ILE:N	2.51	0.43
5:M:578:VAL:HG21	5:M:991:GLN:O	2.18	0.43
5:M:669:GLY:HA3	5:M:995:MET:HA	1.99	0.43
5:M:940:GLU:N	11:M:1220:HOH:O	2.51	0.43
5:M:971:LYS:HG2	5:M:988:VAL:N	2.33	0.43
6:N:1045:MET:CB	6:N:1073:SER:HA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1164:ARG:NH1	6:N:1170:ASP:OD2	2.51	0.43
6:N:165:LYS:HG2	6:N:397:LYS:HD3	2.00	0.43
1:X:15:DC:P	6:N:610:LYS:HE2	2.58	0.43
2:Y:5:C:H6	2:Y:5:C:O5'	2.00	0.43
5:C:101:ILE:HD12	5:C:107:LEU:HD13	2.00	0.43
5:C:1058:ASP:O	5:C:1060:ILE:N	2.51	0.43
5:C:568:ALA:HB1	5:C:668:LEU:HB2	2.00	0.43
5:C:841:ASN:HD21	5:C:845:ASN:H	1.65	0.43
6:D:1066:THR:OG1	6:D:1067:VAL:N	2.51	0.43
6:D:1262:LEU:HD21	6:D:1351:GLU:CG	2.43	0.43
6:D:1438:ALA:CA	6:D:1446:VAL:HG11	2.48	0.43
6:D:56:TYR:C	6:D:80:VAL:HG11	2.38	0.43
6:D:827:ILE:HG23	6:D:840:LYS:NZ	2.33	0.43
4:K:114:PHE:O	4:K:116:PRO:HD3	2.18	0.43
4:L:86:VAL:HG12	4:L:124:ASN:HB2	1.99	0.43
4:L:83:LYS:HE2	4:L:168:ASP:HB2	2.00	0.43
5:M:1008:ARG:NH2	5:M:1020:PRO:HB3	2.33	0.43
5:M:147:TYR:CE2	5:M:280:LYS:HE2	2.52	0.43
5:M:307:LEU:CD1	5:M:310:LEU:HD23	2.48	0.43
5:M:573:ARG:HB3	5:M:670:GLN:OE1	2.18	0.43
5:M:672:VAL:HG12	5:M:699:PHE:HE1	1.82	0.43
5:M:842:ARG:NH2	5:M:887:GLU:OE1	2.51	0.43
6:N:1087:ARG:HB3	6:N:1237:THR:HG21	2.00	0.43
6:N:1165:TYR:HB2	11:N:9241:HOH:O	2.18	0.43
6:N:1261:GLU:O	6:N:1264:GLU:O	2.35	0.43
6:N:1383:ASP:HA	6:N:1384:PRO:HD3	1.71	0.43
11:M:1450:HOH:O	6:N:1456:LYS:HB3	2.17	0.43
6:N:155:ASP:O	6:N:159:ARG:N	2.49	0.43
6:N:204:LEU:HB3	6:N:445:ARG:NH2	2.32	0.43
6:N:732:VAL:HG12	6:N:732:VAL:O	2.18	0.43
11:M:1170:HOH:O	6:N:754:PHE:HB2	2.18	0.43
4:B:65:PHE:CE1	6:D:813:LEU:HD13	2.54	0.43
5:C:1031:ARG:CZ	6:D:621:LYS:NZ	2.81	0.43
5:C:360:LEU:HD22	11:C:1160:HOH:O	2.17	0.43
5:C:431:HIS:CG	5:C:432:ARG:H	2.35	0.43
5:C:124:ASP:OD2	5:C:592:LEU:HD12	2.19	0.43
5:C:71:TYR:HA	5:C:96:ALA:HB2	2.00	0.43
6:D:409:VAL:CG1	6:D:435:VAL:HG11	2.48	0.43
6:D:411:THR:HG23	6:D:436:GLU:HA	2.01	0.43
6:D:477:LEU:HD21	6:D:495:ARG:NH1	2.33	0.43
6:D:827:ILE:HG22	6:D:837:GLY:CA	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:957:PRO:HG3	6:D:1007:VAL:HA	2.00	0.43
7:E:41:GLU:H	7:E:41:GLU:CD	2.21	0.43
2:H:5:C:H2'	2:H:6:U:C5	2.52	0.43
4:K:133:GLU:OE2	4:K:134:GLU:HB2	2.17	0.43
4:K:30:ARG:HH22	5:M:938:LYS:CD	2.28	0.43
4:L:91:ASN:N	4:L:91:ASN:OD1	2.51	0.43
5:M:198:ARG:HE	5:M:198:ARG:CA	2.32	0.43
5:M:144:PRO:N	5:M:276:LYS:HZ3	2.15	0.43
5:M:342:ASP:HA	5:M:345:ARG:HD3	1.99	0.43
5:M:351:LEU:HD11	11:M:1564:HOH:O	2.17	0.43
5:M:569:VAL:HA	5:M:570:PRO:HD3	1.88	0.43
5:M:601:GLY:O	5:M:648:ARG:HA	2.18	0.43
5:M:677:MET:HE1	5:M:679:PHE:CD1	2.38	0.43
5:M:816:LYS:HB2	5:M:819:VAL:CG2	2.47	0.43
5:M:876:VAL:H	5:M:877:PRO:CD	2.31	0.43
5:M:873:PRO:O	5:M:877:PRO:HD3	2.18	0.43
6:N:154:THR:HG23	6:N:157:GLU:H	1.82	0.43
6:N:436:GLU:OE1	6:N:445:ARG:O	2.36	0.43
6:N:481:MET:HE1	6:N:493:ARG:HA	2.01	0.43
6:N:481:MET:CE	6:N:496:LEU:HD23	2.48	0.43
6:N:57:GLU:OE2	6:N:61:GLY:HA2	2.18	0.43
6:N:645:PRO:HG3	6:N:725:SER:O	2.18	0.43
6:N:813:LEU:HB2	6:N:839:LEU:HD21	1.99	0.43
6:N:53:ILE:HA	6:N:86:ARG:HD2	1.99	0.43
2:Y:9:G:C5'	2:Y:9:G:H8	2.30	0.43
4:A:48:ILE:HD11	4:A:210:ALA:HB1	2.00	0.43
5:C:142:ARG:NH2	5:C:325:ILE:HG12	2.34	0.43
5:C:256:TYR:CE1	5:C:293:PHE:HB2	2.53	0.43
5:C:466:PHE:O	5:C:468:ARG:N	2.52	0.43
5:C:36:PRO:CG	5:C:70:GLU:HB3	2.36	0.43
6:D:1046:GLN:HG2	6:D:1052:THR:CG2	2.44	0.43
6:D:1105:ILE:HG22	11:D:8286:HOH:O	2.17	0.43
6:D:1117:TYR:CE1	6:D:1187:PRO:HA	2.53	0.43
6:D:1471:LEU:HD21	6:D:1477:GLY:HA2	1.99	0.43
6:D:957:PRO:HG3	11:D:8019:HOH:O	2.17	0.43
6:D:1486:VAL:HG12	7:E:22:VAL:HG13	2.00	0.43
5:M:1003:ASP:OD2	6:N:724:GLN:NE2	2.52	0.43
5:M:166:PRO:HA	11:M:1128:HOH:O	2.17	0.43
5:M:328:LEU:HD11	5:M:434:HIS:HD2	1.82	0.43
5:M:462:ASP:HB3	5:M:468:ARG:CD	2.43	0.43
5:M:490:GLU:HG2	5:M:493:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:587:VAL:CG1	5:M:588:VAL:N	2.79	0.43
5:M:567:GLN:C	5:M:997:LEU:HD12	2.38	0.43
6:N:794:GLN:HG2	6:N:1017:PHE:CE1	2.53	0.43
5:M:879:ARG:HH21	6:N:1029:ARG:HH22	1.65	0.43
6:N:1209:LEU:HD21	7:O:17:TYR:OH	2.19	0.43
6:N:1453:ALA:O	6:N:1455:LYS:HG2	2.18	0.43
6:N:471:GLU:OE1	6:N:503:LEU:HD21	2.18	0.43
6:N:606:ILE:CG2	6:N:607:LEU:HG	2.48	0.43
6:N:615:ARG:NH2	6:N:1096:ARG:HD2	2.34	0.43
6:N:832:ARG:NE	6:N:832:ARG:HA	2.33	0.43
6:N:970:LYS:HE2	11:N:9402:HOH:O	2.18	0.43
7:O:21:VAL:HG12	7:O:25:LYS:HD2	1.99	0.43
7:O:65:MET:O	7:O:69:LEU:HD12	2.17	0.43
1:X:17:DC:O3'	6:N:628:ARG:NE	2.51	0.43
4:B:216:GLU:HA	4:B:219:ARG:HH12	1.83	0.43
5:C:250:ARG:HG2	5:C:253:ALA:HB3	2.00	0.43
5:C:610:ARG:HD3	5:C:622:GLU:CD	2.38	0.43
5:C:814:GLU:O	5:C:816:LYS:NZ	2.52	0.43
5:C:853:LEU:HB2	5:C:858:MET:HE2	2.01	0.43
5:C:976:ASP:HB3	5:C:979:THR:HG22	2.00	0.43
6:D:108:VAL:CG2	6:D:109:PRO:HD3	2.47	0.43
6:D:1122:LEU:O	6:D:1135:ARG:HB2	2.18	0.43
6:D:1209:LEU:O	6:D:1210:SER:C	2.53	0.43
6:D:1099:VAL:HG23	6:D:1226:ALA:HB1	2.00	0.43
6:D:1271:LYS:CE	6:D:1331:ASP:H	2.32	0.43
6:D:1406:ARG:CB	6:D:1412:LYS:HZ3	2.31	0.43
6:D:1436:SER:N	11:D:8024:HOH:O	2.49	0.43
6:D:415:VAL:O	6:D:432:TYR:HA	2.18	0.43
6:D:95:LEU:CD2	6:D:574:LEU:HD21	2.45	0.43
6:D:711:LEU:HD21	6:D:768:ASN:CB	2.49	0.43
6:D:899:LEU:HB3	6:D:921:ARG:HH12	1.83	0.43
4:K:116:PRO:HG3	11:K:2001:HOH:O	2.17	0.43
4:K:127:LEU:HA	11:K:827:HOH:O	2.17	0.43
4:K:55:SER:HB2	4:K:158:ILE:HB	2.00	0.43
4:L:52:ALA:HB2	4:L:170:VAL:C	2.38	0.43
5:M:1095:LEU:HB2	5:M:1097:LEU:CD2	2.47	0.43
5:M:1101:THR:C	5:M:1102:LEU:HD12	2.38	0.43
5:M:162:ILE:HB	5:M:172:ILE:HD13	2.00	0.43
5:M:37:GLU:HA	11:M:1579:HOH:O	2.18	0.43
5:M:39:ARG:HG3	5:M:39:ARG:NH1	2.29	0.43
5:M:399:ASN:O	5:M:400:PRO:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:853:LEU:O	5:M:858:MET:HE1	2.19	0.43
6:N:615:ARG:HH22	6:N:1096:ARG:CD	2.31	0.43
6:N:111:LYS:HG2	6:N:1452:ILE:CD1	2.48	0.43
6:N:1467:ILE:H	6:N:1467:ILE:HG13	1.55	0.43
6:N:40:GLU:HB3	6:N:41:ARG:H	1.68	0.43
4:A:19:GLU:O	4:A:200:TRP:HA	2.18	0.43
5:C:18:LEU:HD13	5:C:590:ASP:CB	2.48	0.43
5:C:230:ARG:HA	5:C:231:PRO:HD3	1.84	0.43
5:C:496:ILE:HG13	5:C:531:PHE:HB2	2.01	0.43
5:C:398:THR:OG1	5:C:566:THR:O	2.21	0.43
5:C:602:GLU:OE1	5:C:648:ARG:HG2	2.18	0.43
5:C:975:TYR:N	5:C:975:TYR:CD1	2.86	0.43
6:D:127:LEU:CD2	6:D:134:VAL:HG22	2.49	0.43
6:D:475:LYS:NZ	11:D:8306:HOH:O	2.51	0.43
6:D:522:PRO:HG2	6:D:523:ASP:N	2.33	0.43
6:D:52:PRO:HG2	6:D:80:VAL:HA	2.00	0.43
6:D:554:LEU:HD11	6:D:571:LYS:CD	2.48	0.43
6:D:683:ILE:HG23	6:D:687:VAL:CG2	2.48	0.43
6:D:695:ILE:HD13	6:D:720:LEU:HD11	2.00	0.43
6:D:716:PHE:CZ	6:D:765:SER:HB3	2.54	0.43
4:L:86:VAL:O	4:L:86:VAL:HG13	2.18	0.43
4:L:99:LEU:HD13	4:L:144:VAL:CG2	2.49	0.43
5:M:179:ASN:ND2	11:M:1597:HOH:O	2.50	0.43
5:M:666:LEU:HD11	5:M:668:LEU:CD2	2.48	0.43
5:M:771:GLU:HB2	11:M:1204:HOH:O	2.18	0.43
6:N:1148:VAL:HG11	6:N:1203:LYS:HB3	2.00	0.43
6:N:1101:VAL:HG13	6:N:1427:SER:OG	2.18	0.43
6:N:1431:THR:OG1	6:N:1432:LYS:N	2.51	0.43
6:N:41:ARG:HB2	11:N:9006:HOH:O	2.18	0.43
6:N:525:ARG:HB2	6:N:538:SER:HB3	2.00	0.43
6:N:62:LYS:HG3	6:N:75:ARG:HH11	1.84	0.43
6:N:781:PRO:HB3	6:N:785:ILE:CG2	2.49	0.43
6:N:893:GLU:O	6:N:896:ALA:HB3	2.18	0.43
6:N:961:LYS:HG2	11:N:9172:HOH:O	2.17	0.43
7:O:26:ARG:HE	7:O:30:LEU:HD12	1.84	0.43
7:O:67:GLU:HB3	7:O:73:LEU:CD1	2.48	0.43
4:B:100:LEU:O	4:B:115:LEU:HG	2.19	0.43
4:B:103:ALA:N	11:B:348:HOH:O	2.51	0.43
4:B:23:PHE:O	4:B:196:THR:HA	2.19	0.43
5:C:1118:LYS:O	5:C:1119:ARG:HB2	2.18	0.43
5:C:140:ILE:HG13	5:C:411:SER:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:631:SER:CB	5:C:637:LEU:HD11	2.45	0.43
5:C:815:LEU:HD23	11:C:1323:HOH:O	2.19	0.43
6:D:1098:LEU:HD11	6:D:1263:PHE:CE2	2.53	0.43
6:D:1422:MET:CE	6:D:1427:SER:HA	2.48	0.43
6:D:171:LEU:HD11	11:D:8204:HOH:O	2.19	0.43
6:D:33:ASN:HB2	6:D:40:GLU:CD	2.38	0.43
6:D:556:LYS:O	6:D:560:GLN:HG3	2.19	0.43
6:D:586:ARG:HH22	6:D:1444:THR:HG21	1.83	0.43
6:D:80:VAL:HG12	6:D:81:THR:O	2.18	0.43
6:D:849:ALA:O	6:D:853:VAL:HG23	2.18	0.43
4:L:223:THR:HG23	11:L:379:HOH:O	2.18	0.43
4:L:227:ASN:H	4:L:227:ASN:ND2	2.16	0.43
4:L:54:THR:CG2	4:L:158:ILE:HG13	2.48	0.43
5:M:285:LEU:HD12	5:M:288:ARG:O	2.19	0.43
5:M:31:GLN:NE2	5:M:31:GLN:O	2.52	0.43
5:M:771:GLU:O	5:M:771:GLU:HG2	2.19	0.43
5:M:834:GLN:HB3	11:M:1436:HOH:O	2.19	0.43
5:M:882:LEU:HD11	6:N:1038:LEU:HB3	2.00	0.43
6:N:12:LEU:HD21	6:N:104:PHE:CE1	2.52	0.43
6:N:396:VAL:CG1	6:N:447:VAL:HG12	2.47	0.43
6:N:826:PRO:O	6:N:836:VAL:HG13	2.18	0.43
6:N:994:GLN:O	6:N:998:GLU:HG3	2.17	0.43
7:O:70:THR:HG22	7:O:71:GLY:N	2.33	0.43
2:Y:5:C:H2'	2:Y:6:U:C5	2.50	0.43
5:C:1003:ASP:OD1	5:C:1004:LYS:HD3	2.19	0.43
5:C:17:PRO:O	5:C:20:GLU:HB3	2.19	0.43
5:C:250:ARG:HD2	11:C:1278:HOH:O	2.18	0.43
5:C:140:ILE:HA	5:C:332:ARG:O	2.18	0.43
5:C:493:ARG:HE	5:C:493:ARG:HB2	1.53	0.43
6:D:1336:LEU:CD1	6:D:1341:PRO:HG3	2.49	0.43
6:D:1438:ALA:O	6:D:1443:THR:HG22	2.18	0.43
6:D:400:VAL:CG2	6:D:443:VAL:HG21	2.48	0.43
6:D:470:LEU:H	6:D:470:LEU:CD2	2.31	0.43
6:D:496:LEU:HD11	6:D:1388:ARG:HG3	2.01	0.43
6:D:662:GLU:OE2	6:D:669:ASN:HA	2.18	0.43
6:D:699:VAL:H	6:D:756:GLN:HE21	1.62	0.43
6:D:782:SER:O	6:D:786:ILE:HG13	2.18	0.43
5:C:949:LYS:CD	6:D:796:ARG:HH22	2.24	0.43
6:D:867:ARG:HD2	6:D:867:ARG:O	2.19	0.43
6:D:935:LYS:HE3	11:D:8312:HOH:O	2.18	0.43
4:K:7:LYS:HD2	4:K:186:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:151:ASP:OD2	5:M:152:PRO:HD2	2.19	0.43
5:M:194:VAL:CG1	5:M:221:LEU:HB2	2.48	0.43
5:M:352:ALA:C	5:M:355:VAL:HG12	2.39	0.43
5:M:672:VAL:HG12	5:M:699:PHE:CE1	2.54	0.43
5:M:805:ARG:NH1	5:M:807:ARG:HD3	2.34	0.43
5:M:99:GLN:NE2	5:M:109:LYS:HB2	2.33	0.43
6:N:1148:VAL:CG1	6:N:1163:GLY:HA2	2.48	0.43
6:N:1207:TYR:HA	6:N:1214:PRO:HA	2.00	0.43
6:N:106:LYS:HE2	6:N:125:GLN:HE22	1.84	0.43
6:N:179:VAL:CG1	6:N:183:GLU:HB3	2.45	0.43
6:N:207:PHE:HB3	11:N:9229:HOH:O	2.18	0.43
5:M:716:LYS:NZ	6:N:36:THR:HG23	2.31	0.43
6:N:399:ARG:NE	6:N:430:ASP:HB2	2.33	0.43
6:N:816:HIS:N	6:N:816:HIS:ND1	2.65	0.43
6:N:949:ILE:N	11:N:9020:HOH:O	2.51	0.43
4:A:108:GLU:HB3	4:A:110:LYS:CE	2.49	0.43
4:A:43:ILE:HD11	4:B:35:THR:HG21	2.00	0.43
5:C:1103:ASP:OD2	5:C:1108:PRO:O	2.37	0.43
5:C:145:GLY:H	5:C:163:ILE:HG13	1.83	0.43
5:C:258:TYR:N	5:C:258:TYR:CD2	2.84	0.43
5:C:441:VAL:O	5:C:559:LEU:HG	2.18	0.43
5:C:626:ARG:HG3	5:C:626:ARG:HH11	1.84	0.43
5:C:759:THR:HG23	11:C:1516:HOH:O	2.19	0.43
5:C:751:PRO:HA	5:C:792:VAL:CG1	2.49	0.43
5:C:7:GLY:H	5:C:904:PRO:HD2	1.84	0.43
5:C:714:ASP:N	5:C:818:GLY:O	2.52	0.43
5:C:875:GLY:O	5:C:879:ARG:HD2	2.19	0.43
5:C:909:ALA:HB1	5:C:914:ILE:CD1	2.47	0.43
5:C:981:GLU:HG3	5:C:982:PRO:HD3	2.01	0.43
6:D:787:LEU:HD13	6:D:1023:MET:HA	2.00	0.43
6:D:1262:LEU:HD23	6:D:1352:ILE:HG12	2.00	0.43
6:D:1268:PRO:HD2	6:D:1271:LYS:HD3	2.01	0.43
6:D:189:GLN:HG3	11:D:8023:HOH:O	2.19	0.43
6:D:440:VAL:CG2	6:D:441:ARG:HH21	2.32	0.43
5:M:1019:GLN:HA	5:M:1020:PRO:HD3	1.86	0.43
5:M:111:ASP:CG	5:M:112:GLU:HG2	2.39	0.43
5:M:193:LEU:HD22	5:M:307:LEU:HD21	2.00	0.43
5:M:553:ASP:OD2	5:M:883:GLY:HA3	2.18	0.43
6:N:1144:LEU:HA	6:N:1147:ARG:HG3	2.00	0.43
6:N:1424:VAL:CG1	6:N:1425:THR:N	2.82	0.43
6:N:191:LEU:HD22	6:N:393:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:456:MET:HG2	11:N:9491:HOH:O	2.18	0.43
6:N:525:ARG:CD	6:N:525:ARG:H	2.31	0.43
6:N:607:LEU:HD23	11:N:9149:HOH:O	2.19	0.43
7:O:28:GLN:CA	7:O:32:ARG:HH22	2.32	0.43
6:N:1498:ALA:CB	7:O:84:ARG:HE	2.31	0.43
4:A:215:VAL:HG11	4:B:225:PHE:HD1	1.84	0.43
5:C:1031:ARG:CZ	6:D:621:LYS:HZ2	2.32	0.43
5:C:262:ALA:O	5:C:264:PRO:O	2.37	0.43
5:C:894:GLY:HA2	5:C:901:TYR:OH	2.19	0.43
5:C:983:ILE:HG21	5:C:987:ILE:CD1	2.49	0.43
5:C:946:ARG:HD3	5:C:984:GLU:HB3	2.01	0.43
3:I:8:DA:OP1	6:D:1426:LYS:HE3	2.19	0.43
6:D:1441:GLN:NE2	6:D:1442:ASN:H	2.17	0.43
6:D:30:GLU:N	11:D:8061:HOH:O	2.52	0.43
6:D:497:GLU:O	6:D:500:ARG:HB2	2.19	0.43
6:D:764:LEU:HD12	6:D:765:SER:N	2.34	0.43
6:D:767:HIS:CE1	7:E:6:ILE:HG21	2.54	0.43
6:D:799:LYS:N	11:D:8279:HOH:O	2.52	0.43
6:D:820:GLU:HG3	6:D:836:VAL:HG11	1.99	0.43
1:G:23:DG:OP1	5:C:388:ARG:NH1	2.52	0.43
4:L:26:GLU:HB2	4:L:27:PRO:HA	2.01	0.43
4:L:70:GLY:N	11:L:402:HOH:O	2.50	0.43
4:L:76:VAL:HA	4:L:79:ILE:HG12	2.00	0.43
4:L:9:PRO:HB3	4:L:25:LEU:CD2	2.49	0.43
2:Y:7:G:N2	5:M:1014:SER:HA	2.32	0.43
5:M:175:GLU:HB3	5:M:183:SER:OG	2.18	0.43
5:M:290:LEU:HD23	5:M:290:LEU:N	2.32	0.43
5:M:299:LYS:HG3	11:M:1441:HOH:O	2.19	0.43
5:M:564:MET:CB	11:M:1517:HOH:O	2.67	0.43
5:M:822:VAL:HB	5:M:824:ARG:HH21	1.84	0.43
5:M:701:THR:CG2	5:M:830:LYS:HE2	2.46	0.43
5:M:851:LYS:HD2	5:M:852:ILE:H	1.84	0.43
6:N:1112:CYS:O	6:N:1189:ARG:NH2	2.52	0.43
6:N:1150:ALA:CB	6:N:1151:ARG:HD2	2.48	0.43
6:N:1264:GLU:HG3	6:N:1425:THR:OG1	2.19	0.43
5:M:1103:ASP:OD2	6:N:3:LYS:HD2	2.18	0.43
6:N:407:VAL:HA	6:N:422:ALA:CB	2.49	0.43
6:N:508:ARG:HD3	11:N:9337:HOH:O	2.18	0.43
6:N:695:ILE:CD1	6:N:718:PRO:HB2	2.48	0.43
6:N:826:PRO:HD2	6:N:829:VAL:HG22	2.00	0.43
6:N:953:ASP:OD2	6:N:953:ASP:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Z:5:DG:H3'	11:Z:945:HOH:O	2.18	0.43
5:C:139:GLN:HE21	5:C:334:ARG:CD	2.25	0.42
5:C:183:SER:OG	5:C:190:LYS:HG2	2.18	0.42
5:C:251:ASP:HB3	5:C:252:LYS:CD	2.48	0.42
5:C:265:ARG:NH1	11:C:1308:HOH:O	2.51	0.42
5:C:313:LEU:HD13	5:C:321:GLU:CG	2.49	0.42
5:C:399:ASN:ND2	5:C:402:SER:OG	2.52	0.42
5:C:500:ASN:HA	11:C:1162:HOH:O	2.19	0.42
5:C:583:LEU:O	5:C:587:VAL:HG23	2.20	0.42
5:C:614:ARG:HG3	5:C:620:LEU:CD2	2.43	0.42
5:C:599:GLU:HA	5:C:651:LYS:HG3	2.00	0.42
6:D:101:HIS:HD2	6:D:514:LEU:HD11	1.83	0.42
6:D:1123:PHE:CE2	6:D:1184:GLN:HA	2.54	0.42
6:D:133:ILE:HG13	6:D:153:LEU:CG	2.48	0.42
6:D:1344:VAL:HG12	6:D:1348:LEU:HD13	2.00	0.42
6:D:1490:LYS:HB2	7:E:93:TYR:OH	2.19	0.42
6:D:175:VAL:HG21	11:D:8081:HOH:O	2.19	0.42
6:D:397:LYS:HB3	6:D:448:GLU:CB	2.49	0.42
6:D:397:LYS:HD3	6:D:448:GLU:OE1	2.19	0.42
6:D:701:LEU:O	6:D:747:VAL:HA	2.20	0.42
6:D:739:ASP:OD1	6:D:741:ASP:OD1	2.37	0.42
6:D:786:ILE:CD1	6:D:908:LYS:HD3	2.49	0.42
7:E:41:GLU:N	7:E:42:PRO:CD	2.81	0.42
4:K:133:GLU:HG3	5:M:605:LYS:HA	2.01	0.42
4:L:59:GLU:HB2	4:L:137:ARG:CZ	2.49	0.42
5:M:141:HIS:NE2	5:M:332:ARG:HD2	2.34	0.42
5:M:208:ALA:HB3	5:M:209:ARG:NH2	2.33	0.42
5:M:436:GLY:HA2	5:M:538:GLN:C	2.35	0.42
5:M:458:TYR:CD1	5:M:458:TYR:N	2.86	0.42
5:M:519:GLY:HA3	11:M:1314:HOH:O	2.19	0.42
5:M:515:ALA:HB3	5:M:524:VAL:HG21	2.01	0.42
5:M:687:ALA:C	5:M:688:ILE:HG13	2.39	0.42
6:N:1153:VAL:O	6:N:1160:LEU:HG	2.19	0.42
6:N:586:ARG:HH22	6:N:1444:THR:HG21	1.84	0.42
5:M:874:LEU:HD23	6:N:783:ARG:HB3	2.01	0.42
6:N:860:LEU:HD22	6:N:881:LEU:HD23	2.01	0.42
6:N:963:TYR:HA	6:N:966:GLU:OE2	2.19	0.42
6:N:984:THR:HG23	6:N:987:GLU:H	1.84	0.42
7:O:51:LEU:HD12	11:O:1058:HOH:O	2.19	0.42
7:O:26:ARG:HD3	7:O:73:LEU:CD2	2.49	0.42
4:A:152:PRO:HB3	4:A:154:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:313:LEU:CA	5:C:321:GLU:HG3	2.48	0.42
5:C:352:ALA:O	5:C:355:VAL:HG12	2.19	0.42
1:G:23:DG:H5''	5:C:388:ARG:NH2	2.35	0.42
5:C:580:MET:CE	5:C:584:GLU:HG3	2.49	0.42
5:C:747:ALA:C	5:C:799:ILE:HG23	2.39	0.42
5:C:816:LYS:HB2	5:C:819:VAL:HG21	2.00	0.42
5:C:571:LEU:HD12	5:C:996:LYS:HZ2	1.84	0.42
6:D:1046:GLN:HG2	6:D:1052:THR:CA	2.49	0.42
6:D:1231:GLU:OE2	6:D:1232:PRO:HD3	2.18	0.42
6:D:171:LEU:HD21	6:D:192:ALA:HB3	2.00	0.42
6:D:26:VAL:HG11	6:D:44:LEU:CD2	2.48	0.42
6:D:564:GLU:HA	6:D:567:ILE:HD12	2.01	0.42
6:D:699:VAL:HG21	6:D:760:ARG:HB3	2.01	0.42
6:D:794:GLN:HB3	6:D:1017:PHE:CZ	2.51	0.42
6:D:893:GLU:O	6:D:896:ALA:HB3	2.20	0.42
6:D:969:ARG:HA	11:D:8045:HOH:O	2.19	0.42
4:L:106:PRO:HG3	4:L:133:GLU:O	2.19	0.42
5:M:1058:ASP:O	5:M:1060:ILE:N	2.51	0.42
5:M:1103:ASP:N	5:M:1107:ASN:O	2.49	0.42
5:M:12:VAL:HB	5:M:472:ARG:NH1	2.34	0.42
5:M:136:ILE:HA	5:M:136:ILE:HD13	1.93	0.42
5:M:191:PHE:HB2	5:M:192:PRO:HD3	2.01	0.42
5:M:235:LEU:HD21	11:M:1276:HOH:O	2.18	0.42
5:M:684:PHE:O	5:M:685:GLU:C	2.58	0.42
5:M:960:GLU:HG3	5:M:961:GLU:N	2.32	0.42
6:N:501:ALA:CB	6:N:1453:ALA:HB2	2.38	0.42
6:N:161:LEU:HB2	11:N:9073:HOH:O	2.19	0.42
6:N:407:VAL:HA	6:N:422:ALA:HB2	2.01	0.42
6:N:522:PRO:HA	6:N:525:ARG:NE	2.34	0.42
6:N:714:GLN:HE22	6:N:768:ASN:HD22	1.67	0.42
6:N:756:GLN:NE2	6:N:760:ARG:HB3	2.34	0.42
6:N:783:ARG:HG3	6:N:783:ARG:H	1.53	0.42
4:A:55:SER:HB2	4:A:158:ILE:HB	2.01	0.42
4:B:102:LYS:HZ3	4:B:139:ASN:HB2	1.84	0.42
4:B:169:ALA:HB1	4:B:171:PHE:CE2	2.54	0.42
5:C:259:GLY:O	5:C:290:LEU:O	2.37	0.42
5:C:267:TYR:N	5:C:267:TYR:CD2	2.87	0.42
5:C:297:GLU:HG3	11:C:1205:HOH:O	2.18	0.42
5:C:437:ARG:CB	5:C:467:ILE:HB	2.49	0.42
5:C:573:ARG:CD	5:C:670:GLN:HE22	2.32	0.42
6:D:1047:LYS:HG2	6:D:1053:PHE:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:137:PRO:HG3	6:D:467:GLU:OE1	2.20	0.42
6:D:185:VAL:HG21	6:D:191:LEU:CD2	2.49	0.42
6:D:191:LEU:HB2	6:D:195:VAL:HG12	2.00	0.42
6:D:32:ILE:HD13	6:D:37:LEU:O	2.19	0.42
