



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 7, 2023 – 10:58 AM EDT

PDB ID : 4G7O
Title : Crystal structure of Thermus thermophilus transcription initiation complex containing 2 nt of RNA
Authors : Zhang, Y.; Ebright, R.H.
Deposited on : 2012-07-20
Resolution : 2.99 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.35
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35

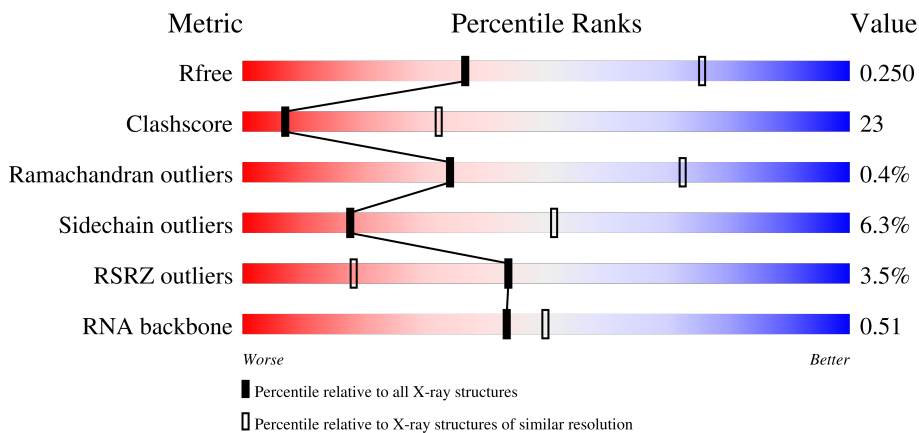
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.99 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (3.30-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	315	 44% 26% • 28%
1	B	315	 41% 26% • 30%
1	K	315	 48% 23% • 28%
1	L	315	 43% 26% • 29%

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Mol	Chain	Length	Quality of chain
2	C	1119	<p>3% 59% 38%</p>
2	M	1119	<p>7% 56% 40%</p>
3	D	1524	<p>3% 59% 34%</p>
3	N	1524	<p>4% 56% 38%</p>
4	E	99	<p>3% 68% 25% 5%</p>
4	O	99	<p>3% 71% 23% 5%</p>
5	F	443	<p>0% 51% 25% 22%</p>
5	P	443	<p>4% 46% 28% 22%</p>
6	G	21	<p>48% 19% 10% 24%</p>
6	Q	21	<p>33% 43% 24%</p>
7	H	27	<p>52% 33% 11%</p>
7	R	27	<p>52% 37% 11%</p>
8	I	2	<p>100%</p>
8	S	2	<p>100%</p>

2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 57231 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	226	Total	C	N	O	S	0	0	0
			1782	1138	310	332	2			
1	B	222	Total	C	N	O	S	0	0	0
			1750	1118	304	326	2			
1	K	226	Total	C	N	O	S	0	0	0
			1782	1138	310	332	2			
1	L	225	Total	C	N	O	S	0	0	0
			1773	1133	308	330	2			

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	C	1111	Total	C	N	O	S	0	0	0
			8770	5548	1564	1634	24			
2	M	1111	Total	C	N	O	S	0	0	0
			8770	5548	1564	1634	24			

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	D	1482	Total	C	N	O	S	0	0	0
			11704	7421	2059	2189	35			
3	N	1489	Total	C	N	O	S	0	0	0
			11746	7446	2066	2198	36			

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	E	94	Total	C	N	O	S	0	0	0
			761	486	132	139	4			
4	O	94	Total	C	N	O	S	0	0	0
			761	486	132	139	4			

- Molecule 5 is a protein called RNA polymerase sigma factor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	F	346	Total	C	N	O	S	0	0	0
			2807	1770	509	524	4			
5	P	347	Total	C	N	O	S	0	0	0
			2814	1774	510	526	4			

There are 40 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	-19	MET	-	expression tag	UNP Q5SKW1
F	-18	GLY	-	expression tag	UNP Q5SKW1
F	-17	SER	-	expression tag	UNP Q5SKW1
F	-16	SER	-	expression tag	UNP Q5SKW1
F	-15	HIS	-	expression tag	UNP Q5SKW1
F	-14	HIS	-	expression tag	UNP Q5SKW1
F	-13	HIS	-	expression tag	UNP Q5SKW1
F	-12	HIS	-	expression tag	UNP Q5SKW1
F	-11	HIS	-	expression tag	UNP Q5SKW1
F	-10	HIS	-	expression tag	UNP Q5SKW1
F	-9	SER	-	expression tag	UNP Q5SKW1
F	-8	SER	-	expression tag	UNP Q5SKW1
F	-7	GLY	-	expression tag	UNP Q5SKW1
F	-6	LEU	-	expression tag	UNP Q5SKW1
F	-5	VAL	-	expression tag	UNP Q5SKW1
F	-4	PRO	-	expression tag	UNP Q5SKW1
F	-3	ARG	-	expression tag	UNP Q5SKW1
F	-2	GLY	-	expression tag	UNP Q5SKW1
F	-1	SER	-	expression tag	UNP Q5SKW1
F	0	HIS	-	expression tag	UNP Q5SKW1
P	-19	MET	-	expression tag	UNP Q5SKW1
P	-18	GLY	-	expression tag	UNP Q5SKW1
P	-17	SER	-	expression tag	UNP Q5SKW1
P	-16	SER	-	expression tag	UNP Q5SKW1
P	-15	HIS	-	expression tag	UNP Q5SKW1
P	-14	HIS	-	expression tag	UNP Q5SKW1
P	-13	HIS	-	expression tag	UNP Q5SKW1
P	-12	HIS	-	expression tag	UNP Q5SKW1
P	-11	HIS	-	expression tag	UNP Q5SKW1
P	-10	HIS	-	expression tag	UNP Q5SKW1
P	-9	SER	-	expression tag	UNP Q5SKW1
P	-8	SER	-	expression tag	UNP Q5SKW1
P	-7	GLY	-	expression tag	UNP Q5SKW1
P	-6	LEU	-	expression tag	UNP Q5SKW1

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Chain	Residue	Modelled	Actual	Comment	Reference
P	-5	VAL	-	expression tag	UNP Q5SKW1
P	-4	PRO	-	expression tag	UNP Q5SKW1
P	-3	ARG	-	expression tag	UNP Q5SKW1
P	-2	GLY	-	expression tag	UNP Q5SKW1
P	-1	SER	-	expression tag	UNP Q5SKW1
P	0	HIS	-	expression tag	UNP Q5SKW1

- Molecule 6 is a DNA chain called 5'-D(*CP*CP*T*GP*CP*AP*TP*CP*CP*GP*TP*GP*AP*GP*TP*CP*GP*AP*GP*GP*G)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
6	G	16	Total	C	N	O	P	0	0	0
			328	156	63	94	15			
6	Q	16	Total	C	N	O	P	0	0	0
			328	156	63	94	15			

- Molecule 7 is a DNA chain called 5'-D(*TP*AP*TP*AP*AP*TP*GP*GP*GP*AP*GP*C P*TP*GP*TP*CP*AP*CP*GP*GP*AP*TP*GP*CP*AP*GP*G)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
7	H	24	Total	C	N	O	P	0	0	0
			495	236	94	142	23			
7	R	24	Total	C	N	O	P	0	0	0
			495	236	94	142	23			

- Molecule 8 is a RNA chain called 5'-R(*GP*A)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
8	I	2	Total	C	N	O	P	0	0	0
			42	20	10	11	1			
8	S	2	Total	C	N	O	P	0	0	0
			42	20	10	11	1			

- Molecule 9 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 10 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
10	D	2	Total Mg 2 2	0	0
10	K	1	Total Mg 1 1	0	0
10	N	2	Total Mg 2 2	0	0

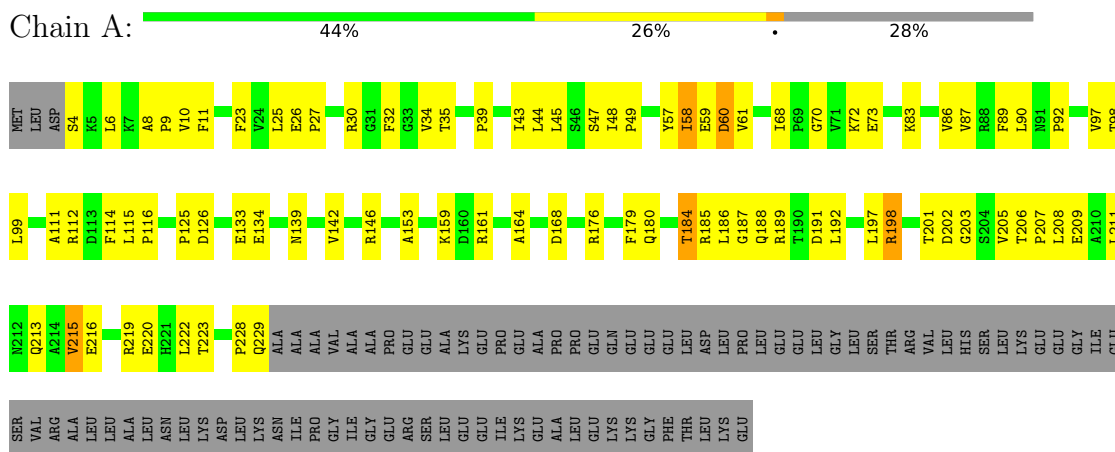
- Molecule 11 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
11	A	14	Total O 14 14	0	0
11	B	3	Total O 3 3	0	0
11	C	53	Total O 53 53	0	0
11	D	58	Total O 58 58	0	0
11	E	8	Total O 8 8	0	0
11	F	10	Total O 10 10	0	0
11	G	5	Total O 5 5	0	0
11	H	2	Total O 2 2	0	0
11	K	4	Total O 4 4	0	0
11	L	3	Total O 3 3	0	0
11	M	33	Total O 33 33	0	0
11	N	52	Total O 52 52	0	0
11	O	5	Total O 5 5	0	0
11	P	16	Total O 16 16	0	0
11	Q	2	Total O 2 2	0	0
11	R	3	Total O 3 3	0	0
11	S	1	Total O 1 1	0	0

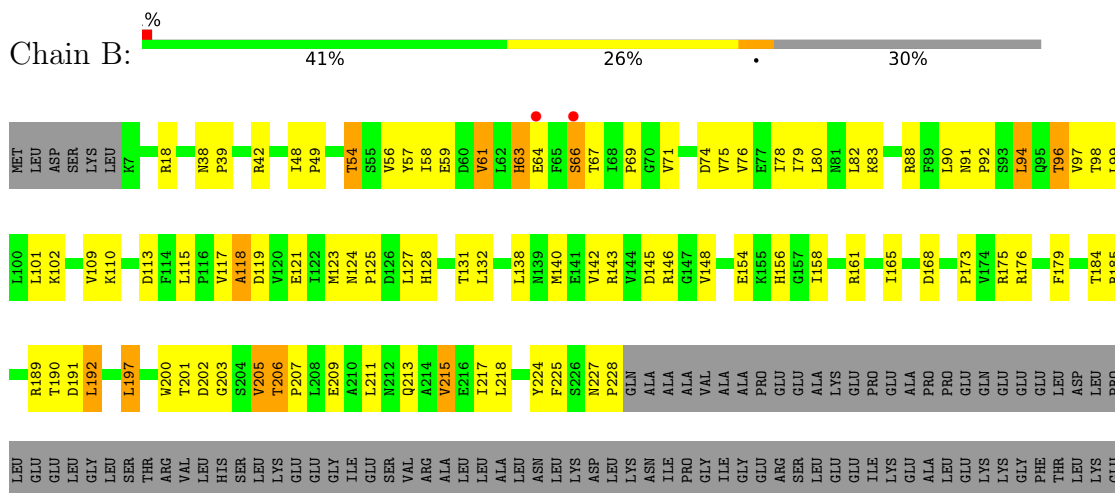
3 Residue-property plots [i](#)

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

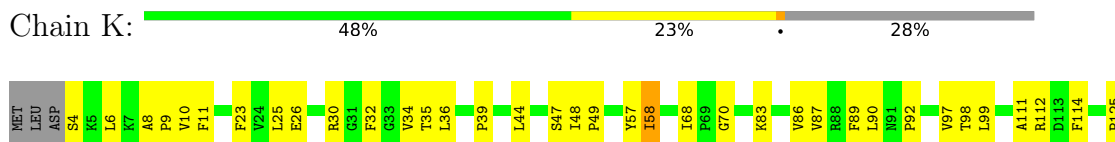
- Molecule 1: DNA-directed RNA polymerase subunit alpha

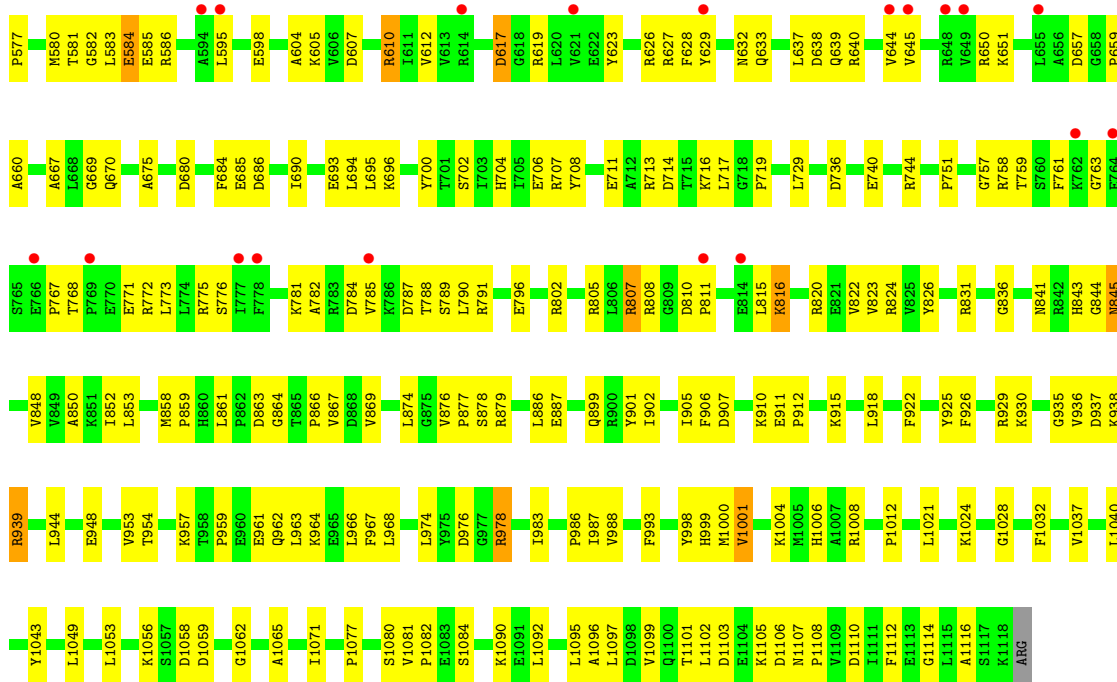


- Molecule 1: DNA-directed RNA polymerase subunit alpha

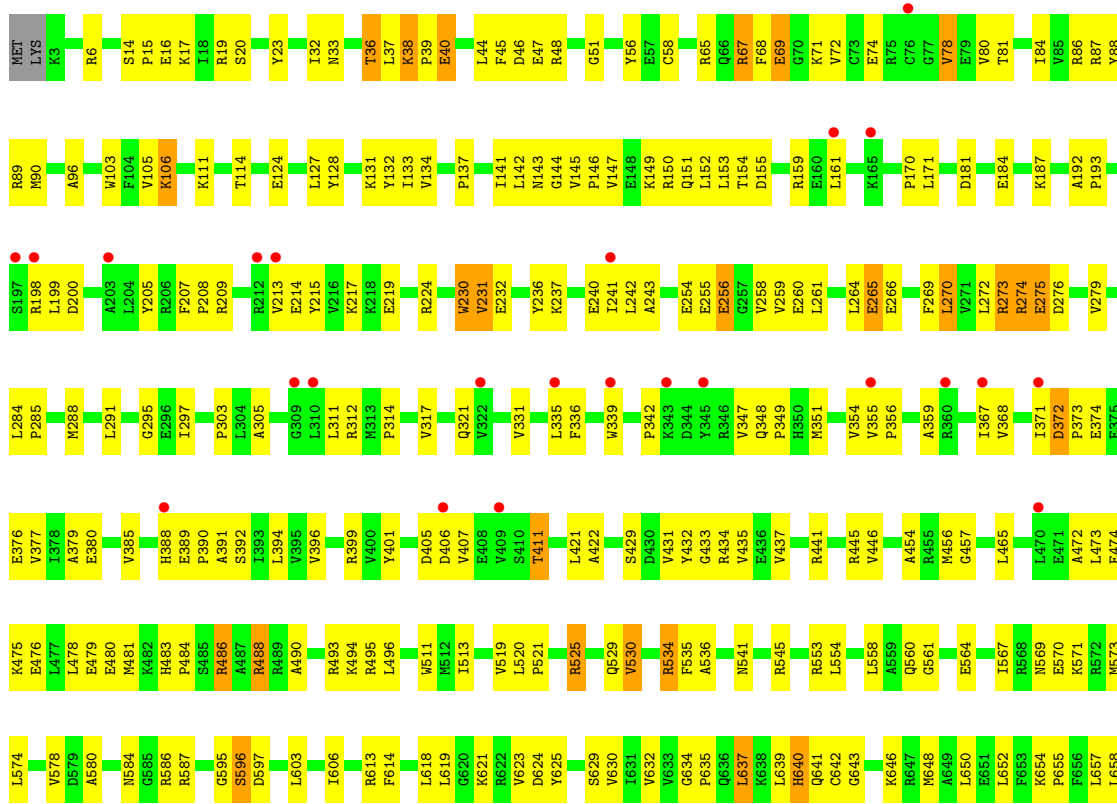


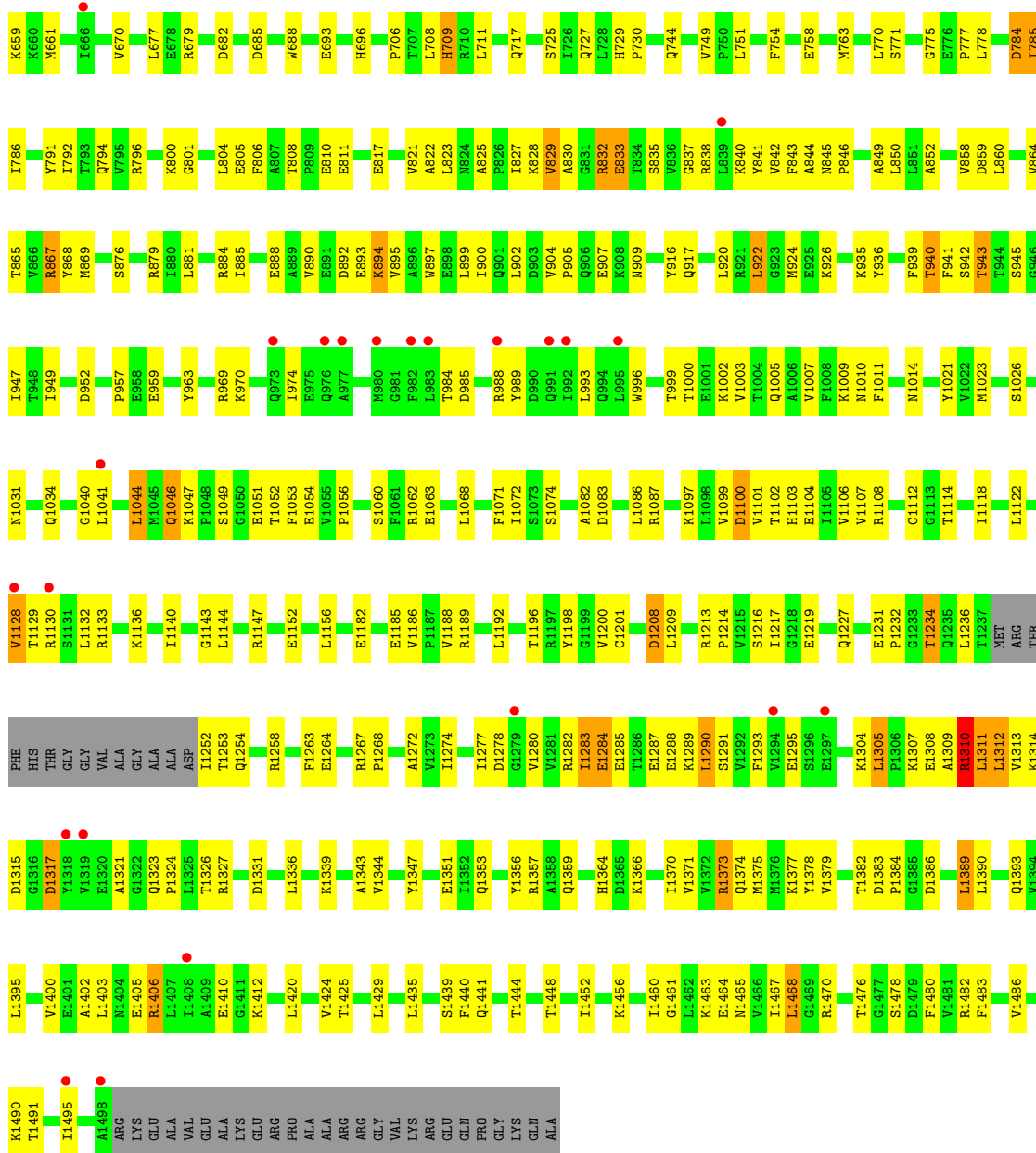
- Molecule 1: DNA-directed RNA polymerase subunit alpha



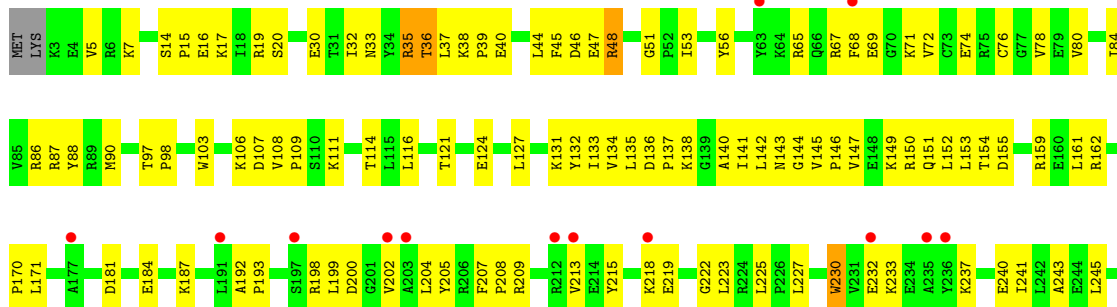


• Molecule 3: DNA-directed RNA polymerase subunit beta'

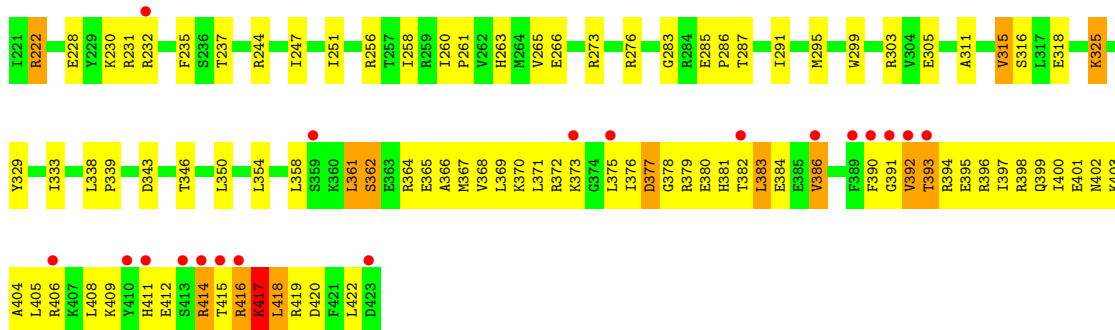




• Molecule 3: DNA-directed RNA polymerase subunit beta'



V1424	S1439	F1440	Q1441	T1444	T1448	A1452	L1459	L1462	K1463	A1464	M1465	V1466	L1467	G1468	R1470	L1472	P1473	G1477	S1478	A1479	F1480	V1481	R1482	F1483	V1486	V1487	T1491	L1492	K1493	A1494	I1495	E1496	E1497	A1498	ARG	LYS	GLU	ALA	VAL	GLU	ALA	LYS	GLU	ARG	PRO	ALA	ALA				
V1344	Y1347	E1351	I1352	Q1353	Y1356	R1357	A1358	Q1359	K1362	K1366	H1367	I1368	V1371	V1372	R1373	Q1374	M1375	E1380	V1381	T1382	D1383	P1384	G1385	D1386	L1389	L1390	Q1393	V1394	L1395	V1400	L1403	M1404	E1405	R1406	L1407	I1408	A1409	E1410	G1411	K1412	T1413	P1414	V1415	M1416	V1417	K1418	F1419	L1420			
I1274	S1275	E1276	I1277	G1278	V1280	V1281	R1282	E1283	A1284	E1285	T1286	E1287	E1288	K1289	L1290	S1291	V1292	F1293	V1294	Q1227	E1231	P1232	G1233	T1234	T1237	M1238	ARG	PHE	HIS	THR	GLY	V1246	G1248	A1249	A1250	D1251	I1252	T1253	Q1254	G1255	L1256	P1257	R1258	V1259	I1260	E1261	L1262	F1263	E1264	R1267	P1268
L1422	F1426	S1429	V1431	Y1432	G1433	V1434	V1435	H1436	V1437	D1438	R1441	R1445	V1446	V1447	Y1450	D1451	L1452	D1453	A1454	R1455	M1456	C1457	L1468	A1472	L1473	E1474	K1475	E1476	L1477	L1478	E1479	E1480	N1481	K1482	H1483	P1484	S1485	R1486	T1487	V1488	V1489	B1488	P1489	G1491	A1492	K1494					
L333	T334	L337	E338	K339	V347	Q348	P349	H350	K351	V352	V353	V354	P356	A359	I367	V368	I371	D372	P373	E376	T378	F283	L284	F285	V286	V298	E299	K300	G301	P303	E306	L310	L311	R312	M313	P314	R315	Q316	V317	R318	A319	E323	T411	C412	H413	R414	L421				
P599	L600	R601	S602	L603	I606	R613	F614	V618	H619	L620	P621	R625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625			
Q680	R681	D682	D685	M688	E693	F614	P706	L618	L619	G620	K621	R622	L623	D624	Y625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625	V630	R634	F635	A636	V637	V638	L639	K621	R622	L623	D624	Y625
G801	L804	E805	F806	A807	T808	P809	E811	E817	E820	V821	A822	L823	D824	Y825	V830	R834	F835	A836	V837	V838	L839	K821	R822	L823	D824	Y825	V830	R834	F835	A836	V837	V838	L839	K821	R822	L823	D824	Y825	V830	R834	F835	A836	V837	V838	L839	K821	R822	L823	D824	Y825	
R884	I885	E888	A889	V890	E891	D892	K894	M897	L899	I900	Q901	L902	D903	Y904	P905	Q906	E907	K908	N909	Y916	Q917	L920	R921	V922	L922	K926	L931	K935	Y936	P939	F941	S942	T943	T944	G945	S946	I947	T948	I949	D952	M959	P957	G958	E959	F963	L980	K970				
L971	I974	Y978	T984	D986	R988	Y989	S1074	L993	M996	L1006	T999	Y1093	K1097	L1098	V1099	D1100	V1101	V1102	H1103	V1107	R1108	F1123	D1126	E1127	T1129	R1130	S1131	L1132	R1133	R1134	R1135	K1136	R1137	I1140	G1143	R1147	L1156	R1159	E1051	T1052	F1053	E1054	V1055	E1182							
S1060	F1061	R1062	L1068	F1071	I1072	S1073	A1082	D1083	L1086	Y1093	K1097	L1098	V1099	D1100	V1101	V1102	H1103	V1107	R1108	F1123	D1126	E1127	T1129	R1130	S1131	L1132	R1133	R1134	R1135	K1136	R1137	I1140	G1143	R1147	L1156	R1159	E1051	T1052	F1053	E1054	V1055	E1182									
V1188	R1189	C1194	Y1198	G1199	V1200	C1204	Y1205	D1208	R1213	P1214	V1215	E1219	Q1227	E1231	P1232	G1233	T1234	T1237	M1238	ARG	PHE	HIS	THR	GLY	V1246	G1248	A1249	A1250	D1251	I1252	T1253	Q1254	G1255	L1256	P1257	R1258	V1259	I1260	E1261	L1262	F1263	E1264	R1267	P1268							
I1274	S1275	E1276	I1277	G1278	V1280	V1281	R1282	E1283	A1284	E1285	T1286	E1287	E1288	K1289	L1290	S1291	V1292	F1293	V1294	Q1227	E1231	P1232	G1233	T1234	T1237	M1238	ARG	PHE	HIS	THR	GLY	V1246	G1248	A1249	A1250	D1251	I1252	T1253	Q1254	G1255	L1256	P1257	R1258	V1259	I1260	E1261	L1262	F1263	E1264	R1267	P1268
V1344	Y1347	E1351	I1352	Q1353	Y1356	R1357	A1358	Q1359	K1362	K1366	H1367	I1368	V1371	V1372	R1373	Q1374	M1375	E1380	V1381	T1382	D1383	P1384	G1385	D1386	L1389	L1390	Q1393	V1394	L1395	V1400	L1403	M1404	E1405	R1406	L1407	I1408	A1409	E1410	G1411	K1412	T1413	P1414	V1415	M1416	V1417	K1418	F1419	L1420			



- Molecule 6: 5'-D(*CP*CP*T*GP*CP*AP*TP*CP*CP*GP*TP*GP*AP*GP*TP*CP*GP*AP*GP*GP*G)-3'

Chain G: 48% 19% 10% 24%



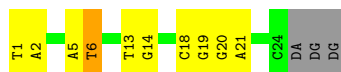
- Molecule 6: 5'-D(*CP*CP*T*GP*CP*AP*TP*CP*CP*GP*TP*GP*AP*GP*TP*CP*GP*AP*GP*GP*G)-3'

Chain Q: 33% 43% 24%



- Molecule 7: 5'-D(*TP*AP*TP*AP*AP*TP*GP*GP*GP*AP*GP*CP*TP*GP*TP*CP*AP*CP*GP*GP*AP*TP*GP*CP*AP*GP*G)-3'

Chain H: 52% 33% 11%



- Molecule 7: 5'-D(*TP*AP*TP*AP*AP*TP*GP*GP*GP*AP*GP*CP*TP*GP*TP*CP*AP*CP*GP*GP*AP*TP*GP*CP*AP*GP*G)-3'

Chain R: 52% 37% 11%



- Molecule 8: 5'-R(*GP*A)-3'

Chain I: 100%

There are no outlier residues recorded for this chain.

- Molecule 8: 5'-R(*GP*A)-3'

Chain S:  100%

There are no outlier residues recorded for this chain.

