



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 15, 2021 – 12:09 PM JST

PDB ID : 7F52
Title : Crystal Structure of IBV Nsp2
Authors : Ming, Z.; Li, Y.; Yan, L.; Lou, Z.; Rao, Z.
Deposited on : 2021-06-21
Resolution : 2.56 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 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 : 2.22
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) : 2.22

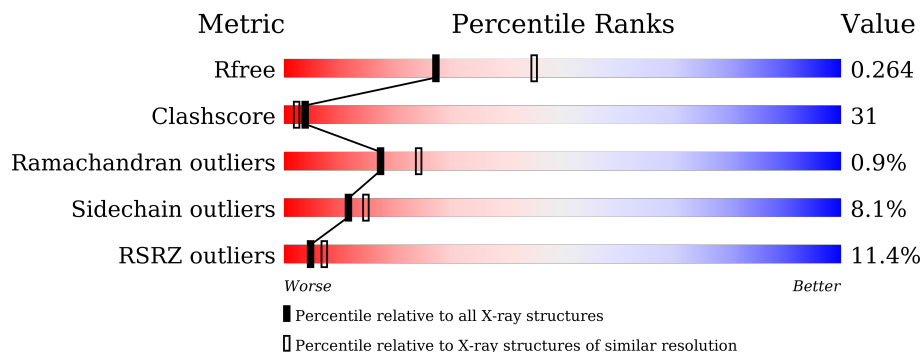
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

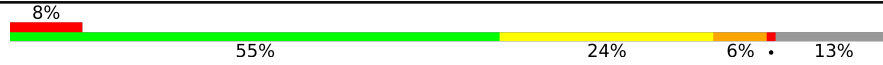

The reported resolution of this entry is 2.56 Å.

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	1279 (2.58-2.54)
Clashscore	141614	1327 (2.58-2.54)
Ramachandran outliers	138981	1312 (2.58-2.54)
Sidechain outliers	138945	1312 (2.58-2.54)
RSRZ outliers	127900	1269 (2.58-2.54)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments 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	673	
1	B	673	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 9717 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 Non-structural protein 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	584	4584	2980	775	804	25	0	0	0
1	B	584	4584	2980	775	804	25	0	0	0

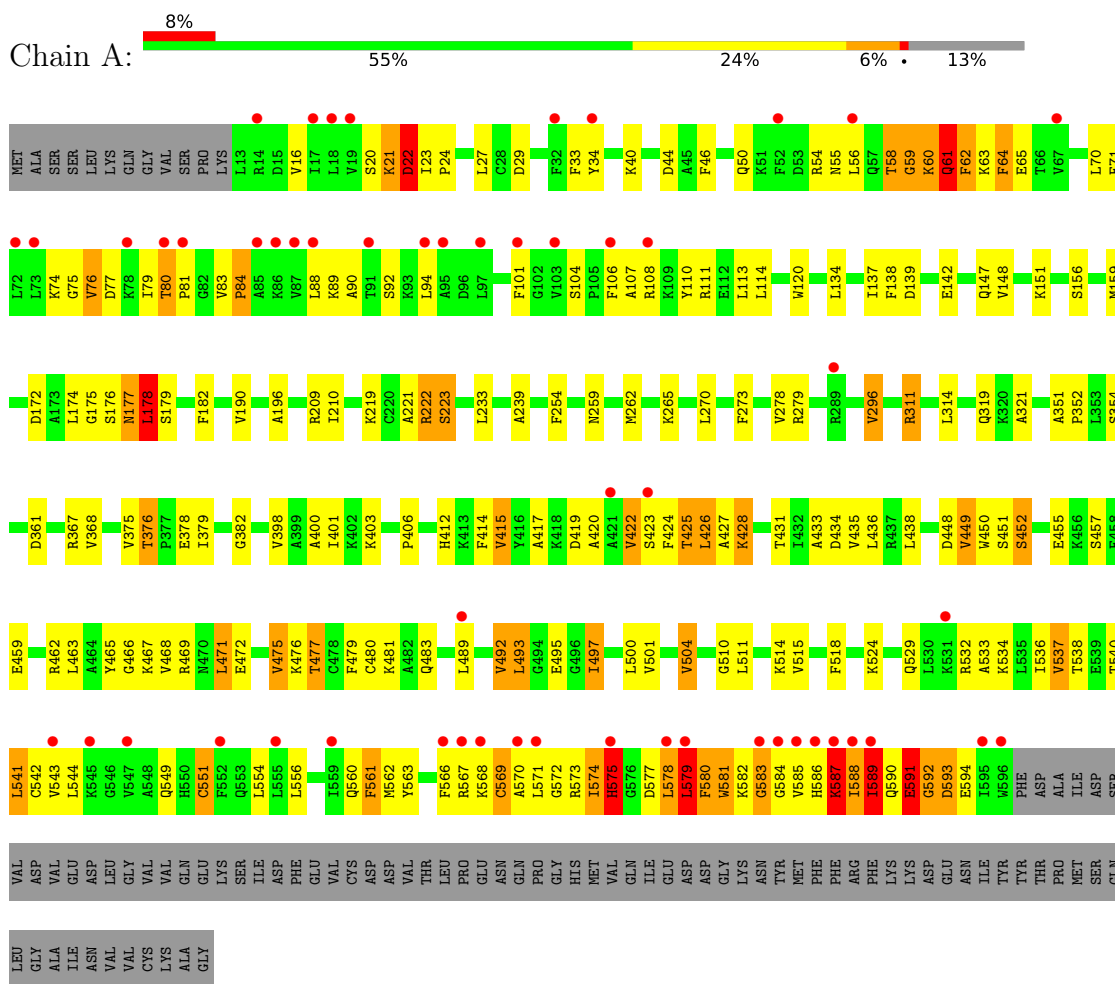
- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
2	A	291	291	291	0	0
2	B	258	258	258	0	0

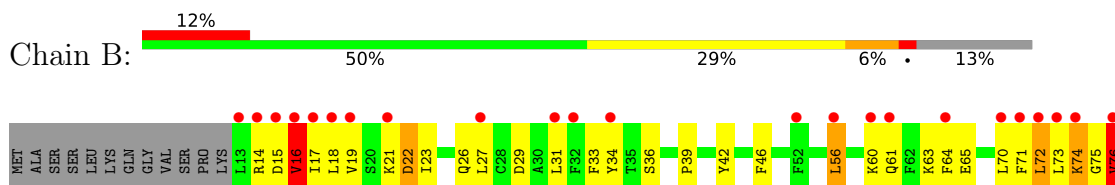
3 Residue-property plots

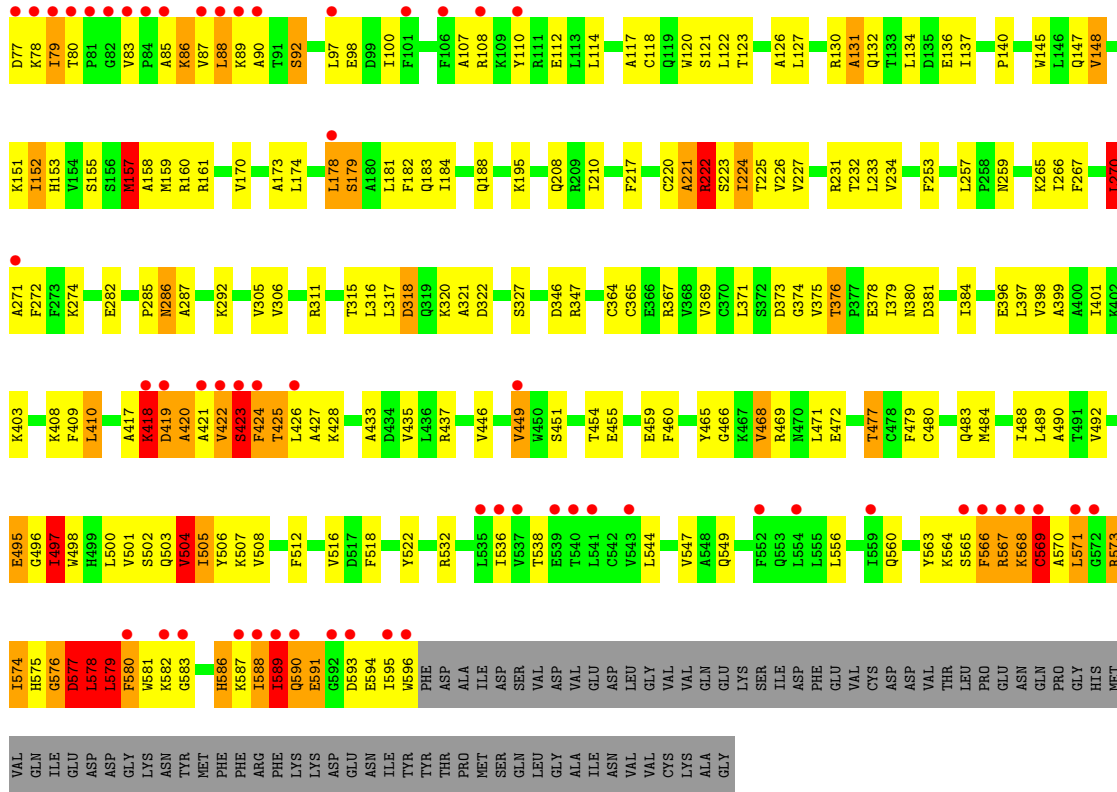
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Non-structural protein 2



• Molecule 1: Non-structural protein 2





4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	57.04Å 192.31Å 105.75Å 90.00° 90.81° 90.00°	Depositor
Resolution (Å)	49.90 – 2.56 49.90 – 2.56	Depositor EDS
% Data completeness (in resolution range)	98.0 (49.90-2.56) 92.1 (49.90-2.56)	Depositor EDS
R_{merge}	0.01	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.39 (at 2.54Å)	Xtrriage
Refinement program	PHENIX 1.9_1692	Depositor
R, R_{free}	0.226 , 0.260 0.238 , 0.264	Depositor DCC
R_{free} test set	1997 reflections (2.78%)	wwPDB-VP
Wilson B-factor (Å ²)	51.1	Xtrriage
Anisotropy	0.932	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 51.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.034 for h,-k,-l	Xtrriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	9717	wwPDB-VP
Average B, all atoms (Å ²)	75.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.74% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.52	0/4679	1.20	64/6320 (1.0%)
1	B	0.51	0/4679	1.26	77/6320 (1.2%)
All	All	0.51	0/9358	1.23	141/12640 (1.1%)

There are no bond length outliers.

