



## Full wwPDB EM Validation Report ⓘ

Sep 28, 2024 – 09:39 AM EDT

PDB ID : 6MJ2  
EMDB ID : EMD-9134  
Title : Human TRPM2 ion channel in a calcium- and ADPR-bound state  
Authors : Wang, L.; Fu, T.M.; Xia, S.; Wu, H.  
Deposited on : 2018-09-20  
Resolution : 6.36 Å (reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113  
MolProbity : 4.02b-467  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : **FAILED**  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

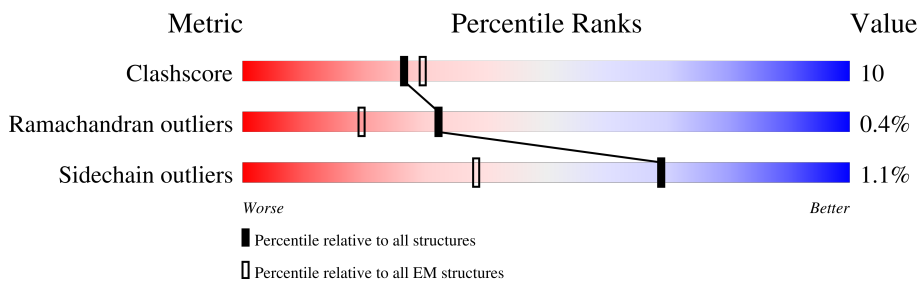
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 6.36 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)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	1503	
1	B	1503	
1	C	1503	
1	D	1503	

## 2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 43124 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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.

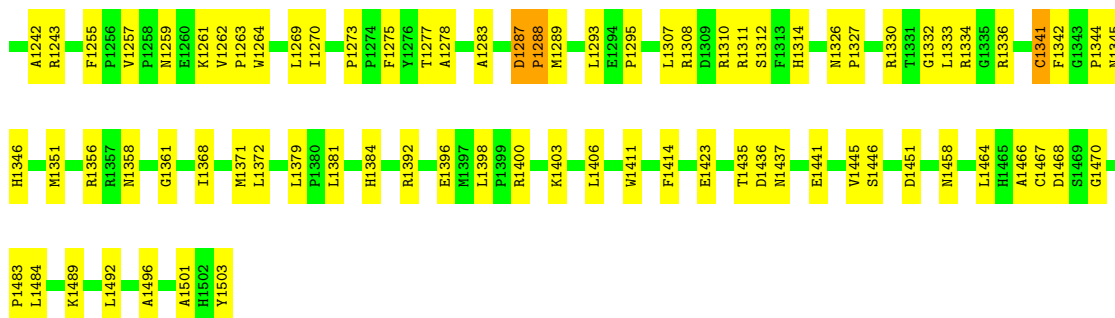
- Molecule 1 is a protein called Transient receptor potential cation channel subfamily M member 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1337	10780	6942	1865	1919	54	0	0
1	B	1337	10780	6942	1865	1919	54	0	0
1	C	1337	10780	6942	1865	1919	54	0	0
1	D	1337	10780	6942	1865	1919	54	0	0

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca).

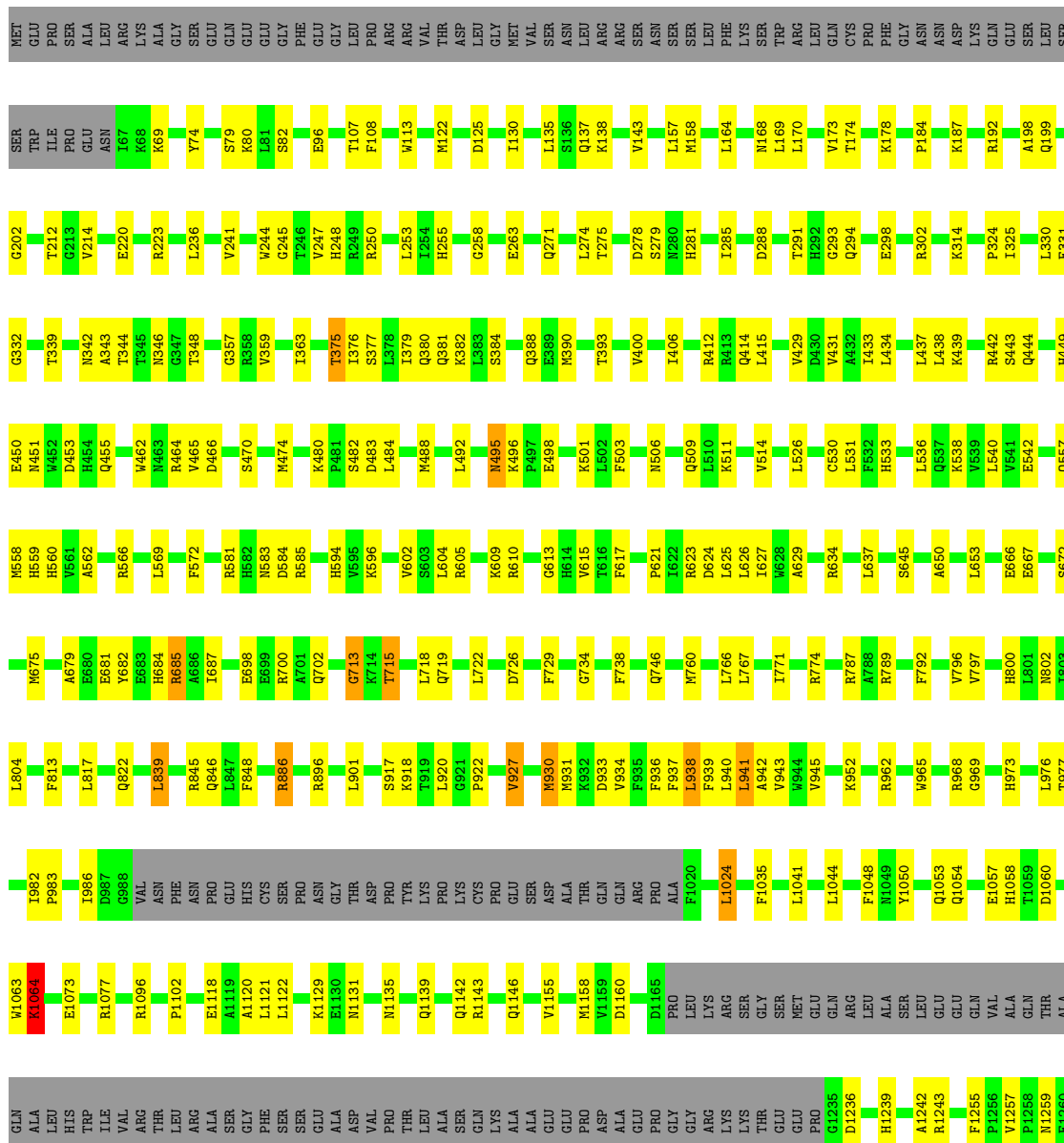
Mol	Chain	Residues	Atoms		AltConf
			Total	Ca	
2	A	1	1	1	0
2	B	1	1	1	0
2	C	1	1	1	0
2	D	1	1	1	0





• Molecule 1: Transient receptor potential cation channel subfamily M member 2

Chain B: 65% 23% 11%





● Molecule 1: Transient receptor potential cation channel subfamily M member 2



MET	GLU	TRP	PRO	SER	ALA	LEU	ARG	LYS	ALA	GLY	SER	GLU	GLN	GLU	GLY	PHE	GLU	PHE	GLU	GLY	LEU	PRO	ARG	VAL	THR	ASP	LEU	GLY	GLY	MET	VAL	SER	ASN	LEU	ARG	SER	ASN	SER	LEU	PHE	LYS	LYS	TRP	ARG	LEU	GLN	CYS	PRO	PHE	GLY	ASN	ASN	ASP	LYS	GLN	GLN	GLU	SER	SER
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SER	TRP	ILE	PRO	GLU	ASN	I67	K68	K69	K69	Y74	S79	K80	L81	S82	E96	T107	F108	W113	M122	D125	I130	L135	Q136	Q137	K138	V143	L157	M158	L164	M168	L169	L170	V173	T174	P184	K187	A198	I325	L330	G331	G333
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E220	R223	L236	V241	W244	G245	T246	H248	R250	L253	T262	H255	C258	E263	Q271	G272	M273	T275	D278	S279	H281	L285	D288	T291	H292	G293	Q294	E298	R302	L302	K314	L321	P324	I325	L330	G331	G333
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T339	N342	A343	T344	T345	K346	G347	T348	G357	R358	V359	L363	T375	L376	S377	L378	I379	Q380	Q381	K382	L383	S384	K385	K390	T393	V400	L406	R412	Q414	L415	V429	D430	V431	L433	L434	L437	L438	K439	E542	I557	M558	H559	H560	D444	H446
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F447	G448	H449	E450	N451	N452	D453	H454	G455	N462	N463	R464	V465	D466	K480	P481	S482	D483	L484	N488	L492	M495	K496	P497	E498	K501	L502	F503	N506	Q509	L510	K511	V514	L526	C530	L531	F532	H533	K538	V539	E542	O557	M558	H559	H560	V561
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A562	R566	L569	F572	R581	H582	N583	D584	R585	H594	V595	K596	V602	S603	L604	R605	K609	R610	G613	H614	V615	T616	F617	P621	T622	R623	D624	L625	L626	I627	A629	B634	L637	A650	L653	K657	E666	E667	S672	M675	A679
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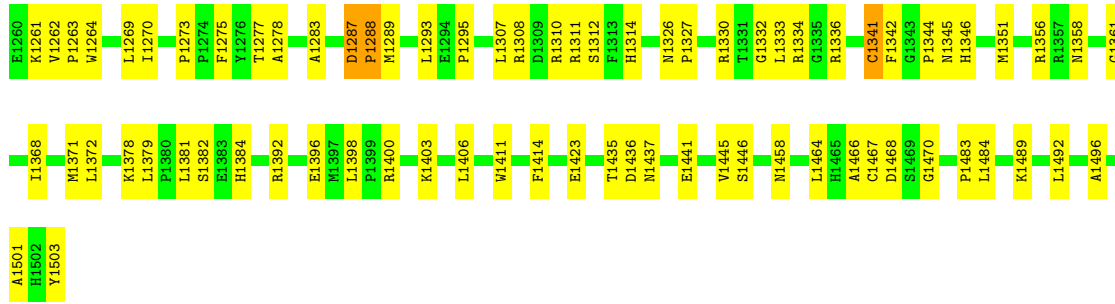
E680	E681	Y682	H683	H684	R685	A686	I687	E698	E699	R700	A701	Q702	R707	G713	K714	T715	Q719	D726	F729	G734	I735	P736	A737	F738	L739	R623	L625	L626	I627	A629	B634	L637	R789	H800	L801	N802	I803	L804	F813	L817
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Q822	L839	R845	Q846	R847	F848	P851	K859	R886	R896	L901	S917	K918	T919	L920	G921	P922	V927	K928	R929	M930	H931	K932	D933	V934	F937	L938	F939	L940	L941	A942	V943	Y944	V945	K952	R962	W965	R968	G969	H973	L976	T977
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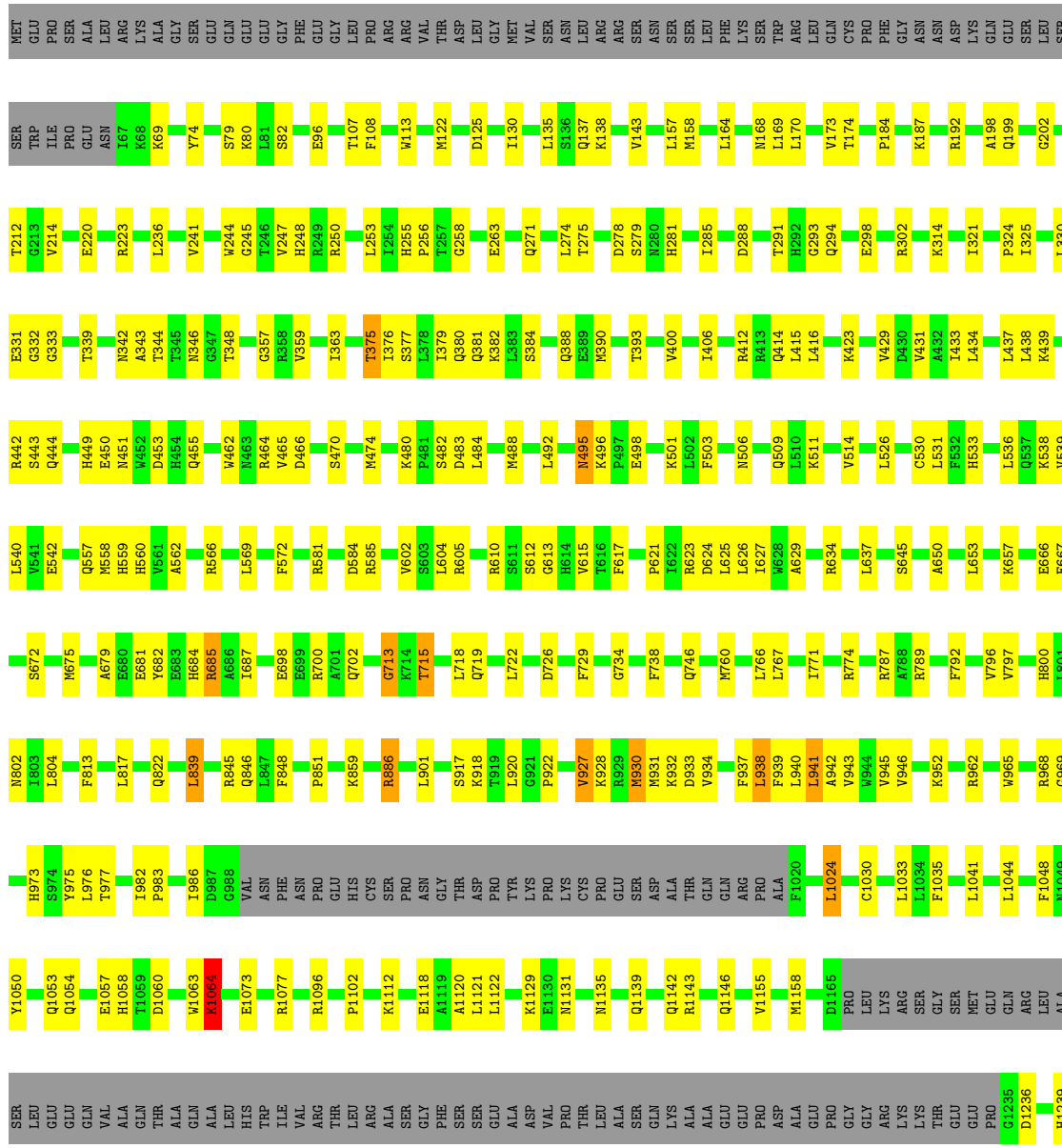
I982	P983	I986	D987	G988	VAL	ASN	PHE	ASN	ASN	PRO	GLU	HIS	CYS	SER	PRO	ASN	GLY	THR	ASP	PRO	TYR	PRO	PRO	LYS	LYS	CYS	PRO	GLU	ARG	PRO	ALA	F1020	L1024	F1035	L1041	L1044	F1048	N1049	Y1050	Q1053	Q1054	E1057	H1058	T1059	D1060	W1063
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K1064	E1073	R1077	R1096	P1102	L1113	E1114	K1115	E1118	A1119	A1120	L1121	L1122	M1131	M1135	Q1139	Q1142	R1143	Q1146	V1155	M1158	V1159	D1160	E1165	PRO	LEU	ARG	ARG	LYS	ARG	LYS	SER	GLY	SER	MET	GLU	GLN	ARG	LEU	ALA	SER	LEU	SER	ALA	LEU	LEU	GLN	GLU	GLU	PRO	GLY	GLY	ARG	LYS	LYS	LYS	THR	GLU	GLU	PRO	GLY
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ALA	GLN	LEU	LEU	HIS	TRP	ILE	VAL	ARG	THR	LEU	THR	ARG	ALA	SER	GLY	PHE	SER	SER	GLY	ALA	ASP	VAL	VAL	PRO	THR	LEU	ALA	SER	GLN	LYS	LYS	LYS	GLY	SER	MET	GLU	GLN	ARG	LEU	ALA	SER	LEU	SER	ALA	SER	LEU	GLN	GLU	PRO	GLY	GLY	ARG	LYS	LYS	LYS	THR	GLU	GLU	PRO	GLY
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• Molecule 1: Transient receptor potential cation channel subfamily M member 2