4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	185.48Å 103.88Å 297.34Å 90.00° 98.23° 90.00°	Depositor
Resolution (Å)	46.61 – 2.99 49.59 – 2.99	Depositor EDS
% Data completeness (in resolution range)	95.6 (46.61-2.99) 95.5 (49.59-2.99)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	0.17	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.99 (at 3.01Å)	Xtrriage
Refinement program	PHENIX (phenix.refine: 1.7.3_928)	Depositor
R, R_{free}	0.205 , 0.247 0.207 , 0.250	Depositor DCC
R_{free} test set	1946 reflections (0.88%)	wwPDB-VP
Wilson B-factor (Å ²)	65.4	Xtrriage
Anisotropy	0.459	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 42.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	57231	wwPDB-VP
Average B, all atoms (Å ²)	77.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 36.33 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 5.0787e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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: MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.29	0/1814	0.50	0/2466
1	B	0.27	0/1782	0.49	0/2424
1	K	0.27	0/1814	0.49	0/2466
1	L	0.28	0/1805	0.51	0/2454
2	C	0.30	0/8937	0.49	0/12087
2	M	0.31	0/8937	0.50	0/12087
3	D	0.31	1/11910 (0.0%)	0.49	0/16105
3	N	0.31	1/11952 (0.0%)	0.50	0/16162
4	E	0.28	0/775	0.44	0/1045
4	O	0.26	0/775	0.44	0/1045
5	F	0.28	0/2852	0.46	0/3837
5	P	0.28	0/2859	0.45	0/3847
6	G	0.55	0/368	1.09	2/567 (0.4%)
6	Q	0.47	0/368	1.05	0/567
7	H	0.51	0/556	1.26	3/858 (0.3%)
7	R	0.52	0/556	1.23	2/858 (0.2%)
8	I	0.35	0/47	0.68	0/72
8	S	0.25	0/47	0.55	0/72
All	All	0.31	2/58154 (0.0%)	0.53	7/79019 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	M	0	1
5	P	0	1
All	All	0	2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	N	599	PRO	C-N	5.34	1.46	1.34
3	D	105	VAL	C-N	5.13	1.45	1.34

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	R	17	DA	O4'-C1'-N9	6.77	112.74	108.00
7	H	6	DT	O4'-C1'-N1	-6.45	103.49	108.00
7	H	20	DG	C1'-O4'-C4'	-6.17	103.93	110.10
6	G	16	DC	O4'-C4'-C3'	-5.77	102.19	104.50
7	R	20	DG	C1'-O4'-C4'	-5.40	104.70	110.10
6	G	15	DT	O4'-C4'-C3'	-5.27	102.39	104.50
7	H	21	DA	O4'-C1'-N9	5.21	111.65	108.00