All (141) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	569	CYS	CB-CA-C	-20.97	68.47	110.40
1	A	569	CYS	N-CA-C	20.84	167.28	111.00
1	B	423	SER	CB-CA-C	-20.49	71.17	110.10
1	A	579	LEU	CB-CA-C	-16.46	78.92	110.20
1	B	423	SER	N-CA-C	16.05	154.34	111.00
1	A	423	SER	CB-CA-C	-15.83	80.02	110.10
1	B	421	ALA	N-CA-CB	-15.23	88.78	110.10
1	B	579	LEU	N-CA-C	14.90	151.23	111.00
1	A	423	SER	N-CA-C	14.77	150.88	111.00
1	B	579	LEU	N-CA-CB	-14.65	81.11	110.40
1	B	578	LEU	CB-CA-C	-14.06	83.48	110.20
1	A	504	VAL	CB-CA-C	-13.83	85.12	111.40
1	B	567	ARG	N-CA-C	13.37	147.11	111.00
1	A	577	ASP	N-CA-CB	-13.26	86.73	110.60
1	B	587	LYS	N-CA-C	-13.20	75.36	111.00
1	B	317	LEU	N-CA-C	13.18	146.60	111.00
1	B	418	LYS	N-CA-C	13.15	146.51	111.00
1	B	221	ALA	N-CA-C	-12.92	76.11	111.00
1	A	21	LYS	N-CA-C	-12.56	77.08	111.00
1	A	61	GLN	CB-CA-C	-12.49	85.42	110.40
1	B	23	ILE	N-CA-C	-12.48	77.31	111.00
1	A	222	ARG	N-CA-C	-12.29	77.81	111.00
1	B	427	ALA	N-CA-CB	11.69	126.47	110.10
1	B	286	ASN	N-CA-CB	-11.54	89.83	110.60
1	A	21	LYS	CB-CA-C	11.48	133.36	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	504	VAL	N-CA-C	11.05	140.84	111.00
1	A	578	LEU	CB-CA-C	-10.83	89.63	110.20
1	B	285	PRO	N-CA-C	10.56	139.56	112.10
1	B	567	ARG	CB-CA-C	-10.51	89.38	110.40
1	A	223	SER	N-CA-C	10.43	139.17	111.00
1	A	579	LEU	N-CA-CB	-10.43	89.54	110.40
1	A	58	THR	CB-CA-C	-10.32	83.73	111.60
1	B	421	ALA	N-CA-C	10.22	138.59	111.00
1	B	417	ALA	CB-CA-C	10.06	125.19	110.10
1	B	571	LEU	CB-CA-C	10.05	129.30	110.20
1	B	426	LEU	CB-CA-C	9.95	129.11	110.20
1	A	427	ALA	N-CA-CB	9.92	123.98	110.10
1	B	318	ASP	N-CA-CB	9.90	128.43	110.60
1	B	418	LYS	CB-CA-C	-9.78	90.85	110.40
1	A	177	ASN	N-CA-C	-9.57	85.17	111.00
1	B	497	ILE	CB-CA-C	-9.48	92.65	111.60
1	B	580	PHE	N-CA-C	9.07	135.49	111.00
1	B	23	ILE	N-CA-CB	8.85	131.15	110.80
1	B	420	ALA	N-CA-C	-8.66	87.63	111.00
1	B	566	PHE	N-CA-C	8.54	134.05	111.00
1	A	426	LEU	CB-CA-C	8.41	126.17	110.20
1	A	222	ARG	N-CA-CB	-8.40	95.48	110.60
1	A	62	PHE	N-CA-CB	-8.38	95.52	110.60
1	A	221	ALA	N-CA-C	8.36	133.58	111.00
1	A	583	GLY	N-CA-C	-8.35	92.22	113.10
1	A	222	ARG	CB-CA-C	-8.21	93.99	110.40
1	B	569	CYS	N-CA-C	-8.18	88.92	111.00
1	A	578	LEU	N-CA-C	-8.12	89.07	111.00
1	B	22	ASP	N-CA-C	-8.10	89.14	111.00
1	A	76	VAL	CB-CA-C	-7.97	96.27	111.40
1	B	271	ALA	CB-CA-C	-7.97	98.15	110.10
1	B	495	GLU	CB-CA-C	-7.88	94.63	110.40
1	B	286	ASN	CB-CA-C	-7.88	94.65	110.40
1	B	507	LYS	CB-CA-C	-7.64	95.13	110.40
1	A	221	ALA	CB-CA-C	-7.57	98.75	110.10
1	A	59	GLY	N-CA-C	7.49	131.83	113.10
1	B	449	VAL	CB-CA-C	7.46	125.58	111.40
1	A	575	HIS	CB-CA-C	7.45	125.29	110.40
1	A	64	PHE	CB-CA-C	7.44	125.28	110.40
1	A	61	GLN	N-CA-C	7.37	130.90	111.00
1	A	60	LYS	CB-CA-C	-7.34	95.72	110.40
1	A	65	GLU	N-CA-C	-7.33	91.20	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	317	LEU	CB-CA-C	-7.33	96.28	110.20
1	B	425	THR	N-CA-CB	-7.28	96.47	110.30
1	B	504	VAL	N-CA-C	7.24	130.55	111.00
1	A	586	HIS	CB-CA-C	-7.23	95.95	110.40
1	A	65	GLU	N-CA-CB	7.06	123.30	110.60
1	A	58	THR	N-CA-C	-6.92	92.30	111.00
1	B	586	HIS	CB-CA-C	-6.92	96.57	110.40
1	B	311	ARG	CB-CA-C	-6.86	96.69	110.40
1	A	428	LYS	CB-CA-C	-6.85	96.70	110.40
1	B	425	THR	N-CA-C	6.80	129.36	111.00
1	A	319	GLN	N-CA-CB	-6.64	98.64	110.60
1	B	573	ARG	N-CA-C	6.56	128.72	111.00
1	A	311	ARG	CB-CA-C	-6.55	97.30	110.40
1	B	90	ALA	CB-CA-C	6.54	119.92	110.10
1	A	223	SER	N-CA-CB	-6.49	100.77	110.50
1	B	508	VAL	N-CA-C	-6.43	93.63	111.00
1	A	223	SER	CB-CA-C	-6.38	97.98	110.10
1	B	571	LEU	N-CA-C	-6.37	93.80	111.00
1	A	475	VAL	CB-CA-C	-6.23	99.56	111.40
1	B	564	LYS	N-CA-C	6.20	127.73	111.00
1	A	476	LYS	N-CA-CB	-6.18	99.47	110.60
1	B	178	LEU	N-CA-C	-6.16	94.38	111.00
1	B	136	GLU	CB-CA-C	6.15	122.69	110.40
1	B	56	LEU	CA-CB-CG	6.14	129.42	115.30
1	A	88	LEU	CB-CA-C	6.13	121.86	110.20
1	B	287	ALA	N-CA-CB	6.10	118.64	110.10
1	B	226	VAL	CB-CA-C	6.08	122.94	111.40
1	B	222	ARG	N-CA-CB	6.00	121.40	110.60
1	B	227	VAL	N-CA-CB	5.99	124.68	111.50
1	B	92	SER	CB-CA-C	-5.97	98.75	110.10
1	A	579	LEU	N-CA-C	-5.91	95.05	111.00
1	B	577	ASP	N-CA-C	5.88	126.87	111.00
1	B	157	MET	CA-CB-CG	5.86	123.26	113.30
1	B	587	LYS	CB-CA-C	-5.86	98.69	110.40
1	B	224	ILE	CB-CA-C	5.80	123.21	111.60
1	B	320	LYS	CB-CA-C	-5.76	98.87	110.40
1	B	583	GLY	N-CA-C	5.74	127.45	113.10
1	B	131	ALA	CB-CA-C	-5.72	101.52	110.10
1	A	423	SER	N-CA-CB	5.71	119.07	110.50
1	A	422	VAL	CB-CA-C	5.70	122.23	111.40
1	B	426	LEU	N-CA-C	-5.69	95.65	111.00
1	B	321	ALA	N-CA-CB	-5.68	102.14	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	576	GLY	N-CA-C	-5.68	98.89	113.10
1	A	471	LEU	CB-CA-C	-5.67	99.43	110.20
1	B	468	VAL	N-CA-C	-5.62	95.83	111.00
1	A	426	LEU	N-CA-C	-5.60	95.89	111.00
1	B	580	PHE	CB-CA-C	-5.59	99.21	110.40
1	A	587	LYS	N-CA-CB	-5.59	100.53	110.60
1	A	422	VAL	N-CA-C	-5.59	95.91	111.00
1	A	423	SER	C-N-CA	5.59	135.67	121.70
1	A	415	VAL	CB-CA-C	-5.59	100.78	111.40
1	B	471	LEU	CB-CA-C	-5.57	99.62	110.20
1	B	503	GLN	CB-CA-C	5.55	121.50	110.40
1	B	22	ASP	N-CA-CB	-5.54	100.64	110.60
1	A	537	VAL	CB-CA-C	-5.53	100.89	111.40
1	B	420	ALA	CB-CA-C	-5.49	101.86	110.10
1	A	449	VAL	CB-CA-C	5.47	121.79	111.40
1	A	551	CYS	N-CA-CB	-5.42	100.85	110.60
1	A	492	VAL	CB-CA-C	-5.36	101.22	111.40
1	A	178	LEU	N-CA-CB	5.33	121.06	110.40
1	A	575	HIS	N-CA-C	-5.33	96.61	111.00
1	B	217	PHE	CB-CA-C	-5.24	99.91	110.40
1	B	16	VAL	N-CA-C	-5.14	97.13	111.00
1	A	417	ALA	CB-CA-C	5.11	117.76	110.10
1	A	64	PHE	N-CA-C	-5.10	97.22	111.00
1	B	179	SER	N-CA-CB	5.10	118.15	110.50
1	B	72	LEU	CB-CG-CD1	5.08	119.64	111.00
1	A	592	GLY	C-N-CA	5.07	134.38	121.70
1	A	22	ASP	N-CA-C	5.07	124.69	111.00
1	A	319	GLN	CB-CA-C	5.07	120.54	110.40
1	B	225	THR	N-CA-CB	5.07	119.93	110.30
1	B	72	LEU	CA-CB-CG	5.07	126.95	115.30
1	B	573	ARG	CB-CA-C	-5.07	100.27	110.40
1	B	270	LEU	N-CA-CB	-5.03	100.35	110.40