6:D:423:ASP:N	6:D:423:ASP:OD1	2.52	0.42
6:D:440:VAL:HB	6:D:441:ARG:NH2	2.30	0.42
6:D:625:TYR:CD1	6:D:625:TYR:N	2.88	0.42
6:D:711:LEU:HD22	6:D:714:GLN:NE2	2.34	0.42
6:D:701:LEU:CD1	6:D:715:ALA:HB2	2.49	0.42
6:D:829:VAL:O	6:D:835:SER:HB2	2.19	0.42
6:D:98:PRO:HG3	6:D:462:GLN:HE22	1.85	0.42
4:K:206:THR:HG23	4:K:207:PRO:CD	2.49	0.42
4:L:56:VAL:HG12	4:L:57:TYR:N	2.34	0.42
5:M:203:ASP:O	5:M:207:LEU:HB2	2.18	0.42
5:M:617:ASP:HB2	5:M:619:ARG:NE	2.33	0.42
5:M:869:VAL:HG22	5:M:871:LEU:HD23	2.01	0.42
6:N:206:ARG:NH1	6:N:206:ARG:HG3	2.34	0.42
6:N:45:PHE:HB3	6:N:86:ARG:HH22	1.83	0.42
6:N:631:ILE:HG21	6:N:745:MET:CG	2.49	0.42
6:N:63:TYR:HB3	6:N:68:PHE:CE1	2.54	0.42
6:N:840:LYS:HE2	6:N:841:TYR:HE2	1.84	0.42
4:A:221:HIS:HA	4:A:224:TYR:CD2	2.54	0.42
5:C:1085:PHE:O	5:C:1088:LEU:HB3	2.18	0.42
5:C:214:TYR:OH	5:C:312:ALA:HB2	2.19	0.42
5:C:362:GLY:HA2	5:C:371:LYS:NZ	2.34	0.42
5:C:399:ASN:O	5:C:400:PRO:C	2.57	0.42
5:C:588:VAL:HA	5:C:591:SER:OG	2.19	0.42
5:C:626:ARG:O	5:C:638:ASP:HA	2.19	0.42
5:C:695:LEU:HD11	5:C:832:LYS:HB3	2.02	0.42
5:C:690:ILE:HD11	5:C:833:LEU:HD23	2.00	0.42
5:C:86:LYS:HB2	5:C:88:LEU:HD23	2.01	0.42
6:D:1109:GLU:CG	6:D:1201:CYS:HA	2.31	0.42
6:D:193:PRO:HG2	11:D:8081:HOH:O	2.18	0.42
6:D:455:ARG:NH1	6:D:463:GLN:HG3	2.35	0.42
2:H:2:A:H2'	2:H:3:G:O5'	2.20	0.42
4:K:9:PRO:HB3	4:K:25:LEU:CD2	2.50	0.42
5:M:146:VAL:CG1	5:M:162:ILE:HG12	2.48	0.42
5:M:244:PRO:HD2	5:M:245:GLY:N	2.28	0.42
5:M:334:ARG:HA	5:M:338:GLU:OE2	2.19	0.42
5:M:364:GLU:O	5:M:367:LEU:HG	2.18	0.42
5:M:526:PRO:HA	5:M:529:VAL:CG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:526:PRO:HA	5:M:529:VAL:HG23	2.01	0.42
5:M:654:LEU:HD13	5:M:664:GLY:N	2.34	0.42
5:M:695:LEU:CD2	5:M:832:LYS:HD3	2.29	0.42
5:M:894:GLY:HA2	5:M:901:TYR:OH	2.19	0.42
6:N:409:VAL:HG12	6:N:435:VAL:HG11	2.01	0.42
6:N:441:ARG:HH22	6:N:445:ARG:NH2	2.16	0.42
6:N:462:GLN:CA	6:N:513:ILE:HD13	2.49	0.42
6:N:653:PHE:CD1	6:N:653:PHE:N	2.87	0.42
6:N:688:TRP:HA	6:N:688:TRP:CE3	2.54	0.42
6:N:903:ASP:O	6:N:904:VAL:HG13	2.19	0.42
6:N:921:ARG:HH11	6:N:921:ARG:CB	2.15	0.42
6:N:785:ILE:CG1	6:N:935:LYS:HA	2.43	0.42
2:Y:16:G:H5'	6:N:742:GLY:C	2.39	0.42
3:Z:8:DA:H1'	3:Z:9:DG:C5'	2.46	0.42
5:C:191:PHE:CE2	5:C:196:LEU:HD12	2.55	0.42
5:C:227:PHE:HB3	11:C:1552:HOH:O	2.20	0.42
5:C:352:ALA:C	5:C:355:VAL:HG12	2.39	0.42
5:C:609:ASN:N	5:C:609:ASN:ND2	2.63	0.42
5:C:663:ASN:C	5:C:665:PHE:H	2.23	0.42
5:C:689:VAL:CG1	5:C:690:ILE:N	2.82	0.42
5:C:807:ARG:C	11:C:1277:HOH:O	2.58	0.42
5:C:924:VAL:HG12	11:C:1285:HOH:O	2.18	0.42
5:C:839:LEU:CD2	5:C:996:LYS:HA	2.47	0.42
6:D:118:LEU:O	6:D:120:ALA:N	2.53	0.42
6:D:1389:LEU:HG	6:D:1390:LEU:N	2.24	0.42
6:D:29:PRO:HD3	11:D:8201:HOH:O	2.18	0.42
6:D:440:VAL:HB	6:D:441:ARG:NE	2.32	0.42
6:D:118:LEU:CD1	6:D:461:ILE:HD12	2.50	0.42
6:D:486:ARG:CA	6:D:489:ARG:HG2	2.47	0.42
6:D:114:THR:CG2	6:D:495:ARG:HA	2.49	0.42
6:D:79:GLU:HG2	6:D:80:VAL:N	2.33	0.42
6:D:817:GLU:HA	6:D:836:VAL:HG21	2.02	0.42
6:D:838:ARG:NH1	6:D:838:ARG:HG2	2.34	0.42
6:D:1487:VAL:HB	7:E:74:VAL:HG23	2.00	0.42
1:G:12:DG:H2''	1:G:13:DT:H5'	2.01	0.42
4:L:106:PRO:HA	4:L:133:GLU:O	2.20	0.42
4:L:56:VAL:HG22	4:L:142:VAL:HG12	2.01	0.42
4:L:142:VAL:HG23	4:L:142:VAL:O	2.18	0.42
4:L:182:GLU:OE1	4:L:194:LYS:HD2	2.20	0.42
5:M:1032:PHE:HB3	6:N:620:GLY:O	2.20	0.42
5:M:208:ALA:CB	5:M:209:ARG:HH21	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:566:THR:HG22	5:M:566:THR:O	2.18	0.42
5:M:602:GLU:OE1	5:M:648:ARG:HB3	2.18	0.42
5:M:937:ASP:OD2	5:M:939:ARG:HG2	2.20	0.42
6:N:955:VAL:HG11	6:N:1015:TYR:CZ	2.54	0.42
6:N:1365:ASP:O	6:N:1369:GLU:HG3	2.19	0.42
6:N:1401:GLU:OE2	6:N:1415:VAL:HG21	2.20	0.42
6:N:739:ASP:OD1	6:N:741:ASP:OD1	2.36	0.42
6:N:989:TYR:CE1	6:N:993:LEU:HD21	2.54	0.42
4:B:101:LEU:HD23	4:B:101:LEU:C	2.40	0.42
5:C:1111:ILE:H	5:C:1111:ILE:HG13	1.48	0.42
5:C:333:ILE:HG12	5:C:467:ILE:HD11	2.01	0.42
5:C:408:ARG:O	5:C:454:SER:HA	2.19	0.42
5:C:431:HIS:HD2	5:C:433:THR:OG1	2.03	0.42
5:C:606:VAL:HG23	5:C:645:VAL:HG12	2.02	0.42
5:C:620:LEU:HD11	11:C:1436:HOH:O	2.19	0.42
5:C:644:VAL:HB	11:C:1372:HOH:O	2.20	0.42
5:C:693:GLU:HA	5:C:696:LYS:HE3	2.00	0.42
5:C:77:PRO:HD3	5:C:91:GLN:O	2.20	0.42
5:C:710:ILE:CD1	5:C:790:LEU:HD13	2.49	0.42
5:C:895:TYR:HA	11:C:1275:HOH:O	2.20	0.42
5:C:1096:ALA:HB2	6:D:101:HIS:NE2	2.34	0.42
5:C:874:LEU:HA	6:D:1023:MET:SD	2.60	0.42
6:D:116:LEU:HD23	6:D:150:ARG:HH11	1.85	0.42
6:D:1121:PRO:HG3	6:D:1185:GLU:OE2	2.19	0.42
6:D:1211:MET:HE1	6:D:1213:ARG:HD3	2.00	0.42
6:D:54:LYS:CG	6:D:55:ASP:H	2.32	0.42
6:D:610:LYS:C	6:D:615:ARG:HD3	2.39	0.42
6:D:709:HIS:CD2	6:D:709:HIS:H	2.37	0.42
6:D:841:TYR:HB3	6:D:843:PHE:CZ	2.54	0.42
6:D:959:GLU:CD	6:D:959:GLU:N	2.73	0.42
2:H:9:G:N2	11:H:26:HOH:O	2.53	0.42
4:K:13:VAL:HG22	4:K:23:PHE:CD1	2.55	0.42
5:M:1060:ILE:O	5:M:1064:ASN:ND2	2.53	0.42
5:M:1111:ILE:HG13	5:M:1112:PHE:N	2.31	0.42
5:M:473:ARG:HG3	5:M:474:VAL:N	2.35	0.42
5:M:536:PRO:HB3	5:M:906:PHE:HD1	1.84	0.42
5:M:575:GLN:NE2	5:M:670:GLN:OE1	2.52	0.42
5:M:810:ASP:HA	5:M:811:PRO:HD3	1.67	0.42
5:M:833:LEU:HD11	5:M:839:LEU:HD21	2.01	0.42
5:M:889:HIS:HE1	6:N:951:ILE:H	1.67	0.42
6:N:1036:ARG:HH11	6:N:1036:ARG:HB3	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1158:VAL:HG12	6:N:1159:ARG:N	2.35	0.42
6:N:166:GLN:OE1	6:N:396:VAL:HG22	2.20	0.42
6:N:131:LYS:HZ3	6:N:568:ARG:CB	2.32	0.42
6:N:656:PHE:HB3	6:N:694:VAL:CG1	2.50	0.42
1:X:19:DC:H3'	11:X:2000:HOH:O	2.19	0.42
4:A:161:ARG:HA	4:A:161:ARG:NE	2.34	0.42
4:B:142:VAL:HG23	4:B:142:VAL:O	2.18	0.42
5:C:137:VAL:N	5:C:391:LEU:HD21	2.33	0.42
5:C:140:ILE:HD11	5:C:412:ALA:HB2	2.01	0.42
5:C:966:LEU:HA	5:C:966:LEU:HD12	1.94	0.42
6:D:1103:HIS:HD2	6:D:1463:LYS:H	1.59	0.42
6:D:711:LEU:HD21	6:D:768:ASN:HB2	2.01	0.42
6:D:806:PHE:HE1	6:D:813:LEU:HB3	1.79	0.42
6:D:820:GLU:OE1	6:D:840:LYS:HE3	2.20	0.42
4:K:213:GLN:NE2	11:K:1765:HOH:O	2.51	0.42
4:L:189:ARG:HG3	4:L:189:ARG:O	2.19	0.42
4:L:75:VAL:O	4:L:79:ILE:HG23	2.19	0.42
5:M:1009:SER:OG	5:M:1010:THR:N	2.53	0.42
5:M:458:TYR:HD1	5:M:458:TYR:N	2.18	0.42
5:M:580:MET:O	5:M:902:ILE:HA	2.19	0.42
5:M:783:ARG:HE	5:M:785:VAL:CG1	2.32	0.42
5:M:69:LEU:HD12	5:M:97:ARG:CB	2.49	0.42
5:M:98:LEU:N	5:M:98:LEU:HD12	2.35	0.42
6:N:1047:LYS:HG2	6:N:1053:PHE:CE1	2.54	0.42
6:N:1055:VAL:HA	6:N:1056:PRO:HD3	1.90	0.42
6:N:1365:ASP:N	6:N:1365:ASP:OD2	2.53	0.42
6:N:137:PRO:HD2	6:N:453:ASP:CG	2.39	0.42
6:N:457:GLY:C	6:N:459:GLU:N	2.72	0.42
6:N:506:GLY:O	6:N:507:ASN:C	2.58	0.42
6:N:19:ARG:HE	6:N:516:ALA:CB	2.32	0.42
6:N:998:GLU:O	6:N:1002:LYS:HG3	2.20	0.42
4:A:184:THR:N	11:A:321:HOH:O	2.53	0.42
5:C:1105:LYS:HD2	5:C:1107:ASN:HD22	1.83	0.42
5:C:401:LEU:HD21	5:C:565:GLN:NE2	2.34	0.42
5:C:541:SER:OG	5:C:542:VAL:N	2.52	0.42
5:C:780:GLU:H	5:C:780:GLU:HG3	1.53	0.42
6:D:1072:ILE:HG12	11:D:8010:HOH:O	2.20	0.42
6:D:1341:PRO:O	6:D:1343:ALA:N	2.52	0.42
6:D:462:GLN:HG2	6:D:466:LYS:HZ2	1.85	0.42
6:D:470:LEU:HD21	11:D:8038:HOH:O	2.19	0.42
6:D:54:LYS:HB3	6:D:57:GLU:OE2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:698:LYS:HE3	6:D:698:LYS:HB3	1.92	0.42
6:D:695:ILE:HD13	6:D:720:LEU:CD1	2.50	0.42
6:D:87:ARG:NH2	11:D:8227:HOH:O	2.53	0.42
6:D:780:LYS:HD2	6:D:912:LYS:HB2	2.02	0.42
7:E:66:LYS:HD2	7:E:69:LEU:HD23	2.02	0.42
3:I:3:DA:O4'	5:C:423:ALA:HB2	2.20	0.42
5:M:1111:ILE:HG12	5:M:1111:ILE:H	1.43	0.42
5:M:628:PHE:CZ	5:M:703:ILE:HD13	2.55	0.42
5:M:677:MET:HE3	5:M:678:PRO:O	2.19	0.42
6:N:879:ARG:HH11	6:N:879:ARG:CG	2.32	0.42
4:A:182:GLU:HG2	4:A:194:LYS:HG2	2.02	0.42
4:A:8:ALA:HB1	4:B:224:TYR:CE1	2.51	0.42
4:B:81:ASN:O	4:B:127:LEU:HD21	2.20	0.42
5:C:139:GLN:HA	5:C:411:SER:O	2.19	0.42
5:C:431:HIS:CD2	5:C:432:ARG:HB2	2.55	0.42
5:C:442:GLU:HG2	5:C:454:SER:H	1.84	0.42
5:C:719:PRO:HD2	11:C:1241:HOH:O	2.20	0.42
6:D:116:LEU:HD23	6:D:150:ARG:NH1	2.35	0.42
6:D:127:LEU:CD1	6:D:128:TYR:N	2.80	0.42
6:D:1444:THR:OG1	6:D:1445:HIS:N	2.53	0.42
6:D:1451:ALA:O	6:D:1452:ILE:C	2.57	0.42
6:D:48:ARG:HB3	6:D:48:ARG:HE	1.53	0.42
7:E:33:HIS:CE1	7:E:89:MET:HB3	2.55	0.42
3:I:13:DG:H2''	3:I:14:DG:C8	2.55	0.42
4:K:107:LYS:HD3	4:K:108:GLU:O	2.20	0.42
4:L:58:ILE:HG21	4:L:61:VAL:HB	2.00	0.42
4:L:73:GLU:CB	4:L:77:GLU:HG3	2.50	0.42
5:M:1035:MET:H	5:M:1035:MET:HG3	1.65	0.42
5:M:20:GLU:OE2	5:M:460:ARG:HD3	2.20	0.42
5:M:909:ALA:CB	5:M:914:ILE:HD11	2.47	0.42
6:N:1078:ARG:NH1	6:N:1078:ARG:HG3	2.34	0.42
6:N:1221:VAL:O	6:N:1222:GLY:C	2.58	0.42
6:N:1415:VAL:HG22	11:N:9043:HOH:O	2.19	0.42
6:N:19:ARG:HH11	6:N:19:ARG:HG3	1.85	0.42
6:N:403:PHE:CD2	6:N:444:VAL:HG23	2.55	0.42
6:N:574:LEU:O	6:N:578:VAL:HG23	2.19	0.42
6:N:596:SER:HB3	6:N:598:ARG:NE	2.35	0.42
6:N:600:LEU:HD12	6:N:600:LEU:H	1.83	0.42
6:N:673:ALA:O	6:N:677:LEU:HD12	2.19	0.42
6:N:683:ILE:HG23	6:N:687:VAL:HG21	2.01	0.42
4:A:70:GLY:O	4:A:132:LEU:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:152:PRO:HG2	6:D:857:ILE:HD12	2.01	0.42
4:B:22:GLU:HG2	4:B:198:ARG:HG2	2.00	0.42
5:C:182:VAL:HG12	5:C:193:LEU:HD13	2.01	0.42
5:C:208:ALA:HB1	5:C:218:VAL:CG1	2.50	0.42
5:C:208:ALA:O	5:C:218:VAL:HG21	2.19	0.42
5:C:537:LYS:CG	5:C:545:ASN:HD21	2.33	0.42
5:C:598:GLU:O	5:C:651:LYS:HG3	2.20	0.42
5:C:71:TYR:HA	5:C:96:ALA:CB	2.50	0.42
5:C:577:PRO:HA	5:C:993:PHE:CD2	2.54	0.42
6:D:1001:GLU:O	6:D:1004:THR:HB	2.20	0.42
6:D:1341:PRO:O	6:D:1344:VAL:N	2.53	0.42
6:D:461:ILE:O	6:D:465:LEU:HB2	2.18	0.42
6:D:50:PHE:HB3	6:D:522:PRO:CG	2.46	0.42
6:D:82:LYS:HB2	11:D:8499:HOH:O	2.20	0.42
7:E:59:ASN:ND2	7:E:59:ASN:N	2.68	0.42
4:K:91:ASN:HB3	11:K:1721:HOH:O	2.20	0.42
4:L:25:LEU:CD2	4:L:28:LEU:HD21	2.40	0.42
5:M:63:GLY:HA3	5:M:103:LYS:HG3	2.02	0.42
5:M:1049:LEU:HD23	6:N:1472:ILE:CD1	2.49	0.42
5:M:536:PRO:CD	5:M:537:LYS:HZ2	2.17	0.42
5:M:456:ALA:HA	5:M:541:SER:HA	2.01	0.42
5:M:549:PHE:HE2	5:M:887:GLU:HA	1.85	0.42
5:M:605:LYS:O	5:M:611:ILE:HA	2.20	0.42
5:M:728:HIS:NE2	5:M:775:ARG:NH1	2.67	0.42
5:M:757:GLY:HA2	5:M:789:SER:HB3	2.02	0.42
5:M:872:ASN:HD21	5:M:874:LEU:HD13	1.85	0.42
5:M:917:LEU:HB3	11:M:1461:HOH:O	2.20	0.42
6:N:1137:ARG:HG3	11:N:9103:HOH:O	2.19	0.42
6:N:1463:LYS:O	6:N:1467:ILE:HG13	2.19	0.42
6:N:397:LYS:HB3	6:N:448:GLU:HB3	2.01	0.42
6:N:446:VAL:O	6:N:447:VAL:O	2.38	0.42
6:N:628:ARG:HG3	6:N:628:ARG:HH11	1.84	0.42
6:N:632:VAL:O	6:N:727:GLN:HA	2.20	0.42
6:N:804:LEU:HD12	6:N:830:ALA:O	2.20	0.42
6:N:859:ASP:HB3	6:N:861:GLN:NE2	2.35	0.42
7:O:47:LYS:CA	7:O:54:LEU:HB3	2.49	0.42
2:Y:7:G:H22	5:M:1014:SER:HA	1.84	0.42
4:A:89:PHE:CE2	4:A:146:ARG:HB2	2.55	0.41
5:C:1084:SER:O	5:C:1087:VAL:HG12	2.20	0.41
5:C:129:ILE:CG1	5:C:134:ARG:HD3	2.50	0.41
5:C:186:VAL:HG23	5:C:187:ASN:N	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:243:ARG:N	5:C:244:PRO:HD3	2.32	0.41
2:H:13:C:C3'	5:C:409:ARG:HH22	2.32	0.41
5:C:564:MET:HE3	5:C:564:MET:O	2.20	0.41
5:C:848:VAL:HG12	5:C:849:VAL:N	2.35	0.41
6:D:1042:ARG:HD2	6:D:1045:MET:CE	2.50	0.41
6:D:105:VAL:HG12	11:D:8237:HOH:O	2.20	0.41
6:D:1495:ILE:HG22	6:D:1499:ARG:NE	2.35	0.41
6:D:566:ILE:N	6:D:566:ILE:HD12	2.35	0.41
6:D:581:LEU:HG	6:D:582:LEU:N	2.35	0.41
5:C:1031:ARG:NH1	6:D:621:LYS:NZ	2.68	0.41
6:D:789:LEU:HD13	6:D:911:LEU:HD21	2.02	0.41
6:D:82:LYS:C	6:D:84:ILE:N	2.74	0.41
6:D:890:VAL:HG23	6:D:890:VAL:O	2.19	0.41
6:D:926:LYS:HB3	6:D:926:LYS:HE2	1.93	0.41
4:K:14:ARG:HH11	4:K:14:ARG:HG3	1.85	0.41
4:K:30:ARG:HD2	4:K:30:ARG:HA	1.87	0.41
4:L:143:ARG:NH1	4:L:158:ILE:HG21	2.35	0.41
4:L:43:ILE:HG23	4:L:217:ILE:HG21	2.02	0.41
5:M:1013:TYR:CE1	5:M:1020:PRO:HG3	2.55	0.41
5:M:263:ASP:HB2	5:M:264:PRO:HD3	2.02	0.41
5:M:292:ARG:HD2	5:M:299:LYS:CE	2.49	0.41
5:M:745:ILE:HG21	11:M:1187:HOH:O	2.19	0.41
5:M:756:VAL:O	5:M:789:SER:CB	2.66	0.41
5:M:842:ARG:HH22	5:M:887:GLU:CD	2.23	0.41
5:M:940:GLU:O	5:M:943:VAL:HG12	2.19	0.41
5:M:842:ARG:HG3	5:M:995:MET:HE3	2.02	0.41
6:N:1000:THR:HG23	6:N:1001:GLU:N	2.34	0.41
6:N:107:ASP:O	6:N:108:VAL:C	2.57	0.41
6:N:1206:GLY:O	6:N:1215:VAL:HG23	2.20	0.41
6:N:1267:ARG:HD2	6:N:1271:LYS:HE2	2.01	0.41
6:N:12:LEU:HD23	6:N:12:LEU:HA	1.84	0.41
6:N:1381:VAL:HG22	6:N:1398:TRP:CZ2	2.54	0.41
6:N:1399:ASP:O	6:N:1403:LEU:HB2	2.19	0.41
6:N:206:ARG:CG	6:N:394:LEU:HD22	2.36	0.41
6:N:485:SER:HA	11:N:9344:HOH:O	2.19	0.41
5:C:636:ALA:HB3	5:C:703:ILE:CD1	2.33	0.41
5:C:68:PHE:HZ	5:C:71:TYR:HD2	1.68	0.41
5:C:704:HIS:O	5:C:829:GLN:OE1	2.38	0.41
5:C:873:PRO:O	5:C:877:PRO:HD3	2.20	0.41
5:C:89:THR:O	5:C:91:GLN:HG3	2.20	0.41
6:D:960:LYS:NZ	6:D:1040:GLY:O	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:12:LEU:HD21	6:D:104:PHE:CZ	2.55	0.41
6:D:1248:GLY:O	6:D:1252:ILE:HG12	2.20	0.41
6:D:1472:ILE:O	6:D:1477:GLY:HA3	2.19	0.41
6:D:134:VAL:HA	6:D:151:GLN:O	2.19	0.41
6:D:522:PRO:HA	6:D:525:ARG:NE	2.34	0.41
6:D:984:THR:HG23	6:D:986:ARG:H	1.84	0.41
7:E:44:GLU:HA	11:E:110:HOH:O	2.20	0.41
4:L:106:PRO:HG3	4:L:134:GLU:CD	2.41	0.41
4:L:175:ARG:HG2	4:L:175:ARG:H	1.61	0.41
4:L:9:PRO:HB3	4:L:25:LEU:HG	2.03	0.41
5:M:1016:ILE:CG1	5:M:1017:THR:N	2.82	0.41
5:M:217:LEU:HD13	11:M:1269:HOH:O	2.20	0.41
5:M:274:ARG:HG3	5:M:285:LEU:HD22	2.02	0.41
5:M:354:GLY:O	5:M:358:ARG:HD3	2.19	0.41
5:M:39:ARG:NH2	11:M:1341:HOH:O	2.52	0.41
5:M:957:LYS:NZ	5:M:957:LYS:HB2	2.35	0.41
6:N:1209:LEU:HD13	11:N:9248:HOH:O	2.20	0.41
6:N:1363:LEU:O	6:N:1363:LEU:HD12	2.20	0.41
6:N:1498:ALA:HB1	7:O:84:ARG:HE	1.86	0.41
6:N:394:LEU:HD11	6:N:445:ARG:HH12	1.81	0.41
6:N:52:PRO:CB	6:N:80:VAL:HG13	2.50	0.41
6:N:66:GLN:O	6:N:69:GLU:HB3	2.20	0.41
6:N:709:HIS:CD2	6:N:709:HIS:N	2.89	0.41
2:Y:7:G:H22	5:M:1014:SER:N	2.17	0.41
4:A:111:ALA:CB	4:A:127:LEU:HD23	2.42	0.41
4:A:128:HIS:HE1	4:A:131:THR:HG23	1.86	0.41
4:B:132:LEU:HD23	4:B:136:GLY:O	2.20	0.41
4:A:42:ARG:HH22	4:B:34:VAL:HB	1.85	0.41
5:C:1006:HIS:HA	5:C:1027:PHE:HD1	1.83	0.41
5:C:115:LEU:H	5:C:115:LEU:HG	1.70	0.41
5:C:182:VAL:CG2	5:C:220:GLY:O	2.67	0.41
5:C:468:ARG:NH2	11:C:1462:HOH:O	2.53	0.41
5:C:6:PHE:N	5:C:6:PHE:CD1	2.88	0.41
5:C:552:HIS:HD2	6:D:1064:GLY:HA2	1.86	0.41
6:D:1464:GLU:HA	6:D:1467:ILE:HD11	2.02	0.41
6:D:412:GLY:HA2	6:D:434:ARG:NH1	2.34	0.41
6:D:420:VAL:C	6:D:421:LEU:HD23	2.40	0.41
6:D:481:MET:CE	6:D:493:ARG:HB2	2.47	0.41
7:E:28:GLN:HG2	7:E:32:ARG:HH22	1.86	0.41
7:E:8:LYS:O	7:E:12:MET:HG3	2.20	0.41
4:K:41:ARG:HG3	4:K:177:VAL:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:91:ASN:O	4:K:94:LEU:HD12	2.20	0.41
4:L:48:ILE:HG22	4:L:173:PRO:HD2	2.03	0.41
4:L:88:ARG:HD2	4:L:123:MET:SD	2.61	0.41
5:M:211:LEU:HD11	5:M:308:ARG:HA	2.02	0.41
5:M:29:ALA:HB2	5:M:337:GLY:HA3	2.01	0.41
5:M:666:LEU:HD12	5:M:667:ALA:N	2.35	0.41
5:M:670:GLN:NE2	5:M:699:PHE:CG	2.88	0.41
5:M:913:GLU:O	5:M:916:GLU:HB3	2.20	0.41
5:M:1070:ILE:HG23	6:N:656:PHE:HD1	1.84	0.41
6:N:704:ARG:CZ	6:N:737:ASN:O	2.69	0.41
5:C:1016:ILE:HG12	5:C:1017:THR:H	1.84	0.41
5:C:98:LEU:C	5:C:109:LYS:HD2	2.40	0.41
6:D:1100:ASP:HB3	6:D:1428:ALA:CB	2.49	0.41
6:D:1110:ALA:O	6:D:1111:ASP:C	2.58	0.41
6:D:124:GLU:O	6:D:128:TYR:HB2	2.19	0.41
6:D:1236:LEU:HD12	6:D:1359:GLN:HB3	2.03	0.41
6:D:496:LEU:HD12	6:D:500:ARG:HG2	2.03	0.41
6:D:754:PHE:O	6:D:758:GLU:HG2	2.20	0.41
6:D:783:ARG:HD2	6:D:1029:ARG:HG2	2.02	0.41
6:D:972:LEU:HD23	11:D:8045:HOH:O	2.19	0.41
6:D:98:PRO:HA	6:D:515:GLU:HA	2.01	0.41
4:K:181:VAL:O	5:M:938:LYS:N	2.54	0.41
4:K:36:LEU:HD11	11:L:365:HOH:O	2.20	0.41
4:K:42:ARG:HH11	5:M:978:ARG:CA	2.28	0.41
5:M:1067:TYR:O	5:M:1071:ILE:HG12	2.20	0.41
5:M:23:VAL:HG13	11:M:1414:HOH:O	2.20	0.41
5:M:13:ILE:HG23	5:M:483:VAL:HG21	2.02	0.41
5:M:632:ASN:HB3	5:M:633:GLN:NE2	2.35	0.41
6:N:1124:GLN:HA	6:N:1125:PRO:HD3	1.60	0.41
6:N:1155:VAL:HG12	11:N:9051:HOH:O	2.20	0.41
6:N:493:ARG:CG	6:N:1390:LEU:HB2	2.45	0.41
6:N:1440:PHE:C	6:N:1440:PHE:CD2	2.93	0.41
5:M:1085:PHE:CE2	6:N:1468:LEU:HG	2.52	0.41
6:N:159:ARG:NH2	11:N:9468:HOH:O	2.53	0.41
6:N:470:LEU:HD12	6:N:503:LEU:CD2	2.50	0.41
6:N:633:VAL:C	6:N:635:PRO:HD3	2.40	0.41
6:N:782:SER:O	6:N:786:ILE:HG13	2.20	0.41
6:N:899:LEU:HB3	6:N:917:GLN:HG2	2.01	0.41
3:Z:13:DG:H2"	3:Z:14:DG:C8	2.55	0.41
5:C:118:ILE:HG22	5:C:382:ILE:HD13	2.01	0.41
5:C:137:VAL:CG2	5:C:391:LEU:HG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:603:VAL:HG11	5:C:606:VAL:HG22	2.03	0.41
5:C:669:GLY:C	5:C:670:GLN:HG2	2.41	0.41
5:C:692:GLU:O	5:C:696:LYS:HG3	2.20	0.41
5:C:715:THR:HA	11:C:1542:HOH:O	2.20	0.41
5:C:791:ARG:O	5:C:793:PRO:HD3	2.20	0.41
5:C:842:ARG:HG3	5:C:995:MET:CE	2.51	0.41
5:C:569:VAL:HG13	5:C:996:LYS:HZ3	1.84	0.41
6:D:1046:GLN:HG2	6:D:1052:THR:CB	2.51	0.41
6:D:112:ILE:HA	6:D:512:MET:HE3	2.02	0.41
6:D:1154:GLU:HB3	6:N:563:PRO:HB3	2.01	0.41
6:D:1481:VAL:HG11	7:E:18:ARG:CA	2.42	0.41
6:D:1481:VAL:HG22	7:E:18:ARG:NE	2.28	0.41
6:D:28:LYS:HD2	11:D:8201:HOH:O	2.20	0.41
6:D:510:GLU:HG2	11:D:8320:HOH:O	2.20	0.41