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	M	104	ASP	Peptide
5	P	82	ARG	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1782	0	1834	81	0
1	B	1750	0	1797	92	0
1	K	1782	0	1834	60	0
1	L	1773	0	1826	76	0
2	C	8770	0	8872	436	0
2	M	8770	0	8871	518	2
3	D	11704	0	11934	544	1
3	N	11746	0	11974	664	0
4	E	761	0	778	26	0
4	O	761	0	778	25	0
5	F	2807	0	2882	111	0
5	P	2814	0	2888	168	1
6	G	328	0	181	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	Q	328	0	181	6	0
7	H	495	0	272	8	0
7	R	495	0	272	14	0
8	I	42	0	23	0	0
8	S	42	0	23	0	0
9	D	2	0	0	0	0
9	N	2	0	0	0	0
10	D	2	0	0	0	0
10	K	1	0	0	0	0
10	N	2	0	0	0	0
11	A	14	0	0	0	0
11	B	3	0	0	0	0
11	C	53	0	0	0	0
11	D	58	0	0	0	0
11	E	8	0	0	0	0
11	F	10	0	0	0	0
11	G	5	0	0	0	0
11	H	2	0	0	0	0
11	K	4	0	0	0	0
11	L	3	0	0	0	0
11	M	33	0	0	1	0
11	N	52	0	0	1	0
11	O	5	0	0	0	0
11	P	16	0	0	0	0
11	Q	2	0	0	0	0
11	R	3	0	0	0	0
11	S	1	0	0	0	0
All	All	57231	0	57220	2617	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (2617) 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:M:157:ARG:NH1	2:M:176:VAL:HG11	1.23	1.47
2:C:64:LEU:N	2:C:103:LYS:NZ	1.61	1.47
2:M:64:LEU:N	2:M:103:LYS:NZ	1.64	1.45
2:M:107:LEU:HD12	2:M:108:ILE:N	1.11	1.40
2:M:740:GLU:OE1	2:M:805:ARG:NH1	1.57	1.36
1:B:58:ILE:HB	1:B:61:VAL:CG1	1.56	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:219:GLU:CG	3:D:339:TRP:HH2	1.41	1.34
2:M:157:ARG:NH1	2:M:176:VAL:CG1	1.88	1.33
3:D:33:ASN:OD1	3:D:36:THR:HG22	1.26	1.32
3:N:1283:ILE:CG2	3:N:1315:ASP:OD1	1.84	1.25
2:C:157:ARG:NH1	2:C:176:VAL:HG11	1.52	1.24
2:C:229:MET:O	2:C:230:ARG:CG	1.84	1.23
2:M:157:ARG:HH11	2:M:176:VAL:CG1	1.45	1.23
3:N:219:GLU:CB	3:N:339:TRP:HH2	1.50	1.22
3:N:219:GLU:CG	3:N:339:TRP:HH2	1.51	1.22
2:C:740:GLU:OE1	2:C:805:ARG:NH1	1.73	1.21
2:M:229:MET:HE3	2:M:233:GLU:O	1.07	1.21
2:C:64:LEU:N	2:C:103:LYS:HZ2	1.21	1.20
3:N:835:SER:HB3	3:N:838:ARG:NE	1.55	1.20
3:N:835:SER:CB	3:N:838:ARG:HE	1.55	1.20
3:N:1283:ILE:HG23	3:N:1315:ASP:CG	1.60	1.20
2:M:231:PRO:HG2	2:M:232:GLU:OE2	1.44	1.18
2:M:229:MET:CE	2:M:233:GLU:O	1.90	1.18
3:N:1290:LEU:CG	3:N:1307:LYS:HE2	1.73	1.17
2:C:108:ILE:HD12	2:C:108:ILE:O	1.45	1.17
3:D:256:GLU:O	3:D:274:ARG:NH1	1.77	1.17
3:N:1283:ILE:HG23	3:N:1315:ASP:OD1	1.39	1.17
2:M:105:THR:CG2	2:M:107:LEU:HB3	1.74	1.17
3:D:894:LYS:HD2	3:D:894:LYS:N	1.49	1.16
3:D:1305:LEU:HD23	3:D:1305:LEU:N	1.55	1.16
1:A:4:SER:O	1:A:189:ARG:NH2	1.79	1.16
3:N:1305:LEU:N	3:N:1305:LEU:HD23	1.56	1.15
2:M:229:MET:CE	2:M:233:GLU:C	2.15	1.15
2:M:107:LEU:CD1	2:M:108:ILE:N	2.08	1.15
2:C:229:MET:O	2:C:230:ARG:HG2	0.99	1.14
2:M:182:VAL:CG2	2:M:193:LEU:HB3	1.75	1.14
3:N:219:GLU:CG	3:N:339:TRP:CH2	2.31	1.14
3:D:219:GLU:HG3	3:D:339:TRP:HH2	1.11	1.13
3:N:1283:ILE:CG2	3:N:1315:ASP:CG	2.16	1.13
2:M:105:THR:HG21	2:M:107:LEU:HB3	1.29	1.12
2:C:182:VAL:CG2	2:C:193:LEU:HB3	1.79	1.12
2:M:64:LEU:N	2:M:103:LYS:HZ2	1.25	1.12
2:M:172:ILE:HG13	2:M:186:VAL:HG22	1.21	1.11
1:B:58:ILE:HB	1:B:61:VAL:HG13	1.19	1.11
3:D:1283:ILE:H	3:D:1283:ILE:CD1	1.54	1.11
3:N:219:GLU:HB2	3:N:339:TRP:CH2	1.86	1.11
3:D:219:GLU:CG	3:D:339:TRP:CH2	2.34	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:416:ARG:O	5:P:417:LYS:HB3	1.44	1.10
3:N:1310:ARG:HD3	3:N:1327:ARG:NH1	1.65	1.10
2:M:198:ARG:HE	2:M:230:ARG:HA	1.13	1.10
3:N:1283:ILE:O	3:N:1283:ILE:HD13	1.49	1.10
5:F:205:ARG:HH11	5:F:205:ARG:CG	1.64	1.09
2:M:229:MET:O	2:M:230:ARG:HG2	1.51	1.09
2:M:182:VAL:HG21	2:M:193:LEU:HB3	1.32	1.09
2:M:229:MET:HE3	2:M:233:GLU:C	1.72	1.08
3:N:32:ILE:CG1	5:P:258:ILE:HD13	1.82	1.08
3:N:894:LYS:H	3:N:894:LYS:HD2	1.14	1.08
2:C:157:ARG:NH1	2:C:176:VAL:CG1	2.16	1.08
3:N:1290:LEU:HG	3:N:1307:LYS:HE2	1.13	1.08
3:N:1310:ARG:CD	3:N:1327:ARG:HH11	1.67	1.08
5:F:205:ARG:HH11	5:F:205:ARG:HG2	0.96	1.07
1:B:58:ILE:CB	1:B:61:VAL:CG1	2.32	1.07
3:D:890:VAL:HB	3:D:922:LEU:CD1	1.84	1.07
2:M:105:THR:HG22	2:M:107:LEU:H	0.94	1.07
3:N:1238:MET:C	3:N:1253:THR:OG1	1.92	1.07
3:N:124:GLU:OE2	3:N:587:ARG:NH2	1.89	1.06
2:C:182:VAL:HG21	2:C:193:LEU:HB3	1.38	1.06
2:M:229:MET:HG2	2:M:233:GLU:HG2	1.35	1.06
3:D:1283:ILE:HD12	3:D:1283:ILE:N	1.55	1.06
5:P:417:LYS:HG3	5:P:418:LEU:H	1.02	1.05
5:P:231:ARG:O	5:P:232:ARG:HG3	1.53	1.05
2:M:64:LEU:HD22	2:M:100:LEU:HD11	1.33	1.05
3:D:274:ARG:HH11	3:D:274:ARG:HG3	0.92	1.05
3:D:894:LYS:H	3:D:894:LYS:CD	1.62	1.05
2:M:172:ILE:HG13	2:M:186:VAL:CG2	1.86	1.05
2:M:167:LYS:O	2:M:168:ARG:HD2	1.57	1.05
3:N:219:GLU:CB	3:N:339:TRP:CH2	2.38	1.04
3:N:32:ILE:HG13	5:P:258:ILE:HD13	1.33	1.04
3:D:219:GLU:HG3	3:D:339:TRP:CH2	1.92	1.04
3:D:1304:LYS:C	3:D:1305:LEU:HD23	1.77	1.04
5:P:417:LYS:HG3	5:P:418:LEU:N	1.71	1.04
3:D:67:ARG:NH1	3:D:67:ARG:HB2	1.71	1.03
3:D:1310:ARG:C	3:D:1311:LEU:HD23	1.78	1.03
3:N:46:ASP:OD1	3:N:48:ARG:N	1.91	1.03
1:A:57:TYR:CD1	1:A:161:ARG:HD2	1.94	1.03
3:D:33:ASN:OD1	3:D:36:THR:CG2	2.05	1.03
3:N:835:SER:HB3	3:N:838:ARG:HE	0.88	1.02
1:B:58:ILE:HB	1:B:61:VAL:HG11	1.38	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:260:GLU:OE1	3:N:273:ARG:NH1	1.92	1.02
3:N:890:VAL:HB	3:N:922:LEU:HD13	1.40	1.02
2:C:230:ARG:HB2	2:C:231:PRO:HD2	1.39	1.01
2:M:179:ASN:OD1	2:M:180:GLY:N	1.93	1.01
2:C:154:ARG:HH11	2:C:154:ARG:HG2	0.84	1.00
1:K:201:THR:HG22	1:K:203:GLY:H	1.27	1.00
2:C:154:ARG:HG2	2:C:154:ARG:NH1	1.65	1.00
2:M:154:ARG:HG2	2:M:154:ARG:HH11	0.84	1.00
3:D:1312:LEU:CD2	3:D:1327:ARG:HG2	1.92	0.99
5:F:281:GLU:HG2	5:F:282:LEU:HD23	1.40	0.99
1:B:58:ILE:CB	1:B:61:VAL:HG11	1.91	0.99
5:F:205:ARG:HG2	5:F:205:ARG:NH1	1.70	0.99
2:M:105:THR:HG22	2:M:107:LEU:N	1.78	0.99
3:D:1311:LEU:HD23	3:D:1311:LEU:N	1.78	0.99
2:M:628:PHE:H	2:M:638:ASP:HB3	1.26	0.98
2:C:108:ILE:HD12	2:C:108:ILE:C	1.83	0.98
3:N:595:GLY:O	3:N:597:ASP:OD2	1.80	0.98
2:C:164:PRO:HD2	2:C:171:TRP:CD1	1.99	0.98
1:A:201:THR:HG22	1:A:203:GLY:H	1.26	0.98
1:A:184:THR:HG22	1:A:192:LEU:CB	1.94	0.98
3:N:1254:GLN:HB3	3:N:1258:ARG:HB2	1.46	0.98
2:M:167:LYS:C	2:M:168:ARG:HD2	1.83	0.97
3:D:124:GLU:OE2	3:D:587:ARG:NH2	1.96	0.97
3:N:1290:LEU:HG	3:N:1307:LYS:CE	1.94	0.97
2:C:154:ARG:HH11	2:C:154:ARG:CG	1.76	0.97
1:B:110:LYS:HZ2	1:B:128:HIS:HB2	1.27	0.97
2:M:154:ARG:HH11	2:M:154:ARG:CG	1.76	0.97
5:P:414:ARG:HG2	5:P:414:ARG:HH11	1.29	0.97
3:N:411:THR:HA	3:N:435:VAL:CG1	1.95	0.96
3:D:67:ARG:HH11	3:D:67:ARG:CG	1.76	0.96
1:B:201:THR:HG22	1:B:203:GLY:H	1.25	0.96
3:D:219:GLU:HG2	3:D:339:TRP:HH2	1.30	0.96
3:N:1310:ARG:HD3	3:N:1327:ARG:HH11	0.81	0.96
1:L:162:ILE:O	1:L:163:ASN:HB2	1.66	0.96
2:M:154:ARG:HG2	2:M:154:ARG:NH1	1.65	0.96
2:M:229:MET:CB	2:M:233:GLU:HB3	1.96	0.96
5:P:91:VAL:O	5:P:193:ARG:NH2	1.97	0.96
1:L:201:THR:HG22	1:L:203:GLY:H	1.25	0.95
3:N:438:ASP:OD1	3:N:441:ARG:HD2	1.65	0.95
2:C:628:PHE:H	2:C:638:ASP:HB3	1.27	0.95
2:M:107:LEU:HD12	2:M:107:LEU:C	1.80	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:229:MET:O	2:M:233:GLU:HB2	1.65	0.95
2:M:198:ARG:NE	2:M:230:ARG:HA	1.81	0.95
1:K:4:SER:O	1:K:189:ARG:NH2	2.00	0.94
2:M:229:MET:HE2	2:M:233:GLU:C	1.86	0.94
3:N:1305:LEU:N	3:N:1305:LEU:CD2	2.30	0.94
2:M:177:GLU:OE1	2:M:190:LYS:NZ	1.99	0.94
1:B:58:ILE:CB	1:B:61:VAL:HG13	1.95	0.94
2:M:521:PRO:HB3	3:N:1068:LEU:HD21	1.48	0.94
3:D:274:ARG:NH1	3:D:274:ARG:HG3	1.72	0.93
1:L:206:THR:HG22	1:L:209:GLU:H	1.33	0.93
3:D:1309:ALA:O	3:D:1310:ARG:HB3	1.68	0.93
2:M:229:MET:HE2	2:M:234:ALA:N	1.84	0.93
1:A:184:THR:HG22	1:A:192:LEU:HB3	1.50	0.93
1:B:206:THR:HG22	1:B:209:GLU:H	1.32	0.93
3:D:274:ARG:HH11	3:D:274:ARG:CG	1.80	0.93
3:D:1305:LEU:N	3:D:1305:LEU:CD2	2.30	0.93
2:C:102:HIS:HB3	2:C:105:THR:CG2	1.99	0.93
3:D:67:ARG:NH1	3:D:67:ARG:CB	2.30	0.93
2:M:229:MET:HE1	2:M:234:ALA:HA	1.51	0.93
3:N:209:ARG:N	3:N:389:GLU:O	2.01	0.93
3:D:45:PHE:O	3:D:86:ARG:NH2	2.01	0.93
3:N:46:ASP:OD2	3:N:48:ARG:HG3	1.69	0.93
3:N:1283:ILE:HG21	3:N:1315:ASP:OD1	1.66	0.93
3:N:890:VAL:HB	3:N:922:LEU:CD1	1.98	0.92
5:P:417:LYS:CG	5:P:418:LEU:N	2.30	0.92
2:M:198:ARG:HE	2:M:230:ARG:CA	1.82	0.92
5:F:231:ARG:C	5:F:232:ARG:HG3	1.89	0.92
3:N:1290:LEU:CD2	3:N:1307:LYS:HE2	1.98	0.92
3:D:894:LYS:HD2	3:D:894:LYS:H	1.01	0.92
1:B:58:ILE:CG2	1:B:61:VAL:CG1	2.48	0.92
3:D:890:VAL:HB	3:D:922:LEU:HD12	1.49	0.91
2:M:229:MET:HG2	2:M:233:GLU:CG	1.99	0.91
3:D:1283:ILE:HG13	3:D:1315:ASP:CG	1.91	0.91
2:M:230:ARG:HB2	2:M:231:PRO:HD2	1.53	0.91
3:D:892:ASP:OD1	3:D:894:LYS:CD	2.18	0.91
3:N:45:PHE:O	3:N:86:ARG:NH2	2.04	0.91
2:M:172:ILE:CG1	2:M:186:VAL:CG2	2.48	0.91
2:M:107:LEU:CD1	2:M:108:ILE:H	1.77	0.91
5:P:231:ARG:C	5:P:232:ARG:HG3	1.87	0.91
2:C:102:HIS:HB3	2:C:105:THR:HG22	1.53	0.91
2:M:229:MET:CG	2:M:233:GLU:HB3	2.00	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:414:ARG:HG2	5:P:414:ARG:NH1	1.85	0.90
3:D:1284:GLU:HG2	3:D:1291:SER:HB3	1.51	0.90
2:M:229:MET:CE	2:M:234:ALA:HA	2.02	0.90
2:C:177:GLU:HG3	2:C:178:PRO:HD2	1.51	0.90
1:K:206:THR:HB	1:K:209:GLU:HG3	1.52	0.90
2:M:237:ARG:O	2:M:241:LEU:HG	1.71	0.90
1:A:206:THR:HB	1:A:209:GLU:HG3	1.52	0.90
3:N:219:GLU:HG3	3:N:339:TRP:CH2	2.06	0.90
2:C:324:ASP:C	2:C:325:ILE:HG23	1.91	0.90
3:D:1254:GLN:HB3	3:D:1258:ARG:HB2	1.53	0.90
2:C:418:LEU:HD11	2:C:427:VAL:HG11	1.54	0.90
3:N:32:ILE:CG1	5:P:258:ILE:CD1	2.50	0.89
3:N:894:LYS:HD2	3:N:894:LYS:N	1.86	0.89
3:D:821:VAL:HG11	3:D:827:ILE:HD11	1.51	0.89
2:C:168:ARG:NH2	2:C:265:ARG:O	2.05	0.89
2:M:324:ASP:C	2:M:325:ILE:HG23	1.91	0.89
3:N:1237:THR:HG22	3:N:1238:MET:N	1.86	0.89
2:C:172:ILE:HG12	2:C:186:VAL:CG2	2.01	0.89
3:N:227:LEU:HG	3:N:331:VAL:HG13	1.55	0.89
2:C:198:ARG:HE	2:C:230:ARG:HA	1.38	0.88
3:D:1285:GLU:OE1	3:D:1307:LYS:HE2	1.74	0.88
5:P:417:LYS:CG	5:P:418:LEU:H	1.80	0.88
3:D:67:ARG:HH11	3:D:67:ARG:HG3	1.36	0.88
3:D:892:ASP:OD1	3:D:894:LYS:HD3	1.74	0.88
3:N:894:LYS:H	3:N:894:LYS:CD	1.84	0.88
1:A:59:GLU:O	1:A:60:ASP:HB2	1.71	0.88
2:C:405:ARG:HD2	2:C:442:GLU:OE2	1.72	0.88
1:B:66:SER:O	1:B:75:VAL:HG23	1.73	0.88
3:D:209:ARG:N	3:D:389:GLU:O	2.07	0.88
2:M:105:THR:CG2	2:M:107:LEU:H	1.85	0.88
3:D:219:GLU:HG2	3:D:339:TRP:CH2	2.07	0.87
2:M:487:THR:HG22	2:M:490:GLU:HB2	1.55	0.87
3:N:411:THR:HA	3:N:435:VAL:HG12	1.56	0.87
1:A:57:TYR:CE1	1:A:161:ARG:HD2	2.08	0.87
3:D:1312:LEU:CD2	3:D:1327:ARG:CG	2.53	0.87
2:M:405:ARG:HD2	2:M:442:GLU:OE2	1.73	0.87
3:N:1486:VAL:HG21	4:O:22:VAL:HG13	1.54	0.87
2:M:229:MET:HG2	2:M:233:GLU:HB3	1.57	0.86
3:D:821:VAL:HG11	3:D:827:ILE:CD1	2.05	0.86
3:N:1311:LEU:CD2	3:N:1311:LEU:N	2.37	0.86
2:C:172:ILE:HG12	2:C:186:VAL:HG22	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:711:GLU:HG2	2:C:822:VAL:HG22	1.56	0.86
2:M:757:GLY:HA2	2:M:789:SER:HB3	1.58	0.86
2:C:502:PRO:O	2:C:503:LEU:HD23	1.75	0.86
3:N:32:ILE:HD11	5:P:258:ILE:HD11	1.57	0.85
3:N:520:LEU:O	3:N:525:ARG:NH1	2.08	0.85
3:D:520:LEU:O	3:D:525:ARG:NH1	2.09	0.85
3:N:1310:ARG:HD3	3:N:1327:ARG:HD2	1.57	0.85
3:D:47:GLU:HB3	3:D:78:VAL:HG21	1.58	0.85
5:F:281:GLU:HG2	5:F:282:LEU:CD2	2.07	0.85
2:M:229:MET:HB3	2:M:233:GLU:HB3	1.58	0.85
2:M:230:ARG:CB	2:M:231:PRO:HD2	2.06	0.85
3:N:1282:ARG:CD	3:N:1295:GLU:OE2	2.25	0.85
5:P:273:ARG:HG2	5:P:276:ARG:HH12	1.40	0.84
2:C:503:LEU:HD22	2:C:508:ILE:HA	1.60	0.84
3:D:1283:ILE:HG13	3:D:1315:ASP:CB	2.06	0.84
3:N:1283:ILE:CG2	3:N:1315:ASP:CB	2.55	0.84
3:D:274:ARG:NH2	3:D:279:VAL:HG21	1.91	0.84
1:K:201:THR:HG21	1:K:205:VAL:O	1.77	0.84
3:D:1283:ILE:HG13	3:D:1315:ASP:HB2	1.56	0.84
5:P:361:LEU:HD12	5:P:362:SER:H	1.41	0.84
2:C:177:GLU:OE2	2:C:183:SER:HB3	1.77	0.84
3:D:864:VAL:HG12	3:D:865:THR:N	1.92	0.84
3:N:1108:ARG:NH2	3:N:1198:TYR:O	2.11	0.84
1:A:201:THR:HG21	1:A:205:VAL:O	1.77	0.84
2:C:163:ILE:HG23	2:C:171:TRP:NE1	1.93	0.84
2:M:324:ASP:O	2:M:325:ILE:HG23	1.76	0.84
2:M:182:VAL:CG2	2:M:193:LEU:CB	2.55	0.84
1:B:110:LYS:NZ	1:B:128:HIS:HB2	1.92	0.83
2:C:324:ASP:O	2:C:325:ILE:HG23	1.76	0.83
3:N:218:LYS:HG2	3:N:338:GLU:HG2	1.60	0.83
2:C:503:LEU:HD21	2:C:508:ILE:HD13	1.61	0.83
2:C:714:ASP:OD1	2:C:820:ARG:NH2	2.11	0.83
2:M:157:ARG:HH12	2:M:176:VAL:CG1	1.87	0.83
3:N:1237:THR:HG22	3:N:1238:MET:H	1.42	0.83
1:L:90:LEU:HB2	1:L:119:ASP:HB3	1.59	0.83
2:M:224:GLU:H	2:M:224:GLU:CD	1.78	0.83
3:N:864:VAL:HG12	3:N:865:THR:N	1.93	0.83
1:A:188:GLN:HG2	1:A:189:ARG:HG3	1.60	0.82
3:D:1283:ILE:H	3:D:1283:ILE:HD12	0.69	0.82
2:M:105:THR:CG2	2:M:107:LEU:CB	2.56	0.82
3:N:46:ASP:OD1	3:N:47:GLU:N	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:835:SER:HB3	3:N:838:ARG:CG	2.07	0.82
2:M:107:LEU:HD12	2:M:108:ILE:H	1.00	0.82
3:N:1305:LEU:HD23	3:N:1305:LEU:H	1.40	0.82
2:M:171:TRP:CZ3	7:R:13:DT:H2"	2.15	0.82
2:C:224:GLU:H	2:C:224:GLU:CD	1.78	0.82
2:M:418:LEU:HD11	2:M:427:VAL:HG11	1.62	0.82
2:C:231:PRO:HG2	2:C:232:GLU:OE2	1.79	0.82
3:D:806:PHE:HB2	3:D:829:VAL:HG22	1.61	0.82
4:O:95:VAL:O	4:O:95:VAL:HG23	1.78	0.82
3:D:785:ILE:HD13	3:D:935:LYS:HA	1.61	0.82
3:D:1312:LEU:HD21	3:D:1327:ARG:HG2	1.61	0.82
3:N:32:ILE:HG13	5:P:258:ILE:CD1	2.10	0.82
3:D:347:VAL:HG13	3:D:351:MET:HG3	1.61	0.82
2:M:428:ARG:NH2	2:M:447:ALA:O	2.12	0.82
3:N:1282:ARG:HD2	3:N:1295:GLU:OE2	1.80	0.82
2:C:103:LYS:O	2:C:104:ASP:HB2	1.80	0.81
3:N:347:VAL:HG13	3:N:351:MET:HG3	1.61	0.81
1:B:90:LEU:HB2	1:B:119:ASP:HB3	1.60	0.81
2:M:437:ARG:NH1	2:M:491:GLU:OE2	2.12	0.81
2:M:103:LYS:O	2:M:104:ASP:HB2	1.80	0.81
3:N:1495:ILE:HG12	4:O:88:GLU:HG3	1.62	0.81
1:B:58:ILE:CG2	1:B:61:VAL:HG11	2.09	0.81
3:D:67:ARG:HH11	3:D:67:ARG:CB	1.89	0.81
2:M:229:MET:HG2	2:M:233:GLU:CB	2.11	0.81
3:N:1312:LEU:CD2	3:N:1327:ARG:HG2	2.10	0.81
2:C:150:PRO:HD3	2:C:322:VAL:CG1	2.11	0.81
3:N:1282:ARG:HD2	3:N:1295:GLU:CD	2.01	0.81
3:N:32:ILE:HD11	5:P:258:ILE:CD1	2.10	0.81
3:D:835:SER:OG	3:D:838:ARG:HG3	1.80	0.81
3:N:411:THR:HB	3:N:437:VAL:H	1.45	0.81
2:M:78:PHE:HB3	2:M:82:GLU:HG2	1.63	0.81
2:C:164:PRO:HD2	2:C:171:TRP:HD1	1.45	0.80
3:D:411:THR:HB	3:D:437:VAL:H	1.44	0.80
3:N:219:GLU:HG3	3:N:339:TRP:CZ2	2.17	0.80
5:F:231:ARG:O	5:F:232:ARG:HG3	1.80	0.80
3:D:1439:SER:HB2	3:D:1463:LYS:NZ	1.97	0.80
3:N:1283:ILE:CG2	3:N:1315:ASP:HB2	2.09	0.80
3:N:1311:LEU:N	3:N:1311:LEU:HD22	1.96	0.80
2:M:419:THR:H	2:M:422:ARG:HG3	1.45	0.80
2:C:182:VAL:CG2	2:C:193:LEU:CB	2.60	0.79
3:N:1444:THR:O	3:N:1448:THR:HG23	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:172:ILE:CG1	2:M:186:VAL:HG22	2.08	0.79
2:M:229:MET:O	2:M:230:ARG:CG	2.30	0.79
3:D:821:VAL:CG1	3:D:827:ILE:HD11	2.13	0.79
2:C:419:THR:H	2:C:422:ARG:HG3	1.45	0.79
3:D:835:SER:OG	3:D:838:ARG:CG	2.31	0.79
3:D:1304:LYS:C	3:D:1305:LEU:CD2	2.50	0.79
3:D:1314:LYS:O	3:D:1317:ASP:HB2	1.81	0.79
2:C:78:PHE:HB3	2:C:82:GLU:HG2	1.64	0.79
2:M:717:LEU:HD23	2:M:763:GLY:HA3	1.64	0.79
2:C:853:LEU:HB2	2:C:858:MET:HE1	1.64	0.79
2:M:487:THR:CG2	2:M:490:GLU:HB2	2.12	0.79
2:M:154:ARG:HH21	2:M:177:GLU:C	1.86	0.79
3:D:1444:THR:O	3:D:1448:THR:HG23	1.81	0.78
3:D:1384:PRO:HB3	3:D:1389:LEU:O	1.82	0.78
3:N:277:GLU:OE1	3:N:277:GLU:HA	1.83	0.78
5:P:414:ARG:HH11	5:P:414:ARG:CG	1.96	0.78
2:M:343:GLN:HG3	2:M:385:PHE:HB2	1.63	0.78
2:C:343:GLN:HG3	2:C:385:PHE:HB2	1.64	0.78
3:D:1156:LEU:HD23	3:D:1182:GLU:OE2	1.82	0.78
3:N:277:GLU:OE1	3:N:277:GLU:CA	2.31	0.78
3:N:796:ARG:HH12	3:N:859:ASP:HB2	1.48	0.78
3:N:1310:ARG:HH21	3:N:1310:ARG:HG3	1.47	0.78
3:D:1312:LEU:HD23	3:D:1327:ARG:HG3	1.64	0.78
3:N:823:LEU:HD11	3:N:837:GLY:HA2	1.64	0.78
3:N:1093:TYR:OH	3:N:1441:GLN:NE2	2.15	0.78
3:N:1283:ILE:O	3:N:1283:ILE:CD1	2.30	0.78
3:N:1284:GLU:OE1	3:N:1285:GLU:N	2.16	0.78
2:C:157:ARG:HH12	2:C:176:VAL:CG1	1.95	0.78
2:C:64:LEU:HD22	2:C:100:LEU:HD11	1.65	0.77
2:M:205:GLU:O	2:M:209:ARG:HG3	1.83	0.77
3:N:843:PHE:CE1	3:N:864:VAL:HG11	2.19	0.77
3:D:796:ARG:HH12	3:D:859:ASP:HB2	1.48	0.77
2:M:102:HIS:O	2:M:106:GLY:N	2.17	0.77
3:N:864:VAL:HG12	3:N:865:THR:H	1.48	0.77
2:C:151:ASP:HB3	2:C:157:ARG:O	1.84	0.77
2:M:1106:ASP:OD1	3:N:7:LYS:NZ	2.15	0.77
3:N:480:GLU:OE2	3:N:488:ARG:NH2	2.17	0.77
3:D:843:PHE:CE1	3:D:864:VAL:HG11	2.20	0.77
3:N:821:VAL:HG11	3:N:827:ILE:HD11	1.66	0.77
3:N:1395:LEU:HD11	3:N:1400:VAL:HB	1.66	0.77
3:N:675:ARG:NH1	5:P:420:ASP:OD1	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:717:LEU:HD23	2:C:763:GLY:HA2	1.65	0.77
2:M:182:VAL:HG23	2:M:193:LEU:HB3	1.67	0.77
5:P:231:ARG:O	5:P:232:ARG:CG	2.30	0.77
3:N:33:ASN:HB3	3:N:36:THR:HG23	1.66	0.76
2:C:198:ARG:NE	2:C:230:ARG:HA	2.01	0.76
2:C:503:LEU:CD2	2:C:508:ILE:HA	2.15	0.76
2:C:771:GLU:OE2	2:C:775:ARG:NH2	2.18	0.76
3:D:36:THR:O	3:D:37:LEU:HB2	1.85	0.76
2:M:151:ASP:HB3	2:M:157:ARG:O	1.84	0.76
2:M:1116:ALA:HB2	3:N:88:TYR:HB3	1.67	0.76
3:N:314:PRO:HG2	3:N:317:VAL:CG1	2.15	0.76
3:N:1282:ARG:HD2	3:N:1295:GLU:OE1	1.86	0.76
3:D:67:ARG:HB2	3:D:67:ARG:HH11	1.46	0.76
3:D:480:GLU:OE2	3:D:488:ARG:NH2	2.17	0.76
3:D:806:PHE:HB2	3:D:829:VAL:CG2	2.16	0.76
3:D:864:VAL:HG12	3:D:865:THR:H	1.50	0.76
2:C:108:ILE:O	2:C:108:ILE:CD1	2.30	0.76
2:M:189:ARG:HH12	2:M:244:PRO:HD3	1.50	0.76
2:M:773:LEU:HD23	5:P:354:LEU:HD13	1.65	0.76
2:M:157:ARG:HH11	2:M:157:ARG:HG3	1.50	0.76
2:M:166:PRO:O	2:M:167:LYS:HB2	1.83	0.76
5:P:383:LEU:HD23	5:P:383:LEU:H	1.50	0.76
2:M:487:THR:HG23	2:M:490:GLU:H	1.51	0.76
2:M:157:ARG:HH11	2:M:176:VAL:HG12	1.50	0.76
2:M:238:LEU:CD1	2:M:242:LEU:HD23	2.16	0.76
3:N:835:SER:HB3	3:N:838:ARG:CD	2.14	0.76
2:C:198:ARG:HE	2:C:230:ARG:CA	1.98	0.76
2:M:853:LEU:HB2	2:M:858:MET:HE1	1.67	0.76
2:M:775:ARG:HD3	2:M:782:ALA:HB2	1.66	0.75
3:N:1304:LYS:C	3:N:1305:LEU:HD23	2.06	0.75
2:M:182:VAL:HG23	2:M:193:LEU:CB	2.14	0.75
3:N:1237:THR:HG21	3:N:1246:VAL:HG13	1.67	0.75
1:A:179:PHE:HB3	1:A:197:LEU:HD23	1.67	0.75
2:C:757:GLY:HA2	2:C:789:SER:HB3	1.68	0.75
2:M:176:VAL:O	2:M:177:GLU:HB2	1.87	0.75
3:N:1237:THR:CG2	3:N:1246:VAL:HG13	2.16	0.75
3:N:1293:PHE:CZ	3:N:1302:GLU:HG3	2.21	0.75
3:D:411:THR:HA	3:D:435:VAL:HG12	1.67	0.75
1:K:179:PHE:HB3	1:K:197:LEU:HD23	1.68	0.75
3:D:895:VAL:HG11	3:D:922:LEU:HD21	1.69	0.74
3:D:1040:GLY:O	3:D:1060:SER:HB3	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:GLU:OE1	1:A:139:ASN:ND2	2.20	0.74
2:C:157:ARG:HH11	2:C:157:ARG:HG3	1.50	0.74
2:M:229:MET:CE	2:M:234:ALA:CA	2.64	0.74
3:N:1040:GLY:O	3:N:1060:SER:HB3	1.88	0.74
1:A:184:THR:HG22	1:A:192:LEU:HB2	1.69	0.74
2:M:154:ARG:NH2	2:M:177:GLU:C	2.41	0.74
1:B:201:THR:HG21	1:B:205:VAL:O	1.86	0.74
2:M:711:GLU:HG2	2:M:822:VAL:HG22	1.69	0.74
3:N:219:GLU:H	3:N:339:TRP:HZ3	1.36	0.74
3:D:32:ILE:HG23	3:D:37:LEU:O	1.88	0.74
3:D:693:GLU:HA	4:E:48:MET:HE1	1.69	0.74
2:M:147:TYR:HA	2:M:323:ASP:OD2	1.88	0.74
5:P:416:ARG:O	5:P:417:LYS:CB	2.30	0.74
2:C:150:PRO:HD3	2:C:322:VAL:HG11	1.70	0.74
5:F:397:ILE:HD12	5:F:400:ILE:HD11	1.70	0.74
2:M:157:ARG:HH11	2:M:176:VAL:HG11	0.88	0.74
3:D:260:GLU:OE1	3:D:273:ARG:NH1	2.20	0.73
3:D:893:GLU:H	3:D:894:LYS:HE2	1.53	0.73
3:N:1283:ILE:HG21	3:N:1315:ASP:HB2	1.68	0.73
2:C:521:PRO:HB3	3:D:1068:LEU:HD21	1.70	0.73
3:N:213:VAL:HG21	3:N:367:ILE:HD13	1.70	0.73
2:M:850:ALA:HA	3:N:632:VAL:CG2	2.18	0.73
3:N:274:ARG:NH1	3:N:279:VAL:HG21	2.03	0.73
1:A:83:LYS:HE3	1:A:168:ASP:HB2	1.70	0.73
5:F:202:TYR:OH	5:F:244:ARG:HG2	1.88	0.73
3:N:219:GLU:HG2	3:N:339:TRP:CH2	2.21	0.73
2:C:157:ARG:HH11	2:C:176:VAL:CG1	1.98	0.73
2:M:776:SER:OG	5:P:373:LYS:NZ	2.21	0.73
2:C:850:ALA:HA	3:D:632:VAL:CG2	2.19	0.73
3:D:371:ILE:HD12	5:F:230:LYS:HA	1.70	0.73
3:D:373:PRO:O	3:D:376:GLU:HG2	1.89	0.73
2:C:230:ARG:HB2	2:C:231:PRO:CD	2.14	0.73
3:N:1311:LEU:CD2	3:N:1311:LEU:H	1.99	0.73
2:C:182:VAL:HG23	2:C:193:LEU:CB	2.18	0.73
2:C:324:ASP:C	2:C:325:ILE:CG2	2.57	0.73
3:N:1283:ILE:HG21	3:N:1315:ASP:CB	2.18	0.73
2:C:1116:ALA:HB2	3:D:88:TYR:HB3	1.71	0.72
3:N:65:ARG:NH1	5:P:378:GLY:O	2.22	0.72
3:N:890:VAL:CB	3:N:922:LEU:CD1	2.67	0.72
2:C:607:ASP:HB2	2:C:610:ARG:NH1	2.04	0.72
3:D:1144:LEU:O	3:D:1147:ARG:HG3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:83:LYS:HE3	1:K:168:ASP:HB2	1.71	0.72
2:M:204:GLN:HG3	2:M:222:MET:SD	2.30	0.72
3:N:255:GLU:OE1	3:N:274:ARG:NH2	2.19	0.72
3:N:843:PHE:HE1	3:N:864:VAL:HG11	1.55	0.72
3:N:892:ASP:OD1	3:N:894:LYS:CD	2.38	0.72
3:N:1263:PHE:HD2	3:N:1375:MET:CE	2.03	0.72
3:D:14:SER:HB3	3:D:511:TRP:CE2	2.25	0.72
2:M:324:ASP:C	2:M:325:ILE:CG2	2.57	0.72
3:N:256:GLU:HG3	3:N:274:ARG:HE	1.54	0.72
3:N:821:VAL:HG11	3:N:827:ILE:CD1	2.19	0.72
2:M:577:PRO:HG2	2:M:580:MET:HG2	1.71	0.72
3:D:711:LEU:HD13	3:D:778:LEU:HD12	1.70	0.72
3:D:1285:GLU:OE1	3:D:1307:LYS:CE	2.37	0.72
3:D:1486:VAL:HG21	4:E:22:VAL:HG13	1.72	0.72
1:L:201:THR:HG21	1:L:205:VAL:O	1.89	0.72
2:M:238:LEU:HD12	2:M:242:LEU:HD23	1.71	0.72
2:C:229:MET:C	2:C:230:ARG:HG2	2.02	0.72
2:M:48:PHE:O	2:M:52:PHE:HD2	1.72	0.72
2:M:607:ASP:HB2	2:M:610:ARG:NH1	2.04	0.72
5:P:411:HIS:O	5:P:415:THR:HB	1.89	0.72
1:B:110:LYS:HZ2	1:B:128:HIS:CB	2.03	0.72
5:F:281:GLU:CG	5:F:282:LEU:HD23	2.17	0.72
2:M:714:ASP:OD1	2:M:820:ARG:NH2	2.23	0.71
3:N:162:ARG:O	3:N:414:ARG:NH1	2.21	0.71
2:C:419:THR:H	2:C:422:ARG:CG	2.03	0.71
2:M:617:ASP:HB2	2:M:619:ARG:HG2	1.72	0.71
3:N:658:LEU:HA	3:N:661:MET:HE3	1.72	0.71
2:M:206:THR:HA	2:M:209:ARG:HD2	1.72	0.71
2:M:859:PRO:O	2:M:867:VAL:HG22	1.90	0.71
1:A:198:ARG:HD3	2:C:934:PHE:CZ	2.25	0.71
2:C:617:ASP:HB2	2:C:619:ARG:HG2	1.72	0.71
5:F:205:ARG:CG	5:F:205:ARG:NH1	2.37	0.71
1:K:176:ARG:NH1	2:M:863:ASP:O	2.23	0.71
3:N:1071:PHE:O	3:N:1074:SER:OG	2.09	0.71
5:P:231:ARG:C	5:P:232:ARG:CG	2.59	0.71
3:D:1312:LEU:HD23	3:D:1327:ARG:CG	2.18	0.71
3:N:1310:ARG:HG3	3:N:1310:ARG:NH2	2.05	0.71
3:D:284:LEU:HD22	3:D:288:MET:HE2	1.72	0.71
2:M:64:LEU:CD2	2:M:100:LEU:HD11	2.16	0.71
2:M:419:THR:H	2:M:422:ARG:CG	2.03	0.71
3:N:32:ILE:CD1	5:P:258:ILE:CD1	2.68	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:905:ILE:HG22	2:M:906:PHE:CD2	2.26	0.71
3:N:56:TYR:HE1	3:N:69:GLU:HG3	1.54	0.71
3:D:1277:ILE:HG22	3:D:1278:ASP:H	1.55	0.70
2:C:177:GLU:HB2	2:C:181:VAL:O	1.90	0.70
2:C:204:GLN:HG3	2:C:222:MET:SD	2.31	0.70
3:D:596:SER:O	3:D:597:ASP:CG	2.30	0.70
2:M:230:ARG:HB2	2:M:231:PRO:CD	2.21	0.70
2:C:302:VAL:O	2:C:306:THR:HG23	1.91	0.70
2:M:874:LEU:HD12	3:N:784:ASP:OD2	1.90	0.70
3:N:864:VAL:CG1	3:N:865:THR:H	2.05	0.70
2:C:1008:ARG:HH11	2:C:1028:GLY:HA2	1.56	0.70
1:K:39:PRO:HG3	1:L:39:PRO:HG3	1.74	0.70
2:M:628:PHE:H	2:M:638:ASP:CB	2.04	0.70
3:D:843:PHE:HE1	3:D:864:VAL:HG11	1.55	0.70
3:N:1284:GLU:OE1	3:N:1284:GLU:C	2.30	0.70
2:C:418:LEU:CD1	2:C:427:VAL:HG11	2.21	0.70
2:C:905:ILE:HG22	2:C:906:PHE:CD2	2.27	0.70
3:D:864:VAL:CG1	3:D:865:THR:H	2.05	0.70
3:N:1044:LEU:H	3:N:1044:LEU:HD12	1.57	0.70
2:C:577:PRO:HG2	2:C:580:MET:HG2	1.73	0.70
3:D:784:ASP:HB2	3:D:939:PHE:HE2	1.57	0.70
3:N:643:GLY:HA3	3:N:727:GLN:HB2	1.74	0.70
3:D:963:TYR:CE2	3:D:1002:LYS:HD3	2.27	0.69
2:M:1008:ARG:O	3:N:625:TYR:HA	1.92	0.69
3:N:596:SER:C	3:N:597:ASP:OD2	2.30	0.69
3:D:1071:PHE:O	3:D:1074:SER:OG	2.10	0.69
3:N:711:LEU:HD13	3:N:778:LEU:HD12	1.73	0.69
2:C:163:ILE:HG23	2:C:171:TRP:CE2	2.27	0.69
2:M:74:GLY:HA3	2:M:93:PRO:HG2	1.74	0.69
2:M:230:ARG:CB	2:M:231:PRO:CD	2.71	0.69
3:N:266:GLU:OE2	3:N:315:ARG:NH2	2.26	0.69
5:P:415:THR:HG22	5:P:416:ARG:HG2	1.72	0.69
1:B:88:ARG:HB3	1:B:121:GLU:HB2	1.75	0.69
3:D:643:GLY:HA3	3:D:727:GLN:HB2	1.75	0.69
2:M:231:PRO:CG	2:M:232:GLU:OE2	2.33	0.69
2:C:1008:ARG:O	3:D:625:TYR:HA	1.91	0.69
3:D:47:GLU:CB	3:D:78:VAL:HG21	2.23	0.69
3:D:493:ARG:HG3	3:D:1390:LEU:HD11	1.73	0.69
3:D:1100:ASP:CG	3:D:1440:PHE:HB2	2.12	0.69
3:D:1118:ILE:HD12	3:D:1192:LEU:HD12	1.73	0.69
2:M:107:LEU:HD12	2:M:108:ILE:CA	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:596:SER:O	3:N:597:ASP:CG	2.30	0.69
2:C:413:LEU:HD21	2:C:451:LEU:HD13	1.74	0.69
3:D:493:ARG:HG3	3:D:1390:LEU:CD1	2.23	0.69
3:N:71:LYS:NZ	3:N:74:GLU:OE2	2.21	0.69
3:N:1136:LYS:O	3:N:1140:ILE:HG13	1.92	0.69
3:D:1044:LEU:H	3:D:1044:LEU:HD12	1.58	0.69
3:D:1310:ARG:HD2	3:D:1327:ARG:HB2	1.75	0.69
2:C:628:PHE:H	2:C:638:ASP:CB	2.05	0.69
1:L:88:ARG:HB3	1:L:121:GLU:HB2	1.75	0.68
2:C:787:ASP:OD2	2:C:791:ARG:NH2	2.26	0.68
5:F:361:LEU:HB3	5:F:365:GLU:HG3	1.75	0.68
2:M:238:LEU:HD12	2:M:238:LEU:O	1.92	0.68
3:N:108:VAL:HB	3:N:109:PRO:HD3	1.75	0.68
3:N:1282:ARG:HH11	3:N:1282:ARG:CG	2.05	0.68
3:N:1282:ARG:HD3	3:N:1295:GLU:OE2	1.92	0.68
2:M:200:LEU:HD13	2:M:300:ASP:HB2	1.75	0.68
2:M:787:ASP:OD2	2:M:791:ARG:NH2	2.27	0.68
2:M:1008:ARG:HH11	2:M:1028:GLY:HA2	1.57	0.68
5:F:231:ARG:O	5:F:232:ARG:CG	2.41	0.68
2:M:262:ALA:HA	2:M:291:ALA:O	1.93	0.68
2:M:302:VAL:O	2:M:306:THR:HG23	1.93	0.68
3:N:963:TYR:CE2	3:N:1002:LYS:HD3	2.28	0.68
2:C:229:MET:HE1	2:C:234:ALA:HA	1.75	0.68
2:C:262:ALA:HA	2:C:289:THR:HG21	1.76	0.68
3:D:823:LEU:HD11	3:D:837:GLY:HA2	1.75	0.68
2:M:286:SER:OG	2:M:301:GLU:OE2	2.10	0.68
3:N:675:ARG:HH12	5:P:420:ASP:HB3	1.59	0.68
2:C:261:ILE:HG23	2:C:290:LEU:HB2	1.74	0.68
3:D:864:VAL:CG1	3:D:865:THR:N	2.57	0.68
3:D:1395:LEU:HD11	3:D:1400:VAL:HB	1.74	0.68
3:D:1461:GLY:O	3:D:1465:ASN:ND2	2.26	0.68
2:C:229:MET:HB3	2:C:233:GLU:HB3	1.75	0.68
3:D:1336:LEU:HD13	3:D:1344:VAL:HG21	1.75	0.68
2:M:230:ARG:CG	2:M:231:PRO:HD2	2.23	0.68
1:B:64:GLU:O	1:B:75:VAL:HB	1.94	0.68
3:D:1263:PHE:HD2	3:D:1375:MET:HE1	1.59	0.68
3:D:1311:LEU:N	3:D:1311:LEU:CD2	2.52	0.67
2:M:165:LEU:O	2:M:168:ARG:HB2	1.94	0.67
5:P:384:GLU:HB3	5:P:394:ARG:HD2	1.74	0.67
2:C:157:ARG:NH1	2:C:176:VAL:HG12	2.07	0.67
2:C:200:LEU:HD13	2:C:300:ASP:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:658:LEU:HA	3:D:661:MET:HE3	1.76	0.67
1:A:27:PRO:HB3	1:A:184:THR:HG21	1.76	0.67
5:P:368:VAL:HG12	5:P:390:PHE:CE1	2.30	0.67
2:C:859:PRO:O	2:C:867:VAL:HG22	1.95	0.67
5:F:80:PRO:HB2	5:F:210:LEU:HD11	1.76	0.67
2:M:261:ILE:HG23	2:M:290:LEU:HB2	1.76	0.67
2:C:786:LYS:NZ	2:C:786:LYS:CB	2.57	0.67
2:M:171:TRP:CE3	7:R:13:DT:H2''	2.30	0.67
2:M:758:ARG:HH21	2:M:788:THR:HB	1.60	0.67
3:N:219:GLU:N	3:N:339:TRP:CZ3	2.63	0.67
3:N:864:VAL:CG1	3:N:865:THR:N	2.58	0.67
5:P:364:ARG:O	5:P:368:VAL:HG13	1.95	0.67
2:M:262:ALA:HA	2:M:289:THR:HG21	1.77	0.67
2:M:853:LEU:HB2	2:M:858:MET:CE	2.25	0.67
3:N:1292:VAL:CG2	3:N:1305:LEU:HD11	2.25	0.67
3:D:46:ASP:OD1	3:D:47:GLU:N	2.28	0.66
3:N:892:ASP:OD1	3:N:894:LYS:HD3	1.95	0.66
3:D:142:LEU:HD13	3:D:161:LEU:HD11	1.77	0.66
1:K:57:TYR:CD1	1:K:161:ARG:HD2	2.30	0.66
5:P:127:ILE:O	5:P:131:VAL:HG23	1.95	0.66
2:C:229:MET:CE	2:C:234:ALA:HA	2.25	0.66
3:D:266:GLU:HG3	3:D:314:PRO:HB3	1.78	0.66
3:N:1237:THR:HG21	3:N:1246:VAL:HG22	1.76	0.66
1:L:5:LYS:HA	1:L:5:LYS:HE3	1.77	0.66
3:N:1468:LEU:HB3	3:N:1470:ARG:HG3	1.77	0.66
2:M:1058:ASP:OD1	3:N:621:LYS:HE2	1.95	0.66
3:N:988:ARG:NH2	3:N:1054:GLU:OE2	2.29	0.66
5:P:386:VAL:HG12	5:P:397:ILE:HG21	1.76	0.66
1:A:57:TYR:CG	1:A:161:ARG:HD2	2.31	0.66
2:C:74:GLY:HA3	2:C:93:PRO:HG2	1.77	0.66
3:D:1482:ARG:HH21	3:D:1483:PHE:HZ	1.43	0.66
5:F:126:LEU:O	5:F:130:VAL:HG23	1.96	0.66
3:N:832:ARG:HH21	3:N:833:GLU:HG3	1.60	0.66
2:C:286:SER:OG	2:C:301:GLU:OE2	2.10	0.66
3:D:832:ARG:HH21	3:D:833:GLU:HG3	1.60	0.66
1:L:6:LEU:HD12	1:L:7:LYS:H	1.60	0.66
2:M:628:PHE:N	2:M:638:ASP:HB3	2.07	0.66
2:M:261:ILE:CG2	2:M:291:ALA:HB3	2.26	0.66
3:N:562:ALA:O	5:P:140:ARG:NH2	2.27	0.66
3:N:1310:ARG:CD	3:N:1327:ARG:HD2	2.25	0.66
5:P:78:SER:O	5:P:80:PRO:CD	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:421:LEU:HD11	3:N:429:SER:HB2	1.77	0.66
3:N:1277:ILE:HG22	3:N:1278:ASP:H	1.61	0.66
2:C:628:PHE:N	2:C:638:ASP:HB3	2.08	0.65
3:D:988:ARG:NH2	3:D:1054:GLU:OE2	2.29	0.65
3:D:213:VAL:HG21	3:D:367:ILE:HD13	1.78	0.65
3:N:1311:LEU:H	3:N:1311:LEU:HD23	1.59	0.65
2:C:166:PRO:O	2:C:167:LYS:HB2	1.95	0.65
2:C:428:ARG:NH2	2:C:447:ALA:O	2.28	0.65
3:D:348:GLN:HB3	3:D:349:PRO:HD2	1.79	0.65
3:D:1304:LYS:CA	3:D:1305:LEU:HD23	2.27	0.65
2:M:229:MET:HE2	2:M:234:ALA:CA	2.26	0.65
3:N:142:LEU:HD13	3:N:161:LEU:HD11	1.78	0.65
2:M:425:PHE:CE2	3:N:1086:LEU:HD12	2.31	0.65
2:M:874:LEU:CD1	3:N:784:ASP:OD2	2.45	0.65
2:C:680:ASP:OD1	3:D:943:THR:HG21	1.96	0.65
3:D:47:GLU:HB3	3:D:78:VAL:CG2	2.26	0.65
3:D:530:VAL:HG12	5:F:333:ILE:HD12	1.79	0.65
2:M:229:MET:CE	2:M:234:ALA:N	2.48	0.65
2:M:915:LYS:NZ	3:N:952:ASP:OD2	2.29	0.65
1:A:216:GLU:OE2	1:A:219:ARG:NH2	2.29	0.65
2:C:1058:ASP:OD1	3:D:621:LYS:HE2	1.95	0.65
2:M:172:ILE:HG12	2:M:186:VAL:CG2	2.27	0.65
3:D:1100:ASP:OD1	3:D:1440:PHE:HB2	1.96	0.65
1:L:49:PRO:HA	1:L:148:VAL:HG12	1.78	0.65
3:D:1283:ILE:CG1	3:D:1315:ASP:CG	2.65	0.65
1:K:228:PRO:O	1:K:229:GLN:HG3	1.96	0.65
2:M:12:VAL:HG21	2:M:472:ARG:HD3	1.77	0.65
2:M:437:ARG:NH2	2:M:491:GLU:OE2	2.29	0.65
3:N:952:ASP:HA	3:N:1062:ARG:HH21	1.62	0.65
2:C:368:THR:H	2:C:371:LYS:HD2	1.62	0.65
3:D:890:VAL:CB	3:D:922:LEU:CD1	2.70	0.65
5:F:400:ILE:HA	5:F:403:LYS:HG2	1.79	0.65
2:M:51:THR:O	2:M:265:ARG:NH2	2.29	0.65
3:D:1310:ARG:C	3:D:1311:LEU:CD2	2.63	0.64
2:M:36:PRO:HA	2:M:39:ARG:HG3	1.79	0.64
2:M:198:ARG:CZ	2:M:230:ARG:HA	2.27	0.64
4:O:52:GLU:OE1	4:O:52:GLU:N	2.27	0.64
3:D:952:ASP:HA	3:D:1062:ARG:HH21	1.63	0.64
3:D:1143:GLY:O	3:D:1147:ARG:HD2	1.96	0.64
3:N:1143:GLY:O	3:N:1147:ARG:HD2	1.97	0.64
5:P:382:THR:HG23	5:P:384:GLU:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:176:VAL:O	2:C:177:GLU:HB2	1.97	0.64
4:E:52:GLU:OE1	4:E:52:GLU:N	2.28	0.64
2:M:1103:ASP:HB3	2:M:1105:LYS:H	1.62	0.64
3:N:348:GLN:HB3	3:N:349:PRO:HD2	1.79	0.64
2:C:12:VAL:HG21	2:C:472:ARG:HD3	1.78	0.64
3:D:835:SER:OG	3:D:838:ARG:NE	2.30	0.64
5:F:88:ILE:HD11	5:F:192:LEU:HD13	1.79	0.64
2:M:368:THR:H	2:M:371:LYS:HD2	1.62	0.64
3:N:569:ASN:O	3:N:573:MET:HG3	1.98	0.64
3:N:1237:THR:O	3:N:1238:MET:C	2.34	0.64
2:C:232:GLU:OE2	2:C:232:GLU:N	2.30	0.64
1:L:56:VAL:HG22	1:L:142:VAL:HG12	1.78	0.64
2:M:462:ASP:HB3	2:M:468:ARG:HD2	1.79	0.64
5:P:205:ARG:CG	5:P:205:ARG:HH11	2.11	0.64
1:A:11:PHE:O	1:B:228:PRO:HA	1.96	0.64
2:C:198:ARG:HH11	2:C:230:ARG:HA	1.63	0.64
2:C:292:ARG:HG3	2:C:299:LYS:HB2	1.78	0.64
2:C:324:ASP:HB3	2:C:327:HIS:HB2	1.79	0.64
3:D:1486:VAL:CG2	4:E:22:VAL:HG13	2.28	0.64
5:F:193:ARG:HB2	7:H:6:DT:H1'	1.78	0.64
3:N:808:THR:HG22	3:N:810:GLU:H	1.63	0.64
3:N:1252:ILE:HG23	3:N:1253:THR:HG23	1.79	0.64
3:D:17:LYS:O	3:D:20:SER:HB3	1.98	0.64
3:D:421:LEU:HD11	3:D:429:SER:HB2	1.79	0.64
3:D:711:LEU:HD13	3:D:778:LEU:CD1	2.27	0.64
1:K:11:PHE:O	1:L:228:PRO:HA	1.98	0.64
1:K:222:LEU:HD21	1:L:218:LEU:HD23	1.80	0.64
2:M:266:ARG:NH1	7:R:11:DG:O6	2.31	0.64
3:N:1315:ASP:OD2	3:N:1316:GLY:N	2.31	0.64
1:A:222:LEU:HD21	1:B:218:LEU:HD23	1.80	0.64
3:N:1309:ALA:O	3:N:1310:ARG:CB	2.46	0.64
5:P:78:SER:O	5:P:80:PRO:N	2.31	0.64
5:F:212:LEU:HD22	5:F:247:ILE:HG23	1.79	0.63
3:N:46:ASP:OD1	3:N:46:ASP:C	2.35	0.63
3:N:1486:VAL:CG2	4:O:22:VAL:HG13	2.26	0.63
3:N:1495:ILE:HD13	4:O:80:VAL:HG21	1.78	0.63
4:O:95:VAL:O	4:O:95:VAL:CG2	2.46	0.63
1:B:58:ILE:HG21	1:B:61:VAL:HG11	1.78	0.63
2:C:853:LEU:HB2	2:C:858:MET:CE	2.28	0.63
2:C:911:GLU:O	2:C:915:LYS:HG2	1.99	0.63
2:C:1103:ASP:HB3	2:C:1105:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:134:VAL:HG12	3:N:454:ALA:HB2	1.80	0.63
3:N:1326:THR:HG22	3:N:1327:ARG:H	1.62	0.63
3:D:1370:ILE:O	3:D:1373:ARG:HG2	1.99	0.63
2:C:356:ARG:HA	2:C:359:MET:HG3	1.81	0.63
3:N:639:LEU:HA	3:N:729:HIS:CD2	2.32	0.63
3:D:111:LYS:HG3	3:D:1452:ILE:HD11	1.81	0.63
1:L:162:ILE:O	1:L:163:ASN:CB	2.43	0.63
2:M:413:LEU:HD21	2:M:451:LEU:HD13	1.79	0.63
2:M:595:LEU:HD21	2:M:623:TYR:HB3	1.80	0.63
3:N:786:ILE:HG22	3:N:1026:SER:HB2	1.81	0.63
3:N:894:LYS:N	3:N:894:LYS:CD	2.54	0.63
3:D:1314:LYS:HG3	3:D:1317:ASP:CG	2.18	0.63
2:M:627:ARG:HA	2:M:638:ASP:HB2	1.80	0.63
3:N:711:LEU:HD13	3:N:778:LEU:CD1	2.29	0.63
2:C:230:ARG:CB	2:C:231:PRO:HD2	2.20	0.63
2:C:262:ALA:HA	2:C:289:THR:CG2	2.28	0.63
2:C:786:LYS:NZ	2:C:786:LYS:HB2	2.14	0.63
3:D:808:THR:HG22	3:D:810:GLU:H	1.63	0.63
3:N:56:TYR:HB3	3:N:65:ARG:O	1.98	0.63
3:N:137:PRO:HB3	3:N:147:VAL:HG12	1.81	0.63
2:C:154:ARG:NH1	2:C:154:ARG:CG	2.45	0.63
1:L:56:VAL:HG21	1:L:82:LEU:HD13	1.80	0.63
3:N:996:TRP:CD2	3:N:1056:PRO:HG3	2.33	0.63
2:M:168:ARG:HG3	2:M:168:ARG:NH1	2.14	0.63
2:M:911:GLU:O	2:M:915:LYS:HG2	1.99	0.63
1:A:228:PRO:O	1:A:229:GLN:HG3	1.98	0.62
2:C:503:LEU:CD2	2:C:508:ILE:HD13	2.28	0.62
2:C:773:LEU:O	2:C:777:ILE:HG13	1.99	0.62
3:D:1283:ILE:HG13	3:D:1315:ASP:OD2	1.99	0.62
5:P:78:SER:O	5:P:80:PRO:HD3	1.99	0.62
2:C:462:ASP:HB3	2:C:468:ARG:HD2	1.80	0.62
4:E:45:ARG:NH1	4:E:56:ASP:OD2	2.33	0.62
2:M:232:GLU:OE2	2:M:232:GLU:N	2.30	0.62
2:M:262:ALA:HA	2:M:289:THR:CG2	2.28	0.62
2:M:874:LEU:O	11:M:1229:HOH:O	2.16	0.62
3:N:493:ARG:HG3	3:N:1390:LEU:CD1	2.29	0.62
4:O:45:ARG:NH1	4:O:56:ASP:OD2	2.32	0.62
5:P:392:VAL:HG21	5:P:397:ILE:HD13	1.80	0.62
3:N:32:ILE:HG12	5:P:258:ILE:HD13	1.74	0.62
3:N:1205:TYR:CE1	3:N:1366:LYS:HD3	2.35	0.62
2:C:35:PRO:HG2	2:C:38:LYS:HD2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1236:LEU:HA	3:D:1359:GLN:HG2	1.81	0.62
3:N:493:ARG:HG3	3:N:1390:LEU:HD11	1.82	0.62
1:B:49:PRO:HA	1:B:148:VAL:HG12	1.81	0.62
1:B:56:VAL:HG22	1:B:142:VAL:HG12	1.80	0.62
3:D:1122:LEU:HD12	3:D:1185:GLU:HA	1.80	0.62
3:D:1310:ARG:CA	3:D:1311:LEU:HD23	2.29	0.62
2:C:179:ASN:OD1	2:C:181:VAL:N	2.23	0.62
3:D:996:TRP:CD2	3:D:1056:PRO:HG3	2.34	0.62
1:K:216:GLU:OE2	1:K:219:ARG:NH2	2.32	0.62
2:M:356:ARG:HA	2:M:359:MET:HG3	1.82	0.62
1:B:56:VAL:HG21	1:B:82:LEU:HD13	1.81	0.62
2:C:108:ILE:C	2:C:108:ILE:CD1	2.57	0.62
2:C:627:ARG:HA	2:C:638:ASP:HB2	1.81	0.62
3:D:569:ASN:O	3:D:573:MET:HG3	2.00	0.62
3:D:657:LEU:HG	3:D:661:MET:HE2	1.81	0.62
2:M:171:TRP:CZ3	7:R:14:DG:OP1	2.53	0.62
5:P:96:LEU:O	5:P:100:VAL:HG23	2.00	0.62
1:A:176:ARG:NH1	2:C:863:ASP:O	2.32	0.62
3:D:541:ASN:O	3:D:545:ARG:HG3	2.00	0.62
3:D:786:ILE:HG22	3:D:1026:SER:HB2	1.82	0.62
3:N:276:ASP:C	3:N:277:GLU:OE1	2.38	0.62
3:N:675:ARG:HH12	5:P:420:ASP:CB	2.13	0.62
2:C:136:ILE:HB	2:C:336:VAL:HG12	1.81	0.62
2:C:740:GLU:HB3	2:C:805:ARG:NH1	2.14	0.62
2:C:957:LYS:HG2	2:C:961:GLU:OE1	1.99	0.62
3:D:890:VAL:CB	3:D:922:LEU:HD12	2.26	0.62
2:M:874:LEU:HD21	3:N:787:LEU:HD22	1.80	0.62
3:N:237:LYS:O	3:N:240:GLU:HB3	2.00	0.62
1:B:63:HIS:ND1	1:B:66:SER:OG	2.31	0.61
3:D:137:PRO:HB3	3:D:147:VAL:HG12	1.82	0.61
1:L:176:ARG:NH2	3:N:888:GLU:OE1	2.33	0.61
2:M:168:ARG:NH2	2:M:265:ARG:O	2.33	0.61
3:N:657:LEU:HG	3:N:661:MET:HE2	1.80	0.61
5:F:152:ASP:HB2	5:F:153:PRO:HD2	1.81	0.61
2:M:168:ARG:HG3	2:M:168:ARG:HH11	1.64	0.61
2:C:1102:LEU:HD23	2:C:1108:PRO:HA	1.83	0.61
3:D:67:ARG:CB	3:D:67:ARG:CZ	2.76	0.61
5:F:120:THR:HG22	5:F:122:LEU:HD13	1.82	0.61
1:L:213:GLN:O	1:L:217:ILE:HG13	1.99	0.61
2:M:1006:HIS:HB2	2:M:1024:LYS:HG3	1.82	0.61
3:N:592:THR:OG1	3:N:596:SER:HA	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:717:LEU:CD2	2:M:763:GLY:HA3	2.31	0.61
2:M:1102:LEU:HD23	2:M:1108:PRO:HA	1.82	0.61
3:N:371:ILE:HD12	5:P:230:LYS:HA	1.81	0.61
3:N:1274:ILE:HG22	3:N:1324:PRO:HA	1.81	0.61
3:N:1400:VAL:HG21	3:N:1417:TRP:CD1	2.36	0.61
1:A:184:THR:CG2	1:A:192:LEU:HB3	2.29	0.61
3:D:274:ARG:NH1	3:D:274:ARG:CG	2.48	0.61
2:M:261:ILE:HG21	2:M:291:ALA:HB3	1.83	0.61
2:M:716:LYS:HE3	3:N:35:ARG:O	2.01	0.61
3:N:1311:LEU:HB2	3:N:1325:LEU:O	2.01	0.61
2:C:1090:LYS:HE2	3:D:88:TYR:O	1.99	0.61
3:N:658:LEU:HD23	3:N:661:MET:HE1	1.81	0.61
5:P:361:LEU:HD13	5:P:365:GLU:HB2	1.81	0.61
2:M:198:ARG:HH11	2:M:230:ARG:HA	1.64	0.61
2:M:198:ARG:NH1	2:M:230:ARG:HA	2.15	0.61
2:M:418:LEU:CD1	2:M:427:VAL:HG11	2.31	0.61
2:M:503:LEU:HD21	2:M:508:ILE:HD13	1.83	0.61
3:N:541:ASN:O	3:N:545:ARG:HG3	2.01	0.61
3:N:1101:VAL:HG21	3:N:1424:VAL:HB	1.82	0.61
1:A:10:VAL:HG22	1:A:26:GLU:O	2.00	0.61
2:C:15:LEU:O	2:C:586:ARG:NH2	2.28	0.61
3:D:1410:GLU:O	3:D:1410:GLU:HG2	1.99	0.61
2:M:173:ASP:C	2:M:174:LEU:HD12	2.20	0.61
3:N:373:PRO:O	3:N:376:GLU:HG2	2.00	0.61
3:N:1097:LYS:O	3:N:1101:VAL:HG23	2.01	0.61
3:N:1290:LEU:HD21	3:N:1307:LYS:HE2	1.81	0.61
1:A:57:TYR:CE1	1:A:161:ARG:CD	2.84	0.61
3:D:321:GLN:HB2	3:D:336:PHE:CD2	2.36	0.61
5:F:362:SER:OG	5:F:365:GLU:HG2	2.01	0.61
3:N:473:LEU:HD21	3:N:495:ARG:HH21	1.65	0.61
3:D:321:GLN:HB2	3:D:336:PHE:HD2	1.66	0.60
3:D:473:LEU:HD21	3:D:495:ARG:HH21	1.66	0.60
3:D:963:TYR:HE2	3:D:1002:LYS:HD3	1.66	0.60
3:D:1283:ILE:CD1	3:D:1283:ILE:N	2.30	0.60
2:M:136:ILE:HB	2:M:336:VAL:HG12	1.83	0.60
2:M:480:THR:HG22	2:M:482:GLU:H	1.66	0.60
2:M:957:LYS:HG2	2:M:961:GLU:OE1	2.01	0.60
5:P:205:ARG:NH1	5:P:205:ARG:HG2	2.16	0.60
3:D:33:ASN:O	3:D:37:LEU:HA	2.01	0.60
3:D:639:LEU:HA	3:D:729:HIS:CD2	2.36	0.60
3:N:783:ARG:NH1	3:N:1028:ALA:O	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:179:PHE:HB3	1:B:197:LEU:HD13	1.81	0.60
1:B:213:GLN:O	1:B:217:ILE:HG13	2.01	0.60
2:C:383:ARG:O	2:C:387:SER:HB2	2.01	0.60
2:C:480:THR:HG22	2:C:482:GLU:H	1.66	0.60
2:C:595:LEU:HD21	2:C:623:TYR:HB3	1.82	0.60
3:N:355:VAL:HG11	3:N:385:VAL:HG21	1.84	0.60
5:F:166:LEU:HD13	5:F:170:HIS:HB3	1.83	0.60
2:M:802:ARG:HB2	2:M:826:TYR:HB2	1.82	0.60
1:B:71:VAL:HG22	1:B:132:LEU:HG	1.82	0.60
2:C:988:VAL:HG21	3:D:949:ILE:O	2.01	0.60
3:N:596:SER:C	3:N:597:ASP:CG	2.60	0.60
2:C:802:ARG:HB2	2:C:826:TYR:HB2	1.81	0.60
3:D:893:GLU:N	3:D:894:LYS:HE2	2.16	0.60
3:N:15:PRO:O	3:N:19:ARG:HG3	2.02	0.60
3:N:586:ARG:HH12	6:Q:10:DG:H5''	1.67	0.60
5:P:329:TYR:CE2	5:P:333:ILE:HD11	2.37	0.60
3:D:14:SER:HB3	3:D:511:TRP:CZ2	2.37	0.60
3:D:1309:ALA:O	3:D:1310:ARG:CB	2.46	0.60
6:G:15:DT:H2'	6:G:16:DC:C6	2.37	0.60
2:M:626:ARG:HG3	2:M:629:TYR:CD1	2.37	0.60
3:N:90:MET:HG2	3:N:521:PRO:HD3	1.82	0.60
1:A:184:THR:O	1:A:192:LEU:HB2	2.02	0.60
2:C:808:ARG:NH2	5:F:305:GLU:OE2	2.35	0.60
2:M:569:VAL:HG21	2:M:1000:MET:CE	2.32	0.60
2:C:177:GLU:OE2	2:C:183:SER:CB	2.48	0.60
2:C:626:ARG:HG3	2:C:629:TYR:CD1	2.37	0.60
3:D:132:TYR:HB2	3:D:153:LEU:HD12	1.83	0.60
3:D:1490:LYS:HD2	4:E:93:TYR:OH	2.01	0.60
3:N:67:ARG:HH11	3:N:67:ARG:HG3	1.67	0.60
1:A:206:THR:HG23	1:A:207:PRO:HD2	1.84	0.60
1:A:219:ARG:HG3	1:A:220:GLU:N	2.17	0.60
2:C:669:GLY:H	2:C:993:PHE:HZ	1.47	0.59
3:D:1263:PHE:O	3:D:1375:MET:HE2	2.03	0.59
2:M:172:ILE:HG23	2:M:184:MET:HG2	1.83	0.59
2:M:773:LEU:HD22	5:P:375:LEU:HD12	1.84	0.59
2:C:976:ASP:OD1	2:C:978:ARG:HD3	2.02	0.59
3:D:32:ILE:HD13	3:D:39:PRO:HA	1.83	0.59
3:D:693:GLU:HA	4:E:48:MET:CE	2.32	0.59
3:D:1087:ARG:NH1	3:D:1234:THR:O	2.35	0.59
3:N:127:LEU:HA	3:N:457:GLY:HA2	1.84	0.59
3:N:131:LYS:O	3:N:456:MET:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:412:GLY:H	3:N:435:VAL:HG12	1.66	0.59
3:N:618:LEU:HG	3:N:1467:ILE:HG23	1.84	0.59
1:K:206:THR:HG23	1:K:207:PRO:HD2	1.83	0.59
1:K:219:ARG:HG3	1:K:220:GLU:N	2.17	0.59
3:N:132:TYR:HB2	3:N:153:LEU:HD12	1.83	0.59
3:N:181:ASP:HB2	3:N:205:TYR:CD1	2.37	0.59
3:D:844:ALA:O	3:D:867:ARG:HB3	2.02	0.59
3:D:1377:LYS:HE3	3:D:1378:TYR:CZ	2.37	0.59
3:N:14:SER:HB3	3:N:511:TRP:CE2	2.38	0.59
3:N:774:SER:HB3	3:N:1362:LYS:O	2.03	0.59
3:N:1010:ASN:OD1	3:N:1014:ASN:ND2	2.36	0.59
1:A:70:GLY:N	2:C:607:ASP:OD1	2.36	0.59
2:C:189:ARG:HH12	2:C:244:PRO:HD3	1.67	0.59
2:C:1006:HIS:HB2	2:C:1024:LYS:HG3	1.85	0.59
3:D:1285:GLU:OE1	3:D:1307:LYS:NZ	2.36	0.59
2:M:154:ARG:CG	2:M:154:ARG:NH1	2.45	0.59
3:N:603:LEU:HA	3:N:606:ILE:HD12	1.84	0.59
1:A:39:PRO:HG3	1:B:39:PRO:HG3	1.84	0.59
2:C:151:ASP:CB	2:C:157:ARG:O	2.50	0.59
2:C:936:VAL:HG11	2:C:959:PRO:HB2	1.85	0.59
3:D:603:LEU:HA	3:D:606:ILE:HD12	1.84	0.59
2:M:15:LEU:O	2:M:586:ARG:NH2	2.29	0.59
5:P:194:LEU:O	5:P:198:ILE:HG13	2.02	0.59
3:D:1435:LEU:O	3:D:1439:SER:OG	2.13	0.59
1:K:206:THR:HG22	1:K:208:LEU:H	1.67	0.59
3:N:845:ASN:HB2	3:N:846:PRO:HD2	1.85	0.59
3:N:1189:ARG:HB3	3:N:1204:CYS:HA	1.84	0.59
3:N:1205:TYR:CZ	3:N:1366:LYS:HD3	2.38	0.59