There are no chirality outliers.

There are no planarity outliers.

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4584	0	4703	218	0
1	B	4584	0	4704	357	0
2	A	291	0	0	65	0
2	B	258	0	0	117	0
All	All	9717	0	9407	575	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 31.

All (575) 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:B:579:LEU:HD11	1:B:581:TRP:CD1	1.21	1.65
1:B:579:LEU:CD1	1:B:581:TRP:HD1	0.95	1.58
1:B:578:LEU:HD22	1:B:579:LEU:CA	1.35	1.55
1:B:579:LEU:CD1	1:B:581:TRP:CD1	1.87	1.31
1:B:265:LYS:HD3	2:B:725:HOH:O	1.18	1.31
1:B:418:LYS:NZ	2:B:701:HOH:O	1.57	1.31
1:B:578:LEU:HD22	1:B:579:LEU:N	1.41	1.31
1:B:578:LEU:CD2	1:B:579:LEU:CA	2.09	1.30
1:B:570:ALA:HB2	2:B:840:HOH:O	1.27	1.28
1:B:61:GLN:OE1	1:B:74:LYS:NZ	1.66	1.28
1:B:578:LEU:O	1:B:578:LEU:CD1	1.83	1.26
1:A:581:TRP:CH2	1:A:583:GLY:HA3	1.72	1.23
1:B:79:ILE:HG23	2:B:807:HOH:O	1.38	1.23
1:B:575:HIS:O	1:B:578:LEU:HD12	1.37	1.23
1:B:578:LEU:O	1:B:578:LEU:HD13	1.10	1.22
1:B:568:LYS:O	1:B:574:ILE:HD11	1.36	1.21
1:B:367:ARG:NH2	1:B:424:PHE:HE2	1.39	1.20
1:B:575:HIS:H	1:B:578:LEU:CD1	1.56	1.17
1:A:538:THR:O	1:A:560:GLN:NE2	1.78	1.15
1:B:578:LEU:HD22	1:B:579:LEU:HA	1.22	1.14
1:A:420:ALA:HB1	2:A:862:HOH:O	1.45	1.13
1:B:15:ASP:OD1	1:B:86:LYS:NZ	1.80	1.13
1:B:594:GLU:HG3	2:B:945:HOH:O	1.47	1.12
1:A:83:VAL:HG22	1:A:84:PRO:CD	1.80	1.12
1:A:581:TRP:CZ2	1:A:583:GLY:HA3	1.83	1.12
1:A:419:ASP:OD2	2:A:705:HOH:O	1.65	1.12
1:A:504:VAL:HG12	1:A:504:VAL:O	1.36	1.12
1:A:83:VAL:HG21	2:A:991:HOH:O	1.46	1.12
1:B:88:LEU:HD21	1:B:97:LEU:HD13	1.21	1.11
1:B:568:LYS:O	1:B:574:ILE:CD1	1.98	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:579:LEU:HG	1:A:579:LEU:O	1.44	1.10
1:B:575:HIS:H	1:B:578:LEU:HD11	0.96	1.09
1:B:85:ALA:HB3	2:B:885:HOH:O	0.92	1.09
1:B:578:LEU:CD2	1:B:579:LEU:N	2.15	1.09
1:B:575:HIS:N	1:B:578:LEU:HD11	1.65	1.08
1:B:83:VAL:HG12	2:B:885:HOH:O	1.50	1.08
1:A:581:TRP:CE3	1:A:583:GLY:N	2.22	1.07
1:B:565:SER:O	1:B:573:ARG:NH1	1.88	1.07
1:B:578:LEU:HD22	1:B:578:LEU:C	1.72	1.07
1:B:579:LEU:HD12	1:B:581:TRP:HD1	1.11	1.07
1:A:61:GLN:CG	1:A:61:GLN:O	1.97	1.07
1:B:567:ARG:O	1:B:567:ARG:CG	1.96	1.06
1:B:15:ASP:CG	1:B:86:LYS:NZ	2.09	1.06
1:B:579:LEU:HD12	1:B:581:TRP:CD1	1.86	1.06
1:B:75:GLY:HA2	2:B:843:HOH:O	1.52	1.05
1:B:88:LEU:CD1	1:B:100:ILE:HD12	1.84	1.05
1:B:567:ARG:O	1:B:567:ARG:HG2	1.26	1.04
1:A:419:ASP:CB	2:A:705:HOH:O	2.04	1.04
1:A:368:VAL:HB	1:A:422:VAL:HG21	1.38	1.04
1:B:588:ILE:HD13	1:B:588:ILE:H	1.21	1.02
1:B:367:ARG:NH2	1:B:424:PHE:CE2	2.28	1.02
1:B:397:LEU:O	2:B:702:HOH:O	1.77	1.01
1:A:504:VAL:O	1:A:504:VAL:CG1	2.04	1.01
1:A:581:TRP:O	1:A:583:GLY:O	1.79	1.00
1:B:579:LEU:HD13	1:B:581:TRP:H	1.25	1.00
1:A:83:VAL:HG22	1:A:84:PRO:HD2	1.34	1.00
1:B:14:ARG:HD2	1:B:15:ASP:H	1.22	1.00
1:B:497:ILE:O	1:B:497:ILE:HG22	1.63	0.98
1:B:578:LEU:HD23	1:B:580:PHE:CD1	1.99	0.98
1:A:84:PRO:HB2	2:A:930:HOH:O	1.62	0.97
1:B:579:LEU:CD1	1:B:581:TRP:H	1.77	0.97
1:B:579:LEU:HD11	1:B:581:TRP:CG	1.98	0.97
1:A:58:THR:O	2:A:706:HOH:O	1.83	0.97
1:B:418:LYS:O	2:B:703:HOH:O	1.81	0.95
1:A:541:LEU:O	1:A:541:LEU:HD23	1.65	0.95
1:A:579:LEU:O	1:A:579:LEU:CG	1.96	0.94
1:A:574:ILE:HG12	1:A:579:LEU:HA	1.48	0.93
1:B:569:CYS:SG	2:B:925:HOH:O	2.26	0.93
1:B:253:PHE:O	2:B:704:HOH:O	1.86	0.92
1:A:419:ASP:HB2	2:A:705:HOH:O	1.62	0.92
1:B:574:ILE:HD12	1:B:574:ILE:N	1.83	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:367:ARG:HH21	1:B:424:PHE:HE2	1.16	0.92
1:B:578:LEU:CD2	1:B:580:PHE:HD1	1.83	0.91
1:A:61:GLN:O	1:A:61:GLN:HG2	1.70	0.91
1:B:567:ARG:HD2	2:B:925:HOH:O	1.71	0.89
1:B:88:LEU:HD21	1:B:97:LEU:CD1	2.01	0.89
1:B:594:GLU:CG	2:B:945:HOH:O	2.12	0.89
1:A:425:THR:HG22	2:A:703:HOH:O	1.72	0.89
1:B:61:GLN:HB3	1:B:74:LYS:HZ2	1.37	0.89
1:B:420:ALA:O	2:B:705:HOH:O	1.89	0.89
1:B:220:CYS:C	1:B:221:ALA:O	2.00	0.89
1:B:497:ILE:O	1:B:497:ILE:CG2	2.20	0.89
1:B:15:ASP:CB	1:B:86:LYS:NZ	2.37	0.88
1:B:575:HIS:O	1:B:578:LEU:CD1	2.20	0.88
1:B:565:SER:O	1:B:573:ARG:NH2	2.06	0.87
1:A:489:LEU:O	1:A:493:LEU:HD22	1.75	0.87
1:B:565:SER:O	1:B:573:ARG:CZ	2.23	0.86
1:B:578:LEU:CD2	1:B:578:LEU:C	2.25	0.86
1:B:15:ASP:CG	1:B:86:LYS:HZ1	1.74	0.85
1:B:578:LEU:HD13	1:B:578:LEU:C	1.96	0.85
1:B:365:CYS:SG	2:B:717:HOH:O	2.35	0.85
1:A:581:TRP:CZ3	1:A:583:GLY:HA3	2.12	0.84
1:A:419:ASP:CG	2:A:705:HOH:O	2.05	0.83
1:B:477:THR:HG22	1:B:480:CYS:H	1.41	0.83
1:B:88:LEU:CD1	1:B:100:ILE:CD1	2.56	0.83
1:B:15:ASP:CB	1:B:86:LYS:HZ2	1.92	0.82
1:A:581:TRP:CH2	1:A:583:GLY:CA	2.60	0.82
1:A:74:LYS:NZ	1:A:75:GLY:O	2.13	0.81
1:A:581:TRP:CZ3	1:A:583:GLY:CA	2.63	0.81
1:B:27:LEU:HD22	1:B:92:SER:O	1.80	0.81
1:B:418:LYS:O	1:B:418:LYS:HG2	1.79	0.81
1:B:578:LEU:CD2	1:B:579:LEU:C	2.48	0.81
1:B:15:ASP:HB3	1:B:86:LYS:HZ2	1.45	0.81
1:A:368:VAL:HB	1:A:422:VAL:CG2	2.11	0.81
1:B:578:LEU:CD2	1:B:579:LEU:HA	1.97	0.81
1:B:495:GLU:O	2:B:706:HOH:O	1.98	0.81
1:B:578:LEU:CD2	1:B:580:PHE:CD1	2.62	0.81
1:A:64:PHE:O	1:A:70:LEU:HD12	1.81	0.80
1:A:61:GLN:O	1:A:61:GLN:HG3	1.81	0.80
1:B:286:ASN:H	1:B:286:ASN:ND2	1.76	0.80