6:D:702:LEU:N	6:D:702:LEU:HD12	2.35	0.41
6:D:906:GLN:HB3	6:D:911:LEU:CD1	2.49	0.41
7:E:43:GLU:HG3	7:E:43:GLU:H	1.69	0.41
2:H:2:A:C2'	2:H:3:G:O5'	2.68	0.41
4:K:174:VAL:HG13	4:K:200:TRP:O	2.20	0.41
4:K:94:LEU:HD11	4:K:119:ASP:CB	2.51	0.41
5:M:259:GLY:O	5:M:290:LEU:O	2.38	0.41
5:M:25:SER:OG	5:M:335:THR:HB	2.20	0.41
5:M:292:ARG:HB2	5:M:299:LYS:HG2	2.02	0.41
5:M:309:TYR:HA	5:M:312:ALA:HB3	2.02	0.41
5:M:217:LEU:CD1	5:M:311:PHE:HA	2.50	0.41
5:M:580:MET:HE1	5:M:665:PHE:CZ	2.55	0.41
5:M:780:GLU:HG3	5:M:781:LYS:N	2.35	0.41
5:M:928:LYS:O	5:M:932:GLU:HG3	2.21	0.41
6:N:1114:THR:O	6:N:1114:THR:CG2	2.68	0.41
6:N:1330:ILE:HB	6:N:1347:TYR:OH	2.20	0.41
6:N:710:ARG:C	6:N:712:GLY:N	2.74	0.41
6:N:800:LYS:CE	6:N:804:LEU:HD13	2.50	0.41
6:N:8:VAL:HG12	6:N:9:ARG:N	2.34	0.41
1:X:11:DC:H2''	1:X:12:DG:H8	1.85	0.41
1:X:12:DG:H2'	1:X:13:DT:H72	2.02	0.41
5:C:1012:PRO:HB2	5:C:1021:LEU:O	2.20	0.41
5:C:141:HIS:CD2	5:C:141:HIS:C	2.93	0.41
5:C:265:ARG:HB2	11:C:1165:HOH:O	2.21	0.41
5:C:318:PRO:HB2	11:C:1545:HOH:O	2.20	0.41
5:C:348:LEU:HD12	5:C:348:LEU:HA	1.90	0.41
5:C:668:LEU:HD12	5:C:668:LEU:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:673:LEU:CD2	5:C:867:VAL:HG12	2.50	0.41
5:C:754:ILE:HD12	5:C:789:SER:HB3	2.02	0.41
5:C:764:GLU:HG3	6:D:54:LYS:HZ3	1.85	0.41
6:D:1153:VAL:HG12	6:D:1155:VAL:HG22	2.02	0.41
6:D:1457:ASP:O	6:D:1459:LEU:HD12	2.21	0.41
6:D:1485:GLN:HG2	6:D:1485:GLN:H	1.75	0.41
6:D:641:GLN:HB3	6:D:717:GLN:O	2.20	0.41
6:D:838:ARG:HH11	6:D:838:ARG:HG2	1.86	0.41
6:D:1494:ALA:HB1	7:E:88:GLU:OE2	2.21	0.41
2:H:7:G:H2'	2:H:8:C:OP1	2.20	0.41
5:M:1008:ARG:HA	5:M:1027:PHE:CD2	2.54	0.41
5:M:23:VAL:HA	11:M:1414:HOH:O	2.21	0.41
5:M:395:LYS:HE2	5:M:403:SER:CB	2.36	0.41
5:M:713:ARG:HB3	5:M:720:GLU:OE2	2.20	0.41
5:M:80:GLN:HE21	5:M:84:ARG:HH21	1.68	0.41
5:M:983:ILE:HG22	5:M:983:ILE:O	2.20	0.41
5:M:993:PHE:HE1	5:M:995:MET:HE2	1.85	0.41
6:N:1406:ARG:HE	6:N:1407:LEU:HD12	1.84	0.41
6:N:63:TYR:HB3	6:N:68:PHE:CD1	2.55	0.41
6:N:716:PHE:O	6:N:718:PRO:HD3	2.21	0.41
6:N:729:HIS:HE1	6:N:731:LEU:HG	1.85	0.41
2:Y:16:G:O3'	6:N:741:ASP:OD1	2.39	0.41
6:N:937:TYR:H	6:N:937:TYR:HD1	1.66	0.41
6:N:956:ILE:HA	6:N:957:PRO:HD3	1.93	0.41
7:O:9:LEU:HB3	7:O:19:LEU:CD2	2.50	0.41
4:B:229:GLN:HB2	4:B:229:GLN:HE21	1.62	0.41
5:C:263:ASP:C	5:C:264:PRO:O	2.59	0.41
5:C:358:ARG:CA	5:C:361:MET:HG2	2.51	0.41
5:C:443:THR:HG21	6:D:1078:ARG:NH2	2.36	0.41
5:C:491:GLU:CB	11:C:1287:HOH:O	2.68	0.41
5:C:595:LEU:HD12	11:C:1444:HOH:O	2.21	0.41
5:C:694:LEU:HD21	5:C:868:ASP:CB	2.47	0.41
6:D:1107:VAL:HG12	6:D:1217:ILE:HA	2.02	0.41
6:D:1223:ILE:HD11	6:D:1462:LEU:HD12	2.03	0.41
6:D:1393:GLN:NE2	6:D:1394:VAL:HB	2.36	0.41
6:D:717:GLN:HG2	11:D:8027:HOH:O	2.21	0.41
6:D:764:LEU:HD23	6:D:767:HIS:CD2	2.54	0.41
1:G:14:DT:H5''	11:D:8242:HOH:O	2.21	0.41
4:L:11:PHE:CE1	4:L:23:PHE:HB3	2.55	0.41
5:M:1092:LEU:HD23	5:M:1095:LEU:HD13	2.03	0.41
5:M:158:TYR:CZ	5:M:313:LEU:HG	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:469:THR:OG1	5:M:470:PRO:HD2	2.21	0.41
5:M:668:LEU:H	5:M:668:LEU:HD12	1.86	0.41
5:M:738:ASP:HB2	5:M:744:ARG:HB3	2.02	0.41
5:M:73:LEU:HD12	5:M:73:LEU:O	2.21	0.41
6:N:1134:LEU:HB3	11:N:9479:HOH:O	2.20	0.41
6:N:701:LEU:O	6:N:747:VAL:HA	2.21	0.41
6:N:709:HIS:HA	6:N:1227:GLN:HB3	2.01	0.41
6:N:916:TYR:O	6:N:919:PHE:HB3	2.19	0.41
7:O:93:TYR:HA	7:O:94:PRO:HD2	1.87	0.41
4:A:178:ALA:HA	11:C:1156:HOH:O	2.20	0.41
5:C:1079:PRO:HB2	11:D:8463:HOH:O	2.19	0.41
5:C:185:LYS:HE2	5:C:190:LYS:NZ	2.35	0.41
5:C:242:LEU:HD11	11:C:1327:HOH:O	2.21	0.41
5:C:599:GLU:OE2	5:C:619:ARG:NH2	2.54	0.41
5:C:639:GLN:HG2	11:C:1396:HOH:O	2.19	0.41
6:D:1086:LEU:HA	11:D:8250:HOH:O	2.21	0.41
6:D:1197:ARG:CB	6:D:1396:GLU:HG3	2.45	0.41
6:D:185:VAL:HG11	6:D:197:SER:OG	2.20	0.41
6:D:446:VAL:O	6:D:447:VAL:O	2.39	0.41
6:D:525:ARG:HA	6:D:526:PRO:HD3	1.73	0.41
7:E:76:GLY:N	7:E:79:LEU:HD22	2.36	0.41
1:G:6:DT:H2''	1:G:7:DC:C5	2.55	0.41
2:H:14:G:C2'	2:H:15:C:H5'	2.48	0.41
4:L:124:ASN:CG	4:L:127:LEU:HB2	2.41	0.41
4:L:81:ASN:HD21	4:L:127:LEU:HD11	1.85	0.41
4:K:224:TYR:HB3	4:L:9:PRO:CG	2.51	0.41
5:M:1021:LEU:HA	11:M:1512:HOH:O	2.21	0.41
5:M:1096:ALA:O	6:N:13:ALA:CB	2.68	0.41
5:M:393:GLN:NE2	5:M:406:HIS:HE1	2.18	0.41
5:M:674:VAL:HG11	5:M:992:MET:HB3	2.02	0.41
6:N:1007:VAL:HA	11:N:9288:HOH:O	2.21	0.41
6:N:1117:TYR:CD2	6:N:1117:TYR:N	2.88	0.41
6:N:1406:ARG:HE	6:N:1407:LEU:CD1	2.33	0.41
6:N:1425:THR:HG22	6:N:1429:LEU:HD12	2.01	0.41
6:N:407:VAL:HG12	6:N:409:VAL:H	1.85	0.41
6:N:28:LYS:CB	6:N:41:ARG:HD2	2.50	0.41
6:N:769:LEU:HD11	6:N:919:PHE:CE2	2.56	0.41
6:N:832:ARG:HA	6:N:832:ARG:CZ	2.51	0.41
6:N:879:ARG:HH11	6:N:879:ARG:HG3	1.84	0.41
6:N:965:GLU:HA	6:N:965:GLU:OE1	2.20	0.41
7:O:19:LEU:O	7:O:23:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:15:DC:OP2	6:N:610:LYS:HE2	2.21	0.41
4:B:65:PHE:CD1	4:B:65:PHE:N	2.88	0.41
5:C:1067:TYR:HB3	11:C:1435:HOH:O	2.21	0.41
5:C:140:ILE:HD13	5:C:331:ARG:CZ	2.51	0.41
5:C:385:PHE:HA	5:C:389:SER:OG	2.21	0.41
5:C:676:ILE:HD13	5:C:676:ILE:O	2.21	0.41
5:C:690:ILE:HG13	5:C:694:LEU:HD12	2.01	0.41
6:D:1063:GLU:HG3	6:D:1064:GLY:H	1.84	0.41
6:D:434:ARG:HB2	6:D:447:VAL:HG21	2.03	0.41
6:D:703:ASN:ND2	6:D:704:ARG:N	2.67	0.41
4:L:209:GLU:HG2	11:L:361:HOH:O	2.21	0.41
5:M:471:TYR:CD2	5:M:533:ASP:HA	2.56	0.41
5:M:878:SER:OG	6:N:1029:ARG:HD2	2.20	0.41
6:N:1336:LEU:HD22	6:N:1421:LEU:HB2	2.03	0.41
6:N:1437:ALA:C	6:N:1446:VAL:HG21	2.40	0.41
6:N:1472:ILE:HB	6:N:1474:ALA:O	2.21	0.41
6:N:165:LYS:O	6:N:167:GLU:HG3	2.20	0.41
6:N:89:ARG:O	6:N:521:PRO:HB3	2.20	0.41
6:N:648:MET:HE2	11:N:9201:HOH:O	2.20	0.41
6:N:728:LEU:HD12	6:N:729:HIS:N	2.36	0.41
6:N:749:VAL:HA	6:N:750:PRO:HD3	1.87	0.41
6:N:875:THR:HG22	6:N:879:ARG:HB2	2.03	0.41
6:N:791:TYR:CD2	6:N:945:SER:HB2	2.56	0.41
3:Z:5:DG:H1'	3:Z:6:DC:H5'	2.01	0.41
4:A:154:GLU:H	4:A:154:GLU:CD	2.24	0.41
4:B:64:GLU:CA	4:B:165:ILE:HD13	2.48	0.41
5:C:1046:ALA:HA	6:D:1472:ILE:CG1	2.44	0.41
5:C:150:PRO:HA	5:C:158:TYR:HD2	1.86	0.41
5:C:172:ILE:HG23	5:C:184:MET:CE	2.51	0.41
5:C:957:LYS:HG2	5:C:961:GLU:CB	2.51	0.41
6:D:1492:LEU:HD11	11:D:8102:HOH:O	2.21	0.41
6:D:470:LEU:N	6:D:470:LEU:HD23	2.36	0.41
6:D:938:GLY:O	6:D:942:SER:HB3	2.21	0.41
6:D:996:TRP:CE3	6:D:996:TRP:HA	2.56	0.41
7:E:4:PRO:HG3	11:E:115:HOH:O	2.21	0.41
4:K:10:VAL:HG12	4:K:12:THR:HG22	2.02	0.41
4:K:14:ARG:HB2	4:K:14:ARG:CZ	2.50	0.41
4:K:159:LYS:NZ	4:K:164:ALA:O	2.50	0.41
4:K:173:PRO:HB2	4:K:205:VAL:HG22	2.03	0.41
5:M:140:ILE:HG13	5:M:411:SER:O	2.20	0.41
5:M:193:LEU:HD21	11:M:1471:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:280:LYS:HB2	5:M:280:LYS:NZ	2.35	0.41
5:M:495:THR:HG21	5:M:524:VAL:HG11	2.03	0.41
5:M:704:HIS:HA	11:M:1346:HOH:O	2.21	0.41
5:M:848:VAL:HG12	5:M:849:VAL:N	2.36	0.41
5:M:86:LYS:HZ3	5:M:812:GLY:H	1.69	0.41
6:N:119:SER:HB2	6:N:123:LEU:N	2.31	0.41
6:N:1336:LEU:CA	6:N:1344:VAL:HG21	2.50	0.41
6:N:708:LEU:HD22	6:N:1234:THR:OG1	2.21	0.41
6:N:796:ARG:O	6:N:828:LYS:HD2	2.21	0.41
4:B:137:ARG:CZ	4:B:139:ASN:HB3	2.51	0.41
4:B:80:LEU:HA	4:B:83:LYS:HD2	2.03	0.41
5:C:1030:GLN:O	6:D:622:ARG:HA	2.21	0.41
5:C:160:ALA:HB2	5:C:310:LEU:HB2	2.02	0.41
5:C:438:ILE:HA	5:C:455:LEU:HA	2.03	0.41
5:C:468:ARG:NE	5:C:485:TYR:O	2.54	0.41
5:C:606:VAL:HG11	5:C:643:VAL:O	2.21	0.41
5:C:808:ARG:NH2	5:C:820:ARG:CZ	2.84	0.41
5:C:876:VAL:H	5:C:877:PRO:CD	2.33	0.41
5:C:945:ARG:NE	11:C:1564:HOH:O	2.54	0.41
6:D:1003:VAL:O	6:D:1006:ALA:HB3	2.21	0.41
6:D:1117:TYR:HB2	6:D:1188:VAL:O	2.21	0.41
3:I:7:DC:OP2	6:D:1266:ARG:NE	2.54	0.41
6:D:1191:PRO:CB	6:D:1370:ILE:HD13	2.51	0.41
6:D:1425:THR:HG22	6:D:1429:LEU:CD1	2.50	0.41
6:D:1429:LEU:HD12	6:D:1440:PHE:HE1	1.85	0.41
6:D:1435:LEU:HB2	6:D:1457:ASP:OD2	2.21	0.41
6:D:36:THR:C	6:D:38:LYS:N	2.75	0.41
6:D:456:MET:N	6:D:459:GLU:OE1	2.49	0.41
5:C:911:GLU:OE1	6:D:951:ILE:HD12	2.21	0.41
1:G:12:DG:H2'	1:G:13:DT:H72	2.02	0.41
1:G:8:DT:H2''	1:G:9:DG:C8	2.55	0.41
4:L:26:GLU:HB3	4:L:194:LYS:HG3	2.03	0.41
4:L:49:PRO:HG3	11:L:364:HOH:O	2.20	0.41
5:M:102:HIS:CE1	5:M:365:ASP:HA	2.55	0.41
5:M:674:VAL:CG2	5:M:871:LEU:HG	2.51	0.41
5:M:874:LEU:CD1	5:M:874:LEU:H	2.34	0.41
6:N:954:ALA:C	6:N:1039:CYS:SG	2.99	0.41
6:N:1041:LEU:O	6:N:1041:LEU:HD23	2.21	0.41
6:N:1147:ARG:HB3	6:N:1188:VAL:CG2	2.50	0.41
6:N:1406:ARG:NE	6:N:1407:LEU:HD12	2.36	0.41
6:N:1438:ALA:CA	6:N:1446:VAL:HG11	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:180:LYS:CG	6:N:183:GLU:HB2	2.31	0.41
6:N:47:GLU:HG3	6:N:51:GLY:O	2.21	0.41
6:N:668:PRO:HB3	11:N:9371:HOH:O	2.20	0.41
6:N:773:ALA:HB2	11:N:9308:HOH:O	2.21	0.41
4:B:48:ILE:HA	4:B:49:PRO:HD3	1.88	0.40
4:B:66:SER:O	4:B:75:VAL:HG23	2.21	0.40
4:B:80:LEU:HG	6:D:844:ALA:HA	2.02	0.40
5:C:1065:ALA:HB3	11:C:1284:HOH:O	2.20	0.40
5:C:174:LEU:O	5:C:310:LEU:HD22	2.22	0.40
5:C:250:ARG:HG2	5:C:253:ALA:CB	2.51	0.40
5:C:436:GLY:O	5:C:459:ALA:CB	2.65	0.40
5:C:52:PHE:CE1	5:C:66:LEU:HG	2.56	0.40
6:D:1403:LEU:HD22	11:D:8028:HOH:O	2.21	0.40
6:D:495:ARG:O	6:D:499:VAL:HG23	2.21	0.40
6:D:645:PRO:CD	6:D:726:ILE:HG12	2.51	0.40
6:D:972:LEU:HD13	6:D:972:LEU:HA	1.94	0.40
1:G:11:DC:H2"	1:G:12:DG:H8	1.85	0.40
4:K:101:LEU:HD23	4:K:101:LEU:C	2.41	0.40
4:K:44:LEU:HD13	4:K:177:VAL:CG1	2.51	0.40
4:L:172:SER:HA	4:L:173:PRO:HD3	1.88	0.40
5:M:1:MET:HE3	11:M:1165:HOH:O	2.21	0.40
5:M:256:TYR:HE1	11:M:1452:HOH:O	2.04	0.40
5:M:494:TYR:HB3	5:M:530:GLU:OE2	2.21	0.40
5:M:572:ILE:HD11	5:M:701:THR:CB	2.51	0.40
5:M:685:GLU:HG3	5:M:686:ASP:N	2.36	0.40
5:M:776:SER:HA	5:M:780:GLU:HB3	2.02	0.40
4:K:38:ASN:CG	5:M:980:GLY:CA	2.89	0.40
6:N:1213:ARG:HD2	6:N:1214:PRO:N	2.35	0.40
6:N:127:LEU:HA	6:N:132:TYR:HD1	1.86	0.40
6:N:434:ARG:HH22	6:N:447:VAL:HG11	1.86	0.40
6:N:137:PRO:HD2	6:N:453:ASP:CB	2.50	0.40
6:N:50:PHE:HB3	6:N:522:PRO:CG	2.51	0.40
6:N:792:ILE:H	6:N:792:ILE:HG22	1.63	0.40
6:N:800:LYS:HZ1	6:N:804:LEU:HD13	1.86	0.40
6:N:957:PRO:HG3	11:N:9288:HOH:O	2.20	0.40
4:A:107:LYS:HE2	4:A:113:ASP:OD2	2.21	0.40
4:A:182:GLU:N	4:A:182:GLU:OE2	2.54	0.40
5:C:1008:ARG:NH1	5:C:1010:THR:HA	2.37	0.40
5:C:1078:GLU:HA	5:C:1079:PRO:HD3	1.93	0.40
5:C:1095:LEU:HD23	5:C:1095:LEU:HA	1.93	0.40
5:C:1090:LYS:HE2	5:C:1112:PHE:CE1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:150:PRO:HA	5:C:158:TYR:CD2	2.56	0.40
5:C:164:PRO:HD2	5:C:170:PRO:O	2.20	0.40
5:C:267:TYR:O	5:C:268:ASP:C	2.59	0.40
5:C:260:LEU:CB	5:C:291:ALA:HB1	2.37	0.40
5:C:327:HIS:CD2	5:C:431:HIS:NE2	2.88	0.40
5:C:410:ILE:HD12	5:C:438:ILE:HG12	2.00	0.40
5:C:474:VAL:HG23	5:C:478:VAL:O	2.21	0.40
5:C:605:LYS:O	5:C:611:ILE:HA	2.21	0.40
5:C:80:GLN:HB3	5:C:80:GLN:HE21	1.63	0.40
5:C:80:GLN:HG2	5:C:90:TYR:CE2	2.56	0.40
5:C:874:LEU:HD12	5:C:874:LEU:N	2.30	0.40
5:C:5:ARG:HB3	5:C:902:ILE:HD12	2.02	0.40
5:C:958:THR:CG2	5:C:961:GLU:HB2	2.46	0.40
6:D:1093:TYR:CE1	6:D:1097:LYS:HE2	2.57	0.40
6:D:1184:GLN:HB2	6:N:559:ALA:HB1	2.02	0.40
5:C:1053:LEU:CD1	6:D:1466:VAL:HG22	2.51	0.40
6:D:34:TYR:O	6:D:35:ARG:C	2.60	0.40
6:D:141:ILE:CD1	6:D:450:TYR:HB3	2.48	0.40
6:D:965:GLU:HA	6:D:968:ASP:HB3	2.02	0.40
6:D:999:THR:O	6:D:1002:LYS:HB2	2.21	0.40
1:G:20:DG:H3'	11:G:38:HOH:O	2.20	0.40
4:K:101:LEU:HD12	4:K:114:PHE:N	2.36	0.40
4:K:159:LYS:HA	4:K:159:LYS:HD3	1.90	0.40
4:K:219:ARG:HG2	4:L:222:LEU:HD12	2.03	0.40
4:L:70:GLY:O	4:L:132:LEU:HA	2.21	0.40
4:L:137:ARG:CZ	4:L:139:ASN:HB3	2.52	0.40
4:L:185:ARG:NH1	11:L:381:HOH:O	2.55	0.40
11:K:1711:HOH:O	4:L:222:LEU:HD11	2.21	0.40
4:L:90:LEU:O	4:L:90:LEU:HD12	2.21	0.40
5:M:474:VAL:HG13	5:M:530:GLU:C	2.42	0.40
5:M:395:LYS:O	5:M:633:GLN:NE2	2.54	0.40
5:M:80:GLN:HG2	5:M:90:TYR:CZ	2.56	0.40
6:N:996:TRP:CZ2	6:N:1056:PRO:HG2	2.57	0.40
6:N:1105:ILE:HA	11:N:9367:HOH:O	2.21	0.40
6:N:1271:LYS:HZ3	6:N:1271:LYS:HB2	1.86	0.40
6:N:493:ARG:NE	6:N:1390:LEU:O	2.54	0.40
6:N:646:LYS:HG3	6:N:721:VAL:O	2.20	0.40
6:N:701:LEU:HD13	6:N:748:HIS:HB2	2.03	0.40
6:N:955:VAL:HG11	6:N:1015:TYR:OH	2.21	0.40
3:Z:3:DA:H1'	11:Z:824:HOH:O	2.20	0.40
4:A:156:HIS:HD2	4:A:157:GLY:N	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:175:ARG:HH21	4:A:176:ARG:HE	1.68	0.40
5:C:97:ARG:HB3	5:C:109:LYS:CE	2.51	0.40
5:C:408:ARG:NE	5:C:542:VAL:HG23	2.37	0.40
5:C:697:ARG:HG3	5:C:697:ARG:O	2.21	0.40
5:C:710:ILE:HB	5:C:790:LEU:CD2	2.43	0.40
5:C:909:ALA:CB	5:C:914:ILE:HD11	2.45	0.40
5:C:676:ILE:HG22	5:C:988:VAL:O	2.21	0.40
6:D:1046:GLN:HG2	6:D:1052:THR:HA	2.03	0.40
6:D:1071:PHE:HB3	11:D:8010:HOH:O	2.22	0.40
6:D:107:ASP:O	6:D:108:VAL:C	2.60	0.40
6:D:1117:TYR:CD1	6:D:1187:PRO:HA	2.57	0.40
6:D:1221:VAL:O	6:D:1222:GLY:C	2.59	0.40
6:D:1477:GLY:O	6:D:1478:SER:C	2.59	0.40
6:D:400:VAL:O	6:D:402:PRO:HD3	2.20	0.40
6:D:421:LEU:HD21	6:D:429:SER:OG	2.21	0.40
6:D:456:MET:HG3	11:D:8208:HOH:O	2.21	0.40
6:D:681:ARG:HB2	6:D:681:ARG:HE	1.66	0.40
6:D:796:ARG:C	6:D:797:LYS:HD2	2.42	0.40
6:D:810:GLU:C	6:D:813:LEU:HG	2.39	0.40
4:K:42:ARG:NH2	4:L:31:GLY:O	2.40	0.40
5:M:217:LEU:HD11	5:M:314:THR:OG1	2.21	0.40
5:M:141:HIS:CA	5:M:331:ARG:HG3	2.52	0.40
5:M:437:ARG:HB3	5:M:467:ILE:HB	2.03	0.40
5:M:610:ARG:HD2	5:M:622:GLU:HG3	2.04	0.40
5:M:626:ARG:NH1	5:M:629:TYR:HB2	2.37	0.40
5:M:720:GLU:OE1	5:M:758:ARG:HD2	2.21	0.40
5:M:909:ALA:HB1	5:M:914:ILE:CD1	2.48	0.40
5:M:80:GLN:HG2	5:M:90:TYR:CE1	2.57	0.40
6:N:1087:ARG:CB	6:N:1256:LEU:HD22	2.49	0.40
6:N:12:LEU:HD21	6:N:104:PHE:CZ	2.57	0.40
6:N:168:THR:HG21	6:N:206:ARG:HH12	1.86	0.40
6:N:415:VAL:HG12	6:N:416:ALA:N	2.37	0.40
6:N:525:ARG:HB2	6:N:538:SER:HB2	2.03	0.40
1:X:12:DG:C8	1:X:13:DT:H72	2.56	0.40
2:Y:12:G:C8	2:Y:12:G:C5'	2.96	0.40
4:B:43:ILE:HG23	4:B:47:SER:HB3	2.02	0.40
4:B:43:ILE:HG23	4:B:47:SER:OG	2.20	0.40
4:B:67:THR:HB	4:B:74:ASP:OD1	2.21	0.40
5:C:431:HIS:CD2	5:C:433:THR:OG1	2.74	0.40
5:C:739:GLU:HG2	5:C:739:GLU:H	1.62	0.40
5:C:773:LEU:O	5:C:777:ILE:HG13	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:782:ALA:O	5:C:784:ASP:N	2.54	0.40
6:D:1221:VAL:O	6:D:1224:VAL:N	2.54	0.40
6:D:700:VAL:HG13	6:D:718:PRO:HG2	2.03	0.40
6:D:789:LEU:O	6:D:793:THR:HG23	2.21	0.40
6:D:817:GLU:O	6:D:821:VAL:HG23	2.21	0.40
6:D:1481:VAL:CG2	7:E:18:ARG:HE	2.30	0.40
1:G:14:DT:C2'	1:G:15:DC:H5'	2.49	0.40
2:H:16:G:H5'	6:D:742:GLY:HA3	2.04	0.40
4:K:67:THR:HG22	5:M:627:ARG:HH21	1.87	0.40
4:K:88:ARG:NH1	4:K:88:ARG:HG2	2.37	0.40
4:K:35:THR:HG23	4:L:39:PRO:HA	2.03	0.40
4:L:58:ILE:HG22	4:L:61:VAL:HB	2.03	0.40
5:M:1091:GLU:HA	6:N:520:LEU:HD13	2.03	0.40
5:M:139:GLN:OE1	5:M:415:PRO:HD3	2.22	0.40
5:M:684:PHE:CG	5:M:685:GLU:N	2.90	0.40
5:M:926:PHE:CD2	5:M:930:LYS:HE3	2.55	0.40
6:N:1108:ARG:NH1	11:N:9097:HOH:O	2.54	0.40
6:N:135:LEU:HD22	6:N:147:VAL:HG23	2.02	0.40
6:N:44:LEU:CD1	6:N:44:LEU:H	2.34	0.40
6:N:501:ALA:HB1	6:N:1453:ALA:CB	2.40	0.40
5:M:1034:GLU:H	6:N:619:LEU:HB3	1.79	0.40
6:N:691:LEU:HG	6:N:720:LEU:HD21	2.02	0.40
4:A:82:LEU:CD2	4:A:142:VAL:HG11	2.43	0.40
4:A:206:THR:CG2	4:A:209:GLU:H	2.32	0.40
4:B:165:ILE:HA	4:B:166:PRO:HD3	1.95	0.40
5:C:1019:GLN:HE22	5:C:1058:ASP:HB2	1.86	0.40
5:C:182:VAL:HG12	5:C:193:LEU:HD11	2.02	0.40
5:C:144:PRO:CG	5:C:265:ARG:NH2	2.80	0.40
5:C:300:ASP:OD2	5:C:303:PHE:HB3	2.22	0.40
5:C:160:ALA:HB1	5:C:306:THR:OG1	2.21	0.40
5:C:520:GLU:HA	5:C:521:PRO:HD3	1.96	0.40
5:C:626:ARG:HG2	11:C:1192:HOH:O	2.21	0.40
5:C:636:ALA:CB	5:C:703:ILE:HD13	2.34	0.40
5:C:743:VAL:HG13	5:C:800:VAL:HG11	2.02	0.40
5:C:7:GLY:O	5:C:8:ARG:HD2	2.21	0.40
6:D:1037:GLN:CG	6:D:1042:ARG:HB3	2.47	0.40
6:D:1083:ASP:OD2	6:D:1241:PHE:HB3	2.21	0.40
6:D:1269:LYS:HZ2	6:D:1269:LYS:HB3	1.85	0.40
6:D:506:GLY:O	6:D:507:ASN:C	2.59	0.40
5:C:1006:HIS:O	6:D:627:GLY:HA2	2.21	0.40
6:D:630:VAL:HA	6:D:744:GLN:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:51:GLY:HA3	6:D:86:ARG:HA	2.04	0.40
3:I:8:DA:H2"	3:I:9:DG:OP2	2.22	0.40
4:K:170:VAL:HG13	11:M:1536:HOH:O	2.20	0.40
4:K:18:ARG:O	4:K:207:PRO:HD3	2.22	0.40
4:L:133:GLU:HB3	4:L:134:GLU:H	1.62	0.40
5:M:324:ASP:HA	11:M:1465:HOH:O	2.22	0.40
6:N:1047:LYS:HB3	6:N:1048:PRO:CD	2.51	0.40
6:N:1044:LEU:HD13	6:N:1052:THR:HG21	2.04	0.40
6:N:112:ILE:O	6:N:112:ILE:HD12	2.22	0.40
6:N:1147:ARG:O	6:N:1165:TYR:HA	2.21	0.40
6:N:637:LEU:HD21	6:N:641:GLN:O	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	A	227/315 (72%)	206 (91%)	14 (6%)	7 (3%)	5	26
4	B	227/315 (72%)	206 (91%)	15 (7%)	6 (3%)	6	31
4	K	227/315 (72%)	208 (92%)	13 (6%)	6 (3%)	6	31
4	L	227/315 (72%)	206 (91%)	15 (7%)	6 (3%)	6	31
5	C	1117/1119 (100%)	919 (82%)	136 (12%)	62 (6%)	2	12
5	M	1117/1119 (100%)	923 (83%)	133 (12%)	61 (6%)	2	12
6	D	1258/1524 (82%)	1051 (84%)	149 (12%)	58 (5%)	3	16
6	N	1258/1524 (82%)	1058 (84%)	140 (11%)	60 (5%)	2	16
7	E	93/99 (94%)	76 (82%)	11 (12%)	6 (6%)	1	8
7	O	93/99 (94%)	74 (80%)	12 (13%)	7 (8%)	1	6
All	All	5844/6744 (87%)	4927 (84%)	638 (11%)	279 (5%)	2	16