2:C:157:ARG:HD3	2:C:157:ARG:N	2.18	0.59
3:D:67:ARG:NH1	5:F:379:ARG:HB2	2.18	0.59
3:D:355:VAL:HG11	3:D:385:VAL:HG21	1.85	0.59
3:D:388:HIS:O	3:D:390:PRO:HD3	2.02	0.59
3:D:580:ALA:O	3:D:584:ASN:HB2	2.03	0.59
3:D:1478:SER:O	3:D:1482:ARG:HB2	2.03	0.59
5:F:230:LYS:O	5:F:232:ARG:HG3	2.02	0.59
1:L:115:LEU:O	1:L:117:VAL:HG23	2.02	0.59
3:N:844:ALA:O	3:N:867:ARG:HB3	2.03	0.59
3:N:963:TYR:HE2	3:N:1002:LYS:HD3	1.68	0.59
1:A:9:PRO:HD2	1:B:224:TYR:CD2	2.38	0.59
1:B:115:LEU:O	1:B:117:VAL:HG23	2.02	0.59
2:C:134:ARG:NH1	2:C:392:SER:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:482:GLU:HG3	2:C:482:GLU:O	2.01	0.59
3:D:1101:VAL:HG21	3:D:1424:VAL:HB	1.85	0.59
3:D:1439:SER:HB2	3:D:1463:LYS:HZ3	1.67	0.59
2:M:383:ARG:O	2:M:387:SER:HB2	2.03	0.59
2:M:482:GLU:HG3	2:M:482:GLU:O	2.03	0.59
2:M:976:ASP:OD1	2:M:978:ARG:HD3	2.01	0.59
3:N:171:LEU:HD22	3:N:390:PRO:HG2	1.85	0.59
3:N:202:VAL:HG21	3:N:400:VAL:HG13	1.83	0.59
6:Q:15:DT:H2'	6:Q:16:DC:C6	2.38	0.59
2:C:102:HIS:CB	2:C:105:THR:CG2	2.78	0.58
2:C:420:ARG:NH2	2:C:448:ASN:OD1	2.33	0.58
2:C:915:LYS:NZ	3:D:952:ASP:OD2	2.36	0.58
3:D:876:SER:OG	3:D:879:ARG:HG3	2.02	0.58
1:K:10:VAL:HG22	1:K:26:GLU:O	2.03	0.58
2:M:858:MET:HG3	2:M:867:VAL:HG23	1.85	0.58
3:N:260:GLU:OE1	3:N:273:ARG:CZ	2.51	0.58
1:B:57:TYR:CG	1:B:161:ARG:HD2	2.38	0.58
2:C:105:THR:O	2:C:105:THR:HG23	2.03	0.58
2:C:157:ARG:HH11	2:C:157:ARG:CG	2.15	0.58
2:M:936:VAL:HG11	2:M:959:PRO:HB2	1.85	0.58
3:N:1286:THR:HG22	3:N:1288:GLU:H	1.68	0.58
4:O:50:THR:HG22	4:O:51:LEU:H	1.67	0.58
1:A:97:VAL:HG12	1:A:99:LEU:HD12	1.86	0.58
3:D:56:TYR:HB3	3:D:65:ARG:O	2.01	0.58
3:D:1495:ILE:HG12	4:E:88:GLU:HG3	1.84	0.58
3:N:1047:LYS:HG2	3:N:1053:PHE:CZ	2.38	0.58
2:C:487:THR:HG23	2:C:490:GLU:H	1.68	0.58
3:D:33:ASN:HB3	3:D:36:THR:HG23	1.84	0.58
3:D:1112:CYS:SG	3:D:1114:THR:HG22	2.44	0.58
2:M:302:VAL:O	2:M:305:PRO:HD2	2.03	0.58
3:N:1384:PRO:HB3	3:N:1389:LEU:O	2.04	0.58
5:P:382:THR:CG2	5:P:384:GLU:HG2	2.33	0.58
2:C:198:ARG:NH1	2:C:230:ARG:HA	2.17	0.58
2:C:1110:ASP:OD2	2:C:1114:GLY:N	2.36	0.58
3:D:1047:LYS:HG2	3:D:1053:PHE:CZ	2.39	0.58
5:F:187:LEU:HD23	5:F:224:VAL:HG13	1.84	0.58
2:M:167:LYS:O	2:M:168:ARG:CD	2.44	0.58
2:M:772:ARG:HH22	5:P:380:GLU:HB3	1.69	0.58
3:N:658:LEU:HD23	3:N:661:MET:CE	2.33	0.58
5:P:228:GLU:OE2	5:P:231:ARG:NE	2.37	0.58
5:P:394:ARG:HG2	5:P:395:GLU:HG2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:211:LEU:O	1:A:215:VAL:HG23	2.03	0.58
3:D:892:ASP:OD1	3:D:894:LYS:HD2	2.02	0.58
1:K:30:ARG:CD	1:K:191:ASP:OD1	2.51	0.58
1:K:97:VAL:HG12	1:K:99:LEU:HD12	1.86	0.58
1:L:80:LEU:HB3	3:N:867:ARG:NH2	2.18	0.58
3:N:37:LEU:HD13	3:N:535:PHE:CZ	2.39	0.58
2:C:740:GLU:HB3	2:C:805:ARG:HH12	1.69	0.58
1:L:94:LEU:HD11	1:L:96:THR:O	2.03	0.58
3:N:149:LYS:O	3:N:150:ARG:HB2	2.03	0.58
3:N:233:LYS:HD2	3:N:240:GLU:OE2	2.03	0.58
3:N:437:VAL:HG11	5:P:175:HIS:CD2	2.39	0.58
2:M:235:LEU:CD1	2:M:257:VAL:HG21	2.34	0.58
2:M:1090:LYS:HE2	3:N:88:TYR:O	2.04	0.58
3:N:317:VAL:HG23	3:N:339:TRP:HB3	1.86	0.58
2:C:714:ASP:OD2	2:C:808:ARG:NH1	2.31	0.58
3:N:876:SER:OG	3:N:879:ARG:HG3	2.02	0.58
2:C:786:LYS:HB2	2:C:786:LYS:HZ2	1.69	0.58
3:D:181:ASP:HB2	3:D:205:TYR:CD1	2.38	0.58
3:D:264:LEU:HD12	3:D:264:LEU:O	2.04	0.57
3:D:490:ALA:O	3:D:494:LYS:HG3	2.04	0.57
2:M:420:ARG:NH2	2:M:448:ASN:OD1	2.36	0.57
3:D:433:GLY:HA3	3:D:446:VAL:CG1	2.33	0.57
3:D:845:ASN:HB2	3:D:846:PRO:HD2	1.87	0.57
5:F:202:TYR:HE2	5:F:248:ASN:OD1	1.87	0.57
3:N:36:THR:O	3:N:37:LEU:HB2	2.03	0.57
3:N:835:SER:HB3	3:N:838:ARG:HG2	1.85	0.57
3:N:1194:CYS:O	3:N:1373:ARG:NH2	2.37	0.57
3:N:1258:ARG:HH21	3:N:1351:GLU:CG	2.17	0.57
1:B:76:VAL:O	1:B:79:ILE:HG12	2.04	0.57
2:C:327:HIS:CD2	2:C:433:THR:HG21	2.39	0.57
2:C:545:ASN:HB3	2:C:583:LEU:HD22	1.86	0.57
3:D:1274:ILE:HG22	3:D:1324:PRO:HA	1.85	0.57
2:M:114:PHE:CD2	5:P:283:GLY:HA2	2.39	0.57
2:M:157:ARG:HD3	2:M:157:ARG:N	2.17	0.57
3:N:259:VAL:HG13	3:N:270:LEU:HD11	1.85	0.57
3:N:276:ASP:O	3:N:277:GLU:OE1	2.22	0.57
5:P:376:ILE:HD12	5:P:377:ASP:HB3	1.86	0.57
3:D:890:VAL:HB	3:D:922:LEU:HD11	1.82	0.57
2:M:127:PHE:O	2:M:133:ASP:HA	2.03	0.57
2:M:146:VAL:HG22	2:M:162:ILE:HG12	1.86	0.57
2:M:179:ASN:OD1	2:M:179:ASN:C	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:111:ALA:O	1:A:114:PHE:HD1	1.87	0.57
1:A:206:THR:HG22	1:A:208:LEU:H	1.70	0.57
3:D:114:THR:HG23	3:D:495:ARG:HG2	1.85	0.57
5:F:202:TYR:O	5:F:205:ARG:HD3	2.04	0.57
2:M:151:ASP:CB	2:M:157:ARG:O	2.50	0.57
3:N:558:LEU:HD13	5:P:142:ARG:HD2	1.86	0.57
3:N:1277:ILE:HG22	3:N:1278:ASP:N	2.19	0.57
2:C:146:VAL:HG22	2:C:162:ILE:HG12	1.86	0.57
2:C:327:HIS:NE2	2:C:433:THR:HG21	2.19	0.57
3:D:808:THR:HB	3:D:811:GLU:HG3	1.87	0.57
4:E:50:THR:HG22	4:E:51:LEU:H	1.68	0.57
2:M:157:ARG:HG3	2:M:176:VAL:CG1	2.35	0.57
2:M:690:ILE:HB	2:M:852:ILE:HD13	1.86	0.57
2:M:983:ILE:HG21	2:M:987:ILE:HD11	1.86	0.57
5:P:256:ARG:NH2	5:P:311:ALA:O	2.37	0.57
1:A:57:TYR:CD1	1:A:161:ARG:CD	2.80	0.57
2:C:617:ASP:N	2:C:617:ASP:OD1	2.37	0.57
2:M:182:VAL:HG23	2:M:193:LEU:HB2	1.86	0.57
3:N:388:HIS:O	3:N:390:PRO:HD3	2.04	0.57
2:C:425:PHE:CE2	3:D:1086:LEU:HD12	2.40	0.57
3:D:658:LEU:HD23	3:D:661:MET:HE1	1.85	0.57
2:M:238:LEU:HD11	2:M:242:LEU:HD23	1.86	0.57
5:P:397:ILE:O	5:P:400:ILE:HG22	2.05	0.57
3:D:1491:THR:O	3:D:1495:ILE:HG13	2.04	0.57
1:K:211:LEU:O	1:K:215:VAL:HG23	2.05	0.57
1:L:76:VAL:O	1:L:79:ILE:HG12	2.05	0.57
2:M:150:PRO:HD3	2:M:322:VAL:CG1	2.35	0.57
3:N:103:TRP:CE2	3:N:1444:THR:HG22	2.40	0.57
3:N:1282:ARG:HH11	3:N:1282:ARG:HG3	1.67	0.57
2:C:171:TRP:CZ3	7:H:13:DT:H2''	2.40	0.57
2:C:174:LEU:HD11	2:C:184:MET:HG3	1.86	0.57
3:D:1010:ASN:OD1	3:D:1014:ASN:ND2	2.37	0.57
5:F:287:THR:O	5:F:291:ILE:HG13	2.05	0.57
3:N:47:GLU:CD	3:N:53:ILE:HG12	2.26	0.57
3:N:563:PRO:HB3	5:P:189:GLU:HG3	1.86	0.57
3:D:784:ASP:HB2	3:D:939:PHE:CE2	2.40	0.56
3:D:1264:GLU:OE1	3:D:1264:GLU:HA	2.05	0.56
3:N:808:THR:HB	3:N:811:GLU:HG3	1.87	0.56
5:P:222:ARG:HD2	5:P:222:ARG:N	2.18	0.56
2:C:157:ARG:HH11	2:C:176:VAL:HG11	1.52	0.56
3:D:15:PRO:O	3:D:19:ARG:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:58:ILE:HB	1:L:61:VAL:HB	1.87	0.56
2:M:150:PRO:HD3	2:M:322:VAL:HG13	1.87	0.56
2:M:617:ASP:N	2:M:617:ASP:OD1	2.37	0.56
1:A:30:ARG:HD3	1:A:191:ASP:OD2	2.06	0.56
2:C:302:VAL:O	2:C:305:PRO:HD2	2.06	0.56
2:C:363:SER:O	2:C:367:LEU:HD21	2.04	0.56
3:D:1231:GLU:N	3:D:1232:PRO:HD2	2.21	0.56
1:K:111:ALA:O	1:K:114:PHE:HD1	1.89	0.56
3:N:1276:GLU:OE2	3:N:1301:LYS:HE3	2.04	0.56
5:P:383:LEU:HD12	5:P:398:ARG:HD2	1.87	0.56
2:C:861:LEU:HD23	2:C:974:LEU:CD1	2.35	0.56
3:N:273:ARG:HG3	3:N:278:PRO:HA	1.87	0.56
3:N:1237:THR:CG2	3:N:1238:MET:H	2.09	0.56
3:N:1290:LEU:HG	3:N:1307:LYS:CD	2.35	0.56
3:N:1439:SER:HB2	3:N:1463:LYS:NZ	2.20	0.56
5:P:409:LYS:C	5:P:409:LYS:HD3	2.25	0.56
2:M:105:THR:HG22	2:M:107:LEU:HB3	1.79	0.56
4:E:14:ASP:OD1	4:E:18:ARG:NH1	2.39	0.56
5:F:377:ASP:OD1	5:F:379:ARG:N	2.38	0.56
3:N:207:PHE:CZ	5:P:101:GLU:OE2	2.59	0.56
2:C:690:ILE:CD1	2:C:869:VAL:HG22	2.36	0.56
2:C:758:ARG:HH21	2:C:788:THR:HB	1.70	0.56
3:D:127:LEU:HA	3:D:457:GLY:HA2	1.87	0.56
3:D:128:TYR:CZ	3:D:587:ARG:CD	2.88	0.56
2:M:176:VAL:HG12	2:M:177:GLU:N	2.21	0.56
3:N:16:GLU:OE2	3:N:16:GLU:N	2.26	0.56
3:N:835:SER:O	3:N:838:ARG:HG3	2.06	0.56
2:M:524:VAL:CG1	2:M:528:GLU:HB2	2.35	0.56
3:N:573:MET:HE1	5:P:214:GLN:HG3	1.88	0.56
3:N:1311:LEU:CB	3:N:1325:LEU:O	2.54	0.56
5:P:358:LEU:O	5:P:366:ALA:HB2	2.05	0.56
2:C:580:MET:HB3	2:C:584:GLU:OE2	2.06	0.56
2:M:118:ILE:HD11	2:M:344:PHE:CE2	2.40	0.56
2:M:230:ARG:HG3	2:M:231:PRO:HD2	1.88	0.56
2:M:56:GLU:HG2	2:M:359:MET:HE3	1.88	0.56
2:M:1110:ASP:OD2	2:M:1114:GLY:N	2.34	0.56
1:A:220:GLU:O	1:A:223:THR:HB	2.07	0.55
2:C:118:ILE:HD11	2:C:344:PHE:CE2	2.40	0.55
2:C:717:LEU:CD2	2:C:763:GLY:HA2	2.35	0.55
2:C:922:PHE:CE2	2:C:964:LYS:HB2	2.42	0.55
3:D:939:PHE:O	3:D:942:SER:OG	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1263:PHE:HD2	3:D:1375:MET:CE	2.17	0.55
1:K:70:GLY:N	2:M:607:ASP:OD1	2.38	0.55
2:M:154:ARG:NH2	2:M:178:PRO:N	2.53	0.55
2:M:157:ARG:HH11	2:M:157:ARG:CG	2.15	0.55
3:N:1263:PHE:HD2	3:N:1375:MET:HE1	1.71	0.55
5:P:153:PRO:HA	5:P:156:VAL:HG22	1.88	0.55
3:D:1258:ARG:HH21	3:D:1351:GLU:CG	2.19	0.55
5:F:354:LEU:O	5:F:358:LEU:HG	2.06	0.55
1:K:25:LEU:HD11	1:L:224:TYR:O	2.07	0.55
3:N:478:LEU:O	3:N:481:MET:HB2	2.06	0.55
1:A:30:ARG:HD3	1:A:191:ASP:CG	2.26	0.55
2:C:164:PRO:HA	2:C:269:LEU:HD12	1.88	0.55
2:C:858:MET:HG3	2:C:867:VAL:HG23	1.88	0.55
1:L:4:SER:O	1:L:189:ARG:NH1	2.39	0.55
2:M:637:LEU:HD23	2:M:659:PRO:HG2	1.88	0.55
3:N:835:SER:CB	3:N:838:ARG:CG	2.82	0.55
5:P:144:ILE:HB	5:P:147:LEU:HB2	1.88	0.55
1:B:102:LYS:HA	1:B:138:LEU:O	2.06	0.55
5:F:259:ARG:HG2	5:F:259:ARG:HH11	1.72	0.55
1:L:102:LYS:HA	1:L:138:LEU:O	2.07	0.55
2:M:157:ARG:HG3	2:M:176:VAL:HG12	1.88	0.55
3:N:553:ARG:HD2	3:N:570:GLU:OE2	2.06	0.55
3:N:1380:GLU:HB2	3:N:1420:LEU:HD22	1.88	0.55
2:C:524:VAL:CG1	2:C:528:GLU:HB2	2.36	0.55
2:C:858:MET:HG2	2:C:867:VAL:O	2.06	0.55
3:D:16:GLU:OE2	3:D:16:GLU:N	2.34	0.55
2:M:224:GLU:OE2	2:M:224:GLU:N	2.30	0.55
2:C:874:LEU:HD23	3:D:1023:MET:SD	2.47	0.55
3:D:274:ARG:HH22	3:D:279:VAL:HG21	1.70	0.55
3:D:372:ASP:OD1	3:D:372:ASP:N	2.40	0.55
2:M:598:GLU:O	2:M:651:LYS:HG3	2.06	0.55
2:C:151:ASP:OD1	2:C:153:ALA:N	2.39	0.55
3:D:149:LYS:O	3:D:150:ARG:HB2	2.05	0.55
3:D:1331:ASP:C	3:D:1331:ASP:OD1	2.45	0.55
1:K:39:PRO:CG	1:L:39:PRO:HG3	2.36	0.55
2:M:141:HIS:CE1	2:M:334:ARG:HD2	2.42	0.55
2:M:1097:LEU:HD11	3:N:103:TRP:HZ3	1.72	0.55
5:P:364:ARG:NH1	5:P:392:VAL:HG11	2.22	0.55
3:N:32:ILE:O	5:P:258:ILE:HG23	2.07	0.55
3:N:56:TYR:CE1	3:N:69:GLU:HG3	2.38	0.55
3:N:1100:ASP:CG	3:N:1440:PHE:HB2	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:1237:THR:CG2	3:N:1238:MET:N	2.57	0.55
3:N:1264:GLU:OE1	3:N:1264:GLU:HA	2.07	0.55
5:P:364:ARG:HH12	5:P:392:VAL:HG11	1.72	0.55
2:C:325:ILE:H	2:C:330:ASN:HD22	1.55	0.55
2:C:593:ALA:HB1	2:C:659:PRO:HD2	1.89	0.55
2:C:719:PRO:HB3	2:C:820:ARG:CZ	2.36	0.55
3:D:696:HIS:CD2	4:E:57:ASP:OD1	2.60	0.55
3:D:1312:LEU:CD2	3:D:1327:ARG:HG3	2.30	0.55
1:L:211:LEU:O	1:L:215:VAL:HG13	2.07	0.55
2:M:680:ASP:OD2	2:M:978:ARG:NH2	2.39	0.55
2:M:922:PHE:CE2	2:M:964:LYS:HB2	2.42	0.55
3:N:685:ASP:HA	3:N:688:TRP:HD1	1.72	0.55
3:N:1156:LEU:HD23	3:N:1182:GLU:OE2	2.07	0.55
1:B:176:ARG:NH2	3:D:888:GLU:OE1	2.40	0.55
5:P:125:ASP:N	5:P:125:ASP:OD1	2.40	0.55
1:B:18:ARG:O	1:B:207:PRO:HD3	2.07	0.54
1:B:211:LEU:O	1:B:215:VAL:HG13	2.06	0.54
2:C:35:PRO:CG	2:C:38:LYS:HD2	2.36	0.54
3:D:56:TYR:HE1	3:D:69:GLU:HG3	1.71	0.54
3:N:227:LEU:O	3:N:227:LEU:HD23	2.07	0.54
3:N:1410:GLU:HG2	3:N:1410:GLU:O	2.06	0.54
5:P:299:TRP:CE3	5:P:303:ARG:HD3	2.41	0.54
5:P:358:LEU:HD23	5:P:370:LYS:HE2	1.88	0.54
3:D:241:ILE:HA	3:D:312:ARG:HB3	1.89	0.54
3:D:553:ARG:HD2	3:D:570:GLU:OE2	2.07	0.54
3:N:771:SER:O	3:N:775:GLY:HA2	2.07	0.54
2:C:164:PRO:CD	2:C:171:TRP:HD1	2.16	0.54
2:M:151:ASP:OD1	2:M:153:ALA:N	2.39	0.54
2:M:236:ILE:HD12	2:M:248:PRO:HB3	1.90	0.54
3:N:1292:VAL:HG21	3:N:1305:LEU:HD11	1.88	0.54
1:B:57:TYR:CD1	1:B:161:ARG:HD2	2.42	0.54
3:D:478:LEU:O	3:D:481:MET:HB2	2.07	0.54
3:D:658:LEU:HD23	3:D:661:MET:CE	2.37	0.54
1:K:133:GLU:HG2	1:K:134:GLU:N	2.22	0.54
1:L:92:PRO:O	1:L:146:ARG:NH1	2.35	0.54
2:M:174:LEU:CD1	2:M:174:LEU:N	2.70	0.54
3:N:274:ARG:O	3:N:275:GLU:HB2	2.06	0.54
2:C:176:VAL:O	2:C:177:GLU:CB	2.56	0.54
3:D:478:LEU:O	3:D:481:MET:N	2.41	0.54
3:D:536:ALA:HA	5:F:315:VAL:O	2.08	0.54
2:M:324:ASP:HB3	2:M:327:HIS:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:1482:ARG:HH21	3:N:1483:PHE:HZ	1.55	0.54
5:P:382:THR:HG23	5:P:384:GLU:HG2	1.89	0.54
5:P:383:LEU:H	5:P:383:LEU:CD2	2.17	0.54
1:K:220:GLU:O	1:K:223:THR:HB	2.08	0.54
2:M:988:VAL:HG21	3:N:949:ILE:O	2.08	0.54
3:N:143:ASN:OD1	3:N:144:GLY:N	2.40	0.54
3:N:800:LYS:HB3	3:N:822:ALA:HB2	1.90	0.54
5:F:163:LEU:HD13	5:F:174:LEU:HD13	1.89	0.54
1:K:184:THR:O	1:K:192:LEU:HB2	2.08	0.54
2:M:437:ARG:CZ	2:M:491:GLU:OE2	2.55	0.54
2:M:545:ASN:HB3	2:M:583:LEU:HD22	1.90	0.54
2:M:704:HIS:CD2	2:M:831:ARG:HD2	2.42	0.54
3:N:1282:ARG:CG	3:N:1282:ARG:NH1	2.66	0.54
3:N:1400:VAL:HG21	3:N:1417:TRP:HD1	1.70	0.54
5:P:125:ASP:O	5:P:129:GLU:HG2	2.08	0.54
2:C:395:LYS:HE2	2:C:403:SER:HB2	1.90	0.54
2:C:1037:VAL:HG13	2:C:1049:LEU:HD11	1.89	0.54
3:D:433:GLY:HA3	3:D:446:VAL:HG13	1.89	0.54
3:D:1046:GLN:HA	3:D:1052:THR:HA	1.89	0.54
2:M:206:THR:CA	2:M:209:ARG:HD2	2.38	0.54
3:N:372:ASP:N	3:N:372:ASP:OD1	2.36	0.54
3:N:475:LYS:O	3:N:479:GLU:HG2	2.08	0.54
5:P:383:LEU:HD23	5:P:383:LEU:N	2.18	0.54
2:C:758:ARG:H	2:C:789:SER:HB3	1.72	0.54
2:C:983:ILE:HG21	2:C:987:ILE:HD11	1.89	0.54
5:F:270:LYS:HG2	5:F:295:MET:HE1	1.90	0.54
3:N:573:MET:CE	5:P:214:GLN:HG3	2.38	0.54
3:N:1213:ARG:HB2	3:N:1214:PRO:HD2	1.89	0.54
2:C:198:ARG:CZ	2:C:230:ARG:HA	2.38	0.54
5:F:155:THR:O	5:F:159:ILE:HG12	2.07	0.54
5:F:231:ARG:O	5:F:232:ARG:CB	2.56	0.54
2:M:395:LYS:HE2	2:M:403:SER:HB2	1.90	0.54
3:N:1292:VAL:HG23	3:N:1305:LEU:HD11	1.89	0.54
3:N:1314:LYS:O	3:N:1317:ASP:HB2	2.07	0.54
1:B:92:PRO:O	1:B:146:ARG:NH1	2.33	0.53
2:C:86:LYS:HB2	2:C:88:LEU:HG	1.90	0.53
2:C:184:MET:HE3	2:C:186:VAL:CG2	2.37	0.53
2:C:598:GLU:O	2:C:651:LYS:HG3	2.08	0.53
2:C:999:HIS:HB3	2:C:1004:LYS:HE3	1.90	0.53
3:D:1283:ILE:CG1	3:D:1315:ASP:HB2	2.35	0.53
2:M:242:LEU:HD12	2:M:256:TYR:OH	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:581:THR:N	2:M:584:GLU:OE2	2.40	0.53
2:M:966:LEU:HD13	2:M:986:PRO:HB3	1.90	0.53
3:N:259:VAL:HG13	3:N:270:LEU:CD1	2.37	0.53
3:N:1312:LEU:HD22	3:N:1327:ARG:HG2	1.90	0.53
2:C:184:MET:HE3	2:C:186:VAL:HG21	1.90	0.53
3:D:800:LYS:HB3	3:D:822:ALA:HB2	1.91	0.53
3:D:1310:ARG:CD	3:D:1327:ARG:HB2	2.37	0.53
3:N:187:LYS:N	3:N:200:ASP:HB3	2.23	0.53
3:N:433:GLY:HA3	3:N:446:VAL:CG1	2.39	0.53
3:N:654:LYS:HB3	3:N:655:PRO:HD3	1.89	0.53
4:O:40:LEU:HG	4:O:67:GLU:HG2	1.89	0.53
5:P:140:ARG:HH11	5:P:140:ARG:HG2	1.73	0.53
1:A:201:THR:HG22	1:A:202:ASP:N	2.23	0.53
2:C:581:THR:N	2:C:584:GLU:OE2	2.41	0.53
3:D:187:LYS:N	3:D:200:ASP:HB3	2.23	0.53
1:L:18:ARG:O	1:L:207:PRO:HD3	2.09	0.53
2:M:419:THR:HB	2:M:422:ARG:HG2	1.91	0.53
3:N:1046:GLN:HA	3:N:1052:THR:HA	1.89	0.53
2:C:177:GLU:CG	2:C:178:PRO:HD2	2.30	0.53
3:D:171:LEU:HD22	3:D:390:PRO:HG2	1.90	0.53
3:D:580:ALA:HA	3:D:584:ASN:HA	1.88	0.53
3:D:685:ASP:HA	3:D:688:TRP:HD1	1.74	0.53
2:M:740:GLU:HB3	2:M:805:ARG:NH1	2.23	0.53
2:C:640:ARG:HH11	2:C:642:ARG:NH2	2.07	0.53
3:D:143:ASN:OD1	3:D:144:GLY:N	2.40	0.53
3:D:270:LEU:HD12	3:D:284:LEU:HD11	1.89	0.53
3:D:1468:LEU:HB3	3:D:1470:ARG:HG3	1.91	0.53
2:M:184:MET:HE3	2:M:186:VAL:HG21	1.90	0.53
3:N:840:LYS:HE3	3:N:841:TYR:OH	2.09	0.53
3:N:1263:PHE:HA	3:N:1375:MET:HE1	1.89	0.53
2:C:229:MET:O	2:C:230:ARG:CB	2.55	0.53
2:C:944:LEU:HD21	2:C:963:LEU:HD23	1.90	0.53
3:D:1386:ASP:CB	3:D:1412:LYS:HD2	2.39	0.53
3:D:1402:ALA:O	3:D:1405:GLU:HG2	2.09	0.53
3:N:1232:PRO:HG2	3:N:1356:TYR:HE2	1.73	0.53
1:A:9:PRO:CD	1:B:224:TYR:CD2	2.92	0.53
2:C:55:GLU:HG3	2:C:56:GLU:H	1.73	0.53
2:C:191:PHE:HB2	2:C:192:PRO:HD2	1.90	0.53
2:C:224:GLU:OE2	2:C:224:GLU:N	2.30	0.53
2:M:157:ARG:HH12	2:M:176:VAL:HG13	1.71	0.53
1:A:58:ILE:HB	1:A:61:VAL:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:419:THR:HB	2:C:422:ARG:HG2	1.91	0.53
3:D:192:ALA:HB1	3:D:193:PRO:HD2	1.90	0.53
5:F:394:ARG:O	5:F:397:ILE:HG22	2.08	0.53
2:M:419:THR:N	2:M:422:ARG:HG3	2.21	0.53
5:P:152:ASP:OD1	5:P:152:ASP:N	2.42	0.53
5:P:343:ASP:O	5:P:346:THR:HB	2.09	0.53
1:A:30:ARG:CD	1:A:191:ASP:OD2	2.57	0.53
2:C:560:MET:O	2:C:564:MET:HG3	2.09	0.53
2:C:580:MET:HB3	2:C:584:GLU:CD	2.29	0.53
2:M:156:GLY:C	2:M:157:ARG:HD3	2.29	0.53
2:M:535:SER:O	2:M:538:GLN:HG2	2.08	0.53
2:M:759:THR:HB	2:M:785:VAL:HB	1.90	0.53
3:N:478:LEU:O	3:N:481:MET:N	2.42	0.53
3:N:1462:LEU:O	3:N:1466:VAL:HG23	2.08	0.53
5:P:368:VAL:HG11	5:P:397:ILE:HD11	1.91	0.53
3:D:405:ASP:CG	3:D:406:ASP:H	2.11	0.53
3:D:897:TRP:CH2	3:D:902:LEU:HD22	2.44	0.53
3:D:1280:VAL:HG12	3:D:1295:GLU:O	2.10	0.53
4:E:95:VAL:HG23	4:E:95:VAL:O	2.08	0.53
2:M:164:PRO:HA	2:M:269:LEU:HD12	1.91	0.53
3:N:405:ASP:CG	3:N:406:ASP:H	2.11	0.53
4:O:14:ASP:OD1	4:O:18:ARG:NH1	2.42	0.53
1:A:112:ARG:HB3	1:A:125:PRO:HB2	1.91	0.52
2:C:1065:ALA:HB1	2:C:1077:PRO:HG3	1.90	0.52
3:D:840:LYS:HE3	3:D:841:TYR:OH	2.09	0.52
3:D:881:LEU:O	3:D:885:ILE:HG13	2.09	0.52
3:D:1044:LEU:HD12	3:D:1044:LEU:N	2.23	0.52
3:D:1147:ARG:HD3	3:D:1188:VAL:HG11	1.91	0.52
5:F:365:GLU:HB2	5:F:404:ALA:HB2	1.91	0.52
2:M:363:SER:O	2:M:367:LEU:HD21	2.09	0.52
3:N:32:ILE:CD1	5:P:258:ILE:HD11	2.33	0.52
4:O:43:GLU:OE1	4:O:43:GLU:N	2.36	0.52
3:D:654:LYS:HB3	3:D:655:PRO:HD3	1.90	0.52
3:D:801:GLY:HA3	3:D:825:ALA:CB	2.40	0.52
3:D:945:SER:OG	3:D:947:ILE:HG12	2.09	0.52
2:M:15:LEU:HD12	2:M:458:TYR:CZ	2.44	0.52
2:M:55:GLU:HG3	2:M:56:GLU:H	1.72	0.52
3:N:255:GLU:HB3	3:N:279:VAL:HG11	1.91	0.52
5:P:366:ALA:O	5:P:370:LYS:HG3	2.09	0.52
5:P:395:GLU:HA	5:P:398:ARG:HG2	1.90	0.52
1:B:110:LYS:NZ	1:B:128:HIS:CB	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:182:VAL:HG23	2:C:193:LEU:HB2	1.90	0.52
2:C:712:ALA:HB3	2:C:821:GLU:HG3	1.91	0.52
3:D:786:ILE:CG2	3:D:1026:SER:HB2	2.39	0.52
3:D:1282:ARG:HB3	3:D:1293:PHE:HB2	1.90	0.52
3:D:1326:THR:HG22	3:D:1327:ARG:H	1.74	0.52
5:F:390:PHE:HD1	5:F:397:ILE:HD11	1.74	0.52
2:M:858:MET:HG2	2:M:867:VAL:O	2.09	0.52
3:N:945:SER:OG	3:N:947:ILE:HG12	2.09	0.52
3:N:1044:LEU:HD12	3:N:1044:LEU:N	2.22	0.52
1:B:67:THR:O	1:B:69:PRO:HD3	2.10	0.52
2:M:191:PHE:HB2	2:M:192:PRO:HD2	1.90	0.52
2:M:999:HIS:HB3	2:M:1004:LYS:HE3	1.92	0.52
3:N:260:GLU:OE1	3:N:273:ARG:NH2	2.42	0.52
3:N:407:VAL:HG23	3:N:422:ALA:HB2	1.91	0.52
3:N:601:ARG:HD3	5:P:318:GLU:HG2	1.92	0.52
3:N:669:ASN:HD22	5:P:417:LYS:HD3	1.73	0.52
3:N:1311:LEU:N	3:N:1311:LEU:HD23	2.18	0.52
5:P:361:LEU:CD1	5:P:362:SER:H	2.16	0.52
2:C:292:ARG:HG3	2:C:299:LYS:CB	2.39	0.52
2:C:807:ARG:NH2	2:C:810:ASP:OD2	2.43	0.52
3:D:1495:ILE:HD13	4:E:80:VAL:HG21	1.92	0.52
5:F:188:ILE:HG12	5:F:224:VAL:HG21	1.90	0.52
1:K:201:THR:HG22	1:K:202:ASP:N	2.25	0.52
3:N:192:ALA:HB1	3:N:193:PRO:HD2	1.91	0.52
3:N:860:LEU:O	3:N:876:SER:HB2	2.09	0.52
1:A:133:GLU:HG2	1:A:134:GLU:N	2.24	0.52
3:D:134:VAL:HG12	3:D:454:ALA:HB2	1.92	0.52
1:K:112:ARG:HB3	1:K:125:PRO:HB2	1.92	0.52
2:M:954:THR:OG1	2:M:957:LYS:HE3	2.10	0.52
2:M:1090:LYS:HD3	2:M:1112:PHE:CZ	2.44	0.52
3:N:277:GLU:OE1	3:N:277:GLU:N	2.42	0.52
3:N:1310:ARG:HD3	3:N:1327:ARG:CD	2.35	0.52
2:C:948:GLU:HB3	2:C:953:VAL:HG23	1.92	0.52
3:D:371:ILE:CD1	5:F:230:LYS:HA	2.40	0.52
3:D:399:ARG:HB2	3:D:401:TYR:CE1	2.45	0.52
3:D:475:LYS:O	3:D:479:GLU:HG2	2.09	0.52
3:D:1364:HIS:ND1	3:D:1366:LYS:HB2	2.25	0.52
2:M:757:GLY:HA2	2:M:789:SER:CB	2.36	0.52
2:M:787:ASP:OD1	2:M:789:SER:OG	2.26	0.52
3:N:801:GLY:HA3	3:N:825:ALA:CB	2.40	0.52
3:N:1267:ARG:HG2	3:N:1331:ASP:OD2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:372:ARG:HD2	5:P:381:HIS:O	2.09	0.52
1:A:209:GLU:O	1:A:213:GLN:HG3	2.10	0.52
1:B:80:LEU:HD11	3:D:842:VAL:HG12	1.91	0.52
3:D:1282:ARG:NE	3:D:1295:GLU:OE2	2.41	0.52
2:M:1037:VAL:HG13	2:M:1049:LEU:HD11	1.90	0.52
2:M:1097:LEU:HD11	3:N:103:TRP:CZ3	2.45	0.52
3:N:114:THR:HG23	3:N:495:ARG:HG2	1.91	0.52
3:N:399:ARG:HB2	3:N:401:TYR:CE1	2.45	0.52
2:C:156:GLY:C	2:C:157:ARG:HD3	2.29	0.52
2:C:424:GLY:O	2:C:428:ARG:HG3	2.09	0.52
2:C:1043:TYR:CG	3:D:763:MET:HG2	2.45	0.52
1:K:4:SER:HA	1:K:189:ARG:HH21	1.74	0.52
2:M:248:PRO:C	2:M:250:ARG:H	2.12	0.52
2:M:550:LEU:HB3	2:M:905:ILE:HG23	1.92	0.52
2:M:768:THR:HB	2:M:771:GLU:HB2	1.91	0.52
2:M:808:ARG:NH2	5:P:305:GLU:OE2	2.43	0.52
2:M:876:VAL:N	2:M:877:PRO:HD2	2.25	0.52
2:M:1053:LEU:HA	3:N:621:LYS:HD2	1.91	0.52
3:N:786:ILE:CG2	3:N:1026:SER:HB2	2.39	0.52
5:P:231:ARG:O	5:P:232:ARG:CB	2.56	0.52
2:C:954:THR:OG1	2:C:957:LYS:HE3	2.10	0.52
2:C:966:LEU:HD13	2:C:986:PRO:HB3	1.92	0.52
2:M:229:MET:O	2:M:230:ARG:CB	2.58	0.52
2:M:294:GLU:O	2:M:295:ASP:C	2.48	0.52
2:M:580:MET:HB3	2:M:584:GLU:OE2	2.10	0.52
3:N:693:GLU:HA	4:O:48:MET:CE	2.40	0.52
3:N:835:SER:H	3:N:838:ARG:NE	2.07	0.52
3:N:881:LEU:O	3:N:885:ILE:HG13	2.09	0.52
5:P:402:ASN:O	5:P:406:ARG:HG3	2.09	0.52
3:D:860:LEU:O	3:D:876:SER:HB2	2.09	0.51
2:M:212:GLY:HA2	2:M:218:VAL:HG21	1.91	0.51
3:N:897:TRP:CH2	3:N:902:LEU:HD22	2.44	0.51
3:N:1336:LEU:HB2	3:N:1344:VAL:HG21	1.92	0.51
2:C:1090:LYS:HD3	2:C:1112:PHE:CZ	2.45	0.51
3:D:706:PRO:HB2	3:D:708:LEU:HD21	1.91	0.51
2:M:983:ILE:HG21	2:M:987:ILE:CD1	2.40	0.51
3:N:890:VAL:CG1	3:N:922:LEU:CD1	2.88	0.51
3:N:1283:ILE:CD1	3:N:1283:ILE:H	2.23	0.51
3:N:1290:LEU:CG	3:N:1307:LYS:CE	2.64	0.51
5:P:404:ALA:O	5:P:408:LEU:HB2	2.11	0.51
2:C:983:ILE:HG21	2:C:987:ILE:CD1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:804:LEU:O	3:D:827:ILE:HG23	2.11	0.51
3:D:895:VAL:HG11	3:D:922:LEU:CD2	2.40	0.51
5:F:95:THR:HG22	5:F:96:LEU:N	2.25	0.51
2:M:66:LEU:HD11	2:M:98:LEU:HB3	1.92	0.51
2:M:194:VAL:HA	2:M:197:LEU:HD12	1.92	0.51
2:M:323:ASP:O	2:M:325:ILE:CG2	2.59	0.51
2:M:807:ARG:NH2	2:M:810:ASP:OD2	2.43	0.51
2:M:948:GLU:HB3	2:M:953:VAL:HG23	1.92	0.51
3:N:46:ASP:OD2	3:N:48:ARG:CG	2.53	0.51
3:N:147:VAL:HG21	3:N:161:LEU:HD21	1.93	0.51
5:P:83:GLN:O	5:P:87:GLU:HG3	2.09	0.51
4:E:40:LEU:HG	4:E:67:GLU:HG2	1.91	0.51
2:M:170:PRO:HA	7:R:13:DT:H3	1.74	0.51
2:M:290:LEU:HD23	2:M:302:VAL:HG21	1.91	0.51
2:M:669:GLY:H	2:M:993:PHE:HZ	1.56	0.51
5:P:419:ARG:HD2	5:P:422:LEU:HD11	1.92	0.51
1:A:180:GLN:NE2	2:C:935:GLY:O	2.43	0.51
2:C:212:GLY:HA2	2:C:218:VAL:HG21	1.91	0.51
1:K:209:GLU:O	1:K:213:GLN:HG3	2.09	0.51
2:M:184:MET:HE3	2:M:186:VAL:CG2	2.40	0.51
2:M:470:PRO:HB2	2:M:534:VAL:HG21	1.93	0.51
2:M:861:LEU:HD23	2:M:974:LEU:CD1	2.40	0.51
3:N:693:GLU:HA	4:O:48:MET:HE1	1.92	0.51
3:N:1258:ARG:HH21	3:N:1351:GLU:HG2	1.73	0.51
5:P:399:GLN:O	5:P:402:ASN:HB2	2.11	0.51
1:A:47:SER:O	1:A:49:PRO:HD3	2.11	0.51
2:C:97:ARG:HD3	2:C:110:GLU:OE1	2.11	0.51
3:D:614:PHE:HA	3:D:618:LEU:HD23	1.93	0.51
6:G:11:DT:H2''	6:G:12:DG:H5''	1.92	0.51
2:M:154:ARG:NH2	2:M:178:PRO:HA	2.26	0.51
2:M:1065:ALA:HB1	2:M:1077:PRO:HG3	1.91	0.51
3:N:823:LEU:HD11	3:N:837:GLY:CA	2.37	0.51
3:N:823:LEU:CD1	3:N:837:GLY:HA2	2.37	0.51
3:N:834:THR:HG23	3:N:835:SER:O	2.11	0.51
3:N:959:GLU:HB3	3:N:963:TYR:CE1	2.45	0.51
5:P:386:VAL:CG1	5:P:397:ILE:HG21	2.41	0.51
2:C:48:PHE:HA	2:C:348:LEU:HD21	1.93	0.51
2:C:704:HIS:CD2	2:C:831:ARG:HD2	2.46	0.51
3:D:646:LYS:HB3	3:D:688:TRP:CZ3	2.46	0.51
3:D:1108:ARG:NH2	3:D:1198:TYR:O	2.44	0.51
3:D:1312:LEU:HD21	3:D:1327:ARG:CG	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:267:TYR:CE2	2:M:290:LEU:HG	2.46	0.51
3:N:709:HIS:HA	3:N:1227:GLN:HB3	1.92	0.51
3:N:1481:VAL:HG23	4:O:21:VAL:HG21	1.93	0.51
3:D:619:LEU:HD11	3:D:1439:SER:HB3	1.93	0.51
3:N:71:LYS:HG3	3:N:72:VAL:N	2.25	0.51
3:N:218:LYS:HA	3:N:337:LEU:O	2.11	0.51
3:N:566:ILE:HD13	5:P:217:ASN:HB3	1.91	0.51
2:C:223:ASP:O	2:C:227:PHE:HD2	1.94	0.51
2:C:1103:ASP:OD2	2:C:1107:ASN:HB2	2.10	0.51
2:M:97:ARG:HD3	2:M:110:GLU:OE1	2.11	0.51
2:M:171:TRP:HZ3	7:R:14:DG:OP1	1.94	0.51
2:M:250:ARG:HG3	2:M:250:ARG:HH11	1.76	0.51
2:M:325:ILE:H	2:M:330:ASN:HD22	1.57	0.51
2:M:503:LEU:CD2	2:M:508:ILE:HD13	2.41	0.51
3:N:44:LEU:HB3	3:N:525:ARG:HH21	1.76	0.51
3:N:566:ILE:HD11	5:P:192:LEU:HD21	1.92	0.51
3:N:573:MET:SD	5:P:210:LEU:HB3	2.51	0.51
3:N:1231:GLU:N	3:N:1232:PRO:HD2	2.26	0.51
3:N:1386:ASP:OD2	3:N:1413:THR:OG1	2.17	0.51
2:C:637:LEU:HD23	2:C:659:PRO:HG3	1.91	0.51
5:F:377:ASP:OD1	5:F:377:ASP:C	2.50	0.51
5:F:418:LEU:HD12	5:F:418:LEU:N	2.25	0.51
1:K:90:LEU:O	1:K:92:PRO:HD3	2.11	0.51
1:L:83:LYS:HE2	1:L:168:ASP:HB2	1.93	0.51
3:N:1099:VAL:O	3:N:1103:HIS:HB3	2.11	0.51
1:B:156:HIS:ND1	1:B:158:ILE:HG23	2.26	0.50
2:C:12:VAL:HG11	2:C:472:ARG:HD3	1.93	0.50
2:C:56:GLU:HG2	2:C:359:MET:HE3	1.92	0.50
2:C:66:LEU:HD11	2:C:98:LEU:HB3	1.93	0.50
2:M:1103:ASP:OD2	2:M:1107:ASN:HB2	2.11	0.50
3:N:111:LYS:HG3	3:N:1452:ILE:HD11	1.93	0.50
3:N:646:LYS:HB3	3:N:688:TRP:CZ3	2.46	0.50
5:P:380:GLU:H	5:P:380:GLU:CD	2.14	0.50
2:C:878:SER:HA	3:D:1034:GLN:OE1	2.11	0.50
3:D:258:VAL:HG12	3:D:297:ILE:HD13	1.92	0.50
3:D:376:GLU:HG3	3:D:376:GLU:O	2.11	0.50
2:M:223:ASP:O	2:M:227:PHE:HD2	1.94	0.50
2:M:758:ARG:H	2:M:789:SER:HB3	1.76	0.50
2:M:1065:ALA:CB	2:M:1077:PRO:HG3	2.41	0.50
5:P:261:PRO:O	5:P:265:VAL:HG23	2.11	0.50
1:A:27:PRO:HB2	1:A:192:LEU:HD13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:105:THR:CG2	2:C:105:THR:O	2.58	0.50
2:C:418:LEU:HD21	7:H:14:DG:C8	2.46	0.50
3:D:47:GLU:CB	3:D:78:VAL:CG2	2.87	0.50
3:D:1232:PRO:HG2	3:D:1356:TYR:HE2	1.75	0.50
3:D:1263:PHE:HA	3:D:1375:MET:HE2	1.94	0.50
2:M:189:ARG:HH12	2:M:244:PRO:CD	2.20	0.50
3:N:114:THR:HG21	3:N:498:VAL:HG21	1.94	0.50
1:B:94:LEU:HD22	1:B:96:THR:H	1.76	0.50
2:C:15:LEU:HD12	2:C:458:TYR:CZ	2.46	0.50
3:D:1339:LYS:HG2	3:D:1343:ALA:HB2	1.91	0.50
3:D:1465:ASN:HB3	3:D:1470:ARG:HB2	1.92	0.50
4:E:67:GLU:O	4:E:70:THR:OG1	2.29	0.50
1:L:156:HIS:ND1	1:L:158:ILE:HG23	2.26	0.50
2:M:12:VAL:HG11	2:M:472:ARG:HD3	1.93	0.50
3:N:279:VAL:HG13	3:N:279:VAL:O	2.10	0.50
3:N:323:GLU:HB2	3:N:334:THR:HB	1.93	0.50
2:C:805:ARG:HG3	2:C:823:VAL:HG22	1.93	0.50
2:M:171:TRP:CH2	7:R:13:DT:H2"	2.45	0.50
3:N:558:LEU:HD23	3:N:567:ILE:HD12	1.93	0.50
1:A:184:THR:N	1:A:192:LEU:O	2.38	0.50
2:C:198:ARG:HH11	2:C:230:ARG:CA	2.24	0.50
3:D:147:VAL:HG21	3:D:161:LEU:HD21	1.94	0.50
3:D:291:LEU:HD12	3:D:303:PRO:HB2	1.94	0.50
3:D:596:SER:O	3:D:597:ASP:OD2	2.30	0.50
3:D:693:GLU:CA	4:E:48:MET:HE1	2.41	0.50
3:D:829:VAL:O	3:D:830:ALA:HB3	2.11	0.50
2:M:580:MET:HB3	2:M:584:GLU:CD	2.32	0.50
3:D:69:GLU:HA	3:D:80:VAL:HG23	1.92	0.50
3:D:959:GLU:HB3	3:D:963:TYR:CE1	2.46	0.50
2:M:327:HIS:CE1	2:M:488:ALA:HB1	2.46	0.50
3:N:1480:PHE:O	4:O:18:ARG:NH2	2.45	0.50
2:C:48:PHE:O	2:C:52:PHE:HD2	1.94	0.50
2:C:239:PHE:CD2	2:C:253:ALA:HA	2.46	0.50
2:C:550:LEU:HB3	2:C:905:ILE:HG23	1.94	0.50
2:C:787:ASP:OD1	2:C:789:SER:OG	2.30	0.50
3:D:407:VAL:HG23	3:D:422:ALA:HB2	1.94	0.50
3:D:483:HIS:ND1	3:D:484:PRO:HD2	2.27	0.50
3:D:1097:LYS:O	3:D:1101:VAL:HG23	2.12	0.50
5:F:153:PRO:HA	5:F:156:VAL:HG22	1.93	0.50
2:M:843:HIS:NE2	2:M:887:GLU:OE2	2.45	0.50
3:N:44:LEU:O	3:N:525:ARG:NH2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:412:GLY:N	3:N:435:VAL:HG12	2.26	0.50
3:N:483:HIS:ND1	3:N:484:PRO:HD2	2.27	0.50
1:B:176:ARG:HG2	1:B:200:TRP:CE3	2.47	0.50
2:C:524:VAL:HG12	2:C:525:SER:N	2.27	0.50
2:C:1097:LEU:HD11	3:D:103:TRP:HZ3	1.75	0.50
3:D:23:TYR:CD2	3:D:89:ARG:HD3	2.47	0.50
3:D:970:LYS:O	3:D:974:ILE:HG13	2.11	0.50
1:K:47:SER:O	1:K:49:PRO:HD3	2.11	0.50
1:K:153:ALA:N	1:K:168:ASP:OD1	2.33	0.50
2:M:690:ILE:CD1	2:M:869:VAL:HG22	2.42	0.50
2:M:926:PHE:HE1	2:M:929:ARG:HH11	1.59	0.50
3:N:1208:ASP:HB2	3:N:1215:VAL:HA	1.94	0.50
3:N:1440:PHE:O	3:N:1441:GLN:HG3	2.12	0.50
2:C:82:GLU:O	2:C:86:LYS:HG3	2.12	0.49
2:C:194:VAL:HA	2:C:197:LEU:HD12	1.94	0.49
2:M:460:ARG:HD2	2:M:485:TYR:CZ	2.46	0.49
3:N:368:VAL:HB	3:N:377:VAL:HB	1.94	0.49
3:N:661:MET:CE	3:N:677:LEU:HD11	2.42	0.49
5:P:152:ASP:HB2	5:P:153:PRO:HD2	1.92	0.49
5:P:398:ARG:O	5:P:401:GLU:HG2	2.10	0.49
1:A:90:LEU:O	1:A:92:PRO:HD3	2.11	0.49
2:C:535:SER:OG	2:C:537:LYS:HG3	2.12	0.49
2:C:926:PHE:HE1	2:C:929:ARG:HH11	1.60	0.49
3:D:33:ASN:HB2	3:D:40:GLU:OE1	2.11	0.49
3:D:217:LYS:HB2	3:D:339:TRP:CE2	2.47	0.49
3:D:595:GLY:O	3:D:597:ASP:OD2	2.30	0.49
3:D:1347:TYR:O	3:D:1351:GLU:HB2	2.11	0.49
2:M:211:LEU:HD23	2:M:311:PHE:HD2	1.76	0.49
2:M:524:VAL:HG12	2:M:525:SER:N	2.27	0.49
3:N:274:ARG:CZ	3:N:279:VAL:HG21	2.42	0.49
5:P:403:LYS:NZ	5:P:406:ARG:HH12	2.10	0.49
1:A:58:ILE:HG21	1:A:68:ILE:HD11	1.93	0.49
2:C:289:THR:HG22	2:C:291:ALA:H	1.76	0.49
2:C:660:ALA:O	2:C:667:ALA:N	2.39	0.49
3:D:96:ALA:HB3	3:D:554:LEU:HD23	1.93	0.49
3:D:567:ILE:HG22	3:D:571:LYS:HE3	1.94	0.49
3:D:916:TYR:CE1	3:D:920:LEU:HD11	2.46	0.49
3:D:1272:ALA:HA	3:D:1326:THR:HB	1.94	0.49
5:F:372:ARG:HE	5:F:383:LEU:HG	1.77	0.49
1:K:47:SER:HG	1:L:32:PHE:HE1	1.60	0.49
2:M:425:PHE:CZ	3:N:1086:LEU:HD12	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:1090:LYS:HD3	2:M:1112:PHE:CE2	2.47	0.49
3:N:315:ARG:O	3:N:316:GLN:HB3	2.12	0.49
5:P:140:ARG:HG2	5:P:140:ARG:NH1	2.27	0.49
1:A:39:PRO:CG	1:B:39:PRO:HG3	2.42	0.49
2:C:267:TYR:CE2	2:C:290:LEU:HG	2.47	0.49
2:C:436:GLY:HA2	2:C:538:GLN:O	2.12	0.49
3:D:230:TRP:CZ2	3:D:232:GLU:HA	2.47	0.49
3:N:619:LEU:HD11	3:N:1439:SER:HB3	1.92	0.49
3:N:806:PHE:HB2	3:N:829:VAL:HG22	1.94	0.49
2:C:711:GLU:HB2	2:C:713:ARG:NH1	2.28	0.49
3:D:128:TYR:CZ	3:D:587:ARG:HD3	2.47	0.49
3:D:1379:VAL:HG21	3:D:1400:VAL:HG11	1.92	0.49
4:E:43:GLU:OE1	4:E:43:GLU:N	2.37	0.49
1:K:34:VAL:CG2	1:L:42:ARG:CZ	2.90	0.49
1:L:176:ARG:HG2	1:L:200:TRP:CE3	2.47	0.49
2:M:157:ARG:NH1	2:M:157:ARG:CG	2.74	0.49
2:M:229:MET:HE2	2:M:234:ALA:HA	1.87	0.49
3:N:473:LEU:HD21	3:N:495:ARG:NH2	2.27	0.49
3:D:661:MET:CE	3:D:677:LEU:HD11	2.43	0.49
3:D:1305:LEU:HD23	3:D:1305:LEU:H	1.66	0.49
1:L:80:LEU:HD11	3:N:842:VAL:HG12	1.95	0.49
2:M:86:LYS:HB2	2:M:88:LEU:HG	1.94	0.49
2:M:289:THR:CG2	2:M:291:ALA:O	2.61	0.49
2:M:327:HIS:CE1	2:M:433:THR:HG21	2.47	0.49
3:N:614:PHE:HA	3:N:618:LEU:HD23	1.94	0.49
5:P:391:GLY:O	5:P:392:VAL:O	2.31	0.49
2:M:23:VAL:HG12	2:M:24:GLU:N	2.26	0.49
2:M:136:ILE:HB	2:M:336:VAL:CG1	2.43	0.49
2:M:261:ILE:HG22	2:M:291:ALA:HB3	1.94	0.49
2:M:424:GLY:O	2:M:428:ARG:HG3	2.12	0.49
3:N:671:LYS:NZ	5:P:420:ASP:O	2.40	0.49
3:N:1238:MET:CG	3:N:1359:GLN:OE1	2.61	0.49
2:C:23:VAL:HG12	2:C:24:GLU:N	2.27	0.49
3:D:473:LEU:HD21	3:D:495:ARG:NH2	2.27	0.49
3:D:1264:GLU:OE2	3:D:1425:THR:OG1	2.31	0.49
5:F:123:ASP:HB3	5:F:125:ASP:OD1	2.12	0.49
2:M:5:ARG:HB3	2:M:902:ILE:HB	1.95	0.49
2:M:685:GLU:OE1	2:M:685:GLU:HA	2.12	0.49
3:N:595:GLY:C	3:N:597:ASP:OD2	2.48	0.49
3:N:729:HIS:ND1	3:N:730:PRO:HD2	2.28	0.49
3:N:832:ARG:HD2	3:N:833:GLU:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:PRO:HD3	1:B:224:TYR:CE2	2.47	0.49
1:A:25:LEU:HD22	1:B:225:PHE:CZ	2.47	0.49
2:C:470:PRO:HB2	2:C:534:VAL:HG21	1.95	0.49
3:D:272:LEU:O	3:D:279:VAL:N	2.43	0.49
3:D:431:VAL:HG12	3:D:432:TYR:N	2.27	0.49
5:F:156:VAL:O	5:F:160:ASP:HB2	2.13	0.49
2:M:238:LEU:HD11	2:M:242:LEU:CD2	2.43	0.49
2:M:878:SER:HA	3:N:1034:GLN:OE1	2.13	0.49
3:N:433:GLY:HA3	3:N:446:VAL:HG13	1.95	0.49
3:N:1237:THR:O	3:N:1238:MET:O	2.30	0.49
2:C:50:GLU:OE1	2:C:345:ARG:NE	2.46	0.49
2:C:290:LEU:HD23	2:C:302:VAL:HG21	1.95	0.49
2:C:1065:ALA:CB	2:C:1077:PRO:HG3	2.42	0.49
3:D:74:GLU:CD	3:D:74:GLU:H	2.17	0.49
1:L:48:ILE:HG22	1:L:173:PRO:HD2	1.95	0.49
2:M:560:MET:O	2:M:564:MET:HG3	2.13	0.49
2:M:660:ALA:O	2:M:667:ALA:N	2.41	0.49
3:N:80:VAL:O	3:N:80:VAL:HG23	2.13	0.49
3:N:313:MET:HG3	3:N:314:PRO:HD2	1.95	0.49
3:N:437:VAL:HG11	5:P:175:HIS:HD2	1.78	0.49
3:D:1068:LEU:O	3:D:1072:ILE:HG12	2.13	0.48
2:M:740:GLU:HB3	2:M:805:ARG:HH12	1.77	0.48
3:N:219:GLU:N	3:N:339:TRP:CH2	2.81	0.48
3:N:286:VAL:HG13	3:N:312:ARG:O	2.13	0.48
3:N:770:LEU:HD23	3:N:777:PRO:HA	1.95	0.48
3:N:850:LEU:HD12	3:N:884:ARG:NH2	2.28	0.48
3:N:890:VAL:HG21	3:N:922:LEU:HD11	1.95	0.48
3:N:1283:ILE:H	3:N:1283:ILE:HD12	1.78	0.48
2:M:858:MET:HG3	2:M:867:VAL:CG2	2.43	0.48
2:M:1043:TYR:CG	3:N:763:MET:HG2	2.49	0.48
3:N:890:VAL:CB	3:N:922:LEU:HD11	2.41	0.48
5:P:89:GLY:HA3	7:R:7:DG:C6	2.48	0.48
1:B:48:ILE:HG22	1:B:173:PRO:HD2	1.95	0.48
2:C:685:GLU:OE1	2:C:685:GLU:HA	2.12	0.48
2:C:876:VAL:N	2:C:877:PRO:HD2	2.28	0.48
3:D:371:ILE:HG23	5:F:230:LYS:HD2	1.95	0.48
5:F:226:LYS:HD2	7:H:1:DT:H72	1.95	0.48
2:M:99:GLN:NE2	2:M:101:ILE:HD11	2.28	0.48
2:M:154:ARG:HH22	2:M:178:PRO:HA	1.77	0.48
2:M:810:ASP:HB2	2:M:811:PRO:HD2	1.95	0.48
2:M:850:ALA:HA	3:N:632:VAL:HG21	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:874:LEU:HD23	3:N:1023:MET:SD	2.53	0.48
1:L:60:ASP:O	1:L:62:LEU:HD12	2.13	0.48
2:M:553:ASP:OD1	2:M:843:HIS:ND1	2.38	0.48
2:M:1053:LEU:HD11	3:N:1466:VAL:HG13	1.94	0.48
3:N:574:LEU:O	3:N:578:VAL:HG23	2.13	0.48
1:B:54:THR:OG1	1:B:145:ASP:OD1	2.28	0.48
2:C:511:GLU:HG3	2:C:512:ARG:HG2	1.96	0.48
2:C:810:ASP:HB2	2:C:811:PRO:HD2	1.94	0.48
3:D:770:LEU:HD23	3:D:777:PRO:HA	1.96	0.48
3:D:1263:PHE:HA	3:D:1375:MET:CE	2.43	0.48
1:K:180:GLN:NE2	2:M:935:GLY:O	2.47	0.48
2:M:805:ARG:HG3	2:M:823:VAL:HG22	1.96	0.48
3:N:255:GLU:HA	3:N:300:LYS:HE2	1.95	0.48
3:N:1400:VAL:CG2	3:N:1417:TRP:CD1	2.96	0.48
3:D:1049:SER:OG	3:D:1051:GLU:HG2	2.13	0.48
5:F:131:VAL:HG13	5:F:178:ARG:HD3	1.94	0.48
2:M:76:PRO:HG3	2:M:120:LEU:CD1	2.44	0.48
2:M:511:GLU:HG3	2:M:512:ARG:HG2	1.96	0.48
3:N:314:PRO:HG2	3:N:317:VAL:HG12	1.95	0.48
3:N:315:ARG:H	3:N:315:ARG:HD3	1.78	0.48
3:N:835:SER:CB	3:N:838:ARG:NE	2.37	0.48
3:N:936:TYR:O	3:N:940:THR:OG1	2.28	0.48
2:C:174:LEU:CD1	2:C:184:MET:HG3	2.43	0.48
2:C:936:VAL:HG11	2:C:959:PRO:CB	2.44	0.48
3:D:999:THR:O	3:D:1003:VAL:HG13	2.13	0.48
5:F:164:LYS:HA	5:F:171:LYS:HE3	1.94	0.48
5:F:295:MET:HA	5:F:295:MET:CE	2.44	0.48
3:N:394:LEU:HG	3:N:396:VAL:HG23	1.95	0.48
5:P:361:LEU:HD21	5:P:408:LEU:HD12	1.96	0.48
1:B:58:ILE:HG22	1:B:61:VAL:CG1	2.40	0.48
2:C:76:PRO:HG3	2:C:120:LEU:CD1	2.44	0.48
2:C:211:LEU:HD23	2:C:311:PHE:HD2	1.79	0.48
3:D:465:LEU:HD12	3:D:513:ILE:HD13	1.96	0.48
2:M:925:TYR:CD1	2:M:967:PHE:CE1	3.02	0.48
3:N:270:LEU:HD23	3:N:284:LEU:HD11	1.96	0.48
3:N:567:ILE:HG22	3:N:571:LYS:HE3	1.96	0.48
3:N:1049:SER:OG	3:N:1051:GLU:HG2	2.12	0.48
3:N:1258:ARG:NH2	3:N:1351:GLU:HG2	2.29	0.48
1:A:185:ARG:HE	1:A:187:GLY:HA2	1.79	0.48
2:C:141:HIS:CE1	2:C:334:ARG:HD2	2.49	0.48
2:C:157:ARG:NH1	2:C:157:ARG:CG	2.74	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:845:ASN:C	2:C:845:ASN:HD22	2.17	0.48
2:C:1056:LYS:O	3:D:624:ASP:N	2.43	0.48
3:D:208:PRO:HA	3:D:390:PRO:HA	1.95	0.48
3:D:832:ARG:HD2	3:D:833:GLU:H	1.77	0.48
2:M:92:ALA:HB2	2:M:120:LEU:HD11	1.94	0.48
2:M:172:ILE:HA	2:M:185:LYS:O	2.14	0.48
2:M:177:GLU:CB	2:M:178:PRO:HD2	2.44	0.48
2:M:351:LEU:HD12	2:M:374:ASN:O	2.14	0.48
2:M:404:LEU:O	2:M:408:ARG:HG3	2.14	0.48
3:N:250:LEU:H	3:N:250:LEU:HD12	1.78	0.48
3:N:255:GLU:HB3	3:N:279:VAL:CG1	2.44	0.48
1:A:34:VAL:CG2	1:B:42:ARG:CZ	2.92	0.48
2:C:136:ILE:HB	2:C:336:VAL:CG1	2.44	0.48
2:C:425:PHE:CZ	3:D:1086:LEU:HD12	2.49	0.48
2:C:580:MET:SD	2:C:584:GLU:HG3	2.54	0.48
2:C:925:TYR:CD1	2:C:967:PHE:CE1	3.01	0.48
3:D:71:LYS:HG3	3:D:72:VAL:N	2.28	0.48
3:D:529:GLN:HG2	3:D:535:PHE:CE1	2.49	0.48
3:D:1258:ARG:HH21	3:D:1351:GLU:HG2	1.78	0.48
3:D:1403:LEU:HD12	3:D:1406:ARG:HH11	1.78	0.48
5:F:365:GLU:O	5:F:369:LEU:HD13	2.14	0.48
1:K:219:ARG:HG3	1:K:220:GLU:H	1.78	0.48
2:M:121:MET:HE1	2:M:336:VAL:HG21	1.96	0.48
2:M:182:VAL:HG21	2:M:193:LEU:CB	2.22	0.48
2:M:944:LEU:HD21	2:M:963:LEU:HD23	1.94	0.48
3:N:465:LEU:HD12	3:N:513:ILE:HD13	1.96	0.48
3:N:493:ARG:NH1	11:N:2121:HOH:O	2.47	0.48
3:N:706:PRO:HB2	3:N:708:LEU:HD21	1.96	0.48
3:N:1282:ARG:CD	3:N:1295:GLU:CD	2.75	0.48
5:P:97:GLU:H	5:P:97:GLU:CD	2.18	0.48
1:A:188:GLN:HG2	1:A:189:ARG:N	2.29	0.47
2:C:569:VAL:HG21	2:C:1000:MET:CE	2.44	0.47
2:C:757:GLY:HA2	2:C:789:SER:CB	2.42	0.47
3:D:729:HIS:ND1	3:D:730:PRO:HD2	2.29	0.47
3:D:1104:GLU:O	3:D:1106:VAL:HG23	2.13	0.47
2:M:168:ARG:HH11	2:M:168:ARG:CG	2.27	0.47
3:N:1413:THR:HG22	3:N:1414:PRO:HD2	1.94	0.47
2:M:685:GLU:O	2:M:686:ASP:HB2	2.15	0.47
3:N:134:VAL:HG23	3:N:150:ARG:N	2.29	0.47
5:P:205:ARG:HH11	5:P:205:ARG:HG2	1.72	0.47
1:B:83:LYS:HE2	1:B:168:ASP:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:404:LEU:O	2:C:408:ARG:HG3	2.14	0.47
2:C:419:THR:N	2:C:422:ARG:HG3	2.21	0.47
2:C:850:ALA:HA	3:D:632:VAL:HG22	1.93	0.47
3:D:394:LEU:HG	3:D:396:VAL:HG23	1.96	0.47
3:D:574:LEU:O	3:D:578:VAL:HG23	2.13	0.47
3:D:868:TYR:CE2	3:D:869:MET:HG3	2.49	0.47
1:L:175:ARG:N	1:L:200:TRP:O	2.44	0.47
3:N:840:LYS:HE3	3:N:841:TYR:CZ	2.49	0.47
1:A:72:LYS:HE3	2:C:643:VAL:O	2.14	0.47
3:D:219:GLU:CB	3:D:339:TRP:CH2	2.97	0.47
3:D:1140:ILE:HG22	3:D:1144:LEU:HD12	1.96	0.47
5:F:279:GLN:HA	5:F:284:ARG:O	2.15	0.47
1:K:32:PHE:HA	1:K:35:THR:HB	1.95	0.47
3:N:431:VAL:HG12	3:N:432:TYR:N	2.29	0.47
3:N:536:ALA:HA	5:P:315:VAL:O	2.13	0.47
3:N:868:TYR:CE2	3:N:869:MET:HG3	2.50	0.47
3:D:236:TYR:CZ	3:D:242:LEU:HD12	2.50	0.47
3:D:1099:VAL:O	3:D:1103:HIS:HB3	2.14	0.47
3:D:1112:CYS:HB3	3:D:1196:THR:OG1	2.14	0.47
1:K:57:TYR:CG	1:K:161:ARG:HD2	2.49	0.47
2:M:418:LEU:HD21	7:R:14:DG:C8	2.48	0.47
2:M:680:ASP:OD1	3:N:943:THR:HG21	2.15	0.47
3:N:650:LEU:HD12	3:N:657:LEU:CD2	2.45	0.47
1:A:9:PRO:CD	1:B:224:TYR:CE2	2.98	0.47
1:A:159:LYS:HE3	1:A:164:ALA:O	2.14	0.47
1:A:219:ARG:HG3	1:A:220:GLU:H	1.79	0.47
2:C:128:ILE:O	2:C:129:ILE:HD13	2.15	0.47
3:D:214:GLU:HG2	3:D:342:PRO:HB3	1.97	0.47
3:D:890:VAL:O	3:D:926:LYS:NZ	2.47	0.47
5:F:234:LYS:HD3	7:H:5:DA:OP2	2.15	0.47
1:K:8:ALA:HA	1:K:9:PRO:HD3	1.65	0.47
1:K:39:PRO:HG3	1:L:39:PRO:CG	2.44	0.47
2:M:173:ASP:O	2:M:174:LEU:HD12	2.14	0.47
3:N:204:LEU:HD23	3:N:441:ARG:NH2	2.29	0.47
3:N:273:ARG:CG	3:N:278:PRO:HA	2.44	0.47
1:B:91:ASN:HB3	1:B:94:LEU:HB2	1.97	0.47
1:B:206:THR:H	1:B:209:GLU:HB2	1.80	0.47
2:C:35:PRO:HG2	2:C:38:LYS:CD	2.44	0.47
2:C:56:GLU:HA	2:C:56:GLU:OE2	2.14	0.47
2:C:92:ALA:HB2	2:C:120:LEU:HD11	1.95	0.47
2:C:1090:LYS:HD3	2:C:1112:PHE:CE2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:47:GLU:HA	3:D:51:GLY:O	2.15	0.47
3:D:134:VAL:HG23	3:D:150:ARG:N	2.29	0.47
3:D:1100:ASP:OD2	3:D:1440:PHE:HB2	2.13	0.47
1:L:101:LEU:HD11	1:L:113:ASP:HB2	1.96	0.47
2:M:580:MET:SD	2:M:584:GLU:HG3	2.54	0.47
2:M:711:GLU:HB2	2:M:713:ARG:NH1	2.30	0.47
2:M:850:ALA:HA	3:N:632:VAL:HG22	1.92	0.47
3:N:134:VAL:HG23	3:N:150:ARG:H	1.80	0.47
3:N:208:PRO:HA	3:N:390:PRO:HA	1.95	0.47
3:N:271:VAL:HG22	3:N:281:THR:HG23	1.96	0.47
3:N:693:GLU:CB	4:O:48:MET:HE1	2.45	0.47
3:N:1068:LEU:O	3:N:1072:ILE:HG12	2.15	0.47
3:N:1347:TYR:O	3:N:1351:GLU:HB2	2.15	0.47
5:P:247:ILE:O	5:P:251:ILE:HG13	2.14	0.47
5:P:365:GLU:O	5:P:368:VAL:HG22	2.15	0.47
2:C:150:PRO:CD	2:C:322:VAL:HG11	2.42	0.47
2:C:229:MET:C	2:C:230:ARG:CG	2.74	0.47
2:C:535:SER:O	2:C:538:GLN:HG2	2.14	0.47
3:D:131:LYS:O	3:D:456:MET:HG2	2.15	0.47
3:D:265:GLU:HB3	3:D:266:GLU:H	1.51	0.47
3:D:936:TYR:O	3:D:940:THR:OG1	2.30	0.47
3:N:310:LEU:HD23	3:N:310:LEU:H	1.80	0.47
3:N:1407:LEU:O	3:N:1410:GLU:N	2.44	0.47
3:D:356:PRO:HG2	3:D:359:ALA:HB2	1.97	0.47
3:D:850:LEU:HD12	3:D:884:ARG:NH2	2.30	0.47
3:D:1128:VAL:HG22	3:D:1129:THR:HG23	1.96	0.47
3:D:1216:SER:HB3	4:E:15:SER:HA	1.97	0.47
1:K:58:ILE:HG21	1:K:68:ILE:HD11	1.97	0.47
1:K:159:LYS:HE3	1:K:164:ALA:O	2.15	0.47
2:M:436:GLY:HA2	2:M:538:GLN:O	2.15	0.47
2:M:550:LEU:HD23	2:M:905:ILE:HG21	1.97	0.47
2:M:571:LEU:HD23	2:M:702:SER:HB3	1.97	0.47
2:M:936:VAL:HG11	2:M:959:PRO:CB	2.44	0.47
3:N:1005:GLN:O	3:N:1009:LYS:HG2	2.14	0.47
3:N:1101:VAL:HG12	3:N:1374:GLN:HB3	1.96	0.47
3:N:1284:GLU:OE1	3:N:1285:GLU:CA	2.63	0.47
6:Q:14:DG:H5'	6:Q:14:DG:H8	1.80	0.47
2:C:164:PRO:CD	2:C:171:TRP:CD1	2.85	0.47
2:C:261:ILE:O	2:C:289:THR:HG23	2.15	0.47
2:C:460:ARG:HD2	2:C:485:TYR:CZ	2.50	0.47
3:D:596:SER:C	3:D:597:ASP:OD2	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:816:LYS:HA	2:M:816:LYS:HD2	1.61	0.47
3:N:37:LEU:HD13	3:N:535:PHE:HZ	1.79	0.47
3:N:434:ARG:O	3:N:447:VAL:HG23	2.15	0.47
3:N:970:LYS:O	3:N:974:ILE:HG13	2.14	0.47
5:P:153:PRO:O	5:P:156:VAL:HG22	2.14	0.47
2:C:77:PRO:HB2	2:C:78:PHE:CD1	2.50	0.46
2:C:685:GLU:O	2:C:686:ASP:HB2	2.15	0.46