1:B:466:GLY:O	1:B:469:ARG:NH1	2.15	0.80
1:B:61:GLN:CB	1:B:74:LYS:HD2	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:156:SER:OG	1:A:210:ILE:CD1	2.30	0.79
1:A:514:LYS:O	2:A:707:HOH:O	2.00	0.79
1:B:500:LEU:O	2:B:707:HOH:O	1.99	0.79
1:B:367:ARG:CZ	1:B:424:PHE:HE2	1.95	0.79
1:B:76:VAL:O	1:B:76:VAL:HG22	1.81	0.79
1:B:61:GLN:HB3	1:B:74:LYS:HD2	1.64	0.78
1:A:536:ILE:HD11	1:A:582:LYS:HA	1.63	0.78
1:B:83:VAL:CG1	2:B:885:HOH:O	2.18	0.78
1:B:170:VAL:O	2:B:709:HOH:O	2.00	0.78
1:B:590:GLN:HG2	2:B:917:HOH:O	1.82	0.78
1:B:570:ALA:HB3	2:B:791:HOH:O	1.82	0.78
1:B:15:ASP:HB3	1:B:86:LYS:NZ	1.98	0.77
1:B:590:GLN:HB3	2:B:915:HOH:O	1.85	0.77
1:B:14:ARG:HD2	1:B:15:ASP:N	2.00	0.77
1:B:79:ILE:HD12	1:B:79:ILE:H	1.49	0.77
1:B:575:HIS:N	1:B:578:LEU:CD1	2.35	0.77
1:A:89:LYS:HG3	1:A:90:ALA:H	1.49	0.76
1:B:497:ILE:O	1:B:501:VAL:HG23	1.85	0.76
1:B:567:ARG:HG3	1:B:569:CYS:SG	2.26	0.76
1:B:16:VAL:HG13	1:B:74:LYS:HE3	1.66	0.76
1:B:579:LEU:HD13	1:B:581:TRP:N	2.01	0.75
1:B:126:ALA:HB3	2:B:728:HOH:O	1.85	0.75
1:A:20:SER:C	1:A:21:LYS:O	2.11	0.75
1:B:574:ILE:HD12	1:B:574:ILE:H	1.51	0.75
1:A:419:ASP:HB2	2:A:704:HOH:O	1.86	0.75
1:A:83:VAL:HG22	1:A:84:PRO:HD3	1.66	0.74
1:A:83:VAL:CG2	1:A:84:PRO:CD	2.64	0.74
1:A:400:ALA:HA	1:A:403:LYS:HE2	1.70	0.74
1:B:419:ASP:C	1:B:420:ALA:O	2.20	0.74
1:B:221:ALA:O	2:B:710:HOH:O	2.05	0.74
1:A:581:TRP:CZ3	1:A:583:GLY:N	2.56	0.73
1:B:575:HIS:O	1:B:576:GLY:C	2.26	0.73
1:B:79:ILE:HD12	1:B:79:ILE:N	2.04	0.73
1:B:578:LEU:HD23	1:B:579:LEU:CA	2.18	0.73
1:B:222:ARG:HG3	1:B:222:ARG:HH11	1.53	0.73
1:B:88:LEU:CD2	1:B:97:LEU:HD13	2.12	0.72
1:B:446:VAL:HG12	1:B:446:VAL:O	1.89	0.72
1:B:272:PHE:O	2:B:712:HOH:O	2.07	0.72
1:A:467:LYS:NZ	2:A:720:HOH:O	2.21	0.72
1:A:80:THR:OG1	1:A:81:PRO:HD2	1.90	0.72
1:B:483:GLN:OE1	2:B:711:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:581:TRP:CE2	1:A:583:GLY:HA3	2.25	0.72
1:A:321:ALA:O	2:A:709:HOH:O	2.07	0.71
1:B:588:ILE:H	1:B:588:ILE:CD1	2.00	0.71
1:A:578:LEU:HB2	1:A:580:PHE:CE1	2.25	0.71
1:A:378:GLU:O	2:A:711:HOH:O	2.08	0.71
1:A:142:GLU:OE2	2:A:712:HOH:O	2.09	0.71
1:A:196:ALA:O	2:A:710:HOH:O	2.07	0.71
1:B:178:LEU:HB2	2:B:732:HOH:O	1.90	0.71
1:B:578:LEU:O	1:B:578:LEU:CG	2.25	0.71
1:B:88:LEU:HD13	1:B:100:ILE:HD12	1.73	0.70
1:A:76:VAL:O	1:A:76:VAL:HG23	1.91	0.70
1:B:495:GLU:O	1:B:495:GLU:HG3	1.91	0.70
1:B:259:ASN:ND2	2:B:725:HOH:O	2.23	0.70
1:B:88:LEU:HD11	1:B:100:ILE:HD12	1.71	0.70
1:A:40:LYS:N	2:A:714:HOH:O	2.10	0.69
1:B:566:PHE:C	1:B:573:ARG:NH2	2.45	0.69
1:A:175:GLY:O	2:A:713:HOH:O	2.09	0.69
1:B:518:PHE:O	2:B:713:HOH:O	2.11	0.69
1:B:257:LEU:N	2:B:704:HOH:O	2.24	0.69
1:A:111:ARG:HA	1:A:114:LEU:HB2	1.76	0.68
1:A:114:LEU:HD21	1:A:151:LYS:HD3	1.76	0.68
1:A:259:ASN:OD1	2:A:715:HOH:O	2.12	0.68
1:B:567:ARG:HA	1:B:573:ARG:NE	2.09	0.68
1:B:63:LYS:HG3	1:B:70:LEU:HD11	1.76	0.68
1:A:533:ALA:HB1	1:A:544:LEU:HD22	1.76	0.67
1:B:61:GLN:CB	1:B:74:LYS:HZ2	2.06	0.67
1:B:121:SER:N	2:B:724:HOH:O	2.23	0.67
1:B:566:PHE:CA	1:B:573:ARG:NH2	2.57	0.67
1:A:541:LEU:O	1:A:541:LEU:CD2	2.42	0.67
1:A:578:LEU:CB	1:A:580:PHE:CE1	2.78	0.67
1:A:536:ILE:HD13	1:A:583:GLY:O	1.95	0.66
1:B:591:GLU:OE1	1:B:591:GLU:HA	1.92	0.66
1:A:56:LEU:HD12	1:A:62:PHE:HZ	1.60	0.66
1:B:396:GLU:OE1	2:B:715:HOH:O	2.14	0.66
1:B:208:GLN:HG3	2:B:810:HOH:O	1.96	0.66
1:A:83:VAL:CG2	1:A:84:PRO:HD3	2.26	0.66
1:A:578:LEU:HB2	1:A:580:PHE:HE1	1.60	0.66
1:B:132:GLN:O	1:B:132:GLN:HG3	1.96	0.66
1:A:94:LEU:HD21	1:A:108:ARG:HG2	1.76	0.66
1:B:423:SER:OG	1:B:423:SER:O	1.81	0.66
1:A:536:ILE:HD13	1:A:584:GLY:HA2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:LYS:HG3	1:A:90:ALA:N	2.11	0.66
1:B:178:LEU:HB3	1:B:181:LEU:HD12	1.77	0.66
1:A:451:SER:HA	1:A:479:PHE:HD2	1.60	0.65
1:B:122:LEU:N	2:B:728:HOH:O	2.28	0.65
1:B:369:VAL:HG13	1:B:424:PHE:O	1.96	0.65
1:B:364:CYS:O	2:B:717:HOH:O	2.15	0.65
1:B:574:ILE:CD1	1:B:574:ILE:N	2.51	0.65
1:A:77:ASP:OD1	1:A:77:ASP:O	2.14	0.65
1:A:24:PRO:HD3	1:A:90:ALA:HA	1.77	0.65
1:A:518:PHE:HB3	2:A:707:HOH:O	1.97	0.65
1:B:578:LEU:HD13	1:B:578:LEU:H	1.61	0.65
1:B:578:LEU:HD23	1:B:580:PHE:HD1	1.39	0.65
1:B:454:THR:HG23	2:B:736:HOH:O	1.97	0.65
1:B:118:CYS:SG	2:B:836:HOH:O	2.54	0.65
1:B:578:LEU:CD2	1:B:578:LEU:O	2.43	0.65
1:B:88:LEU:HD12	1:B:100:ILE:CD1	2.25	0.65
1:A:176:SER:OG	2:A:716:HOH:O	2.15	0.64
1:A:44:ASP:HB3	2:A:714:HOH:O	1.98	0.64
1:B:233:LEU:O	2:B:716:HOH:O	2.14	0.64
1:A:259:ASN:HA	2:A:715:HOH:O	1.97	0.64
1:B:130:ARG:HB3	1:B:157:MET:HE1	1.78	0.64
1:A:580:PHE:CD2	1:A:585:VAL:HG22	2.33	0.63
1:A:580:PHE:HD1	1:A:580:PHE:H	1.44	0.63
1:B:130:ARG:O	1:B:134:LEU:HD12	1.97	0.63
1:B:498:TRP:O	1:B:502:SER:OG	2.16	0.63
1:A:209:ARG:NH1	2:A:710:HOH:O	2.31	0.63
1:A:431:THR:HG22	1:A:433:ALA:H	1.64	0.63
1:B:422:VAL:O	2:B:705:HOH:O	2.15	0.63
1:A:551:CYS:HB2	2:A:707:HOH:O	1.97	0.62
1:B:19:VAL:O	1:B:75:GLY:HA3	1.99	0.62
1:A:581:TRP:CE3	1:A:583:GLY:CA	2.82	0.62
1:B:573:ARG:HA	1:B:574:ILE:HD12	1.82	0.62
1:B:594:GLU:OE2	1:B:594:GLU:HA	1.99	0.62
1:A:562:MET:O	1:A:562:MET:HG2	1.99	0.62