A1242	R1243	F1255	P1256	V1257	P1258	N1259	E1260	K1261	V1262	P1263	W1264	L1269	I1270	P1273	T1277	A1278	A1283	D1287	P1288	M1289	L1293	F1294	P1295	L1307	R1308	D1309	R1310	R1311	S1312	F1313	H1314	M1326	P1327	R1330	T1331	G1332	L1333	R1334	G1335	R1336	C1341	F1342	G1343	P1344	M1345	H1346
M1351	R1356	R1357	M1358	G1361	I1368	M1371	L1372	K1378	L1379	P1380	L1381	S1382	F1383	H1384	R1392	E1396	M1397	L1398	P1399	R1400	K1403	L1406	W1411	R1408	F1414	E1423	T1435	D1436	M1437	E1441	V1445	S1446	D1451	M1458	L1464	H1465	A1466	C1467	D1468	S1469	G1470					
P1483	L1484	K1489	L1492	A1496	A1501	H1502	Y1503																																							



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	14199	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	70.072	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section:  
CA

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	0.30	0/11050	0.67	19/14990 (0.1%)
1	B	0.30	0/11050	0.67	19/14990 (0.1%)
1	C	0.30	0/11050	0.67	19/14990 (0.1%)
1	D	0.30	0/11050	0.67	19/14990 (0.1%)
All	All	0.30	0/44200	0.67	76/59960 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	13
1	B	0	13
1	C	0	13
1	D	0	13
All	All	0	52

There are no bond length outliers.

All (76) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	933	ASP	CB-CG-OD2	-8.80	110.38	118.30
1	D	933	ASP	CB-CG-OD2	-8.77	110.41	118.30
1	C	933	ASP	CB-CG-OD2	-8.77	110.41	118.30
1	A	933	ASP	CB-CG-OD2	-8.74	110.44	118.30
1	C	933	ASP	CB-CG-OD1	8.54	125.99	118.30
1	A	933	ASP	CB-CG-OD1	8.49	125.94	118.30
1	B	933	ASP	CB-CG-OD1	8.49	125.94	118.30
1	D	933	ASP	CB-CG-OD1	8.49	125.94	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	685	ARG	CD-NE-CZ	7.49	134.09	123.60
1	B	685	ARG	CD-NE-CZ	7.49	134.09	123.60
1	D	685	ARG	CD-NE-CZ	7.49	134.09	123.60
1	C	685	ARG	CD-NE-CZ	7.47	134.06	123.60
1	A	1048	PHE	CB-CG-CD2	-7.34	115.66	120.80
1	B	1048	PHE	CB-CG-CD2	-7.34	115.66	120.80
1	D	1048	PHE	CB-CG-CD2	-7.34	115.66	120.80
1	C	1048	PHE	CB-CG-CD2	-7.31	115.68	120.80
1	B	938	LEU	CB-CG-CD1	6.62	122.26	111.00
1	A	938	LEU	CB-CG-CD1	6.60	122.22	111.00
1	D	938	LEU	CB-CG-CD1	6.60	122.22	111.00
1	C	938	LEU	CB-CG-CD1	6.59	122.20	111.00
1	A	1064	LYS	CA-CB-CG	6.48	127.65	113.40
1	B	1064	LYS	CA-CB-CG	6.46	127.62	113.40
1	C	1064	LYS	CA-CB-CG	6.46	127.62	113.40
1	D	1064	LYS	CA-CB-CG	6.45	127.59	113.40
1	A	685	ARG	CG-CD-NE	6.23	124.89	111.80
1	B	685	ARG	CG-CD-NE	6.20	124.83	111.80
1	C	685	ARG	CG-CD-NE	6.20	124.82	111.80
1	D	685	ARG	CG-CD-NE	6.20	124.82	111.80
1	A	767	LEU	CB-CG-CD2	-6.08	100.66	111.00
1	B	767	LEU	CB-CG-CD2	-6.08	100.66	111.00
1	C	767	LEU	CB-CG-CD2	-6.08	100.66	111.00
1	D	767	LEU	CB-CG-CD2	-6.08	100.66	111.00
1	C	938	LEU	CA-CB-CG	6.00	129.09	115.30
1	A	938	LEU	CA-CB-CG	5.99	129.07	115.30
1	D	938	LEU	CA-CB-CG	5.99	129.07	115.30
1	B	938	LEU	CA-CB-CG	5.96	129.01	115.30
1	B	941	LEU	CB-CG-CD1	5.84	120.94	111.00
1	C	941	LEU	CB-CG-CD1	5.84	120.93	111.00
1	A	941	LEU	CB-CG-CD1	5.83	120.91	111.00
1	D	941	LEU	CB-CG-CD1	5.82	120.89	111.00
1	B	1048	PHE	CB-CG-CD1	5.73	124.81	120.80
1	C	976	LEU	CB-CG-CD1	-5.72	101.27	111.00
1	A	976	LEU	CB-CG-CD1	-5.71	101.28	111.00
1	D	976	LEU	CB-CG-CD1	-5.71	101.29	111.00
1	B	976	LEU	CB-CG-CD1	-5.69	101.32	111.00
1	A	1048	PHE	CB-CG-CD1	5.65	124.76	120.80
1	D	1048	PHE	CB-CG-CD1	5.65	124.76	120.80
1	C	1048	PHE	CB-CG-CD1	5.63	124.74	120.80
1	A	839	LEU	CB-CG-CD2	5.61	120.53	111.00
1	B	839	LEU	CB-CG-CD2	5.61	120.53	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	839	LEU	CB-CG-CD2	5.59	120.50	111.00
1	D	839	LEU	CB-CG-CD2	5.58	120.49	111.00
1	A	813	PHE	CB-CG-CD1	-5.44	116.99	120.80
1	B	813	PHE	CB-CG-CD1	-5.42	117.00	120.80
1	C	813	PHE	CB-CG-CD1	-5.40	117.02	120.80
1	C	804	LEU	CB-CG-CD2	-5.37	101.88	111.00
1	B	804	LEU	CB-CG-CD2	-5.37	101.88	111.00
1	D	804	LEU	CB-CG-CD2	-5.37	101.88	111.00
1	A	804	LEU	CB-CG-CD2	-5.35	101.90	111.00
1	C	839	LEU	CB-CG-CD1	-5.35	101.90	111.00
1	D	813	PHE	CB-CG-CD1	-5.35	117.06	120.80
1	A	839	LEU	CB-CG-CD1	-5.34	101.92	111.00
1	B	839	LEU	CB-CG-CD1	-5.34	101.92	111.00
1	D	839	LEU	CB-CG-CD1	-5.33	101.93	111.00
1	B	817	LEU	CB-CG-CD1	-5.26	102.06	111.00
1	D	817	LEU	CB-CG-CD1	-5.26	102.06	111.00
1	C	817	LEU	CB-CG-CD1	-5.24	102.09	111.00
1	A	817	LEU	CB-CG-CD1	-5.23	102.10	111.00
1	B	976	LEU	CA-CB-CG	5.22	127.31	115.30
1	D	976	LEU	CA-CB-CG	5.22	127.30	115.30
1	C	976	LEU	CA-CB-CG	5.21	127.28	115.30
1	A	976	LEU	CA-CB-CG	5.21	127.28	115.30
1	A	945	VAL	CG1-CB-CG2	-5.09	102.75	110.90
1	B	945	VAL	CG1-CB-CG2	-5.09	102.75	110.90
1	C	945	VAL	CG1-CB-CG2	-5.07	102.79	110.90
1	D	945	VAL	CG1-CB-CG2	-5.06	102.81	110.90

There are no chirality outliers.