All (279) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	29	GLU
4	A	187	GLY
4	B	29	GLU
4	B	187	GLY
5	C	178	PRO
5	C	231	PRO
5	C	244	PRO
5	C	288	ARG
5	C	290	LEU
5	C	369	PRO
5	C	462	ASP
5	C	465	GLY
5	C	548	PRO
5	C	627	ARG
5	C	680	ASP
5	C	727	PRO
5	C	908	GLY
5	C	1033	GLY
5	C	1106	ASP
6	D	40	GLU
6	D	43	GLY
6	D	55	ASP
6	D	137	PRO
6	D	447	VAL
6	D	705	ALA
6	D	742	GLY
6	D	832	ARG
6	D	844	ALA
6	D	1028	ALA
6	D	1129	THR
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	170	PRO
5	M	178	PRO
5	M	191	PHE
5	M	231	PRO
5	M	244	PRO

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Mol	Chain	Res	Type
5	M	288	ARG
5	M	290	LEU
5	M	369	PRO
5	M	462	ASP
5	M	465	GLY
5	M	548	PRO
5	M	680	ASP
5	M	727	PRO
5	M	908	GLY
5	M	1033	GLY
5	M	1106	ASP
6	N	40	GLU
6	N	43	GLY
6	N	55	ASP
6	N	137	PRO
6	N	447	VAL
6	N	705	ALA
6	N	742	GLY
6	N	832	ARG
6	N	844	ALA
6	N	1028	ALA
6	N	1129	THR
6	N	1389	LEU
6	N	1441	GLN
7	O	42	PRO
5	C	40	GLU
5	C	44	ILE
5	C	59	LYS
5	C	152	PRO
5	C	156	GLY
5	C	170	PRO
5	C	191	PHE
5	C	251	ASP
5	C	363	SER
5	C	418	LEU
5	C	457	ALA
5	C	529	VAL
5	C	626	ARG
5	C	698	ASP
5	C	783	ARG
5	C	784	ASP
5	C	864	GLY