1:B:575:HIS:C	1:B:578:LEU:HD12	2.19	0.62
1:A:581:TRP:CD2	1:A:583:GLY:N	2.62	0.62
1:B:465:TYR:O	1:B:468:VAL:O	2.18	0.62
1:B:596:TRP:C	2:B:803:HOH:O	2.38	0.62
1:B:18:LEU:HB2	1:B:87:VAL:HG22	1.82	0.62
1:B:188:GLN:NE2	2:B:731:HOH:O	2.32	0.61
1:B:130:ARG:O	1:B:134:LEU:CD1	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:316:LEU:HA	2:B:717:HOH:O	2.00	0.61
1:A:147:GLN:HA	2:A:753:HOH:O	2.01	0.61
1:A:560:GLN:HA	1:A:563:TYR:HB3	1.81	0.61
1:B:60:LYS:HD2	1:B:61:GLN:H	1.64	0.61
1:B:578:LEU:HD22	1:B:578:LEU:O	1.97	0.61
1:A:156:SER:OG	1:A:210:ILE:HD12	2.01	0.61
1:B:532:ARG:HG3	2:B:811:HOH:O	1.99	0.61
1:B:433:ALA:O	1:B:437:ARG:HG3	2.01	0.60
1:B:566:PHE:C	1:B:573:ARG:CZ	2.69	0.60
1:B:579:LEU:HD13	1:B:579:LEU:C	2.22	0.60
1:A:156:SER:OG	1:A:210:ILE:HD11	2.01	0.60
1:A:58:THR:O	1:A:58:THR:OG1	2.13	0.60
1:A:376:THR:HG22	1:A:379:ILE:H	1.66	0.60
1:A:354:SER:HB3	2:A:817:HOH:O	2.01	0.60
1:B:184:ILE:H	1:B:184:ILE:HD12	1.67	0.60
1:B:161:ARG:HG2	2:B:849:HOH:O	2.02	0.60
1:B:504:VAL:HG13	2:B:707:HOH:O	2.02	0.60
1:B:568:LYS:O	1:B:574:ILE:HD13	1.97	0.60
1:B:594:GLU:CB	2:B:945:HOH:O	2.45	0.60
1:B:21:LYS:HD3	1:B:76:VAL:HA	1.84	0.60
1:B:569:CYS:HB2	2:B:745:HOH:O	2.01	0.59
1:B:574:ILE:HG23	1:B:578:LEU:O	2.02	0.59
1:A:471:LEU:HB2	2:A:733:HOH:O	2.01	0.59
1:A:475:VAL:HG23	1:A:475:VAL:O	2.01	0.59
1:B:549:GLN:HG2	2:B:921:HOH:O	2.02	0.59
1:B:578:LEU:HD21	1:B:580:PHE:HD1	1.62	0.59
1:A:59:GLY:O	1:A:74:LYS:HE2	2.01	0.59
1:B:22:ASP:OD1	1:B:22:ASP:O	2.21	0.59
1:B:495:GLU:O	1:B:495:GLU:CG	2.49	0.59
1:B:64:PHE:HB3	2:B:821:HOH:O	2.03	0.59
1:B:15:ASP:CG	1:B:86:LYS:HZ3	2.00	0.58
1:B:518:PHE:CE1	1:B:522:TYR:HD2	2.21	0.58
1:B:538:THR:O	1:B:560:GLN:NE2	2.30	0.58
1:A:352:PRO:HD3	1:A:361:ASP:O	2.03	0.58
1:B:588:ILE:HD13	1:B:588:ILE:N	2.04	0.58
1:A:426:LEU:HD13	1:A:435:VAL:HG22	1.84	0.58
1:B:376:THR:HG22	1:B:379:ILE:H	1.69	0.58
1:B:127:LEU:HD22	2:B:874:HOH:O	2.02	0.58
1:B:17:ILE:H	1:B:17:ILE:HD12	1.68	0.58
1:B:446:VAL:O	1:B:446:VAL:CG1	2.52	0.58
1:B:270:LEU:HD21	2:B:848:HOH:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:468:VAL:HB	2:A:733:HOH:O	2.04	0.57
1:B:56:LEU:HB3	2:B:928:HOH:O	2.04	0.57
1:B:259:ASN:HA	2:B:725:HOH:O	2.05	0.57
1:B:27:LEU:HB3	2:B:730:HOH:O	2.03	0.57
1:B:120:TRP:N	2:B:724:HOH:O	2.37	0.57
1:B:566:PHE:CB	1:B:573:ARG:NH2	2.68	0.57
1:B:574:ILE:HA	1:B:578:LEU:HD11	1.85	0.57
1:A:21:LYS:O	1:A:22:ASP:OD1	2.22	0.57
1:B:315:THR:OG1	1:B:422:VAL:HG21	2.04	0.57
1:A:101:PHE:HB3	2:A:972:HOH:O	2.03	0.57
1:A:580:PHE:N	1:A:580:PHE:CD1	2.72	0.57
1:B:152:ILE:HD12	1:B:153:HIS:H	1.69	0.57
1:B:381:ASP:OD2	1:B:477:THR:HB	2.05	0.57
1:A:492:VAL:HG22	1:A:492:VAL:O	2.05	0.56
1:A:270:LEU:HD11	2:A:952:HOH:O	2.04	0.56
1:A:536:ILE:O	2:A:718:HOH:O	2.18	0.56
1:B:151:LYS:NZ	2:B:739:HOH:O	2.38	0.56
1:B:270:LEU:O	2:B:718:HOH:O	2.18	0.56
1:B:195:LYS:HD2	1:B:195:LYS:O	2.06	0.56
1:B:367:ARG:CZ	1:B:424:PHE:CE2	2.83	0.56
1:A:139:ASP:N	2:A:712:HOH:O	2.11	0.55
1:B:159:MET:HE3	1:B:210:ILE:HD12	1.89	0.55
1:A:23:ILE:HB	1:A:27:LEU:HD23	1.88	0.55
1:A:574:ILE:HG22	1:A:574:ILE:O	2.05	0.55
1:B:282:GLU:OE2	1:B:292:LYS:NZ	2.39	0.55
1:B:580:PHE:O	2:B:719:HOH:O	2.18	0.55
1:A:477:THR:O	1:A:481:LYS:HD2	2.07	0.55
1:B:89:LYS:NZ	2:B:722:HOH:O	2.20	0.55
1:B:257:LEU:HG	2:B:704:HOH:O	2.07	0.55
1:B:574:ILE:CA	1:B:578:LEU:HD11	2.36	0.55
1:A:398:VAL:HA	2:A:941:HOH:O	2.05	0.55
1:A:581:TRP:CE2	1:A:583:GLY:CA	2.90	0.55
1:B:318:ASP:OD1	1:B:318:ASP:O	2.25	0.54
1:B:588:ILE:O	1:B:588:ILE:HG12	2.07	0.54
1:B:88:LEU:HD12	1:B:100:ILE:HD11	1.89	0.54
1:A:54:ARG:NH1	2:A:739:HOH:O	2.40	0.54
1:B:61:GLN:CB	1:B:74:LYS:NZ	2.70	0.54
1:B:547:VAL:HB	2:B:871:HOH:O	2.08	0.54
1:B:316:LEU:HD12	2:B:717:HOH:O	2.07	0.54
1:B:578:LEU:HG	1:B:580:PHE:HE1	1.73	0.54
1:A:80:THR:OG1	1:A:81:PRO:CD	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:14:ARG:NH1	1:B:15:ASP:O	2.41	0.53
1:B:63:LYS:HE2	1:B:70:LEU:HD11	1.89	0.53
1:B:451:SER:HA	1:B:479:PHE:CD2	2.43	0.53
1:A:46:PHE:O	1:A:50:GLN:HG2	2.09	0.53
1:B:232:THR:HG23	2:B:716:HOH:O	2.08	0.53
1:A:401:ILE:HD12	2:A:941:HOH:O	2.08	0.53
1:A:540:THR:OG1	2:A:717:HOH:O	2.17	0.53
1:B:21:LYS:NZ	2:B:743:HOH:O	2.41	0.53
1:A:24:PRO:HD2	1:A:27:LEU:HB3	1.89	0.53
1:A:578:LEU:HB3	1:A:580:PHE:CE1	2.43	0.53
1:B:374:GLY:O	2:B:720:HOH:O	2.19	0.53
1:A:56:LEU:HD12	1:A:62:PHE:CZ	2.41	0.53
1:A:368:VAL:CB	1:A:422:VAL:HG21	2.27	0.53
1:B:14:ARG:HG3	1:B:14:ARG:HH11	1.74	0.53
1:A:524:LYS:NZ	2:A:738:HOH:O	2.40	0.53
1:B:14:ARG:NH1	1:B:14:ARG:HG3	2.24	0.53
1:A:549:GLN:NE2	2:A:737:HOH:O	2.40	0.52
1:B:544:LEU:HB2	2:B:871:HOH:O	2.08	0.52
1:B:580:PHE:CD1	1:B:580:PHE:N	2.78	0.52
1:A:587:LYS:HD3	1:A:589:ILE:HD11	1.91	0.52
1:A:459:GLU:OE1	1:A:462:ARG:NH2	2.35	0.52
1:A:466:GLY:O	1:A:469:ARG:HD2	2.09	0.52
1:A:542:CYS:HB3	2:A:756:HOH:O	2.09	0.52
1:B:36:SER:OG	1:B:65:GLU:HG2	2.10	0.52
1:B:220:CYS:HB3	1:B:224:ILE:HD11	1.92	0.52
1:A:541:LEU:HD23	1:A:541:LEU:C	2.30	0.52
1:B:544:LEU:HD12	1:B:556:LEU:HD11	1.92	0.52
1:B:14:ARG:NH1	2:B:714:HOH:O	2.11	0.52