All (52) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1035	PHE	Peptide
1	A	1050	TYR	Sidechain
1	A	1287	ASP	Peptide
1	A	1341	CYS	Peptide
1	A	1368	ILE	Peptide
1	A	375	THR	Peptide
1	A	388	GLN	Peptide
1	A	495	ASN	Peptide
1	A	615	VAL	Peptide
1	A	617	PHE	Peptide
1	A	713	GLY	Peptide

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Mol	Chain	Res	Type	Group
1	A	82	SER	Peptide
1	A	927	VAL	Peptide
1	B	1035	PHE	Peptide
1	B	1050	TYR	Sidechain
1	B	1287	ASP	Peptide
1	B	1341	CYS	Peptide
1	B	1368	ILE	Peptide
1	B	375	THR	Peptide
1	B	388	GLN	Peptide
1	B	495	ASN	Peptide
1	B	615	VAL	Peptide
1	B	617	PHE	Peptide
1	B	713	GLY	Peptide
1	B	82	SER	Peptide
1	B	927	VAL	Peptide
1	C	1035	PHE	Peptide
1	C	1050	TYR	Sidechain
1	C	1287	ASP	Peptide
1	C	1341	CYS	Peptide
1	C	1368	ILE	Peptide
1	C	375	THR	Peptide
1	C	388	GLN	Peptide
1	C	495	ASN	Peptide
1	C	615	VAL	Peptide
1	C	617	PHE	Peptide
1	C	713	GLY	Peptide
1	C	82	SER	Peptide
1	C	927	VAL	Peptide
1	D	1035	PHE	Peptide
1	D	1050	TYR	Sidechain
1	D	1287	ASP	Peptide
1	D	1341	CYS	Peptide
1	D	1368	ILE	Peptide
1	D	375	THR	Peptide
1	D	388	GLN	Peptide
1	D	495	ASN	Peptide
1	D	615	VAL	Peptide
1	D	617	PHE	Peptide
1	D	713	GLY	Peptide
1	D	82	SER	Peptide
1	D	927	VAL	Peptide