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Mol	Chain	Res	Type
5	C	1059	ASP
6	D	34	TYR
6	D	120	ALA
6	D	164	GLY
6	D	620	GLY
6	D	740	PHE
6	D	803	GLY
6	D	1208	ASP
6	D	1342	GLU
6	D	1385	GLY
6	D	1452	ILE
6	D	1454	GLY
7	E	53	GLY
7	E	58	PRO
5	M	40	GLU
5	M	44	ILE
5	M	59	LYS
5	M	152	PRO
5	M	156	GLY
5	M	223	ASP
5	M	251	ASP
5	M	363	SER
5	M	418	LEU
5	M	529	VAL
5	M	626	ARG
5	M	627	ARG
5	M	698	ASP
5	M	905	ILE
5	M	1005	MET
5	M	1059	ASP
6	N	120	ALA
6	N	164	GLY
6	N	594	PRO
6	N	620	GLY
6	N	740	PHE
6	N	803	GLY
6	N	1125	PRO
6	N	1208	ASP
6	N	1221	VAL
6	N	1385	GLY
6	N	1424	VAL
6	N	1452	ILE

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Mol	Chain	Res	Type
6	N	1454	GLY
7	O	53	GLY
7	O	58	PRO
4	A	3	ASP
5	C	74	GLY
5	C	164	PRO
5	C	188	LYS
5	C	223	ASP
5	C	262	ALA
5	C	268	ASP
5	C	325	ILE
5	C	424	GLY
5	C	517	ARG
5	C	740	GLU
5	C	808	ARG
6	D	37	LEU
6	D	96	ALA
6	D	110	SER
6	D	395	VAL
6	D	507	ASN
6	D	594	PRO
6	D	696	HIS
6	D	822	ALA
6	D	924	MET
6	D	1125	PRO
6	D	1196	THR
6	D	1341	PRO
7	E	43	GLU
4	L	191	ASP
5	M	74	GLY
5	M	164	PRO
5	M	188	LYS
5	M	268	ASP
5	M	424	GLY
5	M	457	ALA
5	M	517	ARG
5	M	808	ARG
5	M	864	GLY
5	M	984	GLU
6	N	37	LEU
6	N	96	ALA
6	N	395	VAL