1:B:590:GLN:CG	2:B:915:HOH:O	2.58	0.51
1:A:514:LYS:HZ3	1:A:554:LEU:HD11	1.74	0.51
1:B:375:VAL:HA	2:B:720:HOH:O	2.09	0.51
1:B:578:LEU:HD23	1:B:579:LEU:C	2.26	0.51
1:B:274:LYS:HD2	2:B:903:HOH:O	2.10	0.51
1:B:373:ASP:OD2	1:B:428:LYS:HG2	2.09	0.51
1:B:123:THR:N	2:B:728:HOH:O	2.34	0.51
1:B:234:VAL:HG22	2:B:716:HOH:O	2.10	0.51
1:B:270:LEU:HD11	2:B:848:HOH:O	2.10	0.51
1:B:590:GLN:HG2	2:B:915:HOH:O	2.10	0.51
1:A:451:SER:HA	1:A:479:PHE:CD2	2.45	0.50
1:A:581:TRP:CD2	1:A:583:GLY:CA	2.94	0.50
1:A:581:TRP:CD1	1:A:581:TRP:N	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:88:LEU:CD2	1:B:97:LEU:CD1	2.82	0.50
1:B:98:GLU:OE2	1:B:108:ARG:NH2	2.44	0.50
1:B:130:ARG:O	1:B:130:ARG:HD2	2.10	0.50
1:B:538:THR:HG22	2:B:719:HOH:O	2.10	0.50
1:B:575:HIS:H	1:B:578:LEU:HD12	1.66	0.50
1:A:572:GLY:HA2	2:A:947:HOH:O	2.10	0.50
1:B:567:ARG:HG3	2:B:925:HOH:O	2.11	0.50
1:A:262:MET:HE1	1:A:351:ALA:HA	1.93	0.50
1:B:566:PHE:HB2	1:B:573:ARG:NH2	2.27	0.50
1:B:265:LYS:CD	2:B:725:HOH:O	2.04	0.50
1:A:278:VAL:HG12	1:A:296:VAL:HG23	1.94	0.50
1:B:305:VAL:HB	2:B:721:HOH:O	2.12	0.50
1:A:529:GLN:O	1:A:532:ARG:HG2	2.12	0.50
1:B:401:ILE:N	2:B:702:HOH:O	1.96	0.50
1:B:61:GLN:CA	1:B:74:LYS:HD2	2.42	0.50
1:B:222:ARG:HG3	1:B:222:ARG:NH1	2.22	0.50
1:B:179:SER:HA	1:B:182:PHE:CE1	2.47	0.49
1:A:536:ILE:HD12	1:A:537:VAL:N	2.27	0.49
1:A:524:LYS:HE2	2:A:978:HOH:O	2.13	0.49
1:B:137:ILE:HD11	2:B:737:HOH:O	2.11	0.49
1:B:379:ILE:HA	1:B:435:VAL:HG21	1.94	0.49
1:B:306:VAL:O	2:B:721:HOH:O	2.19	0.49
1:B:61:GLN:CB	1:B:74:LYS:CD	2.86	0.49
1:B:61:GLN:CD	1:B:74:LYS:HZ3	2.13	0.49
1:A:89:LYS:HE3	2:A:724:HOH:O	2.13	0.49
1:A:452:SER:N	2:A:742:HOH:O	2.42	0.49
1:A:492:VAL:HG13	1:A:493:LEU:HD13	1.95	0.49
1:B:181:LEU:HA	1:B:184:ILE:HD13	1.94	0.49
1:B:398:VAL:HG13	2:B:904:HOH:O	2.12	0.49
1:A:511:LEU:O	1:A:514:LYS:HB2	2.12	0.49
1:A:273:PHE:HB3	1:A:361:ASP:OD1	2.13	0.49
1:A:578:LEU:O	1:A:580:PHE:CE1	2.66	0.49
1:B:469:ARG:HH11	1:B:469:ARG:HG2	1.77	0.49
1:A:489:LEU:O	1:A:489:LEU:HG	2.13	0.48
1:B:409:PHE:CE2	1:B:410:LEU:HD22	2.48	0.48
1:A:569:CYS:HB2	2:A:944:HOH:O	2.13	0.48
1:A:431:THR:HB	1:A:434:ASP:H	1.78	0.48
1:A:33:PHE:HB3	1:A:106:PHE:CD2	2.48	0.48
1:A:270:LEU:HD21	2:A:952:HOH:O	2.13	0.48
1:A:515:VAL:HA	2:A:707:HOH:O	2.14	0.48
1:B:174:LEU:HG	2:B:709:HOH:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:501:VAL:O	1:B:505:ILE:HG13	2.14	0.48
1:A:94:LEU:HB2	1:A:111:ARG:HD3	1.95	0.48
1:A:581:TRP:C	1:A:583:GLY:O	2.52	0.48
1:B:14:ARG:O	1:B:15:ASP:C	2.51	0.48
1:B:39:PRO:HG3	1:B:145:TRP:CZ2	2.48	0.48
1:A:536:ILE:CD1	1:A:581:TRP:O	2.61	0.48
1:B:61:GLN:HB3	1:B:74:LYS:NZ	2.17	0.48
1:A:582:LYS:C	1:A:583:GLY:O	2.47	0.48
1:B:114:LEU:O	2:B:723:HOH:O	2.20	0.47
1:A:367:ARG:HB3	1:A:412:HIS:CD2	2.49	0.47
1:A:55:ASN:HB3	1:A:62:PHE:CD1	2.50	0.47
1:B:378:GLU:OE1	1:B:378:GLU:N	2.45	0.47
1:B:578:LEU:CD1	1:B:578:LEU:N	2.77	0.47
1:A:175:GLY:O	1:A:177:ASN:O	2.32	0.47
1:B:501:VAL:O	1:B:501:VAL:HG12	2.15	0.47
1:B:573:ARG:O	1:B:579:LEU:O	2.33	0.47
1:B:579:LEU:HD13	1:B:580:PHE:N	2.29	0.47
1:B:408:LYS:HG2	2:B:776:HOH:O	2.15	0.47
1:B:578:LEU:HD13	1:B:578:LEU:N	2.26	0.47
1:A:77:ASP:OD1	1:A:77:ASP:C	2.52	0.47
1:B:418:LYS:O	1:B:418:LYS:CG	2.56	0.47
1:B:73:LEU:HG	2:B:821:HOH:O	2.15	0.47
1:B:371:LEU:HD22	2:B:720:HOH:O	2.14	0.47
1:A:34:TYR:CD1	1:A:104:SER:HB2	2.50	0.47
1:B:327:SER:HB3	2:B:932:HOH:O	2.14	0.47
1:B:86:LYS:NZ	2:B:746:HOH:O	2.47	0.46
1:B:153:HIS:HB2	2:B:739:HOH:O	2.14	0.46
1:A:59:GLY:O	1:A:74:LYS:CE	2.63	0.46
1:B:274:LYS:HE3	2:B:794:HOH:O	2.14	0.46
1:B:536:ILE:HD11	1:B:582:LYS:O	2.15	0.46
1:A:40:LYS:HB2	2:A:917:HOH:O	2.16	0.46
1:A:477:THR:HG22	1:A:480:CYS:H	1.80	0.46
1:B:14:ARG:HH22	1:B:71:PHE:HA	1.80	0.46
1:A:55:ASN:HB3	1:A:62:PHE:CE1	2.50	0.46
1:B:155:SER:C	1:B:159:MET:HE2	2.36	0.46
1:B:222:ARG:NH1	2:B:747:HOH:O	2.48	0.46
1:B:286:ASN:H	1:B:286:ASN:HD22	1.57	0.46
1:B:577:ASP:O	1:B:577:ASP:OD1	2.32	0.46
1:B:589:ILE:HB	1:B:590:GLN:H	1.51	0.46
1:A:536:ILE:HD12	1:A:537:VAL:H	1.81	0.46
1:A:465:TYR:HA	2:A:733:HOH:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:567:ARG:CD	2:B:925:HOH:O	2.45	0.46
1:A:134:LEU:O	1:A:138:PHE:HB2	2.16	0.45
1:A:570:ALA:CB	1:A:571:LEU:HD12	2.46	0.45
1:B:399:ALA:O	1:B:403:LYS:HG3	2.16	0.45
1:A:29:ASP:HB3	1:A:33:PHE:CE2	2.52	0.45
1:A:311:ARG:HB2	2:A:809:HOH:O	2.16	0.45
1:B:134:LEU:HD13	2:B:909:HOH:O	2.15	0.45
1:A:219:LYS:NZ	1:A:239:ALA:O	2.41	0.45
1:A:497:ILE:O	1:A:501:VAL:HG23	2.16	0.45
1:B:451:SER:HA	1:B:479:PHE:HD2	1.80	0.45
1:B:578:LEU:CD1	1:B:578:LEU:C	2.43	0.45
1:A:449:VAL:O	1:A:483:GLN:OE1	2.35	0.45
1:A:578:LEU:HD13	1:A:585:VAL:HG11	1.98	0.45
1:A:415:VAL:HG23	1:A:415:VAL:O	2.17	0.45
1:A:174:LEU:HB3	2:A:713:HOH:O	2.16	0.45
1:A:426:LEU:CD1	1:A:435:VAL:HG22	2.45	0.45
1:B:560:GLN:O	1:B:563:TYR:HB3	2.17	0.45
1:B:449:VAL:HG22	2:B:767:HOH:O	2.16	0.44
1:B:573:ARG:C	1:B:574:ILE:HD12	2.36	0.44
1:B:590:GLN:CB	2:B:915:HOH:O	2.53	0.44
1:A:179:SER:HA	1:A:182:PHE:CD1	2.52	0.44
1:A:254:PHE:O	1:A:265:LYS:HD2	2.17	0.44
1:A:561:PHE:O	1:A:561:PHE:CD1	2.70	0.44