## 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	10780	0	10822	212	0
1	B	10780	0	10822	209	0
1	C	10780	0	10822	215	0
1	D	10780	0	10822	215	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
All	All	43124	0	43288	843	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (843) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:569:LEU:HD13	1:A:572:PHE:HB2	1.76	0.68
1:D:569:LEU:HD13	1:D:572:PHE:HB2	1.77	0.67
1:B:569:LEU:HD13	1:B:572:PHE:HB2	1.76	0.67
1:C:569:LEU:HD13	1:C:572:PHE:HB2	1.76	0.66
1:B:962:ARG:H	1:B:965:TRP:HB2	1.60	0.66
1:D:962:ARG:H	1:D:965:TRP:HB2	1.60	0.66
1:A:962:ARG:H	1:A:965:TRP:HB2	1.60	0.66
1:D:602:VAL:HG23	1:D:604:LEU:H	1.61	0.66
1:C:1356:ARG:NH1	1:C:1371:MET:SD	2.69	0.65
1:C:962:ARG:H	1:C:965:TRP:HB2	1.60	0.65
1:D:1356:ARG:NH1	1:D:1371:MET:SD	2.69	0.65
1:A:602:VAL:HG23	1:A:604:LEU:H	1.61	0.65
1:A:1356:ARG:NH1	1:A:1371:MET:SD	2.69	0.65
1:B:1356:ARG:NH1	1:B:1371:MET:SD	2.69	0.65
1:C:602:VAL:HG23	1:C:604:LEU:H	1.61	0.65
1:C:713:GLY:O	1:C:715:THR:OG1	2.16	0.64
1:B:602:VAL:HG23	1:B:604:LEU:H	1.61	0.64
1:D:713:GLY:O	1:D:715:THR:OG1	2.16	0.63
1:A:746:GLN:HE22	1:A:774:ARG:HH11	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:79:SER:HB2	1:B:113:TRP:HB2	1.82	0.61
1:A:713:GLY:O	1:A:715:THR:OG1	2.16	0.61
1:D:746:GLN:HE22	1:D:774:ARG:HH11	1.48	0.61
1:A:79:SER:HB2	1:A:113:TRP:HB2	1.82	0.61
1:A:174:THR:HG21	1:A:339:THR:HG21	1.83	0.61
1:A:1288:PRO:HA	1:A:1308:ARG:HH21	1.66	0.61
1:C:79:SER:HB2	1:C:113:TRP:HB2	1.82	0.61
1:B:713:GLY:O	1:B:715:THR:OG1	2.16	0.60
1:D:79:SER:HB2	1:D:113:TRP:HB2	1.82	0.60
1:D:174:THR:HG21	1:D:339:THR:HG21	1.83	0.60
1:D:1288:PRO:HA	1:D:1308:ARG:HH21	1.66	0.60
1:B:581:ARG:HA	1:B:584:ASP:HB2	1.84	0.60
1:C:581:ARG:HA	1:C:584:ASP:HB2	1.84	0.60
1:B:174:THR:HG21	1:B:339:THR:HG21	1.83	0.60
1:B:1288:PRO:HA	1:B:1308:ARG:HH21	1.66	0.60
1:C:174:THR:HG21	1:C:339:THR:HG21	1.83	0.60
1:A:581:ARG:HA	1:A:584:ASP:HB2	1.84	0.59
1:B:480:LYS:HB3	1:B:482:SER:H	1.67	0.59
1:D:480:LYS:HB3	1:D:482:SER:H	1.68	0.59
1:B:746:GLN:HE22	1:B:774:ARG:HH11	1.48	0.59
1:C:746:GLN:HE22	1:C:774:ARG:HH11	1.48	0.59
1:B:624:ASP:HA	1:B:627:ILE:HD12	1.85	0.59
1:C:624:ASP:HA	1:C:627:ILE:HD12	1.85	0.59
1:C:1288:PRO:HA	1:C:1308:ARG:HH21	1.66	0.59
1:A:480:LYS:HB3	1:A:482:SER:H	1.68	0.59
1:B:434:LEU:HD12	1:B:462:TRP:HZ2	1.68	0.59
1:C:845:ARG:HH12	1:C:1077:ARG:HG2	1.68	0.59
1:D:581:ARG:HA	1:D:584:ASP:HB2	1.84	0.59
1:D:434:LEU:HD12	1:D:462:TRP:HZ2	1.67	0.59
1:D:845:ARG:HH12	1:D:1077:ARG:HG2	1.68	0.59
1:A:449:HIS:CE1	1:A:453:ASP:HB2	2.38	0.59
1:C:509:GLN:HE21	1:C:511:LYS:H	1.51	0.59
1:D:511:LYS:HZ2	1:D:621:PRO:HD2	1.66	0.59
1:A:624:ASP:HA	1:A:627:ILE:HD12	1.85	0.59
1:A:845:ARG:HH12	1:A:1077:ARG:HG2	1.68	0.59
1:C:449:HIS:CE1	1:C:453:ASP:HB2	2.38	0.59
1:C:480:LYS:HB3	1:C:482:SER:H	1.68	0.59
1:B:449:HIS:CE1	1:B:453:ASP:HB2	2.38	0.58
1:C:434:LEU:HD12	1:C:462:TRP:HZ2	1.68	0.58
1:D:624:ASP:HA	1:D:627:ILE:HD12	1.85	0.58
1:A:434:LEU:HD12	1:A:462:TRP:HZ2	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:845:ARG:HH12	1:B:1077:ARG:HG2	1.68	0.58
1:B:509:GLN:HE21	1:B:511:LYS:H	1.51	0.58
1:D:509:GLN:HE21	1:D:511:LYS:H	1.51	0.58
1:A:511:LYS:HZ2	1:A:621:PRO:HD2	1.68	0.58
1:C:1139:GLN:HA	1:C:1142:GLN:HB2	1.86	0.58
1:D:1139:GLN:HA	1:D:1142:GLN:HB2	1.86	0.58
1:D:449:HIS:CE1	1:D:453:ASP:HB2	2.38	0.58
1:A:1139:GLN:HA	1:A:1142:GLN:HB2	1.86	0.58
1:B:1139:GLN:HA	1:B:1142:GLN:HB2	1.86	0.58
1:B:125:ASP:O	1:B:255:HIS:N	2.34	0.57
1:A:125:ASP:O	1:A:255:HIS:N	2.34	0.57
1:D:952:LYS:HZ2	1:D:982:ILE:HG23	1.69	0.57
1:C:1063:TRP:HE3	1:C:1064:LYS:HD2	1.69	0.57
1:A:509:GLN:HE21	1:A:511:LYS:H	1.51	0.57
1:D:1458:ASN:ND2	1:D:1464:LEU:O	2.38	0.57
1:C:846:GLN:NE2	1:C:1073:GLU:OE2	2.38	0.57
1:B:952:LYS:HZ2	1:B:982:ILE:HG23	1.70	0.57
1:C:137:GLN:HE21	1:C:138:LYS:NZ	2.02	0.57
1:C:511:LYS:HZ2	1:C:621:PRO:HD2	1.70	0.57
1:A:1063:TRP:HE3	1:A:1064:LYS:HD2	1.70	0.57
1:C:143:VAL:HG21	1:C:157:LEU:HD11	1.87	0.57
1:D:137:GLN:HE21	1:D:138:LYS:NZ	2.02	0.57
1:A:1458:ASN:ND2	1:A:1464:LEU:O	2.38	0.56
1:A:137:GLN:HE21	1:A:138:LYS:NZ	2.02	0.56
1:A:143:VAL:HG21	1:A:157:LEU:HD11	1.87	0.56
1:A:342:ASN:O	1:A:346:ASN:ND2	2.39	0.56
1:A:952:LYS:HZ2	1:A:982:ILE:HG23	1.71	0.56
1:B:137:GLN:HE21	1:B:138:LYS:NZ	2.02	0.56
1:D:846:GLN:NE2	1:D:1073:GLU:OE2	2.38	0.56
1:D:1255:PHE:HD2	1:D:1332:GLY:HA2	1.70	0.56
1:B:143:VAL:HG21	1:B:157:LEU:HD11	1.87	0.56
1:B:846:GLN:NE2	1:B:1073:GLU:OE2	2.38	0.56
1:C:1255:PHE:HD2	1:C:1332:GLY:HA2	1.70	0.56
1:B:342:ASN:O	1:B:346:ASN:ND2	2.39	0.56
1:B:1458:ASN:ND2	1:B:1464:LEU:O	2.38	0.56
1:C:342:ASN:O	1:C:346:ASN:ND2	2.39	0.56
1:A:846:GLN:NE2	1:A:1073:GLU:OE2	2.38	0.56
1:B:74:TYR:OH	1:B:125:ASP:OD1	2.24	0.56
1:C:952:LYS:HZ2	1:C:982:ILE:HG23	1.71	0.56
1:C:1458:ASN:ND2	1:C:1464:LEU:O	2.38	0.56
1:B:1063:TRP:HE3	1:B:1064:LYS:HD2	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:342:ASN:O	1:D:346:ASN:ND2	2.39	0.56
1:D:700:ARG:HE	1:D:1121:LEU:HD23	1.71	0.56
1:B:380:GLN:HG3	1:B:381:GLN:HE21	1.71	0.55
1:B:1239:HIS:O	1:B:1243:ARG:NE	2.39	0.55
1:D:143:VAL:HG21	1:D:157:LEU:HD11	1.87	0.55
1:D:1063:TRP:HE3	1:D:1064:LYS:HD2	1.69	0.55
1:C:380:GLN:HG3	1:C:381:GLN:HE21	1.71	0.55
1:B:1379:LEU:HD23	1:B:1381:LEU:H	1.70	0.55
1:C:1379:LEU:HD23	1:C:1381:LEU:H	1.70	0.55
1:A:1239:HIS:O	1:A:1243:ARG:NE	2.39	0.55
1:D:1392:ARG:HB2	1:D:1398:LEU:HD23	1.88	0.55
1:A:74:TYR:OH	1:A:125:ASP:OD1	2.24	0.55
1:B:1255:PHE:HD2	1:B:1332:GLY:HA2	1.70	0.55
1:C:700:ARG:HE	1:C:1121:LEU:HD23	1.71	0.55
1:D:1314:HIS:HB3	1:D:1327:PRO:HG2	1.89	0.55
1:A:1379:LEU:HD23	1:A:1381:LEU:H	1.70	0.55
1:D:1379:LEU:HD23	1:D:1381:LEU:H	1.70	0.55
1:A:700:ARG:HE	1:A:1121:LEU:HD23	1.71	0.55
1:B:700:ARG:HE	1:B:1121:LEU:HD23	1.71	0.55
1:C:1314:HIS:HB3	1:C:1327:PRO:HG2	1.89	0.55
1:A:1392:ARG:HB2	1:A:1398:LEU:HD23	1.88	0.55
1:B:1396:GLU:HB3	1:B:1400:ARG:HD2	1.89	0.55
1:C:444:GLN:O	1:C:451:ASN:ND2	2.40	0.55
1:D:241:VAL:HA	1:D:285:ILE:HB	1.89	0.55
1:B:1400:ARG:HA	1:B:1403:LYS:HB2	1.89	0.55
1:C:74:TYR:OH	1:C:125:ASP:OD1	2.24	0.55
1:A:1314:HIS:HB3	1:A:1327:PRO:HG2	1.89	0.54
1:B:511:LYS:HZ2	1:B:621:PRO:HD2	1.71	0.54
1:C:241:VAL:HA	1:C:285:ILE:HB	1.89	0.54
1:D:969:GLY:HA2	1:D:973:HIS:HD2	1.71	0.54
1:C:125:ASP:O	1:C:255:HIS:N	2.34	0.54
1:C:503:PHE:HA	1:C:506:ASN:HD22	1.72	0.54
1:B:503:PHE:HA	1:B:506:ASN:HD22	1.72	0.54
1:C:715:THR:HG22	1:C:719:GLN:HB3	1.89	0.54
1:C:969:GLY:HA2	1:C:973:HIS:HD2	1.71	0.54
1:A:514:VAL:HB	1:A:621:PRO:HB3	1.90	0.54
1:A:1255:PHE:HD2	1:A:1332:GLY:HA2	1.70	0.54
1:B:969:GLY:HA2	1:B:973:HIS:HD2	1.71	0.54
1:B:1060:ASP:OD2	1:B:1064:LYS:NZ	2.41	0.54
1:B:1063:TRP:CE3	1:B:1064:LYS:HD2	2.42	0.54
1:B:1314:HIS:HB3	1:B:1327:PRO:HG2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1392:ARG:HB2	1:C:1398:LEU:HD23	1.88	0.54
1:D:380:GLN:HG3	1:D:381:GLN:HE21	1.71	0.54
1:A:241:VAL:HA	1:A:285:ILE:HB	1.89	0.54
1:A:969:GLY:HA2	1:A:973:HIS:HD2	1.71	0.54
1:A:1400:ARG:HA	1:A:1403:LYS:HB2	1.89	0.54
1:D:1239:HIS:O	1:D:1243:ARG:NE	2.39	0.54
1:A:715:THR:HG22	1:A:719:GLN:HB3	1.89	0.54
1:B:241:VAL:HA	1:B:285:ILE:HB	1.89	0.54
1:B:449:HIS:CE1	1:B:483:ASP:HB2	2.43	0.54
1:C:1400:ARG:HA	1:C:1403:LYS:HB2	1.89	0.54
1:D:444:GLN:O	1:D:451:ASN:ND2	2.40	0.54
1:D:514:VAL:HB	1:D:621:PRO:HB3	1.90	0.54
1:A:380:GLN:HG3	1:A:381:GLN:HE21	1.71	0.54
1:D:125:ASP:O	1:D:255:HIS:N	2.34	0.54
1:D:1396:GLU:HB3	1:D:1400:ARG:HD2	1.89	0.54
1:A:444:GLN:O	1:A:451:ASN:ND2	2.40	0.54
1:A:1396:GLU:HB3	1:A:1400:ARG:HD2	1.89	0.54
1:B:168:ASN:OD1	1:B:314:LYS:NZ	2.38	0.54
1:B:444:GLN:O	1:B:451:ASN:ND2	2.40	0.54
1:B:1392:ARG:HB2	1:B:1398:LEU:HD23	1.88	0.54
1:C:244:TRP:HB3	1:C:288:ASP:HA	1.90	0.54
1:C:1396:GLU:HB3	1:C:1400:ARG:HD2	1.89	0.54
1:D:1063:TRP:CE3	1:D:1064:LYS:HD2	2.42	0.54
1:A:503:PHE:HA	1:A:506:ASN:HD22	1.72	0.54
1:D:169:LEU:HD22	1:D:434:LEU:HD13	1.90	0.54
1:D:244:TRP:HB3	1:D:288:ASP:HA	1.90	0.54
1:D:1060:ASP:OD2	1:D:1064:LYS:NZ	2.41	0.54
1:A:414:GLN:HG3	1:A:443:SER:HB3	1.91	0.53
1:B:414:GLN:HG3	1:B:443:SER:HB3	1.91	0.53
1:C:1257:VAL:HG13	1:C:1261:LYS:HG3	1.90	0.53
1:C:1239:HIS:O	1:C:1243:ARG:NE	2.39	0.53
1:D:503:PHE:HA	1:D:506:ASN:HD22	1.72	0.53
1:D:715:THR:HG22	1:D:719:GLN:HB3	1.89	0.53
1:D:1257:VAL:HG13	1:D:1261:LYS:HG3	1.90	0.53
1:A:1060:ASP:OD2	1:A:1064:LYS:NZ	2.41	0.53
1:A:1063:TRP:CE3	1:A:1064:LYS:HD2	2.42	0.53
1:B:130:ILE:HG23	1:B:263:GLU:HA	1.90	0.53
1:C:1060:ASP:OD2	1:C:1064:LYS:NZ	2.41	0.53
1:D:168:ASN:OD1	1:D:314:LYS:NZ	2.38	0.53
1:D:449:HIS:CE1	1:D:483:ASP:HB2	2.43	0.53
1:A:343:ALA:HB1	1:A:348:THR:HB	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:449:HIS:CE1	1:A:483:ASP:HB2	2.43	0.53
1:A:1257:VAL:HG13	1:A:1261:LYS:HG3	1.90	0.53
1:A:1264:TRP:NE1	1:A:1326:ASN:O	2.42	0.53
1:B:1257:VAL:HG13	1:B:1261:LYS:HG3	1.90	0.53
1:B:1264:TRP:NE1	1:B:1326:ASN:O	2.42	0.53
1:D:414:GLN:HG3	1:D:443:SER:HB3	1.91	0.53
1:D:1400:ARG:HA	1:D:1403:LYS:HB2	1.89	0.53
1:A:379:ILE:HG23	1:A:382:LYS:HD2	1.90	0.53
1:C:169:LEU:HD22	1:C:434:LEU:HD13	1.89	0.53
1:C:449:HIS:CE1	1:C:483:ASP:HB2	2.43	0.53
1:B:169:LEU:HD22	1:B:434:LEU:HD13	1.89	0.53
1:B:1358:ASN:OD1	1:B:1361:GLY:N	2.42	0.53
1:C:414:GLN:HG3	1:C:443:SER:HB3	1.91	0.53
1:C:514:VAL:HB	1:C:621:PRO:HB3	1.90	0.53
1:C:1063:TRP:CE3	1:C:1064:LYS:HD2	2.42	0.53
1:C:1264:TRP:NE1	1:C:1326:ASN:O	2.42	0.53
1:C:400:VAL:HG11	1:C:1269:LEU:HD13	1.90	0.53
1:D:400:VAL:HG11	1:D:1269:LEU:HD13	1.90	0.53
1:A:605:ARG:HE	1:A:613:GLY:HA3	1.74	0.53
1:D:74:TYR:OH	1:D:125:ASP:OD1	2.24	0.53
1:D:1264:TRP:NE1	1:D:1326:ASN:O	2.42	0.53
1:B:715:THR:HG22	1:B:719:GLN:HB3	1.89	0.53