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Mol	Chain	Res	Type
6	N	397	LYS
6	N	507	ASN
6	N	539	ASP
6	N	807	ALA
6	N	830	ALA
6	N	924	MET
6	N	1196	THR
6	N	1269	LYS
7	O	43	GLU
5	C	80	GLN
5	C	180	GLY
5	C	282	GLY
5	C	984	GLU
5	C	1004	LYS
5	C	1024	LYS
5	C	1045	ALA
6	D	808	THR
6	D	830	ALA
6	D	1221	VAL
6	D	1244	GLY
6	D	1269	LYS
6	D	1390	LEU
4	K	3	ASP
5	M	180	GLY
5	M	262	ALA
5	M	767	PRO
5	M	1024	LYS
6	N	34	TYR
6	N	110	SER
6	N	735	ALA
6	N	808	THR
6	N	822	ALA
6	N	1244	GLY
7	O	32	ARG
7	O	82	GLU
5	C	767	PRO
5	C	877	PRO
6	D	31	THR
6	D	807	ALA
7	E	82	GLU
5	M	80	GLN
5	M	264	PRO

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Mol	Chain	Res	Type
5	M	877	PRO
5	M	1004	LYS
5	M	1045	ALA
6	N	181	ASP
6	N	601	ARG
6	N	1390	LEU
4	A	118	ALA
4	B	48	ILE
4	B	191	ASP
5	C	11	GLU
5	C	264	PRO
5	C	905	ILE
5	C	1114	GLY
6	D	406	ASP
6	D	483	HIS
6	D	525	ARG
6	D	530	VAL
6	D	601	ARG
4	L	48	ILE
5	M	740	GLU
5	M	781	LYS
6	N	24	GLY
6	N	483	HIS
6	N	696	HIS
6	N	1222	GLY
6	N	1341	PRO
5	C	646	GLY
5	C	779	GLY
7	E	5	GLY
4	L	157	GLY
5	M	144	PRO
5	M	646	GLY
5	M	779	GLY
5	M	1114	GLY
6	N	136	ASP
6	N	526	PRO
6	N	1214	PRO
4	A	157	GLY
4	B	157	GLY
5	C	1079	PRO
6	D	565	ILE
6	D	1214	PRO

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Mol	Chain	Res	Type
4	K	9	PRO
5	M	53	PRO
4	A	9	PRO
5	C	53	PRO
6	D	134	VAL
6	D	136	ASP
6	D	1050	GLY
4	K	125	PRO
4	K	157	GLY
4	L	125	PRO
5	M	282	GLY
5	M	876	VAL
6	N	146	PRO
6	N	530	VAL
4	A	125	PRO
4	B	125	PRO
6	D	484	PRO
6	D	595	GLY
5	M	336	VAL
6	N	484	PRO
6	N	595	GLY
6	N	1050	GLY
5	C	876	VAL
6	D	98	PRO
6	D	1222	GLY
6	N	565	ILE
7	O	5	GLY

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%)	162 (80%)	40 (20%)	1	8
4	B	202/273 (74%)	159 (79%)	43 (21%)	1	6
4	K	202/273 (74%)	162 (80%)	40 (20%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	L	202/273 (74%)	150 (74%)	52 (26%)	0	3
5	C	941/941 (100%)	704 (75%)	237 (25%)	0	3
5	M	941/941 (100%)	713 (76%)	228 (24%)	1	4
6	D	1063/1279 (83%)	825 (78%)	238 (22%)	1	5
6	N	1063/1279 (83%)	833 (78%)	230 (22%)	1	6
7	E	84/88 (96%)	59 (70%)	25 (30%)	0	2
7	O	84/88 (96%)	68 (81%)	16 (19%)	2	9
All	All	4984/5708 (87%)	3835 (77%)	1149 (23%)	1	4

All (1149) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	5	LYS
4	A	9	PRO
4	A	15	THR
4	A	26	GLU
4	A	29	GLU
4	A	47	SER
4	A	60	ASP
4	A	74	ASP
4	A	84	GLU
4	A	88	ARG
4	A	89	PHE
4	A	92	PRO
4	A	99	LEU
4	A	100	LEU
4	A	101	LEU
4	A	102	LYS
4	A	104	GLU
4	A	115	LEU
4	A	127	LEU
4	A	138	LEU
4	A	140	MET
4	A	141	GLU
4	A	142	VAL
4	A	143	ARG
4	A	148	VAL
4	A	168	ASP
4	A	174	VAL
4	A	176	ARG

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Mol	Chain	Res	Type
4	A	180	GLN
4	A	182	GLU
4	A	183	ASP
4	A	185	ARG
4	A	189	ARG
4	A	191	ASP
4	A	193	ASP
4	A	200	TRP
4	A	201	THR
4	A	206	THR
4	A	218	LEU
4	A	219	ARG
4	B	1	MET
4	B	2	LEU
4	B	3	ASP
4	B	4	SER
4	B	7	LYS
4	B	25	LEU
4	B	26	GLU
4	B	28	LEU
4	B	32	PHE
4	B	41	ARG
4	B	42	ARG
4	B	47	SER
4	B	60	ASP
4	B	62	LEU
4	B	63	HIS
4	B	65	PHE
4	B	66	SER
4	B	67	THR
4	B	73	GLU
4	B	77	GLU
4	B	81	ASN
4	B	85	LEU
4	B	89	PHE
4	B	90	LEU
4	B	93	SER
4	B	95	GLN
4	B	112	ARG
4	B	122	ILE
4	B	140	MET
4	B	155	LYS

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Mol	Chain	Res	Type
4	B	156	HIS
4	B	159	LYS
4	B	163	ASN
4	B	189	ARG
4	B	195	LEU
4	B	196	THR
4	B	197	LEU
4	B	201	THR
4	B	206	THR
4	B	213	GLN
4	B	216	GLU
4	B	221	HIS
4	B	229	GLN
5	C	1	MET
5	C	2	GLU
5	C	8	ARG
5	C	9	ILE
5	C	10	ARG
5	C	13	ILE
5	C	26	TYR
5	C	30	LEU
5	C	34	VAL
5	C	38	LYS
5	C	39	ARG
5	C	40	GLU
5	C	41	ASN
5	C	48	PHE
5	C	49	ARG
5	C	51	THR
5	C	65	VAL
5	C	70	GLU
5	C	73	LEU
5	C	80	GLN
5	C	82	GLU
5	C	91	GLN
5	C	95	TYR
5	C	98	LEU
5	C	105	THR
5	C	114	PHE
5	C	115	LEU
5	C	117	HIS
5	C	121	MET