2:C:850:ALA:HA	3:D:632:VAL:HG21	1.95	0.46
2:M:168:ARG:HG3	2:M:268:ASP:HB3	1.97	0.46
2:M:229:MET:C	2:M:233:GLU:HB2	2.33	0.46
2:M:577:PRO:HB3	2:M:993:PHE:CG	2.50	0.46
3:N:17:LYS:O	3:N:20:SER:HB3	2.15	0.46
3:N:356:PRO:HG2	3:N:359:ALA:HB2	1.97	0.46
3:N:1283:ILE:HG22	3:N:1315:ASP:HB2	1.92	0.46
3:N:1290:LEU:HD21	3:N:1307:LYS:CE	2.43	0.46
3:D:242:LEU:HD23	3:D:285:PRO:HG3	1.96	0.46
3:D:368:VAL:HB	3:D:377:VAL:HB	1.97	0.46
3:D:1208:ASP:C	3:D:1208:ASP:OD1	2.52	0.46
3:D:1252:ILE:HG23	3:D:1253:THR:HG23	1.96	0.46
2:M:154:ARG:NH2	2:M:177:GLU:O	2.47	0.46
3:N:675:ARG:HH12	5:P:420:ASP:CG	2.18	0.46
3:N:1248:GLY:C	3:N:1250:ALA:H	2.18	0.46
3:N:1276:GLU:O	3:N:1277:ILE:HD13	2.15	0.46
3:N:1404:ASN:OD1	3:N:1415:VAL:HB	2.14	0.46
2:C:680:ASP:OD2	2:C:978:ARG:NH2	2.48	0.46
2:C:690:ILE:HB	2:C:852:ILE:HD13	1.97	0.46
2:C:843:HIS:NE2	2:C:887:GLU:OE2	2.49	0.46
3:D:558:LEU:HD23	3:D:567:ILE:HD12	1.96	0.46
3:D:843:PHE:CD1	3:D:864:VAL:HG11	2.50	0.46
1:K:34:VAL:HG22	1:L:42:ARG:NH2	2.31	0.46
1:L:54:THR:OG1	1:L:145:ASP:OD1	2.28	0.46
2:M:503:LEU:HD23	2:M:508:ILE:HA	1.97	0.46
2:M:541:SER:O	2:M:545:ASN:ND2	2.41	0.46
3:N:84:ILE:CD1	3:N:87:ARG:HD3	2.45	0.46
3:N:136:ASP:H	3:N:453:ASP:HB3	1.78	0.46
3:N:1284:GLU:O	3:N:1285:GLU:OE2	2.33	0.46
3:N:1486:VAL:HG22	4:O:75:PHE:HB3	1.97	0.46
2:C:135:VAL:HG23	2:C:395:LYS:HG3	1.96	0.46
2:C:690:ILE:HD13	2:C:690:ILE:HA	1.74	0.46
2:C:1071:ILE:O	3:D:659:LYS:HD3	2.14	0.46
2:C:1095:LEU:O	2:C:1096:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:58:CYS:HA	3:D:78:VAL:CG1	2.45	0.46
2:M:52:PHE:HB3	2:M:53:PRO:HA	1.97	0.46
2:M:135:VAL:HG23	2:M:395:LYS:HG3	1.96	0.46
2:M:289:THR:HG22	2:M:291:ALA:H	1.80	0.46
2:M:366:SER:O	2:M:367:LEU:HD23	2.15	0.46
2:M:605:LYS:HB2	2:M:612:VAL:HB	1.98	0.46
2:M:690:ILE:HD13	2:M:690:ILE:HA	1.74	0.46
3:N:892:ASP:OD1	3:N:894:LYS:HD2	2.12	0.46
3:N:1310:ARG:CD	3:N:1327:ARG:NH1	2.47	0.46
1:A:32:PHE:HA	1:A:35:THR:HB	1.97	0.46
1:B:101:LEU:HD11	1:B:113:ASP:HB2	1.97	0.46
2:C:102:HIS:CB	2:C:105:THR:HG21	2.45	0.46
3:D:44:LEU:HB3	3:D:525:ARG:NH2	2.30	0.46
3:D:373:PRO:HA	3:D:376:GLU:OE2	2.16	0.46
3:D:1231:GLU:N	3:D:1232:PRO:CD	2.79	0.46
2:M:845:ASN:HD22	2:M:845:ASN:C	2.18	0.46
3:N:134:VAL:CG2	3:N:151:GLN:H	2.28	0.46
3:N:999:THR:O	3:N:1003:VAL:HG13	2.16	0.46
3:N:1353:GLN:O	3:N:1357:ARG:HG3	2.15	0.46
7:R:2:DA:H5'	7:R:2:DA:C8	2.50	0.46
1:B:175:ARG:N	1:B:200:TRP:O	2.43	0.46
3:D:56:TYR:CE1	3:D:69:GLU:HG3	2.49	0.46
3:D:243:ALA:HB3	3:D:311:LEU:HD21	1.97	0.46
3:D:1283:ILE:CD1	3:D:1315:ASP:OD2	2.64	0.46
2:M:1001:VAL:HG11	3:N:725:SER:HB3	1.97	0.46
3:N:90:MET:HE3	3:N:519:VAL:O	2.16	0.46
3:N:204:LEU:HD21	3:N:445:ARG:NH1	2.31	0.46
3:N:1326:THR:HG22	3:N:1327:ARG:N	2.28	0.46
3:N:1472:ILE:O	3:N:1477:GLY:HA3	2.16	0.46
2:C:102:HIS:CG	2:C:105:THR:HB	2.50	0.46
2:C:236:ILE:O	2:C:240:THR:HG23	2.16	0.46
2:C:550:LEU:HD23	2:C:905:ILE:HG21	1.97	0.46
3:D:274:ARG:CZ	3:D:279:VAL:HG21	2.46	0.46
7:H:18:DC:H2'	7:H:19:DG:C8	2.51	0.46
2:M:1056:LYS:O	3:N:624:ASP:N	2.44	0.46
3:N:47:GLU:C	3:N:78:VAL:HG22	2.36	0.46
3:N:829:VAL:O	3:N:830:ALA:HB3	2.15	0.46
4:O:68:LEU:HD12	4:O:68:LEU:HA	1.79	0.46
5:P:220:LEU:HD11	5:P:235:PHE:HE2	1.81	0.46
6:Q:18:DA:H2''	6:Q:19:DG:H5'	1.98	0.46
3:D:134:VAL:HG23	3:D:150:ARG:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:907:GLU:OE1	3:D:909:ASN:N	2.48	0.46
5:F:393:THR:O	5:F:396:ARG:HB3	2.16	0.46
1:L:94:LEU:HD12	1:L:96:THR:H	1.81	0.46
2:M:444:PRO:CG	2:M:452:ILE:HB	2.45	0.46
3:N:135:LEU:HD23	3:N:463:GLN:HG2	1.98	0.46
3:N:474:GLU:HG3	3:N:496:LEU:HD11	1.97	0.46
3:N:613:ARG:HG3	3:N:618:LEU:CD2	2.46	0.46
3:N:1339:LYS:HG2	3:N:1343:ALA:HB2	1.97	0.46
2:C:605:LYS:HB2	2:C:612:VAL:HB	1.98	0.46
2:C:764:GLU:OE1	2:C:764:GLU:N	2.42	0.46
3:D:36:THR:O	3:D:37:LEU:CB	2.58	0.46
3:D:46:ASP:OD2	3:D:48:ARG:NE	2.46	0.46
3:D:224:ARG:NE	3:D:254:GLU:OE2	2.27	0.46
1:K:206:THR:O	1:K:207:PRO:C	2.54	0.46
1:L:97:VAL:HG12	1:L:98:THR:N	2.31	0.46
2:M:77:PRO:HB2	2:M:78:PHE:CD1	2.51	0.46
2:M:173:ASP:C	2:M:174:LEU:CD1	2.85	0.46
3:N:222:GLY:HA2	3:N:333:LEU:O	2.16	0.46
3:N:1280:VAL:HG22	3:N:1281:VAL:N	2.31	0.46
3:N:1305:LEU:O	3:N:1306:PRO:C	2.55	0.46
5:P:114:LYS:O	5:P:117:SER:OG	2.24	0.46
2:C:5:ARG:HB3	2:C:902:ILE:HB	1.98	0.46
2:C:1081:VAL:HA	2:C:1082:PRO:HD3	1.85	0.46
3:D:134:VAL:CG2	3:D:151:GLN:H	2.29	0.46
3:D:331:VAL:O	3:D:331:VAL:HG13	2.16	0.46
3:D:1102:THR:HG21	3:D:1371:VAL:HG22	1.97	0.46
3:D:1314:LYS:HG3	3:D:1317:ASP:OD2	2.16	0.46
5:F:188:ILE:HD13	5:F:221:ILE:HG12	1.97	0.46
5:F:281:GLU:OE2	5:F:282:LEU:HD21	2.15	0.46
1:L:38:ASN:HB2	1:L:39:PRO:HD3	1.97	0.46
1:L:154:GLU:H	1:L:154:GLU:CD	2.19	0.46
2:M:198:ARG:HH11	2:M:230:ARG:CA	2.28	0.46
2:M:404:LEU:O	2:M:404:LEU:HG	2.15	0.46
3:N:472:ALA:O	3:N:476:GLU:HG3	2.16	0.46
3:N:778:LEU:HD23	3:N:778:LEU:HA	1.63	0.46
3:N:890:VAL:HG11	3:N:922:LEU:CD1	2.46	0.46
3:N:916:TYR:CE1	3:N:920:LEU:HD11	2.51	0.46
3:N:1400:VAL:CG2	3:N:1417:TRP:HD1	2.29	0.46
2:C:150:PRO:HD3	2:C:322:VAL:HG13	1.96	0.45
2:C:1008:ARG:NH1	2:C:1028:GLY:HA2	2.29	0.45
3:D:564:GLU:OE2	5:F:140:ARG:NH2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:650:LEU:HD12	3:D:657:LEU:CD2	2.46	0.45
3:D:808:THR:HG22	3:D:810:GLU:N	2.31	0.45
3:D:840:LYS:HE3	3:D:841:TYR:CZ	2.50	0.45
1:L:138:LEU:HD11	1:L:140:MET:HE2	1.98	0.45
1:L:206:THR:H	1:L:209:GLU:HB2	1.81	0.45
2:M:604:ALA:O	2:M:645:VAL:HG13	2.16	0.45
2:M:644:VAL:HG22	2:M:645:VAL:N	2.32	0.45
2:M:675:ALA:HB2	2:M:867:VAL:HG11	1.98	0.45
1:A:201:THR:CG2	1:A:202:ASP:N	2.79	0.45
2:C:1097:LEU:HD11	3:D:103:TRP:CZ3	2.51	0.45
3:D:38:LYS:HD2	3:D:38:LYS:HA	1.68	0.45
3:D:145:VAL:HB	3:D:146:PRO:HD2	1.98	0.45
3:D:1136:LYS:O	3:D:1140:ILE:HG13	2.16	0.45
5:F:374:GLY:HA2	5:F:379:ARG:O	2.15	0.45
1:K:193:ASP:HB3	2:M:938:LYS:CE	2.45	0.45
3:N:1100:ASP:OD1	3:N:1440:PHE:HB2	2.16	0.45
3:N:1107:VAL:HA	3:N:1200:VAL:O	2.16	0.45
3:N:1459:LEU:HD12	3:N:1464:GLU:HB3	1.99	0.45
5:P:260:ILE:HG22	5:P:265:VAL:HG23	1.99	0.45
5:P:273:ARG:HA	5:P:276:ARG:NH1	2.31	0.45
2:C:439:CYS:HA	2:C:440:PRO:HD3	1.82	0.45
2:C:571:LEU:HD23	2:C:702:SER:HB3	1.97	0.45
2:C:1053:LEU:HA	3:D:621:LYS:HD2	1.97	0.45
3:D:355:VAL:HG13	3:D:359:ALA:HB3	1.98	0.45
3:D:922:LEU:N	3:D:922:LEU:HD23	2.32	0.45
3:D:1102:THR:CG2	3:D:1371:VAL:HG22	2.47	0.45
2:M:56:GLU:OE2	2:M:56:GLU:HA	2.16	0.45
2:M:419:THR:HB	2:M:422:ARG:CG	2.47	0.45
2:M:469:THR:HG23	2:M:471:TYR:CE1	2.51	0.45
3:N:904:VAL:HG23	3:N:905:PRO:HD2	1.98	0.45
3:N:1248:GLY:O	3:N:1249:ALA:HB3	2.16	0.45
3:N:1276:GLU:OE2	3:N:1301:LYS:CE	2.64	0.45
3:N:1283:ILE:CD1	3:N:1283:ILE:N	2.79	0.45
3:N:1304:LYS:CA	3:N:1305:LEU:HD23	2.45	0.45
2:C:229:MET:O	2:C:230:ARG:CD	2.58	0.45
3:D:573:MET:SD	5:F:210:LEU:HB3	2.56	0.45
3:D:778:LEU:HA	3:D:778:LEU:HD23	1.63	0.45
2:M:86:LYS:O	2:M:87:ASP:HB2	2.17	0.45
2:M:157:ARG:NH1	2:M:176:VAL:HG12	2.09	0.45
3:N:890:VAL:O	3:N:926:LYS:NZ	2.48	0.45
2:C:229:MET:HE2	2:C:234:ALA:CA	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:230:ARG:HD3	2:C:233:GLU:OE1	2.16	0.45
2:C:323:ASP:O	2:C:325:ILE:CG2	2.65	0.45
2:C:444:PRO:CG	2:C:452:ILE:HB	2.47	0.45
3:D:106:LYS:HD2	3:D:106:LYS:HA	1.60	0.45
3:D:1267:ARG:HG2	3:D:1331:ASP:OD2	2.16	0.45
3:D:1439:SER:HB2	3:D:1463:LYS:HZ1	1.77	0.45
3:D:1440:PHE:O	3:D:1441:GLN:CG	2.65	0.45
5:F:162:LYS:HE3	5:F:162:LYS:HB2	1.53	0.45
5:F:278:LEU:O	5:F:282:LEU:HG	2.17	0.45
5:F:372:ARG:HD3	5:F:401:GLU:OE2	2.17	0.45
5:F:418:LEU:HD12	5:F:418:LEU:H	1.81	0.45
1:L:123:MET:C	1:L:125:PRO:HD3	2.37	0.45
2:M:52:PHE:CD2	2:M:68:PHE:HB2	2.52	0.45
2:M:230:ARG:HG3	2:M:231:PRO:CD	2.46	0.45
3:N:843:PHE:CD1	3:N:864:VAL:HG11	2.50	0.45
1:B:201:THR:HG22	1:B:202:ASP:N	2.32	0.45
2:C:428:ARG:HB3	2:C:450:GLY:HA3	1.99	0.45
2:C:693:GLU:HA	2:C:696:LYS:HD2	1.98	0.45
3:D:1440:PHE:O	3:D:1441:GLN:HG3	2.17	0.45
2:M:582:GLY:N	2:M:584:GLU:OE2	2.44	0.45
3:N:30:GLU:OE1	3:N:40:GLU:HG2	2.16	0.45
3:N:693:GLU:CA	4:O:48:MET:HE1	2.46	0.45
3:N:1237:THR:HG21	3:N:1246:VAL:CG1	2.42	0.45
3:N:1309:ALA:O	3:N:1310:ARG:HB3	2.16	0.45
1:A:8:ALA:HA	1:A:9:PRO:HD3	1.64	0.45
2:C:87:ASP:HA	2:C:131:GLY:HA3	1.98	0.45
5:F:88:ILE:HD12	5:F:88:ILE:HA	1.78	0.45
5:F:394:ARG:HG3	5:F:395:GLU:N	2.32	0.45
2:M:87:ASP:HA	2:M:131:GLY:HA3	1.98	0.45
5:P:401:GLU:HG3	5:P:402:ASN:N	2.32	0.45
2:C:717:LEU:HD12	2:C:717:LEU:N	2.32	0.45
3:D:1386:ASP:HB3	3:D:1412:LYS:HD2	1.98	0.45
3:D:1460:ILE:N	3:D:1460:ILE:HD13	2.30	0.45
5:F:390:PHE:CD1	5:F:397:ILE:HD11	2.51	0.45
1:L:64:GLU:O	1:L:75:VAL:HB	2.16	0.45
1:L:201:THR:HG22	1:L:202:ASP:N	2.31	0.45
2:M:302:VAL:C	2:M:305:PRO:HD2	2.37	0.45
2:M:680:ASP:H	3:N:943:THR:CG2	2.30	0.45
3:N:355:VAL:HG13	3:N:359:ALA:HB3	1.99	0.45
3:N:640:HIS:ND1	3:N:641:GLN:HG3	2.32	0.45
5:P:80:PRO:HB2	5:P:210:LEU:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:222:ARG:HA	5:P:222:ARG:HE	1.82	0.45
2:C:419:THR:HB	2:C:422:ARG:CG	2.47	0.45
2:C:858:MET:HG3	2:C:867:VAL:CG2	2.46	0.45
3:D:534:ARG:HH21	3:D:534:ARG:HG3	1.82	0.45
3:D:805:GLU:HA	3:D:828:LYS:O	2.17	0.45
1:L:190:THR:O	1:L:190:THR:HG22	2.17	0.45
2:M:261:ILE:O	2:M:289:THR:HG23	2.16	0.45
2:M:281:LEU:HD11	2:M:306:THR:HG22	1.98	0.45
5:P:237:THR:OG1	7:R:4:DA:H8	2.00	0.45
5:P:358:LEU:HD23	5:P:370:LYS:CE	2.47	0.45
1:B:91:ASN:HA	1:B:92:PRO:HD2	1.88	0.45
1:B:97:VAL:HG12	1:B:99:LEU:HD12	1.98	0.45
1:B:123:MET:C	1:B:125:PRO:HD3	2.36	0.45
1:B:143:ARG:HD3	1:B:158:ILE:HD13	1.99	0.45
1:B:190:THR:O	1:B:190:THR:HG22	2.17	0.45
2:C:470:PRO:HD3	2:C:485:TYR:CE2	2.52	0.45
2:C:1104:GLU:HB3	3:D:6:ARG:HG3	1.98	0.45
5:F:96:LEU:O	5:F:100:VAL:HG23	2.17	0.45
2:M:35:PRO:HG2	2:M:38:LYS:HB2	1.99	0.45
2:M:154:ARG:NH2	2:M:178:PRO:CA	2.80	0.45
2:M:1101:THR:HB	3:N:5:VAL:HG13	1.99	0.45
3:N:806:PHE:O	3:N:830:ALA:N	2.48	0.45
3:N:1123:PHE:CE1	3:N:1134:LEU:HD12	2.51	0.45
3:N:1478:SER:O	3:N:1482:ARG:HB2	2.17	0.45
5:P:338:LEU:HA	5:P:339:PRO:HD3	1.84	0.45
1:A:153:ALA:N	1:A:168:ASP:OD1	2.33	0.44
2:C:231:PRO:HG2	2:C:232:GLU:CD	2.37	0.44
2:C:1071:ILE:HG23	3:D:670:VAL:HG21	1.99	0.44
3:D:32:ILE:HG23	3:D:37:LEU:C	2.36	0.44
3:D:84:ILE:CD1	3:D:87:ARG:HD3	2.47	0.44
3:D:596:SER:C	3:D:597:ASP:CG	2.76	0.44
3:D:791:TYR:CD1	3:D:945:SER:HB2	2.52	0.44
3:D:1031:ASN:C	3:D:1031:ASN:OD1	2.56	0.44
3:D:1310:ARG:O	3:D:1310:ARG:HG2	2.17	0.44
2:M:280:LYS:HE3	2:M:309:TYR:CZ	2.52	0.44
2:M:480:THR:HG22	2:M:481:ASP:N	2.32	0.44
2:M:684:PHE:HE1	3:N:783:ARG:HB2	1.81	0.44
3:N:47:GLU:HG2	3:N:51:GLY:O	2.17	0.44
3:N:241:ILE:HD13	3:N:312:ARG:HB3	1.99	0.44
3:N:634:GLY:O	3:N:637:LEU:CD1	2.65	0.44
2:C:604:ALA:O	2:C:645:VAL:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1200:VAL:CG1	3:D:1201:CYS:N	2.80	0.44
3:N:97:THR:HG22	3:N:98:PRO:O	2.17	0.44
3:N:313:MET:HE1	3:N:319:ALA:HB2	1.99	0.44
3:N:661:MET:HE2	3:N:677:LEU:HD11	1.98	0.44
1:A:34:VAL:HG22	1:B:42:ARG:NH2	2.33	0.44
1:B:38:ASN:HB2	1:B:39:PRO:HD3	1.98	0.44
2:C:1060:ILE:HD13	5:F:338:LEU:HD13	1.98	0.44
3:D:1213:ARG:HB2	3:D:1214:PRO:HD2	1.98	0.44
3:D:1406:ARG:O	3:D:1410:GLU:HB3	2.17	0.44
1:L:56:VAL:HG21	1:L:82:LEU:CD1	2.47	0.44
2:M:639:GLN:HA	2:M:657:ASP:O	2.18	0.44
2:M:767:PRO:HB2	2:M:772:ARG:HD2	1.99	0.44
3:N:14:SER:HB3	3:N:511:TRP:CZ2	2.53	0.44
3:N:46:ASP:OD1	3:N:48:ARG:HG2	2.18	0.44
3:N:213:VAL:HG21	3:N:367:ILE:CD1	2.44	0.44
3:N:1126:ASP:OD2	3:N:1126:ASP:N	2.49	0.44
3:N:1255:GLY:O	3:N:1258:ARG:HB3	2.16	0.44
3:N:1439:SER:OG	3:N:1467:ILE:HD11	2.17	0.44
5:P:202:TYR:HB2	5:P:212:LEU:HD13	1.98	0.44
5:P:286:PRO:HB2	5:P:291:ILE:HG13	1.99	0.44
2:C:144:PRO:HG2	2:C:165:LEU:HD23	1.98	0.44
2:C:639:GLN:HA	2:C:657:ASP:O	2.18	0.44
2:C:873:PRO:HB2	3:D:949:ILE:CD1	2.48	0.44
3:D:133:ILE:HD12	3:D:152:LEU:HD23	2.00	0.44
3:D:237:LYS:N	3:D:240:GLU:OE1	2.49	0.44
1:K:30:ARG:HD3	1:K:191:ASP:OD1	2.17	0.44
2:M:229:MET:HE2	2:M:229:MET:HB3	1.86	0.44
2:M:323:ASP:O	2:M:325:ILE:HG22	2.17	0.44
3:N:71:LYS:O	3:N:80:VAL:HG22	2.17	0.44
3:N:215:TYR:CE1	3:N:380:GLU:O	2.70	0.44
3:N:252:ARG:NH2	3:N:303:PRO:HD3	2.32	0.44
3:N:808:THR:HG22	3:N:810:GLU:N	2.30	0.44
3:N:1477:GLY:O	3:N:1482:ARG:HD3	2.17	0.44
2:C:280:LYS:HE3	2:C:309:TYR:CZ	2.53	0.44
2:C:644:VAL:HG22	2:C:645:VAL:N	2.33	0.44
2:C:862:PRO:HA	2:C:975:TYR:CE2	2.52	0.44
2:C:1059:ASP:OD2	2:C:1062:GLY:HA3	2.18	0.44
2:M:237:ARG:HD2	2:M:241:LEU:HD21	1.99	0.44
2:M:439:CYS:HA	2:M:440:PRO:HD3	1.82	0.44
3:N:142:LEU:HG	3:N:143:ASN:H	1.82	0.44
3:N:170:PRO:HA	3:N:392:SER:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:1282:ARG:HB3	3:N:1293:PHE:HB2	1.98	0.44
3:N:1304:LYS:C	3:N:1305:LEU:CD2	2.78	0.44
3:N:1321:ALA:O	3:N:1339:LYS:HD3	2.17	0.44
5:P:412:GLU:O	5:P:416:ARG:HG3	2.18	0.44
1:B:58:ILE:HD13	1:B:140:MET:HB2	2.00	0.44
2:C:86:LYS:O	2:C:87:ASP:HB2	2.18	0.44
3:D:44:LEU:HB3	3:D:525:ARG:HH21	1.82	0.44
3:D:775:GLY:HA2	3:D:1209:LEU:O	2.17	0.44
5:F:259:ARG:HH11	5:F:259:ARG:CG	2.31	0.44
1:L:97:VAL:HG12	1:L:99:LEU:HD12	1.99	0.44
2:M:202:TYR:CE1	2:M:304:LEU:HD22	2.53	0.44
2:M:1008:ARG:NH1	2:M:1028:GLY:HA2	2.29	0.44
3:N:264:LEU:O	3:N:264:LEU:HD12	2.17	0.44
3:N:679:ARG:HD3	3:N:682:ASP:OD2	2.18	0.44
3:D:170:PRO:HA	3:D:392:SER:HB3	1.98	0.44
3:D:230:TRP:CD1	3:D:331:VAL:HG11	2.52	0.44
3:D:629:SER:O	3:D:744:GLN:HG2	2.17	0.44
3:D:661:MET:HE2	3:D:677:LEU:HD11	1.99	0.44
3:D:679:ARG:HD3	3:D:682:ASP:OD2	2.18	0.44
1:K:201:THR:CG2	1:K:202:ASP:N	2.81	0.44
2:M:167:LYS:HD3	2:M:167:LYS:HA	1.72	0.44
2:M:422:ARG:HH22	7:R:13:DT:H5"	1.82	0.44
2:M:437:ARG:HH22	2:M:491:GLU:HB2	1.83	0.44
2:M:535:SER:OG	2:M:537:LYS:HG3	2.18	0.44
2:M:604:ALA:HB3	2:M:612:VAL:HG12	1.99	0.44
3:N:145:VAL:HB	3:N:146:PRO:HD2	1.99	0.44
3:N:411:THR:CA	3:N:435:VAL:HG12	2.40	0.44
2:C:351:LEU:HD12	2:C:374:ASN:O	2.18	0.44
3:D:890:VAL:CG2	3:D:922:LEU:HD11	2.48	0.44
1:L:123:MET:O	1:L:125:PRO:HD3	2.17	0.44
3:N:989:TYR:CZ	3:N:993:LEU:HD11	2.53	0.44
5:P:393:THR:HG23	5:P:396:ARG:HB3	1.99	0.44
1:B:58:ILE:C	1:B:61:VAL:HG13	2.39	0.44
2:C:712:ALA:HB3	2:C:821:GLU:CG	2.47	0.44
2:C:1056:LYS:HE2	3:D:751:LEU:HG	1.99	0.44
2:C:1058:ASP:OD2	2:C:1084:SER:HB2	2.18	0.44
3:D:792:ILE:HD13	3:D:941:PHE:CE1	2.53	0.44
3:D:823:LEU:HD11	3:D:837:GLY:CA	2.44	0.44
3:D:904:VAL:HG23	3:D:905:PRO:HD2	1.99	0.44
3:D:1353:GLN:OE1	3:D:1353:GLN:HA	2.17	0.44
1:K:206:THR:HG22	1:K:208:LEU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:74:ASP:O	1:L:78:ILE:HG13	2.18	0.44
2:M:206:THR:O	2:M:209:ARG:HD2	2.18	0.44
2:M:717:LEU:N	2:M:717:LEU:HD12	2.32	0.44
2:M:1095:LEU:O	2:M:1096:ALA:HB3	2.18	0.44
3:N:669:ASN:HD22	5:P:417:LYS:CD	2.30	0.44
3:N:1311:LEU:HD22	3:N:1311:LEU:H	1.71	0.44
3:N:1386:ASP:HB2	3:N:1412:LYS:HD2	2.00	0.44
3:N:1487:VAL:CG2	3:N:1491:THR:HB	2.47	0.44
4:O:57:ASP:HA	4:O:58:PRO:HD3	1.85	0.44
1:A:206:THR:O	1:A:207:PRO:C	2.54	0.43
1:B:80:LEU:HB3	3:D:867:ARG:NH2	2.33	0.43
2:C:281:LEU:HD11	2:C:306:THR:HG22	2.00	0.43
2:C:572:ILE:HG13	2:C:573:ARG:HG3	2.00	0.43
2:C:680:ASP:H	3:D:943:THR:CG2	2.32	0.43
2:C:836:GLY:C	2:C:1001:VAL:HG22	2.39	0.43
3:D:314:PRO:HD2	3:D:317:VAL:CG1	2.48	0.43
3:D:474:GLU:HG3	3:D:496:LEU:HD11	1.99	0.43
3:D:709:HIS:HA	3:D:1227:GLN:HB3	1.99	0.43
5:F:278:LEU:HD11	5:F:294:ALA:CB	2.47	0.43
1:L:161:ARG:HE	1:L:161:ARG:HB2	1.63	0.43
1:L:185:ARG:CG	1:L:190:THR:HG23	2.48	0.43
2:M:223:ASP:HA	2:M:224:GLU:OE2	2.18	0.43
2:M:376:ARG:HB2	2:M:377:PRO:HD3	2.00	0.43
2:M:684:PHE:HB3	3:N:633:VAL:HG21	2.00	0.43
3:N:314:PRO:HG2	3:N:317:VAL:HG11	1.99	0.43
3:N:598:ARG:NH2	5:P:316:SER:OG	2.51	0.43
3:N:835:SER:HB2	3:N:838:ARG:HE	1.66	0.43
3:N:907:GLU:OE1	3:N:909:ASN:N	2.51	0.43
2:C:176:VAL:HG12	2:C:177:GLU:O	2.19	0.43
2:C:541:SER:O	2:C:545:ASN:ND2	2.40	0.43
2:C:841:ASN:C	2:C:841:ASN:OD1	2.56	0.43
5:F:81:VAL:O	5:F:85:LEU:HG	2.18	0.43
5:F:376:ILE:C	5:F:378:GLY:H	2.21	0.43
1:K:83:LYS:CE	1:K:168:ASP:HB2	2.46	0.43
1:L:58:ILE:HD13	1:L:140:MET:HB2	2.00	0.43
1:L:88:ARG:HD2	1:L:123:MET:HE2	2.00	0.43
2:M:572:ILE:HG13	2:M:573:ARG:HG3	2.00	0.43
2:M:637:LEU:HA	2:M:659:PRO:HG3	2.00	0.43
3:N:597:ASP:HB2	3:N:598:ARG:H	1.56	0.43
3:N:1284:GLU:O	3:N:1285:GLU:CD	2.57	0.43
3:N:1353:GLN:HG2	3:N:1368:ILE:HD12	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:350:LEU:O	5:P:354:LEU:HG	2.18	0.43
1:A:57:TYR:CZ	1:A:161:ARG:HD2	2.52	0.43
1:B:117:VAL:O	1:B:118:ALA:C	2.57	0.43
2:C:469:THR:HG23	2:C:471:TYR:CE1	2.54	0.43
2:C:706:GLU:OE1	2:C:706:GLU:HA	2.18	0.43
2:C:911:GLU:N	2:C:912:PRO:CD	2.81	0.43
2:C:937:ASP:OD1	2:C:939:ARG:CG	2.66	0.43
3:D:142:LEU:HG	3:D:143:ASN:H	1.84	0.43
3:D:1373:ARG:HE	3:D:1373:ARG:HB2	1.55	0.43
2:M:1058:ASP:OD2	2:M:1084:SER:HB2	2.19	0.43
3:N:204:LEU:HD23	3:N:441:ARG:CZ	2.49	0.43
3:N:648:MET:O	3:N:652:LEU:HG	2.18	0.43
3:N:1171:VAL:O	3:N:1175:ILE:HG13	2.18	0.43
5:P:371:LEU:HA	5:P:381:HIS:HD2	1.83	0.43
5:P:372:ARG:O	5:P:380:GLU:HB2	2.17	0.43
1:B:138:LEU:HD11	1:B:140:MET:HE2	2.00	0.43
1:B:185:ARG:CG	1:B:190:THR:HG23	2.49	0.43
2:C:223:ASP:HA	2:C:224:GLU:OE2	2.19	0.43
2:C:480:THR:HG22	2:C:481:ASP:N	2.32	0.43
2:C:699:PHE:O	2:C:700:TYR:HB2	2.18	0.43
2:C:719:PRO:HD2	2:C:761:PHE:HE1	1.82	0.43
2:C:937:ASP:OD1	2:C:939:ARG:HG3	2.17	0.43
7:H:2:DA:H5'	7:H:2:DA:C8	2.53	0.43
2:M:375:SER:O	2:M:378:LEU:N	2.51	0.43
3:N:827:ILE:CG2	3:N:828:LYS:N	2.80	0.43
1:B:56:VAL:HG21	1:B:82:LEU:CD1	2.48	0.43
1:B:58:ILE:HG21	1:B:61:VAL:CG1	2.37	0.43
3:D:314:PRO:HD2	3:D:317:VAL:HG11	1.99	0.43
3:D:529:GLN:HA	3:D:534:ARG:O	2.18	0.43
3:D:629:SER:C	3:D:744:GLN:HG2	2.39	0.43
3:D:1313:VAL:HG23	3:D:1313:VAL:O	2.19	0.43
5:F:95:THR:HG22	5:F:96:LEU:H	1.82	0.43
5:F:144:ILE:HB	5:F:147:LEU:HB2	2.01	0.43
5:F:228:GLU:OE2	5:F:231:ARG:NE	2.49	0.43
5:F:295:MET:HA	5:F:295:MET:HE3	2.00	0.43
2:M:90:TYR:CD2	2:M:120:LEU:HB2	2.54	0.43
2:M:308:ARG:HE	2:M:308:ARG:HB3	1.70	0.43
2:M:524:VAL:HG11	2:M:528:GLU:HB2	1.99	0.43
2:M:706:GLU:OE1	2:M:706:GLU:HA	2.18	0.43
3:N:315:ARG:O	3:N:316:GLN:CB	2.65	0.43
3:N:1403:LEU:O	3:N:1406:ARG:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:172:ARG:O	5:P:176:ILE:HG12	2.18	0.43
1:B:123:MET:O	1:B:125:PRO:HD3	2.18	0.43
2:C:35:PRO:HG2	2:C:38:LYS:HB2	2.00	0.43
2:C:304:LEU:HB3	2:C:305:PRO:HD3	2.01	0.43
2:C:376:ARG:HB2	2:C:377:PRO:HD3	2.01	0.43
2:C:910:LYS:HB3	2:C:912:PRO:HD2	2.00	0.43
3:D:1277:ILE:HG22	3:D:1278:ASP:N	2.27	0.43
3:D:1429:LEU:HD21	3:D:1441:GLN:HB2	2.01	0.43
4:E:68:LEU:HD12	4:E:68:LEU:HA	1.81	0.43
1:K:36:LEU:HD23	1:K:36:LEU:HA	1.85	0.43
2:M:905:ILE:C	2:M:907:ASP:H	2.22	0.43
2:M:910:LYS:HB3	2:M:912:PRO:HD2	1.99	0.43
2:M:1092:LEU:HD13	2:M:1099:VAL:HG21	2.00	0.43
3:N:68:PHE:O	3:N:80:VAL:HG21	2.17	0.43
3:N:570:GLU:OE2	5:P:214:GLN:NE2	2.48	0.43
3:N:900:ILE:H	3:N:900:ILE:HG13	1.63	0.43
3:N:959:GLU:HB3	3:N:963:TYR:HE1	1.84	0.43
1:B:88:ARG:HD2	1:B:123:MET:HE2	2.00	0.43
2:C:561:GLY:O	2:C:565:GLN:HG3	2.19	0.43
3:D:613:ARG:HG3	3:D:618:LEU:CD2	2.48	0.43
3:D:696:HIS:HD2	4:E:57:ASP:OD1	2.00	0.43
5:F:383:LEU:O	5:F:397:ILE:HG21	2.19	0.43
1:K:89:PHE:HB2	1:K:146:ARG:NH2	2.33	0.43
1:L:143:ARG:HD3	1:L:158:ILE:HD13	1.99	0.43
2:M:136:ILE:HD13	2:M:392:SER:HA	2.01	0.43
2:M:176:VAL:CG1	2:M:177:GLU:O	2.67	0.43
2:M:911:GLU:N	2:M:912:PRO:CD	2.81	0.43
3:N:367:ILE:HB	3:N:377:VAL:HG12	2.01	0.43
3:N:1462:LEU:HD23	3:N:1473:PRO:HG2	2.00	0.43
2:C:260:LEU:C	2:C:261:ILE:HD12	2.39	0.43
2:C:524:VAL:HG11	2:C:528:GLU:HB2	1.99	0.43
3:D:145:VAL:HB	3:D:146:PRO:CD	2.48	0.43
3:D:207:PHE:HB2	3:D:391:ALA:HB2	2.01	0.43
3:D:356:PRO:HB3	3:D:441:ARG:HA	2.01	0.43
3:D:729:HIS:HA	3:D:730:PRO:HD3	1.91	0.43
3:D:1267:ARG:HA	3:D:1268:PRO:HD3	1.86	0.43
3:D:1403:LEU:O	3:D:1406:ARG:HB2	2.18	0.43
2:M:12:VAL:HG11	2:M:472:ARG:NH1	2.34	0.43
2:M:48:PHE:O	2:M:52:PHE:CD2	2.61	0.43
2:M:164:PRO:HB2	2:M:168:ARG:O	2.19	0.43
2:M:171:TRP:CE3	7:R:14:DG:OP1	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:177:GLU:HG3	2:M:178:PRO:HD2	2.00	0.43
2:M:428:ARG:HB3	2:M:450:GLY:HA3	2.00	0.43
2:M:708:TYR:HB3	2:M:790:LEU:HD21	2.00	0.43
2:M:937:ASP:OD1	2:M:939:ARG:CG	2.66	0.43
3:N:245:LEU:HD22	3:N:249:TYR:HB3	2.01	0.43
3:N:520:LEU:HD12	3:N:521:PRO:HD2	1.99	0.43
3:N:1082:ALA:O	3:N:1086:LEU:HG	2.18	0.43
2:C:302:VAL:C	2:C:305:PRO:HD2	2.38	0.43
2:C:807:ARG:HE	2:C:807:ARG:HB2	1.56	0.43
3:D:1005:GLN:O	3:D:1009:LYS:HG2	2.19	0.43
3:D:1188:VAL:HG13	3:D:1189:ARG:O	2.19	0.43
1:L:48:ILE:HA	1:L:49:PRO:HD3	1.71	0.43
1:L:117:VAL:O	1:L:118:ALA:C	2.57	0.43
2:M:1032:PHE:HZ	2:M:1040:LEU:HG	1.84	0.43
2:M:1059:ASP:OD2	2:M:1062:GLY:HA3	2.19	0.43
3:N:133:ILE:CG2	3:N:460:ALA:HB1	2.48	0.43
3:N:801:GLY:HA2	3:N:821:VAL:HG13	2.01	0.43
3:N:1208:ASP:C	3:N:1208:ASP:OD1	2.57	0.43
3:N:1309:ALA:O	3:N:1310:ARG:HB2	2.18	0.43
5:P:78:SER:O	5:P:79:ASP:C	2.58	0.43
5:P:362:SER:HB3	5:P:365:GLU:CG	2.49	0.43
2:C:36:PRO:HA	2:C:39:ARG:HG3	2.01	0.43
3:D:634:GLY:O	3:D:637:LEU:CD1	2.66	0.43
3:D:984:THR:HG22	3:D:985:ASP:N	2.34	0.43
3:D:1480:PHE:O	4:E:18:ARG:NH2	2.51	0.43
1:L:124:ASN:N	1:L:124:ASN:OD1	2.52	0.43
2:M:304:LEU:HB3	2:M:305:PRO:HD3	2.01	0.43
2:M:841:ASN:C	2:M:841:ASN:OD1	2.57	0.43
1:B:97:VAL:HG12	1:B:98:THR:N	2.33	0.42
2:C:202:TYR:CE1	2:C:304:LEU:HD22	2.53	0.42
3:D:155:ASP:O	3:D:159:ARG:HG3	2.18	0.42
3:N:269:PHE:CE2	3:N:283:PHE:HD1	2.37	0.42
3:N:959:GLU:OE1	3:N:959:GLU:N	2.45	0.42
3:N:1495:ILE:HG21	4:O:80:VAL:HG21	2.00	0.42
5:P:101:GLU:CG	5:P:105:LYS:HE2	2.49	0.42
1:B:101:LEU:HD21	1:B:109:VAL:HG11	2.01	0.42
2:C:292:ARG:NE	2:C:299:LYS:HD3	2.34	0.42
2:C:474:VAL:HG22	2:C:479:VAL:HG22	2.01	0.42
3:D:434:ARG:NH1	5:F:135:ILE:O	2.52	0.42
3:D:618:LEU:HG	3:D:1467:ILE:HG23	2.01	0.42
5:F:114:LYS:O	5:F:118:GLU:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:133:GLU:HG2	1:K:134:GLU:H	1.83	0.42
2:M:51:THR:HG21	2:M:352:ALA:HB2	2.01	0.42
2:M:552:HIS:CD2	2:M:886:LEU:HD12	2.54	0.42
2:M:879:ARG:N	2:M:879:ARG:HD2	2.34	0.42
2:M:1056:LYS:HE2	3:N:751:LEU:HG	2.01	0.42
3:N:108:VAL:HB	3:N:109:PRO:CD	2.46	0.42
3:N:367:ILE:HD11	3:N:379:ALA:HB2	2.01	0.42
3:N:593:ASN:OD1	3:N:594:PRO:HD3	2.20	0.42
3:N:719:VAL:O	3:N:721:VAL:HG13	2.20	0.42
3:N:890:VAL:HG11	3:N:922:LEU:HD12	2.01	0.42
3:N:1101:VAL:HG21	3:N:1424:VAL:CB	2.49	0.42
1:A:89:PHE:HB2	1:A:146:ARG:NH2	2.33	0.42
2:C:231:PRO:CG	2:C:232:GLU:OE2	2.59	0.42
2:C:437:ARG:NH2	2:C:488:ALA:HA	2.34	0.42
2:C:1001:VAL:HG13	3:D:630:VAL:HB	2.00	0.42
3:D:65:ARG:HG3	5:F:378:GLY:O	2.19	0.42
3:D:142:LEU:HD13	3:D:161:LEU:CD1	2.48	0.42
3:D:758:GLU:OE1	3:D:1476:THR:OG1	2.26	0.42
3:D:827:ILE:CG2	3:D:828:LYS:N	2.82	0.42
3:D:894:LYS:N	3:D:894:LYS:CD	2.30	0.42
3:D:957:PRO:HG3	3:D:1007:VAL:HA	2.01	0.42
1:L:5:LYS:HE3	1:L:6:LEU:H	1.84	0.42
3:N:791:TYR:CD1	3:N:945:SER:HB2	2.53	0.42
3:N:957:PRO:HG3	3:N:1007:VAL:HA	2.02	0.42
3:D:275:GLU:HB3	3:D:276:ASP:H	1.57	0.42
3:D:553:ARG:HD3	5:F:214:GLN:HB3	2.02	0.42
3:D:890:VAL:CB	3:D:922:LEU:HD11	2.45	0.42
3:D:959:GLU:HB3	3:D:963:TYR:HE1	1.85	0.42
5:F:127:ILE:O	5:F:131:VAL:HG23	2.19	0.42
5:F:350:LEU:HD13	5:F:421:PHE:CD1	2.55	0.42
5:F:418:LEU:H	5:F:418:LEU:CD1	2.32	0.42
1:K:34:VAL:HG22	1:L:42:ARG:CZ	2.49	0.42
1:L:124:ASN:HD22	1:L:127:LEU:HB2	1.84	0.42
2:M:54:ILE:HG23	2:M:356:ARG:HG3	2.01	0.42
2:M:105:THR:CG2	2:M:107:LEU:N	2.60	0.42
2:M:470:PRO:HD3	2:M:485:TYR:CE2	2.55	0.42
2:M:836:GLY:C	2:M:1001:VAL:HG22	2.39	0.42
2:M:937:ASP:OD1	2:M:939:ARG:HG3	2.18	0.42
2:M:998:TYR:CG	2:M:998:TYR:O	2.73	0.42
3:N:138:LYS:HB2	3:N:451:ASP:O	2.17	0.42
3:N:598:ARG:NH2	5:P:316:SER:CB	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:827:ILE:O	3:N:834:THR:N	2.45	0.42
3:N:1286:THR:HG22	3:N:1288:GLU:N	2.32	0.42
1:A:44:LEU:HA	1:A:48:ILE:HG12	2.01	0.42
2:C:64:LEU:CD1	2:C:367:LEU:HD12	2.50	0.42
2:C:236:ILE:HG23	2:C:248:PRO:CB	2.50	0.42
2:C:559:LEU:C	2:C:559:LEU:HD23	2.39	0.42
3:D:128:TYR:CZ	3:D:587:ARG:HD2	2.55	0.42
3:D:367:ILE:HD11	3:D:379:ALA:HB2	2.01	0.42
3:D:520:LEU:HD12	3:D:521:PRO:HD2	2.00	0.42
3:D:1106:VAL:O	3:D:1108:ARG:HG3	2.20	0.42
3:D:1373:ARG:HG3	3:D:1374:GLN:N	2.35	0.42
1:L:201:THR:CG2	1:L:202:ASP:N	2.82	0.42
2:M:151:ASP:OD2	2:M:175:GLU:OE2	2.38	0.42
2:M:1071:ILE:HG23	3:N:670:VAL:HG21	2.02	0.42
2:M:1081:VAL:HA	2:M:1082:PRO:HD3	1.85	0.42
3:N:1031:ASN:C	3:N:1031:ASN:OD1	2.58	0.42
3:N:1312:LEU:CD2	3:N:1327:ARG:CG	2.90	0.42
1:B:201:THR:CG2	1:B:202:ASP:N	2.83	0.42
2:C:229:MET:CE	2:C:234:ALA:CA	2.96	0.42
2:C:774:LEU:HD21	5:F:418:LEU:HB3	2.02	0.42
3:D:187:LYS:HG3	3:D:198:ARG:O	2.20	0.42
3:D:259:VAL:O	3:D:295:GLY:N	2.44	0.42
3:D:640:HIS:ND1	3:D:641:GLN:HG3	2.34	0.42
4:E:34:GLY:O	4:E:35:PHE:HB2	2.19	0.42
2:M:187:ASN:HD22	2:M:187:ASN:HA	1.63	0.42
2:M:918:LEU:HD23	2:M:918:LEU:HA	1.95	0.42
3:N:48:ARG:CZ	3:N:76:CYS:O	2.68	0.42
3:N:266:GLU:HG2	3:N:286:VAL:HB	2.01	0.42
3:N:553:ARG:HD3	5:P:214:GLN:HB3	2.01	0.42
3:N:801:GLY:HA3	3:N:825:ALA:HB1	2.01	0.42
3:N:1003:VAL:O	3:N:1007:VAL:HG23	2.20	0.42
5:P:222:ARG:HA	5:P:222:ARG:NE	2.34	0.42
2:C:690:ILE:HG23	2:C:694:LEU:HD12	2.01	0.42
2:C:1001:VAL:HG11	3:D:725:SER:HB3	2.01	0.42
3:D:47:GLU:C	3:D:78:VAL:CG2	2.88	0.42
3:D:67:ARG:CZ	5:F:379:ARG:HB2	2.50	0.42
3:D:231:VAL:O	3:D:231:VAL:HG22	2.20	0.42
3:D:1321:ALA:O	3:D:1339:LYS:HD3	2.19	0.42
5:F:230:LYS:O	5:F:232:ARG:CG	2.67	0.42
2:M:289:THR:HG21	2:M:291:ALA:O	2.19	0.42
2:M:327:HIS:HE1	2:M:488:ALA:C	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:717:LEU:HD23	2:M:763:GLY:CA	2.43	0.42
2:M:1001:VAL:HG13	3:N:630:VAL:HB	2.02	0.42
3:N:33:ASN:CB	3:N:36:THR:HG23	2.43	0.42
3:N:35:ARG:CB	3:N:35:ARG:HH11	2.32	0.42
3:N:111:LYS:HG3	3:N:1452:ILE:CD1	2.49	0.42
3:N:134:VAL:HG22	3:N:151:GLN:O	2.20	0.42
3:N:568:ARG:HD2	5:P:87:GLU:OE1	2.20	0.42
3:N:784:ASP:HB2	3:N:939:PHE:HE2	1.84	0.42
3:N:827:ILE:HG23	3:N:828:LYS:N	2.34	0.42
3:N:1256:LEU:O	3:N:1260:ILE:HG13	2.19	0.42
3:N:1283:ILE:O	3:N:1283:ILE:CG1	2.67	0.42
1:B:74:ASP:O	1:B:78:ILE:HG13	2.20	0.42
1:B:179:PHE:CB	1:B:197:LEU:HD13	2.49	0.42
2:C:76:PRO:HG3	2:C:120:LEU:HD12	2.02	0.42
2:C:118:ILE:HD11	2:C:344:PHE:HE2	1.80	0.42
2:C:604:ALA:HB3	2:C:612:VAL:HG12	2.01	0.42
3:D:560:GLN:HE22	5:F:222:ARG:HH11	1.68	0.42
3:D:989:TYR:CZ	3:D:993:LEU:HD11	2.55	0.42
5:F:270:LYS:HE2	5:F:295:MET:CE	2.50	0.42
2:M:48:PHE:HA	2:M:348:LEU:HD21	2.02	0.42
2:M:289:THR:HG22	2:M:291:ALA:O	2.20	0.42
2:M:695:LEU:HD23	2:M:695:LEU:N	2.34	0.42
3:N:33:ASN:OD1	3:N:36:THR:CG2	2.67	0.42
3:N:140:ALA:HA	3:N:450:TYR:CG	2.55	0.42
3:N:187:LYS:HG3	3:N:198:ARG:O	2.20	0.42
3:N:230:TRP:HA	3:N:243:ALA:HB2	2.01	0.42
3:N:530:VAL:HG22	3:N:534:ARG:O	2.20	0.42
4:O:61:VAL:O	4:O:65:MET:HG3	2.20	0.42
5:P:368:VAL:HG23	5:P:369:LEU:N	2.35	0.42
1:B:58:ILE:O	1:B:61:VAL:HG13	2.20	0.42
2:C:988:VAL:HG21	3:D:949:ILE:C	2.40	0.42
2:C:1092:LEU:HD13	2:C:1099:VAL:HG21	2.01	0.42
3:D:530:VAL:HG22	3:D:534:ARG:HB3	2.01	0.42
3:D:637:LEU:HD22	3:D:642:CYS:HA	2.02	0.42
3:D:794:GLN:OE1	3:D:794:GLN:HA	2.19	0.42
3:D:1285:GLU:HA	3:D:1290:LEU:HD22	2.02	0.42
5:F:102:LEU:O	5:F:106:VAL:HG23	2.20	0.42
5:F:260:ILE:HG22	5:F:265:VAL:HG23	2.01	0.42
2:M:118:ILE:HD11	2:M:344:PHE:HE2	1.81	0.42
2:M:260:LEU:C	2:M:261:ILE:HD12	2.39	0.42
2:M:693:GLU:HA	2:M:696:LYS:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:751:PRO:HB2	3:N:680:GLN:HB2	2.02	0.42
3:N:36:THR:OG1	3:N:38:LYS:HB2	2.20	0.42
3:N:44:LEU:HB3	3:N:525:ARG:NH2	2.35	0.42
3:N:580:ALA:HA	3:N:584:ASN:HA	2.02	0.42
2:C:675:ALA:HB2	2:C:867:VAL:HG11	2.01	0.42
2:C:786:LYS:HB3	2:C:786:LYS:HZ3	1.84	0.42
3:D:437:VAL:HG11	5:F:175:HIS:CE1	2.55	0.42
3:D:801:GLY:HA3	3:D:825:ALA:HB1	2.01	0.42
4:E:70:THR:HB	4:E:72:ARG:HG3	2.02	0.42
2:M:98:LEU:HD12	2:M:113:VAL:HG21	2.02	0.42
2:M:248:PRO:O	2:M:250:ARG:N	2.53	0.42
2:M:690:ILE:HG23	2:M:694:LEU:HD12	2.02	0.42
2:M:736:ASP:O	2:M:744:ARG:HG2	2.20	0.42
3:N:145:VAL:HB	3:N:146:PRO:CD	2.49	0.42
3:N:317:VAL:CG2	3:N:339:TRP:HB3	2.49	0.42
3:N:602:SER:O	3:N:606:ILE:HG13	2.19	0.42
3:N:1394:VAL:HG12	3:N:1395:LEU:N	2.34	0.42
2:C:54:ILE:HG23	2:C:356:ARG:HG3	2.02	0.41
2:C:64:LEU:HD11	2:C:367:LEU:HD12	2.02	0.41
2:C:289:THR:HG22	2:C:290:LEU:N	2.34	0.41
2:C:592:LEU:N	2:C:592:LEU:HD23	2.35	0.41
2:C:642:ARG:HD3	2:C:642:ARG:HA	1.90	0.41
2:C:1090:LYS:HA	2:C:1090:LYS:HD2	1.88	0.41
3:D:1420:LEU:HD12	3:D:1420:LEU:HA	1.89	0.41
1:L:101:LEU:HD21	1:L:109:VAL:HG11	2.02	0.41
1:L:128:HIS:HE1	1:L:131:THR:CG2	2.33	0.41
2:M:102:HIS:O	2:M:106:GLY:CA	2.68	0.41
2:M:820:ARG:HE	2:M:820:ARG:HB2	1.59	0.41
2:M:999:HIS:HB3	2:M:1004:LYS:CE	2.49	0.41
3:N:36:THR:HG1	3:N:38:LYS:HB2	1.84	0.41
3:N:133:ILE:HD12	3:N:152:LEU:HD23	2.02	0.41
3:N:326:GLU:HG2	3:N:331:VAL:HG12	2.02	0.41
3:N:1374:GLN:HA	3:N:1374:GLN:OE1	2.19	0.41
5:P:228:GLU:OE2	5:P:231:ARG:NH2	2.53	0.41
1:A:23:PHE:HE1	1:A:208:LEU:HD12	1.85	0.41
2:C:258:TYR:CD2	2:C:262:ALA:HB3	2.56	0.41
2:C:404:LEU:O	2:C:404:LEU:HG	2.20	0.41
3:D:80:VAL:HG23	3:D:80:VAL:O	2.20	0.41
3:D:261:LEU:HD12	3:D:269:PHE:O	2.20	0.41
3:D:801:GLY:O	3:D:804:LEU:HG	2.21	0.41
5:F:228:GLU:OE2	5:F:231:ARG:NH2	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:14:DG:H5'	6:G:14:DG:H8	1.85	0.41
1:K:150:TYR:CD1	2:M:696:LYS:HG2	2.55	0.41
2:M:100:LEU:HD23	2:M:367:LEU:O	2.20	0.41
2:M:487:THR:HG23	2:M:490:GLU:HB2	1.96	0.41
2:M:571:LEU:HD22	2:M:700:TYR:HA	2.01	0.41
2:M:776:SER:O	5:P:405:LEU:HD21	2.21	0.41
3:N:483:HIS:HA	3:N:484:PRO:HD3	1.85	0.41
3:N:794:GLN:HA	3:N:794:GLN:OE1	2.19	0.41
5:P:263:HIS:HA	5:P:266:GLU:HG2	2.01	0.41
1:B:124:ASN:OD1	1:B:124:ASN:N	2.54	0.41
2:C:736:ASP:O	2:C:744:ARG:HG2	2.19	0.41
2:C:999:HIS:HB3	2:C:1004:LYS:CE	2.49	0.41
3:D:1353:GLN:O	3:D:1357:ARG:HG3	2.20	0.41
2:M:163:ILE:HA	2:M:164:PRO:HD2	1.93	0.41
3:N:468:LEU:HD23	3:N:468:LEU:HA	1.86	0.41
3:N:890:VAL:CG2	3:N:922:LEU:HD11	2.49	0.41
1:B:185:ARG:HA	1:B:189:ARG:O	2.21	0.41
2:C:35:PRO:HA	2:C:36:PRO:HD3	1.89	0.41
2:C:340:MET:SD	2:C:340:MET:C	2.98	0.41
2:C:905:ILE:C	2:C:907:ASP:H	2.23	0.41
2:C:1032:PHE:HZ	2:C:1040:LEU:HG	1.85	0.41
3:D:243:ALA:O	3:D:311:LEU:HD23	2.20	0.41
3:D:288:MET:CE	3:D:305:ALA:HB3	2.50	0.41
4:E:36:LYS:HE3	4:E:36:LYS:HB3	1.76	0.41
2:M:184:MET:HE1	2:M:191:PHE:CZ	2.56	0.41
2:M:325:ILE:O	2:M:325:ILE:HG13	2.13	0.41
2:M:394:PHE:CE2	2:M:632:ASN:HB3	2.55	0.41
3:N:37:LEU:HD13	3:N:535:PHE:CE1	2.54	0.41
3:N:103:TRP:CZ2	3:N:1444:THR:HG22	2.55	0.41
3:N:116:LEU:HD21	3:N:465:LEU:HD23	2.02	0.41
3:N:273:ARG:HG2	3:N:277:GLU:C	2.41	0.41
3:N:785:ILE:HD13	3:N:935:LYS:HA	2.02	0.41
5:P:135:ILE:HD13	5:P:135:ILE:HA	1.96	0.41
5:P:408:LEU:O	5:P:408:LEU:HD23	2.20	0.41
6:Q:11:DT:H2''	6:Q:12:DG:C8	2.55	0.41
1:A:184:THR:CG2	1:A:192:LEU:CB	2.81	0.41
1:A:184:THR:CG2	1:A:192:LEU:HB2	2.45	0.41
2:C:918:LEU:HD23	2:C:918:LEU:HA	1.94	0.41
3:D:207:PHE:HB2	3:D:391:ALA:CB	2.51	0.41
3:D:472:ALA:O	3:D:476:GLU:HG3	2.19	0.41
3:D:849:ALA:O	3:D:852:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:959:GLU:OE1	3:D:959:GLU:N	2.44	0.41
3:D:1003:VAL:O	3:D:1007:VAL:HG23	2.20	0.41
5:F:256:ARG:NH2	5:F:311:ALA:O	2.53	0.41
1:K:44:LEU:HA	1:K:48:ILE:HG12	2.02	0.41
2:M:569:VAL:HG21	2:M:1000:MET:HE1	2.02	0.41
3:N:356:PRO:HB3	3:N:441:ARG:HA	2.02	0.41
3:N:410:SER:O	3:N:435:VAL:HG11	2.19	0.41
3:N:487:ALA:O	3:N:491:LYS:HG2	2.19	0.41
3:N:632:VAL:O	3:N:727:GLN:HA	2.20	0.41
3:N:792:ILE:HD13	3:N:941:PHE:CE1	2.56	0.41
3:N:823:LEU:CD1	3:N:837:GLY:CA	2.98	0.41
3:N:1267:ARG:HA	3:N:1268:PRO:HD3	1.90	0.41
5:P:384:GLU:HB3	5:P:394:ARG:CD	2.47	0.41
2:C:182:VAL:HG21	2:C:193:LEU:CB	2.27	0.41
2:C:864:GLY:O	2:C:866:PRO:HD3	2.20	0.41
3:D:437:VAL:HG11	5:F:175:HIS:ND1	2.36	0.41
3:D:801:GLY:HA2	3:D:821:VAL:HG13	2.02	0.41
3:D:1464:GLU:OE1	3:D:1464:GLU:N	2.36	0.41
5:F:264:MET:O	5:F:268:ILE:HG13	2.20	0.41
1:L:224:TYR:N	1:L:224:TYR:CD1	2.86	0.41
2:M:559:LEU:HD23	2:M:559:LEU:C	2.40	0.41
3:N:1102:THR:HG21	3:N:1371:VAL:HG22	2.02	0.41
3:N:1238:MET:HG2	3:N:1359:GLN:OE1	2.21	0.41
5:P:367:MET:HB3	5:P:390:PHE:HZ	1.85	0.41
1:A:115:LEU:HA	1:A:116:PRO:HD3	1.87	0.41
1:A:206:THR:HG22	1:A:208:LEU:N	2.34	0.41
1:B:48:ILE:HA	1:B:49:PRO:HD3	1.71	0.41
1:B:128:HIS:HE1	1:B:131:THR:CG2	2.34	0.41
1:B:154:GLU:H	1:B:154:GLU:CD	2.20	0.41
2:C:786:LYS:CB	2:C:786:LYS:HZ3	2.32	0.41
3:D:255:GLU:OE1	3:D:274:ARG:NH2	2.54	0.41
2:M:223:ASP:O	2:M:227:PHE:CD2	2.73	0.41
2:M:1102:LEU:HB2	3:N:7:LYS:HB2	2.03	0.41
3:N:275:GLU:HB3	3:N:276:ASP:H	1.60	0.41
3:N:984:THR:HG22	3:N:985:ASP:N	2.36	0.41
3:N:1100:ASP:OD2	3:N:1440:PHE:HB2	2.21	0.41
3:N:1263:PHE:HD2	3:N:1375:MET:HE3	1.80	0.41
3:N:1353:GLN:HG2	3:N:1368:ILE:CD1	2.51	0.41
3:N:1495:ILE:HG21	4:O:80:VAL:CG2	2.51	0.41
1:A:45:LEU:HD23	1:A:45:LEU:HA	1.92	0.41
1:B:124:ASN:HD22	1:B:127:LEU:HB2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:394:PHE:CE2	2:C:632:ASN:HB3	2.55	0.41
2:C:976:ASP:OD2	2:C:978:ARG:NH1	2.54	0.41
3:D:567:ILE:CG2	3:D:571:LYS:HE3	2.50	0.41
3:D:586:ARG:HH12	6:G:10:DG:H5''	1.86	0.41
3:D:648:MET:O	3:D:652:LEU:HG	2.21	0.41
3:D:806:PHE:HB2	3:D:829:VAL:HG23	1.98	0.41
3:D:1011:PHE:HB3	3:D:1021:TYR:CG	2.55	0.41
3:D:1082:ALA:O	3:D:1086:LEU:HG	2.20	0.41
5:F:195:VAL:HG13	5:F:216:GLY:HA3	2.01	0.41
2:M:238:LEU:HD12	2:M:238:LEU:C	2.40	0.41
2:M:976:ASP:OD2	2:M:978:ARG:NH1	2.54	0.41
3:N:132:TYR:HB2	3:N:153:LEU:CD1	2.50	0.41
3:N:232:GLU:O	3:N:232:GLU:HG2	2.21	0.41
3:N:939:PHE:O	3:N:942:SER:OG	2.23	0.41
3:N:1011:PHE:HB3	3:N:1021:TYR:CG	2.56	0.41
5:P:126:LEU:O	5:P:130:VAL:HG23	2.21	0.41
1:B:80:LEU:O	1:B:83:LYS:HB2	2.21	0.41
1:B:227:ASN:HA	1:B:228:PRO:HD3	1.90	0.41
2:C:163:ILE:HG23	2:C:171:TRP:CD1	2.55	0.41
2:C:204:GLN:HB2	2:C:227:PHE:CD1	2.56	0.41
2:C:372:LEU:HD12	2:C:372:LEU:HA	1.88	0.41
2:C:494:TYR:HD1	2:C:530:GLU:OE2	2.04	0.41
2:C:679:PHE:HA	3:D:943:THR:HB	2.03	0.41
2:C:786:LYS:NZ	2:C:786:LYS:HB3	2.33	0.41
2:C:998:TYR:O	2:C:998:TYR:CG	2.74	0.41
2:C:1105:LYS:O	2:C:1106:ASP:HB2	2.20	0.41
3:D:90:MET:HE3	3:D:519:VAL:O	2.21	0.41
3:D:483:HIS:CG	3:D:484:PRO:HD2	2.56	0.41
3:D:1000:THR:O	3:D:1003:VAL:HG22	2.21	0.41
3:D:1107:VAL:CG1	3:D:1217:ILE:HA	2.51	0.41
3:D:1323:GLN:HA	3:D:1324:PRO:HD3	1.94	0.41
3:D:1468:LEU:HD22	3:D:1468:LEU:HA	1.79	0.41
5:F:259:ARG:CG	5:F:259:ARG:NH1	2.83	0.41
5:F:278:LEU:HD11	5:F:294:ALA:HB3	2.02	0.41
5:F:338:LEU:HD23	5:F:339:PRO:HD2	2.03	0.41
7:H:13:DT:H6	7:H:13:DT:H2'	1.70	0.41
1:K:57:TYR:CE1	1:K:161:ARG:HD2	2.55	0.41
2:M:230:ARG:HG3	2:M:232:GLU:H	1.86	0.41
2:M:561:GLY:O	2:M:565:GLN:HG3	2.21	0.41
2:M:944:LEU:HD22	2:M:962:GLN:HB3	2.03	0.41
2:M:1071:ILE:O	3:N:659:LYS:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:132:TYR:HE2	3:N:155:ASP:HB3	1.86	0.41
3:N:155:ASP:O	3:N:159:ARG:HG3	2.21	0.41
3:N:230:TRP:HA	3:N:243:ALA:CB	2.50	0.41
3:N:567:ILE:CG2	3:N:571:LYS:HE3	2.51	0.41
3:N:597:ASP:OD2	3:N:597:ASP:N	2.54	0.41
3:N:731:LEU:CD1	3:N:931:LEU:HB3	2.51	0.41
3:N:784:ASP:HB2	3:N:939:PHE:CE2	2.56	0.41
3:N:1290:LEU:CD2	3:N:1307:LYS:CE	2.85	0.41
5:P:101:GLU:O	5:P:105:LYS:HG3	2.21	0.41
5:P:120:THR:HG22	5:P:122:LEU:HD13	2.02	0.41
5:P:391:GLY:O	5:P:392:VAL:C	2.58	0.41
2:C:6:PHE:CD2	2:C:909:ALA:HB2	2.56	0.41
2:C:226:VAL:HA	2:C:229:MET:HG3	2.03	0.41
2:C:229:MET:HB3	2:C:233:GLU:CB	2.47	0.41
2:C:375:SER:O	2:C:378:LEU:N	2.53	0.41
2:C:682:TYR:CD1	3:D:635:PRO:HG2	2.56	0.41
2:C:879:ARG:N	2:C:879:ARG:HD2	2.35	0.41
3:D:215:TYR:CE1	3:D:380:GLU:O	2.74	0.41
3:D:561:GLY:HA3	5:F:132:ARG:HD3	2.03	0.41
3:D:1060:SER:OG	3:D:1063:GLU:HG3	2.21	0.41
2:M:258:TYR:CD2	2:M:262:ALA:HB3	2.56	0.41
2:M:1105:LYS:O	2:M:1106:ASP:HB2	2.20	0.41
3:N:1342:GLU:H	3:N:1342:GLU:CD	2.25	0.41
5:P:195:VAL:HG13	5:P:216:GLY:HA3	2.02	0.41
5:P:369:LEU:HD12	5:P:401:GLU:HB2	2.03	0.41
1:B:184:THR:O	1:B:192:LEU:HB2	2.21	0.40
2:C:229:MET:O	2:C:233:GLU:HB2	2.21	0.40
2:C:1027:PHE:CD2	2:C:1027:PHE:O	2.74	0.40
2:C:1056:LYS:NZ	3:D:749:VAL:O	2.38	0.40
3:D:47:GLU:C	3:D:78:VAL:HG23	2.42	0.40
3:D:134:VAL:HG22	3:D:151:GLN:O	2.21	0.40
3:D:632:VAL:O	3:D:727:GLN:HA	2.21	0.40
3:D:1258:ARG:NH2	3:D:1351:GLU:HG2	2.35	0.40
5:F:324:GLU:HB2	5:F:326:ASP:OD1	2.21	0.40
1:L:80:LEU:O	1:L:83:LYS:HB2	2.22	0.40
3:N:1310:ARG:CG	3:N:1327:ARG:NH1	2.84	0.40
1:A:30:ARG:CD	1:A:191:ASP:CG	2.89	0.40
2:C:501:THR:HG21	2:C:513:VAL:HB	2.03	0.40
3:D:106:LYS:HE3	3:D:587:ARG:HG3	2.03	0.40
3:D:486:ARG:H	3:D:486:ARG:HG3	1.58	0.40
3:D:634:GLY:O	3:D:637:LEU:HG	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:771:SER:O	3:D:775:GLY:HA2	2.21	0.40
4:E:61:VAL:O	4:E:65:MET:HG3	2.21	0.40
4:E:70:THR:CB	4:E:72:ARG:HG3	2.52	0.40
5:F:281:GLU:CG	5:F:282:LEU:CD2	2.86	0.40
1:L:94:LEU:HD21	1:L:97:VAL:CG2	2.51	0.40
2:M:395:LYS:HE2	2:M:403:SER:CB	2.51	0.40
2:M:474:VAL:HG22	2:M:479:VAL:HG22	2.03	0.40
2:M:707:ARG:NE	2:M:824:ARG:HD3	2.37	0.40
2:M:708:TYR:OH	2:M:796:GLU:OE1	2.21	0.40
2:M:729:LEU:HD23	2:M:729:LEU:HA	1.91	0.40
2:M:1053:LEU:CD1	3:N:1466:VAL:HG13	2.51	0.40
3:N:90:MET:HE3	3:N:520:LEU:HA	2.02	0.40
3:N:138:LYS:CB	3:N:451:ASP:O	2.69	0.40
3:N:483:HIS:CG	3:N:484:PRO:HD2	2.57	0.40
3:N:637:LEU:HD22	3:N:642:CYS:HA	2.03	0.40
3:N:1289:LYS:O	3:N:1290:LEU:HD23	2.20	0.40
5:P:285:GLU:HA	5:P:286:PRO:HD3	1.78	0.40
5:P:325:LYS:HE2	5:P:325:LYS:HB2	1.80	0.40
1:A:39:PRO:O	1:A:43:ILE:HG13	2.22	0.40
2:C:229:MET:HE2	2:C:229:MET:HB2	1.91	0.40
2:C:626:ARG:HG3	2:C:629:TYR:CG	2.56	0.40
2:C:718:GLY:HA3	2:C:761:PHE:CD1	2.56	0.40
2:C:830:LYS:HB3	2:C:830:LYS:HE2	1.89	0.40
3:D:132:TYR:HB2	3:D:153:LEU:CD1	2.51	0.40
3:D:900:ILE:H	3:D:900:ILE:HG13	1.62	0.40
3:D:1122:LEU:HD11	3:D:1186:VAL:HG23	2.03	0.40
1:K:23:PHE:HE1	1:K:208:LEU:HD12	1.85	0.40
2:M:557:ARG:HG3	2:M:844:GLY:HA3	2.02	0.40
2:M:864:GLY:O	2:M:866:PRO:HD3	2.20	0.40
2:M:899:GLN:HE21	2:M:901:TYR:HE2	1.67	0.40
2:M:1012:PRO:HB2	2:M:1021:LEU:HD12	2.03	0.40
3:N:121:THR:O	3:N:124:GLU:HB3	2.21	0.40
3:N:622:ARG:NH1	6:Q:17:DG:OP1	2.43	0.40
3:N:801:GLY:O	3:N:804:LEU:HG	2.21	0.40
3:N:1258:ARG:NH2	3:N:1262:LEU:HD21	2.36	0.40
5:P:295:MET:HE2	5:P:295:MET:HA	2.02	0.40
1:A:97:VAL:HG12	1:A:98:THR:N	2.36	0.40
2:C:223:ASP:O	2:C:227:PHE:CD2	2.73	0.40
2:C:717:LEU:N	2:C:717:LEU:CD1	2.84	0.40
3:D:23:TYR:CE2	3:D:89:ARG:HD3	2.57	0.40
3:D:208:PRO:HA	3:D:389:GLU:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:260:ILE:HG23	5:F:261:PRO:HD2	2.03	0.40
1:L:184:THR:O	1:L:192:LEU:HB2	2.22	0.40
1:L:185:ARG:HA	1:L:189:ARG:O	2.21	0.40
1:L:205:VAL:HG12	1:L:206:THR:H	1.86	0.40
2:M:385:PHE:O	2:M:389:SER:HB3	2.21	0.40
3:N:252:ARG:HD3	3:N:301:GLY:O	2.21	0.40
3:N:832:ARG:HD2	3:N:833:GLU:N	2.37	0.40
3:N:899:LEU:HD22	3:N:917:GLN:HB3	2.02	0.40
3:N:1102:THR:CG2	3:N:1371:VAL:HG22	2.52	0.40
3:N:1293:PHE:CE2	3:N:1302:GLU:HG3	2.54	0.40
5:P:101:GLU:HG3	5:P:105:LYS:HE2	2.02	0.40
7:R:18:DC:H2'	7:R:19:DG:C8	2.57	0.40
1:A:73:GLU:OE1	1:A:73:GLU:N	2.54	0.40
2:C:103:LYS:H	2:C:103:LYS:HG3	1.55	0.40
2:C:176:VAL:O	2:C:181:VAL:O	2.39	0.40
2:C:758:ARG:N	2:C:789:SER:HB3	2.36	0.40
2:C:1071:ILE:CG2	3:D:670:VAL:HG21	2.52	0.40
3:D:285:PRO:HG2	3:D:311:LEU:HD12	2.04	0.40
3:D:899:LEU:HD22	3:D:917:GLN:HB3	2.03	0.40
1:K:97:VAL:HG12	1:K:98:THR:N	2.35	0.40
2:M:328:LEU:HD12	2:M:433:THR:O	2.22	0.40
2:M:719:PRO:HD2	2:M:761:PHE:CE1	2.57	0.40
3:N:39:PRO:HB3	3:N:45:PHE:O	2.22	0.40
3:N:223:LEU:HD21	3:N:225:LEU:HD21	2.03	0.40
3:N:245:LEU:HD12	3:N:245:LEU:N	2.35	0.40
3:N:1258:ARG:HH21	3:N:1351:GLU:HG3	1.86	0.40
3:N:1406:ARG:HB3	3:N:1406:ARG:NH2	2.36	0.40
4:O:67:GLU:O	4:O:70:THR:OG1	2.36	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1314:LYS:NZ	2:M:784:ASP:OD2[1_445]	1.83	0.37
2:M:40:GLU:OE1	5:P:364:ARG:NH1[1_545]	2.03	0.17