1:C:214:VAL:HG13	1:C:330:LEU:HD12	1.91	0.53
1:C:343:ALA:HB1	1:C:348:THR:HB	1.91	0.53
1:D:379:ILE:HG23	1:D:382:LYS:HD2	1.90	0.53
1:A:244:TRP:HB3	1:A:288:ASP:HA	1.90	0.53
1:B:796:VAL:O	1:B:800:HIS:N	2.37	0.53
1:C:130:ILE:HG23	1:C:263:GLU:HA	1.90	0.53
1:C:379:ILE:HG23	1:C:382:LYS:HD2	1.90	0.53
1:B:379:ILE:HG23	1:B:382:LYS:HD2	1.90	0.52
1:D:214:VAL:HG13	1:D:330:LEU:HD12	1.91	0.52
1:B:244:TRP:HB3	1:B:288:ASP:HA	1.90	0.52
1:C:605:ARG:HE	1:C:613:GLY:HA3	1.74	0.52
1:A:169:LEU:HD22	1:A:434:LEU:HD13	1.89	0.52
1:D:681:GLU:HA	1:D:684:HIS:HB3	1.91	0.52
1:A:324:PRO:HB2	1:A:437:LEU:HD13	1.91	0.52
1:A:400:VAL:HG11	1:A:1269:LEU:HD13	1.90	0.52
1:B:324:PRO:HB2	1:B:437:LEU:HD13	1.91	0.52
1:B:605:ARG:HE	1:B:613:GLY:HA3	1.74	0.52
1:C:324:PRO:HB2	1:C:437:LEU:HD13	1.91	0.52
1:A:681:GLU:HA	1:A:684:HIS:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:130:ILE:HG23	1:D:263:GLU:HA	1.91	0.52
1:D:343:ALA:HB1	1:D:348:THR:HB	1.91	0.52
1:D:605:ARG:HE	1:D:613:GLY:HA3	1.74	0.52
1:A:538:LYS:O	1:A:542:GLU:N	2.43	0.52
1:A:1384:HIS:HA	1:A:1483:PRO:HG2	1.92	0.52
1:B:214:VAL:HG13	1:B:330:LEU:HD12	1.91	0.52
1:B:514:VAL:HB	1:B:621:PRO:HB3	1.90	0.52
1:B:538:LYS:O	1:B:542:GLU:N	2.43	0.52
1:A:130:ILE:HG23	1:A:263:GLU:HA	1.90	0.52
1:A:1358:ASN:OD1	1:A:1361:GLY:N	2.42	0.52
1:D:324:PRO:HB2	1:D:437:LEU:HD13	1.91	0.52
1:D:538:LYS:O	1:D:542:GLU:N	2.43	0.52
1:A:244:TRP:HA	1:A:247:VAL:HG23	1.92	0.52
1:B:244:TRP:HA	1:B:247:VAL:HG23	1.92	0.52
1:B:400:VAL:HG11	1:B:1269:LEU:HD13	1.91	0.52
1:A:1131:ASN:O	1:A:1135:ASN:ND2	2.43	0.51
1:A:1341:CYS:HB3	1:A:1344:PRO:HG3	1.92	0.51
1:B:1131:ASN:O	1:B:1135:ASN:ND2	2.43	0.51
1:C:244:TRP:HA	1:C:247:VAL:HG23	1.92	0.51
1:C:1131:ASN:O	1:C:1135:ASN:ND2	2.43	0.51
1:D:244:TRP:HA	1:D:247:VAL:HG23	1.92	0.51
1:D:917:SER:HB3	1:D:920:LEU:HG	1.93	0.51
1:A:1334:ARG:O	1:A:1435:THR:OG1	2.29	0.51
1:B:1341:CYS:HB3	1:B:1344:PRO:HG3	1.93	0.51
1:C:538:LYS:O	1:C:542:GLU:N	2.43	0.51
1:A:917:SER:HB3	1:A:920:LEU:HG	1.93	0.51
1:D:1131:ASN:O	1:D:1135:ASN:ND2	2.43	0.51
1:A:214:VAL:HG13	1:A:330:LEU:HD12	1.91	0.51
1:A:331:GLU:HA	1:A:357:GLY:HA2	1.93	0.51
1:A:726:ASP:HB3	1:A:729:PHE:HB3	1.92	0.51
1:A:212:THR:HB	1:A:275:THR:HG21	1.93	0.51
1:D:1341:CYS:HB3	1:D:1344:PRO:HG3	1.92	0.51
1:A:291:THR:OG1	1:A:294:GLN:OE1	2.29	0.51
1:B:331:GLU:HA	1:B:357:GLY:HA2	1.93	0.51
1:D:331:GLU:HA	1:D:357:GLY:HA2	1.93	0.51
1:B:343:ALA:HB1	1:B:348:THR:HB	1.91	0.51
1:B:726:ASP:HB3	1:B:729:PHE:HB3	1.92	0.51
1:C:291:THR:OG1	1:C:294:GLN:OE1	2.29	0.51
1:C:1155:VAL:HA	1:C:1158:MET:HG2	1.93	0.51
1:A:822:GLN:H	1:A:886:ARG:HH22	1.59	0.51
1:D:1334:ARG:O	1:D:1435:THR:OG1	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1384:HIS:HA	1:D:1483:PRO:HG2	1.92	0.51
1:B:291:THR:OG1	1:B:294:GLN:OE1	2.29	0.51
1:B:681:GLU:HA	1:B:684:HIS:HB3	1.91	0.51
1:B:1384:HIS:HA	1:B:1483:PRO:HG2	1.92	0.51
1:C:331:GLU:HA	1:C:357:GLY:HA2	1.93	0.51
1:C:917:SER:HB3	1:C:920:LEU:HG	1.93	0.51
1:C:1384:HIS:HA	1:C:1483:PRO:HG2	1.92	0.51
1:C:1492:LEU:HB3	1:C:1503:TYR:HE2	1.76	0.51
1:D:212:THR:HB	1:D:275:THR:HG21	1.93	0.51
1:D:1155:VAL:HA	1:D:1158:MET:HG2	1.93	0.51
1:A:531:LEU:HD22	1:A:666:GLU:HB3	1.93	0.50
1:A:796:VAL:O	1:A:800:HIS:N	2.37	0.50
1:A:1096:ARG:HH22	1:A:1102:PRO:HG3	1.77	0.50
1:B:1334:ARG:O	1:B:1435:THR:OG1	2.29	0.50
1:A:1239:HIS:HB3	1:A:1242:ALA:HB3	1.93	0.50
1:B:822:GLN:H	1:B:886:ARG:HH22	1.59	0.50
1:C:1341:CYS:HB3	1:C:1344:PRO:HG3	1.92	0.50
1:C:1358:ASN:OD1	1:C:1361:GLY:N	2.42	0.50
1:D:158:MET:HB3	1:D:164:LEU:HD12	1.93	0.50
1:B:917:SER:HB3	1:B:920:LEU:HG	1.93	0.50
1:C:531:LEU:HD22	1:C:666:GLU:HB3	1.94	0.50
1:C:1336:ARG:H	1:C:1435:THR:HG21	1.76	0.50
1:D:1358:ASN:OD1	1:D:1361:GLY:N	2.42	0.50
1:A:414:GLN:HA	1:A:439:LYS:HE2	1.93	0.50
1:B:531:LEU:HD22	1:B:666:GLU:HB3	1.94	0.50
1:C:681:GLU:HA	1:C:684:HIS:HB3	1.92	0.50
1:C:726:ASP:HB3	1:C:729:PHE:HB3	1.92	0.50
1:C:1334:ARG:O	1:C:1435:THR:OG1	2.29	0.50
1:D:291:THR:OG1	1:D:294:GLN:OE1	2.29	0.50
1:D:726:ASP:HB3	1:D:729:PHE:HB3	1.92	0.50
1:D:1096:ARG:HH22	1:D:1102:PRO:HG3	1.77	0.50
1:C:414:GLN:HA	1:C:439:LYS:HE2	1.93	0.50
1:D:822:GLN:H	1:D:886:ARG:HH22	1.59	0.50
1:A:1484:LEU:HD23	1:A:1489:LYS:HB2	1.93	0.50
1:B:158:MET:HB3	1:B:164:LEU:HD12	1.93	0.50
1:B:414:GLN:HA	1:B:439:LYS:HE2	1.93	0.50
1:B:1492:LEU:HB3	1:B:1503:TYR:HE2	1.76	0.50
1:C:1261:LYS:HE3	1:C:1269:LEU:HB2	1.94	0.50
1:B:1239:HIS:HB3	1:B:1242:ALA:HB3	1.93	0.50
1:D:414:GLN:HA	1:D:439:LYS:HE2	1.93	0.50
1:D:531:LEU:HD22	1:D:666:GLU:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:667:GLU:HB2	1:D:672:SER:HB3	1.94	0.50
1:D:1484:LEU:HD23	1:D:1489:LYS:HB2	1.93	0.50
1:D:1492:LEU:HB3	1:D:1503:TYR:HE2	1.76	0.50
1:B:1096:ARG:HH22	1:B:1102:PRO:HG3	1.77	0.50
1:B:1336:ARG:H	1:B:1435:THR:HG21	1.76	0.50
1:B:1155:VAL:HA	1:B:1158:MET:HG2	1.93	0.49
1:C:158:MET:HB3	1:C:164:LEU:HD12	1.93	0.49
1:D:796:VAL:O	1:D:800:HIS:N	2.37	0.49
1:A:158:MET:HB3	1:A:164:LEU:HD12	1.93	0.49
1:C:466:ASP:OD1	1:C:466:ASP:N	2.45	0.49
1:C:822:GLN:H	1:C:886:ARG:HH22	1.59	0.49
1:C:1096:ARG:HH22	1:C:1102:PRO:HG3	1.77	0.49
1:C:1239:HIS:HB3	1:C:1242:ALA:HB3	1.93	0.49
1:B:466:ASP:N	1:B:466:ASP:OD1	2.45	0.49
1:B:684:HIS:HA	1:B:687:ILE:HD12	1.95	0.49
1:D:375:THR:O	1:D:377:SER:N	2.46	0.49
1:A:375:THR:O	1:A:377:SER:N	2.46	0.49
1:C:212:THR:HB	1:C:275:THR:HG21	1.93	0.49
1:A:137:GLN:NE2	1:A:138:LYS:NZ	2.60	0.49
1:A:684:HIS:HA	1:A:687:ILE:HD12	1.95	0.49
1:A:1155:VAL:HA	1:A:1158:MET:HG2	1.93	0.49
1:B:137:GLN:NE2	1:B:138:LYS:NZ	2.60	0.49
1:B:1261:LYS:HE3	1:B:1269:LEU:HB2	1.94	0.49
1:C:375:THR:O	1:C:377:SER:N	2.46	0.49
1:A:667:GLU:HB2	1:A:672:SER:HB3	1.94	0.49
1:B:667:GLU:HB2	1:B:672:SER:HB3	1.94	0.49
1:B:1118:GLU:HB3	1:B:1122:LEU:HD23	1.94	0.49
1:D:137:GLN:NE2	1:D:138:LYS:NZ	2.60	0.49
1:D:684:HIS:HA	1:D:687:ILE:HD12	1.95	0.49
1:D:1261:LYS:HE3	1:D:1269:LEU:HB2	1.93	0.49
1:B:69:LYS:HD2	1:B:258:GLY:HA3	1.95	0.49
1:B:931:MET:HA	1:B:934:VAL:HB	1.95	0.49
1:B:1484:LEU:HD23	1:B:1489:LYS:HB2	1.93	0.49
1:C:684:HIS:HA	1:C:687:ILE:HD12	1.95	0.49
1:D:1118:GLU:HB3	1:D:1122:LEU:HD23	1.94	0.49
1:D:1239:HIS:HB3	1:D:1242:ALA:HB3	1.93	0.49
1:A:931:MET:HA	1:A:934:VAL:HB	1.95	0.49
1:C:137:GLN:NE2	1:C:138:LYS:NZ	2.60	0.49
1:C:1262:VAL:HG23	1:C:1263:PRO:HD3	1.95	0.49
1:A:1261:LYS:HE3	1:A:1269:LEU:HB2	1.93	0.49
1:B:212:THR:HB	1:B:275:THR:HG21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:288:ASP:OD1	1:B:288:ASP:N	2.45	0.49
1:D:1336:ARG:H	1:D:1435:THR:HG21	1.76	0.49
1:A:466:ASP:OD1	1:A:466:ASP:N	2.45	0.48
1:B:344:THR:HB	1:B:415:LEU:HD13	1.95	0.48
1:D:1054:GLN:HB2	1:D:1058:HIS:HB2	1.95	0.48
1:D:1262:VAL:HG23	1:D:1263:PRO:HD3	1.95	0.48
1:A:1492:LEU:HB3	1:A:1503:TYR:HE2	1.76	0.48
1:C:667:GLU:HB2	1:C:672:SER:HB3	1.94	0.48
1:C:931:MET:HA	1:C:934:VAL:HB	1.95	0.48
1:A:69:LYS:HD2	1:A:258:GLY:HA3	1.95	0.48
1:C:1484:LEU:HD23	1:C:1489:LYS:HB2	1.93	0.48
1:D:344:THR:HB	1:D:415:LEU:HD13	1.95	0.48
1:D:466:ASP:N	1:D:466:ASP:OD1	2.45	0.48
1:D:931:MET:HA	1:D:934:VAL:HB	1.95	0.48
1:A:1336:ARG:H	1:A:1435:THR:HG21	1.76	0.48
1:A:484:LEU:O	1:A:488:MET:N	2.40	0.48
1:B:433:ILE:HG23	1:B:434:LEU:HG	1.96	0.48
1:B:484:LEU:O	1:B:488:MET:N	2.40	0.48
1:C:344:THR:HB	1:C:415:LEU:HD13	1.95	0.48
1:C:1054:GLN:HB2	1:C:1058:HIS:HB2	1.96	0.48
1:A:1118:GLU:HB3	1:A:1122:LEU:HD23	1.94	0.48
1:B:1351:MET:HB2	1:B:1446:SER:HA	1.96	0.48
1:C:69:LYS:HD2	1:C:258:GLY:HA3	1.95	0.48
1:A:135:LEU:HD21	1:A:279:SER:HA	1.96	0.48
1:A:168:ASN:OD1	1:A:314:LYS:NZ	2.38	0.48
1:A:344:THR:HB	1:A:415:LEU:HD13	1.95	0.48
1:A:977:THR:HB	1:A:982:ILE:HD13	1.96	0.48
1:A:1054:GLN:HB2	1:A:1058:HIS:HB2	1.96	0.48
1:B:137:GLN:NE2	1:B:138:LYS:HZ2	2.10	0.48
1:C:1118:GLU:HB3	1:C:1122:LEU:HD23	1.94	0.48
1:C:1243:ARG:NH1	1:C:1259:ASN:OD1	2.44	0.48
1:A:1262:VAL:HG23	1:A:1263:PRO:HD3	1.95	0.48
1:A:433:ILE:HG23	1:A:434:LEU:HG	1.96	0.48
1:C:796:VAL:O	1:C:800:HIS:N	2.37	0.48
1:D:137:GLN:NE2	1:D:138:LYS:HZ2	2.12	0.48
1:B:1054:GLN:HB2	1:B:1058:HIS:HB2	1.96	0.47
1:B:1143:ARG:HG2	1:B:1146:GLN:H	1.79	0.47
1:B:1262:VAL:HG23	1:B:1263:PRO:HD3	1.95	0.47
1:B:1310:ARG:NH1	1:B:1342:PHE:O	2.47	0.47
1:B:1403:LYS:HA	1:B:1406:LEU:HB2	1.96	0.47
1:B:363:ILE:HG23	1:B:406:ILE:HG23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:977:THR:HB	1:B:982:ILE:HD13	1.96	0.47
1:D:1351:MET:HB2	1:D:1446:SER:HA	1.96	0.47
1:C:168:ASN:OD1	1:C:314:LYS:NZ	2.38	0.47
1:C:1236:ASP:O	1:C:1243:ARG:NH2	2.46	0.47
1:D:69:LYS:HD2	1:D:258:GLY:HA3	1.95	0.47
1:D:135:LEU:HD21	1:D:279:SER:HA	1.96	0.47
1:A:1403:LYS:HA	1:A:1406:LEU:HB2	1.97	0.47
1:B:375:THR:O	1:B:377:SER:N	2.46	0.47
1:D:1310:ARG:NH1	1:D:1342:PHE:O	2.47	0.47
1:A:558:MET:HB3	1:A:585:ARG:HG2	1.96	0.47
1:A:1310:ARG:NH1	1:A:1342:PHE:O	2.47	0.47
1:A:1351:MET:HB2	1:A:1446:SER:HA	1.96	0.47
1:B:135:LEU:HD21	1:B:279:SER:HA	1.96	0.47
1:B:170:LEU:HB2	1:B:325:ILE:HG13	1.97	0.47
1:C:135:LEU:HD21	1:C:279:SER:HA	1.96	0.47
1:C:433:ILE:HG23	1:C:434:LEU:HG	1.96	0.47
1:C:558:MET:HB3	1:C:585:ARG:HG2	1.96	0.47
1:C:1143:ARG:HG2	1:C:1146:GLN:H	1.79	0.47
1:C:1351:MET:HB2	1:C:1446:SER:HA	1.96	0.47
1:D:170:LEU:HB2	1:D:325:ILE:HG13	1.96	0.47
1:D:433:ILE:HG23	1:D:434:LEU:HG	1.96	0.47
1:A:170:LEU:HB2	1:A:325:ILE:HG13	1.97	0.47
1:B:927:VAL:HA	1:B:930:MET:HB2	1.97	0.47
1:C:977:THR:HB	1:C:982:ILE:HD13	1.96	0.47
1:C:1311:ARG:O	1:C:1346:HIS:ND1	2.48	0.47
1:B:558:MET:HB3	1:B:585:ARG:HG2	1.96	0.47
1:C:802:ASN:OD1	1:C:1077:ARG:NH1	2.48	0.47
1:D:558:MET:HB3	1:D:585:ARG:HG2	1.96	0.47
1:A:623:ARG:HA	1:A:626:LEU:HD12	1.97	0.47
1:A:1053:GLN:NE2	1:B:1057:GLU:OE2	2.48	0.47
1:C:363:ILE:HG23	1:C:406:ILE:HG23	1.97	0.47