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Mol	Chain	Res	Type
5	C	123	GLU
5	C	124	ASP
5	C	127	PHE
5	C	133	ASP
5	C	139	GLN
5	C	142	ARG
5	C	147	TYR
5	C	148	PHE
5	C	151	ASP
5	C	152	PRO
5	C	158	TYR
5	C	161	SER
5	C	163	ILE
5	C	170	PRO
5	C	171	TRP
5	C	177	GLU
5	C	178	PRO
5	C	183	SER
5	C	184	MET
5	C	187	ASN
5	C	188	LYS
5	C	193	LEU
5	C	194	VAL
5	C	196	LEU
5	C	198	ARG
5	C	205	GLU
5	C	217	LEU
5	C	221	LEU
5	C	225	SER
5	C	233	GLU
5	C	235	LEU
5	C	237	ARG
5	C	238	LEU
5	C	241	LEU
5	C	243	ARG
5	C	252	LYS
5	C	254	VAL
5	C	260	LEU
5	C	266	ARG
5	C	267	TYR
5	C	268	ASP
5	C	274	ARG

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Mol	Chain	Res	Type
5	C	275	TYR
5	C	278	GLU
5	C	279	GLU
5	C	284	ARG
5	C	285	LEU
5	C	286	SER
5	C	290	LEU
5	C	293	PHE
5	C	294	GLU
5	C	295	ASP
5	C	301	GLU
5	C	309	TYR
5	C	321	GLU
5	C	327	HIS
5	C	330	ASN
5	C	334	ARG
5	C	345	ARG
5	C	351	LEU
5	C	359	MET
5	C	360	LEU
5	C	363	SER
5	C	365	ASP
5	C	366	SER
5	C	367	LEU
5	C	368	THR
5	C	385	PHE
5	C	387	SER
5	C	390	GLN
5	C	393	GLN
5	C	394	PHE
5	C	397	GLU
5	C	398	THR
5	C	399	ASN
5	C	405	ARG
5	C	408	ARG
5	C	413	LEU
5	C	419	THR
5	C	421	GLU
5	C	422	ARG
5	C	426	ASP
5	C	433	THR
5	C	435	TYR

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Mol	Chain	Res	Type
5	C	441	VAL
5	C	445	GLU
5	C	453	THR
5	C	455	LEU
5	C	460	ARG
5	C	469	THR
5	C	484	VAL
5	C	491	GLU
5	C	492	ASP
5	C	498	GLN
5	C	503	LEU
5	C	507	ARG
5	C	508	ILE
5	C	518	LYS
5	C	525	SER
5	C	527	GLU
5	C	538	GLN
5	C	560	MET
5	C	562	SER
5	C	564	MET
5	C	567	GLN
5	C	569	VAL
5	C	573	ARG
5	C	578	VAL
5	C	586	ARG
5	C	590	ASP
5	C	602	GLU
5	C	605	LYS
5	C	609	ASN
5	C	610	ARG
5	C	611	ILE
5	C	617	ASP
5	C	620	LEU
5	C	638	ASP
5	C	639	GLN
5	C	644	VAL
5	C	647	GLN
5	C	649	VAL
5	C	657	ASP
5	C	668	LEU
5	C	676	ILE
5	C	677	MET

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Mol	Chain	Res	Type
5	C	679	PHE
5	C	684	PHE
5	C	699	PHE
5	C	701	THR
5	C	703	ILE
5	C	705	ILE
5	C	707	ARG
5	C	714	ASP
5	C	715	THR
5	C	721	ARG
5	C	727	PRO
5	C	729	LEU
5	C	739	GLU
5	C	740	GLU
5	C	748	GLU
5	C	753	ASP
5	C	766	GLU
5	C	770	GLU
5	C	774	LEU
5	C	780	GLU
5	C	784	ASP
5	C	805	ARG
5	C	807	ARG
5	C	814	GLU
5	C	816	LYS
5	C	821	GLU
5	C	825	VAL
5	C	834	GLN
5	C	841	ASN
5	C	846	LYS
5	C	856	GLU
5	C	858	MET
5	C	865	THR
5	C	868	ASP
5	C	870	ILE
5	C	872	ASN
5	C	881	ASN
5	C	890	LEU
5	C	900	ARG
5	C	904	PRO
5	C	923	GLU
5	C	937	ASP

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Mol	Chain	Res	Type
5	C	938	LYS
5	C	939	ARG
5	C	946	ARG
5	C	950	LEU
5	C	953	VAL
5	C	958	THR
5	C	960	GLU
5	C	961	GLU
5	C	963	LEU
5	C	966	LEU
5	C	971	LYS
5	C	981	GLU
5	C	988	VAL
5	C	989	VAL
5	C	995	MET
5	C	999	HIS
5	C	1002	GLU
5	C	1005	MET
5	C	1016	ILE
5	C	1019	GLN
5	C	1021	LEU
5	C	1031	ARG
5	C	1035	MET
5	C	1040	LEU
5	C	1051	GLU
5	C	1052	MET
5	C	1061	GLU
5	C	1064	ASN
5	C	1072	LYS
5	C	1080	SER
5	C	1085	PHE
5	C	1097	LEU
5	C	1098	ASP
5	C	1101	THR
5	C	1104	GLU
5	C	1105	LYS
5	C	1108	PRO
5	C	1110	ASP
5	C	1111	ILE
5	C	1118	LYS
6	D	6	ARG
6	D	8	VAL

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Mol	Chain	Res	Type
6	D	16	GLU
6	D	29	PRO
6	D	34	TYR
6	D	41	ARG
6	D	42	ASP
6	D	45	PHE
6	D	56	TYR
6	D	57	GLU
6	D	58	CYS
6	D	68	PHE
6	D	69	GLU
6	D	75	ARG
6	D	76	CYS
6	D	82	LYS
6	D	85	VAL
6	D	87	ARG
6	D	95	LEU
6	D	97	THR
6	D	101	HIS
6	D	103	TRP
6	D	108	VAL
6	D	111	LYS
6	D	116	LEU
6	D	124	GLU
6	D	127	LEU
6	D	128	TYR
6	D	133	ILE
6	D	145	VAL
6	D	149	LYS
6	D	151	GLN
6	D	152	LEU
6	D	155	ASP
6	D	161	LEU
6	D	163	TYR
6	D	169	TYR
6	D	180	LYS
6	D	189	GLN
6	D	196	VAL
6	D	198	ARG
6	D	199	LEU
6	D	206	ARG
6	D	207	PHE

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Mol	Chain	Res	Type
6	D	407	VAL
6	D	410	SER
6	D	423	ASP
6	D	430	ASP
6	D	443	VAL
6	D	445	ARG
6	D	447	VAL
6	D	452	ILE
6	D	456	MET
6	D	465	LEU
6	D	470	LEU
6	D	474	GLU
6	D	481	MET
6	D	483	HIS
6	D	485	SER
6	D	493	ARG
6	D	496	LEU
6	D	505	SER
6	D	508	ARG
6	D	513	ILE
6	D	519	VAL
6	D	522	PRO
6	D	523	ASP
6	D	525	ARG
6	D	538	SER
6	D	542	ASP
6	D	543	LEU
6	D	546	ARG
6	D	550	ARG
6	D	554	LEU
6	D	570	GLU
6	D	586	ARG
6	D	590	PRO
6	D	594	PRO
6	D	607	LEU
6	D	611	GLN
6	D	615	ARG
6	D	619	LEU
6	D	621	LYS
6	D	626	SER
6	D	639	LEU
6	D	642	CYS

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Mol	Chain	Res	Type
6	D	644	LEU
6	D	651	GLU
6	D	659	LYS
6	D	662	GLU
6	D	669	ASN
6	D	670	VAL
6	D	676	MET
6	D	678	GLU
6	D	679	ARG
6	D	682	ASP
6	D	691	LEU
6	D	692	GLU
6	D	698	LYS
6	D	703	ASN
6	D	709	HIS
6	D	710	ARG
6	D	724	GLN
6	D	733	CYS
6	D	734	GLU
6	D	736	PHE
6	D	737	ASN
6	D	739	ASP
6	D	740	PHE
6	D	741	ASP
6	D	743	ASP
6	D	744	GLN
6	D	754	PHE
6	D	758	GLU
6	D	762	GLN
6	D	763	MET
6	D	764	LEU
6	D	782	SER
6	D	783	ARG
6	D	785	ILE
6	D	791	TYR
6	D	796	ARG
6	D	808	THR
6	D	810	GLU
6	D	811	GLU
6	D	824	ASN
6	D	826	PRO
6	D	827	ILE

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Mol	Chain	Res	Type
6	D	832	ARG
6	D	833	GLU
6	D	834	THR
6	D	838	ARG
6	D	842	VAL
6	D	859	ASP
6	D	863	VAL
6	D	868	TYR
6	D	869	MET
6	D	876	SER
6	D	879	ARG
6	D	897	TRP
6	D	899	LEU
6	D	904	VAL
6	D	907	GLU
6	D	913	ASP
6	D	914	LEU
6	D	922	LEU
6	D	932	ASP
6	D	947	ILE
6	D	951	ILE
6	D	959	GLU
6	D	971	LEU
6	D	975	GLU
6	D	980	MET
6	D	982	PHE
6	D	983	LEU
6	D	988	ARG
6	D	991	GLN
6	D	1005	GLN
6	D	1014	ASN
6	D	1038	LEU
6	D	1044	LEU
6	D	1052	THR
6	D	1060	SER
6	D	1062	ARG
6	D	1063	GLU
6	D	1066	THR
6	D	1067	VAL
6	D	1070	TYR
6	D	1074	SER
6	D	1083	ASP

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Mol	Chain	Res	Type
6	D	1084	THR
6	D	1090	ASP
6	D	1093	TYR
6	D	1096	ARG
6	D	1100	ASP
6	D	1112	CYS
6	D	1114	THR
6	D	1118	ILE
6	D	1119	SER
6	D	1127	GLU
6	D	1134	LEU
6	D	1135	ARG
6	D	1139	ASP
6	D	1151	ARG
6	D	1152	GLU
6	D	1155	VAL
6	D	1164	ARG
6	D	1166	LEU
6	D	1167	SER
6	D	1196	THR
6	D	1197	ARG
6	D	1207	TYR
6	D	1211	MET
6	D	1214	PRO
6	D	1231	GLU
6	D	1232	PRO
6	D	1234	THR
6	D	1237	THR
6	D	1242	HIS
6	D	1256	LEU
6	D	1257	PRO
6	D	1259	VAL
6	D	1260	ILE
6	D	1264	GLU
6	D	1267	ARG
6	D	1271	LYS
6	D	1330	ILE
6	D	1331	ASP
6	D	1332	PRO
6	D	1337	GLU
6	D	1344	VAL
6	D	1346	ARG

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Mol	Chain	Res	Type
6	D	1347	TYR
6	D	1354	LYS
6	D	1363	LEU
6	D	1365	ASP
6	D	1376	MET
6	D	1383	ASP
6	D	1389	LEU
6	D	1393	GLN
6	D	1395	LEU
6	D	1397	LYS
6	D	1403	LEU
6	D	1415	VAL
6	D	1422	MET
6	D	1424	VAL
6	D	1426	LYS
6	D	1429	LEU
6	D	1434	TRP
6	D	1436	SER
6	D	1440	PHE
6	D	1441	GLN
6	D	1464	GLU
6	D	1465	ASN
6	D	1470	ARG
6	D	1472	ILE
6	D	1483	PHE
6	D	1488	ASP
7	E	28	GLN
7	E	30	LEU
7	E	31	LEU
7	E	32	ARG
7	E	40	LEU
7	E	41	GLU
7	E	42	PRO
7	E	47	LYS
7	E	49	GLN
7	E	51	LEU
7	E	57	ASP
7	E	67	GLU
7	E	68	LEU
7	E	69	LEU
7	E	70	THR
7	E	72	ARG

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Mol	Chain	Res	Type
7	E	74	VAL
7	E	77	GLU
7	E	79	LEU
7	E	81	PRO
7	E	82	GLU
7	E	83	ASP
7	E	85	LEU
7	E	86	GLN
7	E	94	PRO
4	K	1	MET
4	K	5	LYS
4	K	9	PRO
4	K	20	TYR
4	K	26	GLU
4	K	45	LEU
4	K	49	PRO
4	K	54	THR
4	K	58	ILE
4	K	64	GLU
4	K	80	LEU
4	K	86	VAL
4	K	89	PHE
4	K	92	PRO
4	K	93	SER
4	K	96	THR
4	K	99	LEU
4	K	102	LYS
4	K	109	VAL
4	K	116	PRO
4	K	126	ASP
4	K	127	LEU
4	K	131	THR
4	K	134	GLU
4	K	143	ARG
4	K	145	ASP
4	K	167	VAL
4	K	179	PHE
4	K	180	GLN
4	K	182	GLU
4	K	183	ASP
4	K	189	ARG
4	K	197	LEU

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Mol	Chain	Res	Type
4	K	201	THR
4	K	204	SER
4	K	206	THR
4	K	208	LEU
4	K	216	GLU
4	K	219	ARG
4	K	229	GLN
4	L	1	MET
4	L	3	ASP
4	L	4	SER
4	L	7	LYS
4	L	10	VAL
4	L	11	PHE
4	L	15	THR
4	L	20	TYR
4	L	26	GLU
4	L	30	ARG
4	L	41	ARG
4	L	47	SER
4	L	51	THR
4	L	58	ILE
4	L	60	ASP
4	L	61	VAL
4	L	62	LEU
4	L	63	HIS
4	L	64	GLU
4	L	66	SER
4	L	67	THR
4	L	73	GLU
4	L	77	GLU
4	L	80	LEU
4	L	81	ASN
4	L	89	PHE
4	L	95	GLN
4	L	100	LEU
4	L	115	LEU
4	L	117	VAL
4	L	122	ILE
4	L	132	LEU
4	L	140	MET
4	L	151	VAL
4	L	160	ASP

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Mol	Chain	Res	Type
4	L	161	ARG
4	L	163	ASN
4	L	172	SER
4	L	176	ARG
4	L	177	VAL
4	L	179	PHE
4	L	182	GLU
4	L	184	THR
4	L	190	THR
4	L	191	ASP
4	L	196	THR
4	L	200	TRP
4	L	206	THR
4	L	223	THR
4	L	224	TYR
4	L	226	SER
4	L	227	ASN
5	M	1	MET
5	M	10	ARG
5	M	26	TYR
5	M	27	ARG
5	M	30	LEU
5	M	31	GLN
5	M	33	ASP
5	M	39	ARG
5	M	42	VAL
5	M	51	THR
5	M	95	TYR
5	M	98	LEU
5	M	99	GLN
5	M	100	LEU
5	M	107	LEU
5	M	115	LEU
5	M	117	HIS
5	M	118	ILE
5	M	120	LEU
5	M	126	SER
5	M	128	ILE
5	M	133	ASP
5	M	141	HIS
5	M	142	ARG
5	M	148	PHE

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Mol	Chain	Res	Type
5	M	158	TYR
5	M	170	PRO
5	M	173	ASP
5	M	177	GLU
5	M	178	PRO
5	M	179	ASN
5	M	182	VAL
5	M	186	VAL
5	M	188	LYS
5	M	190	LYS
5	M	193	LEU
5	M	194	VAL
5	M	198	ARG
5	M	205	GLU
5	M	209	ARG
5	M	210	GLU
5	M	216	GLU
5	M	218	VAL
5	M	221	LEU
5	M	222	MET
5	M	224	GLU
5	M	225	SER
5	M	227	PHE
5	M	230	ARG
5	M	233	GLU
5	M	241	LEU
5	M	243	ARG
5	M	252	LYS
5	M	260	LEU
5	M	261	ILE
5	M	264	PRO
5	M	266	ARG
5	M	267	TYR
5	M	271	GLU
5	M	281	LEU
5	M	285	LEU
5	M	289	THR
5	M	290	LEU
5	M	293	PHE
5	M	294	GLU
5	M	301	GLU
5	M	303	PHE

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Mol	Chain	Res	Type
5	M	304	LEU
5	M	309	TYR
5	M	320	HIS
5	M	323	ASP
5	M	331	ARG
5	M	332	ARG
5	M	342	ASP
5	M	344	PHE
5	M	350	ARG
5	M	351	LEU
5	M	359	MET
5	M	361	MET
5	M	365	ASP
5	M	367	LEU
5	M	376	ARG
5	M	383	ARG
5	M	387	SER
5	M	388	ARG
5	M	393	GLN
5	M	394	PHE
5	M	401	LEU
5	M	413	LEU
5	M	419	THR
5	M	422	ARG
5	M	425	PHE
5	M	426	ASP
5	M	433	THR
5	M	440	PRO
5	M	443	THR
5	M	458	TYR
5	M	471	TYR
5	M	472	ARG
5	M	474	VAL
5	M	480	THR
5	M	485	TYR
5	M	487	THR
5	M	489	THR
5	M	503	LEU
5	M	511	GLU
5	M	516	ARG
5	M	517	ARG
5	M	520	GLU

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Mol	Chain	Res	Type
5	M	530	GLU
5	M	537	LYS
5	M	543	ASN
5	M	553	ASP
5	M	554	ASP
5	M	572	ILE
5	M	579	VAL
5	M	581	THR
5	M	585	GLU
5	M	586	ARG
5	M	589	ARG
5	M	599	GLU
5	M	602	GLU
5	M	607	ASP
5	M	609	ASN
5	M	613	VAL
5	M	616	GLU
5	M	617	ASP
5	M	620	LEU
5	M	625	LEU
5	M	627	ARG
5	M	628	PHE
5	M	645	VAL
5	M	647	GLN
5	M	654	LEU
5	M	662	GLU
5	M	668	LEU
5	M	671	ASN
5	M	677	MET
5	M	678	PRO
5	M	679	PHE
5	M	686	ASP
5	M	699	PHE
5	M	701	THR
5	M	706	GLU
5	M	711	GLU
5	M	715	THR
5	M	717	LEU
5	M	727	PRO
5	M	728	HIS
5	M	731	GLU
5	M	736	ASP