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	224/315 (71%)	218 (97%)	5 (2%)	1 (0%)	34	72
1	B	220/315 (70%)	212 (96%)	6 (3%)	2 (1%)	17	55
1	K	224/315 (71%)	218 (97%)	6 (3%)	0	100	100
1	L	223/315 (71%)	213 (96%)	8 (4%)	2 (1%)	17	55
2	C	1107/1119 (99%)	1066 (96%)	37 (3%)	4 (0%)	34	72
2	M	1107/1119 (99%)	1063 (96%)	39 (4%)	5 (0%)	29	68
3	D	1478/1524 (97%)	1423 (96%)	53 (4%)	2 (0%)	51	85
3	N	1485/1524 (97%)	1423 (96%)	57 (4%)	5 (0%)	41	76
4	E	92/99 (93%)	89 (97%)	3 (3%)	0	100	100
4	O	92/99 (93%)	88 (96%)	4 (4%)	0	100	100
5	F	344/443 (78%)	335 (97%)	9 (3%)	0	100	100
5	P	345/443 (78%)	329 (95%)	12 (4%)	4 (1%)	13	48
All	All	6941/7630 (91%)	6677 (96%)	239 (3%)	25 (0%)	34	72

All (25) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	C	325	ILE
2	M	325	ILE
5	P	78	SER
5	P	417	LYS
3	D	1310	ARG
3	N	1310	ARG
5	P	392	VAL
3	N	1237	THR
5	P	79	ASP
1	A	60	ASP
1	B	59	GLU
1	B	118	ALA