1:D:977:THR:HB	1:D:982:ILE:HD13	1.96	0.47
1:A:802:ASN:OD1	1:A:1077:ARG:NH1	2.48	0.46
1:B:623:ARG:HA	1:B:626:LEU:HD12	1.97	0.46
1:B:802:ASN:OD1	1:B:1077:ARG:NH1	2.48	0.46
1:C:1310:ARG:NH1	1:C:1342:PHE:O	2.47	0.46
1:A:1057:GLU:OE2	1:D:1053:GLN:NE2	2.48	0.46
1:B:645:SER:O	1:B:1129:LYS:NZ	2.40	0.46
1:C:623:ARG:HA	1:C:626:LEU:HD12	1.97	0.46
1:D:623:ARG:HA	1:D:626:LEU:HD12	1.97	0.46
1:C:1053:GLN:NE2	1:D:1057:GLU:OE2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1403:LYS:HA	1:C:1406:LEU:HB2	1.97	0.46
1:C:170:LEU:HB2	1:C:325:ILE:HG13	1.96	0.46
1:C:634:ARG:HB3	1:C:637:LEU:HD13	1.97	0.46
1:D:734:GLY:O	1:D:738:PHE:N	2.49	0.46
1:D:802:ASN:OD1	1:D:1077:ARG:NH1	2.48	0.46
1:D:1143:ARG:HG2	1:D:1146:GLN:H	1.79	0.46
1:A:332:GLY:HA2	1:A:333:GLY:HA3	1.72	0.46
1:B:917:SER:H	1:B:920:LEU:HD12	1.80	0.46
1:C:917:SER:H	1:C:920:LEU:HD12	1.80	0.46
1:C:927:VAL:HA	1:C:930:MET:HB2	1.97	0.46
1:A:137:GLN:NE2	1:A:138:LYS:HZ2	2.13	0.46
1:A:927:VAL:HA	1:A:930:MET:HB2	1.97	0.46
1:D:173:VAL:O	1:D:302:ARG:NH2	2.46	0.46
1:D:934:VAL:HG12	1:D:938:LEU:HD12	1.98	0.46
1:B:1243:ARG:NH1	1:B:1259:ASN:OD1	2.44	0.46
1:D:484:LEU:O	1:D:488:MET:N	2.40	0.46
1:A:1143:ARG:HG2	1:A:1146:GLN:H	1.79	0.46
1:C:274:LEU:HD21	1:C:293:GLY:HA2	1.98	0.46
1:C:734:GLY:O	1:C:738:PHE:N	2.49	0.46
1:D:363:ILE:HG23	1:D:406:ILE:HG23	1.97	0.46
1:D:1236:ASP:O	1:D:1243:ARG:NH2	2.46	0.46
1:B:634:ARG:HB3	1:B:637:LEU:HD13	1.97	0.46
1:B:934:VAL:HG12	1:B:938:LEU:HD12	1.98	0.46
1:D:1403:LYS:HA	1:D:1406:LEU:HB2	1.96	0.46
1:A:734:GLY:O	1:A:738:PHE:N	2.49	0.45
1:B:557:GLN:HB2	1:B:560:HIS:HD2	1.81	0.45
1:C:1024:LEU:HD21	1:D:901:LEU:HD11	1.98	0.45
1:A:198:ALA:HA	1:A:202:GLY:H	1.81	0.45
1:C:332:GLY:HA3	1:C:359:VAL:HB	1.99	0.45
1:C:939:PHE:HA	1:C:942:ALA:HB3	1.98	0.45
1:D:332:GLY:HA2	1:D:333:GLY:HA3	1.72	0.45
1:A:557:GLN:HB2	1:A:560:HIS:HD2	1.81	0.45
1:A:789:ARG:HA	1:A:792:PHE:HD2	1.82	0.45
1:C:291:THR:HG1	1:C:292:HIS:H	1.65	0.45
1:D:274:LEU:HD21	1:D:293:GLY:HA2	1.98	0.45
1:D:927:VAL:HA	1:D:930:MET:HB2	1.97	0.45
1:D:1330:ARG:HG3	1:D:1436:ASP:HB3	1.98	0.45
1:A:634:ARG:HB3	1:A:637:LEU:HD13	1.97	0.45
1:A:917:SER:H	1:A:920:LEU:HD12	1.80	0.45
1:B:734:GLY:O	1:B:738:PHE:N	2.49	0.45
1:B:1435:THR:HG23	1:B:1437:ASN:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:184:PRO:HA	1:D:187:LYS:HD2	1.99	0.45
1:D:332:GLY:HA3	1:D:359:VAL:HB	1.99	0.45
1:D:917:SER:H	1:D:920:LEU:HD12	1.80	0.45
1:A:332:GLY:HA3	1:A:359:VAL:HB	1.99	0.45
1:A:363:ILE:HG23	1:A:406:ILE:HG23	1.96	0.45
1:A:934:VAL:HG12	1:A:938:LEU:HD12	1.98	0.45
1:A:1236:ASP:O	1:A:1243:ARG:NH2	2.46	0.45
1:A:1435:THR:HG23	1:A:1437:ASN:H	1.82	0.45
1:B:184:PRO:HA	1:B:187:LYS:HD2	1.99	0.45
1:B:332:GLY:HA3	1:B:359:VAL:HB	1.99	0.45
1:C:80:LYS:HD3	1:C:96:GLU:HG3	1.99	0.45
1:C:198:ALA:HA	1:C:202:GLY:H	1.81	0.45
1:C:1435:THR:HG23	1:C:1437:ASN:H	1.82	0.45
1:A:438:LEU:O	1:A:442:ARG:NH1	2.50	0.45
1:A:901:LEU:HD11	1:D:1024:LEU:HD21	1.97	0.45
1:A:939:PHE:HA	1:A:942:ALA:HB3	1.98	0.45
1:B:939:PHE:HA	1:B:942:ALA:HB3	1.98	0.45
1:C:438:LEU:O	1:C:442:ARG:NH1	2.50	0.45
1:D:80:LYS:HD3	1:D:96:GLU:HG3	1.99	0.45
1:D:634:ARG:HB3	1:D:637:LEU:HD13	1.97	0.45
1:B:526:LEU:HB3	1:B:533:HIS:HB2	1.99	0.45
1:B:1311:ARG:O	1:B:1346:HIS:ND1	2.48	0.45
1:C:509:GLN:HG3	1:C:511:LYS:HB2	1.99	0.45
1:D:198:ALA:HA	1:D:202:GLY:H	1.81	0.45
1:D:946:VAL:O	1:D:975:TYR:OH	2.29	0.45
1:A:946:VAL:O	1:A:975:TYR:OH	2.29	0.45
1:C:184:PRO:HA	1:C:187:LYS:HD2	1.99	0.45
1:A:1243:ARG:NH1	1:A:1259:ASN:OD1	2.44	0.45
1:A:1278:ALA:HB2	1:A:1283:ALA:HA	1.99	0.45
1:B:278:ASP:HB3	1:B:281:HIS:CD2	2.52	0.45
1:C:557:GLN:HB2	1:C:560:HIS:HD2	1.81	0.45
1:D:939:PHE:HA	1:D:942:ALA:HB3	1.98	0.45
1:A:1311:ARG:O	1:A:1346:HIS:ND1	2.48	0.44
1:C:789:ARG:HA	1:C:792:PHE:HD2	1.82	0.44
1:C:1293:LEU:HG	1:C:1295:PRO:HD2	2.00	0.44
1:D:698:GLU:O	1:D:702:GLN:N	2.49	0.44
1:A:1345:ASN:HB2	1:A:1441:GLU:H	1.83	0.44
1:C:1330:ARG:HG3	1:C:1436:ASP:HB3	1.98	0.44
1:D:438:LEU:O	1:D:442:ARG:NH1	2.50	0.44
1:A:278:ASP:HB3	1:A:281:HIS:CD2	2.52	0.44
1:B:274:LEU:HD21	1:B:293:GLY:HA2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1278:ALA:HB2	1:B:1283:ALA:HA	1.99	0.44
1:B:1372:LEU:HG	1:B:1501:ALA:HB2	1.99	0.44
1:C:1345:ASN:HB2	1:C:1441:GLU:H	1.83	0.44
1:D:536:LEU:O	1:D:540:LEU:N	2.46	0.44
1:D:557:GLN:HB2	1:D:560:HIS:HD2	1.81	0.44
1:D:789:ARG:HA	1:D:792:PHE:HD2	1.82	0.44
1:D:1293:LEU:HG	1:D:1295:PRO:HD2	2.00	0.44
1:D:1435:THR:HG23	1:D:1437:ASN:H	1.82	0.44
1:A:74:TYR:HB2	1:A:122:MET:H	1.83	0.44
1:B:74:TYR:HB2	1:B:122:MET:H	1.83	0.44
1:B:1053:GLN:NE2	1:C:1057:GLU:OE2	2.50	0.44
1:B:1345:ASN:HB2	1:B:1441:GLU:H	1.83	0.44
1:C:698:GLU:O	1:C:702:GLN:N	2.49	0.44
1:C:928:LYS:HD2	1:C:928:LYS:HA	1.83	0.44
1:C:932:LYS:HA	1:C:932:LYS:HD2	1.84	0.44
1:C:934:VAL:HG12	1:C:938:LEU:HD12	1.98	0.44
1:D:278:ASP:HB3	1:D:281:HIS:CD2	2.52	0.44
1:D:1278:ALA:HB2	1:D:1283:ALA:HA	1.99	0.44
1:D:1372:LEU:HG	1:D:1501:ALA:HB2	1.99	0.44
1:A:449:HIS:NE2	1:A:483:ASP:HB2	2.33	0.44
1:A:698:GLU:O	1:A:702:GLN:N	2.49	0.44
1:B:198:ALA:HA	1:B:202:GLY:H	1.81	0.44
1:B:789:ARG:HA	1:B:792:PHE:HD2	1.82	0.44
1:C:449:HIS:NE2	1:C:483:ASP:HB2	2.33	0.44
1:C:1160:ASP:OD1	1:C:1160:ASP:N	2.50	0.44
1:D:509:GLN:HG3	1:D:511:LYS:HB2	1.99	0.44
1:A:184:PRO:HA	1:A:187:LYS:HD2	1.99	0.44
1:A:274:LEU:HD21	1:A:293:GLY:HA2	1.98	0.44
1:B:449:HIS:NE2	1:B:483:ASP:HB2	2.33	0.44
1:B:1330:ARG:HG3	1:B:1436:ASP:HB3	1.98	0.44
1:D:1273:PRO:HD2	1:D:1333:LEU:HB2	2.00	0.44
1:A:450:GLU:HA	1:A:453:ASP:HB3	2.00	0.44
1:B:438:LEU:O	1:B:442:ARG:NH1	2.50	0.44
1:C:1411:TRP:NE1	1:C:1414:PHE:O	2.51	0.44
1:D:449:HIS:NE2	1:D:483:ASP:HB2	2.33	0.44
1:A:1273:PRO:HD2	1:A:1333:LEU:HB2	2.00	0.44
1:B:450:GLU:HA	1:B:453:ASP:HB3	2.00	0.44
1:B:1423:GLU:HA	1:B:1445:VAL:HA	2.00	0.44
1:C:450:GLU:HA	1:C:453:ASP:HB3	2.00	0.44
1:D:450:GLU:HA	1:D:453:ASP:HB3	2.00	0.44
1:D:1243:ARG:NH1	1:D:1259:ASN:OD1	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1311:ARG:O	1:D:1346:HIS:ND1	2.48	0.44
1:D:1345:ASN:HB2	1:D:1441:GLU:H	1.83	0.44
1:A:363:ILE:HG12	1:A:406:ILE:HG12	2.00	0.44
1:B:509:GLN:HG3	1:B:511:LYS:HB2	1.99	0.44
1:C:220:GLU:HG3	1:C:223:ARG:HH21	1.83	0.44
1:C:278:ASP:HB3	1:C:281:HIS:CD2	2.52	0.44
1:C:332:GLY:HA2	1:C:333:GLY:HA3	1.72	0.44
1:C:609:LYS:HA	1:C:609:LYS:HD3	1.75	0.44
1:C:1273:PRO:HD2	1:C:1333:LEU:HB2	2.00	0.44
1:D:248:HIS:HB2	1:D:271:GLN:HB2	2.00	0.44
1:D:1041:LEU:HG	1:D:1044:LEU:HD22	2.00	0.44
1:A:1160:ASP:OD1	1:A:1160:ASP:N	2.50	0.43
1:B:609:LYS:HA	1:B:609:LYS:HD3	1.75	0.43
1:B:698:GLU:O	1:B:702:GLN:N	2.49	0.43
1:B:1293:LEU:HG	1:B:1295:PRO:HD2	2.00	0.43
1:A:465:VAL:HG21	1:A:498:GLU:HB2	2.01	0.43
1:A:1330:ARG:HG3	1:A:1436:ASP:HB3	1.98	0.43
1:A:1372:LEU:HG	1:A:1501:ALA:HB2	1.99	0.43
1:B:80:LYS:HD3	1:B:96:GLU:HG3	1.99	0.43
1:B:530:CYS:SG	1:B:531:LEU:N	2.91	0.43
1:B:766:LEU:O	1:B:787:ARG:NH2	2.51	0.43
1:B:1273:PRO:HD2	1:B:1333:LEU:HB2	2.00	0.43
1:C:922:PRO:HG3	1:C:1063:TRP:HB2	1.99	0.43
1:C:1278:ALA:HB2	1:C:1283:ALA:HA	1.99	0.43
1:C:1423:GLU:HA	1:C:1445:VAL:HA	2.00	0.43
1:D:922:PRO:HG3	1:D:1063:TRP:HB2	1.99	0.43
1:A:173:VAL:O	1:A:302:ARG:NH2	2.46	0.43
1:A:431:VAL:HG11	1:A:464:ARG:HH11	1.84	0.43
1:A:1411:TRP:NE1	1:A:1414:PHE:O	2.51	0.43
1:B:363:ILE:HG12	1:B:406:ILE:HG12	2.00	0.43
1:C:526:LEU:HB3	1:C:533:HIS:HB2	1.99	0.43
1:C:766:LEU:O	1:C:787:ARG:NH2	2.51	0.43
1:D:526:LEU:HB3	1:D:533:HIS:HB2	1.99	0.43
1:D:766:LEU:O	1:D:787:ARG:NH2	2.51	0.43
1:A:526:LEU:HB3	1:A:533:HIS:HB2	1.99	0.43
1:B:198:ALA:HB3	1:B:236:LEU:HD22	2.01	0.43
1:B:437:LEU:O	1:B:455:GLN:NE2	2.49	0.43
1:B:936:PHE:O	1:B:940:LEU:N	2.40	0.43
1:C:107:THR:HG22	1:C:108:PHE:H	1.84	0.43
1:C:288:ASP:OD1	1:C:288:ASP:N	2.45	0.43
1:C:1372:LEU:HG	1:C:1501:ALA:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:288:ASP:OD1	1:D:288:ASP:N	2.45	0.43
1:D:1411:TRP:NE1	1:D:1414:PHE:O	2.51	0.43
1:D:1423:GLU:HA	1:D:1445:VAL:HA	2.00	0.43
1:A:80:LYS:HD3	1:A:96:GLU:HG3	1.99	0.43
1:A:107:THR:HG22	1:A:108:PHE:H	1.84	0.43
1:A:650:ALA:HA	1:A:653:LEU:HD13	2.01	0.43
1:A:1311:ARG:NH1	1:A:1312:SER:O	2.52	0.43
1:A:1423:GLU:HA	1:A:1445:VAL:HA	2.00	0.43
1:B:650:ALA:HA	1:B:653:LEU:HD13	2.01	0.43
1:B:922:PRO:HG3	1:B:1063:TRP:HB2	1.99	0.43
1:B:1041:LEU:HG	1:B:1044:LEU:HD22	2.00	0.43
1:C:530:CYS:SG	1:C:531:LEU:N	2.91	0.43
1:C:1236:ASP:OD1	1:C:1236:ASP:N	2.52	0.43
1:A:509:GLN:HG3	1:A:511:LYS:HB2	1.99	0.43
1:A:629:ALA:HB1	1:A:634:ARG:HB2	2.01	0.43
1:A:672:SER:HA	1:A:675:MET:HG2	2.01	0.43
1:A:932:LYS:HA	1:A:932:LYS:HD2	1.84	0.43
1:A:1293:LEU:HG	1:A:1295:PRO:HD2	2.00	0.43
1:B:1467:CYS:SG	1:B:1468:ASP:N	2.92	0.43
1:C:363:ILE:HG12	1:C:406:ILE:HG12	2.00	0.43
1:D:672:SER:HA	1:D:675:MET:HG2	2.01	0.43
1:A:220:GLU:HG3	1:A:223:ARG:HH21	1.83	0.43
1:A:1024:LEU:HD21	1:B:901:LEU:HD11	2.00	0.43
1:A:1467:CYS:SG	1:A:1468:ASP:N	2.92	0.43
1:B:107:THR:HG22	1:B:108:PHE:H	1.84	0.43
1:C:74:TYR:HB2	1:C:122:MET:H	1.83	0.43
1:C:1311:ARG:NH1	1:C:1312:SER:O	2.52	0.43
1:D:74:TYR:HB2	1:D:122:MET:H	1.83	0.43
1:D:845:ARG:HA	1:D:848:PHE:HD2	1.84	0.43
1:D:1311:ARG:NH1	1:D:1312:SER:O	2.52	0.43
1:A:70:LYS:HE3	1:A:70:LYS:HB2	1.89	0.43
1:B:220:GLU:HG3	1:B:223:ARG:HH21	1.83	0.43
1:C:248:HIS:HB2	1:C:271:GLN:HB2	2.00	0.43
1:D:932:LYS:HA	1:D:932:LYS:HD2	1.84	0.43
1:A:248:HIS:HB2	1:A:271:GLN:HB2	2.00	0.43
1:B:1236:ASP:OD1	1:B:1236:ASP:N	2.52	0.43
1:C:983:PRO:HB2	1:C:986:ILE:HG12	2.01	0.43
1:C:1467:CYS:SG	1:C:1468:ASP:N	2.92	0.43
1:A:766:LEU:O	1:A:787:ARG:NH2	2.51	0.43
1:A:922:PRO:HG3	1:A:1063:TRP:HB2	1.99	0.43
1:A:1287:ASP:O	1:A:1289:MET:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1411:TRP:NE1	1:B:1414:PHE:O	2.51	0.43