1:A:134:LEU:HD12	1:A:134:LEU:HA	1.81	0.44
1:A:375:VAL:HG21	1:A:401:ILE:HG23	1.98	0.44
1:A:382:GLY:HA3	2:A:711:HOH:O	2.17	0.44
1:B:577:ASP:O	1:B:577:ASP:CG	2.56	0.44
1:A:479:PHE:H	1:A:479:PHE:HD1	1.66	0.44
1:B:31:LEU:O	1:B:34:TYR:HD2	1.99	0.44
1:B:267:PHE:HB3	2:B:718:HOH:O	2.16	0.44
1:B:567:ARG:CG	1:B:569:CYS:SG	3.00	0.44
1:A:500:LEU:HA	2:A:729:HOH:O	2.17	0.44
1:B:265:LYS:N	2:B:712:HOH:O	2.51	0.44
1:B:21:LYS:HB2	1:B:77:ASP:H	1.82	0.44
1:B:496:GLY:O	1:B:497:ILE:HB	2.18	0.44
1:A:60:LYS:N	2:A:728:HOH:O	2.33	0.44
1:B:590:GLN:HE21	1:B:590:GLN:HB2	1.51	0.44
1:B:469:ARG:HH11	1:B:469:ARG:CG	2.30	0.44
1:B:570:ALA:CB	2:B:791:HOH:O	2.52	0.44
1:B:579:LEU:HB3	1:B:586:HIS:H	1.82	0.44
1:B:183:GLN:HB2	2:B:842:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:567:ARG:CA	1:B:573:ARG:CD	2.96	0.44
1:A:84:PRO:CB	2:A:930:HOH:O	2.39	0.43
1:A:477:THR:CG2	1:A:480:CYS:H	2.31	0.43
1:B:428:LYS:HD3	2:B:941:HOH:O	2.17	0.43
1:B:460:PHE:HB3	2:B:767:HOH:O	2.18	0.43
1:A:64:PHE:O	1:A:70:LEU:CD1	2.62	0.43
1:A:448:ASP:HA	1:A:450:TRP:CH2	2.53	0.43
1:A:574:ILE:HG23	1:A:575:HIS:O	2.18	0.43
1:B:578:LEU:CD1	1:B:578:LEU:H	2.29	0.43
1:B:588:ILE:CD1	1:B:588:ILE:N	2.73	0.43
1:B:152:ILE:HD12	1:B:153:HIS:N	2.33	0.43
1:B:490:ALA:HA	1:B:498:TRP:CE3	2.54	0.43
1:B:571:LEU:HD23	1:B:571:LEU:HA	1.64	0.43
1:A:63:LYS:HB3	1:A:70:LEU:HD11	2.00	0.43
1:A:556:LEU:HD23	1:A:556:LEU:HA	1.88	0.43
1:B:567:ARG:HA	1:B:573:ARG:CD	2.48	0.43
1:B:574:ILE:C	1:B:578:LEU:HD11	2.32	0.43
1:A:379:ILE:HA	1:A:435:VAL:HG21	1.99	0.43
1:B:159:MET:HE1	1:B:210:ILE:HG23	2.00	0.43
1:B:459:GLU:HG2	2:B:788:HOH:O	2.18	0.43
1:B:484:MET:O	1:B:488:ILE:HG12	2.18	0.43
1:A:111:ARG:CA	1:A:114:LEU:HB2	2.47	0.43
1:B:60:LYS:HD2	1:B:61:GLN:N	2.33	0.43
1:A:591:GLU:OE2	1:A:591:GLU:HA	2.17	0.43
1:B:36:SER:HB2	2:B:798:HOH:O	2.18	0.43
1:A:50:GLN:NE2	2:A:754:HOH:O	2.51	0.43
1:B:61:GLN:HA	1:B:74:LYS:HD2	2.01	0.43
1:A:533:ALA:O	1:A:534:LYS:HD3	2.19	0.42
1:A:110:TYR:O	1:A:113:LEU:HB3	2.19	0.42
1:A:534:LYS:HD2	1:A:534:LYS:HA	1.75	0.42
1:B:380:ASN:O	1:B:384:ILE:HG13	2.19	0.42
1:B:455:GLU:HG3	1:B:506:TYR:CE2	2.54	0.42
1:A:190:VAL:HG13	2:A:833:HOH:O	2.20	0.42
1:B:518:PHE:CE1	1:B:522:TYR:CD2	3.05	0.42
1:B:29:ASP:HB3	1:B:33:PHE:CE2	2.55	0.42
1:B:71:PHE:O	1:B:72:LEU:HD12	2.19	0.42
1:B:117:ALA:C	2:B:724:HOH:O	2.56	0.42
1:B:118:CYS:HB3	2:B:900:HOH:O	2.18	0.42
1:B:346:ASP:O	1:B:347:ARG:HD3	2.19	0.42
1:B:501:VAL:HG12	1:B:505:ILE:HG12	2.02	0.42
1:A:159:MET:N	2:A:753:HOH:O	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:438:LEU:HD23	1:A:438:LEU:HA	1.65	0.42
1:B:455:GLU:HG3	1:B:506:TYR:CZ	2.54	0.42
1:B:567:ARG:CG	2:B:925:HOH:O	2.65	0.42
1:B:112:GLU:HG3	2:B:835:HOH:O	2.18	0.42
1:B:292:LYS:HE2	2:B:930:HOH:O	2.18	0.42
1:A:510:GLY:N	2:A:745:HOH:O	2.46	0.42
1:B:222:ARG:NH1	1:B:222:ARG:CG	2.83	0.42
1:B:61:GLN:CD	1:B:74:LYS:NZ	2.60	0.42
1:B:544:LEU:CD1	1:B:556:LEU:HD11	2.49	0.42
1:A:178:LEU:HD23	1:A:233:LEU:HD11	2.02	0.42
1:A:463:LEU:HD23	1:A:463:LEU:HA	1.88	0.42
1:B:158:ALA:HA	2:B:849:HOH:O	2.19	0.42
1:B:160:ARG:HD2	2:B:874:HOH:O	2.20	0.42
1:B:568:LYS:HA	1:B:568:LYS:HD2	1.55	0.42
1:B:231:ARG:HD3	2:B:712:HOH:O	2.20	0.41
1:A:542:CYS:SG	2:A:718:HOH:O	2.62	0.41
1:A:567:ARG:HA	1:A:573:ARG:HD3	2.03	0.41
1:A:172:ASP:O	2:A:721:HOH:O	2.22	0.41
1:B:266:ILE:N	1:B:266:ILE:HD13	2.35	0.41
1:B:19:VAL:O	1:B:75:GLY:CA	2.68	0.41
1:B:108:ARG:HB3	2:B:783:HOH:O	2.19	0.41
1:A:63:LYS:CD	1:A:63:LYS:H	2.33	0.41
1:A:179:SER:HA	1:A:182:PHE:CE1	2.55	0.41
1:A:406:PRO:HA	1:A:414:PHE:O	2.20	0.41
1:B:26:GLN:HG2	1:B:151:LYS:HE2	2.02	0.41
1:B:173:ALA:HB3	2:B:709:HOH:O	2.19	0.41
1:A:422:VAL:HG13	2:A:704:HOH:O	2.21	0.41
1:B:489:LEU:HA	1:B:492:VAL:HG12	2.03	0.41
1:B:159:MET:CE	1:B:210:ILE:HG23	2.51	0.41
1:A:120:TRP:N	2:A:708:HOH:O	2.54	0.41
1:B:579:LEU:HB2	1:B:586:HIS:O	2.19	0.41
1:A:70:LEU:HD12	1:A:71:PHE:H	1.86	0.41
1:A:16:VAL:CG1	1:A:74:LYS:HB2	2.51	0.41
1:A:428:LYS:O	1:A:428:LYS:HG2	2.21	0.41
1:B:79:ILE:N	1:B:79:ILE:CD1	2.73	0.41
1:B:79:ILE:CD1	1:B:79:ILE:O	2.69	0.41
1:B:131:ALA:HA	2:B:909:HOH:O	2.20	0.41
1:A:139:ASP:OD1	1:A:142:GLU:HG3	2.20	0.40
1:B:565:SER:C	1:B:573:ARG:HH22	2.22	0.40
1:B:42:TYR:HE2	1:B:147:GLN:HB3	1.85	0.40
1:B:46:PHE:HA	1:B:148:VAL:HG21	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:436:LEU:N	2:A:760:HOH:O	2.55	0.40
1:B:130:ARG:O	1:B:134:LEU:HD13	2.22	0.40
1:B:512:PHE:O	1:B:516:VAL:HG23	2.21	0.40
1:B:575:HIS:O	1:B:577:ASP:N	2.54	0.40
1:A:107:ALA:O	1:A:110:TYR:HB3	2.21	0.40
1:A:536:ILE:CD1	1:A:583:GLY:O	2.67	0.40
1:B:152:ILE:HG13	2:B:866:HOH:O	2.21	0.40
1:A:279:ARG:HG3	2:A:731:HOH:O	2.21	0.40
1:A:489:LEU:O	1:A:489:LEU:CG	2.69	0.40
1:A:582:LYS:HB2	1:A:582:LYS:HE2	1.82	0.40
1:B:107:ALA:O	1:B:110:TYR:HB3	2.22	0.40
1:B:403:LYS:HE2	1:B:403:LYS:HB3	1.68	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	582/673 (86%)	550 (94%)	25 (4%)	7 (1%)	13 17
1	B	582/673 (86%)	560 (96%)	19 (3%)	3 (0%)	29 39
All	All	1164/1346 (86%)	1110 (95%)	44 (4%)	10 (1%)	17 24