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Mol	Chain	Res	Type
2	C	429	ASP
1	L	118	ALA
2	M	230	ARG
2	C	230	ARG
2	M	249	LYS
3	N	1137	ARG
3	N	1306	PRO
1	L	59	GLU
2	C	177	GLU
2	M	170	PRO
3	D	530	VAL
3	N	530	VAL
2	M	177	GLU

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	199/273 (73%)	189 (95%)	10 (5%)	24	60
1	B	195/273 (71%)	182 (93%)	13 (7%)	16	49
1	K	199/273 (73%)	189 (95%)	10 (5%)	24	60
1	L	198/273 (72%)	188 (95%)	10 (5%)	24	60
2	C	936/941 (100%)	880 (94%)	56 (6%)	19	53
2	M	936/941 (100%)	873 (93%)	63 (7%)	16	49
3	D	1250/1279 (98%)	1165 (93%)	85 (7%)	16	48
3	N	1253/1279 (98%)	1169 (93%)	84 (7%)	16	49
4	E	83/88 (94%)	80 (96%)	3 (4%)	35	70
4	O	83/88 (94%)	81 (98%)	2 (2%)	49	79
5	F	301/388 (78%)	287 (95%)	14 (5%)	26	63
5	P	302/388 (78%)	280 (93%)	22 (7%)	14	44
All	All	5935/6484 (92%)	5563 (94%)	372 (6%)	18	51