1:C:845:ARG:HA	1:C:848:PHE:HD2	1.84	0.43
1:C:1378:LYS:NZ	1:C:1382:SER:O	2.51	0.43
1:D:363:ILE:HG12	1:D:406:ILE:HG12	2.00	0.43
1:D:629:ALA:HB1	1:D:634:ARG:HB2	2.01	0.43
1:D:928:LYS:HA	1:D:928:LYS:HD2	1.83	0.43
1:A:530:CYS:SG	1:A:531:LEU:N	2.91	0.42
1:B:390:MET:HB2	1:B:393:THR:HG22	2.01	0.42
1:B:431:VAL:HG11	1:B:464:ARG:HH11	1.84	0.42
1:B:1378:LYS:NZ	1:B:1382:SER:O	2.51	0.42
1:D:245:GLY:O	1:D:250:ARG:NH2	2.52	0.42
1:D:431:VAL:HG11	1:D:464:ARG:HH11	1.84	0.42
1:D:983:PRO:HB2	1:D:986:ILE:HG12	2.01	0.42
1:A:390:MET:HB2	1:A:393:THR:HG22	2.01	0.42
1:A:612:SER:O	1:A:612:SER:OG	2.37	0.42
1:A:845:ARG:HA	1:A:848:PHE:HD2	1.84	0.42
1:B:245:GLY:O	1:B:250:ARG:NH2	2.52	0.42
1:C:245:GLY:O	1:C:250:ARG:NH2	2.52	0.42
1:C:412:ARG:HE	1:C:415:LEU:HD12	1.84	0.42
1:C:629:ALA:HB1	1:C:634:ARG:HB2	2.01	0.42
1:D:198:ALA:HB3	1:D:236:LEU:HD22	2.00	0.42
1:D:220:GLU:HG3	1:D:223:ARG:HH21	1.83	0.42
1:B:173:VAL:O	1:B:302:ARG:NH2	2.46	0.42
1:B:629:ALA:HB1	1:B:634:ARG:HB2	2.01	0.42
1:B:1024:LEU:HD21	1:C:901:LEU:HD11	2.01	0.42
1:B:1239:HIS:HB2	1:B:1243:ARG:HG3	2.01	0.42
1:C:390:MET:HB2	1:C:393:THR:HG22	2.01	0.42
1:C:1041:LEU:HG	1:C:1044:LEU:HD22	2.00	0.42
1:D:107:THR:HG22	1:D:108:PHE:H	1.84	0.42
1:D:498:GLU:HA	1:D:501:LYS:HB3	2.01	0.42
1:D:530:CYS:SG	1:D:531:LEU:N	2.91	0.42
1:D:650:ALA:HA	1:D:653:LEU:HD13	2.01	0.42
1:D:937:PHE:HA	1:D:940:LEU:HB3	2.01	0.42
1:D:1287:ASP:O	1:D:1289:MET:N	2.52	0.42
1:A:498:GLU:HA	1:A:501:LYS:HB3	2.01	0.42
1:A:1041:LEU:HG	1:A:1044:LEU:HD22	2.00	0.42
1:B:412:ARG:HE	1:B:415:LEU:HD12	1.84	0.42
1:B:965:TRP:HA	1:B:968:ARG:HB3	2.02	0.42
1:B:1236:ASP:O	1:B:1243:ARG:NH2	2.46	0.42
1:B:1451:ASP:OD1	1:B:1451:ASP:N	2.52	0.42
1:C:484:LEU:O	1:C:488:MET:N	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:390:MET:HB2	1:D:393:THR:HG22	2.01	0.42
1:D:718:LEU:O	1:D:722:LEU:N	2.48	0.42
1:D:1143:ARG:NH2	1:D:1146:GLN:OE1	2.53	0.42
1:D:1307:LEU:O	1:D:1392:ARG:NH2	2.53	0.42
1:D:1467:CYS:SG	1:D:1468:ASP:N	2.92	0.42
1:D:1496:ALA:HB1	1:D:1501:ALA:HB3	2.02	0.42
1:A:198:ALA:HB3	1:A:236:LEU:HD22	2.01	0.42
1:A:1496:ALA:HB1	1:A:1501:ALA:HB3	2.02	0.42
1:B:248:HIS:HB2	1:B:271:GLN:HB2	2.00	0.42
1:B:679:ALA:HA	1:B:682:TYR:HB2	2.02	0.42
1:B:1311:ARG:NH1	1:B:1312:SER:O	2.52	0.42
1:C:650:ALA:HA	1:C:653:LEU:HD13	2.01	0.42
1:C:679:ALA:HA	1:C:682:TYR:HB2	2.02	0.42
1:C:1143:ARG:NH2	1:C:1146:GLN:OE1	2.53	0.42
1:D:465:VAL:HG21	1:D:498:GLU:HB2	2.01	0.42
1:D:1239:HIS:HB2	1:D:1243:ARG:HG3	2.01	0.42
1:A:817:LEU:O	1:A:896:ARG:NH1	2.52	0.42
1:B:250:ARG:HE	1:B:250:ARG:HB2	1.65	0.42
1:B:1143:ARG:NH2	1:B:1146:GLN:OE1	2.53	0.42
1:C:173:VAL:O	1:C:302:ARG:NH2	2.46	0.42
1:C:672:SER:HA	1:C:675:MET:HG2	2.01	0.42
1:C:934:VAL:HA	1:C:937:PHE:HB3	2.02	0.42
1:D:1489:LYS:O	1:D:1503:TYR:OH	2.35	0.42
1:A:412:ARG:HE	1:A:415:LEU:HD12	1.85	0.42
1:C:559:HIS:HA	1:C:562:ALA:HB3	2.02	0.42
1:D:1451:ASP:N	1:D:1451:ASP:OD1	2.53	0.42
1:A:679:ALA:HA	1:A:682:TYR:HB2	2.02	0.42
1:A:1239:HIS:HB2	1:A:1243:ARG:HG3	2.01	0.42
1:B:1287:ASP:O	1:B:1289:MET:N	2.52	0.42
1:C:465:VAL:HG21	1:C:498:GLU:HB2	2.01	0.42
1:C:817:LEU:O	1:C:896:ARG:NH1	2.52	0.42
1:C:1496:ALA:HB1	1:C:1501:ALA:HB3	2.02	0.42
1:A:437:LEU:O	1:A:455:GLN:NE2	2.49	0.42
1:A:934:VAL:HA	1:A:937:PHE:HB3	2.02	0.42
1:A:937:PHE:HA	1:A:940:LEU:HB3	2.02	0.42
1:C:1239:HIS:HB2	1:C:1243:ARG:HG3	2.00	0.42
1:D:1466:ALA:HB1	1:D:1470:GLY:HA3	2.02	0.42
1:A:514:VAL:HG21	1:A:625:LEU:HD11	2.01	0.42
1:A:1466:ALA:HB1	1:A:1470:GLY:HA3	2.02	0.42
1:B:465:VAL:HG21	1:B:498:GLU:HB2	2.01	0.42
1:B:845:ARG:HA	1:B:848:PHE:HD2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:679:ALA:HA	1:D:682:TYR:HB2	2.02	0.42
1:D:939:PHE:O	1:D:943:VAL:N	2.53	0.42
1:B:583:ASN:HD22	1:B:602:VAL:HG12	1.85	0.41
1:B:672:SER:HA	1:B:675:MET:HG2	2.01	0.41
1:B:1307:LEU:O	1:B:1392:ARG:NH2	2.53	0.41
1:B:1326:ASN:OD1	1:B:1326:ASN:N	2.49	0.41
1:B:1496:ALA:HB1	1:B:1501:ALA:HB3	2.02	0.41
1:C:137:GLN:NE2	1:C:138:LYS:HZ2	2.17	0.41
1:C:514:VAL:HG21	1:C:625:LEU:HD11	2.01	0.41
1:C:965:TRP:HA	1:C:968:ARG:HB3	2.01	0.41
1:A:192:ARG:NH2	1:A:199:GLN:OE1	2.54	0.41
1:A:1143:ARG:NH2	1:A:1146:GLN:OE1	2.53	0.41
1:A:1261:LYS:HD2	1:A:1269:LEU:HD12	2.02	0.41
1:C:198:ALA:HB3	1:C:236:LEU:HD22	2.00	0.41
1:C:937:PHE:HA	1:C:940:LEU:HB3	2.02	0.41
1:D:559:HIS:HA	1:D:562:ALA:HB3	2.02	0.41
1:A:583:ASN:HD22	1:A:602:VAL:HG12	1.85	0.41
1:B:983:PRO:HB2	1:B:986:ILE:HG12	2.01	0.41
1:C:1287:ASP:O	1:C:1289:MET:N	2.52	0.41
1:D:255:HIS:HA	1:D:256:PRO:HD3	1.89	0.41
1:D:412:ARG:HE	1:D:415:LEU:HD12	1.85	0.41
1:A:771:ILE:O	1:A:787:ARG:NH2	2.54	0.41
1:A:939:PHE:O	1:A:943:VAL:N	2.53	0.41
1:B:192:ARG:NH2	1:B:199:GLN:OE1	2.54	0.41
1:B:492:LEU:O	1:B:495:ASN:ND2	2.54	0.41
1:B:700:ARG:NH2	1:B:1120:ALA:O	2.53	0.41
1:B:718:LEU:O	1:B:722:LEU:N	2.48	0.41
1:C:431:VAL:HG11	1:C:464:ARG:HH11	1.84	0.41
1:C:1466:ALA:HB1	1:C:1470:GLY:HA3	2.02	0.41
1:D:437:LEU:O	1:D:455:GLN:NE2	2.49	0.41
1:D:492:LEU:O	1:D:495:ASN:ND2	2.54	0.41
1:A:250:ARG:HE	1:A:250:ARG:HB2	1.65	0.41
1:A:965:TRP:HA	1:A:968:ARG:HB3	2.01	0.41
1:B:498:GLU:HA	1:B:501:LYS:HB3	2.01	0.41
1:C:498:GLU:HA	1:C:501:LYS:HB3	2.01	0.41
1:C:1277:THR:HA	1:C:1336:ARG:HA	2.03	0.41
1:D:250:ARG:HE	1:D:250:ARG:HB2	1.65	0.41
1:D:612:SER:O	1:D:612:SER:OG	2.37	0.41
1:B:514:VAL:HG21	1:B:625:LEU:HD11	2.01	0.41
1:B:934:VAL:HA	1:B:937:PHE:HB3	2.02	0.41
1:C:437:LEU:O	1:C:455:GLN:NE2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1307:LEU:O	1:C:1392:ARG:NH2	2.53	0.41
1:D:416:LEU:O	1:D:439:LYS:NZ	2.45	0.41
1:D:771:ILE:O	1:D:787:ARG:NH2	2.54	0.41
1:B:771:ILE:O	1:B:787:ARG:NH2	2.54	0.41
1:B:1466:ALA:HB1	1:B:1470:GLY:HA3	2.02	0.41
1:C:594:HIS:CE1	1:C:596:LYS:HG2	2.56	0.41
1:C:1261:LYS:HD2	1:C:1269:LEU:HD12	2.02	0.41
1:D:514:VAL:HG21	1:D:625:LEU:HD11	2.01	0.41
1:D:645:SER:O	1:D:1129:LYS:NZ	2.40	0.41
1:D:700:ARG:NH2	1:D:1120:ALA:O	2.53	0.41
1:A:983:PRO:HB2	1:A:986:ILE:HG12	2.01	0.41
1:B:559:HIS:HA	1:B:562:ALA:HB3	2.02	0.41
1:B:937:PHE:HA	1:B:940:LEU:HB3	2.01	0.41
1:B:1277:THR:HA	1:B:1336:ARG:HA	2.03	0.41
1:C:539:VAL:HA	1:C:542:GLU:HB2	2.03	0.41
1:C:771:ILE:O	1:C:787:ARG:NH2	2.54	0.41
1:D:965:TRP:HA	1:D:968:ARG:HB3	2.01	0.41
1:A:700:ARG:NH2	1:A:1120:ALA:O	2.53	0.41
1:A:707:ARG:HG3	1:A:1113:LEU:HD21	2.03	0.41
1:A:760:MET:HE3	1:A:797:VAL:HA	2.03	0.41
1:A:1451:ASP:OD1	1:A:1451:ASP:N	2.52	0.41
1:B:178:LYS:HD2	1:B:178:LYS:HA	1.89	0.41
1:B:1261:LYS:HD2	1:B:1269:LEU:HD12	2.02	0.41
1:C:385:VAL:H	1:C:385:VAL:HG23	1.60	0.41
1:C:583:ASN:HD22	1:C:602:VAL:HG12	1.86	0.41
1:C:707:ARG:HG3	1:C:1113:LEU:HD21	2.03	0.41
1:C:939:PHE:O	1:C:943:VAL:N	2.53	0.41
1:C:1489:LYS:HB2	1:C:1489:LYS:HE2	1.93	0.41
1:D:137:GLN:HE21	1:D:138:LYS:HZ2	1.67	0.41
1:D:423:LYS:HA	1:D:423:LYS:HD3	1.90	0.41
1:D:470:SER:HA	1:D:474:MET:HG2	2.03	0.41
1:D:569:LEU:HA	1:D:657:LYS:HZ3	1.85	0.41
1:D:934:VAL:HA	1:D:937:PHE:HB3	2.02	0.41
1:A:645:SER:O	1:A:1129:LYS:NZ	2.40	0.41
1:A:1277:THR:HA	1:A:1336:ARG:HA	2.03	0.41
1:B:470:SER:HA	1:B:474:MET:HG2	2.03	0.41
1:B:760:MET:HE1	1:B:797:VAL:HA	2.02	0.41
1:C:492:LEU:O	1:C:495:ASN:ND2	2.54	0.41
1:D:314:LYS:HD3	1:D:321:ILE:HD11	2.03	0.41
1:D:539:VAL:HA	1:D:542:GLU:HB2	2.03	0.41
1:D:851:PRO:HA	1:D:859:LYS:HE3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:314:LYS:HD3	1:A:321:ILE:HD11	2.04	0.40
1:A:492:LEU:O	1:A:495:ASN:ND2	2.54	0.40
1:A:559:HIS:HA	1:A:562:ALA:HB3	2.02	0.40
1:B:536:LEU:O	1:B:540:LEU:N	2.46	0.40
1:B:594:HIS:CE1	1:B:596:LYS:HG2	2.56	0.40
1:B:939:PHE:O	1:B:943:VAL:N	2.53	0.40
1:D:1261:LYS:HD2	1:D:1269:LEU:HD12	2.02	0.40
1:D:1277:THR:HA	1:D:1336:ARG:HA	2.03	0.40
1:A:241:VAL:HG12	1:A:298:GLU:HG2	2.04	0.40
1:A:510:LEU:HA	1:A:513:PHE:HB3	2.03	0.40
1:A:536:LEU:O	1:A:540:LEU:N	2.46	0.40
1:A:928:LYS:HD2	1:A:928:LYS:HA	1.83	0.40
1:A:1275:PHE:HE1	1:A:1333:LEU:HB3	1.86	0.40
1:C:137:GLN:HE21	1:C:138:LYS:HZ1	1.67	0.40
1:C:314:LYS:HD3	1:C:321:ILE:HD11	2.04	0.40
1:C:700:ARG:NH2	1:C:1120:ALA:O	2.53	0.40
1:C:1275:PHE:HE1	1:C:1333:LEU:HB3	1.86	0.40
1:C:1344:PRO:O	1:C:1346:HIS:ND1	2.54	0.40
1:D:760:MET:HE3	1:D:797:VAL:HA	2.03	0.40
1:A:594:HIS:CE1	1:A:596:LYS:HG2	2.56	0.40
1:B:241:VAL:HG12	1:B:298:GLU:HG2	2.03	0.40
1:B:1344:PRO:O	1:B:1346:HIS:ND1	2.54	0.40
1:D:192:ARG:NH2	1:D:199:GLN:OE1	2.54	0.40
1:D:241:VAL:HG12	1:D:298:GLU:HG2	2.04	0.40
1:D:1030:CYS:HA	1:D:1033:LEU:HB3	2.03	0.40
1:D:1344:PRO:O	1:D:1346:HIS:ND1	2.54	0.40
1:D:1378:LYS:NZ	1:D:1382:SER:O	2.51	0.40
1:A:446:HIS:HB3	1:A:447:PHE:H	1.73	0.40
1:A:539:VAL:HA	1:A:542:GLU:HB2	2.03	0.40
1:A:1307:LEU:O	1:A:1392:ARG:NH2	2.53	0.40
1:A:1344:PRO:O	1:A:1346:HIS:ND1	2.54	0.40
1:B:1160:ASP:N	1:B:1160:ASP:OD1	2.50	0.40
1:C:241:VAL:HG12	1:C:298:GLU:HG2	2.03	0.40
1:C:377:SER:HA	1:C:380:GLN:HB2	2.03	0.40
1:C:446:HIS:HB3	1:C:447:PHE:H	1.73	0.40
1:C:736:GLN:HA	1:C:739:LEU:HG	2.04	0.40
1:C:1115:LYS:HA	1:C:1115:LYS:HD3	1.98	0.40
1:A:470:SER:HA	1:A:474:MET:HG2	2.03	0.40
1:A:897:VAL:O	1:A:900:SER:OG	2.31	0.40
1:B:377:SER:HA	1:B:380:GLN:HB2	2.04	0.40
1:B:896:ARG:HH11	1:B:896:ARG:HD2	1.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:273:ASN:OD1	1:C:273:ASN:N	2.55	0.40
1:C:569:LEU:HA	1:C:657:LYS:HZ3	1.87	0.40
1:C:851:PRO:HA	1:C:859:LYS:HE3	2.03	0.40
1:D:1112:LYS:HA	1:D:1112:LYS:HD2	1.98	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	1331/1503 (89%)	1131 (85%)	195 (15%)	5 (0%)	30	68
1	B	1331/1503 (89%)	1133 (85%)	193 (14%)	5 (0%)	30	68
1	C	1331/1503 (89%)	1131 (85%)	195 (15%)	5 (0%)	30	68
1	D	1331/1503 (89%)	1131 (85%)	195 (15%)	5 (0%)	30	68
All	All	5324/6012 (89%)	4526 (85%)	778 (15%)	20 (0%)	32	68