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Mol	Chain	Res	Type
5	M	737	LEU
5	M	738	ASP
5	M	739	GLU
5	M	745	ILE
5	M	748	GLU
5	M	750	LYS
5	M	751	PRO
5	M	765	SER
5	M	766	GLU
5	M	769	PRO
5	M	780	GLU
5	M	781	LYS
5	M	783	ARG
5	M	784	ASP
5	M	785	VAL
5	M	787	ASP
5	M	794	PRO
5	M	803	THR
5	M	805	ARG
5	M	806	LEU
5	M	807	ARG
5	M	814	GLU
5	M	824	ARG
5	M	834	GLN
5	M	841	ASN
5	M	856	GLU
5	M	857	ASP
5	M	862	PRO
5	M	868	ASP
5	M	870	ILE
5	M	878	SER
5	M	881	ASN
5	M	884	GLN
5	M	904	PRO
5	M	907	ASP
5	M	913	GLU
5	M	916	GLU
5	M	918	LEU
5	M	920	GLN
5	M	937	ASP
5	M	938	LYS
5	M	946	ARG

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Mol	Chain	Res	Type
5	M	953	VAL
5	M	958	THR
5	M	960	GLU
5	M	966	LEU
5	M	981	GLU
5	M	984	GLU
5	M	988	VAL
5	M	997	LEU
5	M	999	HIS
5	M	1003	ASP
5	M	1005	MET
5	M	1006	HIS
5	M	1008	ARG
5	M	1016	ILE
5	M	1017	THR
5	M	1018	GLN
5	M	1021	LEU
5	M	1027	PHE
5	M	1035	MET
5	M	1054	THR
5	M	1055	LEU
5	M	1058	ASP
5	M	1060	ILE
5	M	1074	GLU
5	M	1075	ASP
5	M	1078	GLU
5	M	1081	VAL
5	M	1085	PHE
5	M	1092	LEU
5	M	1095	LEU
5	M	1097	LEU
5	M	1098	ASP
5	M	1103	ASP
5	M	1110	ASP
5	M	1115	LEU
6	N	4	GLU
6	N	9	ARG
6	N	20	SER
6	N	21	TRP
6	N	36	THR
6	N	40	GLU
6	N	41	ARG

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Mol	Chain	Res	Type
6	N	42	ASP
6	N	44	LEU
6	N	56	TYR
6	N	57	GLU
6	N	64	LYS
6	N	65	ARG
6	N	67	ARG
6	N	68	PHE
6	N	69	GLU
6	N	75	ARG
6	N	76	CYS
6	N	79	GLU
6	N	87	ARG
6	N	95	LEU
6	N	97	THR
6	N	98	PRO
6	N	101	HIS
6	N	108	VAL
6	N	112	ILE
6	N	116	LEU
6	N	122	GLU
6	N	123	LEU
6	N	124	GLU
6	N	127	LEU
6	N	131	LYS
6	N	133	ILE
6	N	138	LYS
6	N	145	VAL
6	N	147	VAL
6	N	148	GLU
6	N	149	LYS
6	N	150	ARG
6	N	152	LEU
6	N	153	LEU
6	N	155	ASP
6	N	157	GLU
6	N	159	ARG
6	N	163	TYR
6	N	166	GLN
6	N	167	GLU
6	N	176	ASP
6	N	178	LEU

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Mol	Chain	Res	Type
6	N	180	LYS
6	N	199	LEU
6	N	405	ASP
6	N	406	ASP
6	N	414	ARG
6	N	430	ASP
6	N	434	ARG
6	N	450	TYR
6	N	451	ASP
6	N	455	ARG
6	N	456	MET
6	N	462	GLN
6	N	464	LEU
6	N	465	LEU
6	N	469	ASP
6	N	470	LEU
6	N	471	GLU
6	N	477	LEU
6	N	493	ARG
6	N	496	LEU
6	N	507	ASN
6	N	511	TRP
6	N	512	MET
6	N	513	ILE
6	N	522	PRO
6	N	523	ASP
6	N	525	ARG
6	N	537	THR
6	N	538	SER
6	N	539	ASP
6	N	542	ASP
6	N	544	TYR
6	N	550	ARG
6	N	564	GLU
6	N	565	ILE
6	N	567	ILE
6	N	576	GLU
6	N	581	LEU
6	N	584	ASN
6	N	594	PRO
6	N	617	ASN
6	N	619	LEU

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Mol	Chain	Res	Type
6	N	629	SER
6	N	635	PRO
6	N	639	LEU
6	N	641	GLN
6	N	647	ARG
6	N	660	LYS
6	N	666	ILE
6	N	669	ASN
6	N	680	GLN
6	N	682	ASP
6	N	688	TRP
6	N	692	GLU
6	N	699	VAL
6	N	701	LEU
6	N	707	THR
6	N	709	HIS
6	N	728	LEU
6	N	733	CYS
6	N	734	GLU
6	N	737	ASN
6	N	739	ASP
6	N	740	PHE
6	N	741	ASP
6	N	743	ASP
6	N	754	PHE
6	N	769	LEU
6	N	792	ILE
6	N	794	GLN
6	N	797	LYS
6	N	817	GLU
6	N	818	ARG
6	N	823	LEU
6	N	824	ASN
6	N	836	VAL
6	N	838	ARG
6	N	840	LYS
6	N	841	TYR
6	N	847	ASP
6	N	861	GLN
6	N	864	VAL
6	N	868	TYR
6	N	881	LEU

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Mol	Chain	Res	Type
6	N	888	GLU
6	N	897	TRP
6	N	902	LEU
6	N	907	GLU
6	N	913	ASP
6	N	914	LEU
6	N	921	ARG
6	N	930	LEU
6	N	939	PHE
6	N	947	ILE
6	N	951	ILE
6	N	952	ASP
6	N	953	ASP
6	N	968	ASP
6	N	976	GLN
6	N	982	PHE
6	N	983	LEU
6	N	985	ASP
6	N	988	ARG
6	N	1001	GLU
6	N	1017	PHE
6	N	1032	PRO
6	N	1034	GLN
6	N	1039	CYS
6	N	1041	LEU
6	N	1042	ARG
6	N	1046	GLN
6	N	1053	PHE
6	N	1060	SER
6	N	1062	ARG
6	N	1063	GLU
6	N	1070	TYR
6	N	1083	ASP
6	N	1088	THR
6	N	1093	TYR
6	N	1097	LYS
6	N	1098	LEU
6	N	1100	ASP
6	N	1109	GLU
6	N	1112	CYS
6	N	1115	THR
6	N	1116	ASN

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Mol	Chain	Res	Type
6	N	1129	THR
6	N	1130	ARG
6	N	1144	LEU
6	N	1151	ARG
6	N	1155	VAL
6	N	1160	LEU
6	N	1164	ARG
6	N	1166	LEU
6	N	1170	ASP
6	N	1179	GLU
6	N	1197	ARG
6	N	1198	TYR
6	N	1204	CYS
6	N	1207	TYR
6	N	1208	ASP
6	N	1211	MET
6	N	1213	ARG
6	N	1219	GLU
6	N	1228	SER
6	N	1232	PRO
6	N	1237	THR
6	N	1238	MET
6	N	1242	HIS
6	N	1251	ASP
6	N	1257	PRO
6	N	1262	LEU
6	N	1264	GLU
6	N	1271	LYS
6	N	1334	GLN
6	N	1337	GLU
6	N	1345	GLU
6	N	1348	LEU
6	N	1350	GLU
6	N	1380	GLU
6	N	1381	VAL
6	N	1383	ASP
6	N	1389	LEU
6	N	1391	GLU
6	N	1397	LYS
6	N	1412	LYS
6	N	1415	VAL
6	N	1418	LYS

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Mol	Chain	Res	Type
6	N	1422	MET
6	N	1429	LEU
6	N	1431	THR
6	N	1432	LYS
6	N	1433	SER
6	N	1440	PHE
6	N	1441	GLN
6	N	1452	ILE
6	N	1471	LEU
6	N	1472	ILE
6	N	1478	SER
6	N	1489	GLN
6	N	1492	LEU
7	O	26	ARG
7	O	30	LEU
7	O	43	GLU
7	O	46	PRO
7	O	48	MET
7	O	56	ASP
7	O	59	ASN
7	O	69	LEU
7	O	72	ARG
7	O	78	ASN
7	O	81	PRO
7	O	82	GLU
7	O	86	GLN
7	O	89	MET
7	O	94	PRO
7	O	96	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (154) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	91	ASN
4	A	124	ASN
4	A	163	ASN
4	A	180	GLN
4	A	221	HIS
4	B	81	ASN
4	B	95	GLN
4	B	124	ASN
4	B	128	HIS

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Mol	Chain	Res	Type
4	B	139	ASN
4	B	180	GLN
4	B	221	HIS
4	B	229	GLN
5	C	22	GLN
5	C	80	GLN
5	C	130	ASN
5	C	139	GLN
5	C	187	ASN
5	C	320	HIS
5	C	327	HIS
5	C	330	ASN
5	C	343	GLN
5	C	390	GLN
5	C	393	GLN
5	C	399	ASN
5	C	406	HIS
5	C	431	HIS
5	C	434	HIS
5	C	500	ASN
5	C	543	ASN
5	C	552	HIS
5	C	565	GLN
5	C	567	GLN
5	C	609	ASN
5	C	639	GLN
5	C	663	ASN
5	C	671	ASN
5	C	834	GLN
5	C	841	ASN
5	C	872	ASN
5	C	881	ASN
5	C	889	HIS
5	C	899	GLN
5	C	1019	GLN
5	C	1030	GLN
5	C	1050	GLN
5	C	1100	GLN
5	C	1107	ASN
6	D	143	ASN
6	D	166	GLN
6	D	463	GLN

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Mol	Chain	Res	Type
6	D	549	ASN
6	D	552	ASN
6	D	616	GLN
6	D	636	GLN
6	D	703	ASN
6	D	709	HIS
6	D	714	GLN
6	D	727	GLN
6	D	737	ASN
6	D	756	GLN
6	D	762	GLN
6	D	824	ASN
6	D	917	GLN
6	D	962	GLN
6	D	1005	GLN
6	D	1010	ASN
6	D	1014	ASN
6	D	1033	GLN
6	D	1103	HIS
6	D	1172	HIS
6	D	1227	GLN
6	D	1334	GLN
6	D	1359	GLN
6	D	1441	GLN
6	D	1465	ASN
6	D	1485	GLN
7	E	28	GLN
7	E	29	GLN
7	E	33	HIS
7	E	37	ASN
7	E	86	GLN
4	K	16	GLN
4	K	63	HIS
4	K	95	GLN
4	K	124	ASN
4	K	156	HIS
4	K	180	GLN
4	K	212	ASN
4	K	213	GLN
4	K	229	GLN
4	L	81	ASN
4	L	95	GLN

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Mol	Chain	Res	Type
4	L	124	ASN
4	L	227	ASN
5	M	31	GLN
5	M	91	GLN
5	M	139	GLN
5	M	204	GLN
5	M	374	ASN
5	M	393	GLN
5	M	406	HIS
5	M	543	ASN
5	M	552	HIS
5	M	556	ASN
5	M	565	GLN
5	M	567	GLN
5	M	575	GLN
5	M	609	ASN
5	M	633	GLN
5	M	639	GLN
5	M	671	ASN
5	M	704	HIS
5	M	829	GLN
5	M	841	ASN
5	M	872	ASN
5	M	881	ASN
5	M	889	HIS
5	M	899	GLN
5	M	1050	GLN
5	M	1064	ASN
5	M	1107	ASN
6	N	125	GLN
6	N	442	ASN
6	N	507	ASN
6	N	529	GLN
6	N	549	ASN
6	N	575	GLN
6	N	584	ASN
6	N	616	GLN
6	N	617	ASN
6	N	680	GLN
6	N	696	HIS
6	N	703	ASN
6	N	714	GLN

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Mol	Chain	Res	Type
6	N	727	GLN
6	N	737	ASN
6	N	744	GLN
6	N	756	GLN
6	N	824	ASN
6	N	845	ASN
6	N	861	GLN
6	N	906	GLN
6	N	976	GLN
6	N	1010	ASN
6	N	1014	ASN
6	N	1025	GLN
6	N	1033	GLN
6	N	1124	GLN
6	N	1202	GLN
6	N	1465	ASN
7	O	29	GLN
7	O	78	ASN
7	O	86	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	H	15/16 (93%)	10 (66%)	0
2	Y	15/16 (93%)	10 (66%)	0
All	All	30/32 (93%)	20 (66%)	0

All (20) 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	12	G
2	H	13	C
2	H	15	C
2	Y	2	A

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

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 10 ligands modelled in this entry, 8 are monoatomic - leaving 2 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	$\# Z > 2$
10	APC	D	3999	9	28,33,33	1.39	4 (14%)	28,52,52	1.89	7 (25%)
10	APC	N	4999	9	28,33,33	1.26	4 (14%)	28,52,52	1.88	6 (21%)

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
10	APC	D	3999	9	-	0/15/38/38	0/3/3/3
10	APC	N	4999	9	-	0/15/38/38	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	D	3999	APC	PB-O2B	-3.41	1.48	1.56
10	D	3999	APC	PA-O2A	-3.01	1.49	1.56
10	N	4999	APC	PB-O2B	-2.91	1.49	1.56
10	N	4999	APC	PA-O2A	-2.69	1.49	1.56
10	D	3999	APC	PG-O3B	2.03	1.63	1.60
10	N	4999	APC	PA-O5'	2.74	1.60	1.57
10	N	4999	APC	PB-O3B	3.06	1.61	1.58
10	D	3999	APC	PB-O3B	3.46	1.62	1.58

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	N	4999	APC	C1'-N9-C4	-6.11	116.08	126.64
10	D	3999	APC	C1'-N9-C4	-5.74	116.72	126.64
10	N	4999	APC	PG-O3B-PB	-3.66	119.47	132.38
10	D	3999	APC	PG-O3B-PB	-3.61	119.65	132.38
10	D	3999	APC	O2'-C2'-C3'	-2.91	102.51	111.83
10	D	3999	APC	C2'-C3'-C4'	2.35	107.20	102.62
10	N	4999	APC	C2'-C3'-C4'	2.41	107.31	102.62
10	D	3999	APC	O2B-PB-O1B	2.89	119.75	110.09
10	N	4999	APC	O2B-PB-O1B	2.94	119.93	110.09
10	N	4999	APC	O2A-PA-O1A	2.95	119.98	110.09
10	D	3999	APC	O2A-PA-O1A	2.99	120.11	110.09
10	N	4999	APC	C5-C6-N6	3.14	126.87	120.47
10	D	3999	APC	C5-C6-N6	3.31	127.21	120.47

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	D	3999	APC	2	0
10	N	4999	APC	2	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	G	23/23 (100%)	-0.73	0 100 100	22, 46, 76, 79	0
1	X	23/23 (100%)	-0.67	0 100 100	21, 38, 71, 90	0
2	H	16/16 (100%)	-0.58	0 100 100	36, 56, 100, 102	0
2	Y	16/16 (100%)	-0.62	0 100 100	21, 73, 101, 103	0
3	I	13/14 (92%)	-0.89	0 100 100	49, 65, 74, 85	0
3	Z	13/14 (92%)	-0.86	0 100 100	54, 67, 80, 81	0
4	A	229/315 (72%)	-0.62	0 100 100	41, 66, 86, 94	0
4	B	229/315 (72%)	-0.55	2 (0%) 84 61	43, 70, 85, 101	0
4	K	229/315 (72%)	-0.62	1 (0%) 92 77	41, 65, 81, 93	0
4	L	229/315 (72%)	-0.60	0 100 100	38, 68, 80, 90	0
5	C	1119/1119 (100%)	-0.60	3 (0%) 93 82	26, 64, 86, 101	0
5	M	1119/1119 (100%)	-0.58	6 (0%) 90 74	25, 65, 89, 109	0
6	D	1264/1524 (82%)	-0.65	5 (0%) 92 77	23, 61, 83, 100	0
6	N	1264/1524 (82%)	-0.66	5 (0%) 92 77	26, 60, 84, 100	0
7	E	95/99 (95%)	-0.66	0 100 100	35, 59, 74, 82	0
7	O	95/99 (95%)	-0.67	0 100 100	45, 66, 80, 84	0
All	All	5976/6850 (87%)	-0.62	22 (0%) 92 77	21, 64, 86, 109	0

All (22) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
6	D	416	ALA	4.9
4	B	147	GLY	4.3
6	D	391	ALA	3.5
6	N	427	VAL	3.2
6	D	192	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
6	D	392	SER	3.0
6	N	416	ALA	2.8
6	N	391	ALA	2.8
5	M	936	VAL	2.7
6	N	421	LEU	2.7
5	C	1001	VAL	2.6
5	C	185	LYS	2.6
4	B	148	VAL	2.4
6	N	177	ALA	2.3
5	M	306	THR	2.3
6	D	619	LEU	2.3
5	M	174	LEU	2.2
5	M	418	LEU	2.2
5	C	309	TYR	2.1
5	M	172	ILE	2.1
5	M	183	SER	2.1
4	K	44	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
8	ZN	D	6112	1/1	0.99	0.14	0.22	59,59,59,59	0
10	APC	N	4999	31/31	0.98	0.16	0.22	45,49,51,54	0
10	APC	D	3999	31/31	0.97	0.16	0.21	41,49,52,54	0
8	ZN	N	7112	1/1	1.00	0.13	-0.80	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
8	ZN	N	5058	1/1	0.97	0.09	-1.18	66,66,66,66	0
9	MG	N	9001	1/1	0.99	0.11	-1.25	21,21,21,21	0
9	MG	D	8001	1/1	0.99	0.10	-1.42	23,23,23,23	0
9	MG	D	8002	1/1	0.99	0.09	-1.89	25,25,25,25	0
8	ZN	D	4058	1/1	0.99	0.09	-1.91	66,66,66,66	0
9	MG	N	9002	1/1	0.98	0.09	-	23,23,23,23	0

6.5 Other polymers [i](#)

There are no such residues in this entry.