All (372) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	LEU
1	A	58	ILE
1	A	86	VAL
1	A	87	VAL
1	A	126	ASP
1	A	142	VAL
1	A	184	THR
1	A	186	LEU
1	A	198	ARG
1	A	215	VAL
1	B	54	THR
1	B	61	VAL
1	B	63	HIS
1	B	66	SER
1	B	94	LEU
1	B	96	THR
1	B	165	ILE
1	B	191	ASP
1	B	192	LEU
1	B	197	LEU
1	B	205	VAL
1	B	206	THR
1	B	215	VAL
2	C	11	GLU
2	C	81	ASP
2	C	85	GLU
2	C	103	LYS
2	C	105	THR
2	C	107	LEU
2	C	108	ILE
2	C	141	HIS
2	C	149	THR
2	C	154	ARG
2	C	157	ARG
2	C	168	ARG
2	C	177	GLU
2	C	182	VAL
2	C	196	LEU
2	C	216	GLU
2	C	218	VAL
2	C	221	LEU
2	C	223	ASP

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Mol	Chain	Res	Type
2	C	229	MET
2	C	230	ARG
2	C	232	GLU
2	C	233	GLU
2	C	251	ASP
2	C	325	ILE
2	C	353	ARG
2	C	359	MET
2	C	361	MET
2	C	372	LEU
2	C	402	SER
2	C	427	VAL
2	C	434	HIS
2	C	454	SER
2	C	527	GLU
2	C	575	GLN
2	C	584	GLU
2	C	585	GLU
2	C	610	ARG
2	C	617	ASP
2	C	633	GLN
2	C	640	ARG
2	C	650	ARG
2	C	670	GLN
2	C	774	LEU
2	C	775	ARG
2	C	786	LYS
2	C	807	ARG
2	C	815	LEU
2	C	845	ASN
2	C	848	VAL
2	C	930	LYS
2	C	939	ARG
2	C	968	LEU
2	C	978	ARG
2	C	1001	VAL
2	C	1080	SER
3	D	36	THR
3	D	38	LYS
3	D	40	GLU
3	D	67	ARG
3	D	68	PHE

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Mol	Chain	Res	Type
3	D	69	GLU
3	D	78	VAL
3	D	81	THR
3	D	106	LYS
3	D	141	ILE
3	D	154	THR
3	D	184	GLU
3	D	199	LEU
3	D	230	TRP
3	D	231	VAL
3	D	256	GLU
3	D	265	GLU
3	D	270	LEU
3	D	273	ARG
3	D	274	ARG
3	D	275	GLU
3	D	335	LEU
3	D	354	VAL
3	D	372	ASP
3	D	374	GLU
3	D	411	THR
3	D	445	ARG
3	D	486	ARG
3	D	488	ARG
3	D	525	ARG
3	D	534	ARG
3	D	596	SER
3	D	623	VAL
3	D	637	LEU
3	D	640	HIS
3	D	709	HIS
3	D	717	GLN
3	D	754	PHE
3	D	784	ASP
3	D	785	ILE
3	D	817	GLU
3	D	829	VAL
3	D	832	ARG
3	D	833	GLU
3	D	858	VAL
3	D	867	ARG
3	D	894	LYS

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Mol	Chain	Res	Type
3	D	922	LEU
3	D	924	MET
3	D	940	THR
3	D	943	THR
3	D	969	ARG
3	D	1041	LEU
3	D	1044	LEU
3	D	1046	GLN
3	D	1083	ASP
3	D	1100	ASP
3	D	1128	VAL
3	D	1130	ARG
3	D	1132	LEU
3	D	1133	ARG
3	D	1152	GLU
3	D	1208	ASP
3	D	1219	GLU
3	D	1234	THR
3	D	1283	ILE
3	D	1284	GLU
3	D	1287	GLU
3	D	1288	GLU
3	D	1289	LYS
3	D	1290	LEU
3	D	1305	LEU
3	D	1308	GLU
3	D	1310	ARG
3	D	1311	LEU
3	D	1312	LEU
3	D	1317	ASP
3	D	1373	ARG
3	D	1382	THR
3	D	1383	ASP
3	D	1389	LEU
3	D	1393	GLN
3	D	1406	ARG
3	D	1456	LYS
3	D	1468	LEU
4	E	50	THR
4	E	92	LEU
4	E	95	VAL
5	F	88	ILE

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Mol	Chain	Res	Type
5	F	117	SER
5	F	125	ASP
5	F	186	HIS
5	F	203	THR
5	F	205	ARG
5	F	218	GLN
5	F	259	ARG
5	F	287	THR
5	F	295	MET
5	F	315	VAL
5	F	325	LYS
5	F	376	ILE
5	F	377	ASP
1	K	6	LEU
1	K	58	ILE
1	K	86	VAL
1	K	87	VAL
1	K	126	ASP
1	K	142	VAL
1	K	184	THR
1	K	185	ARG
1	K	188	GLN
1	K	215	VAL
1	L	5	LYS
1	L	54	THR
1	L	96	THR
1	L	191	ASP
1	L	192	LEU
1	L	197	LEU
1	L	205	VAL
1	L	206	THR
1	L	215	VAL
1	L	223	THR
2	M	11	GLU
2	M	38	LYS
2	M	50	GLU
2	M	81	ASP
2	M	85	GLU
2	M	103	LYS
2	M	105	THR
2	M	107	LEU
2	M	133	ASP

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Mol	Chain	Res	Type
2	M	141	HIS
2	M	149	THR
2	M	154	ARG
2	M	157	ARG
2	M	167	LYS
2	M	168	ARG
2	M	174	LEU
2	M	176	VAL
2	M	182	VAL
2	M	196	LEU
2	M	209	ARG
2	M	216	GLU
2	M	218	VAL
2	M	221	LEU
2	M	223	ASP
2	M	230	ARG
2	M	233	GLU
2	M	237	ARG
2	M	238	LEU
2	M	240	THR
2	M	297	GLU
2	M	299	LYS
2	M	325	ILE
2	M	353	ARG
2	M	359	MET
2	M	361	MET
2	M	372	LEU
2	M	427	VAL
2	M	434	HIS
2	M	454	SER
2	M	490	GLU
2	M	493	ARG
2	M	527	GLU
2	M	575	GLN
2	M	584	GLU
2	M	585	GLU
2	M	610	ARG
2	M	617	ASP
2	M	633	GLN
2	M	640	ARG
2	M	650	ARG
2	M	670	GLN

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Mol	Chain	Res	Type
2	M	781	LYS
2	M	807	ARG
2	M	815	LEU
2	M	816	LYS
2	M	845	ASN
2	M	848	VAL
2	M	930	LYS
2	M	939	ARG
2	M	968	LEU
2	M	978	ARG
2	M	1001	VAL
2	M	1080	SER
3	N	35	ARG
3	N	36	THR
3	N	48	ARG
3	N	106	LYS
3	N	107	ASP
3	N	141	ILE
3	N	154	THR
3	N	184	GLU
3	N	199	LEU
3	N	230	TRP
3	N	264	LEU
3	N	266	GLU
3	N	270	LEU
3	N	277	GLU
3	N	279	VAL
3	N	286	VAL
3	N	298	VAL
3	N	306	GLU
3	N	311	LEU
3	N	315	ARG
3	N	354	VAL
3	N	411	THR
3	N	434	ARG
3	N	445	ARG
3	N	486	ARG
3	N	488	ARG
3	N	518	PRO
3	N	525	ARG
3	N	587	ARG
3	N	591	VAL

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Mol	Chain	Res	Type
3	N	597	ASP
3	N	598	ARG
3	N	623	VAL
3	N	637	LEU
3	N	640	HIS
3	N	709	HIS
3	N	717	GLN
3	N	754	PHE
3	N	817	GLU
3	N	820	GLU
3	N	827	ILE
3	N	832	ARG
3	N	833	GLU
3	N	834	THR
3	N	838	ARG
3	N	858	VAL
3	N	867	ARG
3	N	894	LYS
3	N	940	THR
3	N	943	THR
3	N	1020	LEU
3	N	1041	LEU
3	N	1044	LEU
3	N	1046	GLN
3	N	1083	ASP
3	N	1100	ASP
3	N	1128	VAL
3	N	1129	THR
3	N	1130	ARG
3	N	1131	SER
3	N	1132	LEU
3	N	1159	ARG
3	N	1188	VAL
3	N	1219	GLU
3	N	1234	THR
3	N	1238	MET
3	N	1282	ARG
3	N	1283	ILE
3	N	1284	GLU
3	N	1291	SER
3	N	1301	LYS
3	N	1305	LEU

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Mol	Chain	Res	Type
3	N	1308	GLU
3	N	1311	LEU
3	N	1312	LEU
3	N	1317	ASP
3	N	1373	ARG
3	N	1382	THR
3	N	1383	ASP
3	N	1389	LEU
3	N	1393	GLN
3	N	1413	THR
3	N	1418	LYS
3	N	1459	LEU
4	O	50	THR
4	O	93	TYR
5	P	77	THR
5	P	82	ARG
5	P	123	ASP
5	P	140	ARG
5	P	186	HIS
5	P	205	ARG
5	P	222	ARG
5	P	244	ARG
5	P	287	THR
5	P	315	VAL
5	P	325	LYS
5	P	361	LEU
5	P	362	SER
5	P	377	ASP
5	P	379	ARG
5	P	383	LEU
5	P	386	VAL
5	P	393	THR
5	P	414	ARG
5	P	416	ARG
5	P	417	LYS
5	P	418	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
2	C	187	ASN
2	C	330	ASN

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Mol	Chain	Res	Type
2	C	845	ASN
2	C	884	GLN
3	D	483	HIS
3	D	1046	GLN
3	D	1172	HIS
1	L	221	HIS
2	M	187	ASN
2	M	330	ASN
2	M	845	ASN
2	M	884	GLN
3	N	483	HIS
3	N	1046	GLN
3	N	1195	GLN
3	N	1202	GLN
3	N	1441	GLN
5	P	381	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
8	I	1/2 (50%)	0	0
8	S	1/2 (50%)	0	0
All	All	2/4 (50%)	0	0

There are no RNA backbone outliers to report.

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 9 ligands modelled in this entry, 9 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	226/315 (71%)	-0.28	0 100 100	47, 67, 98, 118	0
1	B	222/315 (70%)	-0.17	2 (0%) 84 63	50, 79, 119, 142	0
1	K	226/315 (71%)	-0.21	0 100 100	49, 73, 103, 122	0
1	L	225/315 (71%)	-0.14	3 (1%) 77 51	51, 81, 126, 148	0
2	C	1111/1119 (99%)	-0.03	29 (2%) 56 27	34, 62, 122, 168	0
2	M	1111/1119 (99%)	0.24	82 (7%) 14 4	38, 76, 142, 179	0
3	D	1482/1524 (97%)	0.02	47 (3%) 47 20	32, 66, 130, 178	1 (0%)
3	N	1489/1524 (97%)	0.06	55 (3%) 41 17	34, 69, 129, 201	1 (0%)
4	E	94/99 (94%)	-0.08	3 (3%) 47 20	44, 66, 113, 121	0
4	O	94/99 (94%)	-0.10	3 (3%) 47 20	49, 72, 116, 130	0
5	F	346/443 (78%)	-0.14	6 (1%) 70 41	42, 70, 124, 147	0
5	P	347/443 (78%)	0.04	19 (5%) 25 9	46, 83, 156, 214	0
6	G	16/21 (76%)	-0.49	0 100 100	42, 78, 172, 179	0
6	Q	16/21 (76%)	-0.63	0 100 100	53, 80, 182, 183	0
7	H	24/27 (88%)	-0.39	0 100 100	67, 95, 146, 201	0
7	R	24/27 (88%)	-0.39	0 100 100	65, 106, 160, 210	0
8	I	2/2 (100%)	-0.43	0 100 100	50, 50, 50, 55	0
8	S	2/2 (100%)	-0.41	0 100 100	62, 62, 62, 63	0
All	All	7057/7730 (91%)	0.01	249 (3%) 44 18	32, 71, 132, 214	2 (0%)

All (249) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	M	363	SER	6.5
5	P	392	VAL	6.1
5	P	411	HIS	6.0

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Mol	Chain	Res	Type	RSRZ
2	M	191	PHE	5.9
5	P	375	LEU	5.6
2	M	367	LEU	5.5
2	M	196	LEU	5.5
2	M	200	LEU	5.3
2	M	362	GLY	5.3
3	D	241	ILE	5.0
5	P	389	PHE	5.0
3	N	1247	ALA	5.0
2	M	311	PHE	4.8
5	P	410	TYR	4.8
3	D	991	GLN	4.7
3	N	1246	VAL	4.4
2	M	211	LEU	4.4
5	P	415	THR	4.4
2	M	199	VAL	4.3
2	M	226	VAL	4.3
2	M	778	PHE	4.3
2	M	296	GLY	4.2
2	M	221	LEU	4.2
3	D	980	MET	4.1
5	P	393	THR	4.1
3	N	355	VAL	4.1
5	P	373	LYS	4.1
2	C	364	GLU	4.0
2	M	364	GLU	4.0
3	D	1297	GLU	4.0
3	N	367	ILE	4.0
2	C	365	ASP	3.9
5	P	423	ASP	3.8
3	N	978	TYR	3.8
3	N	1128	VAL	3.8
3	D	335	LEU	3.8
3	N	311	LEU	3.8
2	C	188	LYS	3.7
3	D	995	LEU	3.7
2	M	207	LEU	3.7
3	N	378	ILE	3.7
2	M	777	ILE	3.7
2	M	295	ASP	3.6
2	M	368	THR	3.7
2	C	176	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
2	M	172	ILE	3.6
5	P	391	GLY	3.6
5	F	423	ASP	3.6
2	M	188	LYS	3.6
2	M	231	PRO	3.6
3	D	1279	GLY	3.6
2	M	184	MET	3.6
2	M	181	VAL	3.6
2	M	64	LEU	3.6
3	D	367	ILE	3.6
2	M	68	PHE	3.6
3	N	191	LEU	3.6
2	M	109	LYS	3.5
3	D	1128	VAL	3.5
3	N	202	VAL	3.5
5	P	390	PHE	3.5
2	C	366	SER	3.5
3	D	343	LYS	3.5
2	M	649	VAL	3.5
3	D	203	ALA	3.4
2	M	365	ASP	3.4
3	N	1250	ALA	3.4
3	D	982	PHE	3.4
5	P	414	ARG	3.3
3	N	177	ALA	3.3
3	N	1249	ALA	3.3
2	C	219	GLN	3.3
1	L	65	PHE	3.3
4	O	85	LEU	3.3
3	N	371	ILE	3.3
2	M	98	LEU	3.3
3	D	371	ILE	3.2
2	M	107	LEU	3.2
2	C	814	GLU	3.2
3	N	1129	THR	3.2
2	M	104	ASP	3.2
4	O	84	ARG	3.2
3	D	977	ALA	3.2
2	C	101	ILE	3.1
3	D	976	GLN	3.1
2	M	222	MET	3.1
3	D	1130	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
2	C	257	VAL	3.1
2	M	297	GLU	3.1
2	M	764	GLU	3.1
3	D	988	ARG	3.1
2	M	769	PRO	3.0
3	N	974	ILE	3.0
2	C	616	GLU	3.0
2	M	300	ASP	3.0
3	N	1408	ILE	3.0
3	D	213	VAL	3.0
2	M	201	GLY	2.9
3	N	1304	LYS	2.9
2	C	811	PRO	2.9
2	M	152	PRO	2.9
5	P	416	ARG	2.9
3	N	394	LEU	2.9
3	N	232	GLU	2.9
3	N	1409	ALA	2.9
3	D	1318	TYR	2.9
2	M	344	PHE	2.9
3	N	406	ASP	2.9
3	N	1281	VAL	2.9
5	P	386	VAL	2.9
3	N	213	VAL	2.8
2	M	762	LYS	2.8
2	M	175	GLU	2.8
3	D	360	ARG	2.8
3	D	198	ARG	2.8
3	D	309	GLY	2.8
4	E	52	GLU	2.8
5	P	406	ARG	2.8
2	M	811	PRO	2.8
3	D	1495	ILE	2.8
3	N	388	HIS	2.8
5	P	359	SER	2.8
3	D	983	LEU	2.8
2	M	44	ILE	2.8
2	C	181	VAL	2.7
2	M	307	LEU	2.7
2	M	30	LEU	2.7
2	M	645	VAL	2.7
3	N	352	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
2	M	265	ARG	2.7
2	C	650	ARG	2.7
2	M	66	LEU	2.7
2	M	766	GLU	2.7
3	N	212	ARG	2.7
2	C	815	LEU	2.7
2	M	655	LEU	2.7
3	N	1299	PHE	2.7
2	M	102	HIS	2.7
2	M	111	ASP	2.6
2	M	219	GLN	2.6
3	N	971	LEU	2.6
3	N	1497	GLU	2.6
3	D	345	TYR	2.6
2	M	254	VAL	2.6
3	D	388	HIS	2.6
3	D	406	ASP	2.6
3	N	426	LYS	2.6
3	N	1319	VAL	2.6
3	D	212	ARG	2.6
2	M	372	LEU	2.6
3	N	353	VAL	2.6
2	M	153	ALA	2.6
3	D	310	LEU	2.6
2	M	48	PHE	2.6
3	D	1294	VAL	2.5
2	M	108	ILE	2.5
2	M	197	LEU	2.5
2	M	595	LEU	2.5
3	D	839	LEU	2.5
3	N	1313	VAL	2.5
3	D	992	ILE	2.5
3	N	1251	ASP	2.5
3	N	218	LYS	2.5
2	M	106	GLY	2.5
3	D	973	GLN	2.5
2	M	1	MET	2.5
3	N	68	PHE	2.5
2	M	594	ALA	2.5
2	M	190	LYS	2.5
3	D	322	VAL	2.5
2	M	354	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
2	C	65	VAL	2.4
2	C	55	GLU	2.4
2	C	66	LEU	2.4
3	N	1248	GLY	2.4
2	M	101	ILE	2.4
3	N	197	SER	2.4
4	O	95	VAL	2.4
3	D	355	VAL	2.3
3	N	396	VAL	2.3
3	D	197	SER	2.3
2	M	235	LEU	2.3
3	N	63	TYR	2.3
3	N	236	TYR	2.3
3	N	1495	ILE	2.3
2	M	614	ARG	2.3
2	M	644	VAL	2.3
3	D	1498	ALA	2.3
2	C	729	LEU	2.3
2	C	764	GLU	2.3
2	C	157	ARG	2.2
3	N	407	VAL	2.2
3	D	470	LEU	2.2
2	M	629	TYR	2.2
2	M	65	VAL	2.2
2	M	785	VAL	2.2
3	D	161	LEU	2.2
2	M	351	LEU	2.2
2	C	629	TYR	2.2
2	M	371	LYS	2.2
2	M	176	VAL	2.2
3	N	1314	LYS	2.2
2	C	254	VAL	2.2
5	F	379	ARG	2.2
5	F	422	LEU	2.2
2	C	778	PHE	2.2
5	F	388	ALA	2.2
3	D	1319	VAL	2.2
3	N	1292	VAL	2.2
3	N	235	ALA	2.2
3	D	76	CYS	2.2
3	N	1253	THR	2.2
5	F	232	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
2	C	69	LEU	2.1
3	N	807	ALA	2.1
3	N	318	ARG	2.1
1	L	165	ILE	2.1
2	M	814	GLU	2.1
2	C	170	PRO	2.1
2	M	293	PHE	2.1
4	E	51	LEU	2.1
3	N	203	ALA	2.1
3	D	339	TRP	2.1
2	C	92	ALA	2.1
3	N	316	GLN	2.1
1	L	4	SER	2.1
2	M	220	GLY	2.1
3	N	279	VAL	2.1
3	D	409	VAL	2.1
3	D	1041	LEU	2.1
3	D	1408	ILE	2.1
3	N	1493	LYS	2.1
2	M	203	ASP	2.0
3	N	393	ILE	2.0
5	P	382	THR	2.0
2	M	170	PRO	2.0
2	C	8	ARG	2.0
2	C	172	ILE	2.0
3	D	666	ILE	2.0
5	F	380	GLU	2.0
2	C	100	LEU	2.0
2	M	648	ARG	2.0
1	B	66	SER	2.0
5	P	232	ARG	2.0
4	E	87	LYS	2.0
1	B	64	GLU	2.0
5	P	413	SER	2.0
2	M	621	VAL	2.0
3	D	165	LYS	2.0

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
10	MG	N	2003	1/1	0.78	0.20	46,46,46,46	0
10	MG	N	2004	1/1	0.82	0.37	65,65,65,65	0
10	MG	K	1001	1/1	0.89	0.66	69,69,69,69	0
10	MG	D	2003	1/1	0.94	0.24	40,40,40,40	0
10	MG	D	2004	1/1	0.97	0.44	63,63,63,63	0
9	ZN	N	2001	1/1	0.98	0.20	62,62,62,62	0
9	ZN	D	2002	1/1	0.98	0.07	83,83,83,83	0
9	ZN	N	2002	1/1	0.99	0.05	107,107,107,107	0
9	ZN	D	2001	1/1	0.99	0.13	62,62,62,62	0

6.5 Other polymers [i](#)

There are no such residues in this entry.