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	591	GLU
1	A	593	ASP
1	B	497	ILE
1	A	84	PRO
1	A	590	GLN
1	B	76	VAL

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Mol	Chain	Res	Type
1	A	588	ILE
1	B	589	ILE
1	A	589	ILE
1	A	592	GLY

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	485/565 (86%)	446 (92%)	39 (8%)	12	15
1	B	485/565 (86%)	445 (92%)	40 (8%)	11	14
All	All	970/1130 (86%)	891 (92%)	79 (8%)	11	15

All (79) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	ASP
1	A	61	GLN
1	A	79	ILE
1	A	80	THR
1	A	92	SER
1	A	137	ILE
1	A	148	VAL
1	A	178	LEU
1	A	222	ARG
1	A	223	SER
1	A	296	VAL
1	A	314	LEU
1	A	376	THR
1	A	424	PHE
1	A	425	THR
1	A	452	SER
1	A	455	GLU
1	A	457	SER
1	A	472	GLU

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Mol	Chain	Res	Type
1	A	477	THR
1	A	493	LEU
1	A	495	GLU
1	A	497	ILE
1	A	541	LEU
1	A	543	VAL
1	A	561	PHE
1	A	566	PHE
1	A	568	LYS
1	A	574	ILE
1	A	575	HIS
1	A	579	LEU
1	A	580	PHE
1	A	581	TRP
1	A	587	LYS
1	A	588	ILE
1	A	589	ILE
1	A	591	GLU
1	A	593	ASP
1	A	594	GLU
1	B	16	VAL
1	B	74	LYS
1	B	76	VAL
1	B	78	LYS
1	B	79	ILE
1	B	80	THR
1	B	86	LYS
1	B	88	LEU
1	B	140	PRO
1	B	148	VAL
1	B	152	ILE
1	B	157	MET
1	B	222	ARG
1	B	223	SER
1	B	270	LEU
1	B	322	ASP
1	B	376	THR
1	B	410	LEU
1	B	418	LYS
1	B	419	ASP
1	B	422	VAL
1	B	423	SER

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Mol	Chain	Res	Type
1	B	424	PHE
1	B	425	THR
1	B	472	GLU
1	B	477	THR
1	B	504	VAL
1	B	505	ILE
1	B	568	LYS
1	B	569	CYS
1	B	574	ILE
1	B	577	ASP
1	B	578	LEU
1	B	579	LEU
1	B	588	ILE
1	B	589	ILE
1	B	590	GLN
1	B	591	GLU
1	B	593	ASP
1	B	595	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	560	GLN
1	B	286	ASN
1	B	590	GLN

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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	584/673 (86%)	0.62	54 (9%) 9 12	41, 65, 115, 182	0
1	B	584/673 (86%)	0.83	79 (13%) 3 4	43, 65, 133, 161	0
All	All	1168/1346 (86%)	0.73	133 (11%) 5 7	41, 65, 126, 182	0

All (133) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	18	LEU	11.0
1	B	13	LEU	10.6
1	A	78	LYS	9.8
1	B	16	VAL	9.6
1	A	80	THR	8.3
1	B	79	ILE	7.5
1	B	536	ILE	7.0
1	B	15	ASP	6.8
1	B	88	LEU	6.1
1	B	540	THR	5.9
1	B	14	ARG	5.9
1	B	566	PHE	5.7
1	A	596	TRP	5.6
1	B	582	LYS	5.6
1	A	566	PHE	5.4
1	B	537	VAL	5.3
1	A	97	LEU	5.1
1	B	541	LEU	5.1
1	A	595	ILE	5.1
1	A	489	LEU	4.9
1	B	89	LYS	4.9
1	B	80	THR	4.8
1	B	97	LEU	4.8
1	B	567	ARG	4.8

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Mol	Chain	Res	Type	RSRZ
1	B	421	ALA	4.8
1	A	87	VAL	4.7
1	B	85	ALA	4.7
1	A	86	LYS	4.6
1	B	76	VAL	4.6
1	B	87	VAL	4.6
1	B	426	LEU	4.6
1	B	83	VAL	4.5
1	B	84	PRO	4.5
1	B	587	LYS	4.5
1	B	589	ILE	4.5
1	B	52	PHE	4.5
1	B	82	GLY	4.4
1	B	592	GLY	4.2
1	A	579	LEU	4.1
1	B	72	LEU	4.1
1	B	19	VAL	4.1
1	A	589	ILE	4.1
1	A	94	LEU	4.0
1	B	27	LEU	4.0
1	A	101	PHE	4.0
1	B	78	LYS	4.0
1	A	85	ALA	4.0
1	A	567	ARG	3.9
1	A	547	VAL	3.9
1	B	73	LEU	3.9
1	A	72	LEU	3.9
1	B	74	LYS	3.8
1	B	593	ASP	3.8
1	B	419	ASP	3.7
1	A	88	LEU	3.7
1	B	590	GLN	3.6
1	B	595	ILE	3.6
1	B	539	GLU	3.5
1	B	34	TYR	3.5
1	A	559	ILE	3.4
1	A	421	ALA	3.4
1	A	56	LEU	3.3
1	B	90	ALA	3.3
1	A	73	LEU	3.3
1	B	77	ASP	3.3
1	B	571	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	571	LEU	3.2
1	B	101	PHE	3.2
1	A	584	GLY	3.2
1	A	568	LYS	3.2
1	A	103	VAL	3.1
1	A	570	ALA	3.1
1	B	422	VAL	3.1
1	A	52	PHE	3.0
1	B	569	CYS	3.0
1	B	596	TRP	2.9
1	B	32	PHE	2.9
1	B	64	PHE	2.9
1	B	583	GLY	2.8
1	A	19	VAL	2.8
1	A	587	LYS	2.8
1	B	110	TYR	2.8
1	B	588	ILE	2.8
1	B	56	LEU	2.8
1	A	289	ARG	2.8
1	B	108	ARG	2.8
1	B	81	PRO	2.7
1	B	71	PHE	2.7
1	B	31	LEU	2.7
1	B	423	SER	2.7
1	B	580	PHE	2.7
1	B	418	LYS	2.7
1	B	535	LEU	2.7
1	A	108	ARG	2.6
1	A	34	TYR	2.6
1	A	91	THR	2.5
1	A	18	LEU	2.5
1	A	81	PRO	2.5
1	B	61	GLN	2.5
1	A	583	GLY	2.5
1	A	32	PHE	2.4
1	A	588	ILE	2.4
1	B	559	ILE	2.4
1	A	531	LYS	2.4
1	A	423	SER	2.4
1	A	578	LEU	2.3
1	A	575	HIS	2.3
1	B	449	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	572	GLY	2.3
1	A	106	PHE	2.3
1	B	424	PHE	2.2
1	B	70	LEU	2.2
1	B	554	LEU	2.2
1	A	67	VAL	2.2
1	B	565	SER	2.2
1	A	586	HIS	2.2
1	A	543	VAL	2.2
1	B	271	ALA	2.2
1	B	17	ILE	2.2
1	A	555	LEU	2.2
1	B	178	LEU	2.1
1	B	60	LYS	2.1
1	A	95	ALA	2.1
1	A	545	LYS	2.1
1	B	568	LYS	2.1
1	A	585	VAL	2.1
1	B	21	LYS	2.1
1	A	552	PHE	2.1
1	B	106	PHE	2.1
1	B	543	VAL	2.1
1	A	17	ILE	2.0
1	A	14	ARG	2.0
1	B	552	PHE	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.