All (20) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	376	ILE
1	B	376	ILE
1	C	376	ILE
1	D	376	ILE
1	A	384	SER
1	B	384	SER
1	C	384	SER
1	D	384	SER
1	A	1288	PRO
1	B	1288	PRO
1	C	1288	PRO

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Mol	Chain	Res	Type
1	D	1288	PRO
1	A	429	VAL
1	A	1270	ILE
1	B	429	VAL
1	B	1270	ILE
1	C	429	VAL
1	C	1270	ILE
1	D	429	VAL
1	D	1270	ILE

### 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 PDB entries followed by that with respect to all EM entries.

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	1176/1318 (89%)	1163 (99%)	13 (1%)	70	80
1	B	1176/1318 (89%)	1163 (99%)	13 (1%)	70	80
1	C	1176/1318 (89%)	1163 (99%)	13 (1%)	70	80
1	D	1176/1318 (89%)	1163 (99%)	13 (1%)	70	80
All	All	4704/5272 (89%)	4652 (99%)	52 (1%)	69	80

All (52) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	253	LEU
1	A	496	LYS
1	A	566	ARG
1	A	610	ARG
1	A	685	ARG
1	A	715	THR
1	A	839	LEU
1	A	886	ARG
1	A	918	LYS
1	A	930	MET
1	A	941	LEU
1	A	1024	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1064	LYS
1	B	253	LEU
1	B	496	LYS
1	B	566	ARG
1	B	610	ARG
1	B	685	ARG
1	B	715	THR
1	B	839	LEU
1	B	886	ARG
1	B	918	LYS
1	B	930	MET
1	B	941	LEU
1	B	1024	LEU
1	B	1064	LYS
1	C	253	LEU
1	C	496	LYS
1	C	566	ARG
1	C	610	ARG
1	C	685	ARG
1	C	715	THR
1	C	839	LEU
1	C	886	ARG
1	C	918	LYS
1	C	930	MET
1	C	941	LEU
1	C	1024	LEU
1	C	1064	LYS
1	D	253	LEU
1	D	496	LYS
1	D	566	ARG
1	D	610	ARG
1	D	685	ARG
1	D	715	THR
1	D	839	LEU
1	D	886	ARG
1	D	918	LYS
1	D	930	MET
1	D	941	LEU
1	D	1024	LEU
1	D	1064	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (70) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	137	GLN
1	A	338	HIS
1	A	381	GLN
1	A	446	HIS
1	A	451	ASN
1	A	454	HIS
1	A	506	ASN
1	A	509	GLN
1	A	525	ASN
1	A	560	HIS
1	A	594	HIS
1	A	646	GLN
1	A	684	HIS
1	A	800	HIS
1	A	973	HIS
1	A	1135	ASN
1	A	1461	ASN
1	A	1502	HIS
1	B	137	GLN
1	B	338	HIS
1	B	381	GLN
1	B	446	HIS
1	B	451	ASN
1	B	454	HIS
1	B	506	ASN
1	B	509	GLN
1	B	525	ASN
1	B	560	HIS
1	B	594	HIS
1	B	646	GLN
1	B	684	HIS
1	B	800	HIS
1	B	973	HIS
1	B	1135	ASN
1	B	1461	ASN
1	B	1502	HIS
1	C	137	GLN
1	C	338	HIS
1	C	381	GLN
1	C	446	HIS
1	C	451	ASN
1	C	454	HIS
1	C	506	ASN

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Mol	Chain	Res	Type
1	C	509	GLN
1	C	525	ASN
1	C	560	HIS
1	C	594	HIS
1	C	646	GLN
1	C	684	HIS
1	C	800	HIS
1	C	973	HIS
1	C	1135	ASN
1	C	1461	ASN
1	C	1502	HIS
1	D	137	GLN
1	D	338	HIS
1	D	381	GLN
1	D	446	HIS
1	D	454	HIS
1	D	506	ASN
1	D	509	GLN
1	D	525	ASN
1	D	560	HIS
1	D	594	HIS
1	D	646	GLN
1	D	684	HIS
1	D	973	HIS
1	D	1135	ASN
1	D	1461	ASN
1	D	1502	HIS

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry

Of 4 ligands modelled in this entry, 4 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

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.



## 6 Map visualisation

This section contains visualisations of the EMDB entry EMD-9134. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections

This section was not generated.

### 6.2 Central slices

This section was not generated.

### 6.3 Largest variance slices

This section was not generated.

### 6.4 Orthogonal standard-deviation projections (False-color)

This section was not generated.

### 6.5 Orthogonal surface views

This section was not generated.

### 6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

## 7 Map analysis

This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution

This section was not generated.

### 7.2 Volume estimate versus contour level

This section was not generated.

### 7.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

## 8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

## 9 Map-model fit

This section was not generated.